

Lockheed Martin Corporation
6801 Rockledge Drive MP: CCT-246
Bethesda, MD 20817
Telephone 301-548-2209



August 21, 2019

VIA PRIVATE CARRIER

Brian Dietz
Interim Program Administrator
Land Restoration Program
Land and Materials Administration
Maryland Department of the Environment
1800 Washington Boulevard, Suite 625
Baltimore, Maryland 21230

Subject: Transmittal of the Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System
Operation, Round 26 February 2019 Monitoring Report
Lockheed Martin Corporation – Middle River Complex
2323 Eastern Boulevard, Middle River, Baltimore County, Maryland

Dear Mr. Dietz,

For your review please find enclosed two hard copies with a CD of the above-referenced document. This report contains the Round 26 (February 2019) monitoring results for Buildings A, B, and C, and background sampling locations. This report also includes a status update of the two sub-slab-depressurization vapor-intrusion-mitigation systems at the Middle River Complex in Middle River Maryland. If possible, we respectfully request to receive MDE's document review comments by October 4, 2019.

Please let me know if you have any questions. My office phone is (301) 548-2209.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom D. Blackman".

Thomas D. Blackman
Project Lead, Environmental Remediation

cc: (via email without enclosure)
Gary Schold, MDE
Mark Mank, MDE
Christine Kline, Lockheed Martin
Norman Varney, Lockheed Martin
Dave Brown, MRAS
Tom Green, LMCPI
Michael Martin, Tetra Tech
Cannon Silver, CDM Smith

Christopher Keller, LMCPI
Glen Harriel, LMCPI

cc: (via mail with enclosure)
Mike Musheno, LMCPI
Budd Zahn, MRAS
Isaiah McGriff, RMS Lockheed Martin

cc: (via Secure Information Exchange)
Jann Richardson, Lockheed Martin
Scott Heinlein, LMCPI

**VAPOR-INTRUSION INVESTIGATION AND
SUB-SLAB-DEPRESSURIZATION-SYSTEM
OPERATION, ROUND 26
FEBRUARY 2019 MONITORING REPORT
LOCKHEED MARTIN MIDDLE RIVER COMPLEX
2323 EASTERN BOULEVARD
MIDDLE RIVER, MARYLAND**

Prepared for:
Lockheed Martin Corporation

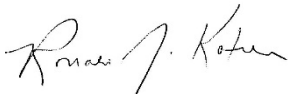
Prepared by:
Tetra Tech, Inc.

August 2019

Revision: 0



Michael Martin, P.G.
Regional Manager



Ronald Kotun
Project Manager

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ACRONYMS AND ABBREVIATIONS

AF	attenuation factor
<i>ca</i>	carcinogenic
CCTV	closed-circuit television
COC	chemical(s) of concern
DCA	dichloroethane
DCE	dichloroethene
DUP	duplicate
°F	degrees Fahrenheit
Freon 22	chlorodifluoromethane
GAC	granular activated-carbon
GC/MS	gas chromatograph/mass spectrometer
GC/PID	gas chromatograph/photoionization detector
HVAC	heating/ventilation/air conditioning
in. Hg	inch(es) of mercury
IA	indoor air
<i>J</i>	compound positively identified, but quantitation is estimated
lb(s)	pound(s)
lb(s)/day	pound(s) per day
lb(s)/month	pound(s) per month
Lockheed Martin	Lockheed Martin Corporation
MDE	Maryland Department of the Environment
µg/L	microgram(s) per liter
µg/m ³	microgram(s) per cubic meter
mph	mile(s) per hour
MPL	mechanical prototype laboratory
MRAS	MRA Systems, Inc.
MRC	Middle River Complex
MST	Mission Systems & Training
MTBE	methyl tertiary-butyl ether
<i>nc</i>	noncarcinogenic

OSHA	Occupational Safety and Health Administration
PCE	tetrachloroethene
PEL	permissible exposure limit
ppb	parts per billion
RMS	Rotary and Mission Systems
RSL	regional screening-level
PVC	polyvinyl chloride
SSD	sub-slab depressurization
SSDS	sub-slab-depressurization system
SV	sub-slab vapor
Tetra Tech	Tetra Tech, Inc.
TCA	trichloroethane
TCE	trichloroethene
TMB	trimethylbenzene
TO-15	Toxic Organic-15 analytical method
<i>U</i>	not detected
USEPA	United States Environmental Protection Agency
VC	vinyl chloride
VI	vapor intrusion
VMP	vapor monitoring point
VOC	volatile organic compound

SECTION 1 INTRODUCTION

Tetra Tech, Inc., (Tetra Tech) has prepared this report on behalf of Lockheed Martin Corporation (Lockheed Martin) to document the first round of indoor air (IA) and sub-slab vapor (SV) monitoring for calendar year 2019 at the Lockheed Martin Middle River Complex (MRC) in Middle River, Maryland. This report contains the Round 26 (February 2019) monitoring results for Buildings A, B, and C, and background sampling locations. This report also includes a status update of the two sub-slab-depressurization (SSD) vapor-intrusion-mitigation systems originally installed at the Middle River Complex in 2008: one beneath the Building A plating shop and the other beneath the southern portion of the Building C basement. This monitoring is part of an ongoing investigation to evaluate whether volatile organic compounds (VOCs) in sub-slab vapors (associated with soil and groundwater chemicals of concern [COC] at the site) might be moving into indoor air at Middle River Complex facilities, and to evaluate whether subsurface vapor contamination remains at concentrations dictating continued operation of the sub-slab-depressurization mitigation system, or if a transition/exit strategy can be performed. The first monitoring round for calendar year 2019 continues investigations previously described in the reports listed in Table 1-1.

This report is organized into the following sections:

- Section 2—Round 26 Indoor-Air and Vapor-Intrusion Investigation: Briefly summarizes previous investigations and interim measures and describes the sampling methodology used for the current investigation round.
- Section 3—Round 26 Results: Presents the results of the February 2019 investigation.
- Section 4—Sub-Slab-Depressurization-System Data Analysis: Summarizes the operation and monitoring of the sub-slab-depressurization systems in Buildings A and C for the reporting period from October 1, 2018 to March 31, 2019.

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- Section 5—Conclusions: Presents conclusions based on the Round 26 sampling results.
 - Section 6—References: Lists the references used in this report.

Tables, figures, and appendices are at the end of the report body following Section 6.

SECTION 2

ROUND 26 INDOOR-AIR-QUALITY AND VAPOR-INTRUSION INVESTIGATION

This section briefly summarizes previous investigations and interim measures and describes the sampling methodology used in the current investigation round.

2.1 PREVIOUS INVESTIGATIONS AND INTERIM MEASURES

The indoor air (IA) and sub-slab vapor (SV) investigation described herein was initially designed to evaluate whether volatile organic compounds (VOCs) associated with soil and groundwater contamination at the site might be moving into IA at Middle River Complex (MRC) facilities. Tetra Tech, Inc. (Tetra Tech) industrial hygienists chose the initial sampling locations for Buildings A, B, and C during a 2006 site reconnaissance. Additional sampling locations were selected throughout program implementation based on previous IA and SV monitoring results (Tetra Tech, 2017d).

Although IA results had predominantly been below risk-based screening levels after the first three rounds of sampling in February and December 2006 and April 2007 (with one trichloroethene [TCE] exceedance in 109 samples¹), two sub-slab depressurization (SSD) vapor intrusion mitigation systems (one beneath the former Building A plating shop and the other beneath the southern portion of the Building C basement) were installed at the MRC in 2008 (Tetra Tech, 2008d), based on elevated SV concentrations detected beneath the buildings. The Building A SSD system (SSDS) was expanded in 2010 (Tetra Tech, 2010c), in 2016 (Tetra Tech, 2016d), and again in 2017 (Tetra Tech, 2017f) after elevated SV concentrations were detected at additional locations.

¹One TCE concentration (36 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$]) out of 109 total samples (including duplicates) exceeded the indoor air screening level (18 $\mu\text{g}/\text{m}^3$) at the time of sampling. The exceedance was observed in the duplicate sample of a field-duplicate pair; TCE was not detected in the corresponding parent sample. Since then, the indoor air screening level has been reduced to 8.8 $\mu\text{g}/\text{m}^3$; even so, that result would have been the only exceedance.

A site-specific TCE screening-level of 35 $\mu\text{g}/\text{m}^3$ for indoor air has been derived for the Building A basement based on limited exposure potential in the basement. This screening level was approved by the Maryland Department of the Environment (MDE) in July 2017. However, the site-specific screening level for the basement does not represent a final risk-based indoor air cleanup criterion.

The Building C SSDS was expanded in 2012 (Tetra Tech, 2012c) and 2013 (Tetra Tech, 2013c) for similar reasons (elevated SV concentrations in the central portion of the basement). Subsequent rounds of IA sampling support that contaminant concentrations in IA on the main floors resulting from vapor intrusion (VI) are being controlled by the SSDSs.

However, recent investigations in Building A and the Building A basement have identified elevated TCE concentrations in SV, water (groundwater and water in sumps), and in basement IA. The following presents a list of subsequent VI investigations in Building A and the Building A basement from 2014–2018, followed by a more detailed description of each investigation:

- (a.) portable gas-chromatograph/mass-spectrometer (GC/MS) surveys of IA and sub-slab air from within Building A basement floor features (e.g., sumps, drains) in February 2014 and April 2016 (Tetra Tech, 2014b, 2016b)
- (b.) installation of three portable air-filtration units in January 2015 in the Building A basement to mitigate TCE exceedances in indoor air (Tetra Tech, 2016d)
- (c.) installation and sampling of additional Vapor Pin™ vapor monitoring points (VMPs), including seven in the eastern wall of Building A basement, two in the Building A basement floor, and one beneath the main floor of Building A in March 2016 (Tetra Tech, 2016b)
- (d.) collection of air and water samples from select floor features (i.e., sumps, drains) in Building A basement in May 2016 (Tetra Tech, 2016b, 2016c)
- (e.) a continuous air-monitoring survey of SV and breathing-zone indoor air locations in the Building A basement over two months (February 24 to April 21, 2017) (Tetra Tech, 2017b)
- (f.) a test to determine effects covering select floor features (e.g., sumps, drains) that had exhibited the highest TCE concentrations had on IA concentrations in the basement in March 2017 (Tetra Tech, 2017b)
- (g.) flow testing conducted in two sumps in the southern portion of Building A basement to determine the volume of water being discharged from each individual sump back to Lift Station #5 in March–May 2018; sampling of water in Building A basement sumps in March 2018 including water from a sump (not previously sampled) in the utility corridor between Building A basement and the Drop Hammer Building; an assessment of the data obtained from this study, sought to determine a constructible, cost-effective solution that effectively controls water and vapor accumulation in the sumps (Tetra Tech, 2018e).

Elevated TCE concentrations detected in air within, and above, select floor features (e.g., sumps) in the Building A basement led to the installation, as an interim measure, of three additional air-purifying filters (for a total of six) in the basement in May 2017 to target floor features that have shown elevated TCE concentrations (Tetra Tech, 2018b). The continuous air-monitoring survey also identified significant sources of IA contamination in the basement at sumps associated with abandoned and/or removed heaters (Tetra Tech, 2017b). In addition to the new air-purifying filters, additional activities were completed in the summer of 2017 in Building A and its basement to address the elevated VOC results in SV and sump water from several recent investigations. A closed-circuit television (CCTV) camera survey of floor features in the Building A basement, including the sumps in existing and former heating rooms, the air-duct network that runs behind the eastern basement wall, the storm-drain line that runs north/south under the basement floor, and the smaller floor drains, was conducted to determine their condition, identify possible breaches, and better understand their direction and design. The CCTV survey indicated that the underground network of floor drains, pipes, and manholes/sumps are interconnected. Floor drains that might have mitigated water infiltration in and near pits associated with former equipment that operated in Building A appeared to be connected to nearby sumps and storm drains. Other floor drains appeared to have been abandoned, which is supported by information received while conducting historical interviews of on-site personnel (Tetra Tech, 2018b).

In 2016 (Tetra Tech, 2016b) and March 2017 (Round 22), sampling location SV-175-A (Figure 2-1) on the Building A basement floor had the highest TCE concentrations (460,000 and 650,000 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$], respectively). The maximum August 2017 (Round 23) SV TCE concentration (21,000 $\mu\text{g}/\text{m}^3$) was also detected at location SV-175-A. Location SV-175-A was removed from the sampling list and not sampled in February 2018 (Round 24) since consistently elevated TCE concentrations detected during previous sampling negates the need to continue collecting data from this location at this time. High TCE SV concentrations were also noted at two locations (SV-171-A and SV-173-A) in the eastern wall of the Building A basement during 2016 (Tetra Tech, 2016b), three locations (SV-170-A, SV-171-A, and SV-173-A) in the eastern wall of the Building A basement in 2017 (in both the March [Round 22] and August [Round 23] sampling), and two locations (SV-171-A and SV-173-A) in the eastern wall of the Building A basement in February 2018 (Round 24).

These high TCE concentrations prompted a pilot test conducted on July 6, 2017; this test evaluated the feasibility of extracting vapors from within the basement duct system at former heater room A-9/sump HRS5 (located immediately adjacent to SV-175-A, where the highest TCE concentrations have been detected historically) using the existing SSDS (Tetra Tech, 2018b). The pilot test was successful, HRS5 was left connected to the SSDS, and the system continues to extract vapor from this sealed sump.

In July 2017 (Tetra Tech, 2017b), a FROG 4000™ gas-chromatograph/photoionization detector (GC/PID) survey of the main floor of Building A assessed whether TCE detected in indoor air near the basement sumps was migrating through air ducts connected to the sumps, and through the floor air-vents, to the main floor of Building A. TCE detections ranging from 32.8 to 103.7 µg/m³ were recorded in samples collected from inside the vents and in indoor air above the vents; therefore, in September 2017 all floor air-vents on the main floor (regardless of screening results) were sealed using a vapor barrier and bolt-down steel plate to close off this exposure pathway and prevent migration of TCE vapor from the basement. A subsequent FROG 4000™ survey in October 2017 verified the integrity of the seals at the 42 air-vent locations and confirmed the absence of TCE in indoor air near the vents. No TCE was detected in any sample collected; all results were non-detected (Tetra Tech, 2018c).

In January–May 2018, Tetra Tech conducted a sump inspection of the pumps in Building A basement, and conducted flow testing in two sumps (SP1/SP1A and the utility corridor sump) in the southern portion of Building A to measure the volume of water being discharged (via polyvinyl chloride [PVC] piping) from each sump to sanitary sewer Lift Station #5. Water samples were also collected from sumps in Building A basement during this investigation. Information gained from the January–May 2018 studies were used to determine constructible, cost-effective solutions that control water and vapor accumulation in Building A basement sumps; possible mitigation solutions currently remain under evaluation (Tetra Tech, 2018e).

The sump inspection determined that the pump in sumps SP1/SP1A was the only one in the target area (southern portion of Building A basement) that pumps a significant volume of water back to Lift Station #5, and subsequently the sanitary sewer system. Only a small amount of water (less than three gallons) was collected in the utility corridor sump over a two-month period. The

respective TCE concentrations detected in sump water at SP1/SP1A during the last three sampling events were: 120 microgram(s) per liter ($\mu\text{g/L}$) and 2,700 $\mu\text{g/L}$ in May 2016; 160 $\mu\text{g/L}$ and 440 $\mu\text{g/L}$ in March 2017; and 160 $\mu\text{g/L}$ (SP1 only)² in March 2018. The TCE concentration detected in the utility corridor sump was 53 $\mu\text{g/L}$. These concentrations are two to three orders of magnitude higher than the TCE concentrations (2.3 $\mu\text{g/L}$ and 2.6 $\mu\text{g/L}$) detected in water samples collected from Lift Station #5. This indicated that dilution is likely occurring at the lift station due to other water that is discharged to it. Various pipes discharge into the lift station, including those carrying heating, ventilation, and air conditioning (HVAC) condensate water. This additional water is likely responsible for the apparent low concentration of TCE concentrations detected at Lift Station #5 when compared to the concentrations detected at the sumps.

2.2 INVESTIGATION PROCEDURES

The sampling plan for Round 26 was based on historical detections, information obtained during site reconnaissance, and a review of historical information and reports. IA and SV samples were collected from Buildings A, B, and C during Round 26 sampling. Relevant guidance from the United States Environmental Protection Agency [USEPA] (USEPA, 1996, 2004, 2012, and 2015) and the Maryland Department of the Environment [MDE] (MDE, 2006) was used to develop the investigation methodology.

IA and SV sampling within Buildings A, B and C was done in accordance with the work plan (Tetra Tech, 2017d). Background outdoor air samples were collected from the same sampling locations as had been used for the previous Round 25 (Figure 2-2). Not all existing monitoring points inside the subject buildings were sampled during Round 26. As in previous rounds, samples were selectively collected in or adjacent to areas where contaminants had been detected previously, or in areas where contaminants are currently suspected of being present.

TCE has been targeted as a primary chemical of concern (COC); it has a history of use at the site, has been detected in groundwater and soil gas, can be toxic to human health depending upon dose, duration, and means of exposure, and is mobile in the environment. Historical sampling locations

²The only sample collected in March 2018 was from SP1, as the focus at that time was on that sump. Note that sumps SP1/SP1A are connected underground.

and the sub-slab VMPs sampled in Buildings A, B and C during this round are shown in Figures 2-3, 2-4 and 2-5, respectively. IA sampling locations were co-located with most of the monitored SV sampling locations to evaluate IA and any possible relationship between SV and IA in Building A, B and C.

Round 26 sampling was performed on February 19 and 21, 2019. Seventy-three samples (and eight duplicates) were collected using Summa[®] canisters as follows:

- four background ambient-air samples were collected at the same locations used in the previous round
- 36 IA samples (and four duplicates) from Buildings A, B, and C:
 - 15 IA samples (and two duplicates) from Building A
 - two IA samples from Building B
 - 19 IA samples (and two duplicates) from Building C
- 33 SV samples (and four duplicates) from Buildings A, B and C:
 - 15 SV samples (and two duplicates) from Building A
 - two SV samples from Building B
 - 16 SV samples (and two duplicates) from Building C
- The “-A,” “-B,” and “-C” suffixes in the sampling location designations correspond with Buildings A, B, and C, respectively.

Five IA samples from Building C (144-C, 145-C, 146-C, 150-C, and 152-C) were collected in the machine shop of the Lockheed Martin Rotary and Mission Systems (RMS) (formerly the Lockheed Martin Mission Systems & Training [MST] mechanical prototype laboratory [MPL]). Monitoring continues in this area, because TCE was detected in IA at a concentration greater than its screening level during Round 15 (August 2013). The five sampling locations that provide data for possible worker-exposure areas within the MPL are:

- 144-C: machine shop area
- 145-C: cubicle area
- 150-C: kitchen area
- 152-C: machine shop area

-
- 146-C: kitchen area

Five SV samples (three in the eastern wall of the Building A basement [170-A, 171-A, and 173-A], one in the Building A basement floor [174-A], and one beneath the main floor of Building A [168-A]), were collected during Round 26 to target possible TCE sources, including a former underground storage tank and vapor degreasers associated with former plating shop operations. SV-170-A was not analyzed because this sample was lost by the laboratory.

Before SV sampling, the tubing for each VMP was purged of atmospheric air, allowing SV to enter the probe and tubing. Purging was performed by attaching the sample tubing to a low-flow sampling pump set to an approximate flow rate of 200 cubic centimeters per minute to minimize the potential mobilization of SV that could bias the sample. One to three volumes (i.e., the volume of the sample probe and tube) were purged to ensure that collected samples were representative of SV conditions. IA samples were collected on the ground surface, with select samples being co-located with the corresponding SV sample location.

Each SV sample was collected over one hour and each IA sample was collected over a period of eight hours using preconditioned Summa[®] canisters to ensure subsurface equilibration and avoid high negative pressure that might mobilize SV and bias the IA results. The one-liter stainless steel canisters were equipped with in-line particulate filters and integral controllers to control the rate of filling during sampling. SV samples were collected through Teflon[®] tubing attached to the stainless-steel Vapor Pins[®] or vapor implants. Each sampling location was routinely inspected during the sampling period to ensure appropriate operation of sampling devices, sample integrity, and to document conditions within the area that might affect results. Samples were collected by opening the valve on the canister, which allowed air to enter the canister at the rate set by the controller (a one-liter canister over a period of one hour [for SV] and over a period of eight hours [for IA]). Controllers were calibrated in the laboratory and shipped to the field with a sufficient flow rate that would maintain the necessary vacuum pressure in the Summa[®] canister for the one-hour and eight-hour sampling intervals. Samples were collected and analyzed for VOCs by TO-15. SV samples were collected in accordance with standard operating procedures developed by the USEPA Environmental Response Team for soil vapor sampling (USEPA, 1996), and methodologies developed by the USEPA Office of Research and Development (USEPA, 2004).

After sampling had been completed, each canister was closed and sent to an off-site laboratory (TestAmerica, Inc. in Knoxville, Tennessee) under proper chain of custody procedures.

The SSD systems in the Building C basement area and the Building A plating shop were shut down approximately 24 hours before sampling began. The SSD systems were restarted within one hour after sampling had been completed in Buildings A and C; this is consistent with previous monitoring episodes. The following observations were recorded during the February 2019 sampling:

- Mean outdoor ambient temperature during the sampling period was 34 degrees Fahrenheit (°F) on February 19, 2019 and 44°F on February 21, 2019. Barometric pressure decreased slightly during the sampling period, from 30.6 inches of mercury (in. Hg) to 30.0 in. Hg. Wind direction on February 19 was from the west/northwest and on February 21 from the south/southwest, with average wind speed ranging from calm to 13 miles per hour (mph). Skies were mostly clear on February 19 and February 21, 2019.
- No precipitation (rain) was recorded on February 19 or February 21, 2019.
- Water was present in the Building B flush-mounted vault (shallow subsurface groundwater accumulation) at sampling locations 121-B and 140B, preventing sample collection. Alternate IA and SV samples were collected at nearby locations 101-B and 100-B, respectively.
- IA and SV samples from 118-A were collected in the bond-layup room (Building A production floor), where a positive-pressure air-conditioning system was operating.
- Sampling location 015-A is in the former plating shop area (Building A production floor). After the sampling round in August 2015, the area had undergone construction and redevelopment. A new floor has been installed and this area is now an extension of the bond-layup room. IA and SV samples from 015-A were collected in this newly expanded bond-layup room (former plating shop), where a positive-pressure air-conditioning system was operating.
- Sampling locations 018-A, 093-A, 116-A, and 138-A were collected in the Building A basement. Select samples from the basement were added to the sampling program in the work plan (Tetra Tech, 2017d) due to the ongoing TCE VI investigation. These include three additional locations in the eastern wall (170-A, 171-A and 173-A) and one in the floor (174-A). As stated previously, sample SV-170-A was not analyzed during Round 26 because this sample was not received by the laboratory.
- The air-purifying units in the Building A basement were operating when samples were collected.

-
- The sample from 168-A was collected near the location of a former vapor degreaser on the main floor of Building A.
 - IA and SV samples in Building C basement at 001-C and 004-C were collected approximately 70 feet from a bay door to the outside that was opened intermittently.
 - Samples IA-144-C through IA-146-C, IA-150-C, and IA-152-C in Building C basement were collected in a positive-pressure, air-conditioned room (the RMS MPL machine shop).
 - Building A is a one-story building, except for a basement corridor under an open-air loading dock on its western side. Roof vents approximately 50 feet above the work floor were open in Building A during Round 26 sampling. The large doors at the loading docks on the western side of the building were also open to allow carts, forklifts, personnel, and equipment to pass. Increased ventilation associated with open doors and roof vents might have affected concentrations in samples collected on the first floor of Building A. No personnel or other activities were observed in the Building A basement.
 - The bay doors across the southern end of Building B were closed during sampling. The automatic bay door at the southeastern corner of Building B was opened and closed quickly to allow carts and equipment to pass. The opening of the bay door might affect concentrations in samples collected from the southernmost sampling locations (IA-100-B and IA-101-B). Open roof vents were also observed in Building B during sampling.
 - The Building C basement is generally accessed via two automatic rolling doors on its eastern and southern sides. These doors open and close quickly to allow carts and forklifts to pass. The automatic rolling door approximately 40 feet east of sampling location 141-C was opened and closed intermittently during the day. The bay doors at the southern and southeastern sides of the Building C basement were open during the sampling period. This might have influenced IA concentrations in the samples collected from locations 001-C and 004-C.
 - The most personnel and greatest activity were observed in Building B, in locations from the thrust-reverser assembly area in the southern portion of the building to the machining area in its central portion. Less activity was observed in Building A, where activity was generally focused in the expanded bond-layup room (former plating shop area) and autoclave areas, and in the parts and assembly areas. No activity was observed in the southern portion of Building C. Light activity (three people) was observed in the machine shop area in Building C basement.
 - The southern end of the Building C basement is now vacant, having been cleared of workstations and equipment by MRA Systems, Inc. (MRAS). Some materials are being temporarily stored in this area.
 - The pressure gauges on most Summa[®] canisters responded instantaneously upon opening the valve by dropping to between -25 in. Hg and -30 in. Hg. Four pressure gauges (IA-004-C, SV-DUP04-A, IA-078-A and IA-081-A) had beginning pressures of less than

- 25 in. Hg. The ending readings on pressure gauges of most Summa[®] canisters were between 0 and -4 in. Hg when sampling was complete. The pressure gauge for IA-DUP01-C showed an end pressure of -11 in. Hg. Pressure readings for samples SV-004-C and IA-117-A were not able to be read due to faulty gauges on the regulators. Despite these varied pressure readings and faulty gauges, all regulators operated properly, and adequate volumes for analysis were collected in all Summa[®] canisters. Pressure readings for each Summa[®] canister are recorded on the chain of custody forms (Appendix A).

Samples were analyzed for the current target-compound list, last amended on February 12, 2012:

- 1,1,1-trichloroethane (1,1,1-TCA)
- 1,1,2-trichloroethane (1,1,2-TCA)
- 1,1-dichloroethane (1,1-DCA)
- 1,1-dichloroethene (1,1-DCE)
- 1,2,3-trimethylbenzene (1,2,3-TMB)
- 1,2,4-trichlorobenzene
- 1,2,4-trimethylbenzene (1,2,4-TMB)
- 1,2-dichloroethane (1,2-DCA)
- 1,3,5-trimethylbenzene (1,3,5-TMB)
- benzene
- carbon tetrachloride
- chlorodifluoromethane (Freon 22)
- chloroform
- *cis*-1,2-dichloroethene (*cis*-1,2-DCE)
- dichlorodifluoromethane
- ethylbenzene
- methylene chloride
- methyl-tertiary-butyl ether (MTBE)
- naphthalene
- tetrachloroethene (PCE)
- toluene
- *trans*-1,2-dichloroethene (*trans*-1,2-DCE)
- trichloroethene (TCE)
- vinyl chloride (VC)
- xylenes (total)

All samples collected during Round 26 were submitted to TestAmerica in Knoxville, Tennessee for analysis via GC/MS using cryogenic concentration (as described in Sections 9 and 10 of USEPA Method [Toxic Organic-15] TO-15 [USEPA, 1999]). This method was used because of its low detection limit (in the parts-per-billion by volume range), and because it can quantify all VOCs of concern. TestAmerica is certified in USEPA Method TO-15 analysis and meets all quality assurance/quality control requirements specified in the TO-15 methodology.

All samples were stored at ambient temperatures and shipped to the laboratory via overnight carrier. All samples were submitted and analyzed within the method's specified 30-day holding time. All appropriate chain of custody documentation was completed for each sample (see Appendix A). A table listing TestAmerica's method detection limits is in Appendix B; Appendix C

contains the laboratory analytical reports. Data-validation reports and supporting documentation are in Appendix D.

Validated analytical data were qualified in accordance with USEPA *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA, 2017a). Attaching data qualifiers to analytical results signifies a quality-control noncompliance. During Round 26, the following data qualifiers were applied to data after validation if applicable:

- *J*—indicates an estimated result below the reporting limit or an estimated result greater than the reporting limit with a quality control nonconformance.
- *J+*—The result is an estimated quantity, but the result may be biased high.
- *U*—indicates the chemical was not detected at the numerical detection limit (i.e., the sample-specific quantitation limit).
- *UJ*—indicates the chemical was not detected at the (estimated) numerical detection limit (i.e., the sample-specific quantitation limit).
- *UR*—indicates the sample result (non-detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Several non-detected results in two samples were rejected during data validation. As documented in the data validation reports in Appendix D, samples IA-113-C-26 and IA-131-C-26 were received with the canister valve in the open position. These samples were at ambient pressure (approximately 0 pounds per square inch). As stated in the laboratory case narrative, the integrity of the samples could have been jeopardized due to changes in ambient pressure after the sample was taken. The client was contacted and told the laboratory to proceed with the analyses. The detected results were qualified as estimated (*J*). The non-detected results were qualified as rejected (*UR*). Note that a field duplicate was collected at location IA-131-C, and results for the field duplicate sample were not rejected. As discussed below, results for two analytes within the field duplicate pair samples were qualified for field duplicate precision. The associated data validation report notes that result comparability for this field pair is limited because the original sample arrived at the laboratory with an opened canister valve.

Field duplicate sampling results were evaluated based on the following criteria: a relative percent difference of less than or equal to 50% when both original and duplicate results were greater than the reporting limit, or a difference within two times the reporting limit when original and duplicate results were less than or equal to the reporting limit. Detected and non-detected results for toluene and total xylenes in sample IA-131-C-26 and its corresponding duplicate were qualified as estimated (*J* and *UJ*, respectively) due to field duplicate precision (Appendix D). No other results were qualified for field duplicate imprecision during Round 26. Original and field duplicate results were considered separately when evaluating exceedances; i.e., if either the original or duplicate sample exceeded criteria, that exceedance is noted. In summary statistics (e.g., frequency of detection counts), field duplicate pairs were counted as one sample, and calculated averages were reported (e.g., in the “average of all values” calculation), as shown on Section 3 tables.

SECTION 3

ROUND 26 RESULTS

All analytical results for indoor air (IA) and background (ambient air) samples were compared to screening levels for industrial air; these levels are based on United States Environmental Protection Agency (USEPA) *Regional Screening Levels (RSLs) for Chemical Contaminants at Superfund Sites* (USEPA, 2018). Screening the chemicals of concern (COC) uses the lower of the carcinogenic (*ca*) or noncarcinogenic (*nc*) values. Carcinogenic values are based on a 1×10^{-5} (i.e., a one-in-100,000 probability) excess cancer-risk, whereas the noncarcinogenic values are based on a hazard quotient of 1 (i.e., the “no adverse effect” level).

These risk benchmarks were selected in accordance with Maryland Department of the Environment (MDE) requirements. Analytical results were also compared to federal Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs). Alternate values, such as the “Threshold Limit Values” published by the American Council of Governmental Industrial Hygienists, were used for chemicals without published permissible exposure limits.

Sub-slab vapor (SV) sampling results were compared to SV screening values derived in accordance with the methods discussed in USEPA’s *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Sources to Indoor Air* (USEPA, 2015), and were calculated by dividing indoor-air (IA) screening levels by a conservative attenuation factor (AF) of 0.03. The AF represents the adjustment applied to IA screening levels to account for concentration reductions due to diffusive, advective, and/or other attenuating mechanisms as vapor migrates from the sub-slab to IA. Simply stated, SV is expected to dilute upon movement into IA; the AF is the ratio of the IA concentration to its SV concentration under a conservative vapor-intrusion (VI) scenario. The recommended AF in the 2015 USEPA guidance results in higher SV screening values than those used for sampling rounds before August 2012, when an earlier USEPA AF of 0.1 was used. USEPA further acknowledges that applying the AF of 0.03 to industrial buildings is conservative (i.e., more protective of human health and the environment), because the

value was developed based on residential VI studies and does not account for industrial buildings that generally have thicker building slabs and stronger heating/ventilation/air-conditioning (HVAC) systems than residential homes.

3.1 ROUND 26 DATA ANALYSIS

The sampling-round designation (R26) is not included when identifying samples or sampling locations in the following text, because all data discussed in this section are from Round 26. For example, an IA sample collected from vapor monitoring point (VMP) 076 (e.g., sample IA-076-A-R26) is referred to as “076-A.” If comparisons are made to specific samples from previous sampling rounds, they will be identified as such in the text or by using the round-designation suffix (e.g., R06 for Round 6).

Descriptive statistics for Round 26 IA and SV samples are shown in Tables 3-1 and 3-2, respectively. Summary statistics for trichloroethene (TCE) and naphthalene in IA over time are shown in Tables 3-3 and 3-4, respectively. Figures 3-1, 3-2, and 3-3 show Round 26 exceedances in Buildings A, B, and C, respectively. The following chemicals were detected in Round 26 IA and/or SV samples at concentrations exceeding their respective MDE industrial risk-management benchmarks:

- IA—none
- SV—1,1-dichloroethane (1,1-DCA), naphthalene, TCE, and vinyl chloride (VC)

Building A—Tables 3-5 and 3-6 present the Building A IA and SV results, respectively. Locations with exceedances are shown in Figure 3-1. All detected IA concentrations were less than screening levels during Round 26. In SV, only TCE concentrations exceeded screening levels. TCE was detected in all Round 26 SV samples, and exceeded its screening level ($293 \mu\text{g}/\text{m}^3$) in three samples; TCE is further discussed below.

TCE in Building A Basement

TCE has periodically been detected in IA in the Building A basement at concentrations greater than its IA screening level ($8.8 \mu\text{g}/\text{m}^3$), beginning with Round 15 (August 2013) and including Round 17 (August through November 2014), Round 20 (February 2016), Round 22 (March 2017),

and Round 25 (August 2018), but has not exceeded the Building A basement-specific screening level of 35 $\mu\text{g}/\text{m}^3$ that MDE approved in 2017. The basement screening-level was developed to account for reduced exposure potential in the basement, as compared to the main floor of Building A. Access to the basement is controlled by management. TCE was detected in IA at all four Round 26 Building A basement sampling locations (018-A, 093-A, 138-A, and 174-A) at concentrations less than its basement-specific screening level. Detected IA TCE concentrations were 3.4 $\mu\text{g}/\text{m}^3$ and 3.5 $\mu\text{g}/\text{m}^3$ in parent and duplicate samples (respectively) at location 018-A, 4 $\mu\text{g}/\text{m}^3$ at location 093-A, 2.9 $\mu\text{g}/\text{m}^3$ at location 138-A, and 7 $\mu\text{g}/\text{m}^3$ at location 174-A.

Note that this is the fourth VI sampling round since vapor extraction began at the HRS5 sump. This sump has been identified as likely the primary contributor of TCE impacts to indoor air in the Building A basement. Vapor is now being extracted there continuously under normal SSDS operating conditions; however, per sampling protocol, the SSDS was temporarily shut down for approximately 24 hours before starting IA and SV sampling and restarted immediately after sampling had been completed.

SV TCE exceeded its screening level (293 $\mu\text{g}/\text{m}^3$) at two basement locations (171-A and 173-A) in the central portion of Building A near the radii of influence of the SSD systems; exceedances were 1,000 $\mu\text{g}/\text{m}^3$ at 171-A and 1,700 $\mu\text{g}/\text{m}^3$ at 173-A. SV TCE concentrations at sampling locations 171-A and 173-A, added to the semiannual sampling in Round 22, also exceeded the screening level in Rounds 22, 23, and 25. These locations are in the eastern wall of the Building A basement. SV TCE exceedances were not detected at location 174-A during Round 26; this basement location was also added to the semiannual sampling plan in Round 22 along with 170-A and 175-A. Location 175-A was not sampled during Round 26. Location 170-A was sampled during Round 26, but the sample from this location was not analyzed because it was not received by the laboratory.

TCE in First Floor of Building A

TCE was detected at concentrations less than the screening level in six of 11 Round 26 first-floor Building A IA samples, at concentrations ranging from 0.43 $\mu\text{g}/\text{m}^3$ to 2 $\mu\text{g}/\text{m}^3$.

SV TCE (1,800 $\mu\text{g}/\text{m}^3$) exceeded its screening level (293 $\mu\text{g}/\text{m}^3$) at only one first floor location (118-A) in the central portion of Building A and within the radii of influence of the SSD systems.

Location 118-A is within the bond-layup room, where a positive-pressure-air-conditioning system was operating at the time of sample collection. TCE SV exceedances were also observed at that location during Rounds 18 through 25. TCE SV concentrations at 118-A in Rounds 19, 20, 21, 22, 23, 24, 25, and 26 ($900 \mu\text{g}/\text{m}^3$, $2,300 \mu\text{g}/\text{m}^3$, $890 \mu\text{g}/\text{m}^3$, $2,000 \mu\text{g}/\text{m}^3$, $690 \mu\text{g}/\text{m}^3$, $1,500 \mu\text{g}/\text{m}^3$, $590 \mu\text{g}/\text{m}^3$, and $1,800 \mu\text{g}/\text{m}^3$, respectively) are all approximately one order of magnitude (i.e., a power of 10) less than the SV concentration detected in Round 18 ($13,100 \mu\text{g}/\text{m}^3$).

SV TCE concentrations at first floor locations 136-A and 168-A, located within or near the radii of influence of the SSD systems, were less than screening levels during Round 26, but exceedances were noted at these locations during the previous sampling round (Round 25). TCE concentrations at SV 136-A in Rounds 21, 22, 23, 24, and 25 ($850 \mu\text{g}/\text{m}^3$, $300 \mu\text{g}/\text{m}^3$, $790 \mu\text{g}/\text{m}^3$, $380 \mu\text{g}/\text{m}^3$, and $660 \mu\text{g}/\text{m}^3$, respectively) have decreased by a factor of approximately 100 since the SSDS was expanded to this location in 2016, after a reported TCE-vapor concentration of $35,000 \mu\text{g}/\text{m}^3$ during Round 20. SV TCE concentrations at sampling location 168-A, added to the semiannual sampling in Round 22, exceeded the screening level in Rounds 22 through 25 ($22,000 \mu\text{g}/\text{m}^3$ [in Round 22]; $8,300 \mu\text{g}/\text{m}^3$, and $7,900 \mu\text{g}/\text{m}^3$ [for original and duplicate, respectively, in Round 23]; $1,300 \mu\text{g}/\text{m}^3$ [in Round 24]; and $950 \mu\text{g}/\text{m}^3$ and $920 \mu\text{g}/\text{m}^3$ [for original and duplicate, respectively, in Round 25]), but have notably decreased over time following the SSDS expansion. Concentrations at locations 136-A and 168-A during Round 26 were $270 \mu\text{g}/\text{m}^3$ and $180 \mu\text{g}/\text{m}^3$, respectively, less than the screening level of $293 \mu\text{g}/\text{m}^3$.

Building B—Tables 3-7 and 3-8 present Building B IA and SV results, respectively. Sampling locations within Building B are shown on Figure 3-2. No IA or SV exceedances were noted during Round 26. Similarly, no exceedances were noted in Building B IA or SV samples during Rounds 19 through 25. During Round 18, only one slight exceedance ($4.2 \mu\text{g}/\text{m}^3$) of naphthalene in IA was detected at location 140-B, and this concentration only marginally exceeded its screening level ($3.6 \mu\text{g}/\text{m}^3$). No exceedances were noted in Building B IA or in SV samples during Round 17. Prior IA exceedances were noted at location 140-B ($6.5 \mu\text{g}/\text{m}^3$) and 0-33B ($4J \mu\text{g}/\text{m}^3$) during Round 16 (February 2014), 033-B ($5 \mu\text{g}/\text{m}^3$) during Round 15 (August 2013), and 057-B ($3.8 \mu\text{g}/\text{m}^3$) during Round 6 (July 2009). Prior exceedances of the SV screening level ($120 \mu\text{g}/\text{m}^3$) were noted at several locations during Rounds 6, 9, and during Rounds 11 through 15, with the most recent

exceedances at locations 140-B (250 $\mu\text{g}/\text{m}^3$) and 123-Z (160 $\mu\text{g}/\text{m}^3$) during Round 15 (August 2013).

Building C—Tables 3-9 and 3-10 present Building C IA and SV results, respectively. All detected IA concentrations were less than screening levels during Round 26.

TCE was detected in three of 18 IA samples, but at low concentrations (1.2 $\mu\text{g}/\text{m}^3$ to 1.5 $\mu\text{g}/\text{m}^3$) less than its screening level (8.8 $\mu\text{g}/\text{m}^3$). TCE was detected at 13 of 16 SV sampling locations, and TCE exceedances in SV were noted at five locations (Figure 3-3):

- 060-C (600 $\mu\text{g}/\text{m}^3$), in the east-central portion of Building C, within the SSD radius of influence
- 102-C (1,100 $\mu\text{g}/\text{m}^3$), in the central portion of Building C near REC #31 (former Patriot Plating Line)
- 126-C (400 $\mu\text{g}/\text{m}^3$) inside the museum room and 141-C (340 $\mu\text{g}/\text{m}^3$) south of the museum room and north of the machine shop, both in the northeastern portion of Building C
- 133-C (760 $\mu\text{g}/\text{m}^3$), in the central portion of Building C, north of REC #31 (former Patriot Plating Line), and within in the SSD radius of influence

SV TCE concentrations at 102-C and 126-C also exceeded its screening level during Rounds 22 through 25. In the previous two sampling rounds (Rounds 24 and 25), SV TCE exceedances were also detected at locations 060-C and 133-C, and an SV TCE exceedance was also detected at location 141-C during Round 24.

Although an SV TCE exceedance was detected at location 001-C, in the southern portion of Building C, during Rounds 21 and 25, no exceedance at that location was detected during Rounds 22 through 24 and during Round 26. An SV TCE exceedance was detected at location 113-C, in the south-central portion of the building, during Round 21, but not during Rounds 22 through 26. SV TCE exceedances at location 152-C, in the east-central portion of Building C, were noted during Rounds 22 and 23, but not during Rounds 24 through 26. SV TCE exceedances in Building C appear to be sporadic and do not follow an observable spatial pattern.

A sole VC exceedance (1,100 $\mu\text{g}/\text{m}^3$) of its screening level (933 $\mu\text{g}/\text{m}^3$) was detected in SV at 126-C, in the museum room in the northeastern portion of Building C. SV exceedances of VC were also noted at location 126-C during Round 18 (1,310 $\mu\text{g}/\text{m}^3$), Round 19 (16,000 $\mu\text{g}/\text{m}^3$), Round 20

(3,100 $\mu\text{g}/\text{m}^3$), Round 21 (5,000 $\mu\text{g}/\text{m}^3$), Round 22 (2,600 $\mu\text{g}/\text{m}^3$), Round 23 (3,300 $\mu\text{g}/\text{m}^3$), Round 24 (2,700 $\mu\text{g}/\text{m}^3$), and 25 (6,300 $\mu\text{g}/\text{m}^3$). VC exceedances in SV have consistently been observed at location 126-C during recent sampling rounds (i.e., in Rounds 12–26). However, VC was not detected in IA during Rounds 12 through 26.

In addition to the screening level exceedances discussed above, SV exceedances of 1,1-DCA (4,800 $\mu\text{g}/\text{m}^3$) and naphthalene (210 $\mu\text{g}/\text{m}^3$) were also detected at 102-C during Round 26 (screening levels are 2,567 $\mu\text{g}/\text{m}^3$ and 120 $\mu\text{g}/\text{m}^3$, respectively). These exceedances are similar to those noted at location 102-C during Rounds 23 (5,900 $\mu\text{g}/\text{m}^3$ for 1,1-DCA, and 180 $\mu\text{g}/\text{m}^3$ for naphthalene), Round 24 (5,600 $\mu\text{g}/\text{m}^3$ for 1,1-DCA and 180 $\mu\text{g}/\text{m}^3$ for naphthalene), and Round 25 (7,900 $\mu\text{g}/\text{m}^3$ and 7,600 $\mu\text{g}/\text{m}^3$ for 1,1-DCA in parent and duplicate samples, respectively, and 280 $\mu\text{g}/\text{m}^3$ and 330 $\mu\text{g}/\text{m}^3$ for naphthalene in parent and duplicate samples, respectively). SV exceedances of 1,1-DCA (3,900 $\mu\text{g}/\text{m}^3$) and naphthalene (310 $\mu\text{g}/\text{m}^3$) at 102-C also occurred during Round 22, but not during Round 21. The SV naphthalene and 1,1-DCA exceedances in Building C do not appear to impact IA concentrations. Naphthalene and 1,1-DCA were not detected in IA during Round 26 but were detected in previous sampling rounds (i.e., Rounds 10 and 11 for 1,1-DCA, and during Rounds 10, 11, 13 through 16, 18, 23, and 25 for naphthalene) at concentrations less than screening levels.

During Round 26, IA and SV concentrations of tetrachloroethene (PCE) did not exceed screening levels. An IA exceedance of PCE (870 $\mu\text{g}/\text{m}^3$, as compared to its IA screening level of 180 $\mu\text{g}/\text{m}^3$) was detected at location 149-C in a Round 18 resample, collected because the TCE concentration at the same location approached, but did not exceed, its screening level in the original sample. Before Round 18, PCE had never been detected in IA or SV in Building C. Additionally, IA and SV concentrations of PCE in Rounds 19 through 25 did not exceed screening levels. In most SV samples collected over time in these investigations from locations at and near location 149-C, PCE was not detected above its detection limit. This suggests that the sole PCE exceedance at location 149-C during Round 18 is anomalous, and possibly attributable to some IA source rather than to VI. In Round 26, PCE was not detected in IA at 149-C, but was detected in SV at a concentration (0.97 $\mu\text{g}/\text{m}^3$) less than its screening level (6,000 $\mu\text{g}/\text{m}^3$) at that location.

3.2 BACKGROUND AMBIENT-AIR SAMPLES

Outdoor-air-quality (i.e., background) samples provide baseline concentrations for COC that can be compared to interior concentrations. Comparison to background indicates whether chemicals detected in IA are more likely associated with an exterior (i.e., background) or interior source (e.g., chemicals used in the workplace, or with past spills of chemicals absorbed to above-slab building materials, or sub-slab sources). Analytical results for Round 26 ambient (background) air samples are shown in Table 3-11. Figure 2-1 shows the background sampling locations used for Round 26; these locations are sufficiently far from site operations to avoid any possible site influence.

Table 3-12 lists chemicals detected in background samples and compares IA concentrations to the maximum detected background concentration. Five VOCs were detected in background samples, and all chemicals detected in background samples were also detected in IA samples. All detected background concentrations are below their respective IA screening criteria. Table 3-12 evaluates whether chemical concentrations detected in IA are possibly due to interior sources, or if they simply reflect background conditions, using the following logic:

- When IA concentrations are equal to or less than background concentrations, IA concentrations likely reflect background conditions.
- When IA concentrations are greater than background concentrations and/or sub-slab concentrations, other interior sources are possibly contributing to IA concentrations.
- The presence of chlorinated degradation-products in IA samples (at concentrations less than those detected in SV samples), but not in background samples, suggests that sub-slab sources might contribute to these IA concentrations.

All COC detected in IA during Round 26 were at concentrations less than their respective screening levels. However, IA detections of several chemicals at concentrations less than screening levels may be influenced by background. As presented in Table 3-12, chemicals with most of their indoor air detections below background (1,3,5-trimethylbenzene and dichlorodifluoromethane) are likely influenced by ambient background contaminant sources. The

remaining contaminants, if detected in both ambient air and in IA, might be due to IA sources (and possibly VI to IA), and/or ambient background conditions. In any case, all background contaminants also detected in IA in Round 26 are below IA screening levels.

SECTION 4

SUB-SLAB-DEPRESSURIZATION-SYSTEM DATA ANALYSIS

This section summarizes the operation and monitoring activities for the sub-slab-depressurization (SSD) systems (SSDS) in Buildings A and C for the reporting period from October 1, 2018 to March 31, 2019. A detailed account of these activities is in the April 22, 2019, remedial action progress report (Appendix E). The location and layout of the SSD systems, and associated sub-slab vapor (SV) extraction points and vapor monitoring points (VMPs), are shown in Figures 1, 2, and 4 of Appendix E. This section discusses SV sampling results, extraction points, system influent, vacuum influence, and SSDS performance.

4.1 SUB-SLAB VAPOR MONITORING POINTS

Tables 4-1 and 4-2 summarize the concentrations of target volatile organic compounds (VOCs) detected at SV monitoring points to date near the SSD systems in Building A (in the lay-up room [former plating shop on the main floor], basement, and eastern area [on main floor]), and in the Building C basement, respectively.

4.1.1 Building A

SV samples collected to date near the Building A SSDS are listed in Table 4-3. VMPs 015-A (on the main floor of Building A); 078-A, 079-A and 136-A (in the eastern area of Building A); 168-A (in the northern area of Building A); and 093-A and 116-A (in the basement of Building A) were sampled in February 2019 (see Figure 2 in Appendix E).

VMPs 015-A (on the main floor of Building A) and 018-A (in the basement) had originally been scoped to be sampled regularly as part of the facility-wide semiannual SV and indoor-air (IA) monitoring program (see Figure 2 in Appendix E). However, VMP 018-A has not been sampled since February 2014, because water regularly collects in its flush-mounted vault. Subsequently, VMPs 093-A and 116-A were added to the SSDS monitoring program.

The highest SV trichloroethene (TCE) concentrations that have been measured in Building A were detected at VMPs 015-A, 018-A, 079-A, 136-A, and 168-A before and after the SSDS began operation, as shown in Table 4-4. The concentrations detected at VMPs 015-A, 079-A, 136-A, and 168-A in February 2019 were at least one order of magnitude (i.e., 10 times) lower than the concentrations detected before a Building A SSDS extraction point began operation in the area.

While a significant decline in TCE concentrations has been observed at 015-A, concentrations continue to fluctuate over time, with some apparent seasonal variation (higher in summer [August] as compared to winter [February] since 2017). For example, TCE was detected at an estimated 2.3 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) in February 2017, at 51.5 $\mu\text{g}/\text{m}^3$ in August 2017, at 6.3 $\mu\text{g}/\text{m}^3$ in February 2018, at 73 $\mu\text{g}/\text{m}^3$ in August 2018, and at 4 $\mu\text{g}/\text{m}^3$ in February 2019 (Figure 4- 1). VOC-impacted groundwater likely provides a continuing source of VOCs to SV at 015-A. Similar fluctuations had also occurred at 018-A between August 2011 and February 2014.

VMPs 079-A and 136-A are near extraction points installed during the system expansion that was completed in April 2016. August 2018 results show that these locations have had more than a 90% decrease in total VOCs since the SSDS was expanded. Figure 4-2 shows that since August 2016, the summer (August) sampling results at these two points are higher than the winter (February) results, with what appears to be seasonal fluctuation.

VMP 168-A is near the system extraction point SSD-39-A, installed during the third-phase of system expansion completed in July 2017; this location continued to show VOC concentration decreases in February 2019 (TCE at 180 $\mu\text{g}/\text{m}^3$) as compared to concentrations in August 2018 (TCE at 950 $\mu\text{g}/\text{m}^3$) and before third-phase expansion in February 2017 (TCE at 22,000 $\mu\text{g}/\text{m}^3$).

Concentrations observed after SSDS startup were generally lower than concentrations detected before the system began operation. VOC reductions at 018-A (in the basement, and last sampled in 2014 due to consistent high groundwater levels) might be more limited than those experienced at main floor VMPs, because the shallow groundwater table (typically less than one foot below the basement slab) possibly impedes vapor flow.

4.1.2 Building C

SV samples collected to date near the Building C SSD system are listed in the Table 4-5. These points are within 100 feet of the Building C SSD-system extraction points in the basement; most³ are within the vacuum influence of SSD-system operations. VMPs 001-C, SSD-4-C (in the southern basement area); and 060-C, 088-C, 113-C, 126-C, 133-C, 141-C 149-C, 152-C, 153-C, and 155-C (in the mid-basement area) were sampled in February 2019 (see Figure 4 in Appendix E).

The highest TCE concentrations were observed at VMPs 001-C, SSD-4-C, 060-C, 113-C, and 133-C before SSDS extraction points began operation in those areas. The most recent concentrations are summarized in Table 4-6. February 2019 TCE concentrations are lower than the concentrations measured before SSD-system startup. Compared to the concentrations measured in the previous semiannual event (August 2018), VMPs 001-C, SSD-4-C, 126-C, 133-C, 149-C, 153-C, and 155-C have lower TCE concentrations, most notably at 001-C, SSD-4-C, 126-C, 133-C, and 149-C; see Table 4-2 and Figure 4-3 for details. The concentrations at VMPs 060-C, 088-C, 113-C, 141-C are slightly higher or similar to those detected during the previous semi-annual event, and are apparently reaching asymptotic levels after several years of vapor extraction in the area. TCE at VMP 152-C continued to decrease; its February 2019 concentration was lower than its August 2018 concentration (49 $\mu\text{g}/\text{m}^3$, as compared to 77 $\mu\text{g}/\text{m}^3$; see Table 4-2 and Figure 4-3).

Concentrations of vinyl chloride (VC) observed at 126-C (north of the SSDS extraction points) have also decreased since the SSD-system expansion (see Figure 4-4), but, as shown on Figure 4-4, VC concentrations in sub-slab vapor at 126-C have varied over time (the respective VC concentrations there in August 2018 and February 2019 were 6,300 $\mu\text{g}/\text{m}^3$ and 1,100 $\mu\text{g}/\text{m}^3$). The reason for these fluctuations may possibly be due to seasonal fluctuation (see 2015, 2016, 2017, and 2018 results in Figure 4-4). VC has not been detected in SSDS influent samples or in groundwater samples collected from a nearby well pair (MW-88A/B).

³Locations 001-C, SSD-4-C, 060-C, 113-C, 127-C, 133-C, 135-C, 149-C, 152-C, 153-C, 155-C, and 156-C

4.2 SUB-SLAB VAPOR EXTRACTION POINTS

The Building A and Building C SV extraction points are not sampled as part of the semi-annual SSDS monitoring program, because the combined influent for the Building A system is sampled monthly, and the Building C system is sampled every two months (influent sampling results are presented in Section 4.4). Figure 2 in Appendix E shows the Building A extraction points (North, South, Basement North, and Basement South), horizontal extraction laterals, extraction pipe from basement sump HRS-5, and vertical extraction points in Building A (SSD-34-A, SSD-35-A, SSD-36-A, SSD-37-A, SSD-38-A, and SSD-39-A). Figure 4 in Appendix E shows the vertical extraction points in Building C: SSD-21-C, SSD-23-C, SSD-26-C, SSD-27-C, SSD-28-C, SSD-29-C, SSD-30-C, SSD-31-C, SSD-32-C, SSD-33-C, and SSD-34-C.

4.3 VACUUM INFLUENCE

Induced vacuum levels over time for sub-slab VMPs in the targeted areas are shown on the following figures in Appendix E: Figure 6 (Building A lay-up room and basement), Figure 7 (Building A eastern area), Figure 8 (Building C southern basement area), and Figure 9 (Building C mid-basement area). Representative vacuum measurements from the March 28, 2019 monitoring episode are indicated on plan views on Figures 10, 11, 12, and 13 of Appendix E. Vacuum influence associated with SSDS VMPs is checked biweekly. The target vacuum is 0.01 inches of water column or greater (Note: negative vacuums at some points indicate pressure readings that are considered not influenced by the SSDS; pressure readings are likely due to undetermined local features).

As indicated in the April 2019 progress report (Appendix E), extraction trenches near the Building A lay-up room induce a vacuum equal to or greater than 0.01 inches water column over an approximately 5,900-square-foot area; this area encompasses all SV monitoring points that had elevated VOC concentrations before system startup. The trenches in the Building A basement induce a vacuum over an approximately 1,900-square-foot area that encompasses all four VMPs used to measure the SSDS induced vacuum in the basement. The extraction wells in the eastern area of Building A induce a vacuum over an approximately 6,100-square-foot-area, and encompass nine of 15 VMPs used to measure the SSDS induced vacuum in that area. Extraction point SSD-

39-A in the western area of Building A is inducing vacuum at two nearby VMPs; the associated area of induced vacuum influence is approximately 1,100 square feet.

The Building C basement extraction wells induce vacuum influence over an approximately 4,200-square-foot area in the southern end of the basement, while the extraction wells in the mid-basement area induce vacuum influence over an approximately 36,800-square-foot area. In the mid-basement, 14 of 20 accessible monitoring points are within the target area shown to have vacuum influence. .

SSD systems are performing as designed except for a lack of induced vacuum near SSD-136-A in the eastern area of Building A, as indicated by the lack of influence seen at 136-A-N and 162-A. However, TCE concentrations at 136-A and 136-A-N have both decreased more than 98% since the system was expanded in 2016

4.4 INFLUENT-VAPOR SAMPLES

Influent-vapor samples are collected monthly to monitor the Building A SSDS operation, and once every two months to monitor the Building C SSDS operation. VOC concentrations at the granular activated-carbon (GAC) influent, midpoint (after the lead drum), and effluent (after the second drum) points are monitored to determine when the midpoint concentration reaches 50% of the influent; when the 50% breakthrough is reached, or at Tetra Tech's discretion with concurrence from Lockheed Martin Corporation (Lockheed Martin), the lead GAC drum is changed out. These samples also allow monitoring of influent-concentration trends over time. Samples are collected directly from all three sampling ports of both SSD systems by connecting a clean one-liter Summa[®] canister (batch certified) to the Teflon[®] tubing of each sampling port and opening the valve for approximately one minute. The samples were submitted to TestAmerica Laboratories, Inc. (TestAmerica) in Knoxville, Tennessee for VOC analysis using United States Environmental Protection Agency (USEPA) Toxic Organic Method (TO-15).

Tables 4-7A and 4-7B summarize the influent-vapor concentrations of target VOCs in samples over time (from system startup in March 2008 through March 2019). These results are displayed graphically on Figures 14 and 15 in Appendix E. Tables 4-7A and 4-7B provide average influent concentrations for the current (October 2018–March 2019) and previous (April–September 2018)

reporting periods. The six-month average-influent (total) VOC concentration in Building A and Building C during the current reporting period (1,429 $\mu\text{g}/\text{m}^3$ for Building A and 49 $\mu\text{g}/\text{m}^3$ for Building C) are lower than the average-influent VOC concentration during the previous semiannual reporting period (2,005 $\mu\text{g}/\text{m}^3$ for Building A and 110 $\mu\text{g}/\text{m}^3$ for Building C). Overall, influent VOC concentrations for both SSD-systems have been relatively stable or slowly decreasing since 2009 (see Figures 14 and 15 in Appendix E).

The goal of the SSD systems is to maintain a negative pressure below the slab (relative to the room space), thus minimizing VOC migration from the sub-slab soil into indoor air. VOC mass removal occurs by treatment of the vapor drawn out to maintain the vacuum.

VOC removal rates for SSDS influent mass in Building A ranged from 0.04 to 0.07 pounds per day (lbs/day); these rates are similar to the removal rates observed in the previous semiannual reporting period (0.05 to 0.08 lbs/day). The Building A system has removed eight pounds (lbs) of VOCs during this reporting period, nine pounds during the previous reporting period, and has removed approximately 190 lbs since system startup in March 2008.

The VOC removal rate in Building C during the current reporting period was less than the previous reporting period, approximately 0.02 pounds per month (lbs/month). The Building C SSDS has removed 0.12 lbs of VOCs this reporting period, 0.29 lbs during the previous reporting period, and has removed 12.2 lbs since system startup in March 2008.

4.5 SYSTEM PERFORMANCE

In general, flow rates and induced vacuums for the SSD systems are performing as designed except for a lack of induced vacuum near SSD-136-A in the eastern area of Building A. We will continue to monitor system induced vacuum performance; however, some localized areas are likely to remain not amenable to induced vacuum, due to the heterogeneous structure of subsurface soil and water accumulation in the subsurface of these older structures. The induced-vacuum influence of the Building A system is over 5,900 square-feet on the main floor (encompassing the lay-up room), 1,900 square-feet in the basement, 6,100 square-feet in the northern and eastern areas, and 1,100 square feet in the western area. The induced-vacuum influence of the Building C SSDS

extends over an approximately 4,200 square-foot area in the southern basement, and over approximately 36,800 square-feet in the mid-basement area.

SECTION 5 CONCLUSIONS

5.1 CONCLUSIONS

Tetra Tech, Inc., (Tetra Tech) has completed Round 26 of vapor-intrusion (VI) monitoring (the first of two scheduled in 2019) in Buildings A, B, and C at the Middle River Complex (MRC) (owned by LMC Properties, Inc.) in Middle River, Maryland. This ongoing investigation seeks to evaluate whether volatile organic compounds (VOCs) in sub-slab vapor (associated with soil and groundwater chemicals of concern [COC] at the site) might be moving into indoor air (IA) at the Middle River Complex facilities, and whether subsurface vapor contamination remains present at concentrations that dictate continued operation of the sub-slab-depressurization (SSD) vapor-intrusion-mitigation systems mitigation system (or if a transition/exit strategy can be performed). The data set is composed of indoor air and sub-slab vapor (SV) samples collected in February 2019. Ambient air samples were also collected at four outdoor background locations around the perimeter of the Middle River Complex. All data were validated to ensure compliance with analytical method requirements.

Indoor air data were compared to risk-based screening levels for industrial air set at the 1×10^{-5} (i.e., one-in-100,000 probability) risk level for carcinogens, or at a hazard quotient of 1 for noncarcinogens (as published in the United States Environmental Protection Agency [USEPA] *Regional Screening Levels for Chemical Contaminants at Superfund Sites* [USEPA, 2018]). For samples collected in the Building A basement only, indoor air levels of trichloroethene (TCE) were compared to a Maryland Department of the Environment-approved basement-specific screening level of 35 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), based on the limited exposure potential for workers entering the basement. Indoor air samples were also compared to federal Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs). Alternate values, such as the “Threshold Limit Values” published by the American Council of Governmental Industrial Hygienists, were used for chemicals without published permissible exposure limits. SV

data were compared to screening values derived using methods described in *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Sources to Indoor Air* (USEPA, 2015) by applying an attenuation factor of 0.03 to the indoor-air screening values.

Historically, trichloroethene and naphthalene have been the prevalent contaminants of concern in indoor air at this site. In Round 26, trichloroethene was not detected in indoor air in Building B, but was detected in indoor air in Buildings A and C. Trichloroethene was detected in 13 of 35 indoor air samples collected during Round 26. However, all indoor air trichloroethene detections were less than the screening level ($8.8 \mu\text{g}/\text{m}^3$) (see plan view in Figure 5-1) and the Building A basement-specific screening level ($35 \mu\text{g}/\text{m}^3$). The reduced trichloroethene indoor air concentrations in the Building A basement, compared to previous years, are attributable to sealing and extracting vapors from basement sump HRS5; this sump was connected to the Building A sub-slab-depressurization system in June 2017.

In Round 26, naphthalene was detected in only one of 35 indoor air samples at a concentration less than its screening level. The sole naphthalene detection occurred in Building A (location 021-A). Sub-slab vapor naphthalene was detected in six of 33 samples, with one concentration exceeding its screening level (at location 102-C). Naphthalene was not detected in indoor air in Buildings B or C.

5.1.1 Building A

Trichloroethene exceeded its screening level in sub-slab vapor (but not in indoor air) during Round 26. Trichloroethene concentrations in Building A are discussed below.

Basement

- Trichloroethene was detected in indoor air at all four Building A basement sampling locations, but at concentrations less than its basement-specific screening level ($35 \mu\text{g}/\text{m}^3$), which was derived to account for reduced potential exposure in the basement, and at concentrations less than its industrial worker screening level ($8.8 \mu\text{g}/\text{m}^3$). Historical indoor-air trichloroethene concentrations in the Building A basement in samples using Summa[®] canisters have never exceeded the basement-specific screening level but have exceeded the industrial screening level. Trichloroethene was detected at concentrations greater than the sub-slab vapor screening level in vapor samples collected from behind the eastern basement wall at locations 171-A and 173-A. Direct measurement of air above the sumps

and of air trapped in the covered sumps indicates that the sumps and drains in the Building A basement are the sources of the trichloroethene.

Main floor

- Trichloroethene was detected in sub-slab vapor at location 118-A (1,800 $\mu\text{g}/\text{m}^3$), located on the main floor in the Bond Layup Room, east of the former Plating Shop, at a concentration greater than the screening level (293 $\mu\text{g}/\text{m}^3$). This sample was collected where a positive-pressure air-conditioning system was operating. This sampling location is within the radii of influence of the sub-slab depressurization systems. Indoor air concentrations of trichloroethene on the main floor of Building A were all less than the screening level.

The sub-slab-depressurization system in Building A appears to be operating as designed (except for limited vacuum influence in the SSD-136-A area), and appears to be effectively mitigating sub-slab vapor intrusion from known source areas of sub-slab vapor contamination, in concert with the indoor-air filtration units and control of vapor emissions from the sumps. Contaminants are constantly removed from soil vapor during system operation, and indoor air concentrations in the main part of Building A (excluding the basement) rarely exceed screening values. Filter cartridges are changed-out quarterly; no other maintenance is required.

Although basement occupancy is restricted, and screening levels related to restricted occupancy are not exceeded, this area will continue to be monitored as the sub-slab-depressurization system continues to operate. Figures 5-2A, 5-2B, and 5-2C show concentrations of trichloroethene in Building A in sub-slab vapor samples, in indoor air of the basement, and in indoor air on the first floor of the building (respectively). Direct measurement of air above the sumps and of air trapped in the covered sumps indicates that the sumps and drains in the Building A basement are the primary trichloroethene sources.

5.1.2 Building B

No exceedances were noted in the Building B indoor air or sub-slab vapor samples during Round 26. The most recent exceedance of the indoor air screening level was during Round 18, when one slight exceedance of naphthalene was detected (February 2015).

5.1.3 Building C

Trichloroethene was detected in three of 18 indoor air samples collected from Building C during Round 26. Sub-slab vapor exceedances of trichloroethene were detected at five locations (060-C,

in the east-central portion of Building C, and within the system's radius of influence; 102-C, in the central portion of Building C near REC #31 (former Patriot Plating Line); 126-C (inside the museum room) and 141-C (south of the museum room and north of the machine shop), both of which are in the northeastern portion of Building C; and 133-C, in the central portion of Building C, north of REC #31(former Patriot Plating Line), and within in the system's radius of influence) in Building C during Round 26, with concentrations ranging from 340 $\mu\text{g}/\text{m}^3$ to 1,100 $\mu\text{g}/\text{m}^3$. The Round 26 exceedances in sub-slab vapor are consistent with those observed in other recent sampling rounds (e.g., Rounds 21 through 25).

Vinyl chloride was detected in sub-slab vapor at location 126-C at a concentration (1,100 $\mu\text{g}/\text{m}^3$) greater than its screening level (933 $\mu\text{g}/\text{m}^3$) during Round 26. Concentrations of vinyl chloride in sub-slab vapor at 126-C have decreased since the sub-slab depressurization system expansion, but have fluctuated over time. Vinyl chloride has not been detected in groundwater near 126-C, nor in indoor air, despite the presence of trichloroethene in nearby groundwater monitoring well MW-88A at concentrations up to 1,500 micrograms per liter ($\mu\text{g}/\text{L}$) in 2009.

Sub-slab vapor concentrations of 1,1-dichloroethane (4,800 $\mu\text{g}/\text{m}^3$) and naphthalene (210 $\mu\text{g}/\text{m}^3$) also exceeded their screening levels (2,567 $\mu\text{g}/\text{m}^3$ and 120 $\mu\text{g}/\text{m}^3$, respectively) at location 102-C during Round 26. Sub-slab vapor concentrations of 1,1-dichloroethane and naphthalene also exceeded their screening levels at location 102-C during other recent sampling rounds (e.g., Rounds 17, 18, 20, 22, 23, 24, and 25).

In general, sub-slab vapor concentrations of volatile organic compounds have decreased in the southern basement area (SSD-4-C) of Building C since system startup in March 2008. Vapor monitoring points (060-C, 088-C, 113-C, 126-C, 133-C, and 135-C) in the mid-basement area also show lower concentrations, as compared to results before system expansion in May 2013.

The absence of any Building C indoor air screening-level exceedances for any compound suggests that vapor intrusion is likely not occurring. The sub-slab-depressurization system in Building C appears to be operating as designed, and appears to be effectively mitigating sub-slab vapor intrusion from known source areas of sub-slab vapor contamination. Figures 5-3A and 5-3B show

sub-slab vapor and indoor air concentrations of 1,1-dichloroethane, naphthalene, trichloroethene, and vinyl chloride in Building C.

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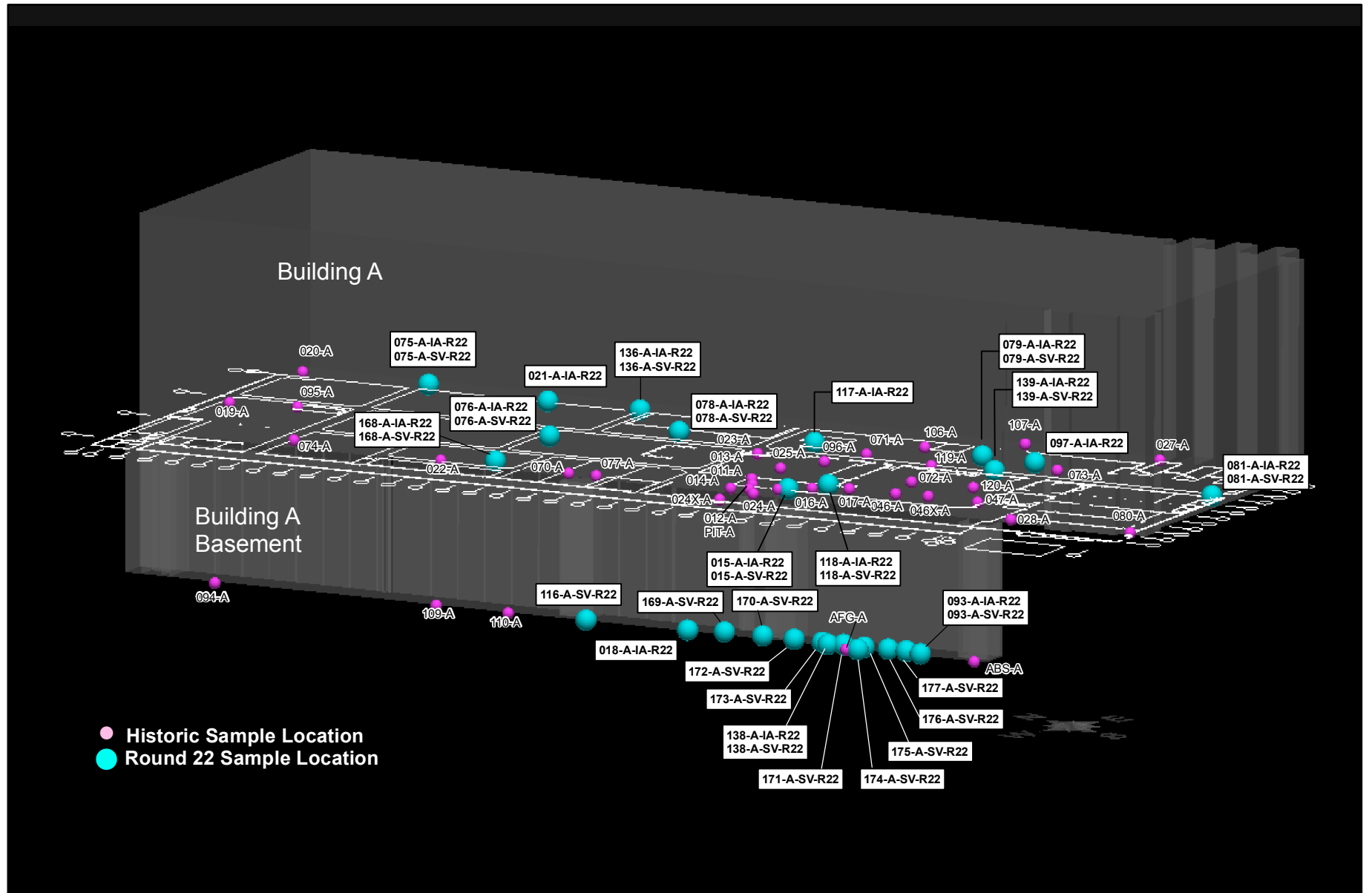
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- Figure 2-2 Ambient Air Background Sampling Locations, Round 26, February 2019**
- Figure 2-3 Indoor Air and Sub-Slab Vapor Monitoring Locations for Building A, Round 26, February 2019**
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Figure 2-1
 Indoor Air and Sub-Slab Vapor Monitoring Locations
 for Building A, Round 22, March 2017








MARTIN STATE AIRPORT

FIGURE 2-2

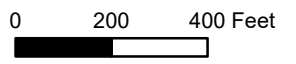
**AMBIENT AIR BACKGROUND SAMPLING LOCATIONS
ROUND 26, FEBRUARY 2019**

LEGEND

-  BACKGROUND SAMPLING LOCATION
-  HISTORICAL BACKGROUND SAMPLING LOCATION
-  SURFACE WATER

IA - indoor air
 BCK-3 moved due to discovery of TCE UST adjacent to historic sample location.

**Lockheed Martin Middle River Complex
Middle River, Maryland**



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Figure 2-3
Indoor Air and Sub-Slab Vapor Monitoring Locations
for Building A, Round 26, February 2019

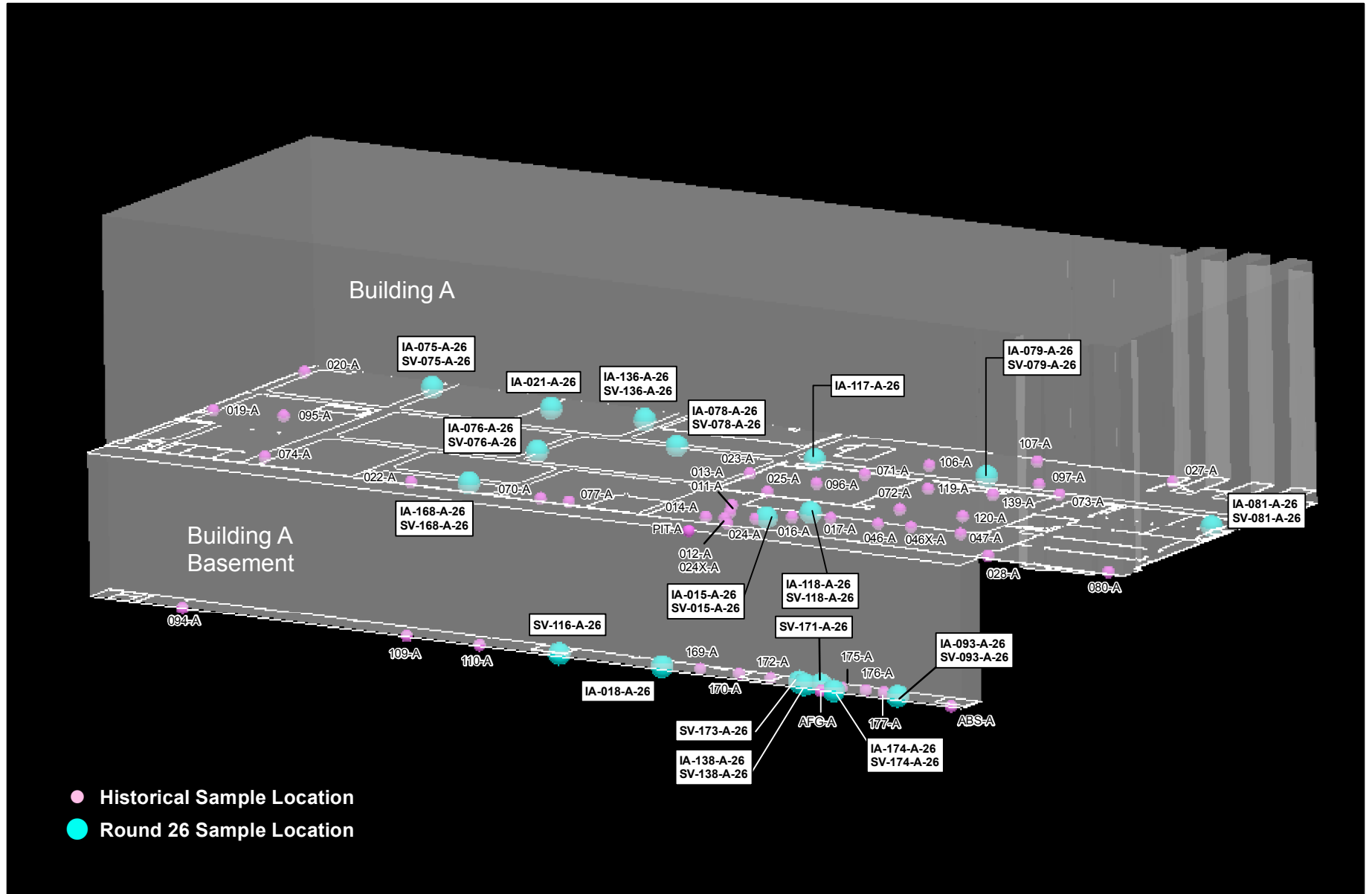


Figure 2-4
Indoor Air and Sub-Slab Vapor Monitoring Locations
for Building B, Round 26, February 2019

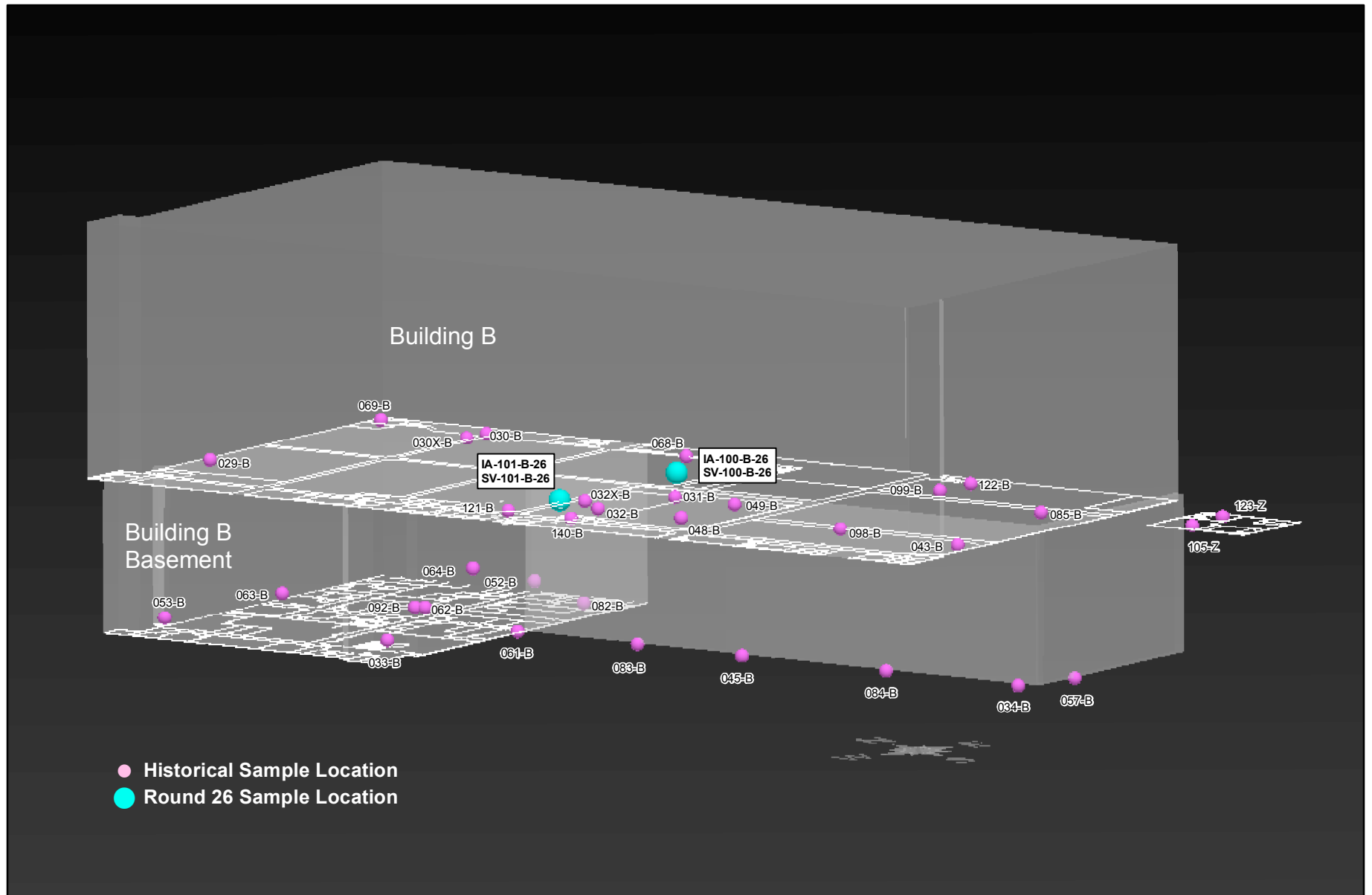


Figure 2-5
 Indoor Air and Sub-Slab Vapor Monitoring Locations
 for Building C, Round 26, February 2019

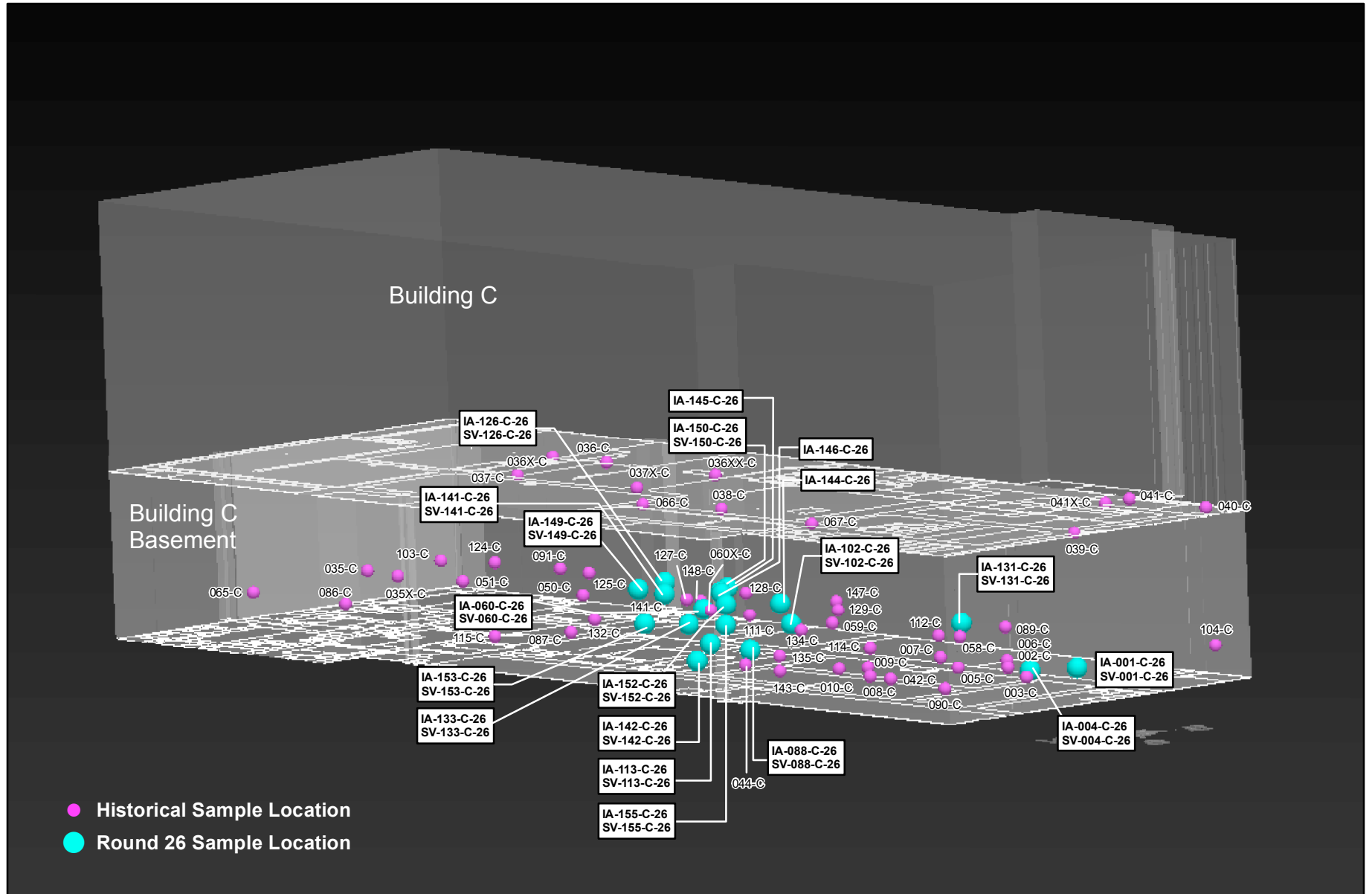
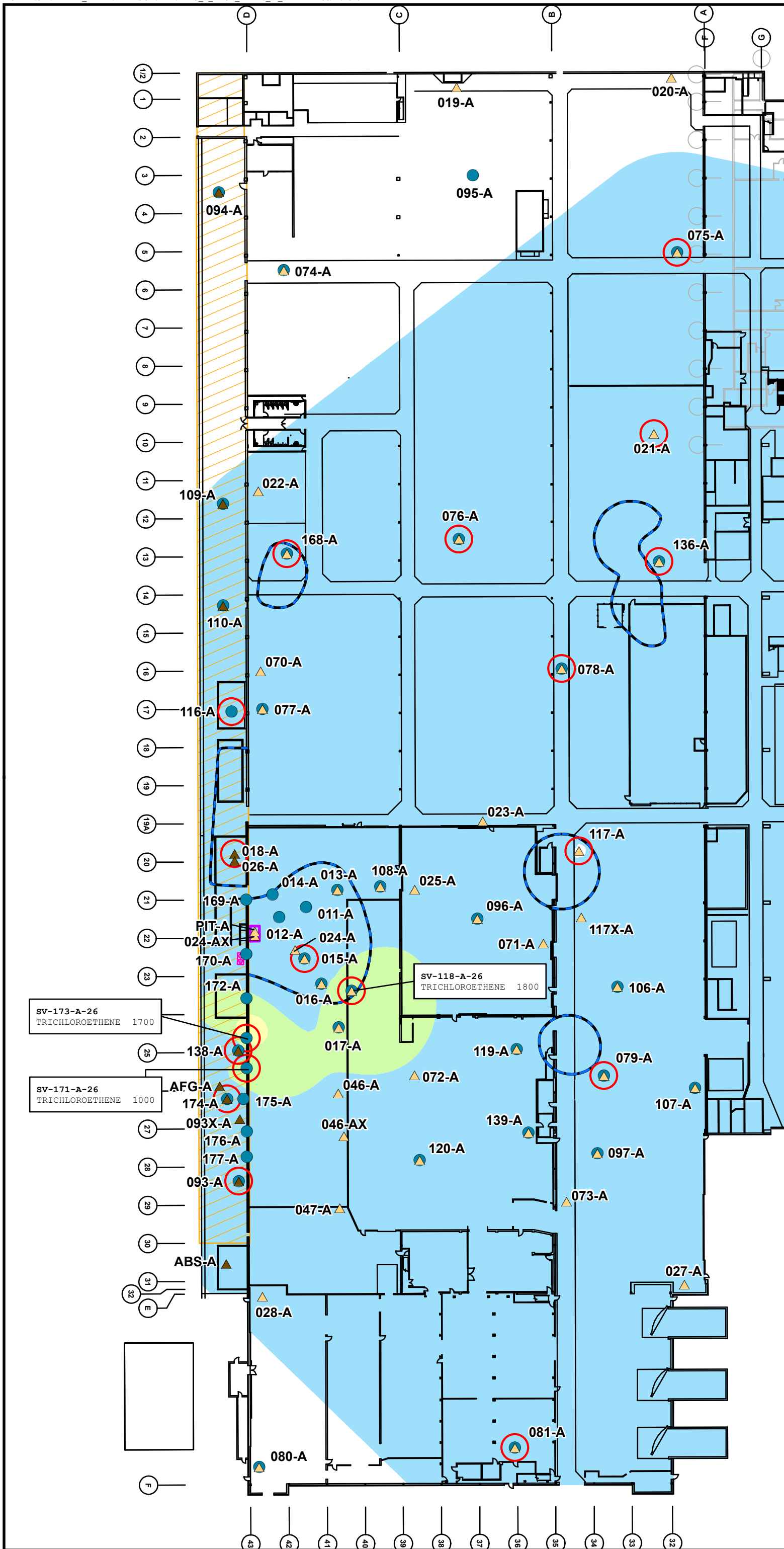


FIGURE 3-1

ROUND 26 INDOOR AIR AND SUB-SLAB VAPOR SAMPLING RESULTS GREATER THAN SCREENING LEVELS BUILDING A



Legend

- ▲ IA, 1st Floor
- ▲ IA, Basement
- SV
- Round 26 Sampling Locations
- SSD Radius of Influence
- Buildings A, B and C
- ▨ Building A Basement
- ▨ Building B and C Basement
- ▭ Excavation Area
- ⊞ SSD Treatment Unit

All results in microgram(s) per cubic meter ($\mu\text{g}/\text{m}^3$).
X - moved from original location once.

Screening Levels Exceeded

Chemical	Indoor Air	Soil Vapor
Trichloroethene	NA	293

NA - Not applicable

IA - Indoor Air
SSD - Sub-slab Depressurization
SV - Soil Vapor
TCE - Trichloroethene

February 2019 Sub-Slab Vapor TCE Concentration

N

0 32 64 Feet

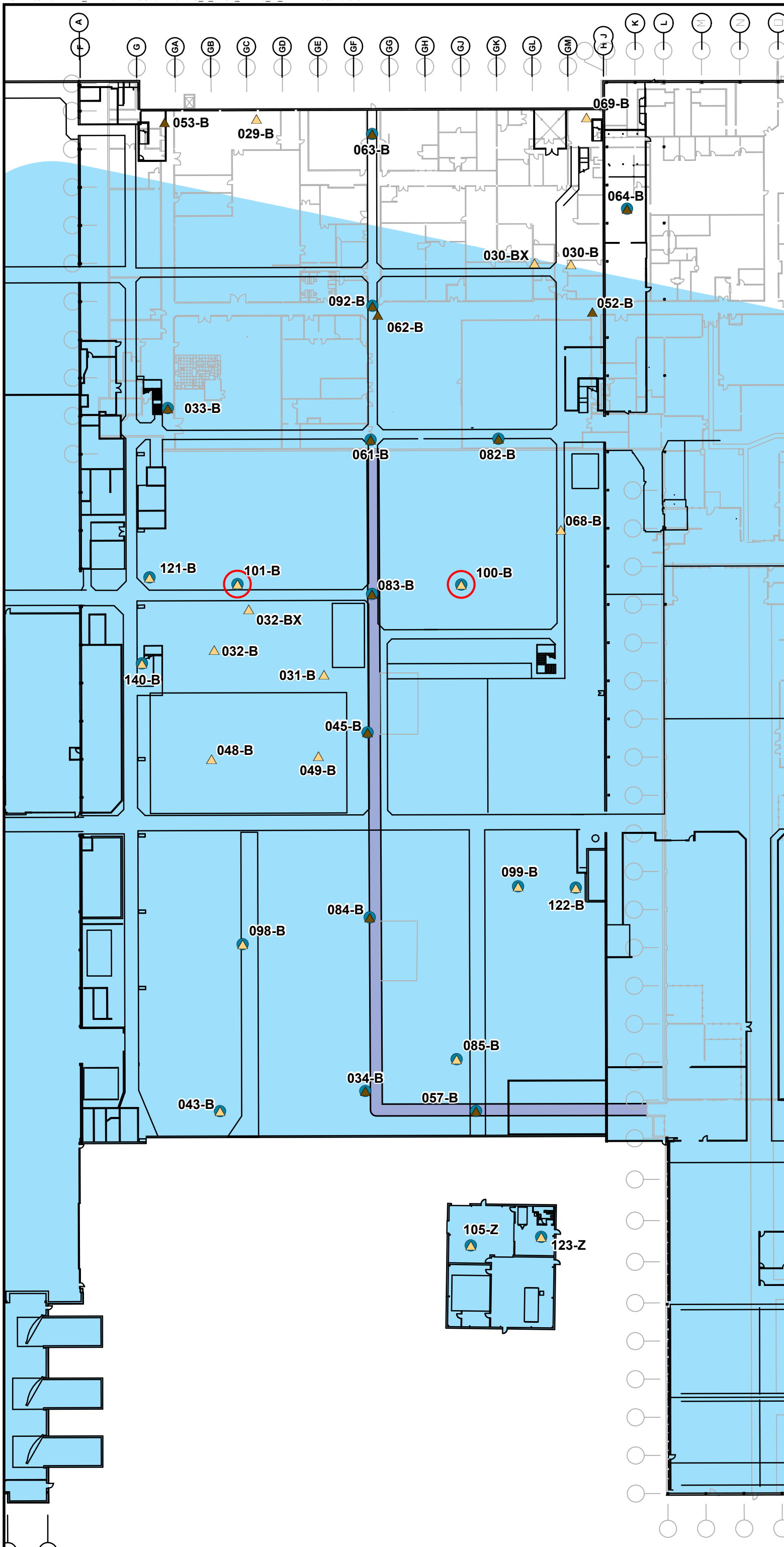
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TETRA TECH

FIGURE 3-2

ROUND 26 INDOOR AIR AND SUB-SLAB VAPOR SAMPLING RESULTS GREATER THAN SCREENING LEVELS BUILDING B



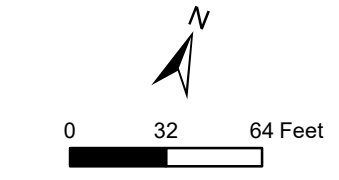
Legend

- ▲ IA, 1st Floor
- ▲ IA, Basement
- SV
- Round 26 Sampling Locations
- Buildings A, B and C
- Building B and C Basement
- Tunnel
- X - moved from original location once.

IA - Indoor Air
SV - Soil Vapor
TCE - Trichloroethene

February 2019 Sub-Slab Vapor TCE Concentration

	10000 ug/m ³
	1000 ug/m ³
	293 ug/m ³
	0.1 ug/m ³



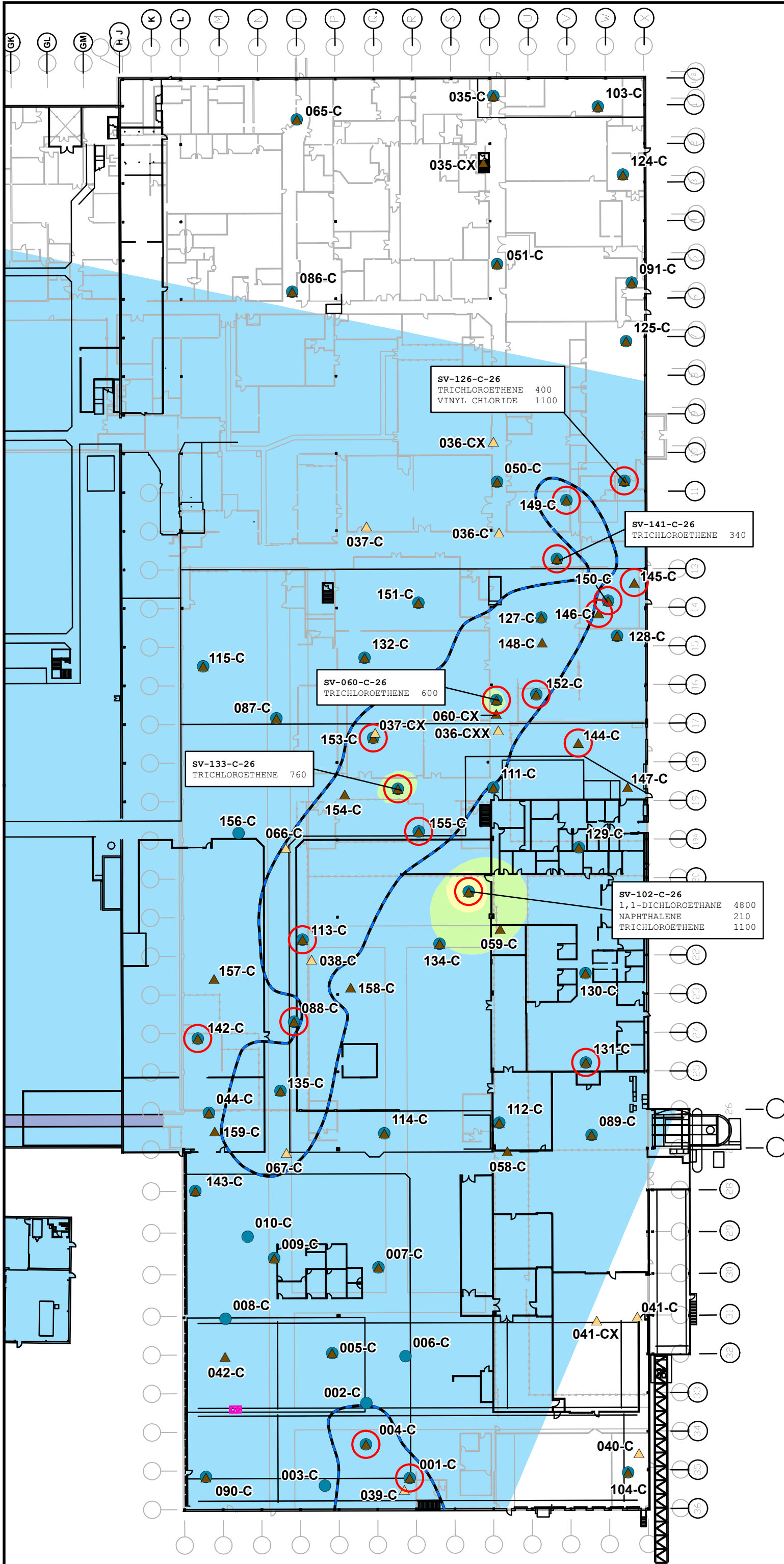
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FIGURE 3-3

ROUND 26 INDOOR AIR AND SUB-SLAB VAPOR SAMPLING RESULTS GREATER THAN SCREENING LEVELS BUILDING C



- Legend**
- ▲ IA, 1st Floor
 - ▲ IA, Basement
 - SV
 - Round 26 Sampling Locations
 - SSD Radius of Influence
 - Buildings A, B and C
 - Building B and C Basement
 - Tunnel
 - ☒ SSD Treatment Unit

All results in microgram(s) per cubic meter ($\mu\text{g}/\text{m}^3$).
 X - moved from original location once.

Note: As discussed in Section 2.2, the integrity of IA samples IA-113-C-26 and IA-131-C-26 could have been jeopardized due to changes in ambient pressure after the sample was taken (see text).

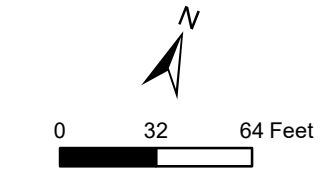
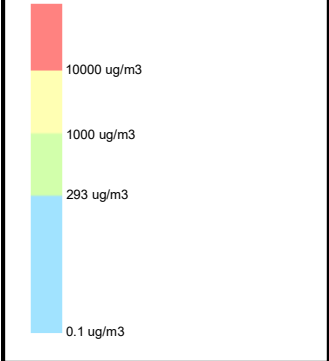
Screening Levels Exceeded

Chemical	Indoor Air	Soil Vapor
1,1-Dichloroethane	NA	2567
Naphthalene	NA	120
Trichloroethene	NA	293
Vinyl Chloride	NA	933

NA - Not applicable

IA - Indoor Air
 SSD - Sub-slab Depressurization
 SV - Soil Vapor
 TCE - Trichloroethene

February 2019 Sub-Slab Vapor TCE Concentration



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Figure 4-1
Sub-Slab Vapor VOC Concentrations at 015-A, Building A
Lockheed Martin Corporation, Middle River Complex
Middle River, Maryland

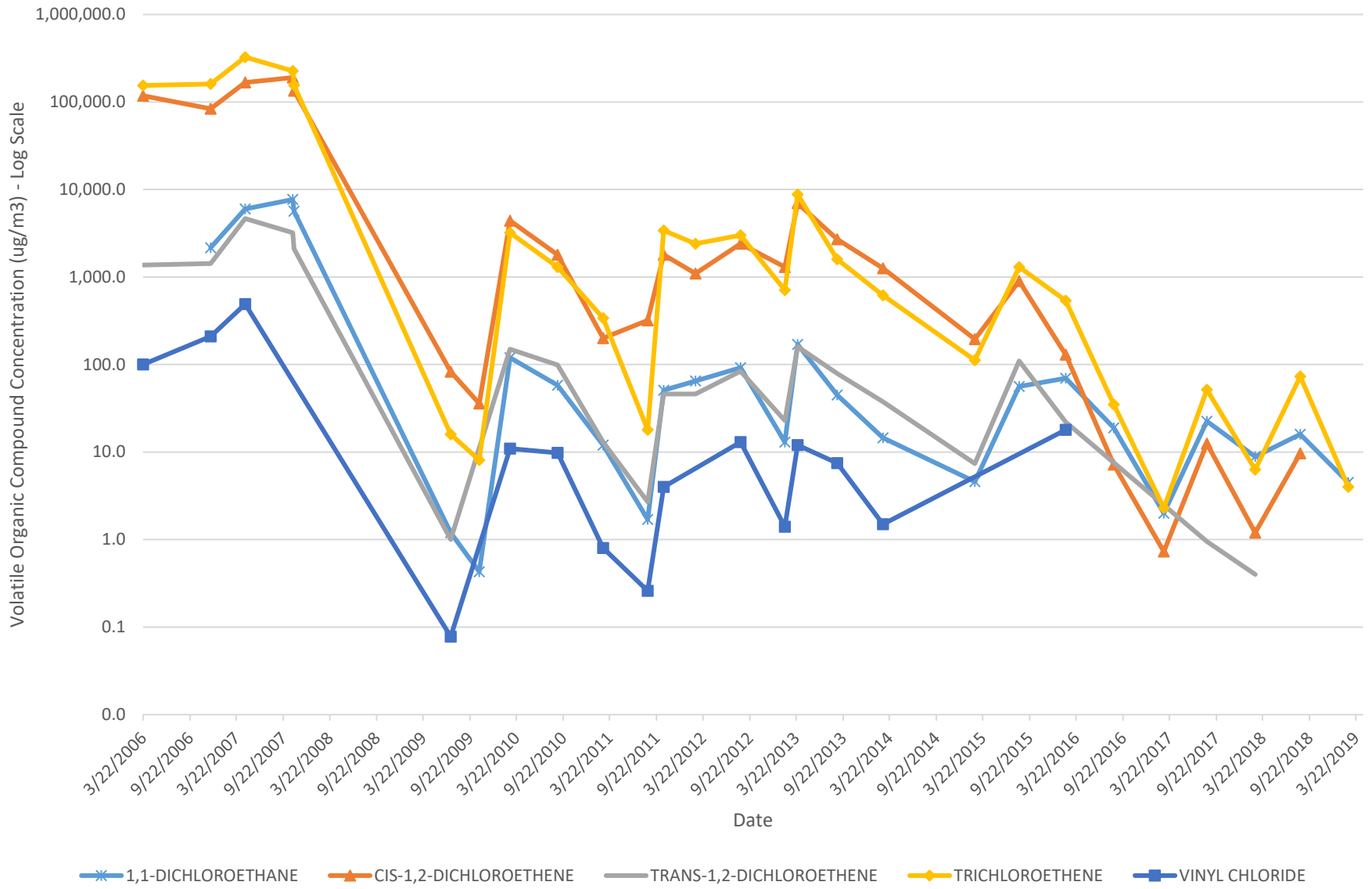


Figure 4-2
Sub-Slab Vapor TCE Concentrations at Monitoring Points Near SSD-System, Building A
Lockheed Martin Corporation, Middle River Complex
Middle River, Maryland

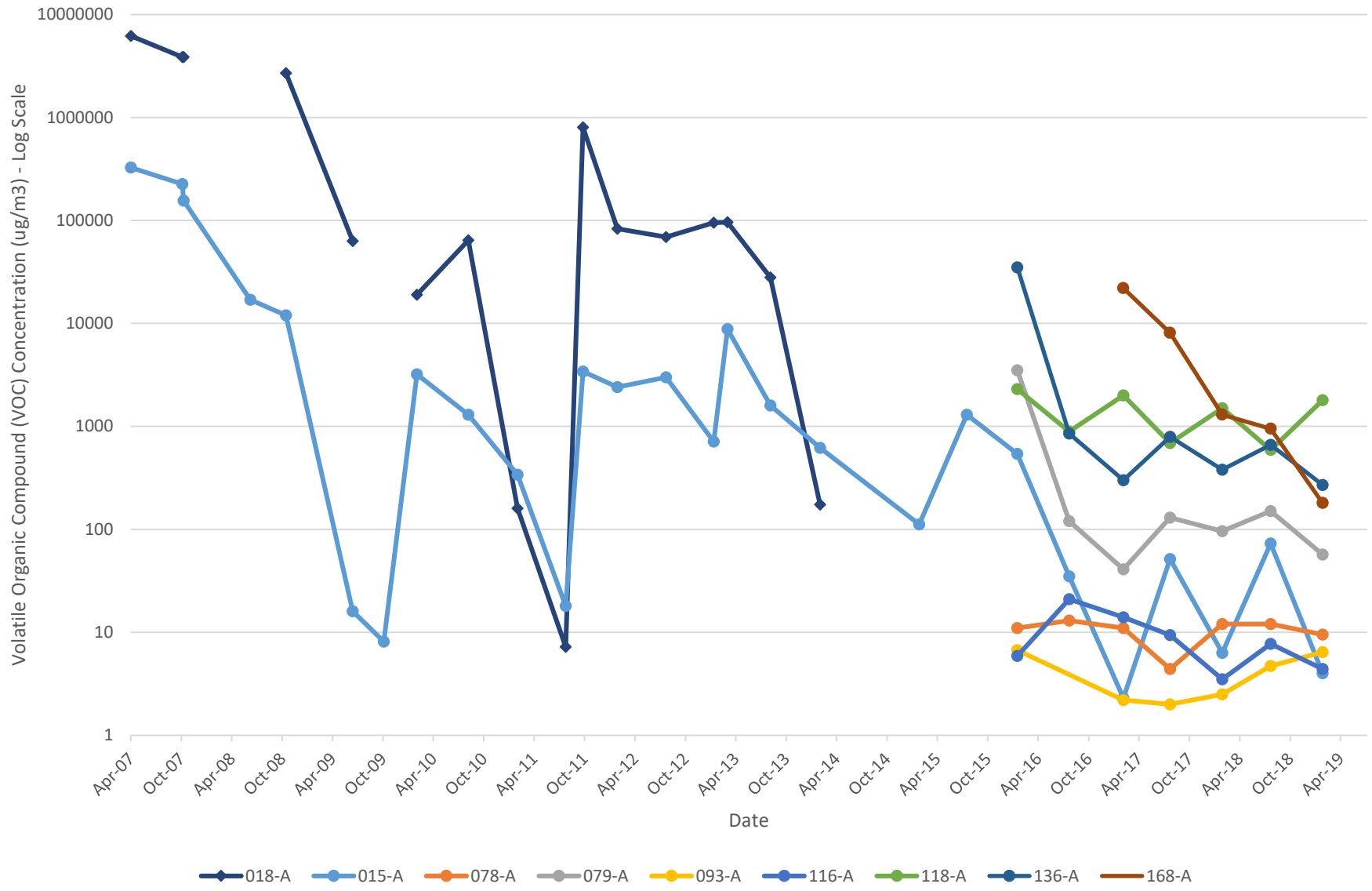
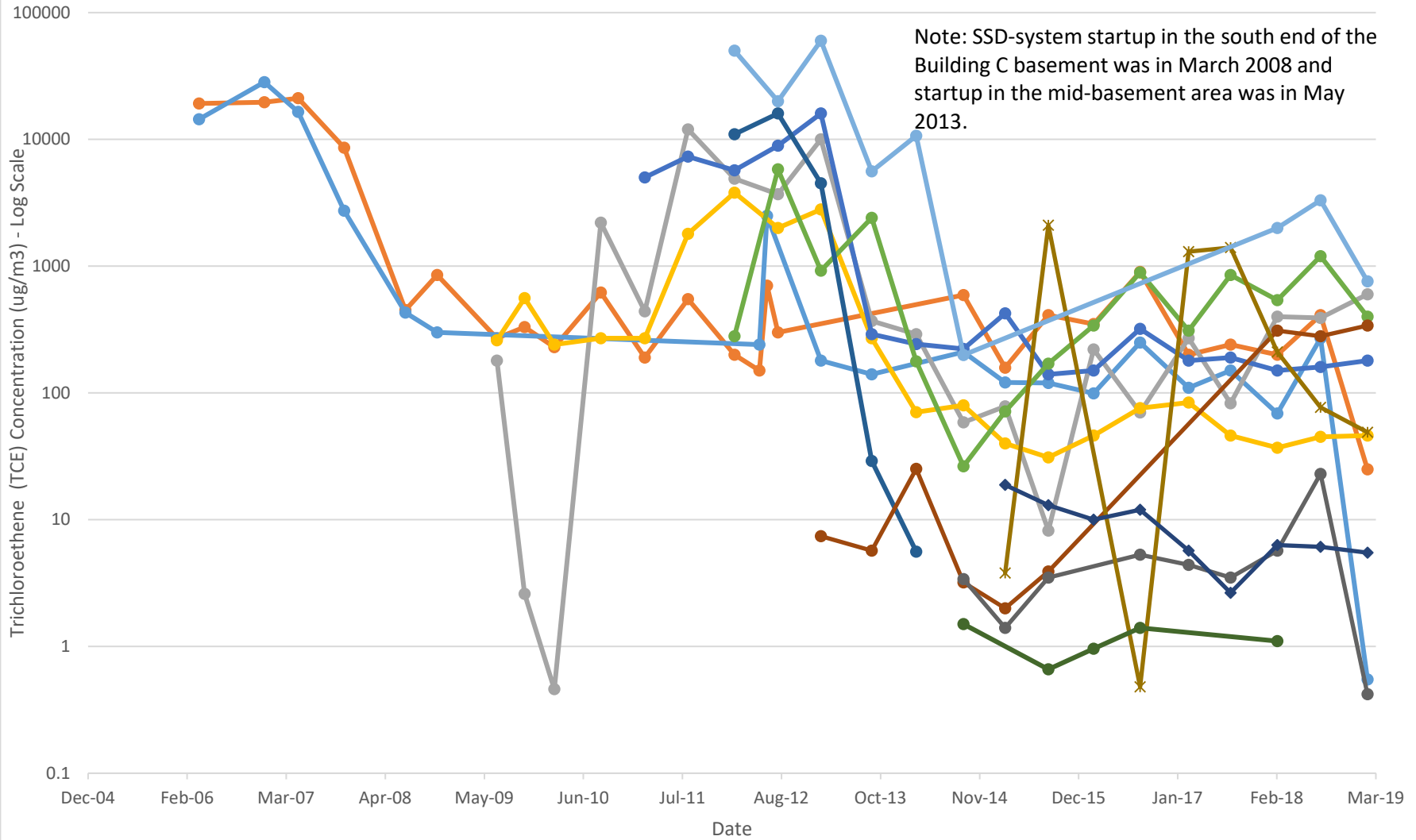


Figure 4-3
Sub-Slab Vapor TCE Concentrations at Monitoring Points Near SSD-System, Building C
Lockheed Martin Corporation, Middle River Complex
Middle River, Maryland

Note: SSD-system startup in the south end of the Building C basement was in March 2008 and startup in the mid-basement area was in May 2013.



001-C SSD-4-C 060-C 088-C 113-C 126-C 135-C 141-C 149-C 152-C 153-C 155-C 133-C

Figure 4-4
Sub-Slab Vapor Vinyl Chloride Concentrations at 126-C, Building C
Lockheed Martin Corporation, Middle River Complex
Middle River, Maryland

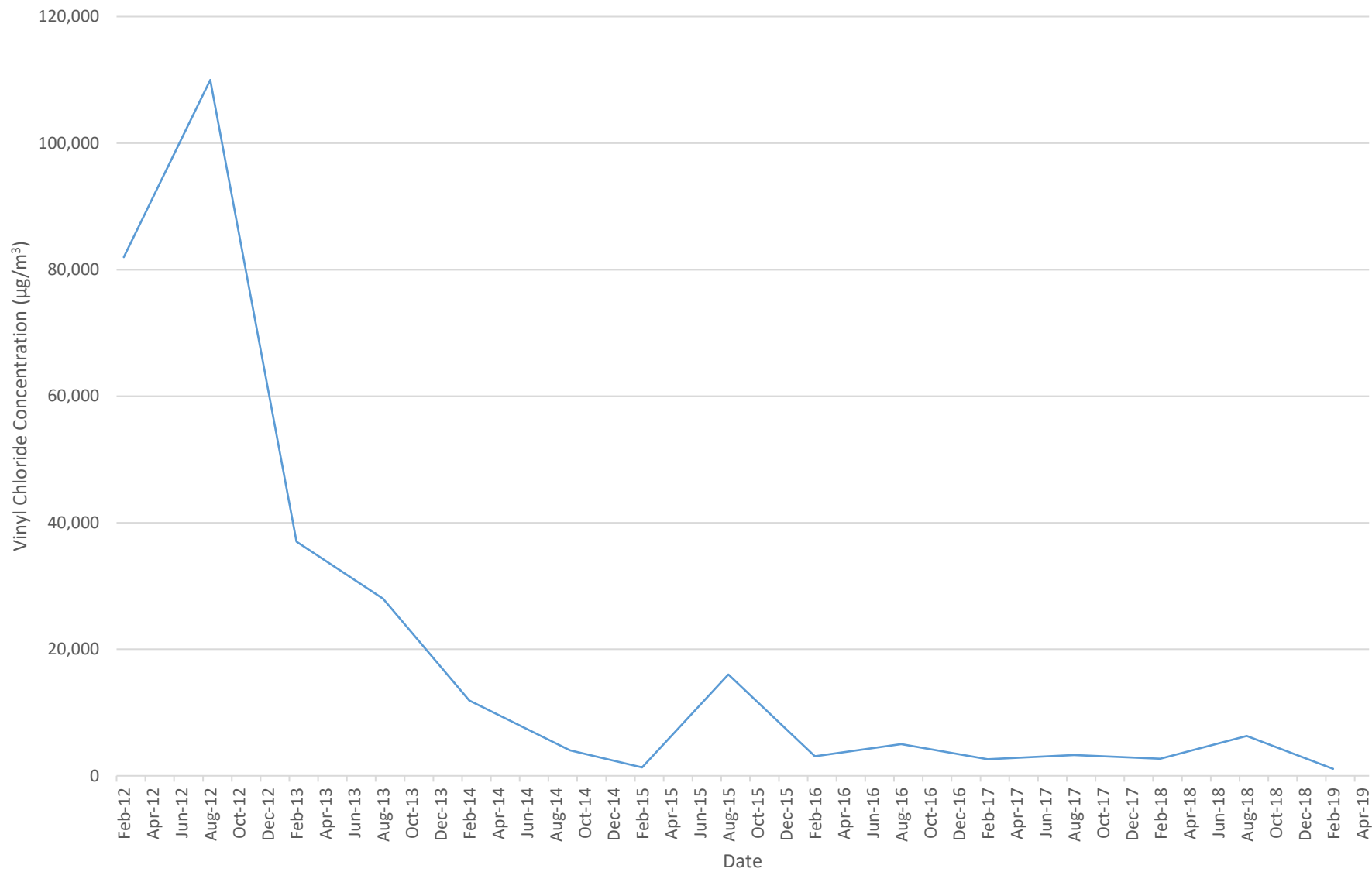
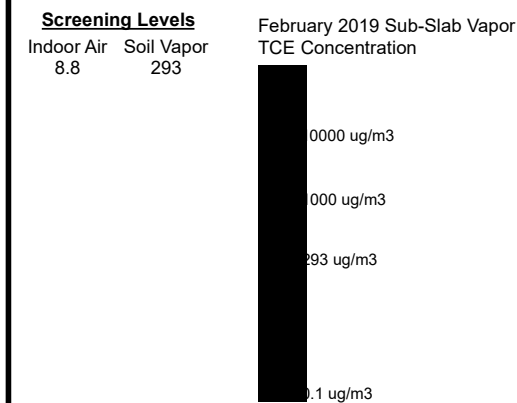


FIGURE 5-1
TRICHLOROETHENE SAMPLING RESULTS
ROUND 26
BUILDINGS A, B AND C

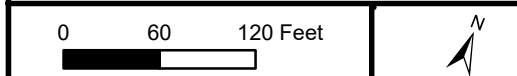
Legend

- ▲ IA, 1st Floor
- ▲ IA, Basement
- SV
- SSD Treatment Unit
- SSD Radius of Influence
- Buildings A, B and C
- Building B and C Basement
- Tunnel
- NA Indicates no indoor air results were collected.
- NA Indicates no soil vapor results were collected.

All units in $\mu\text{g}/\text{m}^3$.
 All location IDs begin with "AIR-".
 DUP - Duplicate sample.
 IA - Indoor air.
 J = Estimated value.
 NA - Not applicable.
 SSD = Sub-slab Depressurization.
 SV - Sub-slab vapor.
 TCE - Trichloroethene.
 U - Not detected.
 UR - Not detected, value was rejected.
 ug/m3 - microgram per cubic meter.
 X - moved from original location once.
 XX - moved from original location twice.
 Indoor air quality results shown in blue type.
 Soil vapor results shown in green type.
 Exceedances labeled in **bold italicized** print.



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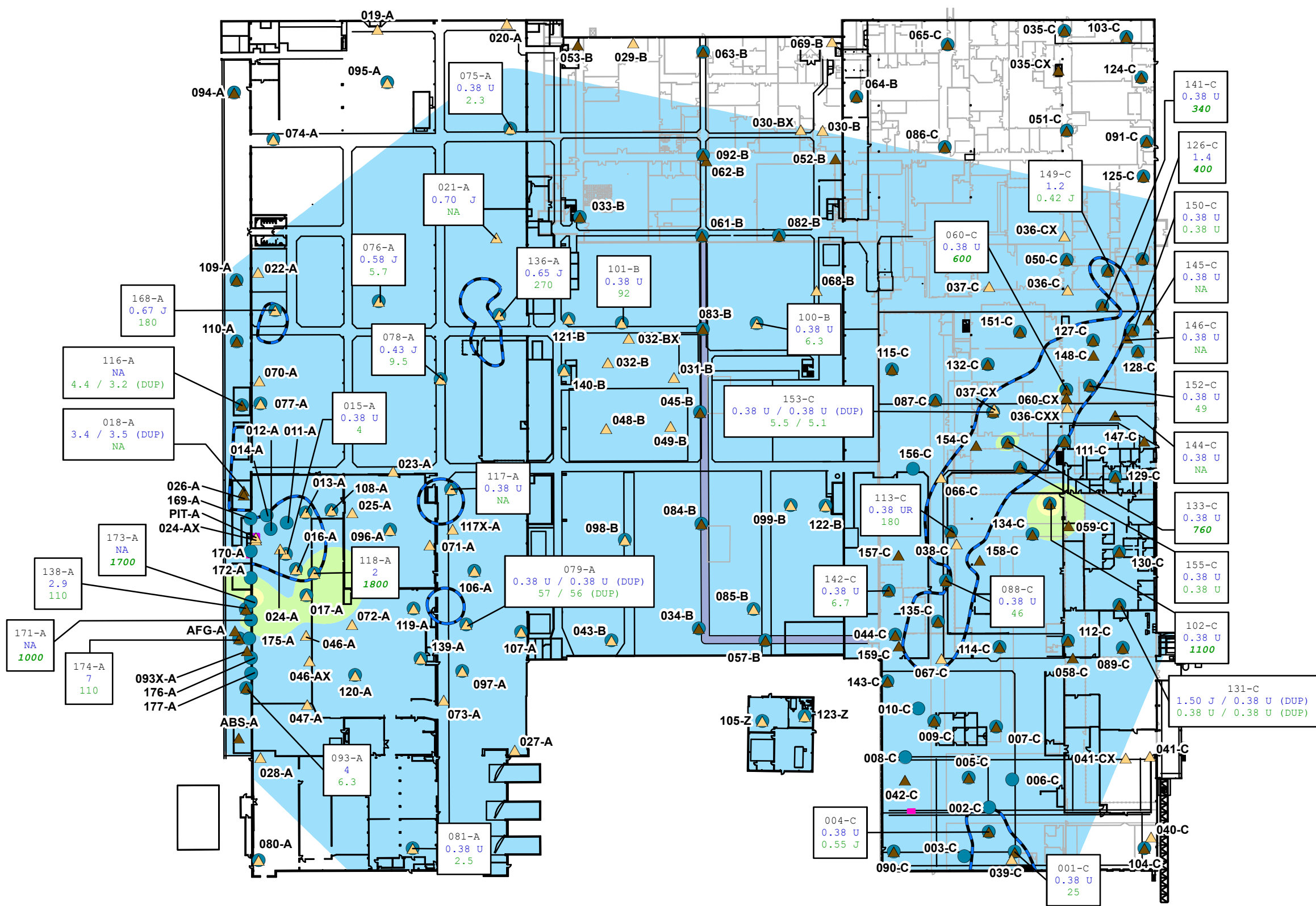


Figure 5-2A
Concentrations of Trichloroethene from Round 26 -
Building A - Sub-Slab Vapor

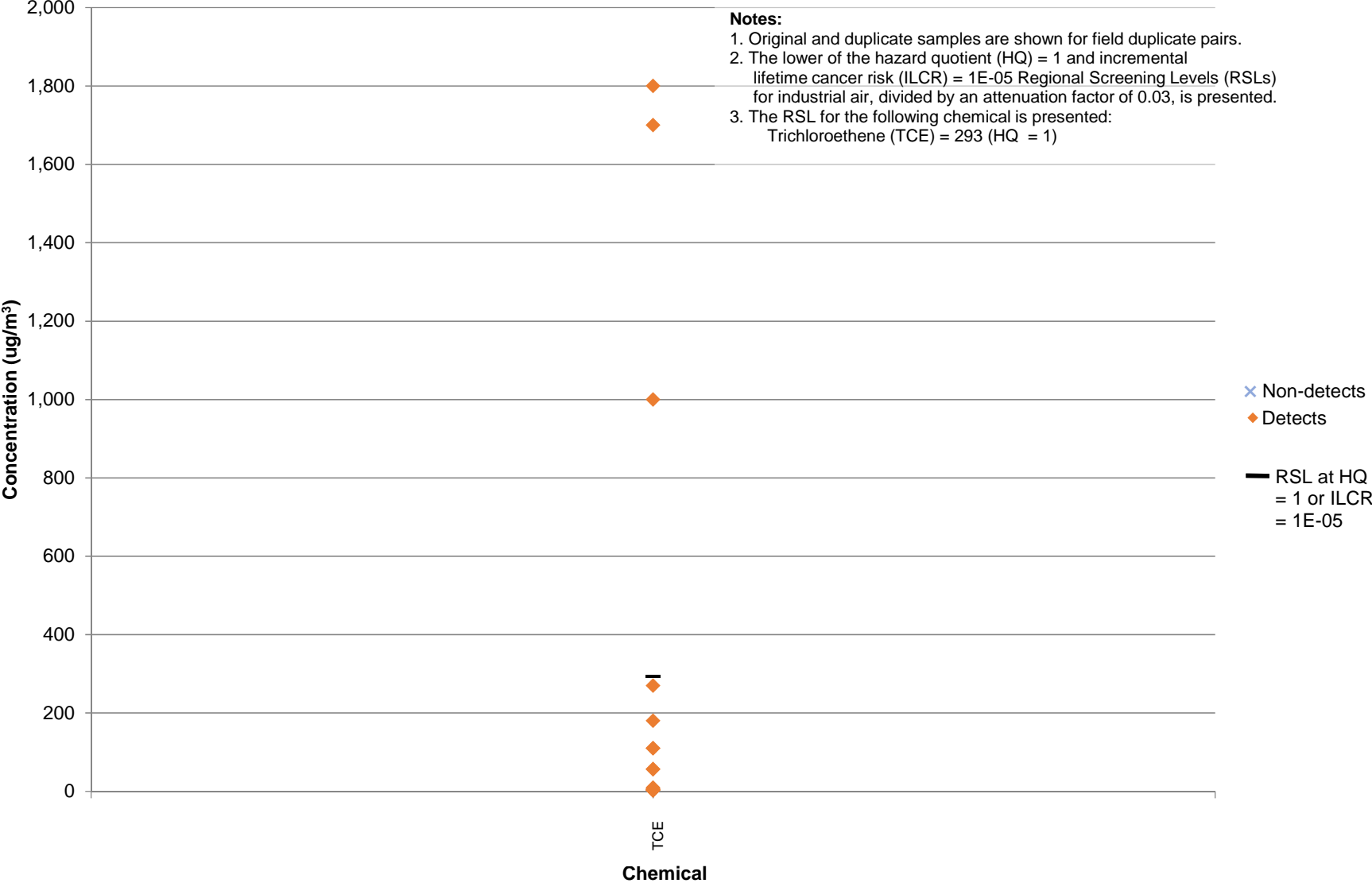


Figure 5-2B
Concentrations of Trichloroethene from Round 26 - Building A -
Indoor Air - Basement

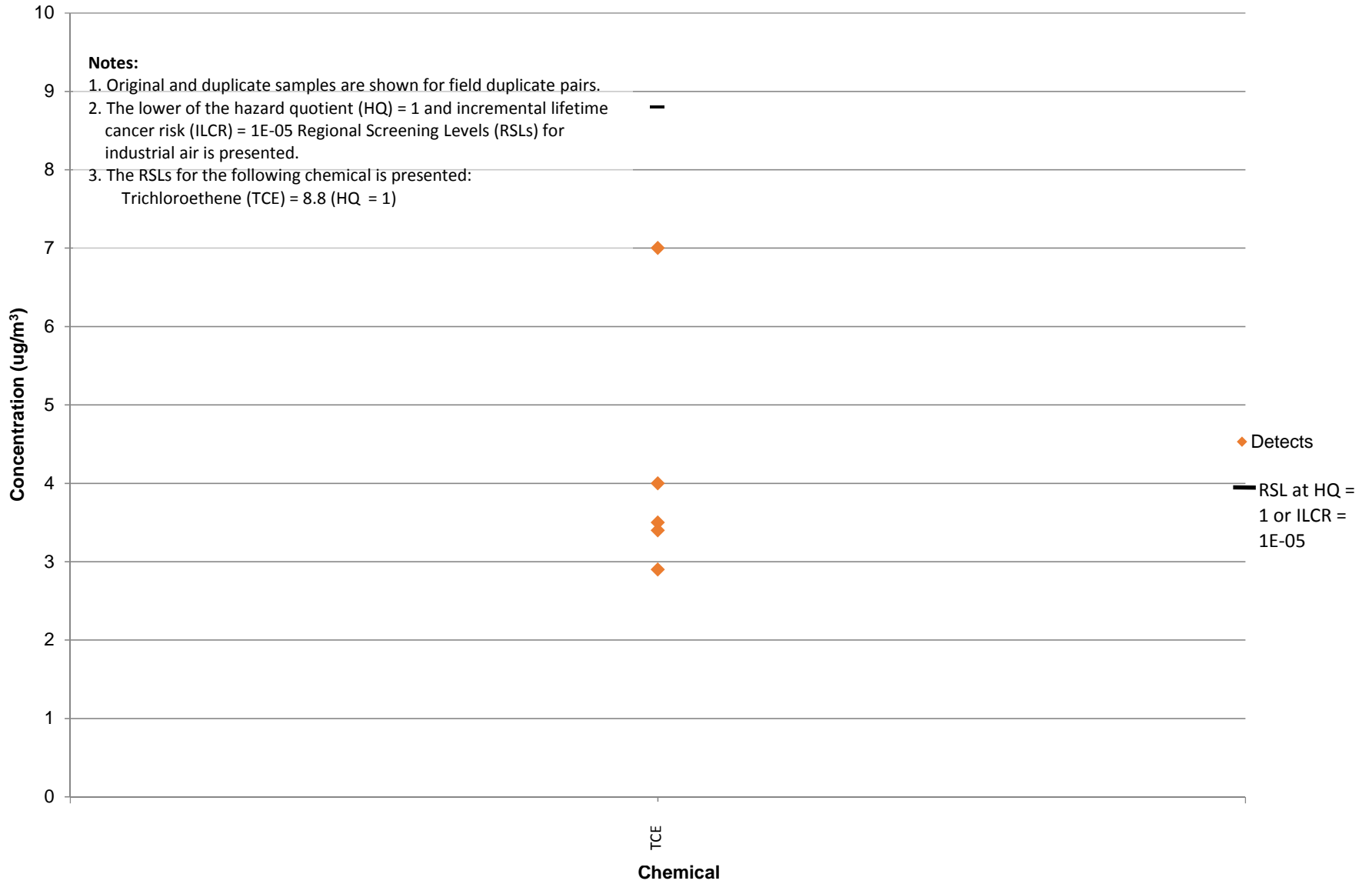


Figure 5-2C
Concentrations of Trichloroethene from Round 26 - Building A -
Indoor Air - First Floor

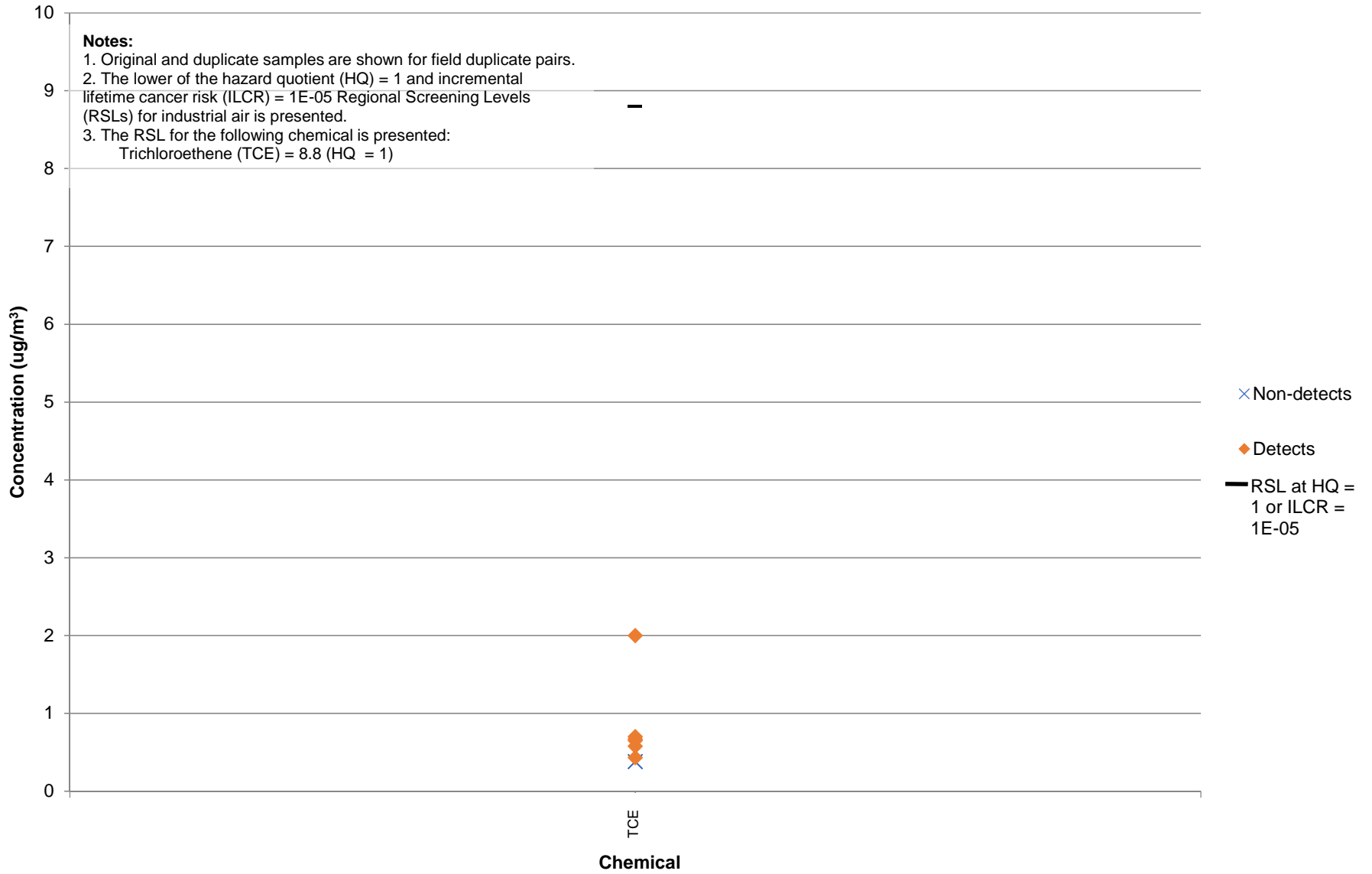


Figure 5-3A
Concentrations of Select Chemicals from Round 26 -
Building C - Sub-Slab Vapor

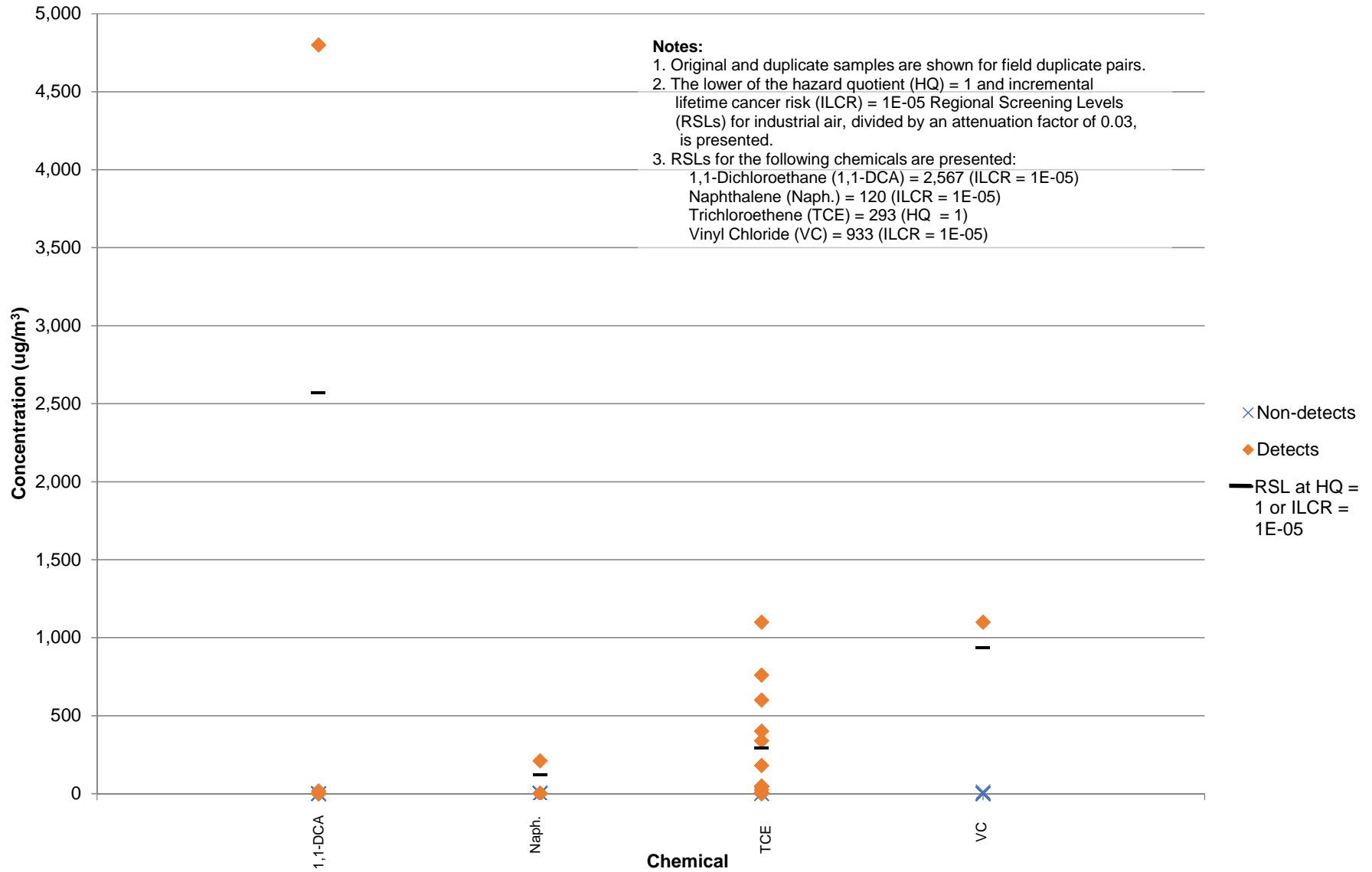
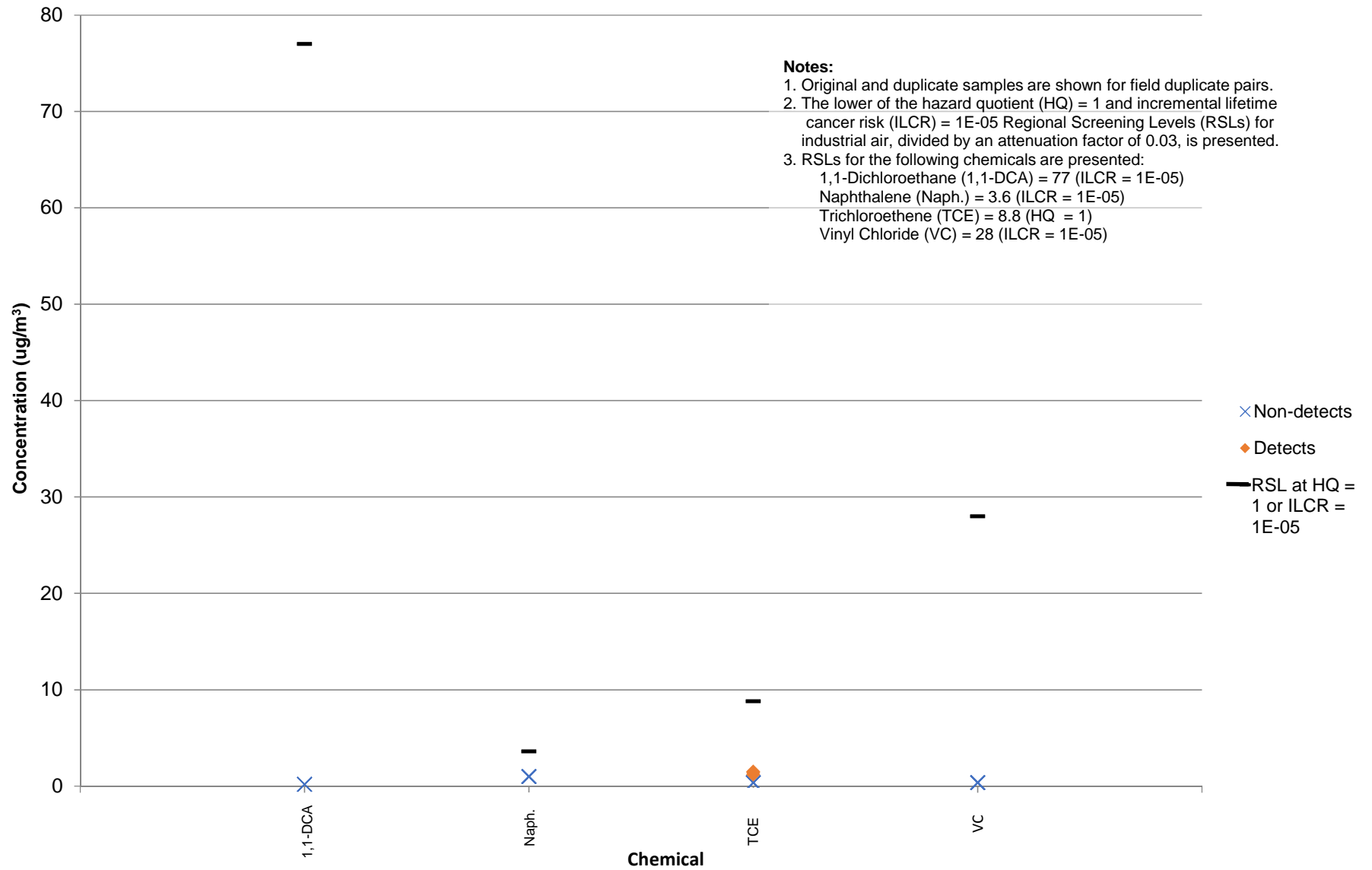


Figure 5-3B
Concentrations of Select Chemicals from Round 26 - Building C -
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Table 3-4 Summary Statistics for Naphthalene Concentrations in Indoor Air

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Table 3-7 Indoor Air Sampling Results, Building B, February 2019

Table 3-8 Sub-Slab Vapor Sampling Results, Building B, February 2019

Table 3-9 Indoor Air Sampling Results, Building C, February 2019

Table 3-10 Sub-Slab Vapor Sampling Results, Building C, February 2019

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**Table 3-12 Analyte Concentrations in Background Air Samples
Compared to Indoor Air Samples, February 2019**

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Table 4-2 Summary of Sub-Slab VOC Detections near SSDS, Building C

Table 4-3 Sub-Slab Monitoring Points Sampled near SSDS, Building A

**Table 4-4 Trichloroethene Concentrations before and
during SSDS Operation, Building A**

Table 4-5 Sub-Slab Monitoring Points Sampled near SSDS, Building C

**Table 4-6 Trichloroethene Concentrations before and
during SSDS Operation, Building C**

Table 4-7A Summary of VOC Detections in SSDS Influent, Building A

Table 4-7B Summary of VOC Detections in SSDS Influent, Building C

Table 1-1
Previous Investigations
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<i>Indoor-Air-Quality Investigation of Buildings A, B, C, and the (Vertical-Launch System) VLS (Facility), Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2007)</i>
<i>Indoor-Air-Quality Investigation Round 3, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2008a)</i>
<i>Indoor-Air-Quality Investigation 2008 Summary Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2008b)</i>
<i>November 2008 Sub-Slab Sampling Report, Sub-Slab-Depressurization Systems, Buildings A and C, Lockheed Martin Corporation Middle River Complex, Middle River, Maryland (Tetra Tech, 2008c)</i>
<i>SSD-System Installation Report for Project # EESHBDf-00897_R642, Sub-Slab Depressurization Systems Installation, Sub-Surface Vapor Intrusion Mitigation, Buildings A and C, Middle River Complex, Middle River, Maryland (Tetra Tech, 2008d)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation 2009 Summary Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2010a)</i>
<i>Indoor-Air-Quality Investigation August 2010 Summary Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2010b)</i>
<i>System Startup Summary Report for the Sub-Slab Depressurization System First-Phase Expansion—Building A, Middle River Complex, Middle River, Maryland (Tetra Tech, 2010c)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2010 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2011a)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2011 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2011b)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2012 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2012a)</i>
<i>Vapor-Intrusion Management Plan, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2012b)</i>
<i>Construction Documentation for EESHJAC_20052_R642, Sub-Slab Depressurization System First-Phase Expansion—Building C, Middle River Complex, Middle River, Maryland (Tetra Tech, 2012c)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2012 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2013a)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2013 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2013b)</i>

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Previous Investigations
Lockheed Martin Middle River Complex,
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<i>Construction Documentation: Sub-Slab Depressurization System Second-Phase Expansion—Building C, Middle River Complex, Middle River, Maryland (Tetra Tech, 2013c)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2013 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2014a)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2014 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2014b)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation September 2014 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2015a)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2015 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2015b)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2015 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2015c)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2016 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2016a)</i>
<i>Block I Building A and Building A Basement Vapor-Intrusion Investigation Report, Lockheed Martin Middle River Complex, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2016b)</i>
<i>Block I Building A and Building A Basement Supplemental Vapor-Intrusion Investigation Report, Lockheed Martin Middle River Complex, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2016c)</i>
<i>Construction Report, Sub-Slab Depressurization-System Second-Phase Expansion—Building A, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland (Tetra Tech, 2016d)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2016 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2017a)</i>
<i>Block I Building A Basement Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2017b)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation March 2017 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2017c)</i>

Table 1-1
Previous Investigations
Lockheed Martin Middle River Complex,
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<i>Construction Report, Sub-Slab Depressurization System, Third-Phase Expansion—Building A, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland (Tetra Tech, 2017f)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2017 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2018a)</i>
<i>Block I Building A and Building A Basement Investigation Report—Summer 2017, Middle River Complex, Middle River, Maryland (Tetra Tech, 2018b)</i>
<i>Block I Building A Floor Air-Vent Sealing and Survey Report Middle River Complex, Middle River, Maryland (Tetra Tech, 2018c)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2018 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2018d)</i>
<i>Groundwater Leachate Management Block I Flow Testing and Additional Sump Sampling Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2018e)</i>
<i>Vapor-Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2018 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland (Tetra Tech, 2018f)</i>

TABLE 3-1

**DESCRIPTIVE STATISTICS OF INDOOR AIR QUALITY RESULTS, ALL BUILDINGS, FEBRUARY 2019
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND**

Parameter	Frequency of detection ⁽¹⁾	Minimum detected value ⁽¹⁾	Maximum detected value ⁽¹⁾	Location of Maximum Concentration Detected	Sample of Maximum Concentration Detected	Minimum non-detect value ⁽²⁾	Maximum non-detect value ⁽²⁾	Average of detected values ⁽¹⁾	Average of all values ⁽¹⁾⁽³⁾	Standard deviation ⁽¹⁾⁽³⁾	Average of detected background values	Maximum background value	Number of detects above maximum background value ⁽¹⁾⁽⁴⁾	Adjusted USEPA RSL for industrial air ⁽⁵⁾		Number of samples above adjusted industrial RSL ⁽¹⁾⁽⁴⁾
Volatile organic compounds (µg/m³)																
1,1,1-TRICHLOROETHANE	2/35	0.33 J	0.81 J	AIR-118-A	IA-118-A-26	0.33	0.33	0.57	0.19	0.11	--	ND	2	22,000	nc	0
1,1-DICHLOROETHENE	5/35	0.32 J	1.8	AIR-018-A	IA-018-A-26	0.28	0.28	0.94	0.25	0.35	--	ND	5	880	nc	0
1,2,4-TRIMETHYLBENZENE	11/36	0.66 J	1.6 J	AIR-076-A	IA-076-A-26	0.61	0.61	0.95	0.50	0.35	--	ND	11	260	nc	0
1,3,5-TRIMETHYLBENZENE	3/35	0.68 J	0.88 J	AIR-131-C	IA-131-C-26	0.64	0.64	0.66	0.35	0.098	0.72	0.72	1	260	nc	0
BENZENE	36/36	0.45 J	1.9 J	AIR-113-C	IA-113-C-26	--	--	0.79	0.79	0.30	0.45	0.47	34	16	ca	0
CARBON TETRACHLORIDE	4/35	0.47 J	0.48 J	AIR-079-A, AIR-153-C	IA-079-A-26, IA-153-C-26	0.47	0.47	0.41	0.26	0.061	--	ND	4	20	ca	0
CHLORODIFLUOROMETHANE	34/36	0.91 J	21 J+	AIR-145-C, AIR-146-C, AIR-150-C	IA-145-C-26, IA-146-C-26, IA-150-C-26	0.27	0.27	4.5	4.2	5.6	1.0	1.1	33	220,000	nc	0
CHLOROFORM	10/35	0.42 J	1.3 J	AIR-136-A	IA-136-A-26	0.37	0.37	0.57	0.30	0.23	--	ND	10	5.3	ca	0
CIS-1,2-DICHLOROETHENE	1/35	0.7 J	0.76 J	AIR-018-A	IA-018-A-26-D	0.48	0.48	0.73	0.25	0.083	--	ND	1	--	--	0
DICHLORODIFLUOROMETHANE	36/36	1.3 J	2.3	AIR-001-C, AIR-021-A, AIR-100-B, AIR-101-B	IA-001-C-26, IA-021-A-26, IA-100-B-26, IA-101-B-26	--	--	1.5	1.5	0.32	2.2	2.3	0	440	nc	0
ETHYLBENZENE	22/36	0.6 J	13	AIR-136-A	IA-136-A-26	0.59	0.59	3.6	2.3	3.3	--	ND	22	49	ca	0
METHYLENE CHLORIDE	36/36	2.8 J	21	AIR-126-C	IA-126-C-26	--	--	6.4	6.4	3.9	3.3	4.1	23	2,600	nc	0
NAPHTHALENE	1/35	1.1	1.1	AIR-021-A	IA-021-A-26	1	1	1.1	0.52	0.10	--	ND	1	3.6	ca	0
TETRACHLOROETHENE	6/36	0.54 J	7.2 J	AIR-113-C	IA-113-C-26	0.54	0.54	2.5	0.64	1.3	--	ND	6	180	nc	0
TOLUENE	25/36	2.2	130	AIR-136-A	IA-136-A-26	2.3	2.3	49.0	34.4	43.1	--	ND	25	22,000	nc	0
TOTAL XYLENES	32/36	1.3 J	57	AIR-136-A	IA-136-A-26	0.52	0.52	12.6	11.2	15.8	--	ND	32	440	nc	0
TRICHLOROETHENE	13/35	0.43 J	7	AIR-174-A	IA-174-A-26	0.38	0.38	2.0	0.86	1.4	--	ND	13	8.8	nc	0

A shaded maximum background value indicates that the maximum detected value from the site data exceeds the maximum background value.

A bolded chemical name indicates that its concentration exceeds background and the industrial air RSL based on an HQ of 0.1 or an ILCR of 1×10^{-6} (i.e., one-tenth of screening value listed).

A bolded/shaded chemical name indicates that its concentration exceeds background and the industrial air RSL based on an HQ of 1 or an ILCR of 1×10^{-5} (i.e., the screening value presented).

Footnotes:

- 1 - Sample and duplicate are considered two separate samples when determining the minimum and maximum concentrations but are considered one sample when determining frequency of detection, average, standard deviation, and the number of samples exceeding screening criteria.
- 2 - Values presented are sample-specific quantitation limits.
- 3 - One-half the detection limit was used to represent non-detected results in calculating the average of all results and the standard deviation.
- 4 - Exceedance counts are based on detected results only.
- 5 - USEPA Regional Screening Levels (RSLs) for Chemical Contaminants at Superfund Sites, November 2018. RSLs for carcinogens were adjusted to be based on a lifetime cancer risk of 1×10^{-5} . RSLs for noncarcinogens were not adjusted and represent a hazard quotient (HQ) of 1.
- 6 - Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL).

Definitions:

ca = screening value based on 1×10^{-5} carcinogenic risk

HQ - hazard quotient

ILCR - incremental lifetime cancer risk

J - estimated value

J+ - estimated value, biased high

µg/m³ - micrograms per cubic meter

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

NA - not applicable/not available

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

ND - not detected

OSHA - Occupational Safety and Health Administration

PEL - permissible exposure limit

RSL - regional screening level

USEPA - United States Environmental Protection Agency

TABLE 3-2

**DESCRIPTIVE STATISTICS OF SUB-SLAB VAPOR RESULTS, ALL BUILDINGS, FEBRUARY 2019
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND**

Parameter	Frequency of detection ⁽¹⁾	Minimum detected value ⁽¹⁾	Maximum detected value ⁽¹⁾	Sample of Maximum Concentration Detected	Location of Maximum Concentration Detected	Minimum non-detect value ⁽²⁾	Maximum non-detect value ⁽²⁾	Average of detected values ⁽¹⁾	Average of all values ⁽¹⁾⁽³⁾	Standard deviation ⁽¹⁾⁽³⁾	Adjusted USEPA RSL for industrial air [value divided by 0.03 ⁽⁴⁾]	Number of samples above adjusted industrial RSL ⁽¹⁾⁽⁵⁾	
Volatile organic compounds (µg/m³)													
1,1,1-TRICHLOROETHANE	20/33	0.36 J	2600	SV-102-C-26	AIR-102-C	0.33	0.82	150	88	450	733,333	nc	0
1,1-DICHLOROETHANE	14/33	0.25 J	4800	SV-102-C-26	AIR-102-C	0.2	0.51	350	150	830	2,567	ca	1
1,1-DICHLOROETHENE	18/33	0.28 J	2600	SV-102-C-26	AIR-102-C	0.28	0.69	210	110	450	29,333	nc	0
1,2,3-TRIMETHYLBENZENE	7/33	0.88 J	550	SV-081-A-26	AIR-081-A	0.84	28	82	18	96	8,667	nc	0
1,2,4-TRICHLOROBENZENE	2/33	2.5 J	3	SV-126-C-26	AIR-126-C	1.4	49	2.8	1.6	4.1	293	nc	0
1,2,4-TRIMETHYLBENZENE	14/33	0.7 J	50	SV-081-A-26	AIR-081-A	0.61	1.5	11	4.7	13	8,667	nc	0
1,2-DICHLOROETHANE	1/33	0.5 J	0.5 J	SV-173-A-26	AIR-173-A	0.38	13	0.5	0.4	1.1	157	ca	0
1,3,5-TRIMETHYLBENZENE	17/33	0.67 J	29	SV-081-A-26	AIR-081-A	0.64	21	4.5	2.8	6.5	8,667	nc	0
BENZENE	20/33	0.44 J	130	SV-126-C-26	AIR-126-C	0.37	12	7.4	4.7	23	533	ca	0
CARBON TETRACHLORIDE	6/33	0.48 J	2.5	SV-101-C-26	AIR-101-C	0.47	16	1.1	0.64	1.4	667	ca	0
CHLORODIFLUOROMETHANE	32/33	0.56 J	13	SV-150-C-26	AIR-150-C	8.9	8.9	2.3	2.4	2.7	7,333,333	nc	0
CHLOROFORM	21/33	0.39 J	43 J	SV-102-C-26	AIR-102-C	0.37	0.37	5.3	3.5	7.8	177	ca	0
CIS-1,2-DICHLOROETHENE	16/33	0.59 J	180	SV-118-A-26	AIR-118-A	0.48	1.2	38	19	44	--	--	0
DICHLORODIFLUOROMETHANE	32/33	1.6 J	4.2	SV-101-C-26	AIR-101-C	22	22	2.3	2.6	1.6	14,667	nc	0
ETHYLBENZENE	16/33	0.61 J	560	SV-102-C-26	AIR-102-C	0.59	1.5	38	19	97	1,633	ca	0
METHYLENE CHLORIDE	32/33	2.5 J	8.2 J	SV-004-C-26	AIR-004-C	76	76	4.1	5.1	6.1	86,667	nc	0
NAPHTHALENE	6/33	1.1	210	SV-102-C-26	AIR-102-C	1	2.6	40	7.7	37	120	ca	1
TETRACHLOROETHENE	15/33	0.57 J	42	SV-101-C-26	AIR-101-C	0.54	18	5.8	3.0	7.8	6,000	nc	0
TOLUENE	15/33	2.3	200	SV-136-A-26	AIR-136-A	2.3	76	25	13	36	733,333	nc	0
TOTAL XYLENES	26/33	0.56 J	4600	SV-102-C-26	AIR-102-C	0.52	1.3	190	150	800	14,667	nc	0
TRANS-1,2-DICHLOROETHENE	7/33	1 J	12	SV-118-A-26	AIR-118-A	0.4	13	4.7	1.3	2.8	--	--	0
TRICHLOROETHENE	30/33	0.42 J	1800	SV-118-A-26	AIR-118-A	0.38	0.38	300	270	480	293	nc	8
VINYL CHLORIDE	3/33	2.1	1100	SV-126-C-26	AIR-126-C	0.37	12	370	34	190	933	ca	1

A bolded chemical name indicates that its concentration exceeds the industrial air RSL divided by 0.03 based on an HQ of 0.1 or an ILCR of 1×10^{-6} (i.e., one-tenth the screening value presented).

A bolded/shaded chemical name indicates that its concentration exceeds the industrial air RSL divided by 0.03 based on an HQ of 1 or an ILCR of 1×10^{-5} (i.e., the screening value).

Footnotes:

- 1 - Sample and duplicate are considered as two separate samples when determining the minimum and maximum concentrations, but are considered one sample when determining frequency of detection, average, standard deviation, and the number of samples exceeding criteria.
- 2 - Values presented are sample-specific quantitation limits.
- 3 - One-half the detection limit was used to represent non-detected results in calculating the average of all results and the standard deviation.
- 4 - Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor 0.03, and correspond to a target cancer risk level of 1.0×10^{-5} or a hazard quotient (HQ) of 1.
- 5 - Exceedance counts are based on detected results only.

Definitions:

-- = no criterion available

ca = screening value based on carcinogenic effects

HQ = hazard quotient

ILCR = incremental lifetime cancer risk

J = estimated value

NA = not available

nc = screening value based on noncarcinogenic effects

RSL = regional screening level

TABLE 3-3

SUMMARY STATISTICS FOR TRICHLOROETHENE CONCENTRATIONS IN INDOOR AIR
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Building level or background	Dataset	Minimum detected value ⁽¹⁾	Maximum detected value ⁽¹⁾	Minimum non-detect value ⁽¹⁾⁽²⁾	Maximum non-detect value ⁽¹⁾⁽²⁾	Average of all values ⁽³⁾⁽⁴⁾	Average of detected values ⁽³⁾	Frequency of detection ⁽¹⁾	Number of detections > 8.8 µg/m ³ ⁽⁵⁾⁽⁶⁾	95% UCL ⁽³⁾
Basement	All Buildings 2006-February 2019	0.077 J	36 ⁽⁷⁾	0.075	20	1.1	2.1	283/624	15	1.5
	All Buildings February 2019	1.2	7	0.38	0.38	1.1	3.0	7/22	0	1.9
	Building A 2006-February 2019	0.15 J	26.2	0.36	0.96	4.0	4.3	90/95	11	4.9
	Building A February 2019	2.9	7	-	-	4.3	4.3	4/4	0	NA ⁽⁸⁾
	Building B 2006-February 2019	0.078 J	2.5	0.075	2.7	0.60	0.68	55/80	0	0.69
	Building B February 2019	-	-	-	-	-	-	-	-	-
	Building C 2006-February 2019	0.077 J	36 ⁽⁷⁾	0.075	20	0.61	1.3	138/449	4	0.83
	Building C February 2019	1.2	1.5 J	0.38	0.38	0.35	1.15	3/18	0	0.66
First Floor⁽¹⁰⁾	All Buildings 2006-February 2019	0.081 J	34	0.075	12	1.0	1.7	186/412	5	1.4
	All Buildings February 2019	0.43 J	2	0.38	0.38	0.49	0.84	6/13	0	0.75
	Building A 2006-February 2019	0.086 J	34	0.075	12	1.1	1.9	141/297	5	1.7
	Building A February 2019	0.43 J	2	0.38	0.38	0.54	0.84	6/11	0	0.84
	Building B 2006-February 2019	0.081 J	5.1	0.075	11	0.76	0.85	38/93	0	0.57
	Building B February 2019	-	-	0.38	0.38	-	-	0/2	0	NA ⁽⁸⁾⁽⁹⁾
	Building C 2006-February 2008	0.5 J	7.2	0.21	2.7	1.0	2.3	7/22	0	2.1
Background	2006-February 2019	0.48 J	11.9	0.075	2.7	0.58	2.8	11/94	1	0.25
	February 2019	-	-	0.38	0.38	-	-	0/4	0	NA ⁽⁸⁾⁽⁹⁾

All results are in µg/m³.

- (1) The original sample and duplicate are considered as two separate samples when determining the minimum and maximum concentration and as one sample when determining the frequency of detection.
- (2) Values presented are sample-specific quantitation limits.
- (3) The average of the original sample and duplicate is used for determining the average of all values, average of detected values, and 95% UCL.
- (4) One-half the detection limit was used to represent non-detected results in calculating the average of all results.
- (5) Value is the non-carcinogenic industrial air regional screening level corresponding to HQ = 1 (USEPA, November 2018).
- (6) Field duplicate pair samples are counted as one sample in determining the number of samples exceeding the screening level. The field duplicate pair is considered to exceed the screening level if either the original or duplicate sample is greater than the screening level.
- (7) The maximum detected concentration (36 µg/m³) was detected in a duplicate sample, and the corresponding original sample concentration (0.75 µg/m³) is considerably less than the maximum concentration. Resampling at the same location found concentrations that were closer to the original sample concentration.
- (8) There are less than five samples; therefore, a UCL is not presented.
- (9) There are less than three detections; therefore, a UCL is not presented.
- (10) There are no trichloroethene results for the Building C first floor from the February 2019 sampling event.

Definitions:

- HQ - hazard quotient
- J - estimated value
- µg/m³ - micrograms per cubic meter
- NA - not applicable/not available
- UCL - upper confidence limit
- USEPA - United States Environmental Protection Agency

TABLE 3-4

SUMMARY STATISTICS FOR NAPHTHALENE CONCENTRATIONS IN INDOOR AIR
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Building level or background	Dataset	Minimum detected value ⁽¹⁾	Maximum detected value ⁽¹⁾	Minimum non-detect value ⁽¹⁾⁽²⁾	Maximum non-detect value ⁽¹⁾⁽²⁾	Average of all values ⁽³⁾⁽⁴⁾	Average of detected values ⁽³⁾	Frequency of detection ⁽¹⁾	Number of detections > 3.6 µg/m ³ ⁽⁵⁾⁽⁶⁾	95% UCL ⁽³⁾
Basement	All Buildings 2006-February 2019	0.2 J	15	0.19	96.7	1.4	2.3	270/559	54	1.6
	All Buildings February 2019	-	-	1	1	-	-	0/22	0	NA ⁽⁷⁾
	Building A 2006-February 2019	0.47 J	15	0.19	4	2.6	3.9	57/90	23	3.4
	Building A February 2019	-	-	1	1	-	-	0/4	0	NA ⁽⁷⁾⁽⁸⁾
	Building B 2006-February 2019	0.23 J	5	0.19	5.6	1.1	1.6	32/53	3	1.4
	Building B February 2019	-	-	-	-	-	-	-	-	-
	Building C 2006-February 2019	0.2 J	6.9	0.19	96.7	1.2	1.9	181/416	28	1.1
	Building C February 2019	-	-	1	1	-	-	0/18	0	NA ⁽⁷⁾
First Floor⁽⁹⁾	All Buildings 2006-February 2019	0.19 J	12 J	0.19	31	1.1	1.5	106/312	8	0.80
	All Buildings February 2019	1.1	1.1	1	1	0.55	1.1	1/13	0	NA ⁽⁷⁾
	Building A 2006-February 2019	0.19 J	12 J	0.19	31	0.95	1.5	80/246	6	0.85
	Building A February 2019	1.1	1.1	1	1	0.56	1.1	1/11	0	NA ⁽⁷⁾
	Building B 2006-February 2019	0.26 J	6.5 J	0.19	24	1.5	1.5	26/66	2	1.1
	Building B February 2019	-	-	1	1	-	-	0/2	0	NA ⁽⁷⁾⁽⁸⁾
Background	2006-February 2019	0.2 J	8.1 J	0.19	3.8	0.81	1.5	24/78	1	0.90
	February 2019	-	-	1	1	-	-	0/4	0	NA ⁽⁷⁾⁽⁸⁾

All results are in µg/m³.

- (1) The original sample and duplicate are considered as two separate samples when determining the minimum and maximum concentration and as one sample when determining the frequency of detection.
- (2) Values presented are sample-specific quantitation limits.
- (3) The average of the original sample and duplicate is used for determining the average of all values, average of detected values, and 95% UCL.
- (4) One-half the detection limit was used to represent non-detected results in calculating the average of all results.
- (5) Value is the carcinogenic industrial air regional screening level corresponding to 1×10^{-5} risk level (USEPA, November 2018).
- (6) Field duplicate pair samples are counted as one sample in determining the number of samples exceeding the screening level. The field duplicate pair is considered to exceed the screening level if either the original or duplicate sample is greater than the screening level.
- (7) There are less than three detections; therefore, a UCL is not presented.
- (8) There are less than five samples; therefore, a UCL is not presented.
- (9) There are no naphthalene results for the Building C first floor from historical or February 2019 sampling events.

Definitions:

- HQ - hazard quotient
- ILCR - incremental lifetime cancer risk
- J - estimated value
- µg/m³ - micrograms per cubic meter
- UCL - upper confidence limit
- USEPA - United States Environmental Protection Agency
- A benchmark of 3.6 µg/m³ corresponds to ILCR = 1×10^{-5} .

TABLE 3-5

INDOOR AIR SAMPLING RESULTS, BUILDING A, FEBRUARY 2019
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
 PAGE 1 OF 3

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL (µg/m ³)	Industrial Air Screening Level (µg/m ³)	Key	AIR-015-A IA-015-A-26 20190221	AIR-018-A ⁽¹⁾ IA-018-A-26 20190221	AIR-018-A ⁽¹⁾ IA-018-A-26-D 20190221	AIR-021-A IA-021-A-26 20190221	AIR-075-A IA-075-A-26 20190221	AIR-076-A IA-076-A-26 20190221
Volatile organic compounds (µg/m³)									
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	1.8	1.7	0.28 U	0.28 U	0.28 U
1,2,3-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRICHLOROBENZENE	40,000 ^N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,2,4-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.61 U	0.61 U	0.61 U	1.1 J	0.71 J	1.6 J
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,3,5-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
BENZENE	31,900	16	ca	1 J	0.95 J	0.83 J	0.78 J	1 J	1.1 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 ^N	220,000	nc	1.6 J+	1.3 J	1.2 J	3.5	2.7	2.8
CHLOROFORM	240,000	5.3	ca	0.37 U	0.61 J	0.62 J	0.52 J	0.37 U	0.42 J
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.7 J	0.76 J	0.48 U	0.48 U	0.48 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	1.4 J	1.5 J	1.5 J	2.3	1.3 J	1.3 J
ETHYLBENZENE	435,000	49	ca	0.64 J	0.6 J	0.59 U	7.8	6.3	9.7
METHYL TERT-BUTYL ETHER	180,000 ^A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	3.4 J	5.9 J	5 J	5.9 J	3.8 J	8.2
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1.1	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.87 J	0.54 U	0.54 U	0.54 J	3.4
TOLUENE	754,000	22,000	nc	5	2.3 U	2.3 U	85	80	120
TOTAL XYLENES	435,000	440	nc	3.5	2.5 J	0.52 U	39	32	49
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	3.4	3.5	0.7 J	0.38 U	0.58 J
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U

Shaded cells indicate a concentration greater than the risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample.

-- = not available

J = estimated value

J+ = estimated value, may be biased high

U = not detected

UJ = non-detected value is estimated

Industrial Air Screening Levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, Nov 2018

ca = carcinogenic screening values based on 1×10⁻⁵ carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

A = American Council of Governmental Industrial Hygienists Threshold Limit Value

MDE = Maryland Department of the Environment

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

OSHA PEL = Occupational Safety and Health Administration Permissible Exposure Limit

RSLs = Regional Screening Levels

USEPA = United States Environmental Protection Agency

1 - This location is in the basement. The TCE screening level for basement samples is 35 µg/m³ based on reduced exposure potential in the basement. This screening level was approved by MDE in 2017

TABLE 3-5

INDOOR AIR SAMPLING RESULTS, BUILDING A, FEBRUARY 2019
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
 PAGE 2 OF 3

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL (µg/m ³)	Industrial Air Screening Level (µg/m ³)	Key	AIR-078-A IA-078-A-26 20190221	AIR-079-A IA-079-A-26 20190221	AIR-079-A IA-079-A-26-D 20190221	AIR-081-A IA-081-A-26 20190221	AIR-093-A ⁽¹⁾ IA-093-A-26 20190221	AIR-117-A IA-117-A-26 20190221
Volatile organic compounds (µg/m³)									
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.86 J	0.28 U
1,2,3-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRICHLOROBENZENE	40,000 ^N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,2,4-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.93 J	0.61 U	0.61 U	0.66 J	0.61 U	0.72 J
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,3,5-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
BENZENE	31,900	16	ca	0.98 J	1.1 J	1.1 J	1.1 J	0.68 J	1 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.48 J	0.47 U	0.47 U	0.47 U	0.47 J
CHLORODIFLUOROMETHANE	3,540,000 ^N	220,000	nc	2.1	1.9	2	3 J+	1.8 J+	1.7
CHLOROFORM	240,000	5.3	ca	0.49 J	0.43 J	0.37 U	0.37 U	0.37 U	0.45 J
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	1.4 J	1.4 J	1.4 J	1.3 J	1.4 J	1.4 J
ETHYLBENZENE	435,000	49	ca	6.6	2.3	2.2	2.3	0.59 U	3.4
METHYL TERT-BUTYL ETHER	180,000 ^A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	5.3 J	6.3 J	4.4 J	3.6 J	3.3 J	3.5 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	2.4 J	0.54 U	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	86	54	56	63	2.3 U	120
TOTAL XYLENES	435,000	440	nc	32	11	10	11	0.52 U	16
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
TRICHLOROETHENE	537,000	8.8	nc	0.43 J	0.38 U	0.38 U	0.38 U	4	0.38 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U

Shaded cells indicate a concentration greater than the risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample.

-- = not available

J = estimated value

J+ = estimated value, may be biased high

U = not detected

UJ = non-detected value is estimated

Industrial Air Screening Levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, Nov 2018

ca = carcinogenic screening values based on 1×10⁻⁵ carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

A = American Council of Governmental Industrial Hygienists Threshold Limit Value

MDE = Maryland Department of the Environment

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

OSHA PEL = Occupational Safety and Health Administration Permissible Exposure Limit

RSLs = Regional Screening Levels

USEPA = United States Environmental Protection Agency

1 - This location is in the basement. The TCE screening level for basement samples is 35 µg/m³ based on reduced exposure potential in the basement. This screening level was approved by MDE in 2017

TABLE 3-5

INDOOR AIR SAMPLING RESULTS, BUILDING A, FEBRUARY 2019
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
 PAGE 3 OF 3

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL (µg/m ³)	Industrial Air Screening Level (µg/m ³)	Key	AIR-118-A IA-118-A-26 20190221	AIR-136-A IA-136-A-26 20190221	AIR-138-A ⁽¹⁾ IA-138-A-26 20190221	AIR-168-A IA-168-A-26 20190221	AIR-174-A ⁽¹⁾ IA-174-A-26 20190221
Volatile organic compounds (µg/m³)								
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.81 J	0.33 U	0.33 U	0.33 U	0.33 J
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.65 J	0.28 U	1.2 J
1,2,3-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRICHLOROBENZENE	40,000 ^N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,2,4-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.61 U	1.5 J	0.61 U	1.2 J	0.61 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,3,5-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
BENZENE	31,900	16	ca	1.2 J	1.1 J	0.69 J	1.1 J	0.6 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 ^N	220,000	nc	1.9	5.7 J+	1.5 J+	2.9	1.2 J
CHLOROFORM	240,000	5.3	ca	0.37 U	1.3 J	0.37 U	0.44 J	0.37 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	1.4 J	1.4 J	1.4 J	1.3 J	1.4 J
ETHYLBENZENE	435,000	49	ca	0.89 J	13	0.59 U	11	0.59 U
METHYL TERT-BUTYL ETHER	180,000 ^A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	5.5 J	7.1	5.2 J	4.7 J	3.5 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	6.6	130	2.3 U	110	2.3 U
TOTAL XYLENES	435,000	440	nc	4.5	57	2.6 J	53	0.52 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
TRICHLOROETHENE	537,000	8.8	nc	2	0.65 J	2.9	0.67 J	7
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U

Shaded cells indicate a concentration greater than the risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample.

-- = not available

J = estimated value

J+ = estimated value, may be biased high

U = not detected

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Industrial Air Screening Levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, Nov 2018

ca = carcinogenic screening values based on 1×10⁻⁵ carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

A = American Council of Governmental Industrial Hygienists Threshold Limit Value

MDE = Maryland Department of the Environment

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

OSHA PEL = Occupational Safety and Health Administration Permissible Exposure Limit

RSLs = Regional Screening Levels

USEPA = United States Environmental Protection Agency

1 - This location is in the basement. The TCE screening level for basement samples is 35 µg/m³ based on reduced exposure potential in the basement. This screening level was approved by MDE in 2017

TABLE 3-6

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING A, FEBRUARY 2019
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
 PAGE 1 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu\text{g}/\text{m}^3$) ⁽¹⁾	Key	AIR-015-A SV-015-A-26 20190221	AIR-075-A SV-075-A-26 20190221	AIR-076-A SV-076-A-26 20190221	AIR-078-A SV-078-A-26 20190221	AIR-079-A SV-079-A-26 20190221	AIR-079-A SV-079-A-26-D 20190221
Volatile organic compounds ($\mu\text{g}/\text{m}^3$)								
I,1,1-TRICHLOROETHANE	733,333	nc	0.56 J	0.33 U	1.7 J	0.58 J	0.72 J	0.71 J
I,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
I,1-DICHLOROETHANE	2,567	ca	4.5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
I,1-DICHLOROETHENE	29,333	nc	1.2 J	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
I,2,3-TRIMETHYLBENZENE	8,667	nc	0.84 U	15	3	0.84 U	0.84 U	0.84 U
I,2,4-TRICHLOROBENZENE	293	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
I,2,4-TRIMETHYLBENZENE	8,667	nc	0.61 U	48	2.2	1 J	0.61 U	0.71 J
I,2-DICHLOROETHANE	157	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
I,3,5-TRIMETHYLBENZENE	8,667	nc	0.64 U	24	4.6	1.1 J	0.64 U	0.64 U
BENZENE	533	ca	1.2 J	0.37 U	0.37 U	0.58 J	0.37 U	0.37 U
CARBON TETRACHLORIDE	667	ca	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	7,333,333	nc	1.6	1.2 J	1.2 J	1 J	1.7	1.6 J+
CHLOROFORM	177	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
DICHLORODIFLUOROMETHANE	14,667	nc	2.5	2.1	2.2	2.3	2.4	2.2
ETHYLBENZENE	1633	ca	0.68 J	1.5 J	0.61 J	0.75 J	0.59 U	0.59 U
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	4.3 J	3.1 J	2.6 J	3 J	4.4 J	2.9 J
NAPHTHALENE	120	ca	1 U	25	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	6,000	nc	0.54 U	0.54 U	0.54 U	0.54 U	8.7	8.3
TOLUENE	733,333	nc	5.4	25	2.3	4.3	2.3 U	2.3 U
TOTAL XYLENES	14,667	nc	3.5	13	5.7	3.9	2.5 J	2.7 J
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
TRICHLOROETHENE	293	nc	4	2.3	5.7	9.5	57	56
VINYL CHLORIDE	933	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U

Notes: All sample concentrations are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Shaded cells indicate a concentration greater than risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample.

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

-- = not available

J = estimated value

J+ = estimated value, may be biased high

U = nondetect

UJ = non-detected value is estimated

ca = screening value based on carcinogenic effects

nc = screening value based on noncarcinogenic effects

1 - Screening values derived in accordance with Draft Guidance for Evaluating the

Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002).

Screening values are equal to United States Environmental Protection Agency (USEPA)

Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond

to a target cancer risk level of 1×10^{-5} .

TABLE 3-6

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING A, FEBRUARY 2019
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
 PAGE 2 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu\text{g}/\text{m}^3$) ⁽¹⁾	Key	AIR-081-A SV-081-A-26 20190221	AIR-093-A SV-093-A-26 20190221	AIR-116-A SV-116-A-26 20190221	AIR-116-A SV-116-A-26-D 20190221	AIR-118-A SV-118-A-26 20190221	AIR-136-A SV-136-A-26 20190221
Volatile organic compounds ($\mu\text{g}/\text{m}^3$)								
I,1,1-TRICHLOROETHANE	733,333	nc	3.7	0.37 J	0.33 U	0.33 U	32	0.33 U
I,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
I,1-DICHLOROETHANE	2,567	ca	0.2 U	0.97 J	0.2 U	0.2 U	46	0.2 U
I,1-DICHLOROETHENE	29,333	nc	0.4 J	1.3 J	0.28 J	0.28 U	300	0.34 J
I,2,3-TRIMETHYLBENZENE	8,667	nc	550	0.84 U	0.84 U	0.84 U	2.9	0.84 U
I,2,4-TRICHLOROBENZENE	293	nc	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	2.5 J	1.4 U
I,2,4-TRIMETHYLBENZENE	8,667	nc	50	0.61 U	0.61 U	0.61 U	7	0.98 J
I,2-DICHLOROETHANE	157	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
I,3,5-TRIMETHYLBENZENE	8,667	nc	29	0.72 J	0.64 U	0.64 U	4.6	1.1 J
BENZENE	533	ca	0.37 U	0.65 J	0.81 J	0.75 J	0.97 J	2
CARBON TETRACHLORIDE	667	ca	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	7,333,333	nc	1.7	1.2 J	1.2 J	1.2 J	1.1 J	2.6
CHLOROFORM	177	ca	1.6 J	0.37 U	1.7 J	1.7 J	1.7 J	8.8
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.48 U	0.48 U	0.48 U	180	1.3 J
DICHLORODIFLUOROMETHANE	14,667	nc	2.2	2.3	2.4	2.3	2.3	2
ETHYLBENZENE	1633	ca	1.4 J	0.59 U	0.59 U	0.59 U	7.7	5.1
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	3.1 J	3.8 J	3.2 J	4.8 J	7.4	3.6 J
NAPHTHALENE	120	ca	1 UJ	1 UJ	1 UJ	1 UJ	1 U	1 U
TETRACHLOROETHENE	6,000	nc	1.3 J	0.54 U	0.54 U	0.54 U	0.99 J	0.54 U
TOLUENE	733,333	nc	5.4	2.3 U	2.3 U	2.3 U	4.2	200
TOTAL XYLENES	14,667	nc	15	0.52 U	0.52 U	0.52 U	72	23
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U	0.4 U	0.4 U	12	0.4 U
TRICHLOROETHENE	293	nc	2.5	6.3	4.4	3.2	1800	270
VINYL CHLORIDE	933	ca	0.37 U	0.37 U	0.37 U	0.37 U	2.1	0.37 U

Notes: All sample concentrations are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Shaded cells indicate a concentration greater than risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample.

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

-- = not available

J = estimated value

J+ = estimated value, may be biased high

U = nondetect

UJ = non-detected value is estimated

ca = screening value based on carcinogenic effects

nc = screening value based on noncarcinogenic effects

1 - Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5} .

TABLE 3-6

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING A, FEBRUARY 2019
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
 PAGE 3 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu\text{g}/\text{m}^3$) ⁽¹⁾	Key	AIR-138-A SV-138-A-26 20190221	AIR-168-A SV-168-A-26 20190221	AIR-171-A SV-171-A-26 20190221	AIR-173-A SV-173-A-26 20190221	AIR-174-A SV-174-A-26 20190221
Volatile organic compounds ($\mu\text{g}/\text{m}^3$)							
1,1,1-TRICHLOROETHANE	733,333	nc	0.36 J	4.8	0.99 J	2.4	45
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
1,1-DICHLOROETHANE	2,567	ca	3.1	1.3 J	8.7	21	9.1
1,1-DICHLOROETHENE	29,333	nc	13	50	250	260	18
1,2,3-TRIMETHYLBENZENE	8,667	nc	0.84 U	0.88 J	0.84 U	0.84 U	0.84 U
1,2,4-TRICHLOROBENZENE	293	nc	1.4 UJ	1.4 U	1.4 UJ	1.4 UJ	1.4 UJ
1,2,4-TRIMETHYLBENZENE	8,667	nc	0.61 U	3.8	0.61 U	0.61 U	0.61 U
1,2-DICHLOROETHANE	157	ca	0.38 U	0.38 U	0.38 U	0.5 J	0.38 U
1,3,5-TRIMETHYLBENZENE	8,667	nc	0.67 J	2.4 J+	1.1 J	0.73 J	0.77 J
BENZENE	533	ca	0.6 J	0.77 J	0.62 J	0.68 J	0.44 J
CARBON TETRACHLORIDE	667	ca	0.47 U	0.51 J	0.47 U	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	7,333,333	nc	1.4	1.3 J	1.1 J	1.1 J	1.4 J
CHLOROFORM	177	ca	0.41 J	1.2 J	4.4	5.4	5.9
CIS-1,2-DICHLOROETHENE	--	--	8.2	0.68 J	37	94	4.7
DICHLORODIFLUOROMETHANE	14,667	nc	2.3	2.4	2.2	2.3	2.2
ETHYLBENZENE	1633	ca	0.59 U	1.5 J	0.59 U	0.59 U	0.59 U
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	3.1 J	6.5 J	4.8 J	2.6 J	2.7 J
NAPHTHALENE	120	ca	1 UJ	1 U	1 UJ	1 UJ	1 UJ
TETRACHLOROETHENE	6,000	nc	0.89 J	0.54 U	0.54 U	0.54 U	0.59 J
TOLUENE	733,333	nc	2.3 U	11	2.4	2.4	2.3 U
TOTAL XYLENES	14,667	nc	0.52 U	7.5	1.2 J	1.2 J	0.52 U
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U	1.8	3.3	0.4 U
TRICHLOROETHENE	293	nc	110	180	1000	1700	110
VINYL CHLORIDE	933	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U

Notes: All sample concentrations are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Shaded cells indicate a concentration greater than risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample.

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

-- = not available

J = estimated value

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U = nondetect

UJ = non-detected value is estimated

ca = screening value based on carcinogenic effects

nc = screening value based on noncarcinogenic effects

1 - Screening values derived in accordance with Draft Guidance for Evaluating the

Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002).

Screening values are equal to United States Environmental Protection Agency (USEPA)

Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond

to a target cancer risk level of 1×10^{-5} .

TABLE 3-7

INDOOR AIR SAMPLING RESULTS, BULIDING B, FEBRUARY 2019
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
 PAGE 1 OF 1

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu\text{g}/\text{m}^3$)	Industrial Air Screening Level ($\mu\text{g}/\text{m}^3$)	Key	AIR-100-B IA-100-B-26 20190219	AIR-101-B IA-101-B-26 20190219
Volatile organic compounds ($\mu\text{g}/\text{m}^3$)					
I,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U
I,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U
I,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U
I,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U
I,2,3-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.84 U	0.84 U
I,2,4-TRICHLOROBENZENE	40,000 ^N	8.8	nc	1.4 U	1.4 U
I,2,4-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.61 U	0.61 U
I,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U
I,3,5-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.64 U	0.64 U
BENZENE	31,900	16	ca	0.45 J	0.54 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 ^N	220,000	nc	3.8	4.2
CHLOROFORM	240,000	5.3	ca	0.55 J	0.64 J
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.3	2.3
ETHYLBENZENE	435,000	49	ca	2	3
METHYL TERT-BUTYL ETHER	180,000 ^A	470	ca	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	3.5 J	6.9 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	91	92
TOTAL XYLENES	435,000	440	nc	9.6	14
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U

Shaded cells indicate a concentration greater than the risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample.

-- = not available

J = estimated value

U = not detected

Industrial air screening levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, November 2018

ca = carcinogenic screening values based on 1×10^{-5} carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

A = American Council of Governmental Industrial Hygienists Threshold Limit Value

MDE = Maryland Department of the Environment

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

OSHA PEL = Occupational Safety and Health Administration Permissible Exposure Limit

RSL = Regional Screening Levels

USEPA = United States Environmental Protection Agency

TABLE 3-8

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING B, FEBRUARY 2019
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
 PAGE 1 OF 1

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu\text{g}/\text{m}^3$) ⁽¹⁾	Key	AIR-100-B SV-100-B-26 20190219	AIR-101-B SV-101-B-26 20190219
Volatile organic compounds ($\mu\text{g}/\text{m}^3$)				
I,1,1-TRICHLOROETHANE	733,333	nc	0.43 J	180
I,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U
I,1-DICHLOROETHANE	2,567	ca	0.2 U	0.2 U
I,1-DICHLOROETHENE	29,333	nc	0.28 U	1.4 J
I,2,3-TRIMETHYLBENZENE	8,667	nc	0.84 U	1.1 J
I,2,4-TRICHLOROBENZENE	293	nc	1.4 U	1.4 U
I,2,4-TRIMETHYLBENZENE	8,667	nc	0.61 U	1.9
I,2-DICHLOROETHANE	157	ca	0.38 U	0.38 U
I,3,5-TRIMETHYLBENZENE	8,667	nc	0.74 J	1.5 J
BENZENE	533	ca	0.37 U	0.64 J
CARBON TETRACHLORIDE	667	ca	2.2 J	2.5
CHLORODIFLUOROMETHANE	7,333,333	nc	1.2 J	2.5 J+
CHLOROFORM	177	ca	2	0.54 J
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.59 J
DICHLORODIFLUOROMETHANE	14,667	nc	2.2	4.2
ETHYLBENZENE	1633	ca	0.59 U	0.95 J
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	2.9 J	4.4 J
NAPHTHALENE	120	ca	1 U	1.4
TETRACHLOROETHENE	6,000	nc	0.93 J	42
TOLUENE	733,333	nc	2.3 U	21
TOTAL XYLENES	14,667	nc	0.52 U	5.2
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U
TRICHLOROETHENE	293	nc	6.3	92
VINYL CHLORIDE	933	ca	0.37 U	6.9

Notes: All sample concentrations are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Shaded cells indicate a concentration greater than risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample.

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

-- = not available

J = estimated value

J+ = estimated value, may be biased high

U = nondetect

ca = screening value based on carcinogenic effects

nc = screening value based on noncarcinogenic effects

1 - Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5} .

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BUILDING C, FEBRUARY 2019
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
 PAGE 1 OF 4

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL (µg/m ³)	Industrial Air Screening Level (µg/m ³)	Key	AIR-001-C IA-001-C-26 20190219	AIR-004-C IA-004-C-26 20190219	AIR-060-C IA-060-C-26 20190219	AIR-088-C IA-088-C-26 20190219	AIR-102-C IA-102-C-26 20190219	AIR-113-C IA-113-C-26 20190219
Volatile organic compounds (µg/m³)									
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 UR
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 UR
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 UR
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 UR
1,2,3-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 UR
1,2,4-TRICHLOROBENZENE	40,000 ^N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 UR
1,2,4-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.72 J
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 UR
1,3,5-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.71 J	0.68 J	0.64 U	0.64 U	0.64 U	0.64 UR
BENZENE	31,900	16	ca	0.53 J	0.46 J	0.55 J	0.56 J	0.54 J	1.9 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 UR
CHLORODIFLUOROMETHANE	3,540,000 ^N	220,000	nc	0.91 J	1.4 J	2.3	1.5	1.8	1.3 J
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 UR
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 UR
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.3	2.2	1.5 J	1.3 J	1.4 J	1.4 J
ETHYLBENZENE	435,000	49	ca	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	3.2 J
METHYL TERT-BUTYL ETHER	180,000 ^A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 UR
METHYLENE CHLORIDE	87,000	2,600	nc	11	3.3 J	10	4 J	5.7 J	13 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1 U	1 U	1 UR
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	7.2 J
TOLUENE	754,000	22,000	nc	2.3 U	2.3 U	5.1	2.3 U	2.3 U	53 J
TOTAL XYLENES	435,000	440	nc	0.52 U	0.52 U	2.8 J	2.4 J	3.2 J	13 J
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 UR
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 UR
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 UR

Shaded cells indicate a concentration greater than the risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample.

-- = not available

J = estimated value

J+ = estimated value, may be biased high

U = not detected

UJ = non-detected value is estimated

UR = non-detected value is rejected

Industrial air screening levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, Nov 2018

ca =carcinogenic screening values based on 1×10⁻⁵ carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

A = American Council of Governmental Industrial Hygienists Threshold Limit Value

MDE = Maryland Department of the Environment

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

OSHA PEL = Occupational Safety and Health Administration Permissible Exposure Limit

RSLs = Regional Screening Levels

USEPA = United States Environmental Protection Agency

TABLE 3-9

**INDOOR AIR QUALITY SAMPLING RESULTS, BUILDING C, FEBRUARY 2019
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 2 OF 4**

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu\text{g}/\text{m}^3$)	Industrial Air Screening Level ($\mu\text{g}/\text{m}^3$)	Key	AIR-126-C IA-126-C-26 20190219	AIR-131-C IA-131-C-26 20190219	AIR-131-C IA-131-C-26-D 20190219	AIR-133-C IA-133-C-26 20190219	AIR-141-C IA-141-C-26 20190219	AIR-142-C IA-142-C-26 20190219
Volatile organic compounds ($\mu\text{g}/\text{m}^3$)									
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 UR	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 UR	0.57 U	0.57 U	0.57 U	0.57 U
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 UR	0.2 U	0.2 U	0.2 U	0.2 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.32 J	0.28 U	0.28 U	0.28 U	0.28 U
1,2,3-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.84 U	0.84 UR	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRICHLOROBENZENE	40,000 ^N	8.8	nc	1.4 U	1.4 UR	1.4 U	1.4 U	1.4 U	1.4 U
1,2,4-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.61 U	0.92 J	0.61 U	0.61 U	0.61 U	0.61 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 UR	0.38 U	0.38 U	0.38 U	0.38 U
1,3,5-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.64 U	0.88 J	0.64 U	0.64 U	0.64 U	0.64 U
BENZENE	31,900	16	ca	1 J	1.3 J	0.47 J	0.56 J	0.59 J	0.52 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.47 UR	0.47 U	0.47 U	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 ^N	220,000	nc	0.27 U	0.27 UR	1.9	1.5	7.4 J+	1.7 J+
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 UR	0.37 U	0.37 U	0.37 U	0.37 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 UR	0.48 U	0.48 U	0.48 U	0.48 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	1.4 J	2.2 J	1.4 J	1.3 J	1.4 J	1.4 J
ETHYLBENZENE	435,000	49	ca	0.59 U	2.8 J	0.59 U	0.59 U	0.73 J	0.59 U
METHYL TERT-BUTYL ETHER	180,000 ^A	470	ca	1.2 U	1.2 UR	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	21	12 J	3.7 J	2.8 J	6.5 J	9.2
NAPHTHALENE	50,000	3.6	ca	1 U	1 UR	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	3.6 J	0.54 U	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	17	41 J	2.3 UJ	2.3 U	32	2.3 U
TOTAL XYLENES	435,000	440	nc	1.3 J	11 J	1.3 J	3.1 J	4.1	2.1 J
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 UR	0.4 U	0.4 U	0.4 U	0.4 U
TRICHLOROETHENE	537,000	8.8	nc	1.4	1.5 J	0.38 U	0.38 U	0.38 U	0.38 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 UR	0.37 U	0.37 U	0.37 U	0.37 U

Shaded cells indicate a concentration greater than the risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample.

-- = not available

J = estimated value

J+ = estimated value, may be biased high

U = not detected

UJ = non-detected value is estimated

UR = non-detected value is rejected

Industrial air screening levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, Nov 2018

ca = carcinogenic screening values based on 1×10^{-5} carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

A = American Council of Governmental Industrial Hygienists Threshold Limit Value

MDE = Maryland Department of the Environment

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

OSHA PEL = Occupational Safety and Health Administration Permissible Exposure Limit

RSLs = Regional Screening Levels

USEPA = United States Environmental Protection Agency

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BUILDING C, FEBRUARY 2019
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
 PAGE 3 OF 4

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu\text{g}/\text{m}^3$)	Industrial Air Screening Level ($\mu\text{g}/\text{m}^3$)	Key	AIR-144-C IA-144-C-26 20190219	AIR-145-C IA-145-C-26 20190219	AIR-146-C IA-146-C-26 20190219	AIR-149-C IA-149-C-26 20190219	AIR-150-C IA-150-C-26 20190219	AIR-152-C IA-152-C-26 20190219
Volatile organic compounds ($\mu\text{g}/\text{m}^3$)									
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
1,2,3-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRICHLOROBENZENE	40,000 ^N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,2,4-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.67 J
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,3,5-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
BENZENE	31,900	16	ca	0.57 J	0.61 J	0.55 J	0.94 J	0.57 J	0.57 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 J
CHLORODIFLUOROMETHANE	3,540,000 ^N	220,000	nc	9.5 J+	21 J+	21 J+	0.27 U	21 J+	11 J+
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	1.3 J	1.4 J	1.5 J	1.6 J	1.3 J	1.4 J
ETHYLBENZENE	435,000	49	ca	1 J	0.65 J	0.6 J	0.59 U	0.64 J	0.99 J
METHYL TERT-BUTYL ETHER	180,000 ^A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	6.8	7.9	4.1 J	16	5.7 J	3.6 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	5.7	9.7	10	8.1	10	6.9
TOTAL XYLENES	435,000	440	nc	5.4	3.6	3.7	2 J	3.7	5.4
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	1.2	0.38 U	0.38 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U

Shaded cells indicate a concentration greater than the risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample.

-- = not available

J = estimated value

J+ = estimated value, may be biased high

U = not detected

UJ = non-detected value is estimated

UR = non-detected value is rejected

Industrial air screening levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, Nov 2018

ca = carcinogenic screening values based on 1×10^{-5} carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

A = American Council of Governmental Industrial Hygienists Threshold Limit Value

MDE = Maryland Department of the Environment

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

OSHA PEL = Occupational Safety and Health Administration Permissible Exposure Limit

RSLs = Regional Screening Levels

USEPA = United States Environmental Protection Agency

TABLE 3-9

**INDOOR AIR QUALITY SAMPLING RESULTS, BUILDING C, FEBRUARY 2019
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 4 OF 4**

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu\text{g}/\text{m}^3$)	Industrial Air Screening Level ($\mu\text{g}/\text{m}^3$)	Key	AIR-153-C IA-153-C-26 20190219	AIR-153-C IA-153-C-26-D 20190219	AIR-155-C IA-155-C-26 20190219
Volatile organic compounds ($\mu\text{g}/\text{m}^3$)						
I,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U
I,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U
I,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U
I,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U
I,2,3-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.84 U	0.84 U	0.84 U
I,2,4-TRICHLOROBENZENE	40,000 ^N	8.8	nc	1.4 U	1.4 U	1.4 U
I,2,4-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.61 U	0.61 U	0.61 U
I,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U
I,3,5-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.64 U	0.64 U	0.64 U
BENZENE	31,900	16	ca	0.53 J	0.52 J	0.54 J
CARBON TETRACHLORIDE	62,900	20	ca	0.48 J	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 ^N	220,000	nc	1.9	1.9 J+	1.5
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	1.4 J	1.5 J	1.4 J
ETHYLBENZENE	435,000	49	ca	0.59 U	0.59 U	0.59 U
METHYL TERT-BUTYL ETHER	180,000 ^A	470	ca	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	6.2 J	3.8 J	3 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	2.5	2.2	2.3 U
TOTAL XYLENES	435,000	440	nc	2.7 J	2.3 J	3.5
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U

Shaded cells indicate a concentration greater than the risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample.

-- = not available

J = estimated value

J+ = estimated value, may be biased high

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UJ = non-detected value is estimated

UR = non-detected value is rejected

Industrial air screening levels from USEPA RSLs for Chemical Contaminants at Superfund Sites, Nov 2018

ca = carcinogenic screening values based on 1×10^{-5} carcinogenic risk

nc = noncarcinogenic screening values based on noncarcinogenic hazard quotient = 1

A = American Council of Governmental Industrial Hygienists Threshold Limit Value

MDE = Maryland Department of the Environment

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

OSHA PEL = Occupational Safety and Health Administration Permissible Exposure Limit

RSLs = Regional Screening Levels

USEPA = United States Environmental Protection Agency

TABLE 3-10

**SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING C, FEBRUARY 2019
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND**

PAGE 1 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu\text{g}/\text{m}^3$) ⁽¹⁾	Key	AIR-001-C SV-001-C-26 20190219	AIR-004-C SV-004-C-26 20190219	AIR-060-C SV-060-C-26 20190219	AIR-088-C SV-088-C-26 20190219	AIR-102-C SV-102-C-26 20190219	AIR-113-C SV-113-C-26 20190219	AIR-126-C SV-126-C-26 20190219
Volatile organic compounds ($\mu\text{g}/\text{m}^3$)									
1,1,1-TRICHLOROETHANE	733,333	nc	0.33 U	1.3 J	33	0.33 U	2600	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	0.57 U	0.57 U	19 U	0.57 U	0.57 U
1,1-DICHLOROETHANE	2,567	ca	0.2 U	2.6	18	0.2 U	4800	0.2 U	0.76 J
1,1-DICHLOROETHENE	29,333	nc	0.28 U	1.3 J	5.1	0.28 U	2600	0.28 U	230
1,2,3-TRIMETHYLBENZENE	8,667	nc	0.84 U	0.84 U	0.84 U	0.84 U	28 U	0.84 U	0.84 U
1,2,4-TRICHLOROBENZENE	293	nc	1.4 U	1.4 U	1.4 U	1.4 U	49 U	1.4 U	3
1,2,4-TRIMETHYLBENZENE	8,667	nc	0.61 U	0.61 U	0.61 U	0.61 U	29 J	0.61 U	0.86 J
1,2-DICHLOROETHANE	157	ca	0.38 U	0.38 U	0.38 U	0.38 U	13 U	0.38 U	0.38 U
1,3,5-TRIMETHYLBENZENE	8,667	nc	0.64 U	0.64 U	0.93 J	0.64 U	21 U	0.64 U	1.1 J
BENZENE	533	ca	0.37 U	1.9	0.62 J	0.37 U	12 U	0.37 U	130
CARBON TETRACHLORIDE	667	ca	0.47 U	0.47 U	0.47 U	0.47 U	16 U	0.47 U	0.48 J
CHLORODIFLUOROMETHANE	7,333,333	nc	1.2 J	1.1 J	5.5	1.2 J	8.9 U	1.3 J	0.56 J
CHLOROFORM	177	ca	0.52 J	0.37 U	11	0.39 J	43 J	1.6 J	0.37 U
CIS-1,2-DICHLOROETHENE	--	--	8.3	0.48 U	16	9.6	52	29	160
DICHLORODIFLUOROMETHANE	14,667	nc	2.3	2.3	2.2	2.2	22 U	2.4	1.6 J
ETHYLBENZENE	1633	ca	0.59 U	2.6	4.9	0.59 U	560	0.59 U	2.3
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	1.2 U	1.2 U	41 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	3.9 J	8.2 J	3.3 J	4.9 J	76 UJ	3 J	2.5 J
NAPHTHALENE	120	ca	1.2	1 U	1 U	1 U	210	1 U	1.2
TETRACHLOROETHENE	6,000	nc	0.54 U	0.91 J	0.72 J	0.54 U	18 U	0.54 U	2.6 J
TOLUENE	733,333	nc	2.3 U	7.8	2.3 U	2.3 U	76 U	2.3 U	39
TOTAL XYLENES	14,667	nc	0.52 U	19	46	3.3 J	4600	2 J	4.1
TRANS-1,2-DICHLOROETHENE	--	--	1.9	0.4 U	1 J	0.4 U	13 U	0.4 U	9.7
TRICHLOROETHENE	293	nc	25	0.55 J	600	46	1100	180	400
VINYL CHLORIDE	933	ca	0.37 U	0.37 U	0.37 U	0.37 U	12 U	0.37 U	1100

Notes: All sample concentrations are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Shaded cells indicate a concentration greater than risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample. $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

-- = not available

J = estimated value

J+ = estimated value, may be biased high

U = nondetect

UJ = non-detected value is estimated

ca = screening value based on carcinogenic effects

nc = screening value based on noncarcinogenic effects

1 - Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5} .

TABLE 3-10

**SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING C, FEBRUARY 2019
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND**

PAGE 2 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu\text{g}/\text{m}^3$) ⁽¹⁾	Key	AIR-131-C SV-131-C-26 20190219	AIR-131-C SV-131-C-26-D 20190219	AIR-133-C SV-133-C-26 20190219	AIR-141-C SV-141-C-26 20190219	AIR-142-C SV-142-C-26 20190219	AIR-149-C SV-149-C-26 20190219	AIR-150-C SV-150-C-26 20190219
Volatile organic compounds ($\mu\text{g}/\text{m}^3$)									
1,1,1-TRICHLOROETHANE	733,333	nc	0.61 J	0.73 J	0.82 U	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	1.4 U	0.57 U	0.57 U	0.57 U	0.57 U
1,1-DICHLOROETHANE	2,567	ca	0.25 J	0.3 J	0.51 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-DICHLOROETHENE	29,333	nc	0.28 U	0.28 U	0.69 U	1.9	0.28 U	0.28 U	0.28 U
1,2,3-TRIMETHYLBENZENE	8,667	nc	2.1	2.5	2.1 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRICHLOROBENZENE	293	nc	1.4 U	1.4 U	3.6 U	1.4 U	1.4 U	1.4 U	1.4 U
1,2,4-TRIMETHYLBENZENE	8,667	nc	0.71 J	0.85 J	1.5 U	0.61 U	0.61 U	0.91 J	0.7 J
1,2-DICHLOROETHANE	157	ca	0.38 U	0.38 U	0.96 U	0.38 U	0.38 U	0.38 U	0.38 U
1,3,5-TRIMETHYLBENZENE	8,667	nc	1.2 J	1.4 J	1.6 U	0.64 U	0.64 U	0.64 U	0.64 U
BENZENE	533	ca	0.37 U	0.37 U	0.92 U	1.4	0.37 U	0.86 J	1.2 J
CARBON TETRACHLORIDE	667	ca	0.47 U	0.47 U	1.2 U	0.47 U	0.53 J	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	7,333,333	nc	1.7	1.9	2.8 J	4.2	1.3 J	1.6	13
CHLOROFORM	177	ca	1.3 J	1.5 J	13	0.49 J	6.7	0.37 U	0.37 U
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.48 U	1.2 U	11	0.48 U	0.48 U	0.48 U
DICHLORODIFLUOROMETHANE	14,667	nc	2.3	2.5	2.6 J	2.3	2.3	2.3	2.3
ETHYLBENZENE	1633	ca	0.59 U	0.59 U	1.5 U	0.85 J	0.59 U	0.76 J	15
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	3.1 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	2.9 J	3.5 J	7.1 J	3.3 J	3.9 J	7.7	3.6 J
NAPHTHALENE	120	ca	1 U	1 U	2.6 U	1 U	1.1	1 U	1 U
TETRACHLOROETHENE	6,000	nc	0.54 U	0.54 U	16	9	0.58 J	0.97 J	0.54 U
TOLUENE	733,333	nc	2.3 U	2.3 U	5.7 U	2.3 U	2.3 U	44	5.1
TOTAL XYLENES	14,667	nc	3.8	4.6	1.3 U	5.9	2.6 J	3.2 J	84
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U	0.99 U	3	0.4 U	0.4 U	0.4 U
TRICHLOROETHENE	293	nc	0.38 U	0.38 U	760	340	6.7	0.42 J	0.38 U
VINYL CHLORIDE	933	ca	0.37 U	0.37 U	0.93 U	0.37 U	0.37 U	0.37 U	0.37 U

Notes: All sample concentrations are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Shaded cells indicate a concentration greater than risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample. $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

-- = not available

J = estimated value

J+ = estimated value, may be biased high

U = nondetect

UJ = non-detected value is estimated

ca = screening value based on carcinogenic effects

nc = screening value based on noncarcinogenic effects

1 - Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5} .

TABLE 3-10

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING C, FEBRUARY 2019
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
 PAGE 3 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu\text{g}/\text{m}^3$) ⁽¹⁾	Key	AIR-152-C SV-152-C-26 20190219	AIR-153-C SV-153-C-26 20190219	AIR-153-C SV-153-C-26-D 20190219	AIR-155-C SV-155-C-26 20190219
Volatile organic compounds ($\mu\text{g}/\text{m}^3$)						
1,1,1-TRICHLOROETHANE	733,333	nc	0.54 J	0.33 U	0.33 U	0.54 J
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	0.57 U	0.57 U
1,1-DICHLOROETHANE	2,567	ca	0.2 U	0.2 U	0.2 U	1.1 J
1,1-DICHLOROETHENE	29,333	nc	0.28 U	0.28 U	0.28 U	0.56 J
1,2,3-TRIMETHYLBENZENE	8,667	nc	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRICHLOROBENZENE	293	nc	1.4 U	1.4 U	1.4 U	1.4 U
1,2,4-TRIMETHYLBENZENE	8,667	nc	0.61 U	0.61 U	0.61 U	0.61 U
1,2-DICHLOROETHANE	157	ca	0.38 U	0.38 U	0.38 U	0.38 U
1,3,5-TRIMETHYLBENZENE	8,667	nc	0.64 U	0.64 U	0.64 U	0.64 U
BENZENE	533	ca	1.1 J	0.37 U	0.37 U	0.46 J
CARBON TETRACHLORIDE	667	ca	0.47 U	0.47 U	0.47 U	0.51 J
CHLORODIFLUOROMETHANE	7,333,333	nc	11 J+	2.1	2.1	1.8
CHLOROFORM	177	ca	0.48 J	0.37 U	0.37 U	0.37 U
CIS-1,2-DICHLOROETHENE	--	--	2.9	0.48 U	0.48 U	0.48 U
DICHLORODIFLUOROMETHANE	14,667	nc	2.3	2.4	2.5	2.4
ETHYLBENZENE	1633	ca	0.59 U	0.59 U	0.59 U	0.59 U
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	4.2 J	3.7 J	3.4 J	3.1 J
NAPHTHALENE	120	ca	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	6,000	nc	0.54 U	0.54 U	0.57 J	0.54 U
TOLUENE	733,333	nc	2.3 U	2.3 U	2.3 U	2.3 U
TOTAL XYLENES	14,667	nc	2.2 J	0.65 J	0.56 J	2.3 J
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U	0.4 U	0.4 U
TRICHLOROETHENE	293	nc	49	5.5	5.1	0.38 U
VINYL CHLORIDE	933	ca	0.37 U	0.37 U	0.37 U	0.37 U

Notes: All sample concentrations are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Shaded cells indicate a concentration greater than risk-based screening level.

Bolded cells indicate that the analyte is detected in the sample.

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

-- = not available

J = estimated value

J+ = estimated value, may be biased high

U = nondetect

UJ = non-detected value is estimated

ca = screening value based on carcinogenic effects

nc = screening value based on noncarcinogenic effects

1 - Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5} .

TABLE 3-11

**AMBIENT AIR (BACKGROUND) SAMPLING RESULTS, FEBRUARY 2019
LOCKHEED MARTIN MIDDLE RIVER COMPLEX
MIDDLE RIVER, MARYLAND**

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu\text{g}/\text{m}^3$)	Industrial Air Screening Level ($\mu\text{g}/\text{m}^3$)	Key	AIR-BCK-1 BCK-1-26 20190219	AIR-BCK-2 BCK-2-26 20190219	AIR-BCK-3 BCK-3-26 20190219	AIR-BCK-4 BCK-4-26 20190219
Volatile organic compounds ($\mu\text{g}/\text{m}^3$)							
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U
1,2,3-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRICHLOROBENZENE	40,000 ^N	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U
1,2,4-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.61 U	0.61 U	0.61 U	0.61 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U
1,3,5-TRIMETHYLBENZENE	123,000 ^N	260	nc	0.72 J	0.71 J	0.64 U	0.64 U
BENZENE	31,900	16	ca	0.47 J	0.45 J	0.44 J	0.44 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.47 U	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000 ^N	220,000	nc	1.1 J	1.1 J	1 J	0.94 J
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U	0.37 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.2	2.2	2.3	2.2
ETHYLBENZENE	435,000	49	ca	0.59 U	0.59 U	0.59 U	0.59 U
METHYL TERT-BUTYL ETHER	180,000 ^A	470	ca	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2600	nc	3.2 J	4.1 J	3.5 J	2.5 J
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	2.3 U	2.3 U	2.3 U	2.3 U
TOTAL XYLENES	435,000	440	nc	0.52 U	0.52 U	0.52 U	0.52 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U

All concentrations are in micrograms per cubic meter air ($\mu\text{g}/\text{m}^3$).

Shaded cells indicate a concentration greater than the risk-based screening level.

Bolded cells indicate analyte was detected in background sample(s).

Industrial Air Screening Levels from USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites, November 2018

-- = not available

A = American Council of Governmental Industrial Hygienists Threshold Limit Value

ca = screening value based on 1×10^{-5} carcinogenic risk

J = estimated value

N = National Institute for Occupational Safety and Health Recommended Exposure Limit

nc = screening value based on noncarcinogenic hazard quotient = 1

OSHA PEL = Occupational Safety and Health Administration Permissible Exposure Limit

U = not detected

USEPA = United States Environmental Protection Agency

TABLE 3-12

ANALYTE CONCENTRATIONS IN BACKGROUND AIR SAMPLES
 COMPARED TO INDOOR AIR SAMPLES - FEBRUARY 2019
 LOCKHEED MARTIN CORPORATION MIDDLE RIVER COMPLEX
 MIDDLE RIVER, MARYLAND

Analyte	Maximum Background Concentration ($\mu\text{g}/\text{m}^3$)	Maximum Indoor Air Sample Concentration ($\mu\text{g}/\text{m}^3$) ⁽¹⁾	Number of Indoor Air Samples with Detects ⁽¹⁾	Number of Indoor Air Detects < Background ⁽¹⁾⁽²⁾	Number of Indoor Air Detects = Background ⁽¹⁾⁽²⁾	Number of Indoor Air Detects > Background ⁽¹⁾⁽²⁾
1,3,5-TRIMETHYLBENZENE	0.72	0.88	3	2	0	1
BENZENE	0.47	1.9	36	2	0	34
CHLORODIFLUOROMETHANE	1.1	21	34	1	0	33
DICHLORODIFLUOROMETHANE	2.3	2.3	36	32	4	0
METHYLENE CHLORIDE	4.1	21	36	12	1	23

1 - The original sample and duplicate are considered as two separate samples when determining the minimum and maximum concentration, but are considered one sample when determining the number of samples with detects and the number of samples less than, equal to, or greater than background.

2 - If one sample in a duplicate pair was greater/equal to background and the other sample in the duplicate pair was less than background, the maximum detected concentration in the field duplicate pair was used to represent the field duplicate pair.

There are a total of four background samples, 35 indoor air samples for 1,3,5-trimethylbenzene, and 36 indoor air samples for the remaining analytes for Round 26.

TABLE 4-2

SUMMARY OF SUB-SLAB VOC DETECTIONS NEAR SSDS, BUILDING C
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
 PAGE 9 OF 16

Location	VOC (µg/m ³)	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17	Aug-17	Feb-18	Aug-18	Feb-19
127-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	268	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	25.1	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	2200	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	4000	NS	NS	NS	NS	NS	NS	0.91 J	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	1000 J	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	27.8	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	4.1	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	1.4 J	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	5.2	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	2.1 J	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	4300 J	NS	NS	NS	NS	NS	NS	5.9 J	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	2.6	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	2.6	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	5.9	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	2900 J	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	240000	NS	NS	NS	NS	NS	NS	410	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	1.1	NS	NS	NS	NS	NS	NS	NS	NS	NS
127-C	TOTAL VOCs	NS	NS	NS	NS	NS	NS	NS	NS	NS	##### J	NS	NS	NS	NS	NS	NS	763 J	NS	NS	NS	NS	NS	NS	NS	NS	NS
133-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	5.2	-	-	NS	NS	NS	NS	NS	NS	-	-	-
133-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	4.6 J	-	-	NS	NS	NS	NS	NS	NS	-	-	-
133-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	1.5 J	-	-	NS	NS	NS	NS	NS	NS	-	-	-
133-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.95	4.1 J	-	-	NS	NS	NS	NS	NS	NS	-	-	-
133-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	2.1	28 J	-	-	NS	NS	NS	NS	NS	NS	-	-	-
133-C	1,2-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.7	0.66	0.92	-	NS	NS	NS	NS	NS	NS	-	-	-
133-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.6 J	3.6	-	-	NS	NS	NS	NS	NS	NS	-	-	-
133-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	1.3	0.71	0.87	-	NS	NS	NS	NS	NS	NS	-	-	-
133-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	2.5	0.9 J	-	-	NS	NS	NS	NS	NS	NS	0.69 J	-	-
133-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	1500	NS	NS	290 J	-	440 J	4.4	12.7	NS	NS	NS	NS	NS	NS	5	28 J	2.8 J
133-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	83 J	NS	NS	-	43	8.3	6.7	-	NS	NS	NS	NS	NS	NS	8.8	61	13
133-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	33	2.5	8.7	-	NS	NS	NS	NS	NS	NS	0.66 J	-	-
133-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	130 J	NS	NS	-	-	2.8 J	3.2	4.3	NS	NS	NS	NS	NS	NS	2.9	-	2.6 J
133-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.93	2.5	-	1.2 J	NS	NS	NS	NS	NS	NS	-	-	-
133-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.93 J	9.6	2 J	4	NS	NS	NS	NS	NS	NS	N/A	-	-
133-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	2700 J	NS	NS	13000 J	-	0.74	20.2 J	-	NS	NS	NS	NS	NS	NS	3.4 J	-	7.1 J
133-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	2200	NS	NS	-	110	42 J	4.7	3.3 J	NS	NS	NS	NS	NS	NS	-	-	-
133-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.57 J	2.3	0.95 J	1.5	NS	NS	NS	NS	NS	NS	N/A	-	-
133-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	2200	NS	NS	740	1500	77	169	3.3 J	NS	NS	NS	NS	NS	NS	53	65	16
133-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	180 J	NS	NS	2400 J	1.3	9.2	5.5 J	5.1	NS	NS	NS	NS	NS	NS	-	-	-
133-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	170 J	NS	NS	-	-	-	-	-	NS	NS	NS	NS	NS	NS	2.1 J	-	-
133-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	25 L	3.1	3.6 J+	-	NS	NS	NS	NS	NS	NS	1.5 J	-	-
133-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	50000	NS	NS	20000	60000	5600	10700	199 J	NS	NS	NS	NS	NS	NS	2000	3300	760
133-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	0.57	-	-	NS	NS	NS	NS	NS	NS	-	-	-
133-C	TOTAL VOCs	NS	NS	NS	NS	NS	NS	NS	NS	NS	59,163 J	NS	NS	36,430 J	61,723 J	6,250 J	10,931 J	234 J	NS	NS	NS	NS	NS	NS	2,078 J	3,454 J	802 J

TABLE 4-2

SUMMARY OF SUB-SLAB VOC DETECTIONS NEAR SSDS, BUILDING C
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
 PAGE 12 OF 16

Location	VOC (µg/m ³)	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16	Feb-17	Aug-17	Feb-18	Aug-18	Feb-19	
156-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.4	NS	NS	NS	NS	NS	NS	NS	NS	NS
156-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.3	NS	NS	NS	NS	NS	NS	NS	NS	NS
156-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.1	NS	NS	NS	NS	NS	NS	NS	NS	NS
156-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.6 J	NS	NS	NS	NS	NS	NS	NS	NS	NS
156-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	22.5	NS	NS	NS	NS	NS	NS	NS	NS	NS
156-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	NS	NS	NS	NS	NS	NS	NS	NS	NS
156-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9.9	NS	NS	NS	NS	NS	NS	NS	NS	NS
156-C	TOTAL VOCs	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	46 J	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes:

Data presented in this table is from sub-slab vapor samples.

µg/m³ = micrograms per cubic meter
 - = not detected (below reporting limit)

DL = diluted analysis
 NA = compound not reported

NS = not sampled
 NA = compound not reported

K = value is biased high
 L = value is biased low

VOC = volatile organic compound
 SSDS = sub-slab depressurization system

TABLE 4-3

SUB-SLAB MONITORING POINTS SAMPLED NEAR SSDS, BUILDING A
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
 PAGE 13 OF 16

Date	Sub-Slab Vapor Monitoring Point												
	SSD-11-A	SSD-12-A	SSD-13-A	015-A	SSD-16-A	017-A	018-A	078-A	079-A	093-A	116-A	136-A	168-A
April-07	✓	✓	✓	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A
October-07	-	-	✓	✓	-	-	✓	N/A	N/A	N/A	N/A	N/A	N/A
July-08	-	-	✓	✓	-	-	✓	N/A	N/A	N/A	N/A	N/A	N/A
November-08	-	-	✓	✓	-	-	✓	N/A	N/A	N/A	N/A	N/A	N/A
November-07	-	-	✓	✓	-	-	✓	N/A	N/A	N/A	N/A	N/A	N/A
July-09	✓	✓	✓	✓	✓	-	-	N/A	N/A	N/A	N/A	N/A	N/A
October-09	✓	✓	✓	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A
July-09	-	-	-	✓	-	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A
October-09	-	-	-	✓	-	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A
February-10	-	-	-	✓	✓	-	✓	N/A	N/A	N/A	N/A	N/A	N/A
August-10	-	-	-	✓	-	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A
February-11	-	-	-	✓	-	-	✓	N/A	N/A	N/A	N/A	N/A	N/A
August-11	-	-	-	✓	-	-	✓	N/A	N/A	N/A	N/A	N/A	N/A
October-11	-	-	-	✓	-	-	✓	N/A	N/A	N/A	N/A	N/A	N/A
February-12	-	-	-	✓	-	-	✓	N/A	N/A	N/A	N/A	N/A	N/A
August-12	-	-	-	✓	-	-	✓	N/A	N/A	N/A	N/A	N/A	N/A
February-13	-	-	-	✓	-	-	✓	N/A	N/A	N/A	N/A	N/A	N/A
March-13	-	-	-	✓	-	-	✓	N/A	N/A	N/A	N/A	N/A	N/A
August-13	-	-	-	✓	-	-	✓	N/A	N/A	N/A	N/A	N/A	N/A
February-14	-	-	-	✓	-	-	✓	N/A	N/A	N/A	N/A	N/A	N/A
September-14	-	-	-	-	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A
February-15	-	-	-	✓	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A
August-15	-	-	-	✓	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A
February-16	-	-	-	✓	-	-	-	✓	✓	✓	✓	✓	N/A
August-16	-	-	-	✓	-	-	-	✓	✓	✓	✓	✓	N/A
February-17	-	-	-	✓	-	-	-	✓	✓	✓	✓	✓	✓
August-17	-	-	-	✓	-	-	-	✓	✓	✓	✓	✓	✓
February-18	-	-	-	✓	-	-	-	✓	✓	✓	✓	✓	✓
August-18	-	-	-	✓	-	-	-	✓	✓	✓	✓	✓	✓
February-19	-	-	-	✓	-	-	-	✓	✓	✓	✓	✓	✓

Notes:

- —point(s) not sampled.

N/A—point may have been sampled but the results were not applicable to the SSD-system.

Points with an "SSD" designation were installed and are monitored for the SSD-system.

Points without the SSD designation are used for the vapor-intrusion monitoring program.

TABLE 4-4

TRICHLOROETHENE CONCENTRATIONS BEFORE AND DURING SSDS OPERATION, BUILDING A
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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<i>Vapor Monitoring Point</i>	<i>Before SSD-system operation*</i>		<i>During SSD-system operation (most recent concentration)</i>	
	<i>Date</i>	<i>Sub-Slab Vapor Concentration ($\mu\text{g}/\text{m}^3$)</i>	<i>Date</i>	<i>Sub-Slab Vapor Concentration ($\mu\text{g}/\text{m}^3$)</i>
015 A	April 2007	326,000	February 2019	4
018 A	August 2010	64,000	February 2014	174
079-A	February 2016	3,500	February 2019	57
136-A	February 2016	35,300	February 2019	270
168-A	February 2017	22,000	February 2019	180

Notes:

*SSD-system startup for the main floor of Building A (015 A) was in March 2008, for the Building A basement (018 A) in October 2010, and April 2016 for the Building A eastern area (079-A and 136-A).

$\mu\text{g}/\text{m}^3$ —microgram(s) per cubic meter air

SSD—sub-slab depressurization

TABLE 4-5

SUB-SLAB MONITORING POINTS SAMPLED NEAR SSDS, BUILDING C
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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Date	Sub-Slab Vapor Monitoring Point																			
	001-C	SSD-2-C	SSD-3-C	SSD-4-C	SSD-5-C	SSD-6-C	060-C	088-C	111-C	113-C	126-C	127-C	133-C	135-C	141-C	149-C	152-C	153-C	155-C	156-C
Oct-07	✓	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jul-08	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nov-08	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jul-09	✓	-	-	-	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-
Oct-09	✓	-	-	-	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-
Feb-10	✓	-	-	-	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-
Aug-10	✓	-	-	-	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-
Feb-11	✓	-	-	-	-	-	✓	✓	-	✓	-	-	-	-	-	-	-	-	-	-
Aug-11	✓	-	-	-	-	-	✓	✓	-	✓	-	-	-	-	-	-	-	-	-	-
Feb-12	✓	-	-	-	-	-	✓	✓	-	✓	✓	✓	✓	✓	-	-	-	-	-	-
Jun-12	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jul-12	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aug-12	✓	-	-	-	-	-	✓	✓	-	✓	✓	-	✓	✓	-	-	-	-	-	-
Feb-13	-	-	-	✓	-	-	✓	✓	-	✓	✓	-	✓	✓	✓	-	-	-	-	-
Aug-13	-	-	-	✓	-	-	✓	✓	-	✓	✓	-	✓	✓	✓	-	-	-	-	-
Feb-14	-	-	-	-	-	-	✓	✓	-	✓	✓	-	✓	✓	✓	-	-	-	-	-
Sep-14	✓	-	-	✓	-	-	✓	✓	-	✓	✓	✓	✓	-	✓	✓	-	✓	✓	-
Feb-15	✓	-	-	✓	-	-	✓	✓	✓	✓	✓	-	-	-	✓	✓	✓	✓	-	✓
Aug-15	✓	-	-	✓	-	-	✓	✓	✓	✓	✓	-	-	-	✓	✓	✓	✓	✓	-
Feb-16	✓	-	-	✓	-	-	✓	✓	-	✓	✓	-	-	-	-	✓	✓	✓	✓	-
Aug-16	✓	-	-	✓	-	-	✓	✓	-	✓	✓	-	-	-	-	✓	✓	✓	✓	-
Feb-17	✓	-	-	✓	-	-	✓	✓	-	✓	✓	-	-	-	-	✓	✓	✓	✓	-
Aug-17	✓	-	-	✓	-	-	✓	✓	-	✓	✓	-	-	-	-	✓	✓	✓	✓	-
Feb-18	✓	-	-	✓	-	-	✓	✓	-	✓	✓	-	✓	-	✓	✓	✓	✓	✓	-
Aug-18	✓	-	-	✓	-	-	✓	✓	-	✓	✓	-	✓	-	✓	✓	✓	✓	✓	-
Feb-19	✓	-	-	✓	-	-	✓	✓	-	✓	✓	-	✓	-	✓	✓	✓	✓	✓	-

Notes:

- —point(s) not sampled.

N/A—point may have been sampled but the results were not applicable to the SSD-system.

Points with an "SSD" designation were installed and are monitored for the SSD-system.

Points without the SSD designation are used for the vapor-intrusion monitoring program.

TABLE 4-6

TRICHLOROETHENE CONCENTRATIONS BEFORE AND DURING SSDS OPERATION, BUILDING C
 LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
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<i>Vapor Monitoring Point</i>	<i>Before SSD-system operation*</i>		<i>During SSD-system operation (most recent concentration)</i>	
	<i>Date</i>	<i>Sub-Slab Vapor Concentration ($\mu\text{g}/\text{m}^3$)</i>	<i>Date</i>	<i>Sub-Slab Vapor Concentration ($\mu\text{g}/\text{m}^3$)</i>
<i>SOUTHERN BASEMENT AREA*</i>				
001-C	March 2006	19,200	February 2019	25
SSD-4-C	December 2006	28,300	February 2019	0.55 J
<i>MID-BASEMENT AREA**</i>				
060 C	August 2011	12,000	February 2019	600
088 C	February 2012	3,800	February 2019	46
113 C	February 2013	16,000 J	February 2019	180
126 C	August 2012	5,800 J	February 2019	400
127-C	Not Sampled		September 2014	410
133 C	February 2013	60,000	February 2019	760
141-C	Not Sampled		February 2019	340
149-C	Not Sampled		February 2019	0.42 J
152-C	Not Sampled		February 2019	49
153-C	Not Sampled		February 2019	5.5
155-C	Not Sampled		February 2019	-

Notes:

*SSD-system startup in the south end of the Building C basement was in March 2008.

**SSD-system startup in the mid-basement area of Building C was in May 2013.

$\mu\text{g}/\text{m}^3$ —microgram(s) per cubic meter air

J—estimated value

- = not detected (below reporting limit)

SSD—sub-slab depressurization

**Table 4-7A
Summary of VOC Detections in SSDS Influent, Building A
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland**

Building A - Influent Volatiles ($\mu\text{g}/\text{m}^3$)																									
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
Mar-08	--	--	N/A	--	8,300	--	2,100	--	7,900	300	--	--	--	330	--	30,000	44,000	--	--	--	--	--	1,100	280	94,310
Apr-08	--	--	N/A	--	3,800	--	660	--	4,500	--	--	--	--	--	--	16,000	34,000	--	--	--	--	--	--	--	58,960
Apr-08	--	--	N/A	--	2,300	--	460	--	3,300	--	--	--	--	--	--	13,000	30,000	--	--	--	--	--	--	--	49,060
Apr-08	--	--	N/A	--	1,100	--	280	--	1,500	--	--	--	--	120	--	9,100	14,000	--	--	--	--	--	--	--	26,100
Apr-08	--	--	N/A	--	2,000	--	480	--	2,200	--	--	--	--	120	--	11,000	18,000	--	--	--	--	--	110	--	33,910
Apr-08	--	--	N/A	--	930	--	260	--	1,200	--	--	--	--	86	--	6,500	8,600	--	--	--	--	--	--	--	17,576
May-08	--	--	N/A	--	1,000	--	320	--	950	--	--	--	--	--	--	6,000	5,500	--	--	--	--	--	--	--	13,770
Jun-08	180	--	N/A	--	720	--	180	--	760	--	--	--	--	--	--	4,800	7,100	--	--	--	--	--	--	--	13,740
Jul-08	--	--	N/A	--	350	--	110	--	430	--	--	--	--	--	--	3,200	3,700	--	--	--	--	--	--	--	7,790
Aug-08	--	--	N/A	--	470	--	150	--	400	--	--	--	--	28	--	2,900	3,400	--	--	--	--	--	--	--	7,348
Sep-08	--	--	N/A	--	380	--	130	--	430	--	17	--	70	52	--	1,900	2,700	32	--	--	--	--	--	--	5,711
Nov-08	--	--	N/A	--	1,300	--	300	--	1,100	--	--	--	--	72	--	6,500	7,200	--	--	--	--	--	--	--	16,472
Dec-08	--	--	N/A	--	420	--	120	--	380	--	--	--	--	--	--	2,300	4,100	--	--	--	--	--	53	--	7,373
Jan-09	--	--	N/A	--	380	--	110	--	380	--	--	--	--	--	--	2,100	2,100	--	--	--	--	--	--	--	5,070
Feb-09	--	--	N/A	--	270	--	78	--	260	--	--	--	--	24	--	1,600	1,600	--	--	--	--	--	--	--	3,832
Mar-09	--	--	N/A	--	620	--	470	--	150	--	--	--	--	--	--	3,800	3,700	--	--	--	--	--	--	--	8,740
Apr-09	--	--	N/A	--	360	--	100	--	220	--	--	--	--	--	--	1,900	2,400	--	--	--	--	--	--	--	4,980
May-09	--	--	N/A	--	200	--	62	--	140	--	--	--	--	32	--	1,700	1,500	--	--	--	--	--	--	--	3,634
Jun-09	--	--	N/A	--	280	--	77	--	200	--	--	--	--	19	--	1,700	1,800	--	--	--	--	--	--	--	4,076
Jul-09	--	--	N/A	--	250	--	68	--	180	--	27	--	--	13	--	1,400	1,700	14	--	--	--	--	--	--	3,652
Aug-09	--	--	N/A	--	280	--	79	--	200	--	--	--	--	42	--	1,900	1,900	--	--	--	--	--	--	--	4,401
Sep-09	--	--	N/A	--	150	--	40	--	110	--	--	--	--	13	--	870	1,000	--	--	--	--	--	--	--	2,183
Oct-09	--	--	N/A	--	230	--	64	--	210	--	--	--	--	20	--	1,500	1,400	--	--	--	--	--	9.7	--	3,434
Nov-09	--	--	N/A	--	180	--	43	--	180	--	--	--	--	14	--	1,200	1,100	--	--	--	--	--	--	--	2,717
Dec-09	--	--	N/A	--	190	--	48	--	180	--	--	--	--	39	--	1,100	1,300	--	--	--	--	--	--	--	2,857
Jan-10	--	--	N/A	--	240	--	67	--	180	--	--	--	--	16	--	1,500	1,600	--	--	--	--	--	--	--	3,603
Feb-10	--	--	N/A	--	140	--	35	--	120	--	--	--	--	24	--	760	930	--	--	--	--	--	--	--	2,009
Mar-10	--	--	N/A	--	250	--	62	--	190	--	--	--	--	21	--	1,500	1,900	--	--	--	--	--	--	--	3,923
Apr-10	--	--	N/A	--	160	--	41	--	160	--	--	--	--	--	--	1,100	1,000	--	--	--	--	--	--	--	2,461
May-10	--	--	N/A	--	170	--	42	--	170	19	--	--	--	95	--	960	1,100	--	--	18	--	--	75	23	2,672
Jun-10	--	--	N/A	--	96	--	24	--	110	12	--	--	--	15	--	630	600	12	--	130	28	--	50	26	1,733
Jul-10	--	--	N/A	--	220	--	52	--	180	--	--	--	--	--	--	1,500	1,500	--	--	24	--	--	--	--	3,476
Aug-10	--	--	N/A	--	200	--	45	--	170	--	--	--	--	12	--	1,200	1,100	16	--	--	--	--	--	--	2,743
Sep-10	--	--	N/A	--	140	--	35	--	150	--	--	--	--	29	--	860	1,100	20	--	--	--	--	--	--	2,334
10/12/2010 ^a	--	--	N/A	--	170	--	40	--	140	--	--	--	--	940	--	1,100	1,400	20	--	--	--	--	89	33	3,932
Nov-10	--	--	N/A	--	150	--	34	--	100	--	--	--	--	71	--	920	1,200	53	--	--	--	--	14	--	2,542
Dec-10	--	--	N/A	--	120	--	28	--	110	42	--	--	--	54	--	790	970	13	--	--	--	--	170	31	2,328
Jan-11	--	--	N/A	--	150	--	34	--	130	14	--	--	--	13	--	860	1,200	--	--	--	--	--	47	10	2,458
Feb-11	--	--	N/A	--	130	--	32	--	160	--	--	--	--	23	--	910	900	--	--	--	--	--	29	--	2,184
Mar-11	--	--	N/A	--	390	--	98	--	350	19	--	--	--	23	--	2,800	2,500	--	--	--	--	--	61	--	6,241
Apr-11	--	--	N/A	--	150	--	36	--	160	--	30	--	--	10	--	900	1,100	--	--	--	--	--	--	--	2,386
May-11	--	--	N/A	--	150	--	39	--	150	--	--	--	--	--	--	880	890	--	--	--	--	--	--	--	2,109
Jun-11	--	--	N/A	--	240	--	59	--	190	--	--	--	--	35	--	1,600	1,600	20	--	--	--	--	--	--	3,744
Jul-11	--	--	N/A	--	200	--	51	--	170	--	40	--	--	81	--	1,300	1,300	--	--	--	--	--	26	--	3,168
Aug-11	--	--	N/A	--	200	--	44	--	160	--	--	--	--	29	--	1,200	1,400	--	--	--	--	--	--	--	3,033
Sep-11	12	--	N/A	--	130	--	29	--	130	--	--	--	--	11	--	750	990	12	--	--	--	--	--	--	2,064
Oct-11	8.3	--	N/A	--	120	--	28	--	93	--	--	--	--	51	--	640	780	--	--	--	--	--	--	--	1,720
Nov-11	10	--	N/A	--	140	--	34	--	110	--	--	--	--	9.2	--	730	930	--	--	--	--	--	--	--	1,963
Dec-11	7.3	--	N/A	--	130	--	29	--	110	--	--	--	--	46	--	600	800	--	--	--	--	--	--	--	1,722
Jan-12	--	--	N/A	--	130	--	30	--	140	--	--	--	--	16	--	590	840	--	--	--	--	--	--	--	1,746

Table 4-7A
Summary of VOC Detections in SSDS Influent, Building A
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Building A - Influent Volatiles (µg/m ³)																										
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride		m-xylene & p-xylene	o-xylene	Total VOCs
Feb-12	--	--	N/A	--	140	--	31	--	110	--	--	--	--	--	760	980	--	--	--	--	--	--	--	--	2,021	
Mar-12	--	--	N/A	--	160	--	36	--	130	--	--	--	14	--	880	1,100	--	--	--	--	--	--	--	--	2,320	
Apr-12	--	--	N/A	--	170	--	34	--	140	--	--	--	--	--	880	1,300	--	--	--	--	--	--	20	--	2,544	
May-12	--	--	N/A	--	290	--	56	--	200	--	--	--	32	--	1,700	2,300	--	--	--	--	--	--	--	--	4,578	
Jun-12	--	--	N/A	--	320	--	66	--	200	--	--	--	--	--	1,700	2,100	--	--	--	--	--	--	--	--	4,386	
Jul-12	--	--	N/A	--	250	--	50	--	180	--	--	--	16	--	1,300	1,300	--	--	--	--	--	--	--	--	3,096	
Aug-12	--	--	N/A	--	150	--	30	--	130	--	--	--	22	--	730	1,000	17	--	--	--	--	--	--	--	2,079	
Sep-12	--	--	N/A	--	110	--	23	--	120	--	--	--	170	--	560	720	--	--	--	--	--	--	--	11	1,714	
Oct-12	--	--	N/A	--	190	--	36	--	180	--	--	--	--	--	1,000	1,400	--	--	--	--	--	--	--	--	2,806	
Nov-12	--	--	N/A	--	120	--	23	--	140	--	--	--	--	--	600	910	--	--	--	--	--	--	--	--	1,793	
Dec-12	--	--	N/A	--	130	--	21	--	120	--	--	--	8	--	590	1,000	--	--	--	--	--	--	--	--	1,869	
Jan-13	--	--	N/A	--	130	--	24	--	190	--	--	--	--	--	630	950	--	--	--	--	--	--	--	--	1,924	
Feb-13	--	--	N/A	--	130	--	26	--	130	--	--	--	--	--	560	860	--	--	--	--	--	--	--	--	1,706	
Mar-13	--	--	N/A	--	140	--	30	--	94	--	--	--	10	--	670	1,100	--	--	--	--	--	--	--	--	2,044	
Apr-13	--	--	N/A	--	2,200	--	290	--	1,500	--	--	--	--	--	2,900	5,900	--	--	--	--	--	--	--	--	12,790	
May-13	--	--	N/A	--	140	11	29	--	130	--	--	--	14	--	730	1,200	17	--	--	--	--	--	--	--	2,271	
Jun-13	--	--	N/A	--	100	--	22	--	110	--	--	--	--	--	530	790	--	--	--	--	--	--	--	--	1,552	
Jul-13	--	--	N/A	--	160	--	33	--	100	--	--	--	--	--	820	1,100	--	--	--	--	--	--	--	--	2,213	
Aug-13	--	--	N/A	--	180	--	34	--	120	--	--	--	15	--	780	1,300	--	--	--	--	--	--	--	--	2,429	
Sep-13	--	--	N/A	--	100	--	16	--	90	--	--	--	--	--	410	630	--	--	--	--	--	--	--	--	1,246	
Oct-13	--	--	N/A	--	220	--	39	--	190	--	--	--	15	--	810	1,400	16	--	--	--	--	--	--	--	2,690	
Nov-13	--	--	N/A	--	200	--	39	--	170	--	--	--	11	--	930	1,500	41	--	--	--	--	--	--	--	2,891	
Dec-13	0.94	--	--	21.2	165	--	30.7	--	132	--	4.4	--	12.2	2.5	883	1,530	--	--	--	--	--	--	--	--	2,782	
Jan-14	--	--	6.5	11.6	173	2.2	29.3	--	141	1.8	3.3	4.9	--	9,820	570	795	--	--	1.9	--	--	--	4.3	1.7	11,567	
Feb-14	--	--	2.4	7.4	126	--	21.2	--	92.7	--	2.1	--	--	15.3	429	843	--	--	--	--	--	--	--	--	1,539	
Mar-14	--	--	2.4	--	176	2.0	29.3	36.4	130	--	--	--	3.6	9.1	1,310	2,100	--	--	--	--	--	--	3.0	--	3,802	
Apr-14	81.7	--	--	--	194	--	31.8	--	131	120	--	--	--	75.7	646	1,490	--	--	--	--	--	--	387	109	3,266	
May-14	4.8	--	8.8	3.9	44.7	4.1	6.7	--	32.6	6.5	202	2.3 J	1.2	29.5	142	292	--	2.8	11.5	3.0	--	--	24.3	9.3	832	
Jun-14	1,040	--	30.3	136	3,710	--	565	--	2,840	--	138	34.9 J	--	199	51.7	1,000 J	1,490	--	--	17.6 J	--	--	25.6 J	--	11,278	
Jul-14	45.1	--	--	8.4 J	189	--	36.5	81.2	145	--	--	--	--	20.8 J	--	871	1,250	--	--	--	--	--	--	--	2,647	
Aug-14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
Sep-14	51.1	1.1	1.0 J	54	416	4.7	104	--	323	--	0.67 J	--	2.3	8.8	8.1	1,290	3,250	--	--	2.3	0.83 J	1.5	1.5 J	1.1 J	5,522	
Oct-14	46.6	--	--	--	89.0	--	16.1	--	69.8	--	17.3 J	--	--	--	480	819	NS	--	--	--	--	--	--	--	1,538	
Nov-14	38.2	--	--	--	92.4	--	16.8	--	71	--	23.9 J	--	59.4	14.3 J	--	459	803	NS	--	--	--	--	--	--	1,578	
Dec-14	34.3	--	--	11.8	77.6	--	18.8	--	68.6	--	19.4 J	--	--	41.5 J	--	428	741	NS	--	--	--	--	--	--	1,441	
Jan-15	64.8	--	--	6.8	85.6	4.4	15.7	--	81	--	2 J	--	2.0	1.7	1.3	404	695	NS	--	--	--	--	0.90 J	--	1,365	
Feb-15	1.5	--	3.7	--	8.5	--	--	--	6.5	1.9 J	46.9	4.1 J	--	13.5	--	17.0	22.4	NS	--	--	--	--	6.5	2.7	135	
Mar-15	0.54	2.9	1.4	2.4	183	1.6	28.3	--	141	1.1 J	1.4 J	1.2 J	--	1.7	--	1,370	2,300	NS	--	--	--	--	4.1	1.3	4,042	
Apr-15	0.73	0.78 J	2.1	7.1	147	2.2	22.7	--	112	--	3.5 J	2.7 J	0.87 J	2.7	--	617	1,090	NS	--	1.3 J	--	--	2.7 J	0.99 J	2,016	
May-15	--	--	--	--	161	--	23 J	--	121	--	--	--	--	--	--	573	1,170	NS	--	--	--	--	--	--	2,048	
Jun-15	--	--	--	--	143	--	19.4 J	33.4	105	133	--	--	--	--	--	536	1,110	NS	--	--	--	--	582	142	2,804	
Jul-15	--	--	--	--	91	--	14	--	78	--	--	--	--	--	390	470	NS	--	--	--	--	--	N/A	N/A	1,043	
Aug-15	12	--	1.3 J	2.4 J	82	2.8 J	16	--	63	--	--	--	--	12	1.4	400	590	NS	--	--	--	--	N/A	N/A	1,183	
Sep-15	72	--	2.7 J	1.8 J	130	--	24	--	86	--	--	--	--	--	1.9 J	510	1,000	NS	--	--	--	--	N/A	N/A	1,828	
Oct-15	78	--	1.5 J	--	130	--	24	--	91	--	--	--	--	2.0 J	560	900	NS	--	--	--	--	N/A	N/A	--	1,787	
Nov-15	43	--	3.2 J	1.9 J	140	3.6	25	--	110	--	--	--	--	2.5 J	570	900	NS	--	--	--	--	N/A	N/A	--	1,799	
Dec-15	34	--	3.2 J	1.4 J	120	3.2	23	--	83	--	--	--	--	1.8 J	490	830	NS	--	--	--	--	N/A	N/A	--	1,590	
Jan-16	9.2	--	1.1 J	2.0	84	2.1	16	--	80	--	3 J	--	--	2.7	1.5 J	320	480	NS	--	--	--	--	N/A	N/A	1,002	
Feb-16	2.6	--	1.0 J	1 J	100	2.4	20	0.60	82	--	--	--	--	1.6	550 EB	840	NS	--	--	--	--	N/A	N/A	--	1,601	
Mar-16	36	0.49 J	7.9	1.5 J	130	2.4	25	0.70	98	--	2.8 J	--	0.64 J	5.3	2.0	680 E	1,300	NS	--	--	--	0.42	N/A	N/A	2,293	

Table 4-7A
Summary of VOC Detections in SSDS Influent, Building A
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Building A - Influent Volatiles (µg/m ³)																											
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride			m-xylene & p-xylene	o-xylene	Total VOCs
Apr-16	28	--	--	--	230	--	42	--	180	--	--	--	--	--	--	940	1,700	NS	--	--	--	--			N/A	N/A	3,120
Apr-16	--	--	--	--	90	--	18	--	68	--	--	--	--	--	--	490	950	NS	--	--	--	--			N/A	N/A	1,616
May-16	--	--	19.0	2 J	110	3.5 J	18	--	120	--	9	--	--	6.5	--	600 B	910	NS	--	--	--	--			N/A	N/A	1,798
Jun-16	31	--	63.0	--	150	--	26	--	140	--	--	--	--	3.6 J	670	1,100	NS	--	--	--	--			N/A	N/A	2,184	
Jul-16	65	--	--	--	100	--	17	--	75	--	36	--	--	15	--	510	940	NS	--	--	--	--			N/A	N/A	1,758
Aug-16	20	--	--	--	92	--	17	--	68	--	--	--	--	--	--	460	860	NS	--	8.2 J	--	--			N/A	N/A	1,525
Sep-16	38	--	1.5 J	1.2 J	88	2.3 J	14	--	66	--	15	--	--	1.8 J	400	760	NS	--	--	--	--			N/A	N/A	1,388	
Oct-16	--	--	1.7	--	81	--	14	--	68	--	--	--	--	--	--	410	630	NS	--	--	--	--			N/A	N/A	1,205
Nov-16	--	--	--	--	350	--	68	--	260	--	49 J	--	--	--	--	2,000	2,800	NS	--	--	--	--			N/A	N/A	5,527
Dec-16	11	--	2 J	--	95	3.1 J	17	--	120	--	--	--	--	2.5 J	600	710	NS	--	--	--	--			N/A	N/A	1,561	
Jan-17	17	--	--	8.4 J	440	--	81	--	370	--	130	--	--	9.3 J	2,000	3,600	NS	--	--	--	--			N/A	N/A	6,656	
Feb-17	33	--	--	6	110	3.7 J	19	--	100	--	--	--	--	2.1 J	660	1,100	NS	--	--	--	--			5.9 J*	N/A	2,040	
Mar-17	21	--	--	2 J	100	3.3 J	21	--	110	--	--	--	8.5 J	2.2 J	590	1,000	NS	--	--	--	--			6.9 J*	N/A	1,865	
Apr-17	15	--	--	1.3 J	65	--	10	--	71	--	--	--	--	--	--	370	680	NS	--	--	--	--			N/A	N/A	1,212
May-17	31	--	1.6 J	--	80	--	16	--	74	--	--	--	--	--	--	430	760	NS	--	--	--	--			N/A	N/A	1,393
Jun-17	10	--	--	3.4 J	69	--	13	--	66	--	13 JB	--	--	--	--	480	710	NS	--	--	--	--			N/A	N/A	1,364
Jul-17	25	--	7.2 J	--	94	--	20	--	120	--	--	--	--	4.6 J	450	1,400	NS	--	--	--	--			N/A	N/A	2,121	
Aug-17	5 J	--	4.9 J	--	90	--	18	--	95	--	28 JB	--	--	--	--	480	940	NS	--	--	--	--			N/A	N/A	1,661
Sep-17	35	--	--	2.0	79	--	13	--	72	--	16 J	--	--	--	--	420	1,000	NS	--	--	--	--			N/A	N/A	1,637
Oct-17	22	ND	2.5 J	--	52	--	10	--	66	--	14 J	--	--	--	--	290	750	NS	--	--	--	--			N/A	N/A	1,207
Nov-17	4 J	ND	ND	--	83	--	17	--	88	--	--	--	--	--	--	550	1,100	NS	--	--	--	--			N/A	N/A	1,842
Dec-17	16	ND	1.5 J	--	75	3.4 J	15	--	92	--	--	--	--	--	--	500 B	990	NS	--	--	--	--			N/A	N/A	1,693
Jan-18	16	0.50 J	1.7	1.2 J	58	2.00	9	--	79	0.59 J	--	--	0.55 J	2.5 J	1.1 J	390	800	NS	--	--	--	--			N/A	N/A	1,363
Feb-18	16	ND	32	--	70	3.6 J	13	--	120	--	14 J	--	--	--	--	420	1,000	NS	--	--	--	--			N/A	N/A	1,689
Mar-18	22	ND	2.1 J	--	80	3.60 J	14	--	110	--	--	--	--	--	--	470	1,200	NS	--	--	--	--			N/A	N/A	1,902
Apr-18	10	--	--	--	67	--	13	--	89	--	12 J	--	--	--	--	430	860	NS	--	--	--	--			N/A	N/A	1,481
May-18	12	--	15	1.8 J	80	3.1 J	15	--	82	--	7.6 JB	--	2.9 J	17	1.5 J	460	870	NS	--	--	--	--			N/A	N/A	1,568
Jun-18	12	--	1.8 J	9.4	91	3.5 J	16	--	90	--	--	--	--	1.8 J	540	1,200	NS	--	--	--	--			N/A	N/A	1,966	
Jul-18	66	--	4.0 J	19 J	140	--	25	--	140	--	40	--	--	--	890 B	1,800	NS	--	--	--	--			N/A	N/A	3,124	
Aug-18	35	--	3.6 J	8.2 J	100	--	22	--	110	--	--	--	--	--	750	1,100	NS	--	--	--	--			N/A	N/A	2,129	
Sep-18	14	--	3.5 J	18	79	--	15	--	72	--	13 JB	--	--	--	590 B	950	NS	--	5.8 J	--	--			N/A	N/A	1,760	
Oct-18	5.9 J	--	--	3.9 J	58	--	12	--	56	--	12 J	--	--	--	430 B	800	NS	--	--	--	--			N/A	N/A	1,378	
Nov-18	11	--	--	3.7 J	56	4.1	11	--	60	--	--	--	--	--	450	810	NS	--	--	--	--			N/A	N/A	1,406	
Dec-18	6.3	--	2.7 J	3.7 J	77	--	17	--	110	--	18 JB	--	--	--	690	1,100	NS	--	--	--	--			N/A	N/A	2,025	
Jan-19	11	--	--	2.1 J	46	--	10	--	55	--	12 J	--	--	--	330	700	NS	--	--	--	--			N/A	N/A	1,166	
Feb-19	3.0 J	--	--	2.3 J	57	--	13	--	73	--	--	--	--	--	430	850	NS	--	--	--	--			N/A	N/A	1,428	
Mar-19	4.4 J	--	--	--	48	--	11	--	60	--	--	--	--	--	330	720	NS	--	--	--	--			N/A	N/A	1,173	
Previous 6-Month Average Apr-Sep 2018	24.8	--	5.6 J	11.3 J	92.8	3.3 J	17.7	--	97.2	--	18.2 JB	--	--	--	1.7 J	610 B	1,130	--	--	5.8 J	--	--			--	--	2,005
Current 6-Month Average Oct 2018-Mar 2019	6.9 J	--	2.7 J	3.1 J	57	4.1	12.3	--	69	--	14 JB	--	-- J	2.5 J	-- J	443	830	--	--	--	--	--			--	--	1,429

SSD - sub-slab depressurization
 * value reported is for total xylenes

SV - soil vapor

D - duplicate J - estimated value

NA - not applicable (compound not sampled)
 B - compound was found in the blank and sample

-- - non-detect (below detection limit); not included in total VOC calculation

Table 4-7B
Summary of VOC Detections in SSDS Influent, Building C
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Building C - Influent Volatiles (µg/m ³)																										
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
Previous 6-Month Average Apr-Sep 2018	3.9	0.60 J	5.9	3.0 J	NA	2.9	2.4 J	-- J	--	--	8.3 J	24 J	--	1.8 J	11	--	0.8 JB	34	NA	--	5.7	1.8 J	--	5.1 J*	NA	110
Current 6-Month Average Oct 2018-Mar 2019	2.8	0.48 J	3.0	--	NA	2.5	1.8 J	--	--	--	0.9 J	2.9 J	--	0.9 J	3.5	--	0.7 J	23.7	NA	--	2.8	1.0 J	--	2.6 *	NA	49

SSD - sub-slab depressurization
 * value reported is for total xylenes

SV - soil vapor

D - duplicate

J - estimated value

NA - not applicable (compound not analyzed/reported)
 B - compound was found in the blank and sample

-- - non-detect (below detection limit); not included in total VOC calculation

APPENDICES

Appendix A—February 2019 Sample Log Sheets/Chain of Custody
Appendix B—Method Detection Limits
Appendix C—Laboratory Analytical Reports
Appendix D—Data Validation Reports
**Appendix E—Remedial Action Progress Report #33: October 1, 2018
through March 31, 2019, Sub-Slab-Depressurization Systems, Buildings A
and C, Lockheed Martin Middle River Complex**

**APPENDIX A—FEBRUARY 2019
SAMPLE LOG SHEETS/CHAIN OF CUSTODY**

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

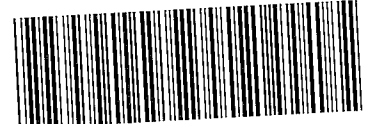
Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Larson, Josh Mullis & Walt Pryor</u>		1 of 16 COCs	
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>					
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>					
City/State/Zip: <u>Germentown, MD, 20871</u>		TAL Contact: <u>Terry Walker Washburn</u>					
Phone: <u>301-528-552</u>							
FAX:							
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time					
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>					
PO# <u>112FC08388</u>		Rush (Specify)					

Baltimore #201

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
IA-138-A-26	2/21/19	0848	1654	-26	0	7249	11835	✓											
IA-093-A-26	2/21/19	0851	1656	-30	-3	4588	11277	✓											
IA-174-A-26	2/21/19	0850	1655	-30	-5	10033	09741	✓											
IA-018-A-26	2/21/19	0856	1657	-30	-2	11261	11669	✓											
IA-DUP03-A-26	2/21/19	0856	1657	-30	0	11499	10841	✓											
IA-015-A-26	2/21/19	0904	1704	-29	-4	09846	11657	✓											

Sampled by: Sophia Larson, Walt Pryor, Josh Mullis

Temperature (Fahrenheit)	
Interior	Ambient
Start	
Stop	
Start	
Stop	



140-14386 Chain of Custody

CUSTOMER SEALS INTACT
 RECEIVED AMBIENT RT 20.0 /GT20.0
 BAD 2-23-19
 8 DAYS FROM 77454111 7893m SP0

18 CANS / 18 FLOWS / 8 TS

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: <u>Tetra Tech</u>	Date/Time: <u>2/22/19</u>	Canisters Received by:
Samples Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/22/19</u>	Received by: <u>[Signature]</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/22/19 1700</u>	Received by: <u>[Signature]</u> 2/23/19 10:10

Lab Use Only: Shipped Name: _____ Opened by: _____ Condition: _____

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.



Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Pryor</u>		2 of 16 COCs													
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																	
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																	
City/State/Zip: <u>Germentown, MD, 20877</u>		TAL Contact: <u>Terry Walker Washburn</u>																	
Phone: <u>301-528-552</u>																			
FAX:																			
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																	
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																	
PO# <u>1121C08388</u>		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
IA-118-A-26	2/21/19	0905	1705	-29	-4	11929	11518	✓											
IA-168-A-26	2/21/19	0928	1728	-30	-7	7605	10796	✓											
IA-081-A-26	2/21/19	0912	1712	-22	0	8780	09823	✓											
IA-079-A-26	2/21/19	0918	1718	-29	-1	10593	11641	✓											
IA-DUPO4-A-26	2/21/19	0918	1718	-30	-5	8727	11107	✓											
IA-117-A-26	2/21/19	0920	1720	NA	-4	8830	09788	✓											
Sampled by: <u>Sophia Lawson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)												<h2>Baltimore #201</h2>					
		Interior		Ambient															
		Start																	
		Stop																	
		Interior		Ambient															
		Start																	
Stop																			
Special Instructions/QC Requirements & Comments:																			
Sample IA-117-A-26 regulator cap arrived broken, canister vacuum not able to measure pressure																			
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:															
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>															
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19 1700</u>		Received by: <u>[Signature]</u>															
Lab Use Only		Shipped Name		Opened By		Condition													

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor		3 of 16 COCs													
Company: Tetra Tech		Phone: 301-528-3000																	
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage																	
City/State/Zip: Germentown, MD, 20877		TAL Contact: Terry Walker Washmund																	
Phone: 301-528-552																			
FAX:																			
Project Name: MRC Indoor Air		Analysis Turnaround Time																	
Site/location: MRC		Standard (Specify) X																	
PO# 112IC08388		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
IA-078-A-26	2/21/19	0923	1723	-19	4	8786	10922	✓											
IA-136-A-26	2/21/19	0925	1725	-26	2	11524	11578	✓											
IA-076-A-26	2/21/19	0927	1727	-28	0	10880	09865	✓											
IA-075-A-26	2/21/19	0931	1731	-30	-5	8690	11809	✓											
IA-021-A-26	2/21/19	0934	1734	-30	-5	11568	12276	✓											
SV-178-MB-3	2/21/19	0948	1058	-30	0	11054	11163	✓											
Sampled by: Sophia Lawson, Josh Mullis, Walt Pryor		Temperature (Fahrenheit)				<h2>Baltimore #201</h2>													
		Interior		Ambient															
		Start																	
		Stop																	
		Pressure (Inches of Hg)																	
		Interior		Ambient															
Start																			
Stop																			
Special Instructions/QC Requirements & Comments:																			
Canisters Shipped by: Tetra Tech		Date/Time: 2/22/19		Canisters Received by:															
Samples Relinquished by: [Signature]		Date/Time: 2/22/19		Received by: [Signature]															
Relinquished by: [Signature]		Date/Time: 2/22/19 1700		Received by: [Signature] TA KX 2-23-19 10:10															
Lab Use Only: Shipper Name: _____ Opened by: _____ Condition: _____																			

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

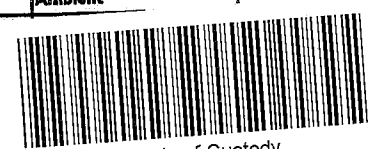
TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor		4 of 16 COCs	
Company: Tetra Tech		Phone: 301-528-3000					
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage					
City/State/Zip: Germentown, MD, 20871		TAL Contact: Terry Walker Washmund					
Phone: 301-528-552							
FAX:							
Project Name: MRC Indoor Air		Analysis Turnaround Time					
Site/location: MRC		Standard (Specify) X					
PO # 112108388		Rush (Specify)					

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-16	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-180-MB-3	2/21/19	0944		-30	0	10653	11855	✓										
SV-179-MB-3	2/21/19	0950		-30	0	10454	11823	✓										
SV-181-MB-3	2/21/19	0953		-29	0	11512	11807	✓										
SV-182-MB-3	2/21/19	0955		-29	0	11898	11858	✓										
SV-183-MB-3	2/21/19	0958		-30	-2.5	11273	11558	✓										
SV-184-MB-3	2/21/19	1001		-30	-5	10621	11753	✓										

Sampled by: Sophia Lawson, Walt Pryor, Josh Mullis	Temperature (Fahrenheit)	
	Interior	Ambient
	Start	
	Pressure (Inches of Hg)	
	Interior	Ambient
	Start	



140-14387 Chain of Custody

Baltimore
#201

17 CANS / 17 FLOWS
 CUSTODY SEAL INTACT
 AMBIENT AIR AT 20.0 / 20.0 °C
 SKN 2-23-19

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: [Signature]	Date/Time: 2/22/19	Received by: [Signature]
Relinquished by: [Signature]	Date/Time: 2/22/19 1700	Received by: [Signature] TAL 2-23-19 10:10

Lab Use Only: Shipper Name: _____ Opened by: _____ Conditions: _____

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.



Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Puyar</u>		5 of 16 COCs	
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>					
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>					
City/State/Zip: <u>Germantown, MD, 20871</u>		TAL Contact: <u>Terry Walker Washburn</u>					
Phone: <u>301-528-552</u>							
FAX:							
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time					
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>					
PO# <u>1125 C08338</u>		Rush (Specify)					

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-185-MB-3	2/21/19	1008	1114	-30	-1	11423	11778	✓										
SV-186-MB-3	2/21/19	1009	1115	-26	0	10432	11859	✓										
SV-187-MB-3	2/21/19	NA	NA	NA	NA	11925	11820	✓										
SV-116-A-26	2/21/19	1030	1215	-25	2	11582	09634	✓										
SV-DUPO3-A-26	2/21/19	0000	0000	-28	1	10953	11615	✓										
SV-138-A-26	2/21/19	1032	0	-29	0	11895	11607	✓										

Sampled by: <u>Sophia Lawson, Walt Puyar, Josh Mullis</u>	Temperature (Fahrenheit)	
	interior	Ambient
	Start	
	Stop	
	Pressure (inches of Hg)	
	interior	Ambient
Start		
Stop		

Baltimore #201

Special Instructions/QC Requirements & Comments:
Sample SV-187-MB-3 was not sampled due to issue opening vapor canister.

Canisters Shipped by: <u>Tetra Tech</u>	Date/Time: <u>2/22/19</u>	Canisters Received by:
Samples Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/22/19</u>	Received by: <u>[Signature]</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/22/19 1700</u>	Received by: <u>[Signature]</u>

Lab Use Only	Shipped Name	Opened by	Condition
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03/07/2019

TAL Knoxville

5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor		6 of 16 COCs	
Company: Tetra Tech		Phone: 301-528-3000					
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage					
City/State/Zip: Germantown, MD, 20871		TAL Contact: Terry Walker Washburn					
Phone: 301-528-552							
FAX:							
Project Name: MRC Indoor Air		Analysis Turnaround Time					
Site/location: MRC		Standard (Specify) X					
PO# 112508388		Rush (Specify)					

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
SV-093-A-26	2/21/19	1034	1221	-30	0	04703	11608	✓											
SV-173-A-26	2/21/19	1038	1223	-29	1	04654	10735	✓											
SV-174-A-26	2/21/19	1040	1220	-30	0	10635	09635	✓											
SV-171-A-26	2/21/19	1049	1222	-29	2	10302	11750	✓											
SV-170-A-26	2/21/19	1054	1224	-26	0	11925	11120	✓											
SV-081-A-26	2/21/19	1127	1234	-24	0	11310	10518	✓											

Sampled by: Sophia Lawson Walt Pryor, Josh Mullis	Temperature (Fahrenheit)	
	Interior	Ambient
	Start	
	Stop	
	Pressure (Inches of Hg)	
	Interior	Ambient
Start		
Stop		

Baltimore #201

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: [Signature]	Date/Time: 2/22/19	Received by: [Signature]
Relinquished by: [Signature]	Date/Time: 2/22/19 1700	Received by: [Signature] TAL KNOX 2-23-19 10:10

Lab Use Only	Shipped Name	Opened by	Condition
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03/07/2019

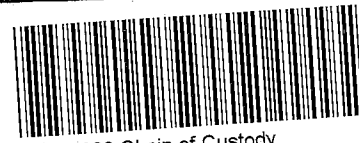
TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Pryor</u>		7 of 16 COCs														
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																		
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																		
City/State/Zip: <u>Germantown, MD, 20871</u>		TAL Contact: <u>Terry Walker Washmont</u>																		
Phone: <u>301-528-552</u>																				
FAX:																				
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																		
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																		
PO # <u>1121C08388</u>		Rush (Specify)																		
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)		
<u>SV-079-A-26</u>	<u>2/21/19</u>	<u>1130</u>	<u>1237</u>	<u>-30</u>	<u>-1</u>	<u>09717</u>	<u>09645</u>	<input checked="" type="checkbox"/>												
<u>SV-DUP04-A-26</u>	<u>2/21/19</u>	<u>0000</u>	<u>0000</u>	<u>-21</u>	<u>4</u>	<u>11733</u>	<u>11728</u>	<input checked="" type="checkbox"/>												
<u>SV-131-C-26</u>	<u>2/19/19</u>	<u>1029</u>	<u>1129</u>	<u>-29</u>	<u>0</u>	<u>11422</u>	<u>11813</u>	<input checked="" type="checkbox"/>												
<u>SV-DUP01-C-26</u>	<u>2/19/19</u>	<u>0000</u>	<u>0000</u>	<u>-29</u>	<u>0</u>	<u>10162</u>	<u>11554</u>	<input checked="" type="checkbox"/>												
<u>SV-001-C-26</u>	<u>2/19/19</u>	<u>1036</u>	<u>1136</u>	<u>-28</u>	<u>-1</u>	<u>11536</u>	<u>10941</u>	<input checked="" type="checkbox"/>												
<u>SV-004-C-26</u>	<u>2/19/19</u>	<u>1040</u>	<u>1140</u>	<u>0</u>	<u>0</u>	<u>11977</u>	<u>11872</u>	<input checked="" type="checkbox"/>												
Sampled by: <u>Sophia Lawson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)																		
		Interior		Ambient																
		Start																		
		Stop																		
Special Instructions/QC Requirements & Comments:		Interior																		
		Start																		
		Stop																		
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:																
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>																
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19 1700</u>		Received by: <u>[Signature]</u>																
Lab Use Only		Shipped Date		Opened by		Condition														



140-14389 Chain of Custody

Baltimore #201

18 CANS / 18 FLOWS

CUSTODY SEAL INTACT
 RECEIVED AMBIENT AT 200/CT20.1C

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03/07/2019

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information Company: Tetra Tech Address: 20251 Century Blvd #200 City/State/Zip: Germantown, MD, 20871 Phone: 301-528-552 FAX: Project Name: MRC Indoor Air Site/location: MRC PO# 112 FC08388		Project Manager: Tony Apanavage Phone: 301-528-3000 Site Contact: Tony Apanavage TAL Contact: Terry Walker Washburn		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor 8 of 16 COCs															
Analysis Turnaround Time Standard (Specify) <input checked="" type="checkbox"/> X Rush (Specify)		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>TO-15</th> <th>TO-14A</th> <th>EPA 3C</th> <th>EPA 25C</th> <th>ASTM D-1946</th> <th>Other (Please specify in notes section)</th> <th>Indoor Air</th> <th>Ambient Air</th> <th>Soil Gas</th> <th>Landfill Gas</th> <th>Other (Please specify in notes section)</th> </tr> </table>				TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)			
TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)									
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
SV-102-C-26	2/19/19	1045	1145	-29	-1	11759	11269	✓											
SV-155-C-26	2/19/19	1048	1148	-30	0	11490	11785	✓											
SV-133-C-26	2/19/19	1052	1152	-30	0	10572	11162	✓											
SV-153-C-26	2/19/19	1055	1155	-30	0	10158	10493	✓											
SV-DUP00-C-26	2/19/19	0000	0000	-30	-2	11497	11658	✓											
SV-150-C-26	2/19/19	1105	1205	-28	0	11931	11841	✓											
Sampled by: Sophia Lawson, Walt Pryor, Josh Mullis		Temperature (Fahrenheit) <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Interior</th> <th>Ambient</th> </tr> <tr> <td>Start</td> <td></td> </tr> <tr> <td>Stop</td> <td></td> </tr> </table>				Interior	Ambient	Start		Stop		<h2>Baltimore #201</h2>							
Interior	Ambient																		
Start																			
Stop																			
Pressure (Inches of Hg) <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Interior</th> <th>Ambient</th> </tr> <tr> <td>Start</td> <td></td> </tr> <tr> <td>Stop</td> <td></td> </tr> </table>				Interior	Ambient	Start		Stop											
Interior	Ambient																		
Start																			
Stop																			
Special Instructions/QC Requirements & Comments:																			
Canisters Shipped by: Tetra Tech		Date/Time: 2/22/19		Canisters Received by:															
Samples Relinquished by:		Date/Time: 2/22/19		Received by:															
Relinquished by:		Date/Time: 2/22/19 1700		Received by: [Signature] TAKX 2-23-19 10:10															
Lab Use Only: Shipper/Time: _____																			

1175

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Pryor</u>		9 of 16 COCs												
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																
City/State/Zip: <u>Georgetown, MD, 20871</u>		TAL Contact: <u>Terry Walker Washburn</u>																
Phone: <u>301-528-552</u>																		
FAX:																		
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																
PO # <u>112FC08388</u>		Rush (Specify)																
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
<u>SV-152-C-26</u>	<u>2/19/19</u>	<u>1106</u>	<u>1206</u>	<u>-29</u>	<u>-1</u>	<u>11732</u>	<u>10745</u>	<input checked="" type="checkbox"/>										
<u>SV-141-C-26</u>	<u>2/19/19</u>	<u>1110</u>	<u>1210</u>	<u>-30</u>	<u>-1</u>	<u>11595</u>	<u>09831</u>	<input checked="" type="checkbox"/>										
<u>SV-088-C-26</u>	<u>2/19/19</u>	<u>1126</u>	<u>1226</u>	<u>-30</u>	<u>-1</u>	<u>09553</u>	<u>11713</u>	<input checked="" type="checkbox"/>										
<u>SV-142-C-26</u>	<u>2/19/19</u>	<u>1120</u>	<u>1220</u>	<u>-28</u>	<u>0</u>	<u>10242</u>	<u>11541</u>	<input checked="" type="checkbox"/>										
<u>SV-113-C-26</u>	<u>2/19/19</u>	<u>1117</u>	<u>1217</u>	<u>-30</u>	<u>0</u>	<u>10629</u>	<u>11745</u>	<input checked="" type="checkbox"/>										
<u>SV-149-C-26</u>	<u>2/19/19</u>	<u>1132</u>	<u>1232</u>	<u>-30</u>	<u>0</u>	<u>11921</u>	<u>11620</u>	<input checked="" type="checkbox"/>										
Sampled by: <u>Sophia Carson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)				<h2>Baltimore #201</h2>												
			Interior	Ambient														
		Start																
		Stop																
		Pressure (Inches of Hg)																
			Interior	Ambient														
Start																		
Stop																		
Special instructions/QC Requirements & Comments:																		
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:														
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>														
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>														
Lab Use Only		Shipper Name		Opened by		Condition												

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11721

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor		10 of 16 COCs													
Company: Tetra Tech		Phone: 301-528-3000																	
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage																	
City/State/Zip: Germantown, MD, 20871		TAL Contact: terry walker washmond																	
Phone: 301-528-552																			
FAX:																			
Project Name: MRC Indoor Air		Analysis Turnaround Time																	
Site/location: MRC		Standard (Specify) X																	
PO# 112FC08388		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
SV-126-C-26	2/19/19	1134	1234	-36	0	11476	09886	✓											
SV-101-C-26	2/19/19	1141	1241	-26	0	10874	11140	✓											
SV-100-C-26	2/19/19	1143	1243	-30	0	11503	11710	✓											
SV-060-C-26	2/19/19	1157	1257	-30	0	10448	11492	✓											
SV-118-A-26	2/21/19	1135	1242	-24	0	11314	11832	✓											
SV-015-A-26	2/21/19	1142	1248	-30	0	11991	09748	✓											
Sampled by: Sophia Lawson, Josh Mullis, Walt Pryor		Temperature (Fahrenheit)																	
			Interior	Ambient															
		Start																	
		Stop																	
		Pressure (Inches of Hg)																	
			Interior	Ambient															
		Start																	
		Stop																	
Special Instructions/QC Requirements & Comments:																			
Canisters Shipped by: Tetra Tech		Date/Time: 2/22/19		Canisters Received by:															
Samples Relinquished by: <i>[Signature]</i>		Date/Time: 2/22/19		Received by: <i>[Signature]</i>															
Relinquished by: <i>[Signature]</i>		Date/Time: 2/22/19 1700		Received by: TA KWX 2-23-19 10:10															
Lab Use Only		Shipper Name		Operator		Condition													

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03/07/2019



140-14390 Chain of Custody

Baltimore #201

18 cans / 18 flows
 CUSTODY SEAL INTACT
 RECEIVED AMBIENT RT 20.0 / CT 20.0 C

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Larson, Josh Mullis & Walt Pryor</u>		11 of 16 COCs	
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>					
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>					
City/State/Zip: <u>Germentown, MD, 20871</u>		TAL Contact: <u>terry walker washund</u>					
Phone: <u>301-528-552</u>							
FAX:							
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time					
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>					
PO# <u>112108388</u>		Rush (Specify)					

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-078-A-26	2/21/19	1147	1249	-25	-5	10175	1177a	✓										
SV-136-A-26	2/21/19	1150	1253	-30	-3	11513	11861	✓										
SV-076-A-26	2/21/19	1157	1257	-30	-4	09842	11848	✓										
SV-168-A-26	2/21/19	1200	1300	-30	-4	7605	10796	✓										
SV-075-A-26	2/21/19	1206	1306	-27	-6	11500	11138	✓										
BCK-1-26	2/19/19	0609	1609	-28	-2	10492	11132	✓										

Sampled by: <u>Sophia Larson, Walt Pryor, Josh Mullis</u>	Temperature (Fahrenheit)	
	interior	Ambient
	Start	
	Stop	
	Pressure (Inches of Hg)	
	interior	Ambient
	Start	
	Stop	

Baltimore #201

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: <u>Tetra Tech</u>	Date/Time: <u>2/22/19</u>	Canisters Received by:
Samples Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/22/19</u>	Received by: <u>[Signature]</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/22/19 1700</u>	Received by: <u>Anna TA Kux 2-23-19 10:10</u>

Lab Use Only Shipped Name: Opened by: Condition:

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Pryor</u>		12 of 16 COCs												
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																
City/State/Zip: <u>Germentown, MD, 20871</u>		TAL Contact: <u>Terry Walker Washburn</u>																
Phone: <u>301-528-552</u>																		
FAX:																		
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																
PO# <u>1121008388</u>		Rush (Specify)																
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BCK-2-26	2/19/19	0819	1619	-30	-5	11601	10492	✓										
BCK-3-26	2/19/19	0828	1628	-25	-1	8815	09798	✓										
BCK-4-26	2/19/19	0835	1635	-30	-3	10149	11764	✓										
IA-001-C-26	2/19/19	0851	1651	-30	-4	11437	10919	✓										
IA-004-C-26	2/19/19	0854	1654	-18	0	7283	10759	✓										
IA-131-C-26	2/19/19	0902	1702	-30	0	7461	11604	✓										
Sampled by: <u>Sophia Lawson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)				<h2>Baltimore #201</h2>												
		Interior		Ambient														
		Start																
		Stop																
		Pressure (Inches of Hg)																
		Interior		Ambient														
Start																		
Stop																		
Special Instructions/QC Requirements & Comments:																		
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:														
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>														
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19 1700</u>		Received by: <u>Mullis JA KX 2-23-19 10:10</u>														
Lab Use Only		Shipper Name		Created by		Condition												

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03/07/2019

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Pryor</u>		13 of 16 COCs													
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																	
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																	
City/State/Zip: <u>Georgetown, MD, 20877</u>		TAL Contact: <u>terry walker washmund</u>																	
Phone: <u>301-528-552</u>																			
FAX:																			
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																	
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																	
PO # <u>1121CG8388</u>		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
IA-DUP01-C-26	2/19/19	0600	0600	-30	-11	7588	09806	✓											
IA-102-C-26	2/19/19	0906	1706	-30	-4	11932	09589	✓											
IA-155-C-26	2/19/19	0908	1708	-30	-4	7162	11592	✓											
IA-133-C-26	2/19/19	0909	1709	-29	0	7921	09791	✓											
IA-153-C-26	2/19/19	0911	1711	-30	-7	7674	09660	✓											
IA-DUP02-C-26	2/19/19	0600	0600	-30	-7	10240	09731	✓											
Sampled by: <u>Sophia Lawson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)												<h2>Baltimore #201</h2> <p>24 COCS / 24 FLOWS CUSTODY SEAL INTACT RECEIVED AMBIENT RT 20.0/CT 20.0°C</p>					
		Interior	Ambient																
		Start																	
		Stop																	
		Pressure (Inches of Hg)																	
		Interior	Ambient																
Start																			
Stop																			
Special Instructions/QC Requirements & Comments:																			
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:															
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>															
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19 1700</u>		Received by: <u>[Signature]</u>		<u>TAL KX 2-23-19 10:10</u>													
Lab Use Only		Shipped Name		Opened by		Condition:													



140-14391 Chain of Custody

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03/07/2019

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Larson, Josh Mullis & Walt Pryor		14 of 16 COCs													
Company: Tetra Tech		Phone: 301-528-3000																	
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage																	
City/State/Zip: Georgetown, MD, 20877		TAL Contact: Terry Walker Washmund																	
Phone: 301-528-552																			
FAX:																			
Project Name: MRC Indoor Air		Analysis Turnaround Time																	
Site/location: MRC		Standard (Specify) X																	
PO# 1121C08388		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
IA-060-C-26	2/19/19	0914	1714	-28	-5	11482	11840	✓											
IA-150-C-26	2/19/19	0916	1716	-36	-5	09551	11865	✓											
IA-145-C-26	2/19/19	0917	1717	-28	-5	8918	11521	✓											
IA-146-C-26	2/19/19	0918	1718	-30	-5	8678	11671	✓											
IA-152-C-26	2/19/19	0919	1719	-36	-4	10435	11857	✓											
IA-144-C-26	2/19/19	0921	1721	-30	-5	0948	10744	✓											
Sampled by: Sophia Larson, Walt Pryor, Josh Mullis		Temperature (Fahrenheit)				Baltimore #201													
		Interior		Ambient															
		Start																	
		Stop																	
		Pressure (Inches of Hg)																	
		Interior		Ambient															
Start																			
Stop																			
Special Instructions/QC Requirements & Comments:																			
Canisters Shipped by: Tetra Tech		Date/Time: 2/22/19		Canisters Received by:															
Samples Relinquished by: <i>[Signature]</i>		Date/Time: 2/22/19		Received by: <i>[Signature]</i>															
Relinquished by: <i>[Signature]</i>		Date/Time: 2/22/19 17:00		Received by: Ammonia TAKVX 2-23-19 10:10															
Lab Use Only: Shipper Name: _____ Operator: _____ Conditions: _____																			

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information				Project Manager: <u>Tony Apanavage</u>				Sampled By: <u>Sophia Larson, Josh Mollis & Walt Pryor</u>				15 of 16 COCs									
Company: <u>Tetra Tech</u>				Phone: <u>301-528-3000</u>																	
Address: <u>20251 Century Blvd #200</u>				Site Contact: <u>Tony Apanavage</u>																	
City/State/Zip: <u>Georgetown, MD, 20877</u>				TAL Contact: <u>Terry Walker Washmund</u>																	
Phone: <u>301-528-552</u>																					
FAX:																					
Project Name: <u>MRC Indoor Air</u>				Analysis Turnaround Time																	
Site/location: <u>MRC</u>				Standard (Specify) <u>X</u>																	
PO# <u>112108388</u>				Rush (Specify)																	
Sample Identification				Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-141-C-26				2/19/19	0924	1724	-30	-5	11175	11136	✓										
IA-088-C-26				2/19/19	0928	1728	-30	-5	7274	11123	✓										
IA-142-C-26				2/19/19	0929	1724	-30	-1	09846	09644	✓										
IA-113-C-26				2/19/19	0930	1730	-30	-6	7027	11547	✓										
IA-149-C-26				2/19/19	0933	1733	-30	0	8683	09589	✓										
IA-126-C-26				2/19/19	0934	1734	-30	-1	8464	10736	✓										
Sampled by: <u>Sophia Larson, Walt Pryor, Josh Mollis</u>				Temperature (Fahrenheit)								<h2>Baltimore #201</h2>									
				Interior		Ambient															
				Start																	
				Pressure (Inches of Hg)																	
				Interior		Ambient															
				Start																	
Special Instructions/QC Requirements & Comments:																					
Canisters Shipped by: <u>Tetra Tech</u>				Date/Time: <u>2/22/19</u>				Canisters Received by:													
Samples Relinquished by: <u>[Signature]</u>				Date/Time: <u>2/22/19</u>				Received by: <u>[Signature]</u>													
Relinquished by: <u>[Signature]</u>				Date/Time: <u>2/22/19 1700</u>				Received by: <u>[Signature]</u>													

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.



Client Contact Information: Project Manager: **Tony Apanavage** Sampled By: **Sophia Larson, Josh Mollis & Walt Pryor** 16 of 16 COCs

Company: **Tetra Tech** Phone: **301-528-3000**
 Address: **20251 Century Blvd #200** Site Contact: **Tony Apanavage**
 City/State/Zip: **Germentown, MD, 20877** TAL Contact: **Terry Walker Washburn**
 Phone: **301-528-552**

Project Name: **MRC Indoor Air** Analysis Turnaround Time
 Site/location: **MRC** Standard (Specify) **X**
 PO# **112108387** Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-101-B-26	2/14/19	0943	1743	-27	-1	10052	09579	✓										
IA-100-B-26	2/14/19	0944	1744	-25	0	10079	11739	✓										

Sampled by: **Sophia Larson, Walt Pryor, Josh Mollis**

Temperature (Fahrenheit)

	Interior	Ambient
Start		
Stop		

Pressure (Inches of Hg)

	Interior	Ambient
Start		
Stop		

Baltimore #201

09665
11884
11869
11646

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: [Signature]	Date/Time: 2/22/19	Received by: [Signature]
Relinquished by: [Signature]	Date/Time: 2/22/19 1700	Received by: [Signature]

Lab Use Only: Shipper Name: _____ Operator: _____ Condition: _____



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-001-C 26	IAQ Sample ID:	IA-001-C 26
SV Canister #:	10941	IAQ Canister #:	10919
SV Regulator #:	11536	IAQ Regulator #:	11937
SV Start Time:	10:36 AM	IAQ Start Time:	8:51 PM
SV Start Pressure:	-28	IAQ Start Pressure:	-30
SV Stop Time:	11:36 AM	IAQ Stop Time:	4:51 PM
SV Stop Pressure:	-1	IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-004-C 26	IAQ Sample ID:	IA-004-C 26
SV Canister #:	11872	IAQ Canister #:	10759
SV Regulator #:	11977	IAQ Regulator #:	7283
SV Start Time:	10:40 AM	IAQ Start Time:	8:54 AM
SV Start Pressure:	00	IAQ Start Pressure:	-18
SV Stop Time:	11:40 AM	IAQ Stop Time:	4:54 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-015-A 26	IAQ Sample ID:	IA-015-A 26
SV Canister #:	09748	IAQ Canister #:	11657
SV Regulator #:	11991	IAQ Regulator #:	09846
SV Start Time:	11:42 AM	IAQ Start Time:	9:19 PM
SV Start Pressure:	-30	IAQ Start Pressure:	-29
SV Stop Time:	12:45 PM	IAQ Stop Time:	5:04 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

[Empty text box for location]

OBSERVATIONS / NOTES:

[Empty text box for observations/notes]

MS/MSD: [Empty text box] Signature: 

Duplicate ID: [Empty text box]



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE	INDOOR AIR QUALITY SAMPLE
SV Sample ID: <input type="text"/>	IAQ Sample ID: <input type="text" value="IA-018-A"/> <input type="text" value="26"/>
SV Canister #: <input type="text"/>	IAQ Canister #: <input type="text" value="11669"/>
SV Regulator #: <input type="text"/>	IAQ Regulator #: <input type="text" value="11261"/>
SV Start Time: <input type="text"/>	IAQ Start Time: <input type="text" value="8:56 AM"/>
SV Start Pressure: <input type="text"/>	IAQ Start Pressure: <input type="text" value="-30"/>
SV Stop Time: <input type="text"/>	IAQ Stop Time: <input type="text" value="4:57 AM"/>
SV Stop Pressure: <input type="text"/>	IAQ Stop Pressure: <input type="text" value="-2"/>


SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Signature: 

Duplicate ID:



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE	INDOOR AIR QUALITY SAMPLE
SV Sample ID: <input type="text"/>	IAQ Sample ID: <input type="text" value="IA-021-A"/> <input type="text" value="26"/>
SV Canister #: <input type="text"/>	IAQ Canister #: <input type="text" value="11276"/>
SV Regulator #: <input type="text"/>	IAQ Regulator #: <input type="text" value="11568"/>
SV Start Time: <input type="text"/>	IAQ Start Time: <input type="text" value="9:34 AM"/>
SV Start Pressure: <input type="text"/>	IAQ Start Pressure: <input type="text" value="-30"/>
SV Stop Time: <input type="text"/>	IAQ Stop Time: <input type="text" value="5:34 PM"/>
SV Stop Pressure: <input type="text"/>	IAQ Stop Pressure: <input type="text" value="-5"/>

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-060-C 26	IAQ Sample ID:	IA-060-C 26
SV Canister #:	11492	IAQ Canister #:	11840
SV Regulator #:	10448	IAQ Regulator #:	11482
SV Start Time:	11:57 AM	IAQ Start Time:	9:14 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-28
SV Stop Time:	12:57 PM	IAQ Stop Time:	5:14 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	-5

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-075-A 26	IAQ Sample ID:	IA-075-A 26
SV Canister #:	11138	IAQ Canister #:	11809
SV Regulator #:	11502	IAQ Regulator #:	8690
SV Start Time:	12:06 PM	IAQ Start Time:	9:31 AM
SV Start Pressure:	-27	IAQ Start Pressure:	-30
SV Stop Time:	1:06 PM	IAQ Stop Time:	5:31 AM
SV Stop Pressure:	-6	IAQ Stop Pressure:	-5

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-076-A 26	IAQ Sample ID:	IA-076-A 26
SV Canister #:	11848	IAQ Canister #:	09805
SV Regulator #:	09842	IAQ Regulator #:	10880
SV Start Time:	11:57 AM	IAQ Start Time:	9:27 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-28
SV Stop Time:	12:57 PM	IAQ Stop Time:	5:27 AM
SV Stop Pressure:	-4	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-078-A 26	IAQ Sample ID:	IA-078-A 26
SV Canister #:	11772	IAQ Canister #:	10922
SV Regulator #:	10175	IAQ Regulator #:	8786
SV Start Time:	11:47 AM	IAQ Start Time:	9:23 AM
SV Start Pressure:	-25	IAQ Start Pressure:	-19
SV Stop Time:	12:49 PM	IAQ Stop Time:	5:23 PM
SV Stop Pressure:	-5	IAQ Stop Pressure:	4

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

[Empty text box for location]

OBSERVATIONS / NOTES:

[Empty text box for observations/notes]

MS/MSD: [Empty text box] Signature: 

Duplicate ID: [Empty text box]



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-079-A 26	IAQ Sample ID:	IA-079-A 26
SV Canister #:	09645	IAQ Canister #:	11641
SV Regulator #:	09717	IAQ Regulator #:	10593
SV Start Time:	11:30 AM	IAQ Start Time:	9:18 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-29
SV Stop Time:	12:37 PM	IAQ Stop Time:	5:18 PM
SV Stop Pressure:	-1	IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Signature:

Duplicate ID: IA-DUP04-A-26 and SV-DUP-A-26



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-081-A 26	IAQ Sample ID:	IA-081-A 26
SV Canister #:	10518	IAQ Canister #:	09823
SV Regulator #:	11310	IAQ Regulator #:	8780
SV Start Time:	11:27 AM	IAQ Start Time:	9:12 AM
SV Start Pressure:	-29	IAQ Start Pressure:	-22
SV Stop Time:	12:34 PM	IAQ Stop Time:	5:12 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-088-C 26	IAQ Sample ID:	IA-088-C 26
SV Canister #:	11713	IAQ Canister #:	11123
SV Regulator #:	09553	IAQ Regulator #:	7274
SV Start Time:	11:26 AM	IAQ Start Time:	9:28 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	12:26 PM	IAQ Stop Time:	5:28 PM
SV Stop Pressure:	-1	IAQ Stop Pressure:	-5

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-093-A 26	IAQ Sample ID:	IA-093-A 26
SV Canister #:	11608	IAQ Canister #:	11277
SV Regulator #:	09703	IAQ Regulator #:	4588
SV Start Time:	10:34 AM	IAQ Start Time:	8:51 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	12:21 PM	IAQ Stop Time:	4:56 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

[Empty text box for location]

OBSERVATIONS / NOTES:

[Empty text box for observations/notes]

MS/MSD: [Empty text box] Signature: 

Duplicate ID: [Empty text box]



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE	INDOOR AIR QUALITY SAMPLE
SV Sample ID: <input type="text"/>	IAQ Sample ID: <input type="text" value="IA-100-B"/> <input type="text" value="26"/>
SV Canister #: <input type="text"/>	IAQ Canister #: <input type="text" value="11739"/>
SV Regulator #: <input type="text"/>	IAQ Regulator #: <input type="text" value="10079"/>
SV Start Time: <input type="text"/>	IAQ Start Time: <input type="text" value="9:44 AM"/>
SV Start Pressure: <input type="text"/>	IAQ Start Pressure: <input type="text" value="-25"/>
SV Stop Time: <input type="text"/>	IAQ Stop Time: <input type="text" value="5:44 PM"/>
SV Stop Pressure: <input type="text"/>	IAQ Stop Pressure: <input type="text" value="0"/>

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE	INDOOR AIR QUALITY SAMPLE
SV Sample ID: <input type="text"/>	IAQ Sample ID: <input type="text" value="IA-101-B"/> <input type="text" value="26"/>
SV Canister #: <input type="text"/>	IAQ Canister #: <input type="text" value="09579"/>
SV Regulator #: <input type="text"/>	IAQ Regulator #: <input type="text" value="10052"/>
SV Start Time: <input type="text"/>	IAQ Start Time: <input type="text" value="9:43 AM"/>
SV Start Pressure: <input type="text"/>	IAQ Start Pressure: <input type="text" value="-27"/>
SV Stop Time: <input type="text"/>	IAQ Stop Time: <input type="text" value="5:43 PM"/>
SV Stop Pressure: <input type="text"/>	IAQ Stop Pressure: <input type="text" value="-1"/>

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE

INDOOR AIR QUALITY SAMPLE

SV Sample ID: SV-102-C|26

IAQ Sample ID: IA-102-C|26

SV Canister #: 11269

IAQ Canister #: 09589

SV Regulator #: 11759

IAQ Regulator #: 11932

SV Start Time: 10:45 AM

IAQ Start Time: 9:06 AM

SV Start Pressure: -29

IAQ Start Pressure: -30

SV Stop Time: 11:45 AM

IAQ Stop Time: 5:06 PM

SV Stop Pressure: -1

IAQ Stop Pressure: -4

SAMPLE COLLECTION INFORMATION:

Analysis

Container Requirements

Collected

TO-15

1 Liter and 6 Liter Canisters

Yes No

Yes No


Yes No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD:

Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-113-C 26	IAQ Sample ID:	IA-113-C 26
SV Canister #:	11745	IAQ Canister #:	11547
SV Regulator #:	10629	IAQ Regulator #:	7027
SV Start Time:	11:17 AM	IAQ Start Time:	9:30 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	12:17 AM	IAQ Stop Time:	5:30 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	-6

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE	INDOOR AIR QUALITY SAMPLE
SV Sample ID: <input type="text"/>	IAQ Sample ID: <input type="text" value="IA-117-A"/> <input type="text" value="26"/>
SV Canister #: <input type="text"/>	IAQ Canister #: <input type="text" value="09788"/>
SV Regulator #: <input type="text"/>	IAQ Regulator #: <input type="text" value="8830"/>
SV Start Time: <input type="text"/>	IAQ Start Time: <input type="text" value="9:20 AM"/>
SV Start Pressure: <input type="text"/>	IAQ Start Pressure: <input type="text"/>
SV Stop Time: <input type="text"/>	IAQ Stop Time: <input type="text" value="5:20 AM"/>
SV Stop Pressure: <input type="text"/>	IAQ Stop Pressure: <input type="text" value="-4"/>

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

Pressure meter arrived from lab broken.

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 22, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-118-A 26	IAQ Sample ID:	IA-118-A 26
SV Canister #:	11832	IAQ Canister #:	11518
SV Regulator #:	11314	IAQ Regulator #:	11929
SV Start Time:	11:35 AM	IAQ Start Time:	9:05 AM
SV Start Pressure:	-29	IAQ Start Pressure:	-29
SV Stop Time:	12:42 PM	IAQ Stop Time:	5:05 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

[Empty text box for location]

OBSERVATIONS / NOTES:

[Empty text box for observations/notes]

MS/MSD: [Empty text box] Signature: 

Duplicate ID: [Empty text box]



Date:

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:

SV Canister #:

SV Regulator #:

SV Start Time:

SV Start Pressure:

SV Stop Time:

SV Stop Pressure:

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:

IAQ Canister #:

IAQ Regulator #:

IAQ Start Time:

IAQ Start Pressure:

IAQ Stop Time:

IAQ Stop Pressure:

SAMPLE COLLECTION INFORMATION:

Analysis

Container Requirements

Collected

TO-15

1 Liter and 6 Liter Canisters

Yes No

Yes No

Yes No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Signature:

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-126-C 26	IAQ Sample ID:	IA-126-C 26
SV Canister #:	09886	IAQ Canister #:	10736
SV Regulator #:	11976	IAQ Regulator #:	8464
SV Start Time:	11:34 AM	IAQ Start Time:	9:34 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	12:34 PM	IAQ Stop Time:	5:34 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-131-C 26	IAQ Sample ID:	IA-131-C 26
SV Canister #:	11813	IAQ Canister #:	11609
SV Regulator #:	11922	IAQ Regulator #:	7461
SV Start Time:	10:29 AM	IAQ Start Time:	9:02 AM
SV Start Pressure:	-29	IAQ Start Pressure:	-30
SV Stop Time:	11:29 AM	IAQ Stop Time:	5:02 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD:

Signature:

Duplicate ID: SV-DUP-01-C-26 and IA-DUP01-C



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-133-C 26	IAQ Sample ID:	IA-133-C 26
SV Canister #:	11162	IAQ Canister #:	09791
SV Regulator #:	10872	IAQ Regulator #:	7921
SV Start Time:	10:52 AM	IAQ Start Time:	9:09 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-29
SV Stop Time:	11:52 AM	IAQ Stop Time:	5:09 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-136-A 26	IAQ Sample ID:	IA-136-A 26
SV Canister #:	11861	IAQ Canister #:	11578
SV Regulator #:	11513	IAQ Regulator #:	11524
SV Start Time:	11:50 AM	IAQ Start Time:	9:25 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-26
SV Stop Time:	12:53 PM	IAQ Stop Time:	5:25 AM
SV Stop Pressure:	-3	IAQ Stop Pressure:	2

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-138-A 26	IAQ Sample ID:	IA-138-A 26
SV Canister #:	11607	IAQ Canister #:	11835
SV Regulator #:	11895	IAQ Regulator #:	7299
SV Start Time:	10:32 AM	IAQ Start Time:	8:48 AM
SV Start Pressure:	-29	IAQ Start Pressure:	-26
SV Stop Time:	12:16 PM	IAQ Stop Time:	4:54 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

[Empty text box for location]

OBSERVATIONS / NOTES:

[Empty text box for observations/notes]

MS/MSD: [Empty text box] Signature: 

Duplicate ID: [Empty text box]



Date:

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:

SV Canister #:

SV Regulator #:

SV Start Time:

SV Start Pressure:

SV Stop Time:

SV Stop Pressure:

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:

IAQ Canister #:

IAQ Regulator #:

IAQ Start Time:

IAQ Start Pressure:

IAQ Stop Time:

IAQ Stop Pressure:

SAMPLE COLLECTION INFORMATION:

Analysis

Container Requirements

Collected

TO-15

1 Liter and 6 Liter Canisters

Yes No

Yes No

Yes No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Signature:

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-141-C 26	IAQ Sample ID:	IA-141-C 26
SV Canister #:	09831	IAQ Canister #:	11136
SV Regulator #:	11595	IAQ Regulator #:	11175
SV Start Time:	11:10 AM	IAQ Start Time:	9:24 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	12:10 PM	IAQ Stop Time:	5:24 PM
SV Stop Pressure:	-1	IAQ Stop Pressure:	-5

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD:

Signature:

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-142-C 26	IAQ Sample ID:	IA-142-C 26
SV Canister #:	11541	IAQ Canister #:	09644
SV Regulator #:	10292	IAQ Regulator #:	09846
SV Start Time:	11:20 AM	IAQ Start Time:	9:24 AM
SV Start Pressure:	-28	IAQ Start Pressure:	-30
SV Stop Time:	12:20 PM	IAQ Stop Time:	5:24 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE	INDOOR AIR QUALITY SAMPLE
SV Sample ID: <input type="text"/>	IAQ Sample ID: <input type="text" value="IA-144-C"/> <input type="text" value="26"/>
SV Canister #: <input type="text"/>	IAQ Canister #: <input type="text" value="10744"/>
SV Regulator #: <input type="text"/>	IAQ Regulator #: <input type="text" value="0948"/>
SV Start Time: <input type="text"/>	IAQ Start Time: <input type="text" value="9:21 AM"/>
SV Start Pressure: <input type="text"/>	IAQ Start Pressure: <input type="text" value="-30"/>
SV Stop Time: <input type="text"/>	IAQ Stop Time: <input type="text" value="5:21 PM"/>
SV Stop Pressure: <input type="text"/>	IAQ Stop Pressure: <input type="text" value="-5"/>

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE	INDOOR AIR QUALITY SAMPLE
SV Sample ID: <input type="text"/>	IAQ Sample ID: <input type="text" value="IA-145-C"/> <input type="text" value="26"/>
SV Canister #: <input type="text"/>	IAQ Canister #: <input type="text" value="11521"/>
SV Regulator #: <input type="text"/>	IAQ Regulator #: <input type="text" value="8918"/>
SV Start Time: <input type="text"/>	IAQ Start Time: <input type="text" value="9:17 AM"/>
SV Start Pressure: <input type="text"/>	IAQ Start Pressure: <input type="text" value="-28"/>
SV Stop Time: <input type="text"/>	IAQ Stop Time: <input type="text" value="5:17 PM"/>
SV Stop Pressure: <input type="text"/>	IAQ Stop Pressure: <input type="text" value="-5"/>

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE	INDOOR AIR QUALITY SAMPLE
SV Sample ID: <input type="text"/>	IAQ Sample ID: <input type="text" value="IA-146-C"/> <input type="text" value="26"/>
SV Canister #: <input type="text"/>	IAQ Canister #: <input type="text" value="11671"/>
SV Regulator #: <input type="text"/>	IAQ Regulator #: <input type="text" value="8678"/>
SV Start Time: <input type="text"/>	IAQ Start Time: <input type="text" value="9:18 AM"/>
SV Start Pressure: <input type="text"/>	IAQ Start Pressure: <input type="text" value="-30"/>
SV Stop Time: <input type="text"/>	IAQ Stop Time: <input type="text" value="5:18 PM"/>
SV Stop Pressure: <input type="text"/>	IAQ Stop Pressure: <input type="text" value="-5"/>

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-149-C 26	IAQ Sample ID:	IA-149-C 26
SV Canister #:	11620	IAQ Canister #:	09583
SV Regulator #:	11921	IAQ Regulator #:	8683
SV Start Time:	11:32 AM	IAQ Start Time:	9:33 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	12:32 PM	IAQ Stop Time:	5:33 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-150-C 26	IAQ Sample ID:	IA-150-C 26
SV Canister #:	11841	IAQ Canister #:	11865
SV Regulator #:	11931	IAQ Regulator #:	09551
SV Start Time:	11:05 AM	IAQ Start Time:	9:16 AM
SV Start Pressure:	-28	IAQ Start Pressure:	-30
SV Stop Time:	12:05 PM	IAQ Stop Time:	5:16 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	-5

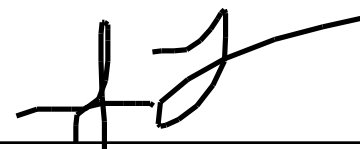
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-152-C 26	IAQ Sample ID:	IA-152-C 26
SV Canister #:	10795	IAQ Canister #:	11857
SV Regulator #:	11732	IAQ Regulator #:	10435
SV Start Time:	11:06 AM	IAQ Start Time:	9:19 AM
SV Start Pressure:	-29	IAQ Start Pressure:	-30
SV Stop Time:	12:06 PM	IAQ Stop Time:	5:19 PM
SV Stop Pressure:	-1	IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-153-C 26	IAQ Sample ID:	IA-153-C 26
SV Canister #:	10493	IAQ Canister #:	09660
SV Regulator #:	10158	IAQ Regulator #:	7674
SV Start Time:	10:55 AM	IAQ Start Time:	9:11 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	11:55 AM	IAQ Stop Time:	5:11 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	-7

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD:

Signature:

Duplicate ID: SV-153-C-26 and IA-DUP02-C



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-155-C 26	IAQ Sample ID:	IA-155-C 26
SV Canister #:	11785	IAQ Canister #:	11592
SV Regulator #:	11490	IAQ Regulator #:	7162
SV Start Time:	10:48 AM	IAQ Start Time:	9:08 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	11:48 AM	IAQ Stop Time:	5:08 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-168-A 26	IAQ Sample ID:	IA-168-A 26
SV Canister #:	10796	IAQ Canister #:	10796
SV Regulator #:	7605	IAQ Regulator #:	7605
SV Start Time:	12:00 PM	IAQ Start Time:	9:28 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	1:00 PM	IAQ Stop Time:	5:28 PM
SV Stop Pressure:	-4	IAQ Stop Pressure:	-7

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

[Empty text box for location]

OBSERVATIONS / NOTES:

[Empty text box for observations/notes]

MS/MSD: [Empty text box] Signature: 

Duplicate ID: [Empty text box]



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-174-A 26	IAQ Sample ID:	IA-174-A 26
SV Canister #:	09635	IAQ Canister #:	09741
SV Regulator #:	10635	IAQ Regulator #:	10033
SV Start Time:	10:40 AM	IAQ Start Time:	8:50 AM
SV Start Pressure:	-30	IAQ Start Pressure:	-30
SV Stop Time:	12:20 PM	IAQ Stop Time:	4:55 PM
SV Stop Pressure:	0	IAQ Stop Pressure:	-5

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

[Empty location text box]

OBSERVATIONS / NOTES:

[Empty observations/notes text box]

MS/MSD: [Empty box] Signature: 

Duplicate ID: [Empty box]



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE	INDOOR AIR QUALITY SAMPLE
SV Sample ID: <input type="text"/>	IAQ Sample ID: <input type="text" value="IA-BCK-1"/> <input type="text" value="26"/>
SV Canister #: <input type="text"/>	IAQ Canister #: <input type="text" value="11132"/>
SV Regulator #: <input type="text"/>	IAQ Regulator #: <input type="text" value="09649"/>
SV Start Time: <input type="text"/>	IAQ Start Time: <input type="text" value="8:09 AM"/>
SV Start Pressure: <input type="text"/>	IAQ Start Pressure: <input type="text" value="-28"/>
SV Stop Time: <input type="text"/>	IAQ Stop Time: <input type="text" value="4:09 PM"/>
SV Stop Pressure: <input type="text"/>	IAQ Stop Pressure: <input type="text" value="-2"/>

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

Outside around site

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE	INDOOR AIR QUALITY SAMPLE
SV Sample ID: <input type="text"/>	IAQ Sample ID: <input type="text" value="IA-BCK-2"/> <input type="text" value="26"/>
SV Canister #: <input type="text"/>	IAQ Canister #: <input type="text" value="10492"/>
SV Regulator #: <input type="text"/>	IAQ Regulator #: <input type="text" value="11601"/>
SV Start Time: <input type="text"/>	IAQ Start Time: <input type="text" value="8:19 AM"/>
SV Start Pressure: <input type="text"/>	IAQ Start Pressure: <input type="text" value="-30"/>
SV Stop Time: <input type="text"/>	IAQ Stop Time: <input type="text" value="4:19 PM"/>
SV Stop Pressure: <input type="text"/>	IAQ Stop Pressure: <input type="text" value="-5"/>

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

Outside around site

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE	INDOOR AIR QUALITY SAMPLE
SV Sample ID: <input type="text"/>	IAQ Sample ID: <input type="text" value="IA-BCK-3"/> <input type="text" value="26"/>
SV Canister #: <input type="text"/>	IAQ Canister #: <input type="text" value="09798"/>
SV Regulator #: <input type="text"/>	IAQ Regulator #: <input type="text" value="8815"/>
SV Start Time: <input type="text"/>	IAQ Start Time: <input type="text" value="8:28 AM"/>
SV Start Pressure: <input type="text"/>	IAQ Start Pressure: <input type="text" value="-25"/>
SV Stop Time: <input type="text"/>	IAQ Stop Time: <input type="text" value="4:28 PM"/>
SV Stop Pressure: <input type="text"/>	IAQ Stop Pressure: <input type="text" value="-1"/>

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

Outside around site

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE	INDOOR AIR QUALITY SAMPLE
SV Sample ID: <input type="text"/>	IAQ Sample ID: <input type="text" value="IA-BCK-4"/> <input type="text" value="26"/>
SV Canister #: <input type="text"/>	IAQ Canister #: <input type="text" value="11764"/>
SV Regulator #: <input type="text"/>	IAQ Regulator #: <input type="text" value="10149"/>
SV Start Time: <input type="text"/>	IAQ Start Time: <input type="text" value="8:35 AM"/>
SV Start Pressure: <input type="text"/>	IAQ Start Pressure: <input type="text" value="-30"/>
SV Stop Time: <input type="text"/>	IAQ Stop Time: <input type="text" value="4:35 PM"/>
SV Stop Pressure: <input type="text"/>	IAQ Stop Pressure: <input type="text" value="-3"/>

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No

LOCATION:

Outside around site

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-100-C 26	IAQ Sample ID:	
SV Canister #:	11710	IAQ Canister #:	
SV Regulator #:	11503	IAQ Regulator #:	
SV Start Time:	11:43 AM	IAQ Start Time:	
SV Start Pressure:	-30	IAQ Start Pressure:	
SV Stop Time:	12:43 PM	IAQ Stop Time:	
SV Stop Pressure:	0	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 19, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-101-C 26	IAQ Sample ID:	
SV Canister #:	11140	IAQ Canister #:	
SV Regulator #:	10874	IAQ Regulator #:	
SV Start Time:	11:41 AM	IAQ Start Time:	
SV Start Pressure:	26	IAQ Start Pressure:	
SV Stop Time:	12:41 PM	IAQ Stop Time:	
SV Stop Pressure:	0	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

C basement

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID: SV-116-A|26

SV Canister #: 09634

SV Regulator #: 11582

SV Start Time: 10:30 AM

SV Start Pressure: -25

SV Stop Time: 12:15 PM

SV Stop Pressure: 2

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:

IAQ Canister #:

IAQ Regulator #:

IAQ Start Time:

IAQ Start Pressure:

IAQ Stop Time:

IAQ Stop Pressure:

SAMPLE COLLECTION INFORMATION:

Analysis

Container Requirements

Collected

TO-15

1 Liter and 6 Liter Canisters

Yes No

Yes No

Yes No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Signature:

Duplicate ID: SV-DUP03-A-26



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-170-A 26	IAQ Sample ID:	
SV Canister #:	11120	IAQ Canister #:	
SV Regulator #:	11925	IAQ Regulator #:	
SV Start Time:	10:54 AM	IAQ Start Time:	
SV Start Pressure:	-26	IAQ Start Pressure:	
SV Stop Time:	12:24 PM	IAQ Stop Time:	
SV Stop Pressure:	0	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-171-A 26	IAQ Sample ID:	
SV Canister #:	11750	IAQ Canister #:	
SV Regulator #:	10302	IAQ Regulator #:	
SV Start Time:	10:49 AM	IAQ Start Time:	
SV Start Pressure:	-29	IAQ Start Pressure:	
SV Stop Time:	12:22 PM	IAQ Stop Time:	
SV Stop Pressure:	2	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:



Date: February 21, 2019

SAMPLING DATA:

SOIL VAPOR SAMPLE		INDOOR AIR QUALITY SAMPLE	
SV Sample ID:	SV-173-A 26	IAQ Sample ID:	
SV Canister #:	10735	IAQ Canister #:	
SV Regulator #:	09654	IAQ Regulator #:	
SV Start Time:	10:38 AM	IAQ Start Time:	
SV Start Pressure:	-29	IAQ Start Pressure:	
SV Stop Time:	12:23 PM	IAQ Stop Time:	
SV Stop Pressure:	1	IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	
TO-15	1 Liter and 6 Liter Canisters	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD: Signature: 

Duplicate ID:

APPENDIX B—METHOD DETECTION LIMITS

TestAmerica Laboratories - Knoxville, TN
Method Detection Limits and Reporting Limits for TO-15

Analyte	CAS #	MW	MDL (PPBV)	REPORTING LIMIT (PPBV)	MDL (UG/M ³)	REPORTING LIMIT (UG/M3)	LCS LOWER QC LIMIT	LCS UPPER QC LIMIT	DUPLICATE RPD
1,1,1-TRICHLOROETHANE	71-55-6	133.40	0.06	0.4	0.33	2.2	70	130	25
1,1,2-TRICHLOROETHANE	79-00-5	133.40	0.11	0.4	0.57	2.2	70	130	25
1,1-DICHLOROETHANE	75-34-3	98.96	0.05	0.4	0.2	1.6	70	130	25
1,1-DICHLOROETHENE	75-35-4	96.94	0.07	0.4	0.28	1.6	70	130	25
1,2,3-TRIMETHYLBENZENE	526-73-8	120.19	0.17	0.4	0.84	2	70	130	25
1,2,4-TRICHLOROBENZENE	120-82-1	181.45	0.2	0.4	1.4	3	60	140	25
1,2,4-TRIMETHYLBENZENE	95-63-6	120.19	0.13	0.4	0.61	2	70	130	25
1,2-DICHLOROETHANE	107-06-2	187.86	0.095	0.4	0.38	1.6	70	130	25
1,3,5-TRIMETHYLBENZENE	108-67-8	120.19	0.13	0.4	0.64	2	70	130	25
BENZENE	71-43-2	78.11	0.12	0.4	0.37	1.3	70	130	25
CARBON TETRACHLORIDE	56-23-5	153.82	0.075	0.4	0.47	2.5	70	130	25
CHLORODIFLUOROMETHANE	75-45-6	86.46	0.075	0.4	0.27	1.4	60	140	25
CHLOROFORM	67-66-3	119.37	0.075	0.4	0.37	2	70	130	25
CIS-1,2-DICHLOROETHENE	156-59-2	96.94	0.12	0.4	0.48	1.6	70	130	25
DICHLORODIFLUOROMETHANE	75-71-8	120.91	0.14	0.4	0.67	2	60	140	25
ETHYLBENZENE	100-41-4	106.16	0.14	0.4	0.59	1.7	70	130	25
METHYL TERT-BUTYL ETHER	1634-04-4	88.14	0.34	2	1.2	7.2	60	140	25
METHYLENE CHLORIDE	75-09-2	84.93	0.65	1	2.3	3.5	70	130	25
NAPHTHALENE	91-20-3	128.17	0.2	0.2	1	1	60	140	25
TETRACHLOROETHENE	127-18-4	165.83	0.08	0.4	0.54	2.7	70	130	25
TOLUENE	108-88-3	92.14	0.6	0.6	2.3	2.3	70	130	25
TOTAL XYLENES	1330-20-7	106.16	0.12	0.8	0.52	3.5	70	130	25
TRANS-1,2-DICHLOROETHENE	156-60-5	96.94	0.1	0.4	0.4	1.6	70	130	25
TRICHLOROETHENE	79-01-6	131.38	0.07	0.2	0.38	1.1	70	130	25
VINYL CHLORIDE	75-01-4	62.49	0.15	0.4	0.37	1	70	130	25

APPENDIX C—LABORATORY ANALYTICAL REPORTS

ANALYTICAL REPORT

Job Number: 140-14386-1

Job Description: MRC Indoor Air - MRC

For:

Tetra Tech, Inc.

20251 Century Blvd

Suite 200

Germantown, MD 20874

Attention: Samantha Brenner



Approved for release.
Terry Walker Wasmund
Project Manager II
3/6/2019 4:47 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
03/06/2019

cc: Ms. Michelle Woeber

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Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-14386-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC listed canister asset number as 12276, but it should be 11276.

Air - GC/MS VOA - Method TO-15LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-138-A-26

Lab Sample ID: 140-14386-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.22	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.43	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.16	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.5	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.54		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.59	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.69	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.5	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.65	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.2	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	2.9		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.6	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-093-A-26

Lab Sample ID: 140-14386-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.21	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.51	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.22	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.95	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.74		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.68	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.8	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.86	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	4.0		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-174-A-26

Lab Sample ID: 140-14386-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.19	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.31	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.060	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.3		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.60	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.2	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.33	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-174-A-26 (Continued)

Lab Sample ID: 140-14386-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	7.0		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-018-A-26

Lab Sample ID: 140-14386-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.30	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.12	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.44		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.14	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.7	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.13	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.63		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.57	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.95	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.61	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.70	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.8		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.60	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.87	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	3.4		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.5	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-DUP03-A-26

Lab Sample ID: 140-14386-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.26	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.13	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.19	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.31	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.44		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.65		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.83	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.62	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.76	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.7		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	3.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-015-A-26

Lab Sample ID: 140-14386-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.31	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.46	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.98	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.3		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.81		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.0	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.64	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.4	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.0		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.5		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-118-A-26

Lab Sample ID: 140-14386-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.36	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.20	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.6	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.7		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.15	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.38		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.0		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.2	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.89	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	6.6		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.81	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	2.0		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.5		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-168-A-26

Lab Sample ID: 140-14386-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34	J	0.40	0.12	ppb v/v	1.57		TO 15 LL	Total/NA
Chlorodifluoromethane	0.83		0.40	0.075	ppb v/v	1.57		TO 15 LL	Total/NA
Chloroform	0.090	J	0.40	0.075	ppb v/v	1.57		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v	1.57		TO 15 LL	Total/NA
Ethylbenzene	2.5		0.40	0.14	ppb v/v	1.57		TO 15 LL	Total/NA
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v	1.57		TO 15 LL	Total/NA
Toluene	29		0.60	0.60	ppb v/v	1.57		TO 15 LL	Total/NA
Trichloroethene	0.12	J	0.20	0.070	ppb v/v	1.57		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-168-A-26 (Continued)

Lab Sample ID: 140-14386-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	0.25	J	0.40	0.13	ppb v/v	1.57		TO 15 LL	Total/NA
Xylenes, Total	12		0.80	0.12	ppb v/v	1.57		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1.57		TO 15 LL	Total/NA
Chlorodifluoromethane	2.9		1.4	0.27	ug/m3	1.57		TO 15 LL	Total/NA
Chloroform	0.44	J	2.0	0.37	ug/m3	1.57		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1.57		TO 15 LL	Total/NA
Ethylbenzene	11		1.7	0.59	ug/m3	1.57		TO 15 LL	Total/NA
Methylene Chloride	4.7	J	6.9	2.3	ug/m3	1.57		TO 15 LL	Total/NA
Toluene	110		2.3	2.3	ug/m3	1.57		TO 15 LL	Total/NA
Trichloroethene	0.67	J	1.1	0.38	ug/m3	1.57		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.2	J	2.0	0.61	ug/m3	1.57		TO 15 LL	Total/NA
Xylenes, Total	53		3.5	0.52	ug/m3	1.57		TO 15 LL	Total/NA

Client Sample ID: IA-081-A-26

Lab Sample ID: 140-14386-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.86	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.53		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	17		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.13	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.6		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.0	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	2.3		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	63		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.66	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	11		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-079-A-26

Lab Sample ID: 140-14386-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.076	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.088	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.52		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.8	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.36	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	14		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.5		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-079-A-26 (Continued)

Lab Sample ID: 140-14386-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.48	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.43	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	2.3		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	2.4	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	54		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	11		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-DUP04-A-26

Lab Sample ID: 140-14386-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.57		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.50		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	15		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.4		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.0		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	2.2		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.4	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	56		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	10		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-117-A-26

Lab Sample ID: 140-14386-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.33	J	0.40	0.12	ppb v/v	1.66		TO 15 LL	Total/NA
Carbon tetrachloride	0.075	J	0.40	0.075	ppb v/v	1.66		TO 15 LL	Total/NA
Chlorodifluoromethane	0.49		0.40	0.075	ppb v/v	1.66		TO 15 LL	Total/NA
Chloroform	0.091	J	0.40	0.075	ppb v/v	1.66		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1.66		TO 15 LL	Total/NA
Ethylbenzene	0.78		0.40	0.14	ppb v/v	1.66		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1.66		TO 15 LL	Total/NA
Toluene	32		0.60	0.60	ppb v/v	1.66		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1.66		TO 15 LL	Total/NA
Xylenes, Total	3.7		0.80	0.12	ppb v/v	1.66		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.0	J	1.3	0.37	ug/m3	1.66		TO 15 LL	Total/NA
Carbon tetrachloride	0.47	J	2.5	0.47	ug/m3	1.66		TO 15 LL	Total/NA
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3	1.66		TO 15 LL	Total/NA
Chloroform	0.45	J	2.0	0.37	ug/m3	1.66		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1.66		TO 15 LL	Total/NA
Ethylbenzene	3.4		1.7	0.59	ug/m3	1.66		TO 15 LL	Total/NA
Methylene Chloride	3.5	J	6.9	2.3	ug/m3	1.66		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-117-A-26 (Continued)

Lab Sample ID: 140-14386-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	120		2.3	2.3	ug/m3	1.66		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.72	J	2.0	0.61	ug/m3	1.66		TO 15 LL	Total/NA
Xylenes, Total	16		3.5	0.52	ug/m3	1.66		TO 15 LL	Total/NA

Client Sample ID: IA-078-A-26

Lab Sample ID: 140-14386-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.31	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.59		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.10	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.5		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.5	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	23		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.079	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	7.3		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.98	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.1		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.49	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	6.6		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	86		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.43	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.93	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	32		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-136-A-26

Lab Sample ID: 140-14386-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.27	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	2.9		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.0		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	36		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.12	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.31	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	13		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	5.7	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.3	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	13		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	7.1		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	130		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-136-A-26 (Continued)

Lab Sample ID: 140-14386-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.65	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.5	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	57		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-076-A-26

Lab Sample ID: 140-14386-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.79		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.086	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	2.2		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.4		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.50		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	32		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.11	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.33	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	11		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.42	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	9.7		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	8.2		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	3.4		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	120		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.58	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.6	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	49		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-075-A-26

Lab Sample ID: 140-14386-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.32	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.78		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.5		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.080	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	21		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	7.4		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.0	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.7		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	6.3		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.54	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-075-A-26 (Continued)

Lab Sample ID: 140-14386-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	80		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.71	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	32		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-021-A-26

Lab Sample ID: 140-14386-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.24	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.99		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.11	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.8		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.7	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Naphthalene	0.21		0.20	0.20	ppb v/v	1		TO 15 LL	Total/NA
Toluene	22		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.13	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	8.9		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.78	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.52	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	7.8		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Naphthalene	1.1		1.0	1.0	ug/m3	1		TO 15 LL	Total/NA
Toluene	85		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.70	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.1	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	39		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-178-MB-3

Lab Sample ID: 140-14386-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.42		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.25	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.63		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.56	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.0	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.1	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.79	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.4	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-138-A-26

Lab Sample ID: 140-14386-1

Date Collected: 02/21/19 16:54

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.22	J	0.40	0.12	ppb v/v			02/25/19 17:10	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 17:10	1
Chlorodifluoromethane	0.43	CI	0.40	0.075	ppb v/v			02/25/19 17:10	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 17:10	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 17:10	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/25/19 17:10	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 17:10	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 17:10	1
1,1-Dichloroethene	0.16	J	0.40	0.070	ppb v/v			02/25/19 17:10	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 17:10	1
Methylene Chloride	1.5	J	2.0	0.65	ppb v/v			02/25/19 17:10	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 17:10	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 17:10	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 17:10	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 17:10	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 17:10	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 17:10	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 17:10	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 17:10	1
Trichloroethene	0.54		0.20	0.070	ppb v/v			02/25/19 17:10	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 17:10	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 17:10	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 17:10	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 17:10	1
Xylenes, Total	0.59	J	0.80	0.12	ppb v/v			02/25/19 17:10	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.69	J	1.3	0.37	ug/m3			02/25/19 17:10	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 17:10	1
Chlorodifluoromethane	1.5	CI	1.4	0.27	ug/m3			02/25/19 17:10	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 17:10	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 17:10	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/25/19 17:10	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 17:10	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 17:10	1
1,1-Dichloroethene	0.65	J	1.6	0.28	ug/m3			02/25/19 17:10	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 17:10	1
Methylene Chloride	5.2	J	6.9	2.3	ug/m3			02/25/19 17:10	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 17:10	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 17:10	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 17:10	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 17:10	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 17:10	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 17:10	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 17:10	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 17:10	1
Trichloroethene	2.9		1.1	0.38	ug/m3			02/25/19 17:10	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 17:10	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 17:10	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-138-A-26

Lab Sample ID: 140-14386-1

Date Collected: 02/21/19 16:54

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 17:10	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 17:10	1
Xylenes, Total	2.6	J	3.5	0.52	ug/m3			02/25/19 17:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/25/19 17:10	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-093-A-26

Lab Sample ID: 140-14386-2

Date Collected: 02/21/19 16:56

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.21	J	0.40	0.12	ppb v/v			02/25/19 17:59	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 17:59	1
Chlorodifluoromethane	0.51	CI	0.40	0.075	ppb v/v			02/25/19 17:59	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 17:59	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 17:59	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/25/19 17:59	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 17:59	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 17:59	1
1,1-Dichloroethene	0.22	J	0.40	0.070	ppb v/v			02/25/19 17:59	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 17:59	1
Methylene Chloride	0.95	J	2.0	0.65	ppb v/v			02/25/19 17:59	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 17:59	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 17:59	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 17:59	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 17:59	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 17:59	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 17:59	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 17:59	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 17:59	1
Trichloroethene	0.74		0.20	0.070	ppb v/v			02/25/19 17:59	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 17:59	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 17:59	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 17:59	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 17:59	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/25/19 17:59	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.68	J	1.3	0.37	ug/m3			02/25/19 17:59	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 17:59	1
Chlorodifluoromethane	1.8	CI	1.4	0.27	ug/m3			02/25/19 17:59	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 17:59	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 17:59	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/25/19 17:59	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 17:59	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 17:59	1
1,1-Dichloroethene	0.86	J	1.6	0.28	ug/m3			02/25/19 17:59	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 17:59	1
Methylene Chloride	3.3	J	6.9	2.3	ug/m3			02/25/19 17:59	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 17:59	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 17:59	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 17:59	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 17:59	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 17:59	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 17:59	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 17:59	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 17:59	1
Trichloroethene	4.0		1.1	0.38	ug/m3			02/25/19 17:59	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 17:59	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 17:59	1

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-093-A-26

Lab Sample ID: 140-14386-2

Date Collected: 02/21/19 16:56

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 17:59	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 17:59	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/25/19 17:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/25/19 17:59	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-174-A-26

Lab Sample ID: 140-14386-3

Date Collected: 02/21/19 16:55

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.19	J	0.40	0.12	ppb v/v			02/25/19 18:48	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 18:48	1
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v			02/25/19 18:48	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 18:48	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 18:48	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/25/19 18:48	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 18:48	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 18:48	1
1,1-Dichloroethene	0.31	J	0.40	0.070	ppb v/v			02/25/19 18:48	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 18:48	1
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			02/25/19 18:48	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 18:48	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 18:48	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 18:48	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 18:48	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 18:48	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 18:48	1
1,1,1-Trichloroethane	0.060	J	0.40	0.060	ppb v/v			02/25/19 18:48	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 18:48	1
Trichloroethene	1.3		0.20	0.070	ppb v/v			02/25/19 18:48	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 18:48	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 18:48	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 18:48	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 18:48	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/25/19 18:48	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.60	J	1.3	0.37	ug/m3			02/25/19 18:48	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 18:48	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/25/19 18:48	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 18:48	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 18:48	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/25/19 18:48	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 18:48	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 18:48	1
1,1-Dichloroethene	1.2	J	1.6	0.28	ug/m3			02/25/19 18:48	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 18:48	1
Methylene Chloride	3.5	J	6.9	2.3	ug/m3			02/25/19 18:48	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 18:48	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 18:48	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 18:48	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 18:48	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 18:48	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 18:48	1
1,1,1-Trichloroethane	0.33	J	2.2	0.33	ug/m3			02/25/19 18:48	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 18:48	1
Trichloroethene	7.0		1.1	0.38	ug/m3			02/25/19 18:48	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 18:48	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 18:48	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-174-A-26

Lab Sample ID: 140-14386-3

Date Collected: 02/21/19 16:55

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 18:48	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 18:48	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/25/19 18:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/25/19 18:48	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-018-A-26

Lab Sample ID: 140-14386-4

Date Collected: 02/21/19 16:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.30	J	0.40	0.12	ppb v/v			02/25/19 19:37	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 19:37	1
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v			02/25/19 19:37	1
Chloroform	0.12	J	0.40	0.075	ppb v/v			02/25/19 19:37	1
cis-1,2-Dichloroethene	0.18	J	0.40	0.12	ppb v/v			02/25/19 19:37	1
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v			02/25/19 19:37	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 19:37	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 19:37	1
1,1-Dichloroethene	0.44		0.40	0.070	ppb v/v			02/25/19 19:37	1
Ethylbenzene	0.14	J	0.40	0.14	ppb v/v			02/25/19 19:37	1
Methylene Chloride	1.7	J	2.0	0.65	ppb v/v			02/25/19 19:37	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 19:37	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 19:37	1
Tetrachloroethene	0.13	J	0.40	0.080	ppb v/v			02/25/19 19:37	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 19:37	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 19:37	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 19:37	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 19:37	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 19:37	1
Trichloroethene	0.63		0.20	0.070	ppb v/v			02/25/19 19:37	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 19:37	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 19:37	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 19:37	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 19:37	1
Xylenes, Total	0.57	J	0.80	0.12	ppb v/v			02/25/19 19:37	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.95	J	1.3	0.37	ug/m3			02/25/19 19:37	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 19:37	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/25/19 19:37	1
Chloroform	0.61	J	2.0	0.37	ug/m3			02/25/19 19:37	1
cis-1,2-Dichloroethene	0.70	J	1.6	0.48	ug/m3			02/25/19 19:37	1
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3			02/25/19 19:37	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 19:37	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 19:37	1
1,1-Dichloroethene	1.8		1.6	0.28	ug/m3			02/25/19 19:37	1
Ethylbenzene	0.60	J	1.7	0.59	ug/m3			02/25/19 19:37	1
Methylene Chloride	5.9	J	6.9	2.3	ug/m3			02/25/19 19:37	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 19:37	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 19:37	1
Tetrachloroethene	0.87	J	2.7	0.54	ug/m3			02/25/19 19:37	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 19:37	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 19:37	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 19:37	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 19:37	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 19:37	1
Trichloroethene	3.4		1.1	0.38	ug/m3			02/25/19 19:37	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 19:37	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 19:37	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-018-A-26

Lab Sample ID: 140-14386-4

Date Collected: 02/21/19 16:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 19:37	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 19:37	1
Xylenes, Total	2.5	J	3.5	0.52	ug/m3			02/25/19 19:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/25/19 19:37	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-DUP03-A-26

Lab Sample ID: 140-14386-5

Date Collected: 02/21/19 16:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.26	J	0.40	0.12	ppb v/v			02/25/19 20:26	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 20:26	1
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/25/19 20:26	1
Chloroform	0.13	J	0.40	0.075	ppb v/v			02/25/19 20:26	1
cis-1,2-Dichloroethene	0.19	J	0.40	0.12	ppb v/v			02/25/19 20:26	1
Dichlorodifluoromethane	0.31	J	0.40	0.14	ppb v/v			02/25/19 20:26	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 20:26	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 20:26	1
1,1-Dichloroethene	0.44		0.40	0.070	ppb v/v			02/25/19 20:26	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 20:26	1
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v			02/25/19 20:26	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 20:26	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 20:26	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 20:26	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 20:26	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 20:26	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 20:26	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 20:26	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 20:26	1
Trichloroethene	0.65		0.20	0.070	ppb v/v			02/25/19 20:26	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 20:26	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 20:26	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 20:26	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 20:26	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/25/19 20:26	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.83	J	1.3	0.37	ug/m3			02/25/19 20:26	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 20:26	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/25/19 20:26	1
Chloroform	0.62	J	2.0	0.37	ug/m3			02/25/19 20:26	1
cis-1,2-Dichloroethene	0.76	J	1.6	0.48	ug/m3			02/25/19 20:26	1
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3			02/25/19 20:26	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 20:26	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 20:26	1
1,1-Dichloroethene	1.7		1.6	0.28	ug/m3			02/25/19 20:26	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 20:26	1
Methylene Chloride	5.0	J	6.9	2.3	ug/m3			02/25/19 20:26	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 20:26	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 20:26	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 20:26	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 20:26	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 20:26	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 20:26	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 20:26	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 20:26	1
Trichloroethene	3.5		1.1	0.38	ug/m3			02/25/19 20:26	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 20:26	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 20:26	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-DUP03-A-26

Lab Sample ID: 140-14386-5

Date Collected: 02/21/19 16:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 20:26	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 20:26	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/25/19 20:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/25/19 20:26	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-015-A-26

Lab Sample ID: 140-14386-6

Date Collected: 02/21/19 17:04

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.31	J	0.40	0.12	ppb v/v			02/25/19 21:14	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 21:14	1
Chlorodifluoromethane	0.46	CI	0.40	0.075	ppb v/v			02/25/19 21:14	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 21:14	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 21:14	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/25/19 21:14	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 21:14	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 21:14	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/25/19 21:14	1
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v			02/25/19 21:14	1
Methylene Chloride	0.98	J	2.0	0.65	ppb v/v			02/25/19 21:14	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 21:14	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 21:14	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 21:14	1
Toluene	1.3		0.60	0.60	ppb v/v			02/25/19 21:14	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 21:14	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 21:14	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 21:14	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 21:14	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/25/19 21:14	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 21:14	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 21:14	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 21:14	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 21:14	1
Xylenes, Total	0.81		0.80	0.12	ppb v/v			02/25/19 21:14	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	J	1.3	0.37	ug/m3			02/25/19 21:14	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 21:14	1
Chlorodifluoromethane	1.6	CI	1.4	0.27	ug/m3			02/25/19 21:14	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 21:14	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 21:14	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/25/19 21:14	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 21:14	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 21:14	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/25/19 21:14	1
Ethylbenzene	0.64	J	1.7	0.59	ug/m3			02/25/19 21:14	1
Methylene Chloride	3.4	J	6.9	2.3	ug/m3			02/25/19 21:14	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 21:14	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 21:14	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 21:14	1
Toluene	5.0		2.3	2.3	ug/m3			02/25/19 21:14	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 21:14	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 21:14	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 21:14	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 21:14	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/25/19 21:14	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 21:14	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 21:14	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-015-A-26

Lab Sample ID: 140-14386-6

Date Collected: 02/21/19 17:04

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 21:14	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 21:14	1
Xylenes, Total	3.5		3.5	0.52	ug/m3			02/25/19 21:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/25/19 21:14	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-118-A-26

Lab Sample ID: 140-14386-7

Date Collected: 02/21/19 17:05

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.36	J	0.40	0.12	ppb v/v			02/25/19 22:03	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 22:03	1
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v			02/25/19 22:03	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 22:03	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 22:03	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/25/19 22:03	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 22:03	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 22:03	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/25/19 22:03	1
Ethylbenzene	0.20	J	0.40	0.14	ppb v/v			02/25/19 22:03	1
Methylene Chloride	1.6	J	2.0	0.65	ppb v/v			02/25/19 22:03	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 22:03	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 22:03	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 22:03	1
Toluene	1.7		0.60	0.60	ppb v/v			02/25/19 22:03	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 22:03	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 22:03	1
1,1,1-Trichloroethane	0.15	J	0.40	0.060	ppb v/v			02/25/19 22:03	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 22:03	1
Trichloroethene	0.38		0.20	0.070	ppb v/v			02/25/19 22:03	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 22:03	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 22:03	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 22:03	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 22:03	1
Xylenes, Total	1.0		0.80	0.12	ppb v/v			02/25/19 22:03	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.2	J	1.3	0.37	ug/m3			02/25/19 22:03	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 22:03	1
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3			02/25/19 22:03	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 22:03	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 22:03	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/25/19 22:03	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 22:03	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 22:03	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/25/19 22:03	1
Ethylbenzene	0.89	J	1.7	0.59	ug/m3			02/25/19 22:03	1
Methylene Chloride	5.5	J	6.9	2.3	ug/m3			02/25/19 22:03	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 22:03	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 22:03	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 22:03	1
Toluene	6.6		2.3	2.3	ug/m3			02/25/19 22:03	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 22:03	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 22:03	1
1,1,1-Trichloroethane	0.81	J	2.2	0.33	ug/m3			02/25/19 22:03	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 22:03	1
Trichloroethene	2.0		1.1	0.38	ug/m3			02/25/19 22:03	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 22:03	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 22:03	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-118-A-26

Lab Sample ID: 140-14386-7

Date Collected: 02/21/19 17:05

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 22:03	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 22:03	1
Xylenes, Total	4.5		3.5	0.52	ug/m3			02/25/19 22:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 22:03	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-168-A-26

Lab Sample ID: 140-14386-8

Date Collected: 02/21/19 17:28

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.34	J	0.40	0.12	ppb v/v			02/25/19 22:53	1.57
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 22:53	1.57
Chlorodifluoromethane	0.83		0.40	0.075	ppb v/v			02/25/19 22:53	1.57
Chloroform	0.090	J	0.40	0.075	ppb v/v			02/25/19 22:53	1.57
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 22:53	1.57
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v			02/25/19 22:53	1.57
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 22:53	1.57
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 22:53	1.57
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/25/19 22:53	1.57
Ethylbenzene	2.5		0.40	0.14	ppb v/v			02/25/19 22:53	1.57
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v			02/25/19 22:53	1.57
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 22:53	1.57
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 22:53	1.57
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 22:53	1.57
Toluene	29		0.60	0.60	ppb v/v			02/25/19 22:53	1.57
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 22:53	1.57
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 22:53	1.57
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 22:53	1.57
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 22:53	1.57
Trichloroethene	0.12	J	0.20	0.070	ppb v/v			02/25/19 22:53	1.57
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 22:53	1.57
1,2,4-Trimethylbenzene	0.25	J	0.40	0.13	ppb v/v			02/25/19 22:53	1.57
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 22:53	1.57
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 22:53	1.57
Xylenes, Total	12		0.80	0.12	ppb v/v			02/25/19 22:53	1.57
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			02/25/19 22:53	1.57
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 22:53	1.57
Chlorodifluoromethane	2.9		1.4	0.27	ug/m3			02/25/19 22:53	1.57
Chloroform	0.44	J	2.0	0.37	ug/m3			02/25/19 22:53	1.57
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 22:53	1.57
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/25/19 22:53	1.57
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 22:53	1.57
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 22:53	1.57
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/25/19 22:53	1.57
Ethylbenzene	11		1.7	0.59	ug/m3			02/25/19 22:53	1.57
Methylene Chloride	4.7	J	6.9	2.3	ug/m3			02/25/19 22:53	1.57
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 22:53	1.57
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 22:53	1.57
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 22:53	1.57
Toluene	110		2.3	2.3	ug/m3			02/25/19 22:53	1.57
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 22:53	1.57
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 22:53	1.57
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 22:53	1.57
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 22:53	1.57
Trichloroethene	0.67	J	1.1	0.38	ug/m3			02/25/19 22:53	1.57
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 22:53	1.57
1,2,4-Trimethylbenzene	1.2	J	2.0	0.61	ug/m3			02/25/19 22:53	1.57

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-168-A-26

Lab Sample ID: 140-14386-8

Date Collected: 02/21/19 17:28

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 22:53	1.57
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 22:53	1.57
Xylenes, Total	53		3.5	0.52	ug/m3			02/25/19 22:53	1.57
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 22:53	1.57

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-081-A-26

Lab Sample ID: 140-14386-9

Date Collected: 02/21/19 17:12

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.34	J	0.40	0.12	ppb v/v			02/25/19 23:42	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 23:42	1
Chlorodifluoromethane	0.86	CI	0.40	0.075	ppb v/v			02/25/19 23:42	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 23:42	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 23:42	1
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v			02/25/19 23:42	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 23:42	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 23:42	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/25/19 23:42	1
Ethylbenzene	0.53		0.40	0.14	ppb v/v			02/25/19 23:42	1
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			02/25/19 23:42	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 23:42	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 23:42	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 23:42	1
Toluene	17		0.60	0.60	ppb v/v			02/25/19 23:42	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 23:42	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 23:42	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 23:42	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 23:42	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/25/19 23:42	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 23:42	1
1,2,4-Trimethylbenzene	0.13	J	0.40	0.13	ppb v/v			02/25/19 23:42	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 23:42	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 23:42	1
Xylenes, Total	2.6		0.80	0.12	ppb v/v			02/25/19 23:42	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			02/25/19 23:42	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 23:42	1
Chlorodifluoromethane	3.0	CI	1.4	0.27	ug/m3			02/25/19 23:42	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 23:42	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 23:42	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/25/19 23:42	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 23:42	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 23:42	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/25/19 23:42	1
Ethylbenzene	2.3		1.7	0.59	ug/m3			02/25/19 23:42	1
Methylene Chloride	3.6	J	6.9	2.3	ug/m3			02/25/19 23:42	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 23:42	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 23:42	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 23:42	1
Toluene	63		2.3	2.3	ug/m3			02/25/19 23:42	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 23:42	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 23:42	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 23:42	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 23:42	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/25/19 23:42	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 23:42	1
1,2,4-Trimethylbenzene	0.66	J	2.0	0.61	ug/m3			02/25/19 23:42	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-081-A-26

Lab Sample ID: 140-14386-9

Date Collected: 02/21/19 17:12

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 23:42	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 23:42	1
Xylenes, Total	11		3.5	0.52	ug/m3			02/25/19 23:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/25/19 23:42	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-079-A-26

Lab Sample ID: 140-14386-10

Date Collected: 02/21/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.34	J	0.40	0.12	ppb v/v			02/26/19 00:31	1
Carbon tetrachloride	0.076	J	0.40	0.075	ppb v/v			02/26/19 00:31	1
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v			02/26/19 00:31	1
Chloroform	0.088	J	0.40	0.075	ppb v/v			02/26/19 00:31	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 00:31	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/26/19 00:31	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 00:31	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 00:31	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 00:31	1
Ethylbenzene	0.52		0.40	0.14	ppb v/v			02/26/19 00:31	1
Methylene Chloride	1.8	J	2.0	0.65	ppb v/v			02/26/19 00:31	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 00:31	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 00:31	1
Tetrachloroethene	0.36	J	0.40	0.080	ppb v/v			02/26/19 00:31	1
Toluene	14		0.60	0.60	ppb v/v			02/26/19 00:31	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 00:31	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 00:31	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 00:31	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 00:31	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 00:31	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 00:31	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 00:31	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 00:31	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 00:31	1
Xylenes, Total	2.5		0.80	0.12	ppb v/v			02/26/19 00:31	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			02/26/19 00:31	1
Carbon tetrachloride	0.48	J	2.5	0.47	ug/m3			02/26/19 00:31	1
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3			02/26/19 00:31	1
Chloroform	0.43	J	2.0	0.37	ug/m3			02/26/19 00:31	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 00:31	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 00:31	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 00:31	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 00:31	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 00:31	1
Ethylbenzene	2.3		1.7	0.59	ug/m3			02/26/19 00:31	1
Methylene Chloride	6.3	J	6.9	2.3	ug/m3			02/26/19 00:31	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 00:31	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 00:31	1
Tetrachloroethene	2.4	J	2.7	0.54	ug/m3			02/26/19 00:31	1
Toluene	54		2.3	2.3	ug/m3			02/26/19 00:31	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 00:31	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 00:31	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 00:31	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 00:31	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 00:31	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 00:31	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 00:31	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-079-A-26

Lab Sample ID: 140-14386-10

Date Collected: 02/21/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 00:31	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 00:31	1
Xylenes, Total	11		3.5	0.52	ug/m3			02/26/19 00:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 00:31	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-DUP04-A-26

Lab Sample ID: 140-14386-11

Date Collected: 02/21/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.34	J	0.40	0.12	ppb v/v			02/26/19 01:20	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 01:20	1
Chlorodifluoromethane	0.57		0.40	0.075	ppb v/v			02/26/19 01:20	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 01:20	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 01:20	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 01:20	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 01:20	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 01:20	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 01:20	1
Ethylbenzene	0.50		0.40	0.14	ppb v/v			02/26/19 01:20	1
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v			02/26/19 01:20	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 01:20	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 01:20	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 01:20	1
Toluene	15		0.60	0.60	ppb v/v			02/26/19 01:20	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 01:20	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 01:20	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 01:20	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 01:20	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 01:20	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 01:20	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 01:20	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 01:20	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 01:20	1
Xylenes, Total	2.4		0.80	0.12	ppb v/v			02/26/19 01:20	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			02/26/19 01:20	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 01:20	1
Chlorodifluoromethane	2.0		1.4	0.27	ug/m3			02/26/19 01:20	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 01:20	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 01:20	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 01:20	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 01:20	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 01:20	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 01:20	1
Ethylbenzene	2.2		1.7	0.59	ug/m3			02/26/19 01:20	1
Methylene Chloride	4.4	J	6.9	2.3	ug/m3			02/26/19 01:20	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 01:20	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 01:20	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 01:20	1
Toluene	56		2.3	2.3	ug/m3			02/26/19 01:20	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 01:20	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 01:20	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 01:20	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 01:20	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 01:20	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 01:20	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 01:20	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-DUP04-A-26

Lab Sample ID: 140-14386-11

Date Collected: 02/21/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 01:20	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 01:20	1
Xylenes, Total	10		3.5	0.52	ug/m3			02/26/19 01:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 140					02/26/19 01:20	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-117-A-26

Lab Sample ID: 140-14386-12

Date Collected: 02/21/19 17:20

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.33	J	0.40	0.12	ppb v/v			02/26/19 02:09	1.66
Carbon tetrachloride	0.075	J	0.40	0.075	ppb v/v			02/26/19 02:09	1.66
Chlorodifluoromethane	0.49		0.40	0.075	ppb v/v			02/26/19 02:09	1.66
Chloroform	0.091	J	0.40	0.075	ppb v/v			02/26/19 02:09	1.66
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 02:09	1.66
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 02:09	1.66
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 02:09	1.66
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 02:09	1.66
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 02:09	1.66
Ethylbenzene	0.78		0.40	0.14	ppb v/v			02/26/19 02:09	1.66
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			02/26/19 02:09	1.66
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 02:09	1.66
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 02:09	1.66
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 02:09	1.66
Toluene	32		0.60	0.60	ppb v/v			02/26/19 02:09	1.66
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 02:09	1.66
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 02:09	1.66
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 02:09	1.66
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 02:09	1.66
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 02:09	1.66
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 02:09	1.66
1,2,4-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			02/26/19 02:09	1.66
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 02:09	1.66
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 02:09	1.66
Xylenes, Total	3.7		0.80	0.12	ppb v/v			02/26/19 02:09	1.66

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	J	1.3	0.37	ug/m3			02/26/19 02:09	1.66
Carbon tetrachloride	0.47	J	2.5	0.47	ug/m3			02/26/19 02:09	1.66
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3			02/26/19 02:09	1.66
Chloroform	0.45	J	2.0	0.37	ug/m3			02/26/19 02:09	1.66
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 02:09	1.66
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 02:09	1.66
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 02:09	1.66
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 02:09	1.66
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 02:09	1.66
Ethylbenzene	3.4		1.7	0.59	ug/m3			02/26/19 02:09	1.66
Methylene Chloride	3.5	J	6.9	2.3	ug/m3			02/26/19 02:09	1.66
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 02:09	1.66
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 02:09	1.66
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 02:09	1.66
Toluene	120		2.3	2.3	ug/m3			02/26/19 02:09	1.66
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 02:09	1.66
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 02:09	1.66
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 02:09	1.66
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 02:09	1.66
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 02:09	1.66
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 02:09	1.66
1,2,4-Trimethylbenzene	0.72	J	2.0	0.61	ug/m3			02/26/19 02:09	1.66

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-117-A-26

Lab Sample ID: 140-14386-12

Date Collected: 02/21/19 17:20

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 02:09	1.66
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 02:09	1.66
Xylenes, Total	16		3.5	0.52	ug/m3			02/26/19 02:09	1.66
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 140					02/26/19 02:09	1.66

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-078-A-26

Lab Sample ID: 140-14386-13

Date Collected: 02/21/19 17:23

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.31	J	0.40	0.12	ppb v/v			02/26/19 02:58	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 02:58	1
Chlorodifluoromethane	0.59		0.40	0.075	ppb v/v			02/26/19 02:58	1
Chloroform	0.10	J	0.40	0.075	ppb v/v			02/26/19 02:58	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 02:58	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 02:58	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 02:58	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 02:58	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 02:58	1
Ethylbenzene	1.5		0.40	0.14	ppb v/v			02/26/19 02:58	1
Methylene Chloride	1.5	J	2.0	0.65	ppb v/v			02/26/19 02:58	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 02:58	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 02:58	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 02:58	1
Toluene	23		0.60	0.60	ppb v/v			02/26/19 02:58	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 02:58	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 02:58	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 02:58	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 02:58	1
Trichloroethene	0.079	J	0.20	0.070	ppb v/v			02/26/19 02:58	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 02:58	1
1,2,4-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v			02/26/19 02:58	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 02:58	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 02:58	1
Xylenes, Total	7.3		0.80	0.12	ppb v/v			02/26/19 02:58	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.98	J	1.3	0.37	ug/m3			02/26/19 02:58	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 02:58	1
Chlorodifluoromethane	2.1		1.4	0.27	ug/m3			02/26/19 02:58	1
Chloroform	0.49	J	2.0	0.37	ug/m3			02/26/19 02:58	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 02:58	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 02:58	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 02:58	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 02:58	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 02:58	1
Ethylbenzene	6.6		1.7	0.59	ug/m3			02/26/19 02:58	1
Methylene Chloride	5.3	J	6.9	2.3	ug/m3			02/26/19 02:58	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 02:58	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 02:58	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 02:58	1
Toluene	86		2.3	2.3	ug/m3			02/26/19 02:58	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 02:58	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 02:58	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 02:58	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 02:58	1
Trichloroethene	0.43	J	1.1	0.38	ug/m3			02/26/19 02:58	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 02:58	1
1,2,4-Trimethylbenzene	0.93	J	2.0	0.61	ug/m3			02/26/19 02:58	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-078-A-26

Lab Sample ID: 140-14386-13

Date Collected: 02/21/19 17:23

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 02:58	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 02:58	1
Xylenes, Total	32		3.5	0.52	ug/m3			02/26/19 02:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 02:58	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-136-A-26

Lab Sample ID: 140-14386-14

Date Collected: 02/21/19 17:25

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.34	J	0.40	0.12	ppb v/v			02/26/19 03:47	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 03:47	1
Chlorodifluoromethane	1.6	CI	0.40	0.075	ppb v/v			02/26/19 03:47	1
Chloroform	0.27	J	0.40	0.075	ppb v/v			02/26/19 03:47	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 03:47	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 03:47	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 03:47	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 03:47	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 03:47	1
Ethylbenzene	2.9		0.40	0.14	ppb v/v			02/26/19 03:47	1
Methylene Chloride	2.0		2.0	0.65	ppb v/v			02/26/19 03:47	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 03:47	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 03:47	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 03:47	1
Toluene	36		0.60	0.60	ppb v/v			02/26/19 03:47	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 03:47	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 03:47	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 03:47	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 03:47	1
Trichloroethene	0.12	J	0.20	0.070	ppb v/v			02/26/19 03:47	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 03:47	1
1,2,4-Trimethylbenzene	0.31	J	0.40	0.13	ppb v/v			02/26/19 03:47	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 03:47	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 03:47	1
Xylenes, Total	13		0.80	0.12	ppb v/v			02/26/19 03:47	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			02/26/19 03:47	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 03:47	1
Chlorodifluoromethane	5.7	CI	1.4	0.27	ug/m3			02/26/19 03:47	1
Chloroform	1.3	J	2.0	0.37	ug/m3			02/26/19 03:47	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 03:47	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 03:47	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 03:47	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 03:47	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 03:47	1
Ethylbenzene	13		1.7	0.59	ug/m3			02/26/19 03:47	1
Methylene Chloride	7.1		6.9	2.3	ug/m3			02/26/19 03:47	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 03:47	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 03:47	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 03:47	1
Toluene	130		2.3	2.3	ug/m3			02/26/19 03:47	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 03:47	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 03:47	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 03:47	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 03:47	1
Trichloroethene	0.65	J	1.1	0.38	ug/m3			02/26/19 03:47	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 03:47	1
1,2,4-Trimethylbenzene	1.5	J	2.0	0.61	ug/m3			02/26/19 03:47	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-136-A-26

Lab Sample ID: 140-14386-14

Date Collected: 02/21/19 17:25

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 03:47	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 03:47	1
Xylenes, Total	57		3.5	0.52	ug/m3			02/26/19 03:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 03:47	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-076-A-26

Lab Sample ID: 140-14386-15

Date Collected: 02/21/19 17:27

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.34	J	0.40	0.12	ppb v/v			02/26/19 04:36	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 04:36	1
Chlorodifluoromethane	0.79		0.40	0.075	ppb v/v			02/26/19 04:36	1
Chloroform	0.086	J	0.40	0.075	ppb v/v			02/26/19 04:36	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 04:36	1
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v			02/26/19 04:36	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 04:36	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 04:36	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 04:36	1
Ethylbenzene	2.2		0.40	0.14	ppb v/v			02/26/19 04:36	1
Methylene Chloride	2.4		2.0	0.65	ppb v/v			02/26/19 04:36	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 04:36	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 04:36	1
Tetrachloroethene	0.50		0.40	0.080	ppb v/v			02/26/19 04:36	1
Toluene	32		0.60	0.60	ppb v/v			02/26/19 04:36	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 04:36	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 04:36	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 04:36	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 04:36	1
Trichloroethene	0.11	J	0.20	0.070	ppb v/v			02/26/19 04:36	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 04:36	1
1,2,4-Trimethylbenzene	0.33	J	0.40	0.13	ppb v/v			02/26/19 04:36	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 04:36	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 04:36	1
Xylenes, Total	11		0.80	0.12	ppb v/v			02/26/19 04:36	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			02/26/19 04:36	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 04:36	1
Chlorodifluoromethane	2.8		1.4	0.27	ug/m3			02/26/19 04:36	1
Chloroform	0.42	J	2.0	0.37	ug/m3			02/26/19 04:36	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 04:36	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/26/19 04:36	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 04:36	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 04:36	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 04:36	1
Ethylbenzene	9.7		1.7	0.59	ug/m3			02/26/19 04:36	1
Methylene Chloride	8.2		6.9	2.3	ug/m3			02/26/19 04:36	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 04:36	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 04:36	1
Tetrachloroethene	3.4		2.7	0.54	ug/m3			02/26/19 04:36	1
Toluene	120		2.3	2.3	ug/m3			02/26/19 04:36	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 04:36	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 04:36	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 04:36	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 04:36	1
Trichloroethene	0.58	J	1.1	0.38	ug/m3			02/26/19 04:36	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 04:36	1
1,2,4-Trimethylbenzene	1.6	J	2.0	0.61	ug/m3			02/26/19 04:36	1

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-076-A-26

Lab Sample ID: 140-14386-15

Date Collected: 02/21/19 17:27

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 04:36	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 04:36	1
Xylenes, Total	49		3.5	0.52	ug/m3			02/26/19 04:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 04:36	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-075-A-26

Lab Sample ID: 140-14386-16

Date Collected: 02/21/19 17:31

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.32	J	0.40	0.12	ppb v/v			02/26/19 05:25	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 05:25	1
Chlorodifluoromethane	0.78		0.40	0.075	ppb v/v			02/26/19 05:25	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 05:25	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 05:25	1
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v			02/26/19 05:25	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 05:25	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 05:25	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 05:25	1
Ethylbenzene	1.5		0.40	0.14	ppb v/v			02/26/19 05:25	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/26/19 05:25	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 05:25	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 05:25	1
Tetrachloroethene	0.080	J	0.40	0.080	ppb v/v			02/26/19 05:25	1
Toluene	21		0.60	0.60	ppb v/v			02/26/19 05:25	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 05:25	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 05:25	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 05:25	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 05:25	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 05:25	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 05:25	1
1,2,4-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			02/26/19 05:25	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 05:25	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 05:25	1
Xylenes, Total	7.4		0.80	0.12	ppb v/v			02/26/19 05:25	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	J	1.3	0.37	ug/m3			02/26/19 05:25	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 05:25	1
Chlorodifluoromethane	2.7		1.4	0.27	ug/m3			02/26/19 05:25	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 05:25	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 05:25	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/26/19 05:25	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 05:25	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 05:25	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 05:25	1
Ethylbenzene	6.3		1.7	0.59	ug/m3			02/26/19 05:25	1
Methylene Chloride	3.8	J	6.9	2.3	ug/m3			02/26/19 05:25	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 05:25	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 05:25	1
Tetrachloroethene	0.54	J	2.7	0.54	ug/m3			02/26/19 05:25	1
Toluene	80		2.3	2.3	ug/m3			02/26/19 05:25	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 05:25	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 05:25	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 05:25	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 05:25	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 05:25	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 05:25	1
1,2,4-Trimethylbenzene	0.71	J	2.0	0.61	ug/m3			02/26/19 05:25	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-075-A-26

Lab Sample ID: 140-14386-16

Date Collected: 02/21/19 17:31

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 05:25	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 05:25	1
Xylenes, Total	32		3.5	0.52	ug/m3			02/26/19 05:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 05:25	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-021-A-26

Lab Sample ID: 140-14386-17

Date Collected: 02/21/19 17:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.24	J	0.40	0.12	ppb v/v			02/26/19 13:42	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 13:42	1
Chlorodifluoromethane	0.99		0.40	0.075	ppb v/v			02/26/19 13:42	1
Chloroform	0.11	J	0.40	0.075	ppb v/v			02/26/19 13:42	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 13:42	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/26/19 13:42	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 13:42	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 13:42	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 13:42	1
Ethylbenzene	1.8		0.40	0.14	ppb v/v			02/26/19 13:42	1
Methylene Chloride	1.7	J	2.0	0.65	ppb v/v			02/26/19 13:42	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 13:42	1
Naphthalene	0.21		0.20	0.20	ppb v/v			02/26/19 13:42	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 13:42	1
Toluene	22		0.60	0.60	ppb v/v			02/26/19 13:42	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 13:42	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 13:42	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 13:42	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 13:42	1
Trichloroethene	0.13	J	0.20	0.070	ppb v/v			02/26/19 13:42	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 13:42	1
1,2,4-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v			02/26/19 13:42	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 13:42	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 13:42	1
Xylenes, Total	8.9		0.80	0.12	ppb v/v			02/26/19 13:42	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.78	J	1.3	0.37	ug/m3			02/26/19 13:42	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 13:42	1
Chlorodifluoromethane	3.5		1.4	0.27	ug/m3			02/26/19 13:42	1
Chloroform	0.52	J	2.0	0.37	ug/m3			02/26/19 13:42	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 13:42	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 13:42	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 13:42	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 13:42	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 13:42	1
Ethylbenzene	7.8		1.7	0.59	ug/m3			02/26/19 13:42	1
Methylene Chloride	5.9	J	6.9	2.3	ug/m3			02/26/19 13:42	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 13:42	1
Naphthalene	1.1		1.0	1.0	ug/m3			02/26/19 13:42	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 13:42	1
Toluene	85		2.3	2.3	ug/m3			02/26/19 13:42	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 13:42	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 13:42	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 13:42	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 13:42	1
Trichloroethene	0.70	J	1.1	0.38	ug/m3			02/26/19 13:42	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 13:42	1
1,2,4-Trimethylbenzene	1.1	J	2.0	0.61	ug/m3			02/26/19 13:42	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-021-A-26

Lab Sample ID: 140-14386-17

Date Collected: 02/21/19 17:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 13:42	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 13:42	1
Xylenes, Total	39		3.5	0.52	ug/m3			02/26/19 13:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/26/19 13:42	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: SV-178-MB-3

Lab Sample ID: 140-14386-18

Date Collected: 02/21/19 10:58

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 15:56	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 15:56	1
Chlorodifluoromethane	0.42		0.40	0.075	ppb v/v			02/26/19 15:56	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 15:56	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 15:56	1
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v			02/26/19 15:56	1
1,1-Dichloroethane	0.25	J	0.40	0.050	ppb v/v			02/26/19 15:56	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 15:56	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 15:56	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 15:56	1
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v			02/26/19 15:56	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 15:56	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 15:56	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 15:56	1
Toluene	0.63		0.60	0.60	ppb v/v			02/26/19 15:56	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 15:56	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 15:56	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 15:56	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 15:56	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 15:56	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 15:56	1
1,2,4-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v			02/26/19 15:56	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 15:56	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 15:56	1
Xylenes, Total	0.56	J	0.80	0.12	ppb v/v			02/26/19 15:56	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 15:56	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 15:56	1
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3			02/26/19 15:56	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 15:56	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 15:56	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/26/19 15:56	1
1,1-Dichloroethane	1.0	J	1.6	0.20	ug/m3			02/26/19 15:56	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 15:56	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 15:56	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 15:56	1
Methylene Chloride	4.1	J	6.9	2.3	ug/m3			02/26/19 15:56	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 15:56	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 15:56	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 15:56	1
Toluene	2.4		2.3	2.3	ug/m3			02/26/19 15:56	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 15:56	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 15:56	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 15:56	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 15:56	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 15:56	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 15:56	1
1,2,4-Trimethylbenzene	0.79	J	2.0	0.61	ug/m3			02/26/19 15:56	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: SV-178-MB-3

Lab Sample ID: 140-14386-18

Date Collected: 02/21/19 10:58

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 15:56	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 15:56	1
Xylenes, Total	2.4	J	3.5	0.52	ug/m3			02/26/19 15:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		60 - 140					02/26/19 15:56	1

Default Detection Limits

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-14386-1	IA-138-A-26	100
140-14386-2	IA-093-A-26	102
140-14386-3	IA-174-A-26	102
140-14386-4	IA-018-A-26	100
140-14386-5	IA-DUP03-A-26	100
140-14386-6	IA-015-A-26	102
140-14386-7	IA-118-A-26	101
140-14386-8	IA-168-A-26	101
140-14386-9	IA-081-A-26	102
140-14386-10	IA-079-A-26	101
140-14386-11	IA-DUP04-A-26	103
140-14386-12	IA-117-A-26	103
140-14386-13	IA-078-A-26	100
140-14386-14	IA-136-A-26	100
140-14386-15	IA-076-A-26	100
140-14386-16	IA-075-A-26	100
140-14386-17	IA-021-A-26	98
140-14386-18	SV-178-MB-3	97
LCS 140-27908/1002	Lab Control Sample	107
LCS 140-27931/1002	Lab Control Sample	100
MB 140-27908/5	Method Blank	103
MB 140-27931/4	Method Blank	96

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-27908/5
Matrix: Air
Analysis Batch: 27908

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			02/25/19 12:52	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/25/19 12:52	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/25/19 12:52	1
Chloroform	ND		0.080	0.015	ppb v/v			02/25/19 12:52	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/25/19 12:52	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/25/19 12:52	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/25/19 12:52	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/25/19 12:52	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/25/19 12:52	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/25/19 12:52	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/25/19 12:52	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/25/19 12:52	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/25/19 12:52	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/25/19 12:52	1
Toluene	ND		0.12	0.12	ppb v/v			02/25/19 12:52	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/25/19 12:52	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/25/19 12:52	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/25/19 12:52	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/25/19 12:52	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/25/19 12:52	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/25/19 12:52	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/25/19 12:52	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/25/19 12:52	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/25/19 12:52	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/25/19 12:52	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/25/19 12:52	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/25/19 12:52	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/25/19 12:52	1
Chloroform	ND		0.39	0.073	ug/m3			02/25/19 12:52	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/25/19 12:52	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/25/19 12:52	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/25/19 12:52	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/25/19 12:52	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/25/19 12:52	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/25/19 12:52	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/25/19 12:52	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/25/19 12:52	1
Naphthalene	ND		0.21	0.21	ug/m3			02/25/19 12:52	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/25/19 12:52	1
Toluene	ND		0.45	0.45	ug/m3			02/25/19 12:52	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/25/19 12:52	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/25/19 12:52	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/25/19 12:52	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/25/19 12:52	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/25/19 12:52	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/25/19 12:52	1

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27908/5
Matrix: Air
Analysis Batch: 27908

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/25/19 12:52	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/25/19 12:52	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/25/19 12:52	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/25/19 12:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 140		02/25/19 12:52	1

Lab Sample ID: LCS 140-27908/1002
Matrix: Air
Analysis Batch: 27908

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	1.86		ppb v/v		93	70 - 130
Carbon tetrachloride	2.00	2.00		ppb v/v		100	70 - 130
Chlorodifluoromethane	2.00	1.82		ppb v/v		91	60 - 140
Chloroform	2.00	1.88		ppb v/v		94	70 - 130
cis-1,2-Dichloroethene	2.00	1.88		ppb v/v		94	70 - 130
Dichlorodifluoromethane	2.00	1.87		ppb v/v		93	60 - 140
1,1-Dichloroethane	2.00	1.87		ppb v/v		94	70 - 130
1,2-Dichloroethane	2.00	1.85		ppb v/v		92	70 - 130
1,1-Dichloroethene	2.00	1.86		ppb v/v		93	70 - 130
Ethylbenzene	2.00	2.06		ppb v/v		103	70 - 130
Methylene Chloride	2.00	1.66		ppb v/v		83	70 - 130
Methyl tert-butyl ether	2.00	1.93		ppb v/v		97	60 - 140
Naphthalene	2.00	1.68		ppb v/v		84	60 - 140
Tetrachloroethene	2.00	2.01		ppb v/v		101	70 - 130
Toluene	2.00	2.02		ppb v/v		101	70 - 130
trans-1,2-Dichloroethene	2.00	1.85		ppb v/v		92	70 - 130
1,2,4-Trichlorobenzene	2.00	1.86		ppb v/v		93	60 - 140
1,1,1-Trichloroethane	2.00	1.88		ppb v/v		94	70 - 130
1,1,2-Trichloroethane	2.00	1.99		ppb v/v		99	70 - 130
Trichloroethene	2.00	1.89		ppb v/v		95	70 - 130
1,2,3-Trimethylbenzene	2.00	2.08		ppb v/v		104	70 - 130
1,2,4-Trimethylbenzene	2.00	2.11		ppb v/v		105	70 - 130
1,3,5-Trimethylbenzene	2.00	2.03		ppb v/v		101	70 - 130
Vinyl chloride	2.00	2.19		ppb v/v		110	70 - 130
Xylenes, Total	6.00	6.41		ppb v/v		107	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	5.94		ug/m3		93	70 - 130
Carbon tetrachloride	13	12.6		ug/m3		100	70 - 130
Chlorodifluoromethane	7.1	6.44		ug/m3		91	60 - 140
Chloroform	9.8	9.17		ug/m3		94	70 - 130
cis-1,2-Dichloroethene	7.9	7.46		ug/m3		94	70 - 130
Dichlorodifluoromethane	9.9	9.23		ug/m3		93	60 - 140
1,1-Dichloroethane	8.1	7.59		ug/m3		94	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27908/1002
Matrix: Air
Analysis Batch: 27908

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	7.48		ug/m3		92	70 - 130
1,1-Dichloroethene	7.9	7.38		ug/m3		93	70 - 130
Ethylbenzene	8.7	8.94		ug/m3		103	70 - 130
Methylene Chloride	6.9	5.78		ug/m3		83	70 - 130
Methyl tert-butyl ether	7.2	6.97		ug/m3		97	60 - 140
Naphthalene	10	8.80		ug/m3		84	60 - 140
Tetrachloroethene	14	13.6		ug/m3		101	70 - 130
Toluene	7.5	7.62		ug/m3		101	70 - 130
trans-1,2-Dichloroethene	7.9	7.32		ug/m3		92	70 - 130
1,2,4-Trichlorobenzene	15	13.8		ug/m3		93	60 - 140
1,1,1-Trichloroethane	11	10.3		ug/m3		94	70 - 130
1,1,2-Trichloroethane	11	10.8		ug/m3		99	70 - 130
Trichloroethene	11	10.2		ug/m3		95	70 - 130
1,2,3-Trimethylbenzene	9.8	10.2		ug/m3		104	70 - 130
1,2,4-Trimethylbenzene	9.8	10.4		ug/m3		105	70 - 130
1,3,5-Trimethylbenzene	9.8	9.96		ug/m3		101	70 - 130
Vinyl chloride	5.1	5.60		ug/m3		110	70 - 130
Xylenes, Total	26	27.8		ug/m3		107	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		60 - 140

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/26/19 12:56	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chloroform	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/26/19 12:56	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/26/19 12:56	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/26/19 12:56	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/26/19 12:56	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/26/19 12:56	1
Toluene	ND		0.12	0.12	ppb v/v			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/26/19 12:56	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/26/19 12:56	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/26/19 12:56	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/26/19 12:56	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/26/19 12:56	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/26/19 12:56	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/26/19 12:56	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/26/19 12:56	1
Chloroform	ND		0.39	0.073	ug/m3			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/26/19 12:56	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/26/19 12:56	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/26/19 12:56	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/26/19 12:56	1
Naphthalene	ND		0.21	0.21	ug/m3			02/26/19 12:56	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/26/19 12:56	1
Toluene	ND		0.45	0.45	ug/m3			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/26/19 12:56	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/26/19 12:56	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/26/19 12:56	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/26/19 12:56	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/26/19 12:56	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/26/19 12:56	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		60 - 140		02/26/19 12:56	1

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.22		ppb v/v		111	70 - 130
Chlorodifluoromethane	2.00	2.02		ppb v/v		101	60 - 140
Chloroform	2.00	2.00		ppb v/v		100	70 - 130
cis-1,2-Dichloroethene	2.00	2.09		ppb v/v		104	70 - 130
Dichlorodifluoromethane	2.00	2.06		ppb v/v		103	60 - 140

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	2.00	2.05		ppb v/v		103	70 - 130
1,2-Dichloroethane	2.00	2.00		ppb v/v		100	70 - 130
1,1-Dichloroethene	2.00	2.14		ppb v/v		107	70 - 130
Ethylbenzene	2.00	2.03		ppb v/v		101	70 - 130
Methylene Chloride	2.00	1.81		ppb v/v		90	70 - 130
Methyl tert-butyl ether	2.00	1.97		ppb v/v		99	60 - 140
Naphthalene	2.00	1.94		ppb v/v		97	60 - 140
Tetrachloroethene	2.00	2.06		ppb v/v		103	70 - 130
Toluene	2.00	2.02		ppb v/v		101	70 - 130
trans-1,2-Dichloroethene	2.00	2.15		ppb v/v		108	70 - 130
1,2,4-Trichlorobenzene	2.00	1.83		ppb v/v		92	60 - 140
1,1,1-Trichloroethane	2.00	2.04		ppb v/v		102	70 - 130
1,1,2-Trichloroethane	2.00	2.11		ppb v/v		105	70 - 130
Trichloroethene	2.00	2.09		ppb v/v		105	70 - 130
1,2,3-Trimethylbenzene	2.00	2.22		ppb v/v		111	70 - 130
1,2,4-Trimethylbenzene	2.00	1.99		ppb v/v		99	70 - 130
1,3,5-Trimethylbenzene	2.00	1.97		ppb v/v		98	70 - 130
Vinyl chloride	2.00	1.97		ppb v/v		98	70 - 130
Xylenes, Total	6.00	6.18		ppb v/v		103	70 - 130
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.61		ug/m3		103	70 - 130
Carbon tetrachloride	13	13.9		ug/m3		111	70 - 130
Chlorodifluoromethane	7.1	7.16		ug/m3		101	60 - 140
Chloroform	9.8	9.78		ug/m3		100	70 - 130
cis-1,2-Dichloroethene	7.9	8.28		ug/m3		104	70 - 130
Dichlorodifluoromethane	9.9	10.2		ug/m3		103	60 - 140
1,1-Dichloroethane	8.1	8.31		ug/m3		103	70 - 130
1,2-Dichloroethane	8.1	8.11		ug/m3		100	70 - 130
1,1-Dichloroethene	7.9	8.50		ug/m3		107	70 - 130
Ethylbenzene	8.7	8.79		ug/m3		101	70 - 130
Methylene Chloride	6.9	6.27		ug/m3		90	70 - 130
Methyl tert-butyl ether	7.2	7.12		ug/m3		99	60 - 140
Naphthalene	10	10.2		ug/m3		97	60 - 140
Tetrachloroethene	14	14.0		ug/m3		103	70 - 130
Toluene	7.5	7.63		ug/m3		101	70 - 130
trans-1,2-Dichloroethene	7.9	8.53		ug/m3		108	70 - 130
1,2,4-Trichlorobenzene	15	13.6		ug/m3		92	60 - 140
1,1,1-Trichloroethane	11	11.1		ug/m3		102	70 - 130
1,1,2-Trichloroethane	11	11.5		ug/m3		105	70 - 130
Trichloroethene	11	11.2		ug/m3		105	70 - 130
1,2,3-Trimethylbenzene	9.8	10.9		ug/m3		111	70 - 130
1,2,4-Trimethylbenzene	9.8	9.78		ug/m3		99	70 - 130
1,3,5-Trimethylbenzene	9.8	9.68		ug/m3		98	70 - 130
Vinyl chloride	5.1	5.03		ug/m3		98	70 - 130
Xylenes, Total	26	26.8		ug/m3		103	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>LCS</i> <i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	100		60 - 140

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Air - GC/MS VOA

Analysis Batch: 27908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14386-1	IA-138-A-26	Total/NA	Air	TO 15 LL	
140-14386-2	IA-093-A-26	Total/NA	Air	TO 15 LL	
140-14386-3	IA-174-A-26	Total/NA	Air	TO 15 LL	
140-14386-4	IA-018-A-26	Total/NA	Air	TO 15 LL	
140-14386-5	IA-DUP03-A-26	Total/NA	Air	TO 15 LL	
140-14386-6	IA-015-A-26	Total/NA	Air	TO 15 LL	
140-14386-7	IA-118-A-26	Total/NA	Air	TO 15 LL	
140-14386-8	IA-168-A-26	Total/NA	Air	TO 15 LL	
140-14386-9	IA-081-A-26	Total/NA	Air	TO 15 LL	
140-14386-10	IA-079-A-26	Total/NA	Air	TO 15 LL	
140-14386-11	IA-DUP04-A-26	Total/NA	Air	TO 15 LL	
140-14386-12	IA-117-A-26	Total/NA	Air	TO 15 LL	
140-14386-13	IA-078-A-26	Total/NA	Air	TO 15 LL	
140-14386-14	IA-136-A-26	Total/NA	Air	TO 15 LL	
140-14386-15	IA-076-A-26	Total/NA	Air	TO 15 LL	
140-14386-16	IA-075-A-26	Total/NA	Air	TO 15 LL	
MB 140-27908/5	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27908/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 27931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14386-17	IA-021-A-26	Total/NA	Air	TO 15 LL	
140-14386-18	SV-178-MB-3	Total/NA	Air	TO 15 LL	
MB 140-27931/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27931/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-138-A-26

Date Collected: 02/21/19 16:54

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14386-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 17:10	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-093-A-26

Date Collected: 02/21/19 16:56

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14386-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 17:59	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-174-A-26

Date Collected: 02/21/19 16:55

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14386-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 18:48	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-018-A-26

Date Collected: 02/21/19 16:57

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14386-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 19:37	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-DUP03-A-26

Date Collected: 02/21/19 16:57

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14386-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 20:26	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-015-A-26

Date Collected: 02/21/19 17:04

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14386-6

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 21:14	S1K	TAL KNX
Instrument ID: MR										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-118-A-26

Lab Sample ID: 140-14386-7

Date Collected: 02/21/19 17:05

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 22:03	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-168-A-26

Lab Sample ID: 140-14386-8

Date Collected: 02/21/19 17:28

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.57	157 mL	500 mL	27908	02/25/19 22:53	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-081-A-26

Lab Sample ID: 140-14386-9

Date Collected: 02/21/19 17:12

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 23:42	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-079-A-26

Lab Sample ID: 140-14386-10

Date Collected: 02/21/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/26/19 00:31	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-DUP04-A-26

Lab Sample ID: 140-14386-11

Date Collected: 02/21/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/26/19 01:20	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-117-A-26

Lab Sample ID: 140-14386-12

Date Collected: 02/21/19 17:20

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.66	166 mL	500 mL	27908	02/26/19 02:09	S1K	TAL KNX
Instrument ID: MR										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-078-A-26

Lab Sample ID: 140-14386-13

Date Collected: 02/21/19 17:23

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/26/19 02:58	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-136-A-26

Lab Sample ID: 140-14386-14

Date Collected: 02/21/19 17:25

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/26/19 03:47	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-076-A-26

Lab Sample ID: 140-14386-15

Date Collected: 02/21/19 17:27

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/26/19 04:36	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-075-A-26

Lab Sample ID: 140-14386-16

Date Collected: 02/21/19 17:31

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/26/19 05:25	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-021-A-26

Lab Sample ID: 140-14386-17

Date Collected: 02/21/19 17:34

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 13:42	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-178-MB-3

Lab Sample ID: 140-14386-18

Date Collected: 02/21/19 10:58

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 15:56	S1K	TAL KNX
Instrument ID: MG										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-27908/5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27908	02/25/19 12:52	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-27931/4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 12:56	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

Lab Sample ID: LCS 140-27908/1002

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27908	02/25/19 10:00	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

Lab Sample ID: LCS 140-27931/1002

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 11:35	S1K	TAL KNX
Instrument ID: MG										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14386-1	IA-138-A-26	Air	02/21/19 16:54	02/23/19 10:10
140-14386-2	IA-093-A-26	Air	02/21/19 16:56	02/23/19 10:10
140-14386-3	IA-174-A-26	Air	02/21/19 16:55	02/23/19 10:10
140-14386-4	IA-018-A-26	Air	02/21/19 16:57	02/23/19 10:10
140-14386-5	IA-DUP03-A-26	Air	02/21/19 16:57	02/23/19 10:10
140-14386-6	IA-015-A-26	Air	02/21/19 17:04	02/23/19 10:10
140-14386-7	IA-118-A-26	Air	02/21/19 17:05	02/23/19 10:10
140-14386-8	IA-168-A-26	Air	02/21/19 17:28	02/23/19 10:10
140-14386-9	IA-081-A-26	Air	02/21/19 17:12	02/23/19 10:10
140-14386-10	IA-079-A-26	Air	02/21/19 17:18	02/23/19 10:10
140-14386-11	IA-DUP04-A-26	Air	02/21/19 17:18	02/23/19 10:10
140-14386-12	IA-117-A-26	Air	02/21/19 17:20	02/23/19 10:10
140-14386-13	IA-078-A-26	Air	02/21/19 17:23	02/23/19 10:10
140-14386-14	IA-136-A-26	Air	02/21/19 17:25	02/23/19 10:10
140-14386-15	IA-076-A-26	Air	02/21/19 17:27	02/23/19 10:10
140-14386-16	IA-075-A-26	Air	02/21/19 17:31	02/23/19 10:10
140-14386-17	IA-021-A-26	Air	02/21/19 17:34	02/23/19 10:10
140-14386-18	SV-178-MB-3	Air	02/21/19 10:58	02/23/19 10:10

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
IA-138-A-26	140-14386-1	100
IA-093-A-26	140-14386-2	102
IA-174-A-26	140-14386-3	102
IA-018-A-26	140-14386-4	100
IA-DUP03-A-26	140-14386-5	100
IA-015-A-26	140-14386-6	102
IA-118-A-26	140-14386-7	101
IA-168-A-26	140-14386-8	101
IA-081-A-26	140-14386-9	102
IA-079-A-26	140-14386-10	101
IA-DUP04-A-26	140-14386-11	103
IA-117-A-26	140-14386-12	103
IA-078-A-26	140-14386-13	100
IA-136-A-26	140-14386-14	100
IA-076-A-26	140-14386-15	100
IA-075-A-26	140-14386-16	100
IA-021-A-26	140-14386-17	98
SV-178-MB-3	140-14386-18	97
	MB 140-27908/5	103
	MB 140-27931/4	96
	LCS 140-27908/1002	107
	LCS 140-27931/1002	100

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: RCCVB25-LCS.d
 Lab ID: LCS 140-27908/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.86	93	70-130	
Carbon tetrachloride	2.00	2.00	100	70-130	
Chlorodifluoromethane	2.00	1.82	91	60-140	
Chloroform	2.00	1.88	94	70-130	
cis-1,2-Dichloroethene	2.00	1.88	94	70-130	
Dichlorodifluoromethane	2.00	1.87	93	60-140	
1,1-Dichloroethane	2.00	1.87	94	70-130	
1,2-Dichloroethane	2.00	1.85	92	70-130	
1,1-Dichloroethene	2.00	1.86	93	70-130	
Ethylbenzene	2.00	2.06	103	70-130	
Methylene Chloride	2.00	1.66	83	70-130	
Methyl tert-butyl ether	2.00	1.93	97	60-140	
Naphthalene	2.00	1.68	84	60-140	
Tetrachloroethene	2.00	2.01	101	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	1.85	92	70-130	
1,2,4-Trichlorobenzene	2.00	1.86	93	60-140	
1,1,1-Trichloroethane	2.00	1.88	94	70-130	
1,1,2-Trichloroethane	2.00	1.99	99	70-130	
Trichloroethene	2.00	1.89	95	70-130	
1,2,3-Trimethylbenzene	2.00	2.08	104	70-130	
1,2,4-Trimethylbenzene	2.00	2.11	105	70-130	
1,3,5-Trimethylbenzene	2.00	2.03	101	70-130	
Vinyl chloride	2.00	2.19	110	70-130	
Xylenes, Total	6.00	6.41	107	70-130	

Column to be used to flag recovery and RPD values

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB26-LCS.d
 Lab ID: LCS 140-27931/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.22	111	70-130	
Chlorodifluoromethane	2.00	2.02	101	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	2.09	104	70-130	
Dichlorodifluoromethane	2.00	2.06	103	60-140	
1,1-Dichloroethane	2.00	2.05	103	70-130	
1,2-Dichloroethane	2.00	2.00	100	70-130	
1,1-Dichloroethene	2.00	2.14	107	70-130	
Ethylbenzene	2.00	2.03	101	70-130	
Methylene Chloride	2.00	1.81	90	70-130	
Methyl tert-butyl ether	2.00	1.97	99	60-140	
Naphthalene	2.00	1.94	97	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	2.15	108	70-130	
1,2,4-Trichlorobenzene	2.00	1.83	92	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	2.11	105	70-130	
Trichloroethene	2.00	2.09	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.22	111	70-130	
1,2,4-Trimethylbenzene	2.00	1.99	99	70-130	
1,3,5-Trimethylbenzene	2.00	1.97	98	70-130	
Vinyl chloride	2.00	1.97	98	70-130	
Xylenes, Total	6.00	6.18	103	70-130	

Column to be used to flag recovery and RPD values
 FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: G500BB26.D Lab Sample ID: MB 140-27931/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/26/2019 12:56
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27931/1002	GCCVB26-LCS .d	02/26/2019 11:35
IA-021-A-26	140-14386-17	GB26P201.D	02/26/2019 13:42
SV-178-MB-3	140-14386-18	GB26P101.D	02/26/2019 15:56

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: R500BB25.D Lab Sample ID: MB 140-27908/5
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MR Date Analyzed: 02/25/2019 12:52
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27908/1002	RCCVB25-LCS .d	02/25/2019 10:00
IA-138-A-26	140-14386-1	RB25P101.D	02/25/2019 17:10
IA-093-A-26	140-14386-2	RB25P102.D	02/25/2019 17:59
IA-174-A-26	140-14386-3	RB25P103.D	02/25/2019 18:48
IA-018-A-26	140-14386-4	RB25P104.D	02/25/2019 19:37
IA-DUP03-A-26	140-14386-5	RB25P105.D	02/25/2019 20:26
IA-015-A-26	140-14386-6	RB25P106.D	02/25/2019 21:14
IA-118-A-26	140-14386-7	RB25P107.D	02/25/2019 22:03
IA-168-A-26	140-14386-8	RB25P108.D	02/25/2019 22:53
IA-081-A-26	140-14386-9	RB25P109.D	02/25/2019 23:42
IA-079-A-26	140-14386-10	RB25P110.D	02/26/2019 00:31
IA-DUP04-A-26	140-14386-11	RB25P111.D	02/26/2019 01:20
IA-117-A-26	140-14386-12	RB25P112.D	02/26/2019 02:09
IA-078-A-26	140-14386-13	RB25P113.D	02/26/2019 02:58
IA-136-A-26	140-14386-14	RB25P114.D	02/26/2019 03:47
IA-076-A-26	140-14386-15	RB25P115.D	02/26/2019 04:36
IA-075-A-26	140-14386-16	RB25P116.D	02/26/2019 05:25

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: GA11BLK1.D BFB Injection Date: 01/11/2019
 Instrument ID: MG BFB Injection Time: 12:24
 Analysis Batch No.: 26755

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.2	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	71.2	
175	5.0 - 9.0 % of mass 174	5.1	(7.1) 1
176	95.0 - 101.0 % of mass 174	70.7	(99.3) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-26755/2	GA11IC09.D	01/11/2019	13:08
	IC 140-26755/6	GA11IC10.D	01/11/2019	14:35
	IC 140-26755/9	GA11IC01.D	01/11/2019	16:46
	IC 140-26755/10	GA11IC02.D	01/11/2019	17:29
	IC 140-26755/11	GA11IC03.D	01/11/2019	18:12
	IC 140-26755/12	GA11IC04.D	01/11/2019	18:56
	IC 140-26755/13	GA11IC05.D	01/11/2019	19:40
	IC 140-26755/14	GA11IC06.D	01/11/2019	20:23
	ICIS 140-26755/15	GA11IC07.D	01/11/2019	21:07
	IC 140-26755/16	GA11IC08.D	01/11/2019	21:51
	ICV 140-26755/18	GA11ICV.D	01/11/2019	23:17

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: GBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MG BFB Injection Time: 11:03
 Analysis Batch No.: 27931

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.5
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	73.1
175	5.0 - 9.0 % of mass 174	5.1 (7.0) 1
176	95.0 - 101.0 % of mass 174	71.2 (97.4) 1
177	5.0 - 9.0 % of mass 176	4.6 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27931/2	GCCVB26.D	02/26/2019	11:35
	LCS 140-27931/1002	GCCVB26-LCS. d	02/26/2019	11:35
	MB 140-27931/4	G500BB26.D	02/26/2019	12:56
IA-021-A-26	140-14386-17	GB26P201.D	02/26/2019	13:42
SV-178-MB-3	140-14386-18	GB26P101.D	02/26/2019	15:56

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: RFBK16I.D BFB Injection Date: 11/16/2018
 Instrument ID: MR BFB Injection Time: 16:00
 Analysis Batch No.: 25490

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	58.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	91.0	
175	5.0 - 9.0 % of mass 174	6.6	(7.3) 1
176	95.0 - 101.0 % of mass 174	88.8	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-25490/3	RK16IC09.D	11/16/2018	17:23
	IC 140-25490/5	RK16IC10.D	11/16/2018	19:07
	IC 140-25490/8	RK16IC01.D	11/16/2018	21:42
	IC 140-25490/9	RK16IC02.D	11/16/2018	22:34
	IC 140-25490/10	RK16IC03.D	11/16/2018	23:27
	IC 140-25490/11	RK16IC04.D	11/17/2018	00:20
	IC 140-25490/12	RK16IC05.D	11/17/2018	01:12
	IC 140-25490/13	RK16IC06.D	11/17/2018	02:05
	ICIS 140-25490/14	RK16IC07.D	11/17/2018	02:58
	IC 140-25490/15	RK16IC08.D	11/17/2018	03:51
	ICV 140-25490/18	RK16ICV.D	11/17/2018	06:27

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: RBFBB25.D BFB Injection Date: 02/25/2019
 Instrument ID: MR BFB Injection Time: 09:32
 Analysis Batch No.: 27908

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.3	
75	30.0 - 60.0 % of mass 95	59.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	88.3	
175	5.0 - 9.0 % of mass 174	6.6	(7.5) 1
176	95.0 - 101.0 % of mass 174	85.5	(96.9) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27908/2	RCCVB25.D	02/25/2019	10:00
	LCS 140-27908/1002	RCCVB25-LCS.d	02/25/2019	10:00
	MB 140-27908/5	R500BB25.D	02/25/2019	12:52
IA-138-A-26	140-14386-1	RB25P101.D	02/25/2019	17:10
IA-093-A-26	140-14386-2	RB25P102.D	02/25/2019	17:59
IA-174-A-26	140-14386-3	RB25P103.D	02/25/2019	18:48
IA-018-A-26	140-14386-4	RB25P104.D	02/25/2019	19:37
IA-DUP03-A-26	140-14386-5	RB25P105.D	02/25/2019	20:26
IA-015-A-26	140-14386-6	RB25P106.D	02/25/2019	21:14
IA-118-A-26	140-14386-7	RB25P107.D	02/25/2019	22:03
IA-168-A-26	140-14386-8	RB25P108.D	02/25/2019	22:53
IA-081-A-26	140-14386-9	RB25P109.D	02/25/2019	23:42
IA-079-A-26	140-14386-10	RB25P110.D	02/26/2019	00:31
IA-DUP04-A-26	140-14386-11	RB25P111.D	02/26/2019	01:20
IA-117-A-26	140-14386-12	RB25P112.D	02/26/2019	02:09
IA-078-A-26	140-14386-13	RB25P113.D	02/26/2019	02:58
IA-136-A-26	140-14386-14	RB25P114.D	02/26/2019	03:47
IA-076-A-26	140-14386-15	RB25P115.D	02/26/2019	04:36
IA-075-A-26	140-14386-16	RB25P116.D	02/26/2019	05:25

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Sample No.: ICIS 140-26755/15 Date Analyzed: 01/11/2019 21:07
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GAl1IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	437891	9.25	2708081	11.42	2541912	16.10
UPPER LIMIT	613047	9.58	3791313	11.75	3558677	16.43
LOWER LIMIT	262735	8.92	1624849	11.09	1525147	15.77
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-26755/18	423755	9.24	2327828	11.42	2182908	16.09

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Sample No.: CCVIS 140-27931/2 Date Analyzed: 02/26/2019 11:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	496382	9.23	2758157	11.41	2578216	16.08	
UPPER LIMIT	694935	9.56	3861420	11.74	3609502	16.41	
LOWER LIMIT	297829	8.90	1654894	11.08	1546930	15.75	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27931/1002	496382	9.23	2758157	11.41	2578216	16.08	
MB 140-27931/4	508819	9.23	2920722	11.41	2502760	16.08	
140-14386-17	IA-021-A-26	472126	9.28	2779341	11.42	2424108	16.08
140-14386-18	SV-178-MB-3	467181	9.23	2830006	11.40	2459421	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Sample No.: ICIS 140-25490/14 Date Analyzed: 11/17/2018 02:58
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RK16IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	298864	7.40	1677758	9.49	1487799	14.56
UPPER LIMIT	418410	7.73	2348861	9.82	2082919	14.89
LOWER LIMIT	179318	7.07	1006655	9.16	892679	14.23
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-25490/18	299493	7.38	1671036	9.48	1499042	14.55

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Sample No.: CCVIS 140-27908/2 Date Analyzed: 02/25/2019 10:00
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RCCVB25.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	212957	7.39	1252120	9.45	1073297	14.50	
UPPER LIMIT	298140	7.72	1752968	9.78	1502616	14.83	
LOWER LIMIT	127774	7.06	751272	9.12	643978	14.17	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27908/1002	212957	7.39	1252120	9.45	1073297	14.50	
MB 140-27908/5	194923	7.39	1132283	9.45	994580	14.50	
140-14386-1	IA-138-A-26	199740	7.38	1149358	9.44	1000642	14.50
140-14386-2	IA-093-A-26	185844	7.38	1121771	9.44	980973	14.50
140-14386-3	IA-174-A-26	192317	7.38	1128796	9.44	981084	14.50
140-14386-4	IA-018-A-26	196545	7.38	1163087	9.45	1010502	14.50
140-14386-5	IA-DUP03-A-26	195628	7.38	1146962	9.44	1007644	14.50
140-14386-6	IA-015-A-26	194942	7.40	1150441	9.46	1002804	14.50
140-14386-7	IA-118-A-26	197063	7.39	1129359	9.46	1003724	14.50
140-14386-8	IA-168-A-26	206642	7.41	1211742	9.46	1068296	14.50
140-14386-9	IA-081-A-26	198942	7.39	1157802	9.45	1032178	14.50
140-14386-10	IA-079-A-26	197950	7.40	1152660	9.46	1034179	14.50
140-14386-11	IA-DUP04-A-26	191537	7.40	1146530	9.46	1017138	14.50
140-14386-12	IA-117-A-26	207494	7.40	1213292	9.46	1072962	14.50
140-14386-13	IA-078-A-26	209949	7.41	1254500	9.46	1098725	14.50
140-14386-14	IA-136-A-26	212893	7.41	1257934	9.47	1117228	14.50
140-14386-15	IA-076-A-26	218083	7.41	1273185	9.47	1123585	14.50
140-14386-16	IA-075-A-26	211063	7.42	1248854	9.47	1112726	14.50

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-138-A-26 Lab Sample ID: 140-14386-1
 Matrix: Air Lab File ID: RB25P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:54
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.43	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.16	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.54		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.59	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-138-A-26 Lab Sample ID: 140-14386-1
 Matrix: Air Lab File ID: RB25P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:54
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.69	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.65	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-093-A-26 Lab Sample ID: 140-14386-2
 Matrix: Air Lab File ID: RB25P102.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:56
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.51	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.22	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.95	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.74		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-093-A-26 Lab Sample ID: 140-14386-2
 Matrix: Air Lab File ID: RB25P102.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:56
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.68	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.86	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-174-A-26 Lab Sample ID: 140-14386-3
 Matrix: Air Lab File ID: RB25P103.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 18:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.35	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.31	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.060	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.3		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-174-A-26 Lab Sample ID: 140-14386-3
 Matrix: Air Lab File ID: RB25P103.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 18:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.2	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.33	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	7.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-018-A-26 Lab Sample ID: 140-14386-4
 Matrix: Air Lab File ID: RB25P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 19:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.30	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.18	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.30	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.44		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.13	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.63		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.57	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-018-A-26 Lab Sample ID: 140-14386-4
 Matrix: Air Lab File ID: RB25P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 19:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.95	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.61	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.70	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.8		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.60	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.87	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.5	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-DUP03-A-26 Lab Sample ID: 140-14386-5
 Matrix: Air Lab File ID: RB25P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:26
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.26	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.19	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.31	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.44		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.65		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-DUP03-A-26 Lab Sample ID: 140-14386-5
 Matrix: Air Lab File ID: RB25P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:26
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.83	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	0.62	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.76	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.7		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-015-A-26 Lab Sample ID: 140-14386-6
 Matrix: Air Lab File ID: RB25P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:04
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 21:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.31	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.98	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.81		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-015-A-26 Lab Sample ID: 140-14386-6
 Matrix: Air Lab File ID: RB25P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:04
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 21:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-118-A-26 Lab Sample ID: 140-14386-7
 Matrix: Air Lab File ID: RB25P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:05
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 22:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.36	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.15	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.38		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-118-A-26 Lab Sample ID: 140-14386-7
 Matrix: Air Lab File ID: RB25P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:05
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 22:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.89	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.81	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-168-A-26 Lab Sample ID: 140-14386-8
 Matrix: Air Lab File ID: RB25P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:28
 Sample wt/vol: 157(mL) Date Analyzed: 02/25/2019 22:53
 Soil Aliquot Vol: _____ Dilution Factor: 1.57
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.83		0.40	0.075
67-66-3	Chloroform	119.38	0.090	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	2.5		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	29		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.12	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.25	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	12		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-168-A-26 Lab Sample ID: 140-14386-8
 Matrix: Air Lab File ID: RB25P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:28
 Sample wt/vol: 157(mL) Date Analyzed: 02/25/2019 22:53
 Soil Aliquot Vol: _____ Dilution Factor: 1.57
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.9		1.4	0.27
67-66-3	Chloroform	119.38	0.44	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	11		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	110		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.67	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.2	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	53		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-081-A-26 Lab Sample ID: 140-14386-9
 Matrix: Air Lab File ID: RB25P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:12
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 23:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.86	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.53		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	17		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.6		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-081-A-26 Lab Sample ID: 140-14386-9
 Matrix: Air Lab File ID: RB25P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:12
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 23:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.0	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	63		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.66	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-079-A-26 Lab Sample ID: 140-14386-10
 Matrix: Air Lab File ID: RB25P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 00:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	0.088	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.52		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.36	J	0.40	0.080
108-88-3	Toluene	92.14	14		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-079-A-26 Lab Sample ID: 140-14386-10
 Matrix: Air Lab File ID: RB25P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 00:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	0.43	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.4	J	2.7	0.54
108-88-3	Toluene	92.14	54		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-DUP04-A-26 Lab Sample ID: 140-14386-11
 Matrix: Air Lab File ID: RB25P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 01:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.57		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.50		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	15		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-DUP04-A-26 Lab Sample ID: 140-14386-11
 Matrix: Air Lab File ID: RB25P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 01:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.2		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	56		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	10		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-117-A-26 Lab Sample ID: 140-14386-12
 Matrix: Air Lab File ID: RB25P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:20
 Sample wt/vol: 166(mL) Date Analyzed: 02/26/2019 02:09
 Soil Aliquot Vol: _____ Dilution Factor: 1.66
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.33	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	0.091	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.78		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	32		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-117-A-26 Lab Sample ID: 140-14386-12
 Matrix: Air Lab File ID: RB25P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:20
 Sample wt/vol: 166(mL) Date Analyzed: 02/26/2019 02:09
 Soil Aliquot Vol: _____ Dilution Factor: 1.66
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	0.45	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	120		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.72	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	16		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-078-A-26 Lab Sample ID: 140-14386-13
 Matrix: Air Lab File ID: RB25P113.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:23
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 02:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.31	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.59		0.40	0.075
67-66-3	Chloroform	119.38	0.10	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.5		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	23		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.079	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	7.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-078-A-26 Lab Sample ID: 140-14386-13
 Matrix: Air Lab File ID: RB25P113.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:23
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 02:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.98	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	0.49	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	6.6		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	86		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.43	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.93	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	32		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-136-A-26 Lab Sample ID: 140-14386-14
 Matrix: Air Lab File ID: RB25P114.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:25
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 03:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6	CI	0.40	0.075
67-66-3	Chloroform	119.38	0.27	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	2.9		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	36		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.12	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.31	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	13		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-136-A-26 Lab Sample ID: 140-14386-14
 Matrix: Air Lab File ID: RB25P114.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:25
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 03:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.7	CI	1.4	0.27
67-66-3	Chloroform	119.38	1.3	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	13		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.1		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	130		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.65	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.5	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	57		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-076-A-26 Lab Sample ID: 140-14386-15
 Matrix: Air Lab File ID: RB25P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:27
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.79		0.40	0.075
67-66-3	Chloroform	119.38	0.086	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	2.2		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.4		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.50		0.40	0.080
108-88-3	Toluene	92.14	32		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.11	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.33	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	11		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-076-A-26 Lab Sample ID: 140-14386-15
 Matrix: Air Lab File ID: RB25P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:27
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.8		1.4	0.27
67-66-3	Chloroform	119.38	0.42	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	9.7		1.7	0.59
75-09-2	Methylene Chloride	84.93	8.2		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.4		2.7	0.54
108-88-3	Toluene	92.14	120		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.58	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	49		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-075-A-26 Lab Sample ID: 140-14386-16
 Matrix: Air Lab File ID: RB25P116.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:31
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 05:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.32	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.78		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.5		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.080	J	0.40	0.080
108-88-3	Toluene	92.14	21		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	7.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-075-A-26 Lab Sample ID: 140-14386-16
 Matrix: Air Lab File ID: RB25P116.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:31
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 05:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	6.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.54	J	2.7	0.54
108-88-3	Toluene	92.14	80		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.71	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	32		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-021-A-26 Lab Sample ID: 140-14386-17
 Matrix: Air Lab File ID: GB26P201.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.99		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.8		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.21		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	22		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.13	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.22	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	8.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-021-A-26 Lab Sample ID: 140-14386-17
 Matrix: Air Lab File ID: GB26P201.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.78	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	0.52	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	7.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	85		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.70	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	39		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: SV-178-MB-3 Lab Sample ID: 140-14386-18
 Matrix: Air Lab File ID: GB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:58
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.25	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.63		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.56	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: SV-178-MB-3 Lab Sample ID: 140-14386-18
 Matrix: Air Lab File ID: GB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:58
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.0	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.79	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.9523	2.7653	2.6769	Ave		2.6204			9.0		30.0				
	2.4796	2.3672	2.3873	2.9026	2.4316												
Propene	+++++	+++++	+++++	1.8011	1.4915	Ave		1.4631			12.5		30.0				
	1.4104	1.3267	1.3362	1.5897	1.2862												
Dichlorodifluoromethane	+++++	+++++	4.4505	4.4326	4.2183	Ave		4.2347			6.5		30.0				
	4.0515	3.9190	3.9550	4.7099	4.1407												
Chloromethane	+++++	+++++	+++++	0.5625	0.4891	Ave		0.4649			11.5		30.0				
	0.4445	0.4230	0.4254	0.4946	0.4152												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	2.6446	2.5541	2.4472	Ave		2.4745			4.4		30.0				
	2.3633	2.3423	2.3822	2.5578	2.5047												
Vinyl chloride	1.9626	1.7167	1.7320	1.6531	1.5626	Ave		1.6109			10.3		30.0				
	1.4785	1.4339	1.4573	1.6387	1.4732												
Butane	+++++	+++++	+++++	3.0743	2.8454	Ave		2.7124			8.2		30.0				
	2.6258	2.4782	2.5038	2.8679	2.5911												
1,3-Butadiene	+++++	+++++	+++++	1.2733	1.2439	Ave		1.2450			5.0		30.0				
	1.2041	1.1760	1.2078	1.3654	1.2448												
Bromomethane	+++++	+++++	1.6548	1.3996	1.3549	Ave		1.3916			8.4		30.0				
	1.3078	1.2877	1.3168	1.4117	1.3995												
Chloroethane	+++++	+++++	0.8627	0.8037	0.7796	Ave		0.7761			6.4		30.0				
	0.7377	0.7148	0.7259	0.8118	0.7729												
Ethanol	+++++	+++++	+++++	0.8657	0.7124	Ave		0.7042			15.6		30.0				
	0.5620	0.7386	0.5593	0.7653	0.7259												
Vinyl bromide	+++++	+++++	1.3835	1.3207	1.2830	Ave		1.2899			4.2		30.0				
	1.2366	1.2145	1.2610	1.2880	1.3321												
2-Methylbutane	+++++	+++++	+++++	2.0547	2.0422	Ave		1.9469			4.4		30.0				
	1.9302	1.8374	1.8471	1.9762	1.9406												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.9949	4.3785 3.8769	4.2718 3.9322	4.1461 4.3687	4.1452 4.2564	Ave		4.1523			4.4		30.0				
Acrolein	++++ 0.3700	++++ 0.3339	++++ 0.3264	++++ 0.4058	0.3535 0.3546	Ave		0.3574			7.9		30.0				
Acetonitrile	++++ 0.5820	++++ 0.5806	++++ 0.5032	0.4860 0.6106	0.5491 0.5907	Ave		0.5574			8.4		30.0				
Acetone	++++ 0.6952	++++ 0.6071	++++ 0.4923	++++ 0.5713	0.7119 0.5299	Ave		0.6013			14.7		30.0				
Pentane	++++ 0.2650	++++ 0.2567	++++ 0.2534	++++ 0.2741	0.2798 0.2630	Ave		0.2653			3.8		30.0				
Isopropyl alcohol	++++ 1.5842	++++ 1.6884	++++ 1.2216	++++ 1.5921	1.7192 1.5978	Ave		1.6033			11.8		30.0				
Ethyl ether	++++ 1.8397	++++ 1.7705	++++ 1.4542	++++ 1.7361	1.9088 1.6409	Ave		1.7250			9.3		30.0				
1,1-Dichloroethene	1.5300 1.3997	1.3691 1.3378	1.5011 1.4037	1.3769 1.3902	1.4054 1.4041	Ave		1.4118			4.2		30.0				
Acrylonitrile	++++ 0.9861	++++ 0.9774	1.0366 0.8664	0.9476 1.0406	0.9217 1.0215	Ave		0.9747			6.2		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.0568	3.1787 2.9429	3.2903 2.9549	3.0618 2.9993	3.1454 2.9101	Ave		3.0600			4.1		30.0				
tert-Butyl alcohol	++++ 2.2526	++++ 2.2071	++++ 1.7152	2.3096 2.1050	2.4776 2.3062	Ave		2.1962			11.0		30.0				
Methylene Chloride	++++ 1.5026	++++ 1.3595	++++ 1.3036	2.5891 1.2966	1.8042 ++++	Ave		1.6426			30.5	*	30.0				
3-Chloropropene	++++ 1.6369	++++ 1.6110	2.0104 1.5866	1.9432 1.7783	1.7193 1.7236	Ave		1.7512			8.8		30.0				
Carbon disulfide	++++ 4.2983	++++ 4.0822	4.5901 4.1194	4.3819 4.1977	4.3526 4.2529	Ave		4.2844			3.8		30.0				
trans-1,2-Dichloroethene	++++ 1.4444	1.3848 1.3913	1.4554 1.4201	1.3845 1.4125	1.4335 1.3979	Ave		1.4138			1.9		30.0				
2-Methylpentane	++++ 4.0309	++++ 3.8853	4.5901 3.8303	4.3761 4.0757	4.2199 3.7514	Ave		4.0450			5.3		30.0				
Methyl tert-butyl ether	++++ 4.1354	3.5946 4.0399	4.2254 3.4444	3.8763 4.0172	4.1168 3.9425	Ave		3.9325			6.6		30.0				
1,1-Dichloroethane	3.1037 2.8577	3.0105 2.8187	3.0470 2.6559	2.9034 2.9155	2.9080 2.8375	Ave		2.9058			4.4		30.0				
Vinyl acetate	++++ 3.9854	++++ 4.2048	4.0675 3.5720	3.8850 4.4145	3.9427 4.2013	Ave		4.0342			6.3		30.0				
Hexane	++++ 1.3242	++++ 1.2816	++++ 1.3713	++++ 1.3526	1.3260 1.2151	Ave		1.3036			4.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++	++++	++++	0.6854	0.6772	Ave		0.6347			8.5		30.0				
	0.6784	0.6294	0.5376	0.6386	0.5958												
cis-1,2-Dichloroethene	1.5310	1.3850	1.4658	1.4361	1.4213	Ave		1.4465			2.9		30.0				
	1.4515	1.4377	1.3972	1.4588	1.4806												
Ethyl acetate	++++	++++	3.4159	3.2335	3.3337	Ave		3.3124			6.9		30.0				
	3.4792	3.3231	2.8120	3.5743	3.3271												
Chloroform	3.5969	3.3560	3.4112	3.4074	3.2824	Ave		3.3444			4.2		30.0				
	3.2821	3.2211	3.0680	3.4218	3.3970												
Tetrahydrofuran	++++	++++	++++	1.7940	1.8215	Ave		1.7724			6.6		30.0				
	1.8641	1.7946	1.5246	1.8635	1.7446												
1,1,1-Trichloroethane	3.8810	3.4765	3.6941	3.5977	3.6119	Ave		3.6203			4.2		30.0				
	3.5723	3.5364	3.3475	3.7388	3.7470												
1,2-Dichloroethane	0.3890	0.3740	0.4205	0.3853	0.3989	Ave		0.3910			6.7		30.0				
	0.3918	0.3624	0.3439	0.4219	0.4228												
Cyclohexane	++++	++++	++++	0.1383	0.1426	Ave		0.1314			6.9		30.0				
	0.1391	0.1224	0.1193	0.1325	0.1258												
Benzene	++++	0.7122	0.8006	0.7160	0.7636	Ave		0.7153			7.0		30.0				
	0.7488	0.6697	0.6393	0.7124	0.6753												
Carbon tetrachloride	0.5647	0.5298	0.5813	0.5547	0.6331	Ave		0.5933			8.0		30.0				
	0.6279	0.5625	0.5603	0.6718	0.6470												
1-Butanol	++++	++++	++++	0.0897	0.1022	Ave		0.0896			13.7		30.0				
	0.1010	0.0823	0.0665	0.0902	0.0950												
2,3-Dimethylpentane	++++	++++	0.2016	0.1866	0.2067	Ave		0.1886			7.0		30.0				
	0.1994	0.1776	0.1681	0.1880	0.1811												
Thiophene	++++	++++	0.4419	0.4095	0.4328	Ave		0.4156			5.4		30.0				
	0.4205	0.3890	0.3765	0.4241	0.4306												
2,2,4-Trimethylpentane	1.4853	1.4111	1.5290	1.4173	1.5323	Ave		1.4009			8.1		30.0				
	1.4628	1.2640	1.1785	1.3863	1.3426												
Heptane	++++	++++	0.3221	0.2848	0.3010	Ave		0.2875			7.7		30.0				
	0.2942	0.2637	0.2507	0.2927	0.2912												
1,2-Dichloropropane	++++	0.2947	0.3066	0.2799	0.2948	Ave		0.2813			7.5		30.0				
	0.2869	0.2617	0.2359	0.2893	0.2819												
Trichloroethene	0.3496	0.3229	0.3354	0.3064	0.3383	Ave		0.3257			5.2		30.0				
	0.3271	0.3039	0.3006	0.3304	0.3426												
Dibromomethane	++++	++++	++++	0.3027	0.3082	Ave		0.2963			7.9		30.0				
	0.2897	0.2688	0.2632	0.3189	0.3227												
Bromodichloromethane	++++	++++	0.5688	0.5299	0.5916	Ave		0.5843			8.8		30.0				
	0.5840	0.5507	0.5314	0.6523	0.6656												
1,4-Dioxane	++++	++++	++++	0.0947	0.0887	Ave		0.0832			17.3		30.0				
	0.0619	0.0891	0.0629	0.0903	0.0946												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3918	++++ 0.3473	++++ 0.2972	0.3014 0.4093	0.3703 0.3989	Ave		0.3595			12.7		30.0				
Methylcyclohexane	0.4845 0.5152	0.4926 0.4533	0.5068 0.4304	0.4870 0.4877	0.5327 0.5063	Ave		0.4896			6.1		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.6350	++++ 0.5092	0.5796 0.3308	0.5597 0.5890	0.6524 0.6484	Ave		0.5630			18.8		30.0				
cis-1,3-Dichloropropene	++++ 0.4479	0.3952 0.4121	0.4552 0.3828	0.4166 0.4613	0.4382 0.4415	Ave		0.4279			6.4		30.0				
trans-1,3-Dichloropropene	++++ 0.4450	0.3978 0.4156	0.4398 0.3772	0.4049 0.4673	0.4521 0.4806	Ave		0.4311			8.0		30.0				
Toluene	0.8893 0.9181	0.8808 0.8443	0.9072 0.7540	0.8795 0.8738	0.9309 0.9230	Ave		0.8801			5.9		30.0				
1,1,2-Trichloroethane	0.2596 0.2870	0.2566 0.2535	0.2815 0.2299	0.2715 0.2735	0.2904 0.2819	Ave		0.2685			7.0		30.0				
2-Hexanone	++++ 0.3129	++++ 0.2311	0.2486 0.1601	0.2653 0.2620	0.3155 0.3172	Ave		0.2641			20.2		30.0				
Octane	++++ 0.3331	++++ 0.2969	0.3166 0.2807	0.3142 0.3116	0.3533 0.3257	Ave		0.3165			7.0		30.0				
C8 Range	++++ 3.2900	++++ 2.9406	++++ 2.7321	3.2543 3.2050	3.4583 3.2302	Ave		3.1586			7.7		30.0				
Dibromochloromethane	++++ 0.5589	++++ 0.5327	0.4753 0.5204	0.4633 0.6101	0.5345 0.6613	Ave		0.5446			12.1		30.0				
1,2-Dibromoethane (EDB)	++++ 0.4879	++++ 0.4537	0.4324 0.4227	0.4409 0.4933	0.4776 0.5168	Ave		0.4656			7.1		30.0				
Tetrachloroethene	0.3340 0.3413	0.3265 0.3106	0.3184 0.2978	0.3299 0.3362	0.3500 0.3575	Ave		0.3302			5.4		30.0				
Chlorobenzene	0.6503 0.7257	0.6533 0.6547	0.7038 0.5918	0.6891 0.6804	0.7584 0.7332	Ave		0.6841			7.2		30.0				
Ethylbenzene	++++ 1.2841	1.1605 1.1457	1.1820 0.9886	1.2041 1.2050	1.3132 1.2806	Ave		1.1960			8.1		30.0				
m-Xylene & p-Xylene	0.7852 1.0069	0.8464 0.8920	0.9631 0.7597	0.9388 0.9364	1.0264 0.9927	Ave		0.9148			10.1		30.0				
Nonane	++++ 0.7074	0.6367 0.6181	0.6731 0.5580	0.6713 0.6403	0.7319 0.6196	Ave		0.6507			8.0		30.0				
Bromoform	++++ 0.5150	++++ 0.5097	0.3874 0.4824	0.3783 0.6069	0.4530 ++++	Ave		0.4761			16.7		30.0				
Styrene	++++ 0.6772	++++ 0.6274	0.5417 0.5521	0.5440 0.6889	0.6499 0.7776	Ave		0.6323			13.2		30.0				
o-Xylene	++++ 1.0316	0.8434 0.9312	0.9762 0.7934	0.9959 0.9762	1.0612 1.0727	Ave		0.9646			9.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++ 0.6943	++++ 0.6225	0.6477 0.5392	0.6105 0.6980	0.7079 0.6623	Ave		0.6478			8.7		30.0				
1,2,3-Trichloropropane	++++ 0.2201	++++ 0.1963	0.2117 0.1718	0.1933 0.2253	0.2181 0.2233	Ave		0.2075			9.0		30.0				
Isopropylbenzene	++++ 1.3750	1.2061 1.2349	1.2881 1.0540	1.2705 1.3875	1.3916 1.3659	Ave		1.2860			8.6		30.0				
Propylbenzene	++++ 0.3714	++++ 0.3352	0.3426 0.2878	0.3159 0.3755	0.3762 0.3762	Ave		0.3476			9.6		30.0				
2-Chlorotoluene	++++ 0.3404	0.3055 0.2960	0.3209 0.2606	0.3117 0.3372	0.3448 0.3406	Ave		0.3175			8.7		30.0				
4-Ethyltoluene	++++ 1.3518	++++ 1.2430	1.2707 1.0593	1.1808 1.3853	1.3899 1.3849	Ave		1.2832			9.3		30.0				
1,3,5-Trimethylbenzene	++++ 0.5322	++++ 0.4840	0.4931 0.4140	0.4624 0.5337	0.5289 0.5468	Ave		0.4994			9.1		30.0				
Alpha Methyl Styrene	++++ 0.5256	++++ 0.4877	++++ 0.4370	++++ 0.6086	0.3906 0.6006	Ave		0.5043			16.0		30.0				
Decane	++++ 0.8778	0.7603 0.7515	0.8322 0.6337	0.8484 0.8180	0.9143 0.7472	Ave		0.7982			10.6		30.0				
tert-Butylbenzene	++++ 1.2040	++++ 1.0655	1.0703 0.8921	1.0556 1.2542	1.1543 1.2176	Ave		1.1142			10.6		30.0				
1,2,4-Trimethylbenzene	++++ 1.1975	++++ 1.0389	1.0671 0.8751	1.0434 1.2267	1.1402 1.1768	Ave		1.0957			10.4		30.0				
sec-Butylbenzene	++++ 1.7209	++++ 1.4915	1.5212 1.2789	1.5236 1.7227	1.6717 1.6181	Ave		1.5686			9.5		30.0				
1,3-Dichlorobenzene	0.6490 0.7671	0.6444 0.6846	0.6738 0.6125	0.6739 0.8458	0.7415 0.8676	Ave		0.7160			12.1		30.0				
Benzyl chloride	++++ 1.0629	++++ 0.9436	0.8534 0.8465	0.8353 1.1447	0.9958 1.1273	Ave		0.9762			13.0		30.0				
1,4-Dichlorobenzene	0.7017 0.7787	0.6870 0.6945	0.6938 0.6166	0.6879 0.8577	0.7429 0.8826	Ave		0.7344			11.3		30.0				
4-Isopropyltoluene	++++ 1.3919	++++ 1.1997	1.1350 1.0411	1.1617 1.4207	1.3168 1.3719	Ave		1.2548			11.1		30.0				
1,2,3-Trimethylbenzene	0.7568 1.1870	0.8539 1.0454	1.0085 0.9035	1.0349 ++++	1.1364 ++++	Ave		0.9908			14.6		30.0				
Indane	++++ 1.0760	++++ 0.9392	0.9630 0.8123	0.9316 1.1012	1.0002 1.0990	Ave		0.9903			10.1		30.0				
1,2-Dichlorobenzene	++++ 0.7440	++++ 0.6621	0.6671 0.5878	0.6607 0.8263	0.7087 0.8754	Ave		0.7165			13.3		30.0				
Butylbenzene	++++ 1.4543	++++ 1.1174	1.2268 1.0412	1.2695 1.4208	1.3939 1.3499	Ave		1.2768			11.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.9217	++++ 0.8188	0.7590 0.7206	0.7567 0.9791	0.8625 0.9878	Ave		0.8508			12.2		30.0				
Undecane	++++ 0.9412	0.7138 0.7639	0.7854 0.6439	0.8623 0.8142	0.9777 0.7859	Ave		0.8098			13.0		30.0				
1,2-Dibromo-3-Chloropropane	0.2667 0.3713	0.2609 0.3380	0.2709 0.2859	0.2620 ++++	0.3145 ++++	Ave		0.2963			13.8		30.0				
1,2,4,5-Tetramethylbenzene	++++ 1.3103	++++ 1.1118	1.0041 0.8463	1.0551 1.2653	1.2570 1.2867	Ave		1.1421			14.5		30.0				
Dodecane	++++ 0.7978	0.6003 0.5688	0.6899 0.3858	0.7041 0.5331	0.8370 ++++	Ave		0.6396			23.1		30.0				
1,2,4-Trichlorobenzene	++++ 0.6436	0.5319 0.5457	0.4906 0.4989	0.4888 0.6587	0.5772 0.6483	Ave		0.5649			12.4		30.0				
Naphthalene	++++ 1.4994	1.1580 1.2044	1.1489 0.9653	1.0861 1.2974	1.4202 1.3257	Ave		1.2339			13.6		30.0				
Hexachlorobutadiene	++++ 0.6448	++++ 0.5763	0.5100 0.5363	0.5070 0.7409	0.5745 0.7482	Ave		0.6047			16.0		30.0				
1,2,3-Trichlorobenzene	++++ 0.6283	0.5060 0.4951	0.4846 0.4151	0.4581 0.5663	0.5627 0.3728	Ave		0.4988			15.9		30.0				
2-Methylnaphthalene	++++ 0.9181	0.6422 0.5284	0.5584 0.3836	0.4778 0.4940	0.8101 ++++	Ave		0.6016			29.9		50.0				
1-Methylnaphthalene	++++ 1.1220	0.8380 0.6213	0.6877 0.4374	0.6391 0.5433	1.0085 ++++	Ave		0.7372			31.8		50.0				
4-Bromofluorobenzene (Surr)	0.7946 0.8130	0.8076 0.7824	0.8238 0.7807	0.8163 0.9039	0.8357 0.8386	Ave		0.8196			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 261958	++++ 518289	21711 1076565	42570 1857884	107824 3550370	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 149007	++++ 290483	++++ 602545	27727 1017511	60077 1877999	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 428033	++++ 858049	32728 1783528	68237 3014742	169908 6045892	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 46960	++++ 92605	++++ 191831	8660 316575	19699 606292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 249678	++++ 512846	19448 1074243	39319 1637176	98572 3657066	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	3911 156203	6583 313945	12737 657162	25449 1048926	62942 2151077	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 277412	++++ 542597	++++ 1129098	47326 1835688	114610 3783292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 127206	++++ 257490	++++ 544660	19602 873952	50104 1817509	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 138169	++++ 281926	12169 593804	21546 903575	54574 2043364	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 77933	++++ 156493	6344 327330	12373 519647	31401 1128580	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 296853	++++ 808553	++++ 1261075	66636 2449308	143467 5299467	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 130640	++++ 265901	10174 568659	20331 824429	51677 1944996	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 203924	++++ 402287	++++ 832948	31631 1264951	82259 2833506	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 422050	16790 848836	31414 1773236	63826 2796331	166966 6214752	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	++++ 39091	++++ 73107	++++ 147180	++++ 259717	14239 517814	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 61491	++++ 127125	++++ 226910	++++ 390809	7481 862471	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetone	CBM	Ave	++++ 220327	++++ 398773	++++ 665956	++++ 1097098	86023 2321110	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 28000	++++ 56204	++++ 114279	++++ 175439	11269 384054	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 502108	++++ 1108992	++++ 1652685	++++ 3057291	79400 6999063	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 194355	++++ 387640	++++ 655797	++++ 1111229	76885 2395844	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	3049 147877	5250 292909	11039 633007	21196 889868	56607 2050200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 104178	++++ 213988	++++ 390689	++++ 666078	7623 1491458	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 322940	++++ 644340	++++ 1332511	++++ 1919761	47135 4249014	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 237979	++++ 483244	++++ 773470	++++ 1347387	35554 3367365	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 158748	++++ 297663	++++ 587875	++++ 829908	39858 72672	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 ++++
3-Chloropropene	CBM	Ave	++++ 172933	++++ 352711	++++ 715500	++++ 1138278	14784 2516658	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 454099	++++ 893782	++++ 1857677	++++ 2686894	33755 6209652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 152597	++++ 304618	++++ 640390	++++ 904134	21313 2041028	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 425850	++++ 850675	++++ 1727313	++++ 2608750	32181 5477445	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 436887	++++ 884523	++++ 1553256	++++ 2571313	31073 5756531	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	6185 301902	11544 617142	22407 1197700	44696 1866128	117133 4143029	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 421041	++++ 920626	++++ 1610829	++++ 2825655	59807 6134377	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 139897	++++ 280600	++++ 564091	++++ 836832	10084 1774150	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 71674	++++ 137814	++++ 242448	++++ 408724	10552 870000	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	3051 153350	5311 314771	10779 630074	22108 933768	57247 2161860	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 367561	++++ 727588	25120 1268094	49778 2287831	134280 4857969	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	7168 346742	12869 705235	25085 1383523	52455 2190241	132214 4960016	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 196936	++++ 392928	++++ 687510	27618 1192762	73368 2547299	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7734 377403	13331 774289	27166 1509577	55384 2393121	145486 5471084	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4547 232618	8382 490730	17516 952640	35324 1548479	87574 3502141	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 82609	++++ 165738	++++ 330488	12681 486357	31319 1042096	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 444635	15963 906736	33352 1771104	65637 2614755	167643 5593459	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	6601 372817	11874 761689	24215 1552321	50848 2465819	138991 5358444	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 59954	++++ 111445	++++ 184294	8226 331158	22433 786825	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 118426	++++ 240541	8397 465638	17105 690034	45390 1499809	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 249671	++++ 526684	18410 1043094	37543 1556455	95028 3566561	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	17363 868592	31627 1711484	63694 3264805	129920 5087913	336411 11120269	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 174693	++++ 357021	13419 694408	26105 1074435	66081 2411618	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 170338	6605 354326	12771 653599	25661 1061646	64714 2334951	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4087 194217	7238 411429	13973 832705	28091 1212507	74264 2837545	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 172040	++++ 363939	++++ 729198	27744 1170568	67675 2672665	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 346754	++++ 745629	23694 1472126	48577 2394105	129879 5512449	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 36737	++++ 120654	++++ 174155	8684 331358	19464 783489	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 232640	++++ 470252	++++ 823262	27631 1502138	81302 3304265	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	5664 305916	11041 613752	21112 1192238	44641 1790104	116952 4193256	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 377024	++++ 689509	24146 916498	51311 2161661	143236 5370174	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 265941	8857 558061	18964 1060593	38186 1693124	96201 3656415	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 249246	8494 528240	18209 983862	34634 1678819	93722 3876912	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	9759 514273	18809 1073072	37560 1966647	75222 3139180	192974 7445292	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2849 160780	5479 322166	11656 599648	23218 982519	60205 2274200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 175250	++++ 293749	10295 417616	22692 941298	65409 2558380	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 186587	++++ 377410	13108 732239	26877 1119383	73243 2627265	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	CBZd 5	Ave	++++ 1842861	++++ 3737320	++++ 7125919	278341 11514382	716916 26057226	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	++++ 313050	++++ 676985	19680 1357226	39627 2191805	110810 5334244	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 273278	++++ 576579	17903 1102407	37712 1772227	99001 4168790	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3665 191154	6973 394783	13185 776709	28219 1207845	72561 2883889	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	7137 406499	13951 832085	29142 1543553	58935 2444395	157211 5914764	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	++++ 719275	24780 1456098	48941 2578598	102987 4329132	272217 10330192	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	17235 1128063	36147 2267354	79756 3963090	160595 6728239	425545 16015024	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd 5	Ave	++++ 396249	13596 785625	27868 1455379	57416 2300427	151720 4997986	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd 5	Ave	++++ 288479	++++ 647774	16038 1258109	32352 2180538	93899 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Styrene	CBZd 5	Ave	++++ 379313	++++ 797396	22430 1440043	46527 2475003	134724 6272582	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	++++ 577831	18010 1183498	40418 2069274	85176 3507204	219991 8652988	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	++++ 388902	++++ 791220	26816 1406346	52217 2507616	146757 5342402	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 123267	++++ 249431	8767 448013	16530 809328	45222 1801458	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 770189	25754 1569505	53331 2749199	108667 4984665	288484 11018383	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	++++ 208028	++++ 425975	14187 750579	27021 1348899	77981 3034911	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 190674	6524 376201	13286 679618	26657 1211506	71471 2747919	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	++++ 757218	++++ 1579790	++++ 2762937	++++ 4977060	++++ 11171652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	++++ 298107	++++ 615118	++++ 1079746	++++ 1917273	++++ 4410950	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 294414	++++ 619837	++++ 1139797	++++ 2186650	++++ 4845121	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 491714	++++ 955171	++++ 1652838	++++ 2938778	++++ 6027860	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	++++ 674397	++++ 1354211	++++ 2326877	++++ 4505713	++++ 9821979	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 670745	++++ 1320347	++++ 2282446	++++ 4407169	++++ 9493306	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	++++ 963943	++++ 1895656	++++ 3335709	++++ 6189211	++++ 13052688	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7122 429682	13761 870050	27898 1597433	57634 3038807	153722 6998909	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 595380	++++ 1199239	++++ 2207883	++++ 4112439	++++ 9093386	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7701 436204	14670 882709	28727 1608243	58838 3081288	154004 7120026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	++++ 779650	++++ 1524715	++++ 2715440	++++ 5104026	++++ 11067094	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	8305 664909	18233 1328651	41757 2356435	88511 ++++	235583 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Indane	CBZd 5	Ave	++++ 602700	++++ 1193709	++++ 2118687	++++ 3956160	++++ 8865173	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 416753	++++ 841536	++++ 1533100	++++ 2968700	++++ 7061726	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	++++ 814617	++++ 1547638	++++ 2715683	++++ 5104411	++++ 10889558	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 516302	++++ 1040605	++++ 1879451	++++ 3517487	++++ 7968258	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 527231	++++ 970873	++++ 1679521	++++ 2924996	++++ 6339976	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2927 207960	5571 429617	11218 745616	22412 ++++	65206 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 733964	++++ 1413004	++++ 2207453	++++ 4545804	++++ 10379759	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 446881	++++ 722978	++++ 1006221	++++ 1915343	++++ ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 360521	11357 693552	20313 1301208	41810 2366361	119662 5229906	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 839854	24728 1530726	47569 2517870	92896 4661002	294401 10693857	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 361175	++++ 732431	21118 1398696	43365 2661640	119102 6035243	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 351962	10806 629244	20063 1082671	39185 2034470	116648 3007302	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 514300	13713 671591	23120 1000580	40866 1774929	167946 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 628512	17895 789694	28473 1141032	54667 1951995	209066 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1743947 1821597	1724522 1988683	1705365 2036360	1745466 1623678	1732344 1691157	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	12.7						50			
Propene	+++++	+++++	+++++	23.1						50		
Dichlorodifluoromethane	+++++	+++++	5.1						50			
Chloromethane	+++++	+++++	+++++	21.0						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	6.9						50			
Vinyl chloride	21.8						50					
Butane	+++++	+++++	+++++	13.3						50		
1,3-Butadiene	+++++	+++++	+++++	2.3						50		
Bromomethane	+++++	+++++	18.9						50			
Chloroethane	+++++	+++++	11.2						50			
Ethanol	+++++	+++++	+++++	22.9						50		
Vinyl bromide	+++++	+++++	7.3						50			
2-Methylbutane	+++++	+++++	+++++	5.5						50		
Trichlorofluoromethane	+++++	5.4						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	+++++	-1.1							50
Acetonitrile	+++++	+++++	+++++	-12.8							50	
Acetone	+++++	+++++	+++++	+++++	18.4							80
Pentane	+++++	+++++	+++++	+++++	5.4							50
Isopropyl alcohol	+++++	+++++	+++++	7.2							50	
Ethyl ether	+++++	+++++	+++++	+++++	10.7							50
1,1-Dichloroethene	8.4						50					
Acrylonitrile	+++++	+++++	6.3						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.9						50				
tert-Butyl alcohol	+++++	+++++	+++++	5.2							50	
Methylene Chloride	+++++	+++++	+++++	57.6 +++++							80	
3-Chloropropene	+++++	+++++	14.8						50			
Carbon disulfide	+++++	+++++	7.1						50			
trans-1,2-Dichloroethene	+++++	-2.1						50				
2-Methylpentane	+++++	+++++	8.2						50			
Methyl tert-butyl ether	+++++	-8.6						50				
1,1-Dichloroethane	6.8						50					
Vinyl acetate	+++++	+++++	0.8						50			
Hexane	+++++	+++++	5.2						50			
2-Butanone (MEK)	+++++	+++++	+++++	8.0						50		
cis-1,2-Dichloroethene	5.8						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	3.1						50			
Chloroform	7.6						50					
Tetrahydrofuran	+++++	+++++	+++++	1.2						50		
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	-0.5						50					
Cyclohexane	+++++	+++++	+++++	5.2						50		
Benzene	+++++	-0.4						50				
Carbon tetrachloride	-4.8						50					
1-Butanol	+++++	+++++	+++++	0.2							50	
2,3-Dimethylpentane	+++++	+++++	6.9						50			
Thiophene	+++++	+++++	6.3						50			
2,2,4-Trimethylpentane	6.0						50					
Heptane	+++++	+++++	12.0						50			
1,2-Dichloropropane	+++++	4.8						50				
Trichloroethene	7.3						50					
Dibromomethane	+++++	+++++	+++++	2.1						50		
Bromodichloromethane	+++++	+++++	-2.7						50			
1,4-Dioxane	+++++	+++++	+++++	13.9						50		
Methyl methacrylate	+++++	+++++	+++++	-16.1						50		
Methylcyclohexane	-1.0						50					
4-Methyl-2-pentanone (MIBK)	+++++	+++++	3.0						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.6						50				
trans-1,3-Dichloropropene	+++++	-7.7						50				
Toluene	1.0						50					
1,1,2-Trichloroethane	-3.3						50					
2-Hexanone	+++++	+++++	-5.8						50			
Octane	+++++	+++++	0.0						50			
Dibromochloromethane	+++++	+++++	-12.7						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-7.1						50			
Tetrachloroethene	1.1						50					
Chlorobenzene	-4.9						50					
Ethylbenzene	+++++	-3.0						50				
m-Xylene & p-Xylene	-14.2						50					
Nonane	+++++	-2.2						50				
Bromoform	+++++	+++++	-18.6		+++++				50			
Styrene	+++++	+++++	-14.3						50			
o-Xylene	+++++	-12.6						50				
1,1,2,2-Tetrachloroethane	+++++	+++++	0.0						50			
1,2,3-Trichloropropane	+++++	+++++	2.1						50			
Isopropylbenzene	+++++	-6.2						50				
Propylbenzene	+++++	+++++	-1.4						50			
2-Chlorotoluene	+++++	-3.8						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	+++++	+++++	-1.0						50			
1,3,5-Trimethylbenzene	+++++	+++++	-1.3						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-22.6						50		
Decane	+++++	-4.7						50				
tert-Butylbenzene	+++++	+++++	-3.9						50			
1,2,4-Trimethylbenzene	+++++	+++++	-2.6						50			
sec-Butylbenzene	+++++	+++++	-3.0						50			
1,3-Dichlorobenzene	-9.4						50					
Benzyl chloride	+++++	+++++	-12.6						50			
1,4-Dichlorobenzene	-4.4						50					
4-Isopropyltoluene	+++++	+++++	-9.5						50			
1,2,3-Trimethylbenzene	-23.6		+++++	+++++			50					
Indane	+++++	+++++	-2.8						50			
1,2-Dichlorobenzene	+++++	+++++	-6.9						50			
Butylbenzene	+++++	-12.5							50			
Indene	+++++	+++++	-10.8						50			
Undecane	+++++	-11.9							50			
1,2-Dibromo-3-Chloropropane	-10.0		+++++	+++++			50					
1,2,4,5-Tetramethylbenzene	+++++	+++++	-12.1						50			
Dodecane	+++++	-6.1		+++++					50			
1,2,4-Trichlorobenzene	+++++	-5.8							50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-6.2						80				
Hexachlorobutadiene	+++++	+++++	-15.7						50			
1,2,3-Trichlorobenzene	+++++	1.5						50				
2-Methylnaphthalene	+++++	6.7		+++++				80				
1-Methylnaphthalene	+++++	13.7		+++++				80				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.6032	2.5523	2.4630	Ave		2.3734			6.7		30.0				
	2.3273	2.2136	2.2367	2.4103	2.1808												
Propene	+++++	+++++	+++++	0.8419	0.7507	Ave		0.7296			8.2		30.0				
	0.7221	0.6895	0.6844	0.7524	0.6660												
Dichlorodifluoromethane	+++++	+++++	4.5412	4.2461	5.3003	Ave		4.3524			11.7		30.0				
	4.1510	3.9686	4.0428	4.8211	3.7479												
Chloromethane	+++++	+++++	0.4314	0.2960	0.3371	Ave		0.3061			18.1		30.0				
	0.2871	0.2733	0.2689	0.2912	0.2638												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.8991	3.2433	3.1843	3.5538	Ave		3.2404			10.6		30.0				
	3.0989	3.0537	3.1101	3.3433	2.6767												
Vinyl chloride	1.3396	1.3354	1.1215	1.1058	1.0442	Ave		1.0731			14.4		30.0				
	0.9887	0.9559	0.9544	0.9748	0.9105												
1,3-Butadiene	+++++	+++++	+++++	0.7017	0.6571	Ave		0.6506			4.0		30.0				
	0.6523	0.6352	0.6377	0.6500	0.6202												
Butane	+++++	+++++	1.3166	1.1752	1.2095	Ave		1.1321			8.5		30.0				
	1.1091	1.0560	1.0795	1.0850	1.0260												
Bromomethane	+++++	+++++	1.4266	1.2696	1.2705	Ave		1.2354			7.2		30.0				
	1.2054	1.1811	1.1809	1.2035	1.1456												
Chloroethane	+++++	+++++	0.6023	0.5518	0.4948	Ave		0.4970			10.7		30.0				
	0.4893	0.4606	0.4673	0.4597	0.4499												
Ethanol	+++++	+++++	+++++	0.3286	0.3153	Ave		0.2997			6.1		30.0				
	0.2949	0.2999	0.2981	0.2885	0.2724												
Vinyl bromide	+++++	+++++	1.4513	1.3532	1.3493	Ave		1.3020			5.9		30.0				
	1.2738	1.2507	1.2699	1.2460	1.2216												
2-Methylbutane	+++++	+++++	0.8639	0.8536	0.8359	Ave		0.7999			5.7		30.0				
	0.7979	0.7734	0.7606	0.7713	0.7425												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Acrolein	++++ 0.2149	++++ 0.2505	++++ 0.2493	0.3397 0.2426	0.2316 0.2411	Ave		0.2528			15.9		30.0				
Trichlorofluoromethane	6.6790 5.8128	6.2714 5.6498	6.2323 5.6579	6.0249 5.5584	5.9679 5.2697	Ave		5.9124			6.9		30.0				
Acetonitrile	++++ 0.2348	++++ 0.2373	++++ 0.2818	0.2630 0.2803	0.2428 0.2703	Ave		0.2586			7.8		30.0				
Acetone	++++ 0.4175	++++ 0.3860	++++ 0.3784	0.5760 0.3627	0.4291 0.3557	Ave		0.4151			18.3		30.0				
Pentane	++++ 0.1987	++++ 0.1907	++++ 0.1944	0.2412 0.1914	0.2034 0.1879	Ave		0.2011			9.2		30.0				
Isopropyl alcohol	++++ 1.1215	++++ 1.1376	++++ 1.1294	1.2584 1.0760	1.1488 1.0492	Ave		1.1316			5.9		30.0				
Ethyl ether	++++ 0.6540	++++ 0.6244	++++ 0.6327	0.7089 0.6995	0.6970 0.6464	Ave		0.6661			5.2		30.0				
1,1-Dichloroethene	1.6400 1.3612	1.4528 1.3523	1.4077 1.3829	1.3842 1.3970	1.3751 1.3233	Ave		1.4076			6.3		30.0				
Acrylonitrile	++++ 0.6195	++++ 0.6124	++++ 0.6202	++++ 0.6572	0.6255 0.6313	Ave		0.6277			2.5		30.0				
tert-Butyl alcohol	++++ 2.6737	++++ 2.7383	++++ 2.6973	2.6805 2.6655	2.7132 2.5593	Ave		2.6773			2.0		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.5282	3.6010 3.4530	3.7397 3.4392	3.5306 3.4042	3.5510 3.1580	Ave		3.4894			4.6		30.0				
Methylene Chloride	++++ 1.2853	++++ 1.1917	++++ 1.1531	2.0228 1.1482	1.5003 1.0647	Ave		1.3380			24.9		30.0				
3-Chloropropene	++++ 1.3439	++++ 1.2944	1.1777 1.2837	1.4302 1.3374	1.3141 1.2919	Ave		1.3092			5.4		30.0				
Carbon disulfide	++++ 3.4096	++++ 3.3395	3.3655 3.3248	3.2471 3.4285	3.3320 3.2774	Ave		3.3406			1.8		30.0				
trans-1,2-Dichloroethene	1.5926 1.4009	1.5829 1.3797	1.4276 1.4044	1.3885 1.4254	1.3834 1.3721	Ave		1.4358			5.7		30.0				
2-Methylpentane	++++ 1.8951	++++ 1.8425	++++ 1.8466	1.9630 1.9346	1.9304 1.8132	Ave		1.8940			2.8		30.0				
Methyl tert-butyl ether	++++ 4.5873	++++ 4.5288	4.7495 4.5802	4.4631 4.6026	4.5963 4.4400	Ave		4.5685			2.1		30.0				
1,1-Dichloroethane	2.6815 2.3300	2.6739 2.2911	2.4729 2.3182	2.3130 2.3408	2.3587 2.2447	Ave		2.4025			6.5		30.0				
Vinyl acetate	++++ 2.2364	++++ 2.3368	++++ 2.4359	2.0297 2.5381	2.1537 2.5129	Ave		2.3205			8.2		30.0				
2-Butanone (MEK)	++++ 0.5380	++++ 0.5309	++++ 0.5519	0.5759 0.5616	0.5098 0.5445	Ave		0.5446			3.9		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	++++ 0.8187	++++ 0.8108	0.9023 0.8291	0.8416 0.8382	0.8376 0.8031	Ave		0.8352			3.6		30.0				
cis-1,2-Dichloroethene	1.6200 1.4112	1.4958 1.4310	1.4342 1.4304	1.4272 1.4418	1.3943 1.3928	Ave		1.4479			4.6		30.0				
Ethyl acetate	++++ 2.0207	++++ 2.0336	1.8097 2.1099	1.9184 2.1701	1.9214 2.1110	Ave		2.0119			6.0		30.0				
Chloroform	4.2334 3.7394	4.0960 3.6835	3.8341 3.7449	3.7602 3.7523	3.7763 3.5872	Ave		3.8207			5.1		30.0				
Tetrahydrofuran	++++ 0.8846	++++ 0.8714	++++ 0.8870	0.8784 0.9150	0.8832 0.8836	Ave		0.8862			1.5		30.0				
1,1,1-Trichloroethane	4.9709 4.7770	4.9939 4.7670	5.0122 4.8476	4.7467 4.8764	4.7402 4.7023	Ave		4.8434			2.4		30.0				
1,2-Dichloroethane	0.5380 0.5057	0.5327 0.4936	0.5166 0.4997	0.4858 0.5068	0.4926 0.4915	Ave		0.5063			3.5		30.0				
Benzene	0.7533 0.6321	0.7075 0.6240	0.7019 0.6266	0.6312 0.6238	0.6214 0.5956	Ave		0.6517			7.8		30.0				
Cyclohexane	++++ 0.1013	++++ 0.0986	++++ 0.1001	0.0959 0.0971	0.0939 0.0911	Ave		0.0968			3.7		30.0				
1-Butanol	++++ 0.0448	++++ 0.0477	++++ 0.0492	++++ 0.0516	0.0330 0.0509	Ave		0.0462			14.9		30.0				
Carbon tetrachloride	0.9231 0.9489	0.9429 0.9372	0.7537 0.9263	0.9038 0.9692	0.9350 0.9273	Ave		0.9167			6.5		30.0				
2,3-Dimethylpentane	++++ 0.1378	++++ 0.1390	++++ 0.1212	0.1277 0.1410	0.1355 0.1365	Ave		0.1349			5.2		30.0				
Thiophene	++++ 0.3778	++++ 0.3718	0.3563 0.3816	0.3607 0.3893	0.3698 0.3754	Ave		0.3728			2.9		30.0				
2,2,4-Trimethylpentane	++++ 0.8423	++++ 0.8248	++++ 0.8652	0.8182 0.8535	0.8128 0.8176	Ave		0.8342			2.3		30.0				
1,2-Dichloropropane	++++ 0.2041	++++ 0.2015	0.2130 0.2054	0.1991 0.2089	0.2024 0.2020	Ave		0.2045			2.2		30.0				
Heptane	++++ 0.2142	++++ 0.2122	++++ 0.1976	0.1979 0.2154	0.2071 0.2066	Ave		0.2083			3.5		30.0				
Trichloroethene	0.4192 0.3857	0.3851 0.3869	0.4007 0.4221	0.3771 0.3913	0.3880 0.3727	Ave		0.3929			4.2		30.0				
Dibromomethane	++++ 0.3459	++++ 0.3374	++++ 0.3725	0.3565 0.3576	0.3464 0.3447	Ave		0.3514			3.1		30.0				
Bromodichloromethane	++++ 0.6680	++++ 0.6726	0.5971 0.7005	0.5918 0.7174	0.6239 0.6980	Ave		0.6587			7.4		30.0				
1,4-Dioxane	++++ 0.0965	++++ 0.1030	++++ 0.1037	0.0992 0.1007	0.0973 0.0954	Ave		0.0994			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.2243	++++ 0.2331	0.2139 0.2468	0.1766 0.2628	0.2044 0.2582	Ave		0.2275			12.8		30.0				
Methylcyclohexane	++++ 0.4067	++++ 0.4050	0.3972 0.4110	0.3842 0.4158	0.3938 0.4053	Ave		0.4024			2.5		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.3577	++++ 0.3715	++++ 0.3933	0.2895 0.4035	0.3277 0.3952	Ave		0.3626			11.5		30.0				
cis-1,3-Dichloropropene	++++ 0.3940	0.3635 0.4127	0.3972 0.4288	0.3514 0.4368	0.3808 0.4249	Ave		0.3948			8.2		30.0				
trans-1,3-Dichloropropene	++++ 0.4780	0.4035 0.4968	0.3959 0.5178	0.4276 0.5209	0.4537 0.5119	Ave		0.4674			10.5		30.0				
Toluene	1.0184 0.9698	0.9133 0.9624	0.9750 0.9710	0.9478 0.9638	0.9541 0.9102	Ave		0.9586			3.2		30.0				
1,1,2-Trichloroethane	0.2339 0.2639	0.2426 0.2594	0.2564 0.2610	0.2580 0.2630	0.2596 0.2452	Ave		0.2543			4.0		30.0				
2-Hexanone	++++ 0.1981	++++ 0.2103	++++ 0.2238	0.1399 0.2293	0.1787 0.2239	Ave		0.2006			16.0		30.0				
Dibromochloromethane	0.6655 0.7840	0.5795 0.8296	0.6334 0.8666	0.6501 0.8735	0.6985 0.8331	Ave		0.7414			14.6		30.0				
Octane	++++ 0.3146	++++ 0.3133	0.2922 0.3156	0.3033 0.3109	0.2998 0.2932	Ave		0.3054			3.1		30.0				
C8 Range	++++ 2.1678	++++ 2.1237	++++ 2.1591	++++ 2.2092	2.0961 2.0601	Ave		2.1360			2.5		30.0				
1,2-Dibromoethane (EDB)	++++ 0.5766	++++ 0.5804	0.5000 0.5952	0.4942 0.5984	0.5448 0.5694	Ave		0.5574			7.3		30.0				
Tetrachloroethene	0.4858 0.4849	0.4864 0.4819	0.4732 0.4752	0.4838 0.4653	0.4706 0.4417	Ave		0.4749			2.9		30.0				
Chlorobenzene	0.8210 0.8508	0.8425 0.8373	0.8551 0.8444	0.8450 0.8430	0.8379 0.7968	Ave		0.8374			2.0		30.0				
Ethylbenzene	1.3703 1.4178	1.3589 1.4128	1.4055 1.4174	1.3343 1.4023	1.4017 1.2986	Ave		1.3820			2.9		30.0				
m-Xylene & p-Xylene	1.1137 1.1838	1.1023 1.1550	1.1618 1.1536	1.1488 1.1251	1.1673 1.0234	Ave		1.1335			4.1		30.0				
Bromoform	++++ 0.7606	++++ 0.8485	0.5893 0.9286	0.6166 0.9279	0.6638 0.8938	Ave		0.7786			18.1		30.0				
Styrene	++++ 0.7750	++++ 0.7975	0.6004 0.8292	0.6182 0.8487	0.6786 0.7961	Ave		0.7430			13.0		30.0				
o-Xylene	1.1430 1.2366	1.1230 1.2060	1.2624 1.1986	1.2290 1.1769	1.2492 1.0804	Ave		1.1905			5.0		30.0				
Nonane	++++ 0.4737	++++ 0.4580	0.4455 0.4538	0.4515 0.4433	0.4801 0.4032	Ave		0.4511			5.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.5797	0.5118	0.5697	0.5802	0.6188	Ave		0.6050			7.5		30.0				
	0.6456	0.6455	0.6181	0.6658	0.6146												
1,2,3-Trichloropropane	++++	++++	0.2911	0.2918	0.2978	Ave		0.3000			2.7		30.0				
	0.3084	0.3034	0.3046	0.3115	0.2914												
Isopropylbenzene	++++	++++	1.8308	1.7528	1.7150	Ave		1.6941			5.0		30.0				
	1.7012	1.6661	1.6871	1.6694	1.5307												
Propylbenzene	0.4435	0.4328	0.4534	0.4640	0.4755	Ave		0.4652			4.5		30.0				
	0.4963	0.4795	0.4859	0.4778	0.4438												
2-Chlorotoluene	++++	0.3991	0.4619	0.4417	0.4398	Ave		0.4306			5.3		30.0				
	0.4524	0.4310	0.4318	0.4245	0.3929												
4-Ethyltoluene	1.5529	1.6047	1.7828	1.7531	1.7972	Ave		1.7594			6.6		30.0				
	1.8829	1.8611	1.8557	1.8469	1.6563												
1,3,5-Trimethylbenzene	0.6792	0.6523	0.7326	0.7228	0.7292	Ave		0.7199			5.1		30.0				
	0.7724	0.7416	0.7410	0.7434	0.6843												
Alpha Methyl Styrene	++++	++++	++++	0.5439	0.5731	Ave		0.6844			13.4		30.0				
	0.6781	0.7295	0.7535	0.7838	0.7289												
Decane	++++	++++	0.6176	0.6408	0.6488	Ave		0.6421			4.6		30.0				
	0.6849	0.6585	0.6522	0.6491	0.5849												
tert-Butylbenzene	1.6566	1.6665	1.8313	1.8740	1.8639	Ave		1.7534			6.6		30.0				
	1.8841	1.7827	1.7468	1.6988	1.5293												
1,2,4-Trimethylbenzene	1.4293	1.4880	1.6887	1.6986	1.7123	Ave		1.6066			7.2		30.0				
	1.7233	1.6671	1.6372	1.5922	1.4293												
1,3-Dichlorobenzene	1.1997	1.0963	1.2442	1.1823	1.1621	Ave		1.1598			4.5		30.0				
	1.1856	1.1603	1.1572	1.1516	1.0583												
sec-Butylbenzene	2.0787	2.1298	2.2743	2.2407	2.2363	Ave		2.1706			5.7		30.0				
	2.3069	2.2195	2.1908	2.1561	1.8732												
Benzyl chloride	++++	++++	1.0998	1.0436	1.1034	Ave		1.2392			11.3		30.0				
	1.2529	1.3231	1.4041	1.3938	1.2924												
1,4-Dichlorobenzene	1.2196	1.1487	1.2267	1.2179	1.1651	Ave		1.1644			5.1		30.0				
	1.2112	1.1594	1.1399	1.1212	1.0340												
4-Isopropyltoluene	2.1095	2.1432	2.2305	2.2370	2.2728	Ave		2.1910			5.2		30.0				
	2.3345	2.2554	2.2238	2.1784	1.9244												
1,2,3-Trimethylbenzene	1.6103	1.5786	1.8623	1.7831	1.7558	Ave		1.7253			6.2		30.0				
	1.8346	1.7874	1.7524	1.7335	1.5556												
1,2-Dichlorobenzene	1.1708	1.2083	1.2580	1.2065	1.1355	Ave		1.1443			6.3		30.0				
	1.1557	1.1157	1.1029	1.0865	1.0034												
Indane	1.4503	1.3817	1.4785	1.4862	1.4419	Ave		1.4233			5.0		30.0				
	1.4994	1.4300	1.4226	1.3893	1.2529												
Indene	++++	++++	1.0339	1.0803	1.0663	Ave		1.1682			8.2		30.0				
	1.2013	1.2223	1.2542	1.2953	1.1920												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.8231 1.8829	1.6985 1.8028	1.8359 1.7871	1.8719 1.7597	1.8266 1.5551	Ave		1.7844			5.4		30.0				
Undecane	++++ 0.8059	++++ 0.7917	++++ 0.7809	++++ 0.7402	0.7701 0.6720	Ave		0.7598			5.8		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.5799	++++ 0.6160	0.4391 0.6515	0.4709 0.6213	0.4861 0.5926	Ave		0.5572			14.3		30.0				
1,2,4,5-Tetramethylbenzene	++++ 2.1235	++++ 2.1635	2.1451 2.1540	2.1430 1.9985	1.9593 1.8488	Ave		2.0670			5.7		30.0				
Dodecane	++++ 0.7733	++++ 0.8936	++++ 0.8877	0.8688 0.7212	0.6803 0.7447	Ave		0.7957			10.9		30.0				
1,2,4-Trichlorobenzene	++++ 1.1894	++++ 1.2694	1.4472 1.2818	1.3888 1.0940	1.0856 1.1269	Ave		1.2354			10.9		30.0				
Naphthalene	++++ 2.0750	3.4525 2.4487	2.8184 2.5087	2.7367 2.1182	1.8255 ++++	Ave		2.4980			20.6		30.0				
Hexachlorobutadiene	++++ 1.4923	++++ 1.4393	1.7181 1.4314	1.5746 1.2072	1.3912 1.2353	Ave		1.4362			11.7		30.0				
1,2,3-Trichlorobenzene	++++ 1.1295	++++ 1.2212	1.4432 1.2323	1.3860 0.9868	1.0237 1.0761	Ave		1.1873			13.9		30.0				
2-Methylnaphthalene	++++ 0.3586	++++ 0.9509	++++ 1.0808	++++ 0.6399	++++ 0.9374	Ave		0.7935			36.8		50.0				
1-Methylnaphthalene	++++ 0.3899	++++ 0.8629	++++ 0.9496	++++ 0.5203	++++ 0.7770	Ave		0.6999			33.7		50.0				
4-Bromofluorobenzene (Surr)	0.8488 0.8636	0.8528 0.8535	0.8654 0.8546	0.8648 0.8319	0.8641 0.8066	Ave		0.8506			2.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 165552	++++ 330784	13488 670931	27178 1511149	67965 2786793	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 51364	++++ 103039	++++ 205301	8965 471697	20715 851034	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 295289	++++ 593041	23530 1212691	45214 3022572	146259 4789313	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 20420	++++ 40844	2235 80675	3152 182542	9302 337068	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 220441	10161 456323	16805 932912	33908 2096072	98065 3420506	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	1811 70331	3480 142840	5811 286294	11775 611179	28814 1163551	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 46402	++++ 94920	++++ 191280	7472 407531	18132 792495	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 78896	++++ 157806	6822 323819	12514 680235	33375 1311043	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 85746	++++ 176496	7392 354225	13519 754560	35058 1463890	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 34804	++++ 68833	3121 140181	5876 288211	13655 574974	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 104882	++++ 224069	++++ 447098	17498 904290	43508 1740692	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 90610	++++ 186899	7520 380924	14410 781185	37233 1560991	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 56760	++++ 115570	4476 228167	9090 483547	23067 948871	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrolein	CBM	Ave	++++ 15289	++++ 37440	++++ 74788	3617 152096	6392 308108	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	9029 413497	16343 844261	32292 1697186	64156 3484877	164680 6733950	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 16703	++++ 35460	++++ 84531	++++ 175714	++++ 345458	++++ 6701 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
Acetone	CBM	Ave	++++ 89101	++++ 173059	++++ 340521	++++ 682117	++++ 1363433	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	++++ 48.0
Pentane	CBM	Ave	++++ 14137	++++ 28499	++++ 58302	++++ 119973	++++ 240067	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
Isopropyl alcohol	CBM	Ave	++++ 239341	++++ 509997	++++ 1016357	++++ 2023732	++++ 4022317	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	++++ 48.0
Ethyl ether	CBM	Ave	++++ 46526	++++ 93310	++++ 189800	++++ 438542	++++ 826066	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1,1-Dichloroethene	CBM	Ave	2217 96830	3786 202076	7294 414812	14740 875865	37945 1690964	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 44072	++++ 91512	++++ 186041	++++ 412056	++++ 806690	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
tert-Butyl alcohol	CBM	Ave	++++ 190196	++++ 409183	13889 809098	28891 1671112	74242 3270376	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 250984	9384 515989	19377 1031649	37596 2134286	97989 4035478	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 91431	++++ 178076	++++ 345898	21540 719893	41401 1360585	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 95603	++++ 193431	++++ 385054	15229 838478	36262 1650820	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 242543	++++ 499031	17438 997332	34577 2149500	91945 4188128	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	2153 99652	4125 206172	7397 421281	14785 893667	38175 1753401	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 134813	++++ 275324	10171 553915	20556 1212878	53163 2316982	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 326320	++++ 676752	++++ 1373906	++++ 2885627	++++ 5673760	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	3625 165748	6968 342362	12813 695373	24630 1467554	65086 2868475	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 159088	++++ 349189	++++ 730693	++++ 1591261	++++ 3211124	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 38268	++++ 79333	++++ 165553	6132 352107	14067 695780	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 58239	++++ 121155	++++ 248691	4675 525494	8962 1026278	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	2190 100389	3898 213838	7431 429081	15197 903953	38474 1779827	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)					
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	
Ethyl acetate	CBM	Ave	++++ 143745	++++ 303889	9377 632910	20428 1360573	53019 2697533	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Chloroform	CBM	Ave	5723 266010	10674 550434	19866 1123349	40040 2352521	104204 4583947	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Tetrahydrofuran	CBM	Ave	++++ 62926	++++ 130211	++++ 266070	9354 573668	24371 1129072	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0	
1,1,1-Trichloroethane	CBM	Ave	6720 339819	13014 712345	25970 1454125	50545 3057281	130803 6008857	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
1,2-Dichloroethane	DFBZ	Ave	4162 199683	7880 414101	15042 837957	29238 1778626	76773 3480930	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Benzene	DFBZ	Ave	5827 249589	10465 523482	20437 1050705	37991 2189441	96837 4217712	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Cyclohexane	DFBZ	Ave	++++ 39991	++++ 82675	++++ 167839	5770 340746	14632 645373	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0	
1-Butanol	DFBZ	Ave	++++ 17690	++++ 40004	++++ 82457	++++ 181076	5146 360622	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0	
Carbon tetrachloride	DFBZ	Ave	7141 374679	13947 786171	21947 1553305	54395 3401707	145724 6567265	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
2,3-Dimethylpentane	DFBZ	Ave	++++ 54415	++++ 116636	3528 235995	7686 494713	21116 966448	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Thiophene	DFBZ	Ave	++++ 149183	++++ 311873	10374 639928	21711 1366267	57630 2658371	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 332582	++++ 691902	25192 1407509	49245 2995449	126672 5790015	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
1,2-Dichloropropane	DFBZ	Ave	++++ 80581	++++ 169011	6201 344383	11982 733246	31548 1430590	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Heptane	DFBZ	Ave	++++ 84592	++++ 178041	5754 361284	11910 756110	32279 1463381	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Trichloroethene	DFBZ	Ave	3243 152289	5696 324569	11668 707793	22698 1373208	60473 2639630	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Dibromomethane	DFBZ	Ave	++++ 136587	++++ 283066	10846 586890	21454 1255108	53985 2441282	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Bromodichloromethane	DFBZ	Ave	++++ 263754	++++ 564189	17387 1174659	35620 2518000	97237 4943175	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
1,4-Dioxane	DFBZ	Ave	++++ 38117	++++ 86437	++++ 173912	5968 353467	15165 675333	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0	
Methyl methacrylate	DFBZ	Ave	++++ 88559	++++ 195505	6227 413937	10629 922467	31857 1828238	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Methylcyclohexane	DFBZ	Ave	++++ 160604	++++ 339768	++++ 11565	11565 689164	23124 1459181	61375 2870166	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 141224	++++ 311634	++++ 659470	17423 1416282	51070 2798783	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0	

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 155584	5376 346235	10488 719012	21150 1532867	59340 3009068	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 165754	5189 369600	10066 783879	22215 1677181	61443 3381888	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	6779 336279	11744 715966	24790 1469948	49243 3103222	129198 6012505	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	1557 91510	3120 192987	6520 395113	13406 846792	35149 1619482	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 68694	++++ 156406	++++ 338784	7267 738442	24199 1478910	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	4430 271846	7451 617174	16103 1311808	33778 2812660	94584 5503585	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 109095	++++ 233063	7429 477723	15759 1000926	40600 1936591	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	DFBZ	Ave	++++ 855982	++++ 1781529	++++ 3620641	++++ 7753468	++++ 14589114	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 199953	++++ 431756	12712 900939	25676 1926667	73769 3761382	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3234 168145	6255 358488	12031 719415	25138 1498188	63725 2918044	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	5465 295002	10833 622855	21742 1278293	43900 2714425	113462 5263414	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	9121 491615	17474 1050972	35735 2145561	69322 4515180	189812 8578718	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	14827 820994	28347 1718390	59080 3492522	119367 7245395	316153 13520878	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	++++ 263744	++++ 631165	14982 1405685	32037 2987666	89888 5904670	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd 5	Ave	++++ 268745	++++ 593262	15265 1255220	32117 2732738	91899 5258738	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	7608 428791	14440 897122	32097 1814388	63851 3789404	169158 7137002	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Nonane	CBZd 5	Ave	++++ 164273	++++ 340741	11326 686883	23460 1427330	65019 2663319	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	3859 223872	6581 480219	14484 935594	30142 2143813	83793 4060026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 106933	++++ 225670	7400 461156	15160 1003093	40330 1925261	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 589911	++++ 1239416	46548 2553866	91067 5375264	232238 10111819	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	2952 172077	5565 356669	11527 735475	24106 1538516	64393 2931395	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 156859	5132 320641	11745 653681	22951 1366689	59552 2595696	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	10337 652888	20634 1384436	45329 2809081	91082 5946732	243377 10941125	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	4521 267835	8388 551670	18627 1121740	37553 2393487	98748 4520211	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 235120	++++ 542707	++++ 1140621	28257 2523695	77610 4814736	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 237483	++++ 489862	15703 987208	33292 2090024	87862 3864099	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11027 653325	21429 1326146	46562 2644216	97365 5469769	252400 10102100	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	9514 597546	19133 1240172	42935 2478370	88253 5126755	231880 9441765	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7986 411115	14097 863153	31633 1751738	61425 3707873	157370 6991250	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	13837 799929	27386 1651103	57824 3316313	116417 6942238	302828 12374020	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 434461	++++ 984275	27963 2125520	54221 4487660	149421 8537696	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	8118 419983	14770 862511	31188 1725619	63275 3610216	157774 6830228	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	14042 809499	27559 1677824	56711 3366403	116224 7014221	307780 12712650	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	10719 636168	20298 1329610	47349 2652674	92640 5581569	237762 10276226	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	7793 400754	15537 829934	31984 1669523	62682 3498467	153773 6628325	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	9654 519916	17767 1063787	37591 2153540	77218 4473280	195256 8276746	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 416558	++++ 909289	26287 1898638	56129 4170791	144394 7874065	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	12135 652919	21840 1341073	46679 2705337	97253 5666096	247354 10272864	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 279455	++++ 588913	++++ 1182131	40009 2383371	102646 4439100	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 201092	++++ 458234	11163 986255	24464 2000539	65829 3914341	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 736323	++++ 1609444	54539 3260653	111338 6434741	265327 12213199	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 268129	++++ 664765	++++ 1343815	45141 2322024	92125 4919414	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 412431	++++ 944306	36794 1940306	72153 3522363	147015 7444026	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 719521	++++ 1821564	44394 3797602	71658 6820345	142183 247207 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Hexachlorobutadiene	CBZd 5	Ave	++++ 517445	++++ 1070672	43683 2166873	81808 3886960	188387 8160248	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 391665	++++ 908417	36693 1865471	72007 3177370	138621 7108780	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 124366	++++ 707384	++++ 1636134	++++ 2060557	++++ 6192720	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 135206	++++ 641933	++++ 1437560	++++ 1675488	++++ 5133017	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1129964 1197793	1096528 1269845	1100173 1293730	1123241 1339226	1170099 1332053	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	9.7						50			
Propene	+++++	+++++	+++++	15.4						50		
Dichlorodifluoromethane	+++++	+++++	4.3						50			
Chloromethane	+++++	+++++	40.9						50			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	20.3						50				
Vinyl chloride	24.8						50					
1,3-Butadiene	+++++	+++++	+++++	7.9						50		
Butane	+++++	+++++	16.3						50			
Bromomethane	+++++	+++++	15.5						50			
Chloroethane	+++++	+++++	21.2						50			
Ethanol	+++++	+++++	+++++	9.7						50		
Vinyl bromide	+++++	+++++	11.5						50			
2-Methylbutane	+++++	+++++	8.0						50			
Acrolein	+++++	+++++	+++++	34.3						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Trichlorofluoromethane	13.0						50					
Acetonitrile	+++++	+++++	+++++	1.7						50		
Acetone	+++++	+++++	+++++	38.8						80		
Pentane	+++++	+++++	+++++	19.9						50		
Isopropyl alcohol	+++++	+++++	+++++	11.2						50		
Ethyl ether	+++++	+++++	+++++	6.4						50		
1,1-Dichloroethene	16.5						50					
Acrylonitrile	+++++	+++++	+++++	+++++	-0.4						50	
tert-Butyl alcohol	+++++	+++++	0.1						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.2						50				
Methylene Chloride	+++++	+++++	+++++	51.2						80		
3-Chloropropene	+++++	+++++	-10.0						50			
Carbon disulfide	+++++	+++++	0.7						50			
trans-1,2-Dichloroethene	10.9						50					
2-Methylpentane	+++++	+++++	3.6						50			
Methyl tert-butyl ether	+++++	+++++	4.0						50			
1,1-Dichloroethane	11.6						50					
Vinyl acetate	+++++	+++++	+++++	-12.5						50		
2-Butanone (MEK)	+++++	+++++	+++++	5.7						50		
Hexane	+++++	+++++	8.0						50			
cis-1,2-Dichloroethene	11.9						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-10.0						50			
Chloroform	10.8						50					
Tetrahydrofuran	+++++	+++++	+++++	-0.9						50		
1,1,1-Trichloroethane	2.6						50					
1,2-Dichloroethane	6.3						50					
Benzene	15.6						50					
Cyclohexane	+++++	+++++	+++++	-1.0						50		
1-Butanol	+++++	+++++	+++++	+++++	-28.5						50	
Carbon tetrachloride	0.7						50					
2,3-Dimethylpentane	+++++	+++++	-10.2						50			
Thiophene	+++++	+++++	-4.4						50			
2,2,4-Trimethylpentane	+++++	+++++	3.7						50			
1,2-Dichloropropane	+++++	+++++	4.1						50			
Heptane	+++++	+++++	-5.1						50			
Trichloroethene	6.7						50					
Dibromomethane	+++++	+++++	6.0						50			
Bromodichloromethane	+++++	+++++	-9.3						50			
1,4-Dioxane	+++++	+++++	+++++	-0.2						50		
Methyl methacrylate	+++++	+++++	-6.0						50			
Methylcyclohexane	+++++	+++++	-1.3						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	-20.2						50		

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.9						50				
trans-1,3-Dichloropropene	+++++	-13.7						50				
Toluene	6.2						50					
1,1,2-Trichloroethane	-8.0						50					
2-Hexanone	+++++	+++++	+++++	-30.3						50		
Dibromochloromethane	-10.2						50					
Octane	+++++	+++++	-4.3						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-10.3						50			
Tetrachloroethene	2.3						50					
Chlorobenzene	-2.0						50					
Ethylbenzene	-0.8						50					
m-Xylene & p-Xylene	-1.7						50					
Bromoform	+++++	+++++	-24.3						50			
Styrene	+++++	+++++	-19.2						50			
o-Xylene	-4.0						50					
Nonane	+++++	+++++	-1.3						50			
1,1,2,2-Tetrachloroethane	-4.2						50					
1,2,3-Trichloropropane	+++++	+++++	-3.0						50			
Isopropylbenzene	+++++	+++++	8.1						50			
Propylbenzene	-4.7						50					
2-Chlorotoluene	+++++	-7.3						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	-11.7						50					
1,3,5-Trimethylbenzene	-5.7						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-20.5						50		
Decane	+++++	+++++	-3.8						50			
tert-Butylbenzene	-5.5						50					
1,2,4-Trimethylbenzene	-11.0						50					
1,3-Dichlorobenzene	3.4						50					
sec-Butylbenzene	-4.2						50					
Benzyl chloride	+++++	+++++	-11.2						50			
1,4-Dichlorobenzene	4.7						50					
4-Isopropyltoluene	-3.7						50					
1,2,3-Trimethylbenzene	-6.7						50					
1,2-Dichlorobenzene	2.3						50					
Indane	1.9						50					
Indene	+++++	+++++	-11.5						50			
Butylbenzene	2.2						50					
Undecane	+++++	+++++	+++++	1.3						50		
1,2-Dibromo-3-Chloropropane	+++++	+++++	-21.2						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	3.8						50			
Dodecane	+++++	+++++	+++++	9.2						50		
1,2,4-Trichlorobenzene	+++++	+++++	17.1						50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	38.2		+++++				80				
Hexachlorobutadiene	+++++	+++++	19.6						50			
1,2,3-Trichlorobenzene	+++++	+++++	21.5						50			
2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-54.8						80
1-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-44.3						80

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 06/21/2017 17:00
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/21/2017 22:43
 Lab File ID: GA11ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.7395	0.6739			2.00	-8.9	35.0
3-Methylthiophene	Ave	0.7319	0.6589			2.00	-10.0	35.0
2-Ethylthiophene	Ave	0.9478	0.8011			2.00	-15.5	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.8235			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.8516	0.6095			2.00	-28.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.167	0.8355			2.00	-28.4	35.0
Benzo (b) thiophene	Ave	1.068	0.7208			2.00	-32.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.638		2.01	2.00	0.7	35.0
Propene	Ave	1.463	1.485		2.03	2.00	1.5	35.0
Dichlorodifluoromethane	Ave	4.235	4.340		2.05	2.00	2.5	35.0
Chloromethane	Ave	0.4649	0.4832		2.08	2.00	3.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.577		2.08	2.00	4.1	35.0
Acetaldehyde	Ave	0.5987	0.4752		7.94	10.0	-20.6	35.0
Vinyl chloride	Ave	1.611	1.638		2.03	2.00	1.7	35.0
1,3-Butadiene	Ave	1.245	1.289		2.07	2.00	3.6	35.0
Butane	Ave	2.712	2.809		2.07	2.00	3.5	35.0
Bromomethane	Ave	1.392	1.376		1.98	2.00	-1.1	35.0
Chloroethane	Ave	0.7761	0.7850		2.02	2.00	1.1	35.0
Ethanol	Ave	0.7042	0.5103		7.25	10.0	-27.5	35.0
Vinyl bromide	Ave	1.290	1.377		2.13	2.00	6.7	35.0
2-Methylbutane	Ave	1.947	1.999		2.05	2.00	2.7	35.0
Trichlorofluoromethane	Ave	4.152	4.112		1.98	2.00	-1.0	35.0
Acrolein	Ave	0.3574	0.2736		1.53	2.00	-23.4	35.0
Acetonitrile	Ave	0.5574	0.4415		1.58	2.00	-20.8	35.0
Acetone	Ave	0.6013	0.5234		1.74	2.00	-13.0	35.0
Pentane	Ave	0.2653	0.2805		2.11	2.00	5.7	35.0
Isopropyl alcohol	Ave	1.603	1.950		2.43	2.00	21.6	35.0
Ethyl ether	Ave	1.725	1.471		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.412	1.470		2.08	2.00	4.1	35.0
Acrylonitrile	Ave	0.9747	0.8590		1.76	2.00	-11.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.092		2.02	2.00	1.0	35.0
tert-Butyl alcohol	Ave	2.196	2.417		2.20	2.00	10.0	35.0
Methylene Chloride	Ave	1.643	1.409		1.72	2.00	-14.2	35.0
3-Chloropropene	Ave	1.751	1.584		1.81	2.00	-9.6	35.0
Carbon disulfide	Ave	4.284	4.357		2.03	2.00	1.7	35.0
trans-1,2-Dichloroethene	Ave	1.414	1.448		2.05	2.00	2.4	35.0
2-Methylpentane	Ave	4.045	3.765		1.86	2.00	-6.9	35.0
Methyl tert-butyl ether	Ave	3.932	3.361		1.71	2.00	-14.5	35.0
1,1-Dichloroethane	Ave	2.906	2.821		1.94	2.00	-2.9	35.0
Vinyl acetate	Ave	4.034	3.285		1.63	2.00	-18.6	35.0
2-Butanone (MEK)	Ave	0.6347	0.5473		1.72	2.00	-13.8	35.0
Hexane	Ave	1.304	1.314		2.02	2.00	0.8	35.0
Isopropyl ether	Ave	4.992	4.538		1.82	2.00	-9.1	35.0
cis-1,2-Dichloroethene	Ave	1.447	1.467		2.03	2.00	1.4	35.0
Ethyl acetate	Ave	3.312	2.660		1.61	2.00	-19.7	35.0
Chloroform	Ave	3.344	3.175		1.90	2.00	-5.1	35.0
Tert-butyl ethyl ether	Ave	4.607	3.821		1.66	2.00	-17.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.483		1.67	2.00	-16.3	35.0
1,1,1-Trichloroethane	Ave	3.620	3.468		1.92	2.00	-4.2	35.0
1,2-Dichloroethane	Ave	0.3910	0.3830		1.96	2.00	-2.1	35.0
Cyclohexane	Ave	0.1314	0.1432		2.18	2.00	8.9	35.0
Benzene	Ave	0.7153	0.7639		2.14	2.00	6.8	35.0
Carbon tetrachloride	Ave	0.5933	0.6444		2.17	2.00	8.6	35.0
1-Butanol	Ave	0.0896	0.1078		2.41	2.00	20.4	35.0
2,3-Dimethylpentane	Ave	0.1886	0.1955		2.07	2.00	3.6	35.0
Thiophene	Ave	0.4156	0.4158		2.00	2.00	0.0	35.0
2,2,4-Trimethylpentane	Ave	1.401	1.433		2.05	2.00	2.3	35.0
Heptane	Ave	0.2875	0.2905		2.02	2.00	1.0	35.0
1,2-Dichloropropane	Ave	0.2813	0.2642		1.88	2.00	-6.1	35.0
Trichloroethene	Ave	0.3257	0.3391		2.08	2.00	4.1	35.0
Dibromomethane	Ave	0.2963	0.2956		2.00	2.00	-0.2	35.0
Bromodichloromethane	Ave	0.5843	0.5891		2.02	2.00	0.8	35.0
1,4-Dioxane	Ave	0.0832	0.0836		2.01	2.00	0.5	35.0
Methyl methacrylate	Ave	0.3595	0.3109		1.73	2.00	-13.5	35.0
Methylcyclohexane	Ave	0.4896	0.6141		2.51	2.00	25.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.5532		1.96	2.00	-1.8	35.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4212		1.97	2.00	-1.5	35.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4178		1.94	2.00	-3.1	35.0
Toluene	Ave	0.8801	0.8270		1.88	2.00	-6.0	35.0
1,1,2-Trichloroethane	Ave	0.2685	0.2546		1.90	2.00	-5.2	35.0
2-Hexanone	Ave	0.2641	0.2800		2.12	2.00	6.0	35.0
Octane	Ave	0.3165	0.3309		2.09	2.00	4.5	35.0
Dibromochloromethane	Ave	0.5446	0.5759		2.12	2.00	5.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4594		1.97	2.00	-1.3	35.0
Tetrachloroethene	Ave	0.3302	0.3391		2.05	2.00	2.7	35.0
2,3-Dimethylheptane	Ave	1.076	0.9762		1.82	2.00	-9.2	35.0
Chlorobenzene	Ave	0.6841	0.6891		2.01	2.00	0.7	35.0
Ethylbenzene	Ave	1.196	1.091		1.82	2.00	-8.8	35.0
m-Xylene & p-Xylene	Ave	0.9148	0.8433		3.69	4.00	-7.8	35.0
Nonane	Ave	0.6507	0.6606		2.03	2.00	1.5	35.0
Bromoform	Ave	0.4761	0.5196		2.18	2.00	9.1	35.0
Styrene	Ave	0.6323	0.5922		1.87	2.00	-6.3	35.0
o-Xylene	Ave	0.9646	0.8608		1.78	2.00	-10.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5907		1.82	2.00	-8.8	35.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	35.0
Isopropylbenzene	Ave	1.286	1.176		1.83	2.00	-8.5	35.0
Propylbenzene	Ave	0.3476	0.3186		1.83	2.00	-8.3	35.0
2-Chlorotoluene	Ave	0.3175	0.3028		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.090		1.70	2.00	-15.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4983		2.00	2.00	-0.2	35.0
Alpha Methyl Styrene	Ave	0.5043	0.4358		1.73	2.00	-13.6	35.0
Decane	Ave	0.7982	0.7703		1.93	2.00	-3.5	35.0
tert-Butylbenzene	Ave	1.114	0.998		1.79	2.00	-10.4	35.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9651		1.76	2.00	-11.9	35.0
sec-Butylbenzene	Ave	1.569	1.417		1.81	2.00	-9.7	35.0
1,3-Dichlorobenzene	Ave	0.7160	0.6664		1.86	2.00	-6.9	35.0
Benzyl chloride	Ave	0.9762	0.8908		1.83	2.00	-8.7	35.0
1,4-Dichlorobenzene	Ave	0.7344	0.6695		1.82	2.00	-8.8	35.0
4-Isopropyltoluene	Ave	1.255	1.122		1.79	2.00	-10.6	35.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.7182		1.45	2.00	-27.5	35.0
Butylcyclohexane	Ave	0.9039	0.8456		1.87	2.00	-6.5	35.0
Indane	Ave	0.9903	0.8594		1.74	2.00	-13.2	35.0
1,2-Dichlorobenzene	Ave	0.7165	0.6343		1.77	2.00	-11.5	35.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	35.0
Indene	Ave	0.8508	0.6491		1.53	2.00	-23.7	35.0
Undecane	Ave	0.8098	0.7744		1.91	2.00	-4.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.2570		1.73	2.00	-13.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.013		1.77	2.00	-11.3	35.0
Dodecane	Ave	0.6396	0.6522		2.04	2.00	2.0	35.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5328		1.89	2.00	-5.7	35.0
Naphthalene	Ave	1.234	1.234		2.00	2.00	0.0	35.0
Hexachlorobutadiene	Ave	0.6047	0.5411		1.79	2.00	-10.5	35.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.5256		2.11	2.00	5.4	35.0
2-Methylnaphthalene	Ave	0.6016	0.6997		2.33	2.00	16.3	50.0
1-Methylnaphthalene	Ave	0.7372	0.8235		2.23	2.00	11.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8145		3.97	4.00	-0.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.652		2.02	2.00	1.2	30.0
Propene	Ave	1.463	1.534		2.10	2.00	4.8	30.0
Dichlorodifluoromethane	Ave	4.235	4.356		2.06	2.00	2.9	30.0
Chloromethane	Ave	0.4649	0.4693		2.02	2.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.404		1.94	2.00	-2.9	30.0
Acetaldehyde	Ave	0.5987	0.5225		8.73	10.0	-12.7	30.0
Vinyl chloride	Ave	1.611	1.586		1.97	2.00	-1.5	30.0
1,3-Butadiene	Ave	1.245	1.283		2.06	2.00	3.0	30.0
Butane	Ave	2.712	2.755		2.03	2.00	1.6	30.0
Bromomethane	Ave	1.392	1.313		1.89	2.00	-5.7	30.0
Chloroethane	Ave	0.7761	0.7469		1.92	2.00	-3.8	30.0
Ethanol	Ave	0.7042	0.7541		10.7	10.0	7.1	30.0
Vinyl bromide	Ave	1.290	1.209		1.87	2.00	-6.3	30.0
2-Methylbutane	Ave	1.947	1.895		1.95	2.00	-2.7	30.0
Trichlorofluoromethane	Ave	4.152	4.042		1.95	2.00	-2.7	30.0
Acrolein	Ave	0.3574	0.3194		1.79	2.00	-10.6	30.0
Acetonitrile	Ave	0.5574	0.5302		1.90	2.00	-4.9	30.0
Acetone	Ave	0.6013	0.4988		4.98	6.00	-17.0	30.0
Pentane	Ave	0.2653	0.2565		1.93	2.00	-3.3	30.0
Isopropyl alcohol	Ave	1.603	1.779		6.66	6.00	10.9	30.0
Ethyl ether	Ave	1.725	1.691		1.96	2.00	-2.0	30.0
1,1-Dichloroethene	Ave	1.412	1.514		2.14	2.00	7.2	30.0
Acrylonitrile	Ave	0.9747	0.9432		1.94	2.00	-3.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.167		2.07	2.00	3.5	30.0
tert-Butyl alcohol	Ave	2.196	2.812		2.56	2.00	28.0	30.0
Methylene Chloride	Ave	1.643	1.484		1.81	2.00	-9.7	30.0
3-Chloropropene	Ave	1.751	1.648		1.88	2.00	-5.9	30.0
Carbon disulfide	Ave	4.284	4.628		2.16	2.00	8.0	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.521		2.15	2.00	7.6	30.0
2-Methylpentane	Ave	4.045	4.401		2.18	2.00	8.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.883		1.97	2.00	-1.3	30.0
1,1-Dichloroethane	Ave	2.906	2.982		2.05	2.00	2.6	30.0
Vinyl acetate	Ave	4.034	3.919		1.94	2.00	-2.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.6318		1.99	2.00	-0.5	30.0
Hexane	Ave	1.304	1.409		2.16	2.00	8.1	30.0
Isopropyl ether	Ave	4.992	5.130		2.06	2.00	2.8	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.511		2.09	2.00	4.4	30.0
Ethyl acetate	Ave	3.312	3.321		2.01	2.00	0.3	30.0
Chloroform	Ave	3.344	3.351		2.00	2.00	0.2	30.0
Tert-butyl ethyl ether	Ave	4.607	4.651		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.780		2.01	2.00	0.4	30.0
1,1,1-Trichloroethane	Ave	3.620	3.686		2.04	2.00	1.8	30.0
1,2-Dichloroethane	Ave	0.3910	0.3917		2.00	2.00	0.2	30.0
Cyclohexane	Ave	0.1314	0.1477		2.25	2.00	12.4	30.0
Benzene	Ave	0.7153	0.7399		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6573		2.22	2.00	10.8	30.0
1-Butanol	Ave	0.0896	0.1263		2.82	2.00	41.0*	30.0
2,3-Dimethylpentane	Ave	0.1886	0.2098		2.22	2.00	11.2	30.0
Thiophene	Ave	0.4156	0.4526		2.18	2.00	8.9	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.515		2.16	2.00	8.2	30.0
Heptane	Ave	0.2875	0.3131		2.18	2.00	8.9	30.0
1,2-Dichloropropane	Ave	0.2813	0.2865		2.04	2.00	1.8	30.0
Trichloroethene	Ave	0.3257	0.3404		2.09	2.00	4.5	30.0
Dibromomethane	Ave	0.2963	0.3076		2.08	2.00	3.8	30.0
Bromodichloromethane	Ave	0.5843	0.6356		2.18	2.00	8.8	30.0
1,4-Dioxane	Ave	0.0832	0.1054		2.53	2.00	26.7	30.0
Methyl methacrylate	Ave	0.3595	0.3845		2.14	2.00	7.0	30.0
Methylcyclohexane	Ave	0.4896	0.5279		2.16	2.00	7.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.6430		2.28	2.00	14.2	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4641		2.17	2.00	8.5	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4612		2.14	2.00	7.0	30.0
Toluene	Ave	0.8801	0.8908		2.02	2.00	1.2	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2829		2.11	2.00	5.3	30.0
2-Hexanone	Ave	0.2641	0.3188		2.41	2.00	20.7	30.0
Octane	Ave	0.3165	0.3439		2.17	2.00	8.7	30.0
Dibromochloromethane	Ave	0.5446	0.5989		2.20	2.00	10.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4929		2.12	2.00	5.8	30.0
Tetrachloroethene	Ave	0.3302	0.3406		2.06	2.00	3.1	30.0
2,3-Dimethylheptane	Ave	1.076	1.161		2.16	2.00	8.0	30.0
Chlorobenzene	Ave	0.6841	0.7203		2.11	2.00	5.3	30.0
Ethylbenzene	Ave	1.196	1.211		2.03	2.00	1.3	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.9437		4.13	4.00	3.2	30.0
Nonane	Ave	0.6507	0.7098		2.18	2.00	9.1	30.0
Bromoform	Ave	0.4761	0.5476		2.30	2.00	15.0	30.0
Styrene	Ave	0.6323	0.6714		2.12	2.00	6.2	30.0
o-Xylene	Ave	0.9646	0.9910		2.05	2.00	2.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.6633		2.05	2.00	2.4	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.2051		1.98	2.00	-1.2	30.0
Isopropylbenzene	Ave	1.286	1.274		1.98	2.00	-1.0	30.0
Propylbenzene	Ave	0.3476	0.3424		1.97	2.00	-1.5	30.0
2-Chlorotoluene	Ave	0.3175	0.3184		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.295		2.02	2.00	0.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4918		1.97	2.00	-1.5	30.0
Alpha Methyl Styrene	Ave	0.5043	0.5202		2.06	2.00	3.1	30.0
Decane	Ave	0.7982	0.8625		2.16	2.00	8.1	30.0
tert-Butylbenzene	Ave	1.114	1.103		1.98	2.00	-1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.096	1.089		1.99	2.00	-0.6	30.0
sec-Butylbenzene	Ave	1.569	1.580		2.01	2.00	0.7	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.7287		2.04	2.00	1.8	30.0
Benzyl chloride	Ave	0.9762	1.033		2.12	2.00	5.8	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.7367		2.01	2.00	0.3	30.0
4-Isopropyltoluene	Ave	1.255	1.277		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	1.101		2.22	2.00	11.1	30.0
Butylcyclohexane	Ave	0.9039	0.9644		2.13	2.00	6.7	30.0
Indane	Ave	0.9903	0.9865		1.99	2.00	-0.4	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.7004		1.95	2.00	-2.3	30.0
Butylbenzene	Ave	1.277	1.325		2.08	2.00	3.8	30.0
Indene	Ave	0.8508	0.8688		2.04	2.00	2.1	30.0
Undecane	Ave	0.8098	0.8597		2.12	2.00	6.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3582		2.42	2.00	20.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.185		2.07	2.00	3.7	30.0
Dodecane	Ave	0.6396	0.6319		1.98	2.00	-1.2	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5181		1.83	2.00	-8.3	30.0
Naphthalene	Ave	1.234	1.197		1.94	2.00	-3.0	30.0
Hexachlorobutadiene	Ave	0.6047	0.5124		1.69	2.00	-15.3	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4625		1.85	2.00	-7.3	30.0
2-Methylnaphthalene	Ave	0.6016	0.4938		1.64	2.00	-17.9	50.0
1-Methylnaphthalene	Ave	0.7372	0.5485		1.49	2.00	-25.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8212		4.01	4.00	0.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 06/28/2017 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/28/2017 21:58
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6999	0.3362			2.00	-52.0*	35.0
3-Methylthiophene	Ave	0.6908	0.7960			2.00	15.2	35.0
2-Ethylthiophene	Ave	0.9153	1.134			2.00	23.9	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.640			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.275			2.00	39.5*	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.768			2.00	43.0*	35.0
Benzo (b) thiophene	Ave	0.9147	1.487			2.00	62.6*	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.256		1.90	2.00	-4.9	35.0
Propene	Ave	0.7296	0.6790		1.86	2.00	-6.9	35.0
Dichlorodifluoromethane	Ave	4.352	5.057		2.32	2.00	16.2	35.0
Chloromethane	Ave	0.3061	0.2731		1.78	2.00	-10.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	3.469		2.14	2.00	7.1	35.0
Acetaldehyde	Ave	0.2860	0.2397		8.38	10.0	-16.2	35.0
Vinyl chloride	Ave	1.073	0.9669		1.80	2.00	-9.9	35.0
1,3-Butadiene	Ave	0.6506	0.6233		1.92	2.00	-4.2	35.0
Butane	Ave	1.132	1.086		1.92	2.00	-4.0	35.0
Bromomethane	Ave	1.235	1.146		1.86	2.00	-7.2	35.0
Chloroethane	Ave	0.4970	0.4655		1.87	2.00	-6.3	35.0
Ethanol	Ave	0.2997	0.2300		7.67	10.0	-23.3	35.0
Vinyl bromide	Ave	1.302	1.320		2.03	2.00	1.4	35.0
2-Methylbutane	Ave	0.7999	0.7818		1.95	2.00	-2.3	35.0
Acrolein	Ave	0.2528	0.2785		2.20	2.00	10.2	35.0
Trichlorofluoromethane	Ave	5.912	5.646		1.91	2.00	-4.5	35.0
Acetonitrile	Ave	0.2586	0.2377		1.84	2.00	-8.1	35.0
Acetone	Ave	0.4151	0.3821		1.84	2.00	-7.9	35.0
Pentane	Ave	0.2011	0.2005		1.99	2.00	-0.3	35.0
Isopropyl alcohol	Ave	1.132	1.401		2.48	2.00	23.8	35.0
Ethyl ether	Ave	0.6661	0.5684		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.408	1.325		1.88	2.00	-5.9	35.0
Acrylonitrile	Ave	0.6277	0.6236		1.99	2.00	-0.6	35.0
tert-Butyl alcohol	Ave	2.677	2.710		2.02	2.00	1.2	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.433		1.97	2.00	-1.6	35.0
Methylene Chloride	Ave	1.338	1.169		1.75	2.00	-12.6	35.0
3-Chloropropene	Ave	1.309	1.297		1.98	2.00	-0.9	35.0
Carbon disulfide	Ave	3.341	3.259		1.95	2.00	-2.4	35.0
trans-1,2-Dichloroethene	Ave	1.436	1.363		1.90	2.00	-5.1	35.0
2-Methylpentane	Ave	1.894	1.705		1.80	2.00	-10.0	35.0
Methyl tert-butyl ether	Ave	4.568	4.614		2.02	2.00	1.0	35.0
1,1-Dichloroethane	Ave	2.402	2.312		1.92	2.00	-3.8	35.0
Vinyl acetate	Ave	2.320	2.445		2.11	2.00	5.4	35.0
2-Butanone (MEK)	Ave	0.5446	0.5251		1.93	2.00	-3.6	35.0
Hexane	Ave	0.8352	0.8172		1.96	2.00	-2.2	35.0
Isopropyl ether	Ave	2.873	2.961		2.06	2.00	3.0	35.0
cis-1,2-Dichloroethene	Ave	1.448	1.418		1.96	2.00	-2.1	35.0
Ethyl acetate	Ave	2.012	1.960		1.95	2.00	-2.6	35.0
Chloroform	Ave	3.821	3.708		1.94	2.00	-3.0	35.0
Tert-butyl ethyl ether	Ave	4.141	3.948		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.8745		1.97	2.00	-1.3	35.0
1,1,1-Trichloroethane	Ave	4.843	4.775		1.97	2.00	-1.4	35.0
1,2-Dichloroethane	Ave	0.5063	0.5017		1.98	2.00	-0.9	35.0
Benzene	Ave	0.6517	0.6483		1.99	2.00	-0.5	35.0
Cyclohexane	Ave	0.0968	0.1018		2.10	2.00	5.2	35.0
1-Butanol	Ave	0.0462	0.0484		2.09	2.00	4.7	35.0
Carbon tetrachloride	Ave	0.9167	0.9855		2.15	2.00	7.5	35.0
2,3-Dimethylpentane	Ave	0.1349	0.1359		2.01	2.00	0.7	35.0
Thiophene	Ave	0.3728	0.3687		1.98	2.00	-1.1	35.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8439		2.02	2.00	1.2	35.0
1,2-Dichloropropane	Ave	0.2045	0.2036		1.99	2.00	-0.5	35.0
Heptane	Ave	0.2083	0.2143		2.06	2.00	2.8	35.0
Trichloroethene	Ave	0.3929	0.3984		2.03	2.00	1.4	35.0
Dibromomethane	Ave	0.3514	0.3500		1.99	2.00	-0.4	35.0
Bromodichloromethane	Ave	0.6587	0.6852		2.08	2.00	4.0	35.0
1,4-Dioxane	Ave	0.0994	0.1029		2.07	2.00	3.5	35.0
Methyl methacrylate	Ave	0.2275	0.2348		2.06	2.00	3.2	35.0
Methylcyclohexane	Ave	0.4024	0.4961		2.47	2.00	23.3	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3776		2.08	2.00	4.1	35.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4285		2.17	2.00	8.5	35.0
trans-1,3-Dichloropropene	Ave	0.4674	0.5177		2.22	2.00	10.8	35.0
Toluene	Ave	0.9586	0.9853		2.06	2.00	2.8	35.0
1,1,2-Trichloroethane	Ave	0.2543	0.2613		2.05	2.00	2.7	35.0
2-Hexanone	Ave	0.2006	0.2098		2.09	2.00	4.6	35.0
Dibromochloromethane	Ave	0.7414	0.8418		2.27	2.00	13.5	35.0
Octane	Ave	0.3054	0.3220		2.11	2.00	5.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5875		2.11	2.00	5.4	35.0
Tetrachloroethene	Ave	0.4749	0.4840		2.04	2.00	1.9	35.0
Chlorobenzene	Ave	0.8374	0.8605		2.06	2.00	2.8	35.0
2,3-Dimethylheptane	Ave	0.5626	0.5171		1.84	2.00	-8.1	35.0
Ethylbenzene	Ave	1.382	1.443		2.09	2.00	4.4	35.0
m-Xylene & p-Xylene	Ave	1.133	1.199		4.23	4.00	5.8	35.0
Bromoform	Ave	0.7786	0.8773		2.25	2.00	12.7	35.0
Styrene	Ave	0.7430	0.8258		2.22	2.00	11.1	35.0
o-Xylene	Ave	1.190	1.212		2.04	2.00	1.8	35.0
Nonane	Ave	0.4511	0.4700		2.08	2.00	4.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6491		2.15	2.00	7.3	35.0
1,2,3-Trichloropropane	Ave	0.3000	0.3085		2.06	2.00	2.8	35.0
Isopropylbenzene	Ave	1.694	1.742		2.06	2.00	2.8	35.0
Propylbenzene	Ave	0.4652	0.5071		2.18	2.00	9.0	35.0
2-Chlorotoluene	Ave	0.4306	0.4514		2.10	2.00	4.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.816		2.06	2.00	3.2	35.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.8591		2.39	2.00	19.3	35.0
Alpha Methyl Styrene	Ave	0.6844	0.7376		2.16	2.00	7.8	35.0
Decane	Ave	0.6421	0.6805		2.12	2.00	6.0	35.0
tert-Butylbenzene	Ave	1.753	1.837		2.10	2.00	4.8	35.0
1,2,4-Trimethylbenzene	Ave	1.607	1.694		2.11	2.00	5.5	35.0
1,3-Dichlorobenzene	Ave	1.160	1.185		2.04	2.00	2.2	35.0
sec-Butylbenzene	Ave	2.171	2.287		2.11	2.00	5.4	35.0
Benzyl chloride	Ave	1.239	1.386		2.24	2.00	11.9	35.0
1,4-Dichlorobenzene	Ave	1.164	1.184		2.03	2.00	1.7	35.0
4-Isopropyltoluene	Ave	2.191	2.267		2.07	2.00	3.5	35.0
1,2,3-Trimethylbenzene	Ave	1.725	1.385		1.61	2.00	-19.7	35.0
Butylcyclohexane	Ave	0.9488	0.9354		1.97	2.00	-1.4	35.0
1,2-Dichlorobenzene	Ave	1.144	1.144		2.00	2.00	-0.0	35.0
Indane	Ave	1.423	1.451		2.04	2.00	2.0	35.0
Indene	Ave	1.168	1.080		1.85	2.00	-7.6	35.0
Butylbenzene	Ave	1.784	1.888		2.12	2.00	5.8	35.0
Undecane	Ave	0.7598	0.8223		2.16	2.00	8.2	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5157		1.85	2.00	-7.4	35.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.082		2.01	2.00	0.7	35.0
Dodecane	Ave	0.7957	0.9180		2.31	2.00	15.4	35.0
1,2,4-Trichlorobenzene	Ave	1.235	1.334		2.16	2.00	7.9	35.0
Naphthalene	Ave	2.498	2.601		2.08	2.00	4.1	35.0
Hexachlorobutadiene	Ave	1.436	1.487		2.07	2.00	3.5	35.0
1,2,3-Trichlorobenzene	Ave	1.187	1.295		2.18	2.00	9.1	35.0
2-Methylnaphthalene	Ave	0.7935	1.016		2.56	2.00	28.1	50.0
1-Methylnaphthalene	Ave	0.6999	0.9471		2.71	2.00	35.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8473		3.98	4.00	-0.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27908/2 Calibration Date: 02/25/2019 10:00
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.162		1.82	2.00	-8.9	30.0
Propene	Ave	0.7296	0.6455		1.77	2.00	-11.5	30.0
Dichlorodifluoromethane	Ave	4.352	4.061		1.87	2.00	-6.7	30.0
Chloromethane	Ave	0.3061	0.2865		1.87	2.00	-6.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	2.764		1.71	2.00	-14.7	30.0
Acetaldehyde	Ave	0.2860	0.3294		11.5	10.0	15.2	30.0
Vinyl chloride	Ave	1.073	1.175		2.19	2.00	9.5	30.0
1,3-Butadiene	Ave	0.6506	0.8129		2.50	2.00	24.9	30.0
Butane	Ave	1.132	1.382		2.44	2.00	22.1	30.0
Bromomethane	Ave	1.235	1.454		2.35	2.00	17.7	30.0
Chloroethane	Ave	0.4970	0.5842		2.35	2.00	17.5	30.0
Ethanol	Ave	0.2997	0.3902		13.0	10.0	30.2*	30.0
Vinyl bromide	Ave	1.302	1.551		2.38	2.00	19.2	30.0
2-Methylbutane	Ave	0.7999	1.034		2.59	2.00	29.3	30.0
Acrolein	Ave	0.2528	0.3437		2.72	2.00	35.9*	30.0
Trichlorofluoromethane	Ave	5.912	7.050		2.38	2.00	19.2	30.0
Acetonitrile	Ave	0.2586	0.3421		2.65	2.00	32.3*	30.0
Acetone	Ave	0.4151	0.4842		7.00	6.00	16.7	30.0
Isopropyl alcohol	Ave	1.132	1.506		7.98	6.00	33.1*	30.0
Pentane	Ave	0.2011	0.2437		2.42	2.00	21.2	30.0
Ethyl ether	Ave	0.6661	0.7939		2.38	2.00	19.2	30.0
1,1-Dichloroethene	Ave	1.408	1.311		1.86	2.00	-6.9	30.0
Acrylonitrile	Ave	0.6277	0.6611		2.11	2.00	5.3	30.0
tert-Butyl alcohol	Ave	2.677	2.599		1.94	2.00	-2.9	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.471		1.99	2.00	-0.5	30.0
Methylene Chloride	Ave	1.338	1.113		1.66	2.00	-16.8	30.0
3-Chloropropene	Ave	1.309	1.405		2.15	2.00	7.3	30.0
Carbon disulfide	Ave	3.341	3.268		1.96	2.00	-2.2	30.0
trans-1,2-Dichloroethene	Ave	1.436	1.325		1.85	2.00	-7.7	30.0
2-Methylpentane	Ave	1.894	2.190		2.31	2.00	15.6	30.0
Methyl tert-butyl ether	Ave	4.568	4.416		1.93	2.00	-3.3	30.0
1,1-Dichloroethane	Ave	2.402	2.252		1.87	2.00	-6.3	30.0
Vinyl acetate	Ave	2.320	2.626		2.26	2.00	13.2	30.0
2-Butanone (MEK)	Ave	0.5446	0.5037		1.85	2.00	-7.5	30.0
Hexane	Ave	0.8352	0.8820		2.11	2.00	5.6	30.0
Isopropyl ether	Ave	2.873	2.990		2.08	2.00	4.1	30.0
cis-1,2-Dichloroethene	Ave	1.448	1.362		1.88	2.00	-5.9	30.0
Ethyl acetate	Ave	2.012	2.137		2.12	2.00	6.2	30.0
Chloroform	Ave	3.821	3.589		1.88	2.00	-6.1	30.0
Tert-butyl ethyl ether	Ave	4.141	4.182		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27908/2 Calibration Date: 02/25/2019 10:00
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.9460		2.14	2.00	6.8	30.0
1,1,1-Trichloroethane	Ave	4.843	4.554		1.88	2.00	-6.0	30.0
1,2-Dichloroethane	Ave	0.5063	0.4676		1.85	2.00	-7.6	30.0
Benzene	Ave	0.6517	0.6058		1.86	2.00	-7.1	30.0
1-Butanol	Ave	0.0462	0.0514		2.22	2.00	11.2	30.0
Cyclohexane	Ave	0.0968	0.1052		2.17	2.00	8.6	30.0
Carbon tetrachloride	Ave	0.9167	0.9170		2.00	2.00	0.0	30.0
2,3-Dimethylpentane	Ave	0.1349	0.1357		2.01	2.00	0.6	30.0
Thiophene	Ave	0.3728	0.3638		1.95	2.00	-2.4	30.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8478		2.03	2.00	1.6	30.0
1,2-Dichloropropane	Ave	0.2045	0.1983		1.94	2.00	-3.1	30.0
Heptane	Ave	0.2083	0.2084		2.00	2.00	0.0	30.0
Trichloroethene	Ave	0.3929	0.3715		1.89	2.00	-5.4	30.0
Dibromomethane	Ave	0.3514	0.3324		1.89	2.00	-5.4	30.0
Bromodichloromethane	Ave	0.6587	0.6299		1.91	2.00	-4.4	30.0
1,4-Dioxane	Ave	0.0994	0.0936		1.88	2.00	-5.8	30.0
Methyl methacrylate	Ave	0.2275	0.2356		2.07	2.00	3.5	30.0
Methylcyclohexane	Ave	0.4024	0.3863		1.92	2.00	-4.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3965		2.19	2.00	9.3	30.0
cis-1,3-Dichloropropene	Ave	0.3948	0.3969		2.01	2.00	0.5	30.0
trans-1,3-Dichloropropene	Ave	0.4674	0.4706		2.01	2.00	0.7	30.0
Toluene	Ave	0.9586	0.9694		2.02	2.00	1.1	30.0
1,1,2-Trichloroethane	Ave	0.2543	0.2526		1.99	2.00	-0.7	30.0
2-Hexanone	Ave	0.2006	0.2079		2.07	2.00	3.7	30.0
Dibromochloromethane	Ave	0.7414	0.8071		2.18	2.00	8.9	30.0
Octane	Ave	0.3054	0.3278		2.15	2.00	7.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5591		2.01	2.00	0.3	30.0
Tetrachloroethene	Ave	0.4749	0.4778		2.01	2.00	0.6	30.0
Chlorobenzene	Ave	0.8374	0.8419		2.01	2.00	0.5	30.0
2,3-Dimethylheptane	Ave	0.5626	0.6802		2.42	2.00	20.9	30.0
Ethylbenzene	Ave	1.382	1.422		2.06	2.00	2.9	30.0
m-Xylene & p-Xylene	Ave	1.133	1.217		4.30	4.00	7.4	30.0
Bromoform	Ave	0.7786	0.8569		2.20	2.00	10.1	30.0
Styrene	Ave	0.7430	0.7974		2.15	2.00	7.3	30.0
o-Xylene	Ave	1.190	1.257		2.11	2.00	5.6	30.0
Nonane	Ave	0.4511	0.5478		2.43	2.00	21.4	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6407		2.12	2.00	5.9	30.0
1,2,3-Trichloropropane	Ave	0.3000	0.2866		1.91	2.00	-4.5	30.0
Isopropylbenzene	Ave	1.694	1.699		2.01	2.00	0.3	30.0
Propylbenzene	Ave	0.4652	0.4653		2.00	2.00	0.0	30.0
2-Chlorotoluene	Ave	0.4306	0.4320		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27908/2 Calibration Date: 02/25/2019 10:00
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.764		2.01	2.00	0.3	30.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.7290		2.03	2.00	1.3	30.0
Alpha Methyl Styrene	Ave	0.6844	0.6787		1.98	2.00	-0.8	30.0
Decane	Ave	0.6421	0.7332		2.28	2.00	14.2	30.0
tert-Butylbenzene	Ave	1.753	1.770		2.02	2.00	1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.607	1.692		2.11	2.00	5.3	30.0
1,3-Dichlorobenzene	Ave	1.160	1.112		1.92	2.00	-4.1	30.0
sec-Butylbenzene	Ave	2.171	2.140		1.97	2.00	-1.4	30.0
Benzyl chloride	Ave	1.239	1.296		2.09	2.00	4.6	30.0
1,4-Dichlorobenzene	Ave	1.164	1.146		1.97	2.00	-1.6	30.0
4-Isopropyltoluene	Ave	2.191	2.229		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	1.725	1.791		2.08	2.00	3.8	30.0
Butylcyclohexane	Ave	0.9488	0.9563		2.02	2.00	0.8	30.0
1,2-Dichlorobenzene	Ave	1.144	1.079		1.89	2.00	-5.7	30.0
Indane	Ave	1.423	1.422		2.00	2.00	-0.0	30.0
Indene	Ave	1.168	1.178		2.02	2.00	0.8	30.0
Butylbenzene	Ave	1.784	1.774		1.99	2.00	-0.6	30.0
Undecane	Ave	0.7598	0.8651		2.28	2.00	13.9	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5992		2.15	2.00	7.5	30.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.039		1.97	2.00	-1.3	30.0
Dodecane	Ave	0.7957	0.8800		2.21	2.00	10.6	30.0
1,2,4-Trichlorobenzene	Ave	1.235	1.150		1.86	2.00	-6.9	30.0
Naphthalene	Ave	2.498	2.097		1.68	2.00	-16.0	30.0
Hexachlorobutadiene	Ave	1.436	1.299		1.81	2.00	-9.6	30.0
1,2,3-Trichlorobenzene	Ave	1.187	1.065		1.79	2.00	-10.3	30.0
2-Methylnaphthalene	Ave	0.7935	0.9775		2.46	2.00	23.2	50.0
1-Methylnaphthalene	Ave	0.6999	1.087		3.11	2.00	55.3*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.9066		4.26	4.00	6.6	30.0

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27908/5
 Matrix: Air Lab File ID: R500BB25.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 12:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27908/5
 Matrix: Air Lab File ID: R500BB25.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 12:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27908/1002
 Matrix: Air Lab File ID: RCCVB25-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 10:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.86		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.00		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.82		0.080	0.015
67-66-3	Chloroform	119.38	1.88		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.88		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.87		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.87		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.85		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.86		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.06		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.66		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.93		0.40	0.068
91-20-3	Naphthalene	128.17	1.68		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.01		0.080	0.016
108-88-3	Toluene	92.14	2.02		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.85		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.86		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.88		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.99		0.080	0.021
79-01-6	Trichloroethene	131.39	1.89		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.08		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.11		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.03		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.19		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.41		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27931/1002
 Matrix: Air Lab File ID: GCCVB26-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 11:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.07		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.22		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.02		0.080	0.015
67-66-3	Chloroform	119.38	2.00		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.09		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.06		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.05		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.00		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.14		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.03		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.81		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.97		0.40	0.068
91-20-3	Naphthalene	128.17	1.94		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.06		0.080	0.016
108-88-3	Toluene	92.14	2.02		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.15		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.83		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.04		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.11		0.080	0.021
79-01-6	Trichloroethene	131.39	2.09		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.22		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.99		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.97		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.97		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.18		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1

SDG No.: _____

Instrument ID: MG Start Date: 01/11/2019 12:24

Analysis Batch Number: 26755 End Date: 01/12/2019 04:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-26755/1		01/11/2019 12:24	1	GA11BLK1.D	RTX-5 0.32 (mm)
IC 140-26755/2		01/11/2019 13:08	1	GA11IC09.D	RTX-5 0.32 (mm)
IC 140-26755/6		01/11/2019 14:35	1	GA11IC10.D	RTX-5 0.32 (mm)
IC 140-26755/9		01/11/2019 16:46	1	GA11IC01.D	RTX-5 0.32 (mm)
IC 140-26755/10		01/11/2019 17:29	1	GA11IC02.D	RTX-5 0.32 (mm)
140-13809-A-1 MDLV		01/11/2019 17:29	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 17:29	1		RTX-5 0.32 (mm)
IC 140-26755/11		01/11/2019 18:12	1	GA11IC03.D	RTX-5 0.32 (mm)
140-13809-A-2 MDLV		01/11/2019 18:12	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:12	1		RTX-5 0.32 (mm)
IC 140-26755/12		01/11/2019 18:56	1	GA11IC04.D	RTX-5 0.32 (mm)
140-13809-A-3 MDLV		01/11/2019 18:56	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:56	1		RTX-5 0.32 (mm)
IC 140-26755/13		01/11/2019 19:40	1	GA11IC05.D	RTX-5 0.32 (mm)
140-13809-A-4 MDLV		01/11/2019 19:40	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 19:40	1		RTX-5 0.32 (mm)
IC 140-26755/14		01/11/2019 20:23	1	GA11IC06.D	RTX-5 0.32 (mm)
ICIS 140-26755/15		01/11/2019 21:07	1	GA11IC07.D	RTX-5 0.32 (mm)
IC 140-26755/16		01/11/2019 21:51	1	GA11IC08.D	RTX-5 0.32 (mm)
ICV 140-26755/18		01/11/2019 23:17	1	GA11ICV.D	RTX-5 0.32 (mm)
ZZZZZ		01/12/2019 04:26	1		RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1

SDG No.: _____

Instrument ID: MG Start Date: 02/26/2019 11:03

Analysis Batch Number: 27931 End Date: 02/27/2019 03:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27931/1		02/26/2019 11:03	1	GBFBB26.D	RTX-5 0.32 (mm)
CCVIS 140-27931/2		02/26/2019 11:35	1	GCCVB26.D	RTX-5 0.32 (mm)
LCS 140-27931/1002		02/26/2019 11:35	1	GCCVB26-LCS.d	RTX-5 0.32 (mm)
MB 140-27931/4		02/26/2019 12:56	1	G500BB26.D	RTX-5 0.32 (mm)
140-14386-17		02/26/2019 13:42	1	GB26P201.D	RTX-5 0.32 (mm)
140-14386-18		02/26/2019 15:56	1	GB26P101.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 16:38	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 17:19	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 18:01	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 19:24	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 20:06	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 21:30	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 22:13	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 22:55	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 23:37	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 00:18	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 01:00	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 01:42	3.7		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 02:23	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 03:05	1		RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1

SDG No.: _____

Instrument ID: MR Start Date: 11/16/2018 16:00

Analysis Batch Number: 25490 End Date: 11/17/2018 06:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25490/1		11/16/2018 16:00	1	RBFBK16I.D	RTX-5 0.32 (mm)
IC 140-25490/3		11/16/2018 17:23	1	RK16IC09.D	RTX-5 0.32 (mm)
IC 140-25490/5		11/16/2018 19:07	1	RK16IC10.D	RTX-5 0.32 (mm)
IC 140-25490/8		11/16/2018 21:42	1	RK16IC01.D	RTX-5 0.32 (mm)
IC 140-25490/9		11/16/2018 22:34	1	RK16IC02.D	RTX-5 0.32 (mm)
IC 140-25490/10		11/16/2018 23:27	1	RK16IC03.D	RTX-5 0.32 (mm)
IC 140-25490/11		11/17/2018 00:20	1	RK16IC04.D	RTX-5 0.32 (mm)
IC 140-25490/12		11/17/2018 01:12	1	RK16IC05.D	RTX-5 0.32 (mm)
IC 140-25490/13		11/17/2018 02:05	1	RK16IC06.D	RTX-5 0.32 (mm)
ICIS 140-25490/14		11/17/2018 02:58	1	RK16IC07.D	RTX-5 0.32 (mm)
IC 140-25490/15		11/17/2018 03:51	1	RK16IC08.D	RTX-5 0.32 (mm)
ICV 140-25490/18		11/17/2018 06:27	1	RK16ICV.D	RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1

SDG No.: _____

Instrument ID: MR Start Date: 02/25/2019 09:32

Analysis Batch Number: 27908 End Date: 02/26/2019 06:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27908/1		02/25/2019 09:32	1	RBFB25.D	RTX-5 0.32 (mm)
CCVIS 140-27908/2		02/25/2019 10:00	1	RCCVB25.D	RTX-5 0.32 (mm)
LCS 140-27908/1002		02/25/2019 10:00	1	RCCVB25-LCS.d	RTX-5 0.32 (mm)
ZZZZZ		02/25/2019 11:58	1		RTX-5 0.32 (mm)
MB 140-27908/5		02/25/2019 12:52	1	R500BB25.D	RTX-5 0.32 (mm)
140-14386-1		02/25/2019 17:10	1	RB25P101.D	RTX-5 0.32 (mm)
140-14386-2		02/25/2019 17:59	1	RB25P102.D	RTX-5 0.32 (mm)
140-14386-3		02/25/2019 18:48	1	RB25P103.D	RTX-5 0.32 (mm)
140-14386-4		02/25/2019 19:37	1	RB25P104.D	RTX-5 0.32 (mm)
140-14386-5		02/25/2019 20:26	1	RB25P105.D	RTX-5 0.32 (mm)
140-14386-6		02/25/2019 21:14	1	RB25P106.D	RTX-5 0.32 (mm)
140-14386-7		02/25/2019 22:03	1	RB25P107.D	RTX-5 0.32 (mm)
140-14386-8		02/25/2019 22:53	1.57	RB25P108.D	RTX-5 0.32 (mm)
140-14386-9		02/25/2019 23:42	1	RB25P109.D	RTX-5 0.32 (mm)
140-14386-10		02/26/2019 00:31	1	RB25P110.D	RTX-5 0.32 (mm)
140-14386-11		02/26/2019 01:20	1	RB25P111.D	RTX-5 0.32 (mm)
140-14386-12		02/26/2019 02:09	1.66	RB25P112.D	RTX-5 0.32 (mm)
140-14386-13		02/26/2019 02:58	1	RB25P113.D	RTX-5 0.32 (mm)
140-14386-14		02/26/2019 03:47	1	RB25P114.D	RTX-5 0.32 (mm)
140-14386-15		02/26/2019 04:36	1	RB25P115.D	RTX-5 0.32 (mm)
140-14386-16		02/26/2019 05:25	1	RB25P116.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 06:14	1		RTX-5 0.32 (mm)

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1

SDG No.: _____

Batch Number: 27908 Batch Start Date: 02/25/19 09:32 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00083	40MXISSURP 00003
BFB 140-27908/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27908/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27908/5		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14386-A-1	IA-138-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-2	IA-093-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-3	IA-174-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-4	IA-018-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-5	IA-DUP03-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-6	IA-015-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-7	IA-118-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-8	IA-168-A-26	TO 15 LL	T	157 mL	500 mL	1	1		40 mL
140-14386-A-9	IA-081-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-10	IA-079-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-11	IA-DUP04-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-12	IA-117-A-26	TO 15 LL	T	166 mL	500 mL	1	1		40 mL
140-14386-A-13	IA-078-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-14	IA-136-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-15	IA-076-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-16	IA-075-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27908/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27908/1		TO 15 LL		40 mL					
CCVIS 140-27908/2		TO 15 LL							
MB 140-27908/5		TO 15 LL							
140-14386-A-1	IA-138-A-26	TO 15 LL	T						
140-14386-A-2	IA-093-A-26	TO 15 LL	T						
140-14386-A-3	IA-174-A-26	TO 15 LL	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1

SDG No.: _____

Batch Number: 27908 Batch Start Date: 02/25/19 09:32 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002				
140-14386-A-4	IA-018-A-26	TO 15 LL	T					
140-14386-A-5	IA-DUP03-A-26	TO 15 LL	T					
140-14386-A-6	IA-015-A-26	TO 15 LL	T					
140-14386-A-7	IA-118-A-26	TO 15 LL	T					
140-14386-A-8	IA-168-A-26	TO 15 LL	T					
140-14386-A-9	IA-081-A-26	TO 15 LL	T					
140-14386-A-10	IA-079-A-26	TO 15 LL	T					
140-14386-A-11	IA-DUP04-A-26	TO 15 LL	T					
140-14386-A-12	IA-117-A-26	TO 15 LL	T					
140-14386-A-13	IA-078-A-26	TO 15 LL	T					
140-14386-A-14	IA-136-A-26	TO 15 LL	T					
140-14386-A-15	IA-076-A-26	TO 15 LL	T					
140-14386-A-16	IA-075-A-26	TO 15 LL	T					
LCS		TO 15 LL						
140-27908/1002								

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1

SDG No.: _____

Batch Number: 27931 Batch Start Date: 02/26/19 11:03 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00082	40MXISSURP 00003
BFB 140-27931/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27931/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27931/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14386-A-17	IA-021-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-18	SV-178-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27931/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27931/1		TO 15 LL		40 mL					
CCVIS 140-27931/2		TO 15 LL							
MB 140-27931/4		TO 15 LL							
140-14386-A-17	IA-021-A-26	TO 15 LL	T						
140-14386-A-18	SV-178-MB-3	TO 15 LL	T						
LCS 140-27931/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Summa Canister Dilution Worksheet

Client: Tetra Tech, Inc.

Job No.: 140-14386-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Date	Analyst
140-14386-8	1	-7.5	0.75	0.75	2.6	1.18	1.18		1.57	1.57	02/25/19 15:10	Barlozhetskaya, Anna F
140-14386-12	1	-8.8	0.71	0.71	2.5	1.17	1.17		1.66	1.66	02/25/19 15:10	Barlozhetskaya, Anna F

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg

Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig

Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury ("Hg)

14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13951-1
 SDG No.: _____
 Client Sample ID: 11851 Lab Sample ID: 140-13951-2
 Matrix: Air Lab File ID: HA16lot13951.D
 Analysis Method: TO-15 Date Collected: 01/15/2019 11:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 21:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26920 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13951-1
 SDG No.: _____
 Client Sample ID: 11851 Lab Sample ID: 140-13951-2
 Matrix: Air Lab File ID: HA16lot13951.D
 Analysis Method: TO-15 Date Collected: 01/15/2019 11:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 21:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26920 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13951-1
 SDG No.: _____
 Client Sample ID: 11851 Lab Sample ID: 140-13951-2
 Matrix: Air Lab File ID: HA16lot13951.D
 Analysis Method: TO-15 Date Collected: 01/15/2019 11:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 21:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26920 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200(mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13994-1
 SDG No.: _____
 Client Sample ID: 09583 Lab Sample ID: 140-13994-1
 Matrix: Air Lab File ID: HA21LOT13994.D
 Analysis Method: TO-15 Date Collected: 01/18/2019 00:14
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 03:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13994-1
 SDG No.: _____
 Client Sample ID: 09583 Lab Sample ID: 140-13994-1
 Matrix: Air Lab File ID: HA21LOT13994.D
 Analysis Method: TO-15 Date Collected: 01/18/2019 00:14
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 03:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13994-1
 SDG No.: _____
 Client Sample ID: 09583 Lab Sample ID: 140-13994-1
 Matrix: Air Lab File ID: HA21LOT13994.D
 Analysis Method: TO-15 Date Collected: 01/18/2019 00:14
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 03:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

Shipping and Receiving Documents


TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information			Project Manager: Tony Apanavage				Sampled By: Sophia Larson, Josh Mullis & Walt Pryor				1 of 16 COCs										
Company: Tetra Tech			Phone: 301-528-3000																		
Address: 20251 Century Blvd #200			Site Contact: Tony Apanavage																		
City/State/Zip: Germantown, MD, 20871			TAL Contact: Terry Walker Washmend																		
Phone: 301-528-552																					
FAX:																					
Project Name: MRC Indoor Air			Analysis Turnaround Time																		
Site/location: MRC			Standard (Specify): X																		
PO# 112FC08388			Rush (Specify):																		
Sample Identification			Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
IA-138-A-26			2/21/19	0848	1654	-26	0	7299	11835	✓											
IA-093-A-26			2/21/19	0851	1656	-30	-3	4588	11277	✓											
IA-174-A-26			2/21/19	0850	1655	-30	-5	10033	09741	✓											
IA-018-A-26			2/21/19	0856	1657	-30	-2	11261	11669	✓											
IA-DUP03-A-26			2/21/19	0856	1657	-30	0	11499	10841	✓											
IA-015-A-26			2/21/19	0904	1704	-29	-4	09846	11657	✓											
Sampled by: Sophia Larson, Walt Pryor, Josh Mullis			Temperature (Fahrenheit)																		
			Interior						Ambient						CUSTODY SEALS INTACT RECEIVED AMBIENT RT 20.0 /GT20.0 BAD 2-23-19 8 DAYS FEAT# 77454111 7893m SP0 18 CANS / 18 FLOWS / 8 TS						
			Start																		
			Stop																		
Start																					
Stop																					
Special Instructions/QC Requirements & Comments:			 140-14386 Chain of Custody																		
			Start																		
			Stop																		
			Start																		
Canisters Shipped by: Tetratech			Date/Time: 2/22/19				Canisters Received by:														
Samples Relinquished by: <i>[Signature]</i>			Date/Time: 2/22/19				Received by: <i>[Signature]</i>														
Relinquished by: <i>[Signature]</i>			Date/Time: 2/22/19 1700				Received by: <i>[Signature]</i> 2/23/19 10:10														
Lab Use Only			Shipped Name:				Opened by:				Condition:										

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.



Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor		2 of 16 COCs													
Company: Tetra Tech		Phone: 301-528-3000																	
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage																	
City/State/Zip: Germentown, MD, 20877		TAL Contact: terry walker wushmond																	
Phone: 301-528-552																			
FAX:																			
Project Name: MRC Indoor Air		Analysis Turnaround Time																	
Site/location: MRC		Standard (Specify) X																	
PO# 1121C08388		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
IA-118-A-26	2/21/19	0905	1705	-29	-4	11929	11518	✓											
IA-168-A-26	2/21/19	0928	1728	-30	-7	7605	10796	✓											
IA-081-A-26	2/21/19	0912	1712	-22	0	8780	09823	✓											
IA-079-A-26	2/21/19	0918	1718	-29	-1	10593	11641	✓											
IA-DUPO4-A-26	2/21/19	0918	1718	-30	-5	8727	11107	✓											
IA-117-A-26	2/21/19	0920	1720	NA	-4	8830	09788	✓											
Sampled by: Sophia Lawson, Walt Pryor, Josh Mullis		Temperature (Fahrenheit)												Baltimore #201					
		Interior	Ambient																
		Start																	
		Stop																	
		Pressure (Inches of Hg)																	
		Interior	Ambient																
Start																			
Stop																			
Special Instructions/QC Requirements & Comments: Sample IA-117-A-26 regulator cap arrived broken, canister vacuum not able to measure pressure																			
Canisters Shipped by: Tetra Tech		Date/Time: 2/22/19		Canisters Received by:															
Samples Relinquished by: [Signature]		Date/Time: 2/22/19		Received by: [Signature]															
Relinquished by: [Signature]		Date/Time: 2/22/19 1700		Received by: [Signature]															
Lab Use Only		Shipped Name		Opened By		Condition													

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor		3 of 16 COCs													
Company: Tetra Tech		Phone: 301-528-3000																	
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage																	
City/State/Zip: Germentown, MD, 20877		TAL Contact: Terry Walker Washmund																	
Phone: 301-528-552																			
FAX:																			
Project Name: MRC Indoor Air		Analysis Turnaround Time																	
Site/location: MRC		Standard (Specify) X																	
PO# 112IC08388		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
IA-078-A-26	2/21/19	0923	1723	-19	4	8786	10922	✓											
IA-136-A-26	2/21/19	0925	1725	-26	2	11524	11578	✓											
IA-076-A-26	2/21/19	0927	1727	-28	0	10880	09865	✓											
IA-075-A-26	2/21/19	0931	1731	-30	-5	8690	11809	✓											
IA-021-A-26	2/21/19	0934	1734	-30	-5	11568	12276	✓											
SV-178-MB-3	2/21/19	0948	1058	-30	0	11054	11163	✓											
Sampled by: Sophia Lawson, Josh Mullis, Walt Pryor		Temperature (Fahrenheit)				<h2>Baltimore #201</h2>													
		Interior		Ambient															
		Start																	
		Stop																	
		Pressure (Inches of Hg)																	
		Interior		Ambient															
Start																			
Stop																			
Special Instructions/QC Requirements & Comments:																			
Canisters Shipped by: Tetra Tech		Date/Time: 2/22/19				Canisters Received by:													
Samples Relinquished by: [Signature]		Date/Time: 2/22/19				Received by: [Signature]													
Relinquished by: [Signature]		Date/Time: 2/22/19 1700				Received by: [Signature] 2-23-19 10:10													
Lab Use Only: Shipper Name: _____ Opened by: _____ Condition: _____																			

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	7. IA-021-A:26. COC HIST CALISTER ASSET AS 12276, SHOULD BE 11276
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID : _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input checked="" type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only)	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/	<input type="checkbox"/> Residual Chlorine	
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	

Labeling Verified by: _____

Date: _____

pH test strip lot number: _____

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative: _____	_____
Lot Number: _____	_____
Exp Date: _____	_____
Analyst: _____	_____
Date: _____	_____
Time: _____	_____

Project #: _____ PM Instructions: _____

Sample Receiving Associate: *[Signature]* Date: 2-25-19

ANALYTICAL REPORT

Job Number: 140-14386-1

Job Description: MRC Indoor Air - MRC

For:

Tetra Tech, Inc.

20251 Century Blvd

Suite 200

Germantown, MD 20874

Attention: Samantha Brenner



Approved for release.
Terry Walker Wasmund
Project Manager II
3/6/2019 4:53 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
03/06/2019

cc: Amy Thomson

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TestAmerica Laboratories, Inc.

TestAmerica Knoxville 5815 Middlebrook Pike, Knoxville, TN 37921

Tel (865) 291-3000 Fax (865) 584-4315 www.testamericainc.com

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Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-14386-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC listed canister asset number as 12276, but it should be 11276.

Air - GC/MS VOA - Method TO-15LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-138-A-26

Lab Sample ID: 140-14386-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.22	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.43	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.16	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.5	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.54		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.59	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.69	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.5	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.65	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.2	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	2.9		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.6	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-093-A-26

Lab Sample ID: 140-14386-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.21	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.51	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.22	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.95	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.74		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.68	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.8	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.86	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	4.0		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-174-A-26

Lab Sample ID: 140-14386-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.19	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.31	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.060	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.3		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.60	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.2	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.33	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-174-A-26 (Continued)

Lab Sample ID: 140-14386-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	7.0		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-018-A-26

Lab Sample ID: 140-14386-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.30	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.12	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.44		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.14	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.7	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.13	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.63		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.57	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.95	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.61	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.70	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.8		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.60	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.87	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	3.4		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.5	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-DUP03-A-26

Lab Sample ID: 140-14386-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.26	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.13	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.19	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.31	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.44		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.65		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.83	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.62	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.76	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.7		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	3.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-015-A-26

Lab Sample ID: 140-14386-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.31	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.46	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.98	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.3		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.81		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.0	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.64	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.4	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.0		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.5		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-118-A-26

Lab Sample ID: 140-14386-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.36	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.20	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.6	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.7		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.15	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.38		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.0		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.2	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.89	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	6.6		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.81	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	2.0		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.5		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-168-A-26

Lab Sample ID: 140-14386-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34	J	0.40	0.12	ppb v/v	1.57		TO 15 LL	Total/NA
Chlorodifluoromethane	0.83		0.40	0.075	ppb v/v	1.57		TO 15 LL	Total/NA
Chloroform	0.090	J	0.40	0.075	ppb v/v	1.57		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v	1.57		TO 15 LL	Total/NA
Ethylbenzene	2.5		0.40	0.14	ppb v/v	1.57		TO 15 LL	Total/NA
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v	1.57		TO 15 LL	Total/NA
Toluene	29		0.60	0.60	ppb v/v	1.57		TO 15 LL	Total/NA
Trichloroethene	0.12	J	0.20	0.070	ppb v/v	1.57		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-168-A-26 (Continued)

Lab Sample ID: 140-14386-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	0.25	J	0.40	0.13	ppb v/v	1.57		TO 15 LL	Total/NA
Xylenes, Total	12		0.80	0.12	ppb v/v	1.57		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1.57		TO 15 LL	Total/NA
Chlorodifluoromethane	2.9		1.4	0.27	ug/m3	1.57		TO 15 LL	Total/NA
Chloroform	0.44	J	2.0	0.37	ug/m3	1.57		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1.57		TO 15 LL	Total/NA
Ethylbenzene	11		1.7	0.59	ug/m3	1.57		TO 15 LL	Total/NA
Methylene Chloride	4.7	J	6.9	2.3	ug/m3	1.57		TO 15 LL	Total/NA
Toluene	110		2.3	2.3	ug/m3	1.57		TO 15 LL	Total/NA
Trichloroethene	0.67	J	1.1	0.38	ug/m3	1.57		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.2	J	2.0	0.61	ug/m3	1.57		TO 15 LL	Total/NA
Xylenes, Total	53		3.5	0.52	ug/m3	1.57		TO 15 LL	Total/NA

Client Sample ID: IA-081-A-26

Lab Sample ID: 140-14386-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.86	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.53		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	17		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.13	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.6		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.0	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	2.3		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	63		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.66	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	11		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-079-A-26

Lab Sample ID: 140-14386-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.076	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.088	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.52		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.8	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.36	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	14		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.5		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-079-A-26 (Continued)

Lab Sample ID: 140-14386-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.48	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.43	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	2.3		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	2.4	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	54		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	11		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-DUP04-A-26

Lab Sample ID: 140-14386-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.57		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.50		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	15		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.4		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.0		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	2.2		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.4	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	56		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	10		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-117-A-26

Lab Sample ID: 140-14386-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.33	J	0.40	0.12	ppb v/v	1.66		TO 15 LL	Total/NA
Carbon tetrachloride	0.075	J	0.40	0.075	ppb v/v	1.66		TO 15 LL	Total/NA
Chlorodifluoromethane	0.49		0.40	0.075	ppb v/v	1.66		TO 15 LL	Total/NA
Chloroform	0.091	J	0.40	0.075	ppb v/v	1.66		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1.66		TO 15 LL	Total/NA
Ethylbenzene	0.78		0.40	0.14	ppb v/v	1.66		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1.66		TO 15 LL	Total/NA
Toluene	32		0.60	0.60	ppb v/v	1.66		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1.66		TO 15 LL	Total/NA
Xylenes, Total	3.7		0.80	0.12	ppb v/v	1.66		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.0	J	1.3	0.37	ug/m3	1.66		TO 15 LL	Total/NA
Carbon tetrachloride	0.47	J	2.5	0.47	ug/m3	1.66		TO 15 LL	Total/NA
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3	1.66		TO 15 LL	Total/NA
Chloroform	0.45	J	2.0	0.37	ug/m3	1.66		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1.66		TO 15 LL	Total/NA
Ethylbenzene	3.4		1.7	0.59	ug/m3	1.66		TO 15 LL	Total/NA
Methylene Chloride	3.5	J	6.9	2.3	ug/m3	1.66		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-117-A-26 (Continued)

Lab Sample ID: 140-14386-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	120		2.3	2.3	ug/m3	1.66		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.72	J	2.0	0.61	ug/m3	1.66		TO 15 LL	Total/NA
Xylenes, Total	16		3.5	0.52	ug/m3	1.66		TO 15 LL	Total/NA

Client Sample ID: IA-078-A-26

Lab Sample ID: 140-14386-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.31	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.59		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.10	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.5		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.5	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	23		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.079	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	7.3		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.98	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.1		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.49	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	6.6		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	86		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.43	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.93	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	32		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-136-A-26

Lab Sample ID: 140-14386-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.27	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	2.9		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.0		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	36		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.12	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.31	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	13		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	5.7	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.3	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	13		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	7.1		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	130		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-136-A-26 (Continued)

Lab Sample ID: 140-14386-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.65	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.5	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	57		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-076-A-26

Lab Sample ID: 140-14386-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.79		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.086	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	2.2		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.4		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.50		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	32		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.11	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.33	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	11		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.42	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	9.7		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	8.2		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	3.4		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	120		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.58	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.6	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	49		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-075-A-26

Lab Sample ID: 140-14386-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.32	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.78		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.5		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.080	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	21		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	7.4		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.0	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.7		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	6.3		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.54	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-075-A-26 (Continued)

Lab Sample ID: 140-14386-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	80		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.71	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	32		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-021-A-26

Lab Sample ID: 140-14386-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.24	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.99		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.11	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.8		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.7	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Naphthalene	0.21		0.20	0.20	ppb v/v	1		TO 15 LL	Total/NA
Toluene	22		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.13	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	8.9		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.78	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.52	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	7.8		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Naphthalene	1.1		1.0	1.0	ug/m3	1		TO 15 LL	Total/NA
Toluene	85		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.70	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.1	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	39		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-178-MB-3

Lab Sample ID: 140-14386-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.42		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.25	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.63		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.56	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.0	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.1	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.79	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.4	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-138-A-26

Lab Sample ID: 140-14386-1

Date Collected: 02/21/19 16:54

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.22	J	0.40	0.12	ppb v/v			02/25/19 17:10	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 17:10	1
Chlorodifluoromethane	0.43	CI	0.40	0.075	ppb v/v			02/25/19 17:10	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 17:10	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 17:10	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/25/19 17:10	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 17:10	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 17:10	1
1,1-Dichloroethene	0.16	J	0.40	0.070	ppb v/v			02/25/19 17:10	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 17:10	1
Methylene Chloride	1.5	J	2.0	0.65	ppb v/v			02/25/19 17:10	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 17:10	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 17:10	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 17:10	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 17:10	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 17:10	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 17:10	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 17:10	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 17:10	1
Trichloroethene	0.54		0.20	0.070	ppb v/v			02/25/19 17:10	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 17:10	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 17:10	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 17:10	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 17:10	1
Xylenes, Total	0.59	J	0.80	0.12	ppb v/v			02/25/19 17:10	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.69	J	1.3	0.37	ug/m3			02/25/19 17:10	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 17:10	1
Chlorodifluoromethane	1.5	CI	1.4	0.27	ug/m3			02/25/19 17:10	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 17:10	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 17:10	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/25/19 17:10	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 17:10	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 17:10	1
1,1-Dichloroethene	0.65	J	1.6	0.28	ug/m3			02/25/19 17:10	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 17:10	1
Methylene Chloride	5.2	J	6.9	2.3	ug/m3			02/25/19 17:10	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 17:10	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 17:10	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 17:10	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 17:10	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 17:10	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 17:10	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 17:10	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 17:10	1
Trichloroethene	2.9		1.1	0.38	ug/m3			02/25/19 17:10	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 17:10	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 17:10	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-138-A-26

Lab Sample ID: 140-14386-1

Date Collected: 02/21/19 16:54

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 17:10	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 17:10	1
Xylenes, Total	2.6	J	3.5	0.52	ug/m3			02/25/19 17:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/25/19 17:10	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-093-A-26

Lab Sample ID: 140-14386-2

Date Collected: 02/21/19 16:56

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.21	J	0.40	0.12	ppb v/v			02/25/19 17:59	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 17:59	1
Chlorodifluoromethane	0.51	CI	0.40	0.075	ppb v/v			02/25/19 17:59	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 17:59	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 17:59	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/25/19 17:59	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 17:59	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 17:59	1
1,1-Dichloroethene	0.22	J	0.40	0.070	ppb v/v			02/25/19 17:59	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 17:59	1
Methylene Chloride	0.95	J	2.0	0.65	ppb v/v			02/25/19 17:59	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 17:59	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 17:59	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 17:59	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 17:59	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 17:59	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 17:59	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 17:59	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 17:59	1
Trichloroethene	0.74		0.20	0.070	ppb v/v			02/25/19 17:59	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 17:59	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 17:59	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 17:59	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 17:59	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/25/19 17:59	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.68	J	1.3	0.37	ug/m3			02/25/19 17:59	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 17:59	1
Chlorodifluoromethane	1.8	CI	1.4	0.27	ug/m3			02/25/19 17:59	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 17:59	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 17:59	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/25/19 17:59	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 17:59	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 17:59	1
1,1-Dichloroethene	0.86	J	1.6	0.28	ug/m3			02/25/19 17:59	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 17:59	1
Methylene Chloride	3.3	J	6.9	2.3	ug/m3			02/25/19 17:59	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 17:59	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 17:59	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 17:59	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 17:59	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 17:59	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 17:59	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 17:59	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 17:59	1
Trichloroethene	4.0		1.1	0.38	ug/m3			02/25/19 17:59	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 17:59	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 17:59	1

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-093-A-26

Lab Sample ID: 140-14386-2

Date Collected: 02/21/19 16:56

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 17:59	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 17:59	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/25/19 17:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/25/19 17:59	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-174-A-26

Lab Sample ID: 140-14386-3

Date Collected: 02/21/19 16:55

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.19	J	0.40	0.12	ppb v/v			02/25/19 18:48	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 18:48	1
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v			02/25/19 18:48	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 18:48	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 18:48	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/25/19 18:48	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 18:48	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 18:48	1
1,1-Dichloroethene	0.31	J	0.40	0.070	ppb v/v			02/25/19 18:48	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 18:48	1
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			02/25/19 18:48	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 18:48	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 18:48	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 18:48	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 18:48	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 18:48	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 18:48	1
1,1,1-Trichloroethane	0.060	J	0.40	0.060	ppb v/v			02/25/19 18:48	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 18:48	1
Trichloroethene	1.3		0.20	0.070	ppb v/v			02/25/19 18:48	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 18:48	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 18:48	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 18:48	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 18:48	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/25/19 18:48	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.60	J	1.3	0.37	ug/m3			02/25/19 18:48	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 18:48	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/25/19 18:48	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 18:48	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 18:48	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/25/19 18:48	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 18:48	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 18:48	1
1,1-Dichloroethene	1.2	J	1.6	0.28	ug/m3			02/25/19 18:48	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 18:48	1
Methylene Chloride	3.5	J	6.9	2.3	ug/m3			02/25/19 18:48	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 18:48	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 18:48	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 18:48	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 18:48	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 18:48	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 18:48	1
1,1,1-Trichloroethane	0.33	J	2.2	0.33	ug/m3			02/25/19 18:48	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 18:48	1
Trichloroethene	7.0		1.1	0.38	ug/m3			02/25/19 18:48	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 18:48	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 18:48	1

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-174-A-26

Lab Sample ID: 140-14386-3

Date Collected: 02/21/19 16:55

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 18:48	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 18:48	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/25/19 18:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/25/19 18:48	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-018-A-26

Lab Sample ID: 140-14386-4

Date Collected: 02/21/19 16:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.30	J	0.40	0.12	ppb v/v			02/25/19 19:37	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 19:37	1
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v			02/25/19 19:37	1
Chloroform	0.12	J	0.40	0.075	ppb v/v			02/25/19 19:37	1
cis-1,2-Dichloroethene	0.18	J	0.40	0.12	ppb v/v			02/25/19 19:37	1
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v			02/25/19 19:37	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 19:37	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 19:37	1
1,1-Dichloroethene	0.44		0.40	0.070	ppb v/v			02/25/19 19:37	1
Ethylbenzene	0.14	J	0.40	0.14	ppb v/v			02/25/19 19:37	1
Methylene Chloride	1.7	J	2.0	0.65	ppb v/v			02/25/19 19:37	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 19:37	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 19:37	1
Tetrachloroethene	0.13	J	0.40	0.080	ppb v/v			02/25/19 19:37	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 19:37	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 19:37	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 19:37	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 19:37	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 19:37	1
Trichloroethene	0.63		0.20	0.070	ppb v/v			02/25/19 19:37	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 19:37	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 19:37	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 19:37	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 19:37	1
Xylenes, Total	0.57	J	0.80	0.12	ppb v/v			02/25/19 19:37	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.95	J	1.3	0.37	ug/m3			02/25/19 19:37	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 19:37	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/25/19 19:37	1
Chloroform	0.61	J	2.0	0.37	ug/m3			02/25/19 19:37	1
cis-1,2-Dichloroethene	0.70	J	1.6	0.48	ug/m3			02/25/19 19:37	1
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3			02/25/19 19:37	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 19:37	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 19:37	1
1,1-Dichloroethene	1.8		1.6	0.28	ug/m3			02/25/19 19:37	1
Ethylbenzene	0.60	J	1.7	0.59	ug/m3			02/25/19 19:37	1
Methylene Chloride	5.9	J	6.9	2.3	ug/m3			02/25/19 19:37	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 19:37	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 19:37	1
Tetrachloroethene	0.87	J	2.7	0.54	ug/m3			02/25/19 19:37	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 19:37	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 19:37	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 19:37	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 19:37	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 19:37	1
Trichloroethene	3.4		1.1	0.38	ug/m3			02/25/19 19:37	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 19:37	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 19:37	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-018-A-26

Lab Sample ID: 140-14386-4

Date Collected: 02/21/19 16:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 19:37	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 19:37	1
Xylenes, Total	2.5	J	3.5	0.52	ug/m3			02/25/19 19:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/25/19 19:37	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-DUP03-A-26

Lab Sample ID: 140-14386-5

Date Collected: 02/21/19 16:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.26	J	0.40	0.12	ppb v/v			02/25/19 20:26	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 20:26	1
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/25/19 20:26	1
Chloroform	0.13	J	0.40	0.075	ppb v/v			02/25/19 20:26	1
cis-1,2-Dichloroethene	0.19	J	0.40	0.12	ppb v/v			02/25/19 20:26	1
Dichlorodifluoromethane	0.31	J	0.40	0.14	ppb v/v			02/25/19 20:26	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 20:26	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 20:26	1
1,1-Dichloroethene	0.44		0.40	0.070	ppb v/v			02/25/19 20:26	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 20:26	1
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v			02/25/19 20:26	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 20:26	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 20:26	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 20:26	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 20:26	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 20:26	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 20:26	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 20:26	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 20:26	1
Trichloroethene	0.65		0.20	0.070	ppb v/v			02/25/19 20:26	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 20:26	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 20:26	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 20:26	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 20:26	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/25/19 20:26	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.83	J	1.3	0.37	ug/m3			02/25/19 20:26	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 20:26	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/25/19 20:26	1
Chloroform	0.62	J	2.0	0.37	ug/m3			02/25/19 20:26	1
cis-1,2-Dichloroethene	0.76	J	1.6	0.48	ug/m3			02/25/19 20:26	1
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3			02/25/19 20:26	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 20:26	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 20:26	1
1,1-Dichloroethene	1.7		1.6	0.28	ug/m3			02/25/19 20:26	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 20:26	1
Methylene Chloride	5.0	J	6.9	2.3	ug/m3			02/25/19 20:26	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 20:26	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 20:26	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 20:26	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 20:26	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 20:26	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 20:26	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 20:26	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 20:26	1
Trichloroethene	3.5		1.1	0.38	ug/m3			02/25/19 20:26	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 20:26	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 20:26	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-DUP03-A-26

Lab Sample ID: 140-14386-5

Date Collected: 02/21/19 16:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 20:26	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 20:26	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/25/19 20:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/25/19 20:26	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-015-A-26

Lab Sample ID: 140-14386-6

Date Collected: 02/21/19 17:04

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.31	J	0.40	0.12	ppb v/v			02/25/19 21:14	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 21:14	1
Chlorodifluoromethane	0.46	CI	0.40	0.075	ppb v/v			02/25/19 21:14	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 21:14	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 21:14	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/25/19 21:14	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 21:14	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 21:14	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/25/19 21:14	1
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v			02/25/19 21:14	1
Methylene Chloride	0.98	J	2.0	0.65	ppb v/v			02/25/19 21:14	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 21:14	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 21:14	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 21:14	1
Toluene	1.3		0.60	0.60	ppb v/v			02/25/19 21:14	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 21:14	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 21:14	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 21:14	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 21:14	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/25/19 21:14	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 21:14	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 21:14	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 21:14	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 21:14	1
Xylenes, Total	0.81		0.80	0.12	ppb v/v			02/25/19 21:14	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	J	1.3	0.37	ug/m3			02/25/19 21:14	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 21:14	1
Chlorodifluoromethane	1.6	CI	1.4	0.27	ug/m3			02/25/19 21:14	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 21:14	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 21:14	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/25/19 21:14	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 21:14	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 21:14	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/25/19 21:14	1
Ethylbenzene	0.64	J	1.7	0.59	ug/m3			02/25/19 21:14	1
Methylene Chloride	3.4	J	6.9	2.3	ug/m3			02/25/19 21:14	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 21:14	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 21:14	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 21:14	1
Toluene	5.0		2.3	2.3	ug/m3			02/25/19 21:14	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 21:14	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 21:14	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 21:14	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 21:14	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/25/19 21:14	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 21:14	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 21:14	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-015-A-26

Lab Sample ID: 140-14386-6

Date Collected: 02/21/19 17:04

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 21:14	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 21:14	1
Xylenes, Total	3.5		3.5	0.52	ug/m3			02/25/19 21:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/25/19 21:14	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-118-A-26

Lab Sample ID: 140-14386-7

Date Collected: 02/21/19 17:05

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.36	J	0.40	0.12	ppb v/v			02/25/19 22:03	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 22:03	1
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v			02/25/19 22:03	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 22:03	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 22:03	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/25/19 22:03	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 22:03	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 22:03	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/25/19 22:03	1
Ethylbenzene	0.20	J	0.40	0.14	ppb v/v			02/25/19 22:03	1
Methylene Chloride	1.6	J	2.0	0.65	ppb v/v			02/25/19 22:03	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 22:03	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 22:03	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 22:03	1
Toluene	1.7		0.60	0.60	ppb v/v			02/25/19 22:03	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 22:03	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 22:03	1
1,1,1-Trichloroethane	0.15	J	0.40	0.060	ppb v/v			02/25/19 22:03	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 22:03	1
Trichloroethene	0.38		0.20	0.070	ppb v/v			02/25/19 22:03	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 22:03	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 22:03	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 22:03	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 22:03	1
Xylenes, Total	1.0		0.80	0.12	ppb v/v			02/25/19 22:03	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.2	J	1.3	0.37	ug/m3			02/25/19 22:03	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 22:03	1
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3			02/25/19 22:03	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 22:03	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 22:03	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/25/19 22:03	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 22:03	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 22:03	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/25/19 22:03	1
Ethylbenzene	0.89	J	1.7	0.59	ug/m3			02/25/19 22:03	1
Methylene Chloride	5.5	J	6.9	2.3	ug/m3			02/25/19 22:03	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 22:03	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 22:03	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 22:03	1
Toluene	6.6		2.3	2.3	ug/m3			02/25/19 22:03	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 22:03	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 22:03	1
1,1,1-Trichloroethane	0.81	J	2.2	0.33	ug/m3			02/25/19 22:03	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 22:03	1
Trichloroethene	2.0		1.1	0.38	ug/m3			02/25/19 22:03	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 22:03	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 22:03	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-118-A-26

Lab Sample ID: 140-14386-7

Date Collected: 02/21/19 17:05

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 22:03	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 22:03	1
Xylenes, Total	4.5		3.5	0.52	ug/m3			02/25/19 22:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 22:03	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-168-A-26

Lab Sample ID: 140-14386-8

Date Collected: 02/21/19 17:28

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.34	J	0.40	0.12	ppb v/v			02/25/19 22:53	1.57
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 22:53	1.57
Chlorodifluoromethane	0.83		0.40	0.075	ppb v/v			02/25/19 22:53	1.57
Chloroform	0.090	J	0.40	0.075	ppb v/v			02/25/19 22:53	1.57
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 22:53	1.57
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v			02/25/19 22:53	1.57
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 22:53	1.57
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 22:53	1.57
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/25/19 22:53	1.57
Ethylbenzene	2.5		0.40	0.14	ppb v/v			02/25/19 22:53	1.57
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v			02/25/19 22:53	1.57
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 22:53	1.57
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 22:53	1.57
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 22:53	1.57
Toluene	29		0.60	0.60	ppb v/v			02/25/19 22:53	1.57
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 22:53	1.57
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 22:53	1.57
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 22:53	1.57
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 22:53	1.57
Trichloroethene	0.12	J	0.20	0.070	ppb v/v			02/25/19 22:53	1.57
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 22:53	1.57
1,2,4-Trimethylbenzene	0.25	J	0.40	0.13	ppb v/v			02/25/19 22:53	1.57
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 22:53	1.57
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 22:53	1.57
Xylenes, Total	12		0.80	0.12	ppb v/v			02/25/19 22:53	1.57

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			02/25/19 22:53	1.57
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 22:53	1.57
Chlorodifluoromethane	2.9		1.4	0.27	ug/m3			02/25/19 22:53	1.57
Chloroform	0.44	J	2.0	0.37	ug/m3			02/25/19 22:53	1.57
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 22:53	1.57
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/25/19 22:53	1.57
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 22:53	1.57
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 22:53	1.57
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/25/19 22:53	1.57
Ethylbenzene	11		1.7	0.59	ug/m3			02/25/19 22:53	1.57
Methylene Chloride	4.7	J	6.9	2.3	ug/m3			02/25/19 22:53	1.57
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 22:53	1.57
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 22:53	1.57
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 22:53	1.57
Toluene	110		2.3	2.3	ug/m3			02/25/19 22:53	1.57
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 22:53	1.57
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 22:53	1.57
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 22:53	1.57
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 22:53	1.57
Trichloroethene	0.67	J	1.1	0.38	ug/m3			02/25/19 22:53	1.57
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 22:53	1.57
1,2,4-Trimethylbenzene	1.2	J	2.0	0.61	ug/m3			02/25/19 22:53	1.57

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-168-A-26

Lab Sample ID: 140-14386-8

Date Collected: 02/21/19 17:28

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 22:53	1.57
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 22:53	1.57
Xylenes, Total	53		3.5	0.52	ug/m3			02/25/19 22:53	1.57
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 22:53	1.57

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-081-A-26

Lab Sample ID: 140-14386-9

Date Collected: 02/21/19 17:12

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.34	J	0.40	0.12	ppb v/v			02/25/19 23:42	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 23:42	1
Chlorodifluoromethane	0.86	CI	0.40	0.075	ppb v/v			02/25/19 23:42	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 23:42	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 23:42	1
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v			02/25/19 23:42	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/25/19 23:42	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 23:42	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/25/19 23:42	1
Ethylbenzene	0.53		0.40	0.14	ppb v/v			02/25/19 23:42	1
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			02/25/19 23:42	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 23:42	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/25/19 23:42	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 23:42	1
Toluene	17		0.60	0.60	ppb v/v			02/25/19 23:42	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 23:42	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 23:42	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 23:42	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 23:42	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/25/19 23:42	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 23:42	1
1,2,4-Trimethylbenzene	0.13	J	0.40	0.13	ppb v/v			02/25/19 23:42	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 23:42	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 23:42	1
Xylenes, Total	2.6		0.80	0.12	ppb v/v			02/25/19 23:42	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			02/25/19 23:42	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 23:42	1
Chlorodifluoromethane	3.0	CI	1.4	0.27	ug/m3			02/25/19 23:42	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 23:42	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 23:42	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/25/19 23:42	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/25/19 23:42	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 23:42	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/25/19 23:42	1
Ethylbenzene	2.3		1.7	0.59	ug/m3			02/25/19 23:42	1
Methylene Chloride	3.6	J	6.9	2.3	ug/m3			02/25/19 23:42	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 23:42	1
Naphthalene	ND		1.0	1.0	ug/m3			02/25/19 23:42	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 23:42	1
Toluene	63		2.3	2.3	ug/m3			02/25/19 23:42	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 23:42	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 23:42	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 23:42	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 23:42	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/25/19 23:42	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 23:42	1
1,2,4-Trimethylbenzene	0.66	J	2.0	0.61	ug/m3			02/25/19 23:42	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-081-A-26

Lab Sample ID: 140-14386-9

Date Collected: 02/21/19 17:12

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/25/19 23:42	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 23:42	1
Xylenes, Total	11		3.5	0.52	ug/m3			02/25/19 23:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/25/19 23:42	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-079-A-26

Lab Sample ID: 140-14386-10

Date Collected: 02/21/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.34	J	0.40	0.12	ppb v/v			02/26/19 00:31	1
Carbon tetrachloride	0.076	J	0.40	0.075	ppb v/v			02/26/19 00:31	1
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v			02/26/19 00:31	1
Chloroform	0.088	J	0.40	0.075	ppb v/v			02/26/19 00:31	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 00:31	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/26/19 00:31	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 00:31	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 00:31	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 00:31	1
Ethylbenzene	0.52		0.40	0.14	ppb v/v			02/26/19 00:31	1
Methylene Chloride	1.8	J	2.0	0.65	ppb v/v			02/26/19 00:31	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 00:31	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 00:31	1
Tetrachloroethene	0.36	J	0.40	0.080	ppb v/v			02/26/19 00:31	1
Toluene	14		0.60	0.60	ppb v/v			02/26/19 00:31	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 00:31	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 00:31	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 00:31	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 00:31	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 00:31	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 00:31	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 00:31	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 00:31	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 00:31	1
Xylenes, Total	2.5		0.80	0.12	ppb v/v			02/26/19 00:31	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			02/26/19 00:31	1
Carbon tetrachloride	0.48	J	2.5	0.47	ug/m3			02/26/19 00:31	1
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3			02/26/19 00:31	1
Chloroform	0.43	J	2.0	0.37	ug/m3			02/26/19 00:31	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 00:31	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 00:31	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 00:31	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 00:31	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 00:31	1
Ethylbenzene	2.3		1.7	0.59	ug/m3			02/26/19 00:31	1
Methylene Chloride	6.3	J	6.9	2.3	ug/m3			02/26/19 00:31	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 00:31	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 00:31	1
Tetrachloroethene	2.4	J	2.7	0.54	ug/m3			02/26/19 00:31	1
Toluene	54		2.3	2.3	ug/m3			02/26/19 00:31	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 00:31	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 00:31	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 00:31	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 00:31	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 00:31	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 00:31	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 00:31	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-079-A-26

Lab Sample ID: 140-14386-10

Date Collected: 02/21/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 00:31	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 00:31	1
Xylenes, Total	11		3.5	0.52	ug/m3			02/26/19 00:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 00:31	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-DUP04-A-26

Lab Sample ID: 140-14386-11

Date Collected: 02/21/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.34	J	0.40	0.12	ppb v/v			02/26/19 01:20	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 01:20	1
Chlorodifluoromethane	0.57		0.40	0.075	ppb v/v			02/26/19 01:20	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 01:20	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 01:20	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 01:20	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 01:20	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 01:20	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 01:20	1
Ethylbenzene	0.50		0.40	0.14	ppb v/v			02/26/19 01:20	1
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v			02/26/19 01:20	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 01:20	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 01:20	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 01:20	1
Toluene	15		0.60	0.60	ppb v/v			02/26/19 01:20	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 01:20	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 01:20	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 01:20	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 01:20	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 01:20	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 01:20	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 01:20	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 01:20	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 01:20	1
Xylenes, Total	2.4		0.80	0.12	ppb v/v			02/26/19 01:20	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			02/26/19 01:20	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 01:20	1
Chlorodifluoromethane	2.0		1.4	0.27	ug/m3			02/26/19 01:20	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 01:20	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 01:20	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 01:20	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 01:20	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 01:20	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 01:20	1
Ethylbenzene	2.2		1.7	0.59	ug/m3			02/26/19 01:20	1
Methylene Chloride	4.4	J	6.9	2.3	ug/m3			02/26/19 01:20	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 01:20	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 01:20	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 01:20	1
Toluene	56		2.3	2.3	ug/m3			02/26/19 01:20	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 01:20	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 01:20	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 01:20	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 01:20	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 01:20	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 01:20	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 01:20	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-DUP04-A-26

Lab Sample ID: 140-14386-11

Date Collected: 02/21/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 01:20	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 01:20	1
Xylenes, Total	10		3.5	0.52	ug/m3			02/26/19 01:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 140					02/26/19 01:20	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-117-A-26

Lab Sample ID: 140-14386-12

Date Collected: 02/21/19 17:20

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.33	J	0.40	0.12	ppb v/v			02/26/19 02:09	1.66
Carbon tetrachloride	0.075	J	0.40	0.075	ppb v/v			02/26/19 02:09	1.66
Chlorodifluoromethane	0.49		0.40	0.075	ppb v/v			02/26/19 02:09	1.66
Chloroform	0.091	J	0.40	0.075	ppb v/v			02/26/19 02:09	1.66
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 02:09	1.66
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 02:09	1.66
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 02:09	1.66
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 02:09	1.66
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 02:09	1.66
Ethylbenzene	0.78		0.40	0.14	ppb v/v			02/26/19 02:09	1.66
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			02/26/19 02:09	1.66
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 02:09	1.66
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 02:09	1.66
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 02:09	1.66
Toluene	32		0.60	0.60	ppb v/v			02/26/19 02:09	1.66
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 02:09	1.66
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 02:09	1.66
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 02:09	1.66
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 02:09	1.66
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 02:09	1.66
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 02:09	1.66
1,2,4-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			02/26/19 02:09	1.66
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 02:09	1.66
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 02:09	1.66
Xylenes, Total	3.7		0.80	0.12	ppb v/v			02/26/19 02:09	1.66

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	J	1.3	0.37	ug/m3			02/26/19 02:09	1.66
Carbon tetrachloride	0.47	J	2.5	0.47	ug/m3			02/26/19 02:09	1.66
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3			02/26/19 02:09	1.66
Chloroform	0.45	J	2.0	0.37	ug/m3			02/26/19 02:09	1.66
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 02:09	1.66
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 02:09	1.66
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 02:09	1.66
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 02:09	1.66
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 02:09	1.66
Ethylbenzene	3.4		1.7	0.59	ug/m3			02/26/19 02:09	1.66
Methylene Chloride	3.5	J	6.9	2.3	ug/m3			02/26/19 02:09	1.66
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 02:09	1.66
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 02:09	1.66
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 02:09	1.66
Toluene	120		2.3	2.3	ug/m3			02/26/19 02:09	1.66
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 02:09	1.66
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 02:09	1.66
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 02:09	1.66
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 02:09	1.66
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 02:09	1.66
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 02:09	1.66
1,2,4-Trimethylbenzene	0.72	J	2.0	0.61	ug/m3			02/26/19 02:09	1.66

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-117-A-26

Lab Sample ID: 140-14386-12

Date Collected: 02/21/19 17:20

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 02:09	1.66
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 02:09	1.66
Xylenes, Total	16		3.5	0.52	ug/m3			02/26/19 02:09	1.66
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 140					02/26/19 02:09	1.66

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-078-A-26

Lab Sample ID: 140-14386-13

Date Collected: 02/21/19 17:23

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.31	J	0.40	0.12	ppb v/v			02/26/19 02:58	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 02:58	1
Chlorodifluoromethane	0.59		0.40	0.075	ppb v/v			02/26/19 02:58	1
Chloroform	0.10	J	0.40	0.075	ppb v/v			02/26/19 02:58	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 02:58	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 02:58	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 02:58	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 02:58	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 02:58	1
Ethylbenzene	1.5		0.40	0.14	ppb v/v			02/26/19 02:58	1
Methylene Chloride	1.5	J	2.0	0.65	ppb v/v			02/26/19 02:58	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 02:58	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 02:58	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 02:58	1
Toluene	23		0.60	0.60	ppb v/v			02/26/19 02:58	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 02:58	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 02:58	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 02:58	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 02:58	1
Trichloroethene	0.079	J	0.20	0.070	ppb v/v			02/26/19 02:58	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 02:58	1
1,2,4-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v			02/26/19 02:58	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 02:58	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 02:58	1
Xylenes, Total	7.3		0.80	0.12	ppb v/v			02/26/19 02:58	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.98	J	1.3	0.37	ug/m3			02/26/19 02:58	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 02:58	1
Chlorodifluoromethane	2.1		1.4	0.27	ug/m3			02/26/19 02:58	1
Chloroform	0.49	J	2.0	0.37	ug/m3			02/26/19 02:58	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 02:58	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 02:58	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 02:58	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 02:58	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 02:58	1
Ethylbenzene	6.6		1.7	0.59	ug/m3			02/26/19 02:58	1
Methylene Chloride	5.3	J	6.9	2.3	ug/m3			02/26/19 02:58	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 02:58	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 02:58	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 02:58	1
Toluene	86		2.3	2.3	ug/m3			02/26/19 02:58	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 02:58	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 02:58	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 02:58	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 02:58	1
Trichloroethene	0.43	J	1.1	0.38	ug/m3			02/26/19 02:58	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 02:58	1
1,2,4-Trimethylbenzene	0.93	J	2.0	0.61	ug/m3			02/26/19 02:58	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-078-A-26

Lab Sample ID: 140-14386-13

Date Collected: 02/21/19 17:23

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 02:58	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 02:58	1
Xylenes, Total	32		3.5	0.52	ug/m3			02/26/19 02:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 02:58	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-136-A-26

Lab Sample ID: 140-14386-14

Date Collected: 02/21/19 17:25

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.34	J	0.40	0.12	ppb v/v			02/26/19 03:47	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 03:47	1
Chlorodifluoromethane	1.6	CI	0.40	0.075	ppb v/v			02/26/19 03:47	1
Chloroform	0.27	J	0.40	0.075	ppb v/v			02/26/19 03:47	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 03:47	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 03:47	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 03:47	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 03:47	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 03:47	1
Ethylbenzene	2.9		0.40	0.14	ppb v/v			02/26/19 03:47	1
Methylene Chloride	2.0		2.0	0.65	ppb v/v			02/26/19 03:47	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 03:47	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 03:47	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 03:47	1
Toluene	36		0.60	0.60	ppb v/v			02/26/19 03:47	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 03:47	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 03:47	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 03:47	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 03:47	1
Trichloroethene	0.12	J	0.20	0.070	ppb v/v			02/26/19 03:47	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 03:47	1
1,2,4-Trimethylbenzene	0.31	J	0.40	0.13	ppb v/v			02/26/19 03:47	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 03:47	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 03:47	1
Xylenes, Total	13		0.80	0.12	ppb v/v			02/26/19 03:47	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			02/26/19 03:47	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 03:47	1
Chlorodifluoromethane	5.7	CI	1.4	0.27	ug/m3			02/26/19 03:47	1
Chloroform	1.3	J	2.0	0.37	ug/m3			02/26/19 03:47	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 03:47	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 03:47	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 03:47	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 03:47	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 03:47	1
Ethylbenzene	13		1.7	0.59	ug/m3			02/26/19 03:47	1
Methylene Chloride	7.1		6.9	2.3	ug/m3			02/26/19 03:47	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 03:47	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 03:47	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 03:47	1
Toluene	130		2.3	2.3	ug/m3			02/26/19 03:47	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 03:47	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 03:47	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 03:47	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 03:47	1
Trichloroethene	0.65	J	1.1	0.38	ug/m3			02/26/19 03:47	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 03:47	1
1,2,4-Trimethylbenzene	1.5	J	2.0	0.61	ug/m3			02/26/19 03:47	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-136-A-26

Lab Sample ID: 140-14386-14

Date Collected: 02/21/19 17:25

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 03:47	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 03:47	1
Xylenes, Total	57		3.5	0.52	ug/m3			02/26/19 03:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 03:47	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-076-A-26

Lab Sample ID: 140-14386-15

Date Collected: 02/21/19 17:27

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.34	J	0.40	0.12	ppb v/v			02/26/19 04:36	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 04:36	1
Chlorodifluoromethane	0.79		0.40	0.075	ppb v/v			02/26/19 04:36	1
Chloroform	0.086	J	0.40	0.075	ppb v/v			02/26/19 04:36	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 04:36	1
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v			02/26/19 04:36	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 04:36	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 04:36	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 04:36	1
Ethylbenzene	2.2		0.40	0.14	ppb v/v			02/26/19 04:36	1
Methylene Chloride	2.4		2.0	0.65	ppb v/v			02/26/19 04:36	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 04:36	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 04:36	1
Tetrachloroethene	0.50		0.40	0.080	ppb v/v			02/26/19 04:36	1
Toluene	32		0.60	0.60	ppb v/v			02/26/19 04:36	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 04:36	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 04:36	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 04:36	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 04:36	1
Trichloroethene	0.11	J	0.20	0.070	ppb v/v			02/26/19 04:36	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 04:36	1
1,2,4-Trimethylbenzene	0.33	J	0.40	0.13	ppb v/v			02/26/19 04:36	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 04:36	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 04:36	1
Xylenes, Total	11		0.80	0.12	ppb v/v			02/26/19 04:36	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			02/26/19 04:36	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 04:36	1
Chlorodifluoromethane	2.8		1.4	0.27	ug/m3			02/26/19 04:36	1
Chloroform	0.42	J	2.0	0.37	ug/m3			02/26/19 04:36	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 04:36	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/26/19 04:36	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 04:36	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 04:36	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 04:36	1
Ethylbenzene	9.7		1.7	0.59	ug/m3			02/26/19 04:36	1
Methylene Chloride	8.2		6.9	2.3	ug/m3			02/26/19 04:36	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 04:36	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 04:36	1
Tetrachloroethene	3.4		2.7	0.54	ug/m3			02/26/19 04:36	1
Toluene	120		2.3	2.3	ug/m3			02/26/19 04:36	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 04:36	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 04:36	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 04:36	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 04:36	1
Trichloroethene	0.58	J	1.1	0.38	ug/m3			02/26/19 04:36	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 04:36	1
1,2,4-Trimethylbenzene	1.6	J	2.0	0.61	ug/m3			02/26/19 04:36	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-076-A-26

Lab Sample ID: 140-14386-15

Date Collected: 02/21/19 17:27

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 04:36	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 04:36	1
Xylenes, Total	49		3.5	0.52	ug/m3			02/26/19 04:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 04:36	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-075-A-26

Lab Sample ID: 140-14386-16

Date Collected: 02/21/19 17:31

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.32	J	0.40	0.12	ppb v/v			02/26/19 05:25	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 05:25	1
Chlorodifluoromethane	0.78		0.40	0.075	ppb v/v			02/26/19 05:25	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 05:25	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 05:25	1
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v			02/26/19 05:25	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 05:25	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 05:25	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 05:25	1
Ethylbenzene	1.5		0.40	0.14	ppb v/v			02/26/19 05:25	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/26/19 05:25	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 05:25	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 05:25	1
Tetrachloroethene	0.080	J	0.40	0.080	ppb v/v			02/26/19 05:25	1
Toluene	21		0.60	0.60	ppb v/v			02/26/19 05:25	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 05:25	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 05:25	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 05:25	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 05:25	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 05:25	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 05:25	1
1,2,4-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			02/26/19 05:25	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 05:25	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 05:25	1
Xylenes, Total	7.4		0.80	0.12	ppb v/v			02/26/19 05:25	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	J	1.3	0.37	ug/m3			02/26/19 05:25	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 05:25	1
Chlorodifluoromethane	2.7		1.4	0.27	ug/m3			02/26/19 05:25	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 05:25	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 05:25	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/26/19 05:25	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 05:25	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 05:25	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 05:25	1
Ethylbenzene	6.3		1.7	0.59	ug/m3			02/26/19 05:25	1
Methylene Chloride	3.8	J	6.9	2.3	ug/m3			02/26/19 05:25	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 05:25	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 05:25	1
Tetrachloroethene	0.54	J	2.7	0.54	ug/m3			02/26/19 05:25	1
Toluene	80		2.3	2.3	ug/m3			02/26/19 05:25	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 05:25	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 05:25	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 05:25	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 05:25	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 05:25	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 05:25	1
1,2,4-Trimethylbenzene	0.71	J	2.0	0.61	ug/m3			02/26/19 05:25	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-075-A-26

Lab Sample ID: 140-14386-16

Date Collected: 02/21/19 17:31

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 05:25	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 05:25	1
Xylenes, Total	32		3.5	0.52	ug/m3			02/26/19 05:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 05:25	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-021-A-26

Lab Sample ID: 140-14386-17

Date Collected: 02/21/19 17:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.24	J	0.40	0.12	ppb v/v			02/26/19 13:42	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 13:42	1
Chlorodifluoromethane	0.99		0.40	0.075	ppb v/v			02/26/19 13:42	1
Chloroform	0.11	J	0.40	0.075	ppb v/v			02/26/19 13:42	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 13:42	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/26/19 13:42	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 13:42	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 13:42	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 13:42	1
Ethylbenzene	1.8		0.40	0.14	ppb v/v			02/26/19 13:42	1
Methylene Chloride	1.7	J	2.0	0.65	ppb v/v			02/26/19 13:42	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 13:42	1
Naphthalene	0.21		0.20	0.20	ppb v/v			02/26/19 13:42	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 13:42	1
Toluene	22		0.60	0.60	ppb v/v			02/26/19 13:42	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 13:42	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 13:42	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 13:42	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 13:42	1
Trichloroethene	0.13	J	0.20	0.070	ppb v/v			02/26/19 13:42	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 13:42	1
1,2,4-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v			02/26/19 13:42	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 13:42	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 13:42	1
Xylenes, Total	8.9		0.80	0.12	ppb v/v			02/26/19 13:42	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.78	J	1.3	0.37	ug/m3			02/26/19 13:42	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 13:42	1
Chlorodifluoromethane	3.5		1.4	0.27	ug/m3			02/26/19 13:42	1
Chloroform	0.52	J	2.0	0.37	ug/m3			02/26/19 13:42	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 13:42	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 13:42	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 13:42	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 13:42	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 13:42	1
Ethylbenzene	7.8		1.7	0.59	ug/m3			02/26/19 13:42	1
Methylene Chloride	5.9	J	6.9	2.3	ug/m3			02/26/19 13:42	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 13:42	1
Naphthalene	1.1		1.0	1.0	ug/m3			02/26/19 13:42	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 13:42	1
Toluene	85		2.3	2.3	ug/m3			02/26/19 13:42	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 13:42	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 13:42	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 13:42	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 13:42	1
Trichloroethene	0.70	J	1.1	0.38	ug/m3			02/26/19 13:42	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 13:42	1
1,2,4-Trimethylbenzene	1.1	J	2.0	0.61	ug/m3			02/26/19 13:42	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-021-A-26

Lab Sample ID: 140-14386-17

Date Collected: 02/21/19 17:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 13:42	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 13:42	1
Xylenes, Total	39		3.5	0.52	ug/m3			02/26/19 13:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/26/19 13:42	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: SV-178-MB-3

Lab Sample ID: 140-14386-18

Date Collected: 02/21/19 10:58

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 15:56	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 15:56	1
Chlorodifluoromethane	0.42		0.40	0.075	ppb v/v			02/26/19 15:56	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 15:56	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 15:56	1
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v			02/26/19 15:56	1
1,1-Dichloroethane	0.25	J	0.40	0.050	ppb v/v			02/26/19 15:56	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 15:56	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 15:56	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 15:56	1
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v			02/26/19 15:56	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 15:56	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 15:56	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 15:56	1
Toluene	0.63		0.60	0.60	ppb v/v			02/26/19 15:56	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 15:56	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 15:56	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 15:56	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 15:56	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 15:56	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 15:56	1
1,2,4-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v			02/26/19 15:56	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 15:56	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 15:56	1
Xylenes, Total	0.56	J	0.80	0.12	ppb v/v			02/26/19 15:56	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 15:56	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 15:56	1
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3			02/26/19 15:56	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 15:56	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 15:56	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/26/19 15:56	1
1,1-Dichloroethane	1.0	J	1.6	0.20	ug/m3			02/26/19 15:56	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 15:56	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 15:56	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 15:56	1
Methylene Chloride	4.1	J	6.9	2.3	ug/m3			02/26/19 15:56	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 15:56	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 15:56	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 15:56	1
Toluene	2.4		2.3	2.3	ug/m3			02/26/19 15:56	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 15:56	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 15:56	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 15:56	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 15:56	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 15:56	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 15:56	1
1,2,4-Trimethylbenzene	0.79	J	2.0	0.61	ug/m3			02/26/19 15:56	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: SV-178-MB-3

Lab Sample ID: 140-14386-18

Date Collected: 02/21/19 10:58

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 15:56	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 15:56	1
Xylenes, Total	2.4	J	3.5	0.52	ug/m3			02/26/19 15:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		60 - 140					02/26/19 15:56	1

Default Detection Limits

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-14386-1	IA-138-A-26	100
140-14386-2	IA-093-A-26	102
140-14386-3	IA-174-A-26	102
140-14386-4	IA-018-A-26	100
140-14386-5	IA-DUP03-A-26	100
140-14386-6	IA-015-A-26	102
140-14386-7	IA-118-A-26	101
140-14386-8	IA-168-A-26	101
140-14386-9	IA-081-A-26	102
140-14386-10	IA-079-A-26	101
140-14386-11	IA-DUP04-A-26	103
140-14386-12	IA-117-A-26	103
140-14386-13	IA-078-A-26	100
140-14386-14	IA-136-A-26	100
140-14386-15	IA-076-A-26	100
140-14386-16	IA-075-A-26	100
140-14386-17	IA-021-A-26	98
140-14386-18	SV-178-MB-3	97
LCS 140-27908/1002	Lab Control Sample	107
LCS 140-27931/1002	Lab Control Sample	100
MB 140-27908/5	Method Blank	103
MB 140-27931/4	Method Blank	96

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-27908/5
Matrix: Air
Analysis Batch: 27908

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			02/25/19 12:52	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/25/19 12:52	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/25/19 12:52	1
Chloroform	ND		0.080	0.015	ppb v/v			02/25/19 12:52	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/25/19 12:52	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/25/19 12:52	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/25/19 12:52	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/25/19 12:52	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/25/19 12:52	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/25/19 12:52	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/25/19 12:52	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/25/19 12:52	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/25/19 12:52	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/25/19 12:52	1
Toluene	ND		0.12	0.12	ppb v/v			02/25/19 12:52	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/25/19 12:52	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/25/19 12:52	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/25/19 12:52	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/25/19 12:52	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/25/19 12:52	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/25/19 12:52	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/25/19 12:52	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/25/19 12:52	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/25/19 12:52	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/25/19 12:52	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/25/19 12:52	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/25/19 12:52	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/25/19 12:52	1
Chloroform	ND		0.39	0.073	ug/m3			02/25/19 12:52	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/25/19 12:52	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/25/19 12:52	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/25/19 12:52	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/25/19 12:52	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/25/19 12:52	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/25/19 12:52	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/25/19 12:52	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/25/19 12:52	1
Naphthalene	ND		0.21	0.21	ug/m3			02/25/19 12:52	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/25/19 12:52	1
Toluene	ND		0.45	0.45	ug/m3			02/25/19 12:52	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/25/19 12:52	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/25/19 12:52	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/25/19 12:52	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/25/19 12:52	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/25/19 12:52	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/25/19 12:52	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27908/5
Matrix: Air
Analysis Batch: 27908

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/25/19 12:52	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/25/19 12:52	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/25/19 12:52	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/25/19 12:52	1
Surrogate	MB	MB	Limits		Unit	D	Prepared	Analyzed	Dil Fac
%Recovery	Qualifier								
4-Bromofluorobenzene (Surr)	103		60 - 140					02/25/19 12:52	1

Lab Sample ID: LCS 140-27908/1002
Matrix: Air
Analysis Batch: 27908

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.00		ppb v/v		100	70 - 130
Chlorodifluoromethane	2.00	1.82		ppb v/v		91	60 - 140
Chloroform	2.00	1.88		ppb v/v		94	70 - 130
cis-1,2-Dichloroethene	2.00	1.88		ppb v/v		94	70 - 130
Dichlorodifluoromethane	2.00	1.87		ppb v/v		93	60 - 140
1,1-Dichloroethane	2.00	1.87		ppb v/v		94	70 - 130
1,2-Dichloroethane	2.00	1.85		ppb v/v		92	70 - 130
1,1-Dichloroethene	2.00	1.86		ppb v/v		93	70 - 130
Ethylbenzene	2.00	2.06		ppb v/v		103	70 - 130
Methylene Chloride	2.00	1.66		ppb v/v		83	70 - 130
Methyl tert-butyl ether	2.00	1.93		ppb v/v		97	60 - 140
Naphthalene	2.00	1.68		ppb v/v		84	60 - 140
Tetrachloroethene	2.00	2.01		ppb v/v		101	70 - 130
Toluene	2.00	2.02		ppb v/v		101	70 - 130
trans-1,2-Dichloroethene	2.00	1.85		ppb v/v		92	70 - 130
1,2,4-Trichlorobenzene	2.00	1.86		ppb v/v		93	60 - 140
1,1,1-Trichloroethane	2.00	1.88		ppb v/v		94	70 - 130
1,1,2-Trichloroethane	2.00	1.99		ppb v/v		99	70 - 130
Trichloroethene	2.00	1.89		ppb v/v		95	70 - 130
1,2,3-Trimethylbenzene	2.00	2.08		ppb v/v		104	70 - 130
1,2,4-Trimethylbenzene	2.00	2.11		ppb v/v		105	70 - 130
1,3,5-Trimethylbenzene	2.00	2.03		ppb v/v		101	70 - 130
Vinyl chloride	2.00	2.19		ppb v/v		110	70 - 130
Xylenes, Total	6.00	6.41		ppb v/v		107	70 - 130
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	5.94		ug/m3		93	70 - 130
Carbon tetrachloride	13	12.6		ug/m3		100	70 - 130
Chlorodifluoromethane	7.1	6.44		ug/m3		91	60 - 140
Chloroform	9.8	9.17		ug/m3		94	70 - 130
cis-1,2-Dichloroethene	7.9	7.46		ug/m3		94	70 - 130
Dichlorodifluoromethane	9.9	9.23		ug/m3		93	60 - 140
1,1-Dichloroethane	8.1	7.59		ug/m3		94	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27908/1002
Matrix: Air
Analysis Batch: 27908

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	7.48		ug/m3		92	70 - 130
1,1-Dichloroethene	7.9	7.38		ug/m3		93	70 - 130
Ethylbenzene	8.7	8.94		ug/m3		103	70 - 130
Methylene Chloride	6.9	5.78		ug/m3		83	70 - 130
Methyl tert-butyl ether	7.2	6.97		ug/m3		97	60 - 140
Naphthalene	10	8.80		ug/m3		84	60 - 140
Tetrachloroethene	14	13.6		ug/m3		101	70 - 130
Toluene	7.5	7.62		ug/m3		101	70 - 130
trans-1,2-Dichloroethene	7.9	7.32		ug/m3		92	70 - 130
1,2,4-Trichlorobenzene	15	13.8		ug/m3		93	60 - 140
1,1,1-Trichloroethane	11	10.3		ug/m3		94	70 - 130
1,1,2-Trichloroethane	11	10.8		ug/m3		99	70 - 130
Trichloroethene	11	10.2		ug/m3		95	70 - 130
1,2,3-Trimethylbenzene	9.8	10.2		ug/m3		104	70 - 130
1,2,4-Trimethylbenzene	9.8	10.4		ug/m3		105	70 - 130
1,3,5-Trimethylbenzene	9.8	9.96		ug/m3		101	70 - 130
Vinyl chloride	5.1	5.60		ug/m3		110	70 - 130
Xylenes, Total	26	27.8		ug/m3		107	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		60 - 140

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/26/19 12:56	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chloroform	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/26/19 12:56	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/26/19 12:56	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/26/19 12:56	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/26/19 12:56	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/26/19 12:56	1
Toluene	ND		0.12	0.12	ppb v/v			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/26/19 12:56	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/26/19 12:56	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/26/19 12:56	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/26/19 12:56	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/26/19 12:56	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/26/19 12:56	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/26/19 12:56	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/26/19 12:56	1
Chloroform	ND		0.39	0.073	ug/m3			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/26/19 12:56	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/26/19 12:56	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/26/19 12:56	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/26/19 12:56	1
Naphthalene	ND		0.21	0.21	ug/m3			02/26/19 12:56	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/26/19 12:56	1
Toluene	ND		0.45	0.45	ug/m3			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/26/19 12:56	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/26/19 12:56	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/26/19 12:56	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/26/19 12:56	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/26/19 12:56	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/26/19 12:56	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		60 - 140		02/26/19 12:56	1

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.22		ppb v/v		111	70 - 130
Chlorodifluoromethane	2.00	2.02		ppb v/v		101	60 - 140
Chloroform	2.00	2.00		ppb v/v		100	70 - 130
cis-1,2-Dichloroethene	2.00	2.09		ppb v/v		104	70 - 130
Dichlorodifluoromethane	2.00	2.06		ppb v/v		103	60 - 140

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	2.00	2.05		ppb v/v		103	70 - 130
1,2-Dichloroethane	2.00	2.00		ppb v/v		100	70 - 130
1,1-Dichloroethene	2.00	2.14		ppb v/v		107	70 - 130
Ethylbenzene	2.00	2.03		ppb v/v		101	70 - 130
Methylene Chloride	2.00	1.81		ppb v/v		90	70 - 130
Methyl tert-butyl ether	2.00	1.97		ppb v/v		99	60 - 140
Naphthalene	2.00	1.94		ppb v/v		97	60 - 140
Tetrachloroethene	2.00	2.06		ppb v/v		103	70 - 130
Toluene	2.00	2.02		ppb v/v		101	70 - 130
trans-1,2-Dichloroethene	2.00	2.15		ppb v/v		108	70 - 130
1,2,4-Trichlorobenzene	2.00	1.83		ppb v/v		92	60 - 140
1,1,1-Trichloroethane	2.00	2.04		ppb v/v		102	70 - 130
1,1,2-Trichloroethane	2.00	2.11		ppb v/v		105	70 - 130
Trichloroethene	2.00	2.09		ppb v/v		105	70 - 130
1,2,3-Trimethylbenzene	2.00	2.22		ppb v/v		111	70 - 130
1,2,4-Trimethylbenzene	2.00	1.99		ppb v/v		99	70 - 130
1,3,5-Trimethylbenzene	2.00	1.97		ppb v/v		98	70 - 130
Vinyl chloride	2.00	1.97		ppb v/v		98	70 - 130
Xylenes, Total	6.00	6.18		ppb v/v		103	70 - 130
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.61		ug/m3		103	70 - 130
Carbon tetrachloride	13	13.9		ug/m3		111	70 - 130
Chlorodifluoromethane	7.1	7.16		ug/m3		101	60 - 140
Chloroform	9.8	9.78		ug/m3		100	70 - 130
cis-1,2-Dichloroethene	7.9	8.28		ug/m3		104	70 - 130
Dichlorodifluoromethane	9.9	10.2		ug/m3		103	60 - 140
1,1-Dichloroethane	8.1	8.31		ug/m3		103	70 - 130
1,2-Dichloroethane	8.1	8.11		ug/m3		100	70 - 130
1,1-Dichloroethene	7.9	8.50		ug/m3		107	70 - 130
Ethylbenzene	8.7	8.79		ug/m3		101	70 - 130
Methylene Chloride	6.9	6.27		ug/m3		90	70 - 130
Methyl tert-butyl ether	7.2	7.12		ug/m3		99	60 - 140
Naphthalene	10	10.2		ug/m3		97	60 - 140
Tetrachloroethene	14	14.0		ug/m3		103	70 - 130
Toluene	7.5	7.63		ug/m3		101	70 - 130
trans-1,2-Dichloroethene	7.9	8.53		ug/m3		108	70 - 130
1,2,4-Trichlorobenzene	15	13.6		ug/m3		92	60 - 140
1,1,1-Trichloroethane	11	11.1		ug/m3		102	70 - 130
1,1,2-Trichloroethane	11	11.5		ug/m3		105	70 - 130
Trichloroethene	11	11.2		ug/m3		105	70 - 130
1,2,3-Trimethylbenzene	9.8	10.9		ug/m3		111	70 - 130
1,2,4-Trimethylbenzene	9.8	9.78		ug/m3		99	70 - 130
1,3,5-Trimethylbenzene	9.8	9.68		ug/m3		98	70 - 130
Vinyl chloride	5.1	5.03		ug/m3		98	70 - 130
Xylenes, Total	26	26.8		ug/m3		103	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>LCS</i> <i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	100		60 - 140

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Air - GC/MS VOA

Analysis Batch: 27908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14386-1	IA-138-A-26	Total/NA	Air	TO 15 LL	
140-14386-2	IA-093-A-26	Total/NA	Air	TO 15 LL	
140-14386-3	IA-174-A-26	Total/NA	Air	TO 15 LL	
140-14386-4	IA-018-A-26	Total/NA	Air	TO 15 LL	
140-14386-5	IA-DUP03-A-26	Total/NA	Air	TO 15 LL	
140-14386-6	IA-015-A-26	Total/NA	Air	TO 15 LL	
140-14386-7	IA-118-A-26	Total/NA	Air	TO 15 LL	
140-14386-8	IA-168-A-26	Total/NA	Air	TO 15 LL	
140-14386-9	IA-081-A-26	Total/NA	Air	TO 15 LL	
140-14386-10	IA-079-A-26	Total/NA	Air	TO 15 LL	
140-14386-11	IA-DUP04-A-26	Total/NA	Air	TO 15 LL	
140-14386-12	IA-117-A-26	Total/NA	Air	TO 15 LL	
140-14386-13	IA-078-A-26	Total/NA	Air	TO 15 LL	
140-14386-14	IA-136-A-26	Total/NA	Air	TO 15 LL	
140-14386-15	IA-076-A-26	Total/NA	Air	TO 15 LL	
140-14386-16	IA-075-A-26	Total/NA	Air	TO 15 LL	
MB 140-27908/5	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27908/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 27931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14386-17	IA-021-A-26	Total/NA	Air	TO 15 LL	
140-14386-18	SV-178-MB-3	Total/NA	Air	TO 15 LL	
MB 140-27931/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27931/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-138-A-26

Date Collected: 02/21/19 16:54

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14386-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 17:10	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-093-A-26

Date Collected: 02/21/19 16:56

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14386-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 17:59	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-174-A-26

Date Collected: 02/21/19 16:55

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14386-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 18:48	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-018-A-26

Date Collected: 02/21/19 16:57

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14386-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 19:37	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-DUP03-A-26

Date Collected: 02/21/19 16:57

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14386-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 20:26	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-015-A-26

Date Collected: 02/21/19 17:04

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14386-6

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 21:14	S1K	TAL KNX
Instrument ID: MR										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-118-A-26

Lab Sample ID: 140-14386-7

Date Collected: 02/21/19 17:05

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 22:03	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-168-A-26

Lab Sample ID: 140-14386-8

Date Collected: 02/21/19 17:28

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.57	157 mL	500 mL	27908	02/25/19 22:53	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-081-A-26

Lab Sample ID: 140-14386-9

Date Collected: 02/21/19 17:12

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/25/19 23:42	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-079-A-26

Lab Sample ID: 140-14386-10

Date Collected: 02/21/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/26/19 00:31	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-DUP04-A-26

Lab Sample ID: 140-14386-11

Date Collected: 02/21/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/26/19 01:20	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-117-A-26

Lab Sample ID: 140-14386-12

Date Collected: 02/21/19 17:20

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.66	166 mL	500 mL	27908	02/26/19 02:09	S1K	TAL KNX
Instrument ID: MR										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: IA-078-A-26

Lab Sample ID: 140-14386-13

Date Collected: 02/21/19 17:23

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/26/19 02:58	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-136-A-26

Lab Sample ID: 140-14386-14

Date Collected: 02/21/19 17:25

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/26/19 03:47	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-076-A-26

Lab Sample ID: 140-14386-15

Date Collected: 02/21/19 17:27

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/26/19 04:36	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-075-A-26

Lab Sample ID: 140-14386-16

Date Collected: 02/21/19 17:31

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27908	02/26/19 05:25	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-021-A-26

Lab Sample ID: 140-14386-17

Date Collected: 02/21/19 17:34

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 13:42	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-178-MB-3

Lab Sample ID: 140-14386-18

Date Collected: 02/21/19 10:58

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 15:56	S1K	TAL KNX
Instrument ID: MG										

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27908/5

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27908	02/25/19 12:52	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27931/4

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 12:56	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27908/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27908	02/25/19 10:00	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27931/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 11:35	S1K	TAL KNX
Instrument ID: MG										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14386-1	IA-138-A-26	Air	02/21/19 16:54	02/23/19 10:10
140-14386-2	IA-093-A-26	Air	02/21/19 16:56	02/23/19 10:10
140-14386-3	IA-174-A-26	Air	02/21/19 16:55	02/23/19 10:10
140-14386-4	IA-018-A-26	Air	02/21/19 16:57	02/23/19 10:10
140-14386-5	IA-DUP03-A-26	Air	02/21/19 16:57	02/23/19 10:10
140-14386-6	IA-015-A-26	Air	02/21/19 17:04	02/23/19 10:10
140-14386-7	IA-118-A-26	Air	02/21/19 17:05	02/23/19 10:10
140-14386-8	IA-168-A-26	Air	02/21/19 17:28	02/23/19 10:10
140-14386-9	IA-081-A-26	Air	02/21/19 17:12	02/23/19 10:10
140-14386-10	IA-079-A-26	Air	02/21/19 17:18	02/23/19 10:10
140-14386-11	IA-DUP04-A-26	Air	02/21/19 17:18	02/23/19 10:10
140-14386-12	IA-117-A-26	Air	02/21/19 17:20	02/23/19 10:10
140-14386-13	IA-078-A-26	Air	02/21/19 17:23	02/23/19 10:10
140-14386-14	IA-136-A-26	Air	02/21/19 17:25	02/23/19 10:10
140-14386-15	IA-076-A-26	Air	02/21/19 17:27	02/23/19 10:10
140-14386-16	IA-075-A-26	Air	02/21/19 17:31	02/23/19 10:10
140-14386-17	IA-021-A-26	Air	02/21/19 17:34	02/23/19 10:10
140-14386-18	SV-178-MB-3	Air	02/21/19 10:58	02/23/19 10:10

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
IA-138-A-26	140-14386-1	100
IA-093-A-26	140-14386-2	102
IA-174-A-26	140-14386-3	102
IA-018-A-26	140-14386-4	100
IA-DUP03-A-26	140-14386-5	100
IA-015-A-26	140-14386-6	102
IA-118-A-26	140-14386-7	101
IA-168-A-26	140-14386-8	101
IA-081-A-26	140-14386-9	102
IA-079-A-26	140-14386-10	101
IA-DUP04-A-26	140-14386-11	103
IA-117-A-26	140-14386-12	103
IA-078-A-26	140-14386-13	100
IA-136-A-26	140-14386-14	100
IA-076-A-26	140-14386-15	100
IA-075-A-26	140-14386-16	100
IA-021-A-26	140-14386-17	98
SV-178-MB-3	140-14386-18	97
	MB 140-27908/5	103
	MB 140-27931/4	96
	LCS 140-27908/1002	107
	LCS 140-27931/1002	100

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: RCCVB25-LCS.d
 Lab ID: LCS 140-27908/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.86	93	70-130	
Carbon tetrachloride	2.00	2.00	100	70-130	
Chlorodifluoromethane	2.00	1.82	91	60-140	
Chloroform	2.00	1.88	94	70-130	
cis-1,2-Dichloroethene	2.00	1.88	94	70-130	
Dichlorodifluoromethane	2.00	1.87	93	60-140	
1,1-Dichloroethane	2.00	1.87	94	70-130	
1,2-Dichloroethane	2.00	1.85	92	70-130	
1,1-Dichloroethene	2.00	1.86	93	70-130	
Ethylbenzene	2.00	2.06	103	70-130	
Methylene Chloride	2.00	1.66	83	70-130	
Methyl tert-butyl ether	2.00	1.93	97	60-140	
Naphthalene	2.00	1.68	84	60-140	
Tetrachloroethene	2.00	2.01	101	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	1.85	92	70-130	
1,2,4-Trichlorobenzene	2.00	1.86	93	60-140	
1,1,1-Trichloroethane	2.00	1.88	94	70-130	
1,1,2-Trichloroethane	2.00	1.99	99	70-130	
Trichloroethene	2.00	1.89	95	70-130	
1,2,3-Trimethylbenzene	2.00	2.08	104	70-130	
1,2,4-Trimethylbenzene	2.00	2.11	105	70-130	
1,3,5-Trimethylbenzene	2.00	2.03	101	70-130	
Vinyl chloride	2.00	2.19	110	70-130	
Xylenes, Total	6.00	6.41	107	70-130	

Column to be used to flag recovery and RPD values

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB26-LCS.d
 Lab ID: LCS 140-27931/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.22	111	70-130	
Chlorodifluoromethane	2.00	2.02	101	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	2.09	104	70-130	
Dichlorodifluoromethane	2.00	2.06	103	60-140	
1,1-Dichloroethane	2.00	2.05	103	70-130	
1,2-Dichloroethane	2.00	2.00	100	70-130	
1,1-Dichloroethene	2.00	2.14	107	70-130	
Ethylbenzene	2.00	2.03	101	70-130	
Methylene Chloride	2.00	1.81	90	70-130	
Methyl tert-butyl ether	2.00	1.97	99	60-140	
Naphthalene	2.00	1.94	97	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	2.15	108	70-130	
1,2,4-Trichlorobenzene	2.00	1.83	92	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	2.11	105	70-130	
Trichloroethene	2.00	2.09	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.22	111	70-130	
1,2,4-Trimethylbenzene	2.00	1.99	99	70-130	
1,3,5-Trimethylbenzene	2.00	1.97	98	70-130	
Vinyl chloride	2.00	1.97	98	70-130	
Xylenes, Total	6.00	6.18	103	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: G500BB26.D Lab Sample ID: MB 140-27931/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/26/2019 12:56
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27931/1002	GCCVB26-LCS .d	02/26/2019 11:35
IA-021-A-26	140-14386-17	GB26P201.D	02/26/2019 13:42
SV-178-MB-3	140-14386-18	GB26P101.D	02/26/2019 15:56

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: R500BB25.D Lab Sample ID: MB 140-27908/5
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MR Date Analyzed: 02/25/2019 12:52
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27908/1002	RCCVB25-LCS .d	02/25/2019 10:00
IA-138-A-26	140-14386-1	RB25P101.D	02/25/2019 17:10
IA-093-A-26	140-14386-2	RB25P102.D	02/25/2019 17:59
IA-174-A-26	140-14386-3	RB25P103.D	02/25/2019 18:48
IA-018-A-26	140-14386-4	RB25P104.D	02/25/2019 19:37
IA-DUP03-A-26	140-14386-5	RB25P105.D	02/25/2019 20:26
IA-015-A-26	140-14386-6	RB25P106.D	02/25/2019 21:14
IA-118-A-26	140-14386-7	RB25P107.D	02/25/2019 22:03
IA-168-A-26	140-14386-8	RB25P108.D	02/25/2019 22:53
IA-081-A-26	140-14386-9	RB25P109.D	02/25/2019 23:42
IA-079-A-26	140-14386-10	RB25P110.D	02/26/2019 00:31
IA-DUP04-A-26	140-14386-11	RB25P111.D	02/26/2019 01:20
IA-117-A-26	140-14386-12	RB25P112.D	02/26/2019 02:09
IA-078-A-26	140-14386-13	RB25P113.D	02/26/2019 02:58
IA-136-A-26	140-14386-14	RB25P114.D	02/26/2019 03:47
IA-076-A-26	140-14386-15	RB25P115.D	02/26/2019 04:36
IA-075-A-26	140-14386-16	RB25P116.D	02/26/2019 05:25

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: GA11BLK1.D BFB Injection Date: 01/11/2019
 Instrument ID: MG BFB Injection Time: 12:24
 Analysis Batch No.: 26755

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.2	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	71.2	
175	5.0 - 9.0 % of mass 174	5.1	(7.1) 1
176	95.0 - 101.0 % of mass 174	70.7	(99.3) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-26755/2	GA11IC09.D	01/11/2019	13:08
	IC 140-26755/6	GA11IC10.D	01/11/2019	14:35
	IC 140-26755/9	GA11IC01.D	01/11/2019	16:46
	IC 140-26755/10	GA11IC02.D	01/11/2019	17:29
	IC 140-26755/11	GA11IC03.D	01/11/2019	18:12
	IC 140-26755/12	GA11IC04.D	01/11/2019	18:56
	IC 140-26755/13	GA11IC05.D	01/11/2019	19:40
	IC 140-26755/14	GA11IC06.D	01/11/2019	20:23
	ICIS 140-26755/15	GA11IC07.D	01/11/2019	21:07
	IC 140-26755/16	GA11IC08.D	01/11/2019	21:51
	ICV 140-26755/18	GA11ICV.D	01/11/2019	23:17

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: GBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MG BFB Injection Time: 11:03
 Analysis Batch No.: 27931

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.5
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	73.1
175	5.0 - 9.0 % of mass 174	5.1 (7.0) 1
176	95.0 - 101.0 % of mass 174	71.2 (97.4) 1
177	5.0 - 9.0 % of mass 176	4.6 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27931/2	GCCVB26.D	02/26/2019	11:35
	LCS 140-27931/1002	GCCVB26-LCS. d	02/26/2019	11:35
	MB 140-27931/4	G500BB26.D	02/26/2019	12:56
IA-021-A-26	140-14386-17	GB26P201.D	02/26/2019	13:42
SV-178-MB-3	140-14386-18	GB26P101.D	02/26/2019	15:56

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: RFBK16I.D BFB Injection Date: 11/16/2018
 Instrument ID: MR BFB Injection Time: 16:00
 Analysis Batch No.: 25490

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	58.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	91.0	
175	5.0 - 9.0 % of mass 174	6.6	(7.3) 1
176	95.0 - 101.0 % of mass 174	88.8	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-25490/3	RK16IC09.D	11/16/2018	17:23
	IC 140-25490/5	RK16IC10.D	11/16/2018	19:07
	IC 140-25490/8	RK16IC01.D	11/16/2018	21:42
	IC 140-25490/9	RK16IC02.D	11/16/2018	22:34
	IC 140-25490/10	RK16IC03.D	11/16/2018	23:27
	IC 140-25490/11	RK16IC04.D	11/17/2018	00:20
	IC 140-25490/12	RK16IC05.D	11/17/2018	01:12
	IC 140-25490/13	RK16IC06.D	11/17/2018	02:05
	ICIS 140-25490/14	RK16IC07.D	11/17/2018	02:58
	IC 140-25490/15	RK16IC08.D	11/17/2018	03:51
	ICV 140-25490/18	RK16ICV.D	11/17/2018	06:27

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: RBFBB25.D BFB Injection Date: 02/25/2019
 Instrument ID: MR BFB Injection Time: 09:32
 Analysis Batch No.: 27908

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.3	
75	30.0 - 60.0 % of mass 95	59.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	88.3	
175	5.0 - 9.0 % of mass 174	6.6	(7.5) 1
176	95.0 - 101.0 % of mass 174	85.5	(96.9) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27908/2	RCCVB25.D	02/25/2019	10:00
	LCS 140-27908/1002	RCCVB25-LCS.d	02/25/2019	10:00
	MB 140-27908/5	R500BB25.D	02/25/2019	12:52
IA-138-A-26	140-14386-1	RB25P101.D	02/25/2019	17:10
IA-093-A-26	140-14386-2	RB25P102.D	02/25/2019	17:59
IA-174-A-26	140-14386-3	RB25P103.D	02/25/2019	18:48
IA-018-A-26	140-14386-4	RB25P104.D	02/25/2019	19:37
IA-DUP03-A-26	140-14386-5	RB25P105.D	02/25/2019	20:26
IA-015-A-26	140-14386-6	RB25P106.D	02/25/2019	21:14
IA-118-A-26	140-14386-7	RB25P107.D	02/25/2019	22:03
IA-168-A-26	140-14386-8	RB25P108.D	02/25/2019	22:53
IA-081-A-26	140-14386-9	RB25P109.D	02/25/2019	23:42
IA-079-A-26	140-14386-10	RB25P110.D	02/26/2019	00:31
IA-DUP04-A-26	140-14386-11	RB25P111.D	02/26/2019	01:20
IA-117-A-26	140-14386-12	RB25P112.D	02/26/2019	02:09
IA-078-A-26	140-14386-13	RB25P113.D	02/26/2019	02:58
IA-136-A-26	140-14386-14	RB25P114.D	02/26/2019	03:47
IA-076-A-26	140-14386-15	RB25P115.D	02/26/2019	04:36
IA-075-A-26	140-14386-16	RB25P116.D	02/26/2019	05:25

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Sample No.: ICIS 140-26755/15 Date Analyzed: 01/11/2019 21:07
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GAl1IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	437891	9.25	2708081	11.42	2541912	16.10
UPPER LIMIT	613047	9.58	3791313	11.75	3558677	16.43
LOWER LIMIT	262735	8.92	1624849	11.09	1525147	15.77
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-26755/18	423755	9.24	2327828	11.42	2182908	16.09

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Sample No.: CCVIS 140-27931/2 Date Analyzed: 02/26/2019 11:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	496382	9.23	2758157	11.41	2578216	16.08	
UPPER LIMIT	694935	9.56	3861420	11.74	3609502	16.41	
LOWER LIMIT	297829	8.90	1654894	11.08	1546930	15.75	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27931/1002	496382	9.23	2758157	11.41	2578216	16.08	
MB 140-27931/4	508819	9.23	2920722	11.41	2502760	16.08	
140-14386-17	IA-021-A-26	472126	9.28	2779341	11.42	2424108	16.08
140-14386-18	SV-178-MB-3	467181	9.23	2830006	11.40	2459421	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Sample No.: ICIS 140-25490/14 Date Analyzed: 11/17/2018 02:58
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RK16IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	298864	7.40	1677758	9.49	1487799	14.56
UPPER LIMIT	418410	7.73	2348861	9.82	2082919	14.89
LOWER LIMIT	179318	7.07	1006655	9.16	892679	14.23
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-25490/18	299493	7.38	1671036	9.48	1499042	14.55

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Sample No.: CCVIS 140-27908/2 Date Analyzed: 02/25/2019 10:00
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RCCVB25.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	212957	7.39	1252120	9.45	1073297	14.50	
UPPER LIMIT	298140	7.72	1752968	9.78	1502616	14.83	
LOWER LIMIT	127774	7.06	751272	9.12	643978	14.17	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27908/1002	212957	7.39	1252120	9.45	1073297	14.50	
MB 140-27908/5	194923	7.39	1132283	9.45	994580	14.50	
140-14386-1	IA-138-A-26	199740	7.38	1149358	9.44	1000642	14.50
140-14386-2	IA-093-A-26	185844	7.38	1121771	9.44	980973	14.50
140-14386-3	IA-174-A-26	192317	7.38	1128796	9.44	981084	14.50
140-14386-4	IA-018-A-26	196545	7.38	1163087	9.45	1010502	14.50
140-14386-5	IA-DUP03-A-26	195628	7.38	1146962	9.44	1007644	14.50
140-14386-6	IA-015-A-26	194942	7.40	1150441	9.46	1002804	14.50
140-14386-7	IA-118-A-26	197063	7.39	1129359	9.46	1003724	14.50
140-14386-8	IA-168-A-26	206642	7.41	1211742	9.46	1068296	14.50
140-14386-9	IA-081-A-26	198942	7.39	1157802	9.45	1032178	14.50
140-14386-10	IA-079-A-26	197950	7.40	1152660	9.46	1034179	14.50
140-14386-11	IA-DUP04-A-26	191537	7.40	1146530	9.46	1017138	14.50
140-14386-12	IA-117-A-26	207494	7.40	1213292	9.46	1072962	14.50
140-14386-13	IA-078-A-26	209949	7.41	1254500	9.46	1098725	14.50
140-14386-14	IA-136-A-26	212893	7.41	1257934	9.47	1117228	14.50
140-14386-15	IA-076-A-26	218083	7.41	1273185	9.47	1123585	14.50
140-14386-16	IA-075-A-26	211063	7.42	1248854	9.47	1112726	14.50

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-138-A-26 Lab Sample ID: 140-14386-1
 Matrix: Air Lab File ID: RB25P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:54
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.43	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.16	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.54		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.59	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-138-A-26 Lab Sample ID: 140-14386-1
 Matrix: Air Lab File ID: RB25P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:54
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.69	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.65	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-093-A-26 Lab Sample ID: 140-14386-2
 Matrix: Air Lab File ID: RB25P102.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:56
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.51	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.22	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.95	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.74		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-093-A-26 Lab Sample ID: 140-14386-2
 Matrix: Air Lab File ID: RB25P102.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:56
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.68	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.86	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-174-A-26 Lab Sample ID: 140-14386-3
 Matrix: Air Lab File ID: RB25P103.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 18:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.35	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.31	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.060	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.3		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-174-A-26 Lab Sample ID: 140-14386-3
 Matrix: Air Lab File ID: RB25P103.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 18:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.2	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.33	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	7.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-018-A-26 Lab Sample ID: 140-14386-4
 Matrix: Air Lab File ID: RB25P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 19:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.30	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.18	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.30	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.44		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.13	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.63		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.57	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-018-A-26 Lab Sample ID: 140-14386-4
 Matrix: Air Lab File ID: RB25P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 19:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.95	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.61	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.70	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.8		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.60	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.87	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.5	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-DUP03-A-26 Lab Sample ID: 140-14386-5
 Matrix: Air Lab File ID: RB25P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:26
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.26	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.19	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.31	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.44		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.65		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-DUP03-A-26 Lab Sample ID: 140-14386-5
 Matrix: Air Lab File ID: RB25P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:26
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.83	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	0.62	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.76	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.7		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-015-A-26 Lab Sample ID: 140-14386-6
 Matrix: Air Lab File ID: RB25P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:04
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 21:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.31	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.98	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.81		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-015-A-26 Lab Sample ID: 140-14386-6
 Matrix: Air Lab File ID: RB25P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:04
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 21:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-118-A-26 Lab Sample ID: 140-14386-7
 Matrix: Air Lab File ID: RB25P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:05
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 22:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.36	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.15	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.38		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-118-A-26 Lab Sample ID: 140-14386-7
 Matrix: Air Lab File ID: RB25P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:05
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 22:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.89	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.81	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-168-A-26 Lab Sample ID: 140-14386-8
 Matrix: Air Lab File ID: RB25P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:28
 Sample wt/vol: 157(mL) Date Analyzed: 02/25/2019 22:53
 Soil Aliquot Vol: _____ Dilution Factor: 1.57
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.83		0.40	0.075
67-66-3	Chloroform	119.38	0.090	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	2.5		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	29		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.12	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.25	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	12		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-168-A-26 Lab Sample ID: 140-14386-8
 Matrix: Air Lab File ID: RB25P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:28
 Sample wt/vol: 157(mL) Date Analyzed: 02/25/2019 22:53
 Soil Aliquot Vol: _____ Dilution Factor: 1.57
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.9		1.4	0.27
67-66-3	Chloroform	119.38	0.44	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	11		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	110		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.67	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.2	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	53		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-081-A-26 Lab Sample ID: 140-14386-9
 Matrix: Air Lab File ID: RB25P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:12
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 23:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.86	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.53		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	17		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.6		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-081-A-26 Lab Sample ID: 140-14386-9
 Matrix: Air Lab File ID: RB25P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:12
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 23:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.0	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	63		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.66	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-079-A-26 Lab Sample ID: 140-14386-10
 Matrix: Air Lab File ID: RB25P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 00:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	0.088	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.52		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.36	J	0.40	0.080
108-88-3	Toluene	92.14	14		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-079-A-26 Lab Sample ID: 140-14386-10
 Matrix: Air Lab File ID: RB25P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 00:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	0.43	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.4	J	2.7	0.54
108-88-3	Toluene	92.14	54		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-DUP04-A-26 Lab Sample ID: 140-14386-11
 Matrix: Air Lab File ID: RB25P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 01:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.57		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.50		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	15		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-DUP04-A-26 Lab Sample ID: 140-14386-11
 Matrix: Air Lab File ID: RB25P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 01:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.2		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	56		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	10		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-117-A-26 Lab Sample ID: 140-14386-12
 Matrix: Air Lab File ID: RB25P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:20
 Sample wt/vol: 166(mL) Date Analyzed: 02/26/2019 02:09
 Soil Aliquot Vol: _____ Dilution Factor: 1.66
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.33	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	0.091	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.78		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	32		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-117-A-26 Lab Sample ID: 140-14386-12
 Matrix: Air Lab File ID: RB25P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:20
 Sample wt/vol: 166(mL) Date Analyzed: 02/26/2019 02:09
 Soil Aliquot Vol: _____ Dilution Factor: 1.66
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	0.45	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	120		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.72	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	16		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-078-A-26 Lab Sample ID: 140-14386-13
 Matrix: Air Lab File ID: RB25P113.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:23
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 02:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.31	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.59		0.40	0.075
67-66-3	Chloroform	119.38	0.10	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.5		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	23		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.079	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	7.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-078-A-26 Lab Sample ID: 140-14386-13
 Matrix: Air Lab File ID: RB25P113.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:23
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 02:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.98	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	0.49	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	6.6		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	86		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.43	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.93	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	32		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-136-A-26 Lab Sample ID: 140-14386-14
 Matrix: Air Lab File ID: RB25P114.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:25
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 03:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6	CI	0.40	0.075
67-66-3	Chloroform	119.38	0.27	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	2.9		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	36		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.12	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.31	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	13		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-136-A-26 Lab Sample ID: 140-14386-14
 Matrix: Air Lab File ID: RB25P114.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:25
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 03:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.7	CI	1.4	0.27
67-66-3	Chloroform	119.38	1.3	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	13		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.1		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	130		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.65	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.5	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	57		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-076-A-26 Lab Sample ID: 140-14386-15
 Matrix: Air Lab File ID: RB25P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:27
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.79		0.40	0.075
67-66-3	Chloroform	119.38	0.086	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	2.2		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.4		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.50		0.40	0.080
108-88-3	Toluene	92.14	32		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.11	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.33	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	11		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-076-A-26 Lab Sample ID: 140-14386-15
 Matrix: Air Lab File ID: RB25P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:27
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.8		1.4	0.27
67-66-3	Chloroform	119.38	0.42	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	9.7		1.7	0.59
75-09-2	Methylene Chloride	84.93	8.2		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.4		2.7	0.54
108-88-3	Toluene	92.14	120		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.58	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	49		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-075-A-26 Lab Sample ID: 140-14386-16
 Matrix: Air Lab File ID: RB25P116.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:31
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 05:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.32	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.78		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.5		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.080	J	0.40	0.080
108-88-3	Toluene	92.14	21		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	7.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-075-A-26 Lab Sample ID: 140-14386-16
 Matrix: Air Lab File ID: RB25P116.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:31
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 05:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	6.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.54	J	2.7	0.54
108-88-3	Toluene	92.14	80		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.71	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	32		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-021-A-26 Lab Sample ID: 140-14386-17
 Matrix: Air Lab File ID: GB26P201.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.99		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.8		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.21		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	22		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.13	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.22	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	8.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-021-A-26 Lab Sample ID: 140-14386-17
 Matrix: Air Lab File ID: GB26P201.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.78	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	0.52	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	7.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	85		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.70	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	39		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: SV-178-MB-3 Lab Sample ID: 140-14386-18
 Matrix: Air Lab File ID: GB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:58
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.25	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.63		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.56	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: SV-178-MB-3 Lab Sample ID: 140-14386-18
 Matrix: Air Lab File ID: GB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:58
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.0	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.79	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.9523	2.7653	2.6769	Ave		2.6204			9.0		30.0				
	2.4796	2.3672	2.3873	2.9026	2.4316												
Propene	+++++	+++++	+++++	1.8011	1.4915	Ave		1.4631			12.5		30.0				
	1.4104	1.3267	1.3362	1.5897	1.2862												
Dichlorodifluoromethane	+++++	+++++	4.4505	4.4326	4.2183	Ave		4.2347			6.5		30.0				
	4.0515	3.9190	3.9550	4.7099	4.1407												
Chloromethane	+++++	+++++	+++++	0.5625	0.4891	Ave		0.4649			11.5		30.0				
	0.4445	0.4230	0.4254	0.4946	0.4152												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	2.6446	2.5541	2.4472	Ave		2.4745			4.4		30.0				
	2.3633	2.3423	2.3822	2.5578	2.5047												
Vinyl chloride	1.9626	1.7167	1.7320	1.6531	1.5626	Ave		1.6109			10.3		30.0				
	1.4785	1.4339	1.4573	1.6387	1.4732												
Butane	+++++	+++++	+++++	3.0743	2.8454	Ave		2.7124			8.2		30.0				
	2.6258	2.4782	2.5038	2.8679	2.5911												
1,3-Butadiene	+++++	+++++	+++++	1.2733	1.2439	Ave		1.2450			5.0		30.0				
	1.2041	1.1760	1.2078	1.3654	1.2448												
Bromomethane	+++++	+++++	1.6548	1.3996	1.3549	Ave		1.3916			8.4		30.0				
	1.3078	1.2877	1.3168	1.4117	1.3995												
Chloroethane	+++++	+++++	0.8627	0.8037	0.7796	Ave		0.7761			6.4		30.0				
	0.7377	0.7148	0.7259	0.8118	0.7729												
Ethanol	+++++	+++++	+++++	0.8657	0.7124	Ave		0.7042			15.6		30.0				
	0.5620	0.7386	0.5593	0.7653	0.7259												
Vinyl bromide	+++++	+++++	1.3835	1.3207	1.2830	Ave		1.2899			4.2		30.0				
	1.2366	1.2145	1.2610	1.2880	1.3321												
2-Methylbutane	+++++	+++++	+++++	2.0547	2.0422	Ave		1.9469			4.4		30.0				
	1.9302	1.8374	1.8471	1.9762	1.9406												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.9949	4.3785 3.8769	4.2718 3.9322	4.1461 4.3687	4.1452 4.2564	Ave		4.1523			4.4		30.0				
Acrolein	++++ 0.3700	++++ 0.3339	++++ 0.3264	++++ 0.4058	0.3535 0.3546	Ave		0.3574			7.9		30.0				
Acetonitrile	++++ 0.5820	++++ 0.5806	++++ 0.5032	0.4860 0.6106	0.5491 0.5907	Ave		0.5574			8.4		30.0				
Acetone	++++ 0.6952	++++ 0.6071	++++ 0.4923	++++ 0.5713	0.7119 0.5299	Ave		0.6013			14.7		30.0				
Pentane	++++ 0.2650	++++ 0.2567	++++ 0.2534	++++ 0.2741	0.2798 0.2630	Ave		0.2653			3.8		30.0				
Isopropyl alcohol	++++ 1.5842	++++ 1.6884	++++ 1.2216	++++ 1.5921	1.7192 1.5978	Ave		1.6033			11.8		30.0				
Ethyl ether	++++ 1.8397	++++ 1.7705	++++ 1.4542	++++ 1.7361	1.9088 1.6409	Ave		1.7250			9.3		30.0				
1,1-Dichloroethene	1.5300 1.3997	1.3691 1.3378	1.5011 1.4037	1.3769 1.3902	1.4054 1.4041	Ave		1.4118			4.2		30.0				
Acrylonitrile	++++ 0.9861	++++ 0.9774	1.0366 0.8664	0.9476 1.0406	0.9217 1.0215	Ave		0.9747			6.2		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.0568	3.1787 2.9429	3.2903 2.9549	3.0618 2.9993	3.1454 2.9101	Ave		3.0600			4.1		30.0				
tert-Butyl alcohol	++++ 2.2526	++++ 2.2071	++++ 1.7152	2.3096 2.1050	2.4776 2.3062	Ave		2.1962			11.0		30.0				
Methylene Chloride	++++ 1.5026	++++ 1.3595	++++ 1.3036	2.5891 1.2966	1.8042 ++++	Ave		1.6426			30.5	*	30.0				
3-Chloropropene	++++ 1.6369	++++ 1.6110	2.0104 1.5866	1.9432 1.7783	1.7193 1.7236	Ave		1.7512			8.8		30.0				
Carbon disulfide	++++ 4.2983	++++ 4.0822	4.5901 4.1194	4.3819 4.1977	4.3526 4.2529	Ave		4.2844			3.8		30.0				
trans-1,2-Dichloroethene	++++ 1.4444	1.3848 1.3913	1.4554 1.4201	1.3845 1.4125	1.4335 1.3979	Ave		1.4138			1.9		30.0				
2-Methylpentane	++++ 4.0309	++++ 3.8853	4.5901 3.8303	4.3761 4.0757	4.2199 3.7514	Ave		4.0450			5.3		30.0				
Methyl tert-butyl ether	++++ 4.1354	3.5946 4.0399	4.2254 3.4444	3.8763 4.0172	4.1168 3.9425	Ave		3.9325			6.6		30.0				
1,1-Dichloroethane	3.1037 2.8577	3.0105 2.8187	3.0470 2.6559	2.9034 2.9155	2.9080 2.8375	Ave		2.9058			4.4		30.0				
Vinyl acetate	++++ 3.9854	++++ 4.2048	4.0675 3.5720	3.8850 4.4145	3.9427 4.2013	Ave		4.0342			6.3		30.0				
Hexane	++++ 1.3242	++++ 1.2816	++++ 1.3713	1.3526 1.3074	1.3260 1.2151	Ave		1.3036			4.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++	++++	++++	0.6854	0.6772	Ave		0.6347			8.5		30.0				
	0.6784	0.6294	0.5376	0.6386	0.5958												
cis-1,2-Dichloroethene	1.5310	1.3850	1.4658	1.4361	1.4213	Ave		1.4465			2.9		30.0				
	1.4515	1.4377	1.3972	1.4588	1.4806												
Ethyl acetate	++++	++++	3.4159	3.2335	3.3337	Ave		3.3124			6.9		30.0				
	3.4792	3.3231	2.8120	3.5743	3.3271												
Chloroform	3.5969	3.3560	3.4112	3.4074	3.2824	Ave		3.3444			4.2		30.0				
	3.2821	3.2211	3.0680	3.4218	3.3970												
Tetrahydrofuran	++++	++++	++++	1.7940	1.8215	Ave		1.7724			6.6		30.0				
	1.8641	1.7946	1.5246	1.8635	1.7446												
1,1,1-Trichloroethane	3.8810	3.4765	3.6941	3.5977	3.6119	Ave		3.6203			4.2		30.0				
	3.5723	3.5364	3.3475	3.7388	3.7470												
1,2-Dichloroethane	0.3890	0.3740	0.4205	0.3853	0.3989	Ave		0.3910			6.7		30.0				
	0.3918	0.3624	0.3439	0.4219	0.4228												
Cyclohexane	++++	++++	++++	0.1383	0.1426	Ave		0.1314			6.9		30.0				
	0.1391	0.1224	0.1193	0.1325	0.1258												
Benzene	++++	0.7122	0.8006	0.7160	0.7636	Ave		0.7153			7.0		30.0				
	0.7488	0.6697	0.6393	0.7124	0.6753												
Carbon tetrachloride	0.5647	0.5298	0.5813	0.5547	0.6331	Ave		0.5933			8.0		30.0				
	0.6279	0.5625	0.5603	0.6718	0.6470												
1-Butanol	++++	++++	++++	0.0897	0.1022	Ave		0.0896			13.7		30.0				
	0.1010	0.0823	0.0665	0.0902	0.0950												
2,3-Dimethylpentane	++++	++++	0.2016	0.1866	0.2067	Ave		0.1886			7.0		30.0				
	0.1994	0.1776	0.1681	0.1880	0.1811												
Thiophene	++++	++++	0.4419	0.4095	0.4328	Ave		0.4156			5.4		30.0				
	0.4205	0.3890	0.3765	0.4241	0.4306												
2,2,4-Trimethylpentane	1.4853	1.4111	1.5290	1.4173	1.5323	Ave		1.4009			8.1		30.0				
	1.4628	1.2640	1.1785	1.3863	1.3426												
Heptane	++++	++++	0.3221	0.2848	0.3010	Ave		0.2875			7.7		30.0				
	0.2942	0.2637	0.2507	0.2927	0.2912												
1,2-Dichloropropane	++++	0.2947	0.3066	0.2799	0.2948	Ave		0.2813			7.5		30.0				
	0.2869	0.2617	0.2359	0.2893	0.2819												
Trichloroethene	0.3496	0.3229	0.3354	0.3064	0.3383	Ave		0.3257			5.2		30.0				
	0.3271	0.3039	0.3006	0.3304	0.3426												
Dibromomethane	++++	++++	++++	0.3027	0.3082	Ave		0.2963			7.9		30.0				
	0.2897	0.2688	0.2632	0.3189	0.3227												
Bromodichloromethane	++++	++++	0.5688	0.5299	0.5916	Ave		0.5843			8.8		30.0				
	0.5840	0.5507	0.5314	0.6523	0.6656												
1,4-Dioxane	++++	++++	++++	0.0947	0.0887	Ave		0.0832			17.3		30.0				
	0.0619	0.0891	0.0629	0.0903	0.0946												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3918	++++ 0.3473	++++ 0.2972	0.3014 0.4093	0.3703 0.3989	Ave		0.3595			12.7		30.0				
Methylcyclohexane	0.4845 0.5152	0.4926 0.4533	0.5068 0.4304	0.4870 0.4877	0.5327 0.5063	Ave		0.4896			6.1		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.6350	++++ 0.5092	0.5796 0.3308	0.5597 0.5890	0.6524 0.6484	Ave		0.5630			18.8		30.0				
cis-1,3-Dichloropropene	++++ 0.4479	0.3952 0.4121	0.4552 0.3828	0.4166 0.4613	0.4382 0.4415	Ave		0.4279			6.4		30.0				
trans-1,3-Dichloropropene	++++ 0.4450	0.3978 0.4156	0.4398 0.3772	0.4049 0.4673	0.4521 0.4806	Ave		0.4311			8.0		30.0				
Toluene	0.8893 0.9181	0.8808 0.8443	0.9072 0.7540	0.8795 0.8738	0.9309 0.9230	Ave		0.8801			5.9		30.0				
1,1,2-Trichloroethane	0.2596 0.2870	0.2566 0.2535	0.2815 0.2299	0.2715 0.2735	0.2904 0.2819	Ave		0.2685			7.0		30.0				
2-Hexanone	++++ 0.3129	++++ 0.2311	0.2486 0.1601	0.2653 0.2620	0.3155 0.3172	Ave		0.2641			20.2		30.0				
Octane	++++ 0.3331	++++ 0.2969	0.3166 0.2807	0.3142 0.3116	0.3533 0.3257	Ave		0.3165			7.0		30.0				
C8 Range	++++ 3.2900	++++ 2.9406	++++ 2.7321	3.2543 3.2050	3.4583 3.2302	Ave		3.1586			7.7		30.0				
Dibromochloromethane	++++ 0.5589	++++ 0.5327	0.4753 0.5204	0.4633 0.6101	0.5345 0.6613	Ave		0.5446			12.1		30.0				
1,2-Dibromoethane (EDB)	++++ 0.4879	++++ 0.4537	0.4324 0.4227	0.4409 0.4933	0.4776 0.5168	Ave		0.4656			7.1		30.0				
Tetrachloroethene	0.3340 0.3413	0.3265 0.3106	0.3184 0.2978	0.3299 0.3362	0.3500 0.3575	Ave		0.3302			5.4		30.0				
Chlorobenzene	0.6503 0.7257	0.6533 0.6547	0.7038 0.5918	0.6891 0.6804	0.7584 0.7332	Ave		0.6841			7.2		30.0				
Ethylbenzene	++++ 1.2841	1.1605 1.1457	1.1820 0.9886	1.2041 1.2050	1.3132 1.2806	Ave		1.1960			8.1		30.0				
m-Xylene & p-Xylene	0.7852 1.0069	0.8464 0.8920	0.9631 0.7597	0.9388 0.9364	1.0264 0.9927	Ave		0.9148			10.1		30.0				
Nonane	++++ 0.7074	0.6367 0.6181	0.6731 0.5580	0.6713 0.6403	0.7319 0.6196	Ave		0.6507			8.0		30.0				
Bromoform	++++ 0.5150	++++ 0.5097	0.3874 0.4824	0.3783 0.6069	0.4530 ++++	Ave		0.4761			16.7		30.0				
Styrene	++++ 0.6772	++++ 0.6274	0.5417 0.5521	0.5440 0.6889	0.6499 0.7776	Ave		0.6323			13.2		30.0				
o-Xylene	++++ 1.0316	0.8434 0.9312	0.9762 0.7934	0.9959 0.9762	1.0612 1.0727	Ave		0.9646			9.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++ 0.6943	++++ 0.6225	0.6477 0.5392	0.6105 0.6980	0.7079 0.6623	Ave		0.6478			8.7		30.0				
1,2,3-Trichloropropane	++++ 0.2201	++++ 0.1963	0.2117 0.1718	0.1933 0.2253	0.2181 0.2233	Ave		0.2075			9.0		30.0				
Isopropylbenzene	++++ 1.3750	1.2061 1.2349	1.2881 1.0540	1.2705 1.3875	1.3916 1.3659	Ave		1.2860			8.6		30.0				
Propylbenzene	++++ 0.3714	++++ 0.3352	0.3426 0.2878	0.3159 0.3755	0.3762 0.3762	Ave		0.3476			9.6		30.0				
2-Chlorotoluene	++++ 0.3404	0.3055 0.2960	0.3209 0.2606	0.3117 0.3372	0.3448 0.3406	Ave		0.3175			8.7		30.0				
4-Ethyltoluene	++++ 1.3518	++++ 1.2430	1.2707 1.0593	1.1808 1.3853	1.3899 1.3849	Ave		1.2832			9.3		30.0				
1,3,5-Trimethylbenzene	++++ 0.5322	++++ 0.4840	0.4931 0.4140	0.4624 0.5337	0.5289 0.5468	Ave		0.4994			9.1		30.0				
Alpha Methyl Styrene	++++ 0.5256	++++ 0.4877	++++ 0.4370	++++ 0.6086	0.3906 0.6006	Ave		0.5043			16.0		30.0				
Decane	++++ 0.8778	0.7603 0.7515	0.8322 0.6337	0.8484 0.8180	0.9143 0.7472	Ave		0.7982			10.6		30.0				
tert-Butylbenzene	++++ 1.2040	++++ 1.0655	1.0703 0.8921	1.0556 1.2542	1.1543 1.2176	Ave		1.1142			10.6		30.0				
1,2,4-Trimethylbenzene	++++ 1.1975	++++ 1.0389	1.0671 0.8751	1.0434 1.2267	1.1402 1.1768	Ave		1.0957			10.4		30.0				
sec-Butylbenzene	++++ 1.7209	++++ 1.4915	1.5212 1.2789	1.5236 1.7227	1.6717 1.6181	Ave		1.5686			9.5		30.0				
1,3-Dichlorobenzene	0.6490 0.7671	0.6444 0.6846	0.6738 0.6125	0.6739 0.8458	0.7415 0.8676	Ave		0.7160			12.1		30.0				
Benzyl chloride	++++ 1.0629	++++ 0.9436	0.8534 0.8465	0.8353 1.1447	0.9958 1.1273	Ave		0.9762			13.0		30.0				
1,4-Dichlorobenzene	0.7017 0.7787	0.6870 0.6945	0.6938 0.6166	0.6879 0.8577	0.7429 0.8826	Ave		0.7344			11.3		30.0				
4-Isopropyltoluene	++++ 1.3919	++++ 1.1997	1.1350 1.0411	1.1617 1.4207	1.3168 1.3719	Ave		1.2548			11.1		30.0				
1,2,3-Trimethylbenzene	0.7568 1.1870	0.8539 1.0454	1.0085 0.9035	1.0349 ++++	1.1364 ++++	Ave		0.9908			14.6		30.0				
Indane	++++ 1.0760	++++ 0.9392	0.9630 0.8123	0.9316 1.1012	1.0002 1.0990	Ave		0.9903			10.1		30.0				
1,2-Dichlorobenzene	++++ 0.7440	++++ 0.6621	0.6671 0.5878	0.6607 0.8263	0.7087 0.8754	Ave		0.7165			13.3		30.0				
Butylbenzene	++++ 1.4543	++++ 1.1174	1.2268 1.0412	1.2695 1.4208	1.3939 1.3499	Ave		1.2768			11.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.9217	++++ 0.8188	0.7590 0.7206	0.7567 0.9791	0.8625 0.9878	Ave		0.8508			12.2		30.0				
Undecane	++++ 0.9412	0.7138 0.7639	0.7854 0.6439	0.8623 0.8142	0.9777 0.7859	Ave		0.8098			13.0		30.0				
1,2-Dibromo-3-Chloropropane	0.2667 0.3713	0.2609 0.3380	0.2709 0.2859	0.2620 ++++	0.3145 ++++	Ave		0.2963			13.8		30.0				
1,2,4,5-Tetramethylbenzene	++++ 1.3103	++++ 1.1118	1.0041 0.8463	1.0551 1.2653	1.2570 1.2867	Ave		1.1421			14.5		30.0				
Dodecane	++++ 0.7978	0.6003 0.5688	0.6899 0.3858	0.7041 0.5331	0.8370 ++++	Ave		0.6396			23.1		30.0				
1,2,4-Trichlorobenzene	++++ 0.6436	0.5319 0.5457	0.4906 0.4989	0.4888 0.6587	0.5772 0.6483	Ave		0.5649			12.4		30.0				
Naphthalene	++++ 1.4994	1.1580 1.2044	1.1489 0.9653	1.0861 1.2974	1.4202 1.3257	Ave		1.2339			13.6		30.0				
Hexachlorobutadiene	++++ 0.6448	++++ 0.5763	0.5100 0.5363	0.5070 0.7409	0.5745 0.7482	Ave		0.6047			16.0		30.0				
1,2,3-Trichlorobenzene	++++ 0.6283	0.5060 0.4951	0.4846 0.4151	0.4581 0.5663	0.5627 0.3728	Ave		0.4988			15.9		30.0				
2-Methylnaphthalene	++++ 0.9181	0.6422 0.5284	0.5584 0.3836	0.4778 0.4940	0.8101 ++++	Ave		0.6016			29.9		50.0				
1-Methylnaphthalene	++++ 1.1220	0.8380 0.6213	0.6877 0.4374	0.6391 0.5433	1.0085 ++++	Ave		0.7372			31.8		50.0				
4-Bromofluorobenzene (Surr)	0.7946 0.8130	0.8076 0.7824	0.8238 0.7807	0.8163 0.9039	0.8357 0.8386	Ave		0.8196			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 261958	++++ 518289	21711 1076565	42570 1857884	107824 3550370	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 149007	++++ 290483	++++ 602545	27727 1017511	60077 1877999	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 428033	++++ 858049	32728 1783528	68237 3014742	169908 6045892	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 46960	++++ 92605	++++ 191831	8660 316575	19699 606292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 249678	++++ 512846	19448 1074243	39319 1637176	98572 3657066	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	3911 156203	6583 313945	12737 657162	25449 1048926	62942 2151077	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 277412	++++ 542597	++++ 1129098	47326 1835688	114610 3783292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 127206	++++ 257490	++++ 544660	19602 873952	50104 1817509	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 138169	++++ 281926	12169 593804	21546 903575	54574 2043364	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 77933	++++ 156493	6344 327330	12373 519647	31401 1128580	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 296853	++++ 808553	++++ 1261075	66636 2449308	143467 5299467	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 130640	++++ 265901	10174 568659	20331 824429	51677 1944996	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 203924	++++ 402287	++++ 832948	31631 1264951	82259 2833506	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 422050	16790 848836	31414 1773236	63826 2796331	166966 6214752	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	++++ 39091	++++ 73107	++++ 147180	++++ 259717	14239 517814	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 61491	++++ 127125	++++ 226910	++++ 390809	7481 862471	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetone	CBM	Ave	++++ 220327	++++ 398773	++++ 665956	++++ 1097098	86023 2321110	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 28000	++++ 56204	++++ 114279	++++ 175439	11269 384054	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 502108	++++ 1108992	++++ 1652685	++++ 3057291	219917 6999063	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 194355	++++ 387640	++++ 655797	++++ 1111229	76885 2395844	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	3049 147877	5250 292909	11039 633007	21196 889868	56607 2050200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 104178	++++ 213988	++++ 390689	++++ 666078	7623 14588 1491458	++++ 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 322940	++++ 644340	++++ 1332511	++++ 1919761	47135 126693 4249014	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 237979	++++ 483244	++++ 773470	++++ 1347387	35554 99796 3367365	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Methylene Chloride	CBM	Ave	++++ 158748	++++ 297663	++++ 587875	++++ 829908	39858 72672 ++++	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 0.400 ++++
3-Chloropropene	CBM	Ave	++++ 172933	++++ 352711	++++ 715500	++++ 1138278	14784 29914 69253 2516658	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 454099	++++ 893782	++++ 1857677	++++ 2686894	33755 67457 175320 6209652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 152597	++++ 304618	++++ 640390	++++ 904134	21313 57740 2041028	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 425850	++++ 850675	++++ 1727313	++++ 2608750	32181 64503 169974 5477445	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 436887	++++ 884523	++++ 1553256	++++ 2571313	13784 31073 59673 165819 5756531	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	6185 301902	11544 617142	22407 1197700	44696 1866128	117133 4143029	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 421041	++++ 920626	++++ 1610829	++++ 2825655	59807 158808 6134377	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 139897	++++ 280600	++++ 564091	++++ 836832	10084 20822 53409 1774150	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 71674	++++ 137814	++++ 242448	++++ 408724	10552 870000	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
cis-1,2-Dichloroethene	CBM	Ave	3051 153350	5311 314771	10779 630074	22108 933768	57247 2161860	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 367561	++++ 727588	25120 1268094	49778 2287831	134280 4857969	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	7168 346742	12869 705235	25085 1383523	52455 2190241	132214 4960016	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 196936	++++ 392928	++++ 687510	27618 1192762	73368 2547299	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7734 377403	13331 774289	27166 1509577	55384 2393121	145486 5471084	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4547 232618	8382 490730	17516 952640	35324 1548479	87574 3502141	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 82609	++++ 165738	++++ 330488	12681 486357	31319 1042096	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 444635	15963 906736	33352 1771104	65637 2614755	167643 5593459	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	6601 372817	11874 761689	24215 1552321	50848 2465819	138991 5358444	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 59954	++++ 111445	++++ 184294	8226 331158	22433 786825	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 118426	++++ 240541	8397 465638	17105 690034	45390 1499809	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 249671	++++ 526684	18410 1043094	37543 1556455	95028 3566561	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	17363 868592	31627 1711484	63694 3264805	129920 5087913	336411 11120269	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 174693	++++ 357021	13419 694408	26105 1074435	66081 2411618	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 170338	6605 354326	12771 653599	25661 1061646	64714 2334951	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4087 194217	7238 411429	13973 832705	28091 1212507	74264 2837545	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 172040	++++ 363939	++++ 729198	27744 1170568	67675 2672665	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 346754	++++ 745629	23694 1472126	48577 2394105	129879 5512449	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 36737	++++ 120654	++++ 174155	8684 331358	19464 783489	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 232640	++++ 470252	++++ 823262	27631 1502138	81302 3304265	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	5664 305916	11041 613752	21112 1192238	44641 1790104	116952 4193256	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 377024	++++ 689509	24146 916498	51311 2161661	143236 5370174	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 265941	8857 558061	18964 1060593	38186 1693124	96201 3656415	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 249246	8494 528240	18209 983862	34634 1678819	93722 3876912	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	9759 514273	18809 1073072	37560 1966647	75222 3139180	192974 7445292	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2849 160780	5479 322166	11656 599648	23218 982519	60205 2274200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 175250	++++ 293749	10295 417616	22692 941298	65409 2558380	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 186587	++++ 377410	13108 732239	26877 1119383	73243 2627265	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	CBZd 5	Ave	++++ 1842861	++++ 3737320	++++ 7125919	278341 11514382	716916 26057226	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	++++ 313050	++++ 676985	19680 1357226	39627 2191805	110810 5334244	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 273278	++++ 576579	17903 1102407	37712 1772227	99001 4168790	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3665 191154	6973 394783	13185 776709	28219 1207845	72561 2883889	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	7137 406499	13951 832085	29142 1543553	58935 2444395	157211 5914764	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	++++ 719275	24780 1456098	48941 2578598	102987 4329132	272217 10330192	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	17235 1128063	36147 2267354	79756 3963090	160595 6728239	425545 16015024	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd 5	Ave	++++ 396249	13596 785625	27868 1455379	57416 2300427	151720 4997986	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd 5	Ave	++++ 288479	++++ 647774	16038 1258109	32352 2180538	93899 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Styrene	CBZd 5	Ave	++++ 379313	++++ 797396	22430 1440043	46527 2475003	134724 6272582	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	++++ 577831	18010 1183498	40418 2069274	85176 3507204	219991 8652988	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	++++ 388902	++++ 791220	26816 1406346	52217 2507616	146757 5342402	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 123267	++++ 249431	8767 448013	16530 809328	45222 1801458	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 770189	++++ 1569505	25754 2749199	53331 4984665	108667 11018383	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	++++ 208028	++++ 425975	14187 750579	27021 1348899	77981 3034911	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 190674	6524 376201	13286 679618	26657 1211506	71471 2747919	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	++++ 757218	++++ 1579790	52613 2762937	100995 4977060	288122 11171652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	++++ 298107	++++ 615118	20417 1079746	39553 1917273	109634 4410950	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 294414	++++ 619837	++++ 1139797	33405 2186650	99545 4845121	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 491714	16235 955171	34455 1652838	72566 2938778	189531 6027860	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	++++ 674397	++++ 1354211	44314 2326877	90284 4505713	239278 9821979	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 670745	++++ 1320347	44184 2282446	89238 4407169	236361 9493306	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	++++ 963943	++++ 1895656	62984 3335709	130314 6189211	346547 13052688	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7122 429682	13761 870050	27898 1597433	57634 3038807	153722 6998909	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 595380	++++ 1199239	35336 2207883	71441 4112439	206433 9093386	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7701 436204	14670 882709	28727 1608243	58838 3081288	154004 7120026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	++++ 779650	++++ 1524715	46995 2715440	99360 5104026	272972 11067094	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	8305 664909	18233 1328651	41757 2356435	88511 ++++	235583 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Indane	CBZd 5	Ave	++++ 602700	++++ 1193709	39872 2118687	79681 3956160	207350 8865173	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 416753	++++ 841536	27621 1533100	56506 2968700	146910 7061726	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	++++ 814617	23860 1547638	50796 2715683	108576 5104411	288957 10889558	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 516302	++++ 1040605	31427 1879451	64720 3517487	178805 7968258	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 527231	15243 970873	32520 1679521	73748 2924996	202684 6339976	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2927 207960	5571 429617	11218 745616	22412 ++++	65206 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 733964	++++ 1413004	41572 2207453	90241 4545804	260569 10379759	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 446881	12818 722978	28563 1006221	60222 1915343	173512 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 360521	11357 693552	20313 1301208	41810 2366361	119662 5229906	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 839854	24728 1530726	47569 2517870	92896 4661002	294401 10693857	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 361175	++++ 732431	21118 1398696	43365 2661640	119102 6035243	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 351962	10806 629244	20063 1082671	39185 2034470	116648 3007302	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 514300	13713 671591	23120 1000580	40866 1774929	167946 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 628512	17895 789694	28473 1141032	54667 1951995	209066 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1743947 1821597	1724522 1988683	1705365 2036360	1745466 1623678	1732344 1691157	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	12.7						50			
Propene	+++++	+++++	+++++	23.1						50		
Dichlorodifluoromethane	+++++	+++++	5.1						50			
Chloromethane	+++++	+++++	+++++	21.0						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	6.9						50			
Vinyl chloride	21.8						50					
Butane	+++++	+++++	+++++	13.3						50		
1,3-Butadiene	+++++	+++++	+++++	2.3						50		
Bromomethane	+++++	+++++	18.9						50			
Chloroethane	+++++	+++++	11.2						50			
Ethanol	+++++	+++++	+++++	22.9						50		
Vinyl bromide	+++++	+++++	7.3						50			
2-Methylbutane	+++++	+++++	+++++	5.5						50		
Trichlorofluoromethane	+++++	5.4						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	+++++	-1.1							50
Acetonitrile	+++++	+++++	+++++	-12.8						50		
Acetone	+++++	+++++	+++++	+++++	18.4							80
Pentane	+++++	+++++	+++++	+++++	5.4							50
Isopropyl alcohol	+++++	+++++	+++++	7.2						50		
Ethyl ether	+++++	+++++	+++++	+++++	10.7							50
1,1-Dichloroethene	8.4						50					
Acrylonitrile	+++++	+++++	6.3						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.9							50			
tert-Butyl alcohol	+++++	+++++	+++++	5.2								50
Methylene Chloride	+++++	+++++	+++++	57.6 +++++								80
3-Chloropropene	+++++	+++++	14.8						50			
Carbon disulfide	+++++	+++++	7.1						50			
trans-1,2-Dichloroethene	+++++	-2.1							50			
2-Methylpentane	+++++	+++++	8.2							50		
Methyl tert-butyl ether	+++++	-8.6							50			
1,1-Dichloroethane	6.8						50					
Vinyl acetate	+++++	+++++	0.8							50		
Hexane	+++++	+++++	5.2							50		
2-Butanone (MEK)	+++++	+++++	+++++	8.0							50	
cis-1,2-Dichloroethene	5.8						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	3.1						50			
Chloroform	7.6						50					
Tetrahydrofuran	+++++	+++++	+++++	1.2						50		
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	-0.5						50					
Cyclohexane	+++++	+++++	+++++	5.2						50		
Benzene	+++++	-0.4						50				
Carbon tetrachloride	-4.8						50					
1-Butanol	+++++	+++++	+++++	0.2							50	
2,3-Dimethylpentane	+++++	+++++	6.9						50			
Thiophene	+++++	+++++	6.3						50			
2,2,4-Trimethylpentane	6.0						50					
Heptane	+++++	+++++	12.0						50			
1,2-Dichloropropane	+++++	4.8						50				
Trichloroethene	7.3						50					
Dibromomethane	+++++	+++++	+++++	2.1						50		
Bromodichloromethane	+++++	+++++	-2.7						50			
1,4-Dioxane	+++++	+++++	+++++	13.9						50		
Methyl methacrylate	+++++	+++++	+++++	-16.1						50		
Methylcyclohexane	-1.0						50					
4-Methyl-2-pentanone (MIBK)	+++++	+++++	3.0						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.6						50				
trans-1,3-Dichloropropene	+++++	-7.7						50				
Toluene	1.0						50					
1,1,2-Trichloroethane	-3.3						50					
2-Hexanone	+++++	+++++	-5.8						50			
Octane	+++++	+++++	0.0						50			
Dibromochloromethane	+++++	+++++	-12.7						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-7.1						50			
Tetrachloroethene	1.1						50					
Chlorobenzene	-4.9						50					
Ethylbenzene	+++++	-3.0						50				
m-Xylene & p-Xylene	-14.2						50					
Nonane	+++++	-2.2						50				
Bromoform	+++++	+++++	-18.6		+++++				50			
Styrene	+++++	+++++	-14.3						50			
o-Xylene	+++++	-12.6						50				
1,1,2,2-Tetrachloroethane	+++++	+++++	0.0						50			
1,2,3-Trichloropropane	+++++	+++++	2.1						50			
Isopropylbenzene	+++++	-6.2						50				
Propylbenzene	+++++	+++++	-1.4						50			
2-Chlorotoluene	+++++	-3.8						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	+++++	+++++	-1.0						50			
1,3,5-Trimethylbenzene	+++++	+++++	-1.3						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-22.6						50		
Decane	+++++	-4.7						50				
tert-Butylbenzene	+++++	+++++	-3.9						50			
1,2,4-Trimethylbenzene	+++++	+++++	-2.6						50			
sec-Butylbenzene	+++++	+++++	-3.0						50			
1,3-Dichlorobenzene	-9.4						50					
Benzyl chloride	+++++	+++++	-12.6						50			
1,4-Dichlorobenzene	-4.4						50					
4-Isopropyltoluene	+++++	+++++	-9.5						50			
1,2,3-Trimethylbenzene	-23.6		+++++	+++++			50					
Indane	+++++	+++++	-2.8						50			
1,2-Dichlorobenzene	+++++	+++++	-6.9						50			
Butylbenzene	+++++	-12.5						50				
Indene	+++++	+++++	-10.8						50			
Undecane	+++++	-11.9						50				
1,2-Dibromo-3-Chloropropane	-10.0		+++++	+++++			50					
1,2,4,5-Tetramethylbenzene	+++++	+++++	-12.1						50			
Dodecane	+++++	-6.1		+++++				50				
1,2,4-Trichlorobenzene	+++++	-5.8						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-6.2						80				
Hexachlorobutadiene	+++++	+++++	-15.7						50			
1,2,3-Trichlorobenzene	+++++	1.5						50				
2-Methylnaphthalene	+++++	6.7		+++++				80				
1-Methylnaphthalene	+++++	13.7		+++++				80				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	++++ 2.3273	++++ 2.2136	2.6032 2.2367	2.5523 2.4103	2.4630 2.1808	Ave		2.3734			6.7		30.0				
Propene	++++ 0.7221	++++ 0.6895	++++ 0.6844	0.8419 0.7524	0.7507 0.6660	Ave		0.7296			8.2		30.0				
Dichlorodifluoromethane	++++ 4.1510	++++ 3.9686	4.5412 4.0428	4.2461 4.8211	5.3003 3.7479	Ave		4.3524			11.7		30.0				
Chloromethane	++++ 0.2871	++++ 0.2733	0.4314 0.2689	0.2960 0.2912	0.3371 0.2638	Ave		0.3061			18.1		30.0				
1,2-Dichloro-1,1,2,2-tetrafluoroethane	++++ 3.0989	3.8991 3.0537	3.2433 3.1101	3.1843 3.3433	3.5538 2.6767	Ave		3.2404			10.6		30.0				
Vinyl chloride	1.3396 0.9887	1.3354 0.9559	1.1215 0.9544	1.1058 0.9748	1.0442 0.9105	Ave		1.0731			14.4		30.0				
1,3-Butadiene	++++ 0.6523	++++ 0.6352	++++ 0.6377	0.7017 0.6500	0.6571 0.6202	Ave		0.6506			4.0		30.0				
Butane	++++ 1.1091	++++ 1.0560	1.3166 1.0795	1.1752 1.0850	1.2095 1.0260	Ave		1.1321			8.5		30.0				
Bromomethane	++++ 1.2054	++++ 1.1811	1.4266 1.1809	1.2696 1.2035	1.2705 1.1456	Ave		1.2354			7.2		30.0				
Chloroethane	++++ 0.4893	++++ 0.4606	0.6023 0.4673	0.5518 0.4597	0.4948 0.4499	Ave		0.4970			10.7		30.0				
Ethanol	++++ 0.2949	++++ 0.2999	++++ 0.2981	0.3286 0.2885	0.3153 0.2724	Ave		0.2997			6.1		30.0				
Vinyl bromide	++++ 1.2738	++++ 1.2507	1.4513 1.2699	1.3532 1.2460	1.3493 1.2216	Ave		1.3020			5.9		30.0				
2-Methylbutane	++++ 0.7979	++++ 0.7734	0.8639 0.7606	0.8536 0.7713	0.8359 0.7425	Ave		0.7999			5.7		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Acrolein	++++ 0.2149	++++ 0.2505	++++ 0.2493	0.3397 0.2426	0.2316 0.2411	Ave		0.2528			15.9		30.0				
Trichlorofluoromethane	6.6790 5.8128	6.2714 5.6498	6.2323 5.6579	6.0249 5.5584	5.9679 5.2697	Ave		5.9124			6.9		30.0				
Acetonitrile	++++ 0.2348	++++ 0.2373	++++ 0.2818	0.2630 0.2803	0.2428 0.2703	Ave		0.2586			7.8		30.0				
Acetone	++++ 0.4175	++++ 0.3860	++++ 0.3784	0.5760 0.3627	0.4291 0.3557	Ave		0.4151			18.3		30.0				
Pentane	++++ 0.1987	++++ 0.1907	++++ 0.1944	0.2412 0.1914	0.2034 0.1879	Ave		0.2011			9.2		30.0				
Isopropyl alcohol	++++ 1.1215	++++ 1.1376	++++ 1.1294	1.2584 1.0760	1.1488 1.0492	Ave		1.1316			5.9		30.0				
Ethyl ether	++++ 0.6540	++++ 0.6244	++++ 0.6327	0.7089 0.6995	0.6970 0.6464	Ave		0.6661			5.2		30.0				
1,1-Dichloroethene	1.6400 1.3612	1.4528 1.3523	1.4077 1.3829	1.3842 1.3970	1.3751 1.3233	Ave		1.4076			6.3		30.0				
Acrylonitrile	++++ 0.6195	++++ 0.6124	++++ 0.6202	++++ 0.6572	0.6255 0.6313	Ave		0.6277			2.5		30.0				
tert-Butyl alcohol	++++ 2.6737	++++ 2.7383	++++ 2.6973	2.6805 2.6655	2.7132 2.5593	Ave		2.6773			2.0		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.5282	3.6010 3.4530	3.7397 3.4392	3.5306 3.4042	3.5510 3.1580	Ave		3.4894			4.6		30.0				
Methylene Chloride	++++ 1.2853	++++ 1.1917	++++ 1.1531	2.0228 1.1482	1.5003 1.0647	Ave		1.3380			24.9		30.0				
3-Chloropropene	++++ 1.3439	++++ 1.2944	1.1777 1.2837	1.4302 1.3374	1.3141 1.2919	Ave		1.3092			5.4		30.0				
Carbon disulfide	++++ 3.4096	++++ 3.3395	3.3655 3.3248	3.2471 3.4285	3.3320 3.2774	Ave		3.3406			1.8		30.0				
trans-1,2-Dichloroethene	1.5926 1.4009	1.5829 1.3797	1.4276 1.4044	1.3885 1.4254	1.3834 1.3721	Ave		1.4358			5.7		30.0				
2-Methylpentane	++++ 1.8951	++++ 1.8425	++++ 1.8466	1.9630 1.9346	1.9304 1.8132	Ave		1.8940			2.8		30.0				
Methyl tert-butyl ether	++++ 4.5873	++++ 4.5288	4.7495 4.5802	4.4631 4.6026	4.5963 4.4400	Ave		4.5685			2.1		30.0				
1,1-Dichloroethane	2.6815 2.3300	2.6739 2.2911	2.4729 2.3182	2.3130 2.3408	2.3587 2.2447	Ave		2.4025			6.5		30.0				
Vinyl acetate	++++ 2.2364	++++ 2.3368	++++ 2.4359	2.0297 2.5381	2.1537 2.5129	Ave		2.3205			8.2		30.0				
2-Butanone (MEK)	++++ 0.5380	++++ 0.5309	++++ 0.5519	0.5759 0.5616	0.5098 0.5445	Ave		0.5446			3.9		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	++++ 0.8187	++++ 0.8108	0.9023 0.8291	0.8416 0.8382	0.8376 0.8031	Ave		0.8352			3.6		30.0				
cis-1,2-Dichloroethene	1.6200 1.4112	1.4958 1.4310	1.4342 1.4304	1.4272 1.4418	1.3943 1.3928	Ave		1.4479			4.6		30.0				
Ethyl acetate	++++ 2.0207	++++ 2.0336	1.8097 2.1099	1.9184 2.1701	1.9214 2.1110	Ave		2.0119			6.0		30.0				
Chloroform	4.2334 3.7394	4.0960 3.6835	3.8341 3.7449	3.7602 3.7523	3.7763 3.5872	Ave		3.8207			5.1		30.0				
Tetrahydrofuran	++++ 0.8846	++++ 0.8714	++++ 0.8870	0.8784 0.9150	0.8832 0.8836	Ave		0.8862			1.5		30.0				
1,1,1-Trichloroethane	4.9709 4.7770	4.9939 4.7670	5.0122 4.8476	4.7467 4.8764	4.7402 4.7023	Ave		4.8434			2.4		30.0				
1,2-Dichloroethane	0.5380 0.5057	0.5327 0.4936	0.5166 0.4997	0.4858 0.5068	0.4926 0.4915	Ave		0.5063			3.5		30.0				
Benzene	0.7533 0.6321	0.7075 0.6240	0.7019 0.6266	0.6312 0.6238	0.6214 0.5956	Ave		0.6517			7.8		30.0				
Cyclohexane	++++ 0.1013	++++ 0.0986	++++ 0.1001	0.0959 0.0971	0.0939 0.0911	Ave		0.0968			3.7		30.0				
1-Butanol	++++ 0.0448	++++ 0.0477	++++ 0.0492	++++ 0.0516	0.0330 0.0509	Ave		0.0462			14.9		30.0				
Carbon tetrachloride	0.9231 0.9489	0.9429 0.9372	0.7537 0.9263	0.9038 0.9692	0.9350 0.9273	Ave		0.9167			6.5		30.0				
2,3-Dimethylpentane	++++ 0.1378	++++ 0.1390	++++ 0.1212	0.1277 0.1410	0.1355 0.1365	Ave		0.1349			5.2		30.0				
Thiophene	++++ 0.3778	++++ 0.3718	0.3563 0.3816	0.3607 0.3893	0.3698 0.3754	Ave		0.3728			2.9		30.0				
2,2,4-Trimethylpentane	++++ 0.8423	++++ 0.8248	++++ 0.8652	0.8182 0.8535	0.8128 0.8176	Ave		0.8342			2.3		30.0				
1,2-Dichloropropane	++++ 0.2041	++++ 0.2015	0.2130 0.2054	0.1991 0.2089	0.2024 0.2020	Ave		0.2045			2.2		30.0				
Heptane	++++ 0.2142	++++ 0.2122	++++ 0.1976	0.1979 0.2154	0.2071 0.2066	Ave		0.2083			3.5		30.0				
Trichloroethene	0.4192 0.3857	0.3851 0.3869	0.4007 0.4221	0.3771 0.3913	0.3880 0.3727	Ave		0.3929			4.2		30.0				
Dibromomethane	++++ 0.3459	++++ 0.3374	++++ 0.3725	0.3565 0.3576	0.3464 0.3447	Ave		0.3514			3.1		30.0				
Bromodichloromethane	++++ 0.6680	++++ 0.6726	0.5971 0.7005	0.5918 0.7174	0.6239 0.6980	Ave		0.6587			7.4		30.0				
1,4-Dioxane	++++ 0.0965	++++ 0.1030	++++ 0.1037	0.0992 0.1007	0.0973 0.0954	Ave		0.0994			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.2243	++++ 0.2331	0.2139 0.2468	0.1766 0.2628	0.2044 0.2582	Ave		0.2275			12.8		30.0				
Methylcyclohexane	++++ 0.4067	++++ 0.4050	0.3972 0.4110	0.3842 0.4158	0.3938 0.4053	Ave		0.4024			2.5		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.3577	++++ 0.3715	++++ 0.3933	0.2895 0.4035	0.3277 0.3952	Ave		0.3626			11.5		30.0				
cis-1,3-Dichloropropene	++++ 0.3940	0.3635 0.4127	0.3972 0.4288	0.3514 0.4368	0.3808 0.4249	Ave		0.3948			8.2		30.0				
trans-1,3-Dichloropropene	++++ 0.4780	0.4035 0.4968	0.3959 0.5178	0.4276 0.5209	0.4537 0.5119	Ave		0.4674			10.5		30.0				
Toluene	1.0184 0.9698	0.9133 0.9624	0.9750 0.9710	0.9478 0.9638	0.9541 0.9102	Ave		0.9586			3.2		30.0				
1,1,2-Trichloroethane	0.2339 0.2639	0.2426 0.2594	0.2564 0.2610	0.2580 0.2630	0.2596 0.2452	Ave		0.2543			4.0		30.0				
2-Hexanone	++++ 0.1981	++++ 0.2103	++++ 0.2238	0.1399 0.2293	0.1787 0.2239	Ave		0.2006			16.0		30.0				
Dibromochloromethane	0.6655 0.7840	0.5795 0.8296	0.6334 0.8666	0.6501 0.8735	0.6985 0.8331	Ave		0.7414			14.6		30.0				
Octane	++++ 0.3146	++++ 0.3133	0.2922 0.3156	0.3033 0.3109	0.2998 0.2932	Ave		0.3054			3.1		30.0				
C8 Range	++++ 2.1678	++++ 2.1237	++++ 2.1591	++++ 2.2092	2.0961 2.0601	Ave		2.1360			2.5		30.0				
1,2-Dibromoethane (EDB)	++++ 0.5766	++++ 0.5804	0.5000 0.5952	0.4942 0.5984	0.5448 0.5694	Ave		0.5574			7.3		30.0				
Tetrachloroethene	0.4858 0.4849	0.4864 0.4819	0.4732 0.4752	0.4838 0.4653	0.4706 0.4417	Ave		0.4749			2.9		30.0				
Chlorobenzene	0.8210 0.8508	0.8425 0.8373	0.8551 0.8444	0.8450 0.8430	0.8379 0.7968	Ave		0.8374			2.0		30.0				
Ethylbenzene	1.3703 1.4178	1.3589 1.4128	1.4055 1.4174	1.3343 1.4023	1.4017 1.2986	Ave		1.3820			2.9		30.0				
m-Xylene & p-Xylene	1.1137 1.1838	1.1023 1.1550	1.1618 1.1536	1.1488 1.1251	1.1673 1.0234	Ave		1.1335			4.1		30.0				
Bromoform	++++ 0.7606	++++ 0.8485	0.5893 0.9286	0.6166 0.9279	0.6638 0.8938	Ave		0.7786			18.1		30.0				
Styrene	++++ 0.7750	++++ 0.7975	0.6004 0.8292	0.6182 0.8487	0.6786 0.7961	Ave		0.7430			13.0		30.0				
o-Xylene	1.1430 1.2366	1.1230 1.2060	1.2624 1.1986	1.2290 1.1769	1.2492 1.0804	Ave		1.1905			5.0		30.0				
Nonane	++++ 0.4737	++++ 0.4580	0.4455 0.4538	0.4515 0.4433	0.4801 0.4032	Ave		0.4511			5.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.5797 0.6456	0.5118 0.6455	0.5697 0.6181	0.5802 0.6658	0.6188 0.6146	Ave		0.6050			7.5		30.0				
1,2,3-Trichloropropane	++++ 0.3084	++++ 0.3034	0.2911 0.3046	0.2918 0.3115	0.2978 0.2914	Ave		0.3000			2.7		30.0				
Isopropylbenzene	++++ 1.7012	++++ 1.6661	1.8308 1.6871	1.7528 1.6694	1.7150 1.5307	Ave		1.6941			5.0		30.0				
Propylbenzene	0.4435 0.4963	0.4328 0.4795	0.4534 0.4859	0.4640 0.4778	0.4755 0.4438	Ave		0.4652			4.5		30.0				
2-Chlorotoluene	++++ 0.4524	0.3991 0.4310	0.4619 0.4318	0.4417 0.4245	0.4398 0.3929	Ave		0.4306			5.3		30.0				
4-Ethyltoluene	1.5529 1.8829	1.6047 1.8611	1.7828 1.8557	1.7531 1.8469	1.7972 1.6563	Ave		1.7594			6.6		30.0				
1,3,5-Trimethylbenzene	0.6792 0.7724	0.6523 0.7416	0.7326 0.7410	0.7228 0.7434	0.7292 0.6843	Ave		0.7199			5.1		30.0				
Alpha Methyl Styrene	++++ 0.6781	++++ 0.7295	++++ 0.7535	++++ 0.7838	0.5439 0.7289	Ave		0.6844			13.4		30.0				
Decane	++++ 0.6849	++++ 0.6585	0.6176 0.6522	0.6408 0.6491	0.6488 0.5849	Ave		0.6421			4.6		30.0				
tert-Butylbenzene	1.6566 1.8841	1.6665 1.7827	1.8313 1.7468	1.8740 1.6988	1.8639 1.5293	Ave		1.7534			6.6		30.0				
1,2,4-Trimethylbenzene	1.4293 1.7233	1.4880 1.6671	1.6887 1.6372	1.6986 1.5922	1.7123 1.4293	Ave		1.6066			7.2		30.0				
1,3-Dichlorobenzene	1.1997 1.1856	1.0963 1.1603	1.2442 1.1572	1.1823 1.1516	1.1621 1.0583	Ave		1.1598			4.5		30.0				
sec-Butylbenzene	2.0787 2.3069	2.1298 2.2195	2.2743 2.1908	2.2407 2.1561	2.2363 1.8732	Ave		2.1706			5.7		30.0				
Benzyl chloride	++++ 1.2529	++++ 1.3231	1.0998 1.4041	1.0436 1.3938	1.1034 1.2924	Ave		1.2392			11.3		30.0				
1,4-Dichlorobenzene	1.2196 1.2112	1.1487 1.1594	1.2267 1.1399	1.2179 1.1212	1.1651 1.0340	Ave		1.1644			5.1		30.0				
4-Isopropyltoluene	2.1095 2.3345	2.1432 2.2554	2.2305 2.2238	2.2370 2.1784	2.2728 1.9244	Ave		2.1910			5.2		30.0				
1,2,3-Trimethylbenzene	1.6103 1.8346	1.5786 1.7874	1.8623 1.7524	1.7831 1.7335	1.7558 1.5556	Ave		1.7253			6.2		30.0				
1,2-Dichlorobenzene	1.1708 1.1557	1.2083 1.1157	1.2580 1.1029	1.2065 1.0865	1.1355 1.0034	Ave		1.1443			6.3		30.0				
Indane	1.4503 1.4994	1.3817 1.4300	1.4785 1.4226	1.4862 1.3893	1.4419 1.2529	Ave		1.4233			5.0		30.0				
Indene	++++ 1.2013	++++ 1.2223	1.0339 1.2542	1.0803 1.2953	1.0663 1.1920	Ave		1.1682			8.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.8231 1.8829	1.6985 1.8028	1.8359 1.7871	1.8719 1.7597	1.8266 1.5551	Ave		1.7844			5.4		30.0				
Undecane	++++ 0.8059	++++ 0.7917	++++ 0.7809	++++ 0.7402	0.7701 0.6720	Ave		0.7598			5.8		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.5799	++++ 0.6160	0.4391 0.6515	0.4709 0.6213	0.4861 0.5926	Ave		0.5572			14.3		30.0				
1,2,4,5-Tetramethylbenzene	++++ 2.1235	++++ 2.1635	2.1451 2.1540	2.1430 1.9985	1.9593 1.8488	Ave		2.0670			5.7		30.0				
Dodecane	++++ 0.7733	++++ 0.8936	++++ 0.8877	0.8688 0.7212	0.6803 0.7447	Ave		0.7957			10.9		30.0				
1,2,4-Trichlorobenzene	++++ 1.1894	++++ 1.2694	1.4472 1.2818	1.3888 1.0940	1.0856 1.1269	Ave		1.2354			10.9		30.0				
Naphthalene	++++ 2.0750	3.4525 2.4487	2.8184 2.5087	2.7367 2.1182	1.8255 ++++	Ave		2.4980			20.6		30.0				
Hexachlorobutadiene	++++ 1.4923	++++ 1.4393	1.7181 1.4314	1.5746 1.2072	1.3912 1.2353	Ave		1.4362			11.7		30.0				
1,2,3-Trichlorobenzene	++++ 1.1295	++++ 1.2212	1.4432 1.2323	1.3860 0.9868	1.0237 1.0761	Ave		1.1873			13.9		30.0				
2-Methylnaphthalene	++++ 0.3586	++++ 0.9509	++++ 1.0808	++++ 0.6399	++++ 0.9374	Ave		0.7935			36.8		50.0				
1-Methylnaphthalene	++++ 0.3899	++++ 0.8629	++++ 0.9496	++++ 0.5203	++++ 0.7770	Ave		0.6999			33.7		50.0				
4-Bromofluorobenzene (Surr)	0.8488 0.8636	0.8528 0.8535	0.8654 0.8546	0.8648 0.8319	0.8641 0.8066	Ave		0.8506			2.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 165552	++++ 330784	13488 670931	27178 1511149	67965 2786793	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 51364	++++ 103039	++++ 205301	8965 471697	20715 851034	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 295289	++++ 593041	23530 1212691	45214 3022572	146259 4789313	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 20420	++++ 40844	2235 80675	3152 182542	9302 337068	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 220441	10161 456323	16805 932912	33908 2096072	98065 3420506	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	1811 70331	3480 142840	5811 286294	11775 611179	28814 1163551	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 46402	++++ 94920	++++ 191280	7472 407531	18132 792495	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 78896	++++ 157806	6822 323819	12514 680235	33375 1311043	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 85746	++++ 176496	7392 354225	13519 754560	35058 1463890	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 34804	++++ 68833	3121 140181	5876 288211	13655 574974	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 104882	++++ 224069	++++ 447098	17498 904290	43508 1740692	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 90610	++++ 186899	7520 380924	14410 781185	37233 1560991	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 56760	++++ 115570	4476 228167	9090 483547	23067 948871	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrolein	CBM	Ave	++++ 15289	++++ 37440	++++ 74788	3617 152096	6392 308108	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	9029 413497	16343 844261	32292 1697186	64156 3484877	164680 6733950	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 16703	++++ 35460	++++ 84531	++++ 175714	2801 345458	6701 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Acetone	CBM	Ave	++++ 89101	++++ 173059	++++ 340521	18402 682117	35521 1363433	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 14137	++++ 28499	++++ 58302	2568 119973	5613 240067	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 239341	++++ 509997	++++ 1016357	40201 2023732	95103 4022317	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 46526	++++ 93310	++++ 189800	7549 438542	19232 826066	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	2217 96830	3786 202076	7294 414812	14740 875865	37945 1690964	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 44072	++++ 91512	++++ 186041	++++ 412056	17259 806690	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 190196	++++ 409183	13889 809098	28891 1671112	74242 3270376	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 250984	9384 515989	19377 1031649	37596 2134286	97989 4035478	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 91431	++++ 178076	++++ 345898	21540 719893	41401 1360585	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 95603	++++ 193431	6102 385054	15229 838478	36262 1650820	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 242543	++++ 499031	17438 997332	34577 2149500	91945 4188128	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	2153 99652	4125 206172	7397 421281	14785 893667	38175 1753401	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 134813	++++ 275324	10171 553915	20556 1212878	53163 2316982	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 326320	++++ 676752	24609 1373906	47525 2885627	126834 5673760	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	3625 165748	6968 342362	12813 695373	24630 1467554	65086 2868475	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 159088	++++ 349189	++++ 730693	21613 1591261	59429 3211124	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 38268	++++ 79333	++++ 165553	6132 352107	14067 695780	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 58239	++++ 121155	++++ 248691	4675 525494	8962 1026278	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	2190 100389	3898 213838	7431 429081	15197 903953	38474 1779827	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 143745	++++ 303889	9377 632910	20428 1360573	53019 2697533	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	5723 266010	10674 550434	19866 1123349	40040 2352521	104204 4583947	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 62926	++++ 130211	++++ 266070	9354 573668	24371 1129072	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	6720 339819	13014 712345	25970 1454125	50545 3057281	130803 6008857	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4162 199683	7880 414101	15042 837957	29238 1778626	76773 3480930	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	5827 249589	10465 523482	20437 1050705	37991 2189441	96837 4217712	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 39991	++++ 82675	++++ 167839	5770 340746	14632 645373	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 17690	++++ 40004	++++ 82457	++++ 181076	5146 360622	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7141 374679	13947 786171	21947 1553305	54395 3401707	145724 6567265	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 54415	++++ 116636	++++ 235995	3528 494713	7686 966448	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 149183	++++ 311873	++++ 639928	10374 1366267	21711 2658371	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 332582	++++ 691902	++++ 1407509	25192 2995449	49245 5790015	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 80581	++++ 169011	++++ 344383	6201 733246	11982 1430590	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 84592	++++ 178041	++++ 361284	5754 756110	32279 1463381	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	3243 152289	5696 324569	11668 707793	22698 1373208	60473 2639630	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 136587	++++ 283066	++++ 586890	10846 1255108	53985 2441282	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 263754	++++ 564189	++++ 1174659	17387 2518000	35620 4943175	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 38117	++++ 86437	++++ 173912	5968 353467	15165 675333	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 88559	++++ 195505	++++ 413937	6227 922467	10629 1828238	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	++++ 160604	++++ 339768	++++ 689164	11565 1459181	23124 2870166	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 141224	++++ 311634	++++ 659470	17423 1416282	51070 2798783	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++	5376	10488	21150	59340	++++	0.0400	0.0800	0.160	0.400
			155584	346235	719012	1532867	3009068	1.00	2.00	4.00	8.00	16.0
trans-1,3-Dichloropropene	CBZd	Ave	++++	5189	10066	22215	61443	++++	0.0400	0.0800	0.160	0.400
			165754	369600	783879	1677181	3381888	1.00	2.00	4.00	8.00	16.0
Toluene	CBZd	Ave	6779	11744	24790	49243	129198	0.0200	0.0400	0.0800	0.160	0.400
			336279	715966	1469948	3103222	6012505	1.00	2.00	4.00	8.00	16.0
1,1,2-Trichloroethane	CBZd	Ave	1557	3120	6520	13406	35149	0.0200	0.0400	0.0800	0.160	0.400
			91510	192987	395113	846792	1619482	1.00	2.00	4.00	8.00	16.0
2-Hexanone	CBZd	Ave	++++	++++	++++	7267	24199	++++	++++	++++	0.160	0.400
			68694	156406	338784	738442	1478910	1.00	2.00	4.00	8.00	16.0
Dibromochloromethane	CBZd	Ave	4430	7451	16103	33778	94584	0.0200	0.0400	0.0800	0.160	0.400
			271846	617174	1311808	2812660	5503585	1.00	2.00	4.00	8.00	16.0
Octane	CBZd	Ave	++++	++++	7429	15759	40600	++++	++++	0.0800	0.160	0.400
			109095	233063	477723	1000926	1936591	1.00	2.00	4.00	8.00	16.0
C8 Range	DFBZ	Ave	++++	++++	++++	++++	326670	++++	++++	++++	++++	0.400
			855982	1781529	3620641	7753468	14589114	1.00	2.00	4.00	8.00	16.0
1,2-Dibromoethane (EDB)	CBZd	Ave	++++	++++	12712	25676	73769	++++	++++	0.0800	0.160	0.400
			199953	431756	900939	1926667	3761382	1.00	2.00	4.00	8.00	16.0
Tetrachloroethene	CBZd	Ave	3234	6255	12031	25138	63725	0.0200	0.0400	0.0800	0.160	0.400
			168145	358488	719415	1498188	2918044	1.00	2.00	4.00	8.00	16.0
Chlorobenzene	CBZd	Ave	5465	10833	21742	43900	113462	0.0200	0.0400	0.0800	0.160	0.400
			295002	622855	1278293	2714425	5263414	1.00	2.00	4.00	8.00	16.0
Ethylbenzene	CBZd	Ave	9121	17474	35735	69322	189812	0.0200	0.0400	0.0800	0.160	0.400
			491615	1050972	2145561	4515180	8578718	1.00	2.00	4.00	8.00	16.0
m-Xylene & p-Xylene	CBZd	Ave	14827	28347	59080	119367	316153	0.0400	0.0800	0.160	0.320	0.800
			820994	1718390	3492522	7245395	13520878	2.00	4.00	8.00	16.0	32.0
Bromoform	CBZd	Ave	++++	++++	14982	32037	89888	++++	++++	0.0800	0.160	0.400
			263744	631165	1405685	2987666	5904670	1.00	2.00	4.00	8.00	16.0
Styrene	CBZd	Ave	++++	++++	15265	32117	91899	++++	++++	0.0800	0.160	0.400
			268745	593262	1255220	2732738	5258738	1.00	2.00	4.00	8.00	16.0
o-Xylene	CBZd	Ave	7608	14440	32097	63851	169158	0.0200	0.0400	0.0800	0.160	0.400
			428791	897122	1814388	3789404	7137002	1.00	2.00	4.00	8.00	16.0
Nonane	CBZd	Ave	++++	++++	11326	23460	65019	++++	++++	0.0800	0.160	0.400
			164273	340741	686883	1427330	2663319	1.00	2.00	4.00	8.00	16.0
1,1,2,2-Tetrachloroethane	CBZd	Ave	3859	6581	14484	30142	83793	0.0200	0.0400	0.0800	0.160	0.400
			223872	480219	935594	2143813	4060026	1.00	2.00	4.00	8.00	16.0
1,2,3-Trichloropropane	CBZd	Ave	++++	++++	7400	15160	40330	++++	++++	0.0800	0.160	0.400
			106933	225670	461156	1003093	1925261	1.00	2.00	4.00	8.00	16.0
Isopropylbenzene	CBZd	Ave	++++	++++	46548	91067	232238	++++	++++	0.0800	0.160	0.400
			589911	1239416	2553866	5375264	10111819	1.00	2.00	4.00	8.00	16.0
Propylbenzene	CBZd	Ave	2952	5565	11527	24106	64393	0.0200	0.0400	0.0800	0.160	0.400
			172077	356669	735475	1538516	2931395	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 156859	5132 320641	11745 653681	22951 1366689	59552 2595696	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	10337 652888	20634 1384436	45329 2809081	91082 5946732	243377 10941125	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	4521 267835	8388 551670	18627 1121740	37553 2393487	98748 4520211	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 235120	++++ 542707	++++ 1140621	28257 2523695	77610 4814736	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 237483	++++ 489862	15703 987208	33292 2090024	87862 3864099	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11027 653325	21429 1326146	46562 2644216	97365 5469769	252400 10102100	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	9514 597546	19133 1240172	42935 2478370	88253 5126755	231880 9441765	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7986 411115	14097 863153	31633 1751738	61425 3707873	157370 6991250	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	13837 799929	27386 1651103	57824 3316313	116417 6942238	302828 12374020	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 434461	++++ 984275	27963 2125520	54221 4487660	149421 8537696	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	8118 419983	14770 862511	31188 1725619	63275 3610216	157774 6830228	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	14042 809499	27559 1677824	56711 3366403	116224 7014221	307780 12712650	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	10719 636168	20298 1329610	47349 2652674	92640 5581569	237762 10276226	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	7793 400754	15537 829934	31984 1669523	62682 3498467	153773 6628325	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	9654 519916	17767 1063787	37591 2153540	77218 4473280	195256 8276746	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 416558	++++ 909289	26287 1898638	56129 4170791	144394 7874065	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	12135 652919	21840 1341073	46679 2705337	97253 5666096	247354 10272864	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 279455	++++ 588913	++++ 1182131	40009 2383371	102646 4439100	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 201092	++++ 458234	11163 986255	24464 2000539	65829 3914341	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 736323	++++ 1609444	54539 3260653	111338 6434741	265327 12213199	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 268129	++++ 664765	++++ 1343815	45141 2322024	92125 4919414	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 412431	++++ 944306	36794 1940306	72153 3522363	147015 7444026	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 719521	++++ 1821564	44394 3797602	71658 6820345	142183 247207 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Hexachlorobutadiene	CBZd 5	Ave	++++ 517445	++++ 1070672	43683 2166873	81808 3886960	188387 8160248	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 391665	++++ 908417	36693 1865471	72007 3177370	138621 7108780	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 124366	++++ 707384	++++ 1636134	++++ 2060557	++++ 6192720	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 135206	++++ 641933	++++ 1437560	++++ 1675488	++++ 5133017	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1129964 1197793	1096528 1269845	1100173 1293730	1123241 1339226	1170099 1332053	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	9.7						50			
Propene	+++++	+++++	+++++	15.4						50		
Dichlorodifluoromethane	+++++	+++++	4.3						50			
Chloromethane	+++++	+++++	40.9						50			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	20.3						50				
Vinyl chloride	24.8						50					
1,3-Butadiene	+++++	+++++	+++++	7.9						50		
Butane	+++++	+++++	16.3						50			
Bromomethane	+++++	+++++	15.5						50			
Chloroethane	+++++	+++++	21.2						50			
Ethanol	+++++	+++++	+++++	9.7						50		
Vinyl bromide	+++++	+++++	11.5						50			
2-Methylbutane	+++++	+++++	8.0						50			
Acrolein	+++++	+++++	+++++	34.3						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Trichlorofluoromethane	13.0						50					
Acetonitrile	+++++	+++++	+++++	1.7						50		
Acetone	+++++	+++++	+++++	38.8						80		
Pentane	+++++	+++++	+++++	19.9						50		
Isopropyl alcohol	+++++	+++++	+++++	11.2						50		
Ethyl ether	+++++	+++++	+++++	6.4						50		
1,1-Dichloroethene	16.5						50					
Acrylonitrile	+++++	+++++	+++++	+++++	-0.4						50	
tert-Butyl alcohol	+++++	+++++	0.1						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.2						50				
Methylene Chloride	+++++	+++++	+++++	51.2						80		
3-Chloropropene	+++++	+++++	-10.0						50			
Carbon disulfide	+++++	+++++	0.7						50			
trans-1,2-Dichloroethene	10.9						50					
2-Methylpentane	+++++	+++++	3.6						50			
Methyl tert-butyl ether	+++++	+++++	4.0						50			
1,1-Dichloroethane	11.6						50					
Vinyl acetate	+++++	+++++	+++++	-12.5						50		
2-Butanone (MEK)	+++++	+++++	+++++	5.7						50		
Hexane	+++++	+++++	8.0						50			
cis-1,2-Dichloroethene	11.9						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-10.0						50			
Chloroform	10.8						50					
Tetrahydrofuran	+++++	+++++	+++++	-0.9						50		
1,1,1-Trichloroethane	2.6						50					
1,2-Dichloroethane	6.3						50					
Benzene	15.6						50					
Cyclohexane	+++++	+++++	+++++	-1.0						50		
1-Butanol	+++++	+++++	+++++	+++++	-28.5						50	
Carbon tetrachloride	0.7						50					
2,3-Dimethylpentane	+++++	+++++	-10.2						50			
Thiophene	+++++	+++++	-4.4						50			
2,2,4-Trimethylpentane	+++++	+++++	3.7						50			
1,2-Dichloropropane	+++++	+++++	4.1						50			
Heptane	+++++	+++++	-5.1						50			
Trichloroethene	6.7						50					
Dibromomethane	+++++	+++++	6.0						50			
Bromodichloromethane	+++++	+++++	-9.3						50			
1,4-Dioxane	+++++	+++++	+++++	-0.2						50		
Methyl methacrylate	+++++	+++++	-6.0						50			
Methylcyclohexane	+++++	+++++	-1.3						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	-20.2						50		

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.9						50				
trans-1,3-Dichloropropene	+++++	-13.7						50				
Toluene	6.2						50					
1,1,2-Trichloroethane	-8.0						50					
2-Hexanone	+++++	+++++	+++++	-30.3						50		
Dibromochloromethane	-10.2						50					
Octane	+++++	+++++	-4.3						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-10.3						50			
Tetrachloroethene	2.3						50					
Chlorobenzene	-2.0						50					
Ethylbenzene	-0.8						50					
m-Xylene & p-Xylene	-1.7						50					
Bromoform	+++++	+++++	-24.3						50			
Styrene	+++++	+++++	-19.2						50			
o-Xylene	-4.0						50					
Nonane	+++++	+++++	-1.3						50			
1,1,2,2-Tetrachloroethane	-4.2						50					
1,2,3-Trichloropropane	+++++	+++++	-3.0						50			
Isopropylbenzene	+++++	+++++	8.1						50			
Propylbenzene	-4.7						50					
2-Chlorotoluene	+++++	-7.3						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	-11.7						50					
1,3,5-Trimethylbenzene	-5.7						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-20.5						50		
Decane	+++++	+++++	-3.8						50			
tert-Butylbenzene	-5.5						50					
1,2,4-Trimethylbenzene	-11.0						50					
1,3-Dichlorobenzene	3.4						50					
sec-Butylbenzene	-4.2						50					
Benzyl chloride	+++++	+++++	-11.2						50			
1,4-Dichlorobenzene	4.7						50					
4-Isopropyltoluene	-3.7						50					
1,2,3-Trimethylbenzene	-6.7						50					
1,2-Dichlorobenzene	2.3						50					
Indane	1.9						50					
Indene	+++++	+++++	-11.5						50			
Butylbenzene	2.2						50					
Undecane	+++++	+++++	+++++	1.3						50		
1,2-Dibromo-3-Chloropropane	+++++	+++++	-21.2						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	3.8						50			
Dodecane	+++++	+++++	+++++	9.2						50		
1,2,4-Trichlorobenzene	+++++	+++++	17.1						50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	38.2		+++++				80				
Hexachlorobutadiene	+++++	+++++	19.6						50			
1,2,3-Trichlorobenzene	+++++	+++++	21.5						50			
2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-54.8						80
1-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-44.3						80

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 06/21/2017 17:00
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/21/2017 22:43
 Lab File ID: GA11ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.7395	0.6739			2.00	-8.9	35.0
3-Methylthiophene	Ave	0.7319	0.6589			2.00	-10.0	35.0
2-Ethylthiophene	Ave	0.9478	0.8011			2.00	-15.5	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.8235			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.8516	0.6095			2.00	-28.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.167	0.8355			2.00	-28.4	35.0
Benzo (b) thiophene	Ave	1.068	0.7208			2.00	-32.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.638		2.01	2.00	0.7	35.0
Propene	Ave	1.463	1.485		2.03	2.00	1.5	35.0
Dichlorodifluoromethane	Ave	4.235	4.340		2.05	2.00	2.5	35.0
Chloromethane	Ave	0.4649	0.4832		2.08	2.00	3.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.577		2.08	2.00	4.1	35.0
Acetaldehyde	Ave	0.5987	0.4752		7.94	10.0	-20.6	35.0
Vinyl chloride	Ave	1.611	1.638		2.03	2.00	1.7	35.0
1,3-Butadiene	Ave	1.245	1.289		2.07	2.00	3.6	35.0
Butane	Ave	2.712	2.809		2.07	2.00	3.5	35.0
Bromomethane	Ave	1.392	1.376		1.98	2.00	-1.1	35.0
Chloroethane	Ave	0.7761	0.7850		2.02	2.00	1.1	35.0
Ethanol	Ave	0.7042	0.5103		7.25	10.0	-27.5	35.0
Vinyl bromide	Ave	1.290	1.377		2.13	2.00	6.7	35.0
2-Methylbutane	Ave	1.947	1.999		2.05	2.00	2.7	35.0
Trichlorofluoromethane	Ave	4.152	4.112		1.98	2.00	-1.0	35.0
Acrolein	Ave	0.3574	0.2736		1.53	2.00	-23.4	35.0
Acetonitrile	Ave	0.5574	0.4415		1.58	2.00	-20.8	35.0
Acetone	Ave	0.6013	0.5234		1.74	2.00	-13.0	35.0
Pentane	Ave	0.2653	0.2805		2.11	2.00	5.7	35.0
Isopropyl alcohol	Ave	1.603	1.950		2.43	2.00	21.6	35.0
Ethyl ether	Ave	1.725	1.471		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.412	1.470		2.08	2.00	4.1	35.0
Acrylonitrile	Ave	0.9747	0.8590		1.76	2.00	-11.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.092		2.02	2.00	1.0	35.0
tert-Butyl alcohol	Ave	2.196	2.417		2.20	2.00	10.0	35.0
Methylene Chloride	Ave	1.643	1.409		1.72	2.00	-14.2	35.0
3-Chloropropene	Ave	1.751	1.584		1.81	2.00	-9.6	35.0
Carbon disulfide	Ave	4.284	4.357		2.03	2.00	1.7	35.0
trans-1,2-Dichloroethene	Ave	1.414	1.448		2.05	2.00	2.4	35.0
2-Methylpentane	Ave	4.045	3.765		1.86	2.00	-6.9	35.0
Methyl tert-butyl ether	Ave	3.932	3.361		1.71	2.00	-14.5	35.0
1,1-Dichloroethane	Ave	2.906	2.821		1.94	2.00	-2.9	35.0
Vinyl acetate	Ave	4.034	3.285		1.63	2.00	-18.6	35.0
2-Butanone (MEK)	Ave	0.6347	0.5473		1.72	2.00	-13.8	35.0
Hexane	Ave	1.304	1.314		2.02	2.00	0.8	35.0
Isopropyl ether	Ave	4.992	4.538		1.82	2.00	-9.1	35.0
cis-1,2-Dichloroethene	Ave	1.447	1.467		2.03	2.00	1.4	35.0
Ethyl acetate	Ave	3.312	2.660		1.61	2.00	-19.7	35.0
Chloroform	Ave	3.344	3.175		1.90	2.00	-5.1	35.0
Tert-butyl ethyl ether	Ave	4.607	3.821		1.66	2.00	-17.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.483		1.67	2.00	-16.3	35.0
1,1,1-Trichloroethane	Ave	3.620	3.468		1.92	2.00	-4.2	35.0
1,2-Dichloroethane	Ave	0.3910	0.3830		1.96	2.00	-2.1	35.0
Cyclohexane	Ave	0.1314	0.1432		2.18	2.00	8.9	35.0
Benzene	Ave	0.7153	0.7639		2.14	2.00	6.8	35.0
Carbon tetrachloride	Ave	0.5933	0.6444		2.17	2.00	8.6	35.0
1-Butanol	Ave	0.0896	0.1078		2.41	2.00	20.4	35.0
2,3-Dimethylpentane	Ave	0.1886	0.1955		2.07	2.00	3.6	35.0
Thiophene	Ave	0.4156	0.4158		2.00	2.00	0.0	35.0
2,2,4-Trimethylpentane	Ave	1.401	1.433		2.05	2.00	2.3	35.0
Heptane	Ave	0.2875	0.2905		2.02	2.00	1.0	35.0
1,2-Dichloropropane	Ave	0.2813	0.2642		1.88	2.00	-6.1	35.0
Trichloroethene	Ave	0.3257	0.3391		2.08	2.00	4.1	35.0
Dibromomethane	Ave	0.2963	0.2956		2.00	2.00	-0.2	35.0
Bromodichloromethane	Ave	0.5843	0.5891		2.02	2.00	0.8	35.0
1,4-Dioxane	Ave	0.0832	0.0836		2.01	2.00	0.5	35.0
Methyl methacrylate	Ave	0.3595	0.3109		1.73	2.00	-13.5	35.0
Methylcyclohexane	Ave	0.4896	0.6141		2.51	2.00	25.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.5532		1.96	2.00	-1.8	35.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4212		1.97	2.00	-1.5	35.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4178		1.94	2.00	-3.1	35.0
Toluene	Ave	0.8801	0.8270		1.88	2.00	-6.0	35.0
1,1,2-Trichloroethane	Ave	0.2685	0.2546		1.90	2.00	-5.2	35.0
2-Hexanone	Ave	0.2641	0.2800		2.12	2.00	6.0	35.0
Octane	Ave	0.3165	0.3309		2.09	2.00	4.5	35.0
Dibromochloromethane	Ave	0.5446	0.5759		2.12	2.00	5.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4594		1.97	2.00	-1.3	35.0
Tetrachloroethene	Ave	0.3302	0.3391		2.05	2.00	2.7	35.0
2,3-Dimethylheptane	Ave	1.076	0.9762		1.82	2.00	-9.2	35.0
Chlorobenzene	Ave	0.6841	0.6891		2.01	2.00	0.7	35.0
Ethylbenzene	Ave	1.196	1.091		1.82	2.00	-8.8	35.0
m-Xylene & p-Xylene	Ave	0.9148	0.8433		3.69	4.00	-7.8	35.0
Nonane	Ave	0.6507	0.6606		2.03	2.00	1.5	35.0
Bromoform	Ave	0.4761	0.5196		2.18	2.00	9.1	35.0
Styrene	Ave	0.6323	0.5922		1.87	2.00	-6.3	35.0
o-Xylene	Ave	0.9646	0.8608		1.78	2.00	-10.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5907		1.82	2.00	-8.8	35.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	35.0
Isopropylbenzene	Ave	1.286	1.176		1.83	2.00	-8.5	35.0
Propylbenzene	Ave	0.3476	0.3186		1.83	2.00	-8.3	35.0
2-Chlorotoluene	Ave	0.3175	0.3028		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.090		1.70	2.00	-15.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4983		2.00	2.00	-0.2	35.0
Alpha Methyl Styrene	Ave	0.5043	0.4358		1.73	2.00	-13.6	35.0
Decane	Ave	0.7982	0.7703		1.93	2.00	-3.5	35.0
tert-Butylbenzene	Ave	1.114	0.998		1.79	2.00	-10.4	35.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9651		1.76	2.00	-11.9	35.0
sec-Butylbenzene	Ave	1.569	1.417		1.81	2.00	-9.7	35.0
1,3-Dichlorobenzene	Ave	0.7160	0.6664		1.86	2.00	-6.9	35.0
Benzyl chloride	Ave	0.9762	0.8908		1.83	2.00	-8.7	35.0
1,4-Dichlorobenzene	Ave	0.7344	0.6695		1.82	2.00	-8.8	35.0
4-Isopropyltoluene	Ave	1.255	1.122		1.79	2.00	-10.6	35.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.7182		1.45	2.00	-27.5	35.0
Butylcyclohexane	Ave	0.9039	0.8456		1.87	2.00	-6.5	35.0
Indane	Ave	0.9903	0.8594		1.74	2.00	-13.2	35.0
1,2-Dichlorobenzene	Ave	0.7165	0.6343		1.77	2.00	-11.5	35.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	35.0
Indene	Ave	0.8508	0.6491		1.53	2.00	-23.7	35.0
Undecane	Ave	0.8098	0.7744		1.91	2.00	-4.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.2570		1.73	2.00	-13.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.013		1.77	2.00	-11.3	35.0
Dodecane	Ave	0.6396	0.6522		2.04	2.00	2.0	35.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5328		1.89	2.00	-5.7	35.0
Naphthalene	Ave	1.234	1.234		2.00	2.00	0.0	35.0
Hexachlorobutadiene	Ave	0.6047	0.5411		1.79	2.00	-10.5	35.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.5256		2.11	2.00	5.4	35.0
2-Methylnaphthalene	Ave	0.6016	0.6997		2.33	2.00	16.3	50.0
1-Methylnaphthalene	Ave	0.7372	0.8235		2.23	2.00	11.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8145		3.97	4.00	-0.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.652		2.02	2.00	1.2	30.0
Propene	Ave	1.463	1.534		2.10	2.00	4.8	30.0
Dichlorodifluoromethane	Ave	4.235	4.356		2.06	2.00	2.9	30.0
Chloromethane	Ave	0.4649	0.4693		2.02	2.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.404		1.94	2.00	-2.9	30.0
Acetaldehyde	Ave	0.5987	0.5225		8.73	10.0	-12.7	30.0
Vinyl chloride	Ave	1.611	1.586		1.97	2.00	-1.5	30.0
1,3-Butadiene	Ave	1.245	1.283		2.06	2.00	3.0	30.0
Butane	Ave	2.712	2.755		2.03	2.00	1.6	30.0
Bromomethane	Ave	1.392	1.313		1.89	2.00	-5.7	30.0
Chloroethane	Ave	0.7761	0.7469		1.92	2.00	-3.8	30.0
Ethanol	Ave	0.7042	0.7541		10.7	10.0	7.1	30.0
Vinyl bromide	Ave	1.290	1.209		1.87	2.00	-6.3	30.0
2-Methylbutane	Ave	1.947	1.895		1.95	2.00	-2.7	30.0
Trichlorofluoromethane	Ave	4.152	4.042		1.95	2.00	-2.7	30.0
Acrolein	Ave	0.3574	0.3194		1.79	2.00	-10.6	30.0
Acetonitrile	Ave	0.5574	0.5302		1.90	2.00	-4.9	30.0
Acetone	Ave	0.6013	0.4988		4.98	6.00	-17.0	30.0
Pentane	Ave	0.2653	0.2565		1.93	2.00	-3.3	30.0
Isopropyl alcohol	Ave	1.603	1.779		6.66	6.00	10.9	30.0
Ethyl ether	Ave	1.725	1.691		1.96	2.00	-2.0	30.0
1,1-Dichloroethene	Ave	1.412	1.514		2.14	2.00	7.2	30.0
Acrylonitrile	Ave	0.9747	0.9432		1.94	2.00	-3.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.167		2.07	2.00	3.5	30.0
tert-Butyl alcohol	Ave	2.196	2.812		2.56	2.00	28.0	30.0
Methylene Chloride	Ave	1.643	1.484		1.81	2.00	-9.7	30.0
3-Chloropropene	Ave	1.751	1.648		1.88	2.00	-5.9	30.0
Carbon disulfide	Ave	4.284	4.628		2.16	2.00	8.0	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.521		2.15	2.00	7.6	30.0
2-Methylpentane	Ave	4.045	4.401		2.18	2.00	8.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.883		1.97	2.00	-1.3	30.0
1,1-Dichloroethane	Ave	2.906	2.982		2.05	2.00	2.6	30.0
Vinyl acetate	Ave	4.034	3.919		1.94	2.00	-2.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.6318		1.99	2.00	-0.5	30.0
Hexane	Ave	1.304	1.409		2.16	2.00	8.1	30.0
Isopropyl ether	Ave	4.992	5.130		2.06	2.00	2.8	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.511		2.09	2.00	4.4	30.0
Ethyl acetate	Ave	3.312	3.321		2.01	2.00	0.3	30.0
Chloroform	Ave	3.344	3.351		2.00	2.00	0.2	30.0
Tert-butyl ethyl ether	Ave	4.607	4.651		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.780		2.01	2.00	0.4	30.0
1,1,1-Trichloroethane	Ave	3.620	3.686		2.04	2.00	1.8	30.0
1,2-Dichloroethane	Ave	0.3910	0.3917		2.00	2.00	0.2	30.0
Cyclohexane	Ave	0.1314	0.1477		2.25	2.00	12.4	30.0
Benzene	Ave	0.7153	0.7399		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6573		2.22	2.00	10.8	30.0
1-Butanol	Ave	0.0896	0.1263		2.82	2.00	41.0*	30.0
2,3-Dimethylpentane	Ave	0.1886	0.2098		2.22	2.00	11.2	30.0
Thiophene	Ave	0.4156	0.4526		2.18	2.00	8.9	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.515		2.16	2.00	8.2	30.0
Heptane	Ave	0.2875	0.3131		2.18	2.00	8.9	30.0
1,2-Dichloropropane	Ave	0.2813	0.2865		2.04	2.00	1.8	30.0
Trichloroethene	Ave	0.3257	0.3404		2.09	2.00	4.5	30.0
Dibromomethane	Ave	0.2963	0.3076		2.08	2.00	3.8	30.0
Bromodichloromethane	Ave	0.5843	0.6356		2.18	2.00	8.8	30.0
1,4-Dioxane	Ave	0.0832	0.1054		2.53	2.00	26.7	30.0
Methyl methacrylate	Ave	0.3595	0.3845		2.14	2.00	7.0	30.0
Methylcyclohexane	Ave	0.4896	0.5279		2.16	2.00	7.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.6430		2.28	2.00	14.2	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4641		2.17	2.00	8.5	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4612		2.14	2.00	7.0	30.0
Toluene	Ave	0.8801	0.8908		2.02	2.00	1.2	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2829		2.11	2.00	5.3	30.0
2-Hexanone	Ave	0.2641	0.3188		2.41	2.00	20.7	30.0
Octane	Ave	0.3165	0.3439		2.17	2.00	8.7	30.0
Dibromochloromethane	Ave	0.5446	0.5989		2.20	2.00	10.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4929		2.12	2.00	5.8	30.0
Tetrachloroethene	Ave	0.3302	0.3406		2.06	2.00	3.1	30.0
2,3-Dimethylheptane	Ave	1.076	1.161		2.16	2.00	8.0	30.0
Chlorobenzene	Ave	0.6841	0.7203		2.11	2.00	5.3	30.0
Ethylbenzene	Ave	1.196	1.211		2.03	2.00	1.3	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.9437		4.13	4.00	3.2	30.0
Nonane	Ave	0.6507	0.7098		2.18	2.00	9.1	30.0
Bromoform	Ave	0.4761	0.5476		2.30	2.00	15.0	30.0
Styrene	Ave	0.6323	0.6714		2.12	2.00	6.2	30.0
o-Xylene	Ave	0.9646	0.9910		2.05	2.00	2.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.6633		2.05	2.00	2.4	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.2051		1.98	2.00	-1.2	30.0
Isopropylbenzene	Ave	1.286	1.274		1.98	2.00	-1.0	30.0
Propylbenzene	Ave	0.3476	0.3424		1.97	2.00	-1.5	30.0
2-Chlorotoluene	Ave	0.3175	0.3184		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.295		2.02	2.00	0.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4918		1.97	2.00	-1.5	30.0
Alpha Methyl Styrene	Ave	0.5043	0.5202		2.06	2.00	3.1	30.0
Decane	Ave	0.7982	0.8625		2.16	2.00	8.1	30.0
tert-Butylbenzene	Ave	1.114	1.103		1.98	2.00	-1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.096	1.089		1.99	2.00	-0.6	30.0
sec-Butylbenzene	Ave	1.569	1.580		2.01	2.00	0.7	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.7287		2.04	2.00	1.8	30.0
Benzyl chloride	Ave	0.9762	1.033		2.12	2.00	5.8	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.7367		2.01	2.00	0.3	30.0
4-Isopropyltoluene	Ave	1.255	1.277		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	1.101		2.22	2.00	11.1	30.0
Butylcyclohexane	Ave	0.9039	0.9644		2.13	2.00	6.7	30.0
Indane	Ave	0.9903	0.9865		1.99	2.00	-0.4	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.7004		1.95	2.00	-2.3	30.0
Butylbenzene	Ave	1.277	1.325		2.08	2.00	3.8	30.0
Indene	Ave	0.8508	0.8688		2.04	2.00	2.1	30.0
Undecane	Ave	0.8098	0.8597		2.12	2.00	6.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3582		2.42	2.00	20.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.185		2.07	2.00	3.7	30.0
Dodecane	Ave	0.6396	0.6319		1.98	2.00	-1.2	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5181		1.83	2.00	-8.3	30.0
Naphthalene	Ave	1.234	1.197		1.94	2.00	-3.0	30.0
Hexachlorobutadiene	Ave	0.6047	0.5124		1.69	2.00	-15.3	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4625		1.85	2.00	-7.3	30.0
2-Methylnaphthalene	Ave	0.6016	0.4938		1.64	2.00	-17.9	50.0
1-Methylnaphthalene	Ave	0.7372	0.5485		1.49	2.00	-25.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8212		4.01	4.00	0.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 06/28/2017 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/28/2017 21:58
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6999	0.3362			2.00	-52.0*	35.0
3-Methylthiophene	Ave	0.6908	0.7960			2.00	15.2	35.0
2-Ethylthiophene	Ave	0.9153	1.134			2.00	23.9	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.640			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.275			2.00	39.5*	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.768			2.00	43.0*	35.0
Benzo (b) thiophene	Ave	0.9147	1.487			2.00	62.6*	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.256		1.90	2.00	-4.9	35.0
Propene	Ave	0.7296	0.6790		1.86	2.00	-6.9	35.0
Dichlorodifluoromethane	Ave	4.352	5.057		2.32	2.00	16.2	35.0
Chloromethane	Ave	0.3061	0.2731		1.78	2.00	-10.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	3.469		2.14	2.00	7.1	35.0
Acetaldehyde	Ave	0.2860	0.2397		8.38	10.0	-16.2	35.0
Vinyl chloride	Ave	1.073	0.9669		1.80	2.00	-9.9	35.0
1,3-Butadiene	Ave	0.6506	0.6233		1.92	2.00	-4.2	35.0
Butane	Ave	1.132	1.086		1.92	2.00	-4.0	35.0
Bromomethane	Ave	1.235	1.146		1.86	2.00	-7.2	35.0
Chloroethane	Ave	0.4970	0.4655		1.87	2.00	-6.3	35.0
Ethanol	Ave	0.2997	0.2300		7.67	10.0	-23.3	35.0
Vinyl bromide	Ave	1.302	1.320		2.03	2.00	1.4	35.0
2-Methylbutane	Ave	0.7999	0.7818		1.95	2.00	-2.3	35.0
Acrolein	Ave	0.2528	0.2785		2.20	2.00	10.2	35.0
Trichlorofluoromethane	Ave	5.912	5.646		1.91	2.00	-4.5	35.0
Acetonitrile	Ave	0.2586	0.2377		1.84	2.00	-8.1	35.0
Acetone	Ave	0.4151	0.3821		1.84	2.00	-7.9	35.0
Pentane	Ave	0.2011	0.2005		1.99	2.00	-0.3	35.0
Isopropyl alcohol	Ave	1.132	1.401		2.48	2.00	23.8	35.0
Ethyl ether	Ave	0.6661	0.5684		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.408	1.325		1.88	2.00	-5.9	35.0
Acrylonitrile	Ave	0.6277	0.6236		1.99	2.00	-0.6	35.0
tert-Butyl alcohol	Ave	2.677	2.710		2.02	2.00	1.2	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.433		1.97	2.00	-1.6	35.0
Methylene Chloride	Ave	1.338	1.169		1.75	2.00	-12.6	35.0
3-Chloropropene	Ave	1.309	1.297		1.98	2.00	-0.9	35.0
Carbon disulfide	Ave	3.341	3.259		1.95	2.00	-2.4	35.0
trans-1,2-Dichloroethene	Ave	1.436	1.363		1.90	2.00	-5.1	35.0
2-Methylpentane	Ave	1.894	1.705		1.80	2.00	-10.0	35.0
Methyl tert-butyl ether	Ave	4.568	4.614		2.02	2.00	1.0	35.0
1,1-Dichloroethane	Ave	2.402	2.312		1.92	2.00	-3.8	35.0
Vinyl acetate	Ave	2.320	2.445		2.11	2.00	5.4	35.0
2-Butanone (MEK)	Ave	0.5446	0.5251		1.93	2.00	-3.6	35.0
Hexane	Ave	0.8352	0.8172		1.96	2.00	-2.2	35.0
Isopropyl ether	Ave	2.873	2.961		2.06	2.00	3.0	35.0
cis-1,2-Dichloroethene	Ave	1.448	1.418		1.96	2.00	-2.1	35.0
Ethyl acetate	Ave	2.012	1.960		1.95	2.00	-2.6	35.0
Chloroform	Ave	3.821	3.708		1.94	2.00	-3.0	35.0
Tert-butyl ethyl ether	Ave	4.141	3.948		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.8745		1.97	2.00	-1.3	35.0
1,1,1-Trichloroethane	Ave	4.843	4.775		1.97	2.00	-1.4	35.0
1,2-Dichloroethane	Ave	0.5063	0.5017		1.98	2.00	-0.9	35.0
Benzene	Ave	0.6517	0.6483		1.99	2.00	-0.5	35.0
Cyclohexane	Ave	0.0968	0.1018		2.10	2.00	5.2	35.0
1-Butanol	Ave	0.0462	0.0484		2.09	2.00	4.7	35.0
Carbon tetrachloride	Ave	0.9167	0.9855		2.15	2.00	7.5	35.0
2,3-Dimethylpentane	Ave	0.1349	0.1359		2.01	2.00	0.7	35.0
Thiophene	Ave	0.3728	0.3687		1.98	2.00	-1.1	35.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8439		2.02	2.00	1.2	35.0
1,2-Dichloropropane	Ave	0.2045	0.2036		1.99	2.00	-0.5	35.0
Heptane	Ave	0.2083	0.2143		2.06	2.00	2.8	35.0
Trichloroethene	Ave	0.3929	0.3984		2.03	2.00	1.4	35.0
Dibromomethane	Ave	0.3514	0.3500		1.99	2.00	-0.4	35.0
Bromodichloromethane	Ave	0.6587	0.6852		2.08	2.00	4.0	35.0
1,4-Dioxane	Ave	0.0994	0.1029		2.07	2.00	3.5	35.0
Methyl methacrylate	Ave	0.2275	0.2348		2.06	2.00	3.2	35.0
Methylcyclohexane	Ave	0.4024	0.4961		2.47	2.00	23.3	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3776		2.08	2.00	4.1	35.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4285		2.17	2.00	8.5	35.0
trans-1,3-Dichloropropene	Ave	0.4674	0.5177		2.22	2.00	10.8	35.0
Toluene	Ave	0.9586	0.9853		2.06	2.00	2.8	35.0
1,1,2-Trichloroethane	Ave	0.2543	0.2613		2.05	2.00	2.7	35.0
2-Hexanone	Ave	0.2006	0.2098		2.09	2.00	4.6	35.0
Dibromochloromethane	Ave	0.7414	0.8418		2.27	2.00	13.5	35.0
Octane	Ave	0.3054	0.3220		2.11	2.00	5.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5875		2.11	2.00	5.4	35.0
Tetrachloroethene	Ave	0.4749	0.4840		2.04	2.00	1.9	35.0
Chlorobenzene	Ave	0.8374	0.8605		2.06	2.00	2.8	35.0
2,3-Dimethylheptane	Ave	0.5626	0.5171		1.84	2.00	-8.1	35.0
Ethylbenzene	Ave	1.382	1.443		2.09	2.00	4.4	35.0
m-Xylene & p-Xylene	Ave	1.133	1.199		4.23	4.00	5.8	35.0
Bromoform	Ave	0.7786	0.8773		2.25	2.00	12.7	35.0
Styrene	Ave	0.7430	0.8258		2.22	2.00	11.1	35.0
o-Xylene	Ave	1.190	1.212		2.04	2.00	1.8	35.0
Nonane	Ave	0.4511	0.4700		2.08	2.00	4.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6491		2.15	2.00	7.3	35.0
1,2,3-Trichloropropane	Ave	0.3000	0.3085		2.06	2.00	2.8	35.0
Isopropylbenzene	Ave	1.694	1.742		2.06	2.00	2.8	35.0
Propylbenzene	Ave	0.4652	0.5071		2.18	2.00	9.0	35.0
2-Chlorotoluene	Ave	0.4306	0.4514		2.10	2.00	4.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.816		2.06	2.00	3.2	35.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.8591		2.39	2.00	19.3	35.0
Alpha Methyl Styrene	Ave	0.6844	0.7376		2.16	2.00	7.8	35.0
Decane	Ave	0.6421	0.6805		2.12	2.00	6.0	35.0
tert-Butylbenzene	Ave	1.753	1.837		2.10	2.00	4.8	35.0
1,2,4-Trimethylbenzene	Ave	1.607	1.694		2.11	2.00	5.5	35.0
1,3-Dichlorobenzene	Ave	1.160	1.185		2.04	2.00	2.2	35.0
sec-Butylbenzene	Ave	2.171	2.287		2.11	2.00	5.4	35.0
Benzyl chloride	Ave	1.239	1.386		2.24	2.00	11.9	35.0
1,4-Dichlorobenzene	Ave	1.164	1.184		2.03	2.00	1.7	35.0
4-Isopropyltoluene	Ave	2.191	2.267		2.07	2.00	3.5	35.0
1,2,3-Trimethylbenzene	Ave	1.725	1.385		1.61	2.00	-19.7	35.0
Butylcyclohexane	Ave	0.9488	0.9354		1.97	2.00	-1.4	35.0
1,2-Dichlorobenzene	Ave	1.144	1.144		2.00	2.00	-0.0	35.0
Indane	Ave	1.423	1.451		2.04	2.00	2.0	35.0
Indene	Ave	1.168	1.080		1.85	2.00	-7.6	35.0
Butylbenzene	Ave	1.784	1.888		2.12	2.00	5.8	35.0
Undecane	Ave	0.7598	0.8223		2.16	2.00	8.2	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5157		1.85	2.00	-7.4	35.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.082		2.01	2.00	0.7	35.0
Dodecane	Ave	0.7957	0.9180		2.31	2.00	15.4	35.0
1,2,4-Trichlorobenzene	Ave	1.235	1.334		2.16	2.00	7.9	35.0
Naphthalene	Ave	2.498	2.601		2.08	2.00	4.1	35.0
Hexachlorobutadiene	Ave	1.436	1.487		2.07	2.00	3.5	35.0
1,2,3-Trichlorobenzene	Ave	1.187	1.295		2.18	2.00	9.1	35.0
2-Methylnaphthalene	Ave	0.7935	1.016		2.56	2.00	28.1	50.0
1-Methylnaphthalene	Ave	0.6999	0.9471		2.71	2.00	35.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8473		3.98	4.00	-0.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27908/2 Calibration Date: 02/25/2019 10:00
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.162		1.82	2.00	-8.9	30.0
Propene	Ave	0.7296	0.6455		1.77	2.00	-11.5	30.0
Dichlorodifluoromethane	Ave	4.352	4.061		1.87	2.00	-6.7	30.0
Chloromethane	Ave	0.3061	0.2865		1.87	2.00	-6.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	2.764		1.71	2.00	-14.7	30.0
Acetaldehyde	Ave	0.2860	0.3294		11.5	10.0	15.2	30.0
Vinyl chloride	Ave	1.073	1.175		2.19	2.00	9.5	30.0
1,3-Butadiene	Ave	0.6506	0.8129		2.50	2.00	24.9	30.0
Butane	Ave	1.132	1.382		2.44	2.00	22.1	30.0
Bromomethane	Ave	1.235	1.454		2.35	2.00	17.7	30.0
Chloroethane	Ave	0.4970	0.5842		2.35	2.00	17.5	30.0
Ethanol	Ave	0.2997	0.3902		13.0	10.0	30.2*	30.0
Vinyl bromide	Ave	1.302	1.551		2.38	2.00	19.2	30.0
2-Methylbutane	Ave	0.7999	1.034		2.59	2.00	29.3	30.0
Acrolein	Ave	0.2528	0.3437		2.72	2.00	35.9*	30.0
Trichlorofluoromethane	Ave	5.912	7.050		2.38	2.00	19.2	30.0
Acetonitrile	Ave	0.2586	0.3421		2.65	2.00	32.3*	30.0
Acetone	Ave	0.4151	0.4842		7.00	6.00	16.7	30.0
Isopropyl alcohol	Ave	1.132	1.506		7.98	6.00	33.1*	30.0
Pentane	Ave	0.2011	0.2437		2.42	2.00	21.2	30.0
Ethyl ether	Ave	0.6661	0.7939		2.38	2.00	19.2	30.0
1,1-Dichloroethene	Ave	1.408	1.311		1.86	2.00	-6.9	30.0
Acrylonitrile	Ave	0.6277	0.6611		2.11	2.00	5.3	30.0
tert-Butyl alcohol	Ave	2.677	2.599		1.94	2.00	-2.9	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.471		1.99	2.00	-0.5	30.0
Methylene Chloride	Ave	1.338	1.113		1.66	2.00	-16.8	30.0
3-Chloropropene	Ave	1.309	1.405		2.15	2.00	7.3	30.0
Carbon disulfide	Ave	3.341	3.268		1.96	2.00	-2.2	30.0
trans-1,2-Dichloroethene	Ave	1.436	1.325		1.85	2.00	-7.7	30.0
2-Methylpentane	Ave	1.894	2.190		2.31	2.00	15.6	30.0
Methyl tert-butyl ether	Ave	4.568	4.416		1.93	2.00	-3.3	30.0
1,1-Dichloroethane	Ave	2.402	2.252		1.87	2.00	-6.3	30.0
Vinyl acetate	Ave	2.320	2.626		2.26	2.00	13.2	30.0
2-Butanone (MEK)	Ave	0.5446	0.5037		1.85	2.00	-7.5	30.0
Hexane	Ave	0.8352	0.8820		2.11	2.00	5.6	30.0
Isopropyl ether	Ave	2.873	2.990		2.08	2.00	4.1	30.0
cis-1,2-Dichloroethene	Ave	1.448	1.362		1.88	2.00	-5.9	30.0
Ethyl acetate	Ave	2.012	2.137		2.12	2.00	6.2	30.0
Chloroform	Ave	3.821	3.589		1.88	2.00	-6.1	30.0
Tert-butyl ethyl ether	Ave	4.141	4.182		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27908/2 Calibration Date: 02/25/2019 10:00
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.9460		2.14	2.00	6.8	30.0
1,1,1-Trichloroethane	Ave	4.843	4.554		1.88	2.00	-6.0	30.0
1,2-Dichloroethane	Ave	0.5063	0.4676		1.85	2.00	-7.6	30.0
Benzene	Ave	0.6517	0.6058		1.86	2.00	-7.1	30.0
1-Butanol	Ave	0.0462	0.0514		2.22	2.00	11.2	30.0
Cyclohexane	Ave	0.0968	0.1052		2.17	2.00	8.6	30.0
Carbon tetrachloride	Ave	0.9167	0.9170		2.00	2.00	0.0	30.0
2,3-Dimethylpentane	Ave	0.1349	0.1357		2.01	2.00	0.6	30.0
Thiophene	Ave	0.3728	0.3638		1.95	2.00	-2.4	30.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8478		2.03	2.00	1.6	30.0
1,2-Dichloropropane	Ave	0.2045	0.1983		1.94	2.00	-3.1	30.0
Heptane	Ave	0.2083	0.2084		2.00	2.00	0.0	30.0
Trichloroethene	Ave	0.3929	0.3715		1.89	2.00	-5.4	30.0
Dibromomethane	Ave	0.3514	0.3324		1.89	2.00	-5.4	30.0
Bromodichloromethane	Ave	0.6587	0.6299		1.91	2.00	-4.4	30.0
1,4-Dioxane	Ave	0.0994	0.0936		1.88	2.00	-5.8	30.0
Methyl methacrylate	Ave	0.2275	0.2356		2.07	2.00	3.5	30.0
Methylcyclohexane	Ave	0.4024	0.3863		1.92	2.00	-4.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3965		2.19	2.00	9.3	30.0
cis-1,3-Dichloropropene	Ave	0.3948	0.3969		2.01	2.00	0.5	30.0
trans-1,3-Dichloropropene	Ave	0.4674	0.4706		2.01	2.00	0.7	30.0
Toluene	Ave	0.9586	0.9694		2.02	2.00	1.1	30.0
1,1,2-Trichloroethane	Ave	0.2543	0.2526		1.99	2.00	-0.7	30.0
2-Hexanone	Ave	0.2006	0.2079		2.07	2.00	3.7	30.0
Dibromochloromethane	Ave	0.7414	0.8071		2.18	2.00	8.9	30.0
Octane	Ave	0.3054	0.3278		2.15	2.00	7.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5591		2.01	2.00	0.3	30.0
Tetrachloroethene	Ave	0.4749	0.4778		2.01	2.00	0.6	30.0
Chlorobenzene	Ave	0.8374	0.8419		2.01	2.00	0.5	30.0
2,3-Dimethylheptane	Ave	0.5626	0.6802		2.42	2.00	20.9	30.0
Ethylbenzene	Ave	1.382	1.422		2.06	2.00	2.9	30.0
m-Xylene & p-Xylene	Ave	1.133	1.217		4.30	4.00	7.4	30.0
Bromoform	Ave	0.7786	0.8569		2.20	2.00	10.1	30.0
Styrene	Ave	0.7430	0.7974		2.15	2.00	7.3	30.0
o-Xylene	Ave	1.190	1.257		2.11	2.00	5.6	30.0
Nonane	Ave	0.4511	0.5478		2.43	2.00	21.4	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6407		2.12	2.00	5.9	30.0
1,2,3-Trichloropropane	Ave	0.3000	0.2866		1.91	2.00	-4.5	30.0
Isopropylbenzene	Ave	1.694	1.699		2.01	2.00	0.3	30.0
Propylbenzene	Ave	0.4652	0.4653		2.00	2.00	0.0	30.0
2-Chlorotoluene	Ave	0.4306	0.4320		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27908/2 Calibration Date: 02/25/2019 10:00
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.764		2.01	2.00	0.3	30.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.7290		2.03	2.00	1.3	30.0
Alpha Methyl Styrene	Ave	0.6844	0.6787		1.98	2.00	-0.8	30.0
Decane	Ave	0.6421	0.7332		2.28	2.00	14.2	30.0
tert-Butylbenzene	Ave	1.753	1.770		2.02	2.00	1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.607	1.692		2.11	2.00	5.3	30.0
1,3-Dichlorobenzene	Ave	1.160	1.112		1.92	2.00	-4.1	30.0
sec-Butylbenzene	Ave	2.171	2.140		1.97	2.00	-1.4	30.0
Benzyl chloride	Ave	1.239	1.296		2.09	2.00	4.6	30.0
1,4-Dichlorobenzene	Ave	1.164	1.146		1.97	2.00	-1.6	30.0
4-Isopropyltoluene	Ave	2.191	2.229		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	1.725	1.791		2.08	2.00	3.8	30.0
Butylcyclohexane	Ave	0.9488	0.9563		2.02	2.00	0.8	30.0
1,2-Dichlorobenzene	Ave	1.144	1.079		1.89	2.00	-5.7	30.0
Indane	Ave	1.423	1.422		2.00	2.00	-0.0	30.0
Indene	Ave	1.168	1.178		2.02	2.00	0.8	30.0
Butylbenzene	Ave	1.784	1.774		1.99	2.00	-0.6	30.0
Undecane	Ave	0.7598	0.8651		2.28	2.00	13.9	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5992		2.15	2.00	7.5	30.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.039		1.97	2.00	-1.3	30.0
Dodecane	Ave	0.7957	0.8800		2.21	2.00	10.6	30.0
1,2,4-Trichlorobenzene	Ave	1.235	1.150		1.86	2.00	-6.9	30.0
Naphthalene	Ave	2.498	2.097		1.68	2.00	-16.0	30.0
Hexachlorobutadiene	Ave	1.436	1.299		1.81	2.00	-9.6	30.0
1,2,3-Trichlorobenzene	Ave	1.187	1.065		1.79	2.00	-10.3	30.0
2-Methylnaphthalene	Ave	0.7935	0.9775		2.46	2.00	23.2	50.0
1-Methylnaphthalene	Ave	0.6999	1.087		3.11	2.00	55.3*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.9066		4.26	4.00	6.6	30.0

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27908/5
 Matrix: Air Lab File ID: R500BB25.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 12:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27908/5
 Matrix: Air Lab File ID: R500BB25.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 12:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27908/1002
 Matrix: Air Lab File ID: RCCVB25-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 02/25/2019 10:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.86		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.00		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.82		0.080	0.015
67-66-3	Chloroform	119.38	1.88		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.88		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.87		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.87		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.85		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.86		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.06		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.66		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.93		0.40	0.068
91-20-3	Naphthalene	128.17	1.68		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.01		0.080	0.016
108-88-3	Toluene	92.14	2.02		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.85		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.86		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.88		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.99		0.080	0.021
79-01-6	Trichloroethene	131.39	1.89		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.08		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.11		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.03		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.19		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.41		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27931/1002
 Matrix: Air Lab File ID: GCCVB26-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 11:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.07		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.22		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.02		0.080	0.015
67-66-3	Chloroform	119.38	2.00		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.09		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.06		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.05		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.00		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.14		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.03		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.81		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.97		0.40	0.068
91-20-3	Naphthalene	128.17	1.94		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.06		0.080	0.016
108-88-3	Toluene	92.14	2.02		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.15		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.83		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.04		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.11		0.080	0.021
79-01-6	Trichloroethene	131.39	2.09		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.22		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.99		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.97		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.97		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.18		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1

SDG No.: _____

Instrument ID: MR Start Date: 11/16/2018 16:00

Analysis Batch Number: 25490 End Date: 11/17/2018 06:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25490/1		11/16/2018 16:00	1	RBFBK16I.D	RTX-5 0.32 (mm)
IC 140-25490/3		11/16/2018 17:23	1	RK16IC09.D	RTX-5 0.32 (mm)
IC 140-25490/5		11/16/2018 19:07	1	RK16IC10.D	RTX-5 0.32 (mm)
IC 140-25490/8		11/16/2018 21:42	1	RK16IC01.D	RTX-5 0.32 (mm)
IC 140-25490/9		11/16/2018 22:34	1	RK16IC02.D	RTX-5 0.32 (mm)
IC 140-25490/10		11/16/2018 23:27	1	RK16IC03.D	RTX-5 0.32 (mm)
IC 140-25490/11		11/17/2018 00:20	1	RK16IC04.D	RTX-5 0.32 (mm)
IC 140-25490/12		11/17/2018 01:12	1	RK16IC05.D	RTX-5 0.32 (mm)
IC 140-25490/13		11/17/2018 02:05	1	RK16IC06.D	RTX-5 0.32 (mm)
ICIS 140-25490/14		11/17/2018 02:58	1	RK16IC07.D	RTX-5 0.32 (mm)
IC 140-25490/15		11/17/2018 03:51	1	RK16IC08.D	RTX-5 0.32 (mm)
ICV 140-25490/18		11/17/2018 06:27	1	RK16ICV.D	RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date:	11/16/18	Instrument:	MR	Chrom WL #:	10019	TALS Batch & Event #	TO14/15: 1744 25490 DOD: 1749 / 25492	OHIO: PMT / 25491				
Chrom/Worklist Review							1 st	Comments	2 nd			
1. Re-read each Limit Group	[method editor-limit groups]					✓			na			
2. Verify LODV in Chrom	[method editor -> edit -> MDL]					✓			na			
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level)	[WL Sample Reagents Tab vs. Entech]					✓			/			
4. Files linked properly to calibration levels?	[Sample List- Lab ID vs. Info]					✓			/			
5. Did BFB meet tune criteria?	[F8]					✓			/			
6. Were all standards injected within 24 hr of BFB?	[F7]					✓		Vol ✓ on screen	/			
7. High point checked for saturation and point removed if so?	[Chrom]					✓	na		✓			
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given?	[Chrom]					na			na			
9. RT for each IS +20 sec avg. RT?	[F6 IstdRec]					✓			/			
10. Area for each IS ± 40% avg. area?	[F6 IstdRec]					✓			/			
11. Each analyte ± 0.06 RRT of avg. RRT?	[F6 - RRT]					✓			/			
12. Elution order checked on isomeric pairs?	[Chrom]								/			
<ul style="list-style-type: none"> dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane 2-methyl butane / acrolein trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane vinyl acetate / hexane cis- and trans- isomers ethyl benzene / m/p-xylene / o-xylene n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene tert-butylbenzene/4-isopropyltoluene 1,3-, 1,4-, and 1,2-dichlorobenzene 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes 1,2,4- and 1,2,3-trichlorobenzenes 2-, and 1-methylnaphthalene 						✓			/			
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?						✓			/			
MLG Review						TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1 & 2 methylnaphthalene ≤ 50%						✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed?						✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.?						✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad)						na	→	→		na	→	→
18. If curves were used, is correlation coefficient ≥ 0.990?						na	→	→		na	→	→
19. Is the intercept less than the RL for each curve?						na	→	→		na	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous.						na	→	na		na	→	na
21. Is low point RSE ≤ 50%?						✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits?						✓	✓	✓		✓	✓	✓
Analyst/Date:						2nd Level Reviewer/Date:						
[Signature]						[Signature] 11/19/18						
TALS Review						TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL						✓				na	na	na
24. Graphics uploaded?						✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event?						✓	✓	✓		✓	✓	✓
26. Runs linked to BFB?						✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings						✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?						na	→	→		na	→	→
29. After review in TALS, approve the method in TALS.						na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>						na	na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?						na	na	na		✓	✓	✓
Analyst/date:						2nd Level Reviewer/date:						
[Signature]						[Signature] 11/19/18						
Comments:						Comments:						
[Handwritten notes]						[Handwritten notes]						

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1

SDG No.: _____

Instrument ID: MG Start Date: 01/11/2019 12:24

Analysis Batch Number: 26755 End Date: 01/12/2019 04:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-26755/1		01/11/2019 12:24	1	GA11BLK1.D	RTX-5 0.32 (mm)
IC 140-26755/2		01/11/2019 13:08	1	GA11IC09.D	RTX-5 0.32 (mm)
IC 140-26755/6		01/11/2019 14:35	1	GA11IC10.D	RTX-5 0.32 (mm)
IC 140-26755/9		01/11/2019 16:46	1	GA11IC01.D	RTX-5 0.32 (mm)
IC 140-26755/10		01/11/2019 17:29	1	GA11IC02.D	RTX-5 0.32 (mm)
140-13809-A-1 MDLV		01/11/2019 17:29	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 17:29	1		RTX-5 0.32 (mm)
IC 140-26755/11		01/11/2019 18:12	1	GA11IC03.D	RTX-5 0.32 (mm)
140-13809-A-2 MDLV		01/11/2019 18:12	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:12	1		RTX-5 0.32 (mm)
IC 140-26755/12		01/11/2019 18:56	1	GA11IC04.D	RTX-5 0.32 (mm)
140-13809-A-3 MDLV		01/11/2019 18:56	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:56	1		RTX-5 0.32 (mm)
IC 140-26755/13		01/11/2019 19:40	1	GA11IC05.D	RTX-5 0.32 (mm)
140-13809-A-4 MDLV		01/11/2019 19:40	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 19:40	1		RTX-5 0.32 (mm)
IC 140-26755/14		01/11/2019 20:23	1	GA11IC06.D	RTX-5 0.32 (mm)
ICIS 140-26755/15		01/11/2019 21:07	1	GA11IC07.D	RTX-5 0.32 (mm)
IC 140-26755/16		01/11/2019 21:51	1	GA11IC08.D	RTX-5 0.32 (mm)
ICV 140-26755/18		01/11/2019 23:17	1	GA11ICV.D	RTX-5 0.32 (mm)
ZZZZZ		01/12/2019 04:26	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date:	7/11/19	Instrument:	UG	Chrom WL #:	10492	TALS Batch & Event #	TO14/15: 1781/26755						
							DOD:	1782/26846	OHIO: 1783/26847				
Chrom/Worklist Review							1 st	Comments		2 nd			
1. Re-read each Limit Group [method editor-limit groups]							✓			na			
2. Verify LODV in Chrom [method editor -> edit -> MDL]							✓			na			
3. Are the reagents and ini/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]							✓			✓			
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]							✓			✓			
5. Did BFB meet tune criteria? [F8]							✓			✓			
6. Were all standards injected within 24 hr of BFB? [F7]							✓			✓			
7. High point checked for saturation and point removed if so? [Chrom]							✓			✓			
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]							✓			NA			
9. RT for each IS +20 sec avg. RT? [F6 IstdRec]							✓			✓			
10. Area for each IS + 40% avg. area? [F6 IstdRec]							✓			✓			
11. Each analyte + 0.06 RRT of avg. RRT? [F6 - RRT]							✓			✓			
12. Elution order checked on isomeric pairs? [Chrom]													
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane							✓			✓			
• 2-methyl butane / acrolein							✓			✓			
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane							✓			✓			
• vinyl acetate / hexane							✓			✓			
• cis- and trans- isomers							✓			✓			
• ethyl benzene / m/p-xylene / o-xylene							✓			✓			
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene							✓			✓			
• tert-butylbenzene/4-isopropyltoluene							✓			✓			
• 1,3-, 1,4-, and 1,2-dichlorobenzene							✓			✓			
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes							✓	mic		✓			
• 1,2,4- and 1,2,3-trichlorobenzenes							✓			✓			
• 2-, and 1-methylnaphthalene							✓			✓			
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?							✓			✓			
MLG Review							TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1 & 2 methylnaphthalene ≤ 50% Mechl 30.5 [F6 Σ]							✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]							✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]							✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]							✓	✓	✓		NA		→
18. If curves were used, is correlation coefficient ≥ 0.990? [F6]							na	→	→		NA		→
19. Is the intercept less than the RL for each curve? [F6]							na	→	→		NA		→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntl-C, details]							na	→	na		NA	→	na
21. Is low point RSE ≤ 50%? Mechl 63% 58% 7/14/19 [F6]							✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits? [F8 - icv]							✓	✓	✓		✓	✓	✓
Analyst/Date:							2nd Level Reviewer/Date:						
H 7/14/19							AS 7/14/19						
TALS Review							TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL							✓	✓	✓		na	na	na
24. Graphics uploaded? [paperclip]							✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events --Fix ICAL linkage' if needed]							✓	✓	✓		✓	✓	✓
26. Runs linked to BFB? [QC Links]							✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings [F8]							✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?							na	na	na		NA		→
29. After review in TALS, approve the method in TALS.							na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>							na	na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?							na	na	na		✓	✓	✓
Analyst/date:							2nd Level Reviewer/date:						
H 7/15/19							AS 7/15/19						
Comments: Mechl UR 5 123tmbz UR-4 7/15/19 dodecane 12db3chloroprop UR 4 7/15/19 d Bromotorm							Comments:						

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1

SDG No.: _____

Instrument ID: MR Start Date: 02/25/2019 09:32

Analysis Batch Number: 27908 End Date: 02/26/2019 06:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27908/1		02/25/2019 09:32	1	RBFB25.D	RTX-5 0.32 (mm)
CCVIS 140-27908/2		02/25/2019 10:00	1	RCCVB25.D	RTX-5 0.32 (mm)
LCS 140-27908/1002		02/25/2019 10:00	1	RCCVB25-LCS.d	RTX-5 0.32 (mm)
ZZZZZ		02/25/2019 11:58	1		RTX-5 0.32 (mm)
MB 140-27908/5		02/25/2019 12:52	1	R500BB25.D	RTX-5 0.32 (mm)
140-14386-1		02/25/2019 17:10	1	RB25P101.D	RTX-5 0.32 (mm)
140-14386-2		02/25/2019 17:59	1	RB25P102.D	RTX-5 0.32 (mm)
140-14386-3		02/25/2019 18:48	1	RB25P103.D	RTX-5 0.32 (mm)
140-14386-4		02/25/2019 19:37	1	RB25P104.D	RTX-5 0.32 (mm)
140-14386-5		02/25/2019 20:26	1	RB25P105.D	RTX-5 0.32 (mm)
140-14386-6		02/25/2019 21:14	1	RB25P106.D	RTX-5 0.32 (mm)
140-14386-7		02/25/2019 22:03	1	RB25P107.D	RTX-5 0.32 (mm)
140-14386-8		02/25/2019 22:53	1.57	RB25P108.D	RTX-5 0.32 (mm)
140-14386-9		02/25/2019 23:42	1	RB25P109.D	RTX-5 0.32 (mm)
140-14386-10		02/26/2019 00:31	1	RB25P110.D	RTX-5 0.32 (mm)
140-14386-11		02/26/2019 01:20	1	RB25P111.D	RTX-5 0.32 (mm)
140-14386-12		02/26/2019 02:09	1.66	RB25P112.D	RTX-5 0.32 (mm)
140-14386-13		02/26/2019 02:58	1	RB25P113.D	RTX-5 0.32 (mm)
140-14386-14		02/26/2019 03:47	1	RB25P114.D	RTX-5 0.32 (mm)
140-14386-15		02/26/2019 04:36	1	RB25P115.D	RTX-5 0.32 (mm)
140-14386-16		02/26/2019 05:25	1	RB25P116.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 06:14	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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Instrument/Date	MR 2/25/2019	Routine		DOD		OHIO VAP	
CCAL Chrom WL #	10923	CCAL Batch #	27908			27954	
ICAL Chrom WL #	10019	ICAL Batch #/ Event #	25490 / 1746			25491 / 1747	
Chrom Review		1st	If No, why is data reportable?				2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]		/					na
2. Did BFB meet tune criteria? [F8]		/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]				/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]		/	List Target analytes outside CCV limits: _____				/
4. Elution order checked on isomeric pairs? [Chrom]							
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		/					/
• 2-methyl butane / acrolein		/					/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		/					/
• vinyl acetate / hexane		/					/
• cis- and trans- isomers		/					/
• ethyl benzene / m/p-xylene / o-xylene		/					/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene		/					/
• tert-butylbenzene/4-isopropyltoluene		/					/
• 1,3-, 1,4-, and 1,2-dichlorobenzene		/					/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		NA					na
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene		/					/
• 2-, and 1-methylnaphthalene		/					/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?		NA					na
6. Has the RT been updated to the method?		/					/
Analyst/date	Suphawan K 2/26/2019	2nd Level Reviewer/date		K 2/26/2019			
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]		/	✓ on screen 2/26/19 K				/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]		/					/
9. Can dilution history verified? [Mgmt Report]		/					/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:		/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)				/
11. All runs - peaks ID'd correctly and false positives removed?		/					/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?		/					/
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]		/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur, Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)				/
Sample Reason Sample Reason							
14. Samples outside calibration range scheduled for dilution?		NA	<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution				na
Chrom Review		1st	If No, why is data reportable?				2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:		/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.				/
Sample Reason Sample Reason							
16. RIC inspected for proper integration for TPH?		NA					na
17. Obvious non-TPH peaks excluded?		/					/
18. Individual TPH peak area < octane high point area?		/					/

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	NA														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input type="checkbox"/> CCV - %D - LCS criteria met (NCM# _____) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/																
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	NA														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random; Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr><td>>90</td><td>5</td></tr> <tr><td>71 - 90</td><td>4</td></tr> <tr><td>51 - 70</td><td>3</td></tr> <tr><td>31 - 50</td><td>2</td></tr> <tr><td>11 - 30</td><td>1</td></tr> <tr><td>< 11</td><td>0</td></tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	< 11	0			
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
< 11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	/		/														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary. [Conditions Review Tab]	NA		NA														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-27954/5, 140-27908/5 200 mL blank ID: _____	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	NA		NA														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?		Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	NA		/														
40. Checklist & Entech report scanned, attached & assigned properly?	NA		/														

Analyst: <u>Suparna Kh.</u>	Date: <u>2/26/2019</u>	2nd Level Reviewer: <u>[Signature]</u>	Date: <u>2/26/19</u>
Comments: <u>Job 140-14386 : Yellow triangle</u>		Comments:	
Example Calculation: <u>140-14386-3 Acetone</u>			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
<u>15.19510 x 500 / 20 x 1.0 = 379.88</u>			

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1

SDG No.: _____

Instrument ID: MG Start Date: 02/26/2019 11:03

Analysis Batch Number: 27931 End Date: 02/27/2019 03:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27931/1		02/26/2019 11:03	1	GBFBB26.D	RTX-5 0.32 (mm)
CCVIS 140-27931/2		02/26/2019 11:35	1	GCCVB26.D	RTX-5 0.32 (mm)
LCS 140-27931/1002		02/26/2019 11:35	1	GCCVB26-LCS.d	RTX-5 0.32 (mm)
MB 140-27931/4		02/26/2019 12:56	1	G500BB26.D	RTX-5 0.32 (mm)
140-14386-17		02/26/2019 13:42	1	GB26P201.D	RTX-5 0.32 (mm)
140-14386-18		02/26/2019 15:56	1	GB26P101.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 16:38	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 17:19	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 18:01	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 19:24	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 20:06	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 21:30	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 22:13	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 22:55	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 23:37	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 00:18	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 01:00	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 01:42	3.7		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 02:23	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 03:05	1		RTX-5 0.32 (mm)

190226.zzz

EUROFINS TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	25.5	2/26/2019	11:03:10 AM
CCV	1 - 101 mL	32.2	2/26/2019	11:35:07 AM
DNU	16 - 21 mL	25.5	2/26/2019	12:21:11 PM
BLK	16 - 500 mL	25.1	2/26/2019	12:56:44 PM
14386-17	1 - 101 mL	6.4	2/26/2019	1:42:01 PM
DNU	1 - 21 mL	11	2/26/2019	3:24:59 PM
14386-18	1 - 101 mL	8.8	2/26/2019	3:56:23 PM
14391-19	2 - 101 mL	7.4	2/26/2019	4:38:04 PM
14391-20	3 - 101 mL	7.1	2/26/2019	5:19:41 PM
14387-04	4 - 11 mL	8	2/26/2019	6:01:19 PM
14387-05	5 - 11 mL	8.2	2/26/2019	6:43:00 PM
14387-14	6 - 11 mL	9.5	2/26/2019	7:24:42 PM
14387-16	7 - 11 mL	9.6	2/26/2019	8:06:22 PM
14387-18	8 - 11 mL	6.3	2/26/2019	8:48:03 PM
14389-01	9 - 101 mL	8.2	2/26/2019	9:30:27 PM
14389-02	10 - 101 mL	8.6	2/26/2019	10:13:31 PM
14389-03	11 - 101 mL	9.6	2/26/2019	10:55:40 PM
14389-04	12 - 101 mL	9.9	2/26/2019	11:37:23 PM
14389-05	13 - 101 mL	9.9	2/27/2019	12:18:55 AM
14389-06	14 - 101 mL	10.1	2/27/2019	1:00:35 AM
14389-07	15 - 11 mL	15.4	2/27/2019	1:42:13 AM
14389-08	16 - 101 mL	9.9	2/27/2019	2:23:49 AM
14389-08	16 - 101 mL	7.9	2/27/2019	3:05:31 AM

MG WL 10931

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 1 of 2

Instrument/Date	MG 2/26/2019		Routine	DOD	OHIO VAP
CCAL Chrom WL #	10931	CCAL Batch #	27931		
ICAL Chrom WL #	10492	ICAL Batch # / Event #	26755 / 1781	/	/
Chrom Review			1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]			/		na
2. Did BFB meet tune criteria? [F8]			/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]			/	List Target analytes outside CCV limits: _____ _____	/
4. Elution order checked on isomeric pairs? [Chrom]					
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane			/		/
• 2-methyl butane / acrolein			/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane			/		/
• vinyl acetate / hexane			/		/
• cis- and trans- isomers			/		/
• ethyl benzene / m/p-xylene / o-xylene			/		/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene			/		/
• tert-butylbenzene/4-isopropyltoluene			/		/
• 1,3- , 1,4- , and 1,2-dichlorobenzene			/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes			NA		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene			/		/
• 2-, and 1-methylnaphthalene			/		/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?			NA		NA
6. Has the RT been updated to the method?			/		/
Analyst/date	Suphanna Kh 2/27/2019		2nd Level Reviewer/date w 03/01/19		
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]			/		/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]			/		/
9. Can dilution history verified? [Mgmt Report]			/		/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:			/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	/
11. All runs - peaks ID'd correctly and false positives removed?			/		/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?			/		/
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]			/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur, Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)	/
Sample Reason Sample Reason					
14. Samples outside calibration range scheduled for dilution?			NA	<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution	NA
Chrom Review			1st	If No, why is data reportable?	2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:			/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.	/
Sample Reason Sample Reason					
16. RIC inspected for proper integration for TPH?			NA		NA
17. Obvious non-TPH peaks excluded?			/		/
18. Individual TPH peak area < octane high point area?			/		/

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 2 of 2

TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	NA														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input type="checkbox"/> CCV - %D - LCS criteria met (NCM# _____) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	NA														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random, Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr> <td>>90</td> <td>5</td> </tr> <tr> <td>71 - 90</td> <td>4</td> </tr> <tr> <td>51 - 70</td> <td>3</td> </tr> <tr> <td>31 - 50</td> <td>2</td> </tr> <tr> <td>11 - 30</td> <td>1</td> </tr> <tr> <td><11</td> <td>0</td> </tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	<11	0			/
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
<11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	/		/														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		NA														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-27931/4 200 mL blank ID: _____	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	NA		NA														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	na		/														
40. Checklist & Entech report scanned, attached & assigned properly?	na		/														

Analyst: Suphawana Kh.	Date: 2/27/2019	2nd Level Reviewer:	Date: 03/04/19
Comments: CS line 16 for Chlorodifluoromethane		Comments:	
Example Calculation: 140-14389-7 1,1-Dichloroethane			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
$7.005013 \times \frac{500}{11} \times 3.7 = 1178.72$			

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1

SDG No.: _____

Batch Number: 27908 Batch Start Date: 02/25/19 09:32 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00083	40MXISSURP 00003
BFB 140-27908/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27908/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27908/5		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14386-A-1	IA-138-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-2	IA-093-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-3	IA-174-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-4	IA-018-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-5	IA-DUP03-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-6	IA-015-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-7	IA-118-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-8	IA-168-A-26	TO 15 LL	T	157 mL	500 mL	1	1		40 mL
140-14386-A-9	IA-081-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-10	IA-079-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-11	IA-DUP04-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-12	IA-117-A-26	TO 15 LL	T	166 mL	500 mL	1	1		40 mL
140-14386-A-13	IA-078-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-14	IA-136-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-15	IA-076-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-16	IA-075-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27908/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27908/1		TO 15 LL		40 mL					
CCVIS 140-27908/2		TO 15 LL							
MB 140-27908/5		TO 15 LL							
140-14386-A-1	IA-138-A-26	TO 15 LL	T						
140-14386-A-2	IA-093-A-26	TO 15 LL	T						
140-14386-A-3	IA-174-A-26	TO 15 LL	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1

SDG No.: _____

Batch Number: 27908 Batch Start Date: 02/25/19 09:32 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002				
140-14386-A-4	IA-018-A-26	TO 15 LL	T					
140-14386-A-5	IA-DUP03-A-26	TO 15 LL	T					
140-14386-A-6	IA-015-A-26	TO 15 LL	T					
140-14386-A-7	IA-118-A-26	TO 15 LL	T					
140-14386-A-8	IA-168-A-26	TO 15 LL	T					
140-14386-A-9	IA-081-A-26	TO 15 LL	T					
140-14386-A-10	IA-079-A-26	TO 15 LL	T					
140-14386-A-11	IA-DUP04-A-26	TO 15 LL	T					
140-14386-A-12	IA-117-A-26	TO 15 LL	T					
140-14386-A-13	IA-078-A-26	TO 15 LL	T					
140-14386-A-14	IA-136-A-26	TO 15 LL	T					
140-14386-A-15	IA-076-A-26	TO 15 LL	T					
140-14386-A-16	IA-075-A-26	TO 15 LL	T					
LCS		TO 15 LL						
140-27908/1002								

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1

SDG No.: _____

Batch Number: 27931 Batch Start Date: 02/26/19 11:03 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00082	40MXISSURP 00003
BFB 140-27931/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27931/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27931/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14386-A-17	IA-021-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14386-A-18	SV-178-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27931/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27931/1		TO 15 LL		40 mL					
CCVIS 140-27931/2		TO 15 LL							
MB 140-27931/4		TO 15 LL							
140-14386-A-17	IA-021-A-26	TO 15 LL	T						
140-14386-A-18	SV-178-MB-3	TO 15 LL	T						
LCS 140-27931/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Summa Canister Dilution Worksheet

Client: Tetra Tech, Inc.

Job No.: 140-14386-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Date	Analyst
140-14386-8	1	-7.5	0.75	0.75	2.6	1.18	1.18		1.57	1.57	02/25/19 15:10	Barlozhetskaya, Anna F
140-14386-12	1	-8.8	0.71	0.71	2.5	1.17	1.17		1.66	1.66	02/25/19 15:10	Barlozhetskaya, Anna F

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg
 Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig
 Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury ("Hg)
 14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13951-1
 SDG No.: _____
 Client Sample ID: 11851 Lab Sample ID: 140-13951-2
 Matrix: Air Lab File ID: HA16lot13951.D
 Analysis Method: TO-15 Date Collected: 01/15/2019 11:05
 Sample wt/vol: 200(mL) Date Analyzed: 01/16/2019 21:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26920 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13951-1
 SDG No.: _____
 Client Sample ID: 11851 Lab Sample ID: 140-13951-2
 Matrix: Air Lab File ID: HA16lot13951.D
 Analysis Method: TO-15 Date Collected: 01/15/2019 11:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 21:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26920 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13951-1
 SDG No.: _____
 Client Sample ID: 11851 Lab Sample ID: 140-13951-2
 Matrix: Air Lab File ID: HA16lot13951.D
 Analysis Method: TO-15 Date Collected: 01/15/2019 11:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 21:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26920 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200(mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200(mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200(mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13994-1
 SDG No.: _____
 Client Sample ID: 09583 Lab Sample ID: 140-13994-1
 Matrix: Air Lab File ID: HA21LOT13994.D
 Analysis Method: TO-15 Date Collected: 01/18/2019 00:14
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 03:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13994-1
 SDG No.: _____
 Client Sample ID: 09583 Lab Sample ID: 140-13994-1
 Matrix: Air Lab File ID: HA21LOT13994.D
 Analysis Method: TO-15 Date Collected: 01/18/2019 00:14
 Sample wt/vol: 200(mL) Date Analyzed: 01/22/2019 03:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13994-1
 SDG No.: _____
 Client Sample ID: 09583 Lab Sample ID: 140-13994-1
 Matrix: Air Lab File ID: HA21LOT13994.D
 Analysis Method: TO-15 Date Collected: 01/18/2019 00:14
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 03:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

Shipping and Receiving Documents

Canister Samples Chain of Custody Record

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

1 of 16 COCs

Project Manager: **Tony Apanavage**
 Phone: 301-528-3000
 Site Contact: **Tony Apanavage**
 TAL Contact: **Terry Walker, Washmet**

Sampled By: **Sophia Lawson, Josh Mullis & Walt Puyou**

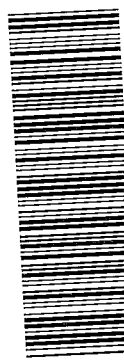
Baltimore #201

Client Contact Information
 Company: **Tetra Tech**
 Address: **20251 Century Blvd #200**
 City/State/Zip: **Georgetown, MD 20871**
 Phone: **301-528-552**
 FAX:
 Project Name: **MRC Indoor Air**
 Site/location: **MRC**
 PO# **112FC08388**

Analysis Turnaround Time
 Standard (Specify) **X**
 Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	Other (Please specify in notes section)										
								TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Indoor Air	Ambient Air	Soil Gas	Landfill Gas		
IA-158-A-26	2/21/19	0848	1654	-26	0	7299	11835	✓										
IA-093-A-26	2/21/19	0851	1656	-30	-3	4588	11277	✓										
IA-174-A-26	2/21/19	0850	1655	-30	-5	10033	09741	✓										
IA-018-A-26	2/21/19	0856	1657	-30	-2	11261	11669	✓										
IA-DUP03-A-26	2/21/19	0856	1657	-30	0	11499	10841	✓										
IA-015-A-26	2/21/19	0904	1704	-29	-4	09846	11657	✓										

Temperature (Fahrenheit)
 Ambient
 Interior
 Start
 Stop



140-14386 Chain of Custody

Sampled by: **Sophia Lawson, Walt Puyou, Josh Mullis**

CUSTOM SEALS IMPACT
 RECEIVEDS AMIS TEST AT 20.0 / 0720.0
 BAD 2-23-19
 2 BOXES FEEL # 17154111 7893M S10
 18 CANS / 18 FLUWS / 8 TS

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: Sophia Lawson	Date/Time: 2/22/19	Received by:
Relinquished by: [Signature]	Date/Time: 2/22/19 1700	Received by: [Signature]

Lab Use Only
 Shipped Name: _____
 Created by: _____
 Confirmed by: _____

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record



Client Contact Information
 Company: Tetra Tech
 Address: 20251 Century Blvd #200
 City/State/Zip: Germantown, MD 20871
 Phone: 301-528-553-
 FAX:
 Project Name: MRC Indoor Air
 Site/location: MRC
 PO# 1121C08388

Project Manager: Tony Apanavage
 Phone: 301-528-3000
 Site Contact: Tony Apanavage
 TAL Contact: Terry Walker WYSHMEND

Sampled By: Sophia Lawson, Sosh Pujou & Walt Mellis
 2 of 6 COCs

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, %Hg (Start)	Canister Vacuum In Field, %Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)				
													Indoor Air	Ambient Air	Soil Gas	Landfill Gas	
IA-118-A-26	2/21/19	0905	1705	-29	-4	11929	11518	✓									
IA-168-A-26	2/21/19	0928	1728	-30	-7	7605	10706	✓									
IA-081-A-26	2/21/19	0912	1712	-22	0	8780	09883	✓									
IA-079-A-26	2/21/19	0918	1718	-29	-1	10593	11641	✓									
IA-DUPOY-A-26	2/21/19	0918	1718	-30	-5	8727	11107	✓									
IA-117-A-26	2/21/19	0920	1720	NA	-4	8830	09788	✓									

Baltimore #201

Temperature (Fahrenheit)	
Start	Ambient
Stop	Ambient

Pressure (Inches of Hg)	
Start	Ambient
Stop	Ambient

Special Instructions/QC Requirements & Comments:
 Sample IA-117-A-26 regulator cap arrived broken, canister vacuum not able to measure pressure

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: <i>[Signature]</i>	Date/Time: 2/22/19	Received by: <i>[Signature]</i>
Relinquished by: <i>[Signature]</i>	Date/Time: 2/22/19 1700	Received by: Name: Sophia Lawson, Sosh Pujou & Walt Mellis Date/Time: 2-22-19 10:10

Lab Use Only: Shipper Name, Shipper Address, Shipper Phone, Shipper Email, Shipper Signature

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.



3 of 16 COCs

Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor

Project Manager: Tony Apanavage
 Phone: 301-528-3000
 Site Contact: Tony Apanavage
 TAL Contact: Terry Walker, Washburn

Client Contact Information
 Company: Tetra Tech
 Address: 20251 Century Blvd #200
 City/State/Zip: Georgetown, MD 20877
 Phone: 301-528-5522
 FAX:

Project Name: MRL Indoor Air
 Site/location: MRL
 PO# 118FC08388

Analysis Turnaround Time
 Standard (Specify) X
 Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15		TO-14A		EPA 3C		EPA 25C		ASTM D-1946		Other (Please specify in notes section)		Other (Please specify in notes section)	
								Indoor Air	Ambient Air	Indoor Air	Ambient Air	Soil Gas	Landfill Gas								
IA-078-A-26	2/21/19	0923	1723	-19	4	8786	10922	✓													
IA-136-A-26	2/21/19	0925	1725	-26	2	11524	11578	✓													
IA-076-A-26	2/21/19	0927	1727	-28	0	10880	08805	✓													
IA-075-A-26	2/21/19	0931	1731	-30	-5	8690	11809	✓													
IA-021-A-26	2/21/19	0934	1734	-30	-5	11568	12276	✓													
SU-178-MB-3	2/21/19	0948	1058	-30	0	11054	1163	✓													

Baltimore #201

Start	Stop	Temperature (Fahrenheit)	
		Interior	Ambient

Start	Stop	Pressure (inches of Hg)	
		Interior	Ambient

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: <u>Tetra Tech</u>	Date/Time: <u>2/22/19</u>	Canisters Received by:
Samples Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/22/19</u>	Received by: <u>[Signature]</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/22/19 1700</u>	Received by: <u>[Signature]</u>

Lab Use Only: _____
 Shipper Name: _____
 Date: _____
 Signature: _____

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	7. IA-021-A-26, COL HIST CAMISTER ASSET AS 12576, SHOWN RE 11276
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID: _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input checked="" type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/		
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	

Labeling Verified by: _____ Date: _____

pH test strip lot number: _____

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative: _____	
Lot Number: _____	
Exp Date: _____	
Analyst: _____	
Date: _____	
Time: _____	

Project #: _____ PM Instructions: _____

Sample Receiving Associate: *[Signature]* Date: 2-25-19 QA026R31.doc, 112618

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
 Date: 2/25/2019

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-14386-a-1	11835	13994	B	1	+0.7	1500	
AFB	140-14386-a-2	11277	13969	B	1	-2.6	1501	
AFB	140-14386-a-3	09741	13994	B	1	-2.8	1502	
AFB	140-14386-a-4	11669	13978	B	1	0	1503	
AFB	140-14386-a-5	10841	13951	B	1	0	1504	
AFB	140-14386-a-6	11657	14031	B	1	-3.0	1505	
AFB	140-14386-a-7	11518	14031	B	1	-4.0	1506	
AFB	140-14386-a-8	10796	13994	B	1	-7.5	1507	2.3
AFB	140-14386-a-9	09823	13978	B	1	-5.4	1508	
AFB	140-14386-a-10	11641	13978	B	1	-3.0	1509	
AFB	140-14386-a-11	11107	13994	B	1	-3.6	1510	
AFB	140-14386-a-12	09788	14031	B	1	-8.8	1511	2.5
AFB	140-14386-a-13	10922	14002	B	1	-1.4	1512	
AFB	140-14386-a-14	11578	13969	B	1	0	1513	
AFB	140-14386-a-15	09805	13994	B	1	0	1514	
AFB	140-14386-a-16	11809	14031	B	1	-4.7	1515	
AFB	140-14386-a-17	11276	13978	B	1	-5.5	1516	
AFB	140-14386-a-18	11163	14114	B	1	0	1517	

<input type="checkbox"/> Receiving –Air Can –Calve Open (NCM # _____) <input type="checkbox"/> Air - Can P -24 to -25 " - Flow Contr. Works (NCM# _____) <input type="checkbox"/> Air - Can P -24 to -25 " - Flow Contr. Faulty (NCM# _____) <input type="checkbox"/> Air - Can P Out -26" - Flow Contr. Works (NCM# _____)	<input type="checkbox"/> Air - Can P Out -26" - Flow Contr. Faulty (NCM# _____) <input type="checkbox"/> Air - Can P Low -24 to -25 " - Grab Sample (NCM# _____) <input type="checkbox"/> Air - Can P Low -26 "- Grab Sample (NCM# _____)
--	---

ANALYTICAL REPORT

Job Number: 140-14387-1
Job Description: MRC Indoor Air, MRC

For:
Tetra Tech, Inc.
20251 Century Blvd
Suite 200
Germantown, MD 20874
Attention: Samantha Brenner



Approved for release.
Terry Walker Wasmund
Project Manager II
3/7/2019 1:47 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
03/07/2019

cc: Ms. Michelle Woeber

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Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
E	Result exceeded calibration range.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-14387-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

Sample SV-170-A-26 (140-14387-17) was listed on the Chain of Custody (COC); however, no sample was received.

Per note on the Chain of Custody, sample SV-187-MB-3 was not logged for analysis.

Air - GC/MS VOA - Method TO-15 LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

The continuing calibration verification (CCV) associated with batch 140-27935 exhibited % difference of > 30% for the following analytes 1,2,4-Trichlorobenzene and Naphthalene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

Naphthalene recovered outside control limits for the LCS associated with analytical batch 140-27935. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-180-MB-3

Lab Sample ID: 140-14387-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.13	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.42		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.23	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.79	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.8		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trichlorobenzene	0.34	J	0.40	0.20	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.20	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.54	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.40	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.1		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.94	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	6.8		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trichlorobenzene	2.5	J	3.0	1.4	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.1	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.94	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-179-MB-3

Lab Sample ID: 140-14387-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.1		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.072	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.98	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.46		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.17	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.15	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	8.5		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.29	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.4	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	2.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.84	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	0.65	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-181-MB-3

Lab Sample ID: 140-14387-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.12	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.28	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	51		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-181-MB-3 (Continued)

Lab Sample ID: 140-14387-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	2.2		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.75	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.12	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.17	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.37	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.98	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	210		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	8.7		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.64	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.85	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-182-MB-3

Lab Sample ID: 140-14387-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	250	E	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	34		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.78	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.63		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	16		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.093	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.27	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane - DL	170		3.6	0.45	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.54	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1000	E	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	130		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	87		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.50	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.93	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane - DL	690		15	1.8	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-183-MB-3

Lab Sample ID: 140-14387-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.16	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	170	E	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-183-MB-3 (Continued)

Lab Sample ID: 140-14387-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	22		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.80	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	8.5		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.082	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane - DL	130		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.52	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	690	E	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	89		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	46		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.44	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.95	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane - DL	540		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-184-MB-3

Lab Sample ID: 140-14387-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.36	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.50		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.26	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.74	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.80		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.21	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.1		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.1	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.66	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	3.0		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.68	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.0	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.6		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-185-MB-3

Lab Sample ID: 140-14387-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.28	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.3		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.84		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-185-MB-3 (Continued)

Lab Sample ID: 140-14387-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.87	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.7		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.19	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.27	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.86	Cl	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.4		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.89	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	17		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	3.3		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.2	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	6.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.0	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.3	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	4.2	Cl	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	6.0		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-186-MB-3

Lab Sample ID: 140-14387-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.28	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.36	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.18	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.1		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.24	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.70	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.88	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.74	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.64	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	4.3		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.78	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.2	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.0	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-116-A-26

Lab Sample ID: 140-14387-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.25	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-116-A-26 (Continued)

Lab Sample ID: 140-14387-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.072	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.92	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.82		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.81	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.7	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.28	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.2	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	4.4		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-DUP03-A-26

Lab Sample ID: 140-14387-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.24	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.60		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.75	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.7	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	3.2		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-138-A-26

Lab Sample ID: 140-14387-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.19	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.40		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.085	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.1		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.77		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	3.3		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.88	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.13	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.065	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	21		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.60	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.4		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.41	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-138-A-26 (Continued)

Lab Sample ID: 140-14387-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	8.2		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.1		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	13		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.1	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.89	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.36	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	110		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.67	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-093-A-26

Lab Sample ID: 140-14387-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.20	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.33	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.24	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.32	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.069	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.2		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.65	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.97	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.3	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.37	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	6.3		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.72	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-173-A-26

Lab Sample ID: 140-14387-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.21	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.30	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.1		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	24		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	5.1		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.12	J	0.40	0.095	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	84	E	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.76	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.63		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.84		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.44		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	480	E	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-173-A-26 (Continued)

Lab Sample ID: 140-14387-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	0.27	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene - DL	66		3.6	0.64	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene - DL	310		1.8	0.64	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.68	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	5.4		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	94		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	21		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.50	J	1.6	0.38	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	330	E	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	3.3		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	2.4		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	2600	E	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.73	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene - DL	260		14	2.5	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene - DL	1700		9.8	3.4	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-174-A-26

Lab Sample ID: 140-14387-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.39	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.2		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	1.2		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.3		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	4.6		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.77	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.087	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	8.2		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	20		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.44	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.4	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	5.9		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	4.7		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	9.1		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	18		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.59	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	45		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	110		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.77	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-171-A-26

Lab Sample ID: 140-14387-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.19	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.32	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.90		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	9.3		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.2		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	63		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.64		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.46		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.18	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	310	E	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.28	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene - DL	190		1.8	0.64	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.62	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	4.4		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	37		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	8.7		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	250		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.8		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.99	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1700	E	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene - DL	1000		9.8	3.4	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-081-A-26

Lab Sample ID: 140-14387-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.47		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.33	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.10	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.32	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.90	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.19	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.4		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.67		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.46		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	200	E *	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	10		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	5.9		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	3.5		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene - DL	110		4.0	1.7	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-081-A-26 (Continued)

Lab Sample ID: 140-14387-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.6	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.40	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.4	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.1	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	1.3	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	3.7		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	2.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	1000	E *	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	50		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	29		2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	15		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene - DL	550		20	8.4	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-180-MB-3

Lab Sample ID: 140-14387-1

Date Collected: 02/21/19 09:49

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.13	J	0.40	0.12	ppb v/v			02/25/19 17:27	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 17:27	1
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/25/19 17:27	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 17:27	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 17:27	1
Dichlorodifluoromethane	0.42		0.40	0.14	ppb v/v			02/25/19 17:27	1
1,1-Dichloroethane	0.23	J	0.40	0.050	ppb v/v			02/25/19 17:27	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 17:27	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/25/19 17:27	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 17:27	1
Methylene Chloride	0.79	J	2.0	0.65	ppb v/v			02/25/19 17:27	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 17:27	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 17:27	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 17:27	1
Toluene	1.8		0.60	0.60	ppb v/v			02/25/19 17:27	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 17:27	1
1,2,4-Trichlorobenzene	0.34	J	0.40	0.20	ppb v/v			02/25/19 17:27	1
1,1,1-Trichloroethane	0.20	J	0.40	0.060	ppb v/v			02/25/19 17:27	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 17:27	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/25/19 17:27	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 17:27	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 17:27	1
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v			02/25/19 17:27	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 17:27	1
Xylenes, Total	0.54	J	0.80	0.12	ppb v/v			02/25/19 17:27	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.40	J	1.3	0.37	ug/m3			02/25/19 17:27	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 17:27	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/25/19 17:27	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 17:27	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 17:27	1
Dichlorodifluoromethane	2.1		2.0	0.67	ug/m3			02/25/19 17:27	1
1,1-Dichloroethane	0.94	J	1.6	0.20	ug/m3			02/25/19 17:27	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 17:27	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/25/19 17:27	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 17:27	1
Methylene Chloride	2.7	J	6.9	2.3	ug/m3			02/25/19 17:27	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 17:27	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 17:27	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 17:27	1
Toluene	6.8		2.3	2.3	ug/m3			02/25/19 17:27	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 17:27	1
1,2,4-Trichlorobenzene	2.5	J	3.0	1.4	ug/m3			02/25/19 17:27	1
1,1,1-Trichloroethane	1.1	J	2.2	0.33	ug/m3			02/25/19 17:27	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 17:27	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/25/19 17:27	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 17:27	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 17:27	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-180-MB-3

Lab Sample ID: 140-14387-1

Date Collected: 02/21/19 09:49

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.94	J	2.0	0.64	ug/m3			02/25/19 17:27	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 17:27	1
Xylenes, Total	2.3	J	3.5	0.52	ug/m3			02/25/19 17:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 17:27	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-179-MB-3

Lab Sample ID: 140-14387-2

Date Collected: 02/21/19 09:50

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/25/19 18:20	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 18:20	1
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v			02/25/19 18:20	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 18:20	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 18:20	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/25/19 18:20	1
1,1-Dichloroethane	2.1		0.40	0.050	ppb v/v			02/25/19 18:20	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 18:20	1
1,1-Dichloroethene	0.072	J	0.40	0.070	ppb v/v			02/25/19 18:20	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 18:20	1
Methylene Chloride	0.98	J	2.0	0.65	ppb v/v			02/25/19 18:20	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 18:20	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 18:20	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 18:20	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 18:20	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 18:20	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 18:20	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 18:20	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 18:20	1
Trichloroethene	0.46		0.20	0.070	ppb v/v			02/25/19 18:20	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/25/19 18:20	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 18:20	1
1,3,5-Trimethylbenzene	0.17	J	0.40	0.13	ppb v/v			02/25/19 18:20	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 18:20	1
Xylenes, Total	0.15	J	0.80	0.12	ppb v/v			02/25/19 18:20	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/25/19 18:20	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 18:20	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/25/19 18:20	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 18:20	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 18:20	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/25/19 18:20	1
1,1-Dichloroethane	8.5		1.6	0.20	ug/m3			02/25/19 18:20	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 18:20	1
1,1-Dichloroethene	0.29	J	1.6	0.28	ug/m3			02/25/19 18:20	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 18:20	1
Methylene Chloride	3.4	J	6.9	2.3	ug/m3			02/25/19 18:20	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 18:20	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 18:20	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 18:20	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 18:20	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 18:20	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 18:20	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 18:20	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 18:20	1
Trichloroethene	2.5		1.1	0.38	ug/m3			02/25/19 18:20	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/25/19 18:20	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 18:20	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-179-MB-3

Lab Sample ID: 140-14387-2

Date Collected: 02/21/19 09:50

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.84	J	2.0	0.64	ug/m3			02/25/19 18:20	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 18:20	1
Xylenes, Total	0.65	J	3.5	0.52	ug/m3			02/25/19 18:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 18:20	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-181-MB-3

Lab Sample ID: 140-14387-3

Date Collected: 02/21/19 09:53

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.12	J	0.40	0.12	ppb v/v			02/25/19 19:13	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 19:13	1
Chlorodifluoromethane	0.28	J	0.40	0.075	ppb v/v			02/25/19 19:13	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 19:13	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 19:13	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/25/19 19:13	1
1,1-Dichloroethane	51		0.40	0.050	ppb v/v			02/25/19 19:13	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 19:13	1
1,1-Dichloroethene	2.2		0.40	0.070	ppb v/v			02/25/19 19:13	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 19:13	1
Methylene Chloride	0.75	J	2.0	0.65	ppb v/v			02/25/19 19:13	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 19:13	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 19:13	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 19:13	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 19:13	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 19:13	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 19:13	1
1,1,1-Trichloroethane	0.12	J	0.40	0.060	ppb v/v			02/25/19 19:13	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 19:13	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/25/19 19:13	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/25/19 19:13	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 19:13	1
1,3,5-Trimethylbenzene	0.17	J	0.40	0.13	ppb v/v			02/25/19 19:13	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 19:13	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/25/19 19:13	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.37	J	1.3	0.37	ug/m3			02/25/19 19:13	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 19:13	1
Chlorodifluoromethane	0.98	J	1.4	0.27	ug/m3			02/25/19 19:13	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 19:13	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 19:13	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/25/19 19:13	1
1,1-Dichloroethane	210		1.6	0.20	ug/m3			02/25/19 19:13	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 19:13	1
1,1-Dichloroethene	8.7		1.6	0.28	ug/m3			02/25/19 19:13	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 19:13	1
Methylene Chloride	2.6	J	6.9	2.3	ug/m3			02/25/19 19:13	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 19:13	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 19:13	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 19:13	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 19:13	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 19:13	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 19:13	1
1,1,1-Trichloroethane	0.64	J	2.2	0.33	ug/m3			02/25/19 19:13	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 19:13	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/25/19 19:13	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/25/19 19:13	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 19:13	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-181-MB-3

Lab Sample ID: 140-14387-3

Date Collected: 02/21/19 09:53

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.85	J	2.0	0.64	ug/m3			02/25/19 19:13	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 19:13	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/25/19 19:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/25/19 19:13	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-182-MB-3

Lab Sample ID: 140-14387-4

Date Collected: 02/21/19 09:55

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/25/19 20:06	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 20:06	1
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/25/19 20:06	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 20:06	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 20:06	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/25/19 20:06	1
1,1-Dichloroethane	250	E	0.40	0.050	ppb v/v			02/25/19 20:06	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 20:06	1
1,1-Dichloroethene	34		0.40	0.070	ppb v/v			02/25/19 20:06	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 20:06	1
Methylene Chloride	0.78	J	2.0	0.65	ppb v/v			02/25/19 20:06	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 20:06	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 20:06	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 20:06	1
Toluene	0.63		0.60	0.60	ppb v/v			02/25/19 20:06	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 20:06	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 20:06	1
1,1,1-Trichloroethane	16		0.40	0.060	ppb v/v			02/25/19 20:06	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 20:06	1
Trichloroethene	0.093	J	0.20	0.070	ppb v/v			02/25/19 20:06	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 20:06	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 20:06	1
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v			02/25/19 20:06	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 20:06	1
Xylenes, Total	0.27	J	0.80	0.12	ppb v/v			02/25/19 20:06	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.54	J	1.3	0.37	ug/m3			02/25/19 20:06	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 20:06	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/25/19 20:06	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 20:06	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 20:06	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/25/19 20:06	1
1,1-Dichloroethane	1000	E	1.6	0.20	ug/m3			02/25/19 20:06	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 20:06	1
1,1-Dichloroethene	130		1.6	0.28	ug/m3			02/25/19 20:06	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 20:06	1
Methylene Chloride	2.7	J	6.9	2.3	ug/m3			02/25/19 20:06	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 20:06	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 20:06	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 20:06	1
Toluene	2.4		2.3	2.3	ug/m3			02/25/19 20:06	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 20:06	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 20:06	1
1,1,1-Trichloroethane	87		2.2	0.33	ug/m3			02/25/19 20:06	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 20:06	1
Trichloroethene	0.50	J	1.1	0.38	ug/m3			02/25/19 20:06	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 20:06	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 20:06	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-182-MB-3

Lab Sample ID: 140-14387-4

Date Collected: 02/21/19 09:55

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.93	J	2.0	0.64	ug/m3			02/25/19 20:06	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 20:06	1
Xylenes, Total	1.2	J	3.5	0.52	ug/m3			02/25/19 20:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 20:06	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	170		3.6	0.45	ppb v/v			02/26/19 18:01	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	690		15	1.8	ug/m3			02/26/19 18:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					02/26/19 18:01	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-183-MB-3

Lab Sample ID: 140-14387-5

Date Collected: 02/21/19 09:58

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.16	J	0.40	0.12	ppb v/v			02/25/19 20:59	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 20:59	1
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v			02/25/19 20:59	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 20:59	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 20:59	1
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v			02/25/19 20:59	1
1,1-Dichloroethane	170	E	0.40	0.050	ppb v/v			02/25/19 20:59	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 20:59	1
1,1-Dichloroethene	22		0.40	0.070	ppb v/v			02/25/19 20:59	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 20:59	1
Methylene Chloride	0.80	J	2.0	0.65	ppb v/v			02/25/19 20:59	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 20:59	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 20:59	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 20:59	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 20:59	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 20:59	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 20:59	1
1,1,1-Trichloroethane	8.5		0.40	0.060	ppb v/v			02/25/19 20:59	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 20:59	1
Trichloroethene	0.082	J	0.20	0.070	ppb v/v			02/25/19 20:59	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 20:59	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 20:59	1
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v			02/25/19 20:59	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 20:59	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/25/19 20:59	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.52	J	1.3	0.37	ug/m3			02/25/19 20:59	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 20:59	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/25/19 20:59	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 20:59	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 20:59	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/25/19 20:59	1
1,1-Dichloroethane	690	E	1.6	0.20	ug/m3			02/25/19 20:59	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 20:59	1
1,1-Dichloroethene	89		1.6	0.28	ug/m3			02/25/19 20:59	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 20:59	1
Methylene Chloride	2.8	J	6.9	2.3	ug/m3			02/25/19 20:59	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 20:59	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 20:59	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 20:59	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 20:59	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 20:59	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 20:59	1
1,1,1-Trichloroethane	46		2.2	0.33	ug/m3			02/25/19 20:59	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 20:59	1
Trichloroethene	0.44	J	1.1	0.38	ug/m3			02/25/19 20:59	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 20:59	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 20:59	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-183-MB-3

Lab Sample ID: 140-14387-5

Date Collected: 02/21/19 09:58

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.95	J	2.0	0.64	ug/m3			02/25/19 20:59	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 20:59	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/25/19 20:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 20:59	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	130		2.0	0.25	ppb v/v			02/28/19 17:11	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	540		8.1	1.0	ug/m3			02/28/19 17:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/28/19 17:11	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-184-MB-3

Lab Sample ID: 140-14387-6

Date Collected: 02/21/19 10:01

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/25/19 21:53	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 21:53	1
Chlorodifluoromethane	0.36	J	0.40	0.075	ppb v/v			02/25/19 21:53	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 21:53	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 21:53	1
Dichlorodifluoromethane	0.50		0.40	0.14	ppb v/v			02/25/19 21:53	1
1,1-Dichloroethane	0.26	J	0.40	0.050	ppb v/v			02/25/19 21:53	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 21:53	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/25/19 21:53	1
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v			02/25/19 21:53	1
Methylene Chloride	0.74	J	2.0	0.65	ppb v/v			02/25/19 21:53	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 21:53	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 21:53	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 21:53	1
Toluene	0.80		0.60	0.60	ppb v/v			02/25/19 21:53	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 21:53	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 21:53	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 21:53	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 21:53	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/25/19 21:53	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/25/19 21:53	1
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/25/19 21:53	1
1,3,5-Trimethylbenzene	0.21	J	0.40	0.13	ppb v/v			02/25/19 21:53	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 21:53	1
Xylenes, Total	1.1		0.80	0.12	ppb v/v			02/25/19 21:53	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/25/19 21:53	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 21:53	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/25/19 21:53	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 21:53	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 21:53	1
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3			02/25/19 21:53	1
1,1-Dichloroethane	1.1	J	1.6	0.20	ug/m3			02/25/19 21:53	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 21:53	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/25/19 21:53	1
Ethylbenzene	0.66	J	1.7	0.59	ug/m3			02/25/19 21:53	1
Methylene Chloride	2.6	J	6.9	2.3	ug/m3			02/25/19 21:53	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 21:53	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 21:53	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 21:53	1
Toluene	3.0		2.3	2.3	ug/m3			02/25/19 21:53	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 21:53	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 21:53	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 21:53	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 21:53	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/25/19 21:53	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/25/19 21:53	1
1,2,4-Trimethylbenzene	0.68	J	2.0	0.61	ug/m3			02/25/19 21:53	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-184-MB-3

Lab Sample ID: 140-14387-6

Date Collected: 02/21/19 10:01

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.0	J	2.0	0.64	ug/m3			02/25/19 21:53	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 21:53	1
Xylenes, Total	4.6		3.5	0.52	ug/m3			02/25/19 21:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 140					02/25/19 21:53	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-185-MB-3

Lab Sample ID: 140-14387-7

Date Collected: 02/21/19 11:14

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.28	J	0.40	0.12	ppb v/v			02/25/19 22:46	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 22:46	1
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/25/19 22:46	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 22:46	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 22:46	1
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v			02/25/19 22:46	1
1,1-Dichloroethane	4.3		0.40	0.050	ppb v/v			02/25/19 22:46	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 22:46	1
1,1-Dichloroethene	0.84		0.40	0.070	ppb v/v			02/25/19 22:46	1
Ethylbenzene	0.28	J	0.40	0.14	ppb v/v			02/25/19 22:46	1
Methylene Chloride	0.87	J	2.0	0.65	ppb v/v			02/25/19 22:46	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 22:46	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 22:46	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 22:46	1
Toluene	1.7		0.60	0.60	ppb v/v			02/25/19 22:46	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 22:46	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 22:46	1
1,1,1-Trichloroethane	0.19	J	0.40	0.060	ppb v/v			02/25/19 22:46	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 22:46	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/25/19 22:46	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/25/19 22:46	1
1,2,4-Trimethylbenzene	0.27	J	0.40	0.13	ppb v/v			02/25/19 22:46	1
1,3,5-Trimethylbenzene	0.86	CI	0.40	0.13	ppb v/v			02/25/19 22:46	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 22:46	1
Xylenes, Total	1.4		0.80	0.12	ppb v/v			02/25/19 22:46	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.89	J	1.3	0.37	ug/m3			02/25/19 22:46	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 22:46	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/25/19 22:46	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 22:46	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 22:46	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/25/19 22:46	1
1,1-Dichloroethane	17		1.6	0.20	ug/m3			02/25/19 22:46	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 22:46	1
1,1-Dichloroethene	3.3		1.6	0.28	ug/m3			02/25/19 22:46	1
Ethylbenzene	1.2	J	1.7	0.59	ug/m3			02/25/19 22:46	1
Methylene Chloride	3.0	J	6.9	2.3	ug/m3			02/25/19 22:46	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 22:46	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 22:46	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 22:46	1
Toluene	6.4		2.3	2.3	ug/m3			02/25/19 22:46	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 22:46	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 22:46	1
1,1,1-Trichloroethane	1.0	J	2.2	0.33	ug/m3			02/25/19 22:46	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 22:46	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/25/19 22:46	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/25/19 22:46	1
1,2,4-Trimethylbenzene	1.3	J	2.0	0.61	ug/m3			02/25/19 22:46	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-185-MB-3

Lab Sample ID: 140-14387-7

Date Collected: 02/21/19 11:14

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	4.2	CI	2.0	0.64	ug/m3			02/25/19 22:46	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 22:46	1
Xylenes, Total	6.0		3.5	0.52	ug/m3			02/25/19 22:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 22:46	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-186-MB-3

Lab Sample ID: 140-14387-8

Date Collected: 02/21/19 11:15

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.28	J	0.40	0.12	ppb v/v			02/25/19 23:39	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 23:39	1
Chlorodifluoromethane	0.36	J	0.40	0.075	ppb v/v			02/25/19 23:39	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 23:39	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 23:39	1
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v			02/25/19 23:39	1
1,1-Dichloroethane	0.18	J	0.40	0.050	ppb v/v			02/25/19 23:39	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 23:39	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/25/19 23:39	1
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v			02/25/19 23:39	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/25/19 23:39	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 23:39	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 23:39	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 23:39	1
Toluene	1.1		0.60	0.60	ppb v/v			02/25/19 23:39	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 23:39	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 23:39	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 23:39	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 23:39	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/25/19 23:39	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/25/19 23:39	1
1,2,4-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v			02/25/19 23:39	1
1,3,5-Trimethylbenzene	0.24	J	0.40	0.13	ppb v/v			02/25/19 23:39	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 23:39	1
Xylenes, Total	0.70	J	0.80	0.12	ppb v/v			02/25/19 23:39	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.88	J	1.3	0.37	ug/m3			02/25/19 23:39	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 23:39	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/25/19 23:39	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 23:39	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 23:39	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/25/19 23:39	1
1,1-Dichloroethane	0.74	J	1.6	0.20	ug/m3			02/25/19 23:39	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 23:39	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/25/19 23:39	1
Ethylbenzene	0.64	J	1.7	0.59	ug/m3			02/25/19 23:39	1
Methylene Chloride	4.0	J	6.9	2.3	ug/m3			02/25/19 23:39	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 23:39	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 23:39	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 23:39	1
Toluene	4.3		2.3	2.3	ug/m3			02/25/19 23:39	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 23:39	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 23:39	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 23:39	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 23:39	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/25/19 23:39	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/25/19 23:39	1
1,2,4-Trimethylbenzene	0.78	J	2.0	0.61	ug/m3			02/25/19 23:39	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-186-MB-3

Lab Sample ID: 140-14387-8

Date Collected: 02/21/19 11:15

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.2	J	2.0	0.64	ug/m3			02/25/19 23:39	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 23:39	1
Xylenes, Total	3.0	J	3.5	0.52	ug/m3			02/25/19 23:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 23:39	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-116-A-26

Lab Sample ID: 140-14387-10

Date Collected: 02/21/19 12:15

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.25	J	0.40	0.12	ppb v/v			02/26/19 00:32	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 00:32	1
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v			02/26/19 00:32	1
Chloroform	0.34	J	0.40	0.075	ppb v/v			02/26/19 00:32	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 00:32	1
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v			02/26/19 00:32	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 00:32	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 00:32	1
1,1-Dichloroethene	0.072	J	0.40	0.070	ppb v/v			02/26/19 00:32	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 00:32	1
Methylene Chloride	0.92	J	2.0	0.65	ppb v/v			02/26/19 00:32	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 00:32	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 00:32	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 00:32	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 00:32	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 00:32	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 00:32	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 00:32	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 00:32	1
Trichloroethene	0.82		0.20	0.070	ppb v/v			02/26/19 00:32	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/26/19 00:32	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 00:32	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 00:32	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 00:32	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/26/19 00:32	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.81	J	1.3	0.37	ug/m3			02/26/19 00:32	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 00:32	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/26/19 00:32	1
Chloroform	1.7	J	2.0	0.37	ug/m3			02/26/19 00:32	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 00:32	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/26/19 00:32	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 00:32	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 00:32	1
1,1-Dichloroethene	0.28	J	1.6	0.28	ug/m3			02/26/19 00:32	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 00:32	1
Methylene Chloride	3.2	J	6.9	2.3	ug/m3			02/26/19 00:32	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 00:32	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 00:32	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 00:32	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 00:32	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 00:32	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 00:32	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 00:32	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 00:32	1
Trichloroethene	4.4		1.1	0.38	ug/m3			02/26/19 00:32	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/26/19 00:32	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 00:32	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-116-A-26

Lab Sample ID: 140-14387-10

Date Collected: 02/21/19 12:15

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 00:32	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 00:32	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/26/19 00:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 00:32	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-DUP03-A-26

Lab Sample ID: 140-14387-11

Date Collected: 02/21/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.24	J	0.40	0.12	ppb v/v			02/26/19 01:24	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 01:24	1
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/26/19 01:24	1
Chloroform	0.34	J	0.40	0.075	ppb v/v			02/26/19 01:24	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 01:24	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/26/19 01:24	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 01:24	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 01:24	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 01:24	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 01:24	1
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v			02/26/19 01:24	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 01:24	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 01:24	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 01:24	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 01:24	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 01:24	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 01:24	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 01:24	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 01:24	1
Trichloroethene	0.60		0.20	0.070	ppb v/v			02/26/19 01:24	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/26/19 01:24	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 01:24	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 01:24	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 01:24	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/26/19 01:24	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.75	J	1.3	0.37	ug/m3			02/26/19 01:24	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 01:24	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/26/19 01:24	1
Chloroform	1.7	J	2.0	0.37	ug/m3			02/26/19 01:24	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 01:24	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 01:24	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 01:24	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 01:24	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 01:24	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 01:24	1
Methylene Chloride	4.8	J	6.9	2.3	ug/m3			02/26/19 01:24	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 01:24	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 01:24	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 01:24	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 01:24	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 01:24	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 01:24	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 01:24	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 01:24	1
Trichloroethene	3.2		1.1	0.38	ug/m3			02/26/19 01:24	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/26/19 01:24	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 01:24	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-DUP03-A-26

Lab Sample ID: 140-14387-11

Date Collected: 02/21/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 01:24	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 01:24	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/26/19 01:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 01:24	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-138-A-26

Lab Sample ID: 140-14387-12

Date Collected: 02/21/19 10:32

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.19	J	0.40	0.12	ppb v/v			02/26/19 02:17	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 02:17	1
Chlorodifluoromethane	0.40		0.40	0.075	ppb v/v			02/26/19 02:17	1
Chloroform	0.085	J	0.40	0.075	ppb v/v			02/26/19 02:17	1
cis-1,2-Dichloroethene	2.1		0.40	0.12	ppb v/v			02/26/19 02:17	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/26/19 02:17	1
1,1-Dichloroethane	0.77		0.40	0.050	ppb v/v			02/26/19 02:17	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 02:17	1
1,1-Dichloroethene	3.3		0.40	0.070	ppb v/v			02/26/19 02:17	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 02:17	1
Methylene Chloride	0.88	J	2.0	0.65	ppb v/v			02/26/19 02:17	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 02:17	1
Naphthalene	ND *		0.20	0.20	ppb v/v			02/26/19 02:17	1
Tetrachloroethene	0.13	J	0.40	0.080	ppb v/v			02/26/19 02:17	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 02:17	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 02:17	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 02:17	1
1,1,1-Trichloroethane	0.065	J	0.40	0.060	ppb v/v			02/26/19 02:17	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 02:17	1
Trichloroethene	21		0.20	0.070	ppb v/v			02/26/19 02:17	1
1,2,3-Trimethylbenzene	ND *		0.40	0.17	ppb v/v			02/26/19 02:17	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 02:17	1
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/26/19 02:17	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 02:17	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/26/19 02:17	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.60	J	1.3	0.37	ug/m3			02/26/19 02:17	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 02:17	1
Chlorodifluoromethane	1.4		1.4	0.27	ug/m3			02/26/19 02:17	1
Chloroform	0.41	J	2.0	0.37	ug/m3			02/26/19 02:17	1
cis-1,2-Dichloroethene	8.2		1.6	0.48	ug/m3			02/26/19 02:17	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 02:17	1
1,1-Dichloroethane	3.1		1.6	0.20	ug/m3			02/26/19 02:17	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 02:17	1
1,1-Dichloroethene	13		1.6	0.28	ug/m3			02/26/19 02:17	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 02:17	1
Methylene Chloride	3.1	J	6.9	2.3	ug/m3			02/26/19 02:17	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 02:17	1
Naphthalene	ND *		1.0	1.0	ug/m3			02/26/19 02:17	1
Tetrachloroethene	0.89	J	2.7	0.54	ug/m3			02/26/19 02:17	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 02:17	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 02:17	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 02:17	1
1,1,1-Trichloroethane	0.36	J	2.2	0.33	ug/m3			02/26/19 02:17	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 02:17	1
Trichloroethene	110		1.1	0.38	ug/m3			02/26/19 02:17	1
1,2,3-Trimethylbenzene	ND *		2.0	0.84	ug/m3			02/26/19 02:17	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 02:17	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-138-A-26

Lab Sample ID: 140-14387-12

Date Collected: 02/21/19 10:32

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.67	J	2.0	0.64	ug/m3			02/26/19 02:17	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 02:17	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/26/19 02:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 02:17	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-093-A-26

Lab Sample ID: 140-14387-13

Date Collected: 02/21/19 12:21

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	J	0.40	0.12	ppb v/v			02/26/19 03:10	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 03:10	1
Chlorodifluoromethane	0.33	J	0.40	0.075	ppb v/v			02/26/19 03:10	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 03:10	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 03:10	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/26/19 03:10	1
1,1-Dichloroethane	0.24	J	0.40	0.050	ppb v/v			02/26/19 03:10	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 03:10	1
1,1-Dichloroethene	0.32	J	0.40	0.070	ppb v/v			02/26/19 03:10	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 03:10	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/26/19 03:10	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 03:10	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 03:10	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 03:10	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 03:10	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 03:10	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 03:10	1
1,1,1-Trichloroethane	0.069	J	0.40	0.060	ppb v/v			02/26/19 03:10	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 03:10	1
Trichloroethene	1.2		0.20	0.070	ppb v/v			02/26/19 03:10	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/26/19 03:10	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 03:10	1
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			02/26/19 03:10	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 03:10	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/26/19 03:10	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.65	J	1.3	0.37	ug/m3			02/26/19 03:10	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 03:10	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/26/19 03:10	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 03:10	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 03:10	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 03:10	1
1,1-Dichloroethane	0.97	J	1.6	0.20	ug/m3			02/26/19 03:10	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 03:10	1
1,1-Dichloroethene	1.3	J	1.6	0.28	ug/m3			02/26/19 03:10	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 03:10	1
Methylene Chloride	3.8	J	6.9	2.3	ug/m3			02/26/19 03:10	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 03:10	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 03:10	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 03:10	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 03:10	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 03:10	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 03:10	1
1,1,1-Trichloroethane	0.37	J	2.2	0.33	ug/m3			02/26/19 03:10	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 03:10	1
Trichloroethene	6.3		1.1	0.38	ug/m3			02/26/19 03:10	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/26/19 03:10	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 03:10	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-093-A-26

Lab Sample ID: 140-14387-13

Date Collected: 02/21/19 12:21

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.72	J	2.0	0.64	ug/m3			02/26/19 03:10	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 03:10	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/26/19 03:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/26/19 03:10	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-173-A-26

Lab Sample ID: 140-14387-14

Date Collected: 02/21/19 12:23

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.21	J	0.40	0.12	ppb v/v			02/26/19 04:03	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 04:03	1
Chlorodifluoromethane	0.30	J	0.40	0.075	ppb v/v			02/26/19 04:03	1
Chloroform	1.1		0.40	0.075	ppb v/v			02/26/19 04:03	1
cis-1,2-Dichloroethene	24		0.40	0.12	ppb v/v			02/26/19 04:03	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/26/19 04:03	1
1,1-Dichloroethane	5.1		0.40	0.050	ppb v/v			02/26/19 04:03	1
1,2-Dichloroethane	0.12	J	0.40	0.095	ppb v/v			02/26/19 04:03	1
1,1-Dichloroethene	84	E	0.40	0.070	ppb v/v			02/26/19 04:03	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 04:03	1
Methylene Chloride	0.76	J	2.0	0.65	ppb v/v			02/26/19 04:03	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 04:03	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 04:03	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 04:03	1
Toluene	0.63		0.60	0.60	ppb v/v			02/26/19 04:03	1
trans-1,2-Dichloroethene	0.84		0.40	0.10	ppb v/v			02/26/19 04:03	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 04:03	1
1,1,1-Trichloroethane	0.44		0.40	0.060	ppb v/v			02/26/19 04:03	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 04:03	1
Trichloroethene	480	E	0.20	0.070	ppb v/v			02/26/19 04:03	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/26/19 04:03	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 04:03	1
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			02/26/19 04:03	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 04:03	1
Xylenes, Total	0.27	J	0.80	0.12	ppb v/v			02/26/19 04:03	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.68	J	1.3	0.37	ug/m3			02/26/19 04:03	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 04:03	1
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3			02/26/19 04:03	1
Chloroform	5.4		2.0	0.37	ug/m3			02/26/19 04:03	1
cis-1,2-Dichloroethene	94		1.6	0.48	ug/m3			02/26/19 04:03	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 04:03	1
1,1-Dichloroethane	21		1.6	0.20	ug/m3			02/26/19 04:03	1
1,2-Dichloroethane	0.50	J	1.6	0.38	ug/m3			02/26/19 04:03	1
1,1-Dichloroethene	330	E	1.6	0.28	ug/m3			02/26/19 04:03	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 04:03	1
Methylene Chloride	2.6	J	6.9	2.3	ug/m3			02/26/19 04:03	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 04:03	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 04:03	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 04:03	1
Toluene	2.4		2.3	2.3	ug/m3			02/26/19 04:03	1
trans-1,2-Dichloroethene	3.3		1.6	0.40	ug/m3			02/26/19 04:03	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 04:03	1
1,1,1-Trichloroethane	2.4		2.2	0.33	ug/m3			02/26/19 04:03	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 04:03	1
Trichloroethene	2600	E	1.1	0.38	ug/m3			02/26/19 04:03	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/26/19 04:03	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 04:03	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-173-A-26

Lab Sample ID: 140-14387-14

Date Collected: 02/21/19 12:23

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.73	J	2.0	0.64	ug/m3			02/26/19 04:03	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 04:03	1
Xylenes, Total	1.2	J	3.5	0.52	ug/m3			02/26/19 04:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 04:03	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	66		3.6	0.64	ppb v/v			02/26/19 19:24	1
Trichloroethene	310		1.8	0.64	ppb v/v			02/26/19 19:24	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	260		14	2.5	ug/m3			02/26/19 19:24	1
Trichloroethene	1700		9.8	3.4	ug/m3			02/26/19 19:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		60 - 140					02/26/19 19:24	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-174-A-26

Lab Sample ID: 140-14387-15

Date Collected: 02/21/19 12:20

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.14	J	0.40	0.12	ppb v/v			02/26/19 04:56	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 04:56	1
Chlorodifluoromethane	0.39	J	0.40	0.075	ppb v/v			02/26/19 04:56	1
Chloroform	1.2		0.40	0.075	ppb v/v			02/26/19 04:56	1
cis-1,2-Dichloroethene	1.2		0.40	0.12	ppb v/v			02/26/19 04:56	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/26/19 04:56	1
1,1-Dichloroethane	2.3		0.40	0.050	ppb v/v			02/26/19 04:56	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 04:56	1
1,1-Dichloroethene	4.6		0.40	0.070	ppb v/v			02/26/19 04:56	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 04:56	1
Methylene Chloride	0.77	J	2.0	0.65	ppb v/v			02/26/19 04:56	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 04:56	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 04:56	1
Tetrachloroethene	0.087	J	0.40	0.080	ppb v/v			02/26/19 04:56	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 04:56	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 04:56	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 04:56	1
1,1,1-Trichloroethane	8.2		0.40	0.060	ppb v/v			02/26/19 04:56	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 04:56	1
Trichloroethene	20		0.20	0.070	ppb v/v			02/26/19 04:56	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/26/19 04:56	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 04:56	1
1,3,5-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v			02/26/19 04:56	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 04:56	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/26/19 04:56	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.44	J	1.3	0.37	ug/m3			02/26/19 04:56	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 04:56	1
Chlorodifluoromethane	1.4	J	1.4	0.27	ug/m3			02/26/19 04:56	1
Chloroform	5.9		2.0	0.37	ug/m3			02/26/19 04:56	1
cis-1,2-Dichloroethene	4.7		1.6	0.48	ug/m3			02/26/19 04:56	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/26/19 04:56	1
1,1-Dichloroethane	9.1		1.6	0.20	ug/m3			02/26/19 04:56	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 04:56	1
1,1-Dichloroethene	18		1.6	0.28	ug/m3			02/26/19 04:56	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 04:56	1
Methylene Chloride	2.7	J	6.9	2.3	ug/m3			02/26/19 04:56	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 04:56	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 04:56	1
Tetrachloroethene	0.59	J	2.7	0.54	ug/m3			02/26/19 04:56	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 04:56	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 04:56	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 04:56	1
1,1,1-Trichloroethane	45		2.2	0.33	ug/m3			02/26/19 04:56	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 04:56	1
Trichloroethene	110		1.1	0.38	ug/m3			02/26/19 04:56	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/26/19 04:56	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 04:56	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-174-A-26

Lab Sample ID: 140-14387-15

Date Collected: 02/21/19 12:20

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.77	J	2.0	0.64	ug/m3			02/26/19 04:56	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 04:56	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/26/19 04:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/26/19 04:56	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-171-A-26

Lab Sample ID: 140-14387-16

Date Collected: 02/21/19 12:22

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.19	J	0.40	0.12	ppb v/v			02/26/19 05:49	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 05:49	1
Chlorodifluoromethane	0.32	J	0.40	0.075	ppb v/v			02/26/19 05:49	1
Chloroform	0.90		0.40	0.075	ppb v/v			02/26/19 05:49	1
cis-1,2-Dichloroethene	9.3		0.40	0.12	ppb v/v			02/26/19 05:49	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/26/19 05:49	1
1,1-Dichloroethane	2.2		0.40	0.050	ppb v/v			02/26/19 05:49	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 05:49	1
1,1-Dichloroethene	63		0.40	0.070	ppb v/v			02/26/19 05:49	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 05:49	1
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v			02/26/19 05:49	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 05:49	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 05:49	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 05:49	1
Toluene	0.64		0.60	0.60	ppb v/v			02/26/19 05:49	1
trans-1,2-Dichloroethene	0.46		0.40	0.10	ppb v/v			02/26/19 05:49	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 05:49	1
1,1,1-Trichloroethane	0.18	J	0.40	0.060	ppb v/v			02/26/19 05:49	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 05:49	1
Trichloroethene	310	E	0.20	0.070	ppb v/v			02/26/19 05:49	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/26/19 05:49	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 05:49	1
1,3,5-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v			02/26/19 05:49	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 05:49	1
Xylenes, Total	0.28	J	0.80	0.12	ppb v/v			02/26/19 05:49	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.62	J	1.3	0.37	ug/m3			02/26/19 05:49	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 05:49	1
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3			02/26/19 05:49	1
Chloroform	4.4		2.0	0.37	ug/m3			02/26/19 05:49	1
cis-1,2-Dichloroethene	37		1.6	0.48	ug/m3			02/26/19 05:49	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/26/19 05:49	1
1,1-Dichloroethane	8.7		1.6	0.20	ug/m3			02/26/19 05:49	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 05:49	1
1,1-Dichloroethene	250		1.6	0.28	ug/m3			02/26/19 05:49	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 05:49	1
Methylene Chloride	4.8	J	6.9	2.3	ug/m3			02/26/19 05:49	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 05:49	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 05:49	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 05:49	1
Toluene	2.4		2.3	2.3	ug/m3			02/26/19 05:49	1
trans-1,2-Dichloroethene	1.8		1.6	0.40	ug/m3			02/26/19 05:49	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 05:49	1
1,1,1-Trichloroethane	0.99	J	2.2	0.33	ug/m3			02/26/19 05:49	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 05:49	1
Trichloroethene	1700	E	1.1	0.38	ug/m3			02/26/19 05:49	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/26/19 05:49	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 05:49	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-171-A-26

Lab Sample ID: 140-14387-16

Date Collected: 02/21/19 12:22

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3			02/26/19 05:49	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 05:49	1
Xylenes, Total	1.2	J	3.5	0.52	ug/m3			02/26/19 05:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/26/19 05:49	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	190		1.8	0.64	ppb v/v			02/26/19 20:06	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1000		9.8	3.4	ug/m3			02/26/19 20:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		60 - 140					02/26/19 20:06	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-081-A-26

Lab Sample ID: 140-14387-18

Date Collected: 02/21/19 12:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 06:43	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 06:43	1
Chlorodifluoromethane	0.47		0.40	0.075	ppb v/v			02/26/19 06:43	1
Chloroform	0.33	J	0.40	0.075	ppb v/v			02/26/19 06:43	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 06:43	1
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v			02/26/19 06:43	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 06:43	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 06:43	1
1,1-Dichloroethene	0.10	J	0.40	0.070	ppb v/v			02/26/19 06:43	1
Ethylbenzene	0.32	J	0.40	0.14	ppb v/v			02/26/19 06:43	1
Methylene Chloride	0.90	J	2.0	0.65	ppb v/v			02/26/19 06:43	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 06:43	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 06:43	1
Tetrachloroethene	0.19	J	0.40	0.080	ppb v/v			02/26/19 06:43	1
Toluene	1.4		0.60	0.60	ppb v/v			02/26/19 06:43	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 06:43	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 06:43	1
1,1,1-Trichloroethane	0.67		0.40	0.060	ppb v/v			02/26/19 06:43	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 06:43	1
Trichloroethene	0.46		0.20	0.070	ppb v/v			02/26/19 06:43	1
1,2,3-Trimethylbenzene	200	E *	0.40	0.17	ppb v/v			02/26/19 06:43	1
1,2,4-Trimethylbenzene	10		0.40	0.13	ppb v/v			02/26/19 06:43	1
1,3,5-Trimethylbenzene	5.9		0.40	0.13	ppb v/v			02/26/19 06:43	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 06:43	1
Xylenes, Total	3.5		0.80	0.12	ppb v/v			02/26/19 06:43	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 06:43	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 06:43	1
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3			02/26/19 06:43	1
Chloroform	1.6	J	2.0	0.37	ug/m3			02/26/19 06:43	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 06:43	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/26/19 06:43	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 06:43	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 06:43	1
1,1-Dichloroethene	0.40	J	1.6	0.28	ug/m3			02/26/19 06:43	1
Ethylbenzene	1.4	J	1.7	0.59	ug/m3			02/26/19 06:43	1
Methylene Chloride	3.1	J	6.9	2.3	ug/m3			02/26/19 06:43	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 06:43	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 06:43	1
Tetrachloroethene	1.3	J	2.7	0.54	ug/m3			02/26/19 06:43	1
Toluene	5.4		2.3	2.3	ug/m3			02/26/19 06:43	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 06:43	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 06:43	1
1,1,1-Trichloroethane	3.7		2.2	0.33	ug/m3			02/26/19 06:43	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 06:43	1
Trichloroethene	2.5		1.1	0.38	ug/m3			02/26/19 06:43	1
1,2,3-Trimethylbenzene	1000	E *	2.0	0.84	ug/m3			02/26/19 06:43	1
1,2,4-Trimethylbenzene	50		2.0	0.61	ug/m3			02/26/19 06:43	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-081-A-26

Lab Sample ID: 140-14387-18

Date Collected: 02/21/19 12:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	29		2.0	0.64	ug/m3			02/26/19 06:43	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 06:43	1
Xylenes, Total	15		3.5	0.52	ug/m3			02/26/19 06:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/26/19 06:43	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	110		4.0	1.7	ppb v/v			02/28/19 06:06	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	550		20	8.4	ug/m3			02/28/19 06:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/28/19 06:06	1

Default Detection Limits

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-14387-1	SV-180-MB-3	101
140-14387-2	SV-179-MB-3	101
140-14387-3	SV-181-MB-3	102
140-14387-4 - DL	SV-182-MB-3	96
140-14387-4	SV-182-MB-3	101
140-14387-5	SV-183-MB-3	101
140-14387-5 - DL	SV-183-MB-3	99
140-14387-6	SV-184-MB-3	103
140-14387-7	SV-185-MB-3	101
140-14387-8	SV-186-MB-3	101
140-14387-10	SV-116-A-26	101
140-14387-11	SV-DUP03-A-26	100
140-14387-12	SV-138-A-26	100
140-14387-13	SV-093-A-26	98
140-14387-14 - DL	SV-173-A-26	89
140-14387-14	SV-173-A-26	100
140-14387-15	SV-174-A-26	98
140-14387-16 - DL	SV-171-A-26	90
140-14387-16	SV-171-A-26	99
140-14387-18	SV-081-A-26	102
140-14387-18 - DL	SV-081-A-26	98
LCS 140-27931/1002	Lab Control Sample	100
LCS 140-27935/1002	Lab Control Sample	103
LCS 140-27980/1002	Lab Control Sample	103
LCS 140-27981/1002	Lab Control Sample	102
MB 140-27931/4	Method Blank	96
MB 140-27935/7	Method Blank	96
MB 140-27980/5	Method Blank	96
MB 140-27981/4	Method Blank	98

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			02/26/19 12:56	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chloroform	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/26/19 12:56	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/26/19 12:56	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/26/19 12:56	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/26/19 12:56	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/26/19 12:56	1
Toluene	ND		0.12	0.12	ppb v/v			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/26/19 12:56	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/26/19 12:56	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/26/19 12:56	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/26/19 12:56	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/26/19 12:56	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/26/19 12:56	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/26/19 12:56	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/26/19 12:56	1
Chloroform	ND		0.39	0.073	ug/m3			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/26/19 12:56	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/26/19 12:56	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/26/19 12:56	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/26/19 12:56	1
Naphthalene	ND		0.21	0.21	ug/m3			02/26/19 12:56	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/26/19 12:56	1
Toluene	ND		0.45	0.45	ug/m3			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/26/19 12:56	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/26/19 12:56	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/26/19 12:56	1

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/26/19 12:56	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/26/19 12:56	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/26/19 12:56	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		60 - 140		02/26/19 12:56	1

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.22		ppb v/v		111	70 - 130
Chlorodifluoromethane	2.00	2.02		ppb v/v		101	60 - 140
Chloroform	2.00	2.00		ppb v/v		100	70 - 130
cis-1,2-Dichloroethene	2.00	2.09		ppb v/v		104	70 - 130
Dichlorodifluoromethane	2.00	2.06		ppb v/v		103	60 - 140
1,1-Dichloroethane	2.00	2.05		ppb v/v		103	70 - 130
1,2-Dichloroethane	2.00	2.00		ppb v/v		100	70 - 130
1,1-Dichloroethene	2.00	2.14		ppb v/v		107	70 - 130
Ethylbenzene	2.00	2.03		ppb v/v		101	70 - 130
Methylene Chloride	2.00	1.81		ppb v/v		90	70 - 130
Methyl tert-butyl ether	2.00	1.97		ppb v/v		99	60 - 140
Naphthalene	2.00	1.94		ppb v/v		97	60 - 140
Tetrachloroethene	2.00	2.06		ppb v/v		103	70 - 130
Toluene	2.00	2.02		ppb v/v		101	70 - 130
trans-1,2-Dichloroethene	2.00	2.15		ppb v/v		108	70 - 130
1,2,4-Trichlorobenzene	2.00	1.83		ppb v/v		92	60 - 140
1,1,1-Trichloroethane	2.00	2.04		ppb v/v		102	70 - 130
1,1,2-Trichloroethane	2.00	2.11		ppb v/v		105	70 - 130
Trichloroethene	2.00	2.09		ppb v/v		105	70 - 130
1,2,3-Trimethylbenzene	2.00	2.22		ppb v/v		111	70 - 130
1,2,4-Trimethylbenzene	2.00	1.99		ppb v/v		99	70 - 130
1,3,5-Trimethylbenzene	2.00	1.97		ppb v/v		98	70 - 130
Vinyl chloride	2.00	1.97		ppb v/v		98	70 - 130
Xylenes, Total	6.00	6.18		ppb v/v		103	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	13	13.9		ug/m3		111	70 - 130
Chlorodifluoromethane	7.1	7.16		ug/m3		101	60 - 140
Chloroform	9.8	9.78		ug/m3		100	70 - 130
cis-1,2-Dichloroethene	7.9	8.28		ug/m3		104	70 - 130
Dichlorodifluoromethane	9.9	10.2		ug/m3		103	60 - 140
1,1-Dichloroethane	8.1	8.31		ug/m3		103	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	8.11		ug/m3		100	70 - 130
1,1-Dichloroethene	7.9	8.50		ug/m3		107	70 - 130
Ethylbenzene	8.7	8.79		ug/m3		101	70 - 130
Methylene Chloride	6.9	6.27		ug/m3		90	70 - 130
Methyl tert-butyl ether	7.2	7.12		ug/m3		99	60 - 140
Naphthalene	10	10.2		ug/m3		97	60 - 140
Tetrachloroethene	14	14.0		ug/m3		103	70 - 130
Toluene	7.5	7.63		ug/m3		101	70 - 130
trans-1,2-Dichloroethene	7.9	8.53		ug/m3		108	70 - 130
1,2,4-Trichlorobenzene	15	13.6		ug/m3		92	60 - 140
1,1,1-Trichloroethane	11	11.1		ug/m3		102	70 - 130
1,1,2-Trichloroethane	11	11.5		ug/m3		105	70 - 130
Trichloroethene	11	11.2		ug/m3		105	70 - 130
1,2,3-Trimethylbenzene	9.8	10.9		ug/m3		111	70 - 130
1,2,4-Trimethylbenzene	9.8	9.78		ug/m3		99	70 - 130
1,3,5-Trimethylbenzene	9.8	9.68		ug/m3		98	70 - 130
Vinyl chloride	5.1	5.03		ug/m3		98	70 - 130
Xylenes, Total	26	26.8		ug/m3		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		60 - 140

Lab Sample ID: MB 140-27935/7
Matrix: Air
Analysis Batch: 27935

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/25/19 14:47	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/25/19 14:47	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/25/19 14:47	1
Chloroform	ND		0.080	0.015	ppb v/v			02/25/19 14:47	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/25/19 14:47	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/25/19 14:47	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/25/19 14:47	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/25/19 14:47	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/25/19 14:47	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/25/19 14:47	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/25/19 14:47	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/25/19 14:47	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/25/19 14:47	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/25/19 14:47	1
Toluene	ND		0.12	0.12	ppb v/v			02/25/19 14:47	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/25/19 14:47	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/25/19 14:47	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/25/19 14:47	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/25/19 14:47	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/25/19 14:47	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27935/7
Matrix: Air
Analysis Batch: 27935

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/25/19 14:47	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/25/19 14:47	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/25/19 14:47	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/25/19 14:47	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/25/19 14:47	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/25/19 14:47	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/25/19 14:47	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/25/19 14:47	1
Chloroform	ND		0.39	0.073	ug/m3			02/25/19 14:47	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/25/19 14:47	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/25/19 14:47	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/25/19 14:47	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/25/19 14:47	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/25/19 14:47	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/25/19 14:47	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/25/19 14:47	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/25/19 14:47	1
Naphthalene	ND		0.21	0.21	ug/m3			02/25/19 14:47	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/25/19 14:47	1
Toluene	ND		0.45	0.45	ug/m3			02/25/19 14:47	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/25/19 14:47	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/25/19 14:47	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/25/19 14:47	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/25/19 14:47	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/25/19 14:47	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/25/19 14:47	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/25/19 14:47	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/25/19 14:47	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/25/19 14:47	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/25/19 14:47	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		60 - 140		02/25/19 14:47	1

Lab Sample ID: LCS 140-27935/1002
Matrix: Air
Analysis Batch: 27935

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	1.00	0.929		ppb v/v		93	70 - 130
Chlorodifluoromethane	1.00	0.930		ppb v/v		93	60 - 140
Chloroform	1.00	0.962		ppb v/v		96	70 - 130
cis-1,2-Dichloroethene	1.00	0.946		ppb v/v		95	70 - 130
Dichlorodifluoromethane	1.00	0.922		ppb v/v		92	60 - 140

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27935/1002
Matrix: Air
Analysis Batch: 27935

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				
1,1-Dichloroethane	1.00	0.944		ppb v/v		94	70 - 130
1,2-Dichloroethane	1.00	0.906		ppb v/v		91	70 - 130
1,1-Dichloroethene	1.00	0.928		ppb v/v		93	70 - 130
Ethylbenzene	1.00	0.927		ppb v/v		93	70 - 130
Methylene Chloride	1.00	0.918		ppb v/v		92	70 - 130
Methyl tert-butyl ether	1.00	0.929		ppb v/v		93	60 - 140
Naphthalene	1.00	0.586	*	ppb v/v		59	60 - 140
Tetrachloroethene	1.00	0.927		ppb v/v		93	70 - 130
Toluene	1.00	0.943		ppb v/v		94	70 - 130
trans-1,2-Dichloroethene	1.00	0.907		ppb v/v		91	70 - 130
1,2,4-Trichlorobenzene	1.00	0.642		ppb v/v		64	60 - 140
1,1,1-Trichloroethane	1.00	0.932		ppb v/v		93	70 - 130
1,1,2-Trichloroethane	1.00	0.963		ppb v/v		96	70 - 130
Trichloroethene	1.00	0.898		ppb v/v		90	70 - 130
1,2,3-Trimethylbenzene	1.00	0.701		ppb v/v		70	70 - 130
1,2,4-Trimethylbenzene	1.00	0.973		ppb v/v		97	70 - 130
1,3,5-Trimethylbenzene	1.00	1.02		ppb v/v		102	70 - 130
Vinyl chloride	1.00	0.950		ppb v/v		95	70 - 130
Xylenes, Total	3.00	2.91		ppb v/v		97	70 - 130
Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				
Benzene	3.2	2.97		ug/m3		93	70 - 130
Carbon tetrachloride	6.3	5.84		ug/m3		93	70 - 130
Chlorodifluoromethane	3.5	3.29		ug/m3		93	60 - 140
Chloroform	4.9	4.69		ug/m3		96	70 - 130
cis-1,2-Dichloroethene	4.0	3.75		ug/m3		95	70 - 130
Dichlorodifluoromethane	4.9	4.56		ug/m3		92	60 - 140
1,1-Dichloroethane	4.0	3.82		ug/m3		94	70 - 130
1,2-Dichloroethane	4.0	3.67		ug/m3		91	70 - 130
1,1-Dichloroethene	4.0	3.68		ug/m3		93	70 - 130
Ethylbenzene	4.3	4.03		ug/m3		93	70 - 130
Methylene Chloride	3.5	3.19		ug/m3		92	70 - 130
Methyl tert-butyl ether	3.6	3.35		ug/m3		93	60 - 140
Naphthalene	5.2	3.07	*	ug/m3		59	60 - 140
Tetrachloroethene	6.8	6.29		ug/m3		93	70 - 130
Toluene	3.8	3.55		ug/m3		94	70 - 130
trans-1,2-Dichloroethene	4.0	3.60		ug/m3		91	70 - 130
1,2,4-Trichlorobenzene	7.4	4.77		ug/m3		64	60 - 140
1,1,1-Trichloroethane	5.5	5.08		ug/m3		93	70 - 130
1,1,2-Trichloroethane	5.5	5.26		ug/m3		96	70 - 130
Trichloroethene	5.4	4.82		ug/m3		90	70 - 130
1,2,3-Trimethylbenzene	4.9	3.45		ug/m3		70	70 - 130
1,2,4-Trimethylbenzene	4.9	4.78		ug/m3		97	70 - 130
1,3,5-Trimethylbenzene	4.9	5.01		ug/m3		102	70 - 130
Vinyl chloride	2.6	2.43		ug/m3		95	70 - 130
Xylenes, Total	13	12.6		ug/m3		97	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27935/1002
Matrix: Air
Analysis Batch: 27935

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		60 - 140

Lab Sample ID: MB 140-27980/5
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/27/19 13:42	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/27/19 13:42	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/27/19 13:42	1
Chloroform	ND		0.080	0.015	ppb v/v			02/27/19 13:42	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/27/19 13:42	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/27/19 13:42	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/27/19 13:42	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/27/19 13:42	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/27/19 13:42	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/27/19 13:42	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/27/19 13:42	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/27/19 13:42	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/27/19 13:42	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/27/19 13:42	1
Toluene	ND		0.12	0.12	ppb v/v			02/27/19 13:42	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/27/19 13:42	1
1,2,4-Trichlorobenzene	0.0691	J	0.080	0.039	ppb v/v			02/27/19 13:42	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/27/19 13:42	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/27/19 13:42	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/27/19 13:42	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/27/19 13:42	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/27/19 13:42	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/27/19 13:42	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/27/19 13:42	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/27/19 13:42	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			02/27/19 13:42	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/27/19 13:42	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/27/19 13:42	1
Chloroform	ND		0.39	0.073	ug/m3			02/27/19 13:42	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/27/19 13:42	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/27/19 13:42	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/27/19 13:42	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/27/19 13:42	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/27/19 13:42	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/27/19 13:42	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/27/19 13:42	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/27/19 13:42	1
Naphthalene	ND		0.21	0.21	ug/m3			02/27/19 13:42	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27980/5
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/27/19 13:42	1
Toluene	ND		0.45	0.45	ug/m3			02/27/19 13:42	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/27/19 13:42	1
1,2,4-Trichlorobenzene	0.513	J	0.59	0.29	ug/m3			02/27/19 13:42	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/27/19 13:42	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/27/19 13:42	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/27/19 13:42	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/27/19 13:42	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/27/19 13:42	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/27/19 13:42	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/27/19 13:42	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/27/19 13:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140		02/27/19 13:42	1

Lab Sample ID: LCS 140-27980/1002
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	1.00	1.08		ppb v/v		108	70 - 130
Carbon tetrachloride	1.00	1.09		ppb v/v		109	70 - 130
Chlorodifluoromethane	1.00	1.09		ppb v/v		109	60 - 140
Chloroform	1.00	1.15		ppb v/v		115	70 - 130
cis-1,2-Dichloroethene	1.00	1.09		ppb v/v		109	70 - 130
Dichlorodifluoromethane	1.00	1.06		ppb v/v		106	60 - 140
1,1-Dichloroethane	1.00	1.11		ppb v/v		111	70 - 130
1,2-Dichloroethane	1.00	1.09		ppb v/v		109	70 - 130
1,1-Dichloroethene	1.00	1.06		ppb v/v		106	70 - 130
Ethylbenzene	1.00	1.09		ppb v/v		109	70 - 130
Methylene Chloride	1.00	1.06		ppb v/v		106	70 - 130
Methyl tert-butyl ether	1.00	1.08		ppb v/v		108	60 - 140
Naphthalene	1.00	1.16		ppb v/v		116	60 - 140
Tetrachloroethene	1.00	1.06		ppb v/v		106	70 - 130
Toluene	1.00	1.10		ppb v/v		110	70 - 130
trans-1,2-Dichloroethene	1.00	1.04		ppb v/v		104	70 - 130
1,2,4-Trichlorobenzene	1.00	0.910		ppb v/v		91	60 - 140
1,1,1-Trichloroethane	1.00	1.09		ppb v/v		109	70 - 130
1,1,2-Trichloroethane	1.00	1.12		ppb v/v		112	70 - 130
Trichloroethene	1.00	1.04		ppb v/v		104	70 - 130
1,2,3-Trimethylbenzene	1.00	0.835		ppb v/v		83	70 - 130
1,2,4-Trimethylbenzene	1.00	1.15		ppb v/v		115	70 - 130
1,3,5-Trimethylbenzene	1.00	1.18		ppb v/v		118	70 - 130
Vinyl chloride	1.00	1.11		ppb v/v		111	70 - 130
Xylenes, Total	3.00	3.43		ppb v/v		114	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				
Benzene	3.2	3.46		ug/m3		108	70 - 130
Carbon tetrachloride	6.3	6.85		ug/m3		109	70 - 130
Chlorodifluoromethane	3.5	3.86		ug/m3		109	60 - 140
Chloroform	4.9	5.60		ug/m3		115	70 - 130
cis-1,2-Dichloroethene	4.0	4.34		ug/m3		109	70 - 130
Dichlorodifluoromethane	4.9	5.24		ug/m3		106	60 - 140
1,1-Dichloroethane	4.0	4.51		ug/m3		111	70 - 130
1,2-Dichloroethane	4.0	4.42		ug/m3		109	70 - 130
1,1-Dichloroethene	4.0	4.19		ug/m3		106	70 - 130
Ethylbenzene	4.3	4.73		ug/m3		109	70 - 130
Methylene Chloride	3.5	3.68		ug/m3		106	70 - 130
Methyl tert-butyl ether	3.6	3.90		ug/m3		108	60 - 140
Naphthalene	5.2	6.06		ug/m3		116	60 - 140
Tetrachloroethene	6.8	7.17		ug/m3		106	70 - 130
Toluene	3.8	4.13		ug/m3		110	70 - 130
trans-1,2-Dichloroethene	4.0	4.13		ug/m3		104	70 - 130
1,2,4-Trichlorobenzene	7.4	6.75		ug/m3		91	60 - 140
1,1,1-Trichloroethane	5.5	5.95		ug/m3		109	70 - 130
1,1,2-Trichloroethane	5.5	6.10		ug/m3		112	70 - 130
Trichloroethene	5.4	5.58		ug/m3		104	70 - 130
1,2,3-Trimethylbenzene	4.9	4.10		ug/m3		83	70 - 130
1,2,4-Trimethylbenzene	4.9	5.66		ug/m3		115	70 - 130
1,3,5-Trimethylbenzene	4.9	5.80		ug/m3		118	70 - 130
Vinyl chloride	2.6	2.83		ug/m3		111	70 - 130
Xylenes, Total	13	14.9		ug/m3		114	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	103		60 - 140

Lab Sample ID: MB 140-27981/4
Matrix: Air
Analysis Batch: 27981

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			02/28/19 14:24	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/28/19 14:24	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/28/19 14:24	1
Chloroform	ND		0.080	0.015	ppb v/v			02/28/19 14:24	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/28/19 14:24	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/28/19 14:24	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/28/19 14:24	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/28/19 14:24	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/28/19 14:24	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/28/19 14:24	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/28/19 14:24	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/28/19 14:24	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/28/19 14:24	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/28/19 14:24	1
Toluene	ND		0.12	0.12	ppb v/v			02/28/19 14:24	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/28/19 14:24	1
1,2,4-Trichlorobenzene	0.0681	J	0.080	0.039	ppb v/v			02/28/19 14:24	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/28/19 14:24	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/28/19 14:24	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/28/19 14:24	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27981/4
Matrix: Air
Analysis Batch: 27981

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/28/19 14:24	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/28/19 14:24	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/28/19 14:24	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/28/19 14:24	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/28/19 14:24	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/28/19 14:24	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/28/19 14:24	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/28/19 14:24	1
Chloroform	ND		0.39	0.073	ug/m3			02/28/19 14:24	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/28/19 14:24	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/28/19 14:24	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/28/19 14:24	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/28/19 14:24	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/28/19 14:24	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/28/19 14:24	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/28/19 14:24	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/28/19 14:24	1
Naphthalene	ND		0.21	0.21	ug/m3			02/28/19 14:24	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/28/19 14:24	1
Toluene	ND		0.45	0.45	ug/m3			02/28/19 14:24	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/28/19 14:24	1
1,2,4-Trichlorobenzene	0.505	J	0.59	0.29	ug/m3			02/28/19 14:24	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/28/19 14:24	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/28/19 14:24	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/28/19 14:24	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/28/19 14:24	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/28/19 14:24	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/28/19 14:24	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/28/19 14:24	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/28/19 14:24	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	98		60 - 140		02/28/19 14:24	1

Lab Sample ID: LCS 140-27981/1002
Matrix: Air
Analysis Batch: 27981

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	1.00	1.11		ppb v/v		111	70 - 130
Chlorodifluoromethane	1.00	1.09		ppb v/v		109	60 - 140
Chloroform	1.00	1.14		ppb v/v		114	70 - 130
cis-1,2-Dichloroethene	1.00	1.11		ppb v/v		111	70 - 130
Dichlorodifluoromethane	1.00	1.07		ppb v/v		107	60 - 140

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27981/1002
Matrix: Air
Analysis Batch: 27981

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	1.00	1.11		ppb v/v		111	70 - 130
1,2-Dichloroethane	1.00	1.09		ppb v/v		109	70 - 130
1,1-Dichloroethene	1.00	1.07		ppb v/v		107	70 - 130
Ethylbenzene	1.00	1.11		ppb v/v		111	70 - 130
Methylene Chloride	1.00	1.05		ppb v/v		105	70 - 130
Methyl tert-butyl ether	1.00	1.12		ppb v/v		112	60 - 140
Naphthalene	1.00	1.08		ppb v/v		108	60 - 140
Tetrachloroethene	1.00	1.09		ppb v/v		109	70 - 130
Toluene	1.00	1.12		ppb v/v		112	70 - 130
trans-1,2-Dichloroethene	1.00	1.07		ppb v/v		107	70 - 130
1,2,4-Trichlorobenzene	1.00	0.901		ppb v/v		90	60 - 140
1,1,1-Trichloroethane	1.00	1.12		ppb v/v		112	70 - 130
1,1,2-Trichloroethane	1.00	1.13		ppb v/v		113	70 - 130
Trichloroethene	1.00	1.09		ppb v/v		109	70 - 130
1,2,3-Trimethylbenzene	1.00	0.811		ppb v/v		81	70 - 130
1,2,4-Trimethylbenzene	1.00	1.12		ppb v/v		112	70 - 130
1,3,5-Trimethylbenzene	1.00	1.18		ppb v/v		118	70 - 130
Vinyl chloride	1.00	1.12		ppb v/v		112	70 - 130
Xylenes, Total	3.00	3.41		ppb v/v		114	70 - 130
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	3.2	3.52		ug/m3		110	70 - 130
Carbon tetrachloride	6.3	6.99		ug/m3		111	70 - 130
Chlorodifluoromethane	3.5	3.85		ug/m3		109	60 - 140
Chloroform	4.9	5.55		ug/m3		114	70 - 130
cis-1,2-Dichloroethene	4.0	4.42		ug/m3		111	70 - 130
Dichlorodifluoromethane	4.9	5.29		ug/m3		107	60 - 140
1,1-Dichloroethane	4.0	4.50		ug/m3		111	70 - 130
1,2-Dichloroethane	4.0	4.41		ug/m3		109	70 - 130
1,1-Dichloroethene	4.0	4.23		ug/m3		107	70 - 130
Ethylbenzene	4.3	4.80		ug/m3		111	70 - 130
Methylene Chloride	3.5	3.64		ug/m3		105	70 - 130
Methyl tert-butyl ether	3.6	4.04		ug/m3		112	60 - 140
Naphthalene	5.2	5.64		ug/m3		108	60 - 140
Tetrachloroethene	6.8	7.41		ug/m3		109	70 - 130
Toluene	3.8	4.22		ug/m3		112	70 - 130
trans-1,2-Dichloroethene	4.0	4.25		ug/m3		107	70 - 130
1,2,4-Trichlorobenzene	7.4	6.68		ug/m3		90	60 - 140
1,1,1-Trichloroethane	5.5	6.09		ug/m3		112	70 - 130
1,1,2-Trichloroethane	5.5	6.15		ug/m3		113	70 - 130
Trichloroethene	5.4	5.86		ug/m3		109	70 - 130
1,2,3-Trimethylbenzene	4.9	3.99		ug/m3		81	70 - 130
1,2,4-Trimethylbenzene	4.9	5.50		ug/m3		112	70 - 130
1,3,5-Trimethylbenzene	4.9	5.78		ug/m3		118	70 - 130
Vinyl chloride	2.6	2.86		ug/m3		112	70 - 130
Xylenes, Total	13	14.8		ug/m3		114	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27981/1002
Matrix: Air
Analysis Batch: 27981

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>LCS</i> <i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	102		60 - 140

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Air - GC/MS VOA

Analysis Batch: 27931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14387-4 - DL	SV-182-MB-3	Total/NA	Air	TO 15 LL	
140-14387-14 - DL	SV-173-A-26	Total/NA	Air	TO 15 LL	
140-14387-16 - DL	SV-171-A-26	Total/NA	Air	TO 15 LL	
MB 140-27931/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27931/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 27935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14387-1	SV-180-MB-3	Total/NA	Air	TO 15 LL	
140-14387-2	SV-179-MB-3	Total/NA	Air	TO 15 LL	
140-14387-3	SV-181-MB-3	Total/NA	Air	TO 15 LL	
140-14387-4	SV-182-MB-3	Total/NA	Air	TO 15 LL	
140-14387-5	SV-183-MB-3	Total/NA	Air	TO 15 LL	
140-14387-6	SV-184-MB-3	Total/NA	Air	TO 15 LL	
140-14387-7	SV-185-MB-3	Total/NA	Air	TO 15 LL	
140-14387-8	SV-186-MB-3	Total/NA	Air	TO 15 LL	
140-14387-10	SV-116-A-26	Total/NA	Air	TO 15 LL	
140-14387-11	SV-DUP03-A-26	Total/NA	Air	TO 15 LL	
140-14387-12	SV-138-A-26	Total/NA	Air	TO 15 LL	
140-14387-13	SV-093-A-26	Total/NA	Air	TO 15 LL	
140-14387-14	SV-173-A-26	Total/NA	Air	TO 15 LL	
140-14387-15	SV-174-A-26	Total/NA	Air	TO 15 LL	
140-14387-16	SV-171-A-26	Total/NA	Air	TO 15 LL	
140-14387-18	SV-081-A-26	Total/NA	Air	TO 15 LL	
MB 140-27935/7	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27935/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 27980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14387-18 - DL	SV-081-A-26	Total/NA	Air	TO 15 LL	
MB 140-27980/5	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27980/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 27981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14387-5 - DL	SV-183-MB-3	Total/NA	Air	TO 15 LL	
MB 140-27981/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27981/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-180-MB-3

Date Collected: 02/21/19 09:49

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 17:27	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: SV-179-MB-3

Date Collected: 02/21/19 09:50

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 18:20	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: SV-181-MB-3

Date Collected: 02/21/19 09:53

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 19:13	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: SV-182-MB-3

Date Collected: 02/21/19 09:55

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL	DL	1	11 mL	500 mL	27931	02/26/19 18:01	S1K	TAL KNX
	Instrument ID: MG									
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 20:06	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: SV-183-MB-3

Date Collected: 02/21/19 09:58

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 20:59	S1K	TAL KNX
	Instrument ID: MH									
Total/NA	Analysis	TO 15 LL	DL	1	20 mL	500 mL	27981	02/28/19 17:11	S1K	TAL KNX
	Instrument ID: MH									

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-184-MB-3

Lab Sample ID: 140-14387-6

Date Collected: 02/21/19 10:01

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 21:53	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-185-MB-3

Lab Sample ID: 140-14387-7

Date Collected: 02/21/19 11:14

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 22:46	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-186-MB-3

Lab Sample ID: 140-14387-8

Date Collected: 02/21/19 11:15

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 23:39	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-116-A-26

Lab Sample ID: 140-14387-10

Date Collected: 02/21/19 12:15

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 00:32	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-DUP03-A-26

Lab Sample ID: 140-14387-11

Date Collected: 02/21/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 01:24	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-138-A-26

Lab Sample ID: 140-14387-12

Date Collected: 02/21/19 10:32

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 02:17	S1K	TAL KNX
Instrument ID: MH										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-093-A-26
Date Collected: 02/21/19 12:21
Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-13
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 03:10	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-173-A-26
Date Collected: 02/21/19 12:23
Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-14
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL	DL	1	11 mL	500 mL	27931	02/26/19 19:24	S1K	TAL KNX
Instrument ID: MG										
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 04:03	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-174-A-26
Date Collected: 02/21/19 12:20
Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-15
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 04:56	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-171-A-26
Date Collected: 02/21/19 12:22
Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-16
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL	DL	1	11 mL	500 mL	27931	02/26/19 20:06	S1K	TAL KNX
Instrument ID: MG										
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 05:49	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-081-A-26
Date Collected: 02/21/19 12:34
Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-18
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 06:43	S1K	TAL KNX
Instrument ID: MH										
Total/NA	Analysis	TO 15 LL	DL	1	10 mL	500 mL	27980	02/28/19 06:06	S1K	TAL KNX
Instrument ID: MH										

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-27931/4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 12:56	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-27935/7

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27935	02/25/19 14:47	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-27980/5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27980	02/27/19 13:42	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-27981/4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27981	02/28/19 14:24	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

Lab Sample ID: LCS 140-27931/1002

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 11:35	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

Lab Sample ID: LCS 140-27935/1002

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27935	02/25/19 09:47	S1K	TAL KNX
Instrument ID: MH										

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27980/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27980	02/27/19 11:50	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27981/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27981	02/28/19 13:02	S1K	TAL KNX
Instrument ID: MH										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14387-1	SV-180-MB-3	Air	02/21/19 09:49	02/23/19 10:10
140-14387-2	SV-179-MB-3	Air	02/21/19 09:50	02/23/19 10:10
140-14387-3	SV-181-MB-3	Air	02/21/19 09:53	02/23/19 10:10
140-14387-4	SV-182-MB-3	Air	02/21/19 09:55	02/23/19 10:10
140-14387-5	SV-183-MB-3	Air	02/21/19 09:58	02/23/19 10:10
140-14387-6	SV-184-MB-3	Air	02/21/19 10:01	02/23/19 10:10
140-14387-7	SV-185-MB-3	Air	02/21/19 11:14	02/23/19 10:10
140-14387-8	SV-186-MB-3	Air	02/21/19 11:15	02/23/19 10:10
140-14387-10	SV-116-A-26	Air	02/21/19 12:15	02/23/19 10:10
140-14387-11	SV-DUP03-A-26	Air	02/21/19 00:00	02/23/19 10:10
140-14387-12	SV-138-A-26	Air	02/21/19 10:32	02/23/19 10:10
140-14387-13	SV-093-A-26	Air	02/21/19 12:21	02/23/19 10:10
140-14387-14	SV-173-A-26	Air	02/21/19 12:23	02/23/19 10:10
140-14387-15	SV-174-A-26	Air	02/21/19 12:20	02/23/19 10:10
140-14387-16	SV-171-A-26	Air	02/21/19 12:22	02/23/19 10:10
140-14387-18	SV-081-A-26	Air	02/21/19 12:34	02/23/19 10:10

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
SV-180-MB-3	140-14387-1	101
SV-179-MB-3	140-14387-2	101
SV-181-MB-3	140-14387-3	102
SV-182-MB-3	140-14387-4	101
SV-182-MB-3 DL	140-14387-4 DL	96
SV-183-MB-3	140-14387-5	101
SV-183-MB-3 DL	140-14387-5 DL	99
SV-184-MB-3	140-14387-6	103
SV-185-MB-3	140-14387-7	101
SV-186-MB-3	140-14387-8	101
SV-116-A-26	140-14387-10	101
SV-DUP03-A-26	140-14387-11	100
SV-138-A-26	140-14387-12	100
SV-093-A-26	140-14387-13	98
SV-173-A-26	140-14387-14	100
SV-173-A-26 DL	140-14387-14 DL	89
SV-174-A-26	140-14387-15	98
SV-171-A-26	140-14387-16	99
SV-171-A-26 DL	140-14387-16 DL	90
SV-081-A-26	140-14387-18	102
SV-081-A-26 DL	140-14387-18 DL	98
	MB 140-27931/4	96
	MB 140-27935/7	96
	MB 140-27980/5	96
	MB 140-27981/4	98
	LCS 140-27931/1002	100
	LCS 140-27935/1002	103
	LCS 140-27980/1002	103
	LCS 140-27981/1002	102

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB26-LCS.d
 Lab ID: LCS 140-27931/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.22	111	70-130	
Chlorodifluoromethane	2.00	2.02	101	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	2.09	104	70-130	
Dichlorodifluoromethane	2.00	2.06	103	60-140	
1,1-Dichloroethane	2.00	2.05	103	70-130	
1,2-Dichloroethane	2.00	2.00	100	70-130	
1,1-Dichloroethene	2.00	2.14	107	70-130	
Ethylbenzene	2.00	2.03	101	70-130	
Methylene Chloride	2.00	1.81	90	70-130	
Methyl tert-butyl ether	2.00	1.97	99	60-140	
Naphthalene	2.00	1.94	97	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	2.15	108	70-130	
1,2,4-Trichlorobenzene	2.00	1.83	92	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	2.11	105	70-130	
Trichloroethene	2.00	2.09	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.22	111	70-130	
1,2,4-Trimethylbenzene	2.00	1.99	99	70-130	
1,3,5-Trimethylbenzene	2.00	1.97	98	70-130	
Vinyl chloride	2.00	1.97	98	70-130	
Xylenes, Total	6.00	6.18	103	70-130	

Column to be used to flag recovery and RPD values

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB25-LCS.d
 Lab ID: LCS 140-27935/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	0.929	93	70-130	
Carbon tetrachloride	1.00	0.929	93	70-130	
Chlorodifluoromethane	1.00	0.930	93	60-140	
Chloroform	1.00	0.962	96	70-130	
cis-1,2-Dichloroethene	1.00	0.946	95	70-130	
Dichlorodifluoromethane	1.00	0.922	92	60-140	
1,1-Dichloroethane	1.00	0.944	94	70-130	
1,2-Dichloroethane	1.00	0.906	91	70-130	
1,1-Dichloroethene	1.00	0.928	93	70-130	
Ethylbenzene	1.00	0.927	93	70-130	
Methylene Chloride	1.00	0.918	92	70-130	
Methyl tert-butyl ether	1.00	0.929	93	60-140	
Naphthalene	1.00	0.586	59	60-140	*
Tetrachloroethene	1.00	0.927	93	70-130	
Toluene	1.00	0.943	94	70-130	
trans-1,2-Dichloroethene	1.00	0.907	91	70-130	
1,2,4-Trichlorobenzene	1.00	0.642	64	60-140	
1,1,1-Trichloroethane	1.00	0.932	93	70-130	
1,1,2-Trichloroethane	1.00	0.963	96	70-130	
Trichloroethene	1.00	0.898	90	70-130	
1,2,3-Trimethylbenzene	1.00	0.701	70	70-130	
1,2,4-Trimethylbenzene	1.00	0.973	97	70-130	
1,3,5-Trimethylbenzene	1.00	1.02	102	70-130	
Vinyl chloride	1.00	0.950	95	70-130	
Xylenes, Total	3.00	2.91	97	70-130	

Column to be used to flag recovery and RPD values

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB27-LCS.d
 Lab ID: LCS 140-27980/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	1.08	108	70-130	
Carbon tetrachloride	1.00	1.09	109	70-130	
Chlorodifluoromethane	1.00	1.09	109	60-140	
Chloroform	1.00	1.15	115	70-130	
cis-1,2-Dichloroethene	1.00	1.09	109	70-130	
Dichlorodifluoromethane	1.00	1.06	106	60-140	
1,1-Dichloroethane	1.00	1.11	111	70-130	
1,2-Dichloroethane	1.00	1.09	109	70-130	
1,1-Dichloroethene	1.00	1.06	106	70-130	
Ethylbenzene	1.00	1.09	109	70-130	
Methylene Chloride	1.00	1.06	106	70-130	
Methyl tert-butyl ether	1.00	1.08	108	60-140	
Naphthalene	1.00	1.16	116	60-140	
Tetrachloroethene	1.00	1.06	106	70-130	
Toluene	1.00	1.10	110	70-130	
trans-1,2-Dichloroethene	1.00	1.04	104	70-130	
1,2,4-Trichlorobenzene	1.00	0.910	91	60-140	
1,1,1-Trichloroethane	1.00	1.09	109	70-130	
1,1,2-Trichloroethane	1.00	1.12	112	70-130	
Trichloroethene	1.00	1.04	104	70-130	
1,2,3-Trimethylbenzene	1.00	0.835	83	70-130	
1,2,4-Trimethylbenzene	1.00	1.15	115	70-130	
1,3,5-Trimethylbenzene	1.00	1.18	118	70-130	
Vinyl chloride	1.00	1.11	111	70-130	
Xylenes, Total	3.00	3.43	114	70-130	

Column to be used to flag recovery and RPD values

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB28-LCS.d
 Lab ID: LCS 140-27981/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	1.10	110	70-130	
Carbon tetrachloride	1.00	1.11	111	70-130	
Chlorodifluoromethane	1.00	1.09	109	60-140	
Chloroform	1.00	1.14	114	70-130	
cis-1,2-Dichloroethene	1.00	1.11	111	70-130	
Dichlorodifluoromethane	1.00	1.07	107	60-140	
1,1-Dichloroethane	1.00	1.11	111	70-130	
1,2-Dichloroethane	1.00	1.09	109	70-130	
1,1-Dichloroethene	1.00	1.07	107	70-130	
Ethylbenzene	1.00	1.11	111	70-130	
Methylene Chloride	1.00	1.05	105	70-130	
Methyl tert-butyl ether	1.00	1.12	112	60-140	
Naphthalene	1.00	1.08	108	60-140	
Tetrachloroethene	1.00	1.09	109	70-130	
Toluene	1.00	1.12	112	70-130	
trans-1,2-Dichloroethene	1.00	1.07	107	70-130	
1,2,4-Trichlorobenzene	1.00	0.901	90	60-140	
1,1,1-Trichloroethane	1.00	1.12	112	70-130	
1,1,2-Trichloroethane	1.00	1.13	113	70-130	
Trichloroethene	1.00	1.09	109	70-130	
1,2,3-Trimethylbenzene	1.00	0.811	81	70-130	
1,2,4-Trimethylbenzene	1.00	1.12	112	70-130	
1,3,5-Trimethylbenzene	1.00	1.18	118	70-130	
Vinyl chloride	1.00	1.12	112	70-130	
Xylenes, Total	3.00	3.41	114	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: G500BB26.D Lab Sample ID: MB 140-27931/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/26/2019 12:56
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27931/1002	GCCVB26-LCS .d	02/26/2019 11:35
SV-182-MB-3 DL	140-14387-4 DL	GB26P104.D	02/26/2019 18:01
SV-173-A-26 DL	140-14387-14 DL	GB26P106.D	02/26/2019 19:24
SV-171-A-26 DL	140-14387-16 DL	GB26P107.D	02/26/2019 20:06

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: H500BB25.D Lab Sample ID: MB 140-27935/7
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/25/2019 14:47
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27935/1002	HCCVB25-LCS .d	02/25/2019 09:47
SV-180-MB-3	140-14387-1	HB25P101.D	02/25/2019 17:27
SV-179-MB-3	140-14387-2	HB25P102.D	02/25/2019 18:20
SV-181-MB-3	140-14387-3	HB25P103.D	02/25/2019 19:13
SV-182-MB-3	140-14387-4	HB25P104.D	02/25/2019 20:06
SV-183-MB-3	140-14387-5	HB25P105.D	02/25/2019 20:59
SV-184-MB-3	140-14387-6	HB25P106.D	02/25/2019 21:53
SV-185-MB-3	140-14387-7	HB25P107.D	02/25/2019 22:46
SV-186-MB-3	140-14387-8	HB25P108.D	02/25/2019 23:39
SV-116-A-26	140-14387-10	HB25P109.D	02/26/2019 00:32
SV-DUP03-A-26	140-14387-11	HB25P110.D	02/26/2019 01:24
SV-138-A-26	140-14387-12	HB25P111.D	02/26/2019 02:17
SV-093-A-26	140-14387-13	HB25P112.D	02/26/2019 03:10
SV-173-A-26	140-14387-14	HB25P113.D	02/26/2019 04:03
SV-174-A-26	140-14387-15	HB25P114.D	02/26/2019 04:56
SV-171-A-26	140-14387-16	HB25P115.D	02/26/2019 05:49
SV-081-A-26	140-14387-18	HB25P116.D	02/26/2019 06:43

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HB27LOT14399MB.D Lab Sample ID: MB 140-27980/5
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/27/2019 13:42
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27980/1002	HCCVB27-LCS .d	02/27/2019 11:50
SV-081-A-26 DL	140-14387-18 DL	HB27P115.D	02/28/2019 06:06

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: H500BB28.D Lab Sample ID: MB 140-27981/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/28/2019 14:24
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27981/1002	HCCVB28-LCS .d	02/28/2019 13:02
SV-183-MB-3 DL	140-14387-5 DL	HB28P101.D	02/28/2019 17:11

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: GA11BLK1.D BFB Injection Date: 01/11/2019
 Instrument ID: MG BFB Injection Time: 12:24
 Analysis Batch No.: 26755

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.2	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	71.2	
175	5.0 - 9.0 % of mass 174	5.1	(7.1) 1
176	95.0 - 101.0 % of mass 174	70.7	(99.3) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-26755/2	GA11IC09.D	01/11/2019	13:08
	IC 140-26755/6	GA11IC10.D	01/11/2019	14:35
	IC 140-26755/9	GA11IC01.D	01/11/2019	16:46
	IC 140-26755/10	GA11IC02.D	01/11/2019	17:29
	IC 140-26755/11	GA11IC03.D	01/11/2019	18:12
	IC 140-26755/12	GA11IC04.D	01/11/2019	18:56
	IC 140-26755/13	GA11IC05.D	01/11/2019	19:40
	IC 140-26755/14	GA11IC06.D	01/11/2019	20:23
	ICIS 140-26755/15	GA11IC07.D	01/11/2019	21:07
	IC 140-26755/16	GA11IC08.D	01/11/2019	21:51
	ICV 140-26755/18	GA11ICV.D	01/11/2019	23:17

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: GBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MG BFB Injection Time: 11:03
 Analysis Batch No.: 27931

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.5
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	73.1
175	5.0 - 9.0 % of mass 174	5.1 (7.0) 1
176	95.0 - 101.0 % of mass 174	71.2 (97.4) 1
177	5.0 - 9.0 % of mass 176	4.6 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27931/2	GCCVB26.D	02/26/2019	11:35
	LCS 140-27931/1002	GCCVB26-LCS. d	02/26/2019	11:35
	MB 140-27931/4	G500BB26.D	02/26/2019	12:56
SV-182-MB-3 DL	140-14387-4 DL	GB26P104.D	02/26/2019	18:01
SV-173-A-26 DL	140-14387-14 DL	GB26P106.D	02/26/2019	19:24
SV-171-A-26 DL	140-14387-16 DL	GB26P107.D	02/26/2019	20:06

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HBFB20IC.D BFB Injection Date: 02/20/2019
 Instrument ID: MH BFB Injection Time: 13:11
 Analysis Batch No.: 27843

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.2	
75	30.0 - 60.0 % of mass 95	48.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	93.5	
175	5.0 - 9.0 % of mass 174	6.7	(7.1) 1
176	95.0 - 101.0 % of mass 174	91.9	(98.2) 1
177	5.0 - 9.0 % of mass 176	6.0	(6.6) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-27843/3	HB20IC09.D	02/20/2019	15:12
	IC 140-27843/5	HB20IC10.D	02/20/2019	16:59
	IC 140-27843/8	HB20IC01.D	02/20/2019	19:38
	IC 140-27843/9	HB20IC02.D	02/20/2019	20:31
	IC 140-27843/10	HB20IC03.D	02/20/2019	21:26
	IC 140-27843/11	HB20IC04.D	02/20/2019	22:20
	IC 140-27843/12	HB20IC05.D	02/20/2019	23:14
	IC 140-27843/13	HB20IC06.D	02/21/2019	00:08
	ICIS 140-27843/14	HB20IC07.D	02/21/2019	01:03
	IC 140-27843/15	HB20IC08.D	02/21/2019	01:57
	ICV 140-27843/17	HB20ICV.D	02/21/2019	03:43

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HBFB25.D BFB Injection Date: 02/25/2019
 Instrument ID: MH BFB Injection Time: 09:19
 Analysis Batch No.: 27935

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.0
75	30.0 - 60.0 % of mass 95	47.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	91.1
175	5.0 - 9.0 % of mass 174	6.5 (7.2) 1
176	95.0 - 101.0 % of mass 174	88.7 (97.4) 1
177	5.0 - 9.0 % of mass 176	5.8 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27935/2	HCCVB25.D	02/25/2019	09:47
	LCS 140-27935/1002	HCCVB25-LCS.d	02/25/2019	09:47
	MB 140-27935/7	H500BB25.D	02/25/2019	14:47
SV-180-MB-3	140-14387-1	HB25P101.D	02/25/2019	17:27
SV-179-MB-3	140-14387-2	HB25P102.D	02/25/2019	18:20
SV-181-MB-3	140-14387-3	HB25P103.D	02/25/2019	19:13
SV-182-MB-3	140-14387-4	HB25P104.D	02/25/2019	20:06
SV-183-MB-3	140-14387-5	HB25P105.D	02/25/2019	20:59
SV-184-MB-3	140-14387-6	HB25P106.D	02/25/2019	21:53
SV-185-MB-3	140-14387-7	HB25P107.D	02/25/2019	22:46
SV-186-MB-3	140-14387-8	HB25P108.D	02/25/2019	23:39
SV-116-A-26	140-14387-10	HB25P109.D	02/26/2019	00:32
SV-DUP03-A-26	140-14387-11	HB25P110.D	02/26/2019	01:24
SV-138-A-26	140-14387-12	HB25P111.D	02/26/2019	02:17
SV-093-A-26	140-14387-13	HB25P112.D	02/26/2019	03:10
SV-173-A-26	140-14387-14	HB25P113.D	02/26/2019	04:03
SV-174-A-26	140-14387-15	HB25P114.D	02/26/2019	04:56
SV-171-A-26	140-14387-16	HB25P115.D	02/26/2019	05:49
SV-081-A-26	140-14387-18	HB25P116.D	02/26/2019	06:43

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HBFB27.D BFB Injection Date: 02/27/2019
 Instrument ID: MH BFB Injection Time: 11:22
 Analysis Batch No.: 27980

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.7
75	30.0 - 60.0 % of mass 95	48.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.4) 1
174	50.0 - 120.00 % of mass 95	91.8
175	5.0 - 9.0 % of mass 174	6.5 (7.0) 1
176	95.0 - 101.0 % of mass 174	88.9 (96.8) 1
177	5.0 - 9.0 % of mass 176	5.8 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27980/2	HCCVB27.D	02/27/2019	11:50
	LCS 140-27980/1002	HCCVB27-LCS. d	02/27/2019	11:50
	MB 140-27980/5	HB27LOT14399 MB.D	02/27/2019	13:42
SV-081-A-26 DL	140-14387-18 DL	HB27P115.D	02/28/2019	06:06

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HBFB28.D BFB Injection Date: 02/28/2019
 Instrument ID: MH BFB Injection Time: 12:34
 Analysis Batch No.: 27981

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	20.7
75	30.0 - 60.0 % of mass 95	47.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.5 (0.5) 1
174	50.0 - 120.00 % of mass 95	93.3
175	5.0 - 9.0 % of mass 174	6.7 (7.2) 1
176	95.0 - 101.0 % of mass 174	91.3 (97.9) 1
177	5.0 - 9.0 % of mass 176	5.9 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27981/2	HCCVB28.D	02/28/2019	13:02
	LCS 140-27981/1002	HCCVB28-LCS. d	02/28/2019	13:02
	MB 140-27981/4	H500BB28.D	02/28/2019	14:24
SV-183-MB-3 DL	140-14387-5 DL	HB28P101.D	02/28/2019	17:11

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: ICIS 140-26755/15 Date Analyzed: 01/11/2019 21:07
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GAl1IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	437891	9.25	2708081	11.42	2541912	16.10
UPPER LIMIT	613047	9.58	3791313	11.75	3558677	16.43
LOWER LIMIT	262735	8.92	1624849	11.09	1525147	15.77
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-26755/18	423755	9.24	2327828	11.42	2182908	16.09

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: CCVIS 140-27931/2 Date Analyzed: 02/26/2019 11:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	496382	9.23	2758157	11.41	2578216	16.08	
UPPER LIMIT	694935	9.56	3861420	11.74	3609502	16.41	
LOWER LIMIT	297829	8.90	1654894	11.08	1546930	15.75	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27931/1002	496382	9.23	2758157	11.41	2578216	16.08	
MB 140-27931/4	508819	9.23	2920722	11.41	2502760	16.08	
140-14387-4 DL	SV-182-MB-3 DL	441997	9.23	2423864	11.40	2177859	16.08
140-14387-14 DL	SV-173-A-26 DL	478998	9.22	2962288	11.40	2673094	16.08
140-14387-16 DL	SV-171-A-26 DL	452797	9.23	2861121	11.40	2641514	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: ICIS 140-27843/14 Date Analyzed: 02/21/2019 01:03
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HB20IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBZd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	348949	8.83	1879497	11.01	1644075	15.73
UPPER LIMIT	488529	9.16	2631296	11.34	2301705	16.06
LOWER LIMIT	209369	8.50	1127698	10.68	986445	15.40
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-27843/17	382438	8.83	2064078	11.01	1803849	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: CCVIS 140-27935/2 Date Analyzed: 02/25/2019 09:47
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB25.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	315308	8.81	1742536	11.00	1476074	15.72	
UPPER LIMIT	441431	9.14	2439550	11.33	2066504	16.05	
LOWER LIMIT	189185	8.48	1045522	10.67	885644	15.39	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27935/1002	315308	8.81	1742536	11.00	1476074	15.72	
MB 140-27935/7	287415	8.82	1579066	11.01	1304589	15.73	
140-14387-1	SV-180-MB-3	281456	8.81	1535292	11.00	1326846	15.72
140-14387-2	SV-179-MB-3	268524	8.82	1449633	11.00	1228351	15.73
140-14387-3	SV-181-MB-3	269386	8.83	1455854	11.01	1235221	15.73
140-14387-4	SV-182-MB-3	265807	8.83	1439853	11.01	1233899	15.73
140-14387-5	SV-183-MB-3	261667	8.83	1424772	11.01	1221074	15.73
140-14387-6	SV-184-MB-3	268482	8.82	1416402	11.01	1183656	15.73
140-14387-7	SV-185-MB-3	272937	8.82	1451084	11.01	1258817	15.73
140-14387-8	SV-186-MB-3	293163	8.82	1583887	11.01	1361840	15.73
140-14387-10	SV-116-A-26	278110	8.82	1479230	11.01	1235939	15.73
140-14387-11	SV-DUP03-A-26	280978	8.82	1513051	11.01	1271379	15.73
140-14387-12	SV-138-A-26	274052	8.82	1481817	11.01	1237546	15.73
140-14387-13	SV-093-A-26	282597	8.82	1531175	11.01	1277807	15.73
140-14387-14	SV-173-A-26	279120	8.82	1506709	11.01	1234999	15.73
140-14387-15	SV-174-A-26	286242	8.82	1547205	11.01	1293580	15.73
140-14387-16	SV-171-A-26	281192	8.82	1525931	11.01	1255482	15.73
140-14387-18	SV-081-A-26	276557	8.82	1486236	11.00	1262786	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: CCVIS 140-27980/2 Date Analyzed: 02/27/2019 11:50
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB27.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	226060	8.81	1253478	11.00	1073197	15.72
UPPER LIMIT	316484	9.14	1754869	11.33	1502476	16.05
LOWER LIMIT	135636	8.48	752087	10.67	643918	15.39
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 140-27980/1002	226060	8.81	1253478	11.00	1073197	15.72
MB 140-27980/5	264467	8.81	1438660	11.00	1193009	15.72
140-14387-18 DL	285504	8.82	1527887	11.01	1270622	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: CCVIS 140-27981/2 Date Analyzed: 02/28/2019 13:02
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB28.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBZd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	308099	8.82	1679334	11.00	1441526	15.73
UPPER LIMIT	431339	9.15	2351068	11.33	2018136	16.06
LOWER LIMIT	184859	8.49	1007600	10.67	864916	15.40
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 140-27981/1002	308099	8.82	1679334	11.00	1441526	15.73
MB 140-27981/4	313051	8.82	1721127	11.00	1440804	15.73
140-14387-5 DL	272703	8.81	1473988	11.00	1251229	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-180-MB-3 Lab Sample ID: 140-14387-1
 Matrix: Air Lab File ID: HB25P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:49
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.23	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.79	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	0.34	J	0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.20	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.19	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.54	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-180-MB-3 Lab Sample ID: 140-14387-1
 Matrix: Air Lab File ID: HB25P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:49
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.94	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	2.5	J	3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.1	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.94	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-179-MB-3 Lab Sample ID: 140-14387-2
 Matrix: Air Lab File ID: HB25P102.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:50
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 18:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.1		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.072	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.98	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.46		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.17	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.15	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-179-MB-3 Lab Sample ID: 140-14387-2
 Matrix: Air Lab File ID: HB25P102.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:50
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 18:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	8.5		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.29	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.84	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	0.65	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-181-MB-3 Lab Sample ID: 140-14387-3
 Matrix: Air Lab File ID: HB25P103.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:53
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 19:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.28	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	51		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	2.2		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.75	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.12	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.17	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-181-MB-3 Lab Sample ID: 140-14387-3
 Matrix: Air Lab File ID: HB25P103.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:53
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 19:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.98	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	210		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	8.7		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.64	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.85	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-182-MB-3 Lab Sample ID: 140-14387-4
 Matrix: Air Lab File ID: HB25P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	250	E	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethane	96.94	34		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.78	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.63		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	16		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.093	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.19	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.27	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-182-MB-3 Lab Sample ID: 140-14387-4
 Matrix: Air Lab File ID: HB25P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1000	E	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	130		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	87		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.50	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.93	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-182-MB-3 DL Lab Sample ID: 140-14387-4 DL
 Matrix: Air Lab File ID: GB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:55
 Sample wt/vol: 11 (mL) Date Analyzed: 02/26/2019 18:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	170		3.6	0.45

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-182-MB-3 DL Lab Sample ID: 140-14387-4 DL
 Matrix: Air Lab File ID: GB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:55
 Sample wt/vol: 11 (mL) Date Analyzed: 02/26/2019 18:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	690		15	1.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-183-MB-3 Lab Sample ID: 140-14387-5
 Matrix: Air Lab File ID: HB25P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:58
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.35	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	170	E	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	22		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	8.5		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.082	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.19	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-183-MB-3 Lab Sample ID: 140-14387-5
 Matrix: Air Lab File ID: HB25P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:58
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	690	E	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	89		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	46		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.44	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.95	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-183-MB-3 DL Lab Sample ID: 140-14387-5 DL
 Matrix: Air Lab File ID: HB28P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:58
 Sample wt/vol: 20 (mL) Date Analyzed: 02/28/2019 17:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27981 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	130		2.0	0.25

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-183-MB-3 DL Lab Sample ID: 140-14387-5 DL
 Matrix: Air Lab File ID: HB28P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:58
 Sample wt/vol: 20 (mL) Date Analyzed: 02/28/2019 17:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27981 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	540		8.1	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-184-MB-3 Lab Sample ID: 140-14387-6
 Matrix: Air Lab File ID: HB25P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:01
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 21:53
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.36	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.26	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.74	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.80		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.21	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-184-MB-3 Lab Sample ID: 140-14387-6
 Matrix: Air Lab File ID: HB25P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:01
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 21:53
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.1	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.66	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.68	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.0	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-185-MB-3 Lab Sample ID: 140-14387-7
 Matrix: Air Lab File ID: HB25P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 11:14
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 22:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.28	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	4.3		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.84		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.28	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.19	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.27	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.86	CI	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-185-MB-3 Lab Sample ID: 140-14387-7
 Matrix: Air Lab File ID: HB25P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 11:14
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 22:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.89	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	17		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	3.3		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.0	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.3	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	4.2	CI	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-186-MB-3 Lab Sample ID: 140-14387-8
 Matrix: Air Lab File ID: HB25P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 11:15
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 23:39
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.28	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.36	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.18	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.24	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.70	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-186-MB-3 Lab Sample ID: 140-14387-8
 Matrix: Air Lab File ID: HB25P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 11:15
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 23:39
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.88	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.74	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.78	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.2	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-116-A-26 Lab Sample ID: 140-14387-10
 Matrix: Air Lab File ID: HB25P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:15
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 00:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.35	J	0.40	0.075
67-66-3	Chloroform	119.38	0.34	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.072	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.92	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.82		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-116-A-26 Lab Sample ID: 140-14387-10
 Matrix: Air Lab File ID: HB25P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:15
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 00:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.81	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	1.7	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.28	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-DUP03-A-26 Lab Sample ID: 140-14387-11
 Matrix: Air Lab File ID: HB25P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 01:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.34	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.60		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-DUP03-A-26 Lab Sample ID: 140-14387-11
 Matrix: Air Lab File ID: HB25P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 01:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.75	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	1.7	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-138-A-26 Lab Sample ID: 140-14387-12
 Matrix: Air Lab File ID: HB25P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:32
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 02:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.085	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.77		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	3.3		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.88	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.13	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.065	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	21		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-138-A-26 Lab Sample ID: 140-14387-12
 Matrix: Air Lab File ID: HB25P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:32
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 02:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	0.41	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	8.2		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	3.1		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	13		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.89	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.36	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	110		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.67	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-093-A-26 Lab Sample ID: 140-14387-13
 Matrix: Air Lab File ID: HB25P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:21
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 03:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.33	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.24	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.32	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.069	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.15	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-093-A-26 Lab Sample ID: 140-14387-13
 Matrix: Air Lab File ID: HB25P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:21
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 03:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.65	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.97	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.3	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.37	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.72	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-173-A-26 Lab Sample ID: 140-14387-14
 Matrix: Air Lab File ID: HB25P113.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:23
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.30	J	0.40	0.075
67-66-3	Chloroform	119.38	1.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	24		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	5.1		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.12	J	0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	84	E	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.76	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.63		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.84		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.44		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	480	E	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.15	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.27	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-173-A-26 Lab Sample ID: 140-14387-14
 Matrix: Air Lab File ID: HB25P113.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:23
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.68	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	5.4		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	94		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	21		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	0.50	J	1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	330	E	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	3.3		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.4		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2600	E	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.73	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-173-A-26 DL Lab Sample ID: 140-14387-14 DL
 Matrix: Air Lab File ID: GB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:23
 Sample wt/vol: 11(mL) Date Analyzed: 02/26/2019 19:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	66		3.6	0.64
79-01-6	Trichloroethene	131.39	310		1.8	0.64

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	89		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-173-A-26 DL Lab Sample ID: 140-14387-14 DL
 Matrix: Air Lab File ID: GB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:23
 Sample wt/vol: 11(mL) Date Analyzed: 02/26/2019 19:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	260		14	2.5
79-01-6	Trichloroethene	131.39	1700		9.8	3.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	89		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-174-A-26 Lab Sample ID: 140-14387-15
 Matrix: Air Lab File ID: HB25P114.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:20
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	1.2		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.2		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.3		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	4.6		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.77	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.087	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	8.2		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	20		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.16	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-174-A-26 Lab Sample ID: 140-14387-15
 Matrix: Air Lab File ID: HB25P114.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:20
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	5.9		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	4.7		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	9.1		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	18		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.59	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	45		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	110		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.77	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-171-A-26 Lab Sample ID: 140-14387-16
 Matrix: Air Lab File ID: HB25P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:22
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 05:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	0.90		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	9.3		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.2		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	63		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.64		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.46		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.18	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	310	E	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.22	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.28	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-171-A-26 Lab Sample ID: 140-14387-16
 Matrix: Air Lab File ID: HB25P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:22
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 05:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.62	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	4.4		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	37		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	8.7		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	250		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.8		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.99	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1700	E	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-171-A-26 DL Lab Sample ID: 140-14387-16 DL
 Matrix: Air Lab File ID: GB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:22
 Sample wt/vol: 11 (mL) Date Analyzed: 02/26/2019 20:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	190		1.8	0.64

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	90		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-171-A-26 DL Lab Sample ID: 140-14387-16 DL
 Matrix: Air Lab File ID: GB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:22
 Sample wt/vol: 11 (mL) Date Analyzed: 02/26/2019 20:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	1000		9.8	3.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	90		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-081-A-26 Lab Sample ID: 140-14387-18
 Matrix: Air Lab File ID: HB25P116.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 06:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.47		0.40	0.075
67-66-3	Chloroform	119.38	0.33	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.10	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.32	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.90	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.19	J	0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.67		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.46		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	200	E *	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	10		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	5.9		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-081-A-26 Lab Sample ID: 140-14387-18
 Matrix: Air Lab File ID: HB25P116.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 06:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	1.6	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.40	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.3	J	2.7	0.54
108-88-3	Toluene	92.14	5.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.7		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1000	E *	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	50		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	29		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	15		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-081-A-26 DL Lab Sample ID: 140-14387-18 DL
 Matrix: Air Lab File ID: HB27P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:34
 Sample wt/vol: 10 (mL) Date Analyzed: 02/28/2019 06:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	120.19	110		4.0	1.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-081-A-26 DL Lab Sample ID: 140-14387-18 DL
 Matrix: Air Lab File ID: HB27P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:34
 Sample wt/vol: 10 (mL) Date Analyzed: 02/28/2019 06:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	120.19	550		20	8.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.9523	2.7653	2.6769	Ave		2.6204			9.0		30.0				
	2.4796	2.3672	2.3873	2.9026	2.4316												
Propene	+++++	+++++	+++++	1.8011	1.4915	Ave		1.4631			12.5		30.0				
	1.4104	1.3267	1.3362	1.5897	1.2862												
Dichlorodifluoromethane	+++++	+++++	4.4505	4.4326	4.2183	Ave		4.2347			6.5		30.0				
	4.0515	3.9190	3.9550	4.7099	4.1407												
Chloromethane	+++++	+++++	+++++	0.5625	0.4891	Ave		0.4649			11.5		30.0				
	0.4445	0.4230	0.4254	0.4946	0.4152												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	2.6446	2.5541	2.4472	Ave		2.4745			4.4		30.0				
	2.3633	2.3423	2.3822	2.5578	2.5047												
Vinyl chloride	1.9626	1.7167	1.7320	1.6531	1.5626	Ave		1.6109			10.3		30.0				
	1.4785	1.4339	1.4573	1.6387	1.4732												
Butane	+++++	+++++	+++++	3.0743	2.8454	Ave		2.7124			8.2		30.0				
	2.6258	2.4782	2.5038	2.8679	2.5911												
1,3-Butadiene	+++++	+++++	+++++	1.2733	1.2439	Ave		1.2450			5.0		30.0				
	1.2041	1.1760	1.2078	1.3654	1.2448												
Bromomethane	+++++	+++++	1.6548	1.3996	1.3549	Ave		1.3916			8.4		30.0				
	1.3078	1.2877	1.3168	1.4117	1.3995												
Chloroethane	+++++	+++++	0.8627	0.8037	0.7796	Ave		0.7761			6.4		30.0				
	0.7377	0.7148	0.7259	0.8118	0.7729												
Ethanol	+++++	+++++	+++++	0.8657	0.7124	Ave		0.7042			15.6		30.0				
	0.5620	0.7386	0.5593	0.7653	0.7259												
Vinyl bromide	+++++	+++++	1.3835	1.3207	1.2830	Ave		1.2899			4.2		30.0				
	1.2366	1.2145	1.2610	1.2880	1.3321												
2-Methylbutane	+++++	+++++	+++++	2.0547	2.0422	Ave		1.9469			4.4		30.0				
	1.9302	1.8374	1.8471	1.9762	1.9406												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.9949	4.3785 3.8769	4.2718 3.9322	4.1461 4.3687	4.1452 4.2564	Ave		4.1523			4.4		30.0				
Acrolein	++++ 0.3700	++++ 0.3339	++++ 0.3264	++++ 0.4058	0.3535 0.3546	Ave		0.3574			7.9		30.0				
Acetonitrile	++++ 0.5820	++++ 0.5806	++++ 0.5032	0.4860 0.6106	0.5491 0.5907	Ave		0.5574			8.4		30.0				
Acetone	++++ 0.6952	++++ 0.6071	++++ 0.4923	++++ 0.5713	0.7119 0.5299	Ave		0.6013			14.7		30.0				
Pentane	++++ 0.2650	++++ 0.2567	++++ 0.2534	++++ 0.2741	0.2798 0.2630	Ave		0.2653			3.8		30.0				
Isopropyl alcohol	++++ 1.5842	++++ 1.6884	++++ 1.2216	++++ 1.5921	1.7192 1.5978	Ave		1.6033			11.8		30.0				
Ethyl ether	++++ 1.8397	++++ 1.7705	++++ 1.4542	++++ 1.7361	1.9088 1.6409	Ave		1.7250			9.3		30.0				
1,1-Dichloroethene	1.5300 1.3997	1.3691 1.3378	1.5011 1.4037	1.3769 1.3902	1.4054 1.4041	Ave		1.4118			4.2		30.0				
Acrylonitrile	++++ 0.9861	++++ 0.9774	1.0366 0.8664	0.9476 1.0406	0.9217 1.0215	Ave		0.9747			6.2		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.0568	3.1787 2.9429	3.2903 2.9549	3.0618 2.9993	3.1454 2.9101	Ave		3.0600			4.1		30.0				
tert-Butyl alcohol	++++ 2.2526	++++ 2.2071	++++ 1.7152	2.3096 2.1050	2.4776 2.3062	Ave		2.1962			11.0		30.0				
Methylene Chloride	++++ 1.5026	++++ 1.3595	++++ 1.3036	2.5891 1.2966	1.8042 ++++	Ave		1.6426			30.5	*	30.0				
3-Chloropropene	++++ 1.6369	++++ 1.6110	2.0104 1.5866	1.9432 1.7783	1.7193 1.7236	Ave		1.7512			8.8		30.0				
Carbon disulfide	++++ 4.2983	++++ 4.0822	4.5901 4.1194	4.3819 4.1977	4.3526 4.2529	Ave		4.2844			3.8		30.0				
trans-1,2-Dichloroethene	++++ 1.4444	1.3848 1.3913	1.4554 1.4201	1.3845 1.4125	1.4335 1.3979	Ave		1.4138			1.9		30.0				
2-Methylpentane	++++ 4.0309	++++ 3.8853	4.5901 3.8303	4.1901 4.0757	4.2199 3.7514	Ave		4.0450			5.3		30.0				
Methyl tert-butyl ether	++++ 4.1354	3.5946 4.0399	4.2254 3.4444	3.8763 4.0172	4.1168 3.9425	Ave		3.9325			6.6		30.0				
1,1-Dichloroethane	3.1037 2.8577	3.0105 2.8187	3.0470 2.6559	2.9034 2.9155	2.9080 2.8375	Ave		2.9058			4.4		30.0				
Vinyl acetate	++++ 3.9854	++++ 4.2048	4.0675 3.5720	3.8850 4.4145	3.9427 4.2013	Ave		4.0342			6.3		30.0				
Hexane	++++ 1.3242	++++ 1.2816	++++ 1.3713	++++ 1.3526	1.3260 1.2151	Ave		1.3036			4.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++	++++	++++	0.6854	0.6772	Ave		0.6347			8.5		30.0				
	0.6784	0.6294	0.5376	0.6386	0.5958												
cis-1,2-Dichloroethene	1.5310	1.3850	1.4658	1.4361	1.4213	Ave		1.4465			2.9		30.0				
	1.4515	1.4377	1.3972	1.4588	1.4806												
Ethyl acetate	++++	++++	3.4159	3.2335	3.3337	Ave		3.3124			6.9		30.0				
	3.4792	3.3231	2.8120	3.5743	3.3271												
Chloroform	3.5969	3.3560	3.4112	3.4074	3.2824	Ave		3.3444			4.2		30.0				
	3.2821	3.2211	3.0680	3.4218	3.3970												
Tetrahydrofuran	++++	++++	++++	1.7940	1.8215	Ave		1.7724			6.6		30.0				
	1.8641	1.7946	1.5246	1.8635	1.7446												
1,1,1-Trichloroethane	3.8810	3.4765	3.6941	3.5977	3.6119	Ave		3.6203			4.2		30.0				
	3.5723	3.5364	3.3475	3.7388	3.7470												
1,2-Dichloroethane	0.3890	0.3740	0.4205	0.3853	0.3989	Ave		0.3910			6.7		30.0				
	0.3918	0.3624	0.3439	0.4219	0.4228												
Cyclohexane	++++	++++	++++	0.1383	0.1426	Ave		0.1314			6.9		30.0				
	0.1391	0.1224	0.1193	0.1325	0.1258												
Benzene	++++	0.7122	0.8006	0.7160	0.7636	Ave		0.7153			7.0		30.0				
	0.7488	0.6697	0.6393	0.7124	0.6753												
Carbon tetrachloride	0.5647	0.5298	0.5813	0.5547	0.6331	Ave		0.5933			8.0		30.0				
	0.6279	0.5625	0.5603	0.6718	0.6470												
1-Butanol	++++	++++	++++	0.0897	0.1022	Ave		0.0896			13.7		30.0				
	0.1010	0.0823	0.0665	0.0902	0.0950												
2,3-Dimethylpentane	++++	++++	0.2016	0.1866	0.2067	Ave		0.1886			7.0		30.0				
	0.1994	0.1776	0.1681	0.1880	0.1811												
Thiophene	++++	++++	0.4419	0.4095	0.4328	Ave		0.4156			5.4		30.0				
	0.4205	0.3890	0.3765	0.4241	0.4306												
2,2,4-Trimethylpentane	1.4853	1.4111	1.5290	1.4173	1.5323	Ave		1.4009			8.1		30.0				
	1.4628	1.2640	1.1785	1.3863	1.3426												
Heptane	++++	++++	0.3221	0.2848	0.3010	Ave		0.2875			7.7		30.0				
	0.2942	0.2637	0.2507	0.2927	0.2912												
1,2-Dichloropropane	++++	0.2947	0.3066	0.2799	0.2948	Ave		0.2813			7.5		30.0				
	0.2869	0.2617	0.2359	0.2893	0.2819												
Trichloroethene	0.3496	0.3229	0.3354	0.3064	0.3383	Ave		0.3257			5.2		30.0				
	0.3271	0.3039	0.3006	0.3304	0.3426												
Dibromomethane	++++	++++	++++	0.3027	0.3082	Ave		0.2963			7.9		30.0				
	0.2897	0.2688	0.2632	0.3189	0.3227												
Bromodichloromethane	++++	++++	0.5688	0.5299	0.5916	Ave		0.5843			8.8		30.0				
	0.5840	0.5507	0.5314	0.6523	0.6656												
1,4-Dioxane	++++	++++	++++	0.0947	0.0887	Ave		0.0832			17.3		30.0				
	0.0619	0.0891	0.0629	0.0903	0.0946												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3918	++++ 0.3473	++++ 0.2972	0.3014 0.4093	0.3703 0.3989	Ave		0.3595			12.7		30.0				
Methylcyclohexane	0.4845 0.5152	0.4926 0.4533	0.5068 0.4304	0.4870 0.4877	0.5327 0.5063	Ave		0.4896			6.1		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.6350	++++ 0.5092	0.5796 0.3308	0.5597 0.5890	0.6524 0.6484	Ave		0.5630			18.8		30.0				
cis-1,3-Dichloropropene	++++ 0.4479	0.3952 0.4121	0.4552 0.3828	0.4166 0.4613	0.4382 0.4415	Ave		0.4279			6.4		30.0				
trans-1,3-Dichloropropene	++++ 0.4450	0.3978 0.4156	0.4398 0.3772	0.4049 0.4673	0.4521 0.4806	Ave		0.4311			8.0		30.0				
Toluene	0.8893 0.9181	0.8808 0.8443	0.9072 0.7540	0.8795 0.8738	0.9309 0.9230	Ave		0.8801			5.9		30.0				
1,1,2-Trichloroethane	0.2596 0.2870	0.2566 0.2535	0.2815 0.2299	0.2715 0.2735	0.2904 0.2819	Ave		0.2685			7.0		30.0				
2-Hexanone	++++ 0.3129	++++ 0.2311	0.2486 0.1601	0.2653 0.2620	0.3155 0.3172	Ave		0.2641			20.2		30.0				
Octane	++++ 0.3331	++++ 0.2969	0.3166 0.2807	0.3142 0.3116	0.3533 0.3257	Ave		0.3165			7.0		30.0				
C8 Range	++++ 3.2900	++++ 2.9406	++++ 2.7321	3.2543 3.2050	3.4583 3.2302	Ave		3.1586			7.7		30.0				
Dibromochloromethane	++++ 0.5589	++++ 0.5327	0.4753 0.5204	0.4633 0.6101	0.5345 0.6613	Ave		0.5446			12.1		30.0				
1,2-Dibromoethane (EDB)	++++ 0.4879	++++ 0.4537	0.4324 0.4227	0.4409 0.4933	0.4776 0.5168	Ave		0.4656			7.1		30.0				
Tetrachloroethene	0.3340 0.3413	0.3265 0.3106	0.3184 0.2978	0.3299 0.3362	0.3500 0.3575	Ave		0.3302			5.4		30.0				
Chlorobenzene	0.6503 0.7257	0.6533 0.6547	0.7038 0.5918	0.6891 0.6804	0.7584 0.7332	Ave		0.6841			7.2		30.0				
Ethylbenzene	++++ 1.2841	1.1605 1.1457	1.1820 0.9886	1.2041 1.2050	1.3132 1.2806	Ave		1.1960			8.1		30.0				
m-Xylene & p-Xylene	0.7852 1.0069	0.8464 0.8920	0.9631 0.7597	0.9388 0.9364	1.0264 0.9927	Ave		0.9148			10.1		30.0				
Nonane	++++ 0.7074	0.6367 0.6181	0.6731 0.5580	0.6713 0.6403	0.7319 0.6196	Ave		0.6507			8.0		30.0				
Bromoform	++++ 0.5150	++++ 0.5097	0.3874 0.4824	0.3783 0.6069	0.4530 ++++	Ave		0.4761			16.7		30.0				
Styrene	++++ 0.6772	++++ 0.6274	0.5417 0.5521	0.5440 0.6889	0.6499 0.7776	Ave		0.6323			13.2		30.0				
o-Xylene	++++ 1.0316	0.8434 0.9312	0.9762 0.7934	0.9959 0.9762	1.0612 1.0727	Ave		0.9646			9.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++ 0.6943	++++ 0.6225	0.6477 0.5392	0.6105 0.6980	0.7079 0.6623	Ave		0.6478			8.7		30.0				
1,2,3-Trichloropropane	++++ 0.2201	++++ 0.1963	0.2117 0.1718	0.1933 0.2253	0.2181 0.2233	Ave		0.2075			9.0		30.0				
Isopropylbenzene	++++ 1.3750	1.2061 1.2349	1.2881 1.0540	1.2705 1.3875	1.3916 1.3659	Ave		1.2860			8.6		30.0				
Propylbenzene	++++ 0.3714	++++ 0.3352	0.3426 0.2878	0.3159 0.3755	0.3762 0.3762	Ave		0.3476			9.6		30.0				
2-Chlorotoluene	++++ 0.3404	0.3055 0.2960	0.3209 0.2606	0.3117 0.3372	0.3448 0.3406	Ave		0.3175			8.7		30.0				
4-Ethyltoluene	++++ 1.3518	++++ 1.2430	1.2707 1.0593	1.1808 1.3853	1.3899 1.3849	Ave		1.2832			9.3		30.0				
1,3,5-Trimethylbenzene	++++ 0.5322	++++ 0.4840	0.4931 0.4140	0.4624 0.5337	0.5289 0.5468	Ave		0.4994			9.1		30.0				
Alpha Methyl Styrene	++++ 0.5256	++++ 0.4877	++++ 0.4370	0.3906 0.6086	0.4802 0.6006	Ave		0.5043			16.0		30.0				
Decane	++++ 0.8778	0.7603 0.7515	0.8322 0.6337	0.8484 0.8180	0.9143 0.7472	Ave		0.7982			10.6		30.0				
tert-Butylbenzene	++++ 1.2040	++++ 1.0655	1.0703 0.8921	1.0556 1.2542	1.1543 1.2176	Ave		1.1142			10.6		30.0				
1,2,4-Trimethylbenzene	++++ 1.1975	++++ 1.0389	1.0671 0.8751	1.0434 1.2267	1.1402 1.1768	Ave		1.0957			10.4		30.0				
sec-Butylbenzene	++++ 1.7209	++++ 1.4915	1.5212 1.2789	1.5236 1.7227	1.6717 1.6181	Ave		1.5686			9.5		30.0				
1,3-Dichlorobenzene	0.6490 0.7671	0.6444 0.6846	0.6738 0.6125	0.6739 0.8458	0.7415 0.8676	Ave		0.7160			12.1		30.0				
Benzyl chloride	++++ 1.0629	++++ 0.9436	0.8534 0.8465	0.8353 1.1447	0.9958 1.1273	Ave		0.9762			13.0		30.0				
1,4-Dichlorobenzene	0.7017 0.7787	0.6870 0.6945	0.6938 0.6166	0.6879 0.8577	0.7429 0.8826	Ave		0.7344			11.3		30.0				
4-Isopropyltoluene	++++ 1.3919	++++ 1.1997	1.1350 1.0411	1.1617 1.4207	1.3168 1.3719	Ave		1.2548			11.1		30.0				
1,2,3-Trimethylbenzene	0.7568 1.1870	0.8539 1.0454	1.0085 0.9035	1.0349 ++++	1.1364 ++++	Ave		0.9908			14.6		30.0				
Indane	++++ 1.0760	++++ 0.9392	0.9630 0.8123	0.9316 1.1012	1.0002 1.0990	Ave		0.9903			10.1		30.0				
1,2-Dichlorobenzene	++++ 0.7440	++++ 0.6621	0.6671 0.5878	0.6607 0.8263	0.7087 0.8754	Ave		0.7165			13.3		30.0				
Butylbenzene	++++ 1.4543	++++ 1.1174	1.2268 1.0412	1.2695 1.4208	1.3939 1.3499	Ave		1.2768			11.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.9217	++++ 0.8188	0.7590 0.7206	0.7567 0.9791	0.8625 0.9878	Ave		0.8508			12.2		30.0				
Undecane	++++ 0.9412	0.7138 0.7639	0.7854 0.6439	0.8623 0.8142	0.9777 0.7859	Ave		0.8098			13.0		30.0				
1,2-Dibromo-3-Chloropropane	0.2667 0.3713	0.2609 0.3380	0.2709 0.2859	0.2620 ++++	0.3145 ++++	Ave		0.2963			13.8		30.0				
1,2,4,5-Tetramethylbenzene	++++ 1.3103	++++ 1.1118	1.0041 0.8463	1.0551 1.2653	1.2570 1.2867	Ave		1.1421			14.5		30.0				
Dodecane	++++ 0.7978	0.6003 0.5688	0.6899 0.3858	0.7041 0.5331	0.8370 ++++	Ave		0.6396			23.1		30.0				
1,2,4-Trichlorobenzene	++++ 0.6436	0.5319 0.5457	0.4906 0.4989	0.4888 0.6587	0.5772 0.6483	Ave		0.5649			12.4		30.0				
Naphthalene	++++ 1.4994	1.1580 1.2044	1.1489 0.9653	1.0861 1.2974	1.4202 1.3257	Ave		1.2339			13.6		30.0				
Hexachlorobutadiene	++++ 0.6448	++++ 0.5763	0.5100 0.5363	0.5070 0.7409	0.5745 0.7482	Ave		0.6047			16.0		30.0				
1,2,3-Trichlorobenzene	++++ 0.6283	0.5060 0.4951	0.4846 0.4151	0.4581 0.5663	0.5627 0.3728	Ave		0.4988			15.9		30.0				
2-Methylnaphthalene	++++ 0.9181	0.6422 0.5284	0.5584 0.3836	0.4778 0.4940	0.8101 ++++	Ave		0.6016			29.9		50.0				
1-Methylnaphthalene	++++ 1.1220	0.8380 0.6213	0.6877 0.4374	0.6391 0.5433	1.0085 ++++	Ave		0.7372			31.8		50.0				
4-Bromofluorobenzene (Surr)	0.7946 0.8130	0.8076 0.7824	0.8238 0.7807	0.8163 0.9039	0.8357 0.8386	Ave		0.8196			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 261958	++++ 518289	21711 1076565	42570 1857884	107824 3550370	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 149007	++++ 290483	++++ 602545	27727 1017511	60077 1877999	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 428033	++++ 858049	32728 1783528	68237 3014742	169908 6045892	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 46960	++++ 92605	++++ 191831	8660 316575	19699 606292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 249678	++++ 512846	19448 1074243	39319 1637176	98572 3657066	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	3911 156203	6583 313945	12737 657162	25449 1048926	62942 2151077	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 277412	++++ 542597	++++ 1129098	47326 1835688	114610 3783292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 127206	++++ 257490	++++ 544660	19602 873952	50104 1817509	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 138169	++++ 281926	12169 593804	21546 903575	54574 2043364	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 77933	++++ 156493	6344 327330	12373 519647	31401 1128580	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 296853	++++ 808553	++++ 1261075	66636 2449308	143467 5299467	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 130640	++++ 265901	10174 568659	20331 824429	51677 1944996	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 203924	++++ 402287	++++ 832948	31631 1264951	82259 2833506	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 422050	16790 848836	31414 1773236	63826 2796331	166966 6214752	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	++++ 39091	++++ 73107	++++ 147180	++++ 259717	14239 517814	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 61491	++++ 127125	++++ 226910	++++ 390809	7481 862471	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Acetone	CBM	Ave	++++ 220327	++++ 398773	++++ 665956	++++ 1097098	86023 2321110	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 28000	++++ 56204	++++ 114279	++++ 175439	11269 384054	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 502108	++++ 1108992	++++ 1652685	++++ 3057291	79400 6999063	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 194355	++++ 387640	++++ 655797	++++ 1111229	76885 2395844	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	3049 147877	5250 292909	11039 633007	21196 889868	56607 2050200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 104178	++++ 213988	++++ 390689	++++ 666078	7623 1491458	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 322940	++++ 644340	++++ 1332511	++++ 1919761	47135 4249014	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 237979	++++ 483244	++++ 773470	++++ 1347387	35554 3367365	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Methylene Chloride	CBM	Ave	++++ 158748	++++ 297663	++++ 587875	++++ 829908	39858 72672	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 0.400
3-Chloropropene	CBM	Ave	++++ 172933	++++ 352711	++++ 715500	++++ 1138278	29914 2516658	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 454099	++++ 893782	++++ 1857677	++++ 2686894	33755 6209652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 152597	++++ 304618	++++ 640390	++++ 904134	21313 2041028	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 425850	++++ 850675	++++ 1727313	++++ 2608750	32181 5477445	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 436887	++++ 884523	++++ 1553256	++++ 2571313	31073 5756531	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	6185 301902	11544 617142	22407 1197700	44696 1866128	117133 4143029	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 421041	++++ 920626	++++ 1610829	++++ 2825655	59807 6134377	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 139897	++++ 280600	++++ 564091	++++ 836832	10084 1774150	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 71674	++++ 137814	++++ 242448	++++ 408724	10552 870000	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
cis-1,2-Dichloroethene	CBM	Ave	3051 153350	5311 314771	10779 630074	22108 933768	57247 2161860	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 367561	++++ 727588	25120 1268094	49778 2287831	134280 4857969	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	7168 346742	12869 705235	25085 1383523	52455 2190241	132214 4960016	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 196936	++++ 392928	++++ 687510	27618 1192762	73368 2547299	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7734 377403	13331 774289	27166 1509577	55384 2393121	145486 5471084	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4547 232618	8382 490730	17516 952640	35324 1548479	87574 3502141	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 82609	++++ 165738	++++ 330488	12681 486357	31319 1042096	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 444635	15963 906736	33352 1771104	65637 2614755	167643 5593459	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	6601 372817	11874 761689	24215 1552321	50848 2465819	138991 5358444	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 59954	++++ 111445	++++ 184294	8226 331158	22433 786825	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 118426	++++ 240541	8397 465638	17105 690034	45390 1499809	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 249671	++++ 526684	18410 1043094	37543 1556455	95028 3566561	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	17363 868592	31627 1711484	63694 3264805	129920 5087913	336411 11120269	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 174693	++++ 357021	13419 694408	26105 1074435	66081 2411618	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 170338	6605 354326	12771 653599	25661 1061646	64714 2334951	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4087 194217	7238 411429	13973 832705	28091 1212507	74264 2837545	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 172040	++++ 363939	++++ 729198	27744 1170568	67675 2672665	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 346754	++++ 745629	23694 1472126	48577 2394105	129879 5512449	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 36737	++++ 120654	++++ 174155	8684 331358	19464 783489	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 232640	++++ 470252	++++ 823262	27631 1502138	81302 3304265	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	5664 305916	11041 613752	21112 1192238	44641 1790104	116952 4193256	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 377024	++++ 689509	24146 916498	51311 2161661	143236 5370174	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 265941	8857 558061	18964 1060593	38186 1693124	96201 3656415	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 249246	8494 528240	18209 983862	34634 1678819	93722 3876912	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	9759 514273	18809 1073072	37560 1966647	75222 3139180	192974 7445292	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2849 160780	5479 322166	11656 599648	23218 982519	60205 2274200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 175250	++++ 293749	10295 417616	22692 941298	65409 2558380	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 186587	++++ 377410	13108 732239	26877 1119383	73243 2627265	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	CBZd 5	Ave	++++ 1842861	++++ 3737320	++++ 7125919	278341 11514382	716916 26057226	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	++++ 313050	++++ 676985	19680 1357226	39627 2191805	110810 5334244	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 273278	++++ 576579	17903 1102407	37712 1772227	99001 4168790	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3665 191154	6973 394783	13185 776709	28219 1207845	72561 2883889	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	7137 406499	13951 832085	29142 1543553	58935 2444395	157211 5914764	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	++++ 719275	24780 1456098	48941 2578598	102987 4329132	272217 10330192	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	17235 1128063	36147 2267354	79756 3963090	160595 6728239	425545 16015024	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd 5	Ave	++++ 396249	13596 785625	27868 1455379	57416 2300427	151720 4997986	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd 5	Ave	++++ 288479	++++ 647774	16038 1258109	32352 2180538	93899 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Styrene	CBZd 5	Ave	++++ 379313	++++ 797396	22430 1440043	46527 2475003	134724 6272582	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	++++ 577831	18010 1183498	40418 2069274	85176 3507204	219991 8652988	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	++++ 388902	++++ 791220	26816 1406346	52217 2507616	146757 5342402	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 123267	++++ 249431	8767 448013	16530 809328	45222 1801458	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 770189	25754 1569505	53331 2749199	108667 4984665	288484 11018383	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	++++ 208028	++++ 425975	14187 750579	27021 1348899	77981 3034911	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 190674	6524 376201	13286 679618	26657 1211506	71471 2747919	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	++++ 757218	++++ 1579790	52613 2762937	100995 4977060	288122 11171652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	++++ 298107	++++ 615118	20417 1079746	39553 1917273	109634 4410950	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 294414	++++ 619837	++++ 1139797	33405 2186650	99545 4845121	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 491714	16235 955171	34455 1652838	72566 2938778	189531 6027860	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	++++ 674397	++++ 1354211	44314 2326877	100995 4505713	288122 9821979	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 670745	++++ 1320347	44184 2282446	89238 4407169	236361 9493306	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	++++ 963943	++++ 1895656	62984 3335709	130314 6189211	346547 13052688	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7122 429682	13761 870050	27898 1597433	57634 3038807	153722 6998909	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 595380	++++ 1199239	35336 2207883	71441 4112439	206433 9093386	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7701 436204	14670 882709	28727 1608243	58838 3081288	154004 7120026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	++++ 779650	++++ 1524715	46995 2715440	99360 5104026	272972 11067094	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	8305 664909	18233 1328651	41757 2356435	88511 ++++	235583 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Indane	CBZd 5	Ave	++++ 602700	++++ 1193709	39872 2118687	79681 3956160	207350 8865173	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 416753	++++ 841536	27621 1533100	56506 2968700	146910 7061726	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	++++ 814617	23860 1547638	50796 2715683	108576 5104411	288957 10889558	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 516302	++++ 1040605	31427 1879451	64720 3517487	178805 7968258	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 527231	15243 970873	32520 1679521	73748 2924996	202684 6339976	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2927 207960	5571 429617	11218 745616	22412 ++++	65206 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 733964	++++ 1413004	41572 2207453	90241 4545804	260569 10379759	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 446881	12818 722978	28563 1006221	60222 1915343	173512 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 360521	11357 693552	20313 1301208	41810 2366361	119662 5229906	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 839854	24728 1530726	47569 2517870	92896 4661002	294401 10693857	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 361175	++++ 732431	21118 1398696	43365 2661640	119102 6035243	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 351962	10806 629244	20063 1082671	39185 2034470	116648 3007302	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 514300	13713 671591	23120 1000580	40866 1774929	167946 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 628512	17895 789694	28473 1141032	54667 1951995	209066 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1743947 1821597	1724522 1988683	1705365 2036360	1745466 1623678	1732344 1691157	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	12.7						50			
Propene	+++++	+++++	+++++	23.1						50		
Dichlorodifluoromethane	+++++	+++++	5.1						50			
Chloromethane	+++++	+++++	+++++	21.0						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	6.9						50			
Vinyl chloride	21.8						50					
Butane	+++++	+++++	+++++	13.3						50		
1,3-Butadiene	+++++	+++++	+++++	2.3						50		
Bromomethane	+++++	+++++	18.9						50			
Chloroethane	+++++	+++++	11.2						50			
Ethanol	+++++	+++++	+++++	22.9						50		
Vinyl bromide	+++++	+++++	7.3						50			
2-Methylbutane	+++++	+++++	+++++	5.5						50		
Trichlorofluoromethane	+++++	5.4						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBCK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	+++++	-1.1							50
Acetonitrile	+++++	+++++	+++++	-12.8							50	
Acetone	+++++	+++++	+++++	+++++	18.4							80
Pentane	+++++	+++++	+++++	+++++	5.4							50
Isopropyl alcohol	+++++	+++++	+++++	7.2							50	
Ethyl ether	+++++	+++++	+++++	+++++	10.7							50
1,1-Dichloroethene	8.4						50					
Acrylonitrile	+++++	+++++	6.3						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.9						50				
tert-Butyl alcohol	+++++	+++++	+++++	5.2							50	
Methylene Chloride	+++++	+++++	+++++	57.6 +++++							80	
3-Chloropropene	+++++	+++++	14.8						50			
Carbon disulfide	+++++	+++++	7.1						50			
trans-1,2-Dichloroethene	+++++	-2.1						50				
2-Methylpentane	+++++	+++++	8.2						50			
Methyl tert-butyl ether	+++++	-8.6						50				
1,1-Dichloroethane	6.8						50					
Vinyl acetate	+++++	+++++	0.8						50			
Hexane	+++++	+++++	5.2						50			
2-Butanone (MEK)	+++++	+++++	+++++	8.0						50		
cis-1,2-Dichloroethene	5.8						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	3.1						50			
Chloroform	7.6						50					
Tetrahydrofuran	+++++	+++++	+++++	1.2						50		
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	-0.5						50					
Cyclohexane	+++++	+++++	+++++	5.2						50		
Benzene	+++++	-0.4						50				
Carbon tetrachloride	-4.8						50					
1-Butanol	+++++	+++++	+++++	0.2							50	
2,3-Dimethylpentane	+++++	+++++	6.9						50			
Thiophene	+++++	+++++	6.3						50			
2,2,4-Trimethylpentane	6.0						50					
Heptane	+++++	+++++	12.0						50			
1,2-Dichloropropane	+++++	4.8						50				
Trichloroethene	7.3						50					
Dibromomethane	+++++	+++++	+++++	2.1						50		
Bromodichloromethane	+++++	+++++	-2.7						50			
1,4-Dioxane	+++++	+++++	+++++	13.9						50		
Methyl methacrylate	+++++	+++++	+++++	-16.1						50		
Methylcyclohexane	-1.0						50					
4-Methyl-2-pentanone (MIBK)	+++++	+++++	3.0						50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.6						50				
trans-1,3-Dichloropropene	+++++	-7.7						50				
Toluene	1.0						50					
1,1,2-Trichloroethane	-3.3						50					
2-Hexanone	+++++	+++++	-5.8						50			
Octane	+++++	+++++	0.0						50			
Dibromochloromethane	+++++	+++++	-12.7						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-7.1						50			
Tetrachloroethene	1.1						50					
Chlorobenzene	-4.9						50					
Ethylbenzene	+++++	-3.0						50				
m-Xylene & p-Xylene	-14.2						50					
Nonane	+++++	-2.2						50				
Bromoform	+++++	+++++	-18.6		+++++				50			
Styrene	+++++	+++++	-14.3						50			
o-Xylene	+++++	-12.6						50				
1,1,2,2-Tetrachloroethane	+++++	+++++	0.0						50			
1,2,3-Trichloropropane	+++++	+++++	2.1						50			
Isopropylbenzene	+++++	-6.2						50				
Propylbenzene	+++++	+++++	-1.4						50			
2-Chlorotoluene	+++++	-3.8						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	+++++	+++++	-1.0						50			
1,3,5-Trimethylbenzene	+++++	+++++	-1.3						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-22.6						50		
Decane	+++++	-4.7						50				
tert-Butylbenzene	+++++	+++++	-3.9						50			
1,2,4-Trimethylbenzene	+++++	+++++	-2.6						50			
sec-Butylbenzene	+++++	+++++	-3.0						50			
1,3-Dichlorobenzene	-9.4						50					
Benzyl chloride	+++++	+++++	-12.6						50			
1,4-Dichlorobenzene	-4.4						50					
4-Isopropyltoluene	+++++	+++++	-9.5						50			
1,2,3-Trimethylbenzene	-23.6		+++++	+++++			50					
Indane	+++++	+++++	-2.8						50			
1,2-Dichlorobenzene	+++++	+++++	-6.9						50			
Butylbenzene	+++++	-12.5							50			
Indene	+++++	+++++	-10.8						50			
Undecane	+++++	-11.9							50			
1,2-Dibromo-3-Chloropropane	-10.0		+++++	+++++			50					
1,2,4,5-Tetramethylbenzene	+++++	+++++	-12.1						50			
Dodecane	+++++	-6.1		+++++					50			
1,2,4-Trichlorobenzene	+++++	-5.8							50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-6.2						80				
Hexachlorobutadiene	+++++	+++++	-15.7						50			
1,2,3-Trichlorobenzene	+++++	1.5						50				
2-Methylnaphthalene	+++++	6.7		+++++				80				
1-Methylnaphthalene	+++++	13.7		+++++				80				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	3.4653	3.1705	3.1944	3.1500	Ave		3.2799			4.2		30.0				
	3.1939	3.2579	3.1981	3.5227	3.3659												
Propene	+++++	+++++	1.7587	1.4845	1.4290	Ave		1.4914			7.7		30.0				
	1.4326	1.4362	1.4091	1.5280	1.4530												
Dichlorodifluoromethane	5.8144	5.0640	4.8366	4.9504	4.8580	Ave		5.0379			6.0		30.0				
	4.8876	5.0248	4.8446	5.2377	4.8608												
Chloromethane	+++++	+++++	+++++	0.6715	0.5966	Ave		0.5876			7.4		30.0				
	0.5872	0.5848	0.5550	0.5865	0.5318												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.7320	3.4028	3.3465	3.4027	Ave		3.4749			3.3		30.0				
	3.4272	3.5307	3.4425	3.5488	3.4411												
Vinyl chloride	+++++	2.0465	1.8423	1.8473	1.8163	Ave		1.8271			5.6		30.0				
	1.8203	1.8334	1.7435	1.8315	1.6623												
Butane	+++++	+++++	2.7879	2.8437	2.7009	Ave		2.6143			7.2		30.0				
	2.6844	2.6215	2.4361	2.5669	2.2728												
1,3-Butadiene	+++++	+++++	1.3389	1.3779	1.3208	Ave		1.3198			4.0		30.0				
	1.3288	1.3568	1.2722	1.3471	1.2155												
Bromomethane	+++++	+++++	1.8623	1.9344	1.8572	Ave		1.8480			3.2		30.0				
	1.8498	1.8745	1.7805	1.8774	1.7481												
Chloroethane	+++++	+++++	0.8855	0.8409	0.8547	Ave		0.8331			3.9		30.0				
	0.8383	0.8323	0.8039	0.8312	0.7778												
Ethanol	+++++	+++++	0.8934	0.8231	0.8080	Ave		0.8189			6.1		30.0				
	0.8037	0.8564	0.8028	0.8429	0.7211												
Vinyl bromide	+++++	1.9018	1.7722	1.7366	1.7418	Ave		1.7583			3.6		30.0				
	1.7437	1.7838	1.7019	1.7701	1.6732												
2-Methylbutane	+++++	+++++	2.0515	1.9633	1.9838	Ave		1.9393			4.2		30.0				
	1.9590	1.9816	1.8753	1.9172	1.7822												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 4.5968	4.8919 4.5966	4.5963 4.4102	4.6432 4.6616	4.6819 4.3585	Ave		4.6041			3.4		30.0				
Acrolein	++++ 0.5846	++++ 0.5959	++++ 0.5782	++++ 0.6012	0.6004 0.5473	Ave		0.5850			3.2		30.0				
Acetonitrile	++++ 0.7177	++++ 0.7681	++++ 0.7379	0.7408 0.7567	0.7405 0.6910	Ave		0.7361			3.4		30.0				
Acetone	++++ 0.7514	++++ 0.7610	++++ 0.7228	0.8447 0.7183	0.7906 0.6754	Ave		0.7520			7.3		30.0				
Pentane	++++ 0.2123	++++ 0.2170	++++ 0.2070	0.2190 0.2038	0.2202 0.1943	Ave		0.2105			4.5		30.0				
Isopropyl alcohol	2.7418 2.1881	2.3188 2.2924	2.2272 2.1969	2.1770 2.2190	1.6999 1.9893	QuaF		2.3689	-0.007836					1.0000		0.9900	
Ethyl ether	++++ 1.8837	2.0347 1.9038	1.8861 1.7817	1.8427 1.8377	1.9152 1.6737	Ave		1.8621			5.3		30.0				
1,1-Dichloroethene	++++ 1.5290	1.7340 1.5543	1.5403 1.5141	1.5633 1.5140	1.5440 1.4908	Ave		1.5537			4.6		30.0				
Acrylonitrile	++++ 1.1815	++++ 1.2218	1.1258 1.2125	1.1965 1.2550	1.1794 1.1889	Ave		1.1952			3.1		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.6645	4.0846 3.6642	3.7625 3.5412	3.7405 3.6163	3.7204 3.4760	Ave		3.6967			4.7		30.0				
tert-Butyl alcohol	++++ 2.5653	++++ 2.7860	2.5284 2.7619	2.5014 2.8005	2.5277 2.6087	Ave		2.6350			4.8		30.0				
Methylene Chloride	++++ 1.5650	++++ 1.4959	++++ 1.3885	2.4719 1.3565	1.8784 1.2927	Ave		1.6355			25.4		30.0				
3-Chloropropene	++++ 1.4263	++++ 1.4402	1.7866 1.3797	1.5003 1.4158	1.4252 1.3047	Ave		1.4598			9.8		30.0				
Carbon disulfide	++++ 4.5267	++++ 4.6305	4.5536 4.4426	4.5843 4.4448	4.5189 4.2681	Ave		4.4962			2.5		30.0				
trans-1,2-Dichloroethene	++++ 1.5549	1.7812 1.5959	1.5579 1.5626	1.5474 1.5716	1.5873 1.5791	Ave		1.5931			4.5		30.0				
2-Methylpentane	++++ 3.6495	3.8413 3.7329	3.6302 3.5934	3.6663 3.6789	3.6726 3.4794	Ave		3.6605			2.7		30.0				
Methyl tert-butyl ether	++++ 3.8063	++++ 3.9290	3.6249 3.8501	3.6903 3.7951	3.7667 3.7289	Ave		3.7739			2.5		30.0				
1,1-Dichloroethane	++++ 3.0039	3.2165 3.0616	3.0410 2.9531	3.0857 3.0007	3.0099 2.9039	Ave		3.0307			2.9		30.0				
Vinyl acetate	++++ 4.3714	++++ 4.6452	3.6694 4.6119	3.8279 4.8234	4.0421 4.6436	Ave		4.3293			9.9		30.0				
Hexane	++++ 1.2057	1.3026 1.2192	1.1775 1.1910	1.1729 1.2227	1.1991 1.2068	Ave		1.2108			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++ 0.6760	++++ 0.7192	++++ 0.7039	0.6508 0.6996	0.6769 0.6879	Ave		0.6878			3.3		30.0				
cis-1,2-Dichloroethene	++++ 1.5744	1.7468 1.6363	1.5933 1.5970	1.6008 1.5970	1.5882 1.5988	Ave		1.6147			3.2		30.0				
Ethyl acetate	++++ 3.8330	3.9793	3.7437 3.9131	3.7153 4.0646	3.7356 3.8788	Ave		3.8579			3.2		30.0				
Chloroform	++++ 3.4568	3.6507 3.5041	3.4694 3.4001	3.5102 3.4590	3.4542 3.3756	Ave		3.4756			2.3		30.0				
Tetrahydrofuran	++++ 1.8356	2.0384 1.8762	1.8755 1.8441	1.8215 1.9023	1.7999 1.8263	Ave		1.8689			3.8		30.0				
1,1,1-Trichloroethane	++++ 3.2539	3.3591 3.4003	3.1133 3.3660	3.1042 3.4402	3.2027 3.5047	Ave		3.3049			4.3		30.0				
1,2-Dichloroethane	0.4792 0.4208	0.4342 0.4309	0.4004 0.4260	0.4094 0.4468	0.4128 0.4496	Ave		0.4310			5.4		30.0				
Cyclohexane	++++ 0.1234	++++ 0.1282	++++ 0.1287	0.1130 0.1363	0.1144 0.1399	Ave		0.1257			7.6		30.0				
Benzene	++++ 0.8262	0.8954 0.8466	0.8112 0.8440	0.7881 0.8945	0.8065 0.8990	Ave		0.8457			5.0		30.0				
Carbon tetrachloride	0.7487 0.6708	0.6490 0.7010	0.6034 0.7125	0.5747 0.7615	0.6367 0.7873	Ave		0.6846			10.2		30.0				
1-Butanol	++++ 0.1071	++++ 0.1245	++++ 0.1248	0.0965 0.1330	0.0979 0.1172	Ave		0.1144			12.4		30.0				
2,3-Dimethylpentane	++++ 0.1796	0.1766 0.1801	0.1665 0.1766	0.1668 0.1780	0.1769 0.1774	Ave		0.1754			2.9		30.0				
Thiophene	++++ 0.4824	0.4876 0.4945	0.4639 0.4890	0.4560 0.4969	0.4750 0.5094	Ave		0.4839			3.4		30.0				
2,2,4-Trimethylpentane	++++ 1.3660	1.4676 1.4074	1.3177 1.3906	1.3230 1.4688	1.3297 1.4871	Ave		1.3953			4.8		30.0				
Heptane	++++ 0.2663	0.2712 0.2737	0.2506 0.2749	0.2452 0.2881	0.2558 0.2989	Ave		0.2694			6.4		30.0				
1,2-Dichloropropane	++++ 0.3549	0.3683 0.3641	0.3346 0.3586	0.3506 0.3775	0.3450 0.3847	Ave		0.3598			4.4		30.0				
Trichloroethene	0.4632 0.3841	0.4095 0.3944	0.3655 0.3956	0.3672 0.4073	0.3757 0.4285	Ave		0.3991			7.5		30.0				
Dibromomethane	++++ 0.3974	0.4765 0.4115	0.4099 0.4077	0.4084 0.4323	0.3933 0.4360	Ave		0.4192			6.1		30.0				
Bromodichloromethane	0.6604 0.6222	0.5793 0.6529	0.5629 0.6534	0.5714 0.6923	0.5879 0.7149	Ave		0.6298			8.4		30.0				
1,4-Dioxane	++++ 0.1219	0.1357 0.1302	0.1276 0.1307	0.1218 0.1288	0.1227 0.1236	Ave		0.1270			3.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	0.4034	0.3437	0.2975	0.3269	0.3551	Ave		0.3781			12.1		30.0				
	0.3789	0.4060	0.4068	0.4343	0.4280												
Methylcyclohexane	++++	++++	0.4245	0.4287	0.4498	LinF		0.5272						0.9990		0.9900	
	0.4648	0.4877	0.4844	0.5074	0.5357												
4-Methyl-2-pentanone (MIBK)	++++	++++	0.7143	0.6509	0.6822	Ave		0.7577			10.3		30.0				
	0.7301	0.7728	0.7841	0.8611	0.8658												
cis-1,3-Dichloropropene	0.4871	0.3999	0.3931	0.4158	0.4395	Ave		0.4735			12.4		30.0				
	0.4778	0.5104	0.5121	0.5406	0.5587												
trans-1,3-Dichloropropene	0.4944	0.4260	0.4038	0.4133	0.4518	Ave		0.4856			12.2		30.0				
	0.4884	0.5211	0.5365	0.5532	0.5670												
Toluene	++++	1.1979	1.0972	1.0779	1.1122	Ave		1.1386			3.2		30.0				
	1.1442	1.1566	1.1486	1.1597	1.1532												
1,1,2-Trichloroethane	0.4133	0.3819	0.3518	0.3774	0.3800	Ave		0.3780			4.2		30.0				
	0.3813	0.3829	0.3732	0.3756	0.3625												
2-Hexanone	++++	++++	++++	0.2822	0.3272	Ave		0.3734			14.2		30.0				
	0.3617	0.3952	0.4022	0.4230	0.4226												
Octane	0.3431	0.2979	0.2983	0.3057	0.3158	Ave		0.3251			5.7		30.0				
	0.3345	0.3387	0.3351	0.3409	0.3405												
C8 Range	++++	++++	++++	2.6905	2.7814	Ave		2.9596			6.7		30.0				
	2.8847	2.9768	2.9653	3.2221	3.1962												
Dibromochloromethane	0.7111	0.6553	0.6167	0.6360	0.7095	Ave		0.7610			14.5		30.0				
	0.7798	0.8336	0.8540	0.8994	0.9146												
1,2-Dibromoethane (EDB)	0.7556	0.6517	0.5952	0.6231	0.6489	Ave		0.6894			8.3		30.0				
	0.6861	0.7166	0.7185	0.7452	0.7529												
Tetrachloroethene	0.5382	0.4943	0.4320	0.4547	0.4475	Ave		0.4638			6.6		30.0				
	0.4481	0.4549	0.4479	0.4602	0.4599												
Chlorobenzene	1.0921	0.9609	0.8656	0.8563	0.8903	Ave		0.9365			7.5		30.0				
	0.8958	0.9195	0.9278	0.9856	0.9706												
Ethylbenzene	1.6135	1.4227	1.3082	1.3322	1.3865	Ave		1.4498			6.5		30.0				
	1.4269	1.4796	1.4755	1.5346	1.5189												
m-Xylene & p-Xylene	1.2072	1.0640	0.9982	1.0439	1.0836	Ave		1.1179			6.4		30.0				
	1.1213	1.1561	1.1505	1.2259	1.1287												
Nonane	0.7214	0.6646	0.6269	0.6551	0.7128	Ave		0.7205			7.7		30.0				
	0.7434	0.7638	0.7531	0.8016	0.7620												
Bromoform	++++	++++	0.5650	0.5843	0.6966	Ave		0.8550			26.6		30.0				
	0.8072	0.9326	0.9922	1.1394	1.1231												
Styrene	0.7205	0.5902	0.6127	0.6375	0.7228	Ave		0.7534			15.1		30.0				
	0.7904	0.8466	0.8542	0.9160	0.8426												
o-Xylene	1.2934	1.1325	1.0847	1.1027	1.1495	Ave		1.1384			5.3		30.0				
	1.1502	1.1572	1.1094	1.1237	1.0809												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.9096	0.8625	0.8260	0.8361	0.9096	Ave		0.9221			7.0		30.0				
	0.9401	0.9755	0.9610	1.0114	0.9889												
1,2,3-Trichloropropane	0.2447	0.2178	0.2113	0.2130	0.2227	Ave		0.2272			5.1		30.0				
	0.2256	0.2303	0.2271	0.2361	0.2431												
Isopropylbenzene	1.7967	1.5351	1.4440	1.4632	1.5279	Ave		1.5707			6.3		30.0				
	1.5633	1.5715	1.5587	1.6321	1.6144												
Propylbenzene	0.4012	0.3808	0.3409	0.3592	0.3891	Ave		0.4111			11.6		30.0				
	0.4107	0.4308	0.4332	0.4685	0.4967												
2-Chlorotoluene	0.4669	0.3905	0.3655	0.3667	0.3951	Ave		0.4027			7.3		30.0				
	0.3964	0.4055	0.3991	0.4165	0.4244												
4-Ethyltoluene	1.4351	1.3019	1.3077	1.3685	1.4589	Ave		1.4935			9.5		30.0				
	1.5278	1.5863	1.5805	1.6912	1.6776												
1,3,5-Trimethylbenzene	++++	++++	0.5413	0.5786	0.6024	Lin1	-0.018	0.6744						0.9990		0.9900	
	0.6176	0.6376	0.6340	0.6743	0.6871												
Alpha Methyl Styrene	++++	++++	++++	0.4208	0.4981	Ave		0.6224			21.8		30.0				
	0.5685	0.6414	0.6778	0.7497	0.8004												
Decane	0.8670	0.8318	0.8501	0.8994	0.9689	Ave		0.9226			6.4		30.0				
	0.9743	0.9881	0.9374	0.9947	0.9138												
tert-Butylbenzene	1.3232	1.2918	1.2707	1.3008	1.3524	Ave		1.3980			8.3		30.0				
	1.3873	1.4399	1.4507	1.6252	1.5376												
1,2,4-Trimethylbenzene	1.2112	1.1922	1.2018	1.2261	1.2756	Ave		1.3033			7.8		30.0				
	1.3135	1.3589	1.3540	1.5084	1.3912												
sec-Butylbenzene	1.9008	1.7647	1.7019	1.7864	1.8764	Ave		1.9482			9.3		30.0				
	1.9575	2.0412	2.0527	2.3032	2.0968												
1,3-Dichlorobenzene	0.9710	0.9136	0.8392	0.8456	0.8596	Ave		0.9455			10.4		30.0				
	0.8871	0.9433	0.9831	1.1213	1.0913												
Benzyl chloride	++++	++++	++++	0.5869	0.7162	Ave		0.9648			27.2		30.0				
	0.8511	0.9916	1.0755	1.2636	1.2685												
1,4-Dichlorobenzene	0.8993	0.8397	0.7743	0.7878	0.8054	Ave		0.8947			11.9		30.0				
	0.8484	0.9077	0.9477	1.0688	1.0683												
4-Isopropyltoluene	1.3948	1.3577	1.3402	1.4210	1.5104	Ave		1.5120			8.5		30.0				
	1.5570	1.5989	1.5830	1.7130	1.6444												
1,2,3-Trimethylbenzene	1.2663	1.2149	1.1671	1.2381	1.2887	Ave		1.2797			4.8		30.0				
	1.2982	1.3173	1.2872	1.3672	1.3515												
Indane	1.2186	1.1243	1.0675	1.0961	1.1826	Ave		1.2519			11.7		30.0				
	1.2431	1.3163	1.3515	1.5395	1.3790												
1,2-Dichlorobenzene	0.9498	0.8850	0.8350	0.8518	0.8698	Ave		0.9417			10.4		30.0				
	0.8906	0.9443	0.9892	1.1350	1.0670												
Indene	++++	++++	++++	0.8141	0.9137	Ave		1.0768			17.1		30.0				
	0.9935	1.0962	1.1520	1.3505	1.2176												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.3790 1.6516	1.3189 1.6880	1.3874 1.6768	1.4670 1.8898	1.5846 1.5798	Ave		1.5623			11.2		30.0				
Undecane	++++ 1.1148	++++ 1.1251	++++ 1.0648	++++ 1.1605	0.9201 1.0623	Ave		1.0667			7.5		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.4502	0.2917 0.5017	0.2809 0.5356	0.3021 ++++	0.3712 ++++	Ave		0.3905			27.0		30.0				
1,2,4,5-Tetramethylbenzene	1.1786 1.4737	1.0742 1.5594	1.1053 1.5930	1.2141 1.8040	1.3311 1.7554	Ave		1.4089			18.9		30.0				
Dodecane	++++ 1.0804	++++ 1.1437	++++ 1.1280	0.7863 1.2231	0.8699 ++++	Ave		1.0386			16.5		30.0				
1,2,4-Trichlorobenzene	++++ 0.6454	++++ 0.7369	0.3966 0.8248	0.4284 ++++	0.4829 ++++	Lin1	-0.053	0.7893						0.9900		0.9900	
Naphthalene	++++ 1.4915	0.9793 1.6065	0.9607 1.6241	1.0249 1.8355	1.1613 1.9378	Ave		1.4024			27.0		30.0				
Hexachlorobutadiene	1.0176 0.8427	0.8796 0.9000	0.8143 0.9493	0.7902 1.0467	0.7652 0.8828	Ave		0.8888			10.5		30.0				
1,2,3-Trichlorobenzene	0.8505 0.7703	0.6300 0.8209	0.5889 0.8468	0.6086 0.9455	0.6198 0.8106	Ave		0.7492			16.9		30.0				
2-Methylnaphthalene	++++ 0.5646	++++ 0.6759	++++ 0.7544	0.3700 ++++	0.3309 ++++	Ave		0.5392			34.4		50.0				
1-Methylnaphthalene	++++ 0.8761	++++ 0.9590	0.6260 0.9457	0.6372 ++++	0.5405 ++++	Ave		0.7641			24.0		50.0				
4-Bromofluorobenzene (Surr)	0.6541 0.6669	0.6584 0.6518	0.6640 0.6390	0.6638 0.6459	0.6727 0.6015	Ave		0.6518			3.1		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 276110	13216 568429	23324 1166346	44738 2080315	110343 4483179	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 123848	++++ 250579	12938 513903	20791 902358	50058 1935361	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	11347 422528	19313 876701	35581 1766802	69332 3093057	170173 6474307	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 50767	++++ 102040	++++ 202413	9404 346372	20898 708335	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 296279	14233 616018	25033 1255454	46869 2095695	119194 4583276	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	++++ 157361	7805 319887	13553 635845	25872 1081563	63624 2214114	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 232065	++++ 457383	20509 888442	39827 1515853	94610 3027220	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 114876	++++ 236733	9850 463965	19298 795542	46266 1618919	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 159914	++++ 327044	13700 649354	27091 1108697	65057 2328401	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 72470	++++ 145223	6514 293162	11777 490862	29938 1035993	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 347389	++++ 747094	32861 1463846	57636 2488750	141512 4802553	++++ 5.00	++++ 10.0	0.400 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 150739	7253 311230	13037 620663	24322 1045304	61012 2228635	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 169357	++++ 345741	15092 683911	27497 1132183	69491 2373804	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 397394	18657 801987	33813 1608364	65029 2752862	164002 5805275	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	++++ 50534	++++ 103966	++++ 210875	8409 355043	20576 728953	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 62042	++++ 134006	++++ 269093	10375 446888	25939 920347	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Acetone	CBM	Ave	++++ 194862	++++ 398344	++++ 790789	35492 1272613	83084 2698817	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 18350	++++ 37863	++++ 75489	3067 120364	7712 258741	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Isopropyl alcohol	CBM	QuaF	16052 567468	26530 1199879	49153 2403555	91466 3931291	228028 7948950	0.0600 3.00	0.120 6.00	0.240 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 162847	7760 332157	13875 649774	25807 1085214	67088 2229204	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	++++ 132183	6613 271177	11331 552199	21894 894072	54085 1985588	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 102139	++++ 213181	++++ 442205	8282 741130	16757 1583584	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 316796	15578 639315	27679 1291447	52386 2135574	130321 4629798	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 221767	++++ 486078	++++ 1007263	18600 1653787	35033 3474636	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 135290	++++ 260991	++++ 506389	34620 801053	65799 1721729	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 123300	++++ 251273	++++ 503167	13143 836069	21012 1737749	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 391326	++++ 807906	++++ 1620181	33499 2624808	64204 5684871	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 134418	6793 278440	11461 569867	21671 928087	55602 2103238	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 315498	14650 651289	26706 1310496	51347 2172520	128649 4634316	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 329050	++++ 685507	++++ 1404124	26667 2241171	51683 4966677	131945 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
1,1-Dichloroethane	CBM	Ave	++++ 259689	12267 534165	22371 1076990	43216 1772013	105434 3867799	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 377904	++++ 810467	++++ 1681929	26994 2848393	53610 6184921	141592 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
Hexane	CBM	Ave	++++ 104228	4968 212722	8662 434352	16426 722047	42005 1607432	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 58444	++++ 125474	++++ 256700	++++ 413154	9115 916246	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	++++ 136108	6662 285498	11721 582417	22419 943075	55633 2129500	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 331359	++++ 694293	27541 1427087	52034 2400330	130856 5166288	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	++++ 298839	13923 611378	25523 1239987	49161 2042657	120999 4496097	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 158683	7774 327341	13797 672532	25511 1123394	63048 2432538	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	++++ 281296	12811 593273	22903 1227570	43475 2031546	112189 4668064	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	5129 196209	9022 404925	16131 824860	31582 1368173	79080 2983220	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 57530	++++ 120448	4554 249183	8824 417405	23383 928409	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 385270	18606 795627	32682 1634406	60789 2739521	154496 5964977	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	8013 312823	13486 658731	24310 1379762	44327 2331942	121964 5223763	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 49965	++++ 117031	++++ 241678	7444 407327	18761 777405	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 83728	3670 169285	6708 341915	12865 545270	33896 1177164	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 224938	10131 464737	18692 946920	35178 1521788	90994 3380138	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 636999	30494 1322559	53089 2692898	102056 4498015	254726 9866899	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 124160	5635 257254	10096 532315	18913 882284	49010 1982995	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 165502	7652 342173	13479 694484	27042 1156069	66097 2552409	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4957 179106	8508 370632	14725 766083	28328 1247479	71975 2842892	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 185331	9901 386676	16515 789473	31506 1323802	75334 2892720	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	7068 290134	12036 613591	22677 1265402	44079 2120110	112623 4743566	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 56823	2819 122358	5140 253088	9393 394321	23501 819819	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	4317 176703	7141 381574	11987 787734	25219 1330076	68030 2839739	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	LinF	++++ 216746	++++ 458293	17104 937963	33070 1553838	86171 3554415	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 340468	++++ 726276	28778 1518450	50210 2637007	130687 5744756	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	5213	8310	15836	32071	84191	0.0200	0.0400	0.0800	0.160	0.400
			222810	479642	991696	1655482	3706962	1.00	2.00	4.00	8.00	16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	4369	7302	13490	26441	71850	0.0200	0.0400	0.0800	0.160	0.400
			193590	428343	930378	1585219	3716627	1.00	2.00	4.00	8.00	16.0
Toluene	CBZd 5	Ave	++++	20535	36650	68961	176860	++++	0.0400	0.0800	0.160	0.400
			453543	950794	1991754	3322999	7558388	1.00	2.00	4.00	8.00	16.0
1,1,2-Trichloroethane	CBZd 5	Ave	3652	6546	11751	24147	60427	0.0200	0.0400	0.0800	0.160	0.400
			151135	314780	647099	1076123	2376053	1.00	2.00	4.00	8.00	16.0
2-Hexanone	CBZd 5	Ave	++++	++++	++++	18055	52036	++++	++++	++++	0.160	0.400
			143357	324836	697429	1212184	2770142	1.00	2.00	4.00	8.00	16.0
Octane	CBZd 5	Ave	3032	5107	9965	19559	50220	0.0200	0.0400	0.0800	0.160	0.400
			132598	278400	581056	976945	2231497	1.00	2.00	4.00	8.00	16.0
C8 Range	DFBZ	Ave	++++	++++	++++	207536	532812	++++	++++	++++	0.160	0.400
			1345188	2797431	5742340	9867518	21206896	1.00	2.00	4.00	8.00	16.0
Dibromochloromethane	CBZd 5	Ave	6284	11234	20599	40693	112826	0.0200	0.0400	0.0800	0.160	0.400
			309096	685217	1481007	2576992	5994726	1.00	2.00	4.00	8.00	16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	6677	11172	19884	39867	103182	0.0200	0.0400	0.0800	0.160	0.400
			271955	589031	1245997	2135184	4934830	1.00	2.00	4.00	8.00	16.0
Tetrachloroethene	CBZd 5	Ave	4756	8474	14431	29094	71154	0.0200	0.0400	0.0800	0.160	0.400
			177605	373916	776667	1318629	3014432	1.00	2.00	4.00	8.00	16.0
Chlorobenzene	CBZd 5	Ave	9651	16472	28914	54785	141575	0.0200	0.0400	0.0800	0.160	0.400
			355092	755892	1608983	2824132	6361822	1.00	2.00	4.00	8.00	16.0
Ethylbenzene	CBZd 5	Ave	14258	24388	43699	85231	220476	0.0200	0.0400	0.0800	0.160	0.400
			565594	1216288	2558634	4397072	9955892	1.00	2.00	4.00	8.00	16.0
m-Xylene & p-Xylene	CBZd 5	Ave	21336	36478	66686	133574	344621	0.0400	0.0800	0.160	0.320	0.800
			888953	1900753	3990112	7025357	14796297	2.00	4.00	8.00	16.0	32.0
Nonane	CBZd 5	Ave	6375	11392	20941	41910	113340	0.0200	0.0400	0.0800	0.160	0.400
			294667	627904	1305941	2296867	4994379	1.00	2.00	4.00	8.00	16.0
Bromoform	CBZd 5	Ave	++++	++++	18872	37380	110767	++++	++++	0.0800	0.160	0.400
			319968	766620	1720677	3264688	7361436	1.00	2.00	4.00	8.00	16.0
Styrene	CBZd 5	Ave	6367	10118	20466	40788	114936	0.0200	0.0400	0.0800	0.160	0.400
			313291	695917	1481246	2624790	5523081	1.00	2.00	4.00	8.00	16.0
o-Xylene	CBZd 5	Ave	11430	19414	36234	70551	182797	0.0200	0.0400	0.0800	0.160	0.400
			455942	951287	1923859	3219909	7084529	1.00	2.00	4.00	8.00	16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	8038	14785	27592	53490	144640	0.0200	0.0400	0.0800	0.160	0.400
			372659	801869	1666518	2898094	6482057	1.00	2.00	4.00	8.00	16.0
1,2,3-Trichloropropane	CBZd 5	Ave	2162	3733	7060	13629	35414	0.0200	0.0400	0.0800	0.160	0.400
			89428	189343	393840	676648	1593385	1.00	2.00	4.00	8.00	16.0
Isopropylbenzene	CBZd 5	Ave	15877	26315	48237	93612	242959	0.0200	0.0400	0.0800	0.160	0.400
			619680	1291872	2702973	4676667	10581270	1.00	2.00	4.00	8.00	16.0
Propylbenzene	CBZd 5	Ave	3545	6527	11389	22978	61876	0.0200	0.0400	0.0800	0.160	0.400
			162793	354102	751306	1342310	3255751	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
2-Chlorotoluene	CBZd 5	Ave	4126 157132	6694 333374	12209 692051	23459 1193527	62820 2781675	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	12682 605609	22317 1303962	43683 2740797	87555 4845851	231995 10995513	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Lin1	++++ 244828	++++ 524101	18083 1099439	37017 1932203	95792 4503336	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 225351	++++ 527224	++++ 1175360	26923 2148167	79203 5246512	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	7662 386206	14259 812284	28397 1625532	57543 2850078	154065 5989503	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11693 549927	22144 1183628	42446 2515614	83223 4656890	215060 10078350	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	10703 520658	20437 1117062	40145 2348070	78441 4322006	202848 9118755	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	16797 775934	30251 1677953	56852 3559589	114293 6599605	298383 13743682	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	8581 351654	15661 775428	28033 1704781	54101 3212950	136687 7153027	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 337367	++++ 815150	++++ 1864979	++++ 3620768	37546 8314062	113885 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7947 336295	14394 746169	25865 1643413	50401 3062438	128080 7002419	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	12326 617168	23274 1314396	44768 2745113	90912 4908356	240183 10778521	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	11190 514577	20826 1082845	38988 2232197	79211 3917469	204927 8858717	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	10769 492757	19273 1082048	35661 2343708	70126 4411376	188062 9038955	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	8393 353004	15171 776291	27892 1715395	54498 3252238	138306 6993755	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 393793	++++ 901129	++++ 1997698	++++ 3869631	52088 7980555	145299 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	12186 654668	22609 1387617	46347 2907810	93855 5414943	251979 10355110	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 441877	++++ 924853	++++ 1846517	++++ 3325148	58868 6962530	162146 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 178449	5000 412385	9382 928720	19327 ++++	59034 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	10415 584141	18414 1281919	36923 2762451	77678 5169036	211664 11505782	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 428247	++++ 940184	++++ 1956105	50308 3504521	138324 ++++	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 ++++

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Lin1	++++ 255822	++++ 605730	13247 1430337	27410 ++++	76796 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Naphthalene	CBZd 5	Ave	++++ 591214	16787 1320630	32092 2816456	65571 5259311	184664 12701015	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	8992 334056	15078 739806	27202 1646161	50558 2999218	121678 5786078	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	7516 305351	10800 674773	19673 1468485	38937 2709115	98554 5313205	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 223829	++++ 555653	++++ 1308281	23671 ++++	52618 ++++	++++ 1.00	++++ 2.00	++++ 4.00	0.160 ++++	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 347276	++++ 788345	20912 1640040	40771 ++++	85954 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1156116 1057465	1128690 1071605	1108968 1108097	1061718 925381	1069670 985627	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD Lin1 = Linear 1/conc ISTD LinF = Linear ISTD forced zero QuaF = Quadratic ISTD forced zero
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FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	5.7						50				
Propene	+++++	+++++	17.9						50			
Dichlorodifluoromethane	15.4						50					
Chloromethane	+++++	+++++	+++++	14.3						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	7.4						50				
Vinyl chloride	+++++	12.0						50				
Butane	+++++	+++++	6.6						50			
1,3-Butadiene	+++++	+++++	1.5						50			
Bromomethane	+++++	+++++	0.8						50			
Chloroethane	+++++	+++++	6.3						50			
Ethanol	+++++	+++++	9.1						50			
Vinyl bromide	+++++	8.2						50				
2-Methylbutane	+++++	+++++	5.8						50			
Trichlorofluoromethane	+++++	6.3						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	2.6						50		
Acetonitrile	+++++	+++++	+++++	0.6						50		
Acetone	+++++	+++++	+++++	12.3						80		
Pentane	+++++	+++++	+++++	4.0						50		
Isopropyl alcohol	15.8						50					
Ethyl ether	+++++	9.3						50				
1,1-Dichloroethene	+++++	11.6						50				
Acrylonitrile	+++++	+++++	-5.8						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	10.5						50				
tert-Butyl alcohol	+++++	+++++	-4.0						50			
Methylene Chloride	+++++	+++++	+++++	51.1						80		
3-Chloropropene	+++++	+++++	22.4						50			
Carbon disulfide	+++++	+++++	1.3						50			
trans-1,2-Dichloroethene	+++++	11.8						50				
2-Methylpentane	+++++	4.9						50				
Methyl tert-butyl ether	+++++	+++++	-3.9						50			
1,1-Dichloroethane	+++++	6.1						50				
Vinyl acetate	+++++	+++++	-15.2						50			
Hexane	+++++	7.6						50				
2-Butanone (MEK)	+++++	+++++	+++++	-5.4						50		
cis-1,2-Dichloroethene	+++++	8.2						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-3.0						50			
Chloroform	+++++	5.0						50				
Tetrahydrofuran	+++++	9.1						50				
1,1,1-Trichloroethane	+++++	1.6						50				
1,2-Dichloroethane	11.2						50					
Cyclohexane	+++++	+++++	-10.1						50			
Benzene	+++++	5.9						50				
Carbon tetrachloride	9.4						50					
1-Butanol	+++++	+++++	+++++	-15.7							50	
2,3-Dimethylpentane	+++++	0.7						50				
Thiophene	+++++	0.8						50				
2,2,4-Trimethylpentane	+++++	5.2						50				
Heptane	+++++	0.7						50				
1,2-Dichloropropane	+++++	2.4						50				
Trichloroethene	16.1						50					
Dibromomethane	+++++	13.7						50				
Bromodichloromethane	4.9						50					
1,4-Dioxane	+++++	6.8						50				
Methyl methacrylate	6.7						50					
Methylcyclohexane	+++++	+++++	-19.5						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	-5.7						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	2.9						50					
trans-1,3-Dichloropropene	1.8						50					
Toluene	+++++	5.2						50				
1,1,2-Trichloroethane	9.3						50					
2-Hexanone	+++++	+++++	+++++	-24.4						50		
Octane	5.6						50					
Dibromochloromethane	-6.6						50					
1,2-Dibromoethane (EDB)	9.6						50					
Tetrachloroethene	16.0						50					
Chlorobenzene	16.6						50					
Ethylbenzene	11.3						50					
m-Xylene & p-Xylene	8.0						50					
Nonane	0.1						50					
Bromoform	+++++	+++++	-33.9						50			
Styrene	-4.4						50					
o-Xylene	13.6						50					
1,1,2,2-Tetrachloroethane	-1.4						50					
1,2,3-Trichloropropane	7.7						50					
Isopropylbenzene	14.4						50					
Propylbenzene	-2.4						50					
2-Chlorotoluene	16.0						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	-3.9						50					
1,3,5-Trimethylbenzene	+++++	+++++	14.0						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-32.4						50		
Decane	-6.0						50					
tert-Butylbenzene	-5.3						50					
1,2,4-Trimethylbenzene	-7.1						50					
sec-Butylbenzene	-2.4						50					
1,3-Dichlorobenzene	2.7						50					
Benzyl chloride	+++++	+++++	+++++	-39.2						50		
1,4-Dichlorobenzene	0.5						50					
4-Isopropyltoluene	-7.8						50					
1,2,3-Trimethylbenzene	-1.0						50					
Indane	-2.7						50					
1,2-Dichlorobenzene	0.9						50					
Indene	+++++	+++++	+++++	-24.4						50		
Butylbenzene	-11.7						50					
Undecane	+++++	+++++	+++++	-13.7						50		
1,2-Dibromo-3-Chloropropane	+++++	-25.3	+++++	+++++					50			
1,2,4,5-Tetramethylbenzene	-16.3						50					
Dodecane	+++++	+++++	+++++	-24.3	+++++					50		
1,2,4-Trichlorobenzene	+++++	+++++	34.3	+++++	+++++				50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-30.2						80				
Hexachlorobutadiene	14.5						50					
1,2,3-Trichlorobenzene	13.5						50					
2-Methylnaphthalene	+++++	+++++	+++++	-31.4						80		
1-Methylnaphthalene	+++++	+++++	-18.1	+++++					80			
			+++++	+++++								

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 06/21/2017 17:00
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/21/2017 22:43
 Lab File ID: GA11ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.7395	0.6739			2.00	-8.9	35.0
3-Methylthiophene	Ave	0.7319	0.6589			2.00	-10.0	35.0
2-Ethylthiophene	Ave	0.9478	0.8011			2.00	-15.5	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.8235			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.8516	0.6095			2.00	-28.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.167	0.8355			2.00	-28.4	35.0
Benzo (b) thiophene	Ave	1.068	0.7208			2.00	-32.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.638		2.01	2.00	0.7	35.0
Propene	Ave	1.463	1.485		2.03	2.00	1.5	35.0
Dichlorodifluoromethane	Ave	4.235	4.340		2.05	2.00	2.5	35.0
Chloromethane	Ave	0.4649	0.4832		2.08	2.00	3.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.577		2.08	2.00	4.1	35.0
Acetaldehyde	Ave	0.5987	0.4752		7.94	10.0	-20.6	35.0
Vinyl chloride	Ave	1.611	1.638		2.03	2.00	1.7	35.0
1,3-Butadiene	Ave	1.245	1.289		2.07	2.00	3.6	35.0
Butane	Ave	2.712	2.809		2.07	2.00	3.5	35.0
Bromomethane	Ave	1.392	1.376		1.98	2.00	-1.1	35.0
Chloroethane	Ave	0.7761	0.7850		2.02	2.00	1.1	35.0
Ethanol	Ave	0.7042	0.5103		7.25	10.0	-27.5	35.0
Vinyl bromide	Ave	1.290	1.377		2.13	2.00	6.7	35.0
2-Methylbutane	Ave	1.947	1.999		2.05	2.00	2.7	35.0
Trichlorofluoromethane	Ave	4.152	4.112		1.98	2.00	-1.0	35.0
Acrolein	Ave	0.3574	0.2736		1.53	2.00	-23.4	35.0
Acetonitrile	Ave	0.5574	0.4415		1.58	2.00	-20.8	35.0
Acetone	Ave	0.6013	0.5234		1.74	2.00	-13.0	35.0
Pentane	Ave	0.2653	0.2805		2.11	2.00	5.7	35.0
Isopropyl alcohol	Ave	1.603	1.950		2.43	2.00	21.6	35.0
Ethyl ether	Ave	1.725	1.471		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.412	1.470		2.08	2.00	4.1	35.0
Acrylonitrile	Ave	0.9747	0.8590		1.76	2.00	-11.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.092		2.02	2.00	1.0	35.0
tert-Butyl alcohol	Ave	2.196	2.417		2.20	2.00	10.0	35.0
Methylene Chloride	Ave	1.643	1.409		1.72	2.00	-14.2	35.0
3-Chloropropene	Ave	1.751	1.584		1.81	2.00	-9.6	35.0
Carbon disulfide	Ave	4.284	4.357		2.03	2.00	1.7	35.0
trans-1,2-Dichloroethene	Ave	1.414	1.448		2.05	2.00	2.4	35.0
2-Methylpentane	Ave	4.045	3.765		1.86	2.00	-6.9	35.0
Methyl tert-butyl ether	Ave	3.932	3.361		1.71	2.00	-14.5	35.0
1,1-Dichloroethane	Ave	2.906	2.821		1.94	2.00	-2.9	35.0
Vinyl acetate	Ave	4.034	3.285		1.63	2.00	-18.6	35.0
2-Butanone (MEK)	Ave	0.6347	0.5473		1.72	2.00	-13.8	35.0
Hexane	Ave	1.304	1.314		2.02	2.00	0.8	35.0
Isopropyl ether	Ave	4.992	4.538		1.82	2.00	-9.1	35.0
cis-1,2-Dichloroethene	Ave	1.447	1.467		2.03	2.00	1.4	35.0
Ethyl acetate	Ave	3.312	2.660		1.61	2.00	-19.7	35.0
Chloroform	Ave	3.344	3.175		1.90	2.00	-5.1	35.0
Tert-butyl ethyl ether	Ave	4.607	3.821		1.66	2.00	-17.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.483		1.67	2.00	-16.3	35.0
1,1,1-Trichloroethane	Ave	3.620	3.468		1.92	2.00	-4.2	35.0
1,2-Dichloroethane	Ave	0.3910	0.3830		1.96	2.00	-2.1	35.0
Cyclohexane	Ave	0.1314	0.1432		2.18	2.00	8.9	35.0
Benzene	Ave	0.7153	0.7639		2.14	2.00	6.8	35.0
Carbon tetrachloride	Ave	0.5933	0.6444		2.17	2.00	8.6	35.0
1-Butanol	Ave	0.0896	0.1078		2.41	2.00	20.4	35.0
2,3-Dimethylpentane	Ave	0.1886	0.1955		2.07	2.00	3.6	35.0
Thiophene	Ave	0.4156	0.4158		2.00	2.00	0.0	35.0
2,2,4-Trimethylpentane	Ave	1.401	1.433		2.05	2.00	2.3	35.0
Heptane	Ave	0.2875	0.2905		2.02	2.00	1.0	35.0
1,2-Dichloropropane	Ave	0.2813	0.2642		1.88	2.00	-6.1	35.0
Trichloroethene	Ave	0.3257	0.3391		2.08	2.00	4.1	35.0
Dibromomethane	Ave	0.2963	0.2956		2.00	2.00	-0.2	35.0
Bromodichloromethane	Ave	0.5843	0.5891		2.02	2.00	0.8	35.0
1,4-Dioxane	Ave	0.0832	0.0836		2.01	2.00	0.5	35.0
Methyl methacrylate	Ave	0.3595	0.3109		1.73	2.00	-13.5	35.0
Methylcyclohexane	Ave	0.4896	0.6141		2.51	2.00	25.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.5532		1.96	2.00	-1.8	35.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4212		1.97	2.00	-1.5	35.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4178		1.94	2.00	-3.1	35.0
Toluene	Ave	0.8801	0.8270		1.88	2.00	-6.0	35.0
1,1,2-Trichloroethane	Ave	0.2685	0.2546		1.90	2.00	-5.2	35.0
2-Hexanone	Ave	0.2641	0.2800		2.12	2.00	6.0	35.0
Octane	Ave	0.3165	0.3309		2.09	2.00	4.5	35.0
Dibromochloromethane	Ave	0.5446	0.5759		2.12	2.00	5.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4594		1.97	2.00	-1.3	35.0
Tetrachloroethene	Ave	0.3302	0.3391		2.05	2.00	2.7	35.0
2,3-Dimethylheptane	Ave	1.076	0.9762		1.82	2.00	-9.2	35.0
Chlorobenzene	Ave	0.6841	0.6891		2.01	2.00	0.7	35.0
Ethylbenzene	Ave	1.196	1.091		1.82	2.00	-8.8	35.0
m-Xylene & p-Xylene	Ave	0.9148	0.8433		3.69	4.00	-7.8	35.0
Nonane	Ave	0.6507	0.6606		2.03	2.00	1.5	35.0
Bromoform	Ave	0.4761	0.5196		2.18	2.00	9.1	35.0
Styrene	Ave	0.6323	0.5922		1.87	2.00	-6.3	35.0
o-Xylene	Ave	0.9646	0.8608		1.78	2.00	-10.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5907		1.82	2.00	-8.8	35.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	35.0
Isopropylbenzene	Ave	1.286	1.176		1.83	2.00	-8.5	35.0
Propylbenzene	Ave	0.3476	0.3186		1.83	2.00	-8.3	35.0
2-Chlorotoluene	Ave	0.3175	0.3028		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.090		1.70	2.00	-15.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4983		2.00	2.00	-0.2	35.0
Alpha Methyl Styrene	Ave	0.5043	0.4358		1.73	2.00	-13.6	35.0
Decane	Ave	0.7982	0.7703		1.93	2.00	-3.5	35.0
tert-Butylbenzene	Ave	1.114	0.998		1.79	2.00	-10.4	35.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9651		1.76	2.00	-11.9	35.0
sec-Butylbenzene	Ave	1.569	1.417		1.81	2.00	-9.7	35.0
1,3-Dichlorobenzene	Ave	0.7160	0.6664		1.86	2.00	-6.9	35.0
Benzyl chloride	Ave	0.9762	0.8908		1.83	2.00	-8.7	35.0
1,4-Dichlorobenzene	Ave	0.7344	0.6695		1.82	2.00	-8.8	35.0
4-Isopropyltoluene	Ave	1.255	1.122		1.79	2.00	-10.6	35.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.7182		1.45	2.00	-27.5	35.0
Butylcyclohexane	Ave	0.9039	0.8456		1.87	2.00	-6.5	35.0
Indane	Ave	0.9903	0.8594		1.74	2.00	-13.2	35.0
1,2-Dichlorobenzene	Ave	0.7165	0.6343		1.77	2.00	-11.5	35.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	35.0
Indene	Ave	0.8508	0.6491		1.53	2.00	-23.7	35.0
Undecane	Ave	0.8098	0.7744		1.91	2.00	-4.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.2570		1.73	2.00	-13.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.013		1.77	2.00	-11.3	35.0
Dodecane	Ave	0.6396	0.6522		2.04	2.00	2.0	35.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5328		1.89	2.00	-5.7	35.0
Naphthalene	Ave	1.234	1.234		2.00	2.00	0.0	35.0
Hexachlorobutadiene	Ave	0.6047	0.5411		1.79	2.00	-10.5	35.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.5256		2.11	2.00	5.4	35.0
2-Methylnaphthalene	Ave	0.6016	0.6997		2.33	2.00	16.3	50.0
1-Methylnaphthalene	Ave	0.7372	0.8235		2.23	2.00	11.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8145		3.97	4.00	-0.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.652		2.02	2.00	1.2	30.0
Propene	Ave	1.463	1.534		2.10	2.00	4.8	30.0
Dichlorodifluoromethane	Ave	4.235	4.356		2.06	2.00	2.9	30.0
Chloromethane	Ave	0.4649	0.4693		2.02	2.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.404		1.94	2.00	-2.9	30.0
Acetaldehyde	Ave	0.5987	0.5225		8.73	10.0	-12.7	30.0
Vinyl chloride	Ave	1.611	1.586		1.97	2.00	-1.5	30.0
1,3-Butadiene	Ave	1.245	1.283		2.06	2.00	3.0	30.0
Butane	Ave	2.712	2.755		2.03	2.00	1.6	30.0
Bromomethane	Ave	1.392	1.313		1.89	2.00	-5.7	30.0
Chloroethane	Ave	0.7761	0.7469		1.92	2.00	-3.8	30.0
Ethanol	Ave	0.7042	0.7541		10.7	10.0	7.1	30.0
Vinyl bromide	Ave	1.290	1.209		1.87	2.00	-6.3	30.0
2-Methylbutane	Ave	1.947	1.895		1.95	2.00	-2.7	30.0
Trichlorofluoromethane	Ave	4.152	4.042		1.95	2.00	-2.7	30.0
Acrolein	Ave	0.3574	0.3194		1.79	2.00	-10.6	30.0
Acetonitrile	Ave	0.5574	0.5302		1.90	2.00	-4.9	30.0
Acetone	Ave	0.6013	0.4988		4.98	6.00	-17.0	30.0
Pentane	Ave	0.2653	0.2565		1.93	2.00	-3.3	30.0
Isopropyl alcohol	Ave	1.603	1.779		6.66	6.00	10.9	30.0
Ethyl ether	Ave	1.725	1.691		1.96	2.00	-2.0	30.0
1,1-Dichloroethene	Ave	1.412	1.514		2.14	2.00	7.2	30.0
Acrylonitrile	Ave	0.9747	0.9432		1.94	2.00	-3.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.167		2.07	2.00	3.5	30.0
tert-Butyl alcohol	Ave	2.196	2.812		2.56	2.00	28.0	30.0
Methylene Chloride	Ave	1.643	1.484		1.81	2.00	-9.7	30.0
3-Chloropropene	Ave	1.751	1.648		1.88	2.00	-5.9	30.0
Carbon disulfide	Ave	4.284	4.628		2.16	2.00	8.0	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.521		2.15	2.00	7.6	30.0
2-Methylpentane	Ave	4.045	4.401		2.18	2.00	8.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.883		1.97	2.00	-1.3	30.0
1,1-Dichloroethane	Ave	2.906	2.982		2.05	2.00	2.6	30.0
Vinyl acetate	Ave	4.034	3.919		1.94	2.00	-2.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.6318		1.99	2.00	-0.5	30.0
Hexane	Ave	1.304	1.409		2.16	2.00	8.1	30.0
Isopropyl ether	Ave	4.992	5.130		2.06	2.00	2.8	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.511		2.09	2.00	4.4	30.0
Ethyl acetate	Ave	3.312	3.321		2.01	2.00	0.3	30.0
Chloroform	Ave	3.344	3.351		2.00	2.00	0.2	30.0
Tert-butyl ethyl ether	Ave	4.607	4.651		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.780		2.01	2.00	0.4	30.0
1,1,1-Trichloroethane	Ave	3.620	3.686		2.04	2.00	1.8	30.0
1,2-Dichloroethane	Ave	0.3910	0.3917		2.00	2.00	0.2	30.0
Cyclohexane	Ave	0.1314	0.1477		2.25	2.00	12.4	30.0
Benzene	Ave	0.7153	0.7399		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6573		2.22	2.00	10.8	30.0
1-Butanol	Ave	0.0896	0.1263		2.82	2.00	41.0*	30.0
2,3-Dimethylpentane	Ave	0.1886	0.2098		2.22	2.00	11.2	30.0
Thiophene	Ave	0.4156	0.4526		2.18	2.00	8.9	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.515		2.16	2.00	8.2	30.0
Heptane	Ave	0.2875	0.3131		2.18	2.00	8.9	30.0
1,2-Dichloropropane	Ave	0.2813	0.2865		2.04	2.00	1.8	30.0
Trichloroethene	Ave	0.3257	0.3404		2.09	2.00	4.5	30.0
Dibromomethane	Ave	0.2963	0.3076		2.08	2.00	3.8	30.0
Bromodichloromethane	Ave	0.5843	0.6356		2.18	2.00	8.8	30.0
1,4-Dioxane	Ave	0.0832	0.1054		2.53	2.00	26.7	30.0
Methyl methacrylate	Ave	0.3595	0.3845		2.14	2.00	7.0	30.0
Methylcyclohexane	Ave	0.4896	0.5279		2.16	2.00	7.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.6430		2.28	2.00	14.2	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4641		2.17	2.00	8.5	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4612		2.14	2.00	7.0	30.0
Toluene	Ave	0.8801	0.8908		2.02	2.00	1.2	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2829		2.11	2.00	5.3	30.0
2-Hexanone	Ave	0.2641	0.3188		2.41	2.00	20.7	30.0
Octane	Ave	0.3165	0.3439		2.17	2.00	8.7	30.0
Dibromochloromethane	Ave	0.5446	0.5989		2.20	2.00	10.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4929		2.12	2.00	5.8	30.0
Tetrachloroethene	Ave	0.3302	0.3406		2.06	2.00	3.1	30.0
2,3-Dimethylheptane	Ave	1.076	1.161		2.16	2.00	8.0	30.0
Chlorobenzene	Ave	0.6841	0.7203		2.11	2.00	5.3	30.0
Ethylbenzene	Ave	1.196	1.211		2.03	2.00	1.3	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.9437		4.13	4.00	3.2	30.0
Nonane	Ave	0.6507	0.7098		2.18	2.00	9.1	30.0
Bromoform	Ave	0.4761	0.5476		2.30	2.00	15.0	30.0
Styrene	Ave	0.6323	0.6714		2.12	2.00	6.2	30.0
o-Xylene	Ave	0.9646	0.9910		2.05	2.00	2.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.6633		2.05	2.00	2.4	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.2051		1.98	2.00	-1.2	30.0
Isopropylbenzene	Ave	1.286	1.274		1.98	2.00	-1.0	30.0
Propylbenzene	Ave	0.3476	0.3424		1.97	2.00	-1.5	30.0
2-Chlorotoluene	Ave	0.3175	0.3184		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.295		2.02	2.00	0.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4918		1.97	2.00	-1.5	30.0
Alpha Methyl Styrene	Ave	0.5043	0.5202		2.06	2.00	3.1	30.0
Decane	Ave	0.7982	0.8625		2.16	2.00	8.1	30.0
tert-Butylbenzene	Ave	1.114	1.103		1.98	2.00	-1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.096	1.089		1.99	2.00	-0.6	30.0
sec-Butylbenzene	Ave	1.569	1.580		2.01	2.00	0.7	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.7287		2.04	2.00	1.8	30.0
Benzyl chloride	Ave	0.9762	1.033		2.12	2.00	5.8	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.7367		2.01	2.00	0.3	30.0
4-Isopropyltoluene	Ave	1.255	1.277		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	1.101		2.22	2.00	11.1	30.0
Butylcyclohexane	Ave	0.9039	0.9644		2.13	2.00	6.7	30.0
Indane	Ave	0.9903	0.9865		1.99	2.00	-0.4	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.7004		1.95	2.00	-2.3	30.0
Butylbenzene	Ave	1.277	1.325		2.08	2.00	3.8	30.0
Indene	Ave	0.8508	0.8688		2.04	2.00	2.1	30.0
Undecane	Ave	0.8098	0.8597		2.12	2.00	6.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3582		2.42	2.00	20.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.185		2.07	2.00	3.7	30.0
Dodecane	Ave	0.6396	0.6319		1.98	2.00	-1.2	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5181		1.83	2.00	-8.3	30.0
Naphthalene	Ave	1.234	1.197		1.94	2.00	-3.0	30.0
Hexachlorobutadiene	Ave	0.6047	0.5124		1.69	2.00	-15.3	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4625		1.85	2.00	-7.3	30.0
2-Methylnaphthalene	Ave	0.6016	0.4938		1.64	2.00	-17.9	50.0
1-Methylnaphthalene	Ave	0.7372	0.5485		1.49	2.00	-25.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8212		4.01	4.00	0.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.231		1.97	2.00	-1.5	35.0
Propene	Ave	1.491	1.400		1.88	2.00	-6.1	35.0
Dichlorodifluoromethane	Ave	5.038	4.975		1.97	2.00	-1.3	35.0
Chloromethane	Ave	0.5876	0.5516		1.88	2.00	-6.1	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.543		2.04	2.00	2.0	35.0
Vinyl chloride	Ave	1.827	1.812		1.98	2.00	-0.8	35.0
Acetaldehyde	Ave	0.7017	0.6186		8.81	10.0	-11.9	35.0
1,3-Butadiene	Ave	1.320	1.310		1.98	2.00	-0.8	35.0
Butane	Ave	2.614	2.580		1.97	2.00	-1.3	35.0
Bromomethane	Ave	1.848	1.784		1.93	2.00	-3.4	35.0
Chloroethane	Ave	0.8331	0.8331		2.00	2.00	0.0	35.0
Ethanol	Ave	0.8189	0.6091		7.44	10.0	-25.6	35.0
Vinyl bromide	Ave	1.758	1.854		2.11	2.00	5.4	35.0
2-Methylbutane	Ave	1.939	1.998		2.06	2.00	3.0	35.0
Trichlorofluoromethane	Ave	4.604	4.525		1.97	2.00	-1.7	35.0
Acrolein	Ave	0.5850	0.6530		2.23	2.00	11.6	35.0
Acetonitrile	Ave	0.7361	0.7152		1.94	2.00	-2.8	35.0
Acetone	Ave	0.7520	0.7484		1.99	2.00	-0.5	35.0
Pentane	Ave	0.2105	0.2264		2.15	2.00	7.5	35.0
Isopropyl alcohol	QuaF		2.642		2.25	2.00	12.4	35.0
Ethyl ether	Ave	1.862	1.936		2.08	2.00	4.0	35.0
1,1-Dichloroethene	Ave	1.554	1.575		2.03	2.00	1.4	35.0
Acrylonitrile	Ave	1.195	1.264		2.12	2.00	5.8	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	3.681		1.99	2.00	-0.4	35.0
tert-Butyl alcohol	Ave	2.635	2.747		2.08	2.00	4.2	35.0
Methylene Chloride	Ave	1.636	1.497		1.83	2.00	-8.5	35.0
3-Chloropropene	Ave	1.460	1.308		1.79	2.00	-10.4	35.0
Carbon disulfide	Ave	4.496	4.585		2.04	2.00	2.0	35.0
trans-1,2-Dichloroethene	Ave	1.593	1.590		2.00	2.00	-0.2	35.0
2-Methylpentane	Ave	3.661	3.368		1.84	2.00	-8.0	35.0
Methyl tert-butyl ether	Ave	3.774	3.976		2.11	2.00	5.3	35.0
1,1-Dichloroethane	Ave	3.031	3.103		2.05	2.00	2.4	35.0
Vinyl acetate	Ave	4.329	4.787		2.21	2.00	10.6	35.0
Hexane	Ave	1.211	1.222		2.02	2.00	0.9	35.0
2-Butanone (MEK)	Ave	0.6878	0.7069		2.06	2.00	2.8	35.0
Isopropyl ether	Ave	5.664	5.931		2.09	2.00	4.7	35.0
cis-1,2-Dichloroethene	Ave	1.615	1.679		2.08	2.00	4.0	35.0
Ethyl acetate	Ave	3.858	3.811		1.98	2.00	-1.2	35.0
Chloroform	Ave	3.476	3.526		2.03	2.00	1.5	35.0
Tert-butyl ethyl ether	Ave	4.715	4.645		1.97	2.00	-1.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	1.886		2.02	2.00	0.9	35.0
1,1,1-Trichloroethane	Ave	3.305	3.421		2.07	2.00	3.5	35.0
1,2-Dichloroethane	Ave	0.4310	0.4324		2.01	2.00	0.3	35.0
Cyclohexane	Ave	0.1257	0.1289		2.05	2.00	2.5	35.0
Benzene	Ave	0.8457	0.8700		2.06	2.00	2.9	35.0
Carbon tetrachloride	Ave	0.6846	0.7122		2.08	2.00	4.0	35.0
1-Butanol	Ave	0.1144	0.1208		2.11	2.00	5.6	35.0
2,3-Dimethylpentane	Ave	0.1754	0.1733		1.98	2.00	-1.2	35.0
Thiophene	Ave	0.4839	0.4800		1.98	2.00	-0.8	35.0
2,2,4-Trimethylpentane	Ave	1.395	1.420		2.04	2.00	1.8	35.0
Heptane	Ave	0.2694	0.2742		2.04	2.00	1.8	35.0
1,2-Dichloropropane	Ave	0.3598	0.3655		2.03	2.00	1.6	35.0
Trichloroethene	Ave	0.3991	0.4065		2.04	2.00	1.8	35.0
Dibromomethane	Ave	0.4192	0.4231		2.02	2.00	0.9	35.0
Bromodichloromethane	Ave	0.6298	0.6609		2.10	2.00	4.9	35.0
1,4-Dioxane	Ave	0.1270	0.1217		1.92	2.00	-4.2	35.0
Methyl methacrylate	Ave	0.3781	0.4011		2.12	2.00	6.1	35.0
Methylcyclohexane	LinF		0.5855		2.22	2.00	11.1	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.7683		2.03	2.00	1.4	35.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5252		2.22	2.00	10.9	35.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5421		2.23	2.00	11.6	35.0
Toluene	Ave	1.139	1.196		2.10	2.00	5.0	35.0
1,1,2-Trichloroethane	Ave	0.3780	0.3876		2.05	2.00	2.5	35.0
2-Hexanone	Ave	0.3734	0.3927		2.10	2.00	5.2	35.0
Octane	Ave	0.3251	0.3451		2.12	2.00	6.2	35.0
Dibromochloromethane	Ave	0.7610	0.8504		2.24	2.00	11.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7285		2.11	2.00	5.7	35.0
Tetrachloroethene	Ave	0.4638	0.4651		2.01	2.00	0.3	35.0
Chlorobenzene	Ave	0.9365	0.9565		2.04	2.00	2.1	35.0
2,3-Dimethylheptane	Ave	1.197	1.077		1.80	2.00	-10.0	35.0
Ethylbenzene	Ave	1.450	1.522		2.10	2.00	5.0	35.0
m-Xylene & p-Xylene	Ave	1.118	1.189		4.25	4.00	6.3	35.0
Nonane	Ave	0.7205	0.7824		2.17	2.00	8.6	35.0
Bromoform	Ave	0.8550	0.9411		2.20	2.00	10.1	35.0
Styrene	Ave	0.7534	0.8717		2.31	2.00	15.7	35.0
o-Xylene	Ave	1.138	1.168		2.05	2.00	2.6	35.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	0.9802		2.13	2.00	6.3	35.0
1,2,3-Trichloropropane	Ave	0.2272	0.2354		2.07	2.00	3.6	35.0
Isopropylbenzene	Ave	1.571	1.652		2.10	2.00	5.2	35.0
Propylbenzene	Ave	0.4111	0.4566		2.22	2.00	11.1	35.0
2-Chlorotoluene	Ave	0.4027	0.4284		2.13	2.00	6.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.553		2.08	2.00	4.0	35.0
1,3,5-Trimethylbenzene	Lin1		0.7424		2.23	2.00	11.4	35.0
Alpha Methyl Styrene	Ave	0.6224	0.6616		2.13	2.00	6.3	35.0
Decane	Ave	0.9226	1.006		2.18	2.00	9.0	35.0
tert-Butylbenzene	Ave	1.398	1.493		2.14	2.00	6.8	35.0
1,2,4-Trimethylbenzene	Ave	1.303	1.389		2.13	2.00	6.6	35.0
sec-Butylbenzene	Ave	1.948	2.098		2.15	2.00	7.7	35.0
1,3-Dichlorobenzene	Ave	0.9455	0.9755		2.06	2.00	3.2	35.0
Benzyl chloride	Ave	0.9648	1.027		2.13	2.00	6.4	35.0
1,4-Dichlorobenzene	Ave	0.8947	0.9383		2.10	2.00	4.9	35.0
4-Isopropyltoluene	Ave	1.512	1.631		2.16	2.00	7.9	35.0
1,2,3-Trimethylbenzene	Ave	1.280	0.9816		1.53	2.00	-23.3	35.0
Butylcyclohexane	Ave	1.039	1.012		1.95	2.00	-2.6	35.0
1,2-Dichlorobenzene	Ave	0.9417	0.9787		2.08	2.00	3.9	35.0
Indane	Ave	1.252	1.300		2.08	2.00	3.9	35.0
Indene	Ave	1.077	0.9377		1.74	2.00	-12.9	35.0
Butylbenzene	Ave	1.562	1.735		2.22	2.00	11.0	35.0
Undecane	Ave	1.067	1.128		2.11	2.00	5.7	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.4026		2.06	2.00	3.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.478		2.10	2.00	4.9	35.0
Dodecane	Ave	1.039	1.175		2.26	2.00	13.1	35.0
1,2,4-Trichlorobenzene	Lin1		0.7912		2.07	2.00	3.6	35.0
Naphthalene	Ave	1.402	1.687		2.41	2.00	20.3	35.0
Hexachlorobutadiene	Ave	0.8888	0.9262		2.08	2.00	4.2	35.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.8815		2.35	2.00	17.7	35.0
2-Methylnaphthalene	Ave	0.5392	0.5260		1.95	2.00	-2.4	50.0
1-Methylnaphthalene	Ave	0.7641	0.6284		1.65	2.00	-17.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6484		3.98	4.00	-0.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27935/2 Calibration Date: 02/25/2019 09:47
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.052		0.930	1.00	-7.0	30.0
Propene	Ave	1.491	1.278		0.857	1.00	-14.3	30.0
Dichlorodifluoromethane	Ave	5.038	4.646		0.922	1.00	-7.8	30.0
Chloromethane	Ave	0.5876	0.5314		0.904	1.00	-9.6	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.214		0.925	1.00	-7.5	30.0
Vinyl chloride	Ave	1.827	1.736		0.950	1.00	-5.0	30.0
Acetaldehyde	Ave	0.7017	0.6122		4.36	5.00	-12.8	30.0
Butane	Ave	2.614	2.496		0.955	1.00	-4.5	30.0
1,3-Butadiene	Ave	1.320	1.226		0.929	1.00	-7.1	30.0
Bromomethane	Ave	1.848	1.773		0.959	1.00	-4.1	30.0
Chloroethane	Ave	0.8331	0.7885		0.947	1.00	-5.3	30.0
Ethanol	Ave	0.8189	0.6238		3.81	5.00	-23.8	30.0
Vinyl bromide	Ave	1.758	1.779		1.01	1.00	1.2	30.0
2-Methylbutane	Ave	1.939	1.858		0.958	1.00	-4.2	30.0
Trichlorofluoromethane	Ave	4.604	4.296		0.933	1.00	-6.7	30.0
Acrolein	Ave	0.5850	0.5626		0.962	1.00	-3.8	30.0
Acetonitrile	Ave	0.7361	0.6933		0.942	1.00	-5.8	30.0
Acetone	Ave	0.7520	0.7397		0.984	1.00	-1.6	30.0
Pentane	Ave	0.2105	0.2035		0.967	1.00	-3.3	30.0
Isopropyl alcohol	QuaF		2.488		1.05	1.00	5.4	30.0
Ethyl ether	Ave	1.862	1.809		0.971	1.00	-2.9	30.0
1,1-Dichloroethene	Ave	1.554	1.442		0.928	1.00	-7.2	30.0
Acrylonitrile	Ave	1.195	1.155		0.967	1.00	-3.3	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	3.494		0.945	1.00	-5.5	30.0
tert-Butyl alcohol	Ave	2.635	2.410		0.915	1.00	-8.5	30.0
Methylene Chloride	Ave	1.636	1.501		0.918	1.00	-8.2	30.0
3-Chloropropene	Ave	1.460	1.369		0.938	1.00	-6.2	30.0
Carbon disulfide	Ave	4.496	4.330		0.963	1.00	-3.7	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.445		0.907	1.00	-9.3	30.0
2-Methylpentane	Ave	3.661	3.098		0.846	1.00	-15.4	30.0
Methyl tert-butyl ether	Ave	3.774	3.507		0.929	1.00	-7.1	30.0
1,1-Dichloroethane	Ave	3.031	2.861		0.944	1.00	-5.6	30.0
Vinyl acetate	Ave	4.329	4.194		0.969	1.00	-3.1	30.0
Hexane	Ave	1.211	1.109		0.916	1.00	-8.4	30.0
2-Butanone (MEK)	Ave	0.6878	0.6353		0.924	1.00	-7.6	30.0
Isopropyl ether	Ave	5.664	5.353		0.945	1.00	-5.5	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.528		0.946	1.00	-5.4	30.0
Ethyl acetate	Ave	3.858	3.466		0.898	1.00	-10.2	30.0
Chloroform	Ave	3.476	3.342		0.962	1.00	-3.8	30.0
Tert-butyl ethyl ether	Ave	4.715	4.085		0.866	1.00	-13.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27935/2 Calibration Date: 02/25/2019 09:47
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	1.709		0.914	1.00	-8.6	30.0
1,1,1-Trichloroethane	Ave	3.305	3.079		0.932	1.00	-6.8	30.0
1,2-Dichloroethane	Ave	0.4310	0.3903		0.906	1.00	-9.4	30.0
Cyclohexane	Ave	0.1257	0.1089		0.866	1.00	-13.4	30.0
Benzene	Ave	0.8457	0.7858		0.929	1.00	-7.1	30.0
Carbon tetrachloride	Ave	0.6846	0.6360		0.929	1.00	-7.1	30.0
1-Butanol	Ave	0.1144	0.1021		0.892	1.00	-10.8	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1580		0.901	1.00	-9.9	30.0
Thiophene	Ave	0.4839	0.4321		0.893	1.00	-10.7	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.261		0.904	1.00	-9.6	30.0
Heptane	Ave	0.2694	0.2374		0.881	1.00	-11.9	30.0
1,2-Dichloropropane	Ave	0.3598	0.3324		0.924	1.00	-7.6	30.0
Trichloroethene	Ave	0.3991	0.3582		0.898	1.00	-10.2	30.0
Dibromomethane	Ave	0.4192	0.3905		0.931	1.00	-6.9	30.0
Bromodichloromethane	Ave	0.6298	0.5961		0.947	1.00	-5.3	30.0
1,4-Dioxane	Ave	0.1270	0.1127		0.888	1.00	-11.2	30.0
Methyl methacrylate	Ave	0.3781	0.3458		0.915	1.00	-8.5	30.0
Methylcyclohexane	LinF		0.5101		0.968	1.00	-3.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.6753		0.891	1.00	-10.9	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.4591		0.970	1.00	-3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.4683		0.964	1.00	-3.6	30.0
Toluene	Ave	1.139	1.073		0.943	1.00	-5.7	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.3641		0.963	1.00	-3.7	30.0
2-Hexanone	Ave	0.3734	0.3396		0.909	1.00	-9.1	30.0
Octane	Ave	0.3251	0.3093		0.951	1.00	-4.9	30.0
Dibromochloromethane	Ave	0.7610	0.7516		0.988	1.00	-1.2	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.6547		0.950	1.00	-5.0	30.0
Tetrachloroethene	Ave	0.4638	0.4299		0.927	1.00	-7.3	30.0
Chlorobenzene	Ave	0.9365	0.8664		0.925	1.00	-7.5	30.0
2,3-Dimethylheptane	Ave	1.197	1.016		0.849	1.00	-15.1	30.0
Ethylbenzene	Ave	1.450	1.345		0.927	1.00	-7.3	30.0
m-Xylene & p-Xylene	Ave	1.118	1.087		1.95	2.00	-2.7	30.0
Nonane	Ave	0.7205	0.7005		0.972	1.00	-2.8	30.0
Bromoform	Ave	0.8550	0.7719		0.903	1.00	-9.7	30.0
Styrene	Ave	0.7534	0.7526		0.999	1.00	-0.1	30.0
o-Xylene	Ave	1.138	1.089		0.957	1.00	-4.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	0.9178		0.995	1.00	-0.5	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2123		0.934	1.00	-6.6	30.0
Isopropylbenzene	Ave	1.571	1.509		0.961	1.00	-3.9	30.0
Propylbenzene	Ave	0.4111	0.3943		0.959	1.00	-4.1	30.0
2-Chlorotoluene	Ave	0.4027	0.3889		0.966	1.00	-3.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27935/2 Calibration Date: 02/25/2019 09:47
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.382		0.925	1.00	-7.5	30.0
1,3,5-Trimethylbenzene	Lin1		0.6694		1.02	1.00	2.0	30.0
Alpha Methyl Styrene	Ave	0.6224	0.5299		0.851	1.00	-14.9	30.0
Decane	Ave	0.9226	0.9368		1.02	1.00	1.5	30.0
tert-Butylbenzene	Ave	1.398	1.352		0.967	1.00	-3.3	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.268		0.973	1.00	-2.7	30.0
sec-Butylbenzene	Ave	1.948	1.908		0.979	1.00	-2.1	30.0
1,3-Dichlorobenzene	Ave	0.9455	0.8424		0.891	1.00	-10.9	30.0
Benzyl chloride	Ave	0.9648	0.8377		0.868	1.00	-13.2	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.7880		0.881	1.00	-11.9	30.0
4-Isopropyltoluene	Ave	1.512	1.497		0.990	1.00	-1.0	30.0
1,2,3-Trimethylbenzene	Ave	1.280	0.8970		0.701	1.00	-29.9	30.0
Butylcyclohexane	Ave	1.039	0.9808		0.944	1.00	-5.6	30.0
1,2-Dichlorobenzene	Ave	0.9417	0.8415		0.894	1.00	-10.6	30.0
Indane	Ave	1.252	1.169		0.934	1.00	-6.6	30.0
Butylbenzene	Ave	1.562	1.622		1.04	1.00	3.8	30.0
Indene	Ave	1.077	0.7733		0.718	1.00	-28.2	30.0
Undecane	Ave	1.067	1.019		0.955	1.00	-4.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3430		0.878	1.00	-12.2	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.176		0.835	1.00	-16.5	30.0
Dodecane	Ave	1.039	0.8937		0.861	1.00	-13.9	30.0
1,2,4-Trichlorobenzene	Lin1		0.4540		0.642	1.00	-35.8*	30.0
Naphthalene	Ave	1.402	0.8222		0.586	1.00	-41.4*	30.0
Hexachlorobutadiene	Ave	0.8888	0.7763		0.873	1.00	-12.7	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.5453		0.728	1.00	-27.2	30.0
2-Methylnaphthalene	Ave	0.5392	0.0719			1.00	-86.7*	50.0
1-Methylnaphthalene	Ave	0.7641	0.1143			1.00	-85.0*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6697		4.11	4.00	2.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.582		1.09	1.00	9.2	30.0
Propene	Ave	1.491	1.525		1.02	1.00	2.3	30.0
Dichlorodifluoromethane	Ave	5.038	5.333		1.06	1.00	5.9	30.0
Chloromethane	Ave	0.5876	0.6486		1.10	1.00	10.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.636		1.05	1.00	4.6	30.0
Vinyl chloride	Ave	1.827	2.022		1.11	1.00	10.7	30.0
Acetaldehyde	Ave	0.7017	0.7335		5.23	5.00	4.5	30.0
1,3-Butadiene	Ave	1.320	1.465		1.11	1.00	11.0	30.0
Butane	Ave	2.614	3.037		1.16	1.00	16.2	30.0
Bromomethane	Ave	1.848	2.013		1.09	1.00	8.9	30.0
Chloroethane	Ave	0.8331	0.9136		1.10	1.00	9.7	30.0
Ethanol	Ave	0.8189	0.7398		4.52	5.00	-9.7	30.0
Vinyl bromide	Ave	1.758	2.069		1.18	1.00	17.6	30.0
2-Methylbutane	Ave	1.939	2.241		1.16	1.00	15.6	30.0
Trichlorofluoromethane	Ave	4.604	5.060		1.10	1.00	9.9	30.0
Acrolein	Ave	0.5850	0.6401		1.09	1.00	9.4	30.0
Acetonitrile	Ave	0.7361	0.8155		1.11	1.00	10.8	30.0
Acetone	Ave	0.7520	0.8565		1.14	1.00	13.9	30.0
Pentane	Ave	0.2105	0.2364		1.12	1.00	12.3	30.0
Isopropyl alcohol	QuaF		2.815		1.19	1.00	19.3	30.0
Ethyl ether	Ave	1.862	2.216		1.19	1.00	19.0	30.0
1,1-Dichloroethene	Ave	1.554	1.640		1.06	1.00	5.6	30.0
Acrylonitrile	Ave	1.195	1.332		1.11	1.00	11.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	4.086		1.11	1.00	10.5	30.0
tert-Butyl alcohol	Ave	2.635	2.774		1.05	1.00	5.3	30.0
Methylene Chloride	Ave	1.636	1.731		1.06	1.00	5.9	30.0
3-Chloropropene	Ave	1.460	1.651		1.13	1.00	13.1	30.0
Carbon disulfide	Ave	4.496	5.037		1.12	1.00	12.0	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.661		1.04	1.00	4.2	30.0
2-Methylpentane	Ave	3.661	3.712		1.01	1.00	1.4	30.0
Methyl tert-butyl ether	Ave	3.774	4.086		1.08	1.00	8.3	30.0
1,1-Dichloroethane	Ave	3.031	3.376		1.11	1.00	11.4	30.0
Vinyl acetate	Ave	4.329	4.892		1.13	1.00	13.0	30.0
Hexane	Ave	1.211	1.291		1.07	1.00	6.6	30.0
2-Butanone (MEK)	Ave	0.6878	0.7365		1.07	1.00	7.1	30.0
Isopropyl ether	Ave	5.664	6.416		1.13	1.00	13.3	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.767		1.09	1.00	9.4	30.0
Ethyl acetate	Ave	3.858	4.156		1.08	1.00	7.7	30.0
Chloroform	Ave	3.476	3.989		1.15	1.00	14.8	30.0
Tert-butyl ethyl ether	Ave	4.715	4.863		1.03	1.00	3.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	2.014		1.08	1.00	7.7	30.0
1,1,1-Trichloroethane	Ave	3.305	3.602		1.09	1.00	9.0	30.0
1,2-Dichloroethane	Ave	0.4310	0.4711		1.09	1.00	9.3	30.0
Benzene	Ave	0.8457	0.9162		1.08	1.00	8.3	30.0
Cyclohexane	Ave	0.1257	0.1264		1.00	1.00	0.5	30.0
Carbon tetrachloride	Ave	0.6846	0.7453		1.09	1.00	8.9	30.0
1-Butanol	Ave	0.1144	0.1225		1.07	1.00	7.1	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1843		1.05	1.00	5.1	30.0
Thiophene	Ave	0.4839	0.5031		1.04	1.00	4.0	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.506		1.08	1.00	7.9	30.0
Heptane	Ave	0.2694	0.2772		1.03	1.00	2.9	30.0
1,2-Dichloropropane	Ave	0.3598	0.3965		1.10	1.00	10.2	30.0
Trichloroethene	Ave	0.3991	0.4146		1.04	1.00	3.9	30.0
Dibromomethane	Ave	0.4192	0.4613		1.10	1.00	10.0	30.0
Bromodichloromethane	Ave	0.6298	0.7064		1.12	1.00	12.2	30.0
1,4-Dioxane	Ave	0.1270	0.1235		0.973	1.00	-2.7	30.0
Methyl methacrylate	Ave	0.3781	0.4271		1.13	1.00	13.0	30.0
Methylcyclohexane	LinF		0.5957		1.13	1.00	13.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.8028		1.06	1.00	6.0	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5430		1.15	1.00	14.7	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5432		1.12	1.00	11.9	30.0
Toluene	Ave	1.139	1.249		1.10	1.00	9.7	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.4227		1.12	1.00	11.8	30.0
2-Hexanone	Ave	0.3734	0.3986		1.07	1.00	6.7	30.0
Octane	Ave	0.3251	0.3570		1.10	1.00	9.8	30.0
Dibromochloromethane	Ave	0.7610	0.8783		1.15	1.00	15.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7564		1.10	1.00	9.7	30.0
Tetrachloroethene	Ave	0.4638	0.4906		1.06	1.00	5.8	30.0
Chlorobenzene	Ave	0.9365	1.016		1.08	1.00	8.5	30.0
2,3-Dimethylheptane	Ave	1.197	1.242		1.04	1.00	3.8	30.0
Ethylbenzene	Ave	1.450	1.579		1.09	1.00	8.9	30.0
m-Xylene & p-Xylene	Ave	1.118	1.285		2.30	2.00	14.9	30.0
Nonane	Ave	0.7205	0.8189		1.14	1.00	13.7	30.0
Bromoform	Ave	0.8550	0.8677		1.01	1.00	1.5	30.0
Styrene	Ave	0.7534	0.8913		1.18	1.00	18.3	30.0
o-Xylene	Ave	1.138	1.284		1.13	1.00	12.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	1.065		1.15	1.00	15.5	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2451		1.08	1.00	7.9	30.0
Isopropylbenzene	Ave	1.571	1.737		1.11	1.00	10.6	30.0
Propylbenzene	Ave	0.4111	0.4533		1.10	1.00	10.3	30.0
2-Chlorotoluene	Ave	0.4027	0.4454		1.11	1.00	10.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.617		1.08	1.00	8.2	30.0
1,3,5-Trimethylbenzene	Lin1		0.7773		1.18	1.00	17.9	30.0
Alpha Methyl Styrene	Ave	0.6224	0.6345		1.02	1.00	2.0	30.0
Decane	Ave	0.9226	1.120		1.21	1.00	21.4	30.0
tert-Butylbenzene	Ave	1.398	1.570		1.12	1.00	12.3	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.500		1.15	1.00	15.1	30.0
sec-Butylbenzene	Ave	1.948	2.219		1.14	1.00	13.9	30.0
1,3-Dichlorobenzene	Ave	0.9455	1.004		1.06	1.00	6.1	30.0
Benzyl chloride	Ave	0.9648	1.031		1.07	1.00	6.9	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.9350		1.05	1.00	4.5	30.0
4-Isopropyltoluene	Ave	1.512	1.756		1.16	1.00	16.2	30.0
1,2,3-Trimethylbenzene	Ave	1.280	1.068		0.835	1.00	-16.5	30.0
Butylcyclohexane	Ave	1.039	1.173		1.13	1.00	13.0	30.0
Indane	Ave	1.252	1.365		1.09	1.00	9.0	30.0
1,2-Dichlorobenzene	Ave	0.9417	1.007		1.07	1.00	7.0	30.0
Indene	Ave	1.077	0.9492		0.882	1.00	-11.8	30.0
Butylbenzene	Ave	1.562	1.974		1.26	1.00	26.3	30.0
Undecane	Ave	1.067	1.264		1.18	1.00	18.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3904		1.00	1.00	-0.0	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.500		1.06	1.00	6.4	30.0
Dodecane	Ave	1.039	1.259		1.21	1.00	21.3	30.0
1,2,4-Trichlorobenzene	Lin1		0.6653		0.910	1.00	-9.0	30.0
Naphthalene	Ave	1.402	1.620		1.16	1.00	15.5	30.0
Hexachlorobutadiene	Ave	0.8888	0.9313		1.05	1.00	4.8	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.8521		1.14	1.00	13.7	30.0
2-Methylnaphthalene	Ave	0.5392	0.4269		0.792	1.00	-20.8	50.0
1-Methylnaphthalene	Ave	0.7641	0.5441		0.712	1.00	-28.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6727		4.13	4.00	3.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27981/2 Calibration Date: 02/28/2019 13:02
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.574		1.09	1.00	9.0	30.0
Propene	Ave	1.491	1.540		1.03	1.00	3.3	30.0
Dichlorodifluoromethane	Ave	5.038	5.387		1.07	1.00	6.9	30.0
Chloromethane	Ave	0.5876	0.6291		1.07	1.00	7.1	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.765		1.08	1.00	8.4	30.0
Vinyl chloride	Ave	1.827	2.041		1.12	1.00	11.7	30.0
Acetaldehyde	Ave	0.7017	0.7245		5.16	5.00	3.3	30.0
1,3-Butadiene	Ave	1.320	1.440		1.09	1.00	9.1	30.0
Butane	Ave	2.614	2.977		1.14	1.00	13.9	30.0
Bromomethane	Ave	1.848	1.991		1.08	1.00	7.7	30.0
Chloroethane	Ave	0.8331	0.9274		1.11	1.00	11.3	30.0
Ethanol	Ave	0.8189	0.7228		4.41	5.00	-11.7	30.0
Vinyl bromide	Ave	1.758	1.991		1.13	1.00	13.2	30.0
2-Methylbutane	Ave	1.939	2.203		1.14	1.00	13.6	30.0
Trichlorofluoromethane	Ave	4.604	5.063		1.10	1.00	10.0	30.0
Acrolein	Ave	0.5850	0.6523		1.12	1.00	11.5	30.0
Acetonitrile	Ave	0.7361	0.7915		1.08	1.00	7.5	30.0
Acetone	Ave	0.7520	0.8543		1.14	1.00	13.6	30.0
Pentane	Ave	0.2105	0.2430		1.15	1.00	15.4	30.0
Isopropyl alcohol	QuaF		2.890		1.23	1.00	22.5	30.0
Ethyl ether	Ave	1.862	2.173		1.17	1.00	16.7	30.0
1,1-Dichloroethene	Ave	1.554	1.659		1.07	1.00	6.8	30.0
Acrylonitrile	Ave	1.195	1.353		1.13	1.00	13.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	4.083		1.10	1.00	10.5	30.0
tert-Butyl alcohol	Ave	2.635	2.848		1.08	1.00	8.1	30.0
Methylene Chloride	Ave	1.636	1.714		1.05	1.00	4.8	30.0
3-Chloropropene	Ave	1.460	1.638		1.12	1.00	12.2	30.0
Carbon disulfide	Ave	4.496	5.050		1.12	1.00	12.3	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.706		1.07	1.00	7.1	30.0
2-Methylpentane	Ave	3.661	3.715		1.01	1.00	1.5	30.0
Methyl tert-butyl ether	Ave	3.774	4.233		1.12	1.00	12.2	30.0
1,1-Dichloroethane	Ave	3.031	3.373		1.11	1.00	11.3	30.0
Vinyl acetate	Ave	4.329	5.025		1.16	1.00	16.1	30.0
Hexane	Ave	1.211	1.329		1.10	1.00	9.8	30.0
2-Butanone (MEK)	Ave	0.6878	0.7536		1.10	1.00	9.6	30.0
Isopropyl ether	Ave	5.664	6.464		1.14	1.00	14.1	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.798		1.11	1.00	11.4	30.0
Ethyl acetate	Ave	3.858	4.140		1.07	1.00	7.3	30.0
Chloroform	Ave	3.476	3.949		1.14	1.00	13.6	30.0
Tert-butyl ethyl ether	Ave	4.715	4.960		1.05	1.00	5.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27981/2 Calibration Date: 02/28/2019 13:02
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	2.027		1.08	1.00	8.5	30.0
1,1,1-Trichloroethane	Ave	3.305	3.686		1.12	1.00	11.5	30.0
1,2-Dichloroethane	Ave	0.4310	0.4697		1.09	1.00	9.0	30.0
Cyclohexane	Ave	0.1257	0.1361		1.08	1.00	8.2	30.0
Benzene	Ave	0.8457	0.9328		1.10	1.00	10.3	30.0
Carbon tetrachloride	Ave	0.6846	0.7610		1.11	1.00	11.2	30.0
1-Butanol	Ave	0.1144	0.1258		1.10	1.00	9.9	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1905		1.09	1.00	8.6	30.0
Thiophene	Ave	0.4839	0.5174		1.07	1.00	6.9	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.525		1.09	1.00	9.3	30.0
Heptane	Ave	0.2694	0.2871		1.07	1.00	6.6	30.0
1,2-Dichloropropane	Ave	0.3598	0.3994		1.11	1.00	11.0	30.0
Trichloroethene	Ave	0.3991	0.4352		1.09	1.00	9.0	30.0
Dibromomethane	Ave	0.4192	0.4546		1.08	1.00	8.5	30.0
Bromodichloromethane	Ave	0.6298	0.7086		1.13	1.00	12.5	30.0
1,4-Dioxane	Ave	0.1270	0.1288		1.01	1.00	1.4	30.0
Methyl methacrylate	Ave	0.3781	0.4243		1.12	1.00	12.2	30.0
Methylcyclohexane	LinF		0.6170		1.17	1.00	17.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.8163		1.08	1.00	7.7	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5512		1.16	1.00	16.4	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5595		1.15	1.00	15.2	30.0
Toluene	Ave	1.139	1.276		1.12	1.00	12.1	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.4259		1.13	1.00	12.7	30.0
2-Hexanone	Ave	0.3734	0.4079		1.09	1.00	9.2	30.0
Octane	Ave	0.3251	0.3675		1.13	1.00	13.0	30.0
Dibromochloromethane	Ave	0.7610	0.8735		1.15	1.00	14.8	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7620		1.11	1.00	10.5	30.0
Tetrachloroethene	Ave	0.4638	0.5065		1.09	1.00	9.2	30.0
Chlorobenzene	Ave	0.9365	1.021		1.09	1.00	9.0	30.0
2,3-Dimethylheptane	Ave	1.197	1.204		1.01	1.00	0.6	30.0
Ethylbenzene	Ave	1.450	1.602		1.11	1.00	10.5	30.0
m-Xylene & p-Xylene	Ave	1.118	1.283		2.29	2.00	14.7	30.0
Nonane	Ave	0.7205	0.8186		1.14	1.00	13.6	30.0
Bromoform	Ave	0.8550	0.8784		1.03	1.00	2.7	30.0
Styrene	Ave	0.7534	0.8894		1.18	1.00	18.1	30.0
o-Xylene	Ave	1.138	1.272		1.12	1.00	11.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	1.042		1.13	1.00	13.0	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2446		1.08	1.00	7.7	30.0
Isopropylbenzene	Ave	1.571	1.741		1.11	1.00	10.8	30.0
Propylbenzene	Ave	0.4111	0.4599		1.12	1.00	11.9	30.0
2-Chlorotoluene	Ave	0.4027	0.4527		1.12	1.00	12.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27981/2 Calibration Date: 02/28/2019 13:02
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.607		1.08	1.00	7.6	30.0
1,3,5-Trimethylbenzene	Lin1		0.7745		1.18	1.00	17.5	30.0
Alpha Methyl Styrene	Ave	0.6224	0.6334		1.02	1.00	1.8	30.0
Decane	Ave	0.9226	1.090		1.18	1.00	18.2	30.0
tert-Butylbenzene	Ave	1.398	1.550		1.11	1.00	10.9	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.458		1.12	1.00	11.8	30.0
sec-Butylbenzene	Ave	1.948	2.192		1.12	1.00	12.5	30.0
1,3-Dichlorobenzene	Ave	0.9455	0.9928		1.05	1.00	5.0	30.0
Benzyl chloride	Ave	0.9648	1.020		1.06	1.00	5.7	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.9363		1.05	1.00	4.6	30.0
4-Isopropyltoluene	Ave	1.512	1.727		1.14	1.00	14.2	30.0
1,2,3-Trimethylbenzene	Ave	1.280	1.038		0.811	1.00	-18.9	30.0
Butylcyclohexane	Ave	1.039	1.122		1.08	1.00	8.0	30.0
Indane	Ave	1.252	1.345		1.07	1.00	7.4	30.0
1,2-Dichlorobenzene	Ave	0.9417	0.9891		1.05	1.00	5.0	30.0
Indene	Ave	1.077	0.9199		0.854	1.00	-14.6	30.0
Butylbenzene	Ave	1.562	1.868		1.20	1.00	19.6	30.0
Undecane	Ave	1.067	1.214		1.14	1.00	13.8	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3916		1.00	1.00	0.3	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.468		1.04	1.00	4.2	30.0
Dodecane	Ave	1.039	1.120		1.08	1.00	7.8	30.0
1,2,4-Trichlorobenzene	Lin1		0.6578		0.901	1.00	-9.9	30.0
Naphthalene	Ave	1.402	1.510		1.08	1.00	7.7	30.0
Hexachlorobutadiene	Ave	0.8888	0.9004		1.01	1.00	1.3	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.7823		1.04	1.00	4.4	30.0
2-Methylnaphthalene	Ave	0.5392	0.2978		0.552	1.00	-44.8	50.0
1-Methylnaphthalene	Ave	0.7641	0.3755		0.491	1.00	-50.9*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6632		4.07	4.00	1.7	30.0

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27935/7
 Matrix: Air Lab File ID: H500BB25.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 14:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27935/7
 Matrix: Air Lab File ID: H500BB25.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 14:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27980/5
 Matrix: Air Lab File ID: HB27LOT14399MB.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 02/27/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.0691	J	0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27980/5
 Matrix: Air Lab File ID: HB27LOT14399MB.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	0.513	J	0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27981/4
 Matrix: Air Lab File ID: H500BB28.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/28/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27981 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.0681	J	0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27981/4
 Matrix: Air Lab File ID: H500BB28.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/28/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27981 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	0.505	J	0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27931/1002
 Matrix: Air Lab File ID: GCCVB26-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 11:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.07		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.22		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.02		0.080	0.015
67-66-3	Chloroform	119.38	2.00		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.09		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.06		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.05		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.00		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.14		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.03		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.81		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.97		0.40	0.068
91-20-3	Naphthalene	128.17	1.94		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.06		0.080	0.016
108-88-3	Toluene	92.14	2.02		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.15		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.83		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.04		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.11		0.080	0.021
79-01-6	Trichloroethene	131.39	2.09		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.22		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.99		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.97		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.97		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.18		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27935/1002
 Matrix: Air Lab File ID: HCCVB25-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 09:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.929		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	0.929		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	0.930		0.080	0.015
67-66-3	Chloroform	119.38	0.962		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	0.946		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	0.922		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	0.944		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	0.906		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	0.928		0.080	0.014
100-41-4	Ethylbenzene	106.17	0.927		0.080	0.027
75-09-2	Methylene Chloride	84.93	0.918		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	0.929		0.40	0.068
91-20-3	Naphthalene	128.17	0.586		0.040	0.040
127-18-4	Tetrachloroethene	165.83	0.927		0.080	0.016
108-88-3	Toluene	92.14	0.943		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	0.907		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.642		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	0.932		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	0.963		0.080	0.021
79-01-6	Trichloroethene	131.39	0.898		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	0.701		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	0.973		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.02		0.080	0.026
75-01-4	Vinyl chloride	62.50	0.950		0.040	0.029
1330-20-7	Xylenes, Total	106.17	2.91		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27980/1002
 Matrix: Air Lab File ID: HCCVB27-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 11:50
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.08		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.09		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.09		0.080	0.015
67-66-3	Chloroform	119.38	1.15		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.09		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.06		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.11		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.09		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.06		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.09		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.06		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.08		0.40	0.068
91-20-3	Naphthalene	128.17	1.16		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.06		0.080	0.016
108-88-3	Toluene	92.14	1.10		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.04		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.910		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.09		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.12		0.080	0.021
79-01-6	Trichloroethene	131.39	1.04		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	0.835		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.15		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.18		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.11		0.040	0.029
1330-20-7	Xylenes, Total	106.17	3.43		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27981/1002
 Matrix: Air Lab File ID: HCCVB28-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/28/2019 13:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27981 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.10		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.11		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.09		0.080	0.015
67-66-3	Chloroform	119.38	1.14		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.11		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.07		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.11		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.09		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.07		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.11		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.05		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.12		0.40	0.068
91-20-3	Naphthalene	128.17	1.08		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.09		0.080	0.016
108-88-3	Toluene	92.14	1.12		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.07		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.901		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.12		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.13		0.080	0.021
79-01-6	Trichloroethene	131.39	1.09		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	0.811		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.12		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.18		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.12		0.040	0.029
1330-20-7	Xylenes, Total	106.17	3.41		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Instrument ID: MG Start Date: 01/11/2019 12:24

Analysis Batch Number: 26755 End Date: 01/12/2019 04:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-26755/1		01/11/2019 12:24	1	GA11BLK1.D	RTX-5 0.32 (mm)
IC 140-26755/2		01/11/2019 13:08	1	GA11IC09.D	RTX-5 0.32 (mm)
IC 140-26755/6		01/11/2019 14:35	1	GA11IC10.D	RTX-5 0.32 (mm)
IC 140-26755/9		01/11/2019 16:46	1	GA11IC01.D	RTX-5 0.32 (mm)
IC 140-26755/10		01/11/2019 17:29	1	GA11IC02.D	RTX-5 0.32 (mm)
140-13809-A-1 MDLV		01/11/2019 17:29	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 17:29	1		RTX-5 0.32 (mm)
IC 140-26755/11		01/11/2019 18:12	1	GA11IC03.D	RTX-5 0.32 (mm)
140-13809-A-2 MDLV		01/11/2019 18:12	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:12	1		RTX-5 0.32 (mm)
IC 140-26755/12		01/11/2019 18:56	1	GA11IC04.D	RTX-5 0.32 (mm)
140-13809-A-3 MDLV		01/11/2019 18:56	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:56	1		RTX-5 0.32 (mm)
IC 140-26755/13		01/11/2019 19:40	1	GA11IC05.D	RTX-5 0.32 (mm)
140-13809-A-4 MDLV		01/11/2019 19:40	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 19:40	1		RTX-5 0.32 (mm)
IC 140-26755/14		01/11/2019 20:23	1	GA11IC06.D	RTX-5 0.32 (mm)
ICIS 140-26755/15		01/11/2019 21:07	1	GA11IC07.D	RTX-5 0.32 (mm)
IC 140-26755/16		01/11/2019 21:51	1	GA11IC08.D	RTX-5 0.32 (mm)
ICV 140-26755/18		01/11/2019 23:17	1	GA11ICV.D	RTX-5 0.32 (mm)
ZZZZZ		01/12/2019 04:26	1		RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Instrument ID: MG Start Date: 02/26/2019 11:03

Analysis Batch Number: 27931 End Date: 02/27/2019 03:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27931/1		02/26/2019 11:03	1	GBFBB26.D	RTX-5 0.32 (mm)
CCVIS 140-27931/2		02/26/2019 11:35	1	GCCVB26.D	RTX-5 0.32 (mm)
LCS 140-27931/1002		02/26/2019 11:35	1	GCCVB26-LCS.d	RTX-5 0.32 (mm)
MB 140-27931/4		02/26/2019 12:56	1	G500BB26.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 13:42	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 15:56	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 16:38	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 17:19	1		RTX-5 0.32 (mm)
140-14387-4 DL		02/26/2019 18:01	1	GB26P104.D	RTX-5 0.32 (mm)
140-14387-14 DL		02/26/2019 19:24	1	GB26P106.D	RTX-5 0.32 (mm)
140-14387-16 DL		02/26/2019 20:06	1	GB26P107.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 21:30	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 22:13	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 22:55	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 23:37	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 00:18	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 01:00	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 01:42	3.7		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 02:23	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 03:05	1		RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Instrument ID: MH Start Date: 02/20/2019 13:11

Analysis Batch Number: 27843 End Date: 02/21/2019 03:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27843/1		02/20/2019 13:11	1	HBFB20IC.D	RTX-5 0.32 (mm)
IC 140-27843/3		02/20/2019 15:12	1	HB20IC09.D	RTX-5 0.32 (mm)
IC 140-27843/5		02/20/2019 16:59	1	HB20IC10.D	RTX-5 0.32 (mm)
IC 140-27843/8		02/20/2019 19:38	1	HB20IC01.D	RTX-5 0.32 (mm)
IC 140-27843/9		02/20/2019 20:31	1	HB20IC02.D	RTX-5 0.32 (mm)
IC 140-27843/10		02/20/2019 21:26	1	HB20IC03.D	RTX-5 0.32 (mm)
IC 140-27843/11		02/20/2019 22:20	1	HB20IC04.D	RTX-5 0.32 (mm)
IC 140-27843/12		02/20/2019 23:14	1	HB20IC05.D	RTX-5 0.32 (mm)
IC 140-27843/13		02/21/2019 00:08	1	HB20IC06.D	RTX-5 0.32 (mm)
ICIS 140-27843/14		02/21/2019 01:03	1	HB20IC07.D	RTX-5 0.32 (mm)
IC 140-27843/15		02/21/2019 01:57	1	HB20IC08.D	RTX-5 0.32 (mm)
ICV 140-27843/17		02/21/2019 03:43	1	HB20ICV.D	RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Instrument ID: MH Start Date: 02/25/2019 09:19

Analysis Batch Number: 27935 End Date: 02/26/2019 07:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27935/1		02/25/2019 09:19	1	HBFB25.D	RTX-5 0.32 (mm)
CCVIS 140-27935/2		02/25/2019 09:47	1	HCCVB25.D	RTX-5 0.32 (mm)
LCS 140-27935/1002		02/25/2019 09:47	1	HCCVB25-LCS.d	RTX-5 0.32 (mm)
ZZZZZ		02/25/2019 12:00	1		RTX-5 0.32 (mm)
ZZZZZ		02/25/2019 12:57	1		RTX-5 0.32 (mm)
ZZZZZ		02/25/2019 13:50	1		RTX-5 0.32 (mm)
MB 140-27935/7		02/25/2019 14:47	1	H500BB25.D	RTX-5 0.32 (mm)
140-14387-1		02/25/2019 17:27	1	HB25P101.D	RTX-5 0.32 (mm)
140-14387-2		02/25/2019 18:20	1	HB25P102.D	RTX-5 0.32 (mm)
140-14387-3		02/25/2019 19:13	1	HB25P103.D	RTX-5 0.32 (mm)
140-14387-4		02/25/2019 20:06	1	HB25P104.D	RTX-5 0.32 (mm)
140-14387-5		02/25/2019 20:59	1	HB25P105.D	RTX-5 0.32 (mm)
140-14387-6		02/25/2019 21:53	1	HB25P106.D	RTX-5 0.32 (mm)
140-14387-7		02/25/2019 22:46	1	HB25P107.D	RTX-5 0.32 (mm)
140-14387-8		02/25/2019 23:39	1	HB25P108.D	RTX-5 0.32 (mm)
140-14387-10		02/26/2019 00:32	1	HB25P109.D	RTX-5 0.32 (mm)
140-14387-11		02/26/2019 01:24	1	HB25P110.D	RTX-5 0.32 (mm)
140-14387-12		02/26/2019 02:17	1	HB25P111.D	RTX-5 0.32 (mm)
140-14387-13		02/26/2019 03:10	1	HB25P112.D	RTX-5 0.32 (mm)
140-14387-14		02/26/2019 04:03	1	HB25P113.D	RTX-5 0.32 (mm)
140-14387-15		02/26/2019 04:56	1	HB25P114.D	RTX-5 0.32 (mm)
140-14387-16		02/26/2019 05:49	1	HB25P115.D	RTX-5 0.32 (mm)
140-14387-18		02/26/2019 06:43	1	HB25P116.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 07:36	1		RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Instrument ID: MH Start Date: 02/27/2019 11:22

Analysis Batch Number: 27980 End Date: 02/28/2019 07:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27980/1		02/27/2019 11:22	1	HBFB27.D	RTX-5 0.32 (mm)
CCVIS 140-27980/2		02/27/2019 11:50	1	HCCVB27.D	RTX-5 0.32 (mm)
LCS 140-27980/1002		02/27/2019 11:50	1	HCCVB27-LCS.d	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 13:42	1		RTX-5 0.32 (mm)
MB 140-27980/5		02/27/2019 13:42	1	HB27LOT14399MB.D	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 14:36	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 16:42	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 18:27	1.33		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 19:20	4.93		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 20:14	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 03:30	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 04:23	1		RTX-5 0.32 (mm)
140-14387-18 DL		02/28/2019 06:06	1	HB27P115.D	RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 07:01	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 07:56	1.33		RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Instrument ID: MH Start Date: 02/28/2019 12:34

Analysis Batch Number: 27981 End Date: 03/01/2019 09:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27981/1		02/28/2019 12:34	1	HBFB28.D	RTX-5 0.32 (mm)
CCVIS 140-27981/2		02/28/2019 13:02	1	HCCVB28.D	RTX-5 0.32 (mm)
LCS 140-27981/1002		02/28/2019 13:02	1	HCCVB28-LCS.d	RTX-5 0.32 (mm)
MB 140-27981/4		02/28/2019 14:24	1	H500BB28.D	RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 15:18	1		RTX-5 0.32 (mm)
140-14387-5 DL		02/28/2019 17:11	1	HB28P101.D	RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 00:15	1		RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 01:10	1		RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 02:05	1		RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 03:00	1		RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 03:57	1		RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 04:51	1		RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 08:44	1		RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 09:37	1		RTX-5 0.32 (mm)

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Batch Number: 27931 Batch Start Date: 02/26/19 11:03 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00082	40MXISSURP 00003
BFB 140-27931/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27931/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27931/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14387-A-4	SV-182-MB-3	TO 15 LL	T	11 mL	500 mL	1	1		40 mL
140-14387-A-14	SV-173-A-26	TO 15 LL	T	11 mL	500 mL	1	1		40 mL
140-14387-A-16	SV-171-A-26	TO 15 LL	T	11 mL	500 mL	1	1		40 mL
LCS 140-27931/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27931/1		TO 15 LL		40 mL					
CCVIS 140-27931/2		TO 15 LL							
MB 140-27931/4		TO 15 LL							
140-14387-A-4	SV-182-MB-3	TO 15 LL	T						
140-14387-A-14	SV-173-A-26	TO 15 LL	T						
140-14387-A-16	SV-171-A-26	TO 15 LL	T						
LCS 140-27931/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Batch Number: 27935 Batch Start Date: 02/25/19 09:19 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101S 00088	40MXISSURP 00003
BFB 140-27935/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27935/2		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL
MB 140-27935/7		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14387-A-1	SV-180-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-2	SV-179-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-3	SV-181-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-4	SV-182-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-5	SV-183-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-6	SV-184-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-7	SV-185-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-8	SV-186-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-10	SV-116-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-11	SV-DUP03-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-12	SV-138-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-13	SV-093-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-14	SV-173-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-15	SV-174-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-16	SV-171-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-18	SV-081-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27935/1002		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27935/1		TO 15 LL		40 mL					
CCVIS 140-27935/2		TO 15 LL							
MB 140-27935/7		TO 15 LL							
140-14387-A-1	SV-180-MB-3	TO 15 LL	T						
140-14387-A-2	SV-179-MB-3	TO 15 LL	T						
140-14387-A-3	SV-181-MB-3	TO 15 LL	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Batch Number: 27935 Batch Start Date: 02/25/19 09:19 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
140-14387-A-4	SV-182-MB-3	TO 15 LL	T						
140-14387-A-5	SV-183-MB-3	TO 15 LL	T						
140-14387-A-6	SV-184-MB-3	TO 15 LL	T						
140-14387-A-7	SV-185-MB-3	TO 15 LL	T						
140-14387-A-8	SV-186-MB-3	TO 15 LL	T						
140-14387-A-10	SV-116-A-26	TO 15 LL	T						
140-14387-A-11	SV-DUP03-A-26	TO 15 LL	T						
140-14387-A-12	SV-138-A-26	TO 15 LL	T						
140-14387-A-13	SV-093-A-26	TO 15 LL	T						
140-14387-A-14	SV-173-A-26	TO 15 LL	T						
140-14387-A-15	SV-174-A-26	TO 15 LL	T						
140-14387-A-16	SV-171-A-26	TO 15 LL	T						
140-14387-A-18	SV-081-A-26	TO 15 LL	T						
LCS		TO 15 LL							
140-27935/1002									

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Batch Number: 27980 Batch Start Date: 02/27/19 11:22 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101S 00087	40MXISSURP 00003
BFB 140-27980/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27980/2		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL
MB 140-27980/5		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14387-A-18	SV-081-A-26	TO 15 LL	T	10 mL	500 mL	1	1		40 mL
LCS 140-27980/1002		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27980/1		TO 15 LL		40 mL					
CCVIS 140-27980/2		TO 15 LL							
MB 140-27980/5		TO 15 LL							
140-14387-A-18	SV-081-A-26	TO 15 LL	T						
LCS 140-27980/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Batch Number: 27981 Batch Start Date: 02/28/19 12:34 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101S 00087	40MXISSURP 00003
BFB 140-27981/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27981/2		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL
MB 140-27981/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14387-A-5	SV-183-MB-3	TO 15 LL	T	20 mL	500 mL	1	1		40 mL
LCS 140-27981/1002		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27981/1		TO 15 LL		40 mL					
CCVIS 140-27981/2		TO 15 LL							
MB 140-27981/4		TO 15 LL							
140-14387-A-5	SV-183-MB-3	TO 15 LL	T						
LCS 140-27981/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D
 Lims ID: 140-14044-A-1
 Client ID: 11547
 Sample Type: Client
 Inject. Date: 24-Jan-2019 15:25:30 ALS Bottle#: 14 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010612-010
 Misc. Info.: 11547
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Jan-2019 09:48:51 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 25-Jan-2019 09:53:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.237	9.237	0.000	97	406723	4.00	
* 2 1,4-Difluorobenzene	114	11.410	11.416	-0.006	97	2310796	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.091	0.000	93	2083397	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.714	0.000	81	1731157	4.06	
31 Methylene Chloride	84	6.606	6.600	0.006	98	25162	0.1507	
47 1,1,1-Trichloroethane	97	10.294	10.294	0.000	95	9292	0.0252	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D

Injection Date: 24-Jan-2019 15:25:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14044-A-1

Lab Sample ID: 140-14044-1

Worklist Smp#: 10

Client ID: 11547

Purge Vol: 500.000 mL

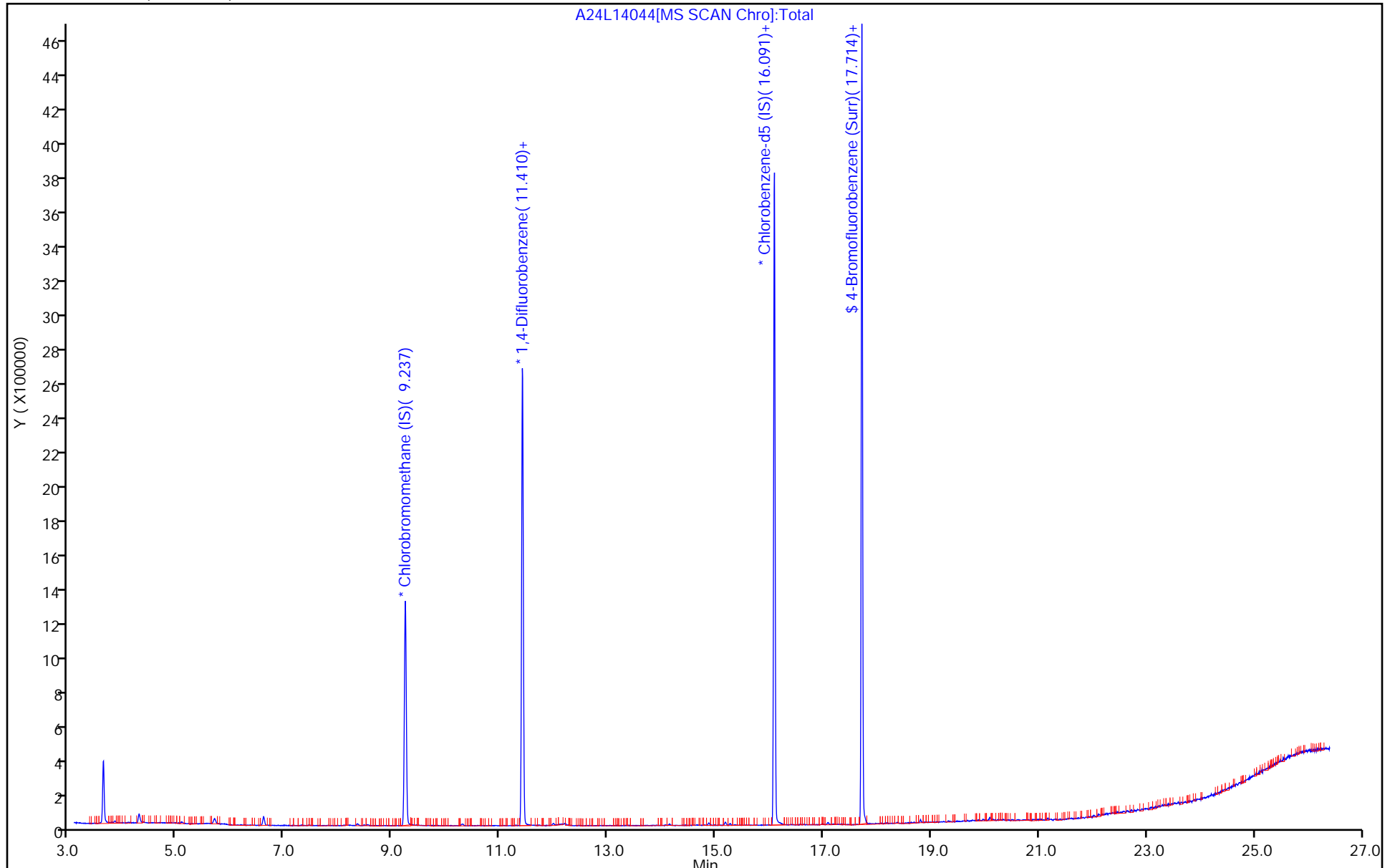
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200 (mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200(mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND	*	1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200 (mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D
 Lims ID: 140-14051-A-16
 Client ID: 10518
 Sample Type: Client
 Inject. Date: 26-Jan-2019 01:10:30 ALS Bottle#: 10 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010617-022
 Misc. Info.: 10518
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Jan-2019 09:09:11 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0302

First Level Reviewer: khachitpongpanits Date: 28-Jan-2019 09:09:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.406	-0.005	73	173091	4.00	
* 2 1,4-Difluorobenzene	114	9.471	9.477	-0.006	95	1033901	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.519	14.524	-0.005	91	905153	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.244	16.244	0.000	87	793289	4.12	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D

Injection Date: 26-Jan-2019 01:10:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-14051-A-16

Lab Sample ID: 140-14051-16

Worklist Smp#: 22

Client ID: 10518

Purge Vol: 500.000 mL

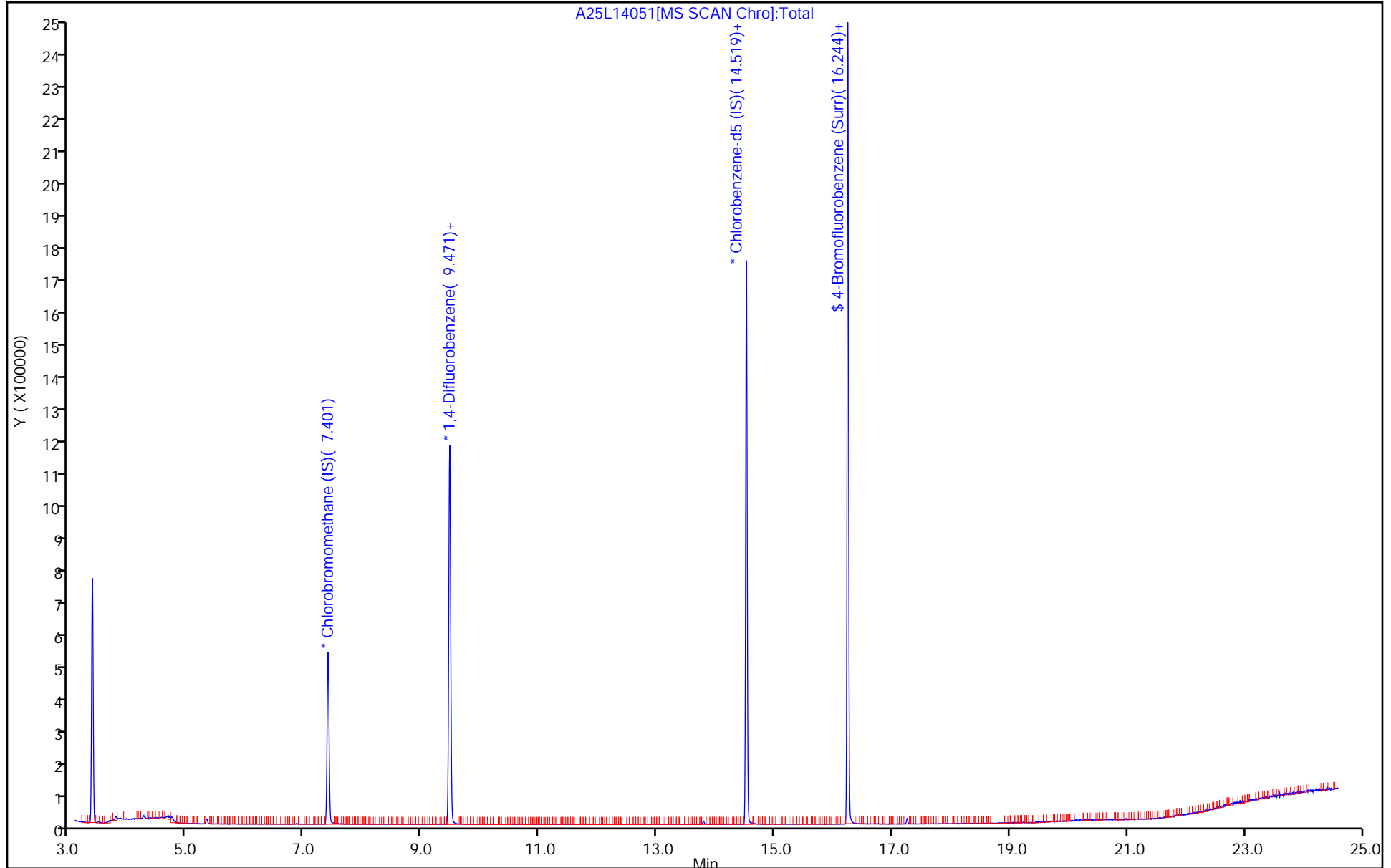
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

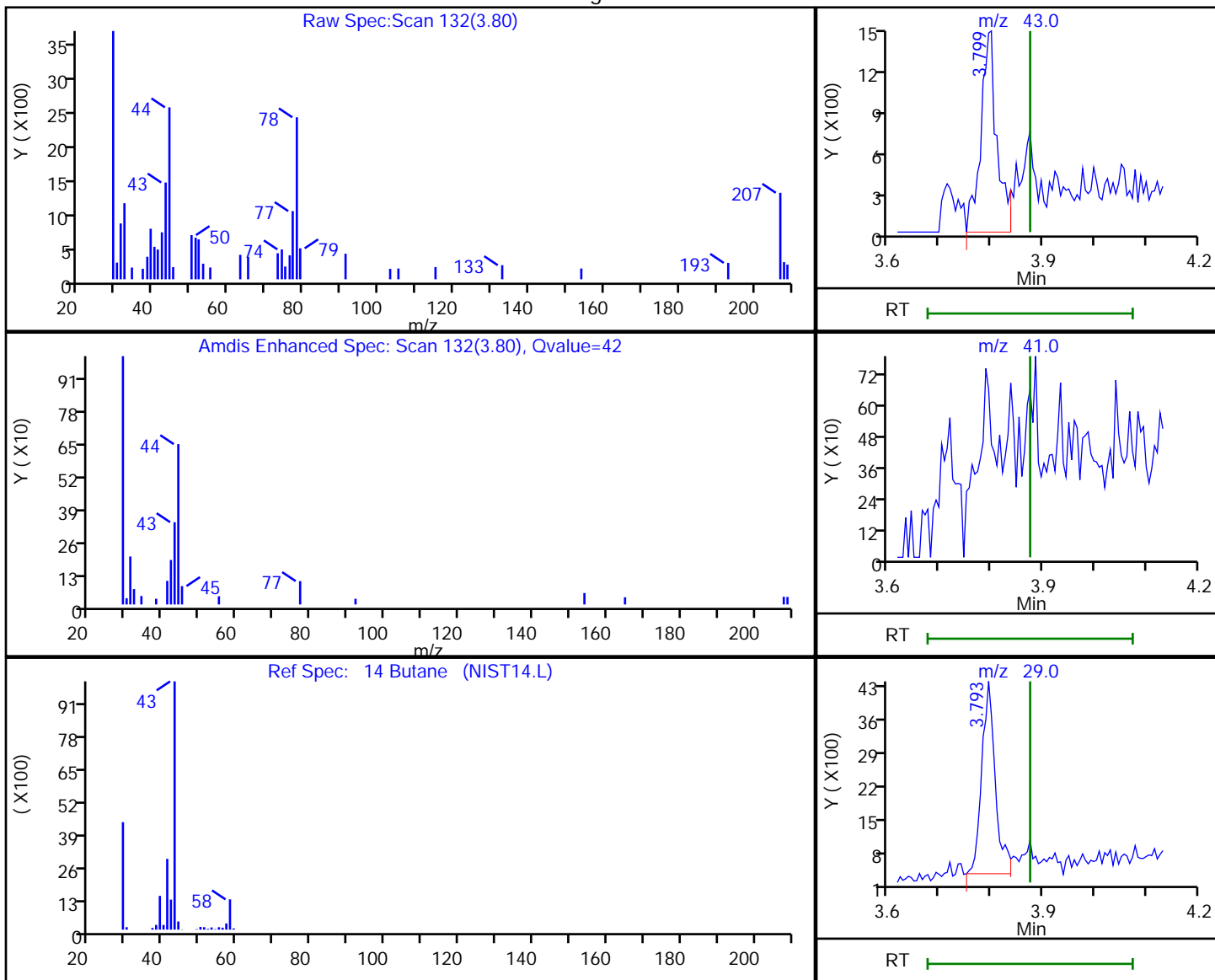


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D
 Injection Date: 26-Jan-2019 01:10:30 Instrument ID: MR
 Lims ID: 140-14051-A-16 Lab Sample ID: 140-14051-16
 Client ID: 10518
 Operator ID: HMT ALS Bottle#: 10 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.80	43.00	3124	0.063769
3.87	41.00	0	
3.79	29.00	7327	

Reviewer: khachitpongpanits, 28-Jan-2019 09:09:01

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200(mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D
 Lims ID: 140-14114-A-3
 Client ID: 11859
 Sample Type: Client
 Inject. Date: 31-Jan-2019 14:24:30 ALS Bottle#: 16 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010665-007
 Misc. Info.: 11859
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 01-Feb-2019 14:53:46 Calib Date: 07-Jan-2019 21:45:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20181224-10406.b\HA07IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0316

First Level Reviewer: khachitpongpanits Date: 01-Feb-2019 15:00:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.834	-0.005	96	226233	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.016	-0.006	95	1257347	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.739	-0.005	89	1030682	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.404	17.409	-0.005	91	693284	4.13	
45 1,1,1-Trichloroethane	97	9.863	9.868	-0.005	95	7970	0.0413	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D

Injection Date: 31-Jan-2019 14:24:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14114-A-3

Lab Sample ID: 140-14114-3

Worklist Smp#: 7

Client ID: 11859

Purge Vol: 500.000 mL

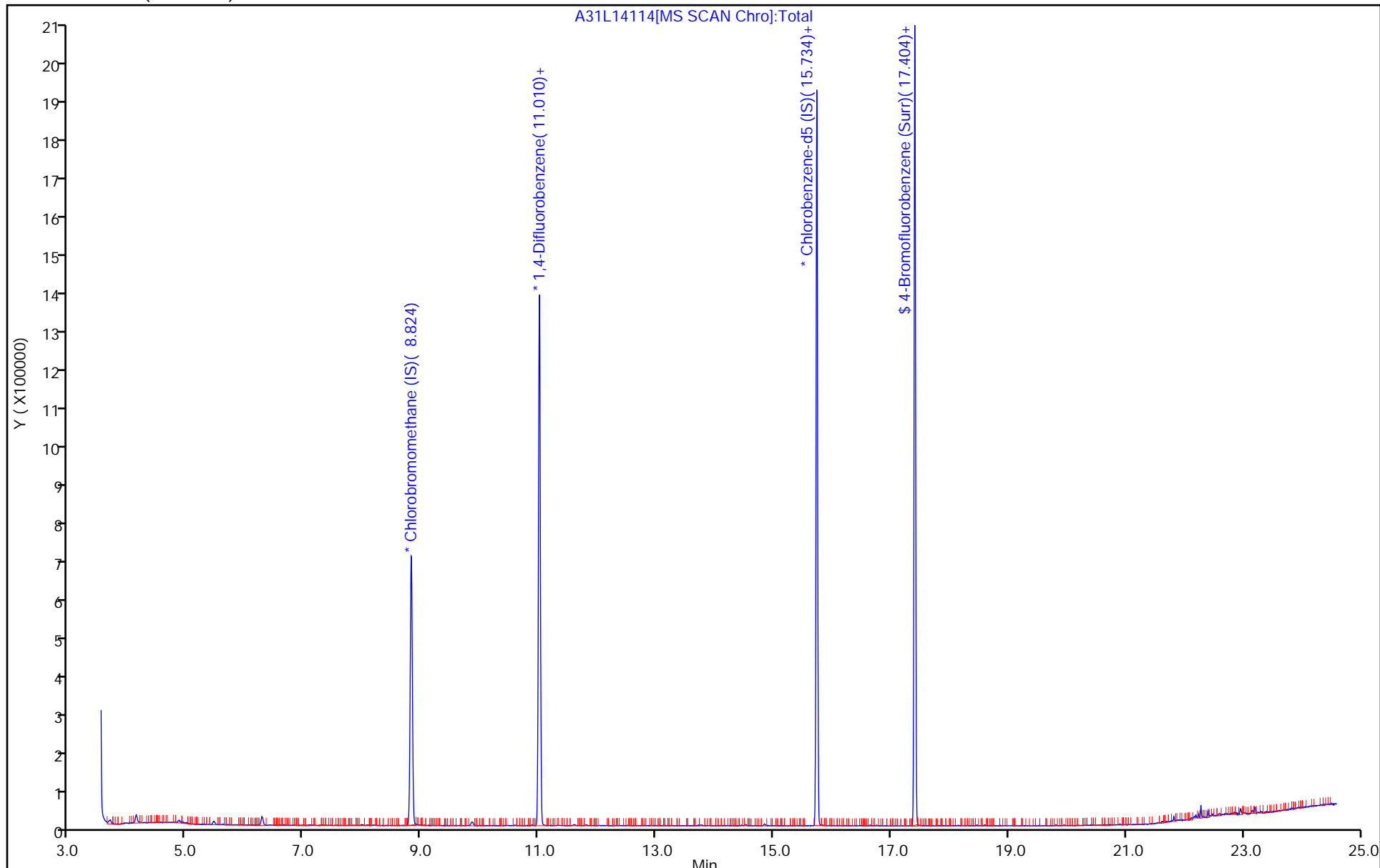
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

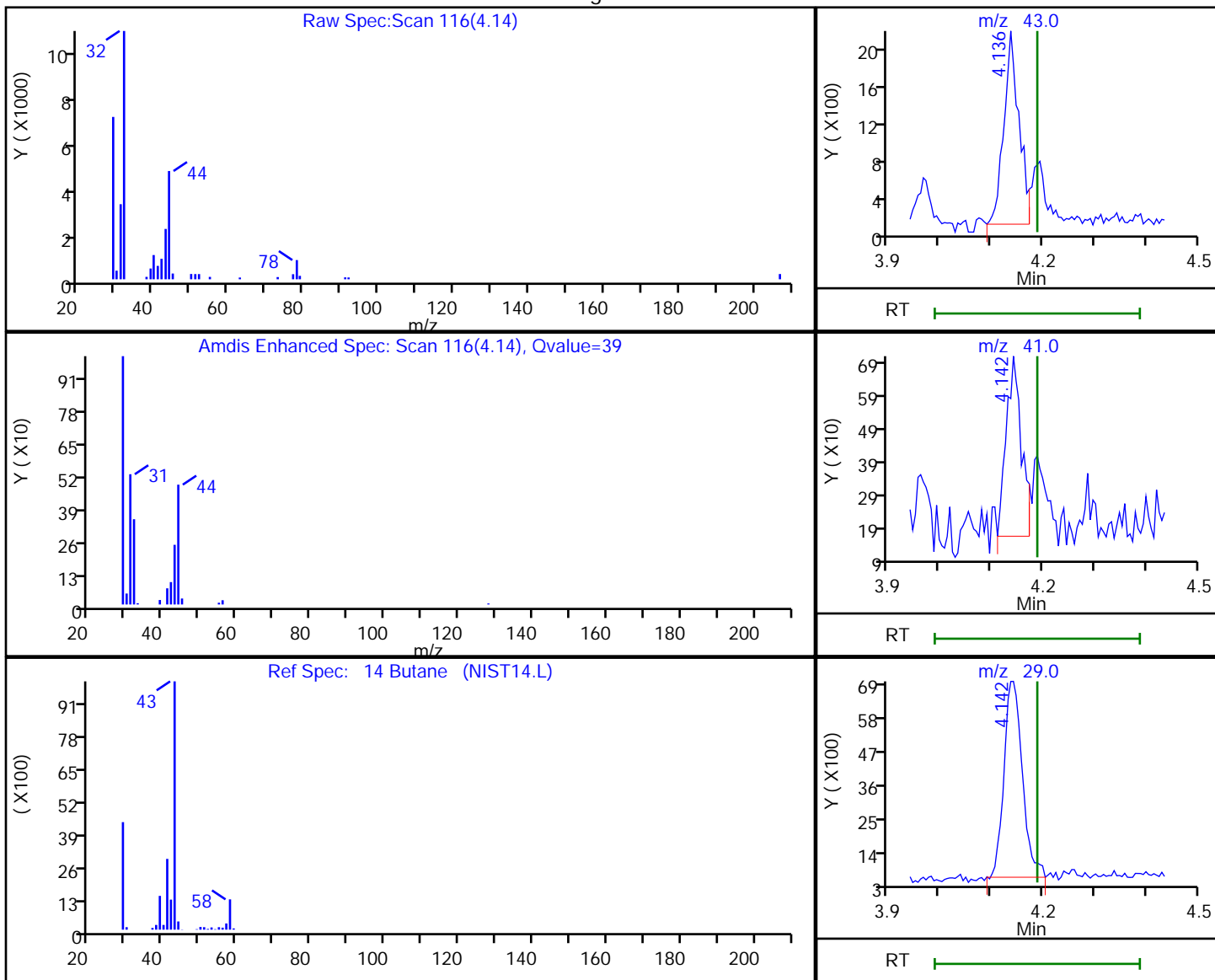


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D
 Injection Date: 31-Jan-2019 14:24:30 Instrument ID: MH
 Lims ID: 140-14114-A-3 Lab Sample ID: 140-14114-3
 Client ID: 11859
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.14	43.00	4267	0.037196
4.14	41.00	1130	
4.14	29.00	16118	

Reviewer: tajh, 31-Jan-2019 14:58:31

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND	*	1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\B05L14136.D
 Lims ID: 140-14136-A-16
 Client ID: 11710
 Sample Type: Client
 Inject. Date: 05-Feb-2019 11:19:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010730-004
 Misc. Info.: 11710
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Feb-2019 10:13:58 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 06-Feb-2019 10:14:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.243	-0.011	95	329997	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.416	-0.011	97	1787592	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.086	16.086	0.000	95	1561576	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.709	17.714	-0.005	79	1327286	4.15	
31 Methylene Chloride	84	6.595	6.606	-0.011	97	17493	0.1291	
110 Dodecane	57	21.009	21.009	0.000	92	19919	0.0798	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\B05L14136.D

Injection Date: 05-Feb-2019 11:19:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14136-A-16

Lab Sample ID: 140-14136-16

Worklist Smp#: 4

Client ID: 11710

Purge Vol: 500.000 mL

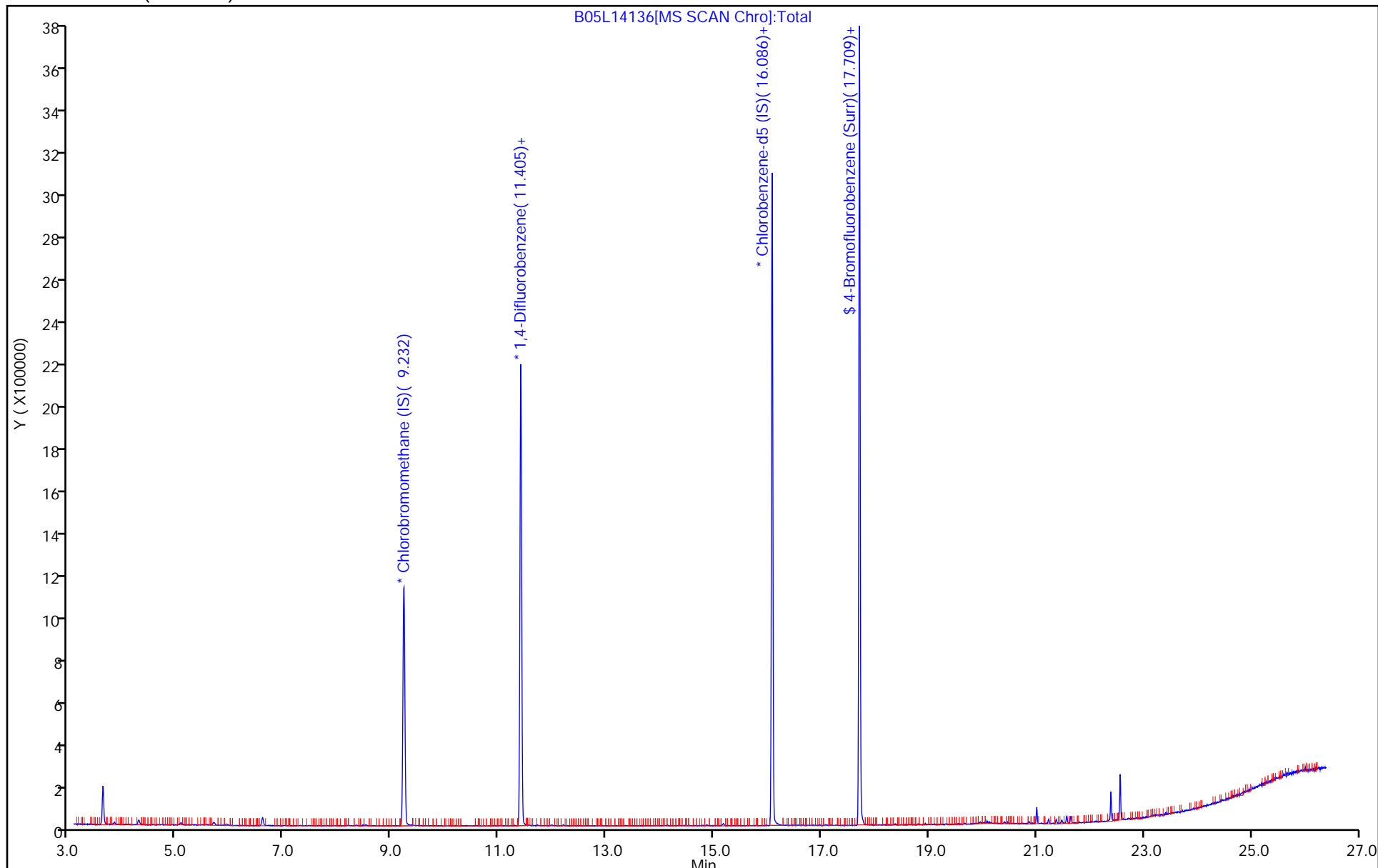
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor		4 of 16 COCs													
Company: Tetra Tech		Phone: 301-528-3000																	
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage																	
City/State/Zip: Germentown, MD, 20871		TAL Contact: Terry Walker Washmund																	
Phone: 301-528-552																			
FAX:																			
Project Name: MRC Indoor Air		Analysis Turnaround Time																	
Site/location: MRC		Standard (Specify) X																	
PO # 112108388		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-16	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
SV-180-MB-3	2/21/19	0944		-30	0	10653	11855	✓											
SV-179-MB-3	2/21/19	0950		-30	0	10454	11823	✓											
SV-181-MB-3	2/21/19	0953		-29	0	11512	11807	✓											
SV-182-MB-3	2/21/19	0955		-29	0	11898	11858	✓											
SV-183-MB-3	2/21/19	0958		-30	-2.5	11273	11558	✓											
SV-184-MB-3	2/21/19	1001		-30	-5	10621	11753	✓											
Sampled by: Sophia Lawson, Walt Pryor, Josh Mullis		Temperature (Fahrenheit)																	
			Interior	Ambient															
		Start																	
	Stop																		
		Pressure (Inches of Hg)																	
			Interior	Ambient															
		Start																	
	Stop																		
Special Instructions/QC Requirements & Comments:																			
Canisters Shipped by: Tetra Tech		Date/Time: 2/22/19		Canisters Received by:															
Samples Relinquished by: [Signature]		Date/Time: 2/22/19		Received by: [Signature]															
Relinquished by: [Signature]		Date/Time: 2/22/19 1700		Received by: [Signature]															
Lab Use Only		Shipper Name		Opened by		Conditions													

Baltimore #201

17 CANS / 17 FLOWS
 CUSTODY SEAL INTACT
 AMBIENT AIR AT 20.0 / 20.0 °C
 SKN 2-23-19



140-14387 Chain of Custody

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TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.



Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Larson, Josh Mullis & Walt Puyar		5 of 16 COCs													
Company: Tetra Tech		Phone: 301-528-3000																	
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage																	
City/State/Zip: Germantown, MD, 20871		TAL Contact: Terry Walker Washburn																	
Phone: 301-528-552																			
FAX:																			
Project Name: MRC Indoor Air		Analysis Turnaround Time																	
Site/location: MRC		Standard (Specify) X																	
PO# 1125 C08338		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
SV-185-MB-3	2/21/19	1008	1114	-30	-1	11423	11778	✓											
SV-186-MB-3	2/21/19	1009	1115	-26	0	10432	11859	✓											
SV-187-MB-3	2/21/19	NA	NA	NA	NA	11925	11820	✓											
SV-116-A-26	2/21/19	1030	1215	-25	2	11582	09634	✓											
SV-DUPO3-A-26	2/21/19	0000	0000	-28	1	10953	11615	✓											
SV-138-A-26	2/21/19	1032	0	-29	0	11895	11607	✓											
Sampled by: Sophia Larson, Walt Puyar, Josh Mullis		Temperature (Fahrenheit)												Baltimore #201					
		interior		Ambient															
		Start																	
		Stop																	
		Pressure (inches of Hg)																	
		interior		Ambient															
Start																			
Stop																			
Special Instructions/QC Requirements & Comments: Sample SV-187-MB-3 was <u>not</u> sampled due to issue opening vapor canister.																			
Canisters Shipped by: Tetra Tech		Date/Time: 2/22/19		Canisters Received by:															
Samples Relinquished by: <i>[Signature]</i>		Date/Time: 2/22/19		Received by: <i>[Signature]</i>															
Relinquished by: <i>[Signature]</i>		Date/Time: 2/22/19 1700		Received by: Mullis & Puyar 2-23-19 10:10															
Lab Use Only: Shipper Name: _____ Opened by: _____ Condition: _____																			

TAL Knoxville

5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor		6 of 16 COCs	
Company: Tetra Tech		Phone: 301-528-3000					
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage					
City/State/Zip: Germantown, MD, 20871		TAL Contact: Terry Walker Washburn					
Phone: 301-528-552							
FAX:							
Project Name: MRC Indoor Air		Analysis Turnaround Time					
Site/location: MRC		Standard (Specify) X					
PO# 112508388		Rush (Specify)					

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
SV-093-A-26	2/21/19	1034	1221	-30	0	04703	11608	✓											
SV-173-A-26	2/21/19	1038	1223	-29	1	04654	10735	✓											
SV-174-A-26	2/21/19	1040	1220	-30	0	10635	09635	✓											
SV-171-A-26	2/21/19	1049	1222	-29	2	10302	11750	✓											
SV-170-A-26	2/21/19	1054	1224	-26	0	11925	11120	✓											
SV-081-A-26	2/21/19	1127	1234	-24	0	11310	10518	✓											

Sampled by: Sophia Lawson Walt Pryor, Josh Mullis	Temperature (Fahrenheit)	
	Interior	Ambient
	Start	
	Stop	
	Pressure (Inches of Hg)	
	Interior	Ambient
Start		
Stop		

Baltimore #201

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: [Signature]	Date/Time: 2/22/19	Received by: [Signature]
Relinquished by: [Signature]	Date/Time: 2/22/19 1700	Received by: [Signature] TAL KNOX 2-23-19 10:10

Lab Use Only	Shipped Name	Opened by	Condition
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03/07/2019

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	<p>8, SN - 170-A-24</p> <p>Labeling Verified by: _____ Date: _____</p> <p>pH test strip lot number: _____</p> <p>Box 16A: pH Preservation</p> <p>Box 18A: Residual Chlorine</p> <p>Preservative: _____</p> <p>Lot Number: _____</p> <p>Exp Date: _____</p> <p>Analyst: _____</p> <p>Date: _____</p> <p>Time: _____</p>
2. Were ambient air containers received intact?	/			<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : _____ Correction factor: _____	/			<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input checked="" type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?	/			<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?	/			<input type="checkbox"/> Headspace (VOA only)	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____	/			<input type="checkbox"/> Residual Chlorine	
19. For 1613B water samples is pH<9?	/			<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?	/			<input type="checkbox"/> Project missing info	

Project #: _____ PM Instructions: _____

Sample Receiving Associate: *[Signature]* Date: 8-23-19

QA026R31.doc, 112618

ANALYTICAL REPORT

Job Number: 140-14387-1
Job Description: MRC Indoor Air, MRC

For:
Tetra Tech, Inc.
20251 Century Blvd
Suite 200
Germantown, MD 20874
Attention: Samantha Brenner



Approved for release.
Terry Walker Wasmund
Project Manager II
3/7/2019 1:51 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
03/07/2019

cc: Amy Thomson

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Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
E	Result exceeded calibration range.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-14387-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

Sample SV-170-A-26 (140-14387-17) was listed on the Chain of Custody (COC); however, no sample was received.

Per note on the Chain of Custody, sample SV-187-MB-3 was not logged for analysis.

Air - GC/MS VOA - Method TO-15 LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

The continuing calibration verification (CCV) associated with batch 140-27935 exhibited % difference of > 30% for the following analytes 1,2,4-Trichlorobenzene and Naphthalene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

Naphthalene recovered outside control limits for the LCS associated with analytical batch 140-27935. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-180-MB-3

Lab Sample ID: 140-14387-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.13	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.42		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.23	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.79	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.8		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trichlorobenzene	0.34	J	0.40	0.20	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.20	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.54	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.40	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.1		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.94	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	6.8		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trichlorobenzene	2.5	J	3.0	1.4	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.1	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.94	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-179-MB-3

Lab Sample ID: 140-14387-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.1		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.072	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.98	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.46		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.17	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.15	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	8.5		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.29	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.4	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	2.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.84	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	0.65	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-181-MB-3

Lab Sample ID: 140-14387-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.12	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.28	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	51		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-181-MB-3 (Continued)

Lab Sample ID: 140-14387-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	2.2		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.75	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.12	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.17	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.37	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.98	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	210		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	8.7		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.64	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.85	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-182-MB-3

Lab Sample ID: 140-14387-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	250	E	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	34		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.78	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.63		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	16		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.093	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.27	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane - DL	170		3.6	0.45	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.54	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1000	E	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	130		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	87		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.50	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.93	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane - DL	690		15	1.8	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-183-MB-3

Lab Sample ID: 140-14387-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.16	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	170	E	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-183-MB-3 (Continued)

Lab Sample ID: 140-14387-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	22		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.80	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	8.5		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.082	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane - DL	130		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.52	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	690	E	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	89		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	46		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.44	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.95	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane - DL	540		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-184-MB-3

Lab Sample ID: 140-14387-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.36	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.50		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.26	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.74	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.80		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.21	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.1		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.1	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.66	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	3.0		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.68	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.0	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.6		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-185-MB-3

Lab Sample ID: 140-14387-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.28	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.3		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.84		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-185-MB-3 (Continued)

Lab Sample ID: 140-14387-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.87	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.7		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.19	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.27	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.86	Cl	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.4		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.89	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	17		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	3.3		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.2	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	6.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.0	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.3	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	4.2	Cl	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	6.0		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-186-MB-3

Lab Sample ID: 140-14387-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.28	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.36	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.18	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.1		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.24	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.70	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.88	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.74	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.64	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	4.3		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.78	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.2	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.0	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-116-A-26

Lab Sample ID: 140-14387-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.25	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-116-A-26 (Continued)

Lab Sample ID: 140-14387-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.072	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.92	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.82		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.81	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.7	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.28	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.2	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	4.4		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-DUP03-A-26

Lab Sample ID: 140-14387-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.24	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.60		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.75	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.7	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	3.2		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-138-A-26

Lab Sample ID: 140-14387-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.19	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.40		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.085	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.1		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.77		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	3.3		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.88	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.13	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.065	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	21		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.60	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.4		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.41	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-138-A-26 (Continued)

Lab Sample ID: 140-14387-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	8.2		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.1		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	13		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.1	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.89	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.36	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	110		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.67	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-093-A-26

Lab Sample ID: 140-14387-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.20	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.33	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.24	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.32	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.069	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.2		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.65	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.97	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.3	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.37	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	6.3		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.72	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-173-A-26

Lab Sample ID: 140-14387-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.21	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.30	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.1		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	24		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	5.1		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.12	J	0.40	0.095	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	84	E	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.76	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.63		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.84		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.44		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	480	E	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-173-A-26 (Continued)

Lab Sample ID: 140-14387-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	0.27	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene - DL	66		3.6	0.64	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene - DL	310		1.8	0.64	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.68	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	5.4		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	94		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	21		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.50	J	1.6	0.38	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	330	E	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	3.3		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	2.4		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	2600	E	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.73	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene - DL	260		14	2.5	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene - DL	1700		9.8	3.4	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-174-A-26

Lab Sample ID: 140-14387-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.39	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.2		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	1.2		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.3		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	4.6		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.77	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.087	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	8.2		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	20		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.44	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.4	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	5.9		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	4.7		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	9.1		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	18		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.59	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	45		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	110		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.77	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-171-A-26

Lab Sample ID: 140-14387-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.19	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.32	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.90		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	9.3		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.2		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	63		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.64		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.46		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.18	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	310	E	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.28	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene - DL	190		1.8	0.64	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.62	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	4.4		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	37		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	8.7		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	250		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.8		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.99	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1700	E	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene - DL	1000		9.8	3.4	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-081-A-26

Lab Sample ID: 140-14387-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.47		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.33	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.10	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.32	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.90	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.19	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.4		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.67		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.46		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	200	E *	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	10		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	5.9		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	3.5		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene - DL	110		4.0	1.7	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-081-A-26 (Continued)

Lab Sample ID: 140-14387-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.6	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.40	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.4	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.1	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	1.3	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	3.7		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	2.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	1000	E *	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	50		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	29		2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	15		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene - DL	550		20	8.4	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-180-MB-3

Lab Sample ID: 140-14387-1

Date Collected: 02/21/19 09:49

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.13	J	0.40	0.12	ppb v/v			02/25/19 17:27	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 17:27	1
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/25/19 17:27	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 17:27	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 17:27	1
Dichlorodifluoromethane	0.42		0.40	0.14	ppb v/v			02/25/19 17:27	1
1,1-Dichloroethane	0.23	J	0.40	0.050	ppb v/v			02/25/19 17:27	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 17:27	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/25/19 17:27	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 17:27	1
Methylene Chloride	0.79	J	2.0	0.65	ppb v/v			02/25/19 17:27	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 17:27	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 17:27	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 17:27	1
Toluene	1.8		0.60	0.60	ppb v/v			02/25/19 17:27	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 17:27	1
1,2,4-Trichlorobenzene	0.34	J	0.40	0.20	ppb v/v			02/25/19 17:27	1
1,1,1-Trichloroethane	0.20	J	0.40	0.060	ppb v/v			02/25/19 17:27	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 17:27	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/25/19 17:27	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 17:27	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 17:27	1
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v			02/25/19 17:27	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 17:27	1
Xylenes, Total	0.54	J	0.80	0.12	ppb v/v			02/25/19 17:27	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.40	J	1.3	0.37	ug/m3			02/25/19 17:27	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 17:27	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/25/19 17:27	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 17:27	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 17:27	1
Dichlorodifluoromethane	2.1		2.0	0.67	ug/m3			02/25/19 17:27	1
1,1-Dichloroethane	0.94	J	1.6	0.20	ug/m3			02/25/19 17:27	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 17:27	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/25/19 17:27	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 17:27	1
Methylene Chloride	2.7	J	6.9	2.3	ug/m3			02/25/19 17:27	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 17:27	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 17:27	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 17:27	1
Toluene	6.8		2.3	2.3	ug/m3			02/25/19 17:27	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 17:27	1
1,2,4-Trichlorobenzene	2.5	J	3.0	1.4	ug/m3			02/25/19 17:27	1
1,1,1-Trichloroethane	1.1	J	2.2	0.33	ug/m3			02/25/19 17:27	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 17:27	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/25/19 17:27	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 17:27	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 17:27	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-180-MB-3

Lab Sample ID: 140-14387-1

Date Collected: 02/21/19 09:49

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.94	J	2.0	0.64	ug/m3			02/25/19 17:27	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 17:27	1
Xylenes, Total	2.3	J	3.5	0.52	ug/m3			02/25/19 17:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 17:27	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-179-MB-3

Lab Sample ID: 140-14387-2

Date Collected: 02/21/19 09:50

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/25/19 18:20	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 18:20	1
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v			02/25/19 18:20	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 18:20	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 18:20	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/25/19 18:20	1
1,1-Dichloroethane	2.1		0.40	0.050	ppb v/v			02/25/19 18:20	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 18:20	1
1,1-Dichloroethene	0.072	J	0.40	0.070	ppb v/v			02/25/19 18:20	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 18:20	1
Methylene Chloride	0.98	J	2.0	0.65	ppb v/v			02/25/19 18:20	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 18:20	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 18:20	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 18:20	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 18:20	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 18:20	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 18:20	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 18:20	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 18:20	1
Trichloroethene	0.46		0.20	0.070	ppb v/v			02/25/19 18:20	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/25/19 18:20	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 18:20	1
1,3,5-Trimethylbenzene	0.17	J	0.40	0.13	ppb v/v			02/25/19 18:20	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 18:20	1
Xylenes, Total	0.15	J	0.80	0.12	ppb v/v			02/25/19 18:20	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/25/19 18:20	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 18:20	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/25/19 18:20	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 18:20	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 18:20	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/25/19 18:20	1
1,1-Dichloroethane	8.5		1.6	0.20	ug/m3			02/25/19 18:20	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 18:20	1
1,1-Dichloroethene	0.29	J	1.6	0.28	ug/m3			02/25/19 18:20	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 18:20	1
Methylene Chloride	3.4	J	6.9	2.3	ug/m3			02/25/19 18:20	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 18:20	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 18:20	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 18:20	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 18:20	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 18:20	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 18:20	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 18:20	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 18:20	1
Trichloroethene	2.5		1.1	0.38	ug/m3			02/25/19 18:20	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/25/19 18:20	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 18:20	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-179-MB-3

Lab Sample ID: 140-14387-2

Date Collected: 02/21/19 09:50

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.84	J	2.0	0.64	ug/m3			02/25/19 18:20	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 18:20	1
Xylenes, Total	0.65	J	3.5	0.52	ug/m3			02/25/19 18:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 18:20	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-181-MB-3

Lab Sample ID: 140-14387-3

Date Collected: 02/21/19 09:53

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.12	J	0.40	0.12	ppb v/v			02/25/19 19:13	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 19:13	1
Chlorodifluoromethane	0.28	J	0.40	0.075	ppb v/v			02/25/19 19:13	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 19:13	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 19:13	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/25/19 19:13	1
1,1-Dichloroethane	51		0.40	0.050	ppb v/v			02/25/19 19:13	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 19:13	1
1,1-Dichloroethene	2.2		0.40	0.070	ppb v/v			02/25/19 19:13	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 19:13	1
Methylene Chloride	0.75	J	2.0	0.65	ppb v/v			02/25/19 19:13	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 19:13	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 19:13	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 19:13	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 19:13	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 19:13	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 19:13	1
1,1,1-Trichloroethane	0.12	J	0.40	0.060	ppb v/v			02/25/19 19:13	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 19:13	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/25/19 19:13	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/25/19 19:13	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 19:13	1
1,3,5-Trimethylbenzene	0.17	J	0.40	0.13	ppb v/v			02/25/19 19:13	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 19:13	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/25/19 19:13	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.37	J	1.3	0.37	ug/m3			02/25/19 19:13	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 19:13	1
Chlorodifluoromethane	0.98	J	1.4	0.27	ug/m3			02/25/19 19:13	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 19:13	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 19:13	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/25/19 19:13	1
1,1-Dichloroethane	210		1.6	0.20	ug/m3			02/25/19 19:13	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 19:13	1
1,1-Dichloroethene	8.7		1.6	0.28	ug/m3			02/25/19 19:13	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 19:13	1
Methylene Chloride	2.6	J	6.9	2.3	ug/m3			02/25/19 19:13	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 19:13	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 19:13	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 19:13	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 19:13	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 19:13	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 19:13	1
1,1,1-Trichloroethane	0.64	J	2.2	0.33	ug/m3			02/25/19 19:13	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 19:13	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/25/19 19:13	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/25/19 19:13	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 19:13	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-181-MB-3

Lab Sample ID: 140-14387-3

Date Collected: 02/21/19 09:53

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.85	J	2.0	0.64	ug/m3			02/25/19 19:13	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 19:13	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/25/19 19:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/25/19 19:13	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-182-MB-3

Lab Sample ID: 140-14387-4

Date Collected: 02/21/19 09:55

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/25/19 20:06	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 20:06	1
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/25/19 20:06	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 20:06	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 20:06	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/25/19 20:06	1
1,1-Dichloroethane	250	E	0.40	0.050	ppb v/v			02/25/19 20:06	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 20:06	1
1,1-Dichloroethene	34		0.40	0.070	ppb v/v			02/25/19 20:06	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 20:06	1
Methylene Chloride	0.78	J	2.0	0.65	ppb v/v			02/25/19 20:06	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 20:06	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 20:06	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 20:06	1
Toluene	0.63		0.60	0.60	ppb v/v			02/25/19 20:06	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 20:06	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 20:06	1
1,1,1-Trichloroethane	16		0.40	0.060	ppb v/v			02/25/19 20:06	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 20:06	1
Trichloroethene	0.093	J	0.20	0.070	ppb v/v			02/25/19 20:06	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 20:06	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 20:06	1
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v			02/25/19 20:06	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 20:06	1
Xylenes, Total	0.27	J	0.80	0.12	ppb v/v			02/25/19 20:06	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.54	J	1.3	0.37	ug/m3			02/25/19 20:06	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 20:06	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/25/19 20:06	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 20:06	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 20:06	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/25/19 20:06	1
1,1-Dichloroethane	1000	E	1.6	0.20	ug/m3			02/25/19 20:06	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 20:06	1
1,1-Dichloroethene	130		1.6	0.28	ug/m3			02/25/19 20:06	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 20:06	1
Methylene Chloride	2.7	J	6.9	2.3	ug/m3			02/25/19 20:06	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 20:06	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 20:06	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 20:06	1
Toluene	2.4		2.3	2.3	ug/m3			02/25/19 20:06	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 20:06	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 20:06	1
1,1,1-Trichloroethane	87		2.2	0.33	ug/m3			02/25/19 20:06	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 20:06	1
Trichloroethene	0.50	J	1.1	0.38	ug/m3			02/25/19 20:06	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 20:06	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 20:06	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-182-MB-3

Lab Sample ID: 140-14387-4

Date Collected: 02/21/19 09:55

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.93	J	2.0	0.64	ug/m3			02/25/19 20:06	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 20:06	1
Xylenes, Total	1.2	J	3.5	0.52	ug/m3			02/25/19 20:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 20:06	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	170		3.6	0.45	ppb v/v			02/26/19 18:01	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	690		15	1.8	ug/m3			02/26/19 18:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					02/26/19 18:01	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-183-MB-3

Lab Sample ID: 140-14387-5

Date Collected: 02/21/19 09:58

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.16	J	0.40	0.12	ppb v/v			02/25/19 20:59	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 20:59	1
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v			02/25/19 20:59	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 20:59	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 20:59	1
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v			02/25/19 20:59	1
1,1-Dichloroethane	170	E	0.40	0.050	ppb v/v			02/25/19 20:59	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 20:59	1
1,1-Dichloroethene	22		0.40	0.070	ppb v/v			02/25/19 20:59	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/25/19 20:59	1
Methylene Chloride	0.80	J	2.0	0.65	ppb v/v			02/25/19 20:59	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 20:59	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 20:59	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 20:59	1
Toluene	ND		0.60	0.60	ppb v/v			02/25/19 20:59	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 20:59	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 20:59	1
1,1,1-Trichloroethane	8.5		0.40	0.060	ppb v/v			02/25/19 20:59	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 20:59	1
Trichloroethene	0.082	J	0.20	0.070	ppb v/v			02/25/19 20:59	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/25/19 20:59	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/25/19 20:59	1
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v			02/25/19 20:59	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 20:59	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/25/19 20:59	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.52	J	1.3	0.37	ug/m3			02/25/19 20:59	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 20:59	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/25/19 20:59	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 20:59	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 20:59	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/25/19 20:59	1
1,1-Dichloroethane	690	E	1.6	0.20	ug/m3			02/25/19 20:59	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 20:59	1
1,1-Dichloroethene	89		1.6	0.28	ug/m3			02/25/19 20:59	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/25/19 20:59	1
Methylene Chloride	2.8	J	6.9	2.3	ug/m3			02/25/19 20:59	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 20:59	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 20:59	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 20:59	1
Toluene	ND		2.3	2.3	ug/m3			02/25/19 20:59	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 20:59	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 20:59	1
1,1,1-Trichloroethane	46		2.2	0.33	ug/m3			02/25/19 20:59	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 20:59	1
Trichloroethene	0.44	J	1.1	0.38	ug/m3			02/25/19 20:59	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/25/19 20:59	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/25/19 20:59	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-183-MB-3

Lab Sample ID: 140-14387-5

Date Collected: 02/21/19 09:58

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.95	J	2.0	0.64	ug/m3			02/25/19 20:59	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 20:59	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/25/19 20:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 20:59	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	130		2.0	0.25	ppb v/v			02/28/19 17:11	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	540		8.1	1.0	ug/m3			02/28/19 17:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/28/19 17:11	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-184-MB-3

Lab Sample ID: 140-14387-6

Date Collected: 02/21/19 10:01

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/25/19 21:53	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 21:53	1
Chlorodifluoromethane	0.36	J	0.40	0.075	ppb v/v			02/25/19 21:53	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 21:53	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 21:53	1
Dichlorodifluoromethane	0.50		0.40	0.14	ppb v/v			02/25/19 21:53	1
1,1-Dichloroethane	0.26	J	0.40	0.050	ppb v/v			02/25/19 21:53	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 21:53	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/25/19 21:53	1
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v			02/25/19 21:53	1
Methylene Chloride	0.74	J	2.0	0.65	ppb v/v			02/25/19 21:53	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 21:53	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 21:53	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 21:53	1
Toluene	0.80		0.60	0.60	ppb v/v			02/25/19 21:53	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 21:53	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 21:53	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 21:53	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 21:53	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/25/19 21:53	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/25/19 21:53	1
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/25/19 21:53	1
1,3,5-Trimethylbenzene	0.21	J	0.40	0.13	ppb v/v			02/25/19 21:53	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 21:53	1
Xylenes, Total	1.1		0.80	0.12	ppb v/v			02/25/19 21:53	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/25/19 21:53	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 21:53	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/25/19 21:53	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 21:53	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 21:53	1
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3			02/25/19 21:53	1
1,1-Dichloroethane	1.1	J	1.6	0.20	ug/m3			02/25/19 21:53	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 21:53	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/25/19 21:53	1
Ethylbenzene	0.66	J	1.7	0.59	ug/m3			02/25/19 21:53	1
Methylene Chloride	2.6	J	6.9	2.3	ug/m3			02/25/19 21:53	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 21:53	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 21:53	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 21:53	1
Toluene	3.0		2.3	2.3	ug/m3			02/25/19 21:53	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 21:53	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 21:53	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 21:53	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 21:53	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/25/19 21:53	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/25/19 21:53	1
1,2,4-Trimethylbenzene	0.68	J	2.0	0.61	ug/m3			02/25/19 21:53	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-184-MB-3

Lab Sample ID: 140-14387-6

Date Collected: 02/21/19 10:01

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.0	J	2.0	0.64	ug/m3			02/25/19 21:53	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 21:53	1
Xylenes, Total	4.6		3.5	0.52	ug/m3			02/25/19 21:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 140					02/25/19 21:53	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-185-MB-3

Lab Sample ID: 140-14387-7

Date Collected: 02/21/19 11:14

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.28	J	0.40	0.12	ppb v/v			02/25/19 22:46	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 22:46	1
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/25/19 22:46	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 22:46	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 22:46	1
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v			02/25/19 22:46	1
1,1-Dichloroethane	4.3		0.40	0.050	ppb v/v			02/25/19 22:46	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 22:46	1
1,1-Dichloroethene	0.84		0.40	0.070	ppb v/v			02/25/19 22:46	1
Ethylbenzene	0.28	J	0.40	0.14	ppb v/v			02/25/19 22:46	1
Methylene Chloride	0.87	J	2.0	0.65	ppb v/v			02/25/19 22:46	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 22:46	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 22:46	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 22:46	1
Toluene	1.7		0.60	0.60	ppb v/v			02/25/19 22:46	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 22:46	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 22:46	1
1,1,1-Trichloroethane	0.19	J	0.40	0.060	ppb v/v			02/25/19 22:46	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 22:46	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/25/19 22:46	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/25/19 22:46	1
1,2,4-Trimethylbenzene	0.27	J	0.40	0.13	ppb v/v			02/25/19 22:46	1
1,3,5-Trimethylbenzene	0.86	CI	0.40	0.13	ppb v/v			02/25/19 22:46	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 22:46	1
Xylenes, Total	1.4		0.80	0.12	ppb v/v			02/25/19 22:46	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.89	J	1.3	0.37	ug/m3			02/25/19 22:46	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 22:46	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/25/19 22:46	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 22:46	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 22:46	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/25/19 22:46	1
1,1-Dichloroethane	17		1.6	0.20	ug/m3			02/25/19 22:46	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 22:46	1
1,1-Dichloroethene	3.3		1.6	0.28	ug/m3			02/25/19 22:46	1
Ethylbenzene	1.2	J	1.7	0.59	ug/m3			02/25/19 22:46	1
Methylene Chloride	3.0	J	6.9	2.3	ug/m3			02/25/19 22:46	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 22:46	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 22:46	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 22:46	1
Toluene	6.4		2.3	2.3	ug/m3			02/25/19 22:46	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 22:46	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 22:46	1
1,1,1-Trichloroethane	1.0	J	2.2	0.33	ug/m3			02/25/19 22:46	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 22:46	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/25/19 22:46	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/25/19 22:46	1
1,2,4-Trimethylbenzene	1.3	J	2.0	0.61	ug/m3			02/25/19 22:46	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-185-MB-3

Lab Sample ID: 140-14387-7

Date Collected: 02/21/19 11:14

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	4.2	CI	2.0	0.64	ug/m3			02/25/19 22:46	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 22:46	1
Xylenes, Total	6.0		3.5	0.52	ug/m3			02/25/19 22:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 22:46	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-186-MB-3

Lab Sample ID: 140-14387-8

Date Collected: 02/21/19 11:15

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.28	J	0.40	0.12	ppb v/v			02/25/19 23:39	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/25/19 23:39	1
Chlorodifluoromethane	0.36	J	0.40	0.075	ppb v/v			02/25/19 23:39	1
Chloroform	ND		0.40	0.075	ppb v/v			02/25/19 23:39	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/25/19 23:39	1
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v			02/25/19 23:39	1
1,1-Dichloroethane	0.18	J	0.40	0.050	ppb v/v			02/25/19 23:39	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/25/19 23:39	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/25/19 23:39	1
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v			02/25/19 23:39	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/25/19 23:39	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/25/19 23:39	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/25/19 23:39	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/25/19 23:39	1
Toluene	1.1		0.60	0.60	ppb v/v			02/25/19 23:39	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/25/19 23:39	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/25/19 23:39	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/25/19 23:39	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/25/19 23:39	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/25/19 23:39	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/25/19 23:39	1
1,2,4-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v			02/25/19 23:39	1
1,3,5-Trimethylbenzene	0.24	J	0.40	0.13	ppb v/v			02/25/19 23:39	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/25/19 23:39	1
Xylenes, Total	0.70	J	0.80	0.12	ppb v/v			02/25/19 23:39	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.88	J	1.3	0.37	ug/m3			02/25/19 23:39	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/25/19 23:39	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/25/19 23:39	1
Chloroform	ND		2.0	0.37	ug/m3			02/25/19 23:39	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/25/19 23:39	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/25/19 23:39	1
1,1-Dichloroethane	0.74	J	1.6	0.20	ug/m3			02/25/19 23:39	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/25/19 23:39	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/25/19 23:39	1
Ethylbenzene	0.64	J	1.7	0.59	ug/m3			02/25/19 23:39	1
Methylene Chloride	4.0	J	6.9	2.3	ug/m3			02/25/19 23:39	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/25/19 23:39	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/25/19 23:39	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/25/19 23:39	1
Toluene	4.3		2.3	2.3	ug/m3			02/25/19 23:39	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/25/19 23:39	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/25/19 23:39	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/25/19 23:39	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/25/19 23:39	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/25/19 23:39	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/25/19 23:39	1
1,2,4-Trimethylbenzene	0.78	J	2.0	0.61	ug/m3			02/25/19 23:39	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-186-MB-3

Lab Sample ID: 140-14387-8

Date Collected: 02/21/19 11:15

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.2	J	2.0	0.64	ug/m3			02/25/19 23:39	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/25/19 23:39	1
Xylenes, Total	3.0	J	3.5	0.52	ug/m3			02/25/19 23:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/25/19 23:39	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-116-A-26

Lab Sample ID: 140-14387-10

Date Collected: 02/21/19 12:15

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.25	J	0.40	0.12	ppb v/v			02/26/19 00:32	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 00:32	1
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v			02/26/19 00:32	1
Chloroform	0.34	J	0.40	0.075	ppb v/v			02/26/19 00:32	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 00:32	1
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v			02/26/19 00:32	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 00:32	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 00:32	1
1,1-Dichloroethene	0.072	J	0.40	0.070	ppb v/v			02/26/19 00:32	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 00:32	1
Methylene Chloride	0.92	J	2.0	0.65	ppb v/v			02/26/19 00:32	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 00:32	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 00:32	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 00:32	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 00:32	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 00:32	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 00:32	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 00:32	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 00:32	1
Trichloroethene	0.82		0.20	0.070	ppb v/v			02/26/19 00:32	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/26/19 00:32	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 00:32	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 00:32	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 00:32	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/26/19 00:32	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.81	J	1.3	0.37	ug/m3			02/26/19 00:32	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 00:32	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/26/19 00:32	1
Chloroform	1.7	J	2.0	0.37	ug/m3			02/26/19 00:32	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 00:32	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/26/19 00:32	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 00:32	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 00:32	1
1,1-Dichloroethene	0.28	J	1.6	0.28	ug/m3			02/26/19 00:32	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 00:32	1
Methylene Chloride	3.2	J	6.9	2.3	ug/m3			02/26/19 00:32	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 00:32	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 00:32	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 00:32	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 00:32	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 00:32	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 00:32	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 00:32	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 00:32	1
Trichloroethene	4.4		1.1	0.38	ug/m3			02/26/19 00:32	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/26/19 00:32	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 00:32	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-116-A-26

Lab Sample ID: 140-14387-10

Date Collected: 02/21/19 12:15

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 00:32	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 00:32	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/26/19 00:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 00:32	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-DUP03-A-26

Lab Sample ID: 140-14387-11

Date Collected: 02/21/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.24	J	0.40	0.12	ppb v/v			02/26/19 01:24	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 01:24	1
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/26/19 01:24	1
Chloroform	0.34	J	0.40	0.075	ppb v/v			02/26/19 01:24	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 01:24	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/26/19 01:24	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 01:24	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 01:24	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 01:24	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 01:24	1
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v			02/26/19 01:24	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 01:24	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 01:24	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 01:24	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 01:24	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 01:24	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 01:24	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 01:24	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 01:24	1
Trichloroethene	0.60		0.20	0.070	ppb v/v			02/26/19 01:24	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/26/19 01:24	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 01:24	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 01:24	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 01:24	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/26/19 01:24	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.75	J	1.3	0.37	ug/m3			02/26/19 01:24	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 01:24	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/26/19 01:24	1
Chloroform	1.7	J	2.0	0.37	ug/m3			02/26/19 01:24	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 01:24	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 01:24	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 01:24	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 01:24	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 01:24	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 01:24	1
Methylene Chloride	4.8	J	6.9	2.3	ug/m3			02/26/19 01:24	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 01:24	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 01:24	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 01:24	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 01:24	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 01:24	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 01:24	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 01:24	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 01:24	1
Trichloroethene	3.2		1.1	0.38	ug/m3			02/26/19 01:24	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/26/19 01:24	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 01:24	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-DUP03-A-26

Lab Sample ID: 140-14387-11

Date Collected: 02/21/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 01:24	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 01:24	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/26/19 01:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 01:24	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-138-A-26

Lab Sample ID: 140-14387-12

Date Collected: 02/21/19 10:32

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.19	J	0.40	0.12	ppb v/v			02/26/19 02:17	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 02:17	1
Chlorodifluoromethane	0.40		0.40	0.075	ppb v/v			02/26/19 02:17	1
Chloroform	0.085	J	0.40	0.075	ppb v/v			02/26/19 02:17	1
cis-1,2-Dichloroethene	2.1		0.40	0.12	ppb v/v			02/26/19 02:17	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/26/19 02:17	1
1,1-Dichloroethane	0.77		0.40	0.050	ppb v/v			02/26/19 02:17	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 02:17	1
1,1-Dichloroethene	3.3		0.40	0.070	ppb v/v			02/26/19 02:17	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 02:17	1
Methylene Chloride	0.88	J	2.0	0.65	ppb v/v			02/26/19 02:17	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 02:17	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 02:17	1
Tetrachloroethene	0.13	J	0.40	0.080	ppb v/v			02/26/19 02:17	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 02:17	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 02:17	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 02:17	1
1,1,1-Trichloroethane	0.065	J	0.40	0.060	ppb v/v			02/26/19 02:17	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 02:17	1
Trichloroethene	21		0.20	0.070	ppb v/v			02/26/19 02:17	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/26/19 02:17	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 02:17	1
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/26/19 02:17	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 02:17	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/26/19 02:17	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.60	J	1.3	0.37	ug/m3			02/26/19 02:17	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 02:17	1
Chlorodifluoromethane	1.4		1.4	0.27	ug/m3			02/26/19 02:17	1
Chloroform	0.41	J	2.0	0.37	ug/m3			02/26/19 02:17	1
cis-1,2-Dichloroethene	8.2		1.6	0.48	ug/m3			02/26/19 02:17	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 02:17	1
1,1-Dichloroethane	3.1		1.6	0.20	ug/m3			02/26/19 02:17	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 02:17	1
1,1-Dichloroethene	13		1.6	0.28	ug/m3			02/26/19 02:17	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 02:17	1
Methylene Chloride	3.1	J	6.9	2.3	ug/m3			02/26/19 02:17	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 02:17	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 02:17	1
Tetrachloroethene	0.89	J	2.7	0.54	ug/m3			02/26/19 02:17	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 02:17	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 02:17	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 02:17	1
1,1,1-Trichloroethane	0.36	J	2.2	0.33	ug/m3			02/26/19 02:17	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 02:17	1
Trichloroethene	110		1.1	0.38	ug/m3			02/26/19 02:17	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/26/19 02:17	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 02:17	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-138-A-26

Lab Sample ID: 140-14387-12

Date Collected: 02/21/19 10:32

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.67	J	2.0	0.64	ug/m3			02/26/19 02:17	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 02:17	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/26/19 02:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 02:17	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-093-A-26

Lab Sample ID: 140-14387-13

Date Collected: 02/21/19 12:21

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	J	0.40	0.12	ppb v/v			02/26/19 03:10	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 03:10	1
Chlorodifluoromethane	0.33	J	0.40	0.075	ppb v/v			02/26/19 03:10	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 03:10	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 03:10	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/26/19 03:10	1
1,1-Dichloroethane	0.24	J	0.40	0.050	ppb v/v			02/26/19 03:10	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 03:10	1
1,1-Dichloroethene	0.32	J	0.40	0.070	ppb v/v			02/26/19 03:10	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 03:10	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/26/19 03:10	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 03:10	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 03:10	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 03:10	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 03:10	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 03:10	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 03:10	1
1,1,1-Trichloroethane	0.069	J	0.40	0.060	ppb v/v			02/26/19 03:10	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 03:10	1
Trichloroethene	1.2		0.20	0.070	ppb v/v			02/26/19 03:10	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/26/19 03:10	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 03:10	1
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			02/26/19 03:10	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 03:10	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/26/19 03:10	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.65	J	1.3	0.37	ug/m3			02/26/19 03:10	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 03:10	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/26/19 03:10	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 03:10	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 03:10	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 03:10	1
1,1-Dichloroethane	0.97	J	1.6	0.20	ug/m3			02/26/19 03:10	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 03:10	1
1,1-Dichloroethene	1.3	J	1.6	0.28	ug/m3			02/26/19 03:10	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 03:10	1
Methylene Chloride	3.8	J	6.9	2.3	ug/m3			02/26/19 03:10	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 03:10	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 03:10	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 03:10	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 03:10	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 03:10	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 03:10	1
1,1,1-Trichloroethane	0.37	J	2.2	0.33	ug/m3			02/26/19 03:10	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 03:10	1
Trichloroethene	6.3		1.1	0.38	ug/m3			02/26/19 03:10	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/26/19 03:10	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 03:10	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-093-A-26

Lab Sample ID: 140-14387-13

Date Collected: 02/21/19 12:21

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.72	J	2.0	0.64	ug/m3			02/26/19 03:10	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 03:10	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/26/19 03:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/26/19 03:10	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-173-A-26

Lab Sample ID: 140-14387-14

Date Collected: 02/21/19 12:23

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.21	J	0.40	0.12	ppb v/v			02/26/19 04:03	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 04:03	1
Chlorodifluoromethane	0.30	J	0.40	0.075	ppb v/v			02/26/19 04:03	1
Chloroform	1.1		0.40	0.075	ppb v/v			02/26/19 04:03	1
cis-1,2-Dichloroethene	24		0.40	0.12	ppb v/v			02/26/19 04:03	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/26/19 04:03	1
1,1-Dichloroethane	5.1		0.40	0.050	ppb v/v			02/26/19 04:03	1
1,2-Dichloroethane	0.12	J	0.40	0.095	ppb v/v			02/26/19 04:03	1
1,1-Dichloroethene	84	E	0.40	0.070	ppb v/v			02/26/19 04:03	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 04:03	1
Methylene Chloride	0.76	J	2.0	0.65	ppb v/v			02/26/19 04:03	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 04:03	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 04:03	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 04:03	1
Toluene	0.63		0.60	0.60	ppb v/v			02/26/19 04:03	1
trans-1,2-Dichloroethene	0.84		0.40	0.10	ppb v/v			02/26/19 04:03	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 04:03	1
1,1,1-Trichloroethane	0.44		0.40	0.060	ppb v/v			02/26/19 04:03	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 04:03	1
Trichloroethene	480	E	0.20	0.070	ppb v/v			02/26/19 04:03	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/26/19 04:03	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 04:03	1
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			02/26/19 04:03	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 04:03	1
Xylenes, Total	0.27	J	0.80	0.12	ppb v/v			02/26/19 04:03	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.68	J	1.3	0.37	ug/m3			02/26/19 04:03	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 04:03	1
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3			02/26/19 04:03	1
Chloroform	5.4		2.0	0.37	ug/m3			02/26/19 04:03	1
cis-1,2-Dichloroethene	94		1.6	0.48	ug/m3			02/26/19 04:03	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 04:03	1
1,1-Dichloroethane	21		1.6	0.20	ug/m3			02/26/19 04:03	1
1,2-Dichloroethane	0.50	J	1.6	0.38	ug/m3			02/26/19 04:03	1
1,1-Dichloroethene	330	E	1.6	0.28	ug/m3			02/26/19 04:03	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 04:03	1
Methylene Chloride	2.6	J	6.9	2.3	ug/m3			02/26/19 04:03	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 04:03	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 04:03	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 04:03	1
Toluene	2.4		2.3	2.3	ug/m3			02/26/19 04:03	1
trans-1,2-Dichloroethene	3.3		1.6	0.40	ug/m3			02/26/19 04:03	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 04:03	1
1,1,1-Trichloroethane	2.4		2.2	0.33	ug/m3			02/26/19 04:03	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 04:03	1
Trichloroethene	2600	E	1.1	0.38	ug/m3			02/26/19 04:03	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/26/19 04:03	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 04:03	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-173-A-26

Lab Sample ID: 140-14387-14

Date Collected: 02/21/19 12:23

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.73	J	2.0	0.64	ug/m3			02/26/19 04:03	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 04:03	1
Xylenes, Total	1.2	J	3.5	0.52	ug/m3			02/26/19 04:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 04:03	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	66		3.6	0.64	ppb v/v			02/26/19 19:24	1
Trichloroethene	310		1.8	0.64	ppb v/v			02/26/19 19:24	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	260		14	2.5	ug/m3			02/26/19 19:24	1
Trichloroethene	1700		9.8	3.4	ug/m3			02/26/19 19:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		60 - 140					02/26/19 19:24	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-174-A-26

Lab Sample ID: 140-14387-15

Date Collected: 02/21/19 12:20

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.14	J	0.40	0.12	ppb v/v			02/26/19 04:56	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 04:56	1
Chlorodifluoromethane	0.39	J	0.40	0.075	ppb v/v			02/26/19 04:56	1
Chloroform	1.2		0.40	0.075	ppb v/v			02/26/19 04:56	1
cis-1,2-Dichloroethene	1.2		0.40	0.12	ppb v/v			02/26/19 04:56	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/26/19 04:56	1
1,1-Dichloroethane	2.3		0.40	0.050	ppb v/v			02/26/19 04:56	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 04:56	1
1,1-Dichloroethene	4.6		0.40	0.070	ppb v/v			02/26/19 04:56	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 04:56	1
Methylene Chloride	0.77	J	2.0	0.65	ppb v/v			02/26/19 04:56	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 04:56	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 04:56	1
Tetrachloroethene	0.087	J	0.40	0.080	ppb v/v			02/26/19 04:56	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 04:56	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 04:56	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 04:56	1
1,1,1-Trichloroethane	8.2		0.40	0.060	ppb v/v			02/26/19 04:56	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 04:56	1
Trichloroethene	20		0.20	0.070	ppb v/v			02/26/19 04:56	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/26/19 04:56	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 04:56	1
1,3,5-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v			02/26/19 04:56	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 04:56	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/26/19 04:56	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.44	J	1.3	0.37	ug/m3			02/26/19 04:56	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 04:56	1
Chlorodifluoromethane	1.4	J	1.4	0.27	ug/m3			02/26/19 04:56	1
Chloroform	5.9		2.0	0.37	ug/m3			02/26/19 04:56	1
cis-1,2-Dichloroethene	4.7		1.6	0.48	ug/m3			02/26/19 04:56	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/26/19 04:56	1
1,1-Dichloroethane	9.1		1.6	0.20	ug/m3			02/26/19 04:56	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 04:56	1
1,1-Dichloroethene	18		1.6	0.28	ug/m3			02/26/19 04:56	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 04:56	1
Methylene Chloride	2.7	J	6.9	2.3	ug/m3			02/26/19 04:56	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 04:56	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 04:56	1
Tetrachloroethene	0.59	J	2.7	0.54	ug/m3			02/26/19 04:56	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 04:56	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 04:56	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 04:56	1
1,1,1-Trichloroethane	45		2.2	0.33	ug/m3			02/26/19 04:56	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 04:56	1
Trichloroethene	110		1.1	0.38	ug/m3			02/26/19 04:56	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/26/19 04:56	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 04:56	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-174-A-26

Lab Sample ID: 140-14387-15

Date Collected: 02/21/19 12:20

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.77	J	2.0	0.64	ug/m3			02/26/19 04:56	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 04:56	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/26/19 04:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/26/19 04:56	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-171-A-26

Lab Sample ID: 140-14387-16

Date Collected: 02/21/19 12:22

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.19	J	0.40	0.12	ppb v/v			02/26/19 05:49	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 05:49	1
Chlorodifluoromethane	0.32	J	0.40	0.075	ppb v/v			02/26/19 05:49	1
Chloroform	0.90		0.40	0.075	ppb v/v			02/26/19 05:49	1
cis-1,2-Dichloroethene	9.3		0.40	0.12	ppb v/v			02/26/19 05:49	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/26/19 05:49	1
1,1-Dichloroethane	2.2		0.40	0.050	ppb v/v			02/26/19 05:49	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 05:49	1
1,1-Dichloroethene	63		0.40	0.070	ppb v/v			02/26/19 05:49	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 05:49	1
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v			02/26/19 05:49	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 05:49	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 05:49	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 05:49	1
Toluene	0.64		0.60	0.60	ppb v/v			02/26/19 05:49	1
trans-1,2-Dichloroethene	0.46		0.40	0.10	ppb v/v			02/26/19 05:49	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 05:49	1
1,1,1-Trichloroethane	0.18	J	0.40	0.060	ppb v/v			02/26/19 05:49	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 05:49	1
Trichloroethene	310	E	0.20	0.070	ppb v/v			02/26/19 05:49	1
1,2,3-Trimethylbenzene	ND	*	0.40	0.17	ppb v/v			02/26/19 05:49	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 05:49	1
1,3,5-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v			02/26/19 05:49	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 05:49	1
Xylenes, Total	0.28	J	0.80	0.12	ppb v/v			02/26/19 05:49	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.62	J	1.3	0.37	ug/m3			02/26/19 05:49	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 05:49	1
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3			02/26/19 05:49	1
Chloroform	4.4		2.0	0.37	ug/m3			02/26/19 05:49	1
cis-1,2-Dichloroethene	37		1.6	0.48	ug/m3			02/26/19 05:49	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/26/19 05:49	1
1,1-Dichloroethane	8.7		1.6	0.20	ug/m3			02/26/19 05:49	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 05:49	1
1,1-Dichloroethene	250		1.6	0.28	ug/m3			02/26/19 05:49	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 05:49	1
Methylene Chloride	4.8	J	6.9	2.3	ug/m3			02/26/19 05:49	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 05:49	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 05:49	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 05:49	1
Toluene	2.4		2.3	2.3	ug/m3			02/26/19 05:49	1
trans-1,2-Dichloroethene	1.8		1.6	0.40	ug/m3			02/26/19 05:49	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 05:49	1
1,1,1-Trichloroethane	0.99	J	2.2	0.33	ug/m3			02/26/19 05:49	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 05:49	1
Trichloroethene	1700	E	1.1	0.38	ug/m3			02/26/19 05:49	1
1,2,3-Trimethylbenzene	ND	*	2.0	0.84	ug/m3			02/26/19 05:49	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 05:49	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-171-A-26

Lab Sample ID: 140-14387-16

Date Collected: 02/21/19 12:22

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3			02/26/19 05:49	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 05:49	1
Xylenes, Total	1.2	J	3.5	0.52	ug/m3			02/26/19 05:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/26/19 05:49	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	190		1.8	0.64	ppb v/v			02/26/19 20:06	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1000		9.8	3.4	ug/m3			02/26/19 20:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		60 - 140					02/26/19 20:06	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-081-A-26

Lab Sample ID: 140-14387-18

Date Collected: 02/21/19 12:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 06:43	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 06:43	1
Chlorodifluoromethane	0.47		0.40	0.075	ppb v/v			02/26/19 06:43	1
Chloroform	0.33	J	0.40	0.075	ppb v/v			02/26/19 06:43	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 06:43	1
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v			02/26/19 06:43	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 06:43	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 06:43	1
1,1-Dichloroethene	0.10	J	0.40	0.070	ppb v/v			02/26/19 06:43	1
Ethylbenzene	0.32	J	0.40	0.14	ppb v/v			02/26/19 06:43	1
Methylene Chloride	0.90	J	2.0	0.65	ppb v/v			02/26/19 06:43	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 06:43	1
Naphthalene	ND	*	0.20	0.20	ppb v/v			02/26/19 06:43	1
Tetrachloroethene	0.19	J	0.40	0.080	ppb v/v			02/26/19 06:43	1
Toluene	1.4		0.60	0.60	ppb v/v			02/26/19 06:43	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 06:43	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 06:43	1
1,1,1-Trichloroethane	0.67		0.40	0.060	ppb v/v			02/26/19 06:43	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 06:43	1
Trichloroethene	0.46		0.20	0.070	ppb v/v			02/26/19 06:43	1
1,2,3-Trimethylbenzene	200	E *	0.40	0.17	ppb v/v			02/26/19 06:43	1
1,2,4-Trimethylbenzene	10		0.40	0.13	ppb v/v			02/26/19 06:43	1
1,3,5-Trimethylbenzene	5.9		0.40	0.13	ppb v/v			02/26/19 06:43	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 06:43	1
Xylenes, Total	3.5		0.80	0.12	ppb v/v			02/26/19 06:43	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 06:43	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 06:43	1
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3			02/26/19 06:43	1
Chloroform	1.6	J	2.0	0.37	ug/m3			02/26/19 06:43	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 06:43	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/26/19 06:43	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 06:43	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 06:43	1
1,1-Dichloroethene	0.40	J	1.6	0.28	ug/m3			02/26/19 06:43	1
Ethylbenzene	1.4	J	1.7	0.59	ug/m3			02/26/19 06:43	1
Methylene Chloride	3.1	J	6.9	2.3	ug/m3			02/26/19 06:43	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 06:43	1
Naphthalene	ND	*	1.0	1.0	ug/m3			02/26/19 06:43	1
Tetrachloroethene	1.3	J	2.7	0.54	ug/m3			02/26/19 06:43	1
Toluene	5.4		2.3	2.3	ug/m3			02/26/19 06:43	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 06:43	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 06:43	1
1,1,1-Trichloroethane	3.7		2.2	0.33	ug/m3			02/26/19 06:43	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 06:43	1
Trichloroethene	2.5		1.1	0.38	ug/m3			02/26/19 06:43	1
1,2,3-Trimethylbenzene	1000	E *	2.0	0.84	ug/m3			02/26/19 06:43	1
1,2,4-Trimethylbenzene	50		2.0	0.61	ug/m3			02/26/19 06:43	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-081-A-26

Lab Sample ID: 140-14387-18

Date Collected: 02/21/19 12:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	29		2.0	0.64	ug/m3			02/26/19 06:43	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 06:43	1
Xylenes, Total	15		3.5	0.52	ug/m3			02/26/19 06:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/26/19 06:43	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	110		4.0	1.7	ppb v/v			02/28/19 06:06	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	550		20	8.4	ug/m3			02/28/19 06:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/28/19 06:06	1

Default Detection Limits

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-14387-1	SV-180-MB-3	101
140-14387-2	SV-179-MB-3	101
140-14387-3	SV-181-MB-3	102
140-14387-4 - DL	SV-182-MB-3	96
140-14387-4	SV-182-MB-3	101
140-14387-5	SV-183-MB-3	101
140-14387-5 - DL	SV-183-MB-3	99
140-14387-6	SV-184-MB-3	103
140-14387-7	SV-185-MB-3	101
140-14387-8	SV-186-MB-3	101
140-14387-10	SV-116-A-26	101
140-14387-11	SV-DUP03-A-26	100
140-14387-12	SV-138-A-26	100
140-14387-13	SV-093-A-26	98
140-14387-14 - DL	SV-173-A-26	89
140-14387-14	SV-173-A-26	100
140-14387-15	SV-174-A-26	98
140-14387-16 - DL	SV-171-A-26	90
140-14387-16	SV-171-A-26	99
140-14387-18	SV-081-A-26	102
140-14387-18 - DL	SV-081-A-26	98
LCS 140-27931/1002	Lab Control Sample	100
LCS 140-27935/1002	Lab Control Sample	103
LCS 140-27980/1002	Lab Control Sample	103
LCS 140-27981/1002	Lab Control Sample	102
MB 140-27931/4	Method Blank	96
MB 140-27935/7	Method Blank	96
MB 140-27980/5	Method Blank	96
MB 140-27981/4	Method Blank	98

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			02/26/19 12:56	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chloroform	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/26/19 12:56	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/26/19 12:56	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/26/19 12:56	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/26/19 12:56	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/26/19 12:56	1
Toluene	ND		0.12	0.12	ppb v/v			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/26/19 12:56	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/26/19 12:56	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/26/19 12:56	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/26/19 12:56	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/26/19 12:56	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/26/19 12:56	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/26/19 12:56	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/26/19 12:56	1
Chloroform	ND		0.39	0.073	ug/m3			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/26/19 12:56	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/26/19 12:56	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/26/19 12:56	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/26/19 12:56	1
Naphthalene	ND		0.21	0.21	ug/m3			02/26/19 12:56	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/26/19 12:56	1
Toluene	ND		0.45	0.45	ug/m3			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/26/19 12:56	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/26/19 12:56	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/26/19 12:56	1

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/26/19 12:56	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/26/19 12:56	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/26/19 12:56	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		60 - 140		02/26/19 12:56	1

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.22		ppb v/v		111	70 - 130
Chlorodifluoromethane	2.00	2.02		ppb v/v		101	60 - 140
Chloroform	2.00	2.00		ppb v/v		100	70 - 130
cis-1,2-Dichloroethene	2.00	2.09		ppb v/v		104	70 - 130
Dichlorodifluoromethane	2.00	2.06		ppb v/v		103	60 - 140
1,1-Dichloroethane	2.00	2.05		ppb v/v		103	70 - 130
1,2-Dichloroethane	2.00	2.00		ppb v/v		100	70 - 130
1,1-Dichloroethene	2.00	2.14		ppb v/v		107	70 - 130
Ethylbenzene	2.00	2.03		ppb v/v		101	70 - 130
Methylene Chloride	2.00	1.81		ppb v/v		90	70 - 130
Methyl tert-butyl ether	2.00	1.97		ppb v/v		99	60 - 140
Naphthalene	2.00	1.94		ppb v/v		97	60 - 140
Tetrachloroethene	2.00	2.06		ppb v/v		103	70 - 130
Toluene	2.00	2.02		ppb v/v		101	70 - 130
trans-1,2-Dichloroethene	2.00	2.15		ppb v/v		108	70 - 130
1,2,4-Trichlorobenzene	2.00	1.83		ppb v/v		92	60 - 140
1,1,1-Trichloroethane	2.00	2.04		ppb v/v		102	70 - 130
1,1,2-Trichloroethane	2.00	2.11		ppb v/v		105	70 - 130
Trichloroethene	2.00	2.09		ppb v/v		105	70 - 130
1,2,3-Trimethylbenzene	2.00	2.22		ppb v/v		111	70 - 130
1,2,4-Trimethylbenzene	2.00	1.99		ppb v/v		99	70 - 130
1,3,5-Trimethylbenzene	2.00	1.97		ppb v/v		98	70 - 130
Vinyl chloride	2.00	1.97		ppb v/v		98	70 - 130
Xylenes, Total	6.00	6.18		ppb v/v		103	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	13	13.9		ug/m3		111	70 - 130
Chlorodifluoromethane	7.1	7.16		ug/m3		101	60 - 140
Chloroform	9.8	9.78		ug/m3		100	70 - 130
cis-1,2-Dichloroethene	7.9	8.28		ug/m3		104	70 - 130
Dichlorodifluoromethane	9.9	10.2		ug/m3		103	60 - 140
1,1-Dichloroethane	8.1	8.31		ug/m3		103	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	8.11		ug/m3		100	70 - 130
1,1-Dichloroethene	7.9	8.50		ug/m3		107	70 - 130
Ethylbenzene	8.7	8.79		ug/m3		101	70 - 130
Methylene Chloride	6.9	6.27		ug/m3		90	70 - 130
Methyl tert-butyl ether	7.2	7.12		ug/m3		99	60 - 140
Naphthalene	10	10.2		ug/m3		97	60 - 140
Tetrachloroethene	14	14.0		ug/m3		103	70 - 130
Toluene	7.5	7.63		ug/m3		101	70 - 130
trans-1,2-Dichloroethene	7.9	8.53		ug/m3		108	70 - 130
1,2,4-Trichlorobenzene	15	13.6		ug/m3		92	60 - 140
1,1,1-Trichloroethane	11	11.1		ug/m3		102	70 - 130
1,1,2-Trichloroethane	11	11.5		ug/m3		105	70 - 130
Trichloroethene	11	11.2		ug/m3		105	70 - 130
1,2,3-Trimethylbenzene	9.8	10.9		ug/m3		111	70 - 130
1,2,4-Trimethylbenzene	9.8	9.78		ug/m3		99	70 - 130
1,3,5-Trimethylbenzene	9.8	9.68		ug/m3		98	70 - 130
Vinyl chloride	5.1	5.03		ug/m3		98	70 - 130
Xylenes, Total	26	26.8		ug/m3		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		60 - 140

Lab Sample ID: MB 140-27935/7
Matrix: Air
Analysis Batch: 27935

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/25/19 14:47	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/25/19 14:47	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/25/19 14:47	1
Chloroform	ND		0.080	0.015	ppb v/v			02/25/19 14:47	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/25/19 14:47	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/25/19 14:47	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/25/19 14:47	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/25/19 14:47	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/25/19 14:47	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/25/19 14:47	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/25/19 14:47	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/25/19 14:47	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/25/19 14:47	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/25/19 14:47	1
Toluene	ND		0.12	0.12	ppb v/v			02/25/19 14:47	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/25/19 14:47	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/25/19 14:47	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/25/19 14:47	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/25/19 14:47	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/25/19 14:47	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27935/7
Matrix: Air
Analysis Batch: 27935

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/25/19 14:47	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/25/19 14:47	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/25/19 14:47	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/25/19 14:47	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/25/19 14:47	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/25/19 14:47	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/25/19 14:47	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/25/19 14:47	1
Chloroform	ND		0.39	0.073	ug/m3			02/25/19 14:47	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/25/19 14:47	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/25/19 14:47	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/25/19 14:47	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/25/19 14:47	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/25/19 14:47	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/25/19 14:47	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/25/19 14:47	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/25/19 14:47	1
Naphthalene	ND		0.21	0.21	ug/m3			02/25/19 14:47	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/25/19 14:47	1
Toluene	ND		0.45	0.45	ug/m3			02/25/19 14:47	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/25/19 14:47	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/25/19 14:47	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/25/19 14:47	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/25/19 14:47	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/25/19 14:47	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/25/19 14:47	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/25/19 14:47	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/25/19 14:47	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/25/19 14:47	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/25/19 14:47	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		60 - 140		02/25/19 14:47	1

Lab Sample ID: LCS 140-27935/1002
Matrix: Air
Analysis Batch: 27935

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	1.00	0.929		ppb v/v		93	70 - 130
Chlorodifluoromethane	1.00	0.930		ppb v/v		93	60 - 140
Chloroform	1.00	0.962		ppb v/v		96	70 - 130
cis-1,2-Dichloroethene	1.00	0.946		ppb v/v		95	70 - 130
Dichlorodifluoromethane	1.00	0.922		ppb v/v		92	60 - 140

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27935/1002
Matrix: Air
Analysis Batch: 27935

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	1.00	0.944		ppb v/v		94	70 - 130
1,2-Dichloroethane	1.00	0.906		ppb v/v		91	70 - 130
1,1-Dichloroethene	1.00	0.928		ppb v/v		93	70 - 130
Ethylbenzene	1.00	0.927		ppb v/v		93	70 - 130
Methylene Chloride	1.00	0.918		ppb v/v		92	70 - 130
Methyl tert-butyl ether	1.00	0.929		ppb v/v		93	60 - 140
Naphthalene	1.00	0.586	*	ppb v/v		59	60 - 140
Tetrachloroethene	1.00	0.927		ppb v/v		93	70 - 130
Toluene	1.00	0.943		ppb v/v		94	70 - 130
trans-1,2-Dichloroethene	1.00	0.907		ppb v/v		91	70 - 130
1,2,4-Trichlorobenzene	1.00	0.642		ppb v/v		64	60 - 140
1,1,1-Trichloroethane	1.00	0.932		ppb v/v		93	70 - 130
1,1,2-Trichloroethane	1.00	0.963		ppb v/v		96	70 - 130
Trichloroethene	1.00	0.898		ppb v/v		90	70 - 130
1,2,3-Trimethylbenzene	1.00	0.701		ppb v/v		70	70 - 130
1,2,4-Trimethylbenzene	1.00	0.973		ppb v/v		97	70 - 130
1,3,5-Trimethylbenzene	1.00	1.02		ppb v/v		102	70 - 130
Vinyl chloride	1.00	0.950		ppb v/v		95	70 - 130
Xylenes, Total	3.00	2.91		ppb v/v		97	70 - 130
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	3.2	2.97		ug/m3		93	70 - 130
Carbon tetrachloride	6.3	5.84		ug/m3		93	70 - 130
Chlorodifluoromethane	3.5	3.29		ug/m3		93	60 - 140
Chloroform	4.9	4.69		ug/m3		96	70 - 130
cis-1,2-Dichloroethene	4.0	3.75		ug/m3		95	70 - 130
Dichlorodifluoromethane	4.9	4.56		ug/m3		92	60 - 140
1,1-Dichloroethane	4.0	3.82		ug/m3		94	70 - 130
1,2-Dichloroethane	4.0	3.67		ug/m3		91	70 - 130
1,1-Dichloroethene	4.0	3.68		ug/m3		93	70 - 130
Ethylbenzene	4.3	4.03		ug/m3		93	70 - 130
Methylene Chloride	3.5	3.19		ug/m3		92	70 - 130
Methyl tert-butyl ether	3.6	3.35		ug/m3		93	60 - 140
Naphthalene	5.2	3.07	*	ug/m3		59	60 - 140
Tetrachloroethene	6.8	6.29		ug/m3		93	70 - 130
Toluene	3.8	3.55		ug/m3		94	70 - 130
trans-1,2-Dichloroethene	4.0	3.60		ug/m3		91	70 - 130
1,2,4-Trichlorobenzene	7.4	4.77		ug/m3		64	60 - 140
1,1,1-Trichloroethane	5.5	5.08		ug/m3		93	70 - 130
1,1,2-Trichloroethane	5.5	5.26		ug/m3		96	70 - 130
Trichloroethene	5.4	4.82		ug/m3		90	70 - 130
1,2,3-Trimethylbenzene	4.9	3.45		ug/m3		70	70 - 130
1,2,4-Trimethylbenzene	4.9	4.78		ug/m3		97	70 - 130
1,3,5-Trimethylbenzene	4.9	5.01		ug/m3		102	70 - 130
Vinyl chloride	2.6	2.43		ug/m3		95	70 - 130
Xylenes, Total	13	12.6		ug/m3		97	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27935/1002
Matrix: Air
Analysis Batch: 27935

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		60 - 140

Lab Sample ID: MB 140-27980/5
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/27/19 13:42	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/27/19 13:42	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/27/19 13:42	1
Chloroform	ND		0.080	0.015	ppb v/v			02/27/19 13:42	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/27/19 13:42	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/27/19 13:42	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/27/19 13:42	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/27/19 13:42	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/27/19 13:42	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/27/19 13:42	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/27/19 13:42	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/27/19 13:42	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/27/19 13:42	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/27/19 13:42	1
Toluene	ND		0.12	0.12	ppb v/v			02/27/19 13:42	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/27/19 13:42	1
1,2,4-Trichlorobenzene	0.0691	J	0.080	0.039	ppb v/v			02/27/19 13:42	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/27/19 13:42	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/27/19 13:42	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/27/19 13:42	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/27/19 13:42	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/27/19 13:42	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/27/19 13:42	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/27/19 13:42	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/27/19 13:42	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			02/27/19 13:42	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/27/19 13:42	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/27/19 13:42	1
Chloroform	ND		0.39	0.073	ug/m3			02/27/19 13:42	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/27/19 13:42	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/27/19 13:42	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/27/19 13:42	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/27/19 13:42	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/27/19 13:42	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/27/19 13:42	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/27/19 13:42	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/27/19 13:42	1
Naphthalene	ND		0.21	0.21	ug/m3			02/27/19 13:42	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27980/5
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/27/19 13:42	1
Toluene	ND		0.45	0.45	ug/m3			02/27/19 13:42	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/27/19 13:42	1
1,2,4-Trichlorobenzene	0.513	J	0.59	0.29	ug/m3			02/27/19 13:42	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/27/19 13:42	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/27/19 13:42	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/27/19 13:42	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/27/19 13:42	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/27/19 13:42	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/27/19 13:42	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/27/19 13:42	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/27/19 13:42	1
	MB	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					02/27/19 13:42	1

Lab Sample ID: LCS 140-27980/1002
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	1.00	1.09		ppb v/v		109	70 - 130
Chlorodifluoromethane	1.00	1.09		ppb v/v		109	60 - 140
Chloroform	1.00	1.15		ppb v/v		115	70 - 130
cis-1,2-Dichloroethene	1.00	1.09		ppb v/v		109	70 - 130
Dichlorodifluoromethane	1.00	1.06		ppb v/v		106	60 - 140
1,1-Dichloroethane	1.00	1.11		ppb v/v		111	70 - 130
1,2-Dichloroethane	1.00	1.09		ppb v/v		109	70 - 130
1,1-Dichloroethene	1.00	1.06		ppb v/v		106	70 - 130
Ethylbenzene	1.00	1.09		ppb v/v		109	70 - 130
Methylene Chloride	1.00	1.06		ppb v/v		106	70 - 130
Methyl tert-butyl ether	1.00	1.08		ppb v/v		108	60 - 140
Naphthalene	1.00	1.16		ppb v/v		116	60 - 140
Tetrachloroethene	1.00	1.06		ppb v/v		106	70 - 130
Toluene	1.00	1.10		ppb v/v		110	70 - 130
trans-1,2-Dichloroethene	1.00	1.04		ppb v/v		104	70 - 130
1,2,4-Trichlorobenzene	1.00	0.910		ppb v/v		91	60 - 140
1,1,1-Trichloroethane	1.00	1.09		ppb v/v		109	70 - 130
1,1,2-Trichloroethane	1.00	1.12		ppb v/v		112	70 - 130
Trichloroethene	1.00	1.04		ppb v/v		104	70 - 130
1,2,3-Trimethylbenzene	1.00	0.835		ppb v/v		83	70 - 130
1,2,4-Trimethylbenzene	1.00	1.15		ppb v/v		115	70 - 130
1,3,5-Trimethylbenzene	1.00	1.18		ppb v/v		118	70 - 130
Vinyl chloride	1.00	1.11		ppb v/v		111	70 - 130
Xylenes, Total	3.00	3.43		ppb v/v		114	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	3.2	3.46		ug/m3		108	70 - 130
Carbon tetrachloride	6.3	6.85		ug/m3		109	70 - 130
Chlorodifluoromethane	3.5	3.86		ug/m3		109	60 - 140
Chloroform	4.9	5.60		ug/m3		115	70 - 130
cis-1,2-Dichloroethene	4.0	4.34		ug/m3		109	70 - 130
Dichlorodifluoromethane	4.9	5.24		ug/m3		106	60 - 140
1,1-Dichloroethane	4.0	4.51		ug/m3		111	70 - 130
1,2-Dichloroethane	4.0	4.42		ug/m3		109	70 - 130
1,1-Dichloroethene	4.0	4.19		ug/m3		106	70 - 130
Ethylbenzene	4.3	4.73		ug/m3		109	70 - 130
Methylene Chloride	3.5	3.68		ug/m3		106	70 - 130
Methyl tert-butyl ether	3.6	3.90		ug/m3		108	60 - 140
Naphthalene	5.2	6.06		ug/m3		116	60 - 140
Tetrachloroethene	6.8	7.17		ug/m3		106	70 - 130
Toluene	3.8	4.13		ug/m3		110	70 - 130
trans-1,2-Dichloroethene	4.0	4.13		ug/m3		104	70 - 130
1,2,4-Trichlorobenzene	7.4	6.75		ug/m3		91	60 - 140
1,1,1-Trichloroethane	5.5	5.95		ug/m3		109	70 - 130
1,1,2-Trichloroethane	5.5	6.10		ug/m3		112	70 - 130
Trichloroethene	5.4	5.58		ug/m3		104	70 - 130
1,2,3-Trimethylbenzene	4.9	4.10		ug/m3		83	70 - 130
1,2,4-Trimethylbenzene	4.9	5.66		ug/m3		115	70 - 130
1,3,5-Trimethylbenzene	4.9	5.80		ug/m3		118	70 - 130
Vinyl chloride	2.6	2.83		ug/m3		111	70 - 130
Xylenes, Total	13	14.9		ug/m3		114	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		60 - 140

Lab Sample ID: MB 140-27981/4
Matrix: Air
Analysis Batch: 27981

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/28/19 14:24	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/28/19 14:24	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/28/19 14:24	1
Chloroform	ND		0.080	0.015	ppb v/v			02/28/19 14:24	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/28/19 14:24	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/28/19 14:24	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/28/19 14:24	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/28/19 14:24	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/28/19 14:24	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/28/19 14:24	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/28/19 14:24	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/28/19 14:24	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/28/19 14:24	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/28/19 14:24	1
Toluene	ND		0.12	0.12	ppb v/v			02/28/19 14:24	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/28/19 14:24	1
1,2,4-Trichlorobenzene	0.0681	J	0.080	0.039	ppb v/v			02/28/19 14:24	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/28/19 14:24	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/28/19 14:24	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/28/19 14:24	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27981/4
Matrix: Air
Analysis Batch: 27981

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/28/19 14:24	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/28/19 14:24	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/28/19 14:24	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/28/19 14:24	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/28/19 14:24	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/28/19 14:24	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/28/19 14:24	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/28/19 14:24	1
Chloroform	ND		0.39	0.073	ug/m3			02/28/19 14:24	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/28/19 14:24	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/28/19 14:24	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/28/19 14:24	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/28/19 14:24	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/28/19 14:24	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/28/19 14:24	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/28/19 14:24	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/28/19 14:24	1
Naphthalene	ND		0.21	0.21	ug/m3			02/28/19 14:24	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/28/19 14:24	1
Toluene	ND		0.45	0.45	ug/m3			02/28/19 14:24	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/28/19 14:24	1
1,2,4-Trichlorobenzene	0.505	J	0.59	0.29	ug/m3			02/28/19 14:24	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/28/19 14:24	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/28/19 14:24	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/28/19 14:24	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/28/19 14:24	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/28/19 14:24	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/28/19 14:24	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/28/19 14:24	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/28/19 14:24	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	98		60 - 140		02/28/19 14:24	1

Lab Sample ID: LCS 140-27981/1002
Matrix: Air
Analysis Batch: 27981

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	1.00	1.11		ppb v/v		111	70 - 130
Chlorodifluoromethane	1.00	1.09		ppb v/v		109	60 - 140
Chloroform	1.00	1.14		ppb v/v		114	70 - 130
cis-1,2-Dichloroethene	1.00	1.11		ppb v/v		111	70 - 130
Dichlorodifluoromethane	1.00	1.07		ppb v/v		107	60 - 140

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27981/1002
Matrix: Air
Analysis Batch: 27981

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
1,1-Dichloroethane	1.00	1.11		ppb v/v		111	70 - 130
1,2-Dichloroethane	1.00	1.09		ppb v/v		109	70 - 130
1,1-Dichloroethene	1.00	1.07		ppb v/v		107	70 - 130
Ethylbenzene	1.00	1.11		ppb v/v		111	70 - 130
Methylene Chloride	1.00	1.05		ppb v/v		105	70 - 130
Methyl tert-butyl ether	1.00	1.12		ppb v/v		112	60 - 140
Naphthalene	1.00	1.08		ppb v/v		108	60 - 140
Tetrachloroethene	1.00	1.09		ppb v/v		109	70 - 130
Toluene	1.00	1.12		ppb v/v		112	70 - 130
trans-1,2-Dichloroethene	1.00	1.07		ppb v/v		107	70 - 130
1,2,4-Trichlorobenzene	1.00	0.901		ppb v/v		90	60 - 140
1,1,1-Trichloroethane	1.00	1.12		ppb v/v		112	70 - 130
1,1,2-Trichloroethane	1.00	1.13		ppb v/v		113	70 - 130
Trichloroethene	1.00	1.09		ppb v/v		109	70 - 130
1,2,3-Trimethylbenzene	1.00	0.811		ppb v/v		81	70 - 130
1,2,4-Trimethylbenzene	1.00	1.12		ppb v/v		112	70 - 130
1,3,5-Trimethylbenzene	1.00	1.18		ppb v/v		118	70 - 130
Vinyl chloride	1.00	1.12		ppb v/v		112	70 - 130
Xylenes, Total	3.00	3.41		ppb v/v		114	70 - 130
Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
Benzene	3.2	3.52		ug/m3		110	70 - 130
Carbon tetrachloride	6.3	6.99		ug/m3		111	70 - 130
Chlorodifluoromethane	3.5	3.85		ug/m3		109	60 - 140
Chloroform	4.9	5.55		ug/m3		114	70 - 130
cis-1,2-Dichloroethene	4.0	4.42		ug/m3		111	70 - 130
Dichlorodifluoromethane	4.9	5.29		ug/m3		107	60 - 140
1,1-Dichloroethane	4.0	4.50		ug/m3		111	70 - 130
1,2-Dichloroethane	4.0	4.41		ug/m3		109	70 - 130
1,1-Dichloroethene	4.0	4.23		ug/m3		107	70 - 130
Ethylbenzene	4.3	4.80		ug/m3		111	70 - 130
Methylene Chloride	3.5	3.64		ug/m3		105	70 - 130
Methyl tert-butyl ether	3.6	4.04		ug/m3		112	60 - 140
Naphthalene	5.2	5.64		ug/m3		108	60 - 140
Tetrachloroethene	6.8	7.41		ug/m3		109	70 - 130
Toluene	3.8	4.22		ug/m3		112	70 - 130
trans-1,2-Dichloroethene	4.0	4.25		ug/m3		107	70 - 130
1,2,4-Trichlorobenzene	7.4	6.68		ug/m3		90	60 - 140
1,1,1-Trichloroethane	5.5	6.09		ug/m3		112	70 - 130
1,1,2-Trichloroethane	5.5	6.15		ug/m3		113	70 - 130
Trichloroethene	5.4	5.86		ug/m3		109	70 - 130
1,2,3-Trimethylbenzene	4.9	3.99		ug/m3		81	70 - 130
1,2,4-Trimethylbenzene	4.9	5.50		ug/m3		112	70 - 130
1,3,5-Trimethylbenzene	4.9	5.78		ug/m3		118	70 - 130
Vinyl chloride	2.6	2.86		ug/m3		112	70 - 130
Xylenes, Total	13	14.8		ug/m3		114	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27981/1002
Matrix: Air
Analysis Batch: 27981

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>LCS</i> <i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	102		60 - 140

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Air - GC/MS VOA

Analysis Batch: 27931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14387-4 - DL	SV-182-MB-3	Total/NA	Air	TO 15 LL	
140-14387-14 - DL	SV-173-A-26	Total/NA	Air	TO 15 LL	
140-14387-16 - DL	SV-171-A-26	Total/NA	Air	TO 15 LL	
MB 140-27931/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27931/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 27935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14387-1	SV-180-MB-3	Total/NA	Air	TO 15 LL	
140-14387-2	SV-179-MB-3	Total/NA	Air	TO 15 LL	
140-14387-3	SV-181-MB-3	Total/NA	Air	TO 15 LL	
140-14387-4	SV-182-MB-3	Total/NA	Air	TO 15 LL	
140-14387-5	SV-183-MB-3	Total/NA	Air	TO 15 LL	
140-14387-6	SV-184-MB-3	Total/NA	Air	TO 15 LL	
140-14387-7	SV-185-MB-3	Total/NA	Air	TO 15 LL	
140-14387-8	SV-186-MB-3	Total/NA	Air	TO 15 LL	
140-14387-10	SV-116-A-26	Total/NA	Air	TO 15 LL	
140-14387-11	SV-DUP03-A-26	Total/NA	Air	TO 15 LL	
140-14387-12	SV-138-A-26	Total/NA	Air	TO 15 LL	
140-14387-13	SV-093-A-26	Total/NA	Air	TO 15 LL	
140-14387-14	SV-173-A-26	Total/NA	Air	TO 15 LL	
140-14387-15	SV-174-A-26	Total/NA	Air	TO 15 LL	
140-14387-16	SV-171-A-26	Total/NA	Air	TO 15 LL	
140-14387-18	SV-081-A-26	Total/NA	Air	TO 15 LL	
MB 140-27935/7	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27935/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 27980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14387-18 - DL	SV-081-A-26	Total/NA	Air	TO 15 LL	
MB 140-27980/5	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27980/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 27981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14387-5 - DL	SV-183-MB-3	Total/NA	Air	TO 15 LL	
MB 140-27981/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27981/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-180-MB-3

Date Collected: 02/21/19 09:49

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 17:27	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: SV-179-MB-3

Date Collected: 02/21/19 09:50

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 18:20	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: SV-181-MB-3

Date Collected: 02/21/19 09:53

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 19:13	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: SV-182-MB-3

Date Collected: 02/21/19 09:55

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL	DL	1	11 mL	500 mL	27931	02/26/19 18:01	S1K	TAL KNX
	Instrument ID: MG									
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 20:06	S1K	TAL KNX
	Instrument ID: MH									

Client Sample ID: SV-183-MB-3

Date Collected: 02/21/19 09:58

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14387-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 20:59	S1K	TAL KNX
	Instrument ID: MH									
Total/NA	Analysis	TO 15 LL	DL	1	20 mL	500 mL	27981	02/28/19 17:11	S1K	TAL KNX
	Instrument ID: MH									

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-184-MB-3

Lab Sample ID: 140-14387-6

Date Collected: 02/21/19 10:01

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 21:53	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-185-MB-3

Lab Sample ID: 140-14387-7

Date Collected: 02/21/19 11:14

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 22:46	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-186-MB-3

Lab Sample ID: 140-14387-8

Date Collected: 02/21/19 11:15

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/25/19 23:39	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-116-A-26

Lab Sample ID: 140-14387-10

Date Collected: 02/21/19 12:15

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 00:32	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-DUP03-A-26

Lab Sample ID: 140-14387-11

Date Collected: 02/21/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 01:24	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-138-A-26

Lab Sample ID: 140-14387-12

Date Collected: 02/21/19 10:32

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 02:17	S1K	TAL KNX
Instrument ID: MH										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: SV-093-A-26

Lab Sample ID: 140-14387-13

Date Collected: 02/21/19 12:21

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 03:10	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-173-A-26

Lab Sample ID: 140-14387-14

Date Collected: 02/21/19 12:23

Matrix: Air

Date Received: 02/23/19 10:10

Total/NA	Analysis	TO 15 LL	DL	1	11 mL	500 mL	27931	02/26/19 19:24	S1K	TAL KNX
Instrument ID: MG										
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 04:03	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-174-A-26

Lab Sample ID: 140-14387-15

Date Collected: 02/21/19 12:20

Matrix: Air

Date Received: 02/23/19 10:10

Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 04:56	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-171-A-26

Lab Sample ID: 140-14387-16

Date Collected: 02/21/19 12:22

Matrix: Air

Date Received: 02/23/19 10:10

Total/NA	Analysis	TO 15 LL	DL	1	11 mL	500 mL	27931	02/26/19 20:06	S1K	TAL KNX
Instrument ID: MG										
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 05:49	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-081-A-26

Lab Sample ID: 140-14387-18

Date Collected: 02/21/19 12:34

Matrix: Air

Date Received: 02/23/19 10:10

Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27935	02/26/19 06:43	S1K	TAL KNX
Instrument ID: MH										
Total/NA	Analysis	TO 15 LL	DL	1	10 mL	500 mL	27980	02/28/19 06:06	S1K	TAL KNX
Instrument ID: MH										

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-27931/4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 12:56	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-27935/7

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27935	02/25/19 14:47	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-27980/5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27980	02/27/19 13:42	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-27981/4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27981	02/28/19 14:24	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

Lab Sample ID: LCS 140-27931/1002

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 11:35	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

Lab Sample ID: LCS 140-27935/1002

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27935	02/25/19 09:47	S1K	TAL KNX
Instrument ID: MH										

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27980/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27980	02/27/19 11:50	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27981/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27981	02/28/19 13:02	S1K	TAL KNX
Instrument ID: MH										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14387-1	SV-180-MB-3	Air	02/21/19 09:49	02/23/19 10:10
140-14387-2	SV-179-MB-3	Air	02/21/19 09:50	02/23/19 10:10
140-14387-3	SV-181-MB-3	Air	02/21/19 09:53	02/23/19 10:10
140-14387-4	SV-182-MB-3	Air	02/21/19 09:55	02/23/19 10:10
140-14387-5	SV-183-MB-3	Air	02/21/19 09:58	02/23/19 10:10
140-14387-6	SV-184-MB-3	Air	02/21/19 10:01	02/23/19 10:10
140-14387-7	SV-185-MB-3	Air	02/21/19 11:14	02/23/19 10:10
140-14387-8	SV-186-MB-3	Air	02/21/19 11:15	02/23/19 10:10
140-14387-10	SV-116-A-26	Air	02/21/19 12:15	02/23/19 10:10
140-14387-11	SV-DUP03-A-26	Air	02/21/19 00:00	02/23/19 10:10
140-14387-12	SV-138-A-26	Air	02/21/19 10:32	02/23/19 10:10
140-14387-13	SV-093-A-26	Air	02/21/19 12:21	02/23/19 10:10
140-14387-14	SV-173-A-26	Air	02/21/19 12:23	02/23/19 10:10
140-14387-15	SV-174-A-26	Air	02/21/19 12:20	02/23/19 10:10
140-14387-16	SV-171-A-26	Air	02/21/19 12:22	02/23/19 10:10
140-14387-18	SV-081-A-26	Air	02/21/19 12:34	02/23/19 10:10

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
SV-180-MB-3	140-14387-1	101
SV-179-MB-3	140-14387-2	101
SV-181-MB-3	140-14387-3	102
SV-182-MB-3	140-14387-4	101
SV-182-MB-3 DL	140-14387-4 DL	96
SV-183-MB-3	140-14387-5	101
SV-183-MB-3 DL	140-14387-5 DL	99
SV-184-MB-3	140-14387-6	103
SV-185-MB-3	140-14387-7	101
SV-186-MB-3	140-14387-8	101
SV-116-A-26	140-14387-10	101
SV-DUP03-A-26	140-14387-11	100
SV-138-A-26	140-14387-12	100
SV-093-A-26	140-14387-13	98
SV-173-A-26	140-14387-14	100
SV-173-A-26 DL	140-14387-14 DL	89
SV-174-A-26	140-14387-15	98
SV-171-A-26	140-14387-16	99
SV-171-A-26 DL	140-14387-16 DL	90
SV-081-A-26	140-14387-18	102
SV-081-A-26 DL	140-14387-18 DL	98
	MB 140-27931/4	96
	MB 140-27935/7	96
	MB 140-27980/5	96
	MB 140-27981/4	98
	LCS 140-27931/1002	100
	LCS 140-27935/1002	103
	LCS 140-27980/1002	103
	LCS 140-27981/1002	102

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB26-LCS.d
 Lab ID: LCS 140-27931/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.22	111	70-130	
Chlorodifluoromethane	2.00	2.02	101	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	2.09	104	70-130	
Dichlorodifluoromethane	2.00	2.06	103	60-140	
1,1-Dichloroethane	2.00	2.05	103	70-130	
1,2-Dichloroethane	2.00	2.00	100	70-130	
1,1-Dichloroethene	2.00	2.14	107	70-130	
Ethylbenzene	2.00	2.03	101	70-130	
Methylene Chloride	2.00	1.81	90	70-130	
Methyl tert-butyl ether	2.00	1.97	99	60-140	
Naphthalene	2.00	1.94	97	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	2.15	108	70-130	
1,2,4-Trichlorobenzene	2.00	1.83	92	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	2.11	105	70-130	
Trichloroethene	2.00	2.09	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.22	111	70-130	
1,2,4-Trimethylbenzene	2.00	1.99	99	70-130	
1,3,5-Trimethylbenzene	2.00	1.97	98	70-130	
Vinyl chloride	2.00	1.97	98	70-130	
Xylenes, Total	6.00	6.18	103	70-130	

Column to be used to flag recovery and RPD values

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB25-LCS.d
 Lab ID: LCS 140-27935/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	0.929	93	70-130	
Carbon tetrachloride	1.00	0.929	93	70-130	
Chlorodifluoromethane	1.00	0.930	93	60-140	
Chloroform	1.00	0.962	96	70-130	
cis-1,2-Dichloroethene	1.00	0.946	95	70-130	
Dichlorodifluoromethane	1.00	0.922	92	60-140	
1,1-Dichloroethane	1.00	0.944	94	70-130	
1,2-Dichloroethane	1.00	0.906	91	70-130	
1,1-Dichloroethene	1.00	0.928	93	70-130	
Ethylbenzene	1.00	0.927	93	70-130	
Methylene Chloride	1.00	0.918	92	70-130	
Methyl tert-butyl ether	1.00	0.929	93	60-140	
Naphthalene	1.00	0.586	59	60-140	*
Tetrachloroethene	1.00	0.927	93	70-130	
Toluene	1.00	0.943	94	70-130	
trans-1,2-Dichloroethene	1.00	0.907	91	70-130	
1,2,4-Trichlorobenzene	1.00	0.642	64	60-140	
1,1,1-Trichloroethane	1.00	0.932	93	70-130	
1,1,2-Trichloroethane	1.00	0.963	96	70-130	
Trichloroethene	1.00	0.898	90	70-130	
1,2,3-Trimethylbenzene	1.00	0.701	70	70-130	
1,2,4-Trimethylbenzene	1.00	0.973	97	70-130	
1,3,5-Trimethylbenzene	1.00	1.02	102	70-130	
Vinyl chloride	1.00	0.950	95	70-130	
Xylenes, Total	3.00	2.91	97	70-130	

Column to be used to flag recovery and RPD values

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB27-LCS.d
 Lab ID: LCS 140-27980/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	1.08	108	70-130	
Carbon tetrachloride	1.00	1.09	109	70-130	
Chlorodifluoromethane	1.00	1.09	109	60-140	
Chloroform	1.00	1.15	115	70-130	
cis-1,2-Dichloroethene	1.00	1.09	109	70-130	
Dichlorodifluoromethane	1.00	1.06	106	60-140	
1,1-Dichloroethane	1.00	1.11	111	70-130	
1,2-Dichloroethane	1.00	1.09	109	70-130	
1,1-Dichloroethene	1.00	1.06	106	70-130	
Ethylbenzene	1.00	1.09	109	70-130	
Methylene Chloride	1.00	1.06	106	70-130	
Methyl tert-butyl ether	1.00	1.08	108	60-140	
Naphthalene	1.00	1.16	116	60-140	
Tetrachloroethene	1.00	1.06	106	70-130	
Toluene	1.00	1.10	110	70-130	
trans-1,2-Dichloroethene	1.00	1.04	104	70-130	
1,2,4-Trichlorobenzene	1.00	0.910	91	60-140	
1,1,1-Trichloroethane	1.00	1.09	109	70-130	
1,1,2-Trichloroethane	1.00	1.12	112	70-130	
Trichloroethene	1.00	1.04	104	70-130	
1,2,3-Trimethylbenzene	1.00	0.835	83	70-130	
1,2,4-Trimethylbenzene	1.00	1.15	115	70-130	
1,3,5-Trimethylbenzene	1.00	1.18	118	70-130	
Vinyl chloride	1.00	1.11	111	70-130	
Xylenes, Total	3.00	3.43	114	70-130	

Column to be used to flag recovery and RPD values

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB28-LCS.d
 Lab ID: LCS 140-27981/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	1.10	110	70-130	
Carbon tetrachloride	1.00	1.11	111	70-130	
Chlorodifluoromethane	1.00	1.09	109	60-140	
Chloroform	1.00	1.14	114	70-130	
cis-1,2-Dichloroethene	1.00	1.11	111	70-130	
Dichlorodifluoromethane	1.00	1.07	107	60-140	
1,1-Dichloroethane	1.00	1.11	111	70-130	
1,2-Dichloroethane	1.00	1.09	109	70-130	
1,1-Dichloroethene	1.00	1.07	107	70-130	
Ethylbenzene	1.00	1.11	111	70-130	
Methylene Chloride	1.00	1.05	105	70-130	
Methyl tert-butyl ether	1.00	1.12	112	60-140	
Naphthalene	1.00	1.08	108	60-140	
Tetrachloroethene	1.00	1.09	109	70-130	
Toluene	1.00	1.12	112	70-130	
trans-1,2-Dichloroethene	1.00	1.07	107	70-130	
1,2,4-Trichlorobenzene	1.00	0.901	90	60-140	
1,1,1-Trichloroethane	1.00	1.12	112	70-130	
1,1,2-Trichloroethane	1.00	1.13	113	70-130	
Trichloroethene	1.00	1.09	109	70-130	
1,2,3-Trimethylbenzene	1.00	0.811	81	70-130	
1,2,4-Trimethylbenzene	1.00	1.12	112	70-130	
1,3,5-Trimethylbenzene	1.00	1.18	118	70-130	
Vinyl chloride	1.00	1.12	112	70-130	
Xylenes, Total	3.00	3.41	114	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: G500BB26.D Lab Sample ID: MB 140-27931/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/26/2019 12:56
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27931/1002	GCCVB26-LCS .d	02/26/2019 11:35
SV-182-MB-3 DL	140-14387-4 DL	GB26P104.D	02/26/2019 18:01
SV-173-A-26 DL	140-14387-14 DL	GB26P106.D	02/26/2019 19:24
SV-171-A-26 DL	140-14387-16 DL	GB26P107.D	02/26/2019 20:06

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: H500BB25.D Lab Sample ID: MB 140-27935/7
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/25/2019 14:47
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27935/1002	HCCVB25-LCS .d	02/25/2019 09:47
SV-180-MB-3	140-14387-1	HB25P101.D	02/25/2019 17:27
SV-179-MB-3	140-14387-2	HB25P102.D	02/25/2019 18:20
SV-181-MB-3	140-14387-3	HB25P103.D	02/25/2019 19:13
SV-182-MB-3	140-14387-4	HB25P104.D	02/25/2019 20:06
SV-183-MB-3	140-14387-5	HB25P105.D	02/25/2019 20:59
SV-184-MB-3	140-14387-6	HB25P106.D	02/25/2019 21:53
SV-185-MB-3	140-14387-7	HB25P107.D	02/25/2019 22:46
SV-186-MB-3	140-14387-8	HB25P108.D	02/25/2019 23:39
SV-116-A-26	140-14387-10	HB25P109.D	02/26/2019 00:32
SV-DUP03-A-26	140-14387-11	HB25P110.D	02/26/2019 01:24
SV-138-A-26	140-14387-12	HB25P111.D	02/26/2019 02:17
SV-093-A-26	140-14387-13	HB25P112.D	02/26/2019 03:10
SV-173-A-26	140-14387-14	HB25P113.D	02/26/2019 04:03
SV-174-A-26	140-14387-15	HB25P114.D	02/26/2019 04:56
SV-171-A-26	140-14387-16	HB25P115.D	02/26/2019 05:49
SV-081-A-26	140-14387-18	HB25P116.D	02/26/2019 06:43

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HB27LOT14399MB.D Lab Sample ID: MB 140-27980/5
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/27/2019 13:42
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27980/1002	HCCVB27-LCS .d	02/27/2019 11:50
SV-081-A-26 DL	140-14387-18 DL	HB27P115.D	02/28/2019 06:06

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: H500BB28.D Lab Sample ID: MB 140-27981/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/28/2019 14:24
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27981/1002	HCCVB28-LCS .d	02/28/2019 13:02
SV-183-MB-3 DL	140-14387-5 DL	HB28P101.D	02/28/2019 17:11

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: GA11BLK1.D BFB Injection Date: 01/11/2019
 Instrument ID: MG BFB Injection Time: 12:24
 Analysis Batch No.: 26755

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.2	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	71.2	
175	5.0 - 9.0 % of mass 174	5.1	(7.1) 1
176	95.0 - 101.0 % of mass 174	70.7	(99.3) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-26755/2	GA11IC09.D	01/11/2019	13:08
	IC 140-26755/6	GA11IC10.D	01/11/2019	14:35
	IC 140-26755/9	GA11IC01.D	01/11/2019	16:46
	IC 140-26755/10	GA11IC02.D	01/11/2019	17:29
	IC 140-26755/11	GA11IC03.D	01/11/2019	18:12
	IC 140-26755/12	GA11IC04.D	01/11/2019	18:56
	IC 140-26755/13	GA11IC05.D	01/11/2019	19:40
	IC 140-26755/14	GA11IC06.D	01/11/2019	20:23
	ICIS 140-26755/15	GA11IC07.D	01/11/2019	21:07
	IC 140-26755/16	GA11IC08.D	01/11/2019	21:51
	ICV 140-26755/18	GA11ICV.D	01/11/2019	23:17

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: GBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MG BFB Injection Time: 11:03
 Analysis Batch No.: 27931

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.5
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	73.1
175	5.0 - 9.0 % of mass 174	5.1 (7.0) 1
176	95.0 - 101.0 % of mass 174	71.2 (97.4) 1
177	5.0 - 9.0 % of mass 176	4.6 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27931/2	GCCVB26.D	02/26/2019	11:35
	LCS 140-27931/1002	GCCVB26-LCS. d	02/26/2019	11:35
	MB 140-27931/4	G500BB26.D	02/26/2019	12:56
SV-182-MB-3 DL	140-14387-4 DL	GB26P104.D	02/26/2019	18:01
SV-173-A-26 DL	140-14387-14 DL	GB26P106.D	02/26/2019	19:24
SV-171-A-26 DL	140-14387-16 DL	GB26P107.D	02/26/2019	20:06

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HBFB20IC.D BFB Injection Date: 02/20/2019
 Instrument ID: MH BFB Injection Time: 13:11
 Analysis Batch No.: 27843

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.2	
75	30.0 - 60.0 % of mass 95	48.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	93.5	
175	5.0 - 9.0 % of mass 174	6.7	(7.1) 1
176	95.0 - 101.0 % of mass 174	91.9	(98.2) 1
177	5.0 - 9.0 % of mass 176	6.0	(6.6) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-27843/3	HB20IC09.D	02/20/2019	15:12
	IC 140-27843/5	HB20IC10.D	02/20/2019	16:59
	IC 140-27843/8	HB20IC01.D	02/20/2019	19:38
	IC 140-27843/9	HB20IC02.D	02/20/2019	20:31
	IC 140-27843/10	HB20IC03.D	02/20/2019	21:26
	IC 140-27843/11	HB20IC04.D	02/20/2019	22:20
	IC 140-27843/12	HB20IC05.D	02/20/2019	23:14
	IC 140-27843/13	HB20IC06.D	02/21/2019	00:08
	ICIS 140-27843/14	HB20IC07.D	02/21/2019	01:03
	IC 140-27843/15	HB20IC08.D	02/21/2019	01:57
	ICV 140-27843/17	HB20ICV.D	02/21/2019	03:43

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HBFB25.D BFB Injection Date: 02/25/2019
 Instrument ID: MH BFB Injection Time: 09:19
 Analysis Batch No.: 27935

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.0
75	30.0 - 60.0 % of mass 95	47.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	91.1
175	5.0 - 9.0 % of mass 174	6.5 (7.2) 1
176	95.0 - 101.0 % of mass 174	88.7 (97.4) 1
177	5.0 - 9.0 % of mass 176	5.8 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27935/2	HCCVB25.D	02/25/2019	09:47
	LCS 140-27935/1002	HCCVB25-LCS.d	02/25/2019	09:47
	MB 140-27935/7	H500BB25.D	02/25/2019	14:47
SV-180-MB-3	140-14387-1	HB25P101.D	02/25/2019	17:27
SV-179-MB-3	140-14387-2	HB25P102.D	02/25/2019	18:20
SV-181-MB-3	140-14387-3	HB25P103.D	02/25/2019	19:13
SV-182-MB-3	140-14387-4	HB25P104.D	02/25/2019	20:06
SV-183-MB-3	140-14387-5	HB25P105.D	02/25/2019	20:59
SV-184-MB-3	140-14387-6	HB25P106.D	02/25/2019	21:53
SV-185-MB-3	140-14387-7	HB25P107.D	02/25/2019	22:46
SV-186-MB-3	140-14387-8	HB25P108.D	02/25/2019	23:39
SV-116-A-26	140-14387-10	HB25P109.D	02/26/2019	00:32
SV-DUP03-A-26	140-14387-11	HB25P110.D	02/26/2019	01:24
SV-138-A-26	140-14387-12	HB25P111.D	02/26/2019	02:17
SV-093-A-26	140-14387-13	HB25P112.D	02/26/2019	03:10
SV-173-A-26	140-14387-14	HB25P113.D	02/26/2019	04:03
SV-174-A-26	140-14387-15	HB25P114.D	02/26/2019	04:56
SV-171-A-26	140-14387-16	HB25P115.D	02/26/2019	05:49
SV-081-A-26	140-14387-18	HB25P116.D	02/26/2019	06:43

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HBFB27.D BFB Injection Date: 02/27/2019
 Instrument ID: MH BFB Injection Time: 11:22
 Analysis Batch No.: 27980

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.7	
75	30.0 - 60.0 % of mass 95	48.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.4	(0.4) 1
174	50.0 - 120.00 % of mass 95	91.8	
175	5.0 - 9.0 % of mass 174	6.5	(7.0) 1
176	95.0 - 101.0 % of mass 174	88.9	(96.8) 1
177	5.0 - 9.0 % of mass 176	5.8	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27980/2	HCCVB27.D	02/27/2019	11:50
	LCS 140-27980/1002	HCCVB27-LCS. d	02/27/2019	11:50
	MB 140-27980/5	HB27LOT14399 MB.D	02/27/2019	13:42
SV-081-A-26 DL	140-14387-18 DL	HB27P115.D	02/28/2019	06:06

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HBFB28.D BFB Injection Date: 02/28/2019
 Instrument ID: MH BFB Injection Time: 12:34
 Analysis Batch No.: 27981

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	20.7
75	30.0 - 60.0 % of mass 95	47.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.5 (0.5) 1
174	50.0 - 120.00 % of mass 95	93.3
175	5.0 - 9.0 % of mass 174	6.7 (7.2) 1
176	95.0 - 101.0 % of mass 174	91.3 (97.9) 1
177	5.0 - 9.0 % of mass 176	5.9 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27981/2	HCCVB28.D	02/28/2019	13:02
	LCS 140-27981/1002	HCCVB28-LCS. d	02/28/2019	13:02
	MB 140-27981/4	H500BB28.D	02/28/2019	14:24
SV-183-MB-3 DL	140-14387-5 DL	HB28P101.D	02/28/2019	17:11

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: ICIS 140-26755/15 Date Analyzed: 01/11/2019 21:07
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GAl1IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	437891	9.25	2708081	11.42	2541912	16.10
UPPER LIMIT	613047	9.58	3791313	11.75	3558677	16.43
LOWER LIMIT	262735	8.92	1624849	11.09	1525147	15.77
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-26755/18	423755	9.24	2327828	11.42	2182908	16.09

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: CCVIS 140-27931/2 Date Analyzed: 02/26/2019 11:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	496382	9.23	2758157	11.41	2578216	16.08	
UPPER LIMIT	694935	9.56	3861420	11.74	3609502	16.41	
LOWER LIMIT	297829	8.90	1654894	11.08	1546930	15.75	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27931/1002	496382	9.23	2758157	11.41	2578216	16.08	
MB 140-27931/4	508819	9.23	2920722	11.41	2502760	16.08	
140-14387-4 DL	SV-182-MB-3 DL	441997	9.23	2423864	11.40	2177859	16.08
140-14387-14 DL	SV-173-A-26 DL	478998	9.22	2962288	11.40	2673094	16.08
140-14387-16 DL	SV-171-A-26 DL	452797	9.23	2861121	11.40	2641514	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: ICIS 140-27843/14 Date Analyzed: 02/21/2019 01:03
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HB20IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBZd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	348949	8.83	1879497	11.01	1644075	15.73
UPPER LIMIT	488529	9.16	2631296	11.34	2301705	16.06
LOWER LIMIT	209369	8.50	1127698	10.68	986445	15.40
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-27843/17	382438	8.83	2064078	11.01	1803849	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: CCVIS 140-27935/2 Date Analyzed: 02/25/2019 09:47
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB25.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	315308	8.81	1742536	11.00	1476074	15.72	
UPPER LIMIT	441431	9.14	2439550	11.33	2066504	16.05	
LOWER LIMIT	189185	8.48	1045522	10.67	885644	15.39	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27935/1002	315308	8.81	1742536	11.00	1476074	15.72	
MB 140-27935/7	287415	8.82	1579066	11.01	1304589	15.73	
140-14387-1	SV-180-MB-3	281456	8.81	1535292	11.00	1326846	15.72
140-14387-2	SV-179-MB-3	268524	8.82	1449633	11.00	1228351	15.73
140-14387-3	SV-181-MB-3	269386	8.83	1455854	11.01	1235221	15.73
140-14387-4	SV-182-MB-3	265807	8.83	1439853	11.01	1233899	15.73
140-14387-5	SV-183-MB-3	261667	8.83	1424772	11.01	1221074	15.73
140-14387-6	SV-184-MB-3	268482	8.82	1416402	11.01	1183656	15.73
140-14387-7	SV-185-MB-3	272937	8.82	1451084	11.01	1258817	15.73
140-14387-8	SV-186-MB-3	293163	8.82	1583887	11.01	1361840	15.73
140-14387-10	SV-116-A-26	278110	8.82	1479230	11.01	1235939	15.73
140-14387-11	SV-DUP03-A-26	280978	8.82	1513051	11.01	1271379	15.73
140-14387-12	SV-138-A-26	274052	8.82	1481817	11.01	1237546	15.73
140-14387-13	SV-093-A-26	282597	8.82	1531175	11.01	1277807	15.73
140-14387-14	SV-173-A-26	279120	8.82	1506709	11.01	1234999	15.73
140-14387-15	SV-174-A-26	286242	8.82	1547205	11.01	1293580	15.73
140-14387-16	SV-171-A-26	281192	8.82	1525931	11.01	1255482	15.73
140-14387-18	SV-081-A-26	276557	8.82	1486236	11.00	1262786	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: CCVIS 140-27980/2 Date Analyzed: 02/27/2019 11:50
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB27.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	226060	8.81	1253478	11.00	1073197	15.72
UPPER LIMIT	316484	9.14	1754869	11.33	1502476	16.05
LOWER LIMIT	135636	8.48	752087	10.67	643918	15.39
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 140-27980/1002	226060	8.81	1253478	11.00	1073197	15.72
MB 140-27980/5	264467	8.81	1438660	11.00	1193009	15.72
140-14387-18 DL	285504	8.82	1527887	11.01	1270622	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: CCVIS 140-27981/2 Date Analyzed: 02/28/2019 13:02
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB28.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBZd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	308099	8.82	1679334	11.00	1441526	15.73
UPPER LIMIT	431339	9.15	2351068	11.33	2018136	16.06
LOWER LIMIT	184859	8.49	1007600	10.67	864916	15.40
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 140-27981/1002	308099	8.82	1679334	11.00	1441526	15.73
MB 140-27981/4	313051	8.82	1721127	11.00	1440804	15.73
140-14387-5 DL	272703	8.81	1473988	11.00	1251229	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-180-MB-3 Lab Sample ID: 140-14387-1
 Matrix: Air Lab File ID: HB25P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:49
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.23	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.79	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	0.34	J	0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.20	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.19	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.54	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-180-MB-3 Lab Sample ID: 140-14387-1
 Matrix: Air Lab File ID: HB25P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:49
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.94	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	2.5	J	3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.1	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.94	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P101.D
 Lims ID: 140-14387-A-1
 Client ID: SV-180-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 17:27:30 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-009
 Misc. Info.: 140-14387-a-1
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Mar-2019 08:52:24 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:06:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.814	8.814	0.000	95	281456	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1535292	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.724	15.724	0.000	88	1326846	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.398	-0.031	93	875512	4.05	
6 Chlorodifluoromethane	51	3.687	3.682	0.005	97	15746	0.0682	
8 Dichlorodifluoromethane	85	3.744	3.738	0.006	100	29895	0.0843	
31 Methylene Chloride	84	6.276	6.271	0.005	98	18108	0.1573	
37 1,1-Dichloroethane	63	7.501	7.501	0.000	99	9894	0.0464	
45 1,1,1-Trichloroethane	97	9.847	9.853	-0.006	96	9321	0.0401	
47 Benzene	78	10.452	10.452	0.000	97	8123	0.0250	
65 Toluene	91	13.760	13.760	0.000	93	135303	0.3582	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	28976	0.0781	
82 o-Xylene	91	16.747	16.752	-0.005	96	11693	0.0310	
89 1,3,5-Trimethylbenzene	120	18.122	18.158	-0.036	95	2553	0.0384	
111 1,2,4-Trichlorobenzene	180	21.104	21.109	-0.005	1	302	0.0684	
S 121 Xylenes, Total	100				0		0.1091	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P101.D

Injection Date: 25-Feb-2019 17:27:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-1

Lab Sample ID: 140-14387-1

Worklist Smp#: 9

Client ID: SV-180-MB-3

Purge Vol: 500.000 mL

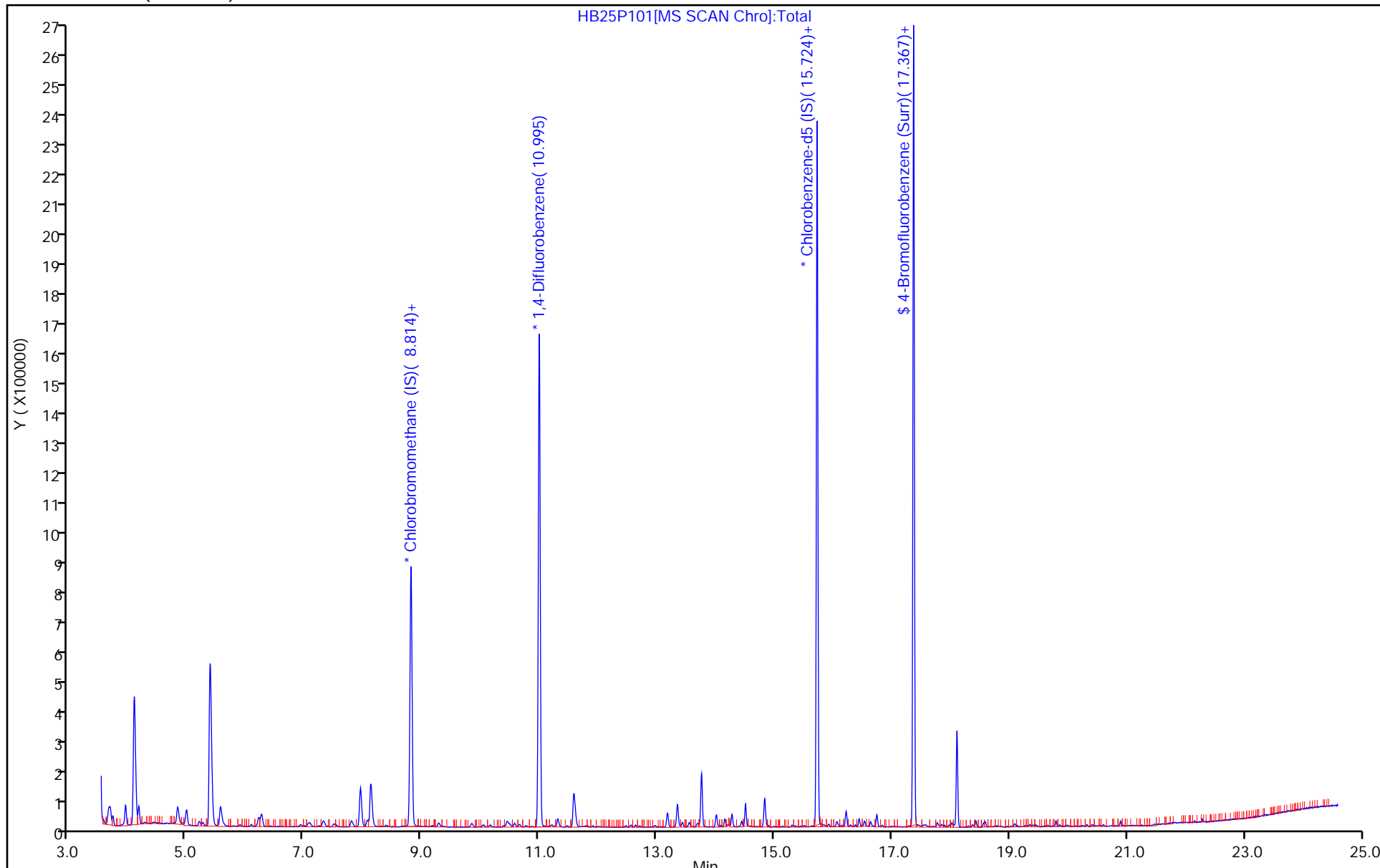
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P101.D
 Lims ID: 140-14387-A-1
 Client ID: SV-180-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 17:27:30 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-009
 Misc. Info.: 140-14387-a-1
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Mar-2019 08:52:24 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:06:33

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.05	101.23

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P101.D

Injection Date: 25-Feb-2019 17:27:30

Instrument ID: MH

Lims ID: 140-14387-A-1

Lab Sample ID: 140-14387-1

Client ID: SV-180-MB-3

Operator ID: HMT

ALS Bottle#: 1 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

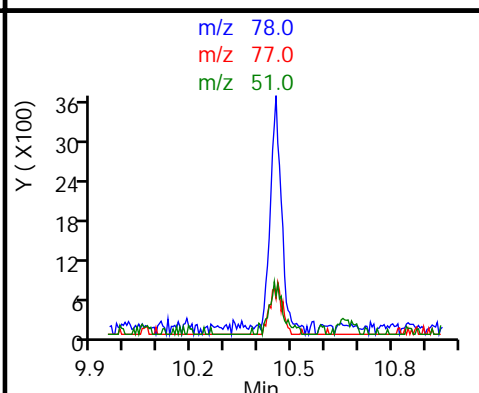
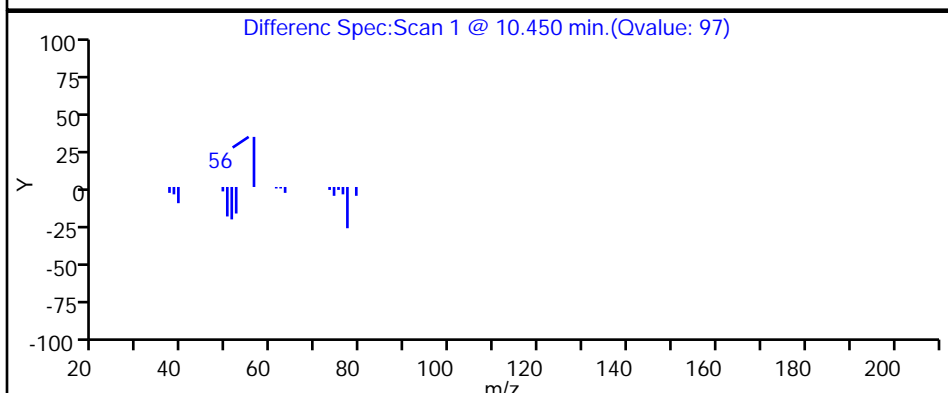
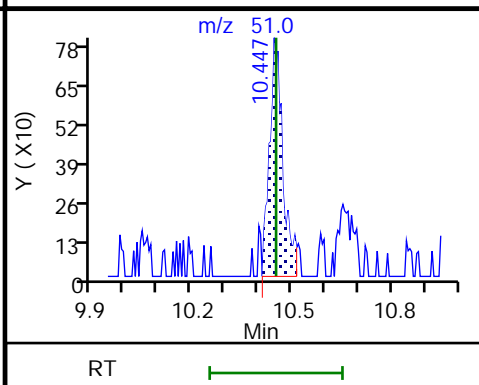
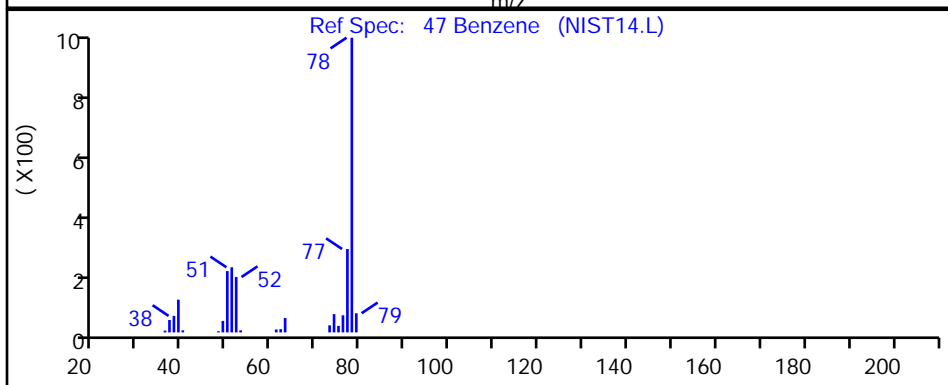
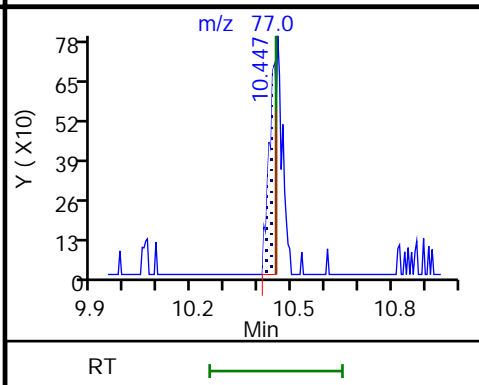
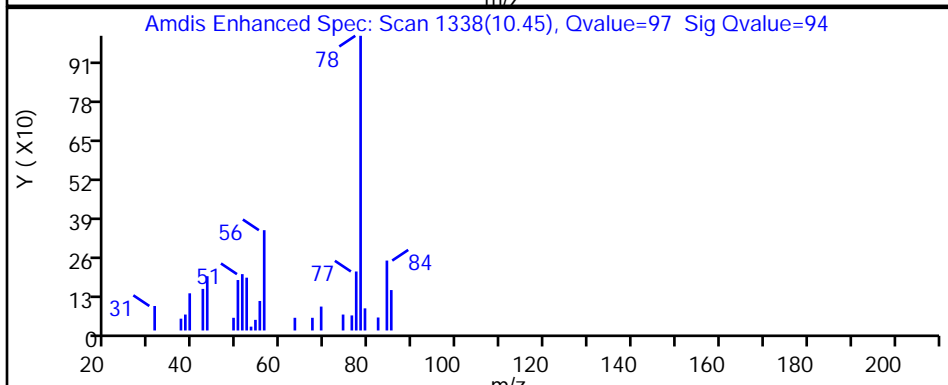
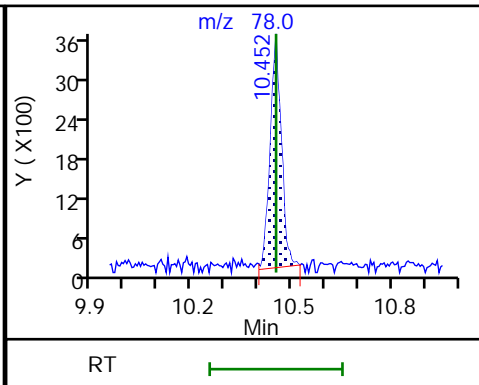
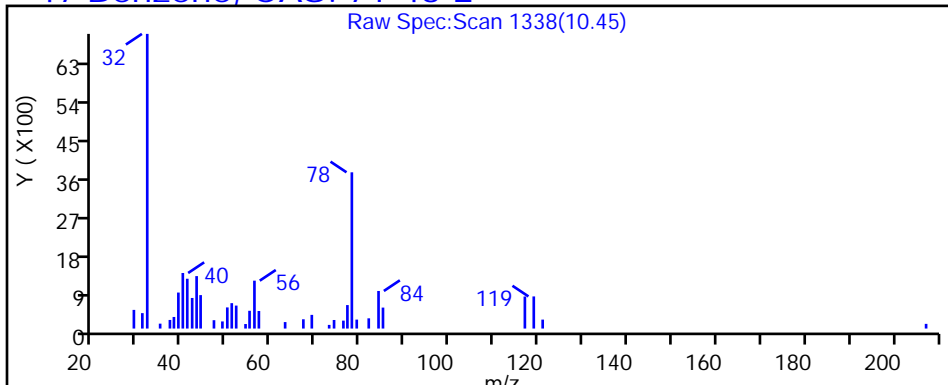
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P101.D

Injection Date: 25-Feb-2019 17:27:30

Instrument ID: MH

Lims ID: 140-14387-A-1

Lab Sample ID: 140-14387-1

Client ID: SV-180-MB-3

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

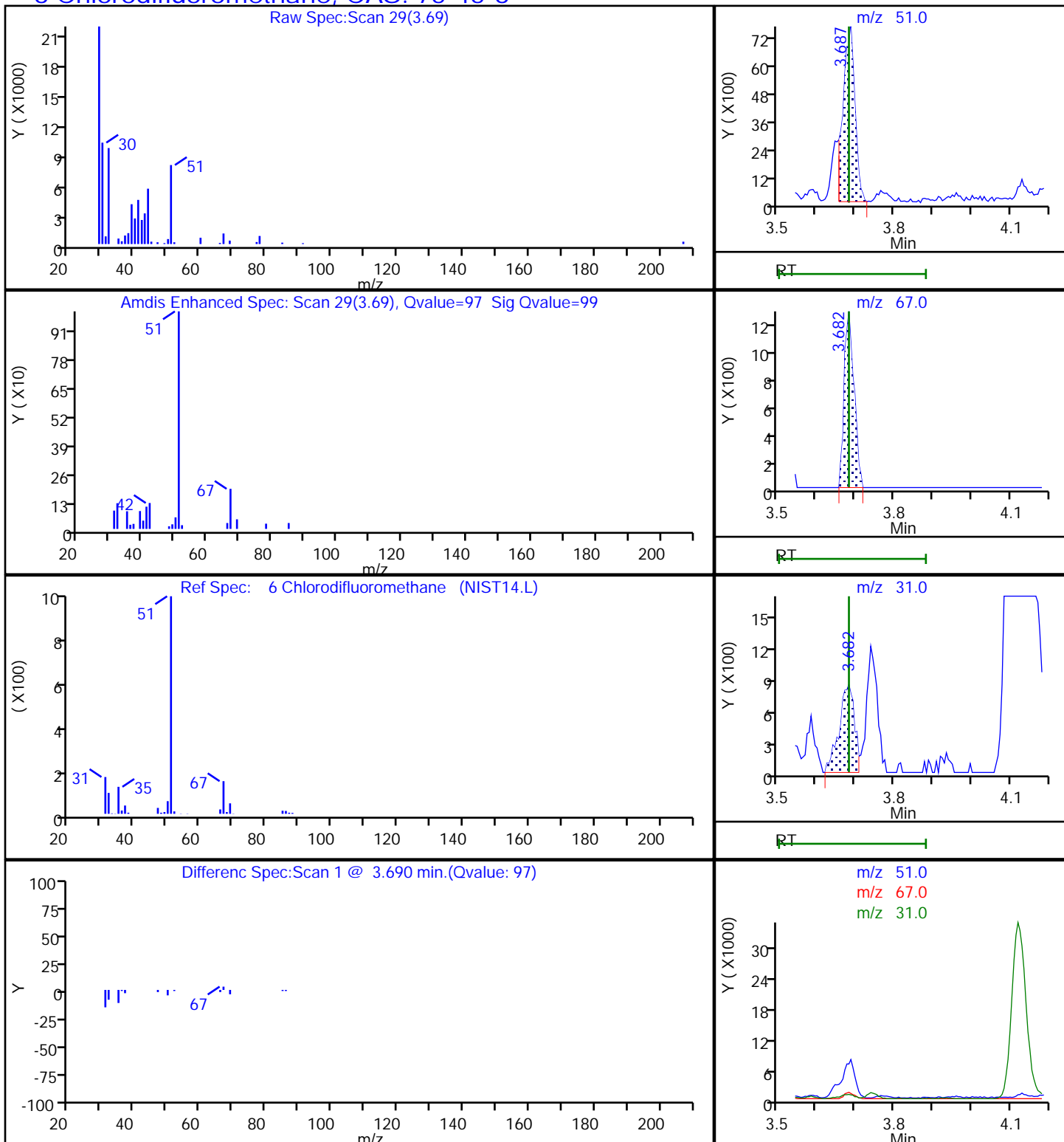
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P101.D

Injection Date: 25-Feb-2019 17:27:30

Instrument ID: MH

Lims ID: 140-14387-A-1

Lab Sample ID: 140-14387-1

Client ID: SV-180-MB-3

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

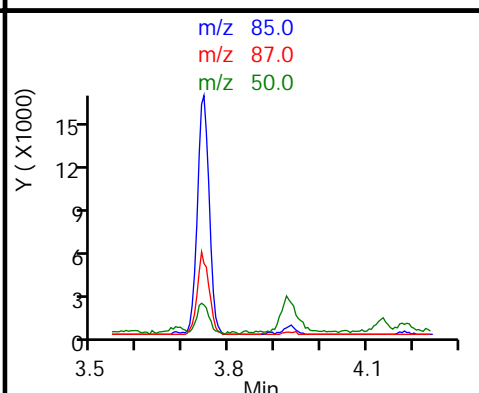
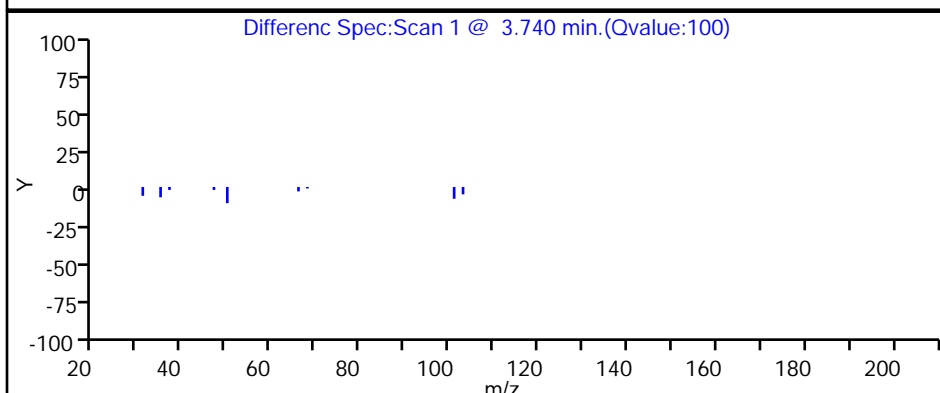
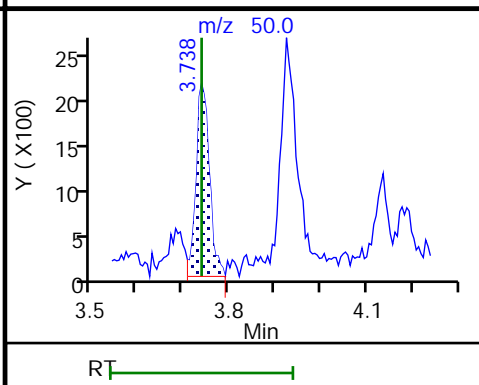
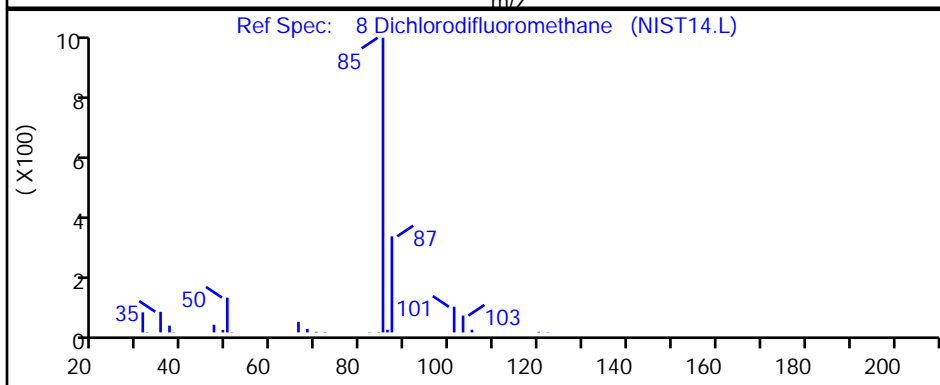
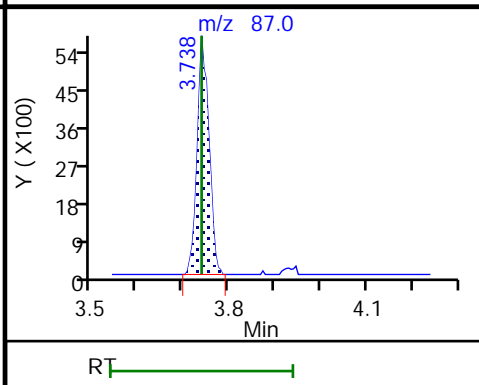
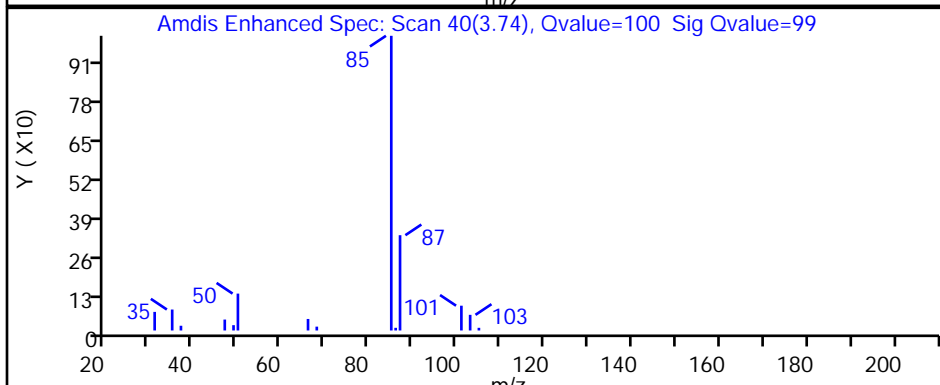
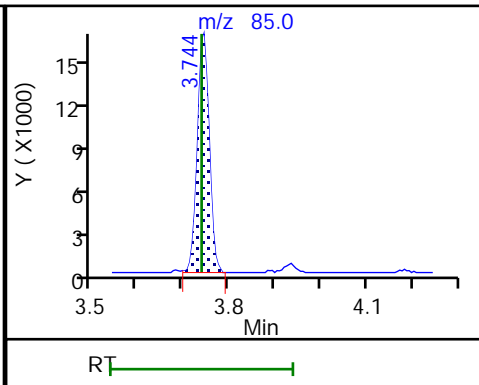
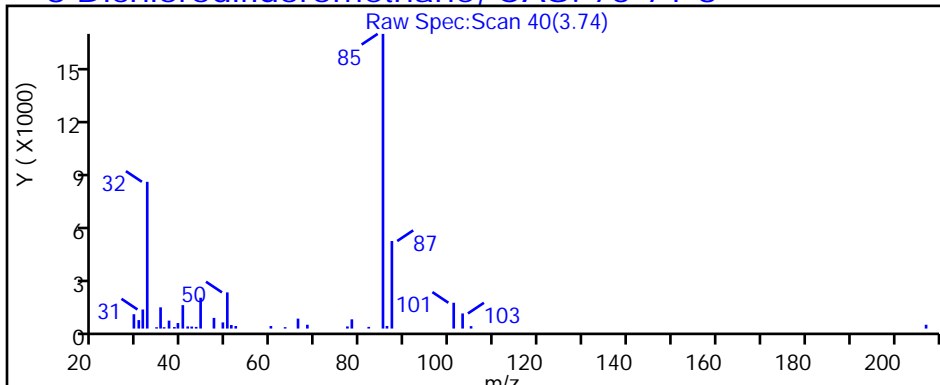
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P101.D

Injection Date: 25-Feb-2019 17:27:30

Instrument ID: MH

Lims ID: 140-14387-A-1

Lab Sample ID: 140-14387-1

Client ID: SV-180-MB-3

Operator ID: HMT

ALS Bottle#: 1 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

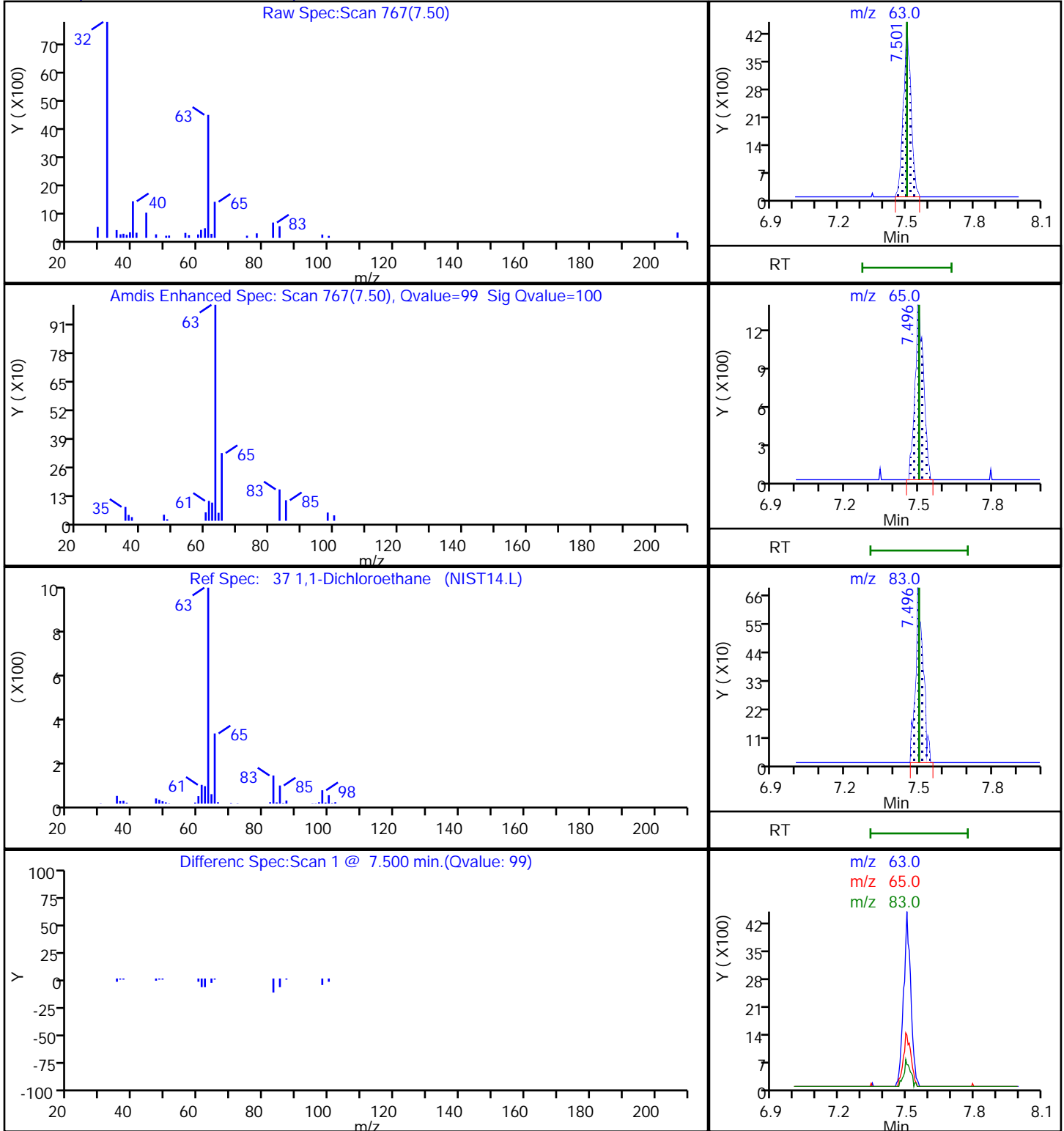
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P101.D

Injection Date: 25-Feb-2019 17:27:30

Instrument ID: MH

Lims ID: 140-14387-A-1

Lab Sample ID: 140-14387-1

Client ID: SV-180-MB-3

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

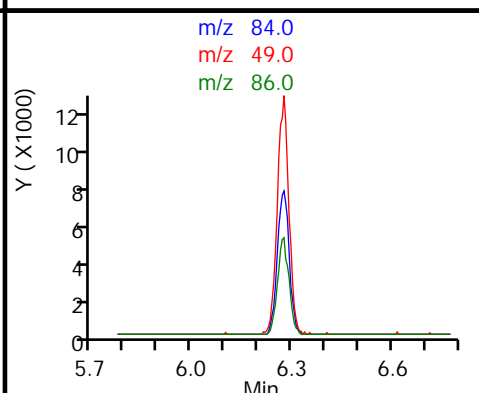
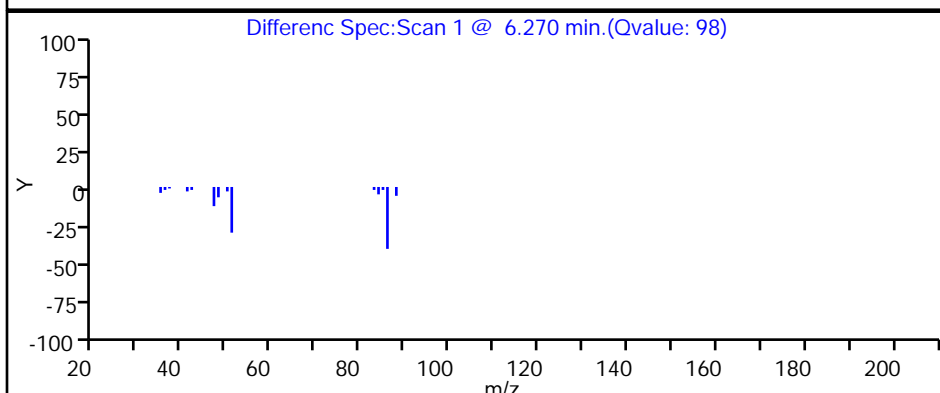
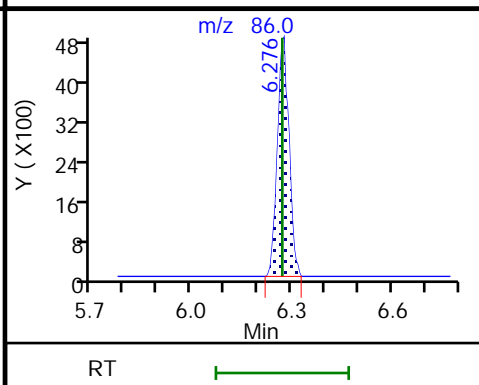
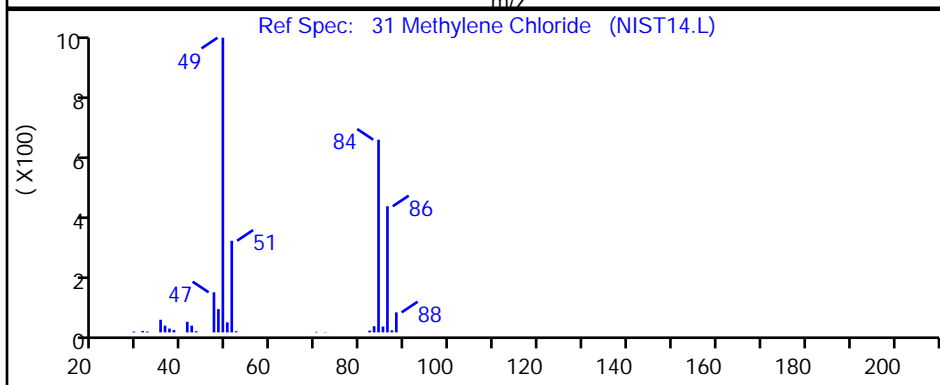
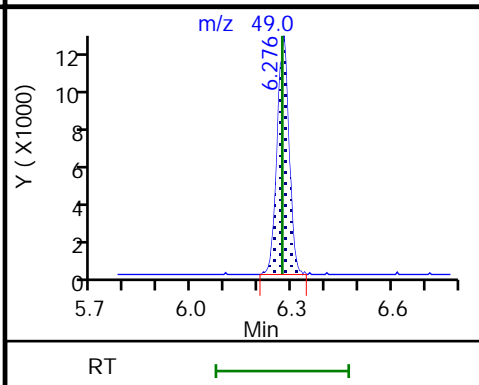
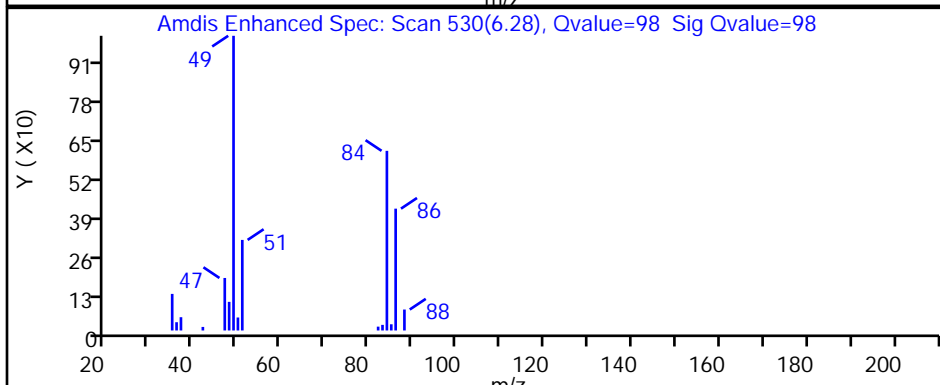
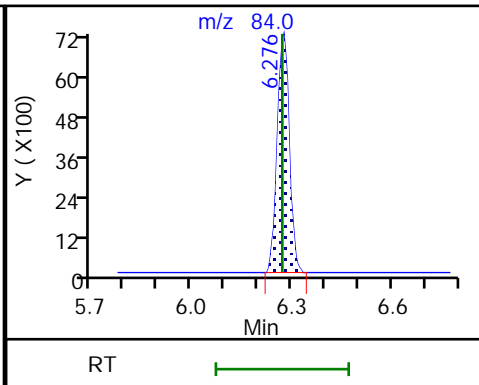
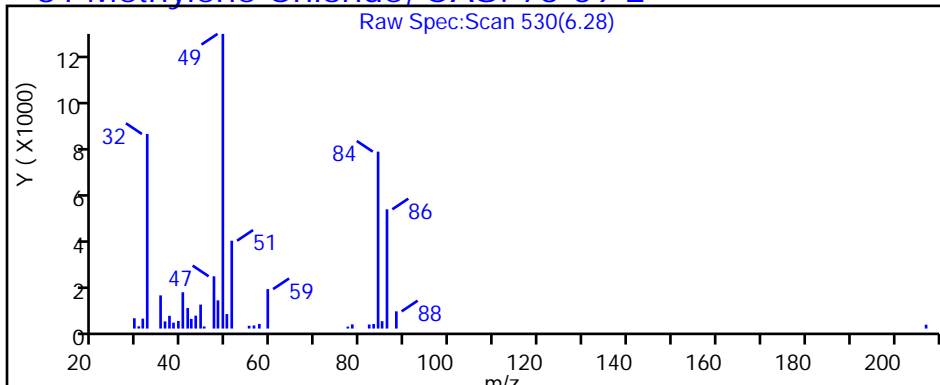
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P101.D

Injection Date: 25-Feb-2019 17:27:30

Instrument ID: MH

Lims ID: 140-14387-A-1

Lab Sample ID: 140-14387-1

Client ID: SV-180-MB-3

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

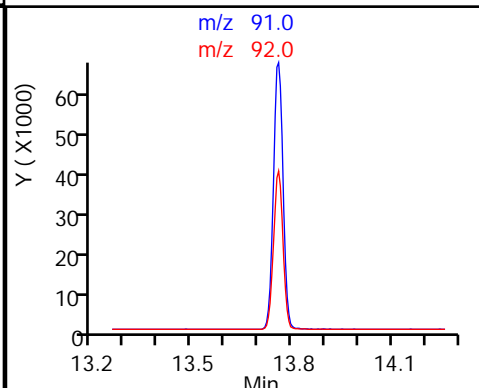
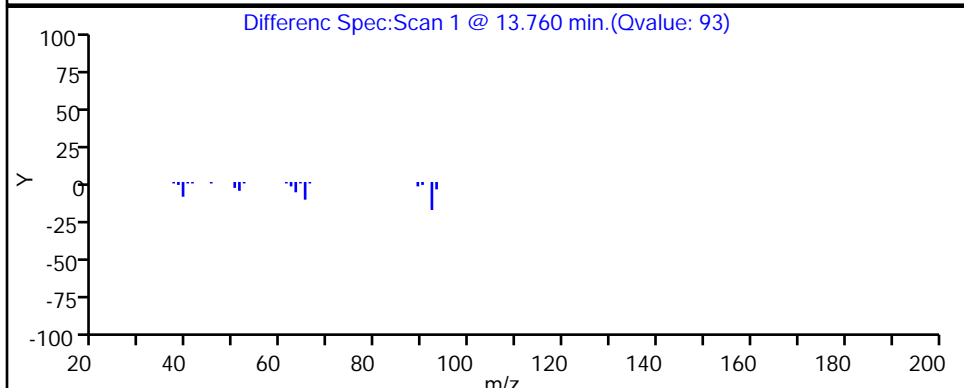
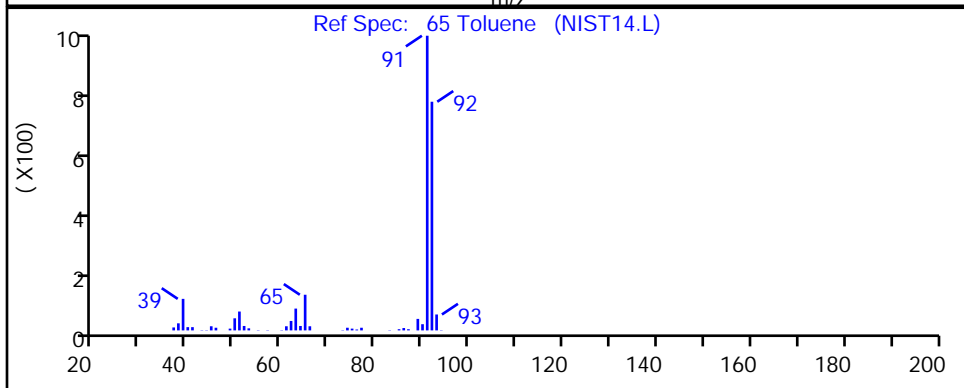
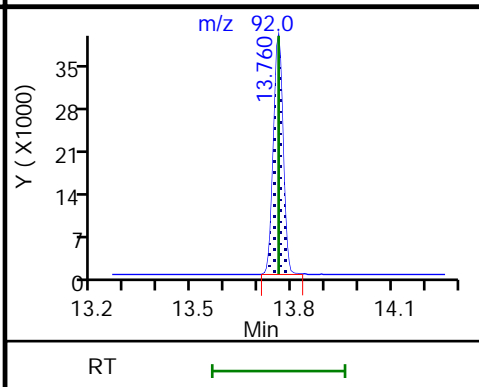
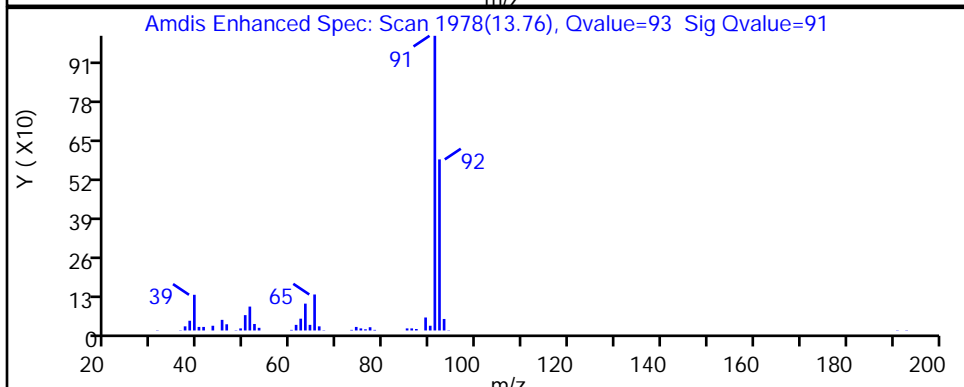
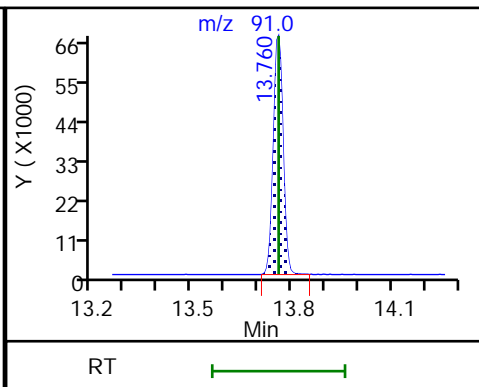
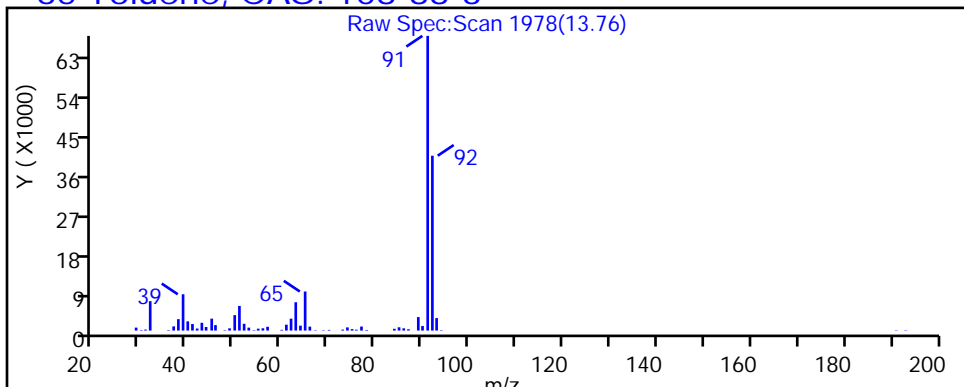
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P101.D

Injection Date: 25-Feb-2019 17:27:30

Instrument ID: MH

Lims ID: 140-14387-A-1

Lab Sample ID: 140-14387-1

Client ID: SV-180-MB-3

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

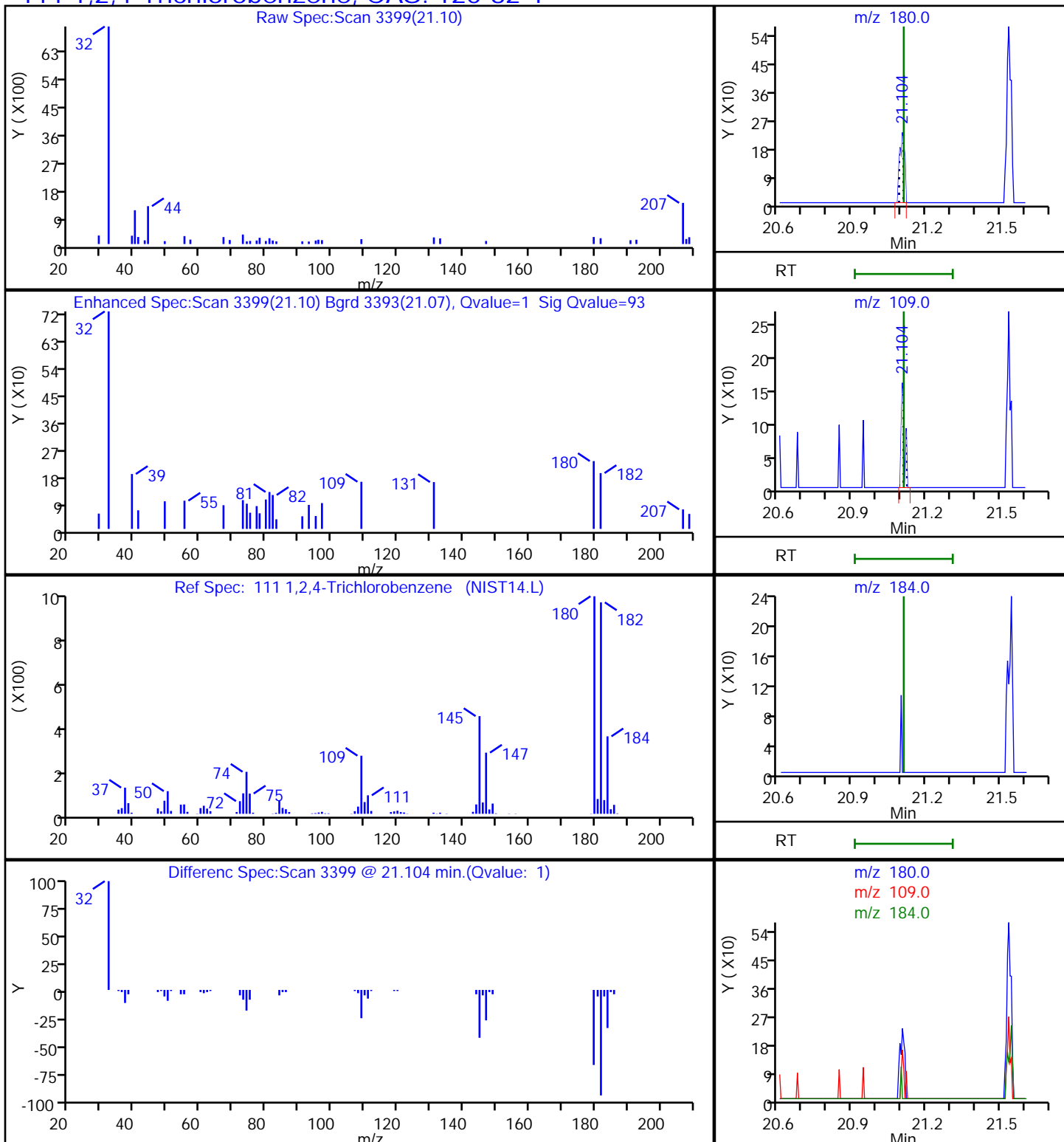
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

111 1,2,4-Trichlorobenzene, CAS: 120-82-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P101.D

Injection Date: 25-Feb-2019 17:27:30

Instrument ID: MH

Lims ID: 140-14387-A-1

Lab Sample ID: 140-14387-1

Client ID: SV-180-MB-3

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

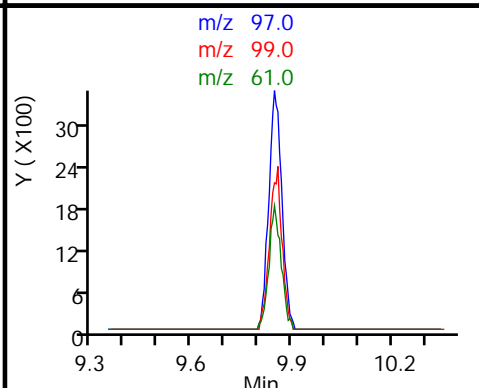
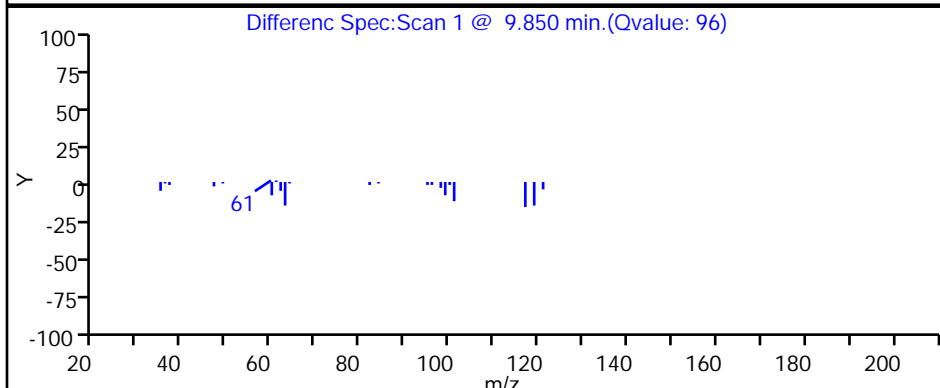
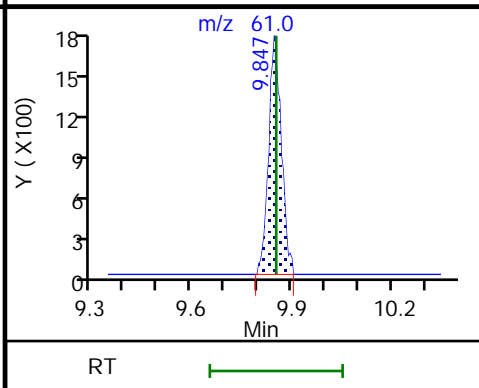
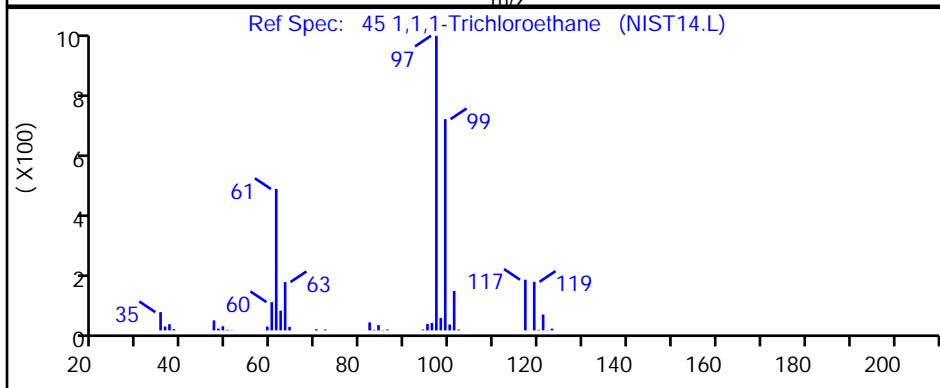
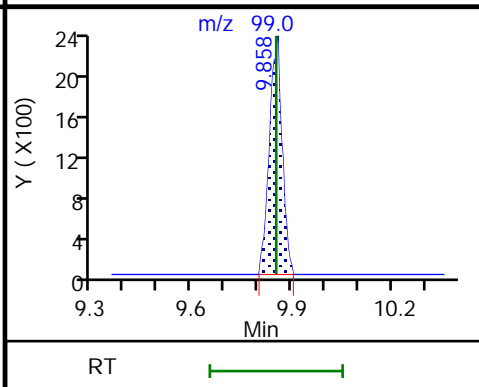
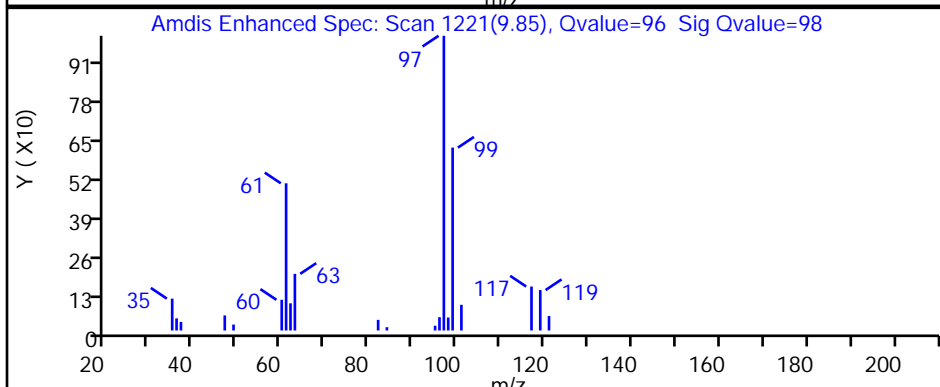
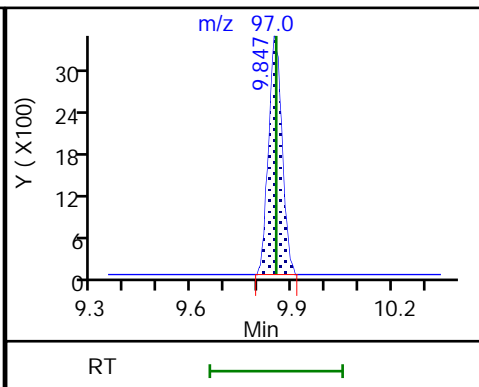
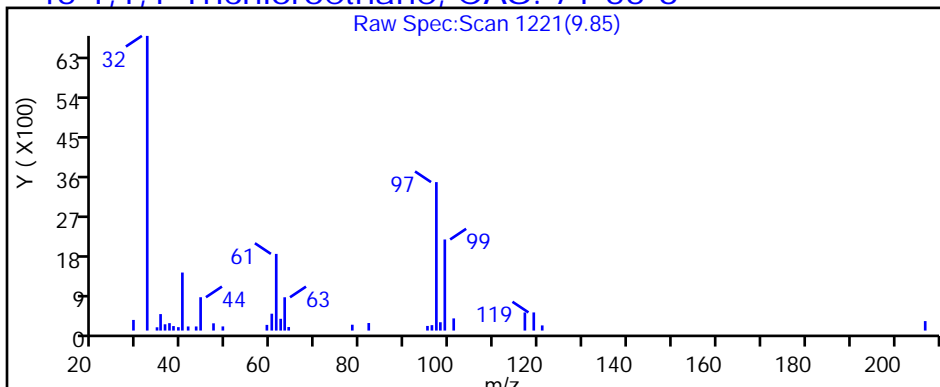
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P101.D

Injection Date: 25-Feb-2019 17:27:30

Instrument ID: MH

Lims ID: 140-14387-A-1

Lab Sample ID: 140-14387-1

Client ID: SV-180-MB-3

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

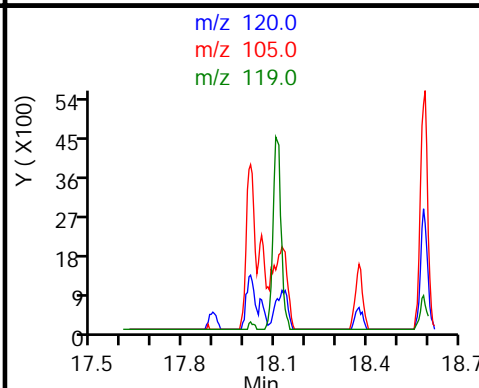
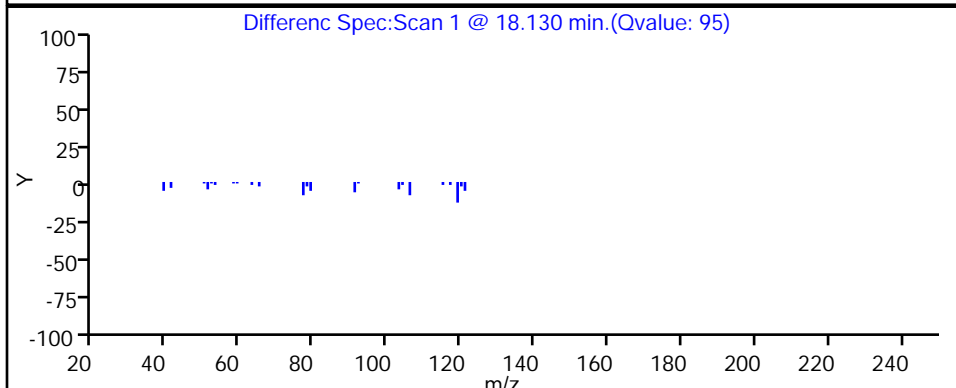
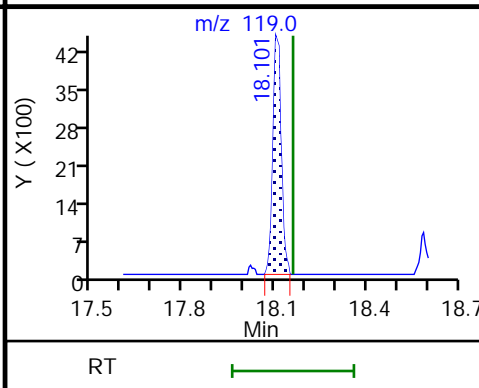
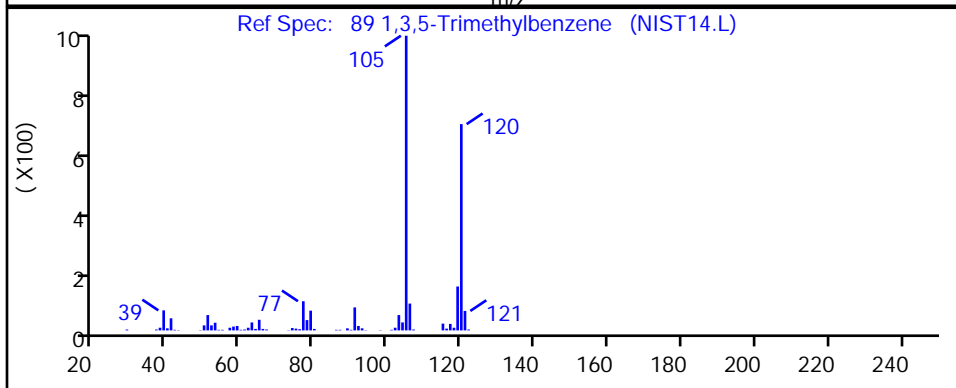
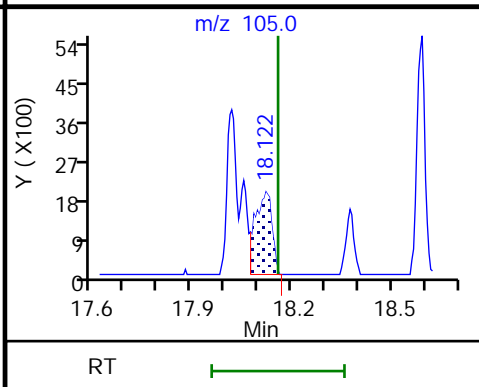
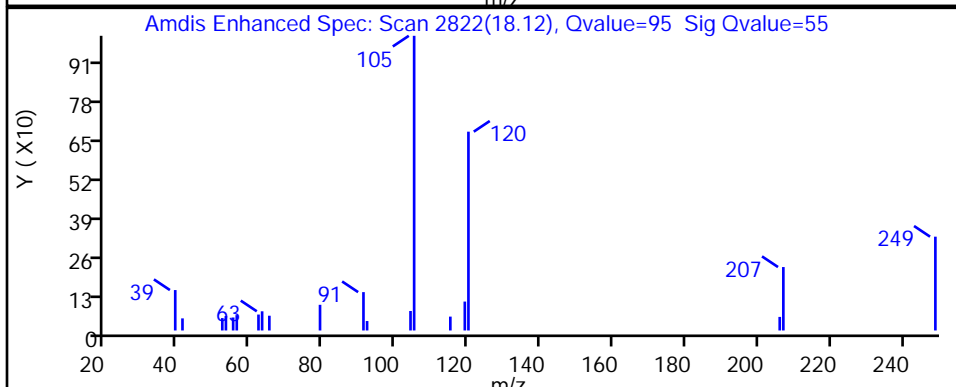
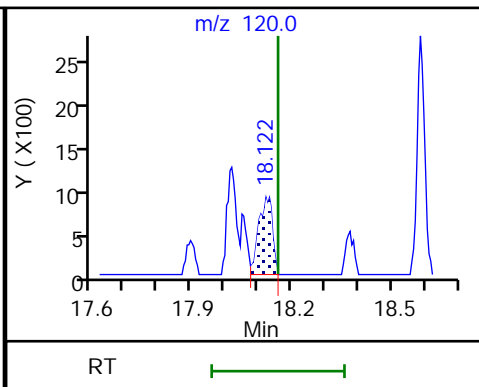
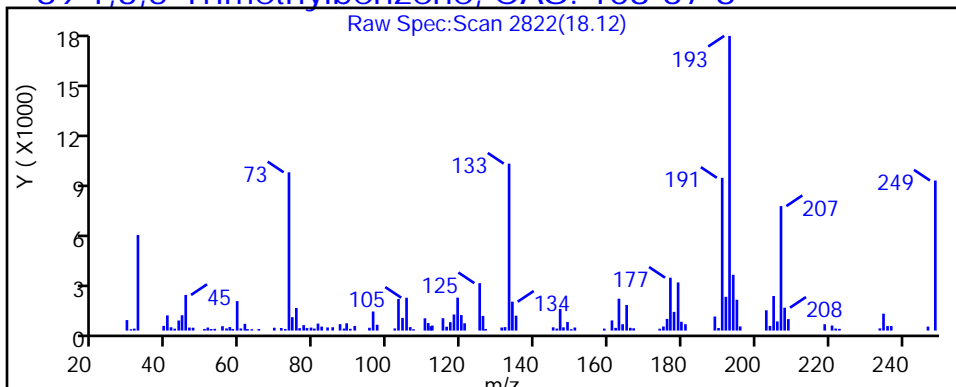
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P101.D

Injection Date: 25-Feb-2019 17:27:30

Instrument ID: MH

Lims ID: 140-14387-A-1

Lab Sample ID: 140-14387-1

Client ID: SV-180-MB-3

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

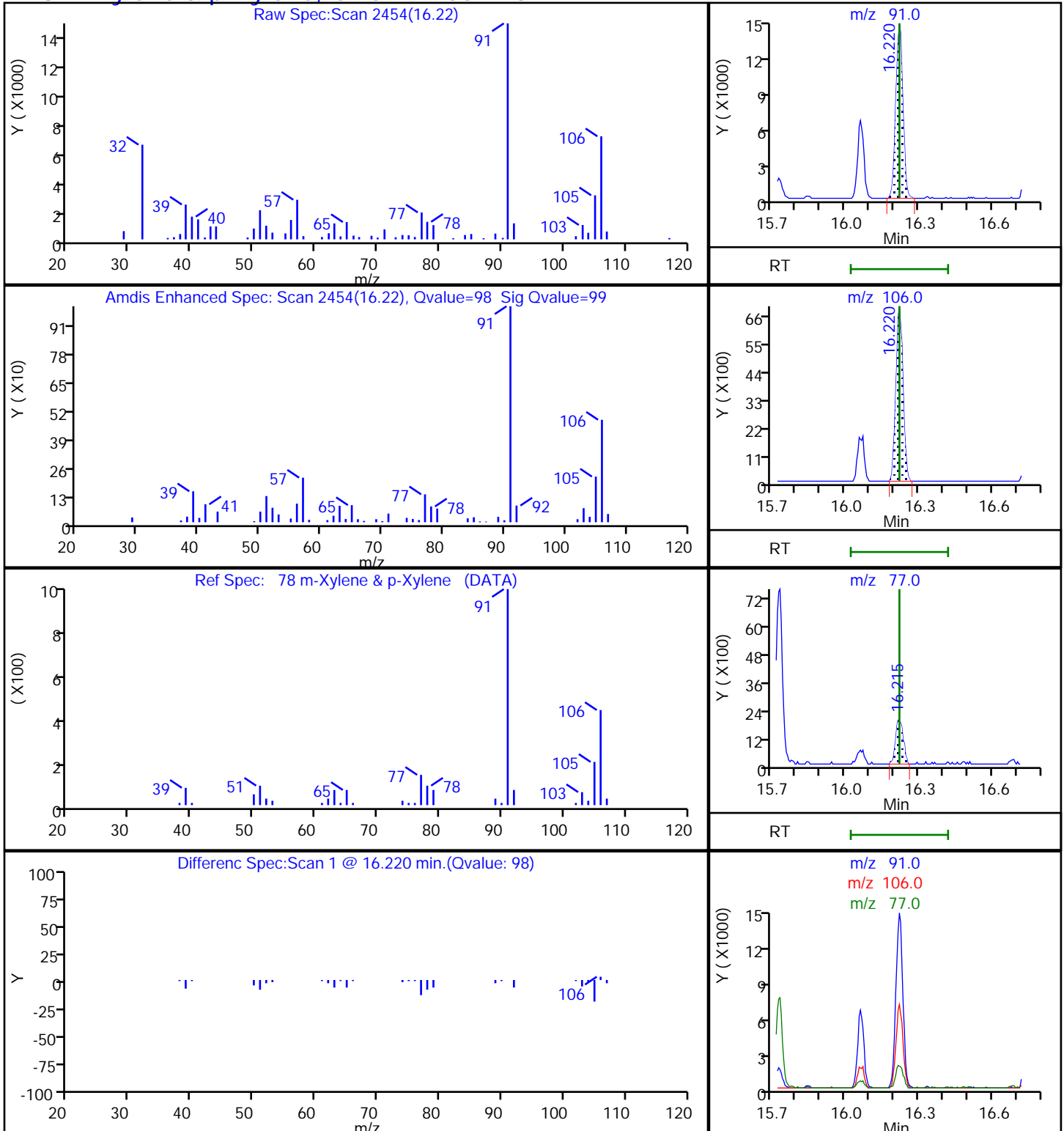
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P101.D

Injection Date: 25-Feb-2019 17:27:30

Instrument ID: MH

Lims ID: 140-14387-A-1

Lab Sample ID: 140-14387-1

Client ID: SV-180-MB-3

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

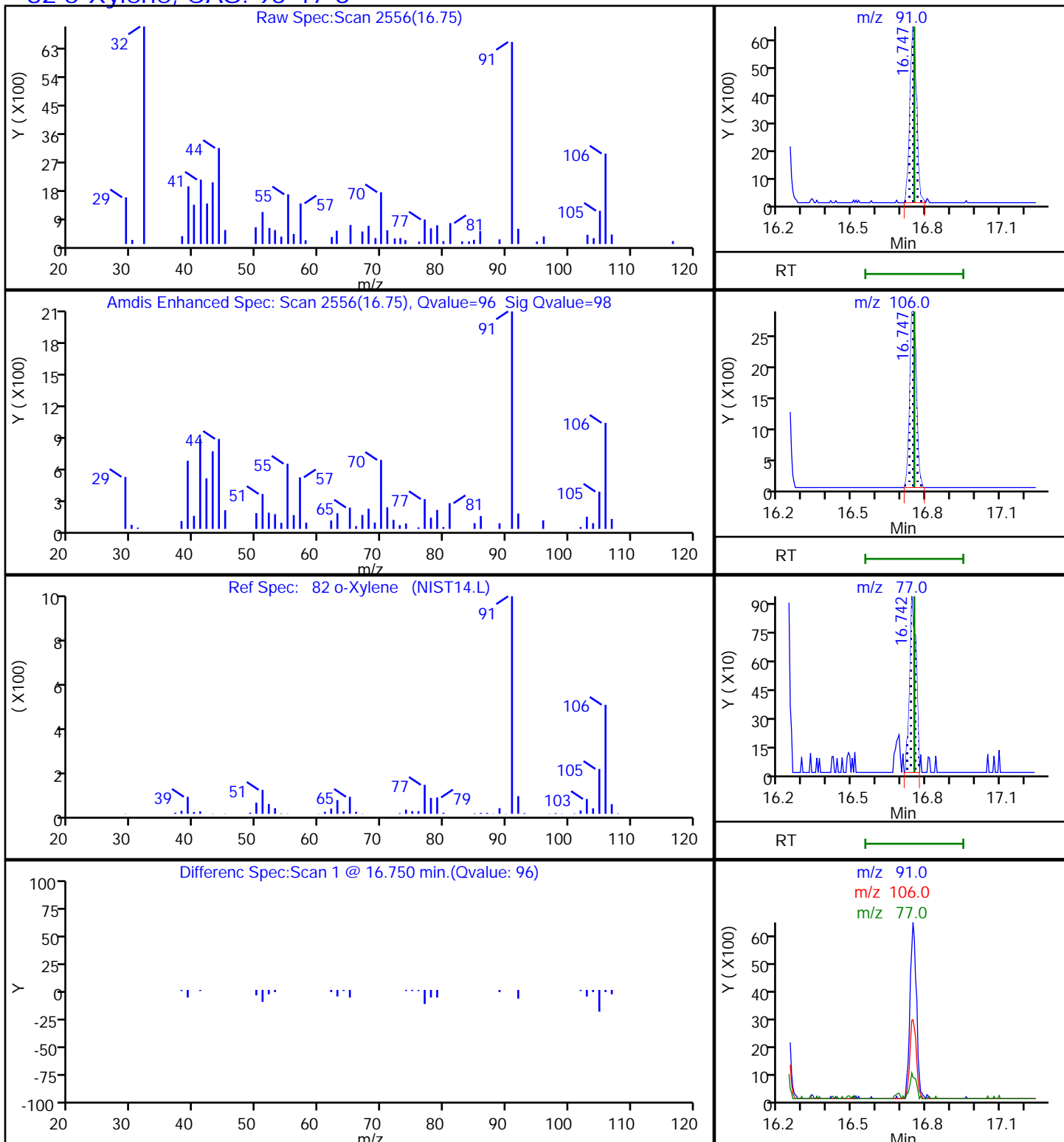
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-179-MB-3 Lab Sample ID: 140-14387-2
 Matrix: Air Lab File ID: HB25P102.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:50
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 18:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.1		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.072	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.98	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.46		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.17	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.15	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-179-MB-3 Lab Sample ID: 140-14387-2
 Matrix: Air Lab File ID: HB25P102.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:50
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 18:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	8.5		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.29	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.84	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	0.65	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P102.D
 Lims ID: 140-14387-A-2
 Client ID: SV-179-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 18:20:30 ALS Bottle#: 2 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-010
 Misc. Info.: 140-14387-a-2
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:01:58 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:02:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.814	0.005	95	268524	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1449633	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1228351	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	811976	4.06	
6 Chlorodifluoromethane	51	3.687	3.687	0.005	47	16783	0.0762	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	32095	0.0949	
27 1,1-Dichloroethene	96	5.920	5.919	0.001	97	1504	0.0144	
31 Methylene Chloride	84	6.281	6.271	0.010	98	21539	0.1962	
37 1,1-Dichloroethane	63	7.506	7.501	0.005	99	85928	0.4223	
56 Trichloroethene	130	11.718	11.708	0.010	94	13282	0.0918	
65 Toluene	91	13.760	13.760	0.000	92	32913	0.0941	
82 o-Xylene	91	16.752	16.752	0.000	98	10657	0.0305	
89 1,3,5-Trimethylbenzene	120	18.132	18.127	-0.026	90	1508	0.0343	
S 121 Xylenes, Total	100				0		0.0305	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P102.D

Injection Date: 25-Feb-2019 18:20:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-2

Lab Sample ID: 140-14387-2

Worklist Smp#: 10

Client ID: SV-179-MB-3

Purge Vol: 500.000 mL

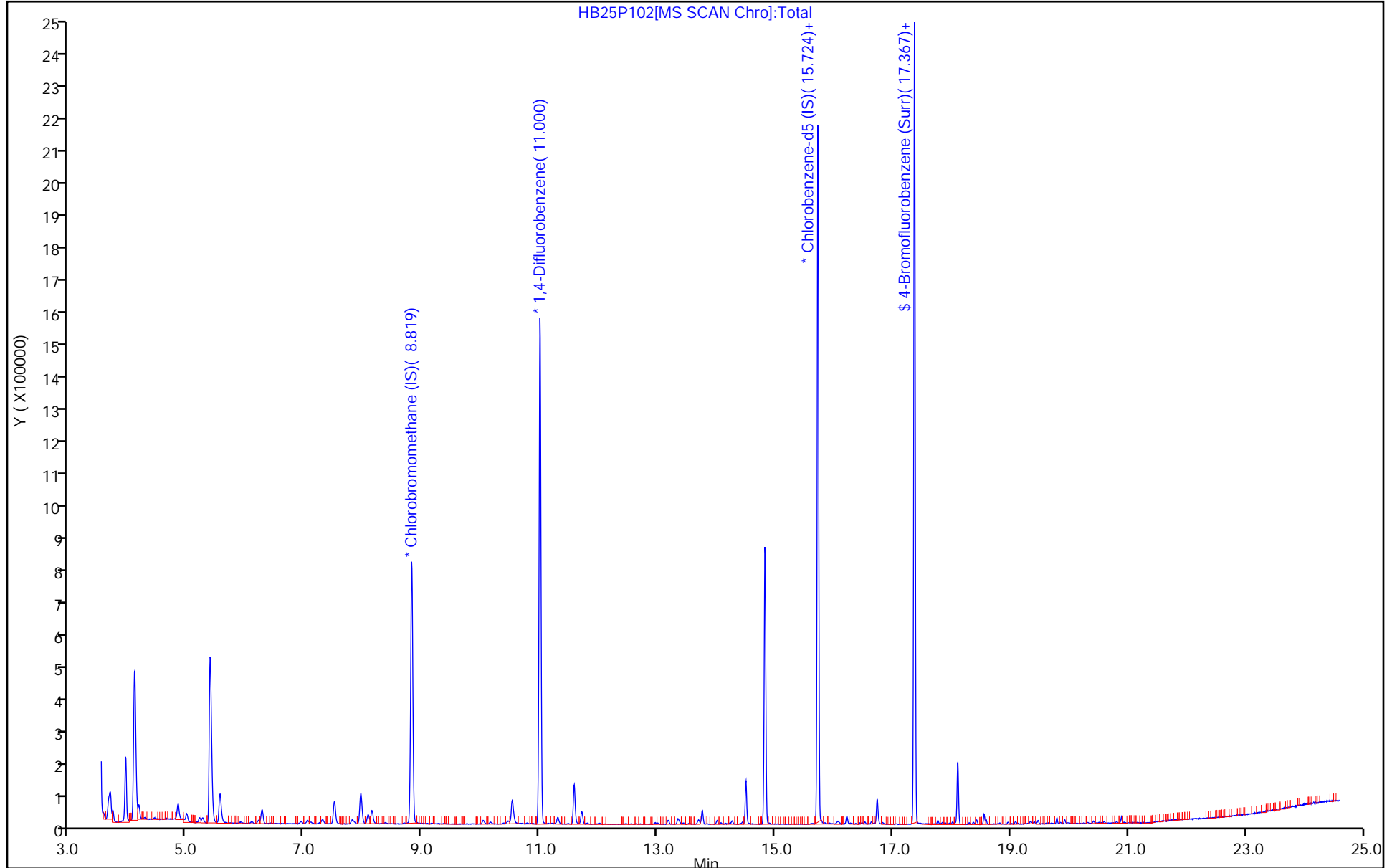
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P102.D
 Lims ID: 140-14387-A-2
 Client ID: SV-179-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 18:20:30 ALS Bottle#: 2 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-010
 Misc. Info.: 140-14387-a-2
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:01:58 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:02:44

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.06	101.41

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P102.D

Injection Date: 25-Feb-2019 18:20:30

Instrument ID: MH

Lims ID: 140-14387-A-2

Lab Sample ID: 140-14387-2

Client ID: SV-179-MB-3

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

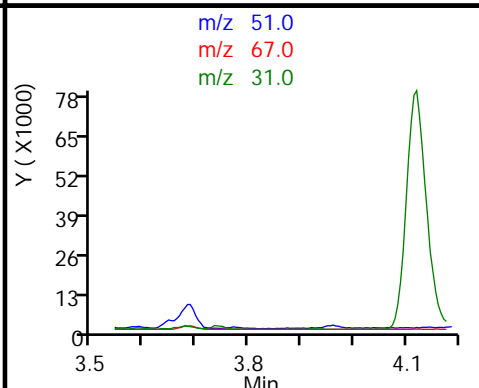
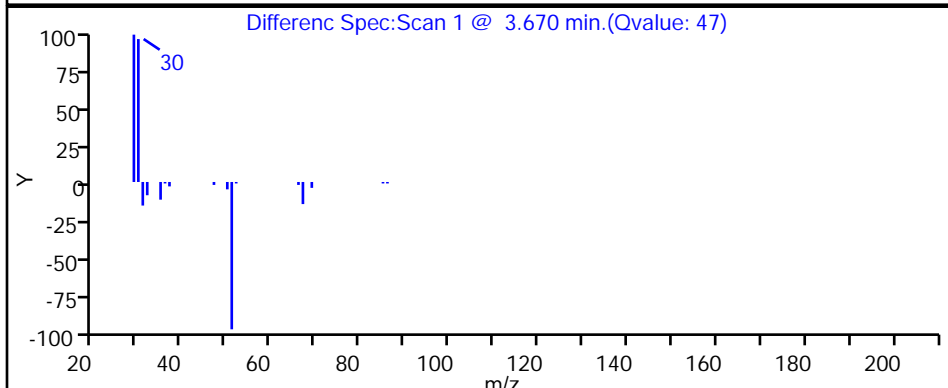
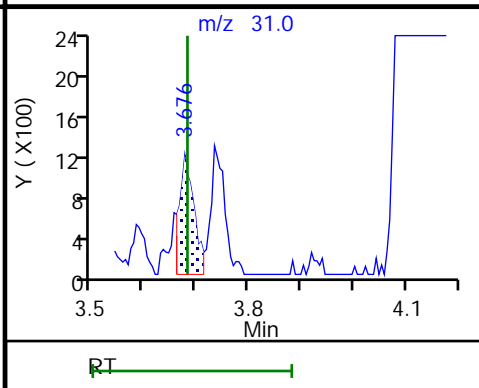
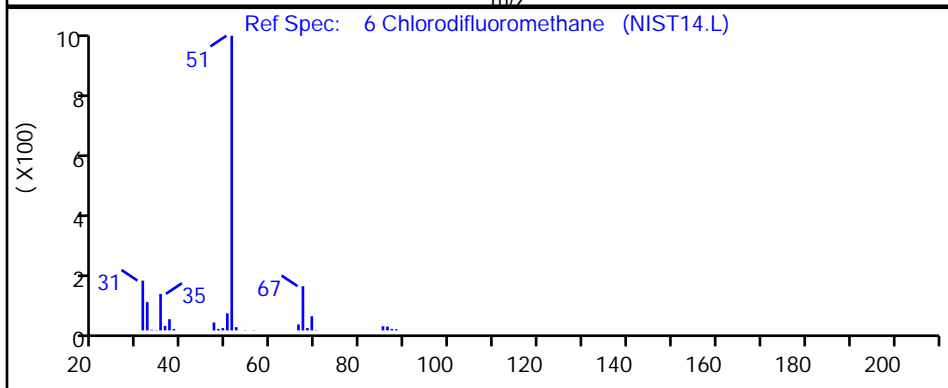
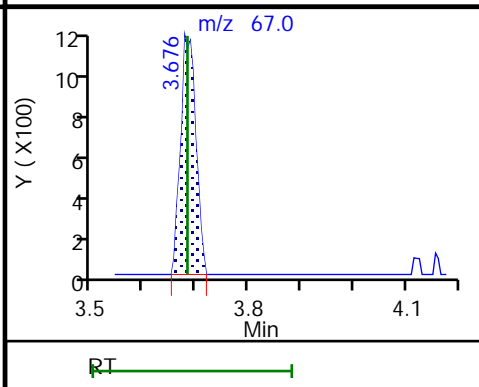
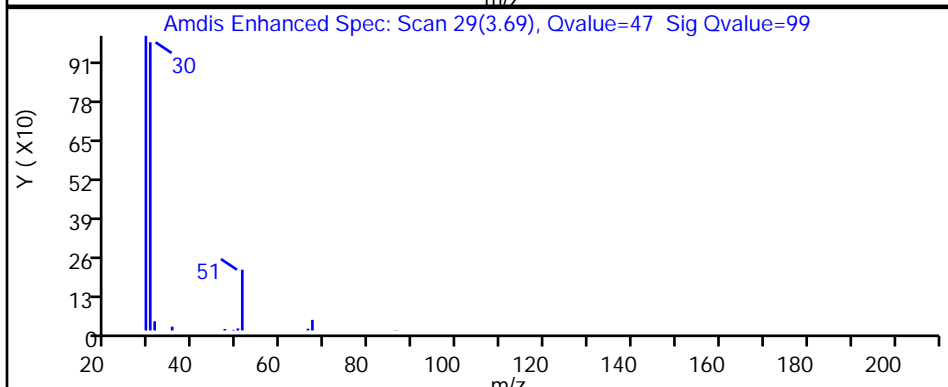
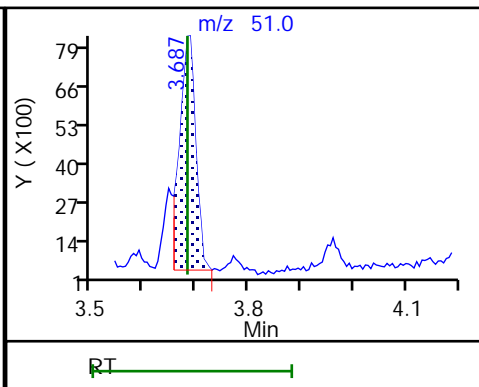
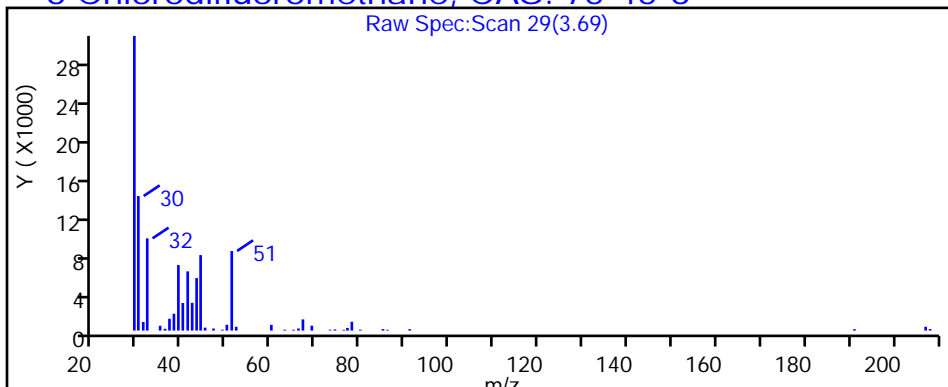
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P102.D

Injection Date: 25-Feb-2019 18:20:30

Instrument ID: MH

Lims ID: 140-14387-A-2

Lab Sample ID: 140-14387-2

Client ID: SV-179-MB-3

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

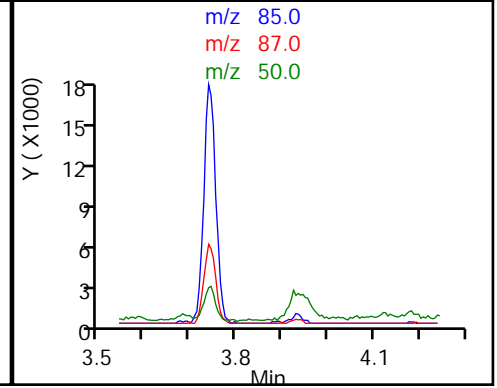
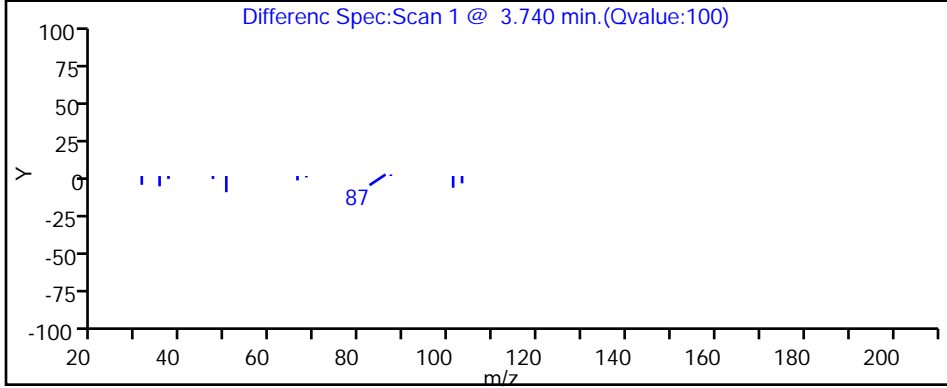
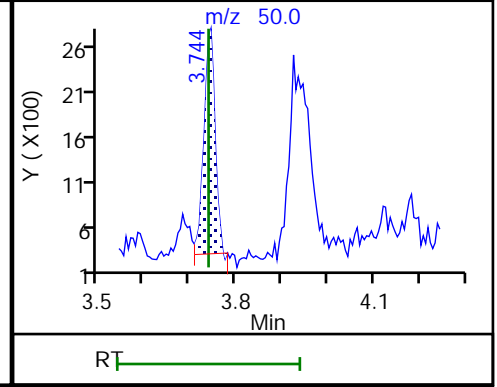
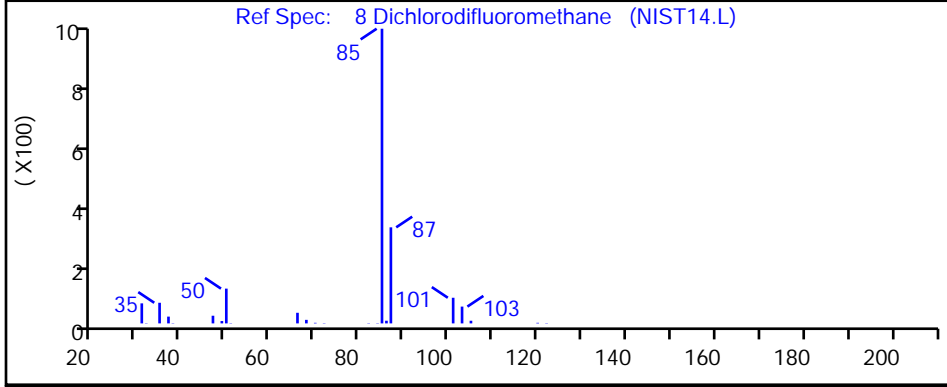
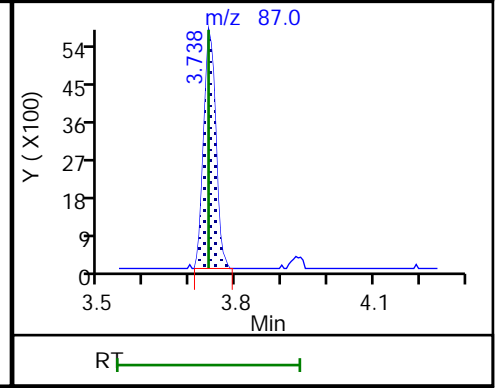
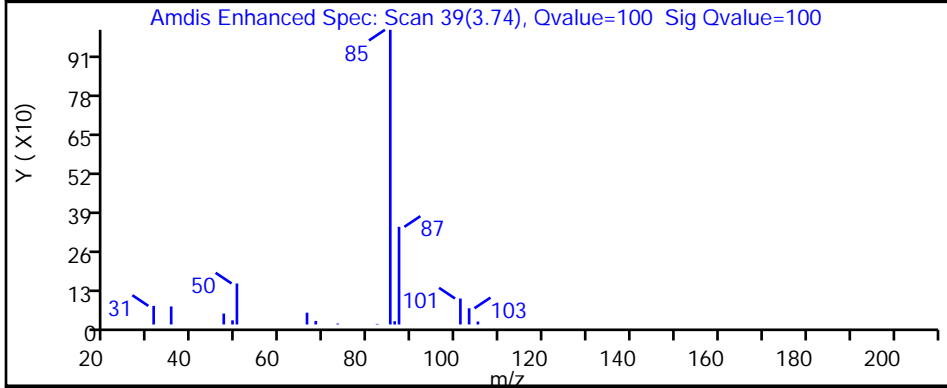
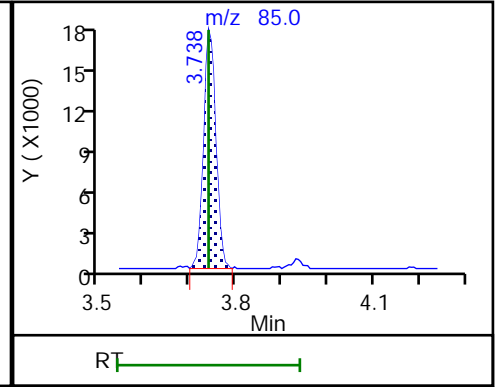
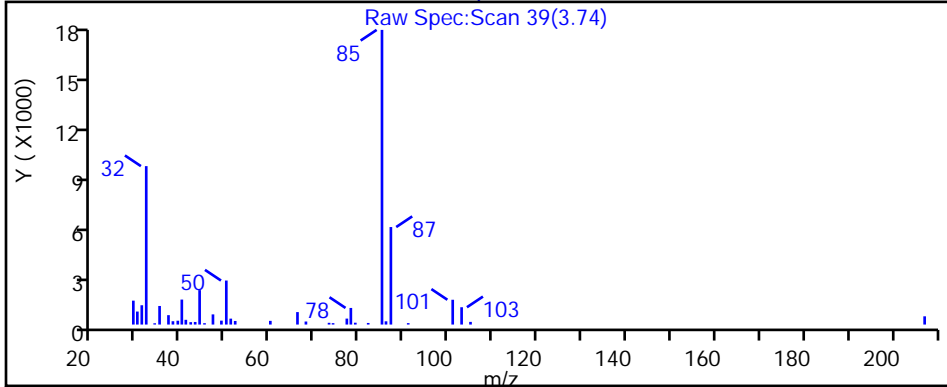
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P102.D

Injection Date: 25-Feb-2019 18:20:30

Instrument ID: MH

Lims ID: 140-14387-A-2

Lab Sample ID: 140-14387-2

Client ID: SV-179-MB-3

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

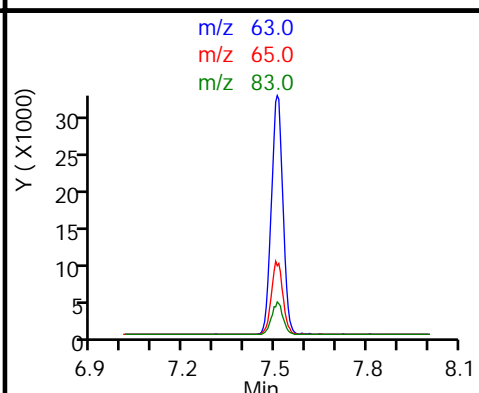
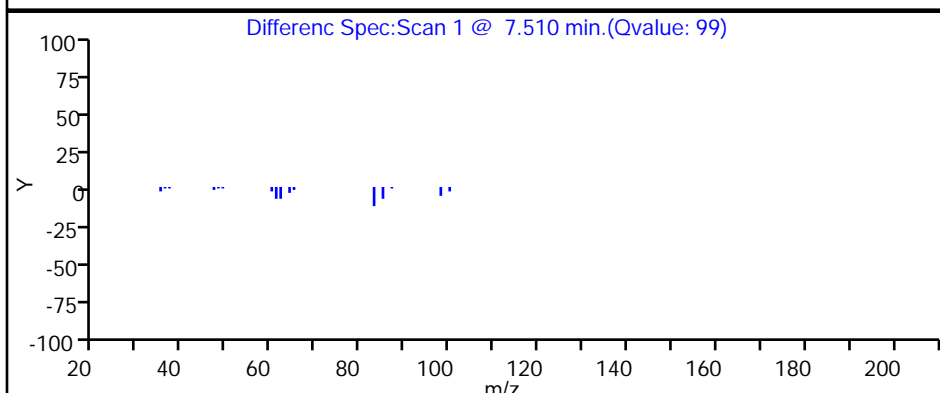
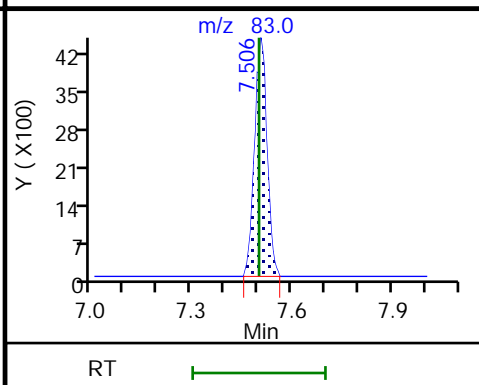
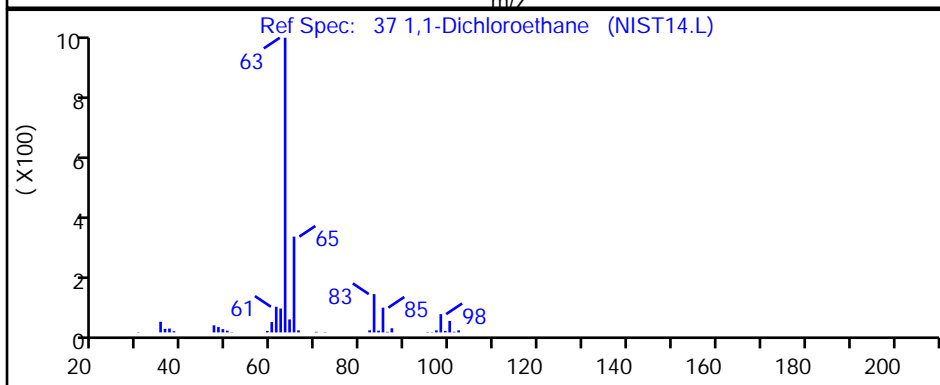
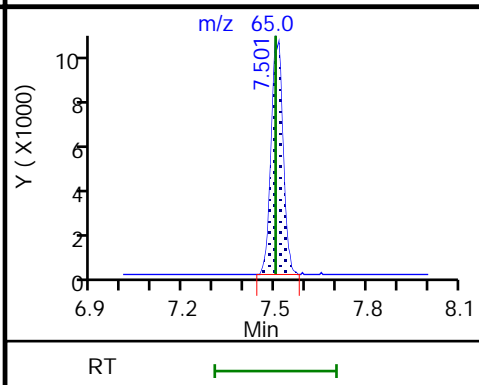
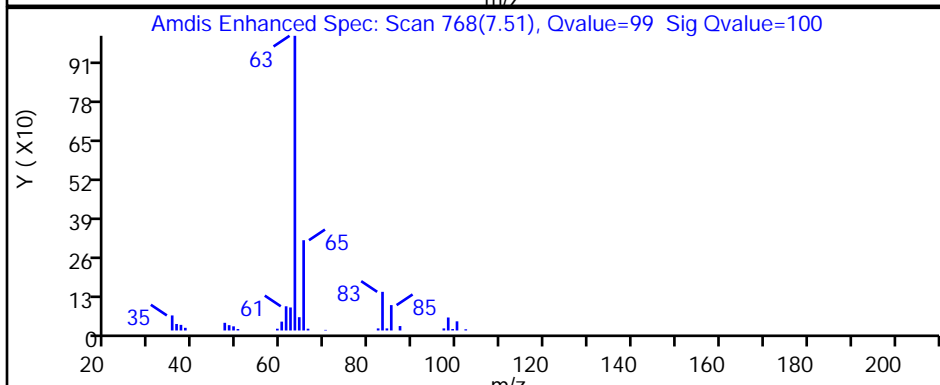
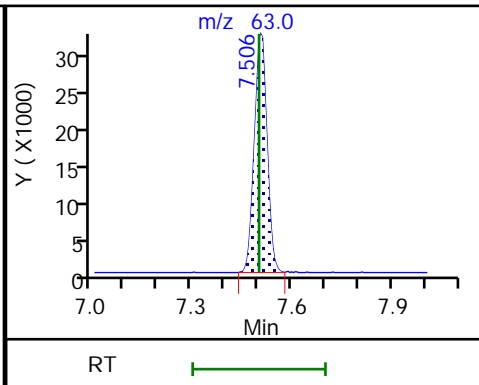
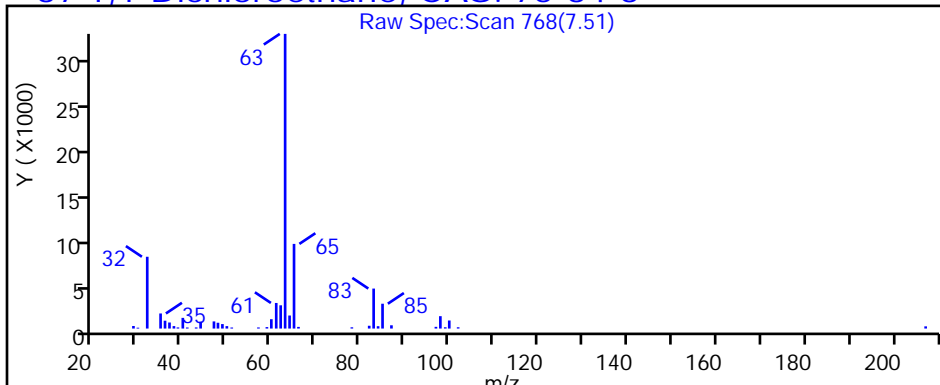
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P102.D

Injection Date: 25-Feb-2019 18:20:30

Instrument ID: MH

Lims ID: 140-14387-A-2

Lab Sample ID: 140-14387-2

Client ID: SV-179-MB-3

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

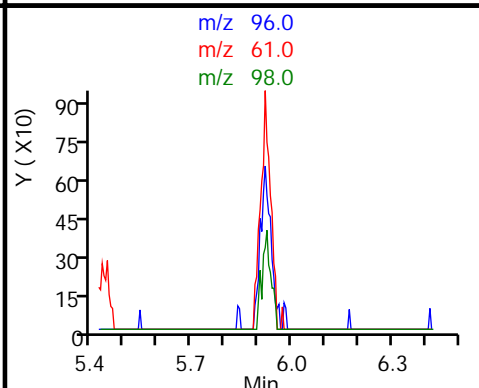
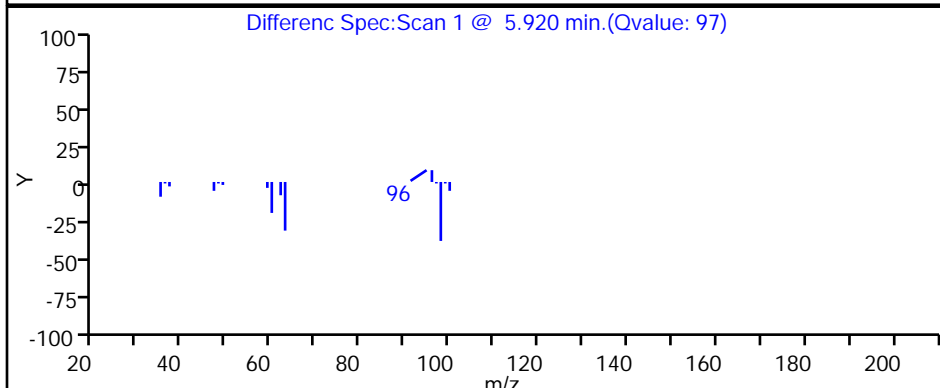
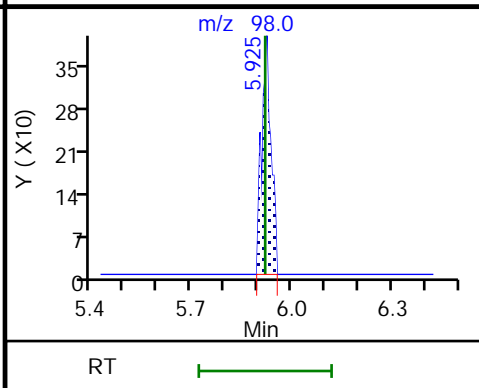
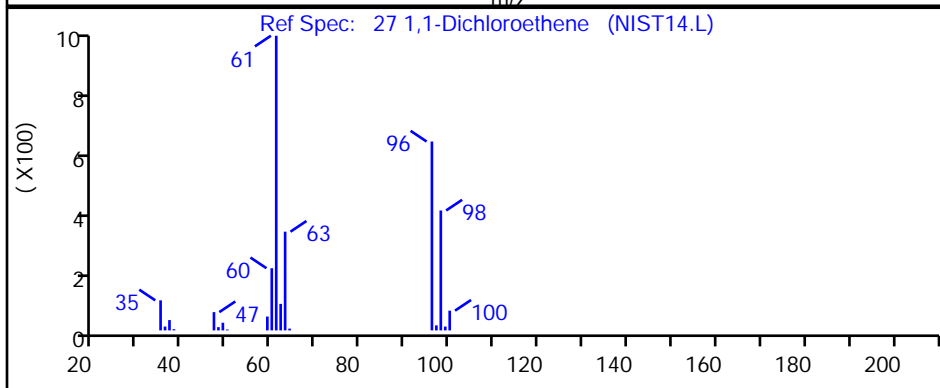
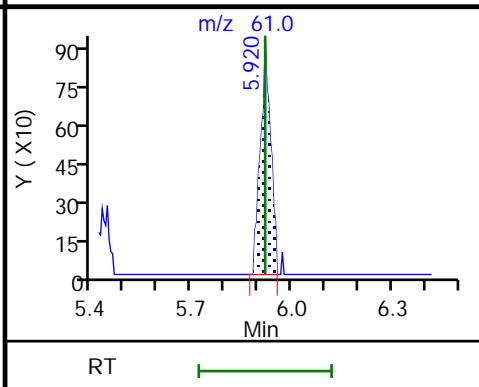
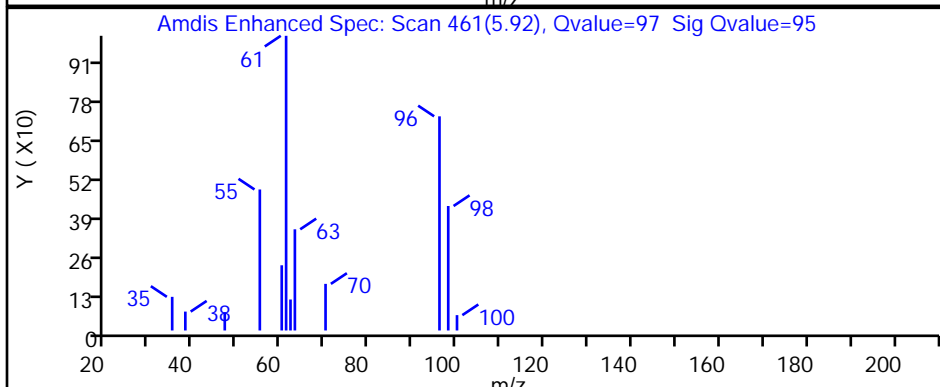
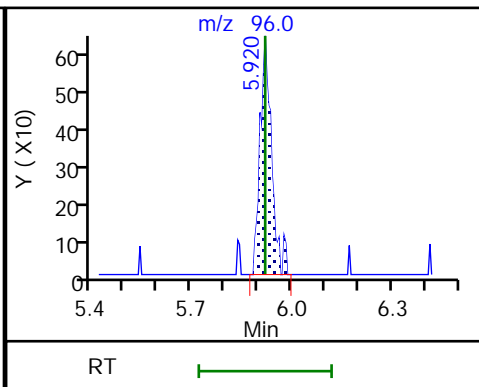
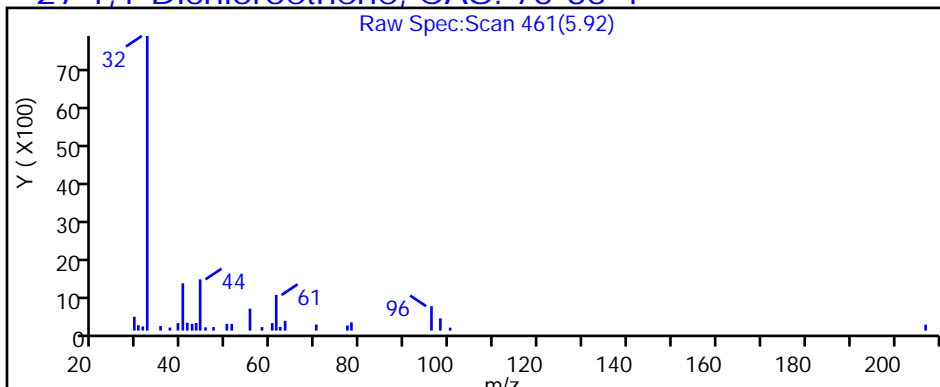
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P102.D

Injection Date: 25-Feb-2019 18:20:30

Instrument ID: MH

Lims ID: 140-14387-A-2

Lab Sample ID: 140-14387-2

Client ID: SV-179-MB-3

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

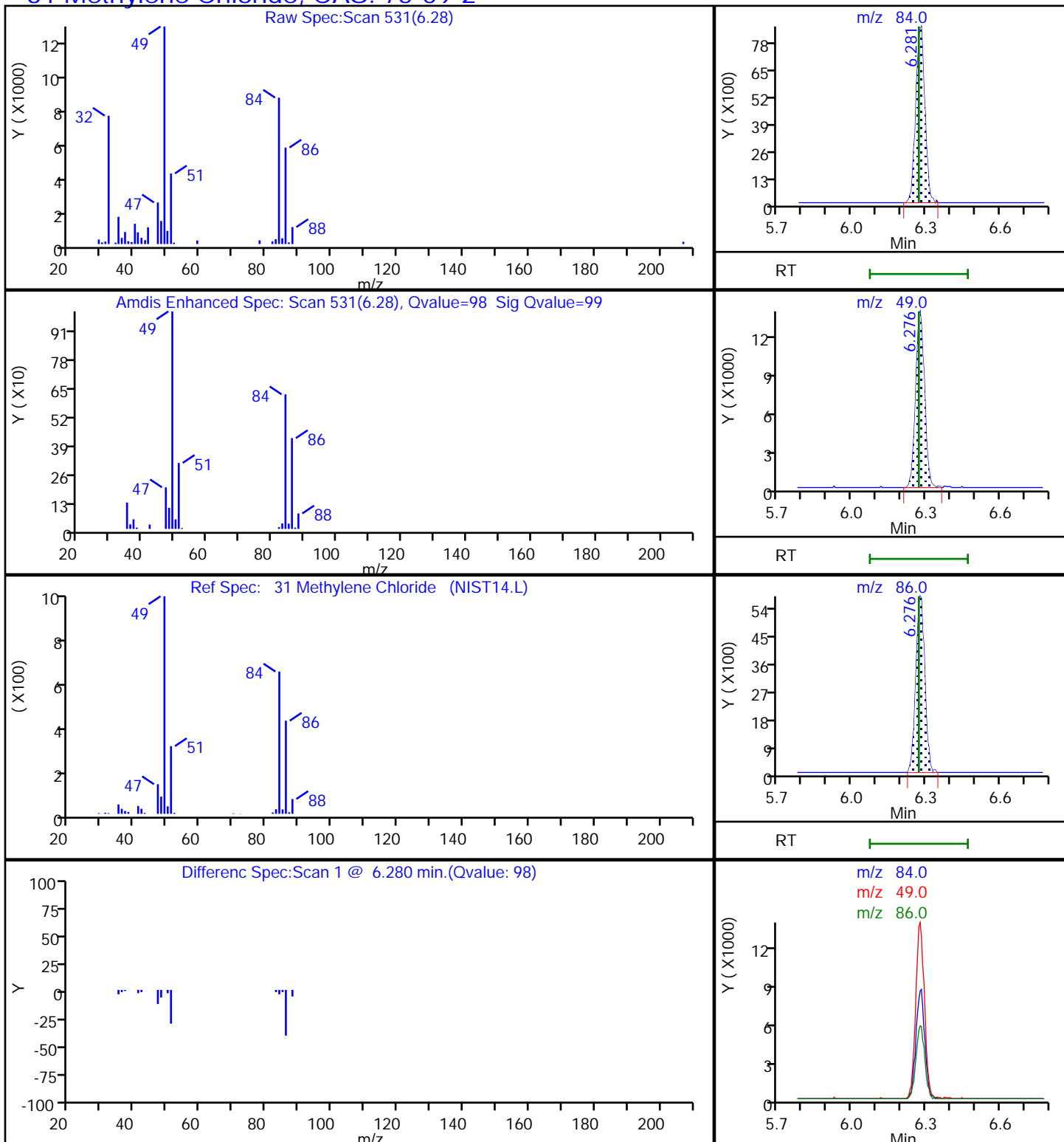
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P102.D

Injection Date: 25-Feb-2019 18:20:30

Instrument ID: MH

Lims ID: 140-14387-A-2

Lab Sample ID: 140-14387-2

Client ID: SV-179-MB-3

Operator ID: HMT

ALS Bottle#: 2 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

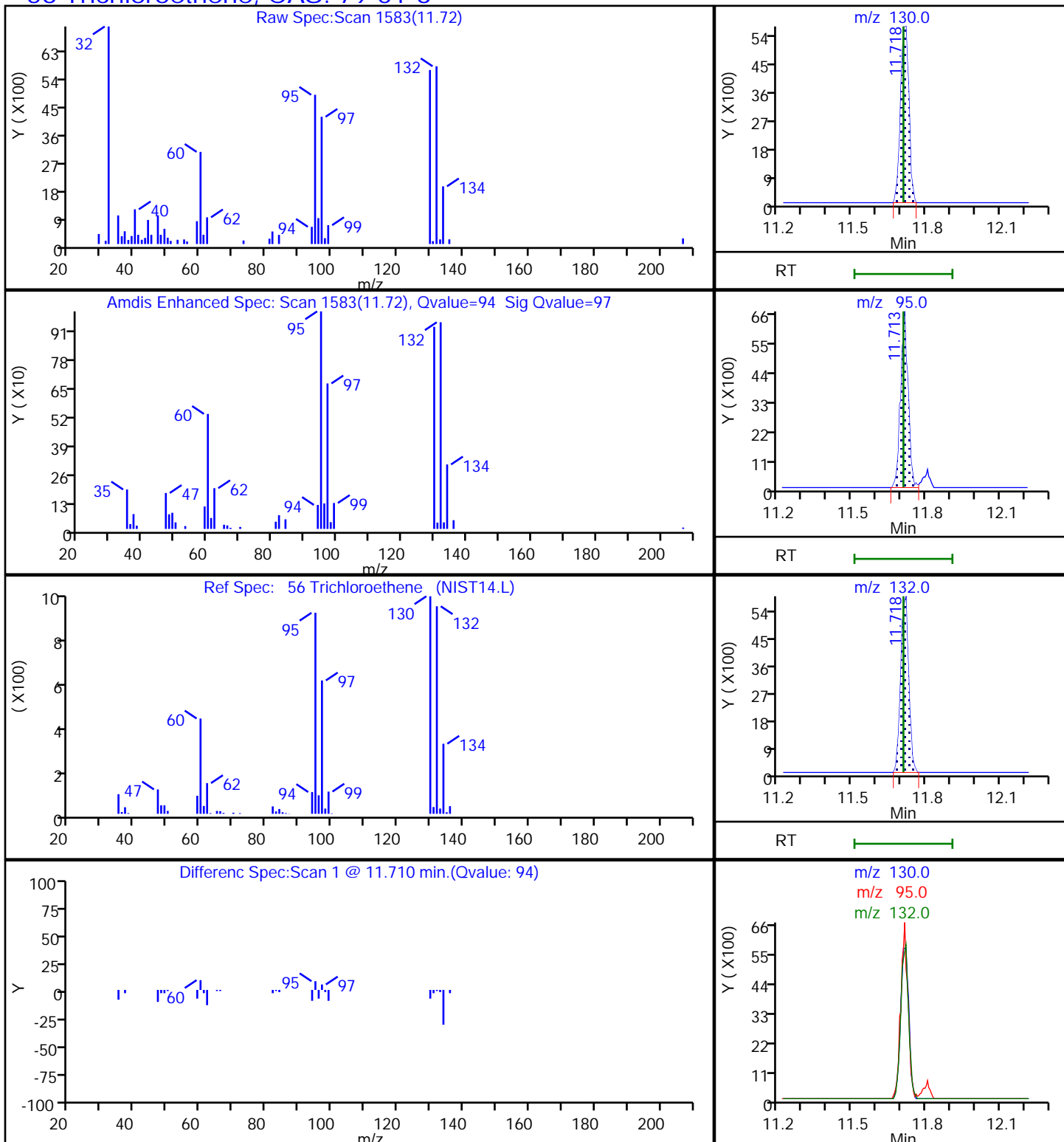
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P102.D

Injection Date: 25-Feb-2019 18:20:30

Instrument ID: MH

Lims ID: 140-14387-A-2

Lab Sample ID: 140-14387-2

Client ID: SV-179-MB-3

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

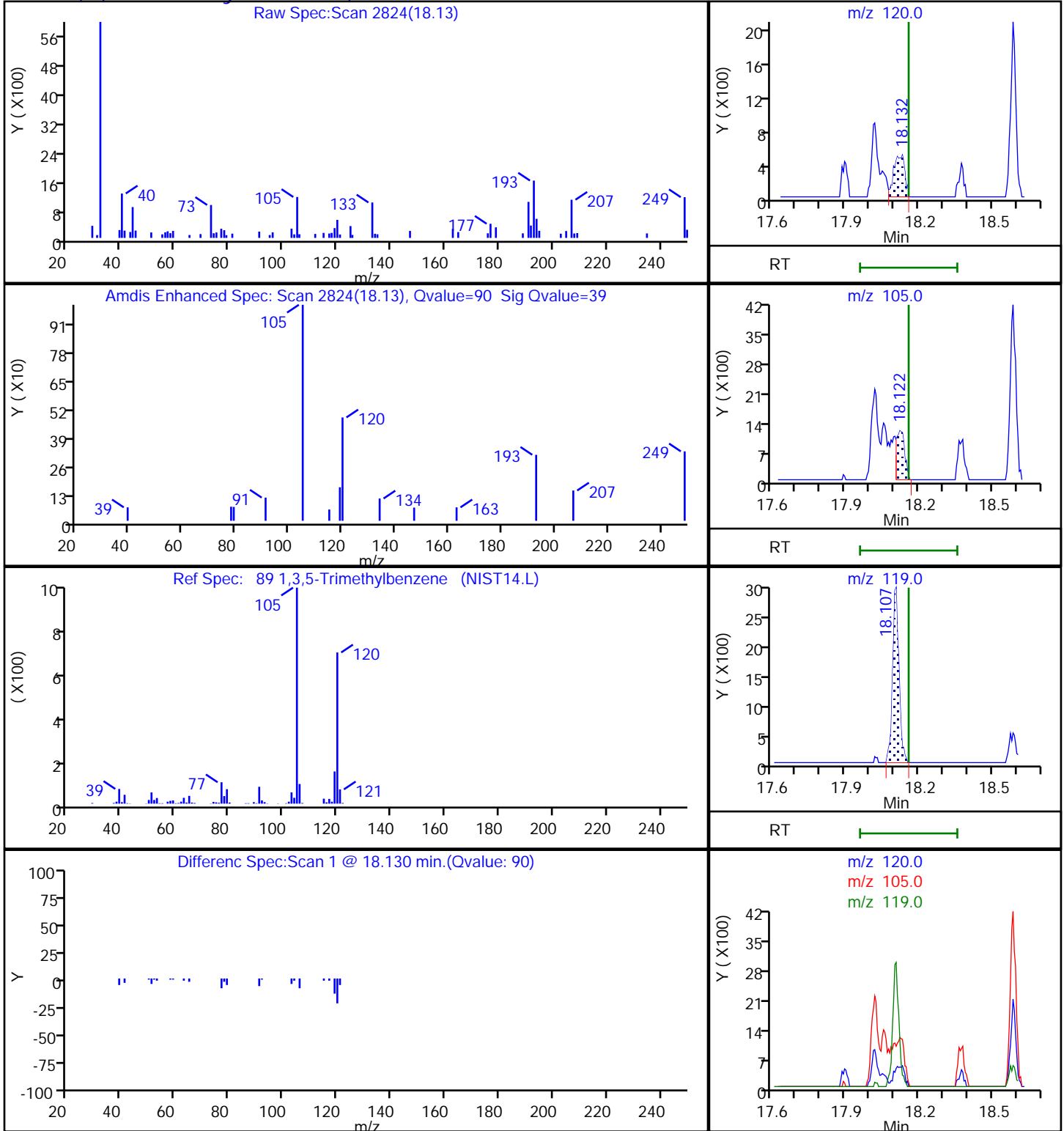
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P102.D

Injection Date: 25-Feb-2019 18:20:30

Instrument ID: MH

Lims ID: 140-14387-A-2

Lab Sample ID: 140-14387-2

Client ID: SV-179-MB-3

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

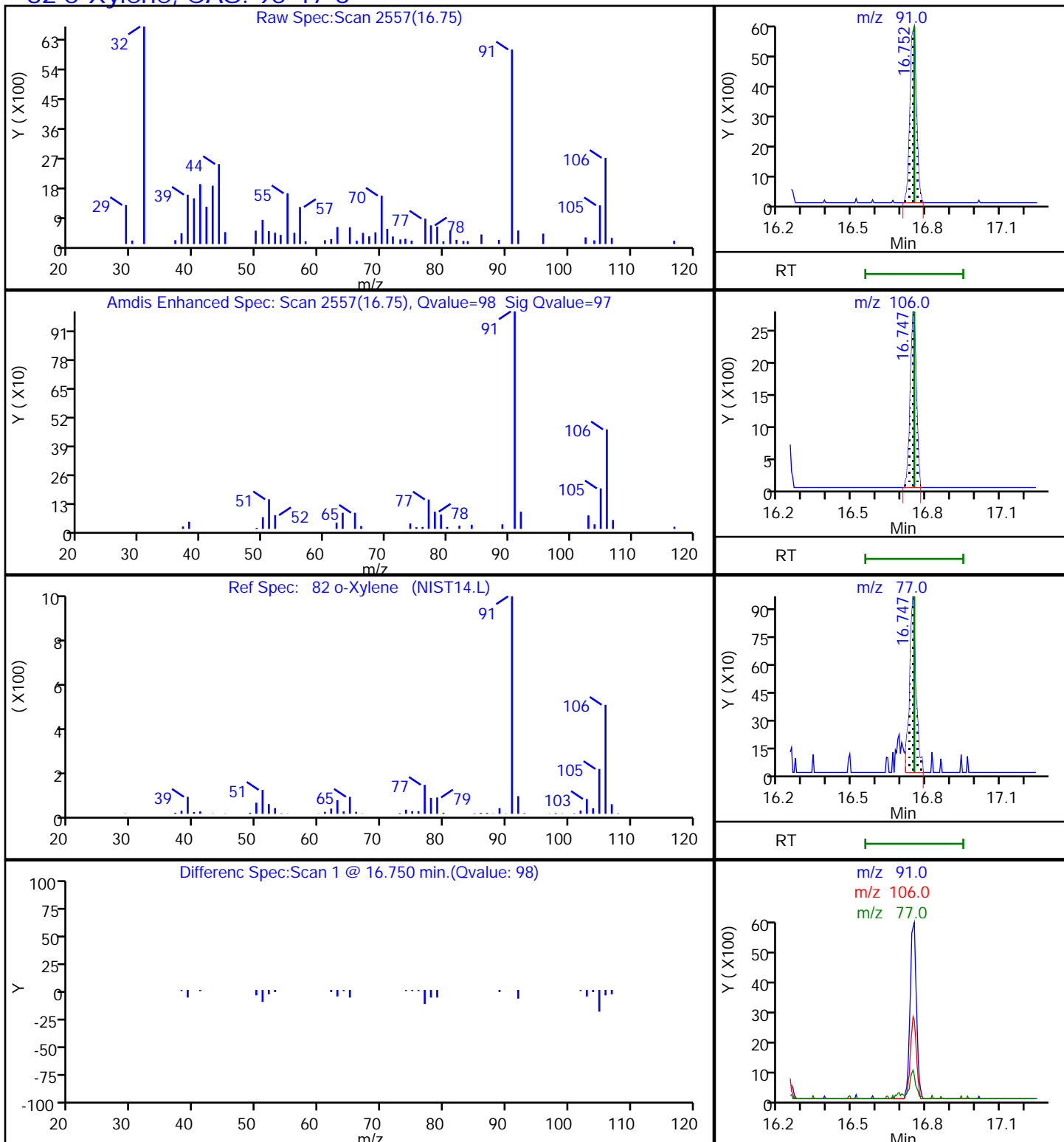
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-181-MB-3 Lab Sample ID: 140-14387-3
 Matrix: Air Lab File ID: HB25P103.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:53
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 19:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.28	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	51		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	2.2		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.75	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.12	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.17	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-181-MB-3 Lab Sample ID: 140-14387-3
 Matrix: Air Lab File ID: HB25P103.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:53
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 19:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.98	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	210		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	8.7		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.64	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.85	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P103.D
 Lims ID: 140-14387-A-3
 Client ID: SV-181-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 19:13:30 ALS Bottle#: 3 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-011
 Misc. Info.: 140-14387-a-3
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:01:58 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:01:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.814	0.015	96	269386	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1455854	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1235221	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	817647	4.06	
6 Chlorodifluoromethane	51	3.687	3.687	0.005	96	12214	0.0553	M
8 Dichlorodifluoromethane	85	3.743	3.738	0.005	100	31703	0.0934	
27 1,1-Dichloroethene	96	5.930	5.919	0.011	98	45992	0.4395	
31 Methylene Chloride	84	6.281	6.271	0.010	98	16439	0.1492	
37 1,1-Dichloroethane	63	7.511	7.501	0.010	100	2084065	10.2	
45 1,1,1-Trichloroethane	97	9.863	9.853	0.010	97	5185	0.0233	
47 Benzene	78	10.462	10.452	0.010	98	7178	0.0233	
65 Toluene	91	13.765	13.760	0.005	93	36660	0.1043	
89 1,3,5-Trimethylbenzene	120	18.127	18.127	-0.031	41	1617	0.0348	a

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P103.D

Injection Date: 25-Feb-2019 19:13:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-3

Lab Sample ID: 140-14387-3

Worklist Smp#: 11

Client ID: SV-181-MB-3

Purge Vol: 500.000 mL

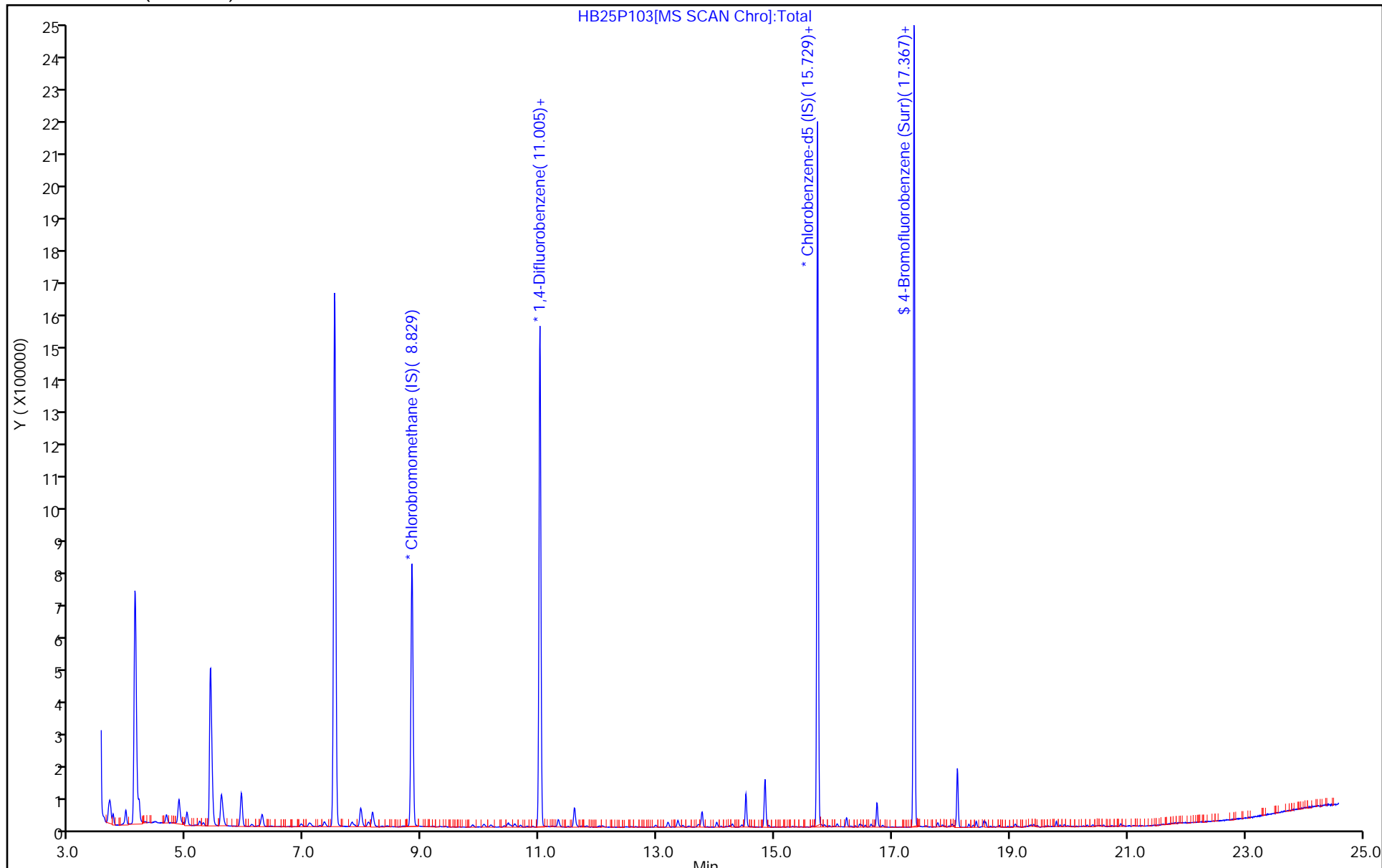
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P103.D
 Lims ID: 140-14387-A-3
 Client ID: SV-181-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 19:13:30 ALS Bottle#: 3 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-011
 Misc. Info.: 140-14387-a-3
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:01:58 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:01:57

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.06	101.55

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P103.D

Injection Date: 25-Feb-2019 19:13:30

Instrument ID: MH

Lims ID: 140-14387-A-3

Lab Sample ID: 140-14387-3

Client ID: SV-181-MB-3

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

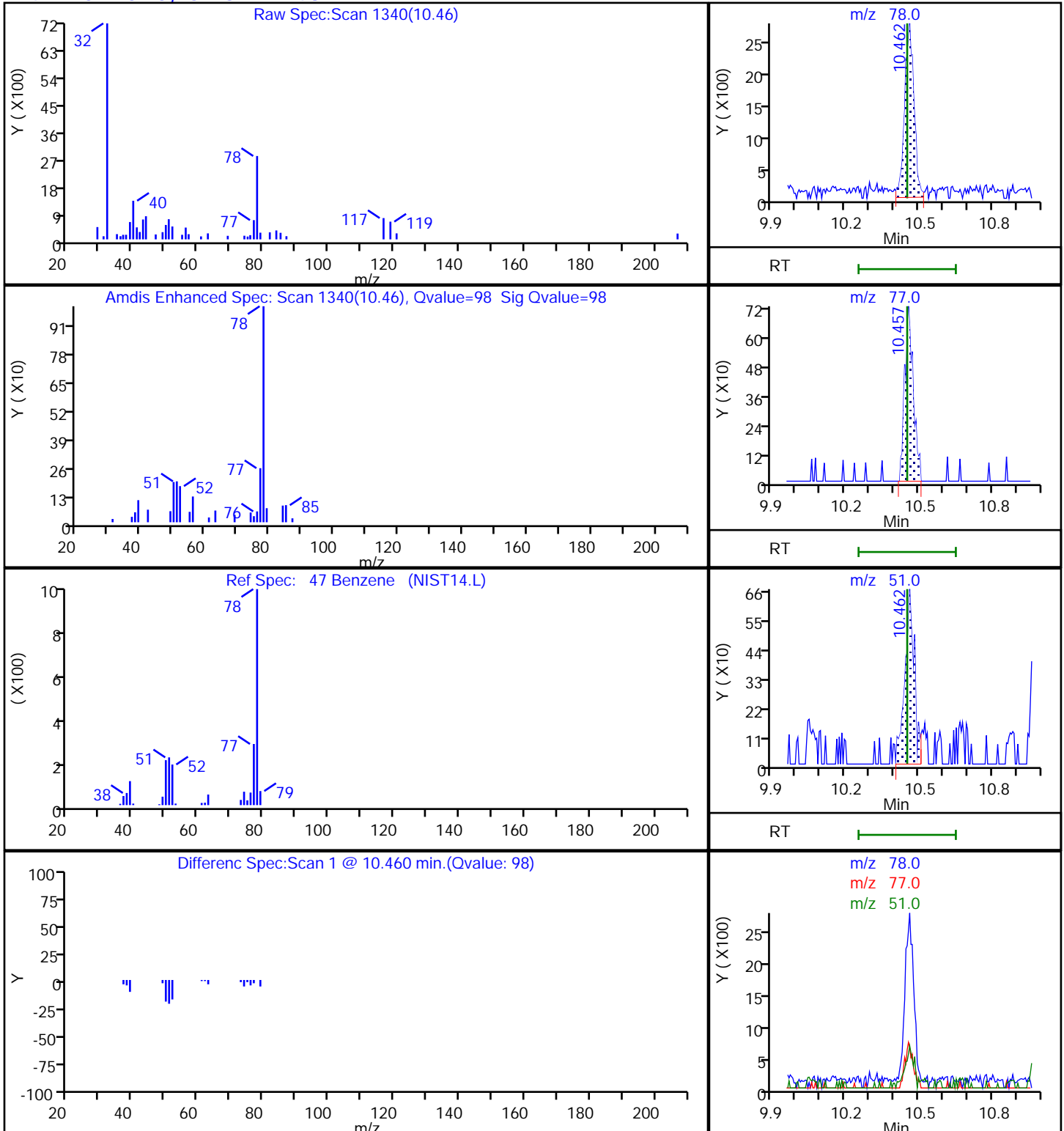
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P103.D

Injection Date: 25-Feb-2019 19:13:30

Instrument ID: MH

Lims ID: 140-14387-A-3

Lab Sample ID: 140-14387-3

Client ID: SV-181-MB-3

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

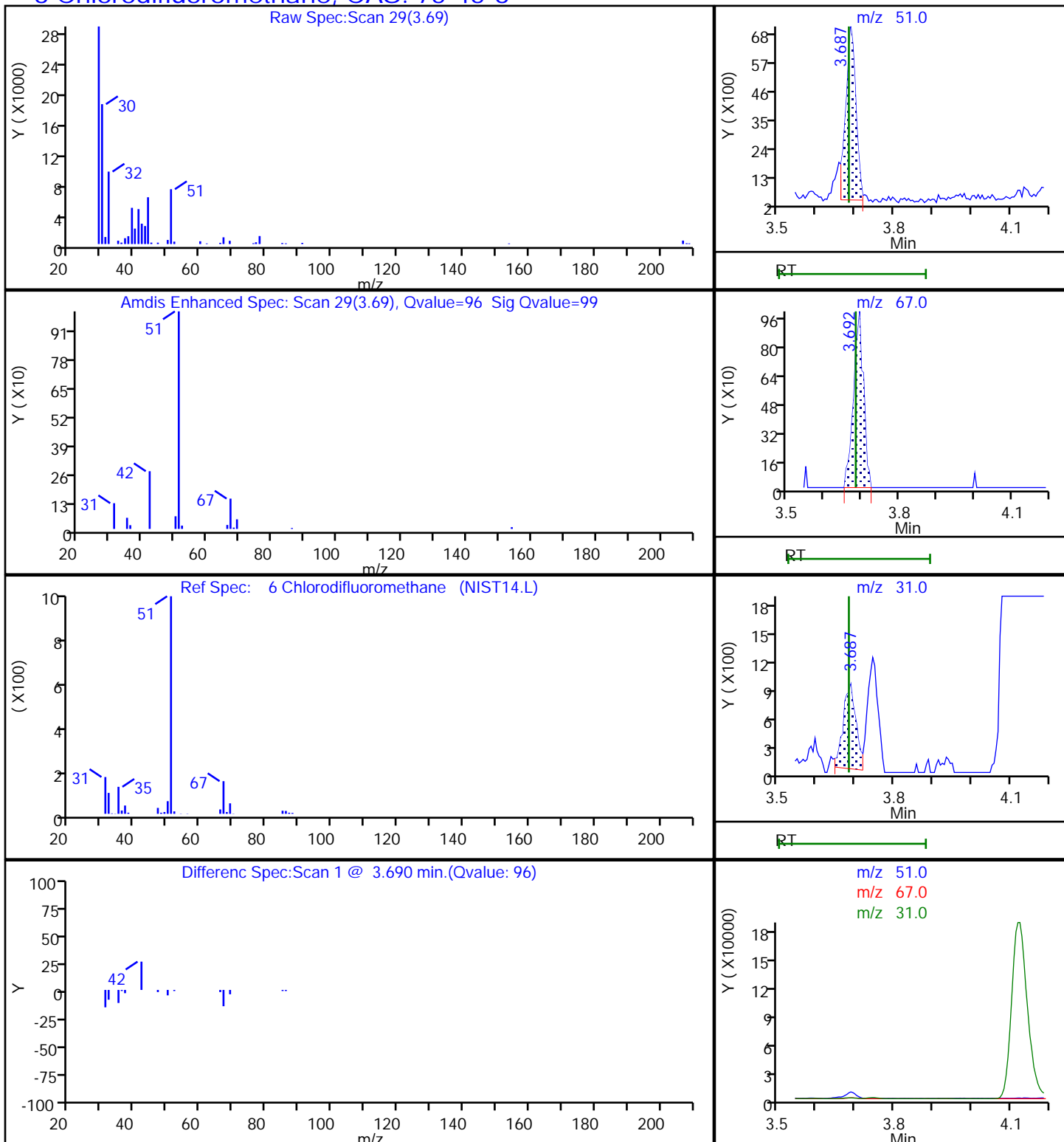
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P103.D

Injection Date: 25-Feb-2019 19:13:30

Instrument ID: MH

Lims ID: 140-14387-A-3

Lab Sample ID: 140-14387-3

Client ID: SV-181-MB-3

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

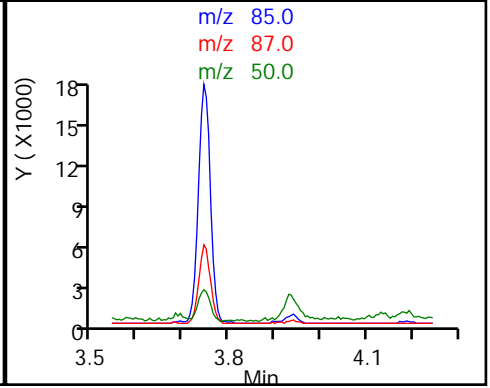
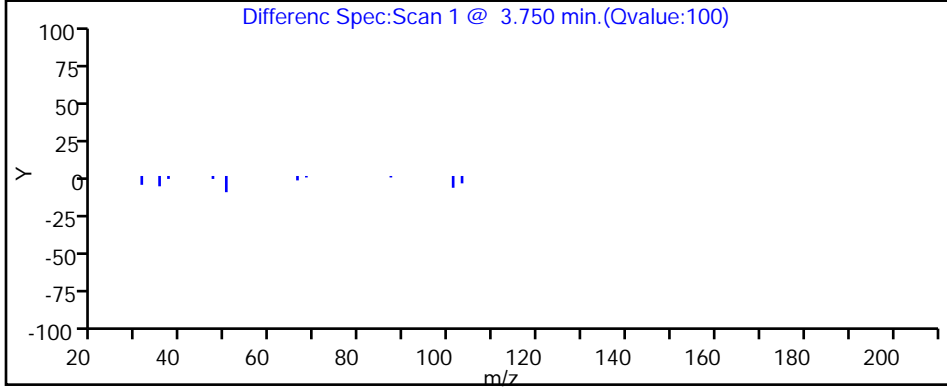
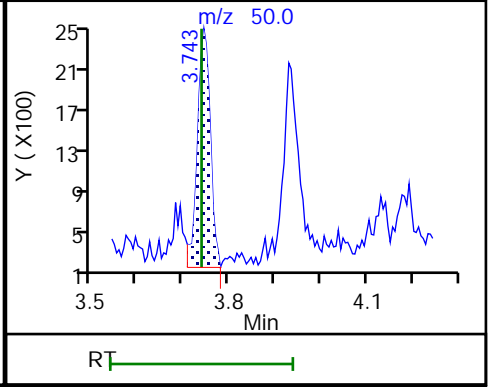
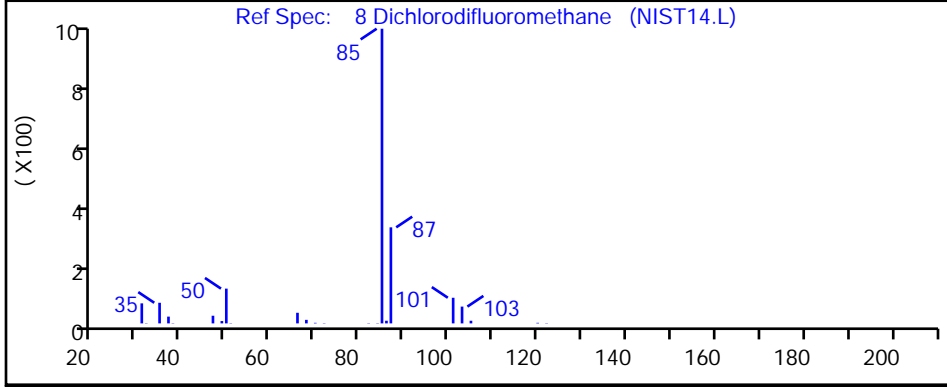
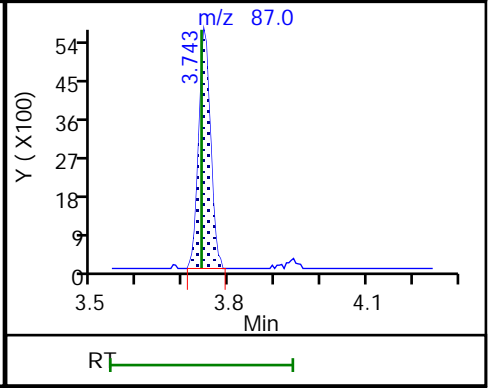
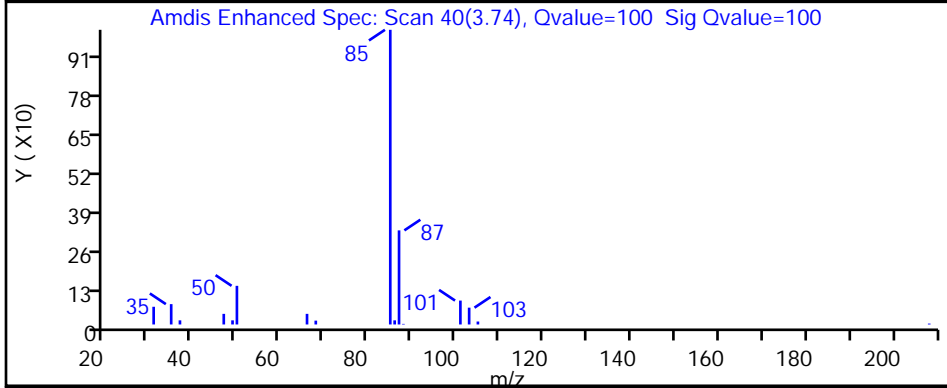
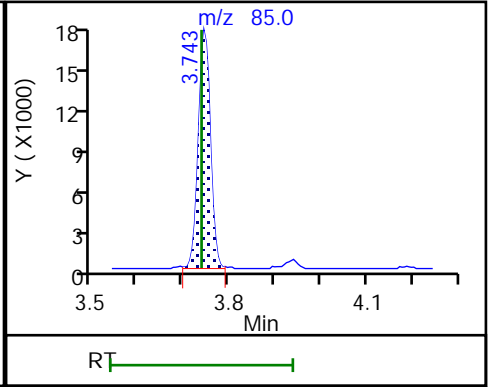
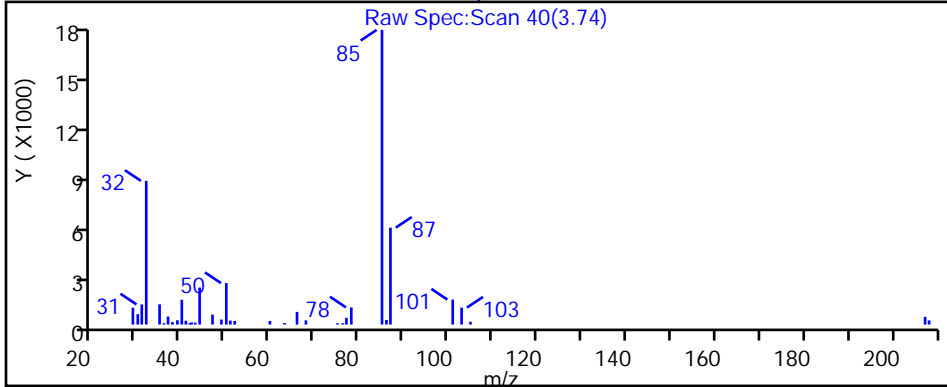
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P103.D

Injection Date: 25-Feb-2019 19:13:30

Instrument ID: MH

Lims ID: 140-14387-A-3

Lab Sample ID: 140-14387-3

Client ID: SV-181-MB-3

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

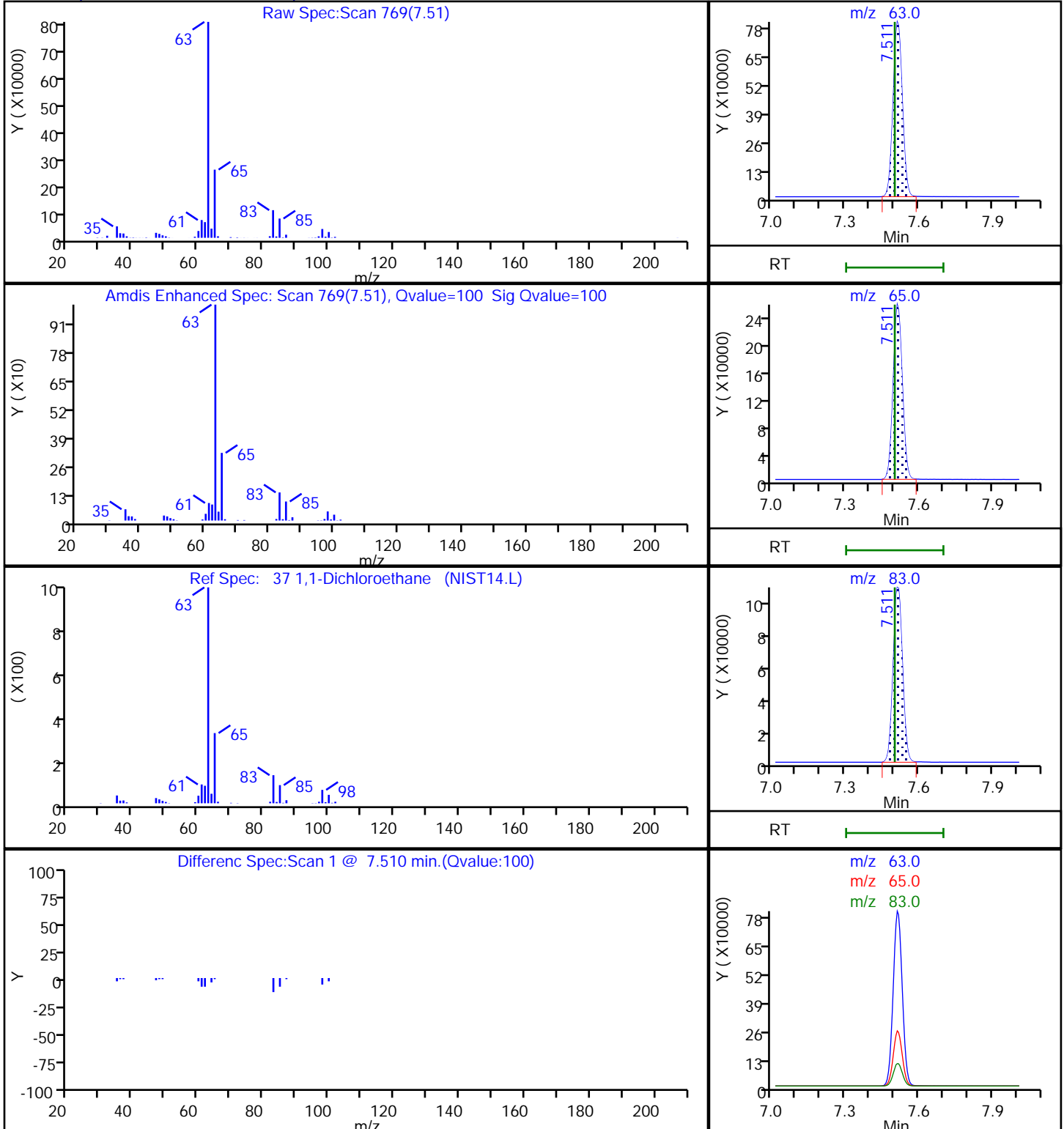
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P103.D

Injection Date: 25-Feb-2019 19:13:30

Instrument ID: MH

Lims ID: 140-14387-A-3

Lab Sample ID: 140-14387-3

Client ID: SV-181-MB-3

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

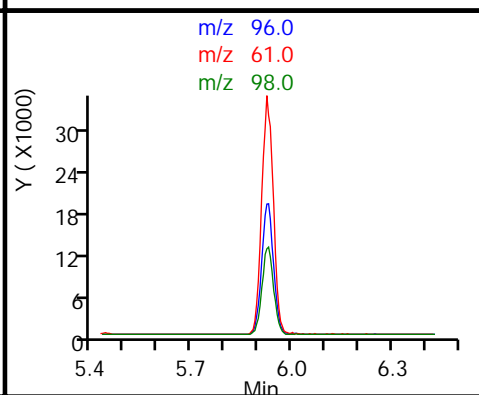
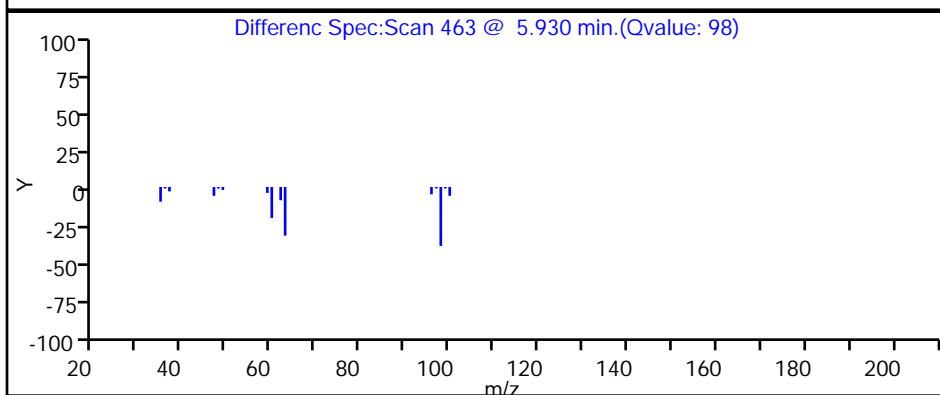
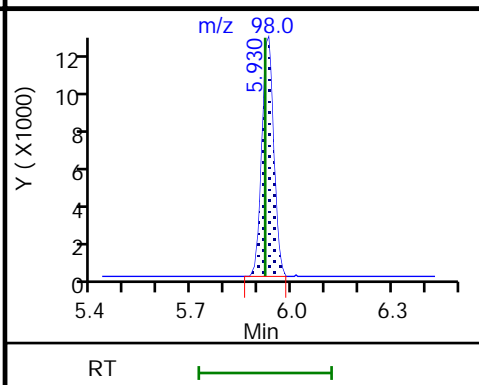
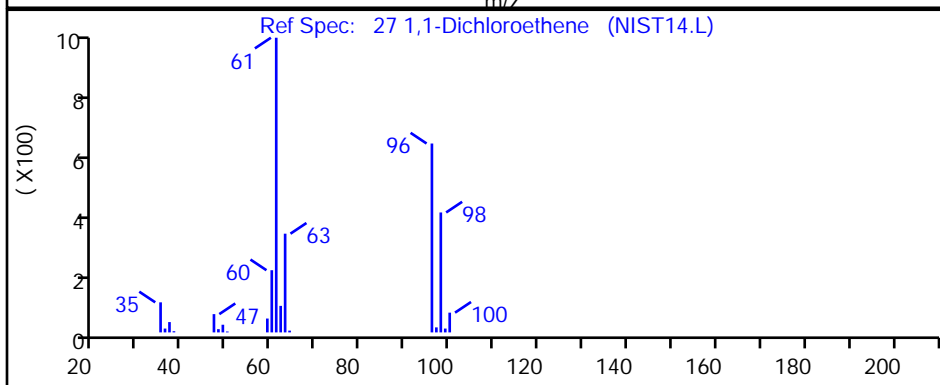
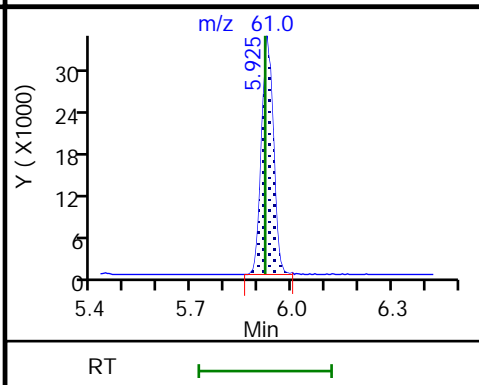
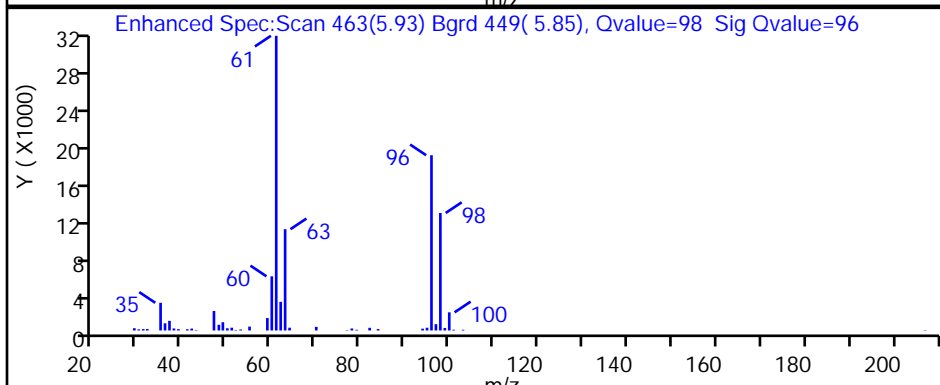
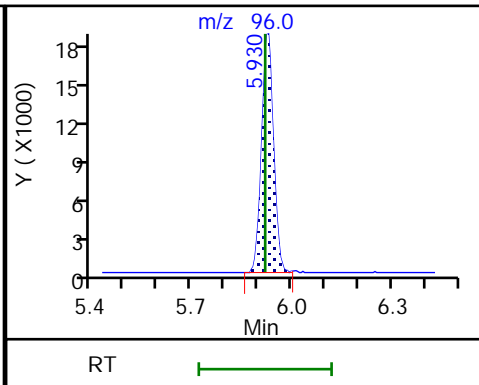
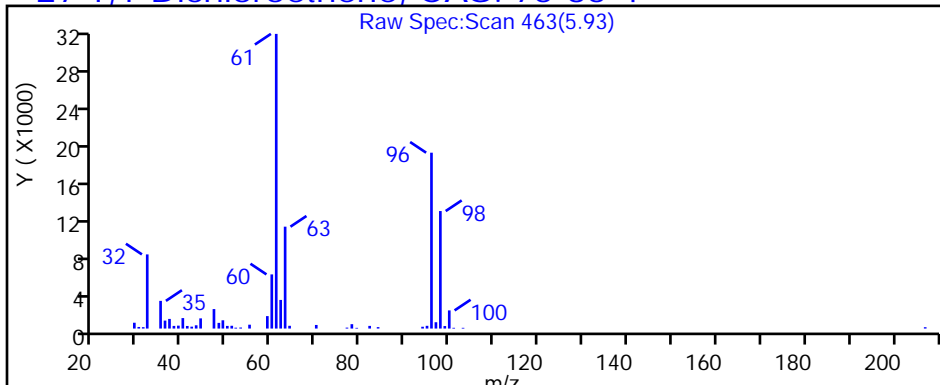
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P103.D

Injection Date: 25-Feb-2019 19:13:30

Instrument ID: MH

Lims ID: 140-14387-A-3

Lab Sample ID: 140-14387-3

Client ID: SV-181-MB-3

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

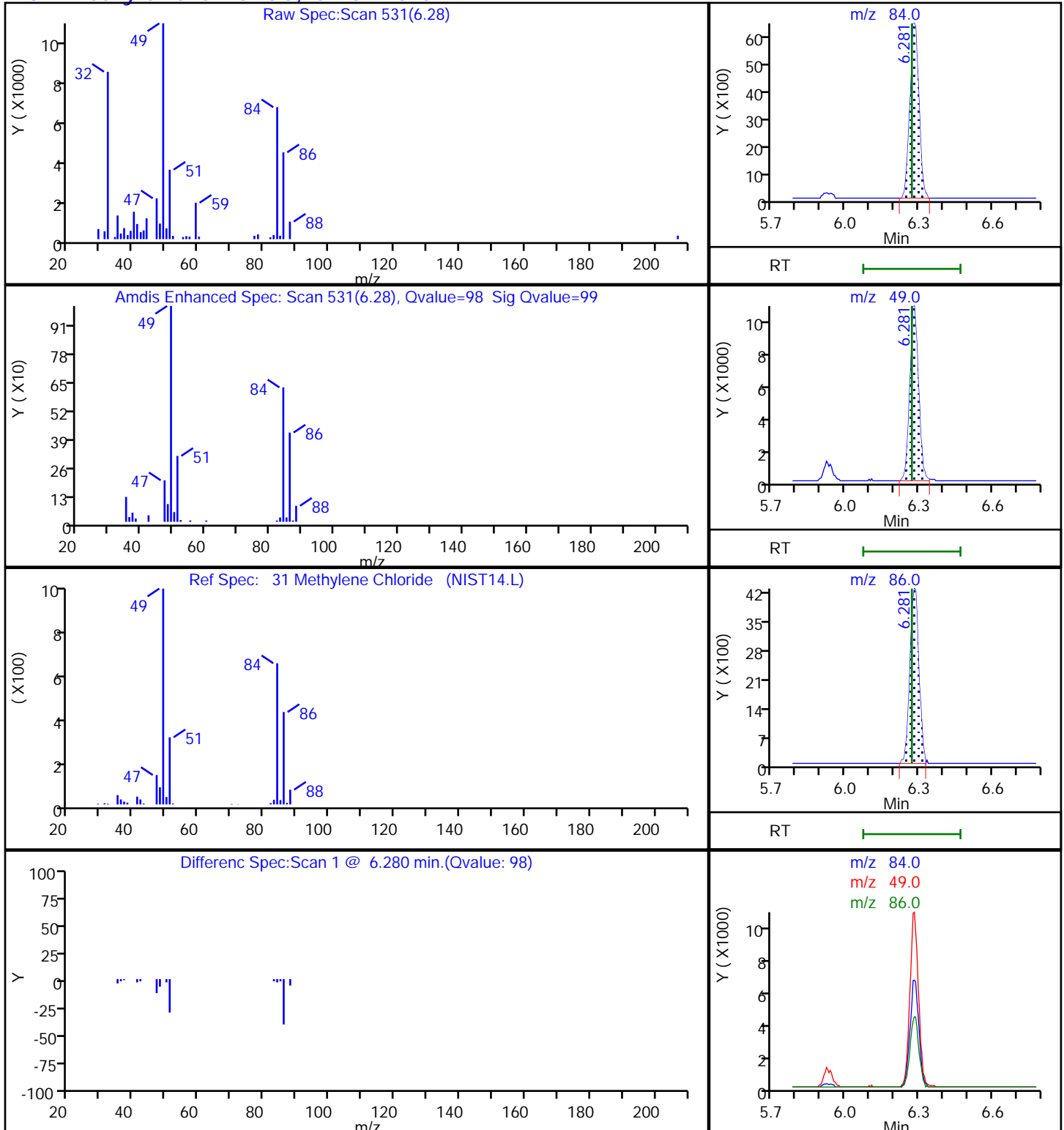
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P103.D

Injection Date: 25-Feb-2019 19:13:30

Instrument ID: MH

Lims ID: 140-14387-A-3

Lab Sample ID: 140-14387-3

Client ID: SV-181-MB-3

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

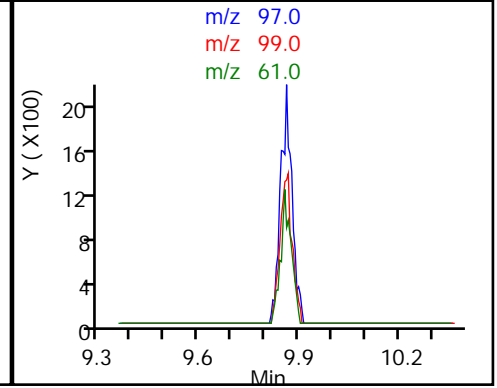
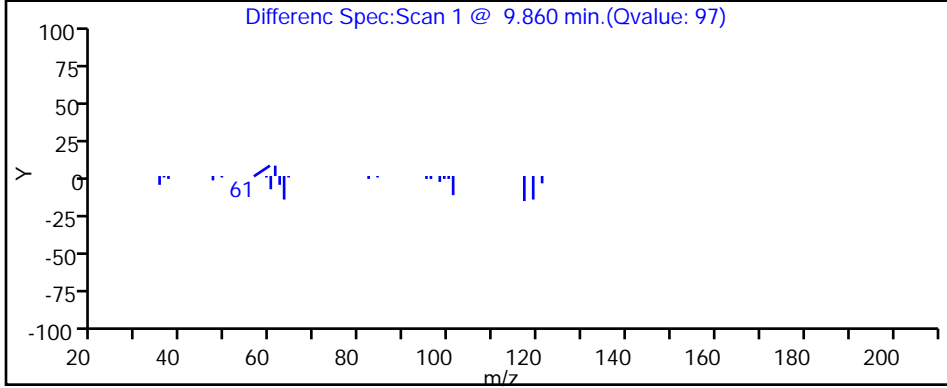
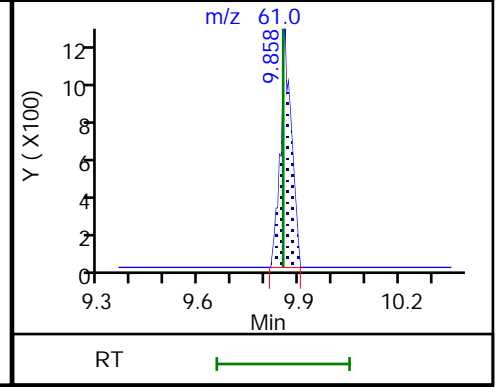
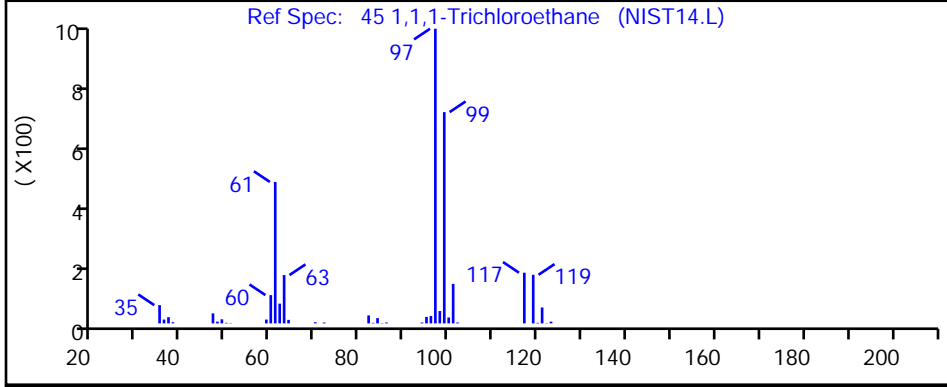
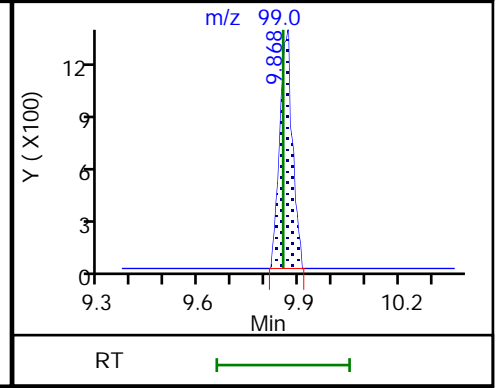
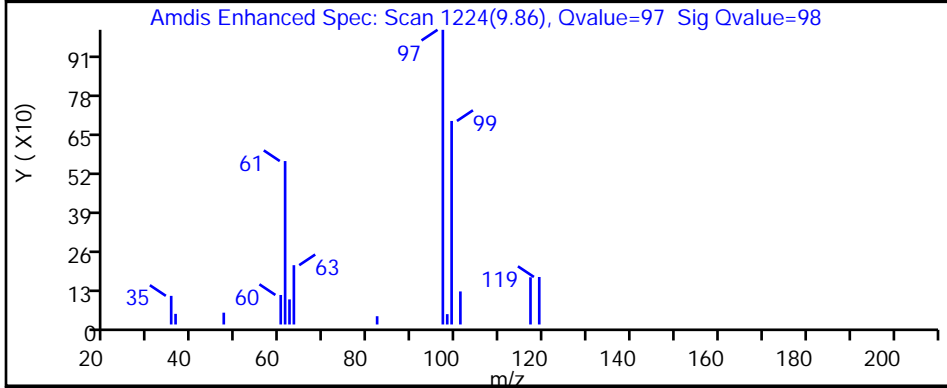
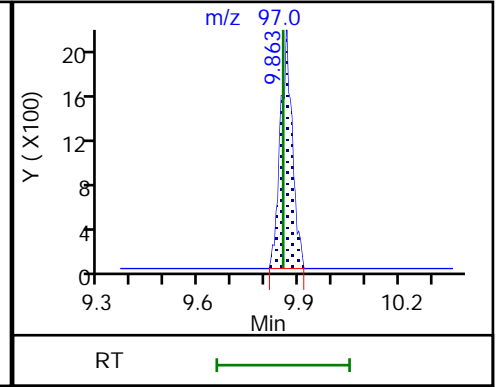
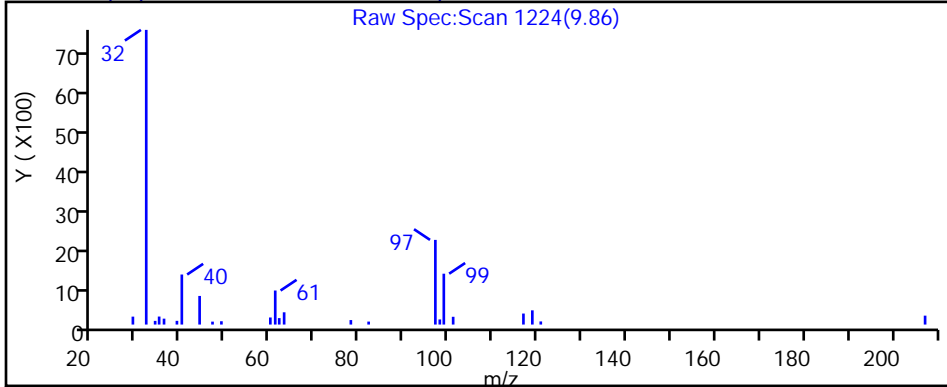
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P103.D

Injection Date: 25-Feb-2019 19:13:30

Instrument ID: MH

Lims ID: 140-14387-A-3

Lab Sample ID: 140-14387-3

Client ID: SV-181-MB-3

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

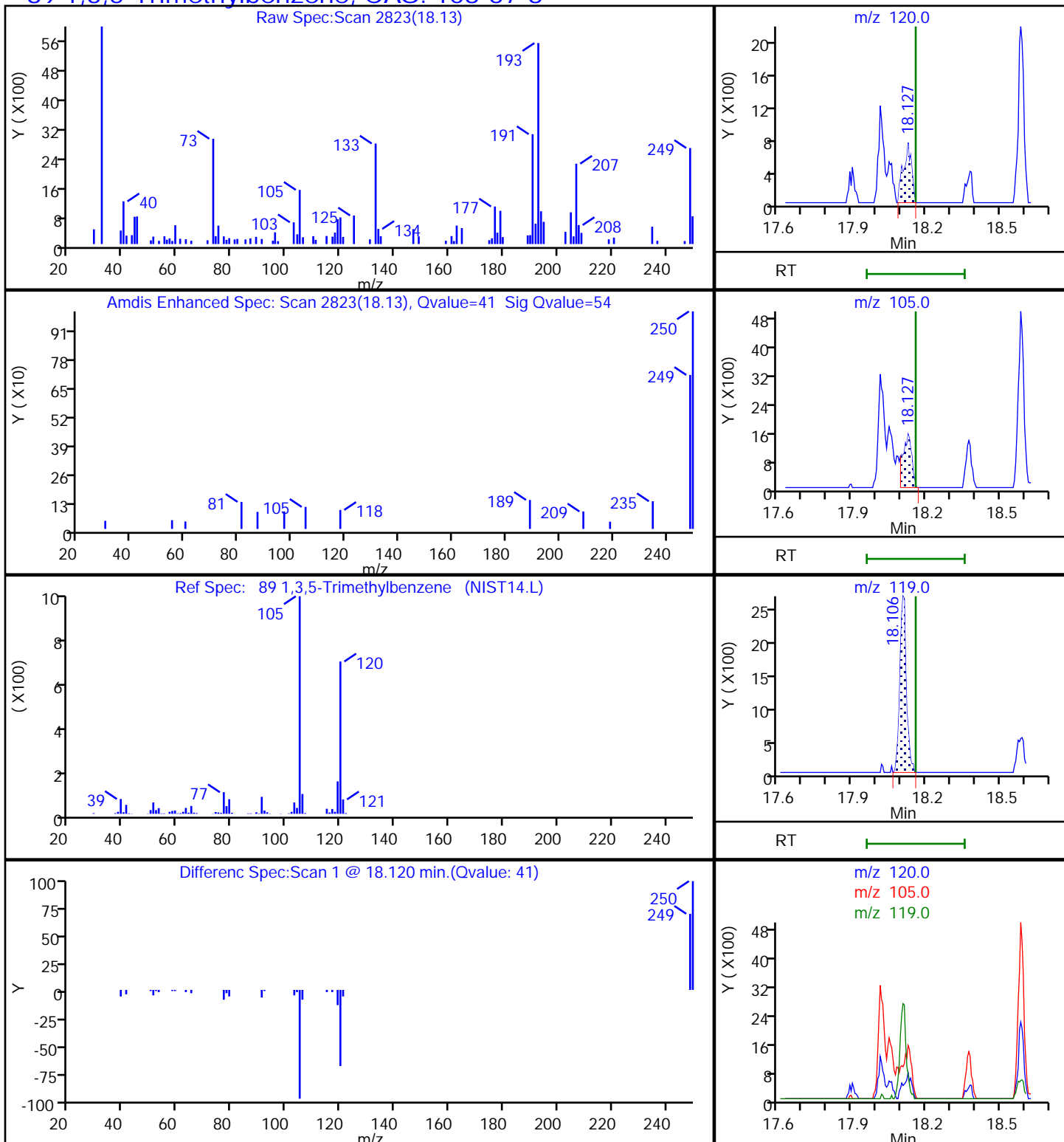
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

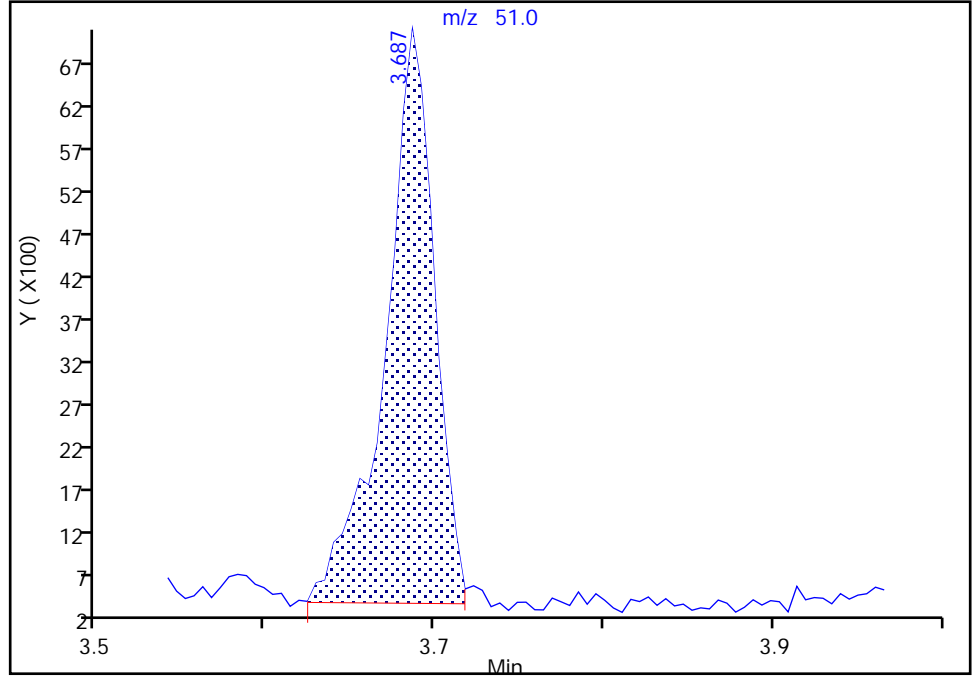
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P103.D
Injection Date: 25-Feb-2019 19:13:30 Instrument ID: MH
Lims ID: 140-14387-A-3 Lab Sample ID: 140-14387-3
Client ID: SV-181-MB-3
Operator ID: HMT ALS Bottle#: 3 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

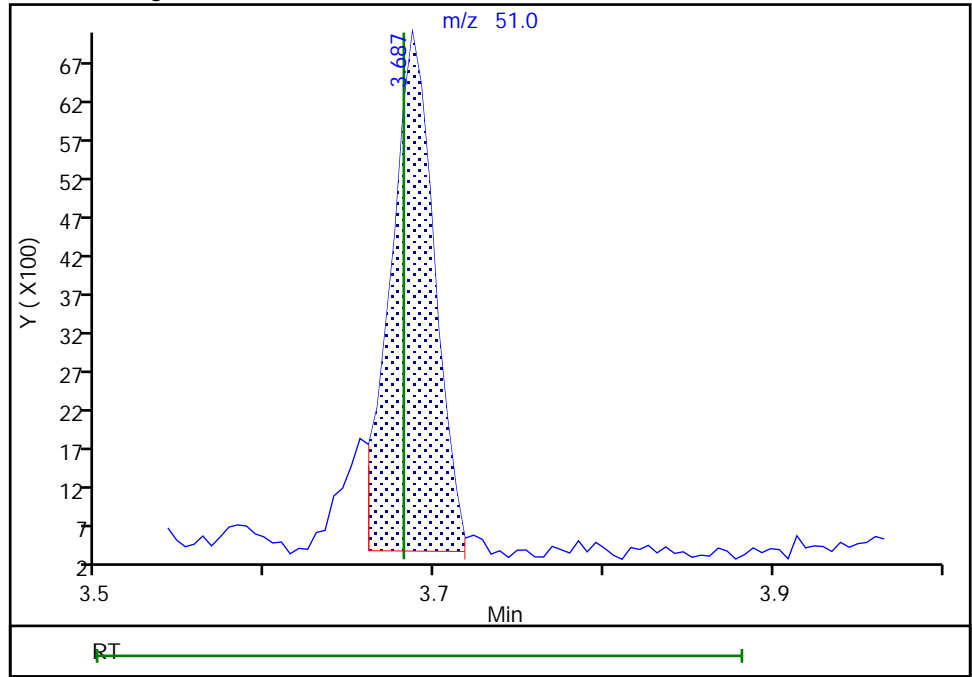
RT: 3.69
Area: 13637
Amount: 0.061737
Amount Units: ppb v/v

Processing Integration Results



RT: 3.69
Area: 12214
Amount: 0.055295
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 26-Feb-2019 20:01:22

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

TestAmerica Knoxville

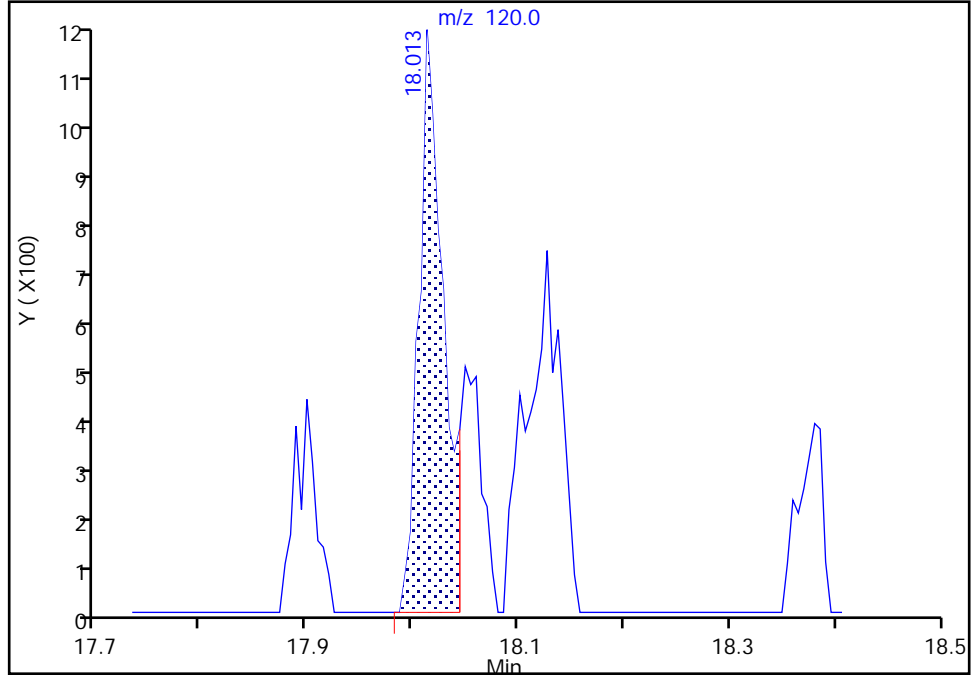
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P103.D
Injection Date: 25-Feb-2019 19:13:30 Instrument ID: MH
Lims ID: 140-14387-A-3 Lab Sample ID: 140-14387-3
Client ID: SV-181-MB-3
Operator ID: HMT ALS Bottle#: 3 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Signal: 1

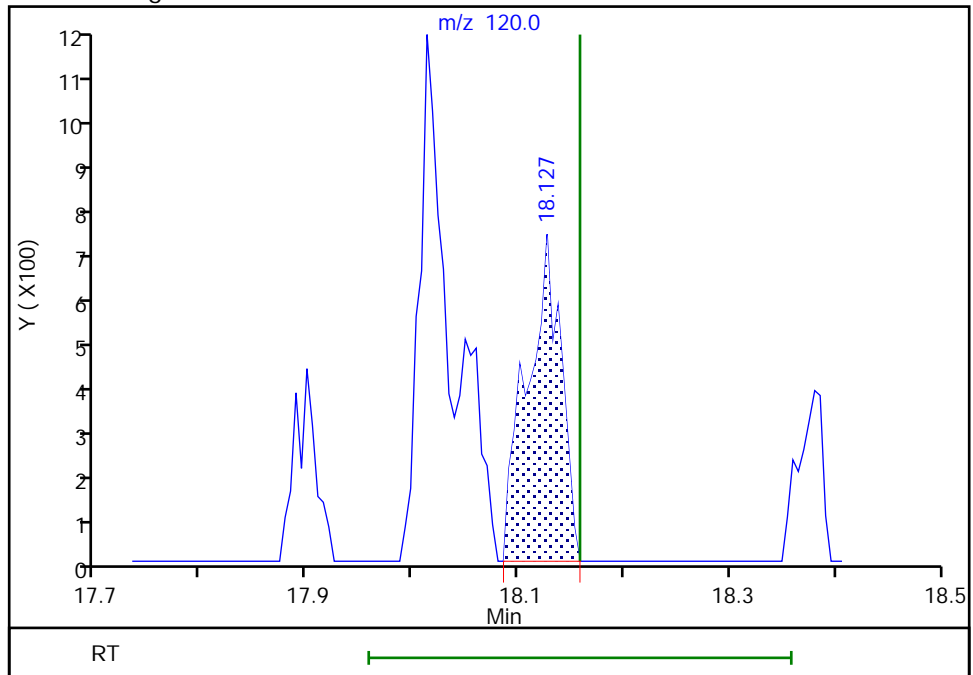
RT: 18.01
Area: 1898
Amount: 0.036132
Amount Units: ppb v/v

Processing Integration Results



RT: 18.13
Area: 1617
Amount: 0.034783
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 26-Feb-2019 20:01:47
Audit Action: Assigned Compound ID

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-182-MB-3 Lab Sample ID: 140-14387-4
 Matrix: Air Lab File ID: HB25P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	250	E	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	34		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.78	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.63		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	16		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.093	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.19	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.27	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-182-MB-3 Lab Sample ID: 140-14387-4
 Matrix: Air Lab File ID: HB25P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1000	E	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	130		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	87		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.50	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.93	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D
 Lims ID: 140-14387-A-4
 Client ID: SV-182-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 20:06:30 ALS Bottle#: 4 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-012
 Misc. Info.: 140-14387-a-4
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Mar-2019 08:55:05 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: khachitpongpanits Date: 04-Mar-2019 08:54:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.834	8.814	0.020	95	265807	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1439853	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1233899	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.404	-0.031	93	810589	4.03	
6 Chlorodifluoromethane	51	3.687	3.690	0.005	97	14729	0.0676	
8 Dichlorodifluoromethane	85	3.744	3.747	0.006	100	30641	0.0915	
27 1,1-Dichloroethene	96	5.925	5.933	0.005	96	695146	6.73	
31 Methylene Chloride	84	6.281	6.286	0.010	99	16865	0.1552	
37 1,1-Dichloroethane	63	7.517	7.519	0.016	100	10252384	50.9	E
45 1,1,1-Trichloroethane	97	9.863	9.876	0.010	97	702935	3.20	
47 Benzene	78	10.463	10.457	0.011	99	10244	0.0336	
56 Trichloroethene	130	11.713	11.714	0.005	95	2666	0.0186	
65 Toluene	91	13.760	13.764	0.000	92	44384	0.1264	
78 m-Xylene & p-Xylene	91	16.220	16.225	0.000	98	18446	0.0535	
89 1,3,5-Trimethylbenzene	120	18.107	18.107	-0.051	42	2219	0.0377	a
S 121 Xylenes, Total	100				0		0.0535	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

a - User Assigned ID

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D

Injection Date: 25-Feb-2019 20:06:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-4

Lab Sample ID: 140-14387-4

Worklist Smp#: 12

Client ID: SV-182-MB-3

Purge Vol: 500.000 mL

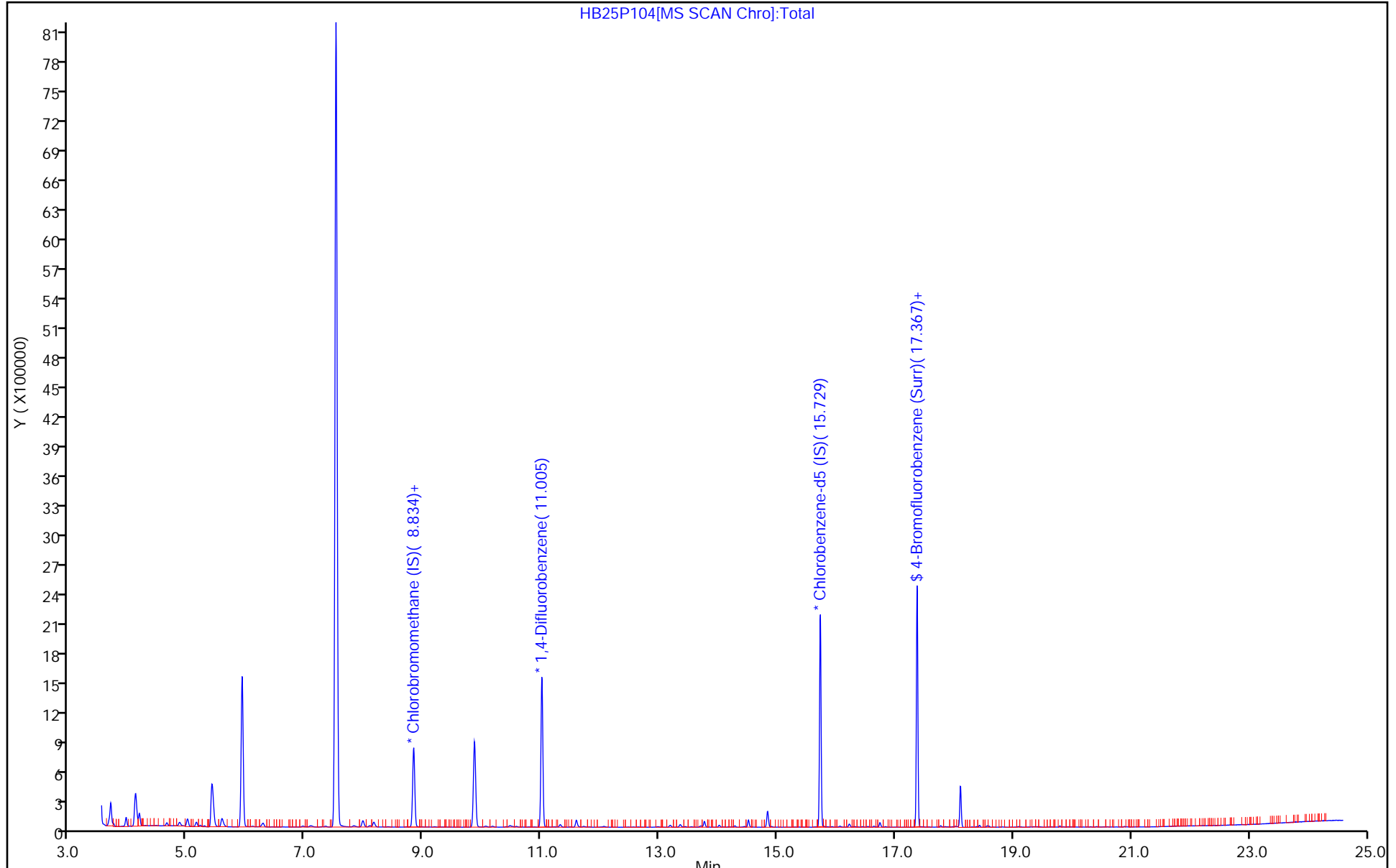
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D
 Lims ID: 140-14387-A-4
 Client ID: SV-182-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 20:06:30 ALS Bottle#: 4 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-012
 Misc. Info.: 140-14387-a-4
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Mar-2019 08:55:05 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: khachitpongpanits Date: 04-Mar-2019 08:54:13

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.03	100.79

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D

Injection Date: 25-Feb-2019 20:06:30

Instrument ID: MH

Lims ID: 140-14387-A-4

Lab Sample ID: 140-14387-4

Client ID: SV-182-MB-3

Operator ID: HMT

ALS Bottle#: 4 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

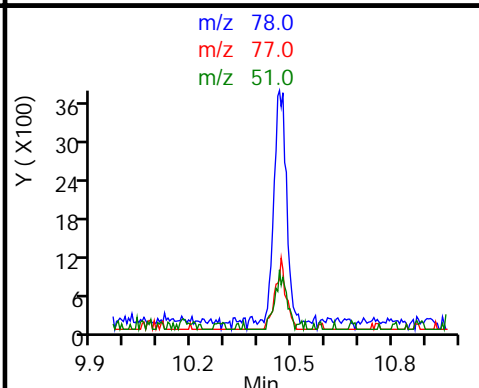
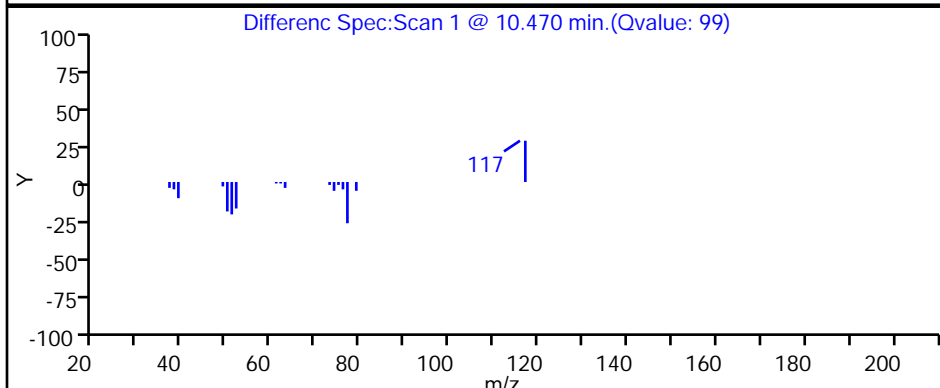
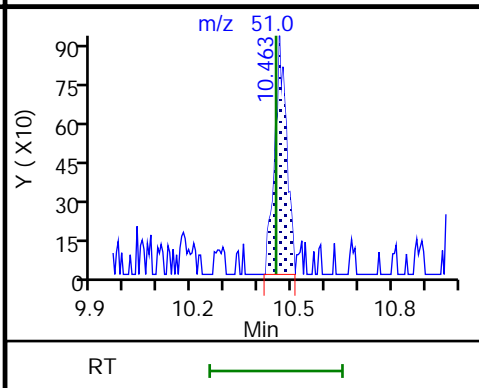
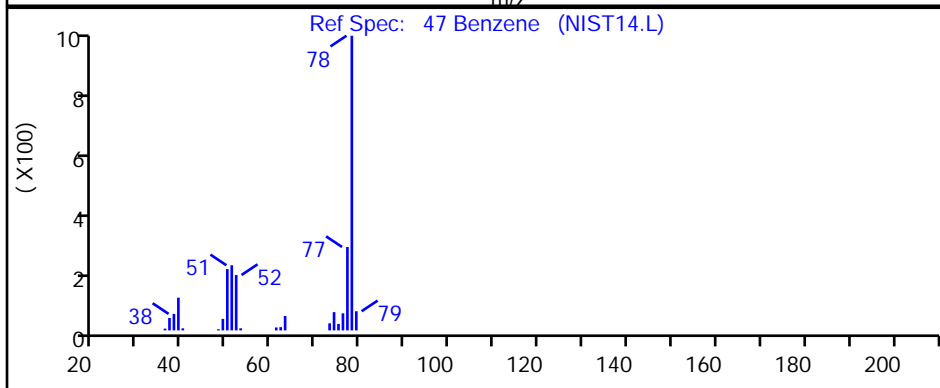
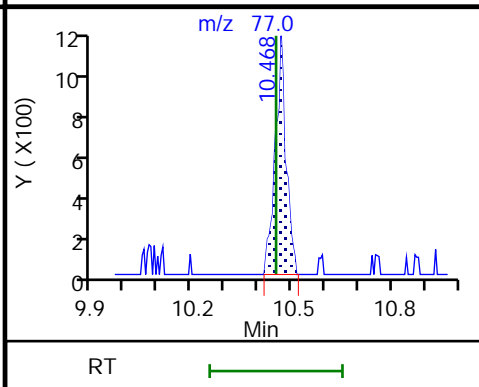
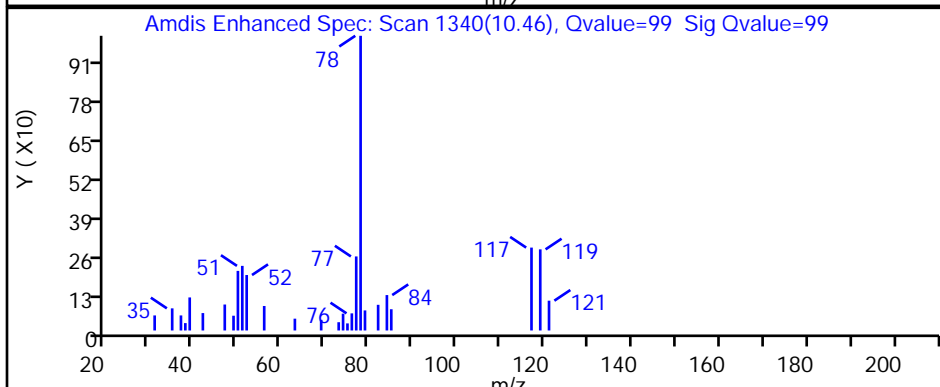
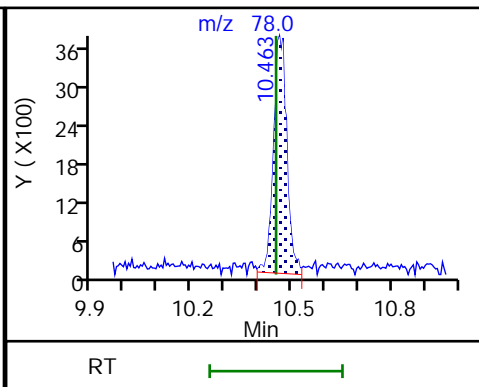
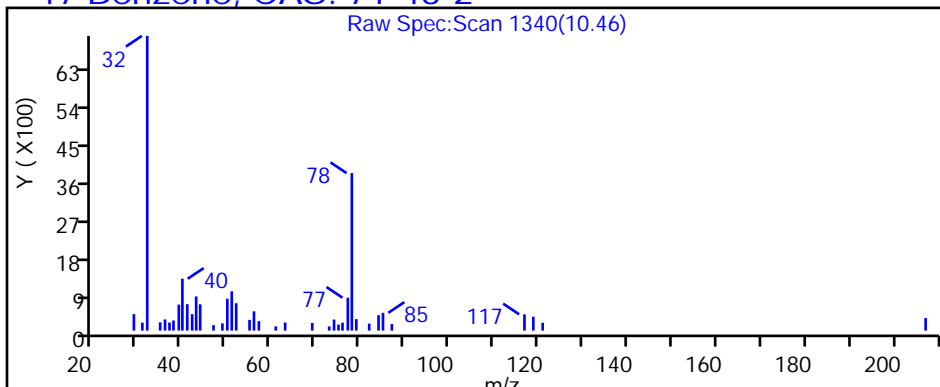
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D

Injection Date: 25-Feb-2019 20:06:30

Instrument ID: MH

Lims ID: 140-14387-A-4

Lab Sample ID: 140-14387-4

Client ID: SV-182-MB-3

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

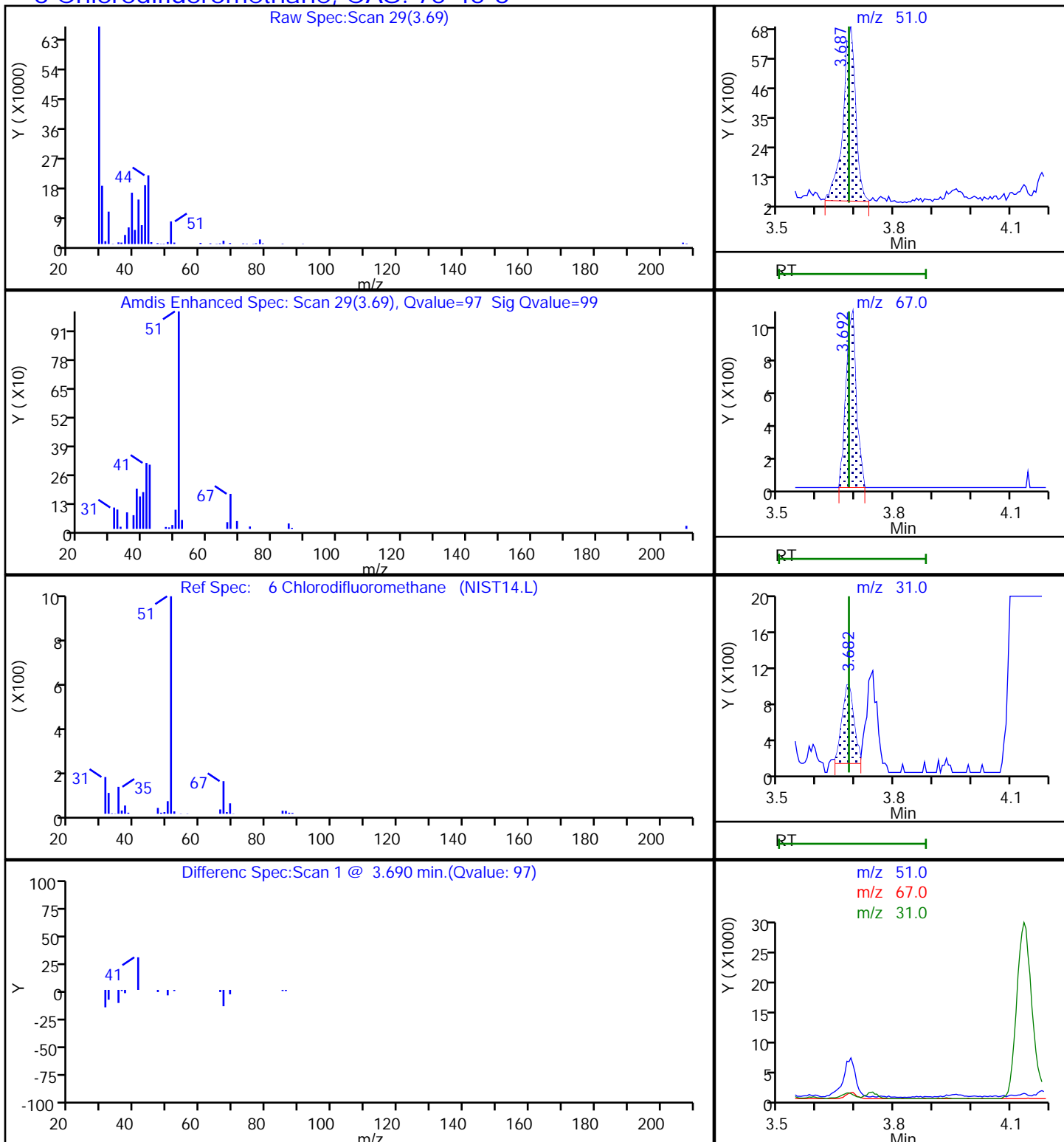
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D

Injection Date: 25-Feb-2019 20:06:30

Instrument ID: MH

Lims ID: 140-14387-A-4

Lab Sample ID: 140-14387-4

Client ID: SV-182-MB-3

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

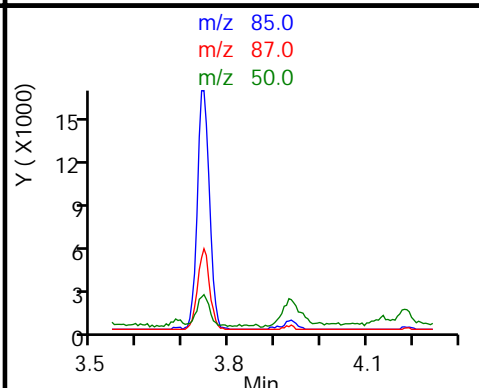
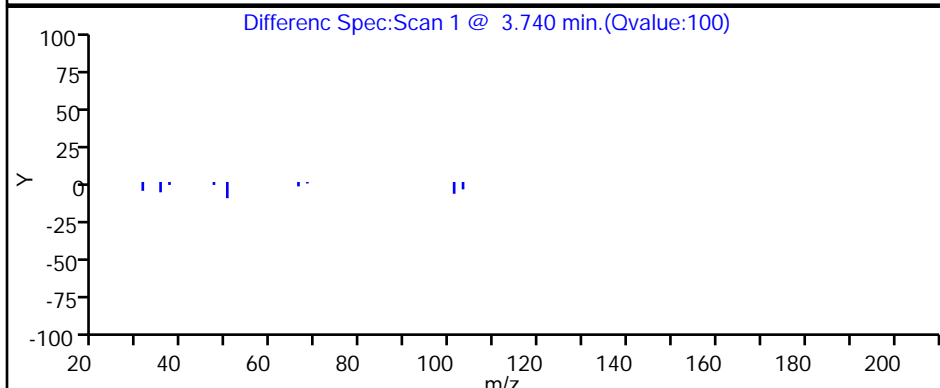
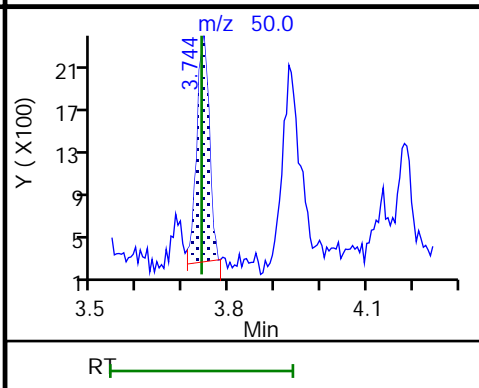
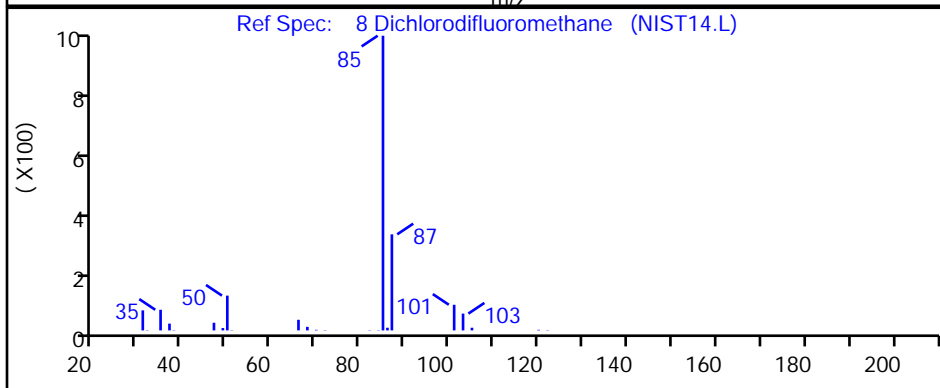
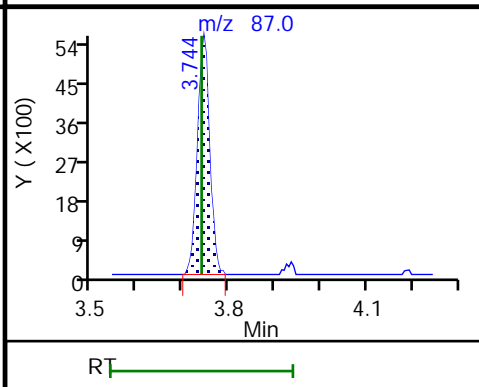
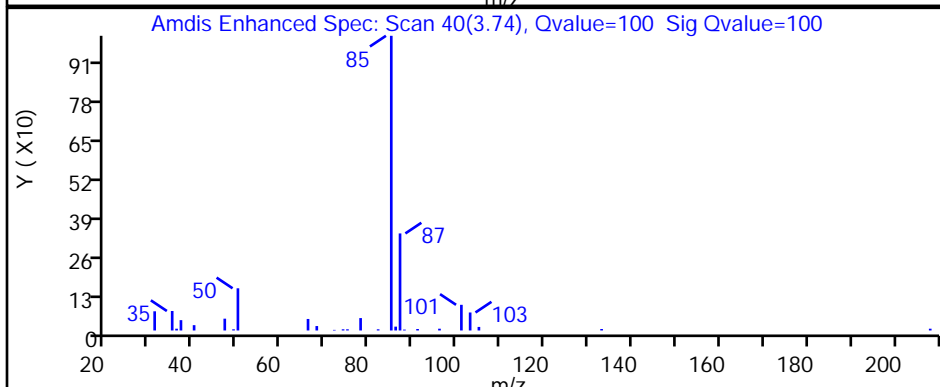
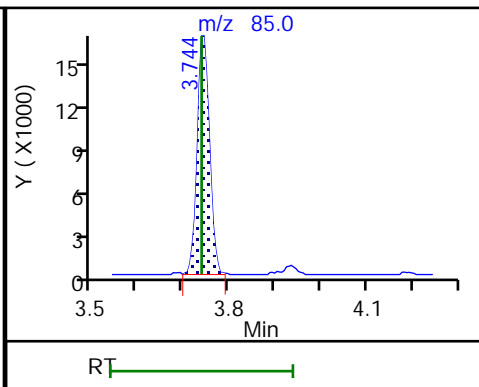
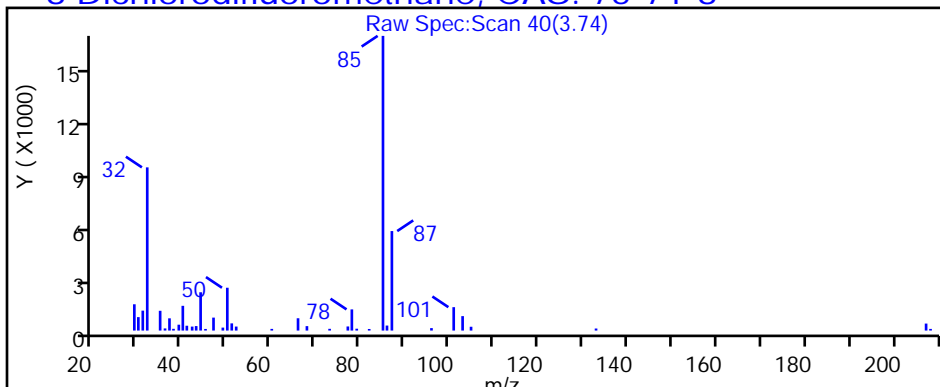
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D

Injection Date: 25-Feb-2019 20:06:30

Instrument ID: MH

Lims ID: 140-14387-A-4

Lab Sample ID: 140-14387-4

Client ID: SV-182-MB-3

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

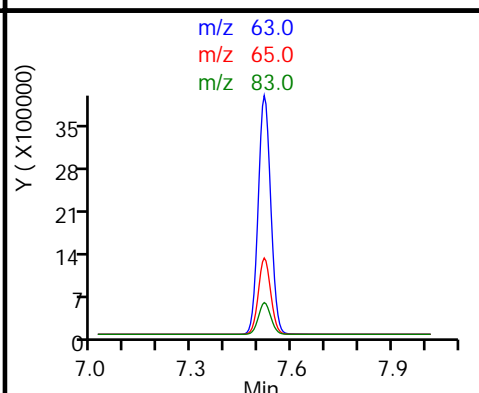
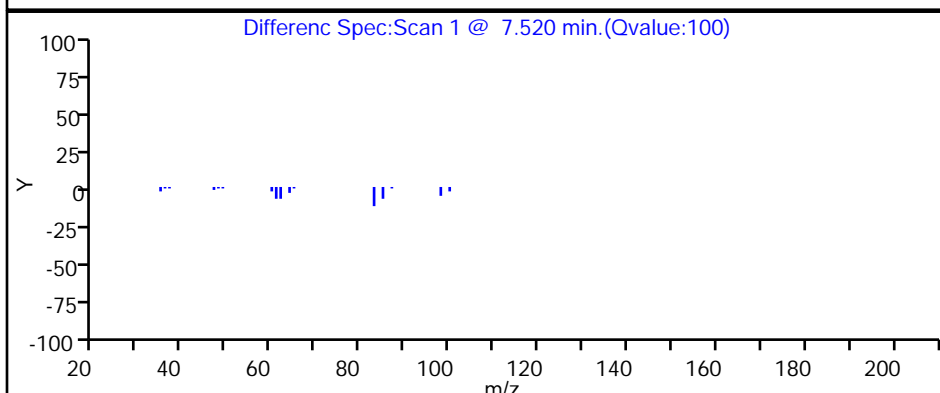
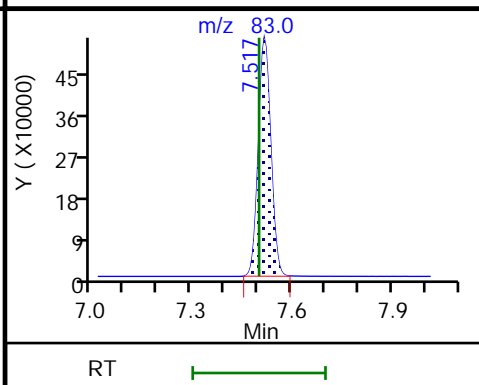
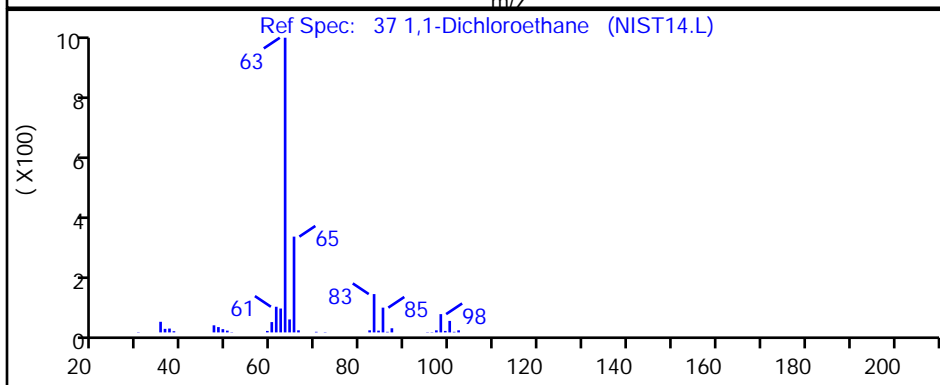
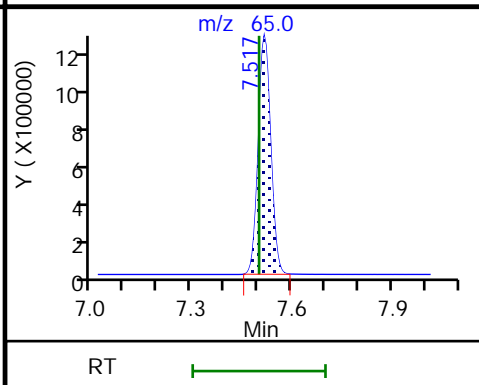
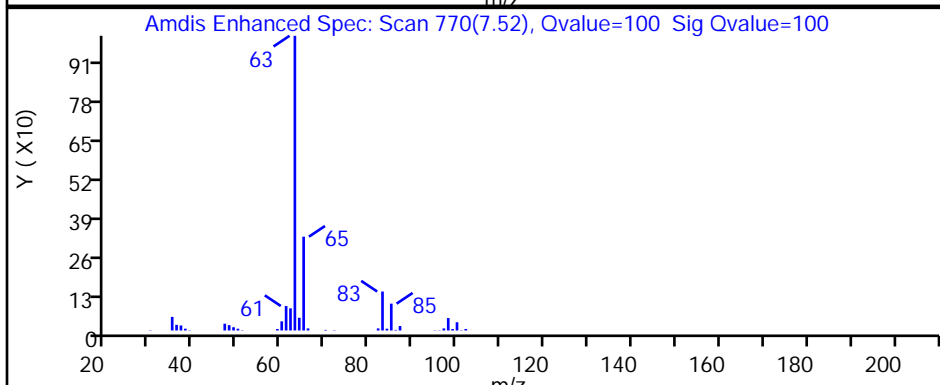
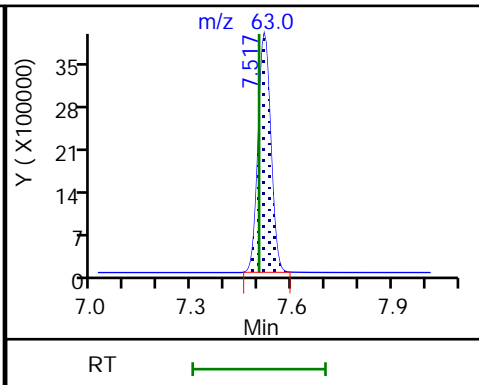
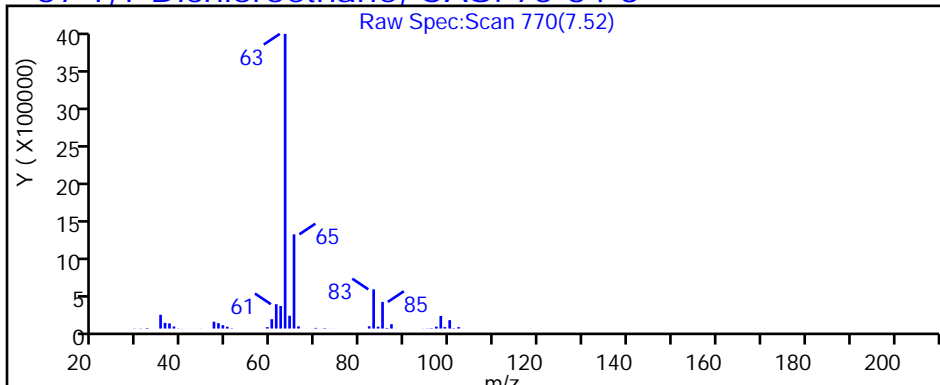
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D

Injection Date: 25-Feb-2019 20:06:30

Instrument ID: MH

Lims ID: 140-14387-A-4

Lab Sample ID: 140-14387-4

Client ID: SV-182-MB-3

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

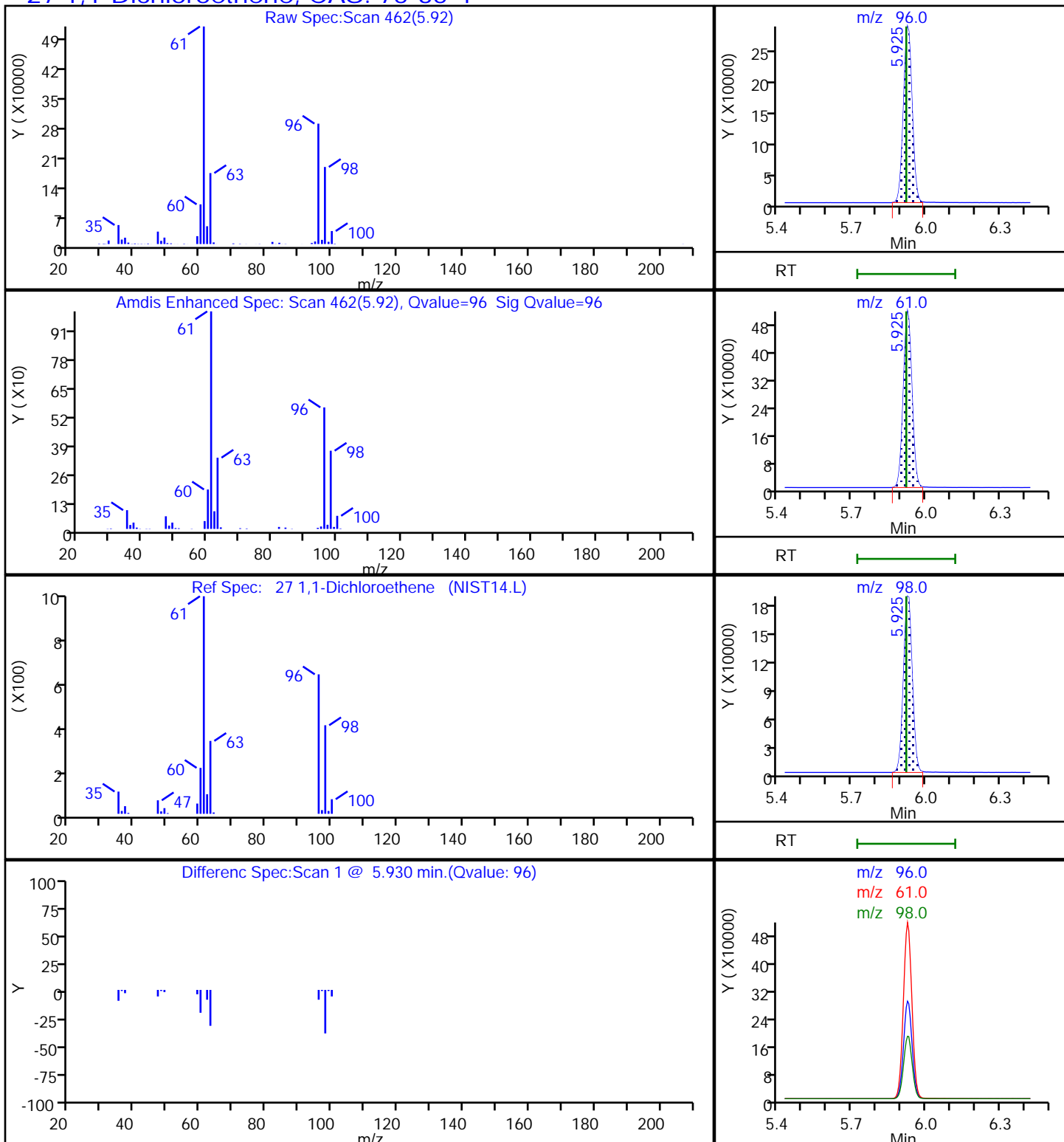
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D

Injection Date: 25-Feb-2019 20:06:30

Instrument ID: MH

Lims ID: 140-14387-A-4

Lab Sample ID: 140-14387-4

Client ID: SV-182-MB-3

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

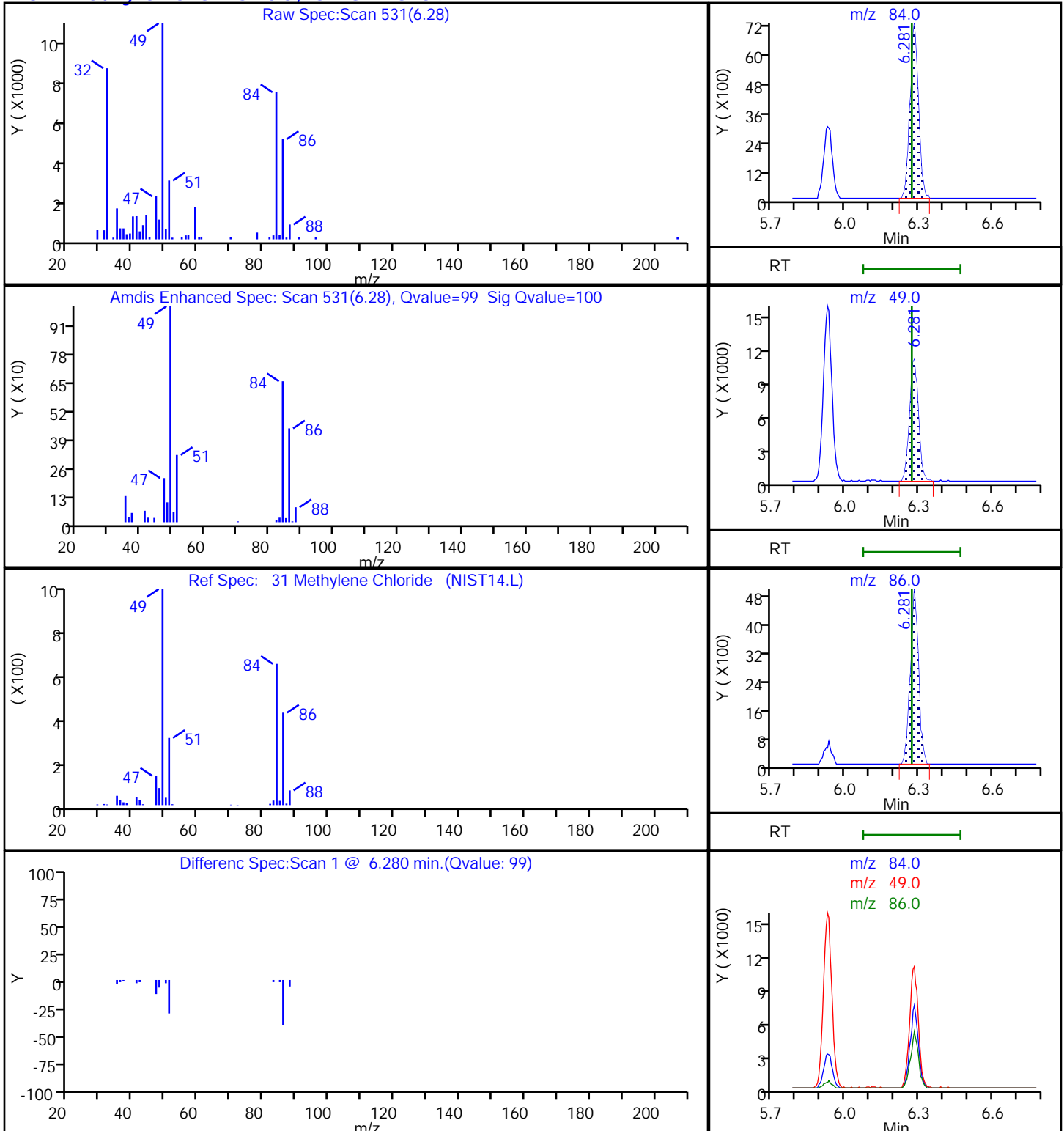
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D

Injection Date: 25-Feb-2019 20:06:30

Instrument ID: MH

Lims ID: 140-14387-A-4

Lab Sample ID: 140-14387-4

Client ID: SV-182-MB-3

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

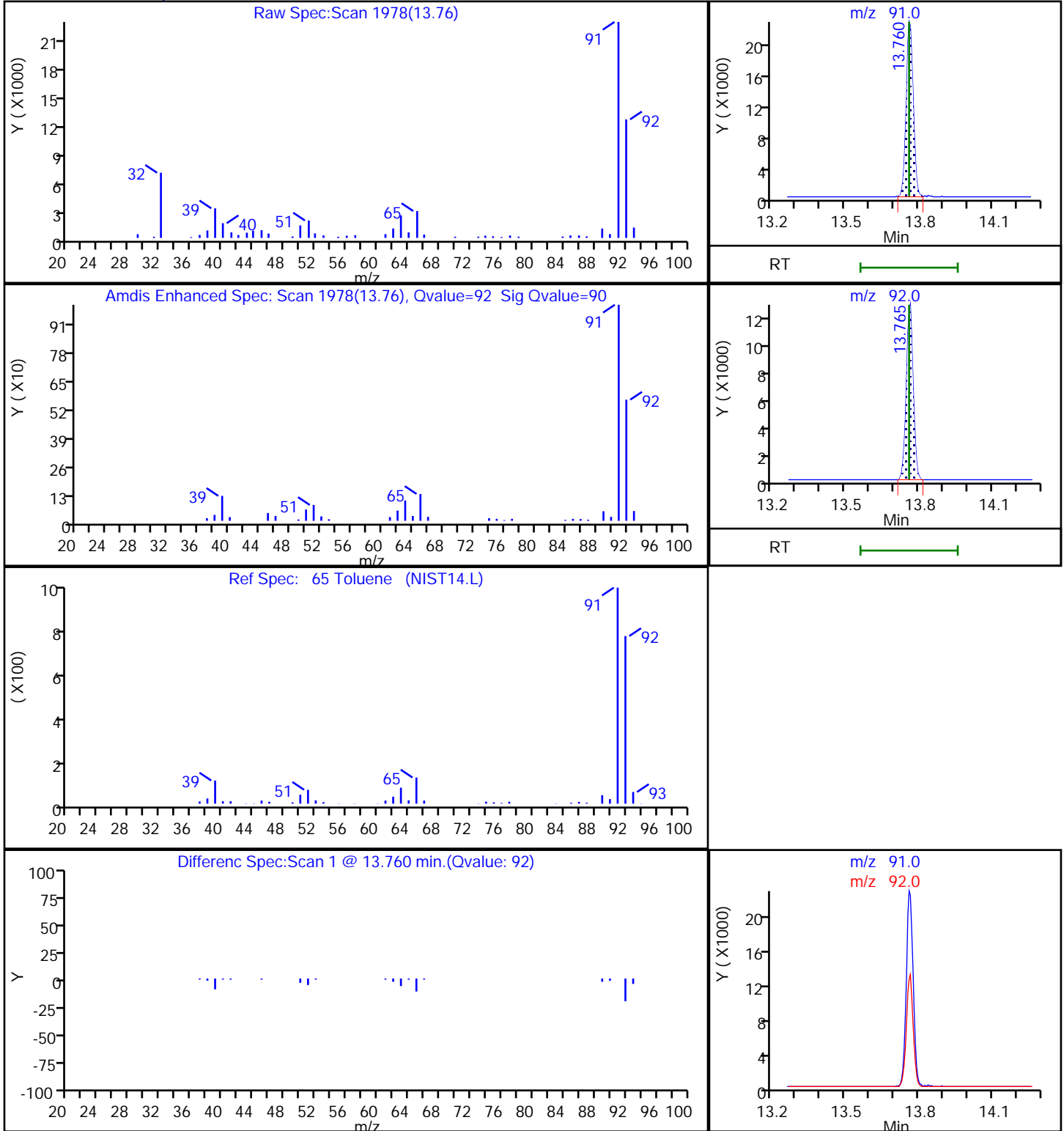
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D

Injection Date: 25-Feb-2019 20:06:30

Instrument ID: MH

Lims ID: 140-14387-A-4

Lab Sample ID: 140-14387-4

Client ID: SV-182-MB-3

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

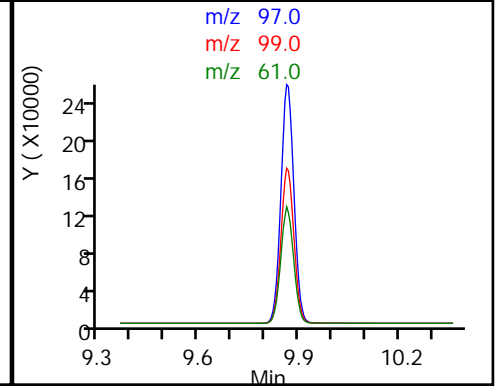
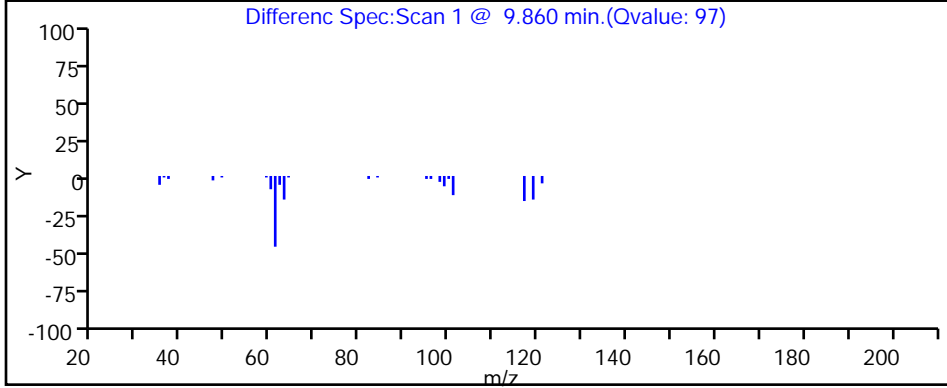
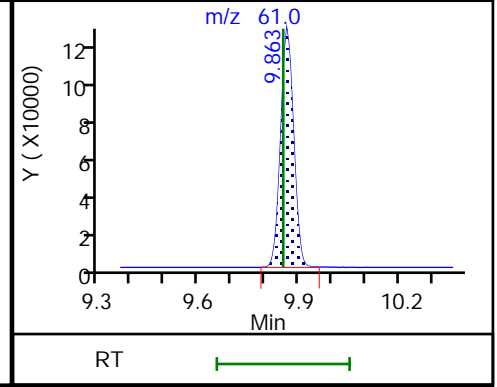
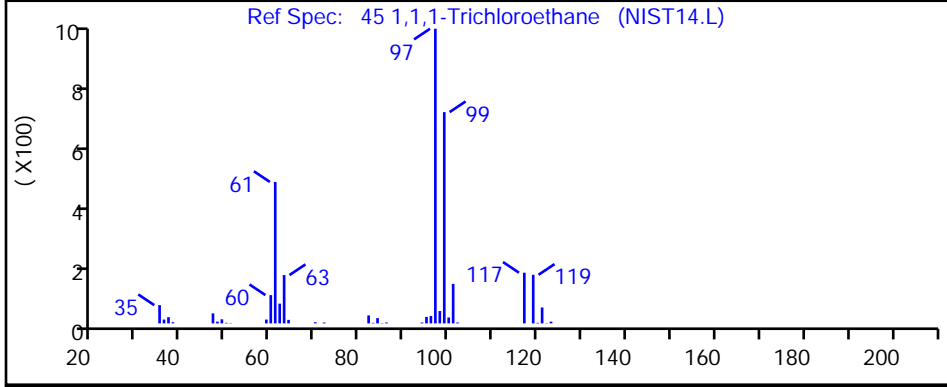
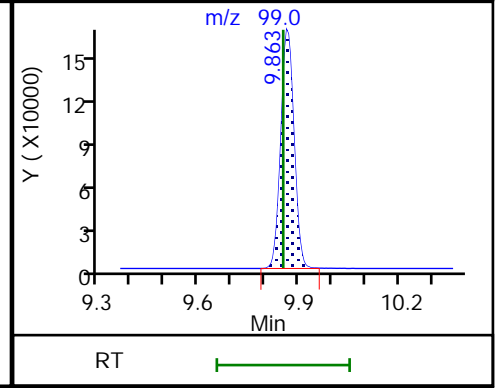
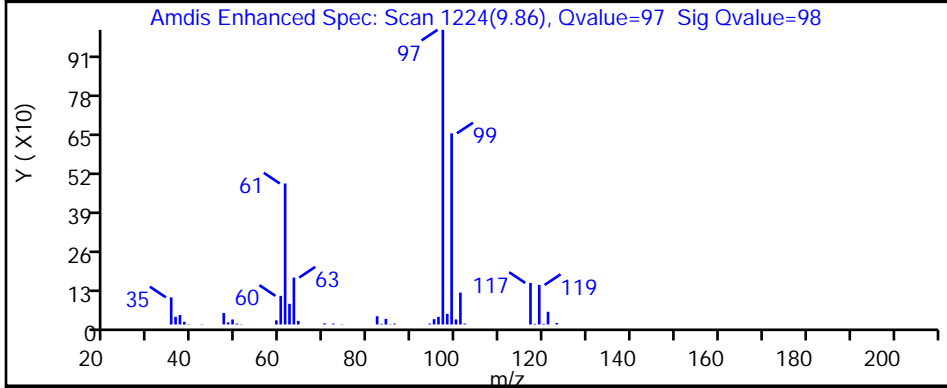
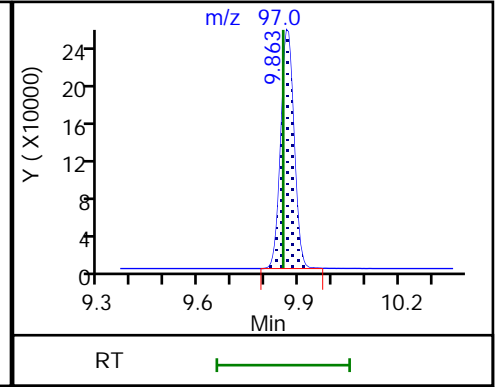
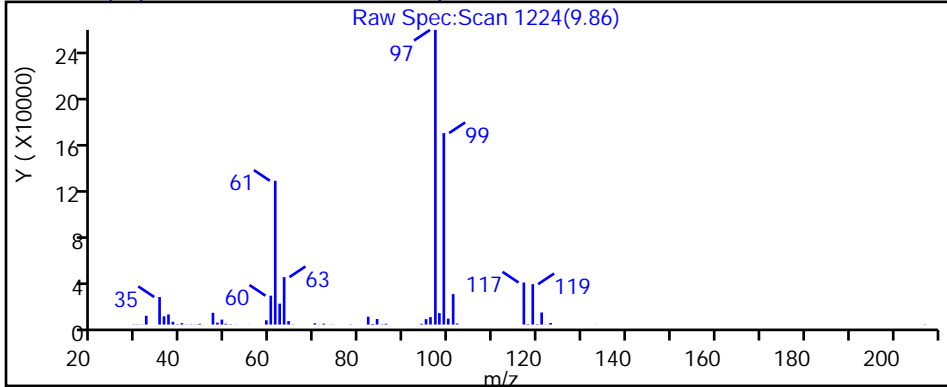
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D

Injection Date: 25-Feb-2019 20:06:30

Instrument ID: MH

Lims ID: 140-14387-A-4

Lab Sample ID: 140-14387-4

Client ID: SV-182-MB-3

Operator ID: HMT

ALS Bottle#: 4 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

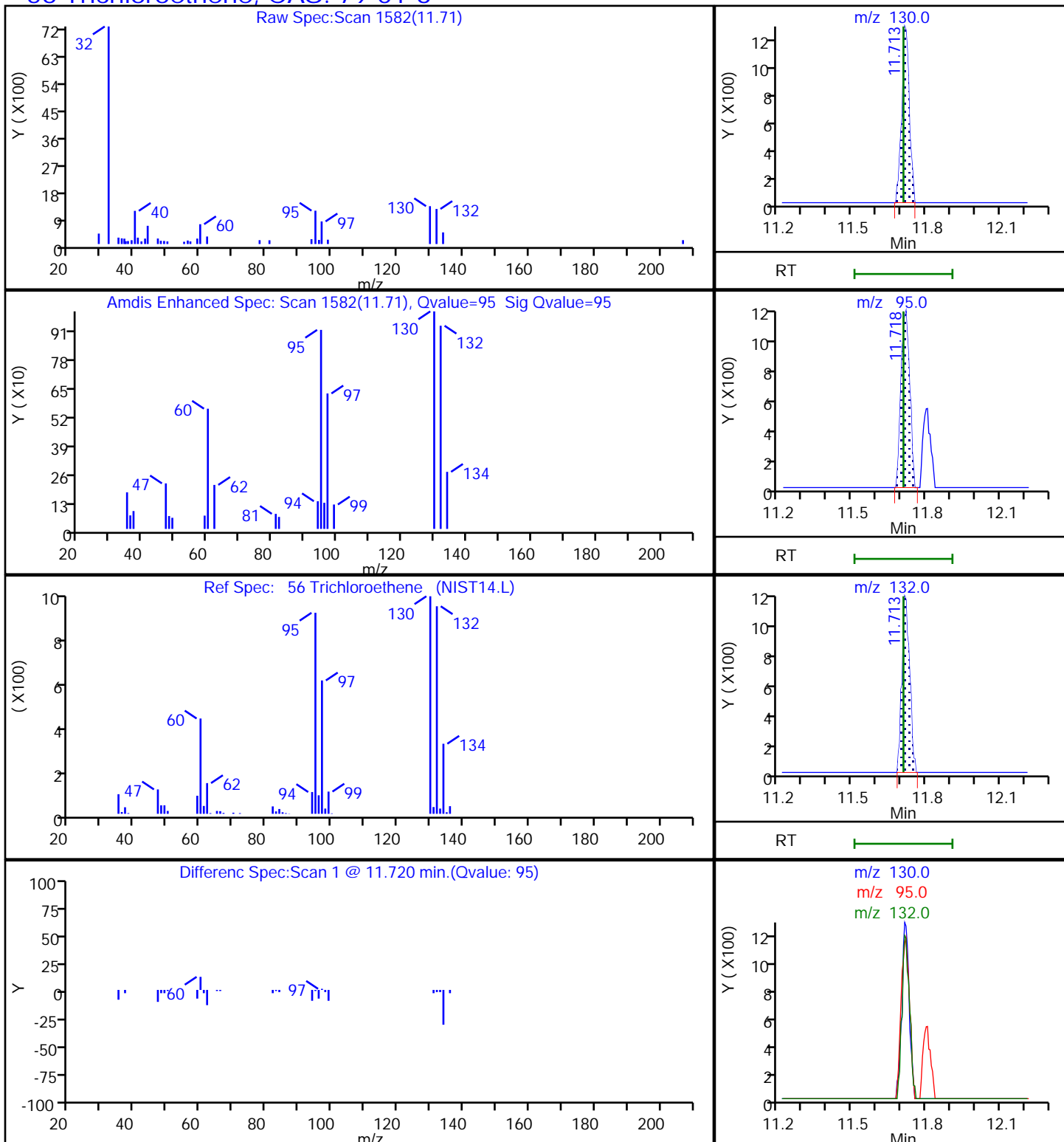
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D

Injection Date: 25-Feb-2019 20:06:30

Instrument ID: MH

Lims ID: 140-14387-A-4

Lab Sample ID: 140-14387-4

Client ID: SV-182-MB-3

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

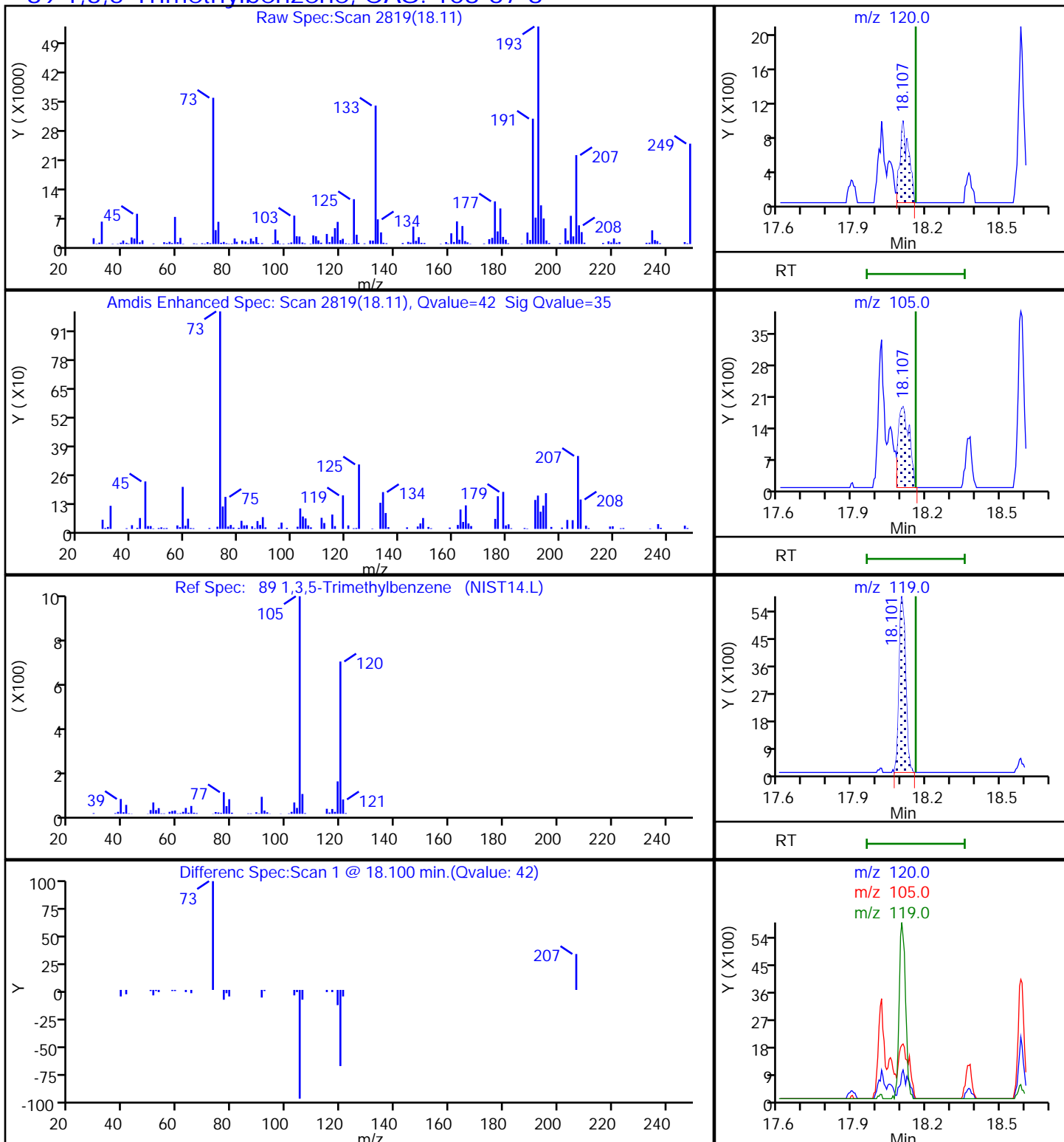
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D

Injection Date: 25-Feb-2019 20:06:30

Instrument ID: MH

Lims ID: 140-14387-A-4

Lab Sample ID: 140-14387-4

Client ID: SV-182-MB-3

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

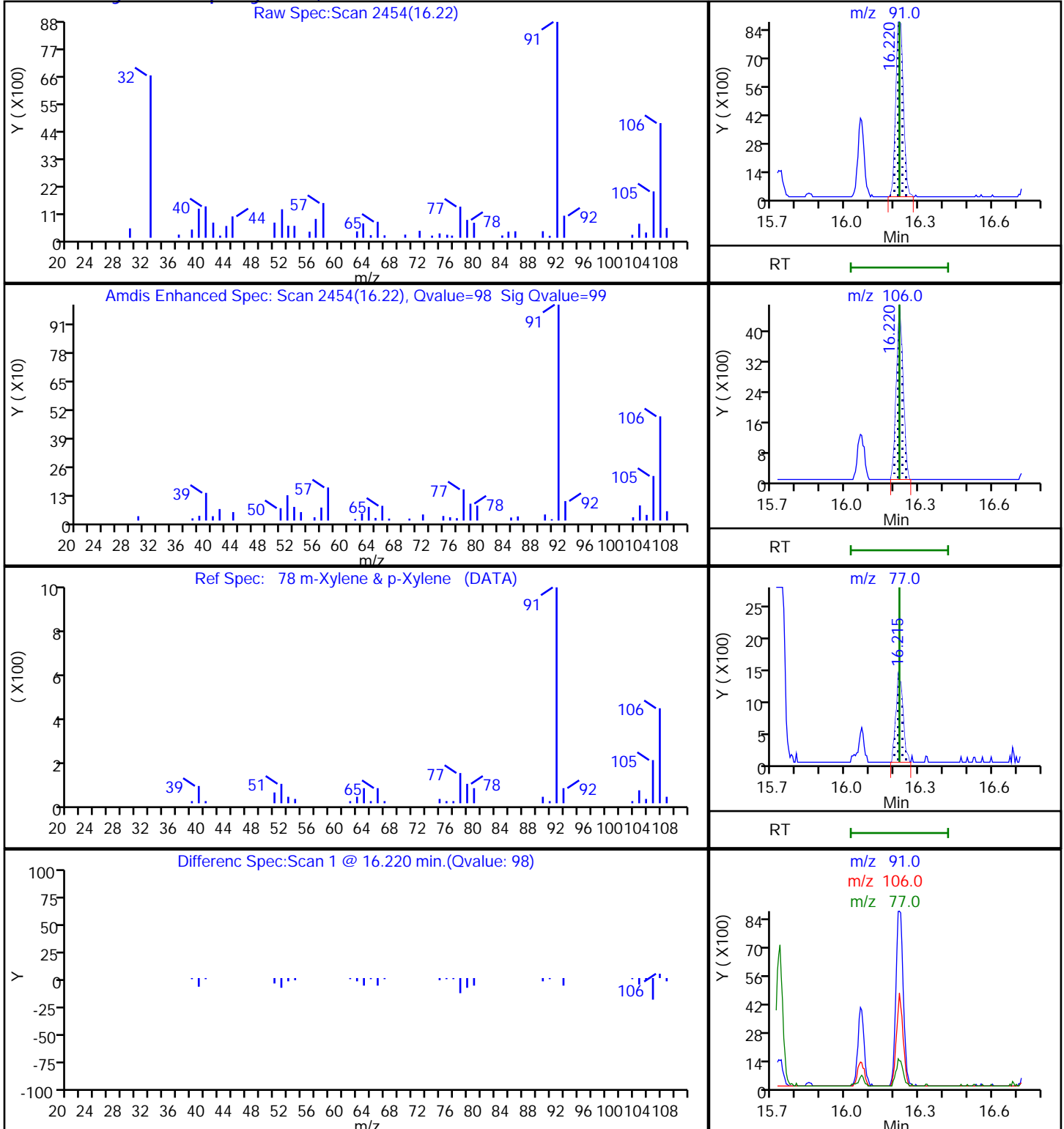
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

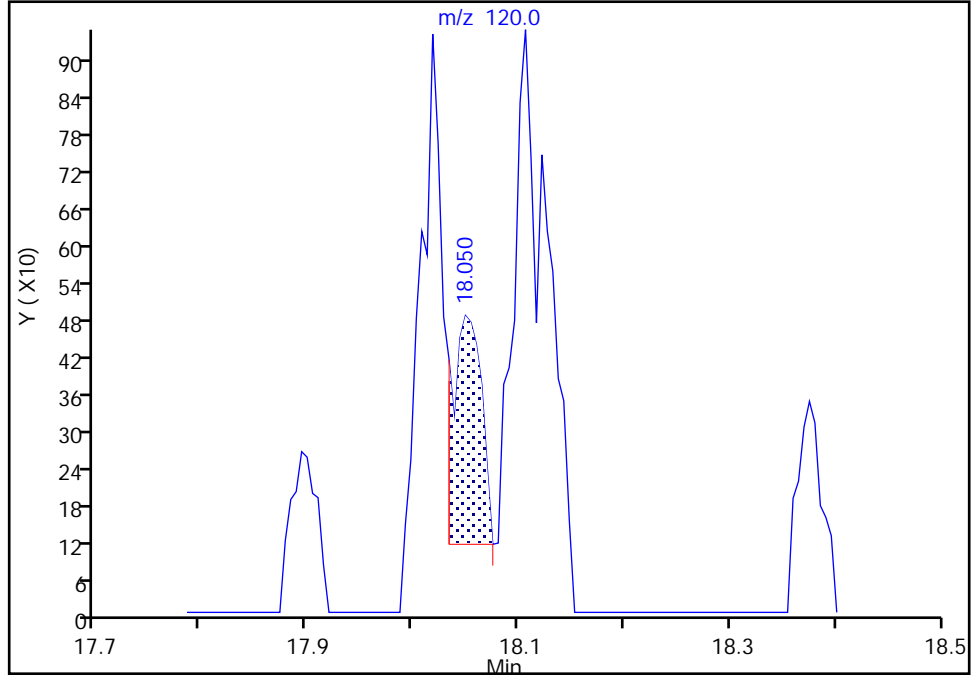
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P104.D
Injection Date: 25-Feb-2019 20:06:30 Instrument ID: MH
Lims ID: 140-14387-A-4 Lab Sample ID: 140-14387-4
Client ID: SV-182-MB-3
Operator ID: HMT ALS Bottle#: 4 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Signal: 1

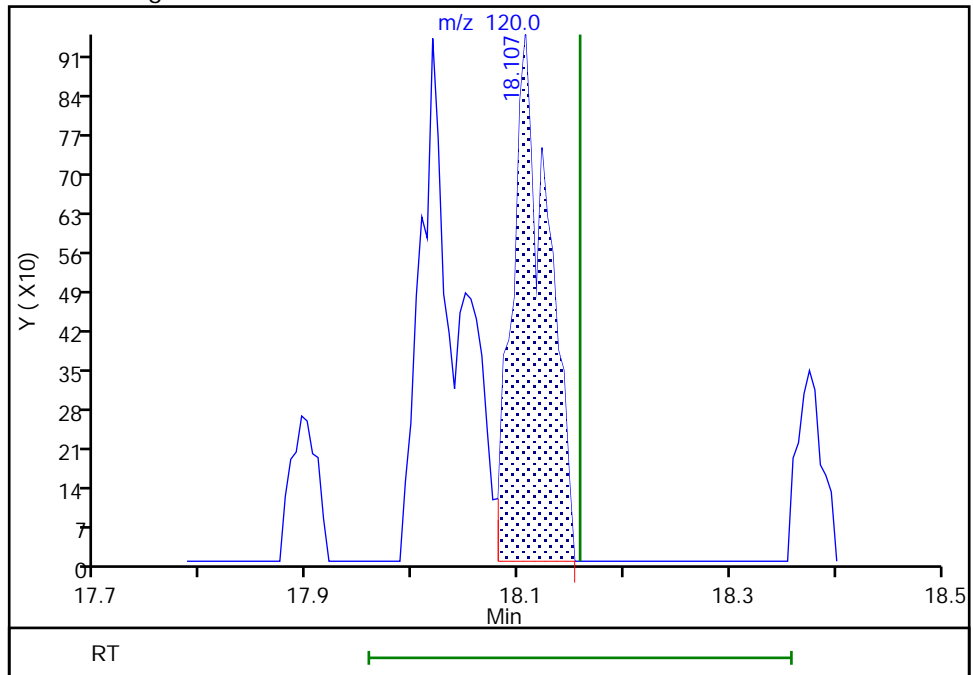
RT: 18.05
Area: 708
Amount: 0.030422
Amount Units: ppb v/v

Processing Integration Results



RT: 18.11
Area: 2219
Amount: 0.037685
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 04-Mar-2019 08:54:31
Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-182-MB-3 DL Lab Sample ID: 140-14387-4 DL
 Matrix: Air Lab File ID: GB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:55
 Sample wt/vol: 11 (mL) Date Analyzed: 02/26/2019 18:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	170		3.6	0.45

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-182-MB-3 DL Lab Sample ID: 140-14387-4 DL
 Matrix: Air Lab File ID: GB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:55
 Sample wt/vol: 11 (mL) Date Analyzed: 02/26/2019 18:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	690		15	1.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P104.D
 Lims ID: 140-14387-A-4
 Client ID: SV-182-MB-3
 Sample Type: Client
 Inject. Date: 26-Feb-2019 18:01:30 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-010
 Misc. Info.: 140-14387-a-4
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:29:18 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:29:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.226	9.232	-0.006	98	441997	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.405	-0.005	96	2423864	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2177859	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	84	1709406	3.83	
27 1,1-Dichloroethene	96	6.234	6.225	0.006	95	93488	0.5993	
31 Methylene Chloride	84	6.600	6.595	0.005	97	23722	0.1307	
37 1,1-Dichloroethane	63	7.873	7.874	-0.005	100	1205742	3.76	
47 1,1,1-Trichloroethane	97	10.283	10.283	0.000	96	97580	0.2439	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P104.D

Injection Date: 26-Feb-2019 18:01:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14387-A-4

Lab Sample ID: 140-14387-4

Worklist Smp#: 10

Client ID: SV-182-MB-3

Purge Vol: 500.000 mL

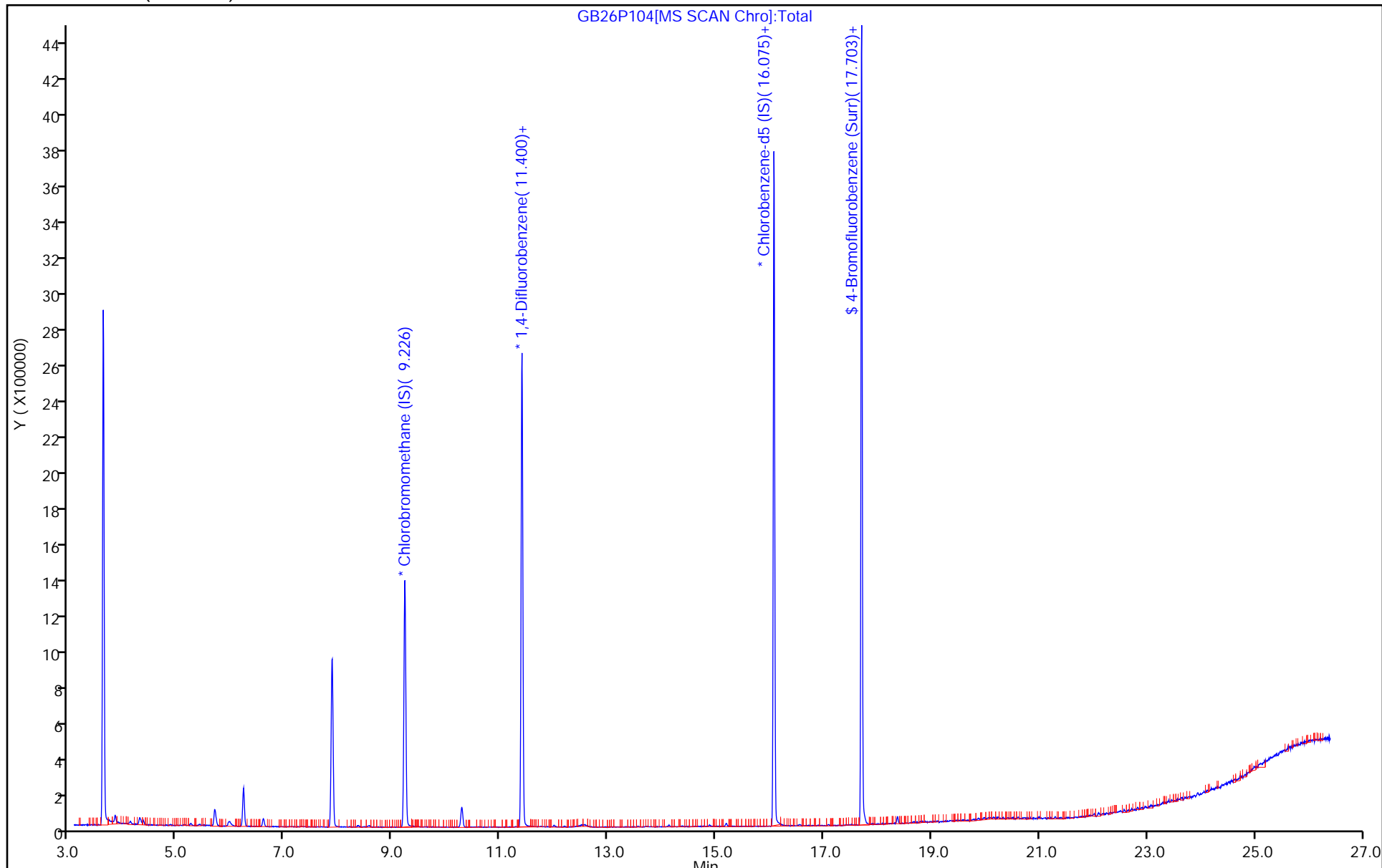
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P104.D
 Lims ID: 140-14387-A-4
 Client ID: SV-182-MB-3
 Sample Type: Client
 Inject. Date: 26-Feb-2019 18:01:30 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-010
 Misc. Info.: 140-14387-a-4
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:29:18 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:29:37

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.83	95.76

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P104.D

Injection Date: 26-Feb-2019 18:01:30

Instrument ID: MG

Lims ID: 140-14387-A-4

Lab Sample ID: 140-14387-4

Client ID: SV-182-MB-3

Operator ID: 7126

ALS Bottle#: 4 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

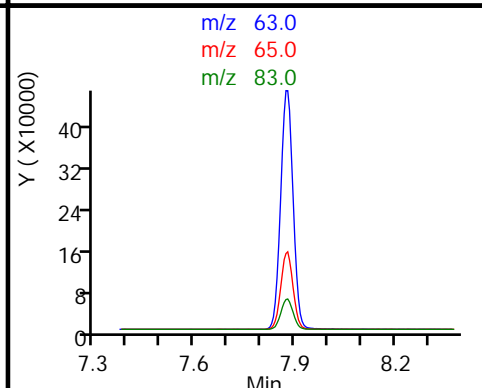
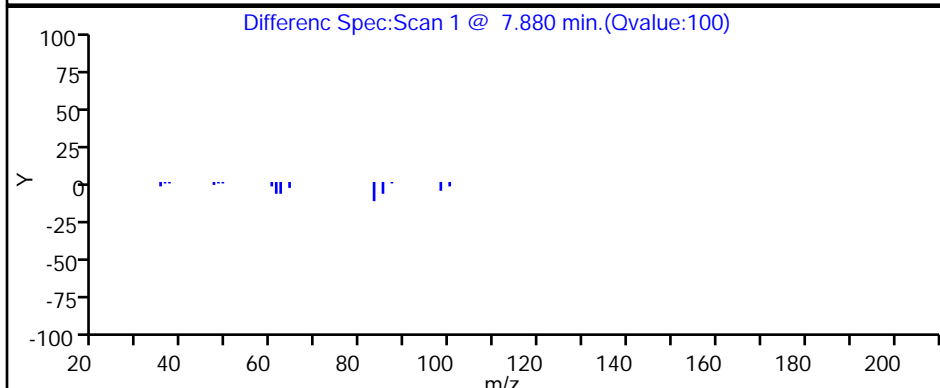
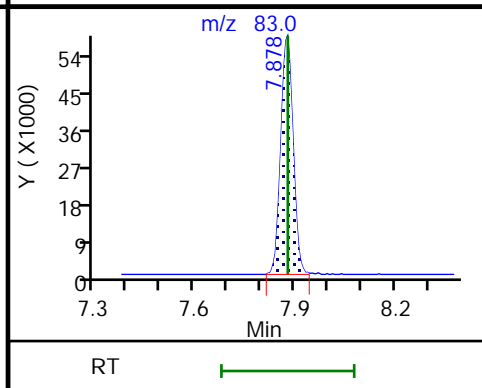
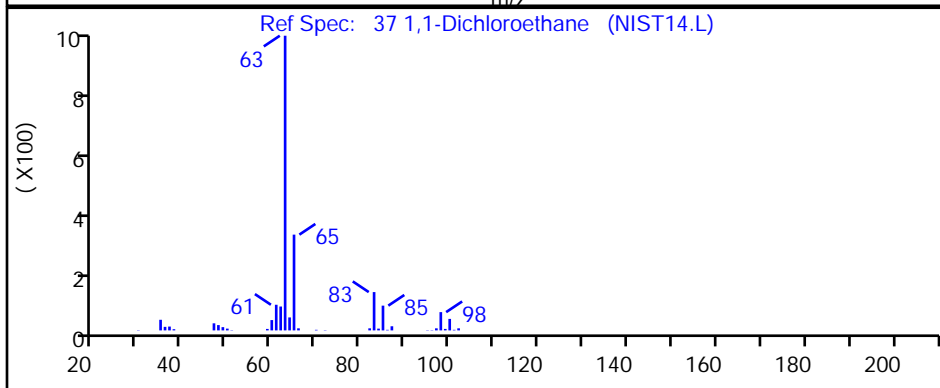
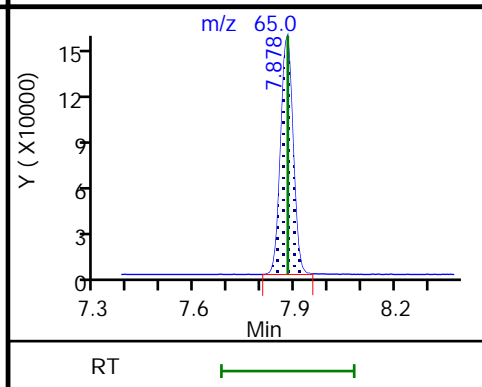
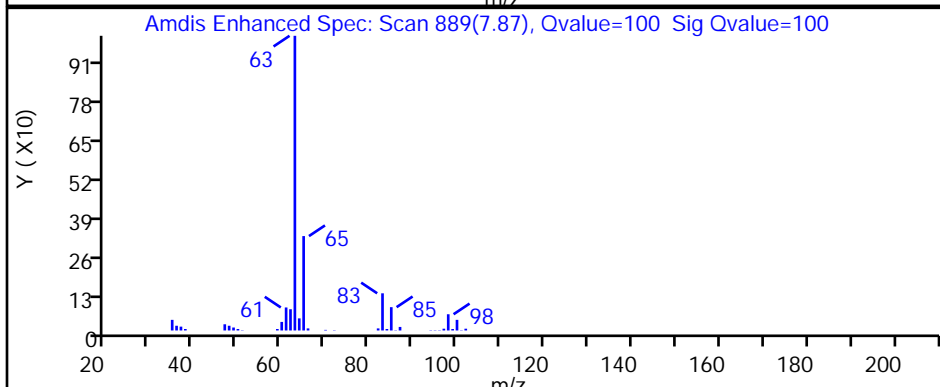
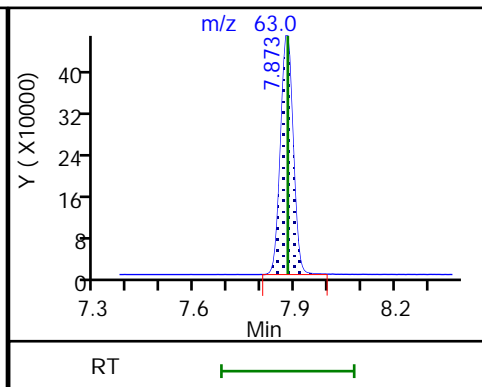
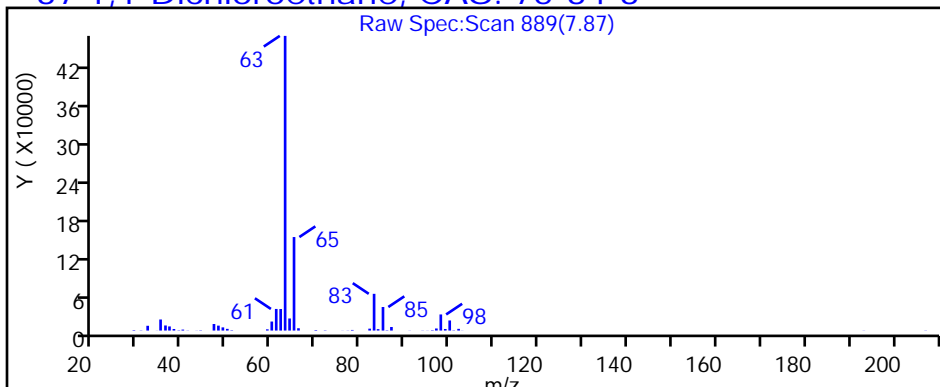
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-183-MB-3 Lab Sample ID: 140-14387-5
 Matrix: Air Lab File ID: HB25P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:58
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.35	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	170	E	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethane	96.94	22		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	8.5		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.082	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.19	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-183-MB-3 Lab Sample ID: 140-14387-5
 Matrix: Air Lab File ID: HB25P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:58
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	690	E	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	89		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	46		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.44	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.95	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P105.D
 Lims ID: 140-14387-A-5
 Client ID: SV-183-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 20:59:30 ALS Bottle#: 5 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-013
 Misc. Info.: 140-14387-a-5
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Mar-2019 08:56:29 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:08:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.834	8.814	0.020	96	261667	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1424772	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1221074	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.404	-0.031	93	802495	4.03	
6 Chlorodifluoromethane	51	3.681	3.681	-0.001	61	14850	0.0692	M
8 Dichlorodifluoromethane	85	3.743	3.747	0.005	99	31626	0.0960	
27 1,1-Dichloroethene	96	5.925	5.933	0.005	96	456983	4.50	
31 Methylene Chloride	84	6.281	6.286	0.010	98	17092	0.1597	
37 1,1-Dichloroethane	63	7.516	7.518	0.015	100	6738910	34.0	E
45 1,1,1-Trichloroethane	97	9.863	9.876	0.010	97	368467	1.70	
47 Benzene	78	10.468	10.457	0.016	98	9818	0.0326	
56 Trichloroethene	130	11.718	11.713	0.010	93	2332	0.0164	
65 Toluene	91	13.765	13.764	0.005	92	34751	0.1000	
89 1,3,5-Trimethylbenzene	120	18.106	18.164	-0.052	70	2421	0.0388	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P105.D

Injection Date: 25-Feb-2019 20:59:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-5

Lab Sample ID: 140-14387-5

Worklist Smp#: 13

Client ID: SV-183-MB-3

Purge Vol: 500.000 mL

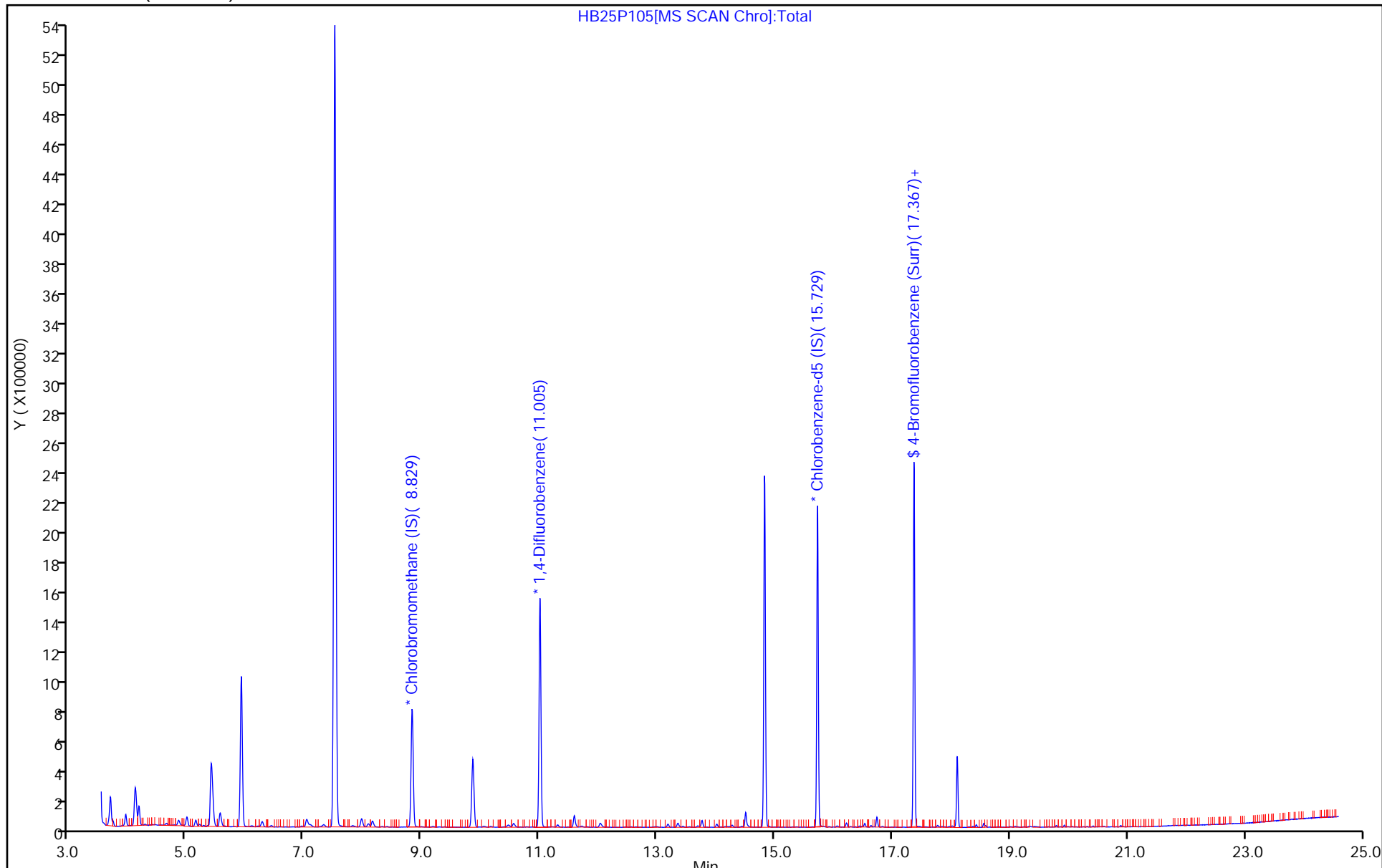
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P105.D
 Lims ID: 140-14387-A-5
 Client ID: SV-183-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 20:59:30 ALS Bottle#: 5 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-013
 Misc. Info.: 140-14387-a-5
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Mar-2019 08:56:29 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:08:20

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.03	100.83

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P105.D

Injection Date: 25-Feb-2019 20:59:30

Instrument ID: MH

Lims ID: 140-14387-A-5

Lab Sample ID: 140-14387-5

Client ID: SV-183-MB-3

Operator ID: HMT

ALS Bottle#: 5 Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

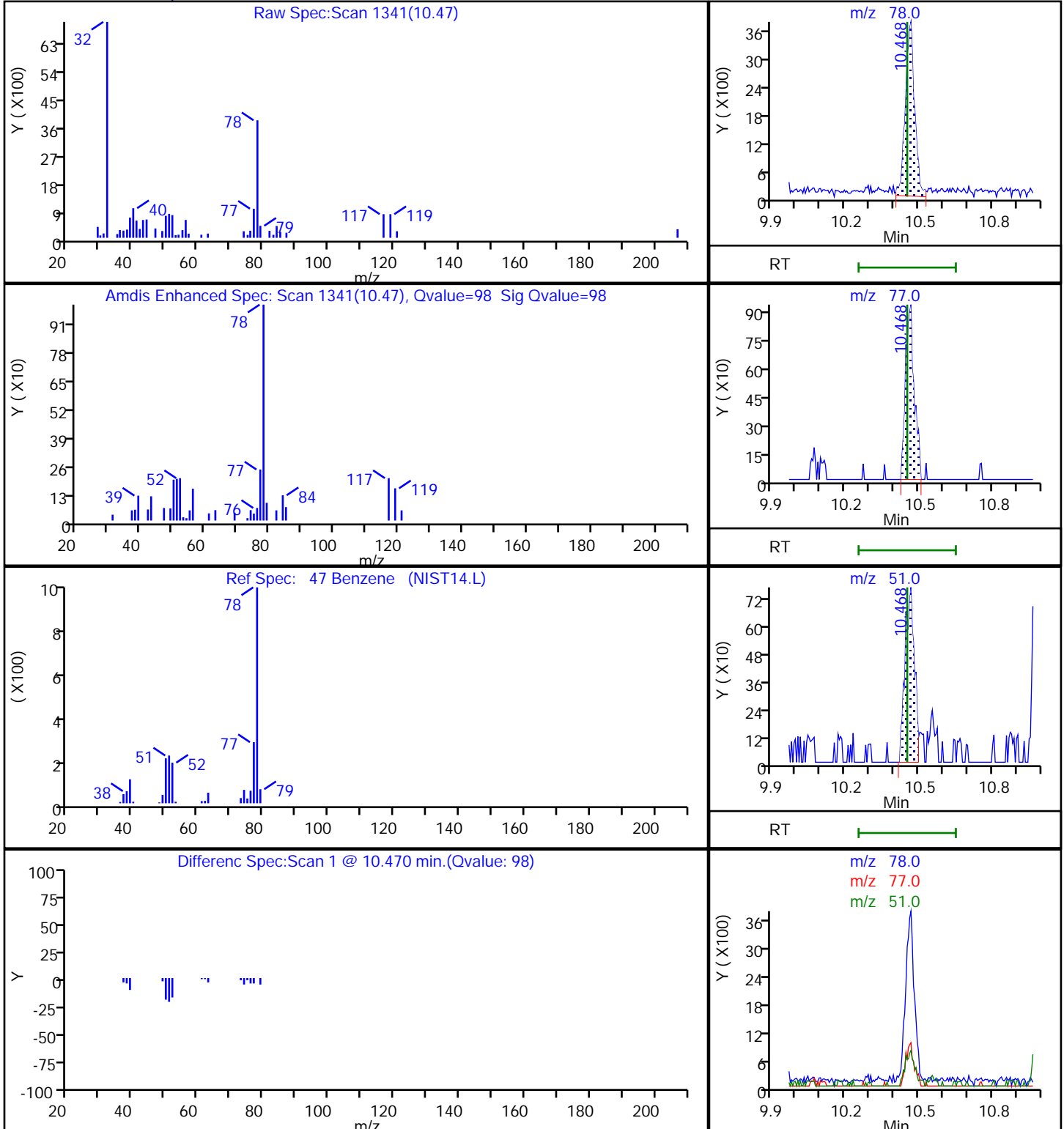
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P105.D

Injection Date: 25-Feb-2019 20:59:30

Instrument ID: MH

Lims ID: 140-14387-A-5

Lab Sample ID: 140-14387-5

Client ID: SV-183-MB-3

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

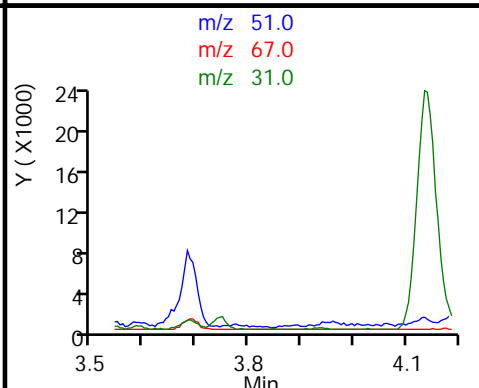
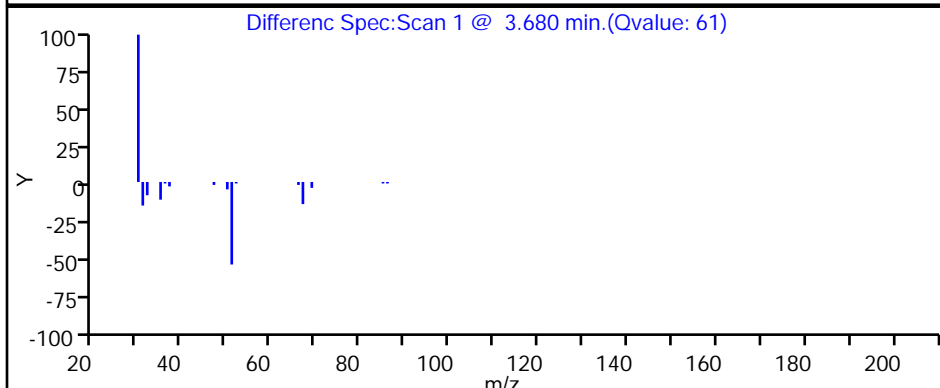
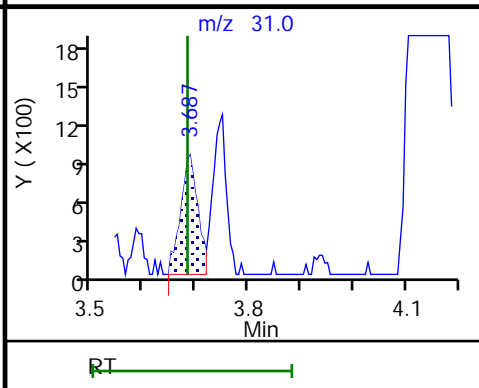
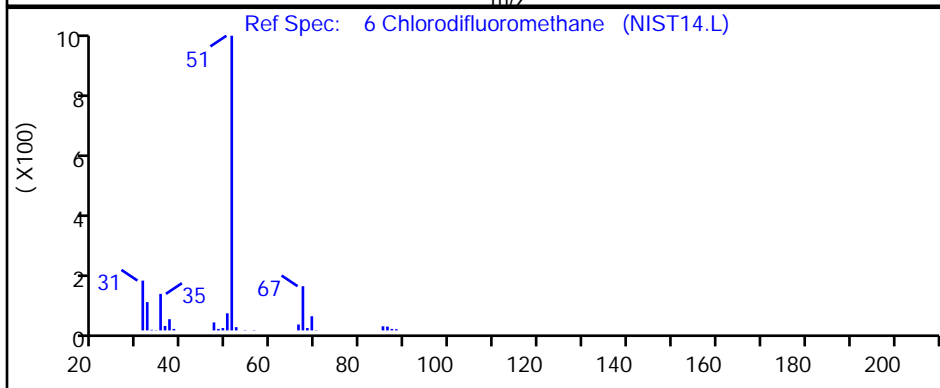
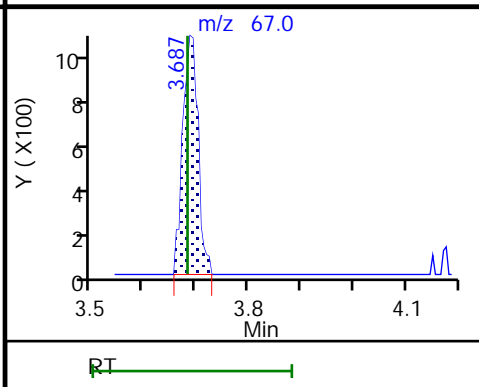
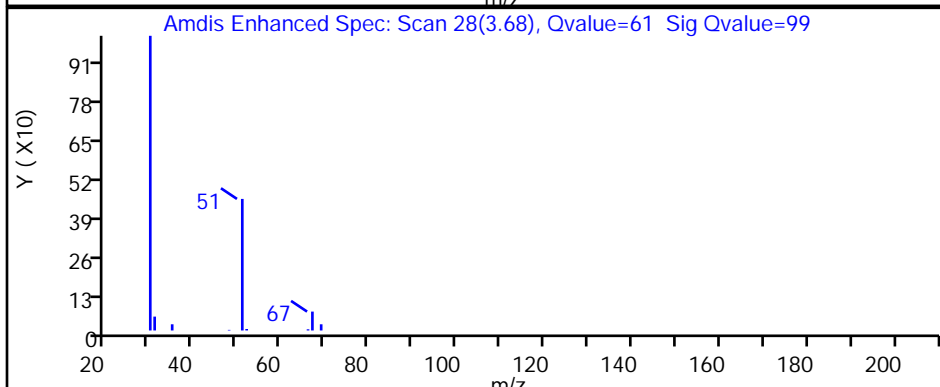
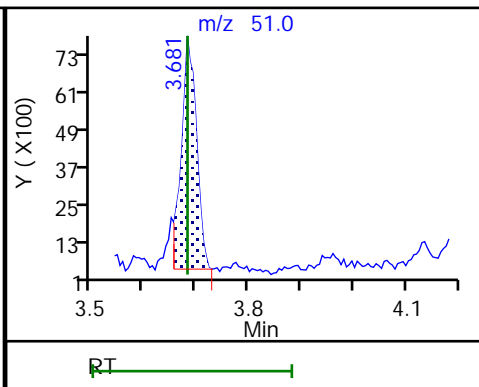
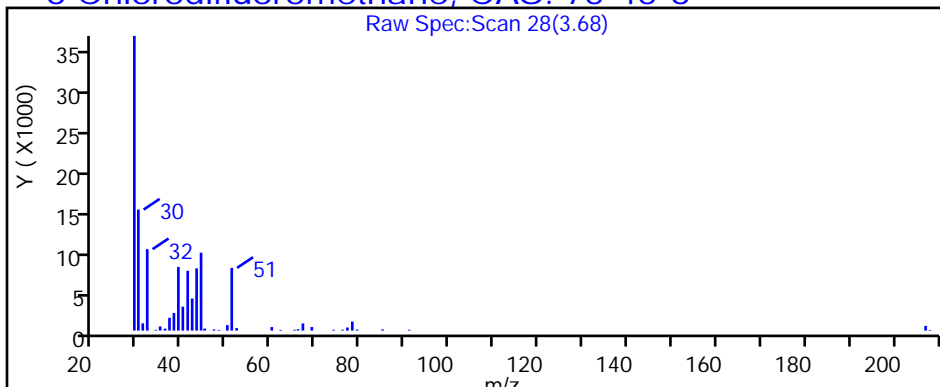
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P105.D

Injection Date: 25-Feb-2019 20:59:30

Instrument ID: MH

Lims ID: 140-14387-A-5

Lab Sample ID: 140-14387-5

Client ID: SV-183-MB-3

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

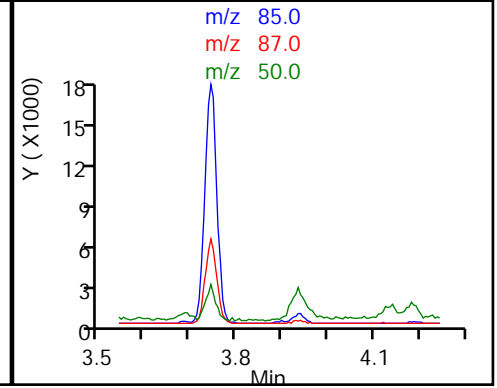
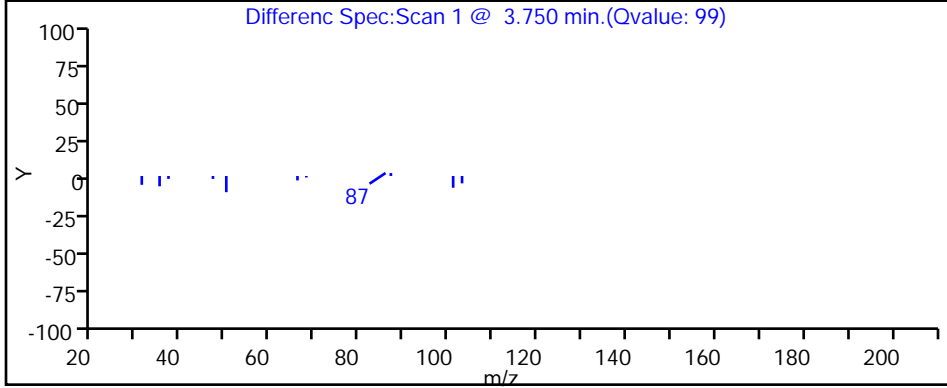
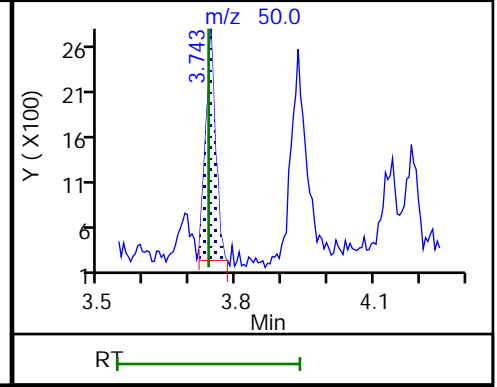
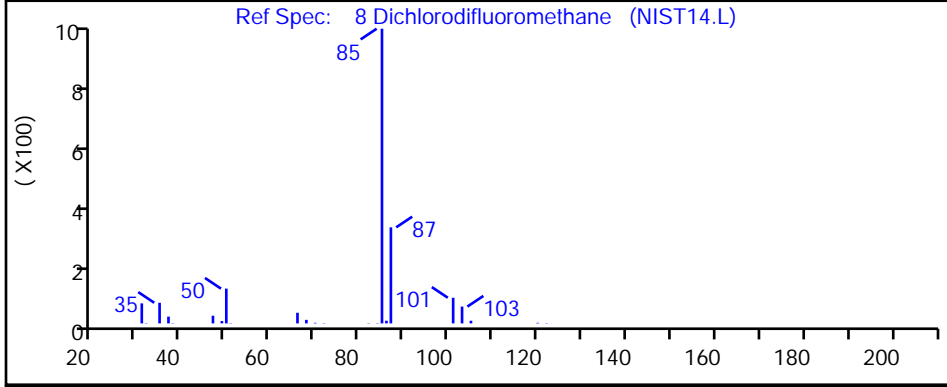
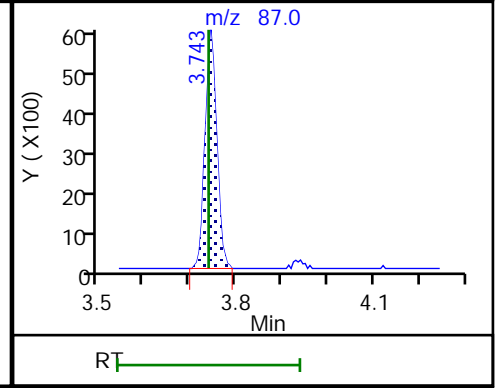
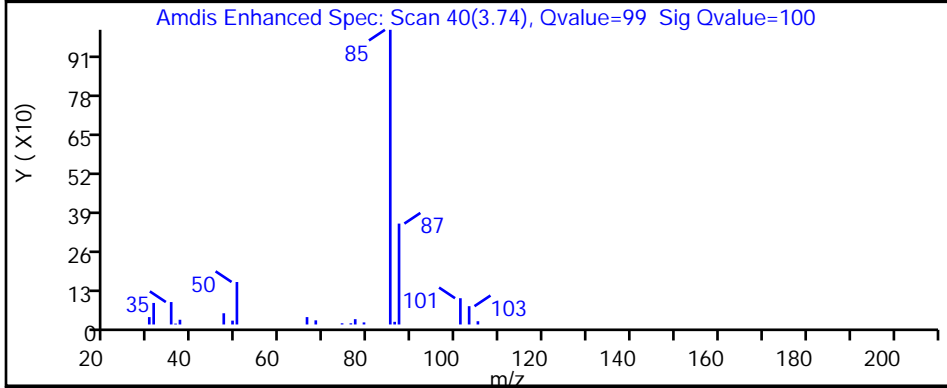
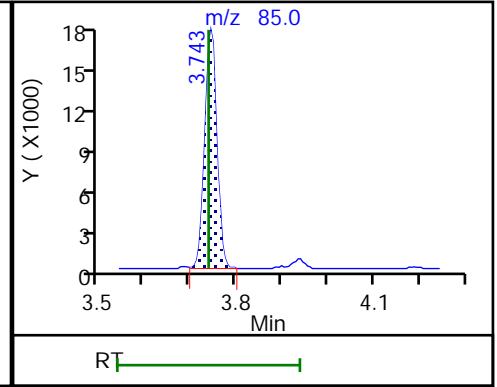
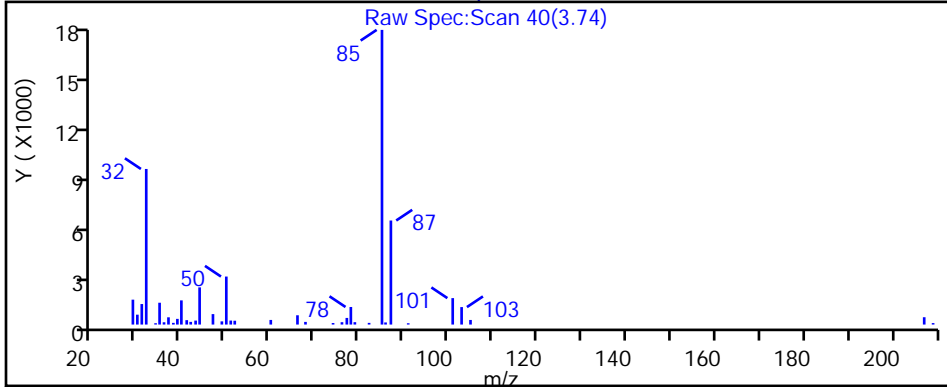
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P105.D

Injection Date: 25-Feb-2019 20:59:30

Instrument ID: MH

Lims ID: 140-14387-A-5

Lab Sample ID: 140-14387-5

Client ID: SV-183-MB-3

Operator ID: HMT

ALS Bottle#: 5 Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

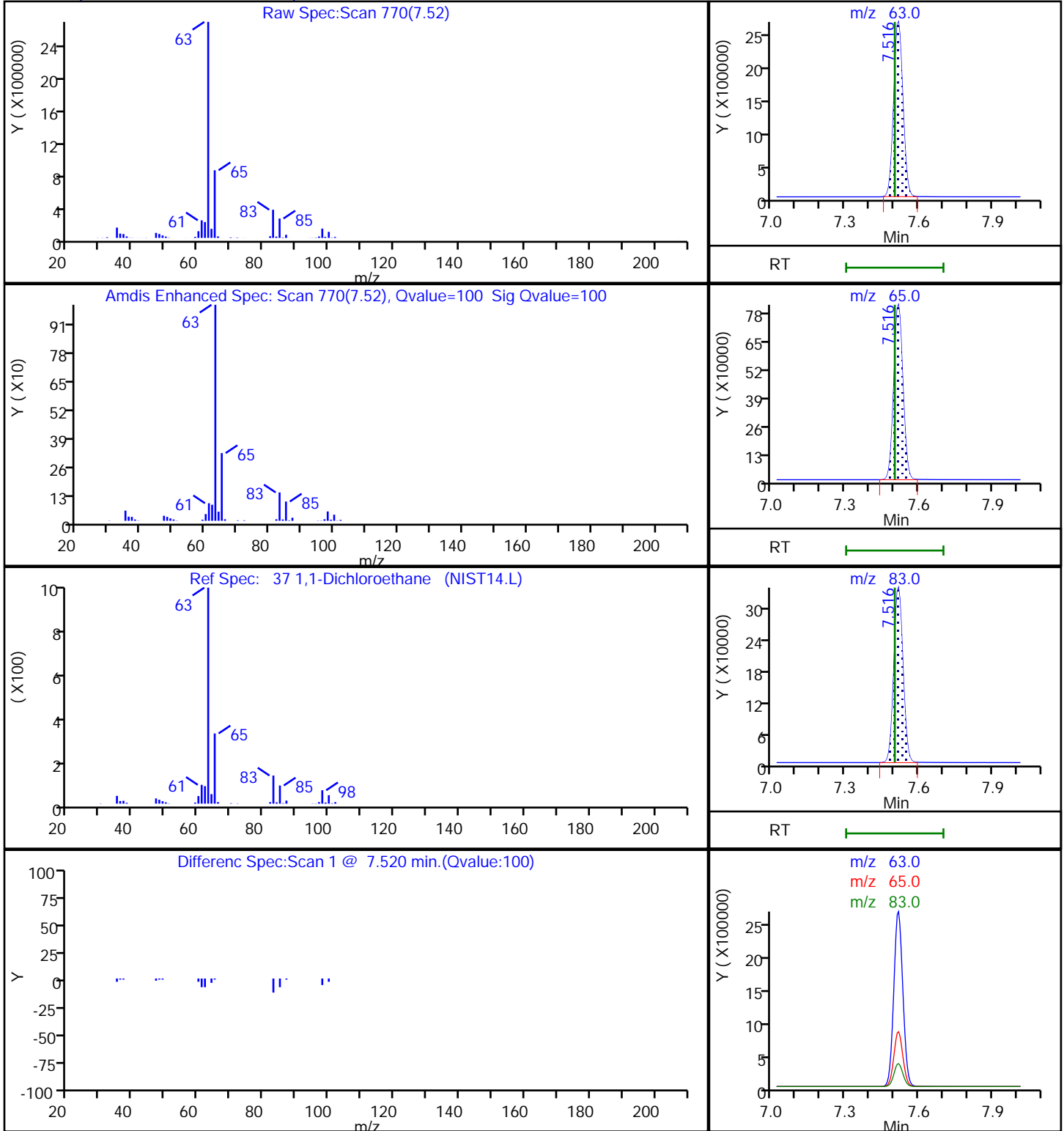
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

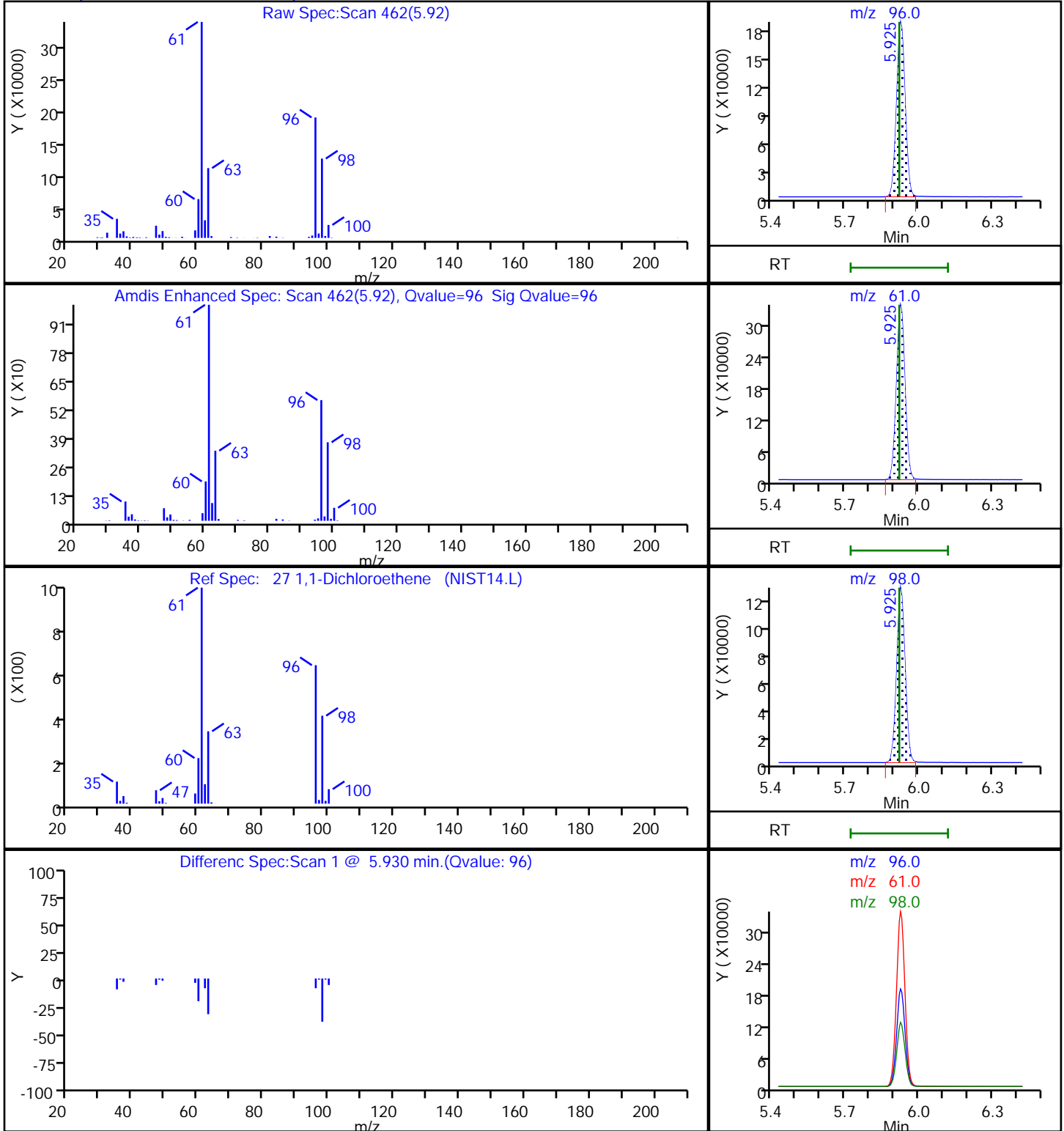
37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P105.D
Injection Date: 25-Feb-2019 20:59:30 Instrument ID: MH
Lims ID: 140-14387-A-5 Lab Sample ID: 140-14387-5
Client ID: SV-183-MB-3
Operator ID: HMT ALS Bottle#: 5 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P105.D

Injection Date: 25-Feb-2019 20:59:30

Instrument ID: MH

Lims ID: 140-14387-A-5

Lab Sample ID: 140-14387-5

Client ID: SV-183-MB-3

Operator ID: HMT

ALS Bottle#: 5 Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

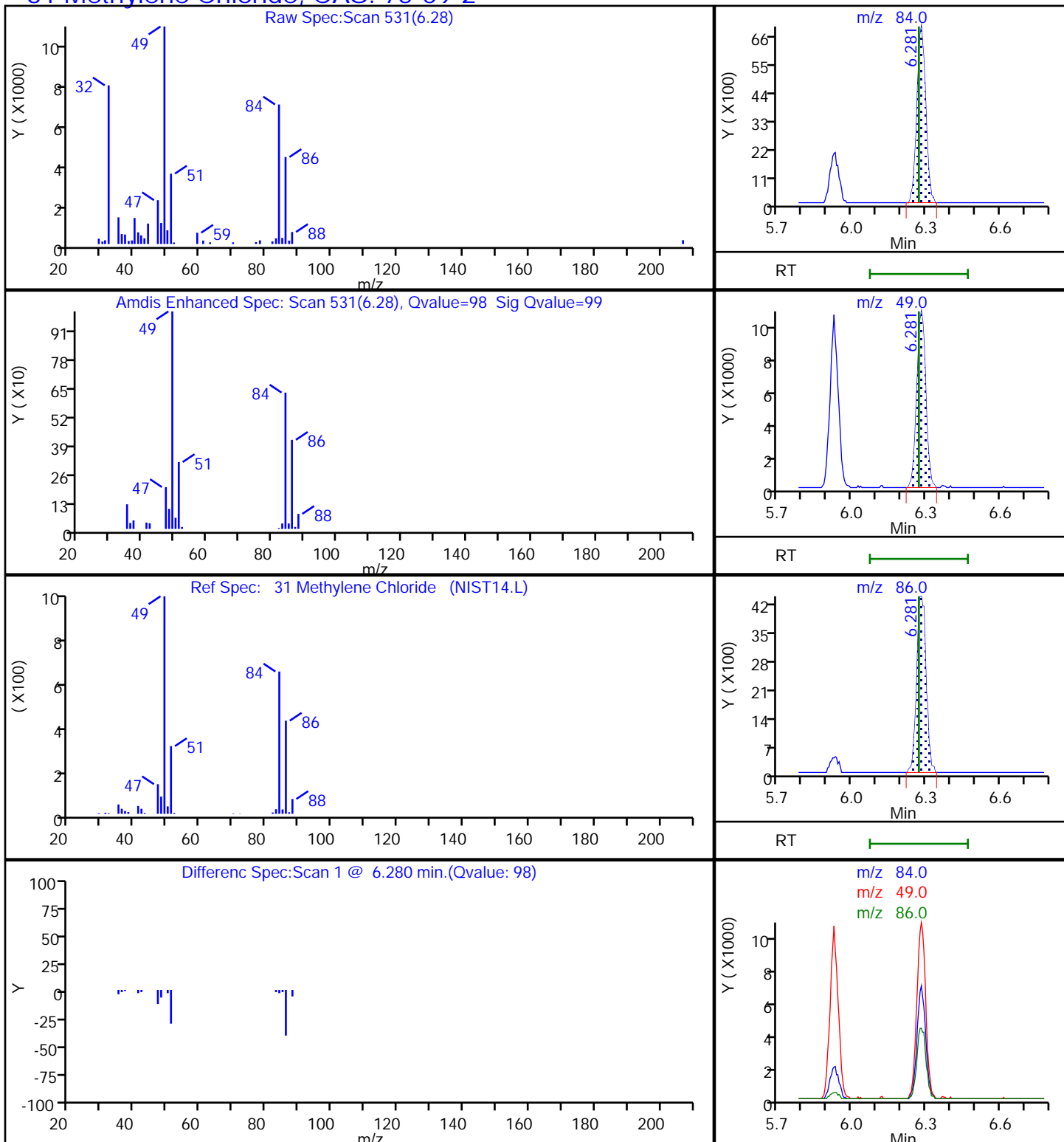
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P105.D

Injection Date: 25-Feb-2019 20:59:30

Instrument ID: MH

Lims ID: 140-14387-A-5

Lab Sample ID: 140-14387-5

Client ID: SV-183-MB-3

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

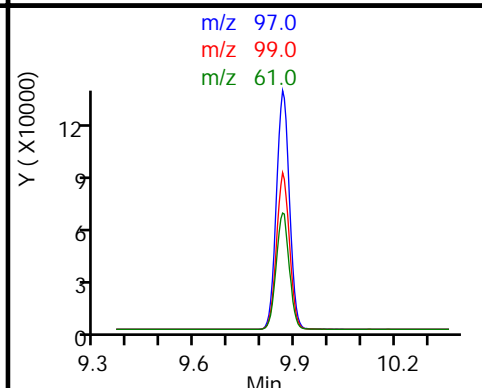
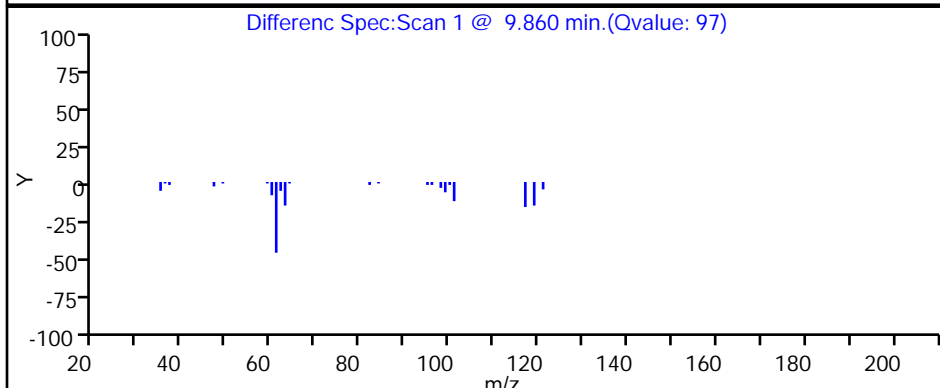
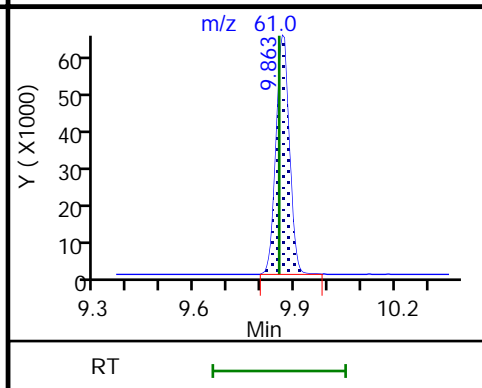
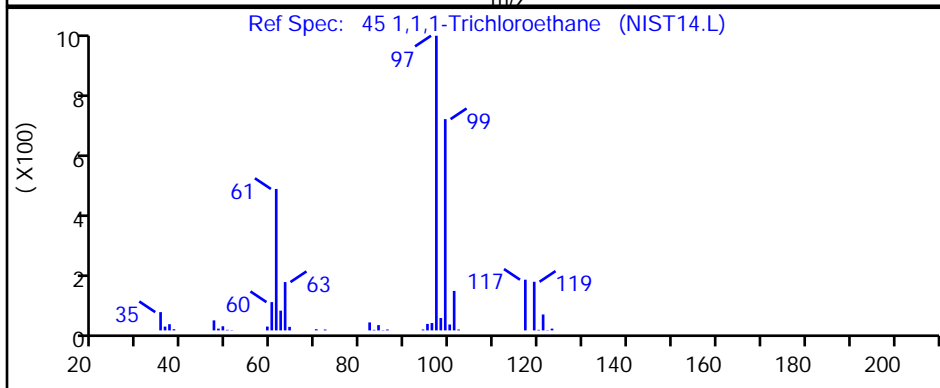
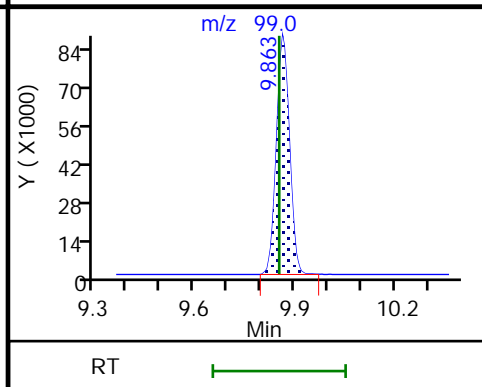
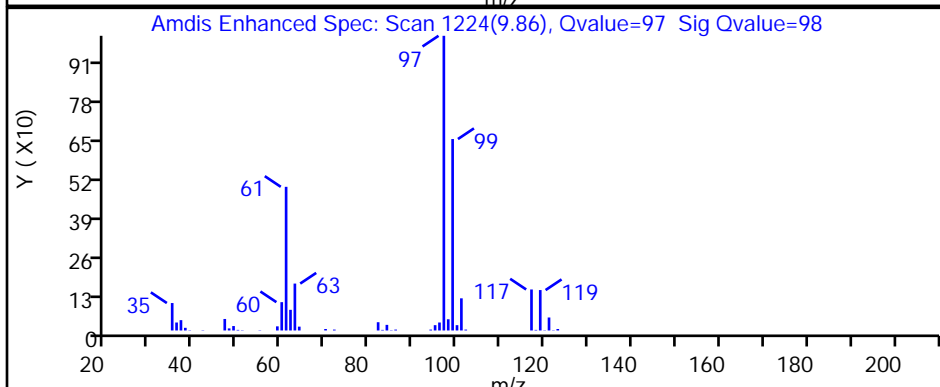
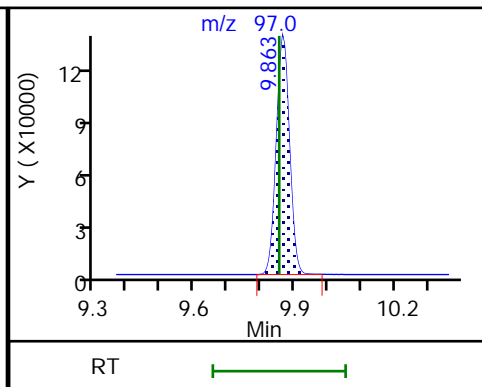
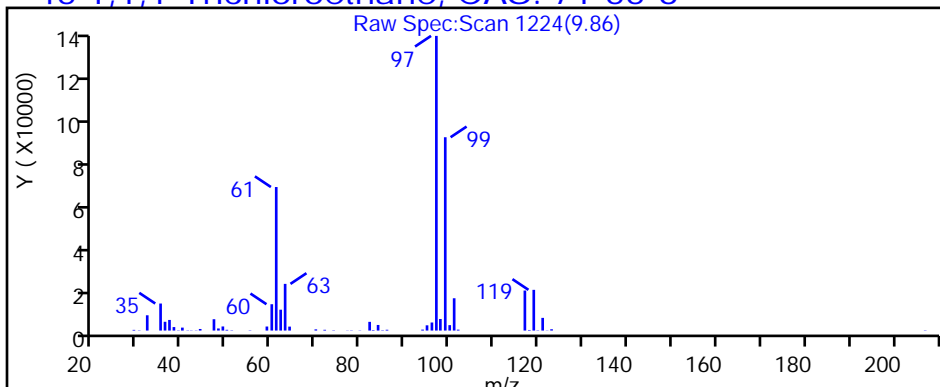
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P105.D

Injection Date: 25-Feb-2019 20:59:30

Instrument ID: MH

Lims ID: 140-14387-A-5

Lab Sample ID: 140-14387-5

Client ID: SV-183-MB-3

Operator ID: HMT

ALS Bottle#: 5 Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

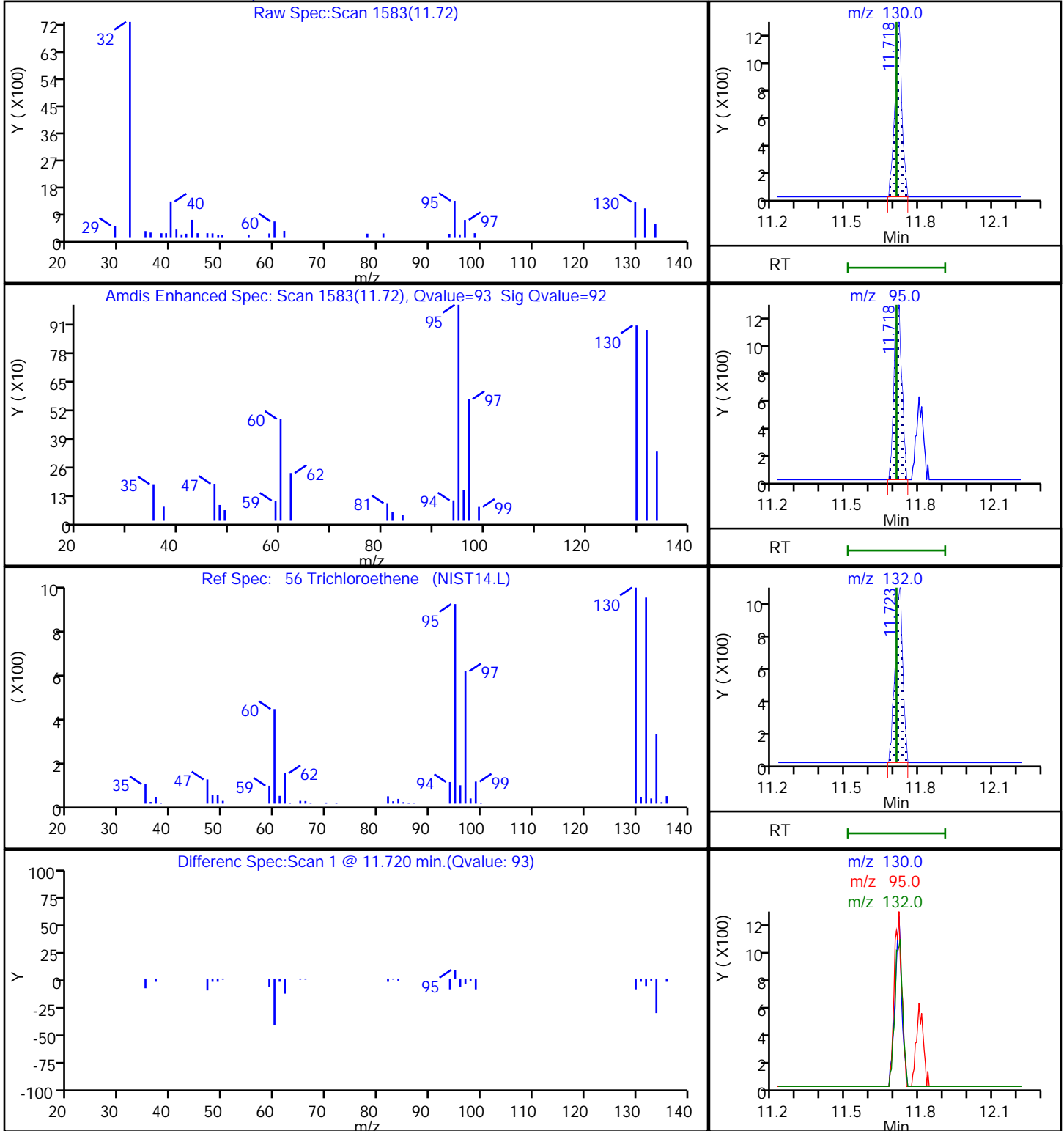
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P105.D

Injection Date: 25-Feb-2019 20:59:30

Instrument ID: MH

Lims ID: 140-14387-A-5

Lab Sample ID: 140-14387-5

Client ID: SV-183-MB-3

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

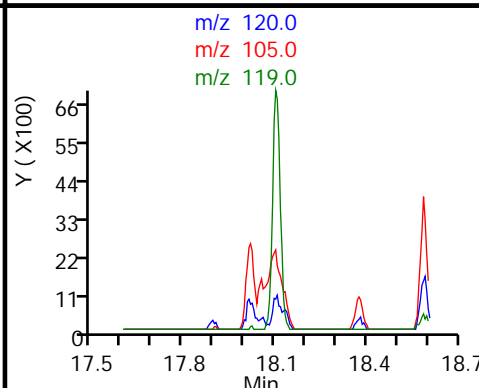
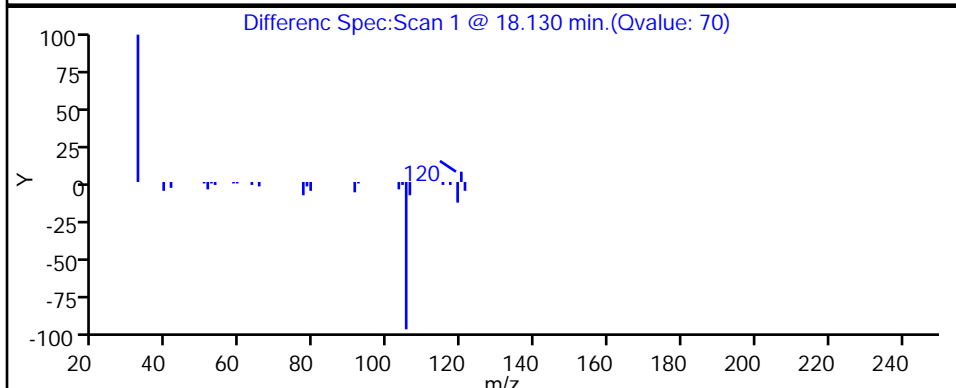
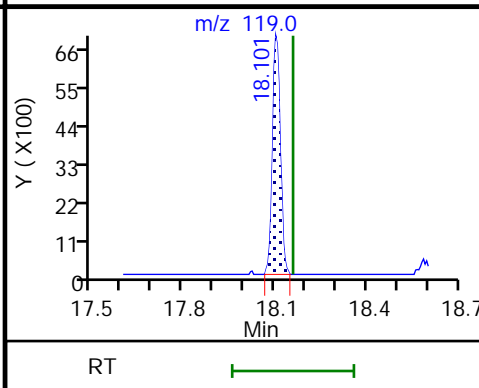
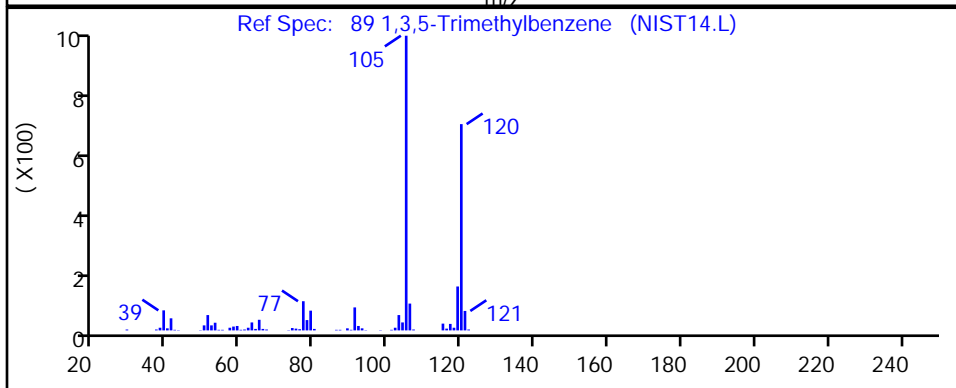
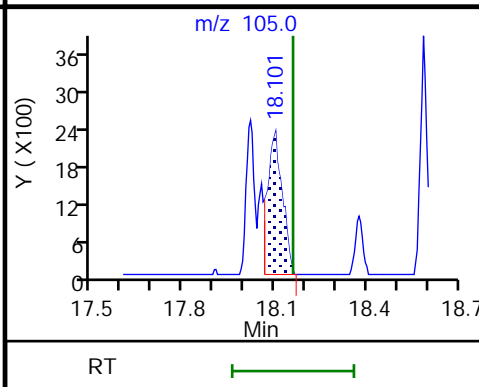
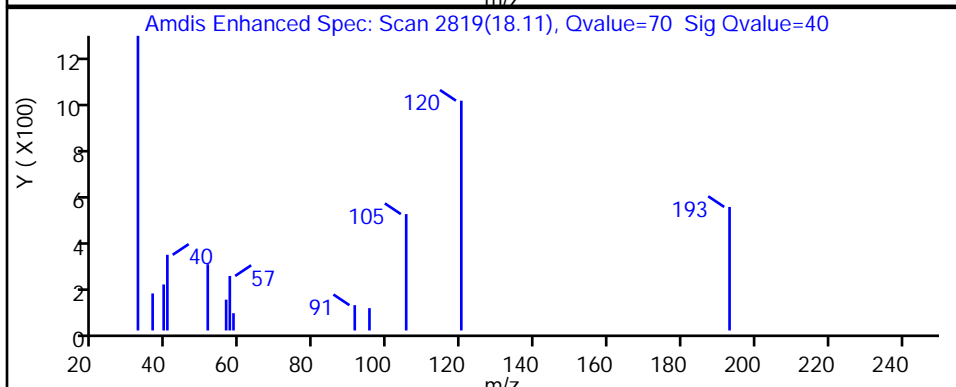
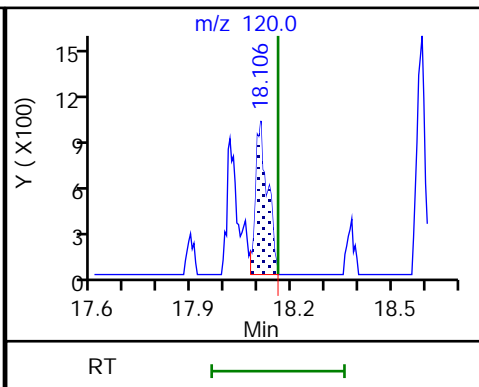
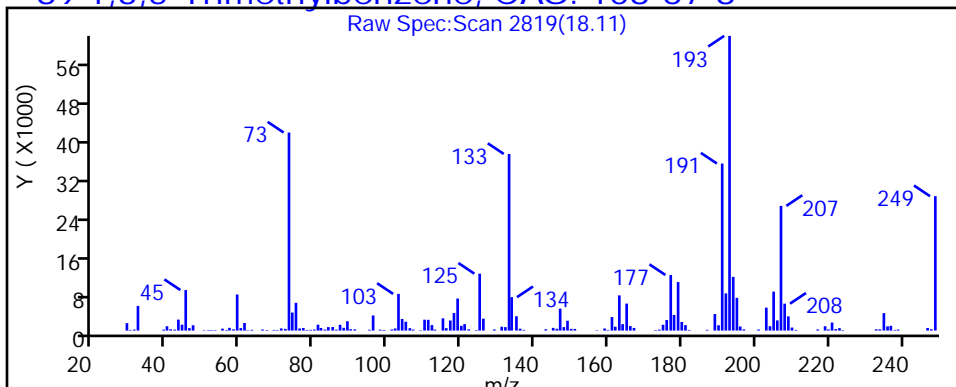
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

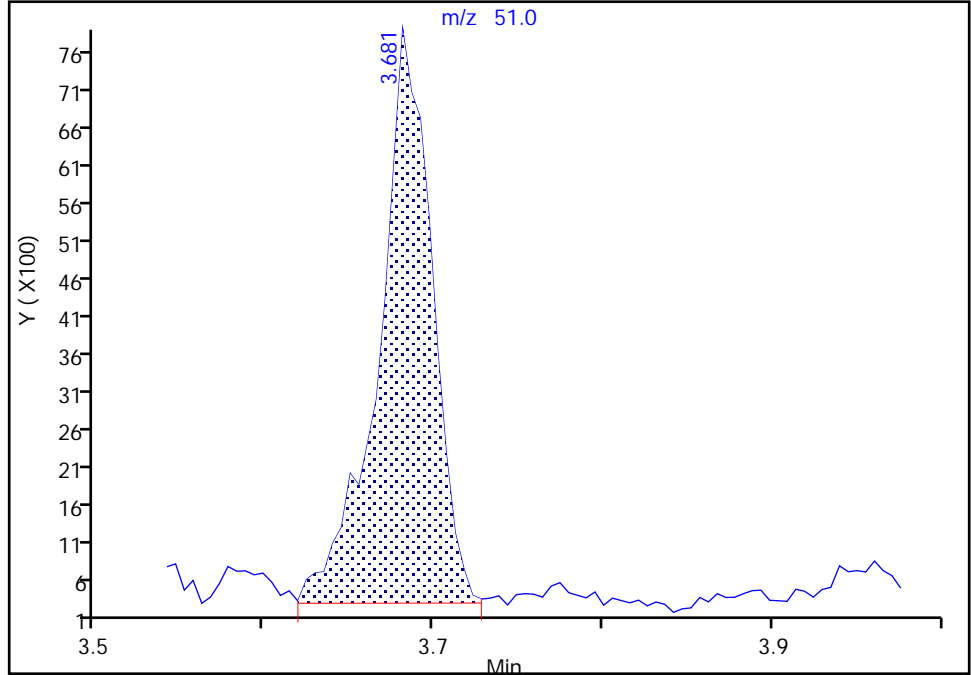
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P105.D
Injection Date: 25-Feb-2019 20:59:30 Instrument ID: MH
Lims ID: 140-14387-A-5 Lab Sample ID: 140-14387-5
Client ID: SV-183-MB-3
Operator ID: HMT ALS Bottle#: 5 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

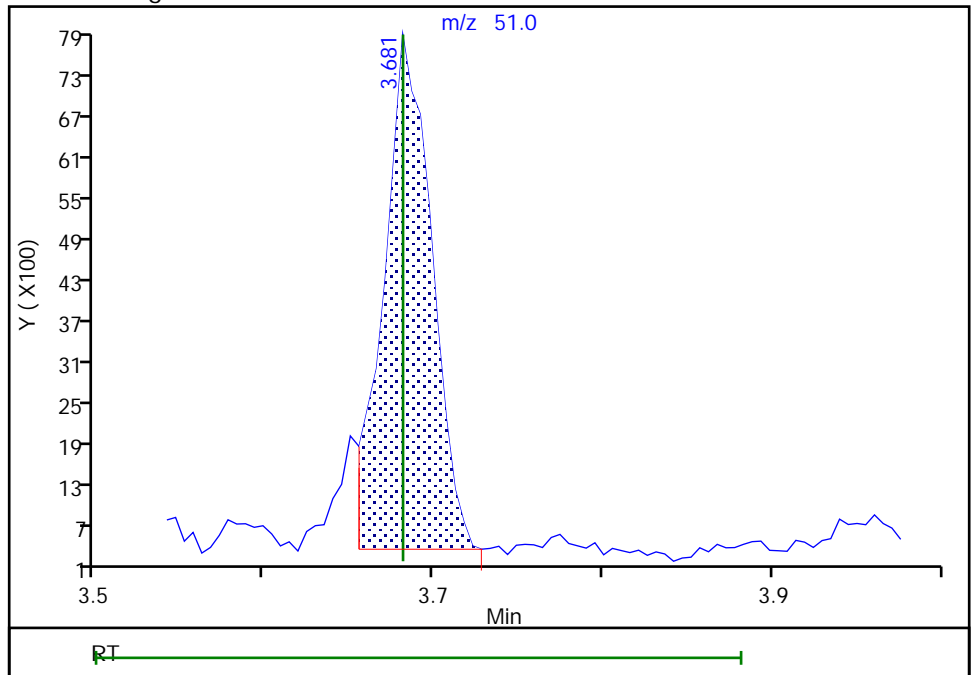
RT: 3.68
Area: 16538
Amount: 0.077079
Amount Units: ppb v/v

Processing Integration Results



RT: 3.68
Area: 14850
Amount: 0.069212
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 04-Mar-2019 08:56:06

Audit Action: Manually Integrated

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-183-MB-3 DL Lab Sample ID: 140-14387-5 DL
 Matrix: Air Lab File ID: HB28P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:58
 Sample wt/vol: 20 (mL) Date Analyzed: 02/28/2019 17:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27981 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	130		2.0	0.25

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-183-MB-3 DL Lab Sample ID: 140-14387-5 DL
 Matrix: Air Lab File ID: HB28P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:58
 Sample wt/vol: 20 (mL) Date Analyzed: 02/28/2019 17:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27981 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	540		8.1	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\HB28P101.D
 Lims ID: 140-14387-A-5
 Client ID: SV-183-MB-3
 Sample Type: Client
 Inject. Date: 28-Feb-2019 17:11:30 ALS Bottle#: 1 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010950-007
 Misc. Info.: 140-14387-a-5
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 01-Mar-2019 16:54:16 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0307

First Level Reviewer: khachitpongpanits Date: 01-Mar-2019 16:54:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.814	8.819	-0.005	96	272703	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1473988	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1251229	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.398	-0.031	93	805200	3.95	
27 1,1-Dichloroethene	96	5.925	5.928	0.000	98	76565	0.7228	
37 1,1-Dichloroethane	63	7.501	7.511	-0.005	99	1099815	5.32	
45 1,1,1-Trichloroethane	97	9.853	9.858	-0.005	97	61604	0.2734	
56 Trichloroethene	130	11.708	11.719	-0.005	95	19049	0.1295	
89 1,3,5-Trimethylbenzene	120	18.117	18.158	-0.041	41	308	0.0285	
111 1,2,4-Trichlorobenzene	180	21.099	21.109	-0.010	80	386	0.0688	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\HB28P101.D

Injection Date: 28-Feb-2019 17:11:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-5

Lab Sample ID: 140-14387-5

Worklist Smp#: 7

Client ID: SV-183-MB-3

Purge Vol: 500.000 mL

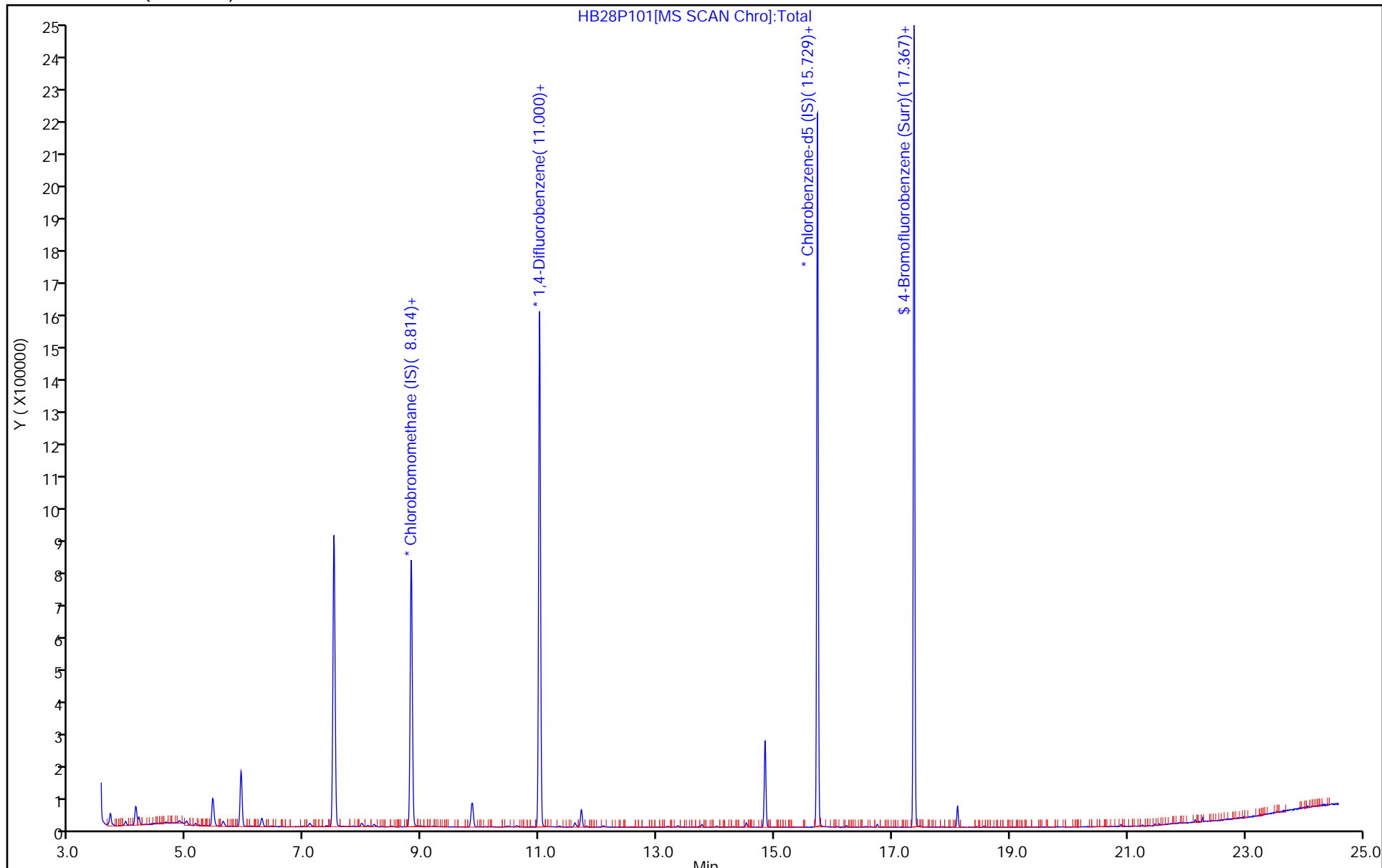
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\HB28P101.D
 Lims ID: 140-14387-A-5
 Client ID: SV-183-MB-3
 Sample Type: Client
 Inject. Date: 28-Feb-2019 17:11:30 ALS Bottle#: 1 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010950-007
 Misc. Info.: 140-14387-a-5
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 01-Mar-2019 16:54:16 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0307

First Level Reviewer: khachitpongpanits Date: 01-Mar-2019 16:54:15

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.95	98.73

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\HB28P101.D

Injection Date: 28-Feb-2019 17:11:30

Instrument ID: MH

Lims ID: 140-14387-A-5

Lab Sample ID: 140-14387-5

Client ID: SV-183-MB-3

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

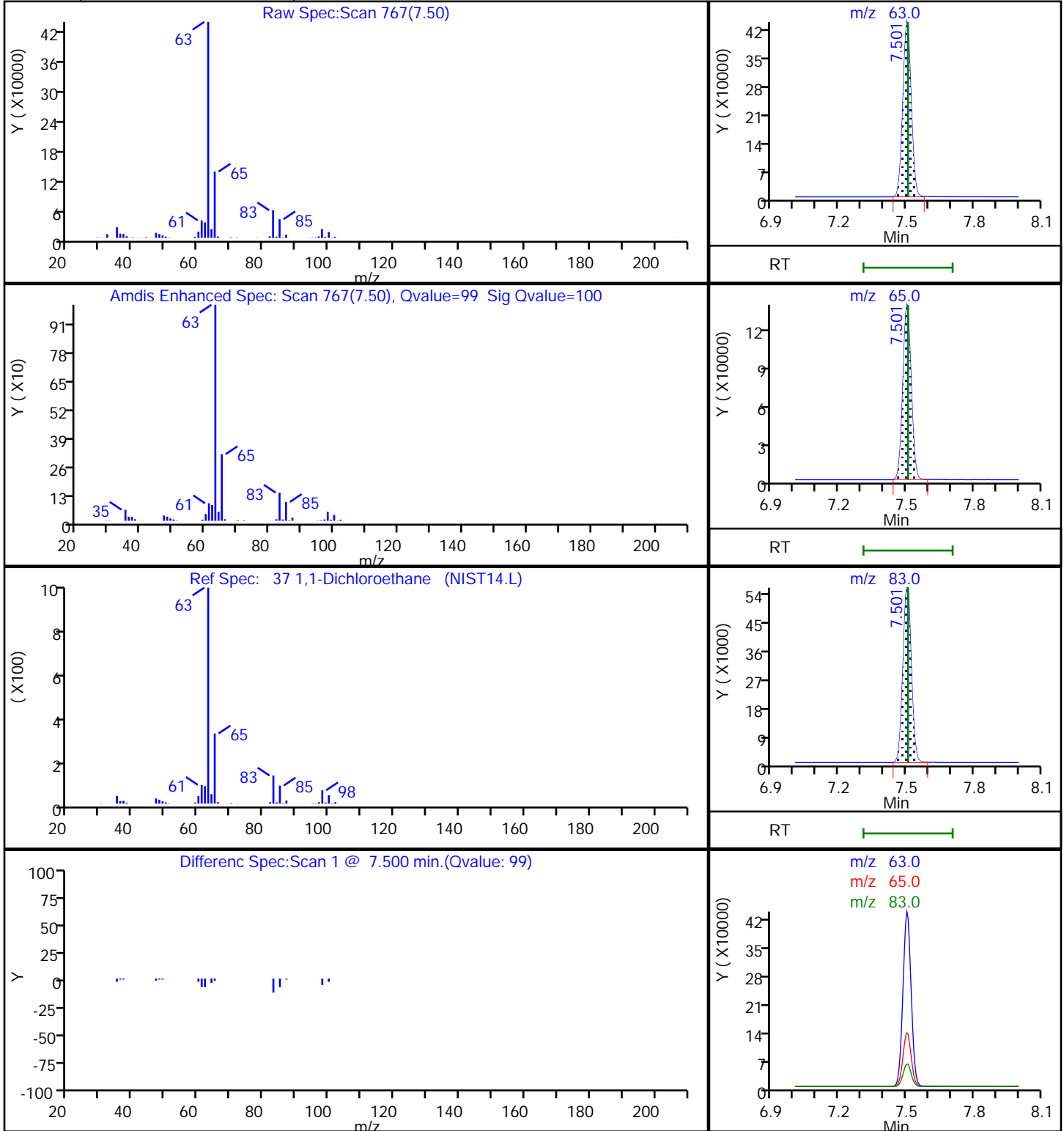
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-184-MB-3 Lab Sample ID: 140-14387-6
 Matrix: Air Lab File ID: HB25P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:01
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 21:53
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.36	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.26	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.74	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.80		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.21	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-184-MB-3 Lab Sample ID: 140-14387-6
 Matrix: Air Lab File ID: HB25P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:01
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 21:53
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.1	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.66	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.68	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.0	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P106.D
 Lims ID: 140-14387-A-6
 Client ID: SV-184-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 21:53:30 ALS Bottle#: 6 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-014
 Misc. Info.: 140-14387-a-6
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:08:20 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:08:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.814	0.010	96	268482	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1416402	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1183656	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	796626	4.13	
6 Chlorodifluoromethane	51	3.687	3.681	0.005	93	15858	0.0720	
8 Dichlorodifluoromethane	85	3.743	3.738	0.005	99	33595	0.0994	
31 Methylene Chloride	84	6.286	6.271	0.015	98	16205	0.1476	
37 1,1-Dichloroethane	63	7.511	7.501	0.010	99	10707	0.0526	
65 Toluene	91	13.765	13.760	0.005	92	53791	0.1597	
76 Ethylbenzene	91	16.065	16.060	0.005	98	12956	0.0302	
78 m-Xylene & p-Xylene	91	16.225	16.220	0.005	99	44810	0.1355	
82 o-Xylene	91	16.747	16.752	-0.005	97	24711	0.0734	
89 1,3,5-Trimethylbenzene	120	18.096	18.132	-0.062	93	3016	0.0421	
93 1,2,4-Trimethylbenzene	105	18.587	18.613	-0.026	98	10622	0.0275	
S 121 Xylenes, Total	100				0		0.2088	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P106.D

Injection Date: 25-Feb-2019 21:53:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-6

Lab Sample ID: 140-14387-6

Worklist Smp#: 14

Client ID: SV-184-MB-3

Purge Vol: 500.000 mL

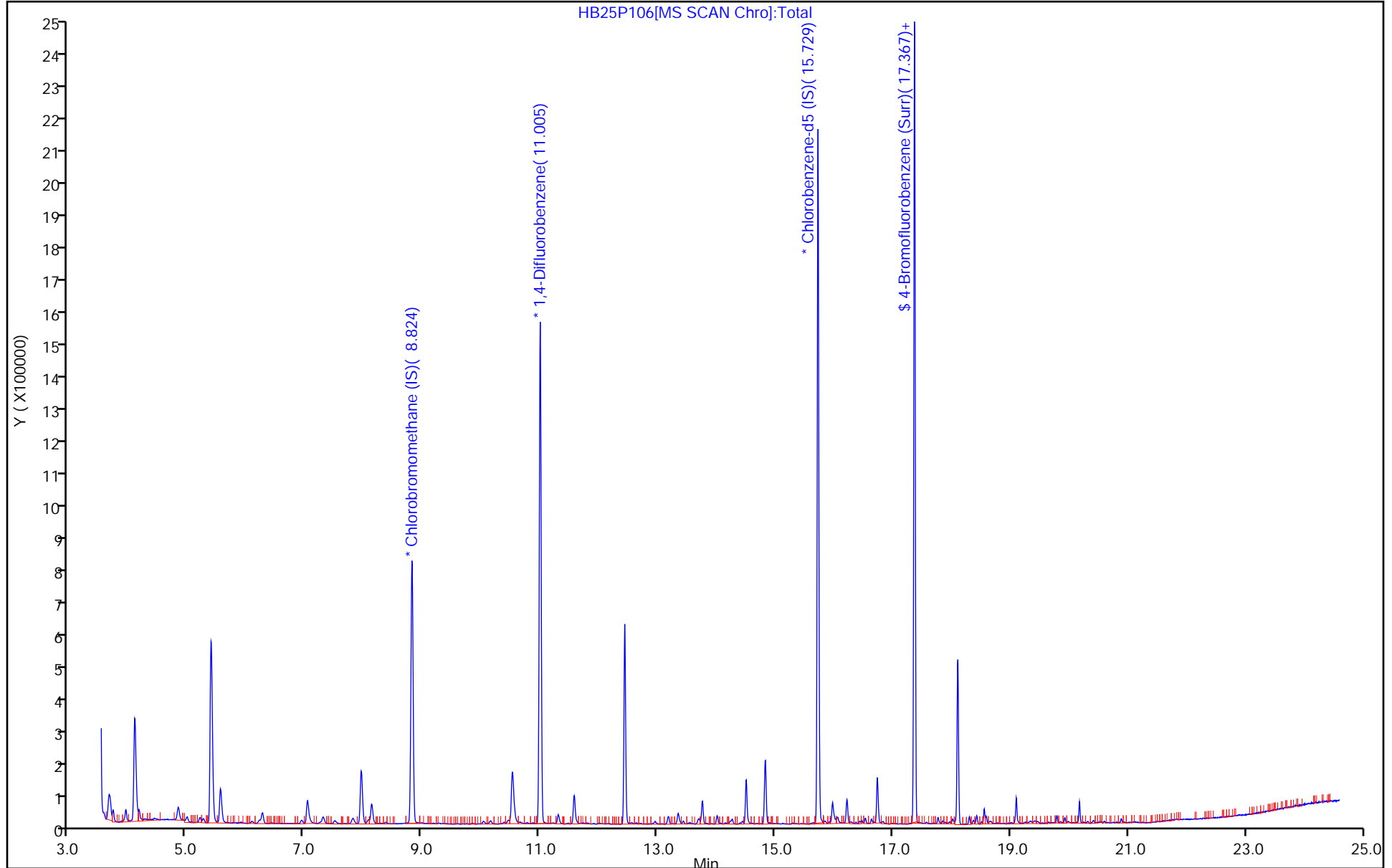
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P106.D
 Lims ID: 140-14387-A-6
 Client ID: SV-184-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 21:53:30 ALS Bottle#: 6 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-014
 Misc. Info.: 140-14387-a-6
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:08:20 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:08:54

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.13	103.25

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P106.D

Injection Date: 25-Feb-2019 21:53:30

Instrument ID: MH

Lims ID: 140-14387-A-6

Lab Sample ID: 140-14387-6

Client ID: SV-184-MB-3

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

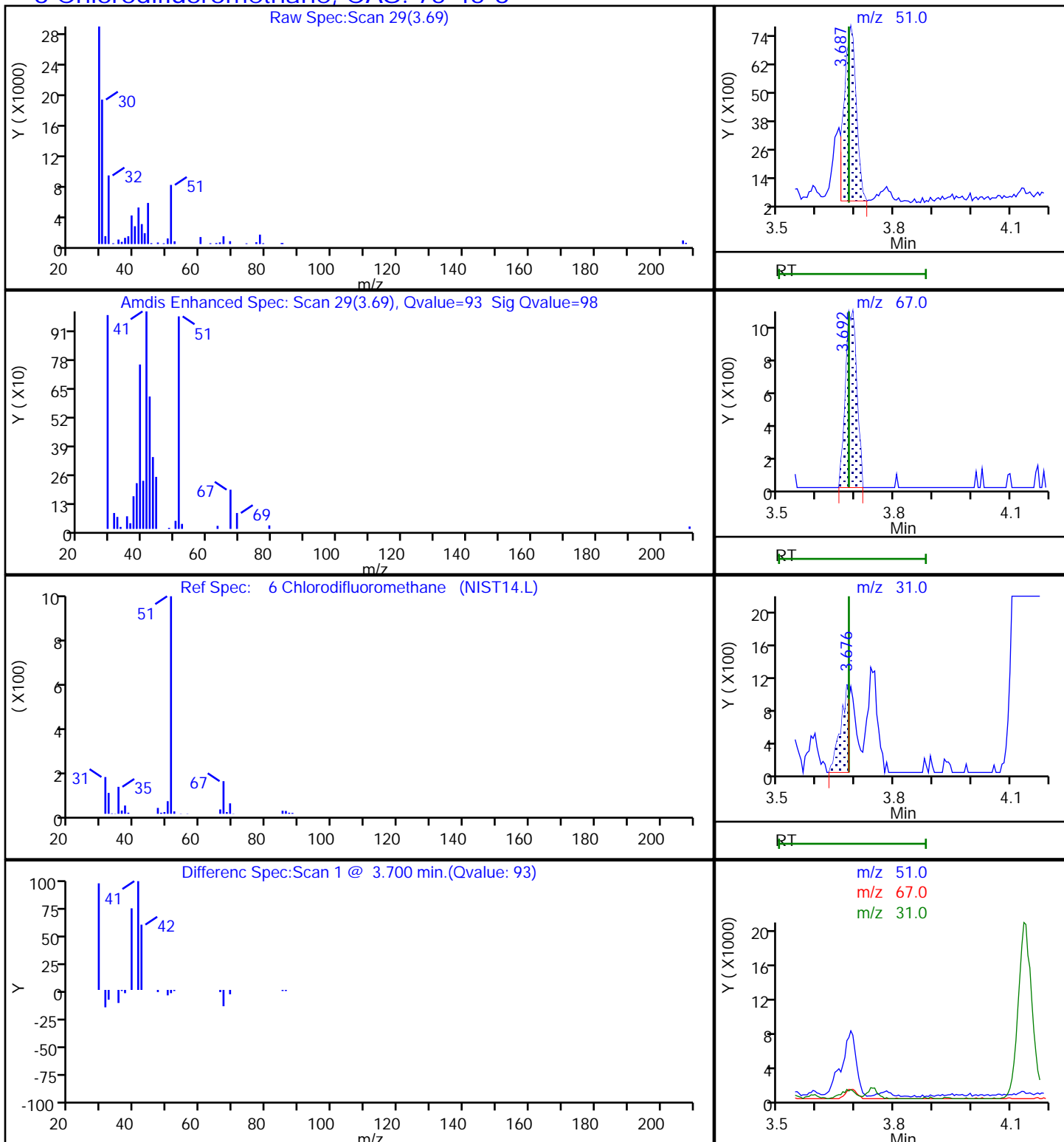
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P106.D

Injection Date: 25-Feb-2019 21:53:30

Instrument ID: MH

Lims ID: 140-14387-A-6

Lab Sample ID: 140-14387-6

Client ID: SV-184-MB-3

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

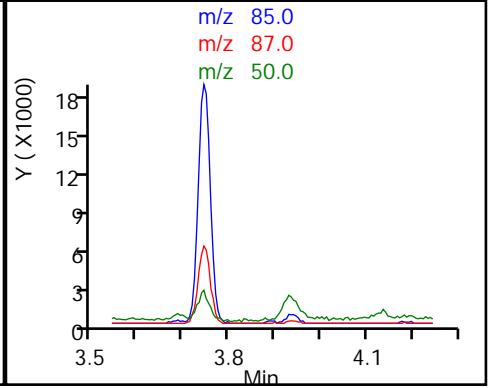
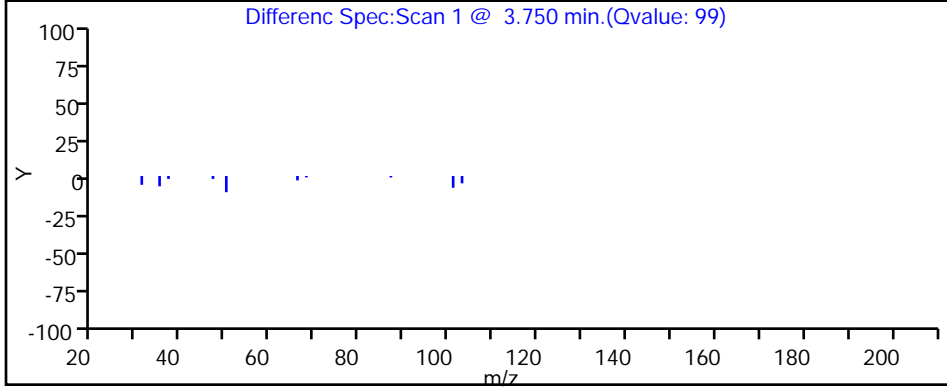
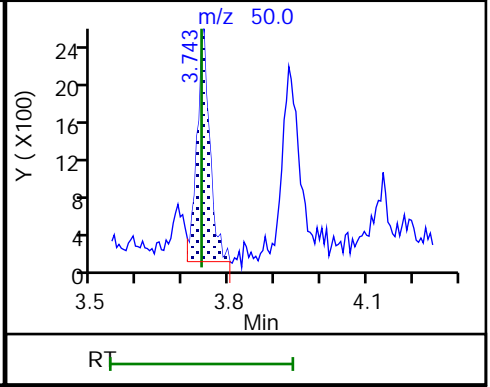
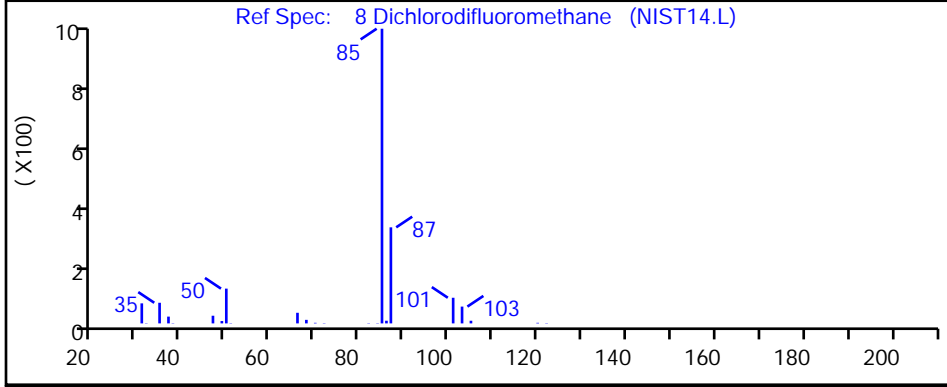
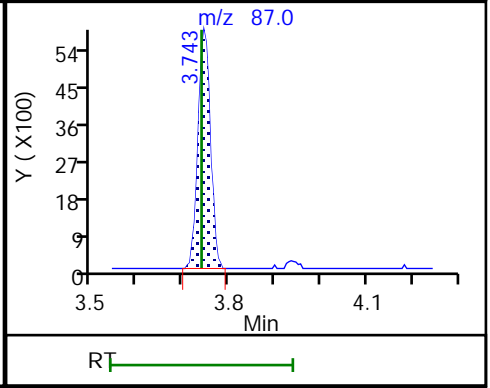
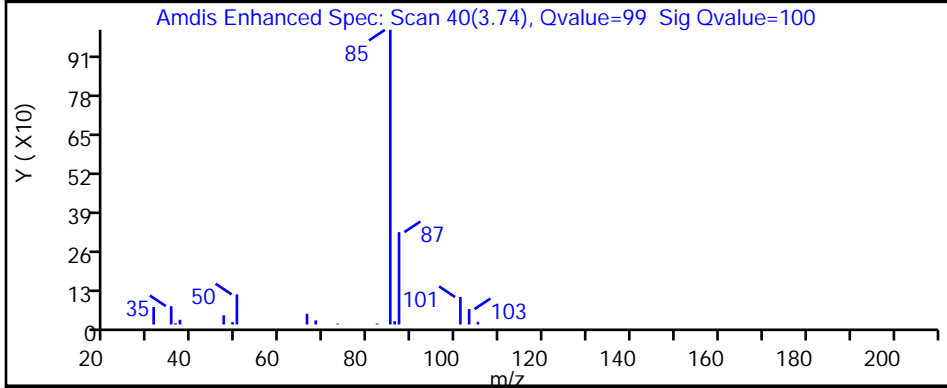
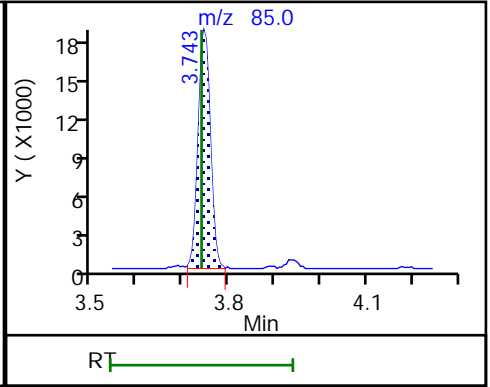
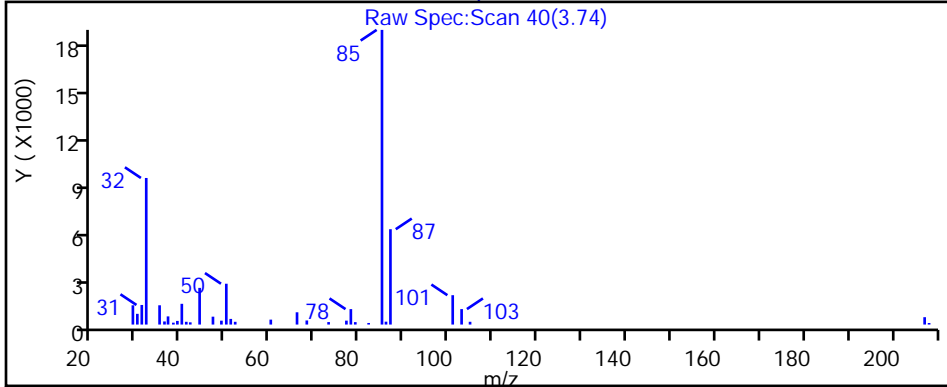
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P106.D

Injection Date: 25-Feb-2019 21:53:30

Instrument ID: MH

Lims ID: 140-14387-A-6

Lab Sample ID: 140-14387-6

Client ID: SV-184-MB-3

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

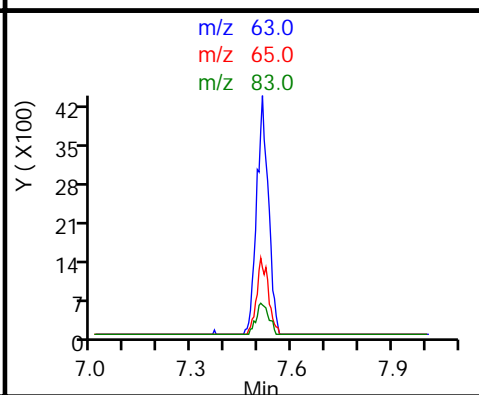
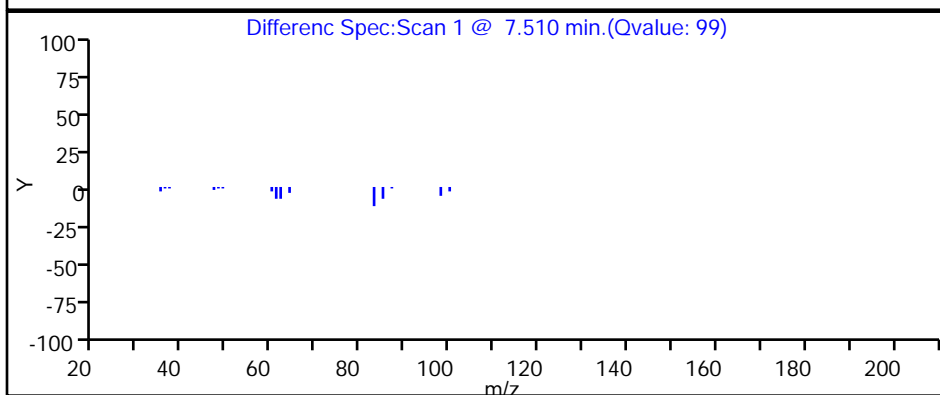
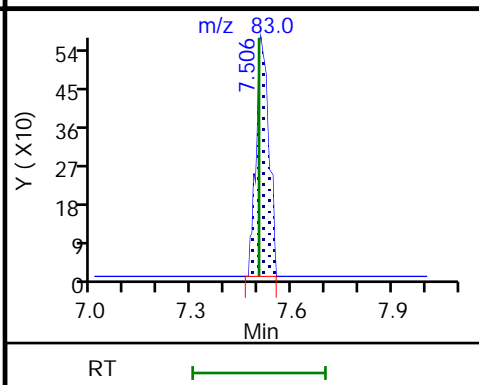
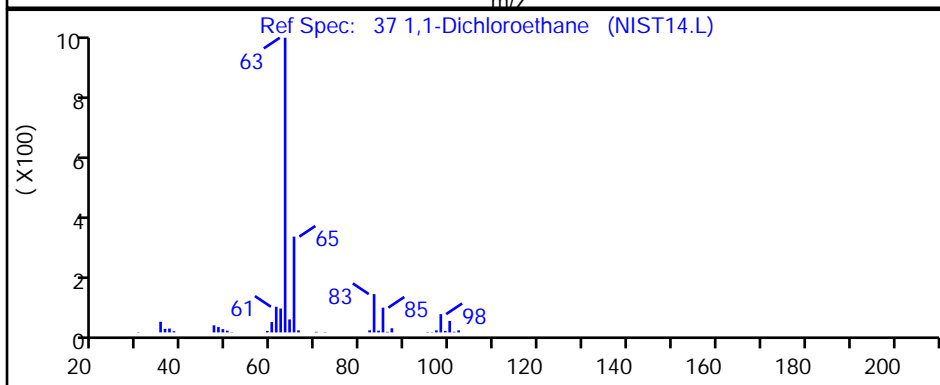
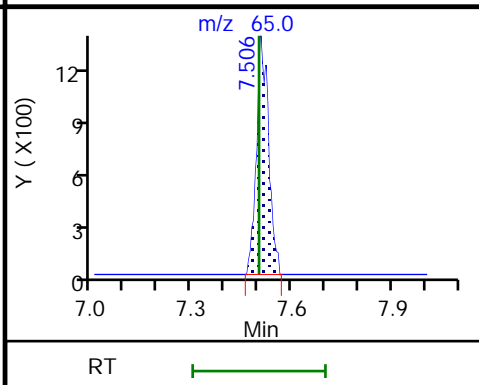
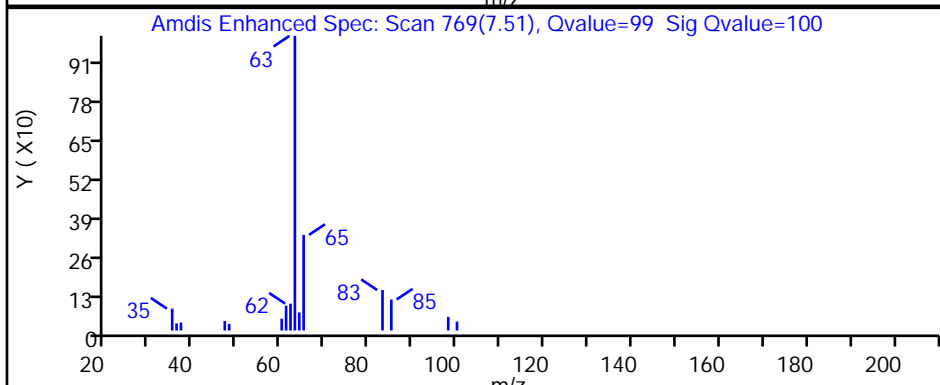
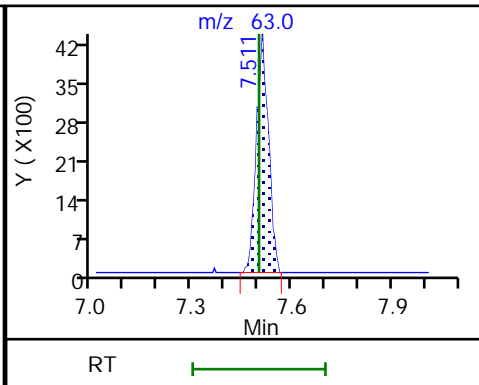
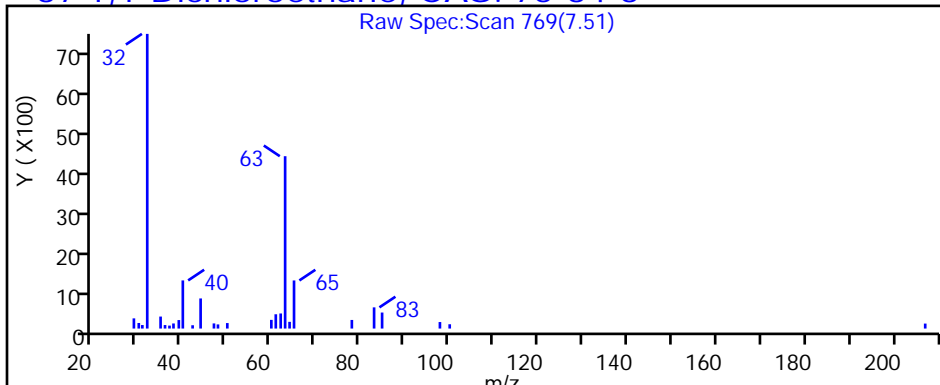
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P106.D

Injection Date: 25-Feb-2019 21:53:30

Instrument ID: MH

Lims ID: 140-14387-A-6

Lab Sample ID: 140-14387-6

Client ID: SV-184-MB-3

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

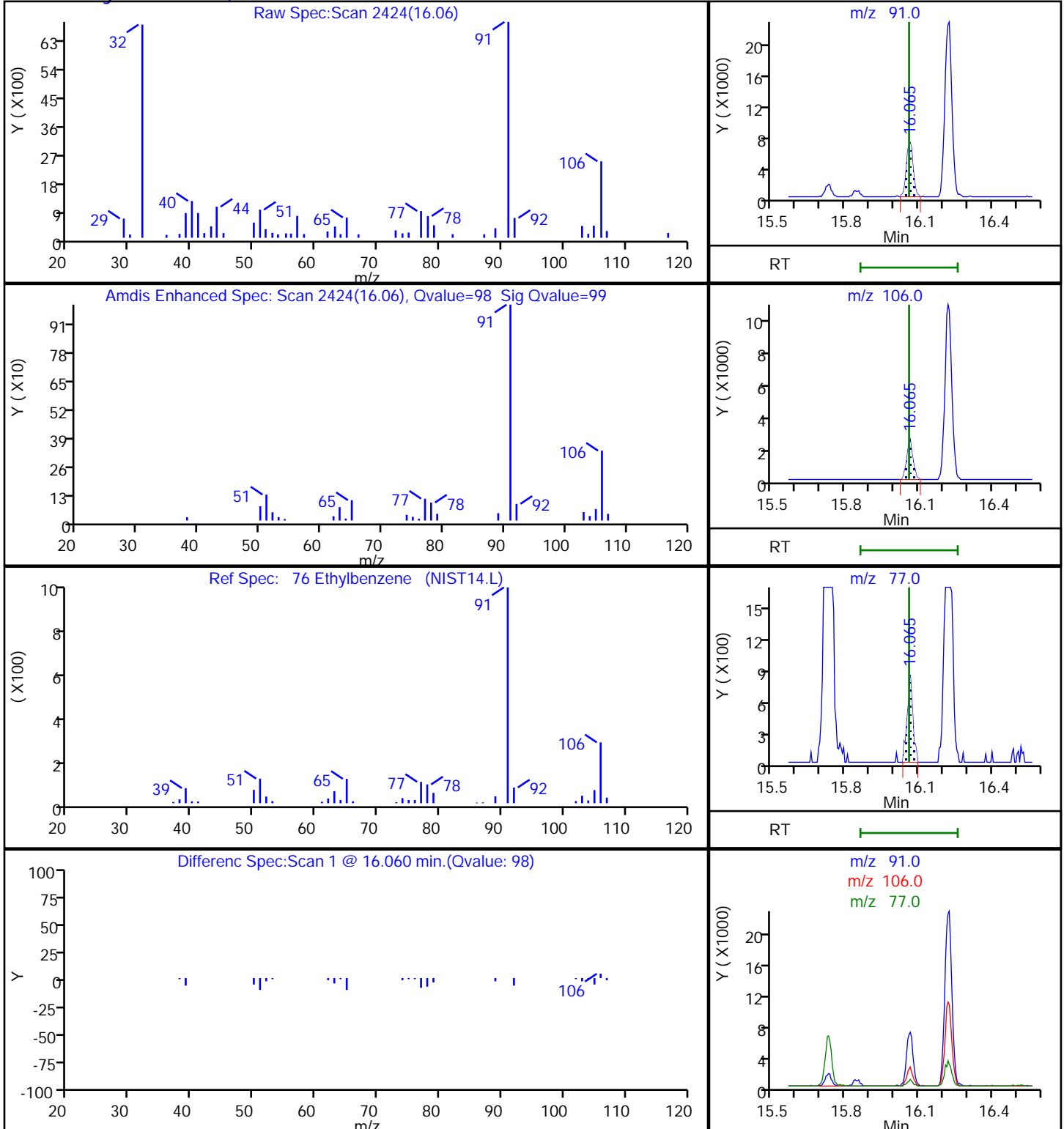
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P106.D

Injection Date: 25-Feb-2019 21:53:30

Instrument ID: MH

Lims ID: 140-14387-A-6

Lab Sample ID: 140-14387-6

Client ID: SV-184-MB-3

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

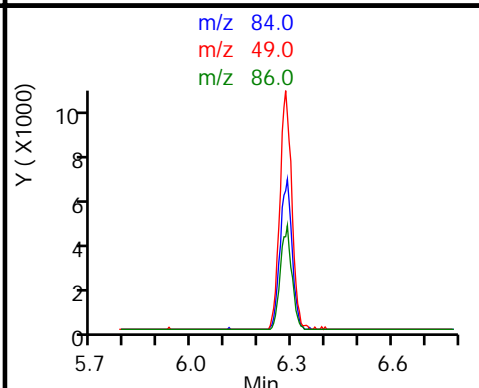
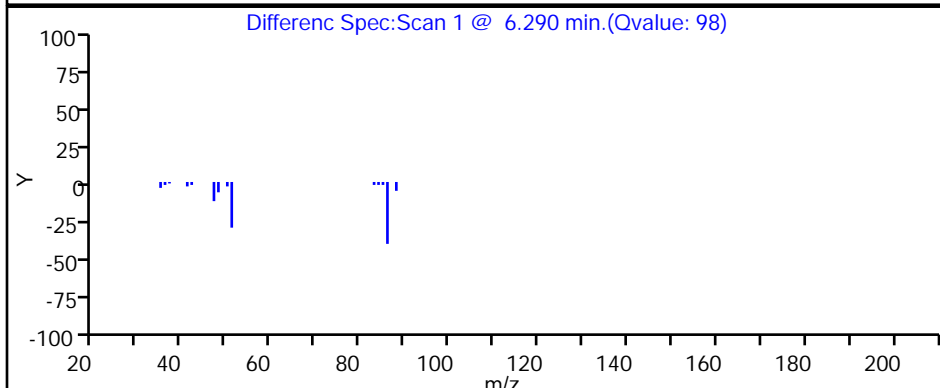
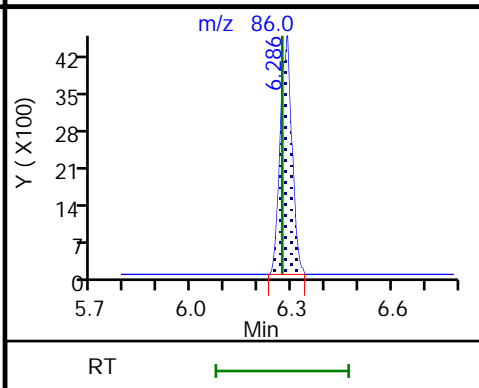
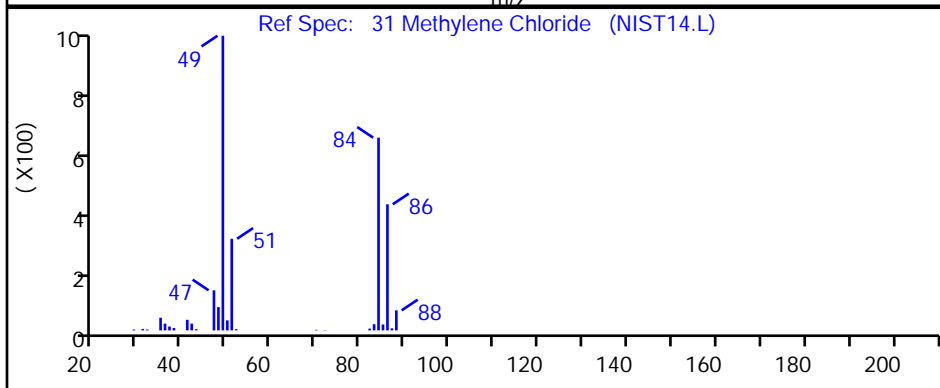
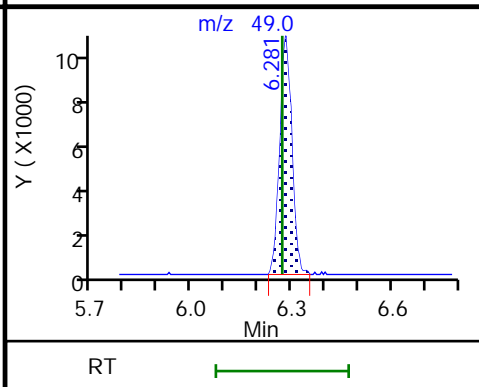
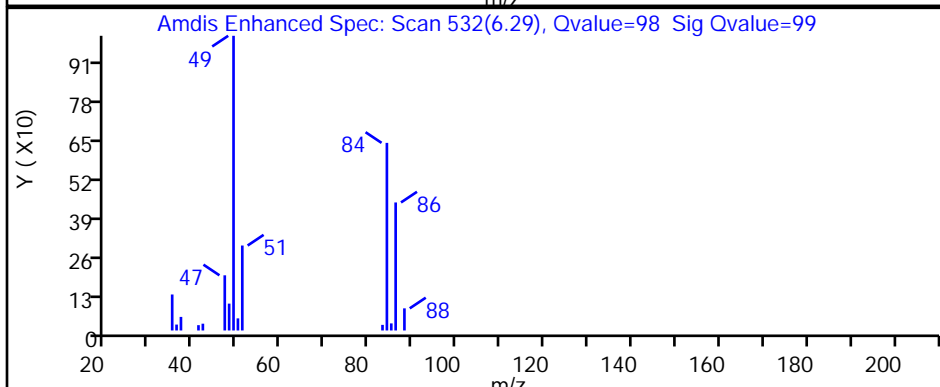
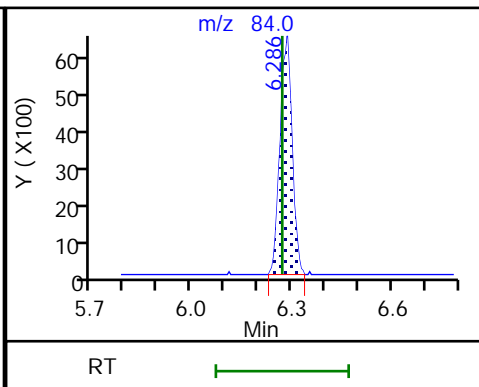
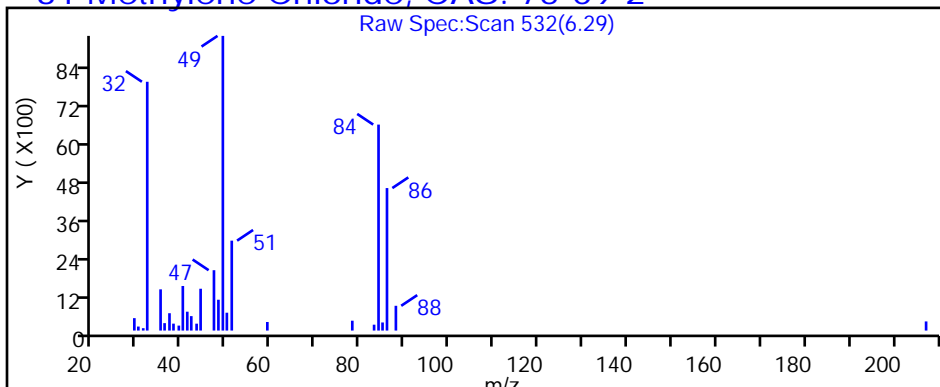
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P106.D

Injection Date: 25-Feb-2019 21:53:30

Instrument ID: MH

Lims ID: 140-14387-A-6

Lab Sample ID: 140-14387-6

Client ID: SV-184-MB-3

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

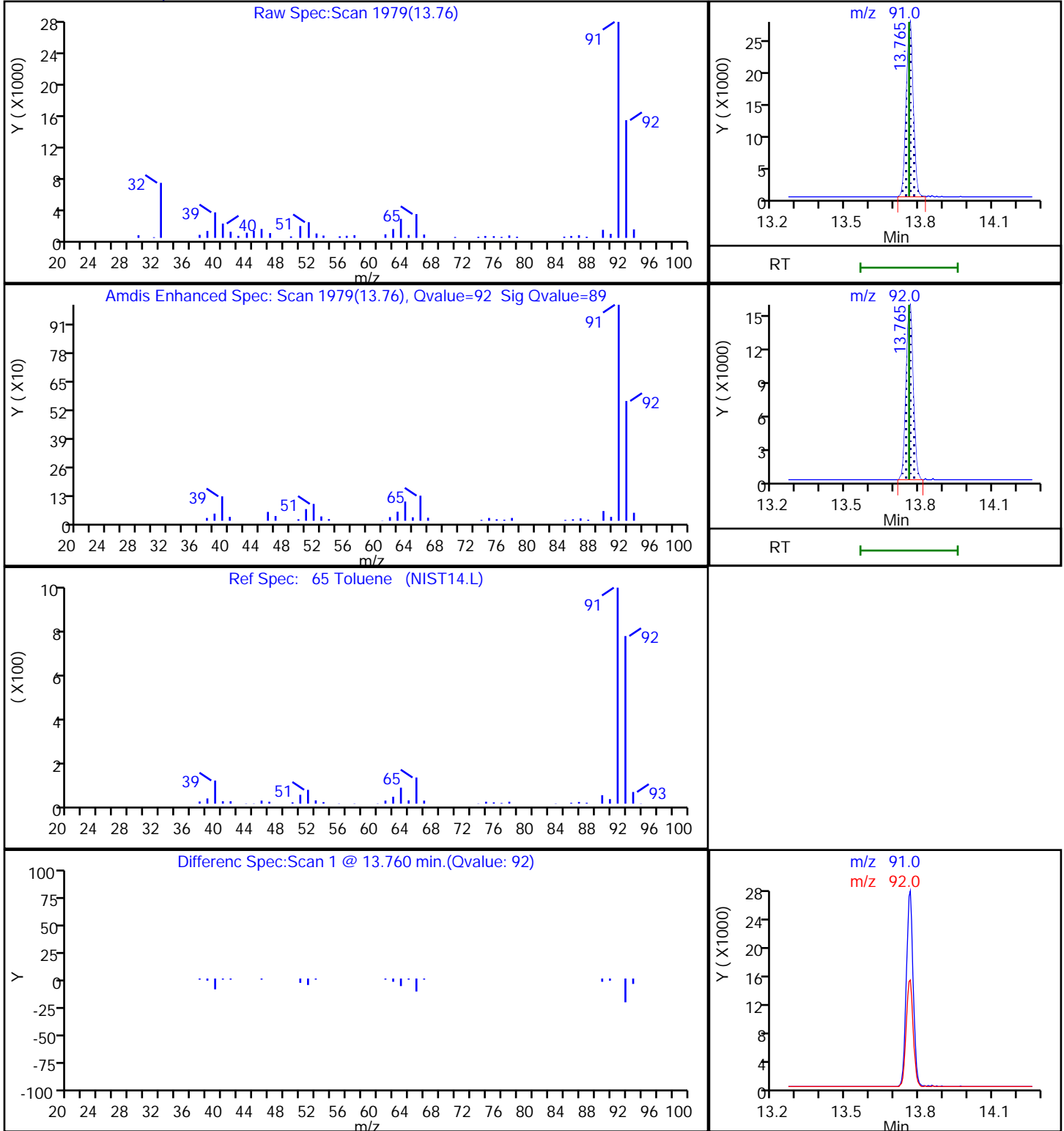
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P106.D

Injection Date: 25-Feb-2019 21:53:30

Instrument ID: MH

Lims ID: 140-14387-A-6

Lab Sample ID: 140-14387-6

Client ID: SV-184-MB-3

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

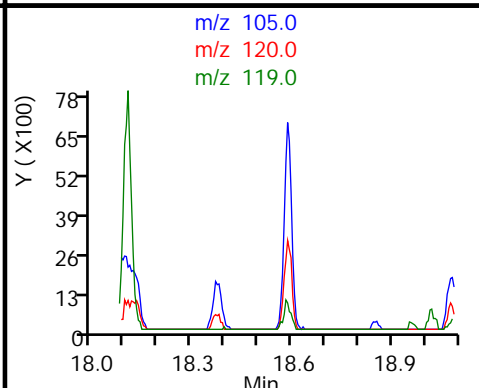
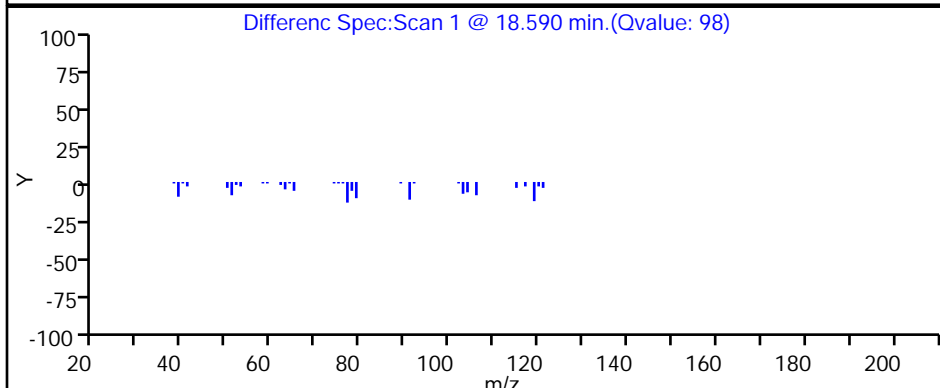
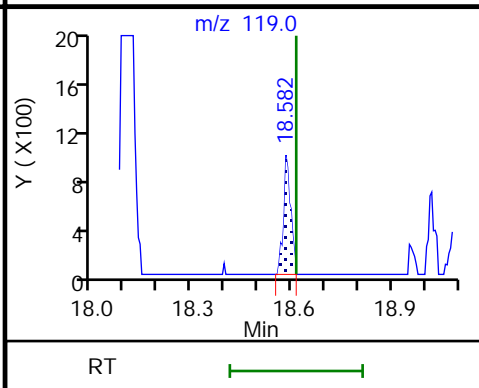
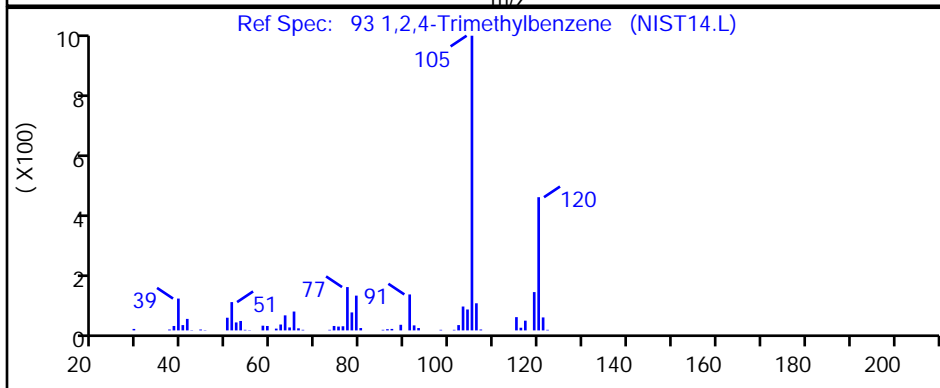
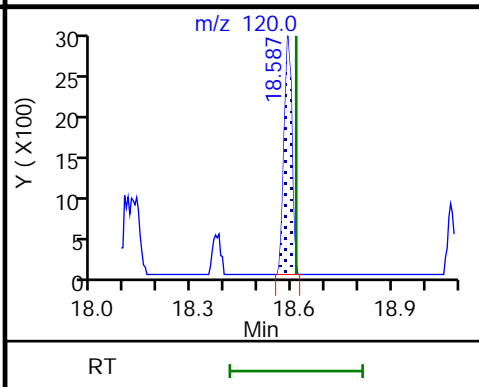
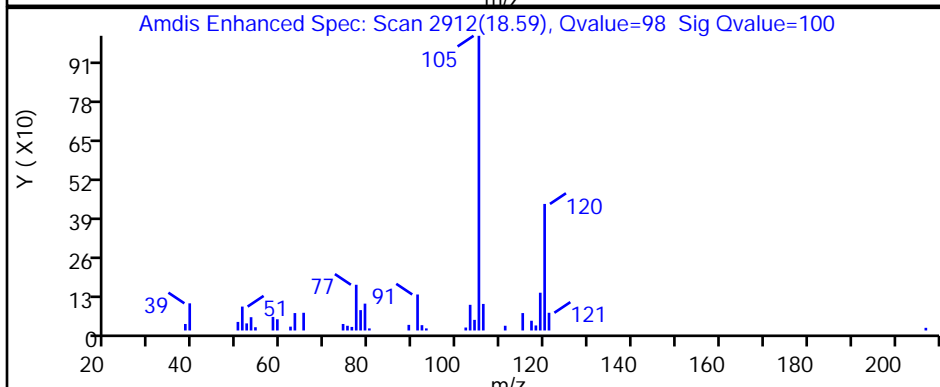
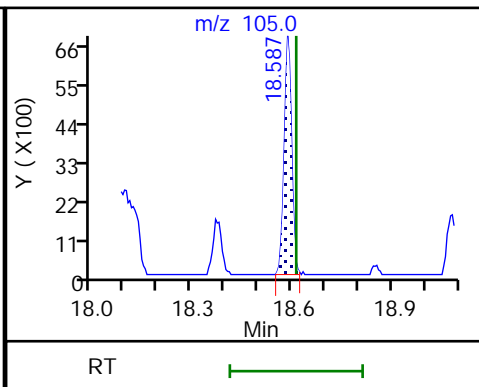
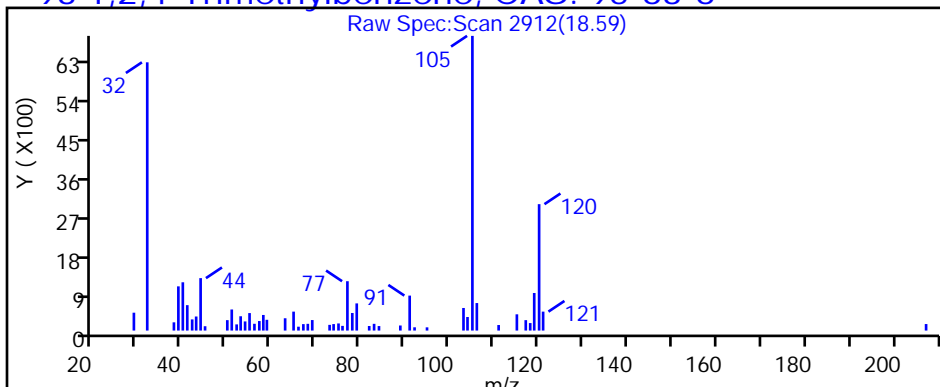
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P106.D

Injection Date: 25-Feb-2019 21:53:30

Instrument ID: MH

Lims ID: 140-14387-A-6

Lab Sample ID: 140-14387-6

Client ID: SV-184-MB-3

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

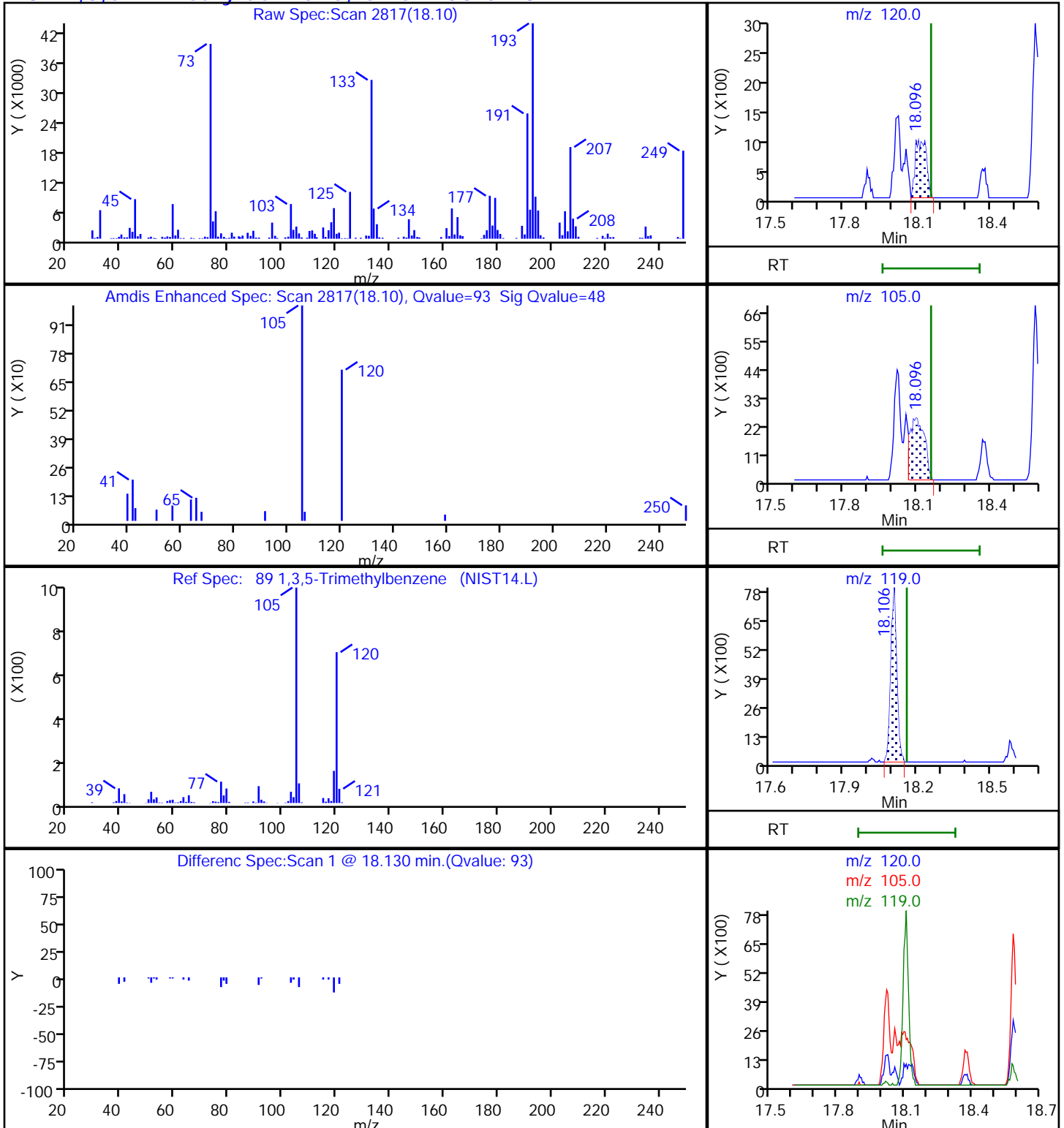
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P106.D

Injection Date: 25-Feb-2019 21:53:30

Instrument ID: MH

Lims ID: 140-14387-A-6

Lab Sample ID: 140-14387-6

Client ID: SV-184-MB-3

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

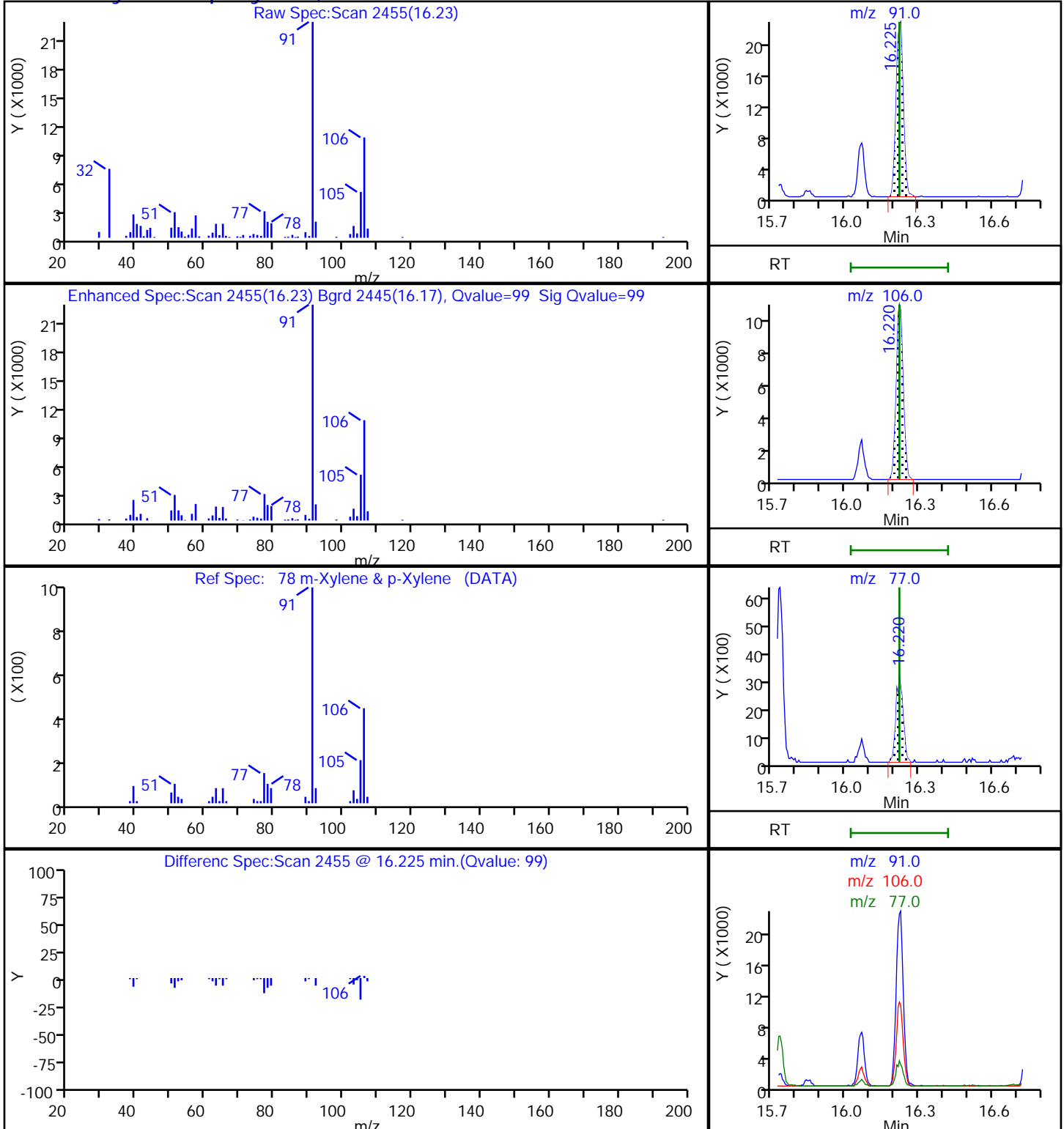
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P106.D

Injection Date: 25-Feb-2019 21:53:30

Instrument ID: MH

Lims ID: 140-14387-A-6

Lab Sample ID: 140-14387-6

Client ID: SV-184-MB-3

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

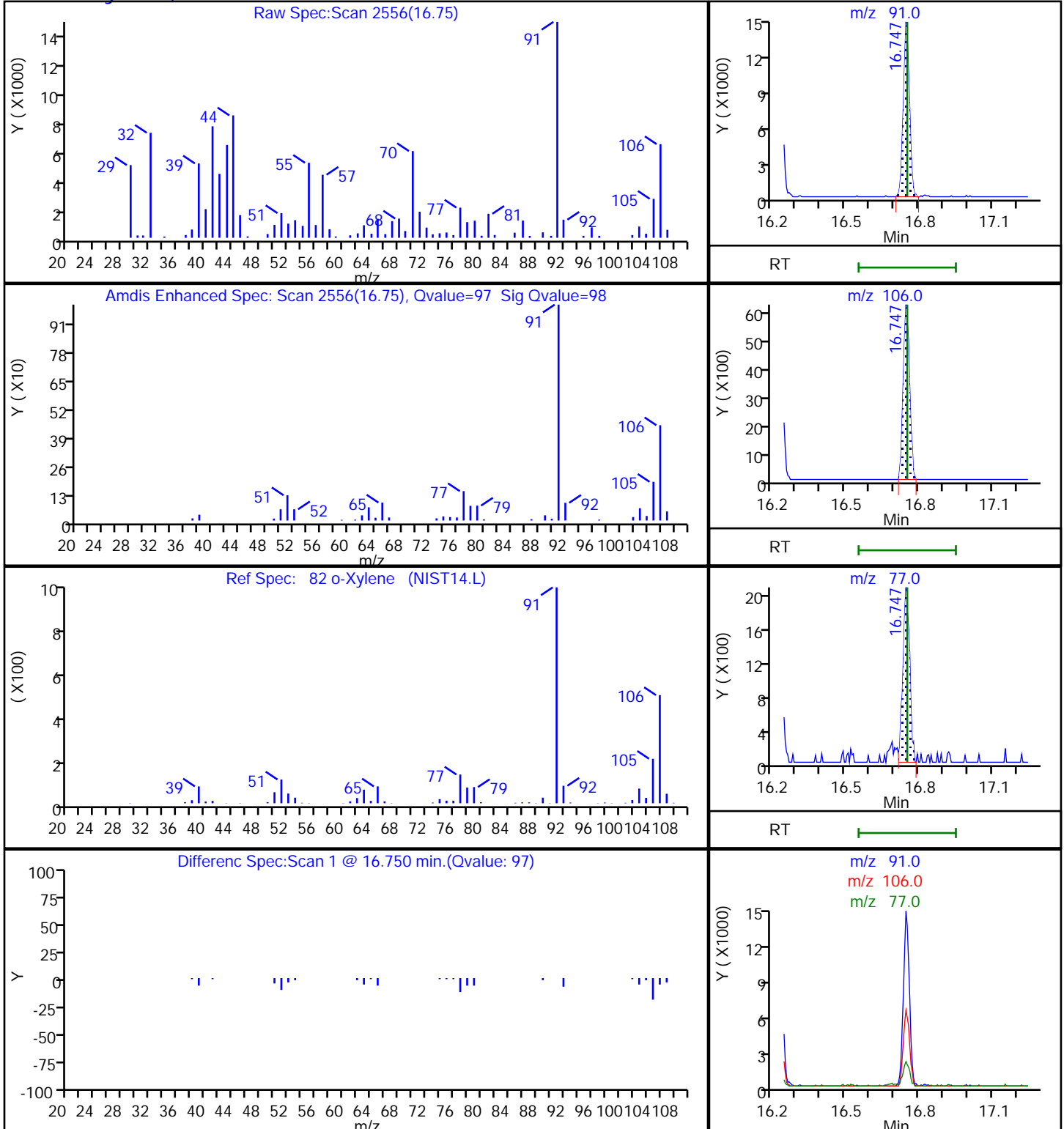
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-185-MB-3 Lab Sample ID: 140-14387-7
 Matrix: Air Lab File ID: HB25P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 11:14
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 22:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.28	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	4.3		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.84		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.28	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.19	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.27	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.86	CI	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-185-MB-3 Lab Sample ID: 140-14387-7
 Matrix: Air Lab File ID: HB25P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 11:14
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 22:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.89	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	17		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	3.3		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.0	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.3	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	4.2	CI	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D
 Lims ID: 140-14387-A-7
 Client ID: SV-185-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 22:46:30 ALS Bottle#: 7 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-015
 Misc. Info.: 140-14387-a-7
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:09:52 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:09:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.814	0.010	96	272937	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1451084	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1258817	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	830504	4.05	
6 Chlorodifluoromethane	51	3.681	3.681	-0.001	97	15339	0.0685	M
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	33304	0.0969	
27 1,1-Dichloroethene	96	5.925	5.919	0.005	96	17838	0.1683	
31 Methylene Chloride	84	6.281	6.271	0.010	98	19360	0.1735	
37 1,1-Dichloroethane	63	7.511	7.501	0.010	100	176255	0.8523	
45 1,1,1-Trichloroethane	97	9.852	9.853	-0.001	97	8663	0.0384	
47 Benzene	78	10.462	10.452	0.010	96	17031	0.0555	
65 Toluene	91	13.760	13.760	0.000	93	121928	0.3403	
76 Ethylbenzene	91	16.060	16.060	0.000	99	25998	0.0570	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	66319	0.1885	
82 o-Xylene	91	16.747	16.752	-0.005	98	31443	0.0878	
89 1,3,5-Trimethylbenzene	120	18.096	18.132	-0.062	69	30766	0.1720	
93 1,2,4-Trimethylbenzene	105	18.587	18.613	-0.026	97	22478	0.0548	
S 121 Xylenes, Total	100				0		0.2763	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D

Injection Date: 25-Feb-2019 22:46:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-7

Lab Sample ID: 140-14387-7

Worklist Smp#: 15

Client ID: SV-185-MB-3

Purge Vol: 500.000 mL

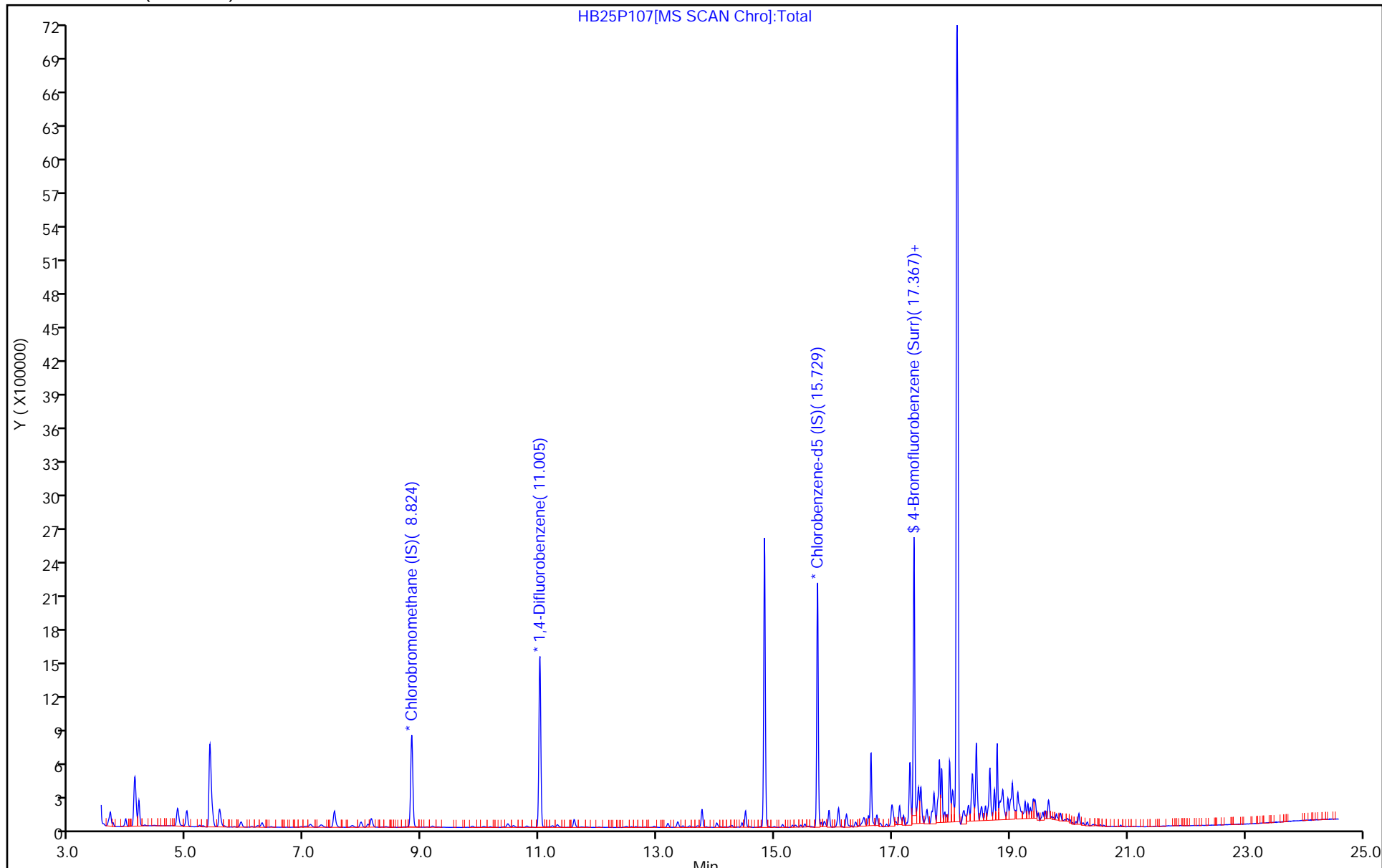
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D
 Lims ID: 140-14387-A-7
 Client ID: SV-185-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 22:46:30 ALS Bottle#: 7 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-015
 Misc. Info.: 140-14387-a-7
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:09:52 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:09:52

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.05	101.22

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D

Injection Date: 25-Feb-2019 22:46:30

Instrument ID: MH

Lims ID: 140-14387-A-7

Lab Sample ID: 140-14387-7

Client ID: SV-185-MB-3

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

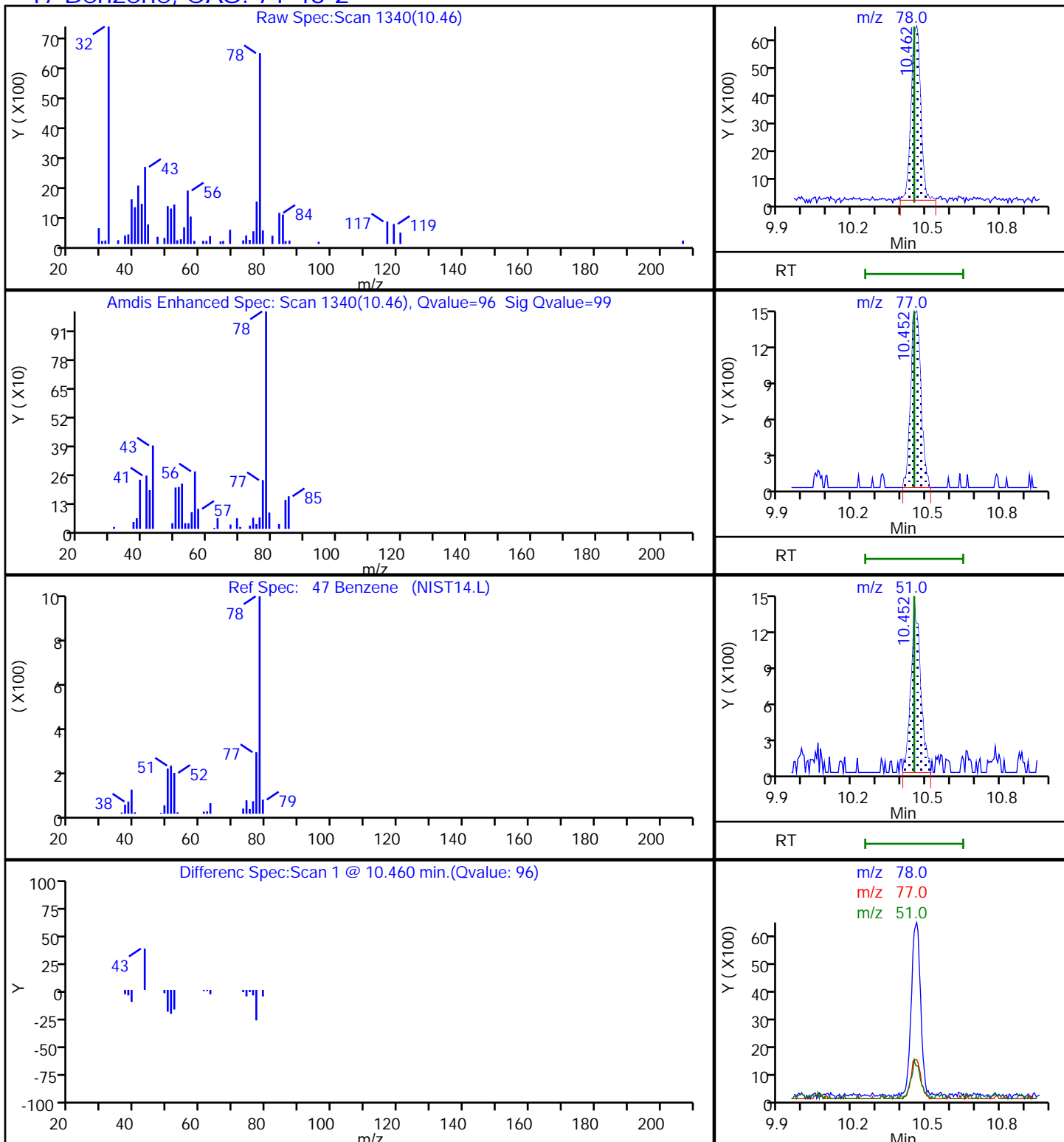
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D

Injection Date: 25-Feb-2019 22:46:30

Instrument ID: MH

Lims ID: 140-14387-A-7

Lab Sample ID: 140-14387-7

Client ID: SV-185-MB-3

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

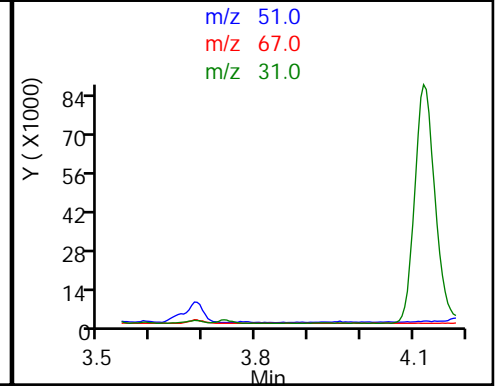
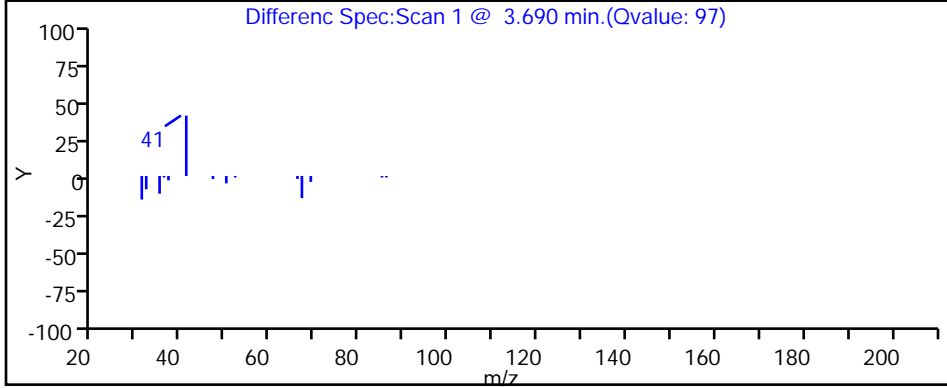
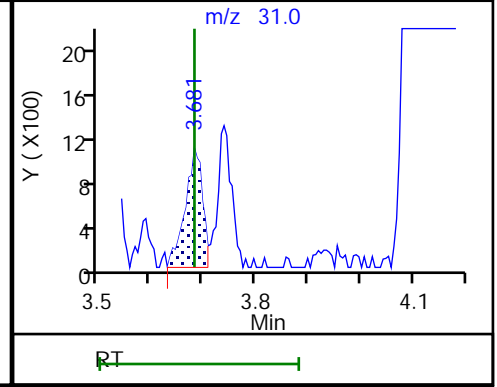
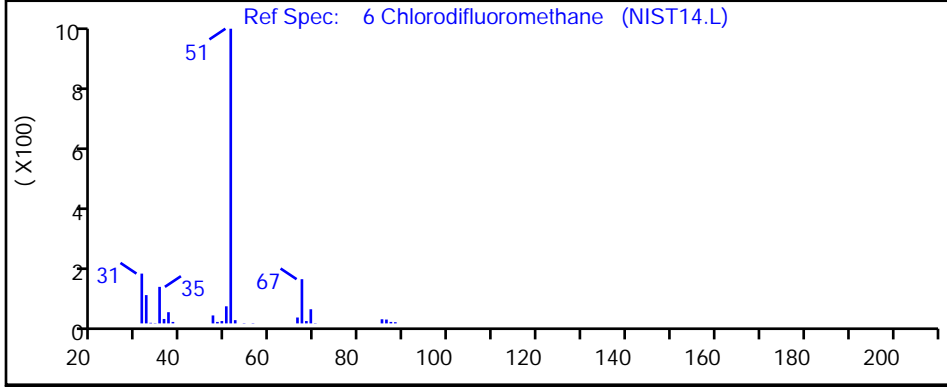
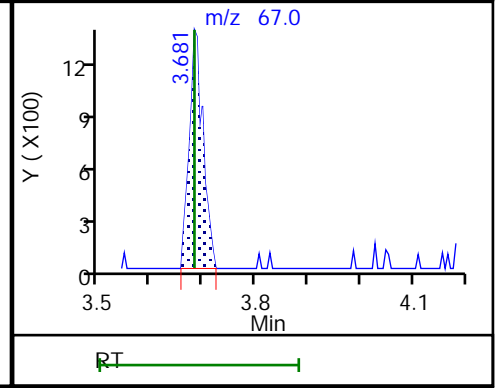
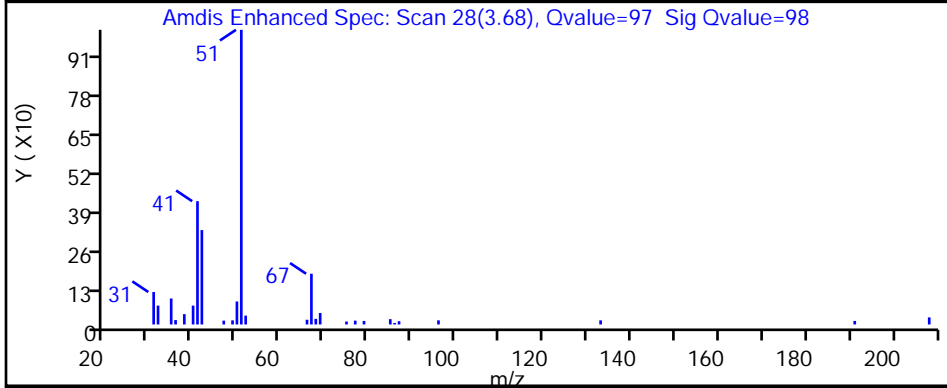
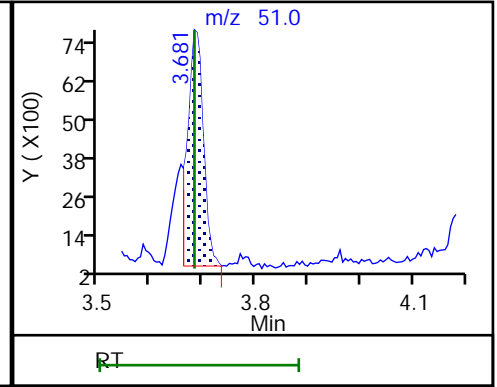
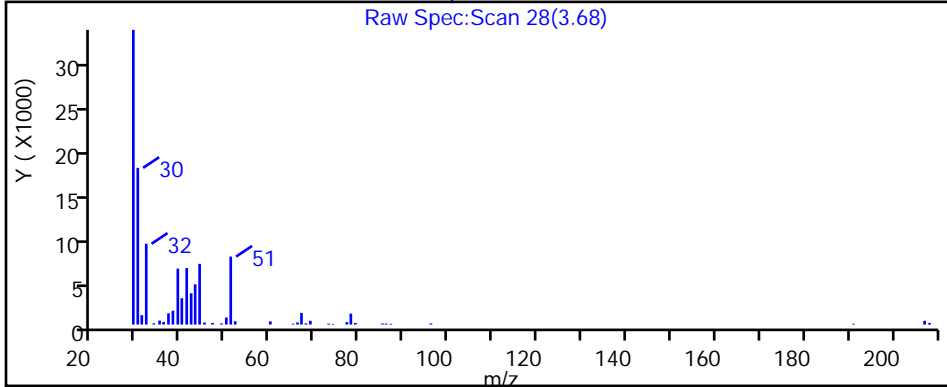
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D

Injection Date: 25-Feb-2019 22:46:30

Instrument ID: MH

Lims ID: 140-14387-A-7

Lab Sample ID: 140-14387-7

Client ID: SV-185-MB-3

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

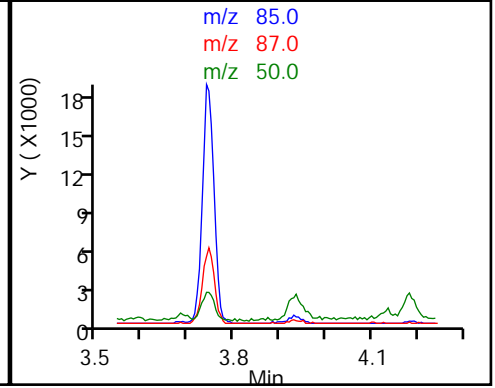
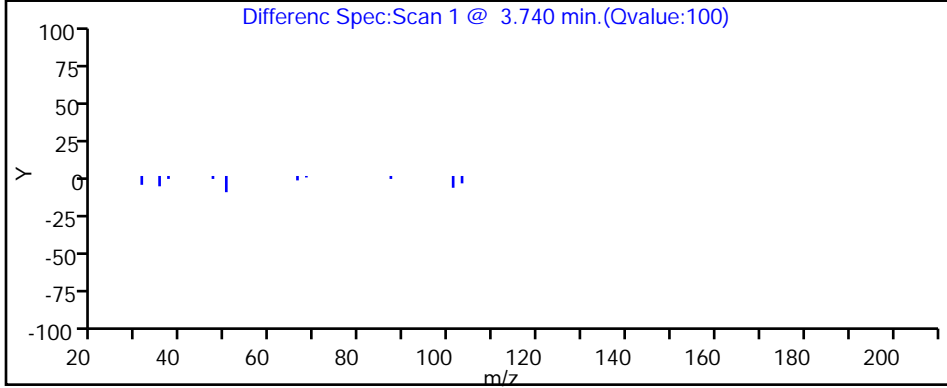
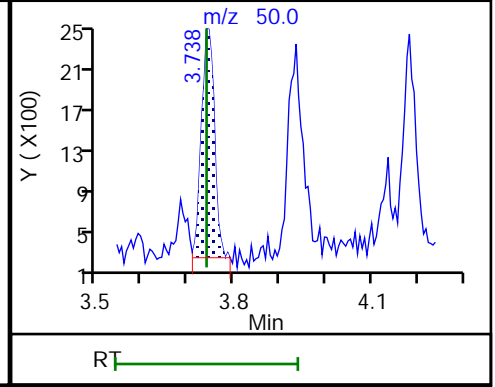
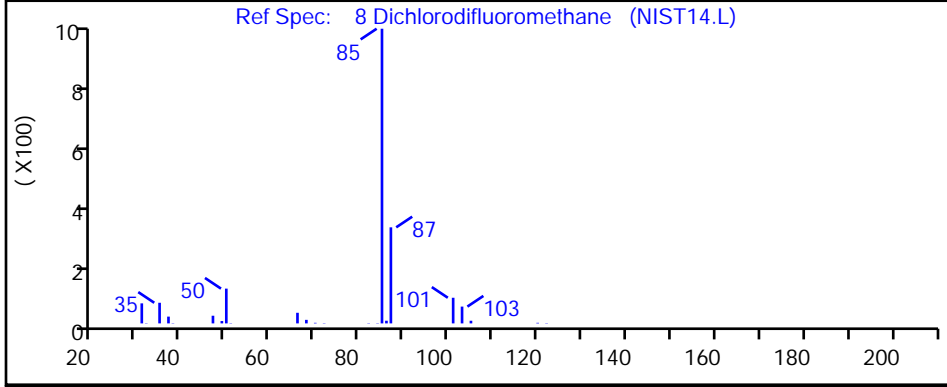
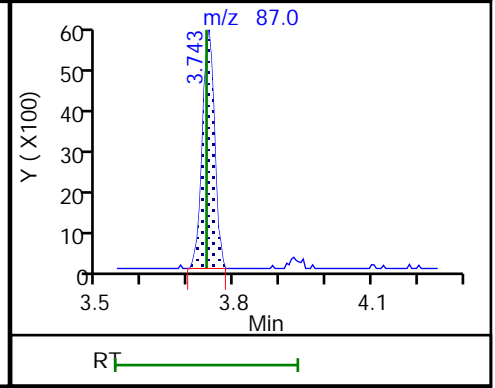
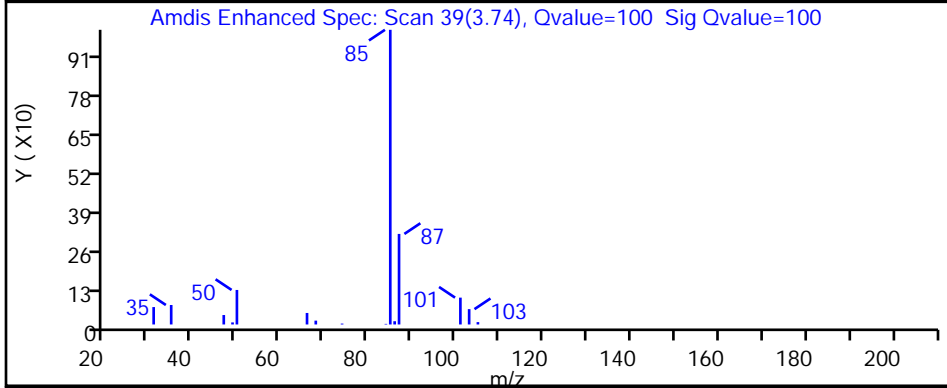
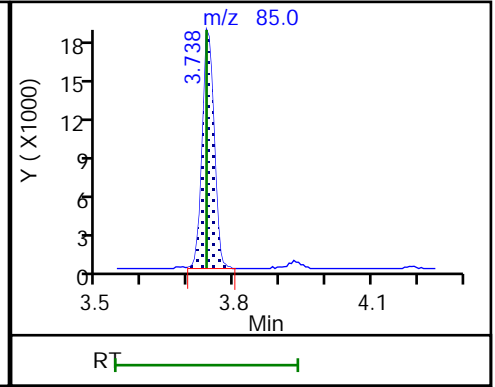
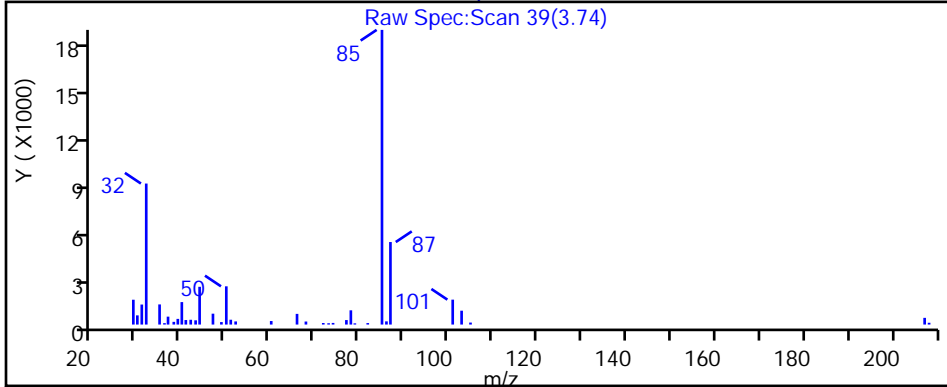
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D

Injection Date: 25-Feb-2019 22:46:30

Instrument ID: MH

Lims ID: 140-14387-A-7

Lab Sample ID: 140-14387-7

Client ID: SV-185-MB-3

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

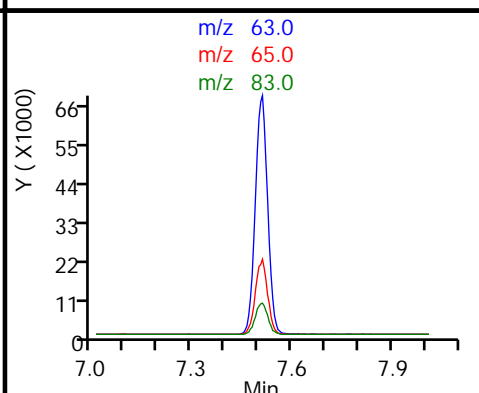
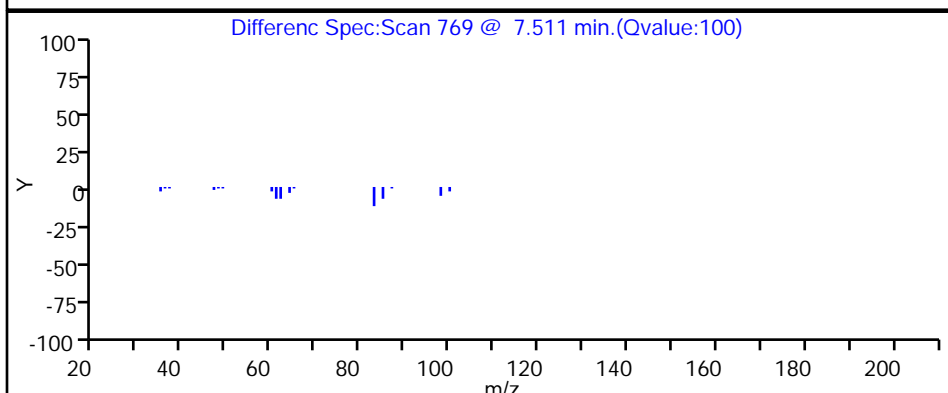
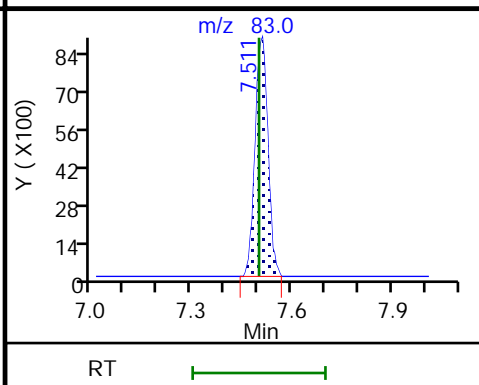
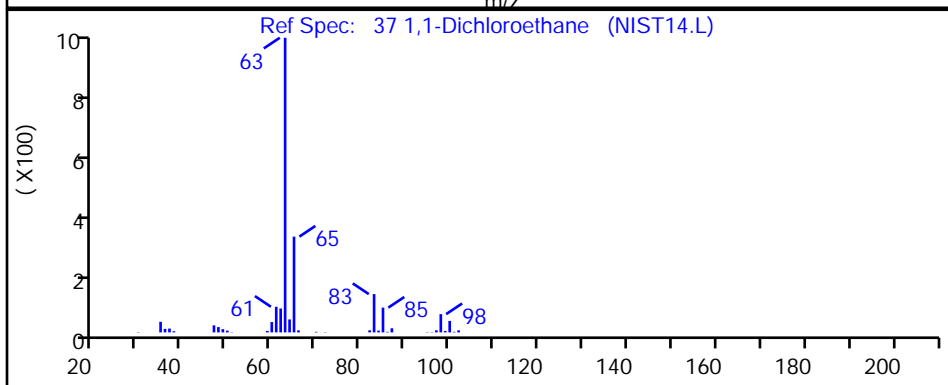
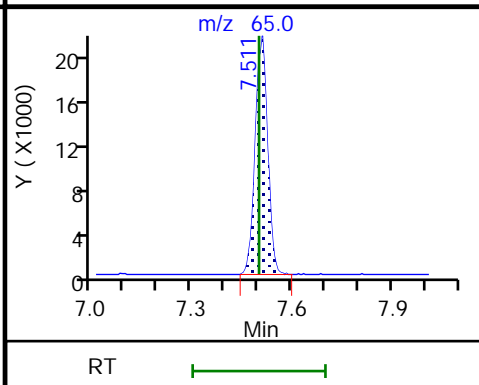
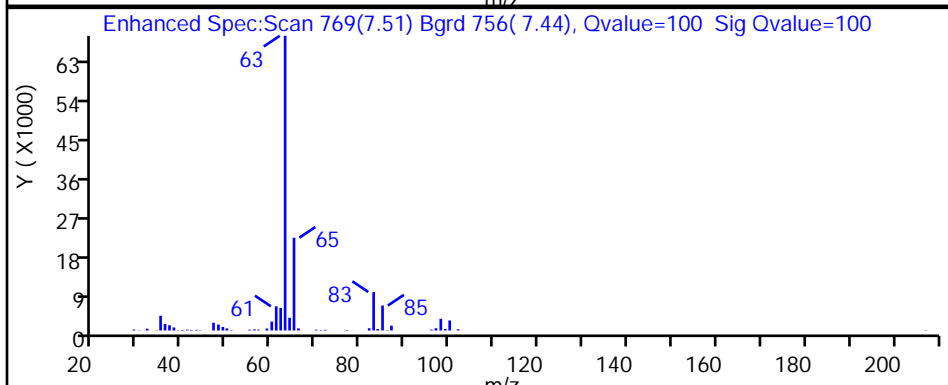
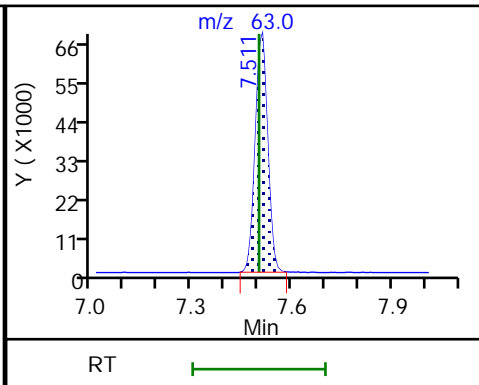
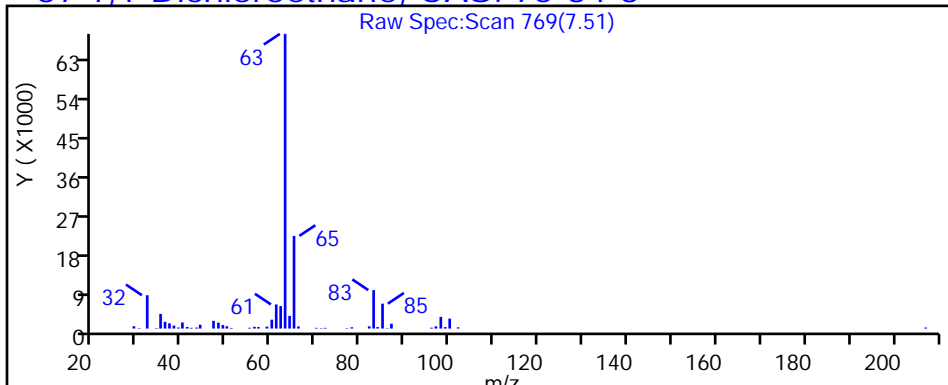
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D

Injection Date: 25-Feb-2019 22:46:30

Instrument ID: MH

Lims ID: 140-14387-A-7

Lab Sample ID: 140-14387-7

Client ID: SV-185-MB-3

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

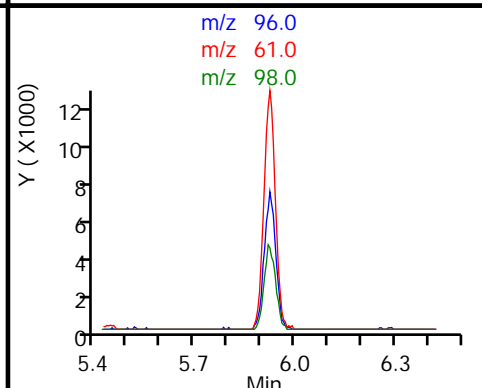
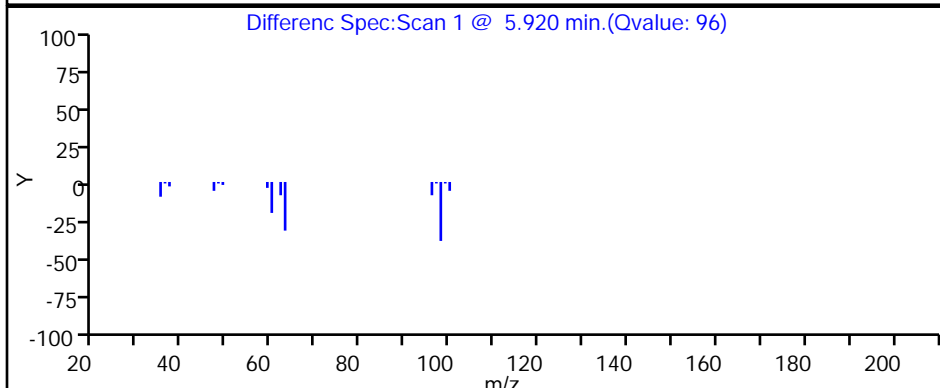
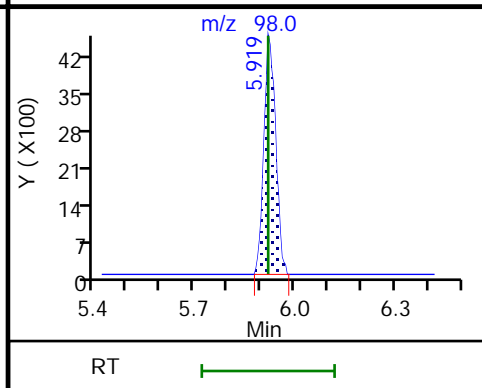
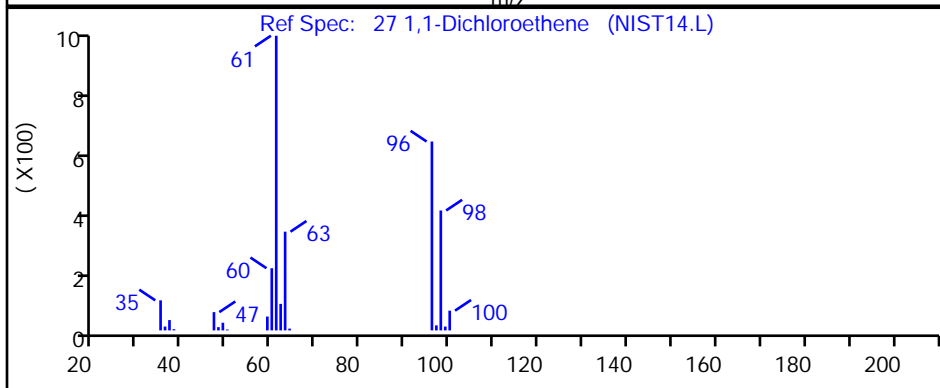
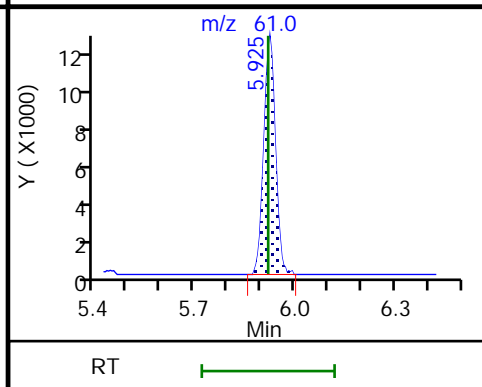
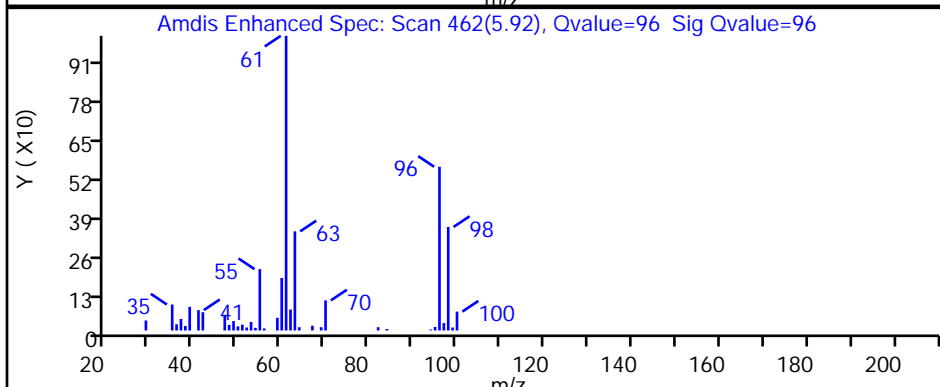
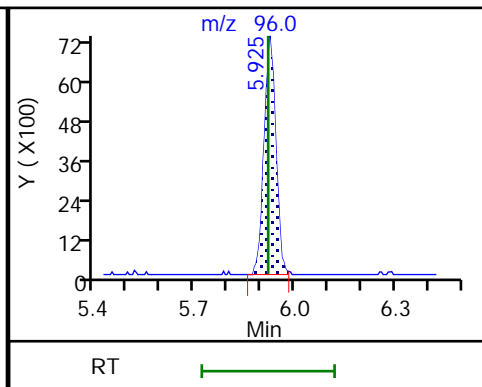
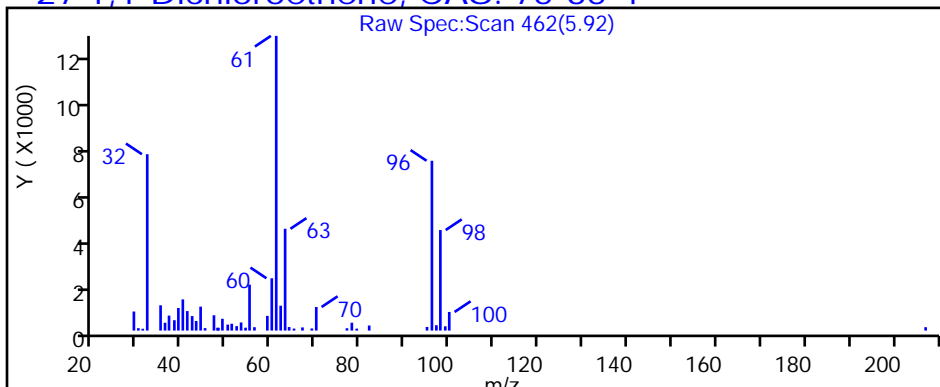
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D

Injection Date: 25-Feb-2019 22:46:30

Instrument ID: MH

Lims ID: 140-14387-A-7

Lab Sample ID: 140-14387-7

Client ID: SV-185-MB-3

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

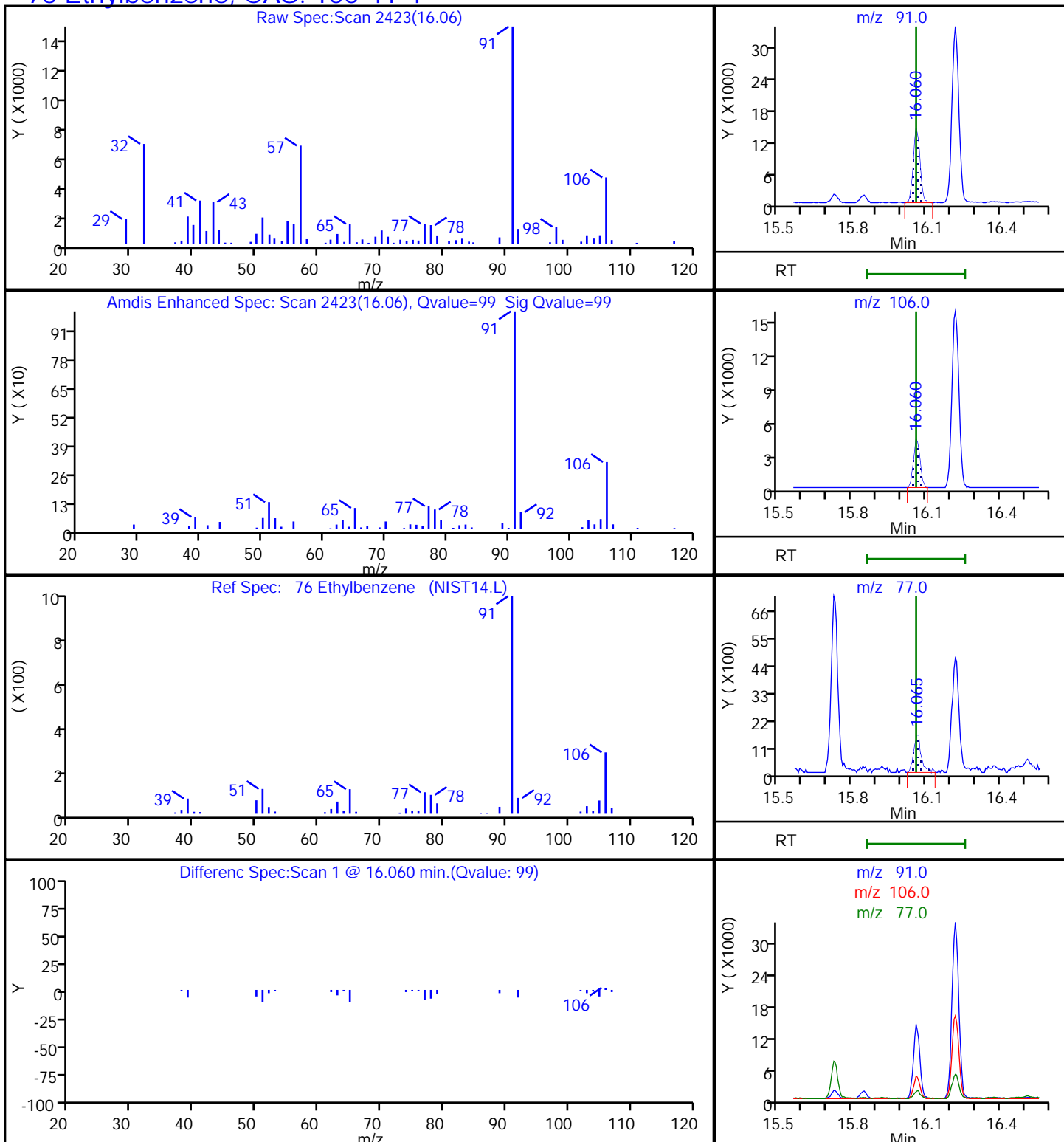
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D

Injection Date: 25-Feb-2019 22:46:30

Instrument ID: MH

Lims ID: 140-14387-A-7

Lab Sample ID: 140-14387-7

Client ID: SV-185-MB-3

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

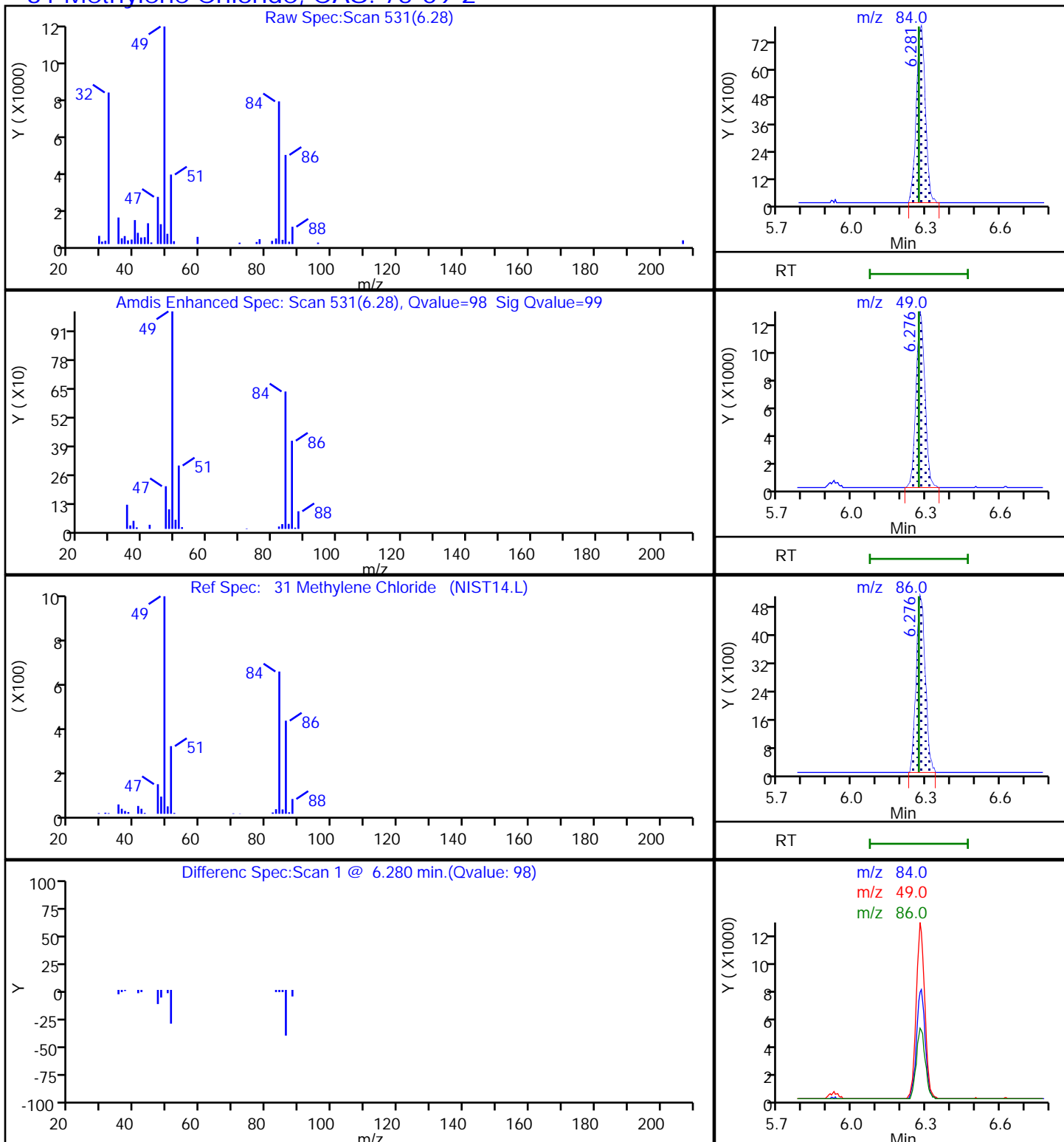
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D

Injection Date: 25-Feb-2019 22:46:30

Instrument ID: MH

Lims ID: 140-14387-A-7

Lab Sample ID: 140-14387-7

Client ID: SV-185-MB-3

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

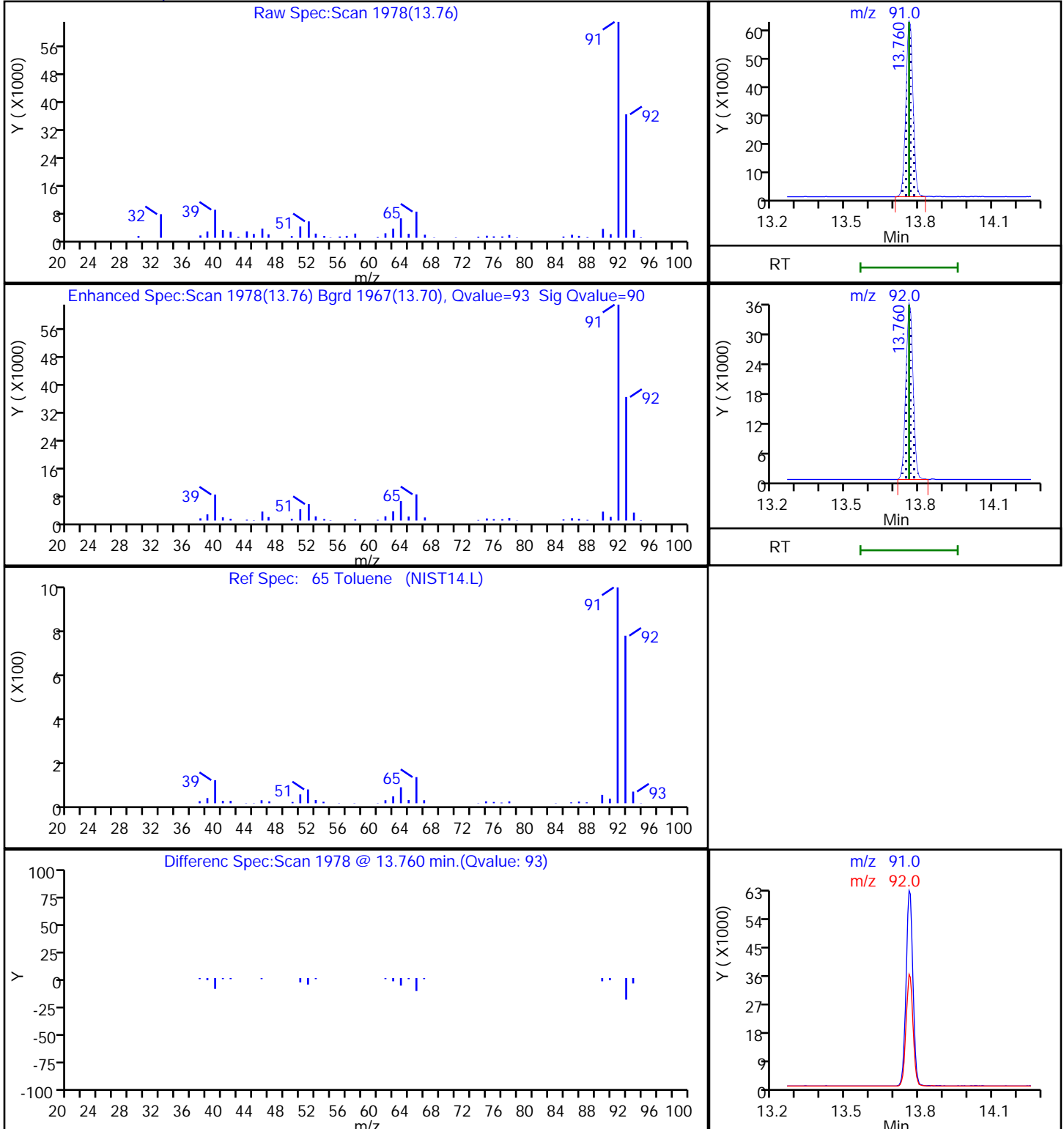
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D

Injection Date: 25-Feb-2019 22:46:30

Instrument ID: MH

Lims ID: 140-14387-A-7

Lab Sample ID: 140-14387-7

Client ID: SV-185-MB-3

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

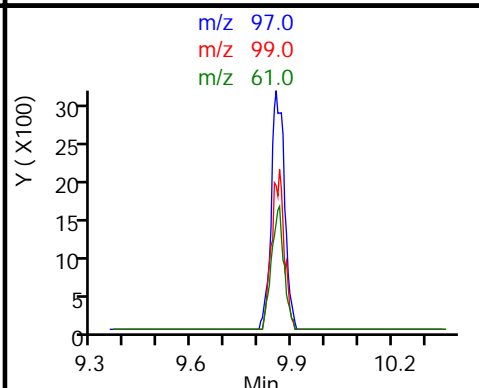
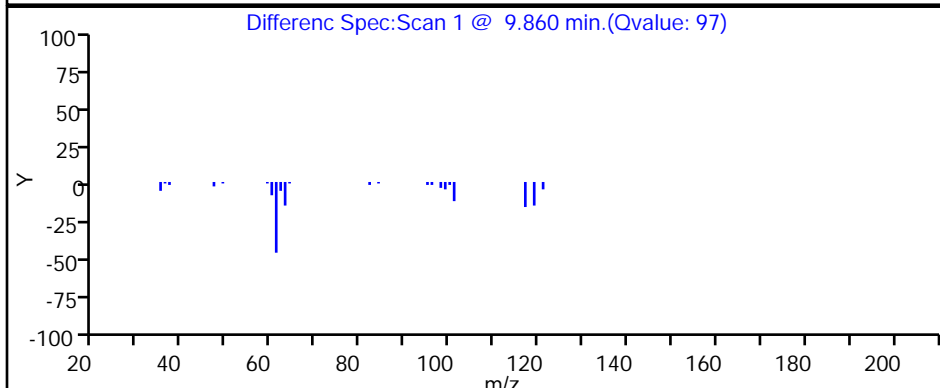
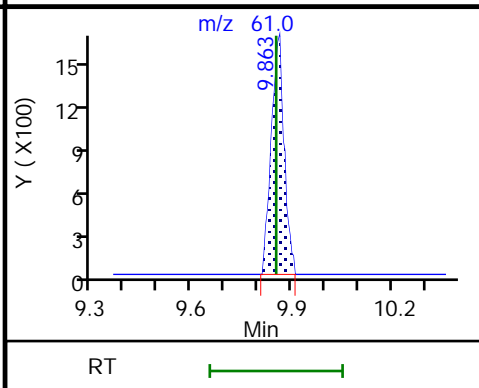
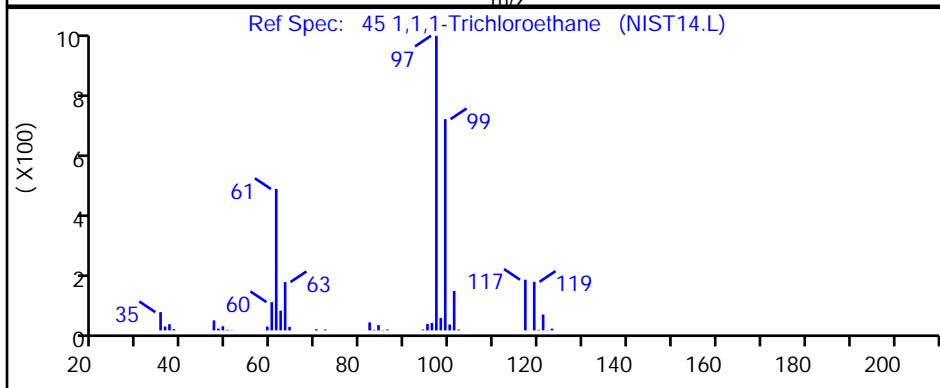
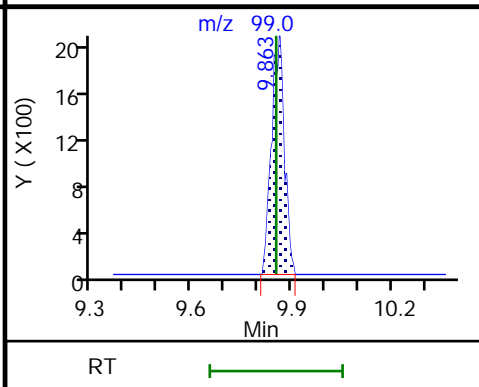
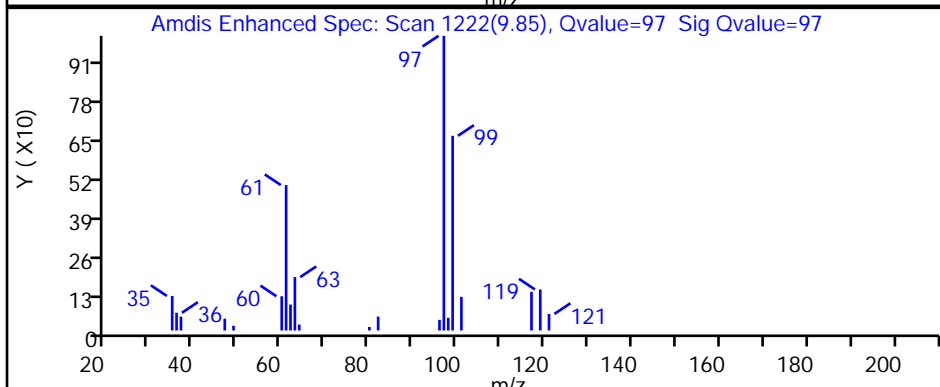
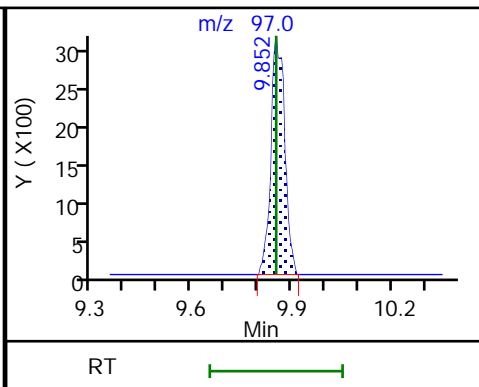
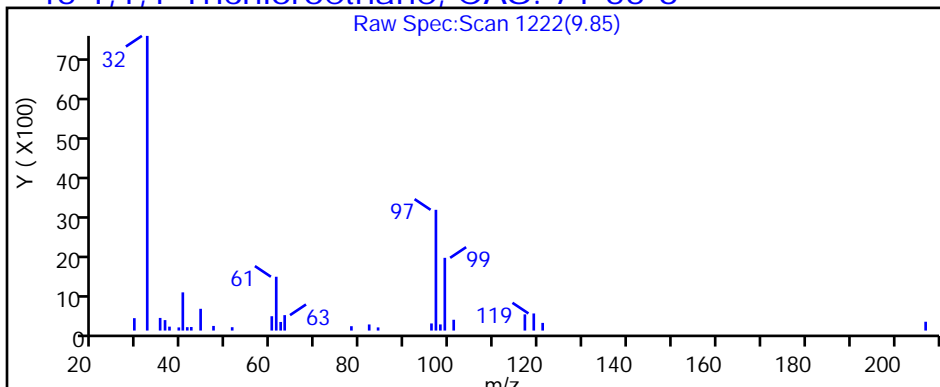
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D

Injection Date: 25-Feb-2019 22:46:30

Instrument ID: MH

Lims ID: 140-14387-A-7

Lab Sample ID: 140-14387-7

Client ID: SV-185-MB-3

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

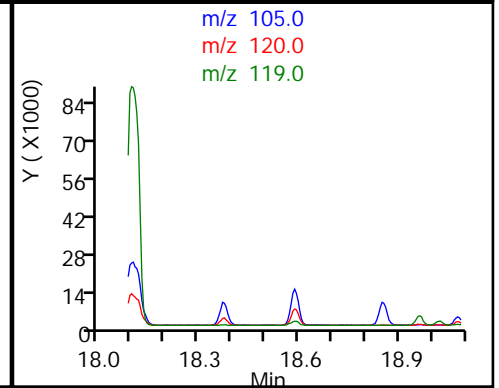
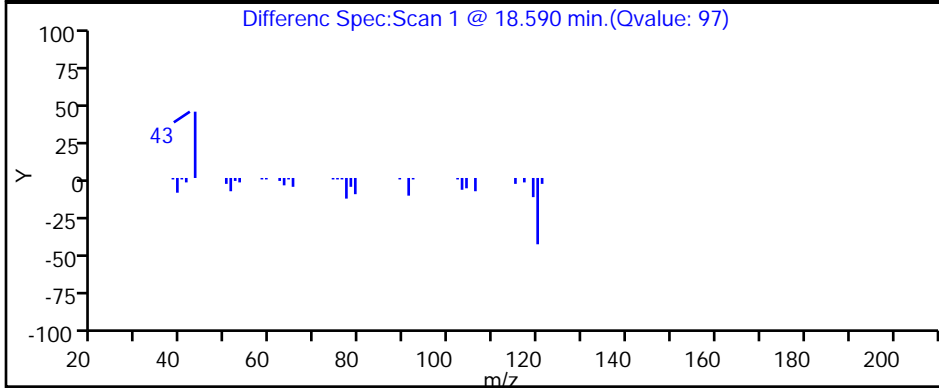
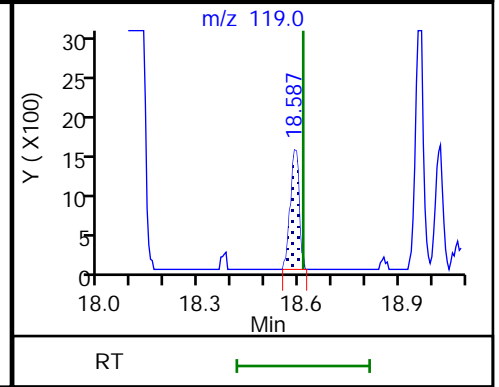
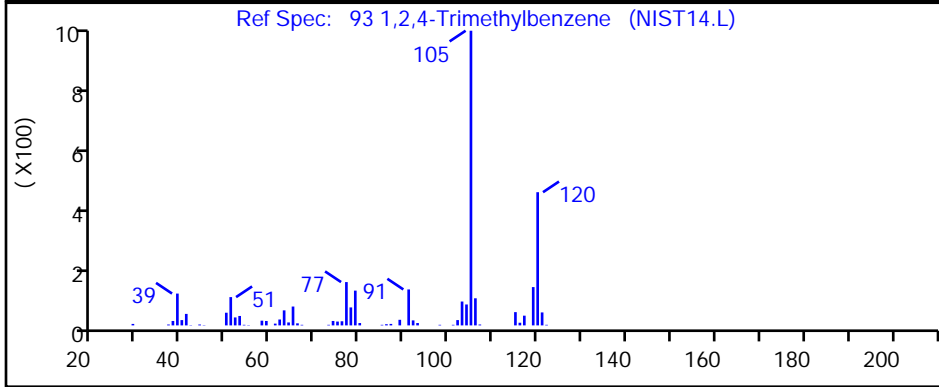
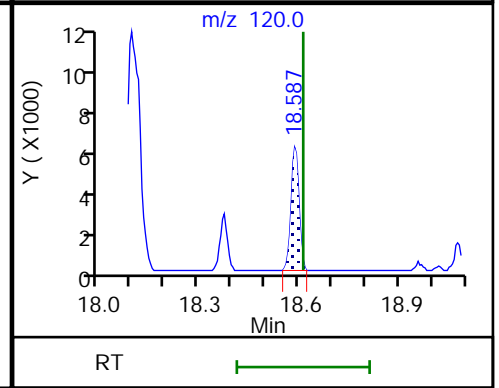
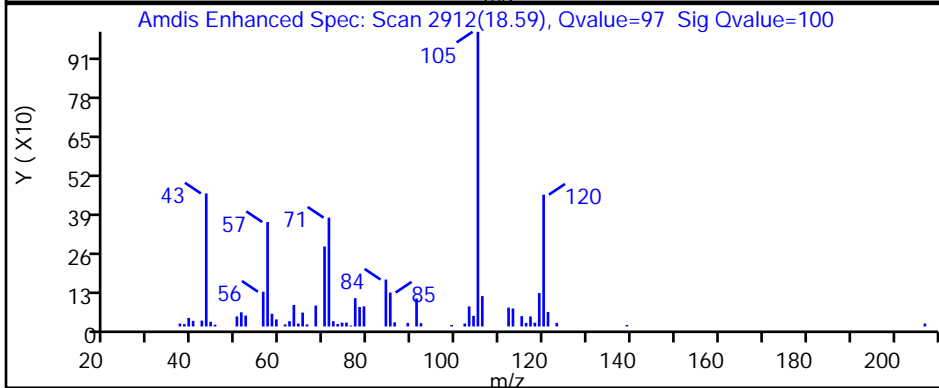
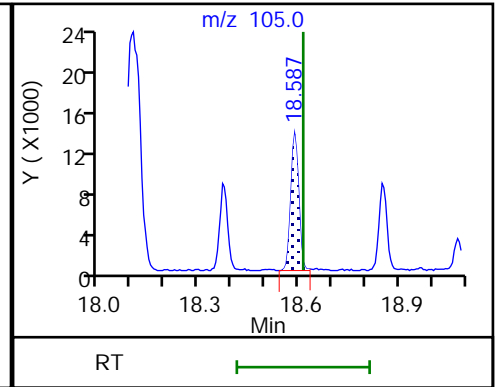
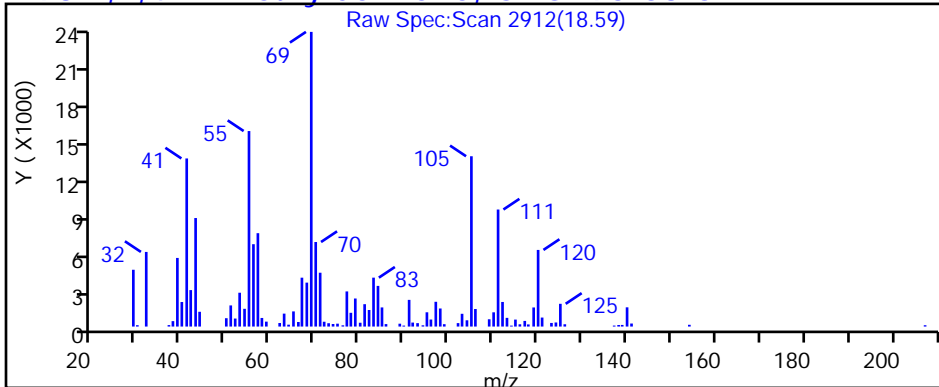
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D

Injection Date: 25-Feb-2019 22:46:30

Instrument ID: MH

Lims ID: 140-14387-A-7

Lab Sample ID: 140-14387-7

Client ID: SV-185-MB-3

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

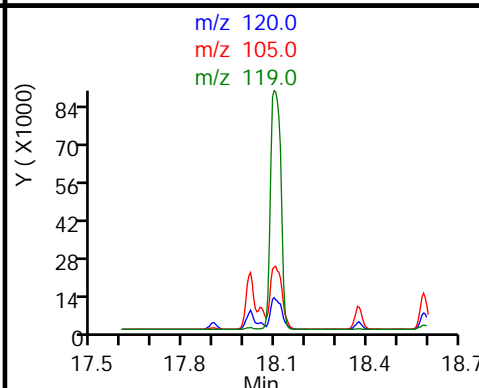
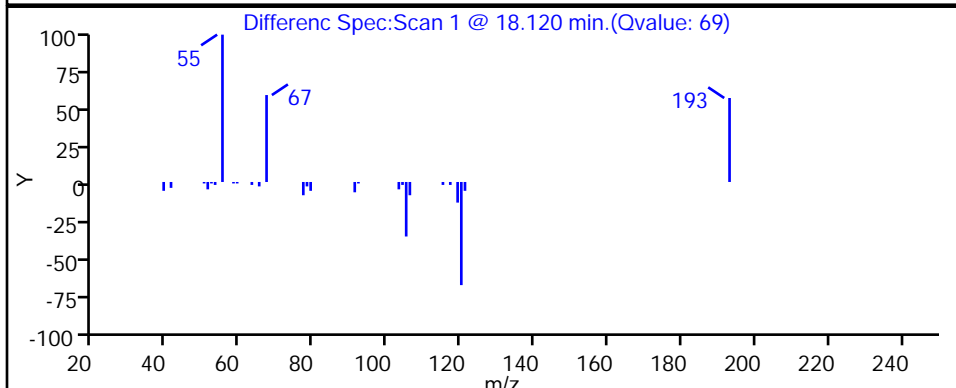
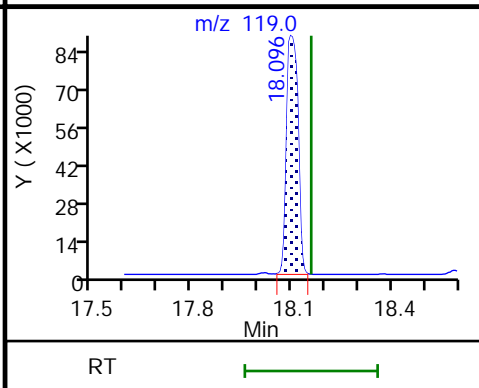
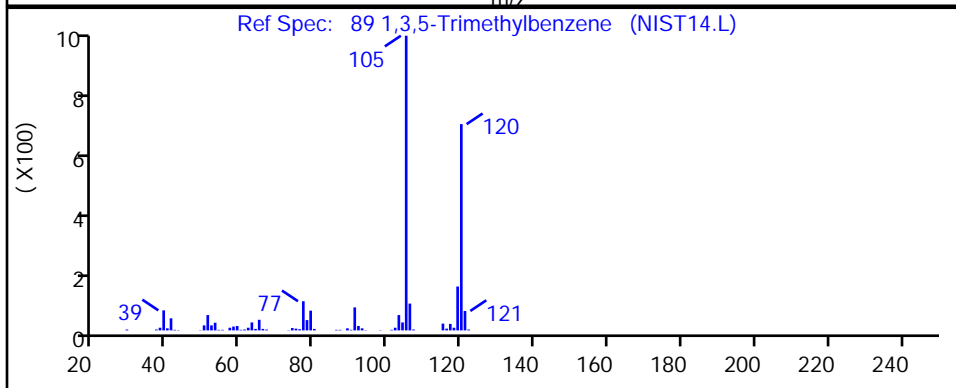
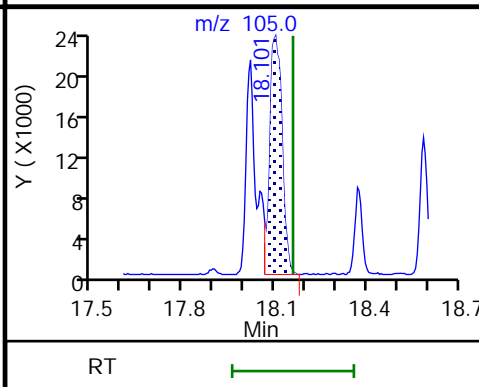
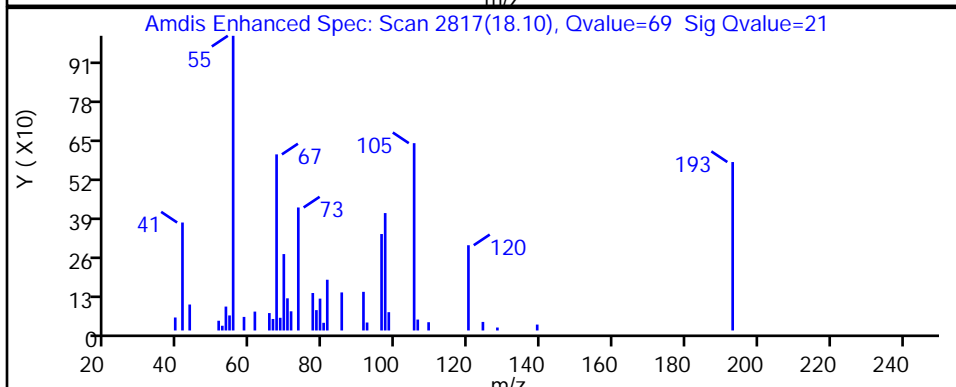
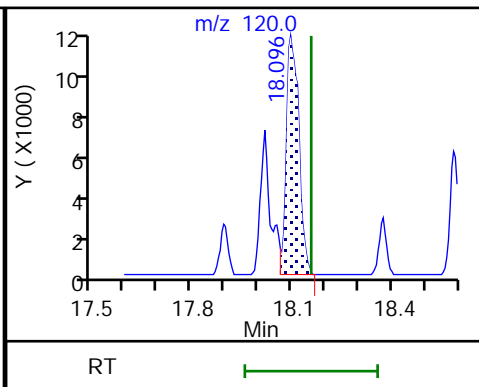
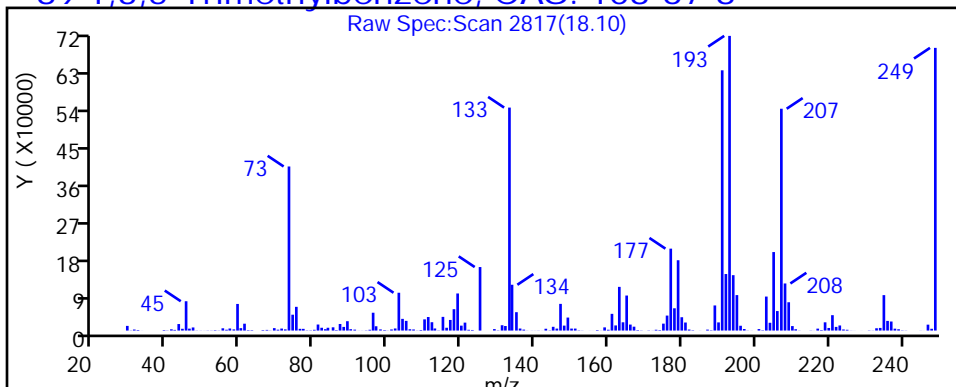
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D

Injection Date: 25-Feb-2019 22:46:30

Instrument ID: MH

Lims ID: 140-14387-A-7

Lab Sample ID: 140-14387-7

Client ID: SV-185-MB-3

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

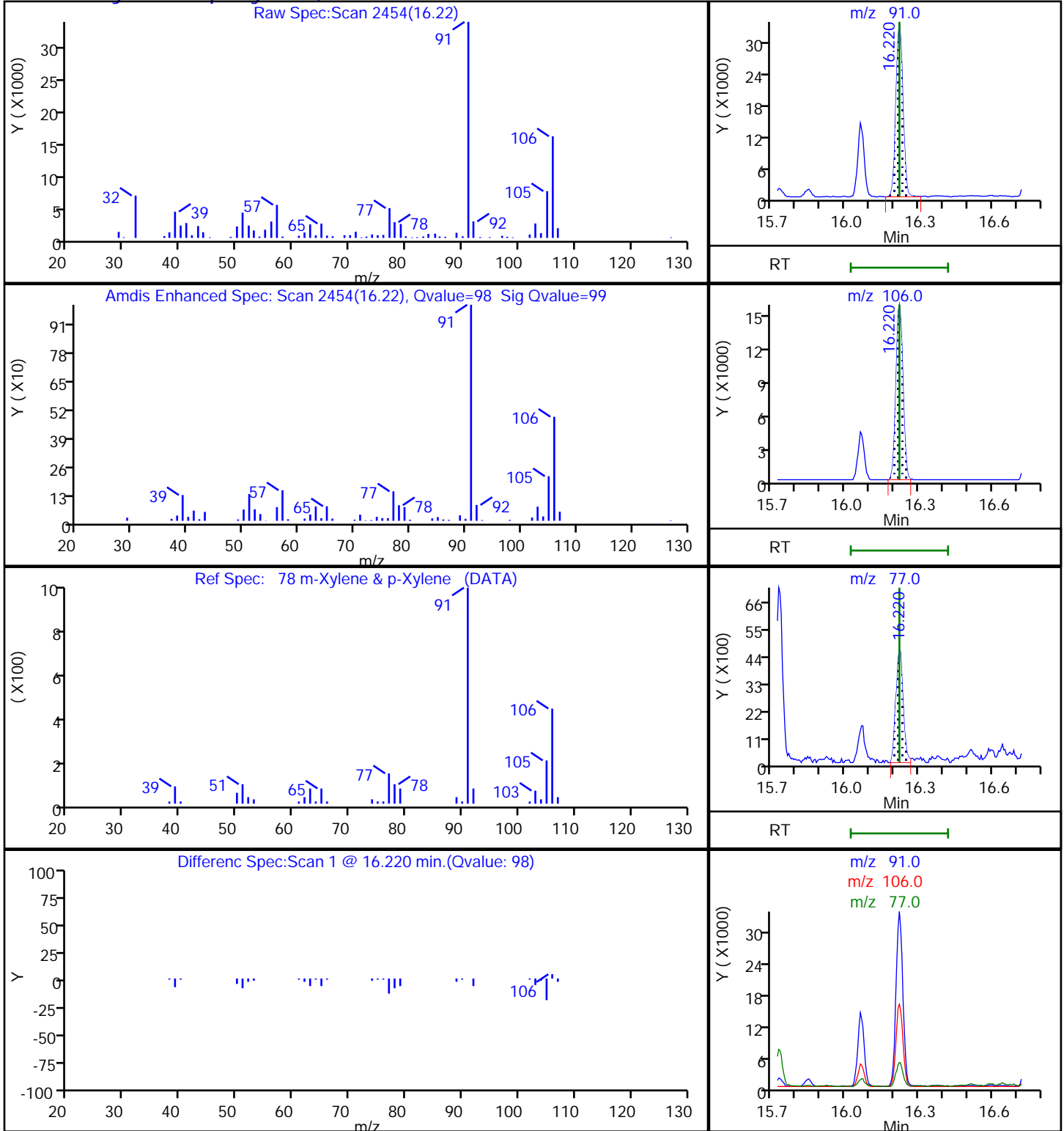
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D

Injection Date: 25-Feb-2019 22:46:30

Instrument ID: MH

Lims ID: 140-14387-A-7

Lab Sample ID: 140-14387-7

Client ID: SV-185-MB-3

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

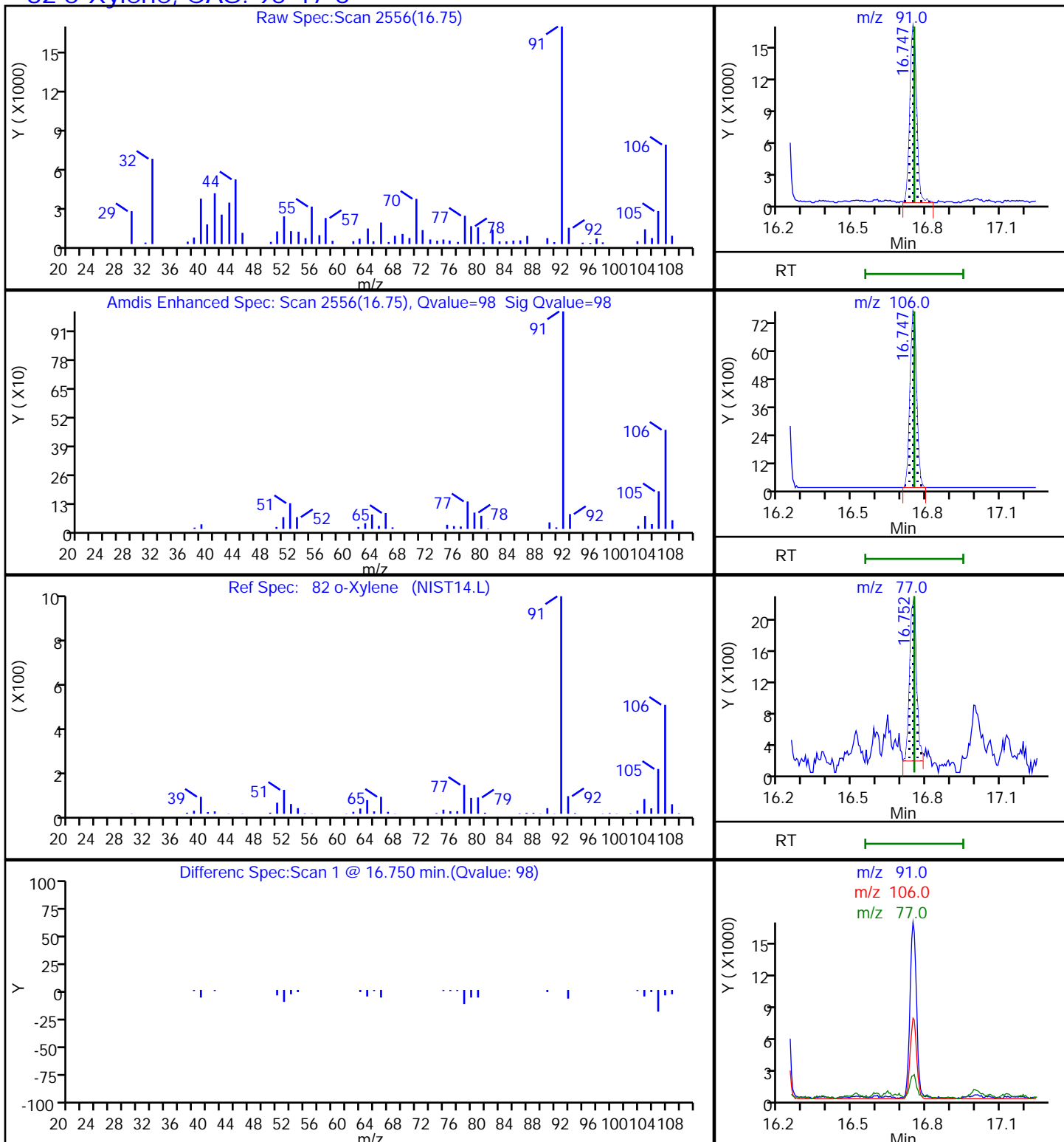
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



TestAmerica Knoxville

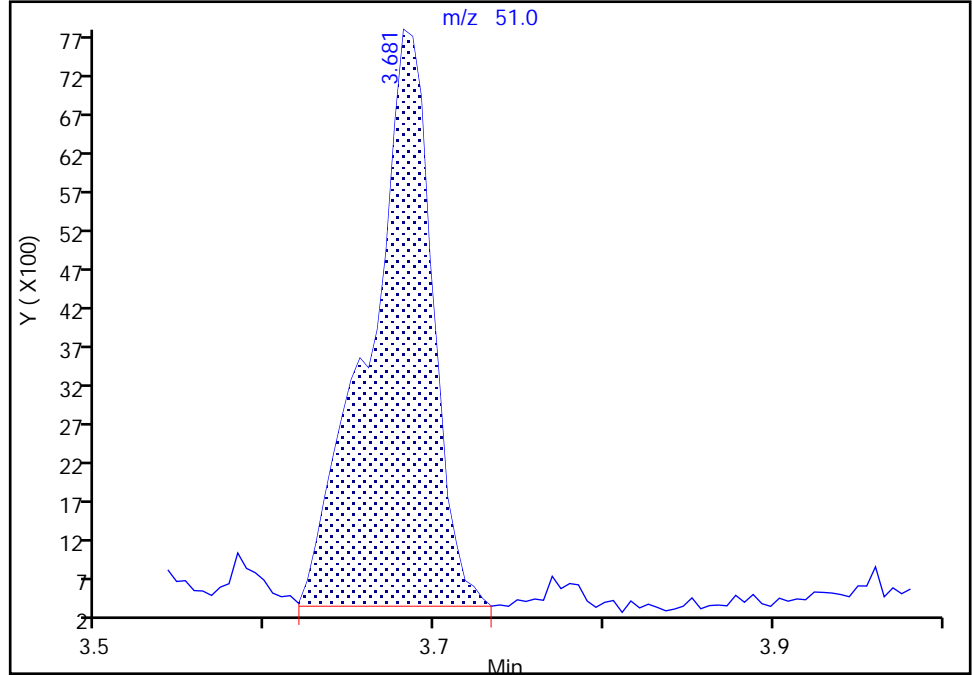
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P107.D
Injection Date: 25-Feb-2019 22:46:30 Instrument ID: MH
Lims ID: 140-14387-A-7 Lab Sample ID: 140-14387-7
Client ID: SV-185-MB-3
Operator ID: HMT ALS Bottle#: 7 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

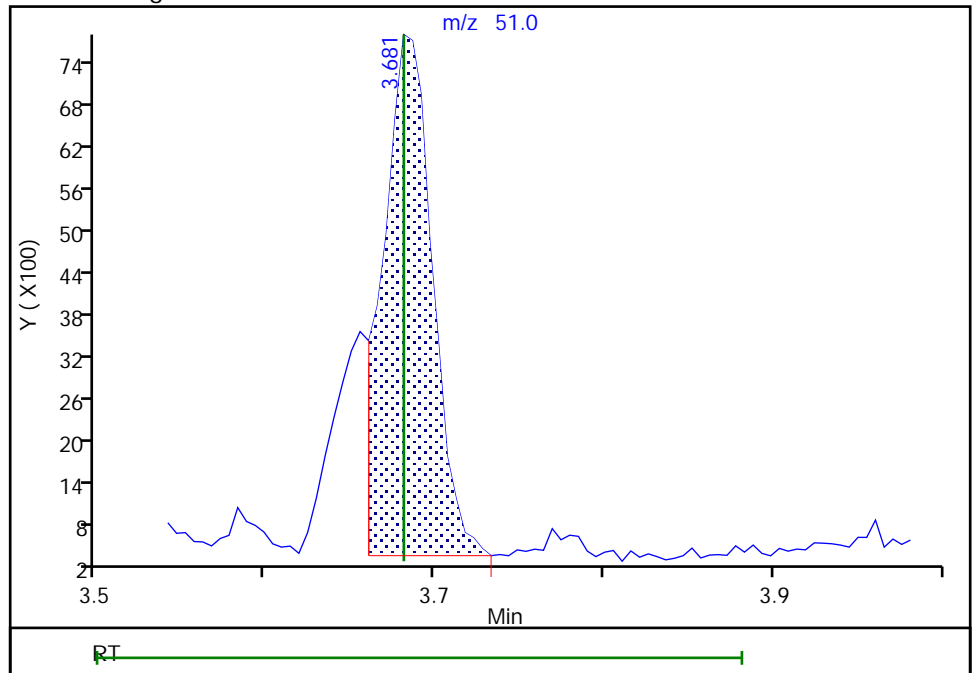
RT: 3.68
Area: 19442
Amount: 0.086872
Amount Units: ppb v/v

Processing Integration Results



RT: 3.68
Area: 15339
Amount: 0.068539
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 26-Feb-2019 20:09:08

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-186-MB-3 Lab Sample ID: 140-14387-8
 Matrix: Air Lab File ID: HB25P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 11:15
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 23:39
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.28	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.36	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.18	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.24	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.70	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-186-MB-3 Lab Sample ID: 140-14387-8
 Matrix: Air Lab File ID: HB25P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 11:15
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 23:39
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.88	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.74	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.78	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.2	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D
 Lims ID: 140-14387-A-8
 Client ID: SV-186-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 23:39:30 ALS Bottle#: 8 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-016
 Misc. Info.: 140-14387-a-8
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:10:34 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:10:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.814	0.005	96	293163	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1583887	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1361840	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	94	899597	4.05	
6 Chlorodifluoromethane	51	3.682	3.682	0.000	95	17140	0.0713	M
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	35755	0.0968	
31 Methylene Chloride	84	6.276	6.271	0.005	98	27385	0.2285	
37 1,1-Dichloroethane	63	7.506	7.501	0.005	95	8135	0.0366	
47 Benzene	78	10.457	10.452	0.005	97	18540	0.0554	
65 Toluene	91	13.765	13.760	0.005	93	87881	0.2267	
76 Ethylbenzene	91	16.065	16.060	0.005	99	14599	0.0296	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	38068	0.1000	
82 o-Xylene	91	16.752	16.752	0.000	98	15880	0.0410	
89 1,3,5-Trimethylbenzene	120	18.101	18.101	-0.057	40	4717	0.0476	a
93 1,2,4-Trimethylbenzene	105	18.587	18.613	-0.026	97	14159	0.0319	
S 121 Xylenes, Total	100				0		0.1410	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D

Injection Date: 25-Feb-2019 23:39:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-8

Lab Sample ID: 140-14387-8

Worklist Smp#: 16

Client ID: SV-186-MB-3

Purge Vol: 500.000 mL

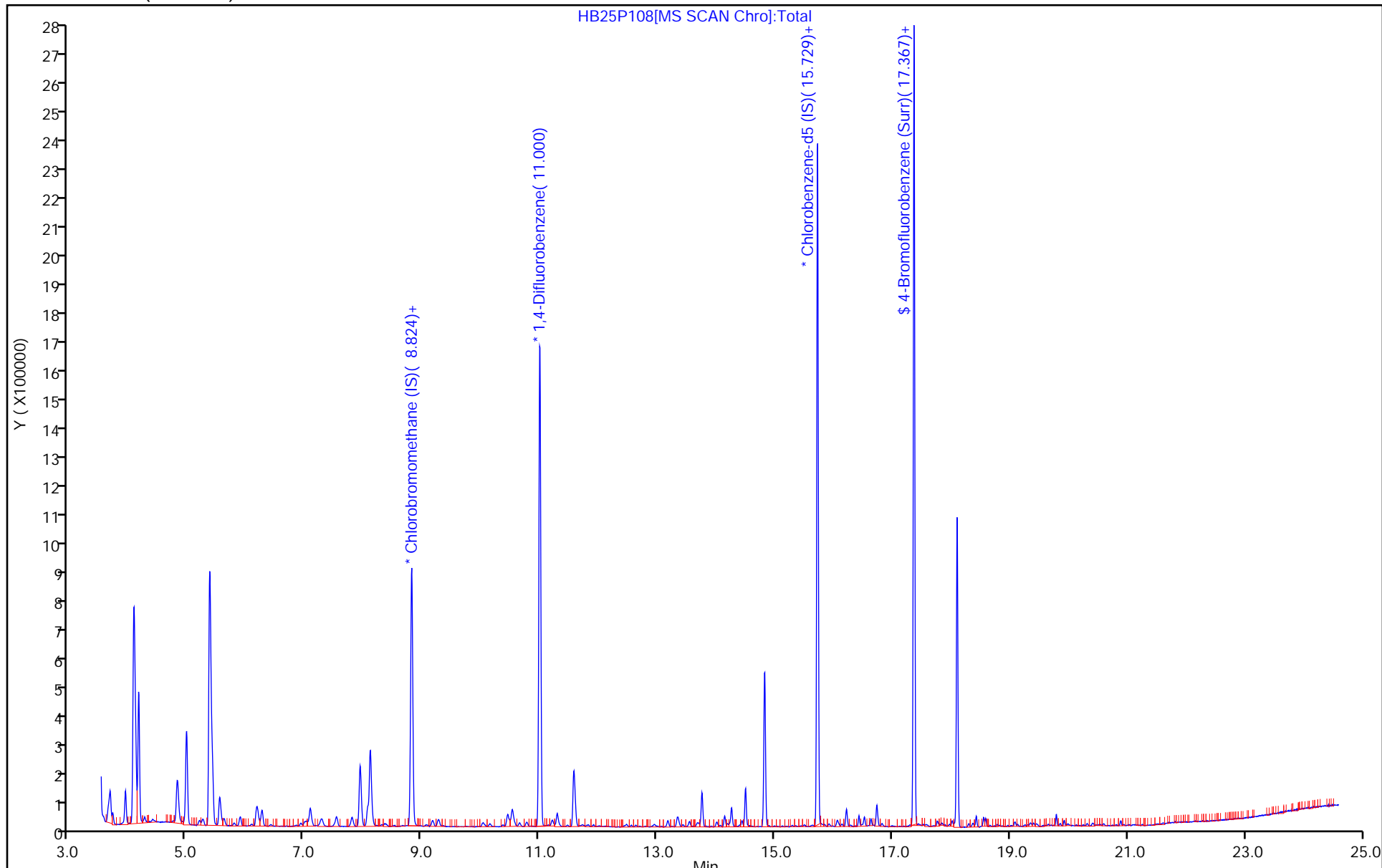
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D
 Lims ID: 140-14387-A-8
 Client ID: SV-186-MB-3
 Sample Type: Client
 Inject. Date: 25-Feb-2019 23:39:30 ALS Bottle#: 8 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-016
 Misc. Info.: 140-14387-a-8
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:10:34 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:10:34

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.05	101.34

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D

Injection Date: 25-Feb-2019 23:39:30

Instrument ID: MH

Lims ID: 140-14387-A-8

Lab Sample ID: 140-14387-8

Client ID: SV-186-MB-3

Operator ID: HMT

ALS Bottle#: 8 Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

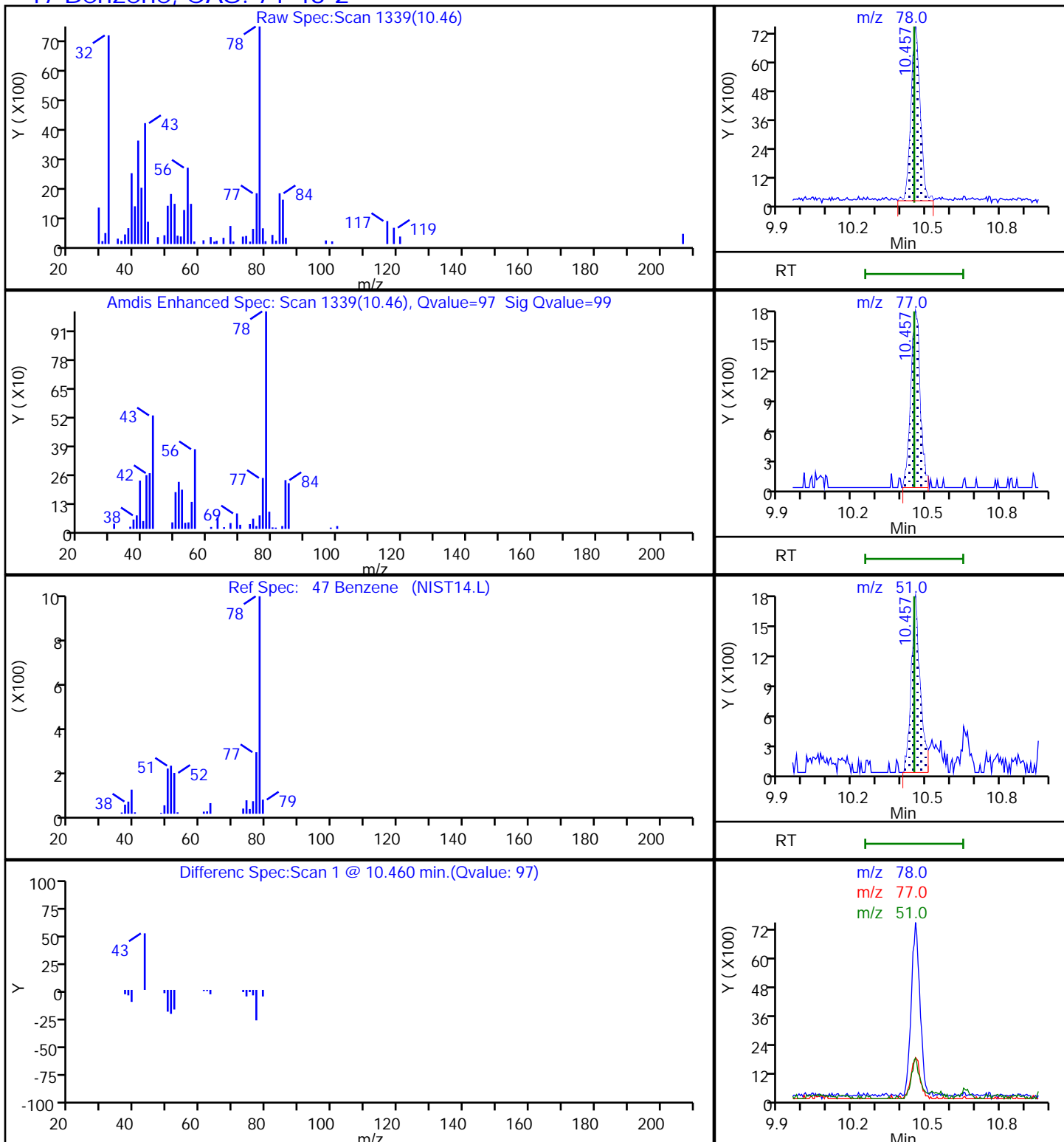
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D

Injection Date: 25-Feb-2019 23:39:30

Instrument ID: MH

Lims ID: 140-14387-A-8

Lab Sample ID: 140-14387-8

Client ID: SV-186-MB-3

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

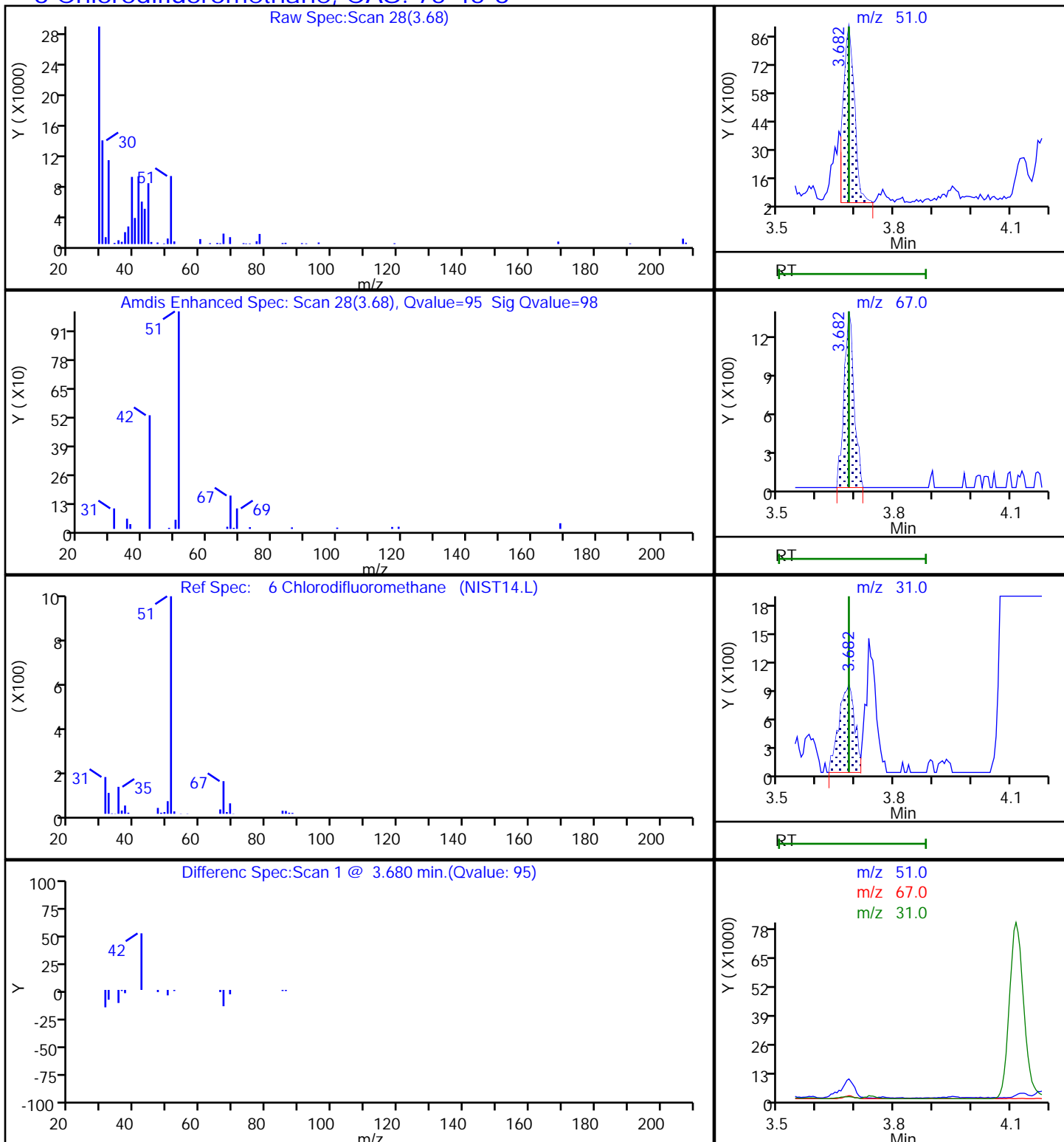
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D

Injection Date: 25-Feb-2019 23:39:30

Instrument ID: MH

Lims ID: 140-14387-A-8

Lab Sample ID: 140-14387-8

Client ID: SV-186-MB-3

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

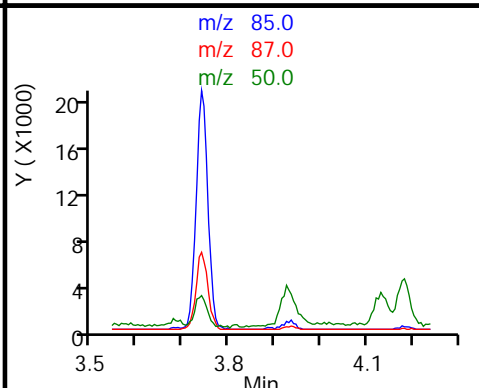
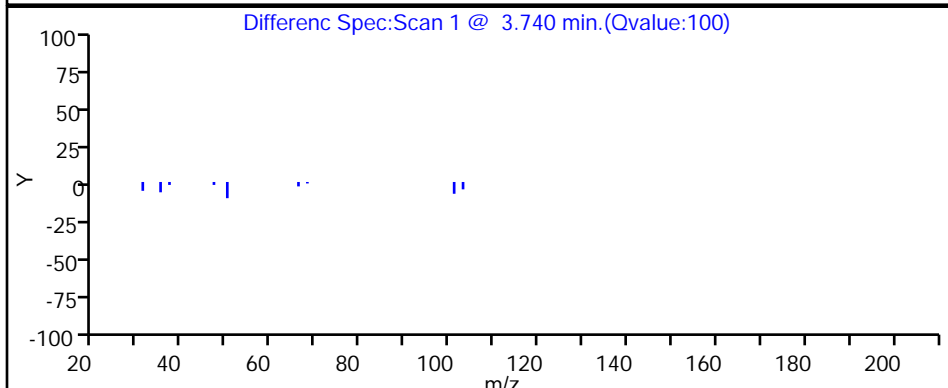
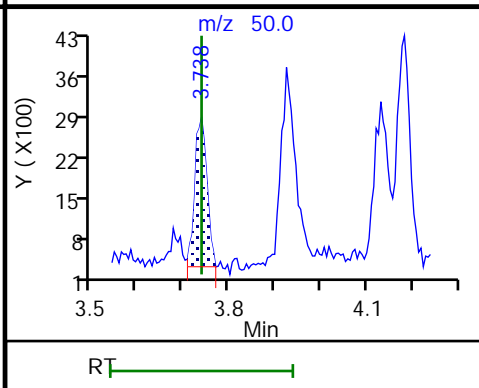
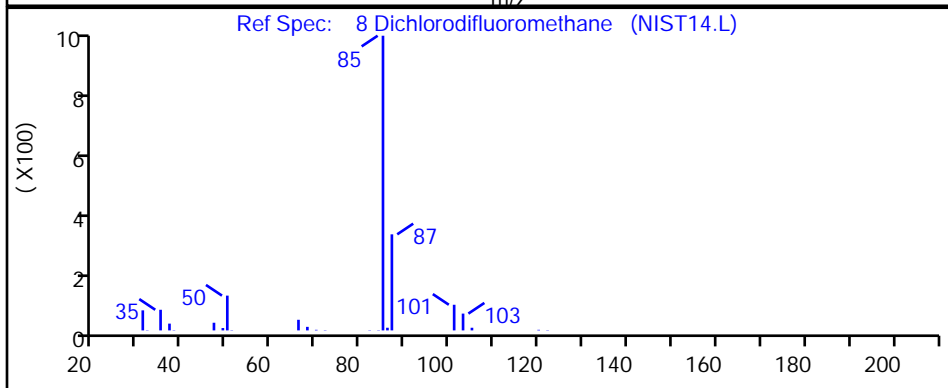
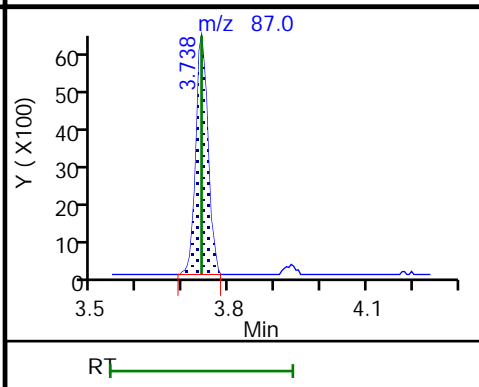
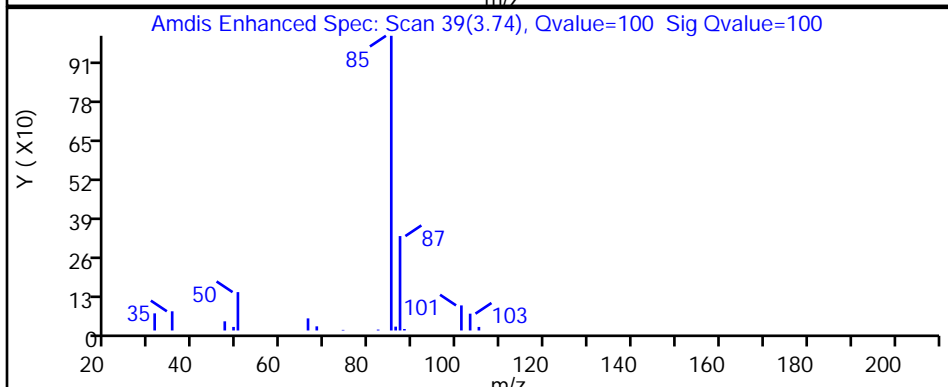
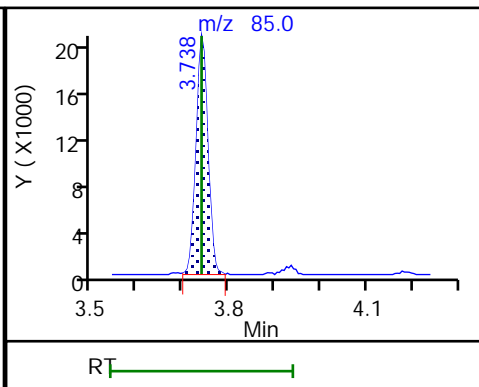
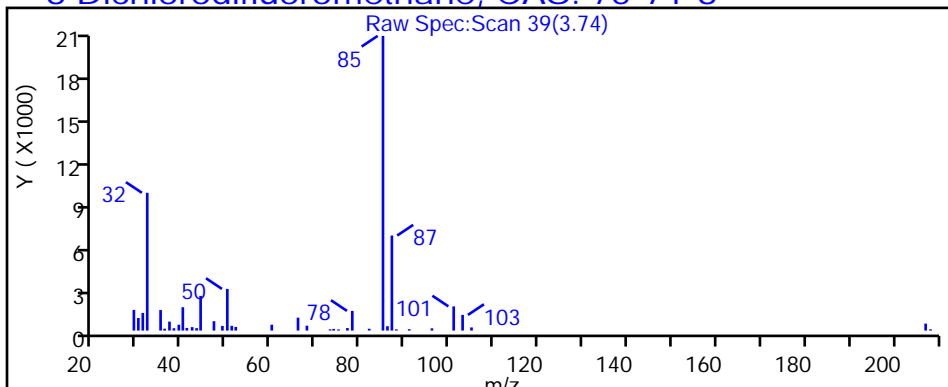
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D

Injection Date: 25-Feb-2019 23:39:30

Instrument ID: MH

Lims ID: 140-14387-A-8

Lab Sample ID: 140-14387-8

Client ID: SV-186-MB-3

Operator ID: HMT

ALS Bottle#: 8 Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

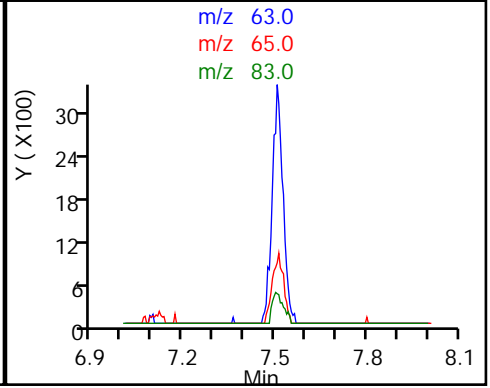
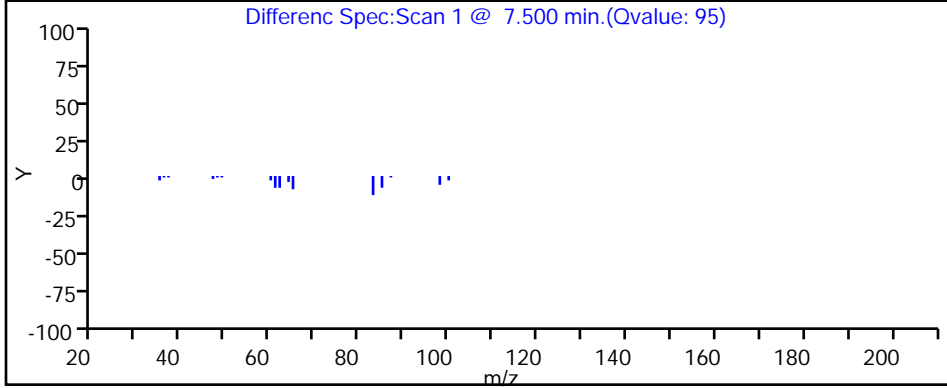
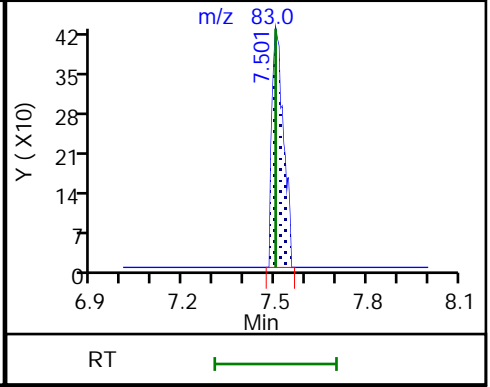
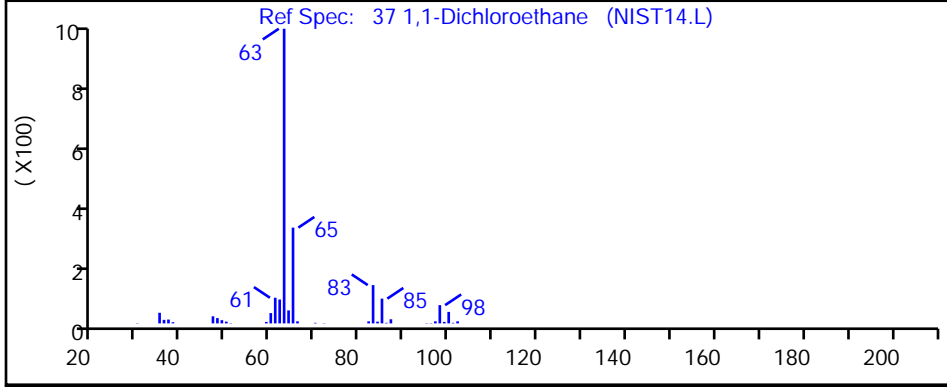
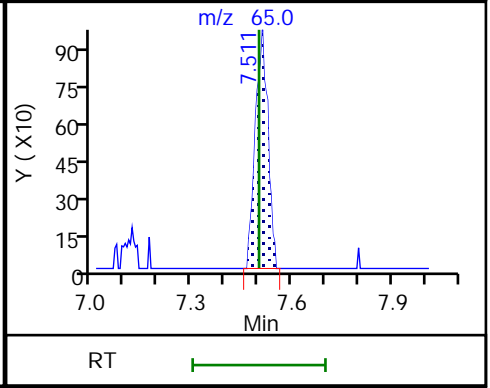
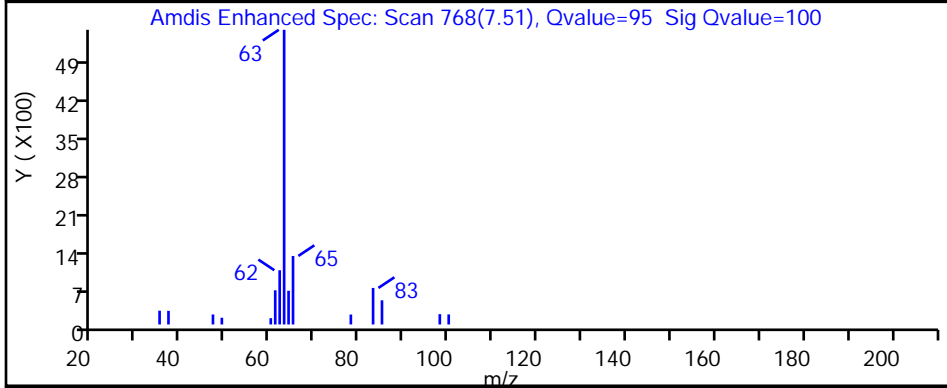
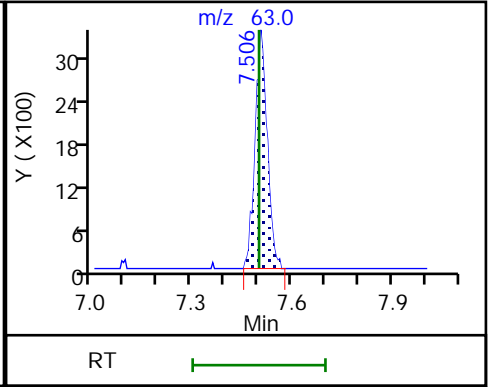
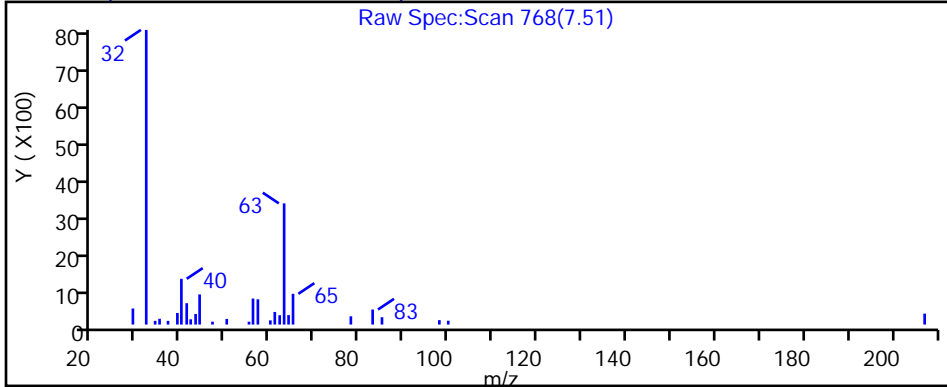
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D

Injection Date: 25-Feb-2019 23:39:30

Instrument ID: MH

Lims ID: 140-14387-A-8

Lab Sample ID: 140-14387-8

Client ID: SV-186-MB-3

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

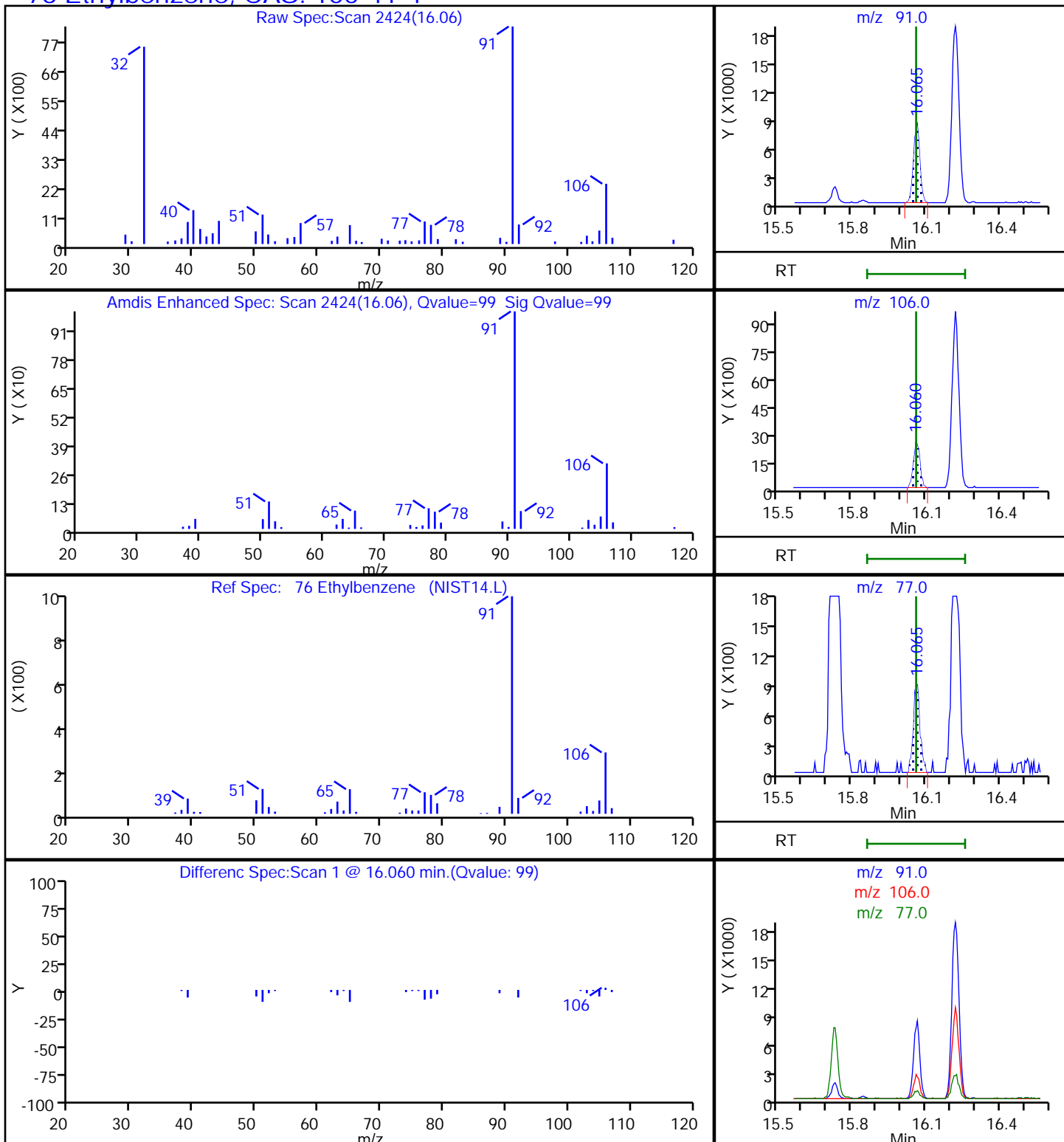
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D

Injection Date: 25-Feb-2019 23:39:30

Instrument ID: MH

Lims ID: 140-14387-A-8

Lab Sample ID: 140-14387-8

Client ID: SV-186-MB-3

Operator ID: HMT

ALS Bottle#: 8 Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

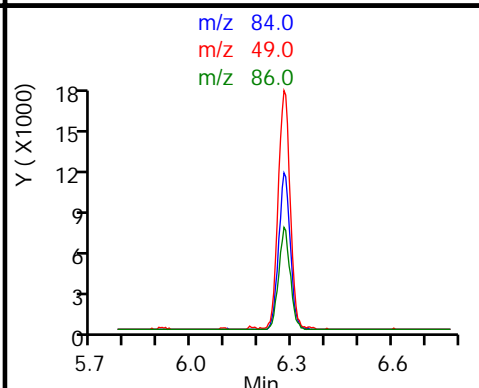
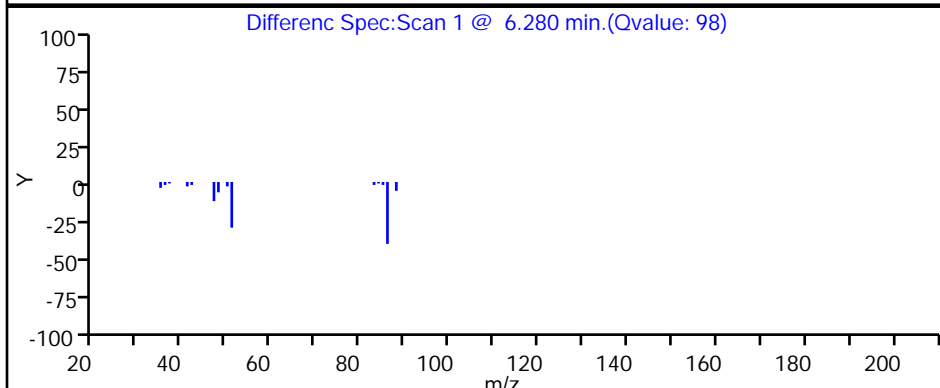
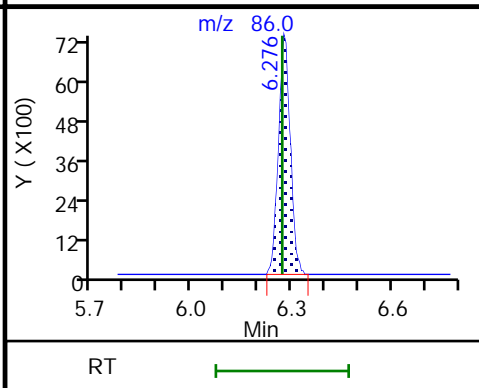
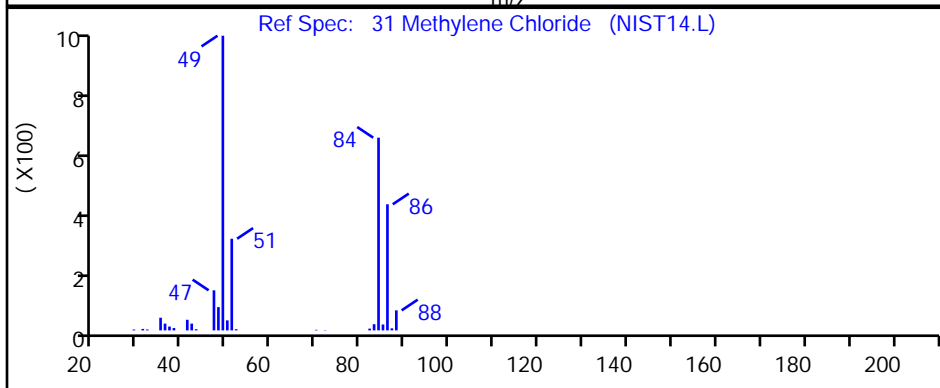
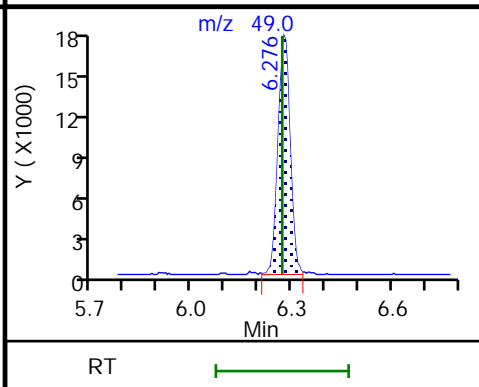
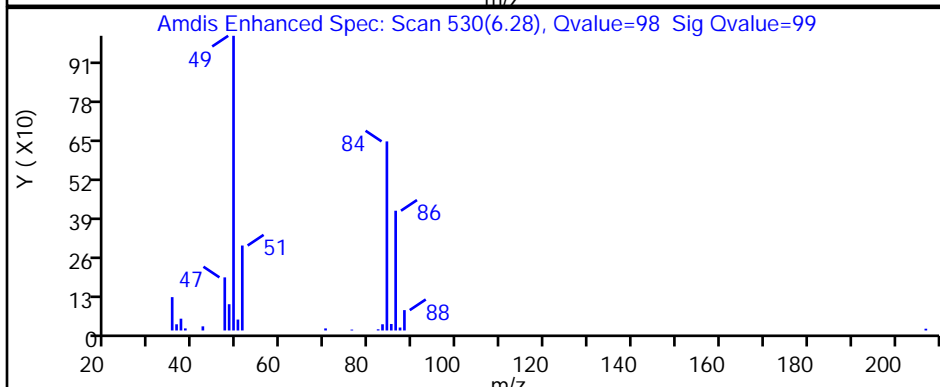
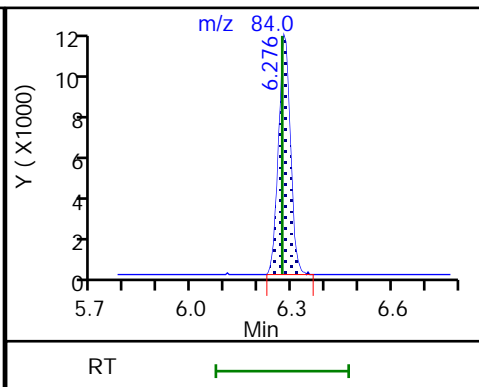
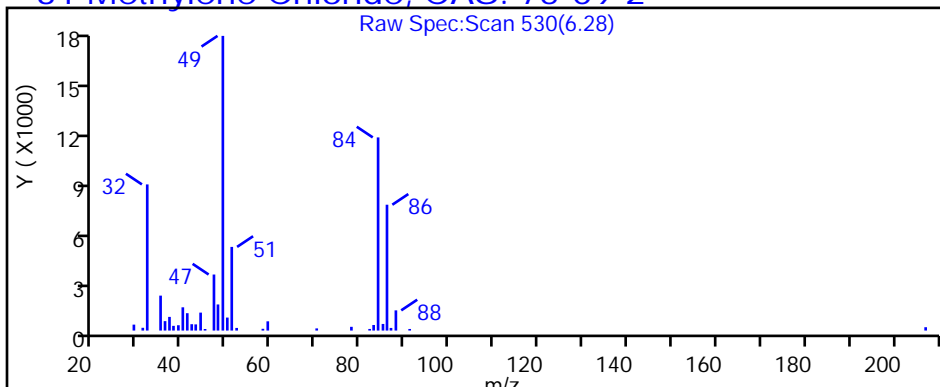
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D

Injection Date: 25-Feb-2019 23:39:30

Instrument ID: MH

Lims ID: 140-14387-A-8

Lab Sample ID: 140-14387-8

Client ID: SV-186-MB-3

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

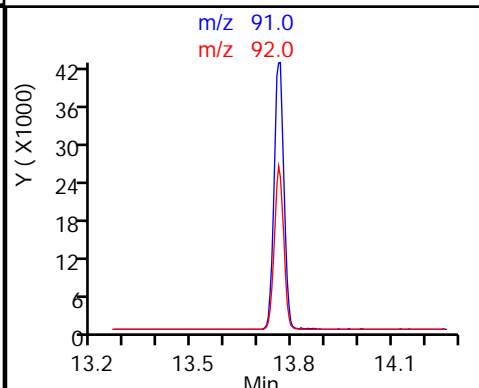
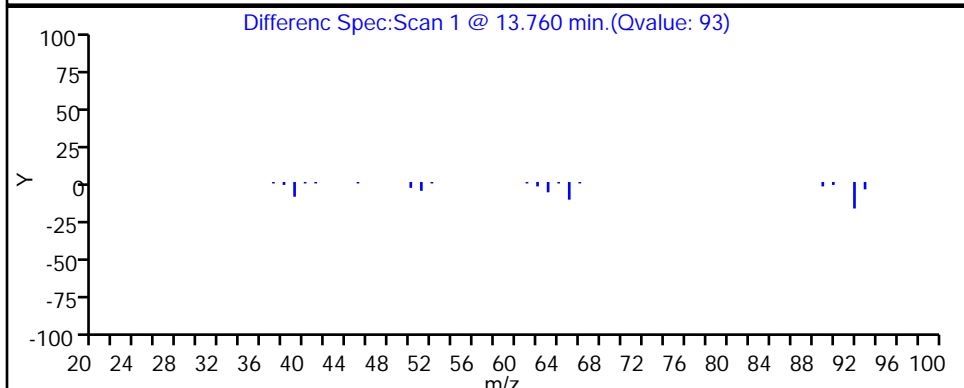
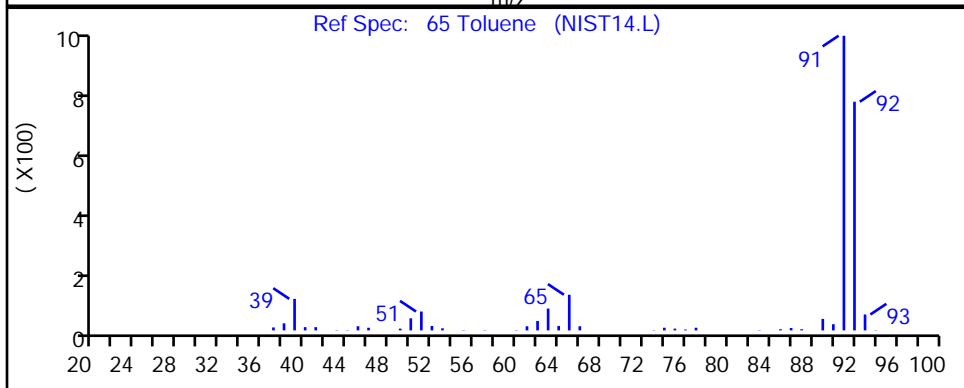
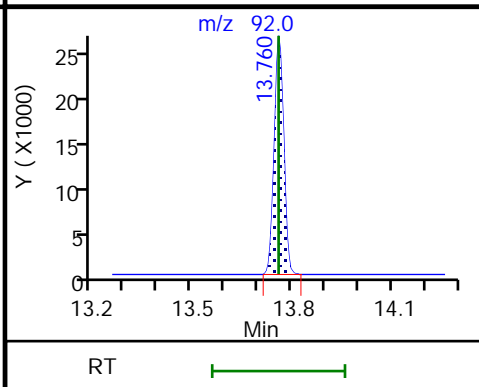
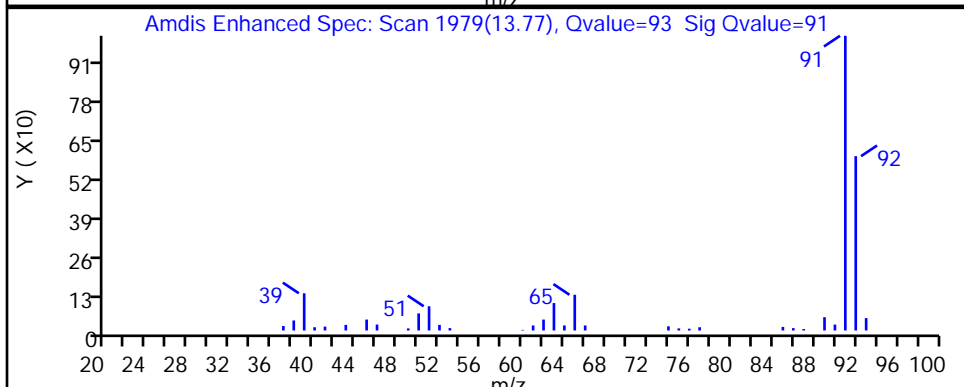
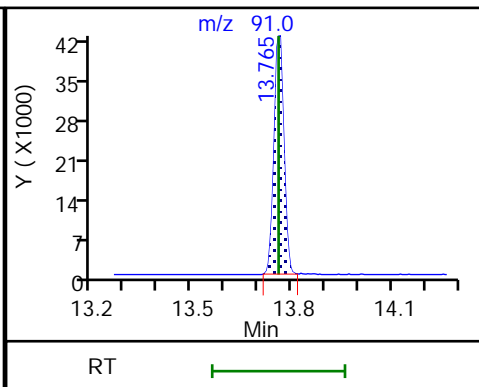
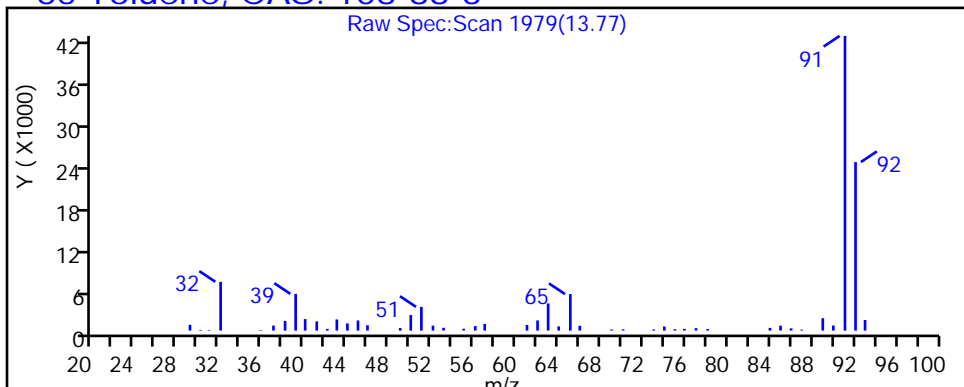
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D

Injection Date: 25-Feb-2019 23:39:30

Instrument ID: MH

Lims ID: 140-14387-A-8

Lab Sample ID: 140-14387-8

Client ID: SV-186-MB-3

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

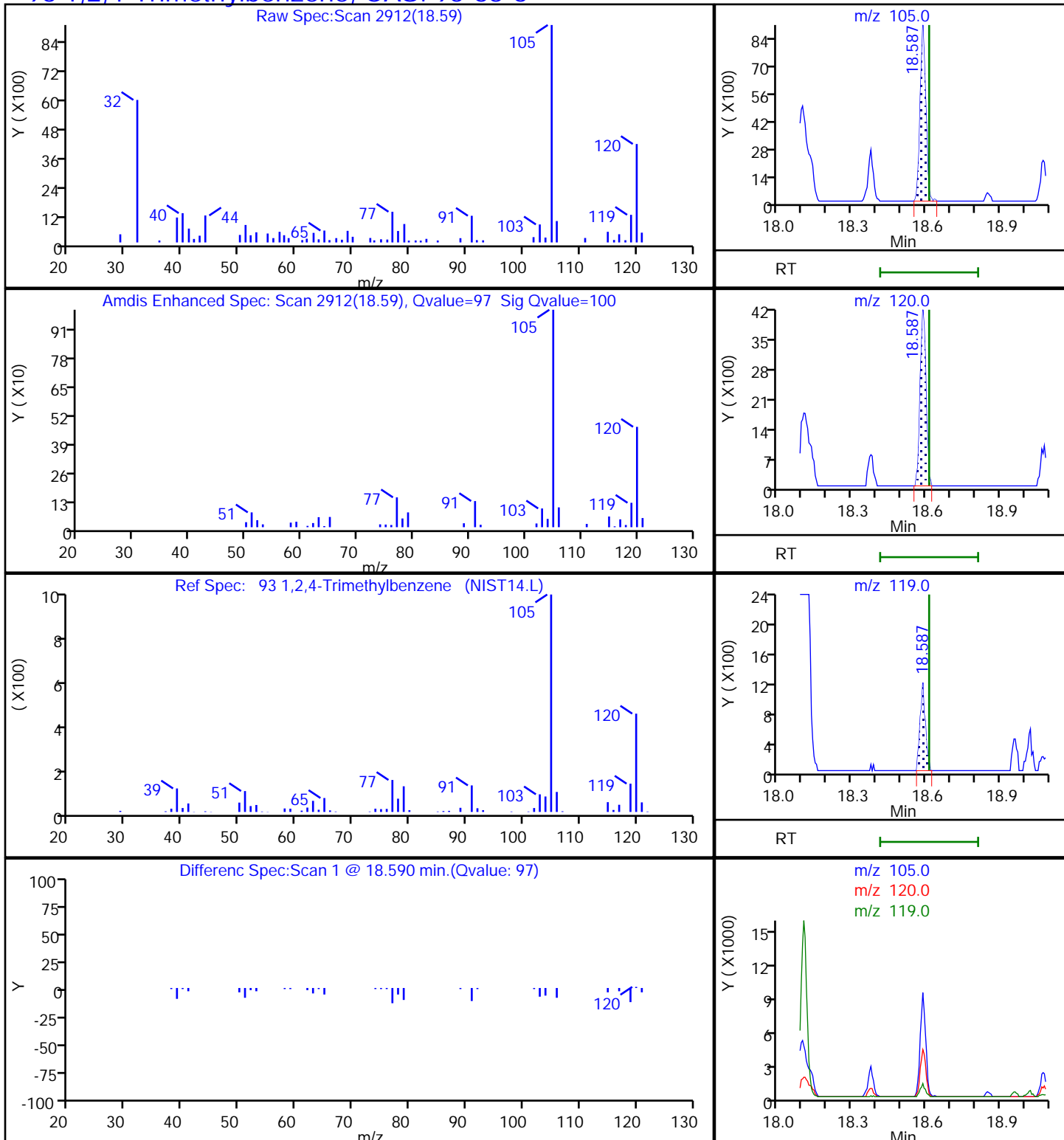
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D

Injection Date: 25-Feb-2019 23:39:30

Instrument ID: MH

Lims ID: 140-14387-A-8

Lab Sample ID: 140-14387-8

Client ID: SV-186-MB-3

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

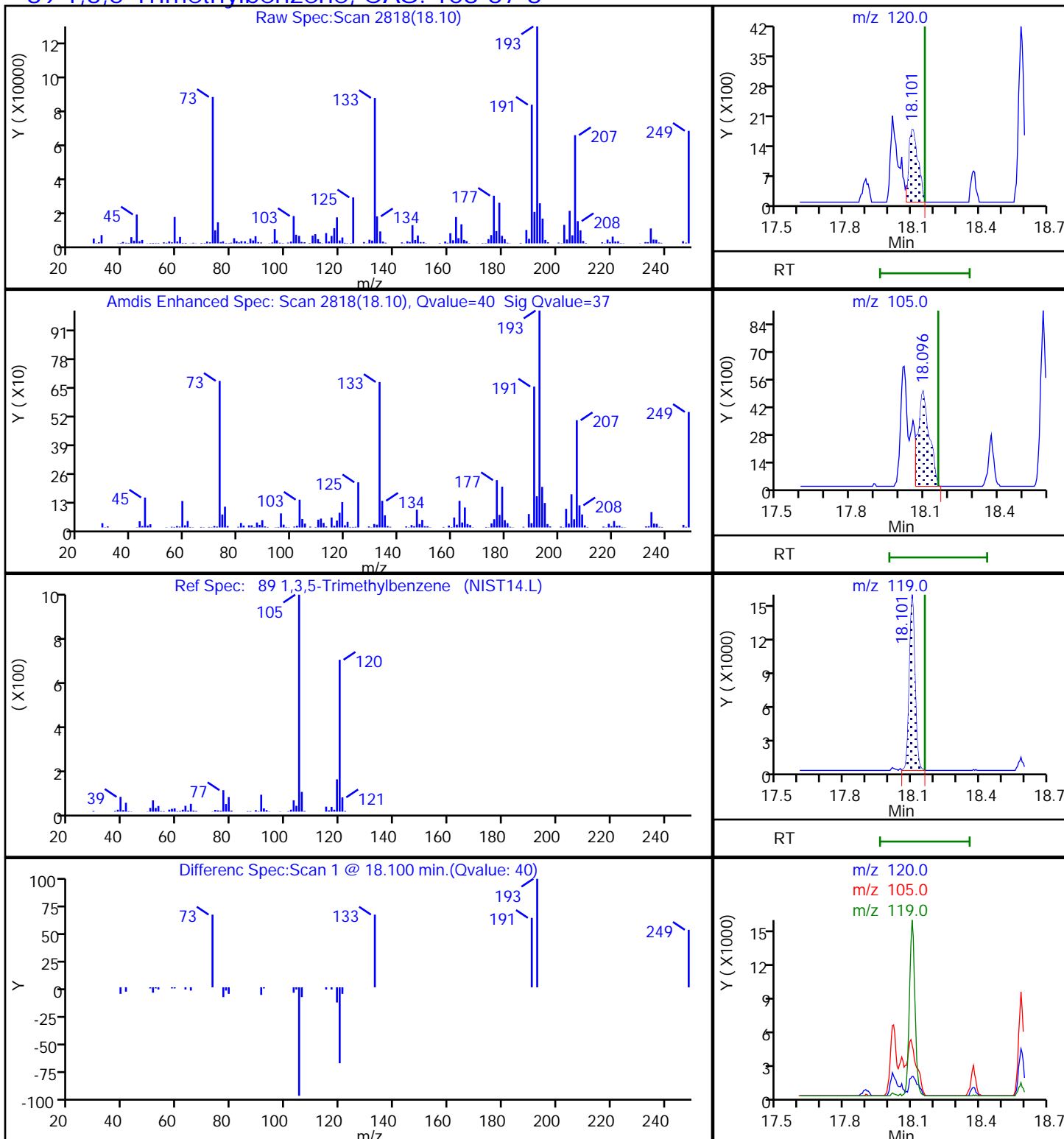
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D

Injection Date: 25-Feb-2019 23:39:30

Instrument ID: MH

Lims ID: 140-14387-A-8

Lab Sample ID: 140-14387-8

Client ID: SV-186-MB-3

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

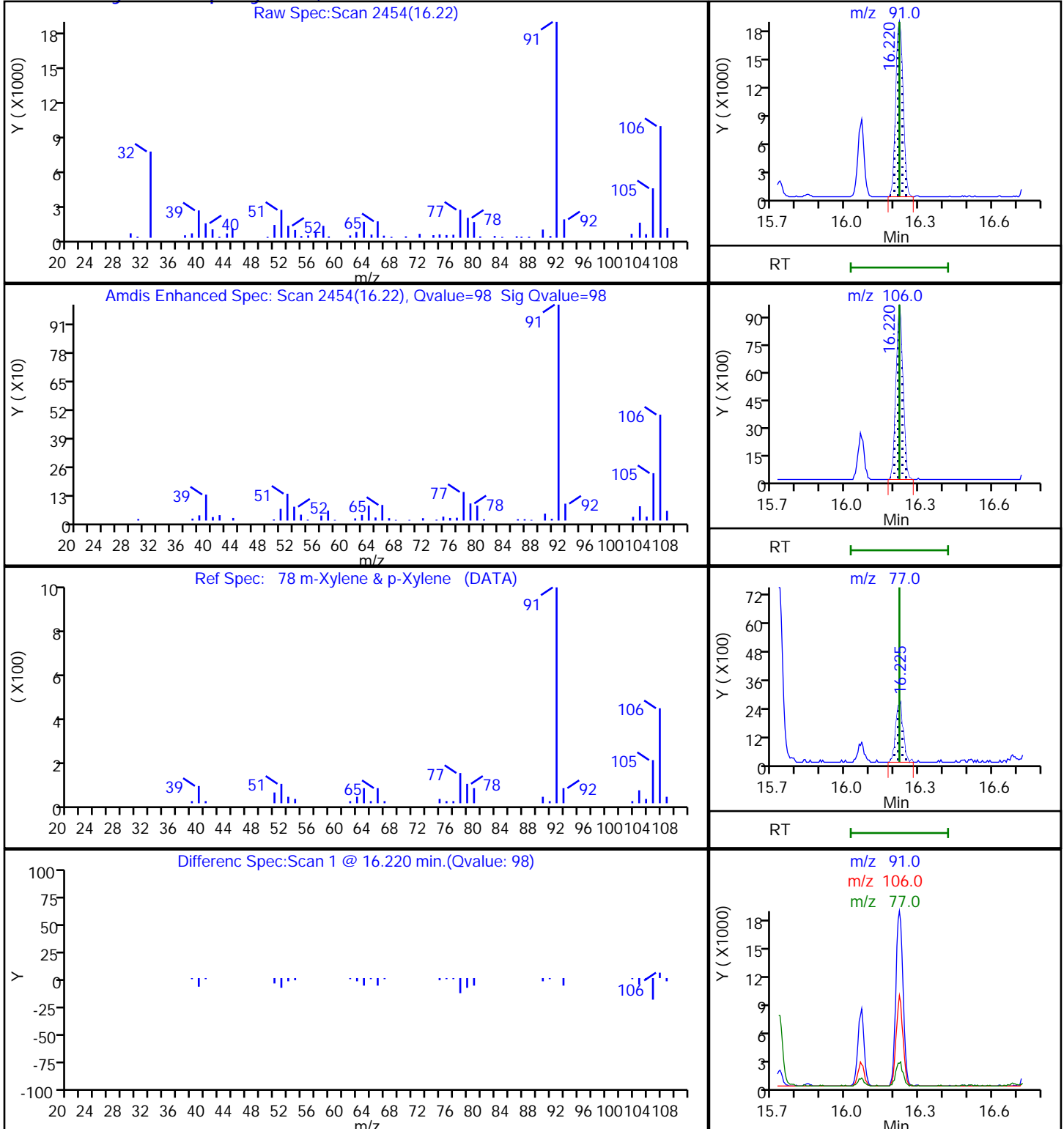
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D

Injection Date: 25-Feb-2019 23:39:30

Instrument ID: MH

Lims ID: 140-14387-A-8

Lab Sample ID: 140-14387-8

Client ID: SV-186-MB-3

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

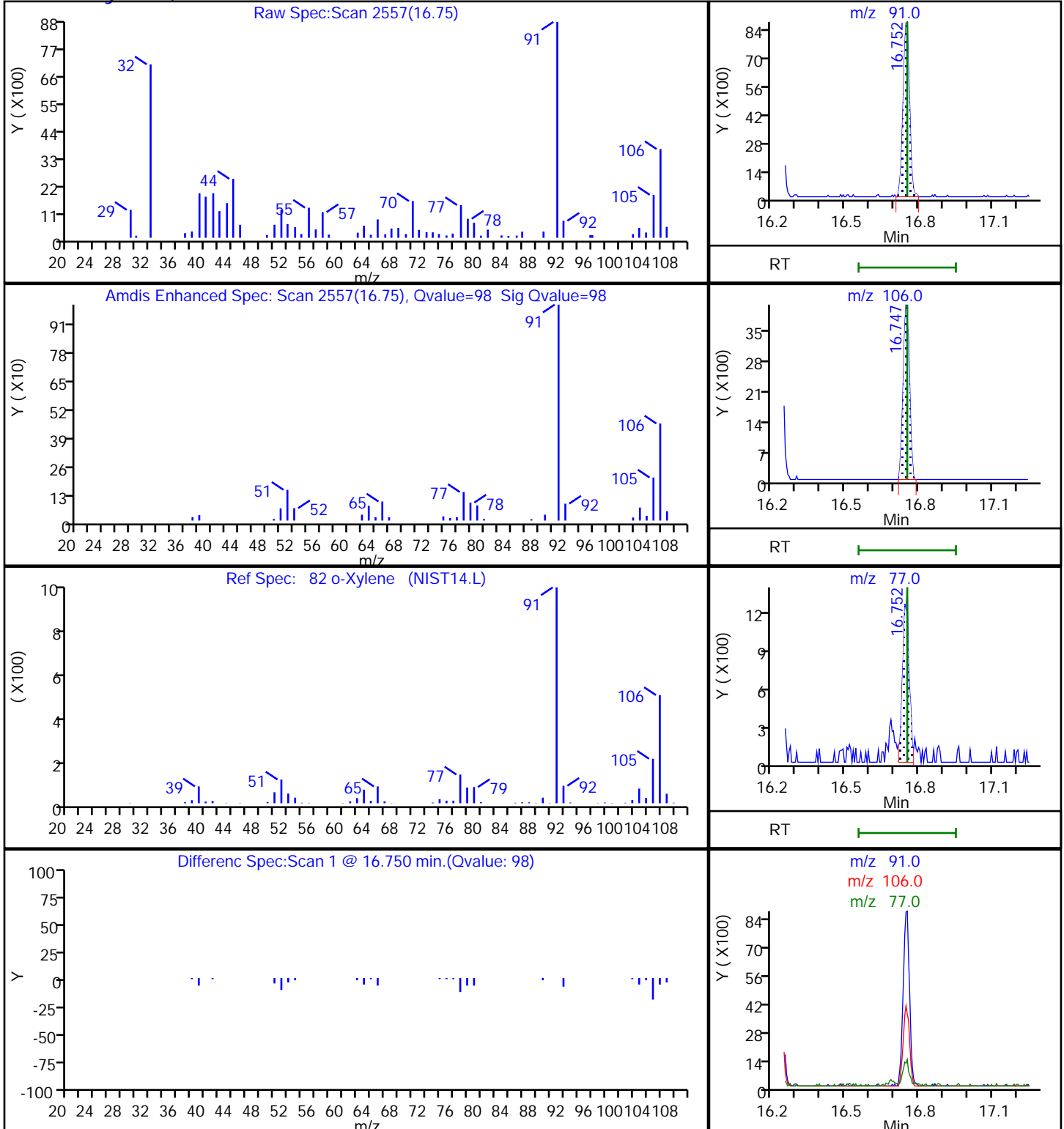
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



TestAmerica Knoxville

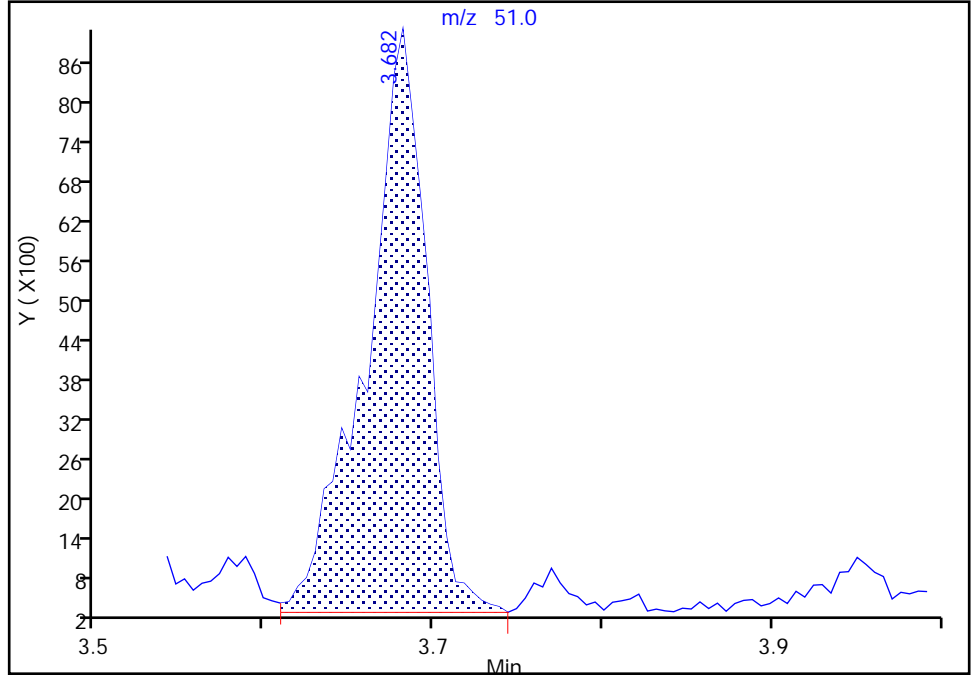
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D
Injection Date: 25-Feb-2019 23:39:30 Instrument ID: MH
Lims ID: 140-14387-A-8 Lab Sample ID: 140-14387-8
Client ID: SV-186-MB-3
Operator ID: HMT ALS Bottle#: 8 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

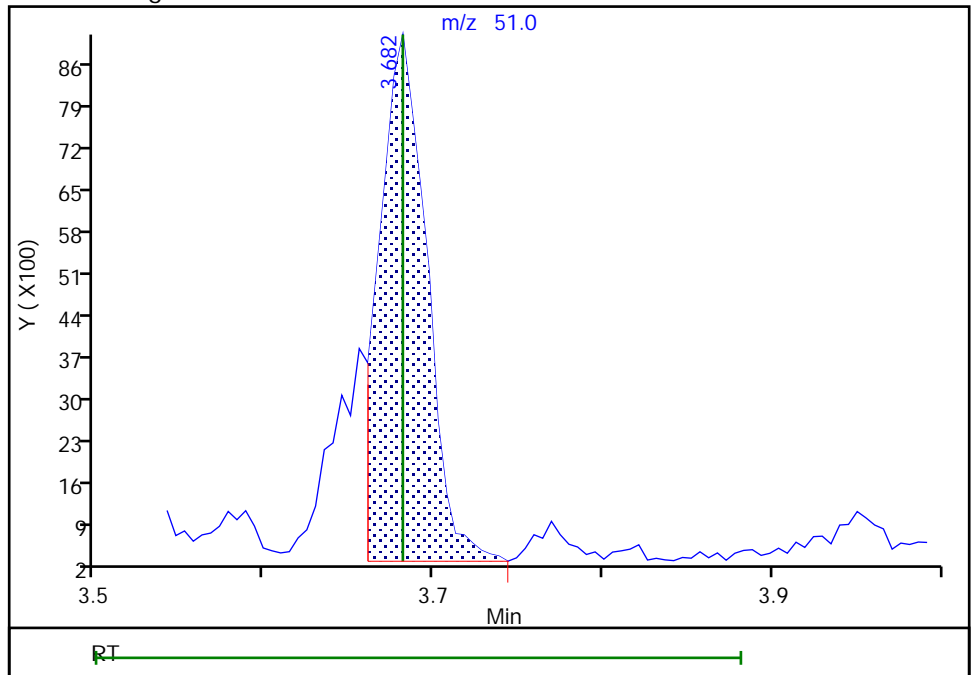
RT: 3.68
Area: 21710
Amount: 0.090314
Amount Units: ppb v/v

Processing Integration Results



RT: 3.68
Area: 17140
Amount: 0.071302
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 26-Feb-2019 20:10:06
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

TestAmerica Knoxville

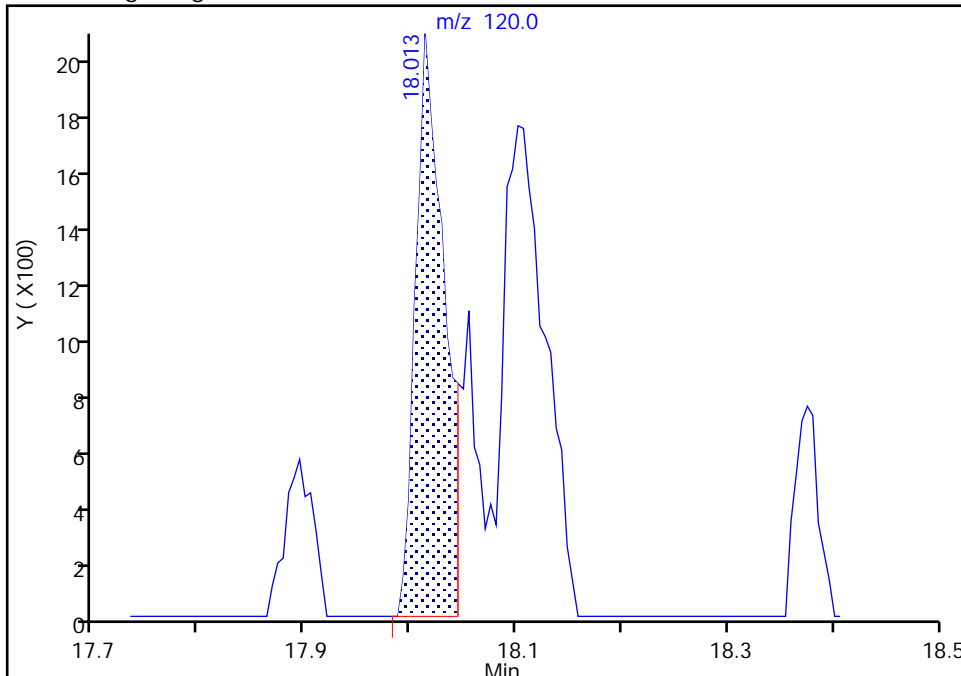
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P108.D
Injection Date: 25-Feb-2019 23:39:30 Instrument ID: MH
Lims ID: 140-14387-A-8 Lab Sample ID: 140-14387-8
Client ID: SV-186-MB-3
Operator ID: HMT ALS Bottle#: 8 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Signal: 1

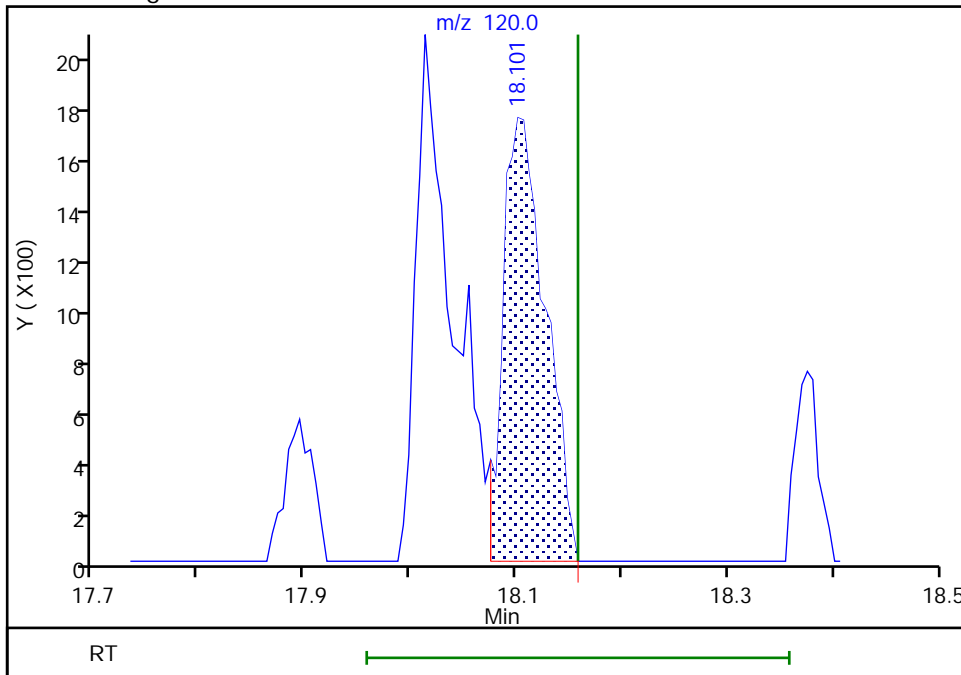
RT: 18.01
Area: 3823
Amount: 0.043668
Amount Units: ppb v/v

Processing Integration Results



RT: 18.10
Area: 4717
Amount: 0.047562
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 26-Feb-2019 20:10:23

Audit Action: Assigned Compound ID

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-116-A-26 Lab Sample ID: 140-14387-10
 Matrix: Air Lab File ID: HB25P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:15
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 00:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.35	J	0.40	0.075
67-66-3	Chloroform	119.38	0.34	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.072	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.92	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.82		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-116-A-26 Lab Sample ID: 140-14387-10
 Matrix: Air Lab File ID: HB25P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:15
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 00:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.81	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	1.7	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.28	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P109.D
 Lims ID: 140-14387-A-10
 Client ID: SV-116-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 00:32:30 ALS Bottle#: 9 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-017
 Misc. Info.: 140-14387-a-10
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:11:01 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:11:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.814	0.010	96	278110	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1479230	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	98	1235939	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	811196	4.03	
6 Chlorodifluoromethane	51	3.687	3.682	0.005	95	15765	0.0691	
8 Dichlorodifluoromethane	85	3.744	3.738	0.006	100	34462	0.0984	
27 1,1-Dichloroethene	96	5.935	5.919	0.016	94	1551	0.0144	
31 Methylene Chloride	84	6.286	6.271	0.015	98	20998	0.1847	
43 Chloroform	83	8.834	8.824	0.010	39	16448	0.0681	
47 Benzene	78	10.462	10.452	0.010	97	15763	0.0504	
56 Trichloroethene	130	11.718	11.708	0.010	97	24062	0.1630	
65 Toluene	91	13.765	13.760	0.005	92	20857	0.0593	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P109.D

Injection Date: 26-Feb-2019 00:32:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-10

Lab Sample ID: 140-14387-10

Worklist Smp#: 17

Client ID: SV-116-A-26

Purge Vol: 500.000 mL

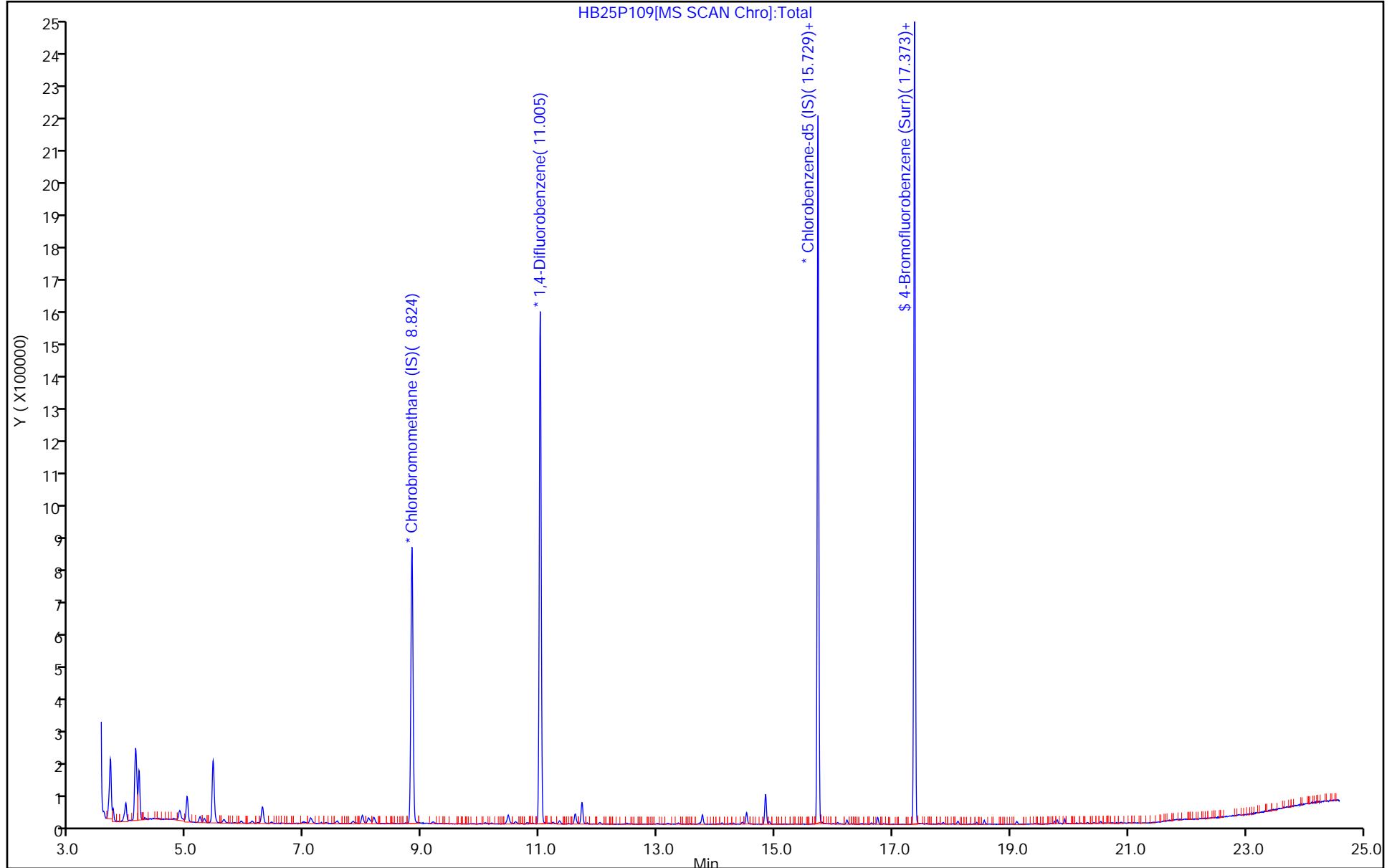
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P109.D
 Lims ID: 140-14387-A-10
 Client ID: SV-116-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 00:32:30 ALS Bottle#: 9 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-017
 Misc. Info.: 140-14387-a-10
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:11:01 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:11:01

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.03	100.69

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P109.D

Injection Date: 26-Feb-2019 00:32:30

Instrument ID: MH

Lims ID: 140-14387-A-10

Lab Sample ID: 140-14387-10

Client ID: SV-116-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

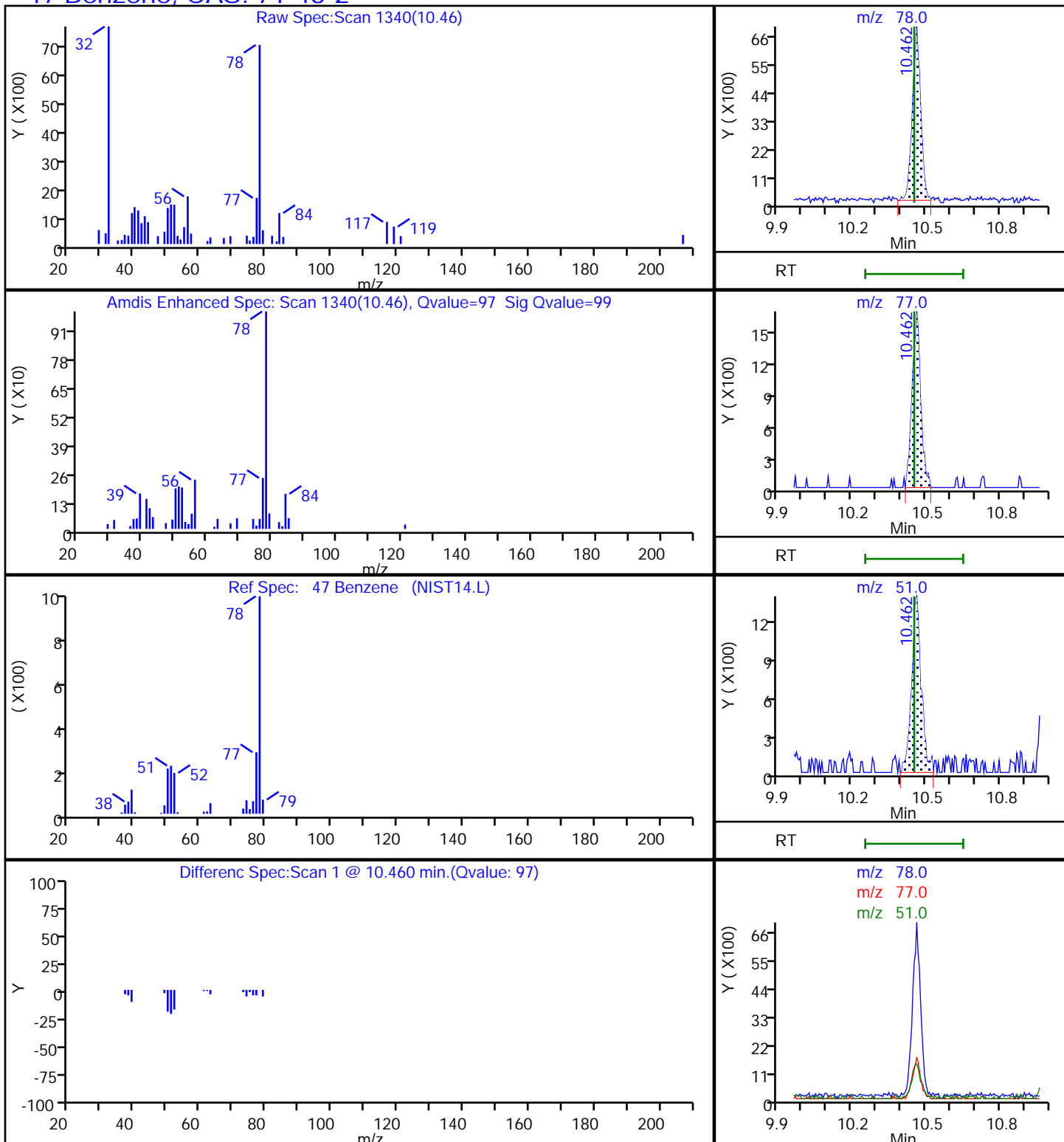
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P109.D

Injection Date: 26-Feb-2019 00:32:30

Instrument ID: MH

Lims ID: 140-14387-A-10

Lab Sample ID: 140-14387-10

Client ID: SV-116-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

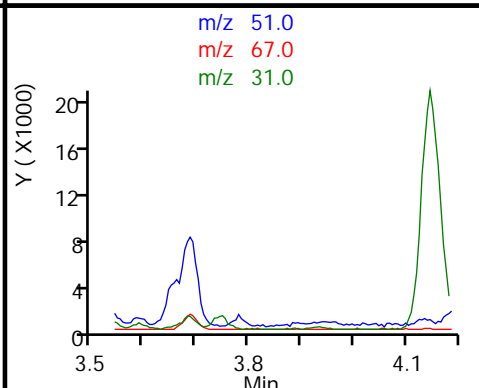
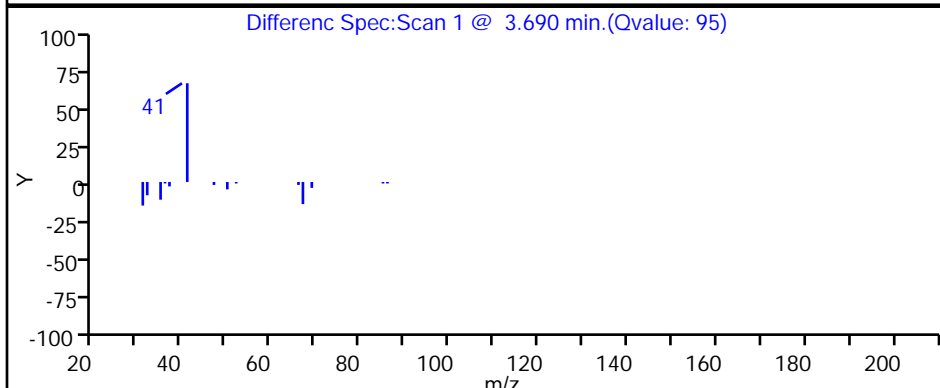
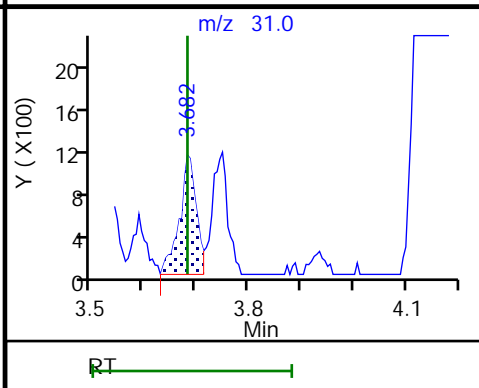
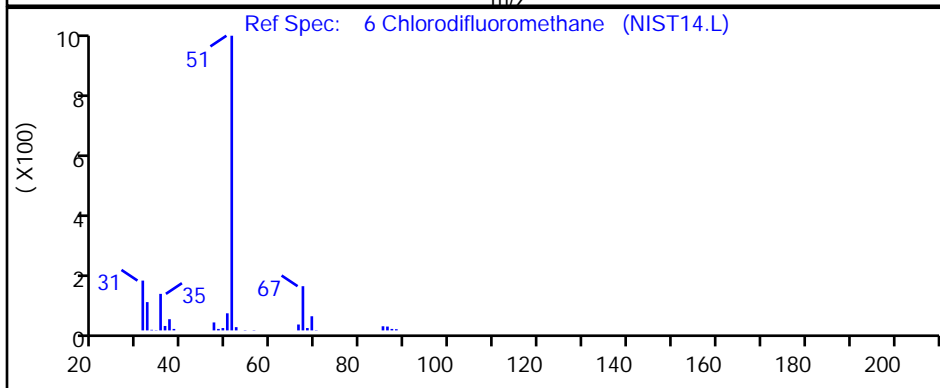
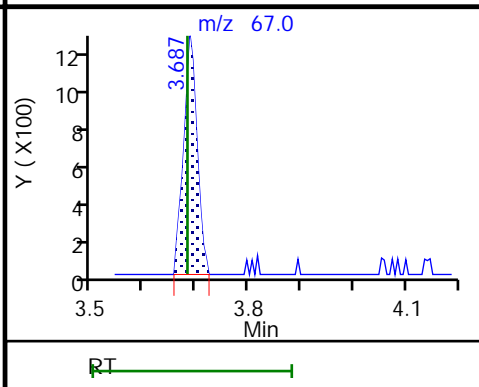
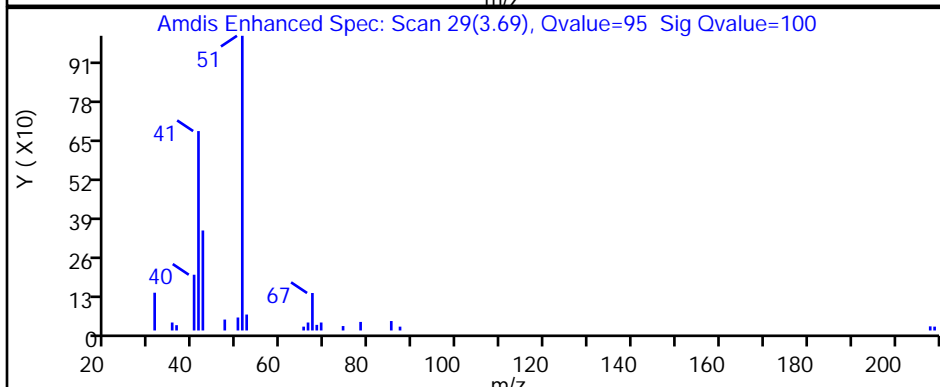
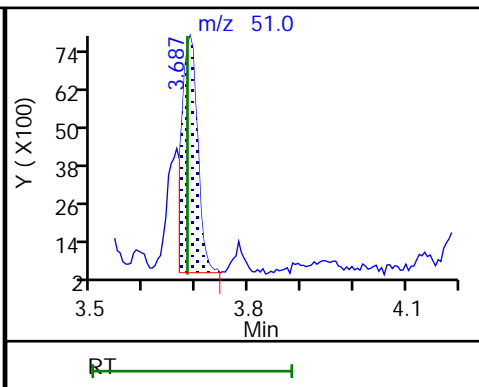
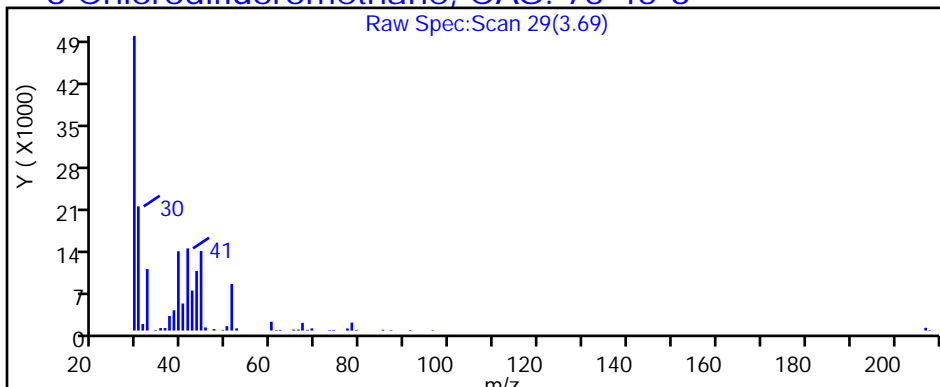
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P109.D

Injection Date: 26-Feb-2019 00:32:30

Instrument ID: MH

Lims ID: 140-14387-A-10

Lab Sample ID: 140-14387-10

Client ID: SV-116-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

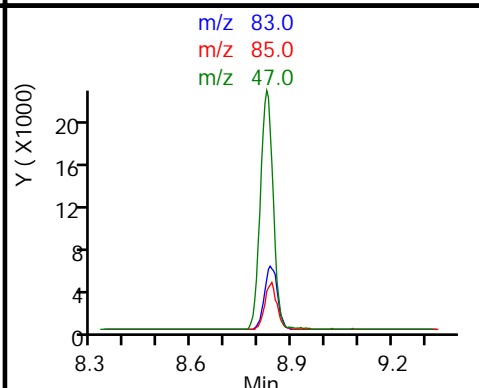
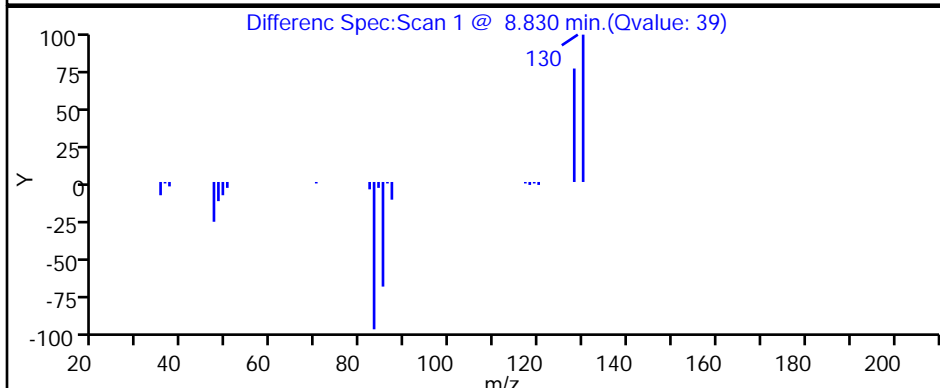
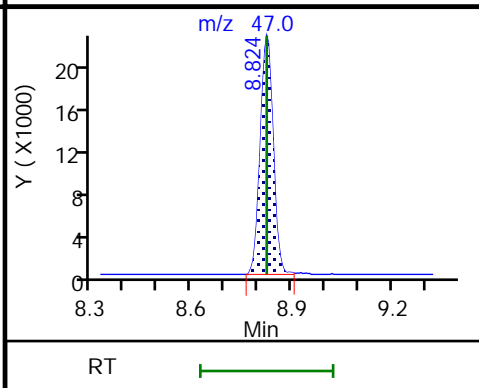
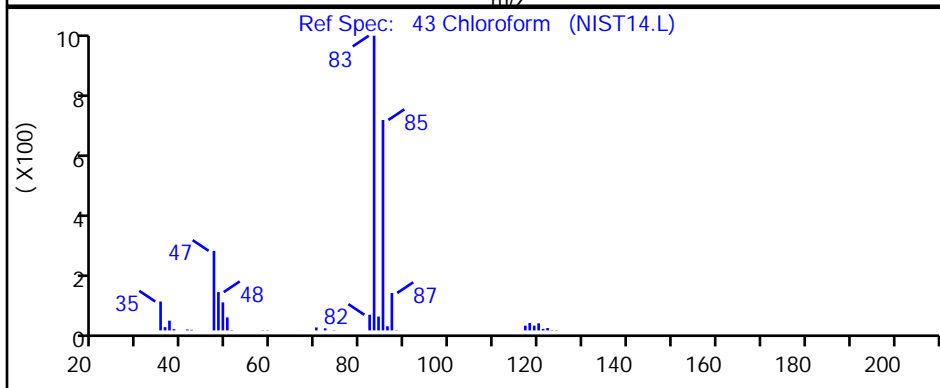
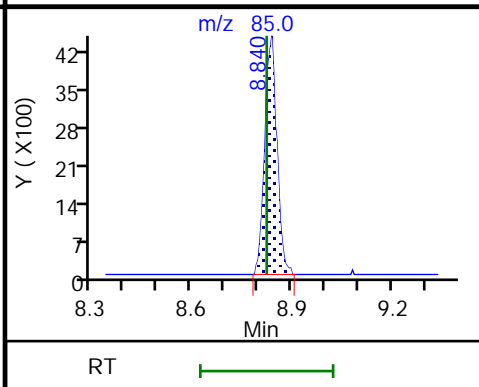
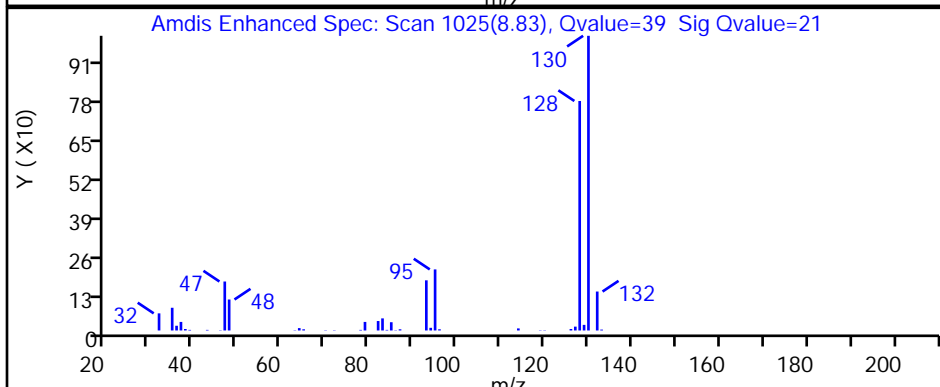
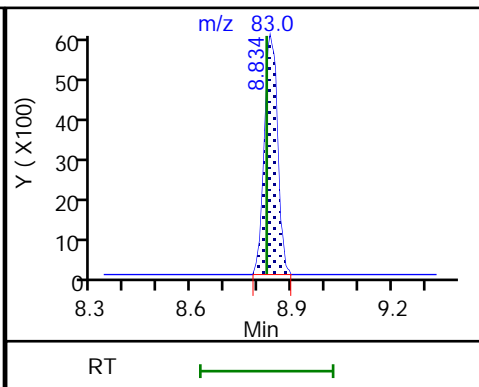
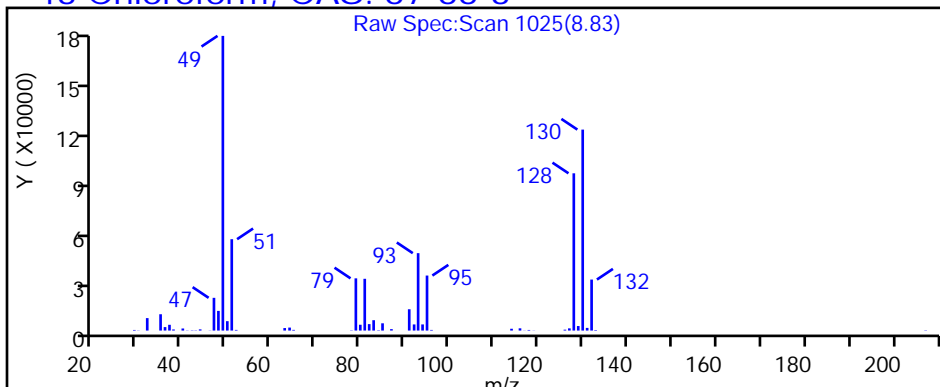
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P109.D

Injection Date: 26-Feb-2019 00:32:30

Instrument ID: MH

Lims ID: 140-14387-A-10

Lab Sample ID: 140-14387-10

Client ID: SV-116-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

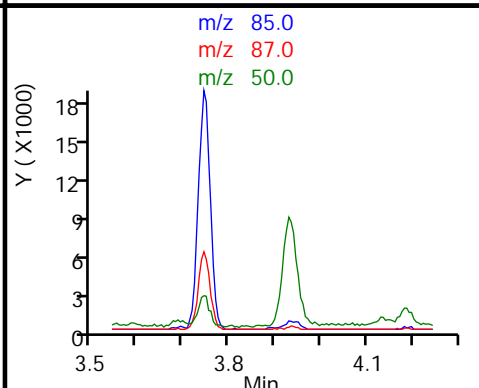
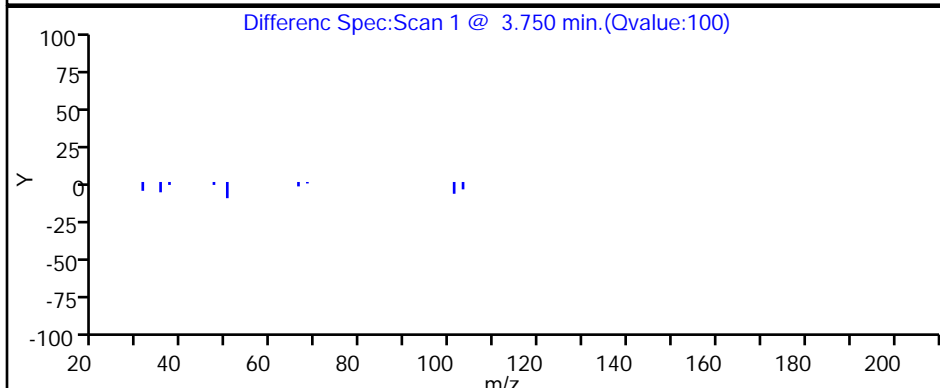
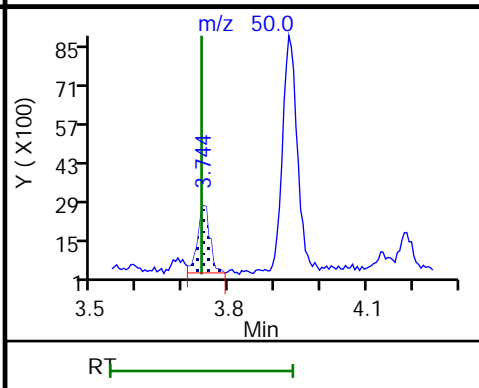
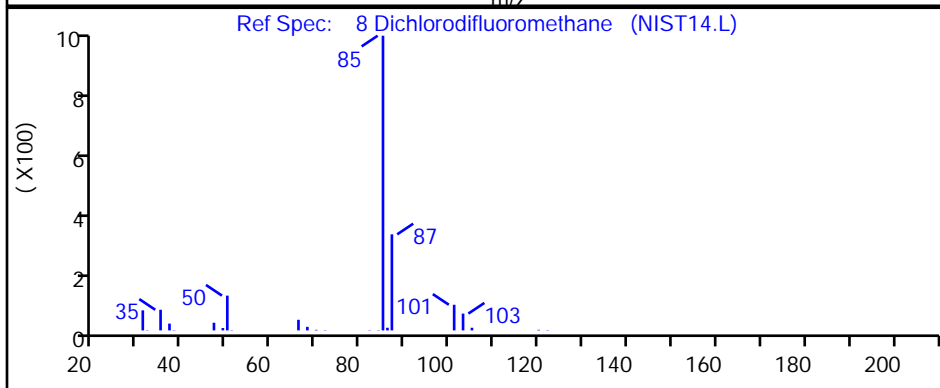
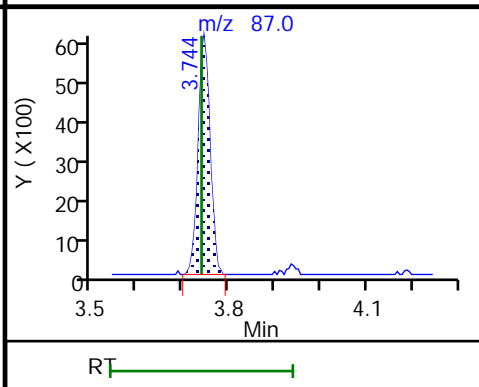
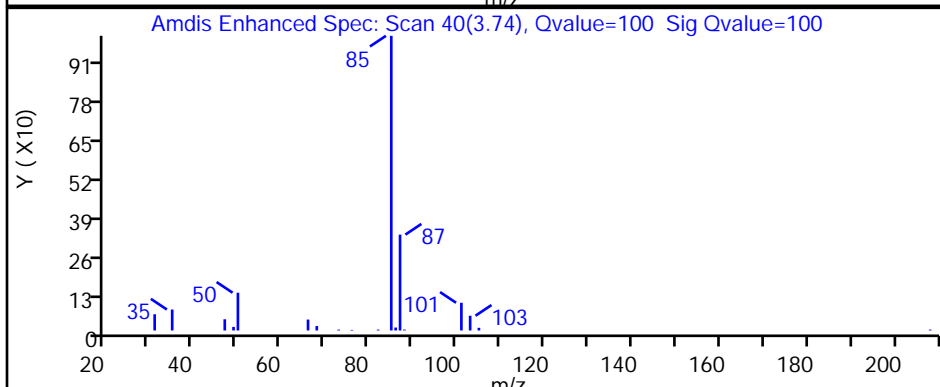
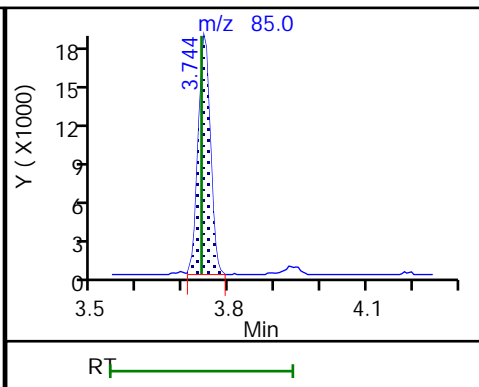
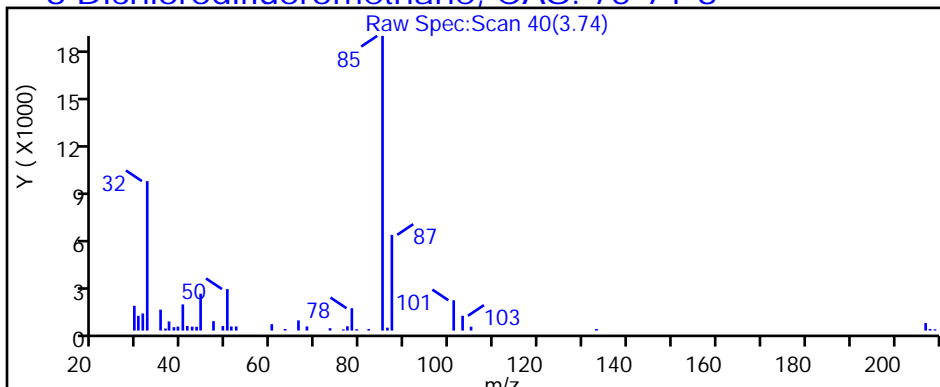
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P109.D

Injection Date: 26-Feb-2019 00:32:30

Instrument ID: MH

Lims ID: 140-14387-A-10

Lab Sample ID: 140-14387-10

Client ID: SV-116-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

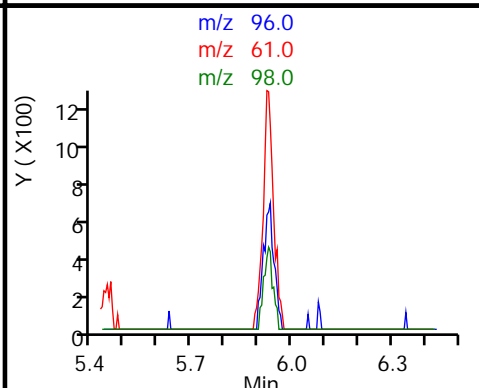
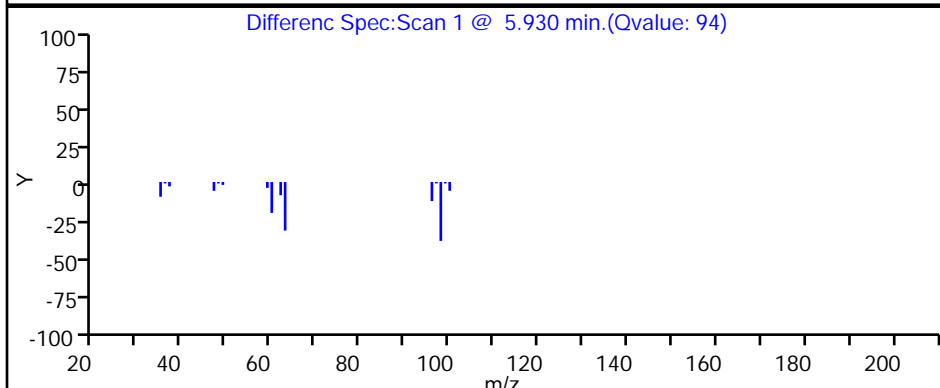
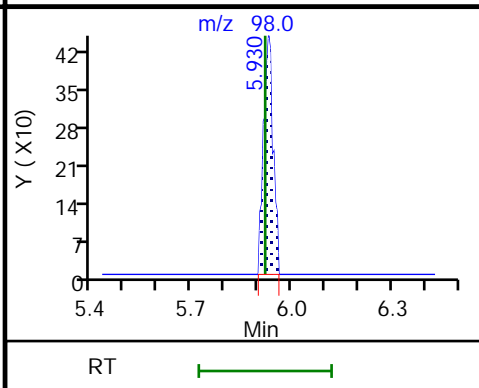
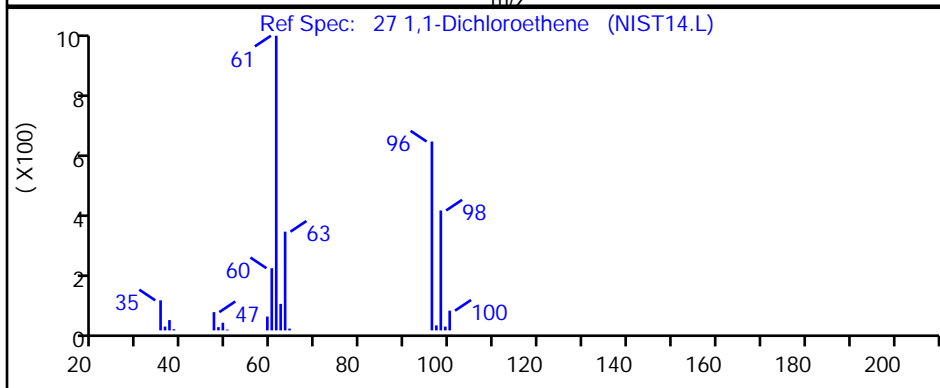
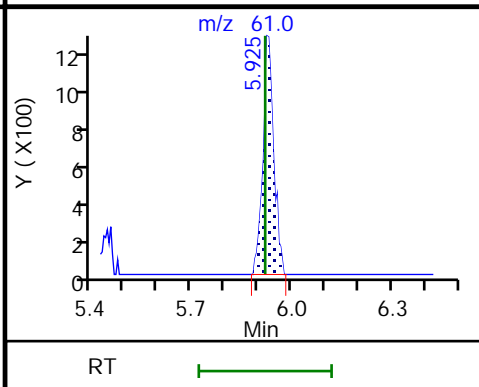
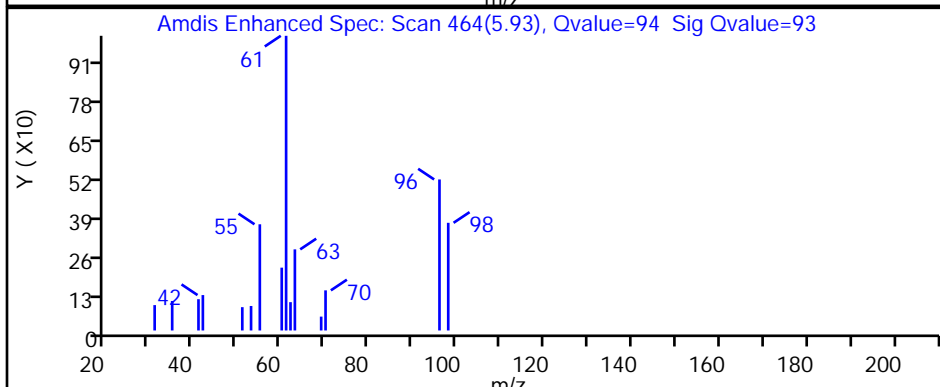
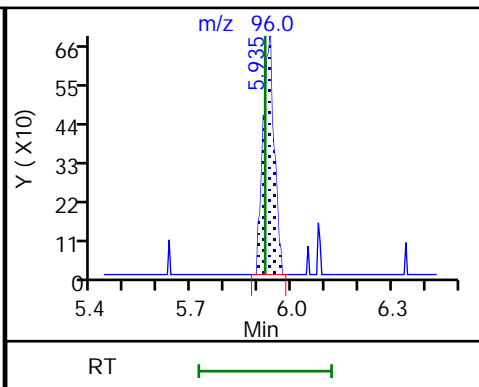
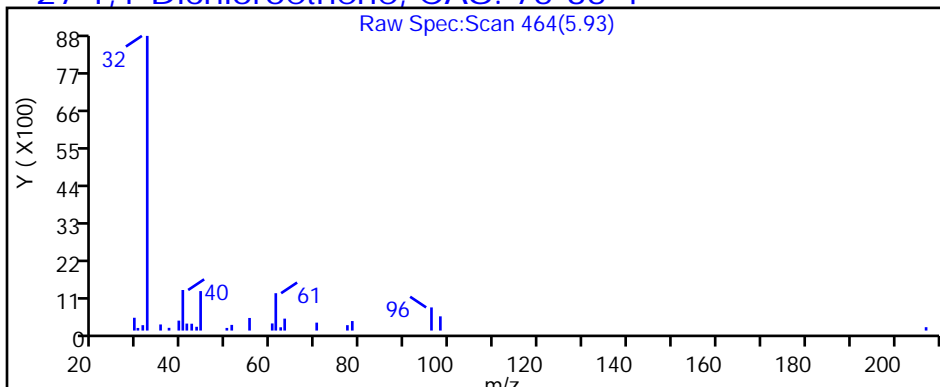
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P109.D

Injection Date: 26-Feb-2019 00:32:30

Instrument ID: MH

Lims ID: 140-14387-A-10

Lab Sample ID: 140-14387-10

Client ID: SV-116-A-26

Operator ID: HMT

ALS Bottle#: 9 Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

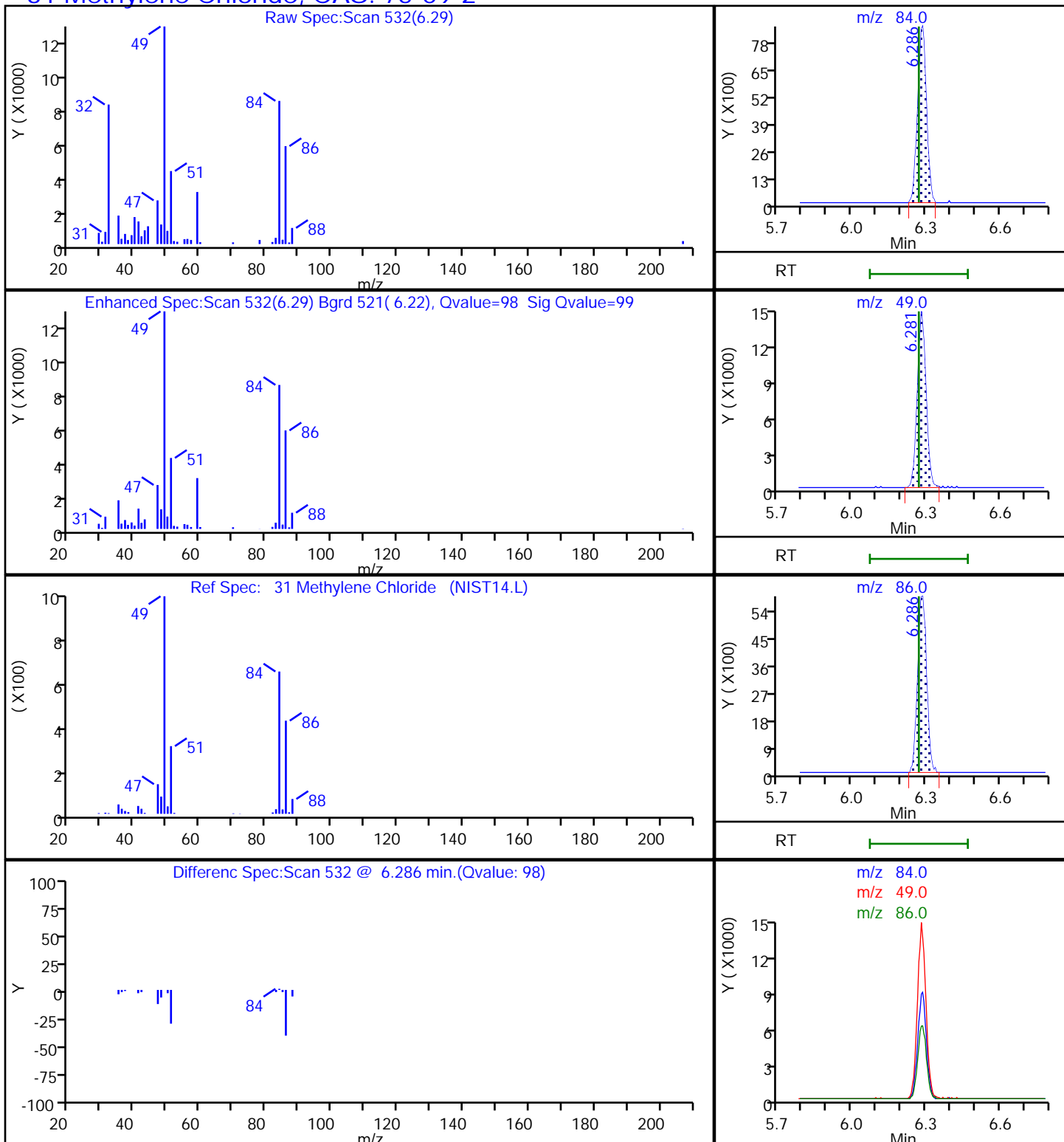
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P109.D

Injection Date: 26-Feb-2019 00:32:30

Instrument ID: MH

Lims ID: 140-14387-A-10

Lab Sample ID: 140-14387-10

Client ID: SV-116-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

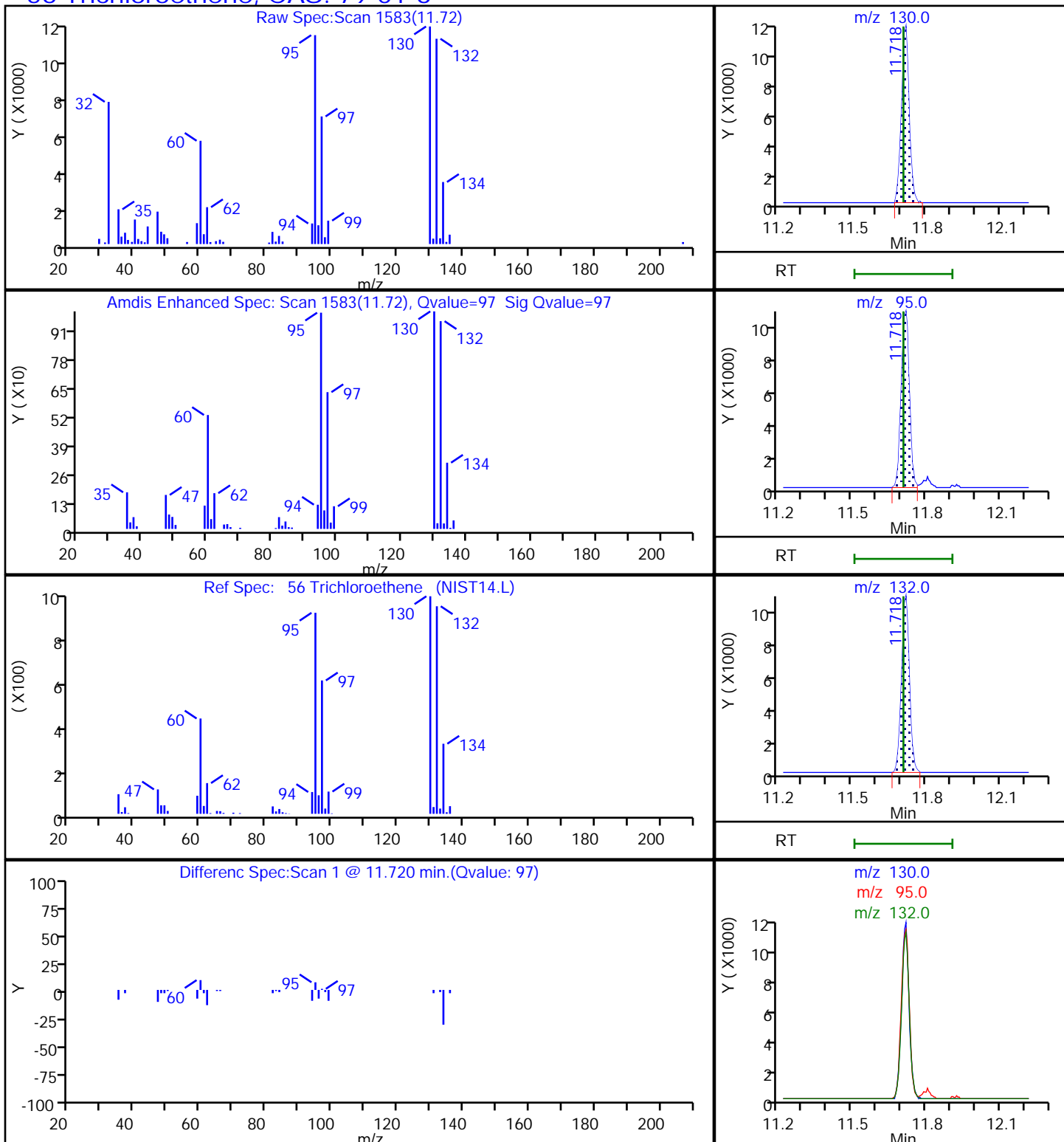
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6

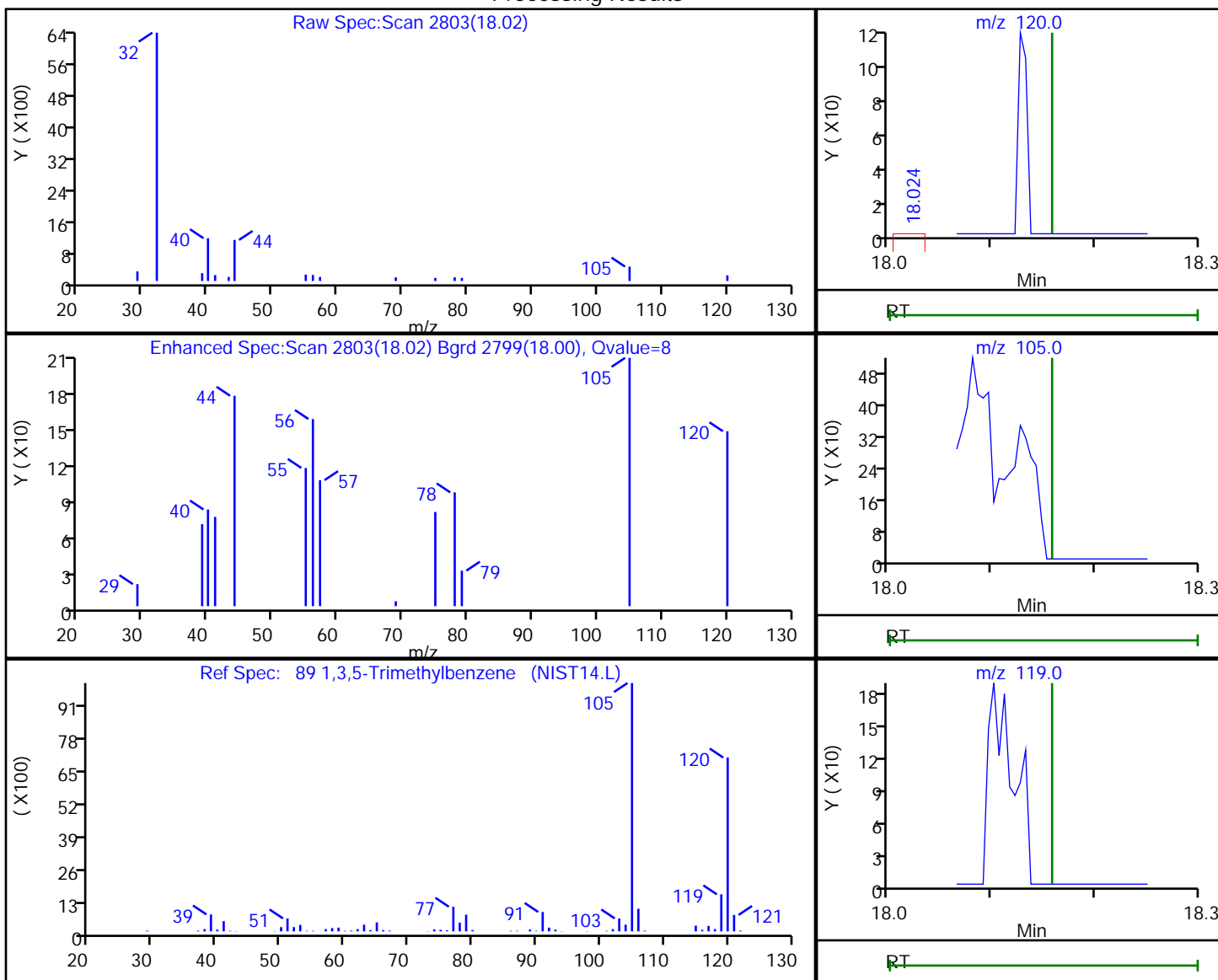


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P109.D
 Injection Date: 26-Feb-2019 00:32:30 Instrument ID: MH
 Lims ID: 140-14387-A-10 Lab Sample ID: 140-14387-10
 Client ID: SV-116-A-26
 Operator ID: HMT ALS Bottle#: 9 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Processing Results



RT	Mass	Response	Amount
18.02	120.00	149	0.027734
18.01	105.00	641	
18.16	119.00	0	

Reviewer: khachitpongpanits, 26-Feb-2019 20:10:55

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-DUP03-A-26 Lab Sample ID: 140-14387-11
 Matrix: Air Lab File ID: HB25P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 01:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.34	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.60		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-DUP03-A-26 Lab Sample ID: 140-14387-11
 Matrix: Air Lab File ID: HB25P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 01:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.75	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	1.7	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P110.D
 Lims ID: 140-14387-A-11
 Client ID: SV-DUP03-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 01:24:30 ALS Bottle#: 10 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-018
 Misc. Info.: 140-14387-a-11
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:11:37 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:11:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.814	0.010	96	280978	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1513051	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1271379	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	826107	3.99	
6 Chlorodifluoromethane	51	3.687	3.687	0.005	68	15673	0.0680	M
8 Dichlorodifluoromethane	85	3.744	3.738	0.006	100	32913	0.0930	
31 Methylene Chloride	84	6.281	6.271	0.010	98	31716	0.2761	
43 Chloroform	83	8.829	8.824	0.005	91	16653	0.0682	
47 Benzene	78	10.457	10.452	0.005	97	15081	0.0471	
56 Trichloroethene	130	11.718	11.708	0.010	95	18179	0.1204	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P110.D

Injection Date: 26-Feb-2019 01:24:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-11

Lab Sample ID: 140-14387-11

Worklist Smp#: 18

Client ID: SV-DUP03-A-26

Purge Vol: 500.000 mL

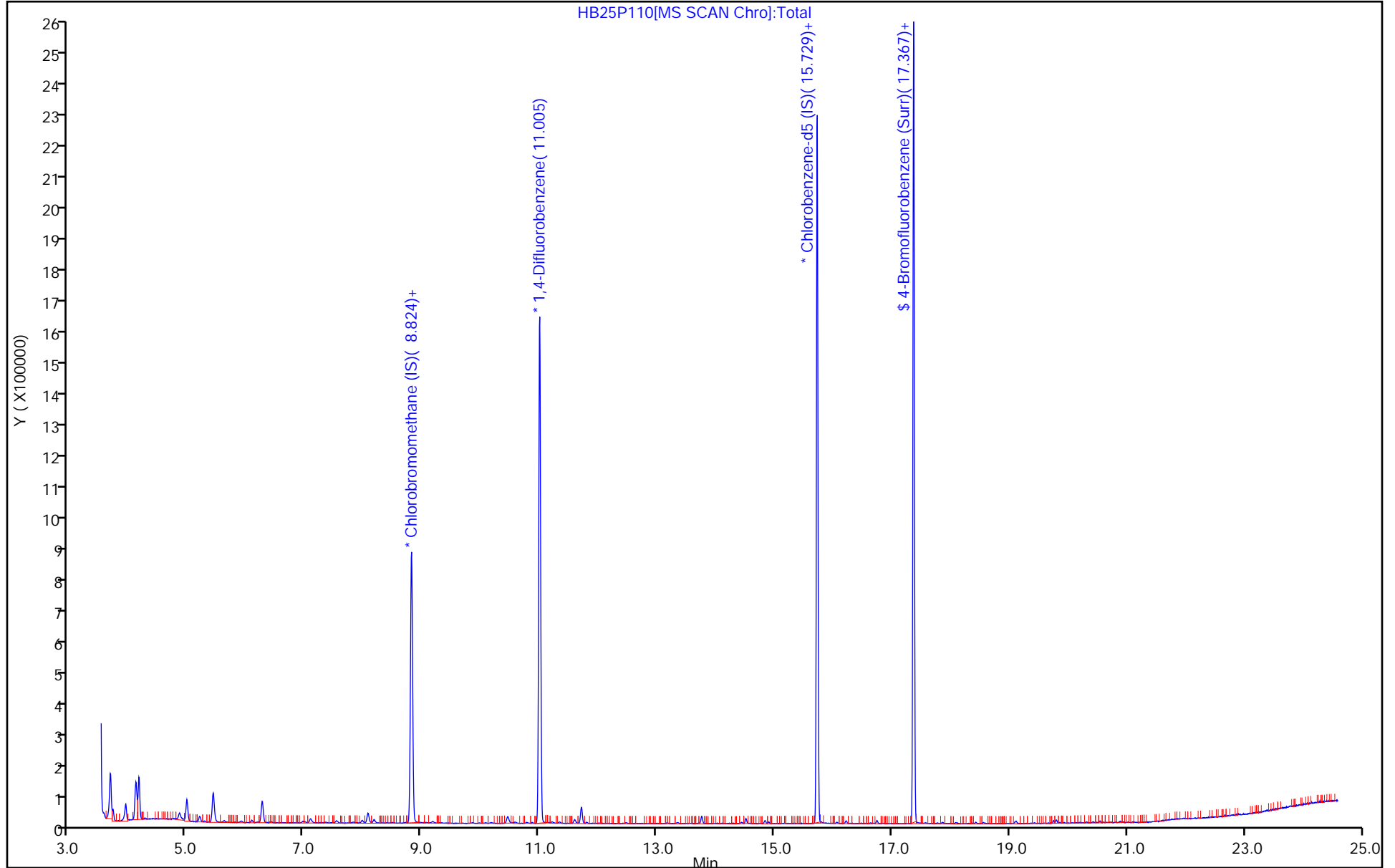
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P110.D
 Lims ID: 140-14387-A-11
 Client ID: SV-DUP03-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 01:24:30 ALS Bottle#: 10 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-018
 Misc. Info.: 140-14387-a-11
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:11:37 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:11:37

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.99	99.69

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P110.D

Injection Date: 26-Feb-2019 01:24:30

Instrument ID: MH

Lims ID: 140-14387-A-11

Lab Sample ID: 140-14387-11

Client ID: SV-DUP03-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

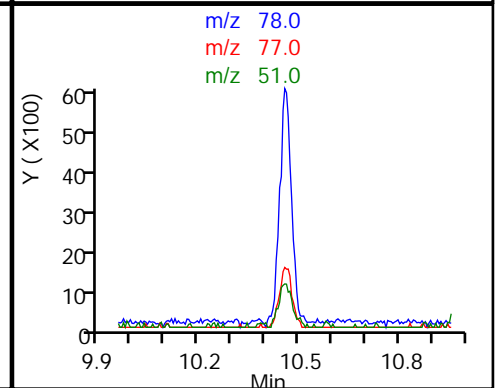
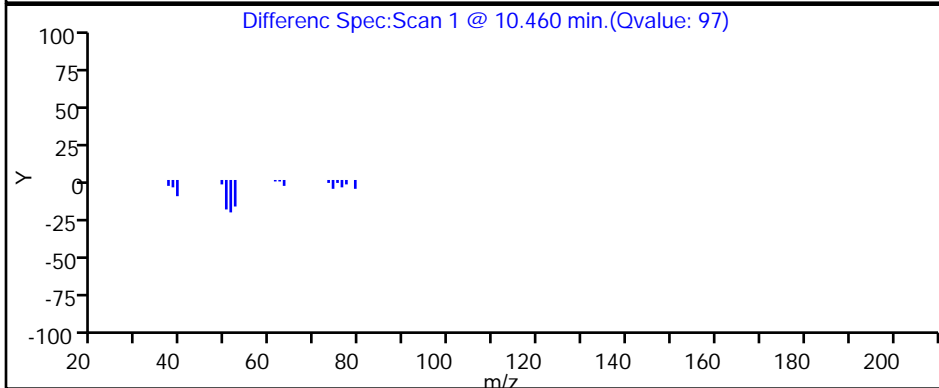
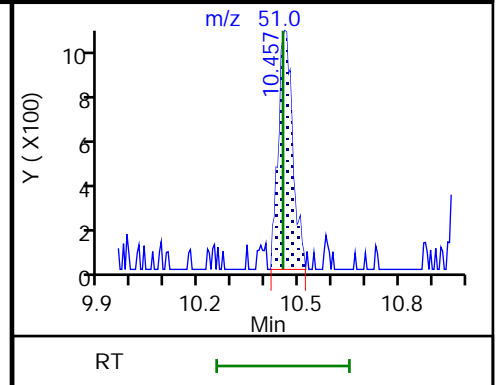
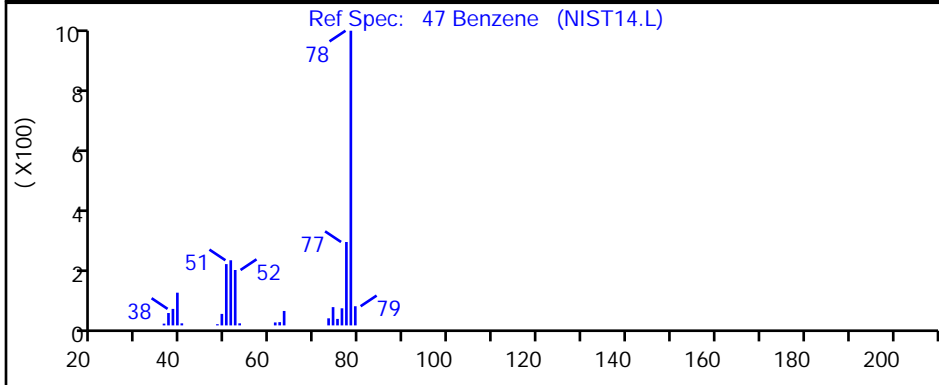
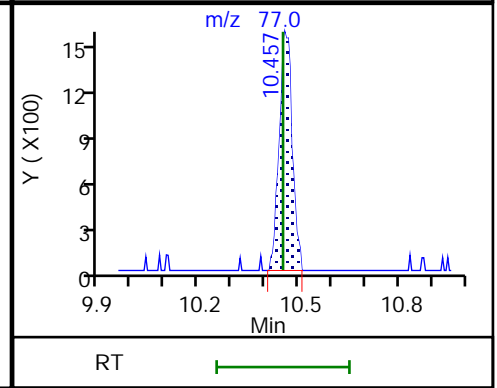
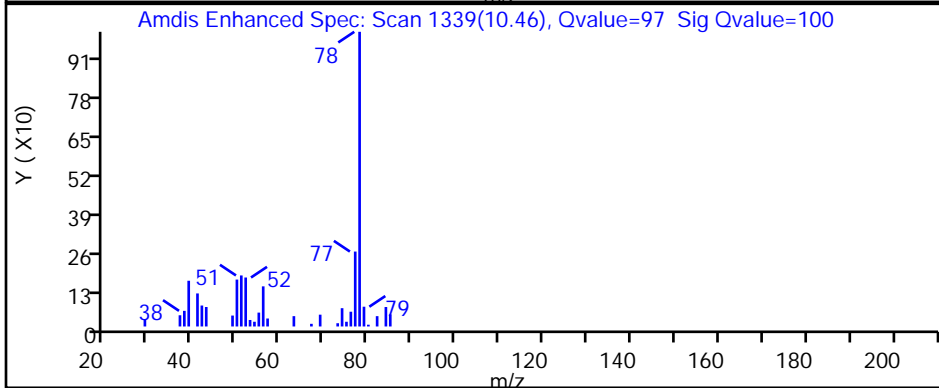
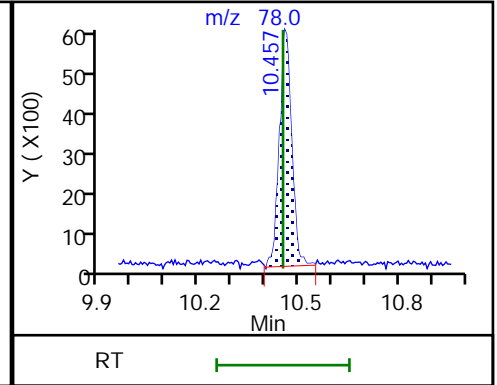
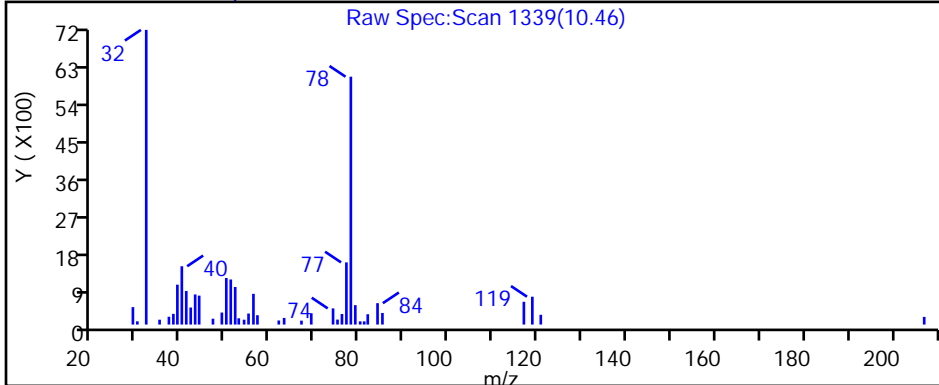
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P110.D

Injection Date: 26-Feb-2019 01:24:30

Instrument ID: MH

Lims ID: 140-14387-A-11

Lab Sample ID: 140-14387-11

Client ID: SV-DUP03-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

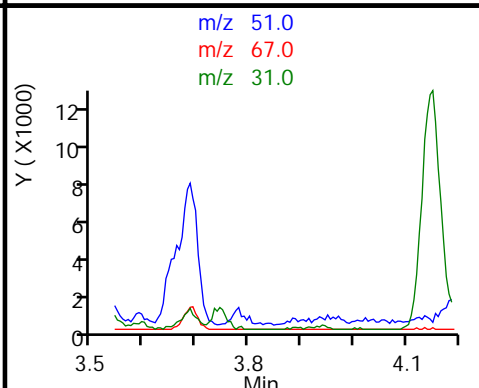
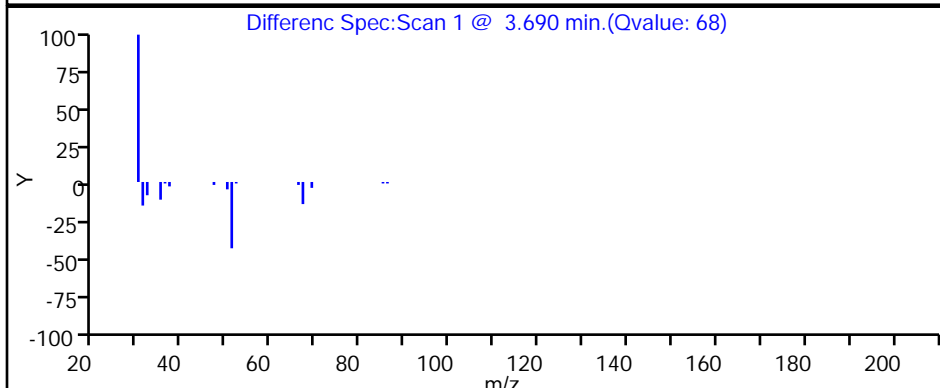
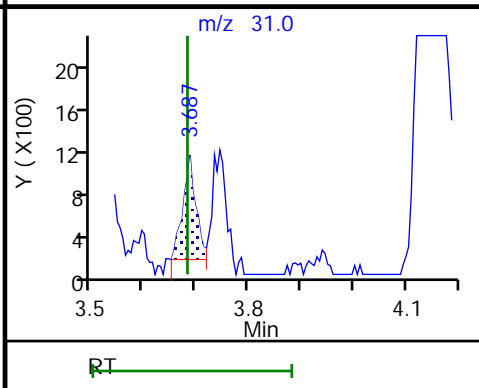
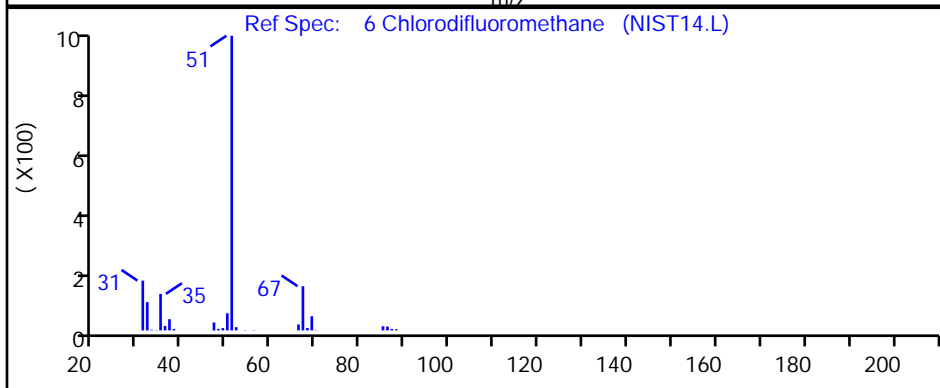
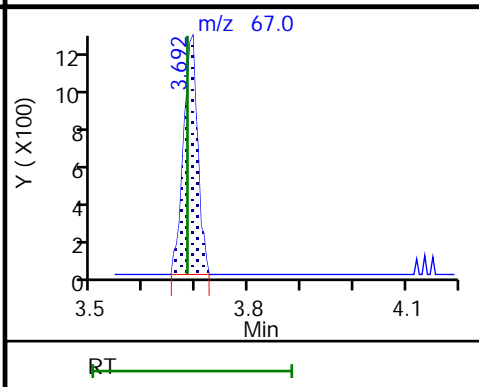
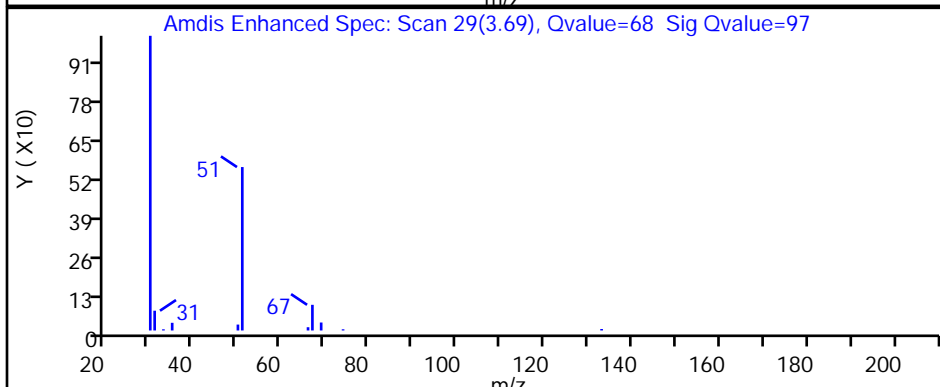
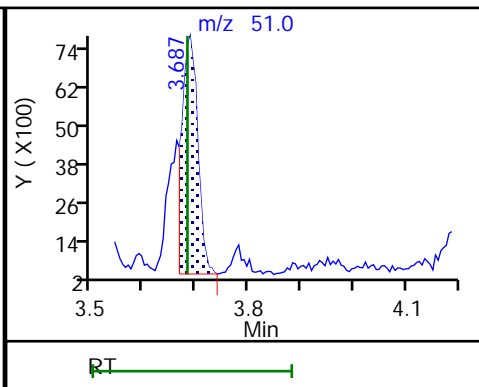
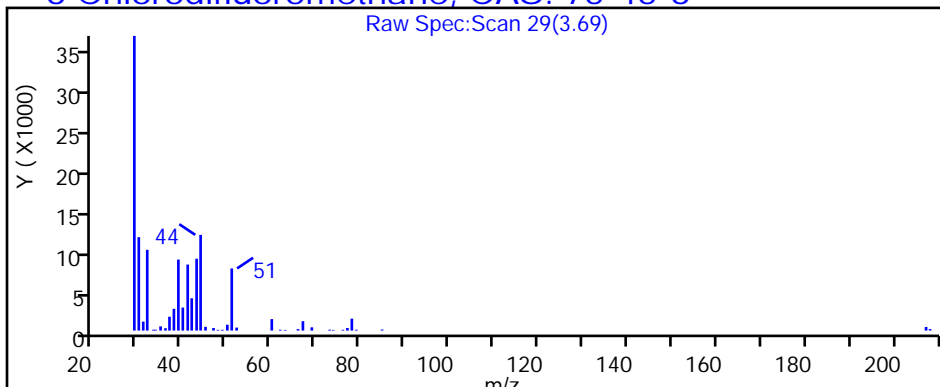
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P110.D

Injection Date: 26-Feb-2019 01:24:30

Instrument ID: MH

Lims ID: 140-14387-A-11

Lab Sample ID: 140-14387-11

Client ID: SV-DUP03-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

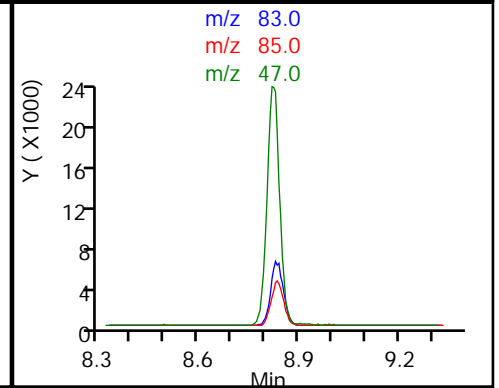
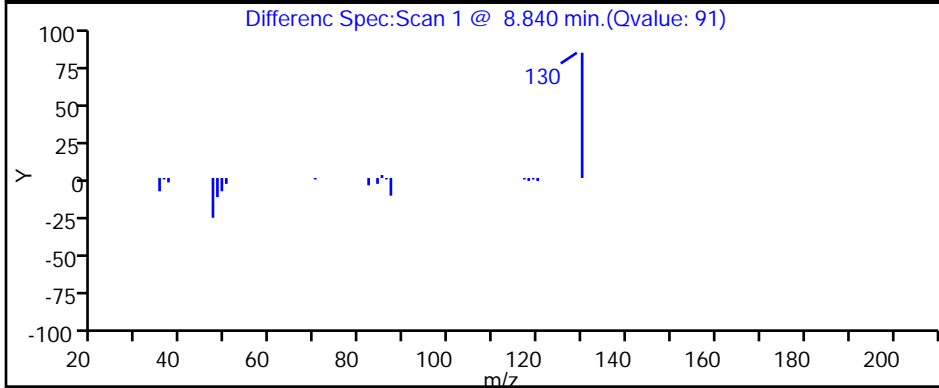
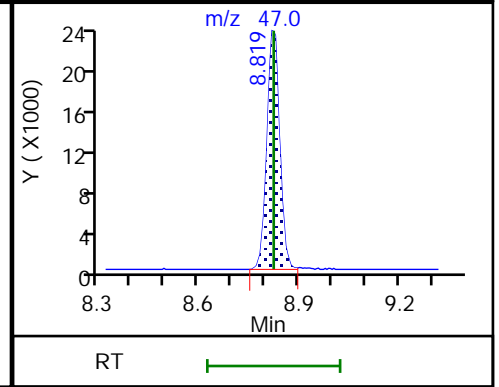
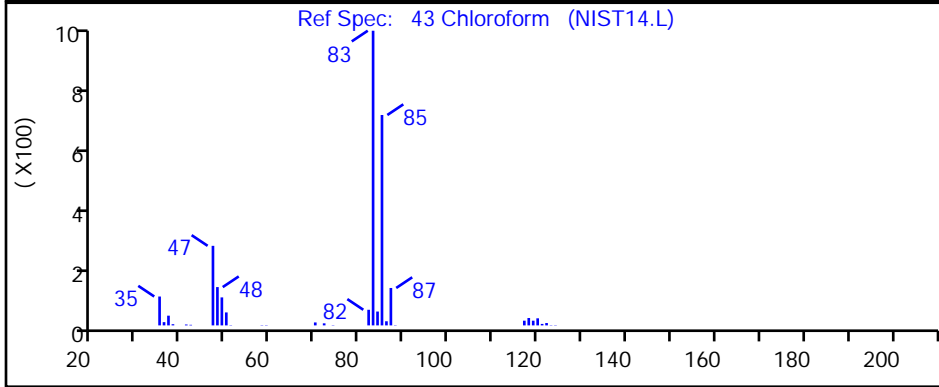
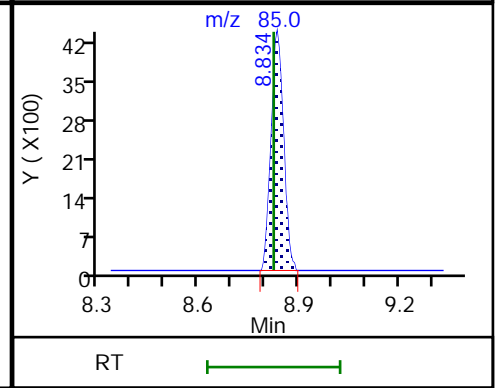
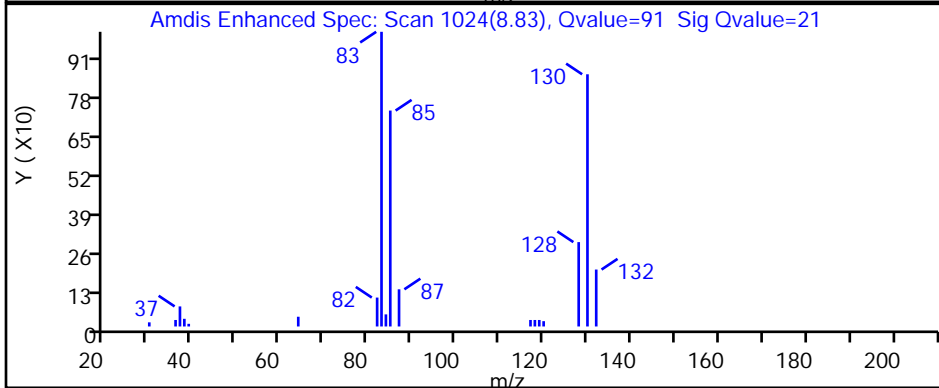
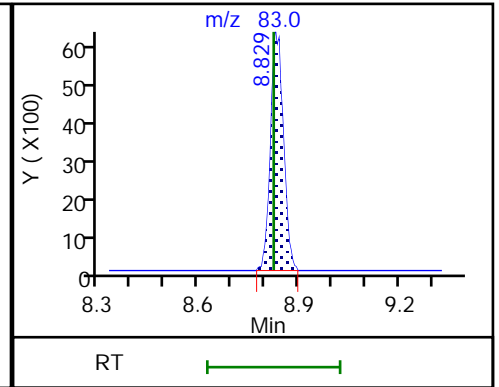
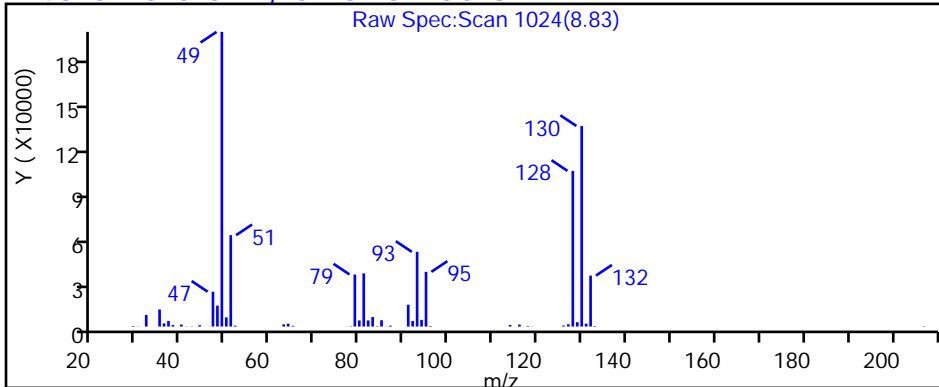
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P110.D

Injection Date: 26-Feb-2019 01:24:30

Instrument ID: MH

Lims ID: 140-14387-A-11

Lab Sample ID: 140-14387-11

Client ID: SV-DUP03-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

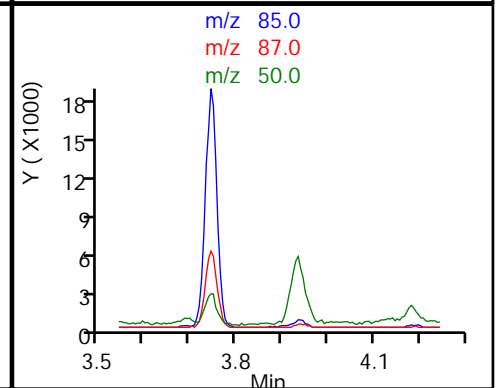
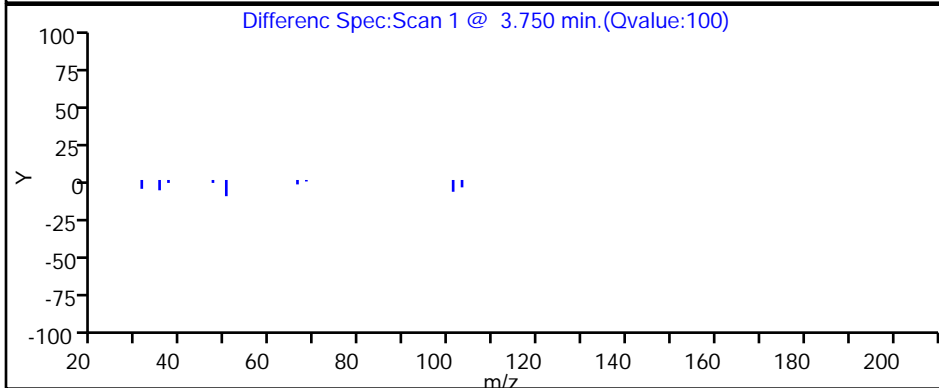
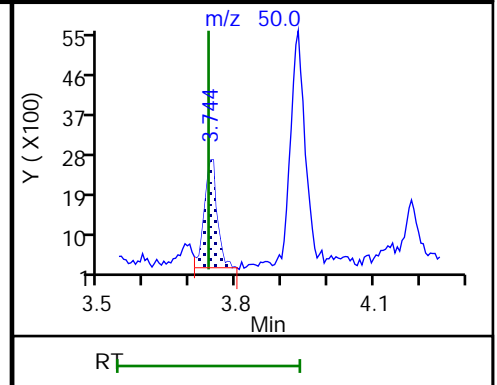
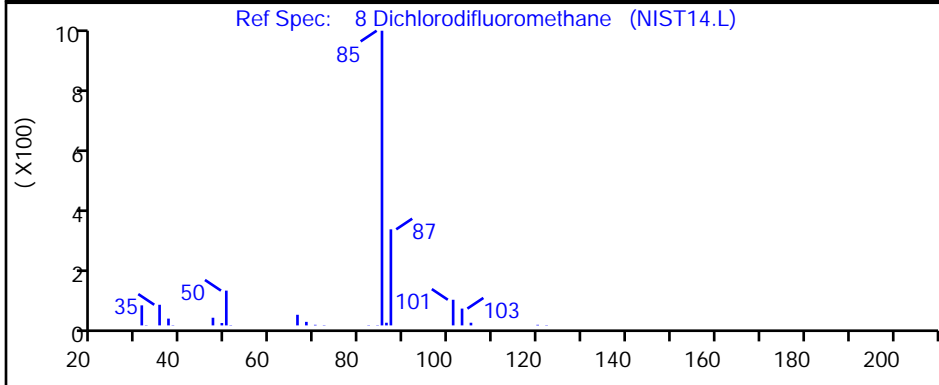
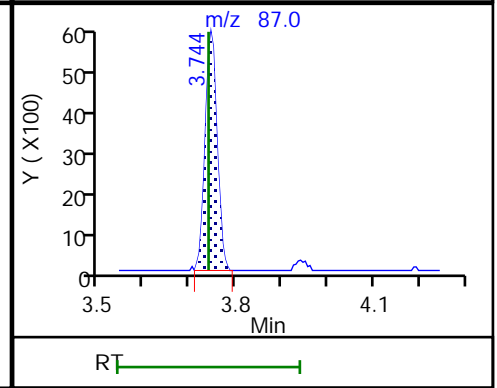
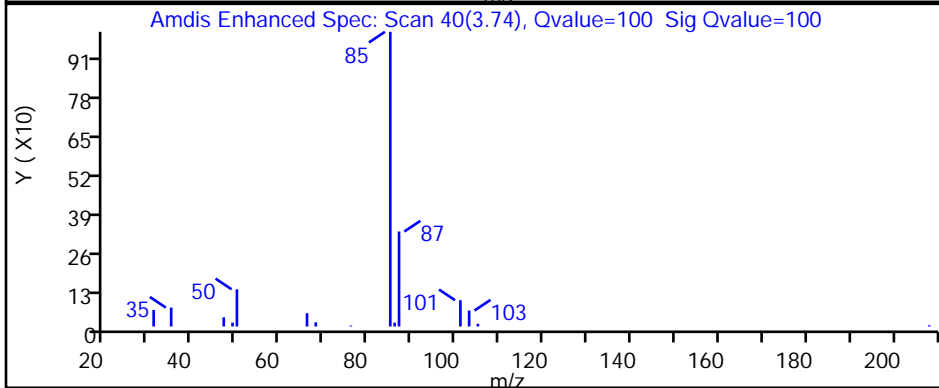
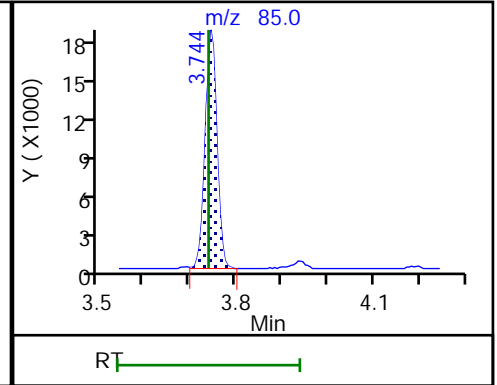
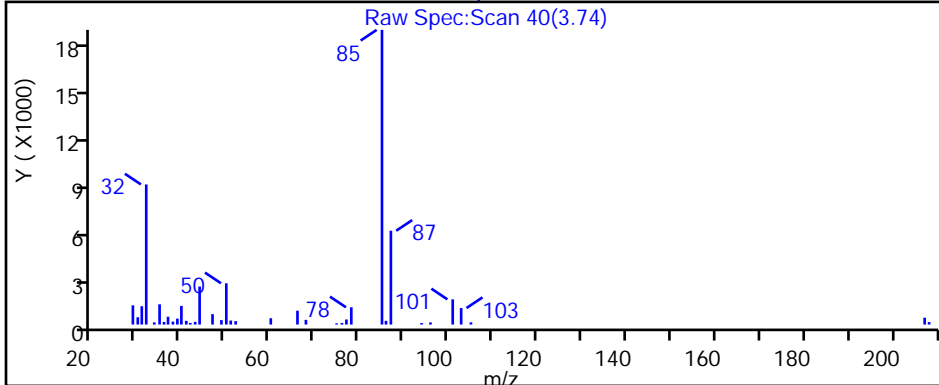
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P110.D

Injection Date: 26-Feb-2019 01:24:30

Instrument ID: MH

Lims ID: 140-14387-A-11

Lab Sample ID: 140-14387-11

Client ID: SV-DUP03-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

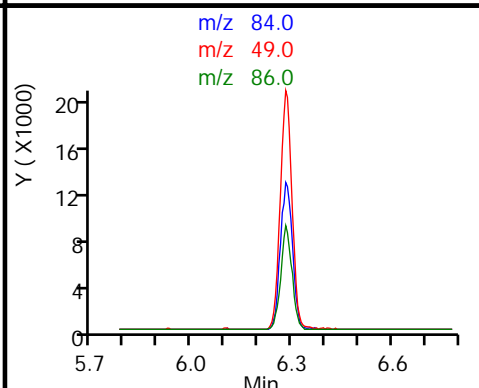
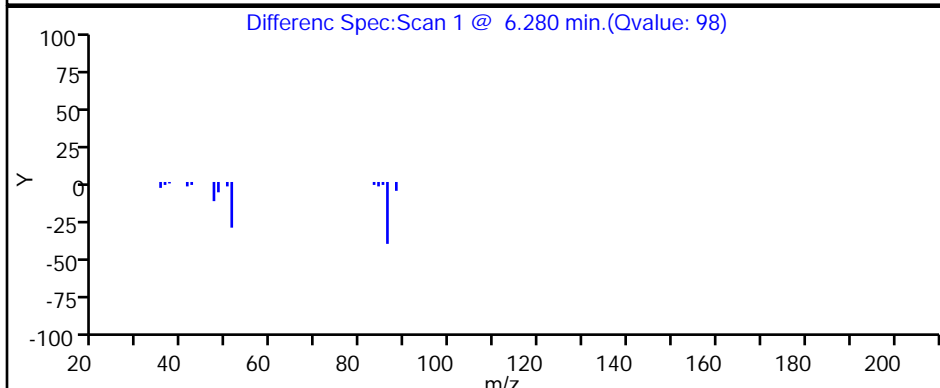
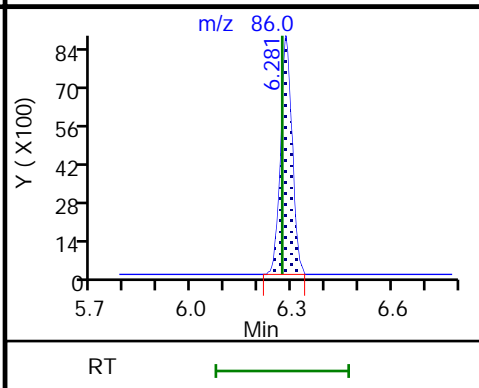
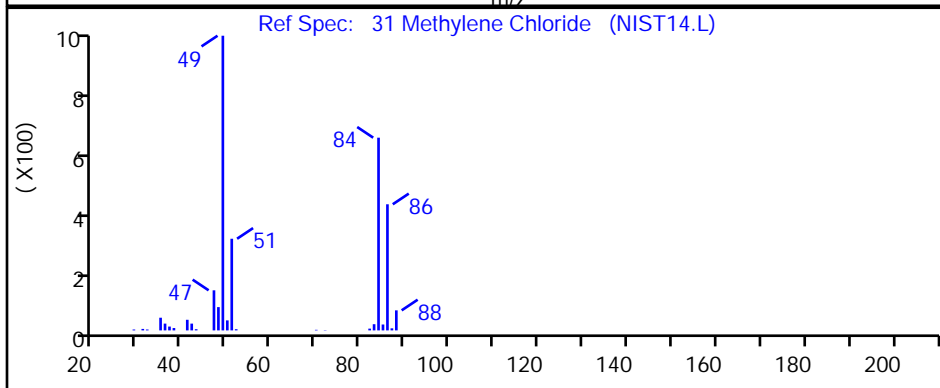
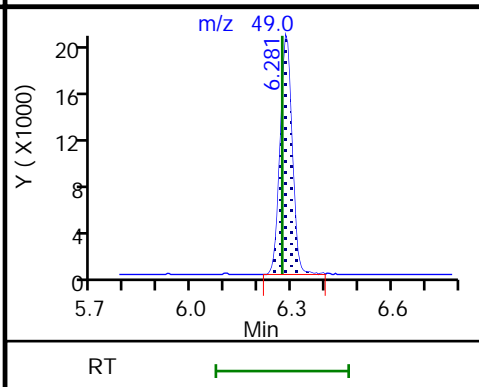
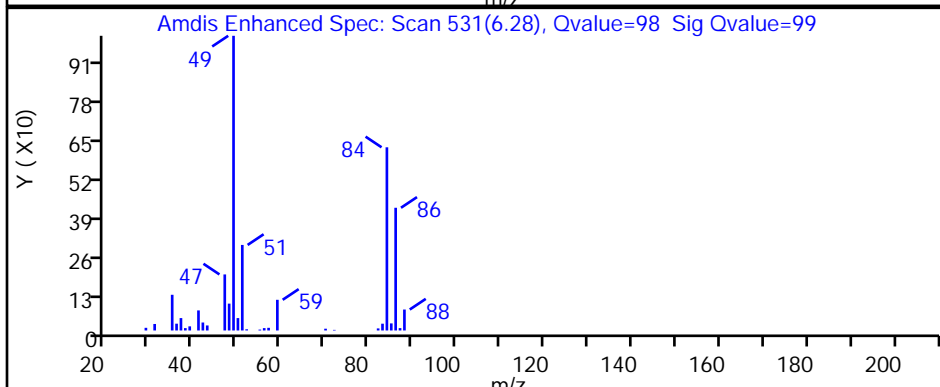
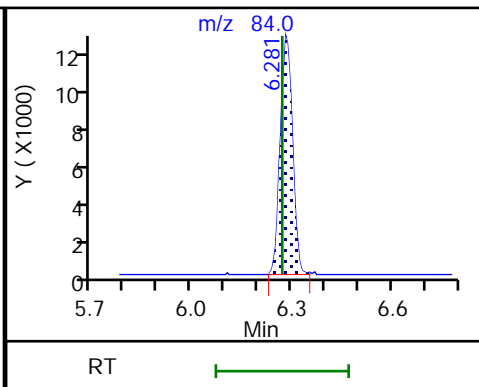
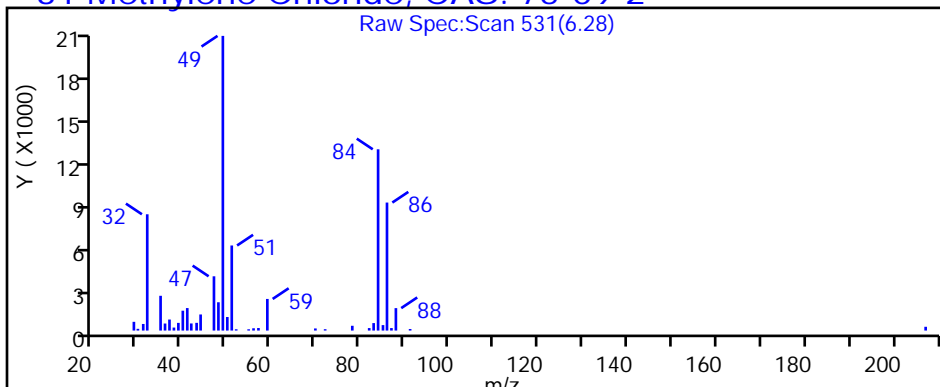
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P110.D

Injection Date: 26-Feb-2019 01:24:30

Instrument ID: MH

Lims ID: 140-14387-A-11

Lab Sample ID: 140-14387-11

Client ID: SV-DUP03-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

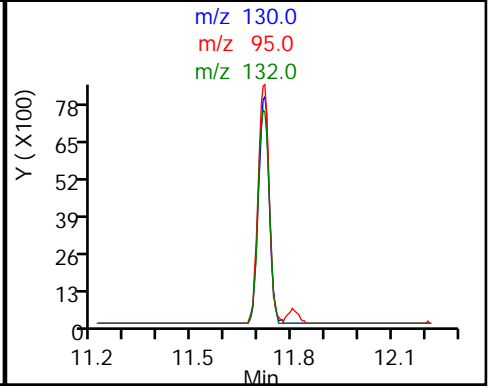
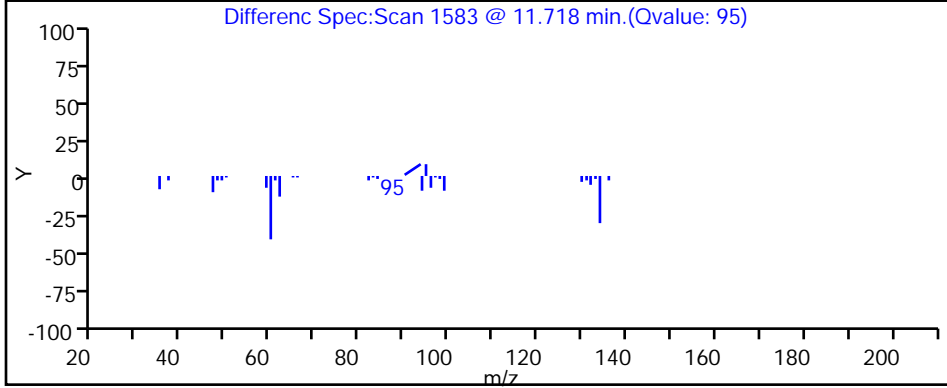
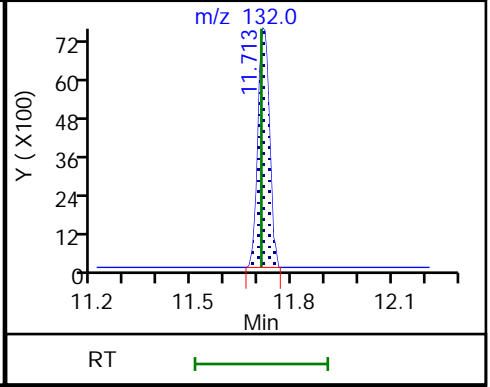
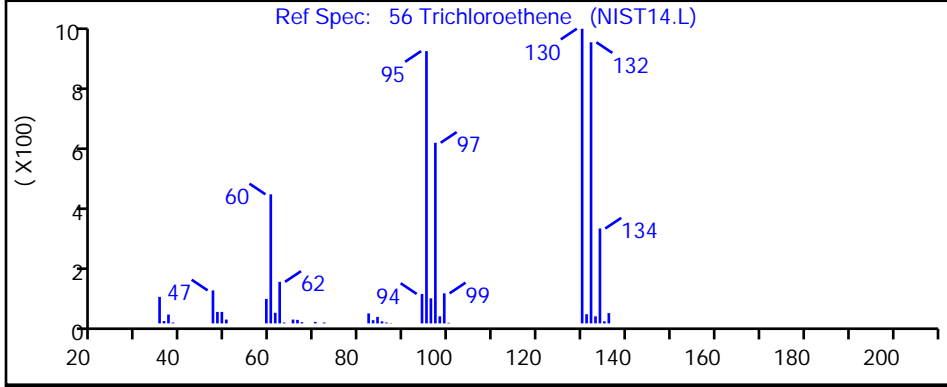
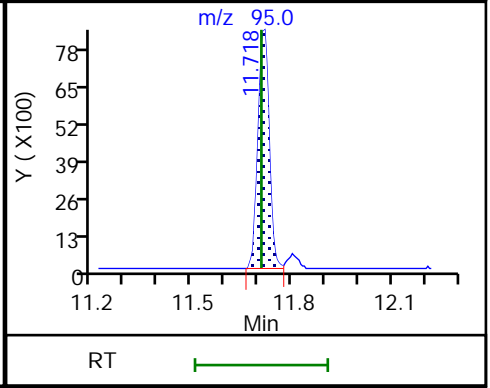
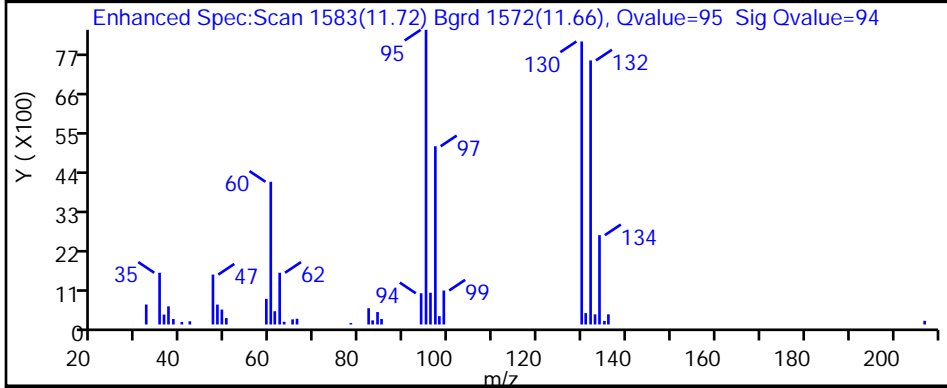
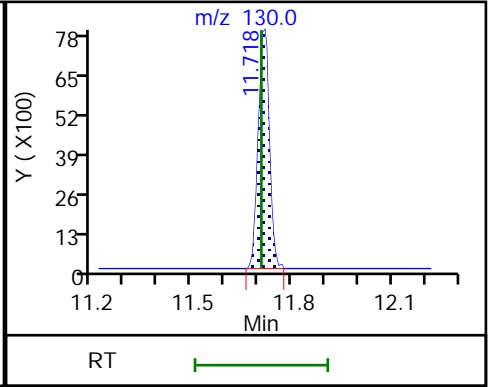
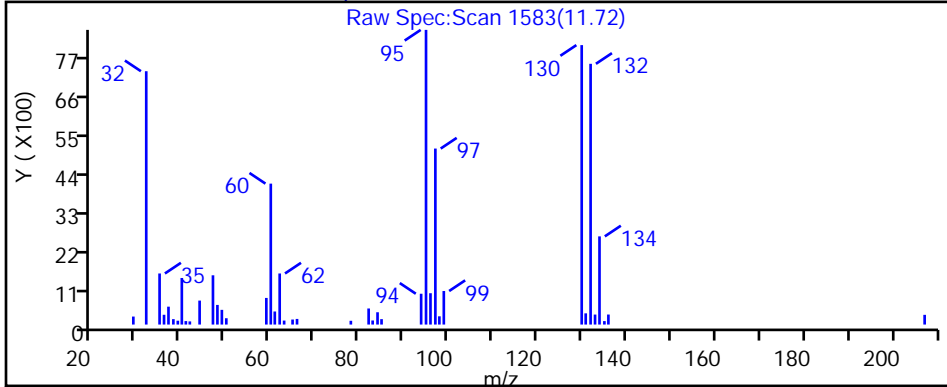
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

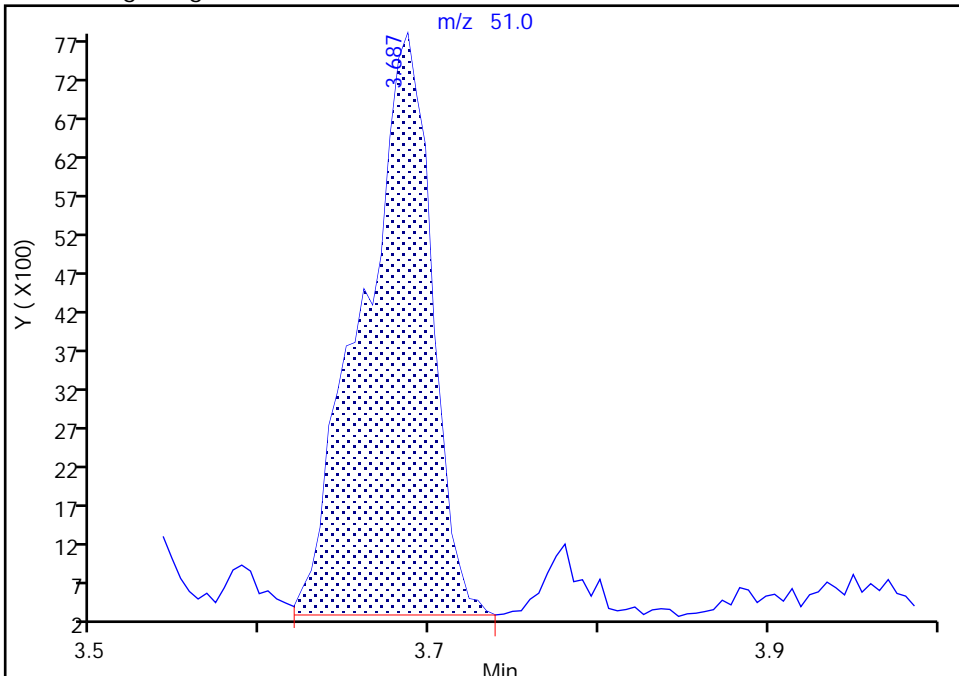
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P110.D
Injection Date: 26-Feb-2019 01:24:30 Instrument ID: MH
Lims ID: 140-14387-A-11 Lab Sample ID: 140-14387-11
Client ID: SV-DUP03-A-26
Operator ID: HMT ALS Bottle#: 10 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

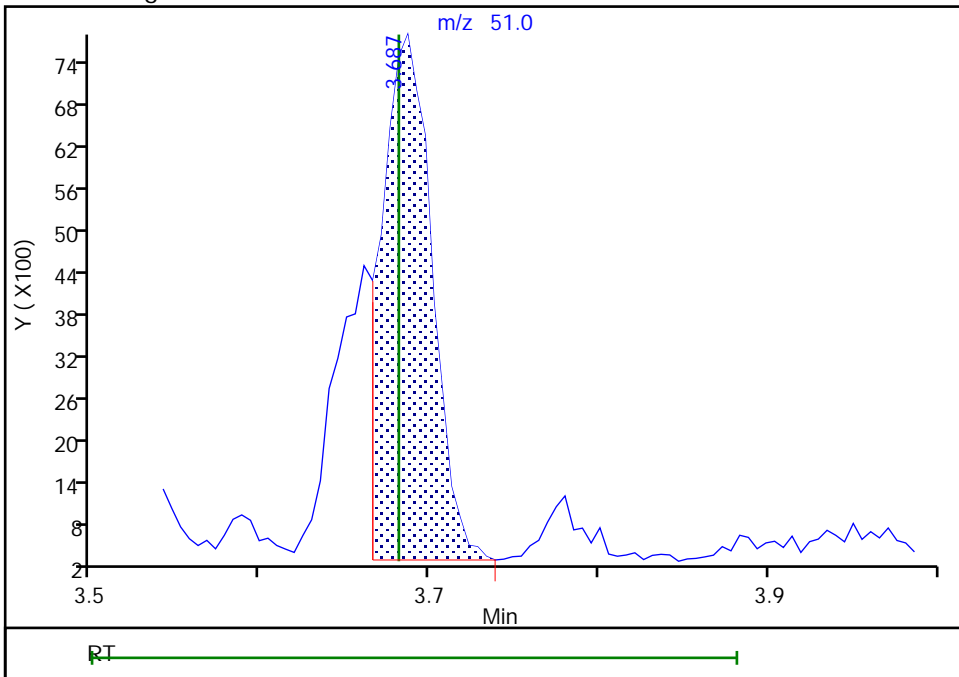
RT: 3.69
Area: 21479
Amount: 0.093228
Amount Units: ppb v/v

Processing Integration Results



RT: 3.69
Area: 15673
Amount: 0.068027
Amount Units: ppb v/v

Manual Integration Results



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-138-A-26 Lab Sample ID: 140-14387-12
 Matrix: Air Lab File ID: HB25P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:32
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 02:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.085	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.77		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	3.3		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.88	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.13	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.065	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	21		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-138-A-26 Lab Sample ID: 140-14387-12
 Matrix: Air Lab File ID: HB25P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:32
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 02:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	0.41	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	8.2		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	3.1		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	13		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.89	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.36	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	110		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.67	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D
 Lims ID: 140-14387-A-12
 Client ID: SV-138-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 02:17:30 ALS Bottle#: 11 Worklist Smp#: 19
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-019
 Misc. Info.: 140-14387-a-12
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:11:37 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:12:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.814	0.010	96	274052	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1481817	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1237546	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.368	17.393	-0.025	93	809509	4.01	
6 Chlorodifluoromethane	51	3.682	3.687	0.000	55	17897	0.0796	
8 Dichlorodifluoromethane	85	3.744	3.738	0.006	100	32512	0.0942	
27 1,1-Dichloroethene	96	5.930	5.919	0.011	99	70192	0.6594	
31 Methylene Chloride	84	6.281	6.271	0.010	98	19745	0.1762	
37 1,1-Dichloroethane	63	7.501	7.501	0.000	100	31836	0.1533	
41 cis-1,2-Dichloroethene	96	8.488	8.483	0.005	97	45746	0.4135	
43 Chloroform	83	8.840	8.824	0.016	73	4037	0.0170	
45 1,1,1-Trichloroethane	97	9.863	9.853	0.010	93	2956	0.0131	
47 Benzene	78	10.457	10.452	0.005	98	11824	0.0377	
56 Trichloroethene	130	11.713	11.708	0.005	96	629551	4.26	
73 Tetrachloroethene	129	14.897	14.897	0.000	93	3745	0.0261	
89 1,3,5-Trimethylbenzene	120	18.132	18.101	-0.026	10	90	0.0275	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D

Injection Date: 26-Feb-2019 02:17:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-12

Lab Sample ID: 140-14387-12

Worklist Smp#: 19

Client ID: SV-138-A-26

Purge Vol: 500.000 mL

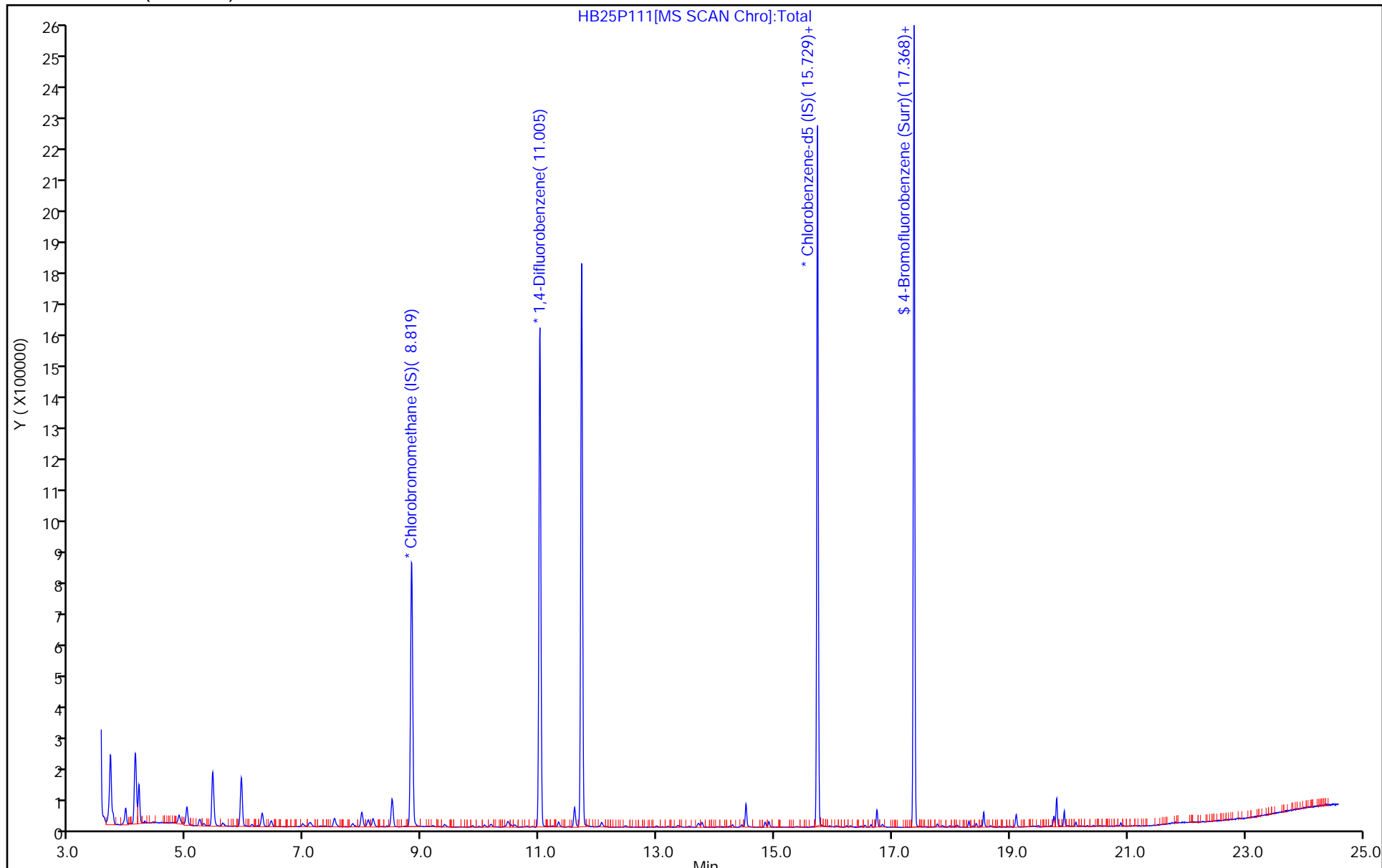
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D
 Lims ID: 140-14387-A-12
 Client ID: SV-138-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 02:17:30 ALS Bottle#: 11 Worklist Smp#: 19
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-019
 Misc. Info.: 140-14387-a-12
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:11:37 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:12:01

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.01	100.35

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D

Injection Date: 26-Feb-2019 02:17:30

Instrument ID: MH

Lims ID: 140-14387-A-12

Lab Sample ID: 140-14387-12

Client ID: SV-138-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

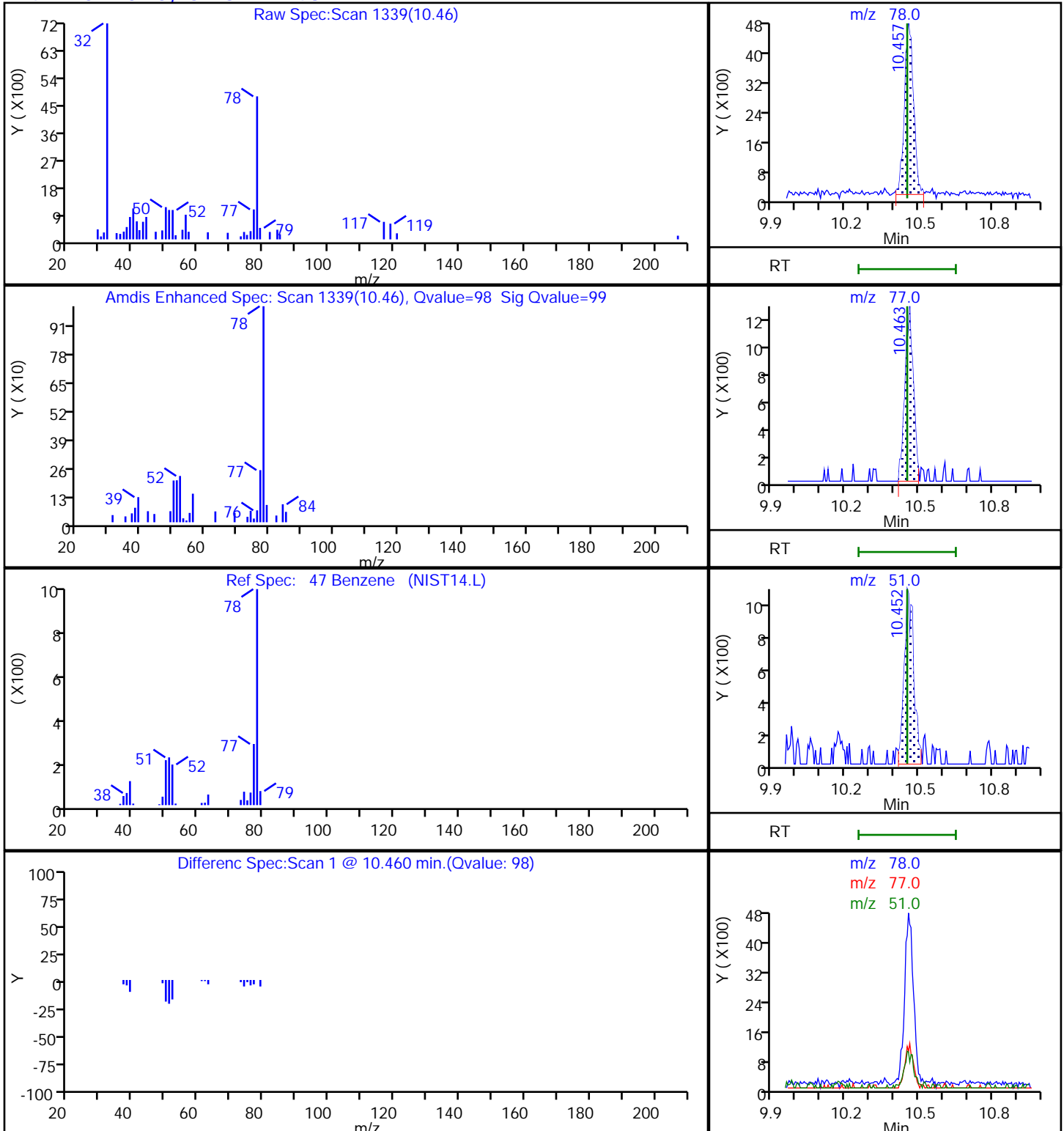
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D

Injection Date: 26-Feb-2019 02:17:30

Instrument ID: MH

Lims ID: 140-14387-A-12

Lab Sample ID: 140-14387-12

Client ID: SV-138-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

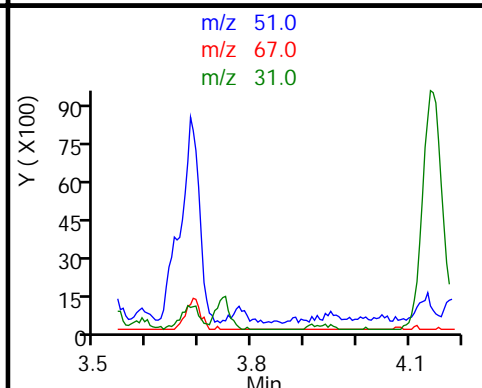
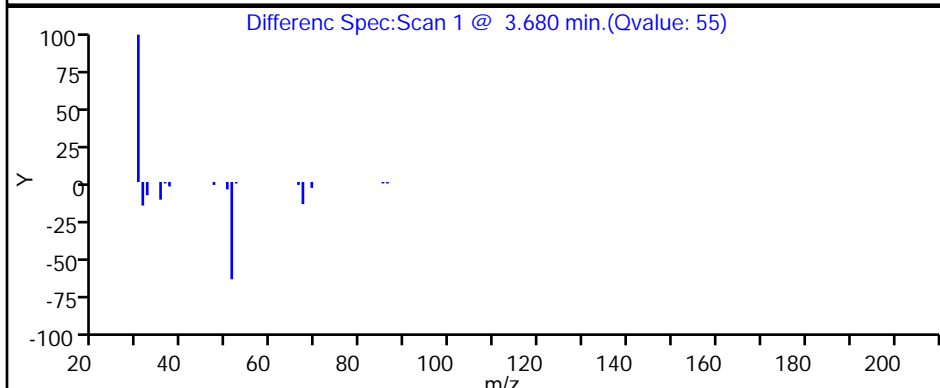
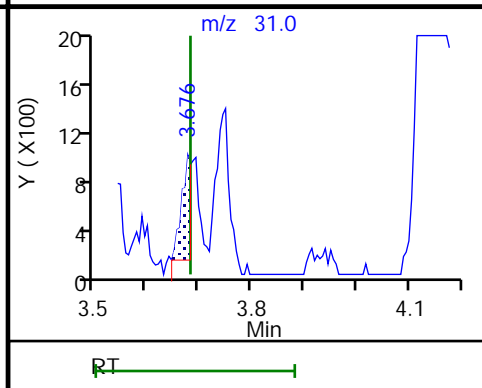
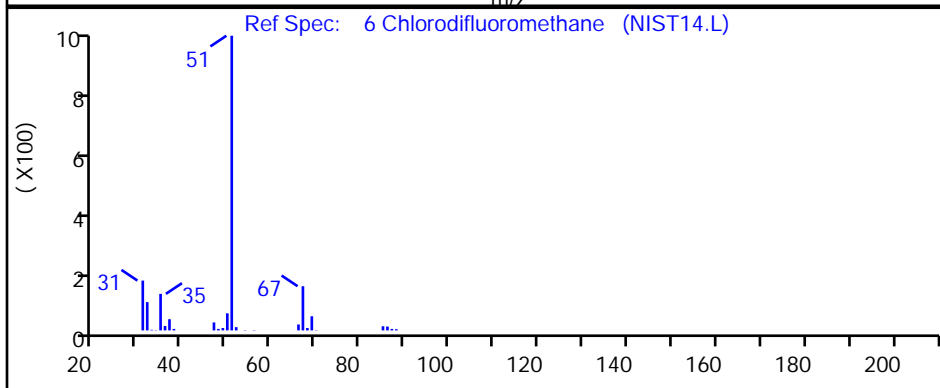
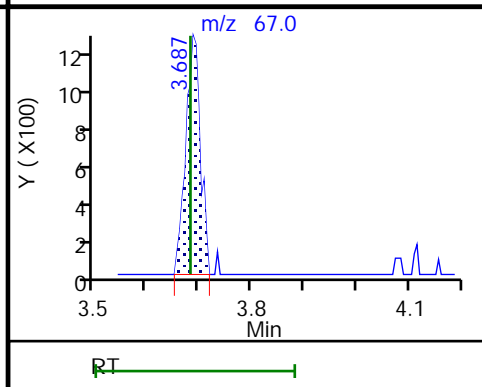
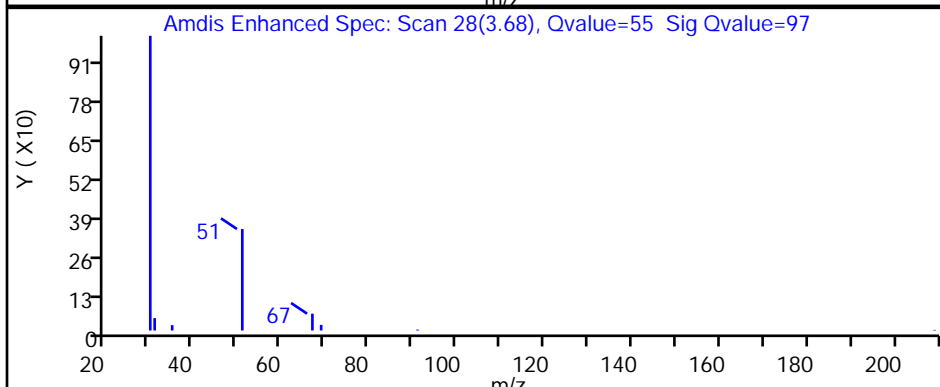
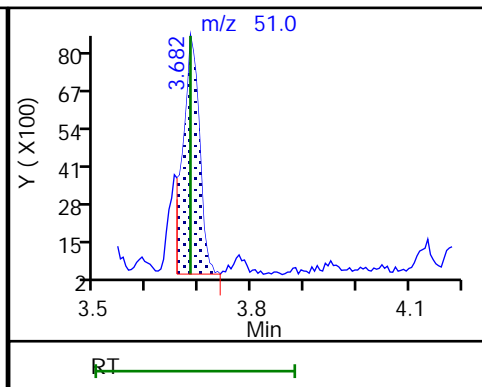
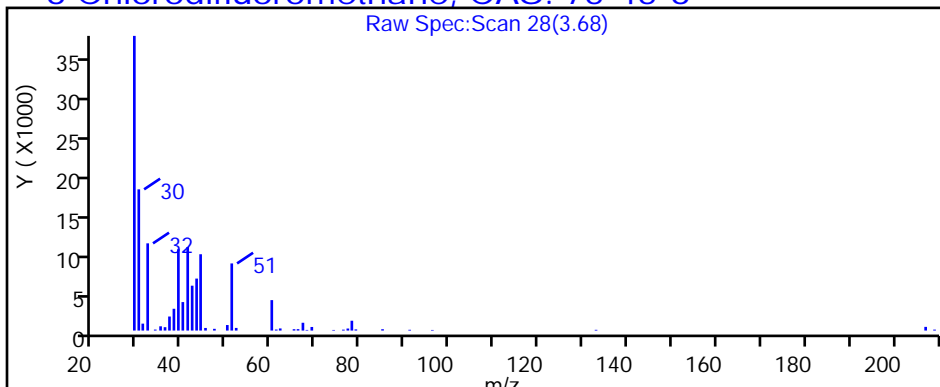
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D

Injection Date: 26-Feb-2019 02:17:30

Instrument ID: MH

Lims ID: 140-14387-A-12

Lab Sample ID: 140-14387-12

Client ID: SV-138-A-26

Operator ID: HMT

ALS Bottle#: 11 Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

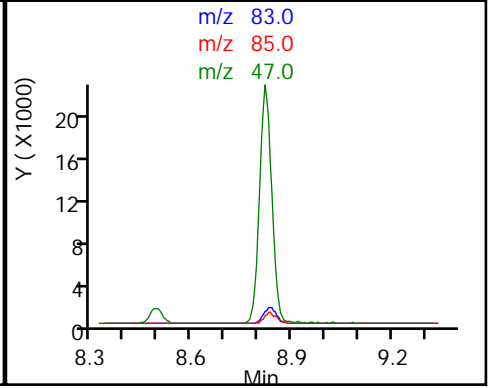
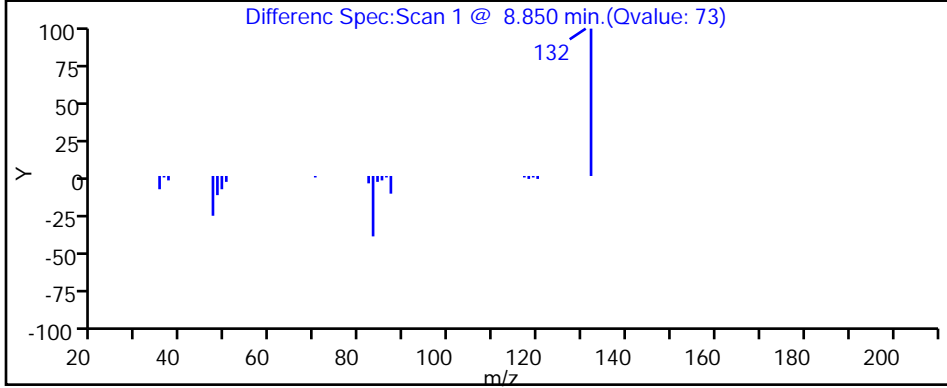
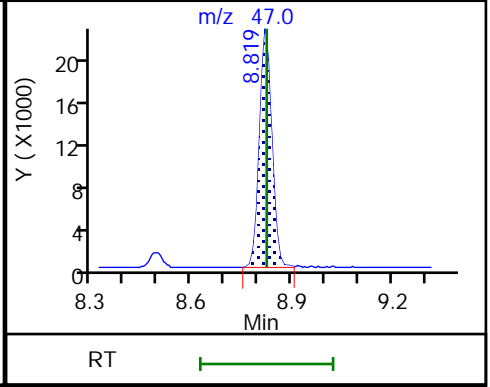
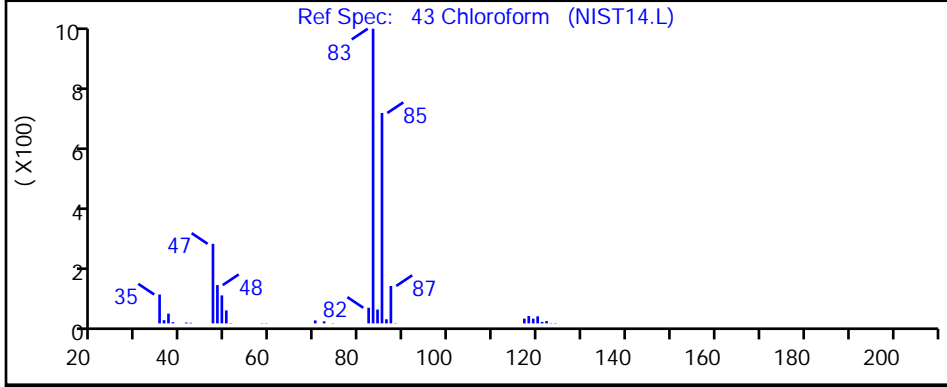
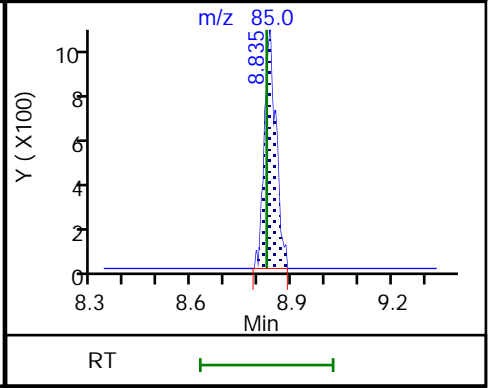
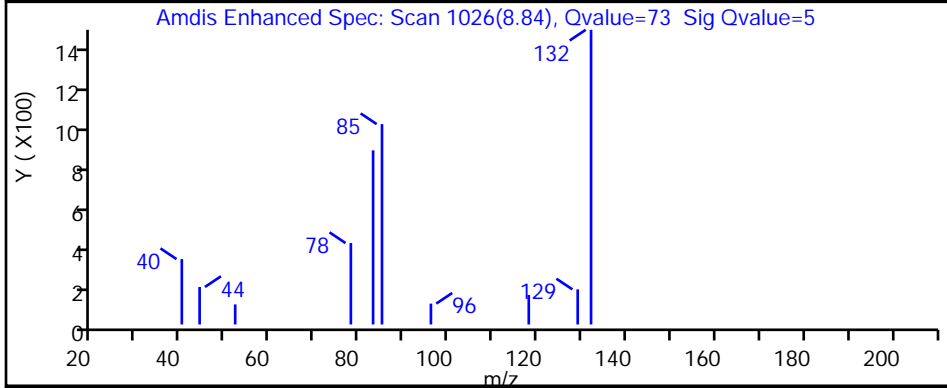
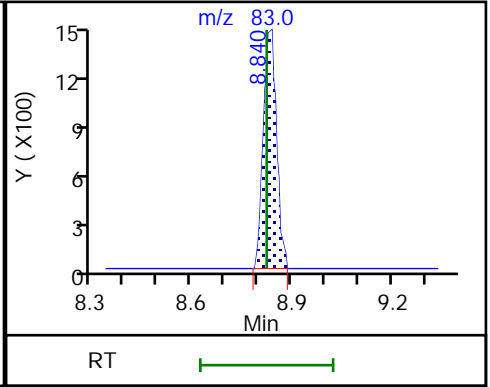
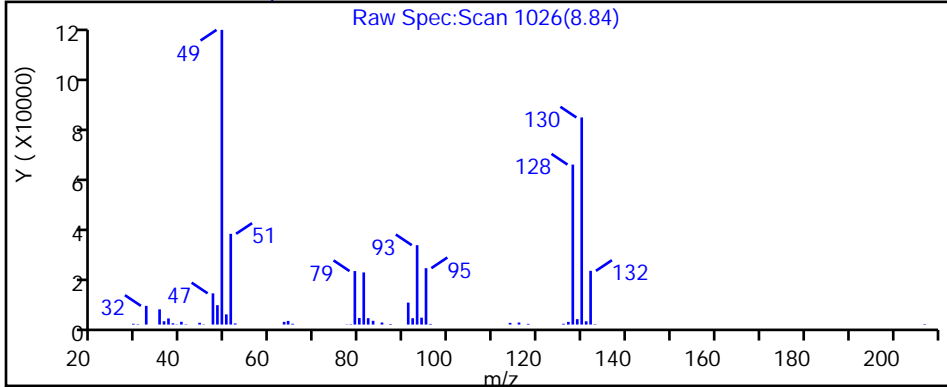
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D

Injection Date: 26-Feb-2019 02:17:30

Instrument ID: MH

Lims ID: 140-14387-A-12

Lab Sample ID: 140-14387-12

Client ID: SV-138-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

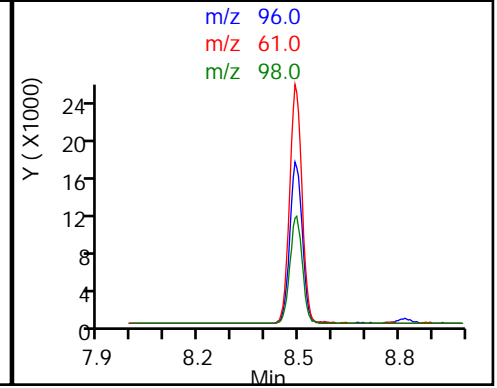
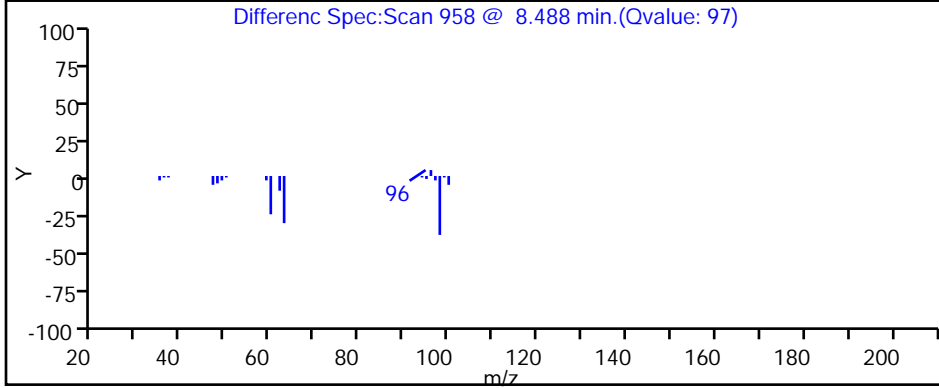
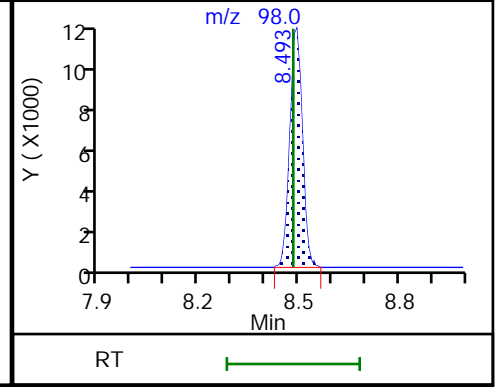
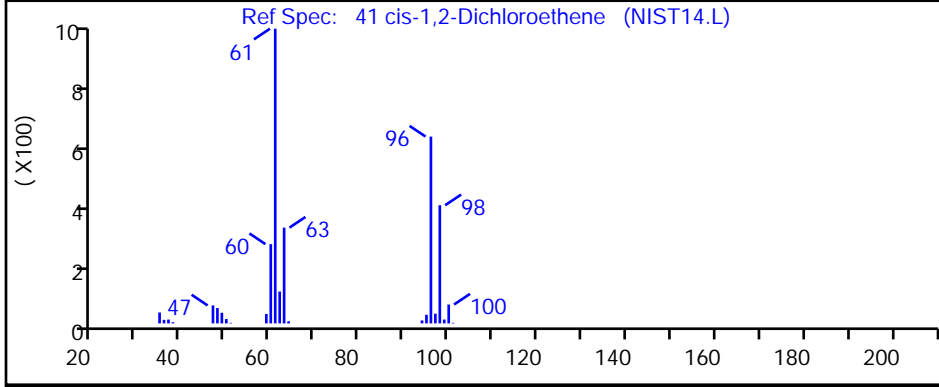
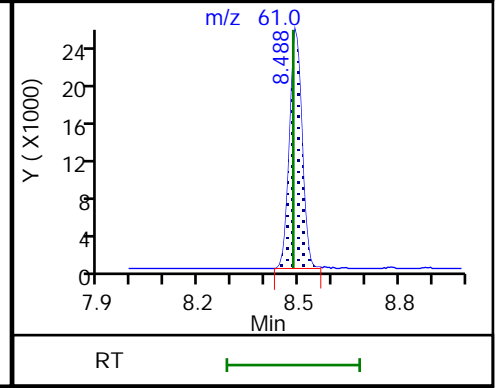
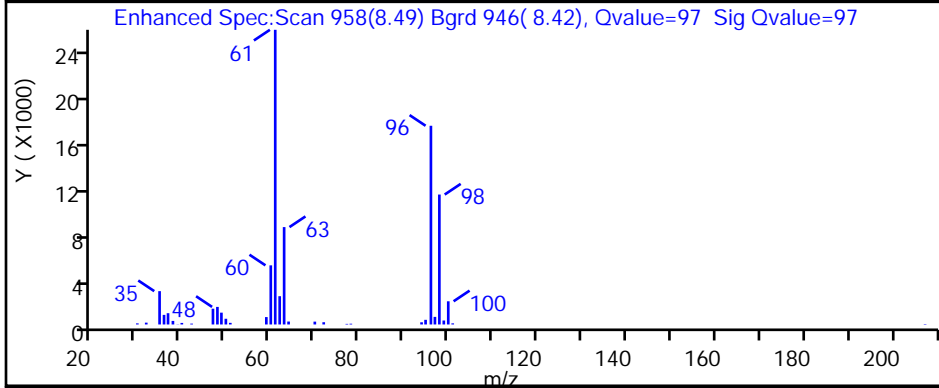
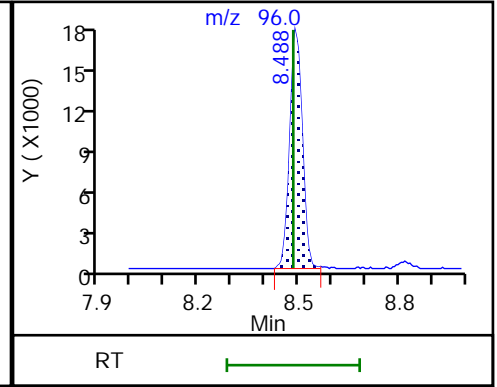
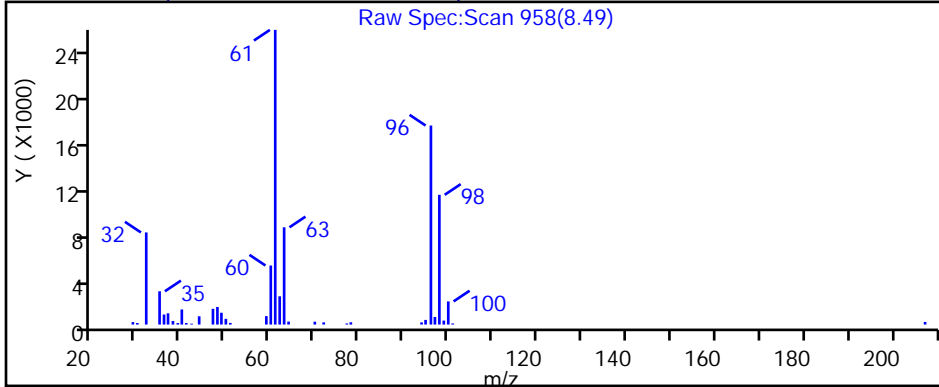
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D

Injection Date: 26-Feb-2019 02:17:30

Instrument ID: MH

Lims ID: 140-14387-A-12

Lab Sample ID: 140-14387-12

Client ID: SV-138-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

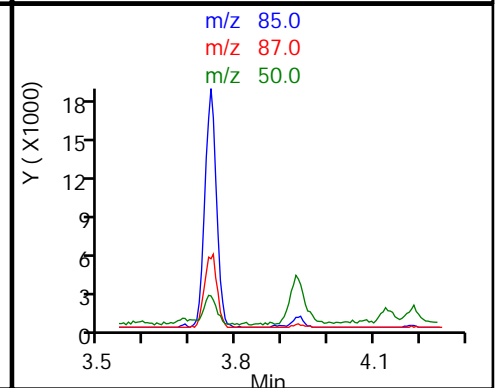
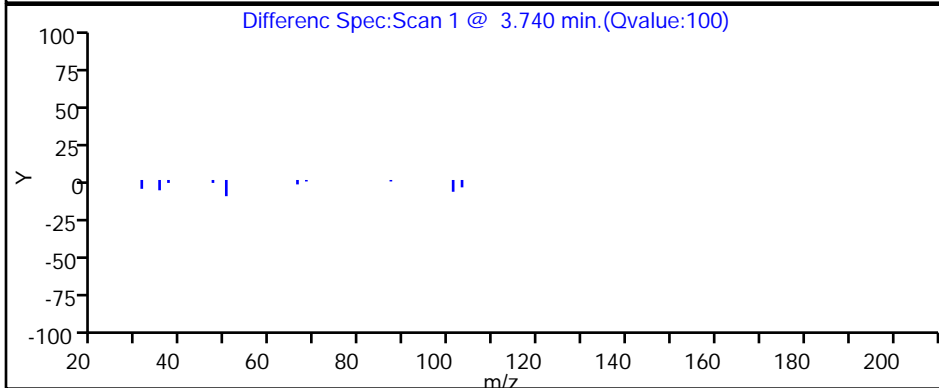
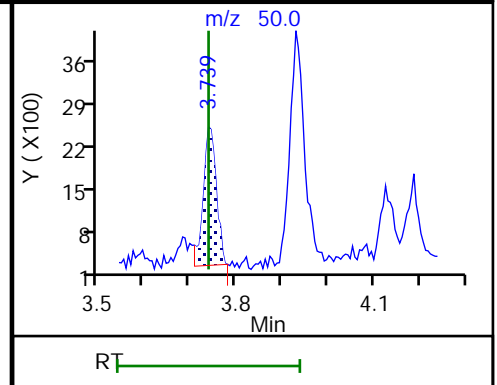
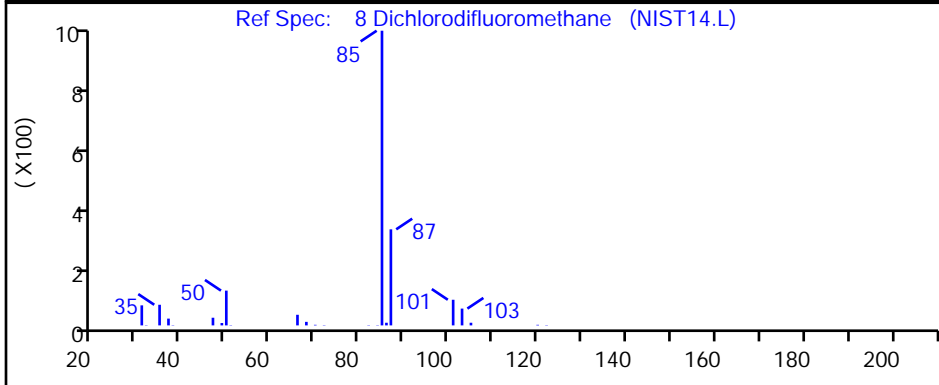
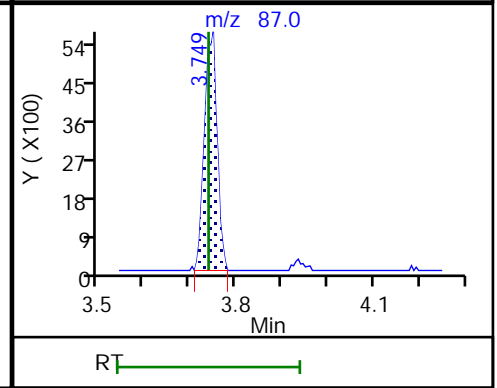
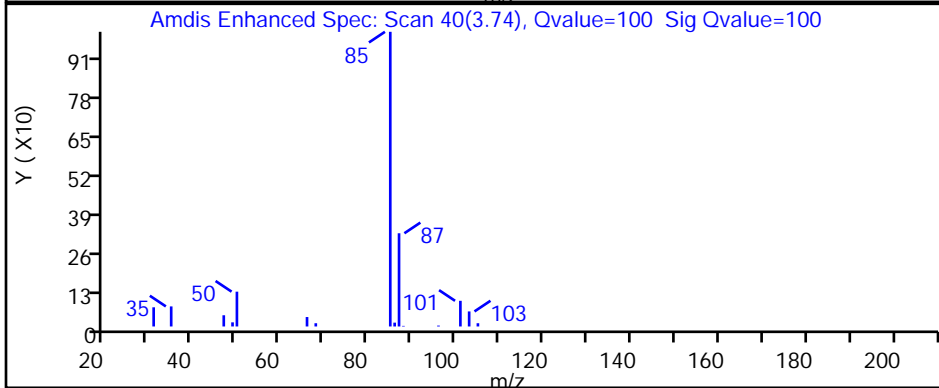
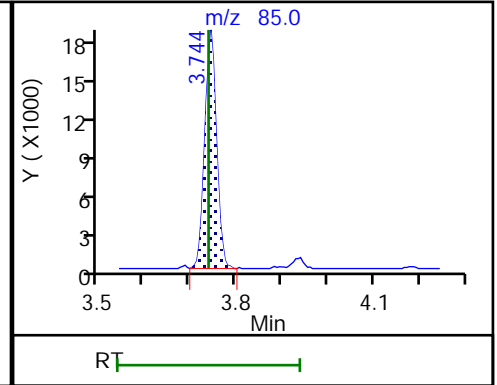
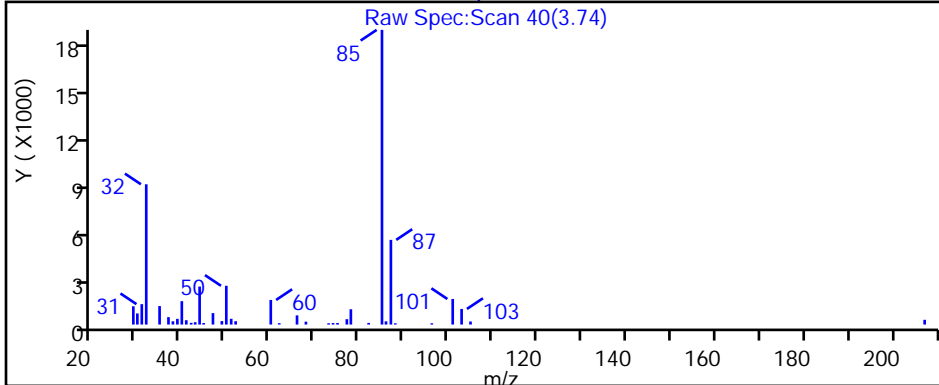
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D

Injection Date: 26-Feb-2019 02:17:30

Instrument ID: MH

Lims ID: 140-14387-A-12

Lab Sample ID: 140-14387-12

Client ID: SV-138-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

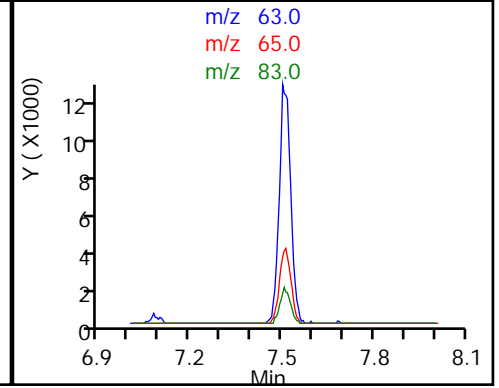
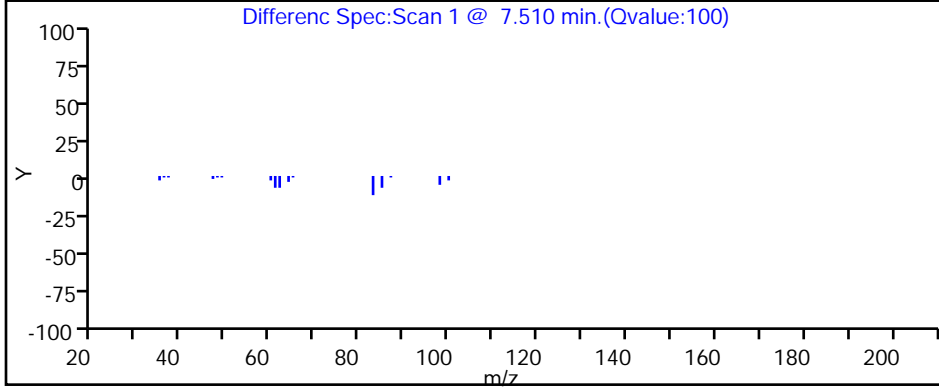
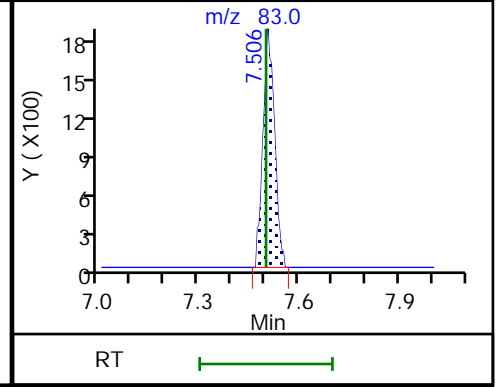
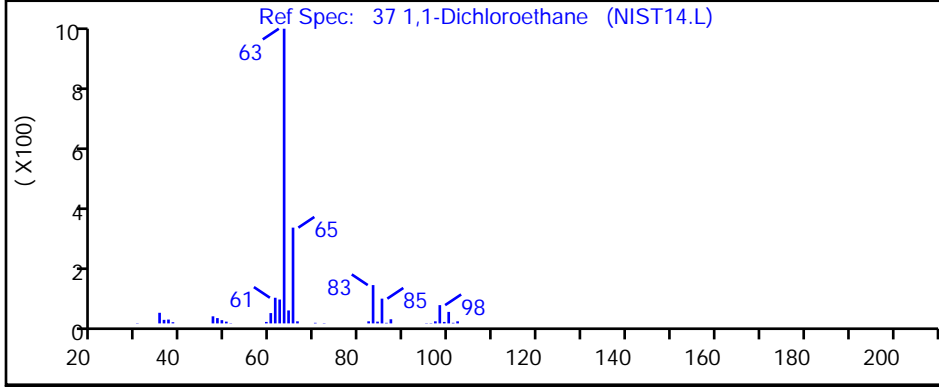
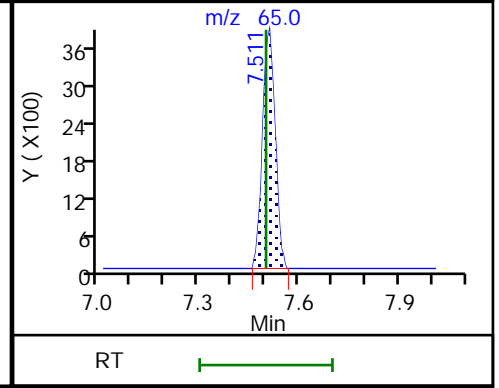
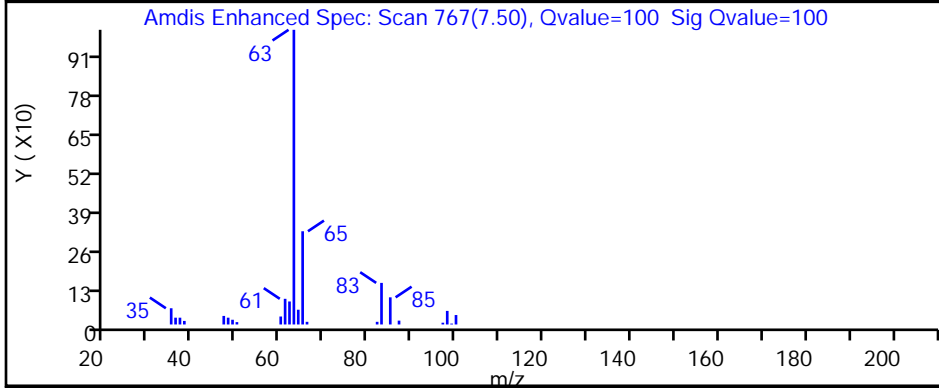
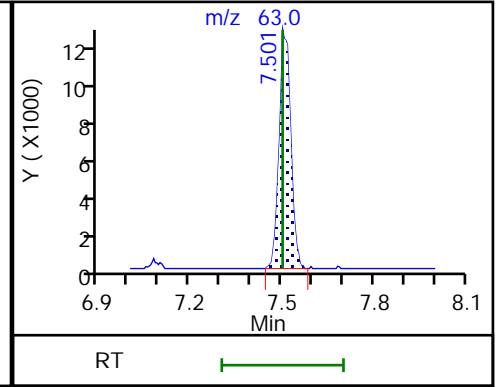
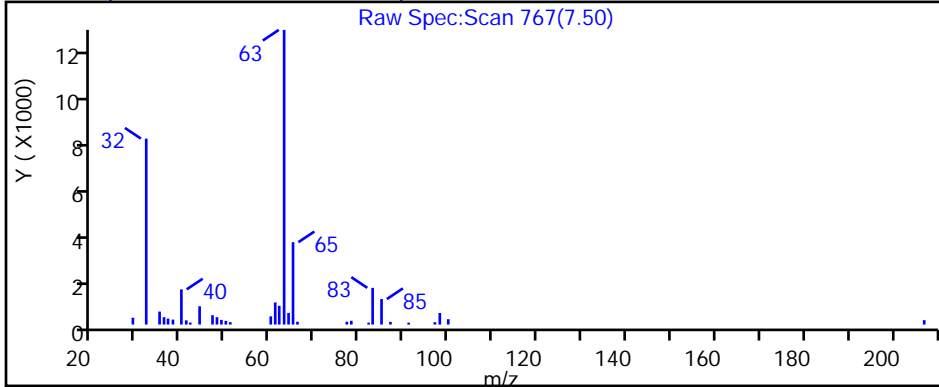
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D

Injection Date: 26-Feb-2019 02:17:30

Instrument ID: MH

Lims ID: 140-14387-A-12

Lab Sample ID: 140-14387-12

Client ID: SV-138-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

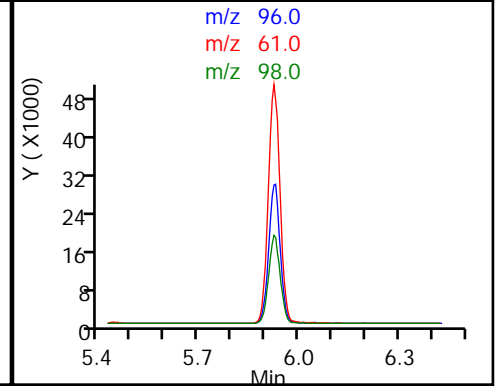
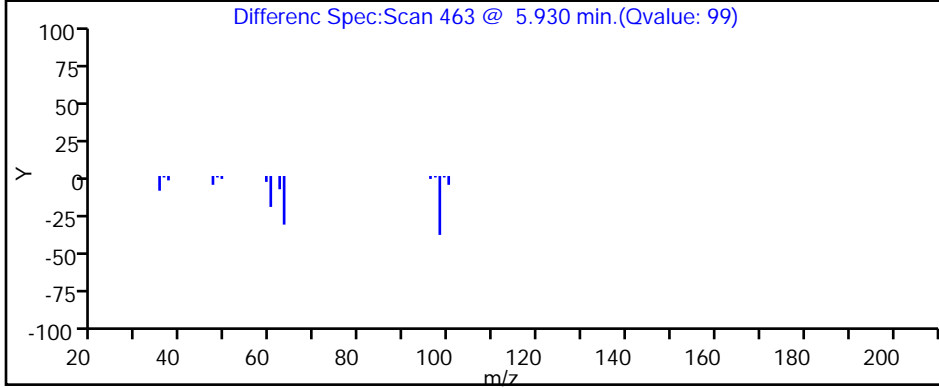
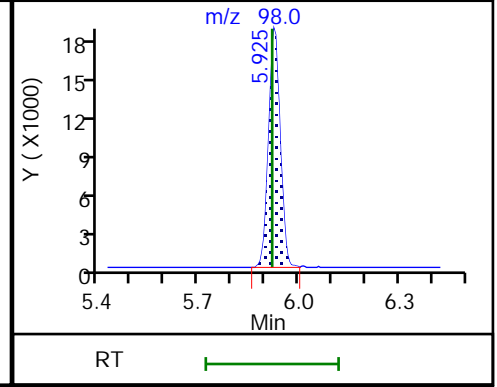
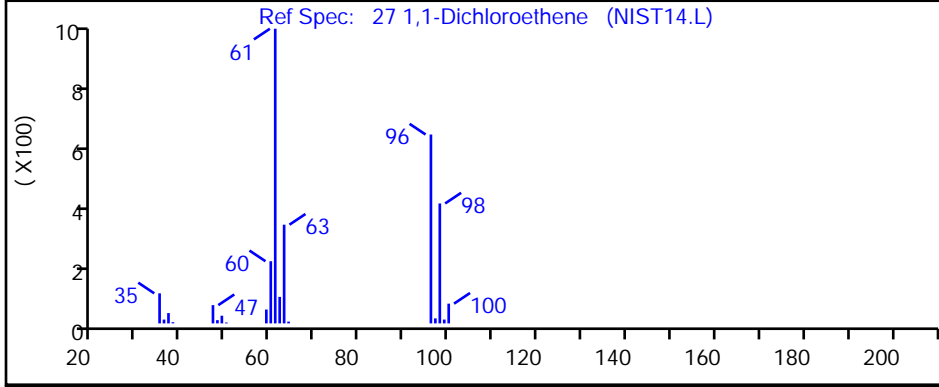
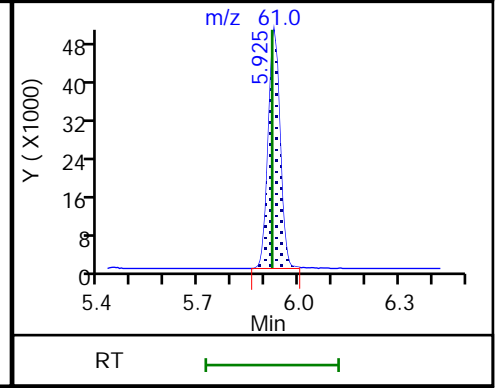
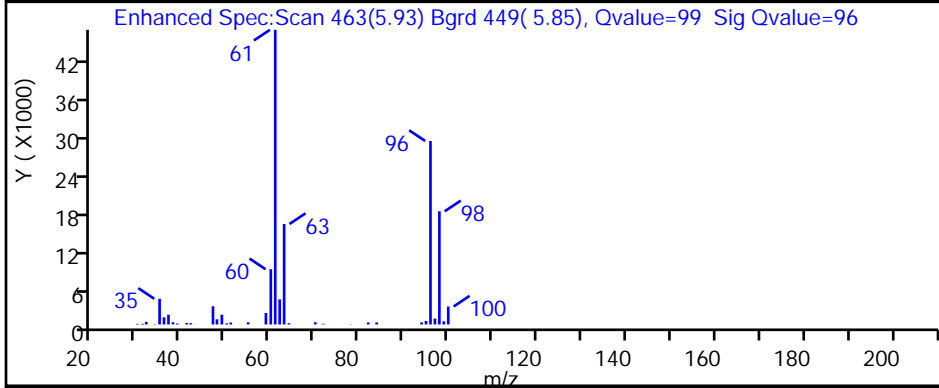
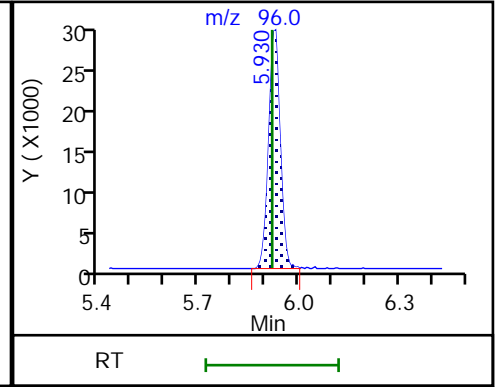
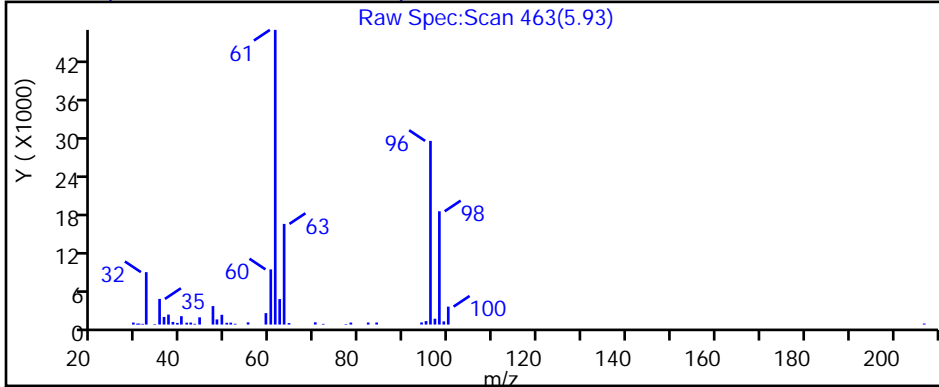
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D

Injection Date: 26-Feb-2019 02:17:30

Instrument ID: MH

Lims ID: 140-14387-A-12

Lab Sample ID: 140-14387-12

Client ID: SV-138-A-26

Operator ID: HMT

ALS Bottle#: 11 Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

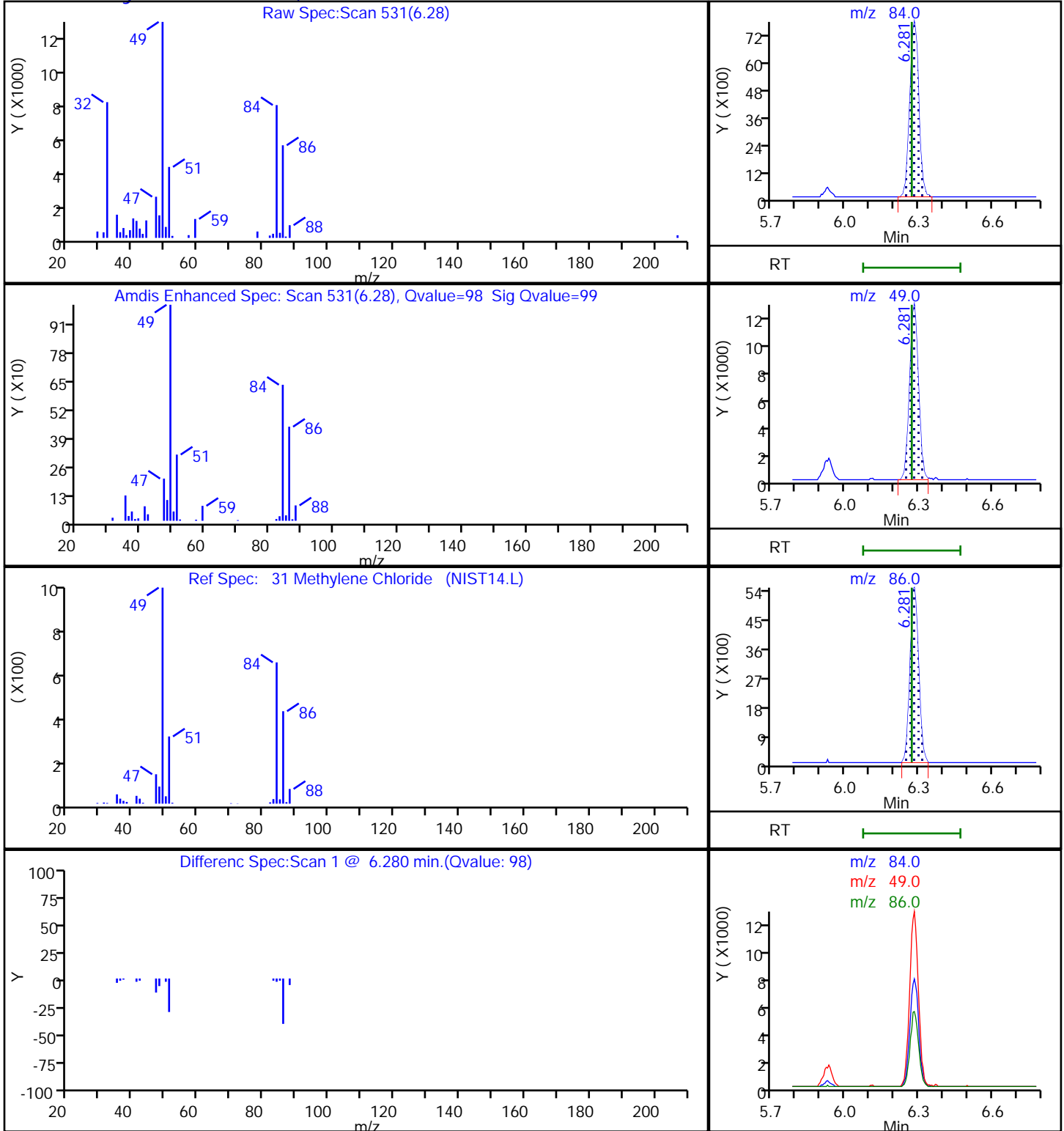
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D

Injection Date: 26-Feb-2019 02:17:30

Instrument ID: MH

Lims ID: 140-14387-A-12

Lab Sample ID: 140-14387-12

Client ID: SV-138-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

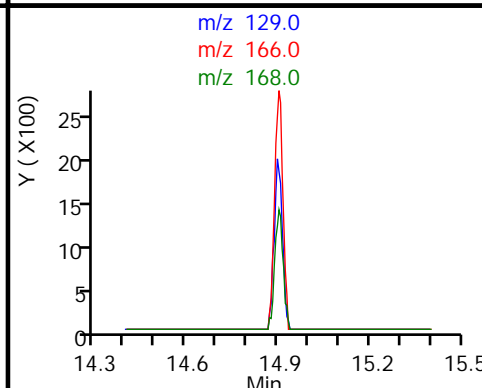
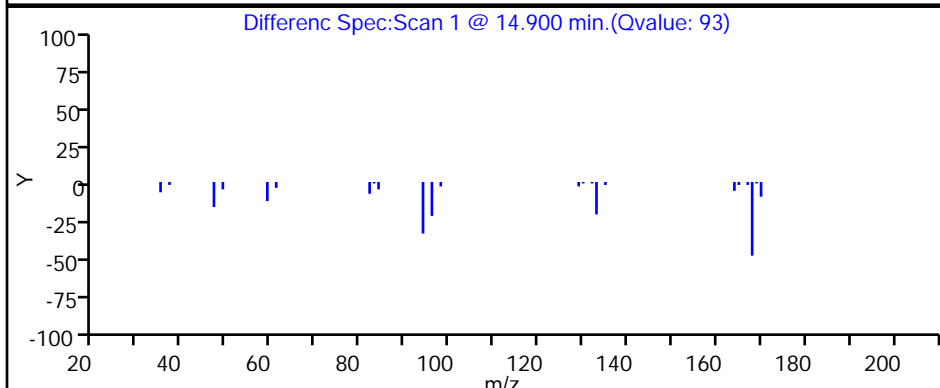
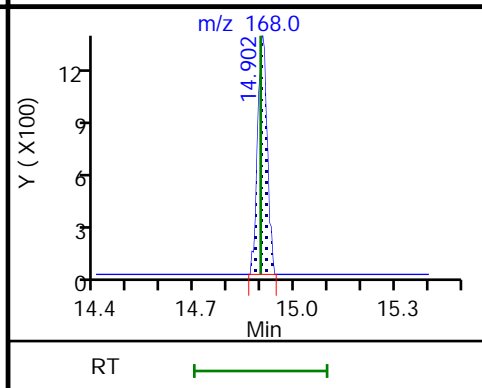
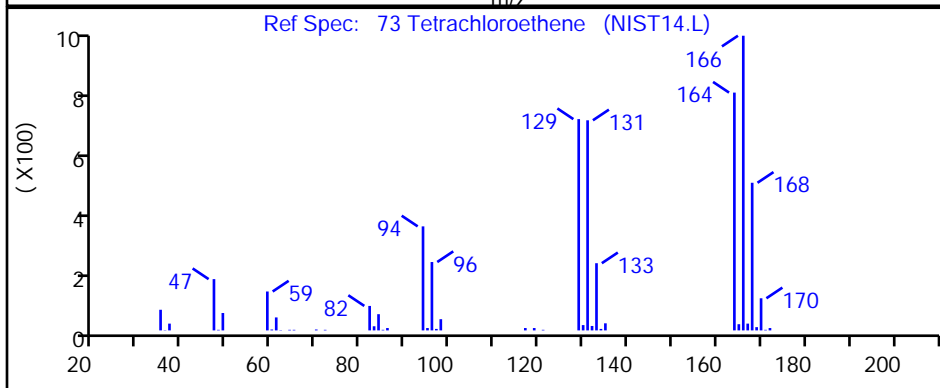
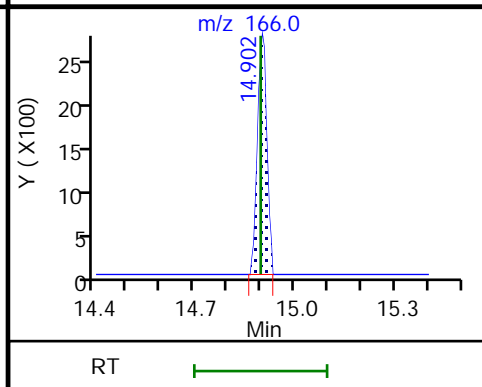
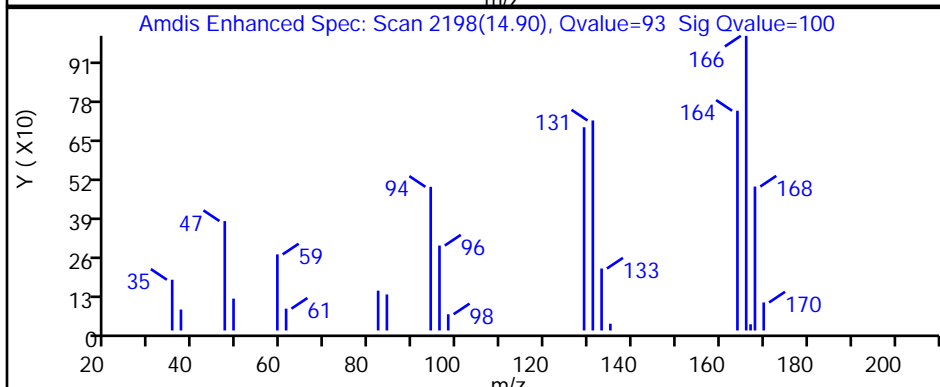
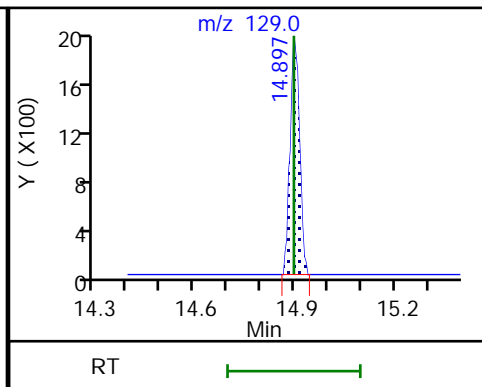
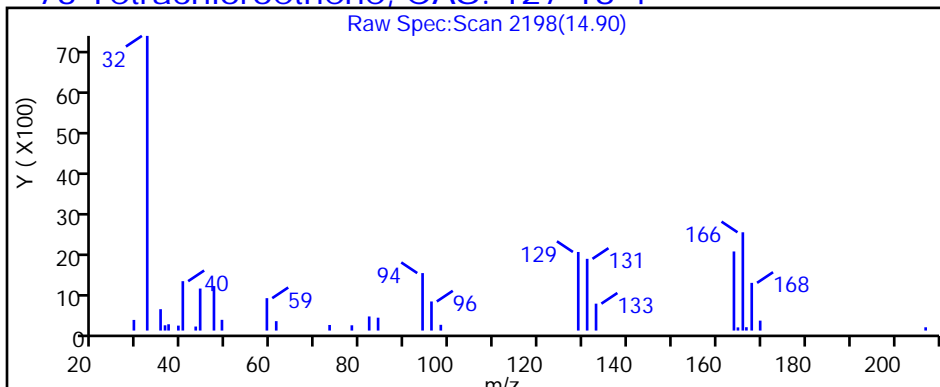
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D

Injection Date: 26-Feb-2019 02:17:30

Instrument ID: MH

Lims ID: 140-14387-A-12

Lab Sample ID: 140-14387-12

Client ID: SV-138-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

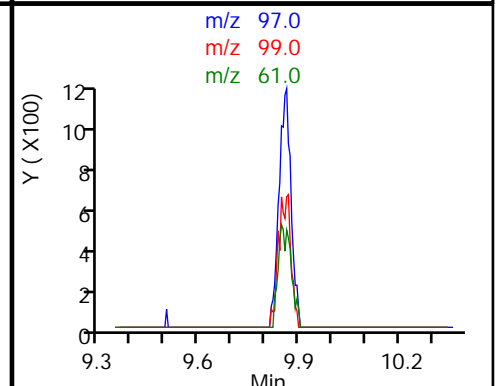
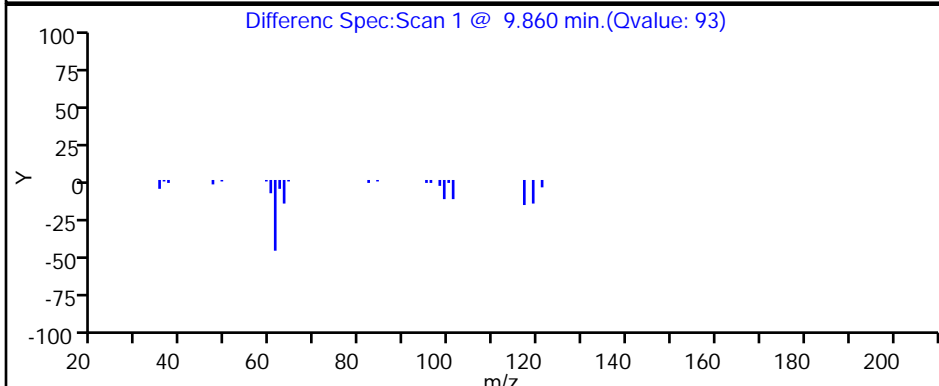
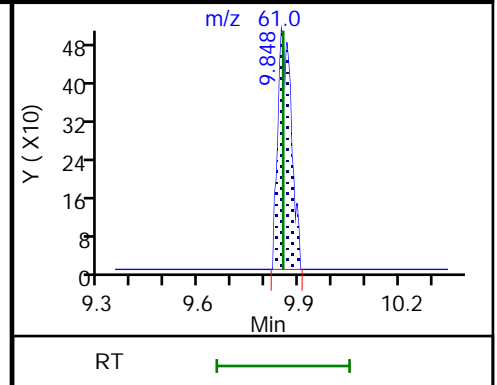
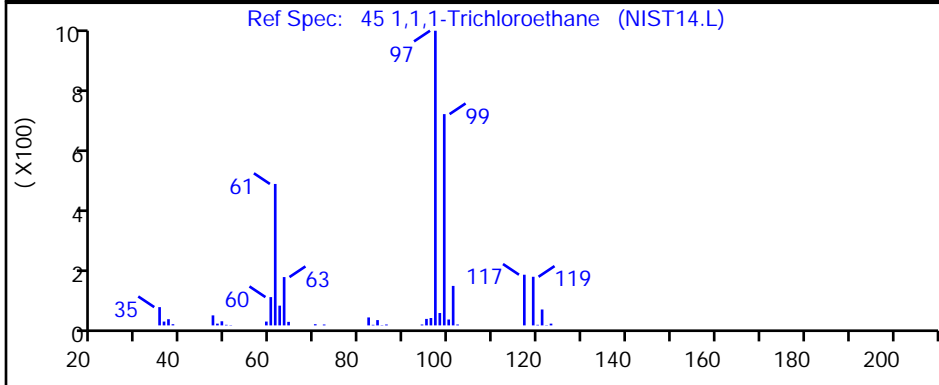
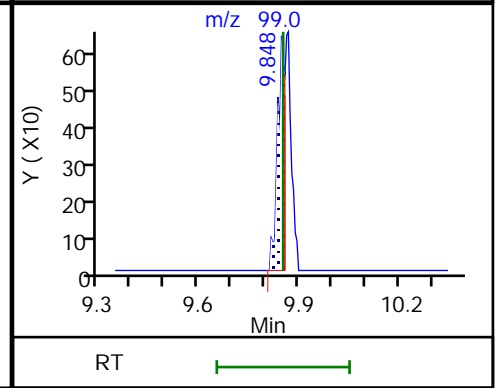
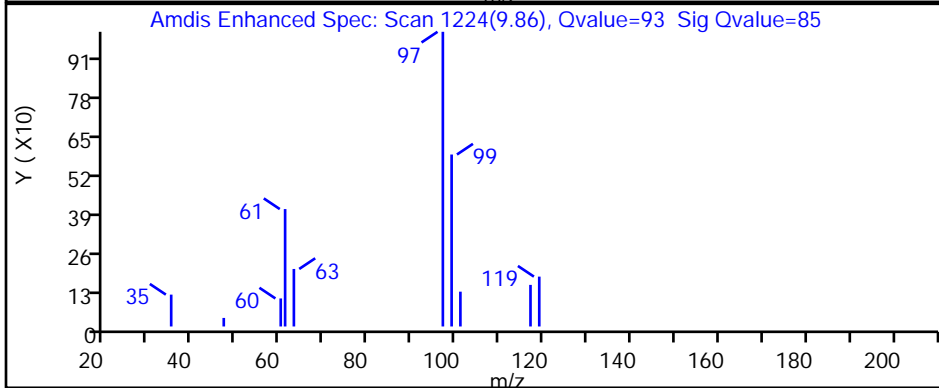
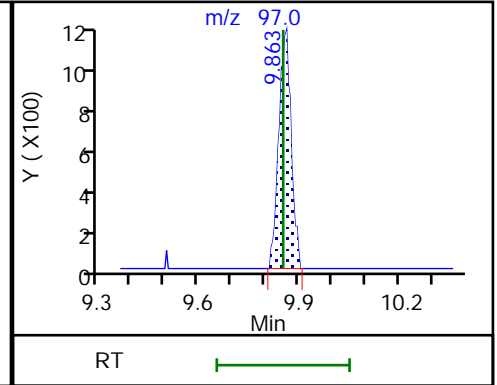
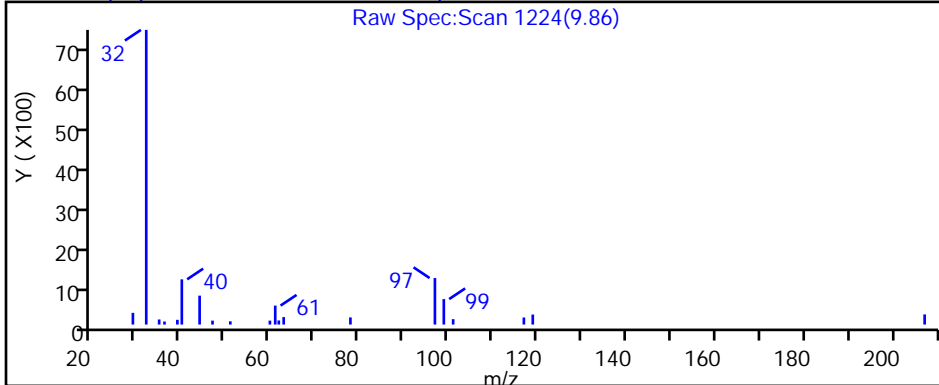
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D

Injection Date: 26-Feb-2019 02:17:30

Instrument ID: MH

Lims ID: 140-14387-A-12

Lab Sample ID: 140-14387-12

Client ID: SV-138-A-26

Operator ID: HMT

ALS Bottle#: 11 Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

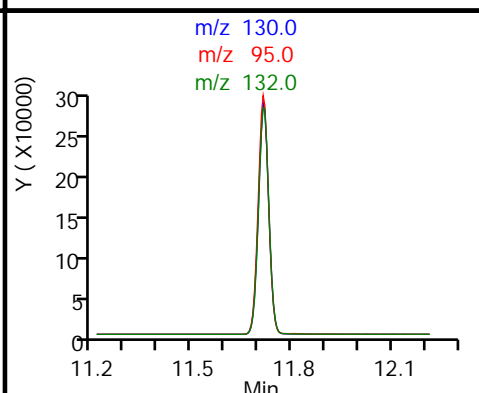
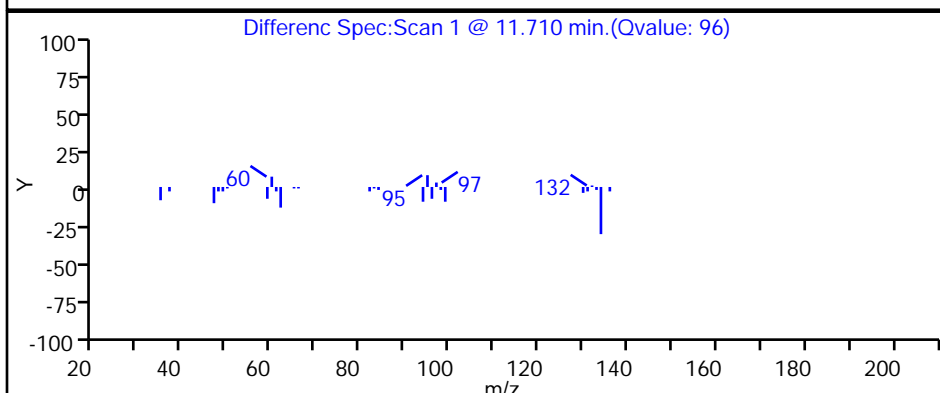
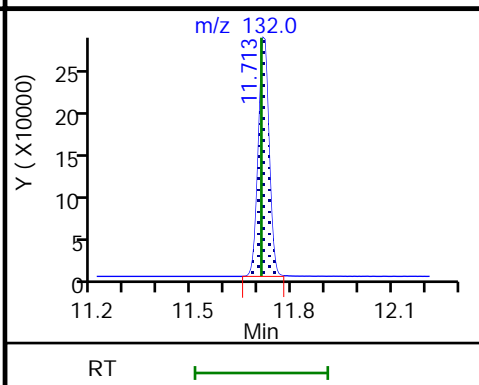
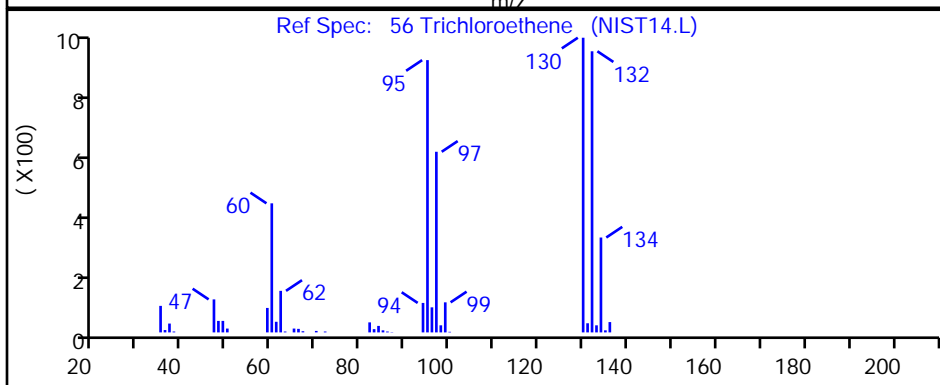
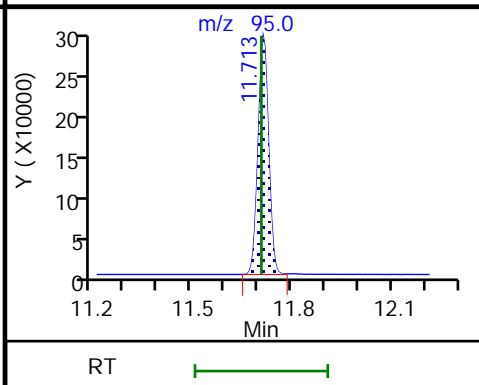
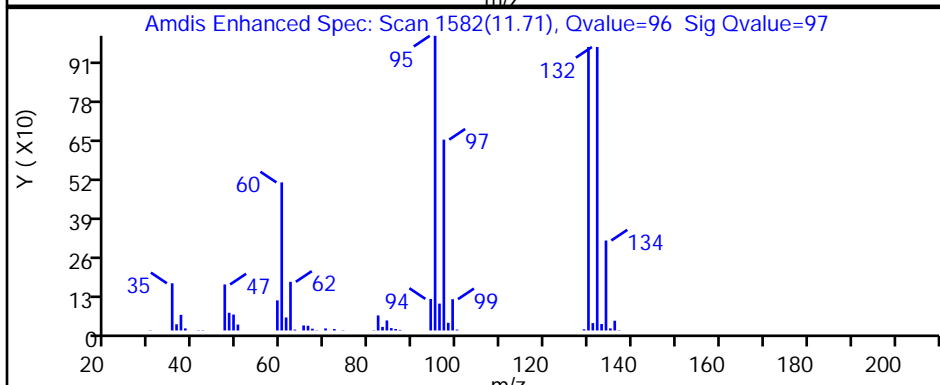
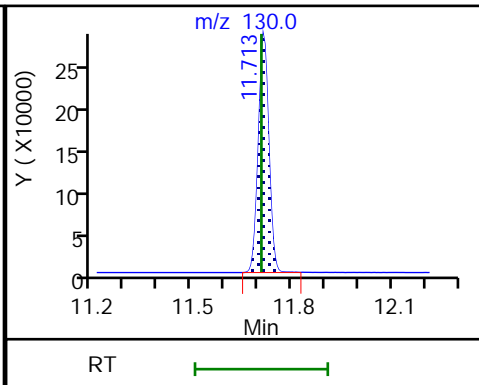
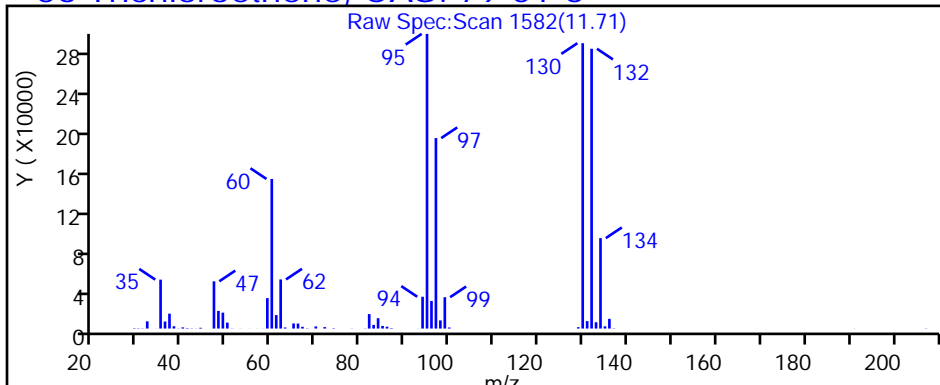
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P111.D

Injection Date: 26-Feb-2019 02:17:30

Instrument ID: MH

Lims ID: 140-14387-A-12

Lab Sample ID: 140-14387-12

Client ID: SV-138-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

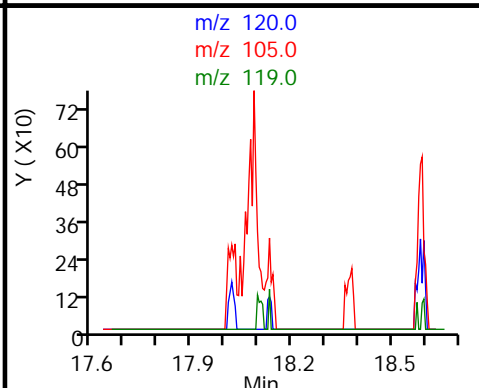
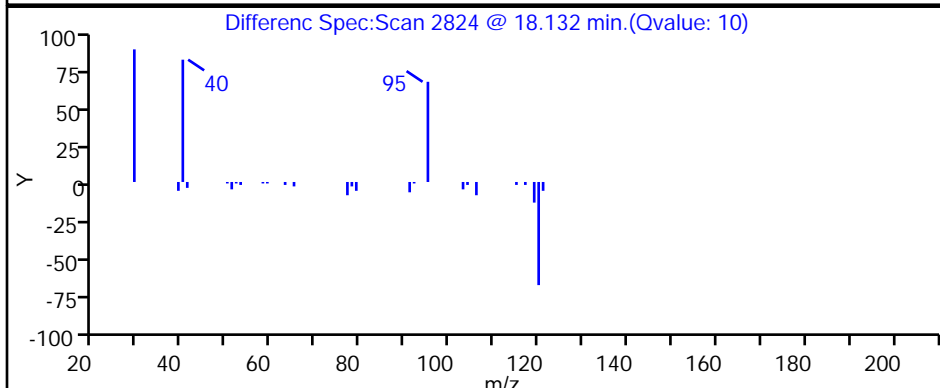
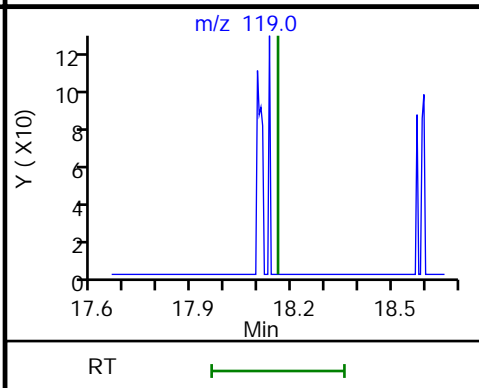
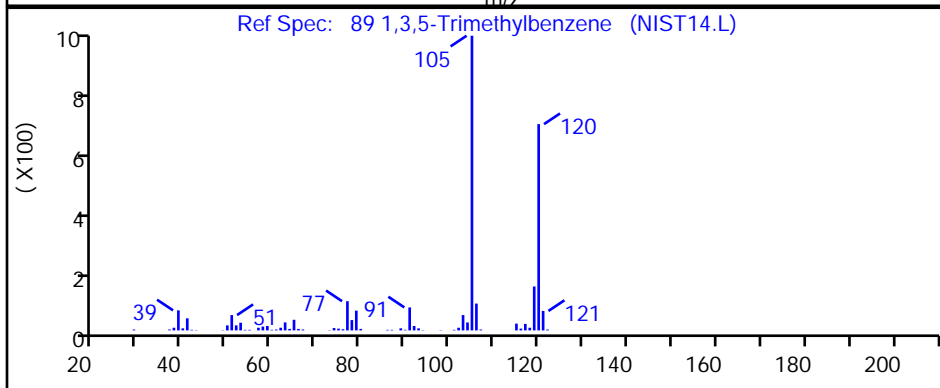
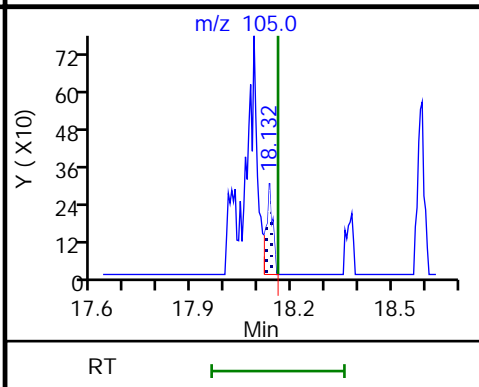
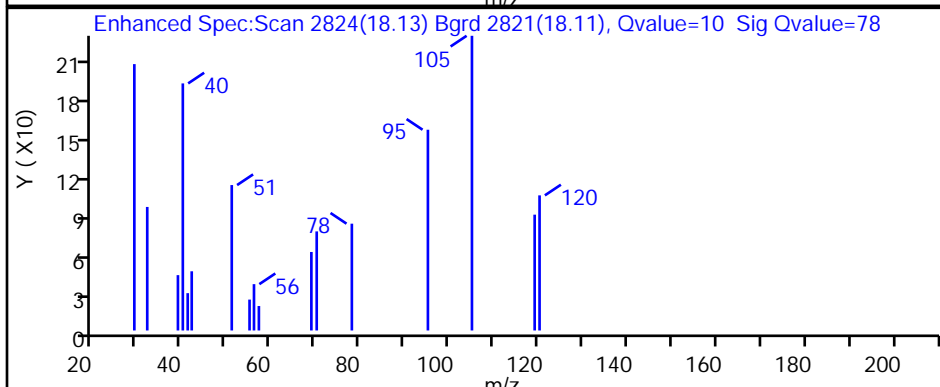
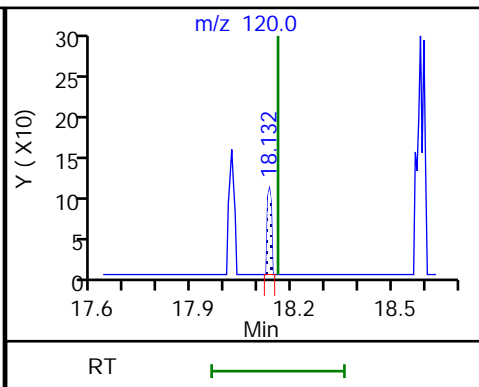
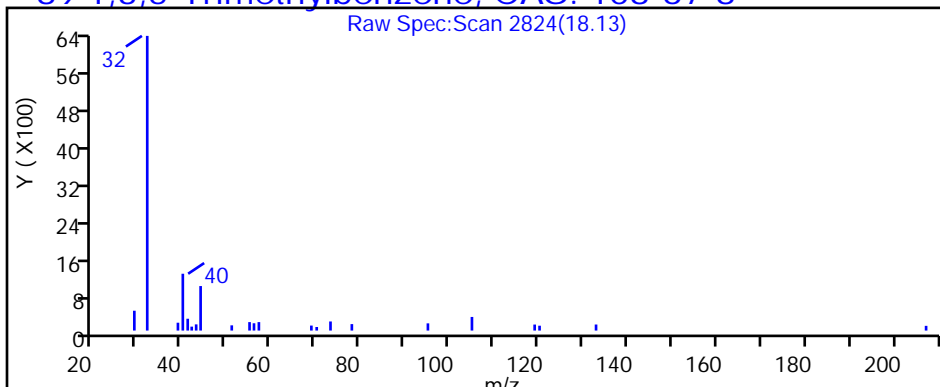
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-093-A-26 Lab Sample ID: 140-14387-13
 Matrix: Air Lab File ID: HB25P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:21
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 03:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.33	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.24	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.32	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.069	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.15	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-093-A-26 Lab Sample ID: 140-14387-13
 Matrix: Air Lab File ID: HB25P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:21
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 03:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.65	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.97	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.3	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.37	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.72	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P112.D
 Lims ID: 140-14387-A-13
 Client ID: SV-093-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 03:10:30 ALS Bottle#: 12 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-020
 Misc. Info.: 140-14387-a-13
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:12:30 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:12:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.814	0.010	96	282597	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1531175	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1277807	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	819316	3.93	
6 Chlorodifluoromethane	51	3.682	3.687	0.000	53	15189	0.0655	
8 Dichlorodifluoromethane	85	3.744	3.738	0.006	100	32676	0.0918	
27 1,1-Dichloroethene	96	5.930	5.919	0.011	95	6947	0.0633	
31 Methylene Chloride	84	6.281	6.271	0.010	99	25212	0.2182	
37 1,1-Dichloroethane	63	7.511	7.501	0.010	99	10297	0.0481	
45 1,1,1-Trichloroethane	97	9.853	9.853	0.000	95	3200	0.0137	
47 Benzene	78	10.457	10.452	0.005	97	13206	0.0408	
56 Trichloroethene	130	11.713	11.708	0.005	96	36001	0.2357	
65 Toluene	91	13.760	13.760	0.000	91	20821	0.0572	
89 1,3,5-Trimethylbenzene	120	18.117	18.117	-0.041	42	503	0.0294	a

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P112.D

Injection Date: 26-Feb-2019 03:10:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-13

Lab Sample ID: 140-14387-13

Worklist Smp#: 20

Client ID: SV-093-A-26

Purge Vol: 500.000 mL

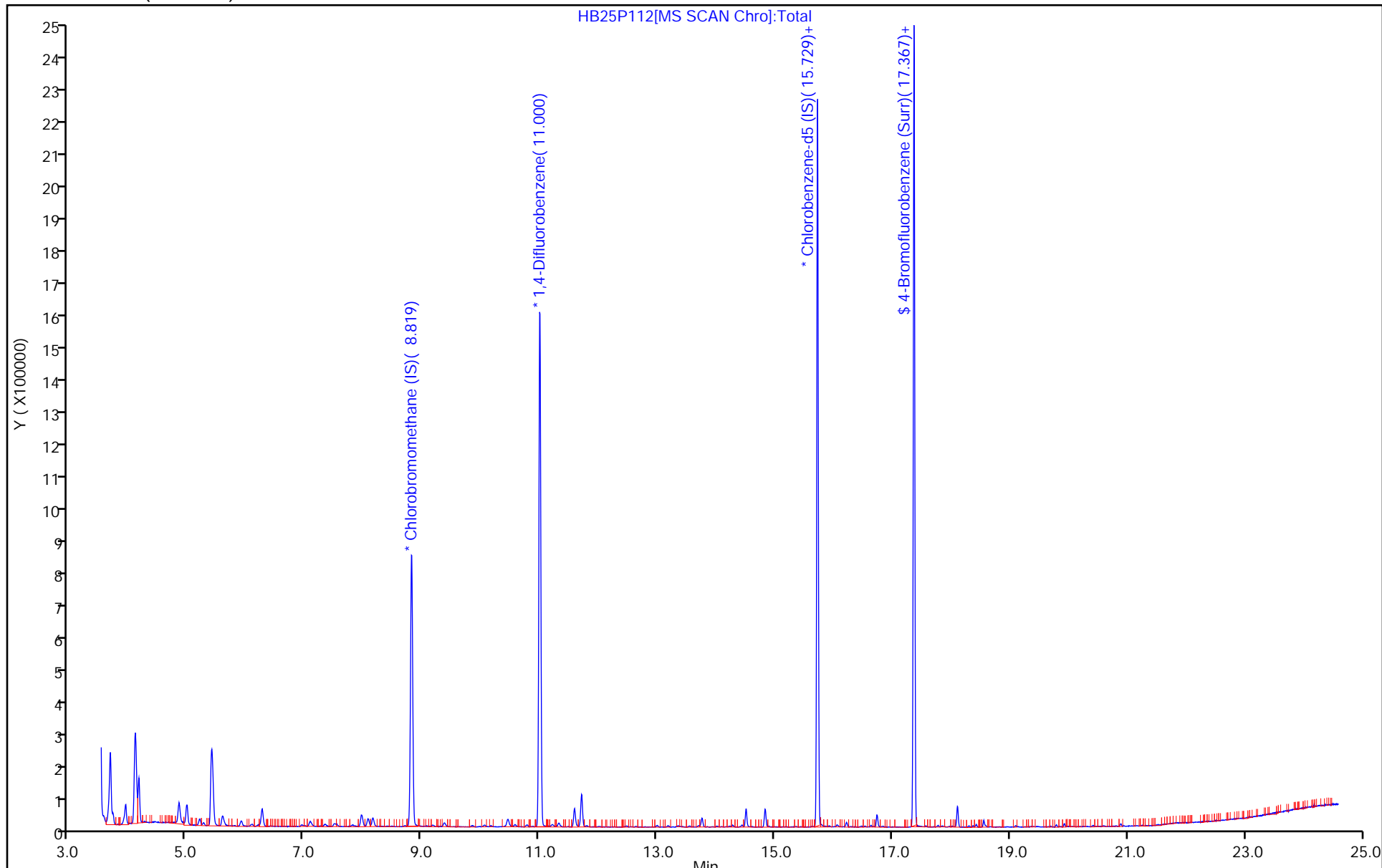
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P112.D
 Lims ID: 140-14387-A-13
 Client ID: SV-093-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 03:10:30 ALS Bottle#: 12 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-020
 Misc. Info.: 140-14387-a-13
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:12:30 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:12:30

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.93	98.37

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P112.D

Injection Date: 26-Feb-2019 03:10:30

Instrument ID: MH

Lims ID: 140-14387-A-13

Lab Sample ID: 140-14387-13

Client ID: SV-093-A-26

Operator ID: HMT

ALS Bottle#: 12

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

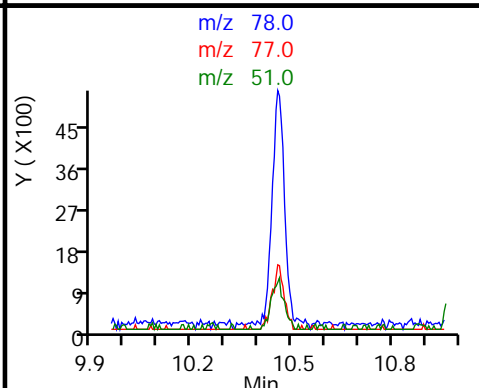
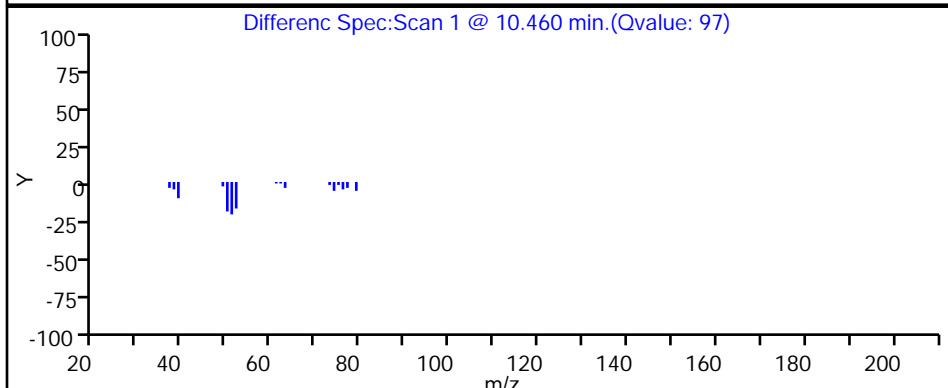
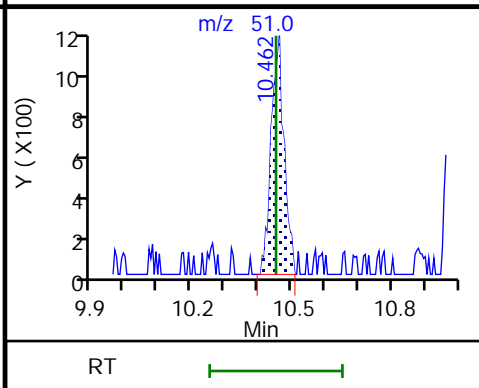
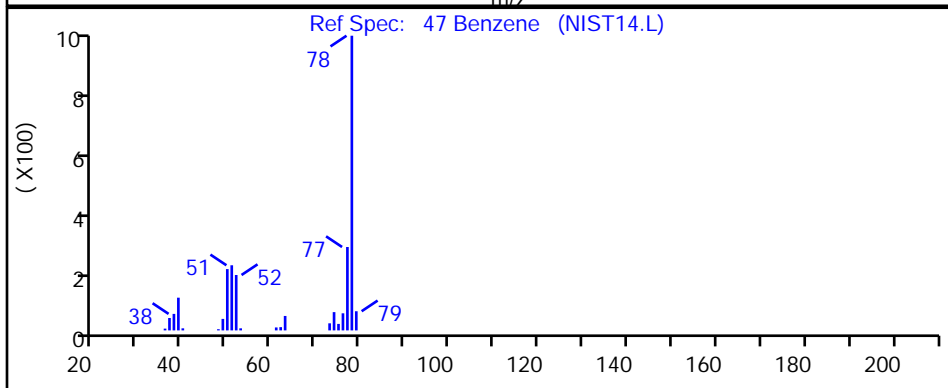
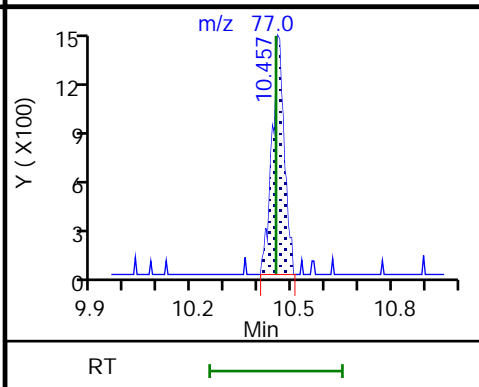
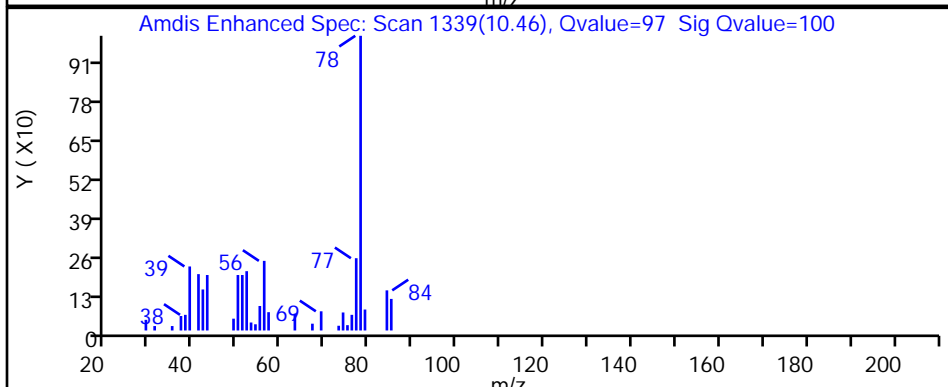
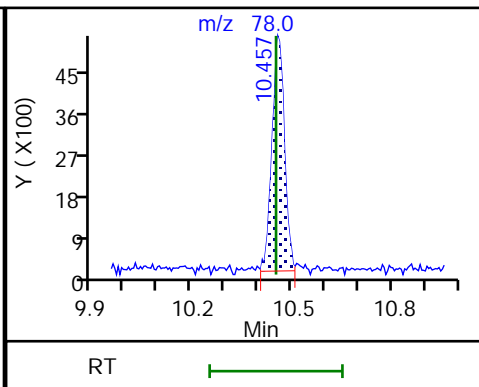
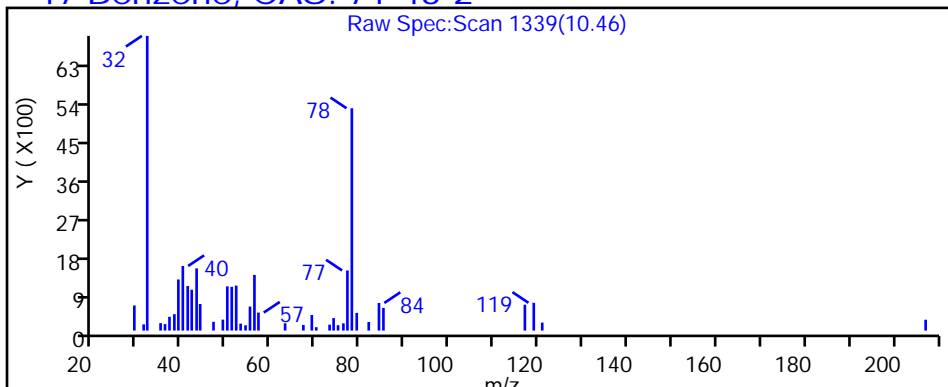
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P112.D

Injection Date: 26-Feb-2019 03:10:30

Instrument ID: MH

Lims ID: 140-14387-A-13

Lab Sample ID: 140-14387-13

Client ID: SV-093-A-26

Operator ID: HMT

ALS Bottle#: 12

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

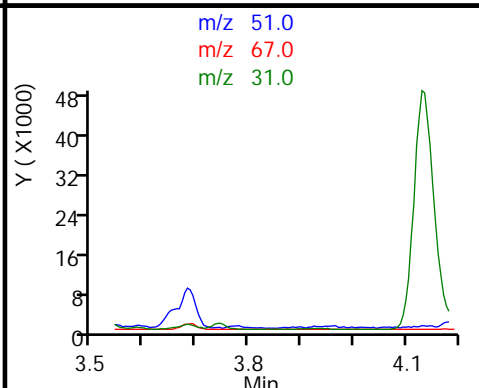
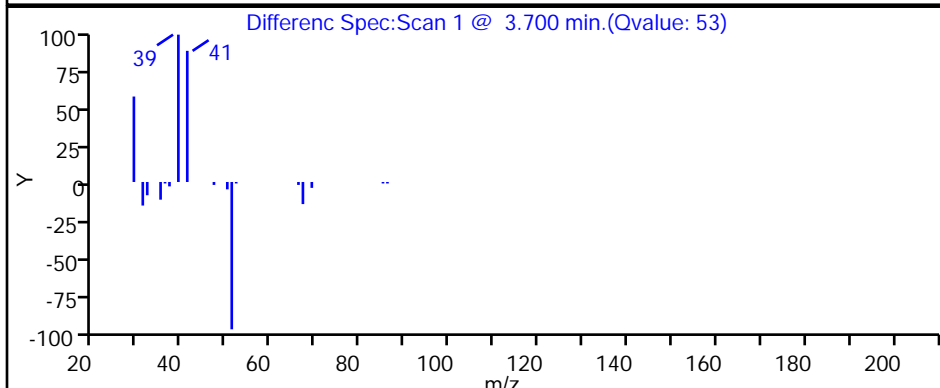
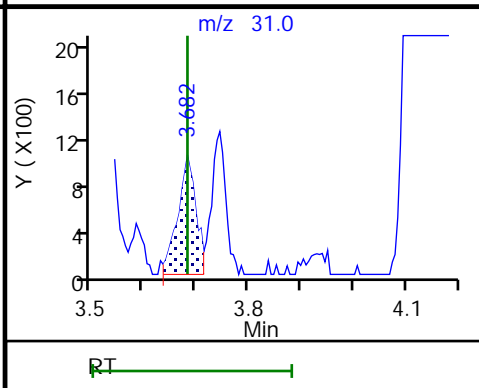
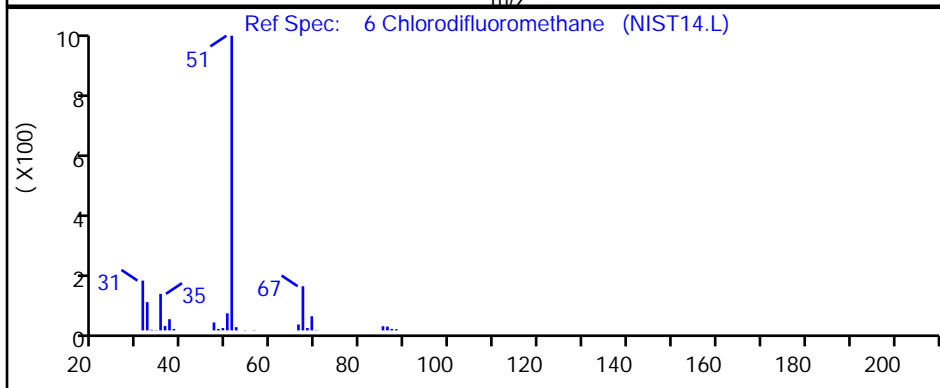
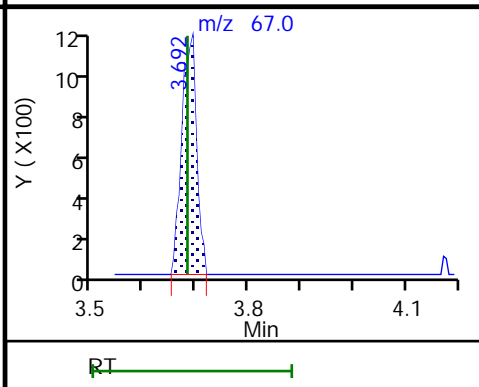
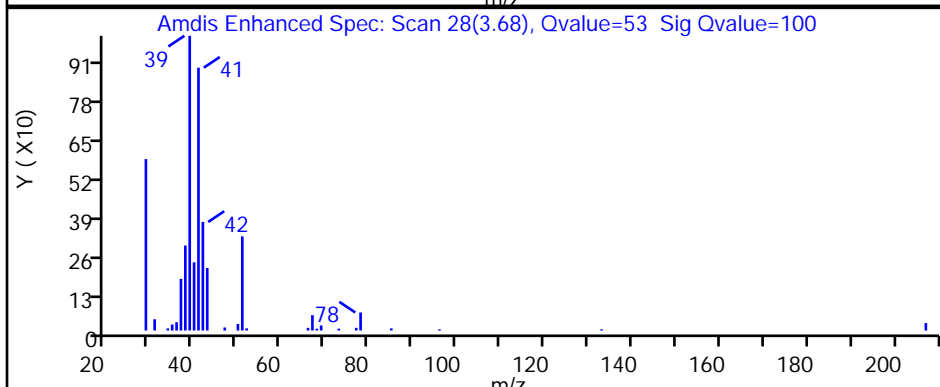
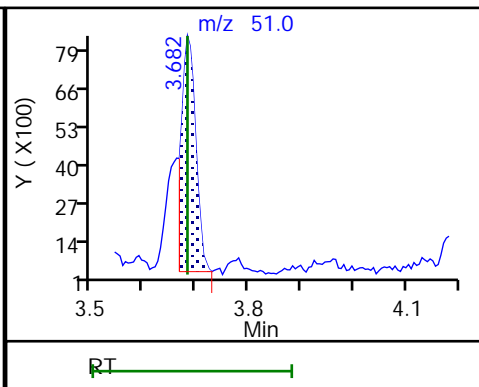
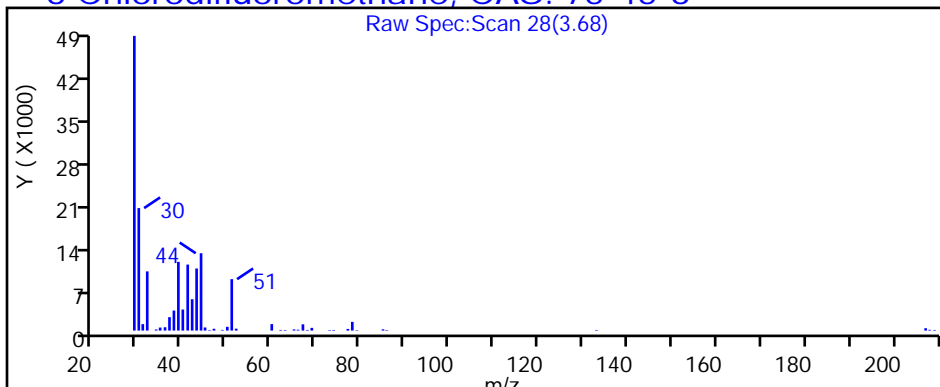
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P112.D

Injection Date: 26-Feb-2019 03:10:30

Instrument ID: MH

Lims ID: 140-14387-A-13

Lab Sample ID: 140-14387-13

Client ID: SV-093-A-26

Operator ID: HMT

ALS Bottle#: 12

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

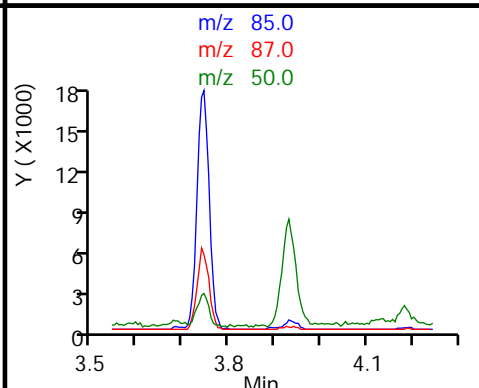
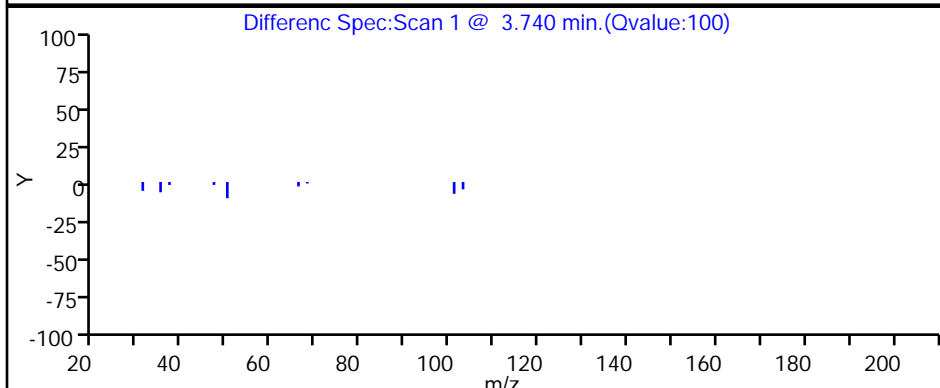
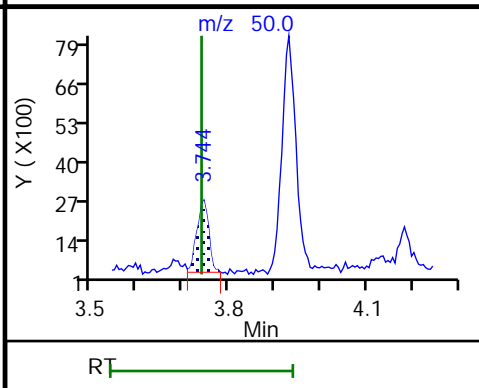
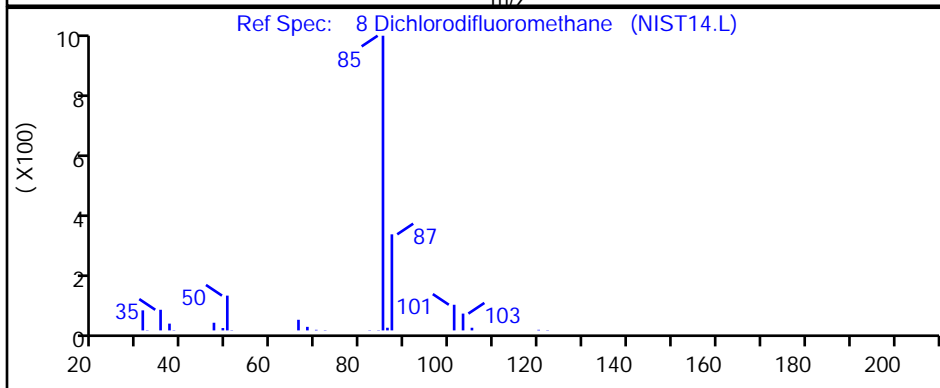
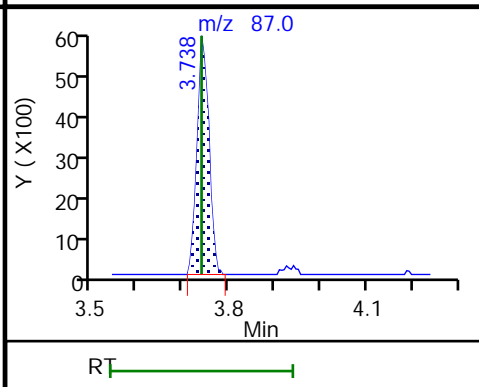
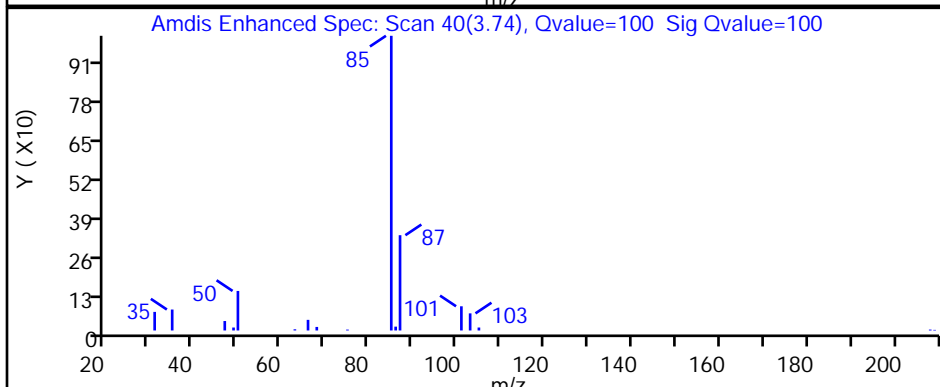
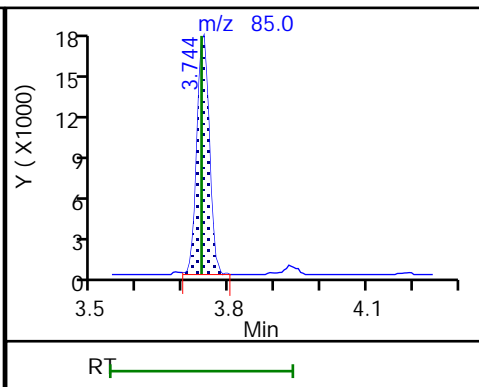
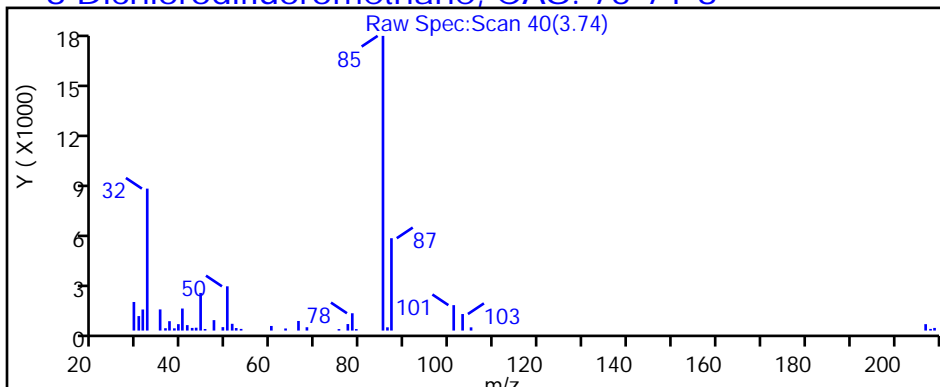
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P112.D

Injection Date: 26-Feb-2019 03:10:30

Instrument ID: MH

Lims ID: 140-14387-A-13

Lab Sample ID: 140-14387-13

Client ID: SV-093-A-26

Operator ID: HMT

ALS Bottle#: 12

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

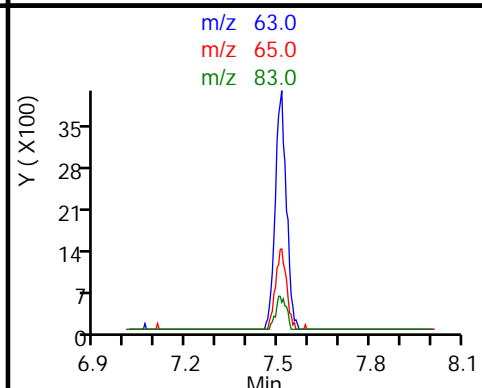
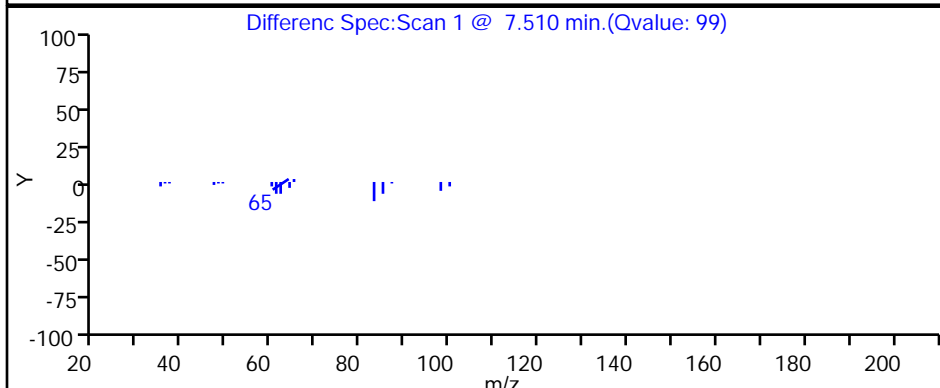
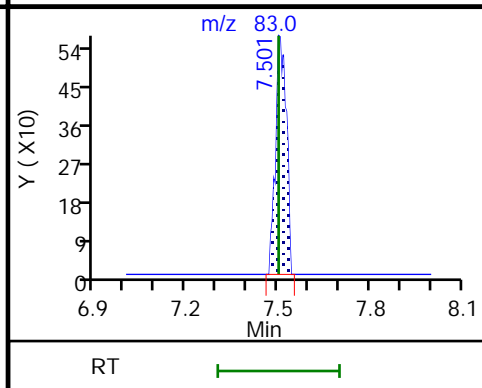
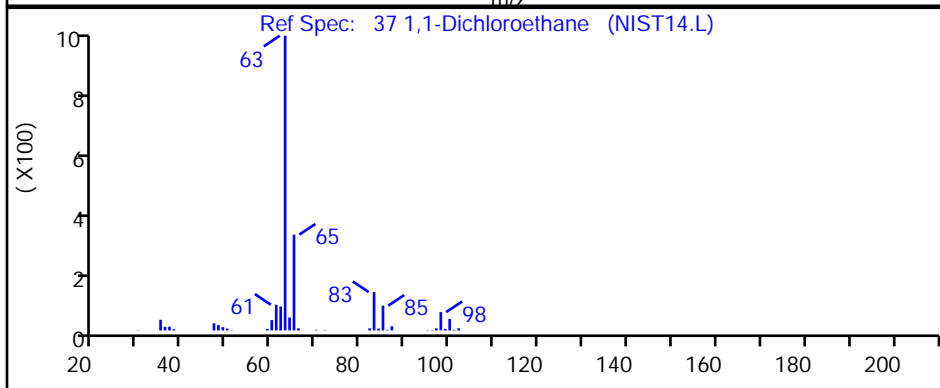
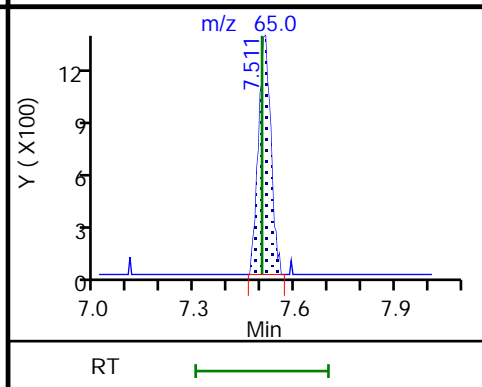
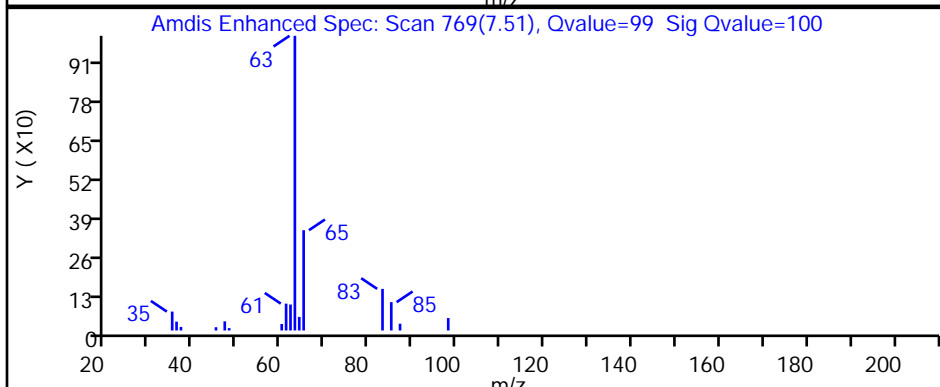
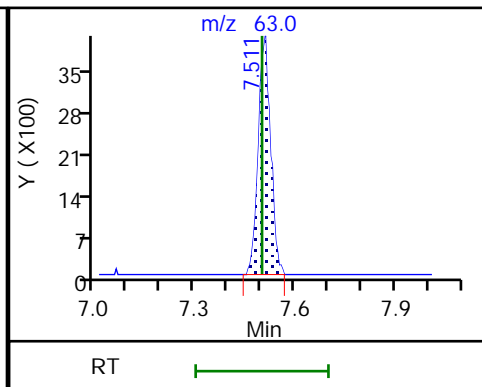
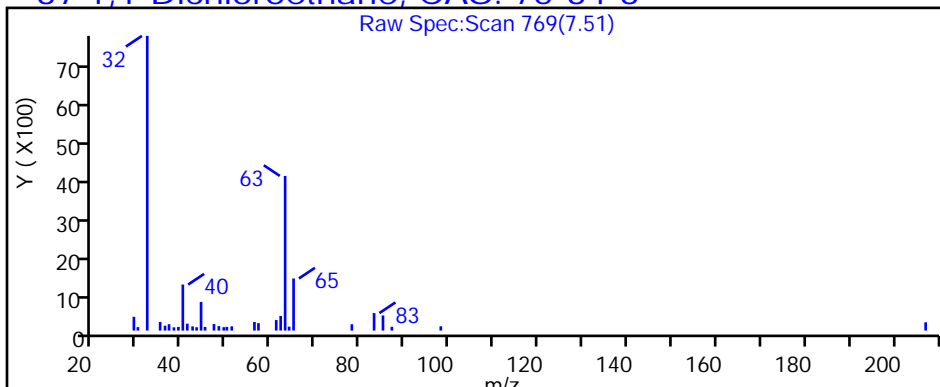
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P112.D

Injection Date: 26-Feb-2019 03:10:30

Instrument ID: MH

Lims ID: 140-14387-A-13

Lab Sample ID: 140-14387-13

Client ID: SV-093-A-26

Operator ID: HMT

ALS Bottle#: 12

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

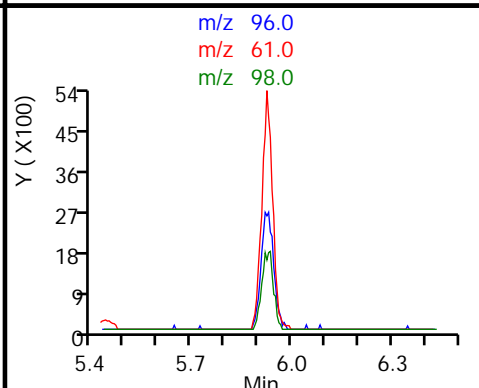
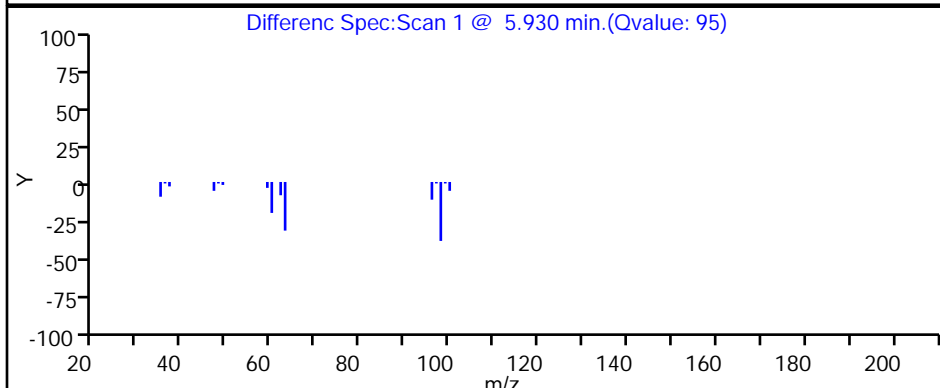
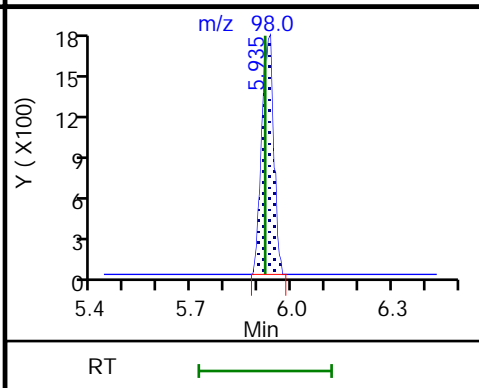
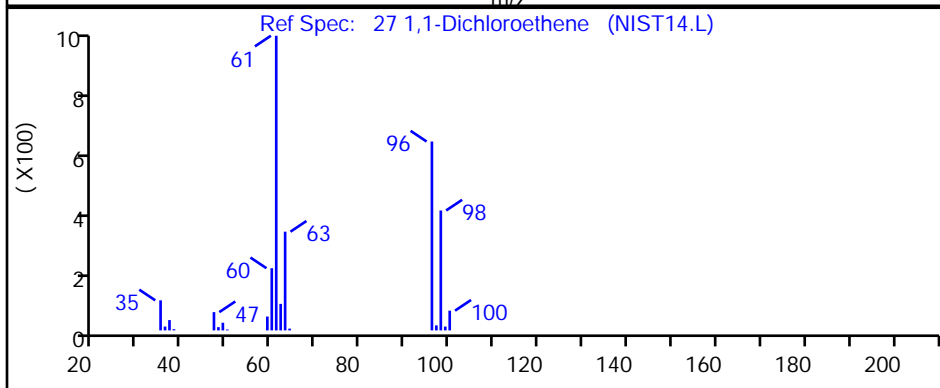
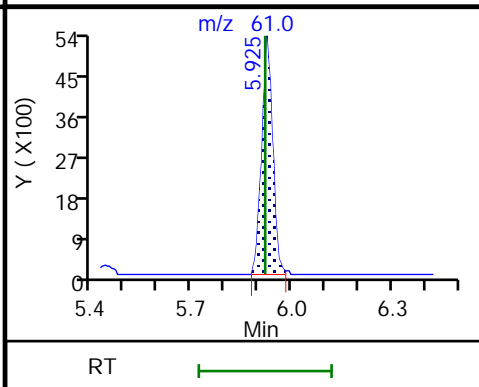
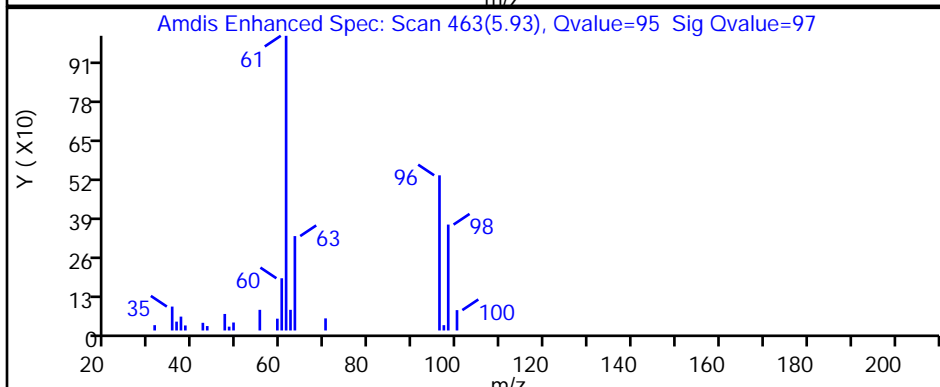
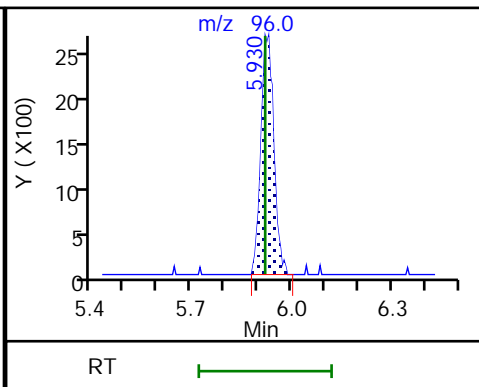
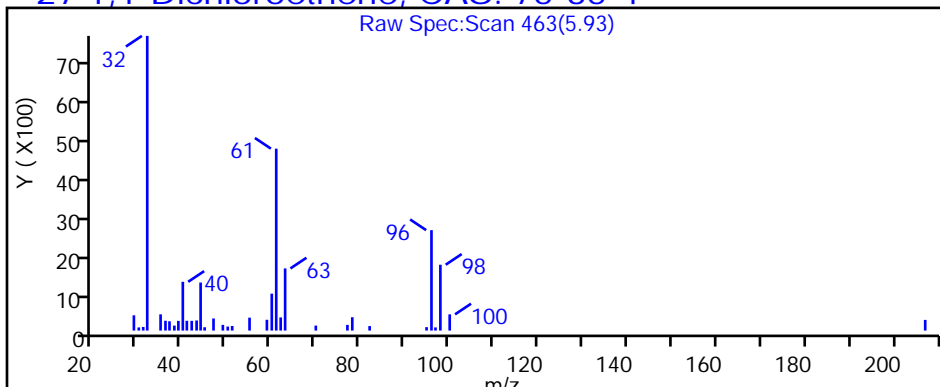
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P112.D

Injection Date: 26-Feb-2019 03:10:30

Instrument ID: MH

Lims ID: 140-14387-A-13

Lab Sample ID: 140-14387-13

Client ID: SV-093-A-26

Operator ID: HMT

ALS Bottle#: 12

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

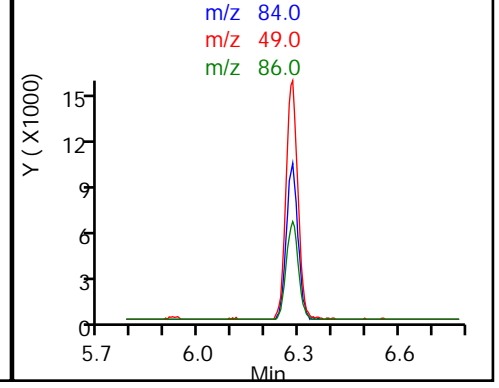
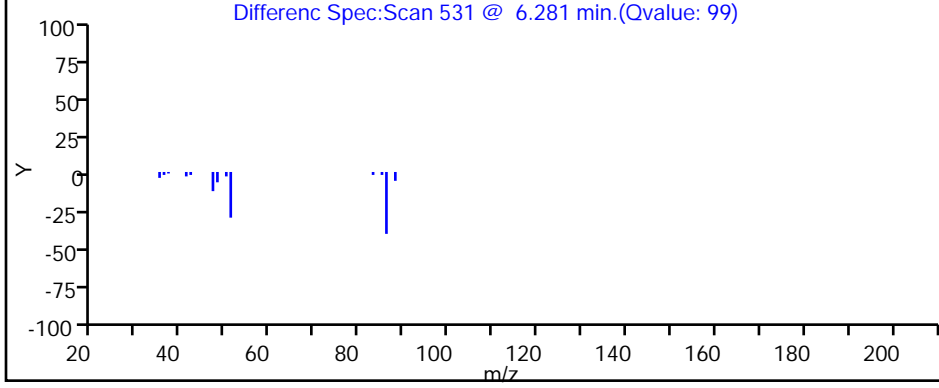
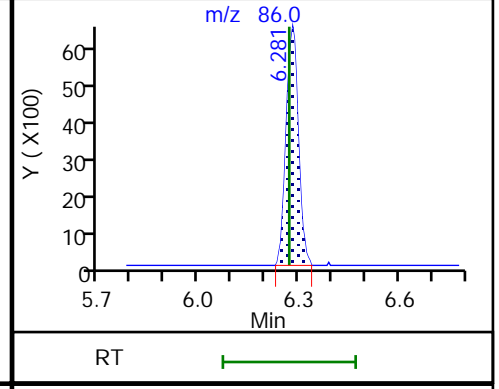
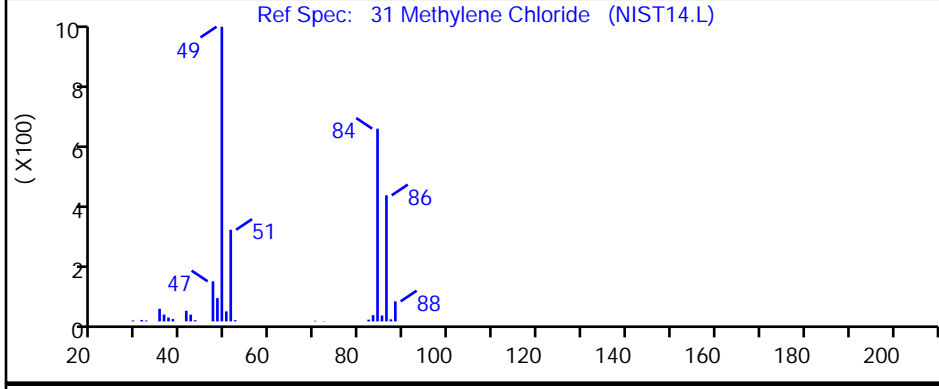
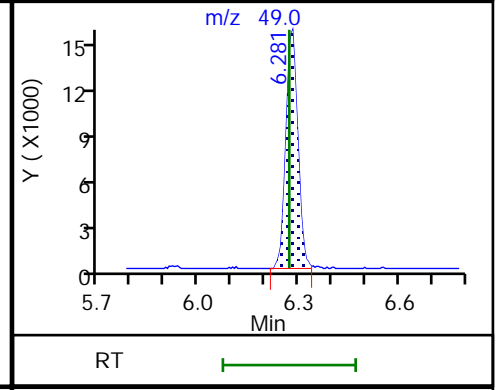
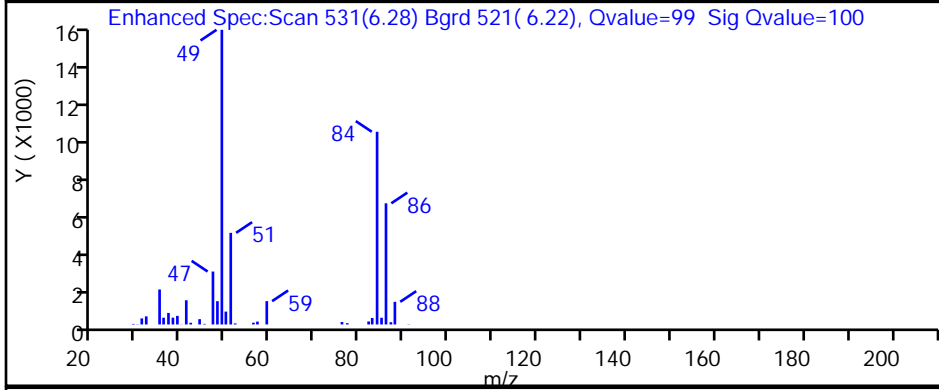
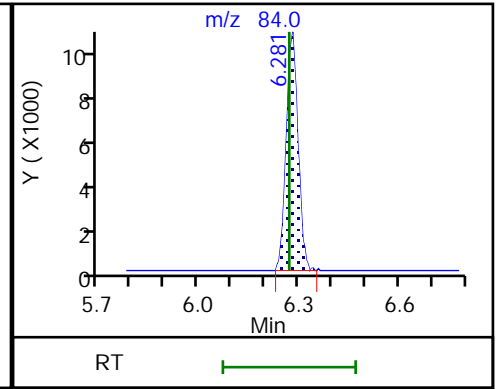
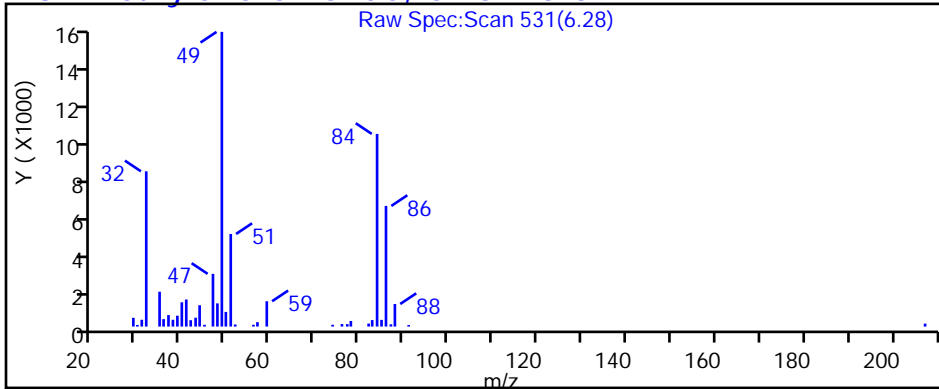
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P112.D

Injection Date: 26-Feb-2019 03:10:30

Instrument ID: MH

Lims ID: 140-14387-A-13

Lab Sample ID: 140-14387-13

Client ID: SV-093-A-26

Operator ID: HMT

ALS Bottle#: 12

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

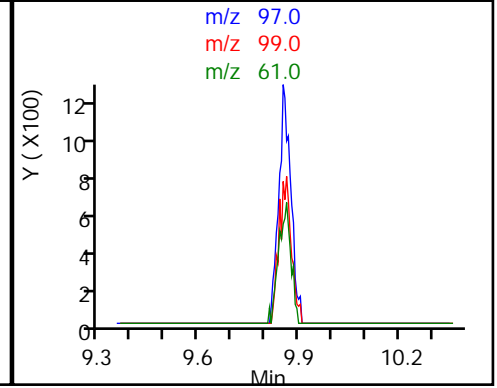
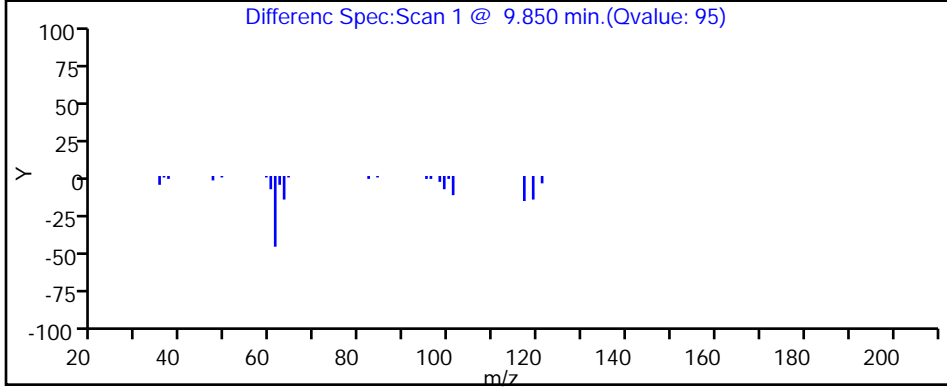
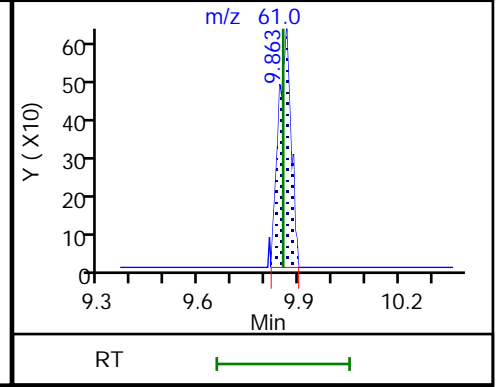
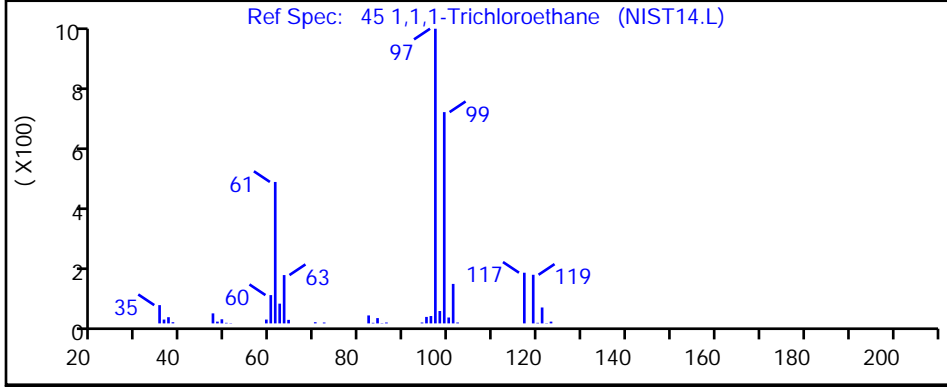
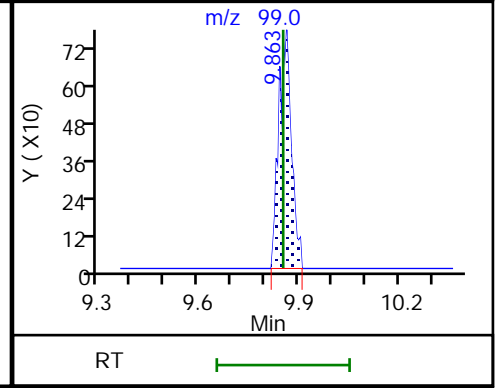
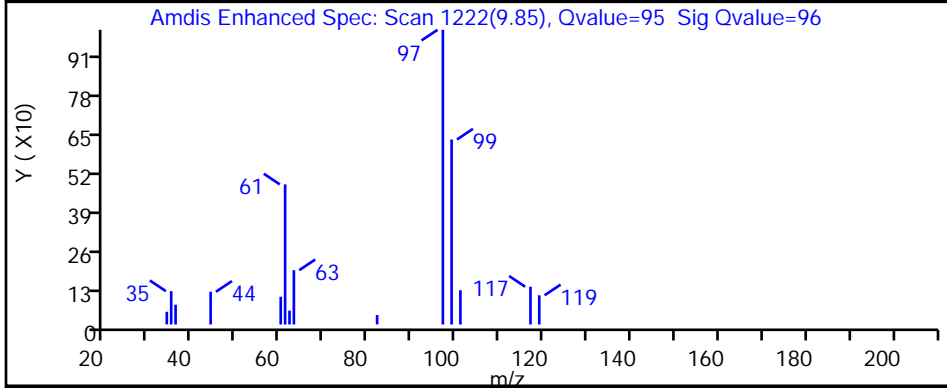
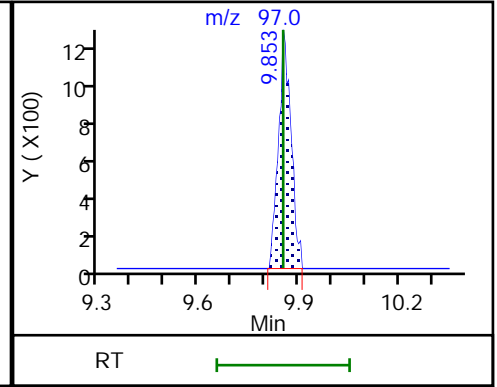
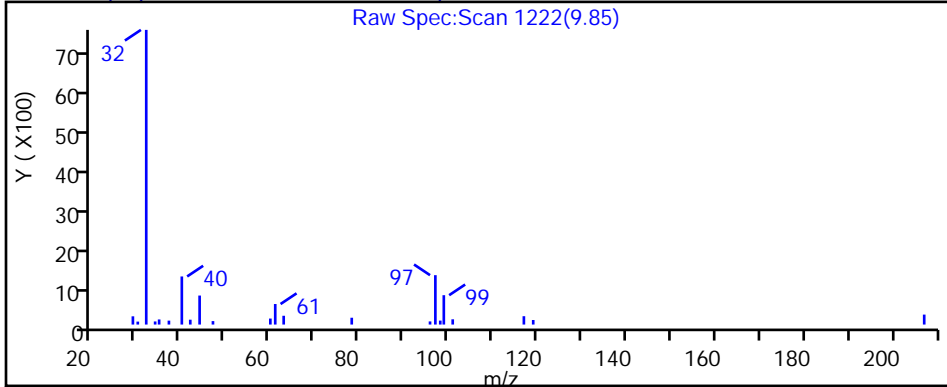
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P112.D

Injection Date: 26-Feb-2019 03:10:30

Instrument ID: MH

Lims ID: 140-14387-A-13

Lab Sample ID: 140-14387-13

Client ID: SV-093-A-26

Operator ID: HMT

ALS Bottle#: 12

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

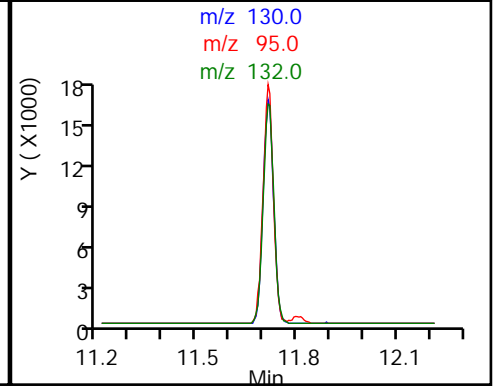
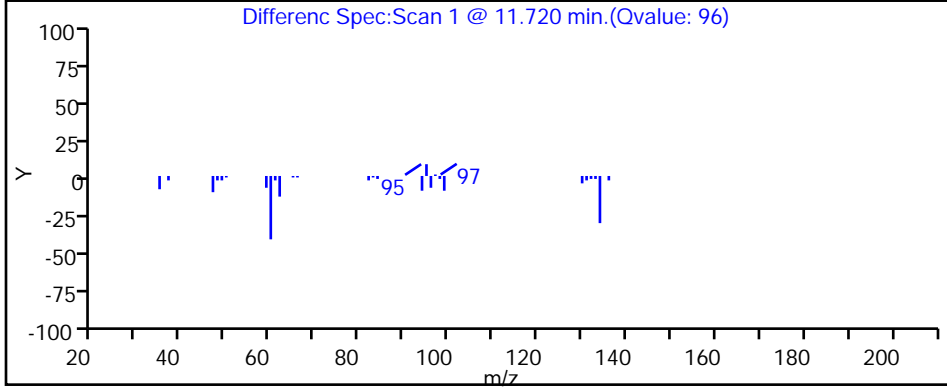
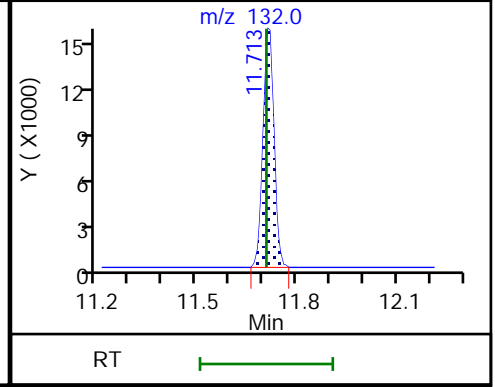
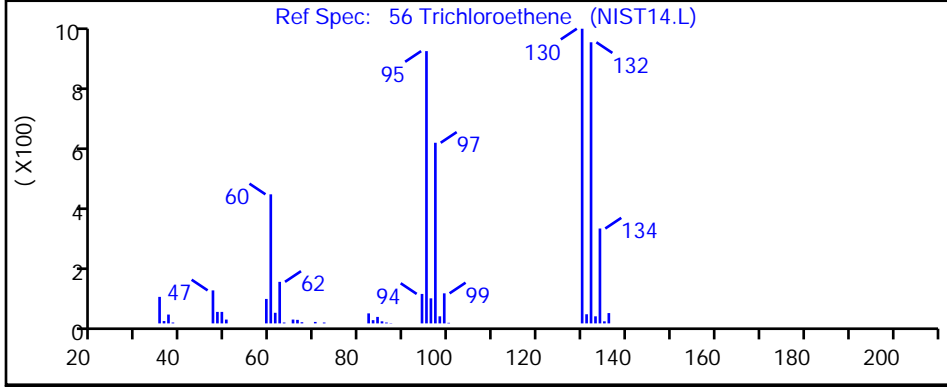
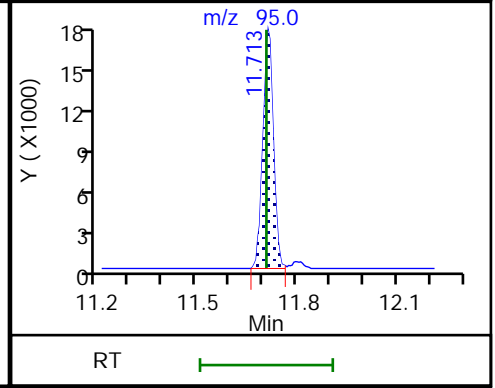
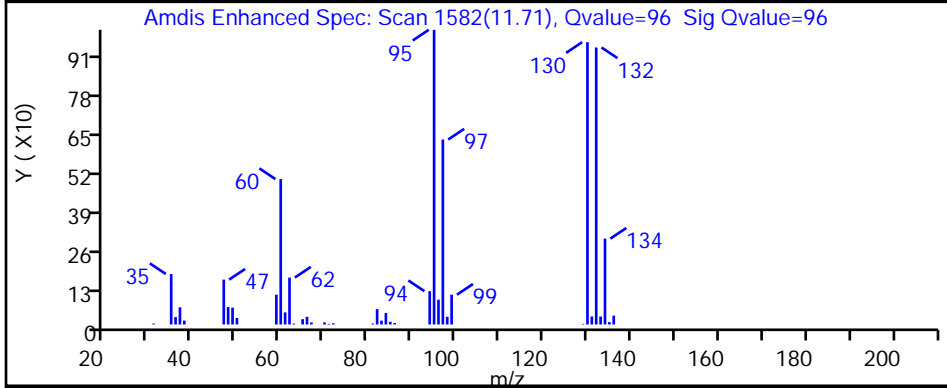
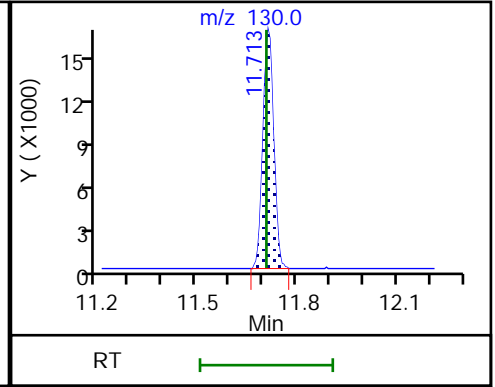
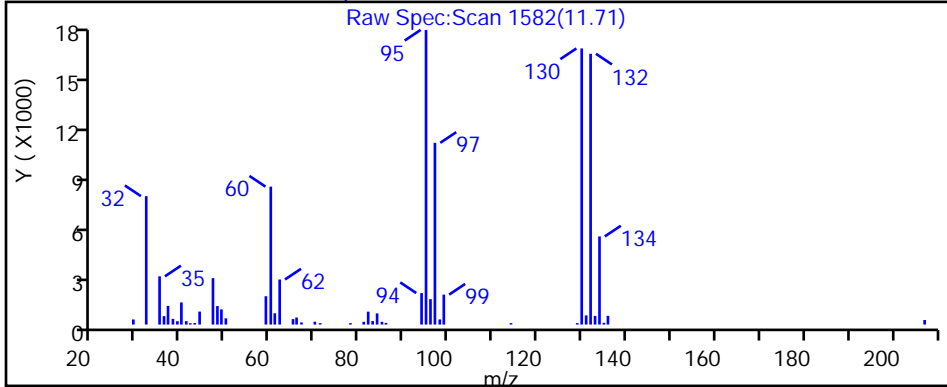
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P112.D

Injection Date: 26-Feb-2019 03:10:30

Instrument ID: MH

Lims ID: 140-14387-A-13

Lab Sample ID: 140-14387-13

Client ID: SV-093-A-26

Operator ID: HMT

ALS Bottle#: 12

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

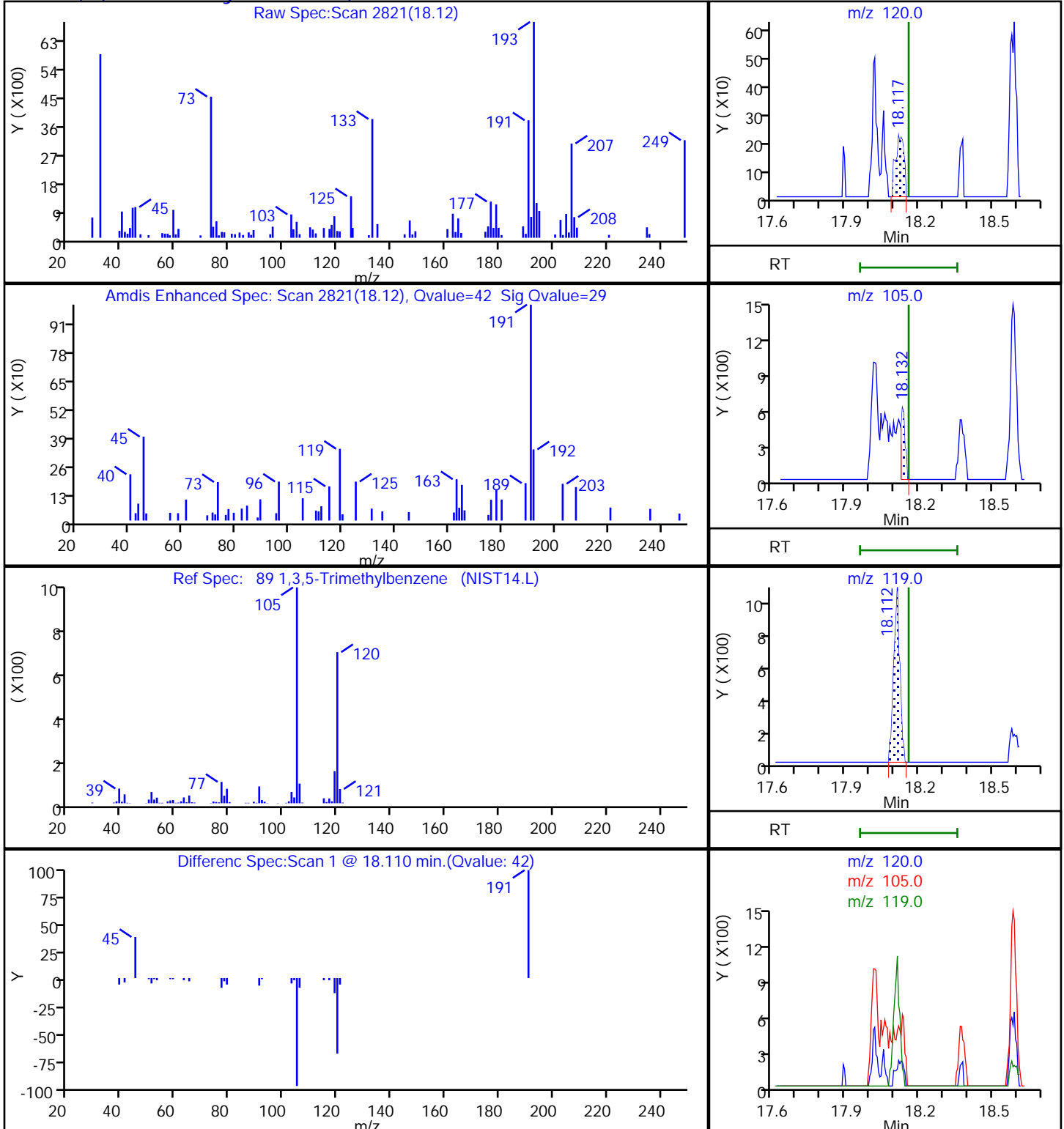
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

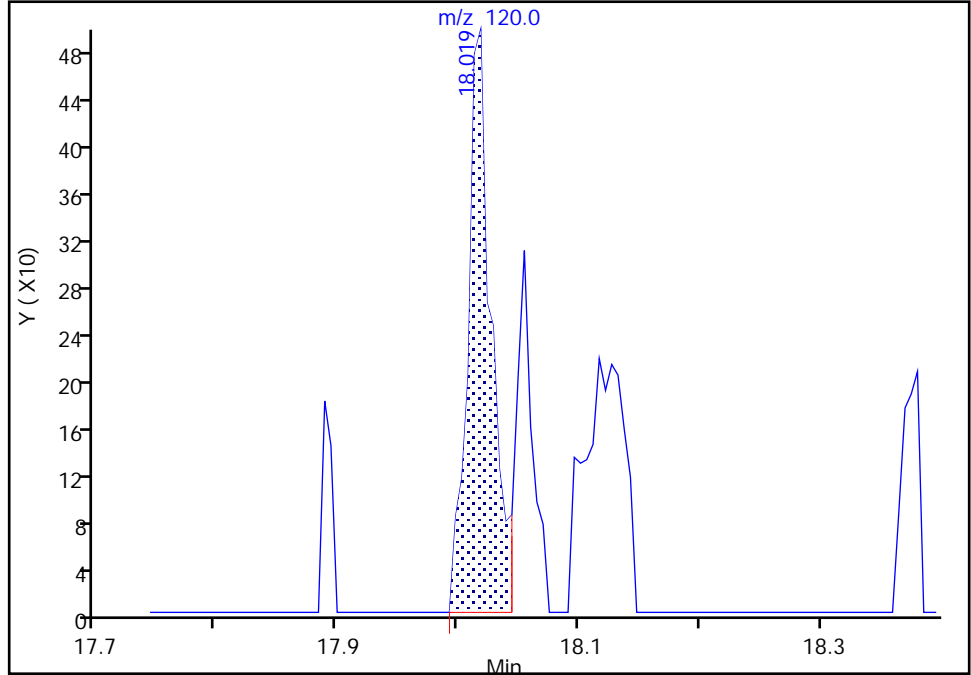
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P112.D
Injection Date: 26-Feb-2019 03:10:30 Instrument ID: MH
Lims ID: 140-14387-A-13 Lab Sample ID: 140-14387-13
Client ID: SV-093-A-26
Operator ID: HMT ALS Bottle#: 12 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Signal: 1

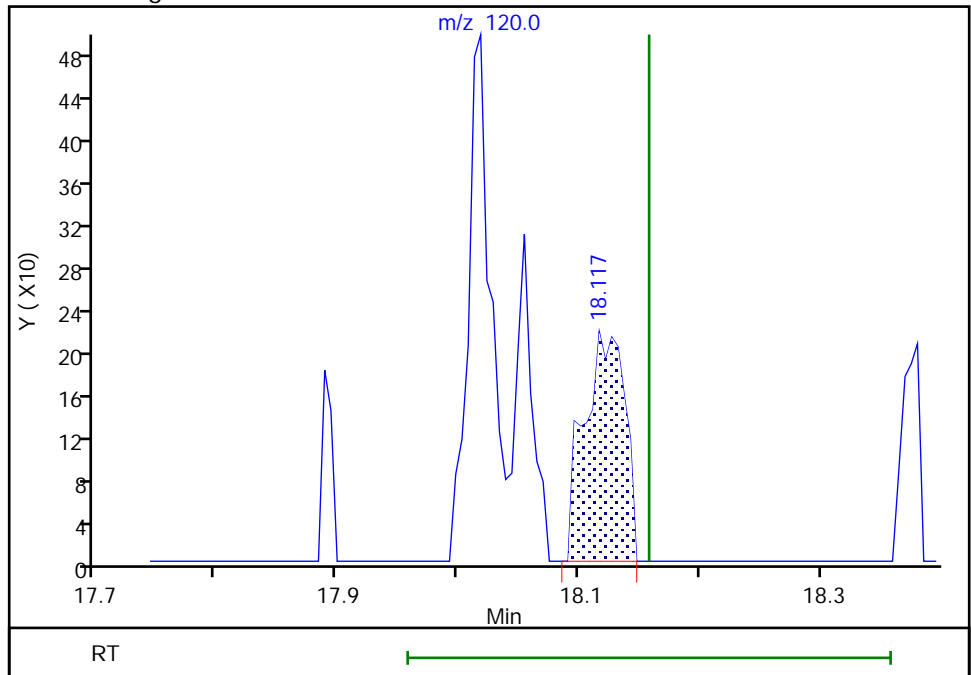
RT: 18.02
Area: 670
Amount: 0.030129
Amount Units: ppb v/v

Processing Integration Results



RT: 18.12
Area: 503
Amount: 0.029354
Amount Units: ppb v/v

Manual Integration Results



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-173-A-26 Lab Sample ID: 140-14387-14
 Matrix: Air Lab File ID: HB25P113.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:23
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.30	J	0.40	0.075
67-66-3	Chloroform	119.38	1.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	24		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	5.1		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.12	J	0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	84	E	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.76	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.63		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.84		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.44		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	480	E	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.15	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.27	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-173-A-26 Lab Sample ID: 140-14387-14
 Matrix: Air Lab File ID: HB25P113.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:23
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.68	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	5.4		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	94		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	21		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	0.50	J	1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	330	E	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	3.3		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.4		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2600	E	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.73	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D
 Lims ID: 140-14387-A-14
 Client ID: SV-173-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 04:03:30 ALS Bottle#: 13 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-021
 Misc. Info.: 140-14387-a-14
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 12:39:41 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:14:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.814	0.010	96	279120	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.000	0.010	95	1506709	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1234999	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.399	-0.026	93	802744	3.99	
6 Chlorodifluoromethane	51	3.682	3.687	0.000	53	13727	0.0600	M
8 Dichlorodifluoromethane	85	3.744	3.743	0.006	100	32119	0.0914	
27 1,1-Dichloroethene	96	5.925	5.926	0.006	96	1826003	16.8	E
31 Methylene Chloride	84	6.281	6.278	0.010	99	17362	0.1521	
34 trans-1,2-Dichloroethene	96	7.087	7.080	0.015	95	18756	0.1687	
37 1,1-Dichloroethane	63	7.511	7.510	0.010	100	215189	1.02	
41 cis-1,2-Dichloroethene	96	8.493	8.493	0.010	96	536513	4.76	
43 Chloroform	83	8.834	8.834	0.010	99	53396	0.2202	
45 1,1,1-Trichloroethane	97	9.863	9.864	0.010	98	20207	0.0876	
46 1,2-Dichloroethane	62	9.971	9.971	0.005	95	4038	0.0249	
47 Benzene	78	10.468	10.457	0.016	99	13488	0.0423	
56 Trichloroethene	130	11.718	11.714	0.010	98	14555864	96.8	E
65 Toluene	91	13.765	13.764	0.005	92	44013	0.1252	
78 m-Xylene & p-Xylene	91	16.220	16.225	0.000	98	18517	0.0536	
89 1,3,5-Trimethylbenzene	120	18.132	18.132	-0.026	38	587	0.0298	Ma
S 121 Xylenes, Total	100				0		0.0536	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Worklist Smp#: 21

Client ID: SV-173-A-26

Purge Vol: 500.000 mL

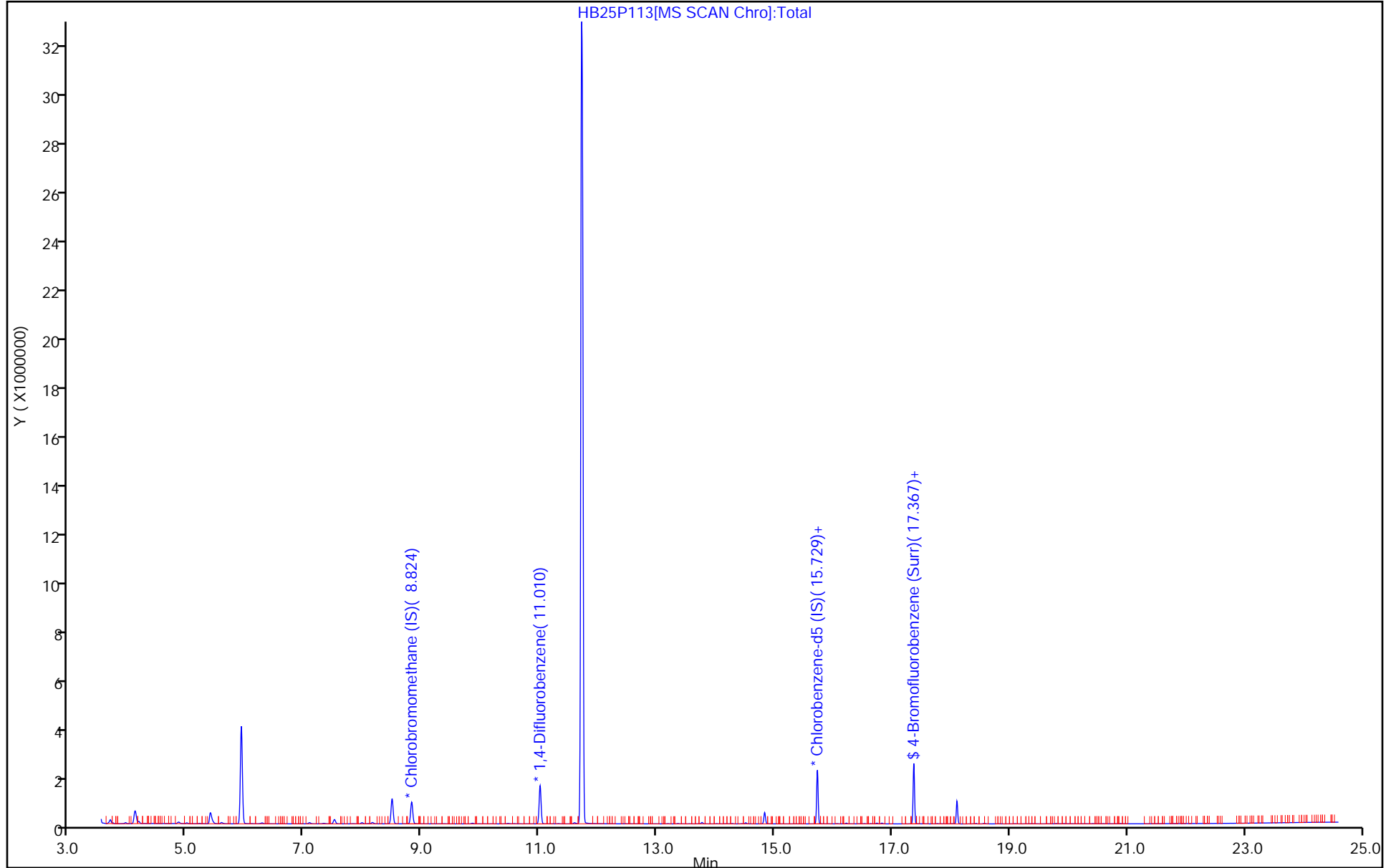
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D
 Lims ID: 140-14387-A-14
 Client ID: SV-173-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 04:03:30 ALS Bottle#: 13 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-021
 Misc. Info.: 140-14387-a-14
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 12:39:41 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:14:11

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.99	99.72

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

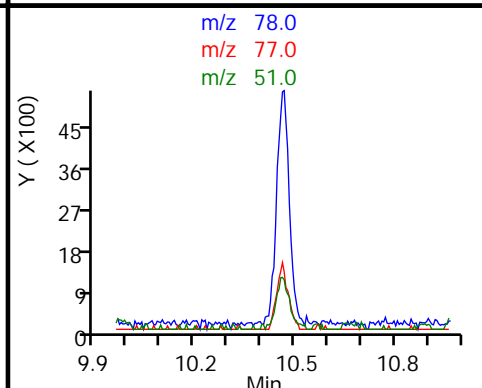
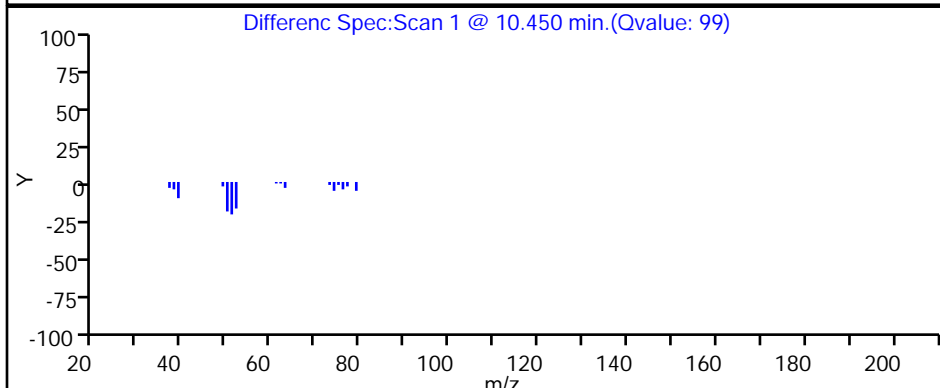
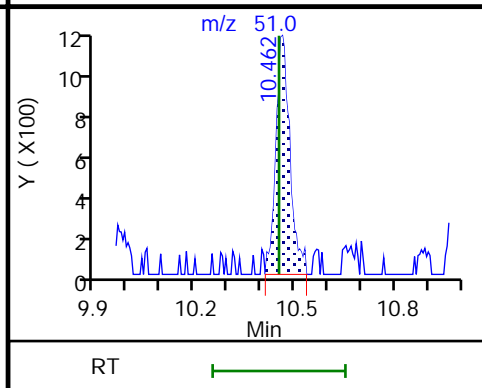
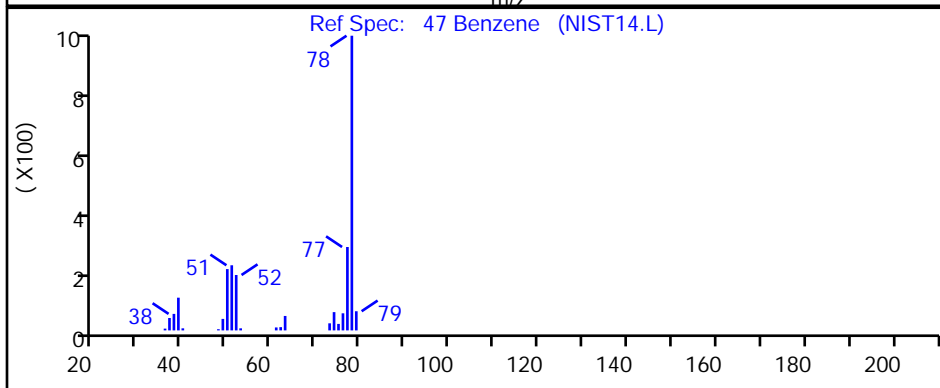
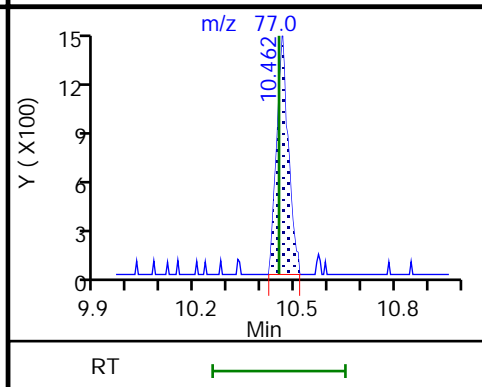
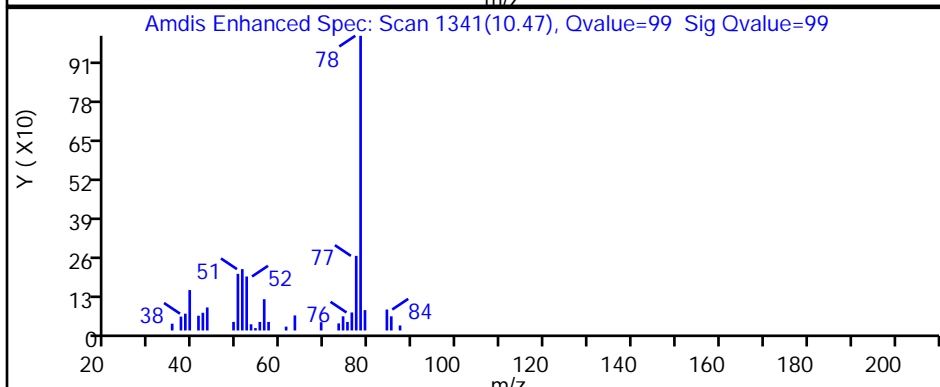
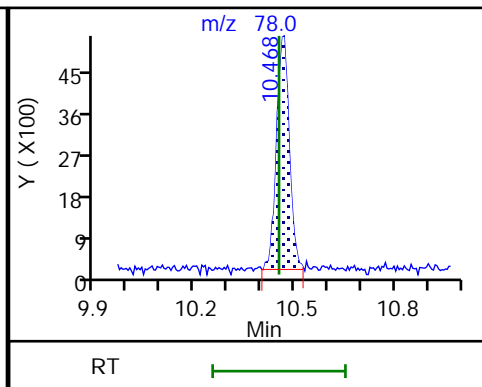
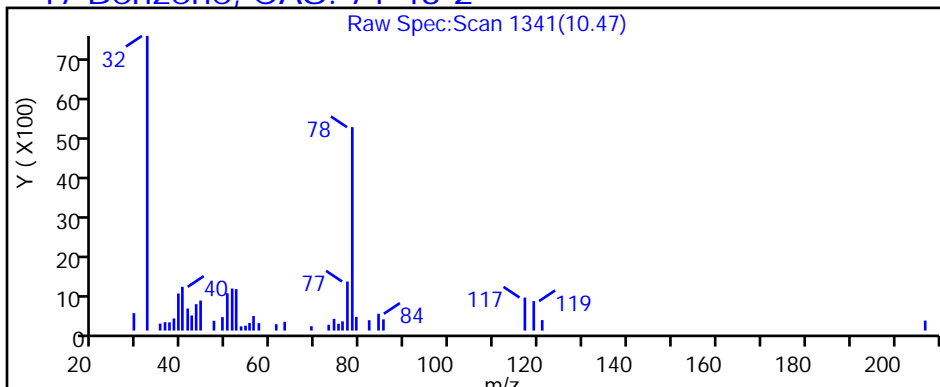
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

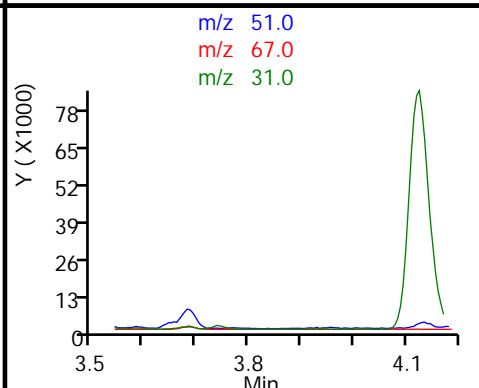
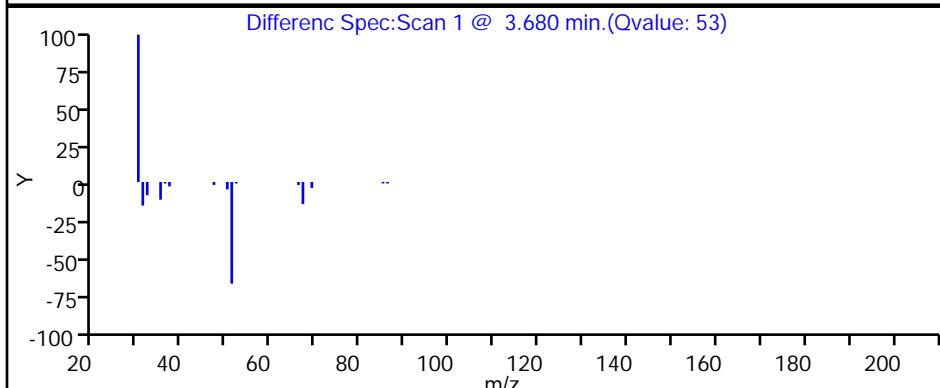
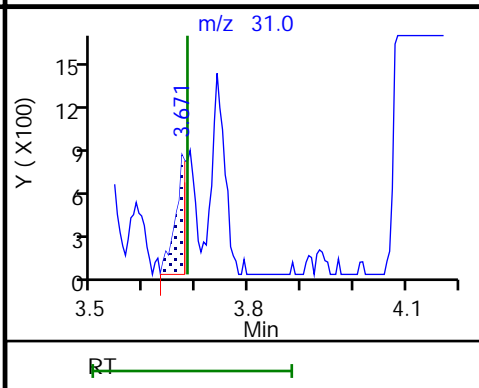
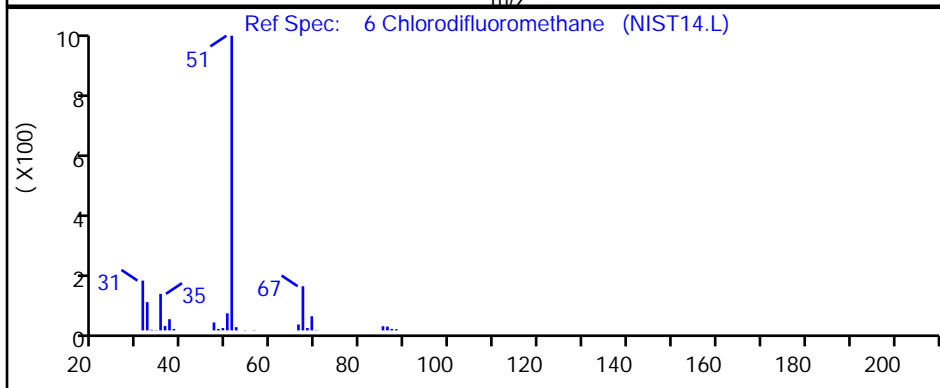
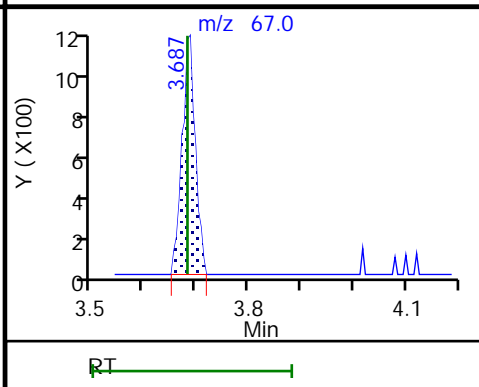
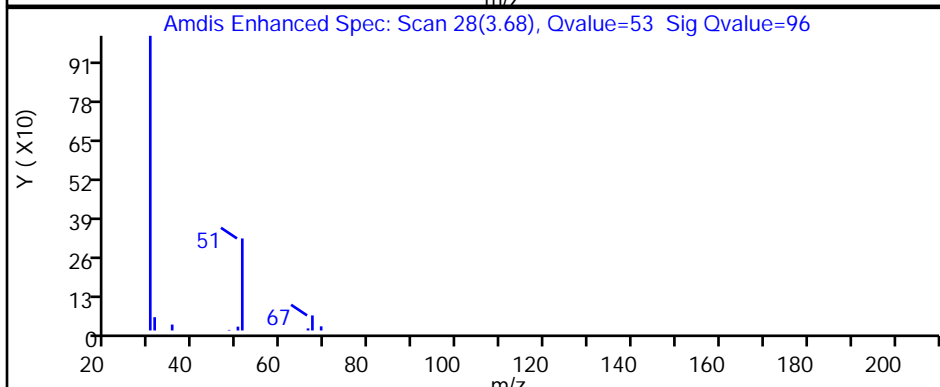
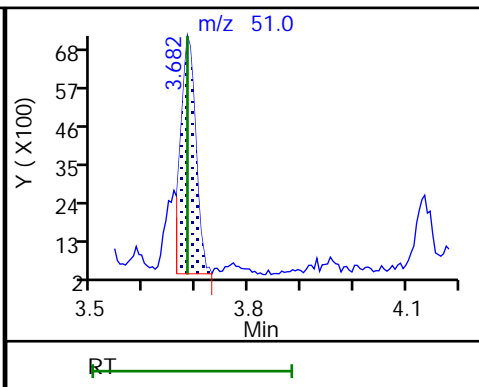
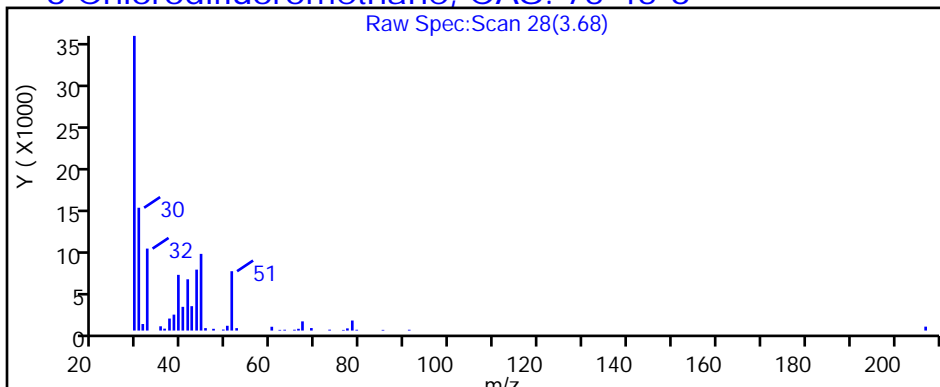
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

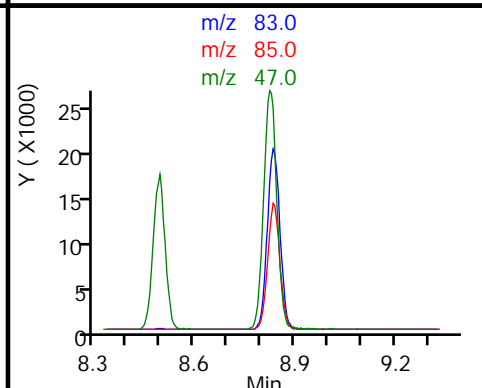
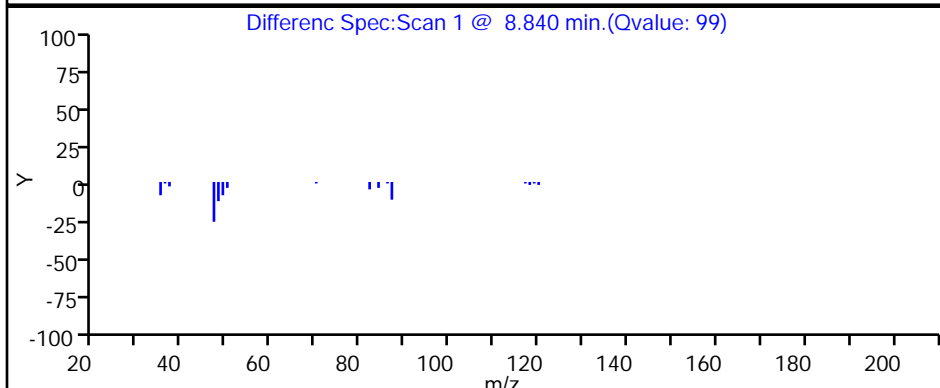
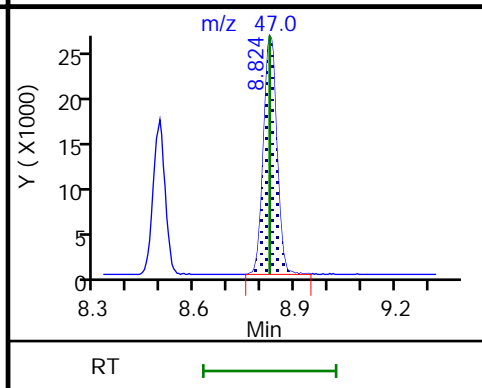
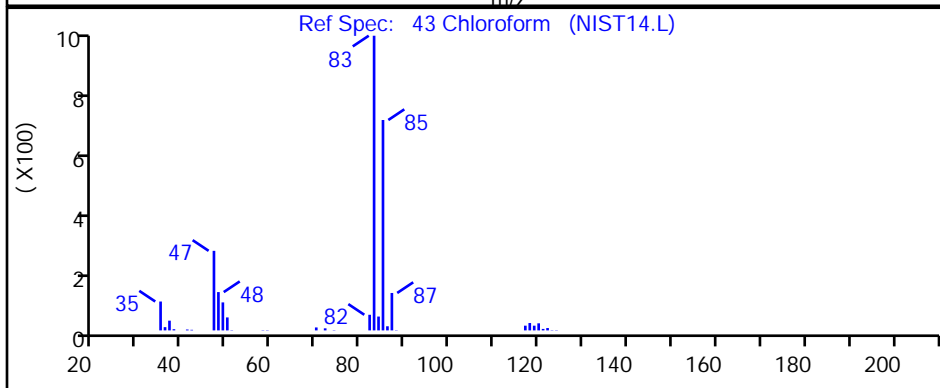
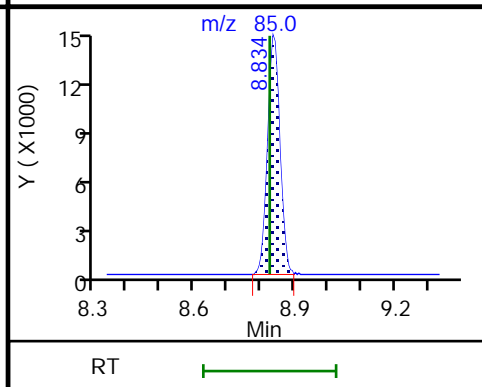
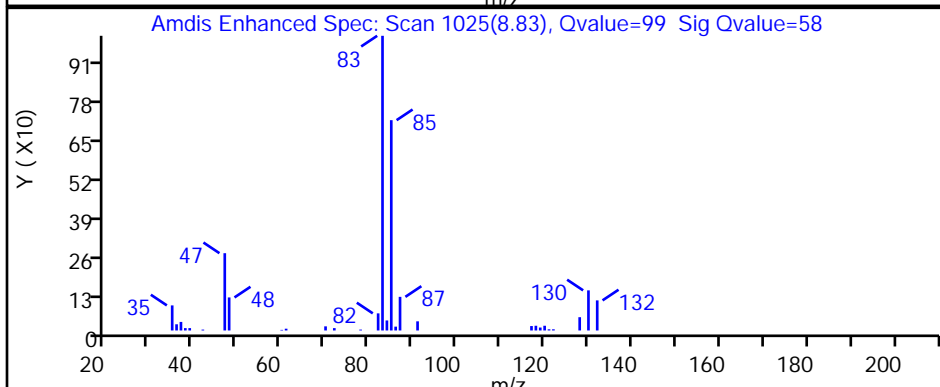
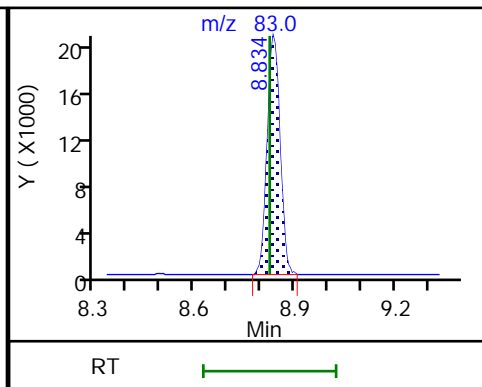
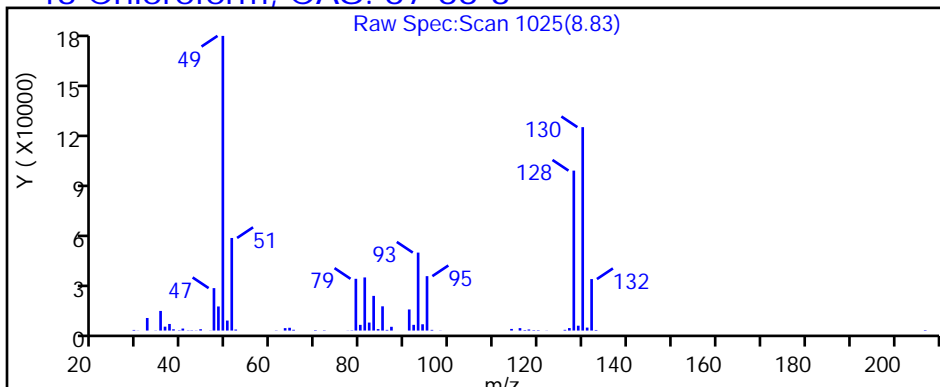
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

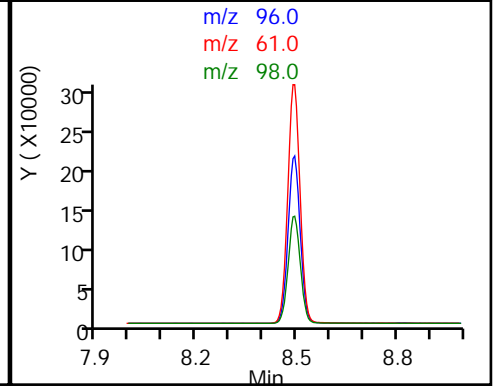
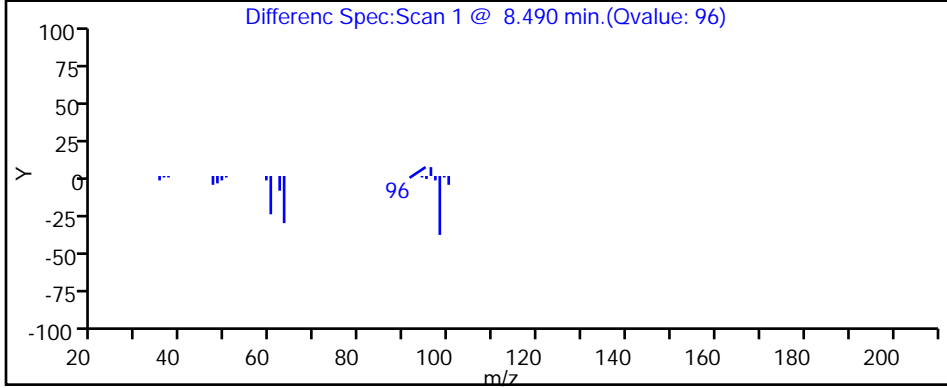
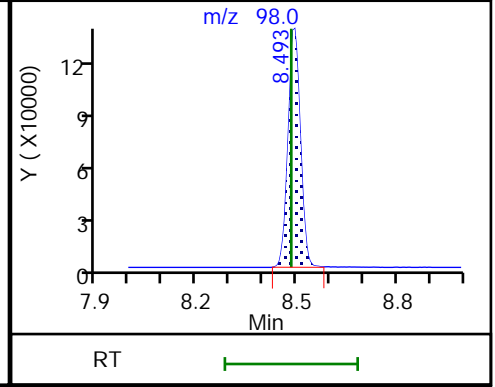
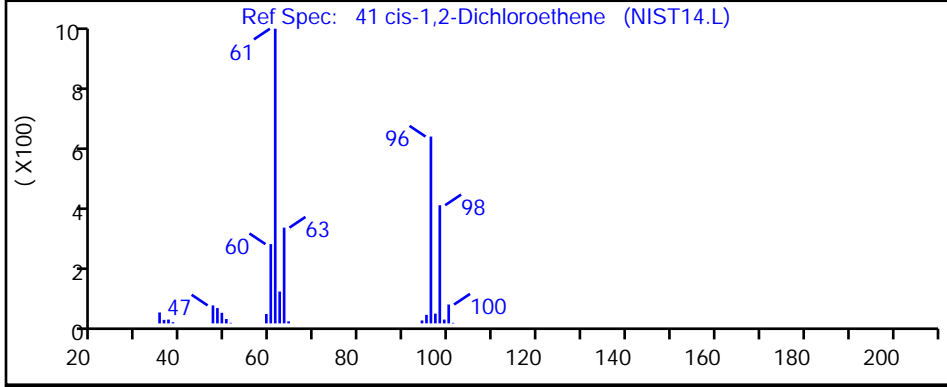
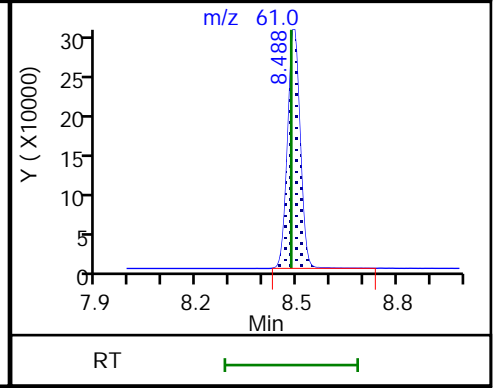
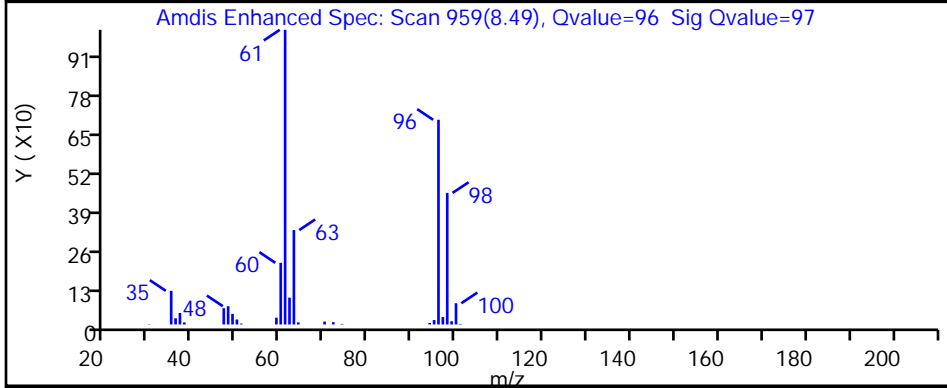
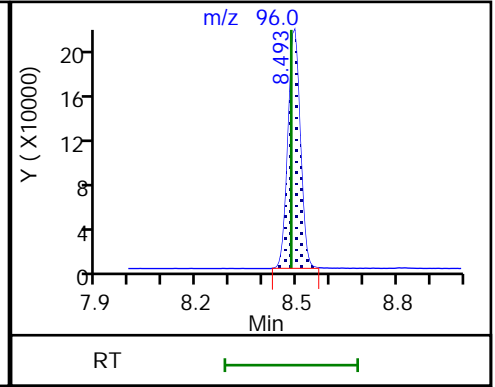
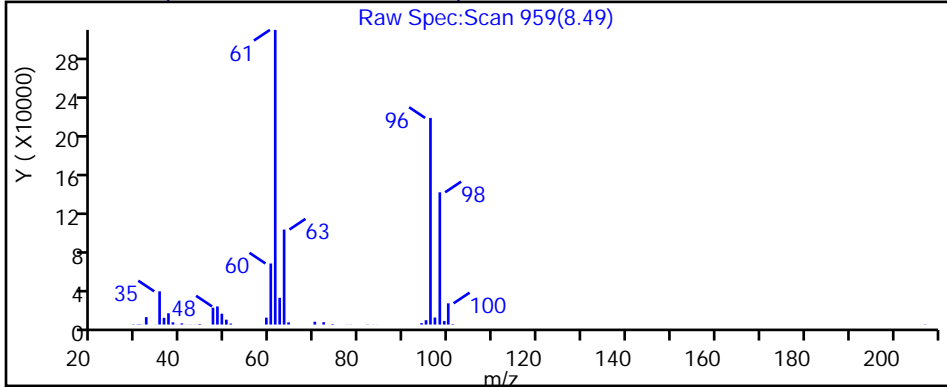
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

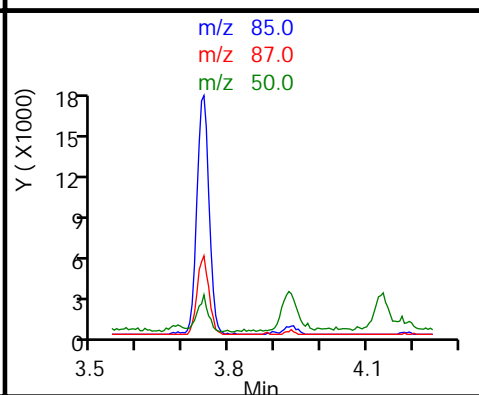
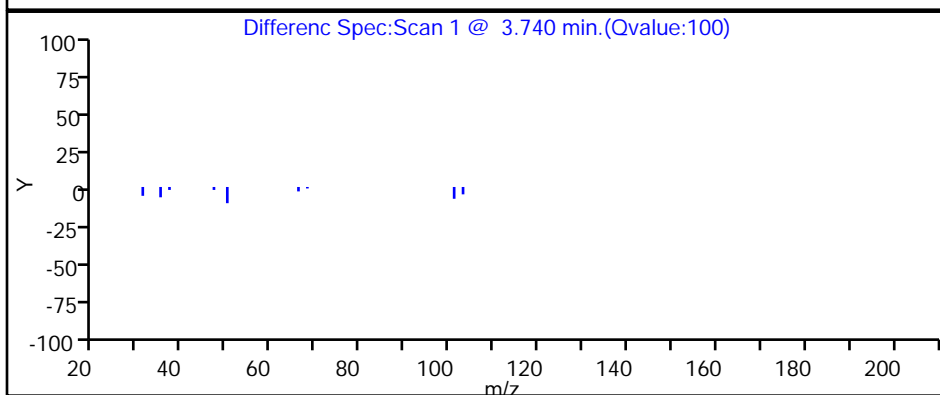
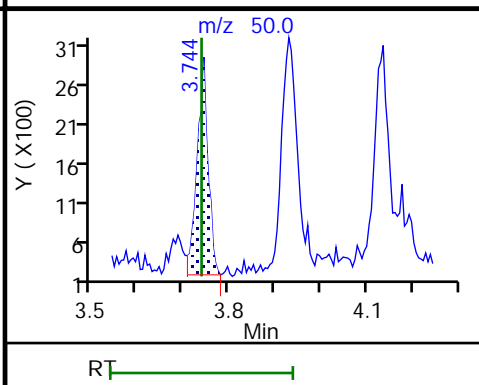
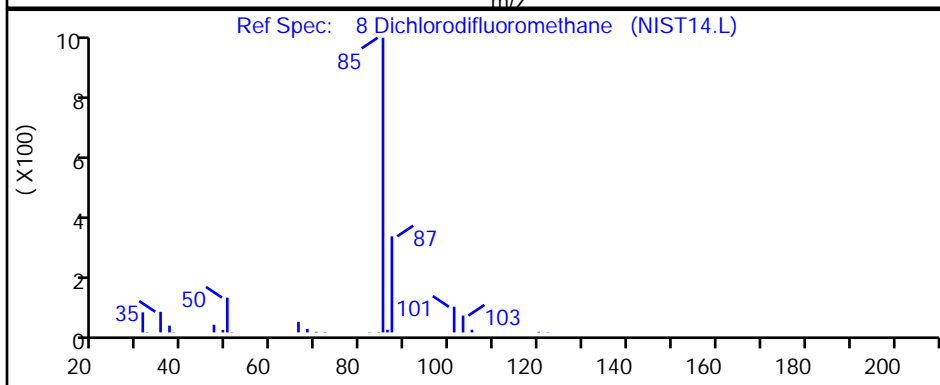
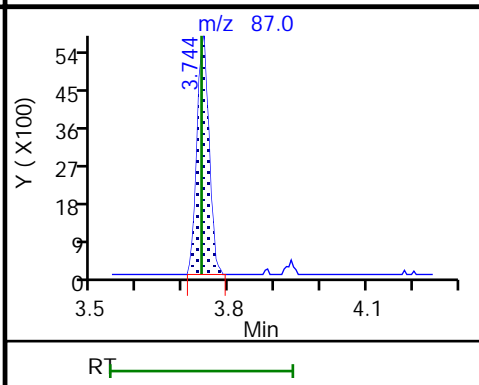
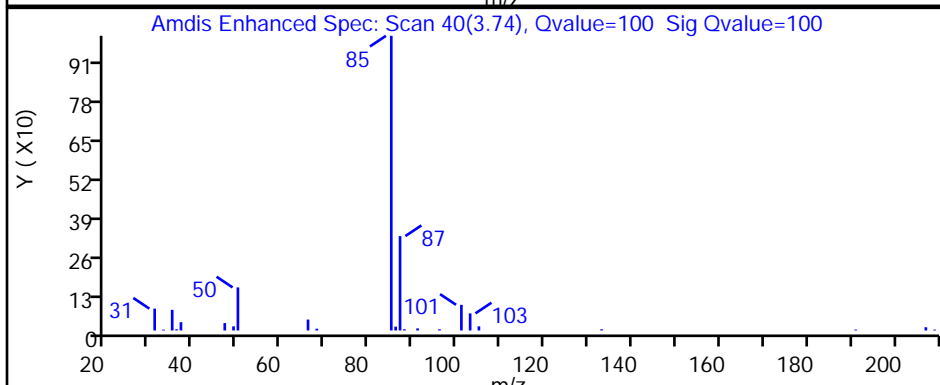
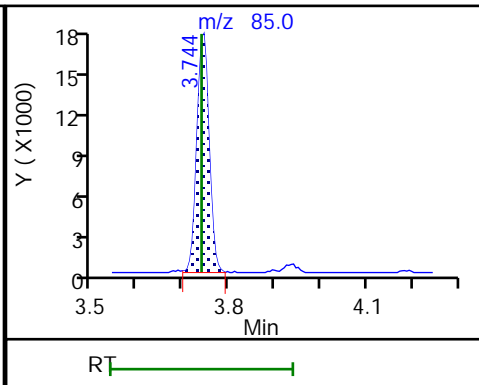
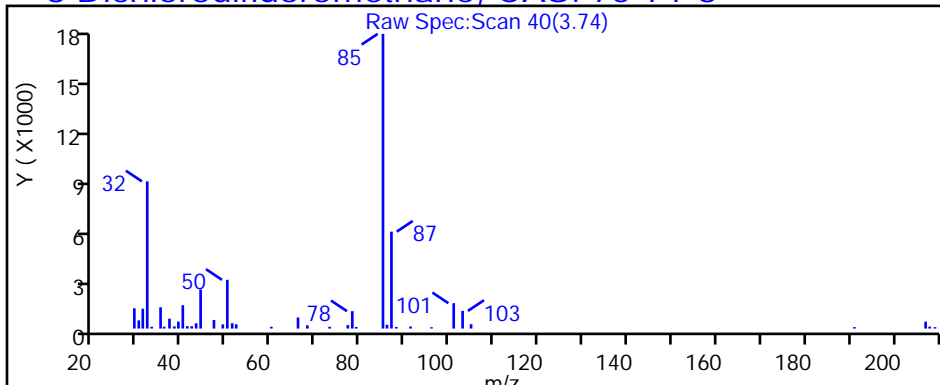
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

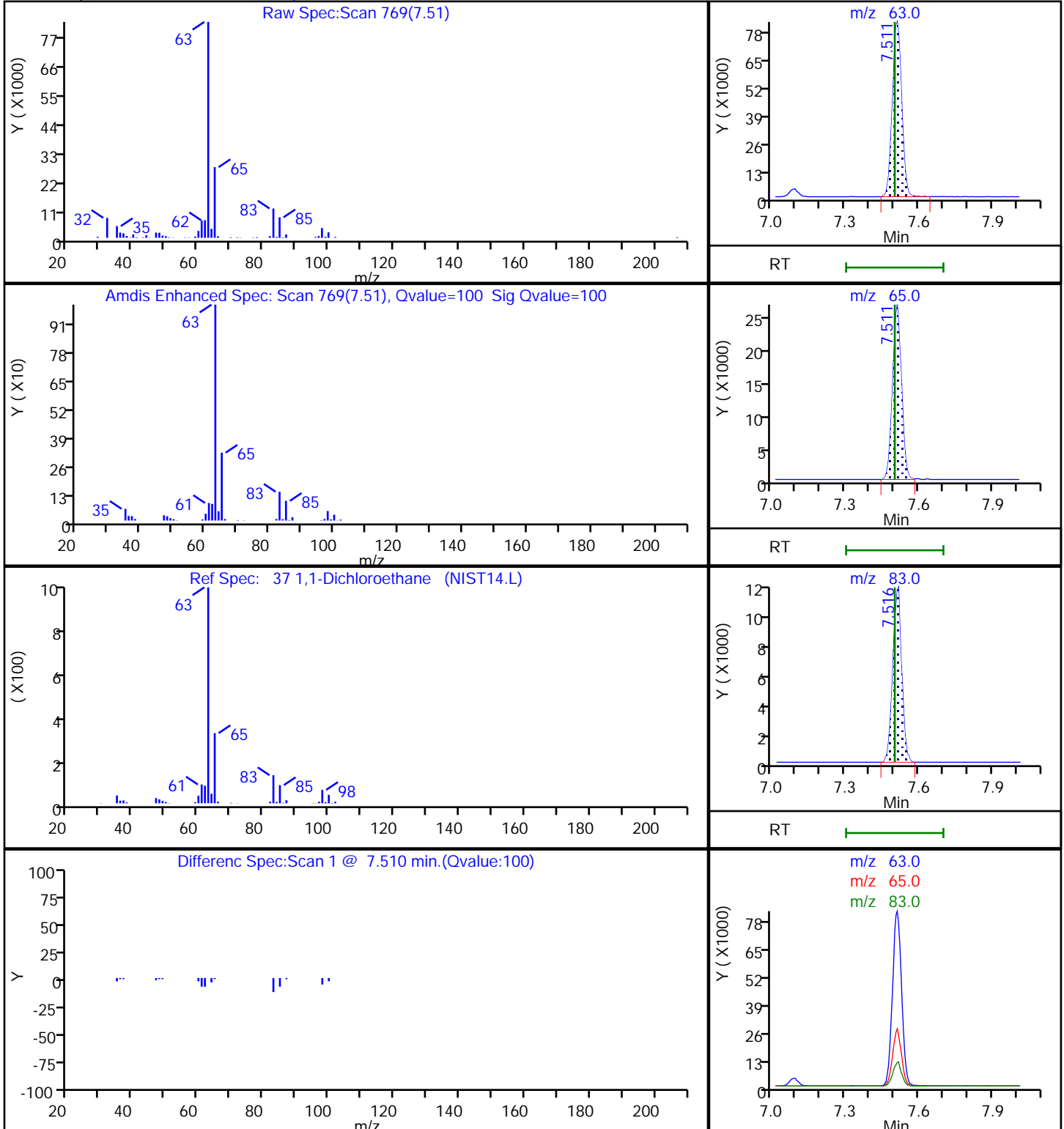
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

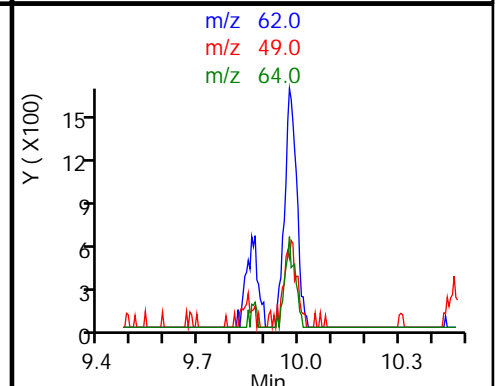
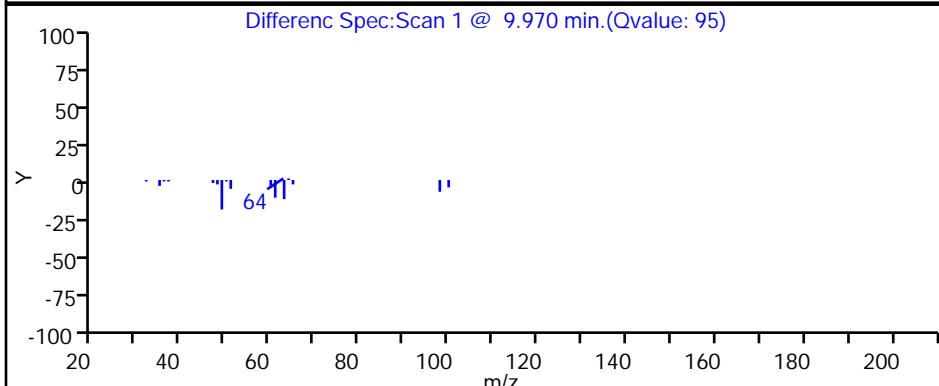
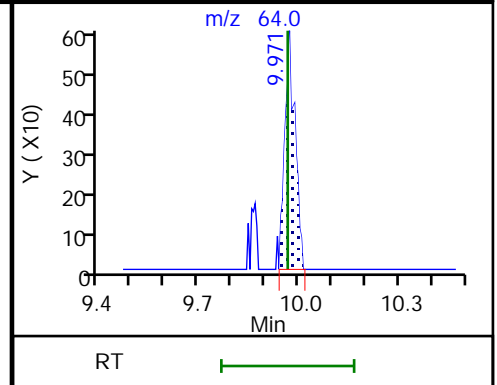
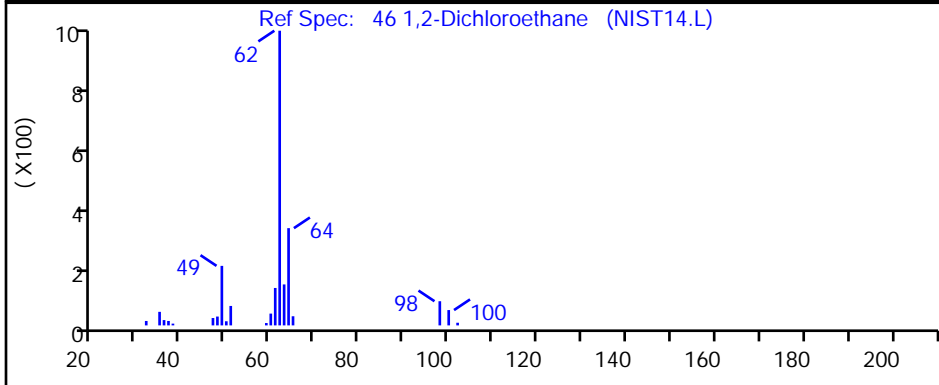
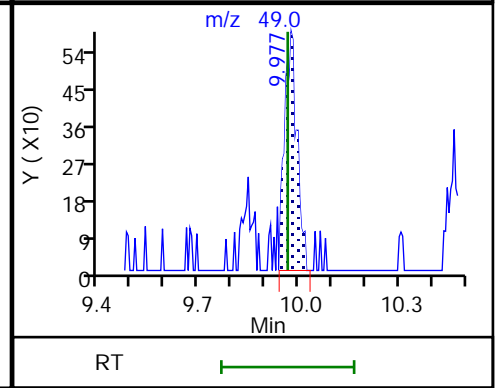
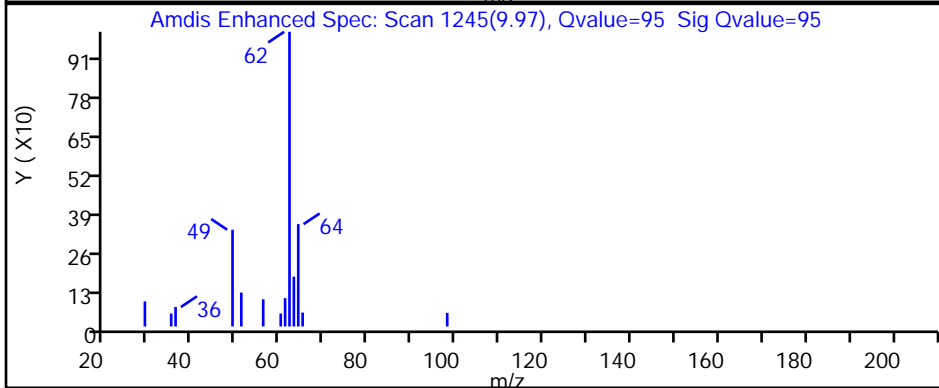
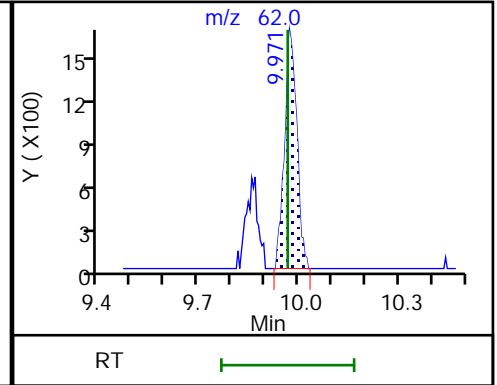
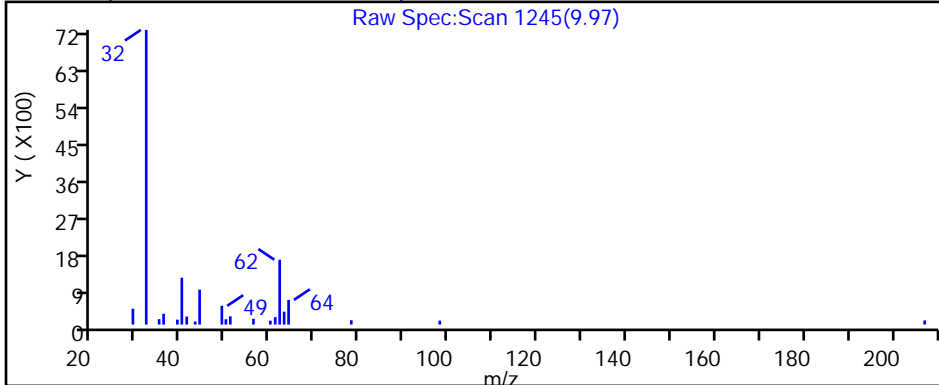
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

46 1,2-Dichloroethane, CAS: 107-06-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

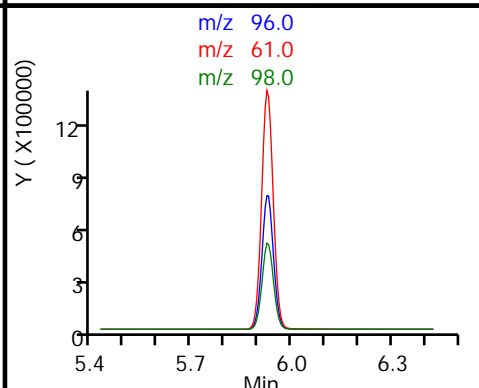
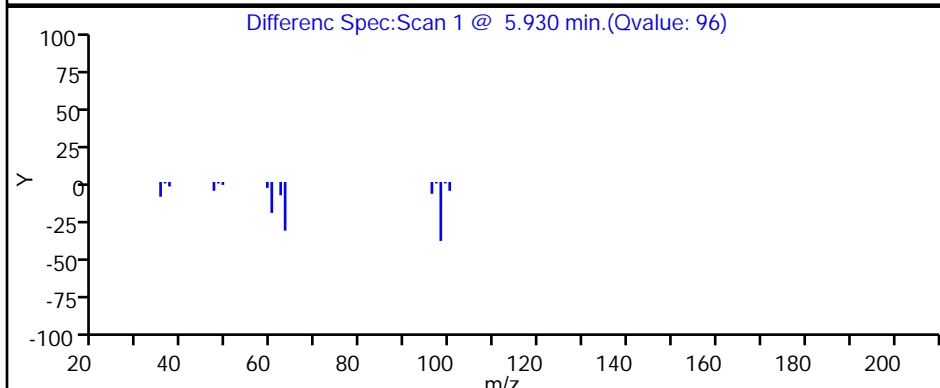
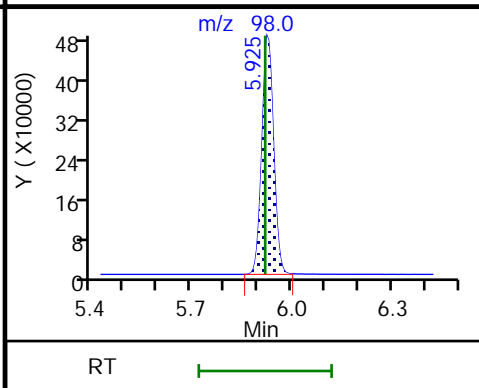
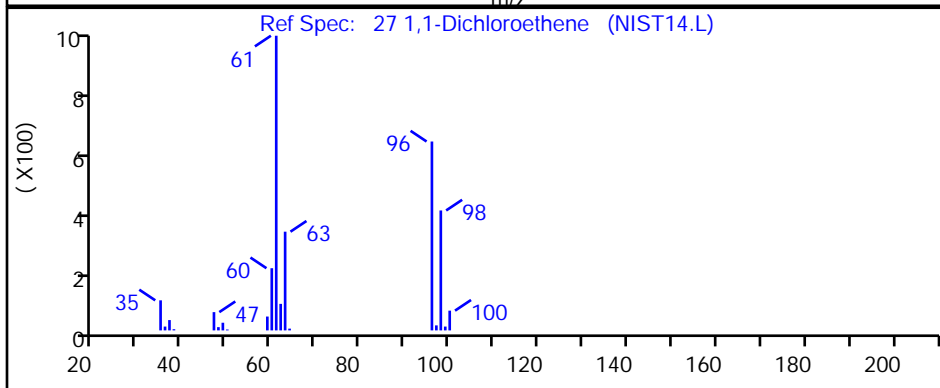
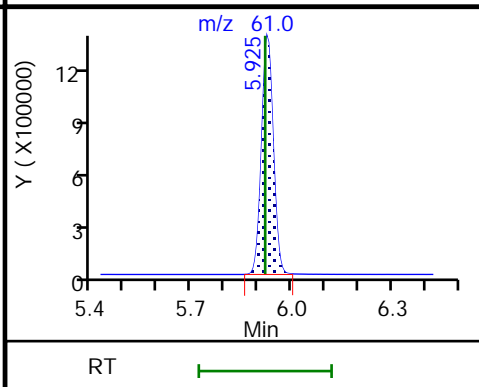
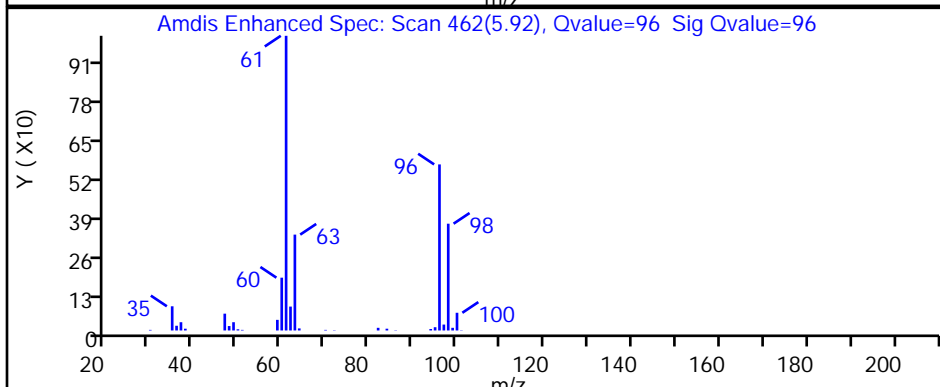
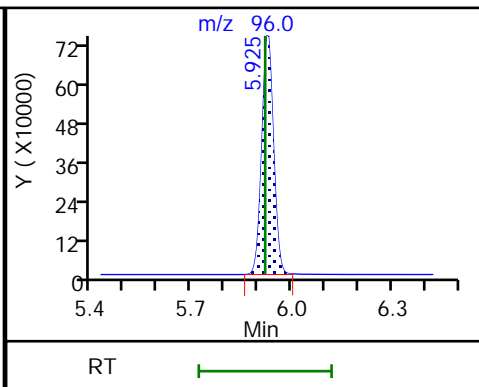
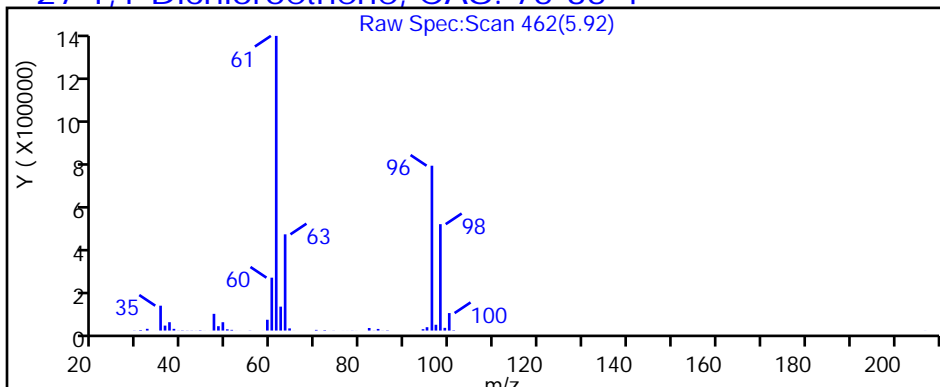
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

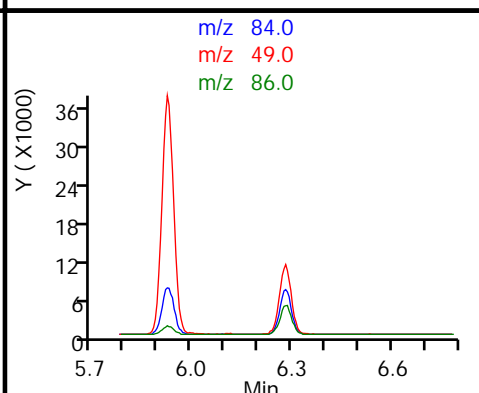
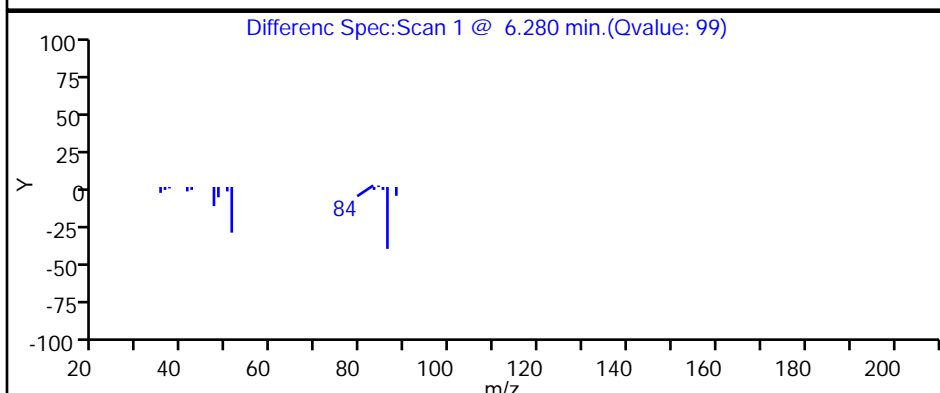
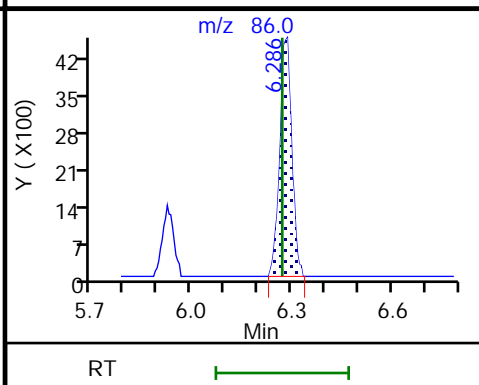
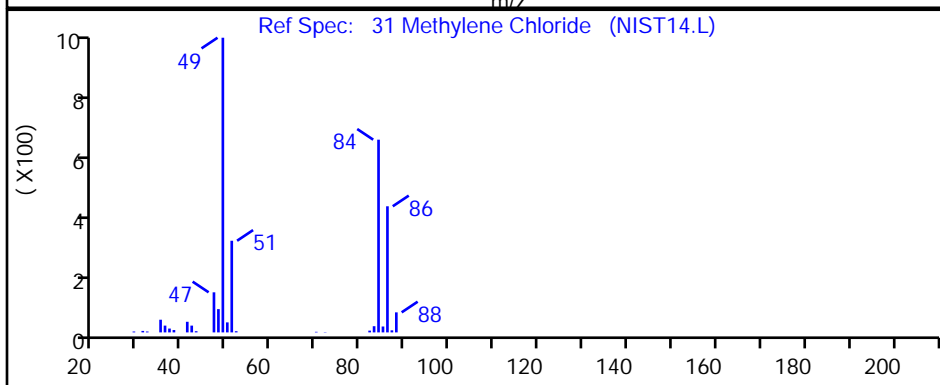
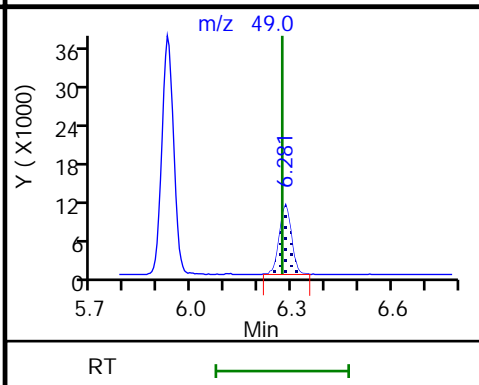
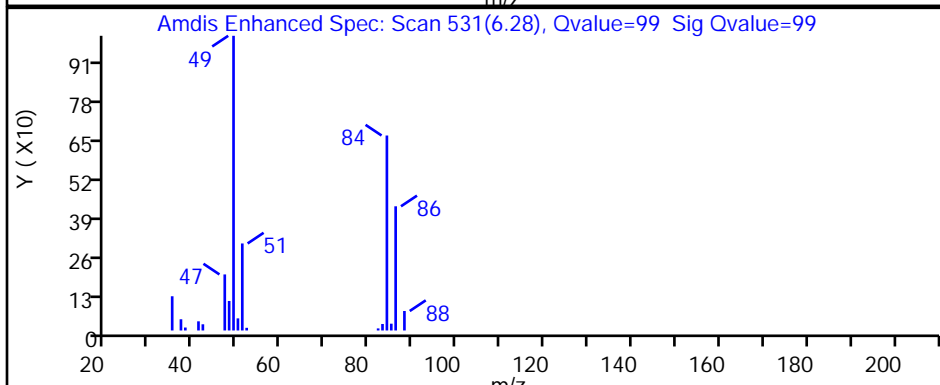
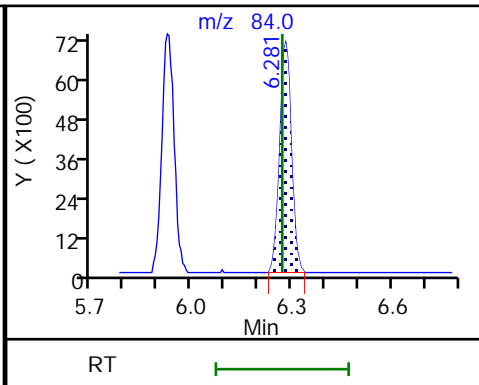
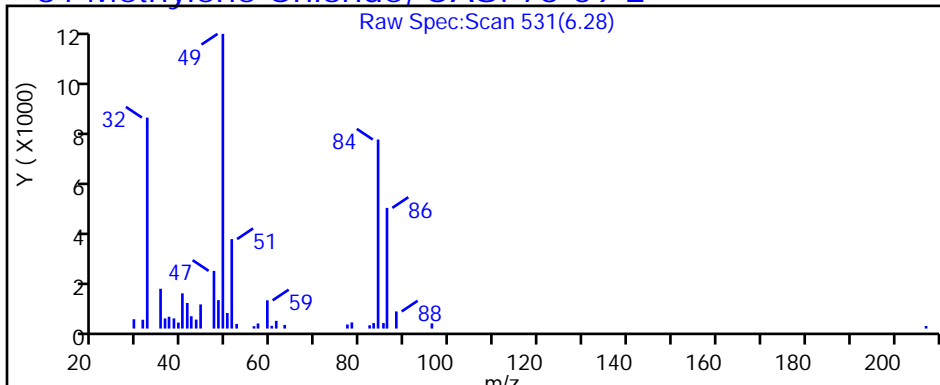
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

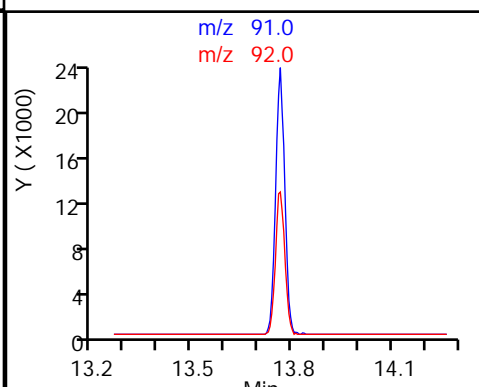
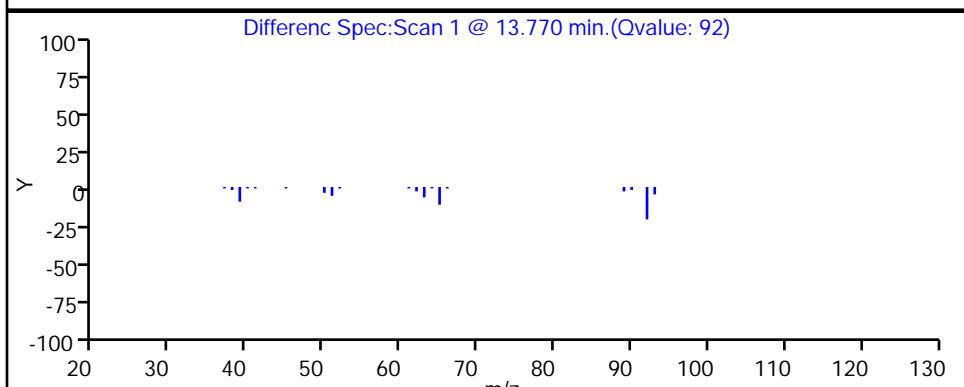
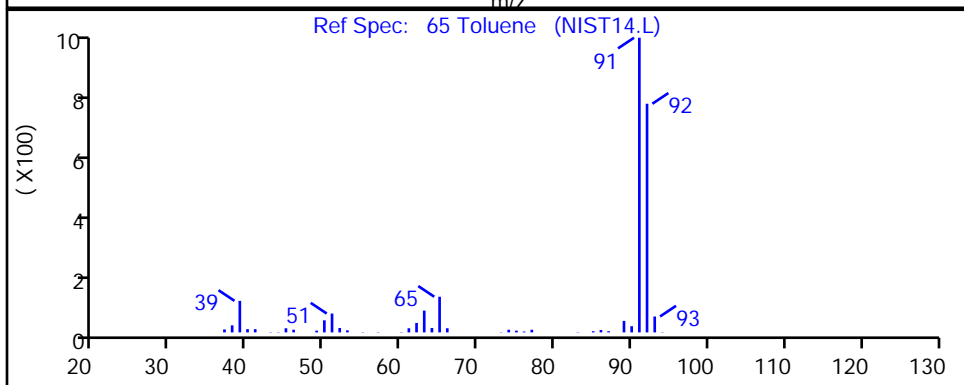
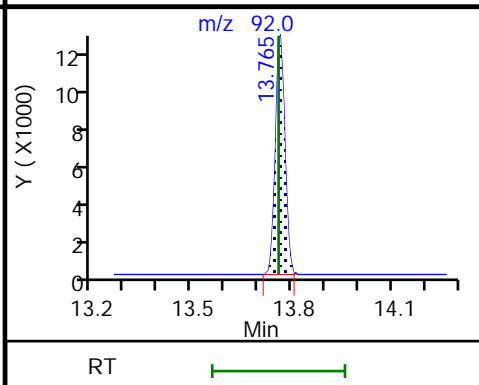
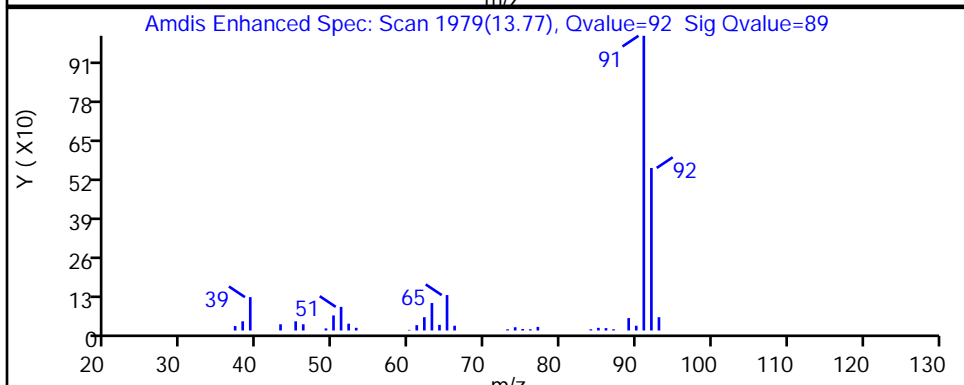
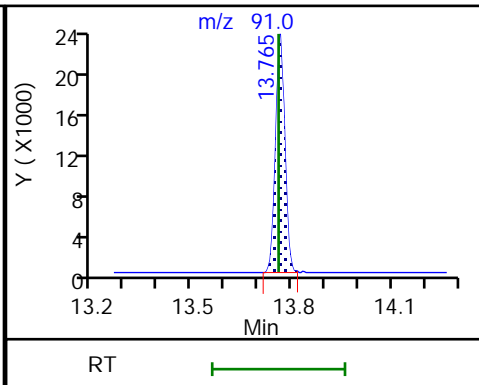
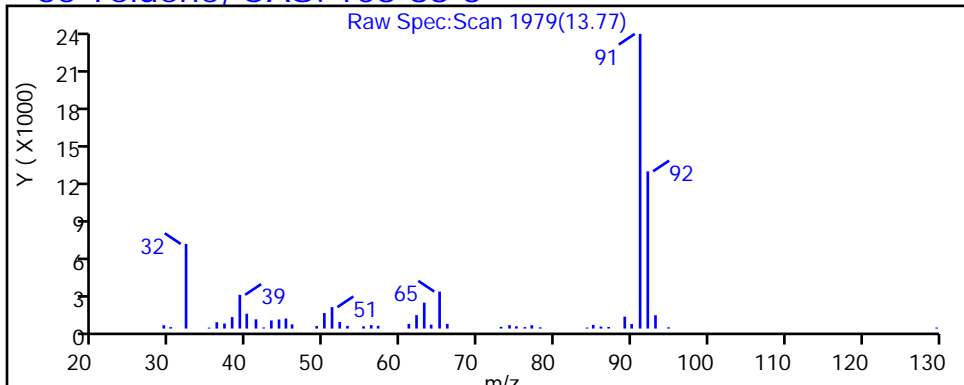
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

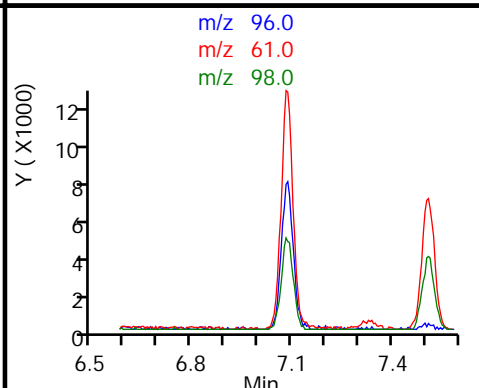
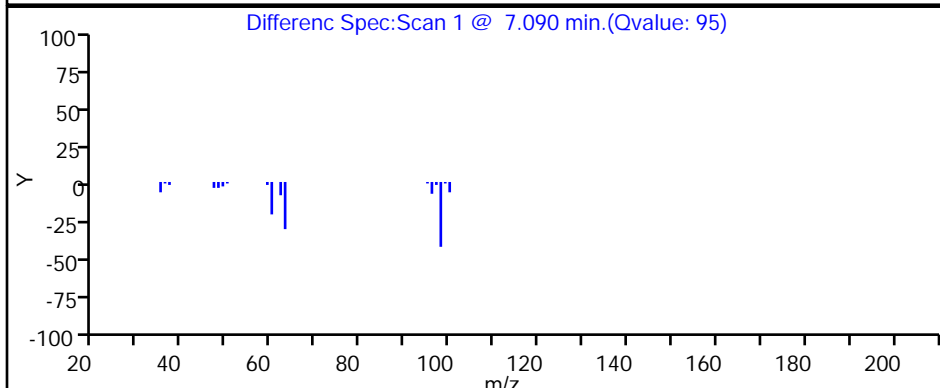
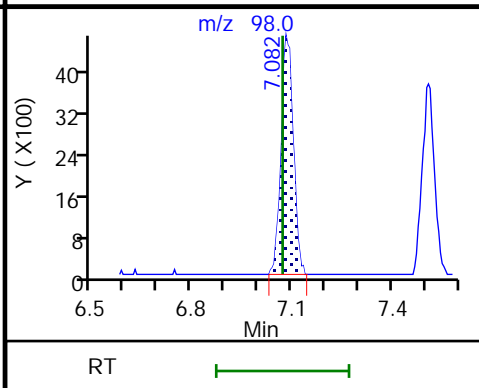
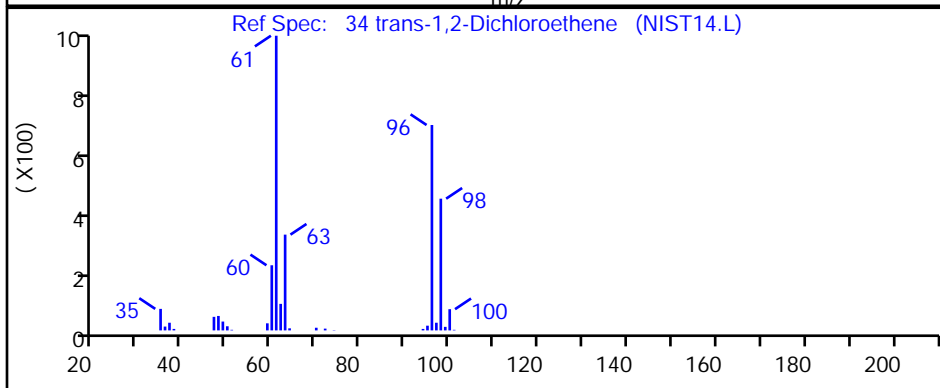
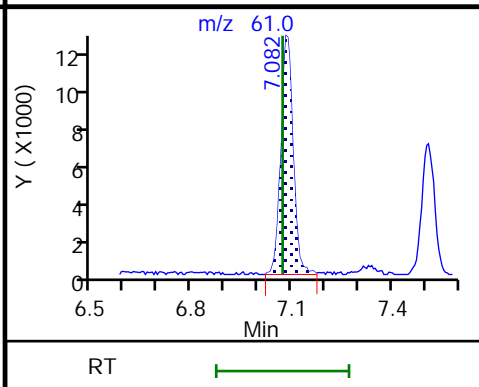
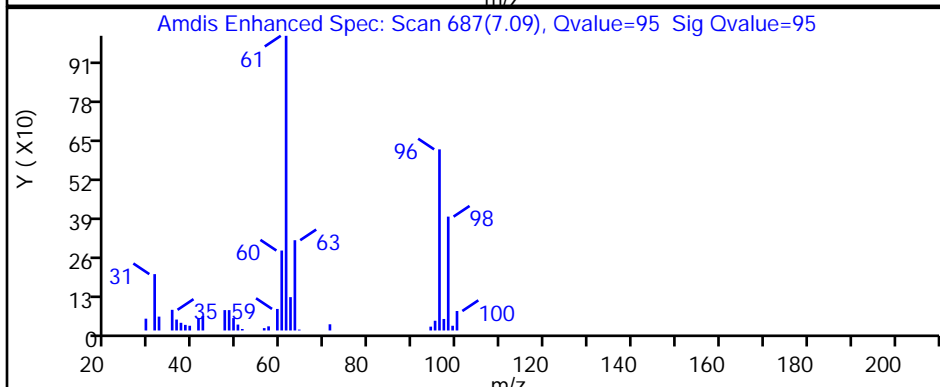
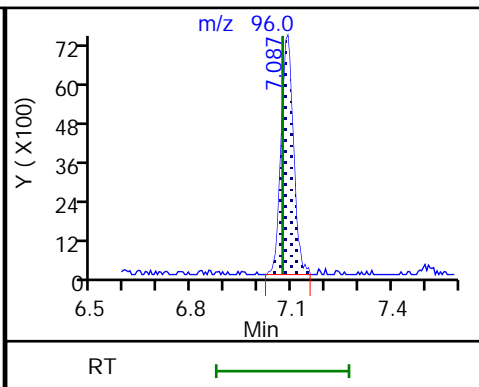
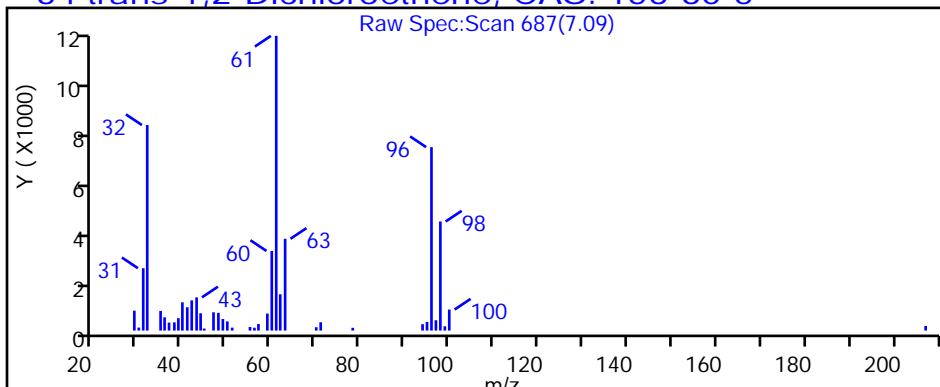
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

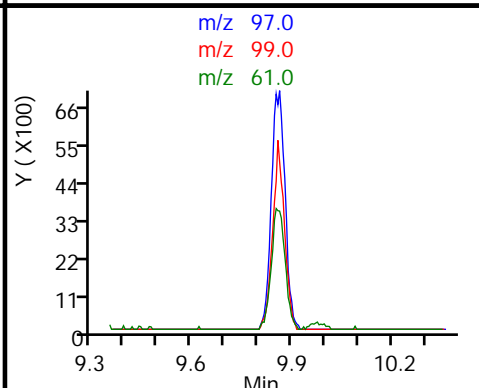
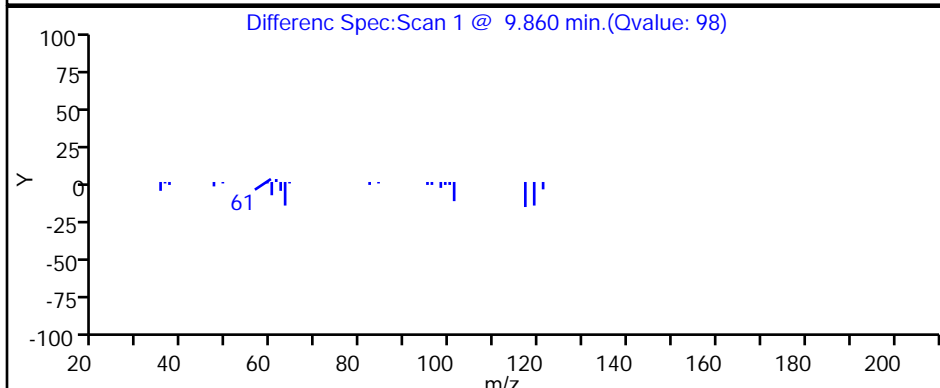
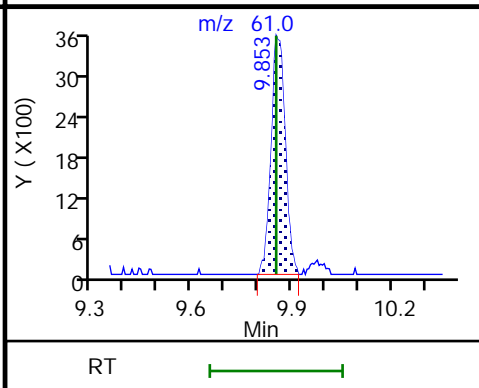
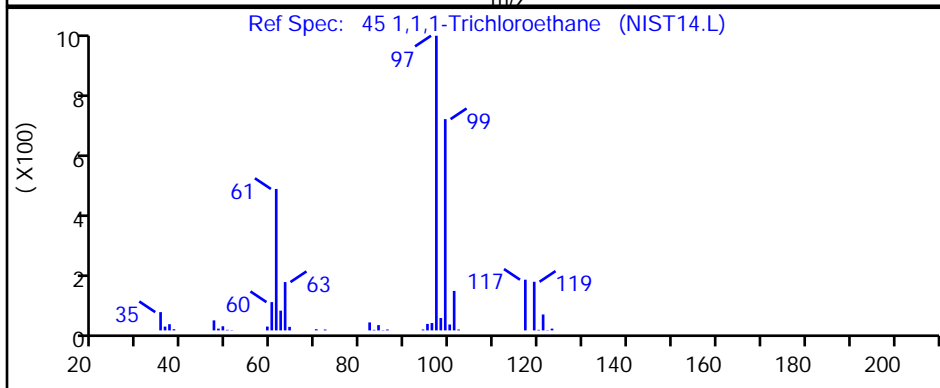
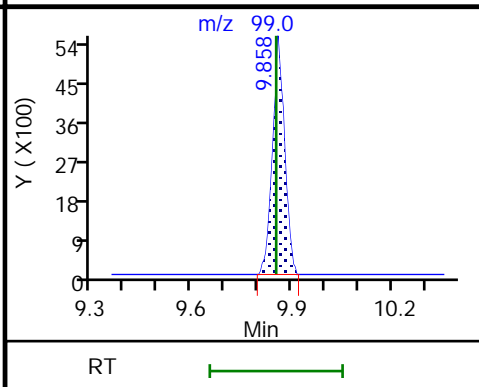
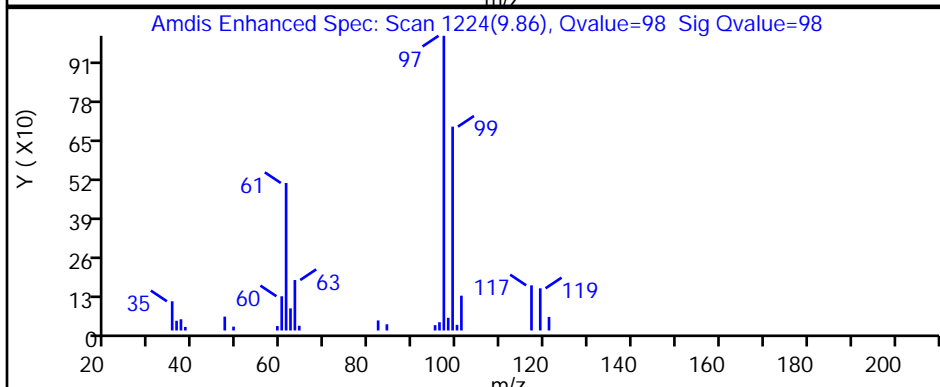
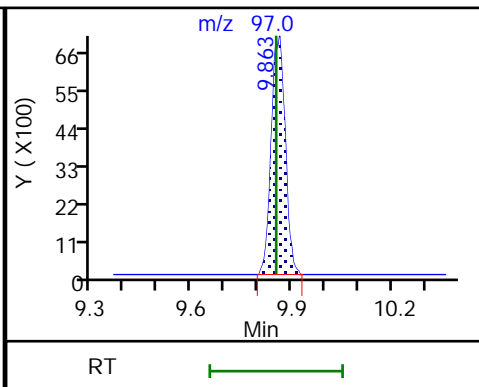
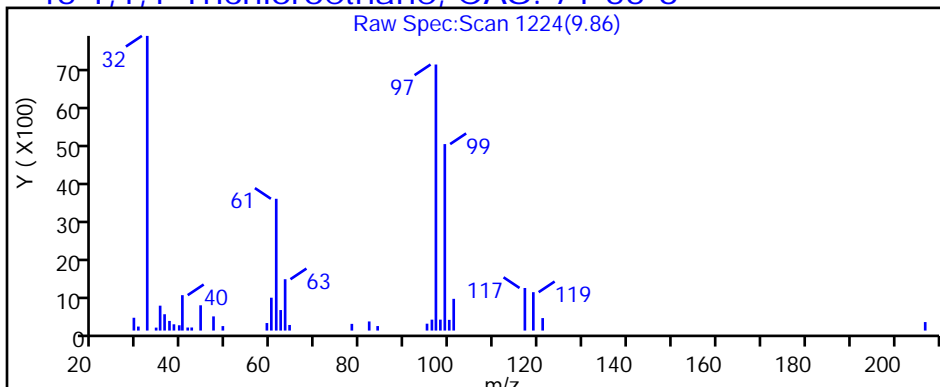
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

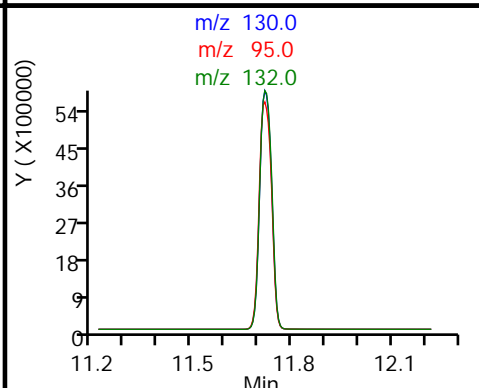
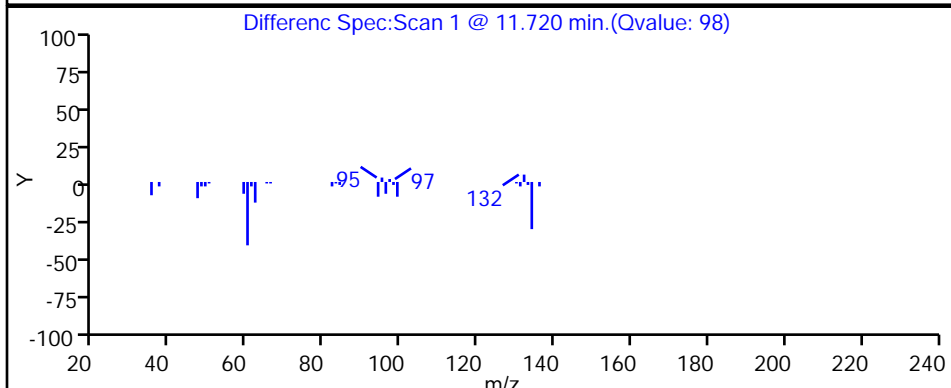
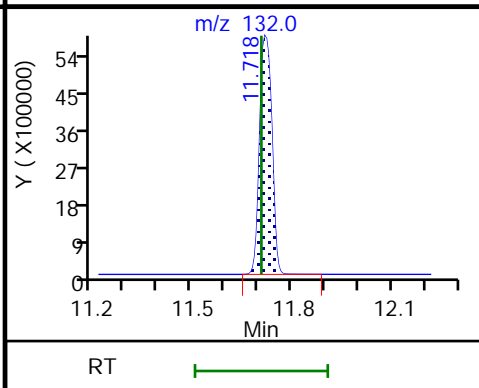
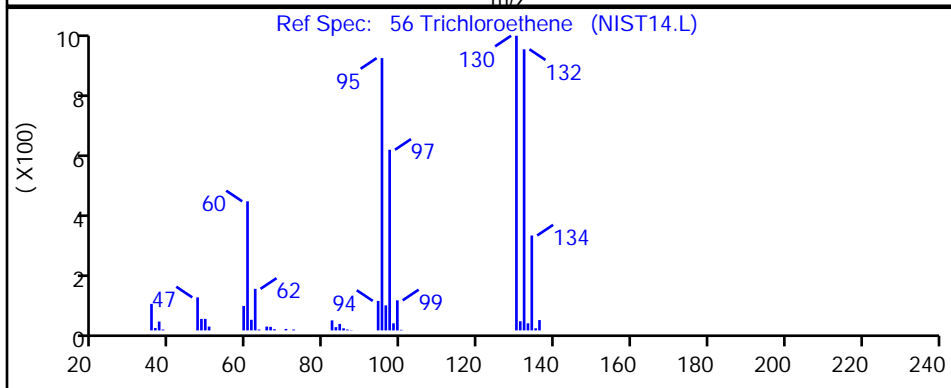
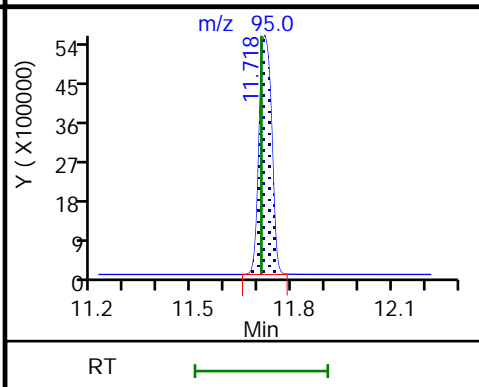
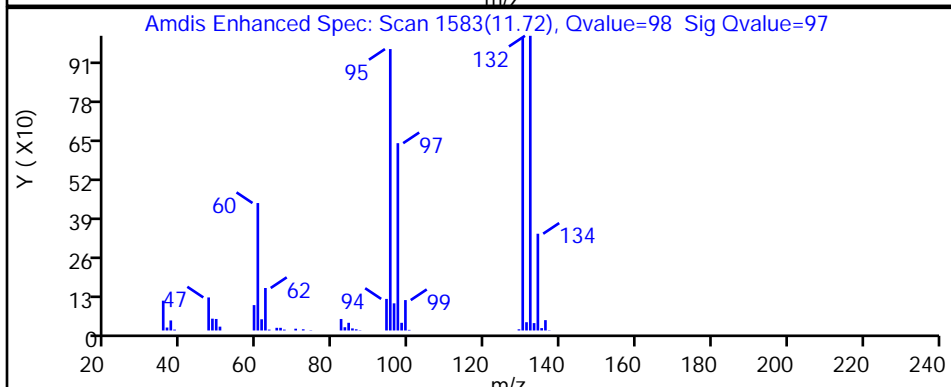
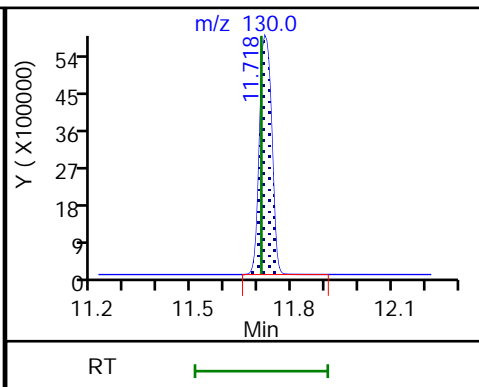
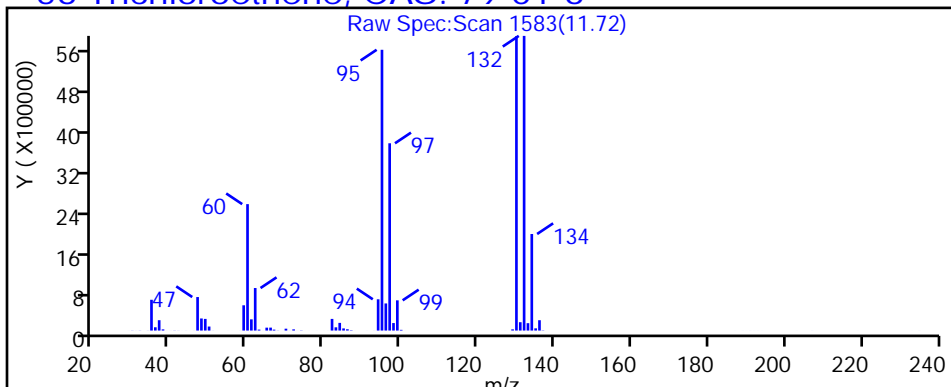
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

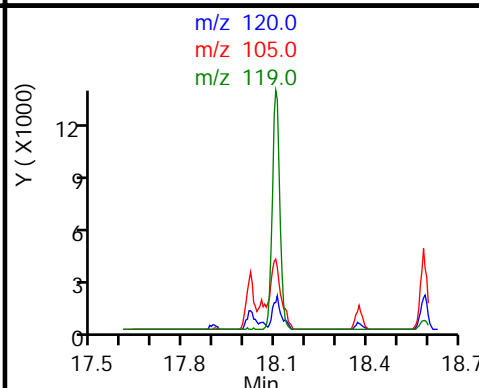
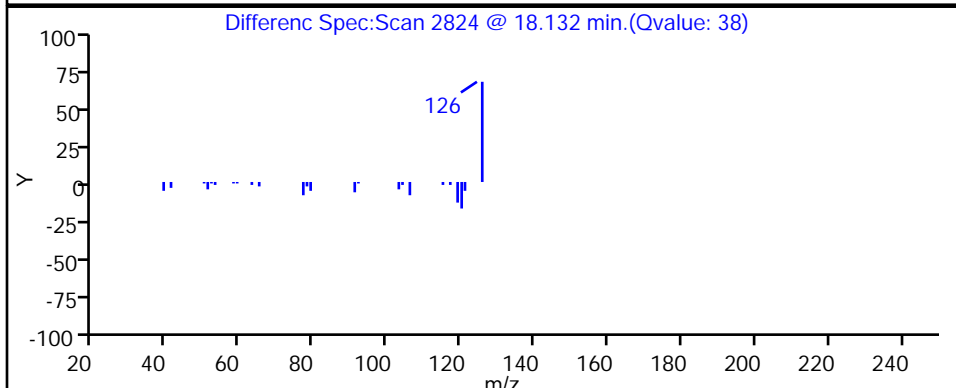
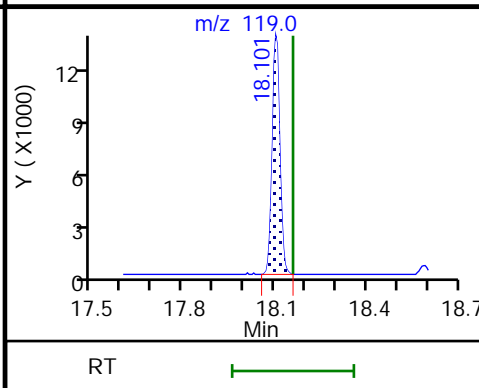
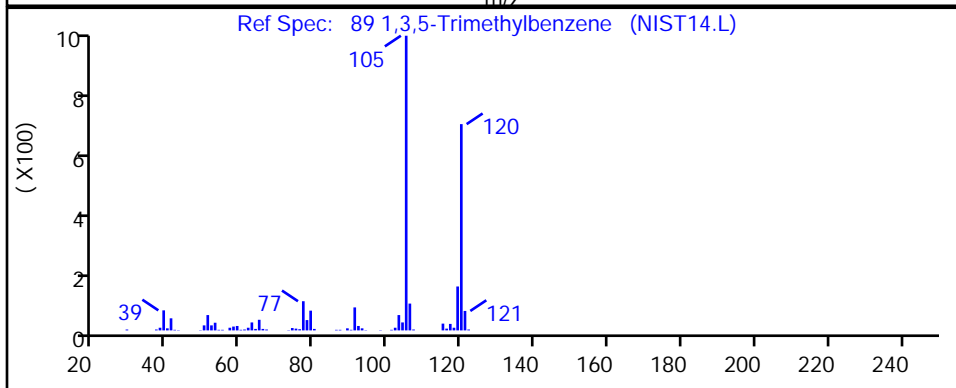
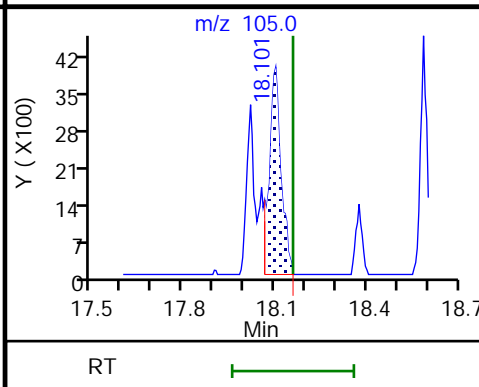
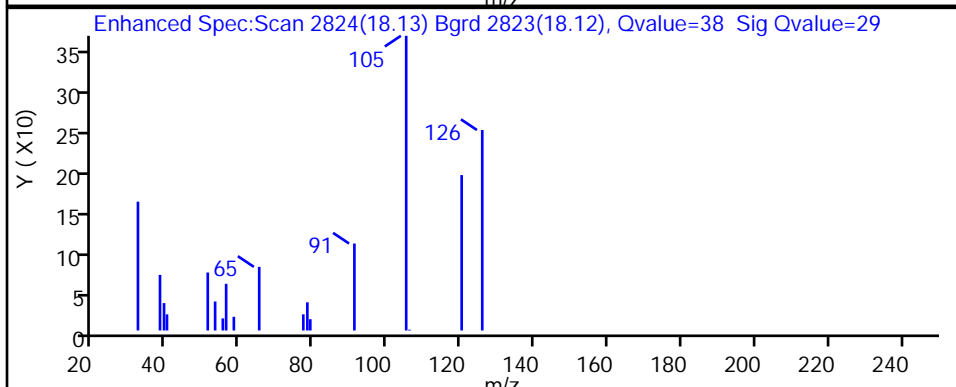
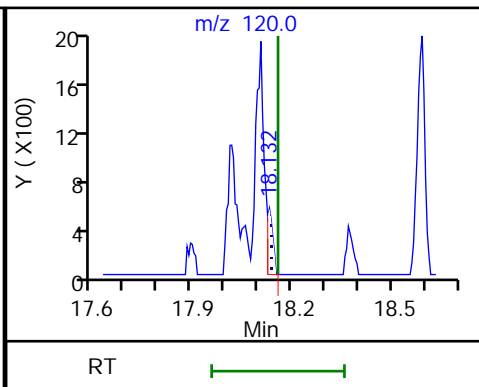
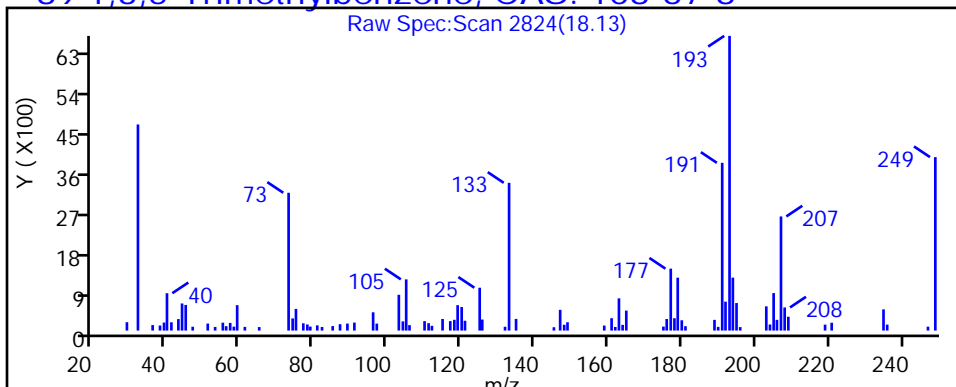
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D

Injection Date: 26-Feb-2019 04:03:30

Instrument ID: MH

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

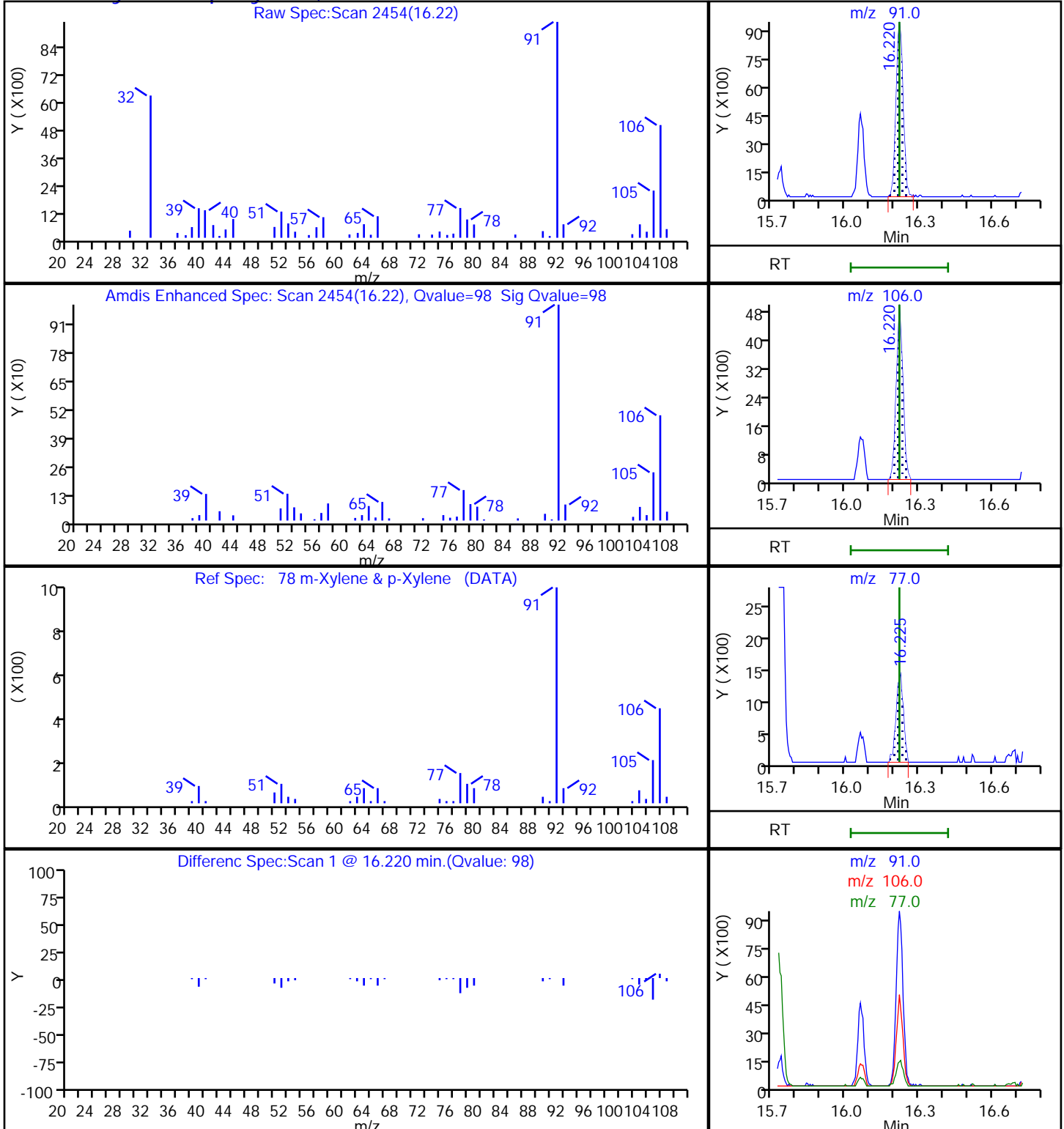
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

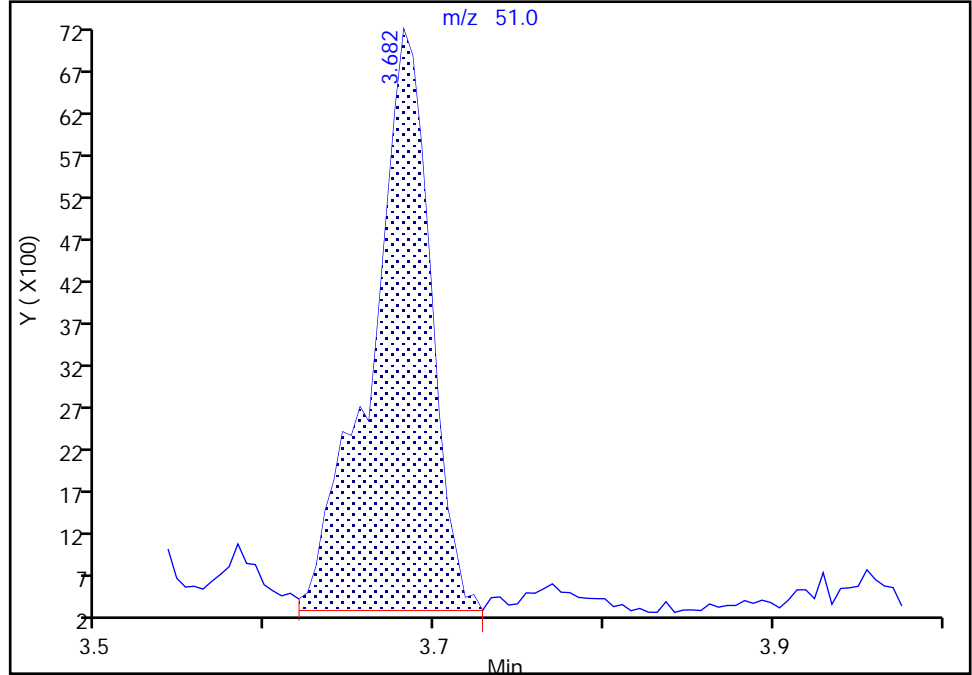
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D
Injection Date: 26-Feb-2019 04:03:30 Instrument ID: MH
Lims ID: 140-14387-A-14 Lab Sample ID: 140-14387-14
Client ID: SV-173-A-26
Operator ID: HMT ALS Bottle#: 13 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

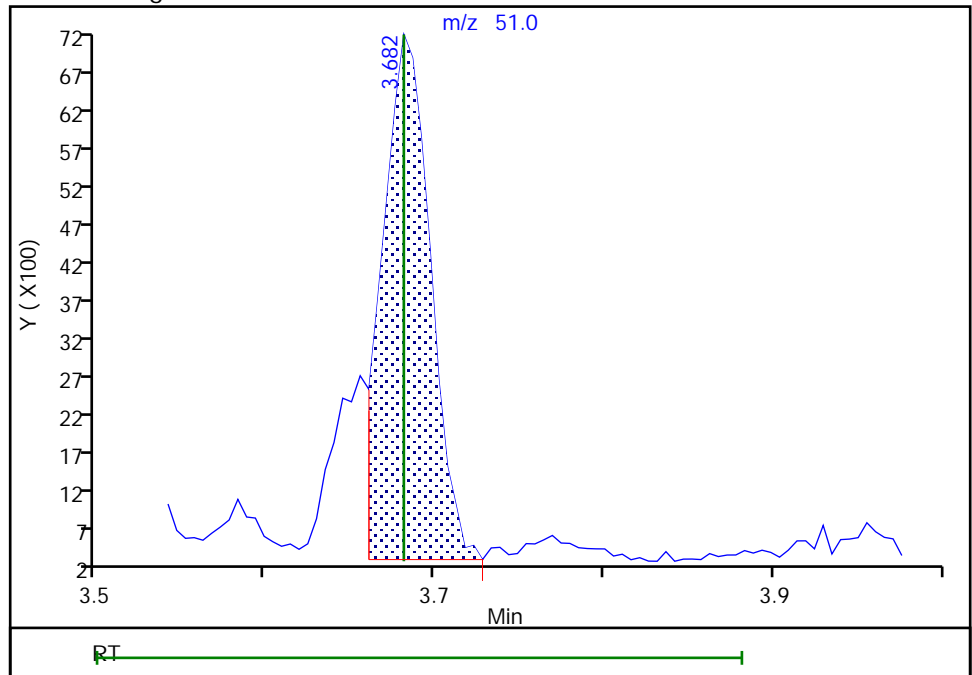
RT: 3.68
Area: 16914
Amount: 0.073902
Amount Units: ppb v/v

Processing Integration Results



RT: 3.68
Area: 13727
Amount: 0.059977
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 26-Feb-2019 20:13:09

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

TestAmerica Knoxville

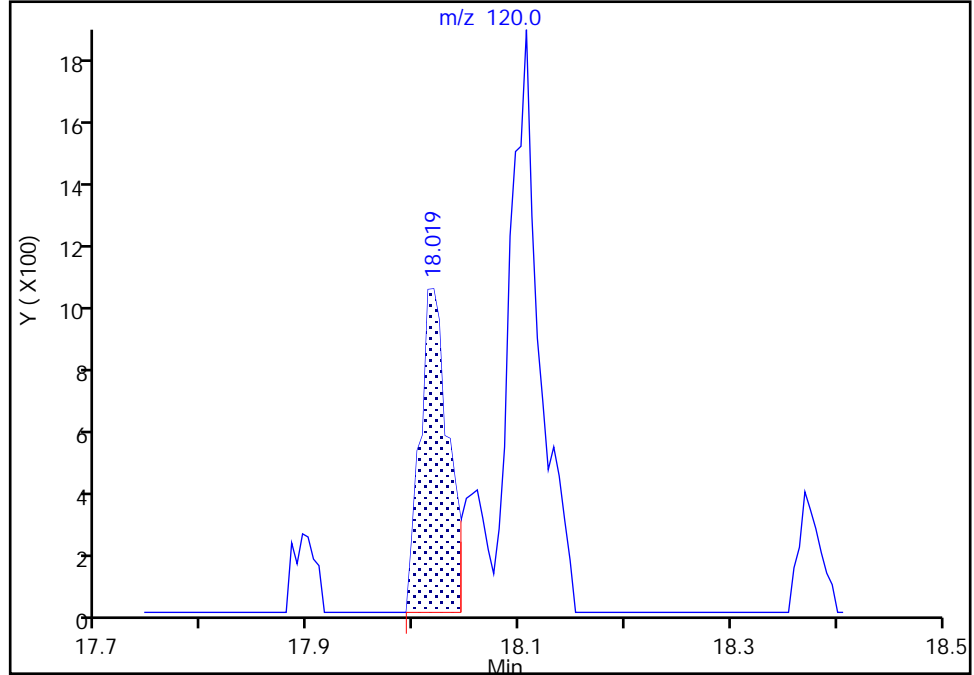
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P113.D
Injection Date: 26-Feb-2019 04:03:30 Instrument ID: MH
Lims ID: 140-14387-A-14 Lab Sample ID: 140-14387-14
Client ID: SV-173-A-26
Operator ID: HMT ALS Bottle#: 13 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Signal: 1

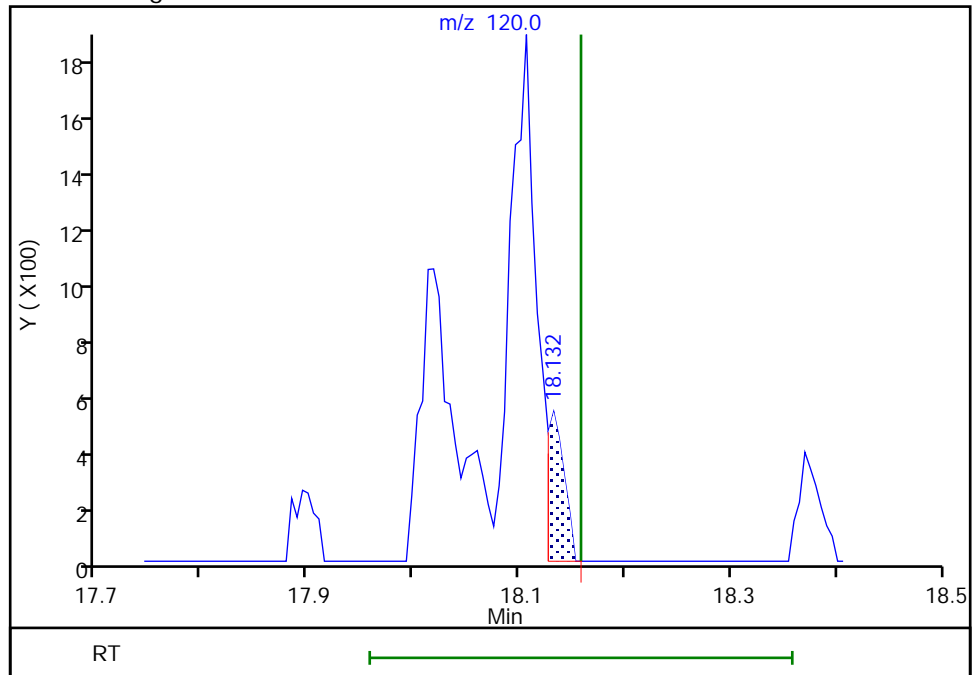
RT: 18.02
Area: 1913
Amount: 0.036206
Amount Units: ppb v/v

Processing Integration Results



RT: 18.13
Area: 587
Amount: 0.029838
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 12:39:21

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-173-A-26 DL Lab Sample ID: 140-14387-14 DL
 Matrix: Air Lab File ID: GB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:23
 Sample wt/vol: 11(mL) Date Analyzed: 02/26/2019 19:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	66		3.6	0.64
79-01-6	Trichloroethene	131.39	310		1.8	0.64

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	89		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-173-A-26 DL Lab Sample ID: 140-14387-14 DL
 Matrix: Air Lab File ID: GB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:23
 Sample wt/vol: 11(mL) Date Analyzed: 02/26/2019 19:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	260		14	2.5
79-01-6	Trichloroethene	131.39	1700		9.8	3.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	89		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P106.D
 Lims ID: 140-14387-A-14
 Client ID: SV-173-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 19:24:30 ALS Bottle#: 6 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-012
 Misc. Info.: 140-14387-a-14
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:29:18 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:30:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.221	9.232	-0.011	98	478998	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.405	-0.005	96	2962288	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2673094	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	1949505	3.56	
27 1,1-Dichloroethene	96	6.228	6.225	0.000	95	246428	1.46	
37 1,1-Dichloroethane	63	7.873	7.874	-0.005	100	23002	0.0661	
42 cis-1,2-Dichloroethene	96	8.881	8.882	-0.006	97	67537	0.3899	
44 Chloroform	83	9.226	9.237	-0.017	27	7234	0.0181	
58 Trichloroethene	130	12.101	12.106	-0.005	94	1661496	6.89	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P106.D

Injection Date: 26-Feb-2019 19:24:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Worklist Smp#: 12

Client ID: SV-173-A-26

Purge Vol: 500.000 mL

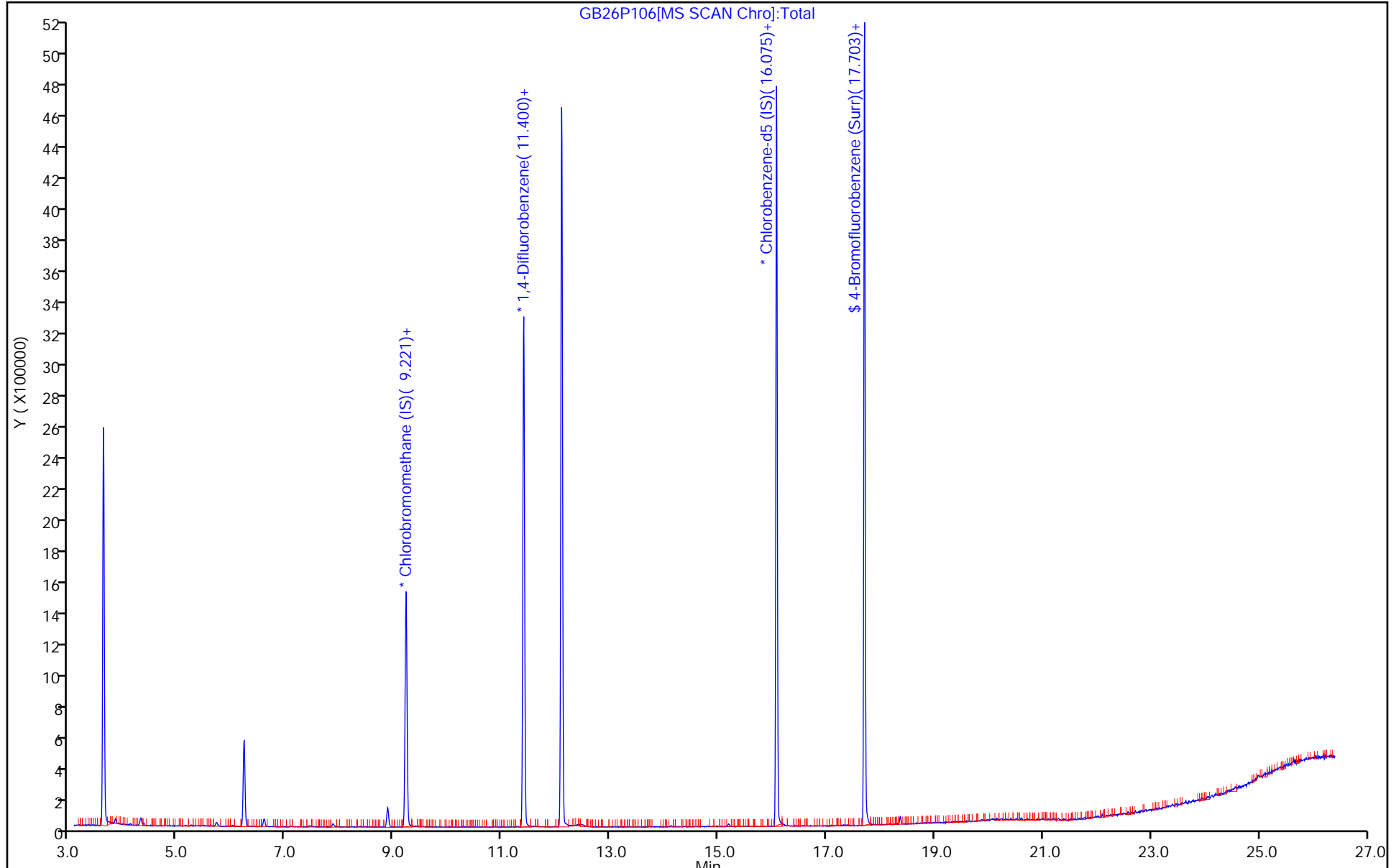
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P106.D
 Lims ID: 140-14387-A-14
 Client ID: SV-173-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 19:24:30 ALS Bottle#: 6 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-012
 Misc. Info.: 140-14387-a-14
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:29:18 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:30:48

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.56	88.98

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P106.D

Injection Date: 26-Feb-2019 19:24:30

Instrument ID: MG

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: 7126

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

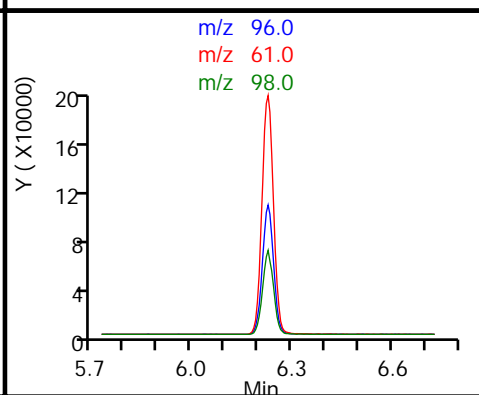
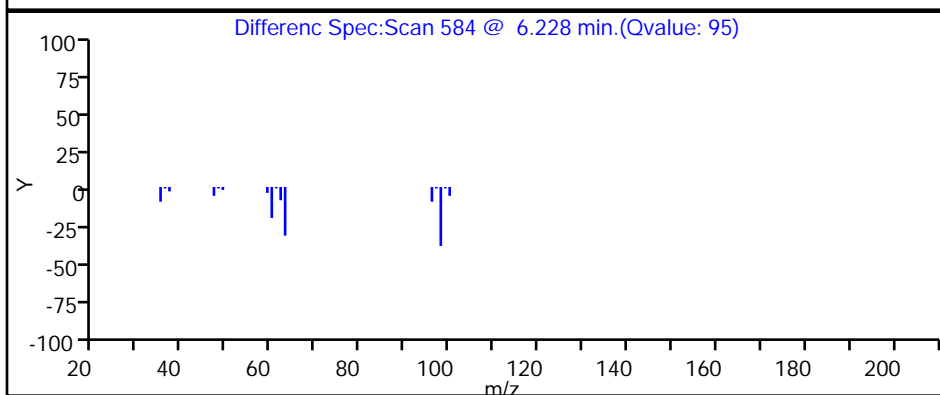
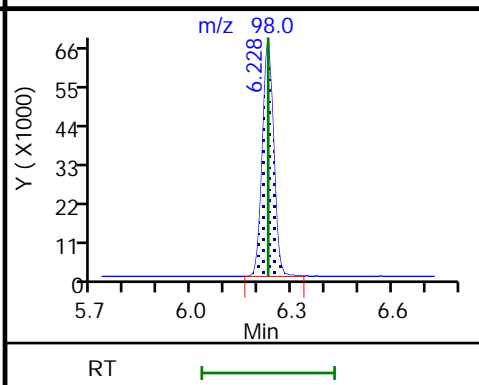
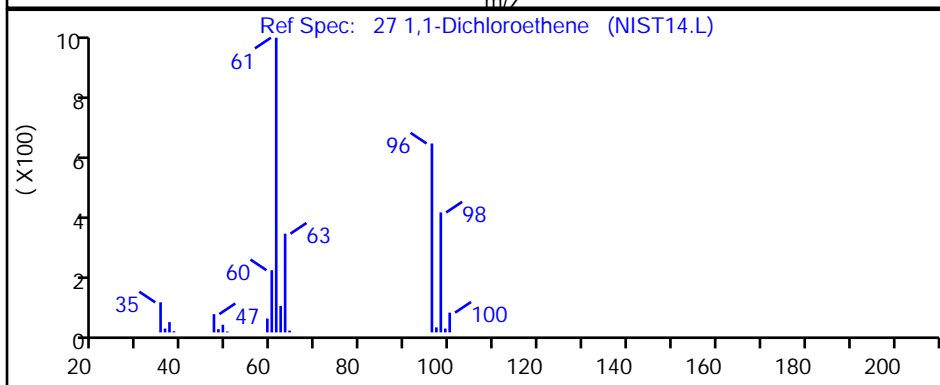
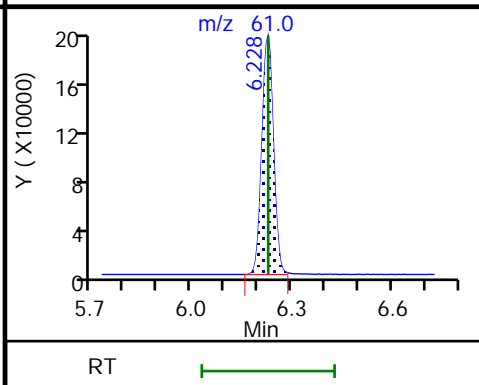
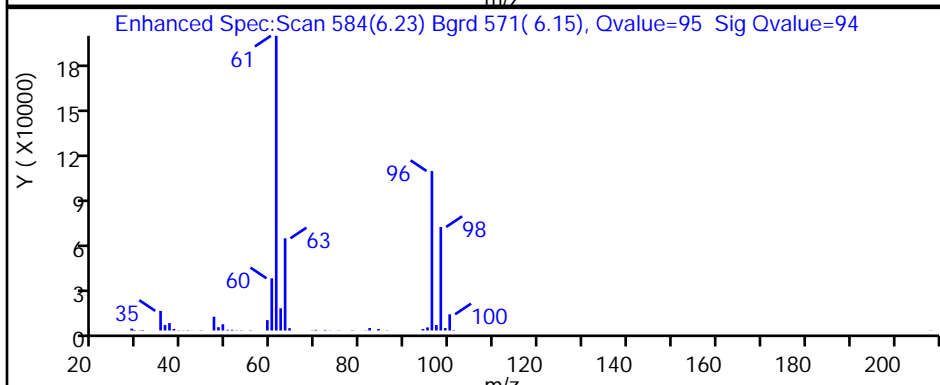
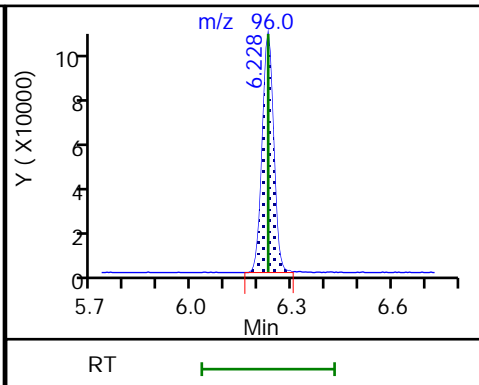
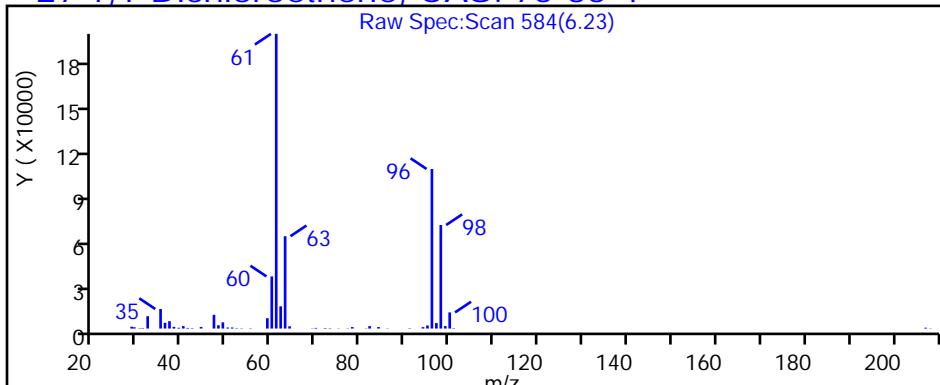
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P106.D

Injection Date: 26-Feb-2019 19:24:30

Instrument ID: MG

Lims ID: 140-14387-A-14

Lab Sample ID: 140-14387-14

Client ID: SV-173-A-26

Operator ID: 7126

ALS Bottle#: 6 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

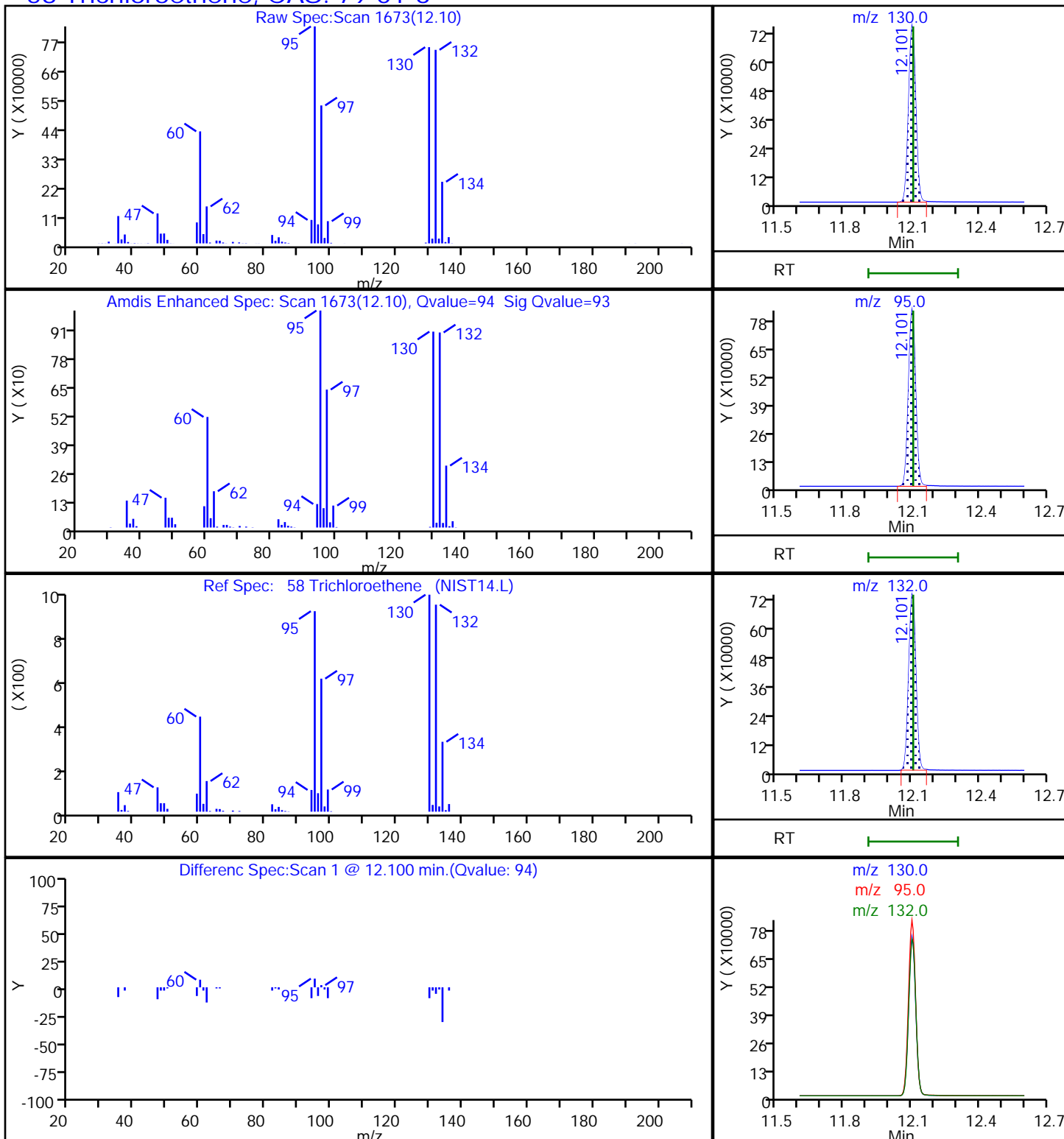
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

58 Trichloroethene, CAS: 79-01-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-174-A-26 Lab Sample ID: 140-14387-15
 Matrix: Air Lab File ID: HB25P114.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:20
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	1.2		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.2		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.3		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	4.6		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.77	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.087	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	8.2		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	20		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.16	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-174-A-26 Lab Sample ID: 140-14387-15
 Matrix: Air Lab File ID: HB25P114.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:20
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	5.9		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	4.7		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	9.1		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	18		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.59	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	45		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	110		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.77	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D
 Lims ID: 140-14387-A-15
 Client ID: SV-174-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 04:56:30 ALS Bottle#: 14 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-022
 Misc. Info.: 140-14387-a-15
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:14:11 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:15:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.814	0.005	97	286242	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1547205	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1293580	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	827648	3.93	
6 Chlorodifluoromethane	51	3.687	3.682	0.005	96	18487	0.0788	
8 Dichlorodifluoromethane	85	3.744	3.738	0.006	100	32152	0.0892	
27 1,1-Dichloroethene	96	5.925	5.919	0.006	96	102462	0.9215	
31 Methylene Chloride	84	6.276	6.271	0.005	99	18069	0.1544	
37 1,1-Dichloroethane	63	7.506	7.501	0.005	99	97954	0.4517	
41 cis-1,2-Dichloroethene	96	8.488	8.483	0.005	97	27680	0.2395	
43 Chloroform	83	8.834	8.824	0.010	96	59937	0.2410	
45 1,1,1-Trichloroethane	97	9.858	9.853	0.005	97	388567	1.64	
47 Benzene	78	10.462	10.452	0.010	97	8923	0.0273	
56 Trichloroethene	130	11.713	11.708	0.005	96	628282	4.07	
65 Toluene	91	13.765	13.760	0.005	94	27058	0.0735	
73 Tetrachloroethene	129	14.902	14.897	0.005	91	2623	0.0175	
89 1,3,5-Trimethylbenzene	120	18.127	18.106	-0.031	88	974	0.0315	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D

Injection Date: 26-Feb-2019 04:56:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-15

Lab Sample ID: 140-14387-15

Worklist Smp#: 22

Client ID: SV-174-A-26

Purge Vol: 500.000 mL

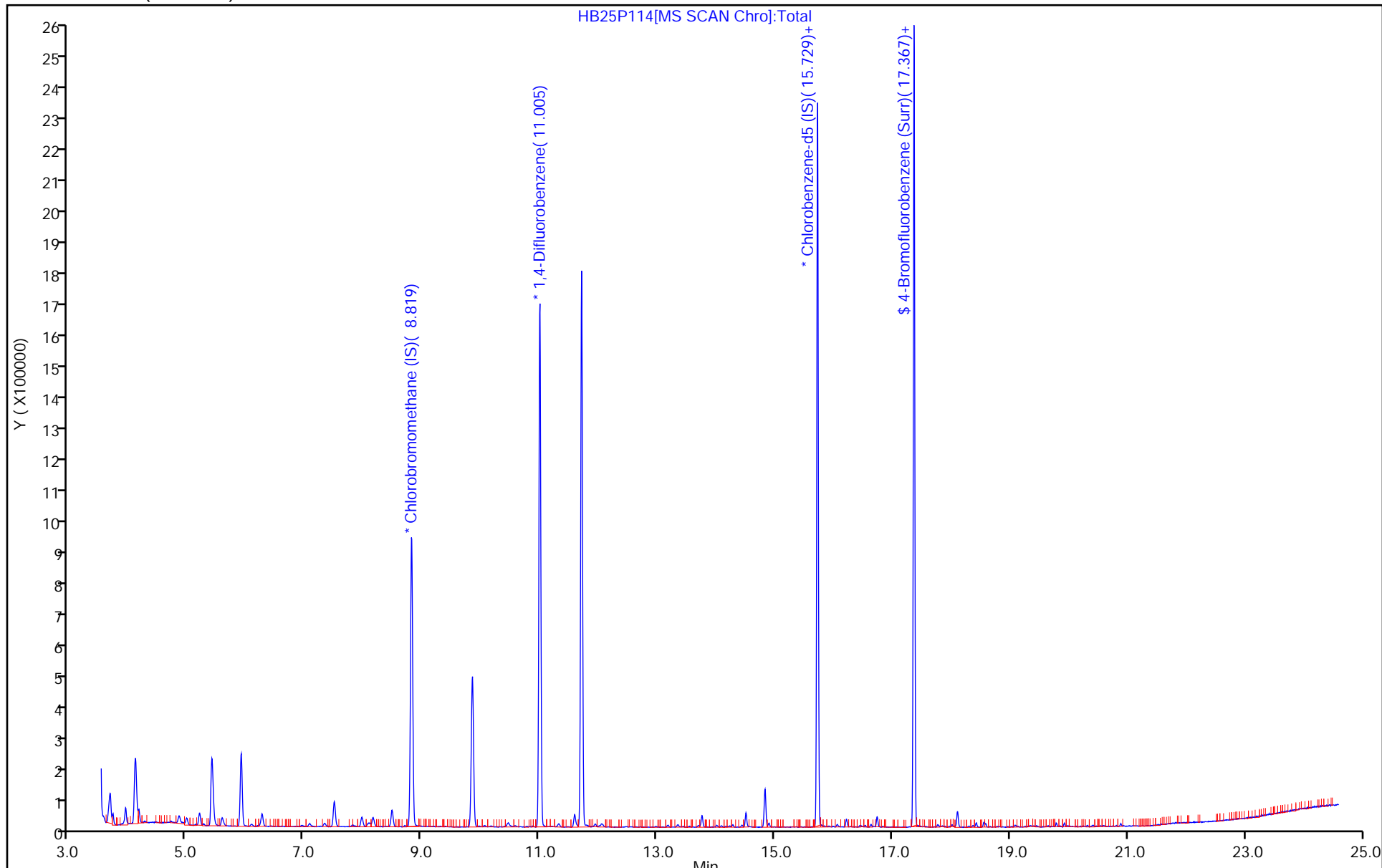
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D
 Lims ID: 140-14387-A-15
 Client ID: SV-174-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 04:56:30 ALS Bottle#: 14 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-022
 Misc. Info.: 140-14387-a-15
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:14:11 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:15:02

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.93	98.16

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D

Injection Date: 26-Feb-2019 04:56:30

Instrument ID: MH

Lims ID: 140-14387-A-15

Lab Sample ID: 140-14387-15

Client ID: SV-174-A-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

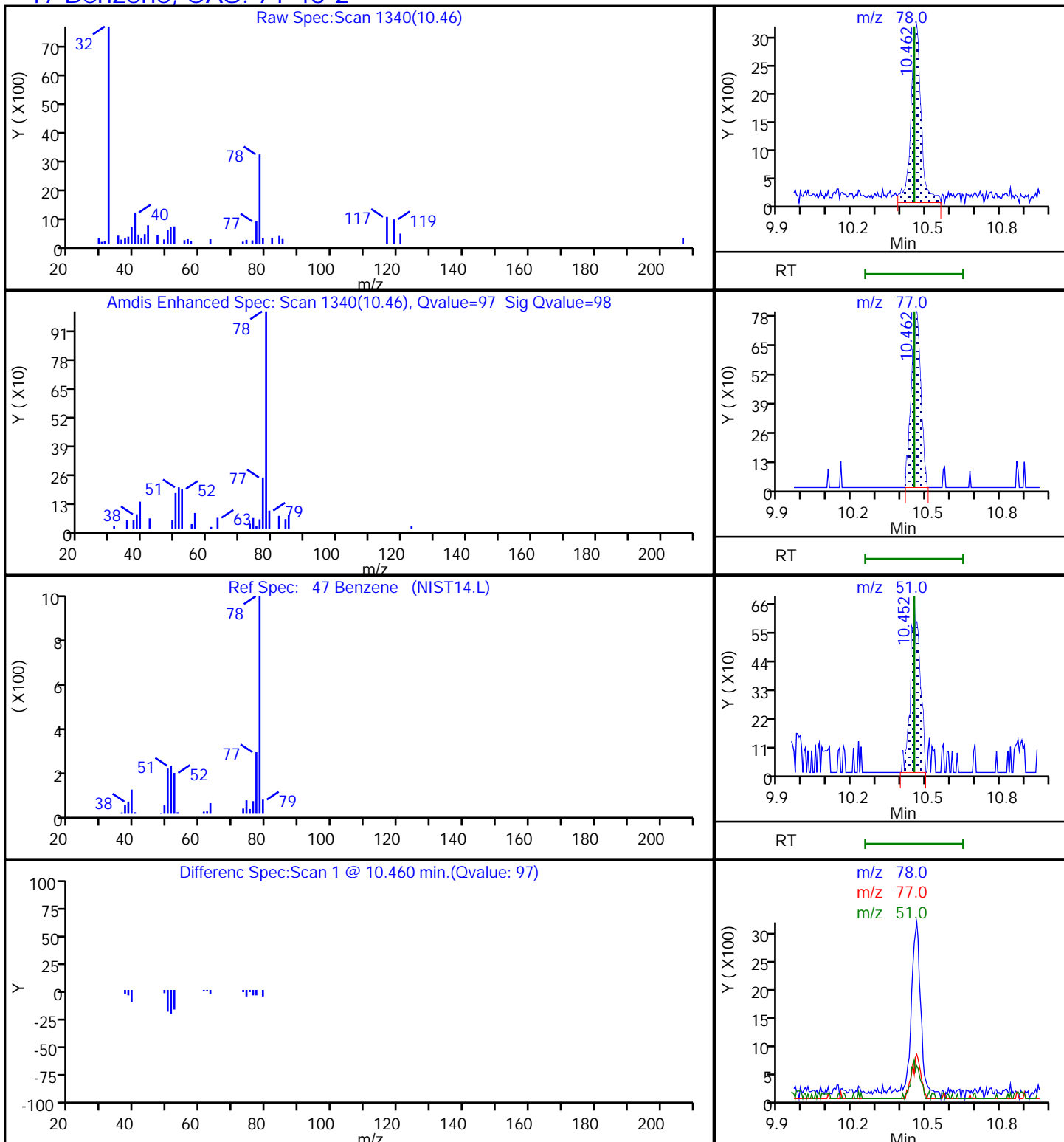
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D

Injection Date: 26-Feb-2019 04:56:30

Instrument ID: MH

Lims ID: 140-14387-A-15

Lab Sample ID: 140-14387-15

Client ID: SV-174-A-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

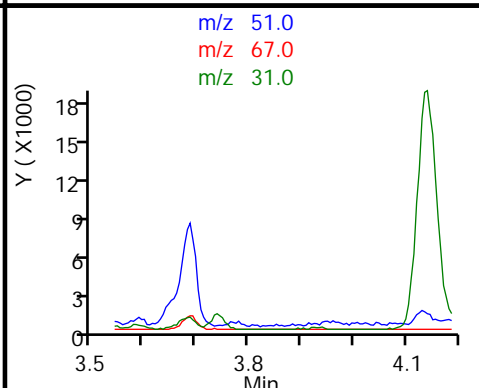
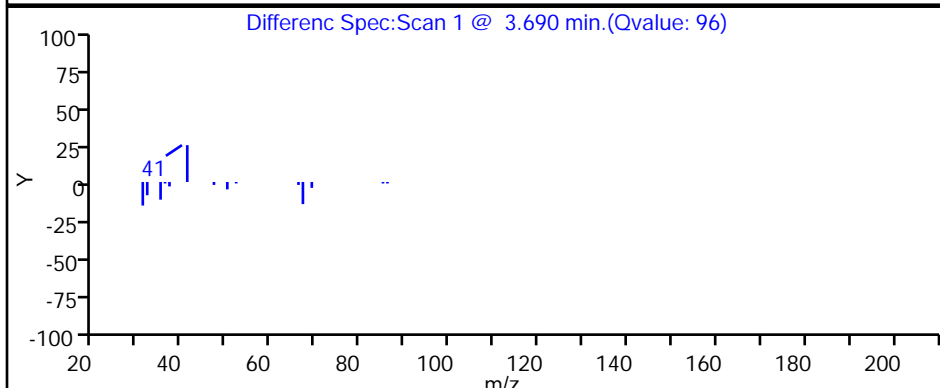
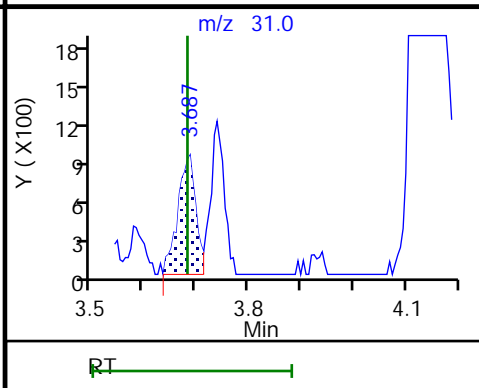
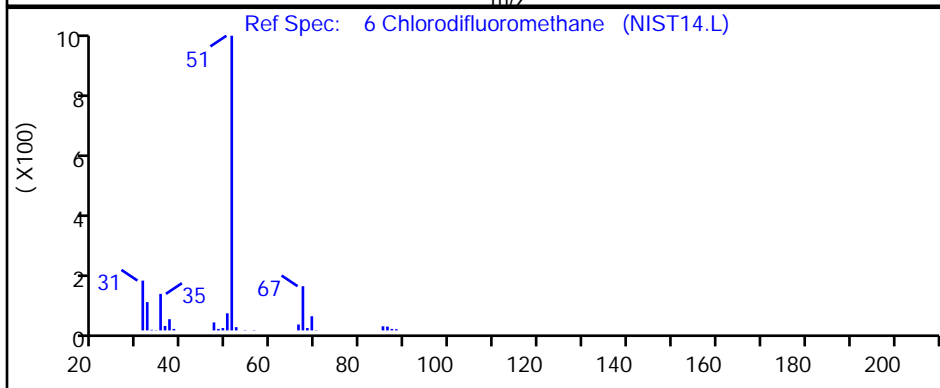
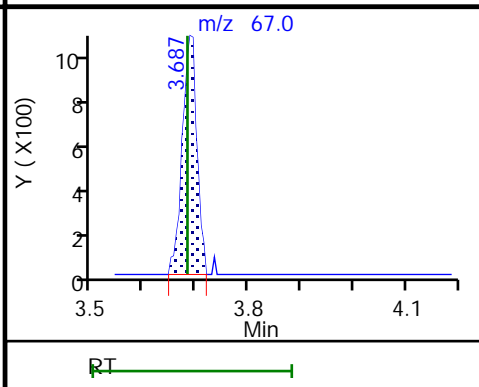
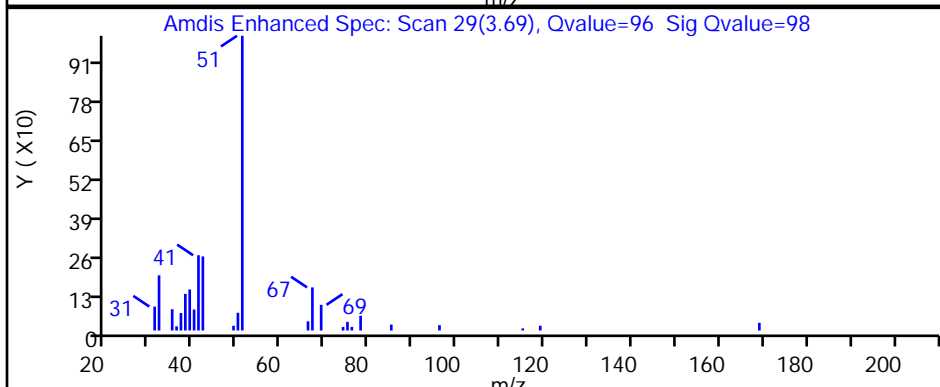
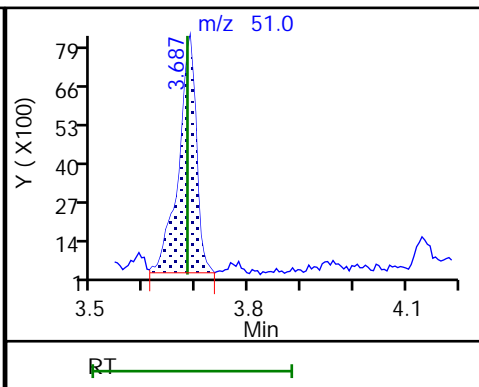
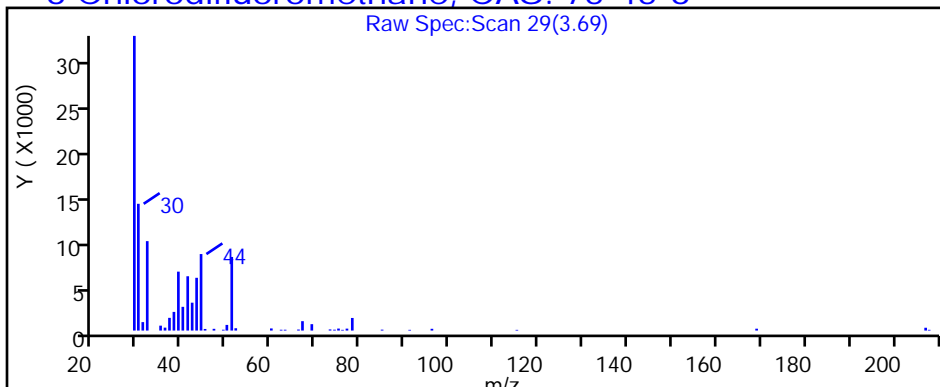
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D

Injection Date: 26-Feb-2019 04:56:30

Instrument ID: MH

Lims ID: 140-14387-A-15

Lab Sample ID: 140-14387-15

Client ID: SV-174-A-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

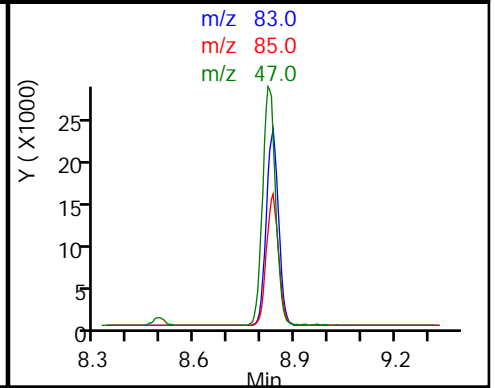
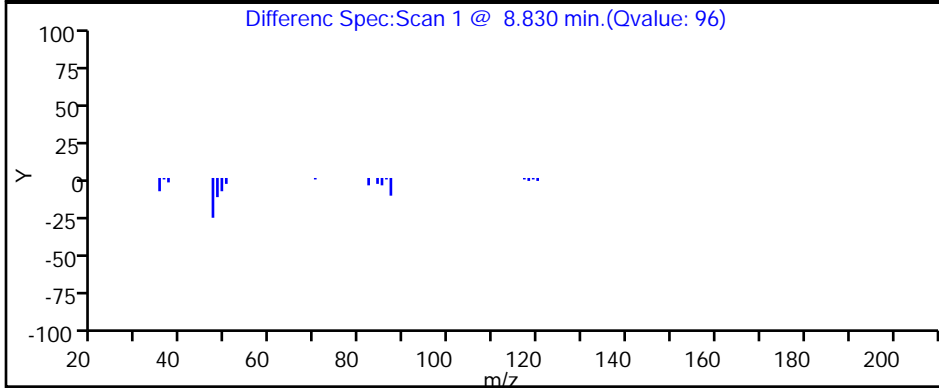
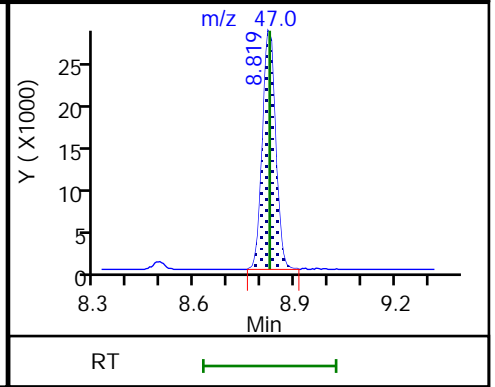
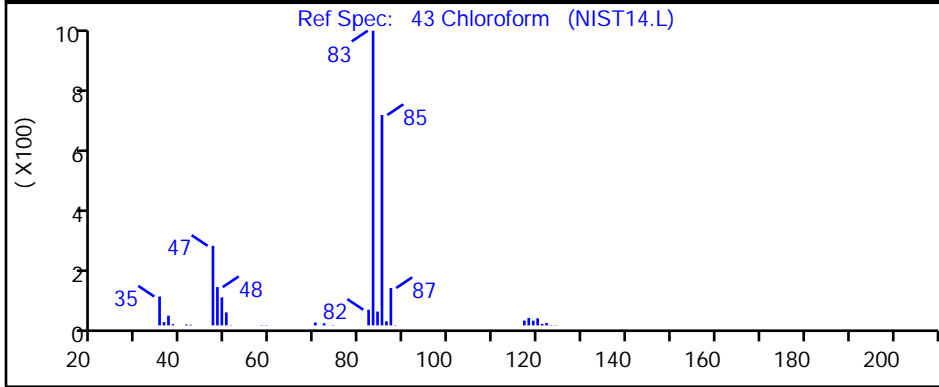
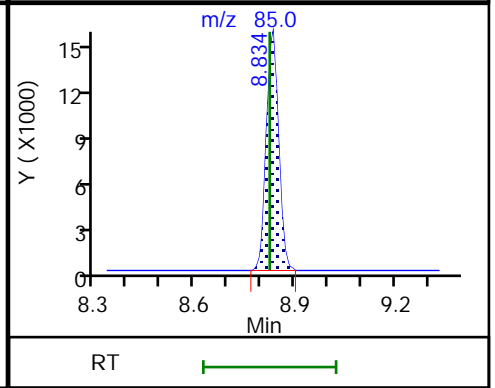
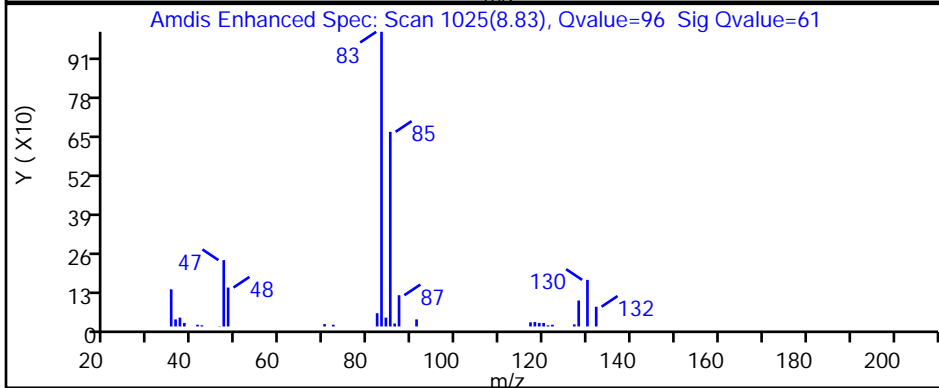
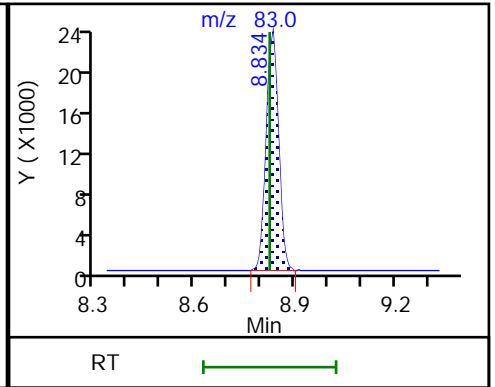
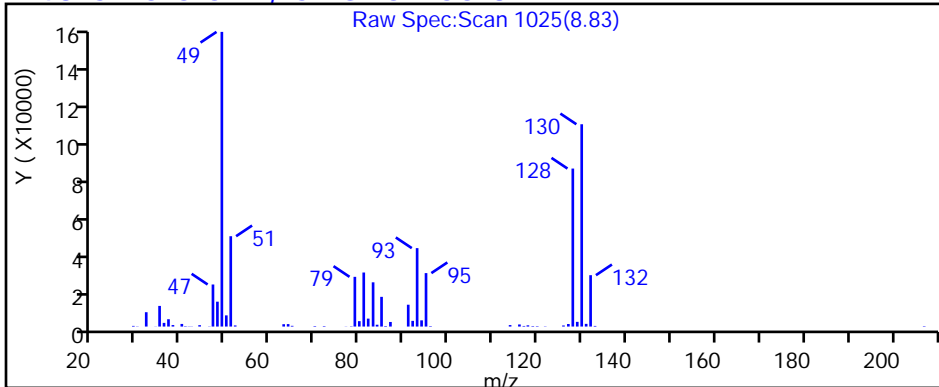
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D

Injection Date: 26-Feb-2019 04:56:30

Instrument ID: MH

Lims ID: 140-14387-A-15

Lab Sample ID: 140-14387-15

Client ID: SV-174-A-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

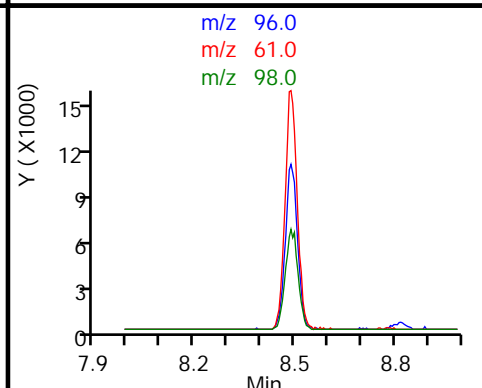
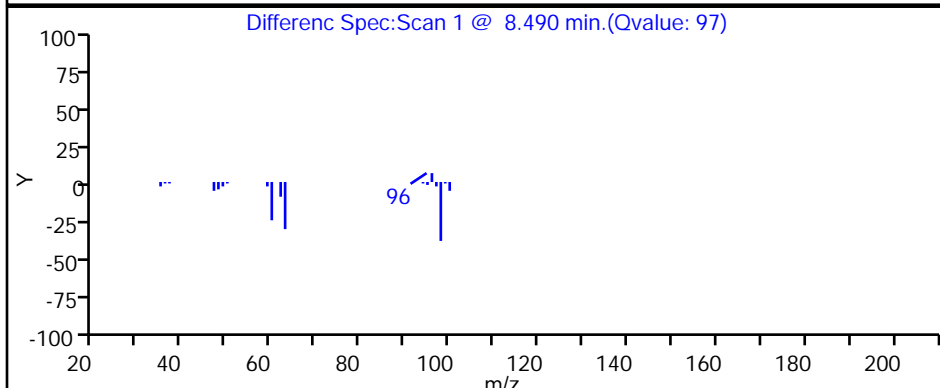
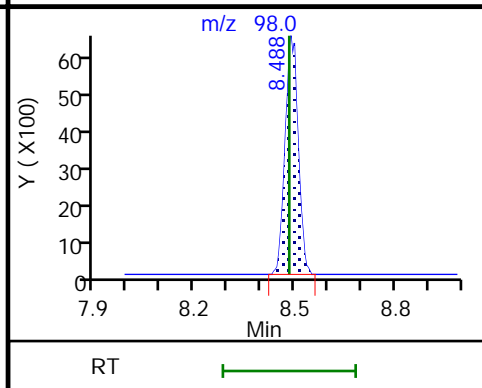
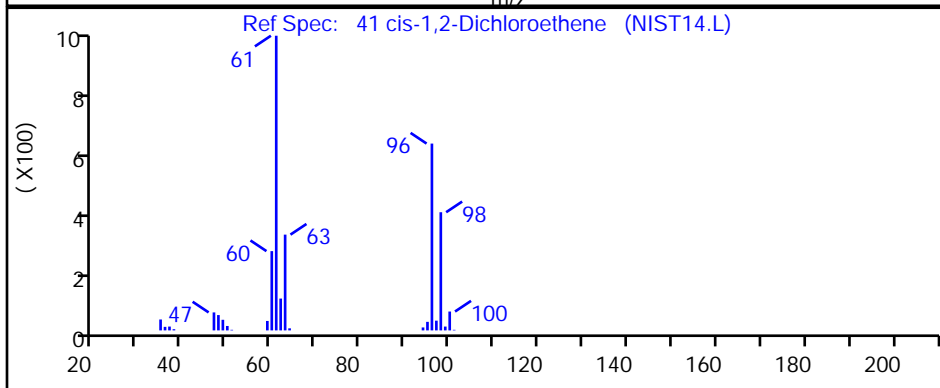
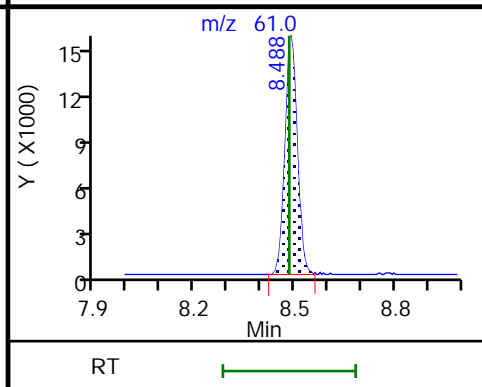
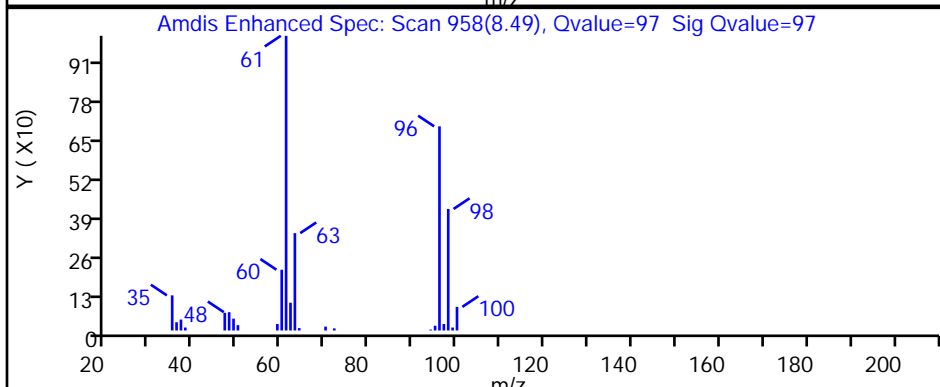
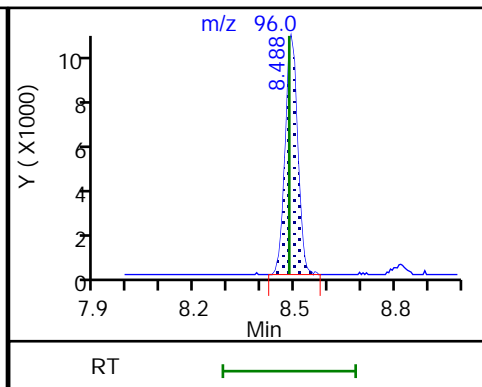
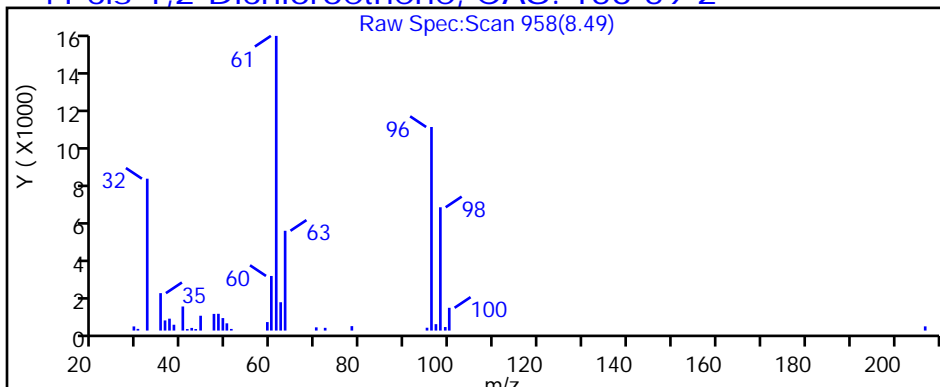
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D

Injection Date: 26-Feb-2019 04:56:30

Instrument ID: MH

Lims ID: 140-14387-A-15

Lab Sample ID: 140-14387-15

Client ID: SV-174-A-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

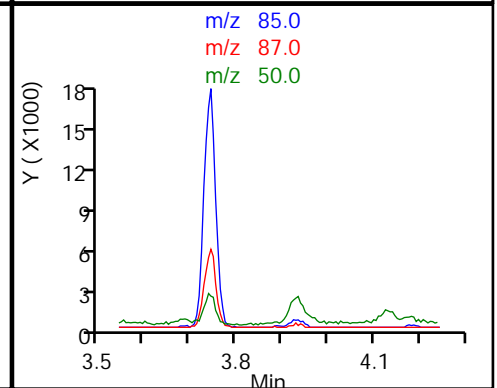
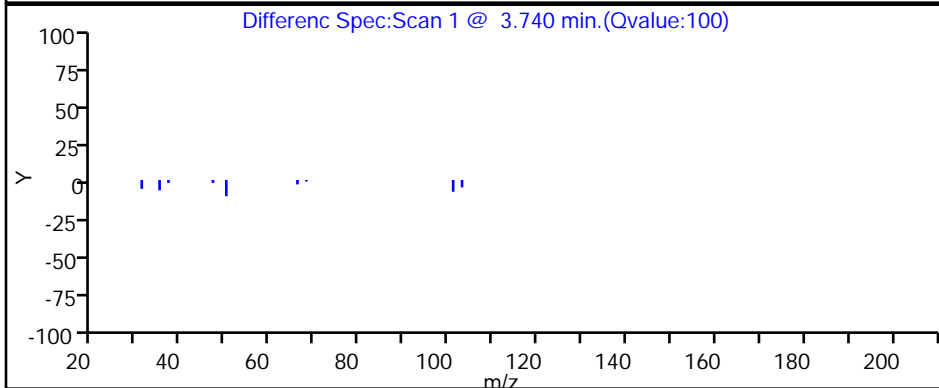
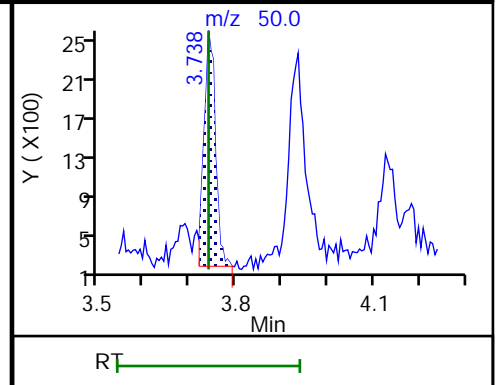
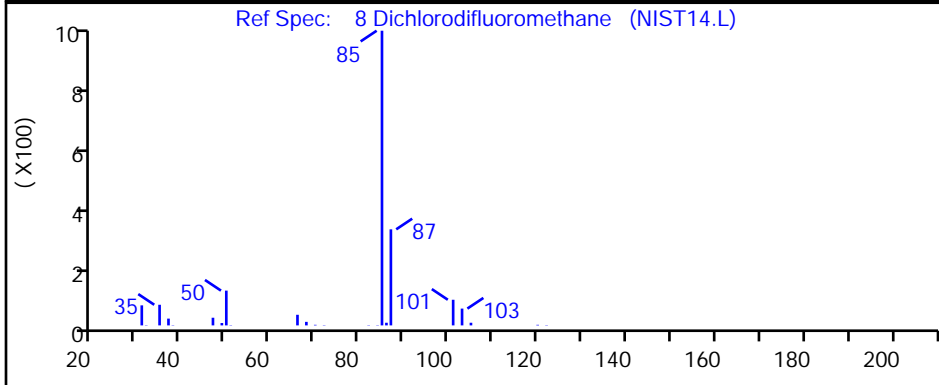
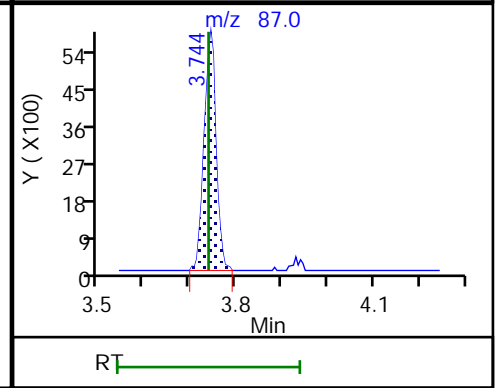
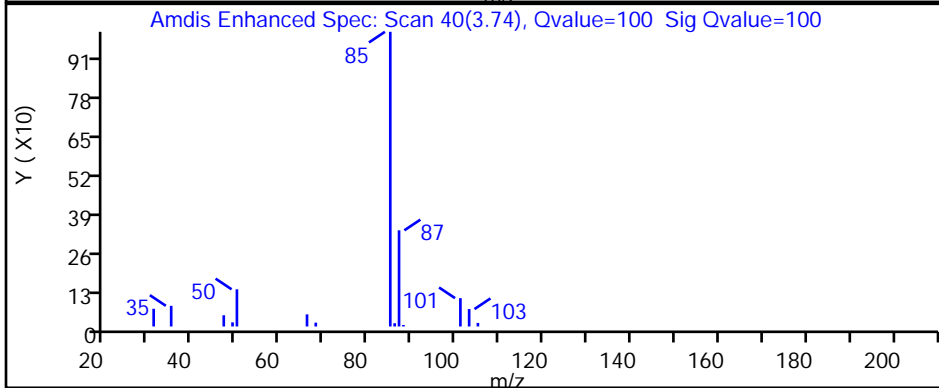
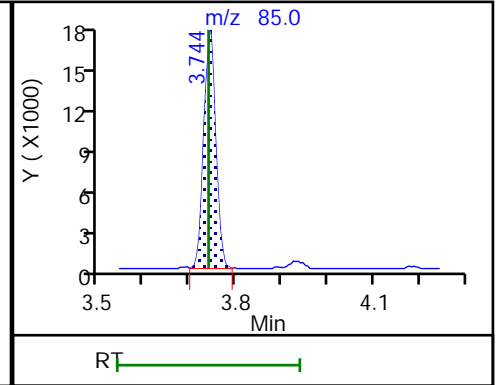
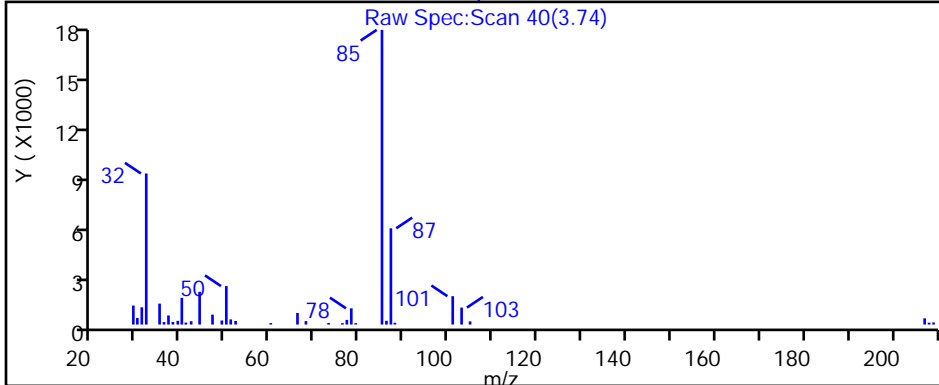
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D

Injection Date: 26-Feb-2019 04:56:30

Instrument ID: MH

Lims ID: 140-14387-A-15

Lab Sample ID: 140-14387-15

Client ID: SV-174-A-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

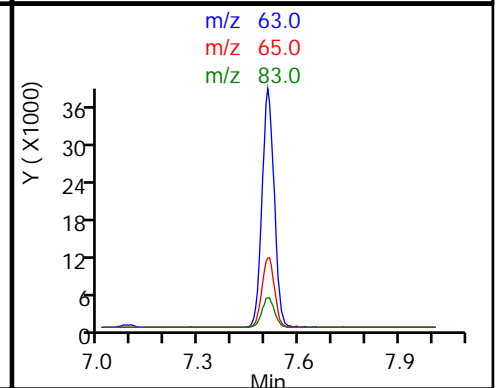
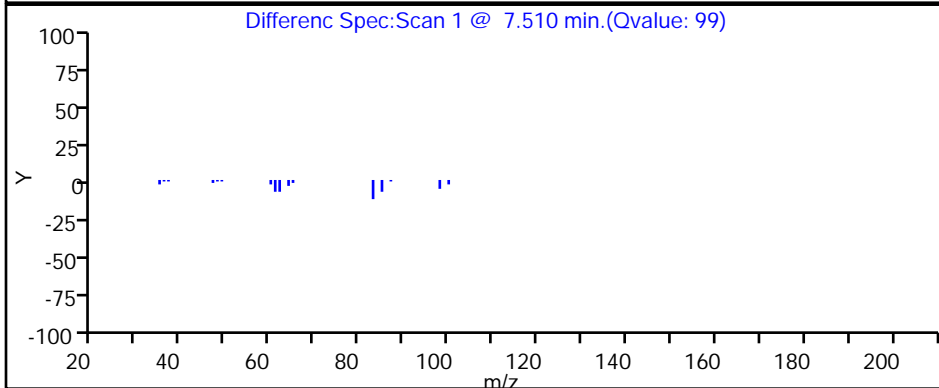
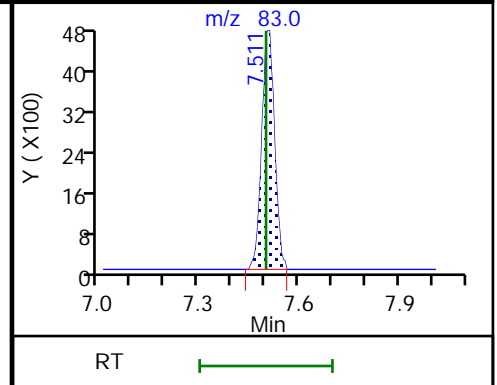
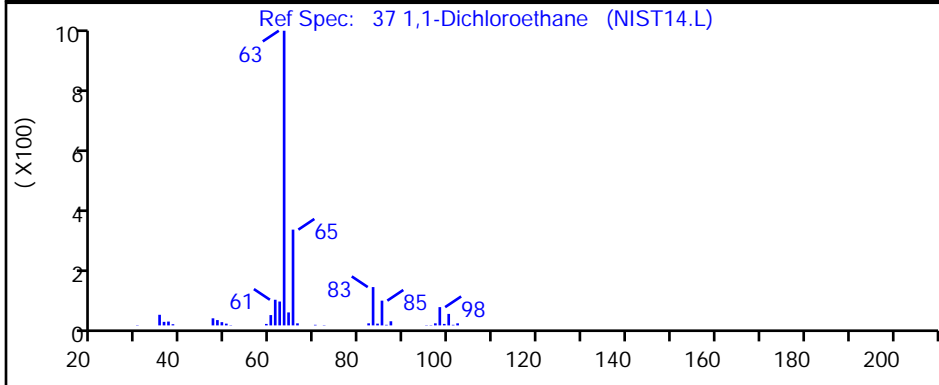
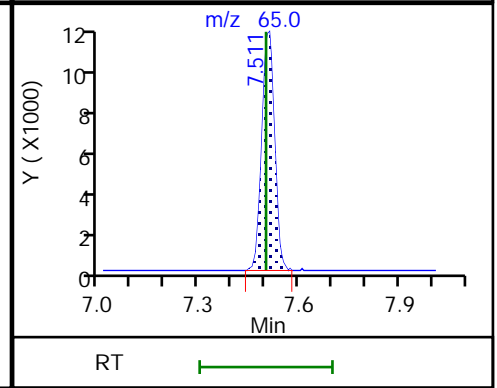
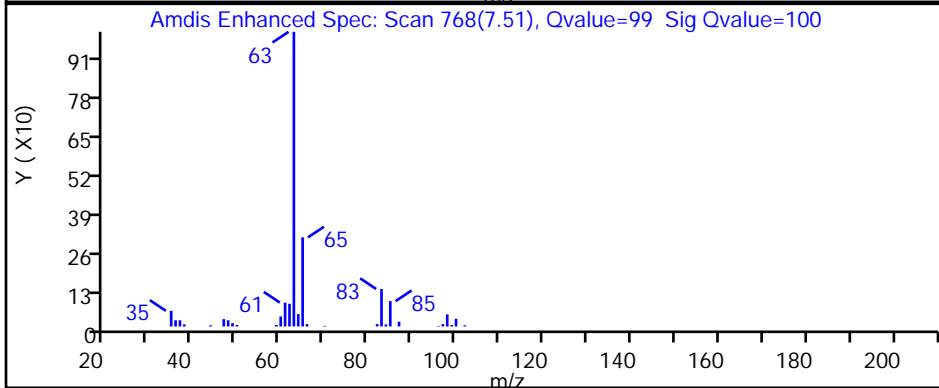
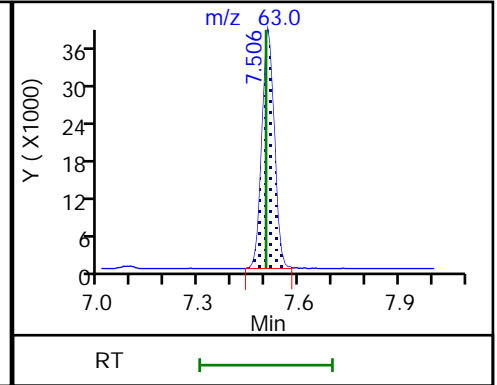
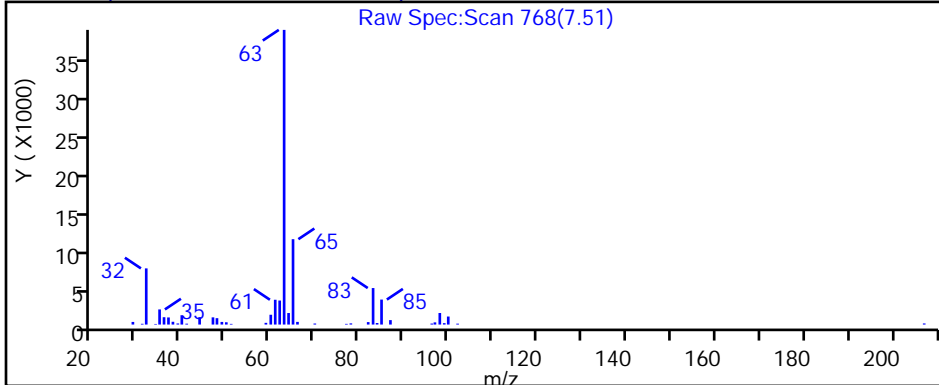
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D

Injection Date: 26-Feb-2019 04:56:30

Instrument ID: MH

Lims ID: 140-14387-A-15

Lab Sample ID: 140-14387-15

Client ID: SV-174-A-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

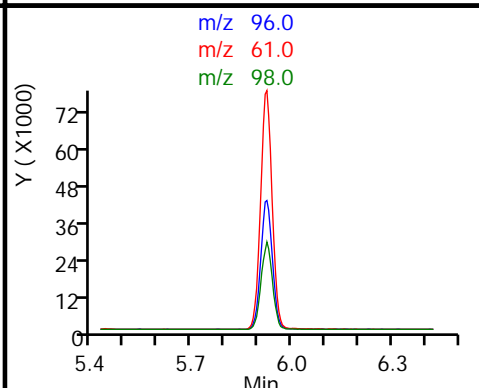
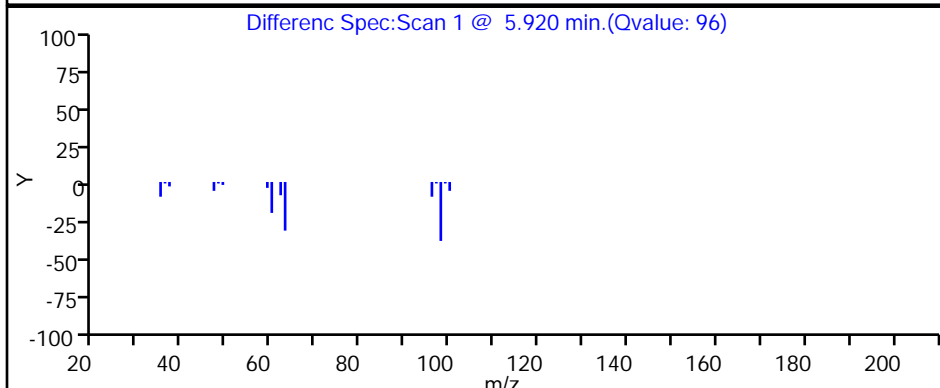
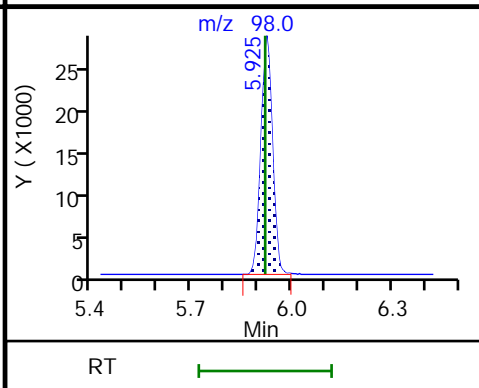
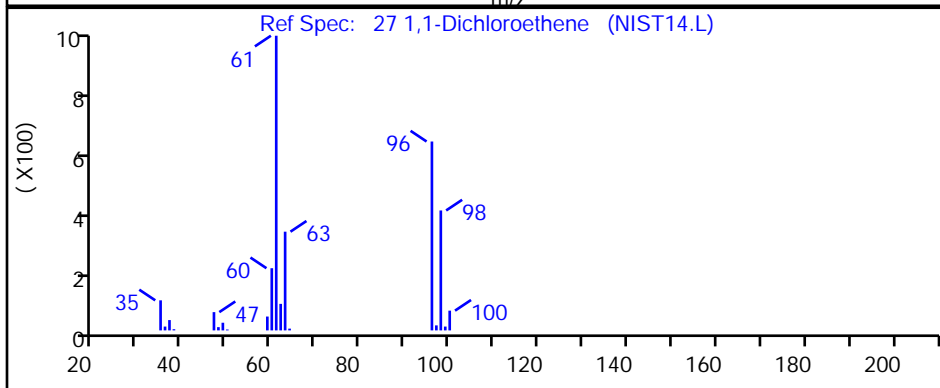
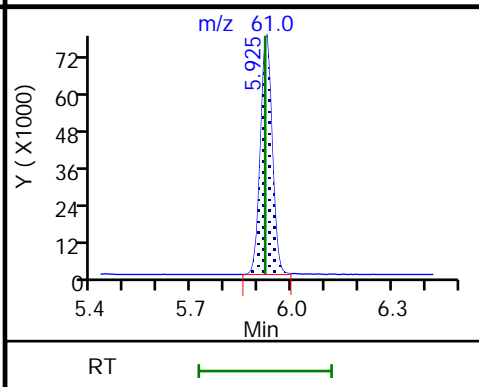
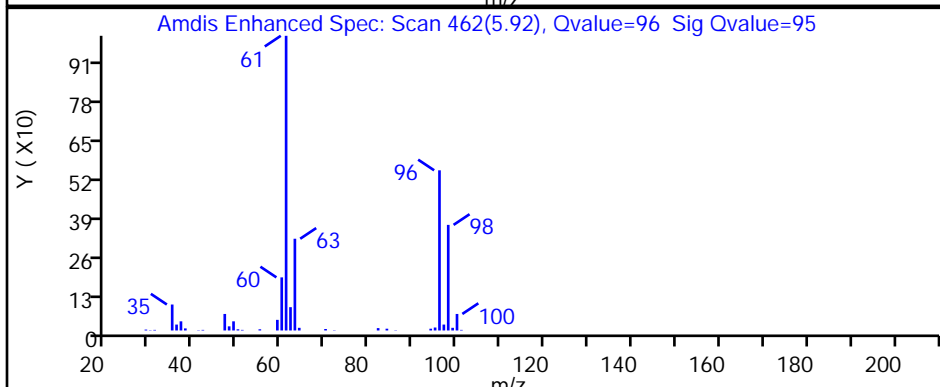
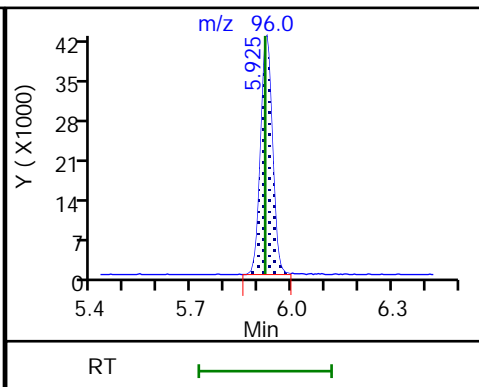
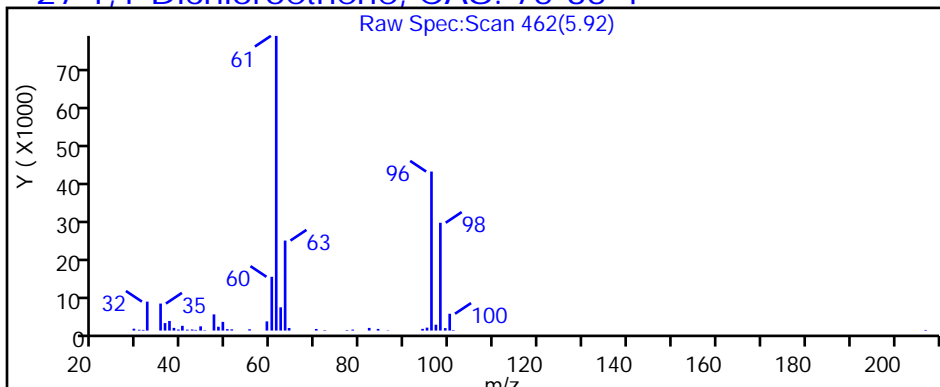
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D

Injection Date: 26-Feb-2019 04:56:30

Instrument ID: MH

Lims ID: 140-14387-A-15

Lab Sample ID: 140-14387-15

Client ID: SV-174-A-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

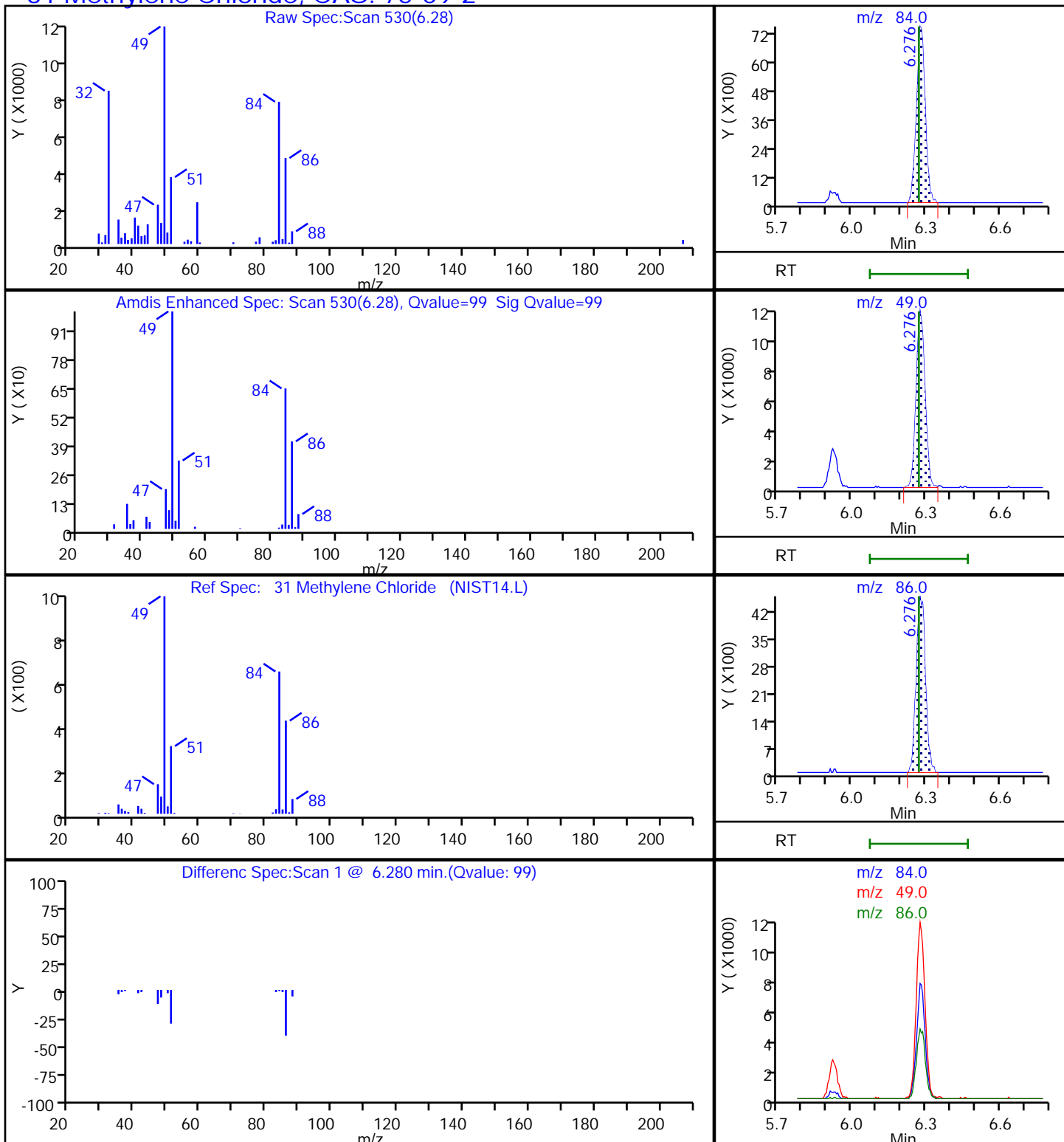
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D

Injection Date: 26-Feb-2019 04:56:30

Instrument ID: MH

Lims ID: 140-14387-A-15

Lab Sample ID: 140-14387-15

Client ID: SV-174-A-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

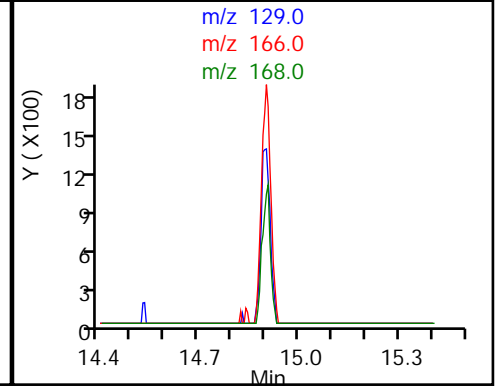
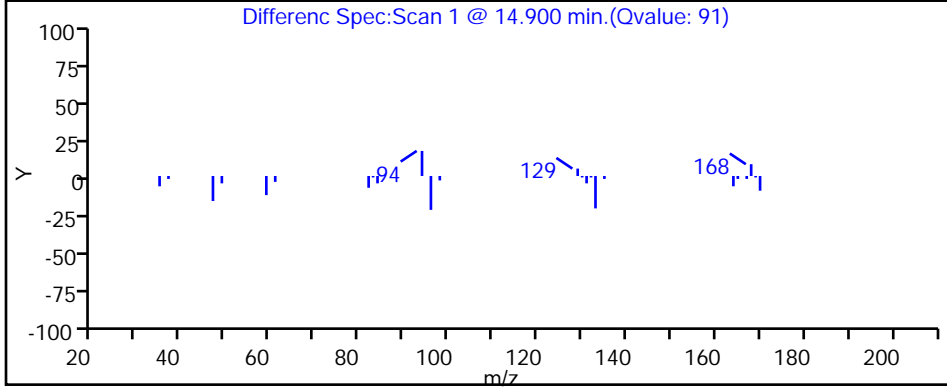
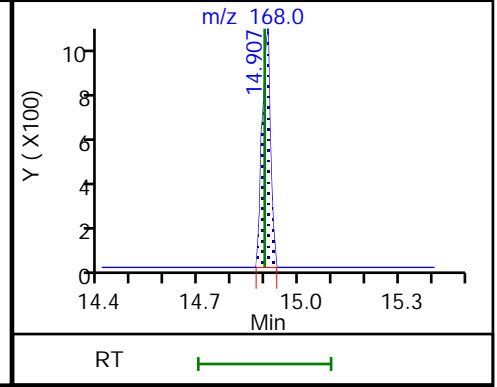
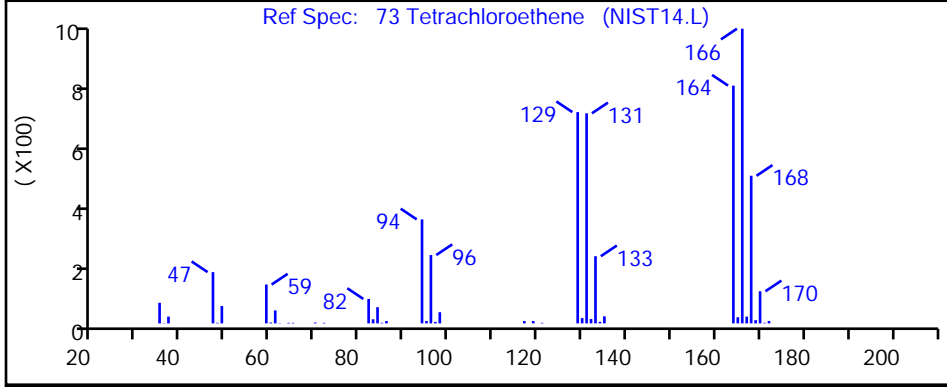
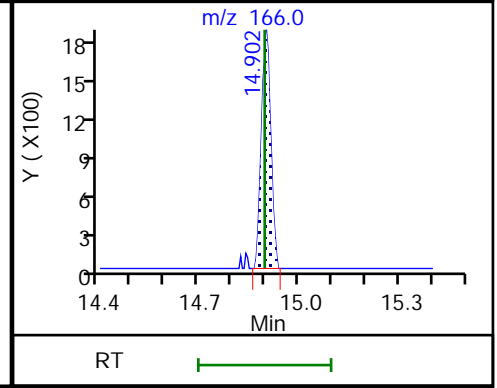
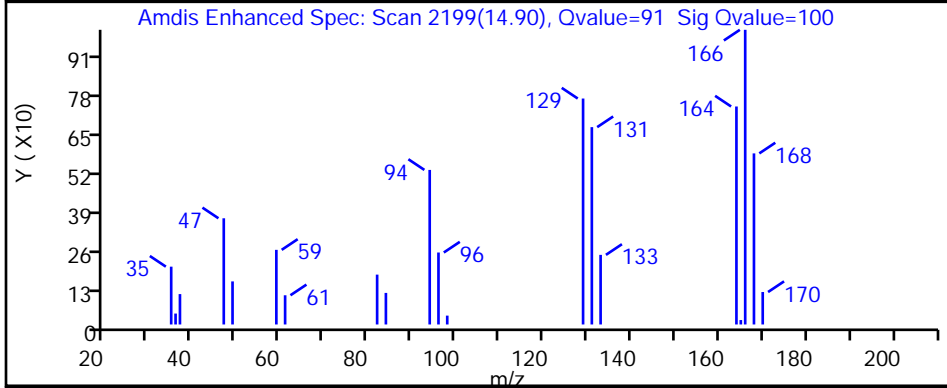
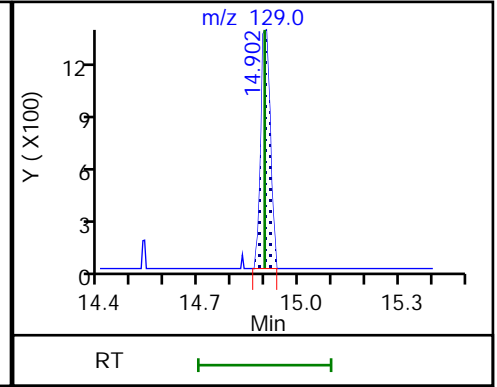
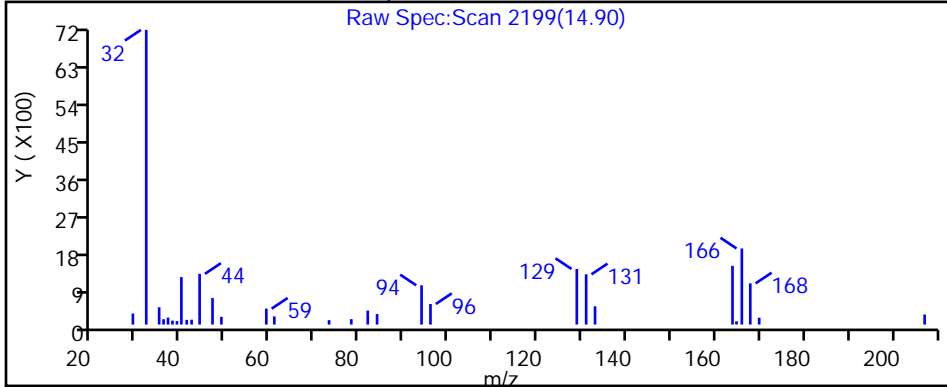
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D

Injection Date: 26-Feb-2019 04:56:30

Instrument ID: MH

Lims ID: 140-14387-A-15

Lab Sample ID: 140-14387-15

Client ID: SV-174-A-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

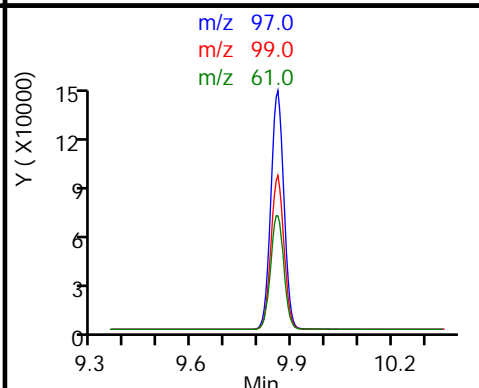
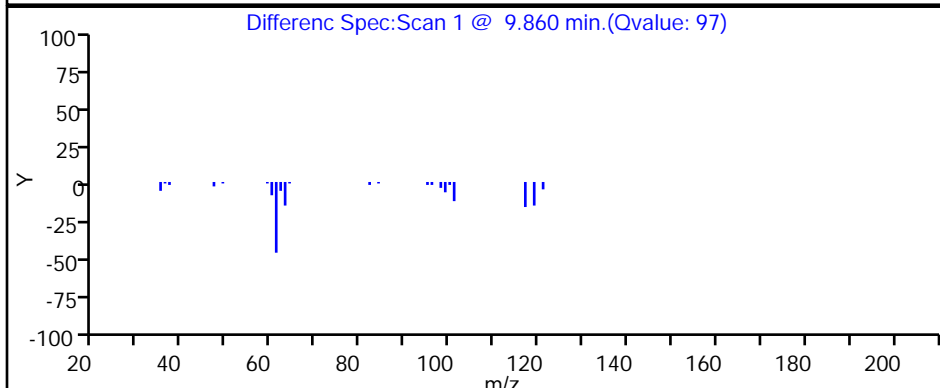
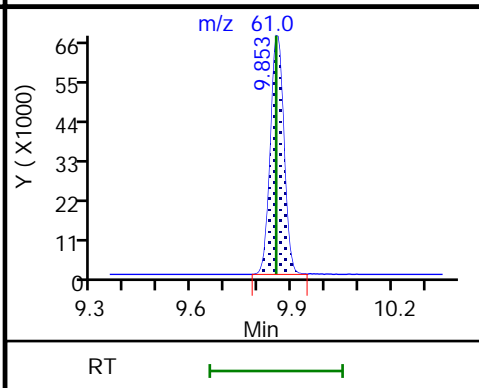
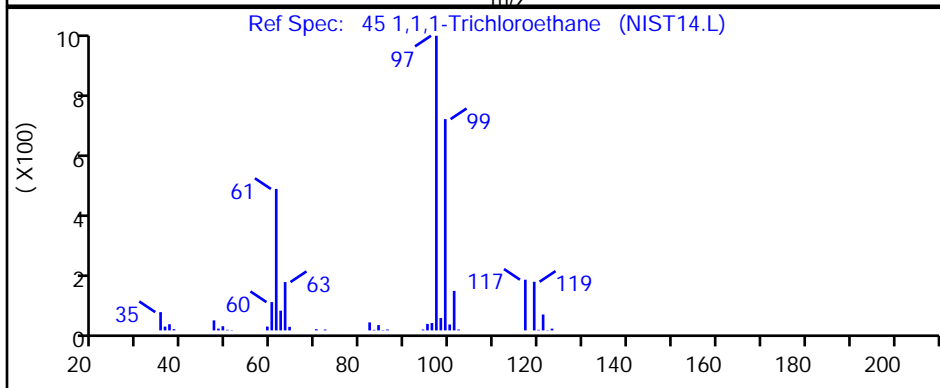
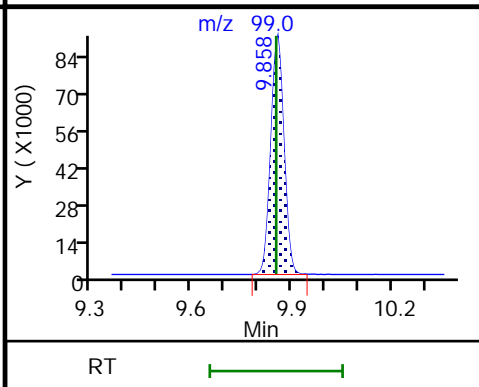
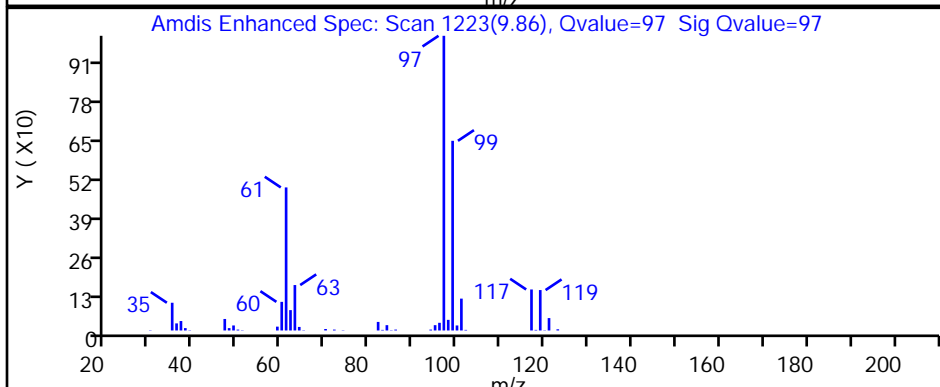
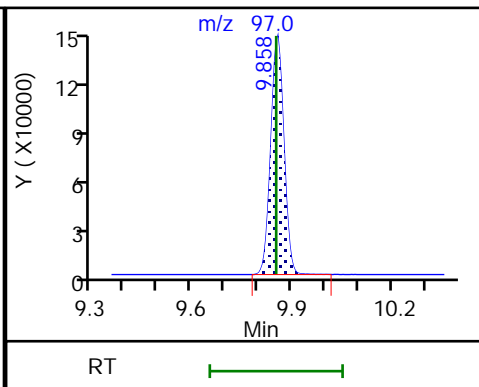
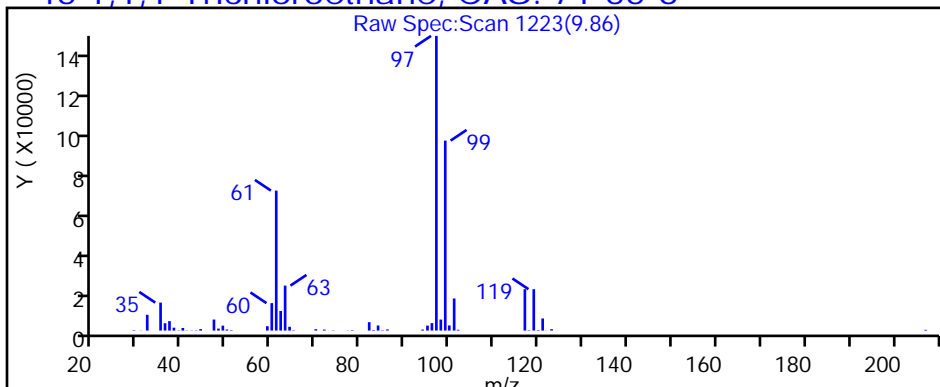
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D

Injection Date: 26-Feb-2019 04:56:30

Instrument ID: MH

Lims ID: 140-14387-A-15

Lab Sample ID: 140-14387-15

Client ID: SV-174-A-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

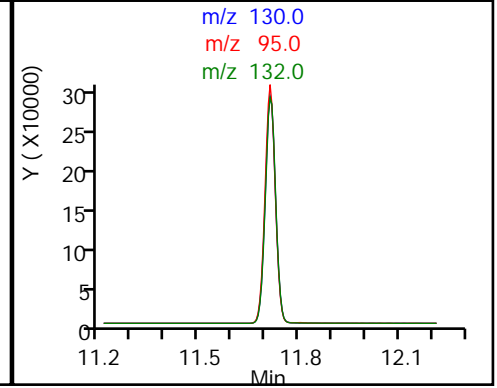
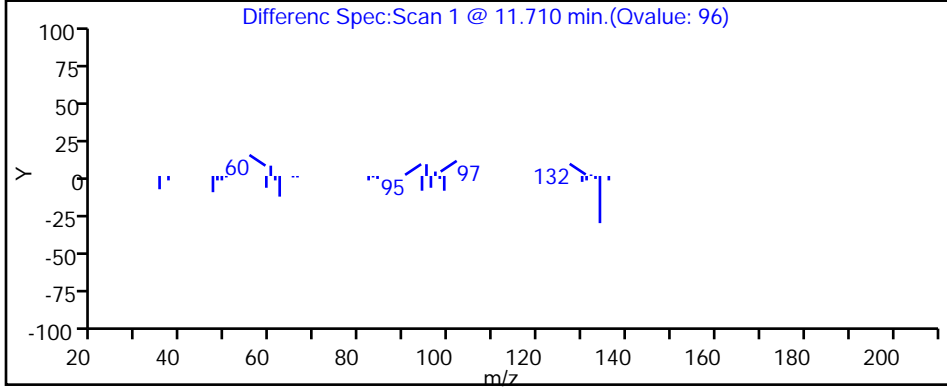
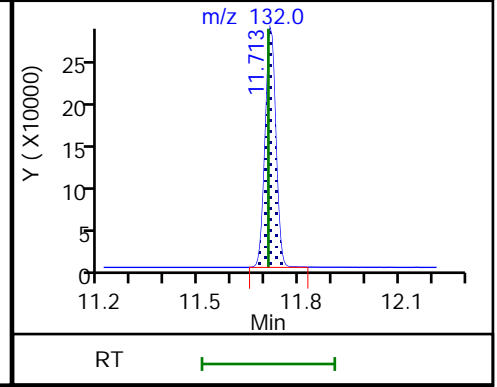
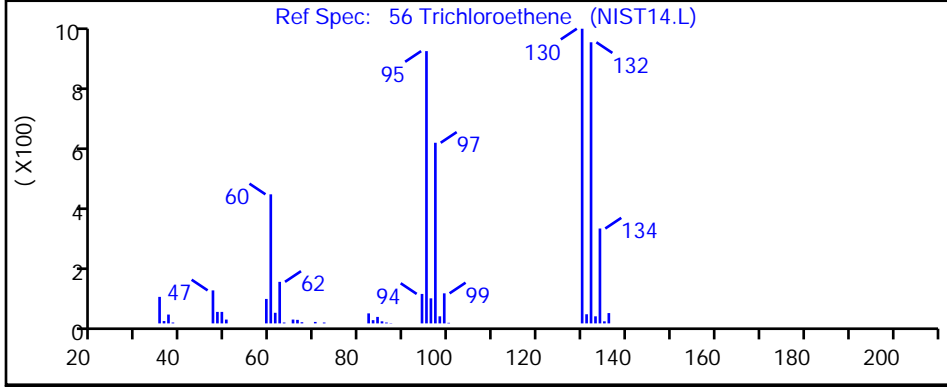
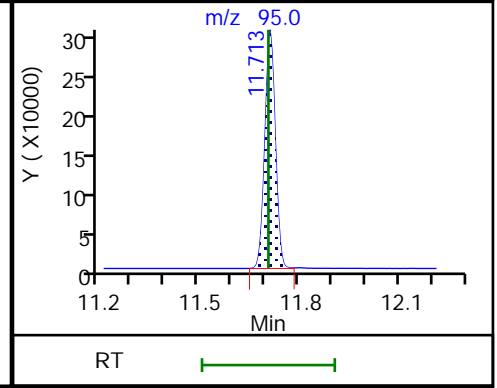
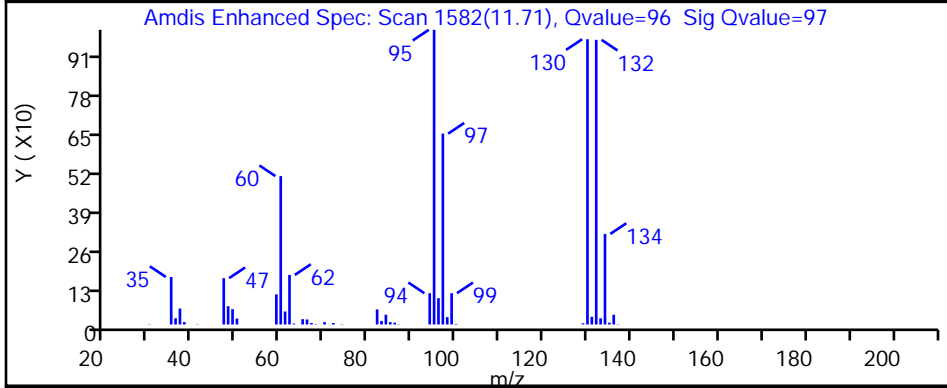
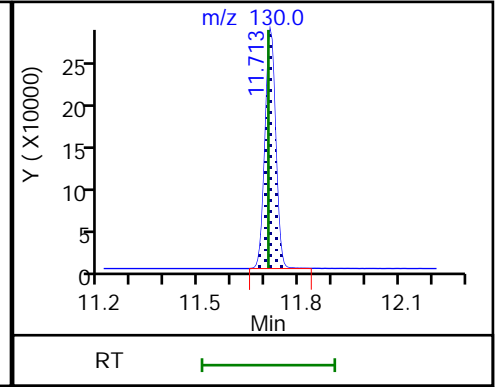
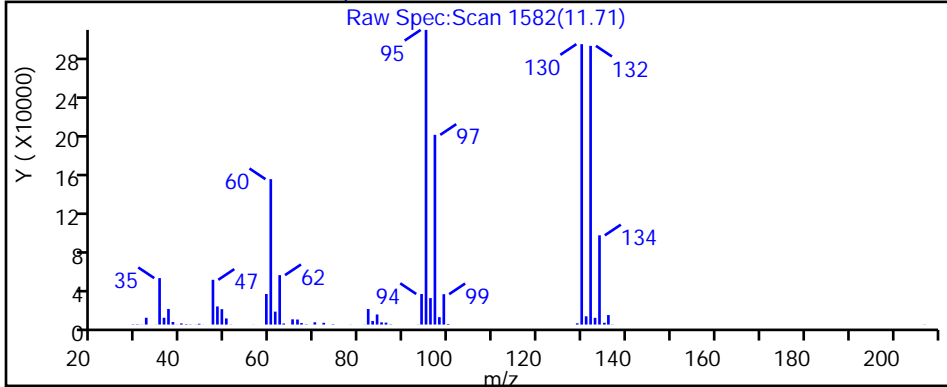
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P114.D

Injection Date: 26-Feb-2019 04:56:30

Instrument ID: MH

Lims ID: 140-14387-A-15

Lab Sample ID: 140-14387-15

Client ID: SV-174-A-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

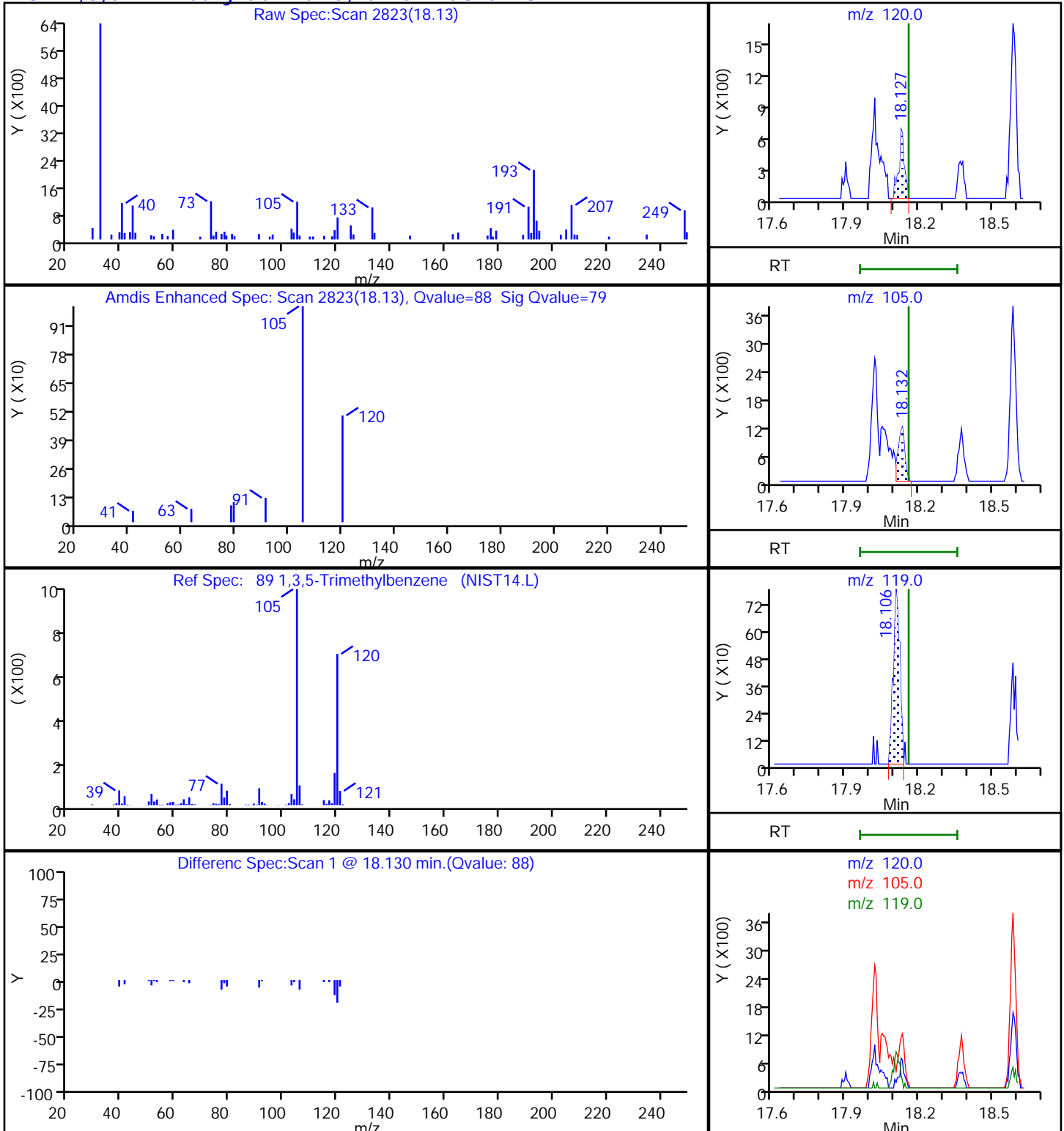
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-171-A-26 Lab Sample ID: 140-14387-16
 Matrix: Air Lab File ID: HB25P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:22
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 05:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	0.90		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	9.3		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.2		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	63		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.64		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.46		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.18	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	310	E	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.22	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.28	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-171-A-26 Lab Sample ID: 140-14387-16
 Matrix: Air Lab File ID: HB25P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:22
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 05:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.62	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	4.4		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	37		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	8.7		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	250		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.8		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.99	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1700	E	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D
 Lims ID: 140-14387-A-16
 Client ID: SV-171-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 05:49:30 ALS Bottle#: 15 Worklist Smp#: 23
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-023
 Misc. Info.: 140-14387-a-16
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:17:17 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:17:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.814	0.010	96	281192	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1525931	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1255482	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	94	812037	3.97	
6 Chlorodifluoromethane	51	3.681	3.682	-0.001	97	14923	0.0647	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	31684	0.0895	
27 1,1-Dichloroethene	96	5.925	5.919	0.006	96	1366718	12.5	
31 Methylene Chloride	84	6.281	6.271	0.010	98	31502	0.2740	
34 trans-1,2-Dichloroethene	96	7.082	7.072	0.010	96	10210	0.0912	
37 1,1-Dichloroethane	63	7.506	7.501	0.005	99	91978	0.4317	
41 cis-1,2-Dichloroethene	96	8.488	8.483	0.005	97	211673	1.86	
43 Chloroform	83	8.834	8.824	0.010	97	43822	0.1794	
45 1,1,1-Trichloroethane	97	9.852	9.853	-0.001	98	8466	0.0364	
47 Benzene	78	10.457	10.452	0.005	99	12439	0.0386	
56 Trichloroethene	130	11.718	11.708	0.010	97	9389418	61.7	E
65 Toluene	91	13.765	13.760	0.005	93	45768	0.1281	
78 m-Xylene & p-Xylene	91	16.215	16.220	-0.005	99	19725	0.0562	
89 1,3,5-Trimethylbenzene	120	18.106	18.106	-0.052	41	3567	0.0439	a
S 121 Xylenes, Total	100				0		0.0562	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

a - User Assigned ID

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Worklist Smp#: 23

Client ID: SV-171-A-26

Purge Vol: 500.000 mL

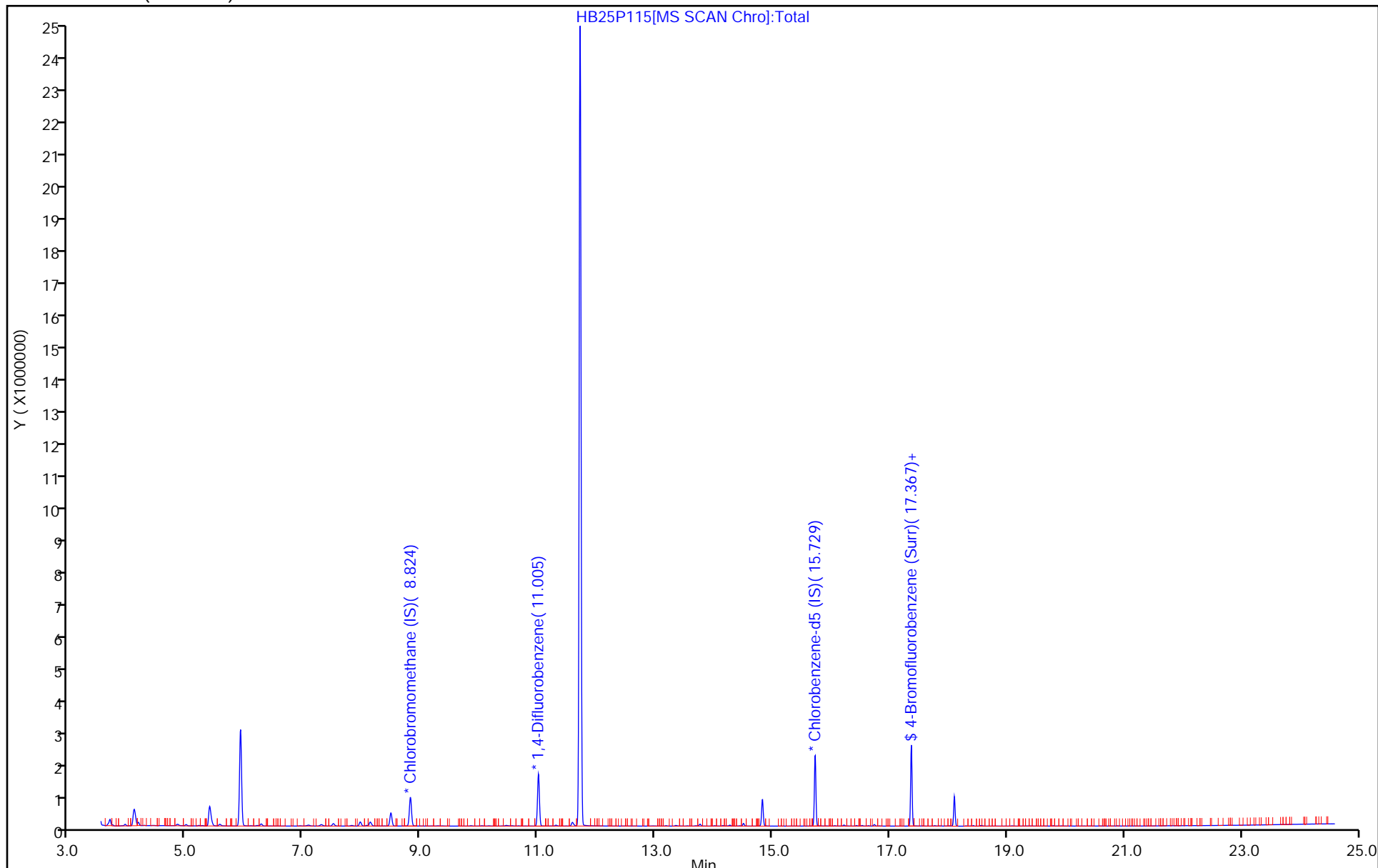
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D
 Lims ID: 140-14387-A-16
 Client ID: SV-171-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 05:49:30 ALS Bottle#: 15 Worklist Smp#: 23
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-023
 Misc. Info.: 140-14387-a-16
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:17:17 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:17:17

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.97	99.23

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

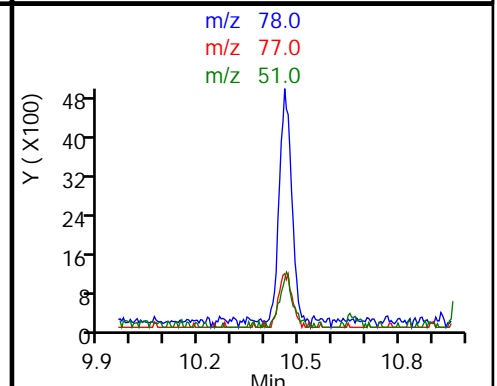
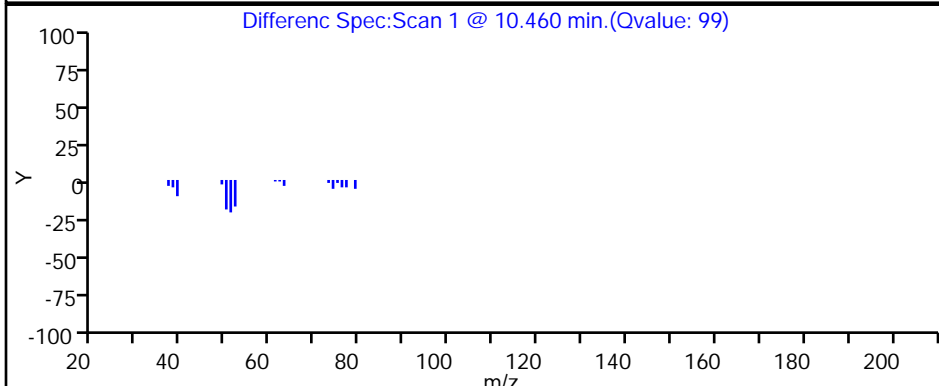
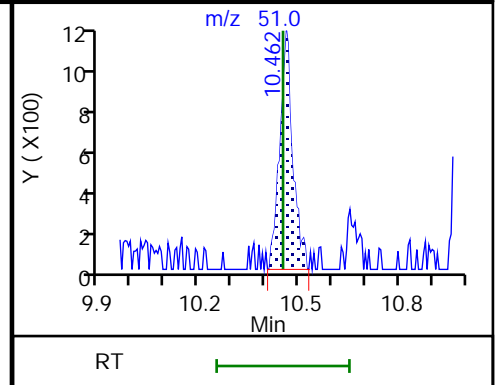
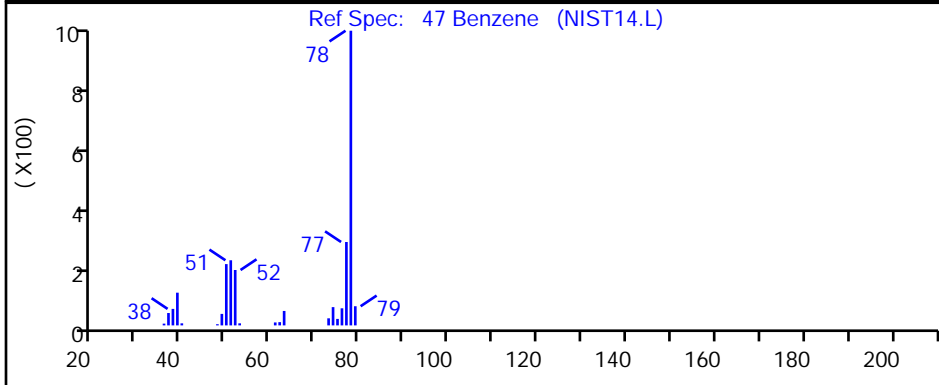
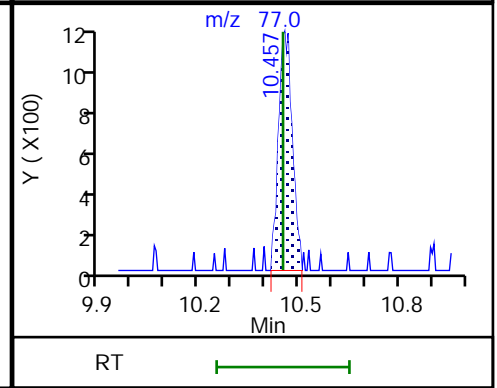
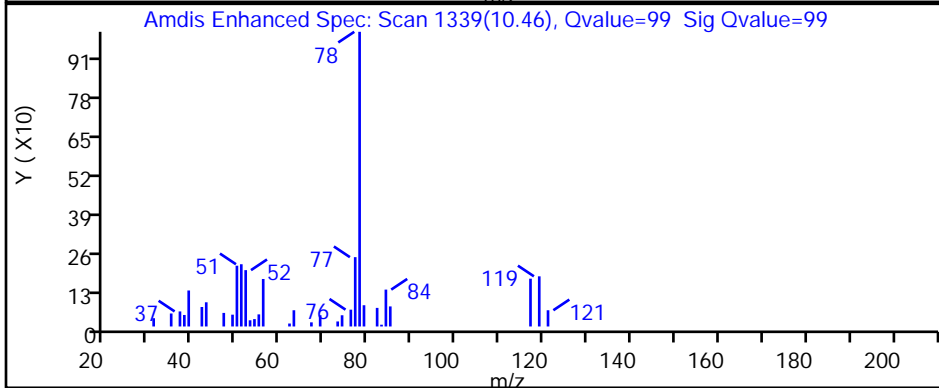
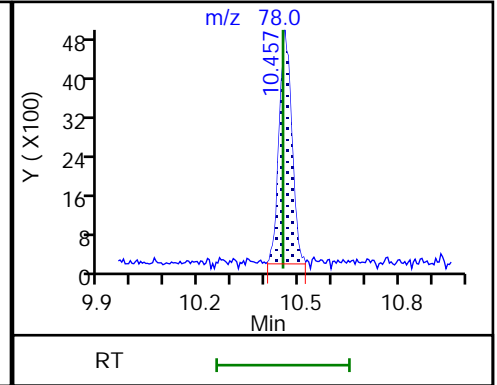
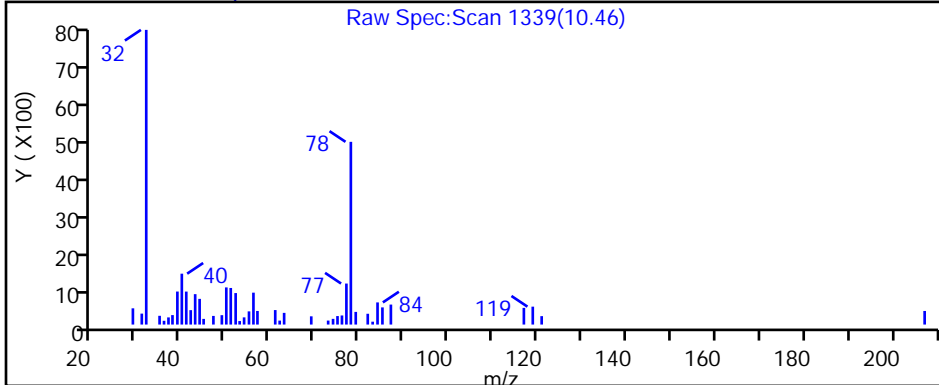
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

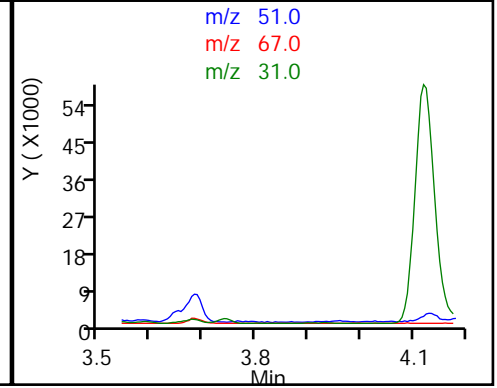
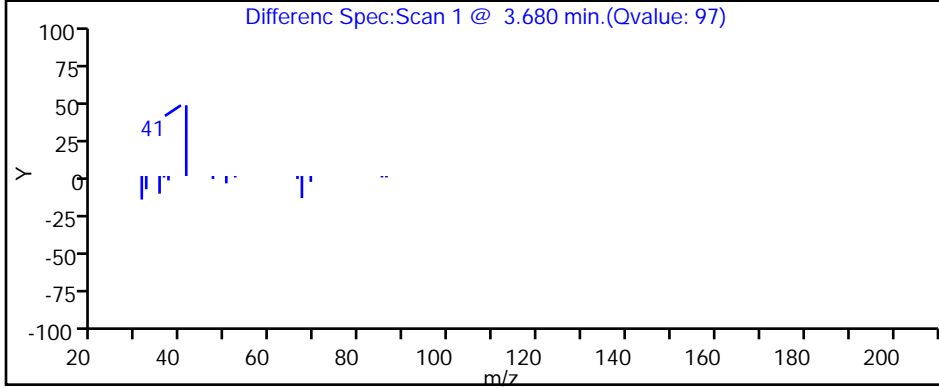
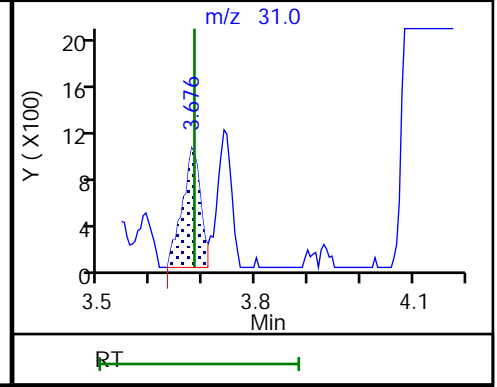
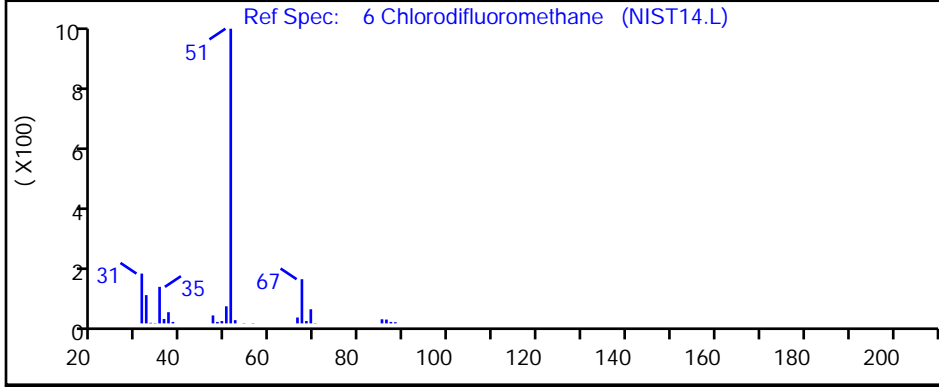
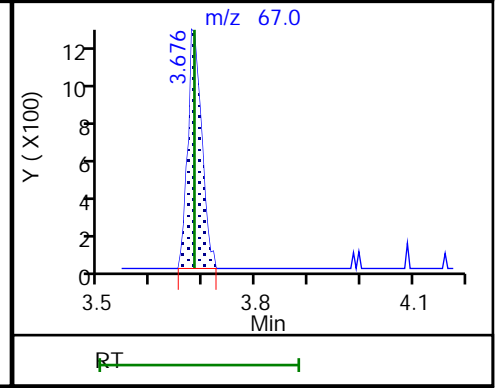
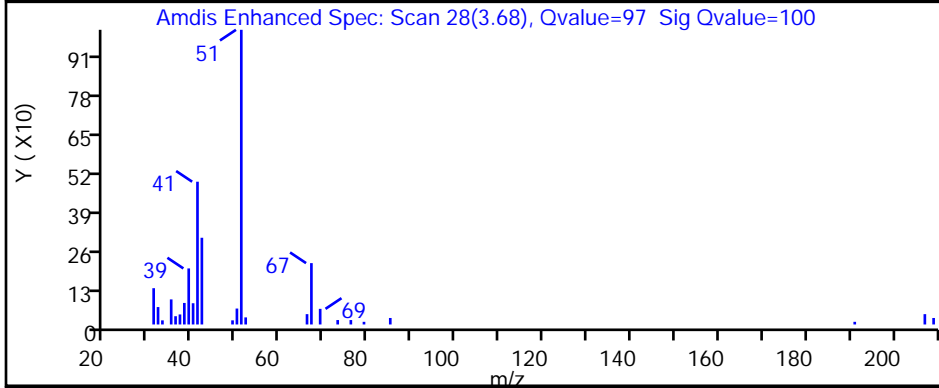
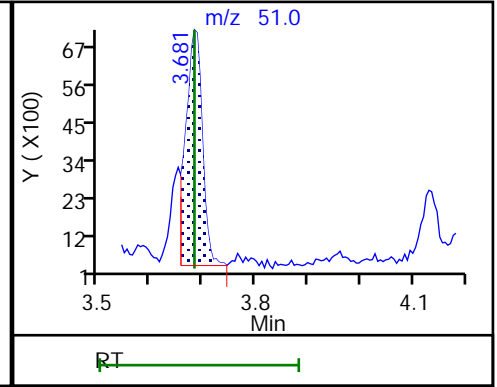
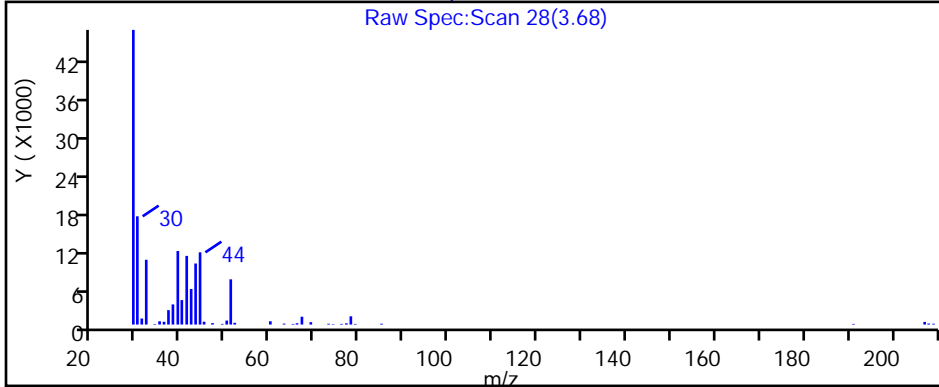
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

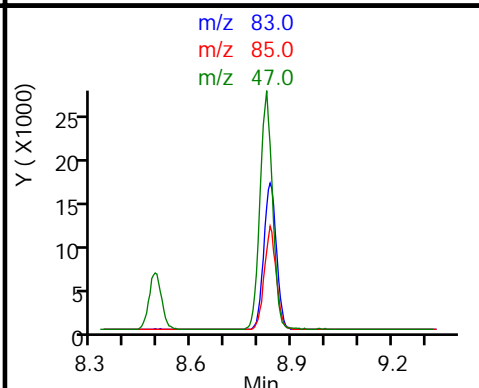
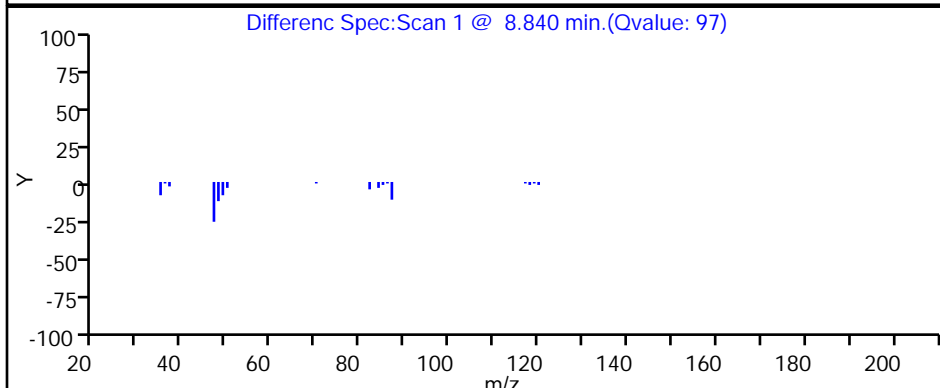
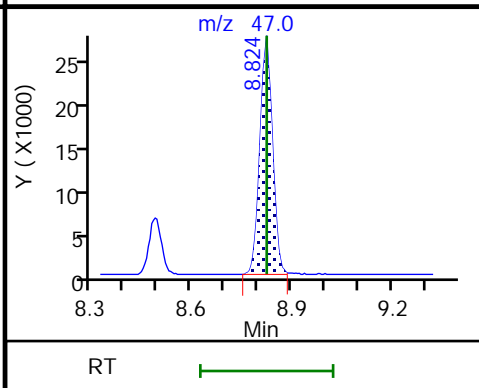
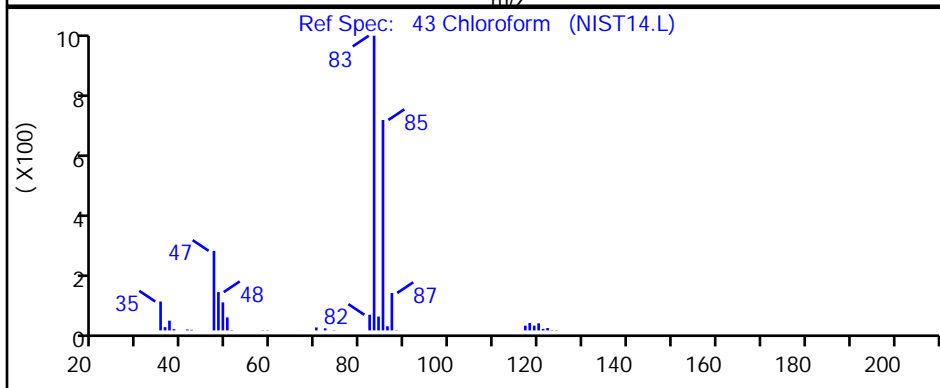
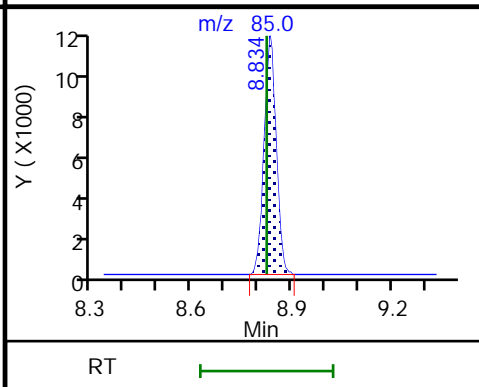
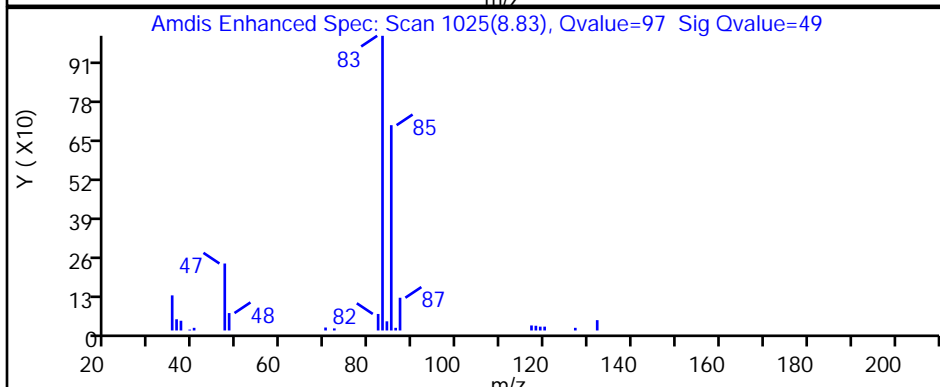
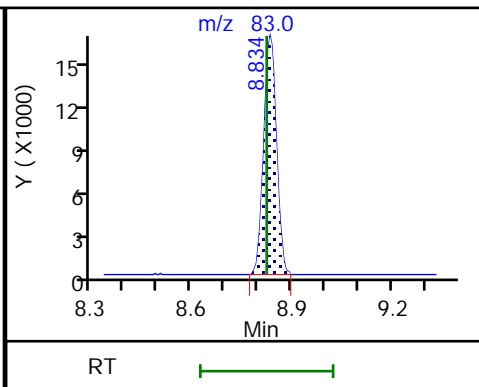
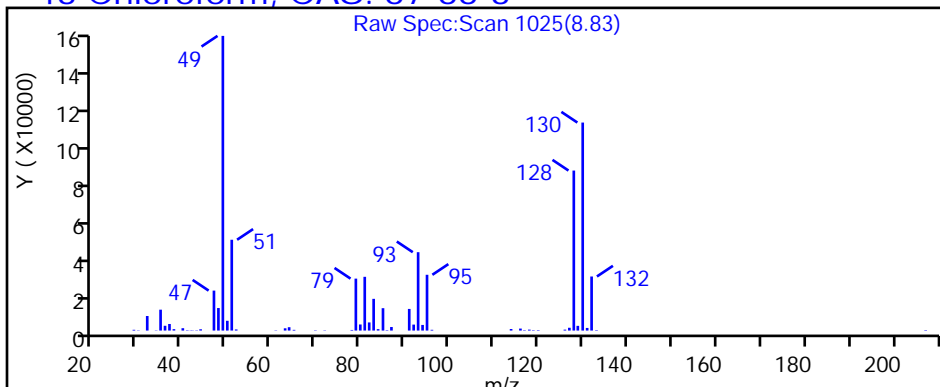
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

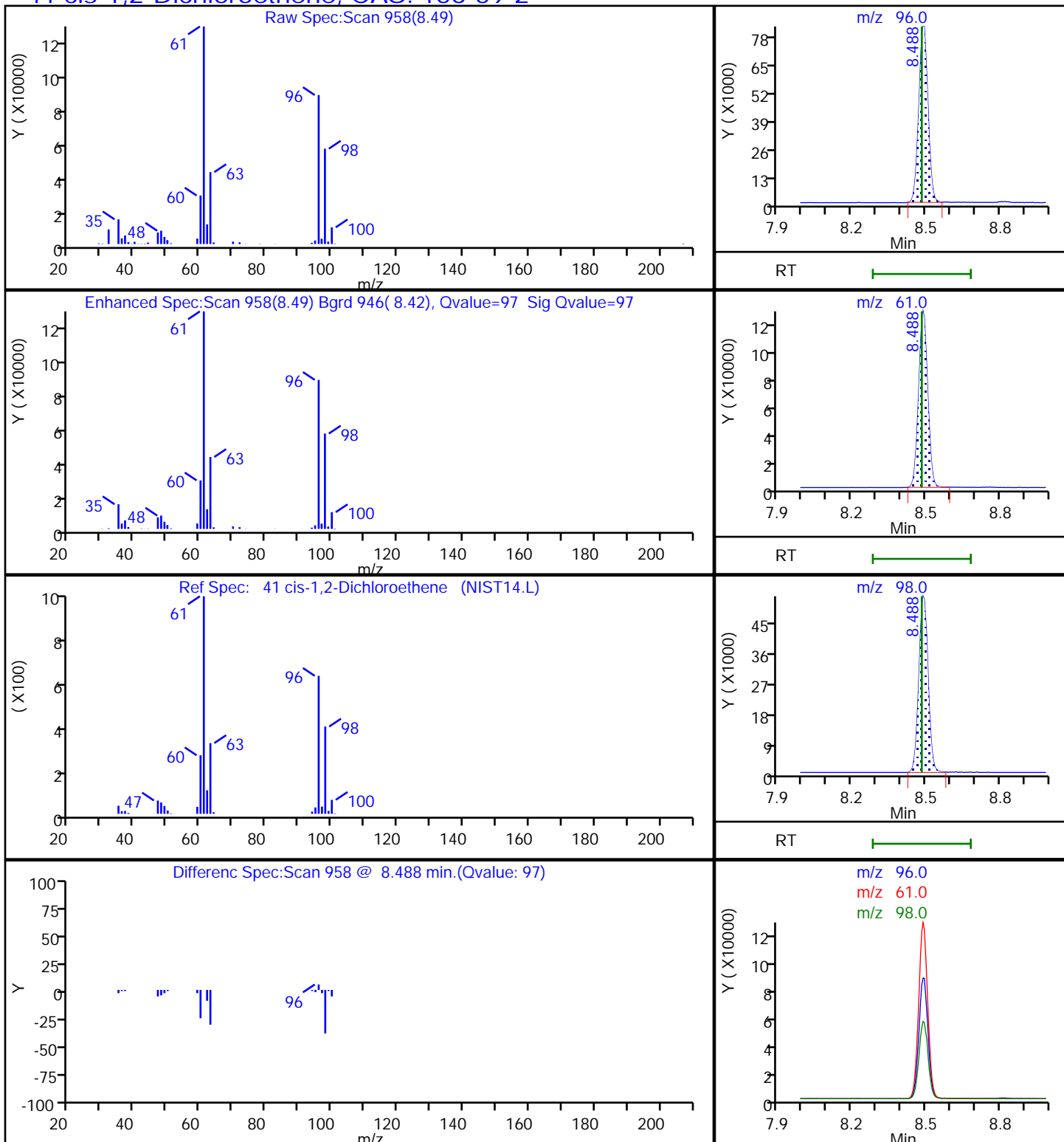
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

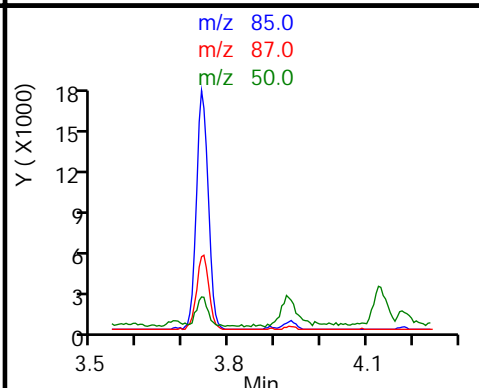
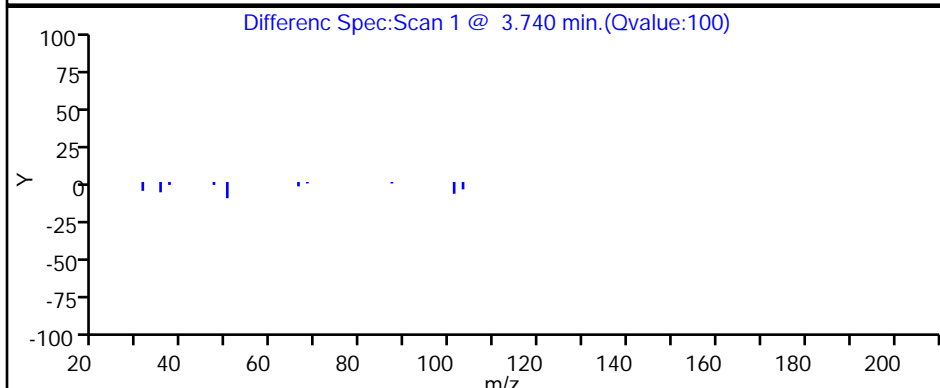
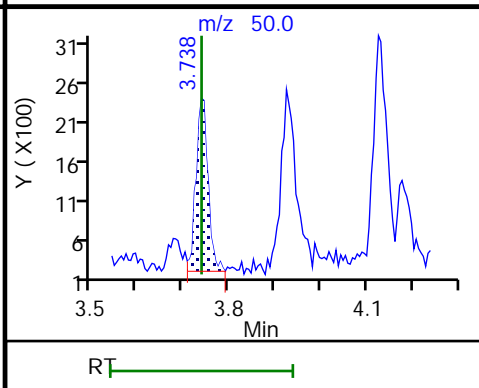
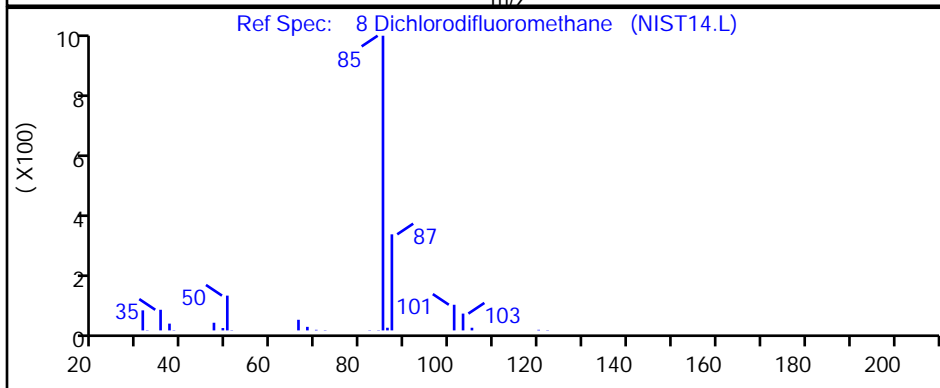
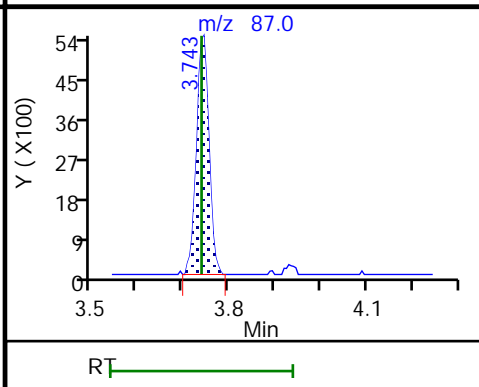
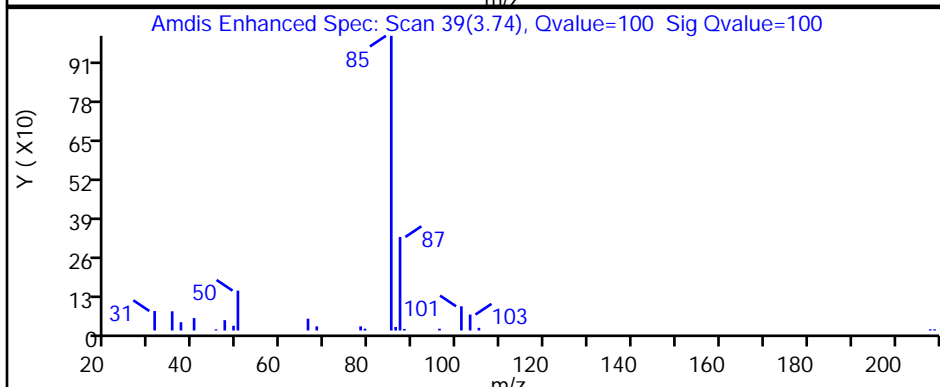
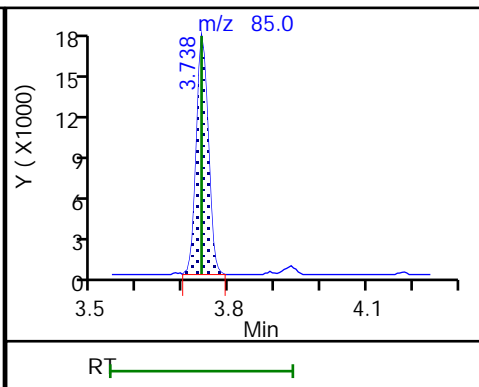
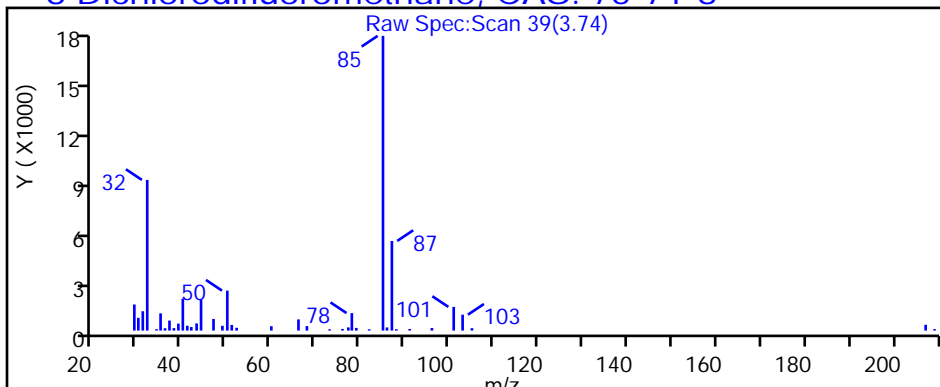
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

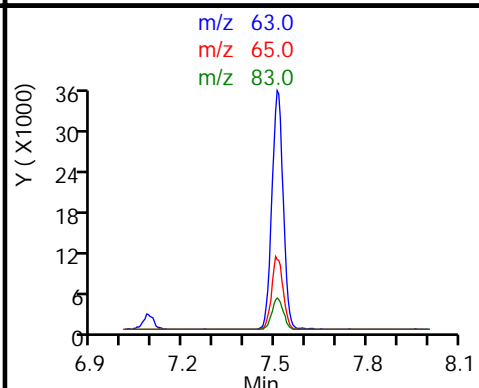
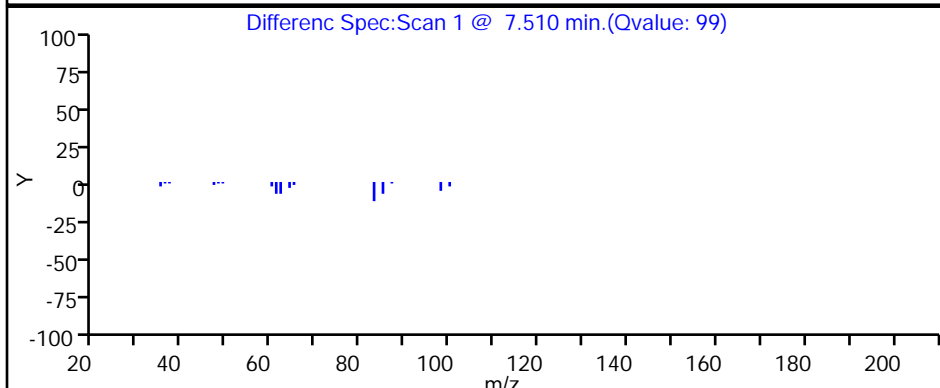
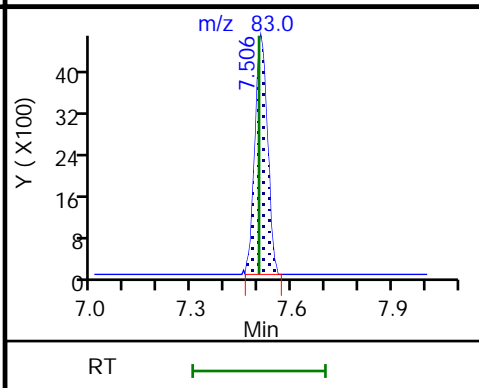
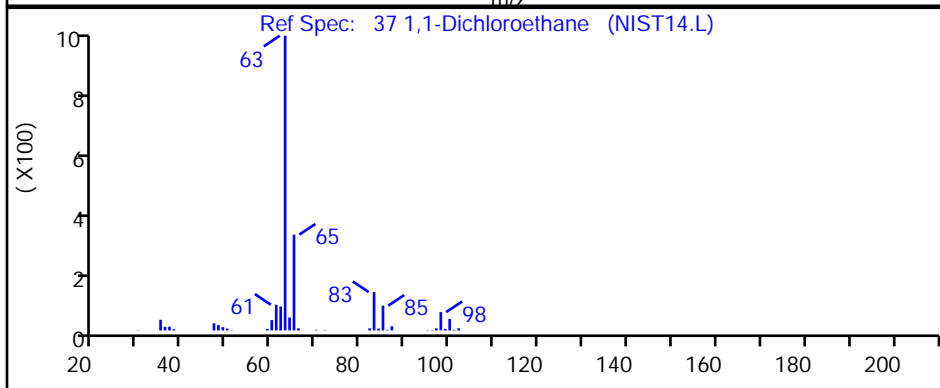
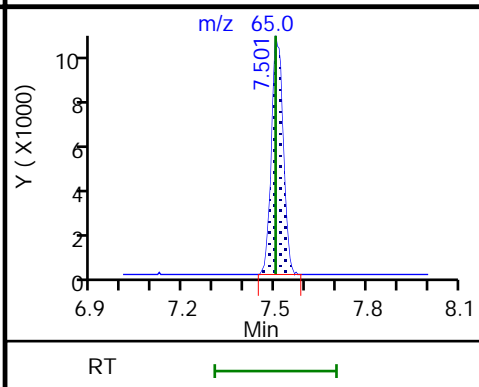
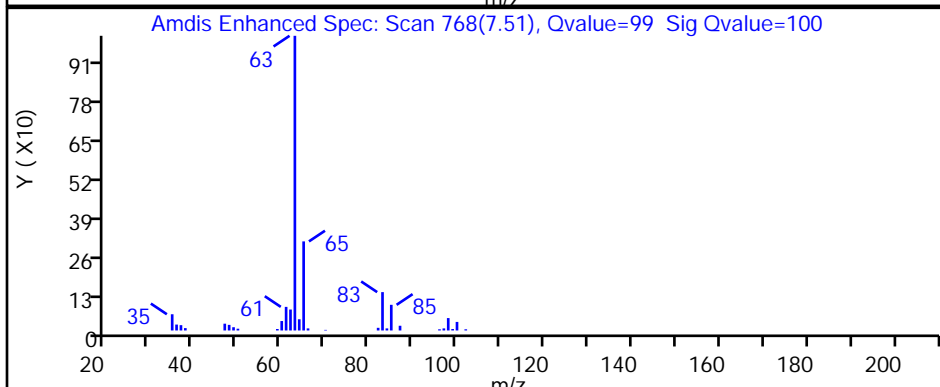
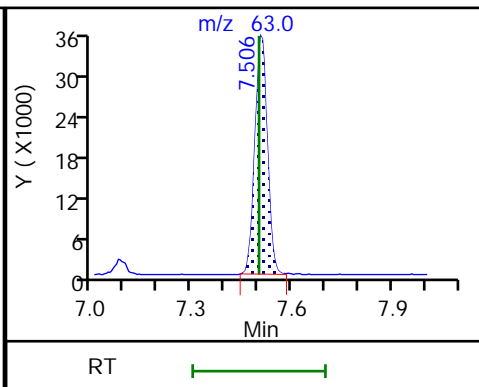
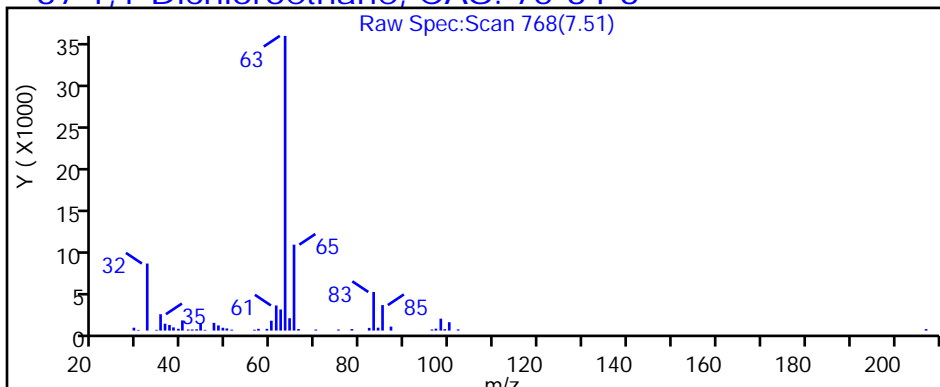
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: HMT

ALS Bottle#: 15 Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

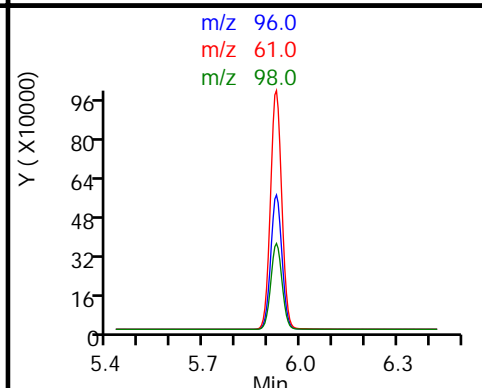
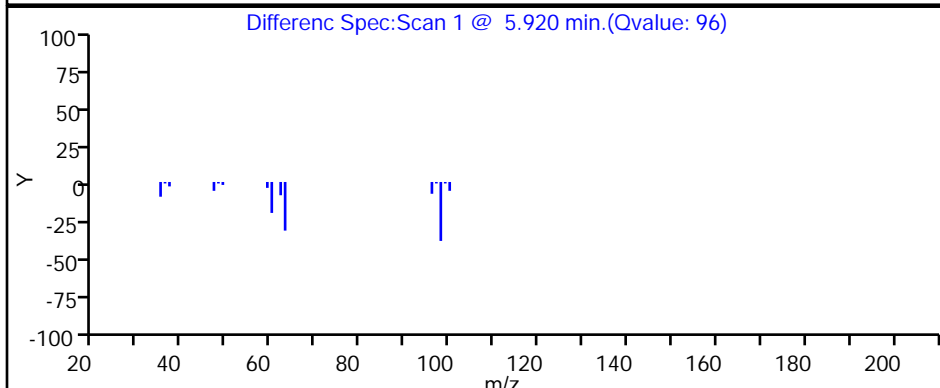
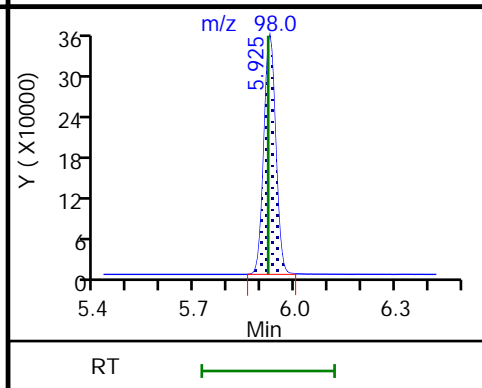
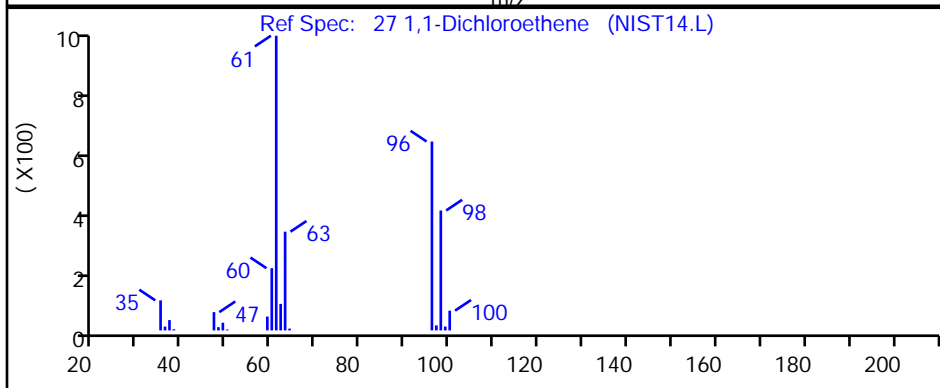
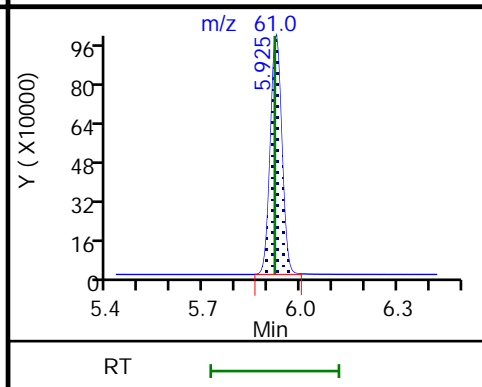
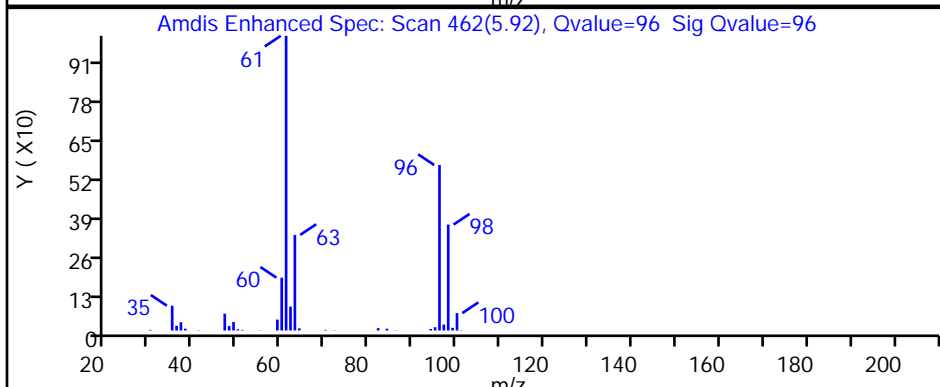
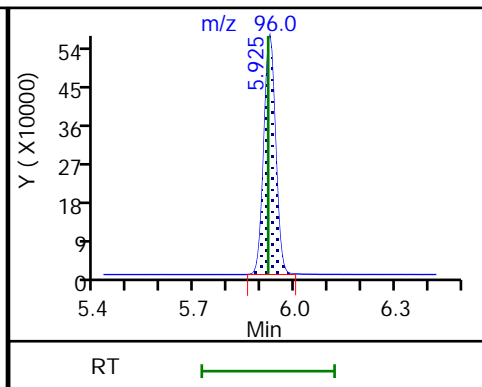
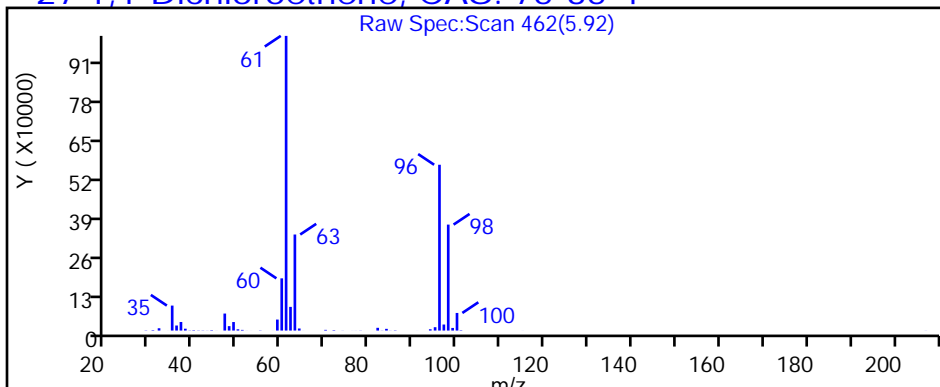
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

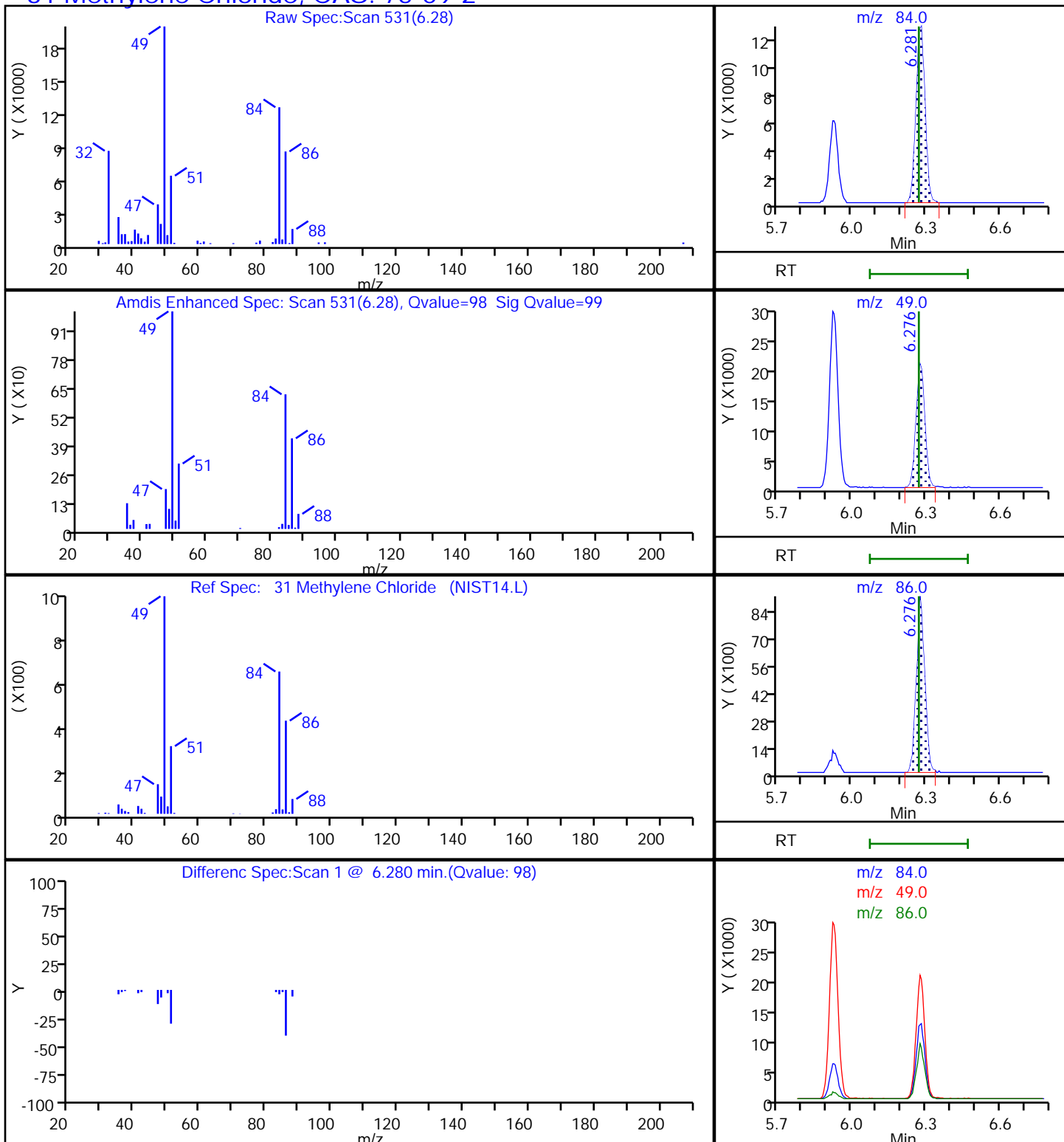
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

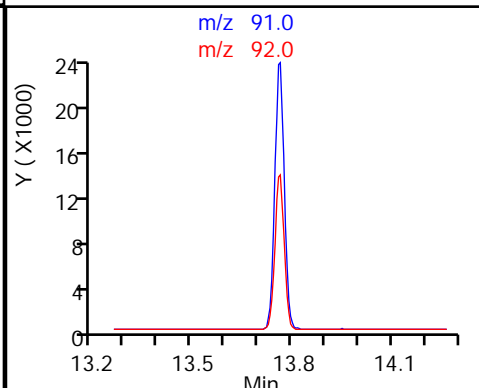
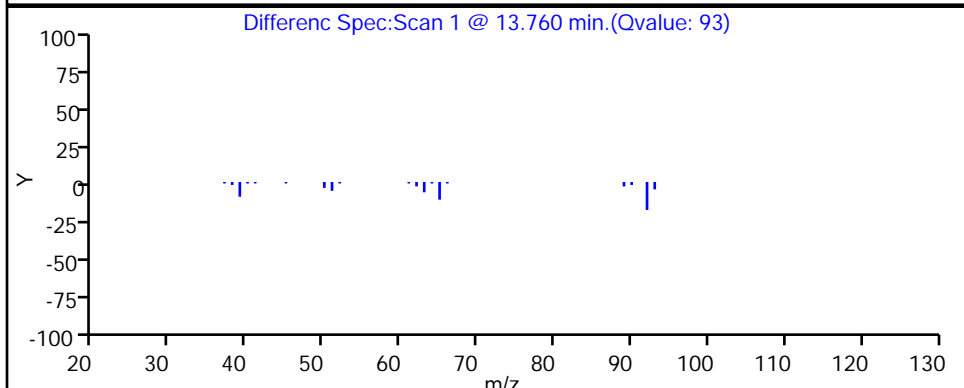
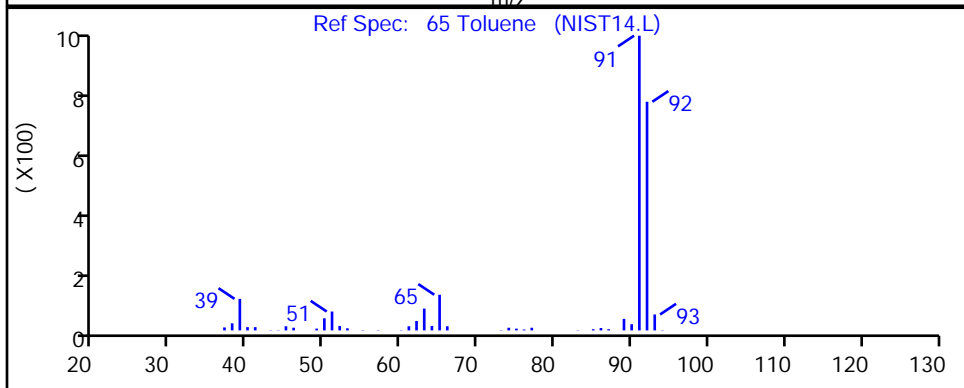
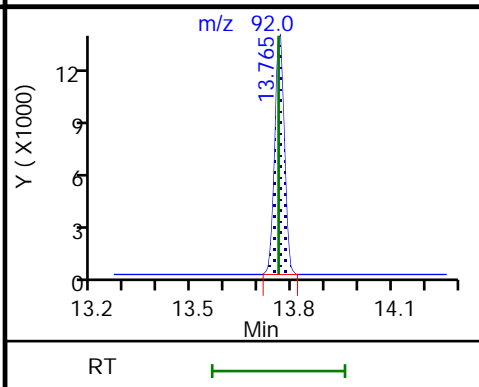
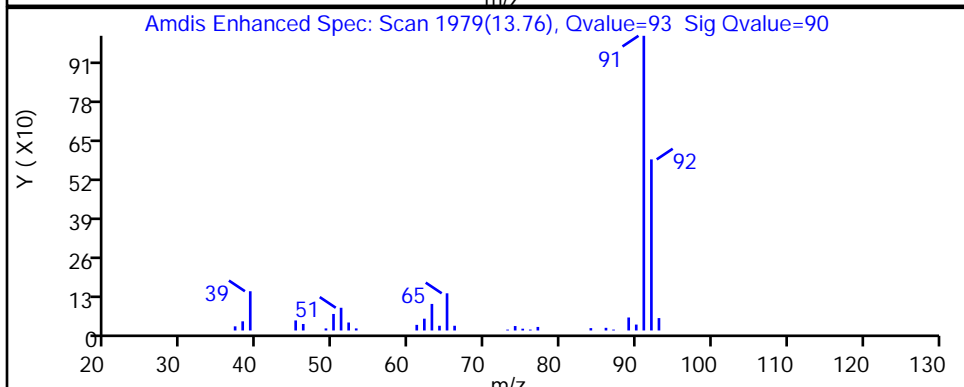
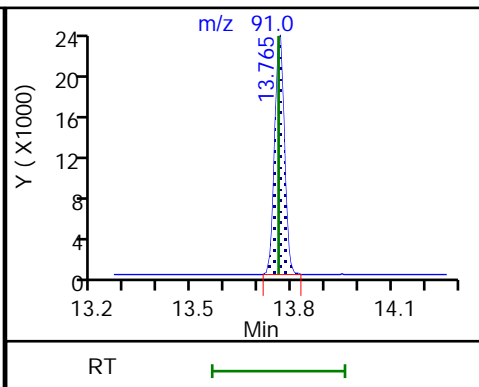
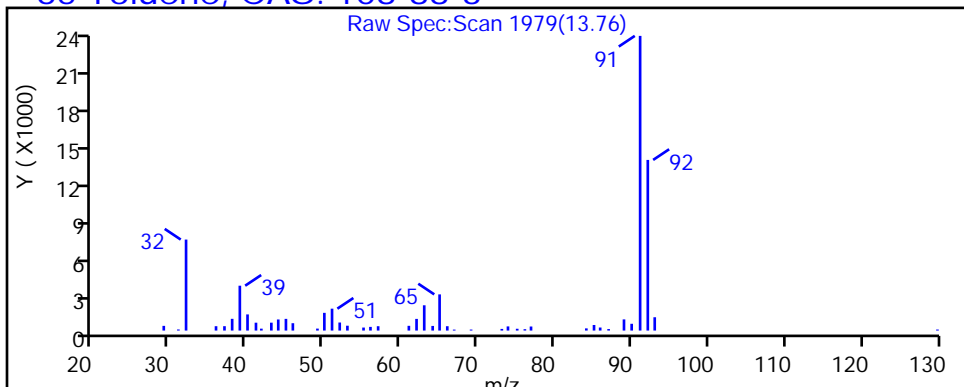
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

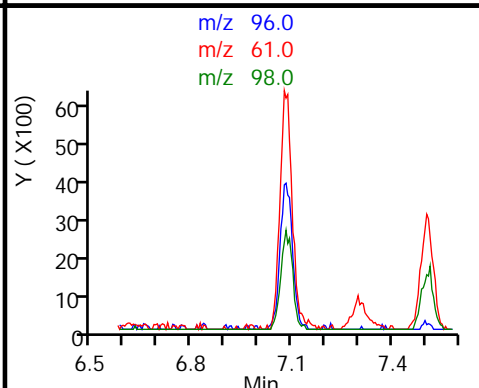
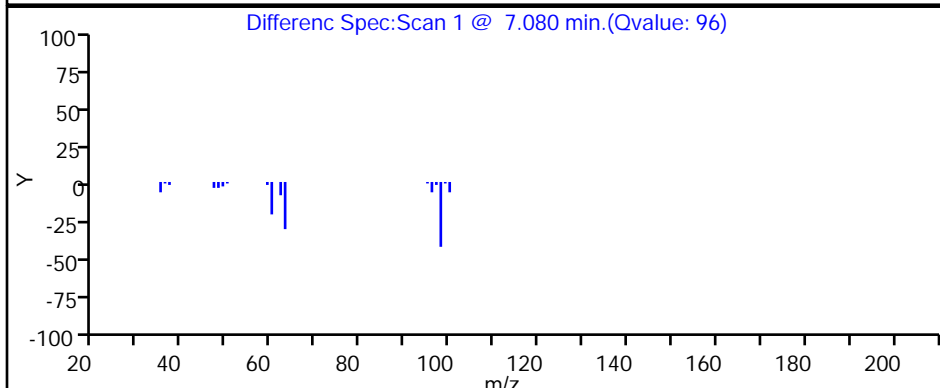
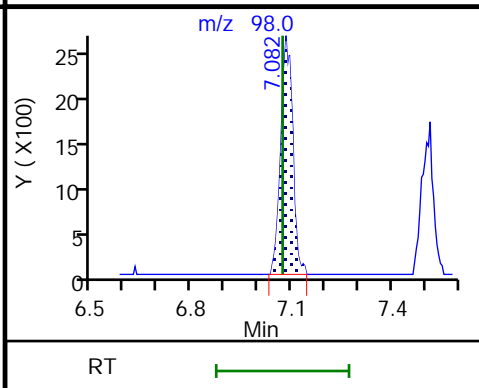
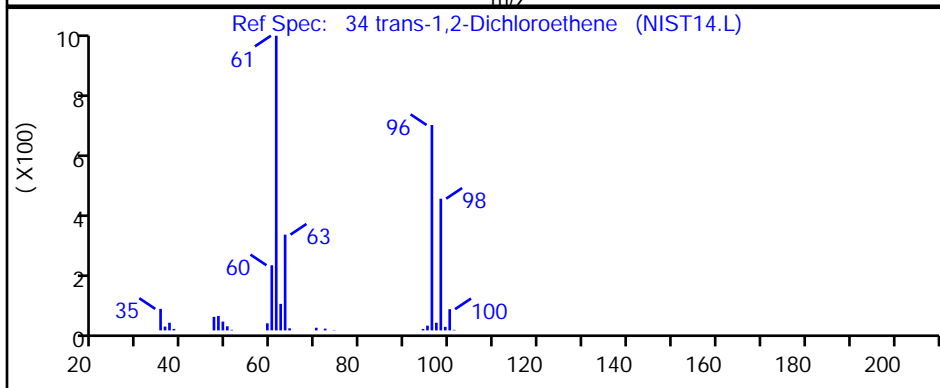
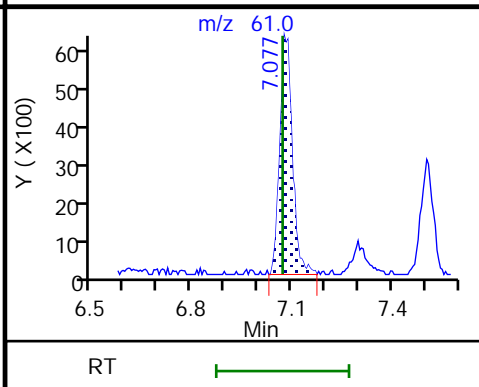
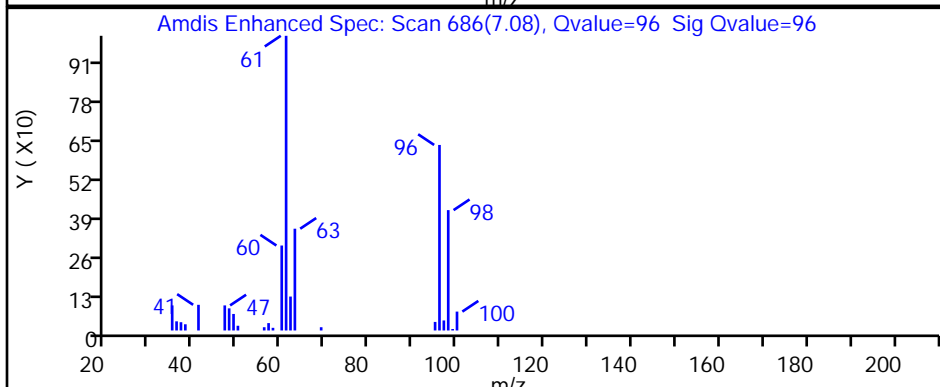
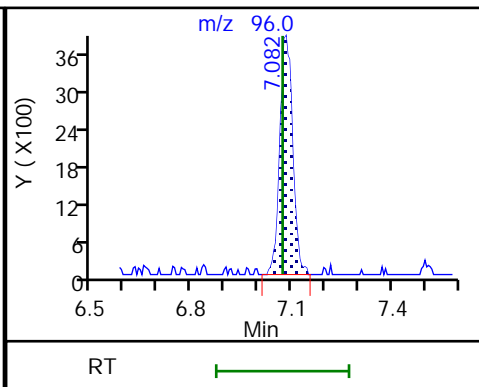
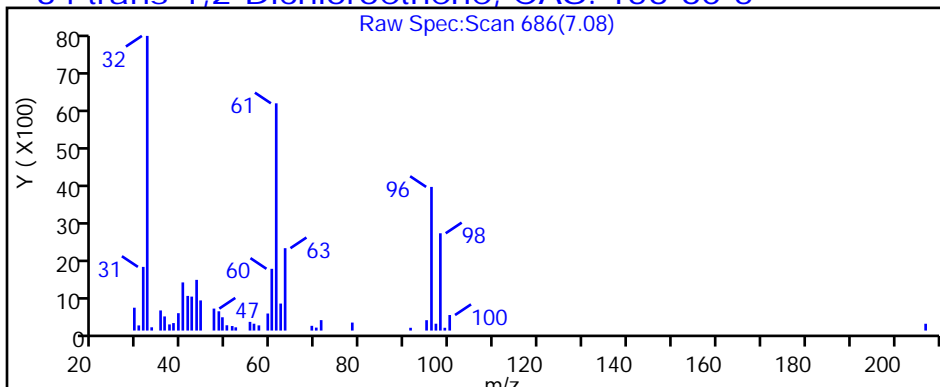
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

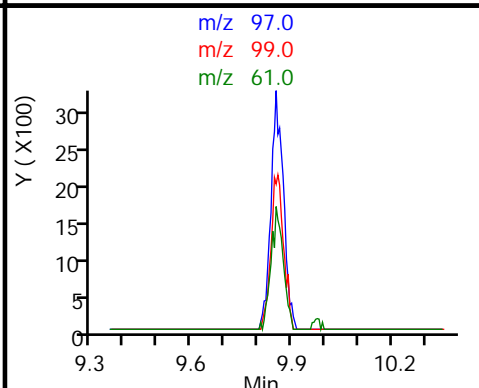
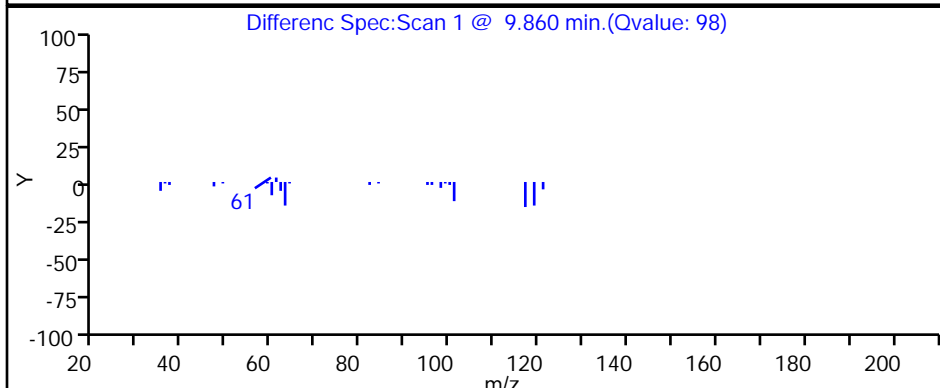
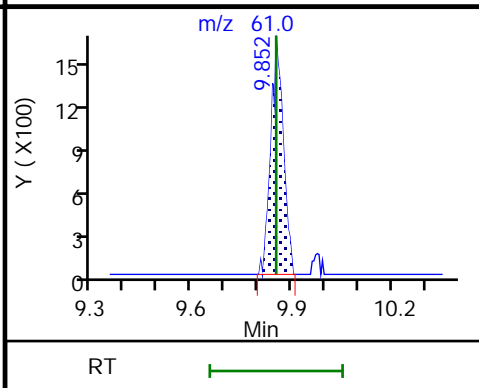
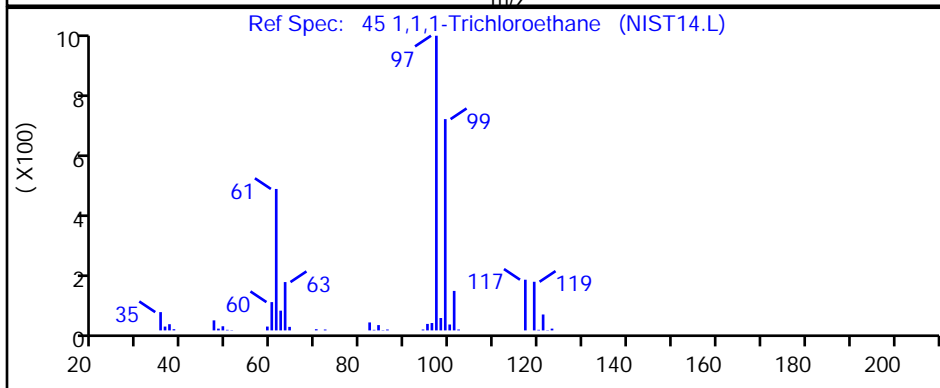
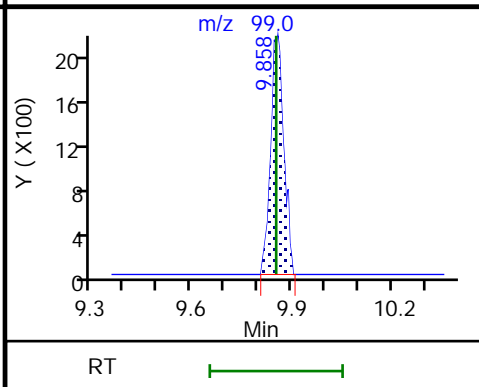
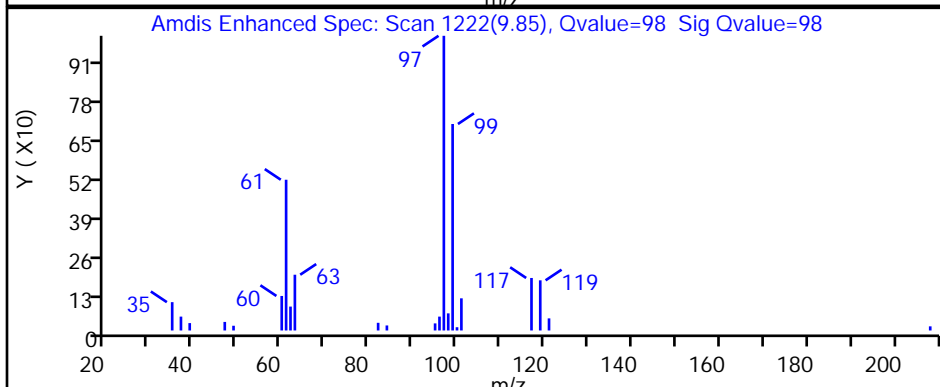
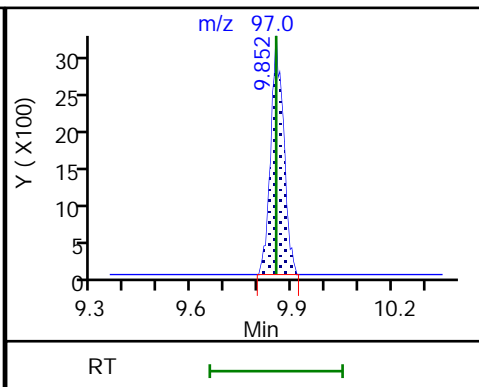
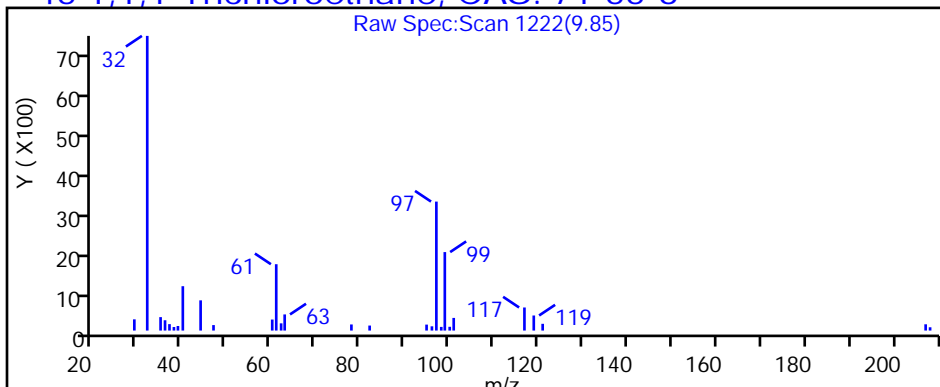
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: HMT

ALS Bottle#: 15 Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

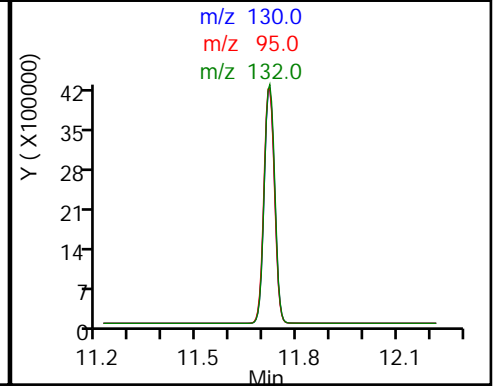
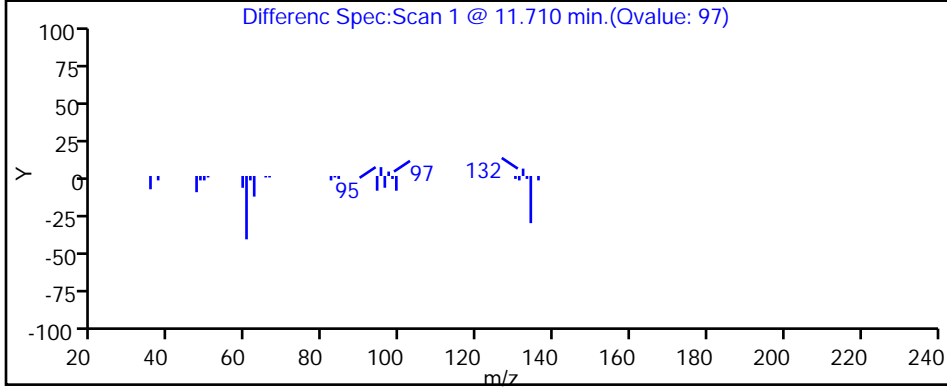
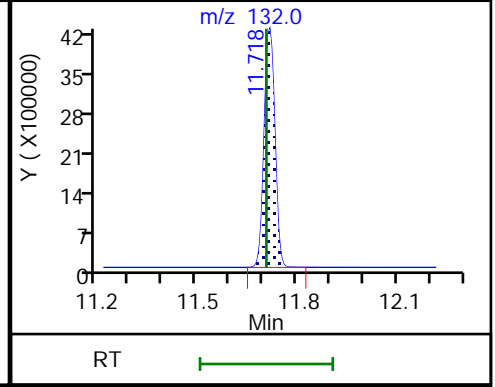
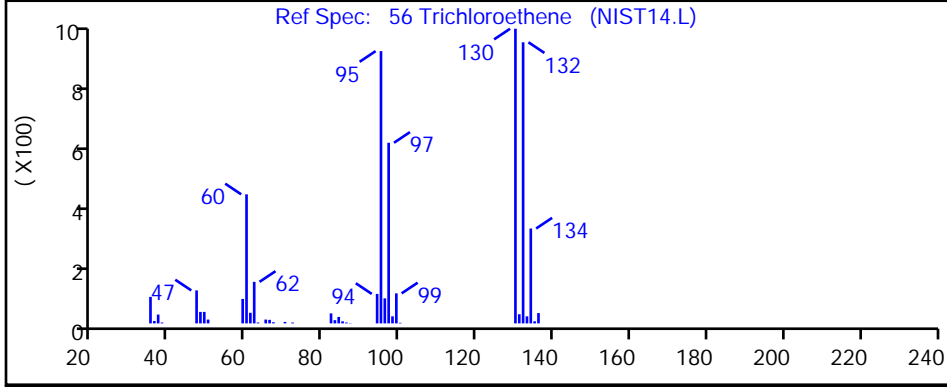
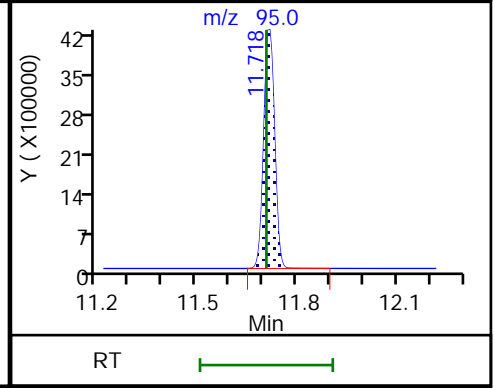
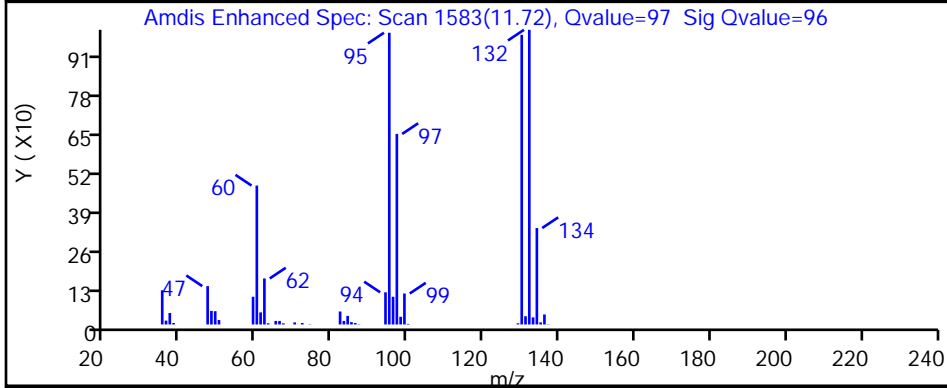
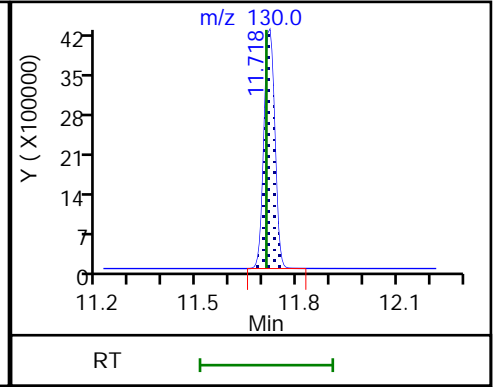
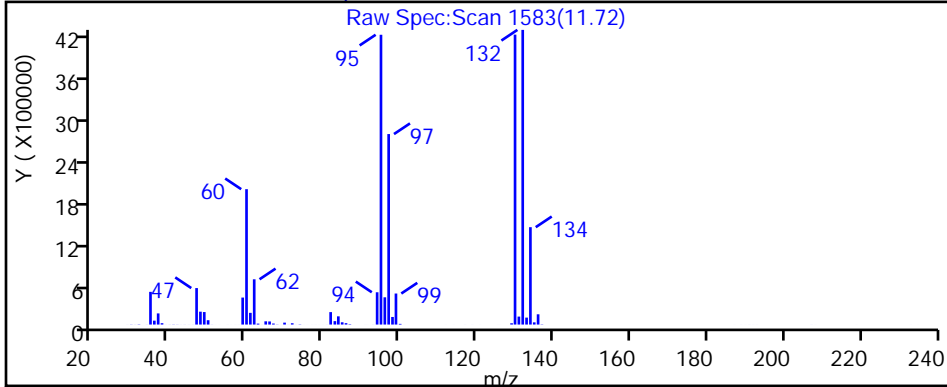
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

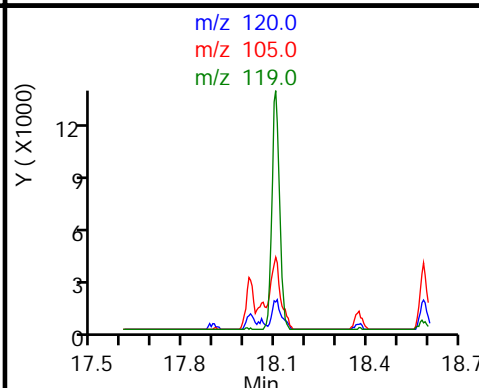
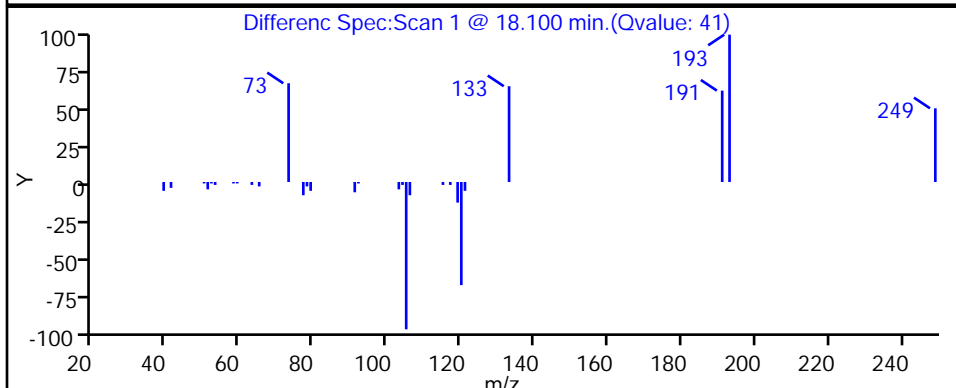
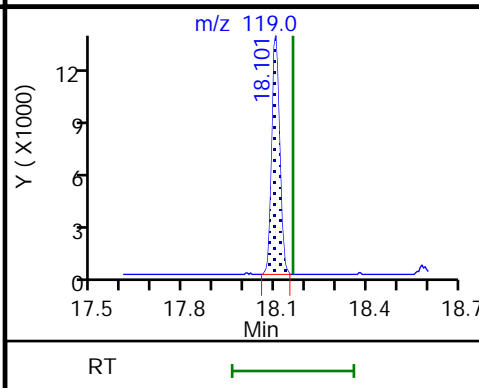
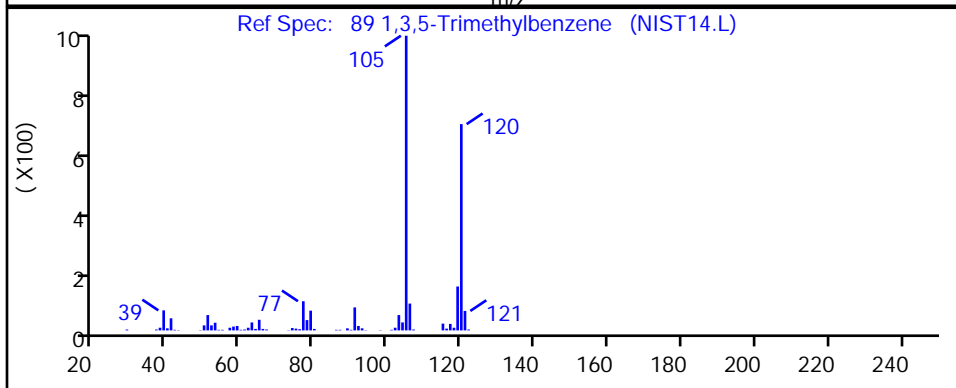
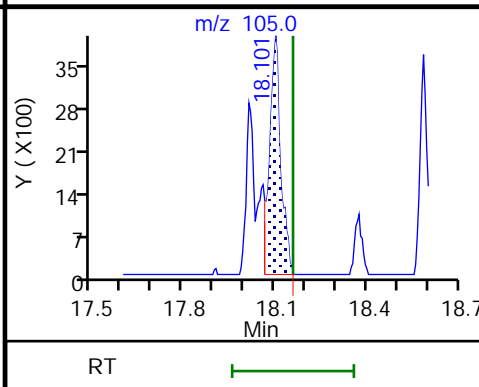
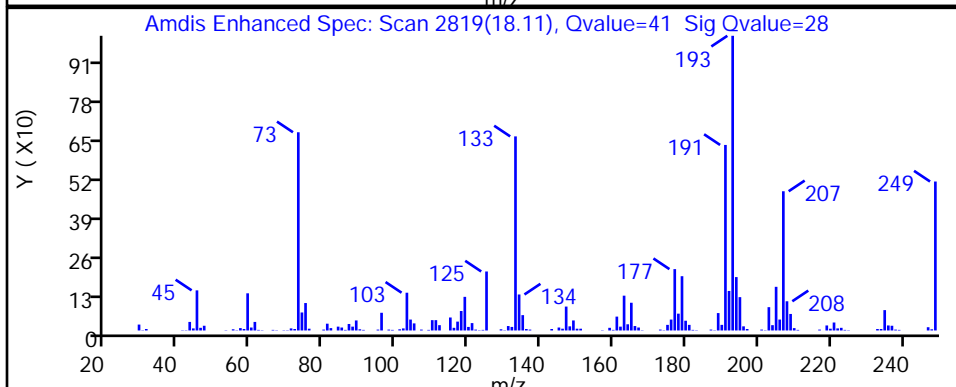
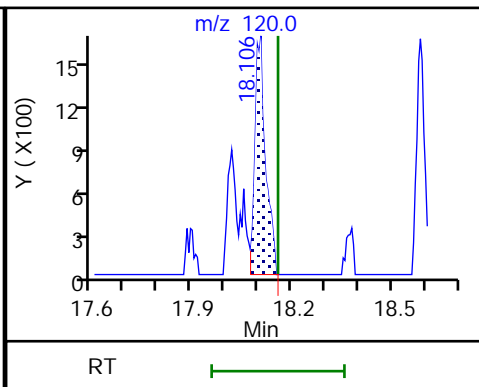
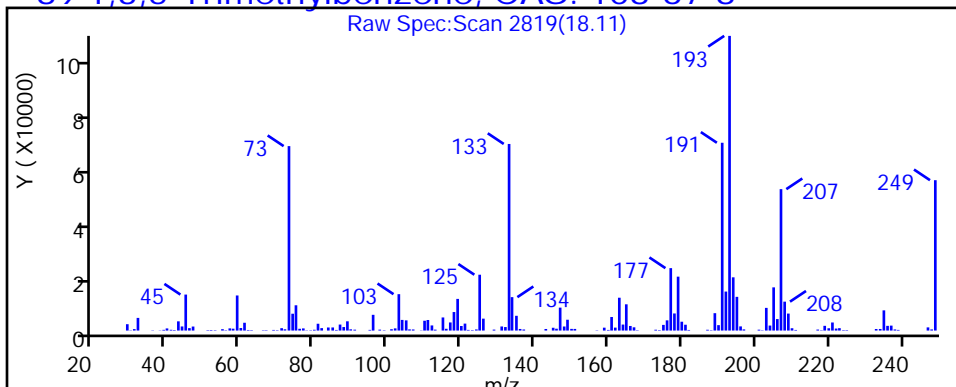
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D

Injection Date: 26-Feb-2019 05:49:30

Instrument ID: MH

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

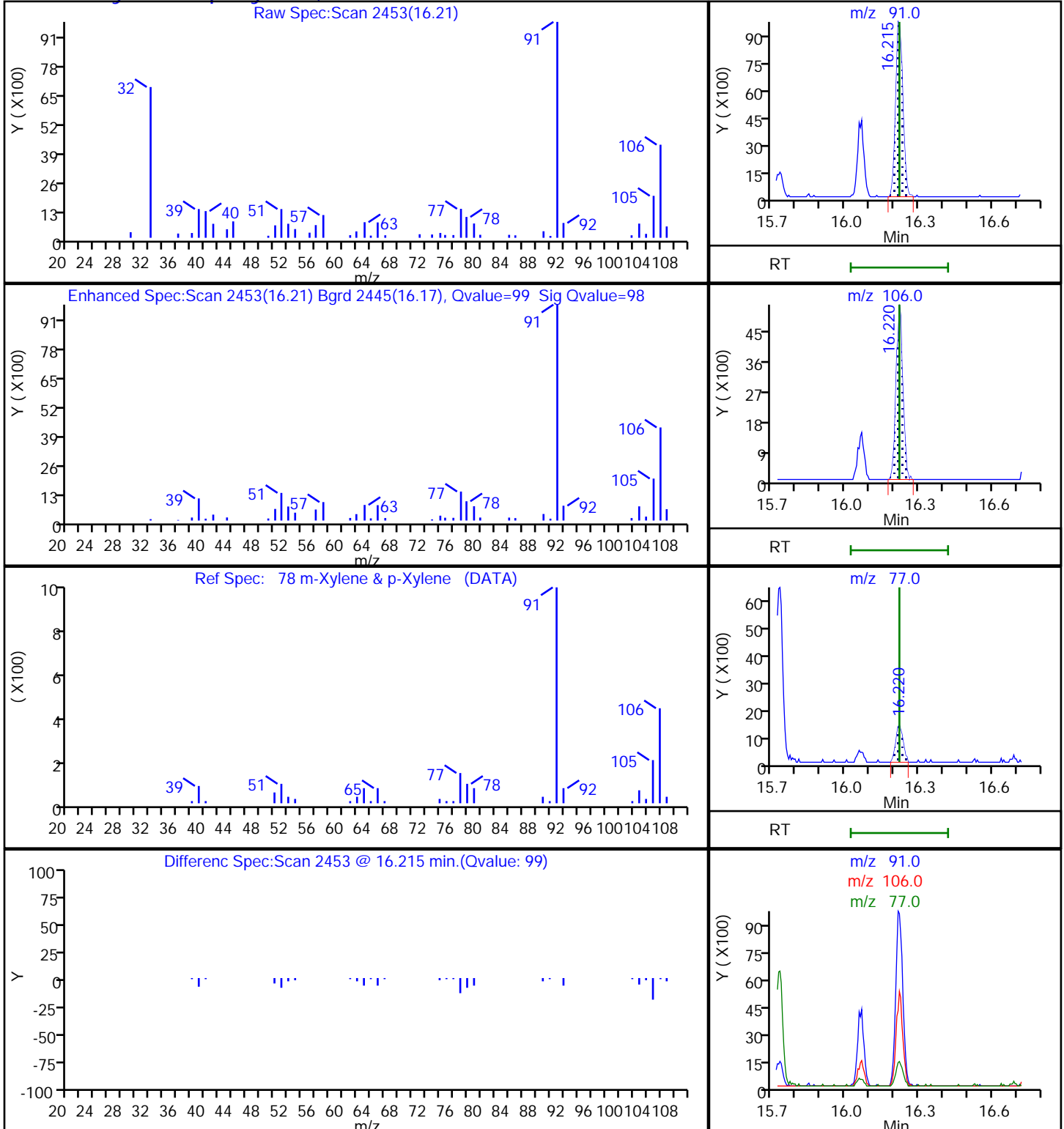
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

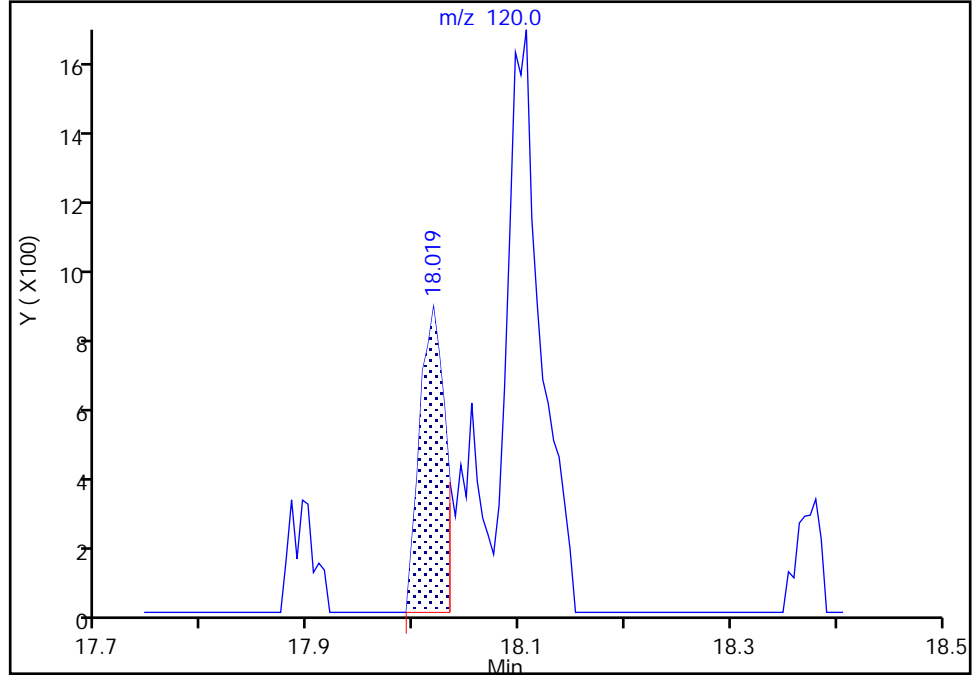
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P115.D
Injection Date: 26-Feb-2019 05:49:30 Instrument ID: MH
Lims ID: 140-14387-A-16 Lab Sample ID: 140-14387-16
Client ID: SV-171-A-26
Operator ID: HMT ALS Bottle#: 15 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Signal: 1

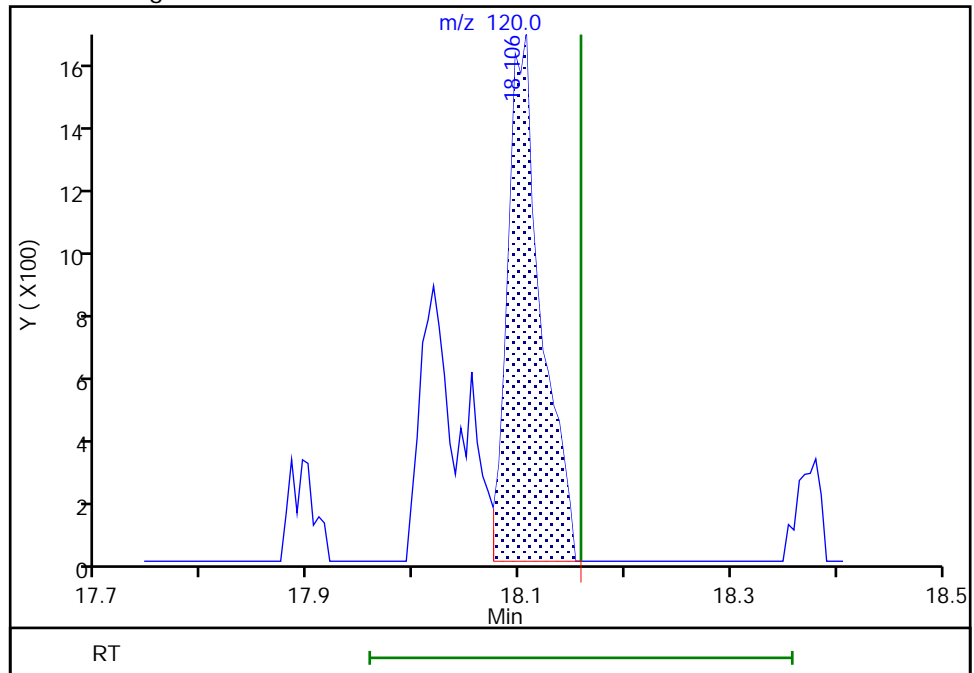
RT: 18.02
Area: 1407
Amount: 0.033666
Amount Units: ppb v/v

Processing Integration Results



RT: 18.11
Area: 3567
Amount: 0.043870
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 26-Feb-2019 20:17:10

Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-171-A-26 DL Lab Sample ID: 140-14387-16 DL
 Matrix: Air Lab File ID: GB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:22
 Sample wt/vol: 11 (mL) Date Analyzed: 02/26/2019 20:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	190		1.8	0.64

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	90		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-171-A-26 DL Lab Sample ID: 140-14387-16 DL
 Matrix: Air Lab File ID: GB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:22
 Sample wt/vol: 11 (mL) Date Analyzed: 02/26/2019 20:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	1000		9.8	3.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	90		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P107.D
 Lims ID: 140-14387-A-16
 Client ID: SV-171-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 20:06:30 ALS Bottle#: 7 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-013
 Misc. Info.: 140-14387-a-16
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:29:18 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:39:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.227	9.232	-0.006	98	452797	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.405	-0.005	96	2861121	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2641514	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	84	1944868	3.59	
27 1,1-Dichloroethene	96	6.234	6.225	0.006	94	187982	1.18	
31 Methylene Chloride	84	6.600	6.595	0.005	99	27691	0.1489	
37 1,1-Dichloroethane	63	7.878	7.874	0.000	99	10449	0.0318	
42 cis-1,2-Dichloroethene	96	8.892	8.882	0.005	96	26549	0.1621	
44 Chloroform	83	9.237	9.237	-0.006	27	6045	0.0160	
58 Trichloroethene	130	12.106	12.106	0.000	94	955870	4.10	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P107.D

Injection Date: 26-Feb-2019 20:06:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Worklist Smp#: 13

Client ID: SV-171-A-26

Purge Vol: 500.000 mL

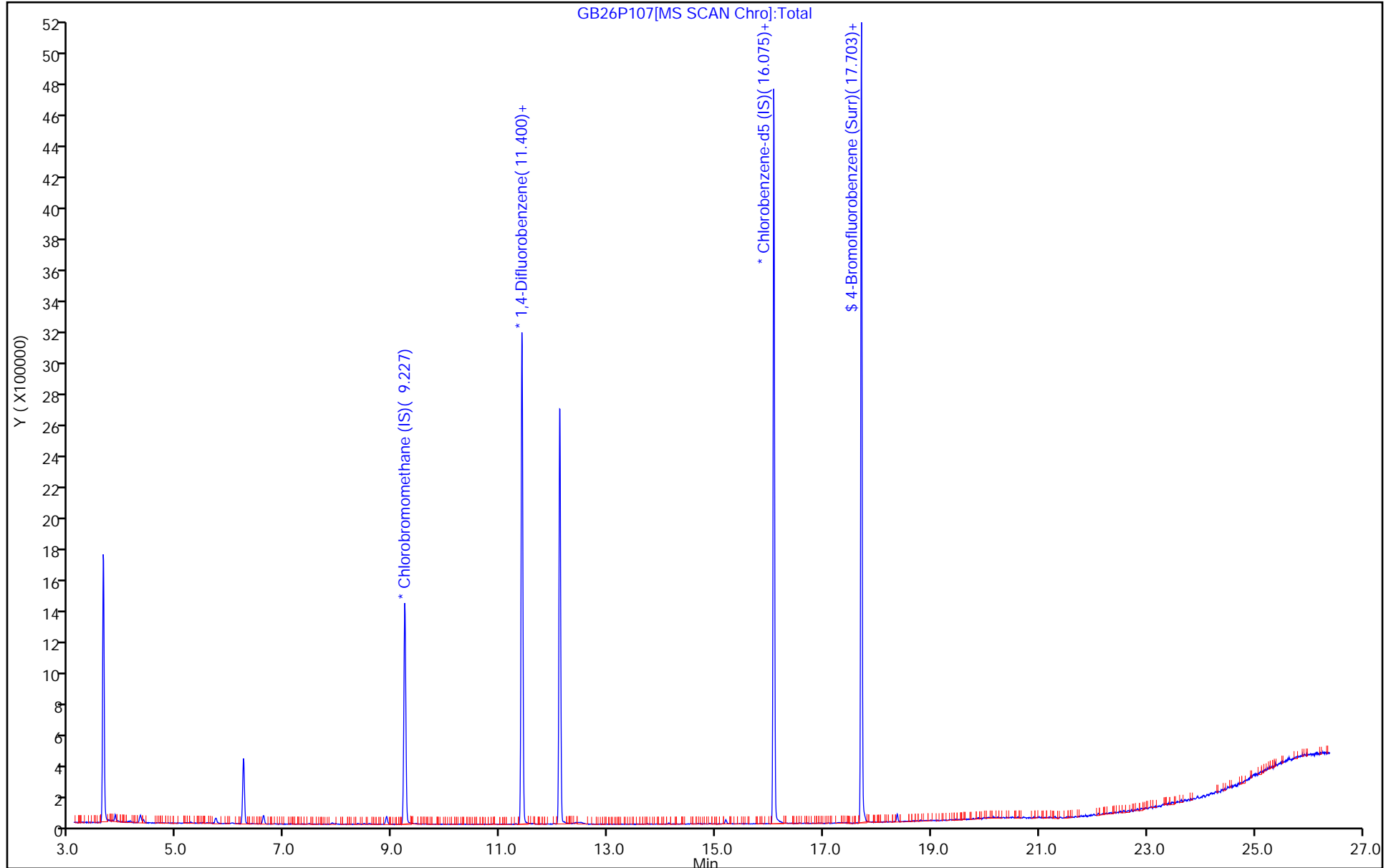
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P107.D
 Lims ID: 140-14387-A-16
 Client ID: SV-171-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 20:06:30 ALS Bottle#: 7 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-013
 Misc. Info.: 140-14387-a-16
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:29:18 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:39:04

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.59	89.83

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P107.D

Injection Date: 26-Feb-2019 20:06:30

Instrument ID: MG

Lims ID: 140-14387-A-16

Lab Sample ID: 140-14387-16

Client ID: SV-171-A-26

Operator ID: 7126

ALS Bottle#: 7 Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

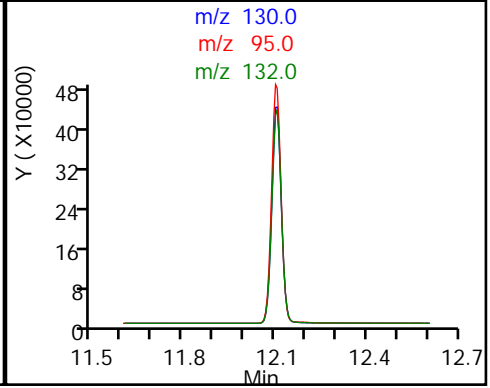
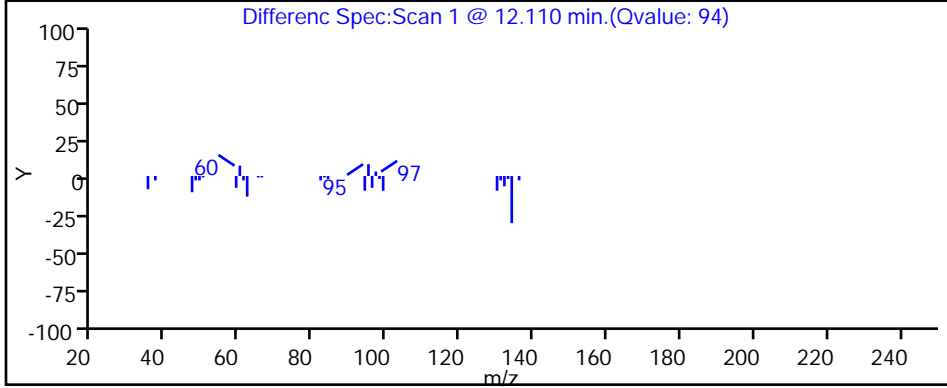
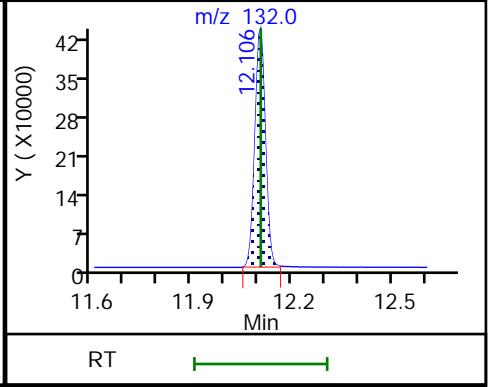
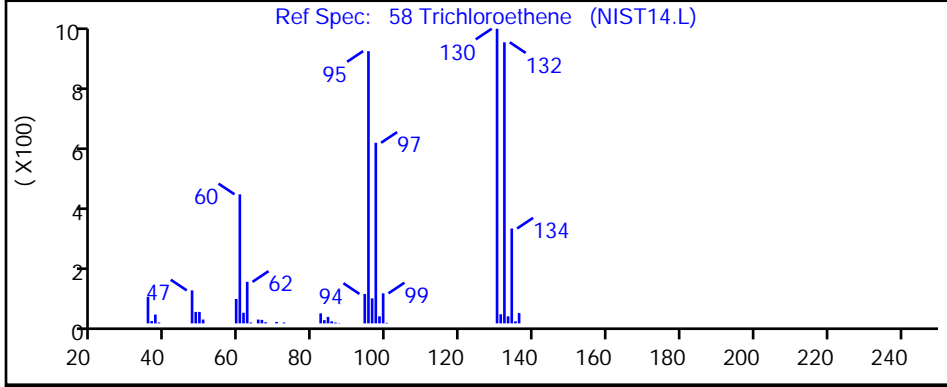
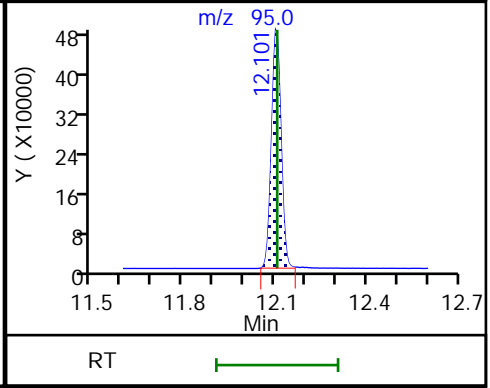
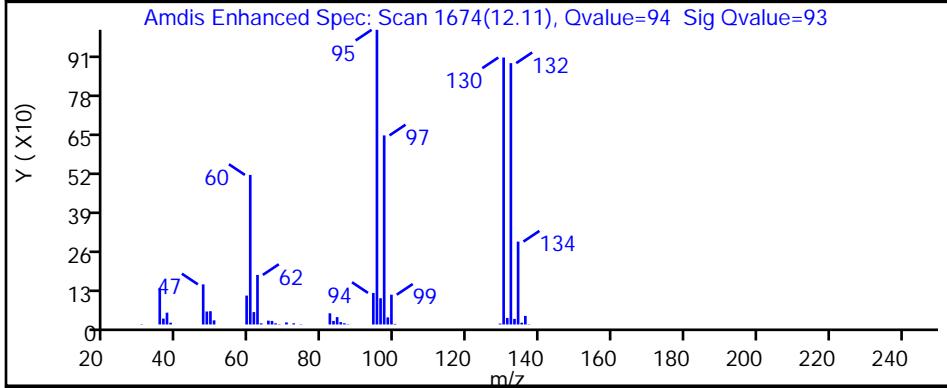
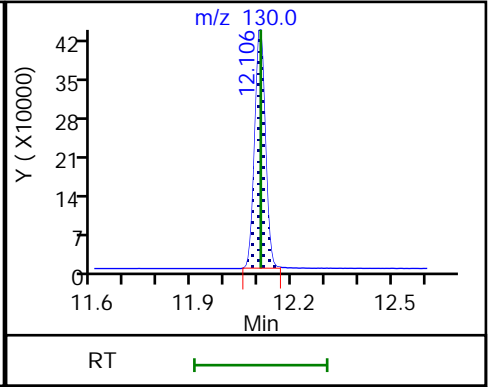
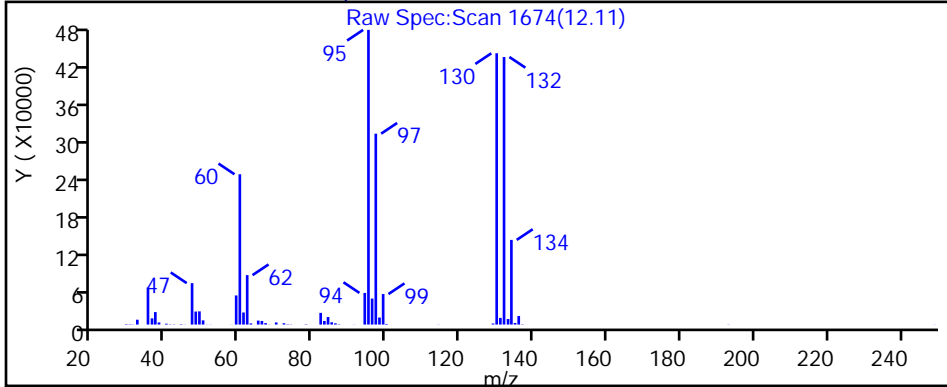
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

58 Trichloroethene, CAS: 79-01-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-081-A-26 Lab Sample ID: 140-14387-18
 Matrix: Air Lab File ID: HB25P116.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 06:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.47		0.40	0.075
67-66-3	Chloroform	119.38	0.33	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.10	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.32	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.90	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.19	J	0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.67		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.46		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	200	E *	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	10		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	5.9		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-081-A-26 Lab Sample ID: 140-14387-18
 Matrix: Air Lab File ID: HB25P116.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 06:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	1.6	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.40	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.3	J	2.7	0.54
108-88-3	Toluene	92.14	5.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.7		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1000	E *	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	50		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	29		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	15		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D
 Lims ID: 140-14387-A-18
 Client ID: SV-081-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 06:43:30 ALS Bottle#: 16 Worklist Smp#: 24
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-024
 Misc. Info.: 140-14387-a-18
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:17:58 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:20:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.814	0.005	95	276557	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1486236	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1262786	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	839686	4.08	
6 Chlorodifluoromethane	51	3.682	3.682	0.000	96	21165	0.0933	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	30624	0.0879	
27 1,1-Dichloroethene	96	5.919	5.919	0.000	97	2150	0.0200	
31 Methylene Chloride	84	6.281	6.271	0.010	98	20276	0.1793	
43 Chloroform	83	8.829	8.824	0.005	31	15782	0.0657	
45 1,1,1-Trichloroethane	97	9.853	9.853	0.000	97	30707	0.1344	
56 Trichloroethene	130	11.713	11.708	0.005	95	13540	0.0913	
65 Toluene	91	13.760	13.760	0.000	93	102528	0.2852	
73 Tetrachloroethene	129	14.897	14.897	0.000	94	5592	0.0382	
76 Ethylbenzene	91	16.060	16.060	0.000	99	29059	0.0635	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	124297	0.3522	
82 o-Xylene	91	16.747	16.752	-0.005	98	122391	0.3405	
89 1,3,5-Trimethylbenzene	120	18.132	18.106	-0.026	92	246456	1.18	
93 1,2,4-Trimethylbenzene	105	18.587	18.613	-0.026	99	844282	2.05	
99 1,2,3-Trimethylbenzene	105	19.078	19.099	-0.021	94	16436061	40.7	Ee
S 121 Xylenes, Total	100				0		0.6927	

QC Flag Legend

Processing Flags

- E - Exceeded Maximum Amount
- e - Potential Peak Saturated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Worklist Smp#: 24

Client ID: SV-081-A-26

Purge Vol: 500.000 mL

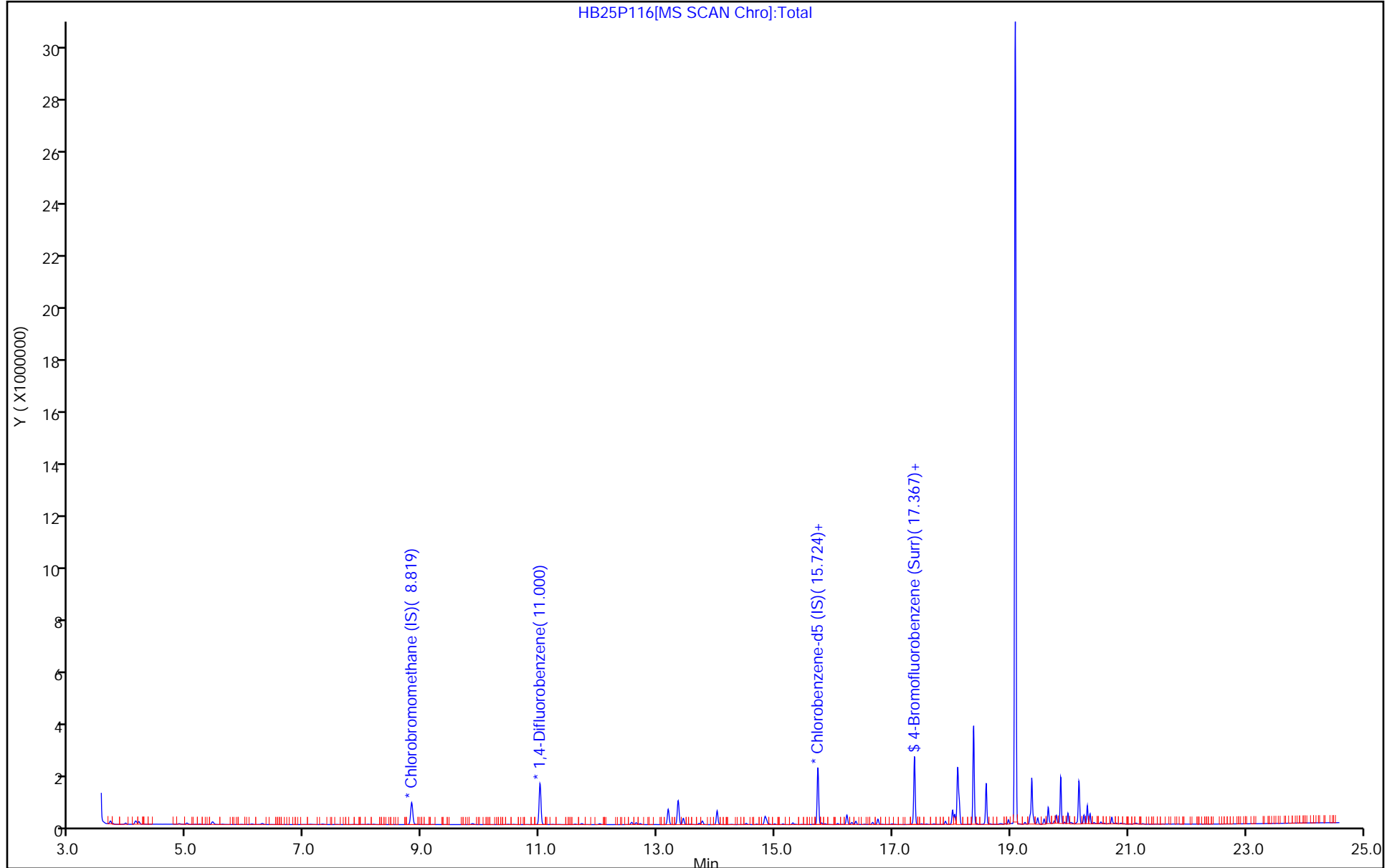
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D
 Lims ID: 140-14387-A-18
 Client ID: SV-081-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 06:43:30 ALS Bottle#: 16 Worklist Smp#: 24
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-024
 Misc. Info.: 140-14387-a-18
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:17:58 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:20:28

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.08	102.01

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

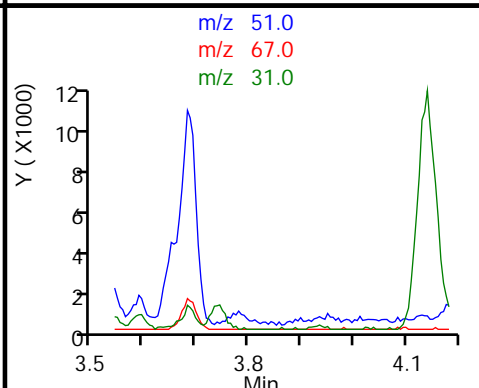
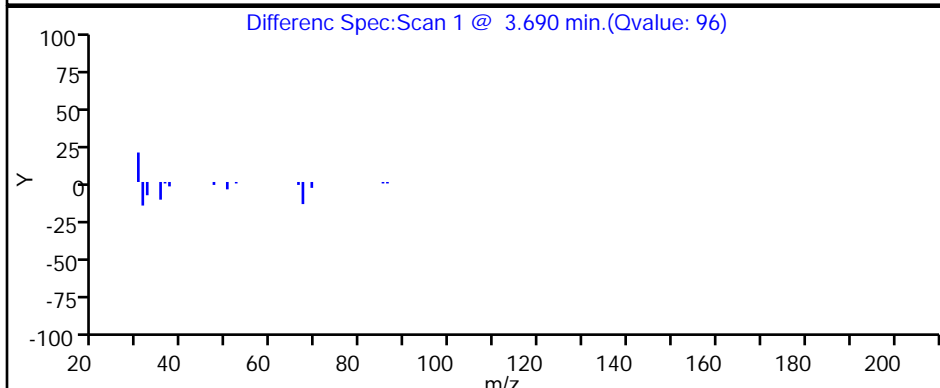
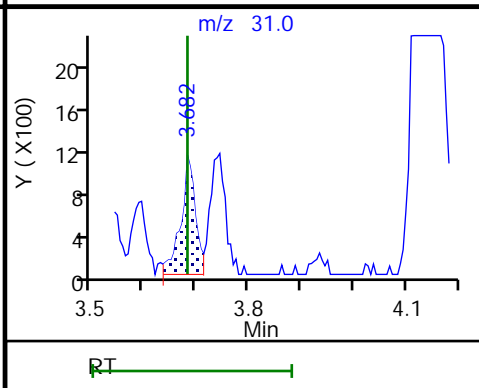
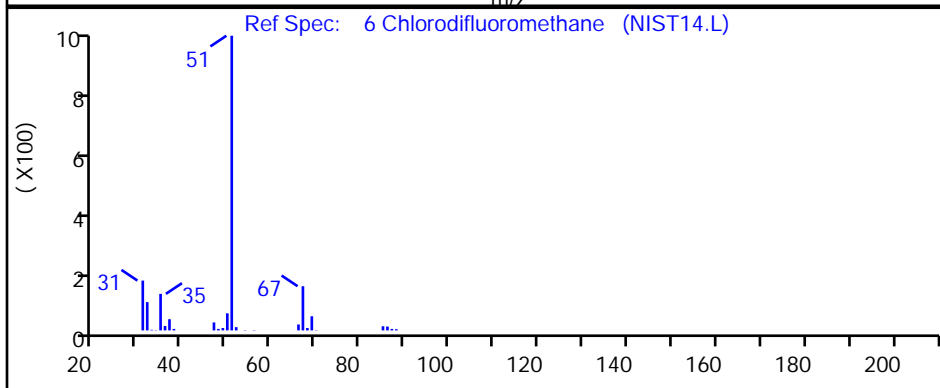
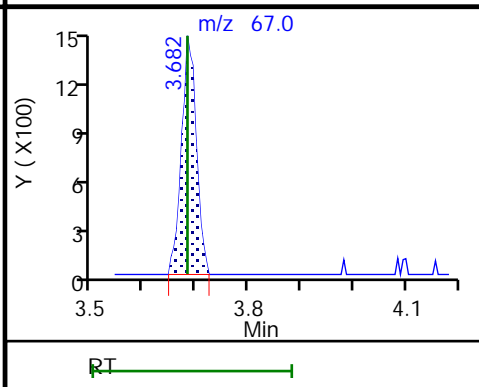
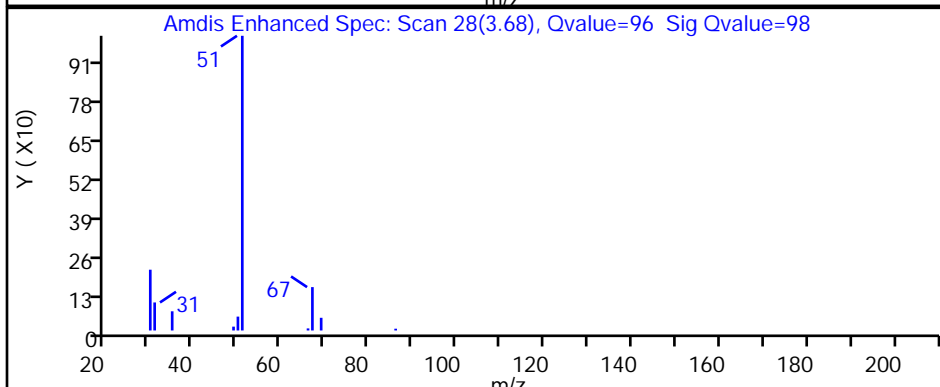
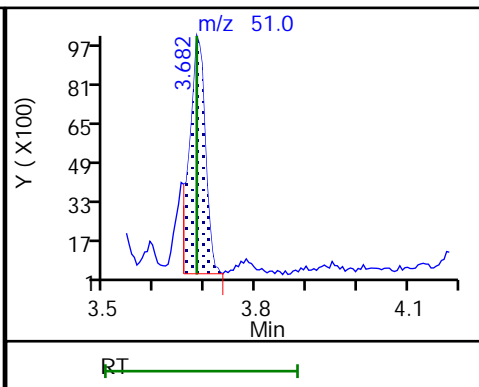
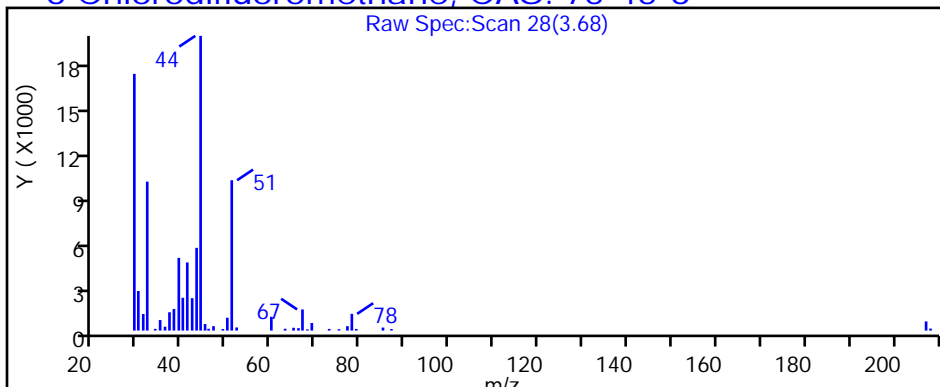
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

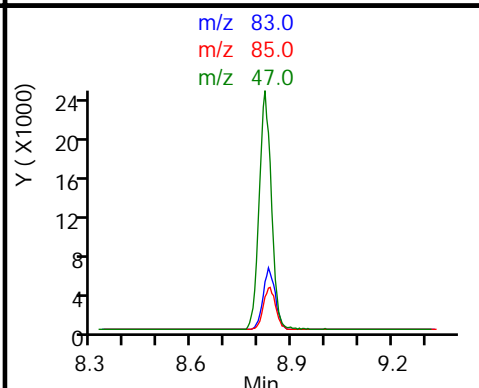
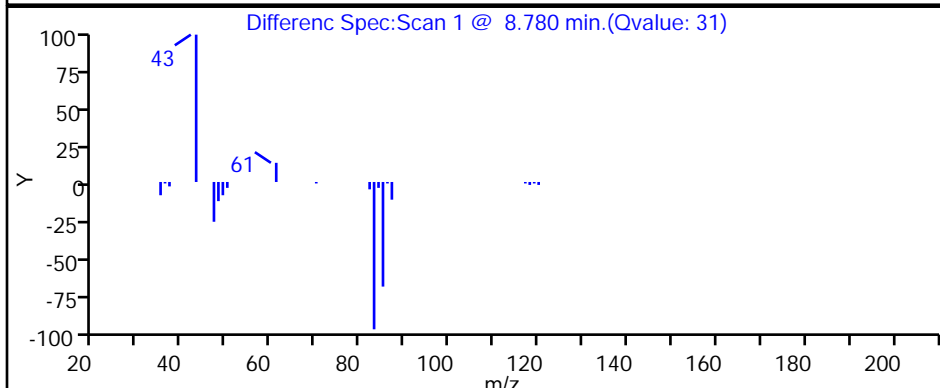
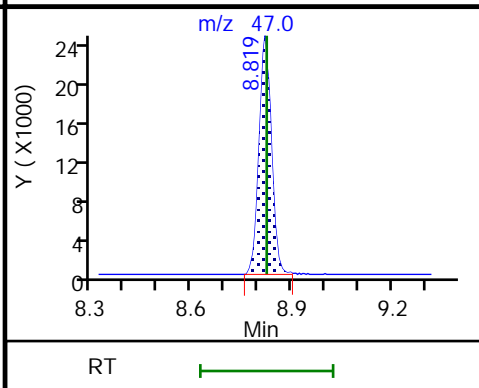
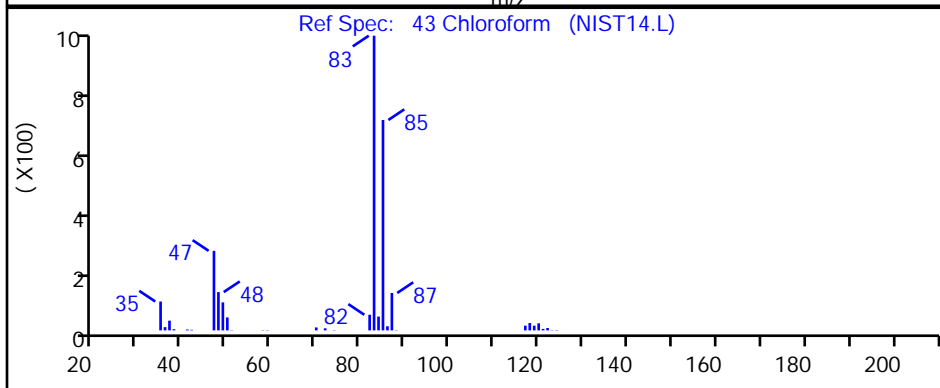
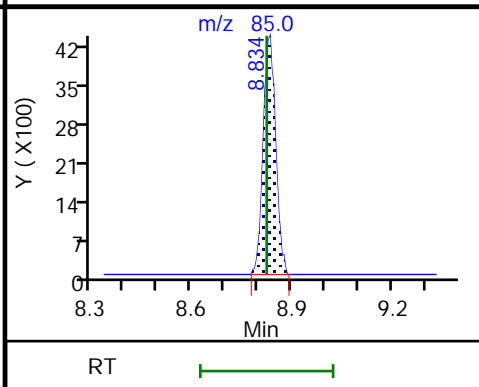
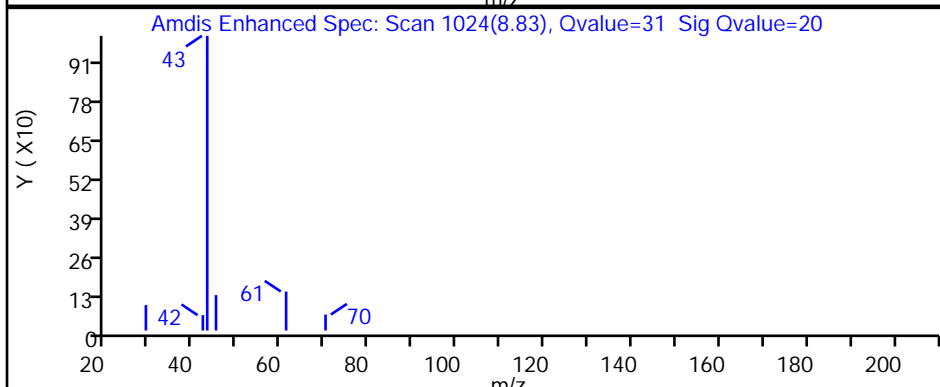
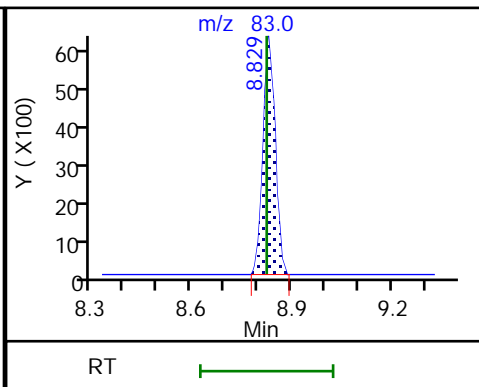
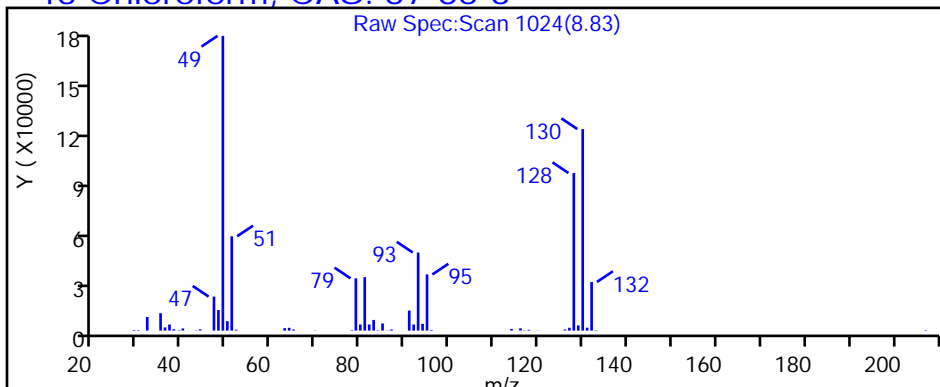
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

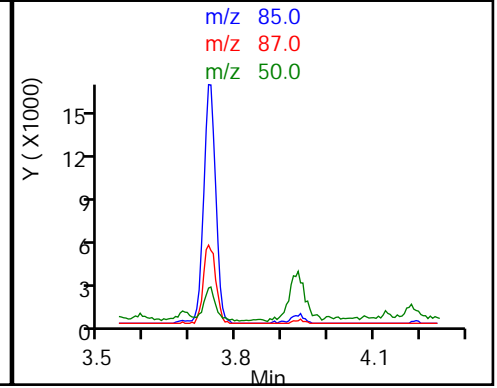
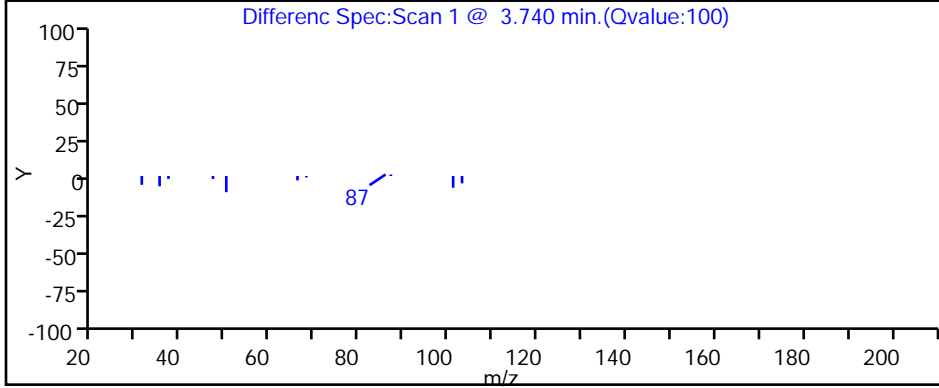
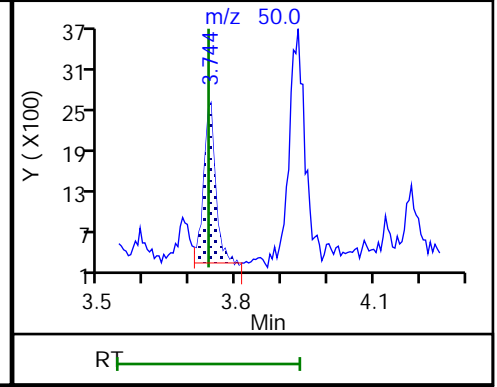
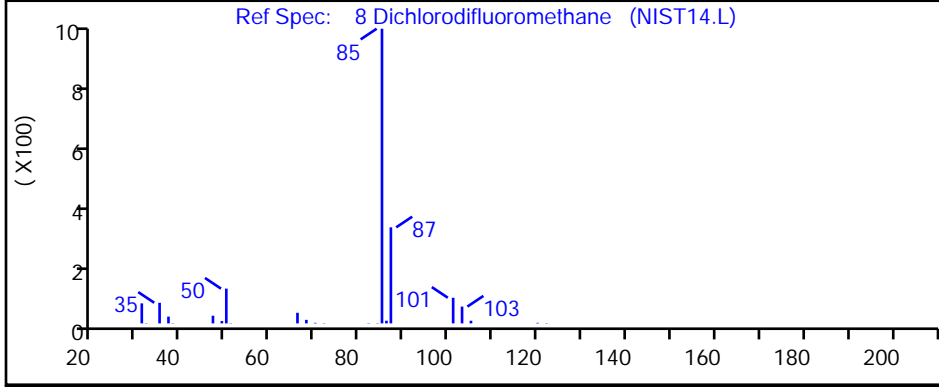
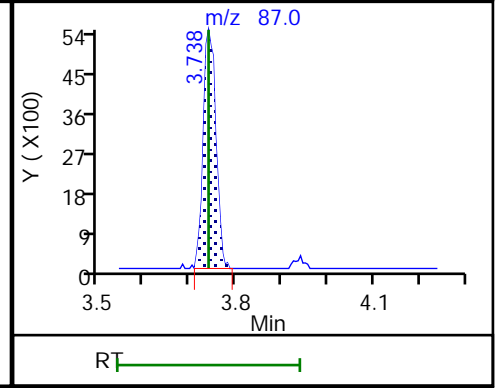
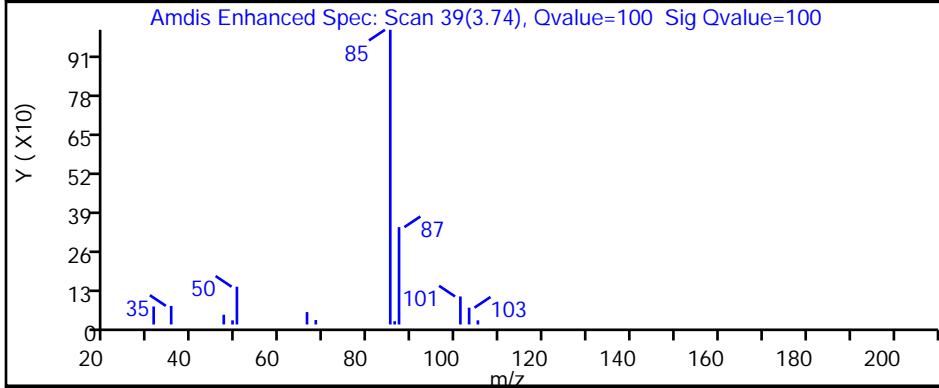
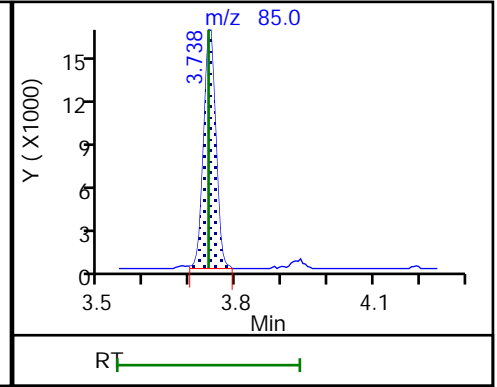
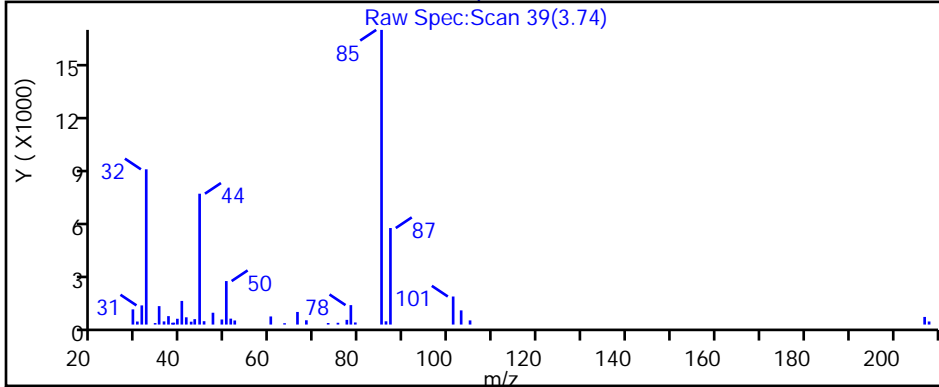
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

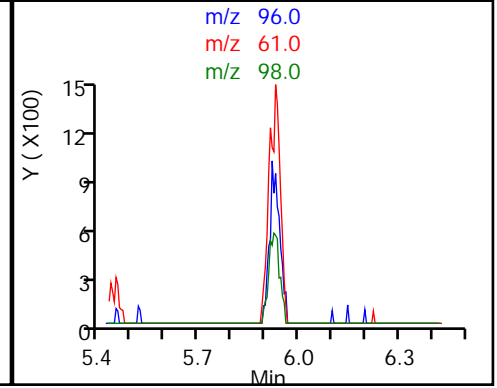
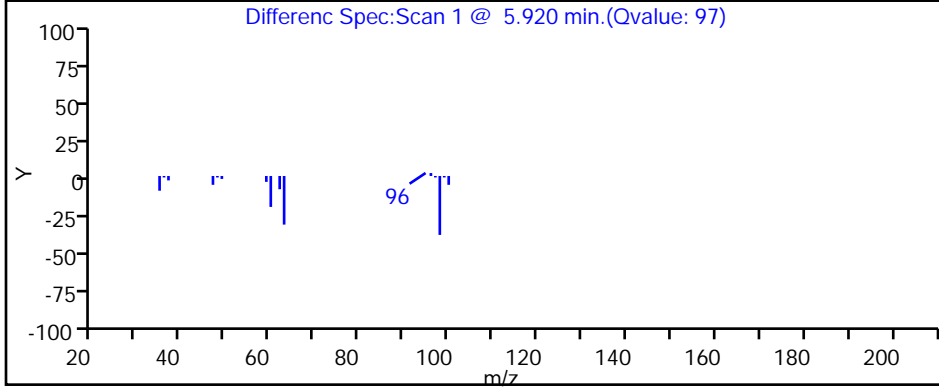
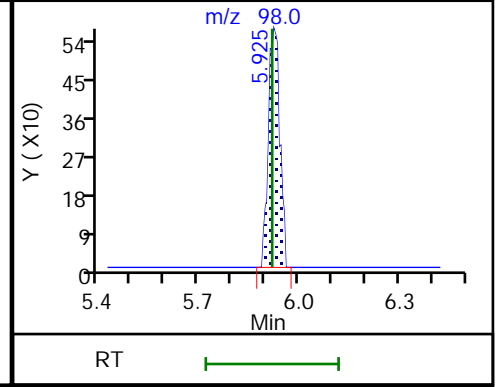
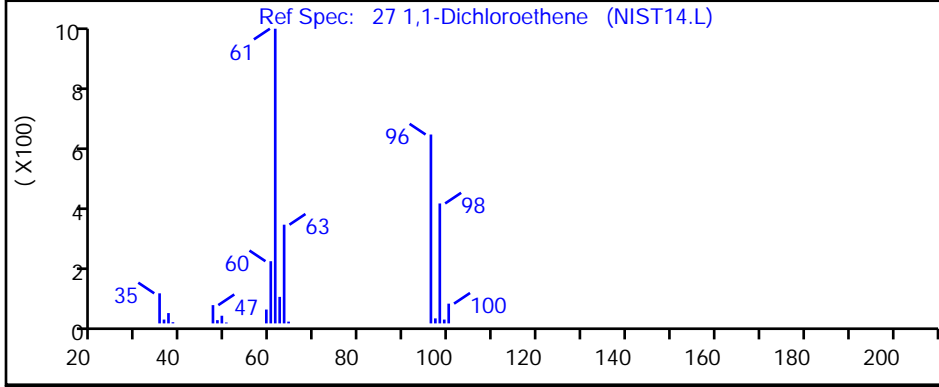
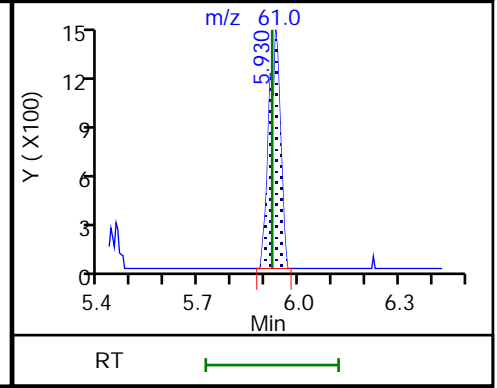
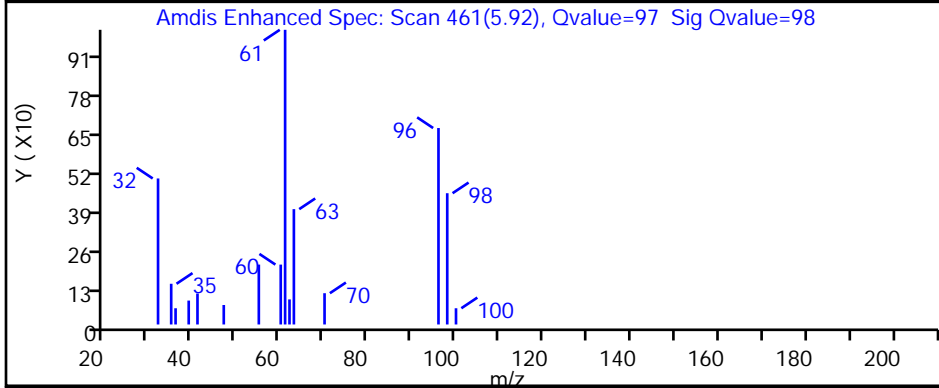
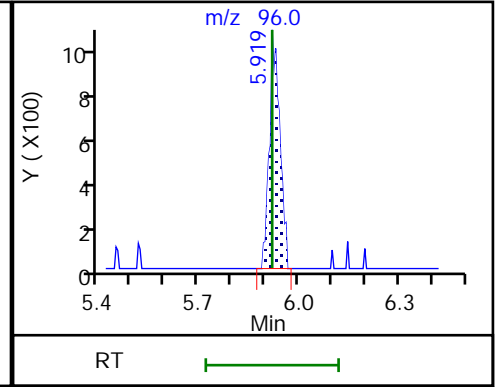
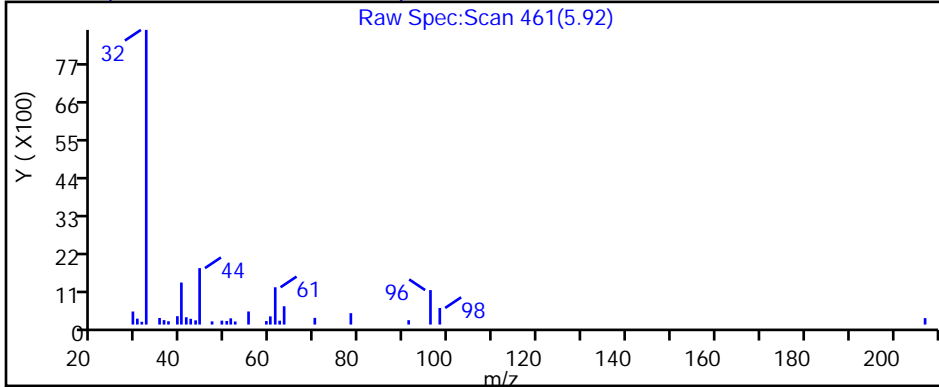
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

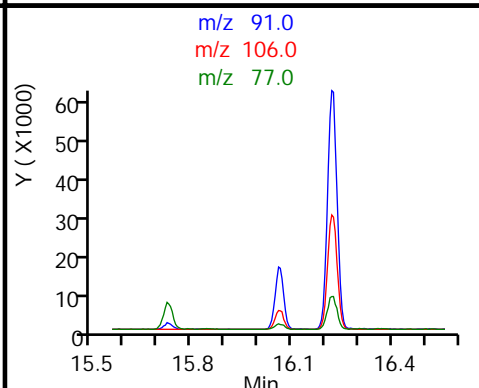
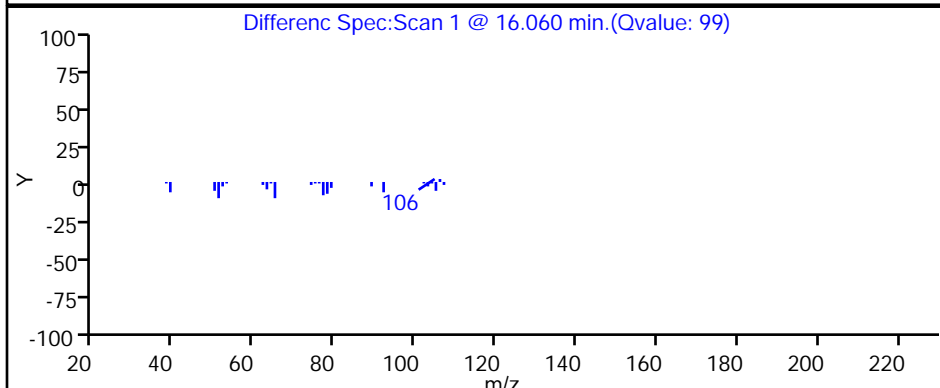
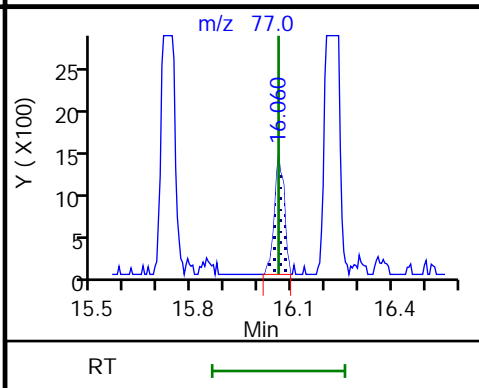
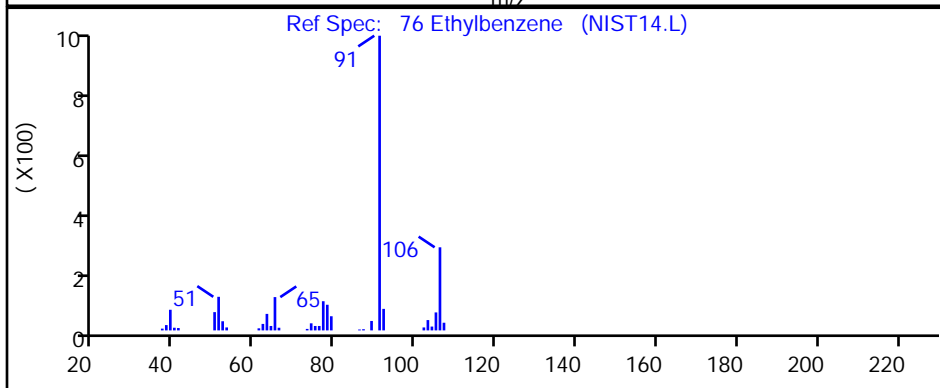
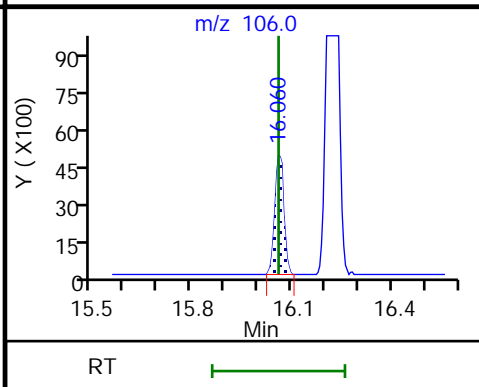
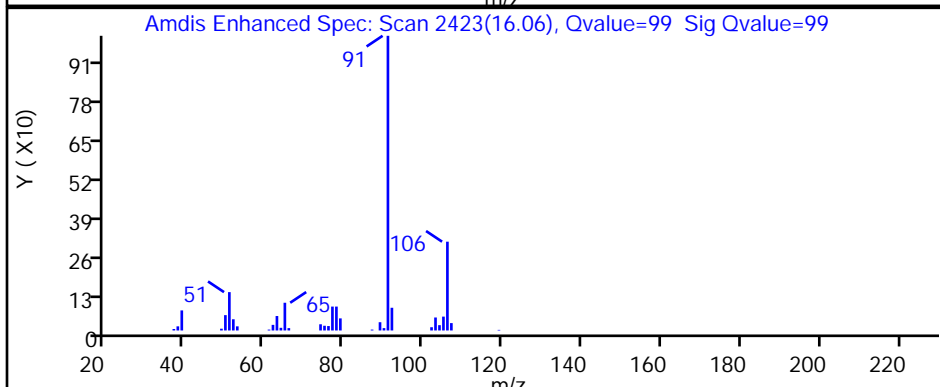
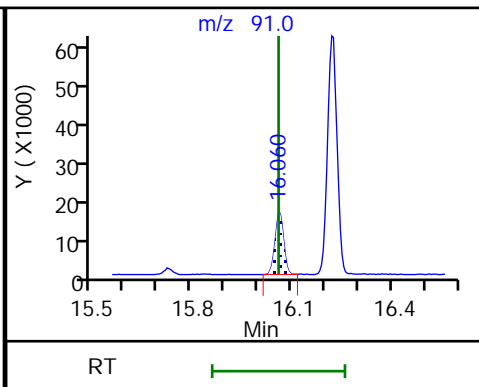
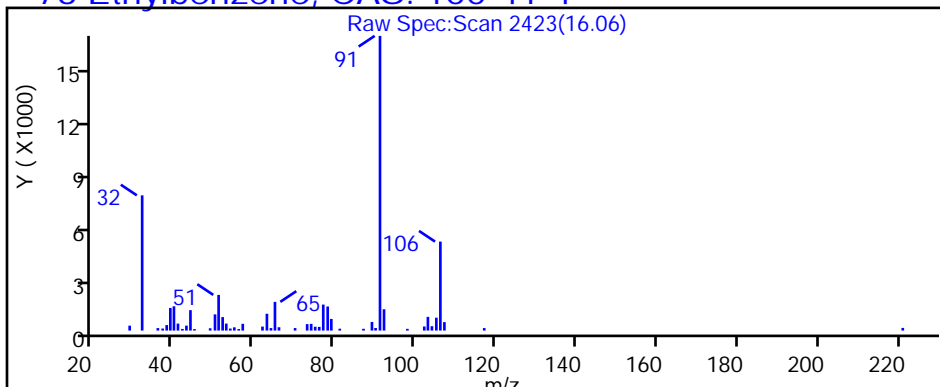
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

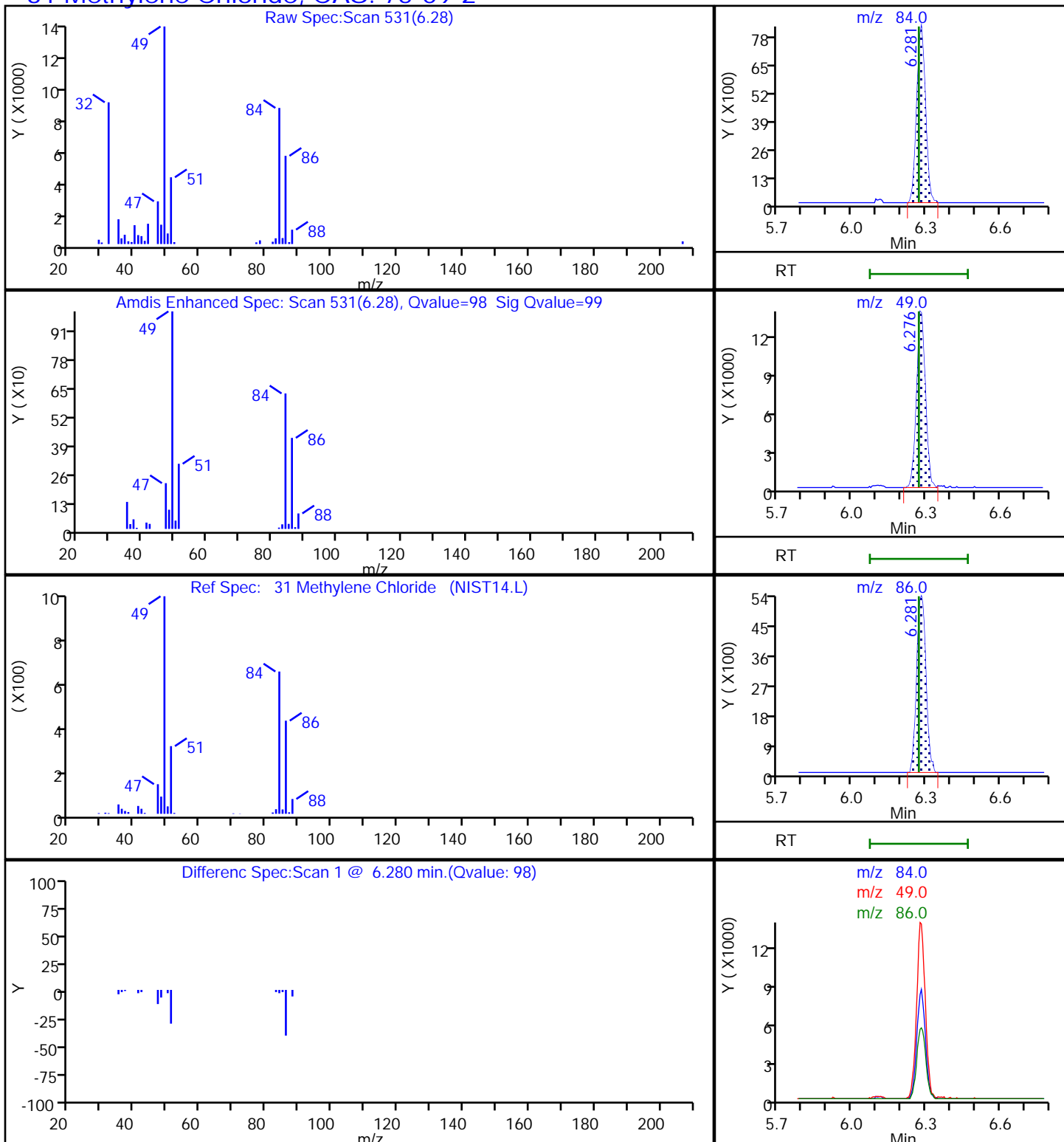
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

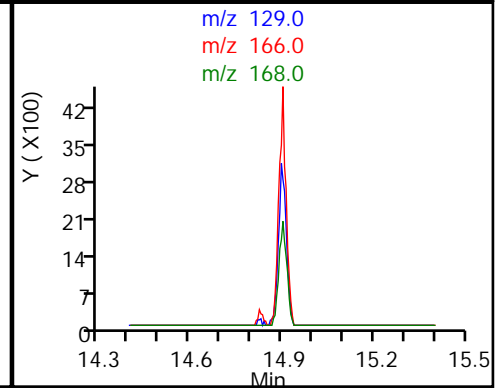
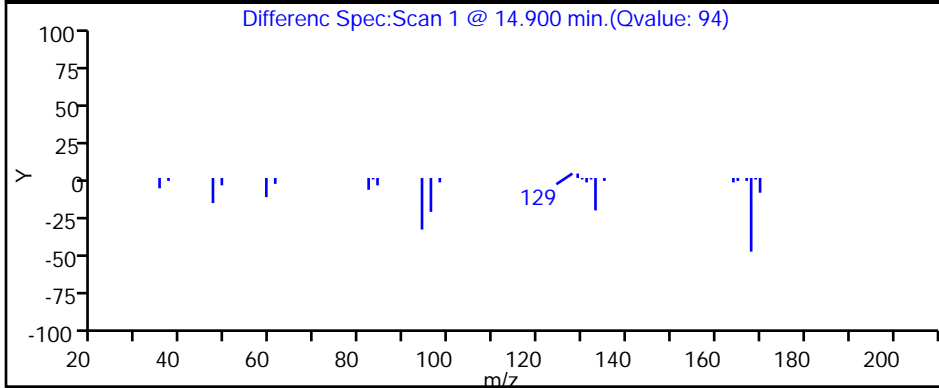
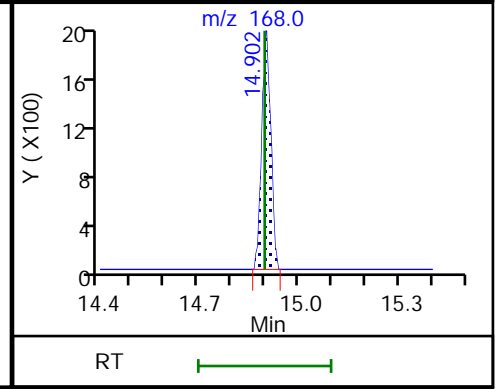
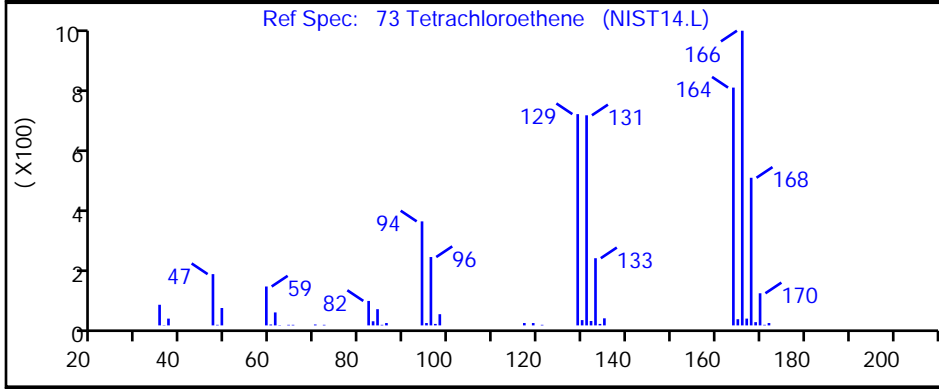
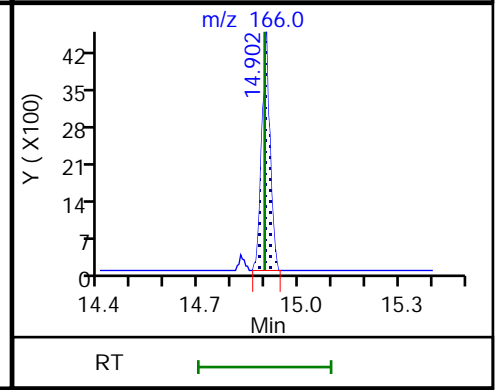
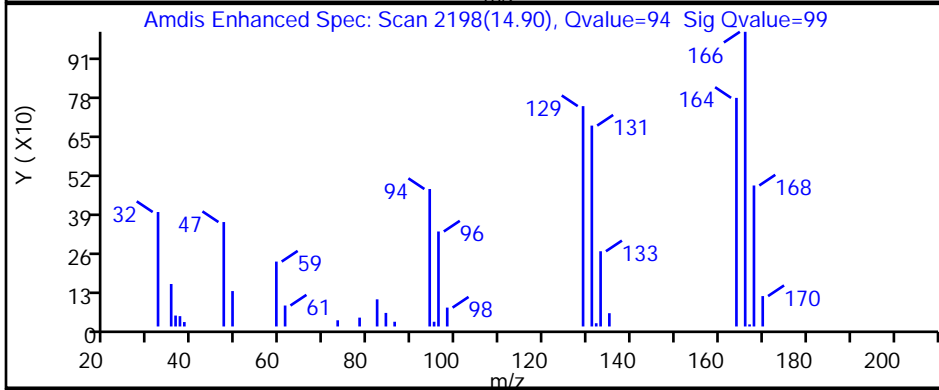
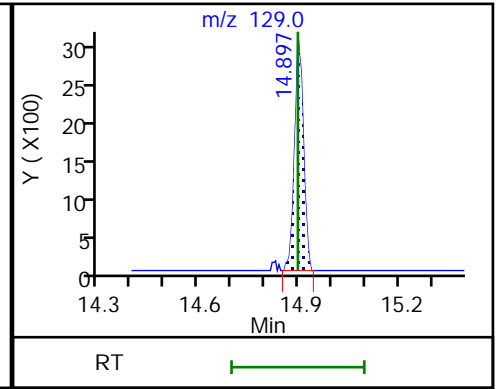
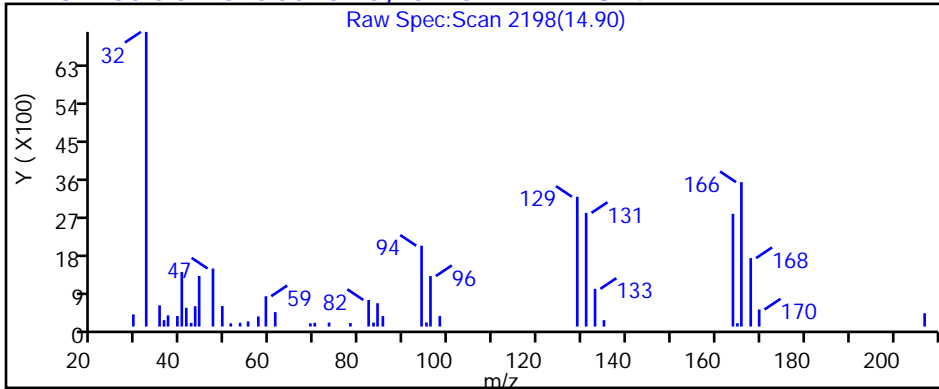
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

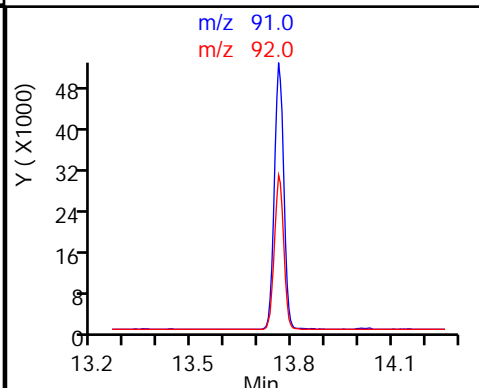
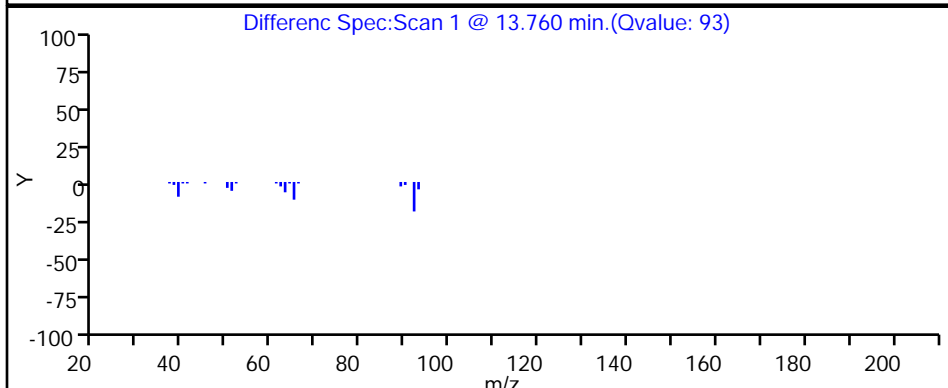
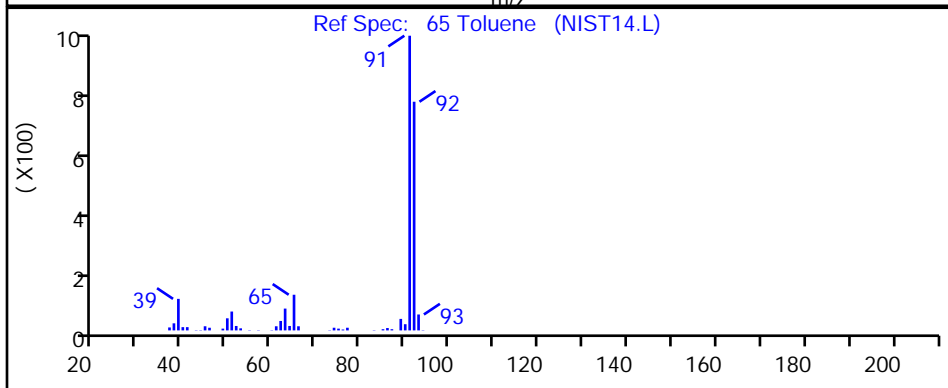
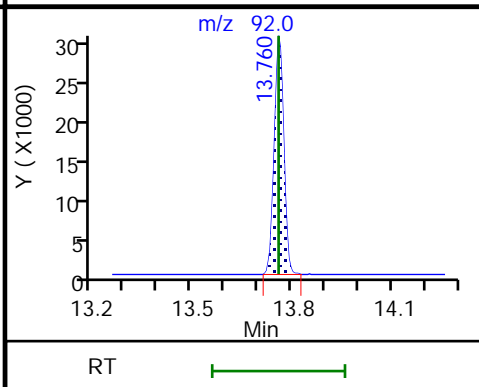
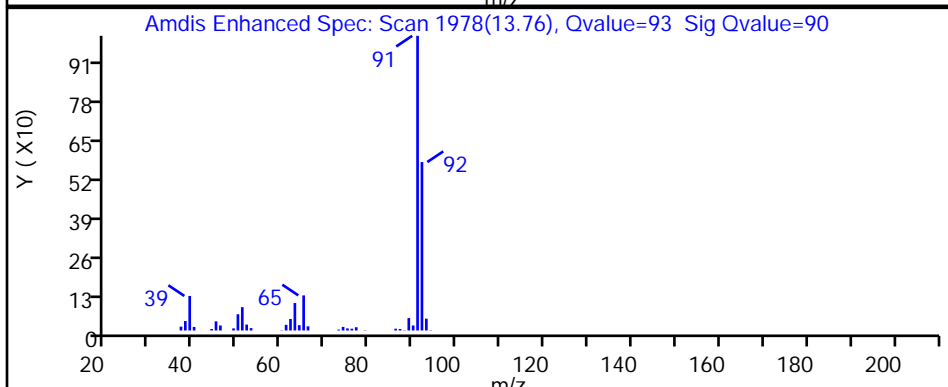
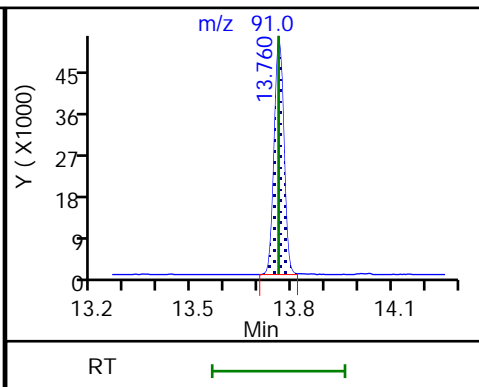
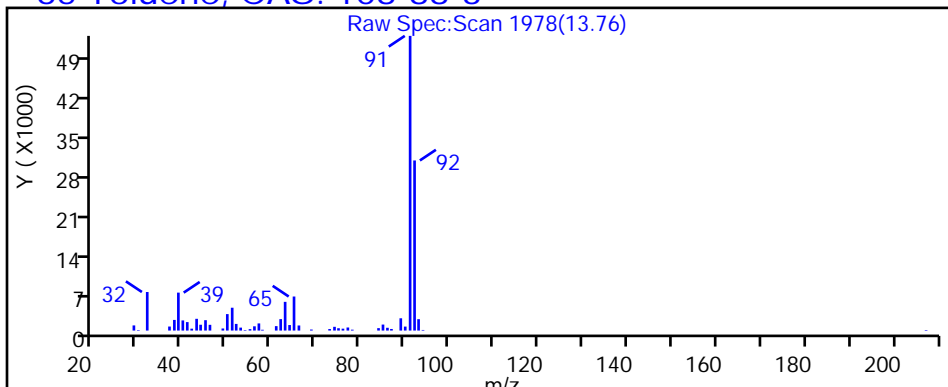
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

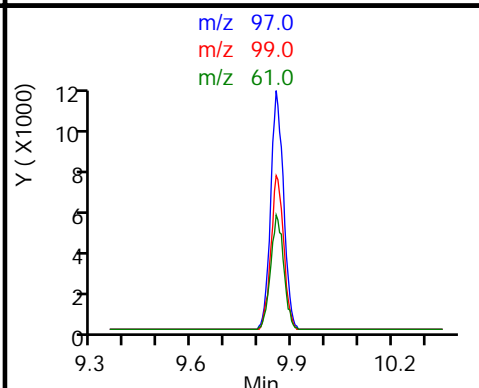
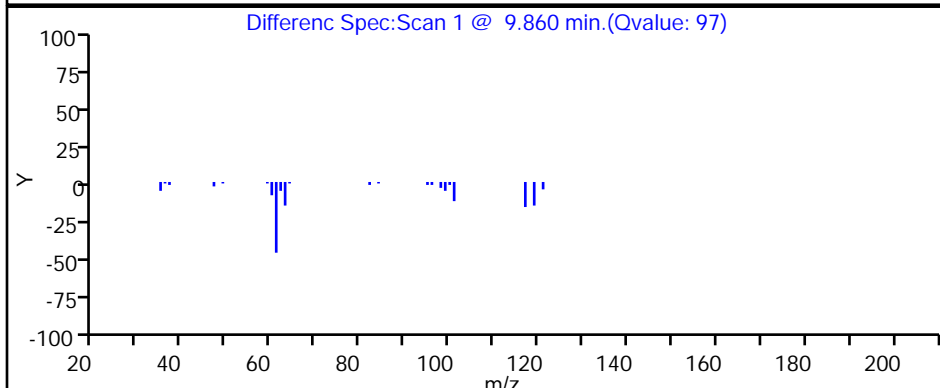
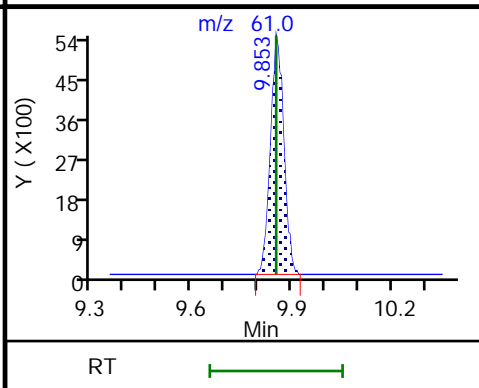
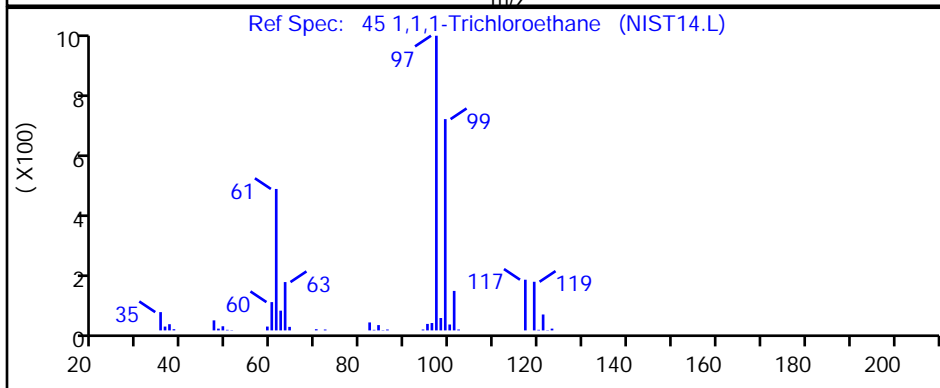
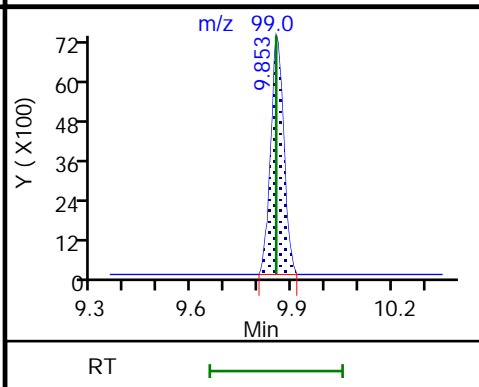
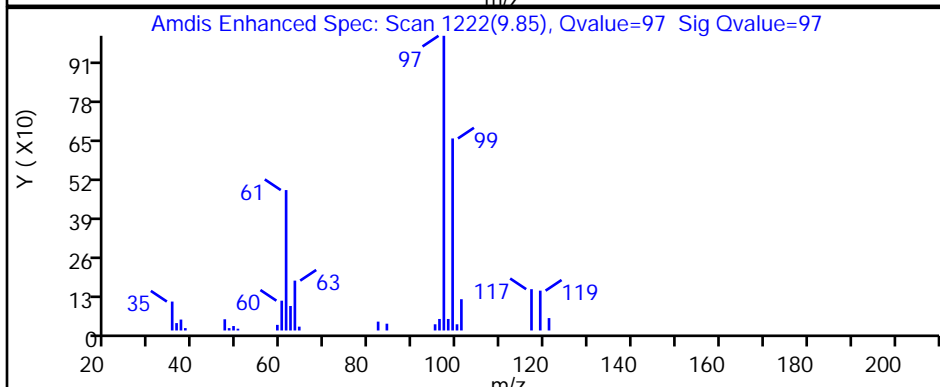
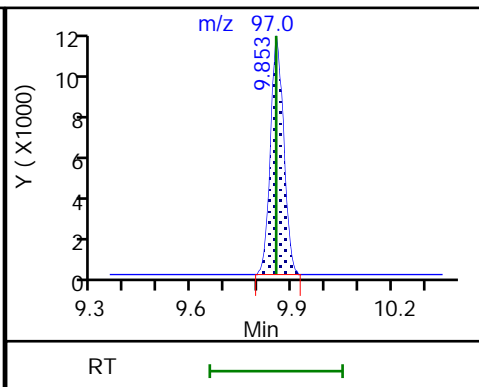
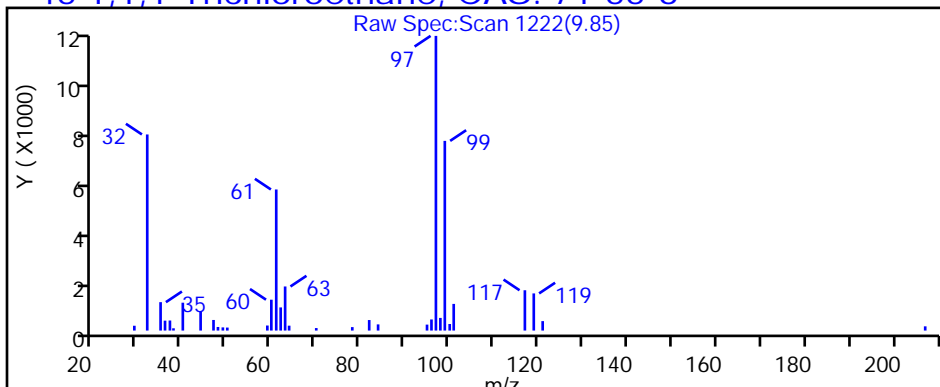
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

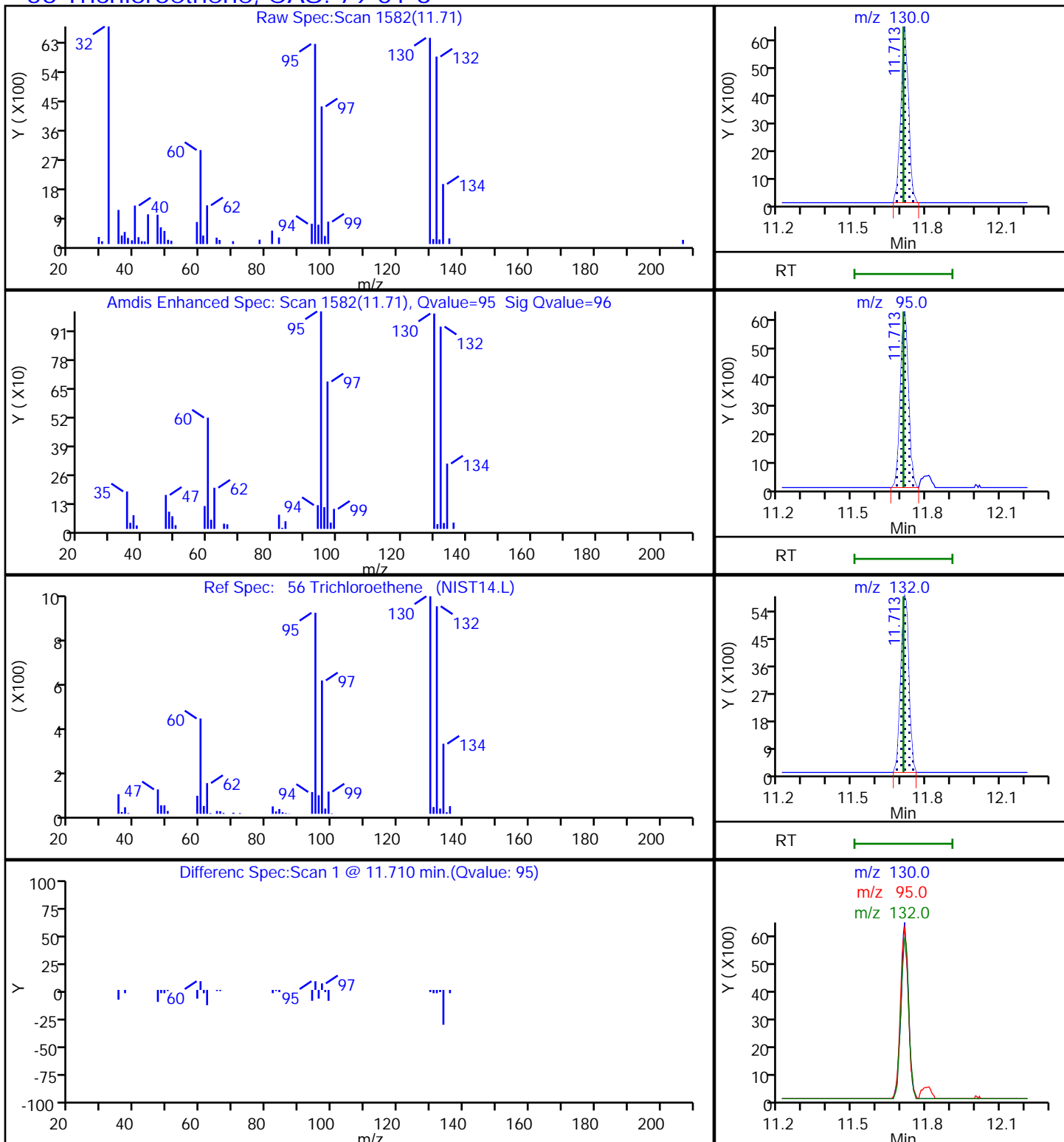
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MH_TO15

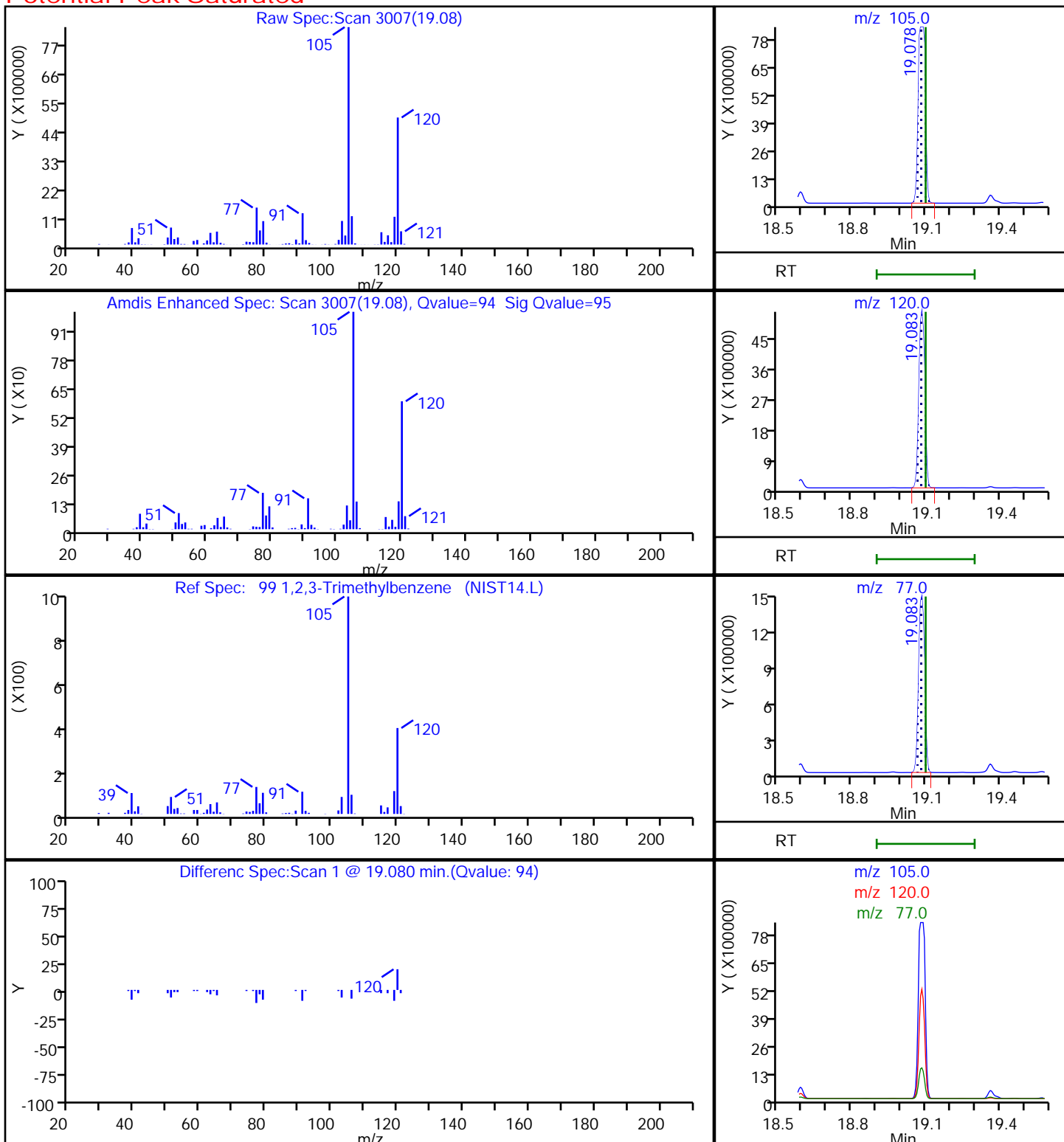
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

99 1,2,3-Trimethylbenzene, CAS: 526-73-8

Potential Peak Saturated



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

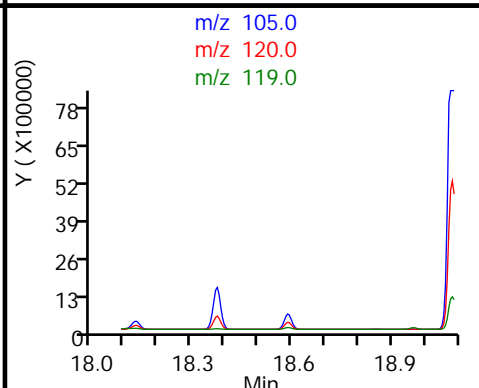
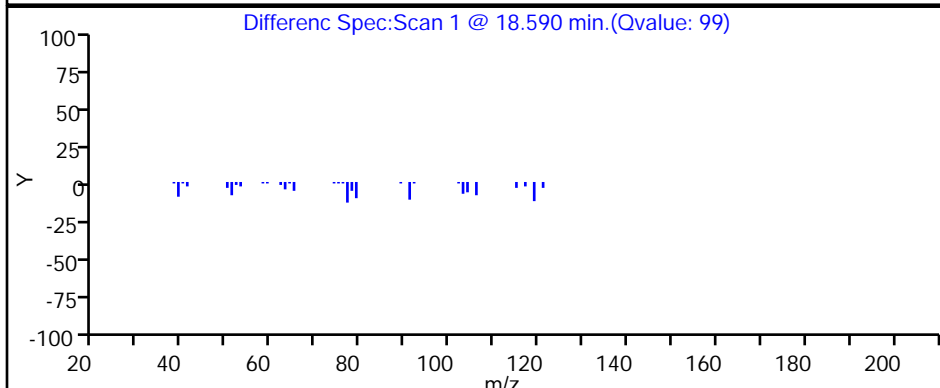
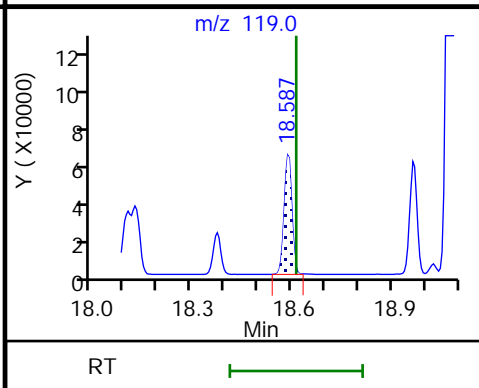
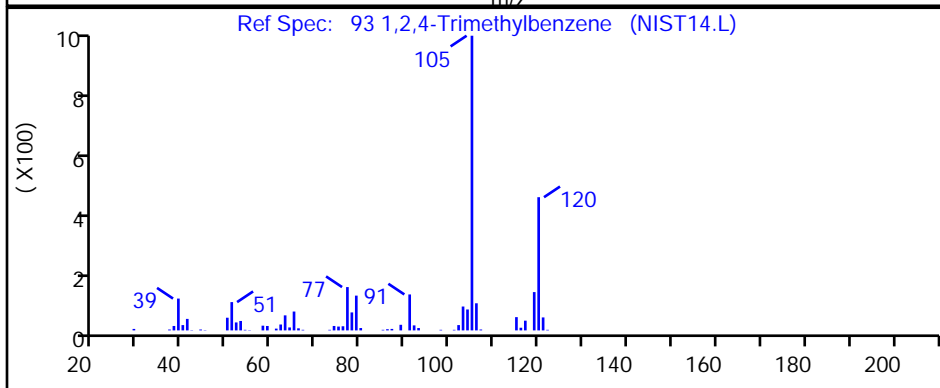
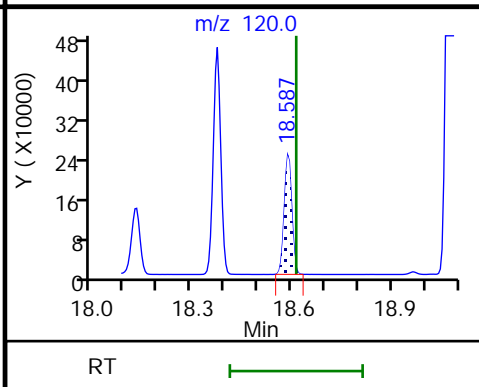
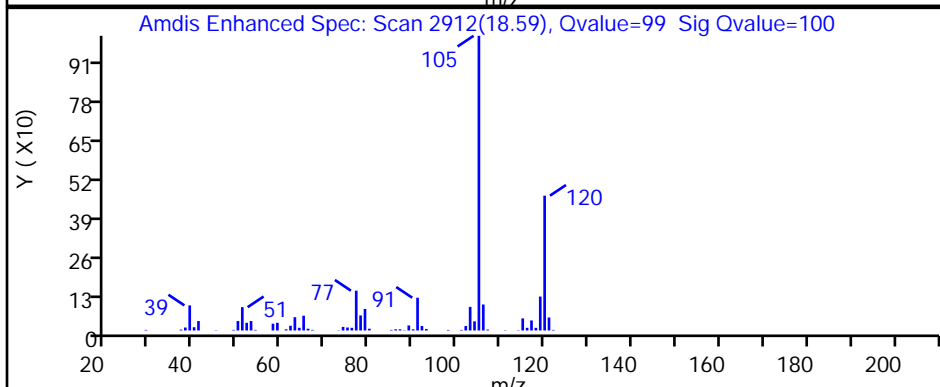
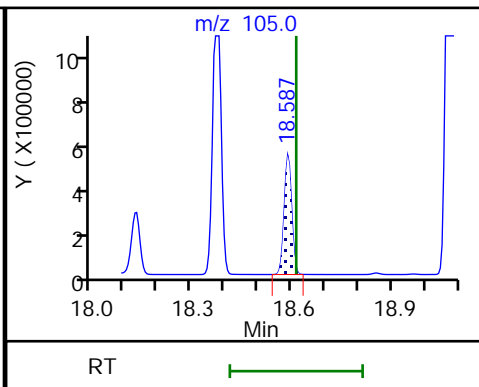
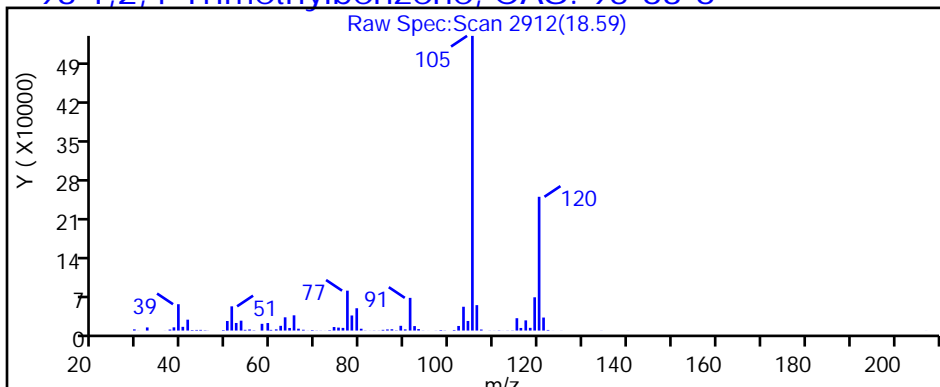
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

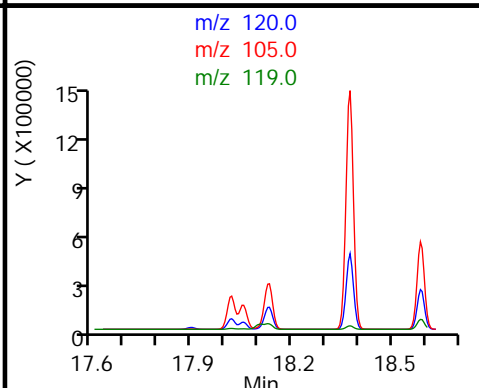
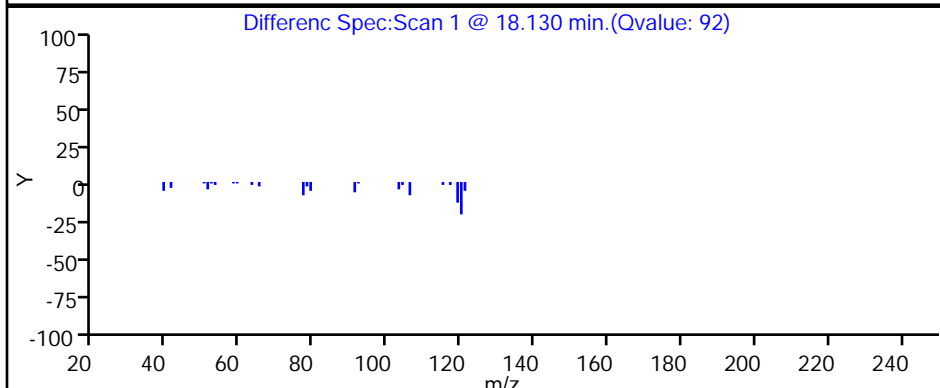
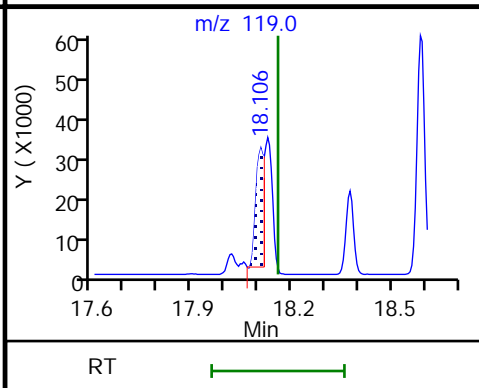
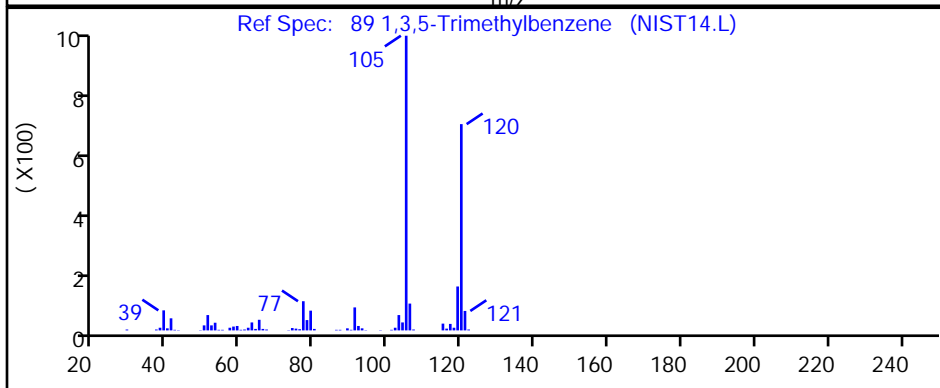
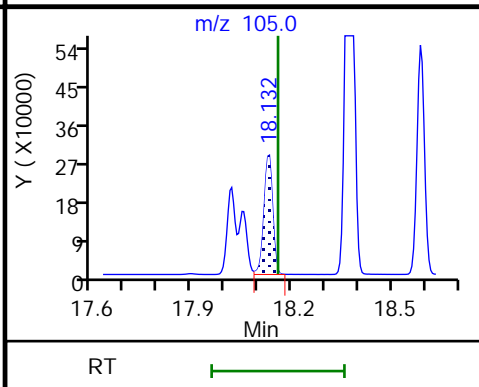
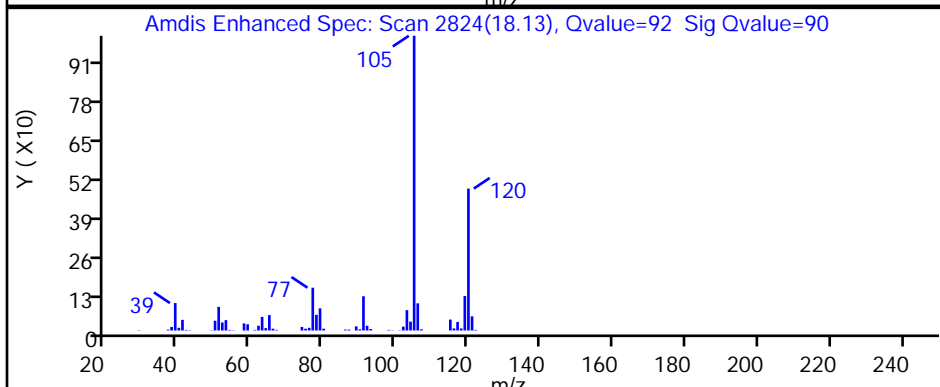
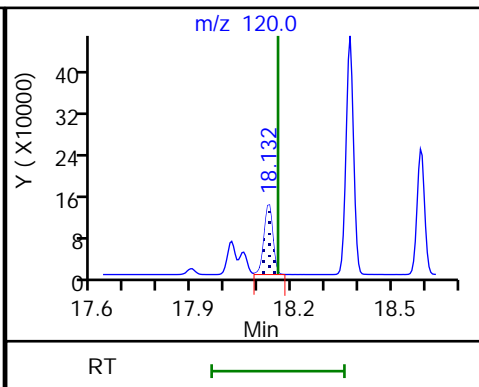
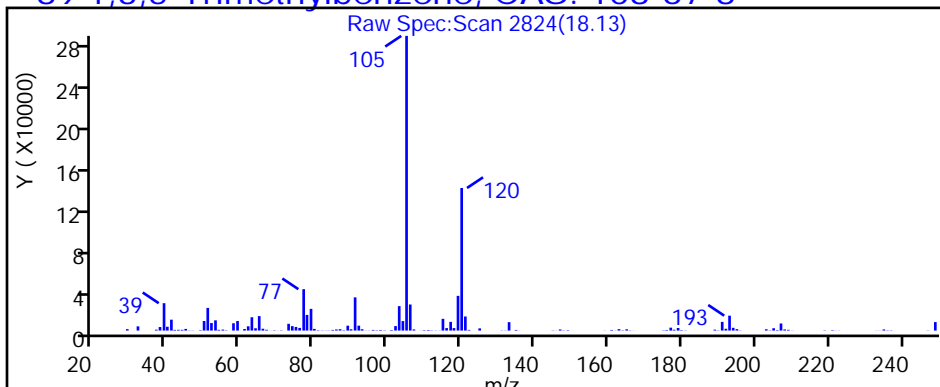
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

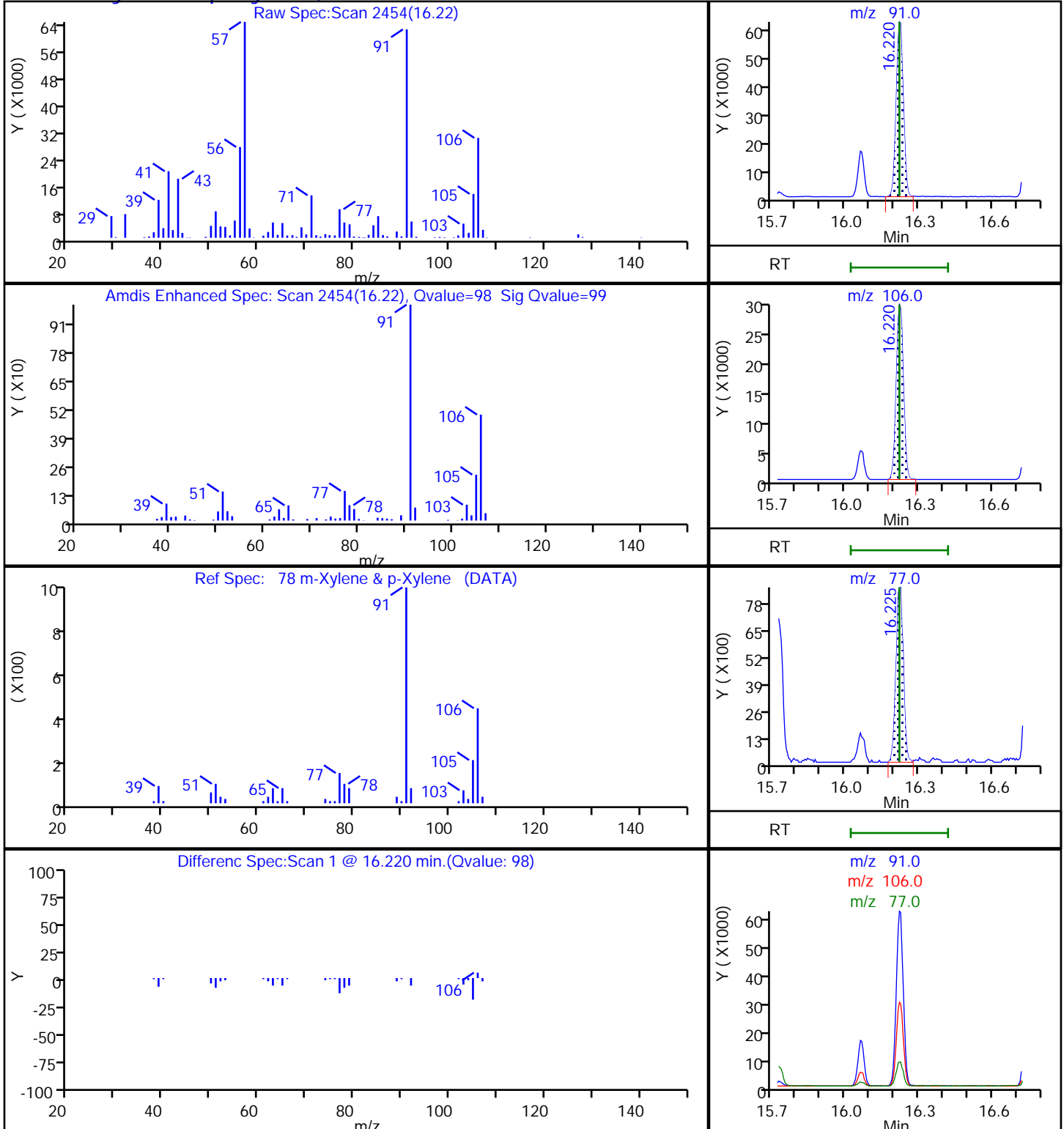
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P116.D

Injection Date: 26-Feb-2019 06:43:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 24

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

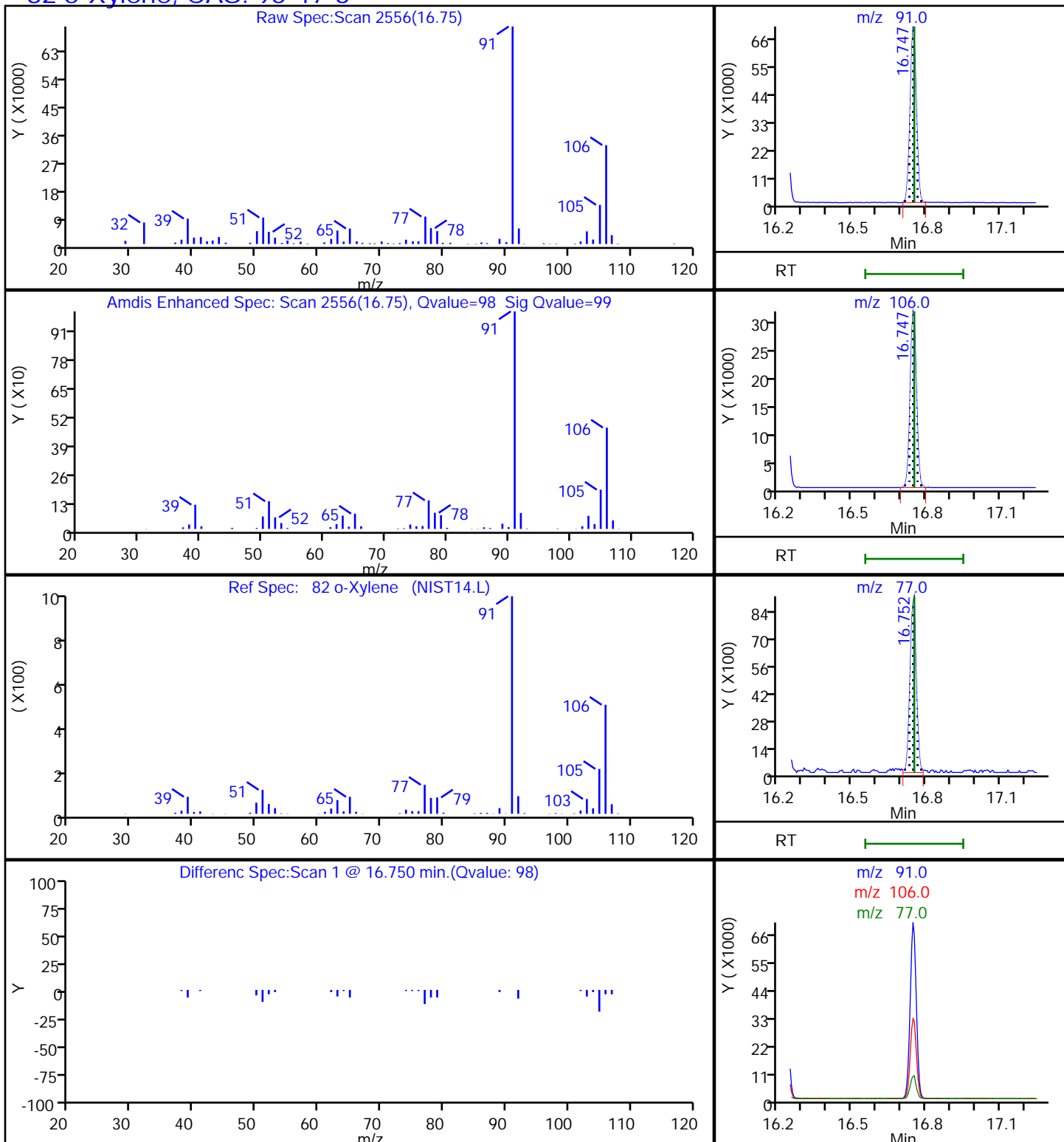
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-081-A-26 DL Lab Sample ID: 140-14387-18 DL
 Matrix: Air Lab File ID: HB27P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:34
 Sample wt/vol: 10 (mL) Date Analyzed: 02/28/2019 06:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	120.19	110		4.0	1.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-081-A-26 DL Lab Sample ID: 140-14387-18 DL
 Matrix: Air Lab File ID: HB27P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:34
 Sample wt/vol: 10 (mL) Date Analyzed: 02/28/2019 06:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	120.19	550		20	8.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P115.D
 Lims ID: 140-14387-A-18
 Client ID: SV-081-A-26
 Sample Type: Client
 Inject. Date: 28-Feb-2019 06:06:30 ALS Bottle#: 15 Worklist Smp#: 23
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-023
 Misc. Info.: 140-14387-a-18
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 19:01:51 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 19:12:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.814	0.010	96	285504	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1527887	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1270622	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.368	17.404	-0.030	94	810868	3.92	
56 Trichloroethene	130	11.724	11.714	0.016	92	2736	0.0179	
89 1,3,5-Trimethylbenzene	120	18.127	18.127	-0.031	92	17986	0.1110	
93 1,2,4-Trimethylbenzene	105	18.587	18.619	-0.026	99	40930	0.0989	
99 1,2,3-Trimethylbenzene	105	19.078	19.105	-0.021	99	909616	2.24	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P115.D

Injection Date: 28-Feb-2019 06:06:30

Instrument ID: MH

Operator ID: AFB

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Worklist Smp#: 23

Client ID: SV-081-A-26

Purge Vol: 500.000 mL

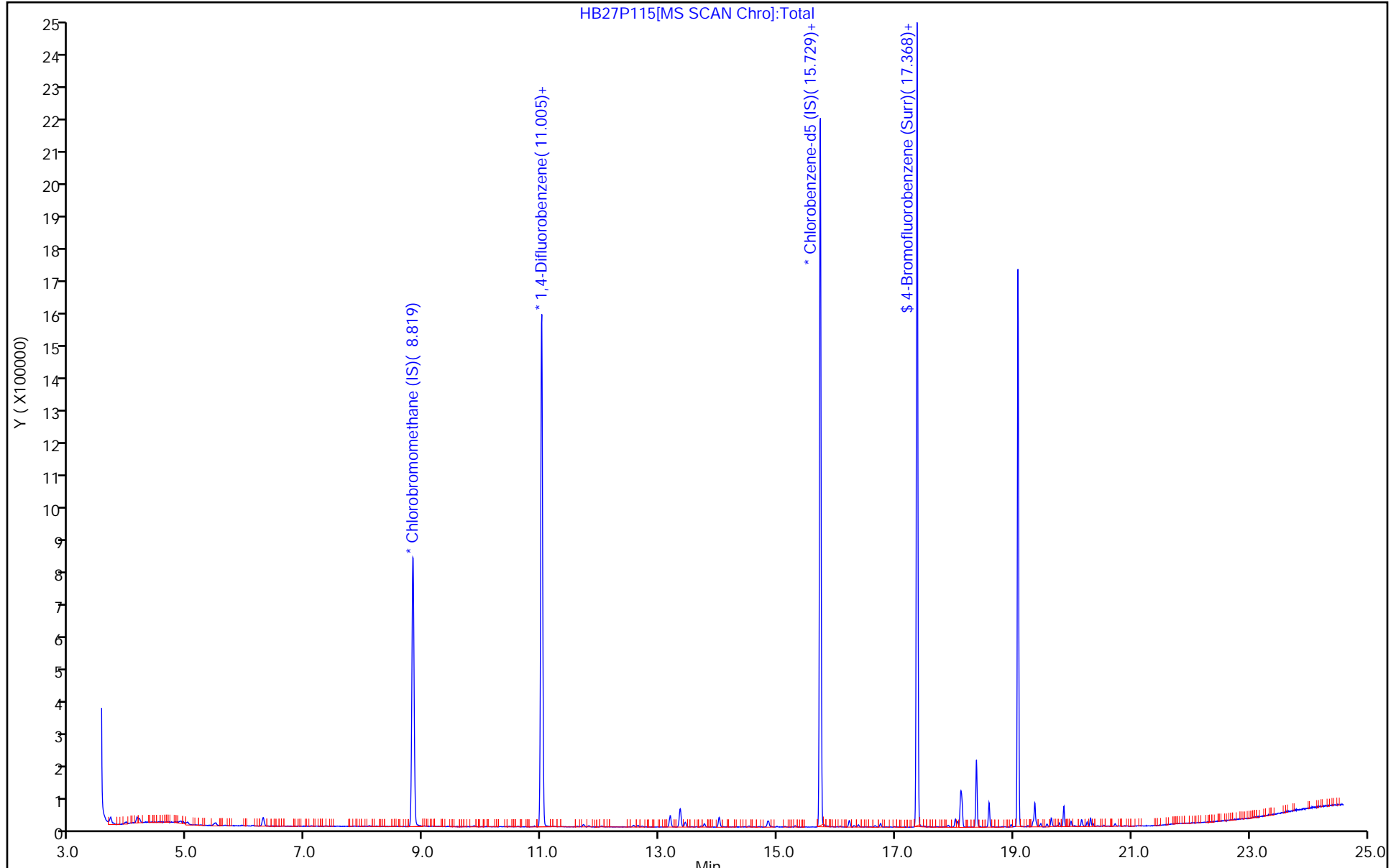
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P115.D
 Lims ID: 140-14387-A-18
 Client ID: SV-081-A-26
 Sample Type: Client
 Inject. Date: 28-Feb-2019 06:06:30 ALS Bottle#: 15 Worklist Smp#: 23
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-023
 Misc. Info.: 140-14387-a-18
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 19:01:51 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 19:12:56

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.92	97.91

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P115.D

Injection Date: 28-Feb-2019 06:06:30

Instrument ID: MH

Lims ID: 140-14387-A-18

Lab Sample ID: 140-14387-18

Client ID: SV-081-A-26

Operator ID: AFB

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

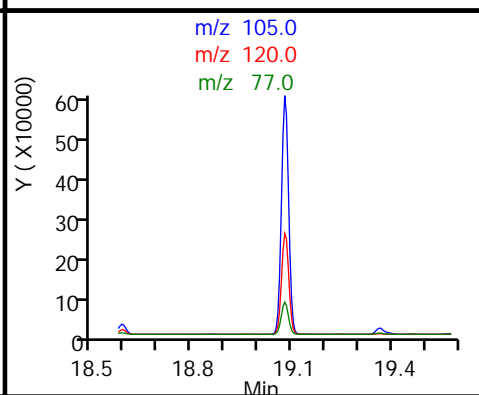
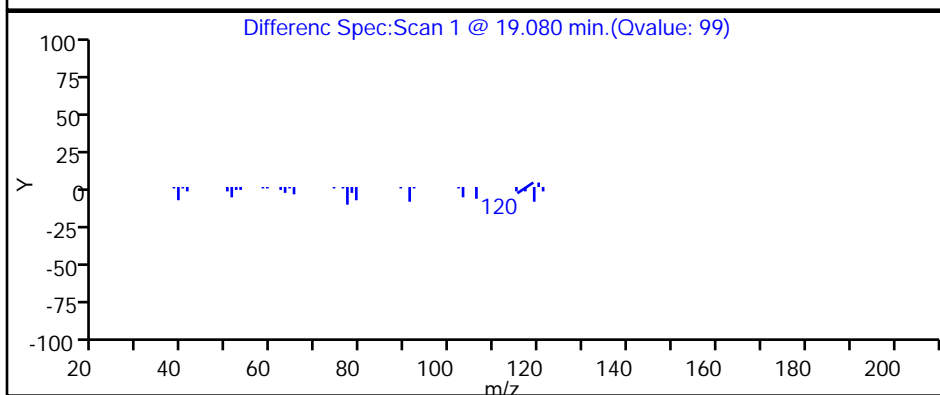
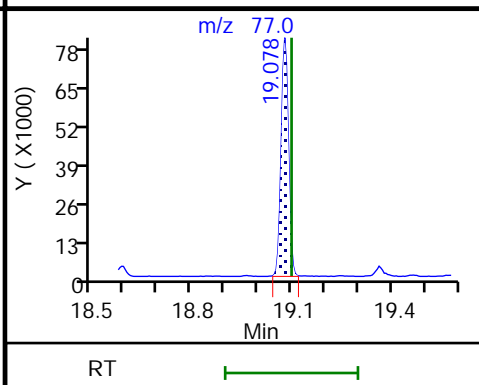
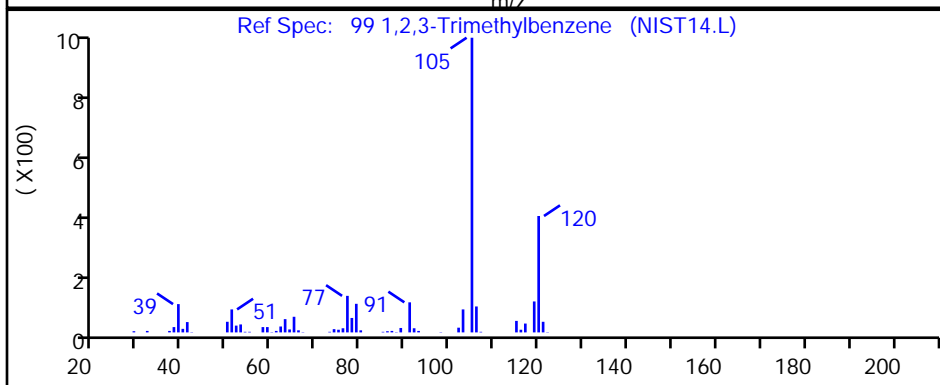
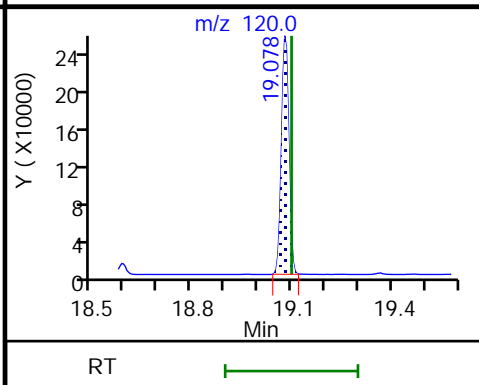
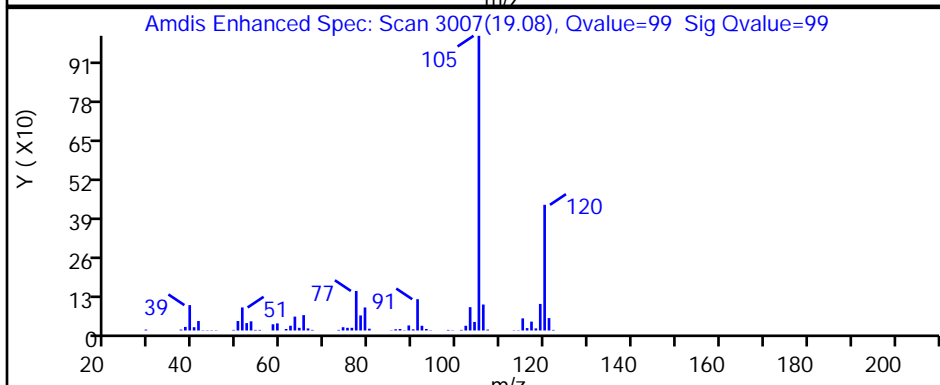
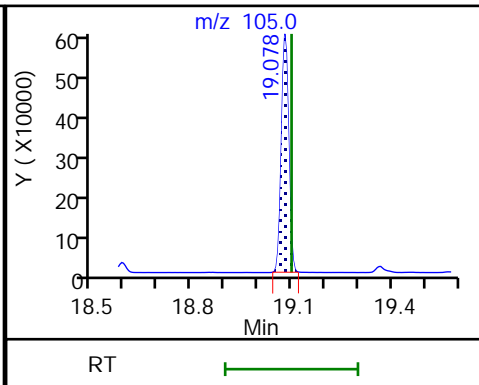
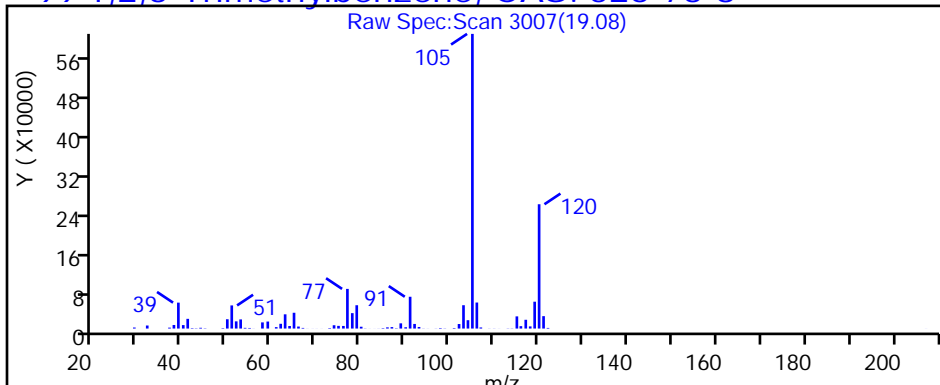
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

99 1,2,3-Trimethylbenzene, CAS: 526-73-8



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.9523	2.7653	2.6769	Ave		2.6204			9.0		30.0				
	2.4796	2.3672	2.3873	2.9026	2.4316												
Propene	+++++	+++++	+++++	1.8011	1.4915	Ave		1.4631			12.5		30.0				
	1.4104	1.3267	1.3362	1.5897	1.2862												
Dichlorodifluoromethane	+++++	+++++	4.4505	4.4326	4.2183	Ave		4.2347			6.5		30.0				
	4.0515	3.9190	3.9550	4.7099	4.1407												
Chloromethane	+++++	+++++	+++++	0.5625	0.4891	Ave		0.4649			11.5		30.0				
	0.4445	0.4230	0.4254	0.4946	0.4152												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	2.6446	2.5541	2.4472	Ave		2.4745			4.4		30.0				
	2.3633	2.3423	2.3822	2.5578	2.5047												
Vinyl chloride	1.9626	1.7167	1.7320	1.6531	1.5626	Ave		1.6109			10.3		30.0				
	1.4785	1.4339	1.4573	1.6387	1.4732												
Butane	+++++	+++++	+++++	3.0743	2.8454	Ave		2.7124			8.2		30.0				
	2.6258	2.4782	2.5038	2.8679	2.5911												
1,3-Butadiene	+++++	+++++	+++++	1.2733	1.2439	Ave		1.2450			5.0		30.0				
	1.2041	1.1760	1.2078	1.3654	1.2448												
Bromomethane	+++++	+++++	1.6548	1.3996	1.3549	Ave		1.3916			8.4		30.0				
	1.3078	1.2877	1.3168	1.4117	1.3995												
Chloroethane	+++++	+++++	0.8627	0.8037	0.7796	Ave		0.7761			6.4		30.0				
	0.7377	0.7148	0.7259	0.8118	0.7729												
Ethanol	+++++	+++++	+++++	0.8657	0.7124	Ave		0.7042			15.6		30.0				
	0.5620	0.7386	0.5593	0.7653	0.7259												
Vinyl bromide	+++++	+++++	1.3835	1.3207	1.2830	Ave		1.2899			4.2		30.0				
	1.2366	1.2145	1.2610	1.2880	1.3321												
2-Methylbutane	+++++	+++++	+++++	2.0547	2.0422	Ave		1.9469			4.4		30.0				
	1.9302	1.8374	1.8471	1.9762	1.9406												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.9949	4.3785 3.8769	4.2718 3.9322	4.1461 4.3687	4.1452 4.2564	Ave		4.1523			4.4		30.0				
Acrolein	++++ 0.3700	++++ 0.3339	++++ 0.3264	++++ 0.4058	0.3535 0.3546	Ave		0.3574			7.9		30.0				
Acetonitrile	++++ 0.5820	++++ 0.5806	++++ 0.5032	0.4860 0.6106	0.5491 0.5907	Ave		0.5574			8.4		30.0				
Acetone	++++ 0.6952	++++ 0.6071	++++ 0.4923	++++ 0.5713	0.7119 0.5299	Ave		0.6013			14.7		30.0				
Pentane	++++ 0.2650	++++ 0.2567	++++ 0.2534	++++ 0.2741	0.2798 0.2630	Ave		0.2653			3.8		30.0				
Isopropyl alcohol	++++ 1.5842	++++ 1.6884	++++ 1.2216	++++ 1.5921	1.7192 1.5978	Ave		1.6033			11.8		30.0				
Ethyl ether	++++ 1.8397	++++ 1.7705	++++ 1.4542	++++ 1.7361	1.9088 1.6409	Ave		1.7250			9.3		30.0				
1,1-Dichloroethene	1.5300 1.3997	1.3691 1.3378	1.5011 1.4037	1.3769 1.3902	1.4054 1.4041	Ave		1.4118			4.2		30.0				
Acrylonitrile	++++ 0.9861	++++ 0.9774	1.0366 0.8664	0.9476 1.0406	0.9217 1.0215	Ave		0.9747			6.2		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.0568	3.1787 2.9429	3.2903 2.9549	3.0618 2.9993	3.1454 2.9101	Ave		3.0600			4.1		30.0				
tert-Butyl alcohol	++++ 2.2526	++++ 2.2071	++++ 1.7152	2.3096 2.1050	2.4776 2.3062	Ave		2.1962			11.0		30.0				
Methylene Chloride	++++ 1.5026	++++ 1.3595	++++ 1.3036	2.5891 1.2966	1.8042 ++++	Ave		1.6426			30.5	*	30.0				
3-Chloropropene	++++ 1.6369	++++ 1.6110	2.0104 1.5866	1.9432 1.7783	1.7193 1.7236	Ave		1.7512			8.8		30.0				
Carbon disulfide	++++ 4.2983	++++ 4.0822	4.5901 4.1194	4.3819 4.1977	4.3526 4.2529	Ave		4.2844			3.8		30.0				
trans-1,2-Dichloroethene	++++ 1.4444	1.3848 1.3913	1.4554 1.4201	1.3845 1.4125	1.4335 1.3979	Ave		1.4138			1.9		30.0				
2-Methylpentane	++++ 4.0309	++++ 3.8853	4.5901 3.8303	4.3761 4.0757	4.2199 3.7514	Ave		4.0450			5.3		30.0				
Methyl tert-butyl ether	++++ 4.1354	3.5946 4.0399	4.2254 3.4444	3.8763 4.0172	4.1168 3.9425	Ave		3.9325			6.6		30.0				
1,1-Dichloroethane	3.1037 2.8577	3.0105 2.8187	3.0470 2.6559	2.9034 2.9155	2.9080 2.8375	Ave		2.9058			4.4		30.0				
Vinyl acetate	++++ 3.9854	++++ 4.2048	4.0675 3.5720	3.8850 4.4145	3.9427 4.2013	Ave		4.0342			6.3		30.0				
Hexane	++++ 1.3242	++++ 1.2816	++++ 1.3713	++++ 1.3526	1.3260 1.2151	Ave		1.3036			4.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++	++++	++++	0.6854	0.6772	Ave		0.6347			8.5		30.0				
	0.6784	0.6294	0.5376	0.6386	0.5958												
cis-1,2-Dichloroethene	1.5310	1.3850	1.4658	1.4361	1.4213	Ave		1.4465			2.9		30.0				
	1.4515	1.4377	1.3972	1.4588	1.4806												
Ethyl acetate	++++	++++	3.4159	3.2335	3.3337	Ave		3.3124			6.9		30.0				
	3.4792	3.3231	2.8120	3.5743	3.3271												
Chloroform	3.5969	3.3560	3.4112	3.4074	3.2824	Ave		3.3444			4.2		30.0				
	3.2821	3.2211	3.0680	3.4218	3.3970												
Tetrahydrofuran	++++	++++	++++	1.7940	1.8215	Ave		1.7724			6.6		30.0				
	1.8641	1.7946	1.5246	1.8635	1.7446												
1,1,1-Trichloroethane	3.8810	3.4765	3.6941	3.5977	3.6119	Ave		3.6203			4.2		30.0				
	3.5723	3.5364	3.3475	3.7388	3.7470												
1,2-Dichloroethane	0.3890	0.3740	0.4205	0.3853	0.3989	Ave		0.3910			6.7		30.0				
	0.3918	0.3624	0.3439	0.4219	0.4228												
Cyclohexane	++++	++++	++++	0.1383	0.1426	Ave		0.1314			6.9		30.0				
	0.1391	0.1224	0.1193	0.1325	0.1258												
Benzene	++++	0.7122	0.8006	0.7160	0.7636	Ave		0.7153			7.0		30.0				
	0.7488	0.6697	0.6393	0.7124	0.6753												
Carbon tetrachloride	0.5647	0.5298	0.5813	0.5547	0.6331	Ave		0.5933			8.0		30.0				
	0.6279	0.5625	0.5603	0.6718	0.6470												
1-Butanol	++++	++++	++++	0.0897	0.1022	Ave		0.0896			13.7		30.0				
	0.1010	0.0823	0.0665	0.0902	0.0950												
2,3-Dimethylpentane	++++	++++	0.2016	0.1866	0.2067	Ave		0.1886			7.0		30.0				
	0.1994	0.1776	0.1681	0.1880	0.1811												
Thiophene	++++	++++	0.4419	0.4095	0.4328	Ave		0.4156			5.4		30.0				
	0.4205	0.3890	0.3765	0.4241	0.4306												
2,2,4-Trimethylpentane	1.4853	1.4111	1.5290	1.4173	1.5323	Ave		1.4009			8.1		30.0				
	1.4628	1.2640	1.1785	1.3863	1.3426												
Heptane	++++	++++	0.3221	0.2848	0.3010	Ave		0.2875			7.7		30.0				
	0.2942	0.2637	0.2507	0.2927	0.2912												
1,2-Dichloropropane	++++	0.2947	0.3066	0.2799	0.2948	Ave		0.2813			7.5		30.0				
	0.2869	0.2617	0.2359	0.2893	0.2819												
Trichloroethene	0.3496	0.3229	0.3354	0.3064	0.3383	Ave		0.3257			5.2		30.0				
	0.3271	0.3039	0.3006	0.3304	0.3426												
Dibromomethane	++++	++++	++++	0.3027	0.3082	Ave		0.2963			7.9		30.0				
	0.2897	0.2688	0.2632	0.3189	0.3227												
Bromodichloromethane	++++	++++	0.5688	0.5299	0.5916	Ave		0.5843			8.8		30.0				
	0.5840	0.5507	0.5314	0.6523	0.6656												
1,4-Dioxane	++++	++++	++++	0.0947	0.0887	Ave		0.0832			17.3		30.0				
	0.0619	0.0891	0.0629	0.0903	0.0946												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3918	++++ 0.3473	++++ 0.2972	0.3014 0.4093	0.3703 0.3989	Ave		0.3595			12.7		30.0				
Methylcyclohexane	0.4845 0.5152	0.4926 0.4533	0.5068 0.4304	0.4870 0.4877	0.5327 0.5063	Ave		0.4896			6.1		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.6350	++++ 0.5092	0.5796 0.3308	0.5597 0.5890	0.6524 0.6484	Ave		0.5630			18.8		30.0				
cis-1,3-Dichloropropene	++++ 0.4479	0.3952 0.4121	0.4552 0.3828	0.4166 0.4613	0.4382 0.4415	Ave		0.4279			6.4		30.0				
trans-1,3-Dichloropropene	++++ 0.4450	0.3978 0.4156	0.4398 0.3772	0.4049 0.4673	0.4521 0.4806	Ave		0.4311			8.0		30.0				
Toluene	0.8893 0.9181	0.8808 0.8443	0.9072 0.7540	0.8795 0.8738	0.9309 0.9230	Ave		0.8801			5.9		30.0				
1,1,2-Trichloroethane	0.2596 0.2870	0.2566 0.2535	0.2815 0.2299	0.2715 0.2735	0.2904 0.2819	Ave		0.2685			7.0		30.0				
2-Hexanone	++++ 0.3129	++++ 0.2311	0.2486 0.1601	0.2653 0.2620	0.3155 0.3172	Ave		0.2641			20.2		30.0				
Octane	++++ 0.3331	++++ 0.2969	0.3166 0.2807	0.3142 0.3116	0.3533 0.3257	Ave		0.3165			7.0		30.0				
C8 Range	++++ 3.2900	++++ 2.9406	++++ 2.7321	3.2543 3.2050	3.4583 3.2302	Ave		3.1586			7.7		30.0				
Dibromochloromethane	++++ 0.5589	++++ 0.5327	0.4753 0.5204	0.4633 0.6101	0.5345 0.6613	Ave		0.5446			12.1		30.0				
1,2-Dibromoethane (EDB)	++++ 0.4879	++++ 0.4537	0.4324 0.4227	0.4409 0.4933	0.4776 0.5168	Ave		0.4656			7.1		30.0				
Tetrachloroethene	0.3340 0.3413	0.3265 0.3106	0.3184 0.2978	0.3299 0.3362	0.3500 0.3575	Ave		0.3302			5.4		30.0				
Chlorobenzene	0.6503 0.7257	0.6533 0.6547	0.7038 0.5918	0.6891 0.6804	0.7584 0.7332	Ave		0.6841			7.2		30.0				
Ethylbenzene	++++ 1.2841	1.1605 1.1457	1.1820 0.9886	1.2041 1.2050	1.3132 1.2806	Ave		1.1960			8.1		30.0				
m-Xylene & p-Xylene	0.7852 1.0069	0.8464 0.8920	0.9631 0.7597	0.9388 0.9364	1.0264 0.9927	Ave		0.9148			10.1		30.0				
Nonane	++++ 0.7074	0.6367 0.6181	0.6731 0.5580	0.6713 0.6403	0.7319 0.6196	Ave		0.6507			8.0		30.0				
Bromoform	++++ 0.5150	++++ 0.5097	0.3874 0.4824	0.3783 0.6069	0.4530 ++++	Ave		0.4761			16.7		30.0				
Styrene	++++ 0.6772	++++ 0.6274	0.5417 0.5521	0.5440 0.6889	0.6499 0.7776	Ave		0.6323			13.2		30.0				
o-Xylene	++++ 1.0316	0.8434 0.9312	0.9762 0.7934	0.9959 0.9762	1.0612 1.0727	Ave		0.9646			9.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++ 0.6943	++++ 0.6225	0.6477 0.5392	0.6105 0.6980	0.7079 0.6623	Ave		0.6478			8.7		30.0				
1,2,3-Trichloropropane	++++ 0.2201	++++ 0.1963	0.2117 0.1718	0.1933 0.2253	0.2181 0.2233	Ave		0.2075			9.0		30.0				
Isopropylbenzene	++++ 1.3750	1.2061 1.2349	1.2881 1.0540	1.2705 1.3875	1.3916 1.3659	Ave		1.2860			8.6		30.0				
Propylbenzene	++++ 0.3714	++++ 0.3352	0.3426 0.2878	0.3159 0.3755	0.3762 0.3762	Ave		0.3476			9.6		30.0				
2-Chlorotoluene	++++ 0.3404	0.3055 0.2960	0.3209 0.2606	0.3117 0.3372	0.3448 0.3406	Ave		0.3175			8.7		30.0				
4-Ethyltoluene	++++ 1.3518	++++ 1.2430	1.2707 1.0593	1.1808 1.3853	1.3899 1.3849	Ave		1.2832			9.3		30.0				
1,3,5-Trimethylbenzene	++++ 0.5322	++++ 0.4840	0.4931 0.4140	0.4624 0.5337	0.5289 0.5468	Ave		0.4994			9.1		30.0				
Alpha Methyl Styrene	++++ 0.5256	++++ 0.4877	++++ 0.4370	++++ 0.6086	0.3906 0.6006	Ave		0.5043			16.0		30.0				
Decane	++++ 0.8778	0.7603 0.7515	0.8322 0.6337	0.8484 0.8180	0.9143 0.7472	Ave		0.7982			10.6		30.0				
tert-Butylbenzene	++++ 1.2040	++++ 1.0655	1.0703 0.8921	1.0556 1.2542	1.1543 1.2176	Ave		1.1142			10.6		30.0				
1,2,4-Trimethylbenzene	++++ 1.1975	++++ 1.0389	1.0671 0.8751	1.0434 1.2267	1.1402 1.1768	Ave		1.0957			10.4		30.0				
sec-Butylbenzene	++++ 1.7209	++++ 1.4915	1.5212 1.2789	1.5236 1.7227	1.6717 1.6181	Ave		1.5686			9.5		30.0				
1,3-Dichlorobenzene	0.6490 0.7671	0.6444 0.6846	0.6738 0.6125	0.6739 0.8458	0.7415 0.8676	Ave		0.7160			12.1		30.0				
Benzyl chloride	++++ 1.0629	++++ 0.9436	0.8534 0.8465	0.8353 1.1447	0.9958 1.1273	Ave		0.9762			13.0		30.0				
1,4-Dichlorobenzene	0.7017 0.7787	0.6870 0.6945	0.6938 0.6166	0.6879 0.8577	0.7429 0.8826	Ave		0.7344			11.3		30.0				
4-Isopropyltoluene	++++ 1.3919	++++ 1.1997	1.1350 1.0411	1.1617 1.4207	1.3168 1.3719	Ave		1.2548			11.1		30.0				
1,2,3-Trimethylbenzene	0.7568 1.1870	0.8539 1.0454	1.0085 0.9035	1.0349 ++++	1.1364 ++++	Ave		0.9908			14.6		30.0				
Indane	++++ 1.0760	++++ 0.9392	0.9630 0.8123	0.9316 1.1012	1.0002 1.0990	Ave		0.9903			10.1		30.0				
1,2-Dichlorobenzene	++++ 0.7440	++++ 0.6621	0.6671 0.5878	0.6607 0.8263	0.7087 0.8754	Ave		0.7165			13.3		30.0				
Butylbenzene	++++ 1.4543	++++ 1.1174	1.2268 1.0412	1.2695 1.4208	1.3939 1.3499	Ave		1.2768			11.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.9217	++++ 0.8188	0.7590 0.7206	0.7567 0.9791	0.8625 0.9878	Ave		0.8508			12.2		30.0				
Undecane	++++ 0.9412	0.7138 0.7639	0.7854 0.6439	0.8623 0.8142	0.9777 0.7859	Ave		0.8098			13.0		30.0				
1,2-Dibromo-3-Chloropropane	0.2667 0.3713	0.2609 0.3380	0.2709 0.2859	0.2620 ++++	0.3145 ++++	Ave		0.2963			13.8		30.0				
1,2,4,5-Tetramethylbenzene	++++ 1.3103	++++ 1.1118	1.0041 0.8463	1.0551 1.2653	1.2570 1.2867	Ave		1.1421			14.5		30.0				
Dodecane	++++ 0.7978	0.6003 0.5688	0.6899 0.3858	0.7041 0.5331	0.8370 ++++	Ave		0.6396			23.1		30.0				
1,2,4-Trichlorobenzene	++++ 0.6436	0.5319 0.5457	0.4906 0.4989	0.4888 0.6587	0.5772 0.6483	Ave		0.5649			12.4		30.0				
Naphthalene	++++ 1.4994	1.1580 1.2044	1.1489 0.9653	1.0861 1.2974	1.4202 1.3257	Ave		1.2339			13.6		30.0				
Hexachlorobutadiene	++++ 0.6448	++++ 0.5763	0.5100 0.5363	0.5070 0.7409	0.5745 0.7482	Ave		0.6047			16.0		30.0				
1,2,3-Trichlorobenzene	++++ 0.6283	0.5060 0.4951	0.4846 0.4151	0.4581 0.5663	0.5627 0.3728	Ave		0.4988			15.9		30.0				
2-Methylnaphthalene	++++ 0.9181	0.6422 0.5284	0.5584 0.3836	0.4778 0.4940	0.8101 ++++	Ave		0.6016			29.9		50.0				
1-Methylnaphthalene	++++ 1.1220	0.8380 0.6213	0.6877 0.4374	0.6391 0.5433	1.0085 ++++	Ave		0.7372			31.8		50.0				
4-Bromofluorobenzene (Surr)	0.7946 0.8130	0.8076 0.7824	0.8238 0.7807	0.8163 0.9039	0.8357 0.8386	Ave		0.8196			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 261958	++++ 518289	21711 1076565	42570 1857884	107824 3550370	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 149007	++++ 290483	++++ 602545	27727 1017511	60077 1877999	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 428033	++++ 858049	32728 1783528	68237 3014742	169908 6045892	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 46960	++++ 92605	++++ 191831	8660 316575	19699 606292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 249678	++++ 512846	19448 1074243	39319 1637176	98572 3657066	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	3911 156203	6583 313945	12737 657162	25449 1048926	62942 2151077	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 277412	++++ 542597	++++ 1129098	47326 1835688	114610 3783292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 127206	++++ 257490	++++ 544660	19602 873952	50104 1817509	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 138169	++++ 281926	12169 593804	21546 903575	54574 2043364	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 77933	++++ 156493	6344 327330	12373 519647	31401 1128580	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 296853	++++ 808553	++++ 1261075	66636 2449308	143467 5299467	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 130640	++++ 265901	10174 568659	20331 824429	51677 1944996	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 203924	++++ 402287	++++ 832948	31631 1264951	82259 2833506	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 422050	16790 848836	31414 1773236	63826 2796331	166966 6214752	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Acrolein	CBM	Ave	++++ 39091	++++ 73107	++++ 147180	++++ 259717	14239 517814	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 61491	++++ 127125	++++ 226910	++++ 390809	7481 862471	22116 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Acetone	CBM	Ave	++++ 220327	++++ 398773	++++ 665956	++++ 1097098	86023 2321110	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 28000	++++ 56204	++++ 114279	++++ 175439	11269 384054	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 502108	++++ 1108992	++++ 1652685	++++ 3057291	79400 6999063	219917 3.00	++++ 6.00	++++ 12.0	++++ 24.0	0.480 48.0
Ethyl ether	CBM	Ave	++++ 194355	++++ 387640	++++ 655797	++++ 1111229	76885 2395844	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	3049 147877	5250 292909	11039 633007	21196 889868	56607 2050200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 104178	++++ 213988	++++ 390689	++++ 666078	7623 1491458	14588 37127	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 322940	12189 644340	24196 1332511	47135 1919761	126693 4249014	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 237979	++++ 483244	++++ 773470	++++ 1347387	35554 3367365	99796 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Methylene Chloride	CBM	Ave	++++ 158748	++++ 297663	++++ 587875	39858 829908	72672 ++++	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 ++++
3-Chloropropene	CBM	Ave	++++ 172933	++++ 352711	++++ 715500	++++ 1138278	14784 2516658	29914 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 454099	++++ 893782	33755 1857677	67457 2686894	175320 6209652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 152597	5310 304618	10703 640390	21313 904134	57740 2041028	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 425850	++++ 850675	32181 1727313	64503 2608750	169974 5477445	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 436887	13784 884523	31073 1553256	59673 2571313	165819 5756531	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	6185 301902	11544 617142	22407 1197700	44696 1866128	117133 4143029	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 421041	++++ 920626	29912 1610829	59807 2825655	158808 6134377	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 139897	++++ 280600	10084 564091	20822 836832	53409 1774150	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 71674	++++ 137814	++++ 242448	++++ 408724	10552 870000	27277 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
cis-1,2-Dichloroethene	CBM	Ave	3051 153350	5311 314771	10779 630074	22108 933768	57247 2161860	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 367561	++++ 727588	25120 1268094	49778 2287831	134280 4857969	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	7168 346742	12869 705235	25085 1383523	52455 2190241	132214 4960016	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 196936	++++ 392928	++++ 687510	27618 1192762	73368 2547299	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7734 377403	13331 774289	27166 1509577	55384 2393121	145486 5471084	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4547 232618	8382 490730	17516 952640	35324 1548479	87574 3502141	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 82609	++++ 165738	++++ 330488	12681 486357	31319 1042096	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 444635	15963 906736	33352 1771104	65637 2614755	167643 5593459	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	6601 372817	11874 761689	24215 1552321	50848 2465819	138991 5358444	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 59954	++++ 111445	++++ 184294	8226 331158	22433 786825	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 118426	++++ 240541	8397 465638	17105 690034	45390 1499809	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 249671	++++ 526684	18410 1043094	37543 1556455	95028 3566561	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	17363 868592	31627 1711484	63694 3264805	129920 5087913	336411 11120269	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 174693	++++ 357021	13419 694408	26105 1074435	66081 2411618	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 170338	6605 354326	12771 653599	25661 1061646	64714 2334951	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4087 194217	7238 411429	13973 832705	28091 1212507	74264 2837545	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 172040	++++ 363939	++++ 729198	27744 1170568	67675 2672665	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 346754	++++ 745629	23694 1472126	48577 2394105	129879 5512449	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 36737	++++ 120654	++++ 174155	8684 331358	19464 783489	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 232640	++++ 470252	++++ 823262	27631 1502138	81302 3304265	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	5664 305916	11041 613752	21112 1192238	44641 1790104	116952 4193256	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 377024	++++ 689509	24146 916498	51311 2161661	143236 5370174	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 265941	8857 558061	18964 1060593	38186 1693124	96201 3656415	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 249246	8494 528240	18209 983862	34634 1678819	93722 3876912	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	9759 514273	18809 1073072	37560 1966647	75222 3139180	192974 7445292	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2849 160780	5479 322166	11656 599648	23218 982519	60205 2274200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 175250	++++ 293749	10295 417616	22692 941298	65409 2558380	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 186587	++++ 377410	13108 732239	26877 1119383	73243 2627265	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	CBZd 5	Ave	++++ 1842861	++++ 3737320	++++ 7125919	278341 11514382	716916 26057226	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	++++ 313050	++++ 676985	19680 1357226	39627 2191805	110810 5334244	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 273278	++++ 576579	17903 1102407	37712 1772227	99001 4168790	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3665 191154	6973 394783	13185 776709	28219 1207845	72561 2883889	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	7137 406499	13951 832085	29142 1543553	58935 2444395	157211 5914764	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	++++ 719275	24780 1456098	48941 2578598	102987 4329132	272217 10330192	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	17235 1128063	36147 2267354	79756 3963090	160595 6728239	425545 16015024	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd 5	Ave	++++ 396249	13596 785625	27868 1455379	57416 2300427	151720 4997986	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd 5	Ave	++++ 288479	++++ 647774	16038 1258109	32352 2180538	93899 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Styrene	CBZd 5	Ave	++++ 379313	++++ 797396	22430 1440043	46527 2475003	134724 6272582	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	++++ 577831	18010 1183498	40418 2069274	85176 3507204	219991 8652988	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	++++ 388902	++++ 791220	26816 1406346	52217 2507616	146757 5342402	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 123267	++++ 249431	8767 448013	16530 809328	45222 1801458	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 770189	25754 1569505	53331 2749199	108667 4984665	288484 11018383	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	++++ 208028	++++ 425975	14187 750579	27021 1348899	77981 3034911	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 190674	6524 376201	13286 679618	26657 1211506	71471 2747919	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	++++ 757218	++++ 1579790	52613 2762937	100995 4977060	288122 11171652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	++++ 298107	++++ 615118	20417 1079746	39553 1917273	109634 4410950	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 294414	++++ 619837	++++ 1139797	33405 2186650	99545 4845121	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 491714	16235 955171	34455 1652838	72566 2938778	189531 6027860	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	++++ 674397	++++ 1354211	44314 2326877	100985 4505713	288122 9821979	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 670745	++++ 1320347	44184 2282446	89238 4407169	236361 9493306	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	++++ 963943	++++ 1895656	62984 3335709	130314 6189211	346547 13052688	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7122 429682	13761 870050	27898 1597433	57634 3038807	153722 6998909	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 595380	++++ 1199239	35336 2207883	71441 4112439	206433 9093386	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7701 436204	14670 882709	28727 1608243	58838 3081288	154004 7120026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	++++ 779650	++++ 1524715	46995 2715440	99360 5104026	272972 11067094	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	8305 664909	18233 1328651	41757 2356435	88511 ++++	235583 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Indane	CBZd 5	Ave	++++ 602700	++++ 1193709	39872 2118687	79681 3956160	207350 8865173	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 416753	++++ 841536	27621 1533100	56506 2968700	146910 7061726	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	++++ 814617	23860 1547638	50796 2715683	108576 5104411	288957 10889558	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 516302	++++ 1040605	31427 1879451	64720 3517487	178805 7968258	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 527231	15243 970873	32520 1679521	73748 2924996	202684 6339976	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2927 207960	5571 429617	11218 745616	22412 ++++	65206 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 733964	++++ 1413004	41572 2207453	90241 4545804	260569 10379759	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 446881	12818 722978	28563 1006221	60222 1915343	173512 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 360521	11357 693552	20313 1301208	41810 2366361	119662 5229906	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 839854	24728 1530726	47569 2517870	92896 4661002	294401 10693857	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 361175	++++ 732431	21118 1398696	43365 2661640	119102 6035243	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 351962	10806 629244	20063 1082671	39185 2034470	116648 3007302	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 514300	13713 671591	23120 1000580	40866 1774929	167946 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 628512	17895 789694	28473 1141032	54667 1951995	209066 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1743947 1821597	1724522 1988683	1705365 2036360	1745466 1623678	1732344 1691157	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	12.7						50			
Propene	+++++	+++++	+++++	23.1						50		
Dichlorodifluoromethane	+++++	+++++	5.1						50			
Chloromethane	+++++	+++++	+++++	21.0						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	6.9						50			
Vinyl chloride	21.8						50					
Butane	+++++	+++++	+++++	13.3						50		
1,3-Butadiene	+++++	+++++	+++++	2.3						50		
Bromomethane	+++++	+++++	18.9						50			
Chloroethane	+++++	+++++	11.2						50			
Ethanol	+++++	+++++	+++++	22.9						50		
Vinyl bromide	+++++	+++++	7.3						50			
2-Methylbutane	+++++	+++++	+++++	5.5						50		
Trichlorofluoromethane	+++++	5.4						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	+++++	-1.1							50
Acetonitrile	+++++	+++++	+++++	-12.8							50	
Acetone	+++++	+++++	+++++	+++++	18.4							80
Pentane	+++++	+++++	+++++	+++++	5.4							50
Isopropyl alcohol	+++++	+++++	+++++	7.2							50	
Ethyl ether	+++++	+++++	+++++	+++++	10.7							50
1,1-Dichloroethene	8.4						50					
Acrylonitrile	+++++	+++++	6.3						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.9						50				
tert-Butyl alcohol	+++++	+++++	+++++	5.2							50	
Methylene Chloride	+++++	+++++	+++++	57.6 +++++							80	
3-Chloropropene	+++++	+++++	14.8						50			
Carbon disulfide	+++++	+++++	7.1						50			
trans-1,2-Dichloroethene	+++++	-2.1						50				
2-Methylpentane	+++++	+++++	8.2						50			
Methyl tert-butyl ether	+++++	-8.6						50				
1,1-Dichloroethane	6.8						50					
Vinyl acetate	+++++	+++++	0.8						50			
Hexane	+++++	+++++	5.2						50			
2-Butanone (MEK)	+++++	+++++	+++++	8.0						50		
cis-1,2-Dichloroethene	5.8						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	3.1						50			
Chloroform	7.6						50					
Tetrahydrofuran	+++++	+++++	+++++	1.2						50		
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	-0.5						50					
Cyclohexane	+++++	+++++	+++++	5.2						50		
Benzene	+++++	-0.4						50				
Carbon tetrachloride	-4.8						50					
1-Butanol	+++++	+++++	+++++	0.2							50	
2,3-Dimethylpentane	+++++	+++++	6.9						50			
Thiophene	+++++	+++++	6.3						50			
2,2,4-Trimethylpentane	6.0						50					
Heptane	+++++	+++++	12.0						50			
1,2-Dichloropropane	+++++	4.8						50				
Trichloroethene	7.3						50					
Dibromomethane	+++++	+++++	+++++	2.1						50		
Bromodichloromethane	+++++	+++++	-2.7						50			
1,4-Dioxane	+++++	+++++	+++++	13.9						50		
Methyl methacrylate	+++++	+++++	+++++	-16.1						50		
Methylcyclohexane	-1.0						50					
4-Methyl-2-pentanone (MIBK)	+++++	+++++	3.0						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.6						50				
trans-1,3-Dichloropropene	+++++	-7.7						50				
Toluene	1.0						50					
1,1,2-Trichloroethane	-3.3						50					
2-Hexanone	+++++	+++++	-5.8						50			
Octane	+++++	+++++	0.0						50			
Dibromochloromethane	+++++	+++++	-12.7						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-7.1						50			
Tetrachloroethene	1.1						50					
Chlorobenzene	-4.9						50					
Ethylbenzene	+++++	-3.0						50				
m-Xylene & p-Xylene	-14.2						50					
Nonane	+++++	-2.2						50				
Bromoform	+++++	+++++	-18.6		+++++				50			
Styrene	+++++	+++++	-14.3						50			
o-Xylene	+++++	-12.6						50				
1,1,2,2-Tetrachloroethane	+++++	+++++	0.0						50			
1,2,3-Trichloropropane	+++++	+++++	2.1						50			
Isopropylbenzene	+++++	-6.2						50				
Propylbenzene	+++++	+++++	-1.4						50			
2-Chlorotoluene	+++++	-3.8						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	+++++	+++++	-1.0						50			
1,3,5-Trimethylbenzene	+++++	+++++	-1.3						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-22.6						50		
Decane	+++++	-4.7						50				
tert-Butylbenzene	+++++	+++++	-3.9						50			
1,2,4-Trimethylbenzene	+++++	+++++	-2.6						50			
sec-Butylbenzene	+++++	+++++	-3.0						50			
1,3-Dichlorobenzene	-9.4						50					
Benzyl chloride	+++++	+++++	-12.6						50			
1,4-Dichlorobenzene	-4.4						50					
4-Isopropyltoluene	+++++	+++++	-9.5						50			
1,2,3-Trimethylbenzene	-23.6		+++++	+++++			50					
Indane	+++++	+++++	-2.8						50			
1,2-Dichlorobenzene	+++++	+++++	-6.9						50			
Butylbenzene	+++++	-12.5						50				
Indene	+++++	+++++	-10.8						50			
Undecane	+++++	-11.9						50				
1,2-Dibromo-3-Chloropropane	-10.0		+++++	+++++			50					
1,2,4,5-Tetramethylbenzene	+++++	+++++	-12.1						50			
Dodecane	+++++	-6.1		+++++				50				
1,2,4-Trichlorobenzene	+++++	-5.8						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-6.2						80				
Hexachlorobutadiene	+++++	+++++	-15.7						50			
1,2,3-Trichlorobenzene	+++++	1.5						50				
2-Methylnaphthalene	+++++	6.7		+++++				80				
1-Methylnaphthalene	+++++	13.7		+++++				80				

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 11-Jan-2019 13:08:30 ALS Bottle#: 14 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-002
 Misc. Info.: 201651
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:31 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa

Date: 14-Jan-2019 17:22:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.264	9.249	0.015	94	320040	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.432	11.421	0.011	97	1835134	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.096	16.094	0.002	93	1796320	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.725	17.718	0.007	86	1623678	4.00	4.41	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	1857884	8.00	8.86	
7 Propene	41	3.834	3.838	-0.004	98	1017511	8.00	8.69	
8 Dichlorodifluoromethane	85	3.893	3.894	-0.001	100	3014742	8.00	8.90	
9 Chloromethane	52	4.093	4.091	0.002	98	316575	8.00	8.51	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	94	1637176	8.00	8.27	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	1048926	8.00	8.14	
11 Acetaldehyde	44	4.266	4.278	-0.012	91	1999939	40.0	41.8	
13 Butane	43	4.373	4.373	0.000	86	1835688	8.00	8.46	
14 Butadiene	54	4.373	4.375	-0.002	67	873952	8.00	8.77	
15 Bromomethane	94	4.724	4.722	0.002	98	903575	8.00	8.12	
16 Chloroethane	64	4.880	4.879	0.001	86	519647	8.00	8.37	
17 Ethanol	31	5.037	5.064	-0.027	98	2449308	40.0	43.5	
18 Vinyl bromide	106	5.209	5.205	0.004	98	824429	8.00	7.99	
19 2-Methylbutane	43	5.258	5.256	0.002	92	1264951	8.00	8.12	
20 Trichlorofluoromethane	101	5.495	5.492	0.003	99	2796331	8.00	8.42	
21 Acrolein	56	5.517	5.526	-0.009	97	259717	8.00	9.08	
22 Acetonitrile	40	5.597	5.603	-0.006	98	390809	8.00	8.76	
23 Acetone	58	5.641	5.666	-0.025	99	1097098	24.0	22.8	
24 Pentane	72	5.727	5.725	0.002	98	175439	8.00	8.26	
25 Isopropyl alcohol	45	5.781	5.840	-0.059	98	3057291	24.0	23.8	
26 Ethyl ether	31	5.910	5.943	-0.033	90	1111229	8.00	8.05	
27 1,1-Dichloroethene	96	6.245	6.242	0.003	94	889868	8.00	7.88	
28 Acrylonitrile	53	6.379	6.375	0.004	94	666078	8.00	8.54	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	93	1919761	8.00	7.84	
30 2-Methyl-2-propanol	59	6.423	6.534	-0.111	95	1347387	8.00	7.67	
31 Methylene Chloride	84	6.617	6.610	0.007	97	829908	8.00	6.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.627	6.626	0.001	96	1138278	8.00	8.12	
33 Carbon disulfide	76	6.784	6.778	0.006	100	2686894	8.00	7.84	
34 trans-1,2-Dichloroethene	96	7.458	7.450	0.008	94	904134	8.00	7.99	
35 2-Methylpentane	43	7.469	7.468	0.001	95	2608750	8.00	8.06	
36 Methyl tert-butyl ether	73	7.598	7.643	-0.045	97	2571313	8.00	8.17	
37 1,1-Dichloroethane	63	7.905	7.892	0.013	100	1866128	8.00	8.03	
38 Vinyl acetate	43	8.013	8.016	-0.003	100	2825655	8.00	8.75	
40 Hexane	56	8.482	8.480	0.002	74	836832	8.00	8.02	
39 2-Butanone (MEK)	72	8.482	8.499	-0.017	83	408724	8.00	8.05	
41 Isopropyl ether	45	8.655	8.679	-0.024	96	3366299	8.00	8.43	
42 cis-1,2-Dichloroethene	96	8.919	8.906	0.013	98	933768	8.00	8.07	
43 Ethyl acetate	43	9.108	9.131	-0.023	98	2287831	8.00	8.63	
44 Chloroform	83	9.275	9.261	0.014	97	2190241	8.00	8.19	
45 Tert-butyl ethyl ether	59	9.351	9.389	-0.038	97	3058584	8.00	8.30	
46 Tetrahydrofuran	42	9.680	9.725	-0.045	93	1192762	8.00	8.41	
47 1,1,1-Trichloroethane	97	10.310	10.303	0.007	96	2393121	8.00	8.26	
48 1,2-Dichloroethane	62	10.429	10.416	0.013	98	1548479	8.00	8.63	
49 Cyclohexane	69	10.893	10.888	0.005	89	486357	8.00	8.06	
50 Benzene	78	10.904	10.893	0.011	99	2614755	8.00	7.97	
52 Carbon tetrachloride	117	10.920	10.913	0.007	96	2465819	8.00	9.06	
53 2,3-Dimethylpentane	71	11.006	11.000	0.006	92	690034	8.00	7.97	
51 n-Butanol	31	10.904	11.004	-0.100	69	331158	8.00	8.06	
54 Thiophene	84	11.173	11.164	0.009	97	1556455	8.00	8.16	
55 Isooctane	57	11.637	11.632	0.005	98	5087913	8.00	7.92	
56 n-Heptane	71	11.998	11.995	0.003	95	1074435	8.00	8.14	
57 1,2-Dichloropropane	63	12.101	12.093	0.008	84	1061646	8.00	8.23	
58 Trichloroethene	130	12.133	12.124	0.009	92	1212507	8.00	8.11	
59 Dibromomethane	93	12.225	12.216	0.009	92	1170568	8.00	8.61	
60 Dichlorobromomethane	83	12.365	12.354	0.011	98	2394105	8.00	8.93	
61 1,4-Dioxane	88	12.386	12.421	-0.035	98	331358	8.00	8.69	
62 Methyl methacrylate	41	12.446	12.453	-0.007	89	1502138	8.00	9.11	
63 Methylcyclohexane	83	12.883	12.879	0.004	91	1790104	8.00	7.97	
64 4-Methyl-2-pentanone (MIBK)	43	13.292	13.321	-0.029	99	2161661	8.00	8.37	
65 cis-1,3-Dichloropropene	75	13.341	13.336	0.005	98	1693124	8.00	8.63	
66 trans-1,3-Dichloropropene	75	14.026	14.019	0.007	96	1678819	8.00	8.67	
67 Toluene	91	14.150	14.144	0.006	93	3139180	8.00	7.94	
68 1,1,2-Trichloroethane	83	14.225	14.220	0.005	97	982519	8.00	8.15	
69 2-Hexanone	58	14.603	14.631	-0.028	91	941298	8.00	7.94	
70 n-Octane	85	14.808	14.804	0.004	95	1119383	8.00	7.87	
71 Chlorodibromomethane	129	14.926	14.920	0.006	97	2191805	8.00	8.96	
72 Ethylene Dibromide	107	15.212	15.207	0.005	98	1772227	8.00	8.48	
73 Tetrachloroethene	129	15.277	15.272	0.005	93	1207845	8.00	8.14	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	95	3728862	8.00	7.72	
75 Chlorobenzene	112	16.145	16.142	0.003	91	2444395	8.00	7.96	
78 Ethylbenzene	91	16.425	16.422	0.003	99	4329132	8.00	8.06	
79 m-Xylene & p-Xylene	91	16.587	16.582	0.005	99	6728239	16.0	16.4	
80 n-Nonane	57	16.981	16.977	0.004	93	2300427	8.00	7.87	
81 Bromoform	173	17.045	17.041	0.004	95	2180538	8.00	10.2	
82 Styrene	104	17.051	17.047	0.004	99	2475003	8.00	8.72	
83 o-Xylene	91	17.110	17.106	0.004	98	3507204	8.00	8.10	
84 1,1,2,2-Tetrachloroethane	83	17.434	17.430	0.004	99	2507616	8.00	8.62	
85 1,2,3-Trichloropropane	110	17.590	17.587	0.003	96	809328	8.00	8.69	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.687	17.684	0.003	97	4984665	8.00	8.63	
87 N-Propylbenzene	120	18.210	18.205	0.005	98	1348899	8.00	8.64	
88 2-Chlorotoluene	126	18.259	18.254	0.005	97	1211506	8.00	8.50	
89 4-Ethyltoluene	105	18.350	18.347	0.003	98	4977060	8.00	8.64	
90 1,3,5-Trimethylbenzene	120	18.426	18.419	0.007	91	1917273	8.00	8.55	
92 Alpha Methyl Styrene	118	18.647	18.644	0.003	86	2186650	8.00	9.65	
93 n-Decane	57	18.685	18.682	0.003	90	2938778	8.00	8.20	
94 tert-Butylbenzene	119	18.836	18.832	0.004	93	4505713	8.00	9.00	
95 1,2,4-Trimethylbenzene	105	18.852	18.846	0.006	97	4407169	8.00	8.96	
96 sec-Butylbenzene	105	19.100	19.094	0.006	98	6189211	8.00	8.79	
97 1,3-Dichlorobenzene	146	19.122	19.117	0.005	99	3038807	8.00	9.45	
98 Benzyl chloride	91	19.192	19.188	0.004	97	4112439	8.00	9.38	
99 1,4-Dichlorobenzene	146	19.202	19.200	0.002	94	3081288	8.00	9.34	
100 4-Isopropyltoluene	119	19.256	19.251	0.005	96	5104026	8.00	9.06	
101 1,2,3-Trimethylbenzene	105	19.310	19.306	0.004	99	4338994	8.00	9.75	
102 Butylcyclohexane	83	19.359	19.353	0.006	90	3386502	8.00	8.34	
103 2,3-Dihydroindene	117	19.553	19.550	0.003	94	3956160	8.00	8.90	
104 1,2-Dichlorobenzene	146	19.558	19.555	0.003	96	2968700	8.00	9.23	
105 n-Butylbenzene	91	19.677	19.673	0.004	99	5104411	8.00	8.90	
106 Indene	116	19.682	19.679	0.003	96	3517487	8.00	9.21	
107 Undecane	57	19.963	19.963	0.000	93	2924996	8.00	8.04	
108 1,2-Dibromo-3-Chloropropan	157	20.146	20.142	0.004	95	1506673	8.00	11.3	
109 1,2,4,5-Tetramethylbenzene	119	20.421	20.417	0.004	97	4545804	8.00	8.86	
110 Dodecane	57	21.014	21.014	0.000	93	1915343	8.00	6.67	
111 1,2,4-Trichlorobenzene	180	21.241	21.236	0.005	94	2366361	8.00	9.33	
112 Naphthalene	128	21.381	21.377	0.004	99	4661002	8.00	8.41	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	94	2661640	8.00	9.80	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	95	2034470	8.00	9.08	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	1774929	8.00	6.57	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	1951995	8.00	5.90	
A 122 C8 Range	1	14.813	(14.749-14.886)		0	11514382	8.00	8.12	
S 123 1,2-Dichloroethene, Total	1				0		16.0	16.1	
S 124 Xylenes, Total	100				0		24.0	24.5	

Reagents:

40L9DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC09.D

Injection Date: 11-Jan-2019 13:08:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L9

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

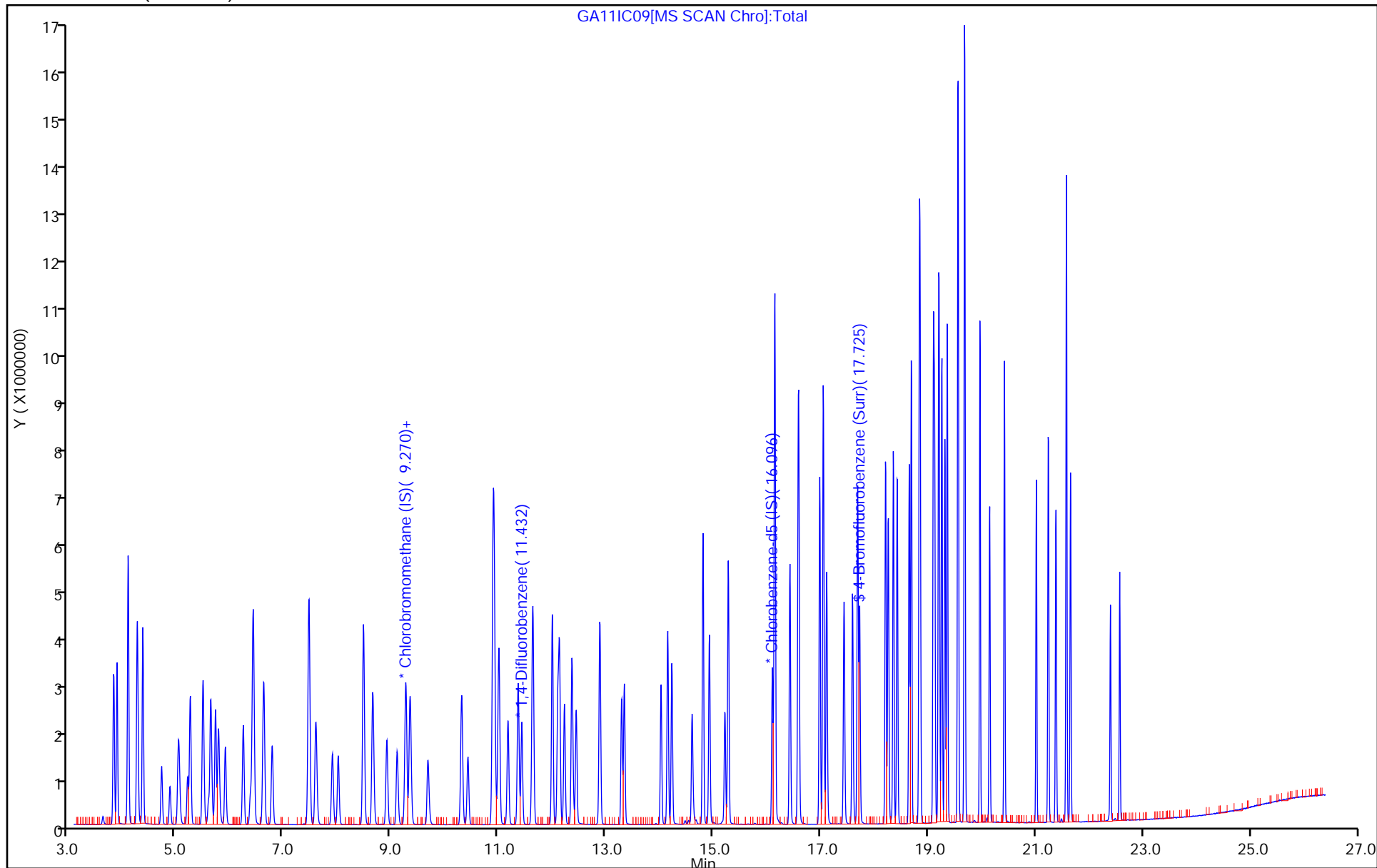
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC09.D

Injection Date: 11-Jan-2019 13:08:30

Instrument ID: MG

Lims ID: IC L9

Client ID:

Operator ID: 007126

ALS Bottle#: 14

Worklist Smp#: 2

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

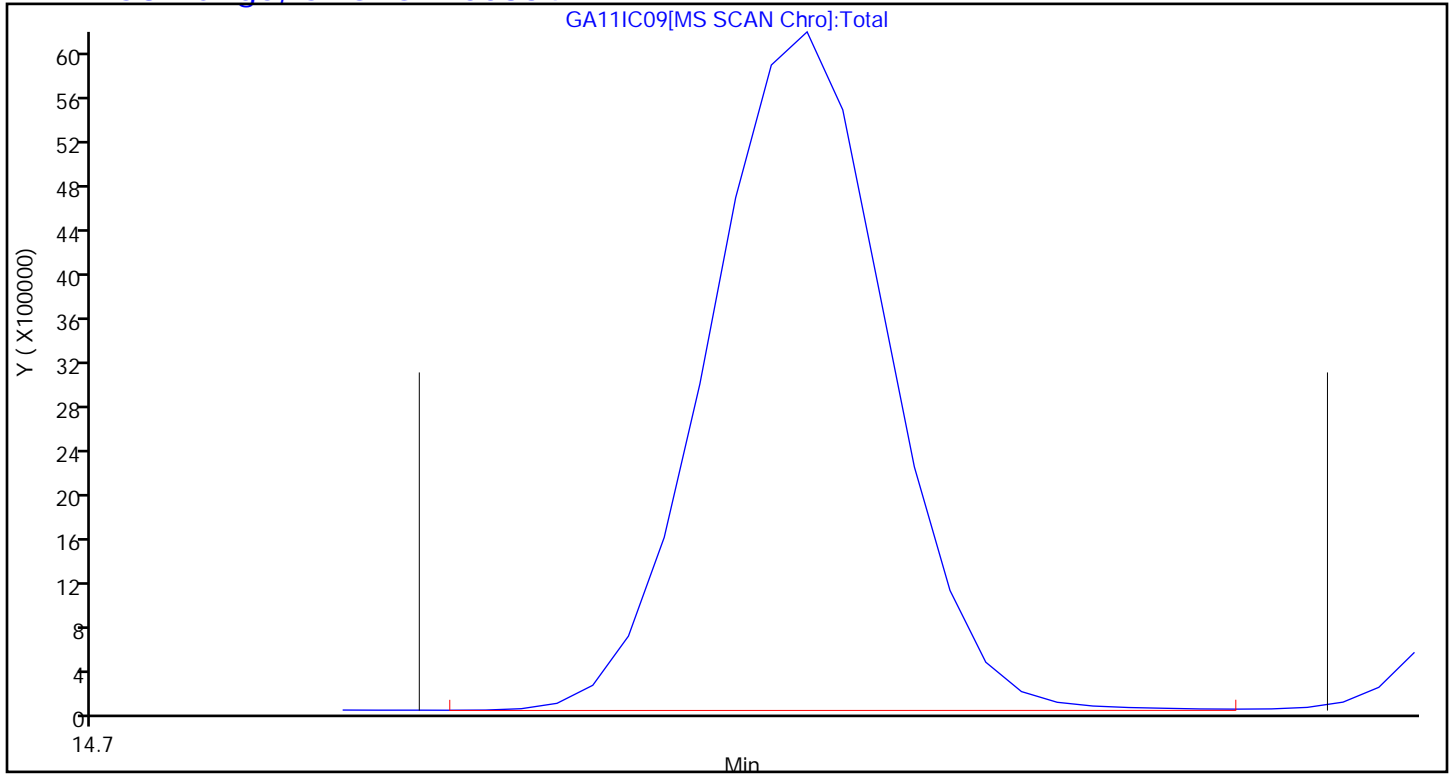
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 11-Jan-2019 14:35:30 ALS Bottle#: 15 Worklist Smp#: 6
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-006
 Misc. Info.: 201650
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:37 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 11-Jan-2019 15:43:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.270	9.249	0.021	94	365027	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.437	11.421	0.016	96	2070632	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.102	16.094	0.008	91	2016686	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.725	17.718	0.007	88	1691157	4.00	4.09	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	3550370	16.0	14.8	
7 Propene	41	3.834	3.838	-0.004	97	1877999	16.0	14.1	
8 Dichlorodifluoromethane	85	3.894	3.894	0.000	100	6045892	16.0	15.6	
9 Chloromethane	52	4.088	4.091	-0.003	100	606292	16.0	14.3	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	92	3657066	16.0	16.2	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	2151077	16.0	14.6	
11 Acetaldehyde	44	4.271	4.278	-0.007	91	4022222	80.0	73.6	
13 Butane	43	4.373	4.373	0.000	85	3783292	16.0	15.3	
14 Butadiene	54	4.373	4.375	-0.002	69	1817509	16.0	16.0	
15 Bromomethane	94	4.724	4.722	0.002	98	2043364	16.0	16.1	
16 Chloroethane	64	4.880	4.879	0.001	85	1128580	16.0	15.9	
17 Ethanol	31	5.058	5.064	-0.006	98	5299467	80.0	82.5	
18 Vinyl bromide	106	5.209	5.205	0.004	98	1944996	16.0	16.5	
19 2-Methylbutane	43	5.258	5.256	0.002	92	2833506	16.0	15.9	
20 Trichlorofluoromethane	101	5.495	5.492	0.003	99	6214752	16.0	16.4	
21 Acrolein	56	5.522	5.526	-0.004	97	517814	16.0	15.9	
22 Acetonitrile	40	5.608	5.603	0.005	98	862471	16.0	17.0	
23 Acetone	58	5.646	5.666	-0.020	99	2321110	48.0	42.3	
24 Pentane	72	5.727	5.725	0.002	97	384054	16.0	15.9	
25 Isopropyl alcohol	45	5.808	5.840	-0.032	99	6999063	48.0	47.8	
26 Ethyl ether	31	5.910	5.943	-0.033	91	2395844	16.0	15.2	
27 1,1-Dichloroethene	96	6.250	6.242	0.008	95	2050200	16.0	15.9	
28 Acrylonitrile	53	6.390	6.375	0.015	94	1491458	16.0	16.8	
29 1,1,2-Trichloro-1,2,2-trif	101	6.433	6.428	0.005	93	4249014	16.0	15.2	
30 2-Methyl-2-propanol	59	6.439	6.534	-0.095	96	3367365	16.0	16.8	
31 Methylene Chloride	84	6.622	6.610	0.012	98	1840784	16.0	12.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.638	6.626	0.012	97	2516658	16.0	15.7	
33 Carbon disulfide	76	6.784	6.778	0.006	100	6209652	16.0	15.9	
34 trans-1,2-Dichloroethene	96	7.463	7.450	0.013	95	2041028	16.0	15.8	
35 2-Methylpentane	43	7.474	7.468	0.006	94	5477445	16.0	14.8	
36 Methyl tert-butyl ether	73	7.598	7.643	-0.045	97	5756531	16.0	16.0	
37 1,1-Dichloroethane	63	7.911	7.892	0.019	100	4143029	16.0	15.6	
38 Vinyl acetate	43	8.019	8.016	0.003	100	6134377	16.0	16.7	
40 Hexane	56	8.488	8.480	0.008	90	1774150	16.0	14.9	
39 2-Butanone (MEK)	72	8.493	8.499	-0.006	97	870000	16.0	15.0	
41 Isopropyl ether	45	8.660	8.679	-0.019	97	7232215	16.0	15.9	
42 cis-1,2-Dichloroethene	96	8.925	8.906	0.019	97	2161860	16.0	16.4	
43 Ethyl acetate	43	9.119	9.131	-0.012	98	4857969	16.0	16.1	
44 Chloroform	83	9.286	9.261	0.025	96	4960016	16.0	16.3	
45 Tert-butyl ethyl ether	59	9.356	9.389	-0.033	97	6802904	16.0	16.2	
46 Tetrahydrofuran	42	9.685	9.725	-0.040	93	2547299	16.0	15.7	
47 1,1,1-Trichloroethane	97	10.316	10.303	0.013	96	5471084	16.0	16.6	
48 1,2-Dichloroethane	62	10.434	10.416	0.018	98	3502141	16.0	17.3	
49 Cyclohexane	69	10.898	10.888	0.010	89	1042096	16.0	15.3	
50 Benzene	78	10.909	10.893	0.016	99	5593459	16.0	15.1	
52 Carbon tetrachloride	117	10.925	10.913	0.012	98	5358444	16.0	17.4	
53 2,3-Dimethylpentane	71	11.011	11.000	0.011	92	1499809	16.0	15.4	
51 n-Butanol	31	10.904	11.004	-0.100	69	786825	16.0	17.0	
54 Thiophene	84	11.184	11.164	0.020	97	3566561	16.0	16.6	
55 Isooctane	57	11.642	11.632	0.010	97	11120269	16.0	15.3	
56 n-Heptane	71	12.009	11.995	0.014	94	2411618	16.0	16.2	
57 1,2-Dichloropropane	63	12.106	12.093	0.013	83	2334951	16.0	16.0	
58 Trichloroethene	130	12.138	12.124	0.014	93	2837545	16.0	16.8	
59 Dibromomethane	93	12.230	12.216	0.014	96	2672665	16.0	17.4	
60 Dichlorobromomethane	83	12.370	12.354	0.016	99	5512449	16.0	18.2	
61 1,4-Dioxane	88	12.392	12.421	-0.029	98	783489	16.0	18.2	
62 Methyl methacrylate	41	12.451	12.453	-0.002	89	3304265	16.0	17.8	
63 Methylcyclohexane	83	12.888	12.879	0.009	92	4193256	16.0	16.5	
64 4-Methyl-2-pentanone (MIBK)	43	13.292	13.321	-0.029	99	5370174	16.0	18.4	
65 cis-1,3-Dichloropropene	75	13.346	13.336	0.010	98	3656415	16.0	16.5	
66 trans-1,3-Dichloropropene	75	14.031	14.019	0.012	96	3876912	16.0	17.8	
67 Toluene	91	14.155	14.144	0.011	93	7445292	16.0	16.8	
68 1,1,2-Trichloroethane	83	14.231	14.220	0.011	98	2274200	16.0	16.8	
69 2-Hexanone	58	14.608	14.631	-0.023	91	2558380	16.0	19.2	
70 n-Octane	85	14.808	14.804	0.004	94	2627265	16.0	16.5	
71 Chlorodibromomethane	129	14.932	14.920	0.012	98	5334244	16.0	19.4	
72 Ethylene Dibromide	107	15.217	15.207	0.010	98	4168790	16.0	17.8	
73 Tetrachloroethene	129	15.282	15.272	0.010	95	2883889	16.0	17.3	
74 2,3-Dimethylheptane	43	16.145	16.139	0.006	96	7774816	16.0	14.3	
75 Chlorobenzene	112	16.150	16.142	0.008	93	5914764	16.0	17.1	
78 Ethylbenzene	91	16.431	16.422	0.009	99	10330192	16.0	17.1	
79 m-Xylene & p-Xylene	91	16.593	16.582	0.011	98	16015024	32.0	34.7	
80 n-Nonane	57	16.986	16.977	0.009	92	4997986	16.0	15.2	
81 Bromoform	173	17.051	17.041	0.010	98	6148940	16.0	25.6	
82 Styrene	104	17.056	17.047	0.009	98	6272582	16.0	19.7	
83 o-Xylene	91	17.116	17.106	0.010	98	8652988	16.0	17.8	
84 1,1,2,2-Tetrachloroethane	83	17.439	17.430	0.009	99	5342402	16.0	16.4	
85 1,2,3-Trichloropropane	110	17.596	17.587	0.009	95	1801458	16.0	17.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.693	17.684	0.009	97	11018383	16.0	17.0	
87 N-Propylbenzene	120	18.210	18.205	0.005	99	3034911	16.0	17.3	
88 2-Chlorotoluene	126	18.259	18.254	0.005	98	2747919	16.0	17.2	
89 4-Ethyltoluene	105	18.356	18.347	0.009	98	11171652	16.0	17.3	
90 1,3,5-Trimethylbenzene	120	18.426	18.419	0.007	92	4410950	16.0	17.5	
92 Alpha Methyl Styrene	118	18.652	18.644	0.008	90	4845121	16.0	19.1	
93 n-Decane	57	18.690	18.682	0.008	92	6027860	16.0	15.0	
94 tert-Butylbenzene	119	18.841	18.832	0.009	90	9821979	16.0	17.5	
95 1,2,4-Trimethylbenzene	105	18.857	18.846	0.011	96	9493306	16.0	17.2	
96 sec-Butylbenzene	105	19.100	19.094	0.006	97	13052688	16.0	16.5	
97 1,3-Dichlorobenzene	146	19.127	19.117	0.010	99	6998909	16.0	19.4	
98 Benzyl chloride	91	19.197	19.188	0.009	98	9093386	16.0	18.5	
99 1,4-Dichlorobenzene	146	19.208	19.200	0.008	96	7120026	16.0	19.2	
100 4-Isopropyltoluene	119	19.262	19.251	0.011	96	11067094	16.0	17.5	
101 1,2,3-Trimethylbenzene	105	19.316	19.306	0.010	99	9391687	16.0	18.8	
102 Butylcyclohexane	83	19.359	19.353	0.006	91	7086712	16.0	15.6	
103 2,3-Dihydroindene	117	19.558	19.550	0.008	94	8865173	16.0	17.8	
104 1,2-Dichlorobenzene	146	19.564	19.555	0.009	97	7061726	16.0	19.5	
105 n-Butylbenzene	91	19.682	19.673	0.009	99	10889558	16.0	16.9	
106 Indene	116	19.688	19.679	0.009	91	7968258	16.0	18.6	
107 Undecane	57	19.968	19.963	0.005	94	6339976	16.0	15.5	
108 1,2-Dibromo-3-Chloropropan	157	20.146	20.142	0.004	98	3643002	16.0	24.4	
109 1,2,4,5-Tetramethylbenzene	119	20.421	20.417	0.004	98	10379759	16.0	18.0	
110 Dodecane	57	21.014	21.014	0.000	93	2461951	16.0	7.63	
111 1,2,4-Trichlorobenzene	180	21.241	21.236	0.005	94	5229906	16.0	18.4	
112 Naphthalene	128	21.381	21.377	0.004	99	10693857	16.0	17.2	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	92	6035243	16.0	19.8	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	95	3007302	16.0	12.0	
115 2-Methylnaphthalene	142	22.400	22.395	0.005	98	11865	16.0	0.0391	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	95	4161	16.0	0.0112	
A 122 C8 Range	1	14.824	(14.755-14.892)		0	26057226	16.0	16.4	
S 123 1,2-Dichloroethene, Total	1				0		32.0	32.2	
S 124 Xylenes, Total	100				0		48.0	52.5	

Reagents:

40L10DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC10.D

Injection Date: 11-Jan-2019 14:35:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L10

Worklist Smp#: 6

Client ID:

Purge Vol: 500.000 mL

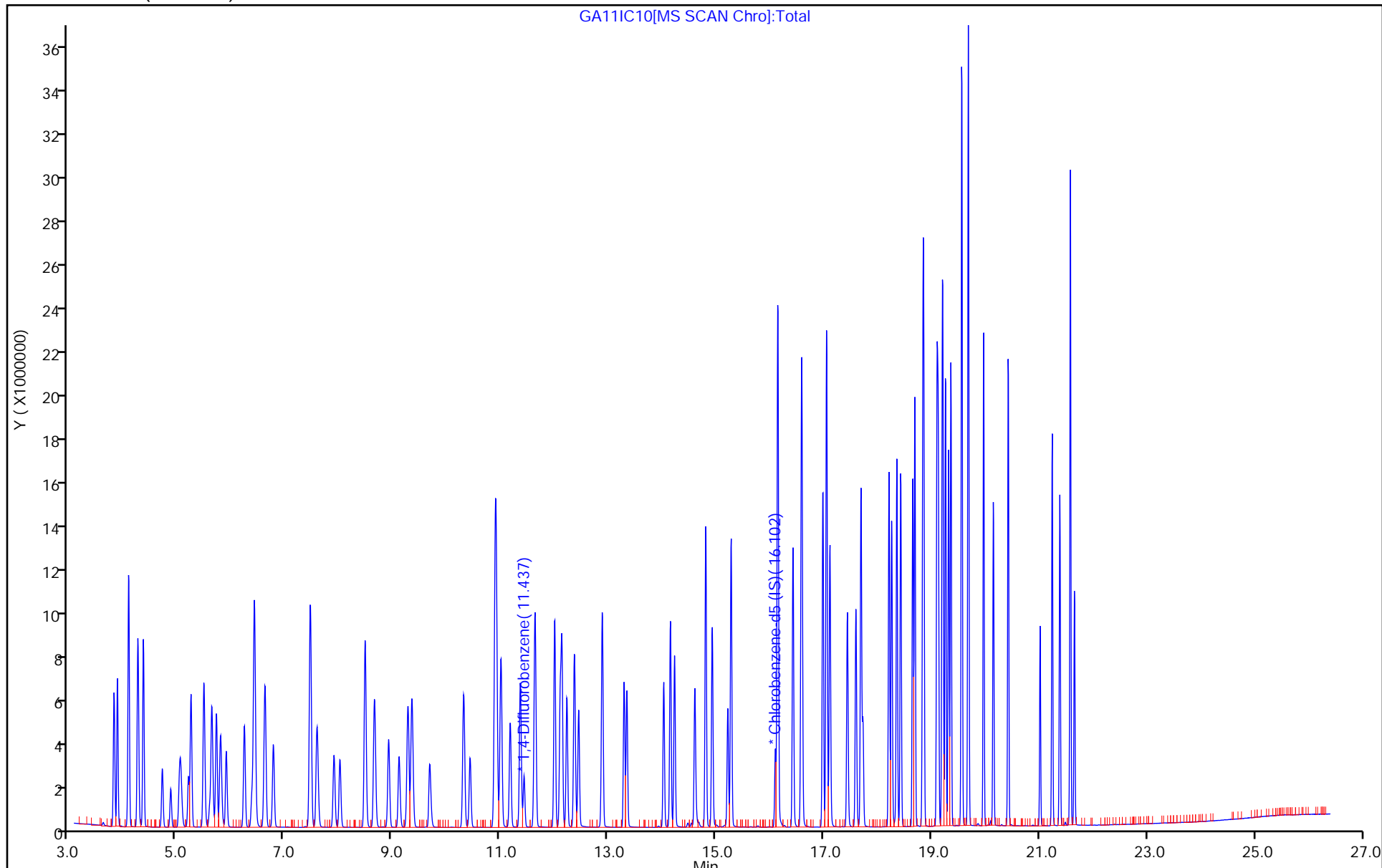
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC10.D

Injection Date: 11-Jan-2019 14:35:30

Instrument ID: MG

Lims ID: IC L10

Client ID:

Operator ID: 007126

ALS Bottle#: 15

Worklist Smp#: 6

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

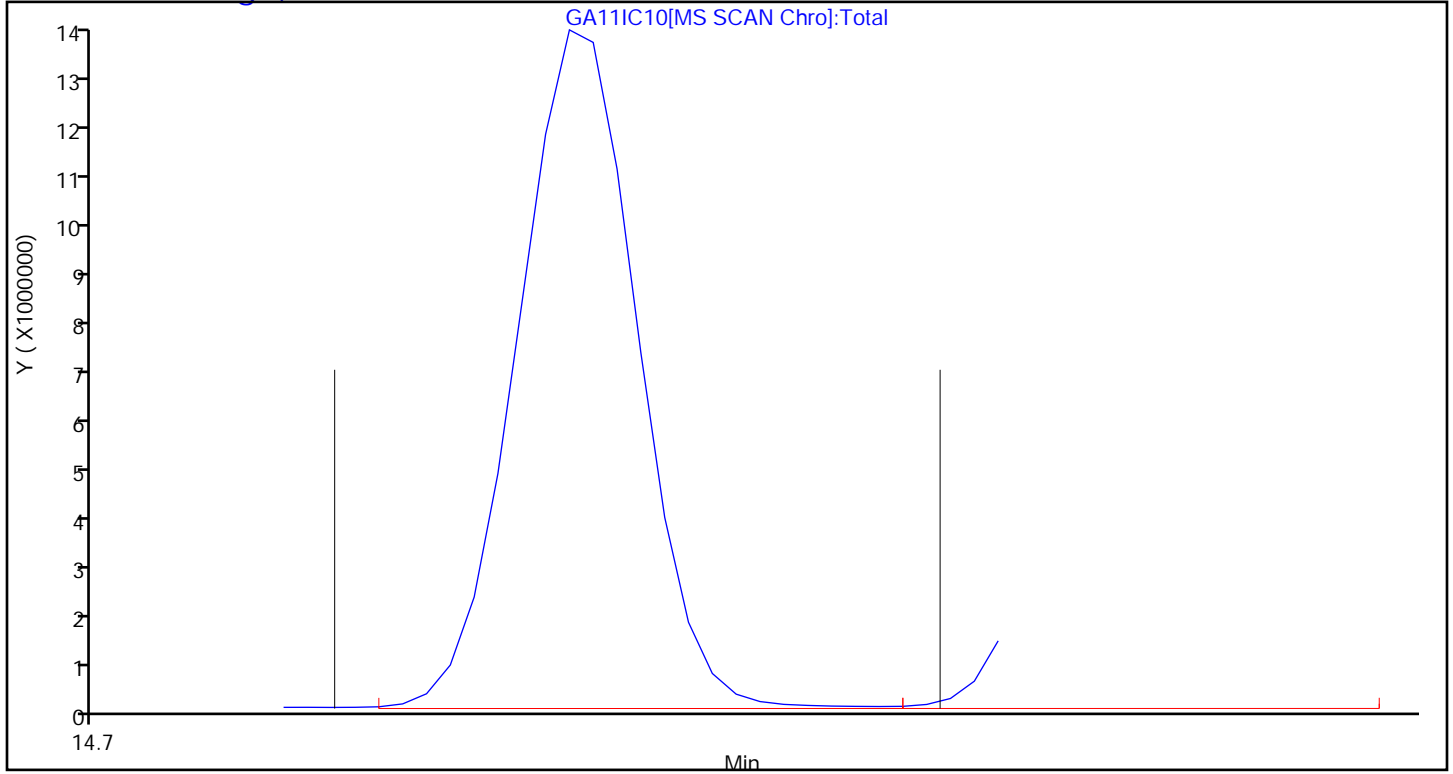
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 11-Jan-2019 16:46:30 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-009
 Misc. Info.: 201657
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:43 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa Date: 14-Jan-2019 17:21:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	98	398561	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	96	2338002	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	92	2194856	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	84	1743947	4.00	3.88	
6 Chlorodifluoromethane	51	3.840	3.829	0.011	84	6540	0.0200	0.0250	
7 Propene	41	3.840	3.838	0.002	96	7070	0.0200	0.0485	
8 Dichlorodifluoromethane	85	3.894	3.894	0.000	99	9502	0.0200	0.0225	
9 Chloromethane	52	4.088	4.091	-0.003	89	1951	0.0200	0.0421	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	91	5940	0.0200	0.0241	
12 Vinyl chloride	62	4.271	4.277	-0.006	51	3911	0.0200	0.0244	
11 Acetaldehyde	44	4.293	4.278	0.015	95	15130	0.1000	0.2536	
13 Butane	43	4.373	4.373	0.000	88	9641	0.0200	0.0357	
14 Butadiene	54	4.379	4.375	0.004	55	3174	0.0200	0.0256	
15 Bromomethane	94	4.724	4.722	0.002	97	3695	0.0200	0.0266	
16 Chloroethane	64	4.880	4.879	0.001	52	1879	0.0200	0.0243	
17 Ethanol	31	5.107	5.064	0.043	98	7458	0.1000	0.1063	
18 Vinyl bromide	106	5.209	5.205	0.004	98	2938	0.0200	0.0229	
19 2-Methylbutane	43	5.252	5.256	-0.004	90	5353	0.0200	0.0276	
20 Trichlorofluoromethane	101	5.495	5.492	0.003	98	9041	0.0200	0.0219	
21 Acrolein	56	5.549	5.526	0.023	51	1646	0.0200	0.0462	
23 Acetone	58	5.711	5.666	0.045	95	6286	0.0600	0.1049	
24 Pentane	72	5.716	5.725	-0.009	75	537	0.0200	0.0203	
25 Isopropyl alcohol	45	5.937	5.840	0.097	94	10878	0.0600	0.0681	
26 Ethyl ether	31	5.997	5.943	0.054	84	3505	0.0200	0.0204	
27 1,1-Dichloroethene	96	6.250	6.242	0.008	93	3049	0.0200	0.0217	
28 Acrylonitrile	53	6.396	6.375	0.021	76	1686	0.0200	0.0174	
29 1,1,2-Trichloro-1,2,2-trif	101	6.433	6.428	0.005	93	6973	0.0200	0.0229	
30 2-Methyl-2-propanol	59	6.698	6.534	0.164	23	4034	0.0200	0.0184	
31 Methylene Chloride	84	6.611	6.610	0.001	98	21773	0.0200	0.1330	
32 3-Chloro-1-propene	39	6.633	6.626	0.007	89	3831	0.0200	0.0220	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.773	6.778	-0.005	95	9172	0.0200	0.0215	
34 trans-1,2-Dichloroethene	96	7.453	7.450	0.002	95	3112	0.0200	0.0221	
35 2-Methylpentane	43	7.463	7.468	-0.005	94	9490	0.0200	0.0235	
36 Methyl tert-butyl ether	73	7.738	7.643	0.095	72	5606	0.0200	0.0143	
37 1,1-Dichloroethane	63	7.884	7.892	-0.008	98	6185	0.0200	0.0214	
38 Vinyl acetate	43	8.035	8.016	0.019	97	5165	0.0200	0.0128	
40 Hexane	56	8.482	8.480	0.002	85	2997	0.0200	0.0231	
42 cis-1,2-Dichloroethene	96	8.898	8.906	-0.008	95	3051	0.0200	0.0212	
43 Ethyl acetate	43	9.173	9.131	0.042	64	3892	0.0200	0.0118	
44 Chloroform	83	9.248	9.261	-0.013	47	7168	0.0200	0.0215	
45 Tert-butyl ethyl ether	59	9.453	9.389	0.064	94	5828	0.0200	0.0127	
46 Tetrahydrofuran	42	9.804	9.725	0.079	81	2922	0.0200	0.0165	
47 1,1,1-Trichloroethane	97	10.305	10.303	0.002	93	7734	0.0200	0.0214	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	94	4547	0.0200	0.0199	
49 Cyclohexane	69	10.882	10.888	-0.006	73	1534	0.0200	0.0200	
50 Benzene	78	10.882	10.893	-0.011	95	9465	0.0200	0.0226	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	92	6601	0.0200	0.0190	
53 2,3-Dimethylpentane	71	10.990	11.000	-0.010	92	2282	0.0200	0.0207	
51 n-Butanol	31	11.098	11.004	0.094	39	1471	0.0200	0.0281	
54 Thiophene	84	11.157	11.164	-0.007	95	5442	0.0200	0.0224	
55 Isooctane	57	11.632	11.632	0.000	97	17363	0.0200	0.0212	
56 n-Heptane	71	11.993	11.995	-0.002	92	3375	0.0200	0.0201	
57 1,2-Dichloropropane	63	12.085	12.093	-0.008	64	3204	0.0200	0.0195	
58 Trichloroethene	130	12.122	12.124	-0.002	90	4087	0.0200	0.0215	
59 Dibromomethane	93	12.209	12.216	-0.007	89	5771	0.0200	0.0333	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	94	6835	0.0200	0.0200	
62 Methyl methacrylate	41	12.467	12.453	0.014	87	2694	0.0200	0.0128	
63 Methylcyclohexane	83	12.877	12.879	-0.002	87	5664	0.0200	0.0198	
64 4-Methyl-2-pentanone (MIBK)	43	13.368	13.321	0.047	96	4253	0.0200	0.0129	
65 cis-1,3-Dichloropropene	75	13.336	13.336	0.000	95	4540	0.0200	0.0182	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	94	4607	0.0200	0.0195	
67 Toluene	91	14.144	14.144	0.000	92	9759	0.0200	0.0202	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	90	2849	0.0200	0.0193	
69 2-Hexanone	58	14.673	14.631	0.042	90	1948	0.0200	0.0134	
70 n-Octane	85	14.808	14.804	0.004	96	3306	0.0200	0.0190	
71 Chlorodibromomethane	129	14.916	14.920	-0.004	93	4719	0.0200	0.0158	
72 Ethylene Dibromide	107	15.201	15.207	-0.006	94	4392	0.0200	0.0172	
73 Tetrachloroethene	129	15.271	15.272	-0.001	90	3665	0.0200	0.0202	
74 2,3-Dimethylheptane	43	16.134	16.139	-0.005	93	12324	0.0200	0.0209	
75 Chlorobenzene	112	16.140	16.142	-0.002	71	7137	0.0200	0.0190	
78 Ethylbenzene	91	16.420	16.422	-0.002	98	11395	0.0200	0.0174	
79 m-Xylene & p-Xylene	91	16.576	16.582	-0.006	99	17235	0.0400	0.0343	
80 n-Nonane	57	16.975	16.977	-0.002	92	6035	0.0200	0.0169	
81 Bromoform	173	17.035	17.041	-0.006	81	3699	0.0200	0.0142	
82 Styrene	104	17.046	17.047	-0.001	96	5116	0.0200	0.0147	
83 o-Xylene	91	17.105	17.106	-0.001	96	8649	0.0200	0.0163	
84 1,1,2,2-Tetrachloroethane	83	17.434	17.430	0.004	96	4703	0.0200	0.0132	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	93	1596	0.0200	0.0140	
86 Isopropylbenzene	105	17.687	17.684	0.003	91	11142	0.0200	0.0158	
87 N-Propylbenzene	120	18.205	18.205	0.000	97	2584	0.0200	0.0135	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	3051	0.0200	0.0175	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	10441	0.0200	0.0148	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
90 1,3,5-Trimethylbenzene	120	18.421	18.419	0.002	91	3714	0.0200	0.0136	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	86	2842	0.0200	0.0103	
93 n-Decane	57	18.679	18.682	-0.003	87	6640	0.0200	0.0152	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	89	8403	0.0200	0.0137	
95 1,2,4-Trimethylbenzene	105	18.841	18.846	-0.005	94	8194	0.0200	0.0136	
96 sec-Butylbenzene	105	19.095	19.094	0.001	97	12069	0.0200	0.0140	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	97	7122	0.0200	0.0181	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	7056	0.0200	0.0132	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	89	7701	0.0200	0.0191	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	95	9243	0.0200	0.0134	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	97	8305	0.0200	0.0153	
102 Butylcyclohexane	83	19.348	19.353	-0.005	88	9138	0.0200	0.0184	
103 2,3-Dihydroindene	117	19.548	19.550	-0.002	92	8066	0.0200	0.0148	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	80	6474	0.0200	0.0165	
105 n-Butylbenzene	91	19.672	19.673	-0.001	94	9992	0.0200	0.0143	
106 Indene	116	19.677	19.679	-0.002	79	6136	0.0200	0.0131	
107 Undecane	57	19.963	19.963	0.000	90	5997	0.0200	0.0135	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	84	2927	0.0200	0.0180	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	94	8929	0.0200	0.0142	
110 Dodecane	57	21.014	21.014	0.000	87	5086	0.0200	0.0145	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	93	6978	0.0200	0.0225	
112 Naphthalene	128	21.376	21.377	-0.001	99	16242	0.0200	0.0240	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	89	5189	0.0200	0.0156	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	91	7256	0.0200	0.0265	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	98	13967	0.0200	0.0423	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	98	19148	0.0200	0.0473	
A 122 C8 Range	1	14.798	(14.755-14.870)		0	37256	0.0200	0.0215	
S 123 1,2-Dichloroethene, Total	1				0		0.0400	0.0433	
S 124 Xylenes, Total	100				0		0.0600	0.0507	

Reagents:

40L1-3DQP_00011

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D

Injection Date: 11-Jan-2019 16:46:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L1

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

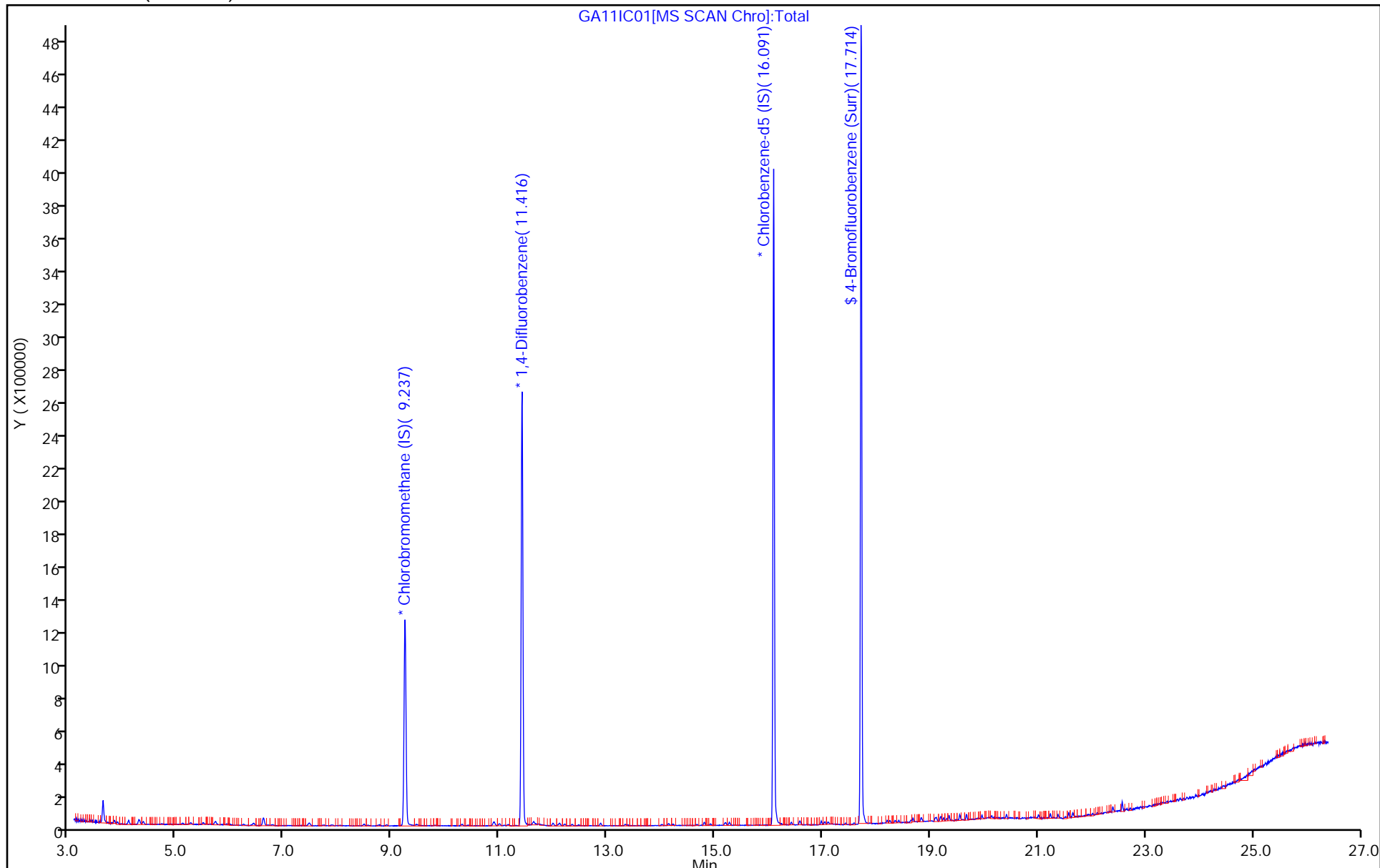
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D

Injection Date: 11-Jan-2019 16:46:30

Instrument ID: MG

Lims ID: IC L1

Client ID:

Operator ID: 007126

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

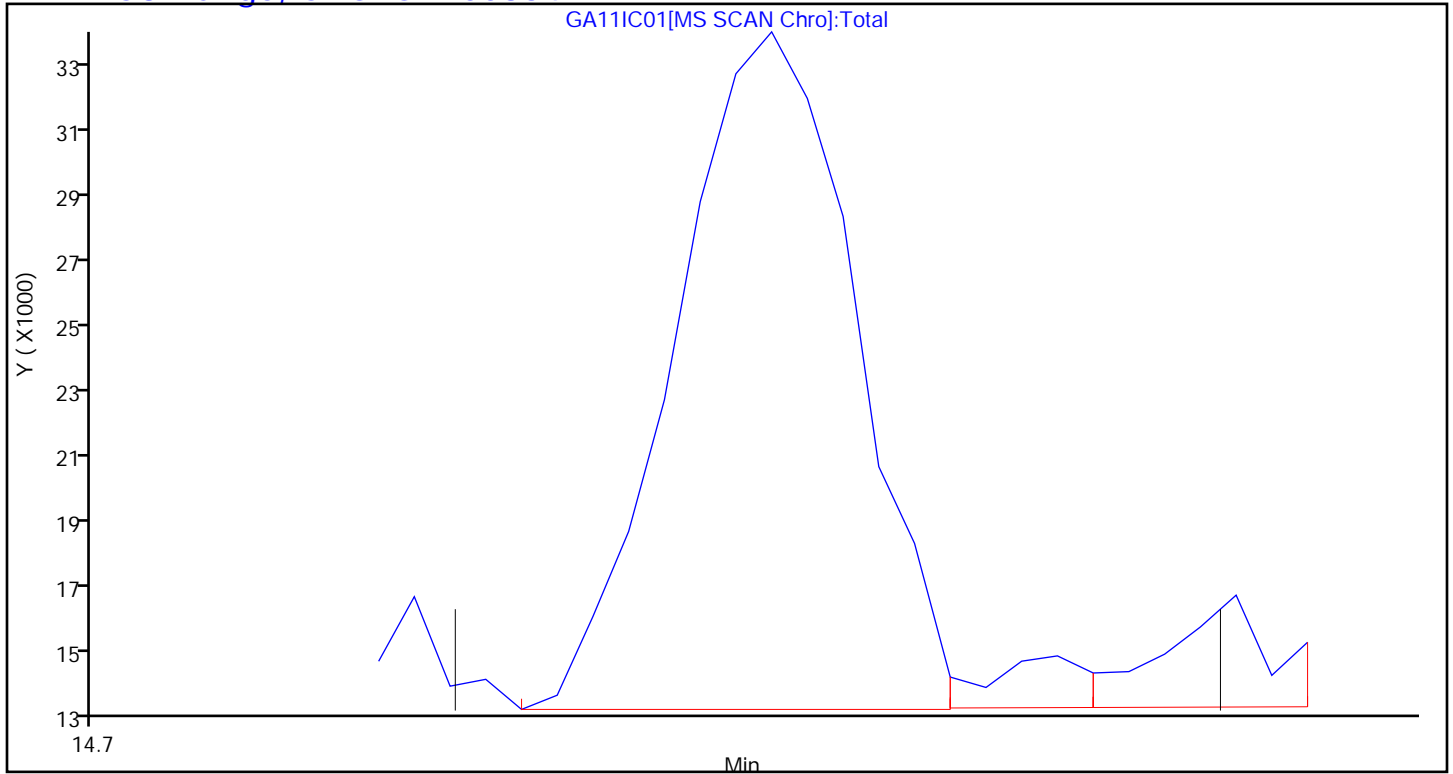
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834

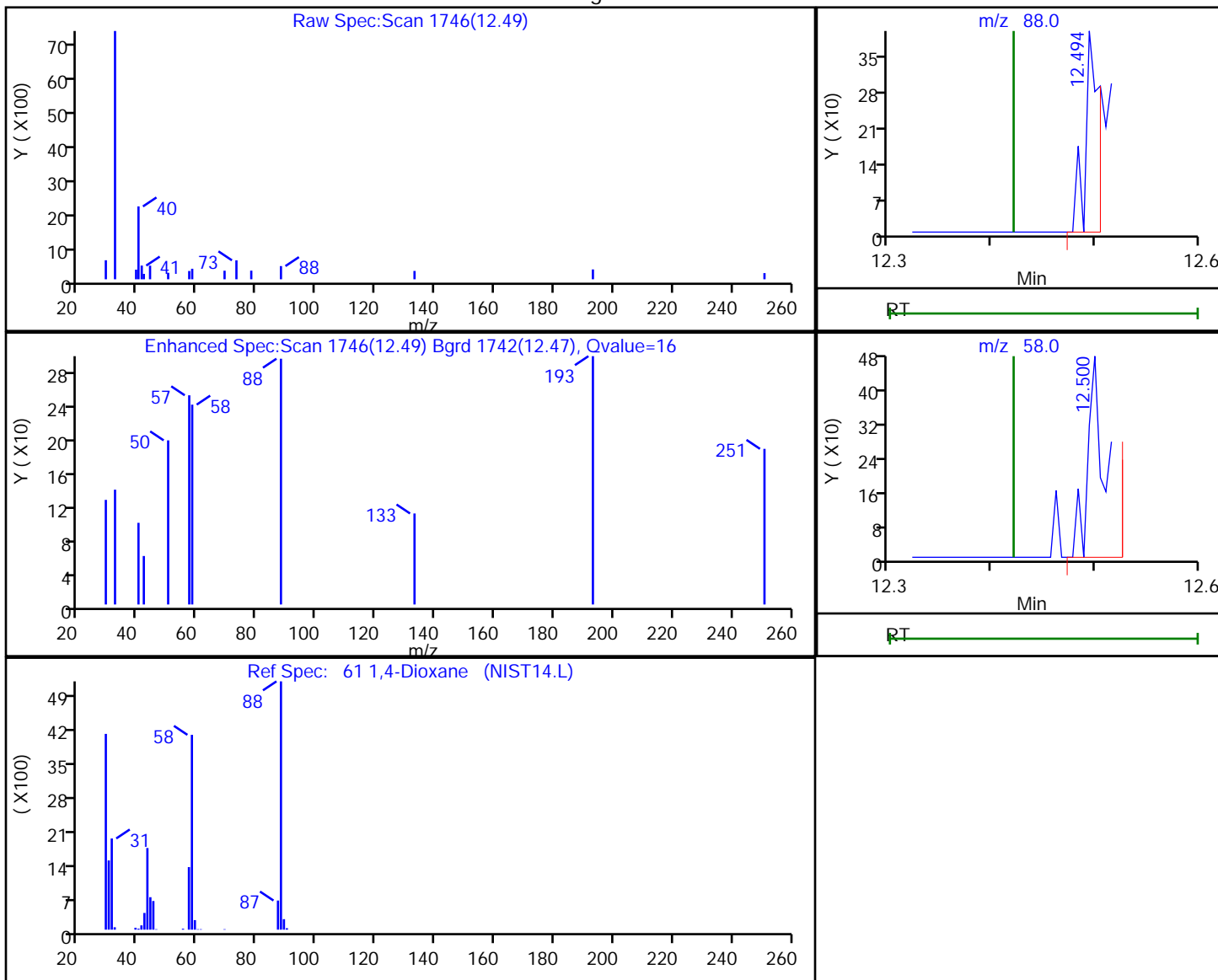


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D
Injection Date: 11-Jan-2019 16:46:30 Instrument ID: MG
Lims ID: IC L1
Client ID:
Operator ID: 007126 ALS Bottle#: 1 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

61 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
12.49	88.00	361	0.007427
12.50	58.00	563	

Reviewer: barlozhetskayaa, 14-Jan-2019 16:39:43

Audit Action: Marked Compound Undetected

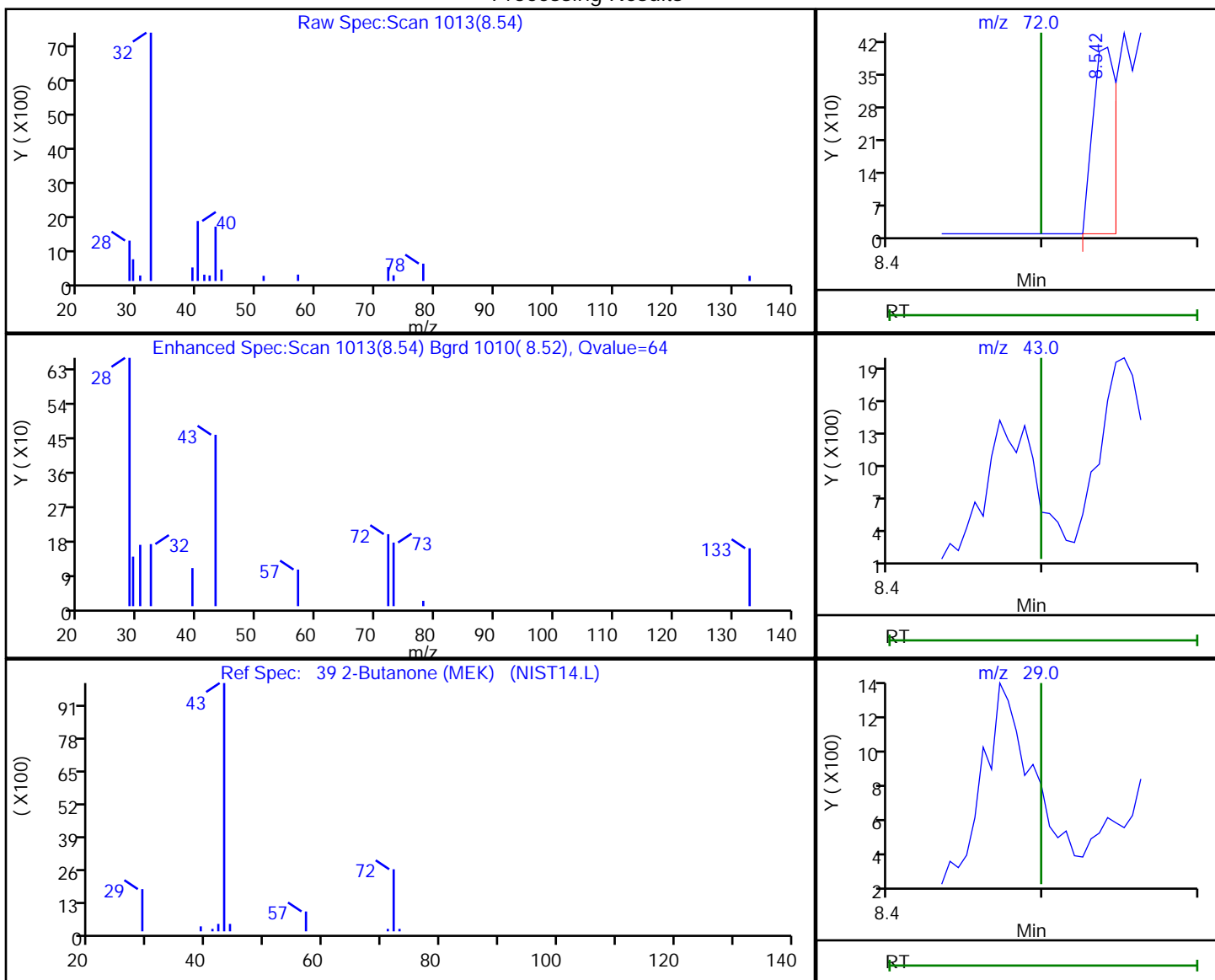
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D
 Injection Date: 11-Jan-2019 16:46:30 Instrument ID: MG
 Lims ID: IC L1
 Client ID:
 Operator ID: 007126 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

39 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
8.54	72.00	434	0.006863
8.50	43.00	0	
8.50	29.00	0	

Reviewer: barlozhetskayaa, 14-Jan-2019 16:39:32

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 11-Jan-2019 17:29:30 ALS Bottle#: 1 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-010
 Misc. Info.: 201657
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:49 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 12:55:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	97	383461	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	96	2241329	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	92	2135368	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	84	1724522	4.00	3.94	
6 Chlorodifluoromethane	51	3.834	3.829	0.005	96	13029	0.0400	0.0519	
7 Propene	41	3.845	3.838	0.007	97	10664	0.0400	0.0760	
8 Dichlorodifluoromethane	85	3.899	3.894	0.005	99	18210	0.0400	0.0449	
9 Chloromethane	52	4.098	4.091	0.007	81	4029	0.0400	0.0904	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	90	10609	0.0400	0.0447	
12 Vinyl chloride	62	4.282	4.277	0.005	39	6583	0.0400	0.0426	
11 Acetaldehyde	44	4.293	4.278	0.015	94	27240	0.2000	0.4746	
13 Butane	43	4.373	4.373	0.000	87	15315	0.0400	0.0589	
14 Butadiene	54	4.379	4.375	0.004	57	4915	0.0400	0.0412	
15 Bromomethane	94	4.724	4.722	0.002	96	6503	0.0400	0.0487	
16 Chloroethane	64	4.875	4.879	-0.004	87	3157	0.0400	0.0424	
17 Ethanol	31	5.101	5.064	0.037	98	16097	0.2000	0.2385	
18 Vinyl bromide	106	5.209	5.205	0.004	96	5557	0.0400	0.0449	
19 2-Methylbutane	43	5.258	5.256	0.002	95	9723	0.0400	0.0521	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	16790	0.0400	0.0422	
21 Acrolein	56	5.538	5.526	0.012	51	2743	0.0400	0.0801	
23 Acetone	58	5.705	5.666	0.039	97	13906	0.1200	0.2412	
24 Pentane	72	5.727	5.725	0.002	80	933	0.0400	0.0367	
25 Isopropyl alcohol	45	5.921	5.840	0.081	98	20121	0.1200	0.1309	
26 Ethyl ether	31	5.986	5.943	0.043	83	7609	0.0400	0.0460	
27 1,1-Dichloroethene	96	6.239	6.242	-0.003	94	5250	0.0400	0.0388	
28 Acrylonitrile	53	6.379	6.375	0.004	88	3780	0.0400	0.0405	
29 1,1,2-Trichloro-1,2,2-trif	101	6.423	6.428	-0.005	94	12189	0.0400	0.0416	
30 2-Methyl-2-propanol	59	6.671	6.534	0.137	88	8632	0.0400	0.0410	
31 Methylene Chloride	84	6.611	6.610	0.001	97	24679	0.0400	0.1567	
32 3-Chloro-1-propene	39	6.627	6.626	0.001	93	7240	0.0400	0.0431	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.778	6.778	0.000	99	17154	0.0400	0.0418	
34 trans-1,2-Dichloroethene	96	7.442	7.450	-0.008	87	5310	0.0400	0.0392	
35 2-Methylpentane	43	7.463	7.468	-0.005	95	17087	0.0400	0.0441	
36 Methyl tert-butyl ether	73	7.706	7.643	0.063	97	13784	0.0400	0.0366	
37 1,1-Dichloroethane	63	7.884	7.892	-0.008	99	11544	0.0400	0.0414	
38 Vinyl acetate	43	8.029	8.016	0.013	100	13405	0.0400	0.0347	
40 Hexane	56	8.477	8.480	-0.003	87	5618	0.0400	0.0450	
39 2-Butanone (MEK)	72	8.536	8.499	0.037	98	2572	0.0400	0.0423	
41 Isopropyl ether	45	8.747	8.679	0.068	96	16803	0.0400	0.0351	
42 cis-1,2-Dichloroethene	96	8.898	8.906	-0.008	95	5311	0.0400	0.0383	
43 Ethyl acetate	43	9.162	9.131	0.031	98	11371	0.0400	0.0358	
44 Chloroform	83	9.248	9.261	-0.013	28	12869	0.0400	0.0401	
45 Tert-butyl ethyl ether	59	9.442	9.389	0.053	97	14659	0.0400	0.0332	
46 Tetrahydrofuran	42	9.793	9.725	0.068	92	6738	0.0400	0.0397	
47 1,1,1-Trichloroethane	97	10.294	10.303	-0.009	96	13331	0.0400	0.0384	
48 1,2-Dichloroethane	62	10.407	10.416	-0.009	97	8382	0.0400	0.0383	
49 Cyclohexane	69	10.882	10.888	-0.006	74	3093	0.0400	0.0420	
50 Benzene	78	10.887	10.893	-0.006	96	15963	0.0400	0.0398	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	97	11874	0.0400	0.0357	
53 2,3-Dimethylpentane	71	11.006	11.000	0.006	90	4248	0.0400	0.0402	
51 n-Butanol	31	11.071	11.004	0.067	54	2052	0.0400	0.0409	
54 Thiophene	84	11.157	11.164	-0.007	96	9203	0.0400	0.0395	
55 Isooctane	57	11.632	11.632	0.000	97	31627	0.0400	0.0403	
56 n-Heptane	71	11.998	11.995	0.003	95	6342	0.0400	0.0394	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	82	6605	0.0400	0.0419	
58 Trichloroethene	130	12.122	12.124	-0.002	92	7238	0.0400	0.0397	
59 Dibromomethane	93	12.203	12.216	-0.013	95	8080	0.0400	0.0487	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	97	11513	0.0400	0.0352	
61 1,4-Dioxane	88	12.489	12.421	0.068	65	2092	0.0400	0.0449	
62 Methyl methacrylate	41	12.473	12.453	0.020	89	6964	0.0400	0.0346	
63 Methylcyclohexane	83	12.877	12.879	-0.002	92	11041	0.0400	0.0402	
64 4-Methyl-2-pentanone (MIBK)	43	13.357	13.321	0.036	98	10902	0.0400	0.0346	
65 cis-1,3-Dichloropropene	75	13.336	13.336	0.000	97	8857	0.0400	0.0369	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	96	8494	0.0400	0.0369	
67 Toluene	91	14.144	14.144	0.000	93	18809	0.0400	0.0400	
68 1,1,2-Trichloroethane	83	14.215	14.220	-0.006	93	5479	0.0400	0.0382	
69 2-Hexanone	58	14.657	14.631	0.026	92	4307	0.0400	0.0305	
70 n-Octane	85	14.808	14.804	0.004	96	6439	0.0400	0.0381	
71 Chlorodibromomethane	129	14.916	14.920	-0.004	96	9202	0.0400	0.0317	
72 Ethylene Dibromide	107	15.201	15.207	-0.006	94	8663	0.0400	0.0348	
73 Tetrachloroethene	129	15.271	15.272	-0.001	87	6973	0.0400	0.0396	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	94	23890	0.0400	0.0416	
75 Chlorobenzene	112	16.140	16.142	-0.002	75	13951	0.0400	0.0382	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	24780	0.0400	0.0388	
79 m-Xylene & p-Xylene	91	16.576	16.582	-0.006	99	36147	0.0800	0.0740	
80 n-Nonane	57	16.975	16.977	-0.002	95	13596	0.0400	0.0391	
81 Bromoform	173	17.040	17.041	-0.001	79	7868	0.0400	0.0310	
82 Styrene	104	17.045	17.047	-0.002	97	10474	0.0400	0.0310	
83 o-Xylene	91	17.099	17.106	-0.007	97	18010	0.0400	0.0350	
84 1,1,1,2-Tetrachloroethane	83	17.423	17.430	-0.007	95	11381	0.0400	0.0329	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	95	3874	0.0400	0.0350	
86 Isopropylbenzene	105	17.682	17.684	-0.002	96	25754	0.0400	0.0375	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 N-Propylbenzene	120	18.205	18.205	0.000	97	6114	0.0400	0.0329	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	96	6524	0.0400	0.0385	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	22914	0.0400	0.0334	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	92	9227	0.0400	0.0346	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	86	7231	0.0400	0.0269	
93 n-Decane	57	18.679	18.682	-0.003	89	16235	0.0400	0.0381	
94 tert-Butylbenzene	119	18.836	18.832	0.004	90	19737	0.0400	0.0332	
95 1,2,4-Trimethylbenzene	105	18.847	18.846	0.001	96	18671	0.0400	0.0319	
96 sec-Butylbenzene	105	19.095	19.094	0.001	98	27915	0.0400	0.0333	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	94	13761	0.0400	0.0360	
98 Benzyl chloride	91	19.186	19.188	-0.002	96	15426	0.0400	0.0296	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	87	14670	0.0400	0.0374	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	21389	0.0400	0.0319	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	98	18233	0.0400	0.0345	
102 Butylcyclohexane	83	19.353	19.353	0.000	90	18731	0.0400	0.0388	
103 2,3-Dihydroindene	117	19.548	19.550	-0.002	92	17941	0.0400	0.0339	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	86	12181	0.0400	0.0318	
105 n-Butylbenzene	91	19.672	19.673	-0.001	95	23860	0.0400	0.0350	
106 Indene	116	19.677	19.679	-0.002	76	14464	0.0400	0.0318	
107 Undecane	57	19.963	19.963	0.000	95	15243	0.0400	0.0353	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	84	5571	0.0400	0.0352	
109 1,2,4,5-Tetramethylbenzene	119	20.421	20.417	0.004	96	18455	0.0400	0.0303	
110 Dodecane	57	21.014	21.014	0.000	94	12818	0.0400	0.0375	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	91	11357	0.0400	0.0377	
112 Naphthalene	128	21.376	21.377	-0.001	98	24728	0.0400	0.0375	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	87	9776	0.0400	0.0303	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	93	10806	0.0400	0.0406	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	99	13713	0.0400	0.0427	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	98	17895	0.0400	0.0455	
A 122 C8 Range	1	14.803	(14.755-14.870)		0	79904	0.0400	0.0474	
S 123 1,2-Dichloroethene, Total	1				0		0.0800	0.0775	
S 124 Xylenes, Total	100				0		0.1200	0.1090	

Reagents:

40L1-3DQP_00011

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC02.D

Injection Date: 11-Jan-2019 17:29:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L2

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

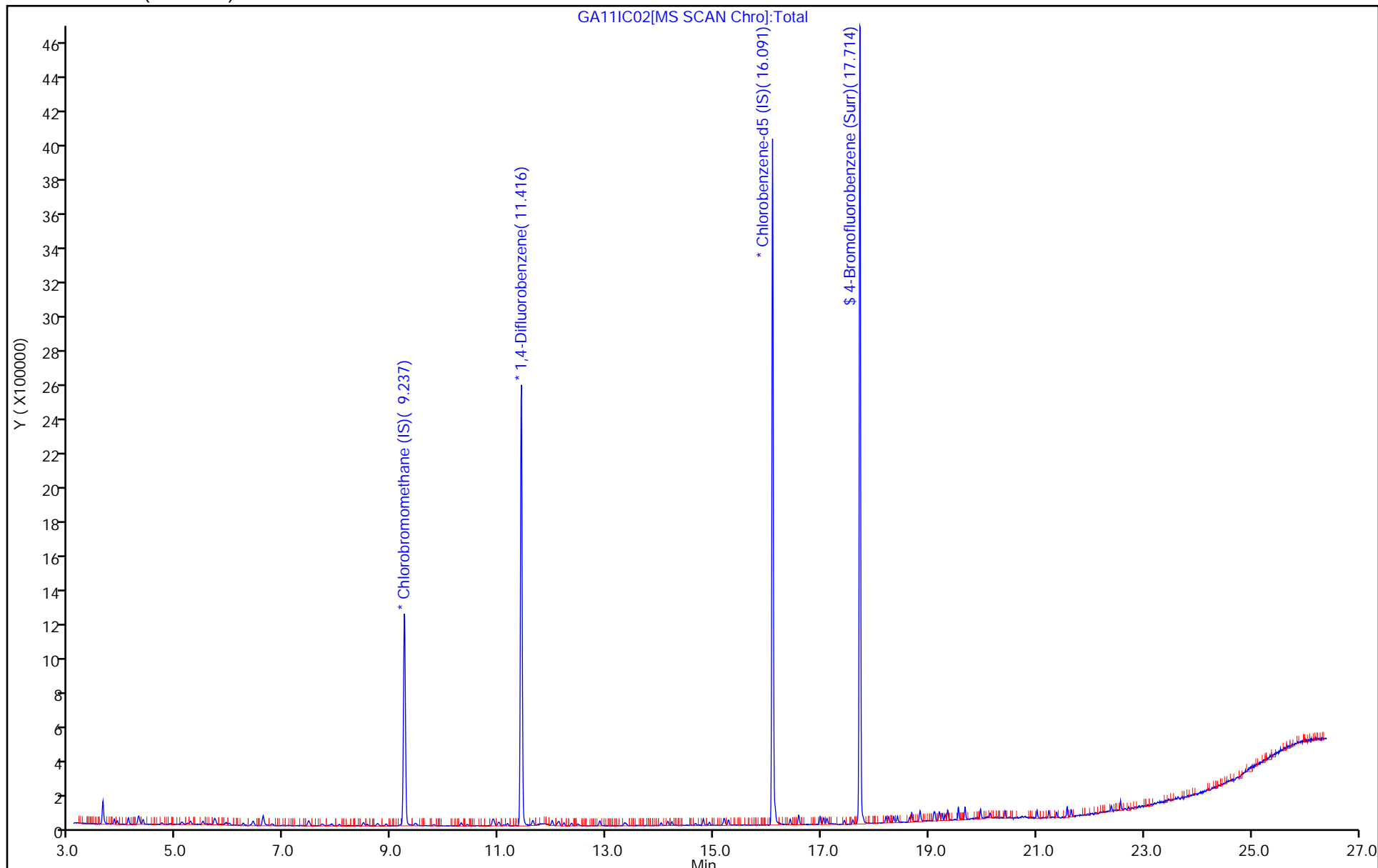
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC02.D

Injection Date: 11-Jan-2019 17:29:30

Instrument ID: MG

Lims ID: IC L2

Client ID:

Operator ID: 007126

ALS Bottle#: 1

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

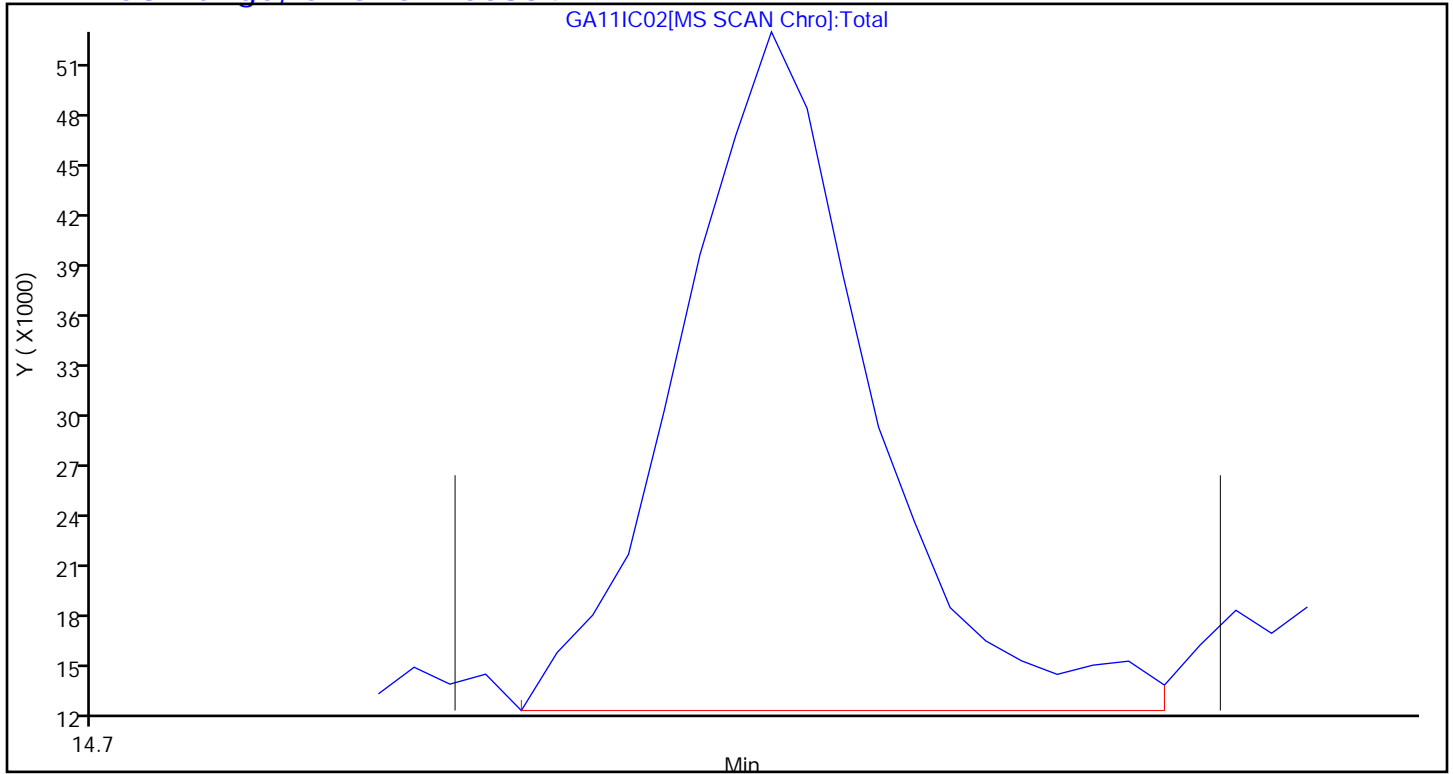
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834

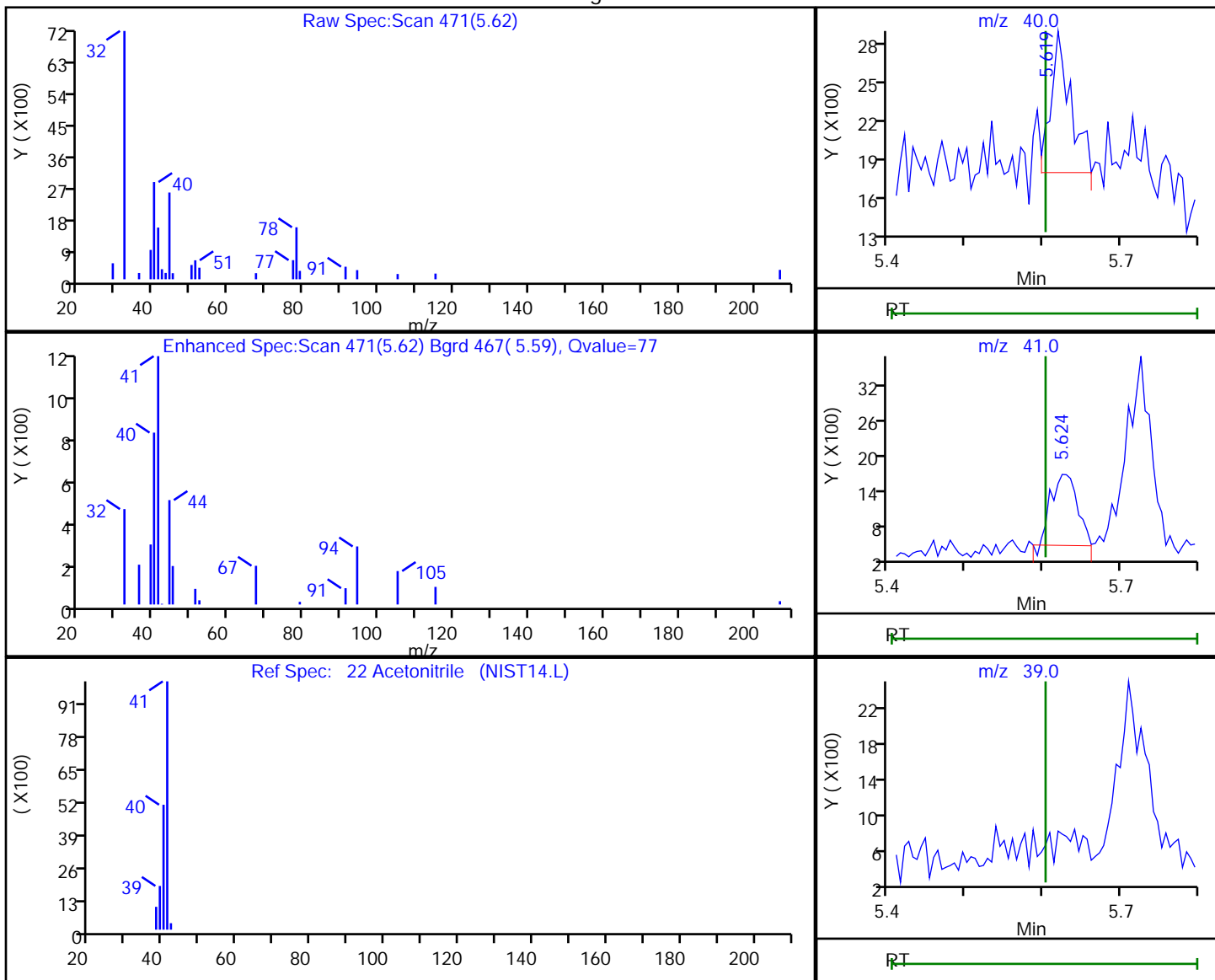


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC02.D
 Injection Date: 11-Jan-2019 17:29:30 Instrument ID: MG
 Lims ID: IC L2
 Client ID:
 Operator ID: 007126 ALS Bottle#: 1 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

22 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
5.62	40.00	1867	0.034937
5.62	41.00	2860	
5.60	39.00	0	

Reviewer: barlozhetskayaa, 14-Jan-2019 16:37:44

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 11-Jan-2019 18:12:30 ALS Bottle#: 1 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-011
 Misc. Info.: 201657
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:56 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa

Date: 14-Jan-2019 17:11:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	98	367691	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	96	2082867	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	93	2070201	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	84	1705365	4.00	4.02	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	97	21711	0.0800	0.0901	
7 Propene	41	3.840	3.838	0.002	97	16425	0.0800	0.1221	
8 Dichlorodifluoromethane	85	3.893	3.894	-0.001	99	32728	0.0800	0.0841	
9 Chloromethane	52	4.098	4.091	0.007	67	5382	0.0800	0.1259	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	92	19448	0.0800	0.0855	
12 Vinyl chloride	62	4.282	4.277	0.005	42	12737	0.0800	0.0860	
11 Acetaldehyde	44	4.287	4.278	0.009	92	55698	0.4000	1.01	
13 Butane	43	4.373	4.373	0.000	88	28045	0.0800	0.1125	
14 Butadiene	54	4.379	4.375	0.004	60	10439	0.0800	0.0912	
15 Bromomethane	94	4.729	4.722	0.007	97	12169	0.0800	0.0951	
16 Chloroethane	64	4.880	4.879	0.001	86	6344	0.0800	0.0889	
17 Ethanol	31	5.085	5.064	0.021	98	32740	0.4000	0.5058	
18 Vinyl bromide	106	5.204	5.205	-0.001	98	10174	0.0800	0.0858	
19 2-Methylbutane	43	5.258	5.256	0.002	93	17744	0.0800	0.0991	
20 Trichlorofluoromethane	101	5.495	5.492	0.003	100	31414	0.0800	0.0823	
21 Acrolein	56	5.533	5.526	0.007	91	5061	0.0800	0.1541	
22 Acetonitrile	40	5.614	5.603	0.011	98	4681	0.0800	0.0914	
23 Acetone	58	5.689	5.666	0.023	99	29244	0.2400	0.5291	
24 Pentane	72	5.732	5.725	0.007	67	2263	0.0800	0.0928	
25 Isopropyl alcohol	45	5.878	5.840	0.038	99	39615	0.2400	0.2688	
26 Ethyl ether	31	5.970	5.943	0.027	87	15127	0.0800	0.0954	
27 1,1-Dichloroethene	96	6.245	6.242	0.003	95	11039	0.0800	0.0851	
28 Acrylonitrile	53	6.379	6.375	0.004	95	7623	0.0800	0.0851	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	92	24196	0.0800	0.0860	
30 2-Methyl-2-propanol	59	6.611	6.534	0.077	55	18927	0.0800	0.0938	
31 Methylene Chloride	84	6.606	6.610	-0.004	97	27617	0.0800	0.1829	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.617	6.626	-0.009	55	14784	0.0800	0.0918	
33 Carbon disulfide	76	6.778	6.778	0.000	100	33755	0.0800	0.0857	
34 trans-1,2-Dichloroethene	96	7.442	7.450	-0.008	96	10703	0.0800	0.0824	
35 2-Methylpentane	43	7.469	7.468	0.001	96	32181	0.0800	0.0865	
36 Methyl tert-butyl ether	73	7.679	7.643	0.036	97	31073	0.0800	0.0860	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	99	22407	0.0800	0.0839	
38 Vinyl acetate	43	8.024	8.016	0.008	100	29912	0.0800	0.0807	
40 Hexane	56	8.477	8.480	-0.003	82	10084	0.0800	0.0842	
39 2-Butanone (MEK)	72	8.526	8.499	0.027	98	6283	0.0800	0.1077	
41 Isopropyl ether	45	8.709	8.679	0.030	96	37979	0.0800	0.0828	
42 cis-1,2-Dichloroethene	96	8.892	8.906	-0.014	97	10779	0.0800	0.0811	
43 Ethyl acetate	43	9.151	9.131	0.020	98	25120	0.0800	0.0825	
44 Chloroform	83	9.259	9.261	-0.002	93	25085	0.0800	0.0816	
45 Tert-butyl ethyl ether	59	9.426	9.389	0.037	96	33984	0.0800	0.0803	
46 Tetrahydrofuran	42	9.760	9.725	0.035	93	14658	0.0800	0.0900	
47 1,1,1-Trichloroethane	97	10.294	10.303	-0.009	96	27166	0.0800	0.0816	
48 1,2-Dichloroethane	62	10.407	10.416	-0.009	97	17516	0.0800	0.0860	
49 Cyclohexane	69	10.887	10.888	-0.001	72	5675	0.0800	0.0829	
50 Benzene	78	10.887	10.893	-0.006	97	33352	0.0800	0.0895	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	96	24215	0.0800	0.0784	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	91	8397	0.0800	0.0855	
51 n-Butanol	31	11.060	11.004	0.056	43	4173	0.0800	0.0895	
54 Thiophene	84	11.157	11.164	-0.007	95	18410	0.0800	0.0851	
55 Isooctane	57	11.626	11.632	-0.006	97	63694	0.0800	0.0873	
56 n-Heptane	71	11.993	11.995	-0.002	95	13419	0.0800	0.0896	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	82	12771	0.0800	0.0872	
58 Trichloroethene	130	12.122	12.124	-0.002	91	13973	0.0800	0.0824	
59 Dibromomethane	93	12.214	12.216	-0.002	92	14509	0.0800	0.0940	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	99	23694	0.0800	0.0779	
61 1,4-Dioxane	88	12.462	12.421	0.041	44	4453	0.0800	0.1028	
62 Methyl methacrylate	41	12.457	12.453	0.004	89	14956	0.0800	0.0799	
63 Methylcyclohexane	83	12.877	12.879	-0.002	91	21112	0.0800	0.0828	
64 4-Methyl-2-pentanone (MIBK)	43	13.341	13.321	0.020	90	24146	0.0800	0.0824	
65 cis-1,3-Dichloropropene	75	13.336	13.336	0.000	96	18964	0.0800	0.0851	
66 trans-1,3-Dichloropropene	75	14.010	14.019	-0.009	96	18209	0.0800	0.0816	
67 Toluene	91	14.139	14.144	-0.005	94	37560	0.0800	0.0825	
68 1,1,2-Trichloroethane	83	14.214	14.220	-0.006	95	11656	0.0800	0.0839	
69 2-Hexanone	58	14.651	14.631	0.020	92	10295	0.0800	0.0753	
70 n-Octane	85	14.802	14.804	-0.002	95	13108	0.0800	0.0800	
71 Chlorodibromomethane	129	14.915	14.920	-0.005	97	19680	0.0800	0.0698	
72 Ethylene Dibromide	107	15.201	15.207	-0.006	98	17903	0.0800	0.0743	
73 Tetrachloroethene	129	15.266	15.272	-0.006	91	13185	0.0800	0.0771	
74 2,3-Dimethylheptane	43	16.134	16.139	-0.005	94	47348	0.0800	0.0851	
75 Chlorobenzene	112	16.140	16.142	-0.002	75	29142	0.0800	0.0823	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	48941	0.0800	0.0791	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	79756	0.1600	0.1685	
80 n-Nonane	57	16.975	16.977	-0.002	94	27868	0.0800	0.0827	
81 Bromoform	173	17.035	17.041	-0.006	89	16038	0.0800	0.0651	
82 Styrene	104	17.040	17.047	-0.007	97	22430	0.0800	0.0685	
83 o-Xylene	91	17.105	17.106	-0.001	97	40418	0.0800	0.0810	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	97	26816	0.0800	0.0800	
85 1,2,3-Trichloropropane	110	17.590	17.587	0.003	96	8767	0.0800	0.0816	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	95	53331	0.0800	0.0801	
87 N-Propylbenzene	120	18.199	18.205	-0.006	98	14187	0.0800	0.0789	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	13286	0.0800	0.0808	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	97	52613	0.0800	0.0792	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	93	20417	0.0800	0.0790	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	86	17649	0.0800	0.0676	
93 n-Decane	57	18.679	18.682	-0.003	90	34455	0.0800	0.0834	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	44314	0.0800	0.0768	
95 1,2,4-Trimethylbenzene	105	18.841	18.846	-0.005	96	44184	0.0800	0.0779	
96 sec-Butylbenzene	105	19.089	19.094	-0.005	98	62984	0.0800	0.0776	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	96	27898	0.0800	0.0753	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	35336	0.0800	0.0699	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	90	28727	0.0800	0.0756	
100 4-Isopropyltoluene	119	19.246	19.251	-0.005	96	46995	0.0800	0.0724	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	41757	0.0800	0.0814	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	38846	0.0800	0.0830	
103 2,3-Dihydroindene	117	19.548	19.550	-0.002	92	39872	0.0800	0.0778	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	91	27621	0.0800	0.0745	
105 n-Butylbenzene	91	19.672	19.673	-0.001	96	50796	0.0800	0.0769	
106 Indene	116	19.677	19.679	-0.002	90	31427	0.0800	0.0714	
107 Undecane	57	19.963	19.963	0.000	92	32520	0.0800	0.0776	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	83	11218	0.0800	0.0732	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	96	41572	0.0800	0.0703	
110 Dodecane	57	21.014	21.014	0.000	93	28563	0.0800	0.0863	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	91	20313	0.0800	0.0695	
112 Naphthalene	128	21.376	21.377	-0.001	99	47569	0.0800	0.0745	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	91	21118	0.0800	0.0675	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	94	20063	0.0800	0.0777	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	98	23120	0.0800	0.0743	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	28473	0.0800	0.0746	
A 122 C8 Range	1	14.792	(14.754-14.870)		0	138324	0.0800	0.0846	
S 123 1,2-Dichloroethene, Total	1				0		0.1600	0.1634	
S 124 Xylenes, Total	100				0		0.2400	0.2494	

Reagents:

40L1-3DQP_00011

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC03.D

Injection Date: 11-Jan-2019 18:12:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L3

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

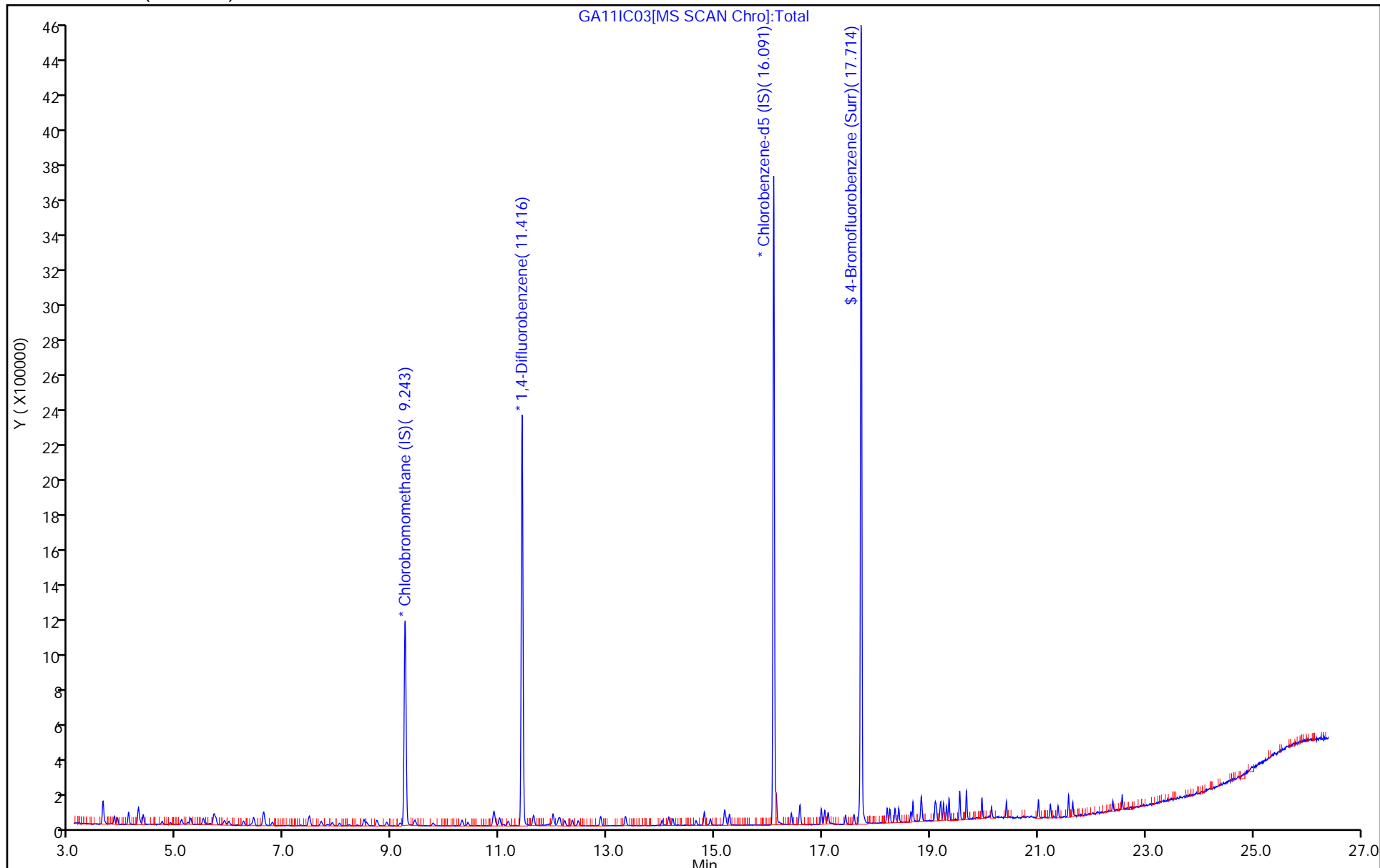
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC03.D

Injection Date: 11-Jan-2019 18:12:30

Instrument ID: MG

Lims ID: IC L3

Client ID:

Operator ID: 007126

ALS Bottle#: 1

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

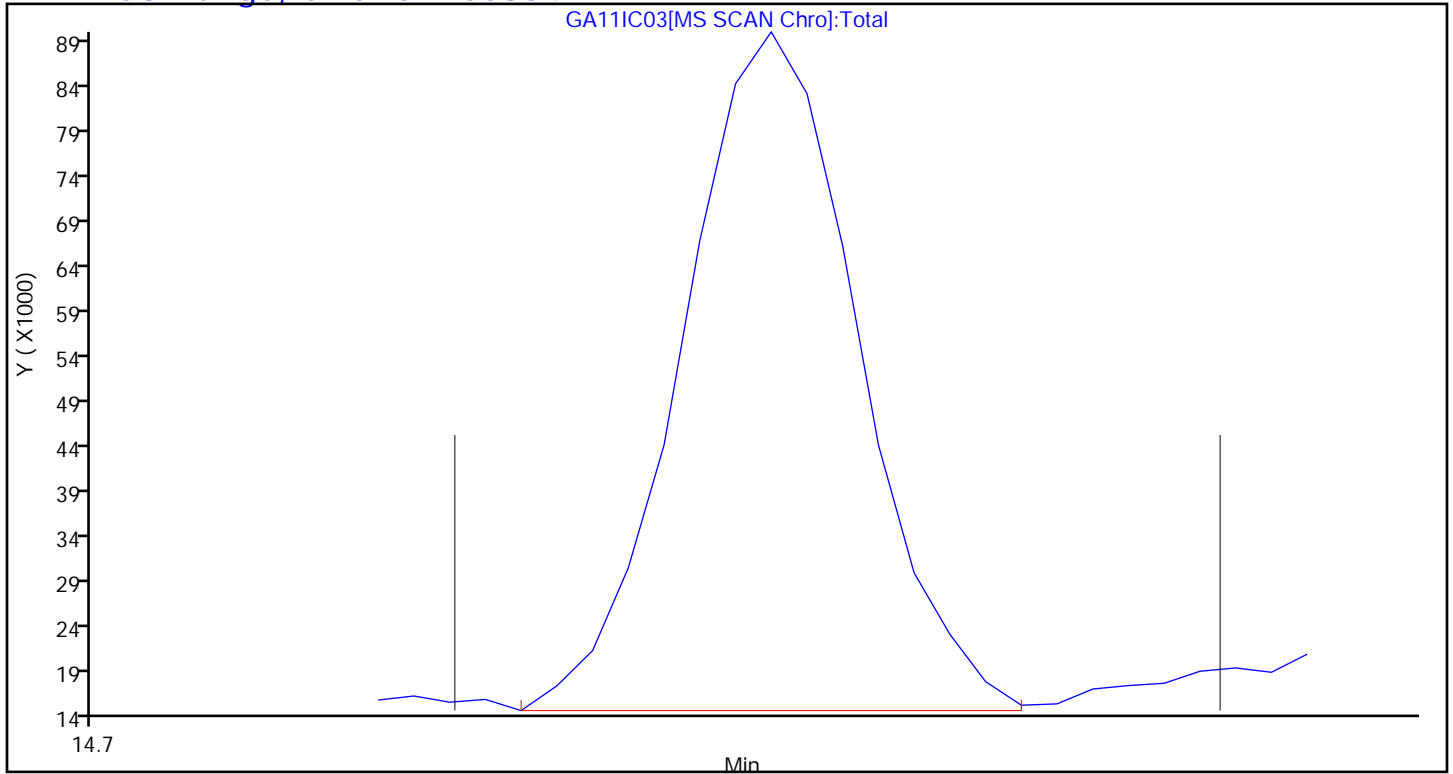
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 11-Jan-2019 18:56:30 ALS Bottle#: 2 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-012
 Misc. Info.: 201656
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:02 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 13:37:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	97	384858	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	97	2291754	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	92	2138235	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	84	1745466	4.00	3.98	
6 Chlorodifluoromethane	51	3.834	3.829	0.005	98	42570	0.1600	0.1689	
7 Propene	41	3.840	3.838	0.002	95	27727	0.1600	0.1970	
8 Dichlorodifluoromethane	85	3.899	3.894	0.005	100	68237	0.1600	0.1675	
9 Chloromethane	52	4.093	4.091	0.002	76	8660	0.1600	0.1936	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.109	4.103	0.006	92	39319	0.1600	0.1651	
12 Vinyl chloride	62	4.282	4.277	0.005	98	25449	0.1600	0.1642	
11 Acetaldehyde	44	4.287	4.278	0.009	95	72390	0.8000	1.26	
13 Butane	43	4.373	4.373	0.000	88	47326	0.1600	0.1813	
14 Butadiene	54	4.379	4.375	0.004	66	19602	0.1600	0.1636	
15 Bromomethane	94	4.724	4.722	0.002	98	21546	0.1600	0.1609	
16 Chloroethane	64	4.886	4.879	0.007	89	12373	0.1600	0.1657	
17 Ethanol	31	5.091	5.064	0.027	97	66636	0.8000	0.9835	
18 Vinyl bromide	106	5.204	5.205	-0.001	97	20331	0.1600	0.1638	
19 2-Methylbutane	43	5.258	5.256	0.002	94	31631	0.1600	0.1689	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	100	63826	0.1600	0.1598	
21 Acrolein	56	5.538	5.526	0.012	78	7324	0.1600	0.2130	
22 Acetonitrile	40	5.619	5.603	0.016	98	7481	0.1600	0.1395	
23 Acetone	58	5.689	5.666	0.023	99	41892	0.4800	0.7241	
24 Pentane	72	5.727	5.725	0.002	78	4701	0.1600	0.1841	
25 Isopropyl alcohol	45	5.889	5.840	0.049	99	79400	0.4800	0.5147	
26 Ethyl ether	31	5.970	5.943	0.027	88	31253	0.1600	0.1883	
27 1,1-Dichloroethene	96	6.245	6.242	0.003	94	21196	0.1600	0.1560	
28 Acrylonitrile	53	6.374	6.375	-0.001	90	14588	0.1600	0.1555	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	93	47135	0.1600	0.1601	
30 2-Methyl-2-propanol	59	6.617	6.534	0.083	49	35554	0.1600	0.1683	
31 Methylene Chloride	84	6.611	6.610	0.001	99	39858	0.1600	0.2522	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.627	6.626	0.001	94	29914	0.1600	0.1775	
33 Carbon disulfide	76	6.778	6.778	0.000	100	67457	0.1600	0.1636	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	21313	0.1600	0.1567	
35 2-Methylpentane	43	7.469	7.468	0.001	96	64503	0.1600	0.1657	
36 Methyl tert-butyl ether	73	7.679	7.643	0.036	97	59673	0.1600	0.1577	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	44696	0.1600	0.1599	
38 Vinyl acetate	43	8.019	8.016	0.003	100	59807	0.1600	0.1541	
40 Hexane	56	8.482	8.480	0.002	88	20822	0.1600	0.1660	
39 2-Butanone (MEK)	72	8.520	8.499	0.021	98	10552	0.1600	0.1728	
41 Isopropyl ether	45	8.709	8.679	0.030	97	77502	0.1600	0.1613	
42 cis-1,2-Dichloroethene	96	8.908	8.906	0.002	97	22108	0.1600	0.1589	
43 Ethyl acetate	43	9.146	9.131	0.015	98	49778	0.1600	0.1562	
44 Chloroform	83	9.253	9.261	-0.008	95	52455	0.1600	0.1630	
45 Tert-butyl ethyl ether	59	9.421	9.389	0.032	98	67993	0.1600	0.1534	
46 Tetrahydrofuran	42	9.755	9.725	0.030	93	27618	0.1600	0.1620	
47 1,1,1-Trichloroethane	97	10.305	10.303	0.002	96	55384	0.1600	0.1590	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	98	35324	0.1600	0.1577	
49 Cyclohexane	69	10.893	10.888	0.005	73	12681	0.1600	0.1684	
50 Benzene	78	10.893	10.893	0.000	97	65637	0.1600	0.1602	
52 Carbon tetrachloride	117	10.914	10.913	0.001	96	50848	0.1600	0.1496	
53 2,3-Dimethylpentane	71	11.001	11.000	0.001	92	17105	0.1600	0.1583	
51 n-Butanol	31	11.081	11.004	0.077	85	8226	0.1600	0.1603	
54 Thiophene	84	11.162	11.164	-0.002	97	37543	0.1600	0.1577	
55 Isooctane	57	11.631	11.632	-0.001	98	129920	0.1600	0.1619	
56 n-Heptane	71	11.993	11.995	-0.002	95	26105	0.1600	0.1585	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	83	25661	0.1600	0.1592	
58 Trichloroethene	130	12.117	12.124	-0.007	91	28091	0.1600	0.1505	
59 Dibromomethane	93	12.214	12.216	-0.002	91	27744	0.1600	0.1634	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	98	48577	0.1600	0.1451	
61 1,4-Dioxane	88	12.446	12.421	0.025	87	8684	0.1600	0.1823	
62 Methyl methacrylate	41	12.462	12.453	0.009	91	27631	0.1600	0.1342	
63 Methylcyclohexane	83	12.877	12.879	-0.002	92	44641	0.1600	0.1591	
64 4-Methyl-2-pentanone (MIBK)	43	13.341	13.321	0.020	98	51311	0.1600	0.1591	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	98	38186	0.1600	0.1558	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	96	34634	0.1600	0.1503	
67 Toluene	91	14.139	14.144	-0.005	93	75222	0.1600	0.1599	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	97	23218	0.1600	0.1617	
69 2-Hexanone	58	14.651	14.631	0.020	92	22692	0.1600	0.1607	
70 n-Octane	85	14.802	14.804	-0.002	97	26877	0.1600	0.1588	
71 Chlorodibromomethane	129	14.921	14.920	0.001	96	39627	0.1600	0.1361	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	37712	0.1600	0.1515	
73 Tetrachloroethene	129	15.271	15.272	-0.001	93	28219	0.1600	0.1599	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	95	96324	0.1600	0.1675	
75 Chlorobenzene	112	16.140	16.142	-0.002	87	58935	0.1600	0.1612	
78 Ethylbenzene	91	16.420	16.422	-0.002	100	102987	0.1600	0.1611	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	160595	0.3200	0.3284	
80 n-Nonane	57	16.975	16.977	-0.002	95	57416	0.1600	0.1651	
81 Bromoform	173	17.040	17.041	-0.001	77	32352	0.1600	0.1271	
82 Styrene	104	17.045	17.047	-0.002	98	46527	0.1600	0.1376	
83 o-Xylene	91	17.105	17.106	-0.001	98	85176	0.1600	0.1652	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	98	52217	0.1600	0.1508	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	16530	0.1600	0.1490	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	96	108667	0.1600	0.1581	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	27021	0.1600	0.1454	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	96	26657	0.1600	0.1571	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	100995	0.1600	0.1472	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	91	39553	0.1600	0.1482	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	33405	0.1600	0.1239	
93 n-Decane	57	18.679	18.682	-0.003	88	72566	0.1600	0.1701	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	89	90284	0.1600	0.1516	
95 1,2,4-Trimethylbenzene	105	18.841	18.846	-0.005	96	89238	0.1600	0.1524	
96 sec-Butylbenzene	105	19.089	19.094	-0.005	98	130314	0.1600	0.1554	
97 1,3-Dichlorobenzene	146	19.111	19.117	-0.006	97	57634	0.1600	0.1506	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	71441	0.1600	0.1369	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	91	58838	0.1600	0.1499	
100 4-Isopropyltoluene	119	19.246	19.251	-0.005	96	99360	0.1600	0.1481	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	88511	0.1600	0.1671	
102 Butylcyclohexane	83	19.348	19.353	-0.005	89	80140	0.1600	0.1659	
103 2,3-Dihydroindene	117	19.547	19.550	-0.003	93	79681	0.1600	0.1505	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	93	56506	0.1600	0.1475	
105 n-Butylbenzene	91	19.672	19.673	-0.001	96	108576	0.1600	0.1591	
106 Indene	116	19.677	19.679	-0.002	96	64720	0.1600	0.1423	
107 Undecane	57	19.963	19.963	0.000	94	73748	0.1600	0.1704	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	86	22412	0.1600	0.1415	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	96	90241	0.1600	0.1478	
110 Dodecane	57	21.014	21.014	0.000	94	60222	0.1600	0.1761	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	92	41810	0.1600	0.1385	
112 Naphthalene	128	21.376	21.377	-0.001	98	92896	0.1600	0.1408	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	92	43365	0.1600	0.1341	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	94	39185	0.1600	0.1470	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	99	40866	0.1600	0.1271	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	98	54667	0.1600	0.1387	
A 122 C8 Range	1	14.798	(14.754-14.881)		0	278341	0.1600	0.1648	
S 123 1,2-Dichloroethene, Total	1				0		0.3200	0.3155	
S 124 Xylenes, Total	100				0		0.4800	0.4936	

Reagents:

40L4DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC04.D

Injection Date: 11-Jan-2019 18:56:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L4

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

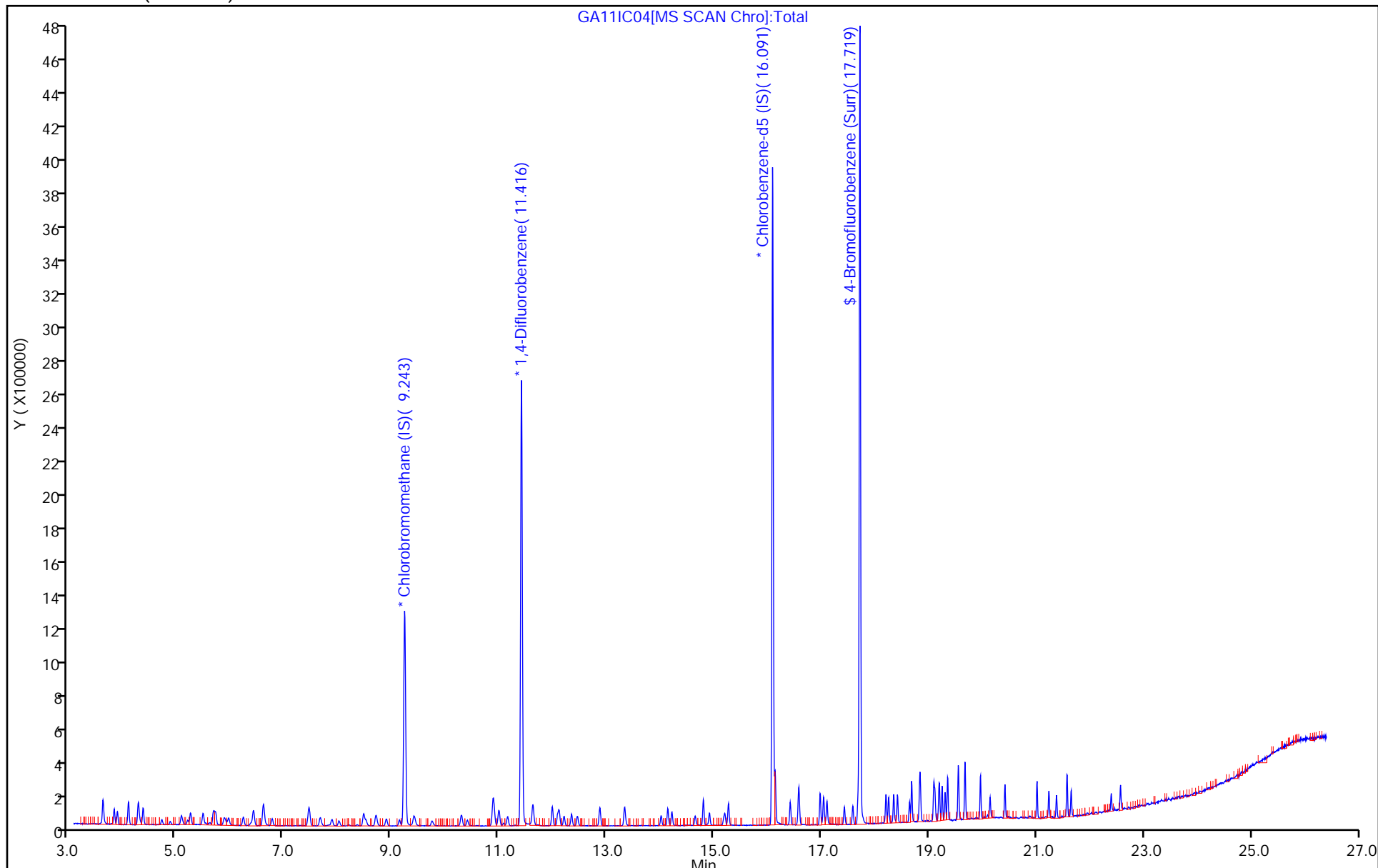
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC04.D

Injection Date: 11-Jan-2019 18:56:30

Instrument ID: MG

Lims ID: IC L4

Client ID:

Operator ID: 007126

ALS Bottle#: 2

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

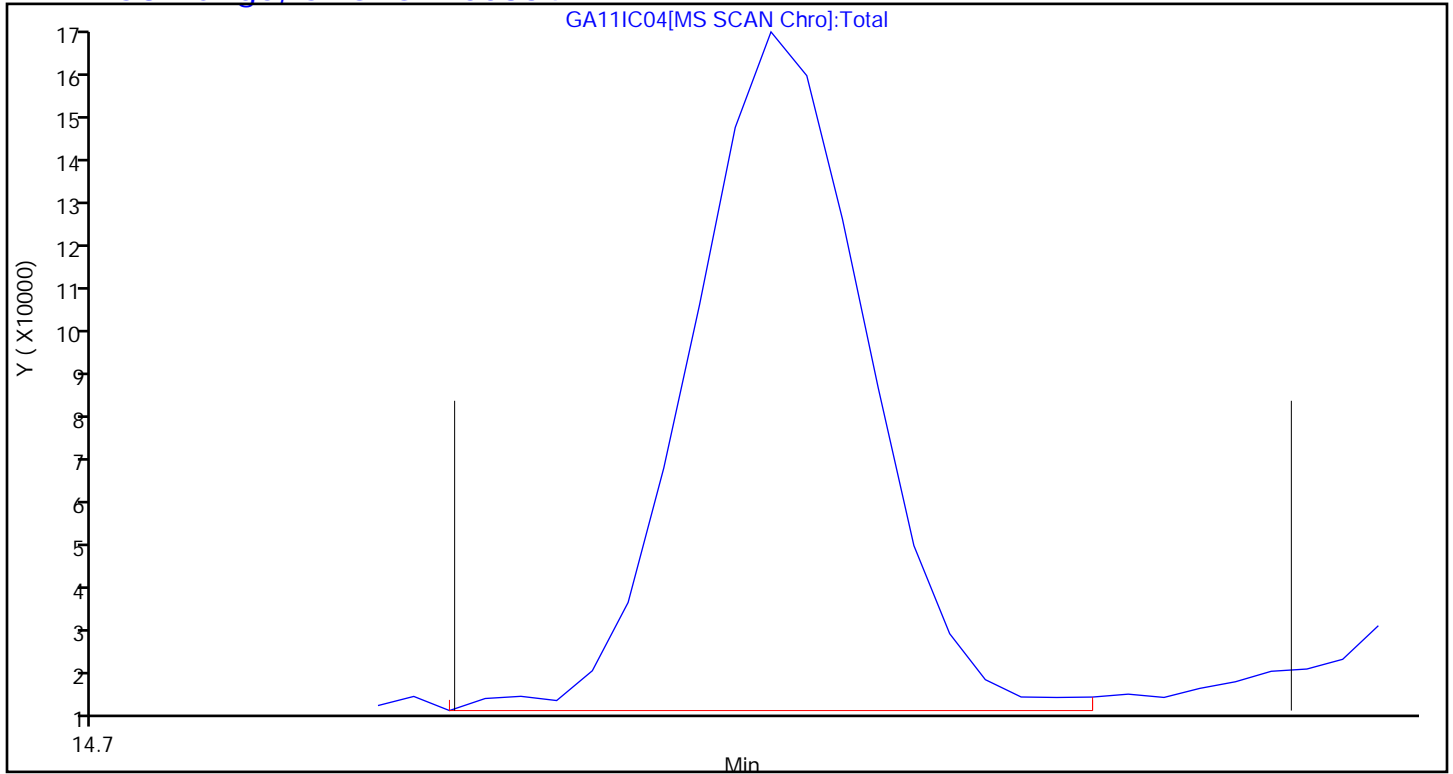
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 11-Jan-2019 19:40:30 ALS Bottle#: 3 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-013
 Misc. Info.: 201655
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:09 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 13:37:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	98	402791	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	96	2195514	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	92	2073004	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.718	0.001	86	1732344	4.00	4.08	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	97	107824	0.4000	0.4086	
7 Propene	41	3.839	3.838	0.001	97	60077	0.4000	0.4078	
8 Dichlorodifluoromethane	85	3.893	3.894	-0.001	100	169908	0.4000	0.3984	
9 Chloromethane	52	4.093	4.091	0.002	66	19699	0.4000	0.4208	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	93	98572	0.4000	0.3956	
12 Vinyl chloride	62	4.276	4.277	-0.001	64	62942	0.4000	0.3880	
11 Acetaldehyde	44	4.276	4.278	-0.002	93	140654	2.00	2.33	
13 Butane	43	4.373	4.373	0.000	87	114610	0.4000	0.4196	
14 Butadiene	54	4.373	4.375	-0.002	64	50104	0.4000	0.3996	
15 Bromomethane	94	4.718	4.722	-0.004	97	54574	0.4000	0.3895	
16 Chloroethane	64	4.880	4.879	0.001	88	31401	0.4000	0.4018	
17 Ethanol	31	5.058	5.064	-0.006	97	143467	2.00	2.02	
18 Vinyl bromide	106	5.198	5.205	-0.007	98	51677	0.4000	0.3978	
19 2-Methylbutane	43	5.252	5.256	-0.004	93	82259	0.4000	0.4196	
20 Trichlorofluoromethane	101	5.489	5.492	-0.003	99	166966	0.4000	0.3993	
21 Acrolein	56	5.522	5.526	-0.004	96	14239	0.4000	0.3957	
22 Acetonitrile	40	5.597	5.603	-0.006	98	22116	0.4000	0.3940	
23 Acetone	58	5.662	5.666	-0.004	99	86023	1.20	1.42	
24 Pentane	72	5.727	5.725	0.002	90	11269	0.4000	0.4218	
25 Isopropyl alcohol	45	5.824	5.840	-0.016	99	219917	1.20	1.36	
26 Ethyl ether	31	5.937	5.943	-0.006	90	76885	0.4000	0.4426	
27 1,1-Dichloroethene	96	6.234	6.242	-0.008	94	56607	0.4000	0.3982	
28 Acrylonitrile	53	6.363	6.375	-0.012	97	37127	0.4000	0.3783	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	94	126693	0.4000	0.4112	
30 2-Methyl-2-propanol	59	6.519	6.534	-0.015	96	99796	0.4000	0.4513	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	72672	0.4000	0.4394	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	94	69253	0.4000	0.3927	
33 Carbon disulfide	76	6.773	6.778	-0.005	100	175320	0.4000	0.4064	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	57740	0.4000	0.4056	
35 2-Methylpentane	43	7.468	7.468	0.000	96	169974	0.4000	0.4173	
36 Methyl tert-butyl ether	73	7.630	7.643	-0.013	97	165819	0.4000	0.4187	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	117133	0.4000	0.4003	
38 Vinyl acetate	43	8.008	8.016	-0.008	100	158808	0.4000	0.3909	
40 Hexane	56	8.482	8.480	0.002	84	53409	0.4000	0.4069	
39 2-Butanone (MEK)	72	8.498	8.499	-0.001	96	27277	0.4000	0.4268	
41 Isopropyl ether	45	8.671	8.679	-0.008	97	213908	0.4000	0.4255	
42 cis-1,2-Dichloroethene	96	8.903	8.906	-0.003	97	57247	0.4000	0.3930	
43 Ethyl acetate	43	9.124	9.131	-0.007	98	134280	0.4000	0.4026	
44 Chloroform	83	9.253	9.261	-0.008	95	132214	0.4000	0.3926	
45 Tert-butyl ethyl ether	59	9.383	9.389	-0.006	97	193609	0.4000	0.4174	
46 Tetrahydrofuran	42	9.717	9.725	-0.008	95	73368	0.4000	0.4111	
47 1,1,1-Trichloroethane	97	10.299	10.303	-0.004	95	145486	0.4000	0.3991	
48 1,2-Dichloroethane	62	10.407	10.416	-0.009	98	87574	0.4000	0.4080	
49 Cyclohexane	69	10.887	10.888	-0.001	92	31319	0.4000	0.4341	
50 Benzene	78	10.887	10.893	-0.006	98	167643	0.4000	0.4270	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	97	138991	0.4000	0.4268	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	90	45390	0.4000	0.4384	
51 n-Butanol	31	11.017	11.004	0.013	68	22433	0.4000	0.4563	
54 Thiophene	84	11.157	11.164	-0.007	97	95028	0.4000	0.4166	
55 Isooctane	57	11.626	11.632	-0.006	97	336411	0.4000	0.4375	
56 n-Heptane	71	11.987	11.995	-0.008	95	66081	0.4000	0.4187	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	88	64714	0.4000	0.4192	
58 Trichloroethene	130	12.117	12.124	-0.007	94	74264	0.4000	0.4154	
59 Dibromomethane	93	12.214	12.216	-0.002	92	67675	0.4000	0.4161	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	98	129879	0.4000	0.4050	
61 1,4-Dioxane	88	12.419	12.421	-0.002	96	19464	0.4000	0.4264	
62 Methyl methacrylate	41	12.446	12.453	-0.007	90	81302	0.4000	0.4121	
63 Methylcyclohexane	83	12.877	12.879	-0.002	94	116952	0.4000	0.4352	
64 4-Methyl-2-pentanone (MIBK)	43	13.314	13.321	-0.007	99	143236	0.4000	0.4635	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	96	96201	0.4000	0.4096	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	97	93722	0.4000	0.4194	
67 Toluene	91	14.139	14.144	-0.005	93	192974	0.4000	0.4231	
68 1,1,2-Trichloroethane	83	14.214	14.220	-0.006	99	60205	0.4000	0.4326	
69 2-Hexanone	58	14.630	14.631	-0.001	91	65409	0.4000	0.4779	
70 n-Octane	85	14.802	14.804	-0.002	96	73243	0.4000	0.4465	
71 Chlorodibromomethane	129	14.915	14.920	-0.005	98	110810	0.4000	0.3926	
72 Ethylene Dibromide	107	15.207	15.207	0.000	99	99001	0.4000	0.4102	
73 Tetrachloroethene	129	15.271	15.272	-0.001	94	72561	0.4000	0.4240	
74 2,3-Dimethylheptane	43	16.139	16.139	0.000	96	247510	0.4000	0.4440	
75 Chlorobenzene	112	16.139	16.142	-0.003	76	157211	0.4000	0.4434	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	272217	0.4000	0.4392	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	425545	0.8000	0.8976	
80 n-Nonane	57	16.975	16.977	-0.002	95	151720	0.4000	0.4499	
81 Bromoform	173	17.040	17.041	-0.001	91	93899	0.4000	0.3806	
82 Styrene	104	17.045	17.047	-0.002	98	134724	0.4000	0.4111	
83 o-Xylene	91	17.105	17.106	-0.001	97	219991	0.4000	0.4401	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	146757	0.4000	0.4371	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	45222	0.4000	0.4206	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	288484	0.4000	0.4329	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	77981	0.4000	0.4329	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	96	71471	0.4000	0.4343	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	288122	0.4000	0.4332	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	92	109634	0.4000	0.4236	
92 Alpha Methyl Styrene	118	18.641	18.644	-0.003	87	99545	0.4000	0.3809	
93 n-Decane	57	18.679	18.682	-0.003	89	189531	0.4000	0.4582	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	239278	0.4000	0.4144	
95 1,2,4-Trimethylbenzene	105	18.841	18.846	-0.005	97	236361	0.4000	0.4162	
96 sec-Butylbenzene	105	19.089	19.094	-0.005	98	346547	0.4000	0.4263	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	98	153722	0.4000	0.4143	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	206433	0.4000	0.4080	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	91	154004	0.4000	0.4047	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	272972	0.4000	0.4197	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	235583	0.4000	0.4588	
102 Butylcyclohexane	83	19.348	19.353	-0.005	91	211972	0.4000	0.4525	
103 2,3-Dihydroindene	117	19.547	19.550	-0.003	93	207350	0.4000	0.4040	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	92	146910	0.4000	0.3956	
105 n-Butylbenzene	91	19.671	19.673	-0.002	98	288957	0.4000	0.4367	
106 Indene	116	19.677	19.679	-0.002	90	178805	0.4000	0.4055	
107 Undecane	57	19.963	19.963	0.000	95	202684	0.4000	0.4829	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	87	65206	0.4000	0.4247	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	96	260569	0.4000	0.4402	
110 Dodecane	57	21.014	21.014	0.000	93	173512	0.4000	0.5235	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	93	119662	0.4000	0.4088	
112 Naphthalene	128	21.375	21.377	-0.002	99	294401	0.4000	0.4604	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	93	119102	0.4000	0.3800	
114 1,2,3-Trichlorobenzene	180	21.650	21.651	-0.001	95	116648	0.4000	0.4513	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	167946	0.4000	0.5387	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	209066	0.4000	0.5472	
A 122 C8 Range	1	14.792	(14.744-14.881)		0	716916	0.4000	0.4380	
S 123 1,2-Dichloroethene, Total	1				0		0.8000	0.7986	
S 124 Xylenes, Total	100				0		1.20	1.34	

Reagents:

40L5DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC05.D

Injection Date: 11-Jan-2019 19:40:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L5

Worklist Smp#: 13

Client ID:

Purge Vol: 500.000 mL

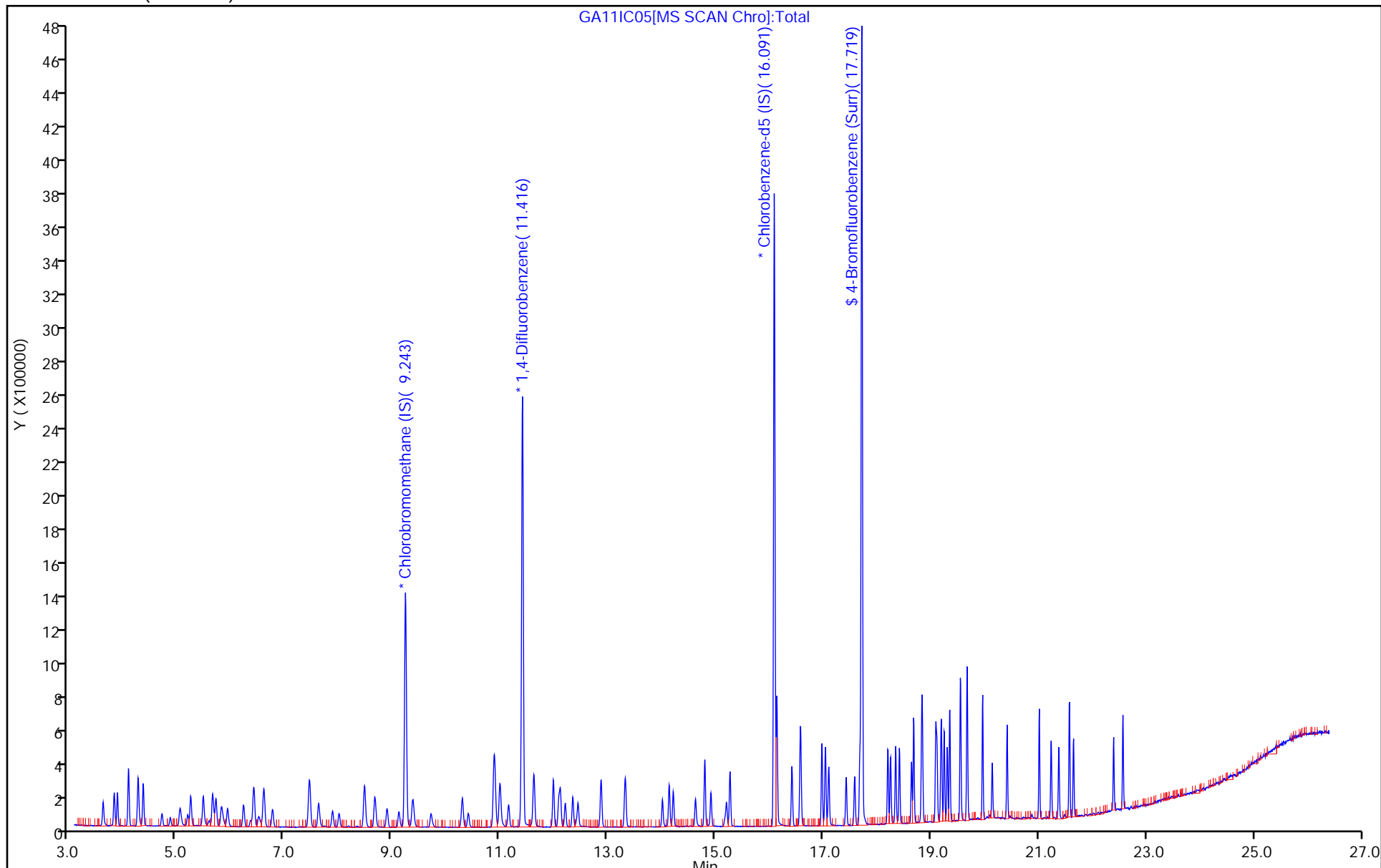
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC05.D

Injection Date: 11-Jan-2019 19:40:30

Instrument ID: MG

Lims ID: IC L5

Client ID:

Operator ID: 007126

ALS Bottle#: 3

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

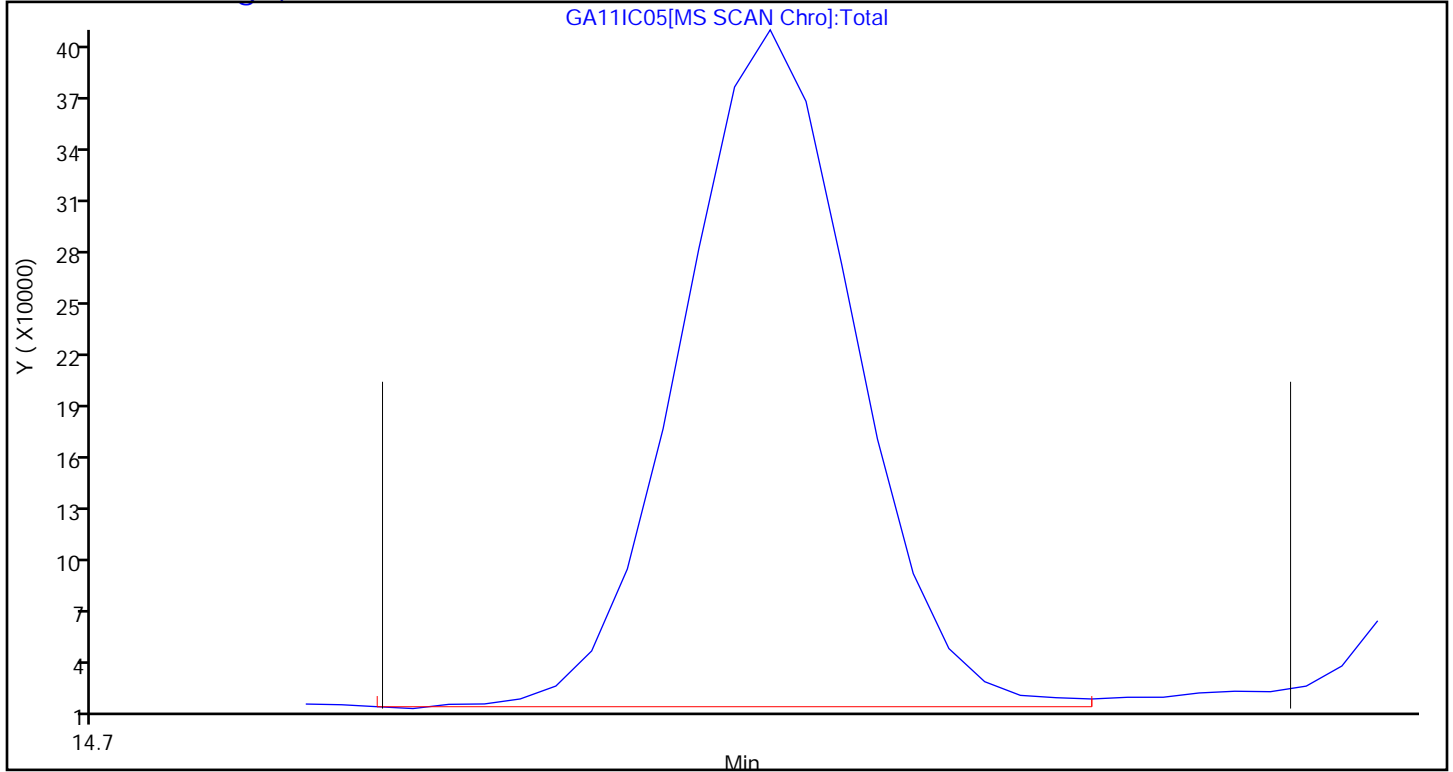
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 11-Jan-2019 20:23:30 ALS Bottle#: 4 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-014
 Misc. Info.: 201654
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:16 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa

Date: 14-Jan-2019 16:59:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.249	-0.001	97	422587	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2375134	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	91	2240571	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	86	1821597	4.00	3.97	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	97	261958	1.00	0.9463	
7 Propene	41	3.840	3.838	0.002	98	149007	1.00	0.9640	
8 Dichlorodifluoromethane	85	3.894	3.894	0.000	100	428033	1.00	0.9568	
9 Chloromethane	52	4.088	4.091	-0.003	99	46960	1.00	0.9561	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	95	249678	1.00	0.9551	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	156203	1.00	0.9178	
11 Acetaldehyde	44	4.271	4.278	-0.007	93	351718	5.00	5.56	
13 Butane	43	4.373	4.373	0.000	86	277412	1.00	0.9681	
14 Butadiene	54	4.373	4.375	-0.002	67	127206	1.00	0.9671	
15 Bromomethane	94	4.719	4.722	-0.003	99	138169	1.00	0.9398	
16 Chloroethane	64	4.875	4.879	-0.004	88	77933	1.00	0.9504	
17 Ethanol	31	5.042	5.064	-0.022	98	296853	5.00	3.99	
18 Vinyl bromide	106	5.204	5.205	-0.001	98	130640	1.00	0.9586	
19 2-Methylbutane	43	5.252	5.256	-0.004	93	203924	1.00	0.99	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	422050	1.00	0.9621	
21 Acrolein	56	5.517	5.526	-0.009	95	39091	1.00	1.04	
22 Acetonitrile	40	5.592	5.603	-0.011	99	61491	1.00	1.04	
23 Acetone	58	5.651	5.666	-0.015	99	220327	3.00	3.47	
24 Pentane	72	5.722	5.725	-0.003	97	28000	1.00	1.00	
25 Isopropyl alcohol	45	5.808	5.840	-0.032	99	502108	3.00	2.96	
26 Ethyl ether	31	5.926	5.943	-0.017	90	194355	1.00	1.07	
27 1,1-Dichloroethene	96	6.239	6.242	-0.003	94	147877	1.00	0.99	
28 Acrylonitrile	53	6.363	6.375	-0.012	95	104178	1.00	1.01	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	94	322940	1.00	1.00	
30 2-Methyl-2-propanol	59	6.477	6.534	-0.058	95	237979	1.00	1.03	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	158748	1.00	0.9148	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	95	172933	1.00	0.9347	
33 Carbon disulfide	76	6.773	6.778	-0.005	100	454099	1.00	1.00	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	152597	1.00	1.02	
35 2-Methylpentane	43	7.469	7.468	0.001	96	425850	1.00	1.00	
36 Methyl tert-butyl ether	73	7.609	7.643	-0.034	97	436887	1.00	1.05	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	301902	1.00	0.9834	
38 Vinyl acetate	43	8.008	8.016	-0.008	100	421041	1.00	0.9879	
40 Hexane	56	8.477	8.480	-0.003	75	139897	1.00	1.02	
39 2-Butanone (MEK)	72	8.482	8.499	-0.017	94	71674	1.00	1.07	
41 Isopropyl ether	45	8.660	8.679	-0.019	96	564806	1.00	1.07	
42 cis-1,2-Dichloroethene	96	8.903	8.906	-0.003	98	153350	1.00	1.00	
43 Ethyl acetate	43	9.113	9.131	-0.018	98	367561	1.00	1.05	
44 Chloroform	83	9.259	9.261	-0.002	96	346742	1.00	0.9814	
45 Tert-butyl ethyl ether	59	9.361	9.389	-0.028	96	516698	1.00	1.06	
46 Tetrahydrofuran	42	9.696	9.725	-0.029	94	196936	1.00	1.05	
47 1,1,1-Trichloroethane	97	10.300	10.303	-0.003	95	377403	1.00	0.9867	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	98	232618	1.00	1.00	
49 Cyclohexane	69	10.882	10.888	-0.006	88	82609	1.00	1.06	
50 Benzene	78	10.893	10.893	0.000	97	444635	1.00	1.05	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	97	372817	1.00	1.06	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	89	118426	1.00	1.06	
51 n-Butanol	31	11.001	11.004	-0.003	70	59954	1.00	1.13	
54 Thiophene	84	11.162	11.164	-0.002	97	249671	1.00	1.01	
55 Isooctane	57	11.632	11.632	0.000	98	868592	1.00	1.04	
56 n-Heptane	71	11.993	11.995	-0.002	94	174693	1.00	1.02	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	86	170338	1.00	1.02	
58 Trichloroethene	130	12.122	12.124	-0.002	94	194217	1.00	1.00	
59 Dibromomethane	93	12.214	12.216	-0.002	94	172040	1.00	0.9778	
60 Dichlorobromomethane	83	12.354	12.354	0.000	98	346754	1.00	1.00	
61 1,4-Dioxane	88	12.414	12.421	-0.007	97	36737	1.00	0.7440	
62 Methyl methacrylate	41	12.446	12.453	-0.007	90	232640	1.00	1.09	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	305916	1.00	1.05	
64 4-Methyl-2-pentanone (MIBK)	43	13.309	13.321	-0.012	97	377024	1.00	1.13	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	98	265941	1.00	1.05	
66 trans-1,3-Dichloropropene	75	14.020	14.019	0.001	97	249246	1.00	1.03	
67 Toluene	91	14.139	14.144	-0.005	93	514273	1.00	1.04	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	98	160780	1.00	1.07	
69 2-Hexanone	58	14.619	14.631	-0.012	91	175250	1.00	1.18	
70 n-Octane	85	14.802	14.804	-0.002	96	186587	1.00	1.05	
71 Chlorodibromomethane	129	14.916	14.920	-0.004	98	313050	1.00	1.03	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	273278	1.00	1.05	
73 Tetrachloroethene	129	15.271	15.272	-0.001	94	191154	1.00	1.03	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	96	641178	1.00	1.06	
75 Chlorobenzene	112	16.140	16.142	-0.002	92	406499	1.00	1.06	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	719275	1.00	1.07	
79 m-Xylene & p-Xylene	91	16.576	16.582	-0.006	99	1128063	2.00	2.20	
80 n-Nonane	57	16.975	16.977	-0.002	94	396249	1.00	1.09	
81 Bromoform	173	17.040	17.041	-0.001	92	288479	1.00	1.08	
82 Styrene	104	17.046	17.047	-0.001	99	379313	1.00	1.07	
83 o-Xylene	91	17.105	17.106	-0.001	98	577831	1.00	1.07	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	388902	1.00	1.07	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	123267	1.00	1.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	770189	1.00	1.07	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	208028	1.00	1.07	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	190674	1.00	1.07	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	757218	1.00	1.05	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	91	298107	1.00	1.07	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	294414	1.00	1.04	
93 n-Decane	57	18.679	18.682	-0.003	89	491714	1.00	1.10	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	674397	1.00	1.08	
95 1,2,4-Trimethylbenzene	105	18.847	18.846	0.001	97	670745	1.00	1.09	
96 sec-Butylbenzene	105	19.095	19.094	0.001	98	963943	1.00	1.10	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	99	429682	1.00	1.07	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	595380	1.00	1.09	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	92	436204	1.00	1.06	
100 4-Isopropyltoluene	119	19.246	19.251	-0.005	96	779650	1.00	1.11	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	664909	1.00	1.20	
102 Butylcyclohexane	83	19.353	19.353	0.000	90	562871	1.00	1.11	
103 2,3-Dihydroindene	117	19.548	19.550	-0.002	93	602700	1.00	1.09	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	94	416753	1.00	1.04	
105 n-Butylbenzene	91	19.672	19.673	-0.001	98	814617	1.00	1.14	
106 Indene	116	19.677	19.679	-0.002	92	516302	1.00	1.08	
107 Undecane	57	19.963	19.963	0.000	95	527231	1.00	1.16	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	90	207960	1.00	1.25	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	96	733964	1.00	1.15	
110 Dodecane	57	21.014	21.014	0.000	94	446881	1.00	1.25	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	360521	1.00	1.14	
112 Naphthalene	128	21.376	21.377	-0.001	99	839854	1.00	1.22	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	95	361175	1.00	1.07	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	95	351962	1.00	1.26	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	514300	1.00	1.53	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	628512	1.00	1.52	
A 122 C8 Range	1	14.803	(14.744-14.902)		0	1842861	1.00	1.04	
S 123 1,2-Dichloroethene, Total	1				0		2.00	2.03	
S 124 Xylenes, Total	100				0		3.00	3.27	

Reagents:

40L6DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC06.D

Injection Date: 11-Jan-2019 20:23:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L6

Worklist Smp#: 14

Client ID:

Purge Vol: 500.000 mL

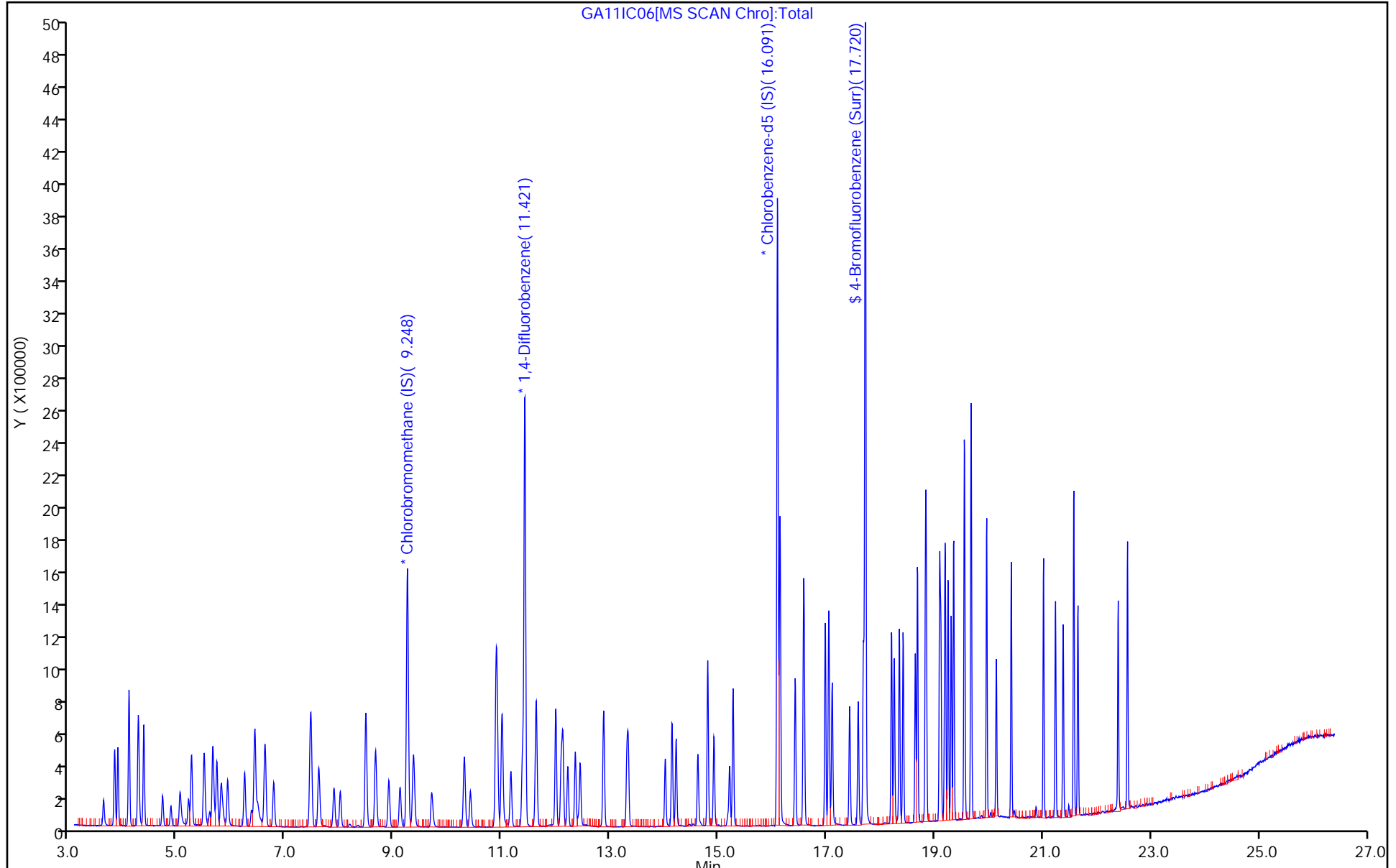
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC06.D

Injection Date: 11-Jan-2019 20:23:30

Instrument ID: MG

Lims ID: IC L6

Client ID:

Operator ID: 007126

ALS Bottle#: 4

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

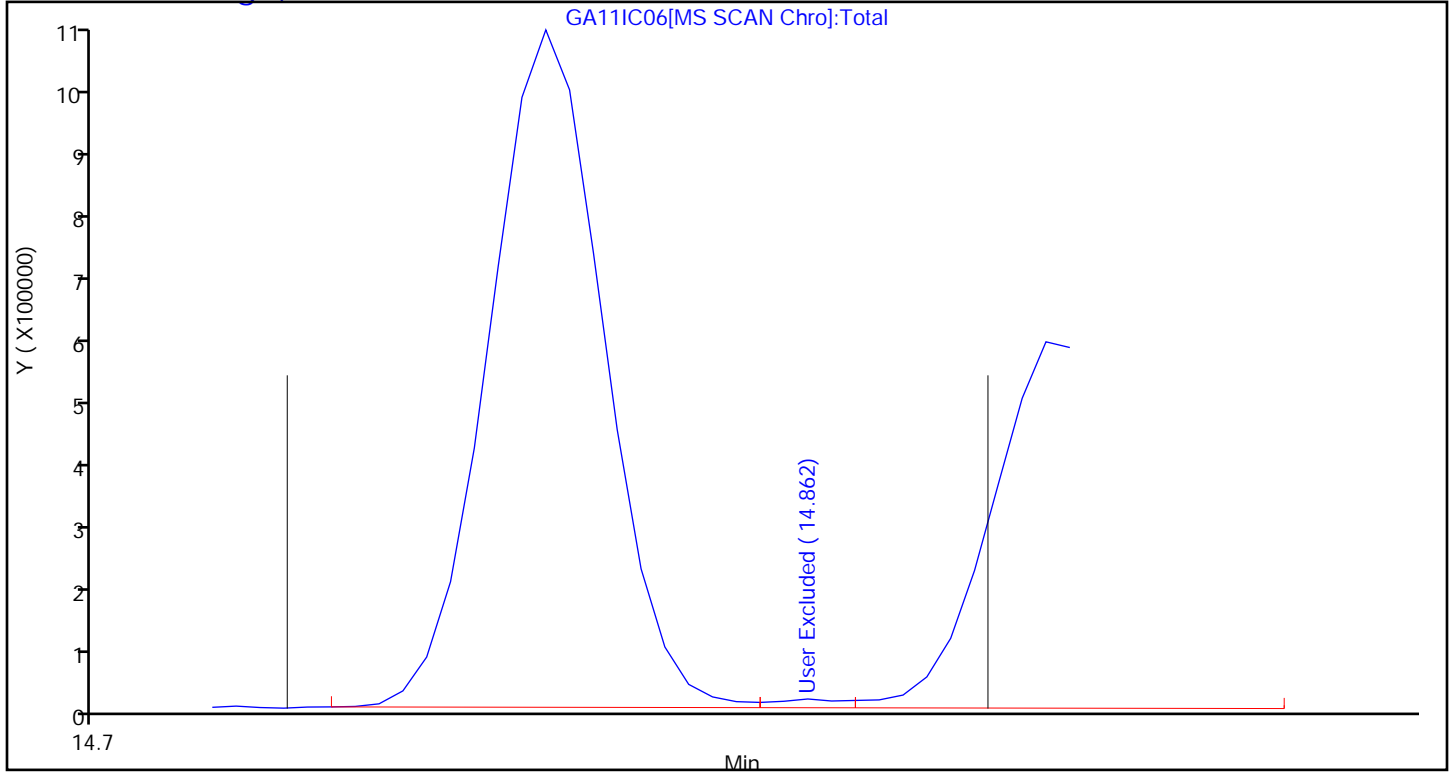
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 11-Jan-2019 21:07:30 ALS Bottle#: 5 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-015
 Misc. Info.: 201653
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:23 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 09:57:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.249	-0.001	97	437891	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2708081	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.096	16.094	0.002	90	2541912	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.720	17.718	0.002	87	1988683	4.00	3.82	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	97	518289	2.00	1.81	
7 Propene	41	3.834	3.838	-0.004	98	290483	2.00	1.81	
8 Dichlorodifluoromethane	85	3.894	3.894	0.000	100	858049	2.00	1.85	
9 Chloromethane	52	4.088	4.091	-0.003	98	92605	2.00	1.82	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	93	512846	2.00	1.89	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	313945	2.00	1.78	
11 Acetaldehyde	44	4.271	4.278	-0.007	93	622934	10.0	9.50	
13 Butane	43	4.373	4.373	0.000	86	542597	2.00	1.83	
14 Butadiene	54	4.373	4.375	-0.002	66	257490	2.00	1.89	
15 Bromomethane	94	4.719	4.722	-0.003	98	281926	2.00	1.85	
16 Chloroethane	64	4.875	4.879	-0.004	89	156493	2.00	1.84	
17 Ethanol	31	5.031	5.064	-0.033	97	808553	10.0	10.5	
18 Vinyl bromide	106	5.198	5.205	-0.007	99	265901	2.00	1.88	
19 2-Methylbutane	43	5.258	5.256	0.002	93	402287	2.00	1.89	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	848836	2.00	1.87	
21 Acrolein	56	5.517	5.526	-0.009	96	73107	2.00	1.87	
22 Acetonitrile	40	5.592	5.603	-0.011	98	127125	2.00	2.08	
23 Acetone	58	5.641	5.666	-0.025	99	398773	6.00	6.06	
24 Pentane	72	5.722	5.725	-0.003	98	56204	2.00	1.93	
25 Isopropyl alcohol	45	5.781	5.840	-0.059	96	1108992	6.00	6.32	
26 Ethyl ether	31	5.916	5.943	-0.027	90	387640	2.00	2.05	
27 1,1-Dichloroethene	96	6.239	6.242	-0.003	95	292909	2.00	1.90	
28 Acrylonitrile	53	6.363	6.375	-0.012	96	213988	2.00	2.01	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	94	644340	2.00	1.92	
30 2-Methyl-2-propanol	59	6.455	6.534	-0.079	95	483244	2.00	2.01	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	297663	2.00	1.66	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	96	352711	2.00	1.84	
33 Carbon disulfide	76	6.778	6.778	0.000	100	893782	2.00	1.91	
34 trans-1,2-Dichloroethene	96	7.452	7.450	0.002	96	304618	2.00	1.97	
35 2-Methylpentane	43	7.469	7.468	0.001	95	850675	2.00	1.92	
36 Methyl tert-butyl ether	73	7.603	7.643	-0.040	97	884523	2.00	2.05	
37 1,1-Dichloroethane	63	7.895	7.892	0.003	100	617142	2.00	1.94	
38 Vinyl acetate	43	8.008	8.016	-0.008	100	920626	2.00	2.08	
40 Hexane	56	8.477	8.480	-0.003	73	280600	2.00	1.97	
39 2-Butanone (MEK)	72	8.477	8.499	-0.022	83	137814	2.00	1.98	
41 Isopropyl ether	45	8.655	8.679	-0.024	97	1119661	2.00	2.05	
42 cis-1,2-Dichloroethene	96	8.908	8.906	0.002	97	314771	2.00	1.99	
43 Ethyl acetate	43	9.108	9.131	-0.023	98	727588	2.00	2.01	
44 Chloroform	83	9.264	9.261	0.003	97	705235	2.00	1.93	
45 Tert-butyl ethyl ether	59	9.351	9.389	-0.038	97	1026205	2.00	2.03	
46 Tetrahydrofuran	42	9.685	9.725	-0.040	94	392928	2.00	2.03	
47 1,1,1-Trichloroethane	97	10.305	10.303	0.002	96	774289	2.00	1.95	
48 1,2-Dichloroethane	62	10.418	10.416	0.002	98	490730	2.00	1.85	
49 Cyclohexane	69	10.887	10.888	-0.001	89	165738	2.00	1.86	
50 Benzene	78	10.893	10.893	0.000	97	906736	2.00	1.87	
52 Carbon tetrachloride	117	10.914	10.913	0.001	99	761689	2.00	1.90	
53 2,3-Dimethylpentane	71	11.001	11.000	0.001	90	240541	2.00	1.88	
51 n-Butanol	31	10.974	11.004	-0.030	74	111445	2.00	1.84	
54 Thiophene	84	11.168	11.164	0.004	97	526684	2.00	1.87	
55 Isooctane	57	11.632	11.632	0.000	98	1711484	2.00	1.80	
56 n-Heptane	71	11.993	11.995	-0.002	94	357021	2.00	1.83	
57 1,2-Dichloropropane	63	12.095	12.093	0.002	86	354326	2.00	1.86	
58 Trichloroethene	130	12.122	12.124	-0.002	95	411429	2.00	1.87	
59 Dibromomethane	93	12.219	12.216	0.003	95	363939	2.00	1.81	
60 Dichlorobromomethane	83	12.354	12.354	0.000	98	745629	2.00	1.88	
61 1,4-Dioxane	88	12.392	12.421	-0.029	98	120654	2.00	2.14	
62 Methyl methacrylate	41	12.440	12.453	-0.013	90	470252	2.00	1.93	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	613752	2.00	1.85	
64 4-Methyl-2-pentanone (MIBK)	43	13.303	13.321	-0.018	99	689509	2.00	1.81	
65 cis-1,3-Dichloropropene	75	13.336	13.336	0.000	98	558061	2.00	1.93	
66 trans-1,3-Dichloropropene	75	14.020	14.019	0.001	97	528240	2.00	1.93	
67 Toluene	91	14.144	14.144	0.000	93	1073072	2.00	1.92	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	99	322166	2.00	1.89	
69 2-Hexanone	58	14.614	14.631	-0.017	91	293749	2.00	1.75	
70 n-Octane	85	14.802	14.804	-0.002	96	377410	2.00	1.88	
71 Chlorodibromomethane	129	14.921	14.920	0.001	98	676985	2.00	1.96	
72 Ethylene Dibromide	107	15.207	15.207	0.000	99	576579	2.00	1.95	
73 Tetrachloroethene	129	15.271	15.272	-0.001	95	394783	2.00	1.88	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	96	1265823	2.00	1.85	
75 Chlorobenzene	112	16.145	16.142	0.003	94	832085	2.00	1.91	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	1456098	2.00	1.92	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	2267354	4.00	3.90	
80 n-Nonane	57	16.975	16.977	-0.002	94	785625	2.00	1.90	
81 Bromoform	173	17.040	17.041	-0.001	92	647774	2.00	2.14	
82 Styrene	104	17.046	17.047	-0.001	99	797396	2.00	1.98	
83 o-Xylene	91	17.105	17.106	-0.001	98	1183498	2.00	1.93	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	791220	2.00	1.92	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	249431	2.00	1.89	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	1569505	2.00	1.92	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	425975	2.00	1.93	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	376201	2.00	1.86	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	1579790	2.00	1.94	
90 1,3,5-Trimethylbenzene	120	18.421	18.419	0.002	92	615118	2.00	1.94	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	619837	2.00	1.93	
93 n-Decane	57	18.685	18.682	0.003	90	955171	2.00	1.88	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	1354211	2.00	1.91	
95 1,2,4-Trimethylbenzene	105	18.847	18.846	0.001	97	1320347	2.00	1.90	
96 sec-Butylbenzene	105	19.095	19.094	0.001	98	1895656	2.00	1.90	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	99	870050	2.00	1.91	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	1199239	2.00	1.93	
99 1,4-Dichlorobenzene	146	19.202	19.200	0.002	93	882709	2.00	1.89	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	97	1524715	2.00	1.91	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	1328651	2.00	2.11	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	1091130	2.00	1.90	
103 2,3-Dihydroindene	117	19.553	19.550	0.003	94	1193709	2.00	1.90	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	95	841536	2.00	1.85	
105 n-Butylbenzene	91	19.672	19.673	-0.001	98	1547638	2.00	1.91	
106 Indene	116	19.677	19.679	-0.002	92	1040605	2.00	1.92	
107 Undecane	57	19.963	19.963	0.000	96	970873	2.00	1.89	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	92	429617	2.00	2.28	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	97	1413004	2.00	1.95	
110 Dodecane	57	21.014	21.014	0.000	94	722978	2.00	1.78	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	693552	2.00	1.93	
112 Naphthalene	128	21.376	21.377	-0.001	99	1530726	2.00	1.95	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	96	732431	2.00	1.91	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	95	629244	2.00	1.99	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	671591	2.00	1.76	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	789694	2.00	1.69	
A 122 C8 Range	1	14.813	(14.749-14.886)		0	3737320	2.00	1.86	
S 123 1,2-Dichloroethene, Total	1				0		4.00	3.96	
S 124 Xylenes, Total	100				0		6.00	5.83	

Reagents:

40L7DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC07.D

Injection Date: 11-Jan-2019 21:07:30

Instrument ID: MG

Operator ID: 007126

Lims ID: ICIS L7

Worklist Smp#: 15

Client ID:

Purge Vol: 500.000 mL

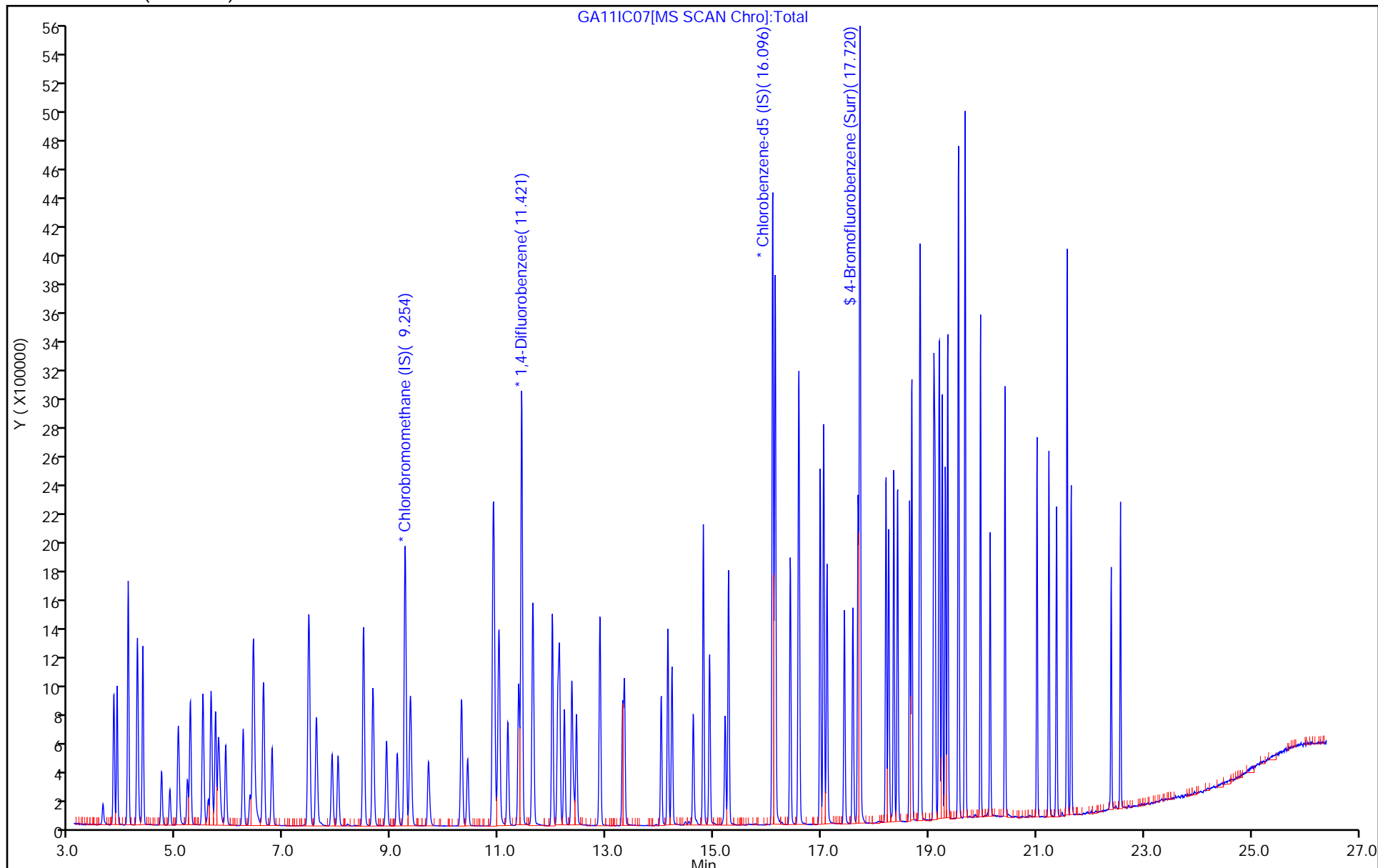
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC07.D

Injection Date: 11-Jan-2019 21:07:30

Instrument ID: MG

Lims ID: ICIS L7

Client ID:

Operator ID: 007126

ALS Bottle#: 5

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

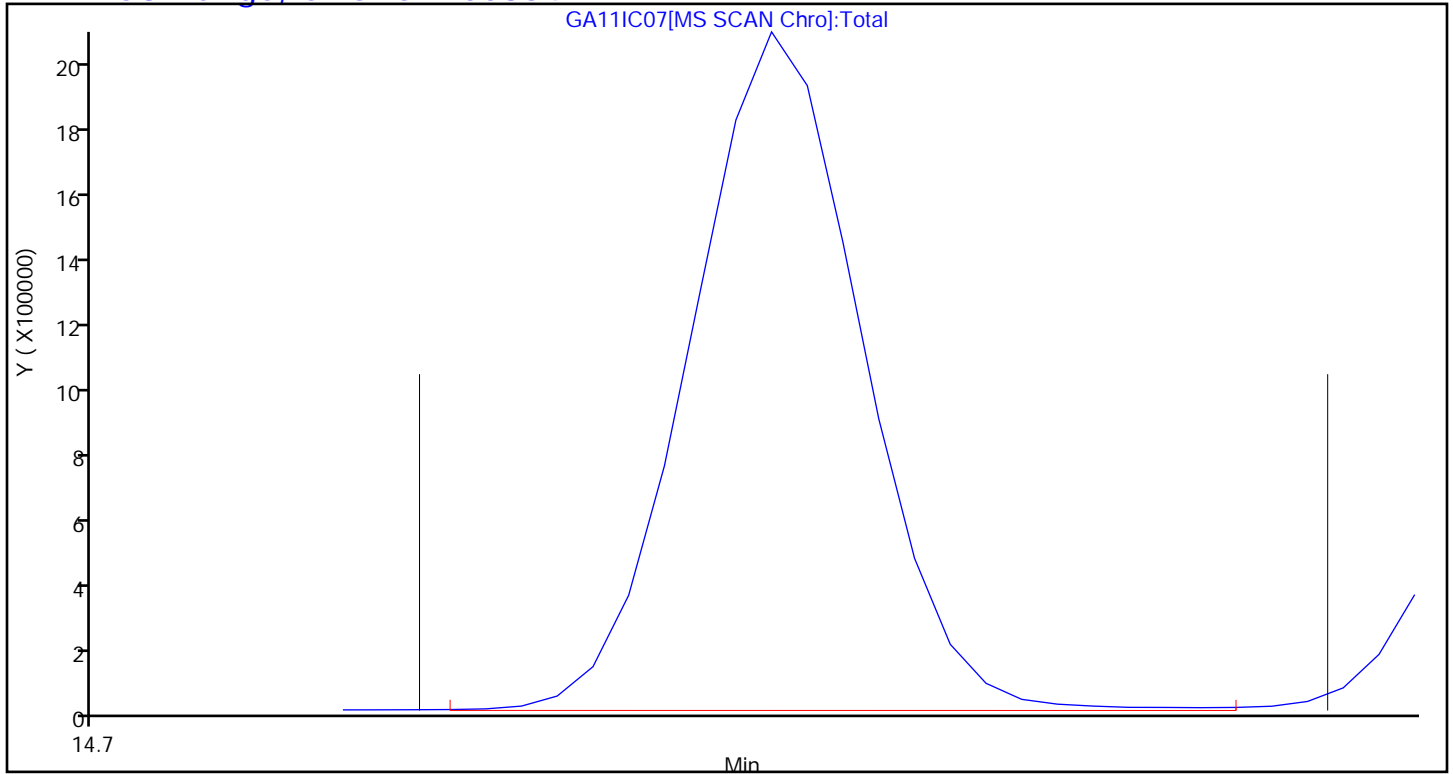
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 11-Jan-2019 21:51:30 ALS Bottle#: 14 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-016
 Misc. Info.: 201651
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:30 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 13:40:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.249	-0.001	98	450955	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2770300	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.096	16.094	0.002	90	2608249	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.718	0.001	87	2036360	4.00	3.81	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	1076565	4.00	3.64	
7 Propene	41	3.834	3.838	-0.004	98	602545	4.00	3.65	
8 Dichlorodifluoromethane	85	3.888	3.894	-0.006	100	1783528	4.00	3.74	
9 Chloromethane	52	4.087	4.091	-0.004	98	191831	4.00	3.66	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	96	1074243	4.00	3.85	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	657162	4.00	3.62	
11 Acetaldehyde	44	4.265	4.278	-0.013	92	1089331	20.0	16.1	
13 Butane	43	4.368	4.373	-0.005	86	1129098	4.00	3.69	
14 Butadiene	54	4.368	4.375	-0.007	67	544660	4.00	3.88	
15 Bromomethane	94	4.718	4.722	-0.004	98	593804	4.00	3.78	
16 Chloroethane	64	4.875	4.879	-0.004	89	327330	4.00	3.74	
17 Ethanol	31	5.026	5.064	-0.038	98	1261075	20.0	15.9	
18 Vinyl bromide	106	5.204	5.205	-0.001	99	568659	4.00	3.91	
19 2-Methylbutane	43	5.252	5.256	-0.004	93	832948	4.00	3.79	
20 Trichlorofluoromethane	101	5.489	5.492	-0.003	99	1773236	4.00	3.79	
21 Acrolein	56	5.511	5.526	-0.015	96	147180	4.00	3.65	
22 Acetonitrile	40	5.587	5.603	-0.016	98	226910	4.00	3.61	
23 Acetone	58	5.630	5.666	-0.036	99	665956	12.0	9.82	
24 Pentane	72	5.721	5.725	-0.004	97	114279	4.00	3.82	
25 Isopropyl alcohol	45	5.770	5.840	-0.070	93	1652685	12.0	9.14	
26 Ethyl ether	31	5.905	5.943	-0.038	91	655797	4.00	3.37	
27 1,1-Dichloroethene	96	6.239	6.242	-0.003	95	633007	4.00	3.98	
28 Acrylonitrile	53	6.363	6.375	-0.012	94	390689	4.00	3.56	
29 1,1,2-Trichloro-1,2,2-trif	101	6.422	6.428	-0.006	94	1332511	4.00	3.86	
30 2-Methyl-2-propanol	59	6.433	6.534	-0.101	95	773470	4.00	3.12	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	587875	4.00	3.17	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	96	715500	4.00	3.62	
33 Carbon disulfide	76	6.778	6.778	0.000	100	1857677	4.00	3.85	
34 trans-1,2-Dichloroethene	96	7.452	7.450	0.002	97	640390	4.00	4.02	
35 2-Methylpentane	43	7.463	7.468	-0.005	95	1727313	4.00	3.79	
36 Methyl tert-butyl ether	73	7.593	7.643	-0.050	97	1553256	4.00	3.50	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	1197700	4.00	3.66	
38 Vinyl acetate	43	8.002	8.016	-0.014	100	1610829	4.00	3.54	
40 Hexane	56	8.477	8.480	-0.003	77	564091	4.00	3.84	
39 2-Butanone (MEK)	72	8.471	8.499	-0.028	95	242448	4.00	3.39	
41 Isopropyl ether	45	8.649	8.679	-0.030	97	1969552	4.00	3.50	
42 cis-1,2-Dichloroethene	96	8.908	8.906	0.002	97	630074	4.00	3.86	
43 Ethyl acetate	43	9.102	9.131	-0.029	98	1268094	4.00	3.40	
44 Chloroform	83	9.264	9.261	0.003	97	1383523	4.00	3.67	
45 Tert-butyl ethyl ether	59	9.345	9.389	-0.044	96	1800930	4.00	3.47	
46 Tetrahydrofuran	42	9.679	9.725	-0.046	94	687510	4.00	3.44	
47 1,1,1-Trichloroethane	97	10.305	10.303	0.002	96	1509577	4.00	3.70	
48 1,2-Dichloroethane	62	10.418	10.416	0.002	98	952640	4.00	3.52	
49 Cyclohexane	69	10.887	10.888	-0.001	94	330488	4.00	3.63	
50 Benzene	78	10.893	10.893	0.000	98	1771104	4.00	3.57	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	99	1552321	4.00	3.78	
53 2,3-Dimethylpentane	71	11.000	11.000	0.000	91	465638	4.00	3.56	
51 n-Butanol	31	10.936	11.004	-0.068	68	184294	4.00	2.97	
54 Thiophene	84	11.162	11.164	-0.002	97	1043094	4.00	3.62	
55 Isooctane	57	11.626	11.632	-0.006	97	3264805	4.00	3.36	
56 n-Heptane	71	11.993	11.995	-0.002	94	694408	4.00	3.49	
57 1,2-Dichloropropane	63	12.095	12.093	0.002	86	653599	4.00	3.36	
58 Trichloroethene	130	12.128	12.124	0.004	96	832705	4.00	3.69	
59 Dibromomethane	93	12.214	12.216	-0.002	96	729198	4.00	3.55	
60 Dichlorobromomethane	83	12.354	12.354	0.000	99	1472126	4.00	3.64	
61 1,4-Dioxane	88	12.386	12.421	-0.035	94	174155	4.00	3.02	
62 Methyl methacrylate	41	12.440	12.453	-0.013	90	823262	4.00	3.31	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	1192238	4.00	3.52	
64 4-Methyl-2-pentanone (MIBK)	43	13.292	13.321	-0.029	99	916498	4.00	2.35	
65 cis-1,3-Dichloropropene	75	13.335	13.336	-0.001	98	1060593	4.00	3.58	
66 trans-1,3-Dichloropropene	75	14.020	14.019	0.001	97	983862	4.00	3.50	
67 Toluene	91	14.144	14.144	0.000	94	1966647	4.00	3.43	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	99	599648	4.00	3.42	
69 2-Hexanone	58	14.608	14.631	-0.023	92	417616	4.00	2.43	
70 n-Octane	85	14.802	14.804	-0.002	95	732239	4.00	3.55	
71 Chlorodibromomethane	129	14.921	14.920	0.001	98	1357226	4.00	3.82	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	1102407	4.00	3.63	
73 Tetrachloroethene	129	15.271	15.272	-0.001	96	776709	4.00	3.61	
74 2,3-Dimethylheptane	43	16.139	16.139	0.000	96	2368408	4.00	3.38	
75 Chlorobenzene	112	16.145	16.142	0.003	93	1543553	4.00	3.46	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	2578598	4.00	3.31	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	3963090	8.00	6.64	
80 n-Nonane	57	16.975	16.977	-0.002	94	1455379	4.00	3.43	
81 Bromoform	173	17.040	17.041	-0.001	94	1258109	4.00	4.05	
82 Styrene	104	17.045	17.047	-0.002	99	1440043	4.00	3.49	
83 o-Xylene	91	17.105	17.106	-0.001	98	2069274	4.00	3.29	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	100	1406346	4.00	3.33	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	448013	4.00	3.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	96	2749199	4.00	3.28	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	750579	4.00	3.31	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	679618	4.00	3.28	
89 4-Ethyltoluene	105	18.350	18.347	0.003	98	2762937	4.00	3.30	
90 1,3,5-Trimethylbenzene	120	18.420	18.419	0.001	92	1079746	4.00	3.32	
92 Alpha Methyl Styrene	118	18.647	18.644	0.003	87	1139797	4.00	3.47	
93 n-Decane	57	18.685	18.682	0.003	90	1652838	4.00	3.18	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	2326877	4.00	3.20	
95 1,2,4-Trimethylbenzene	105	18.846	18.846	0.000	97	2282446	4.00	3.19	
96 sec-Butylbenzene	105	19.094	19.094	0.000	98	3335709	4.00	3.26	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	99	1597433	4.00	3.42	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	2207883	4.00	3.47	
99 1,4-Dichlorobenzene	146	19.202	19.200	0.002	94	1608243	4.00	3.36	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	2715440	4.00	3.32	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	2356435	4.00	3.65	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	1948051	4.00	3.31	
103 2,3-Dihydroindene	117	19.553	19.550	0.003	94	2118687	4.00	3.28	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	95	1533100	4.00	3.28	
105 n-Butylbenzene	91	19.671	19.673	-0.002	98	2715683	4.00	3.26	
106 Indene	116	19.677	19.679	-0.002	92	1879451	4.00	3.39	
107 Undecane	57	19.963	19.963	0.000	95	1679521	4.00	3.18	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	94	745616	4.00	3.86	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	97	2207453	4.00	2.96	
110 Dodecane	57	21.014	21.014	0.000	94	1006221	4.00	2.41	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	1301208	4.00	3.53	
112 Naphthalene	128	21.375	21.377	-0.002	99	2517870	4.00	3.13	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	96	1398696	4.00	3.55	
114 1,2,3-Trichlorobenzene	180	21.650	21.651	-0.001	95	1082671	4.00	3.33	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	1000580	4.00	2.55	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	1141032	4.00	2.37	
A 122 C8 Range	1	14.813	(14.749-14.875)		0	7125919	4.00	3.46	
S 123 1,2-Dichloroethene, Total	1				0		8.00	7.88	
S 124 Xylenes, Total	100				0		12.0	9.93	

Reagents:

40L9DQP_00008

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D

Injection Date: 11-Jan-2019 21:51:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L8

Worklist Smp#: 16

Client ID:

Purge Vol: 500.000 mL

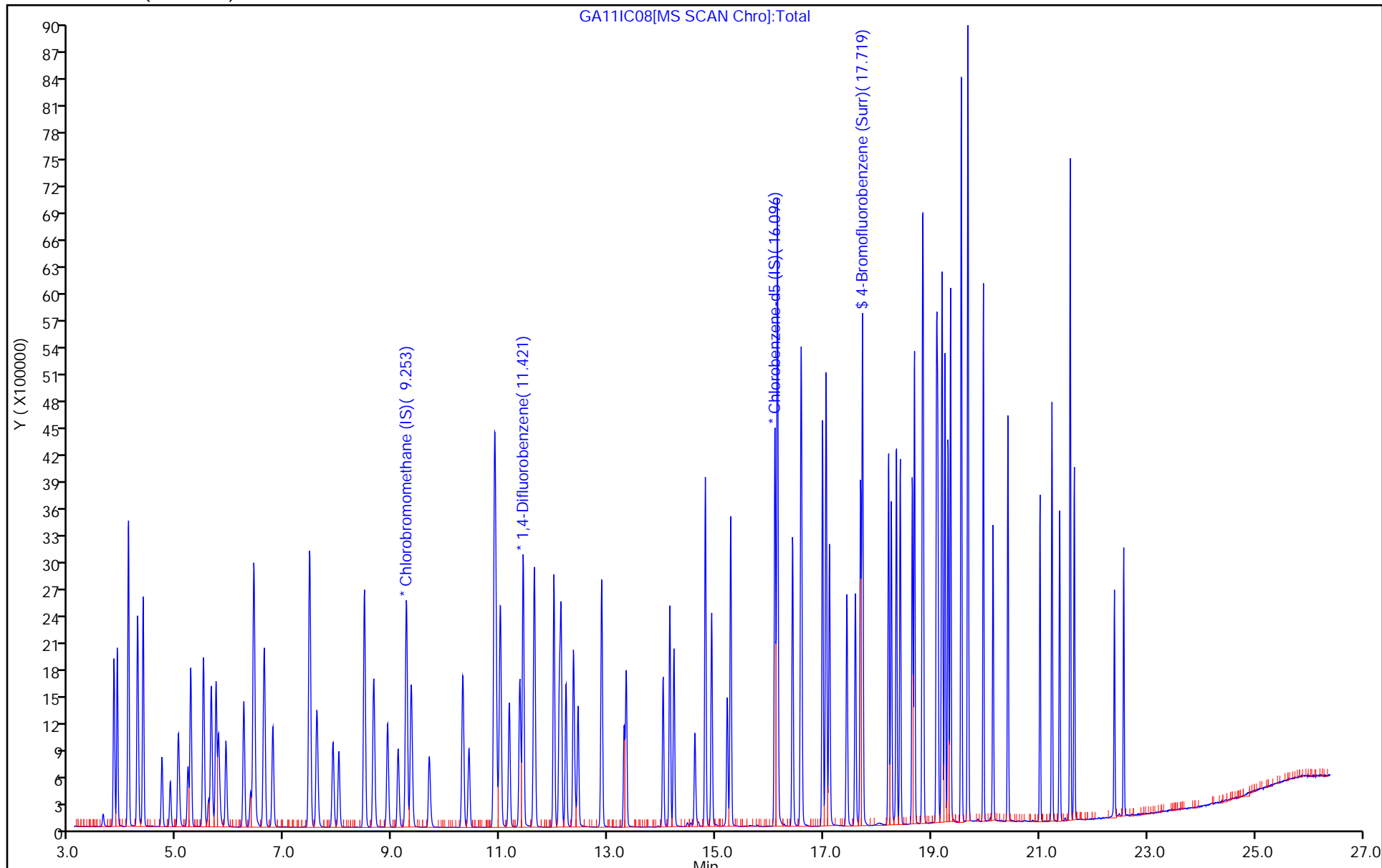
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D

Injection Date: 11-Jan-2019 21:51:30

Instrument ID: MG

Lims ID: IC L8

Client ID:

Operator ID: 007126

ALS Bottle#: 14

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

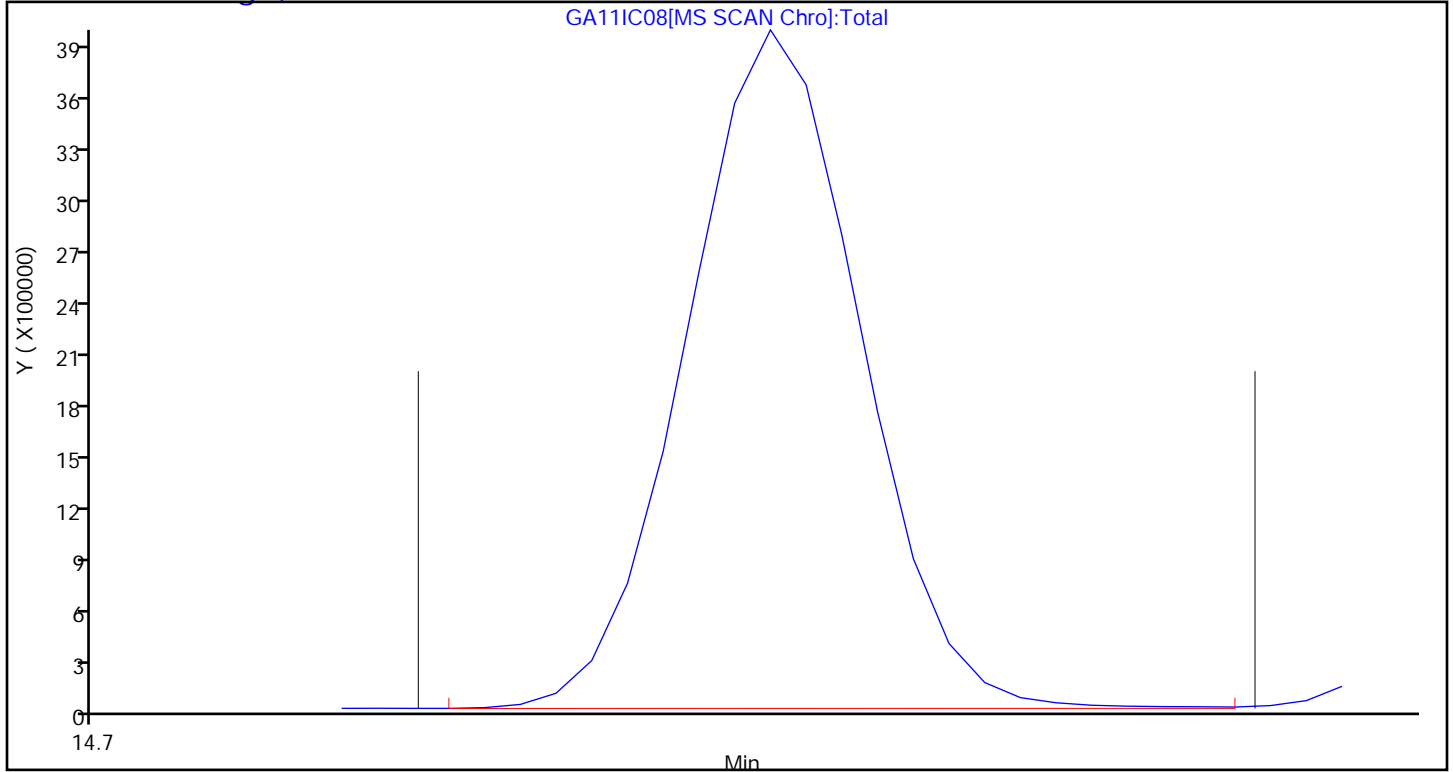
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	3.4653	3.1705	3.1944	3.1500	Ave		3.2799			4.2		30.0				
	3.1939	3.2579	3.1981	3.5227	3.3659												
Propene	+++++	+++++	1.7587	1.4845	1.4290	Ave		1.4914			7.7		30.0				
	1.4326	1.4362	1.4091	1.5280	1.4530												
Dichlorodifluoromethane	5.8144	5.0640	4.8366	4.9504	4.8580	Ave		5.0379			6.0		30.0				
	4.8876	5.0248	4.8446	5.2377	4.8608												
Chloromethane	+++++	+++++	+++++	0.6715	0.5966	Ave		0.5876			7.4		30.0				
	0.5872	0.5848	0.5550	0.5865	0.5318												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.7320	3.4028	3.3465	3.4027	Ave		3.4749			3.3		30.0				
	3.4272	3.5307	3.4425	3.5488	3.4411												
Vinyl chloride	+++++	2.0465	1.8423	1.8473	1.8163	Ave		1.8271			5.6		30.0				
	1.8203	1.8334	1.7435	1.8315	1.6623												
Butane	+++++	+++++	2.7879	2.8437	2.7009	Ave		2.6143			7.2		30.0				
	2.6844	2.6215	2.4361	2.5669	2.2728												
1,3-Butadiene	+++++	+++++	1.3389	1.3779	1.3208	Ave		1.3198			4.0		30.0				
	1.3288	1.3568	1.2722	1.3471	1.2155												
Bromomethane	+++++	+++++	1.8623	1.9344	1.8572	Ave		1.8480			3.2		30.0				
	1.8498	1.8745	1.7805	1.8774	1.7481												
Chloroethane	+++++	+++++	0.8855	0.8409	0.8547	Ave		0.8331			3.9		30.0				
	0.8383	0.8323	0.8039	0.8312	0.7778												
Ethanol	+++++	+++++	0.8934	0.8231	0.8080	Ave		0.8189			6.1		30.0				
	0.8037	0.8564	0.8028	0.8429	0.7211												
Vinyl bromide	+++++	1.9018	1.7722	1.7366	1.7418	Ave		1.7583			3.6		30.0				
	1.7437	1.7838	1.7019	1.7701	1.6732												
2-Methylbutane	+++++	+++++	2.0515	1.9633	1.9838	Ave		1.9393			4.2		30.0				
	1.9590	1.9816	1.8753	1.9172	1.7822												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 4.5968	4.8919 4.5966	4.5963 4.4102	4.6432 4.6616	4.6819 4.3585	Ave		4.6041			3.4		30.0				
Acrolein	++++ 0.5846	++++ 0.5959	++++ 0.5782	0.6004 0.6012	0.5874 0.5473	Ave		0.5850			3.2		30.0				
Acetonitrile	++++ 0.7177	++++ 0.7681	++++ 0.7379	0.7408 0.7567	0.7405 0.6910	Ave		0.7361			3.4		30.0				
Acetone	++++ 0.7514	++++ 0.7610	++++ 0.7228	0.8447 0.7183	0.7906 0.6754	Ave		0.7520			7.3		30.0				
Pentane	++++ 0.2123	++++ 0.2170	++++ 0.2070	0.2190 0.2038	0.2202 0.1943	Ave		0.2105			4.5		30.0				
Isopropyl alcohol	2.7418 2.1881	2.3188 2.2924	2.2272 2.1969	2.1770 2.2190	1.6999 1.9893	QuaF		2.3689	-0.007836					1.0000		0.9900	
Ethyl ether	++++ 1.8837	2.0347 1.9038	1.8861 1.7817	1.8427 1.8377	1.9152 1.6737	Ave		1.8621			5.3		30.0				
1,1-Dichloroethene	++++ 1.5290	1.7340 1.5543	1.5403 1.5141	1.5633 1.5140	1.5440 1.4908	Ave		1.5537			4.6		30.0				
Acrylonitrile	++++ 1.1815	++++ 1.2218	1.1258 1.2125	1.1965 1.2550	1.1794 1.1889	Ave		1.1952			3.1		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.6645	4.0846 3.6642	3.7625 3.5412	3.7405 3.6163	3.7204 3.4760	Ave		3.6967			4.7		30.0				
tert-Butyl alcohol	++++ 2.5653	++++ 2.7860	2.5284 2.7619	2.5014 2.8005	2.5277 2.6087	Ave		2.6350			4.8		30.0				
Methylene Chloride	++++ 1.5650	++++ 1.4959	++++ 1.3885	2.4719 1.3565	1.8784 1.2927	Ave		1.6355			25.4		30.0				
3-Chloropropene	++++ 1.4263	++++ 1.4402	1.7866 1.3797	1.5003 1.4158	1.4252 1.3047	Ave		1.4598			9.8		30.0				
Carbon disulfide	++++ 4.5267	++++ 4.6305	4.5536 4.4426	4.5843 4.4448	4.5189 4.2681	Ave		4.4962			2.5		30.0				
trans-1,2-Dichloroethene	++++ 1.5549	1.7812 1.5959	1.5579 1.5626	1.5474 1.5716	1.5873 1.5791	Ave		1.5931			4.5		30.0				
2-Methylpentane	++++ 3.6495	3.8413 3.7329	3.6302 3.5934	3.6663 3.6789	3.6726 3.4794	Ave		3.6605			2.7		30.0				
Methyl tert-butyl ether	++++ 3.8063	++++ 3.9290	3.6249 3.8501	3.6903 3.7951	3.7667 3.7289	Ave		3.7739			2.5		30.0				
1,1-Dichloroethane	++++ 3.0039	3.2165 3.0616	3.0410 2.9531	3.0857 3.0007	3.0099 2.9039	Ave		3.0307			2.9		30.0				
Vinyl acetate	++++ 4.3714	++++ 4.6452	3.6694 4.6119	3.8279 4.8234	4.0421 4.6436	Ave		4.3293			9.9		30.0				
Hexane	++++ 1.2057	1.3026 1.2192	1.1775 1.1910	1.1729 1.2227	1.1991 1.2068	Ave		1.2108			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++ 0.6760	++++ 0.7192	++++ 0.7039	0.6508 0.6996	0.6769 0.6879	Ave		0.6878			3.3		30.0				
cis-1,2-Dichloroethene	++++ 1.5744	1.7468 1.6363	1.5933 1.5970	1.6008 1.5970	1.5882 1.5988	Ave		1.6147			3.2		30.0				
Ethyl acetate	++++ 3.8330	3.9793	3.7437 3.9131	3.7153 4.0646	3.7356 3.8788	Ave		3.8579			3.2		30.0				
Chloroform	++++ 3.4568	3.6507 3.5041	3.4694 3.4001	3.5102 3.4590	3.4542 3.3756	Ave		3.4756			2.3		30.0				
Tetrahydrofuran	++++ 1.8356	2.0384 1.8762	1.8755 1.8441	1.8215 1.9023	1.7999 1.8263	Ave		1.8689			3.8		30.0				
1,1,1-Trichloroethane	++++ 3.2539	3.3591 3.4003	3.1133 3.3660	3.1042 3.4402	3.2027 3.5047	Ave		3.3049			4.3		30.0				
1,2-Dichloroethane	0.4792 0.4208	0.4342 0.4309	0.4004 0.4260	0.4094 0.4468	0.4128 0.4496	Ave		0.4310			5.4		30.0				
Cyclohexane	++++ 0.1234	++++ 0.1282	++++ 0.1287	0.1130 0.1363	0.1144 0.1399	Ave		0.1257			7.6		30.0				
Benzene	++++ 0.8262	0.8954 0.8466	0.8112 0.8440	0.7881 0.8945	0.8065 0.8990	Ave		0.8457			5.0		30.0				
Carbon tetrachloride	0.7487 0.6708	0.6490 0.7010	0.6034 0.7125	0.5747 0.7615	0.6367 0.7873	Ave		0.6846			10.2		30.0				
1-Butanol	++++ 0.1071	++++ 0.1245	++++ 0.1248	0.0965 0.1330	0.0979 0.1172	Ave		0.1144			12.4		30.0				
2,3-Dimethylpentane	++++ 0.1796	0.1766 0.1801	0.1665 0.1766	0.1668 0.1780	0.1769 0.1774	Ave		0.1754			2.9		30.0				
Thiophene	++++ 0.4824	0.4876 0.4945	0.4639 0.4890	0.4560 0.4969	0.4750 0.5094	Ave		0.4839			3.4		30.0				
2,2,4-Trimethylpentane	++++ 1.3660	1.4676 1.4074	1.3177 1.3906	1.3230 1.4688	1.3297 1.4871	Ave		1.3953			4.8		30.0				
Heptane	++++ 0.2663	0.2712 0.2737	0.2506 0.2749	0.2452 0.2881	0.2558 0.2989	Ave		0.2694			6.4		30.0				
1,2-Dichloropropane	++++ 0.3549	0.3683 0.3641	0.3346 0.3586	0.3506 0.3775	0.3450 0.3847	Ave		0.3598			4.4		30.0				
Trichloroethene	0.4632 0.3841	0.4095 0.3944	0.3655 0.3956	0.3672 0.4073	0.3757 0.4285	Ave		0.3991			7.5		30.0				
Dibromomethane	++++ 0.3974	0.4765 0.4115	0.4099 0.4077	0.4084 0.4323	0.3933 0.4360	Ave		0.4192			6.1		30.0				
Bromodichloromethane	0.6604 0.6222	0.5793 0.6529	0.5629 0.6534	0.5714 0.6923	0.5879 0.7149	Ave		0.6298			8.4		30.0				
1,4-Dioxane	++++ 0.1219	0.1357 0.1302	0.1276 0.1307	0.1218 0.1288	0.1227 0.1236	Ave		0.1270			3.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	0.4034	0.3437	0.2975	0.3269	0.3551	Ave		0.3781			12.1		30.0				
	0.3789	0.4060	0.4068	0.4343	0.4280												
Methylcyclohexane	++++	++++	0.4245	0.4287	0.4498	LinF		0.5272						0.9990		0.9900	
	0.4648	0.4877	0.4844	0.5074	0.5357												
4-Methyl-2-pentanone (MIBK)	++++	++++	0.7143	0.6509	0.6822	Ave		0.7577			10.3		30.0				
	0.7301	0.7728	0.7841	0.8611	0.8658												
cis-1,3-Dichloropropene	0.4871	0.3999	0.3931	0.4158	0.4395	Ave		0.4735			12.4		30.0				
	0.4778	0.5104	0.5121	0.5406	0.5587												
trans-1,3-Dichloropropene	0.4944	0.4260	0.4038	0.4133	0.4518	Ave		0.4856			12.2		30.0				
	0.4884	0.5211	0.5365	0.5532	0.5670												
Toluene	++++	1.1979	1.0972	1.0779	1.1122	Ave		1.1386			3.2		30.0				
	1.1442	1.1566	1.1486	1.1597	1.1532												
1,1,2-Trichloroethane	0.4133	0.3819	0.3518	0.3774	0.3800	Ave		0.3780			4.2		30.0				
	0.3813	0.3829	0.3732	0.3756	0.3625												
2-Hexanone	++++	++++	++++	0.2822	0.3272	Ave		0.3734			14.2		30.0				
	0.3617	0.3952	0.4022	0.4230	0.4226												
Octane	0.3431	0.2979	0.2983	0.3057	0.3158	Ave		0.3251			5.7		30.0				
	0.3345	0.3387	0.3351	0.3409	0.3405												
C8 Range	++++	++++	++++	2.6905	2.7814	Ave		2.9596			6.7		30.0				
	2.8847	2.9768	2.9653	3.2221	3.1962												
Dibromochloromethane	0.7111	0.6553	0.6167	0.6360	0.7095	Ave		0.7610			14.5		30.0				
	0.7798	0.8336	0.8540	0.8994	0.9146												
1,2-Dibromoethane (EDB)	0.7556	0.6517	0.5952	0.6231	0.6489	Ave		0.6894			8.3		30.0				
	0.6861	0.7166	0.7185	0.7452	0.7529												
Tetrachloroethene	0.5382	0.4943	0.4320	0.4547	0.4475	Ave		0.4638			6.6		30.0				
	0.4481	0.4549	0.4479	0.4602	0.4599												
Chlorobenzene	1.0921	0.9609	0.8656	0.8563	0.8903	Ave		0.9365			7.5		30.0				
	0.8958	0.9195	0.9278	0.9856	0.9706												
Ethylbenzene	1.6135	1.4227	1.3082	1.3322	1.3865	Ave		1.4498			6.5		30.0				
	1.4269	1.4796	1.4755	1.5346	1.5189												
m-Xylene & p-Xylene	1.2072	1.0640	0.9982	1.0439	1.0836	Ave		1.1179			6.4		30.0				
	1.1213	1.1561	1.1505	1.2259	1.1287												
Nonane	0.7214	0.6646	0.6269	0.6551	0.7128	Ave		0.7205			7.7		30.0				
	0.7434	0.7638	0.7531	0.8016	0.7620												
Bromoform	++++	++++	0.5650	0.5843	0.6966	Ave		0.8550			26.6		30.0				
	0.8072	0.9326	0.9922	1.1394	1.1231												
Styrene	0.7205	0.5902	0.6127	0.6375	0.7228	Ave		0.7534			15.1		30.0				
	0.7904	0.8466	0.8542	0.9160	0.8426												
o-Xylene	1.2934	1.1325	1.0847	1.1027	1.1495	Ave		1.1384			5.3		30.0				
	1.1502	1.1572	1.1094	1.1237	1.0809												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.9096	0.8625	0.8260	0.8361	0.9096	Ave		0.9221			7.0		30.0				
	0.9401	0.9755	0.9610	1.0114	0.9889												
1,2,3-Trichloropropane	0.2447	0.2178	0.2113	0.2130	0.2227	Ave		0.2272			5.1		30.0				
	0.2256	0.2303	0.2271	0.2361	0.2431												
Isopropylbenzene	1.7967	1.5351	1.4440	1.4632	1.5279	Ave		1.5707			6.3		30.0				
	1.5633	1.5715	1.5587	1.6321	1.6144												
Propylbenzene	0.4012	0.3808	0.3409	0.3592	0.3891	Ave		0.4111			11.6		30.0				
	0.4107	0.4308	0.4332	0.4685	0.4967												
2-Chlorotoluene	0.4669	0.3905	0.3655	0.3667	0.3951	Ave		0.4027			7.3		30.0				
	0.3964	0.4055	0.3991	0.4165	0.4244												
4-Ethyltoluene	1.4351	1.3019	1.3077	1.3685	1.4589	Ave		1.4935			9.5		30.0				
	1.5278	1.5863	1.5805	1.6912	1.6776												
1,3,5-Trimethylbenzene	++++	++++	0.5413	0.5786	0.6024	Lin1	-0.018	0.6744						0.9990		0.9900	
	0.6176	0.6376	0.6340	0.6743	0.6871												
Alpha Methyl Styrene	++++	++++	++++	0.4208	0.4981	Ave		0.6224			21.8		30.0				
	0.5685	0.6414	0.6778	0.7497	0.8004												
Decane	0.8670	0.8318	0.8501	0.8994	0.9689	Ave		0.9226			6.4		30.0				
	0.9743	0.9881	0.9374	0.9947	0.9138												
tert-Butylbenzene	1.3232	1.2918	1.2707	1.3008	1.3524	Ave		1.3980			8.3		30.0				
	1.3873	1.4399	1.4507	1.6252	1.5376												
1,2,4-Trimethylbenzene	1.2112	1.1922	1.2018	1.2261	1.2756	Ave		1.3033			7.8		30.0				
	1.3135	1.3589	1.3540	1.5084	1.3912												
sec-Butylbenzene	1.9008	1.7647	1.7019	1.7864	1.8764	Ave		1.9482			9.3		30.0				
	1.9575	2.0412	2.0527	2.3032	2.0968												
1,3-Dichlorobenzene	0.9710	0.9136	0.8392	0.8456	0.8596	Ave		0.9455			10.4		30.0				
	0.8871	0.9433	0.9831	1.1213	1.0913												
Benzyl chloride	++++	++++	++++	0.5869	0.7162	Ave		0.9648			27.2		30.0				
	0.8511	0.9916	1.0755	1.2636	1.2685												
1,4-Dichlorobenzene	0.8993	0.8397	0.7743	0.7878	0.8054	Ave		0.8947			11.9		30.0				
	0.8484	0.9077	0.9477	1.0688	1.0683												
4-Isopropyltoluene	1.3948	1.3577	1.3402	1.4210	1.5104	Ave		1.5120			8.5		30.0				
	1.5570	1.5989	1.5830	1.7130	1.6444												
1,2,3-Trimethylbenzene	1.2663	1.2149	1.1671	1.2381	1.2887	Ave		1.2797			4.8		30.0				
	1.2982	1.3173	1.2872	1.3672	1.3515												
Indane	1.2186	1.1243	1.0675	1.0961	1.1826	Ave		1.2519			11.7		30.0				
	1.2431	1.3163	1.3515	1.5395	1.3790												
1,2-Dichlorobenzene	0.9498	0.8850	0.8350	0.8518	0.8698	Ave		0.9417			10.4		30.0				
	0.8906	0.9443	0.9892	1.1350	1.0670												
Indene	++++	++++	++++	0.8141	0.9137	Ave		1.0768			17.1		30.0				
	0.9935	1.0962	1.1520	1.3505	1.2176												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.3790 1.6516	1.3189 1.6880	1.3874 1.6768	1.4670 1.8898	1.5846 1.5798	Ave		1.5623			11.2		30.0				
Undecane	++++ 1.1148	++++ 1.1251	++++ 1.0648	++++ 1.1605	0.9201 1.0623	Ave		1.0667			7.5		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.4502	0.2917 0.5017	0.2809 0.5356	0.3021 ++++	0.3712 ++++	Ave		0.3905			27.0		30.0				
1,2,4,5-Tetramethylbenzene	1.1786 1.4737	1.0742 1.5594	1.1053 1.5930	1.2141 1.8040	1.3311 1.7554	Ave		1.4089			18.9		30.0				
Dodecane	++++ 1.0804	++++ 1.1437	++++ 1.1280	0.7863 1.2231	0.8699 ++++	Ave		1.0386			16.5		30.0				
1,2,4-Trichlorobenzene	++++ 0.6454	++++ 0.7369	0.3966 0.8248	0.4284 ++++	0.4829 ++++	Lin1	-0.053	0.7893						0.9900		0.9900	
Naphthalene	++++ 1.4915	0.9793 1.6065	0.9607 1.6241	1.0249 1.8355	1.1613 1.9378	Ave		1.4024			27.0		30.0				
Hexachlorobutadiene	1.0176 0.8427	0.8796 0.9000	0.8143 0.9493	0.7902 1.0467	0.7652 0.8828	Ave		0.8888			10.5		30.0				
1,2,3-Trichlorobenzene	0.8505 0.7703	0.6300 0.8209	0.5889 0.8468	0.6086 0.9455	0.6198 0.8106	Ave		0.7492			16.9		30.0				
2-Methylnaphthalene	++++ 0.5646	++++ 0.6759	++++ 0.7544	0.3700 ++++	0.3309 ++++	Ave		0.5392			34.4		50.0				
1-Methylnaphthalene	++++ 0.8761	++++ 0.9590	0.6260 0.9457	0.6372 ++++	0.5405 ++++	Ave		0.7641			24.0		50.0				
4-Bromofluorobenzene (Surr)	0.6541 0.6669	0.6584 0.6518	0.6640 0.6390	0.6638 0.6459	0.6727 0.6015	Ave		0.6518			3.1		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 276110	13216 568429	23324 1166346	44738 2080315	110343 4483179	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 123848	++++ 250579	12938 513903	20791 902358	50058 1935361	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	11347 422528	19313 876701	35581 1766802	69332 3093057	170173 6474307	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 50767	++++ 102040	++++ 202413	9404 346372	20898 708335	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 296279	14233 616018	25033 1255454	46869 2095695	119194 4583276	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	++++ 157361	7805 319887	13553 635845	25872 1081563	63624 2214114	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 232065	++++ 457383	20509 888442	39827 1515853	94610 3027220	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 114876	++++ 236733	9850 463965	19298 795542	46266 1618919	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 159914	++++ 327044	13700 649354	27091 1108697	65057 2328401	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 72470	++++ 145223	6514 293162	11777 490862	29938 1035993	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 347389	++++ 747094	32861 1463846	57636 2488750	141512 4802553	++++ 5.00	++++ 10.0	0.400 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 150739	7253 311230	13037 620663	24322 1045304	61012 2228635	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 169357	++++ 345741	15092 683911	27497 1132183	69491 2373804	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 397394	18657 801987	33813 1608364	65029 2752862	164002 5805275	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Acrolein	CBM	Ave	++++ 50534	++++ 103966	++++ 210875	8409 355043	20576 728953	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.00
Acetonitrile	CBM	Ave	++++ 62042	++++ 134006	++++ 269093	10375 446888	25939 920347	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.00
Acetone	CBM	Ave	++++ 194862	++++ 398344	++++ 790789	35492 1272613	83084 2698817	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 18350	++++ 37863	++++ 75489	3067 120364	7712 258741	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.00
Isopropyl alcohol	CBM	QuaF	16052 567468	26530 1199879	49153 2403555	91466 3931291	228028 7948950	0.0600 3.00	0.120 6.00	0.240 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 162847	7760 332157	13875 649774	25807 1085214	67088 2229204	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.00
1,1-Dichloroethene	CBM	Ave	++++ 132183	6613 271177	11331 552199	21894 894072	54085 1985588	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.00
Acrylonitrile	CBM	Ave	++++ 102139	++++ 213181	++++ 442205	8282 741130	16757 1583584	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.00
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 316796	15578 639315	27679 1291447	52386 2135574	130321 4629798	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.00
tert-Butyl alcohol	CBM	Ave	++++ 221767	++++ 486078	++++ 1007263	18600 1653787	35033 3474636	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.00
Methylene Chloride	CBM	Ave	++++ 135290	++++ 260991	++++ 506389	34620 801053	65799 1721729	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.00
3-Chloropropene	CBM	Ave	++++ 123300	++++ 251273	++++ 503167	13143 836069	21012 1737749	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.00
Carbon disulfide	CBM	Ave	++++ 391326	++++ 807906	++++ 1620181	33499 2624808	64204 5684871	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.00
trans-1,2-Dichloroethene	CBM	Ave	++++ 134418	6793 278440	11461 569867	21671 928087	55602 2103238	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.00
2-Methylpentane	CBM	Ave	++++ 315498	14650 651289	26706 1310496	51347 2172520	128649 4634316	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.00
Methyl tert-butyl ether	CBM	Ave	++++ 329050	++++ 685507	++++ 1404124	26667 2241171	51683 4966677	131945 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.00
1,1-Dichloroethane	CBM	Ave	++++ 259689	12267 534165	22371 1076990	43216 1772013	105434 3867799	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.00
Vinyl acetate	CBM	Ave	++++ 377904	++++ 810467	++++ 1681929	26994 2848393	53610 6184921	141592 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.00
Hexane	CBM	Ave	++++ 104228	4968 212722	8662 434352	16426 722047	42005 1607432	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.00
2-Butanone (MEK)	CBM	Ave	++++ 58444	++++ 125474	++++ 256700	++++ 413154	9115 916246	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.00
cis-1,2-Dichloroethene	CBM	Ave	++++ 136108	6662 285498	11721 582417	22419 943075	55633 2129500	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 331359	++++ 694293	27541 1427087	52034 2400330	130856 5166288	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	++++ 298839	13923 611378	25523 1239987	49161 2042657	120999 4496097	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 158683	7774 327341	13797 672532	25511 1123394	63048 2432538	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	++++ 281296	12811 593273	22903 1227570	43475 2031546	112189 4668064	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	5129 196209	9022 404925	16131 824860	31582 1368173	79080 2983220	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 57530	++++ 120448	4554 249183	8824 417405	23383 928409	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 385270	18606 795627	32682 1634406	60789 2739521	154496 5964977	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	8013 312823	13486 658731	24310 1379762	44327 2331942	121964 5223763	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 49965	++++ 117031	++++ 241678	7444 407327	18761 777405	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 83728	3670 169285	6708 341915	12865 545270	33896 1177164	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 224938	10131 464737	18692 946920	35178 1521788	90994 3380138	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 636999	30494 1322559	53089 2692898	102056 4498015	254726 9866899	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 124160	5635 257254	10096 532315	18913 882284	49010 1982995	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 165502	7652 342173	13479 694484	27042 1156069	66097 2552409	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4957 179106	8508 370632	14725 766083	28328 1247479	71975 2842892	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 185331	9901 386676	16515 789473	31506 1323802	75334 2892720	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	7068 290134	12036 613591	22677 1265402	44079 2120110	112623 4743566	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 56823	2819 122358	5140 253088	9393 394321	23501 819819	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	4317 176703	7141 381574	11987 787734	25219 1330076	68030 2839739	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	LinF	++++ 216746	++++ 458293	17104 937963	33070 1553838	86171 3554415	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 340468	++++ 726276	28778 1518450	50210 2637007	130687 5744756	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	5213	8310	15836	32071	84191	0.0200	0.0400	0.0800	0.160	0.400
			222810	479642	991696	1655482	3706962	1.00	2.00	4.00	8.00	16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	4369	7302	13490	26441	71850	0.0200	0.0400	0.0800	0.160	0.400
			193590	428343	930378	1585219	3716627	1.00	2.00	4.00	8.00	16.0
Toluene	CBZd 5	Ave	++++	20535	36650	68961	176860	++++	0.0400	0.0800	0.160	0.400
			453543	950794	1991754	3322999	7558388	1.00	2.00	4.00	8.00	16.0
1,1,2-Trichloroethane	CBZd 5	Ave	3652	6546	11751	24147	60427	0.0200	0.0400	0.0800	0.160	0.400
			151135	314780	647099	1076123	2376053	1.00	2.00	4.00	8.00	16.0
2-Hexanone	CBZd 5	Ave	++++	++++	++++	18055	52036	++++	++++	++++	0.160	0.400
			143357	324836	697429	1212184	2770142	1.00	2.00	4.00	8.00	16.0
Octane	CBZd 5	Ave	3032	5107	9965	19559	50220	0.0200	0.0400	0.0800	0.160	0.400
			132598	278400	581056	976945	2231497	1.00	2.00	4.00	8.00	16.0
C8 Range	DFBZ	Ave	++++	++++	++++	207536	532812	++++	++++	++++	0.160	0.400
			1345188	2797431	5742340	9867518	21206896	1.00	2.00	4.00	8.00	16.0
Dibromochloromethane	CBZd 5	Ave	6284	11234	20599	40693	112826	0.0200	0.0400	0.0800	0.160	0.400
			309096	685217	1481007	2576992	5994726	1.00	2.00	4.00	8.00	16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	6677	11172	19884	39867	103182	0.0200	0.0400	0.0800	0.160	0.400
			271955	589031	1245997	2135184	4934830	1.00	2.00	4.00	8.00	16.0
Tetrachloroethene	CBZd 5	Ave	4756	8474	14431	29094	71154	0.0200	0.0400	0.0800	0.160	0.400
			177605	373916	776667	1318629	3014432	1.00	2.00	4.00	8.00	16.0
Chlorobenzene	CBZd 5	Ave	9651	16472	28914	54785	141575	0.0200	0.0400	0.0800	0.160	0.400
			355092	755892	1608983	2824132	6361822	1.00	2.00	4.00	8.00	16.0
Ethylbenzene	CBZd 5	Ave	14258	24388	43699	85231	220476	0.0200	0.0400	0.0800	0.160	0.400
			565594	1216288	2558634	4397072	9955892	1.00	2.00	4.00	8.00	16.0
m-Xylene & p-Xylene	CBZd 5	Ave	21336	36478	66686	133574	344621	0.0400	0.0800	0.160	0.320	0.800
			888953	1900753	3990112	7025357	14796297	2.00	4.00	8.00	16.0	32.0
Nonane	CBZd 5	Ave	6375	11392	20941	41910	113340	0.0200	0.0400	0.0800	0.160	0.400
			294667	627904	1305941	2296867	4994379	1.00	2.00	4.00	8.00	16.0
Bromoform	CBZd 5	Ave	++++	++++	18872	37380	110767	++++	++++	0.0800	0.160	0.400
			319968	766620	1720677	3264688	7361436	1.00	2.00	4.00	8.00	16.0
Styrene	CBZd 5	Ave	6367	10118	20466	40788	114936	0.0200	0.0400	0.0800	0.160	0.400
			313291	695917	1481246	2624790	5523081	1.00	2.00	4.00	8.00	16.0
o-Xylene	CBZd 5	Ave	11430	19414	36234	70551	182797	0.0200	0.0400	0.0800	0.160	0.400
			455942	951287	1923859	3219909	7084529	1.00	2.00	4.00	8.00	16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	8038	14785	27592	53490	144640	0.0200	0.0400	0.0800	0.160	0.400
			372659	801869	1666518	2898094	6482057	1.00	2.00	4.00	8.00	16.0
1,2,3-Trichloropropane	CBZd 5	Ave	2162	3733	7060	13629	35414	0.0200	0.0400	0.0800	0.160	0.400
			89428	189343	393840	676648	1593385	1.00	2.00	4.00	8.00	16.0
Isopropylbenzene	CBZd 5	Ave	15877	26315	48237	93612	242959	0.0200	0.0400	0.0800	0.160	0.400
			619680	1291872	2702973	4676667	10581270	1.00	2.00	4.00	8.00	16.0
Propylbenzene	CBZd 5	Ave	3545	6527	11389	22978	61876	0.0200	0.0400	0.0800	0.160	0.400
			162793	354102	751306	1342310	3255751	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
2-Chlorotoluene	CBZd 5	Ave	4126 157132	6694 333374	12209 692051	23459 1193527	62820 2781675	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	12682 605609	22317 1303962	43683 2740797	87555 4845851	231995 10995513	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Lin1	++++ 244828	++++ 524101	18083 1099439	37017 1932203	95792 4503336	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 225351	++++ 527224	++++ 1175360	26923 2148167	79203 5246512	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	7662 386206	14259 812284	28397 1625532	57543 2850078	154065 5989503	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11693 549927	22144 1183628	42446 2515614	83223 4656890	215060 10078350	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	10703 520658	20437 1117062	40145 2348070	78441 4322006	202848 9118755	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	16797 775934	30251 1677953	56852 3559589	114293 6599605	298383 13743682	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	8581 351654	15661 775428	28033 1704781	54101 3212950	136687 7153027	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 337367	++++ 815150	++++ 1864979	++++ 3620768	37546 8314062	113885 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7947 336295	14394 746169	25865 1643413	50401 3062438	128080 7002419	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	12326 617168	23274 1314396	44768 2745113	90912 4908356	240183 10778521	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	11190 514577	20826 1082845	38988 2232197	79211 3917469	204927 8858717	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	10769 492757	19273 1082048	35661 2343708	70126 4411376	188062 9038955	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	8393 353004	15171 776291	27892 1715395	54498 3252238	138306 6993755	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 393793	++++ 901129	++++ 1997698	++++ 3869631	52088 7980555	145299 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Butylbenzene	CBZd 5	Ave	12186 654668	22609 1387617	46347 2907810	93855 5414943	251979 10355110	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 441877	++++ 924853	++++ 1846517	++++ 3325148	58868 6962530	162146 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 178449	5000 412385	9382 928720	19327 ++++	59034 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	10415 584141	18414 1281919	36923 2762451	77678 5169036	211664 11505782	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 428247	++++ 940184	++++ 1956105	50308 3504521	138324 ++++	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 ++++

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Lin1	++++ 255822	++++ 605730	13247 1430337	27410 ++++	76796 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Naphthalene	CBZd 5	Ave	++++ 591214	16787 1320630	32092 2816456	65571 5259311	184664 12701015	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	8992 334056	15078 739806	27202 1646161	50558 2999218	121678 5786078	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	7516 305351	10800 674773	19673 1468485	38937 2709115	98554 5313205	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 223829	++++ 555653	++++ 1308281	23671 ++++	52618 ++++	++++ 1.00	++++ 2.00	++++ 4.00	0.160 ++++	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 347276	++++ 788345	20912 1640040	40771 ++++	85954 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1156116 1057465	1128690 1071605	1108968 1108097	1061718 925381	1069670 985627	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD Lin1 = Linear 1/conc ISTD LinF = Linear ISTD forced zero QuaF = Quadratic ISTD forced zero
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FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	5.7						50				
Propene	+++++	+++++	17.9						50			
Dichlorodifluoromethane	15.4						50					
Chloromethane	+++++	+++++	+++++	14.3						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	7.4						50				
Vinyl chloride	+++++	12.0						50				
Butane	+++++	+++++	6.6						50			
1,3-Butadiene	+++++	+++++	1.5						50			
Bromomethane	+++++	+++++	0.8						50			
Chloroethane	+++++	+++++	6.3						50			
Ethanol	+++++	+++++	9.1						50			
Vinyl bromide	+++++	8.2						50				
2-Methylbutane	+++++	+++++	5.8						50			
Trichlorofluoromethane	+++++	6.3						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	2.6						50		
Acetonitrile	+++++	+++++	+++++	0.6						50		
Acetone	+++++	+++++	+++++	12.3						80		
Pentane	+++++	+++++	+++++	4.0						50		
Isopropyl alcohol	15.8						50					
Ethyl ether	+++++	9.3						50				
1,1-Dichloroethene	+++++	11.6						50				
Acrylonitrile	+++++	+++++	-5.8						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	10.5						50				
tert-Butyl alcohol	+++++	+++++	-4.0						50			
Methylene Chloride	+++++	+++++	+++++	51.1						80		
3-Chloropropene	+++++	+++++	22.4						50			
Carbon disulfide	+++++	+++++	1.3						50			
trans-1,2-Dichloroethene	+++++	11.8						50				
2-Methylpentane	+++++	4.9						50				
Methyl tert-butyl ether	+++++	+++++	-3.9						50			
1,1-Dichloroethane	+++++	6.1						50				
Vinyl acetate	+++++	+++++	-15.2						50			
Hexane	+++++	7.6						50				
2-Butanone (MEK)	+++++	+++++	+++++	-5.4						50		
cis-1,2-Dichloroethene	+++++	8.2						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-3.0						50			
Chloroform	+++++	5.0						50				
Tetrahydrofuran	+++++	9.1						50				
1,1,1-Trichloroethane	+++++	1.6						50				
1,2-Dichloroethane	11.2						50					
Cyclohexane	+++++	+++++	-10.1						50			
Benzene	+++++	5.9						50				
Carbon tetrachloride	9.4						50					
1-Butanol	+++++	+++++	+++++	-15.7							50	
2,3-Dimethylpentane	+++++	0.7						50				
Thiophene	+++++	0.8						50				
2,2,4-Trimethylpentane	+++++	5.2						50				
Heptane	+++++	0.7						50				
1,2-Dichloropropane	+++++	2.4						50				
Trichloroethene	16.1						50					
Dibromomethane	+++++	13.7						50				
Bromodichloromethane	4.9						50					
1,4-Dioxane	+++++	6.8						50				
Methyl methacrylate	6.7						50					
Methylcyclohexane	+++++	+++++	-19.5						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	-5.7						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	2.9						50					
trans-1,3-Dichloropropene	1.8						50					
Toluene	+++++	5.2						50				
1,1,2-Trichloroethane	9.3						50					
2-Hexanone	+++++	+++++	+++++	-24.4						50		
Octane	5.6						50					
Dibromochloromethane	-6.6						50					
1,2-Dibromoethane (EDB)	9.6						50					
Tetrachloroethene	16.0						50					
Chlorobenzene	16.6						50					
Ethylbenzene	11.3						50					
m-Xylene & p-Xylene	8.0						50					
Nonane	0.1						50					
Bromoform	+++++	+++++	-33.9						50			
Styrene	-4.4						50					
o-Xylene	13.6						50					
1,1,2,2-Tetrachloroethane	-1.4						50					
1,2,3-Trichloropropane	7.7						50					
Isopropylbenzene	14.4						50					
Propylbenzene	-2.4						50					
2-Chlorotoluene	16.0						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	-3.9						50					
1,3,5-Trimethylbenzene	+++++	+++++	14.0						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-32.4						50		
Decane	-6.0						50					
tert-Butylbenzene	-5.3						50					
1,2,4-Trimethylbenzene	-7.1						50					
sec-Butylbenzene	-2.4						50					
1,3-Dichlorobenzene	2.7						50					
Benzyl chloride	+++++	+++++	+++++	-39.2						50		
1,4-Dichlorobenzene	0.5						50					
4-Isopropyltoluene	-7.8						50					
1,2,3-Trimethylbenzene	-1.0						50					
Indane	-2.7						50					
1,2-Dichlorobenzene	0.9						50					
Indene	+++++	+++++	+++++	-24.4						50		
Butylbenzene	-11.7						50					
Undecane	+++++	+++++	+++++	-13.7						50		
1,2-Dibromo-3-Chloropropane	+++++	-25.3	+++++	+++++					50			
1,2,4,5-Tetramethylbenzene	-16.3						50					
Dodecane	+++++	+++++	+++++	-24.3	+++++					50		
1,2,4-Trichlorobenzene	+++++	+++++	34.3	+++++	+++++				50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-30.2						80				
Hexachlorobutadiene	14.5						50					
1,2,3-Trichlorobenzene	13.5						50					
2-Methylnaphthalene	+++++	+++++	+++++	-31.4						80		
1-Methylnaphthalene	+++++	+++++	-18.1	+++++					80			
			+++++	+++++								

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 20-Feb-2019 15:12:30 ALS Bottle#: 14 Worklist Smp#: 3
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-003
 Misc. Info.: 210537
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7

Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:47:13 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 20-Feb-2019 16:26:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.845	8.830	0.015	96	295269	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.021	11.010	0.011	95	1531239	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.730	0.004	87	1432684	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.373	17.371	0.002	95	925381	4.00	3.96	
6 Chlorodifluoromethane	51	3.682	3.681	0.001	97	2080315	8.00	8.59	
7 Propene	41	3.692	3.691	0.001	99	902358	8.00	8.20	
8 Dichlorodifluoromethane	85	3.744	3.741	0.003	100	3093057	8.00	8.32	
9 Chloromethane	52	3.930	3.928	0.002	100	346372	8.00	7.98	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.935	3.933	0.002	93	2095695	8.00	8.17	
12 Vinyl chloride	62	4.100	4.097	0.003	98	1081563	8.00	8.02	
11 Acetaldehyde	44	4.100	4.111	-0.011	99	2099908	40.0	40.5	
14 Butane	43	4.188	4.183	0.005	84	1515853	8.00	7.86	
13 Butadiene	54	4.188	4.185	0.003	73	795542	8.00	8.17	
15 Bromomethane	94	4.509	4.508	0.001	98	1108697	8.00	8.13	
16 Chloroethane	64	4.653	4.653	0.000	97	490862	8.00	7.98	
17 Ethanol	31	4.819	4.836	-0.017	96	2488750	40.0	41.2	
18 Vinyl bromide	106	4.958	4.951	0.007	98	1045304	8.00	8.05	
19 2-Methylbutane	43	5.005	4.999	0.006	92	1132183	8.00	7.91	
21 Trichlorofluoromethane	101	5.227	5.219	0.008	100	2752862	8.00	8.10	
20 Acrolein	56	5.263	5.277	-0.014	94	355043	8.00	8.22	
22 Acetonitrile	40	5.341	5.351	-0.010	98	446888	8.00	8.22	
23 Acetone	58	5.387	5.416	-0.029	98	1272613	24.0	22.9	
24 Pentane	72	5.454	5.444	0.010	93	120364	8.00	7.75	
25 Isopropyl alcohol	45	5.511	5.555	-0.044	97	3931291	24.0	24.5	
26 Ethyl ether	31	5.640	5.672	-0.032	93	1085214	8.00	7.89	
27 1,1-Dichloroethene	96	5.940	5.929	0.011	96	894072	8.00	7.80	
28 Acrylonitrile	53	6.075	6.075	0.000	94	741130	8.00	8.40	
30 1,1,2-Trichloro-1,2,2-trif	101	6.116	6.107	0.009	96	2135574	8.00	7.83	
29 2-Methyl-2-propanol	59	6.111	6.186	-0.075	95	1653787	8.00	8.50	
31 Methylene Chloride	84	6.297	6.284	0.013	97	801053	8.00	6.63	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.307	6.297	0.010	97	836069	8.00	7.76	
33 Carbon disulfide	76	6.452	6.437	0.015	100	2624808	8.00	7.91	
34 trans-1,2-Dichloroethene	96	7.103	7.088	0.015	96	928087	8.00	7.89	
35 2-Methylpentane	43	7.113	7.104	0.009	96	2172520	8.00	8.04	
36 Methyl tert-butyl ether	73	7.253	7.296	-0.043	97	2241171	8.00	8.04	
37 1,1-Dichloroethane	63	7.527	7.514	0.013	99	1772013	8.00	7.92	
38 Vinyl acetate	43	7.641	7.645	-0.004	100	2848393	8.00	8.91	
40 Hexane	56	8.090	8.082	0.008	79	722047	8.00	8.08	
39 2-Butanone (MEK)	72	8.106	8.133	-0.027	95	413154	8.00	8.14	
171 Isopropyl ether	45	8.271	8.306	-0.035	99	3420757	8.00	8.18	
41 cis-1,2-Dichloroethene	96	8.509	8.497	0.012	96	943075	8.00	7.91	
42 Ethyl acetate	43	8.716	8.736	-0.020	98	2400330	8.00	8.43	
43 Chloroform	83	8.860	8.842	0.018	98	2042657	8.00	7.96	
173 Tert-butyl ethyl ether	59	8.948	8.986	-0.038	96	2864134	8.00	8.23	
44 Tetrahydrofuran	42	9.284	9.329	-0.045	95	1123394	8.00	8.14	
45 1,1,1-Trichloroethane	97	9.873	9.862	0.011	97	2031546	8.00	8.33	
46 1,2-Dichloroethane	62	9.992	9.980	0.012	97	1368173	8.00	8.29	
48 Cyclohexane	69	10.468	10.458	0.010	91	417405	8.00	8.67	
47 Benzene	78	10.473	10.465	0.008	97	2739521	8.00	8.46	
50 Carbon tetrachloride	117	10.493	10.483	0.010	97	2331942	8.00	8.90	
49 n-Butanol	31	10.483	10.538	-0.055	66	407327	8.00	9.30	
51 2,3-Dimethylpentane	71	10.587	10.577	0.010	92	545270	8.00	8.12	
52 Thiophene	84	10.752	10.740	0.012	97	1521788	8.00	8.22	
53 Isooctane	57	11.227	11.219	0.008	98	4498015	8.00	8.42	
55 n-Heptane	71	11.600	11.594	0.006	94	882284	8.00	8.55	
54 1,2-Dichloropropane	63	11.693	11.685	0.008	91	1156069	8.00	8.39	
56 Trichloroethene	130	11.729	11.718	0.011	95	1247479	8.00	8.17	
57 Dibromomethane	93	11.817	11.808	0.009	95	1323802	8.00	8.25	
58 Dichlorobromomethane	83	11.961	11.953	0.009	99	2120110	8.00	8.79	
59 1,4-Dioxane	88	11.997	12.035	-0.038	93	394321	8.00	8.11	
60 Methyl methacrylate	41	12.060	12.068	-0.008	92	1330076	8.00	9.19	
61 Methylcyclohexane	83	12.488	12.484	0.004	94	1553838	8.00	7.70	
62 4-Methyl-2-pentanone (MIBK)	43	12.917	12.944	-0.027	98	2637007	8.00	9.09	
63 cis-1,3-Dichloropropene	75	12.954	12.950	0.004	95	1655482	8.00	9.13	
64 trans-1,3-Dichloropropene	75	13.651	13.645	0.006	99	1585219	8.00	9.12	
65 Toluene	91	13.770	13.765	0.005	93	3322999	8.00	8.15	
66 1,1,2-Trichloroethane	83	13.848	13.844	0.004	97	1076123	8.00	7.95	
69 2-Hexanone	58	14.246	14.265	-0.019	91	1212184	8.00	9.06	
71 n-Octane	85	14.447	14.446	0.001	96	976945	8.00	8.39	
70 Chlorodibromomethane	129	14.551	14.544	0.007	98	2576992	8.00	9.45	
72 Ethylene Dibromide	107	14.840	14.835	0.005	98	2135184	8.00	8.65	
73 Tetrachloroethene	129	14.907	14.903	0.004	95	1318629	8.00	7.94	
74 Chlorobenzene	112	15.781	15.778	0.003	94	2824132	8.00	8.42	
75 2,3-Dimethylheptane	43	15.791	15.790	0.001	96	3487932	8.00	8.14	
76 Ethylbenzene	91	16.065	16.065	0.000	99	4397072	8.00	8.47	
78 m-Xylene & p-Xylene	91	16.230	16.226	0.004	98	7025357	16.0	17.5	
81 n-Nonane	57	16.639	16.639	0.000	94	2296867	8.00	8.90	
79 Bromoform	173	16.680	16.679	0.001	95	3264688	8.00	10.7	
80 Styrene	104	16.690	16.690	0.000	99	2624790	8.00	9.73	
82 o-Xylene	91	16.752	16.751	0.001	99	3219909	8.00	7.90	
83 1,1,2,2-Tetrachloroethane	83	17.078	17.077	0.001	98	2898094	8.00	8.78	
84 1,2,3-Trichloropropane	110	17.238	17.237	0.001	98	676648	8.00	8.32	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.342	17.337	0.005	96	4676667	8.00	8.31	
86 N-Propylbenzene	120	17.900	17.900	0.000	99	1342310	8.00	9.12	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	1193527	8.00	8.28	
88 4-Ethyltoluene	105	18.060	18.056	0.004	99	4845851	8.00	9.06	
89 1,3,5-Trimethylbenzene	120	18.138	18.134	0.004	93	1932203	8.00	8.03	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	88	2148167	8.00	9.64	
91 n-Decane	57	18.432	18.430	0.002	89	2850078	8.00	8.63	
92 tert-Butylbenzene	119	18.577	18.577	0.000	93	4656890	8.00	9.30	
93 1,2,4-Trimethylbenzene	105	18.592	18.592	0.000	96	4322006	8.00	9.26	
95 sec-Butylbenzene	105	18.861	18.857	0.004	99	6599605	8.00	9.46	
94 1,3-Dichlorobenzene	146	18.877	18.874	0.003	97	3212950	8.00	9.49	
96 Benzyl chloride	91	18.954	18.955	-0.001	98	3620768	8.00	10.5	
97 1,4-Dichlorobenzene	146	18.964	18.965	-0.001	96	3062438	8.00	9.56	
98 4-Isopropyltoluene	119	19.026	19.027	-0.001	97	4908356	8.00	9.06	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	99	3917469	8.00	8.55	
100 Butylcyclohexane	83	19.135	19.136	-0.001	93	3043212	8.00	8.18	
102 2,3-Dihydroindene	117	19.342	19.338	0.004	94	4411376	8.00	9.84	
101 1,2-Dichlorobenzene	146	19.342	19.338	0.004	92	3252238	8.00	9.64	
103 Indene	116	19.471	19.471	0.000	92	3869631	8.00	10.0	
104 n-Butylbenzene	91	19.476	19.477	-0.001	97	5414943	8.00	9.68	
105 Undecane	57	19.791	19.792	-0.001	96	3325148	8.00	8.70	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	97	1805415	8.00	12.9	
107 1,2,4,5-Tetramethylbenzene	119	20.257	20.255	0.002	97	5169036	8.00	10.2	
110 Dodecane	57	20.887	20.889	-0.002	95	3504521	8.00	9.42	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	94	2876339	8.00	10.2	
113 Naphthalene	128	21.254	21.255	-0.001	99	5259311	8.00	10.5	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	91	2999218	8.00	9.42	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	95	2709115	8.00	10.1	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	99	2652971	8.00	13.7	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	99	3022634	8.00	11.0	
A 120 C8 Range	1	14.452	(14.401-14.494)		0	9867518	8.00	8.71	
S 121 Xylenes, Total	100				0		24.0	25.4	
S 122 1,2-Dichloroethene, Total	1				0		16.0	15.8	

Reagents:

40L9DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC09.D

Injection Date: 20-Feb-2019 15:12:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L9

Worklist Smp#: 3

Client ID:

Purge Vol: 500.000 mL

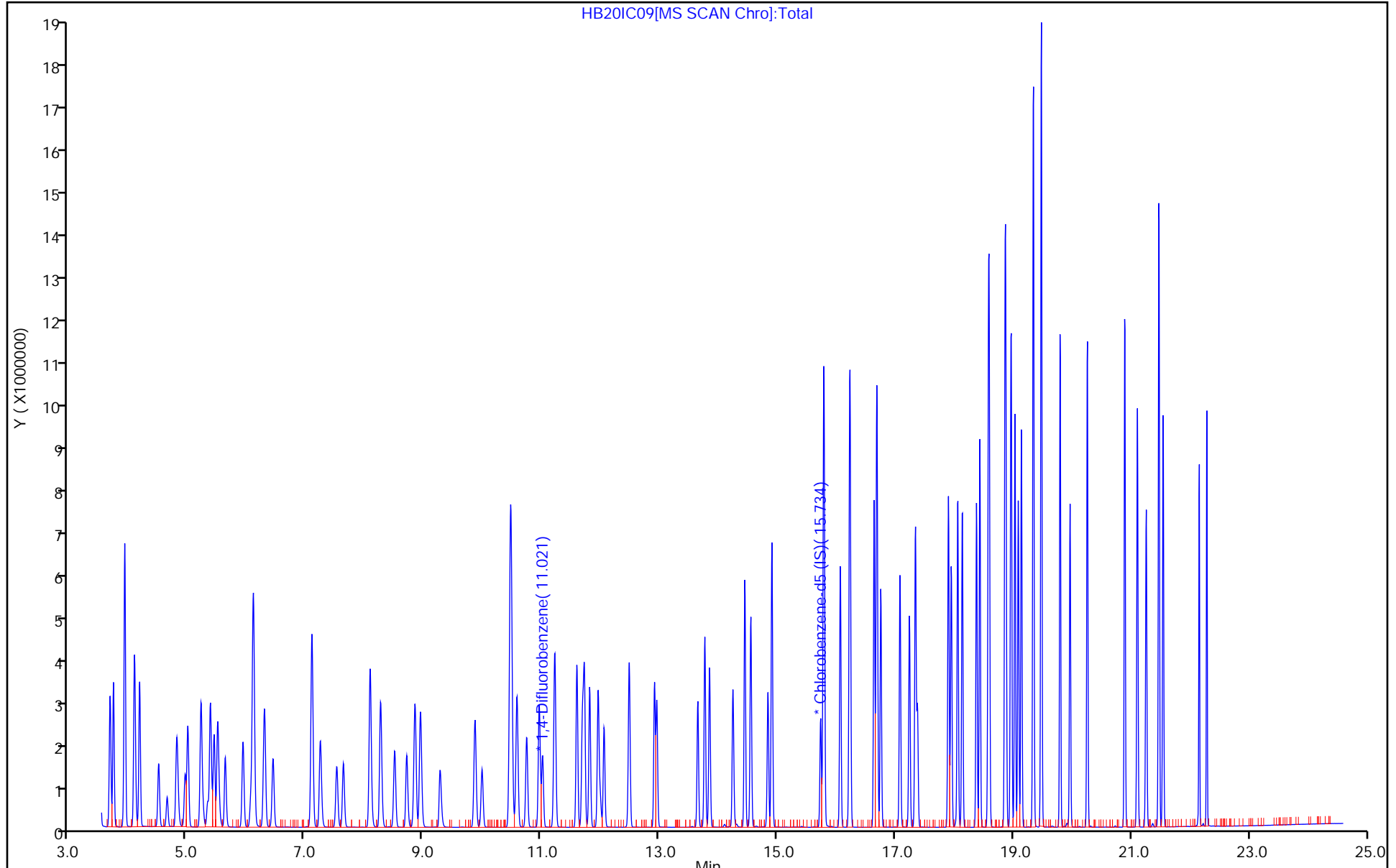
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC09.D

Injection Date: 20-Feb-2019 15:12:30

Instrument ID: MH

Lims ID: IC L9

Client ID:

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

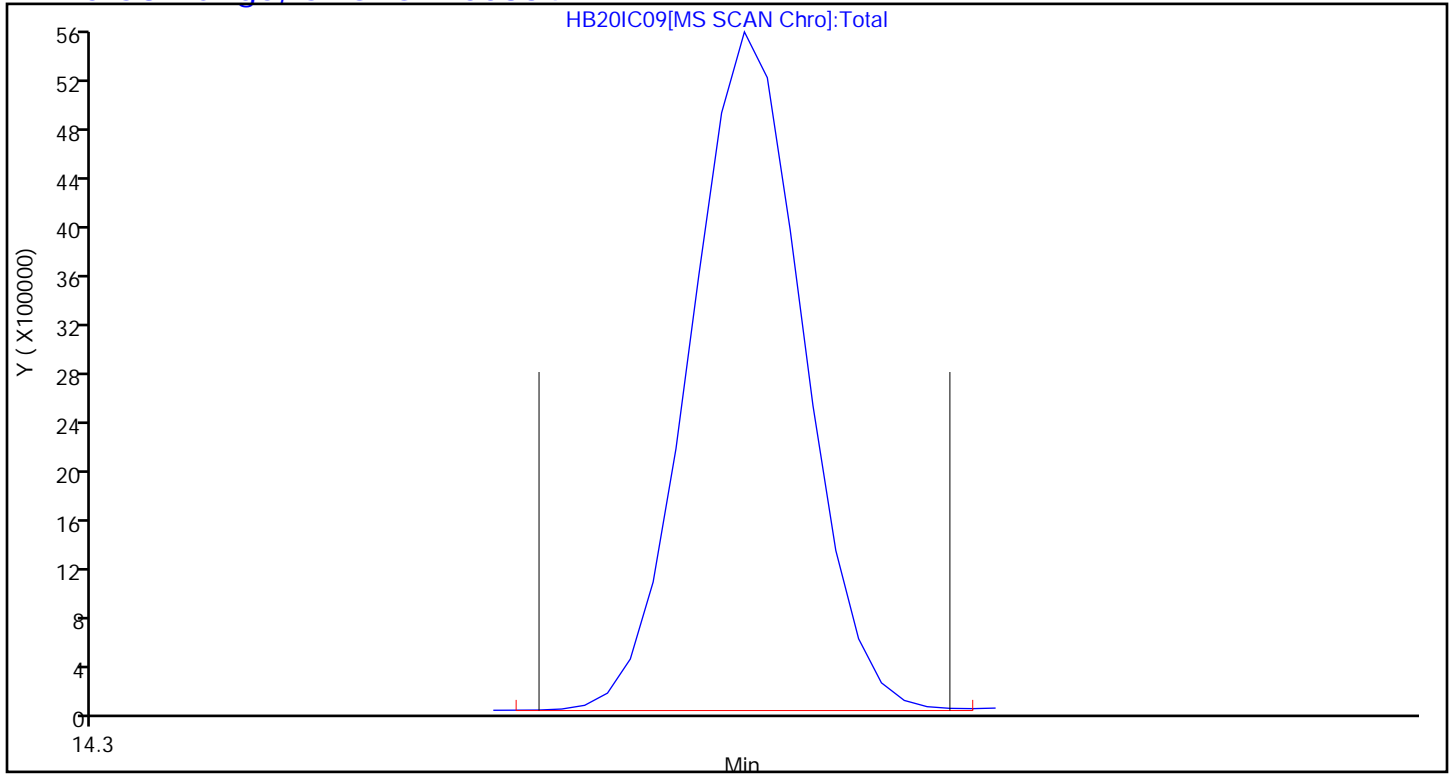
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 20-Feb-2019 16:59:30 ALS Bottle#: 15 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-005
 Misc. Info.: 210536
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:47:29 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 22-Feb-2019 14:10:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.855	8.830	0.025	95	332984	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.026	11.010	0.016	94	1658781	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.730	0.004	86	1638623	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.378	17.371	0.007	96	985627	4.00	3.69	
6 Chlorodifluoromethane	51	3.676	3.681	-0.005	97	4483179	16.0	16.4	
7 Propene	41	3.687	3.691	-0.004	99	1935361	16.0	15.6	
8 Dichlorodifluoromethane	85	3.738	3.741	-0.003	100	6474307	16.0	15.4	
9 Chloromethane	52	3.924	3.928	-0.004	100	708335	16.0	14.5	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.935	3.933	0.002	96	4583276	16.0	15.8	
12 Vinyl chloride	62	4.095	4.097	-0.002	99	2214114	16.0	14.6	
11 Acetaldehyde	44	4.100	4.111	-0.011	98	4126254	80.0	70.6	
14 Butane	43	4.188	4.183	0.005	84	3027220	16.0	13.9	
13 Butadiene	54	4.188	4.185	0.003	75	1618919	16.0	14.7	
15 Bromomethane	94	4.508	4.508	0.000	99	2328401	16.0	15.1	
16 Chloroethane	64	4.658	4.653	0.005	98	1035993	16.0	14.9	
17 Ethanol	31	4.829	4.836	-0.007	95	4802553	80.0	70.4	
18 Vinyl bromide	106	4.963	4.951	0.012	98	2228635	16.0	15.2	
19 2-Methylbutane	43	5.005	4.999	0.006	93	2373804	16.0	14.7	
21 Trichlorofluoromethane	101	5.232	5.219	0.013	100	5805275	16.0	15.1	
20 Acrolein	56	5.263	5.277	-0.014	95	728953	16.0	15.0	
22 Acetonitrile	40	5.351	5.351	0.000	98	920347	16.0	15.0	
23 Acetone	58	5.387	5.416	-0.029	98	2698817	48.0	43.1	
24 Pentane	72	5.454	5.444	0.010	94	258741	16.0	14.8	
25 Isopropyl alcohol	45	5.527	5.555	-0.028	98	7948950	48.0	47.9	
26 Ethyl ether	31	5.640	5.672	-0.032	95	2229204	16.0	14.4	
27 1,1-Dichloroethene	96	5.945	5.929	0.016	97	1985588	16.0	15.4	
28 Acrylonitrile	53	6.080	6.075	0.005	93	1583584	16.0	15.9	
30 1,1,2-Trichloro-1,2,2-trif	101	6.121	6.107	0.014	96	4629798	16.0	15.0	
29 2-Methyl-2-propanol	59	6.121	6.186	-0.065	78	3474636	16.0	15.8	
31 Methylene Chloride	84	6.302	6.284	0.018	98	1721729	16.0	12.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.312	6.297	0.015	97	1737749	16.0	14.3	
33 Carbon disulfide	76	6.452	6.437	0.015	99	5684871	16.0	15.2	
34 trans-1,2-Dichloroethene	96	7.108	7.088	0.020	96	2103238	16.0	15.9	
35 2-Methylpentane	43	7.113	7.104	0.009	95	4634316	16.0	15.2	
36 Methyl tert-butyl ether	73	7.248	7.296	-0.048	97	4966677	16.0	15.8	
37 1,1-Dichloroethane	63	7.537	7.514	0.023	99	3867799	16.0	15.3	
38 Vinyl acetate	43	7.646	7.645	0.001	100	6184921	16.0	17.2	
40 Hexane	56	8.095	8.082	0.013	81	1607432	16.0	15.9	
39 2-Butanone (MEK)	72	8.111	8.133	-0.022	97	916246	16.0	16.0	
171 Isopropyl ether	45	8.276	8.306	-0.030	98	7355329	16.0	15.6	
41 cis-1,2-Dichloroethene	96	8.519	8.497	0.022	96	2129500	16.0	15.8	
42 Ethyl acetate	43	8.721	8.736	-0.015	99	5166288	16.0	16.1	
43 Chloroform	83	8.865	8.842	0.023	98	4496097	16.0	15.5	
173 Tert-butyl ethyl ether	59	8.953	8.986	-0.033	96	6312338	16.0	16.1	
44 Tetrahydrofuran	42	9.284	9.329	-0.045	95	2432538	16.0	15.6	
45 1,1,1-Trichloroethane	97	9.878	9.862	0.016	97	4668064	16.0	17.0	
46 1,2-Dichloroethane	62	9.997	9.980	0.017	97	2983220	16.0	16.7	
48 Cyclohexane	69	10.468	10.458	0.010	90	928409	16.0	17.8	
47 Benzene	78	10.478	10.465	0.013	98	5964977	16.0	17.0	
50 Carbon tetrachloride	117	10.499	10.483	0.016	98	5223763	16.0	18.4	
49 n-Butanol	31	10.478	10.538	-0.060	66	777405	16.0	16.4	
51 2,3-Dimethylpentane	71	10.587	10.577	0.009	91	1177164	16.0	16.2	
52 Thiophene	84	10.757	10.740	0.017	97	3380138	16.0	16.8	
53 Isooctane	57	11.227	11.219	0.008	98	9866899	16.0	17.1	
55 n-Heptane	71	11.605	11.594	0.011	93	1982995	16.0	17.7	
54 1,2-Dichloropropane	63	11.698	11.685	0.013	92	2552409	16.0	17.1	
56 Trichloroethene	130	11.734	11.718	0.016	97	2842892	16.0	17.2	
57 Dibromomethane	93	11.822	11.808	0.014	92	2892720	16.0	16.6	
58 Dichlorobromomethane	83	11.966	11.953	0.014	100	4743566	16.0	18.2	
59 1,4-Dioxane	88	11.997	12.035	-0.038	95	819819	16.0	15.6	
60 Methyl methacrylate	41	12.065	12.068	-0.003	93	2839739	16.0	18.1	
61 Methylcyclohexane	83	12.494	12.484	0.010	95	3554415	16.0	16.3	
62 4-Methyl-2-pentanone (MIBK)	43	12.917	12.944	-0.027	97	5744756	16.0	18.3	
63 cis-1,3-Dichloropropene	75	12.959	12.950	0.009	93	3706962	16.0	18.9	
64 trans-1,3-Dichloropropene	75	13.657	13.645	0.011	99	3716627	16.0	18.7	
65 Toluene	91	13.775	13.765	0.010	94	7558388	16.0	16.2	
66 1,1,2-Trichloroethane	83	13.853	13.844	0.009	97	2376053	16.0	15.3	
69 2-Hexanone	58	14.246	14.265	-0.019	92	2770142	16.0	18.1	
71 n-Octane	85	14.452	14.446	0.006	94	2231497	16.0	16.8	
70 Chlorodibromomethane	129	14.551	14.544	0.007	97	5994726	16.0	19.2	
72 Ethylene Dibromide	107	14.845	14.835	0.010	98	4934830	16.0	17.5	
73 Tetrachloroethene	129	14.907	14.903	0.004	96	3014432	16.0	15.9	
74 Chlorobenzene	112	15.786	15.778	0.008	95	6361822	16.0	16.6	
75 2,3-Dimethylheptane	43	15.796	15.790	0.006	97	6685301	16.0	13.6	
76 Ethylbenzene	91	16.070	16.065	0.005	98	9955892	16.0	16.8	
78 m-Xylene & p-Xylene	91	16.230	16.226	0.004	97	14796297	32.0	32.3	
81 n-Nonane	57	16.644	16.639	0.005	92	4994379	16.0	16.9	
79 Bromoform	173	16.685	16.679	0.006	96	7361436	16.0	21.0	
80 Styrene	104	16.696	16.690	0.006	98	5523081	16.0	17.9	
82 o-Xylene	91	16.758	16.751	0.007	99	7084529	16.0	15.2	
83 1,1,2,2-Tetrachloroethane	83	17.083	17.077	0.006	98	6482057	16.0	17.2	
84 1,2,3-Trichloropropane	110	17.243	17.237	0.006	98	1593385	16.0	17.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.342	17.337	0.005	96	10581270	16.0	16.4	
86 N-Propylbenzene	120	17.905	17.900	0.005	99	3255751	16.0	19.3	
87 2-Chlorotoluene	126	17.951	17.947	0.004	97	2781675	16.0	16.9	
88 4-Ethyltoluene	105	18.060	18.056	0.004	98	10995513	16.0	18.0	
89 1,3,5-Trimethylbenzene	120	18.137	18.134	0.003	93	4503336	16.0	16.3	
90 Alpha Methyl Styrene	118	18.380	18.376	0.004	90	5246512	16.0	20.6	
91 n-Decane	57	18.437	18.430	0.007	90	5989503	16.0	15.8	
92 tert-Butylbenzene	119	18.582	18.577	0.005	93	10078350	16.0	17.6	
93 1,2,4-Trimethylbenzene	105	18.597	18.592	0.005	95	9118755	16.0	17.1	
95 sec-Butylbenzene	105	18.861	18.857	0.004	98	13743682	16.0	17.2	
94 1,3-Dichlorobenzene	146	18.882	18.874	0.008	97	7153027	16.0	18.5	
96 Benzyl chloride	91	18.959	18.955	0.004	99	8314062	16.0	21.0	
97 1,4-Dichlorobenzene	146	18.975	18.965	0.010	96	7002419	16.0	19.1	
98 4-Isopropyltoluene	119	19.032	19.027	0.005	97	10778521	16.0	17.4	
99 1,2,3-Trimethylbenzene	105	19.088	19.083	0.005	98	8858717	16.0	16.9	
100 Butylcyclohexane	83	19.140	19.136	0.004	94	6451190	16.0	15.2	
102 2,3-Dihydroindene	117	19.342	19.338	0.004	94	9038955	16.0	17.6	
101 1,2-Dichlorobenzene	146	19.347	19.338	0.009	94	6993755	16.0	18.1	
103 Indene	116	19.476	19.471	0.005	92	7980555	16.0	18.1	
104 n-Butylbenzene	91	19.481	19.477	0.004	98	10355110	16.0	16.2	
105 Undecane	57	19.797	19.792	0.005	95	6962530	16.0	15.9	
106 1,2-Dibromo-3-Chloropropan	157	19.967	19.962	0.005	94	4532026	16.0	28.3	
107 1,2,4,5-Tetramethylbenzene	119	20.257	20.255	0.002	97	11505782	16.0	19.9	
110 Dodecane	57	20.892	20.889	0.003	96	3514769	16.0	8.26	
111 1,2,4-Trichlorobenzene	180	21.109	21.105	0.004	94	7159328	16.0	22.2	
113 Naphthalene	128	21.259	21.255	0.004	99	12701015	16.0	22.1	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	90	5786078	16.0	15.9	
116 1,2,3-Trichlorobenzene	180	21.543	21.540	0.003	95	5313205	16.0	17.3	
117 2-Methylnaphthalene	142	22.158	22.154	0.004	99	46317	16.0	0.2097	
118 1-Methylnaphthalene	142	22.288	22.283	0.005	97	8734	16.0	0.0279	
A 120 C8 Range	1	14.452	(14.401-14.504)		0	21206896	16.0	17.3	
S 121 Xylenes, Total	100				0		48.0	47.5	
S 122 1,2-Dichloroethene, Total	1				0		32.0	31.7	

Reagents:

40L10DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC10.D

Injection Date: 20-Feb-2019 16:59:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L10

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

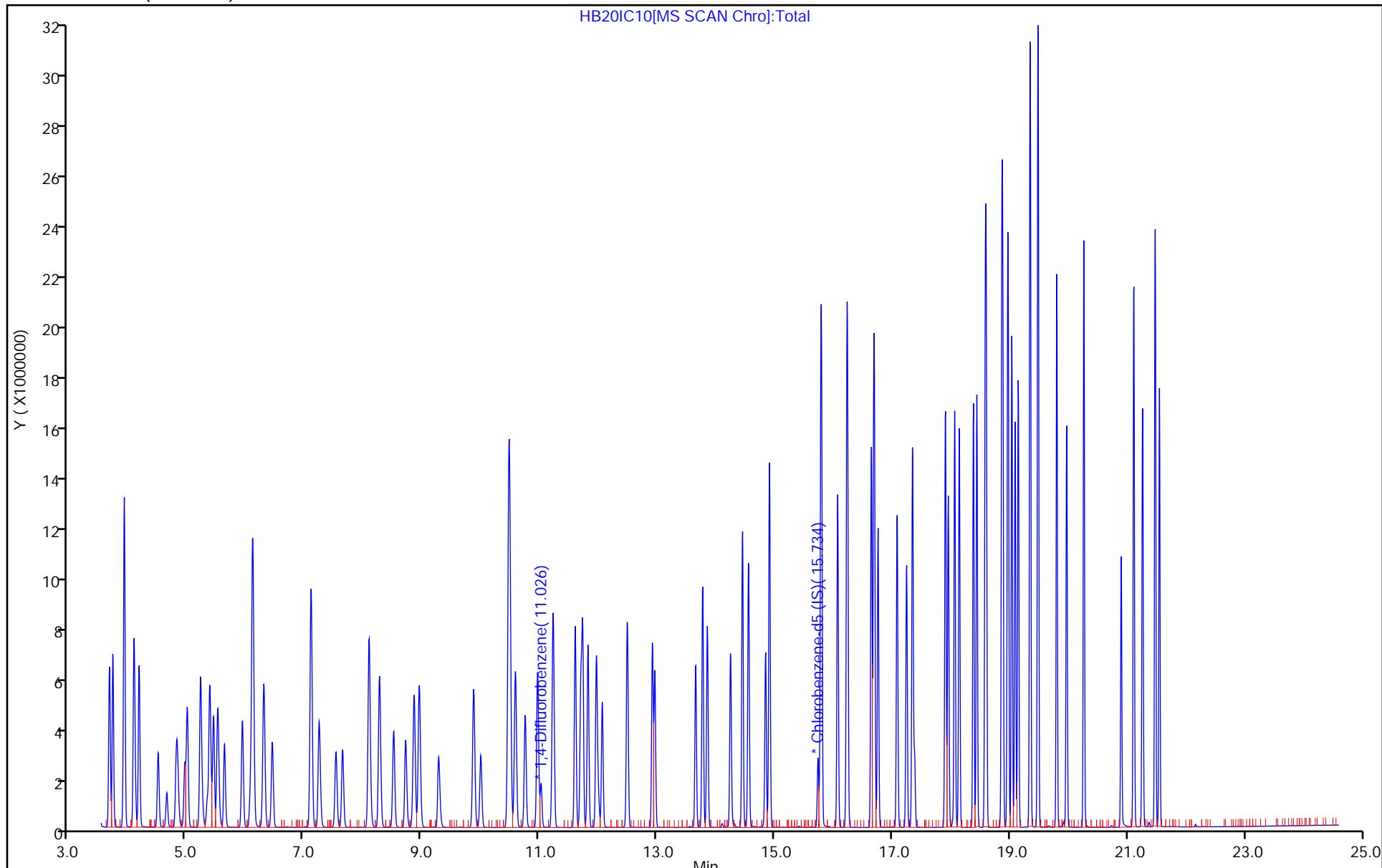
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC10.D

Injection Date: 20-Feb-2019 16:59:30

Instrument ID: MH

Lims ID: IC L10

Client ID:

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

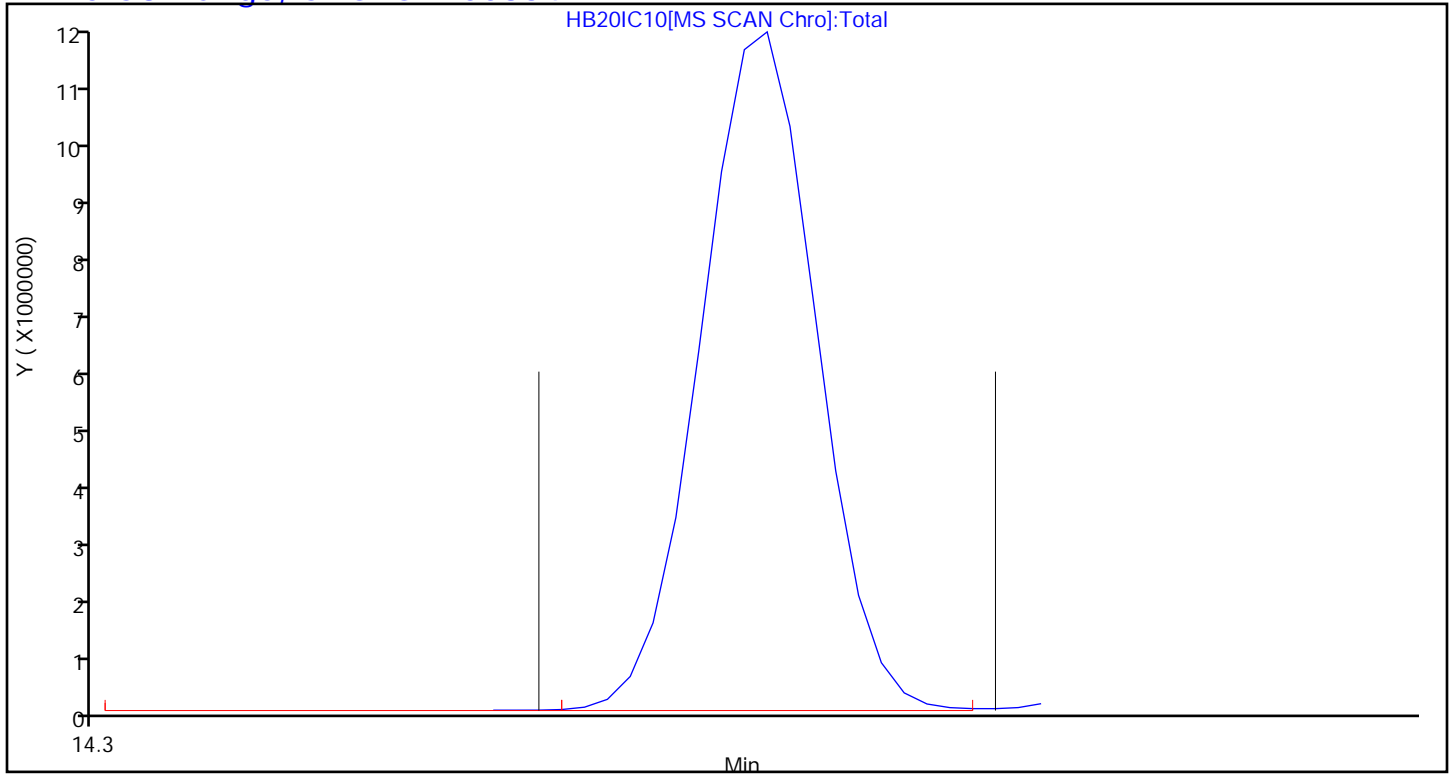
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 20-Feb-2019 19:38:30 ALS Bottle#: 1 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-008
 Misc. Info.: 210543
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7

Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:47:38 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 21-Feb-2019 13:23:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.830	-0.006	95	390308	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.010	-0.005	95	2140459	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	87	1767378	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.373	17.371	0.002	96	1156116	4.00	4.01	
6 Chlorodifluoromethane	51	3.687	3.681	0.006	97	8002	0.0200	0.0250	
7 Propene	41	3.697	3.691	0.006	70	5198	0.0200	0.0357	
8 Dichlorodifluoromethane	85	3.744	3.741	0.003	99	11347	0.0200	0.0231	
9 Chloromethane	52	3.935	3.928	0.007	74	2722	0.0200	0.0475	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.935	3.933	0.002	90	7806	0.0200	0.0230	
12 Vinyl chloride	62	4.105	4.097	0.008	99	4947	0.0200	0.0277	
14 Butane	43	4.183	4.183	0.000	82	7776	0.0200	0.0305	
13 Butadiene	54	4.188	4.185	0.003	86	3167	0.0200	0.0246	
15 Bromomethane	94	4.514	4.508	0.006	97	5726	0.0200	0.0318	
16 Chloroethane	64	4.664	4.653	0.011	95	2374	0.0200	0.0292	
17 Ethanol	31	4.870	4.836	0.034	96	10675	0.1000	0.1336	
18 Vinyl bromide	106	4.953	4.951	0.002	97	4433	0.0200	0.0258	
19 2-Methylbutane	43	4.994	4.999	-0.005	93	5244	0.0200	0.0277	
21 Trichlorofluoromethane	101	5.217	5.219	-0.002	99	10937	0.0200	0.0243	
20 Acrolein	56	5.310	5.277	0.033	77	1763	0.0200	0.0309	
22 Acetonitrile	40	5.387	5.351	0.036	93	2696	0.0200	0.0375	
23 Acetone	58	5.459	5.416	0.043	97	8206	0.0600	0.1118	
24 Pentane	72	5.449	5.444	0.005	71	663	0.0200	0.0323	
25 Isopropyl alcohol	45	5.620	5.555	0.065	98	16052	0.0600	0.0695	
26 Ethyl ether	31	5.723	5.672	0.051	91	4547	0.0200	0.0250	
27 1,1-Dichloroethene	96	5.930	5.929	0.001	97	4045	0.0200	0.0267	
28 Acrylonitrile	53	6.090	6.075	0.015	55	3124	0.0200	0.0268	
30 1,1,2-Trichloro-1,2,2-trif	101	6.111	6.107	0.004	94	9169	0.0200	0.0254	
29 2-Methyl-2-propanol	59	6.276	6.186	0.090	48	5856	0.0200	0.0228	
31 Methylene Chloride	84	6.281	6.284	-0.003	98	19195	0.0200	0.1203	
32 3-Chloro-1-propene	39	6.286	6.297	-0.011	32	4307	0.0200	0.0302	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.436	6.437	-0.001	95	10725	0.0200	0.0244	
34 trans-1,2-Dichloroethene	96	7.077	7.088	-0.011	96	3953	0.0200	0.0254	
35 2-Methylpentane	43	7.103	7.104	-0.001	95	9208	0.0200	0.0258	
36 Methyl tert-butyl ether	73	7.377	7.296	0.081	96	8518	0.0200	0.0231	
37 1,1-Dichloroethane	63	7.511	7.514	-0.003	99	7365	0.0200	0.0249	
38 Vinyl acetate	43	7.666	7.645	0.021	100	8590	0.0200	0.0203	
40 Hexane	56	8.080	8.082	-0.002	89	3108	0.0200	0.0263	
39 2-Butanone (MEK)	72	8.194	8.133	0.061	99	1787	0.0200	0.0266	
171 Isopropyl ether	45	8.369	8.306	0.063	96	13234	0.0200	0.0239	
41 cis-1,2-Dichloroethene	96	8.493	8.497	-0.004	94	4072	0.0200	0.0258	
42 Ethyl acetate	43	8.778	8.736	0.042	98	8889	0.0200	0.0236	
43 Chloroform	83	8.834	8.842	-0.008	31	8539	0.0200	0.0252	
173 Tert-butyl ethyl ether	59	9.046	8.986	0.060	97	10421	0.0200	0.0227	
44 Tetrahydrofuran	42	9.398	9.329	0.069	92	4517	0.0200	0.0248	
45 1,1,1-Trichloroethane	97	9.863	9.862	0.001	97	7742	0.0200	0.0240	
46 1,2-Dichloroethane	62	9.971	9.980	-0.009	96	5129	0.0200	0.0222	
48 Cyclohexane	69	10.457	10.458	-0.001	66	1556	0.0200	0.0231	
47 Benzene	78	10.462	10.465	-0.003	98	10667	0.0200	0.0236	
50 Carbon tetrachloride	117	10.478	10.483	-0.005	96	8013	0.0200	0.0219	
49 n-Butanol	31	10.581	10.538	0.043	72	1408	0.0200	0.0230	
51 2,3-Dimethylpentane	71	10.571	10.577	-0.006	86	2436	0.0200	0.0260	
52 Thiophene	84	10.736	10.740	-0.004	96	6281	0.0200	0.0243	
53 Isooctane	57	11.217	11.219	-0.002	98	19352	0.0200	0.0259	
55 n-Heptane	71	11.589	11.594	-0.005	92	3329	0.0200	0.0231	
54 1,2-Dichloropropane	63	11.682	11.685	-0.003	92	4864	0.0200	0.0253	
56 Trichloroethene	130	11.713	11.718	-0.005	94	4957	0.0200	0.0232	
57 Dibromomethane	93	11.806	11.808	-0.002	94	6488	0.0200	0.0289	
58 Dichlorobromomethane	83	11.951	11.953	-0.001	98	7068	0.0200	0.0210	
59 1,4-Dioxane	88	12.096	12.035	0.061	53	1690	0.0200	0.0249	
60 Methyl methacrylate	41	12.085	12.068	0.017	90	4317	0.0200	0.0213	
61 Methylcyclohexane	83	12.483	12.484	-0.001	94	5773	0.0200	0.0205	
62 4-Methyl-2-pentanone (MIBK)	43	12.979	12.944	0.035	97	8853	0.0200	0.0218	
63 cis-1,3-Dichloropropene	75	12.948	12.950	-0.002	94	5213	0.0200	0.0206	
64 trans-1,3-Dichloropropene	75	13.641	13.645	-0.004	98	4369	0.0200	0.0204	
65 Toluene	91	13.760	13.765	-0.005	94	12625	0.0200	0.0251	
66 1,1,2-Trichloroethane	83	13.843	13.844	-0.001	96	3652	0.0200	0.0219	
69 2-Hexanone	58	14.292	14.265	0.027	91	2825	0.0200	0.0171	
71 n-Octane	85	14.447	14.446	0.001	95	3032	0.0200	0.0211	
70 Chlorodibromomethane	129	14.540	14.544	-0.004	97	6284	0.0200	0.0187	
72 Ethylene Dibromide	107	14.835	14.835	0.000	97	6677	0.0200	0.0219	
73 Tetrachloroethene	129	14.902	14.903	-0.001	94	4756	0.0200	0.0232	
74 Chlorobenzene	112	15.776	15.778	-0.002	95	9651	0.0200	0.0233	
75 2,3-Dimethylheptane	43	15.786	15.790	-0.004	94	12305	0.0200	0.0233	
76 Ethylbenzene	91	16.060	16.065	-0.005	98	14258	0.0200	0.0223	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	21336	0.0400	0.0432	
81 n-Nonane	57	16.639	16.639	0.000	92	6375	0.0200	0.0200	
79 Bromoform	173	16.680	16.679	0.001	83	5840	0.0200	0.0155	
80 Styrene	104	16.690	16.690	0.000	97	6367	0.0200	0.0191	
82 o-Xylene	91	16.747	16.751	-0.004	98	11430	0.0200	0.0227	
83 1,1,1,2,2-Tetrachloroethane	83	17.073	17.077	-0.004	95	8038	0.0200	0.0197	
84 1,2,3-Trichloropropane	110	17.238	17.237	0.001	95	2162	0.0200	0.0215	
85 Isopropylbenzene	105	17.336	17.337	-0.001	95	15877	0.0200	0.0229	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	17.900	17.900	0.000	98	3545	0.0200	0.0195	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	97	4126	0.0200	0.0232	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	98	12682	0.0200	0.0192	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	92	5287	0.0200	0.0448	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	85	3536	0.0200	0.0129	
91 n-Decane	57	18.427	18.430	-0.003	90	7662	0.0200	0.0188	
92 tert-Butylbenzene	119	18.577	18.577	0.000	90	11693	0.0200	0.0189	
93 1,2,4-Trimethylbenzene	105	18.592	18.592	0.000	95	10703	0.0200	0.0186	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	98	16797	0.0200	0.0195	
94 1,3-Dichlorobenzene	146	18.877	18.874	0.003	98	8581	0.0200	0.0205	
96 Benzyl chloride	91	18.954	18.955	-0.001	96	4885	0.0200	0.0115	
97 1,4-Dichlorobenzene	146	18.964	18.965	-0.001	91	7947	0.0200	0.0201	
98 4-Isopropyltoluene	119	19.026	19.027	-0.001	96	12326	0.0200	0.0184	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	98	11190	0.0200	0.0198	
100 Butylcyclohexane	83	19.135	19.136	-0.001	93	9271	0.0200	0.0202	
102 2,3-Dihydroindene	117	19.337	19.338	-0.001	91	10769	0.0200	0.0195	
101 1,2-Dichlorobenzene	146	19.337	19.338	-0.001	86	8393	0.0200	0.0202	
103 Indene	116	19.471	19.471	0.000	71	6594	0.0200	0.0139	
104 n-Butylbenzene	91	19.476	19.477	-0.001	94	12186	0.0200	0.0177	
105 Undecane	57	19.791	19.792	-0.001	89	7169	0.0200	0.0152	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	84	2699	0.0200	0.0156	
107 1,2,4,5-Tetramethylbenzene	119	20.251	20.255	-0.004	96	10415	0.0200	0.0167	
110 Dodecane	57	20.887	20.889	-0.002	90	6236	0.0200	0.0136	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	94	4766	0.0200	0.0809	
113 Naphthalene	128	21.254	21.255	-0.001	98	10836	0.0200	0.0175	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	91	8992	0.0200	0.0229	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	95	7516	0.0200	0.0227	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	96	4738	0.0200	0.0199	
118 1-Methylnaphthalene	142	22.283	22.283	-0.001	99	6869	0.0200	0.0203	
A 120 C8 Range	1	14.447	(14.416-14.478)		0	34835	0.0200	0.0220	
S 121 Xylenes, Total	100				0		0.0600	0.0659	
S 122 1,2-Dichloroethene, Total	1				0		0.0400	0.0513	

Reagents:

40L1-3DQP_00012

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC01.D

Injection Date: 20-Feb-2019 19:38:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L1

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

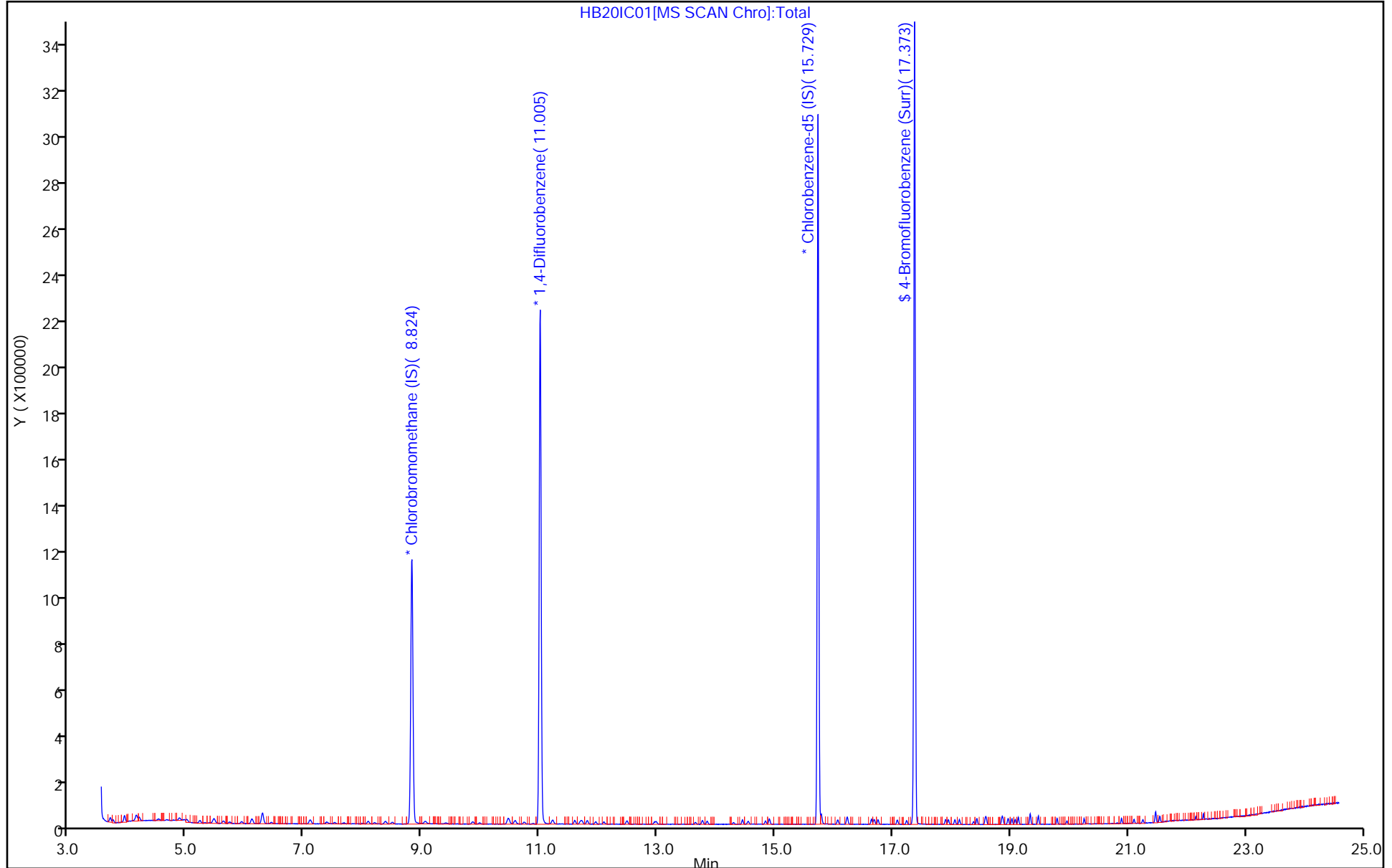
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC01.D

Injection Date: 20-Feb-2019 19:38:30

Instrument ID: MH

Lims ID: IC L1

Client ID:

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

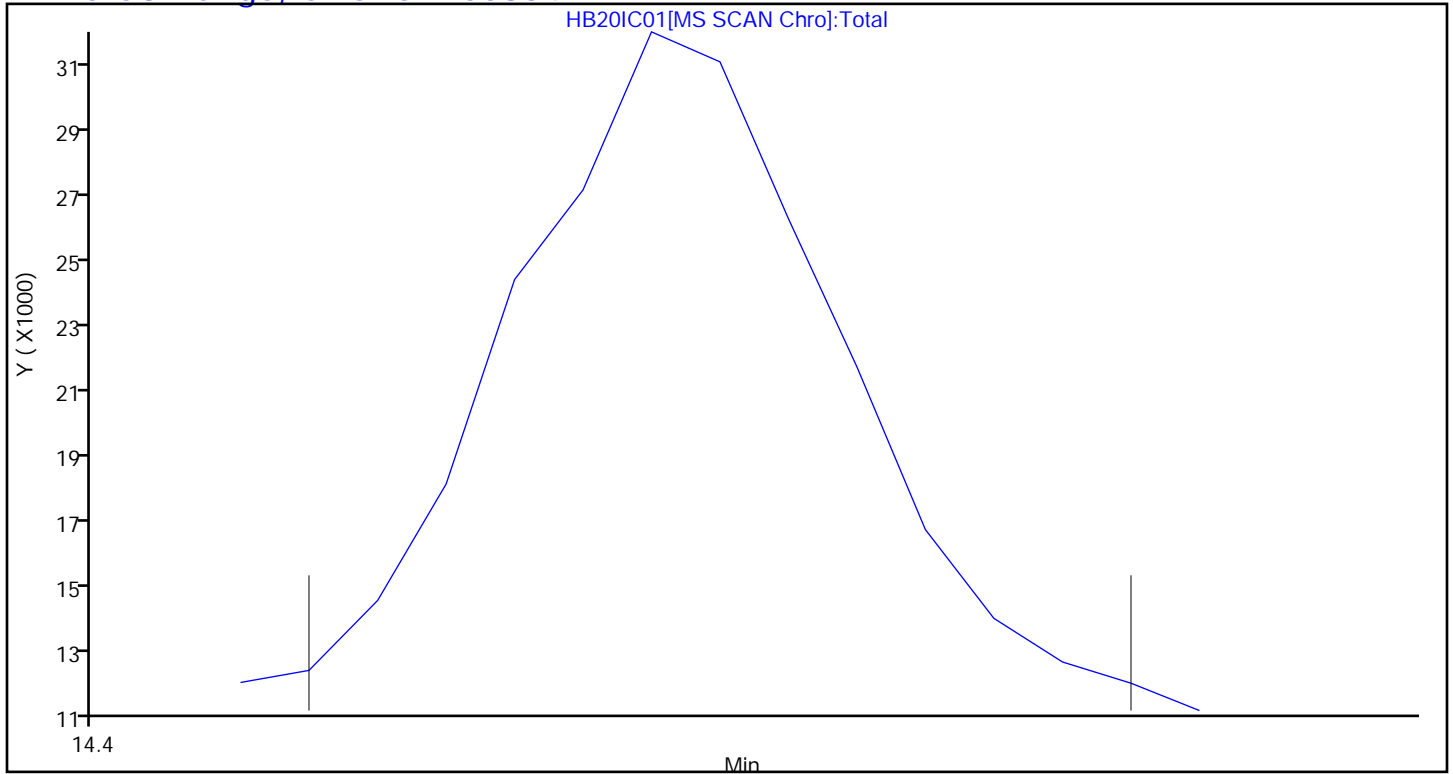
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 20-Feb-2019 20:31:30 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-009
 Misc. Info.: 210543
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7

Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:47:50 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.830	-0.006	95	381382	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.010	-0.005	95	2077846	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	87	1714201	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.371	-0.004	95	1128690	4.00	4.04	
6 Chlorodifluoromethane	51	3.682	3.681	0.001	97	13216	0.0400	0.0423	
7 Propene	41	3.697	3.691	0.006	90	7176	0.0400	0.0505	
8 Dichlorodifluoromethane	85	3.744	3.741	0.003	100	19313	0.0400	0.0402	
9 Chloromethane	52	3.935	3.928	0.007	64	3813	0.0400	0.0681	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.935	3.933	0.002	90	14233	0.0400	0.0430	
12 Vinyl chloride	62	4.105	4.097	0.008	99	7805	0.0400	0.0448	
11 Acetaldehyde	44	4.131	4.111	0.020	98	26744	0.2000	0.3997	
14 Butane	43	4.183	4.183	0.000	77	11645	0.0400	0.0467	
13 Butadiene	54	4.193	4.185	0.008	94	5647	0.0400	0.0449	
15 Bromomethane	94	4.508	4.508	0.000	95	8193	0.0400	0.0465	
16 Chloroethane	64	4.658	4.653	0.005	97	3876	0.0400	0.0488	
17 Ethanol	31	4.860	4.836	0.024	95	18981	0.2000	0.2431	
18 Vinyl bromide	106	4.953	4.951	0.002	98	7253	0.0400	0.0433	
19 2-Methylbutane	43	4.999	4.999	0.000	94	8854	0.0400	0.0479	
21 Trichlorofluoromethane	101	5.222	5.219	0.003	98	18657	0.0400	0.0425	
20 Acrolein	56	5.294	5.277	0.017	94	3006	0.0400	0.0539	
22 Acetonitrile	40	5.366	5.351	0.015	98	3555	0.0400	0.0507	
23 Acetone	58	5.449	5.416	0.033	97	14037	0.1200	0.1958	
24 Pentane	72	5.439	5.444	-0.005	78	977	0.0400	0.0487	
25 Isopropyl alcohol	45	5.599	5.555	0.044	98	26530	0.1200	0.1175	
26 Ethyl ether	31	5.713	5.672	0.041	94	7760	0.0400	0.0437	
27 1,1-Dichloroethene	96	5.925	5.929	-0.004	97	6613	0.0400	0.0446	
28 Acrylonitrile	53	6.090	6.075	0.015	55	4892	0.0400	0.0429	
30 1,1,2-Trichloro-1,2,2-trif	101	6.105	6.107	-0.002	95	15578	0.0400	0.0442	
29 2-Methyl-2-propanol	59	6.250	6.186	0.064	92	10031	0.0400	0.0399	
31 Methylene Chloride	84	6.281	6.284	-0.003	98	22688	0.0400	0.1455	
32 3-Chloro-1-propene	39	6.297	6.297	0.000	49	6713	0.0400	0.0482	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.431	6.437	-0.006	99	18652	0.0400	0.0435	
34 trans-1,2-Dichloroethene	96	7.077	7.088	-0.011	97	6793	0.0400	0.0447	
35 2-Methylpentane	43	7.103	7.104	-0.001	94	14650	0.0400	0.0420	
36 Methyl tert-butyl ether	73	7.351	7.296	0.055	96	15116	0.0400	0.0420	
37 1,1-Dichloroethane	63	7.506	7.514	-0.008	99	12267	0.0400	0.0425	
38 Vinyl acetate	43	7.661	7.645	0.016	100	14397	0.0400	0.0349	
40 Hexane	56	8.085	8.082	0.003	90	4968	0.0400	0.0430	
39 2-Butanone (MEK)	72	8.173	8.133	0.040	98	2857	0.0400	0.0436	
171 Isopropyl ether	45	8.354	8.306	0.048	97	22261	0.0400	0.0412	
41 cis-1,2-Dichloroethene	96	8.488	8.497	-0.009	94	6662	0.0400	0.0433	
42 Ethyl acetate	43	8.772	8.736	0.036	99	14942	0.0400	0.0406	
43 Chloroform	83	8.829	8.842	-0.013	28	13923	0.0400	0.0420	
173 Tert-butyl ethyl ether	59	9.031	8.986	0.045	98	18463	0.0400	0.0411	
44 Tetrahydrofuran	42	9.387	9.329	0.058	93	7774	0.0400	0.0436	
45 1,1,1-Trichloroethane	97	9.853	9.862	-0.009	97	12811	0.0400	0.0407	
46 1,2-Dichloroethane	62	9.977	9.980	-0.003	96	9022	0.0400	0.0403	
48 Cyclohexane	69	10.452	10.458	-0.006	67	2698	0.0400	0.0413	
47 Benzene	78	10.457	10.465	-0.008	97	18606	0.0400	0.0424	
50 Carbon tetrachloride	117	10.478	10.483	-0.005	97	13486	0.0400	0.0379	
49 n-Butanol	31	10.576	10.538	0.038	73	2478	0.0400	0.0417	
51 2,3-Dimethylpentane	71	10.576	10.577	-0.001	87	3670	0.0400	0.0403	
52 Thiophene	84	10.736	10.740	-0.004	97	10131	0.0400	0.0403	
53 Isooctane	57	11.217	11.219	-0.002	98	30494	0.0400	0.0421	
55 n-Heptane	71	11.589	11.594	-0.005	92	5635	0.0400	0.0403	
54 1,2-Dichloropropane	63	11.682	11.685	-0.003	87	7652	0.0400	0.0409	
56 Trichloroethene	130	11.713	11.718	-0.005	96	8508	0.0400	0.0410	
57 Dibromomethane	93	11.801	11.808	-0.007	96	9901	0.0400	0.0455	
58 Dichlorobromomethane	83	11.951	11.953	-0.001	99	12036	0.0400	0.0368	
59 1,4-Dioxane	88	12.075	12.035	0.040	50	2819	0.0400	0.0427	
60 Methyl methacrylate	41	12.080	12.068	0.012	89	7141	0.0400	0.0364	
61 Methylcyclohexane	83	12.483	12.484	-0.001	95	9772	0.0400	0.0357	
62 4-Methyl-2-pentanone (MIBK)	43	12.964	12.944	0.020	96	14502	0.0400	0.0368	
63 cis-1,3-Dichloropropene	75	12.948	12.950	-0.002	98	8310	0.0400	0.0338	
64 trans-1,3-Dichloropropene	75	13.646	13.645	0.001	98	7302	0.0400	0.0351	
65 Toluene	91	13.765	13.765	0.000	93	20535	0.0400	0.0421	
66 1,1,2-Trichloroethane	83	13.843	13.844	-0.001	98	6546	0.0400	0.0404	
69 2-Hexanone	58	14.282	14.265	0.017	89	4605	0.0400	0.0288	
71 n-Octane	85	14.447	14.446	0.001	97	5107	0.0400	0.0367	
70 Chlorodibromomethane	129	14.545	14.544	0.001	97	11234	0.0400	0.0344	
72 Ethylene Dibromide	107	14.830	14.835	-0.005	97	11172	0.0400	0.0378	
73 Tetrachloroethene	129	14.902	14.903	-0.001	93	8474	0.0400	0.0426	
74 Chlorobenzene	112	15.776	15.778	-0.002	97	16472	0.0400	0.0410	
75 2,3-Dimethylheptane	43	15.791	15.790	0.001	94	21252	0.0400	0.0414	
76 Ethylbenzene	91	16.065	16.065	0.000	99	24388	0.0400	0.0393	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	97	36478	0.0800	0.0761	
81 n-Nonane	57	16.639	16.639	0.000	93	11392	0.0400	0.0369	
79 Bromoform	173	16.680	16.679	0.001	92	9937	0.0400	0.0271	
80 Styrene	104	16.690	16.690	0.000	98	10118	0.0400	0.0313	
82 o-Xylene	91	16.747	16.751	-0.004	99	19414	0.0400	0.0398	
83 1,1,2,2-Tetrachloroethane	83	17.073	17.077	-0.004	97	14785	0.0400	0.0374	
84 1,2,3-Trichloropropane	110	17.238	17.237	0.001	96	3733	0.0400	0.0383	
85 Isopropylbenzene	105	17.336	17.337	-0.001	94	26315	0.0400	0.0391	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	17.895	17.900	-0.005	98	6527	0.0400	0.0370	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	6694	0.0400	0.0388	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	98	22317	0.0400	0.0349	
89 1,3,5-Trimethylbenzene	120	18.137	18.134	0.003	91	9243	0.0400	0.0590	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	86	6797	0.0400	0.0255	
91 n-Decane	57	18.427	18.430	-0.003	88	14259	0.0400	0.0361	
92 tert-Butylbenzene	119	18.577	18.577	0.000	90	22144	0.0400	0.0370	
93 1,2,4-Trimethylbenzene	105	18.592	18.592	0.000	96	20437	0.0400	0.0366	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	98	30251	0.0400	0.0362	
94 1,3-Dichlorobenzene	146	18.877	18.874	0.003	97	15661	0.0400	0.0386	
96 Benzyl chloride	91	18.954	18.955	-0.001	98	9643	0.0400	0.0233	
97 1,4-Dichlorobenzene	146	18.959	18.965	-0.006	93	14394	0.0400	0.0375	
98 4-Isopropyltoluene	119	19.026	19.027	-0.001	96	23274	0.0400	0.0359	
99 1,2,3-Trimethylbenzene	105	19.078	19.083	-0.005	99	20826	0.0400	0.0380	
100 Butylcyclohexane	83	19.135	19.136	-0.001	92	17674	0.0400	0.0397	
102 2,3-Dihydroindene	117	19.337	19.338	-0.002	91	19273	0.0400	0.0359	
101 1,2-Dichlorobenzene	146	19.337	19.338	-0.002	86	15171	0.0400	0.0376	
103 Indene	116	19.471	19.471	0.000	89	12723	0.0400	0.0276	
104 n-Butylbenzene	91	19.476	19.477	-0.001	95	22609	0.0400	0.0338	
105 Undecane	57	19.791	19.792	-0.001	93	14241	0.0400	0.0312	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	85	5000	0.0400	0.0299	
107 1,2,4,5-Tetramethylbenzene	119	20.256	20.255	0.001	96	18414	0.0400	0.0305	
110 Dodecane	57	20.892	20.889	0.003	90	11941	0.0400	0.0268	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	91	7491	0.0400	0.0894	
113 Naphthalene	128	21.254	21.255	-0.001	98	16787	0.0400	0.0279	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	91	15078	0.0400	0.0396	
116 1,2,3-Trichlorobenzene	180	21.543	21.540	0.003	95	10800	0.0400	0.0336	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	99	7348	0.0400	0.0318	
118 1-Methylnaphthalene	142	22.282	22.283	-0.001	98	11223	0.0400	0.0343	
A 120 C8 Range	1	14.442	(14.406-14.478)		0	59484	0.0400	0.0387	
S 121 Xylenes, Total	100				0		0.1200	0.1159	
S 122 1,2-Dichloroethene, Total	1				0		0.0800	0.0880	

Reagents:

40L1-3DQP_00012

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC02.D

Injection Date: 20-Feb-2019 20:31:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L2

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

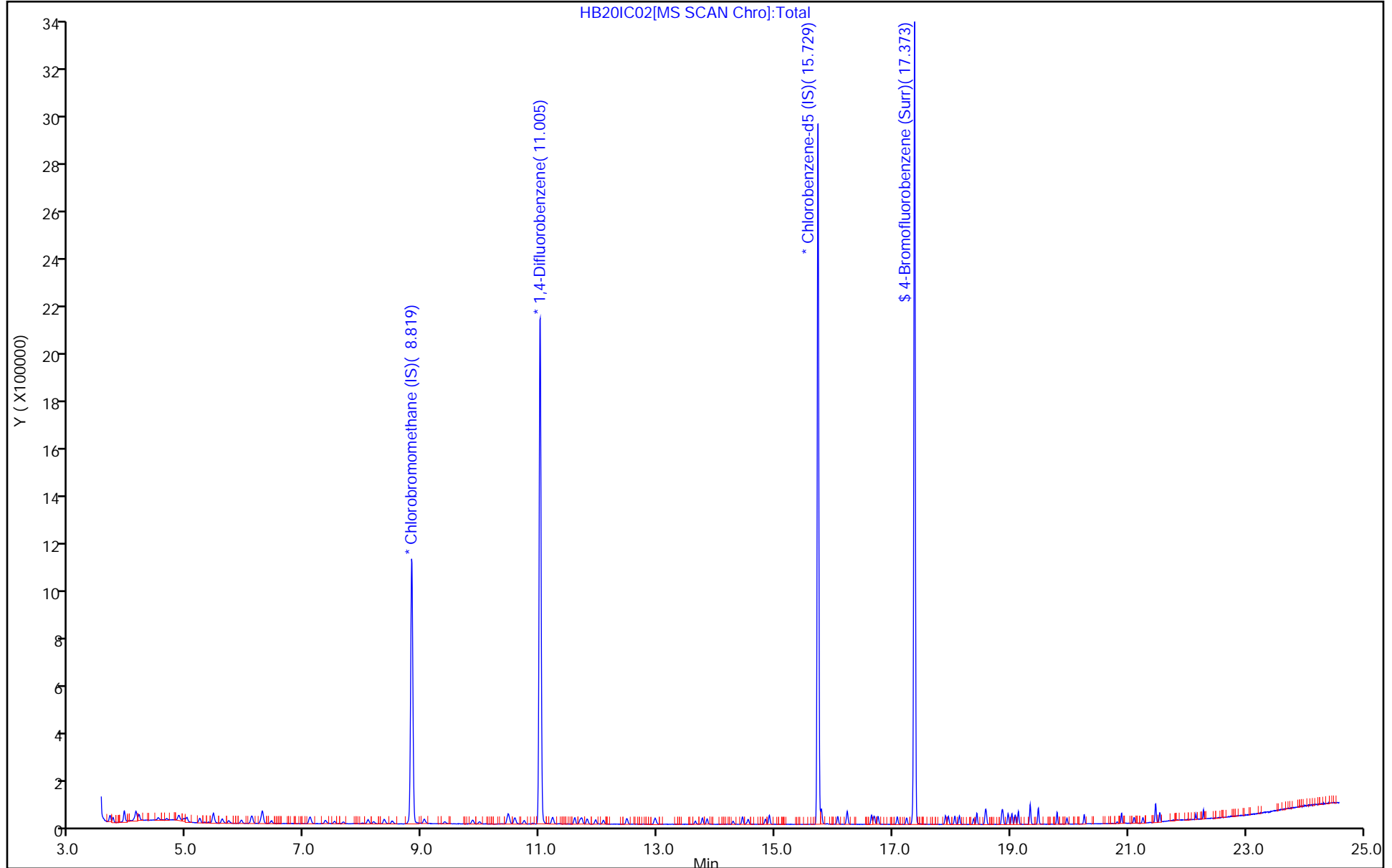
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC02.D

Injection Date: 20-Feb-2019 20:31:30

Instrument ID: MH

Lims ID: IC L2

Client ID:

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

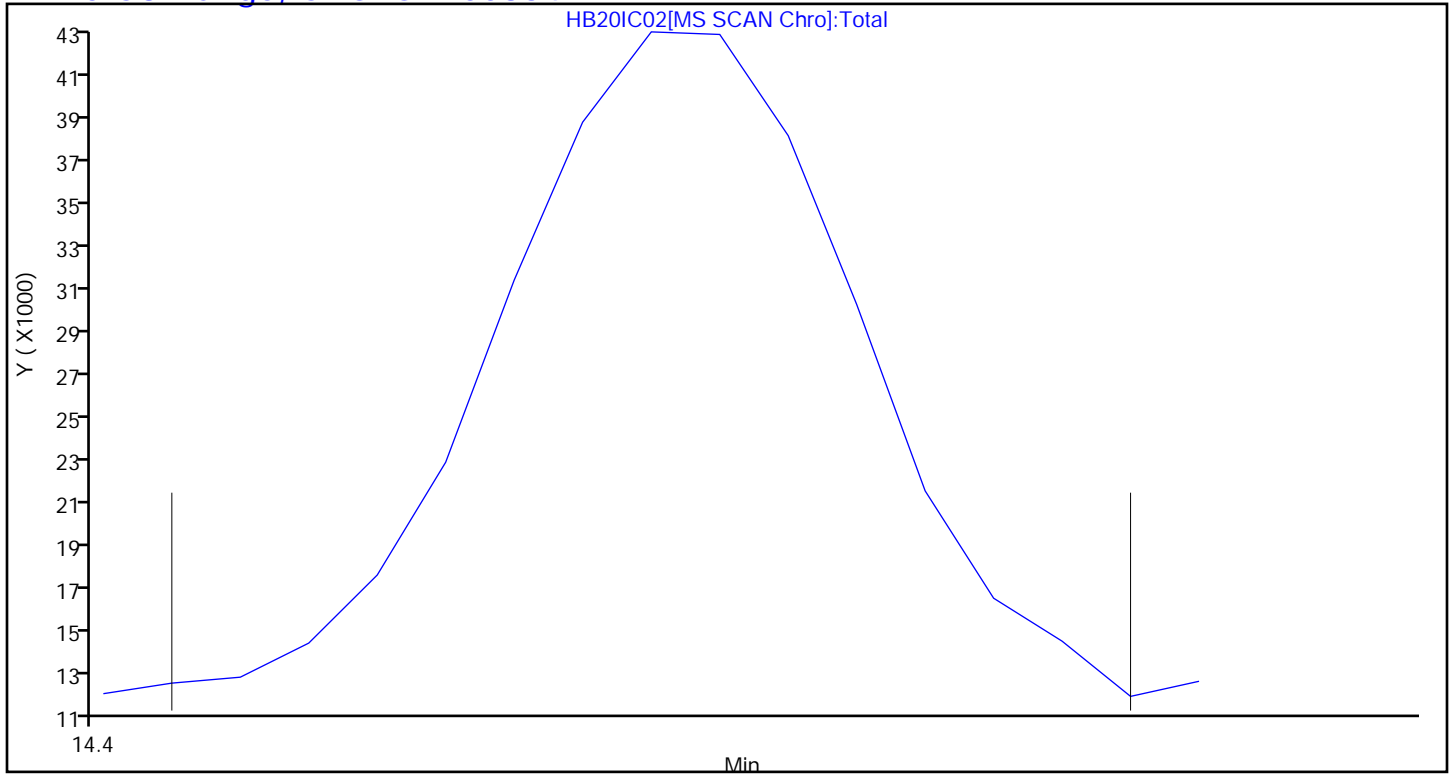
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 20-Feb-2019 21:26:30 ALS Bottle#: 1 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-010
 Misc. Info.: 210543
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7

Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:47:59 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 22-Feb-2019 09:49:03

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.830	-0.011	95	367827	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.010	-0.005	95	2014478	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	87	1670231	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.368	17.371	-0.003	95	1108968	4.00	4.07	
6 Chlorodifluoromethane	51	3.682	3.681	0.001	97	23324	0.0800	0.0773	
7 Propene	41	3.692	3.691	0.001	97	12938	0.0800	0.0943	
8 Dichlorodifluoromethane	85	3.744	3.741	0.003	100	35581	0.0800	0.0768	
9 Chloromethane	52	3.930	3.928	0.002	63	5453	0.0800	0.1009	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.935	3.933	0.002	92	25033	0.0800	0.0783	
12 Vinyl chloride	62	4.095	4.097	-0.002	99	13553	0.0800	0.0807	
11 Acetaldehyde	44	4.131	4.111	0.020	98	47256	0.4000	0.7323	
14 Butane	43	4.183	4.183	0.000	79	20509	0.0800	0.0853	
13 Butadiene	54	4.188	4.185	0.003	77	9850	0.0800	0.0812	
15 Bromomethane	94	4.509	4.508	0.001	98	13700	0.0800	0.0806	
16 Chloroethane	64	4.659	4.653	0.005	97	6514	0.0800	0.0850	
17 Ethanol	31	4.860	4.836	0.024	95	32861	0.4000	0.4364	
18 Vinyl bromide	106	4.948	4.951	-0.003	98	13037	0.0800	0.0806	
19 2-Methylbutane	43	5.005	4.999	0.006	95	15092	0.0800	0.0846	
21 Trichlorofluoromethane	101	5.217	5.219	-0.002	99	33813	0.0800	0.0799	
20 Acrolein	56	5.289	5.277	0.012	95	5242	0.0800	0.0974	
22 Acetonitrile	40	5.361	5.351	0.010	99	6265	0.0800	0.0926	
23 Acetone	58	5.449	5.416	0.033	97	24570	0.2400	0.3553	
24 Pentane	72	5.444	5.444	0.000	73	1560	0.0800	0.0806	
25 Isopropyl alcohol	45	5.599	5.555	0.044	98	49153	0.2400	0.2258	
26 Ethyl ether	31	5.708	5.672	0.036	95	13875	0.0800	0.0810	
27 1,1-Dichloroethene	96	5.925	5.929	-0.004	97	11331	0.0800	0.0793	
28 Acrylonitrile	53	6.085	6.075	0.010	97	8282	0.0800	0.0754	
30 1,1,2-Trichloro-1,2,2-trif	101	6.100	6.107	-0.007	96	27679	0.0800	0.0814	
29 2-Methyl-2-propanol	59	6.250	6.186	0.064	94	18600	0.0800	0.0768	
31 Methylene Chloride	84	6.276	6.284	-0.008	98	27222	0.0800	0.1810	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.292	6.297	-0.005	97	13143	0.0800	0.0979	
33 Carbon disulfide	76	6.431	6.437	-0.006	100	33499	0.0800	0.0810	
34 trans-1,2-Dichloroethene	96	7.088	7.088	0.000	97	11461	0.0800	0.0782	
35 2-Methylpentane	43	7.098	7.104	-0.006	95	26706	0.0800	0.0793	
36 Methyl tert-butyl ether	73	7.346	7.296	0.050	96	26667	0.0800	0.0768	
37 1,1-Dichloroethane	63	7.511	7.514	-0.003	99	22371	0.0800	0.0803	
38 Vinyl acetate	43	7.651	7.645	0.006	100	26994	0.0800	0.0678	
40 Hexane	56	8.075	8.082	-0.007	90	8662	0.0800	0.0778	
39 2-Butanone (MEK)	72	8.163	8.133	0.030	98	5239	0.0800	0.0828	
171 Isopropyl ether	45	8.344	8.306	0.038	97	40220	0.0800	0.0772	
41 cis-1,2-Dichloroethene	96	8.488	8.497	-0.009	97	11721	0.0800	0.0789	
42 Ethyl acetate	43	8.757	8.736	0.021	98	27541	0.0800	0.0776	
43 Chloroform	83	8.829	8.842	-0.013	38	25523	0.0800	0.0799	
173 Tert-butyl ethyl ether	59	9.026	8.986	0.040	98	32408	0.0800	0.0748	
44 Tetrahydrofuran	42	9.372	9.329	0.043	93	13797	0.0800	0.0803	
45 1,1,1-Trichloroethane	97	9.858	9.862	-0.004	97	22903	0.0800	0.0754	
46 1,2-Dichloroethane	62	9.972	9.980	-0.008	96	16131	0.0800	0.0743	
48 Cyclohexane	69	10.452	10.458	-0.006	69	4554	0.0800	0.0719	
47 Benzene	78	10.457	10.465	-0.008	97	32682	0.0800	0.0767	
50 Carbon tetrachloride	117	10.478	10.483	-0.005	95	24310	0.0800	0.0705	
49 n-Butanol	31	10.581	10.538	0.043	73	4171	0.0800	0.0724	
51 2,3-Dimethylpentane	71	10.571	10.577	-0.006	86	6708	0.0800	0.0759	
52 Thiophene	84	10.731	10.740	-0.009	97	18692	0.0800	0.0767	
53 Isooctane	57	11.217	11.219	-0.002	98	53089	0.0800	0.0755	
55 n-Heptane	71	11.589	11.594	-0.005	94	10096	0.0800	0.0744	
54 1,2-Dichloropropane	63	11.682	11.685	-0.003	89	13479	0.0800	0.0744	
56 Trichloroethene	130	11.708	11.718	-0.010	96	14725	0.0800	0.0733	
57 Dibromomethane	93	11.801	11.808	-0.007	96	16515	0.0800	0.0782	
58 Dichlorobromomethane	83	11.946	11.953	-0.006	97	22677	0.0800	0.0715	
59 1,4-Dioxane	88	12.070	12.035	0.035	97	5140	0.0800	0.0804	
60 Methyl methacrylate	41	12.075	12.068	0.007	93	11987	0.0800	0.0630	
61 Methylcyclohexane	83	12.478	12.484	-0.006	92	17104	0.0800	0.0644	
62 4-Methyl-2-pentanone (MIBK)	43	12.969	12.944	0.025	97	28778	0.0800	0.0754	
63 cis-1,3-Dichloropropene	75	12.949	12.950	-0.001	97	15836	0.0800	0.0664	
64 trans-1,3-Dichloropropene	75	13.641	13.645	-0.004	98	13490	0.0800	0.0665	
65 Toluene	91	13.760	13.765	-0.005	93	36650	0.0800	0.0771	
66 1,1,2-Trichloroethane	83	13.843	13.844	-0.001	97	11751	0.0800	0.0745	
69 2-Hexanone	58	14.282	14.265	0.017	92	8963	0.0800	0.0575	
71 n-Octane	85	14.442	14.446	-0.004	95	9965	0.0800	0.0734	
70 Chlorodibromomethane	129	14.540	14.544	-0.004	97	20599	0.0800	0.0648	
72 Ethylene Dibromide	107	14.830	14.835	-0.005	96	19884	0.0800	0.0691	
73 Tetrachloroethene	129	14.902	14.903	-0.001	94	14431	0.0800	0.0745	
74 Chlorobenzene	112	15.776	15.778	-0.002	95	28914	0.0800	0.0739	
75 2,3-Dimethylheptane	43	15.786	15.790	-0.004	94	38282	0.0800	0.0766	
76 Ethylbenzene	91	16.065	16.065	0.000	99	43699	0.0800	0.0722	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	66686	0.1600	0.1429	
81 n-Nonane	57	16.639	16.639	0.000	94	20941	0.0800	0.0696	
79 Bromoform	173	16.675	16.679	-0.004	93	18872	0.0800	0.0529	
80 Styrene	104	16.685	16.690	-0.005	98	20466	0.0800	0.0651	
82 o-Xylene	91	16.752	16.751	0.001	98	36234	0.0800	0.0762	
83 1,1,2,2-Tetrachloroethane	83	17.073	17.077	-0.004	97	27592	0.0800	0.0717	
84 1,2,3-Trichloropropane	110	17.233	17.237	-0.004	96	7060	0.0800	0.0744	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.337	17.337	0.000	96	48237	0.0800	0.0735	
86 N-Propylbenzene	120	17.900	17.900	0.000	98	11389	0.0800	0.0663	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	12209	0.0800	0.0726	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	98	43683	0.0800	0.0700	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	92	18083	0.0800	0.0912	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	83	12726	0.0800	0.0490	
91 n-Decane	57	18.427	18.430	-0.003	89	28397	0.0800	0.0737	
92 tert-Butylbenzene	119	18.572	18.577	-0.005	90	42446	0.0800	0.0727	
93 1,2,4-Trimethylbenzene	105	18.587	18.592	-0.005	96	40145	0.0800	0.0738	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	98	56852	0.0800	0.0699	
94 1,3-Dichlorobenzene	146	18.872	18.874	-0.002	98	28033	0.0800	0.0710	
96 Benzyl chloride	91	18.954	18.955	-0.001	96	18773	0.0800	0.0466	
97 1,4-Dichlorobenzene	146	18.965	18.965	0.000	92	25865	0.0800	0.0692	
98 4-Isopropyltoluene	119	19.027	19.027	0.000	97	44768	0.0800	0.0709	
99 1,2,3-Trimethylbenzene	105	19.078	19.083	-0.005	99	38988	0.0800	0.0730	
100 Butylcyclohexane	83	19.135	19.136	-0.001	90	33076	0.0800	0.0763	
102 2,3-Dihydroindene	117	19.337	19.338	-0.001	92	35661	0.0800	0.0682	
101 1,2-Dichlorobenzene	146	19.337	19.338	-0.001	85	27892	0.0800	0.0709	
103 Indene	116	19.471	19.471	0.000	86	25488	0.0800	0.0567	
104 n-Butylbenzene	91	19.476	19.477	-0.001	98	46347	0.0800	0.0710	
105 Undecane	57	19.791	19.792	-0.001	94	28477	0.0800	0.0639	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	86	9382	0.0800	0.0575	
107 1,2,4,5-Tetramethylbenzene	119	20.257	20.255	0.002	96	36923	0.0800	0.0628	
110 Dodecane	57	20.892	20.889	0.003	92	25472	0.0800	0.0587	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	94	13247	0.0800	0.1074	
113 Naphthalene	128	21.254	21.255	-0.001	98	32092	0.0800	0.0548	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	91	27202	0.0800	0.0733	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	94	19673	0.0800	0.0629	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	99	11594	0.0800	0.0515	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	99	20912	0.0800	0.0655	
A 120 C8 Range	1	14.447	(14.396-14.489)		0	108321	0.0800	0.0727	
S 121 Xylenes, Total	100				0		0.2400	0.2191	
S 122 1,2-Dichloroethene, Total	1				0		0.1600	0.1572	

Reagents:

40L1-3DQP_00012

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC03.D

Injection Date: 20-Feb-2019 21:26:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L3

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

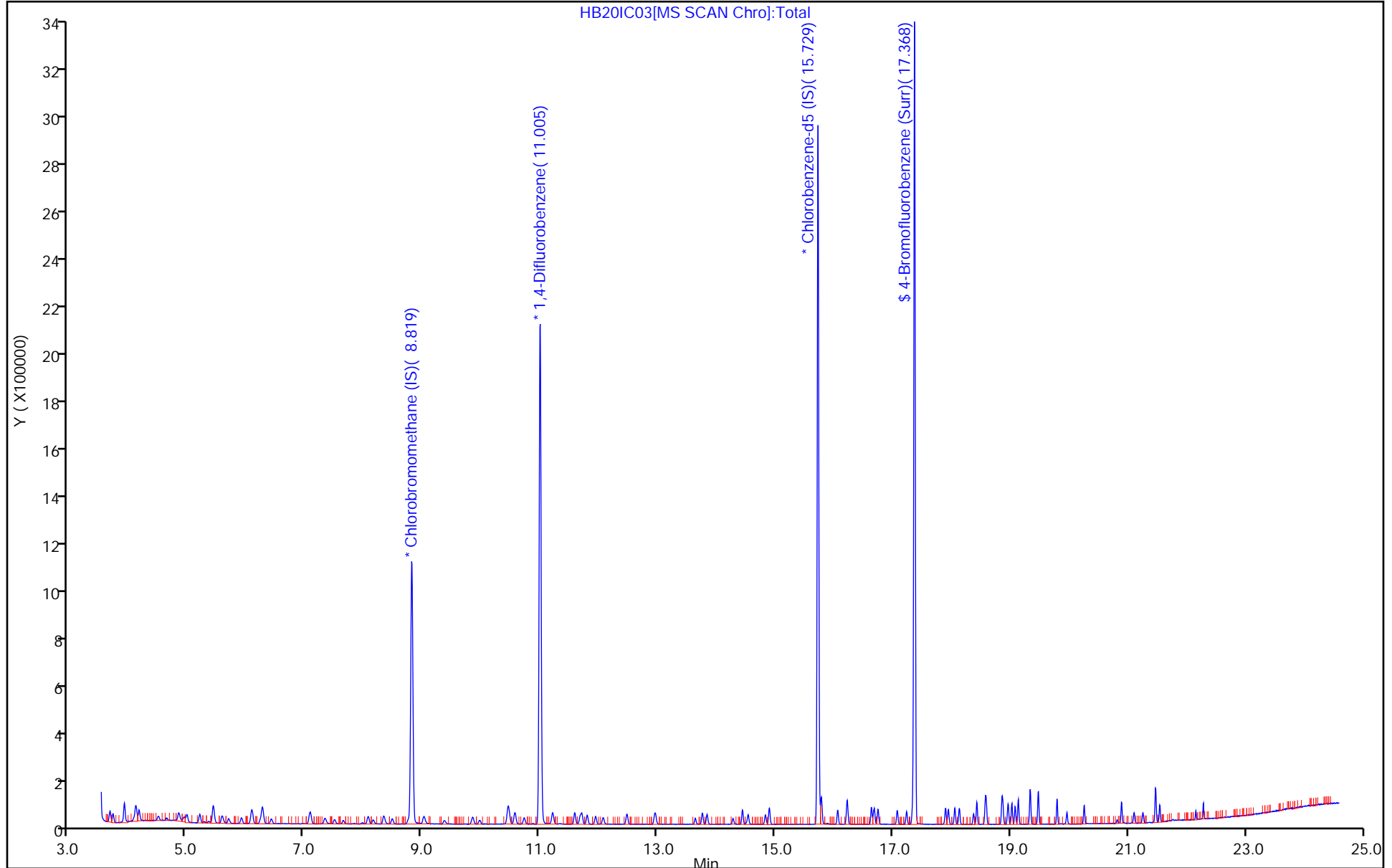
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC03.D

Injection Date: 20-Feb-2019 21:26:30

Instrument ID: MH

Lims ID: IC L3

Client ID:

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

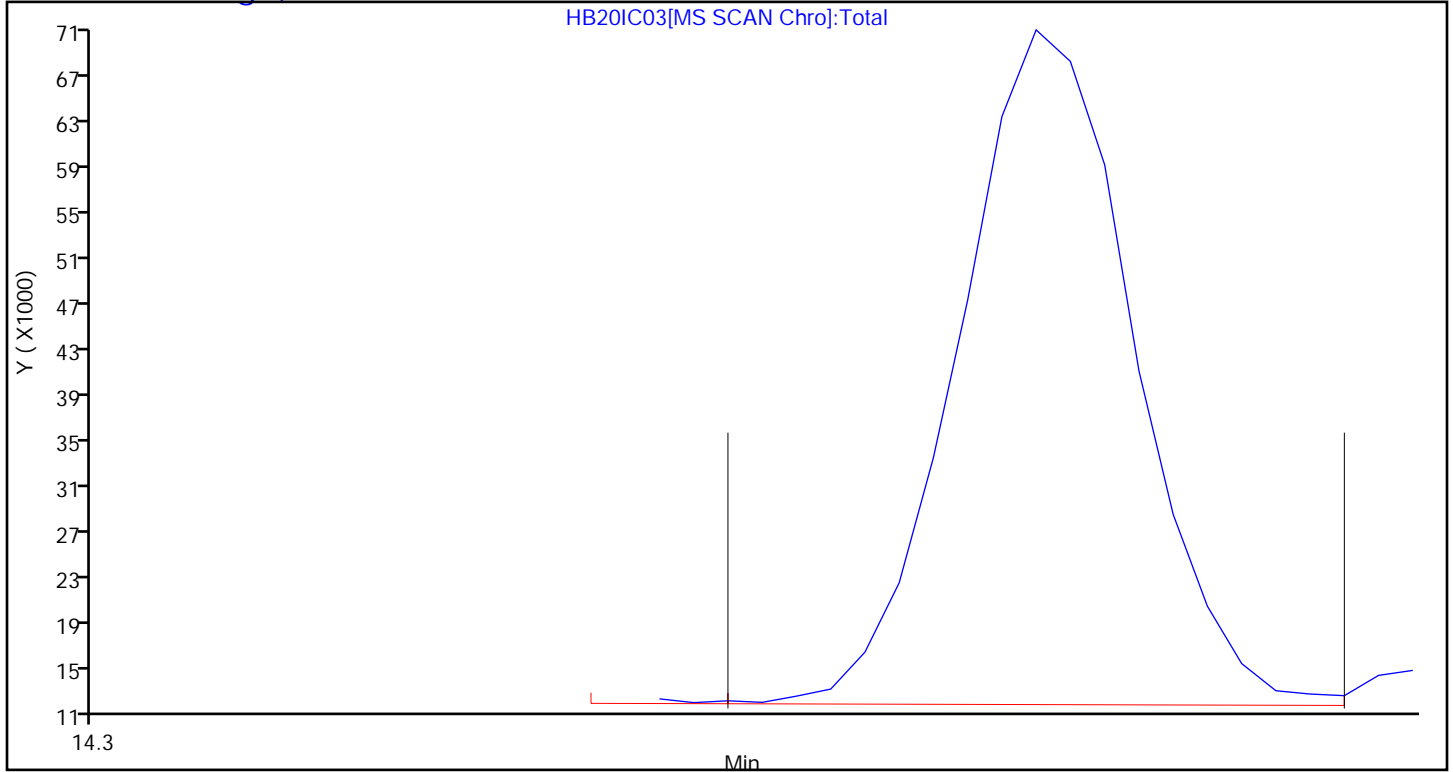
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 20-Feb-2019 22:20:30 ALS Bottle#: 2 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-011
 Misc. Info.: 210542
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:48:13 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 22-Feb-2019 09:52:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.830	-0.006	95	350130	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.010	-0.005	95	1928430	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	88	1599462	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.368	17.371	-0.003	97	1061718	4.00	4.07	
6 Chlorodifluoromethane	51	3.682	3.681	0.001	97	44738	0.1600	0.1558	
7 Propene	41	3.692	3.691	0.001	97	20791	0.1600	0.1593	
8 Dichlorodifluoromethane	85	3.744	3.741	0.003	100	69332	0.1600	0.1572	
9 Chloromethane	52	3.930	3.928	0.002	58	9404	0.1600	0.1828	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.935	3.933	0.002	92	46869	0.1600	0.1541	
12 Vinyl chloride	62	4.095	4.097	-0.002	99	25872	0.1600	0.1618	
11 Acetaldehyde	44	4.126	4.111	0.015	97	56113	0.8000	0.9135	
14 Butane	43	4.183	4.183	0.000	86	39827	0.1600	0.1740	
13 Butadiene	54	4.183	4.185	-0.002	80	19298	0.1600	0.1670	
15 Bromomethane	94	4.514	4.508	0.006	99	27091	0.1600	0.1675	
16 Chloroethane	64	4.653	4.653	0.000	97	11777	0.1600	0.1615	
17 Ethanol	31	4.850	4.836	0.014	96	57636	0.8000	0.8041	
18 Vinyl bromide	106	4.948	4.951	-0.003	97	24322	0.1600	0.1580	
19 2-Methylbutane	43	5.000	4.999	0.001	94	27497	0.1600	0.1620	
21 Trichlorofluoromethane	101	5.217	5.219	-0.002	100	65029	0.1600	0.1614	
20 Acrolein	56	5.294	5.277	0.017	93	8409	0.1600	0.1642	
22 Acetonitrile	40	5.361	5.351	0.010	98	10375	0.1600	0.1610	
23 Acetone	58	5.439	5.416	0.023	96	35492	0.4800	0.5392	
24 Pentane	72	5.444	5.444	0.000	74	3067	0.1600	0.1665	
25 Isopropyl alcohol	45	5.589	5.555	0.034	98	91466	0.4800	0.4417	
26 Ethyl ether	31	5.697	5.672	0.025	93	25807	0.1600	0.1583	
27 1,1-Dichloroethene	96	5.925	5.929	-0.004	97	21894	0.1600	0.1610	
28 Acrylonitrile	53	6.080	6.075	0.005	94	16757	0.1600	0.1602	
30 1,1,2-Trichloro-1,2,2-trif	101	6.100	6.107	-0.007	96	52386	0.1600	0.1619	
29 2-Methyl-2-propanol	59	6.235	6.186	0.049	97	35033	0.1600	0.1519	
31 Methylene Chloride	84	6.281	6.284	-0.003	98	34620	0.1600	0.2418	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.297	6.297	0.000	82	21012	0.1600	0.1644	
33 Carbon disulfide	76	6.431	6.437	-0.006	100	64204	0.1600	0.1631	
34 trans-1,2-Dichloroethene	96	7.082	7.088	-0.006	98	21671	0.1600	0.1554	
35 2-Methylpentane	43	7.103	7.104	-0.001	95	51347	0.1600	0.1603	
36 Methyl tert-butyl ether	73	7.325	7.296	0.029	96	51683	0.1600	0.1565	
37 1,1-Dichloroethane	63	7.506	7.514	-0.008	99	43216	0.1600	0.1629	
38 Vinyl acetate	43	7.651	7.645	0.006	100	53610	0.1600	0.1415	
40 Hexane	56	8.075	8.082	-0.007	90	16426	0.1600	0.1550	
39 2-Butanone (MEK)	72	8.147	8.133	0.014	97	9115	0.1600	0.1514	
171 Isopropyl ether	45	8.333	8.306	0.027	97	77390	0.1600	0.1561	
41 cis-1,2-Dichloroethene	96	8.488	8.497	-0.009	96	22419	0.1600	0.1586	
42 Ethyl acetate	43	8.752	8.736	0.016	98	52034	0.1600	0.1541	
43 Chloroform	83	8.835	8.842	-0.007	97	49161	0.1600	0.1616	
173 Tert-butyl ethyl ether	59	9.015	8.986	0.029	98	63088	0.1600	0.1529	
44 Tetrahydrofuran	42	9.362	9.329	0.033	94	25511	0.1600	0.1559	
45 1,1,1-Trichloroethane	97	9.858	9.862	-0.004	97	43475	0.1600	0.1503	
46 1,2-Dichloroethane	62	9.977	9.980	-0.003	96	31582	0.1600	0.1520	
48 Cyclohexane	69	10.452	10.458	-0.006	70	8824	0.1600	0.1456	
47 Benzene	78	10.463	10.465	-0.002	97	60789	0.1600	0.1491	
50 Carbon tetrachloride	117	10.478	10.483	-0.005	97	44327	0.1600	0.1343	
49 n-Butanol	31	10.571	10.538	0.033	73	7444	0.1600	0.1349	
51 2,3-Dimethylpentane	71	10.576	10.577	-0.001	87	12865	0.1600	0.1521	
52 Thiophene	84	10.736	10.740	-0.004	97	35178	0.1600	0.1508	
53 Isooctane	57	11.217	11.219	-0.002	98	102056	0.1600	0.1517	
55 n-Heptane	71	11.594	11.594	0.000	94	18913	0.1600	0.1456	
54 1,2-Dichloropropane	63	11.682	11.685	-0.003	91	27042	0.1600	0.1559	
56 Trichloroethene	130	11.713	11.718	-0.005	95	28328	0.1600	0.1472	
57 Dibromomethane	93	11.801	11.808	-0.007	96	31506	0.1600	0.1559	
58 Dichlorobromomethane	83	11.946	11.953	-0.006	98	44079	0.1600	0.1452	
59 1,4-Dioxane	88	12.060	12.035	0.025	96	9393	0.1600	0.1534	
60 Methyl methacrylate	41	12.075	12.068	0.007	91	25219	0.1600	0.1384	
61 Methylcyclohexane	83	12.478	12.484	-0.006	91	33070	0.1600	0.1301	
62 4-Methyl-2-pentanone (MIBK)	43	12.959	12.944	0.015	96	50210	0.1600	0.1375	
63 cis-1,3-Dichloropropene	75	12.949	12.950	-0.001	99	32071	0.1600	0.1405	
64 trans-1,3-Dichloropropene	75	13.641	13.645	-0.004	98	26441	0.1600	0.1362	
65 Toluene	91	13.760	13.765	-0.005	92	68961	0.1600	0.1515	
66 1,1,2-Trichloroethane	83	13.843	13.844	-0.001	96	24147	0.1600	0.1598	
69 2-Hexanone	58	14.282	14.265	0.017	91	18055	0.1600	0.1209	
71 n-Octane	85	14.442	14.446	-0.004	96	19559	0.1600	0.1505	
70 Chlorodibromomethane	129	14.540	14.544	-0.004	97	40693	0.1600	0.1337	
72 Ethylene Dibromide	107	14.830	14.835	-0.005	97	39867	0.1600	0.1446	
73 Tetrachloroethene	129	14.902	14.903	-0.001	95	29094	0.1600	0.1569	
74 Chlorobenzene	112	15.776	15.778	-0.002	94	54785	0.1600	0.1463	
75 2,3-Dimethylheptane	43	15.791	15.790	0.001	95	74909	0.1600	0.1565	
76 Ethylbenzene	91	16.065	16.065	0.000	99	85231	0.1600	0.1470	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	133574	0.3200	0.2988	
81 n-Nonane	57	16.639	16.639	0.000	95	41910	0.1600	0.1455	
79 Bromoform	173	16.675	16.679	-0.004	93	37380	0.1600	0.1093	
80 Styrene	104	16.690	16.690	0.000	99	40788	0.1600	0.1354	
82 o-Xylene	91	16.747	16.751	-0.004	98	70551	0.1600	0.1550	
83 1,1,2,2-Tetrachloroethane	83	17.078	17.077	0.001	98	53490	0.1600	0.1451	
84 1,2,3-Trichloropropane	110	17.238	17.237	0.001	97	13629	0.1600	0.1500	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.336	17.337	-0.001	97	93612	0.1600	0.1490	
86 N-Propylbenzene	120	17.900	17.900	0.000	98	22978	0.1600	0.1398	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	23459	0.1600	0.1457	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	98	87555	0.1600	0.1466	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	92	37017	0.1600	0.1643	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	87	26923	0.1600	0.1082	
91 n-Decane	57	18.427	18.430	-0.003	88	57543	0.1600	0.1560	
92 tert-Butylbenzene	119	18.577	18.577	0.000	91	83223	0.1600	0.1489	
93 1,2,4-Trimethylbenzene	105	18.587	18.592	-0.005	96	78441	0.1600	0.1505	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	98	114293	0.1600	0.1467	
94 1,3-Dichlorobenzene	146	18.871	18.874	-0.003	98	54101	0.1600	0.1431	
96 Benzyl chloride	91	18.954	18.955	-0.001	97	37546	0.1600	0.0973	
97 1,4-Dichlorobenzene	146	18.965	18.965	0.000	93	50401	0.1600	0.1409	
98 4-Isopropyltoluene	119	19.027	19.027	0.000	96	90912	0.1600	0.1504	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	99	79211	0.1600	0.1548	
100 Butylcyclohexane	83	19.135	19.136	-0.001	90	66383	0.1600	0.1599	
102 2,3-Dihydroindene	117	19.337	19.338	-0.001	92	70126	0.1600	0.1401	
101 1,2-Dichlorobenzene	146	19.337	19.338	-0.001	84	54498	0.1600	0.1447	
103 Indene	116	19.471	19.471	0.000	90	52088	0.1600	0.1210	
104 n-Butylbenzene	91	19.476	19.477	-0.001	97	93855	0.1600	0.1502	
105 Undecane	57	19.791	19.792	-0.001	93	58868	0.1600	0.1380	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	90	19327	0.1600	0.1238	
107 1,2,4,5-Tetramethylbenzene	119	20.251	20.255	-0.004	96	77678	0.1600	0.1379	
110 Dodecane	57	20.887	20.889	-0.002	91	50308	0.1600	0.1211	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	93	27410	0.1600	0.1541	
113 Naphthalene	128	21.254	21.255	-0.001	98	65571	0.1600	0.1169	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	91	50558	0.1600	0.1423	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	95	38937	0.1600	0.1300	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	99	23671	0.1600	0.1098	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	99	40771	0.1600	0.1334	
A 120 C8 Range	1	14.447	(14.406-14.489)		0	207536	0.1600	0.1455	
S 121 Xylenes, Total	100				0		0.4800	0.4538	
S 122 1,2-Dichloroethene, Total	1				0		0.3200	0.3140	

Reagents:

40L4DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC04.D

Injection Date: 20-Feb-2019 22:20:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L4

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

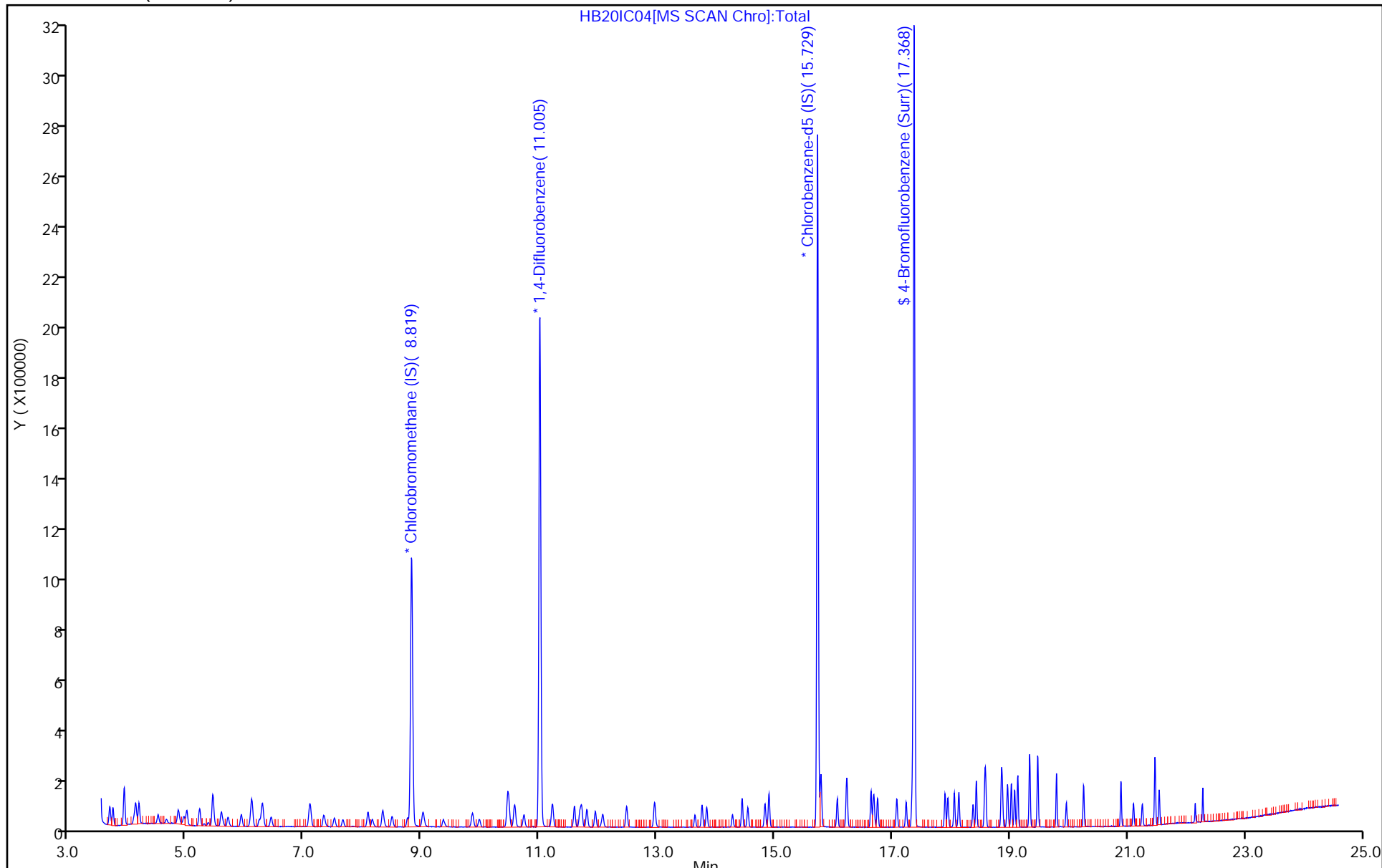
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC04.D

Injection Date: 20-Feb-2019 22:20:30

Instrument ID: MH

Lims ID: IC L4

Client ID:

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

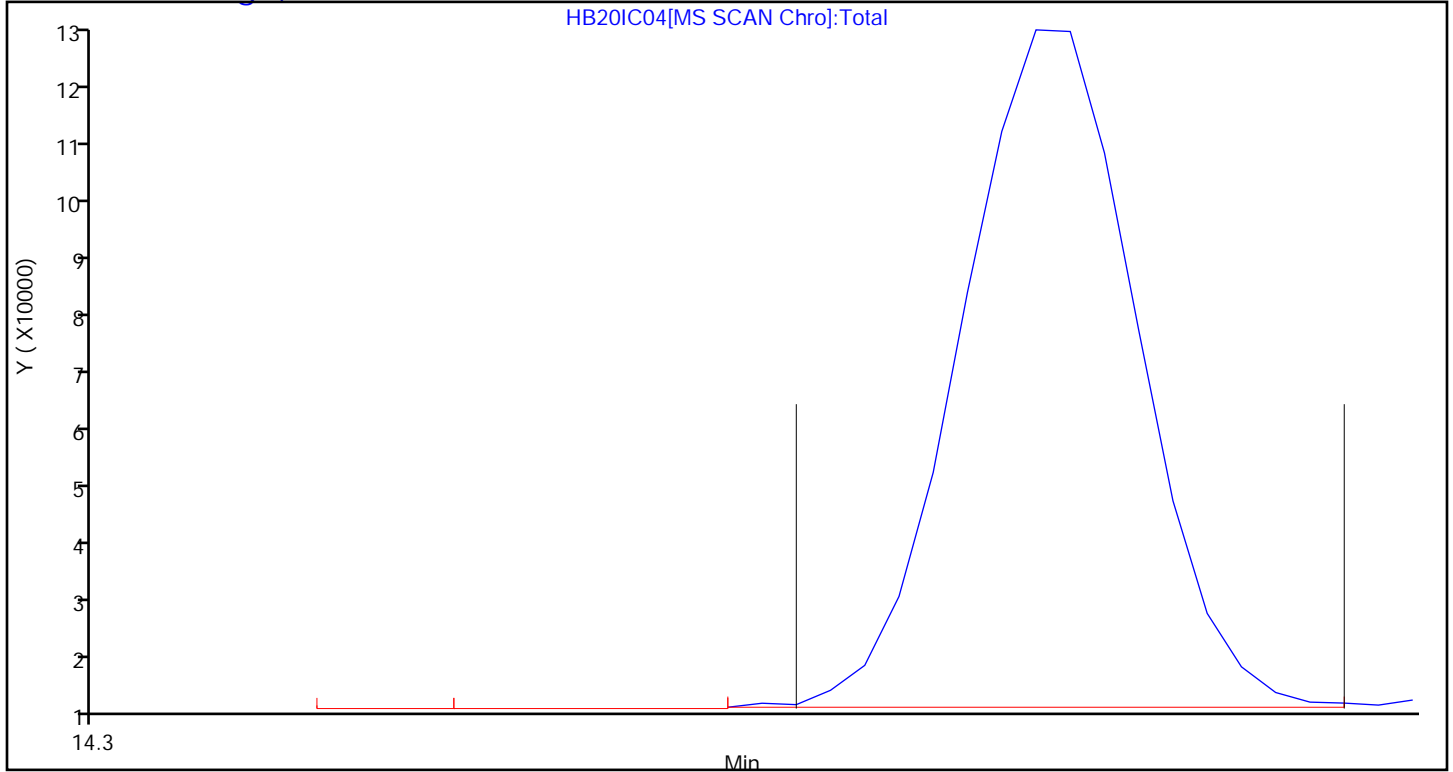
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 20-Feb-2019 23:14:30 ALS Bottle#: 3 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-012
 Misc. Info.: 210541
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7

Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:48:23 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 21-Feb-2019 13:38:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.830	-0.006	97	350291	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.010	-0.005	96	1915626	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	88	1590176	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.373	17.371	0.002	96	1069670	4.00	4.13	
6 Chlorodifluoromethane	51	3.682	3.681	0.001	97	110343	0.4000	0.3842	
7 Propene	41	3.692	3.691	0.001	98	50058	0.4000	0.3833	
8 Dichlorodifluoromethane	85	3.738	3.741	-0.003	100	170173	0.4000	0.3857	
9 Chloromethane	52	3.930	3.928	0.002	98	20898	0.4000	0.4061	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.935	3.933	0.002	92	119194	0.4000	0.3917	
12 Vinyl chloride	62	4.095	4.097	-0.002	99	63624	0.4000	0.3977	
11 Acetaldehyde	44	4.116	4.111	0.005	99	132159	2.00	2.15	
14 Butane	43	4.183	4.183	0.000	90	94610	0.4000	0.4133	
13 Butadiene	54	4.183	4.185	-0.002	92	46266	0.4000	0.4003	
15 Bromomethane	94	4.509	4.508	0.000	98	65057	0.4000	0.4020	
16 Chloroethane	64	4.653	4.653	0.000	98	29938	0.4000	0.4104	
17 Ethanol	31	4.839	4.836	0.003	96	141512	2.00	1.97	
18 Vinyl bromide	106	4.948	4.951	-0.003	98	61012	0.4000	0.3962	
19 2-Methylbutane	43	4.994	4.999	-0.005	92	69491	0.4000	0.4092	
21 Trichlorofluoromethane	101	5.217	5.219	-0.002	100	164002	0.4000	0.4068	
20 Acrolein	56	5.279	5.277	0.002	95	20576	0.4000	0.4016	
22 Acetonitrile	40	5.351	5.351	0.000	98	25939	0.4000	0.4024	
23 Acetone	58	5.423	5.416	0.007	98	83084	1.20	1.26	
24 Pentane	72	5.444	5.444	0.000	80	7712	0.4000	0.4184	
25 Isopropyl alcohol	45	5.563	5.555	0.008	99	228028	1.20	1.10	
26 Ethyl ether	31	5.677	5.672	0.005	93	67088	0.4000	0.4114	
27 1,1-Dichloroethene	96	5.925	5.929	-0.004	96	54085	0.4000	0.3975	
28 Acrylonitrile	53	6.069	6.075	-0.006	93	41315	0.4000	0.3947	
30 1,1,2-Trichloro-1,2,2-trif	101	6.106	6.107	-0.001	96	130321	0.4000	0.4026	
29 2-Methyl-2-propanol	59	6.209	6.186	0.023	97	88542	0.4000	0.3837	
31 Methylene Chloride	84	6.281	6.284	-0.003	98	65799	0.4000	0.4594	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.292	6.297	-0.005	96	49922	0.4000	0.3905	
33 Carbon disulfide	76	6.431	6.437	-0.006	100	158292	0.4000	0.4020	
34 trans-1,2-Dichloroethene	96	7.082	7.088	-0.006	97	55602	0.4000	0.3985	
35 2-Methylpentane	43	7.098	7.104	-0.006	96	128649	0.4000	0.4013	
36 Methyl tert-butyl ether	73	7.299	7.296	0.003	97	131945	0.4000	0.3992	
37 1,1-Dichloroethane	63	7.506	7.514	-0.008	100	105434	0.4000	0.3973	
38 Vinyl acetate	43	7.646	7.645	0.001	100	141592	0.4000	0.3735	
40 Hexane	56	8.080	8.082	-0.002	88	42005	0.4000	0.3961	
39 2-Butanone (MEK)	72	8.137	8.133	0.004	97	23711	0.4000	0.3937	
171 Isopropyl ether	45	8.307	8.306	0.001	97	197900	0.4000	0.3990	
41 cis-1,2-Dichloroethene	96	8.493	8.497	-0.004	97	55633	0.4000	0.3934	
42 Ethyl acetate	43	8.736	8.736	0.000	98	130856	0.4000	0.3873	
43 Chloroform	83	8.834	8.842	-0.008	97	120999	0.4000	0.3975	
173 Tert-butyl ethyl ether	59	8.995	8.986	0.009	97	161632	0.4000	0.3915	
44 Tetrahydrofuran	42	9.336	9.329	0.007	93	63048	0.4000	0.3852	
45 1,1,1-Trichloroethane	97	9.858	9.862	-0.004	98	112189	0.4000	0.3876	
46 1,2-Dichloroethane	62	9.977	9.980	-0.003	96	79080	0.4000	0.3831	
48 Cyclohexane	69	10.457	10.458	-0.001	92	23383	0.4000	0.3883	
47 Benzene	78	10.462	10.465	-0.003	97	154496	0.4000	0.3814	
50 Carbon tetrachloride	117	10.478	10.483	-0.005	96	121964	0.4000	0.3720	
49 n-Butanol	31	10.566	10.538	0.028	70	18761	0.4000	0.3423	
51 2,3-Dimethylpentane	71	10.576	10.577	-0.001	88	33896	0.4000	0.4035	
52 Thiophene	84	10.736	10.740	-0.004	96	90994	0.4000	0.3927	
53 Isooctane	57	11.217	11.219	-0.002	98	254726	0.4000	0.3812	
55 n-Heptane	71	11.594	11.594	0.000	94	49010	0.4000	0.3799	
54 1,2-Dichloropropane	63	11.682	11.685	-0.003	91	66097	0.4000	0.3836	
56 Trichloroethene	130	11.713	11.718	-0.005	95	71975	0.4000	0.3766	
57 Dibromomethane	93	11.806	11.808	-0.002	97	75334	0.4000	0.3752	
58 Dichlorobromomethane	83	11.946	11.953	-0.006	98	112623	0.4000	0.3734	
59 1,4-Dioxane	88	12.039	12.035	0.004	93	23501	0.4000	0.3865	
60 Methyl methacrylate	41	12.070	12.068	0.002	91	68030	0.4000	0.3757	
61 Methylcyclohexane	83	12.483	12.484	-0.001	93	86171	0.4000	0.3413	
62 4-Methyl-2-pentanone (MIBK)	43	12.954	12.944	0.010	96	130687	0.4000	0.3602	
63 cis-1,3-Dichloropropene	75	12.948	12.950	-0.002	96	84191	0.4000	0.3713	
64 trans-1,3-Dichloropropene	75	13.641	13.645	-0.004	99	71850	0.4000	0.3722	
65 Toluene	91	13.765	13.765	0.000	94	176860	0.4000	0.3907	
66 1,1,2-Trichloroethane	83	13.843	13.844	-0.001	97	60427	0.4000	0.4021	
69 2-Hexanone	58	14.272	14.265	0.007	90	52036	0.4000	0.3505	
71 n-Octane	85	14.447	14.446	0.001	96	50220	0.4000	0.3886	
70 Chlorodibromomethane	129	14.540	14.544	-0.004	98	112826	0.4000	0.3729	
72 Ethylene Dibromide	107	14.835	14.835	0.000	97	103182	0.4000	0.3765	
73 Tetrachloroethene	129	14.902	14.903	-0.001	95	71154	0.4000	0.3859	
74 Chlorobenzene	112	15.781	15.778	0.003	94	141575	0.4000	0.3803	
75 2,3-Dimethylheptane	43	15.791	15.790	0.001	95	190542	0.4000	0.4005	
76 Ethylbenzene	91	16.065	16.065	0.000	99	220476	0.4000	0.3825	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	344621	0.8000	0.7754	
81 n-Nonane	57	16.639	16.639	0.000	94	113340	0.4000	0.3957	
79 Bromoform	173	16.680	16.679	0.001	93	110767	0.4000	0.3259	
80 Styrene	104	16.690	16.690	0.000	99	114936	0.4000	0.3838	
82 o-Xylene	91	16.747	16.751	-0.004	98	182797	0.4000	0.4039	
83 1,1,2,2-Tetrachloroethane	83	17.078	17.077	0.001	98	144640	0.4000	0.3946	
84 1,2,3-Trichloropropane	110	17.238	17.237	0.001	97	35414	0.4000	0.3921	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.336	17.337	-0.001	97	242959	0.4000	0.3891	
86 N-Propylbenzene	120	17.900	17.900	0.000	98	61876	0.4000	0.3786	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	62820	0.4000	0.3924	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	98	231995	0.4000	0.3907	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	92	95792	0.4000	0.3843	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	88	79203	0.4000	0.3201	
91 n-Decane	57	18.427	18.430	-0.003	88	154065	0.4000	0.4201	
92 tert-Butylbenzene	119	18.577	18.577	0.000	91	215060	0.4000	0.3870	
93 1,2,4-Trimethylbenzene	105	18.592	18.592	0.000	96	202848	0.4000	0.3915	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	98	298383	0.4000	0.3853	
94 1,3-Dichlorobenzene	146	18.871	18.874	-0.003	98	136687	0.4000	0.3636	
96 Benzyl chloride	91	18.954	18.955	-0.001	97	113885	0.4000	0.2969	
97 1,4-Dichlorobenzene	146	18.964	18.965	-0.001	94	128080	0.4000	0.3601	
98 4-Isopropyltoluene	119	19.026	19.027	-0.001	97	240183	0.4000	0.3996	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	99	204927	0.4000	0.4028	
100 Butylcyclohexane	83	19.135	19.136	-0.001	91	171441	0.4000	0.4153	
102 2,3-Dihydroindene	117	19.337	19.338	-0.001	93	188062	0.4000	0.3779	
101 1,2-Dichlorobenzene	146	19.337	19.338	-0.001	83	138306	0.4000	0.3694	
103 Indene	116	19.471	19.471	0.000	89	145299	0.4000	0.3394	
104 n-Butylbenzene	91	19.476	19.477	-0.001	97	251979	0.4000	0.4057	
105 Undecane	57	19.791	19.792	-0.001	94	162146	0.4000	0.3824	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	93	59034	0.4000	0.3803	
107 1,2,4,5-Tetramethylbenzene	119	20.251	20.255	-0.004	96	211664	0.4000	0.3779	
110 Dodecane	57	20.887	20.889	-0.002	92	138324	0.4000	0.3350	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	93	76796	0.4000	0.3120	
113 Naphthalene	128	21.254	21.255	-0.001	99	184664	0.4000	0.3312	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	92	121678	0.4000	0.3444	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	95	98554	0.4000	0.3309	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	100	52618	0.4000	0.2455	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	100	85954	0.4000	0.2830	
A 120 C8 Range	1	14.442	(14.396-14.499)		0	532812	0.4000	0.3759	
S 121 Xylenes, Total	100				0		1.20	1.18	
S 122 1,2-Dichloroethene, Total	1				0		0.8000	0.7920	

Reagents:

40L5DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC05.D

Injection Date: 20-Feb-2019 23:14:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L5

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

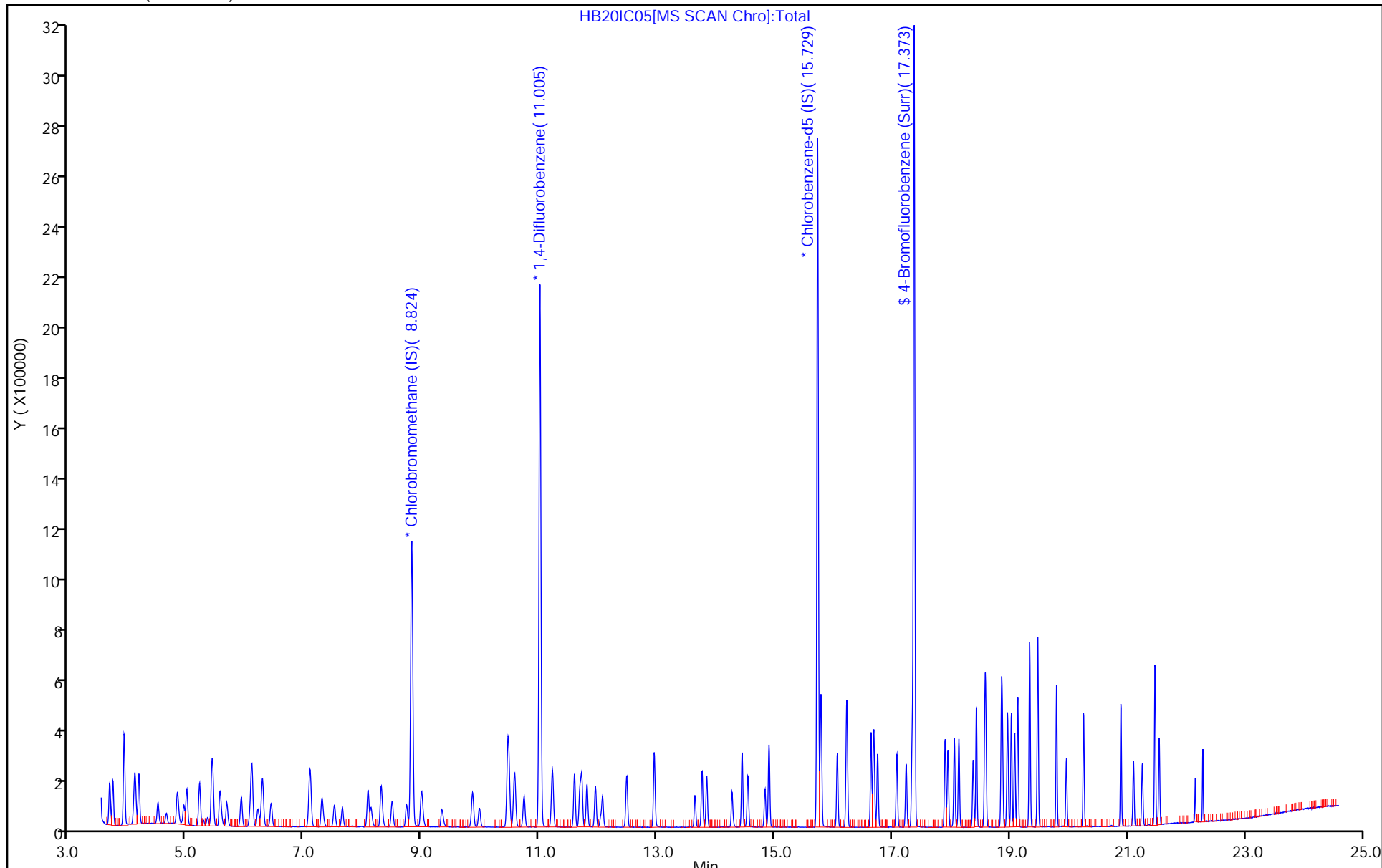
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC05.D

Injection Date: 20-Feb-2019 23:14:30

Instrument ID: MH

Lims ID: IC L5

Client ID:

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

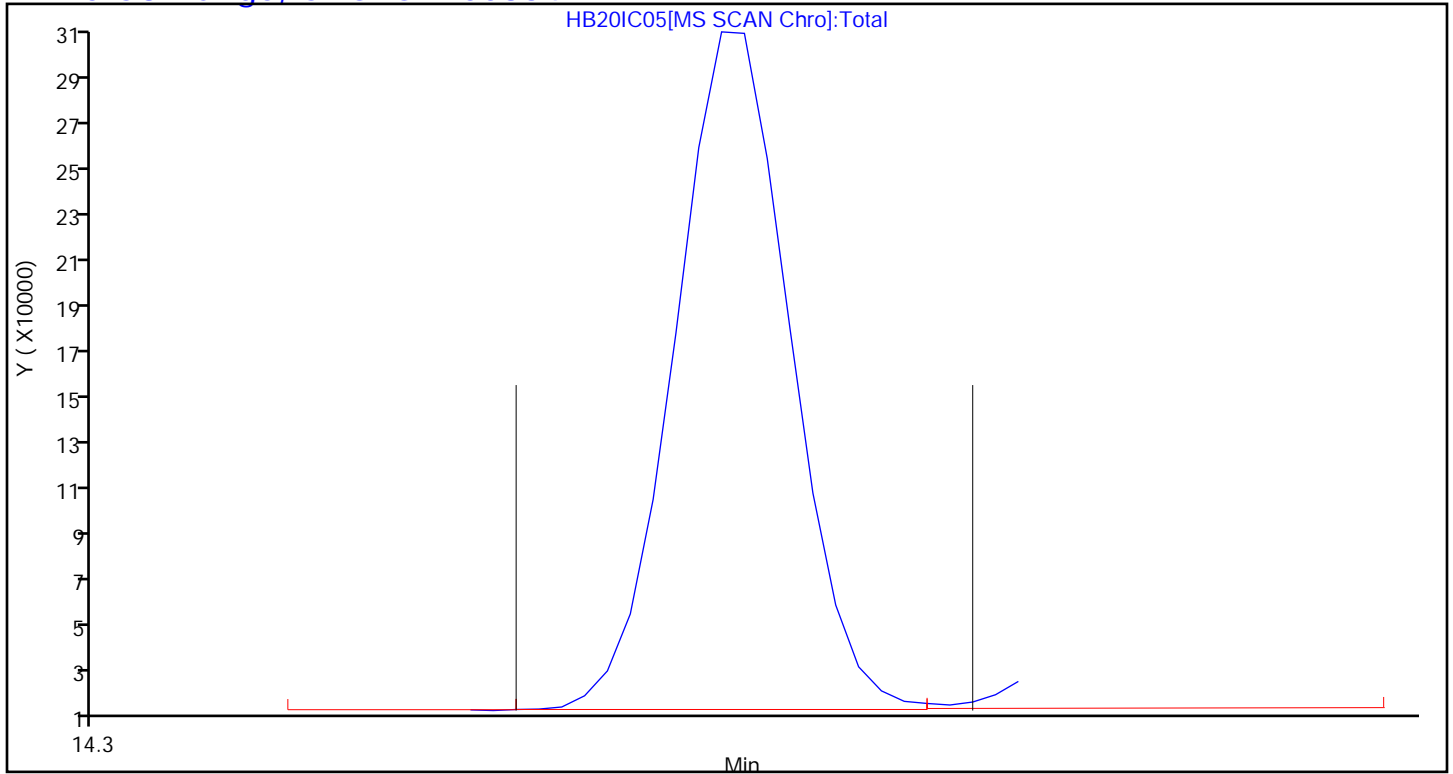
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 21-Feb-2019 00:08:30 ALS Bottle#: 4 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-013
 Misc. Info.: 210540
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:48:33 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 21-Feb-2019 13:37:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.830	-0.006	96	345797	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.010	-0.005	95	1865244	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	87	1585553	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.371	-0.004	96	1057465	4.00	4.09	
6 Chlorodifluoromethane	51	3.681	3.681	0.000	97	276110	1.00	0.9738	
7 Propene	41	3.687	3.691	-0.004	98	123848	1.00	0.9606	
8 Dichlorodifluoromethane	85	3.738	3.741	-0.003	100	422528	1.00	0.9702	
9 Chloromethane	52	3.924	3.928	-0.004	98	50767	1.00	1.00	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.933	-0.003	93	296279	1.00	0.9863	
12 Vinyl chloride	62	4.090	4.097	-0.007	99	157361	1.00	1.00	
11 Acetaldehyde	44	4.105	4.111	-0.006	100	314152	5.00	5.18	
14 Butane	43	4.183	4.183	0.000	84	232065	1.00	1.03	
13 Butadiene	54	4.183	4.185	-0.002	79	114876	1.00	1.01	
15 Bromomethane	94	4.503	4.508	-0.005	99	159914	1.00	1.00	
16 Chloroethane	64	4.643	4.653	-0.010	97	72470	1.00	1.01	
17 Ethanol	31	4.813	4.836	-0.023	96	347389	5.00	4.91	
18 Vinyl bromide	106	4.948	4.951	-0.003	98	150739	1.00	0.99	
19 2-Methylbutane	43	4.994	4.999	-0.005	92	169357	1.00	1.01	
21 Trichlorofluoromethane	101	5.211	5.219	-0.008	100	397394	1.00	1.00	
20 Acrolein	56	5.263	5.277	-0.014	93	50534	1.00	1.00	
22 Acetonitrile	40	5.330	5.351	-0.021	98	62042	1.00	0.9750	
23 Acetone	58	5.397	5.416	-0.019	97	194862	3.00	3.00	
24 Pentane	72	5.434	5.444	-0.010	94	18350	1.00	1.01	
25 Isopropyl alcohol	45	5.532	5.555	-0.023	99	567468	3.00	2.80	
26 Ethyl ether	31	5.651	5.672	-0.021	93	162847	1.00	1.01	
27 1,1-Dichloroethene	96	5.925	5.929	-0.004	96	132183	1.00	0.9841	
28 Acrylonitrile	53	6.059	6.075	-0.016	93	102139	1.00	0.9885	
30 1,1,2-Trichloro-1,2,2-trif	101	6.100	6.107	-0.007	97	316796	1.00	0.99	
29 2-Methyl-2-propanol	59	6.162	6.186	-0.024	97	221767	1.00	0.9736	
31 Methylene Chloride	84	6.276	6.284	-0.008	97	135290	1.00	0.9568	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.291	6.297	-0.006	95	123300	1.00	0.9770	
33 Carbon disulfide	76	6.431	6.437	-0.006	100	391326	1.00	1.01	
34 trans-1,2-Dichloroethene	96	7.082	7.088	-0.006	97	134418	1.00	0.9760	
35 2-Methylpentane	43	7.098	7.104	-0.006	96	315498	1.00	1.00	
36 Methyl tert-butyl ether	73	7.263	7.296	-0.033	97	329050	1.00	1.01	
37 1,1-Dichloroethane	63	7.506	7.514	-0.008	99	259689	1.00	0.99	
38 Vinyl acetate	43	7.630	7.645	-0.015	100	377904	1.00	1.01	
40 Hexane	56	8.080	8.082	-0.002	91	104228	1.00	1.00	
39 2-Butanone (MEK)	72	8.106	8.133	-0.027	97	58444	1.00	0.9830	
171 Isopropyl ether	45	8.276	8.306	-0.030	98	491190	1.00	1.00	
41 cis-1,2-Dichloroethene	96	8.488	8.497	-0.009	96	136108	1.00	0.9750	
42 Ethyl acetate	43	8.715	8.736	-0.021	99	331359	1.00	0.99	
43 Chloroform	83	8.839	8.842	-0.003	98	298839	1.00	0.99	
173 Tert-butyl ethyl ether	59	8.958	8.986	-0.028	97	409604	1.00	1.00	
44 Tetrahydrofuran	42	9.305	9.329	-0.024	94	158683	1.00	0.9822	
45 1,1,1-Trichloroethane	97	9.858	9.862	-0.004	97	281296	1.00	0.9846	
46 1,2-Dichloroethane	62	9.977	9.980	-0.003	96	196209	1.00	0.9763	
48 Cyclohexane	69	10.457	10.458	-0.001	91	57530	1.00	0.9812	
47 Benzene	78	10.462	10.465	-0.003	98	385270	1.00	0.9769	
50 Carbon tetrachloride	117	10.478	10.483	-0.005	96	312823	1.00	0.9800	
49 n-Butanol	31	10.530	10.538	-0.008	67	49965	1.00	0.9363	
51 2,3-Dimethylpentane	71	10.576	10.577	-0.001	93	83728	1.00	1.02	
52 Thiophene	84	10.736	10.740	-0.004	97	224938	1.00	1.00	
53 Isooctane	57	11.217	11.219	-0.002	98	636999	1.00	0.9790	
55 n-Heptane	71	11.589	11.594	-0.005	94	124160	1.00	0.9883	
54 1,2-Dichloropropane	63	11.682	11.685	-0.003	92	165502	1.00	0.9864	
56 Trichloroethene	130	11.718	11.718	0.000	95	179106	1.00	0.9624	
57 Dibromomethane	93	11.806	11.808	-0.002	97	185331	1.00	0.9481	
58 Dichlorobromomethane	83	11.951	11.953	-0.001	99	290134	1.00	0.9880	
59 1,4-Dioxane	88	12.018	12.035	-0.017	93	56823	1.00	0.9597	
60 Methyl methacrylate	41	12.059	12.068	-0.009	91	176703	1.00	1.00	
61 Methylcyclohexane	83	12.483	12.484	-0.001	93	216746	1.00	0.8817	
62 4-Methyl-2-pentanone (MIBK)	43	12.933	12.944	-0.011	96	340468	1.00	0.9636	
63 cis-1,3-Dichloropropene	75	12.948	12.950	-0.002	98	222810	1.00	1.01	
64 trans-1,3-Dichloropropene	75	13.641	13.645	-0.004	99	193590	1.00	1.01	
65 Toluene	91	13.765	13.765	0.000	93	453543	1.00	1.00	
66 1,1,2-Trichloroethane	83	13.842	13.844	-0.002	97	151135	1.00	1.01	
69 2-Hexanone	58	14.256	14.265	-0.009	90	143357	1.00	0.9684	
71 n-Octane	85	14.442	14.446	-0.004	97	132598	1.00	1.03	
70 Chlorodibromomethane	129	14.545	14.544	0.001	98	309096	1.00	1.02	
72 Ethylene Dibromide	107	14.835	14.835	0.000	98	271955	1.00	1.00	
73 Tetrachloroethene	129	14.902	14.903	-0.001	95	177605	1.00	0.9661	
74 Chlorobenzene	112	15.775	15.778	-0.003	94	355092	1.00	0.9566	
75 2,3-Dimethylheptane	43	15.786	15.790	-0.004	95	479292	1.00	1.01	
76 Ethylbenzene	91	16.065	16.065	0.000	99	565594	1.00	0.9842	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	888953	2.00	2.01	
81 n-Nonane	57	16.639	16.639	0.000	95	294667	1.00	1.03	
79 Bromoform	173	16.680	16.679	0.001	93	319968	1.00	0.9441	
80 Styrene	104	16.690	16.690	0.000	99	313291	1.00	1.05	
82 o-Xylene	91	16.752	16.751	0.001	99	455942	1.00	1.01	
83 1,1,2,2-Tetrachloroethane	83	17.078	17.077	0.001	98	372659	1.00	1.02	
84 1,2,3-Trichloropropane	110	17.233	17.237	-0.004	98	89428	1.00	0.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.336	17.337	-0.001	97	619680	1.00	1.00	
86 N-Propylbenzene	120	17.900	17.900	0.000	99	162793	1.00	1.00	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	157132	1.00	0.9845	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	98	605609	1.00	1.02	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	92	244828	1.00	0.9428	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	86	225351	1.00	0.9134	
91 n-Decane	57	18.432	18.430	0.002	88	386206	1.00	1.06	
92 tert-Butylbenzene	119	18.577	18.577	0.000	90	549927	1.00	0.99	
93 1,2,4-Trimethylbenzene	105	18.592	18.592	0.000	96	520658	1.00	1.01	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	98	775934	1.00	1.00	
94 1,3-Dichlorobenzene	146	18.871	18.874	-0.003	98	351654	1.00	0.9383	
96 Benzyl chloride	91	18.954	18.955	-0.001	97	337367	1.00	0.8822	
97 1,4-Dichlorobenzene	146	18.964	18.965	-0.001	95	336295	1.00	0.9482	
98 4-Isopropyltoluene	119	19.026	19.027	-0.001	97	617168	1.00	1.03	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	99	514577	1.00	1.01	
100 Butylcyclohexane	83	19.135	19.136	-0.001	92	424597	1.00	1.03	
102 2,3-Dihydroindene	117	19.336	19.338	-0.002	93	492757	1.00	0.99	
101 1,2-Dichlorobenzene	146	19.336	19.338	-0.002	82	353004	1.00	0.9456	
103 Indene	116	19.471	19.471	0.000	90	393793	1.00	0.9226	
104 n-Butylbenzene	91	19.476	19.477	-0.001	97	654668	1.00	1.06	
105 Undecane	57	19.791	19.792	-0.001	95	441877	1.00	1.05	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	96	178449	1.00	1.15	
107 1,2,4,5-Tetramethylbenzene	119	20.256	20.255	0.001	97	584141	1.00	1.05	
110 Dodecane	57	20.887	20.889	-0.002	93	428247	1.00	1.04	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	93	255822	1.00	0.8849	
113 Naphthalene	128	21.254	21.255	-0.001	99	591214	1.00	1.06	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	92	334056	1.00	0.9482	
116 1,2,3-Trichlorobenzene	180	21.543	21.540	0.003	95	305351	1.00	1.03	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	100	223829	1.00	1.05	
118 1-Methylnaphthalene	142	22.282	22.283	-0.001	100	347276	1.00	1.15	
A 120 C8 Range	1	14.442	(14.395-14.499)		0	1345188	1.00	0.9747	
S 121 Xylenes, Total	100				0		3.00	3.02	
S 122 1,2-Dichloroethene, Total	1				0		2.00	1.95	

Reagents:

40L6DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC06.D

Injection Date: 21-Feb-2019 00:08:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L6

Worklist Smp#: 13

Client ID:

Purge Vol: 500.000 mL

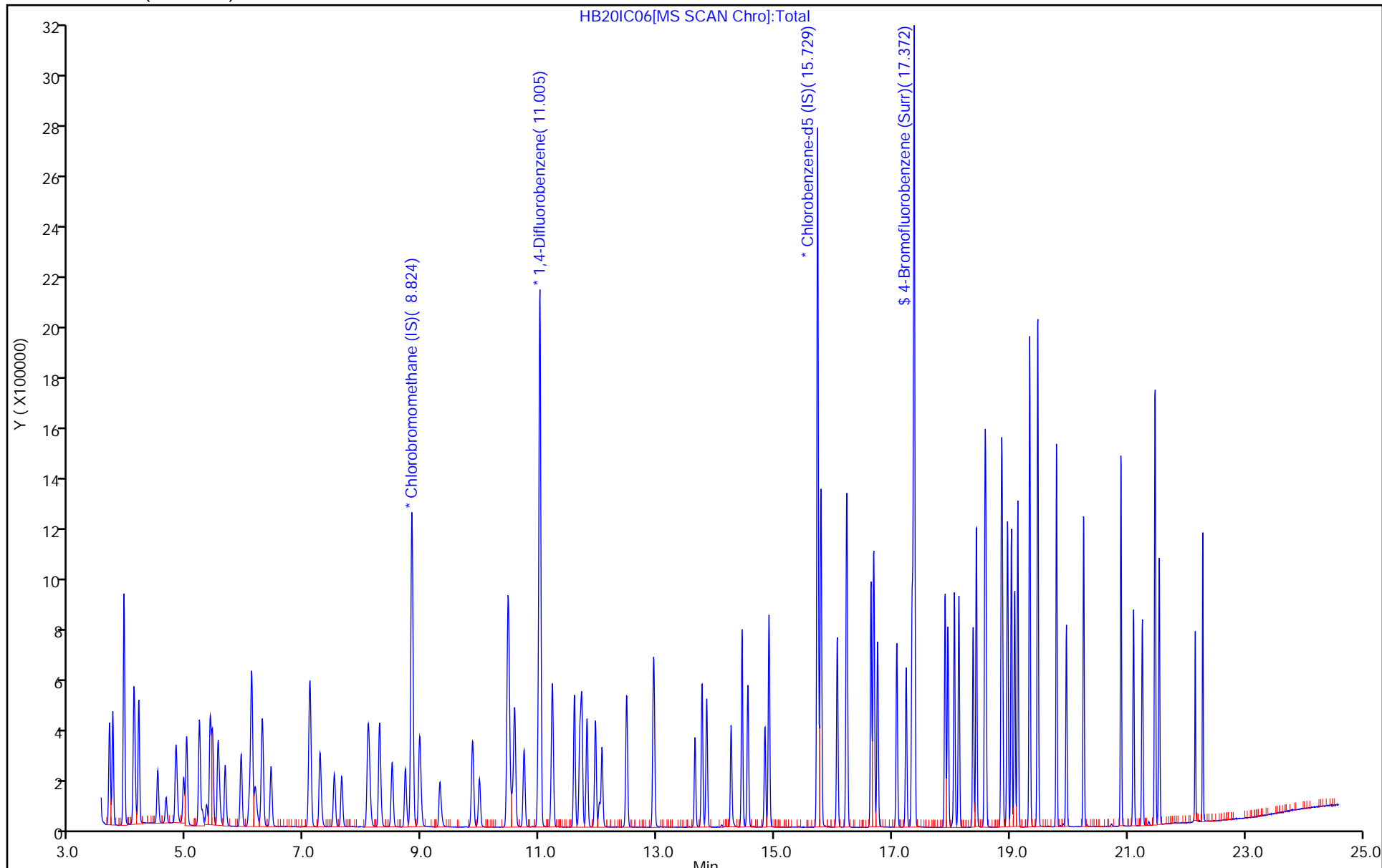
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC06.D

Injection Date: 21-Feb-2019 00:08:30

Instrument ID: MH

Lims ID: IC L6

Client ID:

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

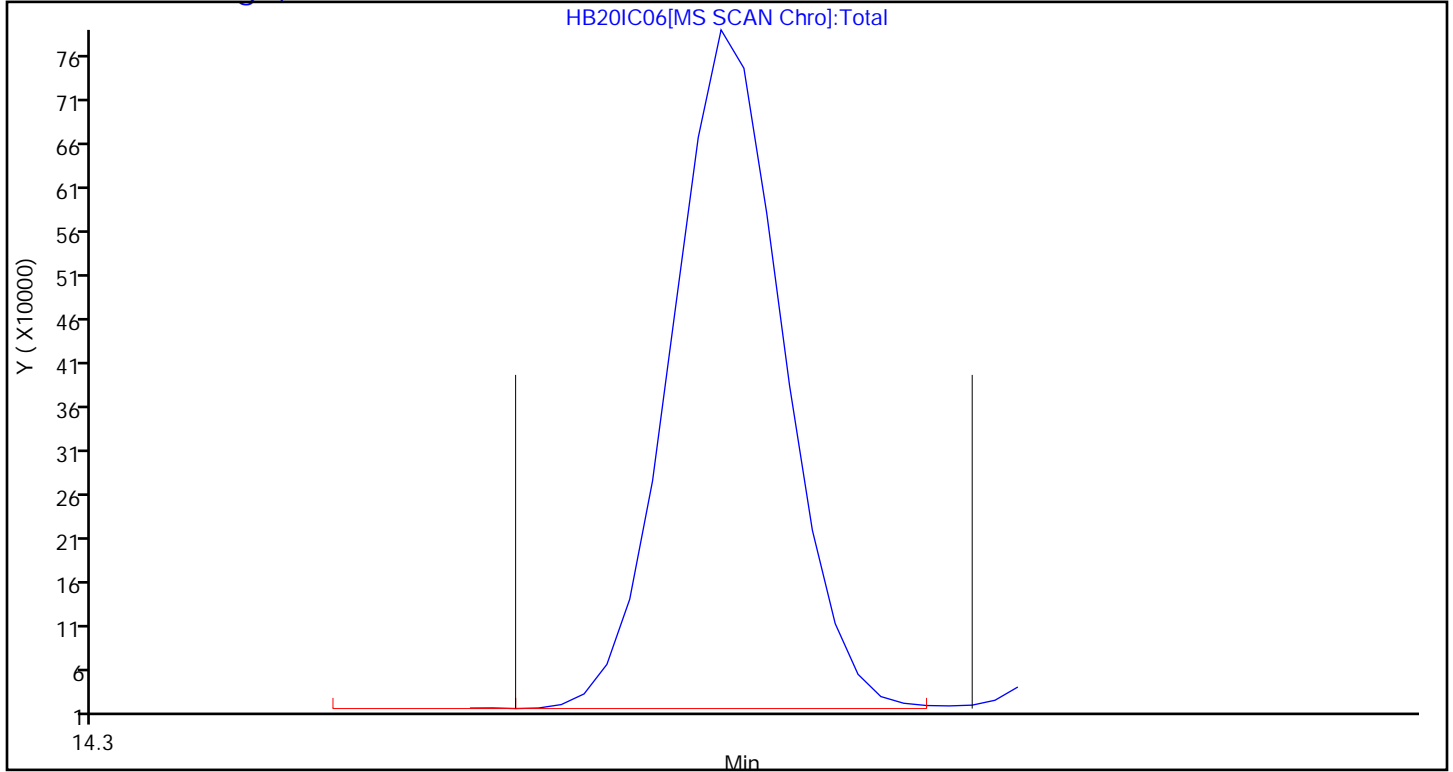
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 21-Feb-2019 01:03:30 ALS Bottle#: 5 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-014
 Misc. Info.: 210539
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:48:42 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 21-Feb-2019 09:40:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.830	-0.001	95	348949	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.010	0.000	95	1879497	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	87	1644075	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.373	17.371	0.002	96	1071605	4.00	4.00	
6 Chlorodifluoromethane	51	3.676	3.681	-0.005	97	568429	2.00	1.99	
7 Propene	41	3.687	3.691	-0.004	98	250579	2.00	1.93	
8 Dichlorodifluoromethane	85	3.738	3.741	-0.003	100	876701	2.00	1.99	
9 Chloromethane	52	3.925	3.928	-0.003	99	102040	2.00	1.99	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.933	-0.003	93	616018	2.00	2.03	
12 Vinyl chloride	62	4.095	4.097	-0.002	99	319887	2.00	2.01	
11 Acetaldehyde	44	4.095	4.111	-0.016	99	631044	10.0	10.3	
14 Butane	43	4.183	4.183	0.000	84	457383	2.00	2.01	
13 Butadiene	54	4.183	4.185	-0.002	70	236733	2.00	2.06	
15 Bromomethane	94	4.503	4.508	-0.005	99	327044	2.00	2.03	
16 Chloroethane	64	4.643	4.653	-0.010	97	145223	2.00	2.00	
17 Ethanol	31	4.808	4.836	-0.028	95	747094	10.0	10.5	
18 Vinyl bromide	106	4.943	4.951	-0.008	98	311230	2.00	2.03	
19 2-Methylbutane	43	5.000	4.999	0.001	93	345741	2.00	2.04	
21 Trichlorofluoromethane	101	5.217	5.219	-0.002	99	801987	2.00	2.00	
20 Acrolein	56	5.258	5.277	-0.019	93	103966	2.00	2.04	
22 Acetonitrile	40	5.330	5.351	-0.021	99	134006	2.00	2.09	
23 Acetone	58	5.387	5.416	-0.029	97	398344	6.00	6.07	
24 Pentane	72	5.439	5.444	-0.005	89	37863	2.00	2.06	
25 Isopropyl alcohol	45	5.511	5.555	-0.044	98	1199879	6.00	5.92	
26 Ethyl ether	31	5.640	5.672	-0.032	93	332157	2.00	2.04	
27 1,1-Dichloroethene	96	5.925	5.929	-0.004	96	271177	2.00	2.00	
28 Acrylonitrile	53	6.059	6.075	-0.016	93	213181	2.00	2.04	
30 1,1,2-Trichloro-1,2,2-trif	101	6.100	6.107	-0.007	97	639315	2.00	1.98	
29 2-Methyl-2-propanol	59	6.137	6.186	-0.049	93	486078	2.00	2.11	
31 Methylene Chloride	84	6.281	6.284	-0.003	97	260991	2.00	1.83	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.297	6.297	0.000	95	251273	2.00	1.97	
33 Carbon disulfide	76	6.436	6.437	-0.001	100	807906	2.00	2.06	
34 trans-1,2-Dichloroethene	96	7.088	7.088	0.000	97	278440	2.00	2.00	
35 2-Methylpentane	43	7.103	7.104	-0.001	96	651289	2.00	2.04	
36 Methyl tert-butyl ether	73	7.253	7.296	-0.043	97	685507	2.00	2.08	
37 1,1-Dichloroethane	63	7.511	7.514	-0.003	100	534165	2.00	2.02	
38 Vinyl acetate	43	7.630	7.645	-0.015	100	810467	2.00	2.15	
40 Hexane	56	8.080	8.082	-0.002	87	212722	2.00	2.01	
39 2-Butanone (MEK)	72	8.101	8.133	-0.032	96	125474	2.00	2.09	
171 Isopropyl ether	45	8.266	8.306	-0.040	98	1016630	2.00	2.06	
41 cis-1,2-Dichloroethene	96	8.499	8.497	0.002	96	285498	2.00	2.03	
42 Ethyl acetate	43	8.710	8.736	-0.026	98	694293	2.00	2.06	
43 Chloroform	83	8.845	8.842	0.003	98	611378	2.00	2.02	
173 Tert-butyl ethyl ether	59	8.948	8.986	-0.038	97	856511	2.00	2.08	
44 Tetrahydrofuran	42	9.284	9.329	-0.045	95	327341	2.00	2.01	
45 1,1,1-Trichloroethane	97	9.858	9.862	-0.004	97	593273	2.00	2.06	
46 1,2-Dichloroethane	62	9.982	9.980	0.002	97	404925	2.00	2.00	
48 Cyclohexane	69	10.463	10.458	0.005	93	120448	2.00	2.04	
47 Benzene	78	10.463	10.465	-0.002	98	795627	2.00	2.00	
50 Carbon tetrachloride	117	10.483	10.483	0.000	96	658731	2.00	2.05	
49 n-Butanol	31	10.519	10.538	-0.019	79	117031	2.00	2.18	
51 2,3-Dimethylpentane	71	10.576	10.577	-0.001	93	169285	2.00	2.05	
52 Thiophene	84	10.736	10.740	-0.004	97	464737	2.00	2.04	
53 Isooctane	57	11.217	11.219	-0.002	98	1322559	2.00	2.02	
55 n-Heptane	71	11.594	11.594	0.000	94	257254	2.00	2.03	
54 1,2-Dichloropropane	63	11.682	11.685	-0.003	92	342173	2.00	2.02	
56 Trichloroethene	130	11.718	11.718	0.000	96	370632	2.00	1.98	
57 Dibromomethane	93	11.806	11.808	-0.002	96	386676	2.00	1.96	
58 Dichlorobromomethane	83	11.951	11.953	-0.001	99	613591	2.00	2.07	
59 1,4-Dioxane	88	12.003	12.035	-0.032	94	122358	2.00	2.05	
60 Methyl methacrylate	41	12.054	12.068	-0.014	92	381574	2.00	2.15	
61 Methylcyclohexane	83	12.483	12.484	-0.001	94	458293	2.00	1.85	
62 4-Methyl-2-pentanone (MIBK)	43	12.928	12.944	-0.016	96	726276	2.00	2.04	
63 cis-1,3-Dichloropropene	75	12.949	12.950	-0.002	98	479642	2.00	2.16	
64 trans-1,3-Dichloropropene	75	13.646	13.645	0.001	99	428343	2.00	2.15	
65 Toluene	91	13.765	13.765	0.000	93	950794	2.00	2.03	
66 1,1,2-Trichloroethane	83	13.843	13.844	-0.001	97	314780	2.00	2.03	
69 2-Hexanone	58	14.251	14.265	-0.014	91	324836	2.00	2.12	
71 n-Octane	85	14.442	14.446	-0.004	96	278400	2.00	2.08	
70 Chlorodibromomethane	129	14.546	14.544	0.002	98	685217	2.00	2.19	
72 Ethylene Dibromide	107	14.835	14.835	0.000	98	589031	2.00	2.08	
73 Tetrachloroethene	129	14.902	14.903	-0.001	95	373916	2.00	1.96	
74 Chlorobenzene	112	15.776	15.778	-0.002	94	755892	2.00	1.96	
75 2,3-Dimethylheptane	43	15.791	15.790	0.001	95	998396	2.00	2.03	
76 Ethylbenzene	91	16.065	16.065	0.000	99	1216288	2.00	2.04	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	1900753	4.00	4.14	
81 n-Nonane	57	16.639	16.639	0.000	94	627904	2.00	2.12	
79 Bromoform	173	16.675	16.679	-0.004	94	766620	2.00	2.18	
80 Styrene	104	16.690	16.690	0.000	99	695917	2.00	2.25	
82 o-Xylene	91	16.752	16.751	0.001	98	951287	2.00	2.03	
83 1,1,2,2-Tetrachloroethane	83	17.078	17.077	0.001	99	801869	2.00	2.12	
84 1,2,3-Trichloropropane	110	17.233	17.237	-0.004	98	189343	2.00	2.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.336	17.337	-0.001	96	1291872	2.00	2.00	
86 N-Propylbenzene	120	17.900	17.900	0.000	99	354102	2.00	2.10	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	333374	2.00	2.01	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	99	1303962	2.00	2.12	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	92	524101	2.00	1.92	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	87	527224	2.00	2.06	
91 n-Decane	57	18.432	18.430	0.002	89	812284	2.00	2.14	
92 tert-Butylbenzene	119	18.577	18.577	0.000	90	1183628	2.00	2.06	
93 1,2,4-Trimethylbenzene	105	18.592	18.592	0.000	96	1117062	2.00	2.09	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	99	1677953	2.00	2.10	
94 1,3-Dichlorobenzene	146	18.871	18.874	-0.003	98	775428	2.00	2.00	
96 Benzyl chloride	91	18.954	18.955	-0.001	97	815150	2.00	2.06	
97 1,4-Dichlorobenzene	146	18.964	18.965	-0.001	95	746169	2.00	2.03	
98 4-Isopropyltoluene	119	19.027	19.027	-0.001	97	1314396	2.00	2.11	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	99	1082845	2.00	2.06	
100 Butylcyclohexane	83	19.135	19.136	-0.001	92	882078	2.00	2.07	
102 2,3-Dihydroindene	117	19.337	19.338	-0.001	93	1082048	2.00	2.10	
101 1,2-Dichlorobenzene	146	19.337	19.338	-0.001	83	776291	2.00	2.01	
103 Indene	116	19.471	19.471	0.000	90	901129	2.00	2.04	
104 n-Butylbenzene	91	19.476	19.477	-0.001	97	1387617	2.00	2.16	
105 Undecane	57	19.791	19.792	-0.001	96	924853	2.00	2.11	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	97	412385	2.00	2.57	
107 1,2,4,5-Tetramethylbenzene	119	20.257	20.255	0.002	97	1281919	2.00	2.21	
110 Dodecane	57	20.887	20.889	-0.002	93	940184	2.00	2.20	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	94	605730	2.00	1.93	
113 Naphthalene	128	21.254	21.255	-0.001	99	1320630	2.00	2.29	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	93	739806	2.00	2.03	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	95	674773	2.00	2.19	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	99	555653	2.00	2.51	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	99	788345	2.00	2.51	
A 120 C8 Range	1	14.442	(14.396-14.489)		0	2797431	2.00	2.01	
S 121 Xylenes, Total	100				0		6.00	6.17	
S 122 1,2-Dichloroethene, Total	1				0		4.00	4.03	

Reagents:

40L7DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC07.D

Injection Date: 21-Feb-2019 01:03:30

Instrument ID: MH

Operator ID: HMT

Lims ID: ICIS L7

Worklist Smp#: 14

Client ID:

Purge Vol: 500.000 mL

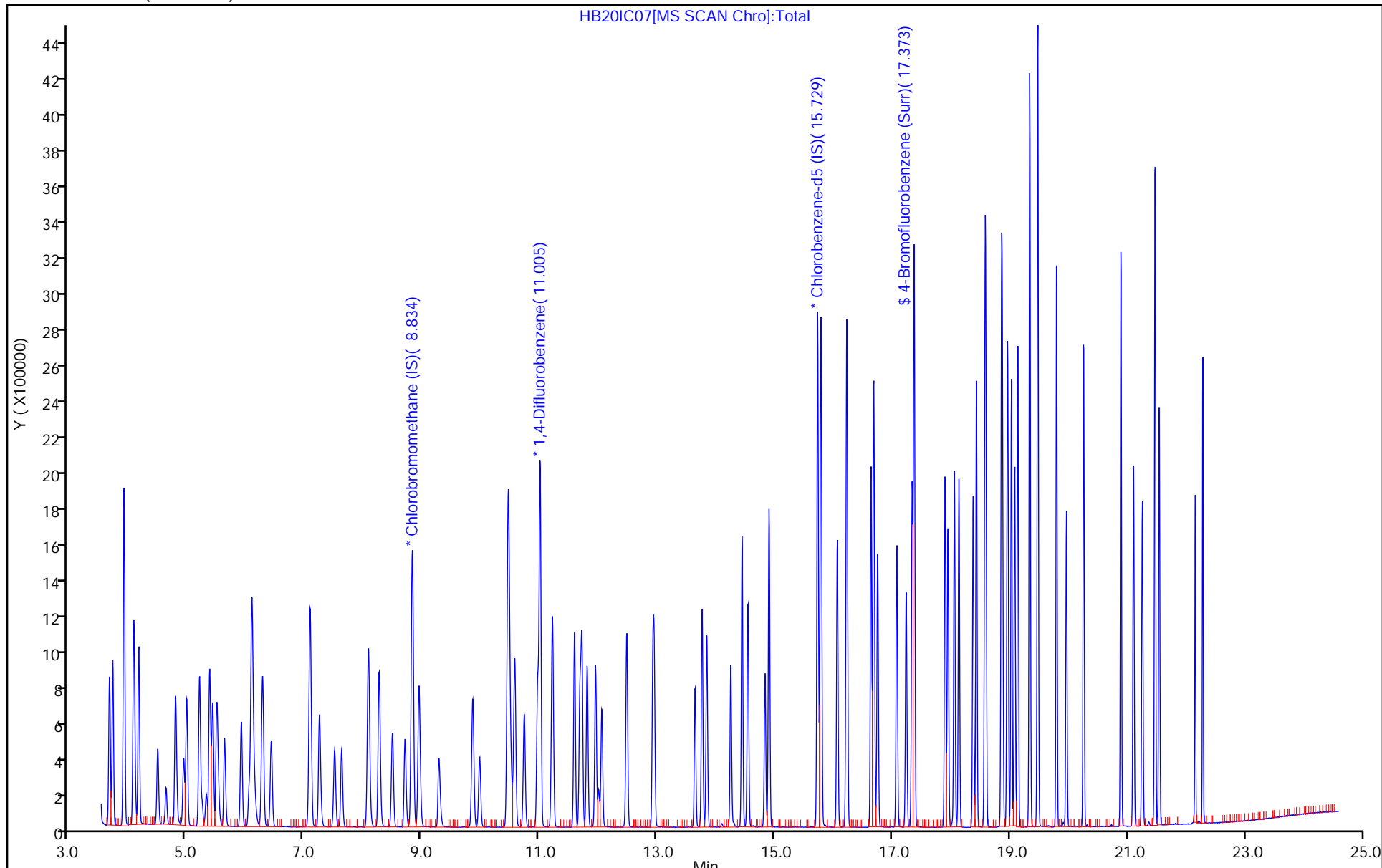
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC07.D

Injection Date: 21-Feb-2019 01:03:30

Instrument ID: MH

Lims ID: ICIS L7

Client ID:

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

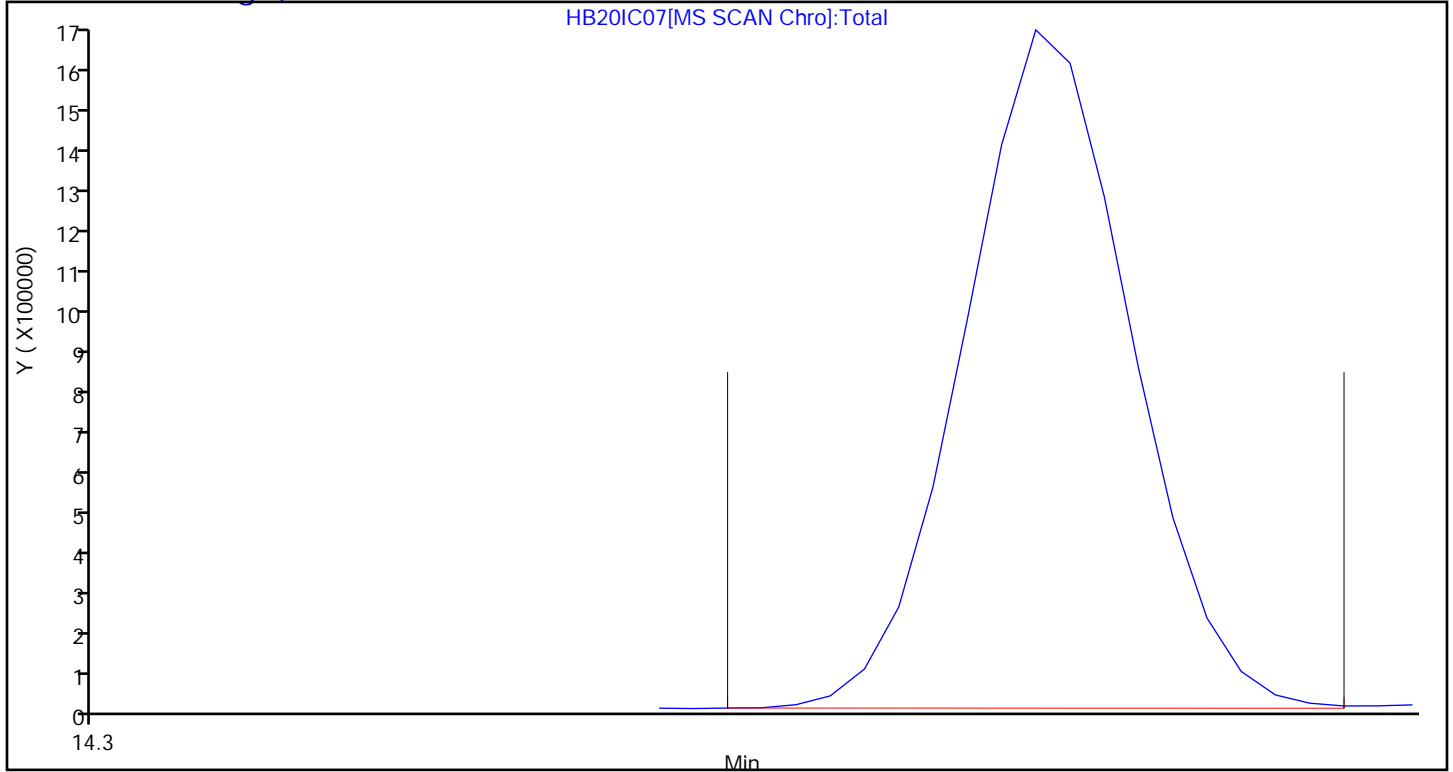
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 21-Feb-2019 01:57:30 ALS Bottle#: 6 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-015
 Misc. Info.: 210538
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:48:52 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh Date: 21-Feb-2019 09:43:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.834	8.830	0.004	94	364694	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.010	0.000	94	1936517	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	87	1734121	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.372	17.371	0.001	97	1108097	4.00	3.92	
6 Chlorodifluoromethane	51	3.676	3.681	-0.005	97	1166346	4.00	3.90	
7 Propene	41	3.687	3.691	-0.004	99	513903	4.00	3.78	
8 Dichlorodifluoromethane	85	3.738	3.741	-0.003	100	1766802	4.00	3.85	
9 Chloromethane	52	3.919	3.928	-0.009	98	202413	4.00	3.78	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.933	-0.003	98	1255454	4.00	3.96	
12 Vinyl chloride	62	4.090	4.097	-0.007	99	635845	4.00	3.82	
11 Acetaldehyde	44	4.095	4.111	-0.016	99	1230613	20.0	19.2	
14 Butane	43	4.178	4.183	-0.005	85	888442	4.00	3.73	
13 Butadiene	54	4.178	4.185	-0.007	70	463965	4.00	3.86	
15 Bromomethane	94	4.503	4.508	-0.005	98	649354	4.00	3.85	
16 Chloroethane	64	4.643	4.653	-0.010	97	293162	4.00	3.86	
17 Ethanol	31	4.808	4.836	-0.028	95	1463846	20.0	19.6	
18 Vinyl bromide	106	4.948	4.951	-0.003	98	620663	4.00	3.87	
19 2-Methylbutane	43	4.994	4.999	-0.005	92	683911	4.00	3.87	
21 Trichlorofluoromethane	101	5.216	5.219	-0.003	100	1608364	4.00	3.83	
20 Acrolein	56	5.253	5.277	-0.024	93	210875	4.00	3.95	
22 Acetonitrile	40	5.330	5.351	-0.021	99	269093	4.00	4.01	
23 Acetone	58	5.382	5.416	-0.034	98	790789	12.0	11.5	
24 Pentane	72	5.444	5.444	0.000	94	75489	4.00	3.93	
25 Isopropyl alcohol	45	5.501	5.555	-0.054	97	2403555	12.0	11.6	
26 Ethyl ether	31	5.635	5.672	-0.037	94	649774	4.00	3.83	
27 1,1-Dichloroethene	96	5.930	5.929	0.001	97	552199	4.00	3.90	
28 Acrylonitrile	53	6.064	6.075	-0.011	94	442205	4.00	4.06	
30 1,1,2-Trichloro-1,2,2-trif	101	6.105	6.107	-0.002	96	1291447	4.00	3.83	
29 2-Methyl-2-propanol	59	6.111	6.186	-0.075	95	1007263	4.00	4.19	
31 Methylene Chloride	84	6.286	6.284	0.002	98	506389	4.00	3.40	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.297	6.297	0.000	96	503167	4.00	3.78	
33 Carbon disulfide	76	6.441	6.437	0.004	99	1620181	4.00	3.95	
34 trans-1,2-Dichloroethene	96	7.093	7.088	0.005	97	569867	4.00	3.92	
35 2-Methylpentane	43	7.103	7.104	-0.001	96	1310496	4.00	3.93	
36 Methyl tert-butyl ether	73	7.248	7.296	-0.048	97	1404124	4.00	4.08	
37 1,1-Dichloroethane	63	7.516	7.514	0.002	99	1076990	4.00	3.90	
38 Vinyl acetate	43	7.630	7.645	-0.015	100	1681929	4.00	4.26	
40 Hexane	56	8.085	8.082	0.003	77	434352	4.00	3.93	
39 2-Butanone (MEK)	72	8.095	8.133	-0.038	95	256700	4.00	4.09	
171 Isopropyl ether	45	8.266	8.306	-0.040	98	2067346	4.00	4.00	
41 cis-1,2-Dichloroethene	96	8.504	8.497	0.007	96	582417	4.00	3.96	
42 Ethyl acetate	43	8.705	8.736	-0.031	99	1427087	4.00	4.06	
43 Chloroform	83	8.850	8.842	0.008	97	1239987	4.00	3.91	
173 Tert-butyl ethyl ether	59	8.943	8.986	-0.043	96	1761469	4.00	4.10	
44 Tetrahydrofuran	42	9.279	9.329	-0.050	95	672532	4.00	3.95	
45 1,1,1-Trichloroethane	97	9.863	9.862	0.001	97	1227570	4.00	4.07	
46 1,2-Dichloroethane	62	9.982	9.980	0.002	97	824860	4.00	3.95	
48 Cyclohexane	69	10.457	10.458	-0.001	95	249183	4.00	4.09	
47 Benzene	78	10.468	10.465	0.003	97	1634406	4.00	3.99	
50 Carbon tetrachloride	117	10.483	10.483	0.000	97	1379762	4.00	4.16	
49 n-Butanol	31	10.493	10.538	-0.045	66	241678	4.00	4.36	
51 2,3-Dimethylpentane	71	10.576	10.577	-0.001	94	341915	4.00	4.03	
52 Thiophene	84	10.741	10.740	0.001	97	946920	4.00	4.04	
53 Isooctane	57	11.217	11.219	-0.002	98	2692898	4.00	3.99	
55 n-Heptane	71	11.594	11.594	0.000	94	532315	4.00	4.08	
54 1,2-Dichloropropane	63	11.687	11.685	0.002	92	694484	4.00	3.99	
56 Trichloroethene	130	11.718	11.718	0.000	96	766083	4.00	3.96	
57 Dibromomethane	93	11.811	11.808	0.003	95	789473	4.00	3.89	
58 Dichlorobromomethane	83	11.956	11.953	0.004	99	1265402	4.00	4.15	
59 1,4-Dioxane	88	11.997	12.035	-0.038	91	253088	4.00	4.12	
60 Methyl methacrylate	41	12.054	12.068	-0.014	92	787734	4.00	4.30	
61 Methylcyclohexane	83	12.483	12.484	-0.001	94	937963	4.00	3.68	
62 4-Methyl-2-pentanone (MIBK)	43	12.917	12.944	-0.027	97	1518450	4.00	4.14	
63 cis-1,3-Dichloropropene	75	12.948	12.950	-0.002	96	991696	4.00	4.33	
64 trans-1,3-Dichloropropene	75	13.646	13.645	0.001	99	930378	4.00	4.42	
65 Toluene	91	13.765	13.765	0.000	93	1991754	4.00	4.04	
66 1,1,2-Trichloroethane	83	13.842	13.844	-0.002	97	647099	4.00	3.95	
69 2-Hexanone	58	14.246	14.265	-0.019	91	697429	4.00	4.31	
71 n-Octane	85	14.447	14.446	0.001	96	581056	4.00	4.12	
70 Chlorodibromomethane	129	14.545	14.544	0.001	98	1481007	4.00	4.49	
72 Ethylene Dibromide	107	14.835	14.835	0.000	98	1245997	4.00	4.17	
73 Tetrachloroethene	129	14.902	14.903	-0.001	95	776667	4.00	3.86	
74 Chlorobenzene	112	15.781	15.778	0.003	94	1608983	4.00	3.96	
75 2,3-Dimethylheptane	43	15.791	15.790	0.001	96	2009738	4.00	3.87	
76 Ethylbenzene	91	16.065	16.065	0.000	98	2558634	4.00	4.07	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	3990112	8.00	8.23	
81 n-Nonane	57	16.639	16.639	0.000	94	1305941	4.00	4.18	
79 Bromoform	173	16.680	16.679	0.001	95	1720677	4.00	4.64	
80 Styrene	104	16.690	16.690	0.000	99	1481246	4.00	4.54	
82 o-Xylene	91	16.752	16.751	0.001	99	1923859	4.00	3.90	
83 1,1,2,2-Tetrachloroethane	83	17.078	17.077	0.001	98	1666518	4.00	4.17	
84 1,2,3-Trichloropropane	110	17.238	17.237	0.001	98	393840	4.00	4.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.336	17.337	-0.001	96	2702973	4.00	3.97	
86 N-Propylbenzene	120	17.900	17.900	0.000	99	751306	4.00	4.22	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	692051	4.00	3.96	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	99	2740797	4.00	4.23	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	93	1099439	4.00	3.79	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	88	1175360	4.00	4.36	
91 n-Decane	57	18.432	18.430	0.002	89	1625532	4.00	4.06	
92 tert-Butylbenzene	119	18.577	18.577	0.000	93	2515614	4.00	4.15	
93 1,2,4-Trimethylbenzene	105	18.592	18.592	0.000	96	2348070	4.00	4.16	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	99	3559589	4.00	4.21	
94 1,3-Dichlorobenzene	146	18.871	18.874	-0.003	98	1704781	4.00	4.16	
96 Benzyl chloride	91	18.954	18.955	-0.001	98	1864979	4.00	4.46	
97 1,4-Dichlorobenzene	146	18.964	18.965	-0.001	96	1643413	4.00	4.24	
98 4-Isopropyltoluene	119	19.026	19.027	-0.001	97	2745113	4.00	4.19	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	99	2232197	4.00	4.02	
100 Butylcyclohexane	83	19.135	19.136	-0.001	93	1748922	4.00	3.88	
102 2,3-Dihydroindene	117	19.336	19.338	-0.002	94	2343708	4.00	4.32	
101 1,2-Dichlorobenzene	146	19.336	19.338	-0.002	83	1715395	4.00	4.20	
103 Indene	116	19.471	19.471	0.000	91	1997698	4.00	4.28	
104 n-Butylbenzene	91	19.476	19.477	-0.001	97	2907810	4.00	4.29	
105 Undecane	57	19.791	19.792	-0.001	96	1846517	4.00	3.99	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	98	928720	4.00	5.49	
107 1,2,4,5-Tetramethylbenzene	119	20.256	20.255	0.001	97	2762451	4.00	4.52	
110 Dodecane	57	20.887	20.889	-0.002	95	1956105	4.00	4.34	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	94	1430337	4.00	4.25	
113 Naphthalene	128	21.254	21.255	-0.001	99	2816456	4.00	4.63	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	92	1646161	4.00	4.27	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	95	1468485	4.00	4.52	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	99	1308281	4.00	5.60	
118 1-Methylnaphthalene	142	22.282	22.283	-0.001	99	1640040	4.00	4.95	
A 120 C8 Range	1	14.452	(14.395-14.499)		0	5742340	4.00	4.01	
S 121 Xylenes, Total	100				0		12.0	12.1	
S 122 1,2-Dichloroethene, Total	1				0		8.00	7.88	

Reagents:

40L8DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D

Injection Date: 21-Feb-2019 01:57:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L8

Worklist Smp#: 15

Client ID:

Purge Vol: 500.000 mL

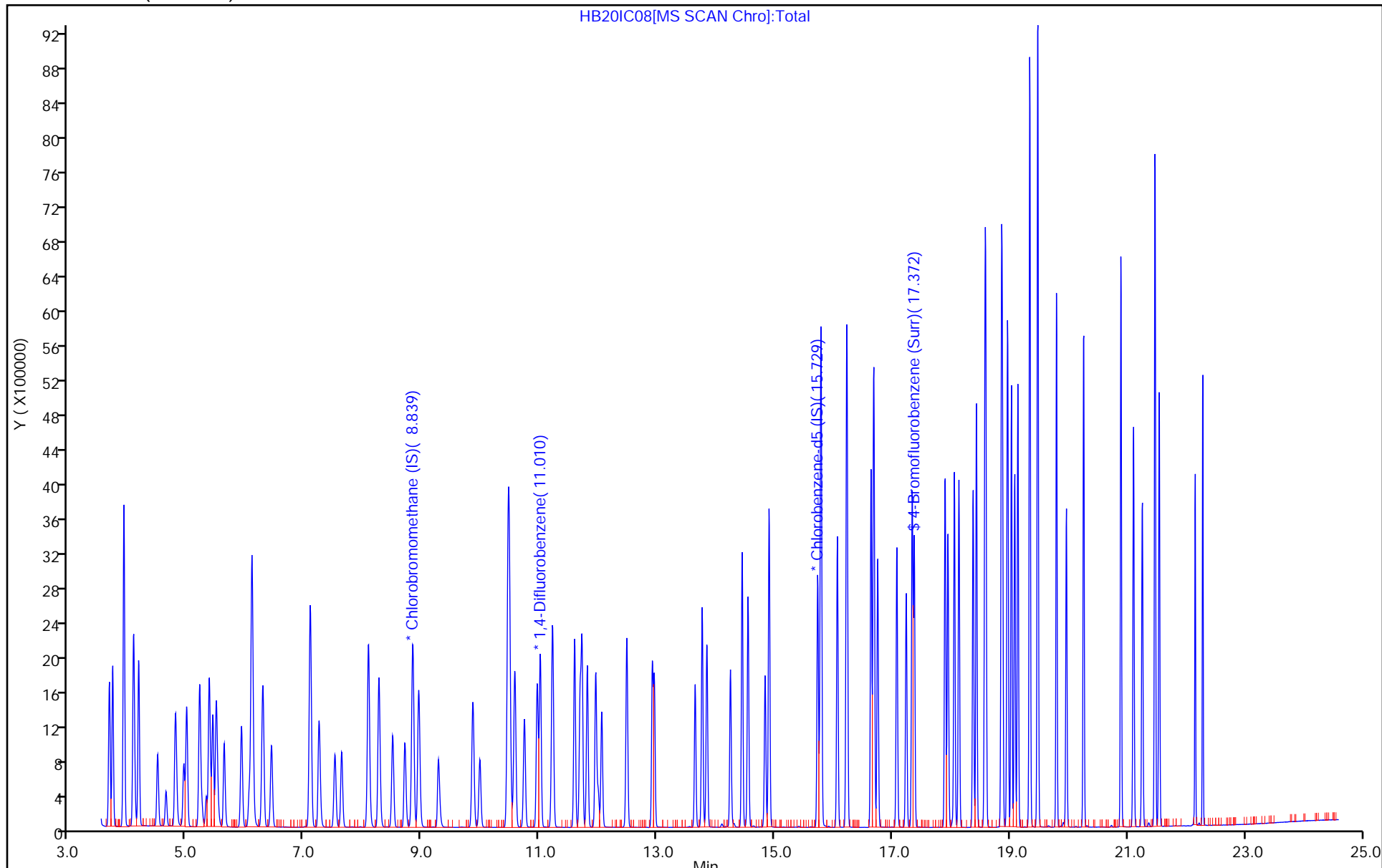
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D

Injection Date: 21-Feb-2019 01:57:30

Instrument ID: MH

Lims ID: IC L8

Client ID:

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

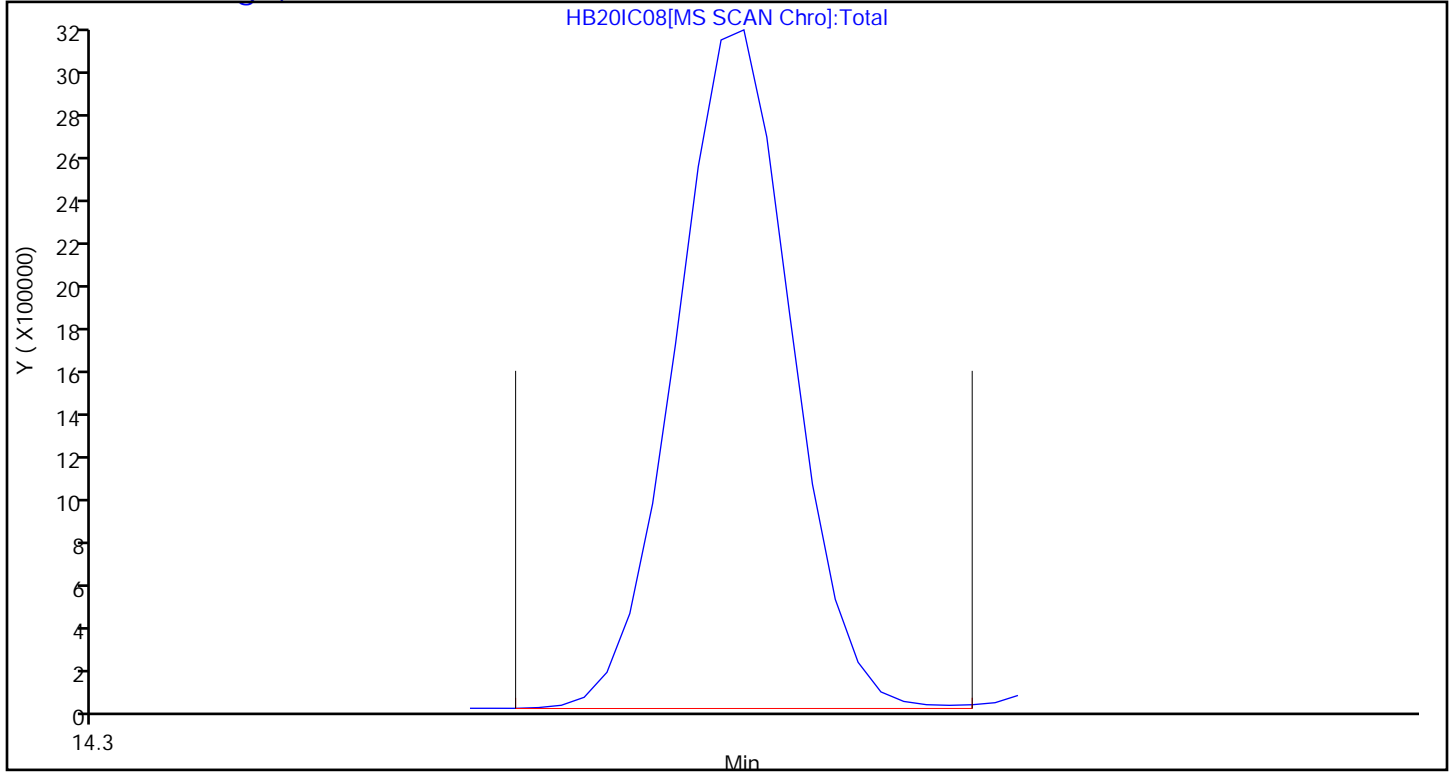
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector MS SCAN

A 120 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 06/21/2017 17:00
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/21/2017 22:43
 Lab File ID: GA11ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.7395	0.6739			2.00	-8.9	35.0
3-Methylthiophene	Ave	0.7319	0.6589			2.00	-10.0	35.0
2-Ethylthiophene	Ave	0.9478	0.8011			2.00	-15.5	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.8235			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.8516	0.6095			2.00	-28.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.167	0.8355			2.00	-28.4	35.0
Benzo (b) thiophene	Ave	1.068	0.7208			2.00	-32.5	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11ICV.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 11-Jan-2019 23:17:30 ALS Bottle#: 6 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-018
 Misc. Info.: S83
 Operator ID: 007126 Instrument ID: MG
 Sublist:

Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:47 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa Date: 14-Jan-2019 17:26:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	97	423755	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2327828	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	91	2182908	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.718	0.001	86	1777994	4.00	3.97	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	559021	2.00	2.01	
7 Propene	41	3.834	3.838	-0.004	98	314582	2.00	2.03	
8 Dichlorodifluoromethane	85	3.888	3.894	-0.006	100	919539	2.00	2.05	
9 Chloromethane	52	4.088	4.091	-0.003	99	102368	2.00	2.08	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	93	545988	2.00	2.08	
12 Vinyl chloride	62	4.271	4.277	-0.006	98	347000	2.00	2.03	
11 Acetaldehyde	44	4.265	4.278	-0.013	93	503377	10.0	7.94	
13 Butane	43	4.368	4.373	-0.005	87	595081	2.00	2.07	
14 Butadiene	54	4.368	4.375	-0.007	65	273211	2.00	2.07	
15 Bromomethane	94	4.718	4.722	-0.004	98	291645	2.00	1.98	
16 Chloroethane	64	4.875	4.879	-0.004	91	166315	2.00	2.02	
17 Ethanol	31	5.026	5.064	-0.038	98	540634	10.0	7.25	
18 Vinyl bromide	106	5.198	5.205	-0.007	99	291743	2.00	2.13	
19 2-Methylbutane	43	5.252	5.256	-0.004	92	423451	2.00	2.05	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	871181	2.00	1.98	
21 Acrolein	56	5.511	5.526	-0.015	96	57965	2.00	1.53	
22 Acetonitrile	40	5.581	5.603	-0.022	99	93536	2.00	1.58	
23 Acetone	58	5.651	5.666	-0.015	99	110896	2.00	1.74	
24 Pentane	72	5.721	5.725	-0.004	98	59420	2.00	2.11	
25 Isopropyl alcohol	45	5.786	5.840	-0.054	97	413062	2.00	2.43	
26 Ethyl ether	31	5.921	5.943	-0.022	91	311636	2.00	1.71	
27 1,1-Dichloroethene	96	6.234	6.242	-0.008	95	311458	2.00	2.08	
28 Acrylonitrile	53	6.358	6.375	-0.017	95	182005	2.00	1.76	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	93	655024	2.00	2.02	
30 2-Methyl-2-propanol	59	6.439	6.534	-0.095	96	512083	2.00	2.20	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	298505	2.00	1.72	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	95	335507	2.00	1.81	
33 Carbon disulfide	76	6.773	6.778	-0.005	100	923248	2.00	2.03	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	306868	2.00	2.05	
35 2-Methylpentane	43	7.463	7.468	-0.005	96	797621	2.00	1.86	
36 Methyl tert-butyl ether	73	7.603	7.643	-0.040	97	712180	2.00	1.71	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	597722	2.00	1.94	
38 Vinyl acetate	43	8.002	8.016	-0.014	100	695958	2.00	1.63	
40 Hexane	56	8.477	8.480	-0.003	77	278451	2.00	2.02	
39 2-Butanone (MEK)	72	8.472	8.499	-0.027	96	115958	2.00	1.72	
41 Isopropyl ether	45	8.649	8.679	-0.030	97	961415	2.00	1.82	
42 cis-1,2-Dichloroethene	96	8.903	8.906	-0.003	97	310749	2.00	2.03	
43 Ethyl acetate	43	9.102	9.131	-0.029	98	563610	2.00	1.61	
44 Chloroform	83	9.253	9.261	-0.008	97	672705	2.00	1.90	
45 Tert-butyl ethyl ether	59	9.350	9.389	-0.039	96	809494	2.00	1.66	
46 Tetrahydrofuran	42	9.685	9.725	-0.040	94	314199	2.00	1.67	
47 1,1,1-Trichloroethane	97	10.300	10.303	-0.003	96	734755	2.00	1.92	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	98	445746	2.00	1.96	
49 Cyclohexane	69	10.882	10.888	-0.006	95	166660	2.00	2.18	
50 Benzene	78	10.887	10.893	-0.006	98	889085	2.00	2.14	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	98	749968	2.00	2.17	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	91	227526	2.00	2.07	
51 n-Butanol	31	10.952	11.004	-0.052	78	125495	2.00	2.41	
54 Thiophene	84	11.162	11.164	-0.002	97	483942	2.00	2.00	
55 Isooctane	57	11.626	11.632	-0.006	98	1667827	2.00	2.05	
56 n-Heptane	71	11.993	11.995	-0.002	94	338068	2.00	2.02	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	87	307526	2.00	1.88	
58 Trichloroethene	130	12.122	12.124	-0.002	95	394652	2.00	2.08	
59 Dibromomethane	93	12.214	12.216	-0.002	94	344072	2.00	2.00	
60 Dichlorobromomethane	83	12.354	12.354	0.000	98	685664	2.00	2.02	
61 1,4-Dioxane	88	12.386	12.421	-0.035	98	97309	2.00	2.01	
62 Methyl methacrylate	41	12.440	12.453	-0.013	90	361838	2.00	1.73	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	714807	2.00	2.51	
64 4-Methyl-2-pentanone (MIBK)	43	13.298	13.321	-0.023	99	643830	2.00	1.96	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	98	490279	2.00	1.97	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	97	456019	2.00	1.94	
67 Toluene	91	14.144	14.144	0.000	93	902637	2.00	1.88	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	99	277868	2.00	1.90	
76 2-Methylthiophene	97	14.295	14.295	0.000	98	735484	NC	NC	
77 3-Methylthiophene	97	14.495	14.495	0.000	99	719176	NC	NC	
69 2-Hexanone	58	14.608	14.631	-0.023	91	305613	2.00	2.12	
70 n-Octane	85	14.802	14.804	-0.002	96	361178	2.00	2.09	
71 Chlorodibromomethane	129	14.915	14.920	-0.005	98	628573	2.00	2.12	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	501417	2.00	1.97	
73 Tetrachloroethene	129	15.271	15.272	-0.001	95	370073	2.00	2.05	
74 2,3-Dimethylheptane	43	16.139	16.139	0.000	96	1065455	2.00	1.82	
75 Chlorobenzene	112	16.139	16.142	-0.003	92	752108	2.00	2.01	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	1190399	2.00	1.82	
91 2-Ethylthiophene	97	16.522	16.522	0.000	98	874372	NC	NC	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	1840740	4.00	3.69	
80 n-Nonane	57	16.975	16.977	-0.002	94	721028	2.00	2.03	
81 Bromoform	173	17.040	17.041	-0.001	93	567100	2.00	2.18	
82 Styrene	104	17.045	17.047	-0.002	99	646380	2.00	1.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 o-Xylene	91	17.105	17.106	-0.001	98	939571	2.00	1.78	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	644662	2.00	1.82	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	202004	2.00	1.78	
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	1283692	2.00	1.83	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	347734	2.00	1.83	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	330501	2.00	1.91	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	1189898	2.00	1.70	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	92	543840	2.00	2.00	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	475664	2.00	1.73	
93 n-Decane	57	18.679	18.682	-0.003	90	840779	2.00	1.93	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	91	1089707	2.00	1.79	
95 1,2,4-Trimethylbenzene	105	18.846	18.846	0.000	96	1053331	2.00	1.76	
96 sec-Butylbenzene	105	19.094	19.094	0.000	98	1546183	2.00	1.81	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	98	727360	2.00	1.86	
98 Benzyl chloride	91	19.186	19.188	-0.002	98	972247	2.00	1.83	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	95	730746	2.00	1.82	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	1224528	2.00	1.79	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	783832	2.00	1.45	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	922903	2.00	1.87	
103 2,3-Dihydroindene	117	19.547	19.550	-0.003	94	938000	2.00	1.74	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	94	692280	2.00	1.77	
105 n-Butylbenzene	91	19.671	19.673	-0.002	98	1289575	2.00	1.85	
106 Indene	116	19.677	19.679	-0.002	90	708434	2.00	1.53	
107 Undecane	57	19.963	19.963	0.000	95	845217	2.00	1.91	
117 1,2-Dimethyl-4-Ethylbenzen	119	20.033	20.033	0.000	98	898836	NC	NC	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	92	280496	2.00	1.73	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	97	1105869	2.00	1.77	
118 1,2,3,5-Tetramethylbenzene	119	20.470	20.470	0.000	95	665260	NC	NC	
119 1,2,3,4-Tetramethylbenzene	119	20.874	20.874	0.000	97	911881	NC	NC	
110 Dodecane	57	21.014	21.014	0.000	94	711861	2.00	2.04	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	581479	2.00	1.89	
112 Naphthalene	128	21.375	21.377	-0.002	99	1346876	2.00	2.00	
120 Benzo(b)thiophene	134	21.478	21.478	0.000	99	786705	NC	NC	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	95	590622	2.00	1.79	
114 1,2,3-Trichlorobenzene	180	21.650	21.651	-0.001	95	573612	2.00	2.11	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	763689	2.00	2.33	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	898886	2.00	2.23	
A 122 C8 Range	1	14.813	(14.744-14.902)		0	3557712	2.00	2.06	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.08	
S 124 Xylenes, Total	100				0		6.00	5.47	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00083

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11ICV.D

Injection Date: 11-Jan-2019 23:17:30

Instrument ID: MG

Operator ID: 007126

Lims ID: ICV

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

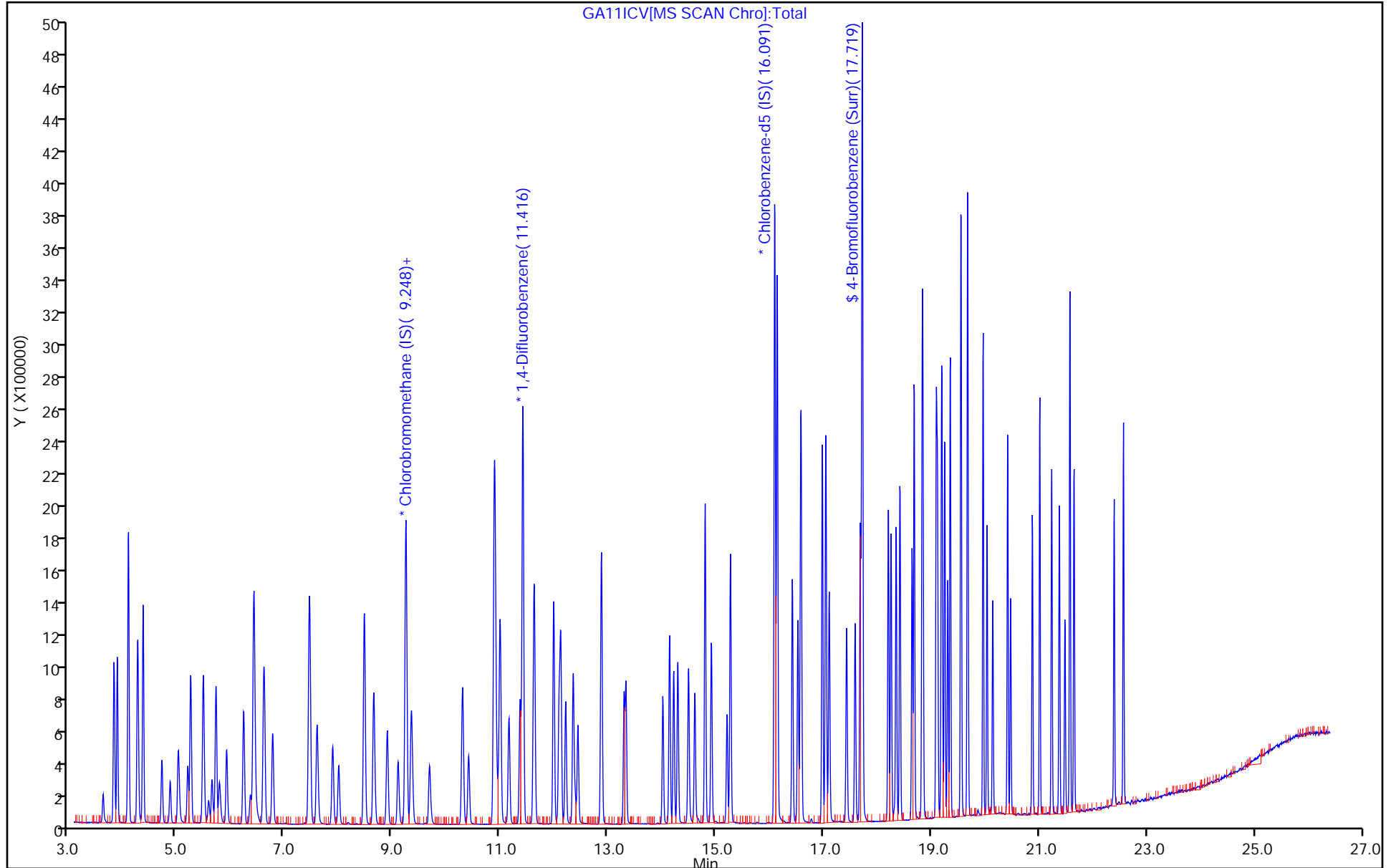
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.638		2.01	2.00	0.7	35.0
Propene	Ave	1.463	1.485		2.03	2.00	1.5	35.0
Dichlorodifluoromethane	Ave	4.235	4.340		2.05	2.00	2.5	35.0
Chloromethane	Ave	0.4649	0.4832		2.08	2.00	3.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.577		2.08	2.00	4.1	35.0
Acetaldehyde	Ave	0.5987	0.4752		7.94	10.0	-20.6	35.0
Vinyl chloride	Ave	1.611	1.638		2.03	2.00	1.7	35.0
1,3-Butadiene	Ave	1.245	1.289		2.07	2.00	3.6	35.0
Butane	Ave	2.712	2.809		2.07	2.00	3.5	35.0
Bromomethane	Ave	1.392	1.376		1.98	2.00	-1.1	35.0
Chloroethane	Ave	0.7761	0.7850		2.02	2.00	1.1	35.0
Ethanol	Ave	0.7042	0.5103		7.25	10.0	-27.5	35.0
Vinyl bromide	Ave	1.290	1.377		2.13	2.00	6.7	35.0
2-Methylbutane	Ave	1.947	1.999		2.05	2.00	2.7	35.0
Trichlorofluoromethane	Ave	4.152	4.112		1.98	2.00	-1.0	35.0
Acrolein	Ave	0.3574	0.2736		1.53	2.00	-23.4	35.0
Acetonitrile	Ave	0.5574	0.4415		1.58	2.00	-20.8	35.0
Acetone	Ave	0.6013	0.5234		1.74	2.00	-13.0	35.0
Pentane	Ave	0.2653	0.2805		2.11	2.00	5.7	35.0
Isopropyl alcohol	Ave	1.603	1.950		2.43	2.00	21.6	35.0
Ethyl ether	Ave	1.725	1.471		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.412	1.470		2.08	2.00	4.1	35.0
Acrylonitrile	Ave	0.9747	0.8590		1.76	2.00	-11.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.092		2.02	2.00	1.0	35.0
tert-Butyl alcohol	Ave	2.196	2.417		2.20	2.00	10.0	35.0
Methylene Chloride	Ave	1.643	1.409		1.72	2.00	-14.2	35.0
3-Chloropropene	Ave	1.751	1.584		1.81	2.00	-9.6	35.0
Carbon disulfide	Ave	4.284	4.357		2.03	2.00	1.7	35.0
trans-1,2-Dichloroethene	Ave	1.414	1.448		2.05	2.00	2.4	35.0
2-Methylpentane	Ave	4.045	3.765		1.86	2.00	-6.9	35.0
Methyl tert-butyl ether	Ave	3.932	3.361		1.71	2.00	-14.5	35.0
1,1-Dichloroethane	Ave	2.906	2.821		1.94	2.00	-2.9	35.0
Vinyl acetate	Ave	4.034	3.285		1.63	2.00	-18.6	35.0
2-Butanone (MEK)	Ave	0.6347	0.5473		1.72	2.00	-13.8	35.0
Hexane	Ave	1.304	1.314		2.02	2.00	0.8	35.0
Isopropyl ether	Ave	4.992	4.538		1.82	2.00	-9.1	35.0
cis-1,2-Dichloroethene	Ave	1.447	1.467		2.03	2.00	1.4	35.0
Ethyl acetate	Ave	3.312	2.660		1.61	2.00	-19.7	35.0
Chloroform	Ave	3.344	3.175		1.90	2.00	-5.1	35.0
Tert-butyl ethyl ether	Ave	4.607	3.821		1.66	2.00	-17.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.483		1.67	2.00	-16.3	35.0
1,1,1-Trichloroethane	Ave	3.620	3.468		1.92	2.00	-4.2	35.0
1,2-Dichloroethane	Ave	0.3910	0.3830		1.96	2.00	-2.1	35.0
Cyclohexane	Ave	0.1314	0.1432		2.18	2.00	8.9	35.0
Benzene	Ave	0.7153	0.7639		2.14	2.00	6.8	35.0
Carbon tetrachloride	Ave	0.5933	0.6444		2.17	2.00	8.6	35.0
1-Butanol	Ave	0.0896	0.1078		2.41	2.00	20.4	35.0
2,3-Dimethylpentane	Ave	0.1886	0.1955		2.07	2.00	3.6	35.0
Thiophene	Ave	0.4156	0.4158		2.00	2.00	0.0	35.0
2,2,4-Trimethylpentane	Ave	1.401	1.433		2.05	2.00	2.3	35.0
Heptane	Ave	0.2875	0.2905		2.02	2.00	1.0	35.0
1,2-Dichloropropane	Ave	0.2813	0.2642		1.88	2.00	-6.1	35.0
Trichloroethene	Ave	0.3257	0.3391		2.08	2.00	4.1	35.0
Dibromomethane	Ave	0.2963	0.2956		2.00	2.00	-0.2	35.0
Bromodichloromethane	Ave	0.5843	0.5891		2.02	2.00	0.8	35.0
1,4-Dioxane	Ave	0.0832	0.0836		2.01	2.00	0.5	35.0
Methyl methacrylate	Ave	0.3595	0.3109		1.73	2.00	-13.5	35.0
Methylcyclohexane	Ave	0.4896	0.6141		2.51	2.00	25.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.5532		1.96	2.00	-1.8	35.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4212		1.97	2.00	-1.5	35.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4178		1.94	2.00	-3.1	35.0
Toluene	Ave	0.8801	0.8270		1.88	2.00	-6.0	35.0
1,1,2-Trichloroethane	Ave	0.2685	0.2546		1.90	2.00	-5.2	35.0
2-Hexanone	Ave	0.2641	0.2800		2.12	2.00	6.0	35.0
Octane	Ave	0.3165	0.3309		2.09	2.00	4.5	35.0
Dibromochloromethane	Ave	0.5446	0.5759		2.12	2.00	5.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4594		1.97	2.00	-1.3	35.0
Tetrachloroethene	Ave	0.3302	0.3391		2.05	2.00	2.7	35.0
2,3-Dimethylheptane	Ave	1.076	0.9762		1.82	2.00	-9.2	35.0
Chlorobenzene	Ave	0.6841	0.6891		2.01	2.00	0.7	35.0
Ethylbenzene	Ave	1.196	1.091		1.82	2.00	-8.8	35.0
m-Xylene & p-Xylene	Ave	0.9148	0.8433		3.69	4.00	-7.8	35.0
Nonane	Ave	0.6507	0.6606		2.03	2.00	1.5	35.0
Bromoform	Ave	0.4761	0.5196		2.18	2.00	9.1	35.0
Styrene	Ave	0.6323	0.5922		1.87	2.00	-6.3	35.0
o-Xylene	Ave	0.9646	0.8608		1.78	2.00	-10.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5907		1.82	2.00	-8.8	35.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	35.0
Isopropylbenzene	Ave	1.286	1.176		1.83	2.00	-8.5	35.0
Propylbenzene	Ave	0.3476	0.3186		1.83	2.00	-8.3	35.0
2-Chlorotoluene	Ave	0.3175	0.3028		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.090		1.70	2.00	-15.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4983		2.00	2.00	-0.2	35.0
Alpha Methyl Styrene	Ave	0.5043	0.4358		1.73	2.00	-13.6	35.0
Decane	Ave	0.7982	0.7703		1.93	2.00	-3.5	35.0
tert-Butylbenzene	Ave	1.114	0.998		1.79	2.00	-10.4	35.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9651		1.76	2.00	-11.9	35.0
sec-Butylbenzene	Ave	1.569	1.417		1.81	2.00	-9.7	35.0
1,3-Dichlorobenzene	Ave	0.7160	0.6664		1.86	2.00	-6.9	35.0
Benzyl chloride	Ave	0.9762	0.8908		1.83	2.00	-8.7	35.0
1,4-Dichlorobenzene	Ave	0.7344	0.6695		1.82	2.00	-8.8	35.0
4-Isopropyltoluene	Ave	1.255	1.122		1.79	2.00	-10.6	35.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.7182		1.45	2.00	-27.5	35.0
Butylcyclohexane	Ave	0.9039	0.8456		1.87	2.00	-6.5	35.0
Indane	Ave	0.9903	0.8594		1.74	2.00	-13.2	35.0
1,2-Dichlorobenzene	Ave	0.7165	0.6343		1.77	2.00	-11.5	35.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	35.0
Indene	Ave	0.8508	0.6491		1.53	2.00	-23.7	35.0
Undecane	Ave	0.8098	0.7744		1.91	2.00	-4.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.2570		1.73	2.00	-13.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.013		1.77	2.00	-11.3	35.0
Dodecane	Ave	0.6396	0.6522		2.04	2.00	2.0	35.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5328		1.89	2.00	-5.7	35.0
Naphthalene	Ave	1.234	1.234		2.00	2.00	0.0	35.0
Hexachlorobutadiene	Ave	0.6047	0.5411		1.79	2.00	-10.5	35.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.5256		2.11	2.00	5.4	35.0
2-Methylnaphthalene	Ave	0.6016	0.6997		2.33	2.00	16.3	50.0
1-Methylnaphthalene	Ave	0.7372	0.8235		2.23	2.00	11.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8145		3.97	4.00	-0.6	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11ICV.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 11-Jan-2019 23:17:30 ALS Bottle#: 6 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-018
 Misc. Info.: S83
 Operator ID: 007126 Instrument ID: MG
 Sublist:

Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:47 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa Date: 14-Jan-2019 17:26:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	97	423755	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2327828	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	91	2182908	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.718	0.001	86	1777994	4.00	3.97	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	559021	2.00	2.01	
7 Propene	41	3.834	3.838	-0.004	98	314582	2.00	2.03	
8 Dichlorodifluoromethane	85	3.888	3.894	-0.006	100	919539	2.00	2.05	
9 Chloromethane	52	4.088	4.091	-0.003	99	102368	2.00	2.08	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	93	545988	2.00	2.08	
12 Vinyl chloride	62	4.271	4.277	-0.006	98	347000	2.00	2.03	
11 Acetaldehyde	44	4.265	4.278	-0.013	93	503377	10.0	7.94	
13 Butane	43	4.368	4.373	-0.005	87	595081	2.00	2.07	
14 Butadiene	54	4.368	4.375	-0.007	65	273211	2.00	2.07	
15 Bromomethane	94	4.718	4.722	-0.004	98	291645	2.00	1.98	
16 Chloroethane	64	4.875	4.879	-0.004	91	166315	2.00	2.02	
17 Ethanol	31	5.026	5.064	-0.038	98	540634	10.0	7.25	
18 Vinyl bromide	106	5.198	5.205	-0.007	99	291743	2.00	2.13	
19 2-Methylbutane	43	5.252	5.256	-0.004	92	423451	2.00	2.05	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	871181	2.00	1.98	
21 Acrolein	56	5.511	5.526	-0.015	96	57965	2.00	1.53	
22 Acetonitrile	40	5.581	5.603	-0.022	99	93536	2.00	1.58	
23 Acetone	58	5.651	5.666	-0.015	99	110896	2.00	1.74	
24 Pentane	72	5.721	5.725	-0.004	98	59420	2.00	2.11	
25 Isopropyl alcohol	45	5.786	5.840	-0.054	97	413062	2.00	2.43	
26 Ethyl ether	31	5.921	5.943	-0.022	91	311636	2.00	1.71	
27 1,1-Dichloroethene	96	6.234	6.242	-0.008	95	311458	2.00	2.08	
28 Acrylonitrile	53	6.358	6.375	-0.017	95	182005	2.00	1.76	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	93	655024	2.00	2.02	
30 2-Methyl-2-propanol	59	6.439	6.534	-0.095	96	512083	2.00	2.20	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	298505	2.00	1.72	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	95	335507	2.00	1.81	
33 Carbon disulfide	76	6.773	6.778	-0.005	100	923248	2.00	2.03	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	306868	2.00	2.05	
35 2-Methylpentane	43	7.463	7.468	-0.005	96	797621	2.00	1.86	
36 Methyl tert-butyl ether	73	7.603	7.643	-0.040	97	712180	2.00	1.71	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	597722	2.00	1.94	
38 Vinyl acetate	43	8.002	8.016	-0.014	100	695958	2.00	1.63	
40 Hexane	56	8.477	8.480	-0.003	77	278451	2.00	2.02	
39 2-Butanone (MEK)	72	8.472	8.499	-0.027	96	115958	2.00	1.72	
41 Isopropyl ether	45	8.649	8.679	-0.030	97	961415	2.00	1.82	
42 cis-1,2-Dichloroethene	96	8.903	8.906	-0.003	97	310749	2.00	2.03	
43 Ethyl acetate	43	9.102	9.131	-0.029	98	563610	2.00	1.61	
44 Chloroform	83	9.253	9.261	-0.008	97	672705	2.00	1.90	
45 Tert-butyl ethyl ether	59	9.350	9.389	-0.039	96	809494	2.00	1.66	
46 Tetrahydrofuran	42	9.685	9.725	-0.040	94	314199	2.00	1.67	
47 1,1,1-Trichloroethane	97	10.300	10.303	-0.003	96	734755	2.00	1.92	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	98	445746	2.00	1.96	
49 Cyclohexane	69	10.882	10.888	-0.006	95	166660	2.00	2.18	
50 Benzene	78	10.887	10.893	-0.006	98	889085	2.00	2.14	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	98	749968	2.00	2.17	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	91	227526	2.00	2.07	
51 n-Butanol	31	10.952	11.004	-0.052	78	125495	2.00	2.41	
54 Thiophene	84	11.162	11.164	-0.002	97	483942	2.00	2.00	
55 Isooctane	57	11.626	11.632	-0.006	98	1667827	2.00	2.05	
56 n-Heptane	71	11.993	11.995	-0.002	94	338068	2.00	2.02	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	87	307526	2.00	1.88	
58 Trichloroethene	130	12.122	12.124	-0.002	95	394652	2.00	2.08	
59 Dibromomethane	93	12.214	12.216	-0.002	94	344072	2.00	2.00	
60 Dichlorobromomethane	83	12.354	12.354	0.000	98	685664	2.00	2.02	
61 1,4-Dioxane	88	12.386	12.421	-0.035	98	97309	2.00	2.01	
62 Methyl methacrylate	41	12.440	12.453	-0.013	90	361838	2.00	1.73	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	714807	2.00	2.51	
64 4-Methyl-2-pentanone (MIBK)	43	13.298	13.321	-0.023	99	643830	2.00	1.96	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	98	490279	2.00	1.97	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	97	456019	2.00	1.94	
67 Toluene	91	14.144	14.144	0.000	93	902637	2.00	1.88	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	99	277868	2.00	1.90	
76 2-Methylthiophene	97	14.295	14.295	0.000	98	735484	NC	NC	
77 3-Methylthiophene	97	14.495	14.495	0.000	99	719176	NC	NC	
69 2-Hexanone	58	14.608	14.631	-0.023	91	305613	2.00	2.12	
70 n-Octane	85	14.802	14.804	-0.002	96	361178	2.00	2.09	
71 Chlorodibromomethane	129	14.915	14.920	-0.005	98	628573	2.00	2.12	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	501417	2.00	1.97	
73 Tetrachloroethene	129	15.271	15.272	-0.001	95	370073	2.00	2.05	
74 2,3-Dimethylheptane	43	16.139	16.139	0.000	96	1065455	2.00	1.82	
75 Chlorobenzene	112	16.139	16.142	-0.003	92	752108	2.00	2.01	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	1190399	2.00	1.82	
91 2-Ethylthiophene	97	16.522	16.522	0.000	98	874372	NC	NC	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	1840740	4.00	3.69	
80 n-Nonane	57	16.975	16.977	-0.002	94	721028	2.00	2.03	
81 Bromoform	173	17.040	17.041	-0.001	93	567100	2.00	2.18	
82 Styrene	104	17.045	17.047	-0.002	99	646380	2.00	1.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 o-Xylene	91	17.105	17.106	-0.001	98	939571	2.00	1.78	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	644662	2.00	1.82	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	202004	2.00	1.78	
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	1283692	2.00	1.83	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	347734	2.00	1.83	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	330501	2.00	1.91	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	1189898	2.00	1.70	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	92	543840	2.00	2.00	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	475664	2.00	1.73	
93 n-Decane	57	18.679	18.682	-0.003	90	840779	2.00	1.93	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	91	1089707	2.00	1.79	
95 1,2,4-Trimethylbenzene	105	18.846	18.846	0.000	96	1053331	2.00	1.76	
96 sec-Butylbenzene	105	19.094	19.094	0.000	98	1546183	2.00	1.81	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	98	727360	2.00	1.86	
98 Benzyl chloride	91	19.186	19.188	-0.002	98	972247	2.00	1.83	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	95	730746	2.00	1.82	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	1224528	2.00	1.79	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	783832	2.00	1.45	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	922903	2.00	1.87	
103 2,3-Dihydroindene	117	19.547	19.550	-0.003	94	938000	2.00	1.74	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	94	692280	2.00	1.77	
105 n-Butylbenzene	91	19.671	19.673	-0.002	98	1289575	2.00	1.85	
106 Indene	116	19.677	19.679	-0.002	90	708434	2.00	1.53	
107 Undecane	57	19.963	19.963	0.000	95	845217	2.00	1.91	
117 1,2-Dimethyl-4-Ethylbenzen	119	20.033	20.033	0.000	98	898836	NC	NC	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	92	280496	2.00	1.73	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	97	1105869	2.00	1.77	
118 1,2,3,5-Tetramethylbenzene	119	20.470	20.470	0.000	95	665260	NC	NC	
119 1,2,3,4-Tetramethylbenzene	119	20.874	20.874	0.000	97	911881	NC	NC	
110 Dodecane	57	21.014	21.014	0.000	94	711861	2.00	2.04	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	581479	2.00	1.89	
112 Naphthalene	128	21.375	21.377	-0.002	99	1346876	2.00	2.00	
120 Benzo(b)thiophene	134	21.478	21.478	0.000	99	786705	NC	NC	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	95	590622	2.00	1.79	
114 1,2,3-Trichlorobenzene	180	21.650	21.651	-0.001	95	573612	2.00	2.11	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	763689	2.00	2.33	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	898886	2.00	2.23	
A 122 C8 Range	1	14.813	(14.744-14.902)		0	3557712	2.00	2.06	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.08	
S 124 Xylenes, Total	100				0		6.00	5.47	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00083

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11ICV.D

Injection Date: 11-Jan-2019 23:17:30

Instrument ID: MG

Operator ID: 007126

Lims ID: ICV

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

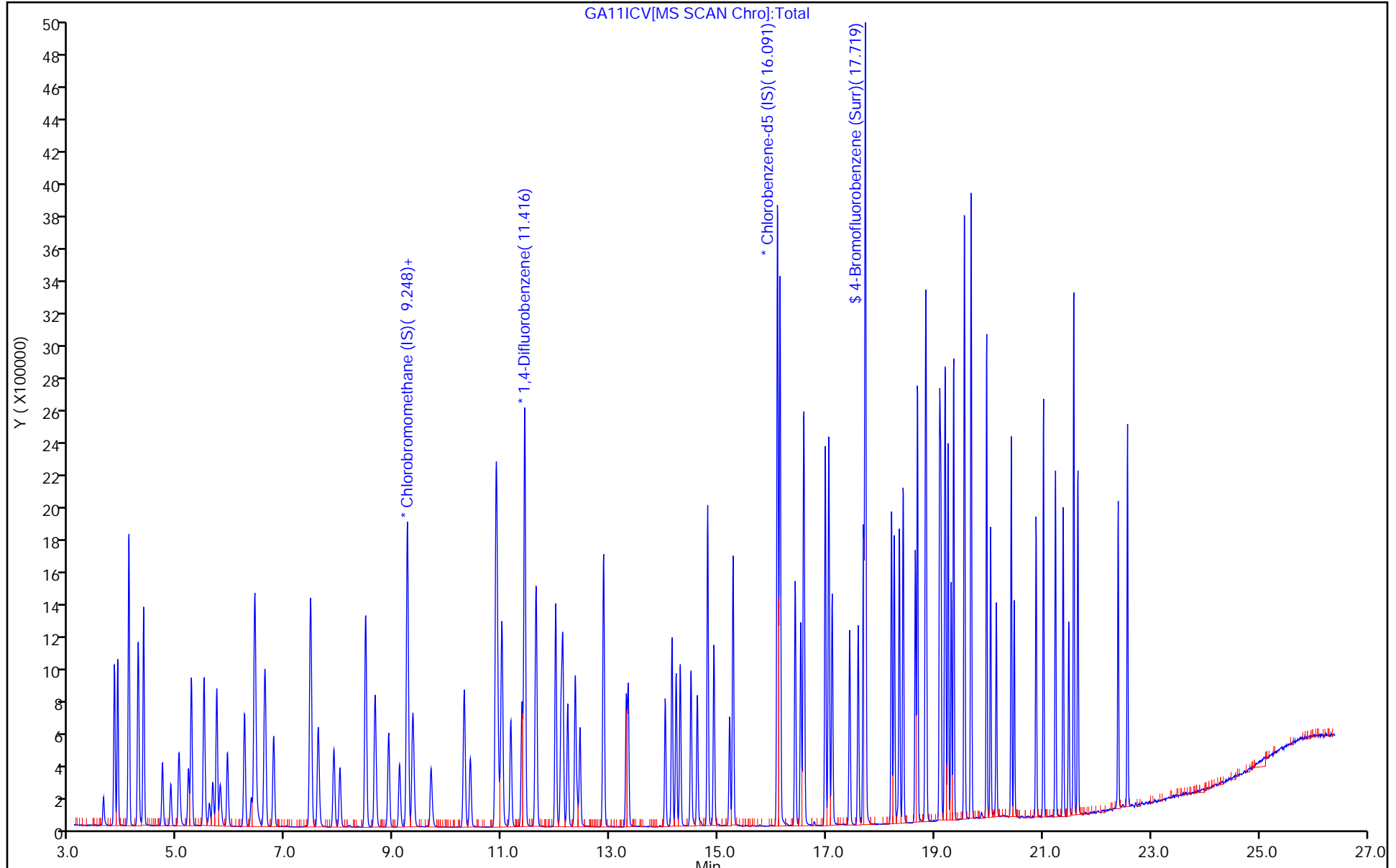
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.652		2.02	2.00	1.2	30.0
Propene	Ave	1.463	1.534		2.10	2.00	4.8	30.0
Dichlorodifluoromethane	Ave	4.235	4.356		2.06	2.00	2.9	30.0
Chloromethane	Ave	0.4649	0.4693		2.02	2.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.404		1.94	2.00	-2.9	30.0
Acetaldehyde	Ave	0.5987	0.5225		8.73	10.0	-12.7	30.0
Vinyl chloride	Ave	1.611	1.586		1.97	2.00	-1.5	30.0
1,3-Butadiene	Ave	1.245	1.283		2.06	2.00	3.0	30.0
Butane	Ave	2.712	2.755		2.03	2.00	1.6	30.0
Bromomethane	Ave	1.392	1.313		1.89	2.00	-5.7	30.0
Chloroethane	Ave	0.7761	0.7469		1.92	2.00	-3.8	30.0
Ethanol	Ave	0.7042	0.7541		10.7	10.0	7.1	30.0
Vinyl bromide	Ave	1.290	1.209		1.87	2.00	-6.3	30.0
2-Methylbutane	Ave	1.947	1.895		1.95	2.00	-2.7	30.0
Trichlorofluoromethane	Ave	4.152	4.042		1.95	2.00	-2.7	30.0
Acrolein	Ave	0.3574	0.3194		1.79	2.00	-10.6	30.0
Acetonitrile	Ave	0.5574	0.5302		1.90	2.00	-4.9	30.0
Acetone	Ave	0.6013	0.4988		4.98	6.00	-17.0	30.0
Pentane	Ave	0.2653	0.2565		1.93	2.00	-3.3	30.0
Isopropyl alcohol	Ave	1.603	1.779		6.66	6.00	10.9	30.0
Ethyl ether	Ave	1.725	1.691		1.96	2.00	-2.0	30.0
1,1-Dichloroethene	Ave	1.412	1.514		2.14	2.00	7.2	30.0
Acrylonitrile	Ave	0.9747	0.9432		1.94	2.00	-3.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.167		2.07	2.00	3.5	30.0
tert-Butyl alcohol	Ave	2.196	2.812		2.56	2.00	28.0	30.0
Methylene Chloride	Ave	1.643	1.484		1.81	2.00	-9.7	30.0
3-Chloropropene	Ave	1.751	1.648		1.88	2.00	-5.9	30.0
Carbon disulfide	Ave	4.284	4.628		2.16	2.00	8.0	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.521		2.15	2.00	7.6	30.0
2-Methylpentane	Ave	4.045	4.401		2.18	2.00	8.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.883		1.97	2.00	-1.3	30.0
1,1-Dichloroethane	Ave	2.906	2.982		2.05	2.00	2.6	30.0
Vinyl acetate	Ave	4.034	3.919		1.94	2.00	-2.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.6318		1.99	2.00	-0.5	30.0
Hexane	Ave	1.304	1.409		2.16	2.00	8.1	30.0
Isopropyl ether	Ave	4.992	5.130		2.06	2.00	2.8	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.511		2.09	2.00	4.4	30.0
Ethyl acetate	Ave	3.312	3.321		2.01	2.00	0.3	30.0
Chloroform	Ave	3.344	3.351		2.00	2.00	0.2	30.0
Tert-butyl ethyl ether	Ave	4.607	4.651		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.780		2.01	2.00	0.4	30.0
1,1,1-Trichloroethane	Ave	3.620	3.686		2.04	2.00	1.8	30.0
1,2-Dichloroethane	Ave	0.3910	0.3917		2.00	2.00	0.2	30.0
Cyclohexane	Ave	0.1314	0.1477		2.25	2.00	12.4	30.0
Benzene	Ave	0.7153	0.7399		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6573		2.22	2.00	10.8	30.0
1-Butanol	Ave	0.0896	0.1263		2.82	2.00	41.0*	30.0
2,3-Dimethylpentane	Ave	0.1886	0.2098		2.22	2.00	11.2	30.0
Thiophene	Ave	0.4156	0.4526		2.18	2.00	8.9	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.515		2.16	2.00	8.2	30.0
Heptane	Ave	0.2875	0.3131		2.18	2.00	8.9	30.0
1,2-Dichloropropane	Ave	0.2813	0.2865		2.04	2.00	1.8	30.0
Trichloroethene	Ave	0.3257	0.3404		2.09	2.00	4.5	30.0
Dibromomethane	Ave	0.2963	0.3076		2.08	2.00	3.8	30.0
Bromodichloromethane	Ave	0.5843	0.6356		2.18	2.00	8.8	30.0
1,4-Dioxane	Ave	0.0832	0.1054		2.53	2.00	26.7	30.0
Methyl methacrylate	Ave	0.3595	0.3845		2.14	2.00	7.0	30.0
Methylcyclohexane	Ave	0.4896	0.5279		2.16	2.00	7.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.6430		2.28	2.00	14.2	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4641		2.17	2.00	8.5	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4612		2.14	2.00	7.0	30.0
Toluene	Ave	0.8801	0.8908		2.02	2.00	1.2	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2829		2.11	2.00	5.3	30.0
2-Hexanone	Ave	0.2641	0.3188		2.41	2.00	20.7	30.0
Octane	Ave	0.3165	0.3439		2.17	2.00	8.7	30.0
Dibromochloromethane	Ave	0.5446	0.5989		2.20	2.00	10.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4929		2.12	2.00	5.8	30.0
Tetrachloroethene	Ave	0.3302	0.3406		2.06	2.00	3.1	30.0
2,3-Dimethylheptane	Ave	1.076	1.161		2.16	2.00	8.0	30.0
Chlorobenzene	Ave	0.6841	0.7203		2.11	2.00	5.3	30.0
Ethylbenzene	Ave	1.196	1.211		2.03	2.00	1.3	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.9437		4.13	4.00	3.2	30.0
Nonane	Ave	0.6507	0.7098		2.18	2.00	9.1	30.0
Bromoform	Ave	0.4761	0.5476		2.30	2.00	15.0	30.0
Styrene	Ave	0.6323	0.6714		2.12	2.00	6.2	30.0
o-Xylene	Ave	0.9646	0.9910		2.05	2.00	2.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.6633		2.05	2.00	2.4	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.2051		1.98	2.00	-1.2	30.0
Isopropylbenzene	Ave	1.286	1.274		1.98	2.00	-1.0	30.0
Propylbenzene	Ave	0.3476	0.3424		1.97	2.00	-1.5	30.0
2-Chlorotoluene	Ave	0.3175	0.3184		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.295		2.02	2.00	0.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4918		1.97	2.00	-1.5	30.0
Alpha Methyl Styrene	Ave	0.5043	0.5202		2.06	2.00	3.1	30.0
Decane	Ave	0.7982	0.8625		2.16	2.00	8.1	30.0
tert-Butylbenzene	Ave	1.114	1.103		1.98	2.00	-1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.096	1.089		1.99	2.00	-0.6	30.0
sec-Butylbenzene	Ave	1.569	1.580		2.01	2.00	0.7	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.7287		2.04	2.00	1.8	30.0
Benzyl chloride	Ave	0.9762	1.033		2.12	2.00	5.8	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.7367		2.01	2.00	0.3	30.0
4-Isopropyltoluene	Ave	1.255	1.277		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	1.101		2.22	2.00	11.1	30.0
Butylcyclohexane	Ave	0.9039	0.9644		2.13	2.00	6.7	30.0
Indane	Ave	0.9903	0.9865		1.99	2.00	-0.4	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.7004		1.95	2.00	-2.3	30.0
Butylbenzene	Ave	1.277	1.325		2.08	2.00	3.8	30.0
Indene	Ave	0.8508	0.8688		2.04	2.00	2.1	30.0
Undecane	Ave	0.8098	0.8597		2.12	2.00	6.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3582		2.42	2.00	20.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.185		2.07	2.00	3.7	30.0
Dodecane	Ave	0.6396	0.6319		1.98	2.00	-1.2	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5181		1.83	2.00	-8.3	30.0
Naphthalene	Ave	1.234	1.197		1.94	2.00	-3.0	30.0
Hexachlorobutadiene	Ave	0.6047	0.5124		1.69	2.00	-15.3	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4625		1.85	2.00	-7.3	30.0
2-Methylnaphthalene	Ave	0.6016	0.4938		1.64	2.00	-17.9	50.0
1-Methylnaphthalene	Ave	0.7372	0.5485		1.49	2.00	-25.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8212		4.01	4.00	0.2	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 26-Feb-2019 11:35:30 ALS Bottle#: 15 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-002
 Misc. Info.: P82
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:22:36 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits

Date: 27-Feb-2019 15:22:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.232	0.000	97	496382	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.405	0.000	96	2758157	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	91	2578216	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2117181	4.00	4.01	
6 Chlorodifluoromethane	51	3.823	3.823	0.000	97	658223	2.00	2.02	
7 Propene	41	3.834	3.834	0.000	99	380649	2.00	2.10	
8 Dichlorodifluoromethane	85	3.888	3.888	0.000	100	1081216	2.00	2.06	
9 Chloromethane	52	4.088	4.088	0.000	99	116472	2.00	2.02	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.098	0.000	96	596628	2.00	1.94	
11 Acetaldehyde	44	4.266	4.266	0.000	95	648347	10.0	8.73	
12 Vinyl chloride	62	4.271	4.271	0.000	99	393694	2.00	1.97	
13 Butane	43	4.368	4.368	0.000	86	683696	2.00	2.03	
14 Butadiene	54	4.368	4.368	0.000	66	318396	2.00	2.06	
15 Bromomethane	94	4.713	4.713	0.000	98	325798	2.00	1.89	
16 Chloroethane	64	4.870	4.870	0.000	90	185377	2.00	1.92	
17 Ethanol	31	5.031	5.031	0.000	97	935746	10.0	10.7	
18 Vinyl bromide	106	5.193	5.193	0.000	98	300038	2.00	1.87	
19 2-Methylbutane	43	5.247	5.247	0.000	92	470238	2.00	1.95	
20 Trichlorofluoromethane	101	5.484	5.484	0.000	99	1003068	2.00	1.95	
21 Acrolein	56	5.506	5.506	0.000	96	79264	2.00	1.79	
22 Acetonitrile	40	5.581	5.581	0.000	99	131601	2.00	1.90	
23 Acetone	58	5.635	5.635	0.000	99	371393	6.00	4.98	
24 Pentane	72	5.716	5.716	0.000	98	63668	2.00	1.93	
25 Isopropyl alcohol	45	5.775	5.775	0.000	97	1324509	6.00	6.66	
26 Ethyl ether	31	5.910	5.910	0.000	90	419601	2.00	1.96	
27 1,1-Dichloroethene	96	6.228	6.228	0.000	94	375675	2.00	2.14	
28 Acrylonitrile	53	6.352	6.352	0.000	95	234090	2.00	1.94	
29 1,1,2-Trichloro-1,2,2-trif	101	6.417	6.417	0.000	94	786133	2.00	2.07	
30 2-Methyl-2-propanol	59	6.455	6.455	0.000	92	697915	2.00	2.56	
31 Methylene Chloride	84	6.595	6.595	0.000	98	368192	2.00	1.81	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.611	6.611	0.000	94	408941	2.00	1.88	
33 Carbon disulfide	76	6.768	6.768	0.000	99	1148654	2.00	2.16	
34 trans-1,2-Dichloroethene	96	7.436	7.436	0.000	95	377435	2.00	2.15	
35 2-Methylpentane	43	7.453	7.453	0.000	96	1092237	2.00	2.18	
36 Methyl tert-butyl ether	73	7.587	7.587	0.000	97	963642	2.00	1.97	
37 1,1-Dichloroethane	63	7.879	7.879	0.000	100	740120	2.00	2.05	
38 Vinyl acetate	43	7.992	7.992	0.000	100	972603	2.00	1.94	
39 2-Butanone (MEK)	72	8.461	8.461	0.000	94	156796	2.00	1.99	
40 Hexane	56	8.466	8.466	0.000	75	349595	2.00	2.16	
41 Isopropyl ether	45	8.639	8.639	0.000	97	1273265	2.00	2.06	
42 cis-1,2-Dichloroethene	96	8.887	8.887	0.000	97	374980	2.00	2.09	
43 Ethyl acetate	43	9.086	9.086	0.000	98	824216	2.00	2.01	
44 Chloroform	83	9.243	9.243	0.000	97	831651	2.00	2.00	
45 Tert-butyl ethyl ether	59	9.340	9.340	0.000	96	1154312	2.00	2.02	
46 Tetrahydrofuran	42	9.669	9.669	0.000	94	441834	2.00	2.01	
47 1,1,1-Trichloroethane	97	10.283	10.283	0.000	95	914802	2.00	2.04	
48 1,2-Dichloroethane	62	10.397	10.397	0.000	98	540157	2.00	2.00	
49 Cyclohexane	69	10.871	10.871	0.000	94	203691	2.00	2.25	
50 Benzene	78	10.877	10.877	0.000	98	1020327	2.00	2.07	
52 Carbon tetrachloride	117	10.898	10.898	0.000	98	906489	2.00	2.22	
51 n-Butanol	31	10.963	10.963	0.000	72	174154	2.00	2.82	
53 2,3-Dimethylpentane	71	10.985	10.985	0.000	90	289271	2.00	2.22	
54 Thiophene	84	11.146	11.146	0.000	98	624101	2.00	2.18	
55 Isooctane	57	11.615	11.615	0.000	98	2089798	2.00	2.16	
56 n-Heptane	71	11.977	11.977	0.000	94	431811	2.00	2.18	
57 1,2-Dichloropropane	63	12.074	12.074	0.000	87	395044	2.00	2.04	
58 Trichloroethene	130	12.106	12.106	0.000	95	469444	2.00	2.09	
59 Dibromomethane	93	12.198	12.198	0.000	92	424190	2.00	2.08	
60 Dichlorobromomethane	83	12.338	12.338	0.000	99	876559	2.00	2.18	
61 1,4-Dioxane	88	12.370	12.370	0.000	98	145314	2.00	2.53	
62 Methyl methacrylate	41	12.424	12.424	0.000	90	530253	2.00	2.14	
63 Methylcyclohexane	83	12.861	12.861	0.000	93	728027	2.00	2.16	
64 4-Methyl-2-pentanone (MIBK)	43	13.287	13.287	0.000	99	886750	2.00	2.28	
65 cis-1,3-Dichloropropene	75	13.319	13.319	0.000	98	639985	2.00	2.17	
66 trans-1,3-Dichloropropene	75	13.999	13.999	0.000	97	594581	2.00	2.14	
67 Toluene	91	14.128	14.128	0.000	94	1148311	2.00	2.02	
68 1,1,2-Trichloroethane	83	14.204	14.204	0.000	99	364646	2.00	2.11	
69 2-Hexanone	58	14.603	14.603	0.000	92	411009	2.00	2.41	
70 n-Octane	85	14.786	14.786	0.000	96	443374	2.00	2.17	
71 Chlorodibromomethane	129	14.905	14.905	0.000	98	772027	2.00	2.20	
72 Ethylene Dibromide	107	15.191	15.191	0.000	99	635364	2.00	2.12	
73 Tetrachloroethene	129	15.255	15.255	0.000	93	439005	2.00	2.06	
74 2,3-Dimethylheptane	43	16.123	16.123	0.000	96	1496933	2.00	2.16	
75 Chlorobenzene	112	16.129	16.129	0.000	77	928511	2.00	2.11	
78 Ethylbenzene	91	16.404	16.404	0.000	99	1561015	2.00	2.03	
79 m-Xylene & p-Xylene	91	16.566	16.566	0.000	99	2433053	4.00	4.13	
80 n-Nonane	57	16.965	16.965	0.000	94	915019	2.00	2.18	
81 Bromoform	173	17.024	17.024	0.000	92	705966	2.00	2.30	
82 Styrene	104	17.029	17.029	0.000	99	865556	2.00	2.12	
83 o-Xylene	91	17.089	17.089	0.000	97	1277486	2.00	2.05	
84 1,1,2,2-Tetrachloroethane	83	17.412	17.412	0.000	99	855020	2.00	2.05	
85 1,2,3-Trichloropropane	110	17.574	17.574	0.000	97	264346	2.00	1.98	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.671	17.671	0.000	97	1641690	2.00	1.98	
87 N-Propylbenzene	120	18.189	18.189	0.000	98	441397	2.00	1.97	
88 2-Chlorotoluene	126	18.237	18.237	0.000	97	410417	2.00	2.01	
89 4-Ethyltoluene	105	18.334	18.334	0.000	98	1669466	2.00	2.02	
90 1,3,5-Trimethylbenzene	120	18.404	18.404	0.000	91	633949	2.00	1.97	
92 Alpha Methyl Styrene	118	18.631	18.631	0.000	87	670603	2.00	2.06	
93 n-Decane	57	18.674	18.674	0.000	90	1111794	2.00	2.16	
94 tert-Butylbenzene	119	18.820	18.820	0.000	94	1422084	2.00	1.98	
95 1,2,4-Trimethylbenzene	105	18.830	18.830	0.000	97	1404437	2.00	1.99	
96 sec-Butylbenzene	105	19.084	19.084	0.000	98	2036393	2.00	2.01	
97 1,3-Dichlorobenzene	146	19.105	19.105	0.000	98	939347	2.00	2.04	
98 Benzyl chloride	91	19.176	19.176	0.000	97	1331508	2.00	2.12	
99 1,4-Dichlorobenzene	146	19.186	19.186	0.000	94	949687	2.00	2.01	
100 4-Isopropyltoluene	119	19.240	19.240	0.000	96	1645625	2.00	2.03	
101 1,2,3-Trimethylbenzene	105	19.294	19.294	0.000	99	1419409	2.00	2.22	
102 Butylcyclohexane	83	19.343	19.343	0.000	91	1243201	2.00	2.13	
103 2,3-Dihydroindene	117	19.537	19.537	0.000	93	1271670	2.00	1.99	
104 1,2-Dichlorobenzene	146	19.542	19.542	0.000	95	902853	2.00	1.95	
105 n-Butylbenzene	91	19.661	19.661	0.000	98	1708583	2.00	2.08	
106 Indene	116	19.666	19.666	0.000	90	1119910	2.00	2.04	
107 Undecane	57	19.952	19.952	0.000	96	1108192	2.00	2.12	
108 1,2-Dibromo-3-Chloropropan	157	20.130	20.130	0.000	96	461711	2.00	2.42	
109 1,2,4,5-Tetramethylbenzene	119	20.405	20.405	0.000	96	1527367	2.00	2.07	
110 Dodecane	57	21.004	21.004	0.000	94	814573	2.00	1.98	
111 1,2,4-Trichlorobenzene	180	21.225	21.225	0.000	94	667891	2.00	1.83	
112 Naphthalene	128	21.365	21.365	0.000	99	1542497	2.00	1.94	
113 Hexachlorobutadiene	225	21.564	21.564	0.000	95	660498	2.00	1.69	
114 1,2,3-Trichlorobenzene	180	21.640	21.640	0.000	95	596206	2.00	1.85	
115 2-Methylnaphthalene	142	22.384	22.384	0.000	100	636621	2.00	1.64	
116 1-Methylnaphthalene	142	22.557	22.557	0.000	99	707065	2.00	1.49	
A 122 C8 Range	1	14.787	(14.733-14.870)		0	4392004	2.00	2.16	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.24	
S 124 Xylenes, Total	100				0		6.00	6.18	

Reagents:

40CV101P_00082

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26.D

Injection Date: 26-Feb-2019 11:35:30

Instrument ID: MG

Operator ID: 007126

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

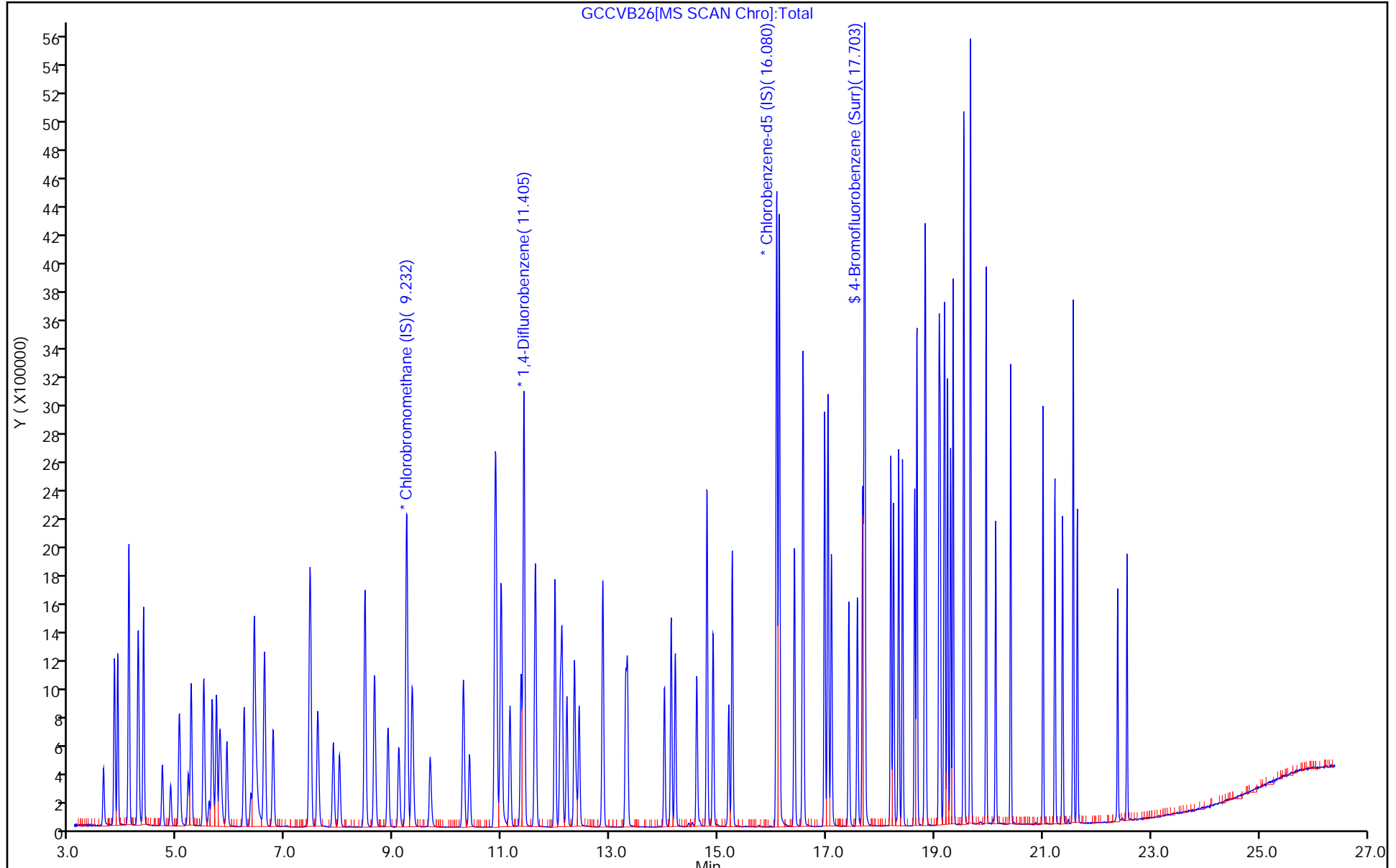
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.231		1.97	2.00	-1.5	35.0
Propene	Ave	1.491	1.400		1.88	2.00	-6.1	35.0
Dichlorodifluoromethane	Ave	5.038	4.975		1.97	2.00	-1.3	35.0
Chloromethane	Ave	0.5876	0.5516		1.88	2.00	-6.1	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.543		2.04	2.00	2.0	35.0
Vinyl chloride	Ave	1.827	1.812		1.98	2.00	-0.8	35.0
Acetaldehyde	Ave	0.7017	0.6186		8.81	10.0	-11.9	35.0
1,3-Butadiene	Ave	1.320	1.310		1.98	2.00	-0.8	35.0
Butane	Ave	2.614	2.580		1.97	2.00	-1.3	35.0
Bromomethane	Ave	1.848	1.784		1.93	2.00	-3.4	35.0
Chloroethane	Ave	0.8331	0.8331		2.00	2.00	0.0	35.0
Ethanol	Ave	0.8189	0.6091		7.44	10.0	-25.6	35.0
Vinyl bromide	Ave	1.758	1.854		2.11	2.00	5.4	35.0
2-Methylbutane	Ave	1.939	1.998		2.06	2.00	3.0	35.0
Trichlorofluoromethane	Ave	4.604	4.525		1.97	2.00	-1.7	35.0
Acrolein	Ave	0.5850	0.6530		2.23	2.00	11.6	35.0
Acetonitrile	Ave	0.7361	0.7152		1.94	2.00	-2.8	35.0
Acetone	Ave	0.7520	0.7484		1.99	2.00	-0.5	35.0
Pentane	Ave	0.2105	0.2264		2.15	2.00	7.5	35.0
Isopropyl alcohol	QuaF		2.642		2.25	2.00	12.4	35.0
Ethyl ether	Ave	1.862	1.936		2.08	2.00	4.0	35.0
1,1-Dichloroethene	Ave	1.554	1.575		2.03	2.00	1.4	35.0
Acrylonitrile	Ave	1.195	1.264		2.12	2.00	5.8	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	3.681		1.99	2.00	-0.4	35.0
tert-Butyl alcohol	Ave	2.635	2.747		2.08	2.00	4.2	35.0
Methylene Chloride	Ave	1.636	1.497		1.83	2.00	-8.5	35.0
3-Chloropropene	Ave	1.460	1.308		1.79	2.00	-10.4	35.0
Carbon disulfide	Ave	4.496	4.585		2.04	2.00	2.0	35.0
trans-1,2-Dichloroethene	Ave	1.593	1.590		2.00	2.00	-0.2	35.0
2-Methylpentane	Ave	3.661	3.368		1.84	2.00	-8.0	35.0
Methyl tert-butyl ether	Ave	3.774	3.976		2.11	2.00	5.3	35.0
1,1-Dichloroethane	Ave	3.031	3.103		2.05	2.00	2.4	35.0
Vinyl acetate	Ave	4.329	4.787		2.21	2.00	10.6	35.0
Hexane	Ave	1.211	1.222		2.02	2.00	0.9	35.0
2-Butanone (MEK)	Ave	0.6878	0.7069		2.06	2.00	2.8	35.0
Isopropyl ether	Ave	5.664	5.931		2.09	2.00	4.7	35.0
cis-1,2-Dichloroethene	Ave	1.615	1.679		2.08	2.00	4.0	35.0
Ethyl acetate	Ave	3.858	3.811		1.98	2.00	-1.2	35.0
Chloroform	Ave	3.476	3.526		2.03	2.00	1.5	35.0
Tert-butyl ethyl ether	Ave	4.715	4.645		1.97	2.00	-1.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	1.886		2.02	2.00	0.9	35.0
1,1,1-Trichloroethane	Ave	3.305	3.421		2.07	2.00	3.5	35.0
1,2-Dichloroethane	Ave	0.4310	0.4324		2.01	2.00	0.3	35.0
Cyclohexane	Ave	0.1257	0.1289		2.05	2.00	2.5	35.0
Benzene	Ave	0.8457	0.8700		2.06	2.00	2.9	35.0
Carbon tetrachloride	Ave	0.6846	0.7122		2.08	2.00	4.0	35.0
1-Butanol	Ave	0.1144	0.1208		2.11	2.00	5.6	35.0
2,3-Dimethylpentane	Ave	0.1754	0.1733		1.98	2.00	-1.2	35.0
Thiophene	Ave	0.4839	0.4800		1.98	2.00	-0.8	35.0
2,2,4-Trimethylpentane	Ave	1.395	1.420		2.04	2.00	1.8	35.0
Heptane	Ave	0.2694	0.2742		2.04	2.00	1.8	35.0
1,2-Dichloropropane	Ave	0.3598	0.3655		2.03	2.00	1.6	35.0
Trichloroethene	Ave	0.3991	0.4065		2.04	2.00	1.8	35.0
Dibromomethane	Ave	0.4192	0.4231		2.02	2.00	0.9	35.0
Bromodichloromethane	Ave	0.6298	0.6609		2.10	2.00	4.9	35.0
1,4-Dioxane	Ave	0.1270	0.1217		1.92	2.00	-4.2	35.0
Methyl methacrylate	Ave	0.3781	0.4011		2.12	2.00	6.1	35.0
Methylcyclohexane	LinF		0.5855		2.22	2.00	11.1	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.7683		2.03	2.00	1.4	35.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5252		2.22	2.00	10.9	35.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5421		2.23	2.00	11.6	35.0
Toluene	Ave	1.139	1.196		2.10	2.00	5.0	35.0
1,1,2-Trichloroethane	Ave	0.3780	0.3876		2.05	2.00	2.5	35.0
2-Hexanone	Ave	0.3734	0.3927		2.10	2.00	5.2	35.0
Octane	Ave	0.3251	0.3451		2.12	2.00	6.2	35.0
Dibromochloromethane	Ave	0.7610	0.8504		2.24	2.00	11.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7285		2.11	2.00	5.7	35.0
Tetrachloroethene	Ave	0.4638	0.4651		2.01	2.00	0.3	35.0
Chlorobenzene	Ave	0.9365	0.9565		2.04	2.00	2.1	35.0
2,3-Dimethylheptane	Ave	1.197	1.077		1.80	2.00	-10.0	35.0
Ethylbenzene	Ave	1.450	1.522		2.10	2.00	5.0	35.0
m-Xylene & p-Xylene	Ave	1.118	1.189		4.25	4.00	6.3	35.0
Nonane	Ave	0.7205	0.7824		2.17	2.00	8.6	35.0
Bromoform	Ave	0.8550	0.9411		2.20	2.00	10.1	35.0
Styrene	Ave	0.7534	0.8717		2.31	2.00	15.7	35.0
o-Xylene	Ave	1.138	1.168		2.05	2.00	2.6	35.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	0.9802		2.13	2.00	6.3	35.0
1,2,3-Trichloropropane	Ave	0.2272	0.2354		2.07	2.00	3.6	35.0
Isopropylbenzene	Ave	1.571	1.652		2.10	2.00	5.2	35.0
Propylbenzene	Ave	0.4111	0.4566		2.22	2.00	11.1	35.0
2-Chlorotoluene	Ave	0.4027	0.4284		2.13	2.00	6.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.553		2.08	2.00	4.0	35.0
1,3,5-Trimethylbenzene	Lin1		0.7424		2.23	2.00	11.4	35.0
Alpha Methyl Styrene	Ave	0.6224	0.6616		2.13	2.00	6.3	35.0
Decane	Ave	0.9226	1.006		2.18	2.00	9.0	35.0
tert-Butylbenzene	Ave	1.398	1.493		2.14	2.00	6.8	35.0
1,2,4-Trimethylbenzene	Ave	1.303	1.389		2.13	2.00	6.6	35.0
sec-Butylbenzene	Ave	1.948	2.098		2.15	2.00	7.7	35.0
1,3-Dichlorobenzene	Ave	0.9455	0.9755		2.06	2.00	3.2	35.0
Benzyl chloride	Ave	0.9648	1.027		2.13	2.00	6.4	35.0
1,4-Dichlorobenzene	Ave	0.8947	0.9383		2.10	2.00	4.9	35.0
4-Isopropyltoluene	Ave	1.512	1.631		2.16	2.00	7.9	35.0
1,2,3-Trimethylbenzene	Ave	1.280	0.9816		1.53	2.00	-23.3	35.0
Butylcyclohexane	Ave	1.039	1.012		1.95	2.00	-2.6	35.0
1,2-Dichlorobenzene	Ave	0.9417	0.9787		2.08	2.00	3.9	35.0
Indane	Ave	1.252	1.300		2.08	2.00	3.9	35.0
Indene	Ave	1.077	0.9377		1.74	2.00	-12.9	35.0
Butylbenzene	Ave	1.562	1.735		2.22	2.00	11.0	35.0
Undecane	Ave	1.067	1.128		2.11	2.00	5.7	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.4026		2.06	2.00	3.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.478		2.10	2.00	4.9	35.0
Dodecane	Ave	1.039	1.175		2.26	2.00	13.1	35.0
1,2,4-Trichlorobenzene	Lin1		0.7912		2.07	2.00	3.6	35.0
Naphthalene	Ave	1.402	1.687		2.41	2.00	20.3	35.0
Hexachlorobutadiene	Ave	0.8888	0.9262		2.08	2.00	4.2	35.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.8815		2.35	2.00	17.7	35.0
2-Methylnaphthalene	Ave	0.5392	0.5260		1.95	2.00	-2.4	50.0
1-Methylnaphthalene	Ave	0.7641	0.6284		1.65	2.00	-17.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6484		3.98	4.00	-0.5	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20ICV.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 21-Feb-2019 03:43:30 ALS Bottle#: 7 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-017
 Misc. Info.: S86
 Operator ID: HMT Instrument ID: MH
 Sublist:
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 14:08:38 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0315

First Level Reviewer: liul

Date: 25-Feb-2019 14:08:38

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.830	-0.001	94	382438	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.010	0.000	95	2064078	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	87	1803849	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.373	17.371	0.002	96	1169524	4.00	3.98	
6 Chlorodifluoromethane	51	3.682	3.681	0.001	97	617765	2.00	1.97	
7 Propene	41	3.687	3.691	-0.004	66	267681	2.00	1.88	
8 Dichlorodifluoromethane	85	3.738	3.741	-0.003	100	951243	2.00	1.97	
9 Chloromethane	52	3.925	3.928	-0.003	98	105477	2.00	1.88	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.933	-0.003	92	677453	2.00	2.04	
12 Vinyl chloride	62	4.095	4.097	-0.002	99	346461	2.00	1.98	
11 Acetaldehyde	44	4.100	4.111	-0.011	99	591409	10.0	8.81	
14 Butane	43	4.183	4.183	0.000	85	493412	2.00	1.97	
13 Butadiene	54	4.183	4.185	-0.002	70	250455	2.00	1.98	
15 Bromomethane	94	4.503	4.508	-0.005	98	341202	2.00	1.93	
16 Chloroethane	64	4.643	4.653	-0.010	97	159305	2.00	2.00	
17 Ethanol	31	4.808	4.836	-0.028	96	582334	10.0	7.44	
18 Vinyl bromide	106	4.943	4.951	-0.008	98	354424	2.00	2.11	
19 2-Methylbutane	43	4.994	4.999	-0.005	92	382016	2.00	2.06	
21 Trichlorofluoromethane	101	5.217	5.219	-0.002	100	865216	2.00	1.97	
20 Acrolein	56	5.258	5.277	-0.019	93	124872	2.00	2.23	
22 Acetonitrile	40	5.330	5.351	-0.021	99	136752	2.00	1.94	
23 Acetone	58	5.398	5.416	-0.018	95	143100	2.00	1.99	
24 Pentane	72	5.439	5.444	-0.005	97	43283	2.00	2.15	
25 Isopropyl alcohol	45	5.522	5.555	-0.033	99	505212	2.00	2.25	
26 Ethyl ether	31	5.646	5.672	-0.026	94	370195	2.00	2.08	
27 1,1-Dichloroethene	96	5.925	5.929	-0.004	96	301235	2.00	2.03	
28 Acrylonitrile	53	6.059	6.075	-0.016	94	241691	2.00	2.12	
30 1,1,2-Trichloro-1,2,2-trif	101	6.106	6.107	-0.001	97	703813	2.00	1.99	
29 2-Methyl-2-propanol	59	6.137	6.186	-0.049	93	525236	2.00	2.08	
31 Methylene Chloride	84	6.276	6.284	-0.008	98	286292	2.00	1.83	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.297	6.297	0.000	95	250101	2.00	1.79	
33 Carbon disulfide	76	6.436	6.437	-0.001	99	876804	2.00	2.04	
34 trans-1,2-Dichloroethene	96	7.088	7.088	0.000	97	304107	2.00	2.00	
35 2-Methylpentane	43	7.103	7.104	-0.001	96	643940	2.00	1.84	
36 Methyl tert-butyl ether	73	7.253	7.296	-0.043	97	760214	2.00	2.11	
37 1,1-Dichloroethane	63	7.511	7.514	-0.003	99	593313	2.00	2.05	
38 Vinyl acetate	43	7.630	7.645	-0.015	100	915298	2.00	2.21	
40 Hexane	56	8.085	8.082	0.003	86	233594	2.00	2.02	
39 2-Butanone (MEK)	72	8.101	8.133	-0.032	97	135177	2.00	2.06	
171 Isopropyl ether	45	8.271	8.306	-0.035	98	1134212	2.00	2.09	
41 cis-1,2-Dichloroethene	96	8.493	8.497	-0.004	96	320969	2.00	2.08	
42 Ethyl acetate	43	8.710	8.736	-0.026	99	728786	2.00	1.98	
43 Chloroform	83	8.840	8.842	-0.002	98	674313	2.00	2.03	
173 Tert-butyl ethyl ether	59	8.948	8.986	-0.038	96	888290	2.00	1.97	
44 Tetrahydrofuran	42	9.289	9.329	-0.040	94	360625	2.00	2.02	
45 1,1,1-Trichloroethane	97	9.863	9.862	0.001	97	654213	2.00	2.07	
46 1,2-Dichloroethane	62	9.982	9.980	0.002	97	446299	2.00	2.01	
48 Cyclohexane	69	10.457	10.458	-0.001	96	132992	2.00	2.05	
47 Benzene	78	10.463	10.465	-0.002	98	897852	2.00	2.06	
50 Carbon tetrachloride	117	10.483	10.483	0.000	98	735005	2.00	2.08	
49 n-Butanol	31	10.514	10.538	-0.024	70	124681	2.00	2.11	
51 2,3-Dimethylpentane	71	10.581	10.577	0.004	93	178851	2.00	1.98	
52 Thiophene	84	10.736	10.740	-0.004	97	495384	2.00	1.98	
53 Isooctane	57	11.217	11.219	-0.002	98	1465747	2.00	2.04	
55 n-Heptane	71	11.594	11.594	0.000	94	283016	2.00	2.04	
54 1,2-Dichloropropane	63	11.687	11.685	0.002	92	377234	2.00	2.03	
56 Trichloroethene	130	11.718	11.718	0.000	96	419469	2.00	2.04	
57 Dibromomethane	93	11.806	11.808	-0.002	95	436657	2.00	2.02	
58 Dichlorobromomethane	83	11.951	11.953	-0.001	99	682097	2.00	2.10	
59 1,4-Dioxane	88	12.008	12.035	-0.027	91	125570	2.00	1.92	
60 Methyl methacrylate	41	12.060	12.068	-0.008	92	413900	2.00	2.12	
61 Methylcyclohexane	83	12.483	12.484	-0.001	94	604237	2.00	2.22	
62 4-Methyl-2-pentanone (MIBK)	43	12.923	12.944	-0.021	97	792879	2.00	2.03	
63 cis-1,3-Dichloropropene	75	12.949	12.950	-0.002	98	542018	2.00	2.22	
64 trans-1,3-Dichloropropene	75	13.646	13.645	0.001	99	488900	2.00	2.23	
65 Toluene	91	13.765	13.765	0.000	93	1078502	2.00	2.10	
67 2-Methylthiophene	97	13.843	13.843	0.001	76	383182	NC	NC	
66 1,1,2-Trichloroethane	83	13.843	13.844	-0.001	97	349586	2.00	2.05	
68 3-Methylthiophene	97	13.920	13.920	0.000	98	855357	NC	NC	
69 2-Hexanone	58	14.251	14.265	-0.014	91	354172	2.00	2.10	
71 n-Octane	85	14.442	14.446	-0.004	96	311236	2.00	2.12	
70 Chlorodibromomethane	129	14.546	14.544	0.002	98	767036	2.00	2.24	
72 Ethylene Dibromide	107	14.835	14.835	0.000	98	657081	2.00	2.11	
73 Tetrachloroethene	129	14.902	14.903	-0.001	95	419495	2.00	2.01	
74 Chlorobenzene	112	15.776	15.778	-0.002	94	862691	2.00	2.04	
75 2,3-Dimethylheptane	43	15.791	15.790	0.001	96	970922	2.00	1.80	
76 Ethylbenzene	91	16.065	16.065	0.000	99	1372758	2.00	2.10	
77 2-Ethylthiophene	97	16.168	16.168	0.000	98	1009674	NC	NC	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	2144593	4.00	4.25	
81 n-Nonane	57	16.639	16.639	0.000	94	705700	2.00	2.17	
79 Bromoform	173	16.680	16.679	0.001	95	848788	2.00	2.20	
80 Styrene	104	16.690	16.690	0.000	99	786176	2.00	2.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
82 o-Xylene	91	16.752	16.751	0.001	99	1053264	2.00	2.05	
83 1,1,2,2-Tetrachloroethane	83	17.078	17.077	0.001	98	884056	2.00	2.13	
84 1,2,3-Trichloropropane	110	17.238	17.237	0.001	99	212322	2.00	2.07	
85 Isopropylbenzene	105	17.336	17.337	-0.001	96	1490233	2.00	2.10	
86 N-Propylbenzene	120	17.900	17.900	0.000	99	411776	2.00	2.22	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	386376	2.00	2.13	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	99	1401067	2.00	2.08	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	92	669587	2.00	2.23	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	88	596734	2.00	2.13	
91 n-Decane	57	18.432	18.430	0.002	89	907085	2.00	2.18	
92 tert-Butylbenzene	119	18.577	18.577	0.000	91	1346139	2.00	2.14	
93 1,2,4-Trimethylbenzene	105	18.587	18.592	-0.005	96	1252491	2.00	2.13	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	99	1891976	2.00	2.15	
94 1,3-Dichlorobenzene	146	18.871	18.874	-0.003	98	879845	2.00	2.06	
96 Benzyl chloride	91	18.954	18.955	-0.001	98	926122	2.00	2.13	
97 1,4-Dichlorobenzene	146	18.964	18.965	-0.001	96	846228	2.00	2.10	
98 4-Isopropyltoluene	119	19.027	19.027	-0.001	97	1471101	2.00	2.16	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	99	885289	2.00	1.53	
100 Butylcyclohexane	83	19.135	19.136	-0.001	92	912300	2.00	1.95	
102 2,3-Dihydroindene	117	19.337	19.338	-0.001	93	1172674	2.00	2.08	
101 1,2-Dichlorobenzene	146	19.337	19.338	-0.001	84	882718	2.00	2.08	
103 Indene	116	19.471	19.471	0.000	91	845755	2.00	1.74	
104 n-Butylbenzene	91	19.476	19.477	-0.001	97	1564533	2.00	2.22	
105 Undecane	57	19.791	19.792	-0.001	96	1017297	2.00	2.11	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.859	19.858	0.001	98	1067343	NC	NC	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	97	363141	2.00	2.06	
107 1,2,4,5-Tetramethylbenzene	119	20.257	20.255	0.002	97	1333063	2.00	2.10	
109 1,2,3,5-Tetramethylbenzene	119	20.308	20.313	-0.005	95	782595	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	20.727	20.727	0.000	97	1086744	NC	NC	
110 Dodecane	57	20.887	20.889	-0.002	94	1059860	2.00	2.26	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	94	713581	2.00	2.07	
113 Naphthalene	128	21.254	21.255	-0.001	99	1521866	2.00	2.41	
114 Benzo(b)thiophene	134	21.363	21.362	0.001	99	733535	NC	NC	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	93	835372	2.00	2.08	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	95	795001	2.00	2.35	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	99	474401	2.00	1.95	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	100	566821	2.00	1.65	
A 120 C8 Range	1	14.452	(14.395-14.499)		0	3101174	2.00	2.03	
S 121 Xylenes, Total	100				0		6.00	6.31	
S 122 1,2-Dichloroethene, Total	1				0		4.00	4.08	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00086

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20ICV.D

Injection Date: 21-Feb-2019 03:43:30

Instrument ID: MH

Operator ID: HMT

Lims ID: ICV

Worklist Smp#: 17

Client ID:

Purge Vol: 500.000 mL

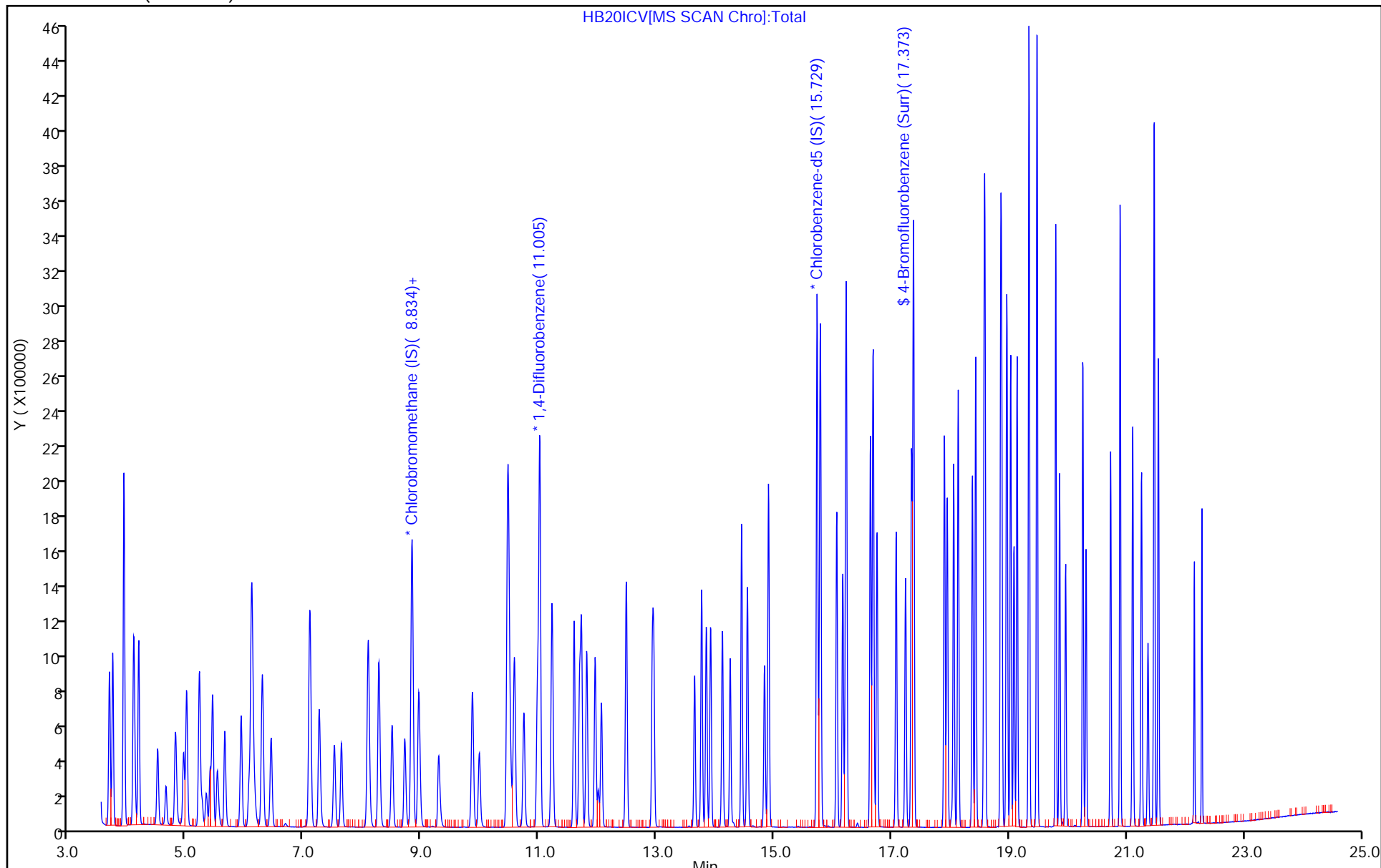
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27935/2 Calibration Date: 02/25/2019 09:47
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.052		0.930	1.00	-7.0	30.0
Propene	Ave	1.491	1.278		0.857	1.00	-14.3	30.0
Dichlorodifluoromethane	Ave	5.038	4.646		0.922	1.00	-7.8	30.0
Chloromethane	Ave	0.5876	0.5314		0.904	1.00	-9.6	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.214		0.925	1.00	-7.5	30.0
Vinyl chloride	Ave	1.827	1.736		0.950	1.00	-5.0	30.0
Acetaldehyde	Ave	0.7017	0.6122		4.36	5.00	-12.8	30.0
Butane	Ave	2.614	2.496		0.955	1.00	-4.5	30.0
1,3-Butadiene	Ave	1.320	1.226		0.929	1.00	-7.1	30.0
Bromomethane	Ave	1.848	1.773		0.959	1.00	-4.1	30.0
Chloroethane	Ave	0.8331	0.7885		0.947	1.00	-5.3	30.0
Ethanol	Ave	0.8189	0.6238		3.81	5.00	-23.8	30.0
Vinyl bromide	Ave	1.758	1.779		1.01	1.00	1.2	30.0
2-Methylbutane	Ave	1.939	1.858		0.958	1.00	-4.2	30.0
Trichlorofluoromethane	Ave	4.604	4.296		0.933	1.00	-6.7	30.0
Acrolein	Ave	0.5850	0.5626		0.962	1.00	-3.8	30.0
Acetonitrile	Ave	0.7361	0.6933		0.942	1.00	-5.8	30.0
Acetone	Ave	0.7520	0.7397		0.984	1.00	-1.6	30.0
Pentane	Ave	0.2105	0.2035		0.967	1.00	-3.3	30.0
Isopropyl alcohol	QuaF		2.488		1.05	1.00	5.4	30.0
Ethyl ether	Ave	1.862	1.809		0.971	1.00	-2.9	30.0
1,1-Dichloroethene	Ave	1.554	1.442		0.928	1.00	-7.2	30.0
Acrylonitrile	Ave	1.195	1.155		0.967	1.00	-3.3	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	3.494		0.945	1.00	-5.5	30.0
tert-Butyl alcohol	Ave	2.635	2.410		0.915	1.00	-8.5	30.0
Methylene Chloride	Ave	1.636	1.501		0.918	1.00	-8.2	30.0
3-Chloropropene	Ave	1.460	1.369		0.938	1.00	-6.2	30.0
Carbon disulfide	Ave	4.496	4.330		0.963	1.00	-3.7	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.445		0.907	1.00	-9.3	30.0
2-Methylpentane	Ave	3.661	3.098		0.846	1.00	-15.4	30.0
Methyl tert-butyl ether	Ave	3.774	3.507		0.929	1.00	-7.1	30.0
1,1-Dichloroethane	Ave	3.031	2.861		0.944	1.00	-5.6	30.0
Vinyl acetate	Ave	4.329	4.194		0.969	1.00	-3.1	30.0
Hexane	Ave	1.211	1.109		0.916	1.00	-8.4	30.0
2-Butanone (MEK)	Ave	0.6878	0.6353		0.924	1.00	-7.6	30.0
Isopropyl ether	Ave	5.664	5.353		0.945	1.00	-5.5	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.528		0.946	1.00	-5.4	30.0
Ethyl acetate	Ave	3.858	3.466		0.898	1.00	-10.2	30.0
Chloroform	Ave	3.476	3.342		0.962	1.00	-3.8	30.0
Tert-butyl ethyl ether	Ave	4.715	4.085		0.866	1.00	-13.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27935/2 Calibration Date: 02/25/2019 09:47
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	1.709		0.914	1.00	-8.6	30.0
1,1,1-Trichloroethane	Ave	3.305	3.079		0.932	1.00	-6.8	30.0
1,2-Dichloroethane	Ave	0.4310	0.3903		0.906	1.00	-9.4	30.0
Cyclohexane	Ave	0.1257	0.1089		0.866	1.00	-13.4	30.0
Benzene	Ave	0.8457	0.7858		0.929	1.00	-7.1	30.0
Carbon tetrachloride	Ave	0.6846	0.6360		0.929	1.00	-7.1	30.0
1-Butanol	Ave	0.1144	0.1021		0.892	1.00	-10.8	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1580		0.901	1.00	-9.9	30.0
Thiophene	Ave	0.4839	0.4321		0.893	1.00	-10.7	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.261		0.904	1.00	-9.6	30.0
Heptane	Ave	0.2694	0.2374		0.881	1.00	-11.9	30.0
1,2-Dichloropropane	Ave	0.3598	0.3324		0.924	1.00	-7.6	30.0
Trichloroethene	Ave	0.3991	0.3582		0.898	1.00	-10.2	30.0
Dibromomethane	Ave	0.4192	0.3905		0.931	1.00	-6.9	30.0
Bromodichloromethane	Ave	0.6298	0.5961		0.947	1.00	-5.3	30.0
1,4-Dioxane	Ave	0.1270	0.1127		0.888	1.00	-11.2	30.0
Methyl methacrylate	Ave	0.3781	0.3458		0.915	1.00	-8.5	30.0
Methylcyclohexane	LinF		0.5101		0.968	1.00	-3.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.6753		0.891	1.00	-10.9	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.4591		0.970	1.00	-3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.4683		0.964	1.00	-3.6	30.0
Toluene	Ave	1.139	1.073		0.943	1.00	-5.7	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.3641		0.963	1.00	-3.7	30.0
2-Hexanone	Ave	0.3734	0.3396		0.909	1.00	-9.1	30.0
Octane	Ave	0.3251	0.3093		0.951	1.00	-4.9	30.0
Dibromochloromethane	Ave	0.7610	0.7516		0.988	1.00	-1.2	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.6547		0.950	1.00	-5.0	30.0
Tetrachloroethene	Ave	0.4638	0.4299		0.927	1.00	-7.3	30.0
Chlorobenzene	Ave	0.9365	0.8664		0.925	1.00	-7.5	30.0
2,3-Dimethylheptane	Ave	1.197	1.016		0.849	1.00	-15.1	30.0
Ethylbenzene	Ave	1.450	1.345		0.927	1.00	-7.3	30.0
m-Xylene & p-Xylene	Ave	1.118	1.087		1.95	2.00	-2.7	30.0
Nonane	Ave	0.7205	0.7005		0.972	1.00	-2.8	30.0
Bromoform	Ave	0.8550	0.7719		0.903	1.00	-9.7	30.0
Styrene	Ave	0.7534	0.7526		0.999	1.00	-0.1	30.0
o-Xylene	Ave	1.138	1.089		0.957	1.00	-4.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	0.9178		0.995	1.00	-0.5	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2123		0.934	1.00	-6.6	30.0
Isopropylbenzene	Ave	1.571	1.509		0.961	1.00	-3.9	30.0
Propylbenzene	Ave	0.4111	0.3943		0.959	1.00	-4.1	30.0
2-Chlorotoluene	Ave	0.4027	0.3889		0.966	1.00	-3.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27935/2 Calibration Date: 02/25/2019 09:47
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.382		0.925	1.00	-7.5	30.0
1,3,5-Trimethylbenzene	Lin1		0.6694		1.02	1.00	2.0	30.0
Alpha Methyl Styrene	Ave	0.6224	0.5299		0.851	1.00	-14.9	30.0
Decane	Ave	0.9226	0.9368		1.02	1.00	1.5	30.0
tert-Butylbenzene	Ave	1.398	1.352		0.967	1.00	-3.3	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.268		0.973	1.00	-2.7	30.0
sec-Butylbenzene	Ave	1.948	1.908		0.979	1.00	-2.1	30.0
1,3-Dichlorobenzene	Ave	0.9455	0.8424		0.891	1.00	-10.9	30.0
Benzyl chloride	Ave	0.9648	0.8377		0.868	1.00	-13.2	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.7880		0.881	1.00	-11.9	30.0
4-Isopropyltoluene	Ave	1.512	1.497		0.990	1.00	-1.0	30.0
1,2,3-Trimethylbenzene	Ave	1.280	0.8970		0.701	1.00	-29.9	30.0
Butylcyclohexane	Ave	1.039	0.9808		0.944	1.00	-5.6	30.0
1,2-Dichlorobenzene	Ave	0.9417	0.8415		0.894	1.00	-10.6	30.0
Indane	Ave	1.252	1.169		0.934	1.00	-6.6	30.0
Butylbenzene	Ave	1.562	1.622		1.04	1.00	3.8	30.0
Indene	Ave	1.077	0.7733		0.718	1.00	-28.2	30.0
Undecane	Ave	1.067	1.019		0.955	1.00	-4.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3430		0.878	1.00	-12.2	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.176		0.835	1.00	-16.5	30.0
Dodecane	Ave	1.039	0.8937		0.861	1.00	-13.9	30.0
1,2,4-Trichlorobenzene	Lin1		0.4540		0.642	1.00	-35.8*	30.0
Naphthalene	Ave	1.402	0.8222		0.586	1.00	-41.4*	30.0
Hexachlorobutadiene	Ave	0.8888	0.7763		0.873	1.00	-12.7	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.5453		0.728	1.00	-27.2	30.0
2-Methylnaphthalene	Ave	0.5392	0.0719			1.00	-86.7*	50.0
1-Methylnaphthalene	Ave	0.7641	0.1143			1.00	-85.0*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6697		4.11	4.00	2.7	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HCCVB25.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 25-Feb-2019 09:47:30 ALS Bottle#: 15 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info:
 Misc. Info.: S88
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub6
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Mar-2019 08:50:22 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: khachitpongpanits

Date: 04-Mar-2019 08:50:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.814	8.814	0.000	97	315308	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1742536	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.724	15.724	0.000	87	1476074	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.393	17.393	0.000	94	988541	4.00	4.11	
6 Chlorodifluoromethane	51	3.682	3.682	0.000	97	240547	1.00	0.9304	
7 Propene	41	3.687	3.687	0.000	98	100714	1.00	0.8567	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	366198	1.00	0.9221	
9 Chloromethane	52	3.919	3.919	0.000	98	41888	1.00	0.9043	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.930	0.000	95	253373	1.00	0.9250	
12 Vinyl chloride	62	4.090	4.090	0.000	99	136847	1.00	0.9502	
11 Acetaldehyde	44	4.105	4.105	0.000	97	241270	5.00	4.36	
14 Butane	43	4.178	4.178	0.000	85	196771	1.00	0.9548	
13 Butadiene	54	4.183	4.183	0.000	72	96649	1.00	0.9290	
15 Bromomethane	94	4.503	4.503	0.000	98	139756	1.00	0.9594	
16 Chloroethane	64	4.643	4.643	0.000	96	62156	1.00	0.9465	
17 Ethanol	31	4.808	4.808	0.000	96	245843	5.00	3.81	
18 Vinyl bromide	106	4.943	4.943	0.000	98	140203	1.00	1.01	
19 2-Methylbutane	43	4.994	4.994	0.000	92	146442	1.00	0.9580	
21 Trichlorofluoromethane	101	5.211	5.211	0.000	100	338677	1.00	0.9332	
20 Acrolein	56	5.258	5.258	0.000	94	44346	1.00	0.9617	
22 Acetonitrile	40	5.325	5.325	0.000	99	54653	1.00	0.9419	
23 Acetone	58	5.392	5.392	0.000	97	58310	1.00	0.9836	
24 Pentane	72	5.439	5.439	0.000	97	16039	1.00	0.9666	
25 Isopropyl alcohol	45	5.532	5.532	0.000	99	196120	1.00	1.05	
26 Ethyl ether	31	5.651	5.651	0.000	92	142580	1.00	0.9713	
27 1,1-Dichloroethene	96	5.919	5.919	0.000	97	113634	1.00	0.9278	
28 Acrylonitrile	53	6.049	6.049	0.000	94	91080	1.00	0.9667	
30 1,1,2-Trichloro-1,2,2-trif	101	6.095	6.095	0.000	96	275449	1.00	0.9453	
29 2-Methyl-2-propanol	59	6.157	6.157	0.000	97	190011	1.00	0.9148	
31 Methylene Chloride	84	6.271	6.271	0.000	97	118341	1.00	0.9179	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.286	6.286	0.000	95	107892	1.00	0.9376	
33 Carbon disulfide	76	6.426	6.426	0.000	100	341342	1.00	0.9631	
34 trans-1,2-Dichloroethene	96	7.072	7.072	0.000	97	113916	1.00	0.9071	
35 2-Methylpentane	43	7.093	7.093	0.000	97	244186	1.00	0.8463	
36 Methyl tert-butyl ether	73	7.258	7.258	0.000	96	276473	1.00	0.9294	
37 1,1-Dichloroethane	63	7.501	7.501	0.000	99	225542	1.00	0.9441	
38 Vinyl acetate	43	7.625	7.625	0.000	100	330598	1.00	0.9687	
40 Hexane	56	8.069	8.069	0.000	92	87385	1.00	0.9155	
39 2-Butanone (MEK)	72	8.100	8.100	0.000	96	50081	1.00	0.9238	
171 Isopropyl ether	45	8.271	8.271	0.000	97	421999	1.00	0.9453	
41 cis-1,2-Dichloroethene	96	8.483	8.483	0.000	96	120460	1.00	0.9464	
42 Ethyl acetate	43	8.710	8.710	0.000	98	273196	1.00	0.8983	
43 Chloroform	83	8.824	8.824	0.000	98	263438	1.00	0.9616	
173 Tert-butyl ethyl ether	59	8.953	8.953	0.000	97	322003	1.00	0.8664	
44 Tetrahydrofuran	42	9.300	9.300	0.000	94	134686	1.00	0.9143	
45 1,1,1-Trichloroethane	97	9.853	9.853	0.000	97	242707	1.00	0.9316	
46 1,2-Dichloroethane	62	9.966	9.966	0.000	97	170025	1.00	0.9055	
48 Cyclohexane	69	10.447	10.447	0.000	91	47435	1.00	0.8660	
47 Benzene	78	10.452	10.452	0.000	97	342298	1.00	0.9291	
50 Carbon tetrachloride	117	10.473	10.473	0.000	97	277059	1.00	0.9291	
49 n-Butanol	31	10.535	10.535	0.000	72	44463	1.00	0.8918	
51 2,3-Dimethylpentane	71	10.571	10.571	0.000	91	68839	1.00	0.9009	
52 Thiophene	84	10.726	10.726	0.000	97	188226	1.00	0.8930	
53 Isooctane	57	11.212	11.212	0.000	98	549229	1.00	0.9036	
55 n-Heptane	71	11.584	11.584	0.000	94	103433	1.00	0.8813	
54 1,2-Dichloropropane	63	11.677	11.677	0.000	91	144823	1.00	0.9239	
56 Trichloroethene	130	11.708	11.708	0.000	95	156061	1.00	0.8976	
57 Dibromomethane	93	11.796	11.796	0.000	96	170096	1.00	0.9314	
58 Dichlorobromomethane	83	11.941	11.941	0.000	98	259681	1.00	0.9465	
59 1,4-Dioxane	88	12.013	12.013	0.000	91	49110	1.00	0.8878	
60 Methyl methacrylate	41	12.059	12.059	0.000	91	150647	1.00	0.9147	
61 Methylcyclohexane	83	12.478	12.478	0.000	93	222193	1.00	0.9675	
62 4-Methyl-2-pentanone (MIBK)	43	12.933	12.933	0.000	97	294175	1.00	0.8913	
63 cis-1,3-Dichloropropene	75	12.943	12.943	0.000	97	199995	1.00	0.9696	
64 trans-1,3-Dichloropropene	75	13.641	13.641	0.000	99	172799	1.00	0.9644	
65 Toluene	91	13.760	13.760	0.000	93	396041	1.00	0.9426	
66 1,1,2-Trichloroethane	83	13.837	13.837	0.000	97	134369	1.00	0.9634	
67 2-Methylthiophene	97	13.837	13.837	0.000	77	144793	NC	NC	
68 3-Methylthiophene	97	13.915	13.915	0.000	99	318611	NC	NC	
69 2-Hexanone	58	14.256	14.256	0.000	90	125323	1.00	0.9094	
71 n-Octane	85	14.442	14.442	0.000	96	114119	1.00	0.9514	
70 Chlorodibromomethane	129	14.540	14.540	0.000	97	277362	1.00	0.9877	
72 Ethylene Dibromide	107	14.830	14.830	0.000	97	241607	1.00	0.9497	
73 Tetrachloroethene	129	14.897	14.897	0.000	95	158622	1.00	0.9269	
74 Chlorobenzene	112	15.775	15.775	0.000	94	319702	1.00	0.9251	
75 2,3-Dimethylheptane	43	15.786	15.786	0.000	95	375033	1.00	0.8492	
76 Ethylbenzene	91	16.060	16.060	0.000	99	496209	1.00	0.9275	
77 2-Ethylthiophene	97	16.163	16.163	0.000	99	370973	NC	NC	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	802567	2.00	1.95	
81 n-Nonane	57	16.639	16.639	0.000	95	258490	1.00	0.9723	
79 Bromoform	173	16.680	16.680	0.000	93	284859	1.00	0.9028	
80 Styrene	104	16.690	16.690	0.000	99	277713	1.00	1.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
82 o-Xylene	91	16.752	16.752	0.000	98	401926	1.00	0.9567	
83 1,1,2,2-Tetrachloroethane	83	17.088	17.088	0.000	99	338679	1.00	1.00	
84 1,2,3-Trichloropropane	110	17.259	17.259	0.000	97	78339	1.00	0.9345	
85 Isopropylbenzene	105	17.362	17.362	0.000	97	556793	1.00	0.9606	
86 N-Propylbenzene	120	17.926	17.926	0.000	98	145485	1.00	0.9590	
87 2-Chlorotoluene	126	17.972	17.972	0.000	98	143516	1.00	0.9659	
88 4-Ethyltoluene	105	18.081	18.081	0.000	98	509804	1.00	0.9250	
89 1,3,5-Trimethylbenzene	120	18.158	18.158	0.000	92	247015	1.00	1.02	
90 Alpha Methyl Styrene	118	18.401	18.401	0.000	86	195538	1.00	0.8514	
91 n-Decane	57	18.453	18.453	0.000	88	345713	1.00	1.02	
92 tert-Butylbenzene	119	18.597	18.597	0.000	92	498813	1.00	0.9669	
93 1,2,4-Trimethylbenzene	105	18.613	18.613	0.000	96	467933	1.00	0.9730	
95 sec-Butylbenzene	105	18.877	18.877	0.000	99	703937	1.00	0.9792	
94 1,3-Dichlorobenzene	146	18.892	18.892	0.000	98	310876	1.00	0.8910	
96 Benzyl chloride	91	18.970	18.970	0.000	98	309130	1.00	0.8683	
97 1,4-Dichlorobenzene	146	18.985	18.985	0.000	95	290783	1.00	0.8807	
98 4-Isopropyltoluene	119	19.042	19.042	0.000	97	552458	1.00	0.99	
99 1,2,3-Trimethylbenzene	105	19.099	19.099	0.000	99	331004	1.00	0.7010	
100 Butylcyclohexane	83	19.150	19.150	0.000	92	361925	1.00	0.9444	
102 2,3-Dihydroindene	117	19.352	19.352	0.000	93	431335	1.00	0.9337	
101 1,2-Dichlorobenzene	146	19.352	19.352	0.000	82	310517	1.00	0.8935	
103 Indene	116	19.486	19.486	0.000	87	285369	1.00	0.7182	
104 n-Butylbenzene	91	19.486	19.486	0.000	96	598387	1.00	1.04	
105 Undecane	57	19.802	19.802	0.000	94	375855	1.00	0.9548	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.869	19.869	0.000	98	388901	NC	NC	
106 1,2-Dibromo-3-Chloropropan	157	19.972	19.972	0.000	95	126580	1.00	0.8785	
107 1,2,4,5-Tetramethylbenzene	119	20.262	20.262	0.000	96	433864	1.00	0.8345	
109 1,2,3,5-Tetramethylbenzene	119	20.318	20.318	0.000	94	264670	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	20.732	20.732	0.000	97	326803	NC	NC	
110 Dodecane	57	20.892	20.892	0.000	93	329798	1.00	0.8605	
111 1,2,4-Trichlorobenzene	180	21.109	21.109	0.000	93	167519	1.00	0.6424	
113 Naphthalene	128	21.254	21.254	0.000	99	303421	1.00	0.5863	
114 Benzo(b)thiophene	134	21.368	21.368	0.000	99	153053	NC	NC	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	92	286449	1.00	0.8733	
116 1,2,3-Trichlorobenzene	180	21.543	21.543	0.000	95	201214	1.00	0.7278	
117 2-Methylnaphthalene	142	22.153	22.153	0.000	99	26524	1.00	0.1333	
118 1-Methylnaphthalene	142	22.277	22.277	0.000	100	42182	1.00	0.1496	
A 120 C8 Range	1	14.442	(14.390-14.494)		0	1192859	1.00	0.9252	
S 121 Xylenes, Total	100				0		3.00	2.90	
S 122 1,2-Dichloroethene, Total	1				0		2.00	1.85	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

40CV101S_00088

Amount Added: 50.00

Units: ml

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HCCVB25.D

Injection Date: 25-Feb-2019 09:47:30

Instrument ID: MH

Operator ID: HMT

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

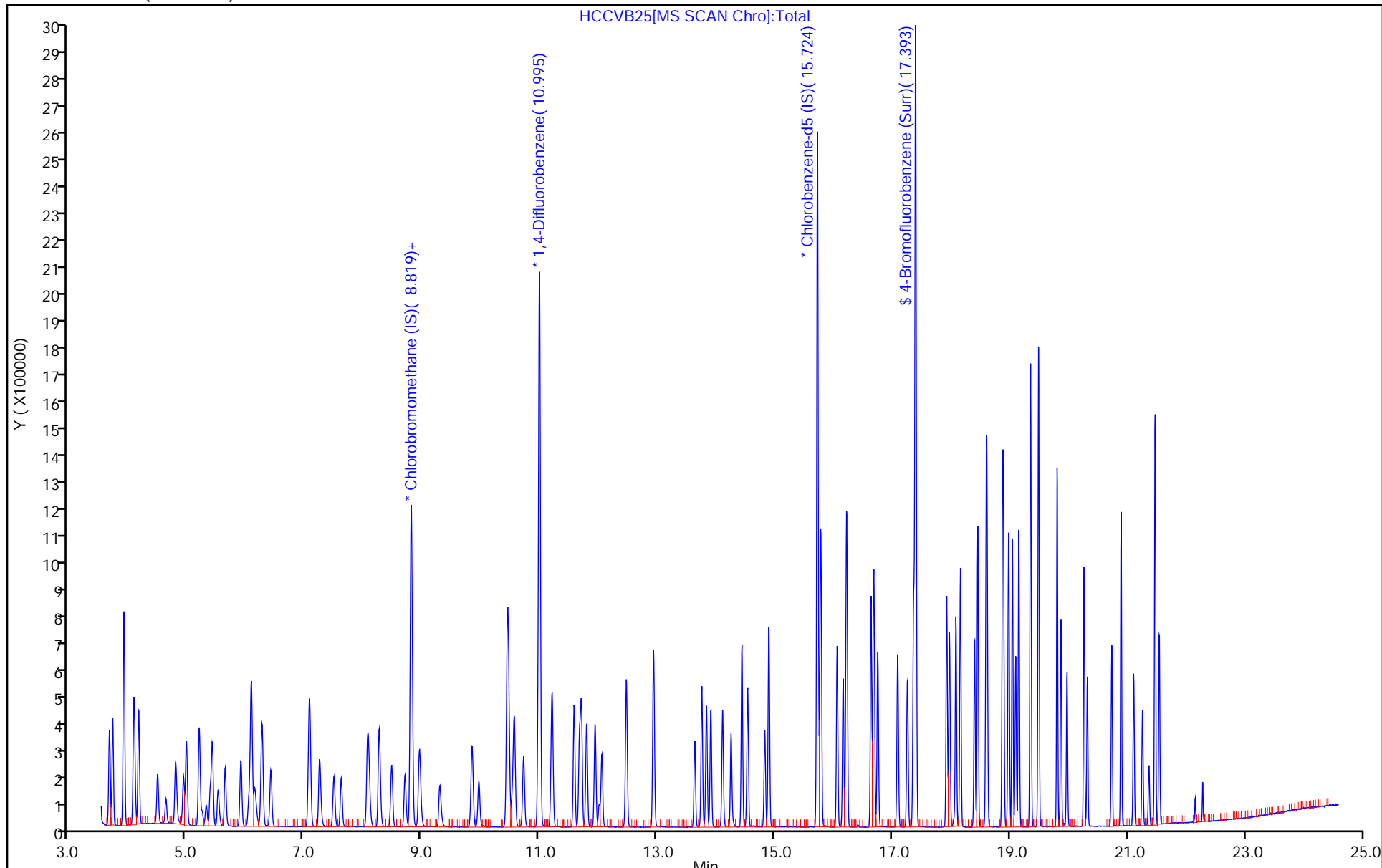
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.582		1.09	1.00	9.2	30.0
Propene	Ave	1.491	1.525		1.02	1.00	2.3	30.0
Dichlorodifluoromethane	Ave	5.038	5.333		1.06	1.00	5.9	30.0
Chloromethane	Ave	0.5876	0.6486		1.10	1.00	10.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.636		1.05	1.00	4.6	30.0
Vinyl chloride	Ave	1.827	2.022		1.11	1.00	10.7	30.0
Acetaldehyde	Ave	0.7017	0.7335		5.23	5.00	4.5	30.0
1,3-Butadiene	Ave	1.320	1.465		1.11	1.00	11.0	30.0
Butane	Ave	2.614	3.037		1.16	1.00	16.2	30.0
Bromomethane	Ave	1.848	2.013		1.09	1.00	8.9	30.0
Chloroethane	Ave	0.8331	0.9136		1.10	1.00	9.7	30.0
Ethanol	Ave	0.8189	0.7398		4.52	5.00	-9.7	30.0
Vinyl bromide	Ave	1.758	2.069		1.18	1.00	17.6	30.0
2-Methylbutane	Ave	1.939	2.241		1.16	1.00	15.6	30.0
Trichlorofluoromethane	Ave	4.604	5.060		1.10	1.00	9.9	30.0
Acrolein	Ave	0.5850	0.6401		1.09	1.00	9.4	30.0
Acetonitrile	Ave	0.7361	0.8155		1.11	1.00	10.8	30.0
Acetone	Ave	0.7520	0.8565		1.14	1.00	13.9	30.0
Pentane	Ave	0.2105	0.2364		1.12	1.00	12.3	30.0
Isopropyl alcohol	QuaF		2.815		1.19	1.00	19.3	30.0
Ethyl ether	Ave	1.862	2.216		1.19	1.00	19.0	30.0
1,1-Dichloroethene	Ave	1.554	1.640		1.06	1.00	5.6	30.0
Acrylonitrile	Ave	1.195	1.332		1.11	1.00	11.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	4.086		1.11	1.00	10.5	30.0
tert-Butyl alcohol	Ave	2.635	2.774		1.05	1.00	5.3	30.0
Methylene Chloride	Ave	1.636	1.731		1.06	1.00	5.9	30.0
3-Chloropropene	Ave	1.460	1.651		1.13	1.00	13.1	30.0
Carbon disulfide	Ave	4.496	5.037		1.12	1.00	12.0	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.661		1.04	1.00	4.2	30.0
2-Methylpentane	Ave	3.661	3.712		1.01	1.00	1.4	30.0
Methyl tert-butyl ether	Ave	3.774	4.086		1.08	1.00	8.3	30.0
1,1-Dichloroethane	Ave	3.031	3.376		1.11	1.00	11.4	30.0
Vinyl acetate	Ave	4.329	4.892		1.13	1.00	13.0	30.0
Hexane	Ave	1.211	1.291		1.07	1.00	6.6	30.0
2-Butanone (MEK)	Ave	0.6878	0.7365		1.07	1.00	7.1	30.0
Isopropyl ether	Ave	5.664	6.416		1.13	1.00	13.3	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.767		1.09	1.00	9.4	30.0
Ethyl acetate	Ave	3.858	4.156		1.08	1.00	7.7	30.0
Chloroform	Ave	3.476	3.989		1.15	1.00	14.8	30.0
Tert-butyl ethyl ether	Ave	4.715	4.863		1.03	1.00	3.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	2.014		1.08	1.00	7.7	30.0
1,1,1-Trichloroethane	Ave	3.305	3.602		1.09	1.00	9.0	30.0
1,2-Dichloroethane	Ave	0.4310	0.4711		1.09	1.00	9.3	30.0
Benzene	Ave	0.8457	0.9162		1.08	1.00	8.3	30.0
Cyclohexane	Ave	0.1257	0.1264		1.00	1.00	0.5	30.0
Carbon tetrachloride	Ave	0.6846	0.7453		1.09	1.00	8.9	30.0
1-Butanol	Ave	0.1144	0.1225		1.07	1.00	7.1	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1843		1.05	1.00	5.1	30.0
Thiophene	Ave	0.4839	0.5031		1.04	1.00	4.0	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.506		1.08	1.00	7.9	30.0
Heptane	Ave	0.2694	0.2772		1.03	1.00	2.9	30.0
1,2-Dichloropropane	Ave	0.3598	0.3965		1.10	1.00	10.2	30.0
Trichloroethene	Ave	0.3991	0.4146		1.04	1.00	3.9	30.0
Dibromomethane	Ave	0.4192	0.4613		1.10	1.00	10.0	30.0
Bromodichloromethane	Ave	0.6298	0.7064		1.12	1.00	12.2	30.0
1,4-Dioxane	Ave	0.1270	0.1235		0.973	1.00	-2.7	30.0
Methyl methacrylate	Ave	0.3781	0.4271		1.13	1.00	13.0	30.0
Methylcyclohexane	LinF		0.5957		1.13	1.00	13.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.8028		1.06	1.00	6.0	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5430		1.15	1.00	14.7	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5432		1.12	1.00	11.9	30.0
Toluene	Ave	1.139	1.249		1.10	1.00	9.7	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.4227		1.12	1.00	11.8	30.0
2-Hexanone	Ave	0.3734	0.3986		1.07	1.00	6.7	30.0
Octane	Ave	0.3251	0.3570		1.10	1.00	9.8	30.0
Dibromochloromethane	Ave	0.7610	0.8783		1.15	1.00	15.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7564		1.10	1.00	9.7	30.0
Tetrachloroethene	Ave	0.4638	0.4906		1.06	1.00	5.8	30.0
Chlorobenzene	Ave	0.9365	1.016		1.08	1.00	8.5	30.0
2,3-Dimethylheptane	Ave	1.197	1.242		1.04	1.00	3.8	30.0
Ethylbenzene	Ave	1.450	1.579		1.09	1.00	8.9	30.0
m-Xylene & p-Xylene	Ave	1.118	1.285		2.30	2.00	14.9	30.0
Nonane	Ave	0.7205	0.8189		1.14	1.00	13.7	30.0
Bromoform	Ave	0.8550	0.8677		1.01	1.00	1.5	30.0
Styrene	Ave	0.7534	0.8913		1.18	1.00	18.3	30.0
o-Xylene	Ave	1.138	1.284		1.13	1.00	12.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	1.065		1.15	1.00	15.5	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2451		1.08	1.00	7.9	30.0
Isopropylbenzene	Ave	1.571	1.737		1.11	1.00	10.6	30.0
Propylbenzene	Ave	0.4111	0.4533		1.10	1.00	10.3	30.0
2-Chlorotoluene	Ave	0.4027	0.4454		1.11	1.00	10.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.617		1.08	1.00	8.2	30.0
1,3,5-Trimethylbenzene	Lin1		0.7773		1.18	1.00	17.9	30.0
Alpha Methyl Styrene	Ave	0.6224	0.6345		1.02	1.00	2.0	30.0
Decane	Ave	0.9226	1.120		1.21	1.00	21.4	30.0
tert-Butylbenzene	Ave	1.398	1.570		1.12	1.00	12.3	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.500		1.15	1.00	15.1	30.0
sec-Butylbenzene	Ave	1.948	2.219		1.14	1.00	13.9	30.0
1,3-Dichlorobenzene	Ave	0.9455	1.004		1.06	1.00	6.1	30.0
Benzyl chloride	Ave	0.9648	1.031		1.07	1.00	6.9	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.9350		1.05	1.00	4.5	30.0
4-Isopropyltoluene	Ave	1.512	1.756		1.16	1.00	16.2	30.0
1,2,3-Trimethylbenzene	Ave	1.280	1.068		0.835	1.00	-16.5	30.0
Butylcyclohexane	Ave	1.039	1.173		1.13	1.00	13.0	30.0
Indane	Ave	1.252	1.365		1.09	1.00	9.0	30.0
1,2-Dichlorobenzene	Ave	0.9417	1.007		1.07	1.00	7.0	30.0
Indene	Ave	1.077	0.9492		0.882	1.00	-11.8	30.0
Butylbenzene	Ave	1.562	1.974		1.26	1.00	26.3	30.0
Undecane	Ave	1.067	1.264		1.18	1.00	18.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3904		1.00	1.00	-0.0	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.500		1.06	1.00	6.4	30.0
Dodecane	Ave	1.039	1.259		1.21	1.00	21.3	30.0
1,2,4-Trichlorobenzene	Lin1		0.6653		0.910	1.00	-9.0	30.0
Naphthalene	Ave	1.402	1.620		1.16	1.00	15.5	30.0
Hexachlorobutadiene	Ave	0.8888	0.9313		1.05	1.00	4.8	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.8521		1.14	1.00	13.7	30.0
2-Methylnaphthalene	Ave	0.5392	0.4269		0.792	1.00	-20.8	50.0
1-Methylnaphthalene	Ave	0.7641	0.5441		0.712	1.00	-28.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6727		4.13	4.00	3.2	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HCCVB27.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 27-Feb-2019 11:50:30 ALS Bottle#: 7 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-002
 Misc. Info.: S87
 Operator ID: AFB Instrument ID: MH
 Sublist: chrom-MH_TO15*sub6
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 15:09:58 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits

Date: 28-Feb-2019 15:09:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.814	8.814	0.000	98	226060	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1253478	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.724	15.724	0.000	88	1073197	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.398	17.398	0.000	93	721930	4.00	4.13	
6 Chlorodifluoromethane	51	3.682	3.682	0.000	97	202448	1.00	1.09	
7 Propene	41	3.692	3.692	0.000	97	86192	1.00	1.02	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	301415	1.00	1.06	
9 Chloromethane	52	3.925	3.925	0.000	98	36653	1.00	1.10	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.930	0.000	93	205505	1.00	1.05	
12 Vinyl chloride	62	4.090	4.090	0.000	99	114280	1.00	1.11	
11 Acetaldehyde	44	4.100	4.100	0.000	98	207270	5.00	5.23	
14 Butane	43	4.183	4.183	0.000	85	171633	1.00	1.16	
13 Butadiene	54	4.183	4.183	0.000	71	82818	1.00	1.11	
15 Bromomethane	94	4.503	4.503	0.000	98	113762	1.00	1.09	
16 Chloroethane	64	4.648	4.648	0.000	94	51634	1.00	1.10	
17 Ethanol	31	4.824	4.824	0.000	97	209034	5.00	4.52	
18 Vinyl bromide	106	4.943	4.943	0.000	98	116901	1.00	1.18	
19 2-Methylbutane	43	4.994	4.994	0.000	93	126651	1.00	1.16	
21 Trichlorofluoromethane	101	5.211	5.211	0.000	99	285948	1.00	1.10	
20 Acrolein	56	5.263	5.263	0.000	94	36175	1.00	1.09	
22 Acetonitrile	40	5.330	5.330	0.000	98	46088	1.00	1.11	
23 Acetone	58	5.403	5.403	0.000	96	48405	1.00	1.14	
24 Pentane	72	5.434	5.434	0.000	97	13358	1.00	1.12	
25 Isopropyl alcohol	45	5.542	5.542	0.000	98	159072	1.00	1.19	
26 Ethyl ether	31	5.651	5.651	0.000	91	125248	1.00	1.19	
27 1,1-Dichloroethene	96	5.920	5.920	0.000	96	92705	1.00	1.06	
28 Acrylonitrile	53	6.054	6.054	0.000	94	75257	1.00	1.11	
30 1,1,2-Trichloro-1,2,2-trif	101	6.095	6.095	0.000	95	230920	1.00	1.11	
29 2-Methyl-2-propanol	59	6.168	6.168	0.000	97	156753	1.00	1.05	
31 Methylene Chloride	84	6.271	6.271	0.000	96	97855	1.00	1.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.286	6.286	0.000	95	93284	1.00	1.13	
33 Carbon disulfide	76	6.426	6.426	0.000	100	284642	1.00	1.12	
34 trans-1,2-Dichloroethene	96	7.077	7.077	0.000	96	93857	1.00	1.04	
35 2-Methylpentane	43	7.093	7.093	0.000	96	209797	1.00	1.01	
36 Methyl tert-butyl ether	73	7.258	7.258	0.000	96	230900	1.00	1.08	
37 1,1-Dichloroethane	63	7.501	7.501	0.000	100	190789	1.00	1.11	
38 Vinyl acetate	43	7.625	7.625	0.000	100	276476	1.00	1.13	
40 Hexane	56	8.075	8.075	0.000	92	72970	1.00	1.07	
39 2-Butanone (MEK)	72	8.106	8.106	0.000	98	41623	1.00	1.07	
171 Isopropyl ether	45	8.271	8.271	0.000	97	362606	1.00	1.13	
41 cis-1,2-Dichloroethene	96	8.483	8.483	0.000	97	99834	1.00	1.09	
42 Ethyl acetate	43	8.710	8.710	0.000	98	234901	1.00	1.08	
43 Chloroform	83	8.824	8.824	0.000	97	225441	1.00	1.15	
173 Tert-butyl ethyl ether	59	8.959	8.959	0.000	98	274855	1.00	1.03	
44 Tetrahydrofuran	42	9.300	9.300	0.000	94	113795	1.00	1.08	
45 1,1,1-Trichloroethane	97	9.853	9.853	0.000	97	203571	1.00	1.09	
46 1,2-Dichloroethane	62	9.966	9.966	0.000	96	147638	1.00	1.09	
48 Cyclohexane	69	10.452	10.452	0.000	88	39593	1.00	1.00	
47 Benzene	78	10.452	10.452	0.000	97	287118	1.00	1.08	
50 Carbon tetrachloride	117	10.473	10.473	0.000	97	233556	1.00	1.09	
49 n-Butanol	31	10.545	10.545	0.000	68	38399	1.00	1.07	
51 2,3-Dimethylpentane	71	10.566	10.566	0.000	89	57748	1.00	1.05	
52 Thiophene	84	10.731	10.731	0.000	97	157660	1.00	1.04	
53 Isooctane	57	11.212	11.212	0.000	98	471784	1.00	1.08	
55 n-Heptane	71	11.589	11.589	0.000	94	86852	1.00	1.03	
54 1,2-Dichloropropane	63	11.677	11.677	0.000	92	124250	1.00	1.10	
56 Trichloroethene	130	11.708	11.708	0.000	94	129936	1.00	1.04	
57 Dibromomethane	93	11.801	11.801	0.000	95	144568	1.00	1.10	
58 Dichlorobromomethane	83	11.946	11.946	0.000	98	221351	1.00	1.12	
59 1,4-Dioxane	88	12.018	12.018	0.000	95	38707	1.00	0.9728	
60 Methyl methacrylate	41	12.060	12.060	0.000	90	133849	1.00	1.13	
61 Methylcyclohexane	83	12.478	12.478	0.000	93	186682	1.00	1.13	
62 4-Methyl-2-pentanone (MIBK)	43	12.933	12.933	0.000	98	251565	1.00	1.06	
63 cis-1,3-Dichloropropene	75	12.943	12.943	0.000	98	170173	1.00	1.15	
64 trans-1,3-Dichloropropene	75	13.641	13.641	0.000	97	145734	1.00	1.12	
65 Toluene	91	13.760	13.760	0.000	92	335127	1.00	1.10	
66 1,1,2-Trichloroethane	83	13.837	13.837	0.000	97	113418	1.00	1.12	
67 2-Methylthiophene	97	13.837	13.837	0.000	77	123193	NC	NC	
68 3-Methylthiophene	97	13.910	13.910	0.000	99	263912	NC	NC	
69 2-Hexanone	58	14.261	14.261	0.000	90	106946	1.00	1.07	
71 n-Octane	85	14.442	14.442	0.000	97	95789	1.00	1.10	
70 Chlorodibromomethane	129	14.540	14.540	0.000	97	235642	1.00	1.15	
72 Ethylene Dibromide	107	14.830	14.830	0.000	98	202945	1.00	1.10	
73 Tetrachloroethene	129	14.897	14.897	0.000	94	131616	1.00	1.06	
74 Chlorobenzene	112	15.776	15.776	0.000	93	272503	1.00	1.08	
75 2,3-Dimethylheptane	43	15.786	15.786	0.000	94	333152	1.00	1.04	
76 Ethylbenzene	91	16.060	16.060	0.000	99	423517	1.00	1.09	
77 2-Ethylthiophene	97	16.163	16.163	0.000	99	315340	NC	NC	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	689557	2.00	2.30	
81 n-Nonane	57	16.639	16.639	0.000	95	219720	1.00	1.14	
79 Bromoform	173	16.680	16.680	0.000	92	232814	1.00	1.01	
80 Styrene	104	16.690	16.690	0.000	98	239143	1.00	1.18	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
82 o-Xylene	91	16.752	16.752	0.000	98	344391	1.00	1.13	
83 1,1,2,2-Tetrachloroethane	83	17.094	17.094	0.000	99	285654	1.00	1.15	
84 1,2,3-Trichloropropane	110	17.259	17.259	0.000	96	65759	1.00	1.08	
85 Isopropylbenzene	105	17.362	17.362	0.000	97	466039	1.00	1.11	
86 N-Propylbenzene	120	17.926	17.926	0.000	98	121617	1.00	1.10	
87 2-Chlorotoluene	126	17.977	17.977	0.000	98	119504	1.00	1.11	
88 4-Ethyltoluene	105	18.086	18.086	0.000	98	433728	1.00	1.08	
89 1,3,5-Trimethylbenzene	120	18.158	18.158	0.000	92	208540	1.00	1.18	
90 Alpha Methyl Styrene	118	18.401	18.401	0.000	86	170243	1.00	1.02	
91 n-Decane	57	18.453	18.453	0.000	88	300572	1.00	1.21	
92 tert-Butylbenzene	119	18.598	18.598	0.000	90	421160	1.00	1.12	
93 1,2,4-Trimethylbenzene	105	18.613	18.613	0.000	96	402528	1.00	1.15	
95 sec-Butylbenzene	105	18.877	18.877	0.000	98	595352	1.00	1.14	
94 1,3-Dichlorobenzene	146	18.892	18.892	0.000	98	269246	1.00	1.06	
96 Benzyl chloride	91	18.975	18.975	0.000	97	276584	1.00	1.07	
97 1,4-Dichlorobenzene	146	18.985	18.985	0.000	96	250865	1.00	1.05	
98 4-Isopropyltoluene	119	19.047	19.047	0.000	97	471219	1.00	1.16	
99 1,2,3-Trimethylbenzene	105	19.099	19.099	0.000	99	286666	1.00	0.8350	
100 Butylcyclohexane	83	19.156	19.156	0.000	91	314740	1.00	1.13	
102 2,3-Dihydroindene	117	19.352	19.352	0.000	93	366103	1.00	1.09	
101 1,2-Dichlorobenzene	146	19.357	19.357	0.000	83	270251	1.00	1.07	
103 Indene	116	19.486	19.486	0.000	87	254677	1.00	0.8815	
104 n-Butylbenzene	91	19.492	19.492	0.000	96	529546	1.00	1.26	
105 Undecane	57	19.807	19.807	0.000	94	339087	1.00	1.18	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.874	19.874	0.000	98	333863	NC	NC	
106 1,2-Dibromo-3-Chloropropan	157	19.977	19.977	0.000	95	104745	1.00	1.00	
107 1,2,4,5-Tetramethylbenzene	119	20.267	20.267	0.000	96	402327	1.00	1.06	
109 1,2,3,5-Tetramethylbenzene	119	20.319	20.319	0.000	94	237961	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	20.737	20.737	0.000	97	317760	NC	NC	
110 Dodecane	57	20.897	20.897	0.000	92	337919	1.00	1.21	
111 1,2,4-Trichlorobenzene	180	21.109	21.109	0.000	93	178505	1.00	0.9102	
113 Naphthalene	128	21.259	21.259	0.000	99	434769	1.00	1.16	
114 Benzo(b)thiophene	134	21.368	21.368	0.000	99	182005	NC	NC	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	91	249871	1.00	1.05	
116 1,2,3-Trichlorobenzene	180	21.544	21.544	0.000	95	228620	1.00	1.14	
117 2-Methylnaphthalene	142	22.153	22.153	0.000	100	114535	1.00	0.7918	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	100	145977	1.00	0.7121	
A 120 C8 Range	1	14.442	(14.390-14.504)		0	1047632	1.00	1.13	
S 121 Xylenes, Total	100				0		3.00	3.43	
S 122 1,2-Dichloroethene, Total	1				0		2.00	2.14	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00087

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HCCVB27.D

Injection Date: 27-Feb-2019 11:50:30

Instrument ID: MH

Operator ID: AFB

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

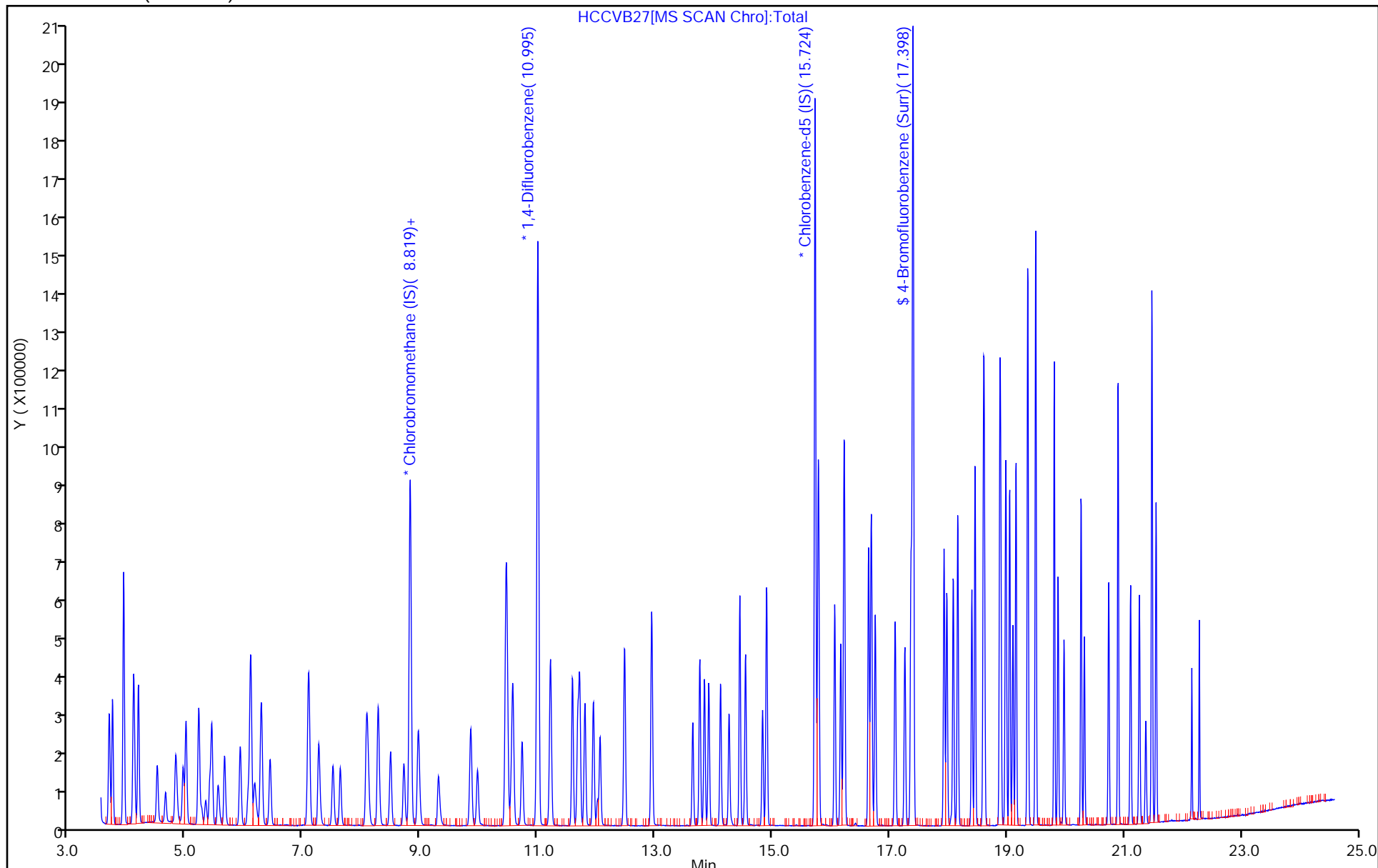
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27981/2 Calibration Date: 02/28/2019 13:02
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.574		1.09	1.00	9.0	30.0
Propene	Ave	1.491	1.540		1.03	1.00	3.3	30.0
Dichlorodifluoromethane	Ave	5.038	5.387		1.07	1.00	6.9	30.0
Chloromethane	Ave	0.5876	0.6291		1.07	1.00	7.1	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.765		1.08	1.00	8.4	30.0
Vinyl chloride	Ave	1.827	2.041		1.12	1.00	11.7	30.0
Acetaldehyde	Ave	0.7017	0.7245		5.16	5.00	3.3	30.0
1,3-Butadiene	Ave	1.320	1.440		1.09	1.00	9.1	30.0
Butane	Ave	2.614	2.977		1.14	1.00	13.9	30.0
Bromomethane	Ave	1.848	1.991		1.08	1.00	7.7	30.0
Chloroethane	Ave	0.8331	0.9274		1.11	1.00	11.3	30.0
Ethanol	Ave	0.8189	0.7228		4.41	5.00	-11.7	30.0
Vinyl bromide	Ave	1.758	1.991		1.13	1.00	13.2	30.0
2-Methylbutane	Ave	1.939	2.203		1.14	1.00	13.6	30.0
Trichlorofluoromethane	Ave	4.604	5.063		1.10	1.00	10.0	30.0
Acrolein	Ave	0.5850	0.6523		1.12	1.00	11.5	30.0
Acetonitrile	Ave	0.7361	0.7915		1.08	1.00	7.5	30.0
Acetone	Ave	0.7520	0.8543		1.14	1.00	13.6	30.0
Pentane	Ave	0.2105	0.2430		1.15	1.00	15.4	30.0
Isopropyl alcohol	QuaF		2.890		1.23	1.00	22.5	30.0
Ethyl ether	Ave	1.862	2.173		1.17	1.00	16.7	30.0
1,1-Dichloroethene	Ave	1.554	1.659		1.07	1.00	6.8	30.0
Acrylonitrile	Ave	1.195	1.353		1.13	1.00	13.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	4.083		1.10	1.00	10.5	30.0
tert-Butyl alcohol	Ave	2.635	2.848		1.08	1.00	8.1	30.0
Methylene Chloride	Ave	1.636	1.714		1.05	1.00	4.8	30.0
3-Chloropropene	Ave	1.460	1.638		1.12	1.00	12.2	30.0
Carbon disulfide	Ave	4.496	5.050		1.12	1.00	12.3	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.706		1.07	1.00	7.1	30.0
2-Methylpentane	Ave	3.661	3.715		1.01	1.00	1.5	30.0
Methyl tert-butyl ether	Ave	3.774	4.233		1.12	1.00	12.2	30.0
1,1-Dichloroethane	Ave	3.031	3.373		1.11	1.00	11.3	30.0
Vinyl acetate	Ave	4.329	5.025		1.16	1.00	16.1	30.0
Hexane	Ave	1.211	1.329		1.10	1.00	9.8	30.0
2-Butanone (MEK)	Ave	0.6878	0.7536		1.10	1.00	9.6	30.0
Isopropyl ether	Ave	5.664	6.464		1.14	1.00	14.1	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.798		1.11	1.00	11.4	30.0
Ethyl acetate	Ave	3.858	4.140		1.07	1.00	7.3	30.0
Chloroform	Ave	3.476	3.949		1.14	1.00	13.6	30.0
Tert-butyl ethyl ether	Ave	4.715	4.960		1.05	1.00	5.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27981/2 Calibration Date: 02/28/2019 13:02
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	2.027		1.08	1.00	8.5	30.0
1,1,1-Trichloroethane	Ave	3.305	3.686		1.12	1.00	11.5	30.0
1,2-Dichloroethane	Ave	0.4310	0.4697		1.09	1.00	9.0	30.0
Cyclohexane	Ave	0.1257	0.1361		1.08	1.00	8.2	30.0
Benzene	Ave	0.8457	0.9328		1.10	1.00	10.3	30.0
Carbon tetrachloride	Ave	0.6846	0.7610		1.11	1.00	11.2	30.0
1-Butanol	Ave	0.1144	0.1258		1.10	1.00	9.9	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1905		1.09	1.00	8.6	30.0
Thiophene	Ave	0.4839	0.5174		1.07	1.00	6.9	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.525		1.09	1.00	9.3	30.0
Heptane	Ave	0.2694	0.2871		1.07	1.00	6.6	30.0
1,2-Dichloropropane	Ave	0.3598	0.3994		1.11	1.00	11.0	30.0
Trichloroethene	Ave	0.3991	0.4352		1.09	1.00	9.0	30.0
Dibromomethane	Ave	0.4192	0.4546		1.08	1.00	8.5	30.0
Bromodichloromethane	Ave	0.6298	0.7086		1.13	1.00	12.5	30.0
1,4-Dioxane	Ave	0.1270	0.1288		1.01	1.00	1.4	30.0
Methyl methacrylate	Ave	0.3781	0.4243		1.12	1.00	12.2	30.0
Methylcyclohexane	LinF		0.6170		1.17	1.00	17.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.8163		1.08	1.00	7.7	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5512		1.16	1.00	16.4	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5595		1.15	1.00	15.2	30.0
Toluene	Ave	1.139	1.276		1.12	1.00	12.1	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.4259		1.13	1.00	12.7	30.0
2-Hexanone	Ave	0.3734	0.4079		1.09	1.00	9.2	30.0
Octane	Ave	0.3251	0.3675		1.13	1.00	13.0	30.0
Dibromochloromethane	Ave	0.7610	0.8735		1.15	1.00	14.8	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7620		1.11	1.00	10.5	30.0
Tetrachloroethene	Ave	0.4638	0.5065		1.09	1.00	9.2	30.0
Chlorobenzene	Ave	0.9365	1.021		1.09	1.00	9.0	30.0
2,3-Dimethylheptane	Ave	1.197	1.204		1.01	1.00	0.6	30.0
Ethylbenzene	Ave	1.450	1.602		1.11	1.00	10.5	30.0
m-Xylene & p-Xylene	Ave	1.118	1.283		2.29	2.00	14.7	30.0
Nonane	Ave	0.7205	0.8186		1.14	1.00	13.6	30.0
Bromoform	Ave	0.8550	0.8784		1.03	1.00	2.7	30.0
Styrene	Ave	0.7534	0.8894		1.18	1.00	18.1	30.0
o-Xylene	Ave	1.138	1.272		1.12	1.00	11.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	1.042		1.13	1.00	13.0	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2446		1.08	1.00	7.7	30.0
Isopropylbenzene	Ave	1.571	1.741		1.11	1.00	10.8	30.0
Propylbenzene	Ave	0.4111	0.4599		1.12	1.00	11.9	30.0
2-Chlorotoluene	Ave	0.4027	0.4527		1.12	1.00	12.4	30.0

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 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.607		1.08	1.00	7.6	30.0
1,3,5-Trimethylbenzene	Lin1		0.7745		1.18	1.00	17.5	30.0
Alpha Methyl Styrene	Ave	0.6224	0.6334		1.02	1.00	1.8	30.0
Decane	Ave	0.9226	1.090		1.18	1.00	18.2	30.0
tert-Butylbenzene	Ave	1.398	1.550		1.11	1.00	10.9	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.458		1.12	1.00	11.8	30.0
sec-Butylbenzene	Ave	1.948	2.192		1.12	1.00	12.5	30.0
1,3-Dichlorobenzene	Ave	0.9455	0.9928		1.05	1.00	5.0	30.0
Benzyl chloride	Ave	0.9648	1.020		1.06	1.00	5.7	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.9363		1.05	1.00	4.6	30.0
4-Isopropyltoluene	Ave	1.512	1.727		1.14	1.00	14.2	30.0
1,2,3-Trimethylbenzene	Ave	1.280	1.038		0.811	1.00	-18.9	30.0
Butylcyclohexane	Ave	1.039	1.122		1.08	1.00	8.0	30.0
Indane	Ave	1.252	1.345		1.07	1.00	7.4	30.0
1,2-Dichlorobenzene	Ave	0.9417	0.9891		1.05	1.00	5.0	30.0
Indene	Ave	1.077	0.9199		0.854	1.00	-14.6	30.0
Butylbenzene	Ave	1.562	1.868		1.20	1.00	19.6	30.0
Undecane	Ave	1.067	1.214		1.14	1.00	13.8	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3916		1.00	1.00	0.3	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.468		1.04	1.00	4.2	30.0
Dodecane	Ave	1.039	1.120		1.08	1.00	7.8	30.0
1,2,4-Trichlorobenzene	Lin1		0.6578		0.901	1.00	-9.9	30.0
Naphthalene	Ave	1.402	1.510		1.08	1.00	7.7	30.0
Hexachlorobutadiene	Ave	0.8888	0.9004		1.01	1.00	1.3	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.7823		1.04	1.00	4.4	30.0
2-Methylnaphthalene	Ave	0.5392	0.2978		0.552	1.00	-44.8	50.0
1-Methylnaphthalene	Ave	0.7641	0.3755		0.491	1.00	-50.9*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6632		4.07	4.00	1.7	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\HCCVB28.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 28-Feb-2019 13:02:30 ALS Bottle#: 15 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010950-002
 Misc. Info.: S87
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub6
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 01-Mar-2019 16:50:30 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0307

First Level Reviewer: khachitpongpanits

Date: 01-Mar-2019 16:50:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.819	0.000	97	308099	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1679334	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	87	1441526	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.398	17.398	0.000	95	956004	4.00	4.07	
6 Chlorodifluoromethane	51	3.687	3.687	0.000	97	275324	1.00	1.09	
7 Propene	41	3.697	3.697	0.000	93	118611	1.00	1.03	
8 Dichlorodifluoromethane	85	3.744	3.744	0.000	100	414896	1.00	1.07	
9 Chloromethane	52	3.930	3.930	0.000	98	48456	1.00	1.07	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.940	3.940	0.000	92	290007	1.00	1.08	
12 Vinyl chloride	62	4.100	4.100	0.000	99	157188	1.00	1.12	
11 Acetaldehyde	44	4.110	4.110	0.000	99	279038	5.00	5.16	
13 Butadiene	54	4.188	4.188	0.000	74	110890	1.00	1.09	
14 Butane	43	4.188	4.188	0.000	85	229293	1.00	1.14	
15 Bromomethane	94	4.508	4.508	0.000	98	153330	1.00	1.08	
16 Chloroethane	64	4.653	4.653	0.000	96	71430	1.00	1.11	
17 Ethanol	31	4.824	4.824	0.000	96	278384	5.00	4.41	
18 Vinyl bromide	106	4.948	4.948	0.000	98	153355	1.00	1.13	
19 2-Methylbutane	43	4.999	4.999	0.000	93	169690	1.00	1.14	
21 Trichlorofluoromethane	101	5.216	5.216	0.000	99	389959	1.00	1.10	
20 Acrolein	56	5.268	5.268	0.000	93	50246	1.00	1.12	
22 Acetonitrile	40	5.335	5.335	0.000	98	60966	1.00	1.08	
23 Acetone	58	5.408	5.408	0.000	97	65801	1.00	1.14	
24 Pentane	72	5.434	5.434	0.000	95	18714	1.00	1.15	
25 Isopropyl alcohol	45	5.547	5.547	0.000	99	222623	1.00	1.23	
26 Ethyl ether	31	5.656	5.656	0.000	92	167405	1.00	1.17	
27 1,1-Dichloroethene	96	5.925	5.925	0.000	97	127784	1.00	1.07	
28 Acrylonitrile	53	6.059	6.059	0.000	93	104241	1.00	1.13	
30 1,1,2-Trichloro-1,2,2-trif	101	6.105	6.105	0.000	96	314509	1.00	1.10	
29 2-Methyl-2-propanol	59	6.167	6.167	0.000	96	219394	1.00	1.08	
31 Methylene Chloride	84	6.276	6.276	0.000	97	132047	1.00	1.05	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.292	6.292	0.000	96	126191	1.00	1.12	
33 Carbon disulfide	76	6.431	6.431	0.000	100	388956	1.00	1.12	
34 trans-1,2-Dichloroethene	96	7.082	7.082	0.000	97	131430	1.00	1.07	
35 2-Methylpentane	43	7.098	7.098	0.000	96	286126	1.00	1.01	
36 Methyl tert-butyl ether	73	7.263	7.263	0.000	97	326066	1.00	1.12	
37 1,1-Dichloroethane	63	7.506	7.506	0.000	100	259780	1.00	1.11	
38 Vinyl acetate	43	7.630	7.630	0.000	100	387033	1.00	1.16	
40 Hexane	56	8.075	8.075	0.000	92	102393	1.00	1.10	
39 2-Butanone (MEK)	72	8.106	8.106	0.000	96	58049	1.00	1.10	
171 Isopropyl ether	45	8.276	8.276	0.000	97	497923	1.00	1.14	
41 cis-1,2-Dichloroethene	96	8.488	8.488	0.000	96	138499	1.00	1.11	
42 Ethyl acetate	43	8.715	8.715	0.000	98	318859	1.00	1.07	
43 Chloroform	83	8.834	8.834	0.000	97	304174	1.00	1.14	
173 Tert-butyl ethyl ether	59	8.958	8.958	0.000	97	382041	1.00	1.05	
44 Tetrahydrofuran	42	9.305	9.305	0.000	94	156161	1.00	1.08	
45 1,1,1-Trichloroethane	97	9.858	9.858	0.000	97	283896	1.00	1.12	
46 1,2-Dichloroethane	62	9.971	9.971	0.000	97	197176	1.00	1.09	
48 Cyclohexane	69	10.452	10.452	0.000	77	57139	1.00	1.08	
47 Benzene	78	10.457	10.457	0.000	98	391626	1.00	1.10	
50 Carbon tetrachloride	117	10.478	10.478	0.000	98	319503	1.00	1.11	
49 n-Butanol	31	10.550	10.550	0.000	68	52801	1.00	1.10	
51 2,3-Dimethylpentane	71	10.571	10.571	0.000	89	79965	1.00	1.09	
52 Thiophene	84	10.731	10.731	0.000	97	217216	1.00	1.07	
53 Isooctane	57	11.217	11.217	0.000	98	640147	1.00	1.09	
55 n-Heptane	71	11.589	11.589	0.000	95	120546	1.00	1.07	
54 1,2-Dichloropropane	63	11.682	11.682	0.000	91	167669	1.00	1.11	
56 Trichloroethene	130	11.713	11.713	0.000	96	182716	1.00	1.09	
57 Dibromomethane	93	11.801	11.801	0.000	97	190874	1.00	1.08	
58 Dichlorobromomethane	83	11.946	11.946	0.000	99	297480	1.00	1.13	
59 1,4-Dioxane	88	12.013	12.013	0.000	95	54074	1.00	1.01	
60 Methyl methacrylate	41	12.059	12.059	0.000	91	178134	1.00	1.12	
61 Methylcyclohexane	83	12.478	12.478	0.000	93	259030	1.00	1.17	
62 4-Methyl-2-pentanone (MIBK)	43	12.933	12.933	0.000	98	342699	1.00	1.08	
63 cis-1,3-Dichloropropene	75	12.943	12.943	0.000	98	231429	1.00	1.16	
64 trans-1,3-Dichloropropene	75	13.641	13.641	0.000	98	201645	1.00	1.15	
65 Toluene	91	13.760	13.760	0.000	93	459838	1.00	1.12	
66 1,1,2-Trichloroethane	83	13.843	13.843	0.000	97	153487	1.00	1.13	
67 2-Methylthiophene	97	13.843	13.843	0.000	77	166773	NC	NC	
68 3-Methylthiophene	97	13.915	13.915	0.000	98	365404	NC	NC	
69 2-Hexanone	58	14.261	14.261	0.000	90	147005	1.00	1.09	
71 n-Octane	85	14.442	14.442	0.000	96	132421	1.00	1.13	
70 Chlorodibromomethane	129	14.540	14.540	0.000	97	314787	1.00	1.15	
72 Ethylene Dibromide	107	14.830	14.830	0.000	98	274601	1.00	1.11	
73 Tetrachloroethene	129	14.897	14.897	0.000	95	182537	1.00	1.09	
74 Chlorobenzene	112	15.775	15.775	0.000	93	367950	1.00	1.09	
75 2,3-Dimethylheptane	43	15.786	15.786	0.000	95	434046	1.00	1.01	
76 Ethylbenzene	91	16.060	16.060	0.000	99	577382	1.00	1.11	
77 2-Ethylthiophene	97	16.163	16.163	0.000	98	426333	NC	NC	
78 m-Xylene & p-Xylene	91	16.225	16.225	0.000	98	924498	2.00	2.29	
81 n-Nonane	57	16.639	16.639	0.000	95	294998	1.00	1.14	
79 Bromoform	173	16.680	16.680	0.000	93	316559	1.00	1.03	
80 Styrene	104	16.690	16.690	0.000	99	320512	1.00	1.18	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
82 o-Xylene	91	16.752	16.752	0.000	99	458341	1.00	1.12	
83 1,1,2,2-Tetrachloroethane	83	17.093	17.093	0.000	99	375400	1.00	1.13	
84 1,2,3-Trichloropropane	110	17.259	17.259	0.000	97	88158	1.00	1.08	
85 Isopropylbenzene	105	17.362	17.362	0.000	97	627291	1.00	1.11	
86 N-Propylbenzene	120	17.926	17.926	0.000	98	165730	1.00	1.12	
87 2-Chlorotoluene	126	17.977	17.977	0.000	98	163152	1.00	1.12	
88 4-Ethyltoluene	105	18.086	18.086	0.000	98	579138	1.00	1.08	
89 1,3,5-Trimethylbenzene	120	18.158	18.158	0.000	92	279130	1.00	1.18	
90 Alpha Methyl Styrene	118	18.401	18.401	0.000	87	228248	1.00	1.02	
91 n-Decane	57	18.458	18.458	0.000	88	392864	1.00	1.18	
92 tert-Butylbenzene	119	18.603	18.603	0.000	93	558694	1.00	1.11	
93 1,2,4-Trimethylbenzene	105	18.613	18.613	0.000	96	525279	1.00	1.12	
95 sec-Butylbenzene	105	18.877	18.877	0.000	99	789783	1.00	1.12	
94 1,3-Dichlorobenzene	146	18.897	18.897	0.000	98	357781	1.00	1.05	
96 Benzyl chloride	91	18.975	18.975	0.000	97	367609	1.00	1.06	
97 1,4-Dichlorobenzene	146	18.985	18.985	0.000	95	337418	1.00	1.05	
98 4-Isopropyltoluene	119	19.047	19.047	0.000	97	622267	1.00	1.14	
99 1,2,3-Trimethylbenzene	105	19.099	19.099	0.000	99	374154	1.00	0.8113	
100 Butylcyclohexane	83	19.156	19.156	0.000	92	404335	1.00	1.08	
102 2,3-Dihydroindene	117	19.352	19.352	0.000	93	484612	1.00	1.07	
101 1,2-Dichlorobenzene	146	19.357	19.357	0.000	84	356441	1.00	1.05	
103 Indene	116	19.486	19.486	0.000	89	331529	1.00	0.8543	
104 n-Butylbenzene	91	19.492	19.492	0.000	97	673121	1.00	1.20	
105 Undecane	57	19.807	19.807	0.000	95	437442	1.00	1.14	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.874	19.874	0.000	98	441545	NC	NC	
106 1,2-Dibromo-3-Chloropropan	157	19.977	19.977	0.000	96	141114	1.00	1.00	
107 1,2,4,5-Tetramethylbenzene	119	20.267	20.267	0.000	96	528894	1.00	1.04	
109 1,2,3,5-Tetramethylbenzene	119	20.318	20.318	0.000	94	315022	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	20.737	20.737	0.000	97	410535	NC	NC	
110 Dodecane	57	20.897	20.897	0.000	93	403486	1.00	1.08	
111 1,2,4-Trichlorobenzene	180	21.109	21.109	0.000	93	237061	1.00	0.9006	
113 Naphthalene	128	21.259	21.259	0.000	99	544124	1.00	1.08	
114 Benzo(b)thiophene	134	21.368	21.368	0.000	99	229062	NC	NC	
115 Hexachlorobutadiene	225	21.476	21.476	0.000	92	324499	1.00	1.01	
116 1,2,3-Trichlorobenzene	180	21.543	21.543	0.000	95	281929	1.00	1.04	
117 2-Methylnaphthalene	142	22.153	22.153	0.000	99	107323	1.00	0.5523	
118 1-Methylnaphthalene	142	22.282	22.282	0.000	100	135311	1.00	0.4914	
A 120 C8 Range	1	14.442	(14.396-14.489)		0	1374461	1.00	1.11	
S 121 Xylenes, Total	100				0		3.00	3.41	
S 122 1,2-Dichloroethene, Total	1				0		2.00	2.18	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00087

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\HCCVB28.D

Injection Date: 28-Feb-2019 13:02:30

Instrument ID: MH

Operator ID: HMT

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

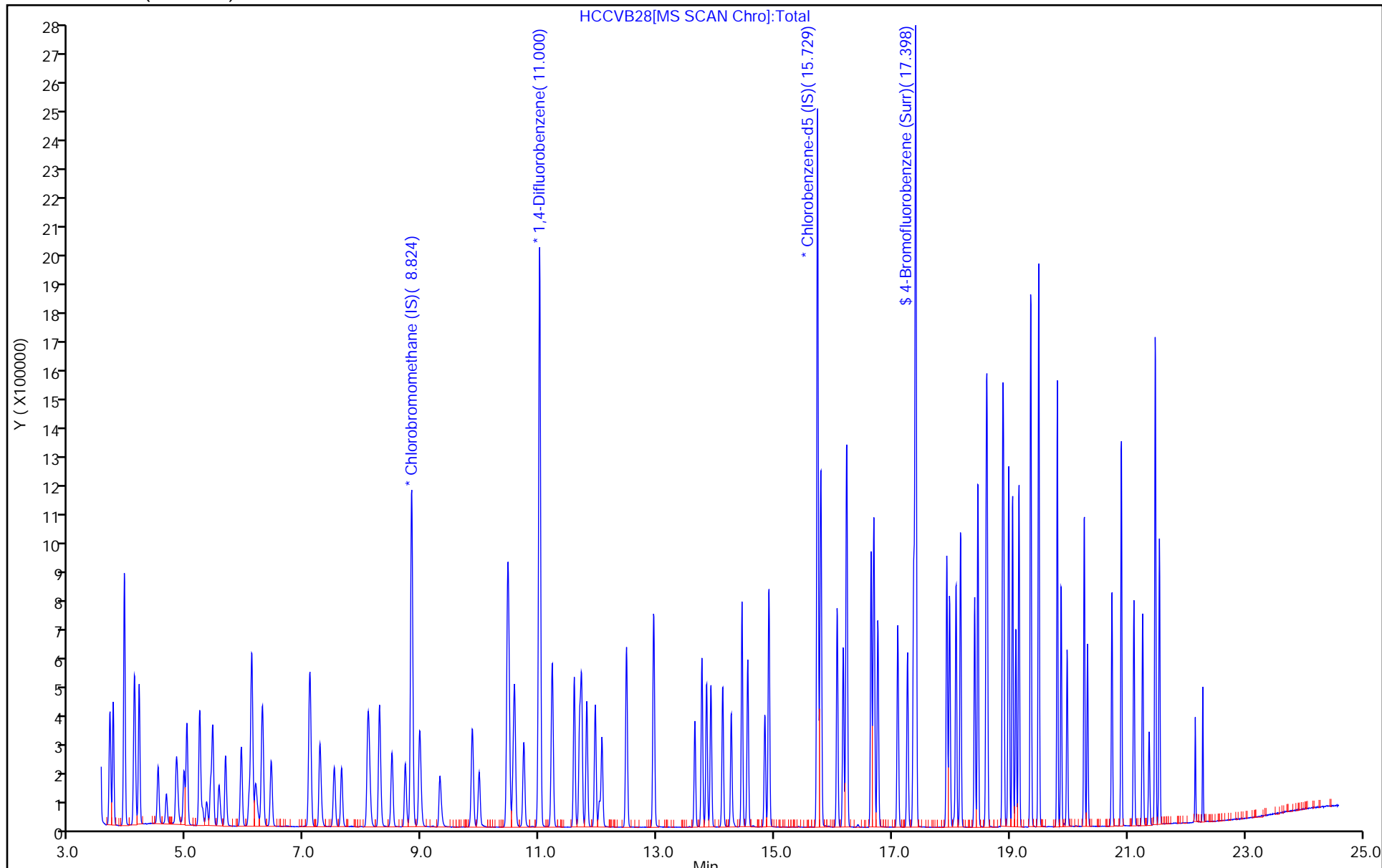
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11BLK1.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 11-Jan-2019 12:24:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-001
 Misc. Info.: TUNE
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:27:58 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	17.714	17.714	0.000	0	1529277	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

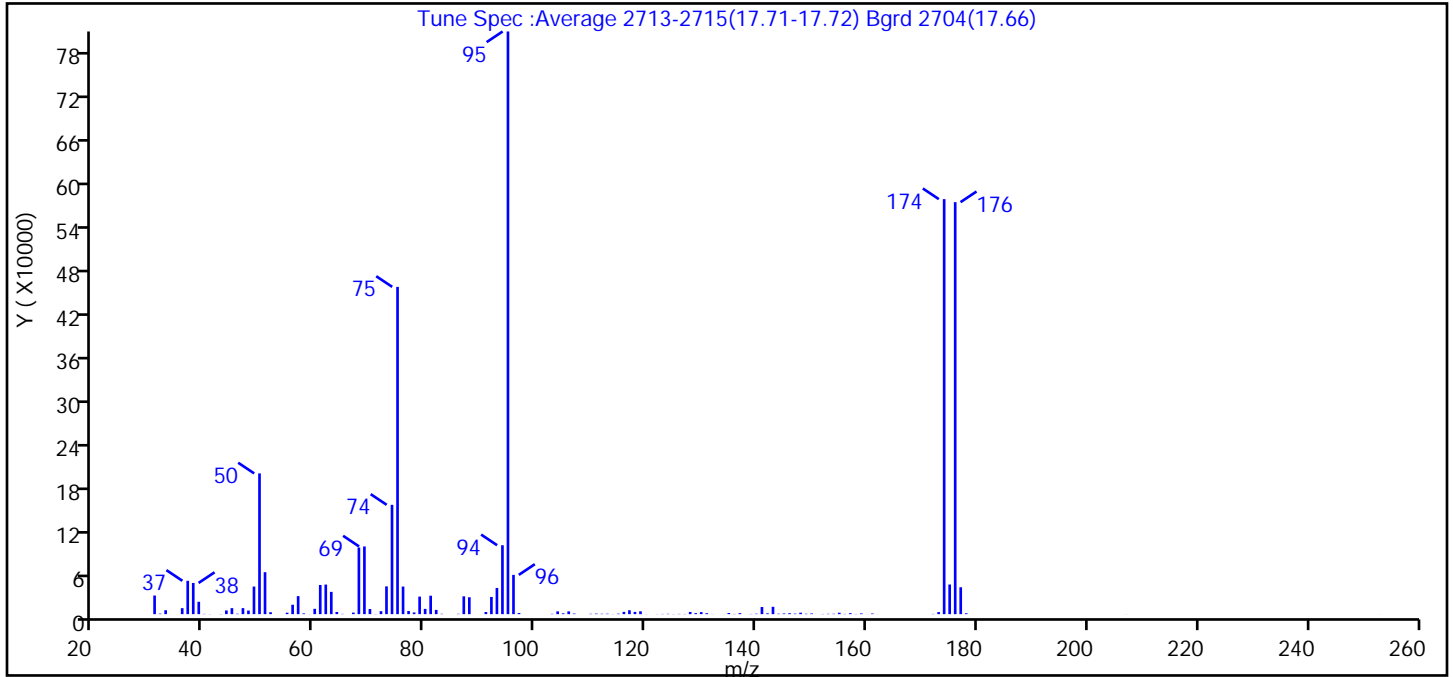
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11BLK1.D
 Injection Date: 11-Jan-2019 12:24:30 Instrument ID: MG
 Lims ID: BFB
 Client ID:
 Operator ID: 007126 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	24.2
75	30 to 60% of m/z 95	56.2
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	71.2
175	5 to 9% of m/z 174	5.1 (7.1)
176	Greater than 95% but less than 101% of m/z 174	70.7 (99.3)
177	5 to 9% of m/z 176	4.6 (6.5)

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11BLK1.D\MG_TO15.rslt\spectra.d
Injection Date: 11-Jan-2019 12:24:30
Spectrum: Tune Spec :Average 2713-2715(17.71-17.72) Bgrd 2704(17.66)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 121

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	40	67.00	2139	107.00	778	143.00	10104
31.00	25632	68.00	91720	110.00	498	144.00	587
32.00	700	69.00	93208	111.00	724	145.00	927
33.00	5381	70.00	7027	112.00	527	146.00	1273
36.00	8248	71.00	202	113.00	608	147.00	708
37.00	45912	72.00	4059	114.00	144	148.00	2025
38.00	42936	73.00	38216	115.00	670	149.00	560
39.00	17016	74.00	150528	116.00	3131	150.00	935
40.00	332	75.00	450624	117.00	5351	152.00	268
41.00	149	76.00	38016	118.00	3117	153.00	484
43.00	197	77.00	4264	119.00	3900	154.00	502
44.00	5113	78.00	2308	120.00	131	155.00	1934
45.00	8252	79.00	24168	122.00	141	156.00	302
46.00	572	80.00	7254	123.00	284	157.00	1307
47.00	8285	81.00	25360	124.00	461	158.00	210
48.00	4923	82.00	5819	125.00	176	159.00	985
49.00	38016	83.00	470	126.00	348	160.00	57
50.00	193792	86.00	468	127.00	225	161.00	843
51.00	57784	87.00	24536	128.00	3031	162.00	53
52.00	2613	88.00	23248	129.00	1392	172.00	318
55.00	1997	91.00	2941	130.00	2824	173.00	2830
56.00	12955	92.00	23664	131.00	1281	174.00	571456
57.00	24800	93.00	36072	132.00	118	175.00	40840
58.00	1003	94.00	94896	134.00	76	176.00	567296
59.00	117	95.00	802304	135.00	1592	177.00	37016
60.00	7338	96.00	54088	136.00	271	178.00	1198
61.00	40160	97.00	1550	137.00	1372	207.00	74
62.00	40712	103.00	429	139.00	267	253.00	65
63.00	30672	104.00	3827	140.00	546		
64.00	2993	105.00	1115	141.00	9796		
65.00	341	106.00	3820	142.00	1128		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11BLK1.D

Injection Date: 11-Jan-2019 12:24:30

Instrument ID: MG

Operator ID: 007126

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

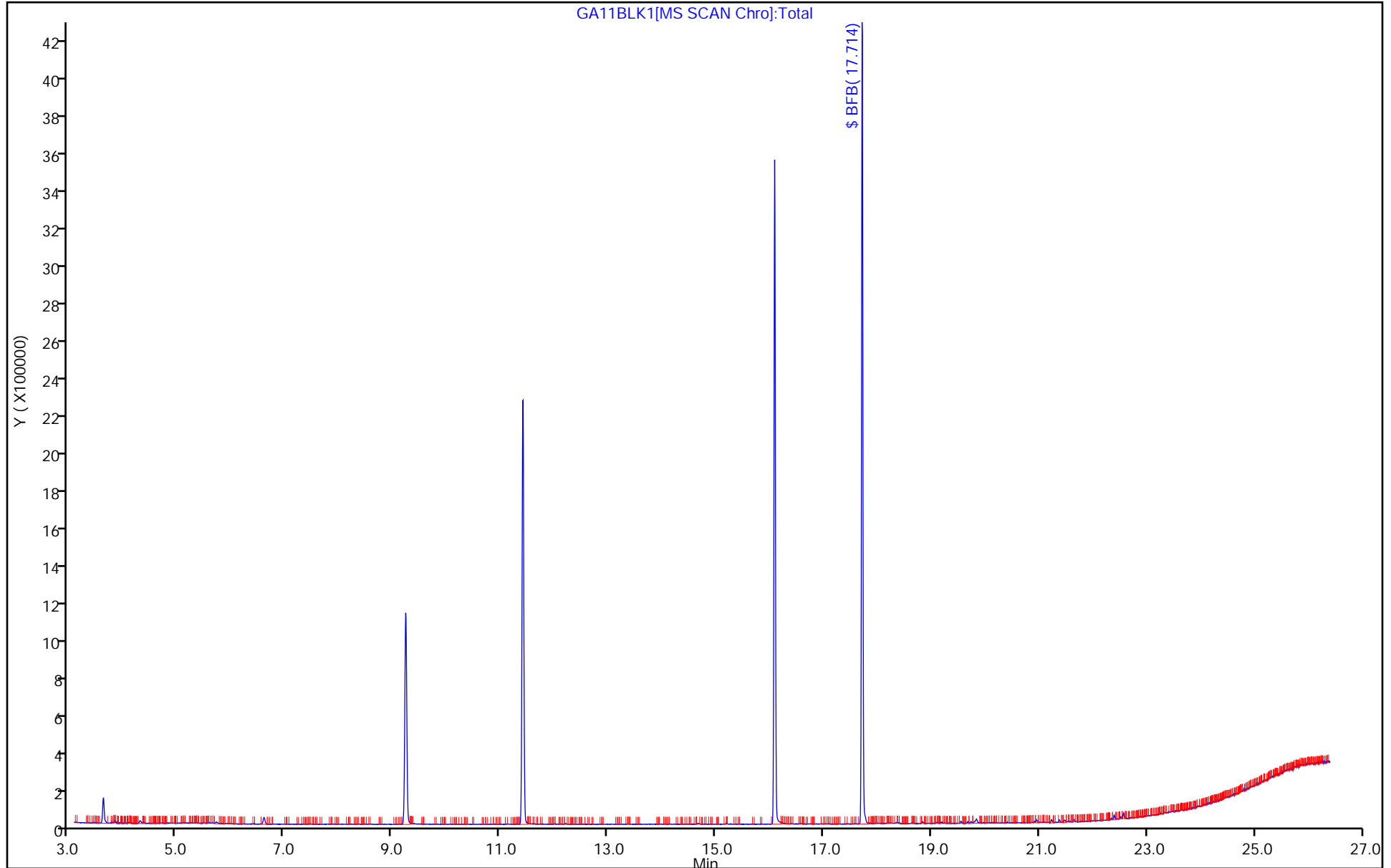
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GBFBB26.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 26-Feb-2019 11:03:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-001
 Misc. Info.: TUNE
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 14:57:11 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 14:57:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.386	5.386	0.000	0	1917303	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

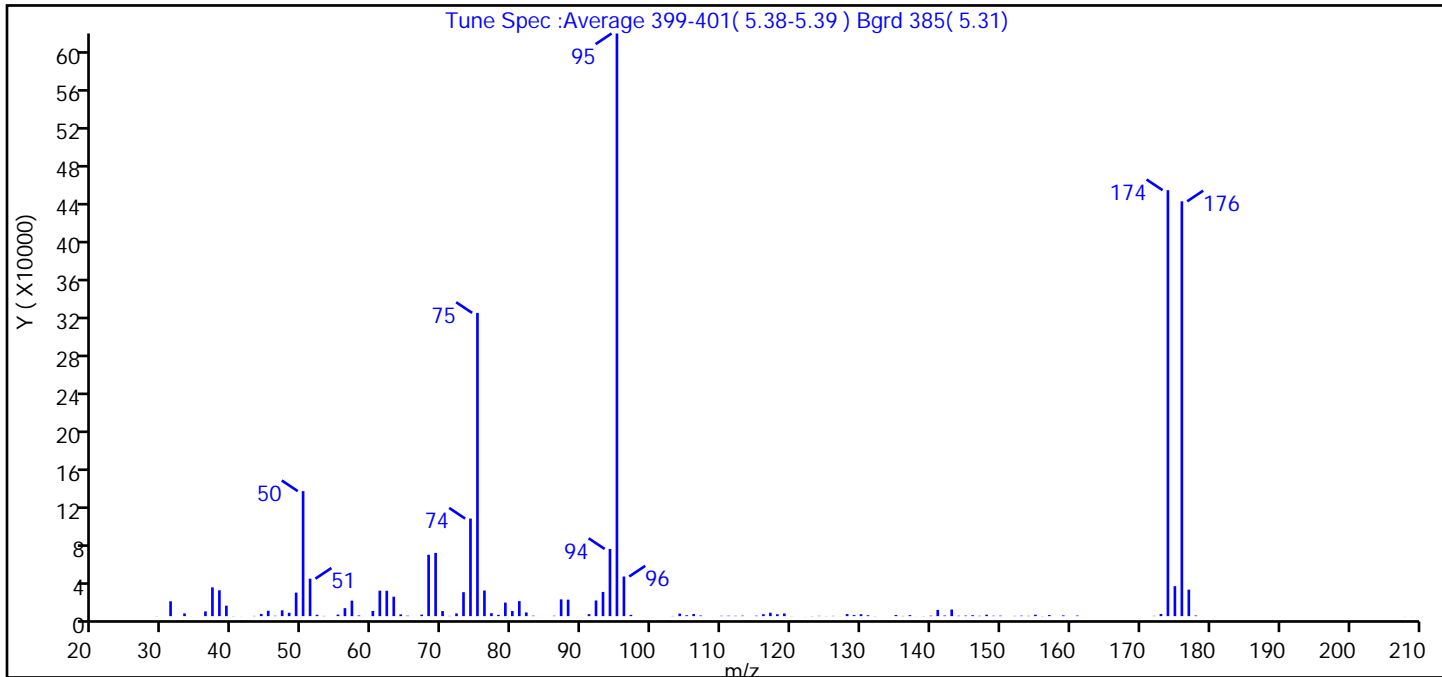
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GBFBB26.D
 Injection Date: 26-Feb-2019 11:03:30 Instrument ID: MG
 Lims ID: BFB
 Client ID:
 Operator ID: 007126 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.5
75	30 to 60% of m/z 95	52.0
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	73.1
175	5 to 9% of m/z 174	5.1 (7.0)
176	Greater than 95% but less than 101% of m/z 174	71.2 (97.4)
177	5 to 9% of m/z 176	4.6 (6.4)

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GBFBB26.D\MG_TO15.rslt\spectra.d
Injection Date: 26-Feb-2019 11:03:30
Spectrum: Tune Spec :Average 399-401(5.38-5.39) Bgrd 385(5.31)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 117

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	132	65.00	510	105.00	971	141.00	6573
31.00	15728	67.00	1546	106.00	2220	142.00	670
33.00	2866	68.00	64928	107.00	668	143.00	7017
34.00	61	69.00	66896	110.00	352	144.00	425
36.00	5049	70.00	5384	111.00	471	145.00	587
37.00	30424	71.00	264	112.00	362	146.00	974
38.00	27344	72.00	2840	113.00	522	147.00	346
39.00	11100	73.00	25352	115.00	478	148.00	1521
40.00	153	74.00	103176	116.00	2038	149.00	412
41.00	61	75.00	320768	117.00	3614	150.00	517
43.00	259	76.00	27120	118.00	1978	152.00	285
44.00	2345	77.00	3106	119.00	2791	153.00	489
45.00	5718	78.00	1363	120.00	128	154.00	328
46.00	415	79.00	14325	122.00	60	155.00	1495
47.00	6168	80.00	5420	123.00	177	156.00	152
48.00	3557	81.00	15906	124.00	347	157.00	1112
49.00	24904	82.00	3962	125.00	183	159.00	784
50.00	132224	83.00	478	126.00	292	161.00	650
51.00	39624	86.00	424	127.00	64	172.00	307
52.00	1446	87.00	17712	128.00	2168	173.00	2258
53.00	249	88.00	17456	129.00	1150	174.00	450560
55.00	1664	91.00	2080	130.00	2016	175.00	31696
56.00	8460	92.00	16592	131.00	943	176.00	438784
57.00	16440	93.00	25600	132.00	127	177.00	28048
58.00	710	94.00	71064	135.00	1217	178.00	696
60.00	5487	95.00	616320	136.00	213	208.00	66
61.00	26976	96.00	41920	137.00	1062	209.00	50
62.00	26816	97.00	1352	138.00	52		
63.00	20584	103.00	221	139.00	133		
64.00	1892	104.00	2685	140.00	483		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GBFBB26.D

Injection Date: 26-Feb-2019 11:03:30

Instrument ID: MG

Operator ID: 007126

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

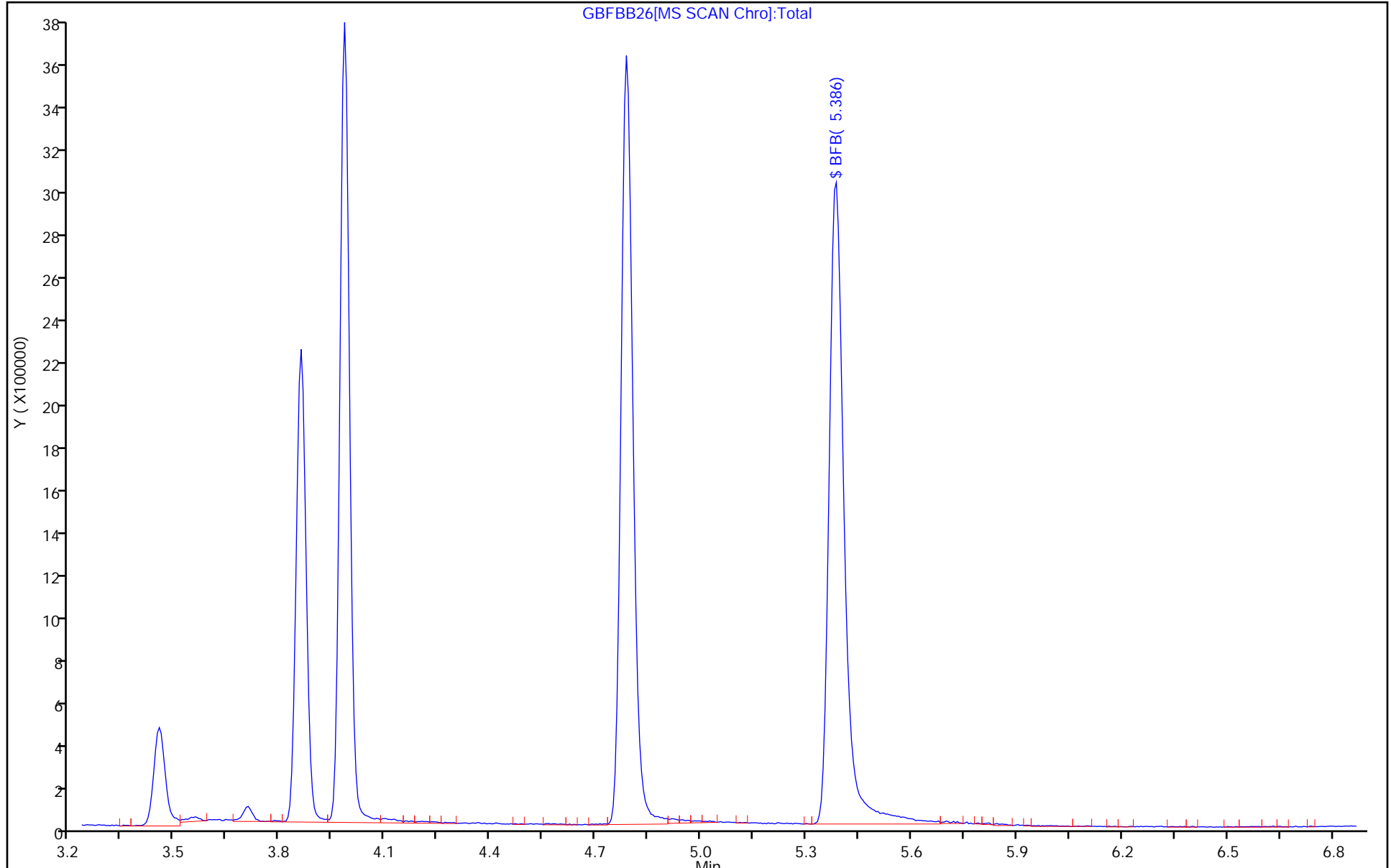
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HBFBB20IC.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 20-Feb-2019 13:11:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info:
 Misc. Info.: BFB
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:47:05 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB 95 4.714 4.514 0.200 0 1073113 NR NR

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

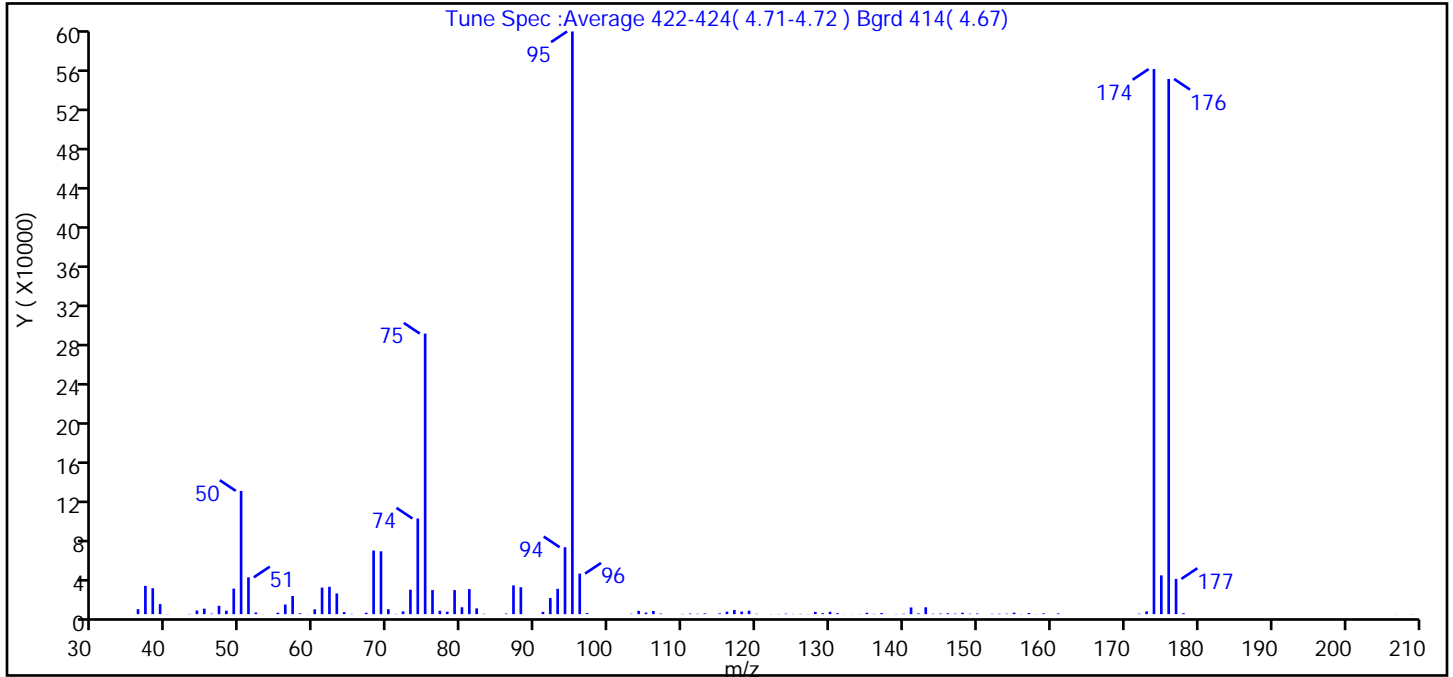
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HBFBB20IC.D
 Injection Date: 20-Feb-2019 13:11:30 Instrument ID: MH
 Lims ID: BFB
 Client ID:
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.2
75	30 to 60% of m/z 95	48.1
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.5 (0.5)
174	50 to 120% of m/z 95	93.5
175	5 to 9% of m/z 174	6.7 (7.1)
176	Greater than 95% but less than 101% of m/z 174	91.9 (98.2)
177	5 to 9% of m/z 176	6.0 (6.6)

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HBFBB20IC.D\MH_TO15.rsl\spectra.d
Injection Date: 20-Feb-2019 13:11:30
Spectrum: Tune Spec :Average 422-424(4.71-4.72) Bgrd 414(4.67)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 119

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	5122	70.00	5075	111.00	644	144.00	429
37.00	28936	71.00	250	112.00	342	145.00	579
38.00	26584	72.00	2835	113.00	755	146.00	933
39.00	10274	73.00	25072	115.00	798	147.00	503
40.00	196	74.00	97952	116.00	2559	148.00	1441
43.00	270	75.00	287360	117.00	4285	149.00	432
44.00	3748	76.00	24640	118.00	2652	150.00	625
45.00	5615	77.00	3520	119.00	3565	152.00	338
46.00	473	78.00	2506	120.00	334	153.00	432
47.00	8552	79.00	24648	122.00	167	154.00	437
48.00	3540	80.00	7055	123.00	200	155.00	1524
49.00	26152	81.00	25648	124.00	510	156.00	183
50.00	126264	82.00	5899	125.00	205	157.00	1129
51.00	37712	83.00	357	126.00	302	158.00	137
52.00	1673	86.00	640	127.00	190	159.00	797
53.00	105	87.00	29456	128.00	2307	160.00	25
55.00	1481	88.00	27568	129.00	1019	161.00	723
56.00	9852	91.00	2370	130.00	2423	162.00	26
57.00	18568	92.00	16552	131.00	1022	172.00	473
58.00	827	93.00	25912	132.00	114	173.00	2816
59.00	79	94.00	68536	133.00	83	174.00	558336
60.00	4936	95.00	596864	134.00	194	175.00	39712
61.00	27232	96.00	41528	135.00	1417	176.00	548224
62.00	28000	97.00	1044	136.00	272	177.00	36104
63.00	21216	103.00	371	137.00	1110	178.00	967
64.00	2084	104.00	3382	139.00	217	193.00	13
65.00	304	105.00	1607	140.00	460	195.00	28
67.00	1418	106.00	3231	141.00	6836	207.00	98
68.00	65168	107.00	618	142.00	743	209.00	138
69.00	64360	110.00	271	143.00	7053		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HBFBB20IC.D

Injection Date: 20-Feb-2019 13:11:30

Instrument ID: MH

Operator ID: HMT

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

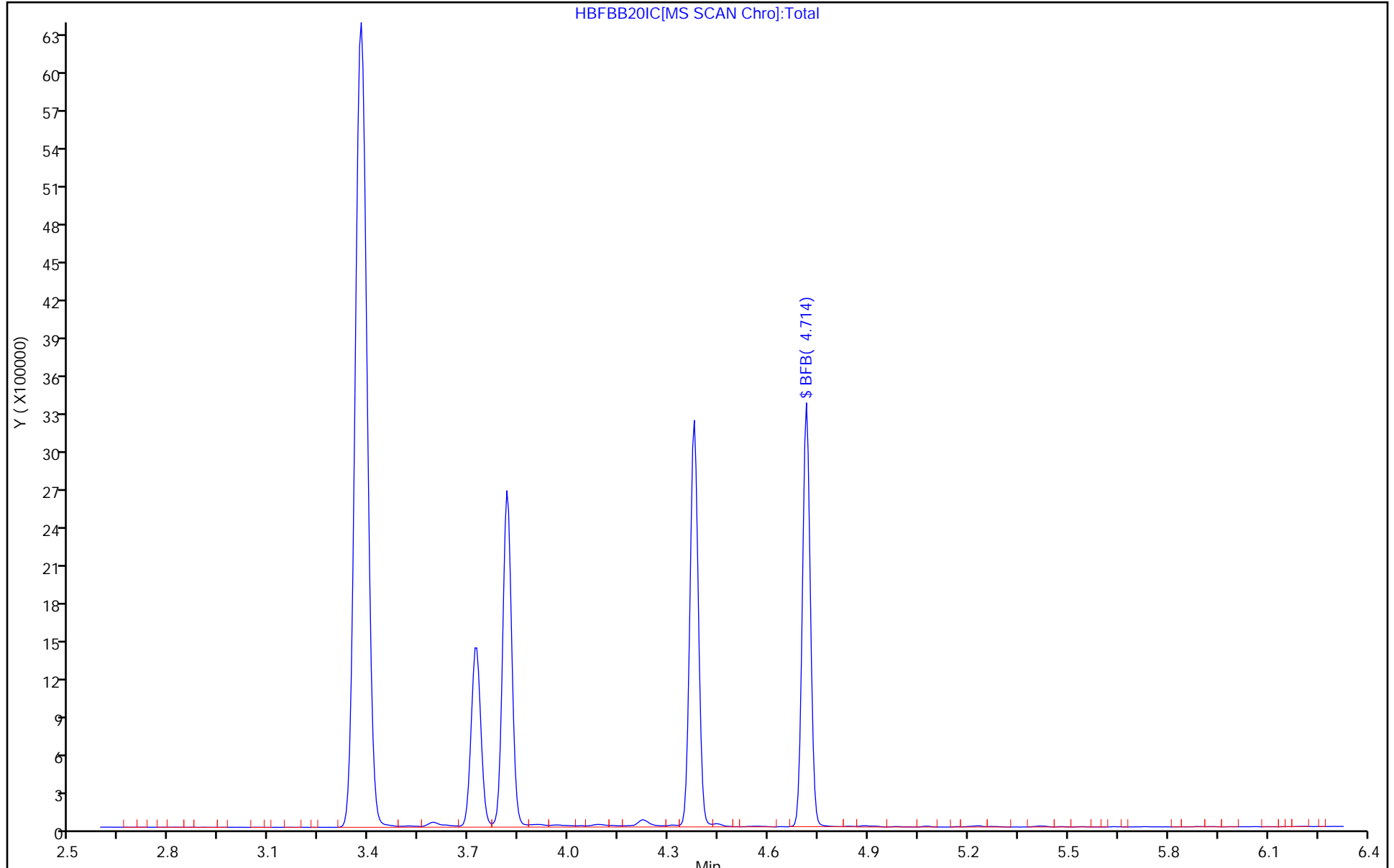
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HBFBB25.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 25-Feb-2019 09:19:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info:
 Misc. Info.: BFB
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 19:53:39 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 19:53:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	4.714	4.714	0.000	0	1069028	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

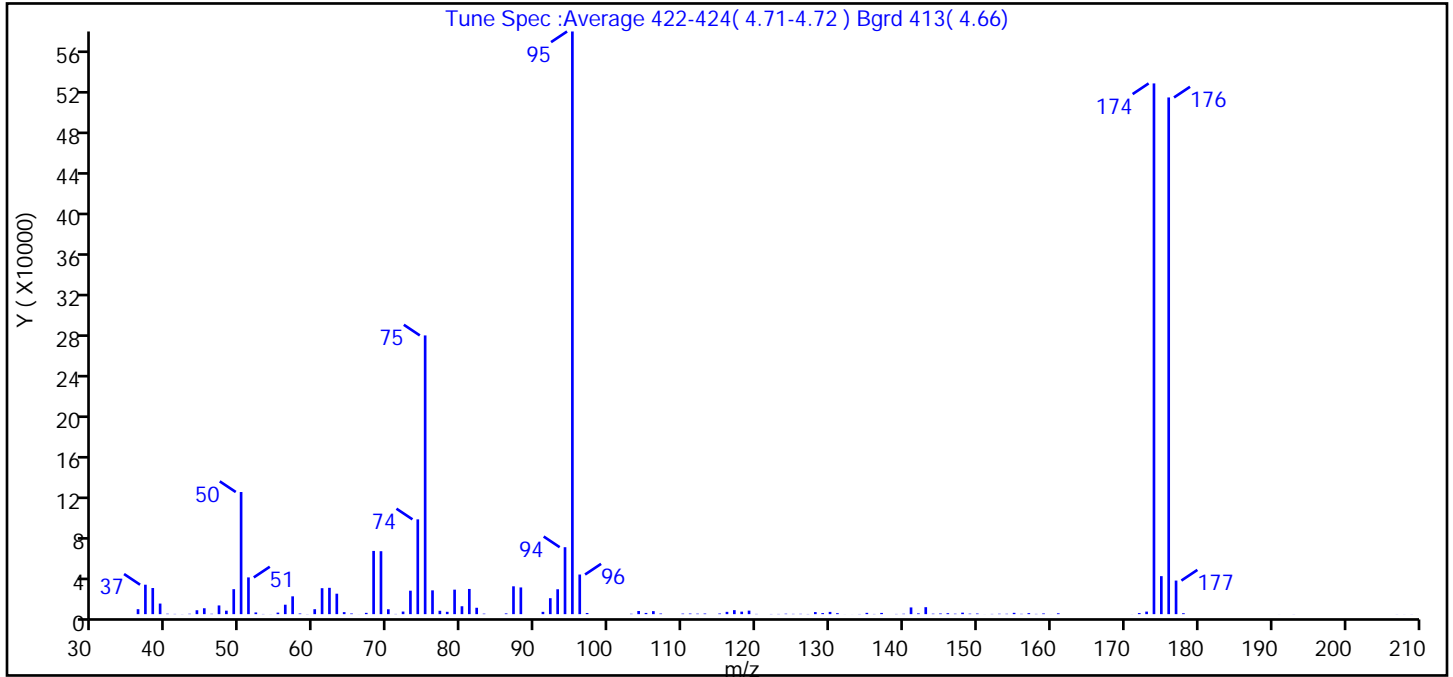
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HBFBB25.D
 Injection Date: 25-Feb-2019 09:19:30 Instrument ID: MH
 Lims ID: BFB
 Client ID:
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.0
75	30 to 60% of m/z 95	47.8
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	91.1
175	5 to 9% of m/z 174	6.5 (7.2)
176	Greater than 95% but less than 101% of m/z 174	88.7 (97.4)
177	5 to 9% of m/z 176	5.8 (6.5)

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HBFBB25.D\MH_TO15.rslt\spectra.d
Injection Date: 25-Feb-2019 09:19:30
Spectrum: Tune Spec :Average 422-424(4.71-4.72) Bgrd 413(4.66)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 125

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4936	68.00	62856	111.00	594	146.00	952
37.00	29272	69.00	62584	112.00	483	147.00	436
38.00	25968	70.00	4865	113.00	609	148.00	1477
39.00	10524	71.00	208	115.00	634	149.00	480
40.00	407	72.00	2579	116.00	2290	150.00	620
41.00	230	73.00	23320	117.00	3974	151.00	48
42.00	95	74.00	94248	118.00	2476	152.00	226
43.00	371	75.00	277120	119.00	3495	153.00	396
44.00	3873	76.00	23656	120.00	225	154.00	356
45.00	5868	77.00	3359	122.00	171	155.00	1307
46.00	356	78.00	2328	123.00	203	156.00	310
47.00	8661	79.00	24360	124.00	423	157.00	1003
48.00	3451	80.00	7851	125.00	272	158.00	253
49.00	24832	81.00	25048	126.00	311	159.00	689
50.00	121424	82.00	6339	127.00	167	160.00	33
51.00	36528	83.00	476	128.00	2046	161.00	849
52.00	1685	86.00	739	129.00	1054	171.00	54
53.00	180	87.00	27680	130.00	2233	172.00	1071
54.00	58	88.00	26560	131.00	986	173.00	2532
55.00	1513	91.00	2296	132.00	48	174.00	527680
56.00	9384	92.00	15852	133.00	34	175.00	37776
57.00	17712	93.00	24744	134.00	169	176.00	513728
58.00	639	94.00	66560	135.00	1286	177.00	33384
59.00	116	95.00	579328	136.00	196	178.00	906
60.00	4911	96.00	39392	137.00	1231	191.00	36
61.00	25800	97.00	1132	139.00	201	193.00	78
62.00	26168	103.00	361	140.00	382	207.00	72
63.00	20328	104.00	3128	141.00	6677	208.00	51
64.00	1999	105.00	1208	142.00	781	209.00	79
65.00	653	106.00	2997	143.00	6930		
66.00	42	107.00	620	144.00	451		
67.00	1286	110.00	534	145.00	662		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HBFBB25.D

Injection Date: 25-Feb-2019 09:19:30

Instrument ID: MH

Operator ID: HMT

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

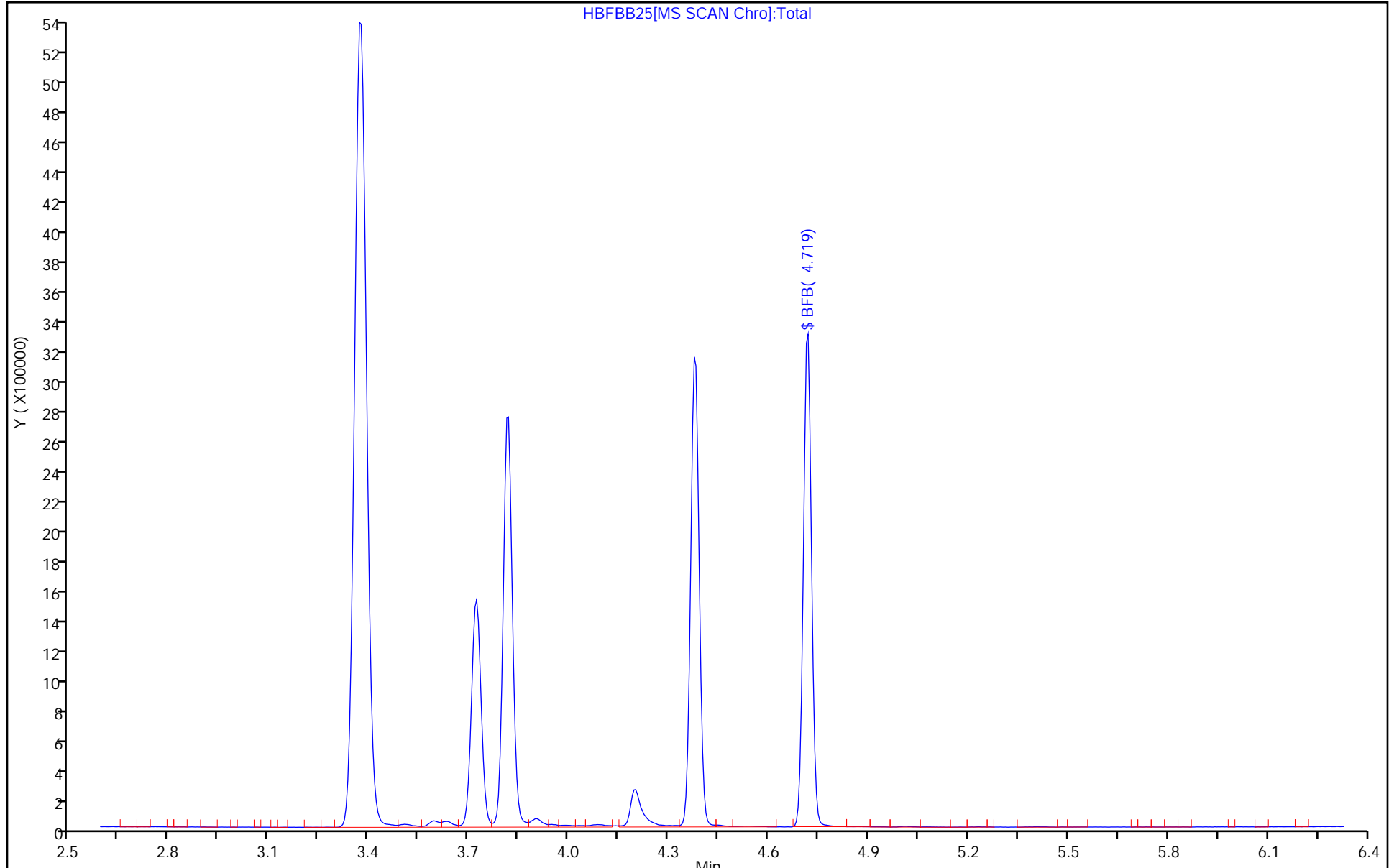
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HBFBB27.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 27-Feb-2019 11:22:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-001
 Misc. Info.: BFB
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 15:09:11 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 15:09:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	4.725	4.725	0.000	0	713144	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

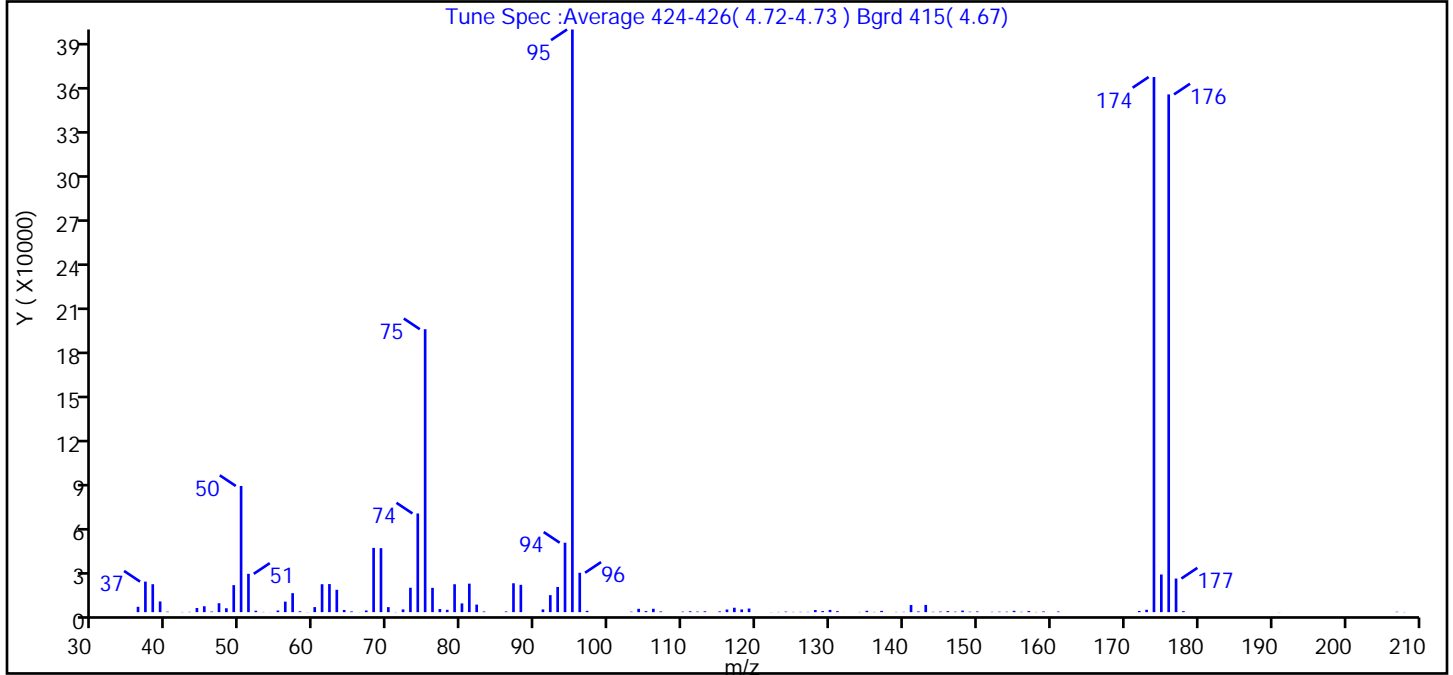
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HBFBB27.D
 Injection Date: 27-Feb-2019 11:22:30 Instrument ID: MH
 Lims ID: BFB
 Client ID:
 Operator ID: AFB ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.7
75	30 to 60% of m/z 95	48.6
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.4 (0.4)
174	50 to 120% of m/z 95	91.8
175	5 to 9% of m/z 174	6.5 (7.0)
176	Greater than 95% but less than 101% of m/z 174	88.9 (96.8)
177	5 to 9% of m/z 176	5.8 (6.5)

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HBFBB27.D\MH_TO15.rslt\spectra.d
Injection Date: 27-Feb-2019 11:22:30
Spectrum: Tune Spec :Average 424-426(4.72-4.73) Bgrd 415(4.67)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 118

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3633	67.00	1140	106.00	2283	142.00	473
37.00	20704	68.00	43584	107.00	483	143.00	4892
38.00	18944	69.00	43392	110.00	348	144.00	254
39.00	7248	70.00	3394	111.00	604	145.00	403
40.00	329	71.00	116	112.00	371	146.00	692
42.00	126	72.00	1871	113.00	573	147.00	322
43.00	201	73.00	16544	115.00	508	148.00	1035
44.00	2791	74.00	66904	116.00	1783	149.00	292
45.00	3997	75.00	191872	117.00	2988	150.00	463
46.00	403	76.00	16472	118.00	1835	152.00	218
47.00	6043	77.00	2124	119.00	2444	153.00	308
48.00	2623	78.00	1587	120.00	28	154.00	291
49.00	18312	79.00	18928	122.00	95	155.00	901
50.00	85560	80.00	5940	123.00	136	156.00	233
51.00	25992	81.00	19328	124.00	358	157.00	746
52.00	951	82.00	5105	125.00	160	158.00	142
53.00	133	83.00	438	126.00	207	159.00	471
54.00	54	86.00	452	127.00	178	161.00	430
55.00	1101	87.00	19576	128.00	1420	172.00	780
56.00	7140	88.00	18528	129.00	730	173.00	1622
57.00	12879	91.00	1854	130.00	1510	174.00	362880
58.00	572	92.00	11531	131.00	662	175.00	25536
59.00	91	93.00	17072	132.00	28	176.00	351104
60.00	3416	94.00	47088	134.00	130	177.00	22792
61.00	18936	95.00	395136	135.00	931	178.00	700
62.00	19048	96.00	26712	136.00	153	191.00	88
63.00	15142	97.00	888	137.00	859	207.00	274
64.00	1491	103.00	307	139.00	151	208.00	121
65.00	498	104.00	2265	140.00	201		
66.00	33	105.00	719	141.00	4811		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HBFBB27.D

Injection Date: 27-Feb-2019 11:22:30

Instrument ID: MH

Operator ID: AFB

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

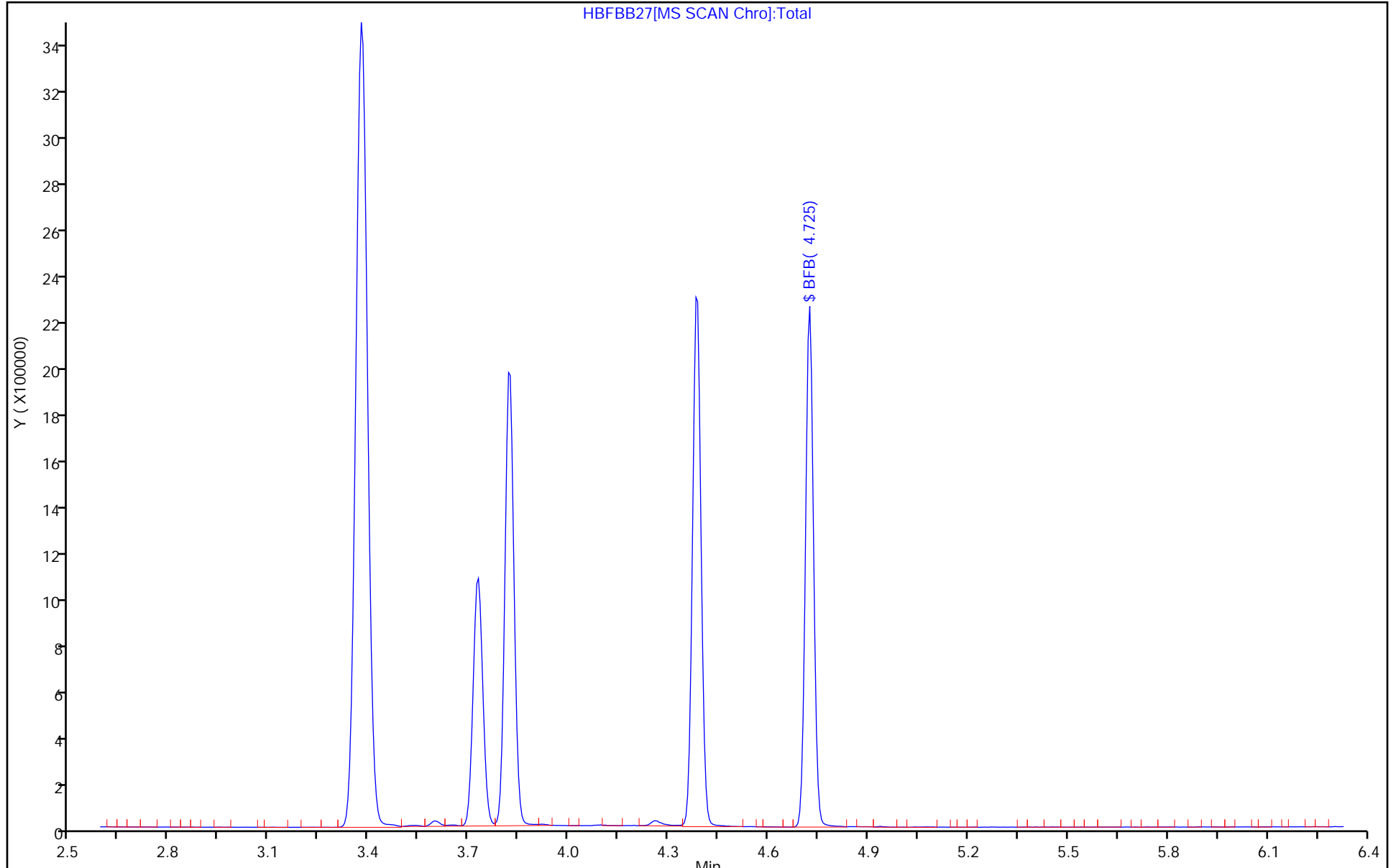
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\HBFBB28.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 28-Feb-2019 12:34:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010950-001
 Misc. Info.: BFB
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 01-Mar-2019 16:49:36 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0307

First Level Reviewer: khachitpongpanits Date: 01-Mar-2019 16:49:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	4.739	4.739	0.000	0	1063102	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

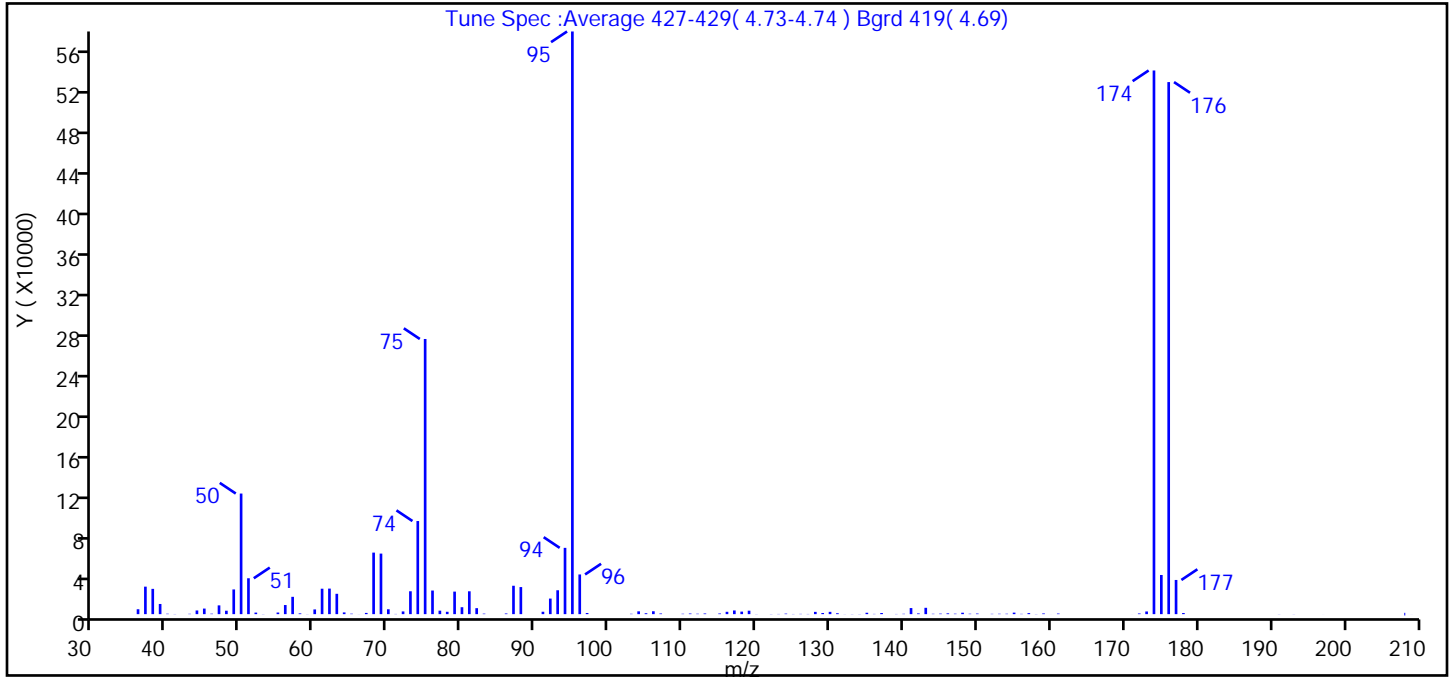
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\HBFBB28.D
 Injection Date: 28-Feb-2019 12:34:30 Instrument ID: MH
 Lims ID: BFB
 Client ID:
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.7
75	30 to 60% of m/z 95	47.2
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.5 (0.5)
174	50 to 120% of m/z 95	93.3
175	5 to 9% of m/z 174	6.7 (7.2)
176	Greater than 95% but less than 101% of m/z 174	91.3 (97.9)
177	5 to 9% of m/z 176	5.9 (6.4)

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\HBFBB28.D\MH_TO15.rslt\spectra.d
Injection Date: 28-Feb-2019 12:34:30
Spectrum: Tune Spec :Average 427-429(4.73-4.74) Bgrd 419(4.69)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 122

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4807	69.00	59416	111.00	626	145.00	511
37.00	26976	70.00	4785	112.00	405	146.00	792
38.00	24808	71.00	201	113.00	652	147.00	442
39.00	9979	72.00	2667	115.00	652	148.00	1399
40.00	399	73.00	22448	116.00	2306	149.00	395
41.00	149	74.00	91368	117.00	3619	150.00	572
43.00	326	75.00	270016	118.00	2484	152.00	296
44.00	3603	76.00	23168	119.00	3384	153.00	378
45.00	5467	77.00	3416	120.00	107	154.00	386
46.00	449	78.00	2318	122.00	139	155.00	1488
47.00	8607	79.00	22112	123.00	190	156.00	279
48.00	3355	80.00	6805	124.00	514	157.00	1022
49.00	24248	81.00	22424	125.00	162	158.00	145
50.00	118344	82.00	5865	126.00	254	159.00	687
51.00	35216	83.00	494	127.00	180	160.00	25
52.00	1521	86.00	662	128.00	2235	161.00	582
53.00	129	87.00	27856	129.00	1112	171.00	27
55.00	1583	88.00	26568	130.00	2256	172.00	666
56.00	8938	91.00	2359	131.00	904	173.00	2623
57.00	16992	92.00	15277	132.00	86	174.00	533504
58.00	747	93.00	23440	133.00	129	175.00	38424
59.00	96	94.00	65048	134.00	129	176.00	522112
60.00	4631	95.00	571776	135.00	1359	177.00	33544
61.00	24960	96.00	38944	136.00	236	178.00	1083
62.00	25064	97.00	1113	137.00	1105	191.00	103
63.00	19960	103.00	341	139.00	179	193.00	96
64.00	1695	104.00	2760	140.00	339	197.00	28
65.00	443	105.00	891	141.00	5962	208.00	2
66.00	57	106.00	2848	142.00	716	209.00	35
67.00	1206	107.00	651	143.00	6216		
68.00	60384	110.00	376	144.00	354		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\HBFBB28.D

Injection Date: 28-Feb-2019 12:34:30

Instrument ID: MH

Operator ID: HMT

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

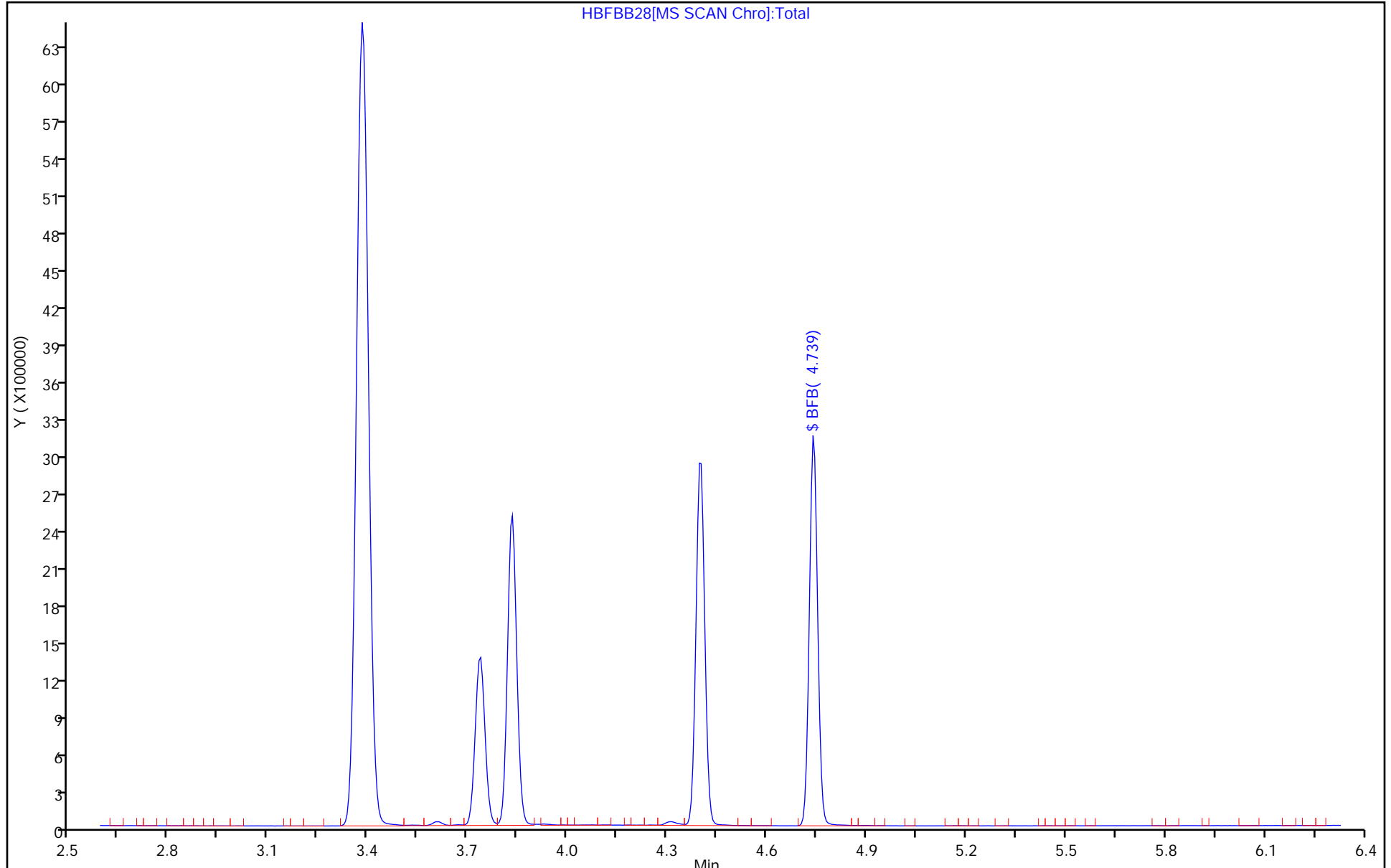
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\G500BB26.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 26-Feb-2019 12:56:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-004
 Misc. Info.: 500ML BLK
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:23:23 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:23:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.227	9.232	-0.005	98	508819	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.405	0.000	96	2920722	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	91	2502760	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	84	1973540	4.00	3.85	
117 1,2-Dimethyl-4-Ethylbenzen	119	20.022	20.027	-0.005	1	540		NC	
118 1,2,3,5-Tetramethylbenzene	119	20.470	20.464	0.006	1	546		NC	
119 1,2,3,4-Tetramethylbenzene	119	20.863	20.869	-0.006	1	1007		NC	
120 Benzo(b)thiophene	134	21.478	21.473	0.005	1	64		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\G500BB26.D

Injection Date: 26-Feb-2019 12:56:30

Instrument ID: MG

Operator ID: 7126

Lims ID: MB

Worklist Smp#: 4

Client ID:

Purge Vol: 500.000 mL

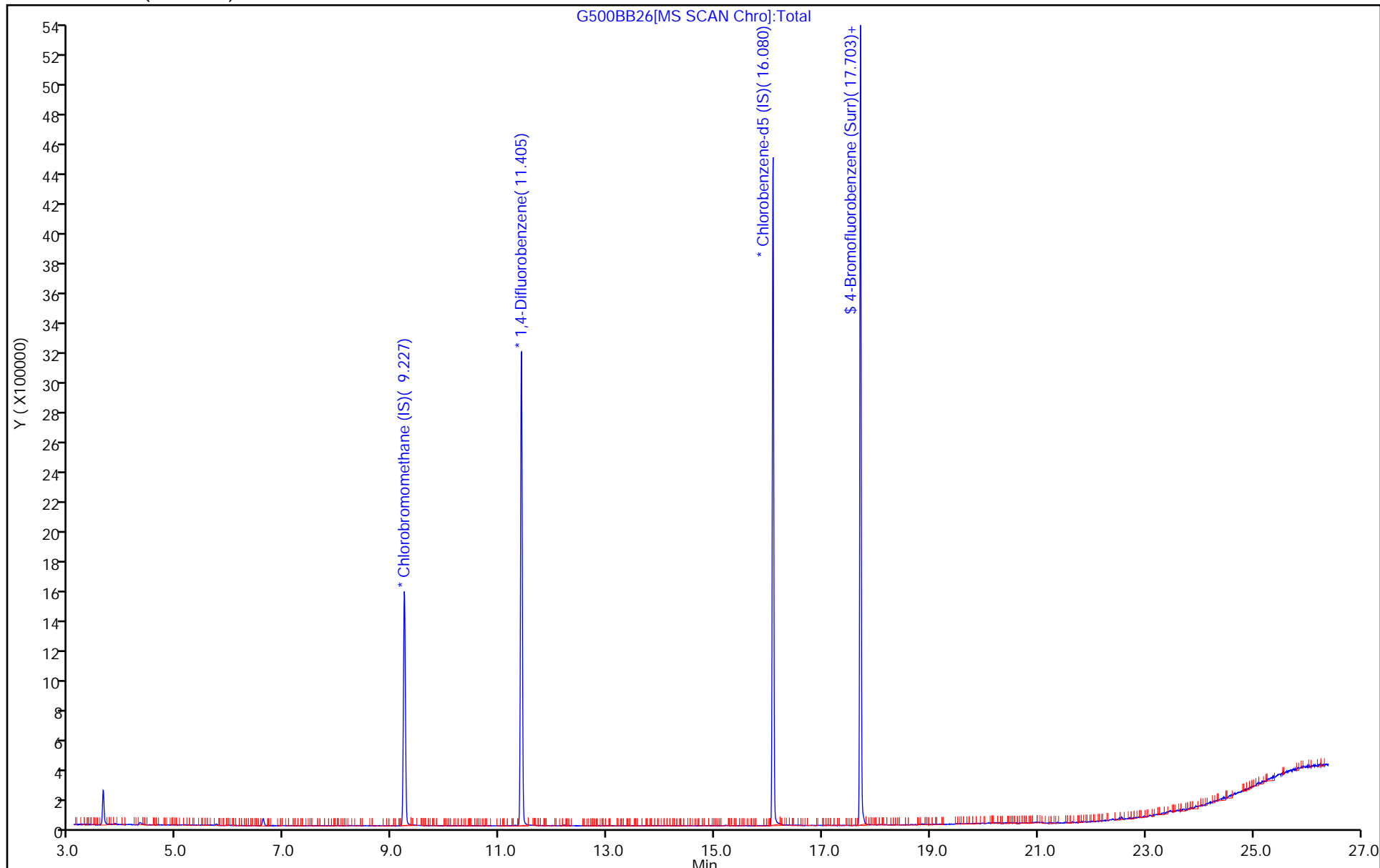
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\G500BB26.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 26-Feb-2019 12:56:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-004
 Misc. Info.: 500ML BLK
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:23:23 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:23:23

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.85	96.21

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27935/7
 Matrix: Air Lab File ID: H500BB25.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 14:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27935/7
 Matrix: Air Lab File ID: H500BB25.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 14:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\H500BB25.D
 Lims ID: mb
 Client ID:
 Sample Type: MB
 Inject. Date: 25-Feb-2019 14:47:30 ALS Bottle#: 19 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-007
 Misc. Info.: 5020ML BLK
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 19:58:51 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 19:58:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.814	0.010	96	287415	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1579066	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1304589	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.398	17.393	0.005	93	816950	4.00	3.84	
109 1,2,3,5-Tetramethylbenzene	119	20.272	20.318	-0.046	1	97		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\H500BB25.D

Injection Date: 25-Feb-2019 14:47:30

Instrument ID: MH

Operator ID: HMT

Lims ID: mb

Worklist Smp#: 7

Client ID:

Purge Vol: 500.000 mL

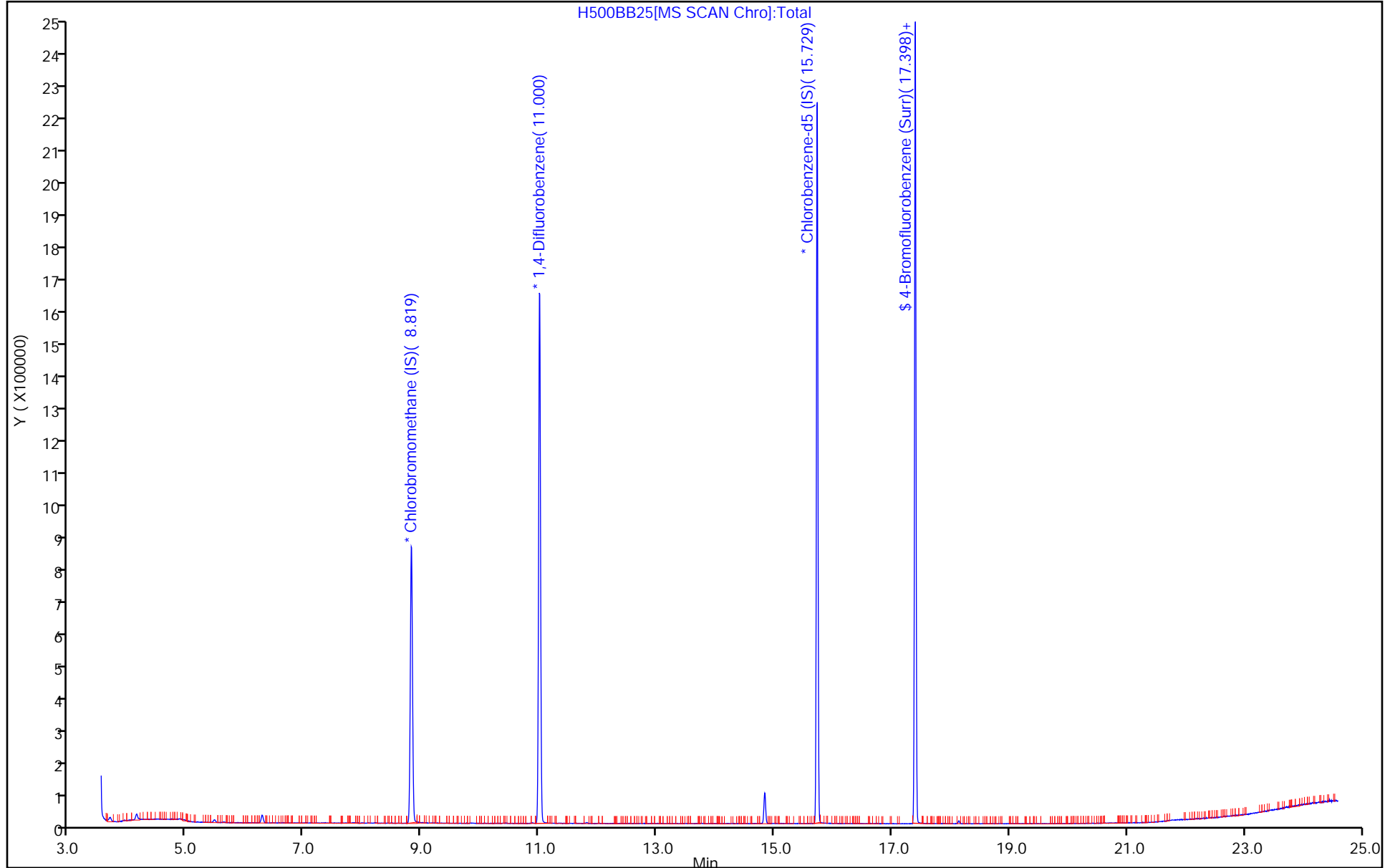
Dil. Factor: 1.0000

ALS Bottle#: 19

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\H500BB25.D
 Lims ID: mb
 Client ID:
 Sample Type: MB
 Inject. Date: 25-Feb-2019 14:47:30 ALS Bottle#: 19 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-007
 Misc. Info.: 5020ML BLK
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 19:58:51 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 19:58:51

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.84	96.07

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27980/5
 Matrix: Air Lab File ID: HB27LOT14399MB.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.0691	J	0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27980/5
 Matrix: Air Lab File ID: HB27LOT14399MB.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	0.513	J	0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27LOT14399MB.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 27-Feb-2019 13:42:30 ALS Bottle#: 7 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-004
 Misc. Info.: 10107
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 15:50:38 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 15:50:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.814	8.814	0.000	96	264467	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1438660	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.724	15.724	0.000	88	1193009	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.404	-0.031	92	744381	4.00	3.83	
14 Butane	43	4.188	4.188	0.005	84	6426		0.0372	
19 2-Methylbutane	43	4.994	5.000	0.000	90	1907		0.0149	
109 1,2,3,5-Tetramethylbenzene	119	20.313	20.325	-0.006	6	267		NC	
112 1,2,3,4-Tetramethylbenzene	119	20.732	20.744	-0.005	7	402		NC	
111 1,2,4-Trichlorobenzene	180	21.099	21.116	-0.010	0	435		0.0691	
114 Benzo(b)thiophene	134	21.362	21.375	-0.006	1	499		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27LOT14399MB.D

Injection Date: 27-Feb-2019 13:42:30

Instrument ID: MH

Operator ID: AFB

Lims ID: MB

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

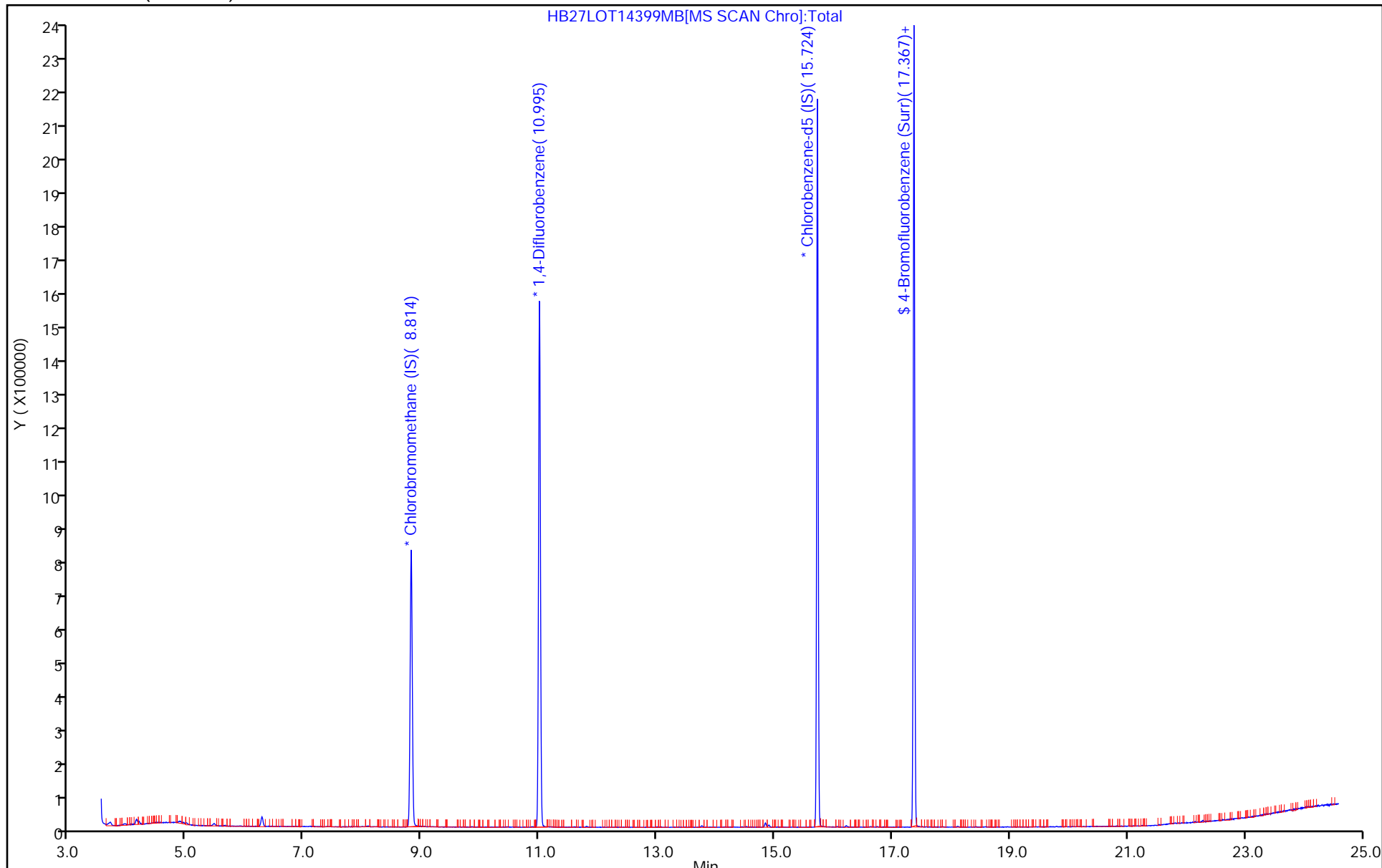
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27LOT14399MB.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 27-Feb-2019 13:42:30 ALS Bottle#: 7 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-004
 Misc. Info.: 10107
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 15:50:38 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 15:50:50

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.83	95.73

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27LOT14399MB.D

Injection Date: 27-Feb-2019 13:42:30

Instrument ID: MH

Lims ID: MB

Client ID:

Operator ID: AFB

ALS Bottle#: 7

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

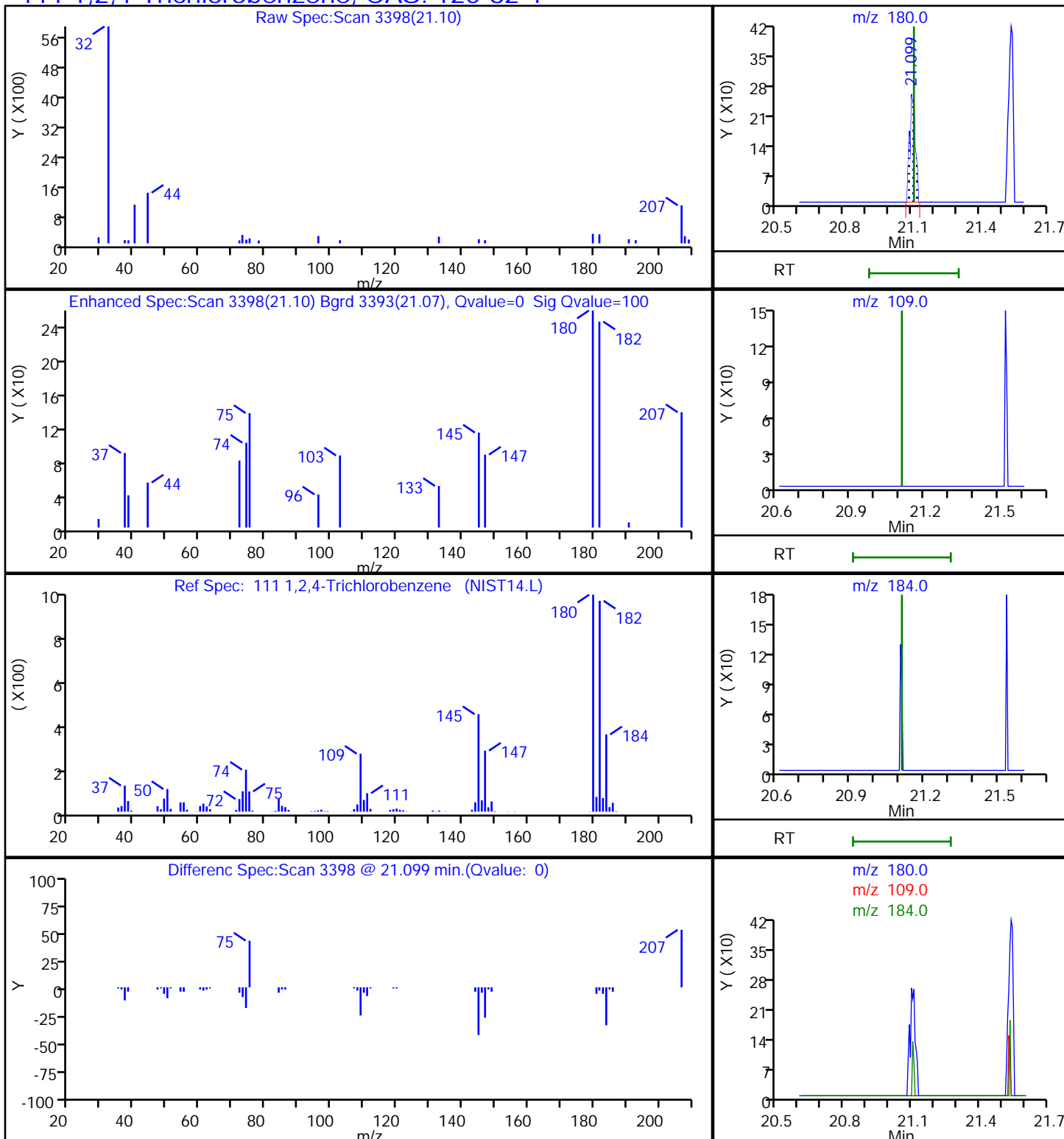
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

111 1,2,4-Trichlorobenzene, CAS: 120-82-1

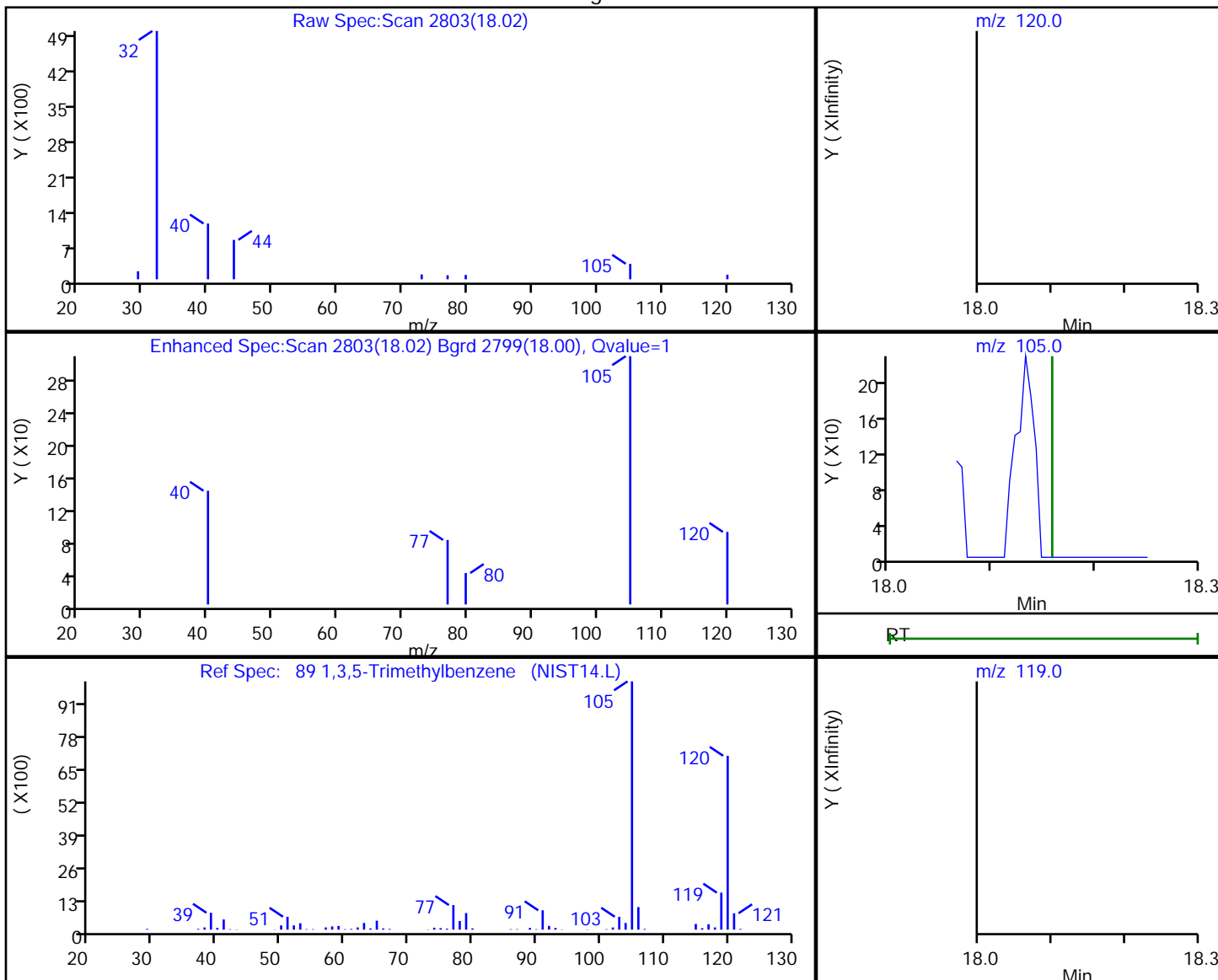


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27LOT14399MB.D
Injection Date: 27-Feb-2019 13:42:30 Instrument ID: MH
Lims ID: MB
Client ID:
Operator ID: AFB ALS Bottle#: 7 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Processing Results



RT	Mass	Response	Amount
18.02	120.00	52	0.027278
18.01	105.00	464	
18.16	119.00	0	

Reviewer: khachitpongpanits, 28-Feb-2019 15:50:23

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27981/4
 Matrix: Air Lab File ID: H500BB28.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/28/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27981 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.0681	J	0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27981/4
 Matrix: Air Lab File ID: H500BB28.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/28/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27981 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	0.505	J	0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\H500BB28.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 28-Feb-2019 14:24:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010950-004
 Misc. Info.: 500ML BLK
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 01-Mar-2019 16:52:04 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0307

First Level Reviewer: khachitpongpanits Date: 01-Mar-2019 16:52:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.819	0.000	95	313051	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1721127	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1440804	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.398	-0.031	94	916807	4.00	3.90	
109 1,2,3,5-Tetramethylbenzene	119	20.313	20.318	-0.005	1	31		NC	
112 1,2,3,4-Tetramethylbenzene	119	20.727	20.737	-0.010	1	478		NC	
111 1,2,4-Trichlorobenzene	180	21.099	21.109	-0.010	1	235		0.0681	
114 Benzo(b)thiophene	134	21.373	21.368	0.005	1	567		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\H500BB28.D

Injection Date: 28-Feb-2019 14:24:30

Instrument ID: MH

Operator ID: HMT

Lims ID: MB

Worklist Smp#: 4

Client ID:

Purge Vol: 500.000 mL

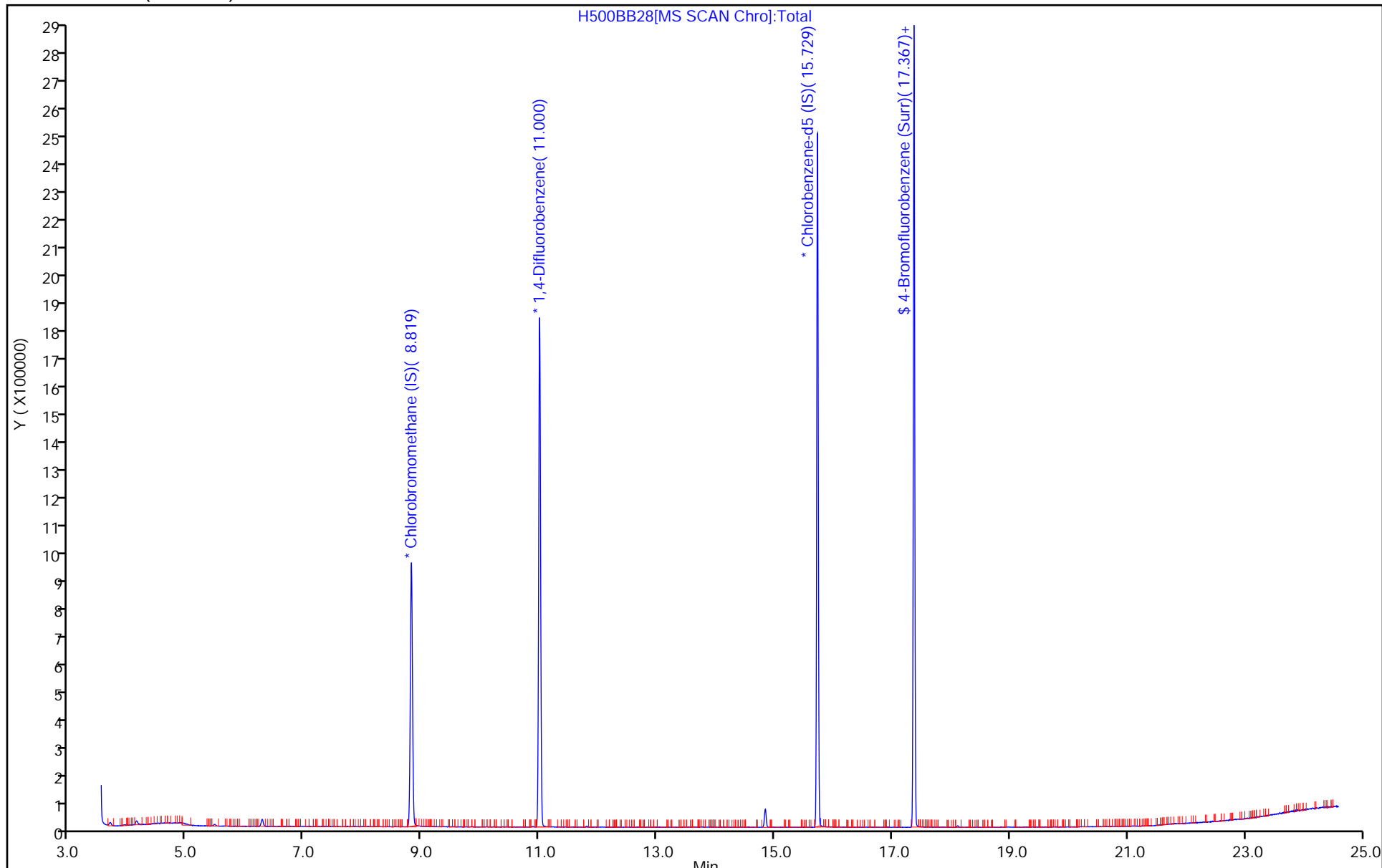
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\H500BB28.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 28-Feb-2019 14:24:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010950-004
 Misc. Info.: 500ML BLK
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 01-Mar-2019 16:52:04 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0307

First Level Reviewer: khachitpongpanits Date: 01-Mar-2019 16:52:04

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.90	97.62

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\H500BB28.D

Injection Date: 28-Feb-2019 14:24:30

Instrument ID: MH

Lims ID: MB

Client ID:

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 4

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

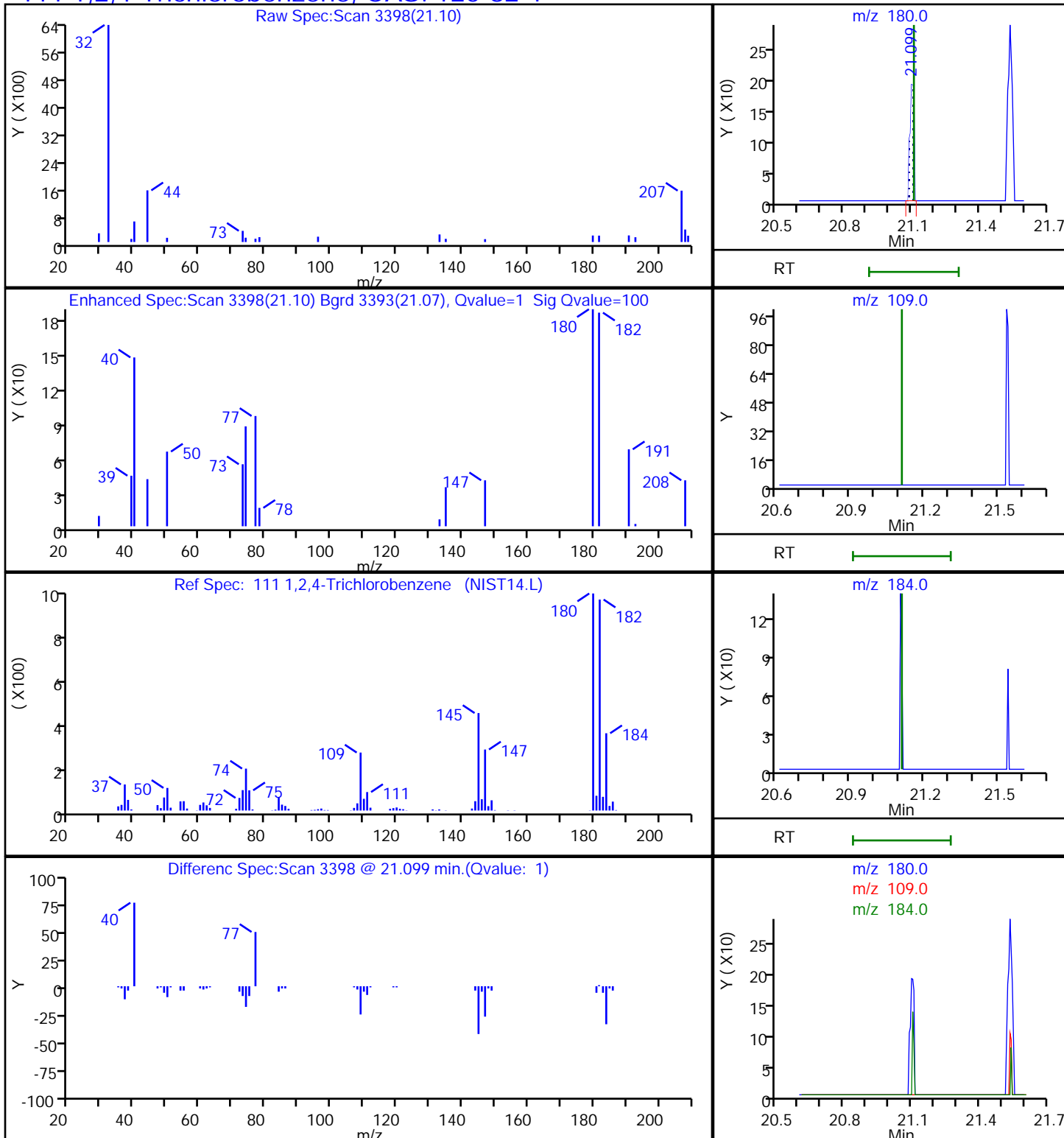
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

111 1,2,4-Trichlorobenzene, CAS: 120-82-1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27931/1002
 Matrix: Air Lab File ID: GCCVB26-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 02/26/2019 11:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.07		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.22		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.02		0.080	0.015
67-66-3	Chloroform	119.38	2.00		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.09		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.06		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.05		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.00		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.14		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.03		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.81		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.97		0.40	0.068
91-20-3	Naphthalene	128.17	1.94		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.06		0.080	0.016
108-88-3	Toluene	92.14	2.02		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.15		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.83		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.04		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.11		0.080	0.021
79-01-6	Trichloroethene	131.39	2.09		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.22		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.99		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.97		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.97		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.18		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 26-Feb-2019 11:35:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-002
 Misc. Info.: P82
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:22:36 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits

Date: 27-Feb-2019 15:22:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.232	0.000	97	496382	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.405	0.000	96	2758157	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	91	2578216	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2117181	4.00	4.01	
6 Chlorodifluoromethane	51	3.823	3.823	0.000	97	658223	2.00	2.02	
7 Propene	41	3.834	3.834	0.000	99	380649	2.00	2.10	
8 Dichlorodifluoromethane	85	3.888	3.888	0.000	100	1081216	2.00	2.06	
9 Chloromethane	52	4.088	4.088	0.000	99	116472	2.00	2.02	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.098	0.000	96	596628	2.00	1.94	
11 Acetaldehyde	44	4.266	4.266	0.000	95	648347	10.0	8.73	
12 Vinyl chloride	62	4.271	4.271	0.000	99	393694	2.00	1.97	
13 Butane	43	4.368	4.368	0.000	86	683696	2.00	2.03	
14 Butadiene	54	4.368	4.368	0.000	66	318396	2.00	2.06	
15 Bromomethane	94	4.713	4.713	0.000	98	325798	2.00	1.89	
16 Chloroethane	64	4.870	4.870	0.000	90	185377	2.00	1.92	
17 Ethanol	31	5.031	5.031	0.000	97	935746	10.0	10.7	
18 Vinyl bromide	106	5.193	5.193	0.000	98	300038	2.00	1.87	
19 2-Methylbutane	43	5.247	5.247	0.000	92	470238	2.00	1.95	
20 Trichlorofluoromethane	101	5.484	5.484	0.000	99	1003068	2.00	1.95	
21 Acrolein	56	5.506	5.506	0.000	96	79264	2.00	1.79	
22 Acetonitrile	40	5.581	5.581	0.000	99	131601	2.00	1.90	
23 Acetone	58	5.635	5.635	0.000	99	371393	6.00	4.98	
24 Pentane	72	5.716	5.716	0.000	98	63668	2.00	1.93	
25 Isopropyl alcohol	45	5.775	5.775	0.000	97	1324509	6.00	6.66	
26 Ethyl ether	31	5.910	5.910	0.000	90	419601	2.00	1.96	
27 1,1-Dichloroethene	96	6.228	6.228	0.000	94	375675	2.00	2.14	
28 Acrylonitrile	53	6.352	6.352	0.000	95	234090	2.00	1.94	
29 1,1,2-Trichloro-1,2,2-trif	101	6.417	6.417	0.000	94	786133	2.00	2.07	
30 2-Methyl-2-propanol	59	6.455	6.455	0.000	92	697915	2.00	2.56	
31 Methylene Chloride	84	6.595	6.595	0.000	98	368192	2.00	1.81	
32 3-Chloro-1-propene	39	6.611	6.611	0.000	94	408941	2.00	1.88	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.768	6.768	0.000	99	1148654	2.00	2.16	
34 trans-1,2-Dichloroethene	96	7.436	7.436	0.000	95	377435	2.00	2.15	
35 2-Methylpentane	43	7.453	7.453	0.000	96	1092237	2.00	2.18	
36 Methyl tert-butyl ether	73	7.587	7.587	0.000	97	963642	2.00	1.97	
37 1,1-Dichloroethane	63	7.879	7.879	0.000	100	740120	2.00	2.05	
38 Vinyl acetate	43	7.992	7.992	0.000	100	972603	2.00	1.94	
39 2-Butanone (MEK)	72	8.461	8.461	0.000	94	156796	2.00	1.99	
40 Hexane	56	8.466	8.466	0.000	75	349595	2.00	2.16	
41 Isopropyl ether	45	8.639	8.639	0.000	97	1273265	2.00	2.06	
42 cis-1,2-Dichloroethene	96	8.887	8.887	0.000	97	374980	2.00	2.09	
43 Ethyl acetate	43	9.086	9.086	0.000	98	824216	2.00	2.01	
44 Chloroform	83	9.243	9.243	0.000	97	831651	2.00	2.00	
45 Tert-butyl ethyl ether	59	9.340	9.340	0.000	96	1154312	2.00	2.02	
46 Tetrahydrofuran	42	9.669	9.669	0.000	94	441834	2.00	2.01	
47 1,1,1-Trichloroethane	97	10.283	10.283	0.000	95	914802	2.00	2.04	
48 1,2-Dichloroethane	62	10.397	10.397	0.000	98	540157	2.00	2.00	
49 Cyclohexane	69	10.871	10.871	0.000	94	203691	2.00	2.25	
50 Benzene	78	10.877	10.877	0.000	98	1020327	2.00	2.07	
52 Carbon tetrachloride	117	10.898	10.898	0.000	98	906489	2.00	2.22	
51 n-Butanol	31	10.963	10.963	0.000	72	174154	2.00	2.82	
53 2,3-Dimethylpentane	71	10.985	10.985	0.000	90	289271	2.00	2.22	
54 Thiophene	84	11.146	11.146	0.000	98	624101	2.00	2.18	
55 Isooctane	57	11.615	11.615	0.000	98	2089798	2.00	2.16	
56 n-Heptane	71	11.977	11.977	0.000	94	431811	2.00	2.18	
57 1,2-Dichloropropane	63	12.074	12.074	0.000	87	395044	2.00	2.04	
58 Trichloroethene	130	12.106	12.106	0.000	95	469444	2.00	2.09	
59 Dibromomethane	93	12.198	12.198	0.000	92	424190	2.00	2.08	
60 Dichlorobromomethane	83	12.338	12.338	0.000	99	876559	2.00	2.18	
61 1,4-Dioxane	88	12.370	12.370	0.000	98	145314	2.00	2.53	
62 Methyl methacrylate	41	12.424	12.424	0.000	90	530253	2.00	2.14	
63 Methylcyclohexane	83	12.861	12.861	0.000	93	728027	2.00	2.16	
64 4-Methyl-2-pentanone (MIBK)	43	13.287	13.287	0.000	99	886750	2.00	2.28	
65 cis-1,3-Dichloropropene	75	13.319	13.319	0.000	98	639985	2.00	2.17	
66 trans-1,3-Dichloropropene	75	13.999	13.999	0.000	97	594581	2.00	2.14	
67 Toluene	91	14.128	14.128	0.000	94	1148311	2.00	2.02	
68 1,1,2-Trichloroethane	83	14.204	14.204	0.000	99	364646	2.00	2.11	
69 2-Hexanone	58	14.603	14.603	0.000	92	411009	2.00	2.41	
70 n-Octane	85	14.786	14.786	0.000	96	443374	2.00	2.17	
71 Chlorodibromomethane	129	14.905	14.905	0.000	98	772027	2.00	2.20	
72 Ethylene Dibromide	107	15.191	15.191	0.000	99	635364	2.00	2.12	
73 Tetrachloroethene	129	15.255	15.255	0.000	93	439005	2.00	2.06	
74 2,3-Dimethylheptane	43	16.123	16.123	0.000	96	1496933	2.00	2.16	
75 Chlorobenzene	112	16.129	16.129	0.000	77	928511	2.00	2.11	
78 Ethylbenzene	91	16.404	16.404	0.000	99	1561015	2.00	2.03	
79 m-Xylene & p-Xylene	91	16.566	16.566	0.000	99	2433053	4.00	4.13	
80 n-Nonane	57	16.965	16.965	0.000	94	915019	2.00	2.18	
81 Bromoform	173	17.024	17.024	0.000	92	705966	2.00	2.30	
82 Styrene	104	17.029	17.029	0.000	99	865556	2.00	2.12	
83 o-Xylene	91	17.089	17.089	0.000	97	1277486	2.00	2.05	
84 1,1,1,2-Tetrachloroethane	83	17.412	17.412	0.000	99	855020	2.00	2.05	
85 1,2,3-Trichloropropane	110	17.574	17.574	0.000	97	264346	2.00	1.98	
86 Isopropylbenzene	105	17.671	17.671	0.000	97	1641690	2.00	1.98	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 N-Propylbenzene	120	18.189	18.189	0.000	98	441397	2.00	1.97	
88 2-Chlorotoluene	126	18.237	18.237	0.000	97	410417	2.00	2.01	
89 4-Ethyltoluene	105	18.334	18.334	0.000	98	1669466	2.00	2.02	
90 1,3,5-Trimethylbenzene	120	18.404	18.404	0.000	91	633949	2.00	1.97	
92 Alpha Methyl Styrene	118	18.631	18.631	0.000	87	670603	2.00	2.06	
93 n-Decane	57	18.674	18.674	0.000	90	1111794	2.00	2.16	
94 tert-Butylbenzene	119	18.820	18.820	0.000	94	1422084	2.00	1.98	
95 1,2,4-Trimethylbenzene	105	18.830	18.830	0.000	97	1404437	2.00	1.99	
96 sec-Butylbenzene	105	19.084	19.084	0.000	98	2036393	2.00	2.01	
97 1,3-Dichlorobenzene	146	19.105	19.105	0.000	98	939347	2.00	2.04	
98 Benzyl chloride	91	19.176	19.176	0.000	97	1331508	2.00	2.12	
99 1,4-Dichlorobenzene	146	19.186	19.186	0.000	94	949687	2.00	2.01	
100 4-Isopropyltoluene	119	19.240	19.240	0.000	96	1645625	2.00	2.03	
101 1,2,3-Trimethylbenzene	105	19.294	19.294	0.000	99	1419409	2.00	2.22	
102 Butylcyclohexane	83	19.343	19.343	0.000	91	1243201	2.00	2.13	
103 2,3-Dihydroindene	117	19.537	19.537	0.000	93	1271670	2.00	1.99	
104 1,2-Dichlorobenzene	146	19.542	19.542	0.000	95	902853	2.00	1.95	
105 n-Butylbenzene	91	19.661	19.661	0.000	98	1708583	2.00	2.08	
106 Indene	116	19.666	19.666	0.000	90	1119910	2.00	2.04	
107 Undecane	57	19.952	19.952	0.000	96	1108192	2.00	2.12	
108 1,2-Dibromo-3-Chloropropan	157	20.130	20.130	0.000	96	461711	2.00	2.42	
109 1,2,4,5-Tetramethylbenzene	119	20.405	20.405	0.000	96	1527367	2.00	2.07	
110 Dodecane	57	21.004	21.004	0.000	94	814573	2.00	1.98	
111 1,2,4-Trichlorobenzene	180	21.225	21.225	0.000	94	667891	2.00	1.83	
112 Naphthalene	128	21.365	21.365	0.000	99	1542497	2.00	1.94	
113 Hexachlorobutadiene	225	21.564	21.564	0.000	95	660498	2.00	1.69	
114 1,2,3-Trichlorobenzene	180	21.640	21.640	0.000	95	596206	2.00	1.85	
115 2-Methylnaphthalene	142	22.384	22.384	0.000	100	636621	2.00	1.64	
116 1-Methylnaphthalene	142	22.557	22.557	0.000	99	707065	2.00	1.49	
A 122 C8 Range	1	14.787	(14.733-14.870)		0	4392004	2.00	2.16	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.24	
S 124 Xylenes, Total	100				0		6.00	6.18	

Reagents:

40CV101P_00082

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26-LCS.d

Injection Date: 26-Feb-2019 11:35:30

Instrument ID: MG

Operator ID: 007126

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

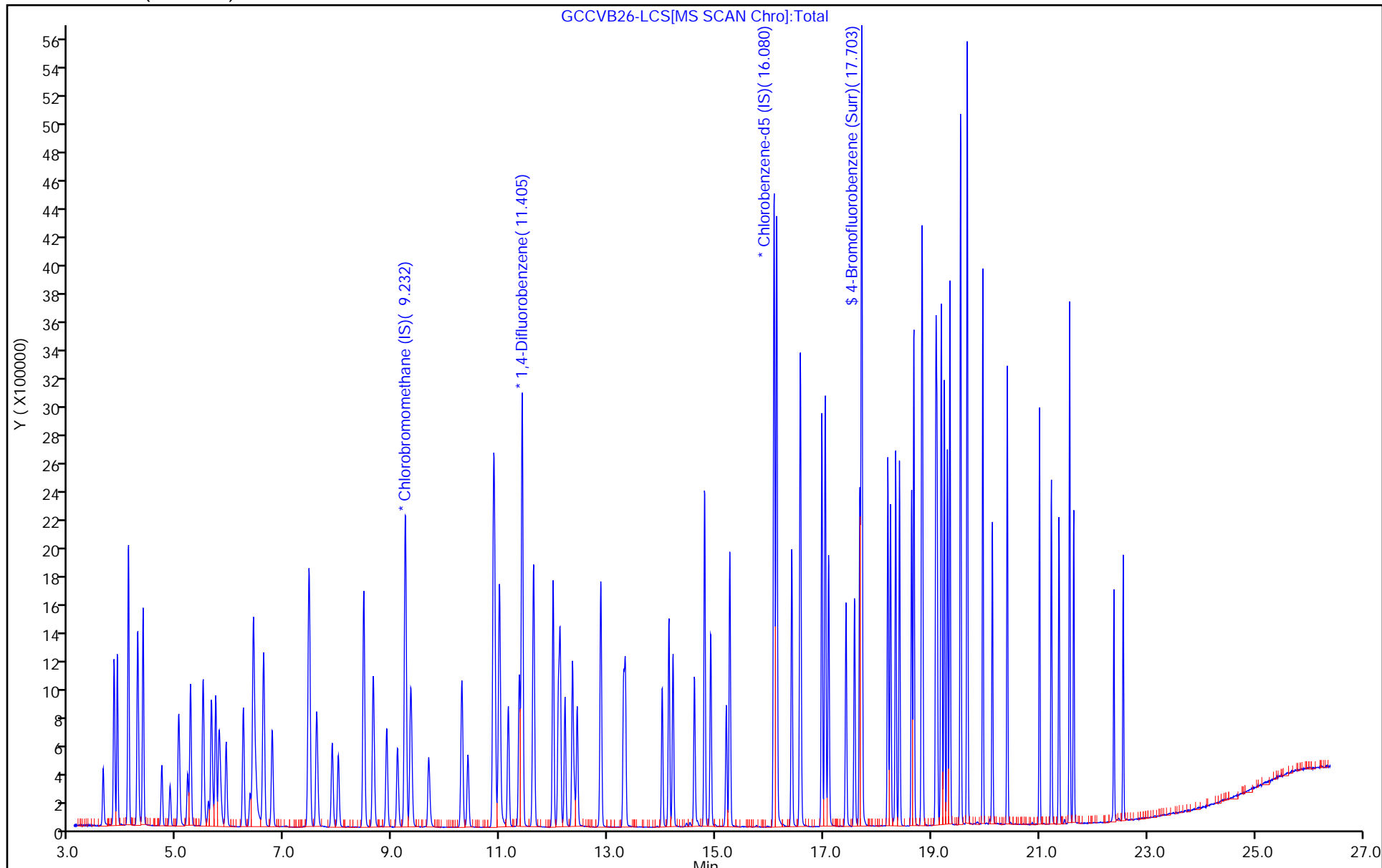
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 26-Feb-2019 11:35:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-002
 Misc. Info.: P82
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:22:36 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:22:36

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.01	100.19

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27935/1002
 Matrix: Air Lab File ID: HCCVB25-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 09:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.929		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	0.929		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	0.930		0.080	0.015
67-66-3	Chloroform	119.38	0.962		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	0.946		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	0.922		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	0.944		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	0.906		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	0.928		0.080	0.014
100-41-4	Ethylbenzene	106.17	0.927		0.080	0.027
75-09-2	Methylene Chloride	84.93	0.918		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	0.929		0.40	0.068
91-20-3	Naphthalene	128.17	0.586		0.040	0.040
127-18-4	Tetrachloroethene	165.83	0.927		0.080	0.016
108-88-3	Toluene	92.14	0.943		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	0.907		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.642		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	0.932		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	0.963		0.080	0.021
79-01-6	Trichloroethene	131.39	0.898		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	0.701		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	0.973		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.02		0.080	0.026
75-01-4	Vinyl chloride	62.50	0.950		0.040	0.029
1330-20-7	Xylenes, Total	106.17	2.91		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HCCVB25-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 25-Feb-2019 09:47:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info:
 Misc. Info.: S88
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Mar-2019 08:50:22 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: khachitpongpanits

Date: 04-Mar-2019 08:50:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.814	8.814	0.000	97	315308	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1742536	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.724	15.724	0.000	87	1476074	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.393	17.393	0.000	94	988541	4.00	4.11	
6 Chlorodifluoromethane	51	3.682	3.682	0.000	97	240547	1.00	0.9304	
7 Propene	41	3.687	3.687	0.000	98	100714	1.00	0.8567	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	366198	1.00	0.9221	
9 Chloromethane	52	3.919	3.919	0.000	98	41888	1.00	0.9043	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.930	0.000	95	253373	1.00	0.9250	
12 Vinyl chloride	62	4.090	4.090	0.000	99	136847	1.00	0.9502	
11 Acetaldehyde	44	4.105	4.105	0.000	97	241270	5.00	4.36	
14 Butane	43	4.178	4.178	0.000	85	196771	1.00	0.9548	
13 Butadiene	54	4.183	4.183	0.000	72	96649	1.00	0.9290	
15 Bromomethane	94	4.503	4.503	0.000	98	139756	1.00	0.9594	
16 Chloroethane	64	4.643	4.643	0.000	96	62156	1.00	0.9465	
17 Ethanol	31	4.808	4.808	0.000	96	245843	5.00	3.81	
18 Vinyl bromide	106	4.943	4.943	0.000	98	140203	1.00	1.01	
19 2-Methylbutane	43	4.994	4.994	0.000	92	146442	1.00	0.9580	
21 Trichlorofluoromethane	101	5.211	5.211	0.000	100	338677	1.00	0.9332	
20 Acrolein	56	5.258	5.258	0.000	94	44346	1.00	0.9617	
22 Acetonitrile	40	5.325	5.325	0.000	99	54653	1.00	0.9419	
23 Acetone	58	5.392	5.392	0.000	97	58310	1.00	0.9836	
24 Pentane	72	5.439	5.439	0.000	97	16039	1.00	0.9666	
25 Isopropyl alcohol	45	5.532	5.532	0.000	99	196120	1.00	1.05	
26 Ethyl ether	31	5.651	5.651	0.000	92	142580	1.00	0.9713	
27 1,1-Dichloroethene	96	5.919	5.919	0.000	97	113634	1.00	0.9278	
28 Acrylonitrile	53	6.049	6.049	0.000	94	91080	1.00	0.9667	
30 1,1,2-Trichloro-1,2,2-trif	101	6.095	6.095	0.000	96	275449	1.00	0.9453	
29 2-Methyl-2-propanol	59	6.157	6.157	0.000	97	190011	1.00	0.9148	
31 Methylene Chloride	84	6.271	6.271	0.000	97	118341	1.00	0.9179	
32 3-Chloro-1-propene	39	6.286	6.286	0.000	95	107892	1.00	0.9376	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.426	6.426	0.000	100	341342	1.00	0.9631	
34 trans-1,2-Dichloroethene	96	7.072	7.072	0.000	97	113916	1.00	0.9071	
35 2-Methylpentane	43	7.093	7.093	0.000	97	244186	1.00	0.8463	
36 Methyl tert-butyl ether	73	7.258	7.258	0.000	96	276473	1.00	0.9294	
37 1,1-Dichloroethane	63	7.501	7.501	0.000	99	225542	1.00	0.9441	
38 Vinyl acetate	43	7.625	7.625	0.000	100	330598	1.00	0.9687	
40 Hexane	56	8.069	8.069	0.000	92	87385	1.00	0.9155	
39 2-Butanone (MEK)	72	8.100	8.100	0.000	96	50081	1.00	0.9238	
171 Isopropyl ether	45	8.271	8.271	0.000	97	421999	1.00	0.9453	
41 cis-1,2-Dichloroethene	96	8.483	8.483	0.000	96	120460	1.00	0.9464	
42 Ethyl acetate	43	8.710	8.710	0.000	98	273196	1.00	0.8983	
43 Chloroform	83	8.824	8.824	0.000	98	263438	1.00	0.9616	
173 Tert-butyl ethyl ether	59	8.953	8.953	0.000	97	322003	1.00	0.8664	
44 Tetrahydrofuran	42	9.300	9.300	0.000	94	134686	1.00	0.9143	
45 1,1,1-Trichloroethane	97	9.853	9.853	0.000	97	242707	1.00	0.9316	
46 1,2-Dichloroethane	62	9.966	9.966	0.000	97	170025	1.00	0.9055	
48 Cyclohexane	69	10.447	10.447	0.000	91	47435	1.00	0.8660	
47 Benzene	78	10.452	10.452	0.000	97	342298	1.00	0.9291	
50 Carbon tetrachloride	117	10.473	10.473	0.000	97	277059	1.00	0.9291	
49 n-Butanol	31	10.535	10.535	0.000	72	44463	1.00	0.8918	
51 2,3-Dimethylpentane	71	10.571	10.571	0.000	91	68839	1.00	0.9009	
52 Thiophene	84	10.726	10.726	0.000	97	188226	1.00	0.8930	
53 Isooctane	57	11.212	11.212	0.000	98	549229	1.00	0.9036	
55 n-Heptane	71	11.584	11.584	0.000	94	103433	1.00	0.8813	
54 1,2-Dichloropropane	63	11.677	11.677	0.000	91	144823	1.00	0.9239	
56 Trichloroethene	130	11.708	11.708	0.000	95	156061	1.00	0.8976	
57 Dibromomethane	93	11.796	11.796	0.000	96	170096	1.00	0.9314	
58 Dichlorobromomethane	83	11.941	11.941	0.000	98	259681	1.00	0.9465	
59 1,4-Dioxane	88	12.013	12.013	0.000	91	49110	1.00	0.8878	
60 Methyl methacrylate	41	12.059	12.059	0.000	91	150647	1.00	0.9147	
61 Methylcyclohexane	83	12.478	12.478	0.000	93	222193	1.00	0.9675	
62 4-Methyl-2-pentanone (MIBK)	43	12.933	12.933	0.000	97	294175	1.00	0.8913	
63 cis-1,3-Dichloropropene	75	12.943	12.943	0.000	97	199995	1.00	0.9696	
64 trans-1,3-Dichloropropene	75	13.641	13.641	0.000	99	172799	1.00	0.9644	
65 Toluene	91	13.760	13.760	0.000	93	396041	1.00	0.9426	
66 1,1,2-Trichloroethane	83	13.837	13.837	0.000	97	134369	1.00	0.9634	
67 2-Methylthiophene	97	13.837	13.837	0.000	77	144793	NC	NC	
68 3-Methylthiophene	97	13.915	13.915	0.000	99	318611	NC	NC	
69 2-Hexanone	58	14.256	14.256	0.000	90	125323	1.00	0.9094	
71 n-Octane	85	14.442	14.442	0.000	96	114119	1.00	0.9514	
70 Chlorodibromomethane	129	14.540	14.540	0.000	97	277362	1.00	0.9877	
72 Ethylene Dibromide	107	14.830	14.830	0.000	97	241607	1.00	0.9497	
73 Tetrachloroethene	129	14.897	14.897	0.000	95	158622	1.00	0.9269	
74 Chlorobenzene	112	15.775	15.775	0.000	94	319702	1.00	0.9251	
75 2,3-Dimethylheptane	43	15.786	15.786	0.000	95	375033	1.00	0.8492	
76 Ethylbenzene	91	16.060	16.060	0.000	99	496209	1.00	0.9275	
77 2-Ethylthiophene	97	16.163	16.163	0.000	99	370973	NC	NC	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	802567	2.00	1.95	
81 n-Nonane	57	16.639	16.639	0.000	95	258490	1.00	0.9723	
79 Bromoform	173	16.680	16.680	0.000	93	284859	1.00	0.9028	
80 Styrene	104	16.690	16.690	0.000	99	277713	1.00	1.00	
82 o-Xylene	91	16.752	16.752	0.000	98	401926	1.00	0.9567	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 1,1,2,2-Tetrachloroethane	83	17.088	17.088	0.000	99	338679	1.00	1.00	
84 1,2,3-Trichloropropane	110	17.259	17.259	0.000	97	78339	1.00	0.9345	
85 Isopropylbenzene	105	17.362	17.362	0.000	97	556793	1.00	0.9606	
86 N-Propylbenzene	120	17.926	17.926	0.000	98	145485	1.00	0.9590	
87 2-Chlorotoluene	126	17.972	17.972	0.000	98	143516	1.00	0.9659	
88 4-Ethyltoluene	105	18.081	18.081	0.000	98	509804	1.00	0.9250	
89 1,3,5-Trimethylbenzene	120	18.158	18.158	0.000	92	247015	1.00	1.02	
90 Alpha Methyl Styrene	118	18.401	18.401	0.000	86	195538	1.00	0.8514	
91 n-Decane	57	18.453	18.453	0.000	88	345713	1.00	1.02	
92 tert-Butylbenzene	119	18.597	18.597	0.000	92	498813	1.00	0.9669	
93 1,2,4-Trimethylbenzene	105	18.613	18.613	0.000	96	467933	1.00	0.9730	
95 sec-Butylbenzene	105	18.877	18.877	0.000	99	703937	1.00	0.9792	
94 1,3-Dichlorobenzene	146	18.892	18.892	0.000	98	310876	1.00	0.8910	
96 Benzyl chloride	91	18.970	18.970	0.000	98	309130	1.00	0.8683	
97 1,4-Dichlorobenzene	146	18.985	18.985	0.000	95	290783	1.00	0.8807	
98 4-Isopropyltoluene	119	19.042	19.042	0.000	97	552458	1.00	0.99	
99 1,2,3-Trimethylbenzene	105	19.099	19.099	0.000	99	331004	1.00	0.7010	
100 Butylcyclohexane	83	19.150	19.150	0.000	92	361925	1.00	0.9444	
102 2,3-Dihydroindene	117	19.352	19.352	0.000	93	431335	1.00	0.9337	
101 1,2-Dichlorobenzene	146	19.352	19.352	0.000	82	310517	1.00	0.8935	
103 Indene	116	19.486	19.486	0.000	87	285369	1.00	0.7182	
104 n-Butylbenzene	91	19.486	19.486	0.000	96	598387	1.00	1.04	
105 Undecane	57	19.802	19.802	0.000	94	375855	1.00	0.9548	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.869	19.869	0.000	98	388901	NC	NC	
106 1,2-Dibromo-3-Chloropropan	157	19.972	19.972	0.000	95	126580	1.00	0.8785	
107 1,2,4,5-Tetramethylbenzene	119	20.262	20.262	0.000	96	433864	1.00	0.8345	
109 1,2,3,5-Tetramethylbenzene	119	20.318	20.318	0.000	94	264670	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	20.732	20.732	0.000	97	326803	NC	NC	
110 Dodecane	57	20.892	20.892	0.000	93	329798	1.00	0.8605	
111 1,2,4-Trichlorobenzene	180	21.109	21.109	0.000	93	167519	1.00	0.6424	
113 Naphthalene	128	21.254	21.254	0.000	99	303421	1.00	0.5863	
114 Benzo(b)thiophene	134	21.368	21.368	0.000	99	153053	NC	NC	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	92	286449	1.00	0.8733	
116 1,2,3-Trichlorobenzene	180	21.543	21.543	0.000	95	201214	1.00	0.7278	
A 120 C8 Range	1	14.442	(14.390-14.494)		0	1192859	1.00	0.9252	
S 121 Xylenes, Total	100				0		3.00	2.90	
S 122 1,2-Dichloroethene, Total	1				0		2.00	1.85	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

40CV101S_00088

Amount Added: 50.00

Units: ml

TestAmerica Laboratories

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HCCVB25-LCS.d

Injection Date: 25-Feb-2019 09:47:30

Instrument ID: MH

Operator ID: HMT

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

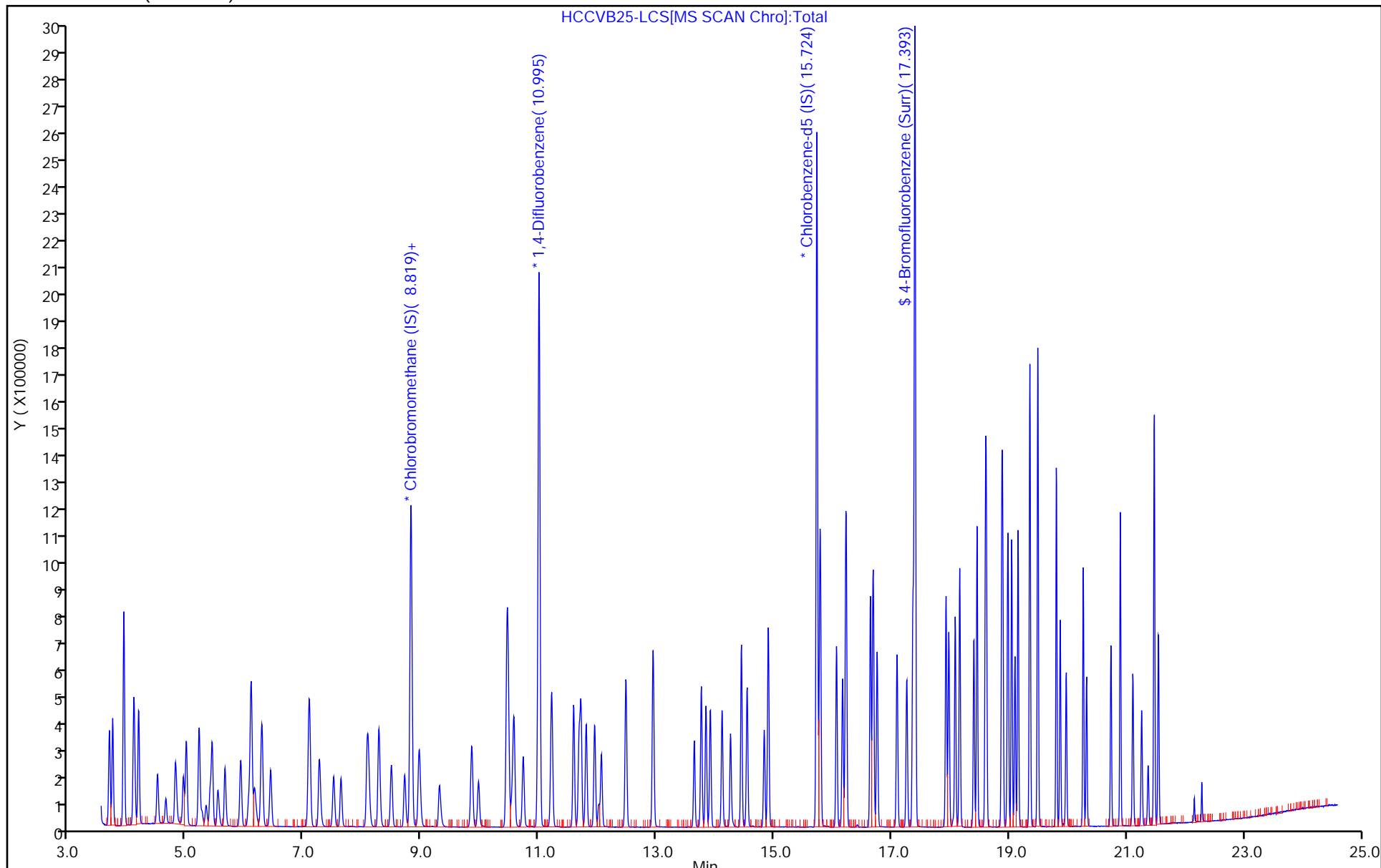
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HCCVB25-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 25-Feb-2019 09:47:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info:
 Misc. Info.: S88
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Mar-2019 08:50:22 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: khachitpongpanits Date: 04-Mar-2019 08:50:22

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.11	102.75

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27980/1002
 Matrix: Air Lab File ID: HCCVB27-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 11:50
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.08		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.09		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.09		0.080	0.015
67-66-3	Chloroform	119.38	1.15		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.09		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.06		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.11		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.09		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.06		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.09		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.06		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.08		0.40	0.068
91-20-3	Naphthalene	128.17	1.16		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.06		0.080	0.016
108-88-3	Toluene	92.14	1.10		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.04		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.910		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.09		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.12		0.080	0.021
79-01-6	Trichloroethene	131.39	1.04		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	0.835		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.15		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.18		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.11		0.040	0.029
1330-20-7	Xylenes, Total	106.17	3.43		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HCCVB27-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 27-Feb-2019 11:50:30 ALS Bottle#: 7 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-002
 Misc. Info.: S87
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 15:09:58 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits

Date: 28-Feb-2019 15:09:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.814	8.814	0.000	98	226060	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1253478	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.724	15.724	0.000	88	1073197	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.398	17.398	0.000	93	721930	4.00	4.13	
6 Chlorodifluoromethane	51	3.682	3.682	0.000	97	202448	1.00	1.09	
7 Propene	41	3.692	3.692	0.000	97	86192	1.00	1.02	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	301415	1.00	1.06	
9 Chloromethane	52	3.925	3.925	0.000	98	36653	1.00	1.10	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.930	0.000	93	205505	1.00	1.05	
12 Vinyl chloride	62	4.090	4.090	0.000	99	114280	1.00	1.11	
11 Acetaldehyde	44	4.100	4.100	0.000	98	207270	5.00	5.23	
14 Butane	43	4.183	4.183	0.000	85	171633	1.00	1.16	
13 Butadiene	54	4.183	4.183	0.000	71	82818	1.00	1.11	
15 Bromomethane	94	4.503	4.503	0.000	98	113762	1.00	1.09	
16 Chloroethane	64	4.648	4.648	0.000	94	51634	1.00	1.10	
17 Ethanol	31	4.824	4.824	0.000	97	209034	5.00	4.52	
18 Vinyl bromide	106	4.943	4.943	0.000	98	116901	1.00	1.18	
19 2-Methylbutane	43	4.994	4.994	0.000	93	126651	1.00	1.16	
21 Trichlorofluoromethane	101	5.211	5.211	0.000	99	285948	1.00	1.10	
20 Acrolein	56	5.263	5.263	0.000	94	36175	1.00	1.09	
22 Acetonitrile	40	5.330	5.330	0.000	98	46088	1.00	1.11	
23 Acetone	58	5.403	5.403	0.000	96	48405	1.00	1.14	
24 Pentane	72	5.434	5.434	0.000	97	13358	1.00	1.12	
25 Isopropyl alcohol	45	5.542	5.542	0.000	98	159072	1.00	1.19	
26 Ethyl ether	31	5.651	5.651	0.000	91	125248	1.00	1.19	
27 1,1-Dichloroethene	96	5.920	5.920	0.000	96	92705	1.00	1.06	
28 Acrylonitrile	53	6.054	6.054	0.000	94	75257	1.00	1.11	
30 1,1,2-Trichloro-1,2,2-trif	101	6.095	6.095	0.000	95	230920	1.00	1.11	
29 2-Methyl-2-propanol	59	6.168	6.168	0.000	97	156753	1.00	1.05	
31 Methylene Chloride	84	6.271	6.271	0.000	96	97855	1.00	1.06	
32 3-Chloro-1-propene	39	6.286	6.286	0.000	95	93284	1.00	1.13	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.426	6.426	0.000	100	284642	1.00	1.12	
34 trans-1,2-Dichloroethene	96	7.077	7.077	0.000	96	93857	1.00	1.04	
35 2-Methylpentane	43	7.093	7.093	0.000	96	209797	1.00	1.01	
36 Methyl tert-butyl ether	73	7.258	7.258	0.000	96	230900	1.00	1.08	
37 1,1-Dichloroethane	63	7.501	7.501	0.000	100	190789	1.00	1.11	
38 Vinyl acetate	43	7.625	7.625	0.000	100	276476	1.00	1.13	
40 Hexane	56	8.075	8.075	0.000	92	72970	1.00	1.07	
39 2-Butanone (MEK)	72	8.106	8.106	0.000	98	41623	1.00	1.07	
171 Isopropyl ether	45	8.271	8.271	0.000	97	362606	1.00	1.13	
41 cis-1,2-Dichloroethene	96	8.483	8.483	0.000	97	99834	1.00	1.09	
42 Ethyl acetate	43	8.710	8.710	0.000	98	234901	1.00	1.08	
43 Chloroform	83	8.824	8.824	0.000	97	225441	1.00	1.15	
173 Tert-butyl ethyl ether	59	8.959	8.959	0.000	98	274855	1.00	1.03	
44 Tetrahydrofuran	42	9.300	9.300	0.000	94	113795	1.00	1.08	
45 1,1,1-Trichloroethane	97	9.853	9.853	0.000	97	203571	1.00	1.09	
46 1,2-Dichloroethane	62	9.966	9.966	0.000	96	147638	1.00	1.09	
48 Cyclohexane	69	10.452	10.452	0.000	88	39593	1.00	1.00	
47 Benzene	78	10.452	10.452	0.000	97	287118	1.00	1.08	
50 Carbon tetrachloride	117	10.473	10.473	0.000	97	233556	1.00	1.09	
49 n-Butanol	31	10.545	10.545	0.000	68	38399	1.00	1.07	
51 2,3-Dimethylpentane	71	10.566	10.566	0.000	89	57748	1.00	1.05	
52 Thiophene	84	10.731	10.731	0.000	97	157660	1.00	1.04	
53 Isooctane	57	11.212	11.212	0.000	98	471784	1.00	1.08	
55 n-Heptane	71	11.589	11.589	0.000	94	86852	1.00	1.03	
54 1,2-Dichloropropane	63	11.677	11.677	0.000	92	124250	1.00	1.10	
56 Trichloroethene	130	11.708	11.708	0.000	94	129936	1.00	1.04	
57 Dibromomethane	93	11.801	11.801	0.000	95	144568	1.00	1.10	
58 Dichlorobromomethane	83	11.946	11.946	0.000	98	221351	1.00	1.12	
59 1,4-Dioxane	88	12.018	12.018	0.000	95	38707	1.00	0.9728	
60 Methyl methacrylate	41	12.060	12.060	0.000	90	133849	1.00	1.13	
61 Methylcyclohexane	83	12.478	12.478	0.000	93	186682	1.00	1.13	
62 4-Methyl-2-pentanone (MIBK)	43	12.933	12.933	0.000	98	251565	1.00	1.06	
63 cis-1,3-Dichloropropene	75	12.943	12.943	0.000	98	170173	1.00	1.15	
64 trans-1,3-Dichloropropene	75	13.641	13.641	0.000	97	145734	1.00	1.12	
65 Toluene	91	13.760	13.760	0.000	92	335127	1.00	1.10	
66 1,1,2-Trichloroethane	83	13.837	13.837	0.000	97	113418	1.00	1.12	
67 2-Methylthiophene	97	13.837	13.837	0.000	77	123193	NC	NC	
68 3-Methylthiophene	97	13.910	13.910	0.000	99	263912	NC	NC	
69 2-Hexanone	58	14.261	14.261	0.000	90	106946	1.00	1.07	
71 n-Octane	85	14.442	14.442	0.000	97	95789	1.00	1.10	
70 Chlorodibromomethane	129	14.540	14.540	0.000	97	235642	1.00	1.15	
72 Ethylene Dibromide	107	14.830	14.830	0.000	98	202945	1.00	1.10	
73 Tetrachloroethene	129	14.897	14.897	0.000	94	131616	1.00	1.06	
74 Chlorobenzene	112	15.776	15.776	0.000	93	272503	1.00	1.08	
75 2,3-Dimethylheptane	43	15.786	15.786	0.000	94	333152	1.00	1.04	
76 Ethylbenzene	91	16.060	16.060	0.000	99	423517	1.00	1.09	
77 2-Ethylthiophene	97	16.163	16.163	0.000	99	315340	NC	NC	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	689557	2.00	2.30	
81 n-Nonane	57	16.639	16.639	0.000	95	219720	1.00	1.14	
79 Bromoform	173	16.680	16.680	0.000	92	232814	1.00	1.01	
80 Styrene	104	16.690	16.690	0.000	98	239143	1.00	1.18	
82 o-Xylene	91	16.752	16.752	0.000	98	344391	1.00	1.13	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 1,1,2,2-Tetrachloroethane	83	17.094	17.094	0.000	99	285654	1.00	1.15	
84 1,2,3-Trichloropropane	110	17.259	17.259	0.000	96	65759	1.00	1.08	
85 Isopropylbenzene	105	17.362	17.362	0.000	97	466039	1.00	1.11	
86 N-Propylbenzene	120	17.926	17.926	0.000	98	121617	1.00	1.10	
87 2-Chlorotoluene	126	17.977	17.977	0.000	98	119504	1.00	1.11	
88 4-Ethyltoluene	105	18.086	18.086	0.000	98	433728	1.00	1.08	
89 1,3,5-Trimethylbenzene	120	18.158	18.158	0.000	92	208540	1.00	1.18	
90 Alpha Methyl Styrene	118	18.401	18.401	0.000	86	170243	1.00	1.02	
91 n-Decane	57	18.453	18.453	0.000	88	300572	1.00	1.21	
92 tert-Butylbenzene	119	18.598	18.598	0.000	90	421160	1.00	1.12	
93 1,2,4-Trimethylbenzene	105	18.613	18.613	0.000	96	402528	1.00	1.15	
95 sec-Butylbenzene	105	18.877	18.877	0.000	98	595352	1.00	1.14	
94 1,3-Dichlorobenzene	146	18.892	18.892	0.000	98	269246	1.00	1.06	
96 Benzyl chloride	91	18.975	18.975	0.000	97	276584	1.00	1.07	
97 1,4-Dichlorobenzene	146	18.985	18.985	0.000	96	250865	1.00	1.05	
98 4-Isopropyltoluene	119	19.047	19.047	0.000	97	471219	1.00	1.16	
99 1,2,3-Trimethylbenzene	105	19.099	19.099	0.000	99	286666	1.00	0.8350	
100 Butylcyclohexane	83	19.156	19.156	0.000	91	314740	1.00	1.13	
102 2,3-Dihydroindene	117	19.352	19.352	0.000	93	366103	1.00	1.09	
101 1,2-Dichlorobenzene	146	19.357	19.357	0.000	83	270251	1.00	1.07	
103 Indene	116	19.486	19.486	0.000	87	254677	1.00	0.8815	
104 n-Butylbenzene	91	19.492	19.492	0.000	96	529546	1.00	1.26	
105 Undecane	57	19.807	19.807	0.000	94	339087	1.00	1.18	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.874	19.874	0.000	98	333863	NC	NC	
106 1,2-Dibromo-3-Chloropropan	157	19.977	19.977	0.000	95	104745	1.00	1.00	
107 1,2,4,5-Tetramethylbenzene	119	20.267	20.267	0.000	96	402327	1.00	1.06	
109 1,2,3,5-Tetramethylbenzene	119	20.319	20.319	0.000	94	237961	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	20.737	20.737	0.000	97	317760	NC	NC	
110 Dodecane	57	20.897	20.897	0.000	92	337919	1.00	1.21	
111 1,2,4-Trichlorobenzene	180	21.109	21.109	0.000	93	178505	1.00	0.9102	
113 Naphthalene	128	21.259	21.259	0.000	99	434769	1.00	1.16	
114 Benzo(b)thiophene	134	21.368	21.368	0.000	99	182005	NC	NC	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	91	249871	1.00	1.05	
116 1,2,3-Trichlorobenzene	180	21.544	21.544	0.000	95	228620	1.00	1.14	
117 2-Methylnaphthalene	142	22.153	22.153	0.000	100	114535	1.00	0.7918	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	100	145977	1.00	0.7121	
A 120 C8 Range	1	14.442	(14.390-14.504)		0	1047632	1.00	1.13	
S 121 Xylenes, Total	100				0		3.00	3.43	
S 122 1,2-Dichloroethene, Total	1				0		2.00	2.14	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00087

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HCCVB27-LCS.d

Injection Date: 27-Feb-2019 11:50:30

Instrument ID: MH

Operator ID: AFB

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

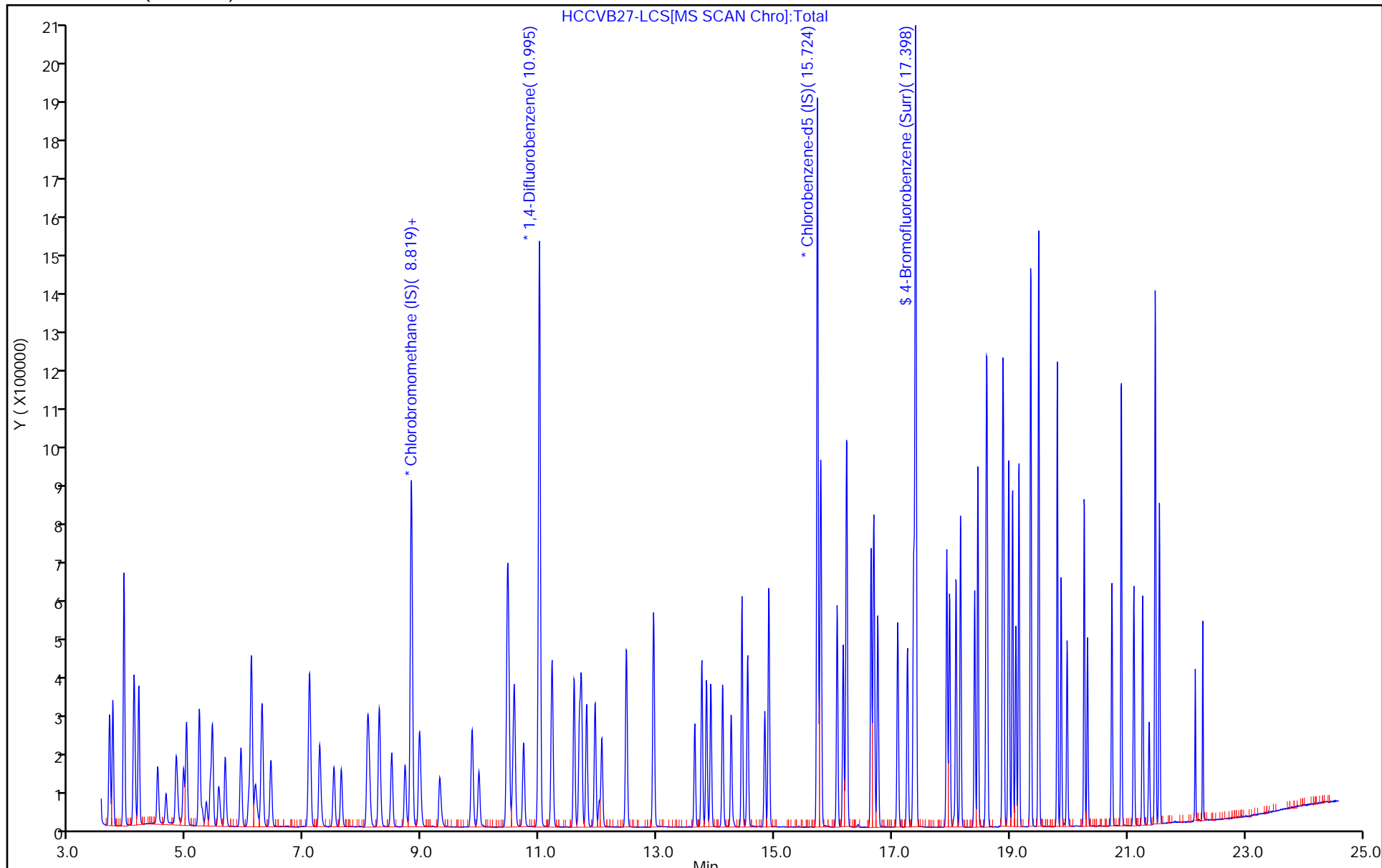
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HCCVB27-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 27-Feb-2019 11:50:30 ALS Bottle#: 7 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-002
 Misc. Info.: S87
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 15:09:58 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 15:09:58

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.13	103.20

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27981/1002
 Matrix: Air Lab File ID: HCCVB28-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/28/2019 13:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27981 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.10		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.11		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.09		0.080	0.015
67-66-3	Chloroform	119.38	1.14		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.11		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.07		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.11		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.09		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.07		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.11		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.05		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.12		0.40	0.068
91-20-3	Naphthalene	128.17	1.08		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.09		0.080	0.016
108-88-3	Toluene	92.14	1.12		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.07		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.901		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.12		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.13		0.080	0.021
79-01-6	Trichloroethene	131.39	1.09		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	0.811		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.12		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.18		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.12		0.040	0.029
1330-20-7	Xylenes, Total	106.17	3.41		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\HCCVB28-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 28-Feb-2019 13:02:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010950-002
 Misc. Info.: S87
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 01-Mar-2019 16:50:30 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0307

First Level Reviewer: khachitpongpanits

Date: 01-Mar-2019 16:50:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.819	0.000	97	308099	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1679334	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	87	1441526	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.398	17.398	0.000	95	956004	4.00	4.07	
6 Chlorodifluoromethane	51	3.687	3.687	0.000	97	275324	1.00	1.09	
7 Propene	41	3.697	3.697	0.000	93	118611	1.00	1.03	
8 Dichlorodifluoromethane	85	3.744	3.744	0.000	100	414896	1.00	1.07	
9 Chloromethane	52	3.930	3.930	0.000	98	48456	1.00	1.07	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.940	3.940	0.000	92	290007	1.00	1.08	
12 Vinyl chloride	62	4.100	4.100	0.000	99	157188	1.00	1.12	
11 Acetaldehyde	44	4.110	4.110	0.000	99	279038	5.00	5.16	
13 Butadiene	54	4.188	4.188	0.000	74	110890	1.00	1.09	
14 Butane	43	4.188	4.188	0.000	85	229293	1.00	1.14	
15 Bromomethane	94	4.508	4.508	0.000	98	153330	1.00	1.08	
16 Chloroethane	64	4.653	4.653	0.000	96	71430	1.00	1.11	
17 Ethanol	31	4.824	4.824	0.000	96	278384	5.00	4.41	
18 Vinyl bromide	106	4.948	4.948	0.000	98	153355	1.00	1.13	
19 2-Methylbutane	43	4.999	4.999	0.000	93	169690	1.00	1.14	
21 Trichlorofluoromethane	101	5.216	5.216	0.000	99	389959	1.00	1.10	
20 Acrolein	56	5.268	5.268	0.000	93	50246	1.00	1.12	
22 Acetonitrile	40	5.335	5.335	0.000	98	60966	1.00	1.08	
23 Acetone	58	5.408	5.408	0.000	97	65801	1.00	1.14	
24 Pentane	72	5.434	5.434	0.000	95	18714	1.00	1.15	
25 Isopropyl alcohol	45	5.547	5.547	0.000	99	222623	1.00	1.23	
26 Ethyl ether	31	5.656	5.656	0.000	92	167405	1.00	1.17	
27 1,1-Dichloroethene	96	5.925	5.925	0.000	97	127784	1.00	1.07	
28 Acrylonitrile	53	6.059	6.059	0.000	93	104241	1.00	1.13	
30 1,1,2-Trichloro-1,2,2-trif	101	6.105	6.105	0.000	96	314509	1.00	1.10	
29 2-Methyl-2-propanol	59	6.167	6.167	0.000	96	219394	1.00	1.08	
31 Methylene Chloride	84	6.276	6.276	0.000	97	132047	1.00	1.05	
32 3-Chloro-1-propene	39	6.292	6.292	0.000	96	126191	1.00	1.12	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.431	6.431	0.000	100	388956	1.00	1.12	
34 trans-1,2-Dichloroethene	96	7.082	7.082	0.000	97	131430	1.00	1.07	
35 2-Methylpentane	43	7.098	7.098	0.000	96	286126	1.00	1.01	
36 Methyl tert-butyl ether	73	7.263	7.263	0.000	97	326066	1.00	1.12	
37 1,1-Dichloroethane	63	7.506	7.506	0.000	100	259780	1.00	1.11	
38 Vinyl acetate	43	7.630	7.630	0.000	100	387033	1.00	1.16	
40 Hexane	56	8.075	8.075	0.000	92	102393	1.00	1.10	
39 2-Butanone (MEK)	72	8.106	8.106	0.000	96	58049	1.00	1.10	
171 Isopropyl ether	45	8.276	8.276	0.000	97	497923	1.00	1.14	
41 cis-1,2-Dichloroethene	96	8.488	8.488	0.000	96	138499	1.00	1.11	
42 Ethyl acetate	43	8.715	8.715	0.000	98	318859	1.00	1.07	
43 Chloroform	83	8.834	8.834	0.000	97	304174	1.00	1.14	
173 Tert-butyl ethyl ether	59	8.958	8.958	0.000	97	382041	1.00	1.05	
44 Tetrahydrofuran	42	9.305	9.305	0.000	94	156161	1.00	1.08	
45 1,1,1-Trichloroethane	97	9.858	9.858	0.000	97	283896	1.00	1.12	
46 1,2-Dichloroethane	62	9.971	9.971	0.000	97	197176	1.00	1.09	
48 Cyclohexane	69	10.452	10.452	0.000	77	57139	1.00	1.08	
47 Benzene	78	10.457	10.457	0.000	98	391626	1.00	1.10	
50 Carbon tetrachloride	117	10.478	10.478	0.000	98	319503	1.00	1.11	
49 n-Butanol	31	10.550	10.550	0.000	68	52801	1.00	1.10	
51 2,3-Dimethylpentane	71	10.571	10.571	0.000	89	79965	1.00	1.09	
52 Thiophene	84	10.731	10.731	0.000	97	217216	1.00	1.07	
53 Isooctane	57	11.217	11.217	0.000	98	640147	1.00	1.09	
55 n-Heptane	71	11.589	11.589	0.000	95	120546	1.00	1.07	
54 1,2-Dichloropropane	63	11.682	11.682	0.000	91	167669	1.00	1.11	
56 Trichloroethene	130	11.713	11.713	0.000	96	182716	1.00	1.09	
57 Dibromomethane	93	11.801	11.801	0.000	97	190874	1.00	1.08	
58 Dichlorobromomethane	83	11.946	11.946	0.000	99	297480	1.00	1.13	
59 1,4-Dioxane	88	12.013	12.013	0.000	95	54074	1.00	1.01	
60 Methyl methacrylate	41	12.059	12.059	0.000	91	178134	1.00	1.12	
61 Methylcyclohexane	83	12.478	12.478	0.000	93	259030	1.00	1.17	
62 4-Methyl-2-pentanone (MIBK)	43	12.933	12.933	0.000	98	342699	1.00	1.08	
63 cis-1,3-Dichloropropene	75	12.943	12.943	0.000	98	231429	1.00	1.16	
64 trans-1,3-Dichloropropene	75	13.641	13.641	0.000	98	201645	1.00	1.15	
65 Toluene	91	13.760	13.760	0.000	93	459838	1.00	1.12	
66 1,1,2-Trichloroethane	83	13.843	13.843	0.000	97	153487	1.00	1.13	
67 2-Methylthiophene	97	13.843	13.843	0.000	77	166773	NC	NC	
68 3-Methylthiophene	97	13.915	13.915	0.000	98	365404	NC	NC	
69 2-Hexanone	58	14.261	14.261	0.000	90	147005	1.00	1.09	
71 n-Octane	85	14.442	14.442	0.000	96	132421	1.00	1.13	
70 Chlorodibromomethane	129	14.540	14.540	0.000	97	314787	1.00	1.15	
72 Ethylene Dibromide	107	14.830	14.830	0.000	98	274601	1.00	1.11	
73 Tetrachloroethene	129	14.897	14.897	0.000	95	182537	1.00	1.09	
74 Chlorobenzene	112	15.775	15.775	0.000	93	367950	1.00	1.09	
75 2,3-Dimethylheptane	43	15.786	15.786	0.000	95	434046	1.00	1.01	
76 Ethylbenzene	91	16.060	16.060	0.000	99	577382	1.00	1.11	
77 2-Ethylthiophene	97	16.163	16.163	0.000	98	426333	NC	NC	
78 m-Xylene & p-Xylene	91	16.225	16.225	0.000	98	924498	2.00	2.29	
81 n-Nonane	57	16.639	16.639	0.000	95	294998	1.00	1.14	
79 Bromoform	173	16.680	16.680	0.000	93	316559	1.00	1.03	
80 Styrene	104	16.690	16.690	0.000	99	320512	1.00	1.18	
82 o-Xylene	91	16.752	16.752	0.000	99	458341	1.00	1.12	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 1,1,2,2-Tetrachloroethane	83	17.093	17.093	0.000	99	375400	1.00	1.13	
84 1,2,3-Trichloropropane	110	17.259	17.259	0.000	97	88158	1.00	1.08	
85 Isopropylbenzene	105	17.362	17.362	0.000	97	627291	1.00	1.11	
86 N-Propylbenzene	120	17.926	17.926	0.000	98	165730	1.00	1.12	
87 2-Chlorotoluene	126	17.977	17.977	0.000	98	163152	1.00	1.12	
88 4-Ethyltoluene	105	18.086	18.086	0.000	98	579138	1.00	1.08	
89 1,3,5-Trimethylbenzene	120	18.158	18.158	0.000	92	279130	1.00	1.18	
90 Alpha Methyl Styrene	118	18.401	18.401	0.000	87	228248	1.00	1.02	
91 n-Decane	57	18.458	18.458	0.000	88	392864	1.00	1.18	
92 tert-Butylbenzene	119	18.603	18.603	0.000	93	558694	1.00	1.11	
93 1,2,4-Trimethylbenzene	105	18.613	18.613	0.000	96	525279	1.00	1.12	
95 sec-Butylbenzene	105	18.877	18.877	0.000	99	789783	1.00	1.12	
94 1,3-Dichlorobenzene	146	18.897	18.897	0.000	98	357781	1.00	1.05	
96 Benzyl chloride	91	18.975	18.975	0.000	97	367609	1.00	1.06	
97 1,4-Dichlorobenzene	146	18.985	18.985	0.000	95	337418	1.00	1.05	
98 4-Isopropyltoluene	119	19.047	19.047	0.000	97	622267	1.00	1.14	
99 1,2,3-Trimethylbenzene	105	19.099	19.099	0.000	99	374154	1.00	0.8113	
100 Butylcyclohexane	83	19.156	19.156	0.000	92	404335	1.00	1.08	
102 2,3-Dihydroindene	117	19.352	19.352	0.000	93	484612	1.00	1.07	
101 1,2-Dichlorobenzene	146	19.357	19.357	0.000	84	356441	1.00	1.05	
103 Indene	116	19.486	19.486	0.000	89	331529	1.00	0.8543	
104 n-Butylbenzene	91	19.492	19.492	0.000	97	673121	1.00	1.20	
105 Undecane	57	19.807	19.807	0.000	95	437442	1.00	1.14	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.874	19.874	0.000	98	441545	NC	NC	
106 1,2-Dibromo-3-Chloropropan	157	19.977	19.977	0.000	96	141114	1.00	1.00	
107 1,2,4,5-Tetramethylbenzene	119	20.267	20.267	0.000	96	528894	1.00	1.04	
109 1,2,3,5-Tetramethylbenzene	119	20.318	20.318	0.000	94	315022	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	20.737	20.737	0.000	97	410535	NC	NC	
110 Dodecane	57	20.897	20.897	0.000	93	403486	1.00	1.08	
111 1,2,4-Trichlorobenzene	180	21.109	21.109	0.000	93	237061	1.00	0.9006	
113 Naphthalene	128	21.259	21.259	0.000	99	544124	1.00	1.08	
114 Benzo(b)thiophene	134	21.368	21.368	0.000	99	229062	NC	NC	
115 Hexachlorobutadiene	225	21.476	21.476	0.000	92	324499	1.00	1.01	
116 1,2,3-Trichlorobenzene	180	21.543	21.543	0.000	95	281929	1.00	1.04	
117 2-Methylnaphthalene	142	22.153	22.153	0.000	99	107323	1.00	0.5523	
118 1-Methylnaphthalene	142	22.282	22.282	0.000	100	135311	1.00	0.4914	
A 120 C8 Range	1	14.442	(14.396-14.489)		0	1374461	1.00	1.11	
S 121 Xylenes, Total	100				0		3.00	3.41	
S 122 1,2-Dichloroethene, Total	1				0		2.00	2.18	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00087

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\HCCVB28-LCS.d

Injection Date: 28-Feb-2019 13:02:30

Instrument ID: MH

Operator ID: HMT

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

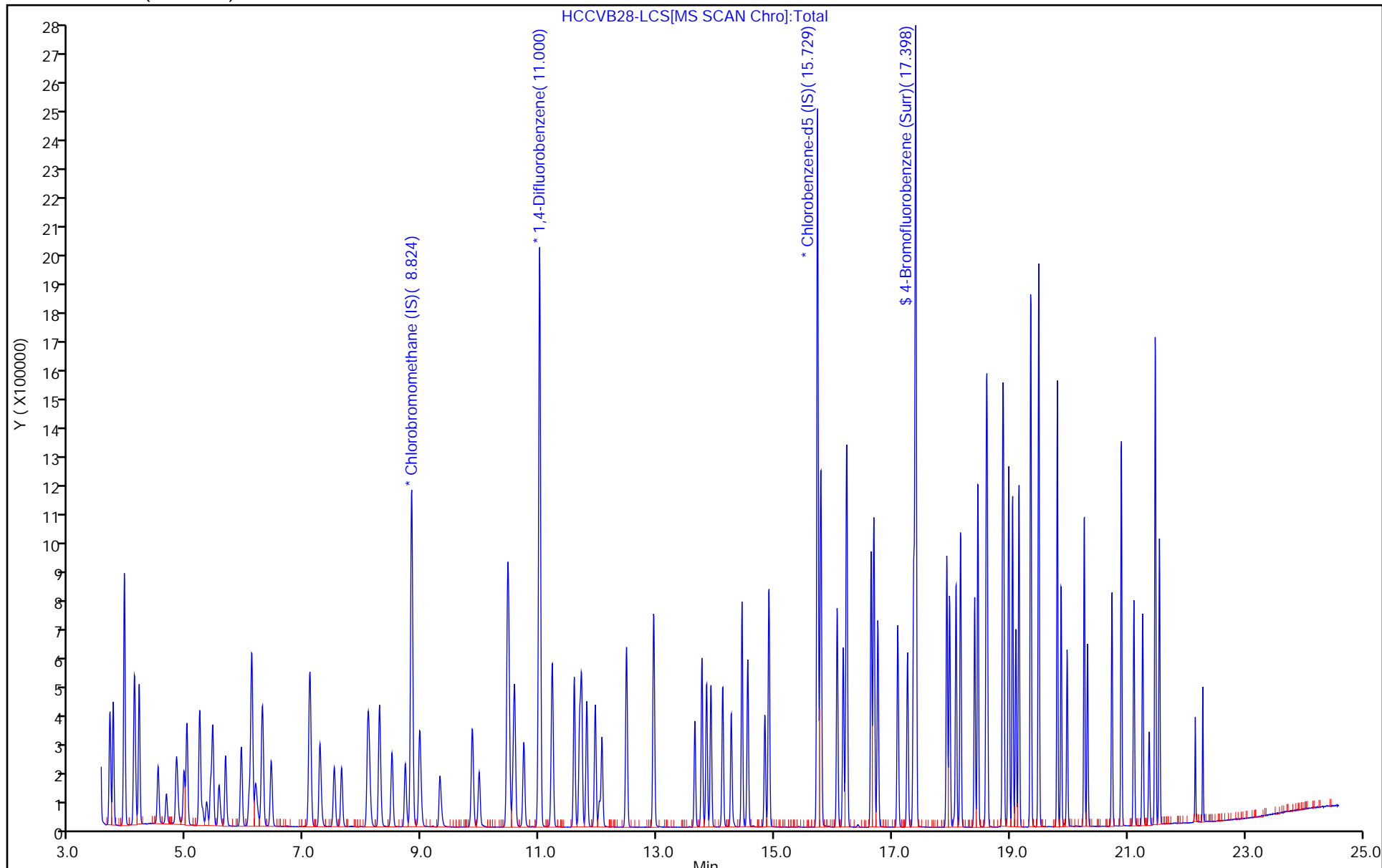
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\HCCVB28-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 28-Feb-2019 13:02:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010950-002
 Misc. Info.: S87
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10950.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 01-Mar-2019 16:50:30 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0307

First Level Reviewer: khachitpongpanits Date: 01-Mar-2019 16:50:30

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.07	101.75

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Instrument ID: MG Start Date: 01/11/2019 12:24

Analysis Batch Number: 26755 End Date: 01/12/2019 04:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-26755/1		01/11/2019 12:24	1	GA11BLK1.D	RTX-5 0.32 (mm)
IC 140-26755/2		01/11/2019 13:08	1	GA11IC09.D	RTX-5 0.32 (mm)
IC 140-26755/6		01/11/2019 14:35	1	GA11IC10.D	RTX-5 0.32 (mm)
IC 140-26755/9		01/11/2019 16:46	1	GA11IC01.D	RTX-5 0.32 (mm)
IC 140-26755/10		01/11/2019 17:29	1	GA11IC02.D	RTX-5 0.32 (mm)
140-13809-A-1 MDLV		01/11/2019 17:29	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 17:29	1		RTX-5 0.32 (mm)
IC 140-26755/11		01/11/2019 18:12	1	GA11IC03.D	RTX-5 0.32 (mm)
140-13809-A-2 MDLV		01/11/2019 18:12	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:12	1		RTX-5 0.32 (mm)
IC 140-26755/12		01/11/2019 18:56	1	GA11IC04.D	RTX-5 0.32 (mm)
140-13809-A-3 MDLV		01/11/2019 18:56	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:56	1		RTX-5 0.32 (mm)
IC 140-26755/13		01/11/2019 19:40	1	GA11IC05.D	RTX-5 0.32 (mm)
140-13809-A-4 MDLV		01/11/2019 19:40	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 19:40	1		RTX-5 0.32 (mm)
IC 140-26755/14		01/11/2019 20:23	1	GA11IC06.D	RTX-5 0.32 (mm)
ICIS 140-26755/15		01/11/2019 21:07	1	GA11IC07.D	RTX-5 0.32 (mm)
IC 140-26755/16		01/11/2019 21:51	1	GA11IC08.D	RTX-5 0.32 (mm)
ICV 140-26755/18		01/11/2019 23:17	1	GA11ICV.D	RTX-5 0.32 (mm)
ZZZZZ		01/12/2019 04:26	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date:	1/11/19	Instrument:	UG	Chrom WL #:	10492	TALS Batch & Event #	TO14/15: 1781/26755						
							DOD:	1782/26846	OHIO: 1783/26847				
Chrom/Worklist Review							1 st	Comments		2 nd			
1. Re-read each Limit Group [method editor-limit groups]							✓			na			
2. Verify LODV in Chrom [method editor -> edit -> MDL]							✓			na			
3. Are the reagents and ini/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]							✓			✓			
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]							✓			✓			
5. Did BFB meet tune criteria? [F8]							✓			✓			
6. Were all standards injected within 24 hr of BFB? [F7]							✓			✓			
7. High point checked for saturation and point removed if so? [Chrom]							✓			✓			
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]							✓			NA			
9. RT for each IS +20 sec avg. RT? [F6 IstdRec]							✓			✓			
10. Area for each IS + 40% avg. area? [F6 IstdRec]							✓			✓			
11. Each analyte + 0.06 RRT of avg. RRT? [F6 - RRT]							✓			✓			
12. Elution order checked on isomeric pairs? [Chrom]													
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane							✓			✓			
• 2-methyl butane / acrolein							✓			✓			
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane							✓			✓			
• vinyl acetate / hexane							✓			✓			
• cis- and trans- isomers							✓			✓			
• ethyl benzene / m/p-xylene / o-xylene							✓			✓			
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene							✓			✓			
• tert-butylbenzene/4-isopropyltoluene							✓			✓			
• 1,3-, 1,4-, and 1,2-dichlorobenzene							✓			✓			
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes							✓	mic		✓			
• 1,2,4- and 1,2,3-trichlorobenzenes							✓			✓			
• 2-, and 1-methylnaphthalene							✓			✓			
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?							✓			✓			
MLG Review							TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1 & 2 methylnaphthalene ≤ 50% Mechl 30.5 [F6 Σ]							✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]							✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]							✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]							✓	✓	✓		NA		→
18. If curves were used, is correlation coefficient ≥ 0.990? [F6]							na	→	→		NA		→
19. Is the intercept less than the RL for each curve? [F6]							na	→	→		NA		→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntl-C, details]							na	→	na		NA	→	na
21. Is low point RSE ≤ 50%? Mechl 63% 58% 1/14/19 [F6]							✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits? [F8 - icv]							✓	✓	✓		✓	✓	✓
Analyst/Date:							2nd Level Reviewer/Date:						
H 1/14/19							AS 1/14/19						
TALS Review							TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL							✓	✓	✓		na	na	na
24. Graphics uploaded? [paperclip]							✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events --'Fix ICAL linkage' if needed]							✓	✓	✓		✓	✓	✓
26. Runs linked to BFB? [QC Links]							✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings [F8]							✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?							na	na	na		NA		→
29. After review in TALS, approve the method in TALS.							na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>							na	na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?							na	na	na		✓	✓	✓
Analyst/date:							2nd Level Reviewer/date:						
H 1/15/19							AS 1/15/19						
Comments: Mechl UR 5 123tmbz UR -4 1/15/19 dodecane 12db3chloroprop UR 4 1/15/19 d Bromotorm							Comments:						

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Instrument ID: MH Start Date: 02/20/2019 13:11

Analysis Batch Number: 27843 End Date: 02/21/2019 03:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27843/1		02/20/2019 13:11	1	HBFB20IC.D	RTX-5 0.32 (mm)
IC 140-27843/3		02/20/2019 15:12	1	HB20IC09.D	RTX-5 0.32 (mm)
IC 140-27843/5		02/20/2019 16:59	1	HB20IC10.D	RTX-5 0.32 (mm)
IC 140-27843/8		02/20/2019 19:38	1	HB20IC01.D	RTX-5 0.32 (mm)
IC 140-27843/9		02/20/2019 20:31	1	HB20IC02.D	RTX-5 0.32 (mm)
IC 140-27843/10		02/20/2019 21:26	1	HB20IC03.D	RTX-5 0.32 (mm)
IC 140-27843/11		02/20/2019 22:20	1	HB20IC04.D	RTX-5 0.32 (mm)
IC 140-27843/12		02/20/2019 23:14	1	HB20IC05.D	RTX-5 0.32 (mm)
IC 140-27843/13		02/21/2019 00:08	1	HB20IC06.D	RTX-5 0.32 (mm)
ICIS 140-27843/14		02/21/2019 01:03	1	HB20IC07.D	RTX-5 0.32 (mm)
IC 140-27843/15		02/21/2019 01:57	1	HB20IC08.D	RTX-5 0.32 (mm)
ICV 140-27843/17		02/21/2019 03:43	1	HB20ICV.D	RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date:	4/20/19	Instrument:	MH	Chrom WL #:	10899	TALS Batch & Event #	TO14/15: 1829 27843	DOD:	1830 / 27844	OHIO:	1831 / 27845		
Chrom/Worklist Review							1 st	Comments			2 nd		
1. Re-read each Limit Group	[method editor-limit groups]					✓					na		
2. Verify LODV in Chrom	[method editor -> edit -> MDL]					✓					na		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level)	[WL Sample Reagents Tab vs. Entech]					✓					✓		
4. Files linked properly to calibration levels?	[Sample List- Lab ID vs. Info]					✓					✓		
5. Did BFB meet tune criteria?	[F8]					✓					✓		
6. Were all standards injected within 24 hr of BFB?	[F7]					✓					✓		
7. High point checked for saturation and point removed if so?	[Chrom]					✓					✓		
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given?	[Chrom]					✓					na		
9. RT for each IS +20 sec avg. RT?	[F6 IstdRec]					✓					✓		
10. Area for each IS ± 40% avg. area?	[F6 IstdRec]					✓					✓		
11. Each analyte ± 0.06 RRT of avg. RRT?	[F6 - RRT]					✓					✓		
12. Elution order checked on isomeric pairs?	[Chrom]												
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane						✓					✓		
• 2-methyl butane / acrolein						✓					✓		
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane						✓					✓		
• vinyl acetate / hexane						✓					✓		
• cis- and trans- isomers						✓					✓		
• ethyl benzene / m/p-xylene / o-xylene						✓					✓		
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene						✓					✓		
• tert-butylbenzene/4-isopropyltoluene						✓					✓		
• 1,3-, 1,4-, and 1,2-dichlorobenzene						✓					✓		
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes						✓					na		
• 1,2,4- and 1,2,3-trichlorobenzenes						✓					✓		
• 2-, and 1-methylnaphthalene						✓					✓		
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?						✓					✓		
MLG Review							TO	DOD	OH	Comments	TO	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50%	[F6 Σ]					✓	✓	✓		✓	✓	✓	
15. Were at least 5 levels of each compound analyzed?	[F6]					✓	✓	✓		✓	✓	✓	
16. Is low level std at or <RL and are the remaining points consec.?	[F6]					✓	✓	✓		✓	✓	✓	
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad)	[F6]					✓	✓	✓		✓	✓	✓	
18. If curves were used, is correlation coefficient ≥ 0.990?	[F6]					✓	✓	✓		✓	✓	✓	
19. Is the intercept less than the RL for each curve?	[F6]					✓	✓	✓		✓	✓	✓	
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous.	[Cntl-C, details]					✓	✓	na		✓	✓	na	
21. Is low point RSE < 50 %?	[F6]					✓	✓	✓		✓	✓	✓	
22. Is the second source analysis within limits?	[F8 - icv]					✓	✓	✓		✓	✓	✓	
Analyst/Date:	JH 4/20/19					2nd Level Reviewer/Date: [Signature] 02/25/19							
TALS Review							TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL						✓				na	na	na	
24. Graphics uploaded?	[paperclip]					✓	✓	✓		✓	✓	✓	
25. All points are in the most recent active calibration event?	[Calibration Events - 'Fix ICAL linkage' if needed]					✓	✓	✓		✓	✓	✓	
26. Runs linked to BFB?	[QC Links]					✓	✓	✓		✓	✓	✓	
27. Run Checklist and acknowledge findings	[F8]					✓	✓	✓		✓	✓	✓	
28. If criteria not met, was a NCM generated?						na	na	na		na	na	na	
29. After review in TALS, approve the method in TALS.						na	na	na		na	na	na	
30. After verifying TALS is correct, lock method in Chrom	<resolve any error issues>					na	na	na		na	na	na	
31. Checklist & Entech report scanned, attached & assigned properly?						na	na	na		na	na	na	
Analyst/date:	JH 4/20/19					2nd Level Reviewer/date: [Signature] 02/25/19							
Comments:						Comments:							

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Instrument ID: MG Start Date: 02/26/2019 11:03

Analysis Batch Number: 27931 End Date: 02/27/2019 03:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27931/1		02/26/2019 11:03	1	GBFBB26.D	RTX-5 0.32 (mm)
CCVIS 140-27931/2		02/26/2019 11:35	1	GCCVB26.D	RTX-5 0.32 (mm)
LCS 140-27931/1002		02/26/2019 11:35	1	GCCVB26-LCS.d	RTX-5 0.32 (mm)
MB 140-27931/4		02/26/2019 12:56	1	G500BB26.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 13:42	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 15:56	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 16:38	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 17:19	1		RTX-5 0.32 (mm)
140-14387-4 DL		02/26/2019 18:01	1	GB26P104.D	RTX-5 0.32 (mm)
140-14387-14 DL		02/26/2019 19:24	1	GB26P106.D	RTX-5 0.32 (mm)
140-14387-16 DL		02/26/2019 20:06	1	GB26P107.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 21:30	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 22:13	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 22:55	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 23:37	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 00:18	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 01:00	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 01:42	3.7		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 02:23	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 03:05	1		RTX-5 0.32 (mm)

190226.zzz

EUROFINS TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	25.5	2/26/2019	11:03:10 AM
CCV	1 - 101 mL	32.2	2/26/2019	11:35:07 AM
DNU	16 - 21 mL	25.5	2/26/2019	12:21:11 PM
BLK	16 - 500 mL	25.1	2/26/2019	12:56:44 PM
14386-17	1 - 101 mL	6.4	2/26/2019	1:42:01 PM
DNU	1 - 21 mL	11	2/26/2019	3:24:59 PM
14386-18	1 - 101 mL	8.8	2/26/2019	3:56:23 PM
14391-19	2 - 101 mL	7.4	2/26/2019	4:38:04 PM
14391-20	3 - 101 mL	7.1	2/26/2019	5:19:41 PM
14387-04	4 - 11 mL	8	2/26/2019	6:01:19 PM
14387-05	5 - 11 mL	8.2	2/26/2019	6:43:00 PM
14387-14	6 - 11 mL	9.5	2/26/2019	7:24:42 PM
14387-16	7 - 11 mL	9.6	2/26/2019	8:06:22 PM
14387-18	8 - 11 mL	6.3	2/26/2019	8:48:03 PM
14389-01	9 - 101 mL	8.2	2/26/2019	9:30:27 PM
14389-02	10 - 101 mL	8.6	2/26/2019	10:13:31 PM
14389-03	11 - 101 mL	9.6	2/26/2019	10:55:40 PM
14389-04	12 - 101 mL	9.9	2/26/2019	11:37:23 PM
14389-05	13 - 101 mL	9.9	2/27/2019	12:18:55 AM
14389-06	14 - 101 mL	10.1	2/27/2019	1:00:35 AM
14389-07	15 - 11 mL	15.4	2/27/2019	1:42:13 AM
14389-08	16 - 101 mL	9.9	2/27/2019	2:23:49 AM
14389-08	16 - 101 mL	7.9	2/27/2019	3:05:31 AM

MG WL 10931

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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Instrument/Date	MG 2/26/2019		Routine	DOD	OHIO VAP
CCAL Chrom WL #	10931	CCAL Batch #	27931		
ICAL Chrom WL #	10492	ICAL Batch # / Event #	26755 / 1781	/	/
Chrom Review			1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]			/		na
2. Did BFB meet tune criteria? [F8]			/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]			/	List Target analytes outside CCV limits: _____ _____	/
4. Elution order checked on isomeric pairs? [Chrom]					
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane			/		/
• 2-methyl butane / acrolein			/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane			/		/
• vinyl acetate / hexane			/		/
• cis- and trans- isomers			/		/
• ethyl benzene / m/p-xylene / o-xylene			/		/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene			/		/
• tert-butylbenzene/4-isopropyltoluene			/		/
• 1,3- , 1,4- , and 1,2-dichlorobenzene			/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes			NA		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene			/		/
• 2-, and 1-methylnaphthalene			/		/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?			NA		NA
6. Has the RT been updated to the method?			/		/
Analyst/date	Suphawan K 2/27/2019		2nd Level Reviewer/date W 03/01/19		
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]			/		/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]			/		/
9. Can dilution history verified? [Mgmt Report]			/		/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:			/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	/
11. All runs - peaks ID'd correctly and false positives removed?			/		/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?			/		/
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]			/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur, Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)	/
Sample Reason Sample Reason					
14. Samples outside calibration range scheduled for dilution?			NA	<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution	NA
Chrom Review			1st	If No, why is data reportable?	2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:			/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.	/
Sample Reason Sample Reason					
16. RIC inspected for proper integration for TPH?			NA		NA
17. Obvious non-TPH peaks excluded?			/		/
18. Individual TPH peak area < octane high point area?			/		/

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 2 of 2

TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	NA														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input type="checkbox"/> CCV - %D - LCS criteria met (NCM# _____) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	NA														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random; Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr> <td>>90</td> <td>5</td> </tr> <tr> <td>71 - 90</td> <td>4</td> </tr> <tr> <td>51 - 70</td> <td>3</td> </tr> <tr> <td>31 - 50</td> <td>2</td> </tr> <tr> <td>11 - 30</td> <td>1</td> </tr> <tr> <td><11</td> <td>0</td> </tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	<11	0			/
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
<11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	/		/														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		NA														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-27931/4 200 mL blank ID: _____	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	NA		NA														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	na		/														
40. Checklist & Entech report scanned, attached & assigned properly?	na		/														

Analyst: Suphawana Kh.	Date: 2/27/2019	2nd Level Reviewer: [Signature]	Date: 03/04/19
Comments:		Comments:	
CS line 16 for Chlorodifluoromethane			
Example Calculation: 140-14389-7 1,1-Dichloroethane			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
$\frac{7.005013 \times 500 \times 3.7}{11} = 1178.72$			

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Instrument ID: MH Start Date: 02/25/2019 09:19

Analysis Batch Number: 27935 End Date: 02/26/2019 07:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27935/1		02/25/2019 09:19	1	HBFB25.D	RTX-5 0.32 (mm)
CCVIS 140-27935/2		02/25/2019 09:47	1	HCCVB25.D	RTX-5 0.32 (mm)
LCS 140-27935/1002		02/25/2019 09:47	1	HCCVB25-LCS.d	RTX-5 0.32 (mm)
ZZZZZ		02/25/2019 12:00	1		RTX-5 0.32 (mm)
ZZZZZ		02/25/2019 12:57	1		RTX-5 0.32 (mm)
ZZZZZ		02/25/2019 13:50	1		RTX-5 0.32 (mm)
MB 140-27935/7		02/25/2019 14:47	1	H500BB25.D	RTX-5 0.32 (mm)
140-14387-1		02/25/2019 17:27	1	HB25P101.D	RTX-5 0.32 (mm)
140-14387-2		02/25/2019 18:20	1	HB25P102.D	RTX-5 0.32 (mm)
140-14387-3		02/25/2019 19:13	1	HB25P103.D	RTX-5 0.32 (mm)
140-14387-4		02/25/2019 20:06	1	HB25P104.D	RTX-5 0.32 (mm)
140-14387-5		02/25/2019 20:59	1	HB25P105.D	RTX-5 0.32 (mm)
140-14387-6		02/25/2019 21:53	1	HB25P106.D	RTX-5 0.32 (mm)
140-14387-7		02/25/2019 22:46	1	HB25P107.D	RTX-5 0.32 (mm)
140-14387-8		02/25/2019 23:39	1	HB25P108.D	RTX-5 0.32 (mm)
140-14387-10		02/26/2019 00:32	1	HB25P109.D	RTX-5 0.32 (mm)
140-14387-11		02/26/2019 01:24	1	HB25P110.D	RTX-5 0.32 (mm)
140-14387-12		02/26/2019 02:17	1	HB25P111.D	RTX-5 0.32 (mm)
140-14387-13		02/26/2019 03:10	1	HB25P112.D	RTX-5 0.32 (mm)
140-14387-14		02/26/2019 04:03	1	HB25P113.D	RTX-5 0.32 (mm)
140-14387-15		02/26/2019 04:56	1	HB25P114.D	RTX-5 0.32 (mm)
140-14387-16		02/26/2019 05:49	1	HB25P115.D	RTX-5 0.32 (mm)
140-14387-18		02/26/2019 06:43	1	HB25P116.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 07:36	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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Instrument/Date	MH 2/25/2019		Routine	DOD	OHIO VAP
CCAL Chrom WL #	10935	CCAL Batch #	27935		
ICAL Chrom WL #	10894	ICAL Batch # / Event #	27843, 1829		
Chrom Review			1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]			/		na
2. Did BFB meet tune criteria? [F8]			/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]			/	List Target analytes outside CCV limits: Naphthalene, 1,2,4-Trichlorobenzene	/
4. Elution order checked on isomeric pairs? [Chrom]					
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane			/		/
• 2-methyl butane / acrolein			/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane			/		/
• vinyl acetate / hexane			/		/
• cis- and trans- isomers			/		/
• ethyl benzene / m/p-xylene / o-xylene			/		/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene			/		/
• tert-butylbenzene/4-isopropyltoluene			/		/
• 1,3-, 1,4-, and 1,2-dichlorobenzene			/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes			NA		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene			/		/
• 2-, and 1-methylnaphthalene			/		/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?			NA		NA
6. Has the RT been updated to the method?			/		NA
Analyst/date Suprowana Kh. 2/27/2019			2nd Level Reviewer/date W 030119		
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]			/	volumes checked on-screen	/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]			/	NOTE 2/26/19 as 2/27/19	/
9. Can dilution history verified? [Mgmt Report]			/		/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:			/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	/
11. All runs - peaks ID'd correctly and false positives removed?			/		/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?			/		/
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]			/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate - RX concur, Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)	/
Sample	Reason	Sample	Reason		
_____	_____	_____	_____		
14. Samples outside calibration range scheduled for dilution?			/	<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution	/
Chrom Review			1st	If No, why is data reportable?	2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:			/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.	/
Sample	Reason	Sample	Reason		
_____	_____	_____	_____		
16. RIC inspected for proper integration for TPH?			NA		NA
17. Obvious non-TPH peaks excluded?			/		/
18. Individual TPH peak area < octane high point area?			/		/

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 2 of 2

TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	NA														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] TALS-Sample Results Tab	/	<input checked="" type="checkbox"/> CCV - %D - LCS criteria met (NCM# <u>16554</u>) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	NA														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input checked="" type="checkbox"/> Marginal Exceedances - Within ME Limits and Random Report (NCM# <u>16555</u>) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr> <td>>90</td> <td>5</td> </tr> <tr> <td>71 - 90</td> <td>4</td> </tr> <tr> <td>51 - 70</td> <td>3</td> </tr> <tr> <td>31 - 50</td> <td>2</td> </tr> <tr> <td>11 - 30</td> <td>1</td> </tr> <tr> <td>< 11</td> <td>0</td> </tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	< 11	0			
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
< 11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	NA		NA														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	/		/														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: <u>140-27935/7</u> 200 mL blank ID: <u>-</u>	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	/		/														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	na		/														
40. Checklist & Entech report scanned, attached & assigned properly?	na		/														

Analyst: <u>Suphanya An</u>	Date: <u>2/27/2019</u>	2nd Level Reviewer: <u>[Signature]</u>	Date: <u>2/27/2019</u>
Comments: <u>CE line 15 for 1,3,5-trimethylbenzene</u>		Comments:	
<p>Example Calculation: $\frac{140-14387-1}{100} \times \text{Toluene}$</p> <p>On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF</p> <p>$0.358240 \times 500 \times 1.0 = 1.79$</p>			

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Instrument ID: MH Start Date: 02/27/2019 11:22

Analysis Batch Number: 27980 End Date: 02/28/2019 07:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27980/1		02/27/2019 11:22	1	HBFB27.D	RTX-5 0.32 (mm)
CCVIS 140-27980/2		02/27/2019 11:50	1	HCCVB27.D	RTX-5 0.32 (mm)
LCS 140-27980/1002		02/27/2019 11:50	1	HCCVB27-LCS.d	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 13:42	1		RTX-5 0.32 (mm)
MB 140-27980/5		02/27/2019 13:42	1	HB27LOT14399MB.D	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 14:36	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 16:42	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 18:27	1.33		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 19:20	4.93		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 20:14	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 03:30	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 04:23	1		RTX-5 0.32 (mm)
140-14387-18 DL		02/28/2019 06:06	1	HB27P115.D	RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 07:01	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 07:56	1.33		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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Instrument/Date	MH 2/27/2019	<u>Routine</u>	<u>DOD</u>	<u>OHIO VAP</u>
CCAL Chrom WL #	10949	CCAL Batch #	27980	28040
ICAL Chrom WL #	10894	ICAL Batch # / Event #	27843 / 1829	27844 / 1830
Chrom Review		1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]		/		na
2. Did BFB meet tune criteria? [F8]		/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]		/	List Target analytes outside CCV limits: _____ _____	/
4. Elution order checked on isomeric pairs? [Chrom]				
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		/		/
• 2-methyl butane / acrolein		/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		/		/
• vinyl acetate / hexane		/		/
• cis- and trans- isomers		/		/
• ethyl benzene / m/p-xylene / o-xylene		/		/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene		/		/
• tert-butylbenzene/4-isopropyltoluene		/		/
• 1,3-, 1,4-, and 1,2-dichlorobenzene		/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		NA		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene		/		/
• 2-, and 1-methylnaphthalene		/		/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?		/		/
6. Has the RT been updated to the method?		/		/
Analyst/date	Sophomna Kh. 2/28/2019	2nd Level Reviewer/date W 02/28/19		
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]		/	✓ on seen chart	/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]		/		/
9. Can dilution history verified? [Mgmt Report]		/		/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:		/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	/
11. All runs - peaks ID'd correctly and false positives removed?		/		/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?		/		/
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]		/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate - RX concur. Report both (NCM# _____) <input checked="" type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# 16593)	/
14. Samples outside calibration range scheduled for dilution?	Sample Reason 149411-3 150000 like 25 reporting dil like 10 due to interferences.	/	<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution	/
Chrom Review		1st	If No, why is data reportable?	2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason: Sample Reason Sample Reason		/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.	/
16. RIC inspected for proper integration for TPH?		/		/
17. Obvious non-TPH peaks excluded?		/		/
18. Individual TPH peak area < octane high point area?		/		/

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 2 of 2

TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	NO														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input type="checkbox"/> CCV - %D - LCS criteria met (NCM# _____) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	/	<input checked="" type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	/														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random; Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr><td>>90</td><td>5</td></tr> <tr><td>71 - 90</td><td>4</td></tr> <tr><td>51 - 70</td><td>3</td></tr> <tr><td>31 - 50</td><td>2</td></tr> <tr><td>11 - 30</td><td>1</td></tr> <tr><td>< 11</td><td>0</td></tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	< 11	0			
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
< 11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	/		/														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	/		/														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/	15 dup - will run re dup's. next rep. all were w/in limits	/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-27980/5 200 mL blank ID: 140-27980/6, 140-28040/5	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	/		/														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/		/														
39. QC checker run and items addressed?	-na-	Runs set to 2 nd level review?	/														
40. Checklist & Entech report scanned, attached & assigned properly?	-na-		/														

Analyst: Suphawan Klu	Date: 2/28/2019	2nd Level Reviewer: [Signature]	Date: 2/28/19
Comments: c line 12 for Chlorodifluoromethane and Chloromethane		Comments:	
1st level - like 11, 10, 25, 28 2/28/19			
Example Calculation: 140-14390-5 Trichloroethene On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF $\frac{6,576.321 \times 500}{10} \times 1.0 = 325.82$			

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Instrument ID: MH Start Date: 02/28/2019 12:34

Analysis Batch Number: 27981 End Date: 03/01/2019 09:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27981/1		02/28/2019 12:34	1	HBFB28.D	RTX-5 0.32 (mm)
CCVIS 140-27981/2		02/28/2019 13:02	1	HCCVB28.D	RTX-5 0.32 (mm)
LCS 140-27981/1002		02/28/2019 13:02	1	HCCVB28-LCS.d	RTX-5 0.32 (mm)
MB 140-27981/4		02/28/2019 14:24	1	H500BB28.D	RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 15:18	1		RTX-5 0.32 (mm)
140-14387-5 DL		02/28/2019 17:11	1	HB28P101.D	RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 00:15	1		RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 01:10	1		RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 02:05	1		RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 03:00	1		RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 03:57	1		RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 04:51	1		RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 08:44	1		RTX-5 0.32 (mm)
ZZZZZ		03/01/2019 09:37	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 1 of 2

Instrument/Date	MH 2/28/2019	Routine		DOD		OHIO VAP	
CCAL Chrom WL#	10950	CCAL Batch #	27981			28064	
ICAL Chrom WL#	10894	ICAL Batch # / Event #	27843 / 1829	/	/	27845 / 1831	
Chrom Review		1st	If No, why is data reportable?				2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]		/					na
2. Did BFB meet tune criteria? [F8]		/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]				/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]		/	List Target analytes outside CCV limits: _____ _____				/
4. Elution order checked on isomeric pairs? [Chrom]							
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		/					/
• 2-methyl butane / acrolein		/					/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		/					/
• vinyl acetate / hexane		/					/
• cis- and trans- isomers		/					/
• ethyl benzene / m/p-xylene / o-xylene		/					/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene		/					/
• tert-butylbenzene/4-isopropyltoluene		/					/
• 1,3-, 1,4-, and 1,2-dichlorobenzene		/					/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		NA					NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene		/					/
• 2-, and 1-methylnaphthalene		/					/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?		NA					NA
6. Has the RT been updated to the method?		/					/
Analyst/date		Gupharana Kh 3/1/2019		2nd Level Reviewer/date		[Signature] 03/01/19	
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]		/	✓ On screen				/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]		/					/
9. Can dilution history verified? [Mgmt Report]		/					/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:		/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)				/
11. All runs - peaks ID'd correctly and false positives removed?		/					/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?		/					/
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]		/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur. Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)				/
Sample	Reason	Sample	Reason				
_____	_____	_____	_____				
_____	_____	_____	_____				
14. Samples outside calibration range scheduled for dilution?		/	<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution				/
Chrom Review		1st	If No, why is data reportable?				2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:		/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.				/
Sample	Reason	Sample	Reason				
_____	_____	_____	_____				
_____	_____	_____	_____				
16. RIC inspected for proper integration for TPH?		NA					NA
17. Obvious non-TPH peaks excluded?		/					/
18. Individual TPH peak area < octane high point area?		/					/

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 2 of 2

TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	MS														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input type="checkbox"/> CCV - %D - LCS criteria met (NCM# _____) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	MS														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random; Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr> <td>>90</td> <td>5</td> </tr> <tr> <td>71 - 90</td> <td>4</td> </tr> <tr> <td>51 - 70</td> <td>3</td> </tr> <tr> <td>31 - 50</td> <td>2</td> </tr> <tr> <td>11 - 30</td> <td>1</td> </tr> <tr> <td>< 11</td> <td>0</td> </tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	< 11	0			/
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
< 11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	/		/														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	/		/														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-27981/4, 140-28064/4 200 mL blank ID: 140-27981/5	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	NA		NO														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	-NA-		/														
40. Checklist & Entech report scanned, attached & assigned properly?	-NA-		/														

Analyst: Suphawana Kh	Date: 3/1/2019	2nd Level Reviewer:	Date: 03/04/19
Comments:		Comments:	
1st level like 22, 23 3/1/19H			
Will RR 140-4423-A-2 on diff test			
Example Calculation: 140-14416-1 Acetone			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
$5.065550 \times \frac{500}{15} \times 3.0 = 506.56$			

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Batch Number: 27931 Batch Start Date: 02/26/19 11:03 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00082	40MXISSURP 00003
BFB 140-27931/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27931/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27931/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14387-A-4	SV-182-MB-3	TO 15 LL	T	11 mL	500 mL	1	1		40 mL
140-14387-A-14	SV-173-A-26	TO 15 LL	T	11 mL	500 mL	1	1		40 mL
140-14387-A-16	SV-171-A-26	TO 15 LL	T	11 mL	500 mL	1	1		40 mL
LCS 140-27931/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27931/1		TO 15 LL		40 mL					
CCVIS 140-27931/2		TO 15 LL							
MB 140-27931/4		TO 15 LL							
140-14387-A-4	SV-182-MB-3	TO 15 LL	T						
140-14387-A-14	SV-173-A-26	TO 15 LL	T						
140-14387-A-16	SV-171-A-26	TO 15 LL	T						
LCS 140-27931/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Batch Number: 27935 Batch Start Date: 02/25/19 09:19 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101S 00088	40MXISSURP 00003
BFB 140-27935/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27935/2		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL
MB 140-27935/7		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14387-A-1	SV-180-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-2	SV-179-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-3	SV-181-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-4	SV-182-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-5	SV-183-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-6	SV-184-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-7	SV-185-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-8	SV-186-MB-3	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-10	SV-116-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-11	SV-DUP03-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-12	SV-138-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-13	SV-093-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-14	SV-173-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-15	SV-174-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-16	SV-171-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14387-A-18	SV-081-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27935/1002		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27935/1		TO 15 LL		40 mL					
CCVIS 140-27935/2		TO 15 LL							
MB 140-27935/7		TO 15 LL							
140-14387-A-1	SV-180-MB-3	TO 15 LL	T						
140-14387-A-2	SV-179-MB-3	TO 15 LL	T						
140-14387-A-3	SV-181-MB-3	TO 15 LL	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Batch Number: 27935 Batch Start Date: 02/25/19 09:19 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
140-14387-A-4	SV-182-MB-3	TO 15 LL	T						
140-14387-A-5	SV-183-MB-3	TO 15 LL	T						
140-14387-A-6	SV-184-MB-3	TO 15 LL	T						
140-14387-A-7	SV-185-MB-3	TO 15 LL	T						
140-14387-A-8	SV-186-MB-3	TO 15 LL	T						
140-14387-A-10	SV-116-A-26	TO 15 LL	T						
140-14387-A-11	SV-DUP03-A-26	TO 15 LL	T						
140-14387-A-12	SV-138-A-26	TO 15 LL	T						
140-14387-A-13	SV-093-A-26	TO 15 LL	T						
140-14387-A-14	SV-173-A-26	TO 15 LL	T						
140-14387-A-15	SV-174-A-26	TO 15 LL	T						
140-14387-A-16	SV-171-A-26	TO 15 LL	T						
140-14387-A-18	SV-081-A-26	TO 15 LL	T						
LCS		TO 15 LL							
140-27935/1002									

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Batch Number: 27980 Batch Start Date: 02/27/19 11:22 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101S 00087	40MXISSURP 00003
BFB 140-27980/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27980/2		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL
MB 140-27980/5		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14387-A-18	SV-081-A-26	TO 15 LL	T	10 mL	500 mL	1	1		40 mL
LCS 140-27980/1002		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27980/1		TO 15 LL		40 mL					
CCVIS 140-27980/2		TO 15 LL							
MB 140-27980/5		TO 15 LL							
140-14387-A-18	SV-081-A-26	TO 15 LL	T						
LCS 140-27980/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1

SDG No.: _____

Batch Number: 27981 Batch Start Date: 02/28/19 12:34 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101S 00087	40MXISSURP 00003
BFB 140-27981/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27981/2		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL
MB 140-27981/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14387-A-5	SV-183-MB-3	TO 15 LL	T	20 mL	500 mL	1	1		40 mL
LCS 140-27981/1002		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27981/1		TO 15 LL		40 mL					
CCVIS 140-27981/2		TO 15 LL							
MB 140-27981/4		TO 15 LL							
140-14387-A-5	SV-183-MB-3	TO 15 LL	T						
LCS 140-27981/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200(mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D
 Lims ID: 140-14044-A-1
 Client ID: 11547
 Sample Type: Client
 Inject. Date: 24-Jan-2019 15:25:30 ALS Bottle#: 14 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010612-010
 Misc. Info.: 11547
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Jan-2019 09:48:51 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 25-Jan-2019 09:53:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.237	9.237	0.000	97	406723	4.00	
* 2 1,4-Difluorobenzene	114	11.410	11.416	-0.006	97	2310796	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.091	0.000	93	2083397	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.714	0.000	81	1731157	4.06	
31 Methylene Chloride	84	6.606	6.600	0.006	98	25162	0.1507	
47 1,1,1-Trichloroethane	97	10.294	10.294	0.000	95	9292	0.0252	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D

Injection Date: 24-Jan-2019 15:25:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14044-A-1

Lab Sample ID: 140-14044-1

Worklist Smp#: 10

Client ID: 11547

Purge Vol: 500.000 mL

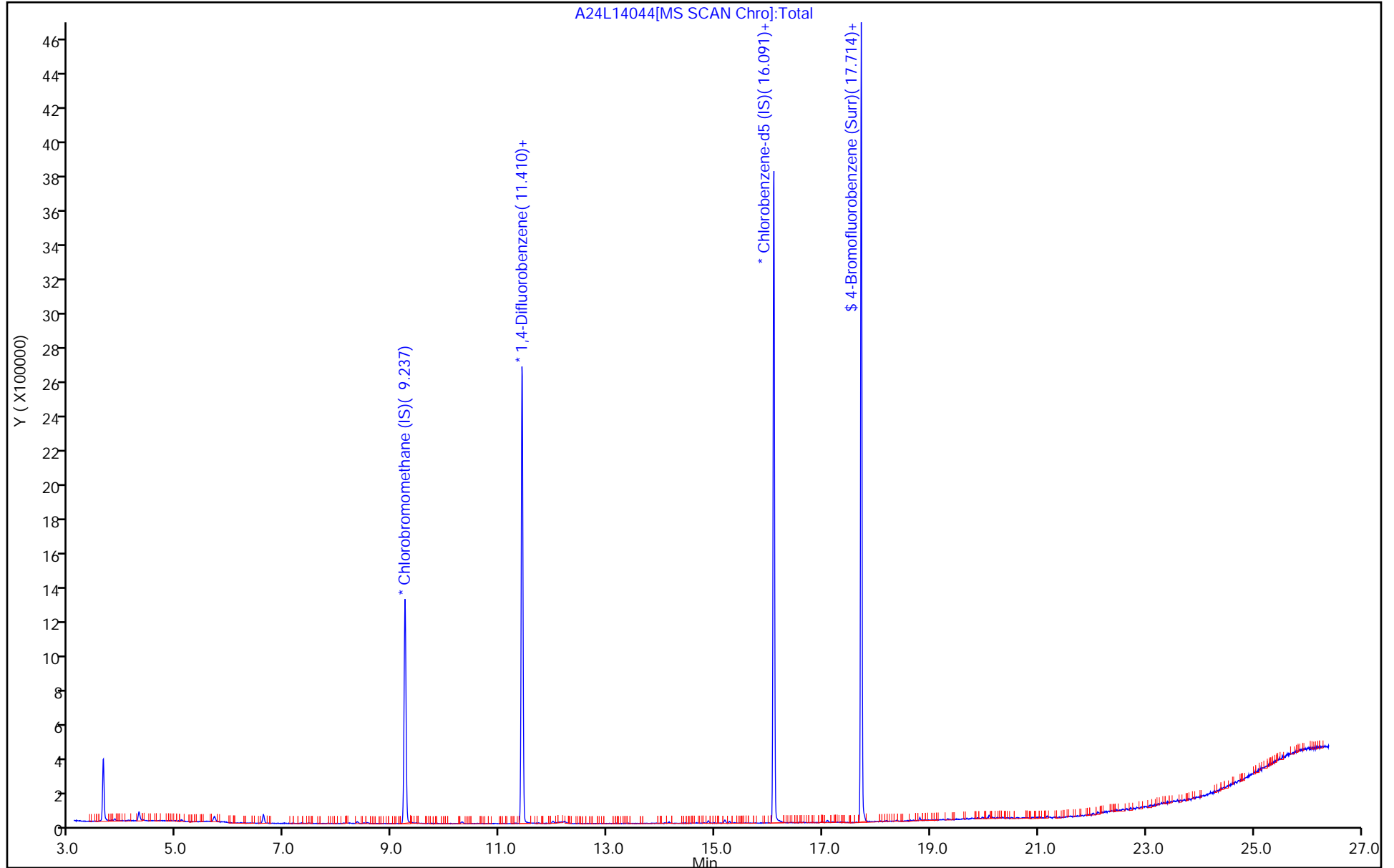
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200 (mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200 (mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND	*	1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200 (mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D
 Lims ID: 140-14051-A-16
 Client ID: 10518
 Sample Type: Client
 Inject. Date: 26-Jan-2019 01:10:30 ALS Bottle#: 10 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010617-022
 Misc. Info.: 10518
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Jan-2019 09:09:11 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0302

First Level Reviewer: khachitpongpanits Date: 28-Jan-2019 09:09:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.406	-0.005	73	173091	4.00	
* 2 1,4-Difluorobenzene	114	9.471	9.477	-0.006	95	1033901	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.519	14.524	-0.005	91	905153	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.244	16.244	0.000	87	793289	4.12	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D

Injection Date: 26-Jan-2019 01:10:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-14051-A-16

Lab Sample ID: 140-14051-16

Worklist Smp#: 22

Client ID: 10518

Purge Vol: 500.000 mL

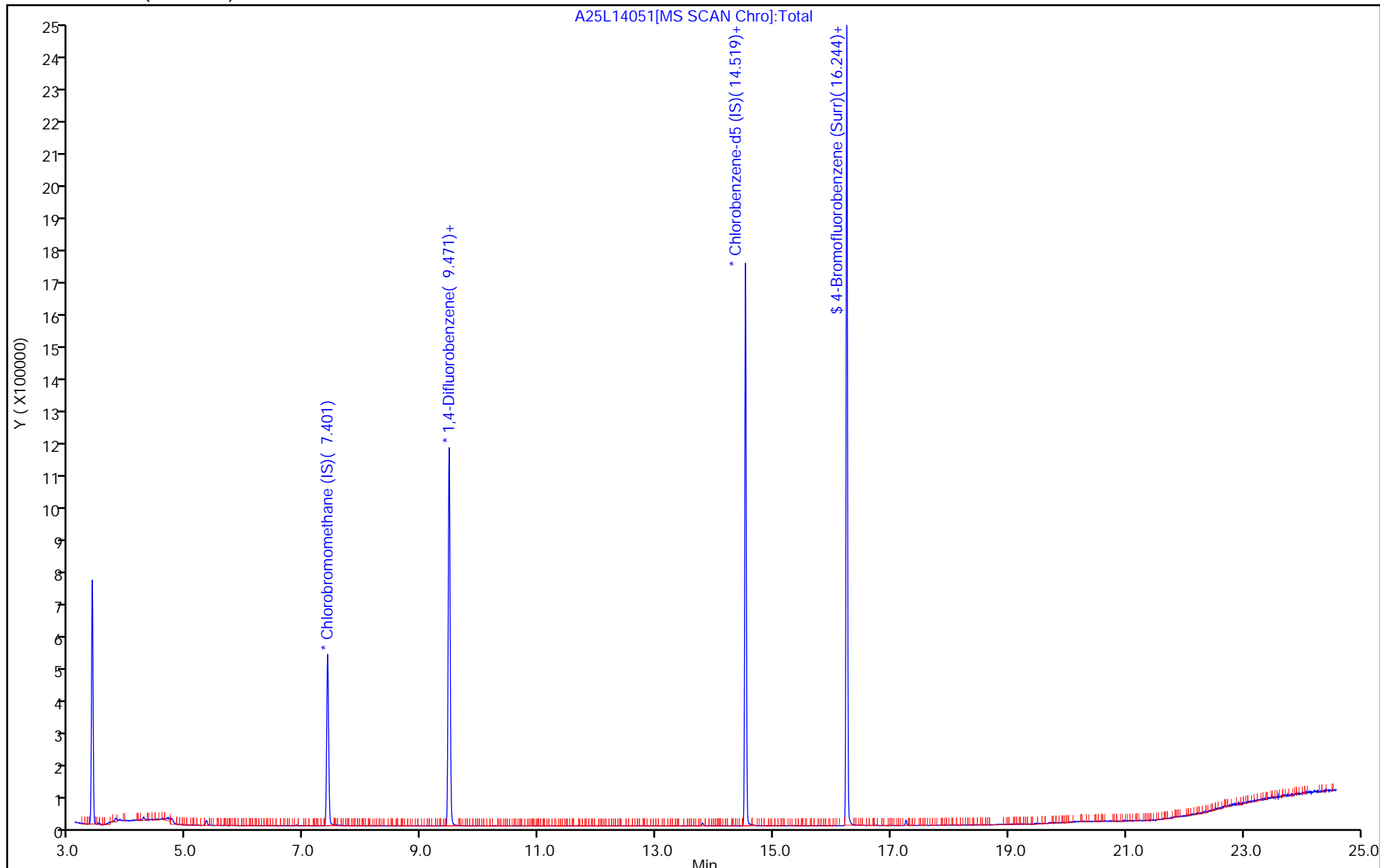
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

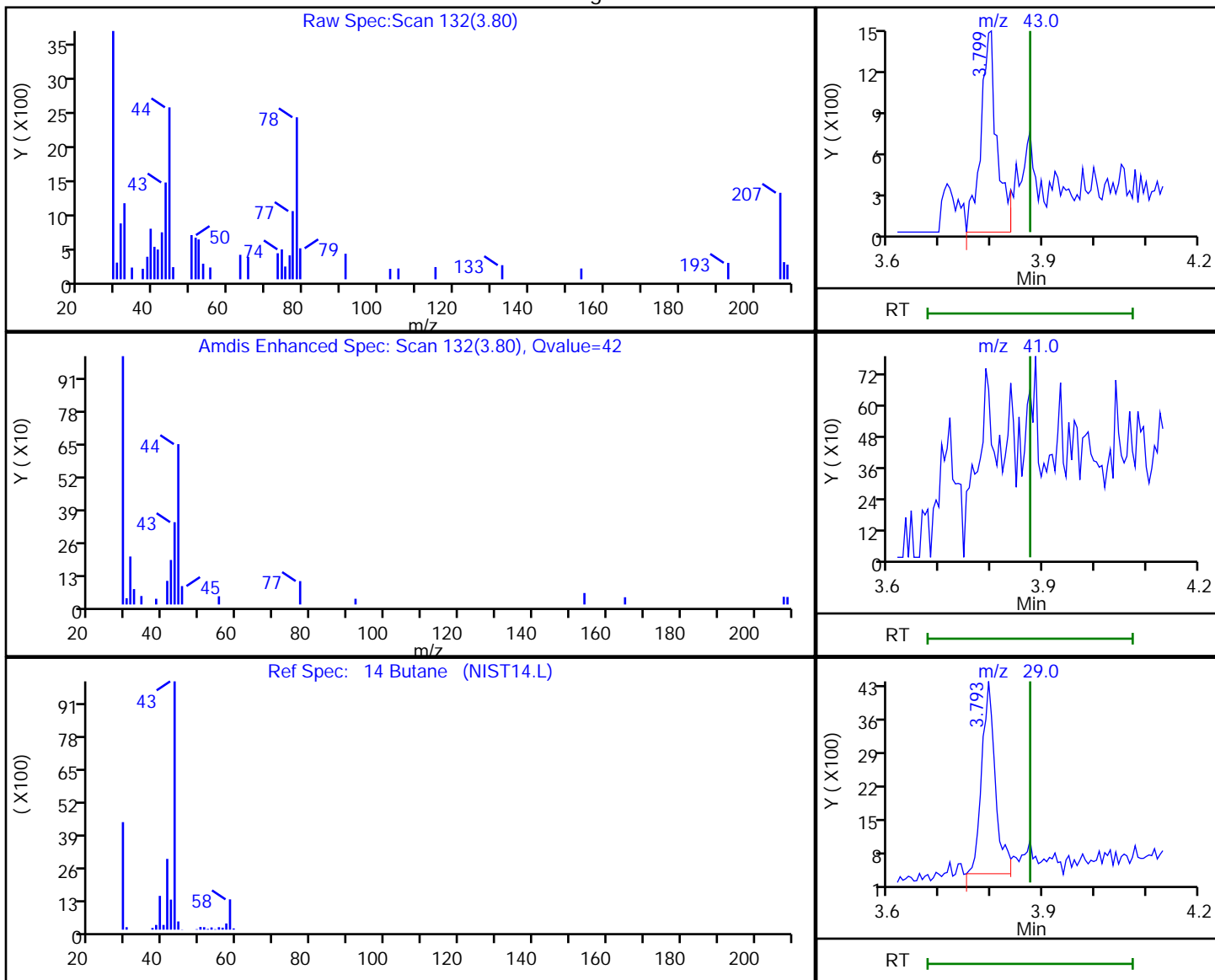


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D
 Injection Date: 26-Jan-2019 01:10:30 Instrument ID: MR
 Lims ID: 140-14051-A-16 Lab Sample ID: 140-14051-16
 Client ID: 10518
 Operator ID: HMT ALS Bottle#: 10 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.80	43.00	3124	0.063769
3.87	41.00	0	
3.79	29.00	7327	

Reviewer: khachitpongpanits, 28-Jan-2019 09:09:01

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D
 Lims ID: 140-14114-A-3
 Client ID: 11859
 Sample Type: Client
 Inject. Date: 31-Jan-2019 14:24:30 ALS Bottle#: 16 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010665-007
 Misc. Info.: 11859
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 01-Feb-2019 14:53:46 Calib Date: 07-Jan-2019 21:45:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20181224-10406.b\HA07IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0316

First Level Reviewer: khachitpongpanits Date: 01-Feb-2019 15:00:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.834	-0.005	96	226233	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.016	-0.006	95	1257347	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.739	-0.005	89	1030682	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.404	17.409	-0.005	91	693284	4.13	
45 1,1,1-Trichloroethane	97	9.863	9.868	-0.005	95	7970	0.0413	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D

Injection Date: 31-Jan-2019 14:24:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14114-A-3

Lab Sample ID: 140-14114-3

Worklist Smp#: 7

Client ID: 11859

Purge Vol: 500.000 mL

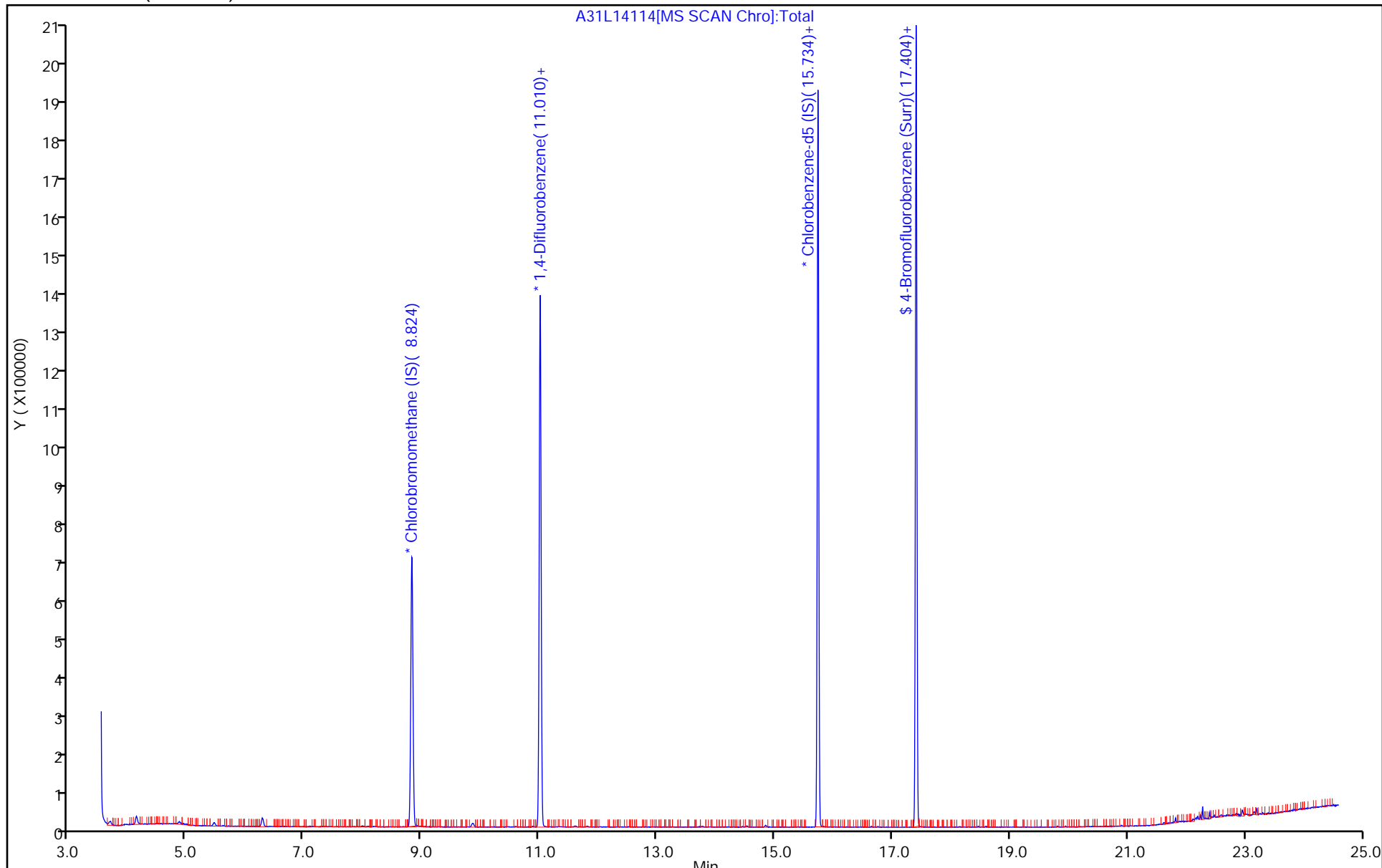
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

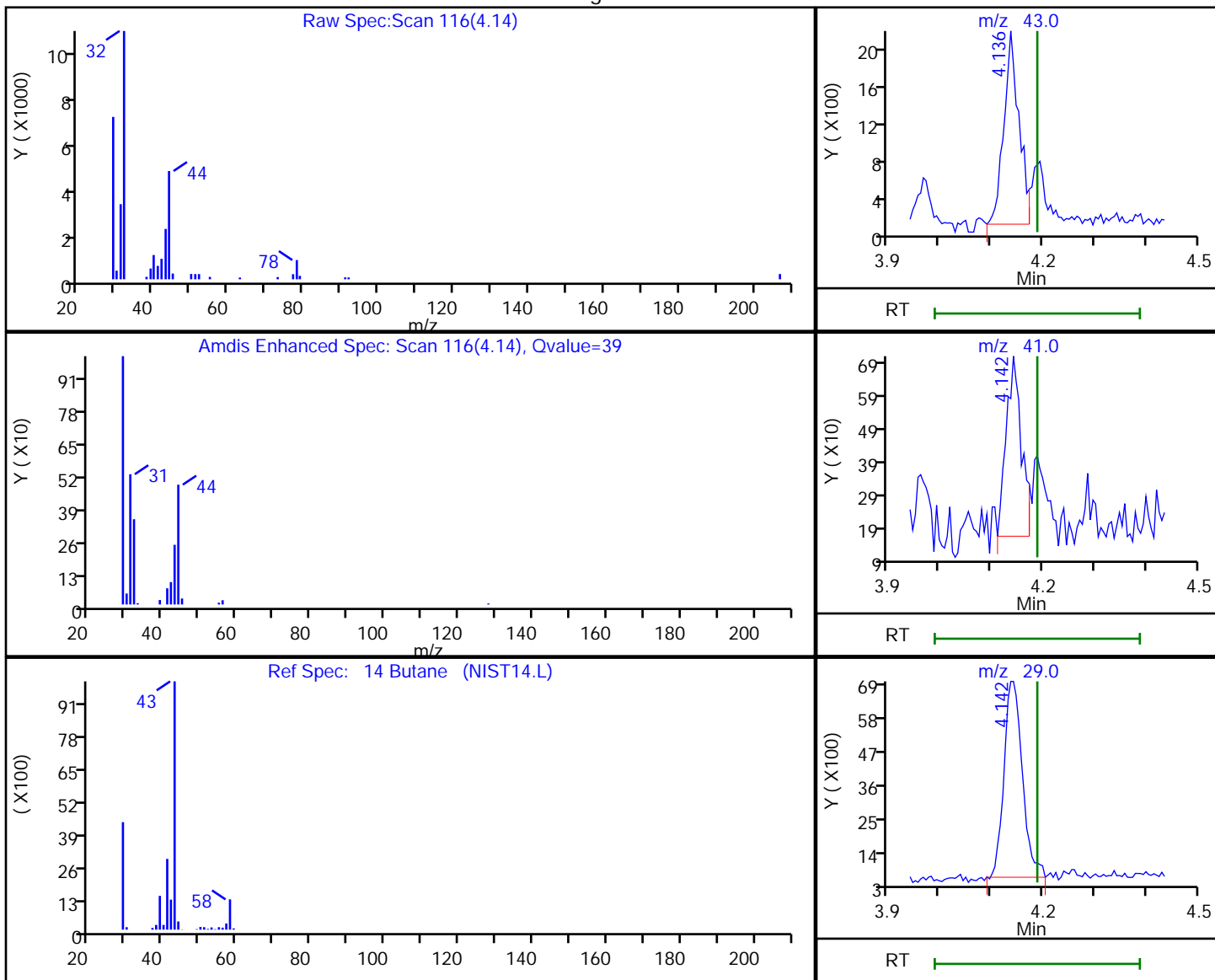


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D
 Injection Date: 31-Jan-2019 14:24:30 Instrument ID: MH
 Lims ID: 140-14114-A-3 Lab Sample ID: 140-14114-3
 Client ID: 11859
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.14	43.00	4267	0.037196
4.14	41.00	1130	
4.14	29.00	16118	

Reviewer: tajh, 31-Jan-2019 14:58:31

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND	*	1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\B05L14136.D
 Lims ID: 140-14136-A-16
 Client ID: 11710
 Sample Type: Client
 Inject. Date: 05-Feb-2019 11:19:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010730-004
 Misc. Info.: 11710
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Feb-2019 10:13:58 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 06-Feb-2019 10:14:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.243	-0.011	95	329997	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.416	-0.011	97	1787592	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.086	16.086	0.000	95	1561576	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.709	17.714	-0.005	79	1327286	4.15	
31 Methylene Chloride	84	6.595	6.606	-0.011	97	17493	0.1291	
110 Dodecane	57	21.009	21.009	0.000	92	19919	0.0798	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\B05L14136.D

Injection Date: 05-Feb-2019 11:19:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14136-A-16

Lab Sample ID: 140-14136-16

Worklist Smp#: 4

Client ID: 11710

Purge Vol: 500.000 mL

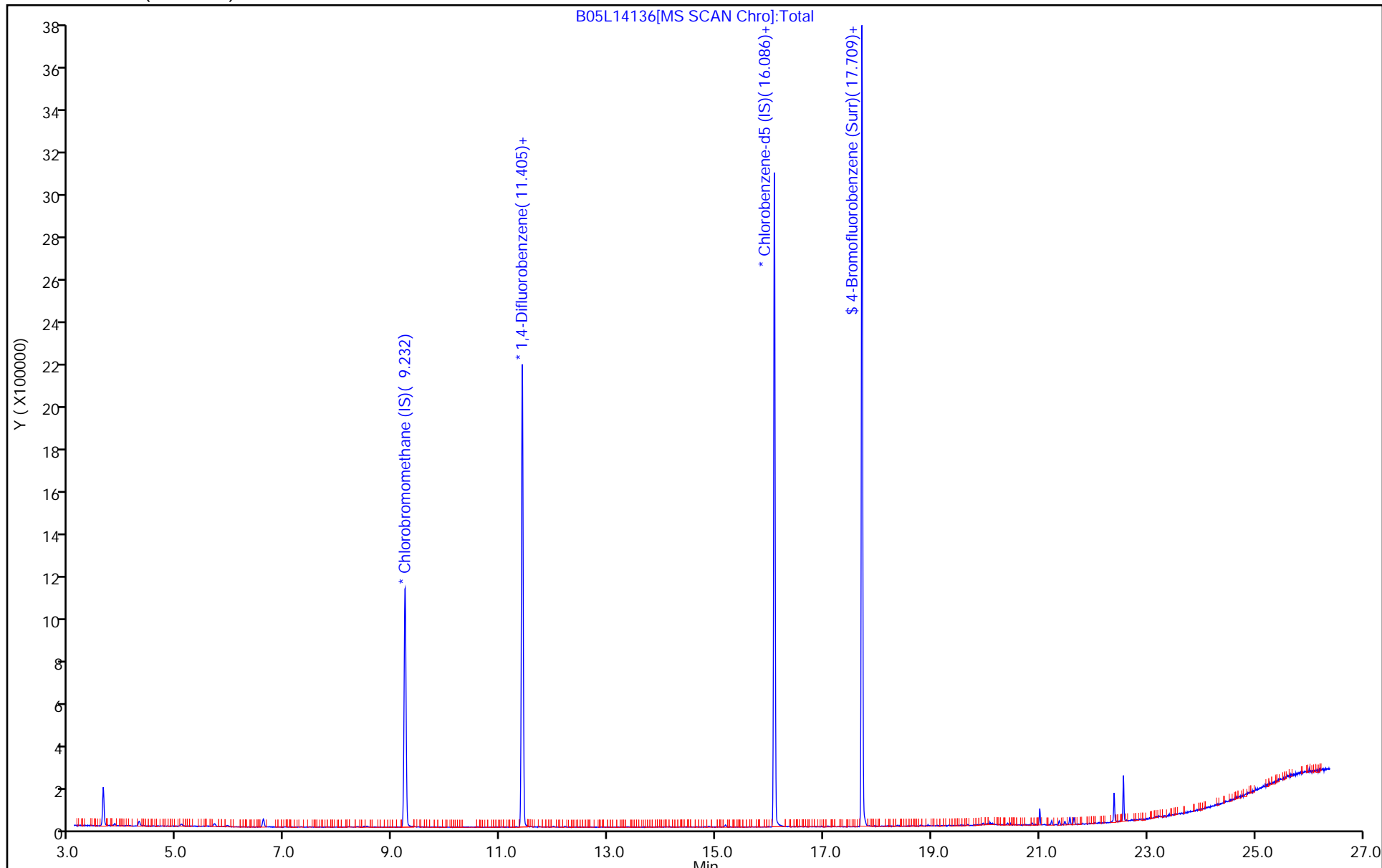
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

4 of 16 COCs

Project Manager: Tony Apanavage
Phone: 301-528-3000
Site Contact: Tony Apanavage
TAL Contact: Terry Walker Wushund

Client Contact Information
Company: Tetra Tech
Address: 20251 Century Blvd #200
City/State/Zip: Germantown, MD 20871
Phone: 301-528-5522
FAX:

Sampled By: Sophia Lawson, Josh Mullis & Walt Pr-jor

Project Name: MRLC Indoor Air
Site/location: MRC
PO # 112108388

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15		TO-14A		EPA 3C		EPA 25C		ASTM D-1946		Other (Please specify in notes section)		Other (Please specify in notes section)	
								Indoor Air	Ambient Air	Indoor Air	Ambient Air	Indoor Air	Ambient Air	Indoor Air	Ambient Air	Indoor Air	Ambient Air	Indoor Air	Ambient Air	Indoor Air	Ambient Air
SV-180-MB-3	2/21/19	0944		-30	0	10653	11855	✓													
SV-179-MB-3	2/21/19	0950		-30	0	10454	11823	✓													
SV-181-MB-3	2/21/19	0953		-29	0	11512	11807	✓													
SV-182-MB-3	2/21/19	0955		-29	0	11898	11858	✓													
SV-183-MB-3	2/21/19	0958		-30	-2.5	11273	11558	✓													
SV-184-MB-3	2/21/19	1001		-30	-5	10621	11753	✓													

Sampled by:
Sophia Lawson, Walt Pr-jor,
Josh Mullis

Baltimore #201

17 CANS / 17 FLOWS
CUSTOMY SEAL JUMPT
RECEIVED - AMBIENT - RT 2/21/19 / CT 2/21/19
S/S 2-23-19



140-14387 Chain of Custody

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: Sophia	Date/Time: 2/22/19	Received by:
Relinquished by: Sophia	Date/Time: 2/27/19 1700	Received by: Sophia

Lab Use Only: _____
Shipped to: _____
Received by: _____
Date: _____

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Project Manager: **Tony Apanavage** Sampled By: **Sophia Lawson, Josh Mullis & Walt Puyou** 5 of 16 COCs

Client Contact Information
 Company: **Tetra Tech**
 Address: **20851 Century Blvd #200**
 City/State/Zip: **Georgetown, MD 20871**
 Phone: **301-528-5522**
 FAX:
 Project Name: **MRLC Indoor Air**
 Site/location: **MRLC**
 PO # **1125083354**

Analysis Turnaround Time
 Standard (Specify) **X**
 Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15		TO-14A		EPA 3C		EPA 25C		ASTM D-1946		Other (Please specify in notes section)	
								Indoor Air	Ambient Air	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	Other (Please specify in notes section)				
SV-185 - MB-3	2/21/19	1008	1114	-36	-1	11423	11778	✓		✓									
SV-186 - MB-3	2/21/19	1009	1115	-26	0	10432	11859	✓		✓									
SV-187 - MB-3	2/21/19	NA	NA	NA	NA	11925	11820	✓		✓									
SV-116 - A-26	2/21/19	1030	1215	-25	2	11582	09634	✓		✓									
SV-DUPO3 - A-26	2/21/19	0000	0000	-28	1	10953	11615	✓		✓									
SV-138 - A-26	2/21/19	1032	0	-29	0	11845	11607	✓		✓									

Sampled by: **Sophia Lawson, Walt Puyou, Josh Mullis**

Baltimore #201

Temperature (Fahrenheit)
 Ambient
 Interior
 Start
 Stop

Pressure (Inches of Hg)
 Ambient
 Interior
 Start
 Stop

Special Instructions/QC Requirements & Comments:
Sample SV-187-MB-3 was not sampled due to issue opening vapor canister.

Canisters Shipped by: **Tetra Tech** Date/Time: **2/22/19** Canisters Received by:
 Samples Relinquished by: **[Signature]** Date/Time: **2/22/19** Received by:
 Relinquished by: **[Signature]** Date/Time: **2/21/19 1700** Received by: **[Signature]**

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.



Client Contact Information
 Company: Tetra Tech
 Address: 20251 Century Blvd #200
 City/State/Zip: Germantown, MD 20871
 Phone: 301-528-552
 FAX:
 Project Name: MRC Indoor Air
 Site/location: MRC
 PO # 112 E 08388

Project Manager: Tony Apanavage
 Phone: 301-528-3000
 Site Contact: Tony Apanavage
 TAL Contact: Terry Walker Washburne

Sampled By: Sophia Lawson, Josh Mullis & Walt Pufor

6 of 16 COCs

Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 26C	ASTM D-1946	Other (Please specify in notes section)			
												Indoor Air	Ambient Air	Soil Gas	Landfill Gas
2/21/19	10:34	12:21	-30	0	09703	11608	✓								
2/21/19	10:38	12:23	-29	1	09654	10735	✓								
2/21/19	10:40	12:20	-30	0	10635	09635	✓								
2/21/19	10:49	12:22	-29	2	10302	11750	✓								
2/21/19	10:54	12:24	-26	0	11425	11120	✓								
2/21/19	11:27	12:34	-24	0	11310	10518	✓								

Baltimore #201

Temperature (Fahrenheit)	
Interior	
Ambient	
Pressure (inches of Hg)	
Interior	
Ambient	
Start	
Stop	

Special Instructions/QC Requirements & Comments:

Sampled by: Sophia Lawson
 Walt Pufor, Josh Mullis

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: [Signature]	Date/Time: 2/22/19	Received by: [Signature]
Relinquished by: [Signature]	Date/Time: 2/22/19 1700	Received by: Sophia Lawson, Josh Mullis, Walt Pufor 2/23/19 10:10

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	<p>8, SN - 170-A-24</p> <p>Labeling Verified by: _____ Date: _____</p> <p>pH test strip lot number: _____</p> <p>Box 16A: pH Preservation</p> <p>Box 18A: Residual Chlorine</p> <p>Preservative: _____</p> <p>Lot Number: _____</p> <p>Exp Date: _____</p> <p>Analyst: _____</p> <p>Date: _____</p> <p>Time: _____</p>
2. Were ambient air containers received intact?	/			<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : _____ Correction factor: _____	/			<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input checked="" type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?	/			<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?	/			<input type="checkbox"/> Headspace (VOA only)	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____	/			<input type="checkbox"/> Residual Chlorine	
19. For 1613B water samples is pH<9?	/			<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?	/			<input type="checkbox"/> Project missing info	

Project #: _____ PM Instructions: _____

Sample Receiving Associate: *[Signature]* Date: 8-23-19

QA026R31.doc, 112618

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
 Date: 2/25/2019

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
afb	140-14387-A-1	11855	14136	b	1	0	1527	
afb	140-14387-A-2	11823	14114	b	1	0	1528	
afb	140-14387-A-3	11807	14045	b	1	0	1529	
afb	140-14387-A-4	11858	14051	b	1	-1.4	1530	
afb	140-14387-A-5	11558	14136	b	1	-1.2	1531	
afb	140-14387-A-6	11753	14045	b	1	-2.8	1532	
afb	140-14387-A-7	11778	14051	b	1	-1.9	1533	
afb	140-14387-A-8	11859	14114	b	1	-1.2	1534	
afb	140-14387-A-9	11820	14136	b	1	+0.6	1535	DNA
afb	140-14387-A-10	09634	14051	b	1	0	1536	
afb	140-14387-A-11	11615	14136	b	1	+0.7	1537	
afb	140-14387-A-12	11607	14114	b	1	+0.9	1538	
afb	140-14387-A-13	11608	14114	b	1	+0.9	1539	
afb	140-14387-A-14	10735	14044	b	1	+0.8	1540	
afb	140-14387-A-15	09635	14044	b	1	+0.8	1541	
afb	140-14387-A-16	11750	14051	b	1	+0.8	1542	
afb	140-14387-A-18	10518	14051	b	1	-1.2	1543	
<input type="checkbox"/> Receiving –Air Can –Calve Open (NCM # _____)					<input type="checkbox"/> Air - Can P Out -26" - Flow Contr. Faulty (NCM# _____)			
<input type="checkbox"/> Air - Can P -24 to -25 " - Flow Contr. Works (NCM# _____)					<input type="checkbox"/> Air - Can P Low -24 to -25 " - Grab Sample (NCM# _____)			
<input type="checkbox"/> Air - Can P -24 to -25 " - Flow Contr. Faulty (NCM# _____)					<input type="checkbox"/> Air - Can P Low -26 "- Grab Sample (NCM# _____)			
<input type="checkbox"/> Air - Can P Out -26" - Flow Contr. Works (NCM# _____)								

ANALYTICAL REPORT

Job Number: 140-14389-1
Job Description: MRC Indoor Air, MRC

For:
Tetra Tech, Inc.
20251 Century Blvd
Suite 200
Germantown, MD 20874
Attention: Samantha Brenner



Approved for release.
Terry Walker Wasmund
Project Manager II
3/7/2019 2:13 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
03/07/2019

cc: Ms. Michelle Woeber

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Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-14389-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC listed a canister asset number as 11785, but it should be 11745.

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC listed a canister asset number as 11745, but it should be 11721.

Air - GC/MS VOA - Method TO-15 LL

Method(s) TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-079-A-26

Lab Sample ID: 140-14389-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.49		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	1.3		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	11		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.57	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.4	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	8.7		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.72	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	57		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.5	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-DUP04-A-26

Lab Sample ID: 140-14389-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.46	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.83	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	1.2		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	10		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.63	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.6	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	8.3		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.71	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	56		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.71	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.7	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-131-C-26

Lab Sample ID: 140-14389-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.49		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.26	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.063	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.83	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.11	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.43		0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.25	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.88		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-131-C-26 (Continued)

Lab Sample ID: 140-14389-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.3	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.25	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.61	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	2.1		2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.71	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.2	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.8		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-DUP01-C-26

Lab Sample ID: 140-14389-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.54		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.31	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.51		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.074	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.99	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.51		0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.17	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.29	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.1		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.5	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.30	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.73	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	2.5		2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.85	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.4	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.6		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-001-C-26

Lab Sample ID: 140-14389-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.11	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.1		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Naphthalene	0.23		0.20	0.20	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.49		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	4.6		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.52	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-001-C-26 (Continued)

Lab Sample ID: 140-14389-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	8.3		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Naphthalene	1.2		1.0	1.0	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.9		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	25		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-004-C-26

Lab Sample ID: 140-14389-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.59		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.31	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.64		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.32	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.60		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.4		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.13	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.1		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.24	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.10	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	4.4		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.9		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.6		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.3	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	2.6		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	8.2		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.91	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	7.8		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.3	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.55	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	19		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-102-C-26

Lab Sample ID: 140-14389-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	8.8	J	13	2.5	ppb v/v	3.7		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	13		13	4.0	ppb v/v	3.7		TO 15 LL	Total/NA
1,1-Dichloroethane	1200		13	1.7	ppb v/v	3.7		TO 15 LL	Total/NA
1,1-Dichloroethene	650		13	2.4	ppb v/v	3.7		TO 15 LL	Total/NA
Ethylbenzene	130		13	4.5	ppb v/v	3.7		TO 15 LL	Total/NA
Naphthalene	39		6.7	6.7	ppb v/v	3.7		TO 15 LL	Total/NA
1,1,1-Trichloroethane	470		13	2.0	ppb v/v	3.7		TO 15 LL	Total/NA
Trichloroethene	200		6.7	2.4	ppb v/v	3.7		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	5.9	J	13	4.2	ppb v/v	3.7		TO 15 LL	Total/NA
Xylenes, Total	1100		27	4.0	ppb v/v	3.7		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-102-C-26 (Continued)

Lab Sample ID: 140-14389-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	43	J	66	12	ug/m3	3.7		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	52		53	16	ug/m3	3.7		TO 15 LL	Total/NA
1,1-Dichloroethane	4800		54	6.8	ug/m3	3.7		TO 15 LL	Total/NA
1,1-Dichloroethene	2600		53	9.3	ug/m3	3.7		TO 15 LL	Total/NA
Ethylbenzene	560		58	20	ug/m3	3.7		TO 15 LL	Total/NA
Naphthalene	210		35	35	ug/m3	3.7		TO 15 LL	Total/NA
1,1,1-Trichloroethane	2600		73	11	ug/m3	3.7		TO 15 LL	Total/NA
Trichloroethene	1100		36	13	ug/m3	3.7		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	29	J	66	21	ug/m3	3.7		TO 15 LL	Total/NA
Xylenes, Total	4600		120	18	ug/m3	3.7		TO 15 LL	Total/NA

Client Sample ID: SV-155-C-26

Lab Sample ID: 140-14389-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.081	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.52		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.27	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.14	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.89	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.099	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.53	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.46	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.51	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.1	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.56	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.1	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.54	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-133-C-26

Lab Sample ID: 140-14389-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.79	J	1.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	2.7		1.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.52	J	1.0	0.34	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.1	J	5.0	1.6	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	2.4		1.0	0.20	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	140		0.50	0.18	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	2.8	J	3.5	0.66	ug/m3	1		TO 15 LL	Total/NA
Chloroform	13		4.9	0.92	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.6	J	4.9	1.7	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	7.1	J	17	5.6	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	16		6.8	1.4	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	760		2.7	0.94	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-153-C-26

Lab Sample ID: 140-14389-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.58		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.0		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.15	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	2.1		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	5.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	0.65	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-DUP02-C-26

Lab Sample ID: 140-14389-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.61		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.51		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.98	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.084	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.94		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.13	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	2.1		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.4	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.57	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	5.1		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	0.56	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-150-C-26

Lab Sample ID: 140-14389-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.37	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.6		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	3.4		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.4		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	19		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.2	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	13		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	15		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.1		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.70	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	84		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-152-C-26

Lab Sample ID: 140-14389-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.33	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.1	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.098	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.74		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.099	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	9.1		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.50	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	11	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.48	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.9		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.2	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.54	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	49		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-141-C-26

Lab Sample ID: 140-14389-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.44		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.10	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.8		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.48		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.20	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.95	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	1.3		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.75		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	63		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.4		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.4		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	4.2		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.49	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	11		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.9		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.85	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	9.0		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	3.0		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	340		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	5.9		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-088-C-26

Lab Sample ID: 140-14389-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.080	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.4		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	8.5		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.75	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.39	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	9.6		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	46		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-142-C-26

Lab Sample ID: 140-14389-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.084	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.37	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.4		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Naphthalene	0.21		0.20	0.20	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.086	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.2		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.61	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.53	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	6.7		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Naphthalene	1.1		1.0	1.0	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.58	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	6.7		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.6	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-113-C-26

Lab Sample ID: 140-14389-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.32	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	7.2		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.87	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	33		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.47	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-113-C-26 (Continued)

Lab Sample ID: 140-14389-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.6	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	29		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	180		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.0	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-149-C-26

Lab Sample ID: 140-14389-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.27	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.46		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.17	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.2		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.14	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	12		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.077	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.74	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.86	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.76	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	7.7		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.97	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	44		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.42	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.91	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-079-A-26

Lab Sample ID: 140-14389-1

Date Collected: 02/21/19 12:37

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 21:30	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 21:30	1
Chlorodifluoromethane	0.49		0.40	0.075	ppb v/v			02/26/19 21:30	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 21:30	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 21:30	1
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v			02/26/19 21:30	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 21:30	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 21:30	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 21:30	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 21:30	1
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v			02/26/19 21:30	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 21:30	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 21:30	1
Tetrachloroethene	1.3		0.40	0.080	ppb v/v			02/26/19 21:30	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 21:30	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 21:30	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 21:30	1
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v			02/26/19 21:30	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 21:30	1
Trichloroethene	11		0.20	0.070	ppb v/v			02/26/19 21:30	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 21:30	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 21:30	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 21:30	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 21:30	1
Xylenes, Total	0.57	J	0.80	0.12	ppb v/v			02/26/19 21:30	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 21:30	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 21:30	1
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3			02/26/19 21:30	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 21:30	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 21:30	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/26/19 21:30	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 21:30	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 21:30	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 21:30	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 21:30	1
Methylene Chloride	4.4	J	6.9	2.3	ug/m3			02/26/19 21:30	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 21:30	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 21:30	1
Tetrachloroethene	8.7		2.7	0.54	ug/m3			02/26/19 21:30	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 21:30	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 21:30	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 21:30	1
1,1,1-Trichloroethane	0.72	J	2.2	0.33	ug/m3			02/26/19 21:30	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 21:30	1
Trichloroethene	57		1.1	0.38	ug/m3			02/26/19 21:30	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 21:30	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 21:30	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-079-A-26

Lab Sample ID: 140-14389-1

Date Collected: 02/21/19 12:37

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 21:30	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 21:30	1
Xylenes, Total	2.5	J	3.5	0.52	ug/m3			02/26/19 21:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/26/19 21:30	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-DUP04-A-26

Lab Sample ID: 140-14389-2

Date Collected: 02/21/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 22:13	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 22:13	1
Chlorodifluoromethane	0.46	CI	0.40	0.075	ppb v/v			02/26/19 22:13	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 22:13	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 22:13	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/26/19 22:13	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 22:13	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 22:13	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 22:13	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 22:13	1
Methylene Chloride	0.83	J	2.0	0.65	ppb v/v			02/26/19 22:13	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 22:13	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 22:13	1
Tetrachloroethene	1.2		0.40	0.080	ppb v/v			02/26/19 22:13	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 22:13	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 22:13	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 22:13	1
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v			02/26/19 22:13	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 22:13	1
Trichloroethene	10		0.20	0.070	ppb v/v			02/26/19 22:13	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 22:13	1
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/26/19 22:13	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 22:13	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 22:13	1
Xylenes, Total	0.63	J	0.80	0.12	ppb v/v			02/26/19 22:13	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 22:13	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 22:13	1
Chlorodifluoromethane	1.6	CI	1.4	0.27	ug/m3			02/26/19 22:13	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 22:13	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 22:13	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/26/19 22:13	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 22:13	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 22:13	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 22:13	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 22:13	1
Methylene Chloride	2.9	J	6.9	2.3	ug/m3			02/26/19 22:13	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 22:13	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 22:13	1
Tetrachloroethene	8.3		2.7	0.54	ug/m3			02/26/19 22:13	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 22:13	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 22:13	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 22:13	1
1,1,1-Trichloroethane	0.71	J	2.2	0.33	ug/m3			02/26/19 22:13	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 22:13	1
Trichloroethene	56		1.1	0.38	ug/m3			02/26/19 22:13	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 22:13	1
1,2,4-Trimethylbenzene	0.71	J	2.0	0.61	ug/m3			02/26/19 22:13	1

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-DUP04-A-26

Lab Sample ID: 140-14389-2

Date Collected: 02/21/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 22:13	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 22:13	1
Xylenes, Total	2.7	J	3.5	0.52	ug/m3			02/26/19 22:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		60 - 140					02/26/19 22:13	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-131-C-26

Lab Sample ID: 140-14389-3

Date Collected: 02/19/19 11:29

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 22:55	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 22:55	1
Chlorodifluoromethane	0.49		0.40	0.075	ppb v/v			02/26/19 22:55	1
Chloroform	0.26	J	0.40	0.075	ppb v/v			02/26/19 22:55	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 22:55	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/26/19 22:55	1
1,1-Dichloroethane	0.063	J	0.40	0.050	ppb v/v			02/26/19 22:55	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 22:55	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 22:55	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 22:55	1
Methylene Chloride	0.83	J	2.0	0.65	ppb v/v			02/26/19 22:55	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 22:55	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 22:55	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 22:55	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 22:55	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 22:55	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 22:55	1
1,1,1-Trichloroethane	0.11	J	0.40	0.060	ppb v/v			02/26/19 22:55	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 22:55	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 22:55	1
1,2,3-Trimethylbenzene	0.43		0.40	0.17	ppb v/v			02/26/19 22:55	1
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/26/19 22:55	1
1,3,5-Trimethylbenzene	0.25	J	0.40	0.13	ppb v/v			02/26/19 22:55	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 22:55	1
Xylenes, Total	0.88		0.80	0.12	ppb v/v			02/26/19 22:55	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 22:55	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 22:55	1
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3			02/26/19 22:55	1
Chloroform	1.3	J	2.0	0.37	ug/m3			02/26/19 22:55	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 22:55	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 22:55	1
1,1-Dichloroethane	0.25	J	1.6	0.20	ug/m3			02/26/19 22:55	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 22:55	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 22:55	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 22:55	1
Methylene Chloride	2.9	J	6.9	2.3	ug/m3			02/26/19 22:55	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 22:55	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 22:55	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 22:55	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 22:55	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 22:55	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 22:55	1
1,1,1-Trichloroethane	0.61	J	2.2	0.33	ug/m3			02/26/19 22:55	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 22:55	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 22:55	1
1,2,3-Trimethylbenzene	2.1		2.0	0.84	ug/m3			02/26/19 22:55	1
1,2,4-Trimethylbenzene	0.71	J	2.0	0.61	ug/m3			02/26/19 22:55	1

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-131-C-26

Lab Sample ID: 140-14389-3

Date Collected: 02/19/19 11:29

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.2	J	2.0	0.64	ug/m3			02/26/19 22:55	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 22:55	1
Xylenes, Total	3.8		3.5	0.52	ug/m3			02/26/19 22:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		60 - 140					02/26/19 22:55	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-DUP01-C-26

Lab Sample ID: 140-14389-4

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 23:37	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 23:37	1
Chlorodifluoromethane	0.54		0.40	0.075	ppb v/v			02/26/19 23:37	1
Chloroform	0.31	J	0.40	0.075	ppb v/v			02/26/19 23:37	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 23:37	1
Dichlorodifluoromethane	0.51		0.40	0.14	ppb v/v			02/26/19 23:37	1
1,1-Dichloroethane	0.074	J	0.40	0.050	ppb v/v			02/26/19 23:37	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 23:37	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 23:37	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 23:37	1
Methylene Chloride	0.99	J	2.0	0.65	ppb v/v			02/26/19 23:37	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 23:37	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 23:37	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 23:37	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 23:37	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 23:37	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 23:37	1
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v			02/26/19 23:37	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 23:37	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 23:37	1
1,2,3-Trimethylbenzene	0.51		0.40	0.17	ppb v/v			02/26/19 23:37	1
1,2,4-Trimethylbenzene	0.17	J	0.40	0.13	ppb v/v			02/26/19 23:37	1
1,3,5-Trimethylbenzene	0.29	J	0.40	0.13	ppb v/v			02/26/19 23:37	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 23:37	1
Xylenes, Total	1.1		0.80	0.12	ppb v/v			02/26/19 23:37	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 23:37	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 23:37	1
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3			02/26/19 23:37	1
Chloroform	1.5	J	2.0	0.37	ug/m3			02/26/19 23:37	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 23:37	1
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3			02/26/19 23:37	1
1,1-Dichloroethane	0.30	J	1.6	0.20	ug/m3			02/26/19 23:37	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 23:37	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 23:37	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 23:37	1
Methylene Chloride	3.5	J	6.9	2.3	ug/m3			02/26/19 23:37	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 23:37	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 23:37	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 23:37	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 23:37	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 23:37	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 23:37	1
1,1,1-Trichloroethane	0.73	J	2.2	0.33	ug/m3			02/26/19 23:37	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 23:37	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 23:37	1
1,2,3-Trimethylbenzene	2.5		2.0	0.84	ug/m3			02/26/19 23:37	1
1,2,4-Trimethylbenzene	0.85	J	2.0	0.61	ug/m3			02/26/19 23:37	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-DUP01-C-26

Lab Sample ID: 140-14389-4

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.4	J	2.0	0.64	ug/m3			02/26/19 23:37	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 23:37	1
Xylenes, Total	4.6		3.5	0.52	ug/m3			02/26/19 23:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/26/19 23:37	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-001-C-26

Lab Sample ID: 140-14389-5

Date Collected: 02/19/19 11:36

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/27/19 00:18	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 00:18	1
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/27/19 00:18	1
Chloroform	0.11	J	0.40	0.075	ppb v/v			02/27/19 00:18	1
cis-1,2-Dichloroethene	2.1		0.40	0.12	ppb v/v			02/27/19 00:18	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/27/19 00:18	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 00:18	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 00:18	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 00:18	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 00:18	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/27/19 00:18	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 00:18	1
Naphthalene	0.23		0.20	0.20	ppb v/v			02/27/19 00:18	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 00:18	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 00:18	1
trans-1,2-Dichloroethene	0.49		0.40	0.10	ppb v/v			02/27/19 00:18	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 00:18	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 00:18	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 00:18	1
Trichloroethene	4.6		0.20	0.070	ppb v/v			02/27/19 00:18	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 00:18	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 00:18	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 00:18	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 00:18	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/27/19 00:18	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/27/19 00:18	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 00:18	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/27/19 00:18	1
Chloroform	0.52	J	2.0	0.37	ug/m3			02/27/19 00:18	1
cis-1,2-Dichloroethene	8.3		1.6	0.48	ug/m3			02/27/19 00:18	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/27/19 00:18	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 00:18	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 00:18	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 00:18	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 00:18	1
Methylene Chloride	3.9	J	6.9	2.3	ug/m3			02/27/19 00:18	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 00:18	1
Naphthalene	1.2		1.0	1.0	ug/m3			02/27/19 00:18	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 00:18	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 00:18	1
trans-1,2-Dichloroethene	1.9		1.6	0.40	ug/m3			02/27/19 00:18	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 00:18	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 00:18	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 00:18	1
Trichloroethene	25		1.1	0.38	ug/m3			02/27/19 00:18	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 00:18	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 00:18	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-001-C-26

Lab Sample ID: 140-14389-5

Date Collected: 02/19/19 11:36

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 00:18	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 00:18	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/27/19 00:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					02/27/19 00:18	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-004-C-26

Lab Sample ID: 140-14389-6

Date Collected: 02/19/19 11:40

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.59		0.40	0.12	ppb v/v			02/27/19 01:00	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 01:00	1
Chlorodifluoromethane	0.31	J	0.40	0.075	ppb v/v			02/27/19 01:00	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 01:00	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 01:00	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/27/19 01:00	1
1,1-Dichloroethane	0.64		0.40	0.050	ppb v/v			02/27/19 01:00	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 01:00	1
1,1-Dichloroethene	0.32	J	0.40	0.070	ppb v/v			02/27/19 01:00	1
Ethylbenzene	0.60		0.40	0.14	ppb v/v			02/27/19 01:00	1
Methylene Chloride	2.4		2.0	0.65	ppb v/v			02/27/19 01:00	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 01:00	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 01:00	1
Tetrachloroethene	0.13	J	0.40	0.080	ppb v/v			02/27/19 01:00	1
Toluene	2.1		0.60	0.60	ppb v/v			02/27/19 01:00	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 01:00	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 01:00	1
1,1,1-Trichloroethane	0.24	J	0.40	0.060	ppb v/v			02/27/19 01:00	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 01:00	1
Trichloroethene	0.10	J	0.20	0.070	ppb v/v			02/27/19 01:00	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 01:00	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 01:00	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 01:00	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 01:00	1
Xylenes, Total	4.4		0.80	0.12	ppb v/v			02/27/19 01:00	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.9		1.3	0.37	ug/m3			02/27/19 01:00	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 01:00	1
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3			02/27/19 01:00	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 01:00	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 01:00	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/27/19 01:00	1
1,1-Dichloroethane	2.6		1.6	0.20	ug/m3			02/27/19 01:00	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 01:00	1
1,1-Dichloroethene	1.3	J	1.6	0.28	ug/m3			02/27/19 01:00	1
Ethylbenzene	2.6		1.7	0.59	ug/m3			02/27/19 01:00	1
Methylene Chloride	8.2		6.9	2.3	ug/m3			02/27/19 01:00	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 01:00	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 01:00	1
Tetrachloroethene	0.91	J	2.7	0.54	ug/m3			02/27/19 01:00	1
Toluene	7.8		2.3	2.3	ug/m3			02/27/19 01:00	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 01:00	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 01:00	1
1,1,1-Trichloroethane	1.3	J	2.2	0.33	ug/m3			02/27/19 01:00	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 01:00	1
Trichloroethene	0.55	J	1.1	0.38	ug/m3			02/27/19 01:00	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 01:00	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 01:00	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-004-C-26

Lab Sample ID: 140-14389-6

Date Collected: 02/19/19 11:40

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 01:00	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 01:00	1
Xylenes, Total	19		3.5	0.52	ug/m3			02/27/19 01:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		60 - 140					02/27/19 01:00	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-102-C-26

Lab Sample ID: 140-14389-7

Date Collected: 02/19/19 11:45

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		13	3.9	ppb v/v			02/27/19 01:42	3.7
Carbon tetrachloride	ND		13	2.5	ppb v/v			02/27/19 01:42	3.7
Chlorodifluoromethane	ND		13	2.5	ppb v/v			02/27/19 01:42	3.7
Chloroform	8.8	J	13	2.5	ppb v/v			02/27/19 01:42	3.7
cis-1,2-Dichloroethene	13		13	4.0	ppb v/v			02/27/19 01:42	3.7
Dichlorodifluoromethane	ND		13	4.5	ppb v/v			02/27/19 01:42	3.7
1,1-Dichloroethane	1200		13	1.7	ppb v/v			02/27/19 01:42	3.7
1,2-Dichloroethane	ND		13	3.2	ppb v/v			02/27/19 01:42	3.7
1,1-Dichloroethene	650		13	2.4	ppb v/v			02/27/19 01:42	3.7
Ethylbenzene	130		13	4.5	ppb v/v			02/27/19 01:42	3.7
Methylene Chloride	ND		67	22	ppb v/v			02/27/19 01:42	3.7
Methyl tert-butyl ether	ND		67	11	ppb v/v			02/27/19 01:42	3.7
Naphthalene	39		6.7	6.7	ppb v/v			02/27/19 01:42	3.7
Tetrachloroethene	ND		13	2.7	ppb v/v			02/27/19 01:42	3.7
Toluene	ND		20	20	ppb v/v			02/27/19 01:42	3.7
trans-1,2-Dichloroethene	ND		13	3.4	ppb v/v			02/27/19 01:42	3.7
1,2,4-Trichlorobenzene	ND		13	6.6	ppb v/v			02/27/19 01:42	3.7
1,1,1-Trichloroethane	470		13	2.0	ppb v/v			02/27/19 01:42	3.7
1,1,2-Trichloroethane	ND		13	3.5	ppb v/v			02/27/19 01:42	3.7
Trichloroethene	200		6.7	2.4	ppb v/v			02/27/19 01:42	3.7
1,2,3-Trimethylbenzene	ND		13	5.7	ppb v/v			02/27/19 01:42	3.7
1,2,4-Trimethylbenzene	5.9	J	13	4.2	ppb v/v			02/27/19 01:42	3.7
1,3,5-Trimethylbenzene	ND		13	4.4	ppb v/v			02/27/19 01:42	3.7
Vinyl chloride	ND		6.7	4.9	ppb v/v			02/27/19 01:42	3.7
Xylenes, Total	1100		27	4.0	ppb v/v			02/27/19 01:42	3.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		43	12	ug/m3			02/27/19 01:42	3.7
Carbon tetrachloride	ND		85	16	ug/m3			02/27/19 01:42	3.7
Chlorodifluoromethane	ND		48	8.9	ug/m3			02/27/19 01:42	3.7
Chloroform	43	J	66	12	ug/m3			02/27/19 01:42	3.7
cis-1,2-Dichloroethene	52		53	16	ug/m3			02/27/19 01:42	3.7
Dichlorodifluoromethane	ND		67	22	ug/m3			02/27/19 01:42	3.7
1,1-Dichloroethane	4800		54	6.8	ug/m3			02/27/19 01:42	3.7
1,2-Dichloroethane	ND		54	13	ug/m3			02/27/19 01:42	3.7
1,1-Dichloroethene	2600		53	9.3	ug/m3			02/27/19 01:42	3.7
Ethylbenzene	560		58	20	ug/m3			02/27/19 01:42	3.7
Methylene Chloride	ND		230	76	ug/m3			02/27/19 01:42	3.7
Methyl tert-butyl ether	ND		240	41	ug/m3			02/27/19 01:42	3.7
Naphthalene	210		35	35	ug/m3			02/27/19 01:42	3.7
Tetrachloroethene	ND		91	18	ug/m3			02/27/19 01:42	3.7
Toluene	ND		76	76	ug/m3			02/27/19 01:42	3.7
trans-1,2-Dichloroethene	ND		53	13	ug/m3			02/27/19 01:42	3.7
1,2,4-Trichlorobenzene	ND		100	49	ug/m3			02/27/19 01:42	3.7
1,1,1-Trichloroethane	2600		73	11	ug/m3			02/27/19 01:42	3.7
1,1,2-Trichloroethane	ND		73	19	ug/m3			02/27/19 01:42	3.7
Trichloroethene	1100		36	13	ug/m3			02/27/19 01:42	3.7
1,2,3-Trimethylbenzene	ND		66	28	ug/m3			02/27/19 01:42	3.7
1,2,4-Trimethylbenzene	29	J	66	21	ug/m3			02/27/19 01:42	3.7

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-102-C-26

Lab Sample ID: 140-14389-7

Date Collected: 02/19/19 11:45

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		66	21	ug/m3			02/27/19 01:42	3.7
Vinyl chloride	ND		17	12	ug/m3			02/27/19 01:42	3.7
Xylenes, Total	4600		120	18	ug/m3			02/27/19 01:42	3.7
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		60 - 140					02/27/19 01:42	3.7

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-155-C-26

Lab Sample ID: 140-14389-8

Date Collected: 02/19/19 11:48

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.14	J	0.40	0.12	ppb v/v			02/27/19 03:05	1
Carbon tetrachloride	0.081	J	0.40	0.075	ppb v/v			02/27/19 03:05	1
Chlorodifluoromethane	0.52		0.40	0.075	ppb v/v			02/27/19 03:05	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 03:05	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 03:05	1
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v			02/27/19 03:05	1
1,1-Dichloroethane	0.27	J	0.40	0.050	ppb v/v			02/27/19 03:05	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 03:05	1
1,1-Dichloroethene	0.14	J	0.40	0.070	ppb v/v			02/27/19 03:05	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 03:05	1
Methylene Chloride	0.89	J	2.0	0.65	ppb v/v			02/27/19 03:05	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 03:05	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 03:05	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 03:05	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 03:05	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 03:05	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 03:05	1
1,1,1-Trichloroethane	0.099	J	0.40	0.060	ppb v/v			02/27/19 03:05	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 03:05	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 03:05	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 03:05	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 03:05	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 03:05	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 03:05	1
Xylenes, Total	0.53	J	0.80	0.12	ppb v/v			02/27/19 03:05	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.46	J	1.3	0.37	ug/m3			02/27/19 03:05	1
Carbon tetrachloride	0.51	J	2.5	0.47	ug/m3			02/27/19 03:05	1
Chlorodifluoromethane	1.8		1.4	0.27	ug/m3			02/27/19 03:05	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 03:05	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 03:05	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/27/19 03:05	1
1,1-Dichloroethane	1.1	J	1.6	0.20	ug/m3			02/27/19 03:05	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 03:05	1
1,1-Dichloroethene	0.56	J	1.6	0.28	ug/m3			02/27/19 03:05	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 03:05	1
Methylene Chloride	3.1	J	6.9	2.3	ug/m3			02/27/19 03:05	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 03:05	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 03:05	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 03:05	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 03:05	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 03:05	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 03:05	1
1,1,1-Trichloroethane	0.54	J	2.2	0.33	ug/m3			02/27/19 03:05	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 03:05	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 03:05	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 03:05	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 03:05	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-155-C-26

Lab Sample ID: 140-14389-8

Date Collected: 02/19/19 11:48

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 03:05	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 03:05	1
Xylenes, Total	2.3	J	3.5	0.52	ug/m3			02/27/19 03:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		60 - 140					02/27/19 03:05	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-133-C-26

Lab Sample ID: 140-14389-9

Date Collected: 02/19/19 11:52

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.29	ppb v/v			02/27/19 17:22	1
Carbon tetrachloride	ND		1.0	0.19	ppb v/v			02/27/19 17:22	1
Chlorodifluoromethane	0.79	J	1.0	0.19	ppb v/v			02/27/19 17:22	1
Chloroform	2.7		1.0	0.19	ppb v/v			02/27/19 17:22	1
cis-1,2-Dichloroethene	ND		1.0	0.30	ppb v/v			02/27/19 17:22	1
Dichlorodifluoromethane	0.52	J	1.0	0.34	ppb v/v			02/27/19 17:22	1
1,1-Dichloroethane	ND		1.0	0.13	ppb v/v			02/27/19 17:22	1
1,2-Dichloroethane	ND		1.0	0.24	ppb v/v			02/27/19 17:22	1
1,1-Dichloroethene	ND		1.0	0.18	ppb v/v			02/27/19 17:22	1
Ethylbenzene	ND		1.0	0.34	ppb v/v			02/27/19 17:22	1
Methylene Chloride	2.1	J	5.0	1.6	ppb v/v			02/27/19 17:22	1
Methyl tert-butyl ether	ND		5.0	0.85	ppb v/v			02/27/19 17:22	1
Naphthalene	ND		0.50	0.50	ppb v/v			02/27/19 17:22	1
Tetrachloroethene	2.4		1.0	0.20	ppb v/v			02/27/19 17:22	1
Toluene	ND		1.5	1.5	ppb v/v			02/27/19 17:22	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ppb v/v			02/27/19 17:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.49	ppb v/v			02/27/19 17:22	1
1,1,1-Trichloroethane	ND		1.0	0.15	ppb v/v			02/27/19 17:22	1
1,1,2-Trichloroethane	ND		1.0	0.26	ppb v/v			02/27/19 17:22	1
Trichloroethene	140		0.50	0.18	ppb v/v			02/27/19 17:22	1
1,2,3-Trimethylbenzene	ND		1.0	0.43	ppb v/v			02/27/19 17:22	1
1,2,4-Trimethylbenzene	ND		1.0	0.31	ppb v/v			02/27/19 17:22	1
1,3,5-Trimethylbenzene	ND		1.0	0.33	ppb v/v			02/27/19 17:22	1
Vinyl chloride	ND		0.50	0.36	ppb v/v			02/27/19 17:22	1
Xylenes, Total	ND		2.0	0.30	ppb v/v			02/27/19 17:22	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.2	0.92	ug/m3			02/27/19 17:22	1
Carbon tetrachloride	ND		6.3	1.2	ug/m3			02/27/19 17:22	1
Chlorodifluoromethane	2.8	J	3.5	0.66	ug/m3			02/27/19 17:22	1
Chloroform	13		4.9	0.92	ug/m3			02/27/19 17:22	1
cis-1,2-Dichloroethene	ND		4.0	1.2	ug/m3			02/27/19 17:22	1
Dichlorodifluoromethane	2.6	J	4.9	1.7	ug/m3			02/27/19 17:22	1
1,1-Dichloroethane	ND		4.0	0.51	ug/m3			02/27/19 17:22	1
1,2-Dichloroethane	ND		4.0	0.96	ug/m3			02/27/19 17:22	1
1,1-Dichloroethene	ND		4.0	0.69	ug/m3			02/27/19 17:22	1
Ethylbenzene	ND		4.3	1.5	ug/m3			02/27/19 17:22	1
Methylene Chloride	7.1	J	17	5.6	ug/m3			02/27/19 17:22	1
Methyl tert-butyl ether	ND		18	3.1	ug/m3			02/27/19 17:22	1
Naphthalene	ND		2.6	2.6	ug/m3			02/27/19 17:22	1
Tetrachloroethene	16		6.8	1.4	ug/m3			02/27/19 17:22	1
Toluene	ND		5.7	5.7	ug/m3			02/27/19 17:22	1
trans-1,2-Dichloroethene	ND		4.0	0.99	ug/m3			02/27/19 17:22	1
1,2,4-Trichlorobenzene	ND		7.4	3.6	ug/m3			02/27/19 17:22	1
1,1,1-Trichloroethane	ND		5.5	0.82	ug/m3			02/27/19 17:22	1
1,1,2-Trichloroethane	ND		5.5	1.4	ug/m3			02/27/19 17:22	1
Trichloroethene	760		2.7	0.94	ug/m3			02/27/19 17:22	1
1,2,3-Trimethylbenzene	ND		4.9	2.1	ug/m3			02/27/19 17:22	1
1,2,4-Trimethylbenzene	ND		4.9	1.5	ug/m3			02/27/19 17:22	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-133-C-26

Lab Sample ID: 140-14389-9

Date Collected: 02/19/19 11:52

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		4.9	1.6	ug/m3			02/27/19 17:22	1
Vinyl chloride	ND		1.3	0.93	ug/m3			02/27/19 17:22	1
Xylenes, Total	ND		8.7	1.3	ug/m3			02/27/19 17:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					02/27/19 17:22	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-153-C-26

Lab Sample ID: 140-14389-10

Date Collected: 02/19/19 11:55

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/27/19 18:04	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 18:04	1
Chlorodifluoromethane	0.58		0.40	0.075	ppb v/v			02/27/19 18:04	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 18:04	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 18:04	1
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v			02/27/19 18:04	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 18:04	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 18:04	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 18:04	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 18:04	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/27/19 18:04	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 18:04	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 18:04	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 18:04	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 18:04	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 18:04	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 18:04	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 18:04	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 18:04	1
Trichloroethene	1.0		0.20	0.070	ppb v/v			02/27/19 18:04	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 18:04	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 18:04	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 18:04	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 18:04	1
Xylenes, Total	0.15	J	0.80	0.12	ppb v/v			02/27/19 18:04	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/27/19 18:04	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 18:04	1
Chlorodifluoromethane	2.1		1.4	0.27	ug/m3			02/27/19 18:04	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 18:04	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 18:04	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/27/19 18:04	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 18:04	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 18:04	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 18:04	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 18:04	1
Methylene Chloride	3.7	J	6.9	2.3	ug/m3			02/27/19 18:04	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 18:04	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 18:04	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 18:04	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 18:04	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 18:04	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 18:04	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 18:04	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 18:04	1
Trichloroethene	5.5		1.1	0.38	ug/m3			02/27/19 18:04	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 18:04	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 18:04	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-153-C-26

Lab Sample ID: 140-14389-10

Date Collected: 02/19/19 11:55

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 18:04	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 18:04	1
Xylenes, Total	0.65	J	3.5	0.52	ug/m3			02/27/19 18:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/27/19 18:04	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-DUP02-C-26

Lab Sample ID: 140-14389-11

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/27/19 18:46	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 18:46	1
Chlorodifluoromethane	0.61		0.40	0.075	ppb v/v			02/27/19 18:46	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 18:46	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 18:46	1
Dichlorodifluoromethane	0.51		0.40	0.14	ppb v/v			02/27/19 18:46	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 18:46	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 18:46	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 18:46	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 18:46	1
Methylene Chloride	0.98	J	2.0	0.65	ppb v/v			02/27/19 18:46	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 18:46	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 18:46	1
Tetrachloroethene	0.084	J	0.40	0.080	ppb v/v			02/27/19 18:46	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 18:46	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 18:46	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 18:46	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 18:46	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 18:46	1
Trichloroethene	0.94		0.20	0.070	ppb v/v			02/27/19 18:46	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 18:46	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 18:46	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 18:46	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 18:46	1
Xylenes, Total	0.13	J	0.80	0.12	ppb v/v			02/27/19 18:46	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/27/19 18:46	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 18:46	1
Chlorodifluoromethane	2.1		1.4	0.27	ug/m3			02/27/19 18:46	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 18:46	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 18:46	1
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3			02/27/19 18:46	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 18:46	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 18:46	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 18:46	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 18:46	1
Methylene Chloride	3.4	J	6.9	2.3	ug/m3			02/27/19 18:46	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 18:46	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 18:46	1
Tetrachloroethene	0.57	J	2.7	0.54	ug/m3			02/27/19 18:46	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 18:46	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 18:46	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 18:46	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 18:46	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 18:46	1
Trichloroethene	5.1		1.1	0.38	ug/m3			02/27/19 18:46	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 18:46	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 18:46	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-DUP02-C-26

Lab Sample ID: 140-14389-11

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 18:46	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 18:46	1
Xylenes, Total	0.56	J	3.5	0.52	ug/m3			02/27/19 18:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/27/19 18:46	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-150-C-26

Lab Sample ID: 140-14389-12

Date Collected: 02/19/19 12:05

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.37	J	0.40	0.12	ppb v/v			02/28/19 04:34	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/28/19 04:34	1
Chlorodifluoromethane	3.6		0.40	0.075	ppb v/v			02/28/19 04:34	1
Chloroform	ND		0.40	0.075	ppb v/v			02/28/19 04:34	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/28/19 04:34	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/28/19 04:34	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/28/19 04:34	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/28/19 04:34	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/28/19 04:34	1
Ethylbenzene	3.4		0.40	0.14	ppb v/v			02/28/19 04:34	1
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			02/28/19 04:34	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/28/19 04:34	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/28/19 04:34	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/28/19 04:34	1
Toluene	1.4		0.60	0.60	ppb v/v			02/28/19 04:34	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/28/19 04:34	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/28/19 04:34	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/28/19 04:34	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/28/19 04:34	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/28/19 04:34	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/28/19 04:34	1
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/28/19 04:34	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/28/19 04:34	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/28/19 04:34	1
Xylenes, Total	19		0.80	0.12	ppb v/v			02/28/19 04:34	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.2	J	1.3	0.37	ug/m3			02/28/19 04:34	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/28/19 04:34	1
Chlorodifluoromethane	13		1.4	0.27	ug/m3			02/28/19 04:34	1
Chloroform	ND		2.0	0.37	ug/m3			02/28/19 04:34	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/28/19 04:34	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/28/19 04:34	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/28/19 04:34	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/28/19 04:34	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/28/19 04:34	1
Ethylbenzene	15		1.7	0.59	ug/m3			02/28/19 04:34	1
Methylene Chloride	3.6	J	6.9	2.3	ug/m3			02/28/19 04:34	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/28/19 04:34	1
Naphthalene	ND		1.0	1.0	ug/m3			02/28/19 04:34	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/28/19 04:34	1
Toluene	5.1		2.3	2.3	ug/m3			02/28/19 04:34	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/28/19 04:34	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/28/19 04:34	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/28/19 04:34	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/28/19 04:34	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/28/19 04:34	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/28/19 04:34	1
1,2,4-Trimethylbenzene	0.70	J	2.0	0.61	ug/m3			02/28/19 04:34	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-150-C-26

Lab Sample ID: 140-14389-12

Date Collected: 02/19/19 12:05

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/28/19 04:34	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/28/19 04:34	1
Xylenes, Total	84		3.5	0.52	ug/m3			02/28/19 04:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					02/28/19 04:34	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-152-C-26

Lab Sample ID: 140-14389-13

Date Collected: 02/19/19 12:06

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.33	J	0.40	0.12	ppb v/v			02/27/19 20:10	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 20:10	1
Chlorodifluoromethane	3.1	CI	0.40	0.075	ppb v/v			02/27/19 20:10	1
Chloroform	0.098	J	0.40	0.075	ppb v/v			02/27/19 20:10	1
cis-1,2-Dichloroethene	0.74		0.40	0.12	ppb v/v			02/27/19 20:10	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/27/19 20:10	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 20:10	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 20:10	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 20:10	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 20:10	1
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v			02/27/19 20:10	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 20:10	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 20:10	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 20:10	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 20:10	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 20:10	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 20:10	1
1,1,1-Trichloroethane	0.099	J	0.40	0.060	ppb v/v			02/27/19 20:10	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 20:10	1
Trichloroethene	9.1		0.20	0.070	ppb v/v			02/27/19 20:10	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 20:10	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 20:10	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 20:10	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 20:10	1
Xylenes, Total	0.50	J	0.80	0.12	ppb v/v			02/27/19 20:10	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			02/27/19 20:10	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 20:10	1
Chlorodifluoromethane	11	CI	1.4	0.27	ug/m3			02/27/19 20:10	1
Chloroform	0.48	J	2.0	0.37	ug/m3			02/27/19 20:10	1
cis-1,2-Dichloroethene	2.9		1.6	0.48	ug/m3			02/27/19 20:10	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/27/19 20:10	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 20:10	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 20:10	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 20:10	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 20:10	1
Methylene Chloride	4.2	J	6.9	2.3	ug/m3			02/27/19 20:10	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 20:10	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 20:10	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 20:10	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 20:10	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 20:10	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 20:10	1
1,1,1-Trichloroethane	0.54	J	2.2	0.33	ug/m3			02/27/19 20:10	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 20:10	1
Trichloroethene	49		1.1	0.38	ug/m3			02/27/19 20:10	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 20:10	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 20:10	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-152-C-26

Lab Sample ID: 140-14389-13

Date Collected: 02/19/19 12:06

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 20:10	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 20:10	1
Xylenes, Total	2.2	J	3.5	0.52	ug/m3			02/27/19 20:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		60 - 140					02/27/19 20:10	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-141-C-26

Lab Sample ID: 140-14389-14

Date Collected: 02/19/19 12:10

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.44		0.40	0.12	ppb v/v			02/28/19 05:16	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/28/19 05:16	1
Chlorodifluoromethane	1.2		0.40	0.075	ppb v/v			02/28/19 05:16	1
Chloroform	0.10	J	0.40	0.075	ppb v/v			02/28/19 05:16	1
cis-1,2-Dichloroethene	2.8		0.40	0.12	ppb v/v			02/28/19 05:16	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/28/19 05:16	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/28/19 05:16	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/28/19 05:16	1
1,1-Dichloroethene	0.48		0.40	0.070	ppb v/v			02/28/19 05:16	1
Ethylbenzene	0.20	J	0.40	0.14	ppb v/v			02/28/19 05:16	1
Methylene Chloride	0.95	J	2.0	0.65	ppb v/v			02/28/19 05:16	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/28/19 05:16	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/28/19 05:16	1
Tetrachloroethene	1.3		0.40	0.080	ppb v/v			02/28/19 05:16	1
Toluene	ND		0.60	0.60	ppb v/v			02/28/19 05:16	1
trans-1,2-Dichloroethene	0.75		0.40	0.10	ppb v/v			02/28/19 05:16	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/28/19 05:16	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/28/19 05:16	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/28/19 05:16	1
Trichloroethene	63		0.20	0.070	ppb v/v			02/28/19 05:16	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/28/19 05:16	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/28/19 05:16	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/28/19 05:16	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/28/19 05:16	1
Xylenes, Total	1.4		0.80	0.12	ppb v/v			02/28/19 05:16	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.4		1.3	0.37	ug/m3			02/28/19 05:16	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/28/19 05:16	1
Chlorodifluoromethane	4.2		1.4	0.27	ug/m3			02/28/19 05:16	1
Chloroform	0.49	J	2.0	0.37	ug/m3			02/28/19 05:16	1
cis-1,2-Dichloroethene	11		1.6	0.48	ug/m3			02/28/19 05:16	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/28/19 05:16	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/28/19 05:16	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/28/19 05:16	1
1,1-Dichloroethene	1.9		1.6	0.28	ug/m3			02/28/19 05:16	1
Ethylbenzene	0.85	J	1.7	0.59	ug/m3			02/28/19 05:16	1
Methylene Chloride	3.3	J	6.9	2.3	ug/m3			02/28/19 05:16	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/28/19 05:16	1
Naphthalene	ND		1.0	1.0	ug/m3			02/28/19 05:16	1
Tetrachloroethene	9.0		2.7	0.54	ug/m3			02/28/19 05:16	1
Toluene	ND		2.3	2.3	ug/m3			02/28/19 05:16	1
trans-1,2-Dichloroethene	3.0		1.6	0.40	ug/m3			02/28/19 05:16	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/28/19 05:16	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/28/19 05:16	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/28/19 05:16	1
Trichloroethene	340		1.1	0.38	ug/m3			02/28/19 05:16	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/28/19 05:16	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/28/19 05:16	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-141-C-26

Lab Sample ID: 140-14389-14

Date Collected: 02/19/19 12:10

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/28/19 05:16	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/28/19 05:16	1
Xylenes, Total	5.9		3.5	0.52	ug/m3			02/28/19 05:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		60 - 140					02/28/19 05:16	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-088-C-26

Lab Sample ID: 140-14389-15

Date Collected: 02/19/19 12:26

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/27/19 22:15	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 22:15	1
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v			02/27/19 22:15	1
Chloroform	0.080	J	0.40	0.075	ppb v/v			02/27/19 22:15	1
cis-1,2-Dichloroethene	2.4		0.40	0.12	ppb v/v			02/27/19 22:15	1
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v			02/27/19 22:15	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 22:15	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 22:15	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 22:15	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 22:15	1
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v			02/27/19 22:15	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 22:15	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 22:15	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 22:15	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 22:15	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 22:15	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 22:15	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 22:15	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 22:15	1
Trichloroethene	8.5		0.20	0.070	ppb v/v			02/27/19 22:15	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 22:15	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 22:15	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 22:15	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 22:15	1
Xylenes, Total	0.75	J	0.80	0.12	ppb v/v			02/27/19 22:15	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/27/19 22:15	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 22:15	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/27/19 22:15	1
Chloroform	0.39	J	2.0	0.37	ug/m3			02/27/19 22:15	1
cis-1,2-Dichloroethene	9.6		1.6	0.48	ug/m3			02/27/19 22:15	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/27/19 22:15	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 22:15	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 22:15	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 22:15	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 22:15	1
Methylene Chloride	4.9	J	6.9	2.3	ug/m3			02/27/19 22:15	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 22:15	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 22:15	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 22:15	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 22:15	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 22:15	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 22:15	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 22:15	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 22:15	1
Trichloroethene	46		1.1	0.38	ug/m3			02/27/19 22:15	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 22:15	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 22:15	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-088-C-26

Lab Sample ID: 140-14389-15

Date Collected: 02/19/19 12:26

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 22:15	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 22:15	1
Xylenes, Total	3.3	J	3.5	0.52	ug/m3			02/27/19 22:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		60 - 140					02/27/19 22:15	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-142-C-26

Lab Sample ID: 140-14389-16

Date Collected: 02/19/19 12:20

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/27/19 22:57	1
Carbon tetrachloride	0.084	J	0.40	0.075	ppb v/v			02/27/19 22:57	1
Chlorodifluoromethane	0.37	J	0.40	0.075	ppb v/v			02/27/19 22:57	1
Chloroform	1.4		0.40	0.075	ppb v/v			02/27/19 22:57	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 22:57	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/27/19 22:57	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 22:57	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 22:57	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 22:57	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 22:57	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/27/19 22:57	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 22:57	1
Naphthalene	0.21		0.20	0.20	ppb v/v			02/27/19 22:57	1
Tetrachloroethene	0.086	J	0.40	0.080	ppb v/v			02/27/19 22:57	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 22:57	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 22:57	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 22:57	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 22:57	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 22:57	1
Trichloroethene	1.2		0.20	0.070	ppb v/v			02/27/19 22:57	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 22:57	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 22:57	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 22:57	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 22:57	1
Xylenes, Total	0.61	J	0.80	0.12	ppb v/v			02/27/19 22:57	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/27/19 22:57	1
Carbon tetrachloride	0.53	J	2.5	0.47	ug/m3			02/27/19 22:57	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/27/19 22:57	1
Chloroform	6.7		2.0	0.37	ug/m3			02/27/19 22:57	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 22:57	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/27/19 22:57	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 22:57	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 22:57	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 22:57	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 22:57	1
Methylene Chloride	3.9	J	6.9	2.3	ug/m3			02/27/19 22:57	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 22:57	1
Naphthalene	1.1		1.0	1.0	ug/m3			02/27/19 22:57	1
Tetrachloroethene	0.58	J	2.7	0.54	ug/m3			02/27/19 22:57	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 22:57	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 22:57	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 22:57	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 22:57	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 22:57	1
Trichloroethene	6.7		1.1	0.38	ug/m3			02/27/19 22:57	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 22:57	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 22:57	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-142-C-26

Lab Sample ID: 140-14389-16

Date Collected: 02/19/19 12:20

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 22:57	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 22:57	1
Xylenes, Total	2.6	J	3.5	0.52	ug/m3			02/27/19 22:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		60 - 140					02/27/19 22:57	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-113-C-26

Lab Sample ID: 140-14389-17

Date Collected: 02/19/19 12:17

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/27/19 23:39	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 23:39	1
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v			02/27/19 23:39	1
Chloroform	0.32	J	0.40	0.075	ppb v/v			02/27/19 23:39	1
cis-1,2-Dichloroethene	7.2		0.40	0.12	ppb v/v			02/27/19 23:39	1
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v			02/27/19 23:39	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 23:39	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 23:39	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 23:39	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 23:39	1
Methylene Chloride	0.87	J	2.0	0.65	ppb v/v			02/27/19 23:39	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 23:39	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 23:39	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 23:39	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 23:39	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 23:39	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 23:39	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 23:39	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 23:39	1
Trichloroethene	33		0.20	0.070	ppb v/v			02/27/19 23:39	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 23:39	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 23:39	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 23:39	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 23:39	1
Xylenes, Total	0.47	J	0.80	0.12	ppb v/v			02/27/19 23:39	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/27/19 23:39	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 23:39	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/27/19 23:39	1
Chloroform	1.6	J	2.0	0.37	ug/m3			02/27/19 23:39	1
cis-1,2-Dichloroethene	29		1.6	0.48	ug/m3			02/27/19 23:39	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/27/19 23:39	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 23:39	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 23:39	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 23:39	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 23:39	1
Methylene Chloride	3.0	J	6.9	2.3	ug/m3			02/27/19 23:39	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 23:39	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 23:39	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 23:39	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 23:39	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 23:39	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 23:39	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 23:39	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 23:39	1
Trichloroethene	180		1.1	0.38	ug/m3			02/27/19 23:39	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 23:39	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 23:39	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-113-C-26

Lab Sample ID: 140-14389-17

Date Collected: 02/19/19 12:17

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 23:39	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 23:39	1
Xylenes, Total	2.0	J	3.5	0.52	ug/m3			02/27/19 23:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/27/19 23:39	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-149-C-26

Lab Sample ID: 140-14389-18

Date Collected: 02/19/19 12:32

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.27	J	0.40	0.12	ppb v/v			02/28/19 00:20	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/28/19 00:20	1
Chlorodifluoromethane	0.46		0.40	0.075	ppb v/v			02/28/19 00:20	1
Chloroform	ND		0.40	0.075	ppb v/v			02/28/19 00:20	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/28/19 00:20	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/28/19 00:20	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/28/19 00:20	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/28/19 00:20	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/28/19 00:20	1
Ethylbenzene	0.17	J	0.40	0.14	ppb v/v			02/28/19 00:20	1
Methylene Chloride	2.2		2.0	0.65	ppb v/v			02/28/19 00:20	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/28/19 00:20	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/28/19 00:20	1
Tetrachloroethene	0.14	J	0.40	0.080	ppb v/v			02/28/19 00:20	1
Toluene	12		0.60	0.60	ppb v/v			02/28/19 00:20	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/28/19 00:20	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/28/19 00:20	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/28/19 00:20	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/28/19 00:20	1
Trichloroethene	0.077	J	0.20	0.070	ppb v/v			02/28/19 00:20	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/28/19 00:20	1
1,2,4-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v			02/28/19 00:20	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/28/19 00:20	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/28/19 00:20	1
Xylenes, Total	0.74	J	0.80	0.12	ppb v/v			02/28/19 00:20	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.86	J	1.3	0.37	ug/m3			02/28/19 00:20	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/28/19 00:20	1
Chlorodifluoromethane	1.6		1.4	0.27	ug/m3			02/28/19 00:20	1
Chloroform	ND		2.0	0.37	ug/m3			02/28/19 00:20	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/28/19 00:20	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/28/19 00:20	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/28/19 00:20	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/28/19 00:20	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/28/19 00:20	1
Ethylbenzene	0.76	J	1.7	0.59	ug/m3			02/28/19 00:20	1
Methylene Chloride	7.7		6.9	2.3	ug/m3			02/28/19 00:20	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/28/19 00:20	1
Naphthalene	ND		1.0	1.0	ug/m3			02/28/19 00:20	1
Tetrachloroethene	0.97	J	2.7	0.54	ug/m3			02/28/19 00:20	1
Toluene	44		2.3	2.3	ug/m3			02/28/19 00:20	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/28/19 00:20	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/28/19 00:20	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/28/19 00:20	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/28/19 00:20	1
Trichloroethene	0.42	J	1.1	0.38	ug/m3			02/28/19 00:20	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/28/19 00:20	1
1,2,4-Trimethylbenzene	0.91	J	2.0	0.61	ug/m3			02/28/19 00:20	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-149-C-26

Lab Sample ID: 140-14389-18

Date Collected: 02/19/19 12:32

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/28/19 00:20	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/28/19 00:20	1
Xylenes, Total	3.2	J	3.5	0.52	ug/m3			02/28/19 00:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					02/28/19 00:20	1

Default Detection Limits

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-14389-1	SV-079-A-26	98
140-14389-2	SV-DUP04-A-26	95
140-14389-3	SV-131-C-26	95
140-14389-4	SV-DUP01-C-26	98
140-14389-5	SV-001-C-26	96
140-14389-6	SV-004-C-26	94
140-14389-7	SV-102-C-26	93
140-14389-8	SV-155-C-26	94
140-14389-9	SV-133-C-26	96
140-14389-10	SV-153-C-26	100
140-14389-11	SV-DUP02-C-26	100
140-14389-12	SV-150-C-26	96
140-14389-13	SV-152-C-26	94
140-14389-14	SV-141-C-26	94
140-14389-15	SV-088-C-26	94
140-14389-16	SV-142-C-26	97
140-14389-17	SV-113-C-26	98
140-14389-18	SV-149-C-26	96
LCS 140-27931/1002	Lab Control Sample	100
LCS 140-27932/1002	Lab Control Sample	95
MB 140-27931/4	Method Blank	96
MB 140-27932/7	Method Blank	96

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			02/26/19 12:56	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chloroform	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/26/19 12:56	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/26/19 12:56	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/26/19 12:56	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/26/19 12:56	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/26/19 12:56	1
Toluene	ND		0.12	0.12	ppb v/v			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/26/19 12:56	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/26/19 12:56	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/26/19 12:56	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/26/19 12:56	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/26/19 12:56	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/26/19 12:56	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/26/19 12:56	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/26/19 12:56	1
Chloroform	ND		0.39	0.073	ug/m3			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/26/19 12:56	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/26/19 12:56	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/26/19 12:56	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/26/19 12:56	1
Naphthalene	ND		0.21	0.21	ug/m3			02/26/19 12:56	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/26/19 12:56	1
Toluene	ND		0.45	0.45	ug/m3			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/26/19 12:56	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/26/19 12:56	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/26/19 12:56	1

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/26/19 12:56	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/26/19 12:56	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/26/19 12:56	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		60 - 140		02/26/19 12:56	1

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.22		ppb v/v		111	70 - 130
Chlorodifluoromethane	2.00	2.02		ppb v/v		101	60 - 140
Chloroform	2.00	2.00		ppb v/v		100	70 - 130
cis-1,2-Dichloroethene	2.00	2.09		ppb v/v		104	70 - 130
Dichlorodifluoromethane	2.00	2.06		ppb v/v		103	60 - 140
1,1-Dichloroethane	2.00	2.05		ppb v/v		103	70 - 130
1,2-Dichloroethane	2.00	2.00		ppb v/v		100	70 - 130
1,1-Dichloroethene	2.00	2.14		ppb v/v		107	70 - 130
Ethylbenzene	2.00	2.03		ppb v/v		101	70 - 130
Methylene Chloride	2.00	1.81		ppb v/v		90	70 - 130
Methyl tert-butyl ether	2.00	1.97		ppb v/v		99	60 - 140
Naphthalene	2.00	1.94		ppb v/v		97	60 - 140
Tetrachloroethene	2.00	2.06		ppb v/v		103	70 - 130
Toluene	2.00	2.02		ppb v/v		101	70 - 130
trans-1,2-Dichloroethene	2.00	2.15		ppb v/v		108	70 - 130
1,2,4-Trichlorobenzene	2.00	1.83		ppb v/v		92	60 - 140
1,1,1-Trichloroethane	2.00	2.04		ppb v/v		102	70 - 130
1,1,2-Trichloroethane	2.00	2.11		ppb v/v		105	70 - 130
Trichloroethene	2.00	2.09		ppb v/v		105	70 - 130
1,2,3-Trimethylbenzene	2.00	2.22		ppb v/v		111	70 - 130
1,2,4-Trimethylbenzene	2.00	1.99		ppb v/v		99	70 - 130
1,3,5-Trimethylbenzene	2.00	1.97		ppb v/v		98	70 - 130
Vinyl chloride	2.00	1.97		ppb v/v		98	70 - 130
Xylenes, Total	6.00	6.18		ppb v/v		103	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	13	13.9		ug/m3		111	70 - 130
Chlorodifluoromethane	7.1	7.16		ug/m3		101	60 - 140
Chloroform	9.8	9.78		ug/m3		100	70 - 130
cis-1,2-Dichloroethene	7.9	8.28		ug/m3		104	70 - 130
Dichlorodifluoromethane	9.9	10.2		ug/m3		103	60 - 140
1,1-Dichloroethane	8.1	8.31		ug/m3		103	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	8.11		ug/m3		100	70 - 130
1,1-Dichloroethene	7.9	8.50		ug/m3		107	70 - 130
Ethylbenzene	8.7	8.79		ug/m3		101	70 - 130
Methylene Chloride	6.9	6.27		ug/m3		90	70 - 130
Methyl tert-butyl ether	7.2	7.12		ug/m3		99	60 - 140
Naphthalene	10	10.2		ug/m3		97	60 - 140
Tetrachloroethene	14	14.0		ug/m3		103	70 - 130
Toluene	7.5	7.63		ug/m3		101	70 - 130
trans-1,2-Dichloroethene	7.9	8.53		ug/m3		108	70 - 130
1,2,4-Trichlorobenzene	15	13.6		ug/m3		92	60 - 140
1,1,1-Trichloroethane	11	11.1		ug/m3		102	70 - 130
1,1,2-Trichloroethane	11	11.5		ug/m3		105	70 - 130
Trichloroethene	11	11.2		ug/m3		105	70 - 130
1,2,3-Trimethylbenzene	9.8	10.9		ug/m3		111	70 - 130
1,2,4-Trimethylbenzene	9.8	9.78		ug/m3		99	70 - 130
1,3,5-Trimethylbenzene	9.8	9.68		ug/m3		98	70 - 130
Vinyl chloride	5.1	5.03		ug/m3		98	70 - 130
Xylenes, Total	26	26.8		ug/m3		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		60 - 140

Lab Sample ID: MB 140-27932/7
Matrix: Air
Analysis Batch: 27932

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/27/19 16:40	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/27/19 16:40	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/27/19 16:40	1
Chloroform	ND		0.080	0.015	ppb v/v			02/27/19 16:40	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/27/19 16:40	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/27/19 16:40	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/27/19 16:40	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/27/19 16:40	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/27/19 16:40	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/27/19 16:40	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/27/19 16:40	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/27/19 16:40	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/27/19 16:40	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/27/19 16:40	1
Toluene	ND		0.12	0.12	ppb v/v			02/27/19 16:40	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/27/19 16:40	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/27/19 16:40	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/27/19 16:40	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/27/19 16:40	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/27/19 16:40	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27932/7
Matrix: Air
Analysis Batch: 27932

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/27/19 16:40	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/27/19 16:40	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/27/19 16:40	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/27/19 16:40	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/27/19 16:40	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/27/19 16:40	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/27/19 16:40	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/27/19 16:40	1
Chloroform	ND		0.39	0.073	ug/m3			02/27/19 16:40	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/27/19 16:40	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/27/19 16:40	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/27/19 16:40	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/27/19 16:40	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/27/19 16:40	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/27/19 16:40	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/27/19 16:40	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/27/19 16:40	1
Naphthalene	ND		0.21	0.21	ug/m3			02/27/19 16:40	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/27/19 16:40	1
Toluene	ND		0.45	0.45	ug/m3			02/27/19 16:40	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/27/19 16:40	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/27/19 16:40	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/27/19 16:40	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/27/19 16:40	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/27/19 16:40	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/27/19 16:40	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/27/19 16:40	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/27/19 16:40	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/27/19 16:40	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/27/19 16:40	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		60 - 140		02/27/19 16:40	1

Lab Sample ID: LCS 140-27932/1002
Matrix: Air
Analysis Batch: 27932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.14		ppb v/v		107	70 - 130
Chlorodifluoromethane	2.00	1.79		ppb v/v		89	60 - 140
Chloroform	2.00	2.01		ppb v/v		100	70 - 130
cis-1,2-Dichloroethene	2.00	2.11		ppb v/v		105	70 - 130
Dichlorodifluoromethane	2.00	1.89		ppb v/v		94	60 - 140

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27932/1002
Matrix: Air
Analysis Batch: 27932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				
1,1-Dichloroethane	2.00	2.04		ppb v/v		102	70 - 130
1,2-Dichloroethane	2.00	1.98		ppb v/v		99	70 - 130
1,1-Dichloroethene	2.00	2.03		ppb v/v		102	70 - 130
Ethylbenzene	2.00	1.88		ppb v/v		94	70 - 130
Methylene Chloride	2.00	1.73		ppb v/v		87	70 - 130
Methyl tert-butyl ether	2.00	1.80		ppb v/v		90	60 - 140
Naphthalene	2.00	1.84		ppb v/v		92	60 - 140
Tetrachloroethene	2.00	2.00		ppb v/v		100	70 - 130
Toluene	2.00	1.94		ppb v/v		97	70 - 130
trans-1,2-Dichloroethene	2.00	2.08		ppb v/v		104	70 - 130
1,2,4-Trichlorobenzene	2.00	1.78		ppb v/v		89	60 - 140
1,1,1-Trichloroethane	2.00	2.04		ppb v/v		102	70 - 130
1,1,2-Trichloroethane	2.00	1.95		ppb v/v		98	70 - 130
Trichloroethene	2.00	2.06		ppb v/v		103	70 - 130
1,2,3-Trimethylbenzene	2.00	1.99		ppb v/v		100	70 - 130
1,2,4-Trimethylbenzene	2.00	1.77		ppb v/v		88	70 - 130
1,3,5-Trimethylbenzene	2.00	1.78		ppb v/v		89	70 - 130
Vinyl chloride	2.00	1.76		ppb v/v		88	70 - 130
Xylenes, Total	6.00	5.64		ppb v/v		94	70 - 130
Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				
Benzene	6.4	6.61		ug/m3		103	70 - 130
Carbon tetrachloride	13	13.4		ug/m3		107	70 - 130
Chlorodifluoromethane	7.1	6.33		ug/m3		89	60 - 140
Chloroform	9.8	9.80		ug/m3		100	70 - 130
cis-1,2-Dichloroethene	7.9	8.35		ug/m3		105	70 - 130
Dichlorodifluoromethane	9.9	9.34		ug/m3		94	60 - 140
1,1-Dichloroethane	8.1	8.24		ug/m3		102	70 - 130
1,2-Dichloroethane	8.1	8.02		ug/m3		99	70 - 130
1,1-Dichloroethene	7.9	8.07		ug/m3		102	70 - 130
Ethylbenzene	8.7	8.16		ug/m3		94	70 - 130
Methylene Chloride	6.9	6.02		ug/m3		87	70 - 130
Methyl tert-butyl ether	7.2	6.48		ug/m3		90	60 - 140
Naphthalene	10	9.63		ug/m3		92	60 - 140
Tetrachloroethene	14	13.6		ug/m3		100	70 - 130
Toluene	7.5	7.31		ug/m3		97	70 - 130
trans-1,2-Dichloroethene	7.9	8.26		ug/m3		104	70 - 130
1,2,4-Trichlorobenzene	15	13.2		ug/m3		89	60 - 140
1,1,1-Trichloroethane	11	11.1		ug/m3		102	70 - 130
1,1,2-Trichloroethane	11	10.7		ug/m3		98	70 - 130
Trichloroethene	11	11.1		ug/m3		103	70 - 130
1,2,3-Trimethylbenzene	9.8	9.78		ug/m3		100	70 - 130
1,2,4-Trimethylbenzene	9.8	8.69		ug/m3		88	70 - 130
1,3,5-Trimethylbenzene	9.8	8.75		ug/m3		89	70 - 130
Vinyl chloride	5.1	4.51		ug/m3		88	70 - 130
Xylenes, Total	26	24.5		ug/m3		94	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27932/1002
Matrix: Air
Analysis Batch: 27932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>LCS</i> <i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	95		60 - 140

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Air - GC/MS VOA

Analysis Batch: 27931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14389-1	SV-079-A-26	Total/NA	Air	TO 15 LL	
140-14389-2	SV-DUP04-A-26	Total/NA	Air	TO 15 LL	
140-14389-3	SV-131-C-26	Total/NA	Air	TO 15 LL	
140-14389-4	SV-DUP01-C-26	Total/NA	Air	TO 15 LL	
140-14389-5	SV-001-C-26	Total/NA	Air	TO 15 LL	
140-14389-6	SV-004-C-26	Total/NA	Air	TO 15 LL	
140-14389-7	SV-102-C-26	Total/NA	Air	TO 15 LL	
140-14389-8	SV-155-C-26	Total/NA	Air	TO 15 LL	
MB 140-27931/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27931/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 27932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14389-9	SV-133-C-26	Total/NA	Air	TO 15 LL	
140-14389-10	SV-153-C-26	Total/NA	Air	TO 15 LL	
140-14389-11	SV-DUP02-C-26	Total/NA	Air	TO 15 LL	
140-14389-12	SV-150-C-26	Total/NA	Air	TO 15 LL	
140-14389-13	SV-152-C-26	Total/NA	Air	TO 15 LL	
140-14389-14	SV-141-C-26	Total/NA	Air	TO 15 LL	
140-14389-15	SV-088-C-26	Total/NA	Air	TO 15 LL	
140-14389-16	SV-142-C-26	Total/NA	Air	TO 15 LL	
140-14389-17	SV-113-C-26	Total/NA	Air	TO 15 LL	
140-14389-18	SV-149-C-26	Total/NA	Air	TO 15 LL	
MB 140-27932/7	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27932/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-079-A-26

Date Collected: 02/21/19 12:37

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14389-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 21:30	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-DUP04-A-26

Date Collected: 02/21/19 00:00

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14389-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 22:13	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-131-C-26

Date Collected: 02/19/19 11:29

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14389-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 22:55	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-DUP01-C-26

Date Collected: 02/19/19 00:00

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14389-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 23:37	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-001-C-26

Date Collected: 02/19/19 11:36

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14389-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/27/19 00:18	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-004-C-26

Date Collected: 02/19/19 11:40

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14389-6

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/27/19 01:00	S1K	TAL KNX
Instrument ID: MG										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-102-C-26

Lab Sample ID: 140-14389-7

Date Collected: 02/19/19 11:45

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		3.7	11 mL	500 mL	27931	02/27/19 01:42	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-155-C-26

Lab Sample ID: 140-14389-8

Date Collected: 02/19/19 11:48

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/27/19 03:05	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-133-C-26

Lab Sample ID: 140-14389-9

Date Collected: 02/19/19 11:52

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	40 mL	500 mL	27932	02/27/19 17:22	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-153-C-26

Lab Sample ID: 140-14389-10

Date Collected: 02/19/19 11:55

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/27/19 18:04	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-DUP02-C-26

Lab Sample ID: 140-14389-11

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/27/19 18:46	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-150-C-26

Lab Sample ID: 140-14389-12

Date Collected: 02/19/19 12:05

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/28/19 04:34	S1K	TAL KNX
Instrument ID: MG										

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-152-C-26

Lab Sample ID: 140-14389-13

Date Collected: 02/19/19 12:06

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/27/19 20:10	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-141-C-26

Lab Sample ID: 140-14389-14

Date Collected: 02/19/19 12:10

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/28/19 05:16	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-088-C-26

Lab Sample ID: 140-14389-15

Date Collected: 02/19/19 12:26

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/27/19 22:15	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-142-C-26

Lab Sample ID: 140-14389-16

Date Collected: 02/19/19 12:20

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/27/19 22:57	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-113-C-26

Lab Sample ID: 140-14389-17

Date Collected: 02/19/19 12:17

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/27/19 23:39	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-149-C-26

Lab Sample ID: 140-14389-18

Date Collected: 02/19/19 12:32

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/28/19 00:20	S1K	TAL KNX
Instrument ID: MG										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27931/4

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 12:56	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27932/7

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27932	02/27/19 16:40	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27931/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 11:35	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27932/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27932	02/27/19 13:35	S1K	TAL KNX
Instrument ID: MG										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14389-1	SV-079-A-26	Air	02/21/19 12:37	02/23/19 10:10
140-14389-2	SV-DUP04-A-26	Air	02/21/19 00:00	02/23/19 10:10
140-14389-3	SV-131-C-26	Air	02/19/19 11:29	02/23/19 10:10
140-14389-4	SV-DUP01-C-26	Air	02/19/19 00:00	02/23/19 10:10
140-14389-5	SV-001-C-26	Air	02/19/19 11:36	02/23/19 10:10
140-14389-6	SV-004-C-26	Air	02/19/19 11:40	02/23/19 10:10
140-14389-7	SV-102-C-26	Air	02/19/19 11:45	02/23/19 10:10
140-14389-8	SV-155-C-26	Air	02/19/19 11:48	02/23/19 10:10
140-14389-9	SV-133-C-26	Air	02/19/19 11:52	02/23/19 10:10
140-14389-10	SV-153-C-26	Air	02/19/19 11:55	02/23/19 10:10
140-14389-11	SV-DUP02-C-26	Air	02/19/19 00:00	02/23/19 10:10
140-14389-12	SV-150-C-26	Air	02/19/19 12:05	02/23/19 10:10
140-14389-13	SV-152-C-26	Air	02/19/19 12:06	02/23/19 10:10
140-14389-14	SV-141-C-26	Air	02/19/19 12:10	02/23/19 10:10
140-14389-15	SV-088-C-26	Air	02/19/19 12:26	02/23/19 10:10
140-14389-16	SV-142-C-26	Air	02/19/19 12:20	02/23/19 10:10
140-14389-17	SV-113-C-26	Air	02/19/19 12:17	02/23/19 10:10
140-14389-18	SV-149-C-26	Air	02/19/19 12:32	02/23/19 10:10

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
SV-079-A-26	140-14389-1	98
SV-DUP04-A-26	140-14389-2	95
SV-131-C-26	140-14389-3	95
SV-DUP01-C-26	140-14389-4	98
SV-001-C-26	140-14389-5	96
SV-004-C-26	140-14389-6	94
SV-102-C-26	140-14389-7	93
SV-155-C-26	140-14389-8	94
SV-133-C-26	140-14389-9	96
SV-153-C-26	140-14389-10	100
SV-DUP02-C-26	140-14389-11	100
SV-150-C-26	140-14389-12	96
SV-152-C-26	140-14389-13	94
SV-141-C-26	140-14389-14	94
SV-088-C-26	140-14389-15	94
SV-142-C-26	140-14389-16	97
SV-113-C-26	140-14389-17	98
SV-149-C-26	140-14389-18	96
	MB 140-27931/4	96
	MB 140-27932/7	96
	LCS 140-27931/1002	100
	LCS 140-27932/1002	95

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB26-LCS.d
 Lab ID: LCS 140-27931/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.22	111	70-130	
Chlorodifluoromethane	2.00	2.02	101	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	2.09	104	70-130	
Dichlorodifluoromethane	2.00	2.06	103	60-140	
1,1-Dichloroethane	2.00	2.05	103	70-130	
1,2-Dichloroethane	2.00	2.00	100	70-130	
1,1-Dichloroethene	2.00	2.14	107	70-130	
Ethylbenzene	2.00	2.03	101	70-130	
Methylene Chloride	2.00	1.81	90	70-130	
Methyl tert-butyl ether	2.00	1.97	99	60-140	
Naphthalene	2.00	1.94	97	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	2.15	108	70-130	
1,2,4-Trichlorobenzene	2.00	1.83	92	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	2.11	105	70-130	
Trichloroethene	2.00	2.09	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.22	111	70-130	
1,2,4-Trimethylbenzene	2.00	1.99	99	70-130	
1,3,5-Trimethylbenzene	2.00	1.97	98	70-130	
Vinyl chloride	2.00	1.97	98	70-130	
Xylenes, Total	6.00	6.18	103	70-130	

Column to be used to flag recovery and RPD values

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB27a-LCS.d
 Lab ID: LCS 140-27932/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.14	107	70-130	
Chlorodifluoromethane	2.00	1.79	89	60-140	
Chloroform	2.00	2.01	100	70-130	
cis-1,2-Dichloroethene	2.00	2.11	105	70-130	
Dichlorodifluoromethane	2.00	1.89	94	60-140	
1,1-Dichloroethane	2.00	2.04	102	70-130	
1,2-Dichloroethane	2.00	1.98	99	70-130	
1,1-Dichloroethene	2.00	2.03	102	70-130	
Ethylbenzene	2.00	1.88	94	70-130	
Methylene Chloride	2.00	1.73	87	70-130	
Methyl tert-butyl ether	2.00	1.80	90	60-140	
Naphthalene	2.00	1.84	92	60-140	
Tetrachloroethene	2.00	2.00	100	70-130	
Toluene	2.00	1.94	97	70-130	
trans-1,2-Dichloroethene	2.00	2.08	104	70-130	
1,2,4-Trichlorobenzene	2.00	1.78	89	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	1.95	98	70-130	
Trichloroethene	2.00	2.06	103	70-130	
1,2,3-Trimethylbenzene	2.00	1.99	100	70-130	
1,2,4-Trimethylbenzene	2.00	1.77	88	70-130	
1,3,5-Trimethylbenzene	2.00	1.78	89	70-130	
Vinyl chloride	2.00	1.76	88	70-130	
Xylenes, Total	6.00	5.64	94	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: G500BB26.D Lab Sample ID: MB 140-27931/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/26/2019 12:56
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27931/1002	GCCVB26-LCS .d	02/26/2019 11:35
SV-079-A-26	140-14389-1	GB26P109.D	02/26/2019 21:30
SV-DUP04-A-26	140-14389-2	GB26P110.D	02/26/2019 22:13
SV-131-C-26	140-14389-3	GB26P111.D	02/26/2019 22:55
SV-DUP01-C-26	140-14389-4	GB26P112.D	02/26/2019 23:37
SV-001-C-26	140-14389-5	GB26P113.D	02/27/2019 00:18
SV-004-C-26	140-14389-6	GB26P114.D	02/27/2019 01:00
SV-102-C-26	140-14389-7	GB26P115.D	02/27/2019 01:42
SV-155-C-26	140-14389-8	GB26P116D.D	02/27/2019 03:05

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: GB27mb500.D Lab Sample ID: MB 140-27932/7
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/27/2019 16:40
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
SV-133-C-26	140-14389-9	GB27p101.D	02/27/2019 17:22
SV-153-C-26	140-14389-10	GB27p102.D	02/27/2019 18:04
SV-DUP02-C-26	140-14389-11	GB27p103.D	02/27/2019 18:46
SV-152-C-26	140-14389-13	GB27p105.D	02/27/2019 20:10
SV-088-C-26	140-14389-15	GB27p107.D	02/27/2019 22:15
SV-142-C-26	140-14389-16	GB27p108.D	02/27/2019 22:57
SV-113-C-26	140-14389-17	GB27p109.D	02/27/2019 23:39
SV-149-C-26	140-14389-18	GB27p110.D	02/28/2019 00:20
SV-150-C-26	140-14389-12	GB27p104R.D	02/28/2019 04:34
SV-141-C-26	140-14389-14	GB27p106R.D	02/28/2019 05:16

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: GA11BLK1.D BFB Injection Date: 01/11/2019
 Instrument ID: MG BFB Injection Time: 12:24
 Analysis Batch No.: 26755

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.2	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	71.2	
175	5.0 - 9.0 % of mass 174	5.1	(7.1) 1
176	95.0 - 101.0 % of mass 174	70.7	(99.3) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-26755/2	GA11IC09.D	01/11/2019	13:08
	IC 140-26755/6	GA11IC10.D	01/11/2019	14:35
	IC 140-26755/9	GA11IC01.D	01/11/2019	16:46
	IC 140-26755/10	GA11IC02.D	01/11/2019	17:29
	IC 140-26755/11	GA11IC03.D	01/11/2019	18:12
	IC 140-26755/12	GA11IC04.D	01/11/2019	18:56
	IC 140-26755/13	GA11IC05.D	01/11/2019	19:40
	IC 140-26755/14	GA11IC06.D	01/11/2019	20:23
	ICIS 140-26755/15	GA11IC07.D	01/11/2019	21:07
	IC 140-26755/16	GA11IC08.D	01/11/2019	21:51
	ICV 140-26755/18	GA11ICV.D	01/11/2019	23:17

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: GBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MG BFB Injection Time: 11:03
 Analysis Batch No.: 27931

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.5
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	73.1
175	5.0 - 9.0 % of mass 174	5.1 (7.0) 1
176	95.0 - 101.0 % of mass 174	71.2 (97.4) 1
177	5.0 - 9.0 % of mass 176	4.6 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27931/2	GCCVB26.D	02/26/2019	11:35
	LCS 140-27931/1002	GCCVB26-LCS. d	02/26/2019	11:35
	MB 140-27931/4	G500BB26.D	02/26/2019	12:56
SV-079-A-26	140-14389-1	GB26P109.D	02/26/2019	21:30
SV-DUP04-A-26	140-14389-2	GB26P110.D	02/26/2019	22:13
SV-131-C-26	140-14389-3	GB26P111.D	02/26/2019	22:55
SV-DUP01-C-26	140-14389-4	GB26P112.D	02/26/2019	23:37
SV-001-C-26	140-14389-5	GB26P113.D	02/27/2019	00:18
SV-004-C-26	140-14389-6	GB26P114.D	02/27/2019	01:00
SV-102-C-26	140-14389-7	GB26P115.D	02/27/2019	01:42
SV-155-C-26	140-14389-8	GB26P116D.D	02/27/2019	03:05

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: GBFBB27a.D BFB Injection Date: 02/27/2019
 Instrument ID: MG BFB Injection Time: 13:04
 Analysis Batch No.: 27932

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.2
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.9
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	76.9
175	5.0 - 9.0 % of mass 174	5.5 (7.1) 1
176	95.0 - 101.0 % of mass 174	77.0 (100.2) 1
177	5.0 - 9.0 % of mass 176	4.9 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27932/2	GCCVB27a.D	02/27/2019	13:35
	LCS 140-27932/1002	GCCVB27a-LCS .d	02/27/2019	13:35
	MB 140-27932/7	GB27mb500.D	02/27/2019	16:40
SV-133-C-26	140-14389-9	GB27p101.D	02/27/2019	17:22
SV-153-C-26	140-14389-10	GB27p102.D	02/27/2019	18:04
SV-DUP02-C-26	140-14389-11	GB27p103.D	02/27/2019	18:46
SV-152-C-26	140-14389-13	GB27p105.D	02/27/2019	20:10
SV-088-C-26	140-14389-15	GB27p107.D	02/27/2019	22:15
SV-142-C-26	140-14389-16	GB27p108.D	02/27/2019	22:57
SV-113-C-26	140-14389-17	GB27p109.D	02/27/2019	23:39
SV-149-C-26	140-14389-18	GB27p110.D	02/28/2019	00:20
SV-150-C-26	140-14389-12	GB27p104R.D	02/28/2019	04:34
SV-141-C-26	140-14389-14	GB27p106R.D	02/28/2019	05:16

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Sample No.: ICIS 140-26755/15 Date Analyzed: 01/11/2019 21:07
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GAl1IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	437891	9.25	2708081	11.42	2541912	16.10
UPPER LIMIT	613047	9.58	3791313	11.75	3558677	16.43
LOWER LIMIT	262735	8.92	1624849	11.09	1525147	15.77
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-26755/18	423755	9.24	2327828	11.42	2182908	16.09

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Sample No.: CCVIS 140-27931/2 Date Analyzed: 02/26/2019 11:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBzd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	496382	9.23	2758157	11.41	2578216	16.08	
UPPER LIMIT	694935	9.56	3861420	11.74	3609502	16.41	
LOWER LIMIT	297829	8.90	1654894	11.08	1546930	15.75	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27931/1002	496382	9.23	2758157	11.41	2578216	16.08	
MB 140-27931/4	508819	9.23	2920722	11.41	2502760	16.08	
140-14389-1	SV-079-A-26	460405	9.22	2922859	11.40	2688571	16.08
140-14389-2	SV-DUP04-A-26	489843	9.23	2906982	11.40	2724517	16.08
140-14389-3	SV-131-C-26	483743	9.23	2991373	11.40	2811933	16.08
140-14389-4	SV-DUP01-C-26	437107	9.22	2665935	11.40	2551551	16.08
140-14389-5	SV-001-C-26	471643	9.23	2836179	11.40	2626133	16.08
140-14389-6	SV-004-C-26	479473	9.23	2624991	11.40	2596426	16.08
140-14389-7	SV-102-C-26	457608	9.23	2569647	11.40	2367991	16.08
140-14389-8	SV-155-C-26	459815	9.23	2680947	11.40	2507992	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Sample No.: CCVIS 140-27932/2 Date Analyzed: 02/27/2019 13:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB27a.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	507272	9.24	2957187	11.41	2771430	16.08	
UPPER LIMIT	710181	9.57	4140062	11.74	3880002	16.41	
LOWER LIMIT	304363	8.91	1774312	11.08	1662858	15.75	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27932/1002	507272	9.24	2957187	11.41	2771430	16.08	
MB 140-27932/7	450057	9.23	2814179	11.40	2588422	16.08	
140-14389-9	SV-133-C-26	439243	9.23	2502675	11.40	2291491	16.08
140-14389-10	SV-153-C-26	443609	9.22	2572234	11.40	2373427	16.08
140-14389-11	SV-DUP02-C-26	448090	9.23	2630175	11.40	2394397	16.08
140-14389-13	SV-152-C-26	495405	9.23	3052420	11.40	2868489	16.08
140-14389-15	SV-088-C-26	497394	9.23	3117508	11.40	2902566	16.08
140-14389-16	SV-142-C-26	469571	9.23	2857201	11.40	2606400	16.08
140-14389-17	SV-113-C-26	471775	9.23	2659937	11.40	2435487	16.08
140-14389-18	SV-149-C-26	479671	9.23	2857167	11.40	2693946	16.08
140-14389-12	SV-150-C-26	479004	9.23	2944153	11.40	2703053	16.08
140-14389-14	SV-141-C-26	479558	9.23	3005696	11.40	2816785	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-079-A-26 Lab Sample ID: 140-14389-1
 Matrix: Air Lab File ID: GB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:37
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.3		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	11		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.57	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-079-A-26 Lab Sample ID: 140-14389-1
 Matrix: Air Lab File ID: GB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:37
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	8.7		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.72	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	57		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.5	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP04-A-26 Lab Sample ID: 140-14389-2
 Matrix: Air Lab File ID: GB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.83	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.2		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	10		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.63	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP04-A-26 Lab Sample ID: 140-14389-2
 Matrix: Air Lab File ID: GB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	8.3		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.71	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	56		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.71	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-131-C-26 Lab Sample ID: 140-14389-3
 Matrix: Air Lab File ID: GB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:29
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	0.26	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.063	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.83	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.43		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.25	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.88		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-131-C-26 Lab Sample ID: 140-14389-3
 Matrix: Air Lab File ID: GB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:29
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	1.3	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.25	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.61	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	2.1		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.71	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.2	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP01-C-26 Lab Sample ID: 140-14389-4
 Matrix: Air Lab File ID: GB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 23:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.54		0.40	0.075
67-66-3	Chloroform	119.38	0.31	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.074	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.99	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.51		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.17	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.29	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP01-C-26 Lab Sample ID: 140-14389-4
 Matrix: Air Lab File ID: GB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 23:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	1.5	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.30	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.73	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	2.5		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.85	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.4	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-001-C-26 Lab Sample ID: 140-14389-5
 Matrix: Air Lab File ID: GB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:36
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.23		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.49		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	4.6		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-001-C-26 Lab Sample ID: 140-14389-5
 Matrix: Air Lab File ID: GB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:36
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	0.52	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	8.3		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.2		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.9		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	25		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-004-C-26 Lab Sample ID: 140-14389-6
 Matrix: Air Lab File ID: GB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:40
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.59		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.31	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.64		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.32	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.60		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.4		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.13	J	0.40	0.080
108-88-3	Toluene	92.14	2.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.24	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.10	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	4.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-004-C-26 Lab Sample ID: 140-14389-6
 Matrix: Air Lab File ID: GB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:40
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.9		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.6		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.3	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	2.6		1.7	0.59
75-09-2	Methylene Chloride	84.93	8.2		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.91	J	2.7	0.54
108-88-3	Toluene	92.14	7.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.3	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.55	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	19		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-102-C-26 Lab Sample ID: 140-14389-7
 Matrix: Air Lab File ID: GB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:45
 Sample wt/vol: 11 (mL) Date Analyzed: 02/27/2019 01:42
 Soil Aliquot Vol: _____ Dilution Factor: 3.7
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		13	3.9
56-23-5	Carbon tetrachloride	153.81	ND		13	2.5
75-45-6	Chlorodifluoromethane	86.47	ND		13	2.5
67-66-3	Chloroform	119.38	8.8	J	13	2.5
156-59-2	cis-1,2-Dichloroethene	96.94	13		13	4.0
75-71-8	Dichlorodifluoromethane	120.91	ND		13	4.5
75-34-3	1,1-Dichloroethane	98.96	1200		13	1.7
107-06-2	1,2-Dichloroethane	98.96	ND		13	3.2
75-35-4	1,1-Dichloroethene	96.94	650		13	2.4
100-41-4	Ethylbenzene	106.17	130		13	4.5
75-09-2	Methylene Chloride	84.93	ND		67	22
1634-04-4	Methyl tert-butyl ether	88.15	ND		67	11
91-20-3	Naphthalene	128.17	39		6.7	6.7
127-18-4	Tetrachloroethene	165.83	ND		13	2.7
108-88-3	Toluene	92.14	ND		20	20
156-60-5	trans-1,2-Dichloroethene	96.94	ND		13	3.4
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		13	6.6
71-55-6	1,1,1-Trichloroethane	133.41	470		13	2.0
79-00-5	1,1,2-Trichloroethane	133.41	ND		13	3.5
79-01-6	Trichloroethene	131.39	200		6.7	2.4
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		13	5.7
95-63-6	1,2,4-Trimethylbenzene	120.20	5.9	J	13	4.2
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		13	4.4
75-01-4	Vinyl chloride	62.50	ND		6.7	4.9
1330-20-7	Xylenes, Total	106.17	1100		27	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-102-C-26 Lab Sample ID: 140-14389-7
 Matrix: Air Lab File ID: GB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:45
 Sample wt/vol: 11 (mL) Date Analyzed: 02/27/2019 01:42
 Soil Aliquot Vol: _____ Dilution Factor: 3.7
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		43	12
56-23-5	Carbon tetrachloride	153.81	ND		85	16
75-45-6	Chlorodifluoromethane	86.47	ND		48	8.9
67-66-3	Chloroform	119.38	43	J	66	12
156-59-2	cis-1,2-Dichloroethene	96.94	52		53	16
75-71-8	Dichlorodifluoromethane	120.91	ND		67	22
75-34-3	1,1-Dichloroethane	98.96	4800		54	6.8
107-06-2	1,2-Dichloroethane	98.96	ND		54	13
75-35-4	1,1-Dichloroethene	96.94	2600		53	9.3
100-41-4	Ethylbenzene	106.17	560		58	20
75-09-2	Methylene Chloride	84.93	ND		230	76
1634-04-4	Methyl tert-butyl ether	88.15	ND		240	41
91-20-3	Naphthalene	128.17	210		35	35
127-18-4	Tetrachloroethene	165.83	ND		91	18
108-88-3	Toluene	92.14	ND		76	76
156-60-5	trans-1,2-Dichloroethene	96.94	ND		53	13
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		100	49
71-55-6	1,1,1-Trichloroethane	133.41	2600		73	11
79-00-5	1,1,2-Trichloroethane	133.41	ND		73	19
79-01-6	Trichloroethene	131.39	1100		36	13
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		66	28
95-63-6	1,2,4-Trimethylbenzene	120.20	29	J	66	21
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		66	21
75-01-4	Vinyl chloride	62.50	ND		17	12
1330-20-7	Xylenes, Total	106.17	4600		120	18

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-155-C-26 Lab Sample ID: 140-14389-8
 Matrix: Air Lab File ID: GB26P116D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:48
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:05
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.52		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.27	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.14	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.89	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.099	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.53	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-155-C-26 Lab Sample ID: 140-14389-8
 Matrix: Air Lab File ID: GB26P116D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:48
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:05
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.1	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.56	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.54	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-133-C-26 Lab Sample ID: 140-14389-9
 Matrix: Air Lab File ID: GB27p101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:52
 Sample wt/vol: 40 (mL) Date Analyzed: 02/27/2019 17:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.0	0.29
56-23-5	Carbon tetrachloride	153.81	ND		1.0	0.19
75-45-6	Chlorodifluoromethane	86.47	0.79	J	1.0	0.19
67-66-3	Chloroform	119.38	2.7		1.0	0.19
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.0	0.30
75-71-8	Dichlorodifluoromethane	120.91	0.52	J	1.0	0.34
75-34-3	1,1-Dichloroethane	98.96	ND		1.0	0.13
107-06-2	1,2-Dichloroethane	98.96	ND		1.0	0.24
75-35-4	1,1-Dichloroethene	96.94	ND		1.0	0.18
100-41-4	Ethylbenzene	106.17	ND		1.0	0.34
75-09-2	Methylene Chloride	84.93	2.1	J	5.0	1.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		5.0	0.85
91-20-3	Naphthalene	128.17	ND		0.50	0.50
127-18-4	Tetrachloroethene	165.83	2.4		1.0	0.20
108-88-3	Toluene	92.14	ND		1.5	1.5
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.0	0.25
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1.0	0.49
71-55-6	1,1,1-Trichloroethane	133.41	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	133.41	ND		1.0	0.26
79-01-6	Trichloroethene	131.39	140		0.50	0.18
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		1.0	0.43
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		1.0	0.31
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		1.0	0.33
75-01-4	Vinyl chloride	62.50	ND		0.50	0.36
1330-20-7	Xylenes, Total	106.17	ND		2.0	0.30

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-133-C-26 Lab Sample ID: 140-14389-9
 Matrix: Air Lab File ID: GB27p101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:52
 Sample wt/vol: 40 (mL) Date Analyzed: 02/27/2019 17:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		3.2	0.92
56-23-5	Carbon tetrachloride	153.81	ND		6.3	1.2
75-45-6	Chlorodifluoromethane	86.47	2.8	J	3.5	0.66
67-66-3	Chloroform	119.38	13		4.9	0.92
156-59-2	cis-1,2-Dichloroethene	96.94	ND		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	2.6	J	4.9	1.7
75-34-3	1,1-Dichloroethane	98.96	ND		4.0	0.51
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.96
75-35-4	1,1-Dichloroethene	96.94	ND		4.0	0.69
100-41-4	Ethylbenzene	106.17	ND		4.3	1.5
75-09-2	Methylene Chloride	84.93	7.1	J	17	5.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		18	3.1
91-20-3	Naphthalene	128.17	ND		2.6	2.6
127-18-4	Tetrachloroethene	165.83	16		6.8	1.4
108-88-3	Toluene	92.14	ND		5.7	5.7
156-60-5	trans-1,2-Dichloroethene	96.94	ND		4.0	0.99
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		7.4	3.6
71-55-6	1,1,1-Trichloroethane	133.41	ND		5.5	0.82
79-00-5	1,1,2-Trichloroethane	133.41	ND		5.5	1.4
79-01-6	Trichloroethene	131.39	760		2.7	0.94
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.9	2.1
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.9	1.5
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.9	1.6
75-01-4	Vinyl chloride	62.50	ND		1.3	0.93
1330-20-7	Xylenes, Total	106.17	ND		8.7	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-153-C-26 Lab Sample ID: 140-14389-10
 Matrix: Air Lab File ID: GB27p102.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 18:04
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.58		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.0		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.15	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-153-C-26 Lab Sample ID: 140-14389-10
 Matrix: Air Lab File ID: GB27p102.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 18:04
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	0.65	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP02-C-26 Lab Sample ID: 140-14389-11
 Matrix: Air Lab File ID: GB27p103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 18:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.61		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.98	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.084	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.94		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.13	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP02-C-26 Lab Sample ID: 140-14389-11
 Matrix: Air Lab File ID: GB27p103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 18:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.57	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	0.56	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-150-C-26 Lab Sample ID: 140-14389-12
 Matrix: Air Lab File ID: GB27p104R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:05
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 04:34
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	3.4		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	19		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-150-C-26 Lab Sample ID: 140-14389-12
 Matrix: Air Lab File ID: GB27p104R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:05
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 04:34
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	13		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	15		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.70	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	84		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-152-C-26 Lab Sample ID: 140-14389-13
 Matrix: Air Lab File ID: GB27p105.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:06
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 20:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.33	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.1	CI	0.40	0.075
67-66-3	Chloroform	119.38	0.098	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.74		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.099	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	9.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.50	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-152-C-26 Lab Sample ID: 140-14389-13
 Matrix: Air Lab File ID: GB27p105.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:06
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 20:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	11	CI	1.4	0.27
67-66-3	Chloroform	119.38	0.48	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	2.9		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.54	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	49		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-141-C-26 Lab Sample ID: 140-14389-14
 Matrix: Air Lab File ID: GB27p106R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:10
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 05:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	0.10	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.8		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.48		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.95	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.3		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.75		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	63		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-141-C-26 Lab Sample ID: 140-14389-14
 Matrix: Air Lab File ID: GB27p106R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:10
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 05:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.4		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.2		1.4	0.27
67-66-3	Chloroform	119.38	0.49	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	11		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.9		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.85	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	9.0		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	3.0		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	340		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-088-C-26 Lab Sample ID: 140-14389-15
 Matrix: Air Lab File ID: GB27p107.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:26
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 22:15
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.35	J	0.40	0.075
67-66-3	Chloroform	119.38	0.080	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.4		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	8.5		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.75	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-088-C-26 Lab Sample ID: 140-14389-15
 Matrix: Air Lab File ID: GB27p107.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:26
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 22:15
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	0.39	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	9.6		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	46		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-142-C-26 Lab Sample ID: 140-14389-16
 Matrix: Air Lab File ID: GB27p108.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:20
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 22:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.084	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	1.4		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.21		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.086	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.61	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-142-C-26 Lab Sample ID: 140-14389-16
 Matrix: Air Lab File ID: GB27p108.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:20
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 22:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	6.7		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.58	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-113-C-26 Lab Sample ID: 140-14389-17
 Matrix: Air Lab File ID: GB27p109.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:17
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 23:39
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.32	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	7.2		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	33		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.47	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-113-C-26 Lab Sample ID: 140-14389-17
 Matrix: Air Lab File ID: GB27p109.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:17
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 23:39
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	1.6	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	29		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	180		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-149-C-26 Lab Sample ID: 140-14389-18
 Matrix: Air Lab File ID: GB27p110.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:32
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 00:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.27	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.2		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.14	J	0.40	0.080
108-88-3	Toluene	92.14	12		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.077	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.74	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-149-C-26 Lab Sample ID: 140-14389-18
 Matrix: Air Lab File ID: GB27p110.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:32
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 00:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.86	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.76	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.7		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.97	J	2.7	0.54
108-88-3	Toluene	92.14	44		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.42	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.91	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	++++ 2.4796	++++ 2.3672	2.9523 2.3873	2.7653 2.9026	2.6769 2.4316	Ave		2.6204			9.0		30.0				
Propene	++++ 1.4104	++++ 1.3267	++++ 1.3362	1.8011 1.5897	1.4915 1.2862	Ave		1.4631			12.5		30.0				
Dichlorodifluoromethane	++++ 4.0515	++++ 3.9190	++++ 4.4505 3.9550	4.4326 4.7099	4.2183 4.1407	Ave		4.2347			6.5		30.0				
Chloromethane	++++ 0.4445	++++ 0.4230	++++ 0.4254	0.5625 0.4946	0.4891 0.4152	Ave		0.4649			11.5		30.0				
1,2-Dichloro-1,1,2,2-tetrafluoroethane	++++ 2.3633	++++ 2.3423	2.6446 2.3822	2.5541 2.5578	2.4472 2.5047	Ave		2.4745			4.4		30.0				
Vinyl chloride	1.9626 1.4785	1.7167 1.4339	1.7320 1.4573	1.6531 1.6387	1.5626 1.4732	Ave		1.6109			10.3		30.0				
Butane	++++ 2.6258	++++ 2.4782	++++ 2.5038	3.0743 2.8679	2.8454 2.5911	Ave		2.7124			8.2		30.0				
1,3-Butadiene	++++ 1.2041	++++ 1.1760	++++ 1.2078	1.2733 1.3654	1.2439 1.2448	Ave		1.2450			5.0		30.0				
Bromomethane	++++ 1.3078	++++ 1.2877	1.6548 1.3168	1.3996 1.4117	1.3549 1.3995	Ave		1.3916			8.4		30.0				
Chloroethane	++++ 0.7377	++++ 0.7148	0.8627 0.7259	0.8037 0.8118	0.7796 0.7729	Ave		0.7761			6.4		30.0				
Ethanol	++++ 0.5620	++++ 0.7386	++++ 0.5593	0.8657 0.7653	0.7124 0.7259	Ave		0.7042			15.6		30.0				
Vinyl bromide	++++ 1.2366	++++ 1.2145	1.3835 1.2610	1.3207 1.2880	1.2830 1.3321	Ave		1.2899			4.2		30.0				
2-Methylbutane	++++ 1.9302	++++ 1.8374	++++ 1.8471	2.0547 1.9762	2.0422 1.9406	Ave		1.9469			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.9949	4.3785 3.8769	4.2718 3.9322	4.1461 4.3687	4.1452 4.2564	Ave		4.1523			4.4		30.0				
Acrolein	++++ 0.3700	++++ 0.3339	++++ 0.3264	++++ 0.4058	0.3535 0.3546	Ave		0.3574			7.9		30.0				
Acetonitrile	++++ 0.5820	++++ 0.5806	++++ 0.5032	0.4860 0.6106	0.5491 0.5907	Ave		0.5574			8.4		30.0				
Acetone	++++ 0.6952	++++ 0.6071	++++ 0.4923	++++ 0.5713	0.7119 0.5299	Ave		0.6013			14.7		30.0				
Pentane	++++ 0.2650	++++ 0.2567	++++ 0.2534	++++ 0.2741	0.2798 0.2630	Ave		0.2653			3.8		30.0				
Isopropyl alcohol	++++ 1.5842	++++ 1.6884	++++ 1.2216	++++ 1.5921	1.7192 1.5978	Ave		1.6033			11.8		30.0				
Ethyl ether	++++ 1.8397	++++ 1.7705	++++ 1.4542	++++ 1.7361	1.9088 1.6409	Ave		1.7250			9.3		30.0				
1,1-Dichloroethene	1.5300 1.3997	1.3691 1.3378	1.5011 1.4037	1.3769 1.3902	1.4054 1.4041	Ave		1.4118			4.2		30.0				
Acrylonitrile	++++ 0.9861	++++ 0.9774	1.0366 0.8664	0.9476 1.0406	0.9217 1.0215	Ave		0.9747			6.2		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.0568	3.1787 2.9429	3.2903 2.9549	3.0618 2.9993	3.1454 2.9101	Ave		3.0600			4.1		30.0				
tert-Butyl alcohol	++++ 2.2526	++++ 2.2071	++++ 1.7152	2.3096 2.1050	2.4776 2.3062	Ave		2.1962			11.0		30.0				
Methylene Chloride	++++ 1.5026	++++ 1.3595	++++ 1.3036	2.5891 1.2966	1.8042 ++++	Ave		1.6426			30.5	*	30.0				
3-Chloropropene	++++ 1.6369	++++ 1.6110	2.0104 1.5866	1.9432 1.7783	1.7193 1.7236	Ave		1.7512			8.8		30.0				
Carbon disulfide	++++ 4.2983	++++ 4.0822	4.5901 4.1194	4.3819 4.1977	4.3526 4.2529	Ave		4.2844			3.8		30.0				
trans-1,2-Dichloroethene	++++ 1.4444	1.3848 1.3913	1.4554 1.4201	1.3845 1.4125	1.4335 1.3979	Ave		1.4138			1.9		30.0				
2-Methylpentane	++++ 4.0309	++++ 3.8853	4.3761 3.8303	4.1901 4.0757	4.2199 3.7514	Ave		4.0450			5.3		30.0				
Methyl tert-butyl ether	++++ 4.1354	3.5946 4.0399	4.2254 3.4444	3.8763 4.0172	4.1168 3.9425	Ave		3.9325			6.6		30.0				
1,1-Dichloroethane	3.1037 2.8577	3.0105 2.8187	3.0470 2.6559	2.9034 2.9155	2.9080 2.8375	Ave		2.9058			4.4		30.0				
Vinyl acetate	++++ 3.9854	++++ 4.2048	4.0675 3.5720	3.8850 4.4145	3.9427 4.2013	Ave		4.0342			6.3		30.0				
Hexane	++++ 1.3242	++++ 1.2816	++++ 1.3713	1.3526 1.3074	1.3260 1.2151	Ave		1.3036			4.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++	++++	++++	0.6854	0.6772	Ave		0.6347			8.5		30.0				
	0.6784	0.6294	0.5376	0.6386	0.5958												
cis-1,2-Dichloroethene	1.5310	1.3850	1.4658	1.4361	1.4213	Ave		1.4465			2.9		30.0				
	1.4515	1.4377	1.3972	1.4588	1.4806												
Ethyl acetate	++++	++++	3.4159	3.2335	3.3337	Ave		3.3124			6.9		30.0				
	3.4792	3.3231	2.8120	3.5743	3.3271												
Chloroform	3.5969	3.3560	3.4112	3.4074	3.2824	Ave		3.3444			4.2		30.0				
	3.2821	3.2211	3.0680	3.4218	3.3970												
Tetrahydrofuran	++++	++++	++++	1.7940	1.8215	Ave		1.7724			6.6		30.0				
	1.8641	1.7946	1.5246	1.8635	1.7446												
1,1,1-Trichloroethane	3.8810	3.4765	3.6941	3.5977	3.6119	Ave		3.6203			4.2		30.0				
	3.5723	3.5364	3.3475	3.7388	3.7470												
1,2-Dichloroethane	0.3890	0.3740	0.4205	0.3853	0.3989	Ave		0.3910			6.7		30.0				
	0.3918	0.3624	0.3439	0.4219	0.4228												
Cyclohexane	++++	++++	++++	0.1383	0.1426	Ave		0.1314			6.9		30.0				
	0.1391	0.1224	0.1193	0.1325	0.1258												
Benzene	++++	0.7122	0.8006	0.7160	0.7636	Ave		0.7153			7.0		30.0				
	0.7488	0.6697	0.6393	0.7124	0.6753												
Carbon tetrachloride	0.5647	0.5298	0.5813	0.5547	0.6331	Ave		0.5933			8.0		30.0				
	0.6279	0.5625	0.5603	0.6718	0.6470												
1-Butanol	++++	++++	++++	0.0897	0.1022	Ave		0.0896			13.7		30.0				
	0.1010	0.0823	0.0665	0.0902	0.0950												
2,3-Dimethylpentane	++++	++++	0.2016	0.1866	0.2067	Ave		0.1886			7.0		30.0				
	0.1994	0.1776	0.1681	0.1880	0.1811												
Thiophene	++++	++++	0.4419	0.4095	0.4328	Ave		0.4156			5.4		30.0				
	0.4205	0.3890	0.3765	0.4241	0.4306												
2,2,4-Trimethylpentane	1.4853	1.4111	1.5290	1.4173	1.5323	Ave		1.4009			8.1		30.0				
	1.4628	1.2640	1.1785	1.3863	1.3426												
Heptane	++++	++++	0.3221	0.2848	0.3010	Ave		0.2875			7.7		30.0				
	0.2942	0.2637	0.2507	0.2927	0.2912												
1,2-Dichloropropane	++++	0.2947	0.3066	0.2799	0.2948	Ave		0.2813			7.5		30.0				
	0.2869	0.2617	0.2359	0.2893	0.2819												
Trichloroethene	0.3496	0.3229	0.3354	0.3064	0.3383	Ave		0.3257			5.2		30.0				
	0.3271	0.3039	0.3006	0.3304	0.3426												
Dibromomethane	++++	++++	++++	0.3027	0.3082	Ave		0.2963			7.9		30.0				
	0.2897	0.2688	0.2632	0.3189	0.3227												
Bromodichloromethane	++++	++++	0.5688	0.5299	0.5916	Ave		0.5843			8.8		30.0				
	0.5840	0.5507	0.5314	0.6523	0.6656												
1,4-Dioxane	++++	++++	++++	0.0947	0.0887	Ave		0.0832			17.3		30.0				
	0.0619	0.0891	0.0629	0.0903	0.0946												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3918	++++ 0.3473	++++ 0.2972	0.3014 0.4093	0.3703 0.3989	Ave		0.3595			12.7		30.0				
Methylcyclohexane	0.4845 0.5152	0.4926 0.4533	0.5068 0.4304	0.4870 0.4877	0.5327 0.5063	Ave		0.4896			6.1		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.6350	++++ 0.5092	0.5796 0.3308	0.5597 0.5890	0.6524 0.6484	Ave		0.5630			18.8		30.0				
cis-1,3-Dichloropropene	++++ 0.4479	0.3952 0.4121	0.4552 0.3828	0.4166 0.4613	0.4382 0.4415	Ave		0.4279			6.4		30.0				
trans-1,3-Dichloropropene	++++ 0.4450	0.3978 0.4156	0.4398 0.3772	0.4049 0.4673	0.4521 0.4806	Ave		0.4311			8.0		30.0				
Toluene	0.8893 0.9181	0.8808 0.8443	0.9072 0.7540	0.8795 0.8738	0.9309 0.9230	Ave		0.8801			5.9		30.0				
1,1,2-Trichloroethane	0.2596 0.2870	0.2566 0.2535	0.2815 0.2299	0.2715 0.2735	0.2904 0.2819	Ave		0.2685			7.0		30.0				
2-Hexanone	++++ 0.3129	++++ 0.2311	0.2486 0.1601	0.2653 0.2620	0.3155 0.3172	Ave		0.2641			20.2		30.0				
Octane	++++ 0.3331	++++ 0.2969	0.3166 0.2807	0.3142 0.3116	0.3533 0.3257	Ave		0.3165			7.0		30.0				
C8 Range	++++ 3.2900	++++ 2.9406	++++ 2.7321	3.2543 3.2050	3.4583 3.2302	Ave		3.1586			7.7		30.0				
Dibromochloromethane	++++ 0.5589	++++ 0.5327	0.4753 0.5204	0.4633 0.6101	0.5345 0.6613	Ave		0.5446			12.1		30.0				
1,2-Dibromoethane (EDB)	++++ 0.4879	++++ 0.4537	0.4324 0.4227	0.4409 0.4933	0.4776 0.5168	Ave		0.4656			7.1		30.0				
Tetrachloroethene	0.3340 0.3413	0.3265 0.3106	0.3184 0.2978	0.3299 0.3362	0.3500 0.3575	Ave		0.3302			5.4		30.0				
Chlorobenzene	0.6503 0.7257	0.6533 0.6547	0.7038 0.5918	0.6891 0.6804	0.7584 0.7332	Ave		0.6841			7.2		30.0				
Ethylbenzene	++++ 1.2841	1.1605 1.1457	1.1820 0.9886	1.2041 1.2050	1.3132 1.2806	Ave		1.1960			8.1		30.0				
m-Xylene & p-Xylene	0.7852 1.0069	0.8464 0.8920	0.9631 0.7597	0.9388 0.9364	1.0264 0.9927	Ave		0.9148			10.1		30.0				
Nonane	++++ 0.7074	0.6367 0.6181	0.6731 0.5580	0.6713 0.6403	0.7319 0.6196	Ave		0.6507			8.0		30.0				
Bromoform	++++ 0.5150	++++ 0.5097	0.3874 0.4824	0.3783 0.6069	0.4530 ++++	Ave		0.4761			16.7		30.0				
Styrene	++++ 0.6772	++++ 0.6274	0.5417 0.5521	0.5440 0.6889	0.6499 0.7776	Ave		0.6323			13.2		30.0				
o-Xylene	++++ 1.0316	0.8434 0.9312	0.9762 0.7934	0.9959 0.9762	1.0612 1.0727	Ave		0.9646			9.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++ 0.6943	++++ 0.6225	0.6477 0.5392	0.6105 0.6980	0.7079 0.6623	Ave		0.6478			8.7		30.0				
1,2,3-Trichloropropane	++++ 0.2201	++++ 0.1963	0.2117 0.1718	0.1933 0.2253	0.2181 0.2233	Ave		0.2075			9.0		30.0				
Isopropylbenzene	++++ 1.3750	1.2061 1.2349	1.2881 1.0540	1.2705 1.3875	1.3916 1.3659	Ave		1.2860			8.6		30.0				
Propylbenzene	++++ 0.3714	++++ 0.3352	0.3426 0.2878	0.3159 0.3755	0.3762 0.3762	Ave		0.3476			9.6		30.0				
2-Chlorotoluene	++++ 0.3404	0.3055 0.2960	0.3209 0.2606	0.3117 0.3372	0.3448 0.3406	Ave		0.3175			8.7		30.0				
4-Ethyltoluene	++++ 1.3518	++++ 1.2430	1.2707 1.0593	1.1808 1.3853	1.3899 1.3849	Ave		1.2832			9.3		30.0				
1,3,5-Trimethylbenzene	++++ 0.5322	++++ 0.4840	0.4931 0.4140	0.4624 0.5337	0.5289 0.5468	Ave		0.4994			9.1		30.0				
Alpha Methyl Styrene	++++ 0.5256	++++ 0.4877	++++ 0.4370	++++ 0.6086	0.3906 0.6006	Ave		0.5043			16.0		30.0				
Decane	++++ 0.8778	0.7603 0.7515	0.8322 0.6337	0.8484 0.8180	0.9143 0.7472	Ave		0.7982			10.6		30.0				
tert-Butylbenzene	++++ 1.2040	++++ 1.0655	1.0703 0.8921	1.0556 1.2542	1.1543 1.2176	Ave		1.1142			10.6		30.0				
1,2,4-Trimethylbenzene	++++ 1.1975	++++ 1.0389	1.0671 0.8751	1.0434 1.2267	1.1402 1.1768	Ave		1.0957			10.4		30.0				
sec-Butylbenzene	++++ 1.7209	++++ 1.4915	1.5212 1.2789	1.5236 1.7227	1.6717 1.6181	Ave		1.5686			9.5		30.0				
1,3-Dichlorobenzene	0.6490 0.7671	0.6444 0.6846	0.6738 0.6125	0.6739 0.8458	0.7415 0.8676	Ave		0.7160			12.1		30.0				
Benzyl chloride	++++ 1.0629	++++ 0.9436	0.8534 0.8465	0.8353 1.1447	0.9958 1.1273	Ave		0.9762			13.0		30.0				
1,4-Dichlorobenzene	0.7017 0.7787	0.6870 0.6945	0.6938 0.6166	0.6879 0.8577	0.7429 0.8826	Ave		0.7344			11.3		30.0				
4-Isopropyltoluene	++++ 1.3919	++++ 1.1997	1.1350 1.0411	1.1617 1.4207	1.3168 1.3719	Ave		1.2548			11.1		30.0				
1,2,3-Trimethylbenzene	0.7568 1.1870	0.8539 1.0454	1.0085 0.9035	1.0349 ++++	1.1364 ++++	Ave		0.9908			14.6		30.0				
Indane	++++ 1.0760	++++ 0.9392	0.9630 0.8123	0.9316 1.1012	1.0002 1.0990	Ave		0.9903			10.1		30.0				
1,2-Dichlorobenzene	++++ 0.7440	++++ 0.6621	0.6671 0.5878	0.6607 0.8263	0.7087 0.8754	Ave		0.7165			13.3		30.0				
Butylbenzene	++++ 1.4543	++++ 1.1174	1.2268 1.0412	1.2695 1.4208	1.3939 1.3499	Ave		1.2768			11.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.9217	++++ 0.8188	0.7590 0.7206	0.7567 0.9791	0.8625 0.9878	Ave		0.8508			12.2		30.0				
Undecane	++++ 0.9412	0.7138 0.7639	0.7854 0.6439	0.8623 0.8142	0.9777 0.7859	Ave		0.8098			13.0		30.0				
1,2-Dibromo-3-Chloropropane	0.2667 0.3713	0.2609 0.3380	0.2709 0.2859	0.2620 ++++	0.3145 ++++	Ave		0.2963			13.8		30.0				
1,2,4,5-Tetramethylbenzene	++++ 1.3103	++++ 1.1118	1.0041 0.8463	1.0551 1.2653	1.2570 1.2867	Ave		1.1421			14.5		30.0				
Dodecane	++++ 0.7978	0.6003 0.5688	0.6899 0.3858	0.7041 0.5331	0.8370 ++++	Ave		0.6396			23.1		30.0				
1,2,4-Trichlorobenzene	++++ 0.6436	0.5319 0.5457	0.4906 0.4989	0.4888 0.6587	0.5772 0.6483	Ave		0.5649			12.4		30.0				
Naphthalene	++++ 1.4994	1.1580 1.2044	1.1489 0.9653	1.0861 1.2974	1.4202 1.3257	Ave		1.2339			13.6		30.0				
Hexachlorobutadiene	++++ 0.6448	++++ 0.5763	0.5100 0.5363	0.5070 0.7409	0.5745 0.7482	Ave		0.6047			16.0		30.0				
1,2,3-Trichlorobenzene	++++ 0.6283	0.5060 0.4951	0.4846 0.4151	0.4581 0.5663	0.5627 0.3728	Ave		0.4988			15.9		30.0				
2-Methylnaphthalene	++++ 0.9181	0.6422 0.5284	0.5584 0.3836	0.4778 0.4940	0.8101 ++++	Ave		0.6016			29.9		50.0				
1-Methylnaphthalene	++++ 1.1220	0.8380 0.6213	0.6877 0.4374	0.6391 0.5433	1.0085 ++++	Ave		0.7372			31.8		50.0				
4-Bromofluorobenzene (Surr)	0.7946 0.8130	0.8076 0.7824	0.8238 0.7807	0.8163 0.9039	0.8357 0.8386	Ave		0.8196			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 261958	++++ 518289	21711 1076565	42570 1857884	107824 3550370	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 149007	++++ 290483	++++ 602545	27727 1017511	60077 1877999	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 428033	++++ 858049	32728 1783528	68237 3014742	169908 6045892	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 46960	++++ 92605	++++ 191831	8660 316575	19699 606292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 249678	++++ 512846	19448 1074243	39319 1637176	98572 3657066	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	3911 156203	6583 313945	12737 657162	25449 1048926	62942 2151077	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 277412	++++ 542597	++++ 1129098	47326 1835688	114610 3783292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 127206	++++ 257490	++++ 544660	19602 873952	50104 1817509	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 138169	++++ 281926	12169 593804	21546 903575	54574 2043364	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 77933	++++ 156493	6344 327330	12373 519647	31401 1128580	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 296853	++++ 808553	++++ 1261075	66636 2449308	143467 5299467	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 130640	++++ 265901	10174 568659	20331 824429	51677 1944996	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 203924	++++ 402287	++++ 832948	31631 1264951	82259 2833506	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 422050	16790 848836	31414 1773236	63826 2796331	166966 6214752	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	++++ 39091	++++ 73107	++++ 147180	++++ 259717	14239 517814	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 61491	++++ 127125	++++ 226910	++++ 390809	7481 862471	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetone	CBM	Ave	++++ 220327	++++ 398773	++++ 665956	++++ 1097098	86023 2321110	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 28000	++++ 56204	++++ 114279	++++ 175439	11269 384054	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 502108	++++ 1108992	++++ 1652685	++++ 3057291	79400 6999063	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 194355	++++ 387640	++++ 655797	++++ 1111229	76885 2395844	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	3049 147877	5250 292909	11039 633007	21196 889868	56607 2050200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 104178	++++ 213988	++++ 390689	++++ 666078	7623 1491458	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 322940	++++ 644340	++++ 1332511	++++ 1919761	47135 4249014	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 237979	++++ 483244	++++ 773470	++++ 1347387	35554 3367365	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 158748	++++ 297663	++++ 587875	++++ 829908	39858 72672	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 ++++
3-Chloropropene	CBM	Ave	++++ 172933	++++ 352711	++++ 715500	++++ 1138278	14784 2516658	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 454099	++++ 893782	++++ 1857677	++++ 2686894	33755 6209652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 152597	++++ 304618	++++ 640390	++++ 904134	21313 2041028	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 425850	++++ 850675	++++ 1727313	++++ 2608750	32181 5477445	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 436887	++++ 884523	++++ 1553256	++++ 2571313	31073 5756531	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	6185 301902	11544 617142	22407 1197700	44696 1866128	117133 4143029	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 421041	++++ 920626	++++ 1610829	++++ 2825655	59807 6134377	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 139897	++++ 280600	++++ 564091	++++ 836832	10084 1774150	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 71674	++++ 137814	++++ 242448	++++ 408724	10552 870000	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	3051 153350	5311 314771	10779 630074	22108 933768	57247 2161860	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 367561	++++ 727588	25120 1268094	49778 2287831	134280 4857969	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	7168 346742	12869 705235	25085 1383523	52455 2190241	132214 4960016	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 196936	++++ 392928	++++ 687510	27618 1192762	73368 2547299	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7734 377403	13331 774289	27166 1509577	55384 2393121	145486 5471084	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4547 232618	8382 490730	17516 952640	35324 1548479	87574 3502141	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 82609	++++ 165738	++++ 330488	12681 486357	31319 1042096	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 444635	15963 906736	33352 1771104	65637 2614755	167643 5593459	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	6601 372817	11874 761689	24215 1552321	50848 2465819	138991 5358444	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 59954	++++ 111445	++++ 184294	8226 331158	22433 786825	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 118426	++++ 240541	8397 465638	17105 690034	45390 1499809	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 249671	++++ 526684	18410 1043094	37543 1556455	95028 3566561	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	17363 868592	31627 1711484	63694 3264805	129920 5087913	336411 11120269	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 174693	++++ 357021	13419 694408	26105 1074435	66081 2411618	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 170338	6605 354326	12771 653599	25661 1061646	64714 2334951	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4087 194217	7238 411429	13973 832705	28091 1212507	74264 2837545	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 172040	++++ 363939	++++ 729198	27744 1170568	67675 2672665	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 346754	++++ 745629	23694 1472126	48577 2394105	129879 5512449	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 36737	++++ 120654	++++ 174155	8684 331358	19464 783489	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 232640	++++ 470252	++++ 823262	27631 1502138	81302 3304265	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	5664 305916	11041 613752	21112 1192238	44641 1790104	116952 4193256	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 377024	++++ 689509	24146 916498	51311 2161661	143236 5370174	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 265941	8857 558061	18964 1060593	38186 1693124	96201 3656415	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 249246	8494 528240	18209 983862	34634 1678819	93722 3876912	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	9759 514273	18809 1073072	37560 1966647	75222 3139180	192974 7445292	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2849 160780	5479 322166	11656 599648	23218 982519	60205 2274200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 175250	++++ 293749	10295 417616	22692 941298	65409 2558380	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 186587	++++ 377410	13108 732239	26877 1119383	73243 2627265	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	CBZd 5	Ave	++++ 1842861	++++ 3737320	++++ 7125919	278341 11514382	716916 26057226	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	++++ 313050	++++ 676985	19680 1357226	39627 2191805	110810 5334244	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 273278	++++ 576579	17903 1102407	37712 1772227	99001 4168790	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3665 191154	6973 394783	13185 776709	28219 1207845	72561 2883889	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	7137 406499	13951 832085	29142 1543553	58935 2444395	157211 5914764	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	++++ 719275	24780 1456098	48941 2578598	102987 4329132	272217 10330192	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	17235 1128063	36147 2267354	79756 3963090	160595 6728239	425545 16015024	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd 5	Ave	++++ 396249	13596 785625	27868 1455379	57416 2300427	151720 4997986	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd 5	Ave	++++ 288479	++++ 647774	16038 1258109	32352 2180538	93899 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Styrene	CBZd 5	Ave	++++ 379313	++++ 797396	22430 1440043	46527 2475003	134724 6272582	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	++++ 577831	18010 1183498	40418 2069274	85176 3507204	219991 8652988	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	++++ 388902	++++ 791220	26816 1406346	52217 2507616	146757 5342402	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 123267	++++ 249431	8767 448013	16530 809328	45222 1801458	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 770189	++++ 1569505	25754 2749199	53331 4984665	108667 11018383	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	++++ 208028	++++ 425975	14187 750579	27021 1348899	77981 3034911	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 190674	6524 376201	13286 679618	26657 1211506	71471 2747919	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	++++ 757218	++++ 1579790	52613 2762937	100995 4977060	288122 11171652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	++++ 298107	++++ 615118	20417 1079746	39553 1917273	109634 4410950	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 294414	++++ 619837	++++ 1139797	33405 2186650	99545 4845121	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 491714	16235 955171	34455 1652838	72566 2938778	189531 6027860	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	++++ 674397	++++ 1354211	44314 2326877	90284 4505713	239278 9821979	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 670745	++++ 1320347	44184 2282446	89238 4407169	236361 9493306	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	++++ 963943	++++ 1895656	62984 3335709	130314 6189211	346547 13052688	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7122 429682	13761 870050	27898 1597433	57634 3038807	153722 6998909	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 595380	++++ 1199239	35336 2207883	71441 4112439	206433 9093386	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7701 436204	14670 882709	28727 1608243	58838 3081288	154004 7120026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	++++ 779650	++++ 1524715	46995 2715440	99360 5104026	272972 11067094	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	8305 664909	18233 1328651	41757 2356435	88511 ++++	235583 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Indane	CBZd 5	Ave	++++ 602700	++++ 1193709	39872 2118687	79681 3956160	207350 8865173	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 416753	++++ 841536	27621 1533100	56506 2968700	146910 7061726	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	++++ 814617	23860 1547638	50796 2715683	108576 5104411	288957 10889558	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 516302	++++ 1040605	31427 1879451	64720 3517487	178805 7968258	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 527231	15243 970873	32520 1679521	73748 2924996	202684 6339976	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2927 207960	5571 429617	11218 745616	22412 ++++	65206 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 733964	++++ 1413004	41572 2207453	90241 4545804	260569 10379759	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 446881	12818 722978	28563 1006221	60222 1915343	173512 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 360521	11357 693552	20313 1301208	41810 2366361	119662 5229906	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 839854	24728 1530726	47569 2517870	92896 4661002	294401 10693857	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 361175	++++ 732431	21118 1398696	43365 2661640	119102 6035243	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 351962	10806 629244	20063 1082671	39185 2034470	116648 3007302	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 514300	13713 671591	23120 1000580	40866 1774929	167946 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 628512	17895 789694	28473 1141032	54667 1951995	209066 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1743947 1821597	1724522 1988683	1705365 2036360	1745466 1623678	1732344 1691157	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	12.7						50			
Propene	+++++	+++++	+++++	23.1						50		
Dichlorodifluoromethane	+++++	+++++	5.1						50			
Chloromethane	+++++	+++++	+++++	21.0						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	6.9						50			
Vinyl chloride	21.8						50					
Butane	+++++	+++++	+++++	13.3						50		
1,3-Butadiene	+++++	+++++	+++++	2.3						50		
Bromomethane	+++++	+++++	18.9						50			
Chloroethane	+++++	+++++	11.2						50			
Ethanol	+++++	+++++	+++++	22.9						50		
Vinyl bromide	+++++	+++++	7.3						50			
2-Methylbutane	+++++	+++++	+++++	5.5						50		
Trichlorofluoromethane	+++++	5.4						50				

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AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	+++++	-1.1							50
Acetonitrile	+++++	+++++	+++++	-12.8						50		
Acetone	+++++	+++++	+++++	+++++	18.4							80
Pentane	+++++	+++++	+++++	+++++	5.4							50
Isopropyl alcohol	+++++	+++++	+++++	7.2						50		
Ethyl ether	+++++	+++++	+++++	+++++	10.7							50
1,1-Dichloroethene	8.4						50					
Acrylonitrile	+++++	+++++	6.3						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.9						50				
tert-Butyl alcohol	+++++	+++++	+++++	5.2								50
Methylene Chloride	+++++	+++++	+++++	57.6 +++++								80
3-Chloropropene	+++++	+++++	14.8						50			
Carbon disulfide	+++++	+++++	7.1						50			
trans-1,2-Dichloroethene	+++++	-2.1						50				
2-Methylpentane	+++++	+++++	8.2						50			
Methyl tert-butyl ether	+++++	-8.6						50				
1,1-Dichloroethane	6.8						50					
Vinyl acetate	+++++	+++++	0.8						50			
Hexane	+++++	+++++	5.2						50			
2-Butanone (MEK)	+++++	+++++	+++++	8.0						50		
cis-1,2-Dichloroethene	5.8						50					

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AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	3.1						50			
Chloroform	7.6						50					
Tetrahydrofuran	+++++	+++++	+++++	1.2						50		
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	-0.5						50					
Cyclohexane	+++++	+++++	+++++	5.2						50		
Benzene	+++++	-0.4						50				
Carbon tetrachloride	-4.8						50					
1-Butanol	+++++	+++++	+++++	0.2							50	
2,3-Dimethylpentane	+++++	+++++	6.9						50			
Thiophene	+++++	+++++	6.3						50			
2,2,4-Trimethylpentane	6.0						50					
Heptane	+++++	+++++	12.0						50			
1,2-Dichloropropane	+++++	4.8						50				
Trichloroethene	7.3						50					
Dibromomethane	+++++	+++++	+++++	2.1						50		
Bromodichloromethane	+++++	+++++	-2.7						50			
1,4-Dioxane	+++++	+++++	+++++	13.9						50		
Methyl methacrylate	+++++	+++++	+++++	-16.1						50		
Methylcyclohexane	-1.0						50					
4-Methyl-2-pentanone (MIBK)	+++++	+++++	3.0						50			

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 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.6						50				
trans-1,3-Dichloropropene	+++++	-7.7						50				
Toluene	1.0						50					
1,1,2-Trichloroethane	-3.3						50					
2-Hexanone	+++++	+++++	-5.8						50			
Octane	+++++	+++++	0.0						50			
Dibromochloromethane	+++++	+++++	-12.7						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-7.1						50			
Tetrachloroethene	1.1						50					
Chlorobenzene	-4.9						50					
Ethylbenzene	+++++	-3.0						50				
m-Xylene & p-Xylene	-14.2						50					
Nonane	+++++	-2.2						50				
Bromoform	+++++	+++++	-18.6		+++++				50			
Styrene	+++++	+++++	-14.3						50			
o-Xylene	+++++	-12.6						50				
1,1,2,2-Tetrachloroethane	+++++	+++++	0.0						50			
1,2,3-Trichloropropane	+++++	+++++	2.1						50			
Isopropylbenzene	+++++	-6.2						50				
Propylbenzene	+++++	+++++	-1.4						50			
2-Chlorotoluene	+++++	-3.8						50				

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Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	+++++	+++++	-1.0						50			
1,3,5-Trimethylbenzene	+++++	+++++	-1.3						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-22.6						50		
Decane	+++++	-4.7						50				
tert-Butylbenzene	+++++	+++++	-3.9						50			
1,2,4-Trimethylbenzene	+++++	+++++	-2.6						50			
sec-Butylbenzene	+++++	+++++	-3.0						50			
1,3-Dichlorobenzene	-9.4						50					
Benzyl chloride	+++++	+++++	-12.6						50			
1,4-Dichlorobenzene	-4.4						50					
4-Isopropyltoluene	+++++	+++++	-9.5						50			
1,2,3-Trimethylbenzene	-23.6		+++++	+++++			50					
Indane	+++++	+++++	-2.8						50			
1,2-Dichlorobenzene	+++++	+++++	-6.9						50			
Butylbenzene	+++++	-12.5							50			
Indene	+++++	+++++	-10.8						50			
Undecane	+++++	-11.9							50			
1,2-Dibromo-3-Chloropropane	-10.0		+++++	+++++			50					
1,2,4,5-Tetramethylbenzene	+++++	+++++	-12.1						50			
Dodecane	+++++	-6.1		+++++					50			
1,2,4-Trichlorobenzene	+++++	-5.8							50			

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SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-6.2						80				
Hexachlorobutadiene	+++++	+++++	-15.7						50			
1,2,3-Trichlorobenzene	+++++	1.5						50				
2-Methylnaphthalene	+++++	6.7		+++++				80				
1-Methylnaphthalene	+++++	13.7		+++++				80				

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 06/21/2017 17:00
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/21/2017 22:43
 Lab File ID: GA11ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.7395	0.6739			2.00	-8.9	35.0
3-Methylthiophene	Ave	0.7319	0.6589			2.00	-10.0	35.0
2-Ethylthiophene	Ave	0.9478	0.8011			2.00	-15.5	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.8235			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.8516	0.6095			2.00	-28.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.167	0.8355			2.00	-28.4	35.0
Benzo (b) thiophene	Ave	1.068	0.7208			2.00	-32.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.638		2.01	2.00	0.7	35.0
Propene	Ave	1.463	1.485		2.03	2.00	1.5	35.0
Dichlorodifluoromethane	Ave	4.235	4.340		2.05	2.00	2.5	35.0
Chloromethane	Ave	0.4649	0.4832		2.08	2.00	3.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.577		2.08	2.00	4.1	35.0
Acetaldehyde	Ave	0.5987	0.4752		7.94	10.0	-20.6	35.0
Vinyl chloride	Ave	1.611	1.638		2.03	2.00	1.7	35.0
1,3-Butadiene	Ave	1.245	1.289		2.07	2.00	3.6	35.0
Butane	Ave	2.712	2.809		2.07	2.00	3.5	35.0
Bromomethane	Ave	1.392	1.376		1.98	2.00	-1.1	35.0
Chloroethane	Ave	0.7761	0.7850		2.02	2.00	1.1	35.0
Ethanol	Ave	0.7042	0.5103		7.25	10.0	-27.5	35.0
Vinyl bromide	Ave	1.290	1.377		2.13	2.00	6.7	35.0
2-Methylbutane	Ave	1.947	1.999		2.05	2.00	2.7	35.0
Trichlorofluoromethane	Ave	4.152	4.112		1.98	2.00	-1.0	35.0
Acrolein	Ave	0.3574	0.2736		1.53	2.00	-23.4	35.0
Acetonitrile	Ave	0.5574	0.4415		1.58	2.00	-20.8	35.0
Acetone	Ave	0.6013	0.5234		1.74	2.00	-13.0	35.0
Pentane	Ave	0.2653	0.2805		2.11	2.00	5.7	35.0
Isopropyl alcohol	Ave	1.603	1.950		2.43	2.00	21.6	35.0
Ethyl ether	Ave	1.725	1.471		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.412	1.470		2.08	2.00	4.1	35.0
Acrylonitrile	Ave	0.9747	0.8590		1.76	2.00	-11.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.092		2.02	2.00	1.0	35.0
tert-Butyl alcohol	Ave	2.196	2.417		2.20	2.00	10.0	35.0
Methylene Chloride	Ave	1.643	1.409		1.72	2.00	-14.2	35.0
3-Chloropropene	Ave	1.751	1.584		1.81	2.00	-9.6	35.0
Carbon disulfide	Ave	4.284	4.357		2.03	2.00	1.7	35.0
trans-1,2-Dichloroethene	Ave	1.414	1.448		2.05	2.00	2.4	35.0
2-Methylpentane	Ave	4.045	3.765		1.86	2.00	-6.9	35.0
Methyl tert-butyl ether	Ave	3.932	3.361		1.71	2.00	-14.5	35.0
1,1-Dichloroethane	Ave	2.906	2.821		1.94	2.00	-2.9	35.0
Vinyl acetate	Ave	4.034	3.285		1.63	2.00	-18.6	35.0
2-Butanone (MEK)	Ave	0.6347	0.5473		1.72	2.00	-13.8	35.0
Hexane	Ave	1.304	1.314		2.02	2.00	0.8	35.0
Isopropyl ether	Ave	4.992	4.538		1.82	2.00	-9.1	35.0
cis-1,2-Dichloroethene	Ave	1.447	1.467		2.03	2.00	1.4	35.0
Ethyl acetate	Ave	3.312	2.660		1.61	2.00	-19.7	35.0
Chloroform	Ave	3.344	3.175		1.90	2.00	-5.1	35.0
Tert-butyl ethyl ether	Ave	4.607	3.821		1.66	2.00	-17.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.483		1.67	2.00	-16.3	35.0
1,1,1-Trichloroethane	Ave	3.620	3.468		1.92	2.00	-4.2	35.0
1,2-Dichloroethane	Ave	0.3910	0.3830		1.96	2.00	-2.1	35.0
Cyclohexane	Ave	0.1314	0.1432		2.18	2.00	8.9	35.0
Benzene	Ave	0.7153	0.7639		2.14	2.00	6.8	35.0
Carbon tetrachloride	Ave	0.5933	0.6444		2.17	2.00	8.6	35.0
1-Butanol	Ave	0.0896	0.1078		2.41	2.00	20.4	35.0
2,3-Dimethylpentane	Ave	0.1886	0.1955		2.07	2.00	3.6	35.0
Thiophene	Ave	0.4156	0.4158		2.00	2.00	0.0	35.0
2,2,4-Trimethylpentane	Ave	1.401	1.433		2.05	2.00	2.3	35.0
Heptane	Ave	0.2875	0.2905		2.02	2.00	1.0	35.0
1,2-Dichloropropane	Ave	0.2813	0.2642		1.88	2.00	-6.1	35.0
Trichloroethene	Ave	0.3257	0.3391		2.08	2.00	4.1	35.0
Dibromomethane	Ave	0.2963	0.2956		2.00	2.00	-0.2	35.0
Bromodichloromethane	Ave	0.5843	0.5891		2.02	2.00	0.8	35.0
1,4-Dioxane	Ave	0.0832	0.0836		2.01	2.00	0.5	35.0
Methyl methacrylate	Ave	0.3595	0.3109		1.73	2.00	-13.5	35.0
Methylcyclohexane	Ave	0.4896	0.6141		2.51	2.00	25.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.5532		1.96	2.00	-1.8	35.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4212		1.97	2.00	-1.5	35.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4178		1.94	2.00	-3.1	35.0
Toluene	Ave	0.8801	0.8270		1.88	2.00	-6.0	35.0
1,1,2-Trichloroethane	Ave	0.2685	0.2546		1.90	2.00	-5.2	35.0
2-Hexanone	Ave	0.2641	0.2800		2.12	2.00	6.0	35.0
Octane	Ave	0.3165	0.3309		2.09	2.00	4.5	35.0
Dibromochloromethane	Ave	0.5446	0.5759		2.12	2.00	5.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4594		1.97	2.00	-1.3	35.0
Tetrachloroethene	Ave	0.3302	0.3391		2.05	2.00	2.7	35.0
2,3-Dimethylheptane	Ave	1.076	0.9762		1.82	2.00	-9.2	35.0
Chlorobenzene	Ave	0.6841	0.6891		2.01	2.00	0.7	35.0
Ethylbenzene	Ave	1.196	1.091		1.82	2.00	-8.8	35.0
m-Xylene & p-Xylene	Ave	0.9148	0.8433		3.69	4.00	-7.8	35.0
Nonane	Ave	0.6507	0.6606		2.03	2.00	1.5	35.0
Bromoform	Ave	0.4761	0.5196		2.18	2.00	9.1	35.0
Styrene	Ave	0.6323	0.5922		1.87	2.00	-6.3	35.0
o-Xylene	Ave	0.9646	0.8608		1.78	2.00	-10.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5907		1.82	2.00	-8.8	35.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	35.0
Isopropylbenzene	Ave	1.286	1.176		1.83	2.00	-8.5	35.0
Propylbenzene	Ave	0.3476	0.3186		1.83	2.00	-8.3	35.0
2-Chlorotoluene	Ave	0.3175	0.3028		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.090		1.70	2.00	-15.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4983		2.00	2.00	-0.2	35.0
Alpha Methyl Styrene	Ave	0.5043	0.4358		1.73	2.00	-13.6	35.0
Decane	Ave	0.7982	0.7703		1.93	2.00	-3.5	35.0
tert-Butylbenzene	Ave	1.114	0.998		1.79	2.00	-10.4	35.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9651		1.76	2.00	-11.9	35.0
sec-Butylbenzene	Ave	1.569	1.417		1.81	2.00	-9.7	35.0
1,3-Dichlorobenzene	Ave	0.7160	0.6664		1.86	2.00	-6.9	35.0
Benzyl chloride	Ave	0.9762	0.8908		1.83	2.00	-8.7	35.0
1,4-Dichlorobenzene	Ave	0.7344	0.6695		1.82	2.00	-8.8	35.0
4-Isopropyltoluene	Ave	1.255	1.122		1.79	2.00	-10.6	35.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.7182		1.45	2.00	-27.5	35.0
Butylcyclohexane	Ave	0.9039	0.8456		1.87	2.00	-6.5	35.0
Indane	Ave	0.9903	0.8594		1.74	2.00	-13.2	35.0
1,2-Dichlorobenzene	Ave	0.7165	0.6343		1.77	2.00	-11.5	35.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	35.0
Indene	Ave	0.8508	0.6491		1.53	2.00	-23.7	35.0
Undecane	Ave	0.8098	0.7744		1.91	2.00	-4.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.2570		1.73	2.00	-13.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.013		1.77	2.00	-11.3	35.0
Dodecane	Ave	0.6396	0.6522		2.04	2.00	2.0	35.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5328		1.89	2.00	-5.7	35.0
Naphthalene	Ave	1.234	1.234		2.00	2.00	0.0	35.0
Hexachlorobutadiene	Ave	0.6047	0.5411		1.79	2.00	-10.5	35.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.5256		2.11	2.00	5.4	35.0
2-Methylnaphthalene	Ave	0.6016	0.6997		2.33	2.00	16.3	50.0
1-Methylnaphthalene	Ave	0.7372	0.8235		2.23	2.00	11.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8145		3.97	4.00	-0.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.652		2.02	2.00	1.2	30.0
Propene	Ave	1.463	1.534		2.10	2.00	4.8	30.0
Dichlorodifluoromethane	Ave	4.235	4.356		2.06	2.00	2.9	30.0
Chloromethane	Ave	0.4649	0.4693		2.02	2.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.404		1.94	2.00	-2.9	30.0
Acetaldehyde	Ave	0.5987	0.5225		8.73	10.0	-12.7	30.0
Vinyl chloride	Ave	1.611	1.586		1.97	2.00	-1.5	30.0
1,3-Butadiene	Ave	1.245	1.283		2.06	2.00	3.0	30.0
Butane	Ave	2.712	2.755		2.03	2.00	1.6	30.0
Bromomethane	Ave	1.392	1.313		1.89	2.00	-5.7	30.0
Chloroethane	Ave	0.7761	0.7469		1.92	2.00	-3.8	30.0
Ethanol	Ave	0.7042	0.7541		10.7	10.0	7.1	30.0
Vinyl bromide	Ave	1.290	1.209		1.87	2.00	-6.3	30.0
2-Methylbutane	Ave	1.947	1.895		1.95	2.00	-2.7	30.0
Trichlorofluoromethane	Ave	4.152	4.042		1.95	2.00	-2.7	30.0
Acrolein	Ave	0.3574	0.3194		1.79	2.00	-10.6	30.0
Acetonitrile	Ave	0.5574	0.5302		1.90	2.00	-4.9	30.0
Acetone	Ave	0.6013	0.4988		4.98	6.00	-17.0	30.0
Pentane	Ave	0.2653	0.2565		1.93	2.00	-3.3	30.0
Isopropyl alcohol	Ave	1.603	1.779		6.66	6.00	10.9	30.0
Ethyl ether	Ave	1.725	1.691		1.96	2.00	-2.0	30.0
1,1-Dichloroethene	Ave	1.412	1.514		2.14	2.00	7.2	30.0
Acrylonitrile	Ave	0.9747	0.9432		1.94	2.00	-3.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.167		2.07	2.00	3.5	30.0
tert-Butyl alcohol	Ave	2.196	2.812		2.56	2.00	28.0	30.0
Methylene Chloride	Ave	1.643	1.484		1.81	2.00	-9.7	30.0
3-Chloropropene	Ave	1.751	1.648		1.88	2.00	-5.9	30.0
Carbon disulfide	Ave	4.284	4.628		2.16	2.00	8.0	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.521		2.15	2.00	7.6	30.0
2-Methylpentane	Ave	4.045	4.401		2.18	2.00	8.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.883		1.97	2.00	-1.3	30.0
1,1-Dichloroethane	Ave	2.906	2.982		2.05	2.00	2.6	30.0
Vinyl acetate	Ave	4.034	3.919		1.94	2.00	-2.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.6318		1.99	2.00	-0.5	30.0
Hexane	Ave	1.304	1.409		2.16	2.00	8.1	30.0
Isopropyl ether	Ave	4.992	5.130		2.06	2.00	2.8	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.511		2.09	2.00	4.4	30.0
Ethyl acetate	Ave	3.312	3.321		2.01	2.00	0.3	30.0
Chloroform	Ave	3.344	3.351		2.00	2.00	0.2	30.0
Tert-butyl ethyl ether	Ave	4.607	4.651		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.780		2.01	2.00	0.4	30.0
1,1,1-Trichloroethane	Ave	3.620	3.686		2.04	2.00	1.8	30.0
1,2-Dichloroethane	Ave	0.3910	0.3917		2.00	2.00	0.2	30.0
Cyclohexane	Ave	0.1314	0.1477		2.25	2.00	12.4	30.0
Benzene	Ave	0.7153	0.7399		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6573		2.22	2.00	10.8	30.0
1-Butanol	Ave	0.0896	0.1263		2.82	2.00	41.0*	30.0
2,3-Dimethylpentane	Ave	0.1886	0.2098		2.22	2.00	11.2	30.0
Thiophene	Ave	0.4156	0.4526		2.18	2.00	8.9	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.515		2.16	2.00	8.2	30.0
Heptane	Ave	0.2875	0.3131		2.18	2.00	8.9	30.0
1,2-Dichloropropane	Ave	0.2813	0.2865		2.04	2.00	1.8	30.0
Trichloroethene	Ave	0.3257	0.3404		2.09	2.00	4.5	30.0
Dibromomethane	Ave	0.2963	0.3076		2.08	2.00	3.8	30.0
Bromodichloromethane	Ave	0.5843	0.6356		2.18	2.00	8.8	30.0
1,4-Dioxane	Ave	0.0832	0.1054		2.53	2.00	26.7	30.0
Methyl methacrylate	Ave	0.3595	0.3845		2.14	2.00	7.0	30.0
Methylcyclohexane	Ave	0.4896	0.5279		2.16	2.00	7.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.6430		2.28	2.00	14.2	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4641		2.17	2.00	8.5	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4612		2.14	2.00	7.0	30.0
Toluene	Ave	0.8801	0.8908		2.02	2.00	1.2	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2829		2.11	2.00	5.3	30.0
2-Hexanone	Ave	0.2641	0.3188		2.41	2.00	20.7	30.0
Octane	Ave	0.3165	0.3439		2.17	2.00	8.7	30.0
Dibromochloromethane	Ave	0.5446	0.5989		2.20	2.00	10.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4929		2.12	2.00	5.8	30.0
Tetrachloroethene	Ave	0.3302	0.3406		2.06	2.00	3.1	30.0
2,3-Dimethylheptane	Ave	1.076	1.161		2.16	2.00	8.0	30.0
Chlorobenzene	Ave	0.6841	0.7203		2.11	2.00	5.3	30.0
Ethylbenzene	Ave	1.196	1.211		2.03	2.00	1.3	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.9437		4.13	4.00	3.2	30.0
Nonane	Ave	0.6507	0.7098		2.18	2.00	9.1	30.0
Bromoform	Ave	0.4761	0.5476		2.30	2.00	15.0	30.0
Styrene	Ave	0.6323	0.6714		2.12	2.00	6.2	30.0
o-Xylene	Ave	0.9646	0.9910		2.05	2.00	2.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.6633		2.05	2.00	2.4	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.2051		1.98	2.00	-1.2	30.0
Isopropylbenzene	Ave	1.286	1.274		1.98	2.00	-1.0	30.0
Propylbenzene	Ave	0.3476	0.3424		1.97	2.00	-1.5	30.0
2-Chlorotoluene	Ave	0.3175	0.3184		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.295		2.02	2.00	0.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4918		1.97	2.00	-1.5	30.0
Alpha Methyl Styrene	Ave	0.5043	0.5202		2.06	2.00	3.1	30.0
Decane	Ave	0.7982	0.8625		2.16	2.00	8.1	30.0
tert-Butylbenzene	Ave	1.114	1.103		1.98	2.00	-1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.096	1.089		1.99	2.00	-0.6	30.0
sec-Butylbenzene	Ave	1.569	1.580		2.01	2.00	0.7	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.7287		2.04	2.00	1.8	30.0
Benzyl chloride	Ave	0.9762	1.033		2.12	2.00	5.8	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.7367		2.01	2.00	0.3	30.0
4-Isopropyltoluene	Ave	1.255	1.277		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	1.101		2.22	2.00	11.1	30.0
Butylcyclohexane	Ave	0.9039	0.9644		2.13	2.00	6.7	30.0
Indane	Ave	0.9903	0.9865		1.99	2.00	-0.4	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.7004		1.95	2.00	-2.3	30.0
Butylbenzene	Ave	1.277	1.325		2.08	2.00	3.8	30.0
Indene	Ave	0.8508	0.8688		2.04	2.00	2.1	30.0
Undecane	Ave	0.8098	0.8597		2.12	2.00	6.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3582		2.42	2.00	20.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.185		2.07	2.00	3.7	30.0
Dodecane	Ave	0.6396	0.6319		1.98	2.00	-1.2	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5181		1.83	2.00	-8.3	30.0
Naphthalene	Ave	1.234	1.197		1.94	2.00	-3.0	30.0
Hexachlorobutadiene	Ave	0.6047	0.5124		1.69	2.00	-15.3	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4625		1.85	2.00	-7.3	30.0
2-Methylnaphthalene	Ave	0.6016	0.4938		1.64	2.00	-17.9	50.0
1-Methylnaphthalene	Ave	0.7372	0.5485		1.49	2.00	-25.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8212		4.01	4.00	0.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27932/2 Calibration Date: 02/27/2019 13:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB27a.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.343		1.79	2.00	-10.6	30.0
Propene	Ave	1.463	1.318		1.80	2.00	-9.9	30.0
Dichlorodifluoromethane	Ave	4.235	4.000		1.89	2.00	-5.5	30.0
Chloromethane	Ave	0.4649	0.4249		1.83	2.00	-8.6	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.345		1.90	2.00	-5.2	30.0
Acetaldehyde	Ave	0.5987	0.5000		8.35	10.0	-16.5	30.0
Vinyl chloride	Ave	1.611	1.421		1.76	2.00	-11.8	30.0
1,3-Butadiene	Ave	1.245	1.150		1.85	2.00	-7.6	30.0
Butane	Ave	2.712	2.416		1.78	2.00	-10.9	30.0
Bromomethane	Ave	1.392	1.237		1.78	2.00	-11.1	30.0
Chloroethane	Ave	0.7761	0.6871		1.77	2.00	-11.5	30.0
Ethanol	Ave	0.7042	0.6514		9.25	10.0	-7.5	30.0
Vinyl bromide	Ave	1.290	1.177		1.82	2.00	-8.8	30.0
2-Methylbutane	Ave	1.947	1.713		1.76	2.00	-12.0	30.0
Trichlorofluoromethane	Ave	4.152	3.892		1.87	2.00	-6.3	30.0
Acrolein	Ave	0.3574	0.3013		1.69	2.00	-15.7	30.0
Acetonitrile	Ave	0.5574	0.4750		1.70	2.00	-14.8	30.0
Acetone	Ave	0.6013	0.4639		4.63	6.00	-22.8	30.0
Pentane	Ave	0.2653	0.2431		1.83	2.00	-8.4	30.0
Isopropyl alcohol	Ave	1.603	1.541		5.77	6.00	-3.9	30.0
Ethyl ether	Ave	1.725	1.461		1.69	2.00	-15.3	30.0
1,1-Dichloroethene	Ave	1.412	1.436		2.03	2.00	1.7	30.0
Acrylonitrile	Ave	0.9747	0.8816		1.81	2.00	-9.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.101		2.03	2.00	1.3	30.0
tert-Butyl alcohol	Ave	2.196	2.381		2.17	2.00	8.4	30.0
Methylene Chloride	Ave	1.643	1.422		1.73	2.00	-13.4	30.0
3-Chloropropene	Ave	1.751	1.640		1.87	2.00	-6.3	30.0
Carbon disulfide	Ave	4.284	4.332		2.02	2.00	1.1	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.473		2.08	2.00	4.2	30.0
2-Methylpentane	Ave	4.045	4.117		2.04	2.00	1.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.532		1.80	2.00	-10.2	30.0
1,1-Dichloroethane	Ave	2.906	2.958		2.04	2.00	1.8	30.0
Vinyl acetate	Ave	4.034	3.636		1.80	2.00	-9.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.5868		1.85	2.00	-7.5	30.0
Hexane	Ave	1.304	1.351		2.07	2.00	3.6	30.0
Isopropyl ether	Ave	4.992	4.608		1.85	2.00	-7.7	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.522		2.11	2.00	5.3	30.0
Ethyl acetate	Ave	3.312	2.968		1.79	2.00	-10.4	30.0
Chloroform	Ave	3.344	3.357		2.01	2.00	0.4	30.0
Tert-butyl ethyl ether	Ave	4.607	4.184		1.82	2.00	-9.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27932/2 Calibration Date: 02/27/2019 13:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB27a.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.592		1.80	2.00	-10.2	30.0
1,1,1-Trichloroethane	Ave	3.620	3.695		2.04	2.00	2.1	30.0
1,2-Dichloroethane	Ave	0.3910	0.3874		1.98	2.00	-0.9	30.0
Cyclohexane	Ave	0.1314	0.1357		2.06	2.00	3.2	30.0
Benzene	Ave	0.7153	0.7400		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6334		2.14	2.00	6.8	30.0
1-Butanol	Ave	0.0896	0.1016		2.27	2.00	13.5	30.0
2,3-Dimethylpentane	Ave	0.1886	0.1975		2.09	2.00	4.7	30.0
Thiophene	Ave	0.4156	0.4425		2.13	2.00	6.5	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.412		2.02	2.00	0.8	30.0
Heptane	Ave	0.2875	0.2935		2.04	2.00	2.1	30.0
1,2-Dichloropropane	Ave	0.2813	0.2678		1.90	2.00	-4.8	30.0
Trichloroethene	Ave	0.3257	0.3360		2.06	2.00	3.1	30.0
Dibromomethane	Ave	0.2963	0.2999		2.02	2.00	1.2	30.0
Bromodichloromethane	Ave	0.5843	0.6016		2.06	2.00	3.0	30.0
1,4-Dioxane	Ave	0.0832	0.0945		2.27	2.00	13.7	30.0
Methyl methacrylate	Ave	0.3595	0.3261		1.81	2.00	-9.3	30.0
Methylcyclohexane	Ave	0.4896	0.5068		2.07	2.00	3.5	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.4971		1.77	2.00	-11.7	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4333		2.03	2.00	1.3	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4311		2.00	2.00	0.0	30.0
Toluene	Ave	0.8801	0.8538		1.94	2.00	-3.0	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2622		1.95	2.00	-2.3	30.0
2-Hexanone	Ave	0.2641	0.2523		1.91	2.00	-4.5	30.0
Octane	Ave	0.3165	0.3167		2.00	2.00	0.0	30.0
Dibromochloromethane	Ave	0.5446	0.5739		2.11	2.00	5.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4756		2.04	2.00	2.1	30.0
Tetrachloroethene	Ave	0.3302	0.3300		2.00	2.00	-0.0	30.0
2,3-Dimethylheptane	Ave	1.076	1.057		1.97	2.00	-1.7	30.0
Chlorobenzene	Ave	0.6841	0.6719		1.96	2.00	-1.8	30.0
Ethylbenzene	Ave	1.196	1.124		1.88	2.00	-6.0	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.8615		3.77	4.00	-5.8	30.0
Nonane	Ave	0.6507	0.6447		1.98	2.00	-0.9	30.0
Bromoform	Ave	0.4761	0.5205		2.19	2.00	9.3	30.0
Styrene	Ave	0.6323	0.6158		1.95	2.00	-2.6	30.0
o-Xylene	Ave	0.9646	0.9002		1.87	2.00	-6.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5939		1.83	2.00	-8.3	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	30.0
Isopropylbenzene	Ave	1.286	1.146		1.78	2.00	-10.9	30.0
Propylbenzene	Ave	0.3476	0.3083		1.77	2.00	-11.3	30.0
2-Chlorotoluene	Ave	0.3175	0.2967		1.87	2.00	-6.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27932/2 Calibration Date: 02/27/2019 13:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB27a.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.151		1.79	2.00	-10.3	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4446		1.78	2.00	-11.0	30.0
Alpha Methyl Styrene	Ave	0.5043	0.4618		1.83	2.00	-8.4	30.0
Decane	Ave	0.7982	0.7610		1.91	2.00	-4.7	30.0
tert-Butylbenzene	Ave	1.114	0.9896		1.78	2.00	-11.2	30.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9684		1.77	2.00	-11.6	30.0
sec-Butylbenzene	Ave	1.569	1.412		1.80	2.00	-10.0	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.6715		1.88	2.00	-6.2	30.0
Benzyl chloride	Ave	0.9762	0.9129		1.87	2.00	-6.5	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.6831		1.86	2.00	-7.0	30.0
4-Isopropyltoluene	Ave	1.255	1.146		1.83	2.00	-8.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.9859		1.99	2.00	-0.5	30.0
Butylcyclohexane	Ave	0.9039	0.8816		1.95	2.00	-2.5	30.0
Indane	Ave	0.9903	0.8909		1.80	2.00	-10.0	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.6395		1.79	2.00	-10.7	30.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	30.0
Indene	Ave	0.8508	0.7789		1.83	2.00	-8.4	30.0
Undecane	Ave	0.8098	0.7716		1.91	2.00	-4.7	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3190		2.15	2.00	7.7	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.063		1.86	2.00	-6.9	30.0
Dodecane	Ave	0.6396	0.5967		1.87	2.00	-6.7	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5036		1.78	2.00	-10.9	30.0
Naphthalene	Ave	1.234	1.133		1.84	2.00	-8.2	30.0
Hexachlorobutadiene	Ave	0.6047	0.5154		1.70	2.00	-14.8	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4541		1.82	2.00	-9.0	30.0
2-Methylnaphthalene	Ave	0.6016	0.5475		1.82	2.00	-9.0	50.0
1-Methylnaphthalene	Ave	0.7372	0.6256		1.70	2.00	-15.1	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.7809		3.81	4.00	-4.7	30.0

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27932/7
 Matrix: Air Lab File ID: GB27mb500.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 16:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27932/7
 Matrix: Air Lab File ID: GB27mb500.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 16:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27931/1002
 Matrix: Air Lab File ID: GCCVB26-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 11:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.07		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.22		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.02		0.080	0.015
67-66-3	Chloroform	119.38	2.00		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.09		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.06		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.05		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.00		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.14		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.03		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.81		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.97		0.40	0.068
91-20-3	Naphthalene	128.17	1.94		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.06		0.080	0.016
108-88-3	Toluene	92.14	2.02		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.15		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.83		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.04		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.11		0.080	0.021
79-01-6	Trichloroethene	131.39	2.09		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.22		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.99		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.97		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.97		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.18		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27932/1002
 Matrix: Air Lab File ID: GCCVB27a-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 13:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.07		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.14		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.79		0.080	0.015
67-66-3	Chloroform	119.38	2.01		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.11		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.89		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.04		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.98		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.03		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.88		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.73		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.80		0.40	0.068
91-20-3	Naphthalene	128.17	1.84		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.00		0.080	0.016
108-88-3	Toluene	92.14	1.94		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.08		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.78		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.04		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.95		0.080	0.021
79-01-6	Trichloroethene	131.39	2.06		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.99		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.77		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.78		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.76		0.040	0.029
1330-20-7	Xylenes, Total	106.17	5.64		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1

SDG No.: _____

Instrument ID: MG Start Date: 01/11/2019 12:24

Analysis Batch Number: 26755 End Date: 01/12/2019 04:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-26755/1		01/11/2019 12:24	1	GA11BLK1.D	RTX-5 0.32 (mm)
IC 140-26755/2		01/11/2019 13:08	1	GA11IC09.D	RTX-5 0.32 (mm)
IC 140-26755/6		01/11/2019 14:35	1	GA11IC10.D	RTX-5 0.32 (mm)
IC 140-26755/9		01/11/2019 16:46	1	GA11IC01.D	RTX-5 0.32 (mm)
IC 140-26755/10		01/11/2019 17:29	1	GA11IC02.D	RTX-5 0.32 (mm)
140-13809-A-1 MDLV		01/11/2019 17:29	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 17:29	1		RTX-5 0.32 (mm)
IC 140-26755/11		01/11/2019 18:12	1	GA11IC03.D	RTX-5 0.32 (mm)
140-13809-A-2 MDLV		01/11/2019 18:12	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:12	1		RTX-5 0.32 (mm)
IC 140-26755/12		01/11/2019 18:56	1	GA11IC04.D	RTX-5 0.32 (mm)
140-13809-A-3 MDLV		01/11/2019 18:56	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:56	1		RTX-5 0.32 (mm)
IC 140-26755/13		01/11/2019 19:40	1	GA11IC05.D	RTX-5 0.32 (mm)
140-13809-A-4 MDLV		01/11/2019 19:40	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 19:40	1		RTX-5 0.32 (mm)
IC 140-26755/14		01/11/2019 20:23	1	GA11IC06.D	RTX-5 0.32 (mm)
ICIS 140-26755/15		01/11/2019 21:07	1	GA11IC07.D	RTX-5 0.32 (mm)
IC 140-26755/16		01/11/2019 21:51	1	GA11IC08.D	RTX-5 0.32 (mm)
ICV 140-26755/18		01/11/2019 23:17	1	GA11ICV.D	RTX-5 0.32 (mm)
ZZZZZ		01/12/2019 04:26	1		RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1

SDG No.: _____

Instrument ID: MG Start Date: 02/26/2019 11:03

Analysis Batch Number: 27931 End Date: 02/27/2019 03:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27931/1		02/26/2019 11:03	1	GBFBB26.D	RTX-5 0.32 (mm)
CCVIS 140-27931/2		02/26/2019 11:35	1	GCCVB26.D	RTX-5 0.32 (mm)
LCS 140-27931/1002		02/26/2019 11:35	1	GCCVB26-LCS.d	RTX-5 0.32 (mm)
MB 140-27931/4		02/26/2019 12:56	1	G500BB26.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 13:42	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 15:56	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 16:38	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 17:19	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 18:01	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 19:24	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 20:06	1		RTX-5 0.32 (mm)
140-14389-1		02/26/2019 21:30	1	GB26P109.D	RTX-5 0.32 (mm)
140-14389-2		02/26/2019 22:13	1	GB26P110.D	RTX-5 0.32 (mm)
140-14389-3		02/26/2019 22:55	1	GB26P111.D	RTX-5 0.32 (mm)
140-14389-4		02/26/2019 23:37	1	GB26P112.D	RTX-5 0.32 (mm)
140-14389-5		02/27/2019 00:18	1	GB26P113.D	RTX-5 0.32 (mm)
140-14389-6		02/27/2019 01:00	1	GB26P114.D	RTX-5 0.32 (mm)
140-14389-7		02/27/2019 01:42	3.7	GB26P115.D	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 02:23	1		RTX-5 0.32 (mm)
140-14389-8		02/27/2019 03:05	1	GB26P116D.D	RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1

SDG No.: _____

Instrument ID: MG Start Date: 02/27/2019 13:04

Analysis Batch Number: 27932 End Date: 02/28/2019 05:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27932/1		02/27/2019 13:04	1	GBFBB27a.D	RTX-5 0.32 (mm)
CCVIS 140-27932/2		02/27/2019 13:35	1	GCCVB27a.D	RTX-5 0.32 (mm)
LCS 140-27932/1002		02/27/2019 13:35	1	GCCVB27a-LCS.d	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 15:55	1		RTX-5 0.32 (mm)
MB 140-27932/7		02/27/2019 16:40	1	GB27mb500.D	RTX-5 0.32 (mm)
140-14389-9		02/27/2019 17:22	1	GB27p101.D	RTX-5 0.32 (mm)
140-14389-10		02/27/2019 18:04	1	GB27p102.D	RTX-5 0.32 (mm)
140-14389-11		02/27/2019 18:46	1	GB27p103.D	RTX-5 0.32 (mm)
140-14389-13		02/27/2019 20:10	1	GB27p105.D	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 21:33	1		RTX-5 0.32 (mm)
140-14389-15		02/27/2019 22:15	1	GB27p107.D	RTX-5 0.32 (mm)
140-14389-16		02/27/2019 22:57	1	GB27p108.D	RTX-5 0.32 (mm)
140-14389-17		02/27/2019 23:39	1	GB27p109.D	RTX-5 0.32 (mm)
140-14389-18		02/28/2019 00:20	1	GB27p110.D	RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 01:46	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 02:28	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 03:10	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 03:52	1		RTX-5 0.32 (mm)
140-14389-12		02/28/2019 04:34	1	GB27p104R.D	RTX-5 0.32 (mm)
140-14389-14		02/28/2019 05:16	1	GB27p106R.D	RTX-5 0.32 (mm)

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1

SDG No.: _____

Batch Number: 27931 Batch Start Date: 02/26/19 11:03 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00082	40MXISSURP 00003
BFB 140-27931/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27931/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27931/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14389-A-1	SV-079-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-2	SV-DUP04-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-3	SV-131-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-4	SV-DUP01-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-5	SV-001-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-6	SV-004-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-7	SV-102-C-26	TO 15 LL	T	11 mL	500 mL	1	1		40 mL
140-14389-A-8	SV-155-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27931/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27931/1		TO 15 LL		40 mL					
CCVIS 140-27931/2		TO 15 LL							
MB 140-27931/4		TO 15 LL							
140-14389-A-1	SV-079-A-26	TO 15 LL	T						
140-14389-A-2	SV-DUP04-A-26	TO 15 LL	T						
140-14389-A-3	SV-131-C-26	TO 15 LL	T						
140-14389-A-4	SV-DUP01-C-26	TO 15 LL	T						
140-14389-A-5	SV-001-C-26	TO 15 LL	T						
140-14389-A-6	SV-004-C-26	TO 15 LL	T						
140-14389-A-7	SV-102-C-26	TO 15 LL	T						
140-14389-A-8	SV-155-C-26	TO 15 LL	T						
LCS 140-27931/1002		TO 15 LL							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1

SDG No.: _____

Batch Number: 27931 Batch Start Date: 02/26/19 11:03 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1

SDG No.: _____

Batch Number: 27932 Batch Start Date: 02/27/19 13:04 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00082	40MXISSURP 00003
BFB 140-27932/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27932/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27932/7		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14389-A-9	SV-133-C-26	TO 15 LL	T	40 mL	500 mL	1	1		40 mL
140-14389-A-10	SV-153-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-11	SV-DUP02-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-13	SV-152-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-15	SV-088-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-16	SV-142-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-17	SV-113-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-18	SV-149-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-12	SV-150-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-14	SV-141-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27932/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27932/1		TO 15 LL		40 mL					
CCVIS 140-27932/2		TO 15 LL							
MB 140-27932/7		TO 15 LL							
140-14389-A-9	SV-133-C-26	TO 15 LL	T						
140-14389-A-10	SV-153-C-26	TO 15 LL	T						
140-14389-A-11	SV-DUP02-C-26	TO 15 LL	T						
140-14389-A-13	SV-152-C-26	TO 15 LL	T						
140-14389-A-15	SV-088-C-26	TO 15 LL	T						
140-14389-A-16	SV-142-C-26	TO 15 LL	T						
140-14389-A-17	SV-113-C-26	TO 15 LL	T						
140-14389-A-18	SV-149-C-26	TO 15 LL	T						
140-14389-A-12	SV-150-C-26	TO 15 LL	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1

SDG No.: _____

Batch Number: 27932 Batch Start Date: 02/27/19 13:04 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
140-14389-A-14	SV-141-C-26	TO 15 LL	T						
LCS 140-27932/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Summa Canister Dilution Worksheet

Client: Tetra Tech, Inc.

Job No.: 140-14389-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Date	Time	Analyst
140-14389-7	1	0.0	1.00	1.00	39.7	3.70	3.70		3.70	3.70	02/26/19	13:45	Barlozhetskaya, Anna F

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg

Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig

Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury ("Hg)

14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200(mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D
 Lims ID: 140-14044-A-1
 Client ID: 11547
 Sample Type: Client
 Inject. Date: 24-Jan-2019 15:25:30 ALS Bottle#: 14 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010612-010
 Misc. Info.: 11547
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Jan-2019 09:48:51 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 25-Jan-2019 09:53:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.237	9.237	0.000	97	406723	4.00	
* 2 1,4-Difluorobenzene	114	11.410	11.416	-0.006	97	2310796	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.091	0.000	93	2083397	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.714	0.000	81	1731157	4.06	
31 Methylene Chloride	84	6.606	6.600	0.006	98	25162	0.1507	
47 1,1,1-Trichloroethane	97	10.294	10.294	0.000	95	9292	0.0252	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D

Injection Date: 24-Jan-2019 15:25:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14044-A-1

Lab Sample ID: 140-14044-1

Worklist Smp#: 10

Client ID: 11547

Purge Vol: 500.000 mL

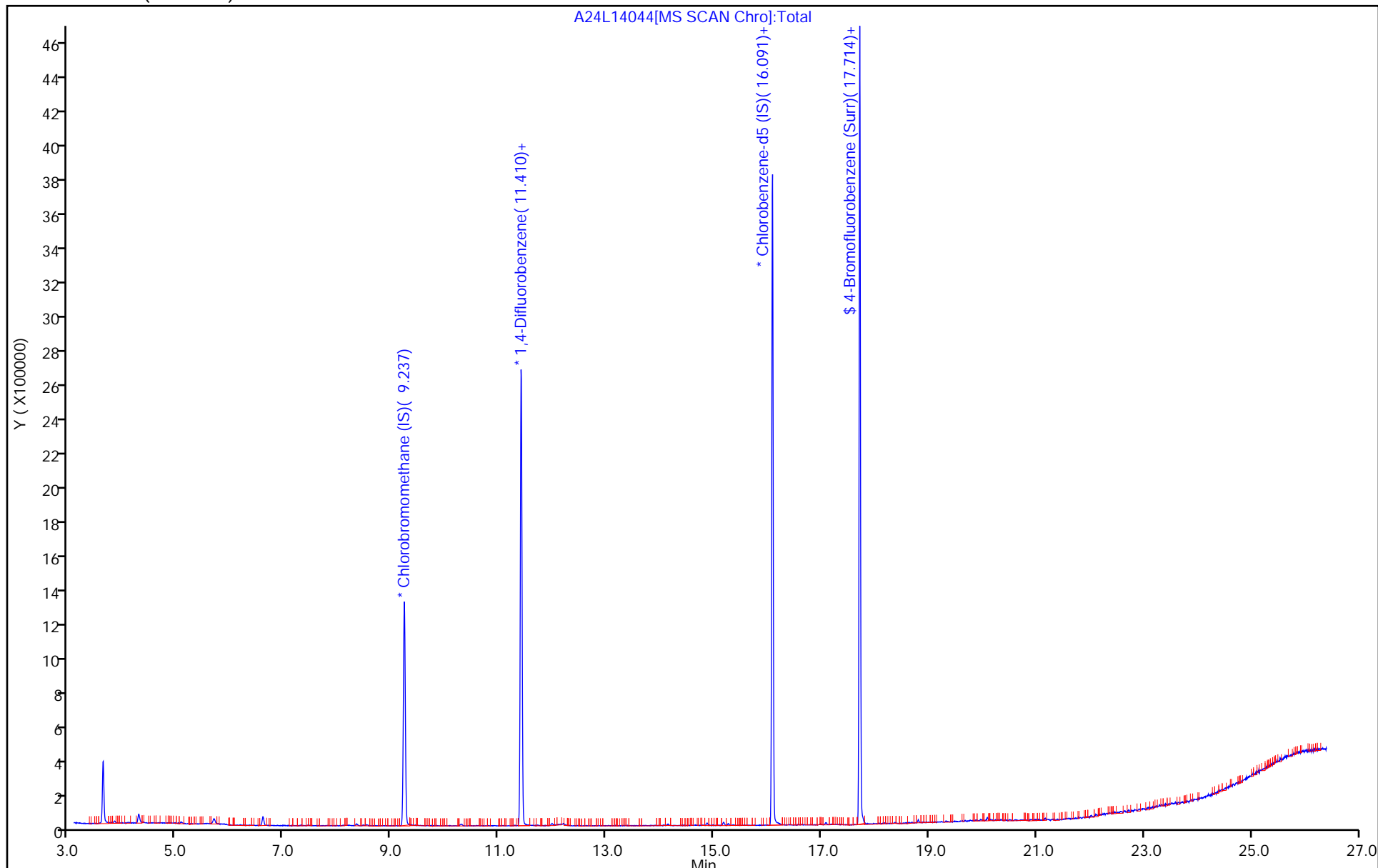
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200(mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200(mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND	*	1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200 (mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D
 Lims ID: 140-14051-A-16
 Client ID: 10518
 Sample Type: Client
 Inject. Date: 26-Jan-2019 01:10:30 ALS Bottle#: 10 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010617-022
 Misc. Info.: 10518
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Jan-2019 09:09:11 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0302

First Level Reviewer: khachitpongpanits Date: 28-Jan-2019 09:09:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.406	-0.005	73	173091	4.00	
* 2 1,4-Difluorobenzene	114	9.471	9.477	-0.006	95	1033901	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.519	14.524	-0.005	91	905153	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.244	16.244	0.000	87	793289	4.12	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D

Injection Date: 26-Jan-2019 01:10:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-14051-A-16

Lab Sample ID: 140-14051-16

Worklist Smp#: 22

Client ID: 10518

Purge Vol: 500.000 mL

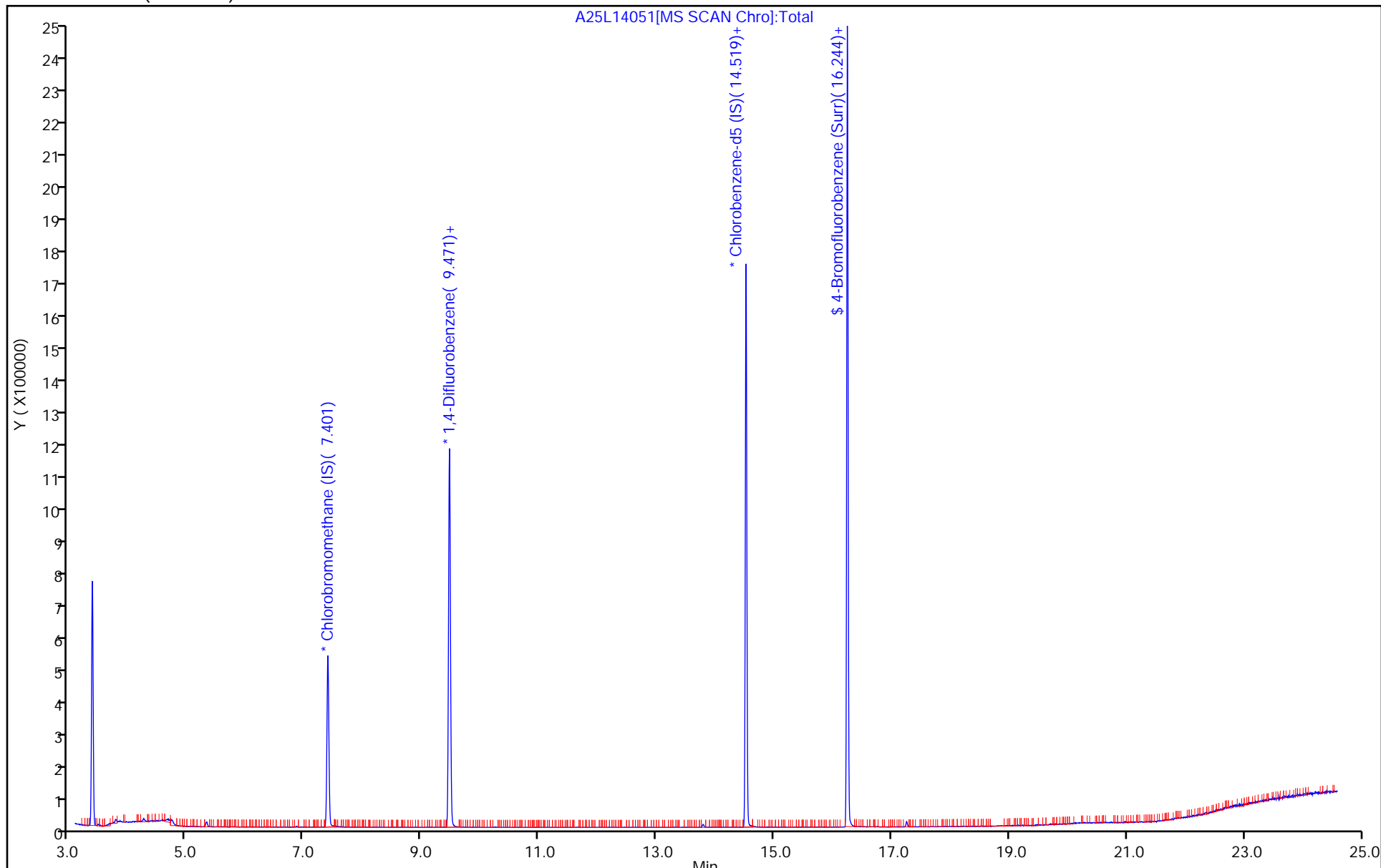
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

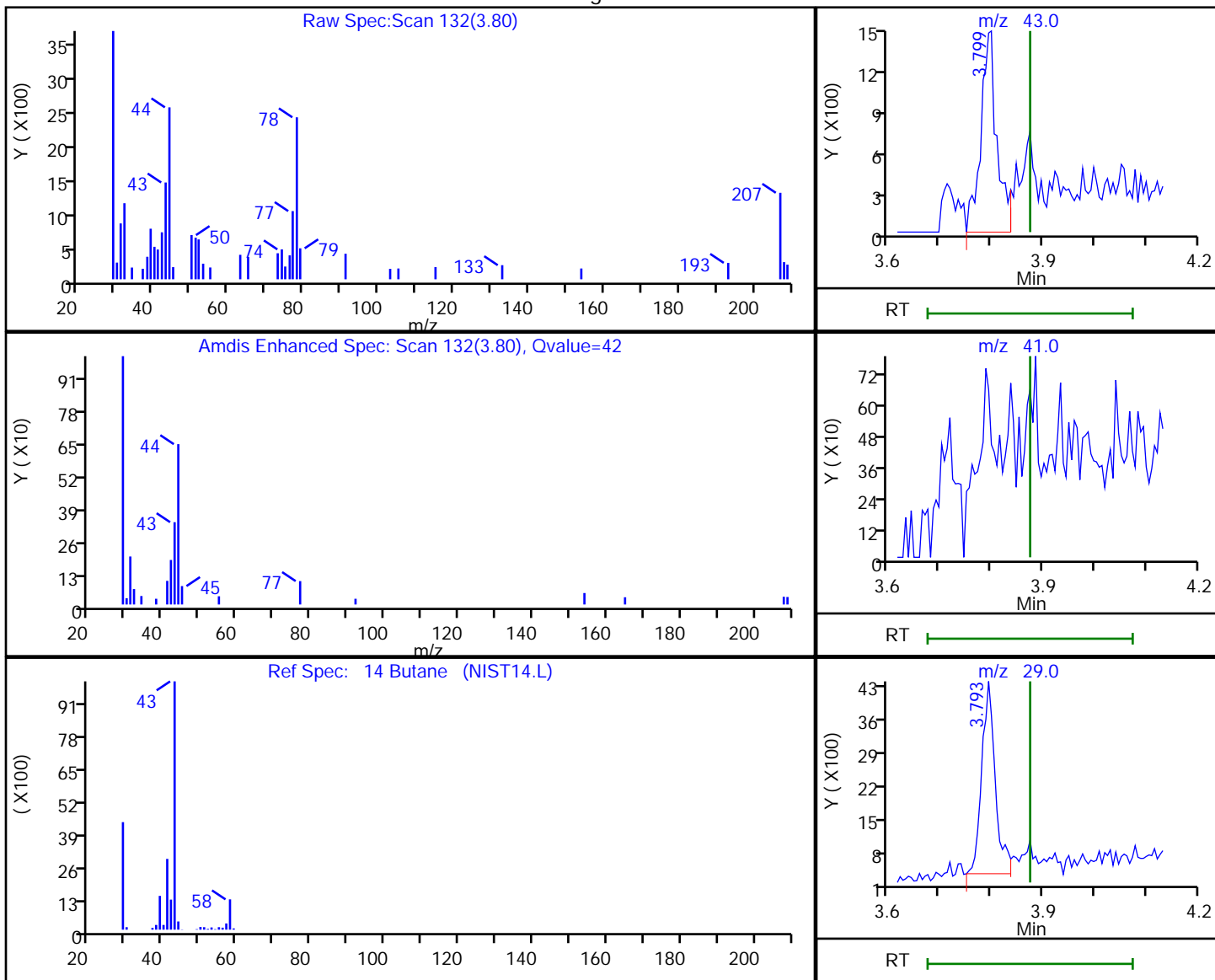


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D
 Injection Date: 26-Jan-2019 01:10:30 Instrument ID: MR
 Lims ID: 140-14051-A-16 Lab Sample ID: 140-14051-16
 Client ID: 10518
 Operator ID: HMT ALS Bottle#: 10 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.80	43.00	3124	0.063769
3.87	41.00	0	
3.79	29.00	7327	

Reviewer: khachitpongpanits, 28-Jan-2019 09:09:01

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200(mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D
 Lims ID: 140-14114-A-3
 Client ID: 11859
 Sample Type: Client
 Inject. Date: 31-Jan-2019 14:24:30 ALS Bottle#: 16 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010665-007
 Misc. Info.: 11859
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 01-Feb-2019 14:53:46 Calib Date: 07-Jan-2019 21:45:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20181224-10406.b\HA07IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0316

First Level Reviewer: khachitpongpanits Date: 01-Feb-2019 15:00:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.834	-0.005	96	226233	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.016	-0.006	95	1257347	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.739	-0.005	89	1030682	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.404	17.409	-0.005	91	693284	4.13	
45 1,1,1-Trichloroethane	97	9.863	9.868	-0.005	95	7970	0.0413	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D

Injection Date: 31-Jan-2019 14:24:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14114-A-3

Lab Sample ID: 140-14114-3

Worklist Smp#: 7

Client ID: 11859

Purge Vol: 500.000 mL

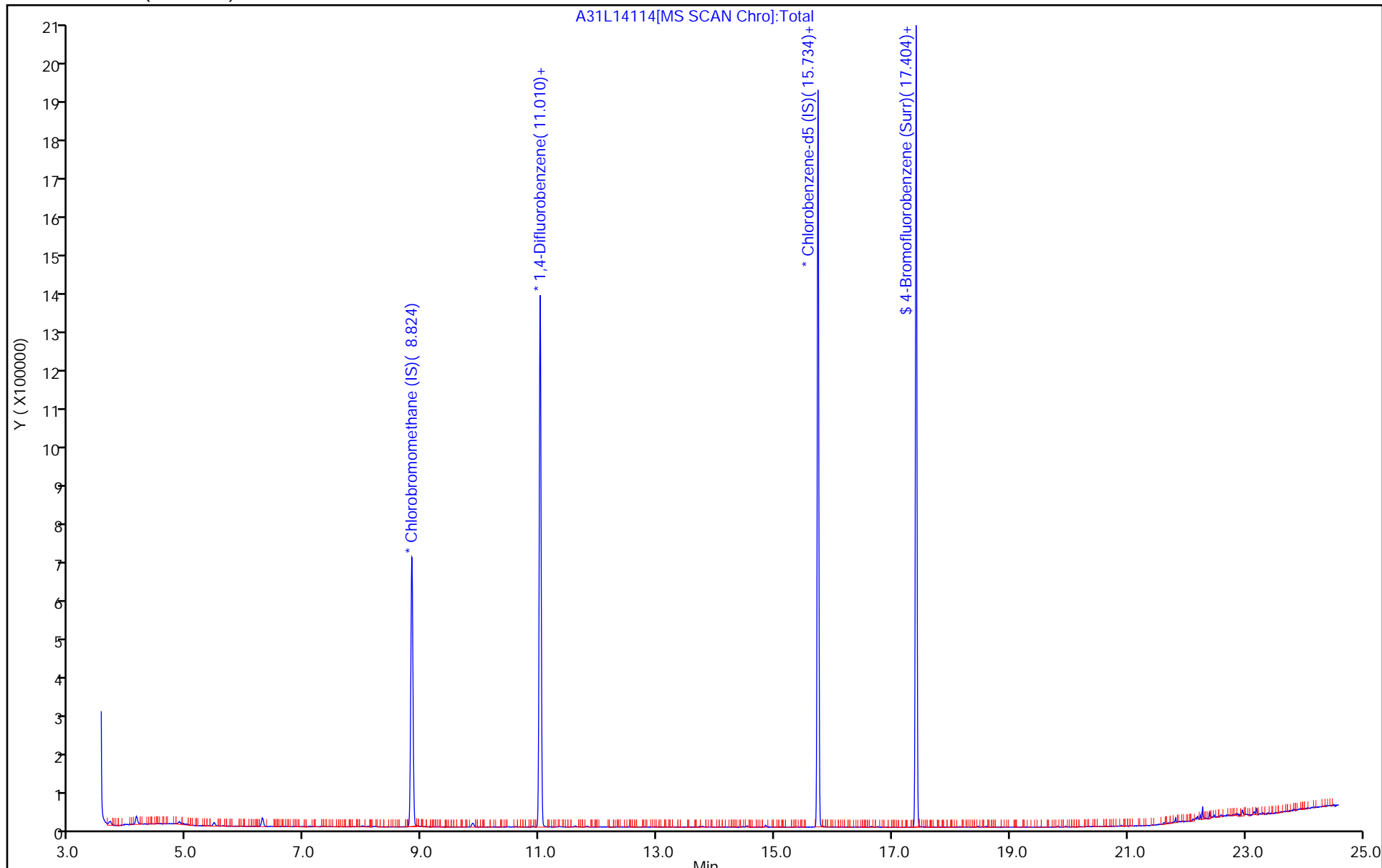
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D

Injection Date: 31-Jan-2019 14:24:30

Instrument ID: MH

Lims ID: 140-14114-A-3

Lab Sample ID: 140-14114-3

Client ID: 11859

Operator ID: HMT

ALS Bottle#: 16 Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MH_TO15

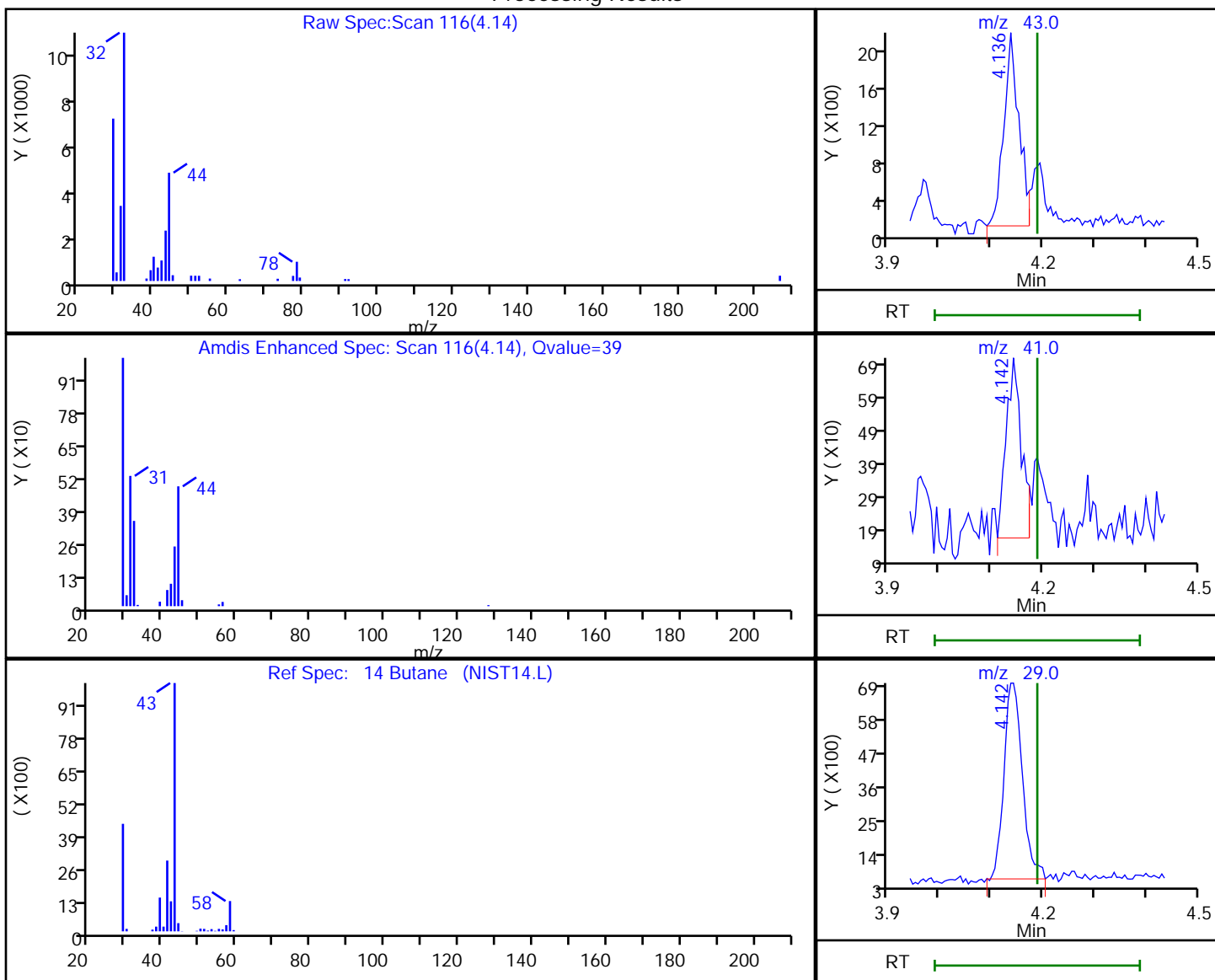
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.14	43.00	4267	0.037196
4.14	41.00	1130	
4.14	29.00	16118	

Reviewer: tajh, 31-Jan-2019 14:58:31

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND	*	1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\B05L14136.D
 Lims ID: 140-14136-A-16
 Client ID: 11710
 Sample Type: Client
 Inject. Date: 05-Feb-2019 11:19:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010730-004
 Misc. Info.: 11710
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Feb-2019 10:13:58 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits

Date: 06-Feb-2019 10:14:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.243	-0.011	95	329997	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.416	-0.011	97	1787592	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.086	16.086	0.000	95	1561576	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.709	17.714	-0.005	79	1327286	4.15	
31 Methylene Chloride	84	6.595	6.606	-0.011	97	17493	0.1291	
110 Dodecane	57	21.009	21.009	0.000	92	19919	0.0798	

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\B05L14136.D

Injection Date: 05-Feb-2019 11:19:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14136-A-16

Lab Sample ID: 140-14136-16

Worklist Smp#: 4

Client ID: 11710

Purge Vol: 500.000 mL

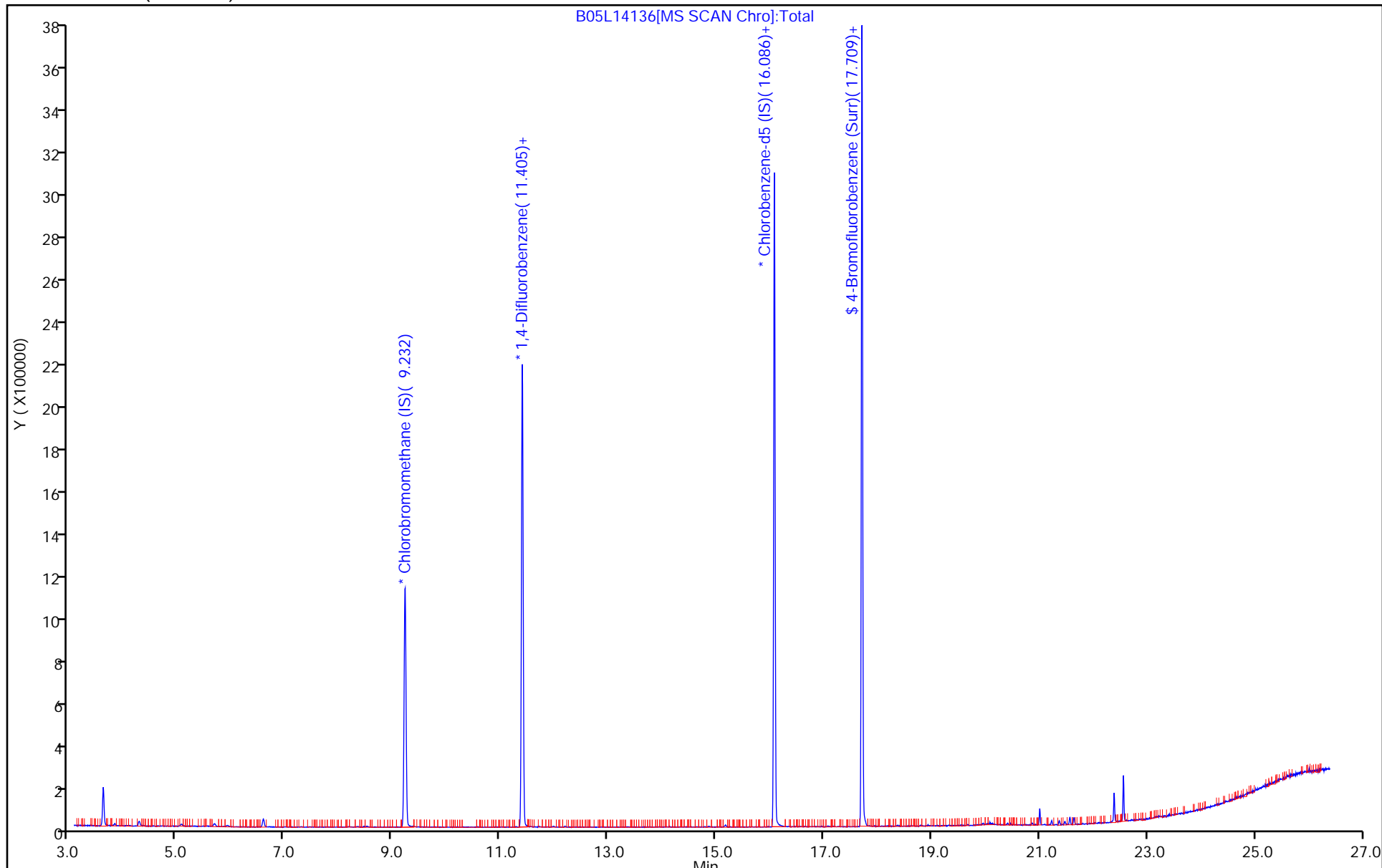
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14159-1
 SDG No.: _____
 Client Sample ID: 09647 Lab Sample ID: 140-14159-1
 Matrix: Air Lab File ID: B05L14159.D
 Analysis Method: TO-15 Date Collected: 02/04/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 20:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27362 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND	*	0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14159-1
 SDG No.: _____
 Client Sample ID: 09647 Lab Sample ID: 140-14159-1
 Matrix: Air Lab File ID: B05L14159.D
 Analysis Method: TO-15 Date Collected: 02/04/2019 16:00
 Sample wt/vol: 200(mL) Date Analyzed: 02/05/2019 20:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27362 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14159-1
 SDG No.: _____
 Client Sample ID: 09647 Lab Sample ID: 140-14159-1
 Matrix: Air Lab File ID: B05L14159.D
 Analysis Method: TO-15 Date Collected: 02/04/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 20:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27362 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MJ\20190204-10717.b\B05L14159.D
 Lims ID: 140-14159-A-1
 Client ID: 09647
 Sample Type: Client
 Inject. Date: 05-Feb-2019 20:35:30 ALS Bottle#: 7 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010717-016
 Misc. Info.: 09647
 Operator ID: 007126 Instrument ID: MJ
 Method: \\chromna\Knoxville\ChromData\MJ\20190204-10717.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Feb-2019 13:16:33 Calib Date: 30-Jan-2019 23:00:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MJ\20190130-10689.b\JA30ICL08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 06-Feb-2019 13:18:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.760	9.771	-0.011	92	137691	4.00	
* 2 1,4-Difluorobenzene	114	11.868	11.874	-0.006	95	795074	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.477	16.482	-0.005	90	674023	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	18.074	18.076	-0.005	89	489101	3.88	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MJ\20190204-10717.b\B05L14159.D

Injection Date: 05-Feb-2019 20:35:30

Instrument ID: MJ

Operator ID: 007126

Lims ID: 140-14159-A-1

Lab Sample ID: 140-14159-1

Worklist Smp#: 16

Client ID: 09647

Purge Vol: 500.000 mL

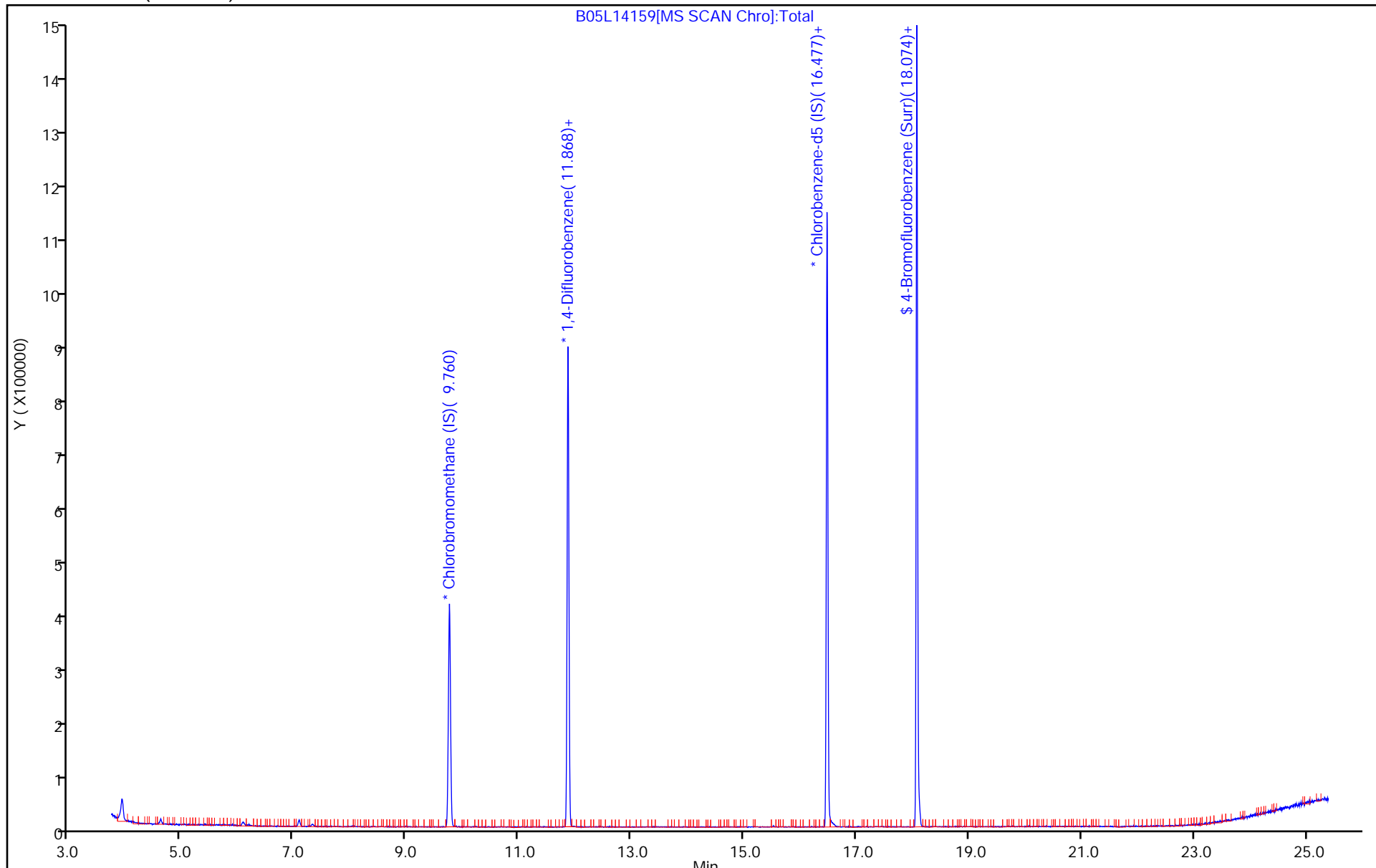
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

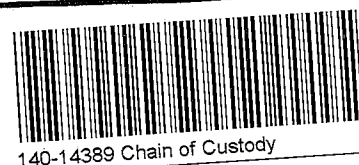
TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Pryor</u>		7 of 16 COCs													
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																	
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																	
City/State/Zip: <u>Germentown, MD, 20871</u>		TAL Contact: <u>Terry Walker Washmont</u>																	
Phone: <u>301-528-552</u>																			
FAX:																			
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																	
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																	
PO # <u>112IC08388</u>		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
<u>SV-079-A-26</u>	<u>2/21/19</u>	<u>1130</u>	<u>1237</u>	<u>-30</u>	<u>-1</u>	<u>09717</u>	<u>09645</u>	<input checked="" type="checkbox"/>											
<u>SV-DUP04-A-26</u>	<u>2/21/19</u>	<u>0000</u>	<u>0000</u>	<u>-21</u>	<u>4</u>	<u>11733</u>	<u>11728</u>	<input checked="" type="checkbox"/>											
<u>SV-131-C-26</u>	<u>2/19/19</u>	<u>1029</u>	<u>1129</u>	<u>-29</u>	<u>0</u>	<u>11422</u>	<u>11813</u>	<input checked="" type="checkbox"/>											
<u>SV-DUP01-C-26</u>	<u>2/19/19</u>	<u>0000</u>	<u>0000</u>	<u>-29</u>	<u>0</u>	<u>10162</u>	<u>11554</u>	<input checked="" type="checkbox"/>											
<u>SV-001-C-26</u>	<u>2/19/19</u>	<u>1036</u>	<u>1136</u>	<u>-28</u>	<u>-1</u>	<u>11536</u>	<u>10941</u>	<input checked="" type="checkbox"/>											
<u>SV-004-C-26</u>	<u>2/19/19</u>	<u>1040</u>	<u>1140</u>	<u>0</u>	<u>0</u>	<u>11977</u>	<u>11872</u>	<input checked="" type="checkbox"/>											
Sampled by: <u>Sophia Lawson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)																	
		Interior		Ambient															
		Start																	
		Stop																	
Special Instructions/QC Requirements & Comments:		Interior																	
		Start																	
		Stop																	
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:															
		Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>													
		Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19 1700</u>		Received by: <u>[Signature]</u>													
Lab Use Only		Shipped Date		Opened by		Condition													



Baltimore #201

18 COCS / 18 FLOWS

CUSTODY SEAL INTACT
 RECEIVED AMBIENT AT 2:00 / CT 2:00

Page 183 of 186

03/07/2019

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Pryor</u>		8 of 16 COCs													
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																	
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																	
City/State/Zip: <u>Germanstown, MD 20871</u>		TAL Contact: <u>Terry Walker Washburn</u>																	
Phone: <u>301-528-552</u>																			
FAX:																			
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																	
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																	
PO# <u>112 FC 08388</u>		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
<u>SV-102-C-26</u>	<u>2/19/19</u>	<u>1045</u>	<u>1145</u>	<u>-29</u>	<u>-1</u>	<u>11759</u>	<u>11269</u>	<input checked="" type="checkbox"/>											
<u>SV-155-C-26</u>	<u>2/19/19</u>	<u>1048</u>	<u>1148</u>	<u>-30</u>	<u>0</u>	<u>11490</u>	<u>11785</u>	<input checked="" type="checkbox"/>											
<u>SV-133-C-26</u>	<u>2/19/19</u>	<u>1052</u>	<u>1152</u>	<u>-30</u>	<u>0</u>	<u>10572</u>	<u>11162</u>	<input checked="" type="checkbox"/>											
<u>SV-153-C-26</u>	<u>2/19/19</u>	<u>1055</u>	<u>1155</u>	<u>-30</u>	<u>0</u>	<u>10158</u>	<u>10493</u>	<input checked="" type="checkbox"/>											
<u>SV-DUP00-C-26</u>	<u>2/19/19</u>	<u>0000</u>	<u>0000</u>	<u>-30</u>	<u>-2</u>	<u>11497</u>	<u>11658</u>	<input checked="" type="checkbox"/>											
<u>SV-150-C-26</u>	<u>2/19/19</u>	<u>1105</u>	<u>1205</u>	<u>-28</u>	<u>0</u>	<u>11931</u>	<u>11841</u>	<input checked="" type="checkbox"/>											
Sampled by: <u>Sophia Lawson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)				<h2>Baltimore #201</h2>													
		Interior		Ambient															
		Start																	
		Stop																	
		Pressure (Inches of Hg)																	
		Interior		Ambient															
Start																			
Stop																			
Special Instructions/QC Requirements & Comments:																			
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:															
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>															
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19 1700</u>		Received by: <u>[Signature]</u> TA KX 2-23-19 10:10															
Lab Use Only		Shipper/Time		Opened by		Conditions													

1175

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Pryor</u>		9 of 16 COCs												
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																
City/State/Zip: <u>Georgetown, MD, 20871</u>		TAL Contact: <u>Terry Walker Washburn</u>																
Phone: <u>301-528-552</u>																		
FAX:																		
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																
PO # <u>112FC08388</u>		Rush (Specify)																
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
<u>SV-152-C-26</u>	<u>2/19/19</u>	<u>1106</u>	<u>1206</u>	<u>-29</u>	<u>-1</u>	<u>11732</u>	<u>10745</u>	<input checked="" type="checkbox"/>										
<u>SV-141-C-26</u>	<u>2/19/19</u>	<u>1110</u>	<u>1210</u>	<u>-30</u>	<u>-1</u>	<u>11595</u>	<u>09831</u>	<input checked="" type="checkbox"/>										
<u>SV-088-C-26</u>	<u>2/19/19</u>	<u>1126</u>	<u>1226</u>	<u>-30</u>	<u>-1</u>	<u>09553</u>	<u>11713</u>	<input checked="" type="checkbox"/>										
<u>SV-142-C-26</u>	<u>2/19/19</u>	<u>1120</u>	<u>1220</u>	<u>-28</u>	<u>0</u>	<u>10242</u>	<u>11541</u>	<input checked="" type="checkbox"/>										
<u>SV-113-C-26</u>	<u>2/19/19</u>	<u>1117</u>	<u>1217</u>	<u>-30</u>	<u>0</u>	<u>10629</u>	<u>11745</u>	<input checked="" type="checkbox"/>										
<u>SV-149-C-26</u>	<u>2/19/19</u>	<u>1132</u>	<u>1232</u>	<u>-30</u>	<u>0</u>	<u>11921</u>	<u>11620</u>	<input checked="" type="checkbox"/>										
Sampled by: <u>Sophia Carson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)				<h2>Baltimore #201</h2>												
			Interior	Ambient														
		Start																
		Stop																
		Pressure (Inches of Hg)																
			Interior	Ambient														
Start																		
Stop																		
Special instructions/QC Requirements & Comments:																		
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:														
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>														
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u> TAL KX 223-19 10:10														
Lab Use Only: Shipper Name: _____ Opened by: _____ Condition: _____																		

Log In Number:

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	7.SV-155-C-216 COC LIST CANISTER ASSET NUMBER AS 11745 SHOULD BE 11745
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	7.SV-113-C-216 COC LIST CANISTER ASSET NUMBER AS 11745, SHOULD BE 11741
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input checked="" type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	pH test strip lot number: _____
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	Exp Date: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/		Analyst: _____
19. For 1613B water samples is pH<9?			/		Date: _____
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> If no, notify lab to adjust <input type="checkbox"/> Project missing info	Time: _____

Project #: _____ PM Instructions: _____
 Sample Receiving Associate: *Mary Jones* Date: 8-25-19
 QA026R31.doc, 112618

ANALYTICAL REPORT

Job Number: 140-14389-1
Job Description: MRC Indoor Air, MRC

For:
Tetra Tech, Inc.
20251 Century Blvd
Suite 200
Germantown, MD 20874
Attention: Samantha Brenner



Approved for release.
Terry Walker Wasmund
Project Manager II
3/7/2019 2:48 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
03/07/2019

cc: Amy Thomson

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Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-14389-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC listed a canister asset number as 11785, but it should be 11745.

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC listed a canister asset number as 11745, but it should be 11721.

Air - GC/MS VOA - Method TO-15 LL

Method(s) TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-079-A-26

Lab Sample ID: 140-14389-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.49		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	1.3		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	11		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.57	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.4	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	8.7		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.72	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	57		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.5	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-DUP04-A-26

Lab Sample ID: 140-14389-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.46	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.83	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	1.2		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	10		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.63	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.6	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	8.3		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.71	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	56		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.71	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.7	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-131-C-26

Lab Sample ID: 140-14389-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.49		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.26	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.063	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.83	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.11	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.43		0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.25	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.88		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-131-C-26 (Continued)

Lab Sample ID: 140-14389-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.3	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.25	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.61	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	2.1		2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.71	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.2	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.8		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-DUP01-C-26

Lab Sample ID: 140-14389-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.54		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.31	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.51		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.074	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.99	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.51		0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.17	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.29	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.1		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.5	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.30	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.73	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	2.5		2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.85	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.4	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.6		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-001-C-26

Lab Sample ID: 140-14389-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.11	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.1		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Naphthalene	0.23		0.20	0.20	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.49		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	4.6		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.52	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-001-C-26 (Continued)

Lab Sample ID: 140-14389-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	8.3		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Naphthalene	1.2		1.0	1.0	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.9		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	25		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-004-C-26

Lab Sample ID: 140-14389-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.59		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.31	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.64		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.32	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.60		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.4		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.13	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.1		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.24	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.10	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	4.4		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.9		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.6		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.3	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	2.6		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	8.2		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.91	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	7.8		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.3	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.55	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	19		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-102-C-26

Lab Sample ID: 140-14389-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	8.8	J	13	2.5	ppb v/v	3.7		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	13		13	4.0	ppb v/v	3.7		TO 15 LL	Total/NA
1,1-Dichloroethane	1200		13	1.7	ppb v/v	3.7		TO 15 LL	Total/NA
1,1-Dichloroethene	650		13	2.4	ppb v/v	3.7		TO 15 LL	Total/NA
Ethylbenzene	130		13	4.5	ppb v/v	3.7		TO 15 LL	Total/NA
Naphthalene	39		6.7	6.7	ppb v/v	3.7		TO 15 LL	Total/NA
1,1,1-Trichloroethane	470		13	2.0	ppb v/v	3.7		TO 15 LL	Total/NA
Trichloroethene	200		6.7	2.4	ppb v/v	3.7		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	5.9	J	13	4.2	ppb v/v	3.7		TO 15 LL	Total/NA
Xylenes, Total	1100		27	4.0	ppb v/v	3.7		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-102-C-26 (Continued)

Lab Sample ID: 140-14389-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	43	J	66	12	ug/m3	3.7		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	52		53	16	ug/m3	3.7		TO 15 LL	Total/NA
1,1-Dichloroethane	4800		54	6.8	ug/m3	3.7		TO 15 LL	Total/NA
1,1-Dichloroethene	2600		53	9.3	ug/m3	3.7		TO 15 LL	Total/NA
Ethylbenzene	560		58	20	ug/m3	3.7		TO 15 LL	Total/NA
Naphthalene	210		35	35	ug/m3	3.7		TO 15 LL	Total/NA
1,1,1-Trichloroethane	2600		73	11	ug/m3	3.7		TO 15 LL	Total/NA
Trichloroethene	1100		36	13	ug/m3	3.7		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	29	J	66	21	ug/m3	3.7		TO 15 LL	Total/NA
Xylenes, Total	4600		120	18	ug/m3	3.7		TO 15 LL	Total/NA

Client Sample ID: SV-155-C-26

Lab Sample ID: 140-14389-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.081	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.52		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.27	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.14	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.89	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.099	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.53	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.46	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.51	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.1	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.56	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.1	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.54	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-133-C-26

Lab Sample ID: 140-14389-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.79	J	1.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	2.7		1.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.52	J	1.0	0.34	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.1	J	5.0	1.6	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	2.4		1.0	0.20	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	140		0.50	0.18	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	2.8	J	3.5	0.66	ug/m3	1		TO 15 LL	Total/NA
Chloroform	13		4.9	0.92	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.6	J	4.9	1.7	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	7.1	J	17	5.6	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	16		6.8	1.4	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	760		2.7	0.94	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-153-C-26

Lab Sample ID: 140-14389-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.58		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.0		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.15	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	2.1		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	5.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	0.65	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-DUP02-C-26

Lab Sample ID: 140-14389-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.61		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.51		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.98	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.084	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.94		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.13	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	2.1		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.4	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.57	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	5.1		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	0.56	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-150-C-26

Lab Sample ID: 140-14389-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.37	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.6		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	3.4		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.4		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	19		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.2	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	13		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	15		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.1		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.70	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	84		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-152-C-26

Lab Sample ID: 140-14389-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.33	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.1	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.098	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.74		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.099	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	9.1		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.50	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	11	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.48	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.9		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.2	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.54	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	49		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-141-C-26

Lab Sample ID: 140-14389-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.44		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.10	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.8		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.48		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.20	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.95	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	1.3		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.75		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	63		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.4		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.4		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	4.2		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.49	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	11		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.9		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.85	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	9.0		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	3.0		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	340		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	5.9		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-088-C-26

Lab Sample ID: 140-14389-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.080	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.4		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	8.5		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.75	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.39	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	9.6		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	46		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-142-C-26

Lab Sample ID: 140-14389-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.084	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.37	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.4		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Naphthalene	0.21		0.20	0.20	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.086	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.2		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.61	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.53	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	6.7		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Naphthalene	1.1		1.0	1.0	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.58	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	6.7		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.6	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-113-C-26

Lab Sample ID: 140-14389-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.32	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	7.2		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.87	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	33		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.47	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-113-C-26 (Continued)

Lab Sample ID: 140-14389-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.6	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	29		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	180		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.0	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-149-C-26

Lab Sample ID: 140-14389-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.27	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.46		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.17	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.2		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.14	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	12		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.077	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.74	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.86	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.76	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	7.7		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.97	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	44		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.42	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.91	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-079-A-26

Lab Sample ID: 140-14389-1

Date Collected: 02/21/19 12:37

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 21:30	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 21:30	1
Chlorodifluoromethane	0.49		0.40	0.075	ppb v/v			02/26/19 21:30	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 21:30	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 21:30	1
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v			02/26/19 21:30	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 21:30	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 21:30	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 21:30	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 21:30	1
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v			02/26/19 21:30	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 21:30	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 21:30	1
Tetrachloroethene	1.3		0.40	0.080	ppb v/v			02/26/19 21:30	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 21:30	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 21:30	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 21:30	1
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v			02/26/19 21:30	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 21:30	1
Trichloroethene	11		0.20	0.070	ppb v/v			02/26/19 21:30	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 21:30	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 21:30	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 21:30	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 21:30	1
Xylenes, Total	0.57	J	0.80	0.12	ppb v/v			02/26/19 21:30	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 21:30	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 21:30	1
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3			02/26/19 21:30	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 21:30	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 21:30	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/26/19 21:30	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 21:30	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 21:30	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 21:30	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 21:30	1
Methylene Chloride	4.4	J	6.9	2.3	ug/m3			02/26/19 21:30	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 21:30	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 21:30	1
Tetrachloroethene	8.7		2.7	0.54	ug/m3			02/26/19 21:30	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 21:30	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 21:30	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 21:30	1
1,1,1-Trichloroethane	0.72	J	2.2	0.33	ug/m3			02/26/19 21:30	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 21:30	1
Trichloroethene	57		1.1	0.38	ug/m3			02/26/19 21:30	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 21:30	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 21:30	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-079-A-26

Lab Sample ID: 140-14389-1

Date Collected: 02/21/19 12:37

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 21:30	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 21:30	1
Xylenes, Total	2.5	J	3.5	0.52	ug/m3			02/26/19 21:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/26/19 21:30	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-DUP04-A-26

Lab Sample ID: 140-14389-2

Date Collected: 02/21/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 22:13	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 22:13	1
Chlorodifluoromethane	0.46	CI	0.40	0.075	ppb v/v			02/26/19 22:13	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 22:13	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 22:13	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/26/19 22:13	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 22:13	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 22:13	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 22:13	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 22:13	1
Methylene Chloride	0.83	J	2.0	0.65	ppb v/v			02/26/19 22:13	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 22:13	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 22:13	1
Tetrachloroethene	1.2		0.40	0.080	ppb v/v			02/26/19 22:13	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 22:13	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 22:13	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 22:13	1
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v			02/26/19 22:13	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 22:13	1
Trichloroethene	10		0.20	0.070	ppb v/v			02/26/19 22:13	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 22:13	1
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/26/19 22:13	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 22:13	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 22:13	1
Xylenes, Total	0.63	J	0.80	0.12	ppb v/v			02/26/19 22:13	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 22:13	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 22:13	1
Chlorodifluoromethane	1.6	CI	1.4	0.27	ug/m3			02/26/19 22:13	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 22:13	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 22:13	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/26/19 22:13	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 22:13	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 22:13	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 22:13	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 22:13	1
Methylene Chloride	2.9	J	6.9	2.3	ug/m3			02/26/19 22:13	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 22:13	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 22:13	1
Tetrachloroethene	8.3		2.7	0.54	ug/m3			02/26/19 22:13	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 22:13	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 22:13	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 22:13	1
1,1,1-Trichloroethane	0.71	J	2.2	0.33	ug/m3			02/26/19 22:13	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 22:13	1
Trichloroethene	56		1.1	0.38	ug/m3			02/26/19 22:13	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 22:13	1
1,2,4-Trimethylbenzene	0.71	J	2.0	0.61	ug/m3			02/26/19 22:13	1

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-DUP04-A-26

Lab Sample ID: 140-14389-2

Date Collected: 02/21/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 22:13	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 22:13	1
Xylenes, Total	2.7	J	3.5	0.52	ug/m3			02/26/19 22:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		60 - 140					02/26/19 22:13	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-131-C-26

Lab Sample ID: 140-14389-3

Date Collected: 02/19/19 11:29

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 22:55	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 22:55	1
Chlorodifluoromethane	0.49		0.40	0.075	ppb v/v			02/26/19 22:55	1
Chloroform	0.26	J	0.40	0.075	ppb v/v			02/26/19 22:55	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 22:55	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/26/19 22:55	1
1,1-Dichloroethane	0.063	J	0.40	0.050	ppb v/v			02/26/19 22:55	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 22:55	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 22:55	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 22:55	1
Methylene Chloride	0.83	J	2.0	0.65	ppb v/v			02/26/19 22:55	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 22:55	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 22:55	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 22:55	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 22:55	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 22:55	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 22:55	1
1,1,1-Trichloroethane	0.11	J	0.40	0.060	ppb v/v			02/26/19 22:55	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 22:55	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 22:55	1
1,2,3-Trimethylbenzene	0.43		0.40	0.17	ppb v/v			02/26/19 22:55	1
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/26/19 22:55	1
1,3,5-Trimethylbenzene	0.25	J	0.40	0.13	ppb v/v			02/26/19 22:55	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 22:55	1
Xylenes, Total	0.88		0.80	0.12	ppb v/v			02/26/19 22:55	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 22:55	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 22:55	1
Chlorodifluoromethane	1.7		1.4	0.27	ug/m3			02/26/19 22:55	1
Chloroform	1.3	J	2.0	0.37	ug/m3			02/26/19 22:55	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 22:55	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 22:55	1
1,1-Dichloroethane	0.25	J	1.6	0.20	ug/m3			02/26/19 22:55	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 22:55	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 22:55	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 22:55	1
Methylene Chloride	2.9	J	6.9	2.3	ug/m3			02/26/19 22:55	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 22:55	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 22:55	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 22:55	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 22:55	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 22:55	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 22:55	1
1,1,1-Trichloroethane	0.61	J	2.2	0.33	ug/m3			02/26/19 22:55	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 22:55	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 22:55	1
1,2,3-Trimethylbenzene	2.1		2.0	0.84	ug/m3			02/26/19 22:55	1
1,2,4-Trimethylbenzene	0.71	J	2.0	0.61	ug/m3			02/26/19 22:55	1

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-131-C-26

Lab Sample ID: 140-14389-3

Date Collected: 02/19/19 11:29

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.2	J	2.0	0.64	ug/m3			02/26/19 22:55	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 22:55	1
Xylenes, Total	3.8		3.5	0.52	ug/m3			02/26/19 22:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		60 - 140					02/26/19 22:55	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-DUP01-C-26

Lab Sample ID: 140-14389-4

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 23:37	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 23:37	1
Chlorodifluoromethane	0.54		0.40	0.075	ppb v/v			02/26/19 23:37	1
Chloroform	0.31	J	0.40	0.075	ppb v/v			02/26/19 23:37	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 23:37	1
Dichlorodifluoromethane	0.51		0.40	0.14	ppb v/v			02/26/19 23:37	1
1,1-Dichloroethane	0.074	J	0.40	0.050	ppb v/v			02/26/19 23:37	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 23:37	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 23:37	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 23:37	1
Methylene Chloride	0.99	J	2.0	0.65	ppb v/v			02/26/19 23:37	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 23:37	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 23:37	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 23:37	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 23:37	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 23:37	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 23:37	1
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v			02/26/19 23:37	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 23:37	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 23:37	1
1,2,3-Trimethylbenzene	0.51		0.40	0.17	ppb v/v			02/26/19 23:37	1
1,2,4-Trimethylbenzene	0.17	J	0.40	0.13	ppb v/v			02/26/19 23:37	1
1,3,5-Trimethylbenzene	0.29	J	0.40	0.13	ppb v/v			02/26/19 23:37	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 23:37	1
Xylenes, Total	1.1		0.80	0.12	ppb v/v			02/26/19 23:37	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 23:37	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 23:37	1
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3			02/26/19 23:37	1
Chloroform	1.5	J	2.0	0.37	ug/m3			02/26/19 23:37	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 23:37	1
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3			02/26/19 23:37	1
1,1-Dichloroethane	0.30	J	1.6	0.20	ug/m3			02/26/19 23:37	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 23:37	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 23:37	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 23:37	1
Methylene Chloride	3.5	J	6.9	2.3	ug/m3			02/26/19 23:37	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 23:37	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 23:37	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 23:37	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 23:37	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 23:37	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 23:37	1
1,1,1-Trichloroethane	0.73	J	2.2	0.33	ug/m3			02/26/19 23:37	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 23:37	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 23:37	1
1,2,3-Trimethylbenzene	2.5		2.0	0.84	ug/m3			02/26/19 23:37	1
1,2,4-Trimethylbenzene	0.85	J	2.0	0.61	ug/m3			02/26/19 23:37	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-DUP01-C-26

Lab Sample ID: 140-14389-4

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.4	J	2.0	0.64	ug/m3			02/26/19 23:37	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 23:37	1
Xylenes, Total	4.6		3.5	0.52	ug/m3			02/26/19 23:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/26/19 23:37	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-001-C-26

Lab Sample ID: 140-14389-5

Date Collected: 02/19/19 11:36

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/27/19 00:18	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 00:18	1
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/27/19 00:18	1
Chloroform	0.11	J	0.40	0.075	ppb v/v			02/27/19 00:18	1
cis-1,2-Dichloroethene	2.1		0.40	0.12	ppb v/v			02/27/19 00:18	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/27/19 00:18	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 00:18	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 00:18	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 00:18	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 00:18	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/27/19 00:18	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 00:18	1
Naphthalene	0.23		0.20	0.20	ppb v/v			02/27/19 00:18	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 00:18	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 00:18	1
trans-1,2-Dichloroethene	0.49		0.40	0.10	ppb v/v			02/27/19 00:18	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 00:18	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 00:18	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 00:18	1
Trichloroethene	4.6		0.20	0.070	ppb v/v			02/27/19 00:18	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 00:18	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 00:18	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 00:18	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 00:18	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/27/19 00:18	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/27/19 00:18	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 00:18	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/27/19 00:18	1
Chloroform	0.52	J	2.0	0.37	ug/m3			02/27/19 00:18	1
cis-1,2-Dichloroethene	8.3		1.6	0.48	ug/m3			02/27/19 00:18	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/27/19 00:18	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 00:18	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 00:18	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 00:18	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 00:18	1
Methylene Chloride	3.9	J	6.9	2.3	ug/m3			02/27/19 00:18	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 00:18	1
Naphthalene	1.2		1.0	1.0	ug/m3			02/27/19 00:18	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 00:18	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 00:18	1
trans-1,2-Dichloroethene	1.9		1.6	0.40	ug/m3			02/27/19 00:18	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 00:18	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 00:18	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 00:18	1
Trichloroethene	25		1.1	0.38	ug/m3			02/27/19 00:18	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 00:18	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 00:18	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-001-C-26

Lab Sample ID: 140-14389-5

Date Collected: 02/19/19 11:36

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 00:18	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 00:18	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/27/19 00:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					02/27/19 00:18	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-004-C-26

Lab Sample ID: 140-14389-6

Date Collected: 02/19/19 11:40

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.59		0.40	0.12	ppb v/v			02/27/19 01:00	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 01:00	1
Chlorodifluoromethane	0.31	J	0.40	0.075	ppb v/v			02/27/19 01:00	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 01:00	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 01:00	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/27/19 01:00	1
1,1-Dichloroethane	0.64		0.40	0.050	ppb v/v			02/27/19 01:00	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 01:00	1
1,1-Dichloroethene	0.32	J	0.40	0.070	ppb v/v			02/27/19 01:00	1
Ethylbenzene	0.60		0.40	0.14	ppb v/v			02/27/19 01:00	1
Methylene Chloride	2.4		2.0	0.65	ppb v/v			02/27/19 01:00	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 01:00	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 01:00	1
Tetrachloroethene	0.13	J	0.40	0.080	ppb v/v			02/27/19 01:00	1
Toluene	2.1		0.60	0.60	ppb v/v			02/27/19 01:00	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 01:00	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 01:00	1
1,1,1-Trichloroethane	0.24	J	0.40	0.060	ppb v/v			02/27/19 01:00	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 01:00	1
Trichloroethene	0.10	J	0.20	0.070	ppb v/v			02/27/19 01:00	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 01:00	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 01:00	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 01:00	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 01:00	1
Xylenes, Total	4.4		0.80	0.12	ppb v/v			02/27/19 01:00	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.9		1.3	0.37	ug/m3			02/27/19 01:00	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 01:00	1
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3			02/27/19 01:00	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 01:00	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 01:00	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/27/19 01:00	1
1,1-Dichloroethane	2.6		1.6	0.20	ug/m3			02/27/19 01:00	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 01:00	1
1,1-Dichloroethene	1.3	J	1.6	0.28	ug/m3			02/27/19 01:00	1
Ethylbenzene	2.6		1.7	0.59	ug/m3			02/27/19 01:00	1
Methylene Chloride	8.2		6.9	2.3	ug/m3			02/27/19 01:00	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 01:00	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 01:00	1
Tetrachloroethene	0.91	J	2.7	0.54	ug/m3			02/27/19 01:00	1
Toluene	7.8		2.3	2.3	ug/m3			02/27/19 01:00	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 01:00	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 01:00	1
1,1,1-Trichloroethane	1.3	J	2.2	0.33	ug/m3			02/27/19 01:00	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 01:00	1
Trichloroethene	0.55	J	1.1	0.38	ug/m3			02/27/19 01:00	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 01:00	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 01:00	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-004-C-26

Lab Sample ID: 140-14389-6

Date Collected: 02/19/19 11:40

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 01:00	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 01:00	1
Xylenes, Total	19		3.5	0.52	ug/m3			02/27/19 01:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		60 - 140					02/27/19 01:00	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-102-C-26

Lab Sample ID: 140-14389-7

Date Collected: 02/19/19 11:45

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		13	3.9	ppb v/v			02/27/19 01:42	3.7
Carbon tetrachloride	ND		13	2.5	ppb v/v			02/27/19 01:42	3.7
Chlorodifluoromethane	ND		13	2.5	ppb v/v			02/27/19 01:42	3.7
Chloroform	8.8	J	13	2.5	ppb v/v			02/27/19 01:42	3.7
cis-1,2-Dichloroethene	13		13	4.0	ppb v/v			02/27/19 01:42	3.7
Dichlorodifluoromethane	ND		13	4.5	ppb v/v			02/27/19 01:42	3.7
1,1-Dichloroethane	1200		13	1.7	ppb v/v			02/27/19 01:42	3.7
1,2-Dichloroethane	ND		13	3.2	ppb v/v			02/27/19 01:42	3.7
1,1-Dichloroethene	650		13	2.4	ppb v/v			02/27/19 01:42	3.7
Ethylbenzene	130		13	4.5	ppb v/v			02/27/19 01:42	3.7
Methylene Chloride	ND		67	22	ppb v/v			02/27/19 01:42	3.7
Methyl tert-butyl ether	ND		67	11	ppb v/v			02/27/19 01:42	3.7
Naphthalene	39		6.7	6.7	ppb v/v			02/27/19 01:42	3.7
Tetrachloroethene	ND		13	2.7	ppb v/v			02/27/19 01:42	3.7
Toluene	ND		20	20	ppb v/v			02/27/19 01:42	3.7
trans-1,2-Dichloroethene	ND		13	3.4	ppb v/v			02/27/19 01:42	3.7
1,2,4-Trichlorobenzene	ND		13	6.6	ppb v/v			02/27/19 01:42	3.7
1,1,1-Trichloroethane	470		13	2.0	ppb v/v			02/27/19 01:42	3.7
1,1,2-Trichloroethane	ND		13	3.5	ppb v/v			02/27/19 01:42	3.7
Trichloroethene	200		6.7	2.4	ppb v/v			02/27/19 01:42	3.7
1,2,3-Trimethylbenzene	ND		13	5.7	ppb v/v			02/27/19 01:42	3.7
1,2,4-Trimethylbenzene	5.9	J	13	4.2	ppb v/v			02/27/19 01:42	3.7
1,3,5-Trimethylbenzene	ND		13	4.4	ppb v/v			02/27/19 01:42	3.7
Vinyl chloride	ND		6.7	4.9	ppb v/v			02/27/19 01:42	3.7
Xylenes, Total	1100		27	4.0	ppb v/v			02/27/19 01:42	3.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		43	12	ug/m3			02/27/19 01:42	3.7
Carbon tetrachloride	ND		85	16	ug/m3			02/27/19 01:42	3.7
Chlorodifluoromethane	ND		48	8.9	ug/m3			02/27/19 01:42	3.7
Chloroform	43	J	66	12	ug/m3			02/27/19 01:42	3.7
cis-1,2-Dichloroethene	52		53	16	ug/m3			02/27/19 01:42	3.7
Dichlorodifluoromethane	ND		67	22	ug/m3			02/27/19 01:42	3.7
1,1-Dichloroethane	4800		54	6.8	ug/m3			02/27/19 01:42	3.7
1,2-Dichloroethane	ND		54	13	ug/m3			02/27/19 01:42	3.7
1,1-Dichloroethene	2600		53	9.3	ug/m3			02/27/19 01:42	3.7
Ethylbenzene	560		58	20	ug/m3			02/27/19 01:42	3.7
Methylene Chloride	ND		230	76	ug/m3			02/27/19 01:42	3.7
Methyl tert-butyl ether	ND		240	41	ug/m3			02/27/19 01:42	3.7
Naphthalene	210		35	35	ug/m3			02/27/19 01:42	3.7
Tetrachloroethene	ND		91	18	ug/m3			02/27/19 01:42	3.7
Toluene	ND		76	76	ug/m3			02/27/19 01:42	3.7
trans-1,2-Dichloroethene	ND		53	13	ug/m3			02/27/19 01:42	3.7
1,2,4-Trichlorobenzene	ND		100	49	ug/m3			02/27/19 01:42	3.7
1,1,1-Trichloroethane	2600		73	11	ug/m3			02/27/19 01:42	3.7
1,1,2-Trichloroethane	ND		73	19	ug/m3			02/27/19 01:42	3.7
Trichloroethene	1100		36	13	ug/m3			02/27/19 01:42	3.7
1,2,3-Trimethylbenzene	ND		66	28	ug/m3			02/27/19 01:42	3.7
1,2,4-Trimethylbenzene	29	J	66	21	ug/m3			02/27/19 01:42	3.7

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-102-C-26

Lab Sample ID: 140-14389-7

Date Collected: 02/19/19 11:45

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		66	21	ug/m3			02/27/19 01:42	3.7
Vinyl chloride	ND		17	12	ug/m3			02/27/19 01:42	3.7
Xylenes, Total	4600		120	18	ug/m3			02/27/19 01:42	3.7
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		60 - 140					02/27/19 01:42	3.7

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-155-C-26

Lab Sample ID: 140-14389-8

Date Collected: 02/19/19 11:48

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.14	J	0.40	0.12	ppb v/v			02/27/19 03:05	1
Carbon tetrachloride	0.081	J	0.40	0.075	ppb v/v			02/27/19 03:05	1
Chlorodifluoromethane	0.52		0.40	0.075	ppb v/v			02/27/19 03:05	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 03:05	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 03:05	1
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v			02/27/19 03:05	1
1,1-Dichloroethane	0.27	J	0.40	0.050	ppb v/v			02/27/19 03:05	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 03:05	1
1,1-Dichloroethene	0.14	J	0.40	0.070	ppb v/v			02/27/19 03:05	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 03:05	1
Methylene Chloride	0.89	J	2.0	0.65	ppb v/v			02/27/19 03:05	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 03:05	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 03:05	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 03:05	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 03:05	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 03:05	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 03:05	1
1,1,1-Trichloroethane	0.099	J	0.40	0.060	ppb v/v			02/27/19 03:05	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 03:05	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 03:05	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 03:05	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 03:05	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 03:05	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 03:05	1
Xylenes, Total	0.53	J	0.80	0.12	ppb v/v			02/27/19 03:05	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.46	J	1.3	0.37	ug/m3			02/27/19 03:05	1
Carbon tetrachloride	0.51	J	2.5	0.47	ug/m3			02/27/19 03:05	1
Chlorodifluoromethane	1.8		1.4	0.27	ug/m3			02/27/19 03:05	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 03:05	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 03:05	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/27/19 03:05	1
1,1-Dichloroethane	1.1	J	1.6	0.20	ug/m3			02/27/19 03:05	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 03:05	1
1,1-Dichloroethene	0.56	J	1.6	0.28	ug/m3			02/27/19 03:05	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 03:05	1
Methylene Chloride	3.1	J	6.9	2.3	ug/m3			02/27/19 03:05	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 03:05	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 03:05	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 03:05	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 03:05	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 03:05	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 03:05	1
1,1,1-Trichloroethane	0.54	J	2.2	0.33	ug/m3			02/27/19 03:05	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 03:05	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 03:05	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 03:05	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 03:05	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-155-C-26

Lab Sample ID: 140-14389-8

Date Collected: 02/19/19 11:48

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 03:05	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 03:05	1
Xylenes, Total	2.3	J	3.5	0.52	ug/m3			02/27/19 03:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		60 - 140					02/27/19 03:05	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-133-C-26

Lab Sample ID: 140-14389-9

Date Collected: 02/19/19 11:52

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.29	ppb v/v			02/27/19 17:22	1
Carbon tetrachloride	ND		1.0	0.19	ppb v/v			02/27/19 17:22	1
Chlorodifluoromethane	0.79	J	1.0	0.19	ppb v/v			02/27/19 17:22	1
Chloroform	2.7		1.0	0.19	ppb v/v			02/27/19 17:22	1
cis-1,2-Dichloroethene	ND		1.0	0.30	ppb v/v			02/27/19 17:22	1
Dichlorodifluoromethane	0.52	J	1.0	0.34	ppb v/v			02/27/19 17:22	1
1,1-Dichloroethane	ND		1.0	0.13	ppb v/v			02/27/19 17:22	1
1,2-Dichloroethane	ND		1.0	0.24	ppb v/v			02/27/19 17:22	1
1,1-Dichloroethene	ND		1.0	0.18	ppb v/v			02/27/19 17:22	1
Ethylbenzene	ND		1.0	0.34	ppb v/v			02/27/19 17:22	1
Methylene Chloride	2.1	J	5.0	1.6	ppb v/v			02/27/19 17:22	1
Methyl tert-butyl ether	ND		5.0	0.85	ppb v/v			02/27/19 17:22	1
Naphthalene	ND		0.50	0.50	ppb v/v			02/27/19 17:22	1
Tetrachloroethene	2.4		1.0	0.20	ppb v/v			02/27/19 17:22	1
Toluene	ND		1.5	1.5	ppb v/v			02/27/19 17:22	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ppb v/v			02/27/19 17:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.49	ppb v/v			02/27/19 17:22	1
1,1,1-Trichloroethane	ND		1.0	0.15	ppb v/v			02/27/19 17:22	1
1,1,2-Trichloroethane	ND		1.0	0.26	ppb v/v			02/27/19 17:22	1
Trichloroethene	140		0.50	0.18	ppb v/v			02/27/19 17:22	1
1,2,3-Trimethylbenzene	ND		1.0	0.43	ppb v/v			02/27/19 17:22	1
1,2,4-Trimethylbenzene	ND		1.0	0.31	ppb v/v			02/27/19 17:22	1
1,3,5-Trimethylbenzene	ND		1.0	0.33	ppb v/v			02/27/19 17:22	1
Vinyl chloride	ND		0.50	0.36	ppb v/v			02/27/19 17:22	1
Xylenes, Total	ND		2.0	0.30	ppb v/v			02/27/19 17:22	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.2	0.92	ug/m3			02/27/19 17:22	1
Carbon tetrachloride	ND		6.3	1.2	ug/m3			02/27/19 17:22	1
Chlorodifluoromethane	2.8	J	3.5	0.66	ug/m3			02/27/19 17:22	1
Chloroform	13		4.9	0.92	ug/m3			02/27/19 17:22	1
cis-1,2-Dichloroethene	ND		4.0	1.2	ug/m3			02/27/19 17:22	1
Dichlorodifluoromethane	2.6	J	4.9	1.7	ug/m3			02/27/19 17:22	1
1,1-Dichloroethane	ND		4.0	0.51	ug/m3			02/27/19 17:22	1
1,2-Dichloroethane	ND		4.0	0.96	ug/m3			02/27/19 17:22	1
1,1-Dichloroethene	ND		4.0	0.69	ug/m3			02/27/19 17:22	1
Ethylbenzene	ND		4.3	1.5	ug/m3			02/27/19 17:22	1
Methylene Chloride	7.1	J	17	5.6	ug/m3			02/27/19 17:22	1
Methyl tert-butyl ether	ND		18	3.1	ug/m3			02/27/19 17:22	1
Naphthalene	ND		2.6	2.6	ug/m3			02/27/19 17:22	1
Tetrachloroethene	16		6.8	1.4	ug/m3			02/27/19 17:22	1
Toluene	ND		5.7	5.7	ug/m3			02/27/19 17:22	1
trans-1,2-Dichloroethene	ND		4.0	0.99	ug/m3			02/27/19 17:22	1
1,2,4-Trichlorobenzene	ND		7.4	3.6	ug/m3			02/27/19 17:22	1
1,1,1-Trichloroethane	ND		5.5	0.82	ug/m3			02/27/19 17:22	1
1,1,2-Trichloroethane	ND		5.5	1.4	ug/m3			02/27/19 17:22	1
Trichloroethene	760		2.7	0.94	ug/m3			02/27/19 17:22	1
1,2,3-Trimethylbenzene	ND		4.9	2.1	ug/m3			02/27/19 17:22	1
1,2,4-Trimethylbenzene	ND		4.9	1.5	ug/m3			02/27/19 17:22	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-133-C-26

Lab Sample ID: 140-14389-9

Date Collected: 02/19/19 11:52

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		4.9	1.6	ug/m3			02/27/19 17:22	1
Vinyl chloride	ND		1.3	0.93	ug/m3			02/27/19 17:22	1
Xylenes, Total	ND		8.7	1.3	ug/m3			02/27/19 17:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					02/27/19 17:22	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-153-C-26

Lab Sample ID: 140-14389-10

Date Collected: 02/19/19 11:55

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/27/19 18:04	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 18:04	1
Chlorodifluoromethane	0.58		0.40	0.075	ppb v/v			02/27/19 18:04	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 18:04	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 18:04	1
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v			02/27/19 18:04	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 18:04	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 18:04	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 18:04	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 18:04	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/27/19 18:04	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 18:04	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 18:04	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 18:04	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 18:04	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 18:04	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 18:04	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 18:04	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 18:04	1
Trichloroethene	1.0		0.20	0.070	ppb v/v			02/27/19 18:04	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 18:04	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 18:04	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 18:04	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 18:04	1
Xylenes, Total	0.15	J	0.80	0.12	ppb v/v			02/27/19 18:04	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/27/19 18:04	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 18:04	1
Chlorodifluoromethane	2.1		1.4	0.27	ug/m3			02/27/19 18:04	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 18:04	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 18:04	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/27/19 18:04	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 18:04	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 18:04	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 18:04	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 18:04	1
Methylene Chloride	3.7	J	6.9	2.3	ug/m3			02/27/19 18:04	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 18:04	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 18:04	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 18:04	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 18:04	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 18:04	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 18:04	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 18:04	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 18:04	1
Trichloroethene	5.5		1.1	0.38	ug/m3			02/27/19 18:04	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 18:04	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 18:04	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-153-C-26

Lab Sample ID: 140-14389-10

Date Collected: 02/19/19 11:55

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 18:04	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 18:04	1
Xylenes, Total	0.65	J	3.5	0.52	ug/m3			02/27/19 18:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/27/19 18:04	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-DUP02-C-26

Lab Sample ID: 140-14389-11

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/27/19 18:46	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 18:46	1
Chlorodifluoromethane	0.61		0.40	0.075	ppb v/v			02/27/19 18:46	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 18:46	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 18:46	1
Dichlorodifluoromethane	0.51		0.40	0.14	ppb v/v			02/27/19 18:46	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 18:46	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 18:46	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 18:46	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 18:46	1
Methylene Chloride	0.98	J	2.0	0.65	ppb v/v			02/27/19 18:46	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 18:46	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 18:46	1
Tetrachloroethene	0.084	J	0.40	0.080	ppb v/v			02/27/19 18:46	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 18:46	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 18:46	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 18:46	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 18:46	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 18:46	1
Trichloroethene	0.94		0.20	0.070	ppb v/v			02/27/19 18:46	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 18:46	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 18:46	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 18:46	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 18:46	1
Xylenes, Total	0.13	J	0.80	0.12	ppb v/v			02/27/19 18:46	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/27/19 18:46	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 18:46	1
Chlorodifluoromethane	2.1		1.4	0.27	ug/m3			02/27/19 18:46	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 18:46	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 18:46	1
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3			02/27/19 18:46	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 18:46	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 18:46	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 18:46	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 18:46	1
Methylene Chloride	3.4	J	6.9	2.3	ug/m3			02/27/19 18:46	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 18:46	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 18:46	1
Tetrachloroethene	0.57	J	2.7	0.54	ug/m3			02/27/19 18:46	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 18:46	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 18:46	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 18:46	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 18:46	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 18:46	1
Trichloroethene	5.1		1.1	0.38	ug/m3			02/27/19 18:46	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 18:46	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 18:46	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-DUP02-C-26

Lab Sample ID: 140-14389-11

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 18:46	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 18:46	1
Xylenes, Total	0.56	J	3.5	0.52	ug/m3			02/27/19 18:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/27/19 18:46	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-150-C-26

Lab Sample ID: 140-14389-12

Date Collected: 02/19/19 12:05

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.37	J	0.40	0.12	ppb v/v			02/28/19 04:34	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/28/19 04:34	1
Chlorodifluoromethane	3.6		0.40	0.075	ppb v/v			02/28/19 04:34	1
Chloroform	ND		0.40	0.075	ppb v/v			02/28/19 04:34	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/28/19 04:34	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/28/19 04:34	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/28/19 04:34	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/28/19 04:34	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/28/19 04:34	1
Ethylbenzene	3.4		0.40	0.14	ppb v/v			02/28/19 04:34	1
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			02/28/19 04:34	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/28/19 04:34	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/28/19 04:34	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/28/19 04:34	1
Toluene	1.4		0.60	0.60	ppb v/v			02/28/19 04:34	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/28/19 04:34	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/28/19 04:34	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/28/19 04:34	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/28/19 04:34	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/28/19 04:34	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/28/19 04:34	1
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/28/19 04:34	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/28/19 04:34	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/28/19 04:34	1
Xylenes, Total	19		0.80	0.12	ppb v/v			02/28/19 04:34	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.2	J	1.3	0.37	ug/m3			02/28/19 04:34	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/28/19 04:34	1
Chlorodifluoromethane	13		1.4	0.27	ug/m3			02/28/19 04:34	1
Chloroform	ND		2.0	0.37	ug/m3			02/28/19 04:34	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/28/19 04:34	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/28/19 04:34	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/28/19 04:34	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/28/19 04:34	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/28/19 04:34	1
Ethylbenzene	15		1.7	0.59	ug/m3			02/28/19 04:34	1
Methylene Chloride	3.6	J	6.9	2.3	ug/m3			02/28/19 04:34	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/28/19 04:34	1
Naphthalene	ND		1.0	1.0	ug/m3			02/28/19 04:34	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/28/19 04:34	1
Toluene	5.1		2.3	2.3	ug/m3			02/28/19 04:34	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/28/19 04:34	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/28/19 04:34	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/28/19 04:34	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/28/19 04:34	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/28/19 04:34	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/28/19 04:34	1
1,2,4-Trimethylbenzene	0.70	J	2.0	0.61	ug/m3			02/28/19 04:34	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-150-C-26

Lab Sample ID: 140-14389-12

Date Collected: 02/19/19 12:05

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/28/19 04:34	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/28/19 04:34	1
Xylenes, Total	84		3.5	0.52	ug/m3			02/28/19 04:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					02/28/19 04:34	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-152-C-26

Lab Sample ID: 140-14389-13

Date Collected: 02/19/19 12:06

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.33	J	0.40	0.12	ppb v/v			02/27/19 20:10	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 20:10	1
Chlorodifluoromethane	3.1	CI	0.40	0.075	ppb v/v			02/27/19 20:10	1
Chloroform	0.098	J	0.40	0.075	ppb v/v			02/27/19 20:10	1
cis-1,2-Dichloroethene	0.74		0.40	0.12	ppb v/v			02/27/19 20:10	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/27/19 20:10	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 20:10	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 20:10	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 20:10	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 20:10	1
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v			02/27/19 20:10	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 20:10	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 20:10	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 20:10	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 20:10	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 20:10	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 20:10	1
1,1,1-Trichloroethane	0.099	J	0.40	0.060	ppb v/v			02/27/19 20:10	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 20:10	1
Trichloroethene	9.1		0.20	0.070	ppb v/v			02/27/19 20:10	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 20:10	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 20:10	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 20:10	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 20:10	1
Xylenes, Total	0.50	J	0.80	0.12	ppb v/v			02/27/19 20:10	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			02/27/19 20:10	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 20:10	1
Chlorodifluoromethane	11	CI	1.4	0.27	ug/m3			02/27/19 20:10	1
Chloroform	0.48	J	2.0	0.37	ug/m3			02/27/19 20:10	1
cis-1,2-Dichloroethene	2.9		1.6	0.48	ug/m3			02/27/19 20:10	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/27/19 20:10	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 20:10	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 20:10	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 20:10	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 20:10	1
Methylene Chloride	4.2	J	6.9	2.3	ug/m3			02/27/19 20:10	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 20:10	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 20:10	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 20:10	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 20:10	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 20:10	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 20:10	1
1,1,1-Trichloroethane	0.54	J	2.2	0.33	ug/m3			02/27/19 20:10	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 20:10	1
Trichloroethene	49		1.1	0.38	ug/m3			02/27/19 20:10	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 20:10	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 20:10	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-152-C-26

Lab Sample ID: 140-14389-13

Date Collected: 02/19/19 12:06

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 20:10	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 20:10	1
Xylenes, Total	2.2	J	3.5	0.52	ug/m3			02/27/19 20:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		60 - 140					02/27/19 20:10	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-141-C-26

Lab Sample ID: 140-14389-14

Date Collected: 02/19/19 12:10

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.44		0.40	0.12	ppb v/v			02/28/19 05:16	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/28/19 05:16	1
Chlorodifluoromethane	1.2		0.40	0.075	ppb v/v			02/28/19 05:16	1
Chloroform	0.10	J	0.40	0.075	ppb v/v			02/28/19 05:16	1
cis-1,2-Dichloroethene	2.8		0.40	0.12	ppb v/v			02/28/19 05:16	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/28/19 05:16	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/28/19 05:16	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/28/19 05:16	1
1,1-Dichloroethene	0.48		0.40	0.070	ppb v/v			02/28/19 05:16	1
Ethylbenzene	0.20	J	0.40	0.14	ppb v/v			02/28/19 05:16	1
Methylene Chloride	0.95	J	2.0	0.65	ppb v/v			02/28/19 05:16	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/28/19 05:16	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/28/19 05:16	1
Tetrachloroethene	1.3		0.40	0.080	ppb v/v			02/28/19 05:16	1
Toluene	ND		0.60	0.60	ppb v/v			02/28/19 05:16	1
trans-1,2-Dichloroethene	0.75		0.40	0.10	ppb v/v			02/28/19 05:16	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/28/19 05:16	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/28/19 05:16	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/28/19 05:16	1
Trichloroethene	63		0.20	0.070	ppb v/v			02/28/19 05:16	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/28/19 05:16	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/28/19 05:16	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/28/19 05:16	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/28/19 05:16	1
Xylenes, Total	1.4		0.80	0.12	ppb v/v			02/28/19 05:16	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.4		1.3	0.37	ug/m3			02/28/19 05:16	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/28/19 05:16	1
Chlorodifluoromethane	4.2		1.4	0.27	ug/m3			02/28/19 05:16	1
Chloroform	0.49	J	2.0	0.37	ug/m3			02/28/19 05:16	1
cis-1,2-Dichloroethene	11		1.6	0.48	ug/m3			02/28/19 05:16	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/28/19 05:16	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/28/19 05:16	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/28/19 05:16	1
1,1-Dichloroethene	1.9		1.6	0.28	ug/m3			02/28/19 05:16	1
Ethylbenzene	0.85	J	1.7	0.59	ug/m3			02/28/19 05:16	1
Methylene Chloride	3.3	J	6.9	2.3	ug/m3			02/28/19 05:16	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/28/19 05:16	1
Naphthalene	ND		1.0	1.0	ug/m3			02/28/19 05:16	1
Tetrachloroethene	9.0		2.7	0.54	ug/m3			02/28/19 05:16	1
Toluene	ND		2.3	2.3	ug/m3			02/28/19 05:16	1
trans-1,2-Dichloroethene	3.0		1.6	0.40	ug/m3			02/28/19 05:16	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/28/19 05:16	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/28/19 05:16	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/28/19 05:16	1
Trichloroethene	340		1.1	0.38	ug/m3			02/28/19 05:16	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/28/19 05:16	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/28/19 05:16	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-141-C-26

Lab Sample ID: 140-14389-14

Date Collected: 02/19/19 12:10

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/28/19 05:16	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/28/19 05:16	1
Xylenes, Total	5.9		3.5	0.52	ug/m3			02/28/19 05:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		60 - 140					02/28/19 05:16	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-088-C-26

Lab Sample ID: 140-14389-15

Date Collected: 02/19/19 12:26

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/27/19 22:15	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 22:15	1
Chlorodifluoromethane	0.35	J	0.40	0.075	ppb v/v			02/27/19 22:15	1
Chloroform	0.080	J	0.40	0.075	ppb v/v			02/27/19 22:15	1
cis-1,2-Dichloroethene	2.4		0.40	0.12	ppb v/v			02/27/19 22:15	1
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v			02/27/19 22:15	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 22:15	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 22:15	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 22:15	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 22:15	1
Methylene Chloride	1.4	J	2.0	0.65	ppb v/v			02/27/19 22:15	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 22:15	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 22:15	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 22:15	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 22:15	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 22:15	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 22:15	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 22:15	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 22:15	1
Trichloroethene	8.5		0.20	0.070	ppb v/v			02/27/19 22:15	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 22:15	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 22:15	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 22:15	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 22:15	1
Xylenes, Total	0.75	J	0.80	0.12	ppb v/v			02/27/19 22:15	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/27/19 22:15	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 22:15	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/27/19 22:15	1
Chloroform	0.39	J	2.0	0.37	ug/m3			02/27/19 22:15	1
cis-1,2-Dichloroethene	9.6		1.6	0.48	ug/m3			02/27/19 22:15	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/27/19 22:15	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 22:15	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 22:15	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 22:15	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 22:15	1
Methylene Chloride	4.9	J	6.9	2.3	ug/m3			02/27/19 22:15	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 22:15	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 22:15	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 22:15	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 22:15	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 22:15	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 22:15	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 22:15	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 22:15	1
Trichloroethene	46		1.1	0.38	ug/m3			02/27/19 22:15	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 22:15	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 22:15	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-088-C-26

Lab Sample ID: 140-14389-15

Date Collected: 02/19/19 12:26

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 22:15	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 22:15	1
Xylenes, Total	3.3	J	3.5	0.52	ug/m3			02/27/19 22:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		60 - 140					02/27/19 22:15	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-142-C-26

Lab Sample ID: 140-14389-16

Date Collected: 02/19/19 12:20

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/27/19 22:57	1
Carbon tetrachloride	0.084	J	0.40	0.075	ppb v/v			02/27/19 22:57	1
Chlorodifluoromethane	0.37	J	0.40	0.075	ppb v/v			02/27/19 22:57	1
Chloroform	1.4		0.40	0.075	ppb v/v			02/27/19 22:57	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 22:57	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/27/19 22:57	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 22:57	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 22:57	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 22:57	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 22:57	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/27/19 22:57	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 22:57	1
Naphthalene	0.21		0.20	0.20	ppb v/v			02/27/19 22:57	1
Tetrachloroethene	0.086	J	0.40	0.080	ppb v/v			02/27/19 22:57	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 22:57	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 22:57	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 22:57	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 22:57	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 22:57	1
Trichloroethene	1.2		0.20	0.070	ppb v/v			02/27/19 22:57	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 22:57	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 22:57	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 22:57	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 22:57	1
Xylenes, Total	0.61	J	0.80	0.12	ppb v/v			02/27/19 22:57	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/27/19 22:57	1
Carbon tetrachloride	0.53	J	2.5	0.47	ug/m3			02/27/19 22:57	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/27/19 22:57	1
Chloroform	6.7		2.0	0.37	ug/m3			02/27/19 22:57	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 22:57	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/27/19 22:57	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 22:57	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 22:57	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 22:57	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 22:57	1
Methylene Chloride	3.9	J	6.9	2.3	ug/m3			02/27/19 22:57	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 22:57	1
Naphthalene	1.1		1.0	1.0	ug/m3			02/27/19 22:57	1
Tetrachloroethene	0.58	J	2.7	0.54	ug/m3			02/27/19 22:57	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 22:57	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 22:57	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 22:57	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 22:57	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 22:57	1
Trichloroethene	6.7		1.1	0.38	ug/m3			02/27/19 22:57	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 22:57	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 22:57	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-142-C-26

Lab Sample ID: 140-14389-16

Date Collected: 02/19/19 12:20

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 22:57	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 22:57	1
Xylenes, Total	2.6	J	3.5	0.52	ug/m3			02/27/19 22:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		60 - 140					02/27/19 22:57	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-113-C-26

Lab Sample ID: 140-14389-17

Date Collected: 02/19/19 12:17

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/27/19 23:39	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 23:39	1
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v			02/27/19 23:39	1
Chloroform	0.32	J	0.40	0.075	ppb v/v			02/27/19 23:39	1
cis-1,2-Dichloroethene	7.2		0.40	0.12	ppb v/v			02/27/19 23:39	1
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v			02/27/19 23:39	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 23:39	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 23:39	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 23:39	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 23:39	1
Methylene Chloride	0.87	J	2.0	0.65	ppb v/v			02/27/19 23:39	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 23:39	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 23:39	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 23:39	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 23:39	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 23:39	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 23:39	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 23:39	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 23:39	1
Trichloroethene	33		0.20	0.070	ppb v/v			02/27/19 23:39	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 23:39	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 23:39	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 23:39	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 23:39	1
Xylenes, Total	0.47	J	0.80	0.12	ppb v/v			02/27/19 23:39	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/27/19 23:39	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 23:39	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/27/19 23:39	1
Chloroform	1.6	J	2.0	0.37	ug/m3			02/27/19 23:39	1
cis-1,2-Dichloroethene	29		1.6	0.48	ug/m3			02/27/19 23:39	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/27/19 23:39	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 23:39	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 23:39	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 23:39	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 23:39	1
Methylene Chloride	3.0	J	6.9	2.3	ug/m3			02/27/19 23:39	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 23:39	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 23:39	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 23:39	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 23:39	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 23:39	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 23:39	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 23:39	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 23:39	1
Trichloroethene	180		1.1	0.38	ug/m3			02/27/19 23:39	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 23:39	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 23:39	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-113-C-26

Lab Sample ID: 140-14389-17

Date Collected: 02/19/19 12:17

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 23:39	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 23:39	1
Xylenes, Total	2.0	J	3.5	0.52	ug/m3			02/27/19 23:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/27/19 23:39	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-149-C-26

Lab Sample ID: 140-14389-18

Date Collected: 02/19/19 12:32

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.27	J	0.40	0.12	ppb v/v			02/28/19 00:20	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/28/19 00:20	1
Chlorodifluoromethane	0.46		0.40	0.075	ppb v/v			02/28/19 00:20	1
Chloroform	ND		0.40	0.075	ppb v/v			02/28/19 00:20	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/28/19 00:20	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/28/19 00:20	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/28/19 00:20	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/28/19 00:20	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/28/19 00:20	1
Ethylbenzene	0.17	J	0.40	0.14	ppb v/v			02/28/19 00:20	1
Methylene Chloride	2.2		2.0	0.65	ppb v/v			02/28/19 00:20	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/28/19 00:20	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/28/19 00:20	1
Tetrachloroethene	0.14	J	0.40	0.080	ppb v/v			02/28/19 00:20	1
Toluene	12		0.60	0.60	ppb v/v			02/28/19 00:20	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/28/19 00:20	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/28/19 00:20	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/28/19 00:20	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/28/19 00:20	1
Trichloroethene	0.077	J	0.20	0.070	ppb v/v			02/28/19 00:20	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/28/19 00:20	1
1,2,4-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v			02/28/19 00:20	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/28/19 00:20	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/28/19 00:20	1
Xylenes, Total	0.74	J	0.80	0.12	ppb v/v			02/28/19 00:20	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.86	J	1.3	0.37	ug/m3			02/28/19 00:20	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/28/19 00:20	1
Chlorodifluoromethane	1.6		1.4	0.27	ug/m3			02/28/19 00:20	1
Chloroform	ND		2.0	0.37	ug/m3			02/28/19 00:20	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/28/19 00:20	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/28/19 00:20	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/28/19 00:20	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/28/19 00:20	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/28/19 00:20	1
Ethylbenzene	0.76	J	1.7	0.59	ug/m3			02/28/19 00:20	1
Methylene Chloride	7.7		6.9	2.3	ug/m3			02/28/19 00:20	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/28/19 00:20	1
Naphthalene	ND		1.0	1.0	ug/m3			02/28/19 00:20	1
Tetrachloroethene	0.97	J	2.7	0.54	ug/m3			02/28/19 00:20	1
Toluene	44		2.3	2.3	ug/m3			02/28/19 00:20	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/28/19 00:20	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/28/19 00:20	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/28/19 00:20	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/28/19 00:20	1
Trichloroethene	0.42	J	1.1	0.38	ug/m3			02/28/19 00:20	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/28/19 00:20	1
1,2,4-Trimethylbenzene	0.91	J	2.0	0.61	ug/m3			02/28/19 00:20	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-149-C-26

Lab Sample ID: 140-14389-18

Date Collected: 02/19/19 12:32

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/28/19 00:20	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/28/19 00:20	1
Xylenes, Total	3.2	J	3.5	0.52	ug/m3			02/28/19 00:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					02/28/19 00:20	1

Default Detection Limits

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-14389-1	SV-079-A-26	98
140-14389-2	SV-DUP04-A-26	95
140-14389-3	SV-131-C-26	95
140-14389-4	SV-DUP01-C-26	98
140-14389-5	SV-001-C-26	96
140-14389-6	SV-004-C-26	94
140-14389-7	SV-102-C-26	93
140-14389-8	SV-155-C-26	94
140-14389-9	SV-133-C-26	96
140-14389-10	SV-153-C-26	100
140-14389-11	SV-DUP02-C-26	100
140-14389-12	SV-150-C-26	96
140-14389-13	SV-152-C-26	94
140-14389-14	SV-141-C-26	94
140-14389-15	SV-088-C-26	94
140-14389-16	SV-142-C-26	97
140-14389-17	SV-113-C-26	98
140-14389-18	SV-149-C-26	96
LCS 140-27931/1002	Lab Control Sample	100
LCS 140-27932/1002	Lab Control Sample	95
MB 140-27931/4	Method Blank	96
MB 140-27932/7	Method Blank	96

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			02/26/19 12:56	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chloroform	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/26/19 12:56	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/26/19 12:56	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/26/19 12:56	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/26/19 12:56	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/26/19 12:56	1
Toluene	ND		0.12	0.12	ppb v/v			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/26/19 12:56	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/26/19 12:56	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/26/19 12:56	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/26/19 12:56	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/26/19 12:56	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/26/19 12:56	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/26/19 12:56	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/26/19 12:56	1
Chloroform	ND		0.39	0.073	ug/m3			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/26/19 12:56	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/26/19 12:56	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/26/19 12:56	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/26/19 12:56	1
Naphthalene	ND		0.21	0.21	ug/m3			02/26/19 12:56	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/26/19 12:56	1
Toluene	ND		0.45	0.45	ug/m3			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/26/19 12:56	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/26/19 12:56	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/26/19 12:56	1

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/26/19 12:56	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/26/19 12:56	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/26/19 12:56	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		60 - 140		02/26/19 12:56	1

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.22		ppb v/v		111	70 - 130
Chlorodifluoromethane	2.00	2.02		ppb v/v		101	60 - 140
Chloroform	2.00	2.00		ppb v/v		100	70 - 130
cis-1,2-Dichloroethene	2.00	2.09		ppb v/v		104	70 - 130
Dichlorodifluoromethane	2.00	2.06		ppb v/v		103	60 - 140
1,1-Dichloroethane	2.00	2.05		ppb v/v		103	70 - 130
1,2-Dichloroethane	2.00	2.00		ppb v/v		100	70 - 130
1,1-Dichloroethene	2.00	2.14		ppb v/v		107	70 - 130
Ethylbenzene	2.00	2.03		ppb v/v		101	70 - 130
Methylene Chloride	2.00	1.81		ppb v/v		90	70 - 130
Methyl tert-butyl ether	2.00	1.97		ppb v/v		99	60 - 140
Naphthalene	2.00	1.94		ppb v/v		97	60 - 140
Tetrachloroethene	2.00	2.06		ppb v/v		103	70 - 130
Toluene	2.00	2.02		ppb v/v		101	70 - 130
trans-1,2-Dichloroethene	2.00	2.15		ppb v/v		108	70 - 130
1,2,4-Trichlorobenzene	2.00	1.83		ppb v/v		92	60 - 140
1,1,1-Trichloroethane	2.00	2.04		ppb v/v		102	70 - 130
1,1,2-Trichloroethane	2.00	2.11		ppb v/v		105	70 - 130
Trichloroethene	2.00	2.09		ppb v/v		105	70 - 130
1,2,3-Trimethylbenzene	2.00	2.22		ppb v/v		111	70 - 130
1,2,4-Trimethylbenzene	2.00	1.99		ppb v/v		99	70 - 130
1,3,5-Trimethylbenzene	2.00	1.97		ppb v/v		98	70 - 130
Vinyl chloride	2.00	1.97		ppb v/v		98	70 - 130
Xylenes, Total	6.00	6.18		ppb v/v		103	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	13	13.9		ug/m3		111	70 - 130
Chlorodifluoromethane	7.1	7.16		ug/m3		101	60 - 140
Chloroform	9.8	9.78		ug/m3		100	70 - 130
cis-1,2-Dichloroethene	7.9	8.28		ug/m3		104	70 - 130
Dichlorodifluoromethane	9.9	10.2		ug/m3		103	60 - 140
1,1-Dichloroethane	8.1	8.31		ug/m3		103	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	8.11		ug/m3		100	70 - 130
1,1-Dichloroethene	7.9	8.50		ug/m3		107	70 - 130
Ethylbenzene	8.7	8.79		ug/m3		101	70 - 130
Methylene Chloride	6.9	6.27		ug/m3		90	70 - 130
Methyl tert-butyl ether	7.2	7.12		ug/m3		99	60 - 140
Naphthalene	10	10.2		ug/m3		97	60 - 140
Tetrachloroethene	14	14.0		ug/m3		103	70 - 130
Toluene	7.5	7.63		ug/m3		101	70 - 130
trans-1,2-Dichloroethene	7.9	8.53		ug/m3		108	70 - 130
1,2,4-Trichlorobenzene	15	13.6		ug/m3		92	60 - 140
1,1,1-Trichloroethane	11	11.1		ug/m3		102	70 - 130
1,1,2-Trichloroethane	11	11.5		ug/m3		105	70 - 130
Trichloroethene	11	11.2		ug/m3		105	70 - 130
1,2,3-Trimethylbenzene	9.8	10.9		ug/m3		111	70 - 130
1,2,4-Trimethylbenzene	9.8	9.78		ug/m3		99	70 - 130
1,3,5-Trimethylbenzene	9.8	9.68		ug/m3		98	70 - 130
Vinyl chloride	5.1	5.03		ug/m3		98	70 - 130
Xylenes, Total	26	26.8		ug/m3		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		60 - 140

Lab Sample ID: MB 140-27932/7
Matrix: Air
Analysis Batch: 27932

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/27/19 16:40	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/27/19 16:40	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/27/19 16:40	1
Chloroform	ND		0.080	0.015	ppb v/v			02/27/19 16:40	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/27/19 16:40	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/27/19 16:40	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/27/19 16:40	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/27/19 16:40	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/27/19 16:40	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/27/19 16:40	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/27/19 16:40	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/27/19 16:40	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/27/19 16:40	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/27/19 16:40	1
Toluene	ND		0.12	0.12	ppb v/v			02/27/19 16:40	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/27/19 16:40	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/27/19 16:40	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/27/19 16:40	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/27/19 16:40	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/27/19 16:40	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27932/7
Matrix: Air
Analysis Batch: 27932

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/27/19 16:40	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/27/19 16:40	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/27/19 16:40	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/27/19 16:40	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/27/19 16:40	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/27/19 16:40	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/27/19 16:40	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/27/19 16:40	1
Chloroform	ND		0.39	0.073	ug/m3			02/27/19 16:40	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/27/19 16:40	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/27/19 16:40	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/27/19 16:40	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/27/19 16:40	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/27/19 16:40	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/27/19 16:40	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/27/19 16:40	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/27/19 16:40	1
Naphthalene	ND		0.21	0.21	ug/m3			02/27/19 16:40	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/27/19 16:40	1
Toluene	ND		0.45	0.45	ug/m3			02/27/19 16:40	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/27/19 16:40	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/27/19 16:40	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/27/19 16:40	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/27/19 16:40	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/27/19 16:40	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/27/19 16:40	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/27/19 16:40	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/27/19 16:40	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/27/19 16:40	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/27/19 16:40	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		60 - 140		02/27/19 16:40	1

Lab Sample ID: LCS 140-27932/1002
Matrix: Air
Analysis Batch: 27932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.14		ppb v/v		107	70 - 130
Chlorodifluoromethane	2.00	1.79		ppb v/v		89	60 - 140
Chloroform	2.00	2.01		ppb v/v		100	70 - 130
cis-1,2-Dichloroethene	2.00	2.11		ppb v/v		105	70 - 130
Dichlorodifluoromethane	2.00	1.89		ppb v/v		94	60 - 140

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27932/1002

Matrix: Air

Analysis Batch: 27932

**Client Sample ID: Lab Control Sample
Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
1,1-Dichloroethane	2.00	2.04		ppb v/v		102	70 - 130
1,2-Dichloroethane	2.00	1.98		ppb v/v		99	70 - 130
1,1-Dichloroethene	2.00	2.03		ppb v/v		102	70 - 130
Ethylbenzene	2.00	1.88		ppb v/v		94	70 - 130
Methylene Chloride	2.00	1.73		ppb v/v		87	70 - 130
Methyl tert-butyl ether	2.00	1.80		ppb v/v		90	60 - 140
Naphthalene	2.00	1.84		ppb v/v		92	60 - 140
Tetrachloroethene	2.00	2.00		ppb v/v		100	70 - 130
Toluene	2.00	1.94		ppb v/v		97	70 - 130
trans-1,2-Dichloroethene	2.00	2.08		ppb v/v		104	70 - 130
1,2,4-Trichlorobenzene	2.00	1.78		ppb v/v		89	60 - 140
1,1,1-Trichloroethane	2.00	2.04		ppb v/v		102	70 - 130
1,1,2-Trichloroethane	2.00	1.95		ppb v/v		98	70 - 130
Trichloroethene	2.00	2.06		ppb v/v		103	70 - 130
1,2,3-Trimethylbenzene	2.00	1.99		ppb v/v		100	70 - 130
1,2,4-Trimethylbenzene	2.00	1.77		ppb v/v		88	70 - 130
1,3,5-Trimethylbenzene	2.00	1.78		ppb v/v		89	70 - 130
Vinyl chloride	2.00	1.76		ppb v/v		88	70 - 130
Xylenes, Total	6.00	5.64		ppb v/v		94	70 - 130
Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
Benzene	6.4	6.61		ug/m3		103	70 - 130
Carbon tetrachloride	13	13.4		ug/m3		107	70 - 130
Chlorodifluoromethane	7.1	6.33		ug/m3		89	60 - 140
Chloroform	9.8	9.80		ug/m3		100	70 - 130
cis-1,2-Dichloroethene	7.9	8.35		ug/m3		105	70 - 130
Dichlorodifluoromethane	9.9	9.34		ug/m3		94	60 - 140
1,1-Dichloroethane	8.1	8.24		ug/m3		102	70 - 130
1,2-Dichloroethane	8.1	8.02		ug/m3		99	70 - 130
1,1-Dichloroethene	7.9	8.07		ug/m3		102	70 - 130
Ethylbenzene	8.7	8.16		ug/m3		94	70 - 130
Methylene Chloride	6.9	6.02		ug/m3		87	70 - 130
Methyl tert-butyl ether	7.2	6.48		ug/m3		90	60 - 140
Naphthalene	10	9.63		ug/m3		92	60 - 140
Tetrachloroethene	14	13.6		ug/m3		100	70 - 130
Toluene	7.5	7.31		ug/m3		97	70 - 130
trans-1,2-Dichloroethene	7.9	8.26		ug/m3		104	70 - 130
1,2,4-Trichlorobenzene	15	13.2		ug/m3		89	60 - 140
1,1,1-Trichloroethane	11	11.1		ug/m3		102	70 - 130
1,1,2-Trichloroethane	11	10.7		ug/m3		98	70 - 130
Trichloroethene	11	11.1		ug/m3		103	70 - 130
1,2,3-Trimethylbenzene	9.8	9.78		ug/m3		100	70 - 130
1,2,4-Trimethylbenzene	9.8	8.69		ug/m3		88	70 - 130
1,3,5-Trimethylbenzene	9.8	8.75		ug/m3		89	70 - 130
Vinyl chloride	5.1	4.51		ug/m3		88	70 - 130
Xylenes, Total	26	24.5		ug/m3		94	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27932/1002
Matrix: Air
Analysis Batch: 27932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>LCS</i> <i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	95		60 - 140

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Air - GC/MS VOA

Analysis Batch: 27931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14389-1	SV-079-A-26	Total/NA	Air	TO 15 LL	
140-14389-2	SV-DUP04-A-26	Total/NA	Air	TO 15 LL	
140-14389-3	SV-131-C-26	Total/NA	Air	TO 15 LL	
140-14389-4	SV-DUP01-C-26	Total/NA	Air	TO 15 LL	
140-14389-5	SV-001-C-26	Total/NA	Air	TO 15 LL	
140-14389-6	SV-004-C-26	Total/NA	Air	TO 15 LL	
140-14389-7	SV-102-C-26	Total/NA	Air	TO 15 LL	
140-14389-8	SV-155-C-26	Total/NA	Air	TO 15 LL	
MB 140-27931/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27931/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 27932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14389-9	SV-133-C-26	Total/NA	Air	TO 15 LL	
140-14389-10	SV-153-C-26	Total/NA	Air	TO 15 LL	
140-14389-11	SV-DUP02-C-26	Total/NA	Air	TO 15 LL	
140-14389-12	SV-150-C-26	Total/NA	Air	TO 15 LL	
140-14389-13	SV-152-C-26	Total/NA	Air	TO 15 LL	
140-14389-14	SV-141-C-26	Total/NA	Air	TO 15 LL	
140-14389-15	SV-088-C-26	Total/NA	Air	TO 15 LL	
140-14389-16	SV-142-C-26	Total/NA	Air	TO 15 LL	
140-14389-17	SV-113-C-26	Total/NA	Air	TO 15 LL	
140-14389-18	SV-149-C-26	Total/NA	Air	TO 15 LL	
MB 140-27932/7	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27932/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-079-A-26

Date Collected: 02/21/19 12:37

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14389-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 21:30	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-DUP04-A-26

Date Collected: 02/21/19 00:00

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14389-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 22:13	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-131-C-26

Date Collected: 02/19/19 11:29

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14389-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 22:55	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-DUP01-C-26

Date Collected: 02/19/19 00:00

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14389-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 23:37	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-001-C-26

Date Collected: 02/19/19 11:36

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14389-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/27/19 00:18	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-004-C-26

Date Collected: 02/19/19 11:40

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14389-6

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/27/19 01:00	S1K	TAL KNX
Instrument ID: MG										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-102-C-26

Lab Sample ID: 140-14389-7

Date Collected: 02/19/19 11:45

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		3.7	11 mL	500 mL	27931	02/27/19 01:42	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-155-C-26

Lab Sample ID: 140-14389-8

Date Collected: 02/19/19 11:48

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/27/19 03:05	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-133-C-26

Lab Sample ID: 140-14389-9

Date Collected: 02/19/19 11:52

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	40 mL	500 mL	27932	02/27/19 17:22	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-153-C-26

Lab Sample ID: 140-14389-10

Date Collected: 02/19/19 11:55

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/27/19 18:04	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-DUP02-C-26

Lab Sample ID: 140-14389-11

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/27/19 18:46	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-150-C-26

Lab Sample ID: 140-14389-12

Date Collected: 02/19/19 12:05

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/28/19 04:34	S1K	TAL KNX
Instrument ID: MG										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: SV-152-C-26

Lab Sample ID: 140-14389-13

Date Collected: 02/19/19 12:06

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/27/19 20:10	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-141-C-26

Lab Sample ID: 140-14389-14

Date Collected: 02/19/19 12:10

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/28/19 05:16	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-088-C-26

Lab Sample ID: 140-14389-15

Date Collected: 02/19/19 12:26

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/27/19 22:15	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-142-C-26

Lab Sample ID: 140-14389-16

Date Collected: 02/19/19 12:20

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/27/19 22:57	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-113-C-26

Lab Sample ID: 140-14389-17

Date Collected: 02/19/19 12:17

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/27/19 23:39	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: SV-149-C-26

Lab Sample ID: 140-14389-18

Date Collected: 02/19/19 12:32

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27932	02/28/19 00:20	S1K	TAL KNX
Instrument ID: MG										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27931/4

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 12:56	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27932/7

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27932	02/27/19 16:40	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27931/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 11:35	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27932/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27932	02/27/19 13:35	S1K	TAL KNX
Instrument ID: MG										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14389-1	SV-079-A-26	Air	02/21/19 12:37	02/23/19 10:10
140-14389-2	SV-DUP04-A-26	Air	02/21/19 00:00	02/23/19 10:10
140-14389-3	SV-131-C-26	Air	02/19/19 11:29	02/23/19 10:10
140-14389-4	SV-DUP01-C-26	Air	02/19/19 00:00	02/23/19 10:10
140-14389-5	SV-001-C-26	Air	02/19/19 11:36	02/23/19 10:10
140-14389-6	SV-004-C-26	Air	02/19/19 11:40	02/23/19 10:10
140-14389-7	SV-102-C-26	Air	02/19/19 11:45	02/23/19 10:10
140-14389-8	SV-155-C-26	Air	02/19/19 11:48	02/23/19 10:10
140-14389-9	SV-133-C-26	Air	02/19/19 11:52	02/23/19 10:10
140-14389-10	SV-153-C-26	Air	02/19/19 11:55	02/23/19 10:10
140-14389-11	SV-DUP02-C-26	Air	02/19/19 00:00	02/23/19 10:10
140-14389-12	SV-150-C-26	Air	02/19/19 12:05	02/23/19 10:10
140-14389-13	SV-152-C-26	Air	02/19/19 12:06	02/23/19 10:10
140-14389-14	SV-141-C-26	Air	02/19/19 12:10	02/23/19 10:10
140-14389-15	SV-088-C-26	Air	02/19/19 12:26	02/23/19 10:10
140-14389-16	SV-142-C-26	Air	02/19/19 12:20	02/23/19 10:10
140-14389-17	SV-113-C-26	Air	02/19/19 12:17	02/23/19 10:10
140-14389-18	SV-149-C-26	Air	02/19/19 12:32	02/23/19 10:10

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
SV-079-A-26	140-14389-1	98
SV-DUP04-A-26	140-14389-2	95
SV-131-C-26	140-14389-3	95
SV-DUP01-C-26	140-14389-4	98
SV-001-C-26	140-14389-5	96
SV-004-C-26	140-14389-6	94
SV-102-C-26	140-14389-7	93
SV-155-C-26	140-14389-8	94
SV-133-C-26	140-14389-9	96
SV-153-C-26	140-14389-10	100
SV-DUP02-C-26	140-14389-11	100
SV-150-C-26	140-14389-12	96
SV-152-C-26	140-14389-13	94
SV-141-C-26	140-14389-14	94
SV-088-C-26	140-14389-15	94
SV-142-C-26	140-14389-16	97
SV-113-C-26	140-14389-17	98
SV-149-C-26	140-14389-18	96
	MB 140-27931/4	96
	MB 140-27932/7	96
	LCS 140-27931/1002	100
	LCS 140-27932/1002	95

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB26-LCS.d
 Lab ID: LCS 140-27931/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.22	111	70-130	
Chlorodifluoromethane	2.00	2.02	101	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	2.09	104	70-130	
Dichlorodifluoromethane	2.00	2.06	103	60-140	
1,1-Dichloroethane	2.00	2.05	103	70-130	
1,2-Dichloroethane	2.00	2.00	100	70-130	
1,1-Dichloroethene	2.00	2.14	107	70-130	
Ethylbenzene	2.00	2.03	101	70-130	
Methylene Chloride	2.00	1.81	90	70-130	
Methyl tert-butyl ether	2.00	1.97	99	60-140	
Naphthalene	2.00	1.94	97	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	2.15	108	70-130	
1,2,4-Trichlorobenzene	2.00	1.83	92	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	2.11	105	70-130	
Trichloroethene	2.00	2.09	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.22	111	70-130	
1,2,4-Trimethylbenzene	2.00	1.99	99	70-130	
1,3,5-Trimethylbenzene	2.00	1.97	98	70-130	
Vinyl chloride	2.00	1.97	98	70-130	
Xylenes, Total	6.00	6.18	103	70-130	

Column to be used to flag recovery and RPD values

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB27a-LCS.d
 Lab ID: LCS 140-27932/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.14	107	70-130	
Chlorodifluoromethane	2.00	1.79	89	60-140	
Chloroform	2.00	2.01	100	70-130	
cis-1,2-Dichloroethene	2.00	2.11	105	70-130	
Dichlorodifluoromethane	2.00	1.89	94	60-140	
1,1-Dichloroethane	2.00	2.04	102	70-130	
1,2-Dichloroethane	2.00	1.98	99	70-130	
1,1-Dichloroethene	2.00	2.03	102	70-130	
Ethylbenzene	2.00	1.88	94	70-130	
Methylene Chloride	2.00	1.73	87	70-130	
Methyl tert-butyl ether	2.00	1.80	90	60-140	
Naphthalene	2.00	1.84	92	60-140	
Tetrachloroethene	2.00	2.00	100	70-130	
Toluene	2.00	1.94	97	70-130	
trans-1,2-Dichloroethene	2.00	2.08	104	70-130	
1,2,4-Trichlorobenzene	2.00	1.78	89	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	1.95	98	70-130	
Trichloroethene	2.00	2.06	103	70-130	
1,2,3-Trimethylbenzene	2.00	1.99	100	70-130	
1,2,4-Trimethylbenzene	2.00	1.77	88	70-130	
1,3,5-Trimethylbenzene	2.00	1.78	89	70-130	
Vinyl chloride	2.00	1.76	88	70-130	
Xylenes, Total	6.00	5.64	94	70-130	

Column to be used to flag recovery and RPD values
 FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: G500BB26.D Lab Sample ID: MB 140-27931/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/26/2019 12:56
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27931/1002	GCCVB26-LCS .d	02/26/2019 11:35
SV-079-A-26	140-14389-1	GB26P109.D	02/26/2019 21:30
SV-DUP04-A-26	140-14389-2	GB26P110.D	02/26/2019 22:13
SV-131-C-26	140-14389-3	GB26P111.D	02/26/2019 22:55
SV-DUP01-C-26	140-14389-4	GB26P112.D	02/26/2019 23:37
SV-001-C-26	140-14389-5	GB26P113.D	02/27/2019 00:18
SV-004-C-26	140-14389-6	GB26P114.D	02/27/2019 01:00
SV-102-C-26	140-14389-7	GB26P115.D	02/27/2019 01:42
SV-155-C-26	140-14389-8	GB26P116D.D	02/27/2019 03:05

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: GB27mb500.D Lab Sample ID: MB 140-27932/7
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/27/2019 16:40
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
SV-133-C-26	140-14389-9	GB27p101.D	02/27/2019 17:22
SV-153-C-26	140-14389-10	GB27p102.D	02/27/2019 18:04
SV-DUP02-C-26	140-14389-11	GB27p103.D	02/27/2019 18:46
SV-152-C-26	140-14389-13	GB27p105.D	02/27/2019 20:10
SV-088-C-26	140-14389-15	GB27p107.D	02/27/2019 22:15
SV-142-C-26	140-14389-16	GB27p108.D	02/27/2019 22:57
SV-113-C-26	140-14389-17	GB27p109.D	02/27/2019 23:39
SV-149-C-26	140-14389-18	GB27p110.D	02/28/2019 00:20
SV-150-C-26	140-14389-12	GB27p104R.D	02/28/2019 04:34
SV-141-C-26	140-14389-14	GB27p106R.D	02/28/2019 05:16

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: GA11BLK1.D BFB Injection Date: 01/11/2019
 Instrument ID: MG BFB Injection Time: 12:24
 Analysis Batch No.: 26755

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.2	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	71.2	
175	5.0 - 9.0 % of mass 174	5.1	(7.1) 1
176	95.0 - 101.0 % of mass 174	70.7	(99.3) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-26755/2	GA11IC09.D	01/11/2019	13:08
	IC 140-26755/6	GA11IC10.D	01/11/2019	14:35
	IC 140-26755/9	GA11IC01.D	01/11/2019	16:46
	IC 140-26755/10	GA11IC02.D	01/11/2019	17:29
	IC 140-26755/11	GA11IC03.D	01/11/2019	18:12
	IC 140-26755/12	GA11IC04.D	01/11/2019	18:56
	IC 140-26755/13	GA11IC05.D	01/11/2019	19:40
	IC 140-26755/14	GA11IC06.D	01/11/2019	20:23
	ICIS 140-26755/15	GA11IC07.D	01/11/2019	21:07
	IC 140-26755/16	GA11IC08.D	01/11/2019	21:51
	ICV 140-26755/18	GA11ICV.D	01/11/2019	23:17

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: GBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MG BFB Injection Time: 11:03
 Analysis Batch No.: 27931

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.5
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	73.1
175	5.0 - 9.0 % of mass 174	5.1 (7.0) 1
176	95.0 - 101.0 % of mass 174	71.2 (97.4) 1
177	5.0 - 9.0 % of mass 176	4.6 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27931/2	GCCVB26.D	02/26/2019	11:35
	LCS 140-27931/1002	GCCVB26-LCS.d	02/26/2019	11:35
	MB 140-27931/4	G500BB26.D	02/26/2019	12:56
SV-079-A-26	140-14389-1	GB26P109.D	02/26/2019	21:30
SV-DUP04-A-26	140-14389-2	GB26P110.D	02/26/2019	22:13
SV-131-C-26	140-14389-3	GB26P111.D	02/26/2019	22:55
SV-DUP01-C-26	140-14389-4	GB26P112.D	02/26/2019	23:37
SV-001-C-26	140-14389-5	GB26P113.D	02/27/2019	00:18
SV-004-C-26	140-14389-6	GB26P114.D	02/27/2019	01:00
SV-102-C-26	140-14389-7	GB26P115.D	02/27/2019	01:42
SV-155-C-26	140-14389-8	GB26P116D.D	02/27/2019	03:05

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: GBFBB27a.D BFB Injection Date: 02/27/2019
 Instrument ID: MG BFB Injection Time: 13:04
 Analysis Batch No.: 27932

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.2
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.9
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	76.9
175	5.0 - 9.0 % of mass 174	5.5 (7.1) 1
176	95.0 - 101.0 % of mass 174	77.0 (100.2) 1
177	5.0 - 9.0 % of mass 176	4.9 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27932/2	GCCVB27a.D	02/27/2019	13:35
	LCS 140-27932/1002	GCCVB27a-LCS .d	02/27/2019	13:35
	MB 140-27932/7	GB27mb500.D	02/27/2019	16:40
SV-133-C-26	140-14389-9	GB27p101.D	02/27/2019	17:22
SV-153-C-26	140-14389-10	GB27p102.D	02/27/2019	18:04
SV-DUP02-C-26	140-14389-11	GB27p103.D	02/27/2019	18:46
SV-152-C-26	140-14389-13	GB27p105.D	02/27/2019	20:10
SV-088-C-26	140-14389-15	GB27p107.D	02/27/2019	22:15
SV-142-C-26	140-14389-16	GB27p108.D	02/27/2019	22:57
SV-113-C-26	140-14389-17	GB27p109.D	02/27/2019	23:39
SV-149-C-26	140-14389-18	GB27p110.D	02/28/2019	00:20
SV-150-C-26	140-14389-12	GB27p104R.D	02/28/2019	04:34
SV-141-C-26	140-14389-14	GB27p106R.D	02/28/2019	05:16

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Sample No.: ICIS 140-26755/15 Date Analyzed: 01/11/2019 21:07
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GAl1IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	437891	9.25	2708081	11.42	2541912	16.10
UPPER LIMIT	613047	9.58	3791313	11.75	3558677	16.43
LOWER LIMIT	262735	8.92	1624849	11.09	1525147	15.77
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-26755/18	423755	9.24	2327828	11.42	2182908	16.09

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Sample No.: CCVIS 140-27931/2 Date Analyzed: 02/26/2019 11:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBZd5			
	AREA #	RT #	AREA #	RT #	AREA #	RT #		
12/24 HOUR STD	496382	9.23	2758157	11.41	2578216	16.08		
UPPER LIMIT	694935	9.56	3861420	11.74	3609502	16.41		
LOWER LIMIT	297829	8.90	1654894	11.08	1546930	15.75		
LAB SAMPLE ID	CLIENT SAMPLE ID							
LCS 140-27931/1002			496382	9.23	2758157	11.41	2578216	16.08
MB 140-27931/4			508819	9.23	2920722	11.41	2502760	16.08
140-14389-1		SV-079-A-26	460405	9.22	2922859	11.40	2688571	16.08
140-14389-2		SV-DUP04-A-26	489843	9.23	2906982	11.40	2724517	16.08
140-14389-3		SV-131-C-26	483743	9.23	2991373	11.40	2811933	16.08
140-14389-4		SV-DUP01-C-26	437107	9.22	2665935	11.40	2551551	16.08
140-14389-5		SV-001-C-26	471643	9.23	2836179	11.40	2626133	16.08
140-14389-6		SV-004-C-26	479473	9.23	2624991	11.40	2596426	16.08
140-14389-7		SV-102-C-26	457608	9.23	2569647	11.40	2367991	16.08
140-14389-8		SV-155-C-26	459815	9.23	2680947	11.40	2507992	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Sample No.: CCVIS 140-27932/2 Date Analyzed: 02/27/2019 13:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB27a.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	507272	9.24	2957187	11.41	2771430	16.08	
UPPER LIMIT	710181	9.57	4140062	11.74	3880002	16.41	
LOWER LIMIT	304363	8.91	1774312	11.08	1662858	15.75	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27932/1002	507272	9.24	2957187	11.41	2771430	16.08	
MB 140-27932/7	450057	9.23	2814179	11.40	2588422	16.08	
140-14389-9	SV-133-C-26	439243	9.23	2502675	11.40	2291491	16.08
140-14389-10	SV-153-C-26	443609	9.22	2572234	11.40	2373427	16.08
140-14389-11	SV-DUP02-C-26	448090	9.23	2630175	11.40	2394397	16.08
140-14389-13	SV-152-C-26	495405	9.23	3052420	11.40	2868489	16.08
140-14389-15	SV-088-C-26	497394	9.23	3117508	11.40	2902566	16.08
140-14389-16	SV-142-C-26	469571	9.23	2857201	11.40	2606400	16.08
140-14389-17	SV-113-C-26	471775	9.23	2659937	11.40	2435487	16.08
140-14389-18	SV-149-C-26	479671	9.23	2857167	11.40	2693946	16.08
140-14389-12	SV-150-C-26	479004	9.23	2944153	11.40	2703053	16.08
140-14389-14	SV-141-C-26	479558	9.23	3005696	11.40	2816785	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-079-A-26 Lab Sample ID: 140-14389-1
 Matrix: Air Lab File ID: GB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:37
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.3		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	11		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.57	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-079-A-26 Lab Sample ID: 140-14389-1
 Matrix: Air Lab File ID: GB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:37
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	8.7		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.72	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	57		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.5	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P109.D
 Lims ID: 140-14389-A-1
 Client ID: SV-079-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 21:30:30 ALS Bottle#: 9 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-015
 Misc. Info.: 140-14389-a-1
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:41:46

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.221	9.232	-0.011	98	460405	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.405	-0.005	96	2922859	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2688571	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2155750	3.91	
6 Chlorodifluoromethane	51	3.829	3.829	0.006	95	29451	0.0976	M
8 Dichlorodifluoromethane	85	3.893	3.886	0.005	100	46893	0.0962	
31 Methylene Chloride	84	6.595	6.591	0.000	99	48256	0.2552	
47 1,1,1-Trichloroethane	97	10.278	10.277	-0.005	95	10999	0.0264	
58 Trichloroethene	130	12.101	12.100	-0.005	94	507734	2.13	
67 Toluene	91	14.123	14.128	-0.005	93	37017	0.0626	
73 Tetrachloroethene	129	15.250	15.255	-0.005	91	56924	0.2565	
79 m-Xylene & p-Xylene	91	16.560	16.565	-0.006	98	36102	0.0587	
83 o-Xylene	91	17.089	17.089	0.000	98	36406	0.0561	
S 124 Xylenes, Total	100				0		0.1149	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P109.D

Injection Date: 26-Feb-2019 21:30:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14389-A-1

Lab Sample ID: 140-14389-1

Worklist Smp#: 15

Client ID: SV-079-A-26

Purge Vol: 500.000 mL

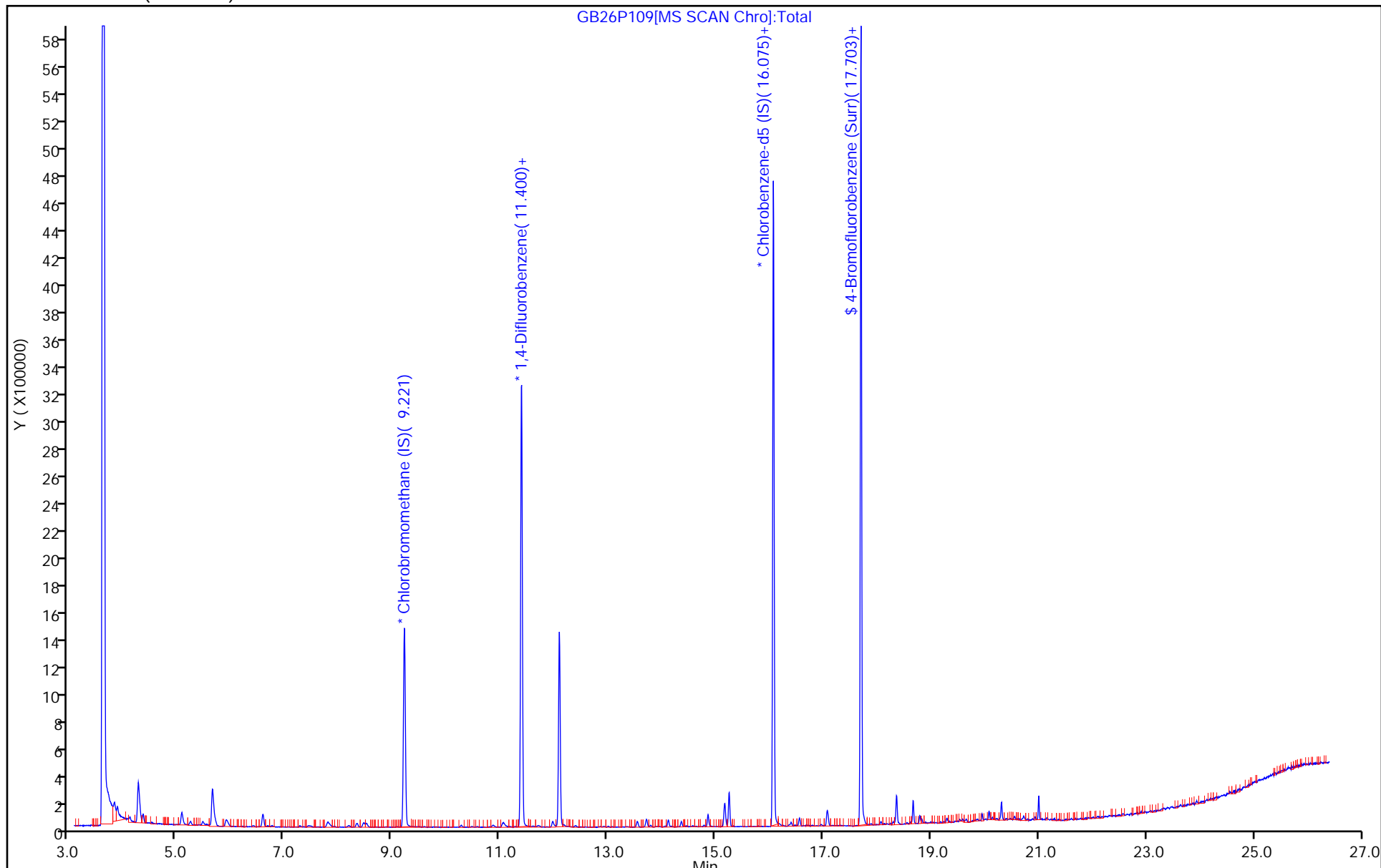
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P109.D
 Lims ID: 140-14389-A-1
 Client ID: SV-079-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 21:30:30 ALS Bottle#: 9 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-015
 Misc. Info.: 140-14389-a-1
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:41:46

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.91	97.82

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P109.D

Injection Date: 26-Feb-2019 21:30:30

Instrument ID: MG

Lims ID: 140-14389-A-1

Lab Sample ID: 140-14389-1

Client ID: SV-079-A-26

Operator ID: 7126

ALS Bottle#: 9

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

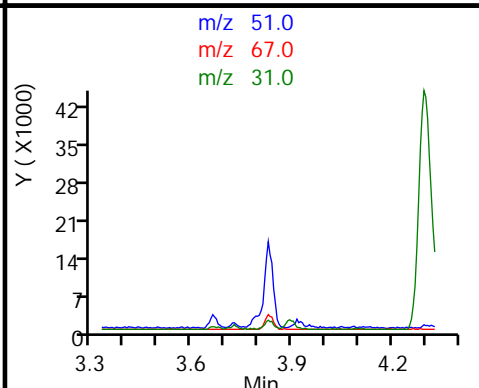
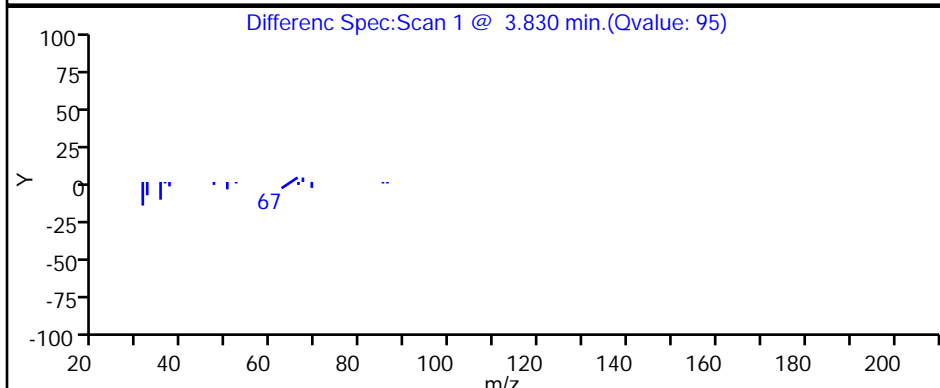
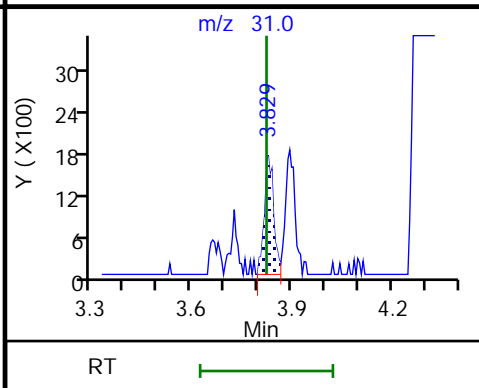
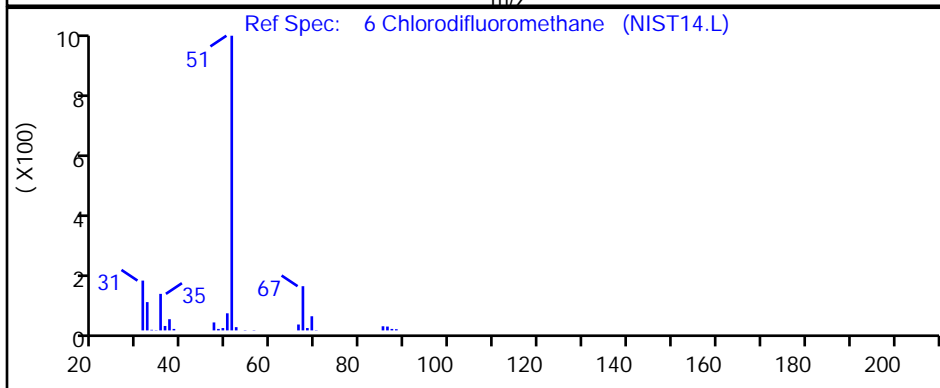
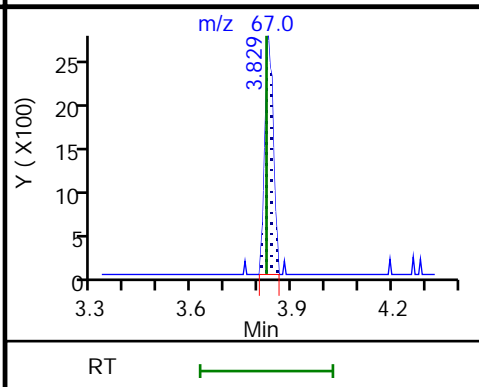
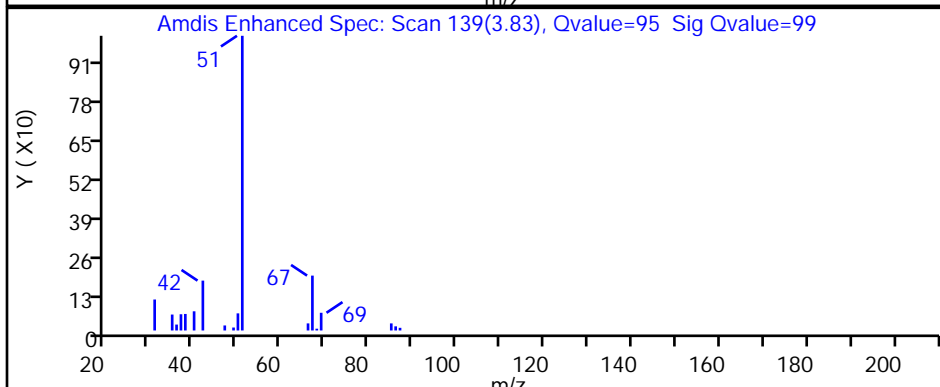
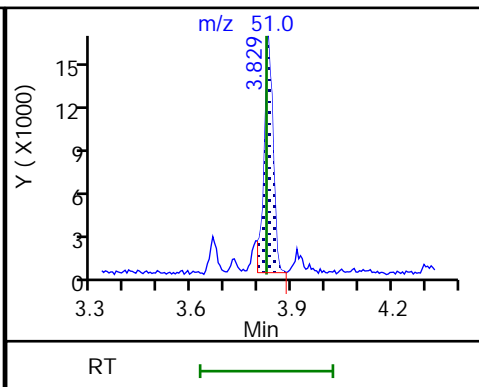
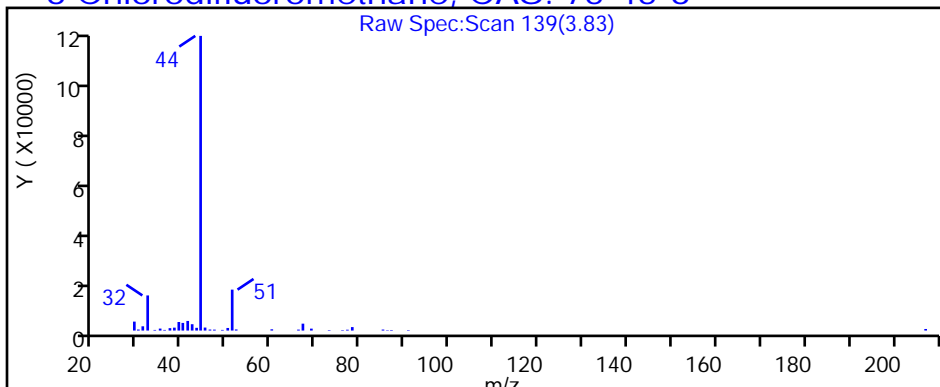
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P109.D

Injection Date: 26-Feb-2019 21:30:30

Instrument ID: MG

Lims ID: 140-14389-A-1

Lab Sample ID: 140-14389-1

Client ID: SV-079-A-26

Operator ID: 7126

ALS Bottle#: 9

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

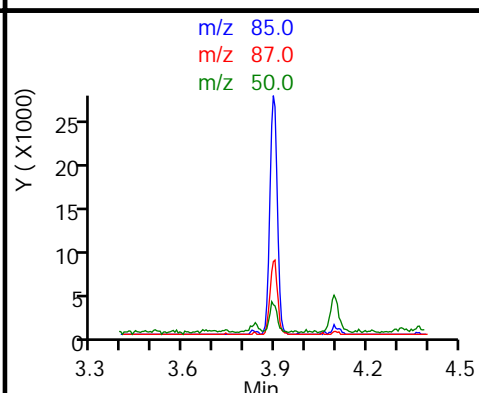
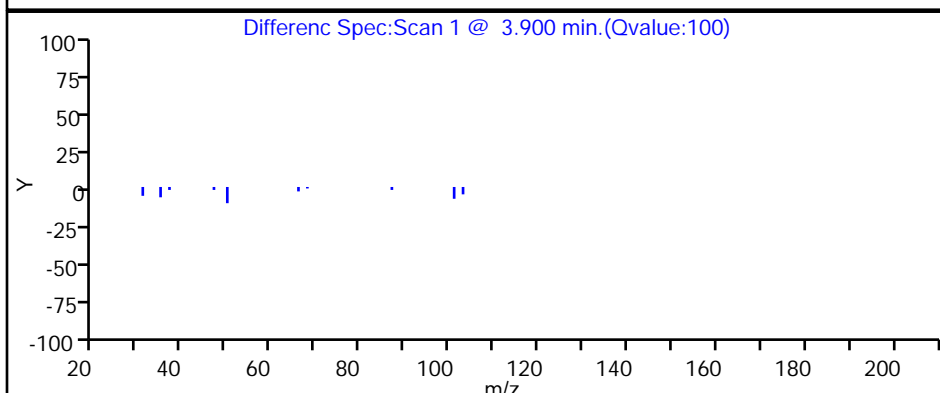
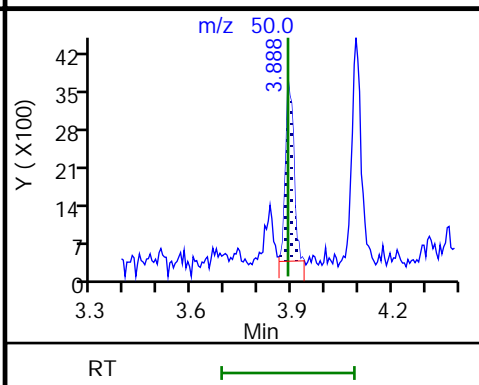
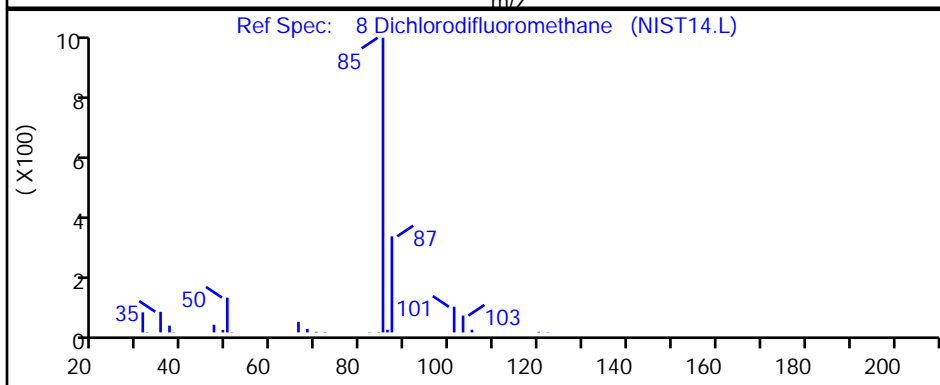
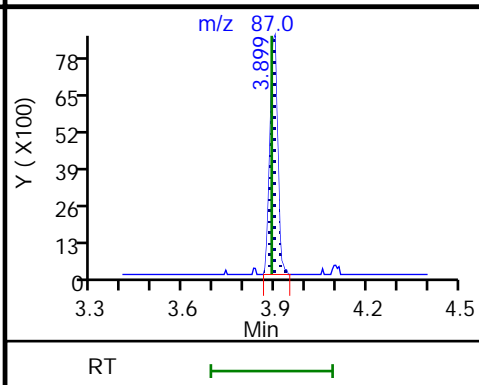
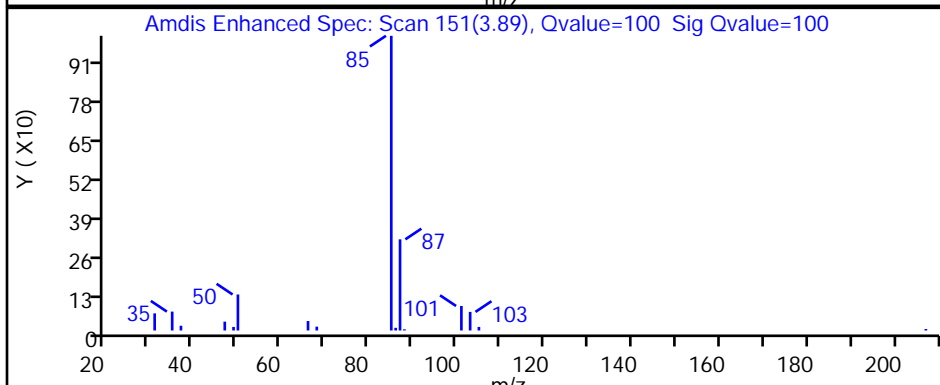
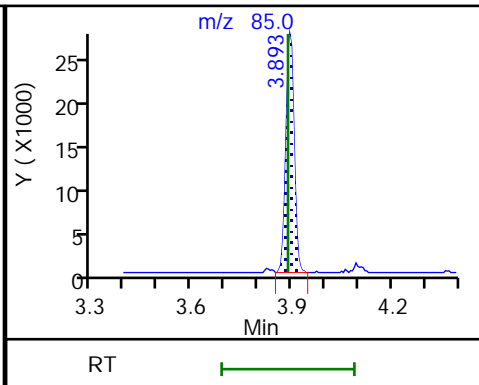
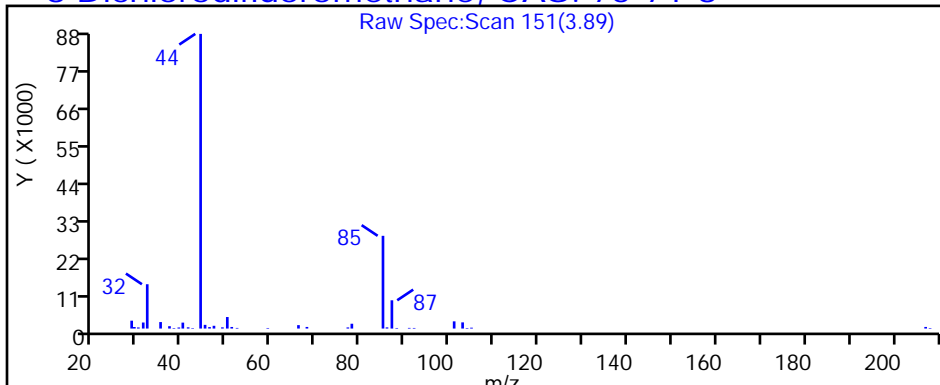
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

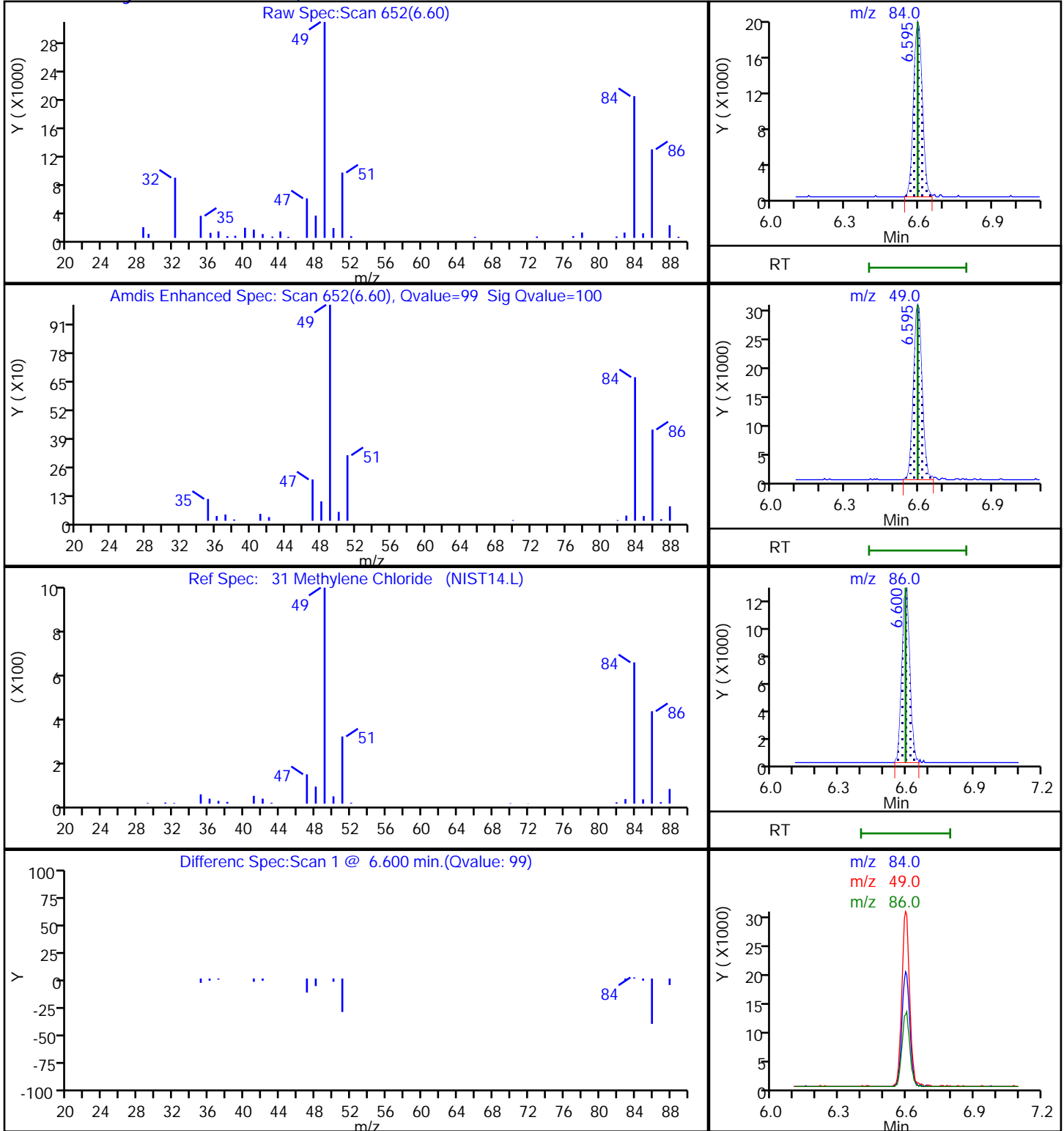
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P109.D
Injection Date: 26-Feb-2019 21:30:30 Instrument ID: MG
Lims ID: 140-14389-A-1 Lab Sample ID: 140-14389-1
Client ID: SV-079-A-26
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P109.D

Injection Date: 26-Feb-2019 21:30:30

Instrument ID: MG

Lims ID: 140-14389-A-1

Lab Sample ID: 140-14389-1

Client ID: SV-079-A-26

Operator ID: 7126

ALS Bottle#: 9

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

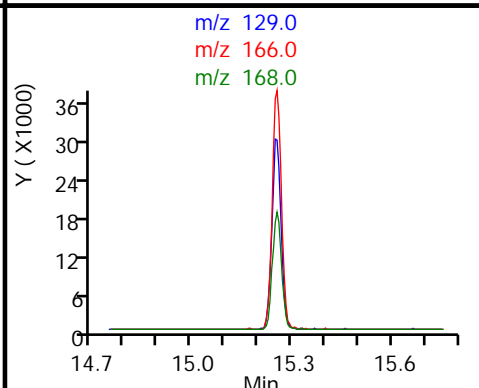
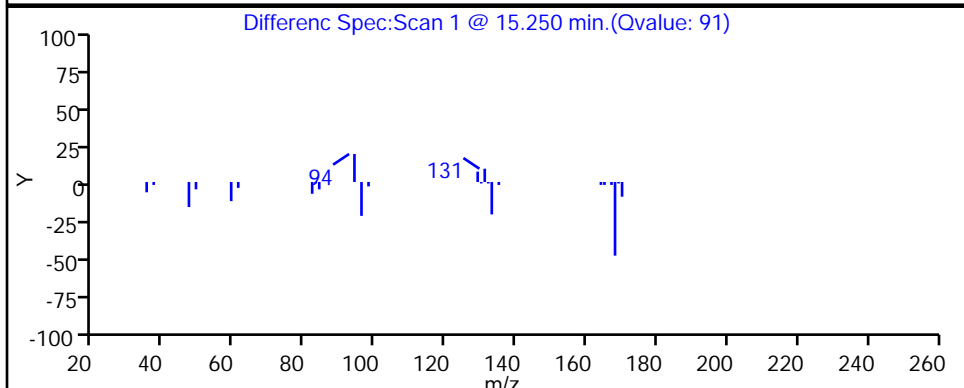
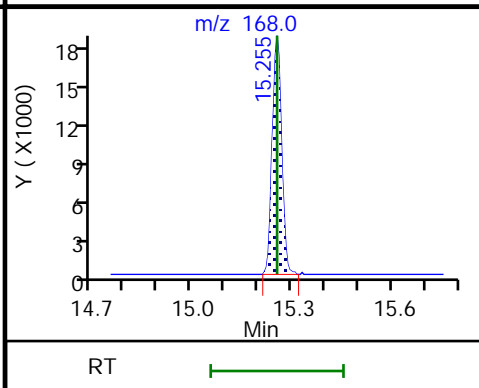
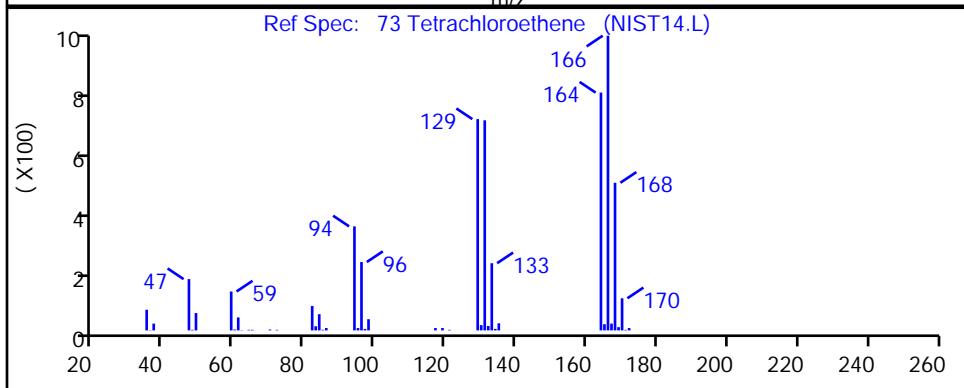
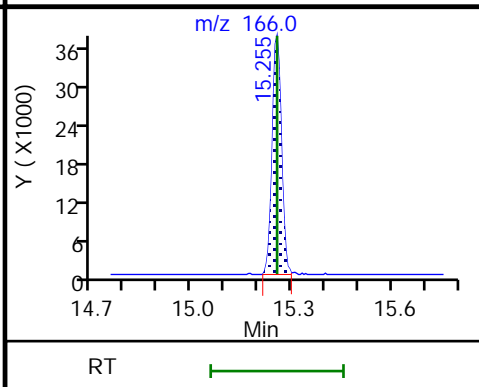
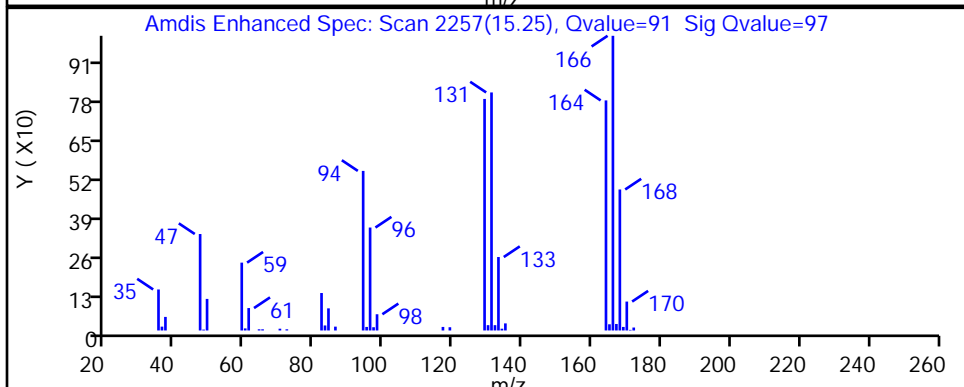
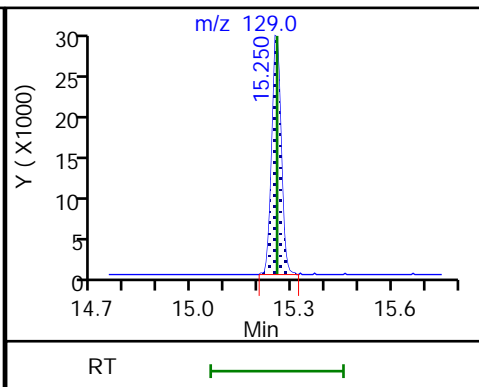
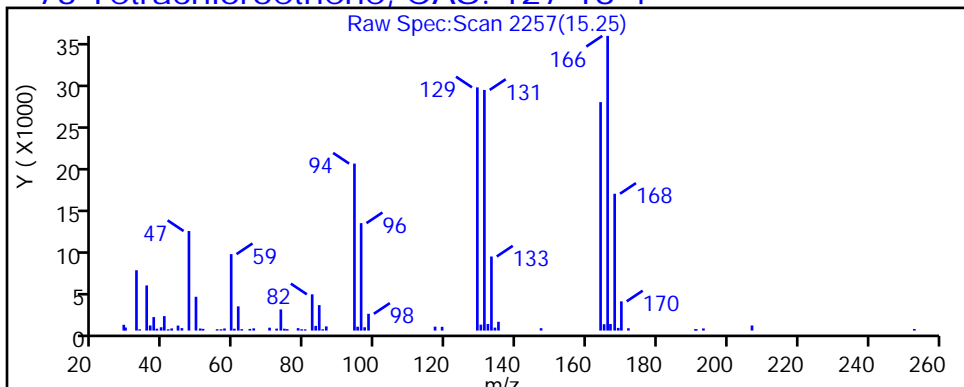
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

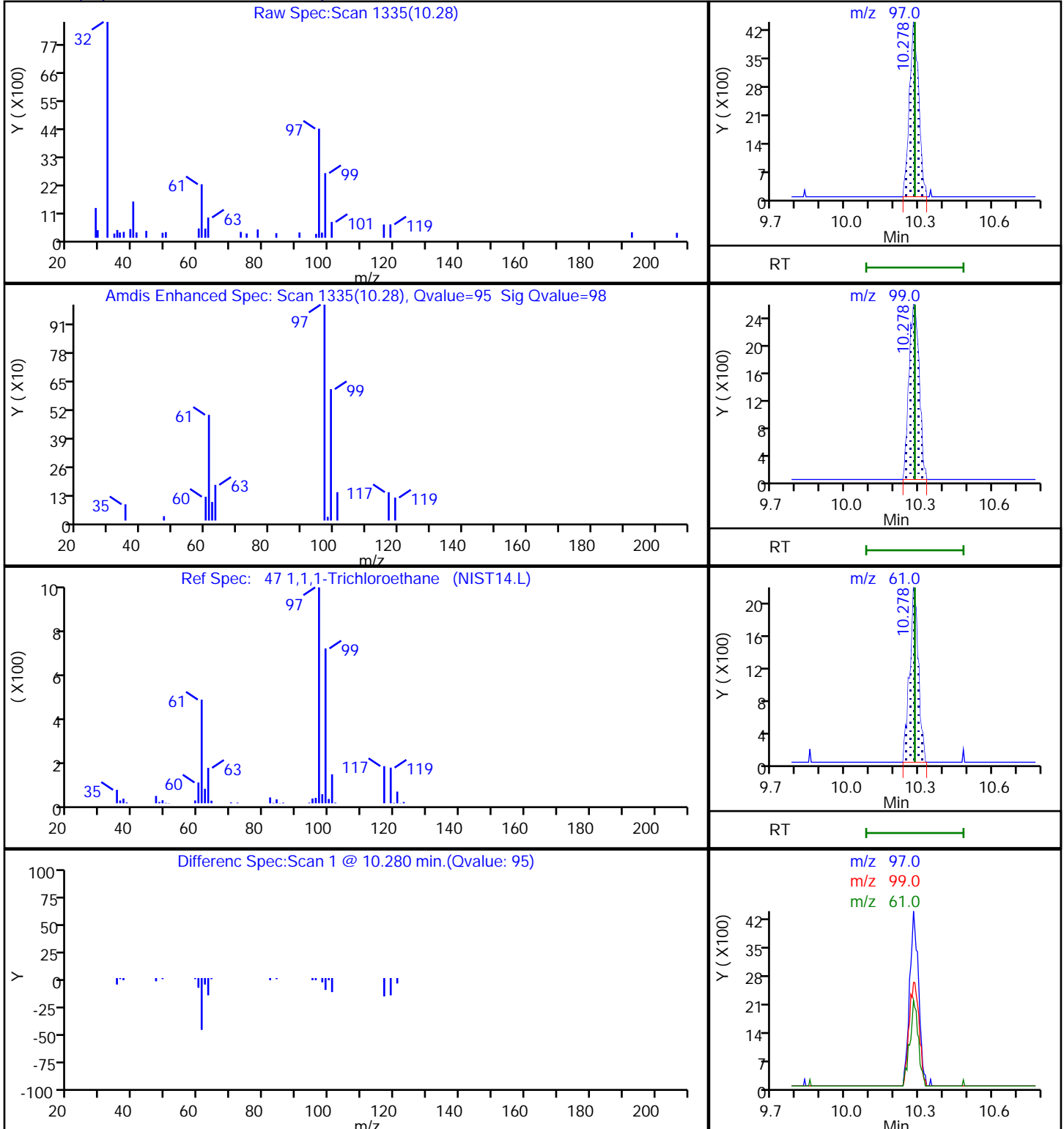
73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P109.D
Injection Date: 26-Feb-2019 21:30:30 Instrument ID: MG
Lims ID: 140-14389-A-1 Lab Sample ID: 140-14389-1
Client ID: SV-079-A-26
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

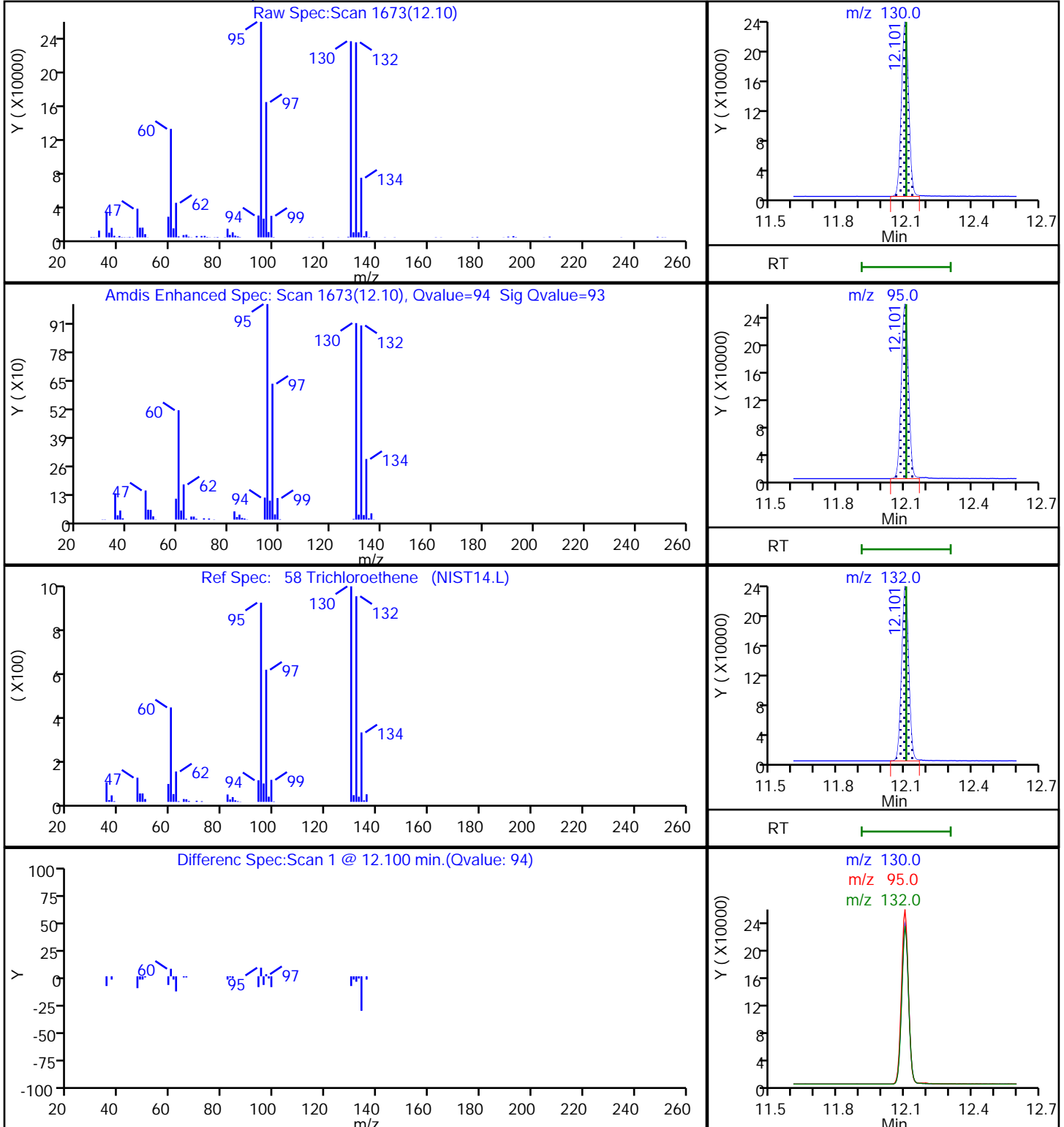
47 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P109.D
Injection Date: 26-Feb-2019 21:30:30 Instrument ID: MG
Lims ID: 140-14389-A-1 Lab Sample ID: 140-14389-1
Client ID: SV-079-A-26
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

58 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P109.D

Injection Date: 26-Feb-2019 21:30:30

Instrument ID: MG

Lims ID: 140-14389-A-1

Lab Sample ID: 140-14389-1

Client ID: SV-079-A-26

Operator ID: 7126

ALS Bottle#: 9

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

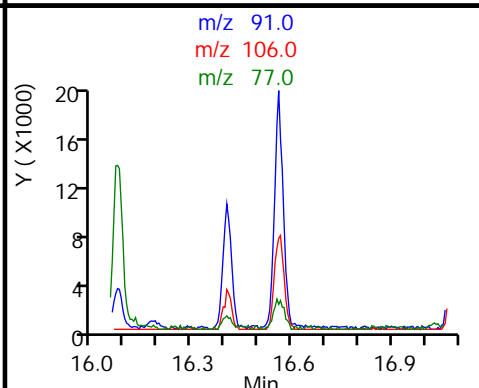
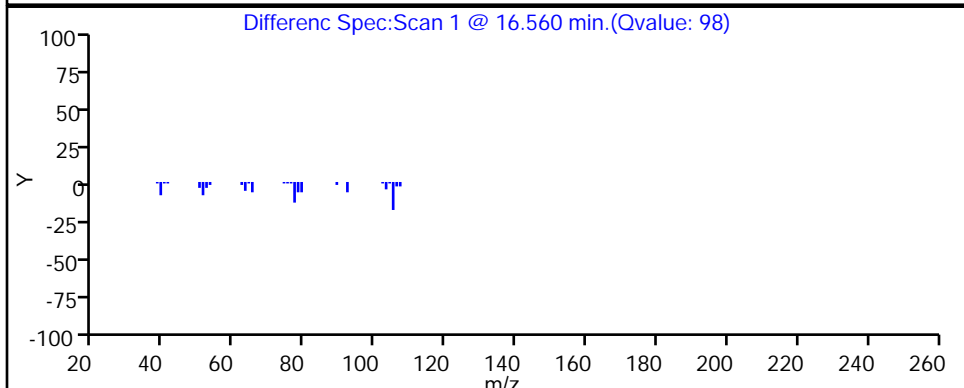
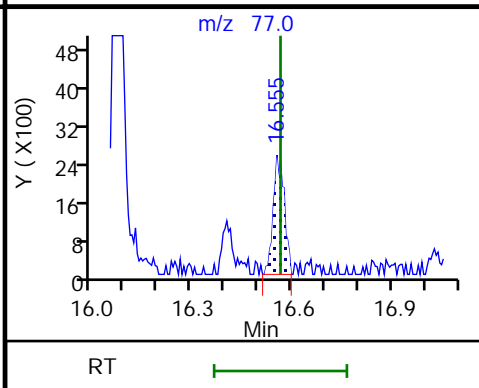
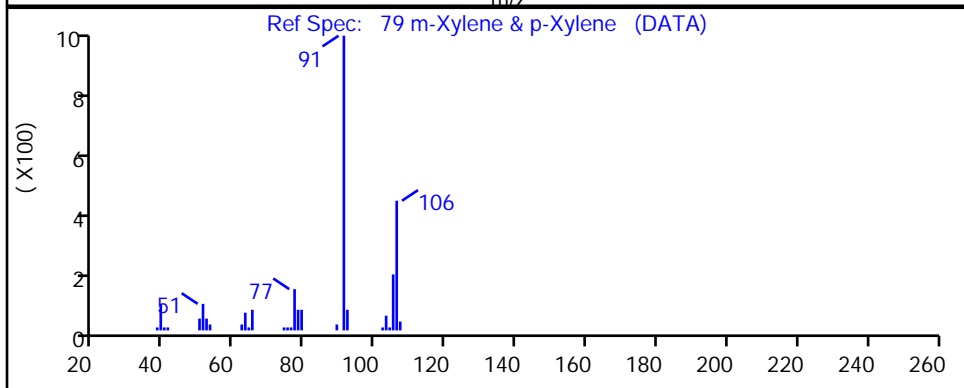
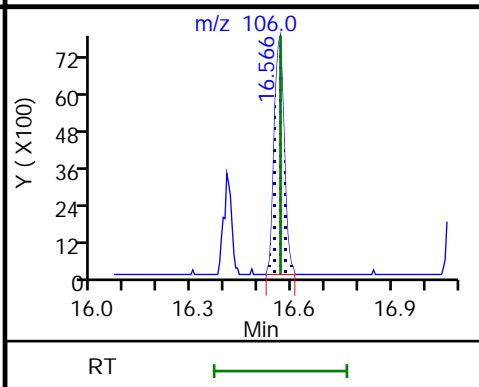
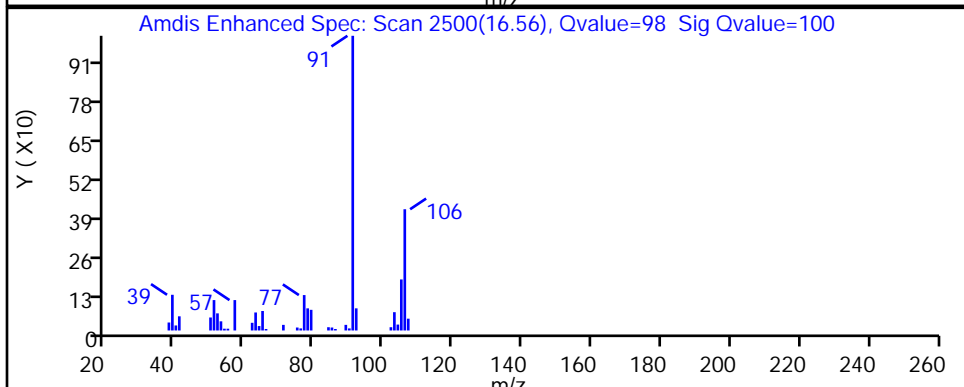
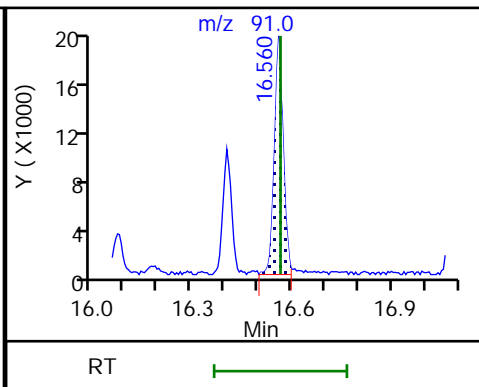
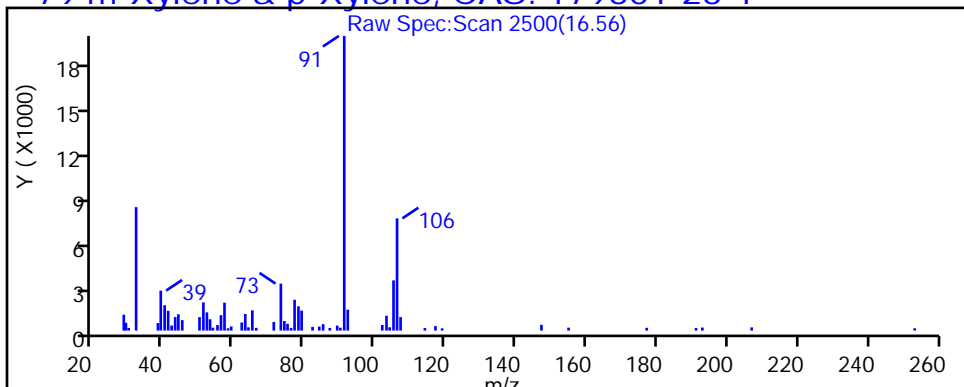
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

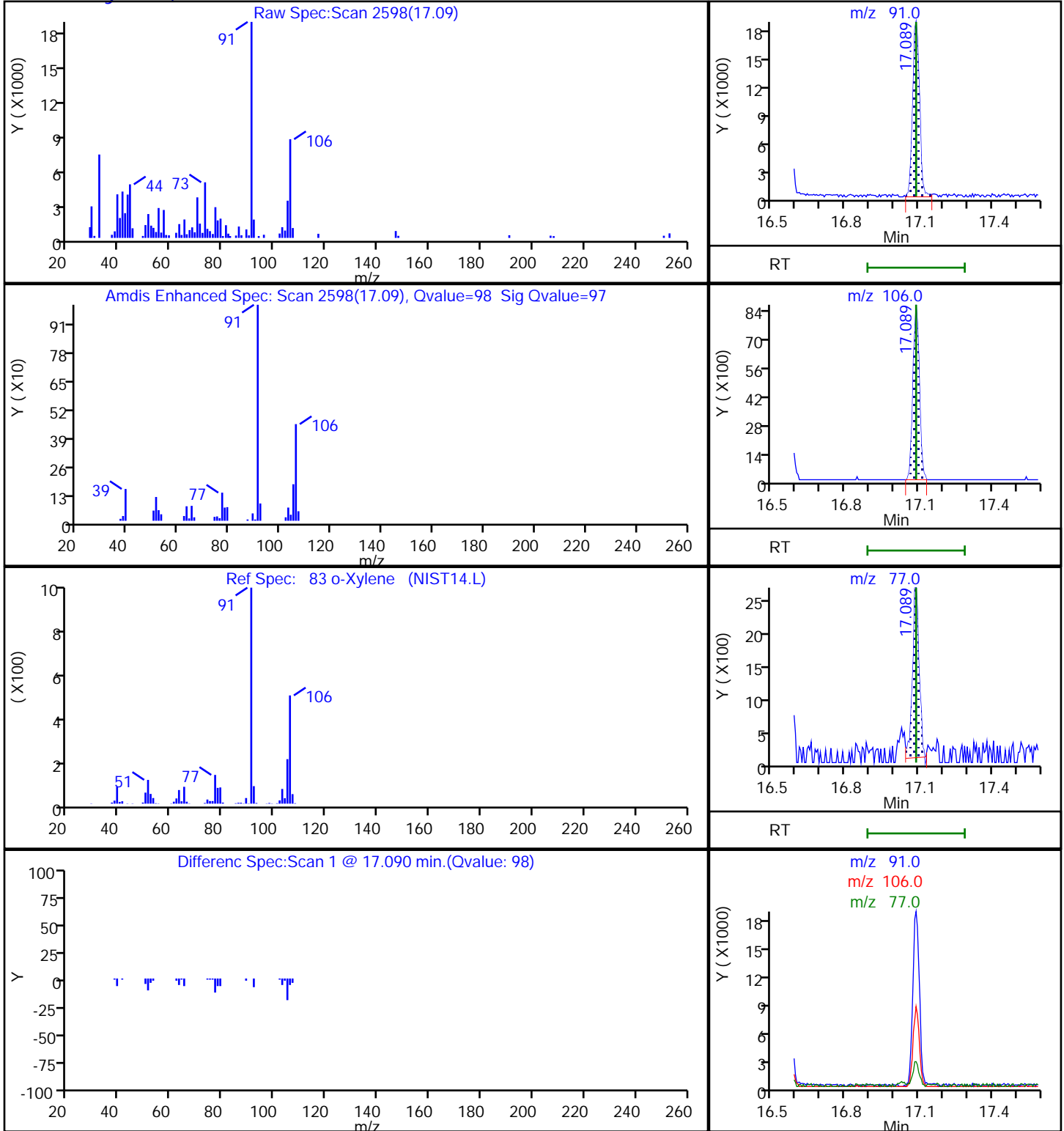
79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P109.D
Injection Date: 26-Feb-2019 21:30:30 Instrument ID: MG
Lims ID: 140-14389-A-1 Lab Sample ID: 140-14389-1
Client ID: SV-079-A-26
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



TestAmerica Knoxville

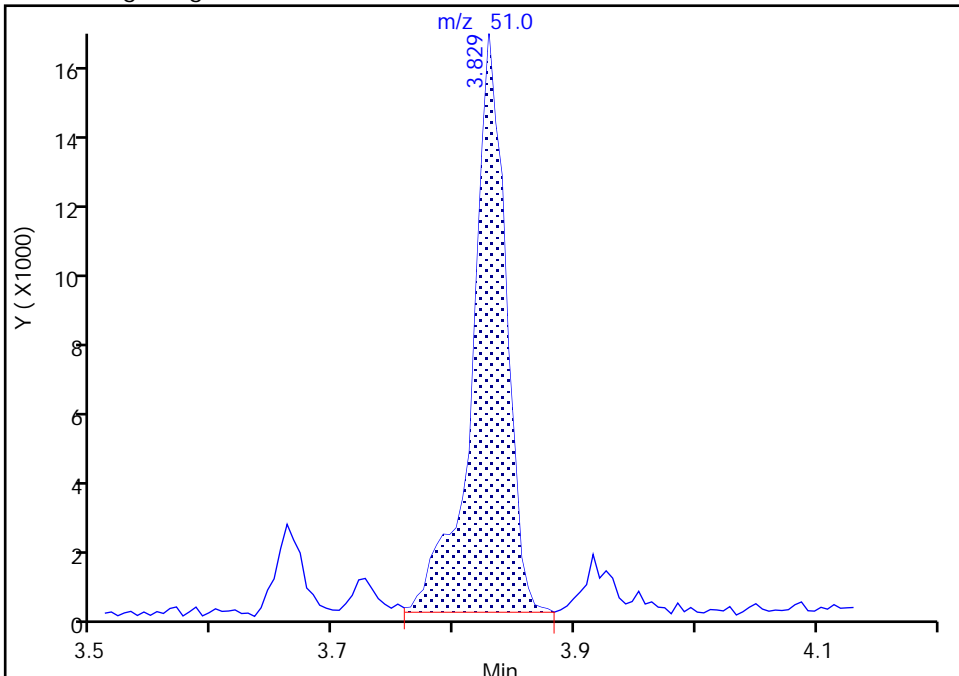
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Injection Date: 26-Feb-2019 21:30:30 Instrument ID: MG
Lims ID: 140-14389-A-1 Lab Sample ID: 140-14389-1
Client ID: SV-079-A-26
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

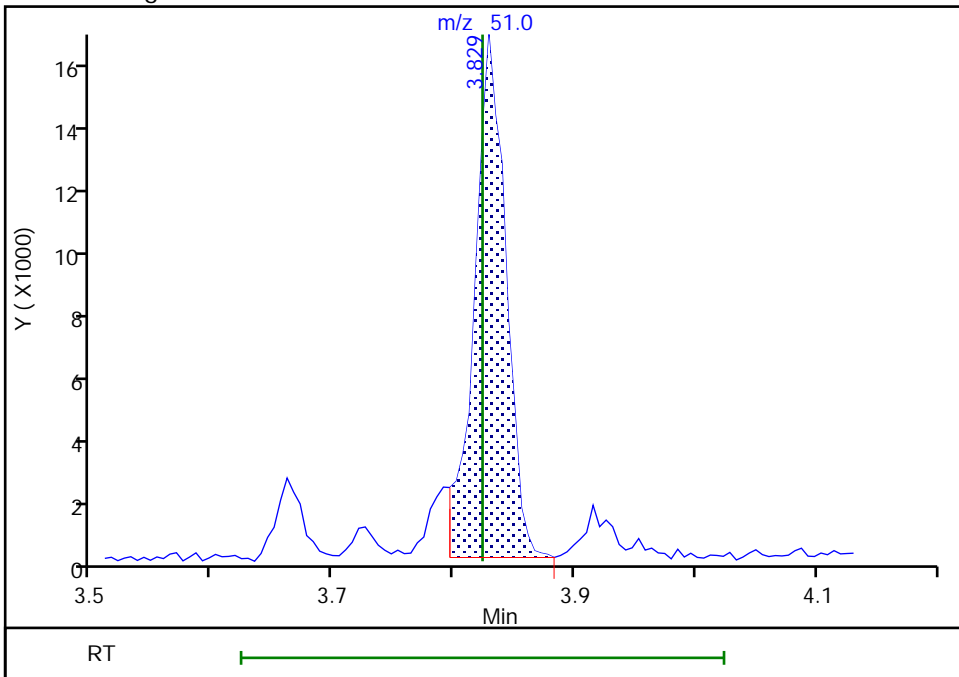
RT: 3.83
Area: 31688
Amount: 0.105064
Amount Units: ppb v/v

Processing Integration Results



RT: 3.83
Area: 29451
Amount: 0.097647
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 15:41:17

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP04-A-26 Lab Sample ID: 140-14389-2
 Matrix: Air Lab File ID: GB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.83	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.2		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	10		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.63	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP04-A-26 Lab Sample ID: 140-14389-2
 Matrix: Air Lab File ID: GB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	8.3		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.71	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	56		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.71	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P110.D
 Lims ID: 140-14389-A-2
 Client ID: SV-DUP04-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 22:13:30 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-016
 Misc. Info.: 140-14389-a-2
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:45:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.226	9.232	-0.006	98	489843	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.405	-0.005	96	2906982	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2724517	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2117016	3.79	
6 Chlorodifluoromethane	51	3.829	3.829	0.006	97	29608	0.0923	
8 Dichlorodifluoromethane	85	3.893	3.886	0.005	100	46725	0.0901	
31 Methylene Chloride	84	6.600	6.591	0.005	98	33368	0.1659	
47 1,1,1-Trichloroethane	97	10.278	10.277	-0.005	98	11597	0.0262	
58 Trichloroethene	130	12.101	12.100	-0.005	95	496440	2.10	
67 Toluene	91	14.128	14.128	0.000	92	32429	0.0541	
73 Tetrachloroethene	129	15.255	15.255	0.000	92	55130	0.2451	
79 m-Xylene & p-Xylene	91	16.560	16.565	-0.006	100	43262	0.0694	
83 o-Xylene	91	17.088	17.089	-0.001	98	36758	0.0559	
95 1,2,4-Trimethylbenzene	105	18.830	18.830	0.000	97	21469	0.0288	
S 124 Xylenes, Total	100				0		0.1254	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P110.D

Injection Date: 26-Feb-2019 22:13:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14389-A-2

Lab Sample ID: 140-14389-2

Worklist Smp#: 16

Client ID: SV-DUP04-A-26

Purge Vol: 500.000 mL

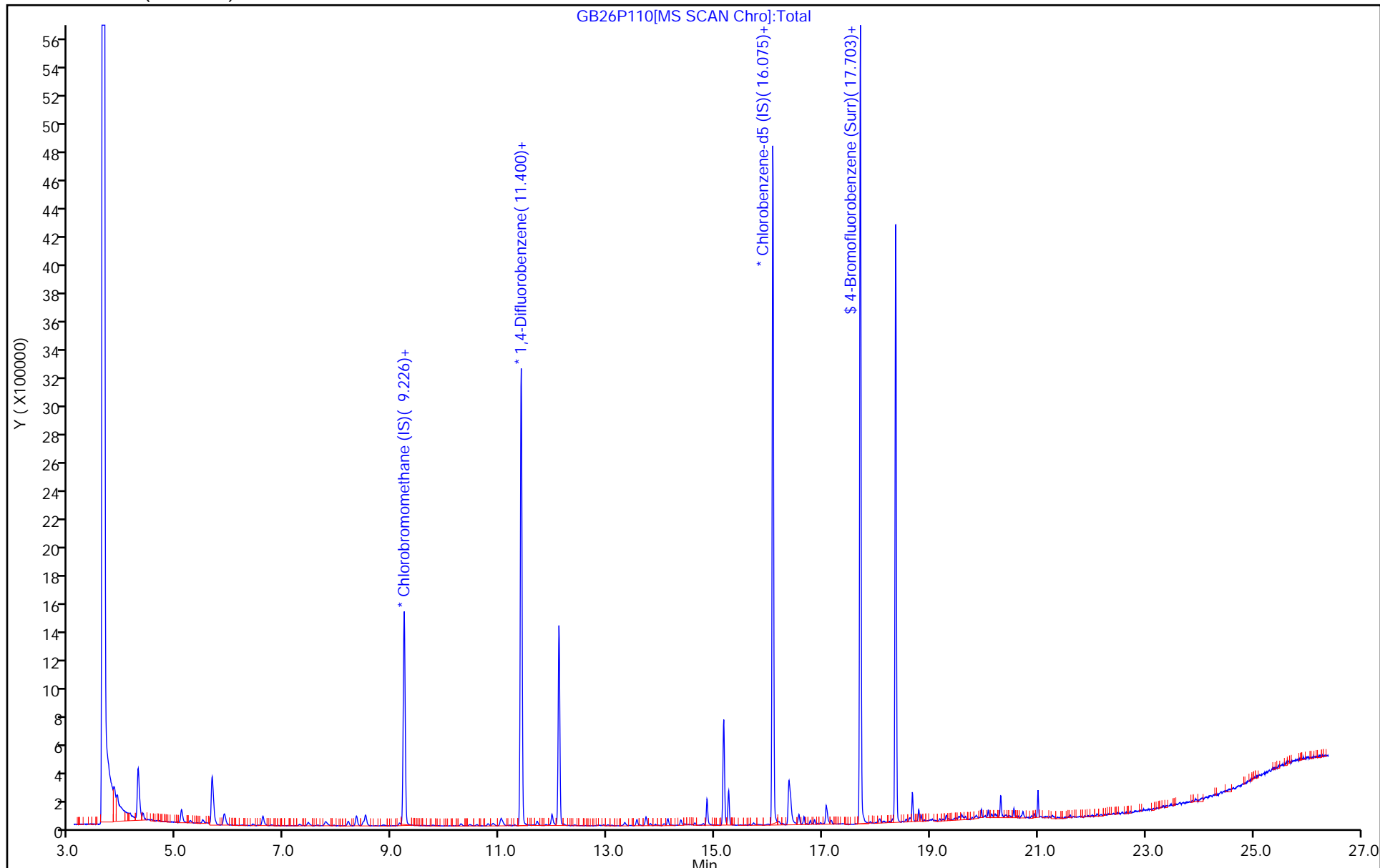
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P110.D
 Lims ID: 140-14389-A-2
 Client ID: SV-DUP04-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 22:13:30 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-016
 Misc. Info.: 140-14389-a-2
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:45:39

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.79	94.80

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P110.D

Injection Date: 26-Feb-2019 22:13:30

Instrument ID: MG

Lims ID: 140-14389-A-2

Lab Sample ID: 140-14389-2

Client ID: SV-DUP04-A-26

Operator ID: 7126

ALS Bottle#: 10

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

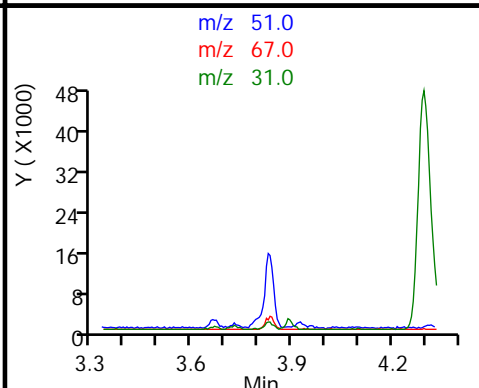
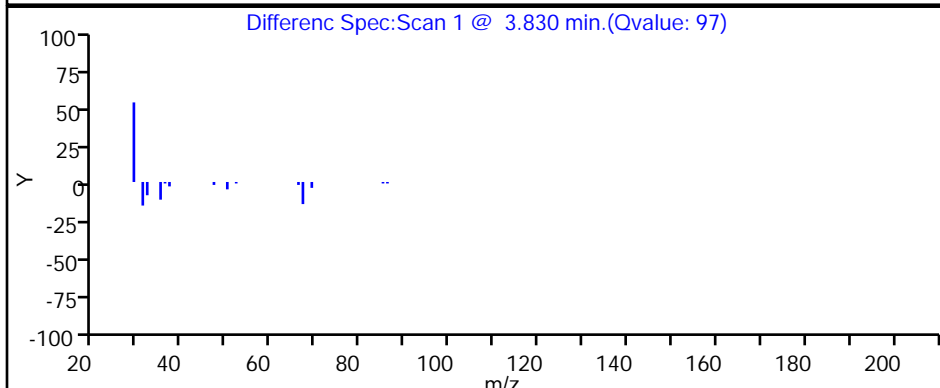
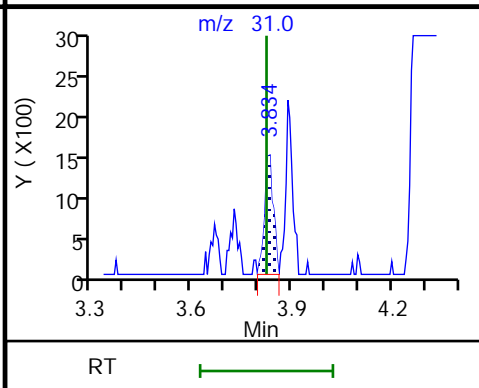
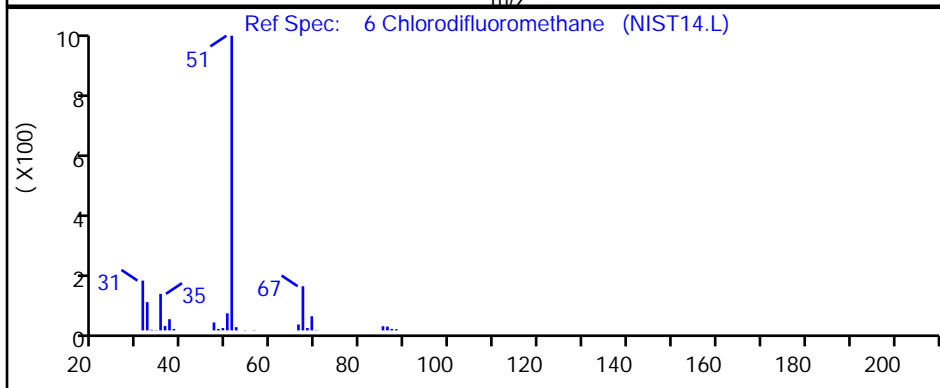
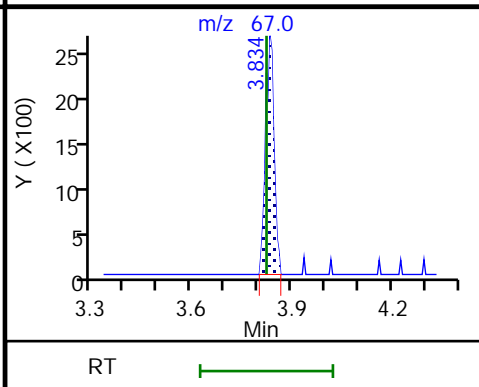
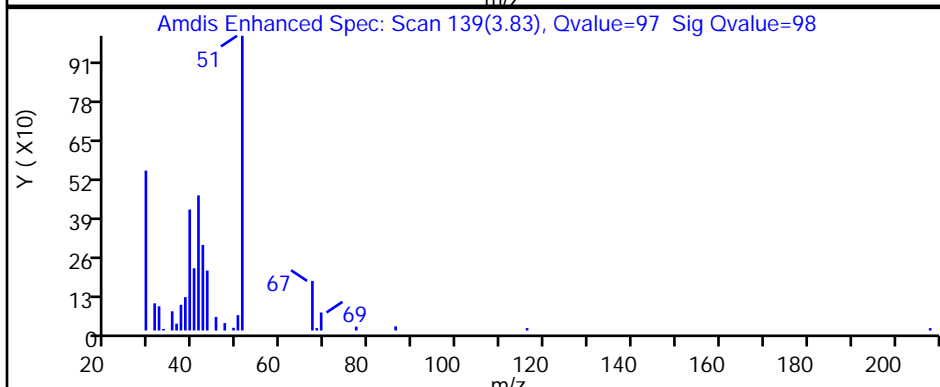
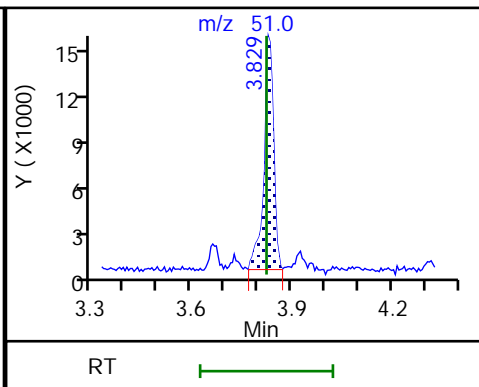
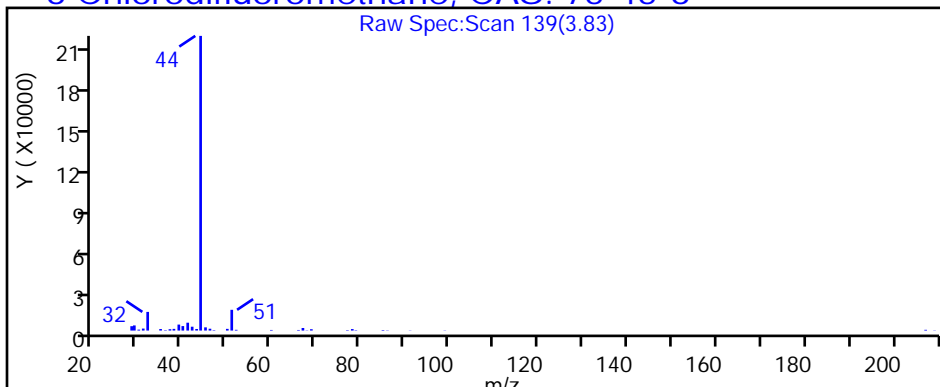
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P110.D

Injection Date: 26-Feb-2019 22:13:30

Instrument ID: MG

Lims ID: 140-14389-A-2

Lab Sample ID: 140-14389-2

Client ID: SV-DUP04-A-26

Operator ID: 7126

ALS Bottle#: 10

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

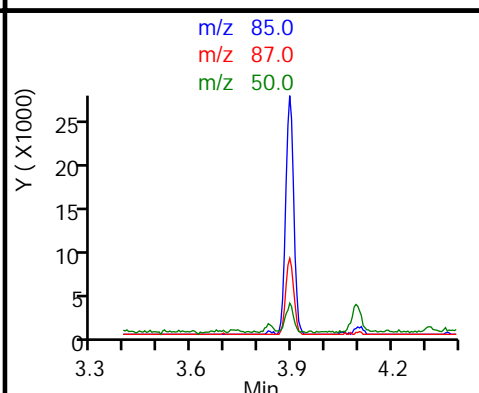
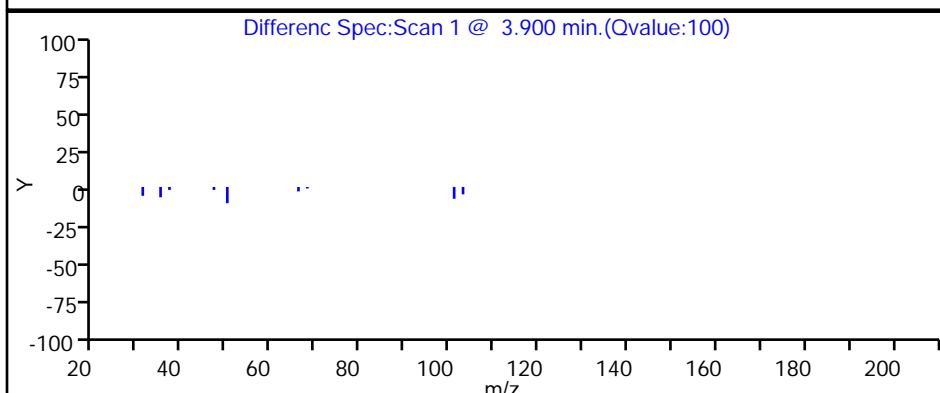
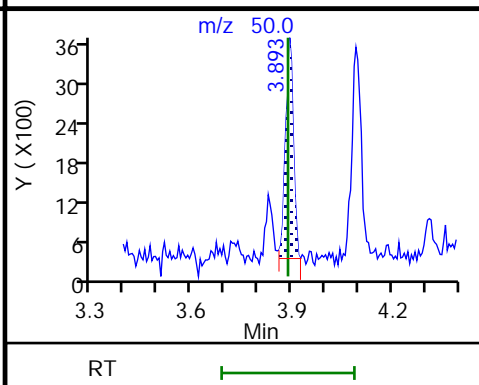
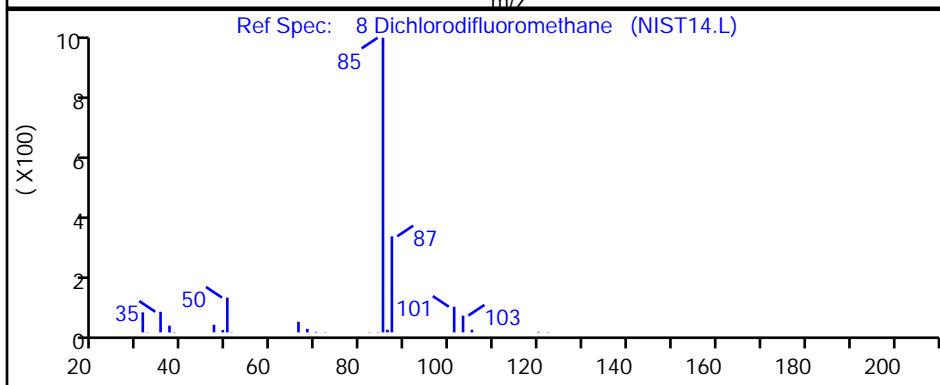
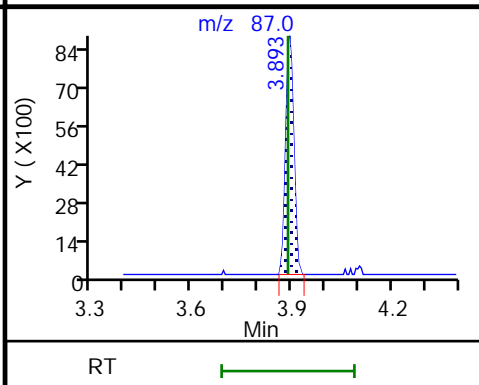
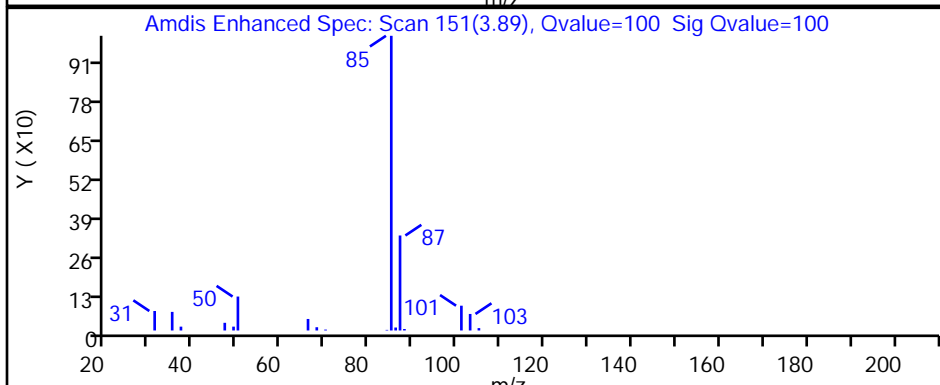
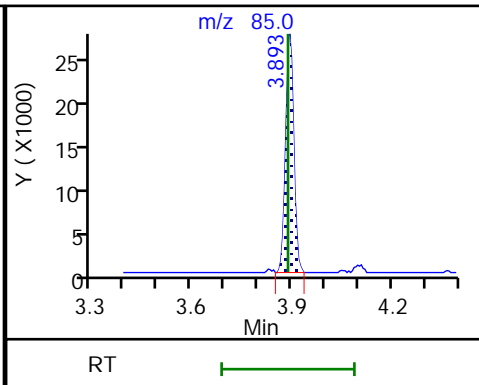
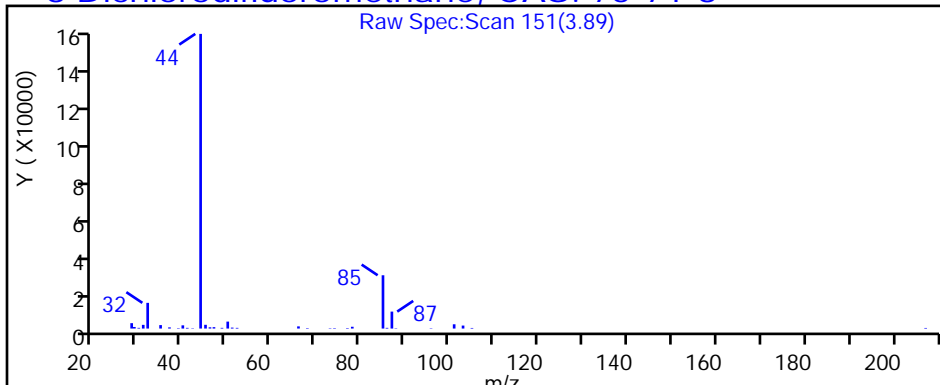
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

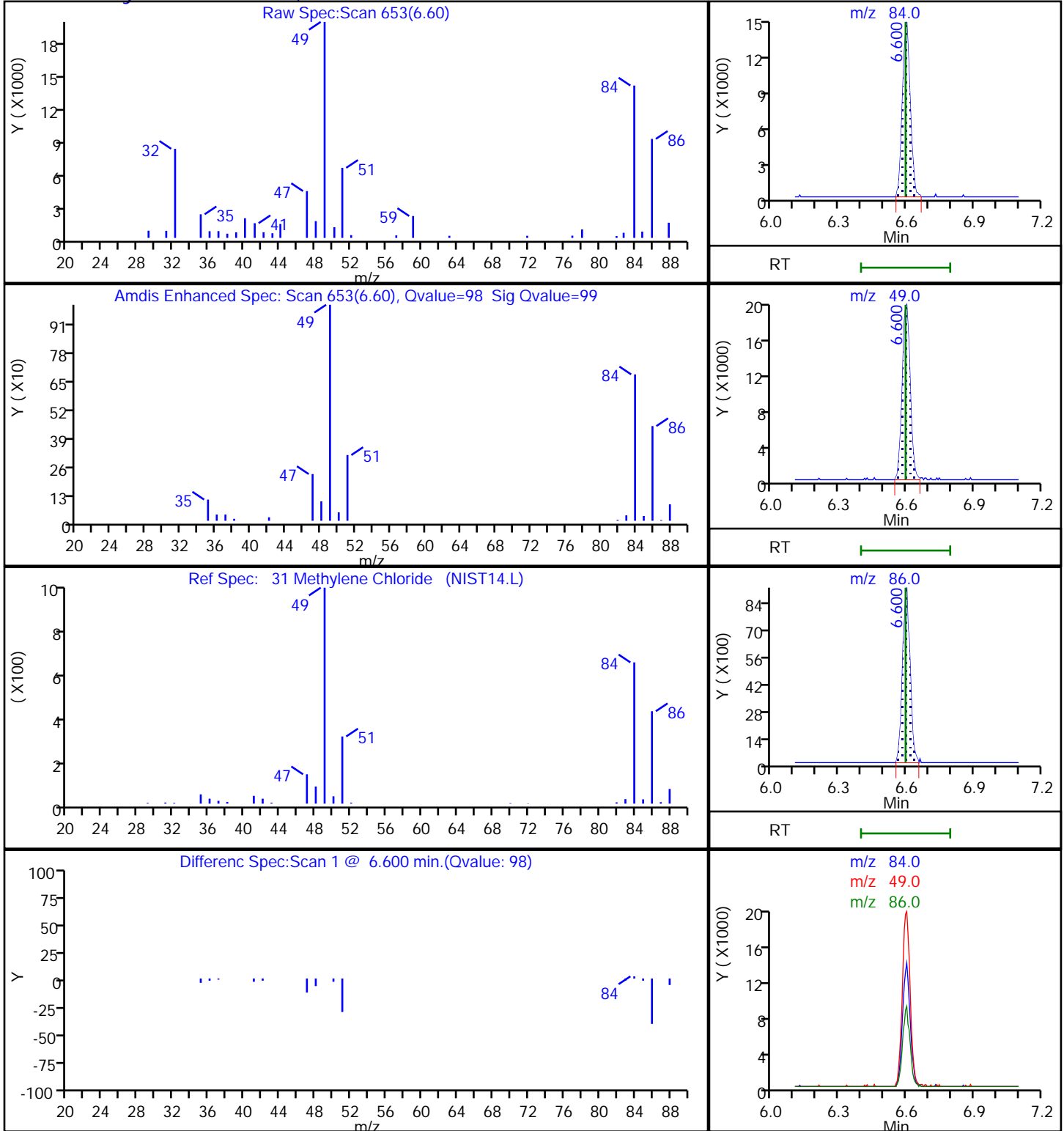
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P110.D
Injection Date: 26-Feb-2019 22:13:30 Instrument ID: MG
Lims ID: 140-14389-A-2 Lab Sample ID: 140-14389-2
Client ID: SV-DUP04-A-26
Operator ID: 7126 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P110.D

Injection Date: 26-Feb-2019 22:13:30

Instrument ID: MG

Lims ID: 140-14389-A-2

Lab Sample ID: 140-14389-2

Client ID: SV-DUP04-A-26

Operator ID: 7126

ALS Bottle#: 10

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

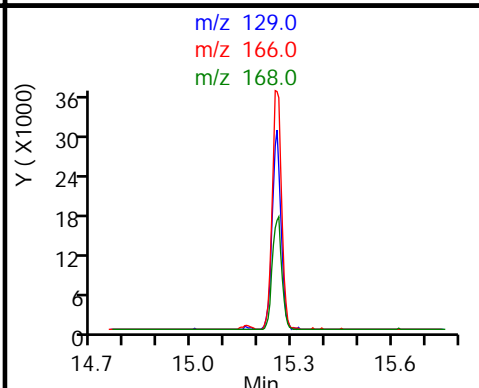
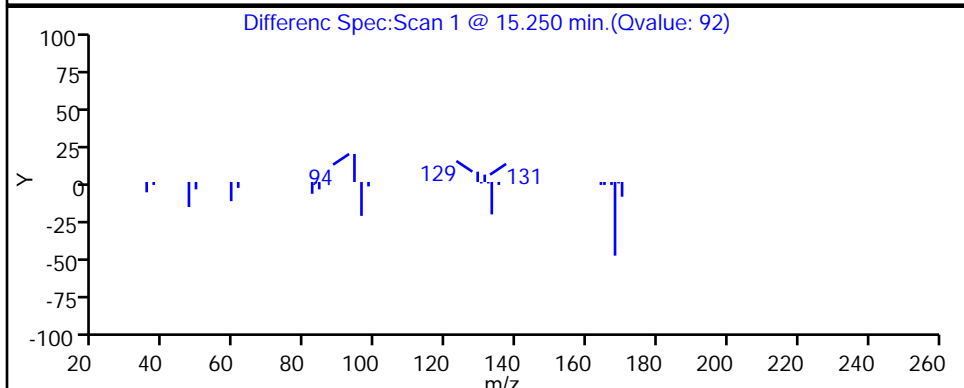
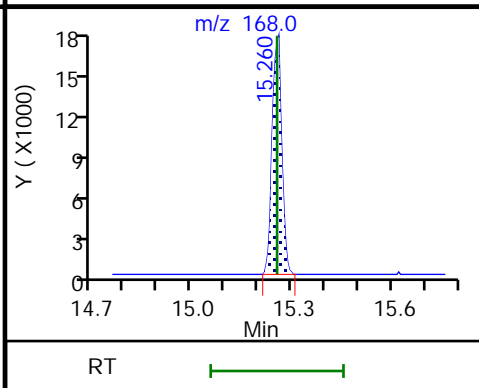
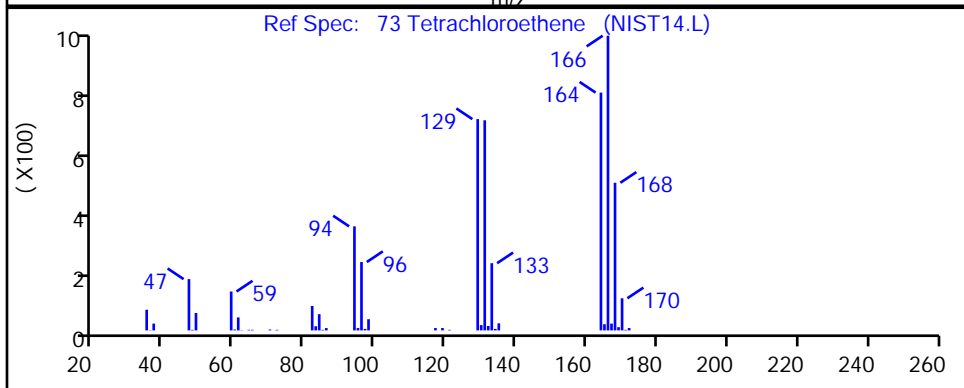
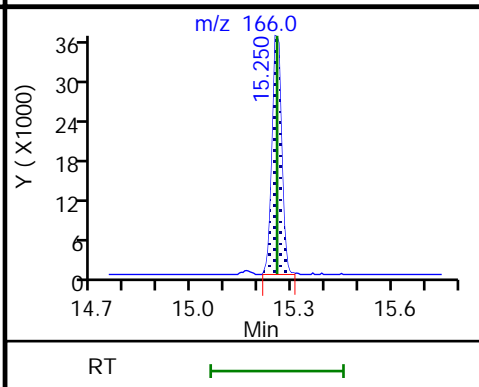
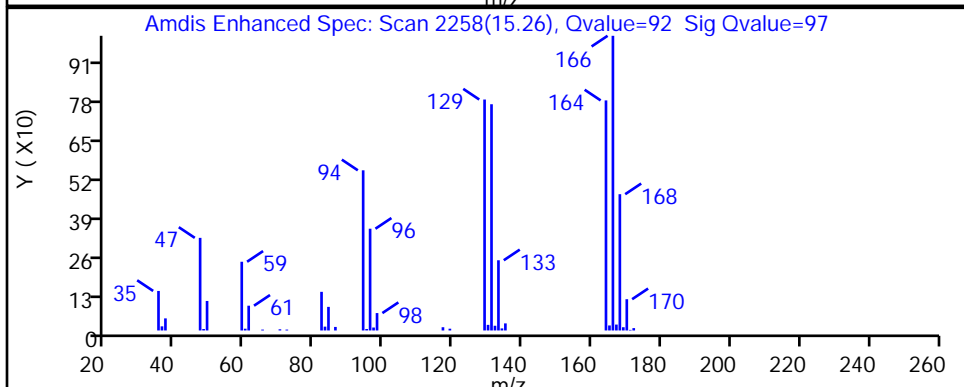
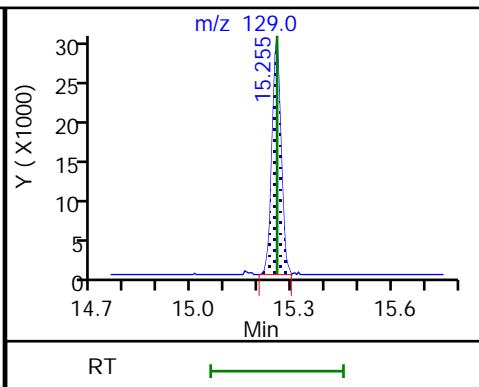
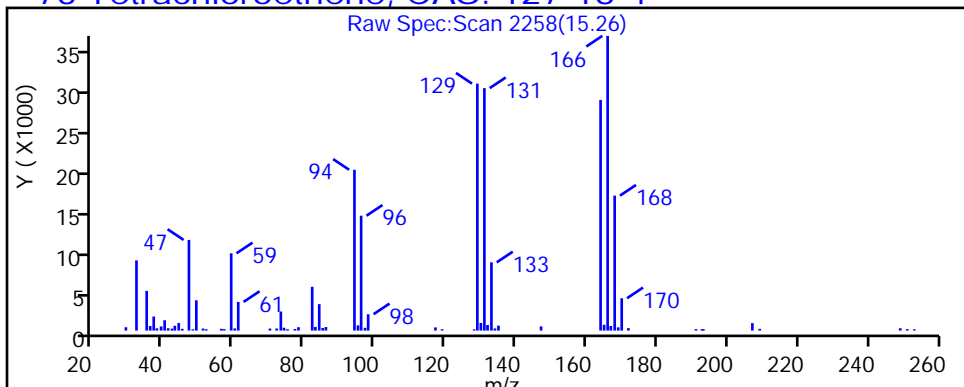
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

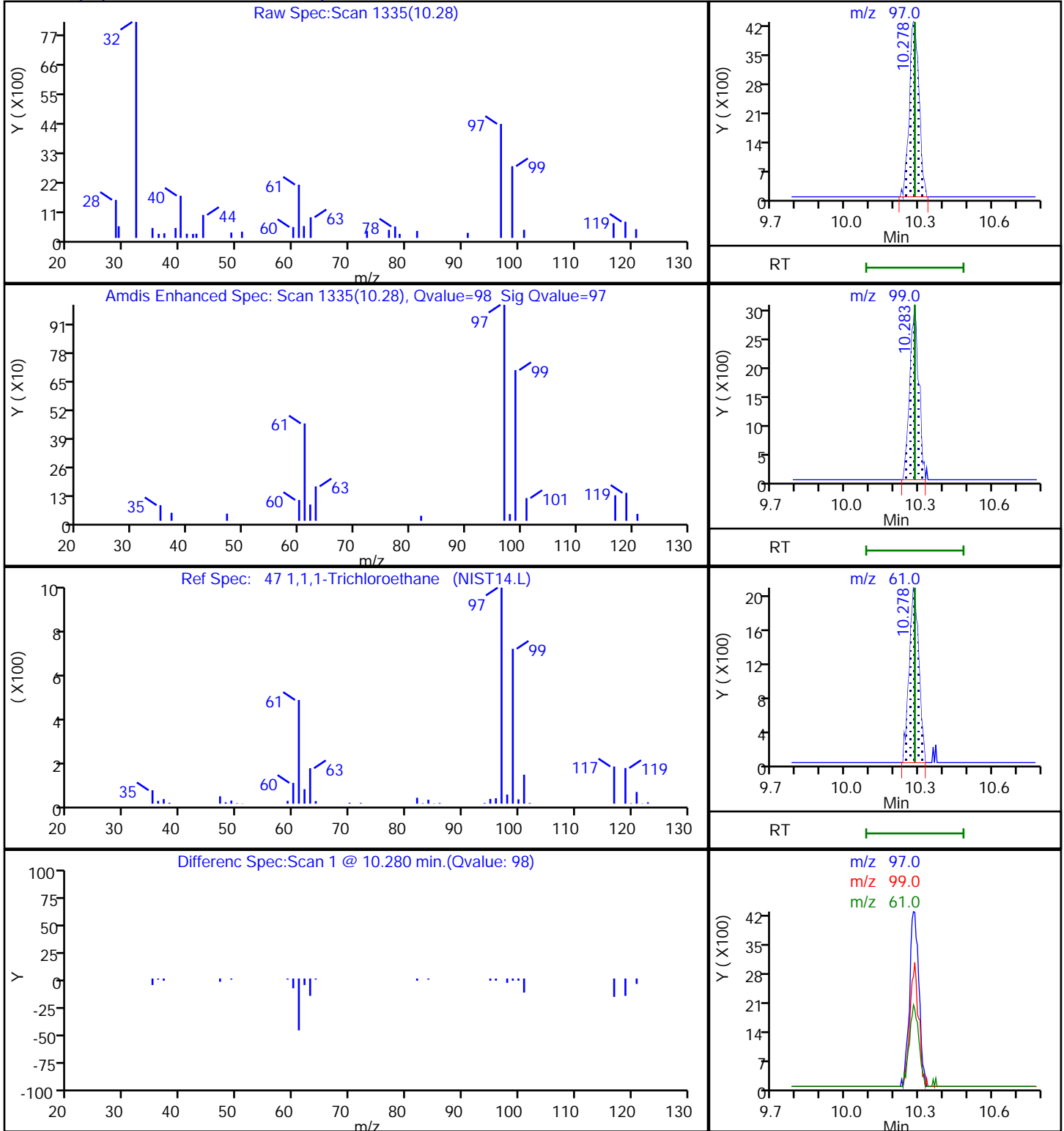
73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P110.D
Injection Date: 26-Feb-2019 22:13:30 Instrument ID: MG
Lims ID: 140-14389-A-2 Lab Sample ID: 140-14389-2
Client ID: SV-DUP04-A-26
Operator ID: 7126 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

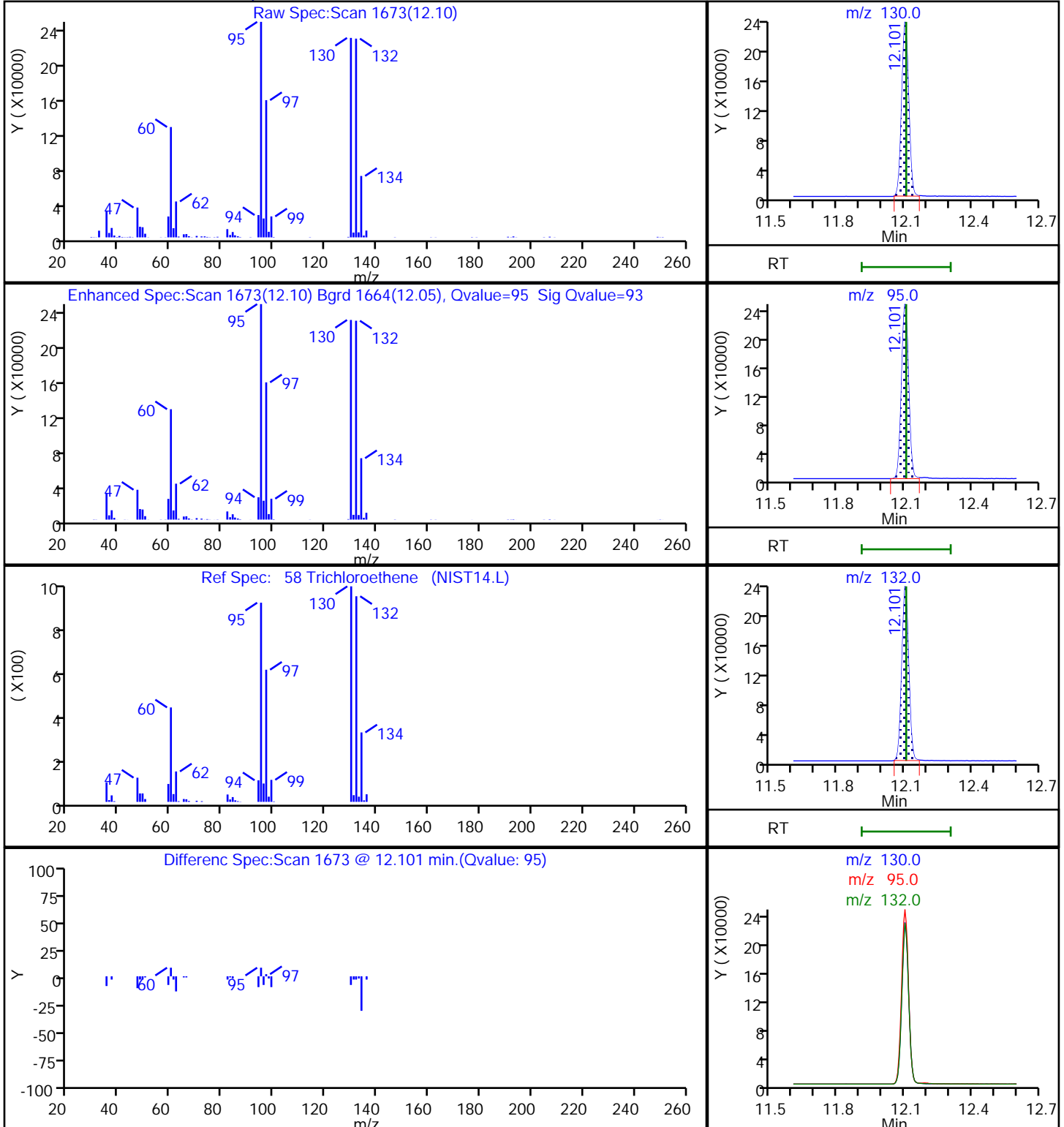
47 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P110.D
Injection Date: 26-Feb-2019 22:13:30 Instrument ID: MG
Lims ID: 140-14389-A-2 Lab Sample ID: 140-14389-2
Client ID: SV-DUP04-A-26
Operator ID: 7126 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

58 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P110.D

Injection Date: 26-Feb-2019 22:13:30

Instrument ID: MG

Lims ID: 140-14389-A-2

Lab Sample ID: 140-14389-2

Client ID: SV-DUP04-A-26

Operator ID: 7126

ALS Bottle#: 10

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

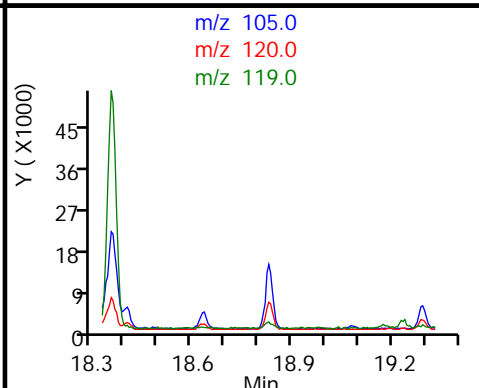
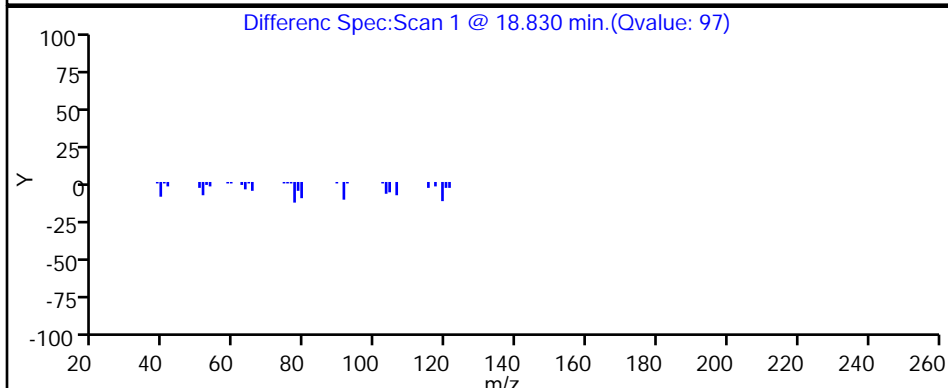
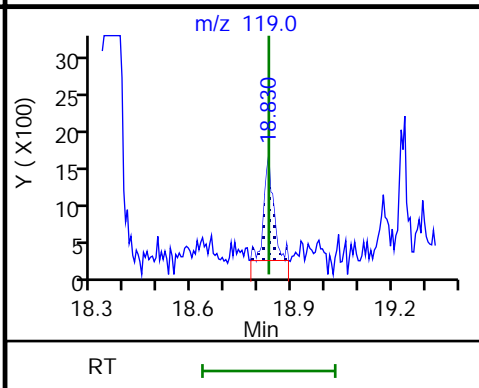
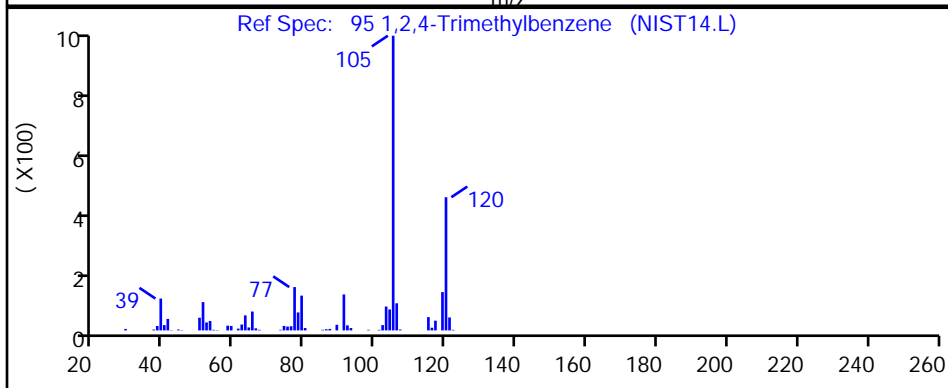
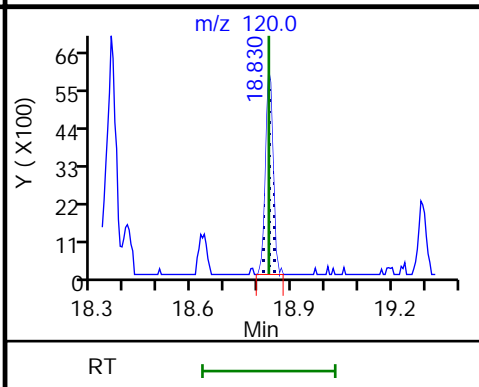
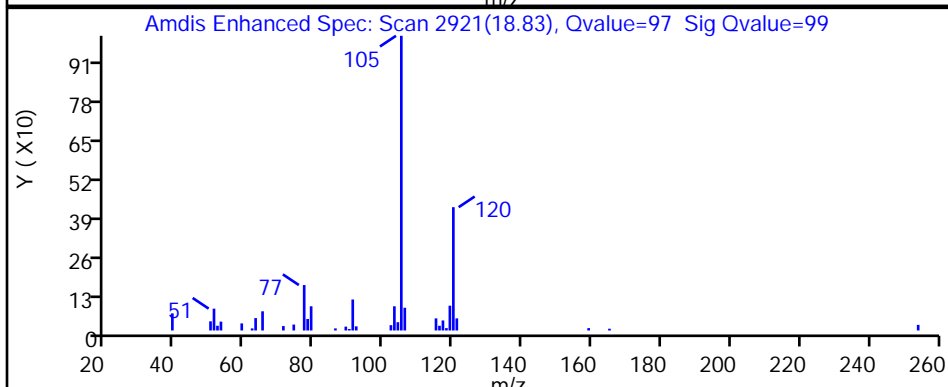
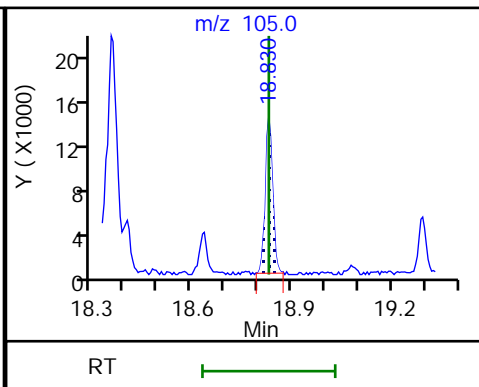
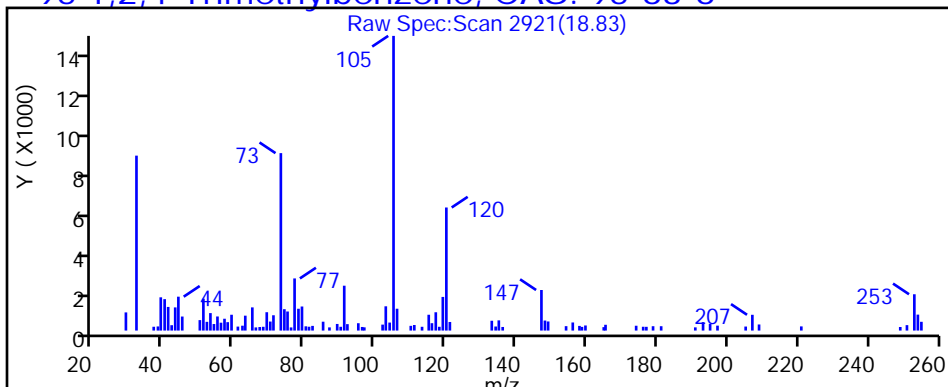
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

95 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P110.D

Injection Date: 26-Feb-2019 22:13:30

Instrument ID: MG

Lims ID: 140-14389-A-2

Lab Sample ID: 140-14389-2

Client ID: SV-DUP04-A-26

Operator ID: 7126

ALS Bottle#: 10

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

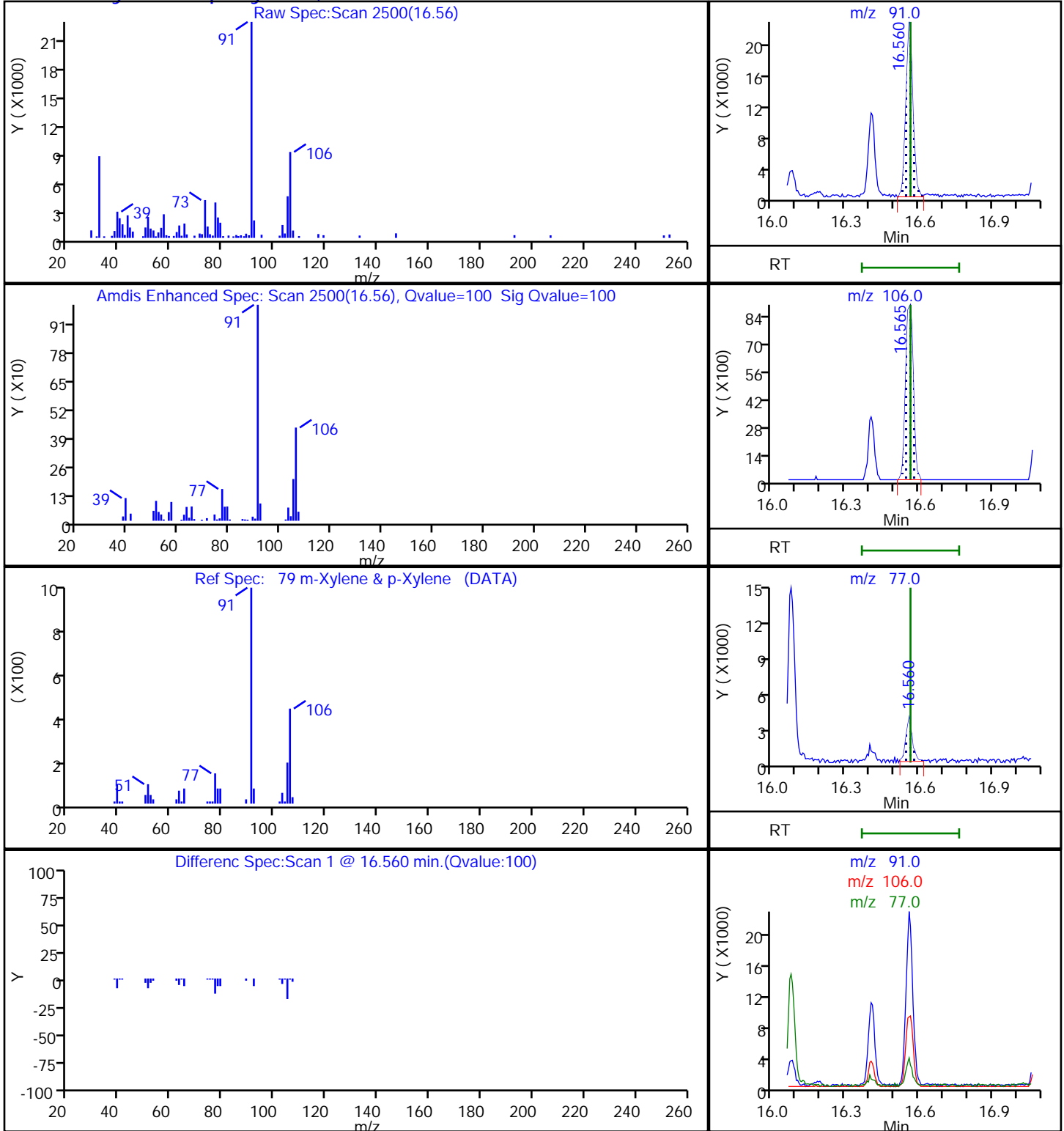
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P110.D

Injection Date: 26-Feb-2019 22:13:30

Instrument ID: MG

Lims ID: 140-14389-A-2

Lab Sample ID: 140-14389-2

Client ID: SV-DUP04-A-26

Operator ID: 7126

ALS Bottle#: 10

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

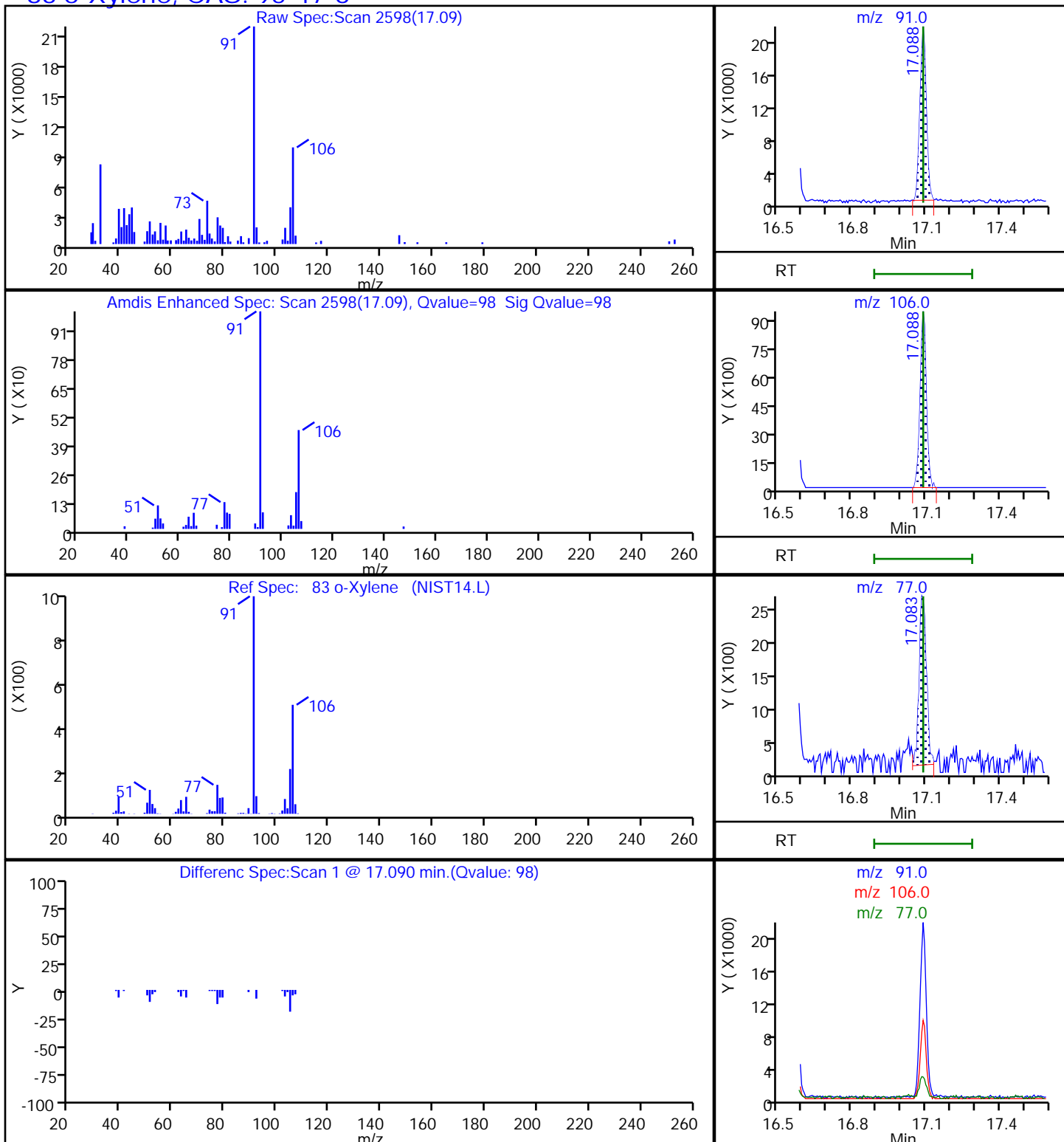
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-131-C-26 Lab Sample ID: 140-14389-3
 Matrix: Air Lab File ID: GB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:29
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	0.26	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.063	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.83	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.43		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.25	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.88		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-131-C-26 Lab Sample ID: 140-14389-3
 Matrix: Air Lab File ID: GB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:29
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	1.3	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.25	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.61	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	2.1		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.71	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.2	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P111.D
 Lims ID: 140-14389-A-3
 Client ID: SV-131-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 22:55:30 ALS Bottle#: 11 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-017
 Misc. Info.: 140-14389-a-3
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:46:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.226	9.232	-0.006	98	483743	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.405	-0.005	96	2991373	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2811933	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2197907	3.81	
6 Chlorodifluoromethane	51	3.829	3.829	0.006	96	30893	0.0975	
8 Dichlorodifluoromethane	85	3.893	3.886	0.005	100	47281	0.0923	
31 Methylene Chloride	84	6.595	6.591	0.000	98	33107	0.1667	
37 1,1-Dichloroethane	63	7.873	7.874	-0.005	46	4412	0.0126	
44 Chloroform	83	9.237	9.237	-0.006	89	20742	0.0513	
47 1,1,1-Trichloroethane	97	10.283	10.277	0.000	94	9749	0.0223	
79 m-Xylene & p-Xylene	91	16.560	16.565	-0.006	99	87664	0.1363	
83 o-Xylene	91	17.094	17.089	0.005	98	27145	0.0400	
90 1,3,5-Trimethylbenzene	120	18.404	18.404	0.000	91	17575	0.0501	
95 1,2,4-Trimethylbenzene	105	18.830	18.830	0.000	98	22139	0.0287	
101 1,2,3-Trimethylbenzene	105	19.294	19.294	0.000	99	59433	0.0853	
S 124 Xylenes, Total	100				0		0.1764	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P111.D

Injection Date: 26-Feb-2019 22:55:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14389-A-3

Lab Sample ID: 140-14389-3

Worklist Smp#: 17

Client ID: SV-131-C-26

Purge Vol: 500.000 mL

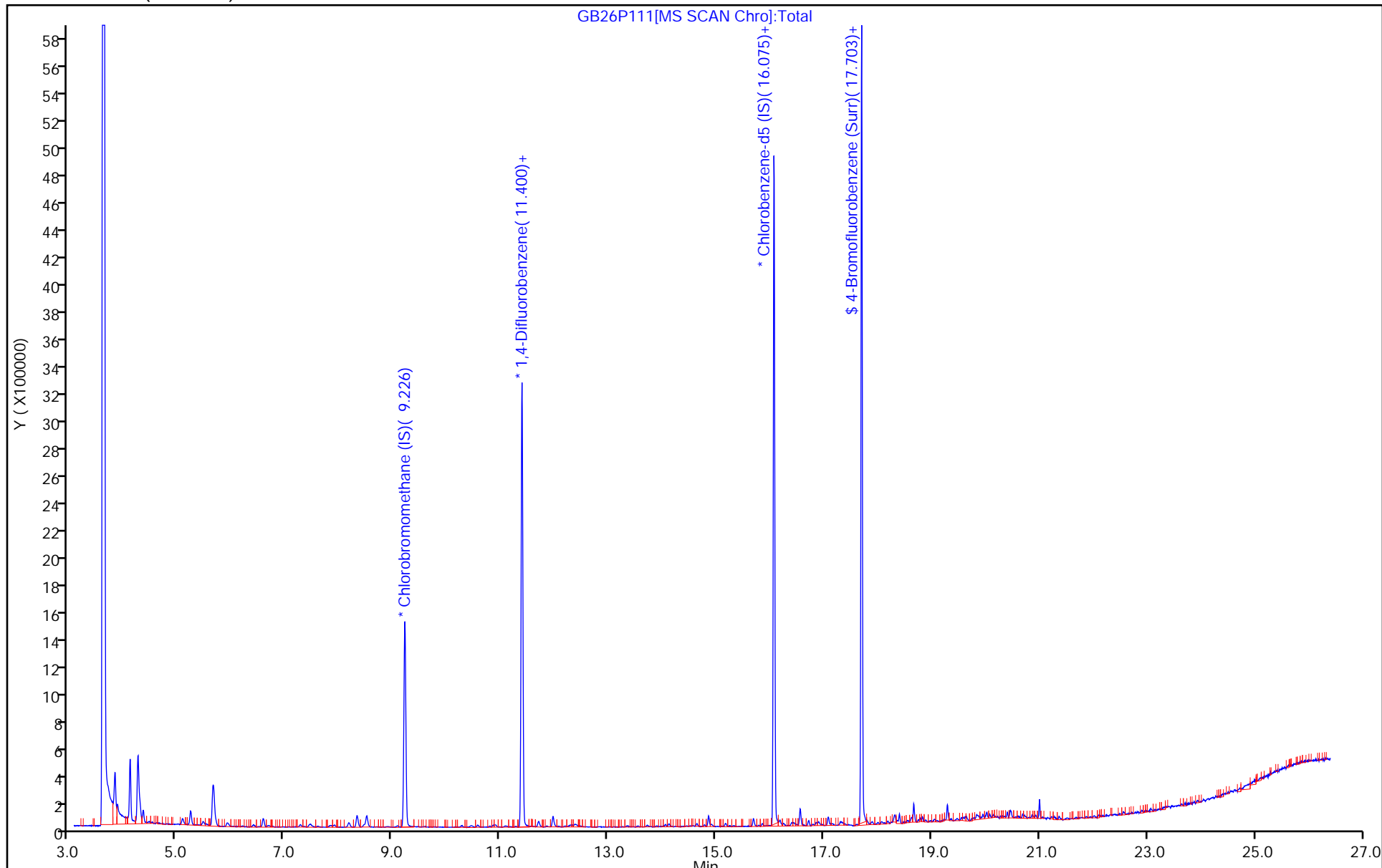
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P111.D
 Lims ID: 140-14389-A-3
 Client ID: SV-131-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 22:55:30 ALS Bottle#: 11 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-017
 Misc. Info.: 140-14389-a-3
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

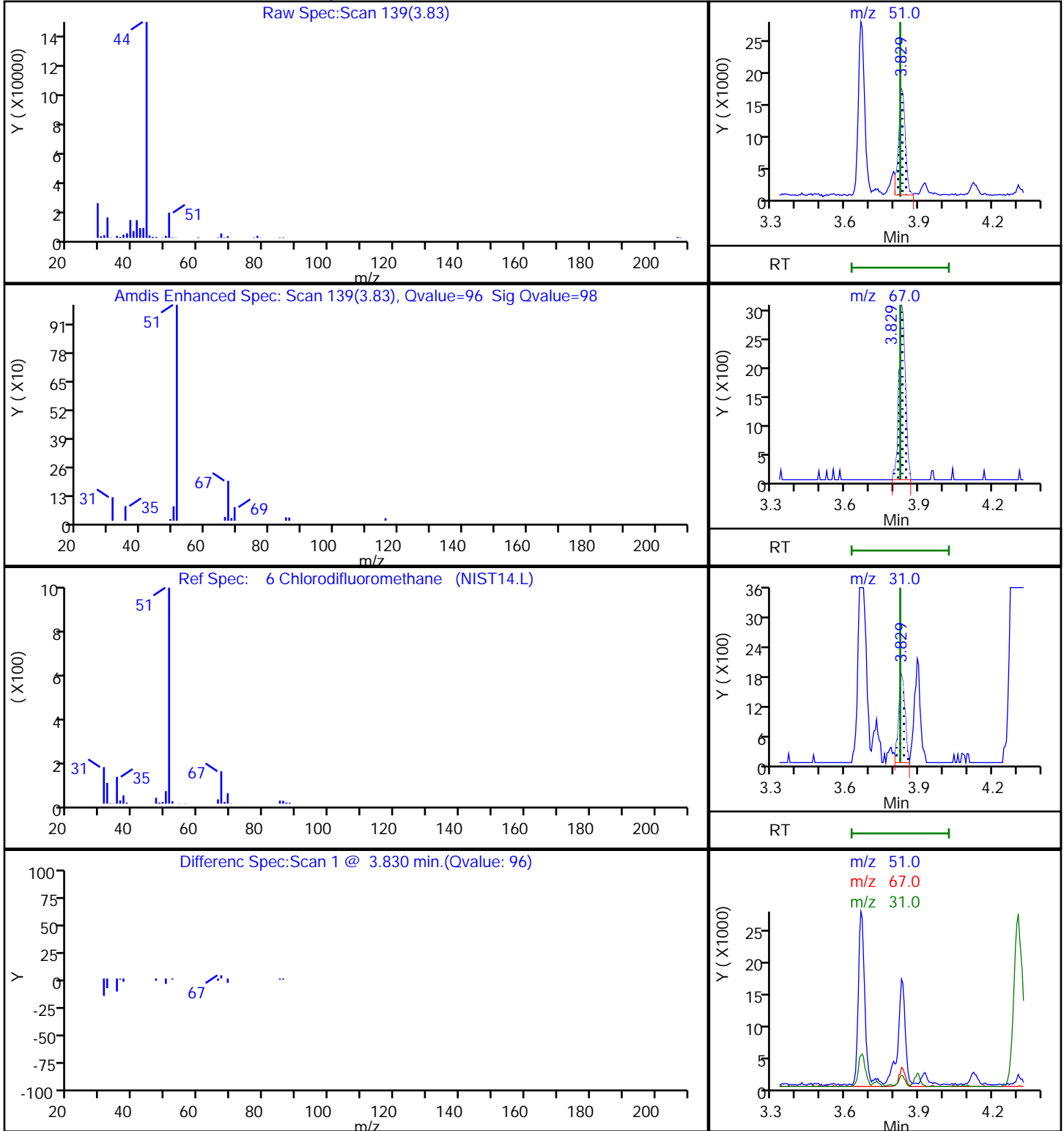
First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:46:14

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.81	95.36

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P111.D
Injection Date: 26-Feb-2019 22:55:30 Instrument ID: MG
Lims ID: 140-14389-A-3 Lab Sample ID: 140-14389-3
Client ID: SV-131-C-26
Operator ID: 7126 ALS Bottle#: 11 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P111.D

Injection Date: 26-Feb-2019 22:55:30

Instrument ID: MG

Lims ID: 140-14389-A-3

Lab Sample ID: 140-14389-3

Client ID: SV-131-C-26

Operator ID: 7126

ALS Bottle#: 11

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

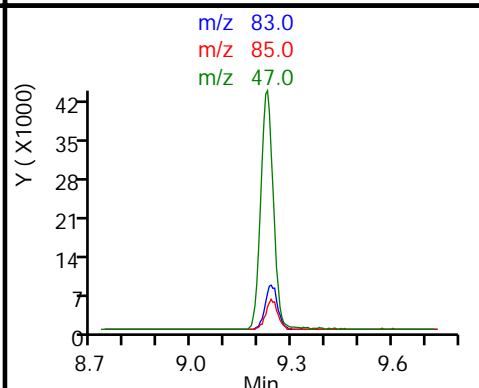
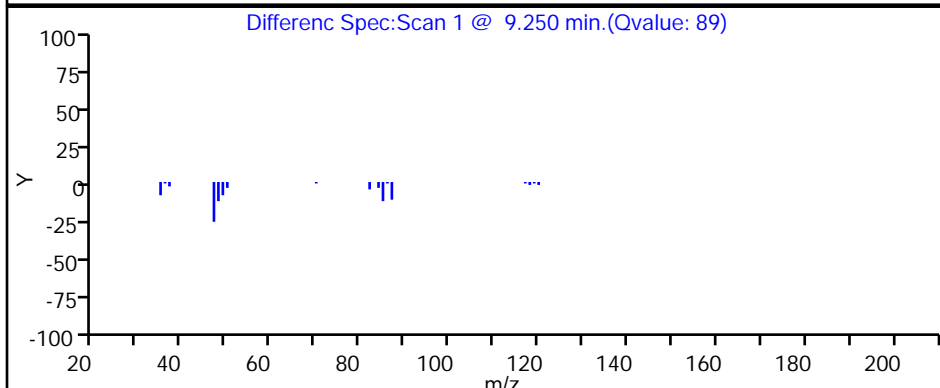
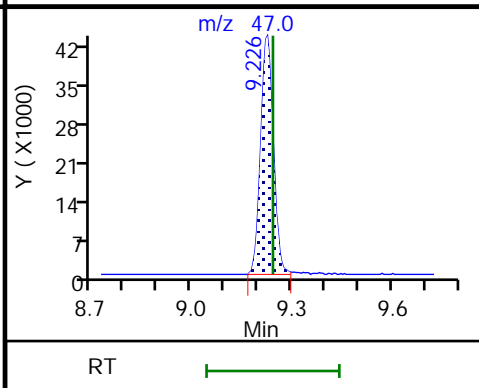
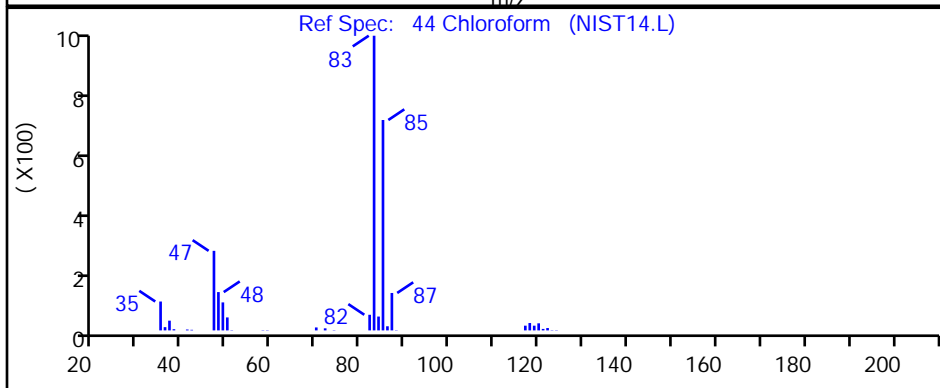
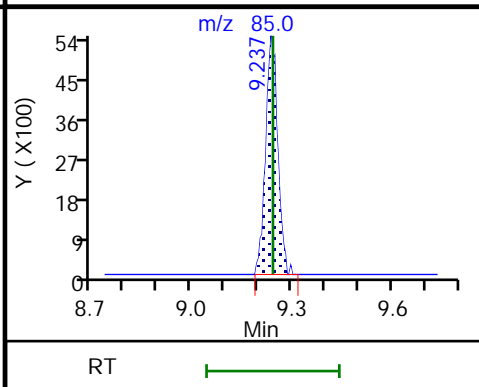
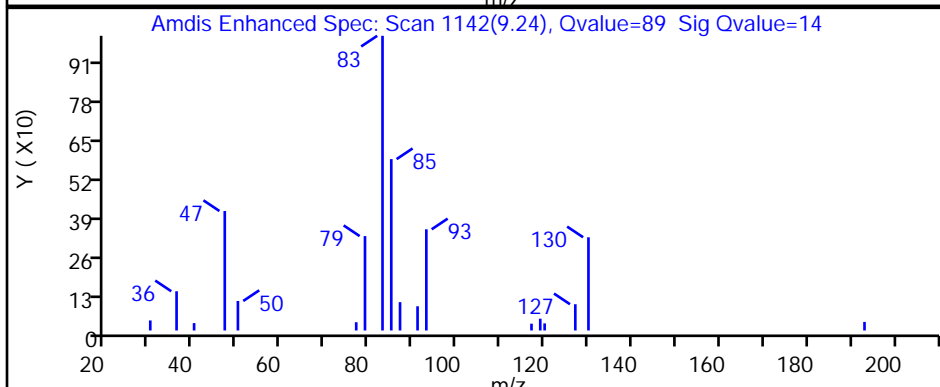
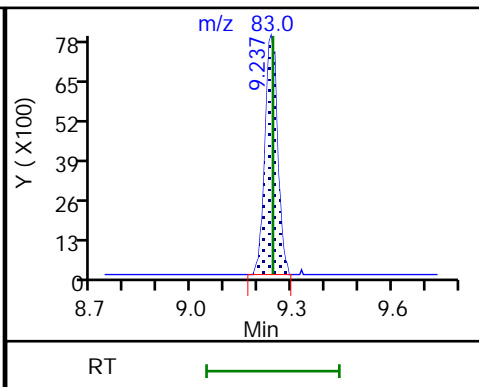
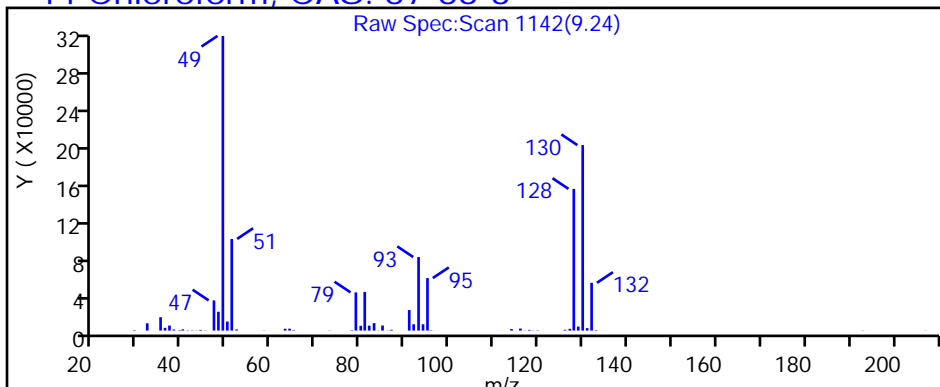
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

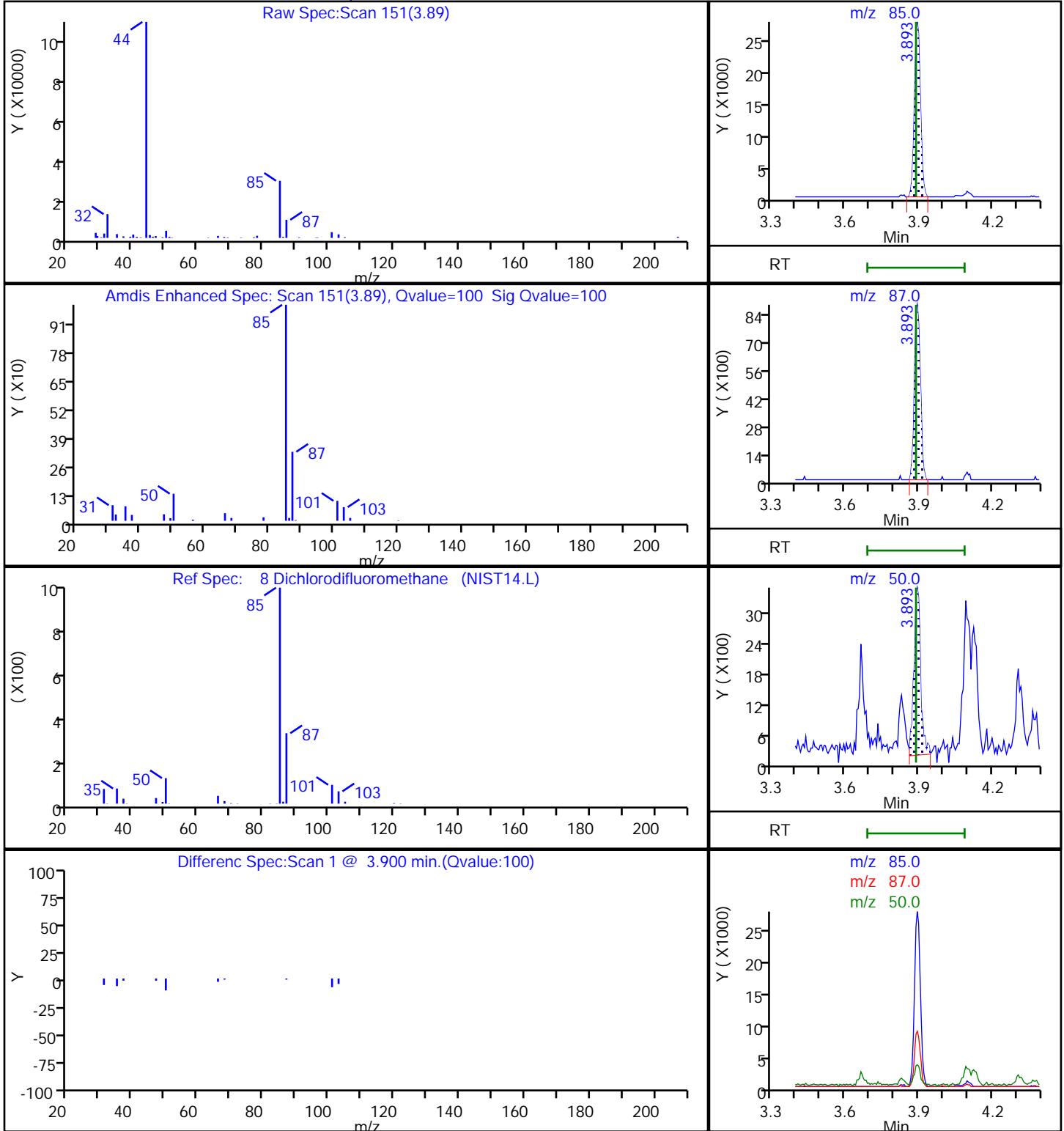
44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P111.D
Injection Date: 26-Feb-2019 22:55:30 Instrument ID: MG
Lims ID: 140-14389-A-3 Lab Sample ID: 140-14389-3
Client ID: SV-131-C-26
Operator ID: 7126 ALS Bottle#: 11 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

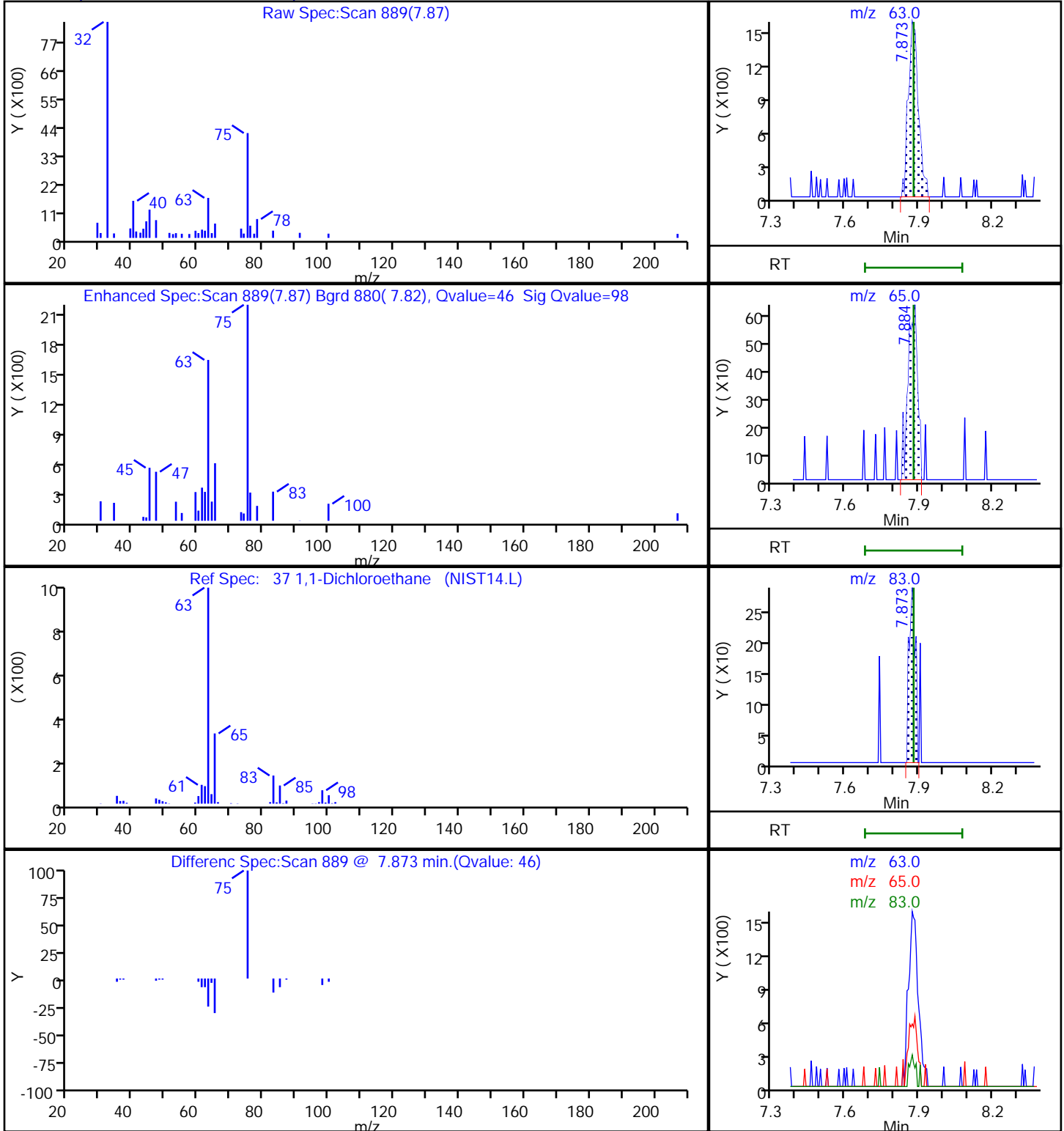
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P111.D
Injection Date: 26-Feb-2019 22:55:30 Instrument ID: MG
Lims ID: 140-14389-A-3 Lab Sample ID: 140-14389-3
Client ID: SV-131-C-26
Operator ID: 7126 ALS Bottle#: 11 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

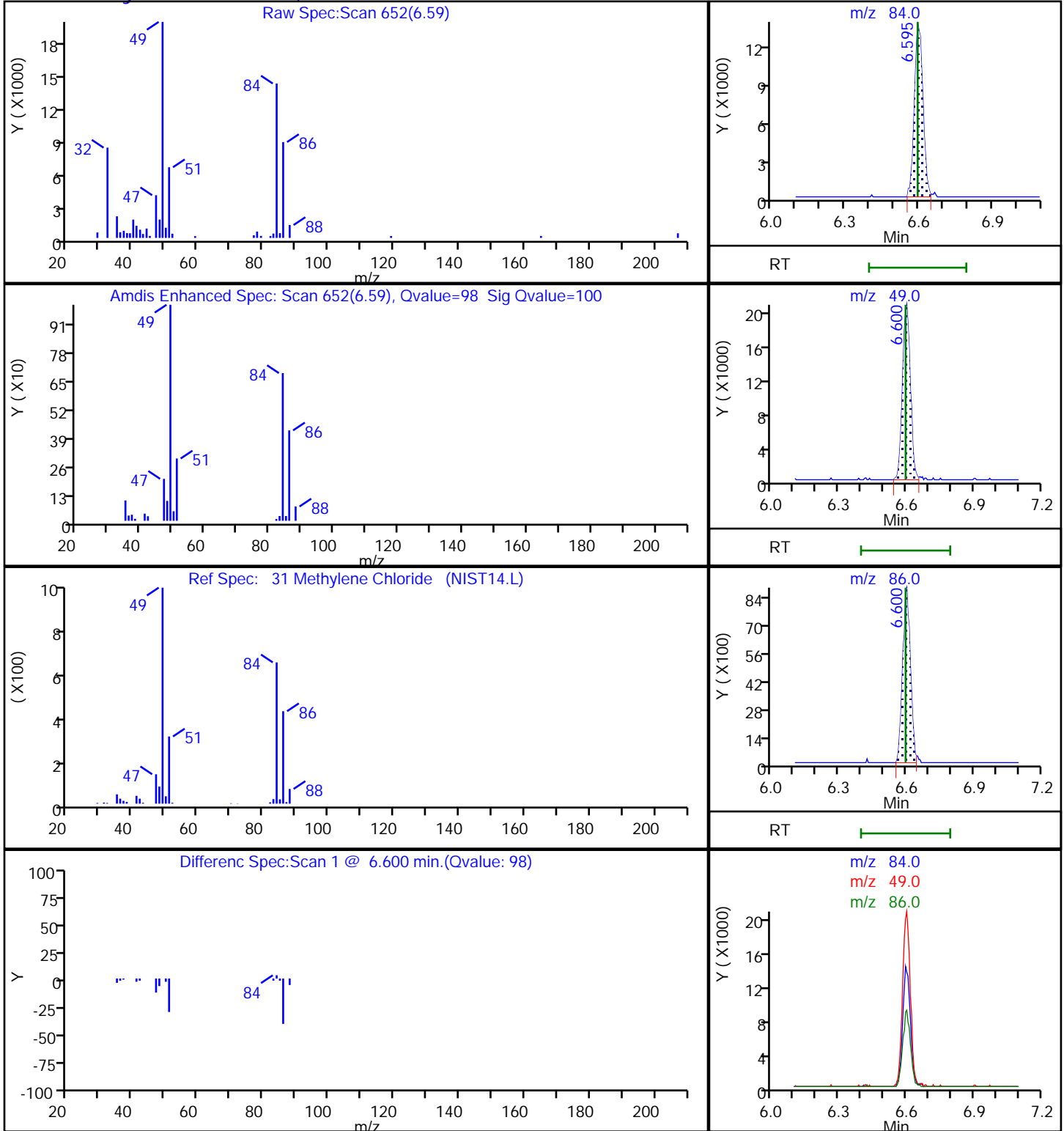
37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P111.D
Injection Date: 26-Feb-2019 22:55:30 Instrument ID: MG
Lims ID: 140-14389-A-3 Lab Sample ID: 140-14389-3
Client ID: SV-131-C-26
Operator ID: 7126 ALS Bottle#: 11 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P111.D

Injection Date: 26-Feb-2019 22:55:30

Instrument ID: MG

Lims ID: 140-14389-A-3

Lab Sample ID: 140-14389-3

Client ID: SV-131-C-26

Operator ID: 7126

ALS Bottle#: 11 Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

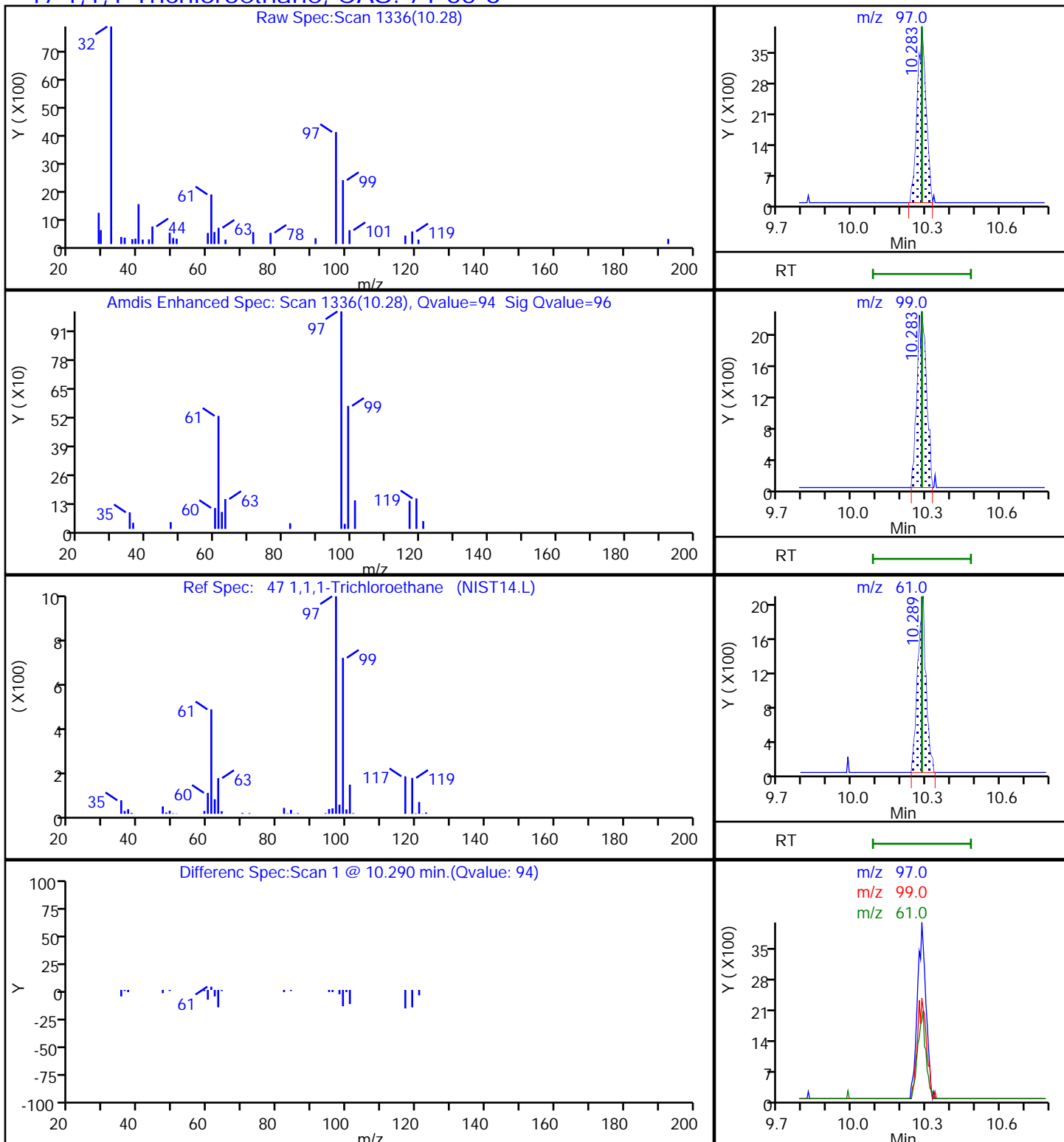
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P111.D

Injection Date: 26-Feb-2019 22:55:30

Instrument ID: MG

Lims ID: 140-14389-A-3

Lab Sample ID: 140-14389-3

Client ID: SV-131-C-26

Operator ID: 7126

ALS Bottle#: 11

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

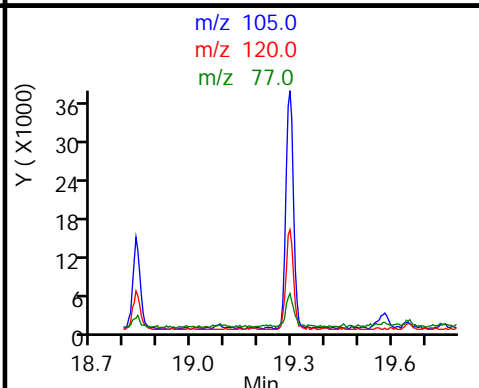
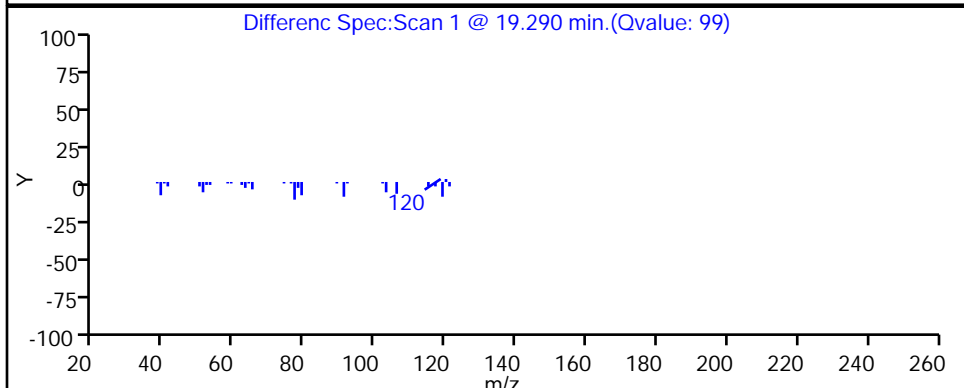
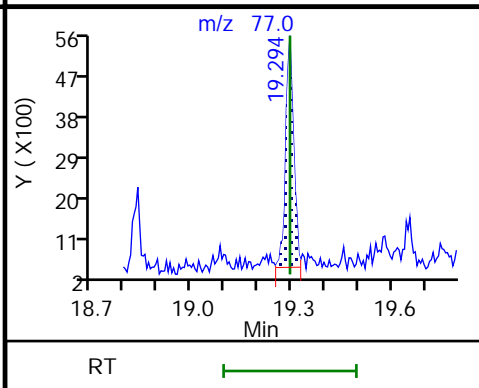
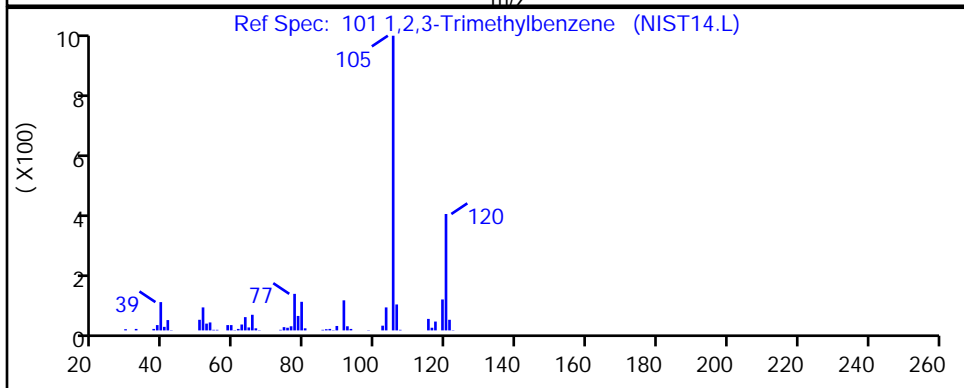
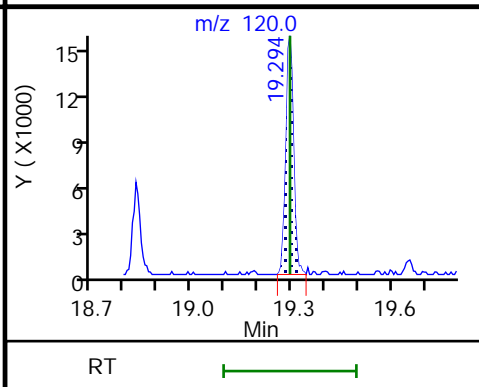
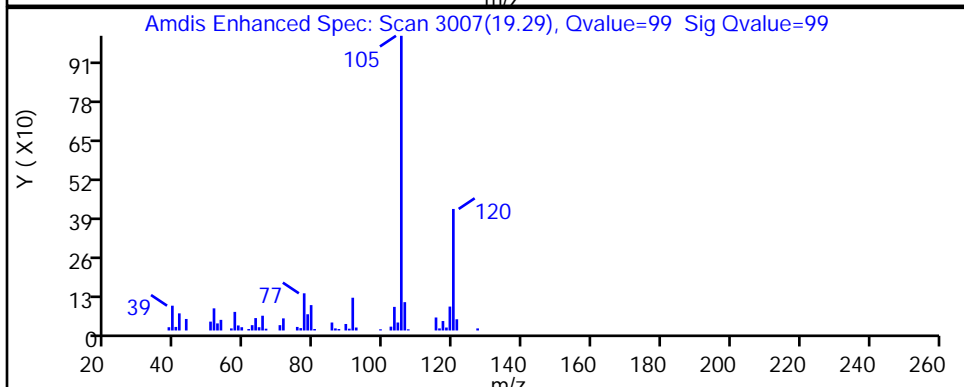
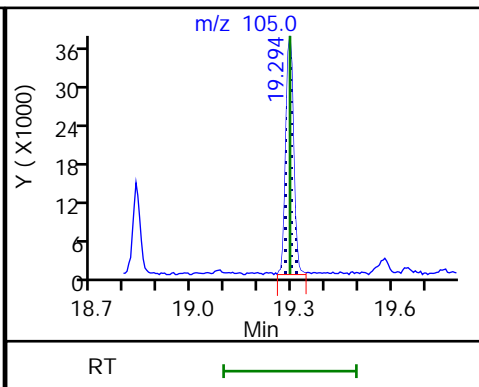
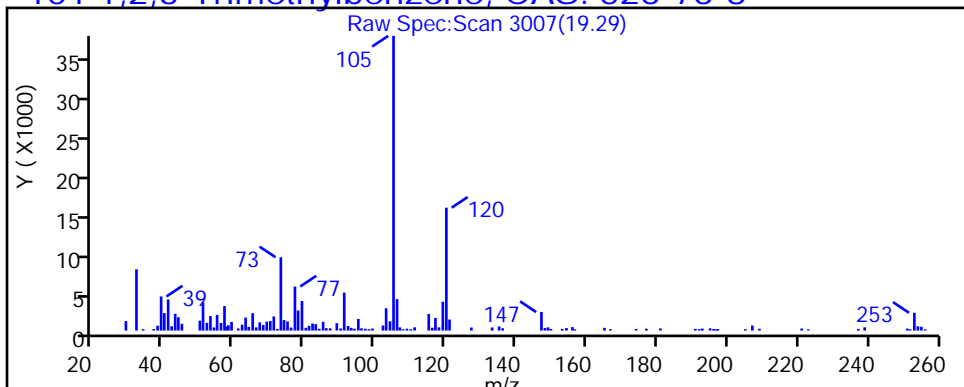
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

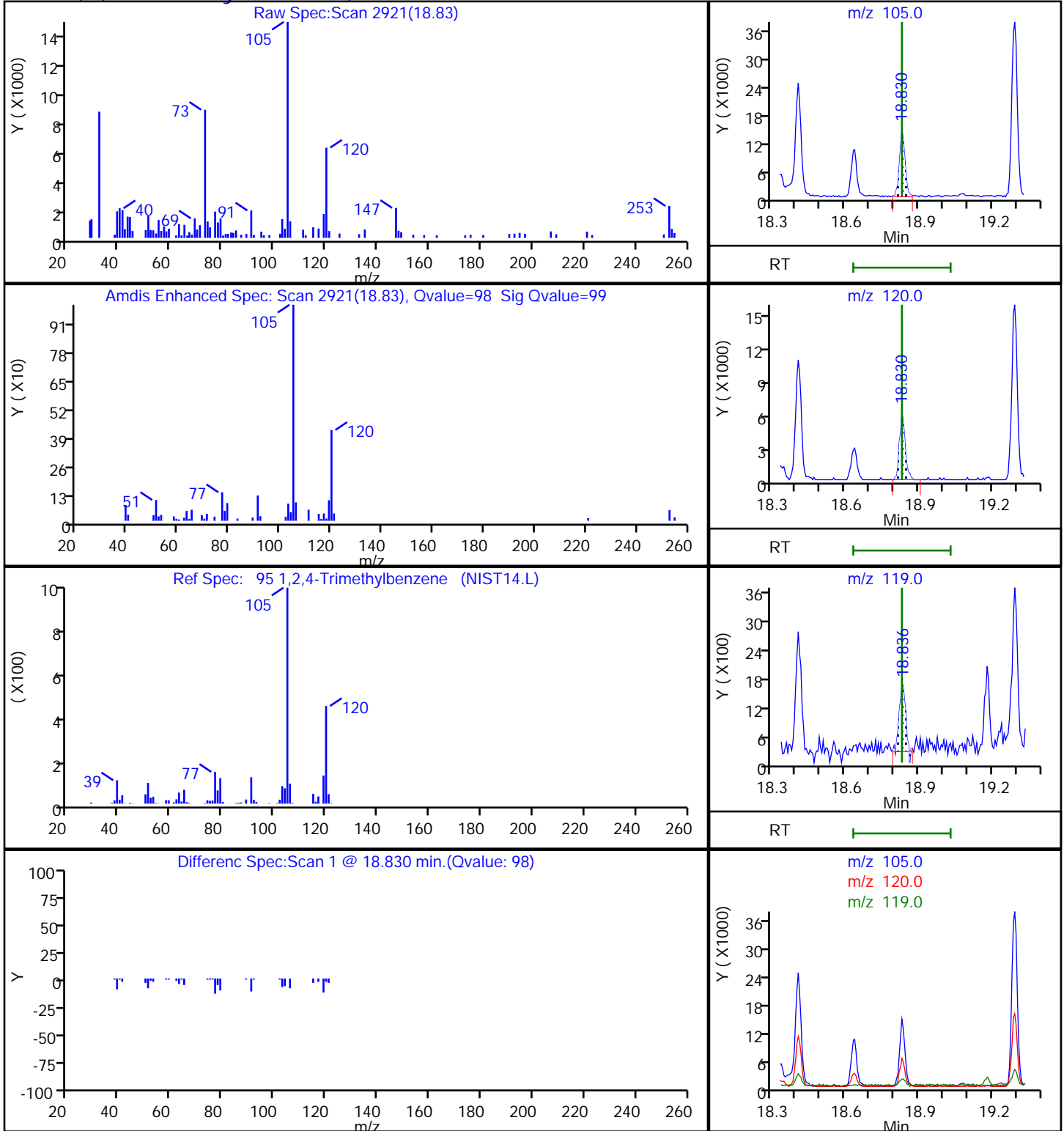
101 1,2,3-Trimethylbenzene, CAS: 526-73-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P111.D
Injection Date: 26-Feb-2019 22:55:30 Instrument ID: MG
Lims ID: 140-14389-A-3 Lab Sample ID: 140-14389-3
Client ID: SV-131-C-26
Operator ID: 7126 ALS Bottle#: 11 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

95 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P111.D

Injection Date: 26-Feb-2019 22:55:30

Instrument ID: MG

Lims ID: 140-14389-A-3

Lab Sample ID: 140-14389-3

Client ID: SV-131-C-26

Operator ID: 7126

ALS Bottle#: 11

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

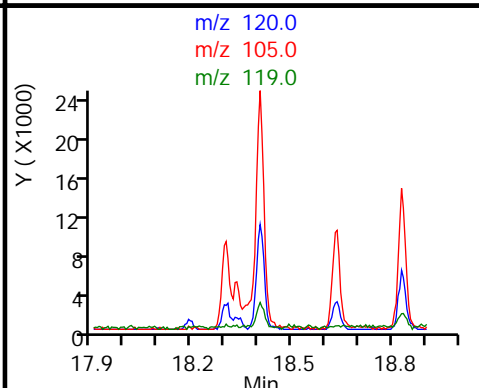
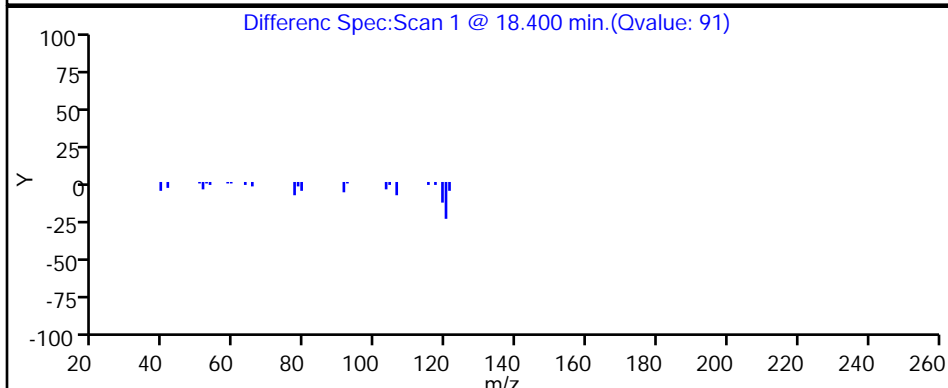
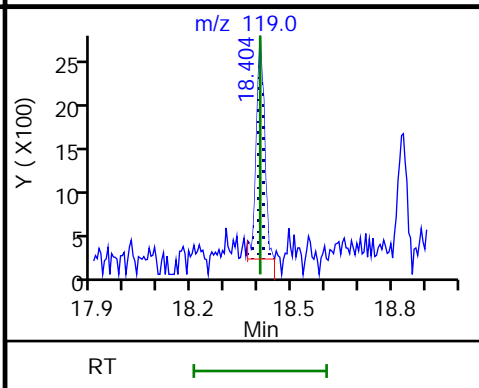
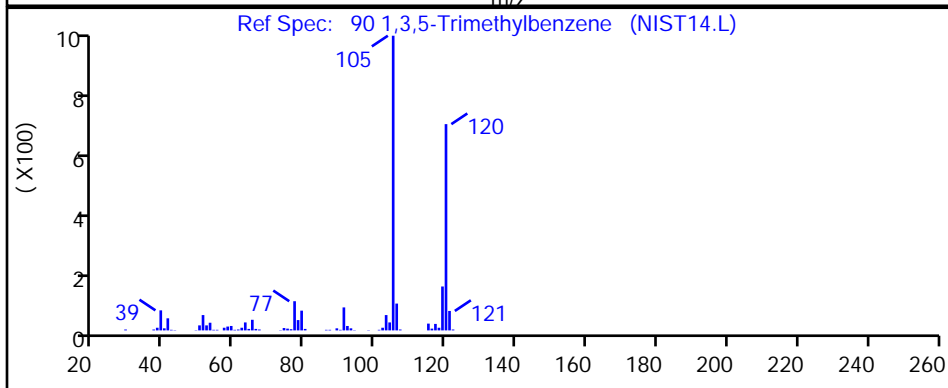
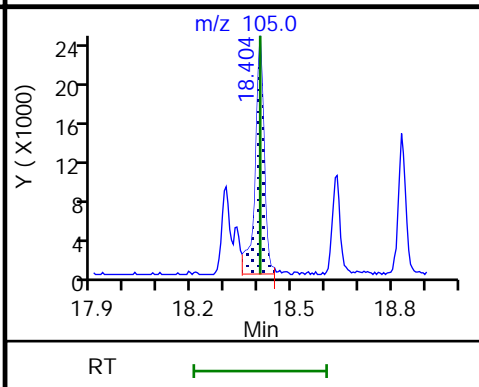
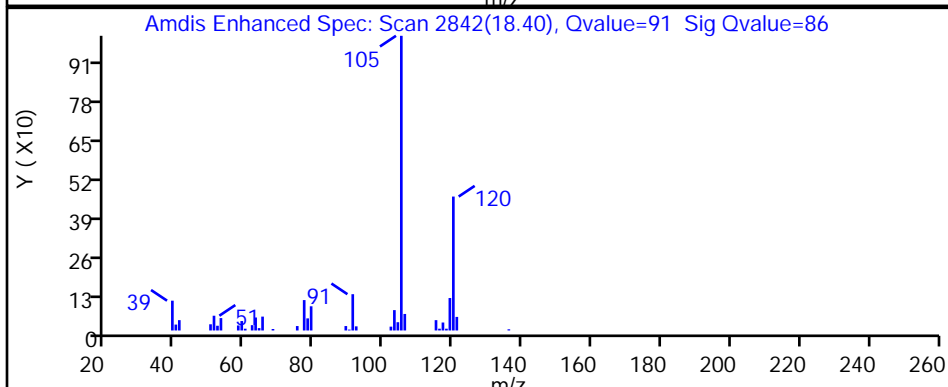
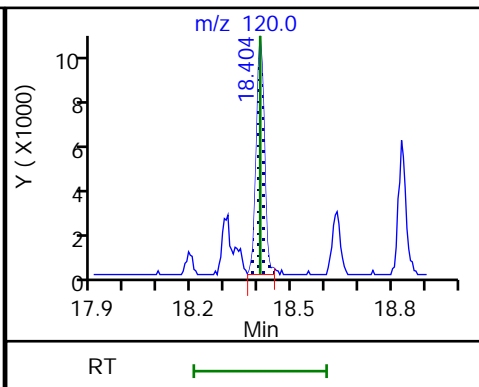
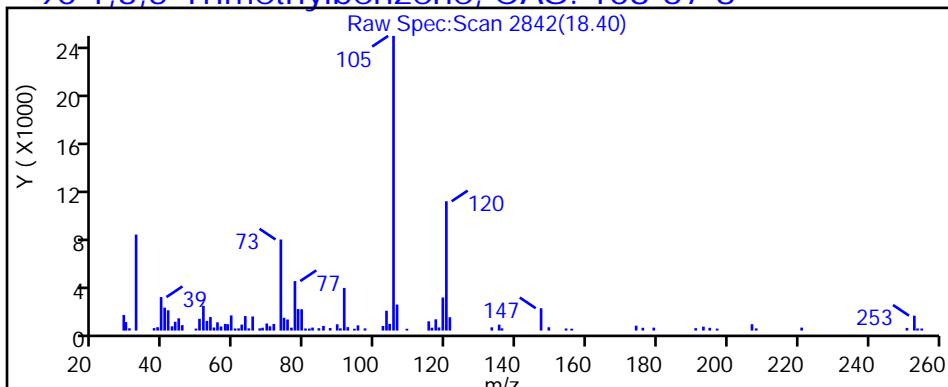
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

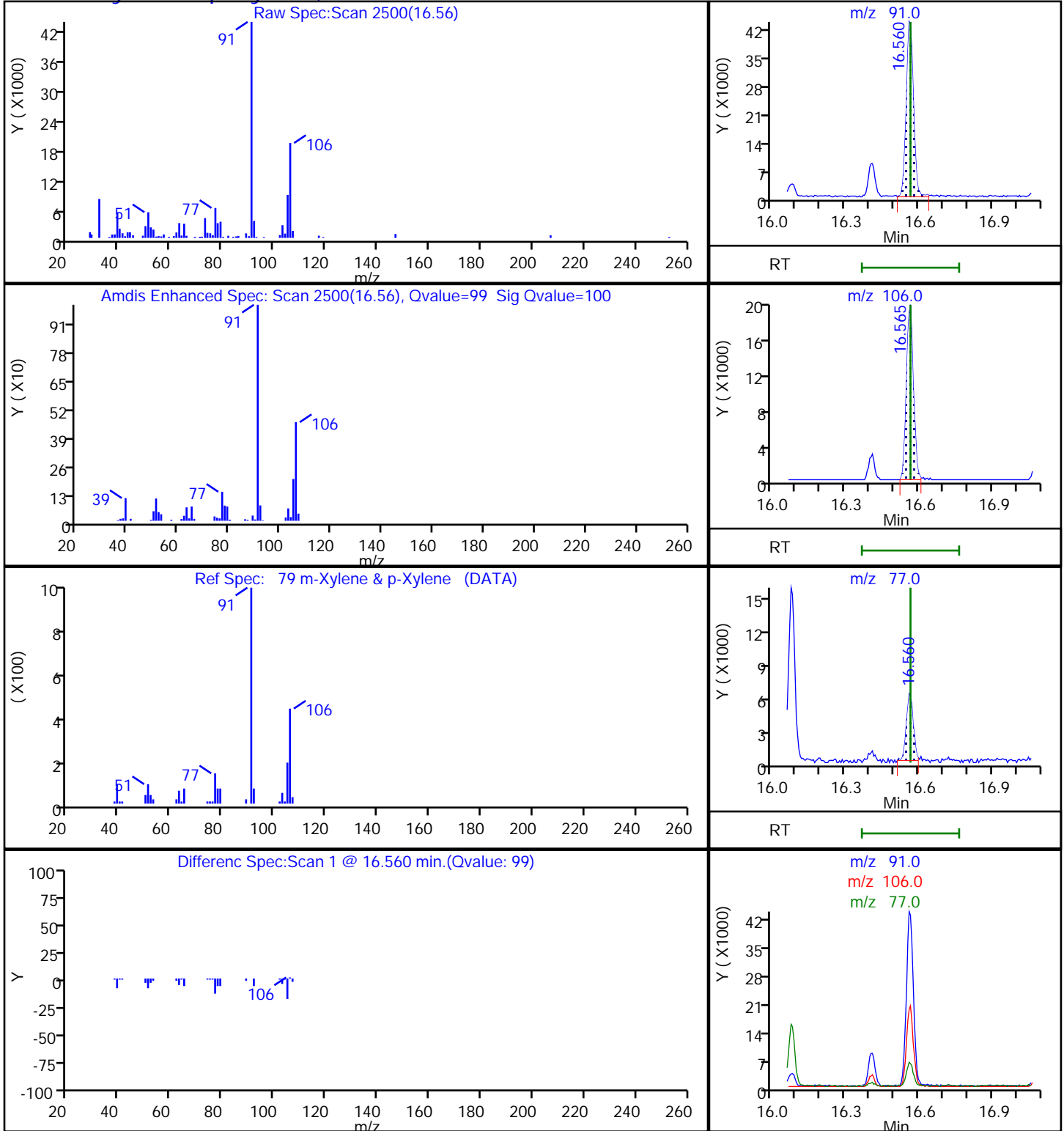
90 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P111.D
Injection Date: 26-Feb-2019 22:55:30 Instrument ID: MG
Lims ID: 140-14389-A-3 Lab Sample ID: 140-14389-3
Client ID: SV-131-C-26
Operator ID: 7126 ALS Bottle#: 11 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P111.D

Injection Date: 26-Feb-2019 22:55:30

Instrument ID: MG

Lims ID: 140-14389-A-3

Lab Sample ID: 140-14389-3

Client ID: SV-131-C-26

Operator ID: 7126

ALS Bottle#: 11 Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

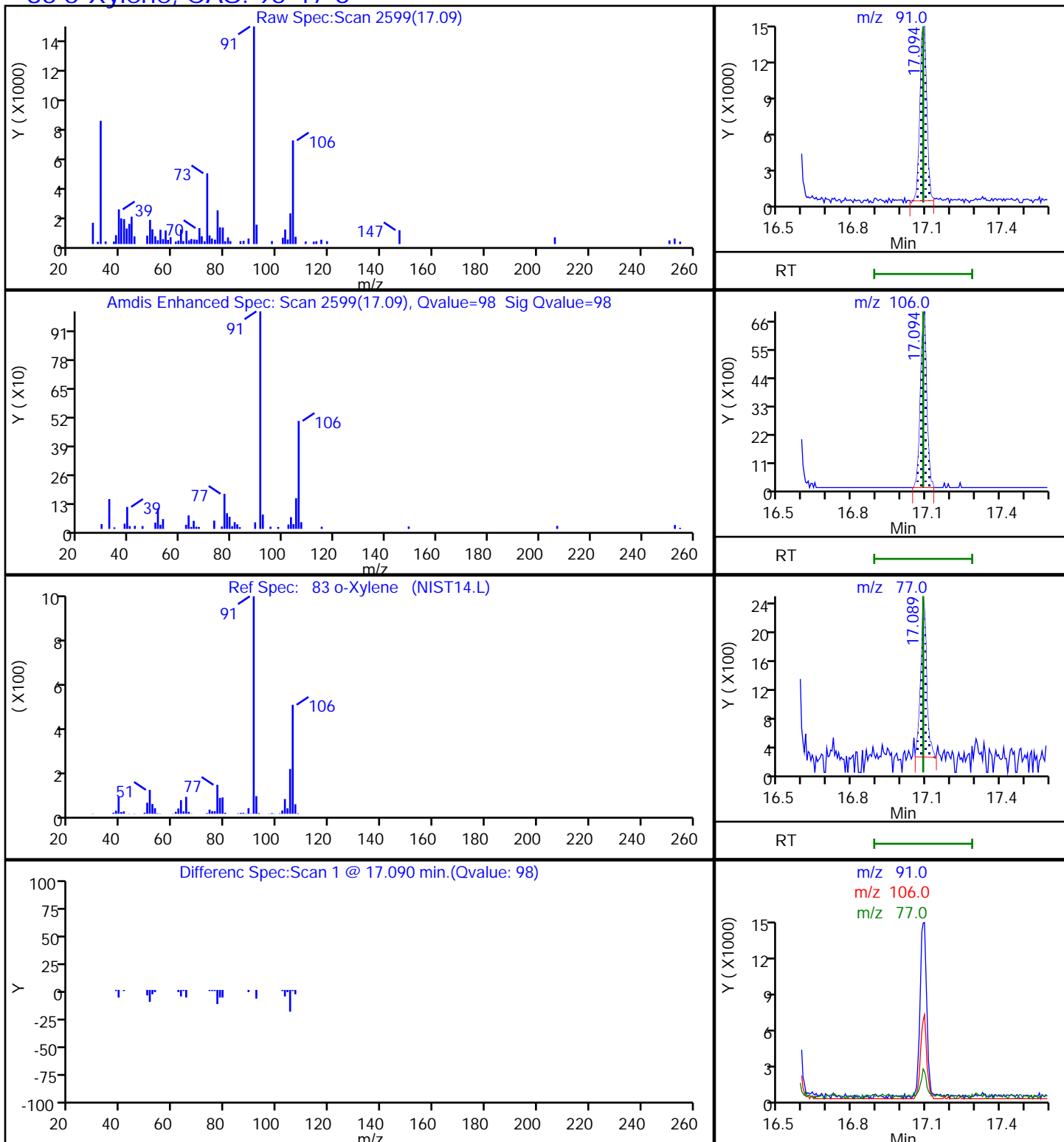
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP01-C-26 Lab Sample ID: 140-14389-4
 Matrix: Air Lab File ID: GB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 23:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.54		0.40	0.075
67-66-3	Chloroform	119.38	0.31	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.074	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.99	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.51		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.17	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.29	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP01-C-26 Lab Sample ID: 140-14389-4
 Matrix: Air Lab File ID: GB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 23:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	1.5	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.30	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.73	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	2.5		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.85	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.4	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P112.D
 Lims ID: 140-14389-A-4
 Client ID: SV-DUP01-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 23:37:30 ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-018
 Misc. Info.: 140-14389-a-4
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:46:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.221	9.232	-0.011	98	437107	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.405	-0.005	96	2665935	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2551551	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2057909	3.94	
6 Chlorodifluoromethane	51	3.829	3.829	0.006	97	30947	0.1081	
8 Dichlorodifluoromethane	85	3.894	3.886	0.006	100	47283	0.1022	
31 Methylene Chloride	84	6.595	6.591	0.000	99	35696	0.1989	
37 1,1-Dichloroethane	63	7.873	7.874	-0.005	95	4699	0.0148	
44 Chloroform	83	9.237	9.237	-0.006	89	22326	0.0611	
47 1,1,1-Trichloroethane	97	10.284	10.277	0.001	98	10568	0.0267	
79 m-Xylene & p-Xylene	91	16.560	16.565	-0.006	100	93952	0.1610	
83 o-Xylene	91	17.089	17.089	0.000	97	30063	0.0489	
90 1,3,5-Trimethylbenzene	120	18.404	18.404	0.000	91	18580	0.0583	
95 1,2,4-Trimethylbenzene	105	18.830	18.830	0.000	98	24078	0.0344	
101 1,2,3-Trimethylbenzene	105	19.294	19.294	0.000	99	63893	0.1011	
S 124 Xylenes, Total	100				0		0.2099	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P112.D

Injection Date: 26-Feb-2019 23:37:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14389-A-4

Lab Sample ID: 140-14389-4

Worklist Smp#: 18

Client ID: SV-DUP01-C-26

Purge Vol: 500.000 mL

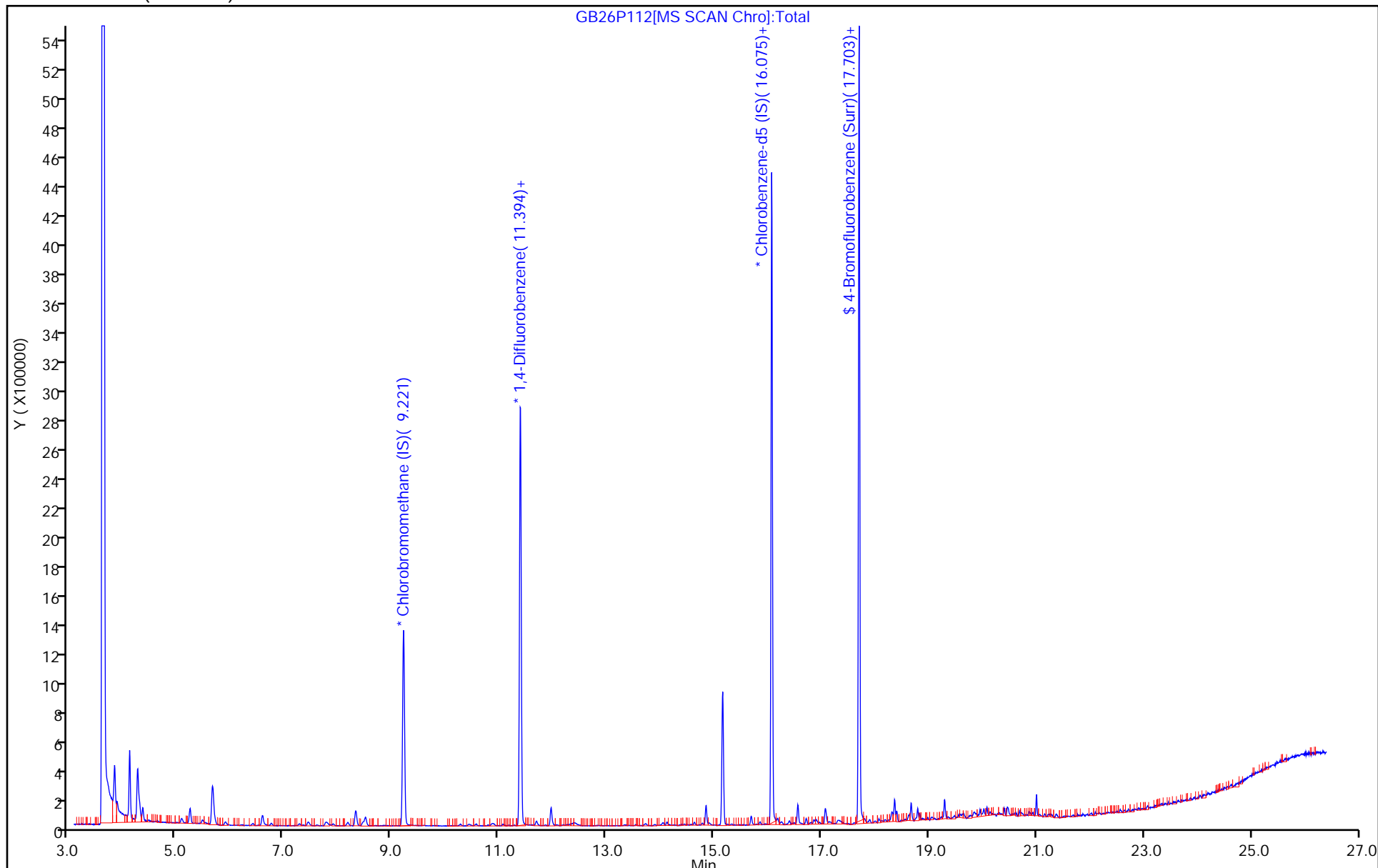
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P112.D
 Lims ID: 140-14389-A-4
 Client ID: SV-DUP01-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 23:37:30 ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-018
 Misc. Info.: 140-14389-a-4
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

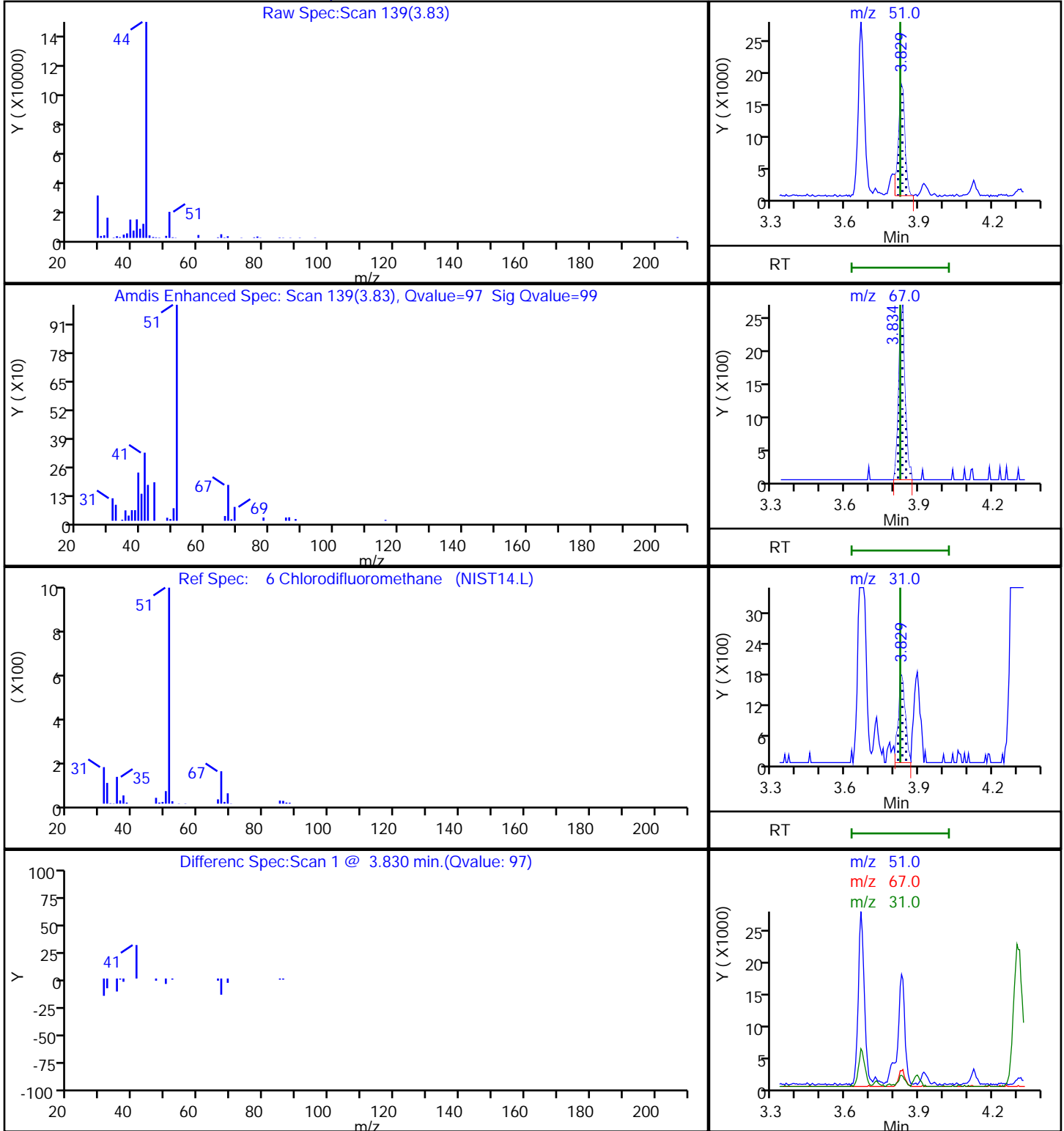
First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:46:50

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.94	98.40

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P112.D
Injection Date: 26-Feb-2019 23:37:30 Instrument ID: MG
Lims ID: 140-14389-A-4 Lab Sample ID: 140-14389-4
Client ID: SV-DUP01-C-26
Operator ID: 7126 ALS Bottle#: 12 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P112.D

Injection Date: 26-Feb-2019 23:37:30

Instrument ID: MG

Lims ID: 140-14389-A-4

Lab Sample ID: 140-14389-4

Client ID: SV-DUP01-C-26

Operator ID: 7126

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

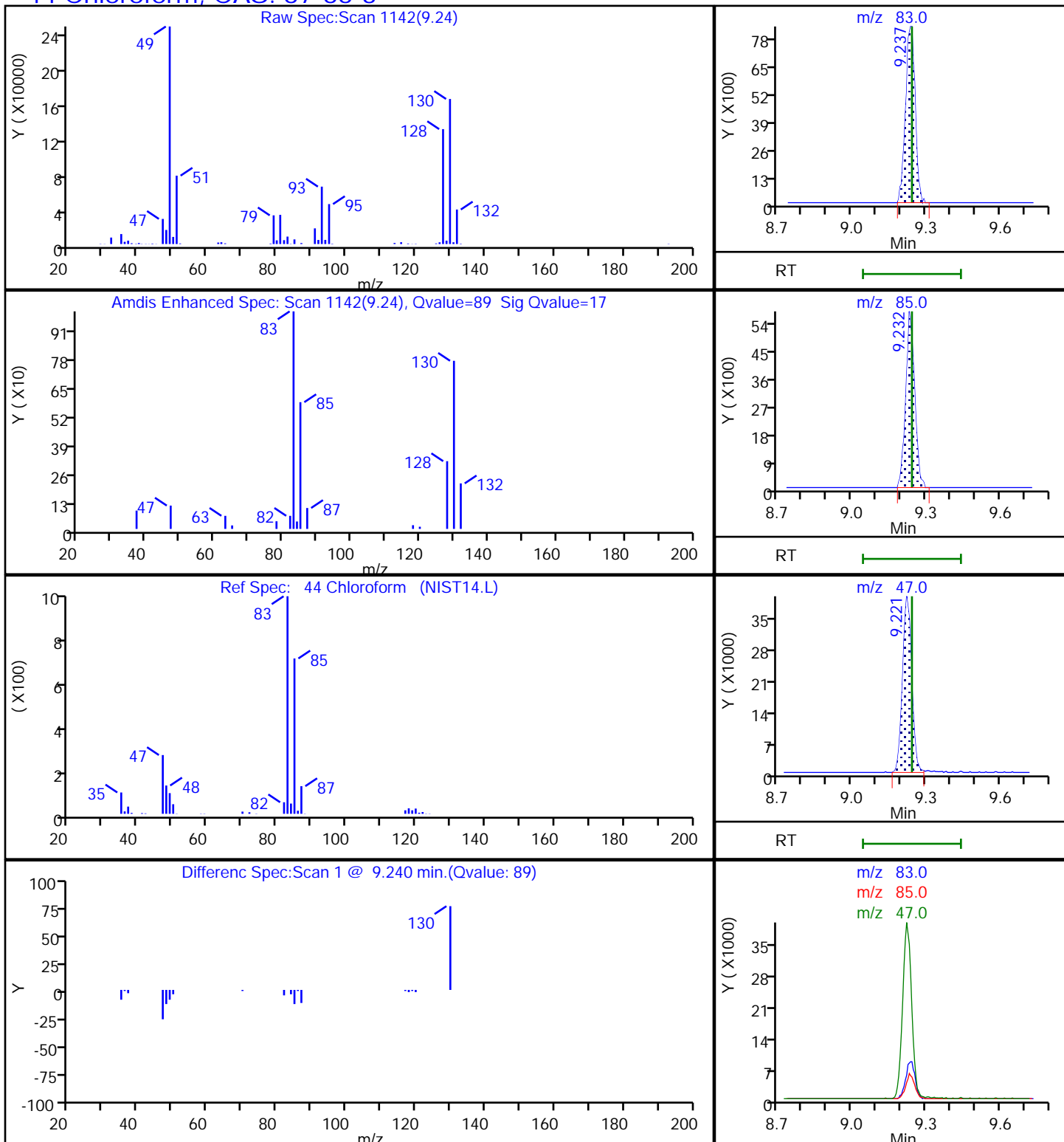
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

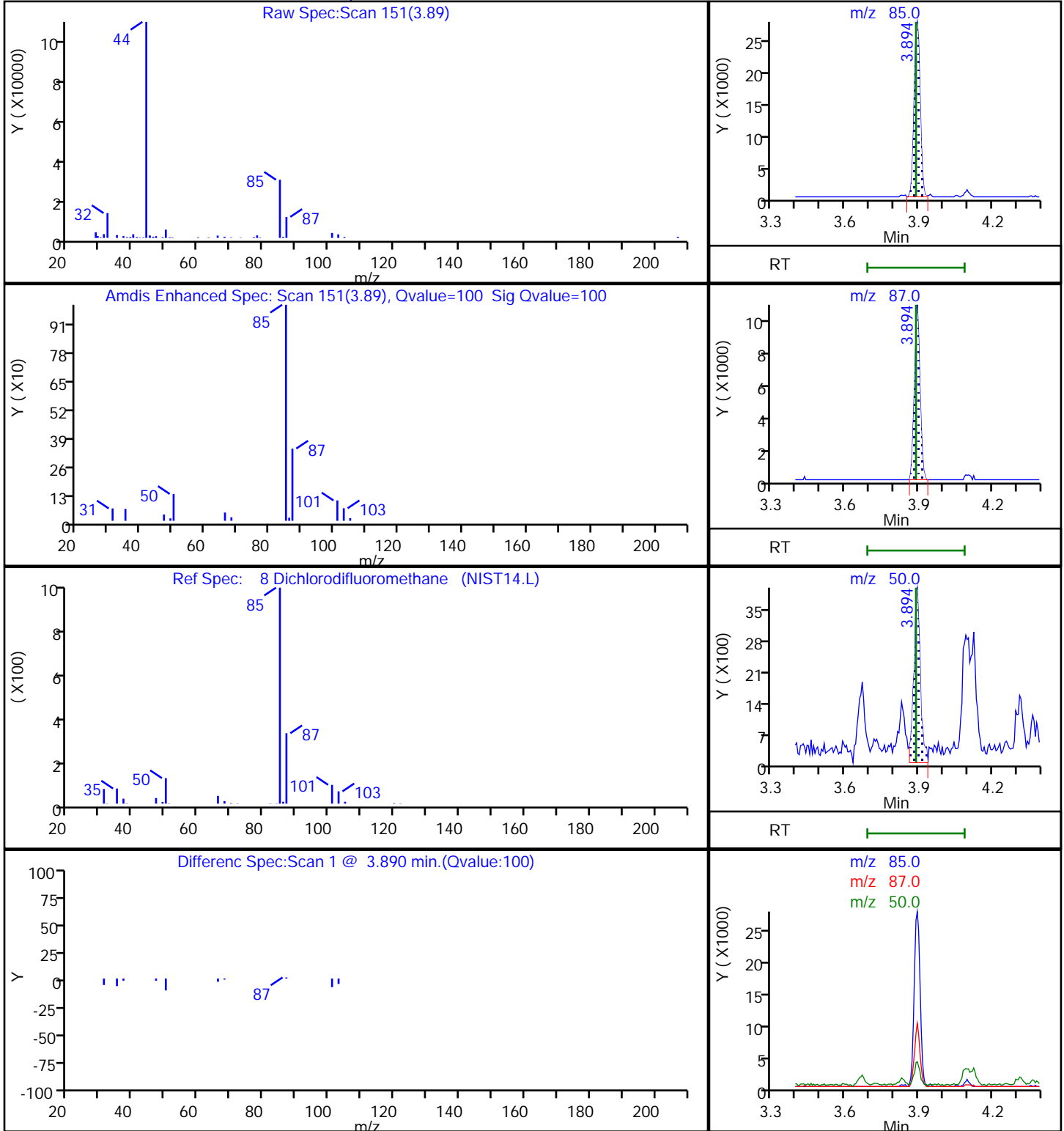
44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P112.D
Injection Date: 26-Feb-2019 23:37:30 Instrument ID: MG
Lims ID: 140-14389-A-4 Lab Sample ID: 140-14389-4
Client ID: SV-DUP01-C-26
Operator ID: 7126 ALS Bottle#: 12 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P112.D

Injection Date: 26-Feb-2019 23:37:30

Instrument ID: MG

Lims ID: 140-14389-A-4

Lab Sample ID: 140-14389-4

Client ID: SV-DUP01-C-26

Operator ID: 7126

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

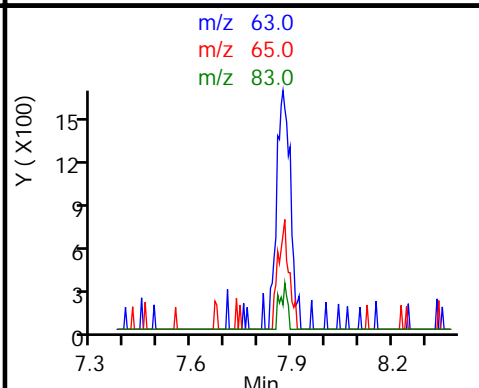
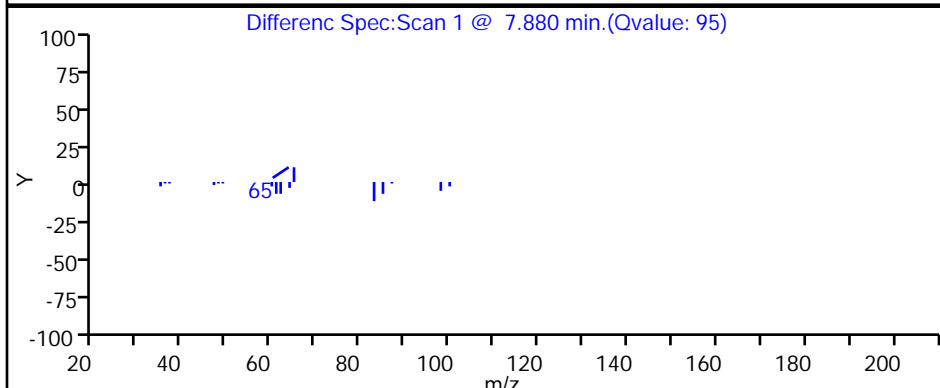
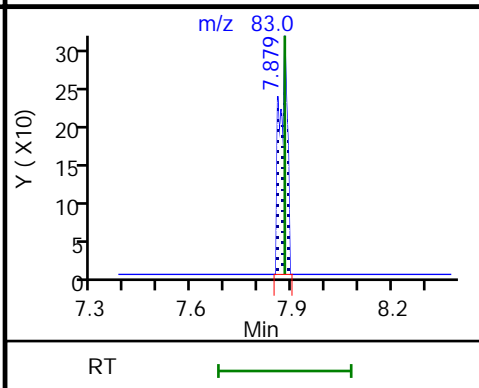
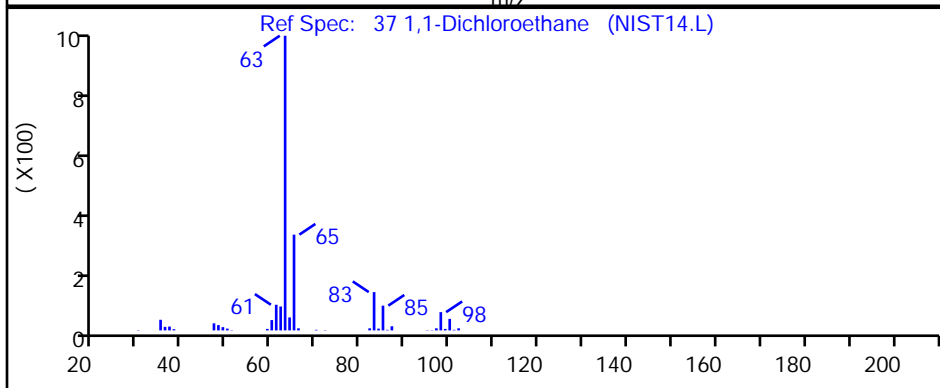
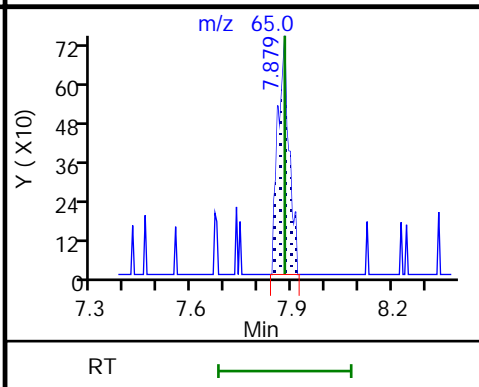
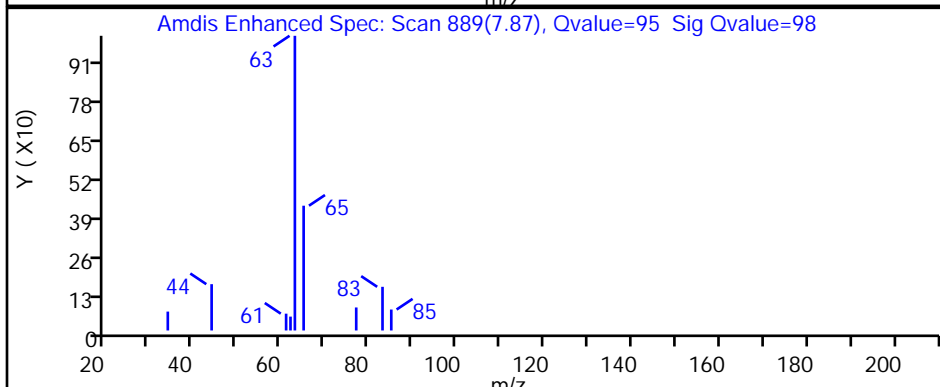
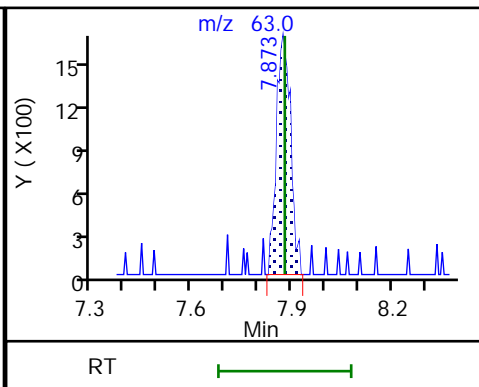
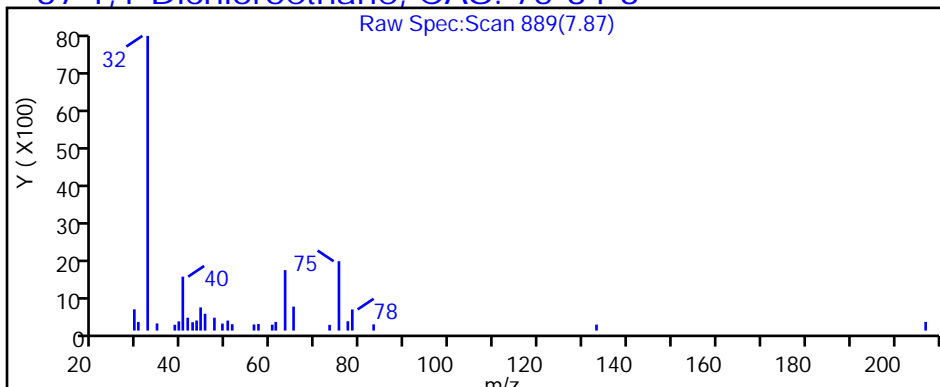
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P112.D

Injection Date: 26-Feb-2019 23:37:30

Instrument ID: MG

Lims ID: 140-14389-A-4

Lab Sample ID: 140-14389-4

Client ID: SV-DUP01-C-26

Operator ID: 7126

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

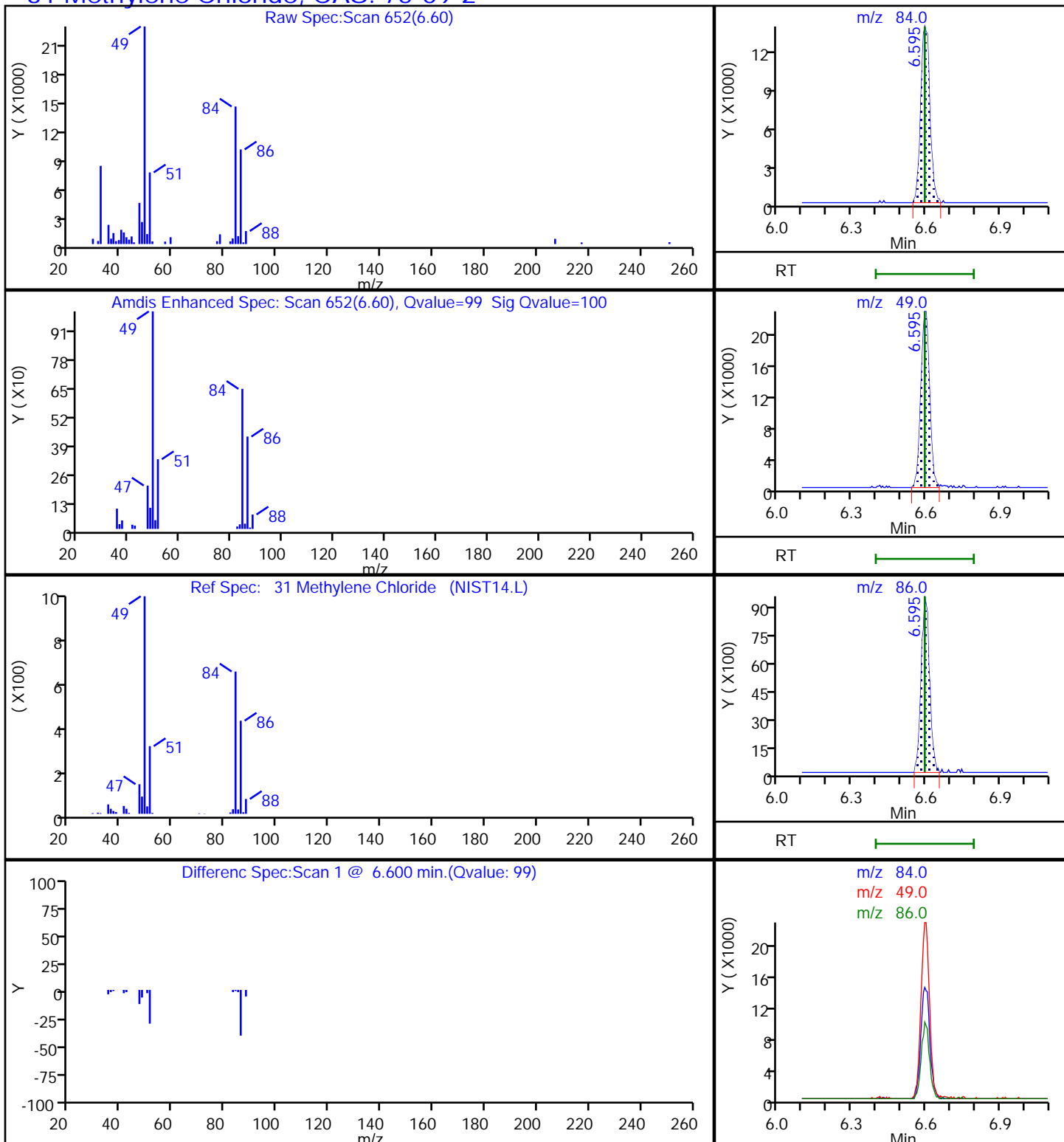
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P112.D

Injection Date: 26-Feb-2019 23:37:30

Instrument ID: MG

Lims ID: 140-14389-A-4

Lab Sample ID: 140-14389-4

Client ID: SV-DUP01-C-26

Operator ID: 7126

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

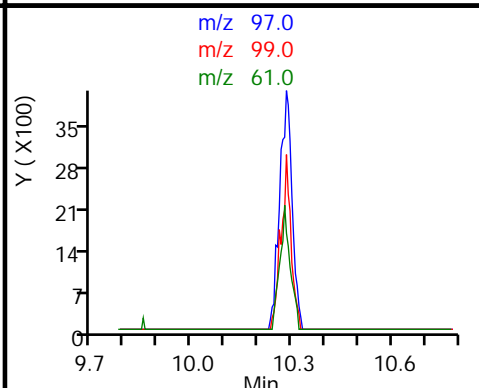
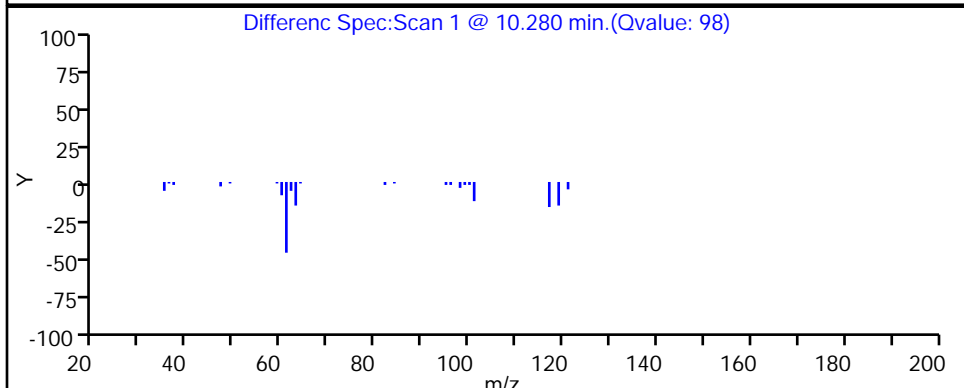
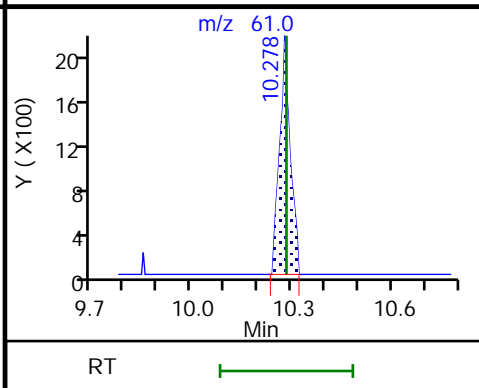
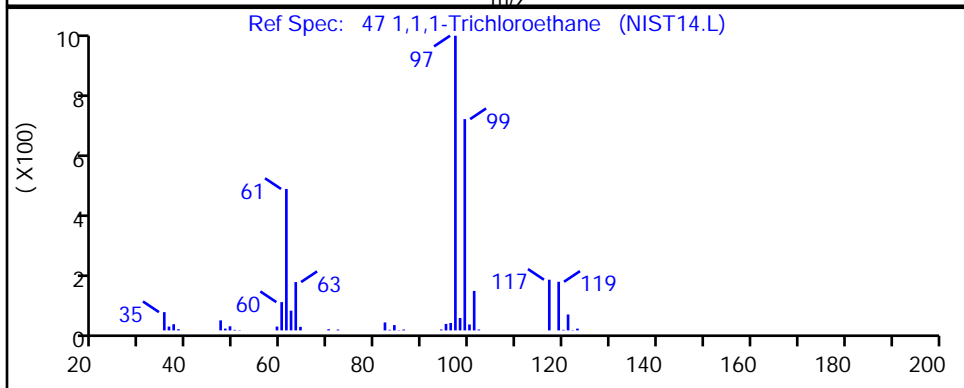
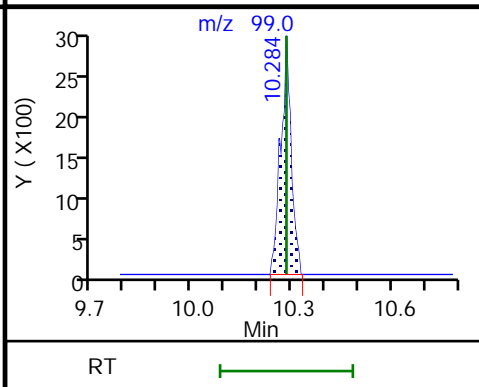
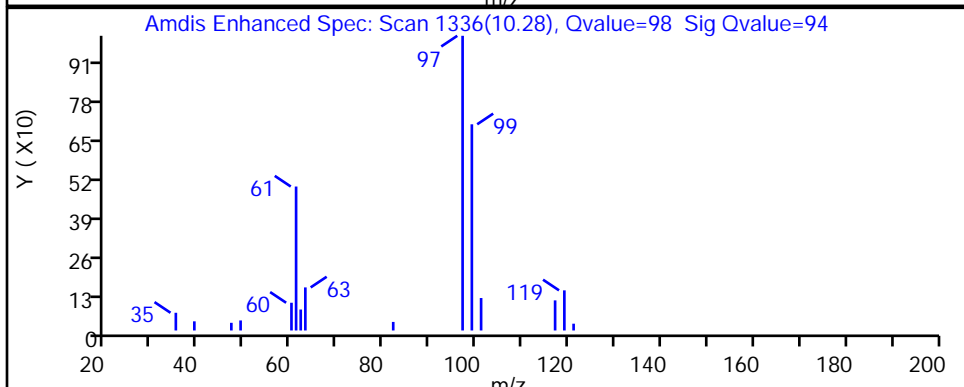
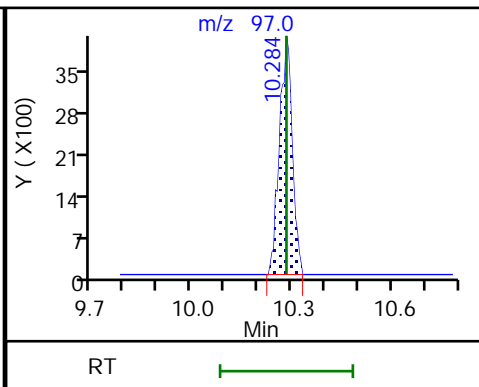
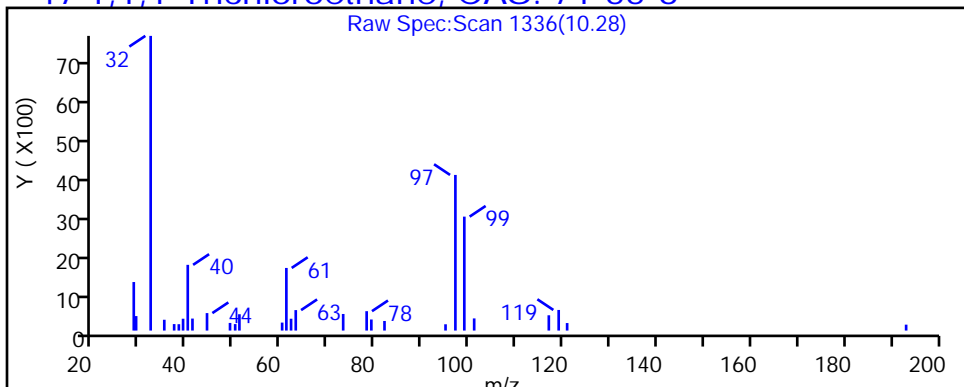
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P112.D

Injection Date: 26-Feb-2019 23:37:30

Instrument ID: MG

Lims ID: 140-14389-A-4

Lab Sample ID: 140-14389-4

Client ID: SV-DUP01-C-26

Operator ID: 7126

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

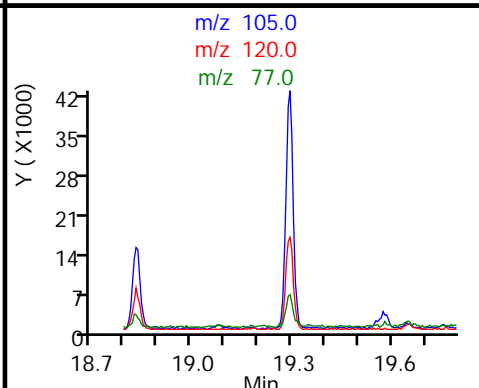
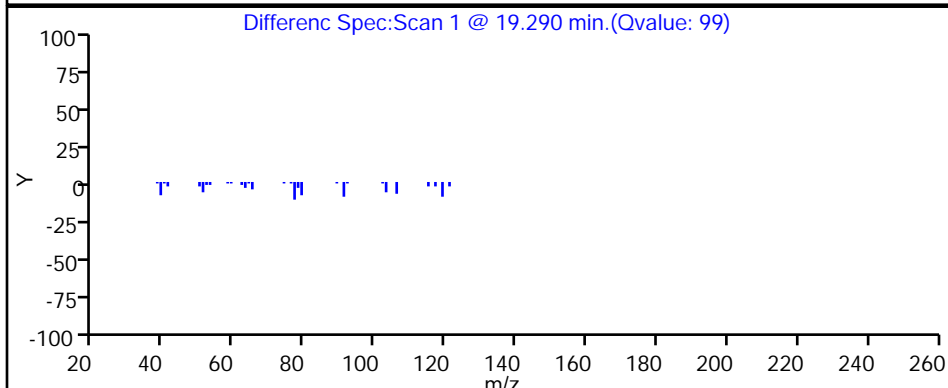
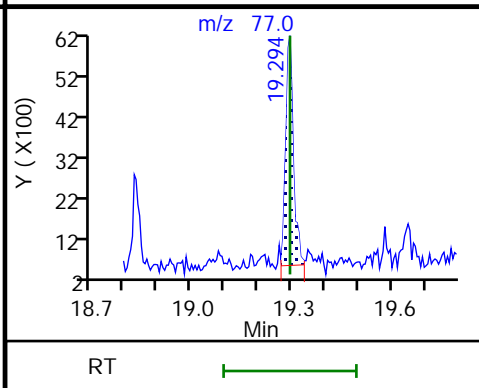
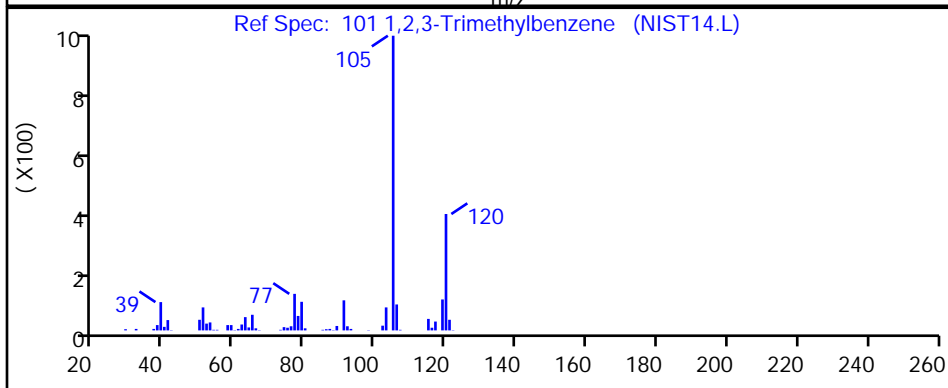
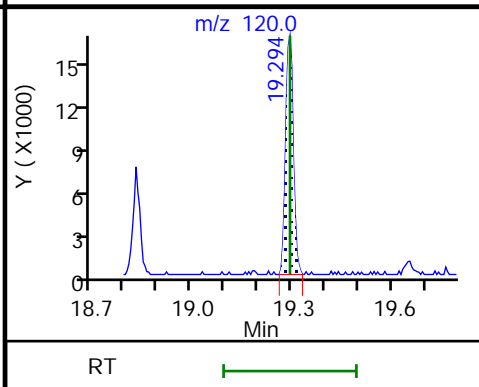
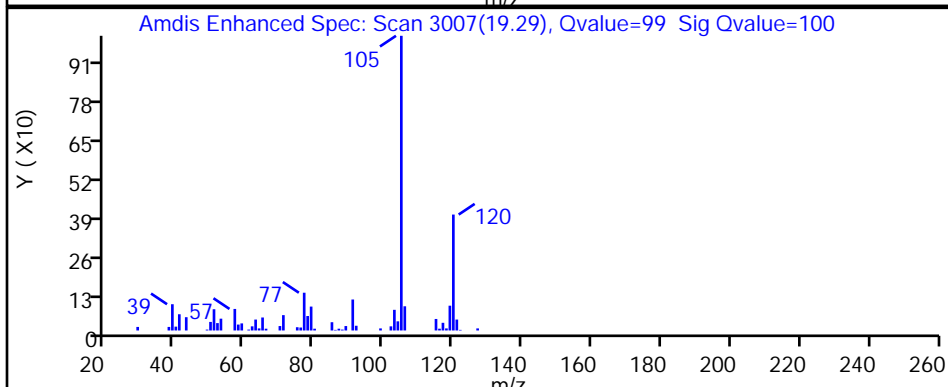
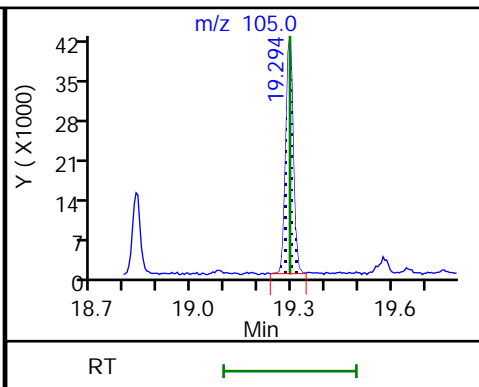
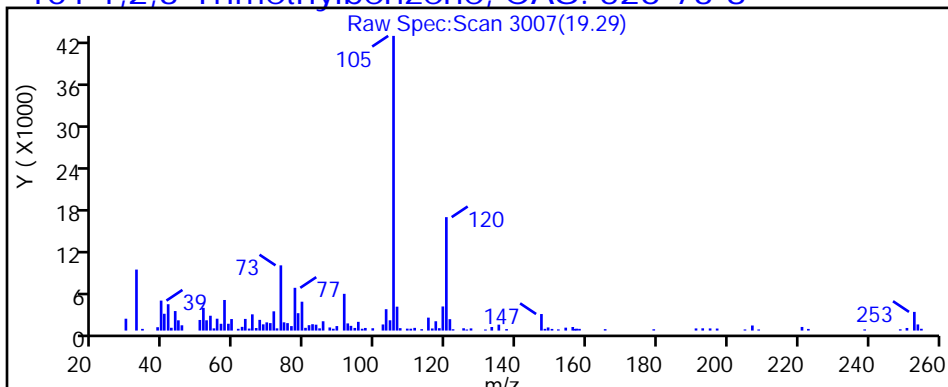
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

101 1,2,3-Trimethylbenzene, CAS: 526-73-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P112.D

Injection Date: 26-Feb-2019 23:37:30

Instrument ID: MG

Lims ID: 140-14389-A-4

Lab Sample ID: 140-14389-4

Client ID: SV-DUP01-C-26

Operator ID: 7126

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

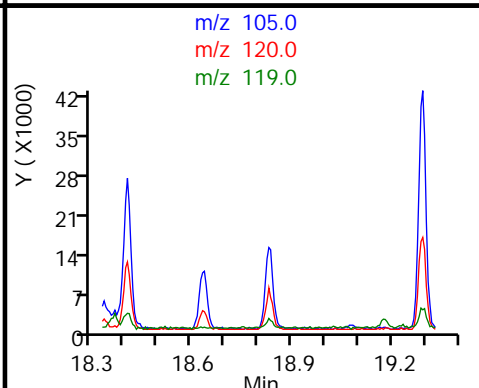
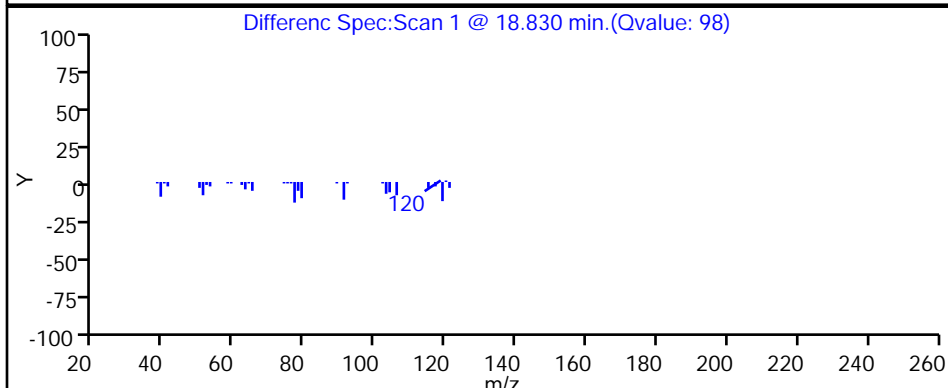
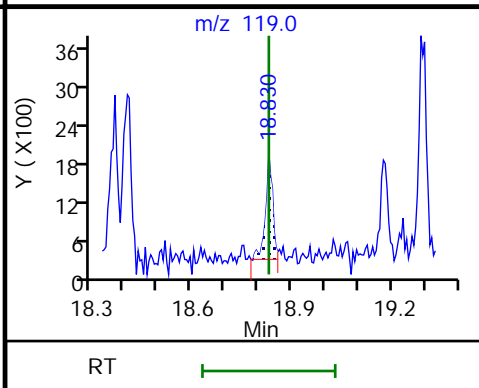
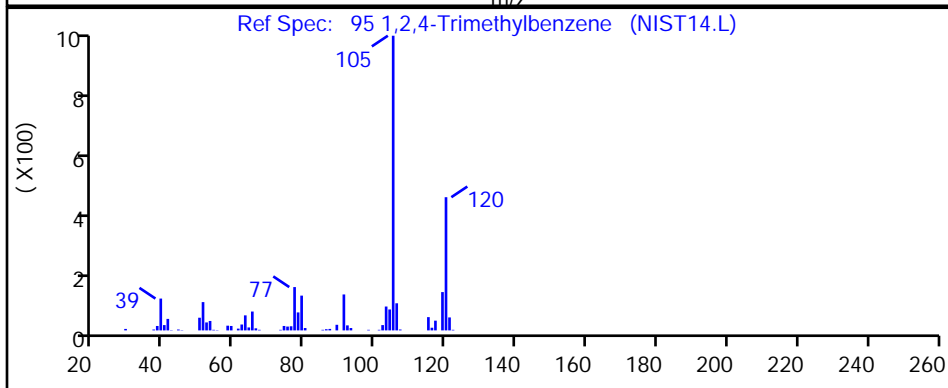
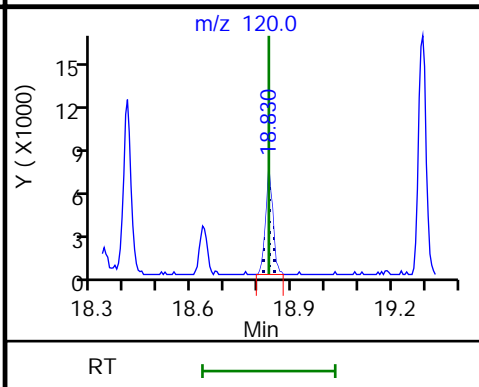
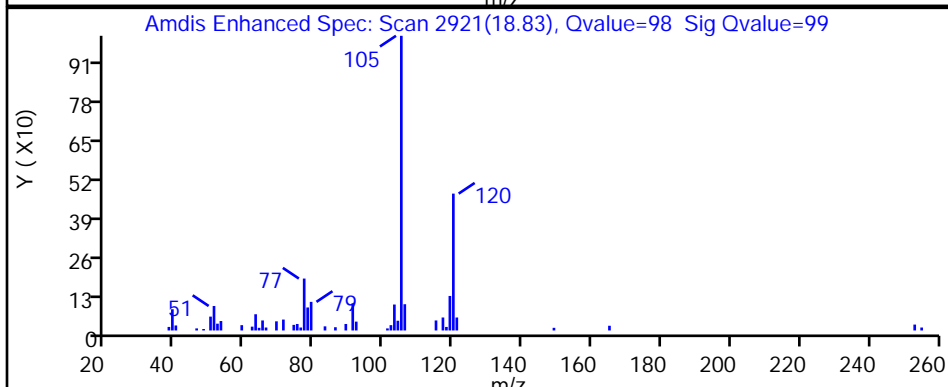
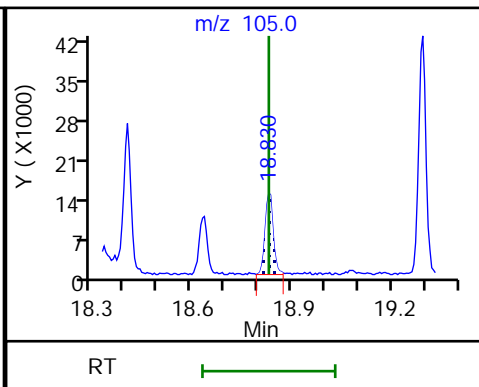
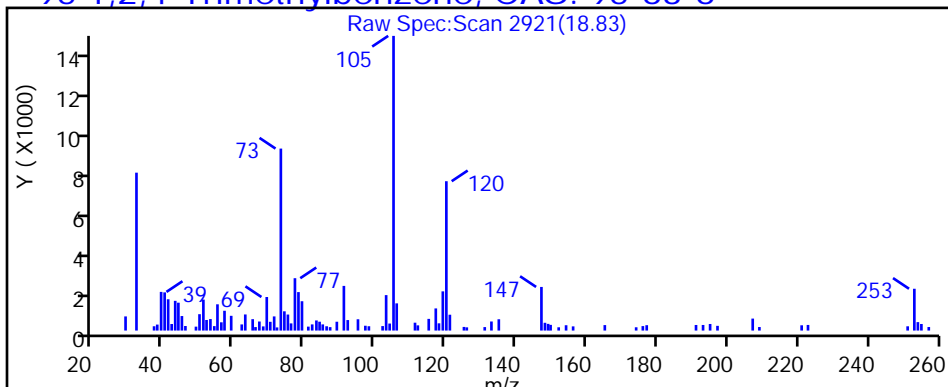
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

95 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P112.D

Injection Date: 26-Feb-2019 23:37:30

Instrument ID: MG

Lims ID: 140-14389-A-4

Lab Sample ID: 140-14389-4

Client ID: SV-DUP01-C-26

Operator ID: 7126

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

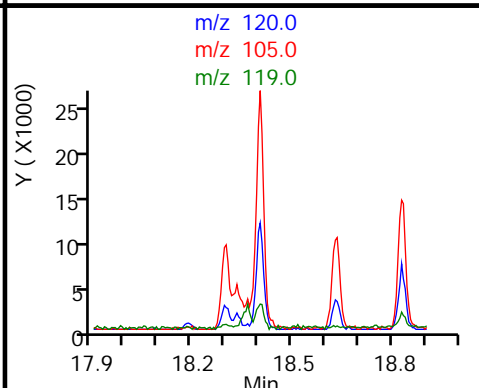
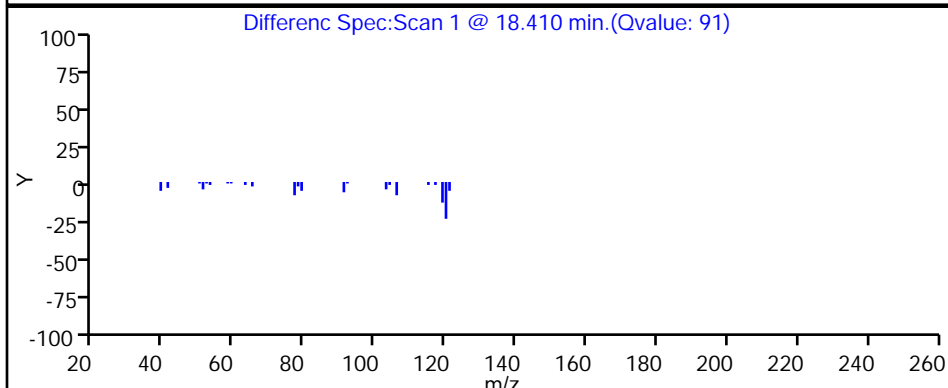
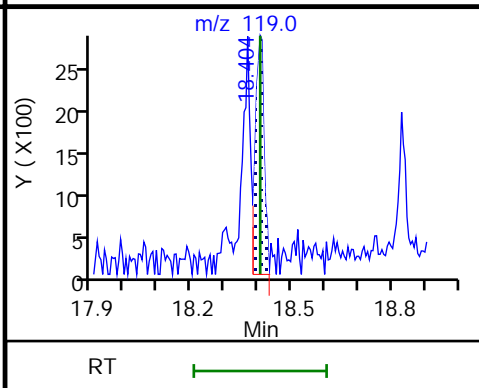
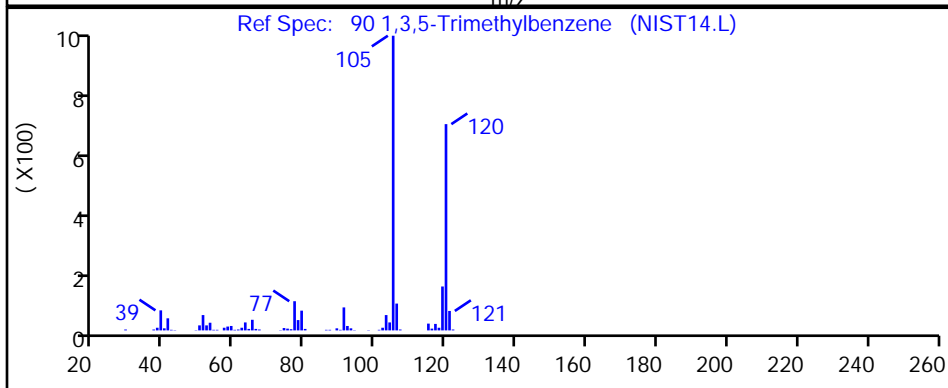
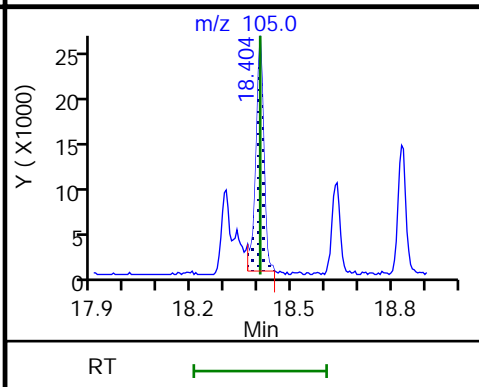
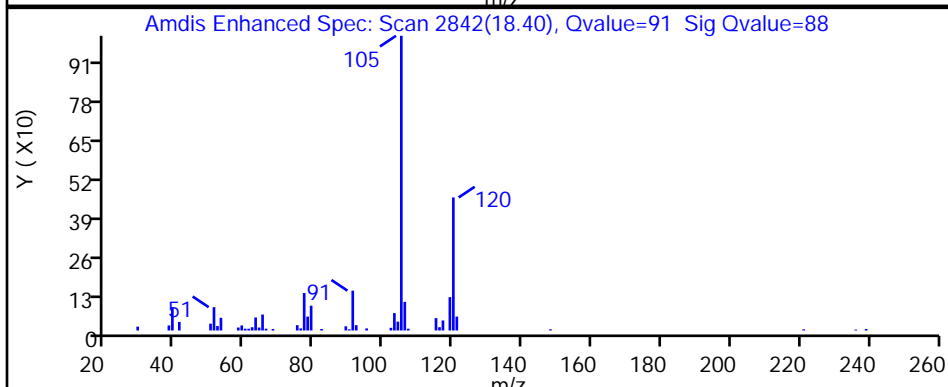
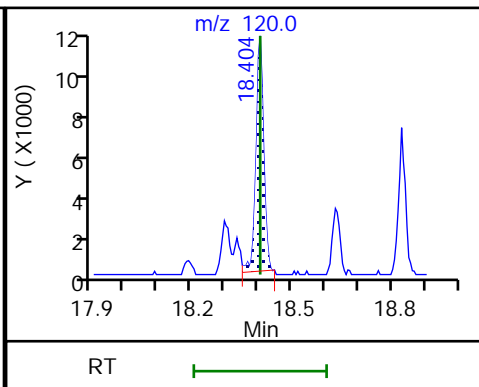
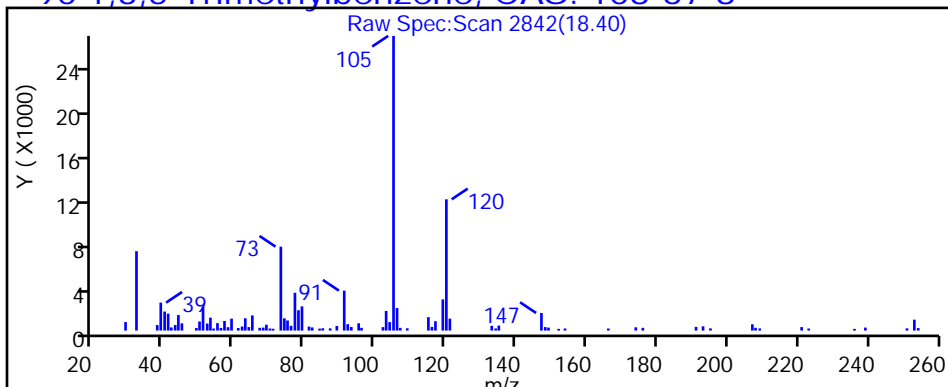
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

90 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P112.D

Injection Date: 26-Feb-2019 23:37:30

Instrument ID: MG

Lims ID: 140-14389-A-4

Lab Sample ID: 140-14389-4

Client ID: SV-DUP01-C-26

Operator ID: 7126

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

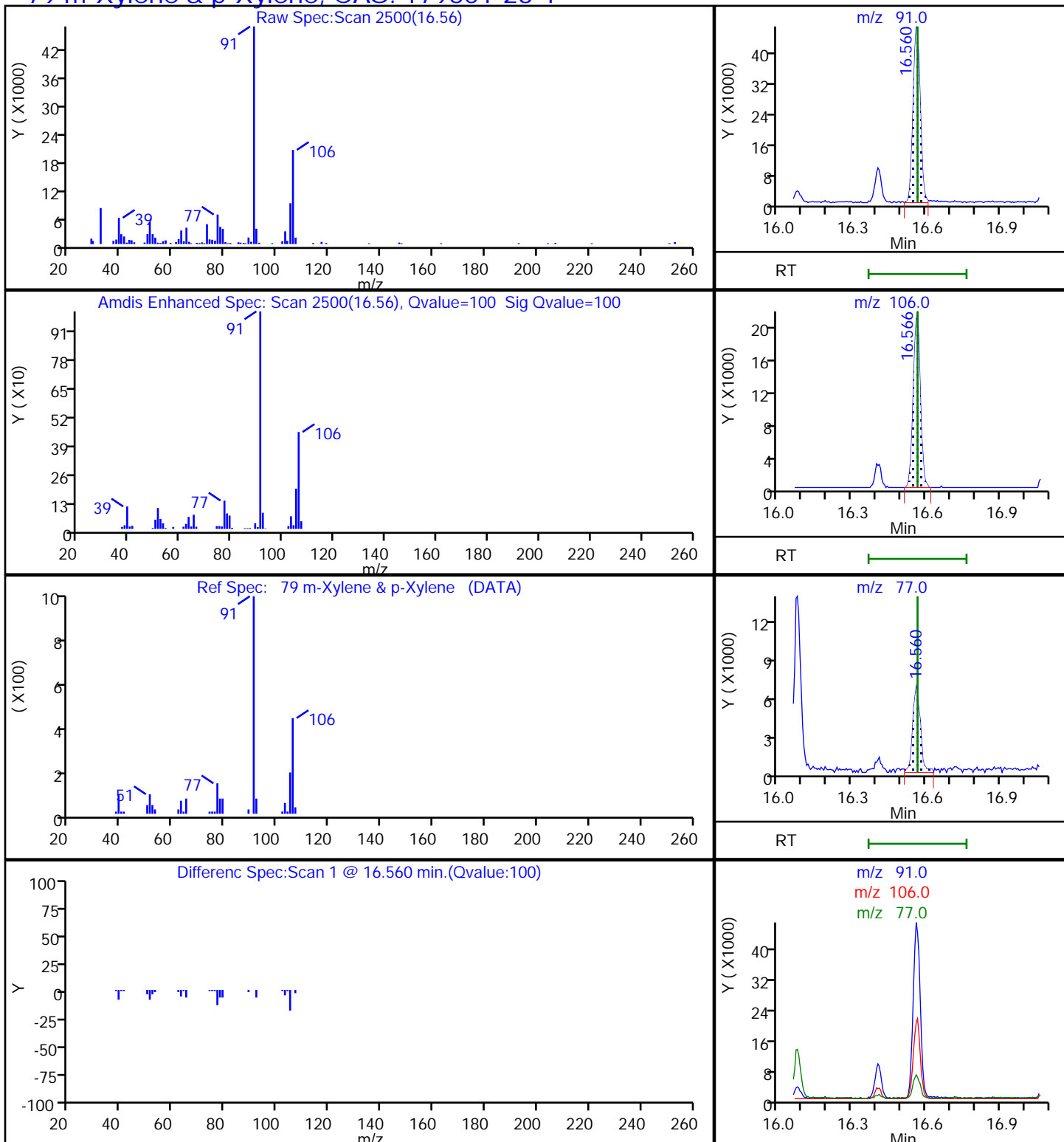
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

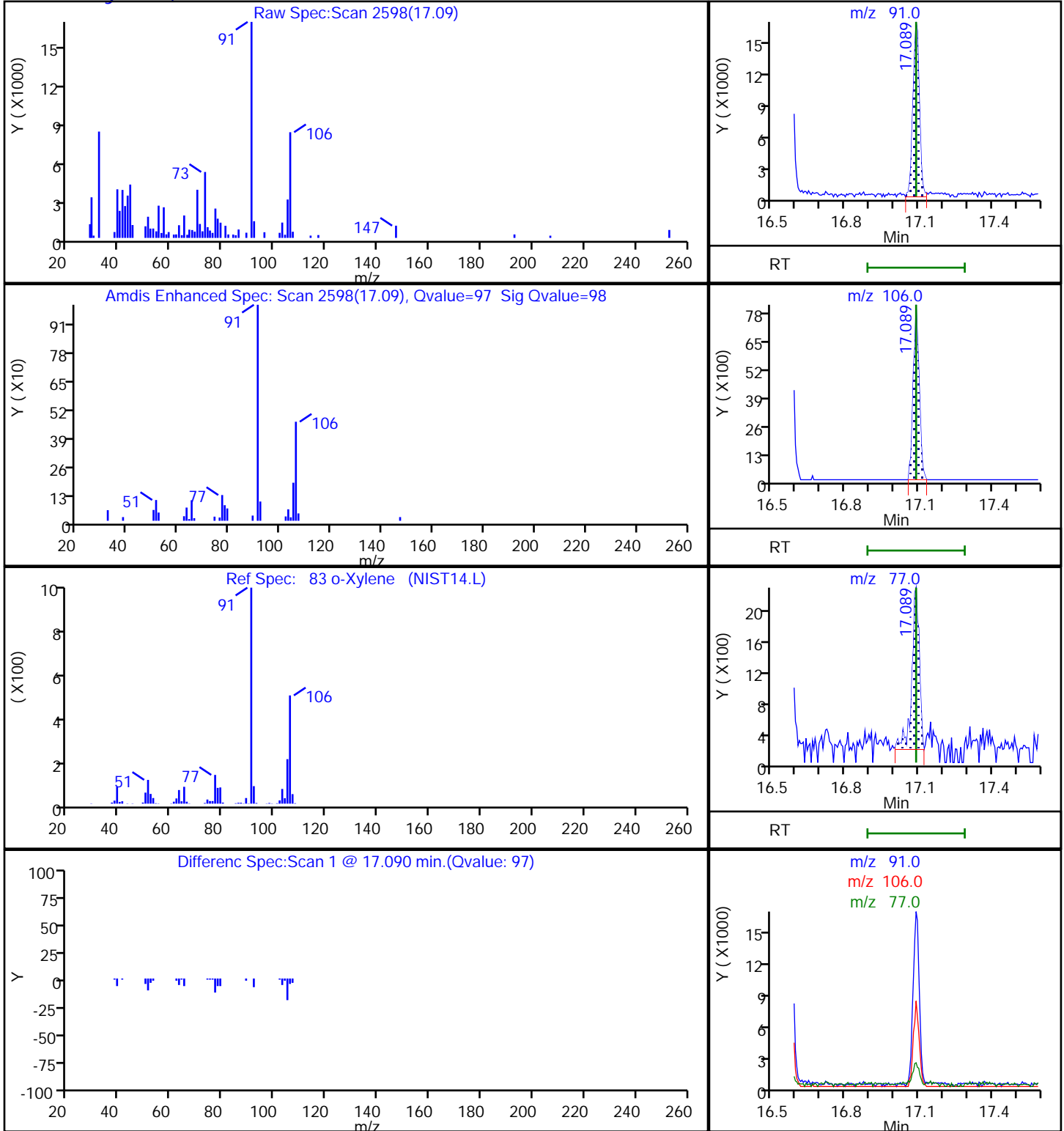
79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P112.D
Injection Date: 26-Feb-2019 23:37:30 Instrument ID: MG
Lims ID: 140-14389-A-4 Lab Sample ID: 140-14389-4
Client ID: SV-DUP01-C-26
Operator ID: 7126 ALS Bottle#: 12 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-001-C-26 Lab Sample ID: 140-14389-5
 Matrix: Air Lab File ID: GB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:36
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.23		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.49		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	4.6		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-001-C-26 Lab Sample ID: 140-14389-5
 Matrix: Air Lab File ID: GB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:36
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	0.52	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	8.3		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.2		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.9		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	25		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P113.D
 Lims ID: 140-14389-A-5
 Client ID: SV-001-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 00:18:30 ALS Bottle#: 13 Worklist Smp#: 19
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-019
 Misc. Info.: 140-14389-a-5
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:47:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.226	9.232	-0.006	98	471643	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.405	-0.005	96	2836179	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2626133	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2060932	3.83	
6 Chlorodifluoromethane	51	3.834	3.829	0.011	96	20858	0.0675	
8 Dichlorodifluoromethane	85	3.899	3.886	0.011	100	46329	0.0928	
31 Methylene Chloride	84	6.606	6.591	0.011	98	43822	0.2263	
34 trans-1,2-Dichloroethene	96	7.442	7.432	0.006	97	16346	0.0981	
42 cis-1,2-Dichloroethene	96	8.887	8.882	0.000	97	71259	0.4178	
44 Chloroform	83	9.237	9.237	-0.006	27	8378	0.0212	
58 Trichloroethene	130	12.106	12.100	0.000	94	214120	0.9271	
67 Toluene	91	14.123	14.128	-0.005	92	40877	0.0707	
112 Naphthalene	128	21.365	21.365	0.000	99	37487	0.0463	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P113.D

Injection Date: 27-Feb-2019 00:18:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14389-A-5

Lab Sample ID: 140-14389-5

Worklist Smp#: 19

Client ID: SV-001-C-26

Purge Vol: 500.000 mL

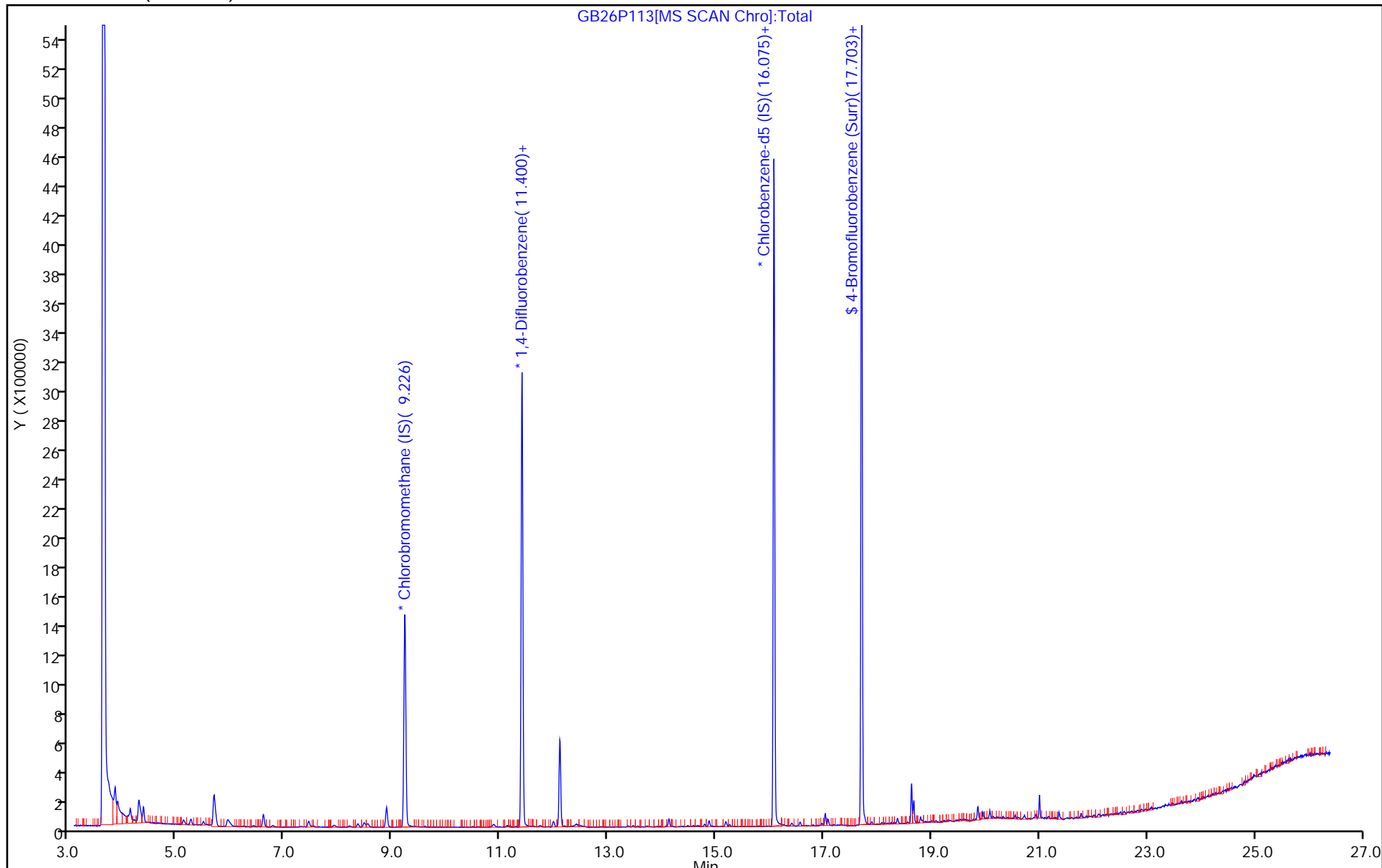
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P113.D
 Lims ID: 140-14389-A-5
 Client ID: SV-001-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 00:18:30 ALS Bottle#: 13 Worklist Smp#: 19
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-019
 Misc. Info.: 140-14389-a-5
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

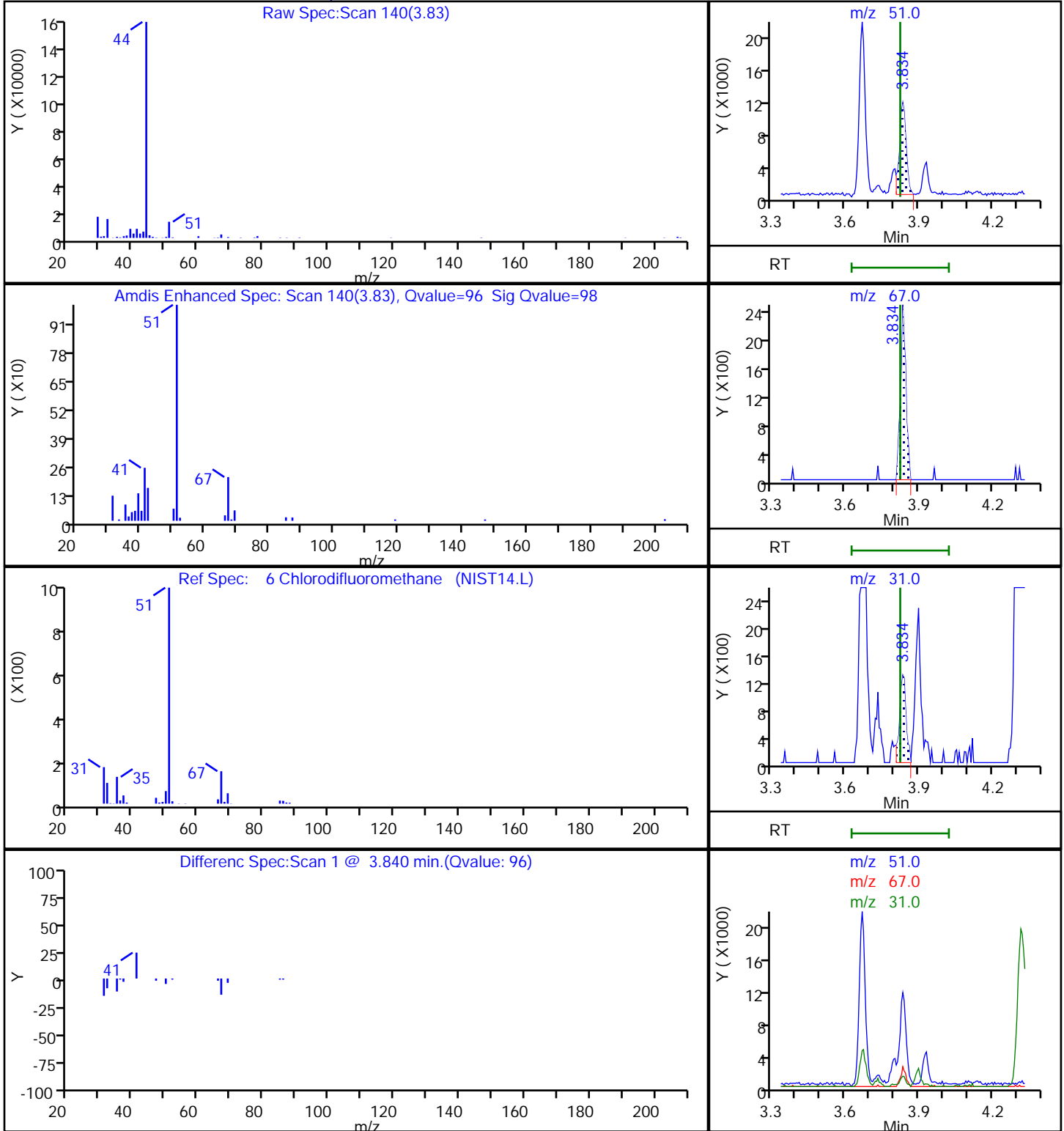
First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:47:20

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.83	95.75

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P113.D
Injection Date: 27-Feb-2019 00:18:30 Instrument ID: MG
Lims ID: 140-14389-A-5 Lab Sample ID: 140-14389-5
Client ID: SV-001-C-26
Operator ID: 7126 ALS Bottle#: 13 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P113.D

Injection Date: 27-Feb-2019 00:18:30

Instrument ID: MG

Lims ID: 140-14389-A-5

Lab Sample ID: 140-14389-5

Client ID: SV-001-C-26

Operator ID: 7126

ALS Bottle#: 13

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

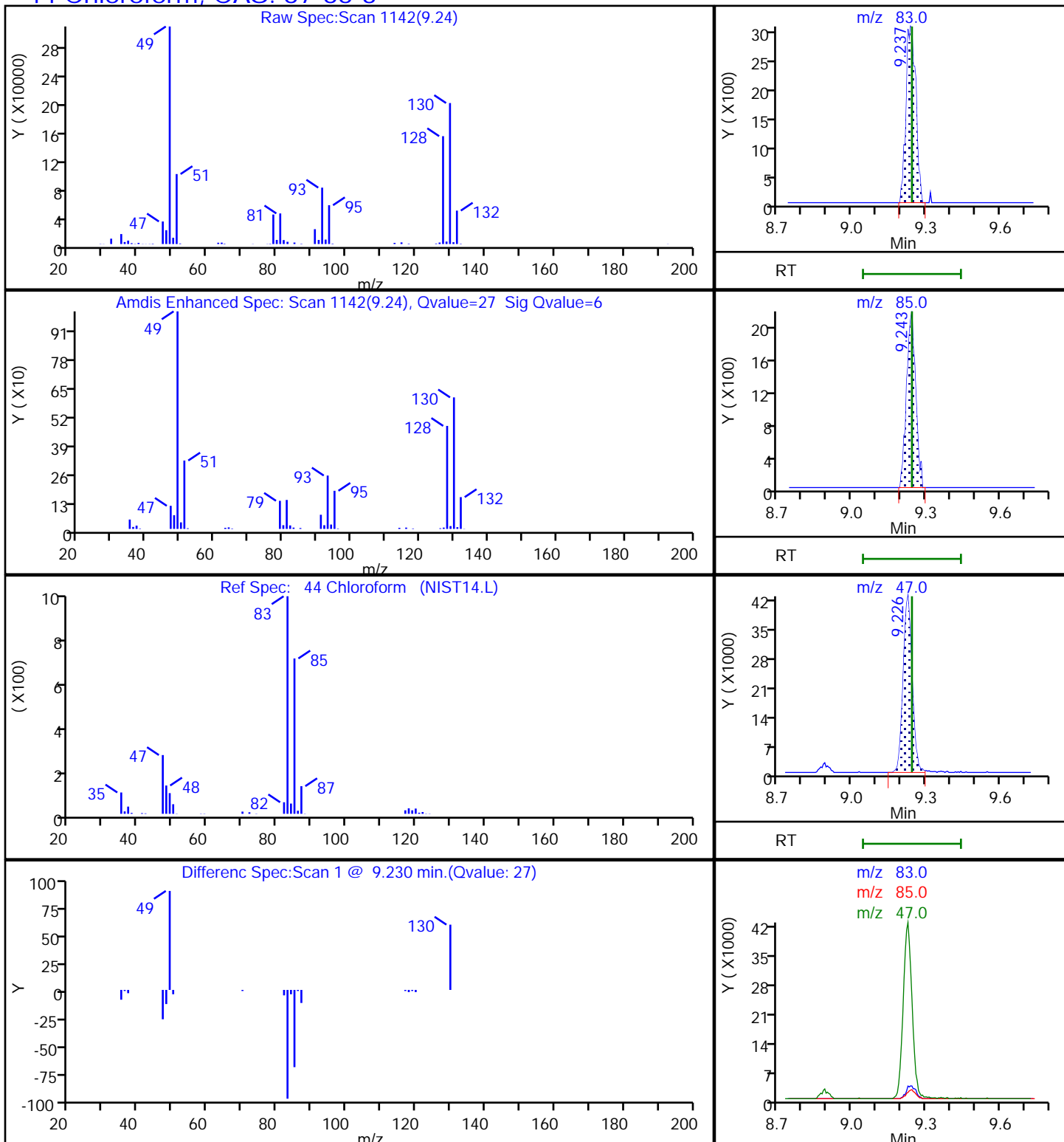
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

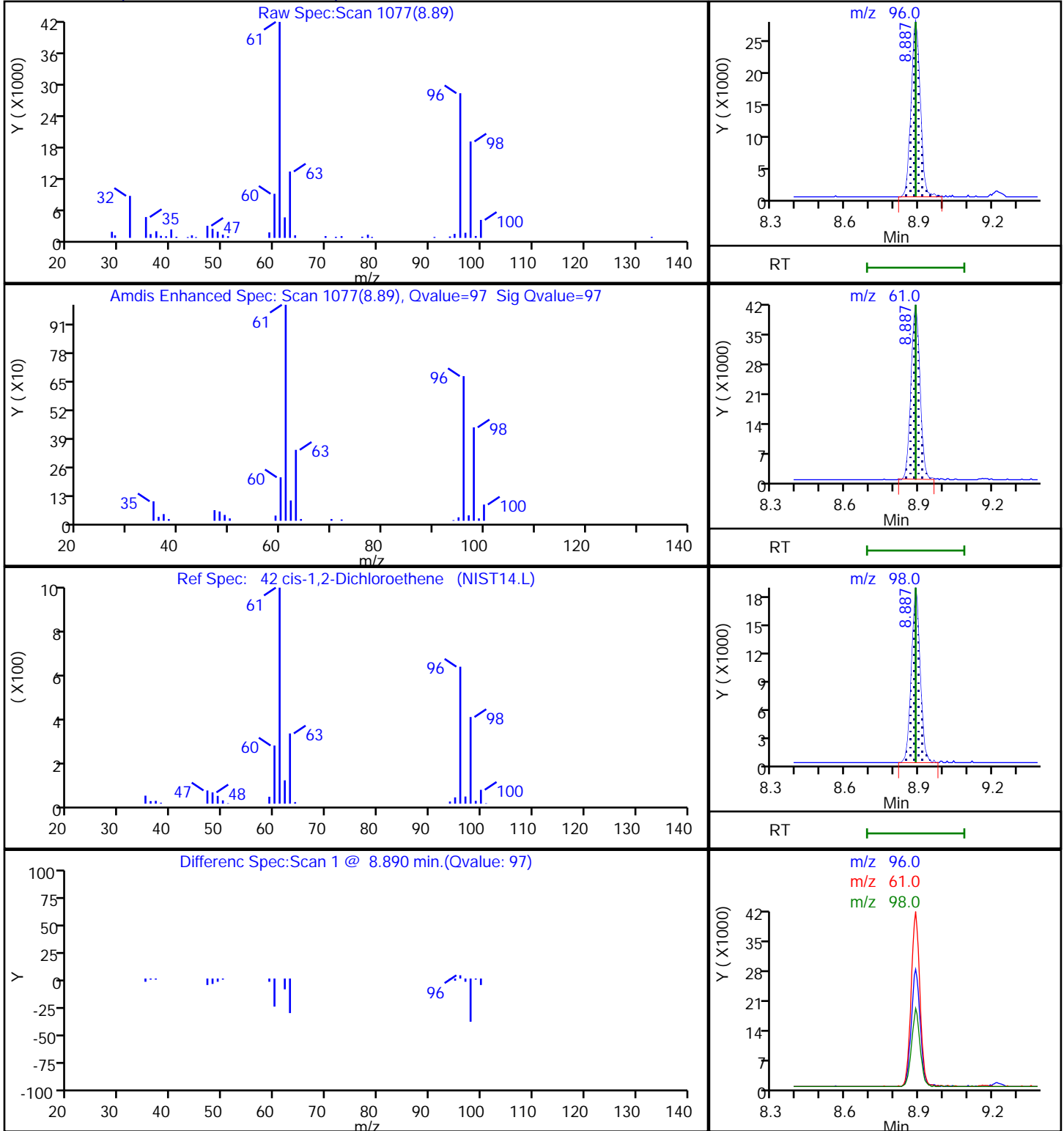
44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P113.D
Injection Date: 27-Feb-2019 00:18:30 Instrument ID: MG
Lims ID: 140-14389-A-5 Lab Sample ID: 140-14389-5
Client ID: SV-001-C-26
Operator ID: 7126 ALS Bottle#: 13 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P113.D

Injection Date: 27-Feb-2019 00:18:30

Instrument ID: MG

Lims ID: 140-14389-A-5

Lab Sample ID: 140-14389-5

Client ID: SV-001-C-26

Operator ID: 7126

ALS Bottle#: 13

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

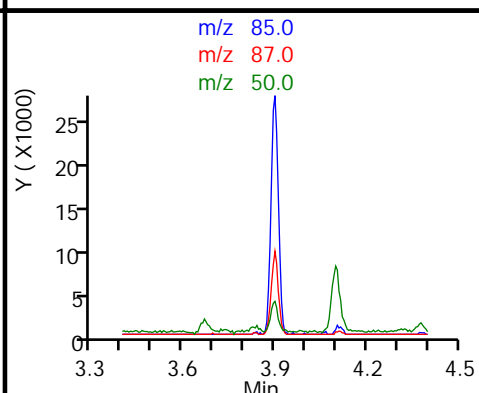
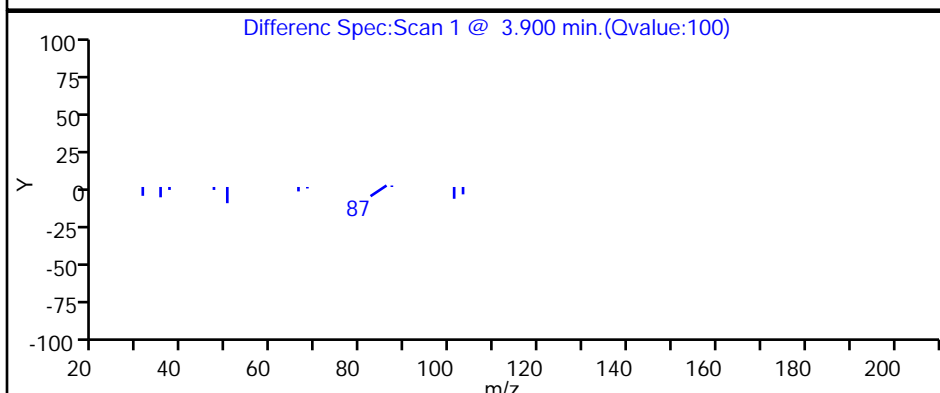
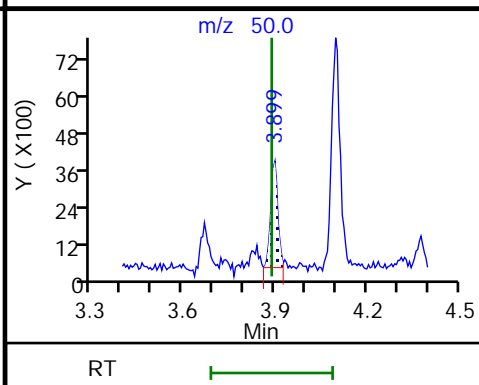
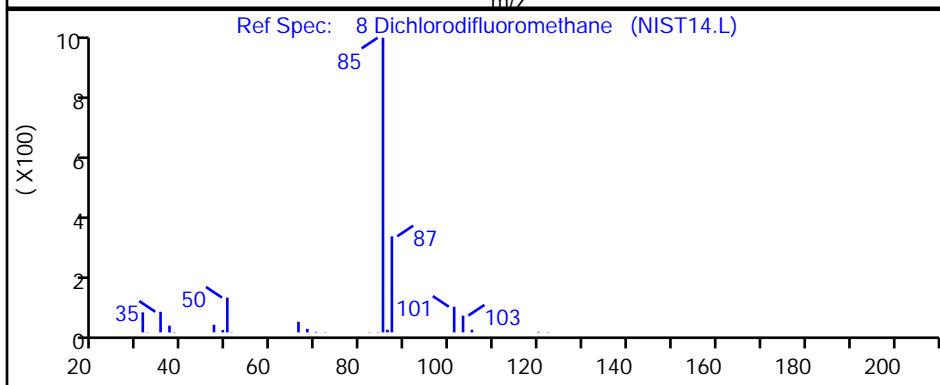
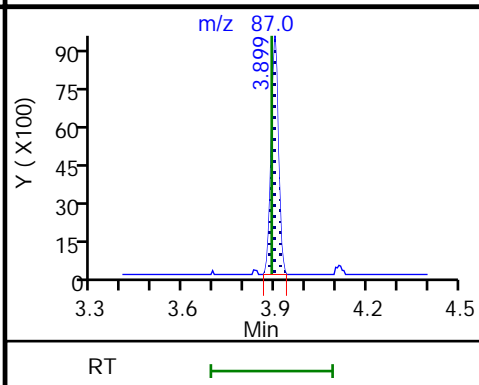
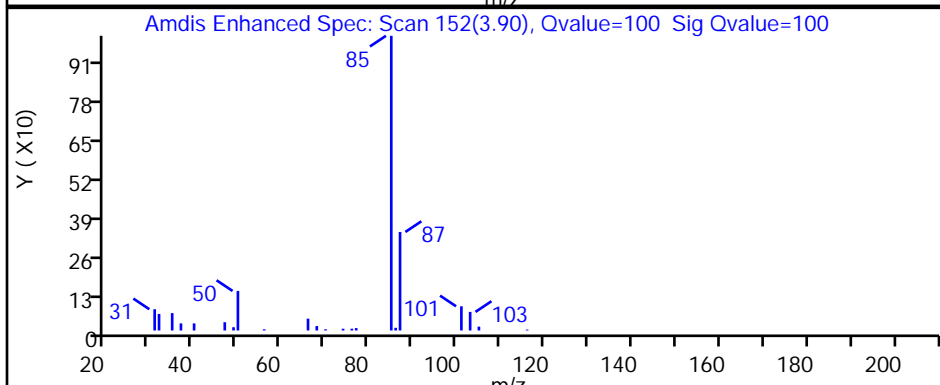
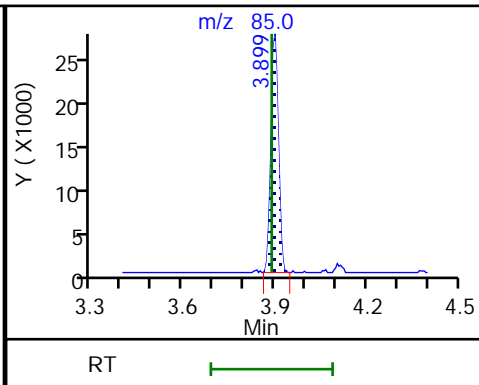
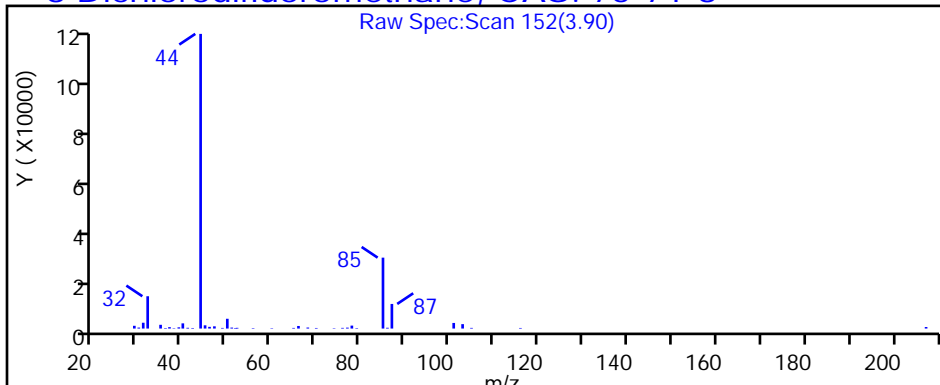
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P113.D

Injection Date: 27-Feb-2019 00:18:30

Instrument ID: MG

Lims ID: 140-14389-A-5

Lab Sample ID: 140-14389-5

Client ID: SV-001-C-26

Operator ID: 7126

ALS Bottle#: 13 Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

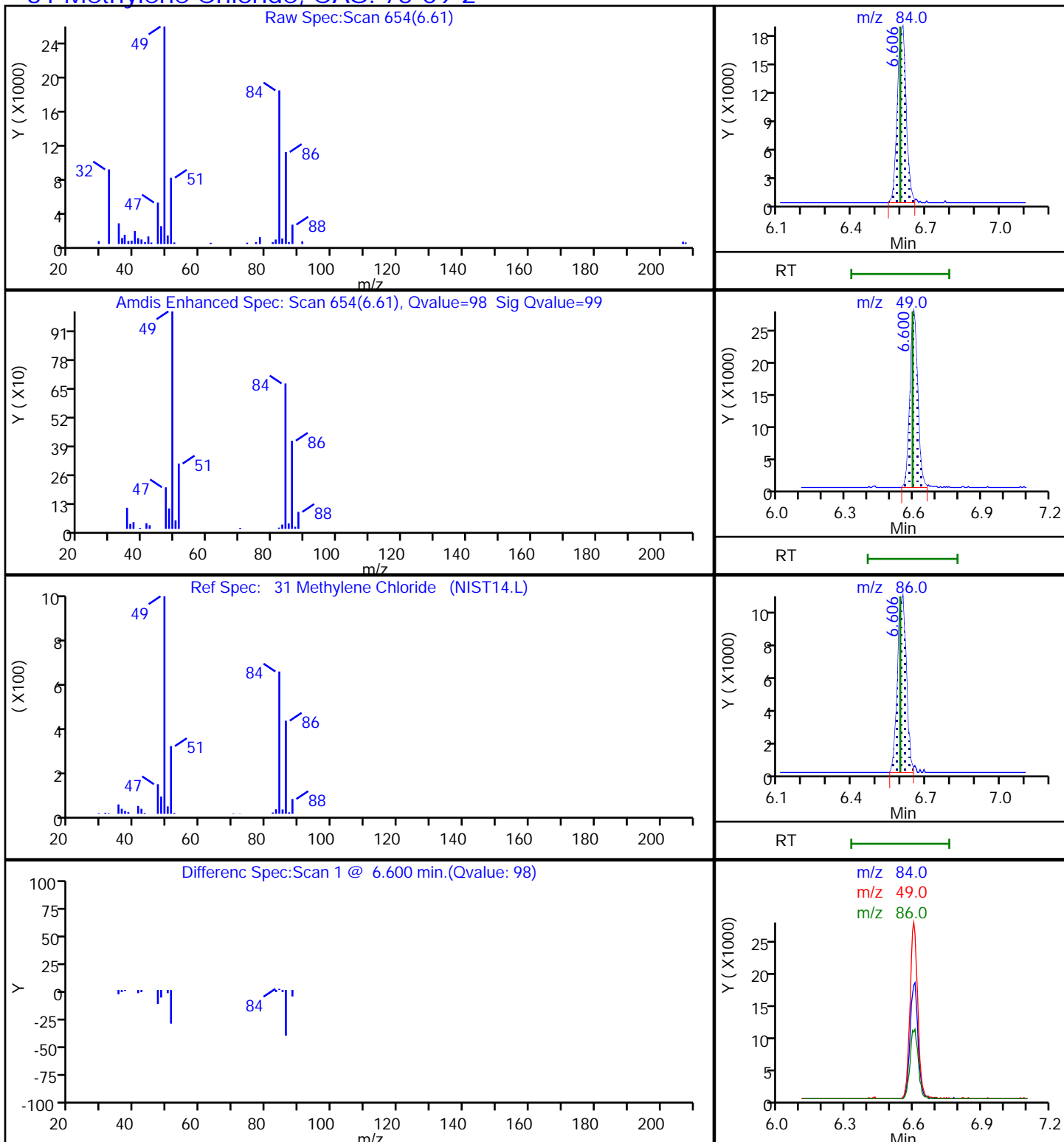
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

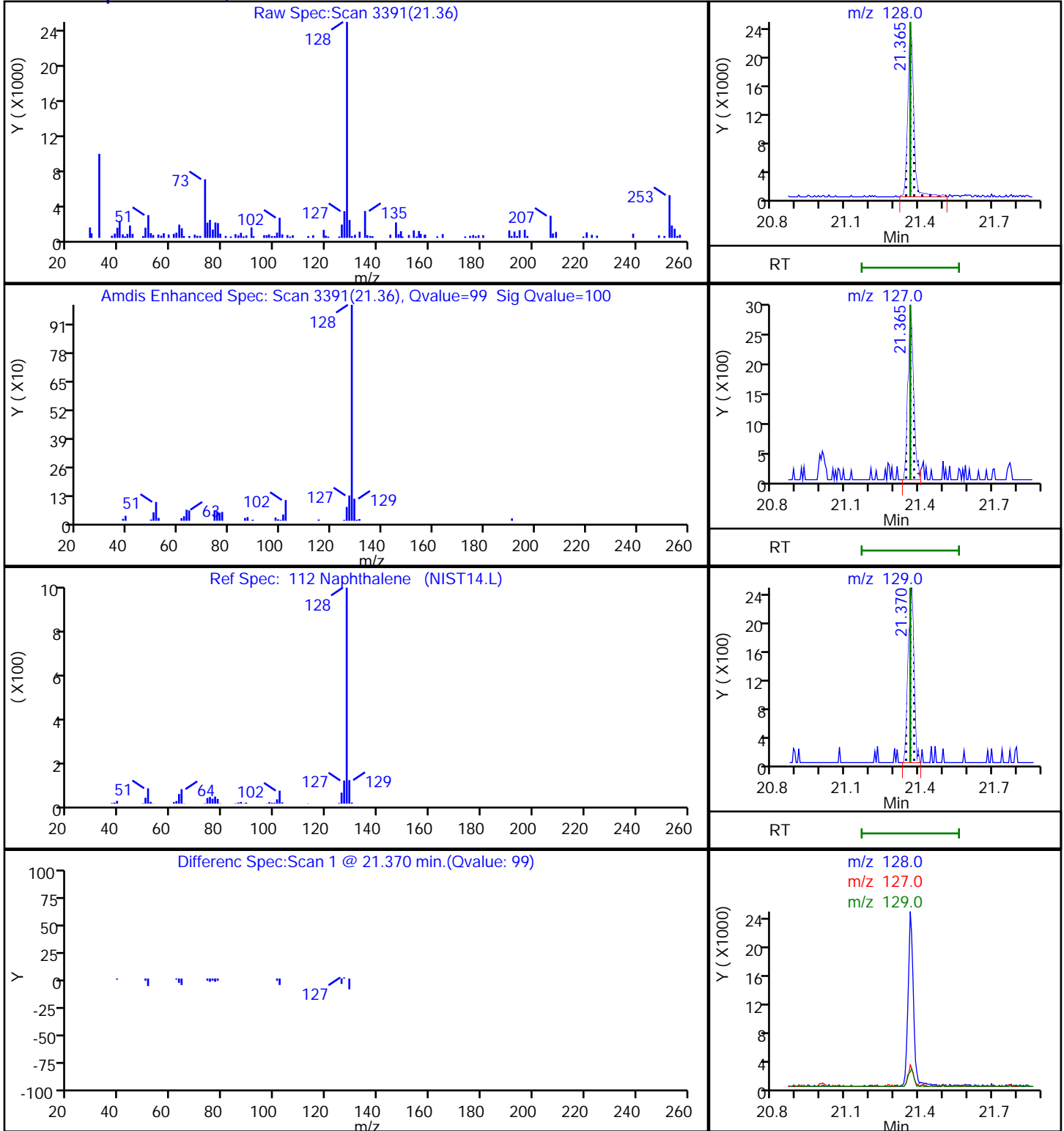
31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P113.D
Injection Date: 27-Feb-2019 00:18:30 Instrument ID: MG
Lims ID: 140-14389-A-5 Lab Sample ID: 140-14389-5
Client ID: SV-001-C-26
Operator ID: 7126 ALS Bottle#: 13 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

112 Naphthalene, CAS: 91-20-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P113.D

Injection Date: 27-Feb-2019 00:18:30

Instrument ID: MG

Lims ID: 140-14389-A-5

Lab Sample ID: 140-14389-5

Client ID: SV-001-C-26

Operator ID: 7126

ALS Bottle#: 13

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

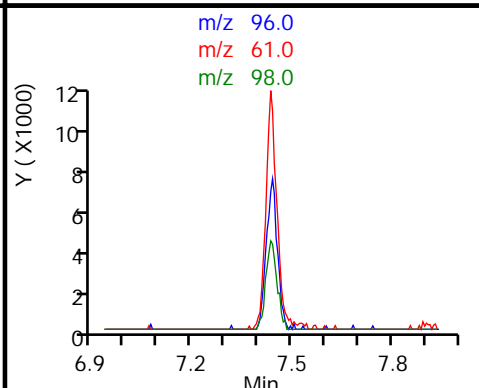
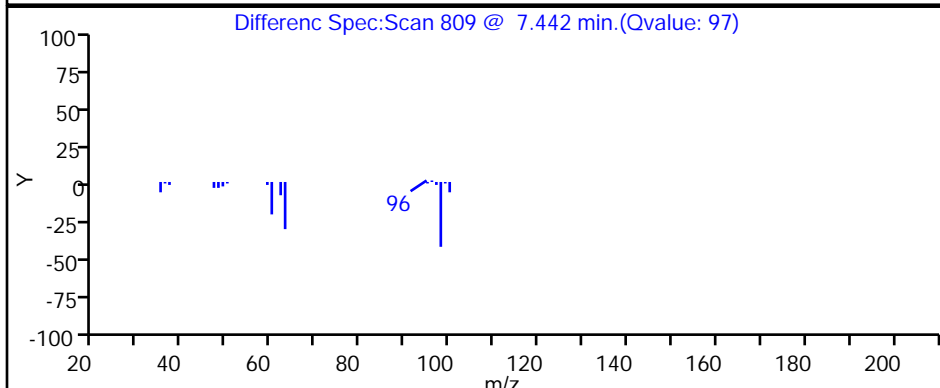
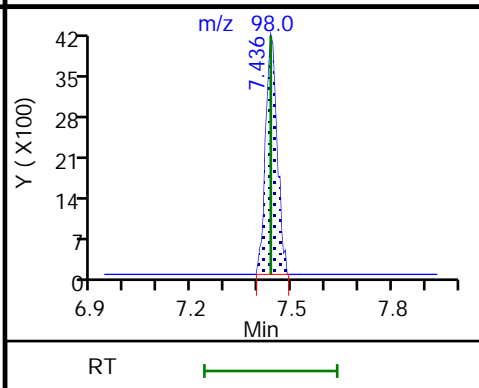
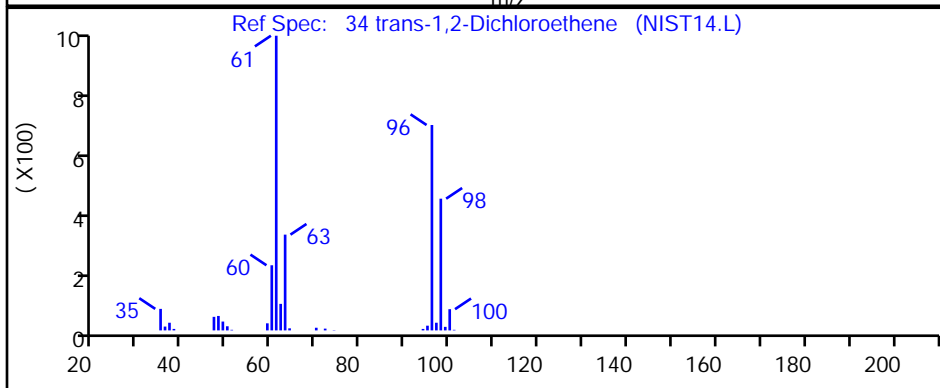
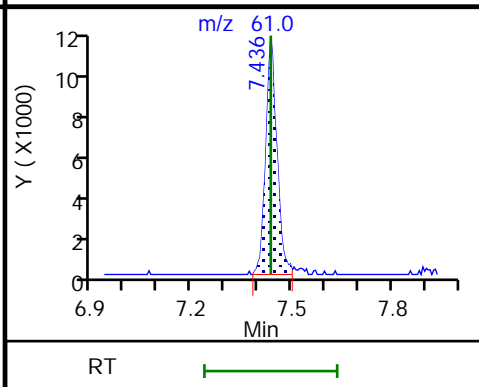
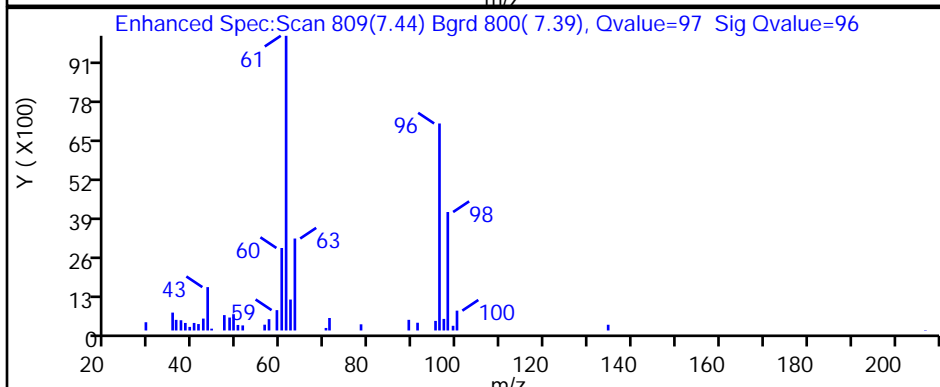
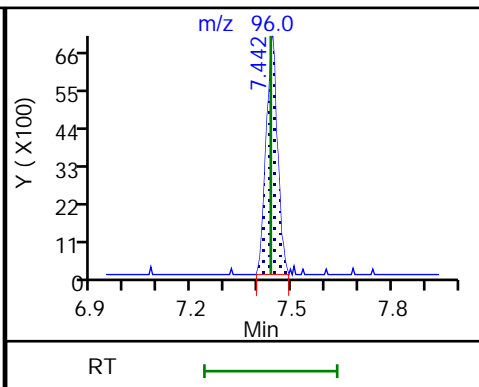
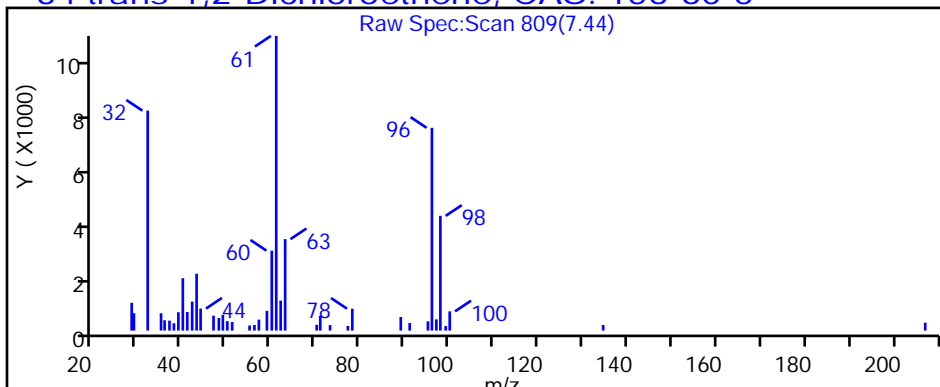
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

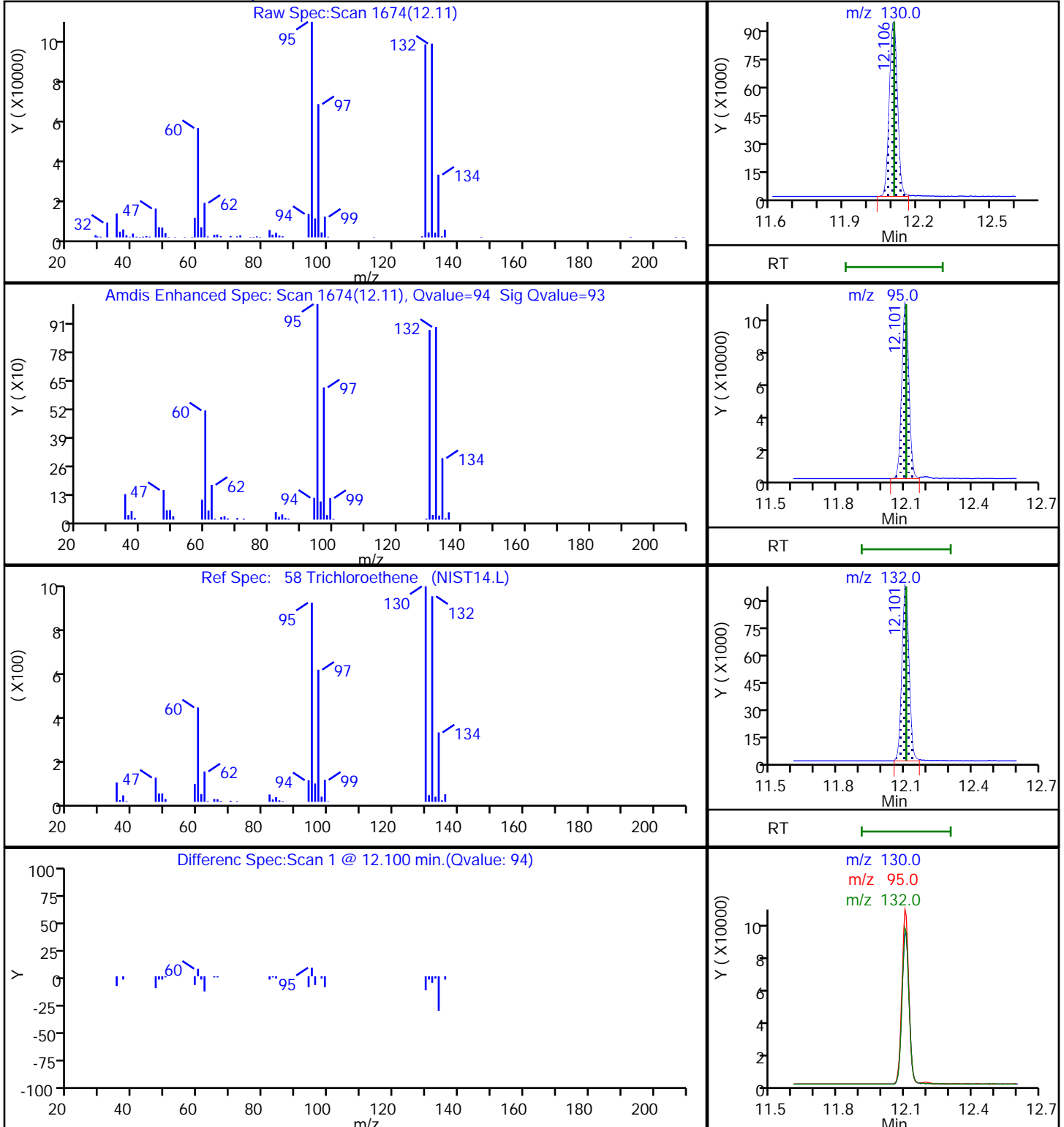
34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P113.D
Injection Date: 27-Feb-2019 00:18:30 Instrument ID: MG
Lims ID: 140-14389-A-5 Lab Sample ID: 140-14389-5
Client ID: SV-001-C-26
Operator ID: 7126 ALS Bottle#: 13 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

58 Trichloroethene, CAS: 79-01-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-004-C-26 Lab Sample ID: 140-14389-6
 Matrix: Air Lab File ID: GB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:40
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.59		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.31	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.64		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.32	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.60		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.4		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.13	J	0.40	0.080
108-88-3	Toluene	92.14	2.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.24	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.10	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	4.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-004-C-26 Lab Sample ID: 140-14389-6
 Matrix: Air Lab File ID: GB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:40
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.9		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.6		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.3	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	2.6		1.7	0.59
75-09-2	Methylene Chloride	84.93	8.2		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.91	J	2.7	0.54
108-88-3	Toluene	92.14	7.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.3	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.55	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	19		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D
 Lims ID: 140-14389-A-6
 Client ID: SV-004-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 01:00:30 ALS Bottle#: 14 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-020
 Misc. Info.: 140-14389-a-6
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:47:53

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.227	9.232	-0.005	98	479473	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.405	-0.005	96	2624991	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2596426	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	86	2003047	3.76	
6 Chlorodifluoromethane	51	3.829	3.829	0.006	39	19560	0.0623	
8 Dichlorodifluoromethane	85	3.894	3.886	0.006	100	47355	0.0933	
27 1,1-Dichloroethene	96	6.234	6.225	0.006	92	10823	0.0640	
31 Methylene Chloride	84	6.595	6.591	0.000	99	93053	0.4726	
37 1,1-Dichloroethane	63	7.873	7.874	-0.005	98	44816	0.1287	
47 1,1,1-Trichloroethane	97	10.278	10.277	-0.005	96	20517	0.0473	
50 Benzene	78	10.871	10.871	-0.006	96	55748	0.1188	
58 Trichloroethene	130	12.101	12.100	-0.005	91	4392	0.0205	
67 Toluene	91	14.123	14.128	-0.005	94	235957	0.4130	
73 Tetrachloroethene	129	15.261	15.255	0.006	94	5732	0.0267	
78 Ethylbenzene	91	16.404	16.404	0.000	99	92811	0.1196	
79 m-Xylene & p-Xylene	91	16.560	16.565	-0.006	99	334419	0.5632	
83 o-Xylene	91	17.089	17.089	0.000	97	200431	0.3201	
S 124 Xylenes, Total	100				0		0.8833	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D

Injection Date: 27-Feb-2019 01:00:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14389-A-6

Lab Sample ID: 140-14389-6

Worklist Smp#: 20

Client ID: SV-004-C-26

Purge Vol: 500.000 mL

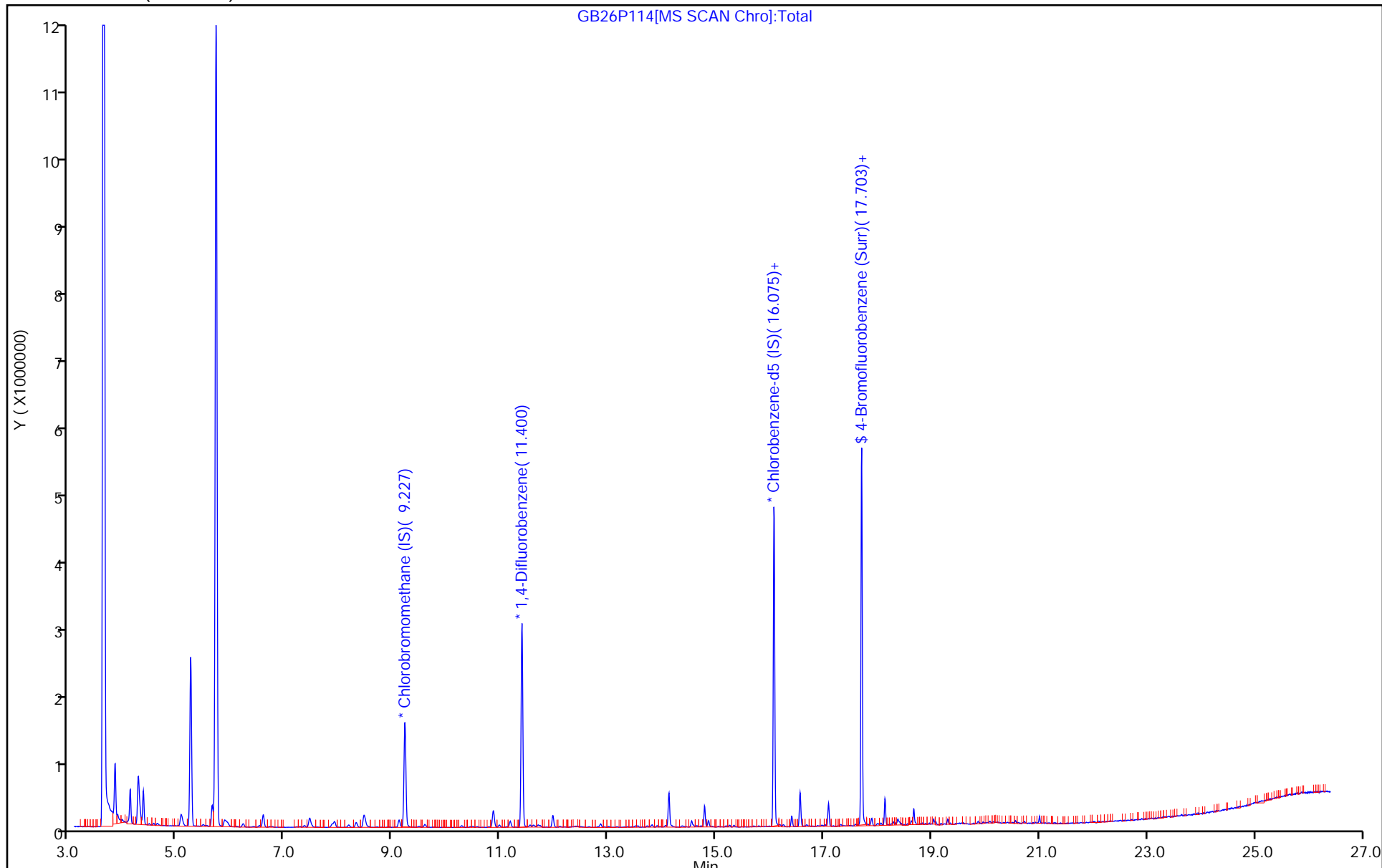
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D
 Lims ID: 140-14389-A-6
 Client ID: SV-004-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 01:00:30 ALS Bottle#: 14 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-020
 Misc. Info.: 140-14389-a-6
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:47:53

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.76	94.12

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D

Injection Date: 27-Feb-2019 01:00:30

Instrument ID: MG

Lims ID: 140-14389-A-6

Lab Sample ID: 140-14389-6

Client ID: SV-004-C-26

Operator ID: 7126

ALS Bottle#: 14 Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

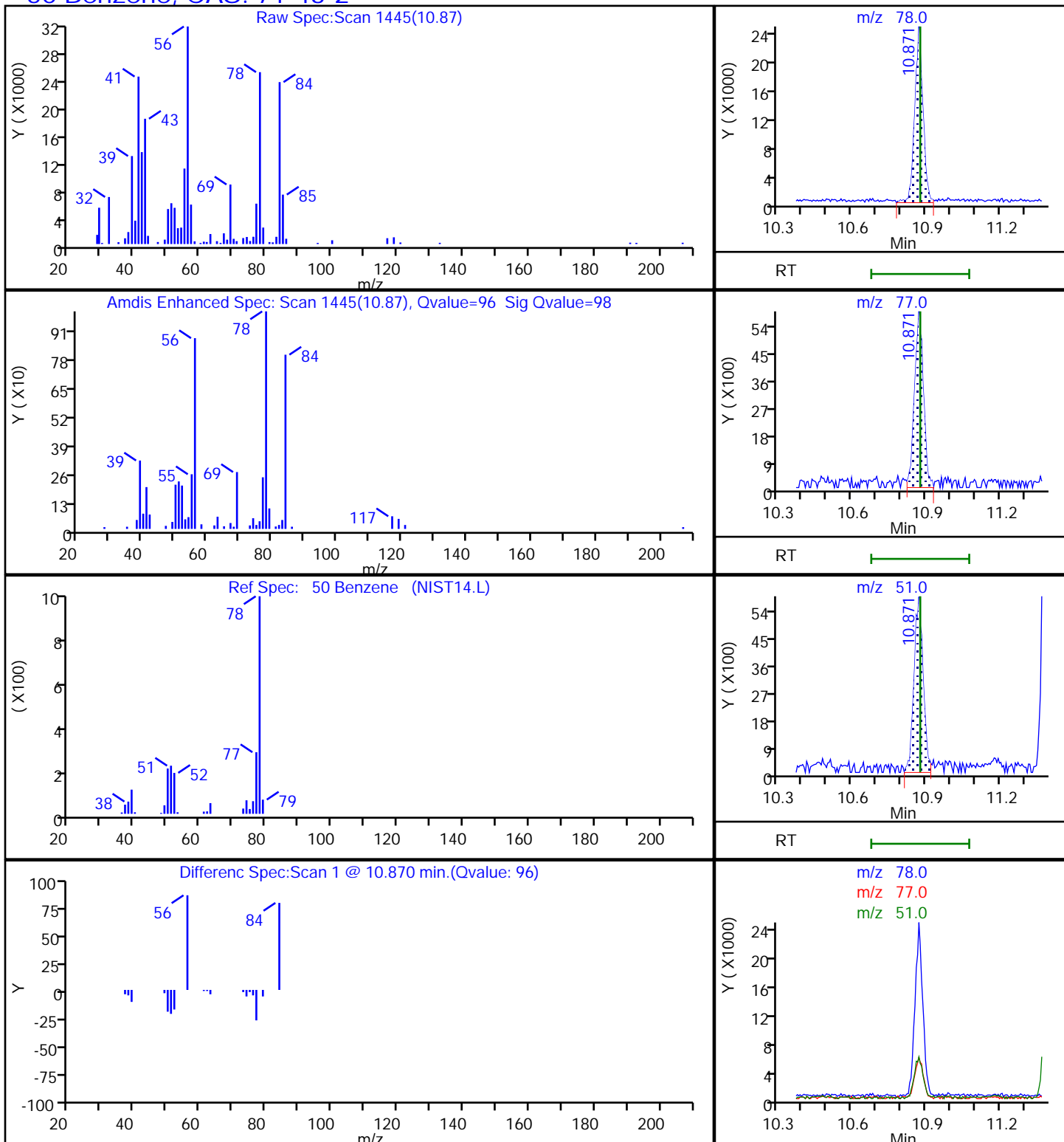
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D

Injection Date: 27-Feb-2019 01:00:30

Instrument ID: MG

Lims ID: 140-14389-A-6

Lab Sample ID: 140-14389-6

Client ID: SV-004-C-26

Operator ID: 7126

ALS Bottle#: 14 Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

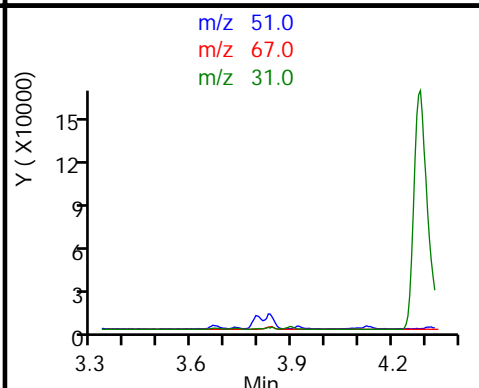
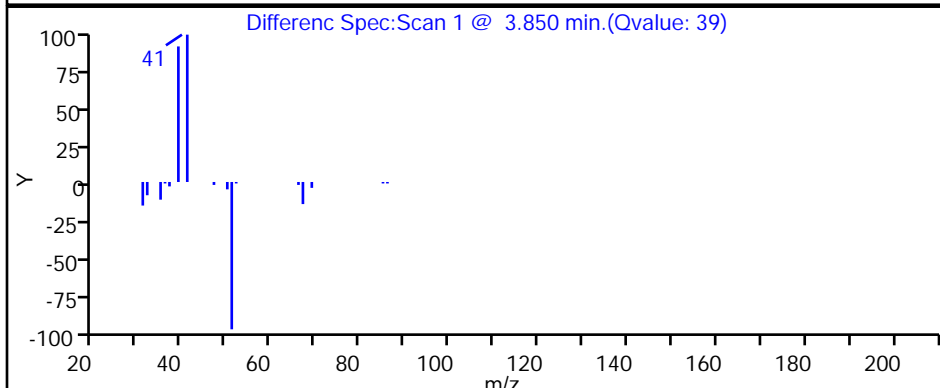
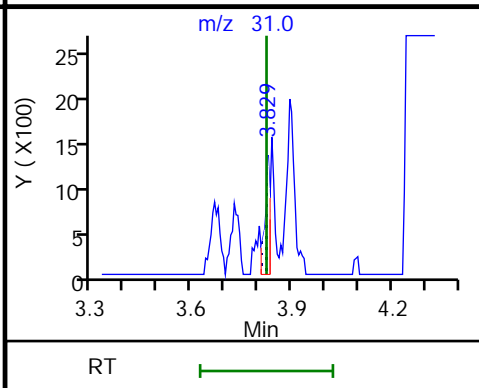
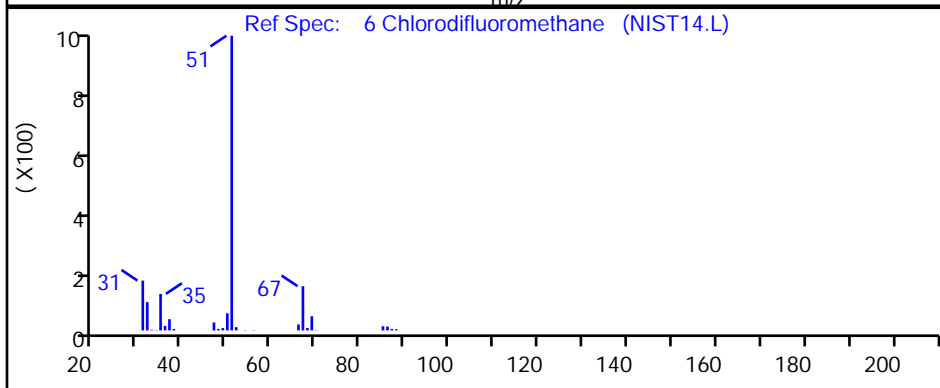
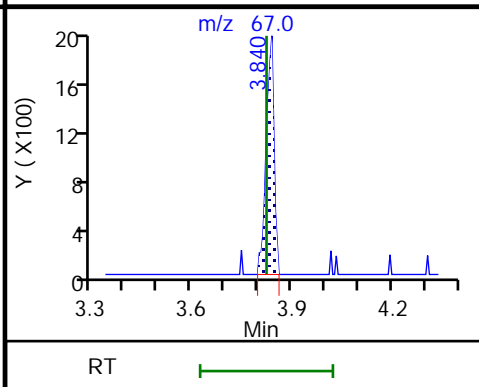
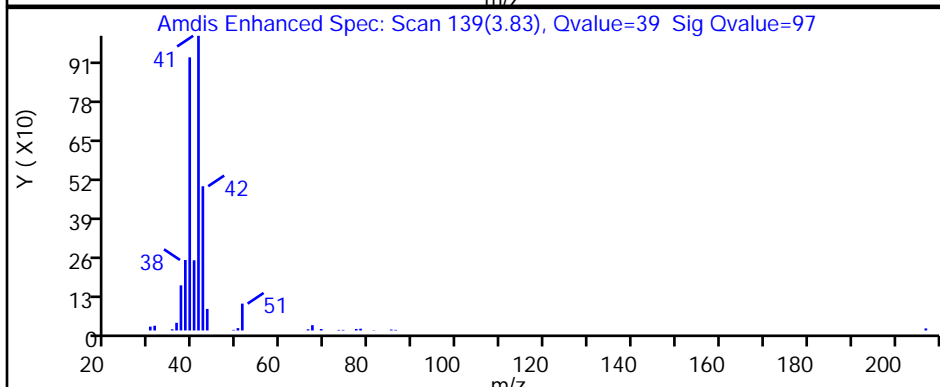
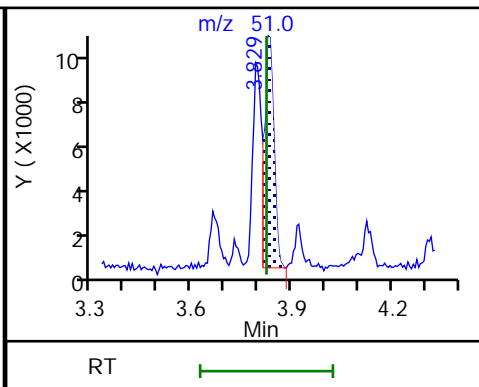
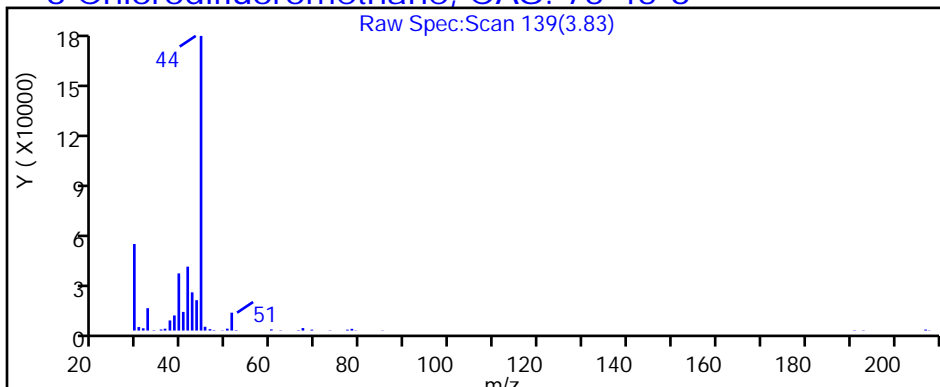
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D

Injection Date: 27-Feb-2019 01:00:30

Instrument ID: MG

Lims ID: 140-14389-A-6

Lab Sample ID: 140-14389-6

Client ID: SV-004-C-26

Operator ID: 7126

ALS Bottle#: 14

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

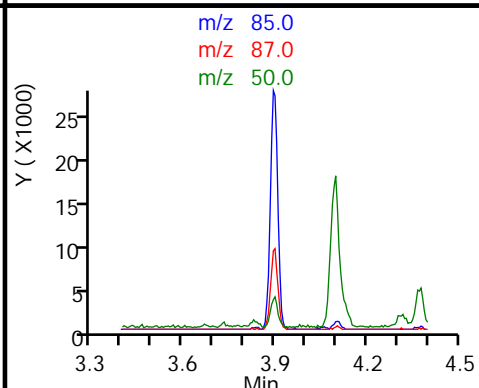
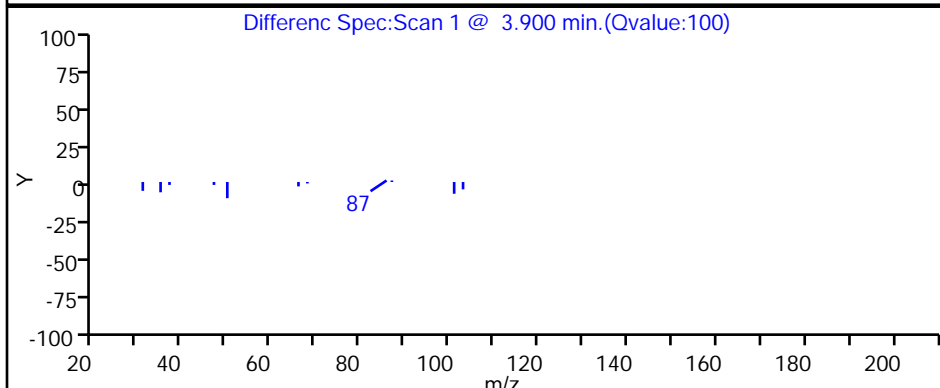
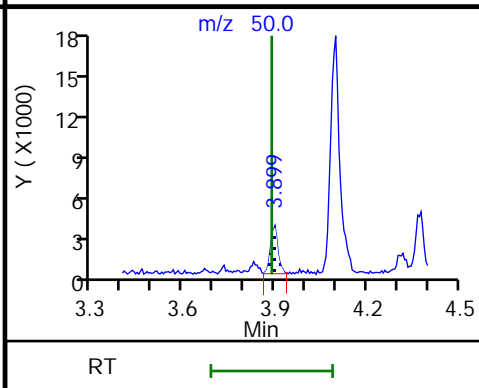
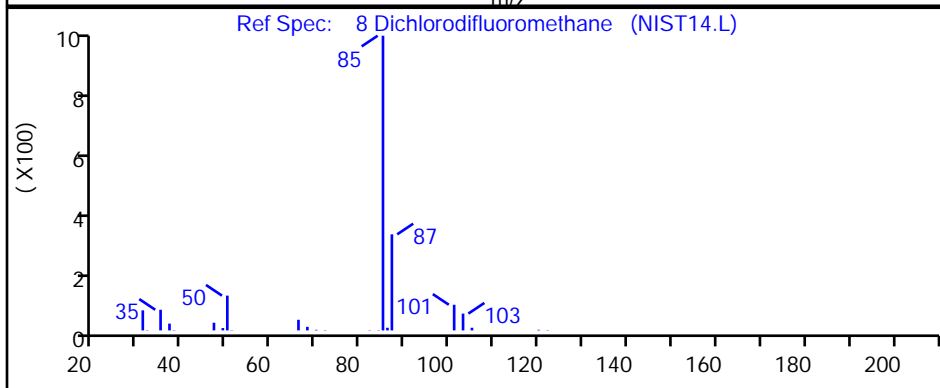
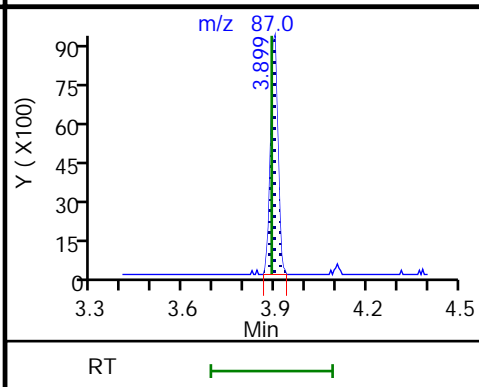
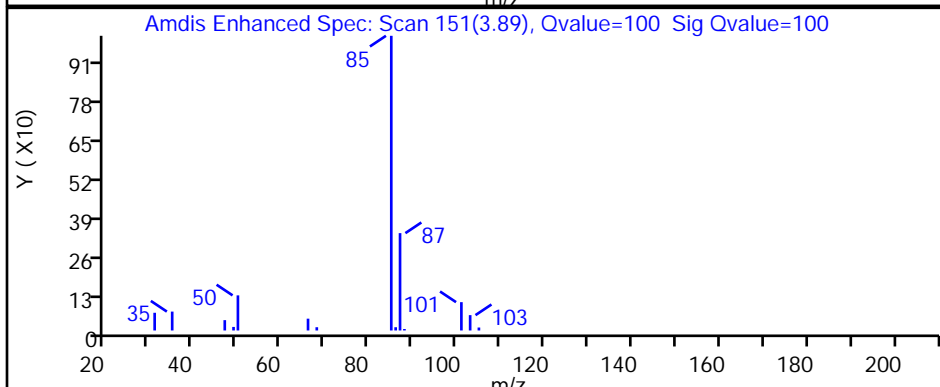
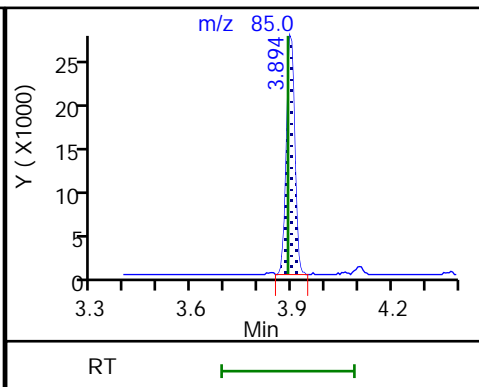
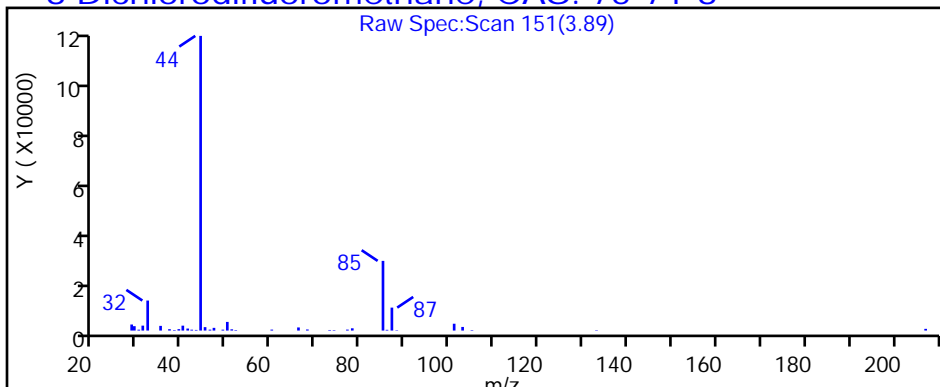
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D

Injection Date: 27-Feb-2019 01:00:30

Instrument ID: MG

Lims ID: 140-14389-A-6

Lab Sample ID: 140-14389-6

Client ID: SV-004-C-26

Operator ID: 7126

ALS Bottle#: 14

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

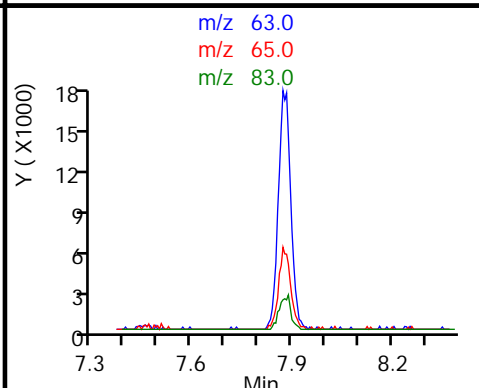
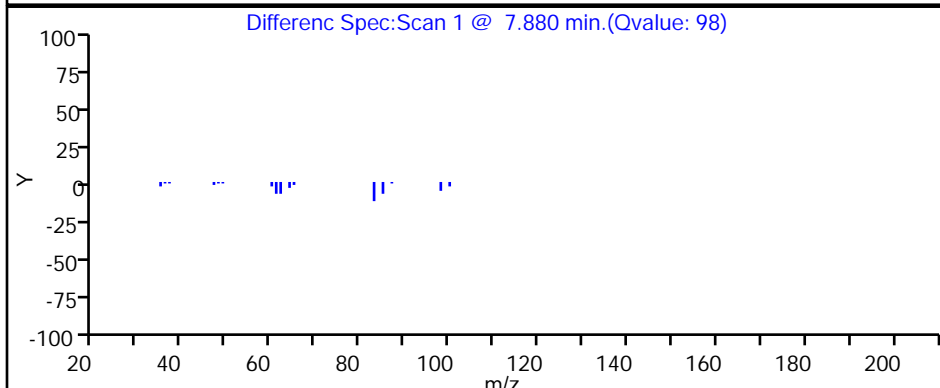
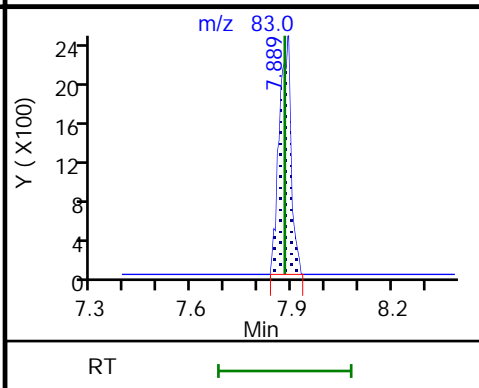
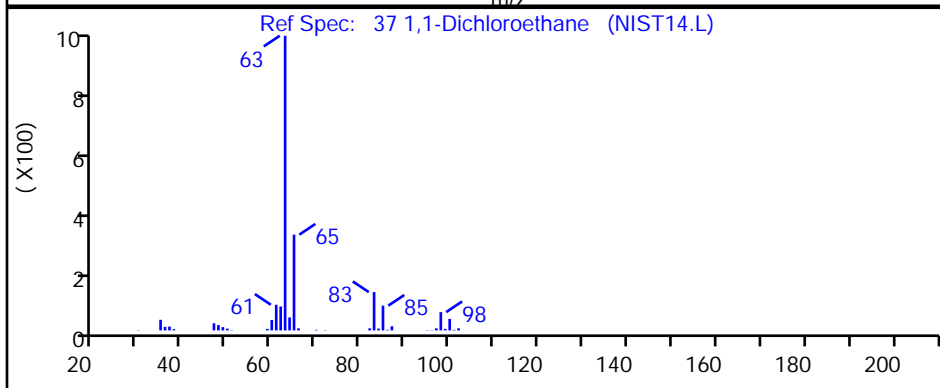
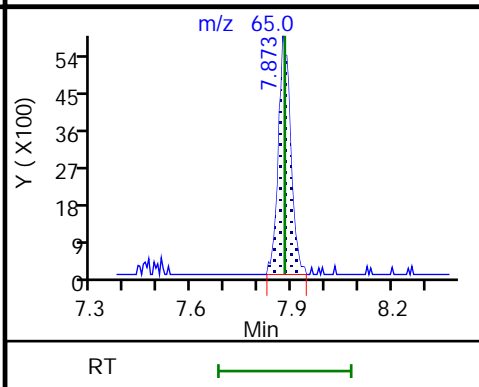
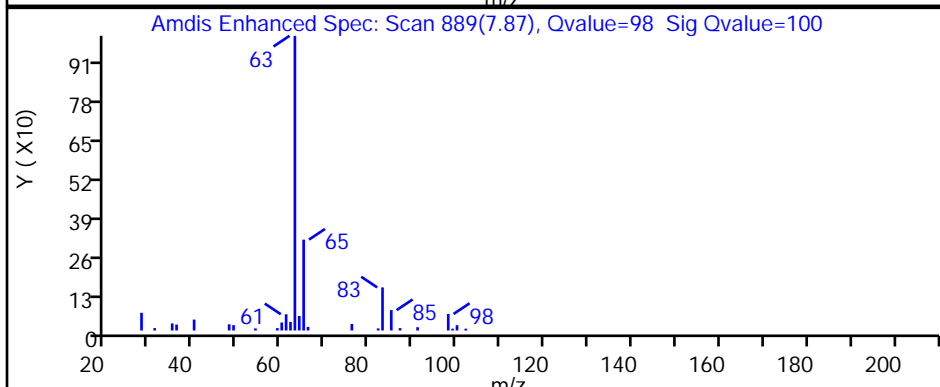
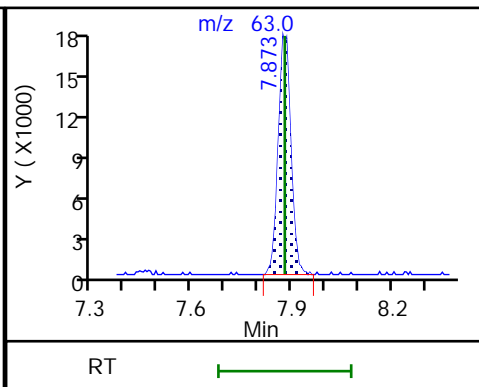
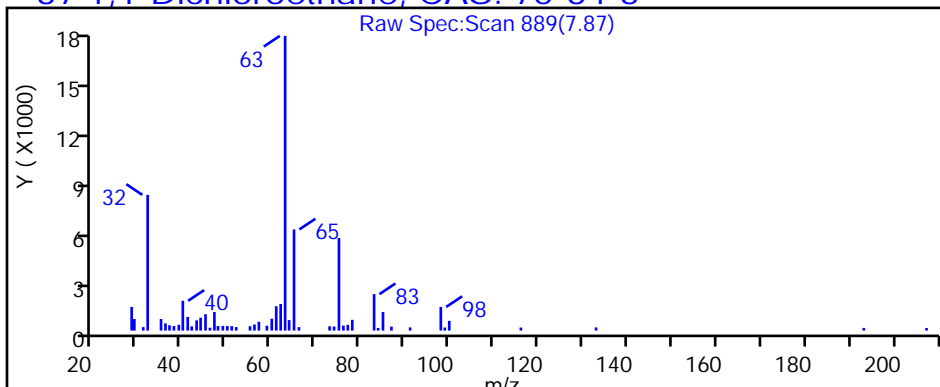
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D

Injection Date: 27-Feb-2019 01:00:30

Instrument ID: MG

Lims ID: 140-14389-A-6

Lab Sample ID: 140-14389-6

Client ID: SV-004-C-26

Operator ID: 7126

ALS Bottle#: 14 Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

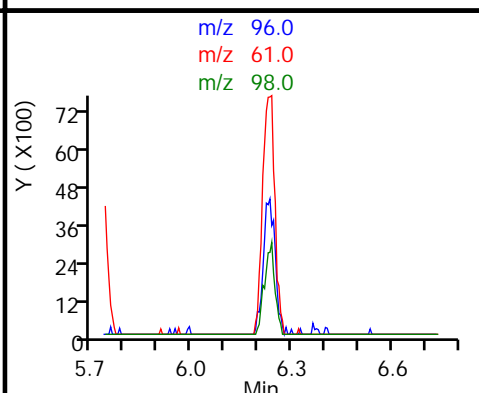
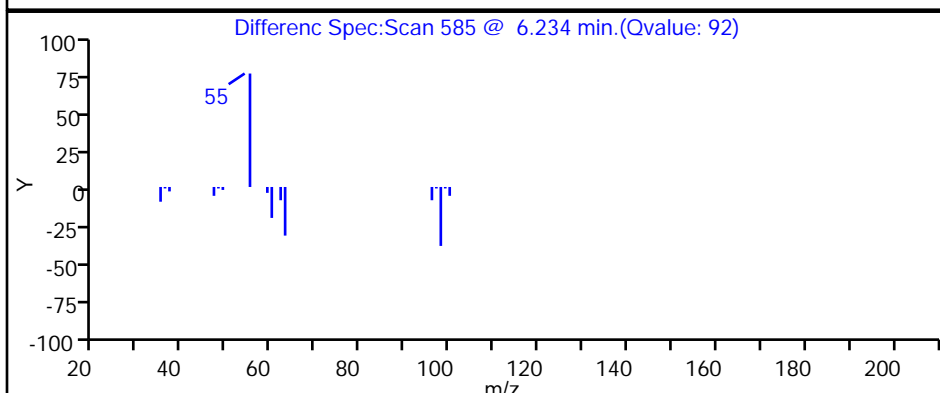
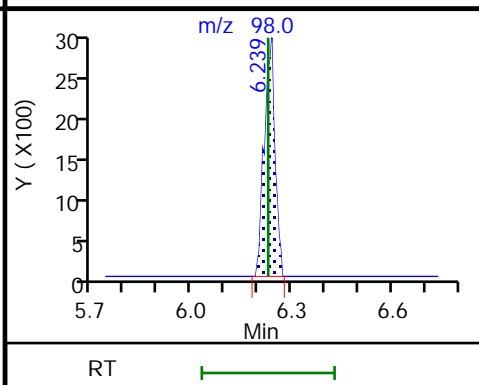
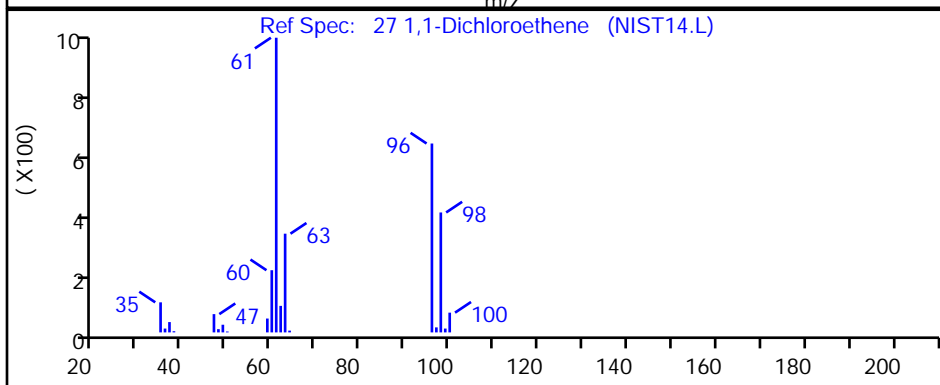
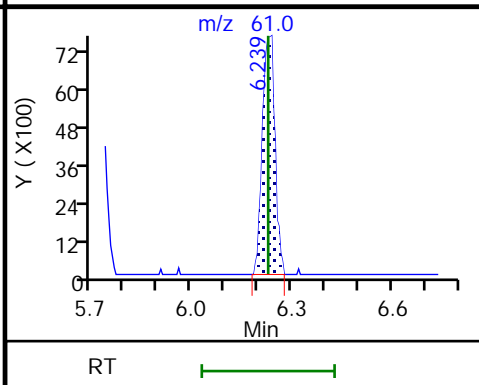
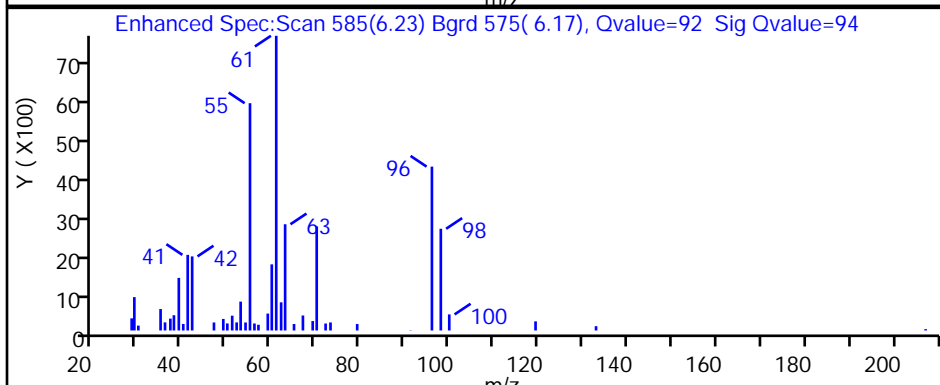
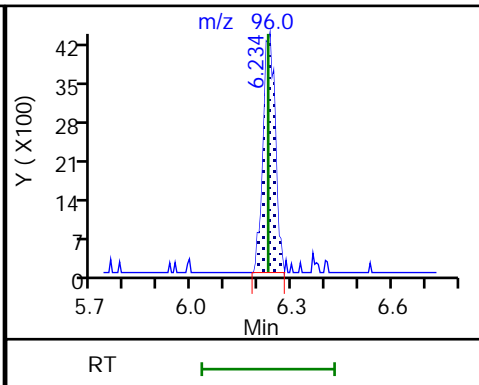
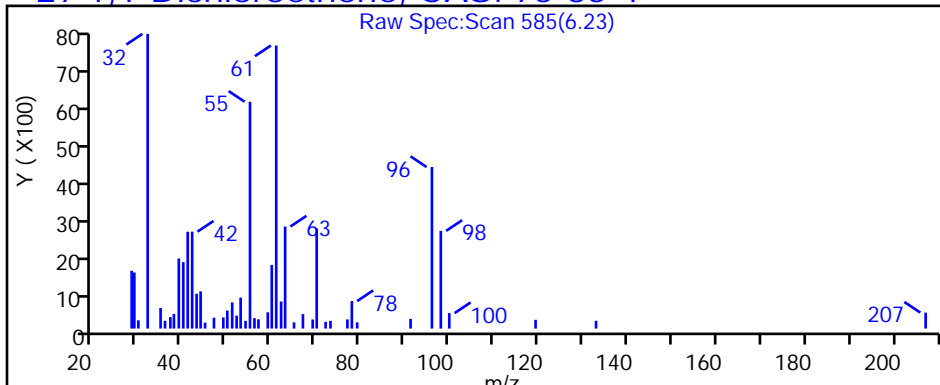
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D

Injection Date: 27-Feb-2019 01:00:30

Instrument ID: MG

Lims ID: 140-14389-A-6

Lab Sample ID: 140-14389-6

Client ID: SV-004-C-26

Operator ID: 7126

ALS Bottle#: 14

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

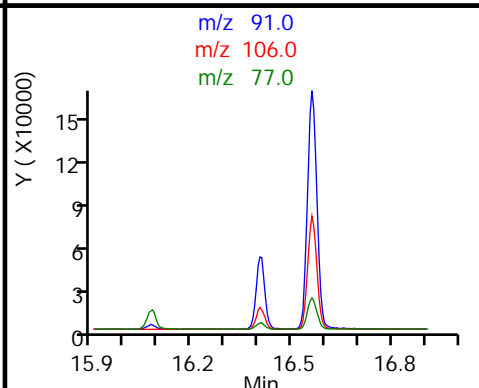
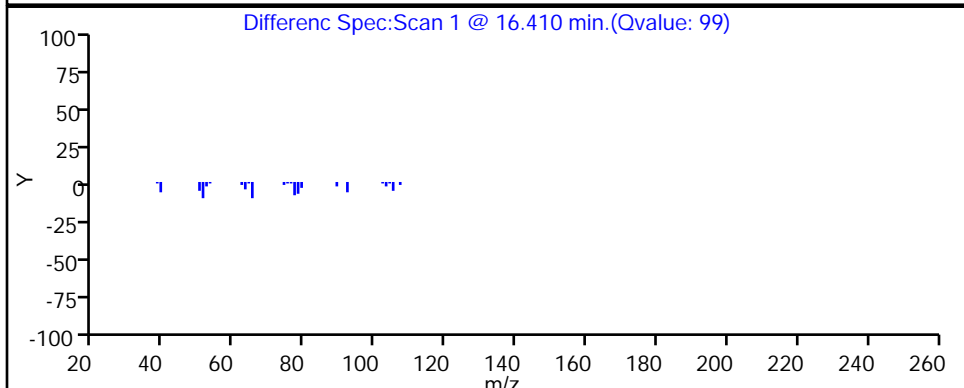
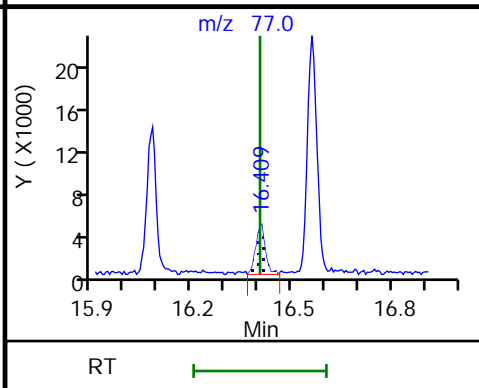
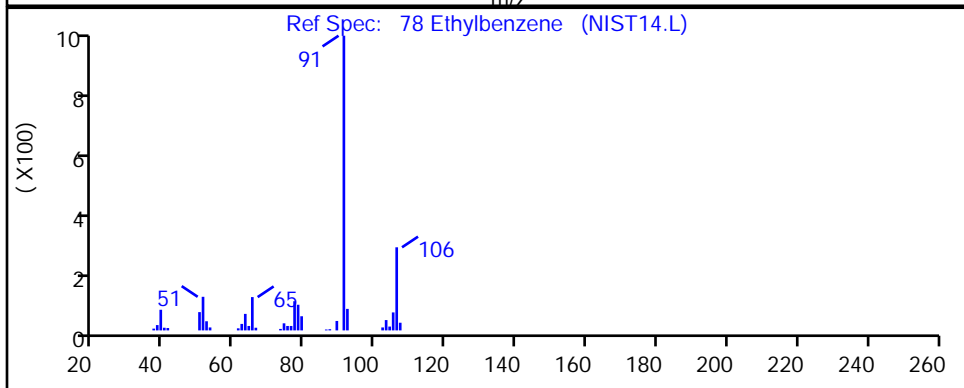
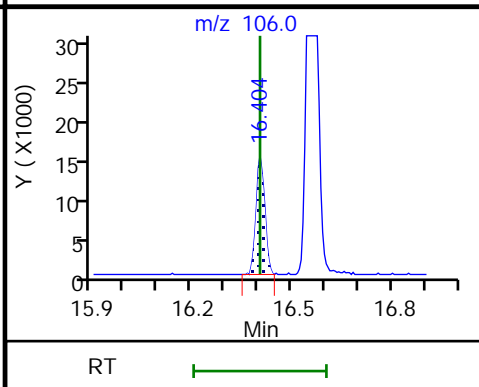
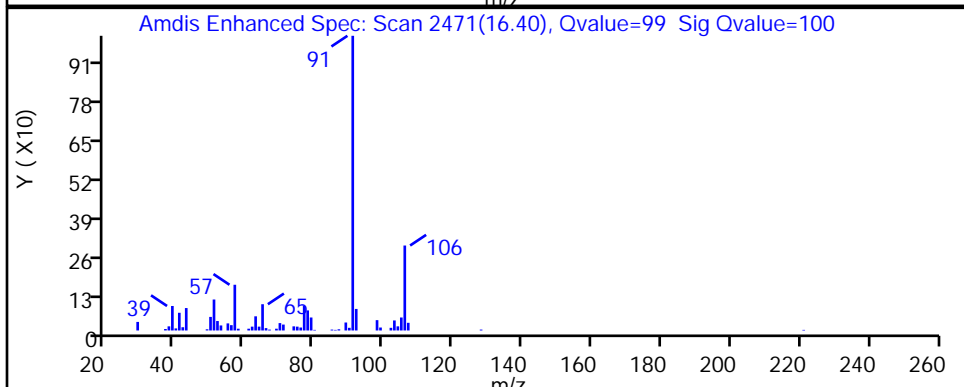
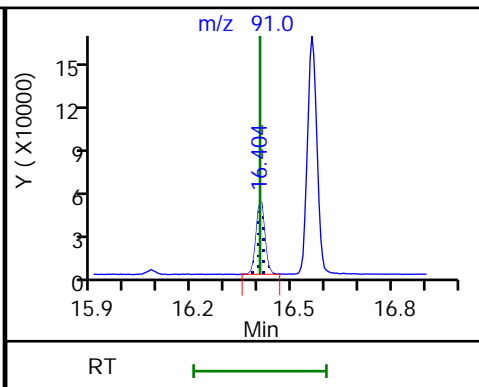
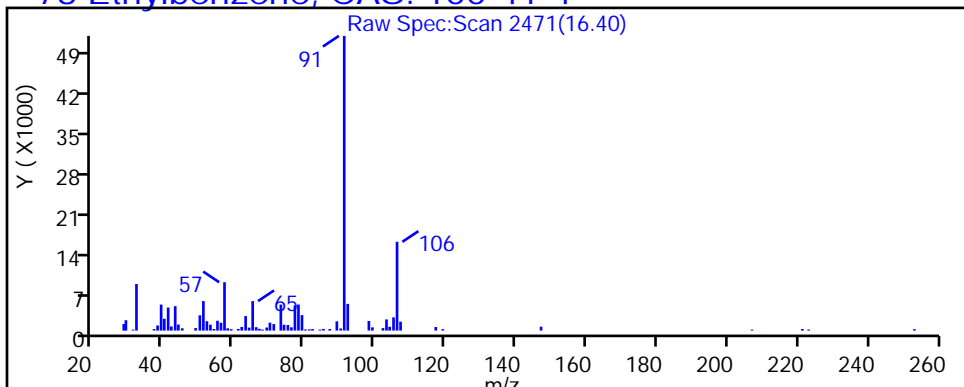
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

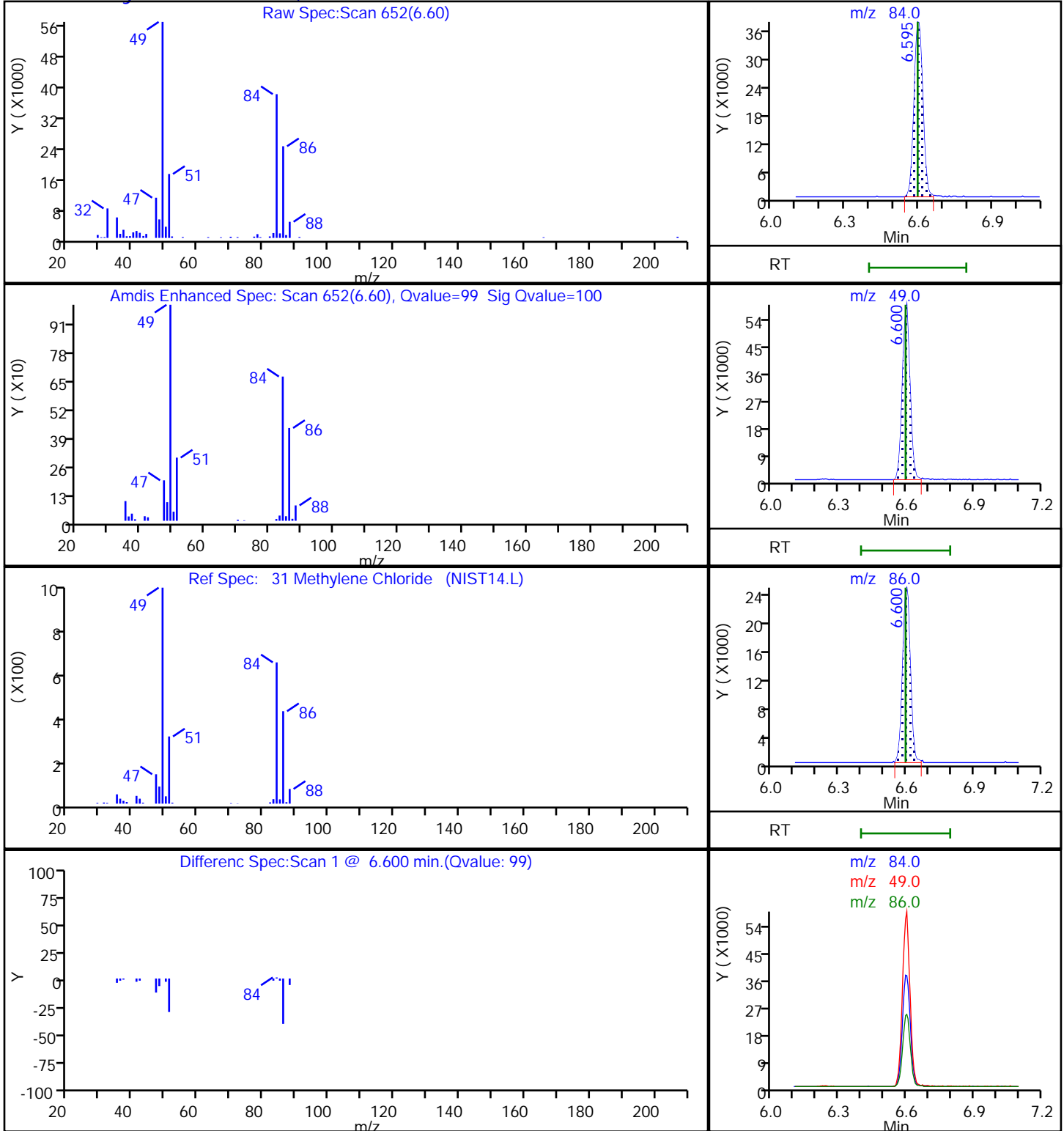
78 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D
Injection Date: 27-Feb-2019 01:00:30 Instrument ID: MG
Lims ID: 140-14389-A-6 Lab Sample ID: 140-14389-6
Client ID: SV-004-C-26
Operator ID: 7126 ALS Bottle#: 14 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D

Injection Date: 27-Feb-2019 01:00:30

Instrument ID: MG

Lims ID: 140-14389-A-6

Lab Sample ID: 140-14389-6

Client ID: SV-004-C-26

Operator ID: 7126

ALS Bottle#: 14

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

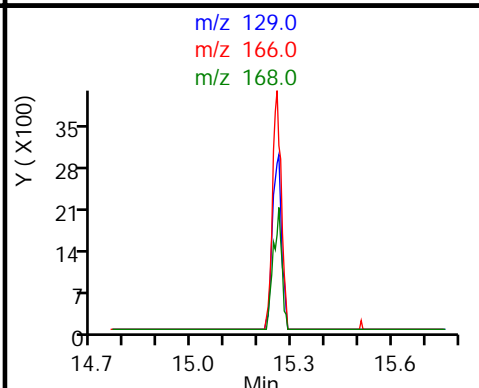
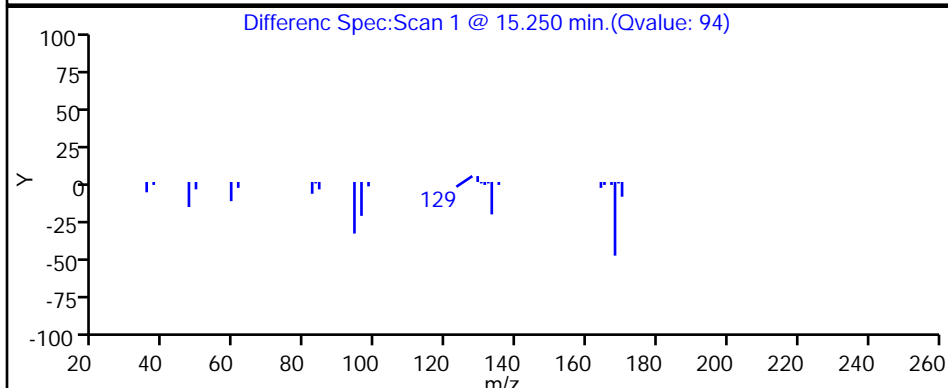
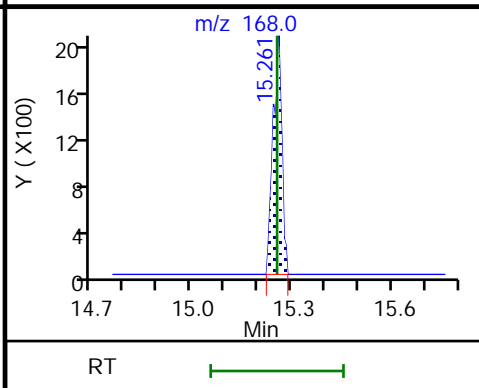
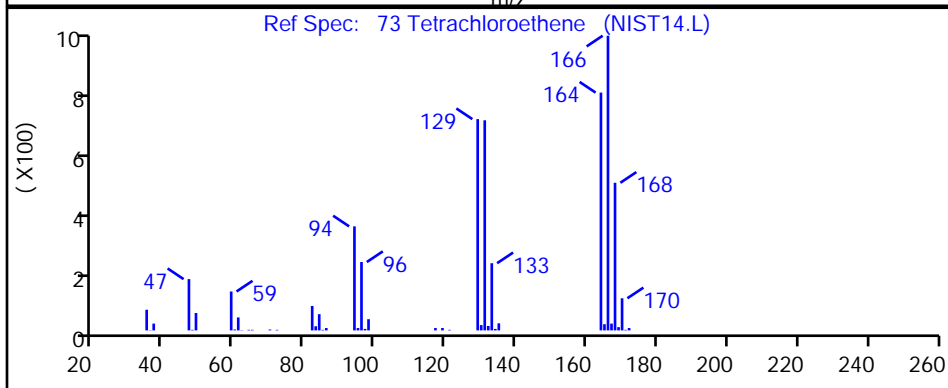
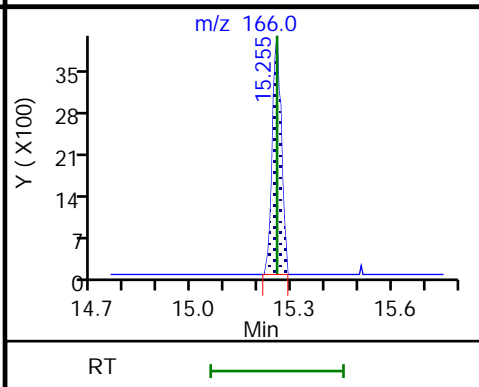
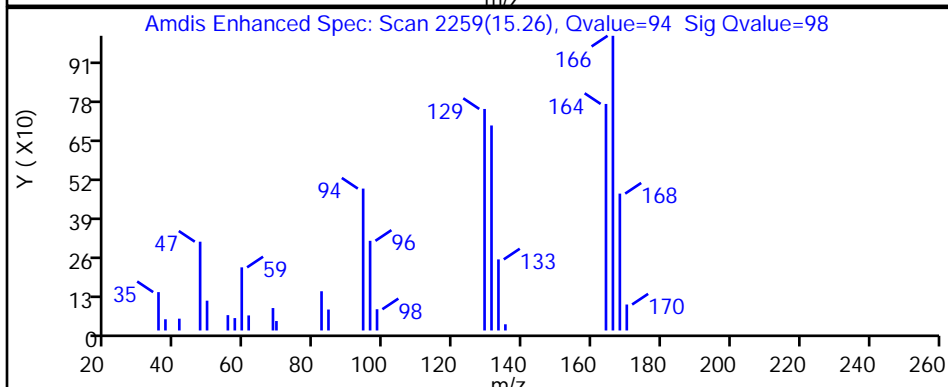
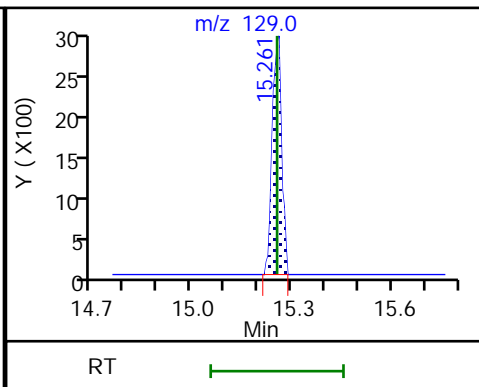
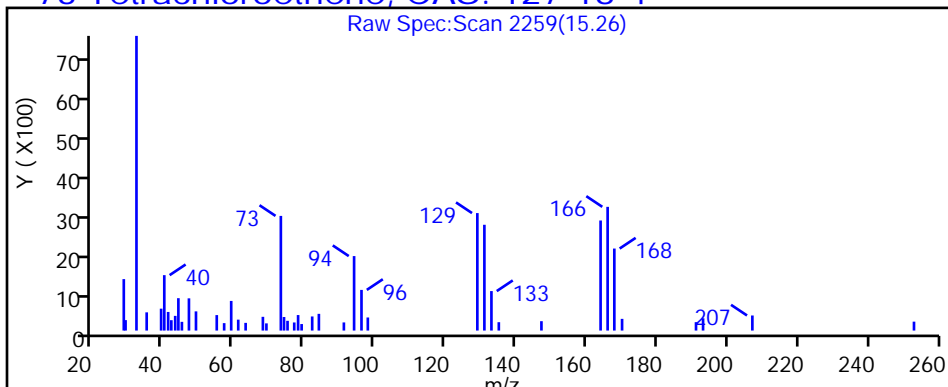
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D

Injection Date: 27-Feb-2019 01:00:30

Instrument ID: MG

Lims ID: 140-14389-A-6

Lab Sample ID: 140-14389-6

Client ID: SV-004-C-26

Operator ID: 7126

ALS Bottle#: 14 Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

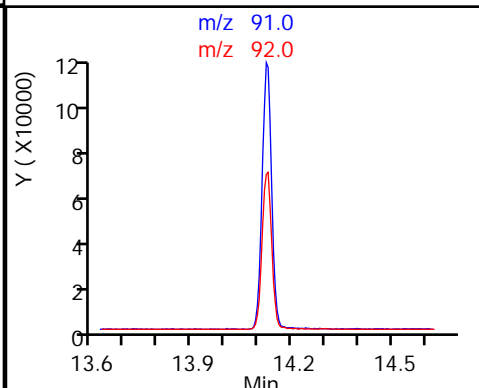
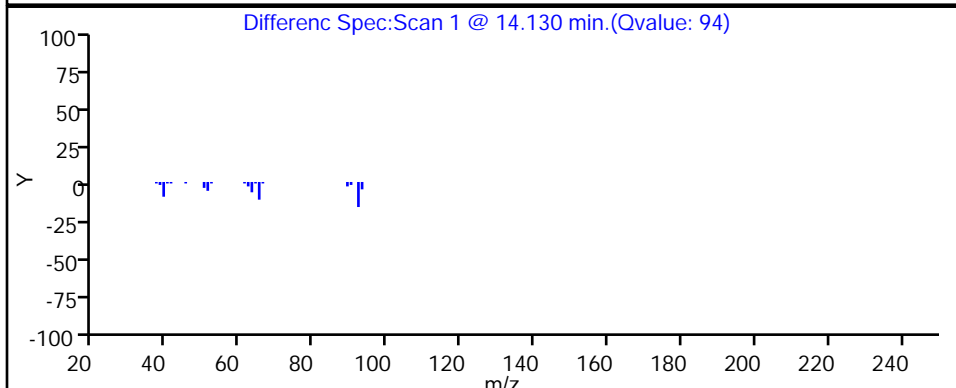
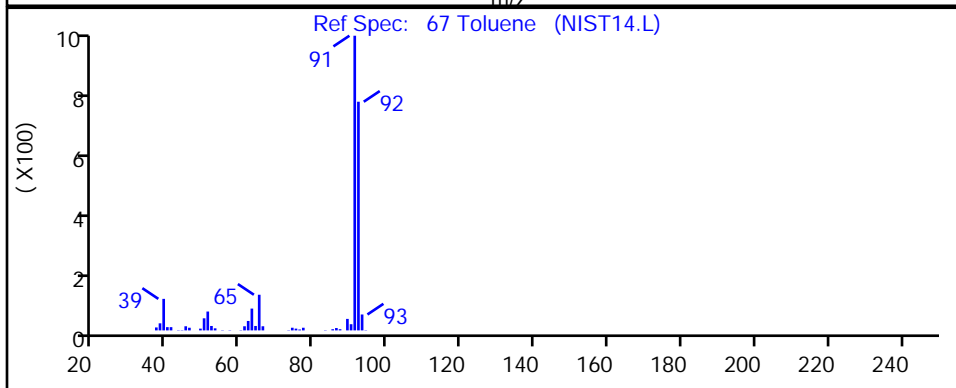
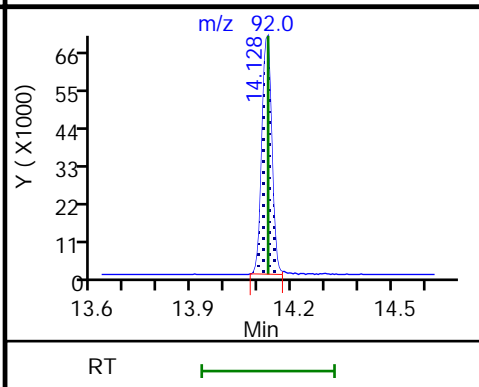
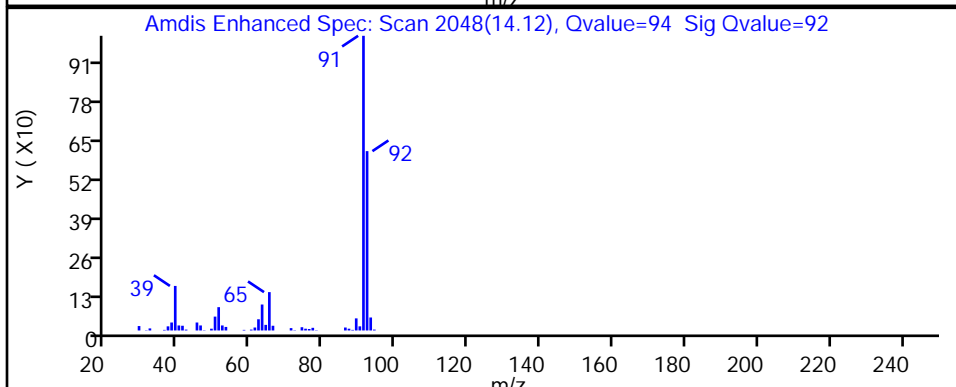
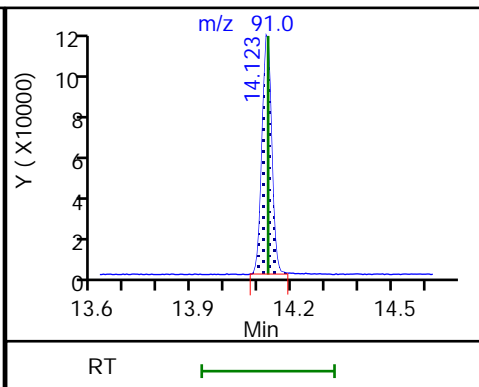
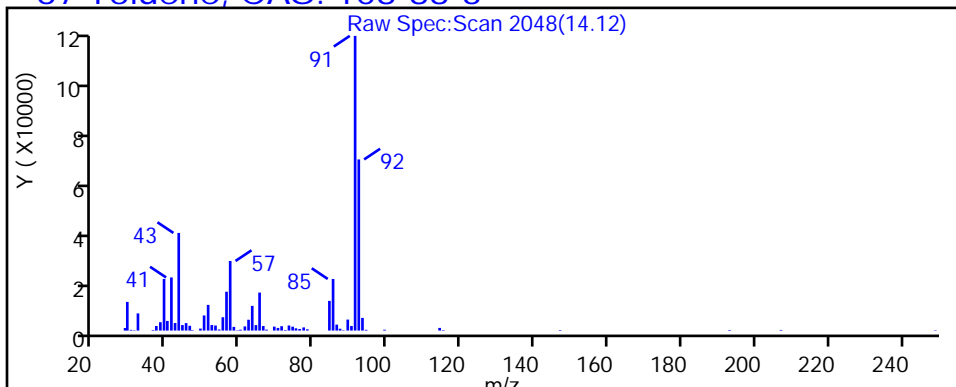
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

67 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D

Injection Date: 27-Feb-2019 01:00:30

Instrument ID: MG

Lims ID: 140-14389-A-6

Lab Sample ID: 140-14389-6

Client ID: SV-004-C-26

Operator ID: 7126

ALS Bottle#: 14

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

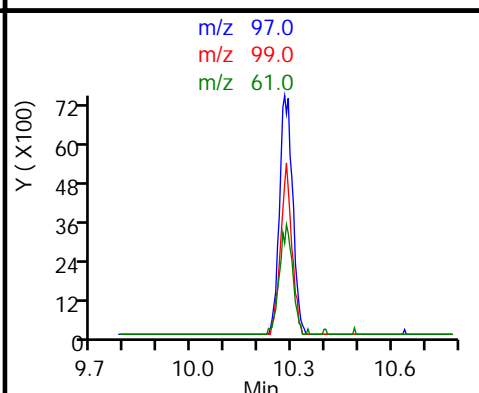
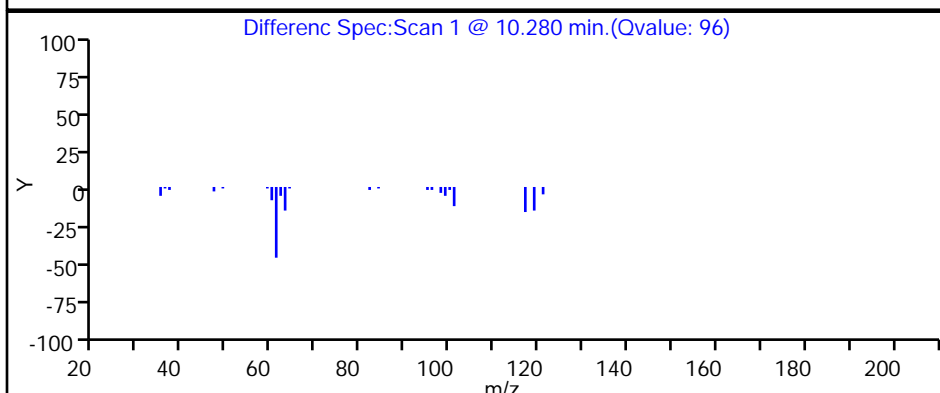
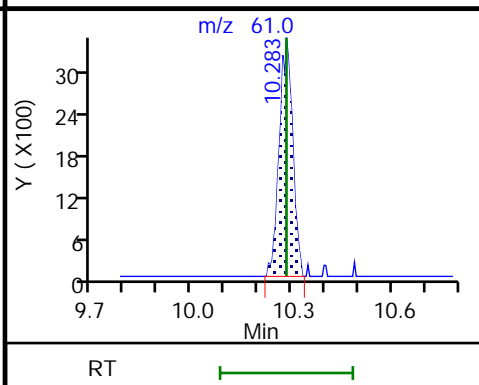
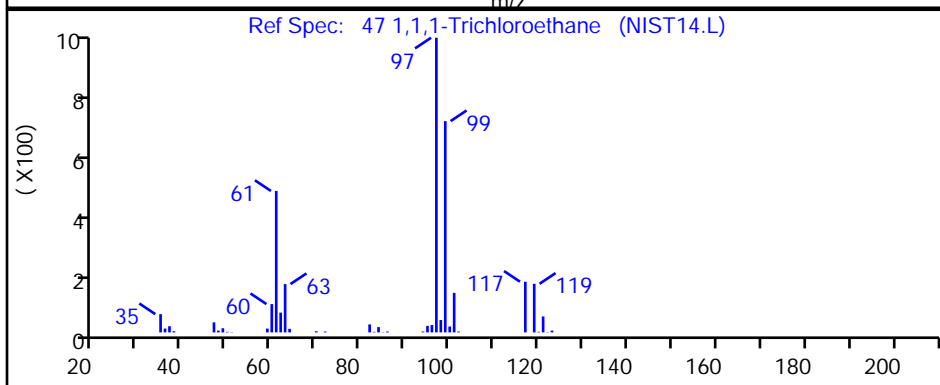
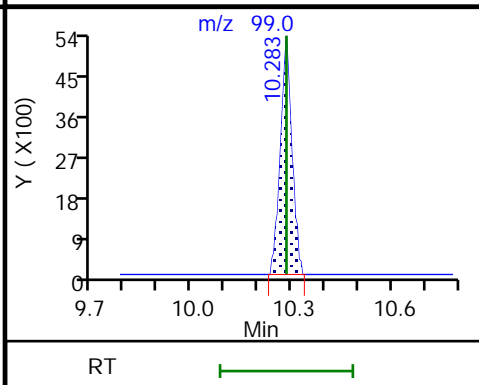
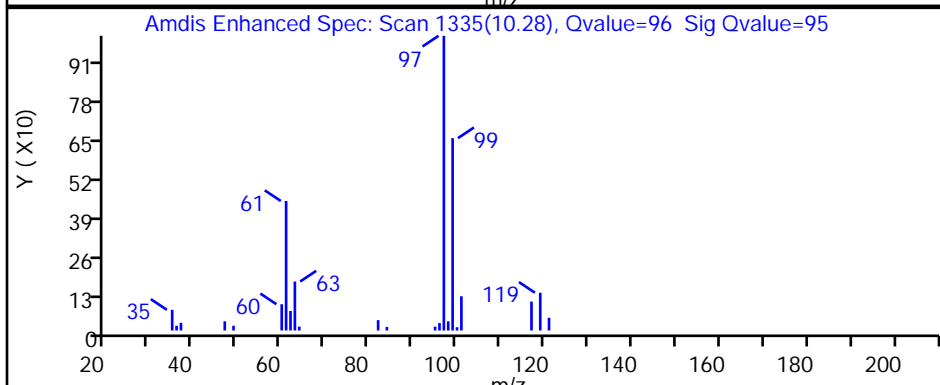
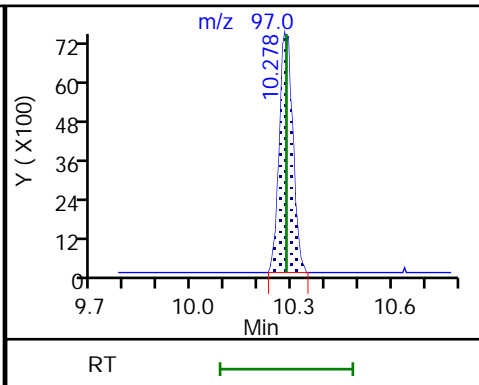
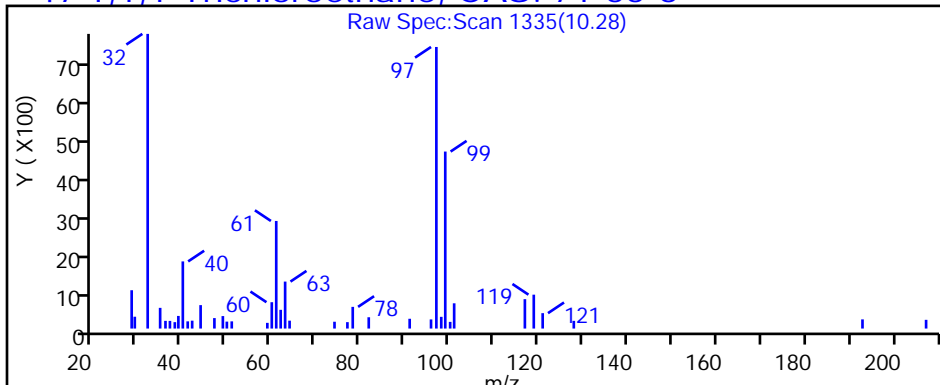
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D

Injection Date: 27-Feb-2019 01:00:30

Instrument ID: MG

Lims ID: 140-14389-A-6

Lab Sample ID: 140-14389-6

Client ID: SV-004-C-26

Operator ID: 7126

ALS Bottle#: 14 Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

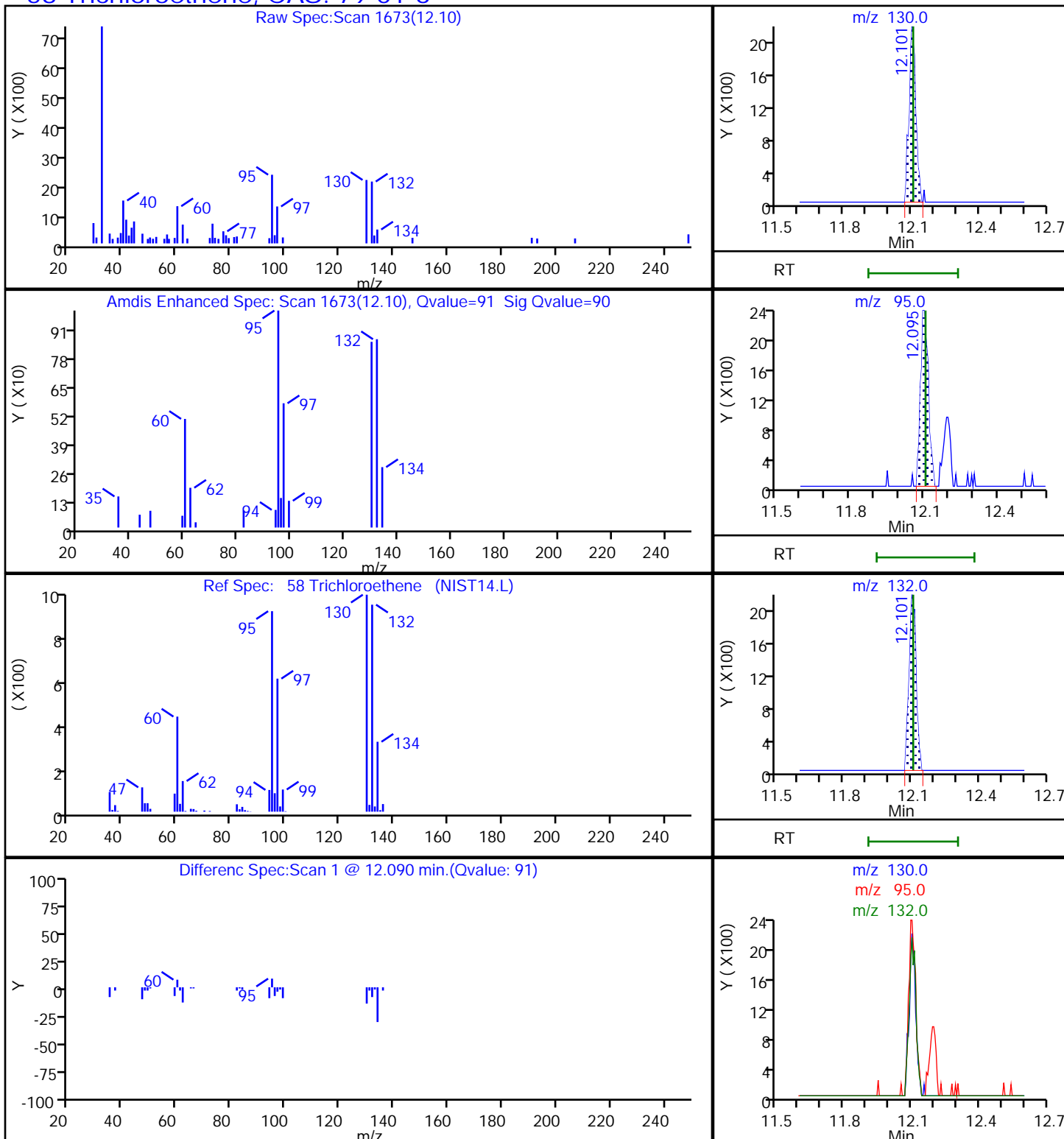
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

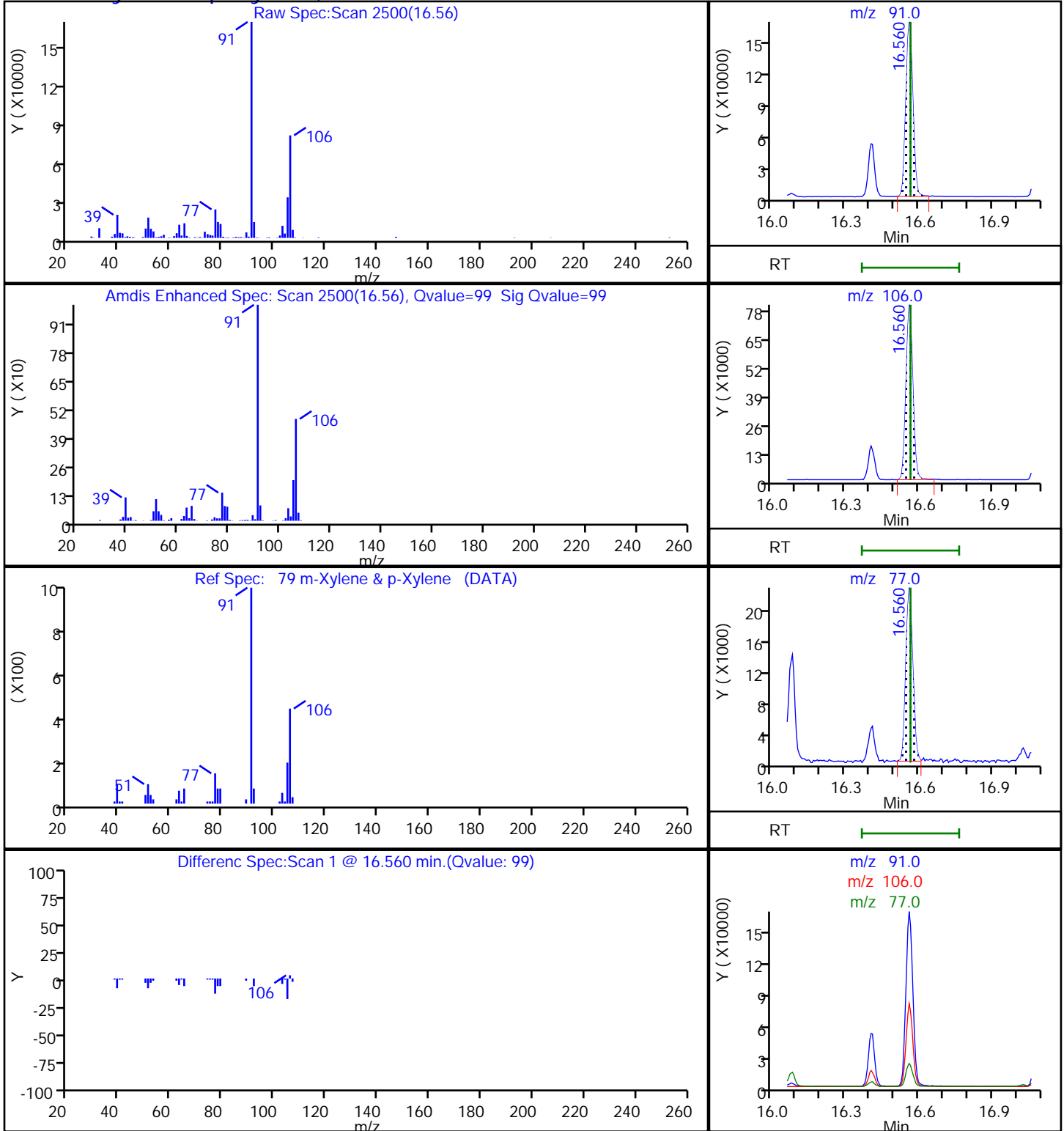
58 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D
Injection Date: 27-Feb-2019 01:00:30 Instrument ID: MG
Lims ID: 140-14389-A-6 Lab Sample ID: 140-14389-6
Client ID: SV-004-C-26
Operator ID: 7126 ALS Bottle#: 14 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P114.D

Injection Date: 27-Feb-2019 01:00:30

Instrument ID: MG

Lims ID: 140-14389-A-6

Lab Sample ID: 140-14389-6

Client ID: SV-004-C-26

Operator ID: 7126

ALS Bottle#: 14

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

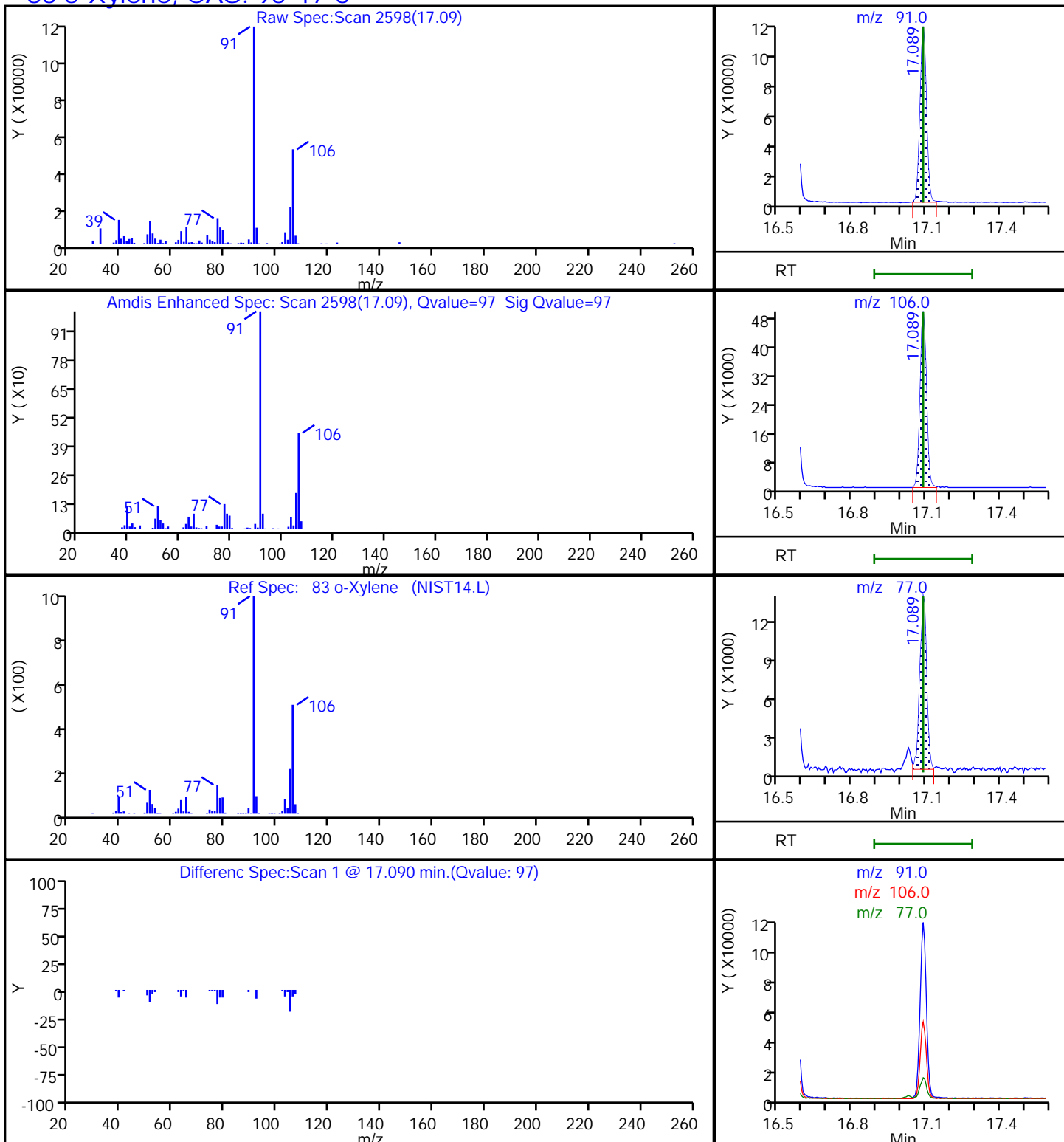
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-102-C-26 Lab Sample ID: 140-14389-7
 Matrix: Air Lab File ID: GB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:45
 Sample wt/vol: 11 (mL) Date Analyzed: 02/27/2019 01:42
 Soil Aliquot Vol: _____ Dilution Factor: 3.7
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		13	3.9
56-23-5	Carbon tetrachloride	153.81	ND		13	2.5
75-45-6	Chlorodifluoromethane	86.47	ND		13	2.5
67-66-3	Chloroform	119.38	8.8	J	13	2.5
156-59-2	cis-1,2-Dichloroethene	96.94	13		13	4.0
75-71-8	Dichlorodifluoromethane	120.91	ND		13	4.5
75-34-3	1,1-Dichloroethane	98.96	1200		13	1.7
107-06-2	1,2-Dichloroethane	98.96	ND		13	3.2
75-35-4	1,1-Dichloroethene	96.94	650		13	2.4
100-41-4	Ethylbenzene	106.17	130		13	4.5
75-09-2	Methylene Chloride	84.93	ND		67	22
1634-04-4	Methyl tert-butyl ether	88.15	ND		67	11
91-20-3	Naphthalene	128.17	39		6.7	6.7
127-18-4	Tetrachloroethene	165.83	ND		13	2.7
108-88-3	Toluene	92.14	ND		20	20
156-60-5	trans-1,2-Dichloroethene	96.94	ND		13	3.4
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		13	6.6
71-55-6	1,1,1-Trichloroethane	133.41	470		13	2.0
79-00-5	1,1,2-Trichloroethane	133.41	ND		13	3.5
79-01-6	Trichloroethene	131.39	200		6.7	2.4
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		13	5.7
95-63-6	1,2,4-Trimethylbenzene	120.20	5.9	J	13	4.2
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		13	4.4
75-01-4	Vinyl chloride	62.50	ND		6.7	4.9
1330-20-7	Xylenes, Total	106.17	1100		27	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-102-C-26 Lab Sample ID: 140-14389-7
 Matrix: Air Lab File ID: GB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:45
 Sample wt/vol: 11 (mL) Date Analyzed: 02/27/2019 01:42
 Soil Aliquot Vol: _____ Dilution Factor: 3.7
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		43	12
56-23-5	Carbon tetrachloride	153.81	ND		85	16
75-45-6	Chlorodifluoromethane	86.47	ND		48	8.9
67-66-3	Chloroform	119.38	43	J	66	12
156-59-2	cis-1,2-Dichloroethene	96.94	52		53	16
75-71-8	Dichlorodifluoromethane	120.91	ND		67	22
75-34-3	1,1-Dichloroethane	98.96	4800		54	6.8
107-06-2	1,2-Dichloroethane	98.96	ND		54	13
75-35-4	1,1-Dichloroethene	96.94	2600		53	9.3
100-41-4	Ethylbenzene	106.17	560		58	20
75-09-2	Methylene Chloride	84.93	ND		230	76
1634-04-4	Methyl tert-butyl ether	88.15	ND		240	41
91-20-3	Naphthalene	128.17	210		35	35
127-18-4	Tetrachloroethene	165.83	ND		91	18
108-88-3	Toluene	92.14	ND		76	76
156-60-5	trans-1,2-Dichloroethene	96.94	ND		53	13
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		100	49
71-55-6	1,1,1-Trichloroethane	133.41	2600		73	11
79-00-5	1,1,2-Trichloroethane	133.41	ND		73	19
79-01-6	Trichloroethene	131.39	1100		36	13
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		66	28
95-63-6	1,2,4-Trimethylbenzene	120.20	29	J	66	21
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		66	21
75-01-4	Vinyl chloride	62.50	ND		17	12
1330-20-7	Xylenes, Total	106.17	4600		120	18

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P115.D
 Lims ID: 140-14389-A-7
 Client ID: SV-102-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 01:42:30 ALS Bottle#: 15 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 3.7000
 Sample Info: 140-0010931-021
 Misc. Info.: 140-14389-a-7@3.70
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:49:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.227	9.232	-0.005	98	457608	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.405	-0.005	96	2569647	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2367991	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	1806996	3.72	
27 1,1-Dichloroethene	96	6.228	6.225	0.000	95	621742	3.85	
37 1,1-Dichloroethane	63	7.879	7.874	0.000	100	2328655	7.01	
42 cis-1,2-Dichloroethene	96	8.887	8.882	0.000	98	12806	0.0774	
44 Chloroform	83	9.237	9.237	-0.006	28	19992	0.0523	
47 1,1,1-Trichloroethane	97	10.283	10.277	0.000	95	1168743	2.82	
58 Trichloroethene	130	12.106	12.100	0.000	95	244747	1.17	
67 Toluene	91	14.134	14.128	0.006	93	39986	0.0767	
78 Ethylbenzene	91	16.404	16.404	0.000	99	540289	0.7631	
79 m-Xylene & p-Xylene	91	16.560	16.565	-0.006	99	2474182	4.57	
83 o-Xylene	91	17.089	17.089	0.000	98	963750	1.69	
95 1,2,4-Trimethylbenzene	105	18.830	18.830	0.000	98	22650	0.0349	
112 Naphthalene	128	21.365	21.365	0.000	99	170220	0.2330	
S 124 Xylenes, Total	100				0		6.26	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P115.D

Injection Date: 27-Feb-2019 01:42:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14389-A-7

Lab Sample ID: 140-14389-7

Worklist Smp#: 21

Client ID: SV-102-C-26

Purge Vol: 500.000 mL

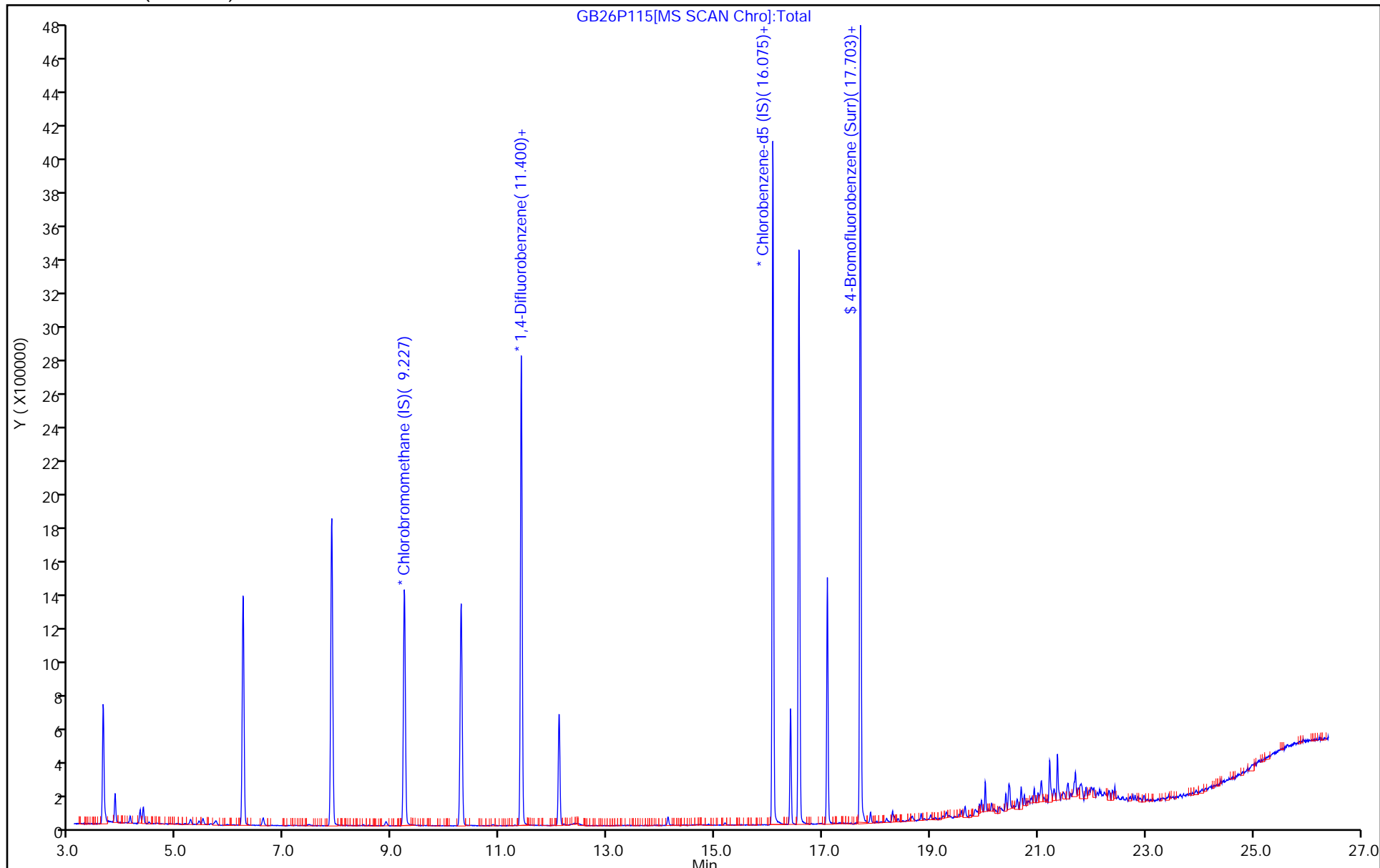
Dil. Factor: 3.7000

ALS Bottle#: 15

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P115.D
 Lims ID: 140-14389-A-7
 Client ID: SV-102-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 01:42:30 ALS Bottle#: 15 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 3.7000
 Sample Info: 140-0010931-021
 Misc. Info.: 140-14389-a-7@3.70
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:49:12

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.72	93.10

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P115.D

Injection Date: 27-Feb-2019 01:42:30

Instrument ID: MG

Lims ID: 140-14389-A-7

Lab Sample ID: 140-14389-7

Client ID: SV-102-C-26

Operator ID: 7126

ALS Bottle#: 15 Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 3.7000

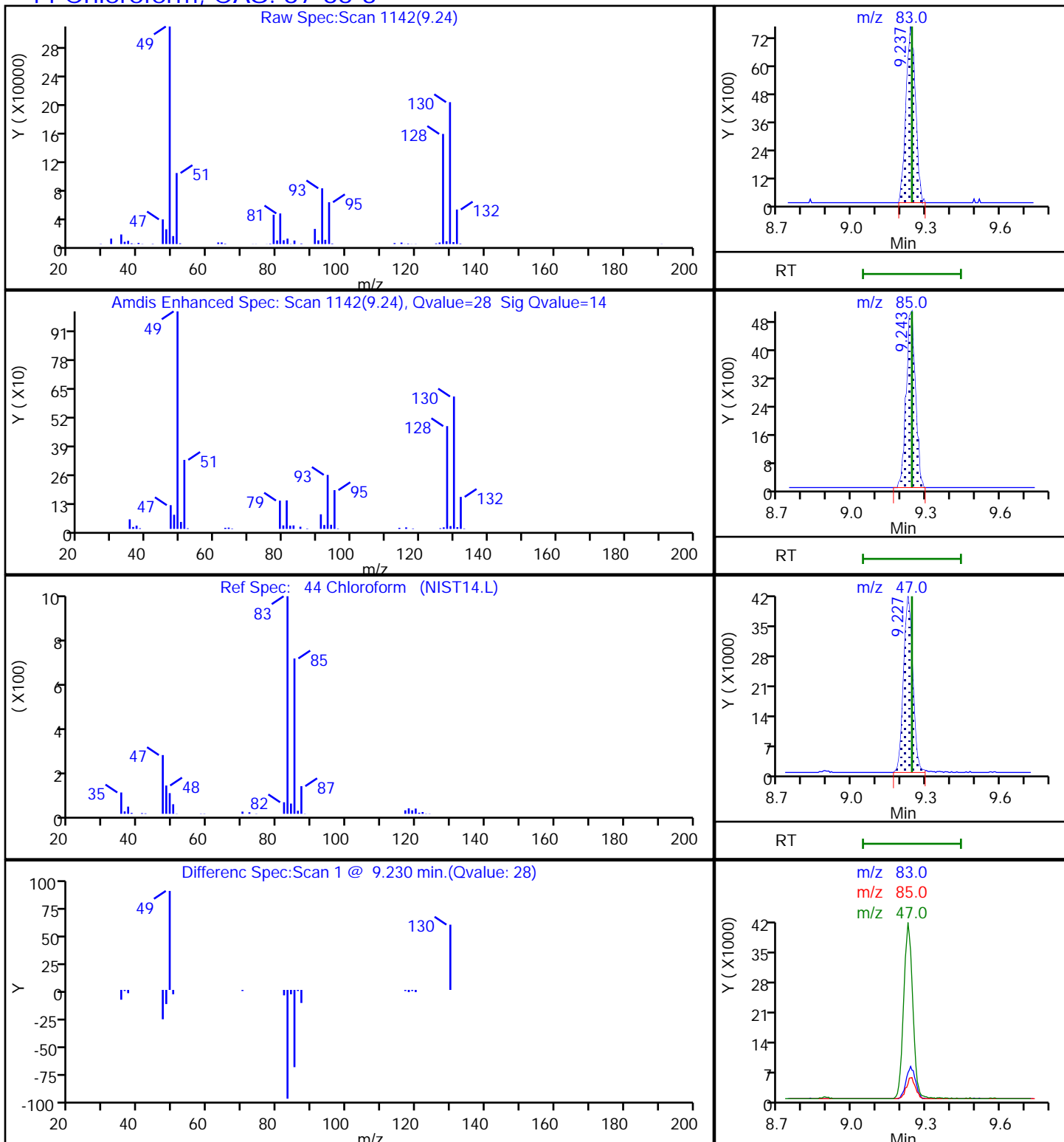
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

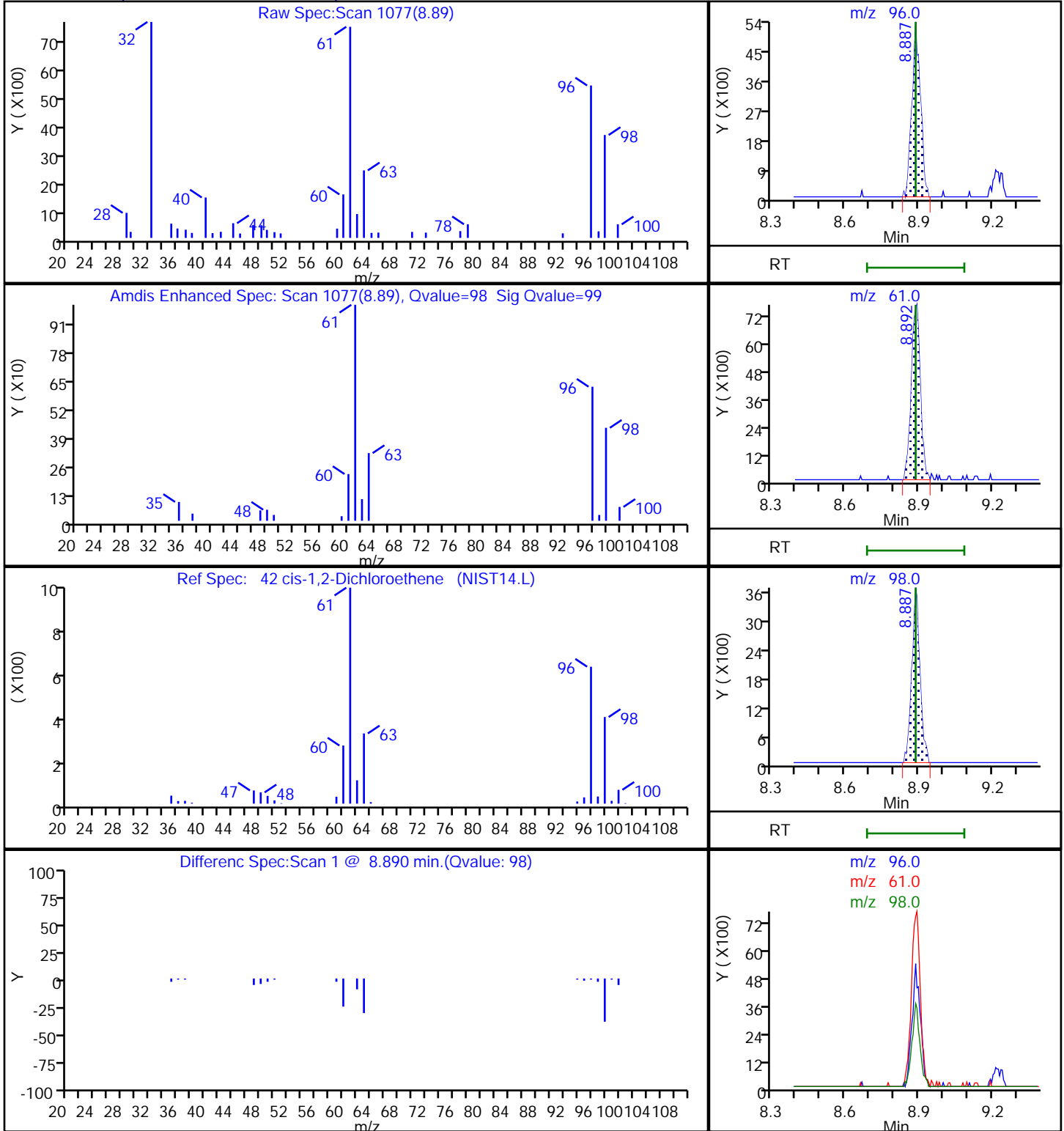
44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P115.D
Injection Date: 27-Feb-2019 01:42:30 Instrument ID: MG
Lims ID: 140-14389-A-7 Lab Sample ID: 140-14389-7
Client ID: SV-102-C-26
Operator ID: 7126 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 3.7000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P115.D

Injection Date: 27-Feb-2019 01:42:30

Instrument ID: MG

Lims ID: 140-14389-A-7

Lab Sample ID: 140-14389-7

Client ID: SV-102-C-26

Operator ID: 7126

ALS Bottle#: 15 Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 3.7000

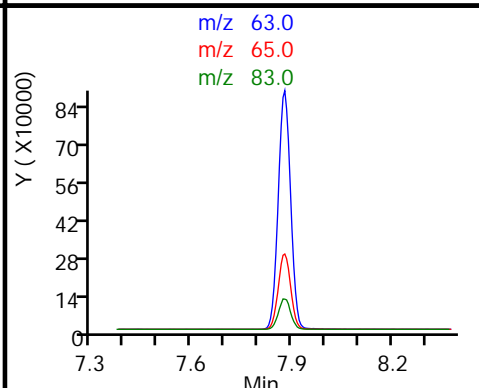
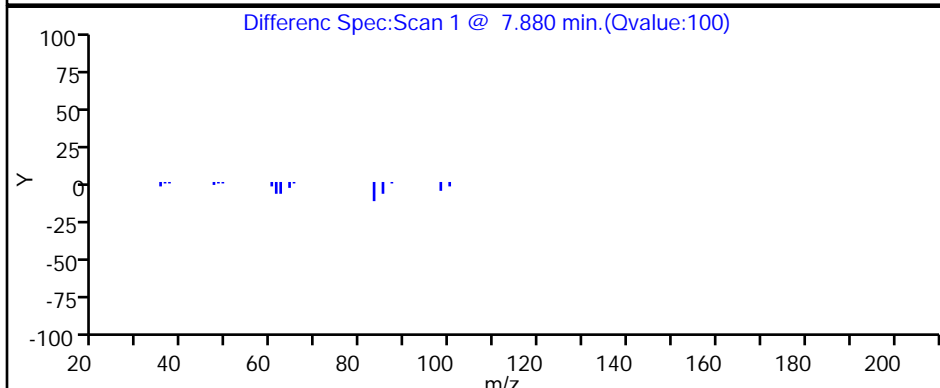
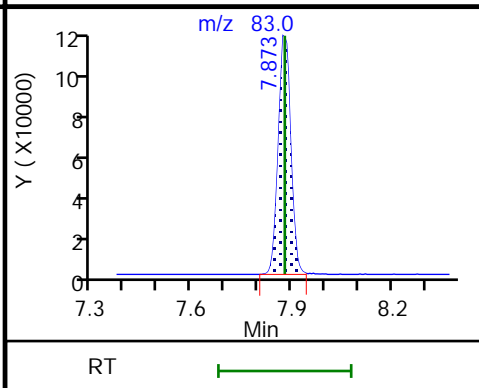
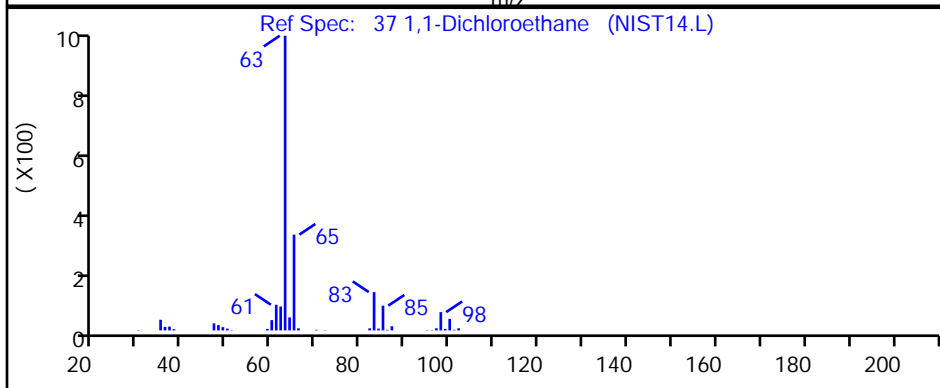
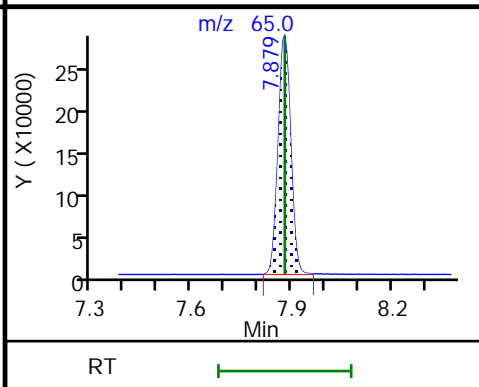
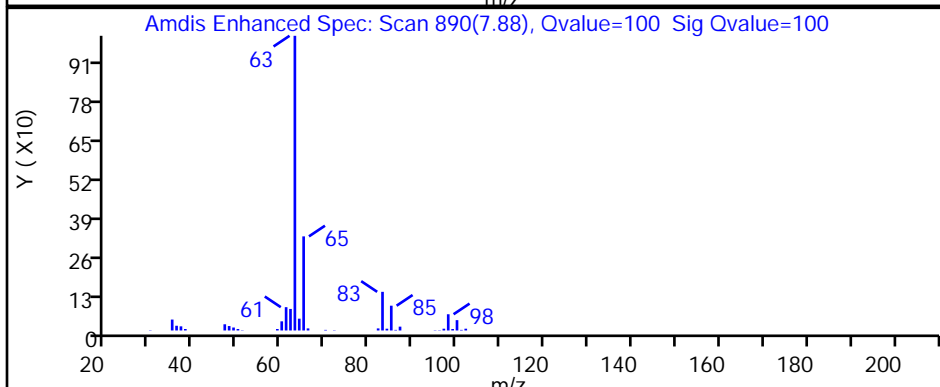
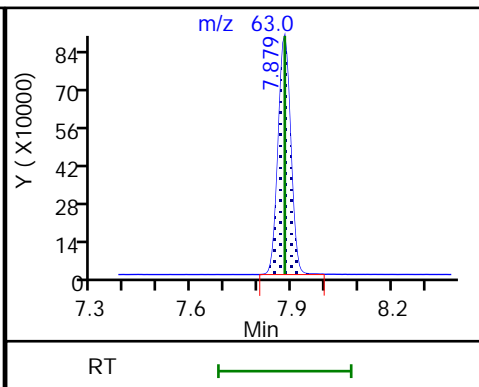
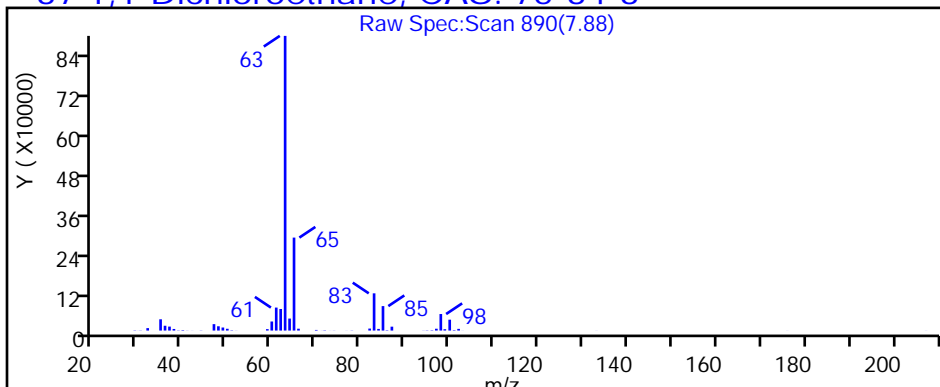
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P115.D

Injection Date: 27-Feb-2019 01:42:30

Instrument ID: MG

Lims ID: 140-14389-A-7

Lab Sample ID: 140-14389-7

Client ID: SV-102-C-26

Operator ID: 7126

ALS Bottle#: 15 Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 3.7000

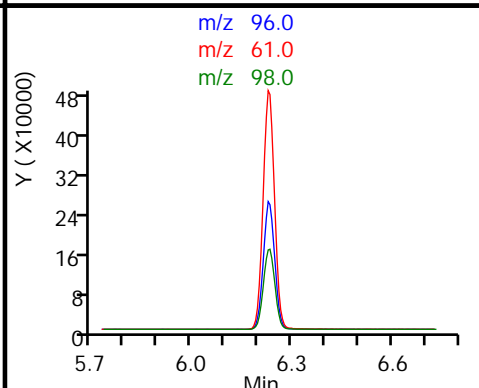
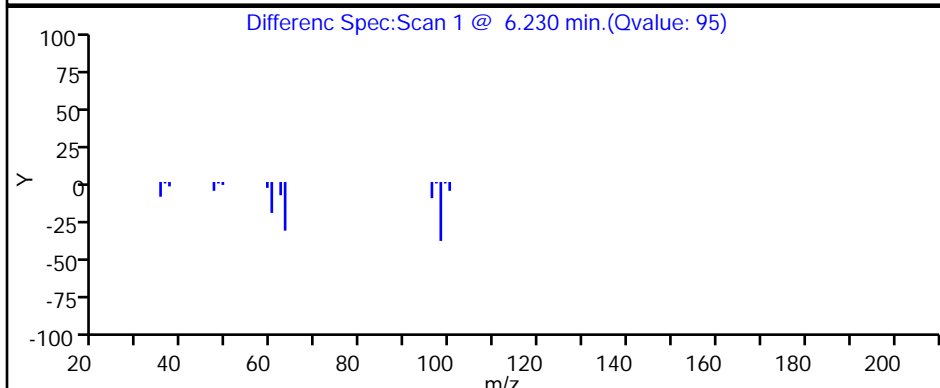
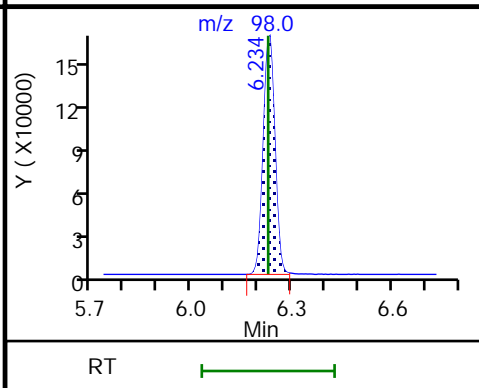
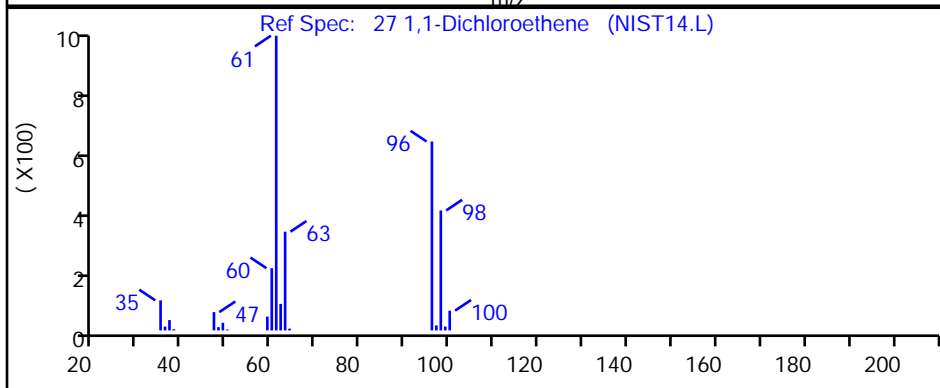
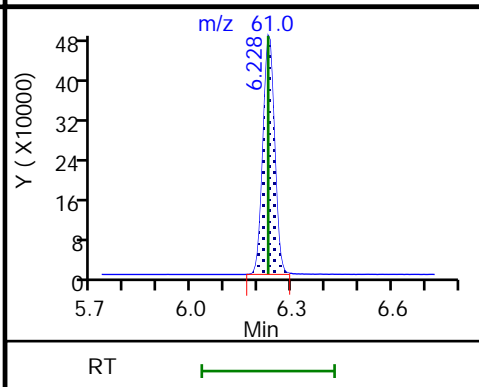
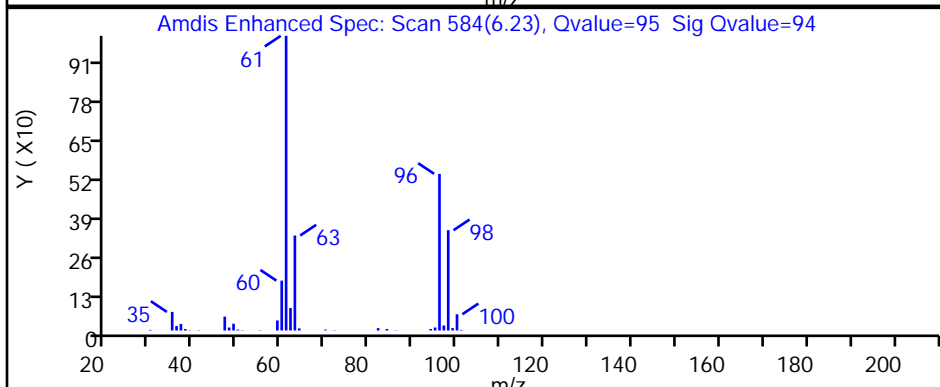
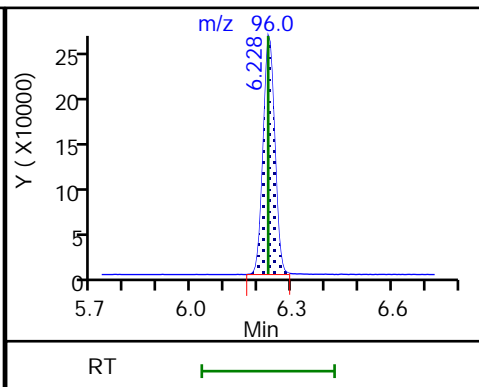
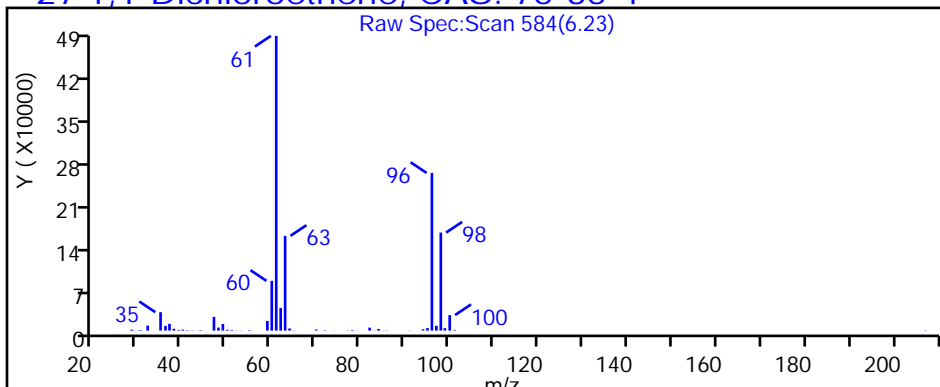
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P115.D

Injection Date: 27-Feb-2019 01:42:30

Instrument ID: MG

Lims ID: 140-14389-A-7

Lab Sample ID: 140-14389-7

Client ID: SV-102-C-26

Operator ID: 7126

ALS Bottle#: 15

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 3.7000

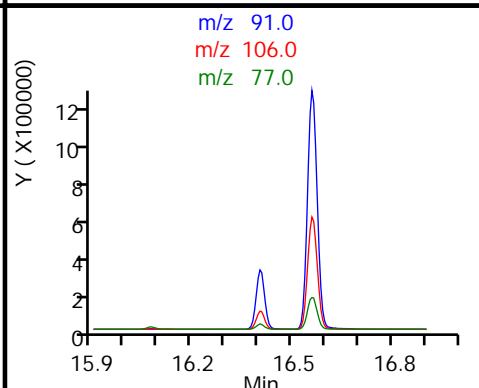
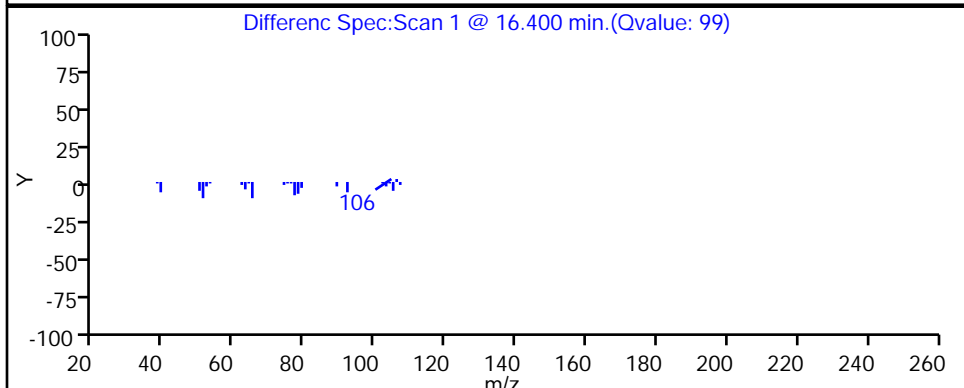
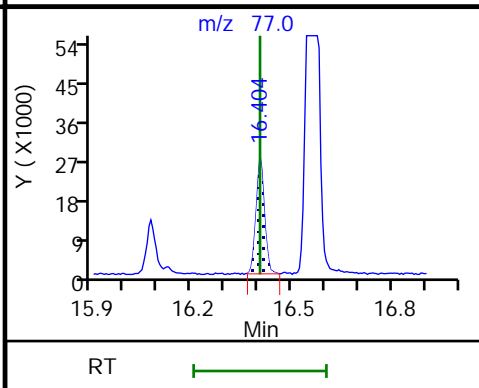
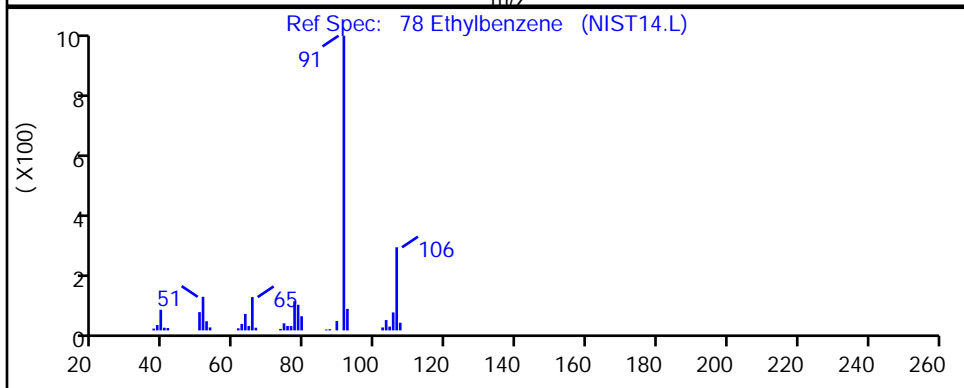
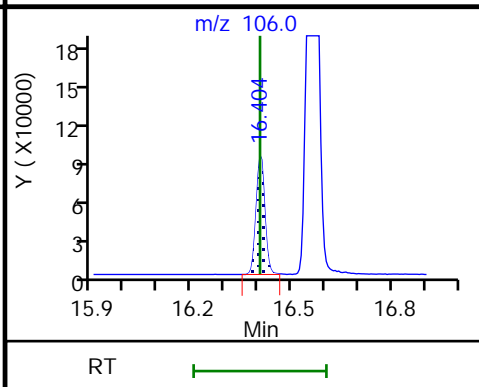
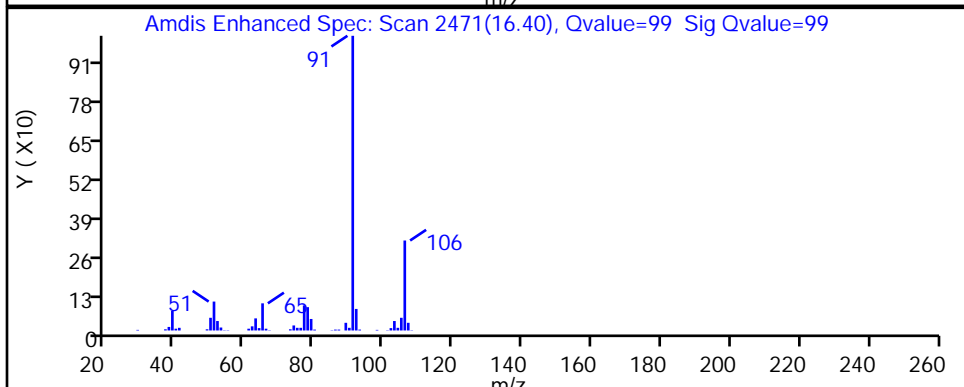
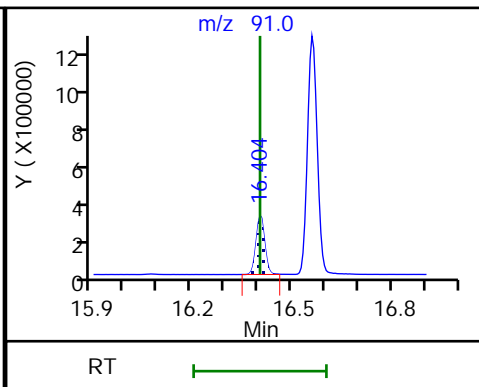
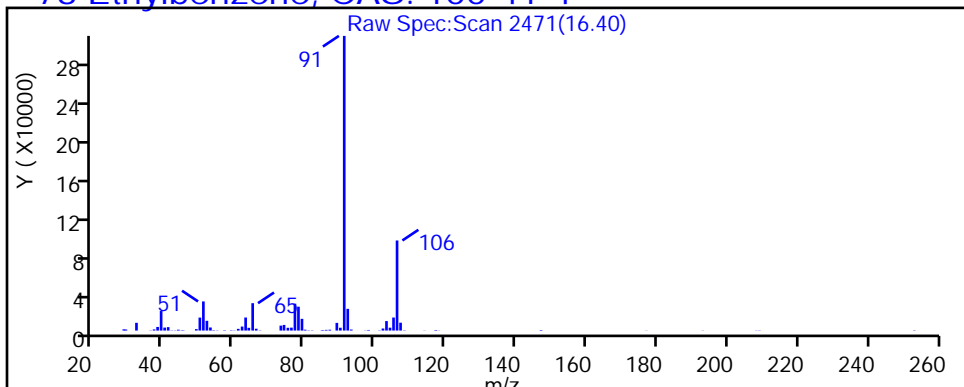
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P115.D

Injection Date: 27-Feb-2019 01:42:30

Instrument ID: MG

Lims ID: 140-14389-A-7

Lab Sample ID: 140-14389-7

Client ID: SV-102-C-26

Operator ID: 7126

ALS Bottle#: 15 Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 3.7000

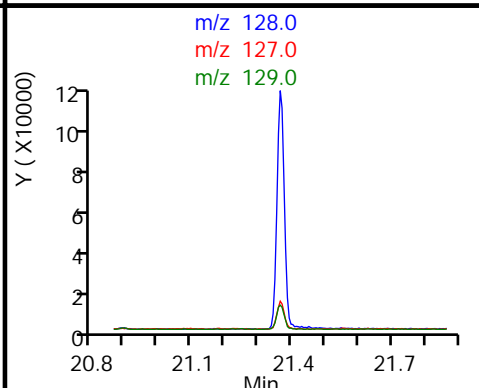
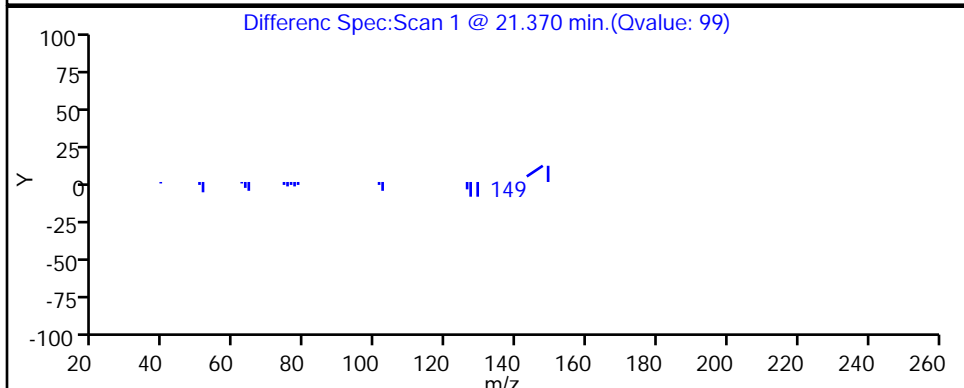
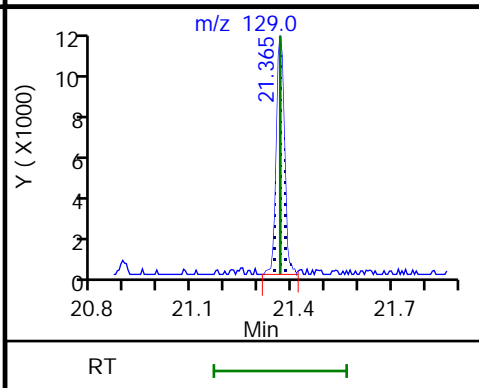
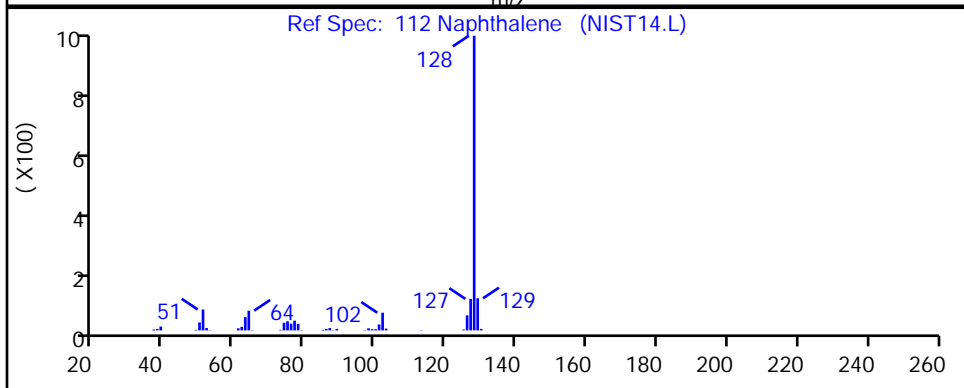
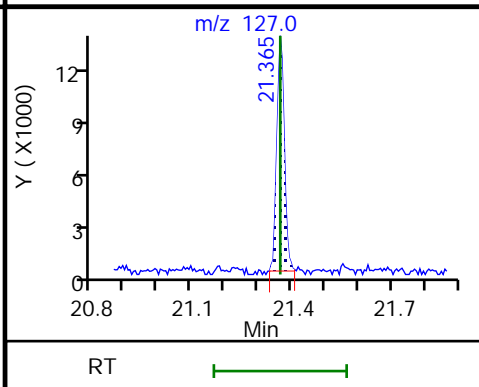
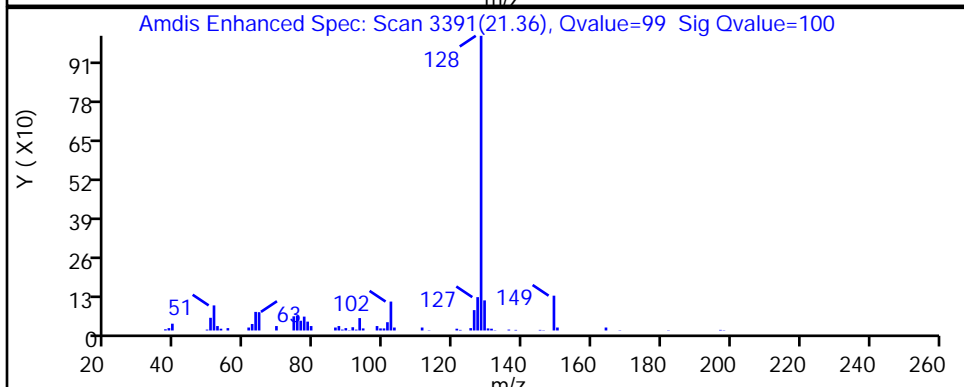
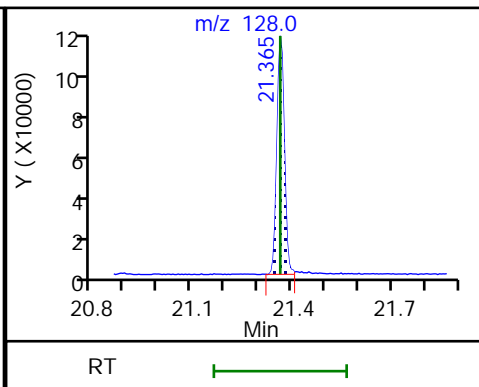
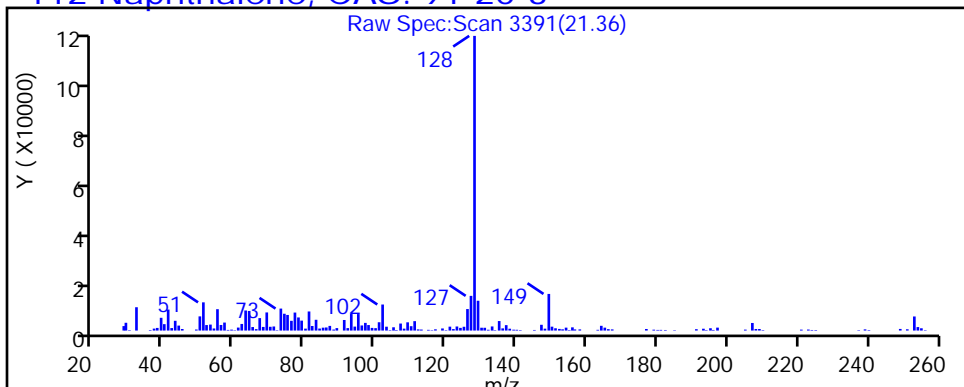
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

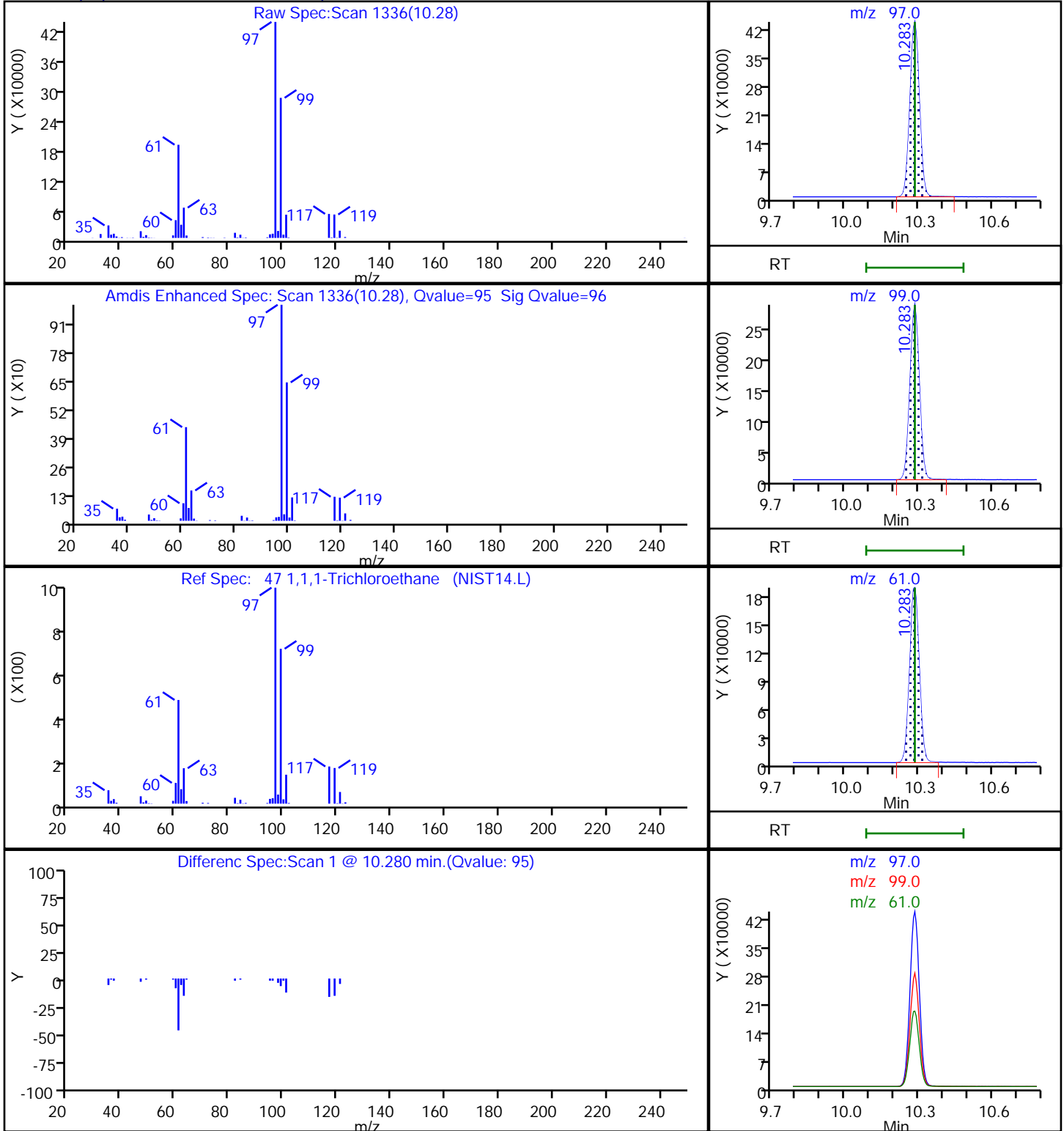
112 Naphthalene, CAS: 91-20-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P115.D
Injection Date: 27-Feb-2019 01:42:30 Instrument ID: MG
Lims ID: 140-14389-A-7 Lab Sample ID: 140-14389-7
Client ID: SV-102-C-26
Operator ID: 7126 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 3.7000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

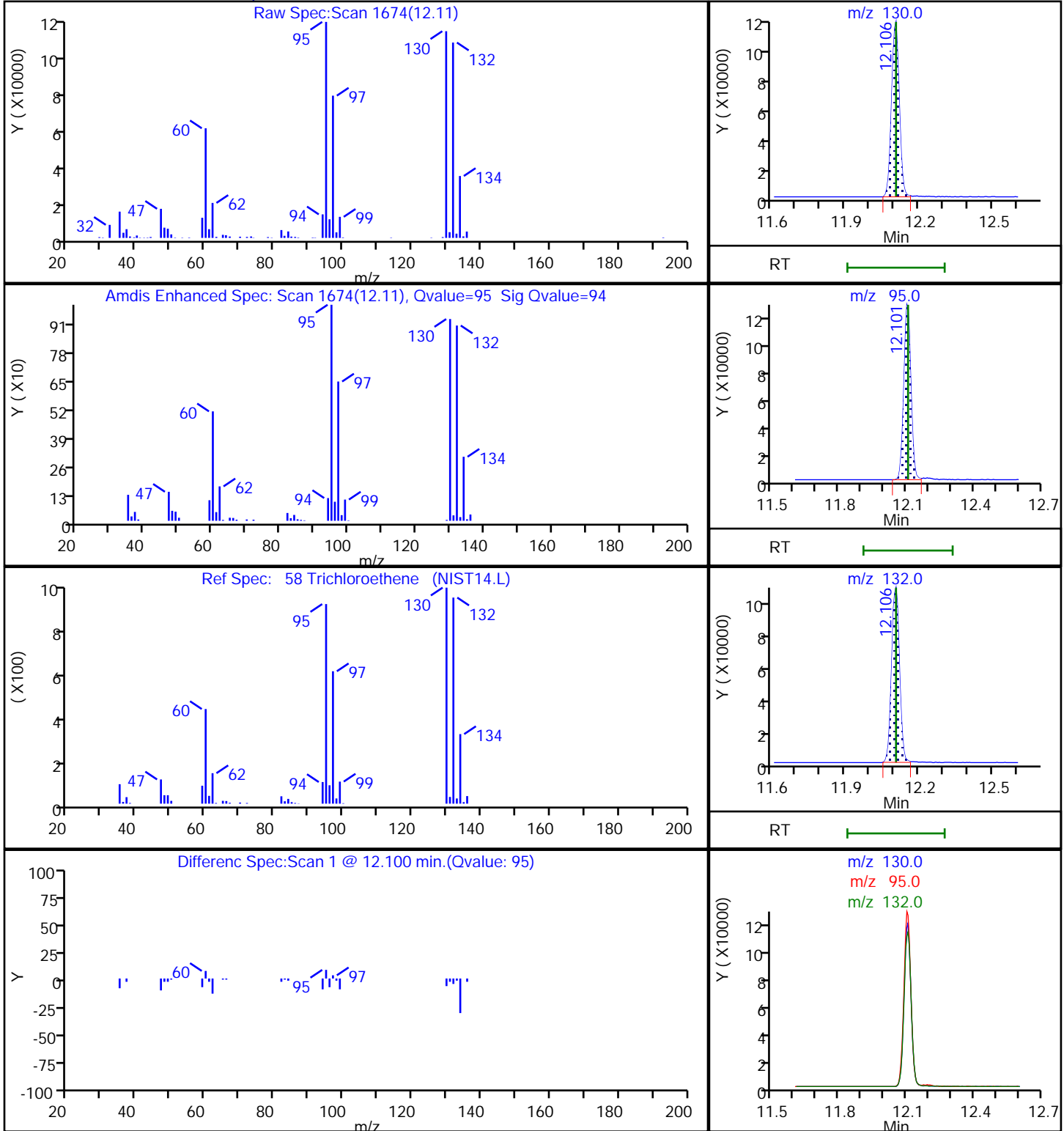
47 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P115.D
Injection Date: 27-Feb-2019 01:42:30 Instrument ID: MG
Lims ID: 140-14389-A-7 Lab Sample ID: 140-14389-7
Client ID: SV-102-C-26
Operator ID: 7126 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 3.7000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

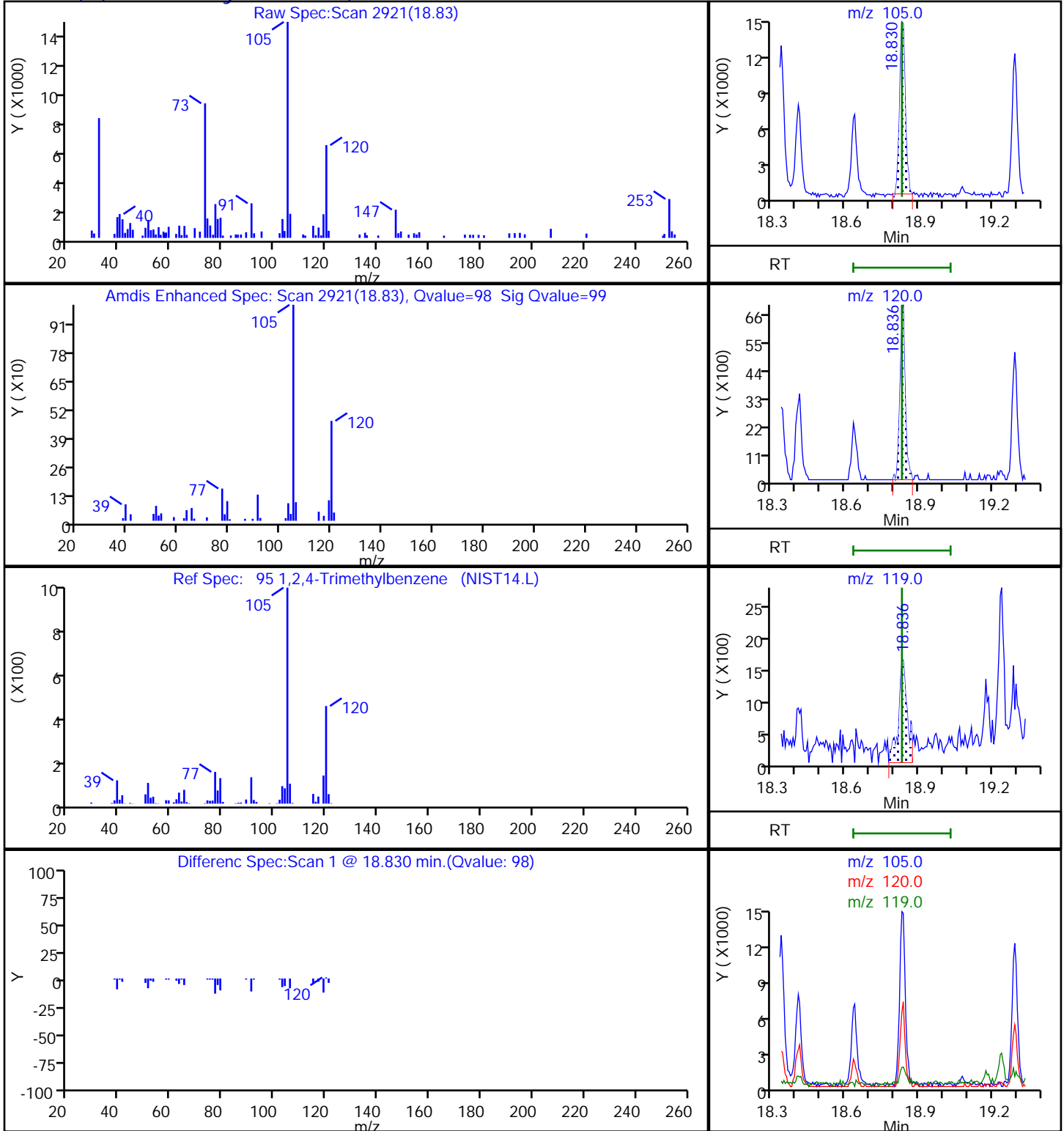
58 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P115.D
Injection Date: 27-Feb-2019 01:42:30 Instrument ID: MG
Lims ID: 140-14389-A-7 Lab Sample ID: 140-14389-7
Client ID: SV-102-C-26
Operator ID: 7126 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 3.7000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

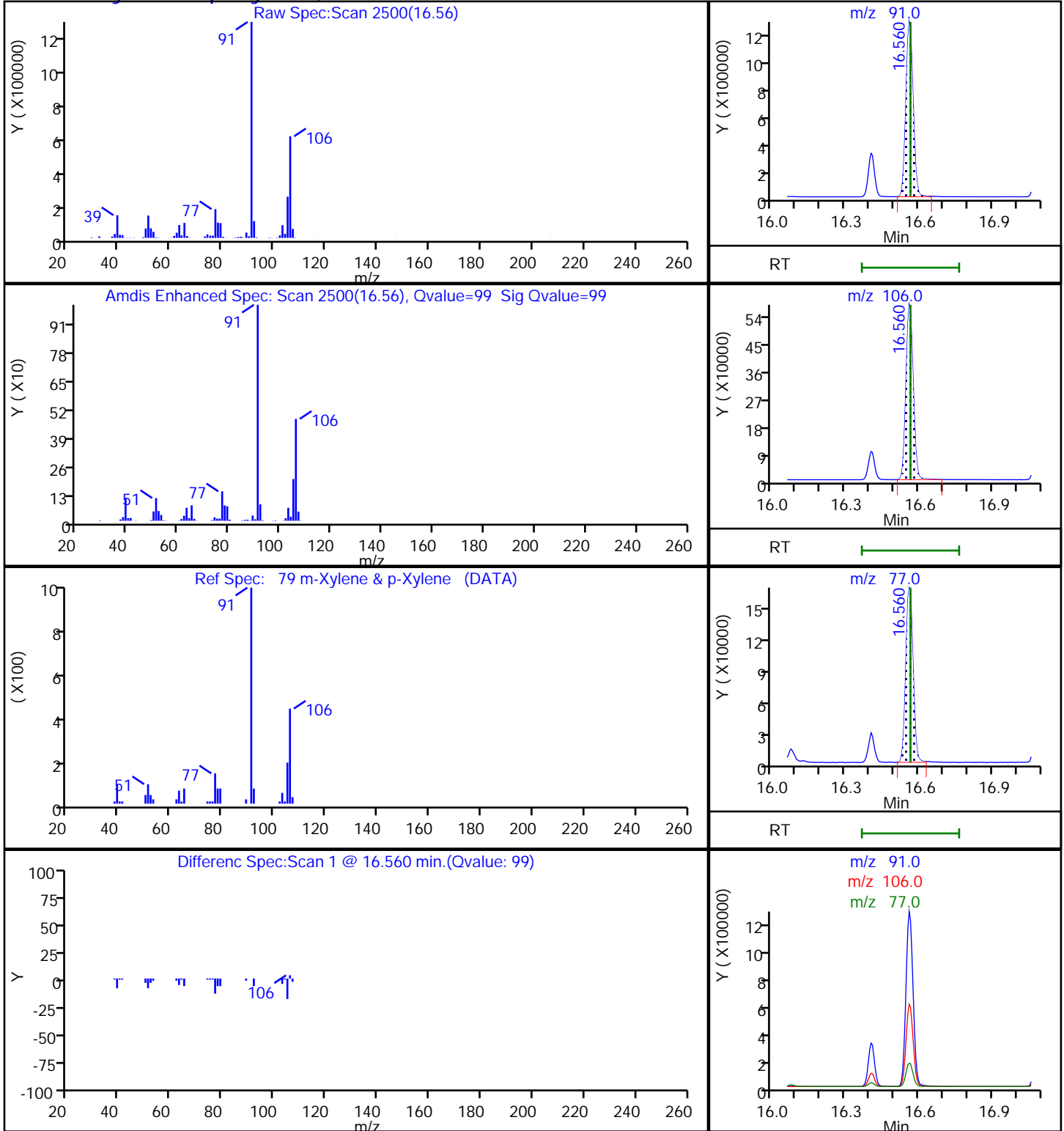
95 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P115.D
Injection Date: 27-Feb-2019 01:42:30 Instrument ID: MG
Lims ID: 140-14389-A-7 Lab Sample ID: 140-14389-7
Client ID: SV-102-C-26
Operator ID: 7126 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 3.7000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P115.D

Injection Date: 27-Feb-2019 01:42:30

Instrument ID: MG

Lims ID: 140-14389-A-7

Lab Sample ID: 140-14389-7

Client ID: SV-102-C-26

Operator ID: 7126

ALS Bottle#: 15

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 3.7000

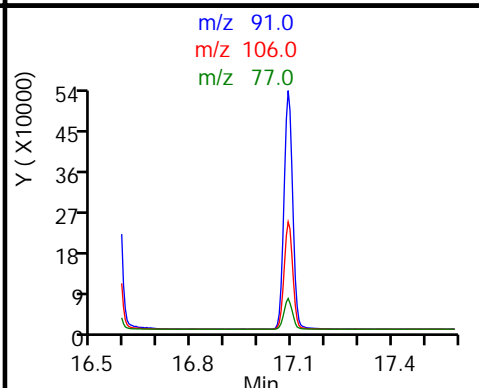
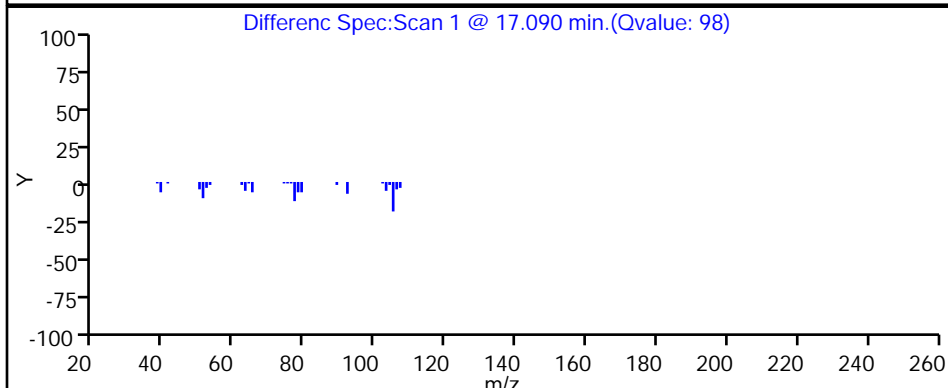
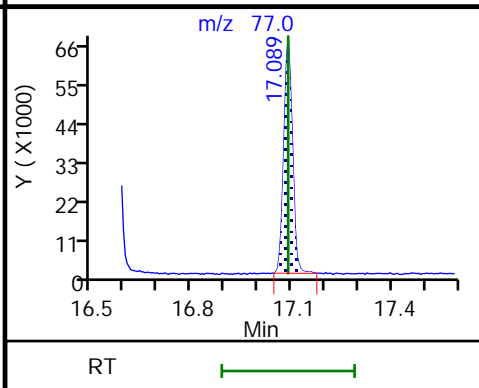
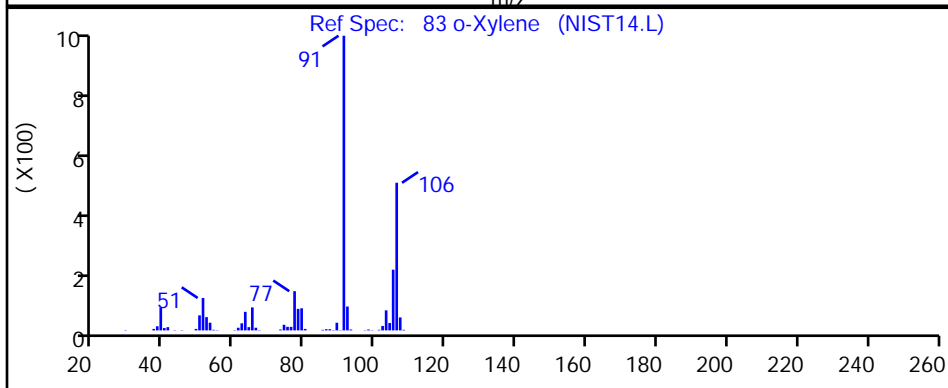
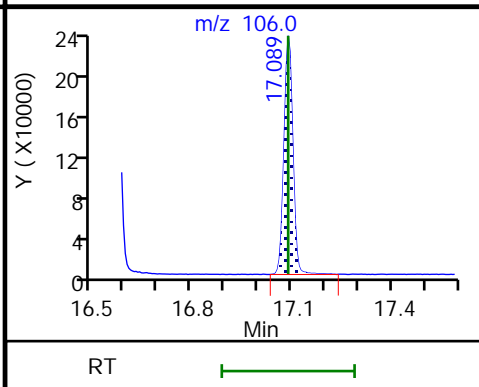
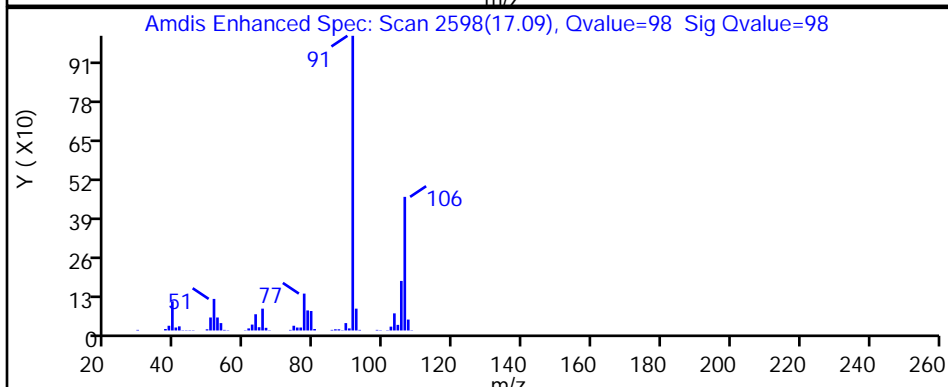
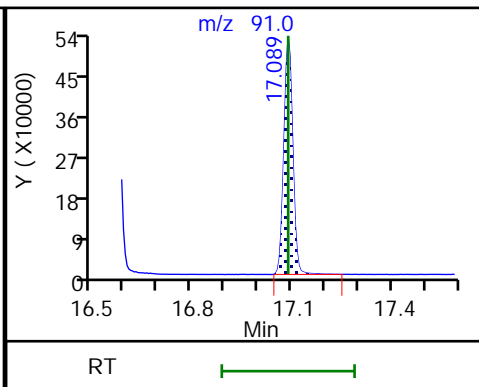
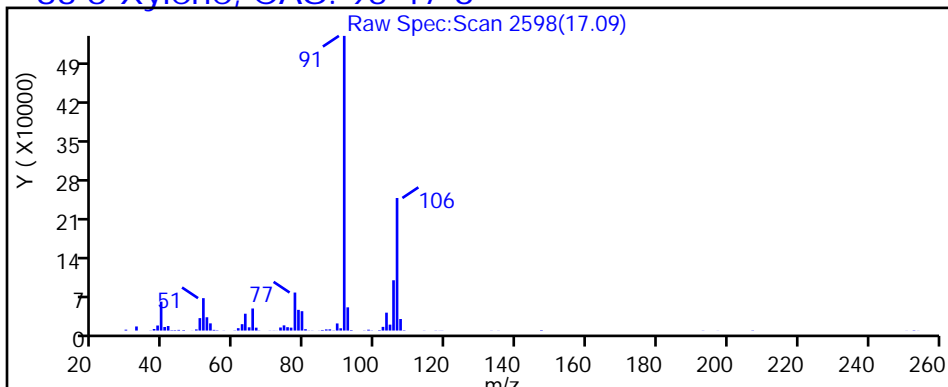
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-155-C-26 Lab Sample ID: 140-14389-8
 Matrix: Air Lab File ID: GB26P116D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:48
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:05
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.52		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.27	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.14	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.89	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.099	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.53	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-155-C-26 Lab Sample ID: 140-14389-8
 Matrix: Air Lab File ID: GB26P116D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:48
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:05
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.1	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.56	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.54	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P116D.D
 Lims ID: 140-14389-A-8
 Client ID: SV-155-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 03:05:30 ALS Bottle#: 16 Worklist Smp#: 23
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-023
 Misc. Info.: 140-14389-a-8
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:51:01 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:52:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.226	9.232	-0.006	98	459815	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.405	-0.005	96	2680947	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	91	2507992	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	1933479	3.76	
6 Chlorodifluoromethane	51	3.834	3.834	0.011	96	31429	0.1043	M
8 Dichlorodifluoromethane	85	3.893	3.886	0.005	100	47158	0.0969	
27 1,1-Dichloroethene	96	6.228	6.225	0.000	96	4597	0.0283	
31 Methylene Chloride	84	6.600	6.591	0.005	98	33566	0.1778	
37 1,1-Dichloroethane	63	7.873	7.874	-0.005	99	18025	0.0540	
47 1,1,1-Trichloroethane	97	10.273	10.277	-0.010	95	8217	0.0197	
50 Benzene	78	10.871	10.871	-0.006	97	13670	0.0285	
52 Carbon tetrachloride	117	10.893	10.893	-0.005	96	6474	0.0163	
67 Toluene	91	14.128	14.128	0.000	93	44248	0.0802	
79 m-Xylene & p-Xylene	91	16.565	16.565	-0.001	99	42975	0.0749	
83 o-Xylene	91	17.089	17.089	0.000	98	18759	0.0310	
S 124 Xylenes, Total	100				0		0.1059	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P116D.D

Injection Date: 27-Feb-2019 03:05:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14389-A-8

Lab Sample ID: 140-14389-8

Worklist Smp#: 23

Client ID: SV-155-C-26

Purge Vol: 500.000 mL

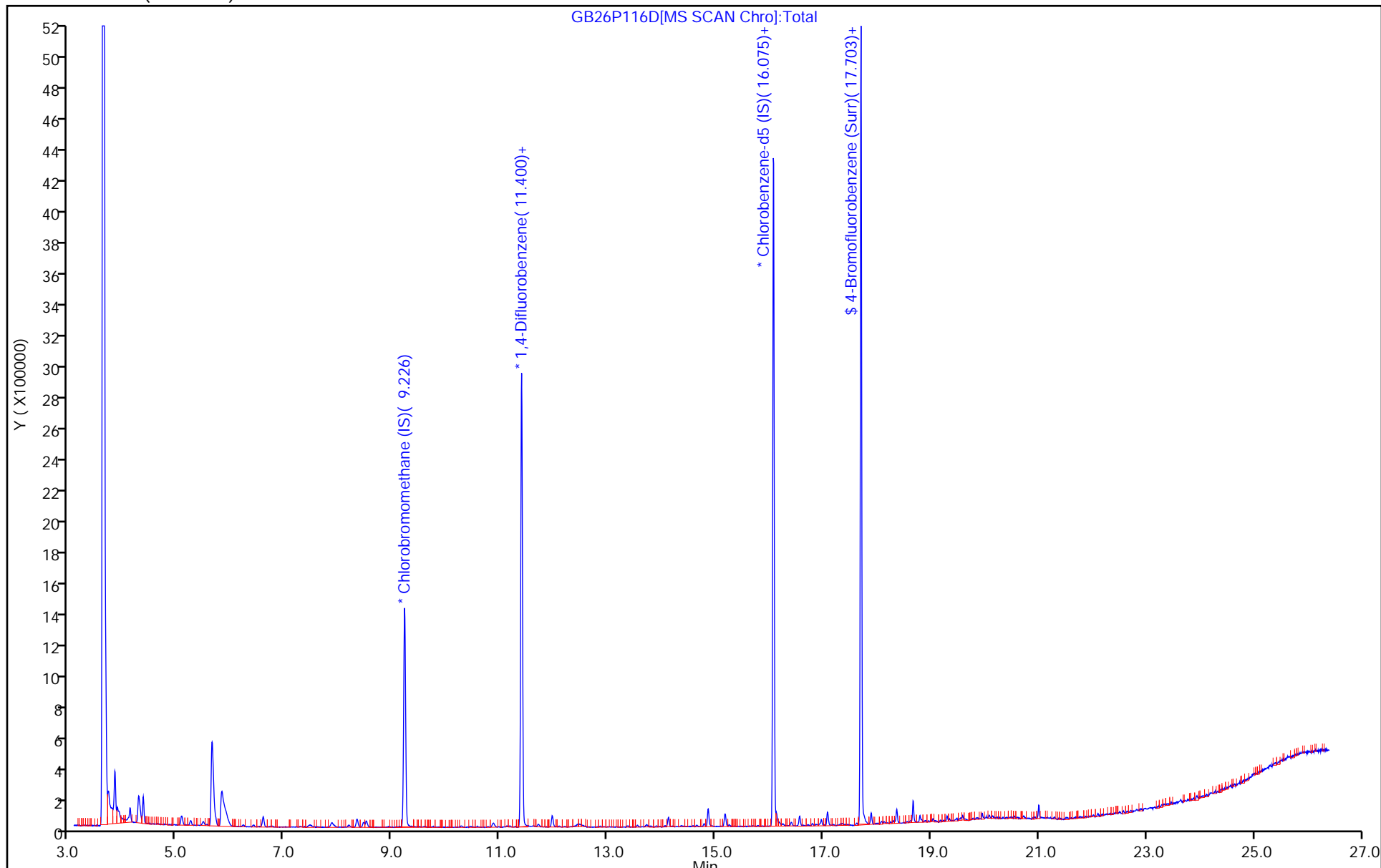
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P116D.D
 Lims ID: 140-14389-A-8
 Client ID: SV-155-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 03:05:30 ALS Bottle#: 16 Worklist Smp#: 23
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-023
 Misc. Info.: 140-14389-a-8
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:51:01 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:52:10

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.76	94.06

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P116D.D

Injection Date: 27-Feb-2019 03:05:30

Instrument ID: MG

Lims ID: 140-14389-A-8

Lab Sample ID: 140-14389-8

Client ID: SV-155-C-26

Operator ID: 7126

ALS Bottle#: 16

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

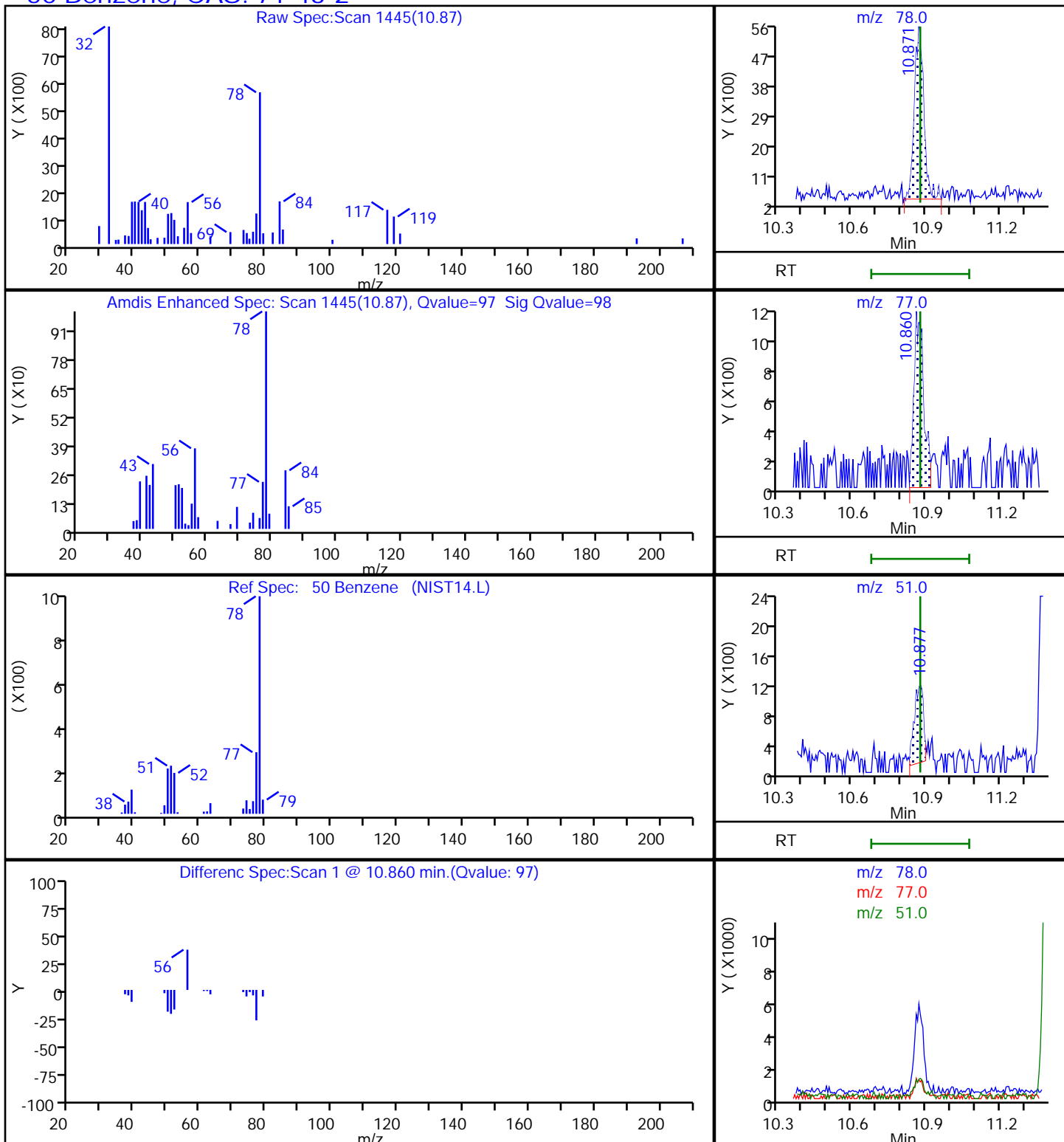
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P116D.D

Injection Date: 27-Feb-2019 03:05:30

Instrument ID: MG

Lims ID: 140-14389-A-8

Lab Sample ID: 140-14389-8

Client ID: SV-155-C-26

Operator ID: 7126

ALS Bottle#: 16

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

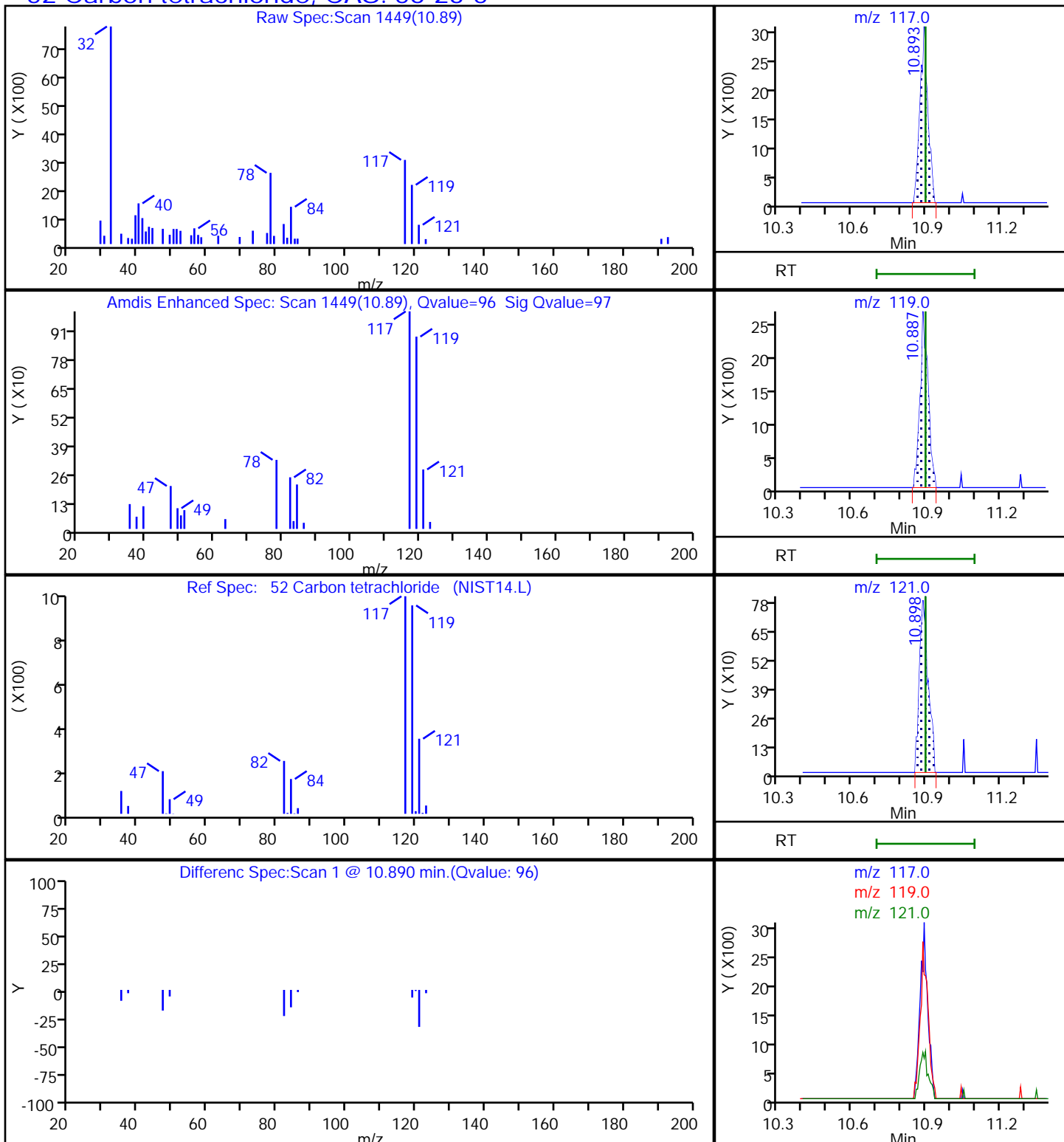
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

52 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P116D.D

Injection Date: 27-Feb-2019 03:05:30

Instrument ID: MG

Lims ID: 140-14389-A-8

Lab Sample ID: 140-14389-8

Client ID: SV-155-C-26

Operator ID: 7126

ALS Bottle#: 16

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

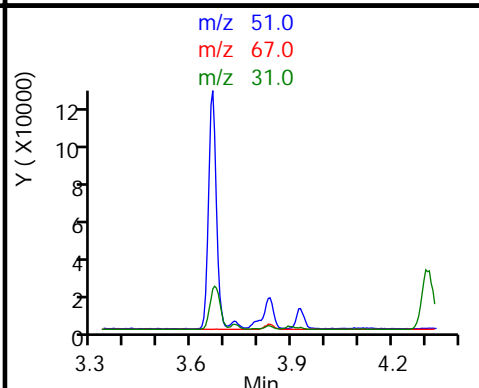
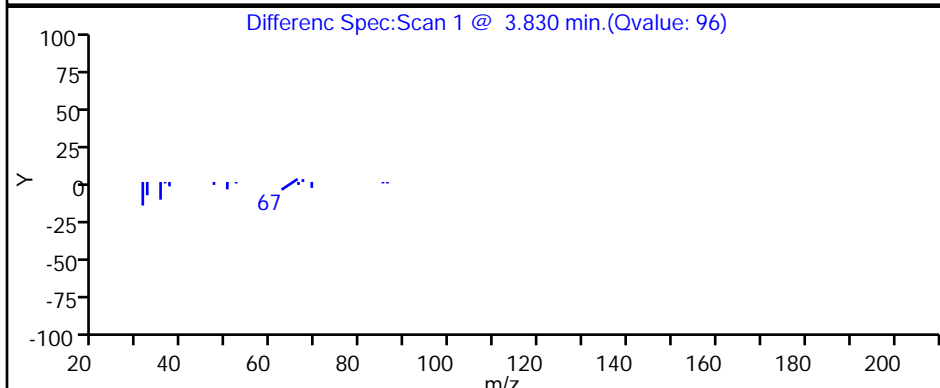
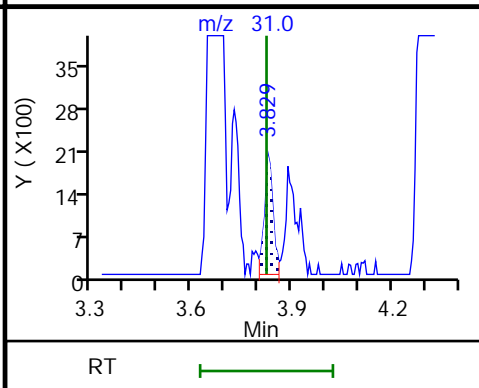
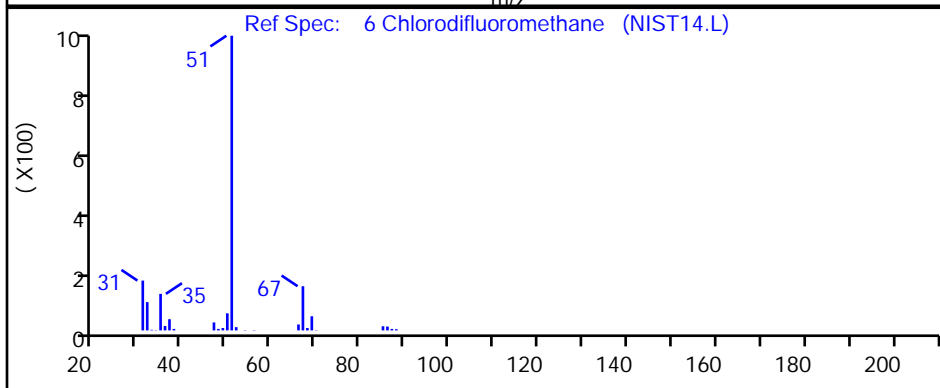
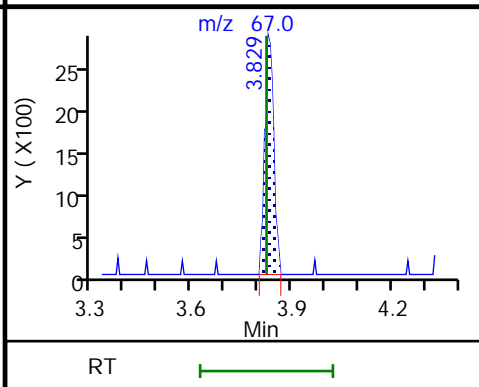
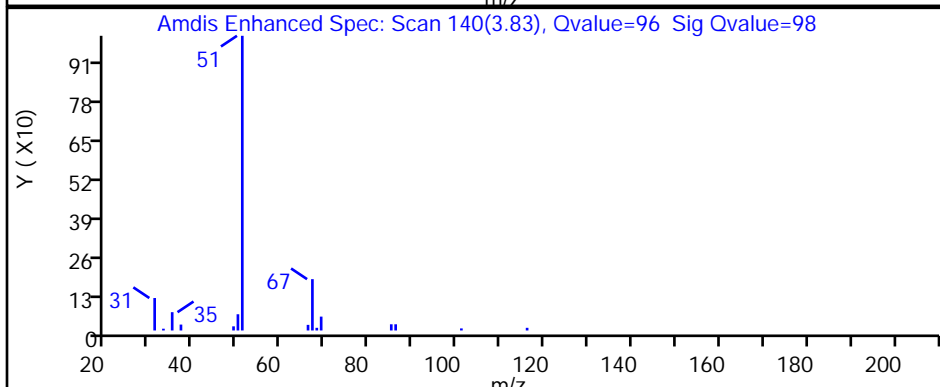
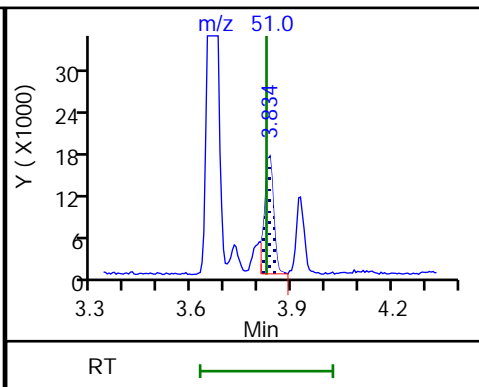
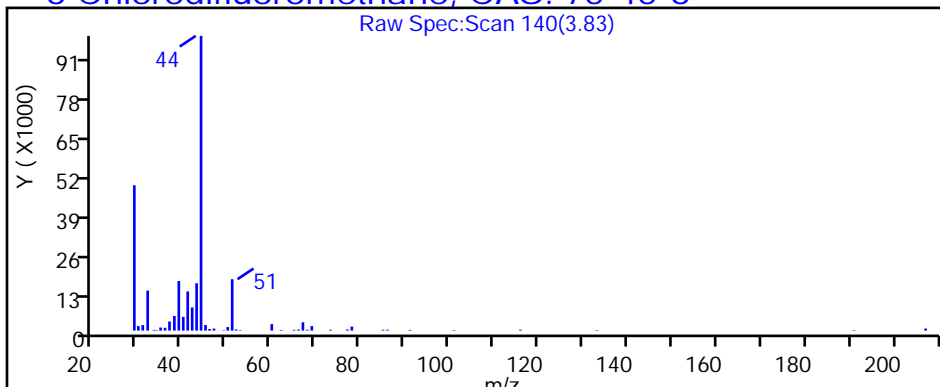
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P116D.D

Injection Date: 27-Feb-2019 03:05:30

Instrument ID: MG

Lims ID: 140-14389-A-8

Lab Sample ID: 140-14389-8

Client ID: SV-155-C-26

Operator ID: 7126

ALS Bottle#: 16

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

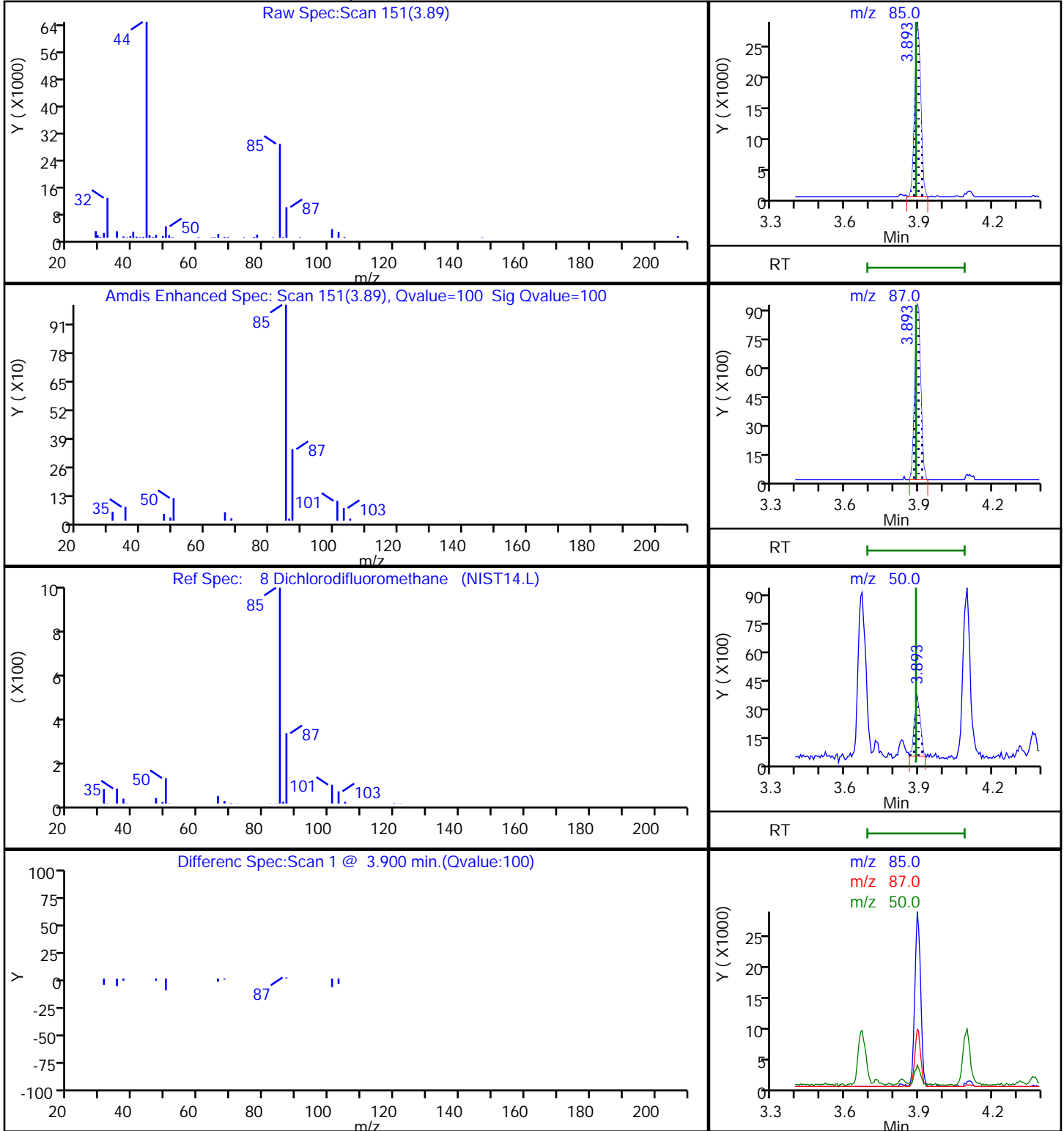
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P116D.D

Injection Date: 27-Feb-2019 03:05:30

Instrument ID: MG

Lims ID: 140-14389-A-8

Lab Sample ID: 140-14389-8

Client ID: SV-155-C-26

Operator ID: 7126

ALS Bottle#: 16

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

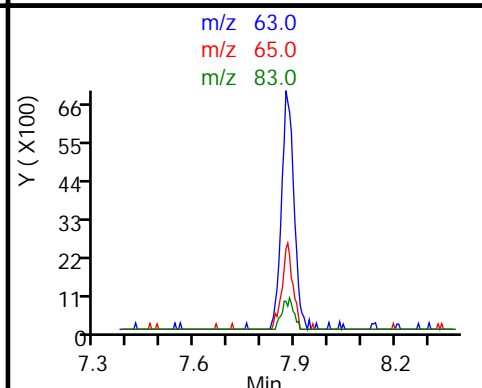
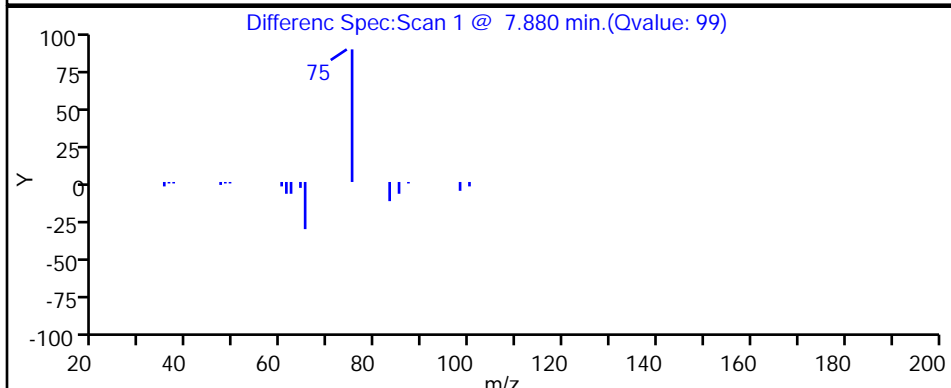
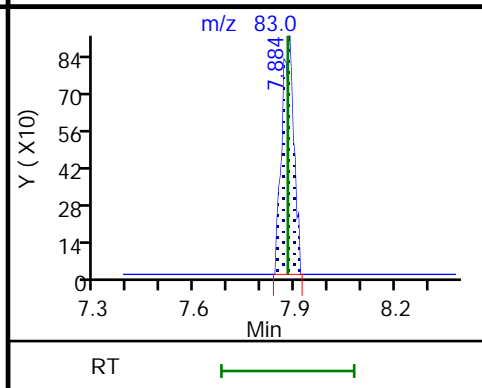
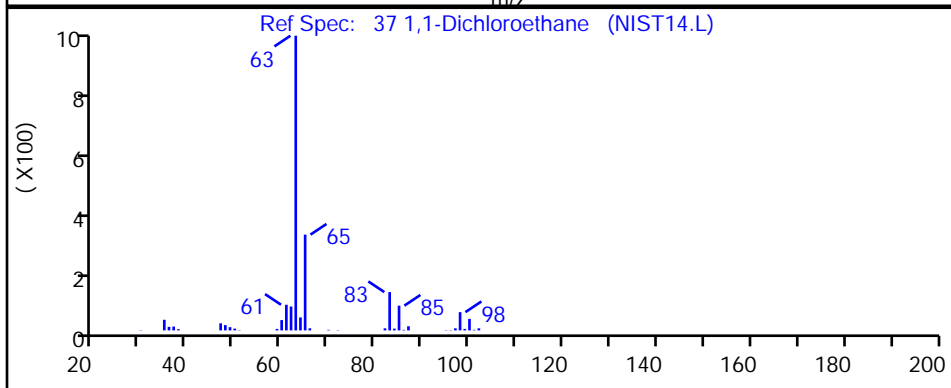
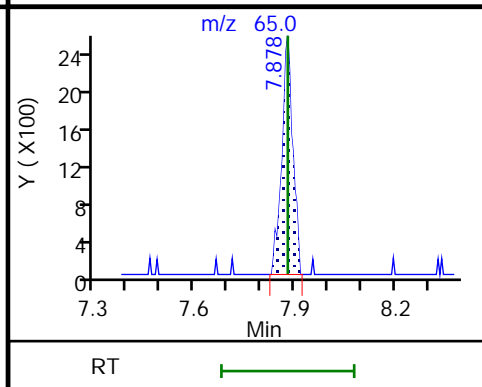
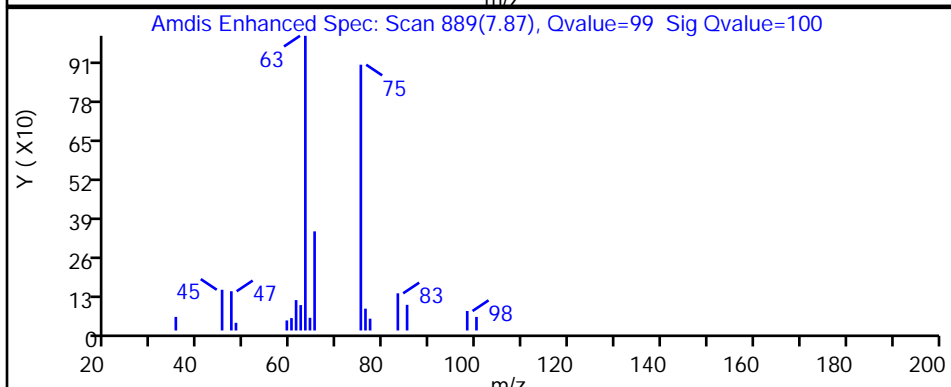
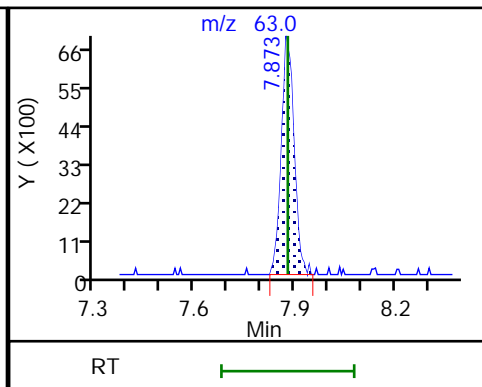
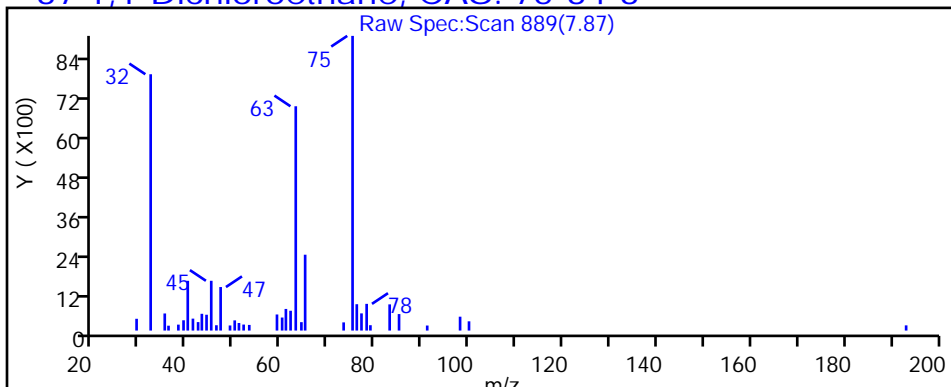
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P116D.D

Injection Date: 27-Feb-2019 03:05:30

Instrument ID: MG

Lims ID: 140-14389-A-8

Lab Sample ID: 140-14389-8

Client ID: SV-155-C-26

Operator ID: 7126

ALS Bottle#: 16

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

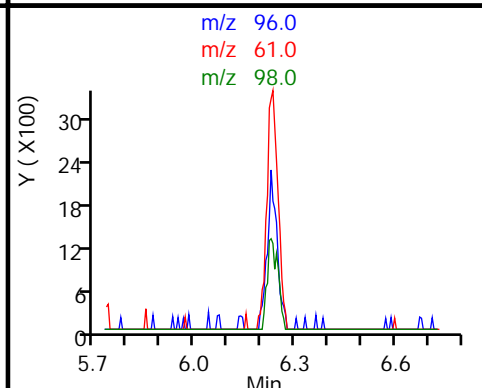
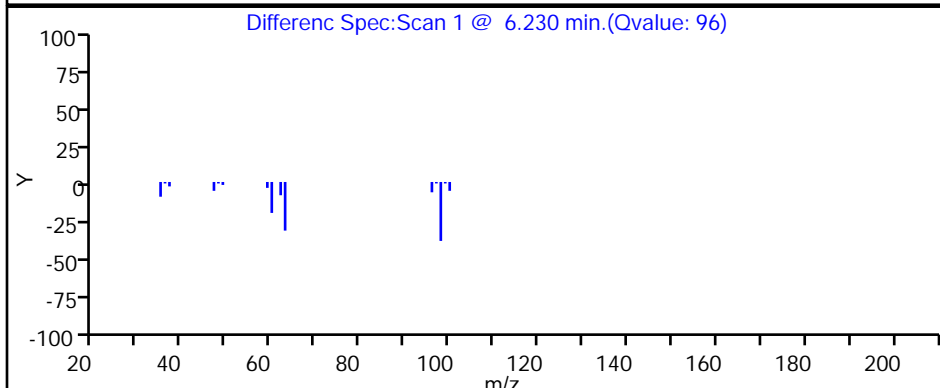
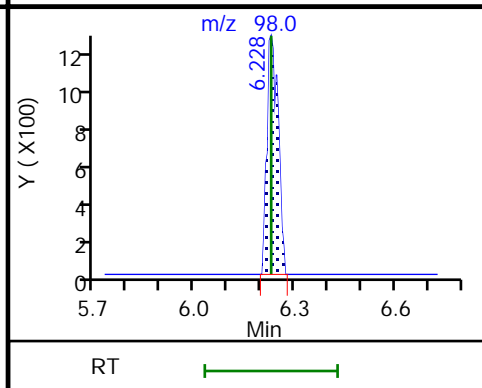
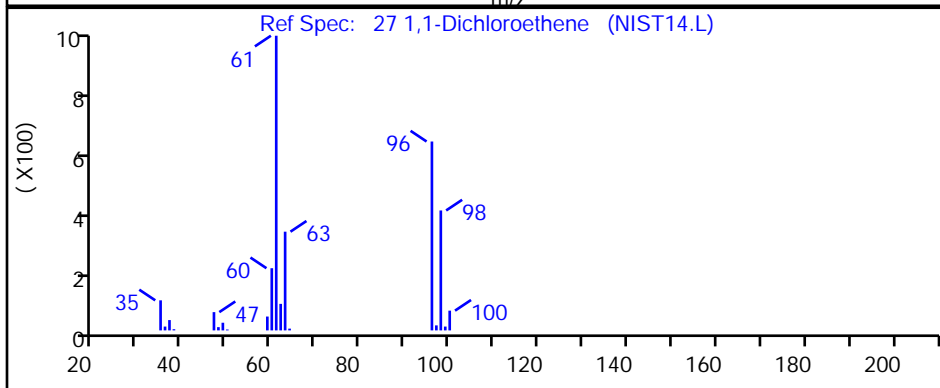
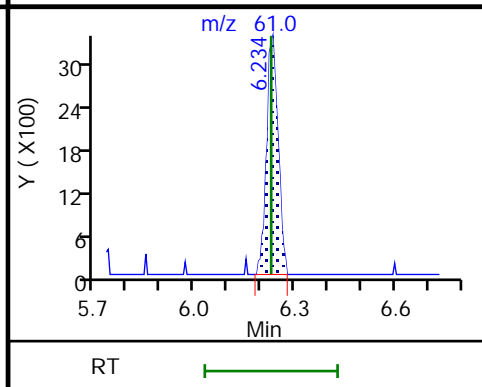
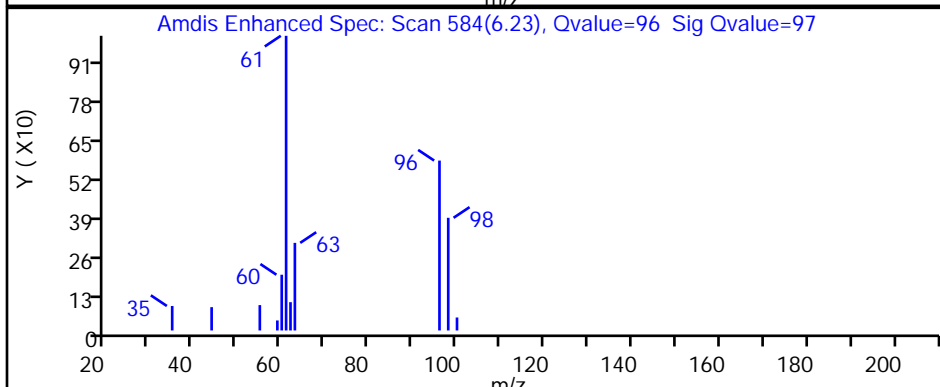
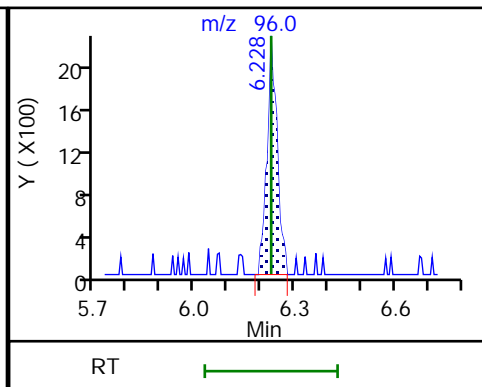
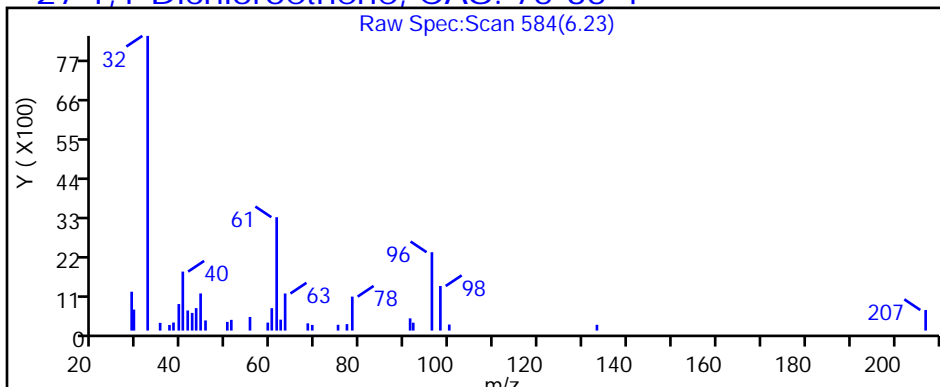
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P116D.D

Injection Date: 27-Feb-2019 03:05:30

Instrument ID: MG

Lims ID: 140-14389-A-8

Lab Sample ID: 140-14389-8

Client ID: SV-155-C-26

Operator ID: 7126

ALS Bottle#: 16

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

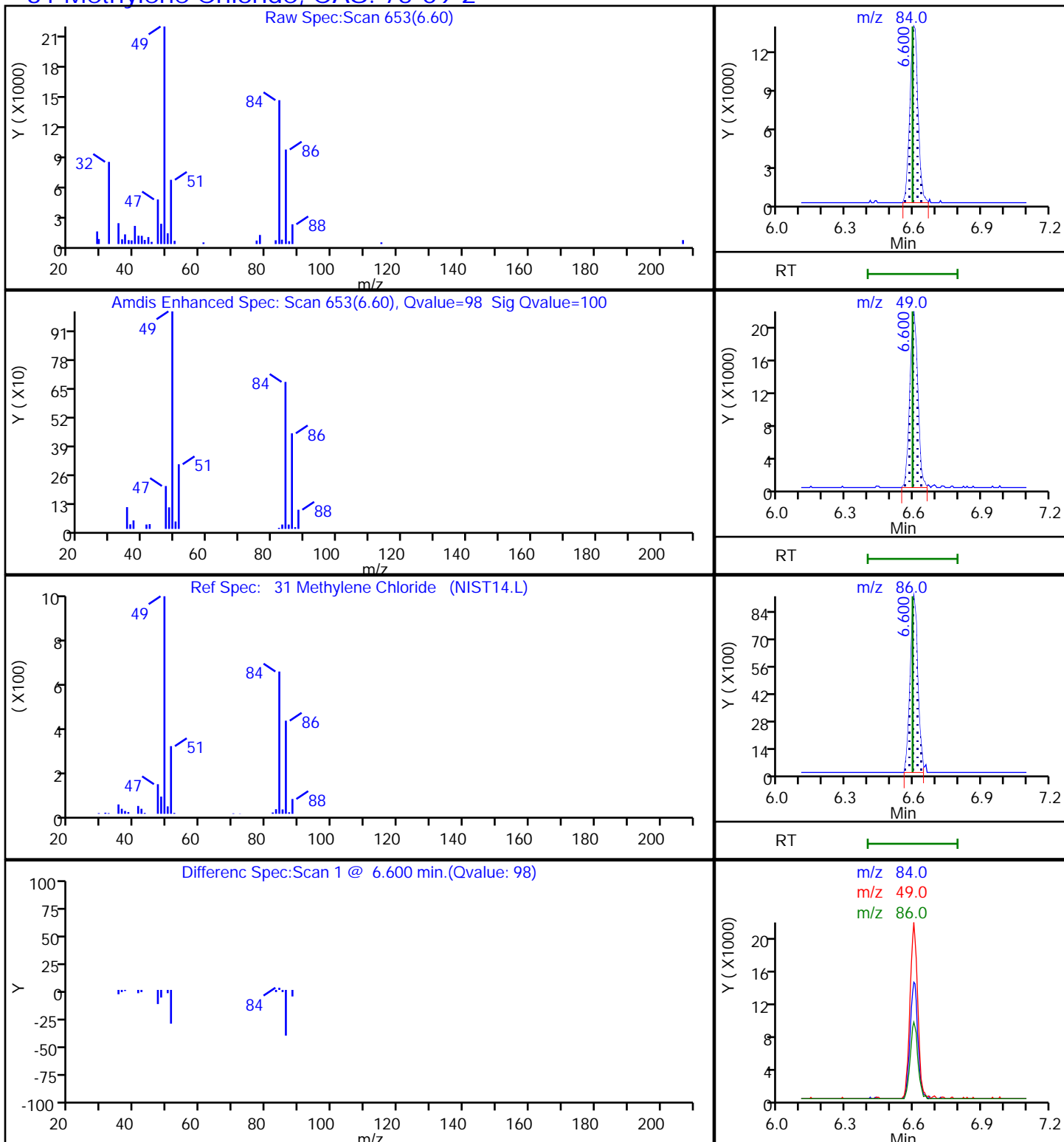
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P116D.D

Injection Date: 27-Feb-2019 03:05:30

Instrument ID: MG

Lims ID: 140-14389-A-8

Lab Sample ID: 140-14389-8

Client ID: SV-155-C-26

Operator ID: 7126

ALS Bottle#: 16

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

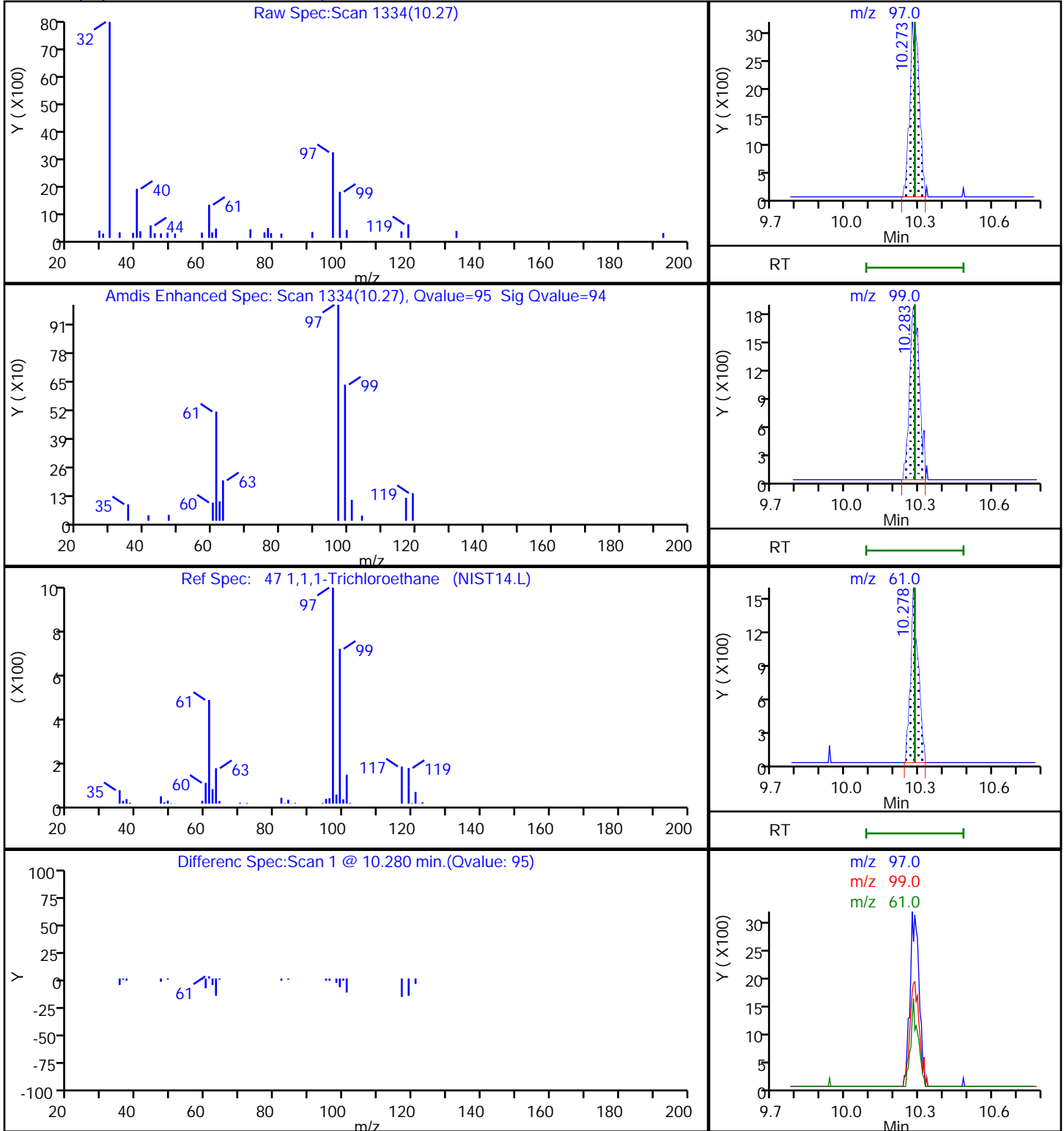
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P116D.D

Injection Date: 27-Feb-2019 03:05:30

Instrument ID: MG

Lims ID: 140-14389-A-8

Lab Sample ID: 140-14389-8

Client ID: SV-155-C-26

Operator ID: 7126

ALS Bottle#: 16

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

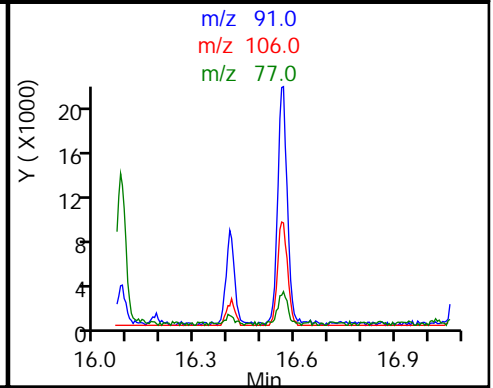
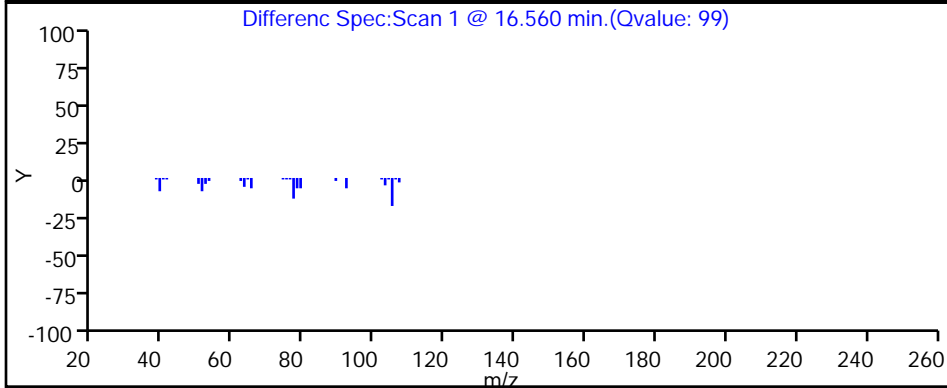
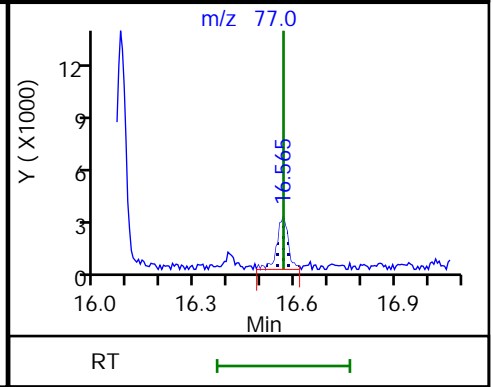
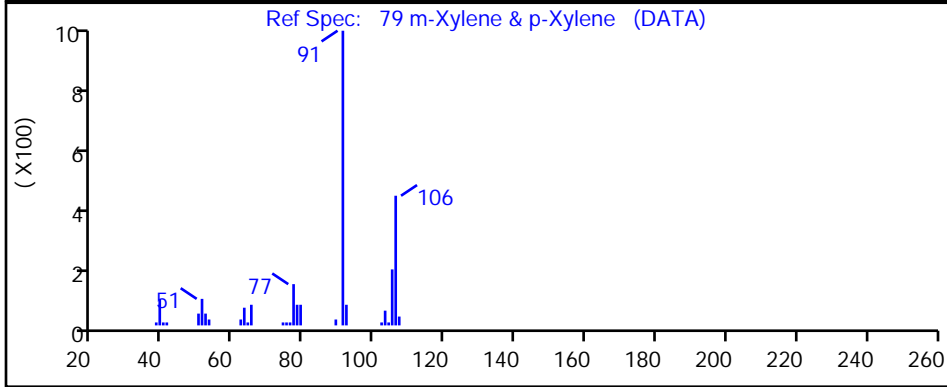
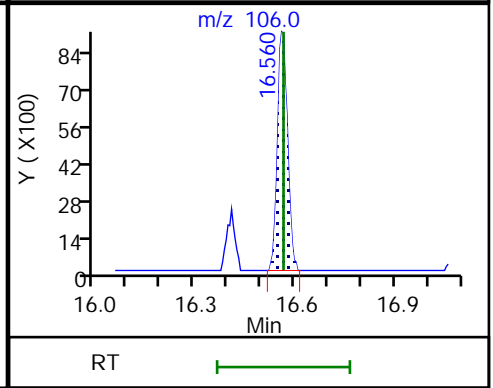
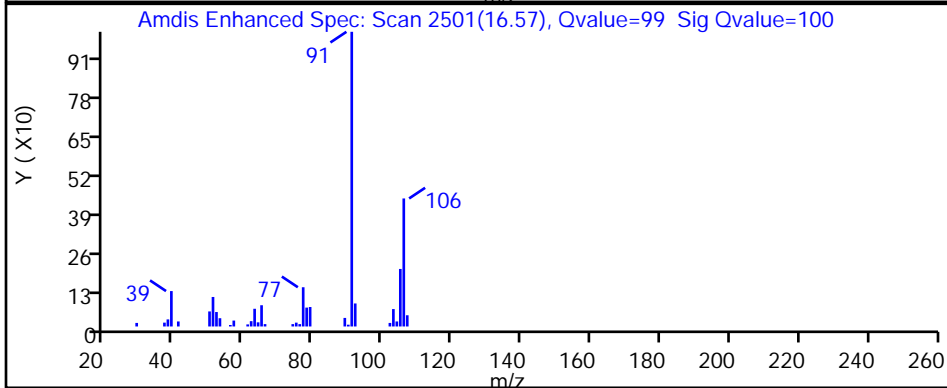
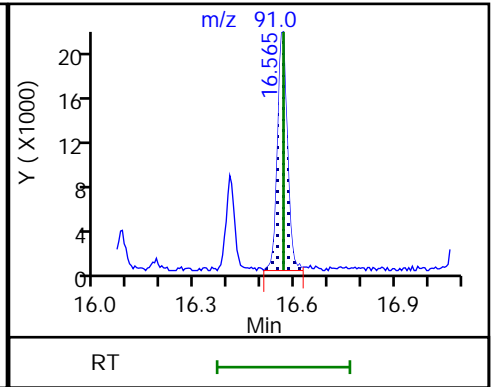
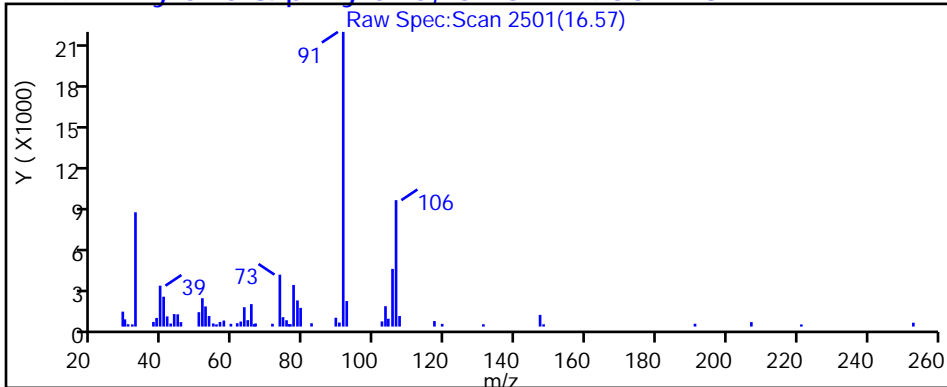
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P116D.D

Injection Date: 27-Feb-2019 03:05:30

Instrument ID: MG

Lims ID: 140-14389-A-8

Lab Sample ID: 140-14389-8

Client ID: SV-155-C-26

Operator ID: 7126

ALS Bottle#: 16

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

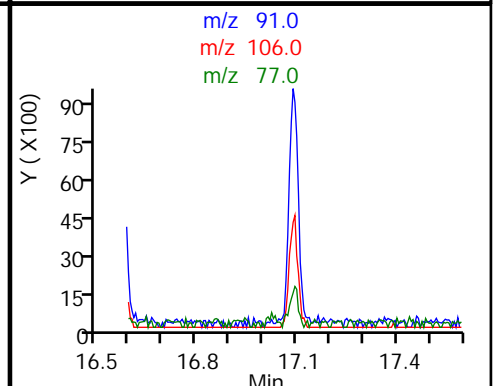
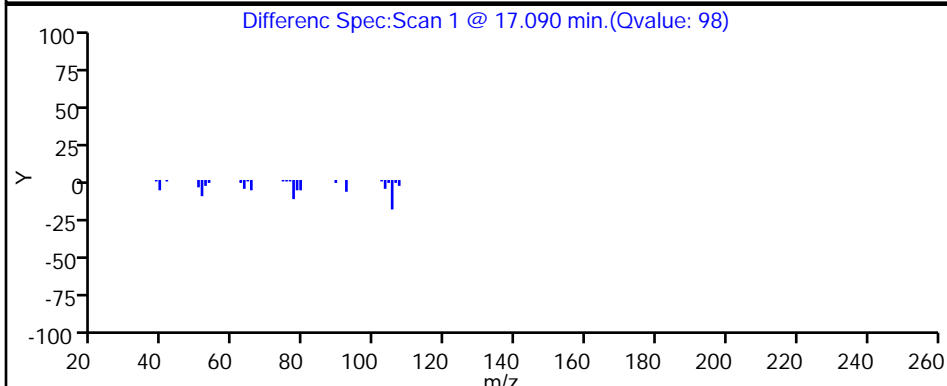
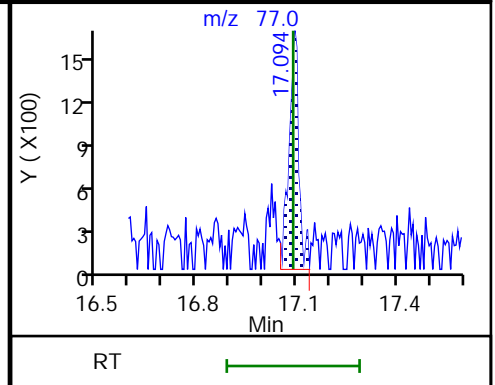
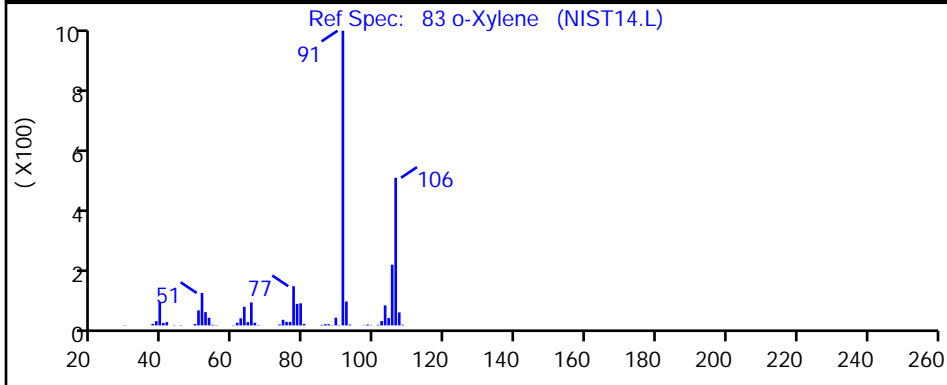
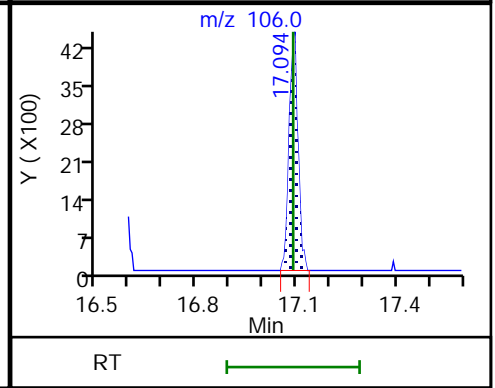
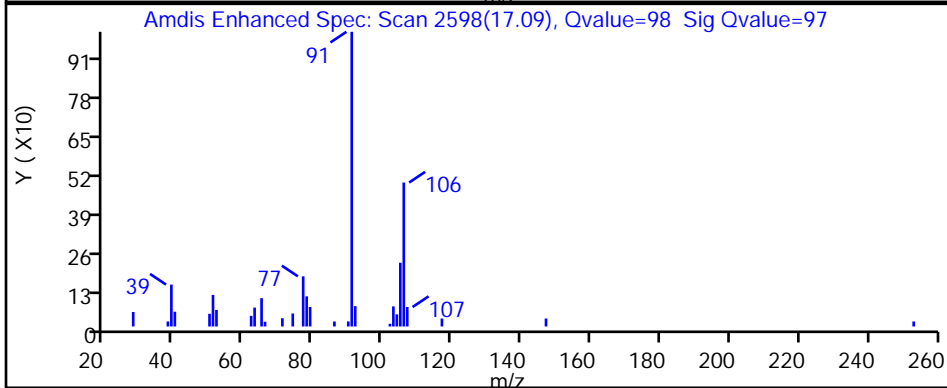
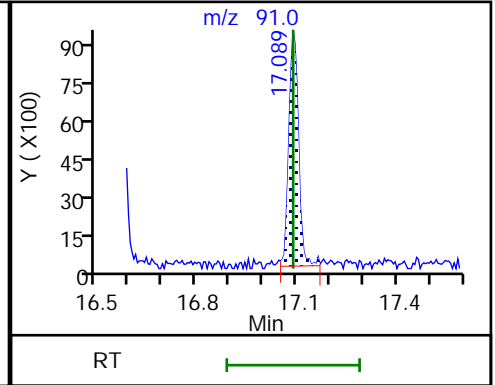
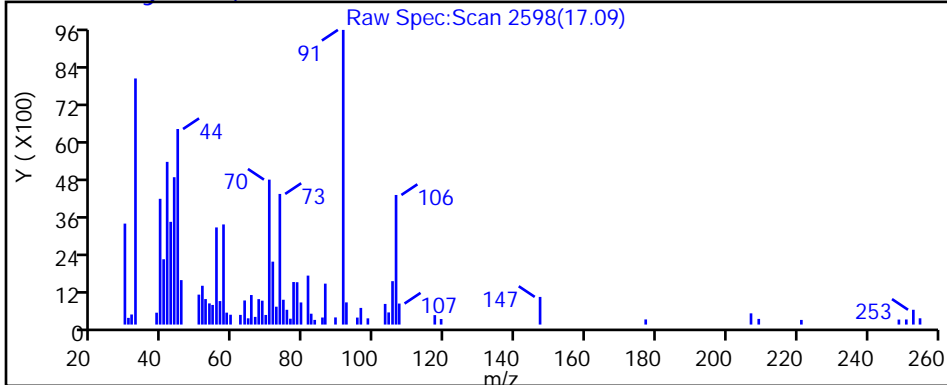
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



TestAmerica Knoxville

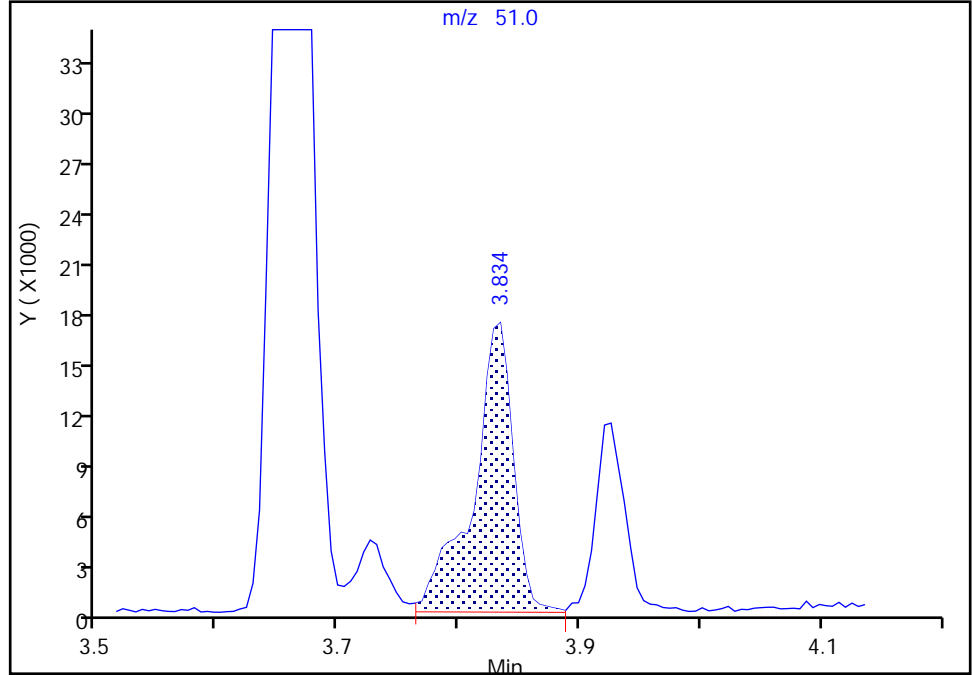
Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P116D.D
Injection Date: 27-Feb-2019 03:05:30 Instrument ID: MG
Lims ID: 140-14389-A-8 Lab Sample ID: 140-14389-8
Client ID: SV-155-C-26
Operator ID: 7126 ALS Bottle#: 16 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

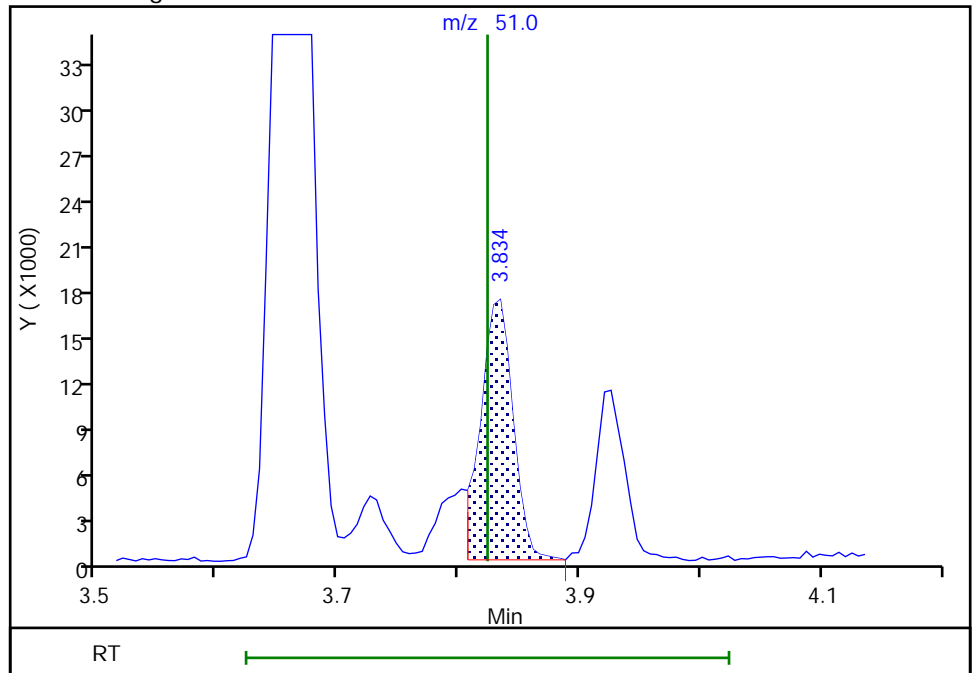
RT: 3.83
Area: 38967
Amount: 0.129364
Amount Units: ppb v/v

Processing Integration Results



RT: 3.83
Area: 31429
Amount: 0.104339
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 15:50:56

Audit Action: Manually Integrated

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-133-C-26 Lab Sample ID: 140-14389-9
 Matrix: Air Lab File ID: GB27p101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:52
 Sample wt/vol: 40 (mL) Date Analyzed: 02/27/2019 17:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.0	0.29
56-23-5	Carbon tetrachloride	153.81	ND		1.0	0.19
75-45-6	Chlorodifluoromethane	86.47	0.79	J	1.0	0.19
67-66-3	Chloroform	119.38	2.7		1.0	0.19
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.0	0.30
75-71-8	Dichlorodifluoromethane	120.91	0.52	J	1.0	0.34
75-34-3	1,1-Dichloroethane	98.96	ND		1.0	0.13
107-06-2	1,2-Dichloroethane	98.96	ND		1.0	0.24
75-35-4	1,1-Dichloroethene	96.94	ND		1.0	0.18
100-41-4	Ethylbenzene	106.17	ND		1.0	0.34
75-09-2	Methylene Chloride	84.93	2.1	J	5.0	1.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		5.0	0.85
91-20-3	Naphthalene	128.17	ND		0.50	0.50
127-18-4	Tetrachloroethene	165.83	2.4		1.0	0.20
108-88-3	Toluene	92.14	ND		1.5	1.5
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.0	0.25
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1.0	0.49
71-55-6	1,1,1-Trichloroethane	133.41	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	133.41	ND		1.0	0.26
79-01-6	Trichloroethene	131.39	140		0.50	0.18
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		1.0	0.43
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		1.0	0.31
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		1.0	0.33
75-01-4	Vinyl chloride	62.50	ND		0.50	0.36
1330-20-7	Xylenes, Total	106.17	ND		2.0	0.30

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-133-C-26 Lab Sample ID: 140-14389-9
 Matrix: Air Lab File ID: GB27p101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:52
 Sample wt/vol: 40 (mL) Date Analyzed: 02/27/2019 17:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		3.2	0.92
56-23-5	Carbon tetrachloride	153.81	ND		6.3	1.2
75-45-6	Chlorodifluoromethane	86.47	2.8	J	3.5	0.66
67-66-3	Chloroform	119.38	13		4.9	0.92
156-59-2	cis-1,2-Dichloroethene	96.94	ND		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	2.6	J	4.9	1.7
75-34-3	1,1-Dichloroethane	98.96	ND		4.0	0.51
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.96
75-35-4	1,1-Dichloroethene	96.94	ND		4.0	0.69
100-41-4	Ethylbenzene	106.17	ND		4.3	1.5
75-09-2	Methylene Chloride	84.93	7.1	J	17	5.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		18	3.1
91-20-3	Naphthalene	128.17	ND		2.6	2.6
127-18-4	Tetrachloroethene	165.83	16		6.8	1.4
108-88-3	Toluene	92.14	ND		5.7	5.7
156-60-5	trans-1,2-Dichloroethene	96.94	ND		4.0	0.99
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		7.4	3.6
71-55-6	1,1,1-Trichloroethane	133.41	ND		5.5	0.82
79-00-5	1,1,2-Trichloroethane	133.41	ND		5.5	1.4
79-01-6	Trichloroethene	131.39	760		2.7	0.94
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.9	2.1
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.9	1.5
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.9	1.6
75-01-4	Vinyl chloride	62.50	ND		1.3	0.93
1330-20-7	Xylenes, Total	106.17	ND		8.7	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p101.D
 Lims ID: 140-14389-A-9
 Client ID: SV-133-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 17:22:30 ALS Bottle#: 1 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-008
 Misc. Info.: 140-14389-A-9
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:28:56 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:28:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.227	9.237	-0.010	97	439243	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.410	-0.010	97	2502675	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	92	2291491	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	86	1808607	3.85	
6 Chlorodifluoromethane	51	3.834	3.829	0.005	52	18148	0.0631	
8 Dichlorodifluoromethane	85	3.899	3.889	0.006	99	19272	0.0414	
31 Methylene Chloride	84	6.595	6.600	-0.005	98	29655	0.1644	
44 Chloroform	83	9.237	9.248	-0.011	95	78780	0.2145	
58 Trichloroethene	130	12.106	12.100	-0.005	94	2294537	11.3	
73 Tetrachloroethene	129	15.255	15.255	0.000	90	36561	0.1933	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p101.D

Injection Date: 27-Feb-2019 17:22:30

Instrument ID: MG

Operator ID: 403648

Lims ID: 140-14389-A-9

Lab Sample ID: 140-14389-9

Worklist Smp#: 8

Client ID: SV-133-C-26

Purge Vol: 500.000 mL

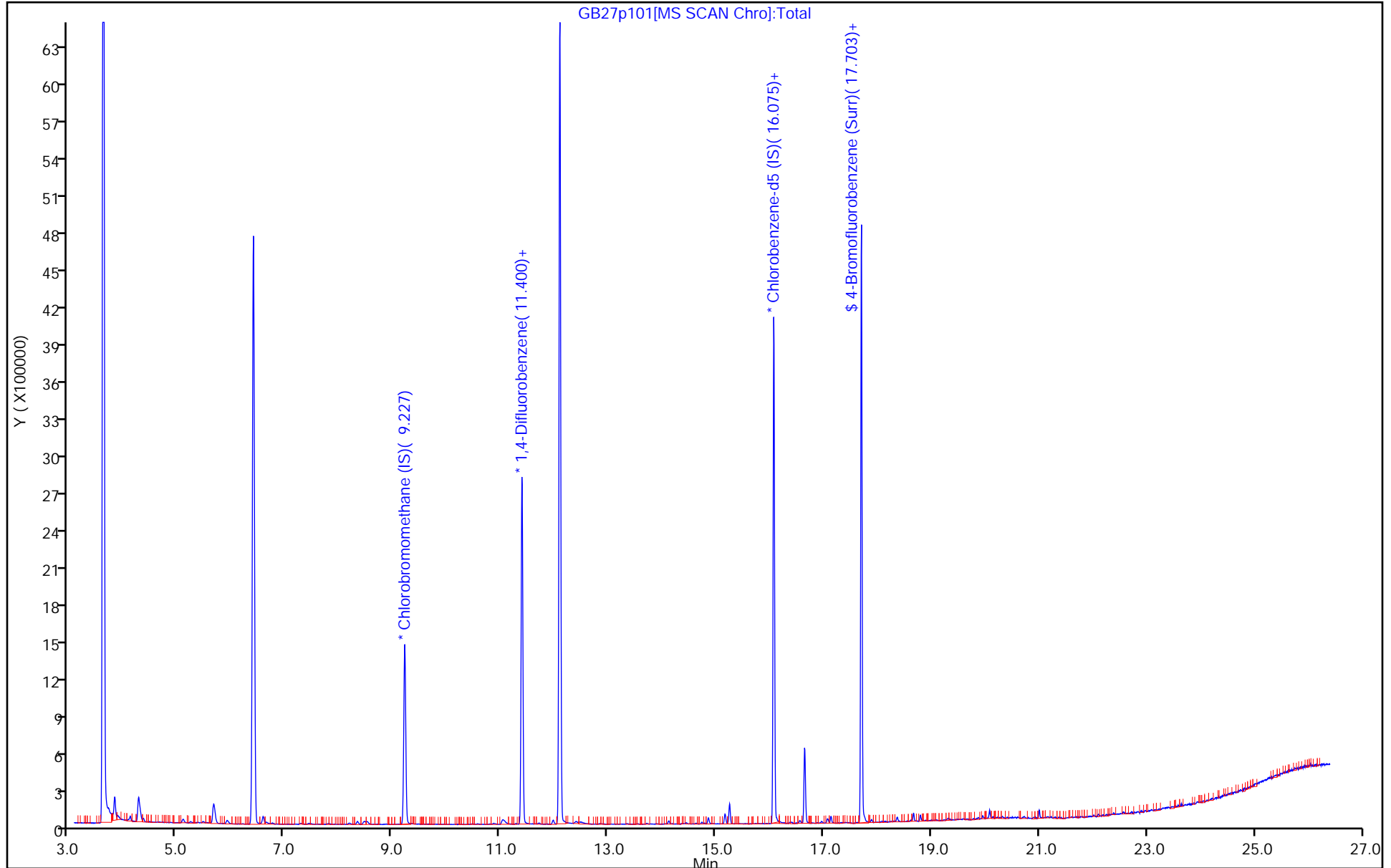
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p101.D
 Lims ID: 140-14389-A-9
 Client ID: SV-133-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 17:22:30 ALS Bottle#: 1 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-008
 Misc. Info.: 140-14389-A-9
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:28:56 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:28:56

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.85	96.29

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p101.D

Injection Date: 27-Feb-2019 17:22:30

Instrument ID: MG

Lims ID: 140-14389-A-9

Lab Sample ID: 140-14389-9

Client ID: SV-133-C-26

Operator ID: 403648

ALS Bottle#: 1 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

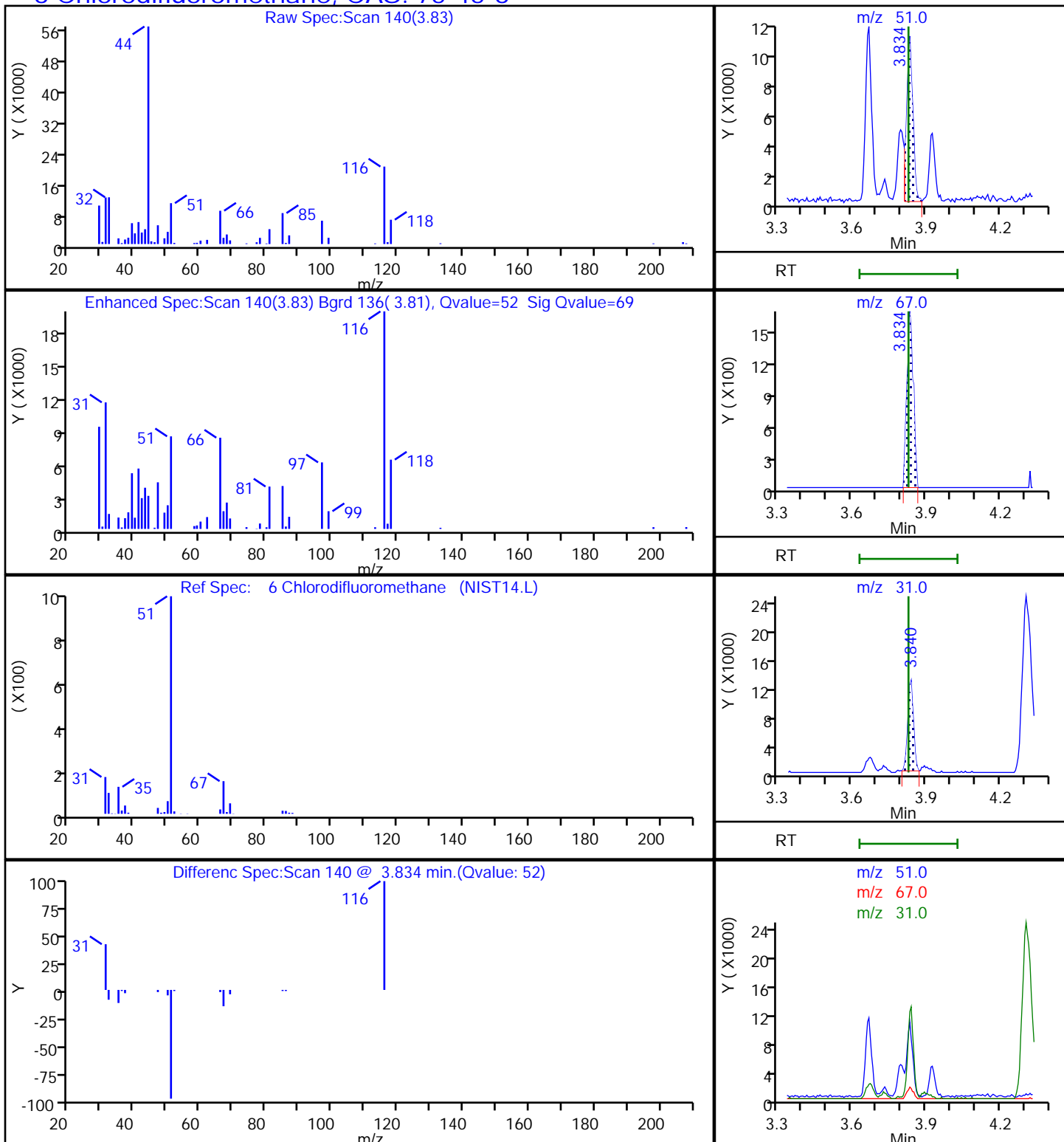
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p101.D

Injection Date: 27-Feb-2019 17:22:30

Instrument ID: MG

Lims ID: 140-14389-A-9

Lab Sample ID: 140-14389-9

Client ID: SV-133-C-26

Operator ID: 403648

ALS Bottle#: 1 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

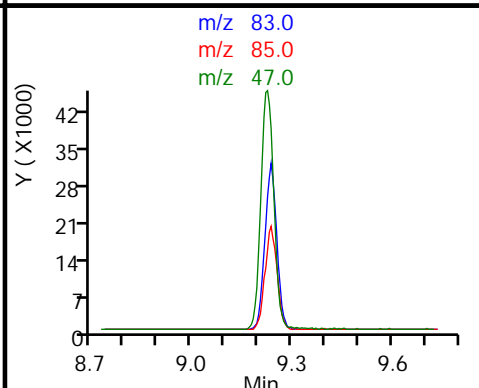
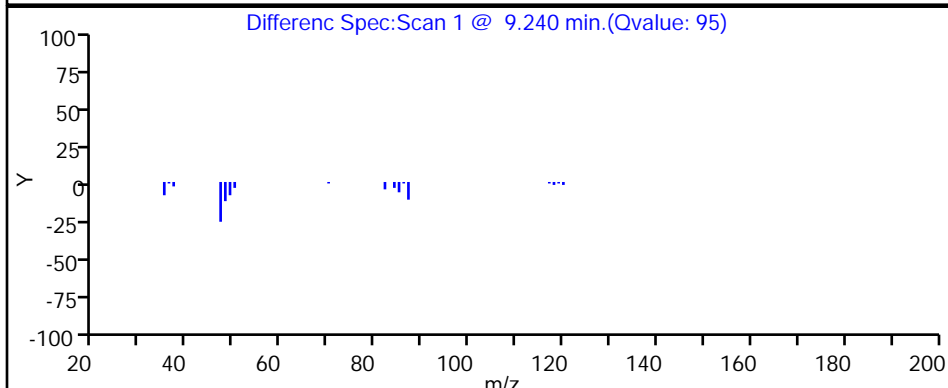
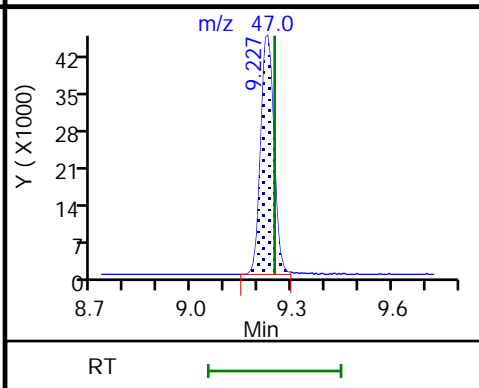
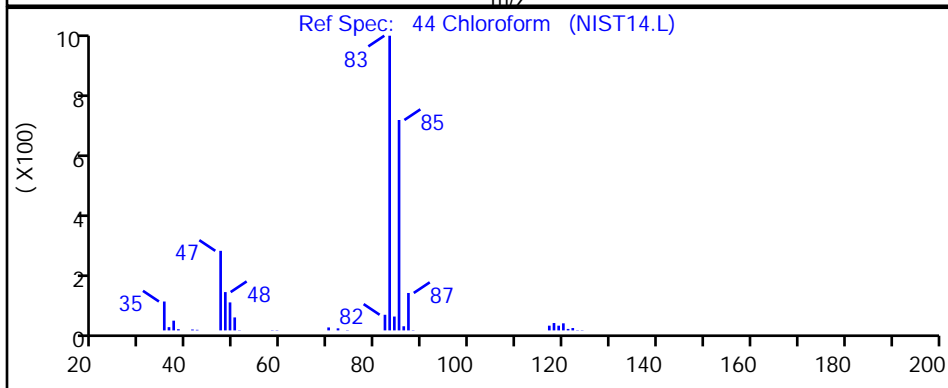
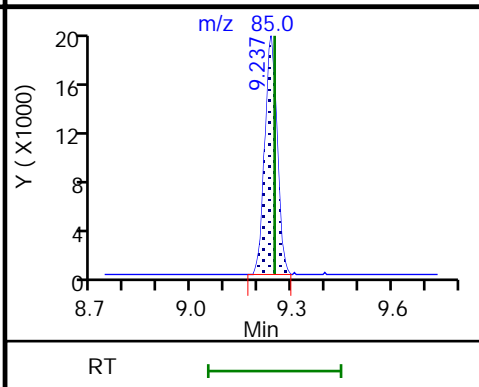
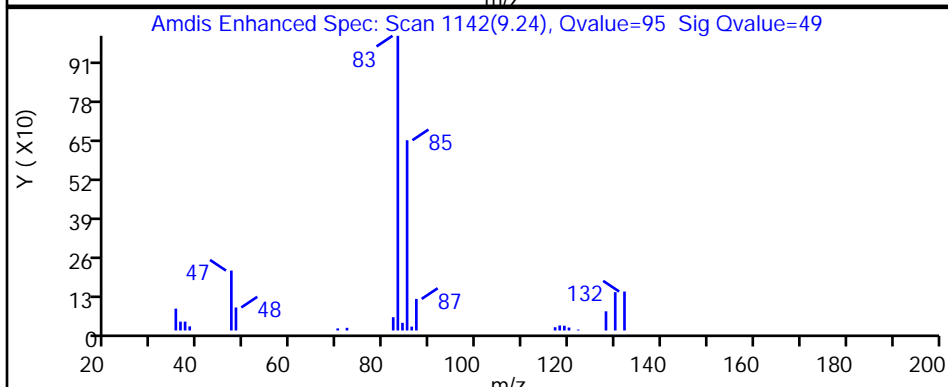
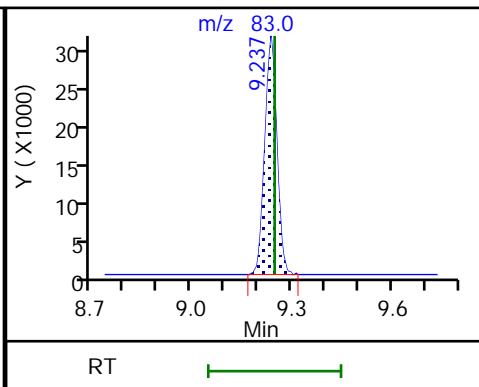
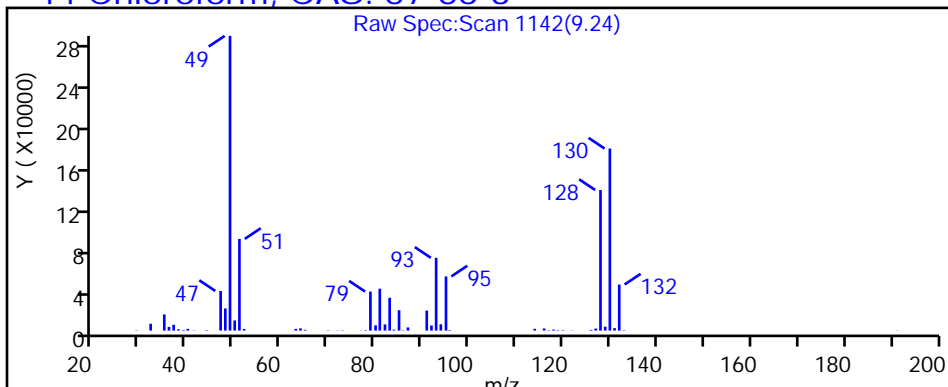
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

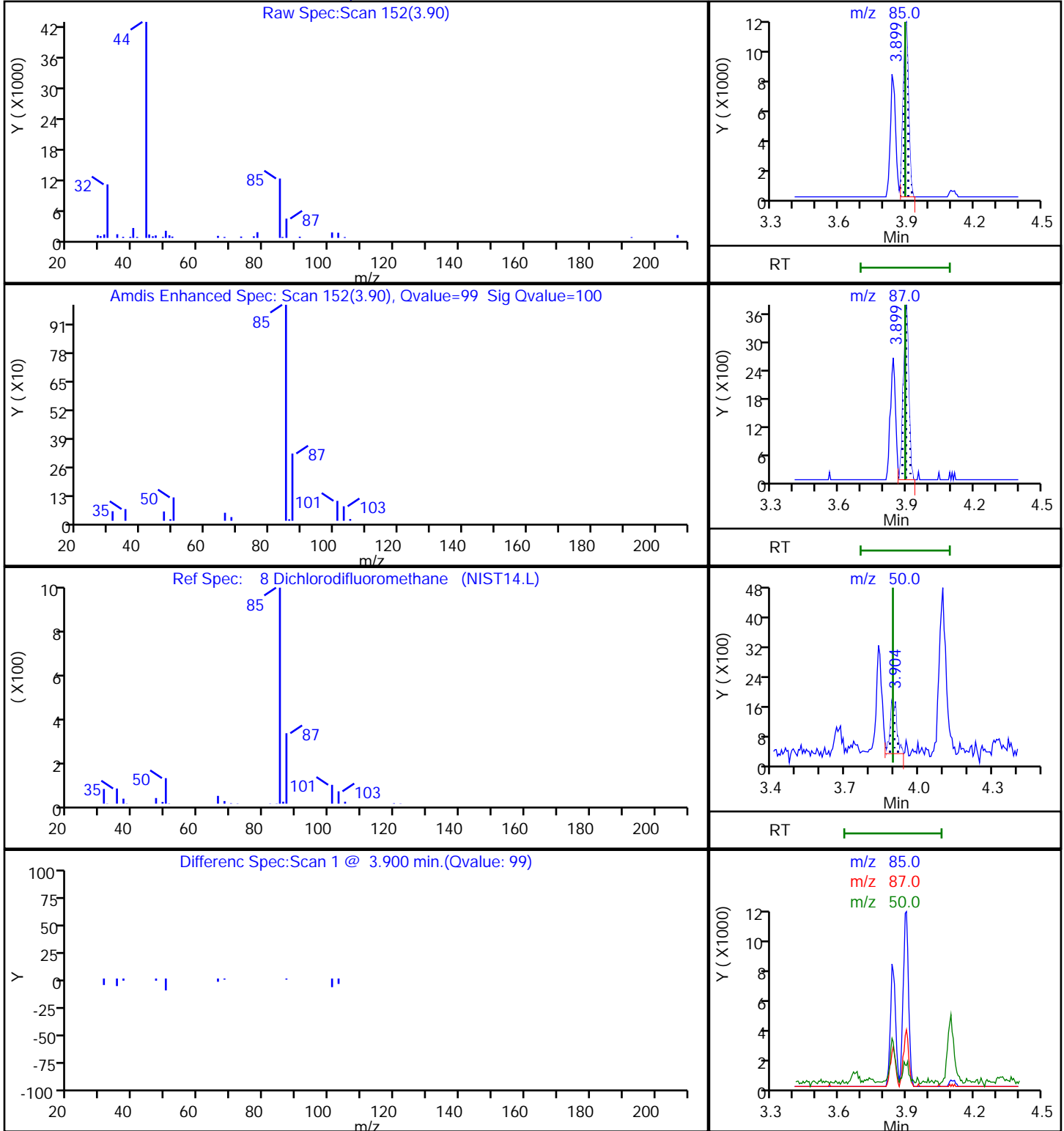
44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p101.D
Injection Date: 27-Feb-2019 17:22:30 Instrument ID: MG
Lims ID: 140-14389-A-9 Lab Sample ID: 140-14389-9
Client ID: SV-133-C-26
Operator ID: 403648 ALS Bottle#: 1 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p101.D

Injection Date: 27-Feb-2019 17:22:30

Instrument ID: MG

Lims ID: 140-14389-A-9

Lab Sample ID: 140-14389-9

Client ID: SV-133-C-26

Operator ID: 403648

ALS Bottle#: 1 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

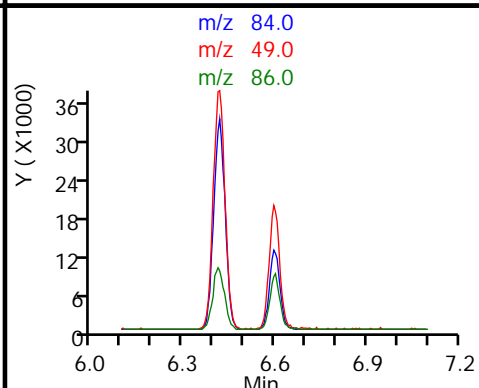
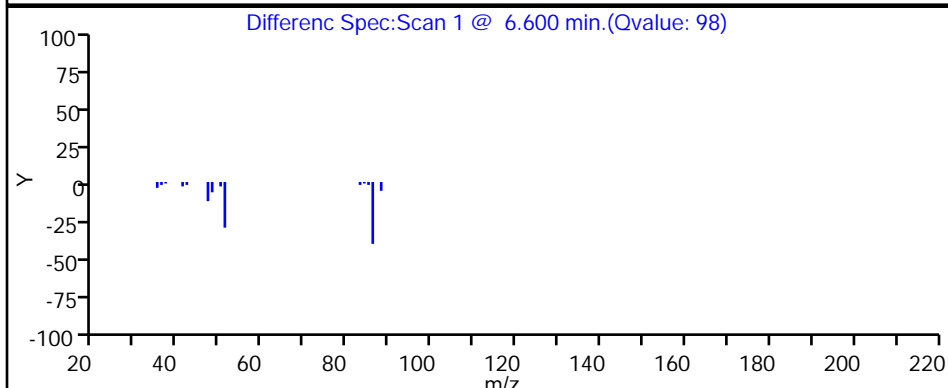
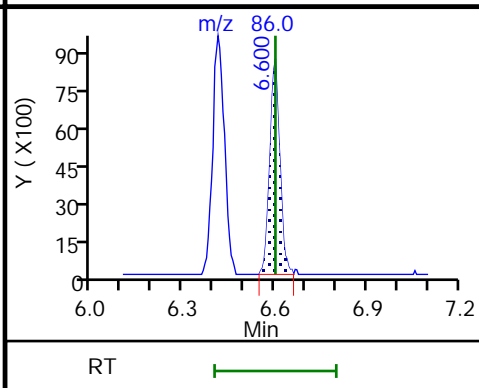
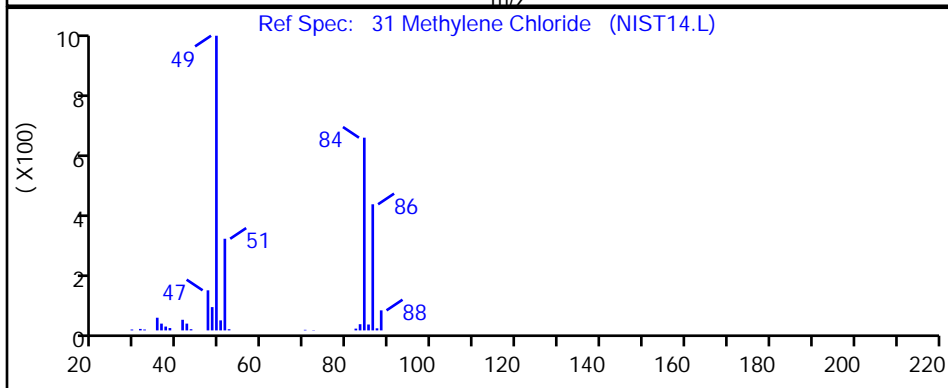
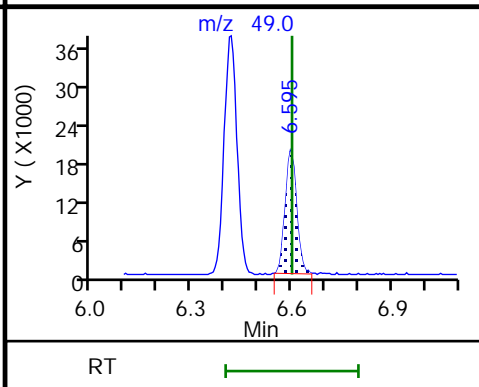
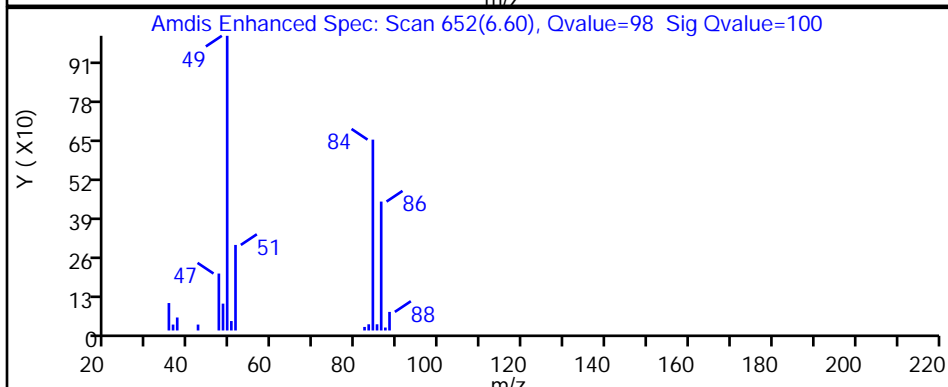
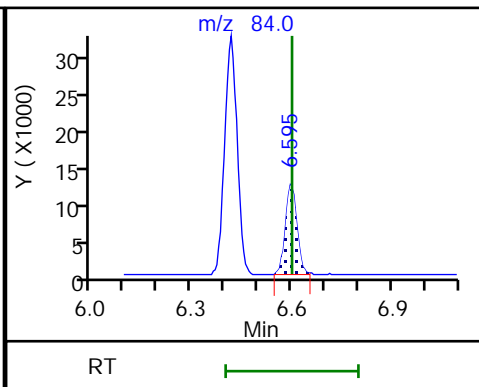
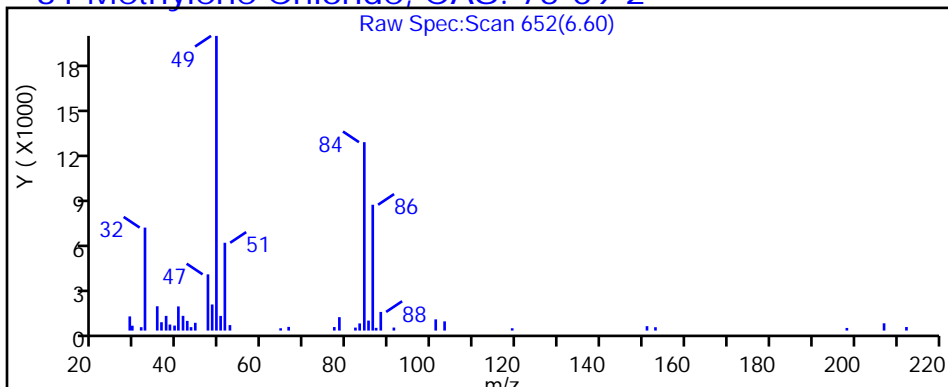
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p101.D

Injection Date: 27-Feb-2019 17:22:30

Instrument ID: MG

Lims ID: 140-14389-A-9

Lab Sample ID: 140-14389-9

Client ID: SV-133-C-26

Operator ID: 403648

ALS Bottle#: 1 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

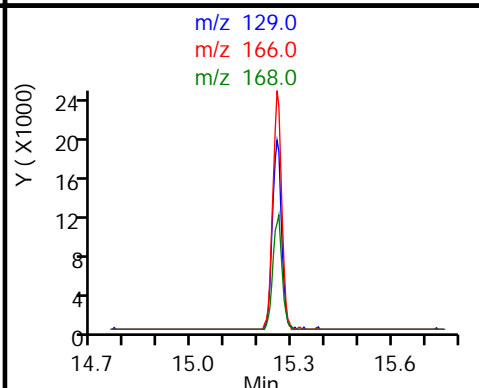
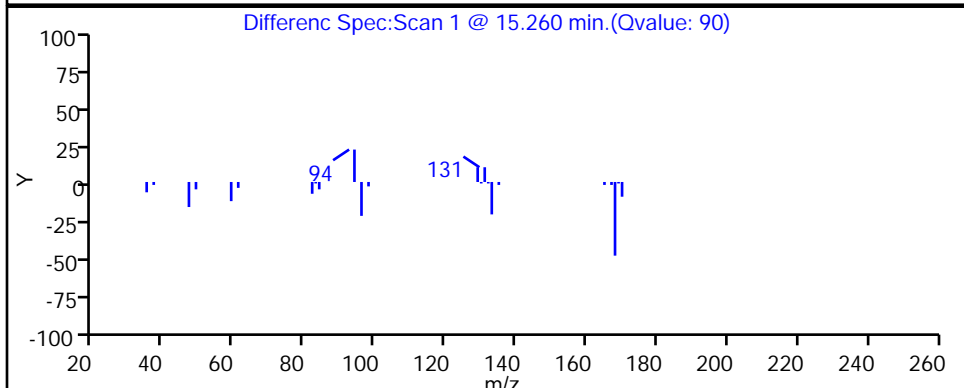
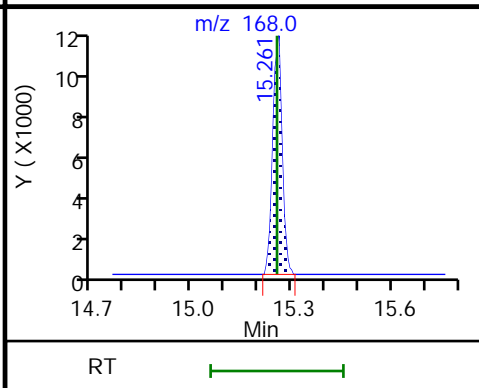
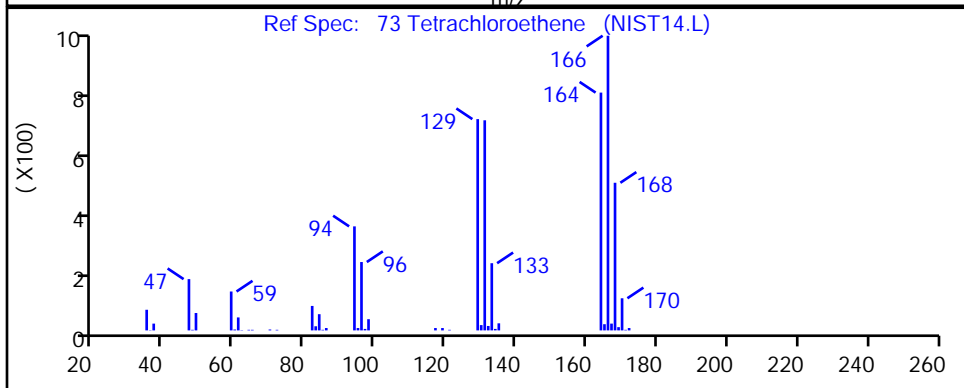
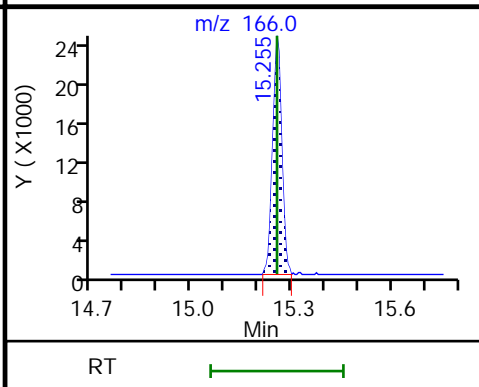
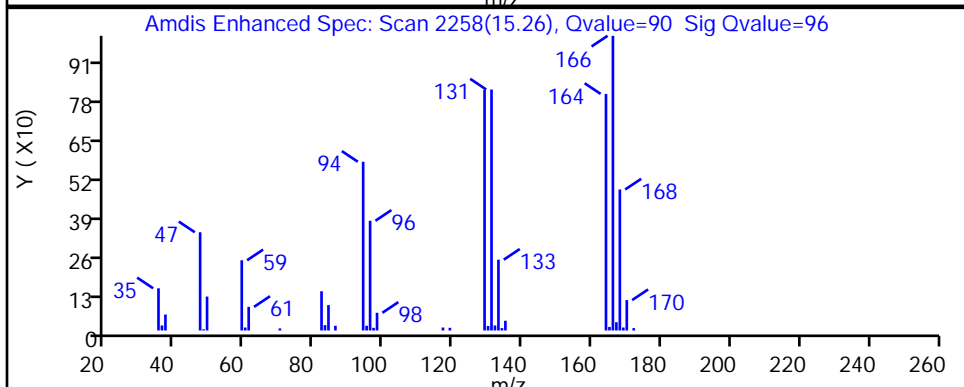
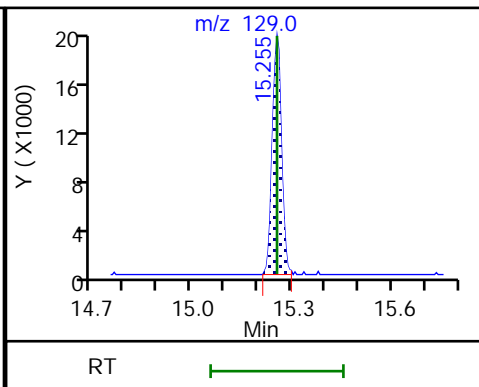
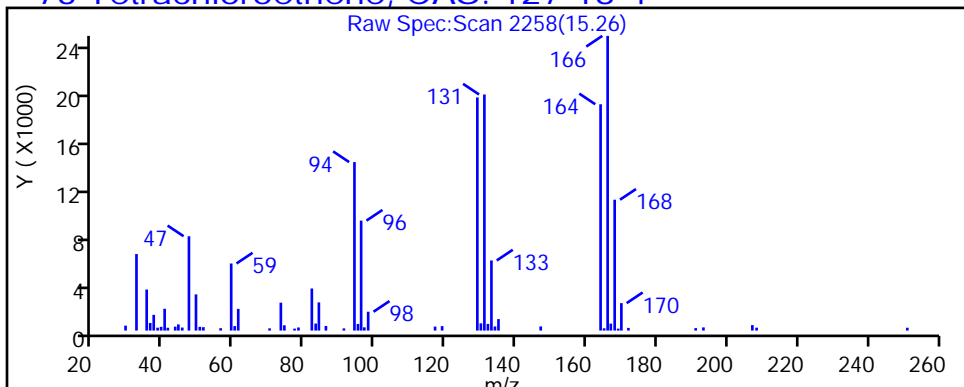
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p101.D

Injection Date: 27-Feb-2019 17:22:30

Instrument ID: MG

Lims ID: 140-14389-A-9

Lab Sample ID: 140-14389-9

Client ID: SV-133-C-26

Operator ID: 403648

ALS Bottle#: 1 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

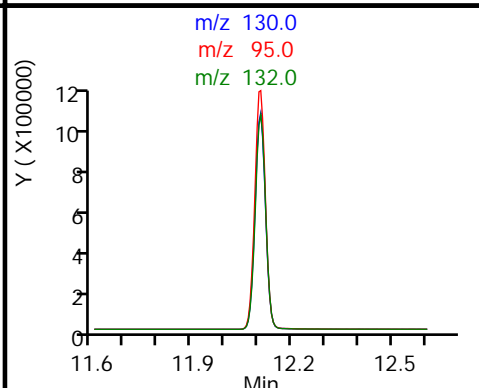
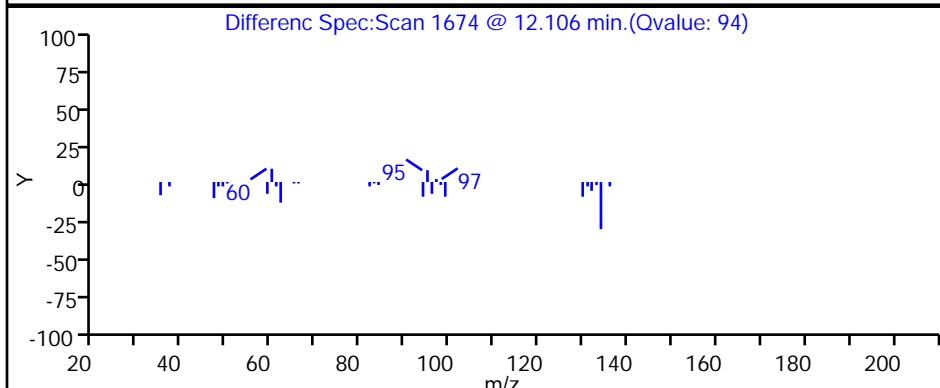
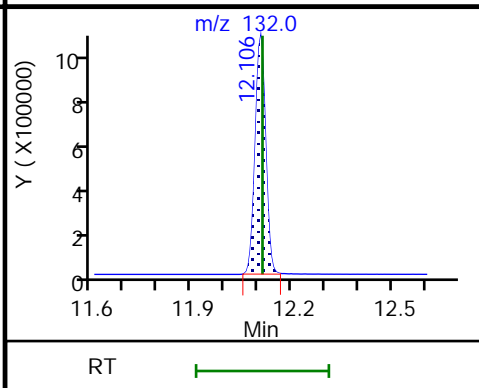
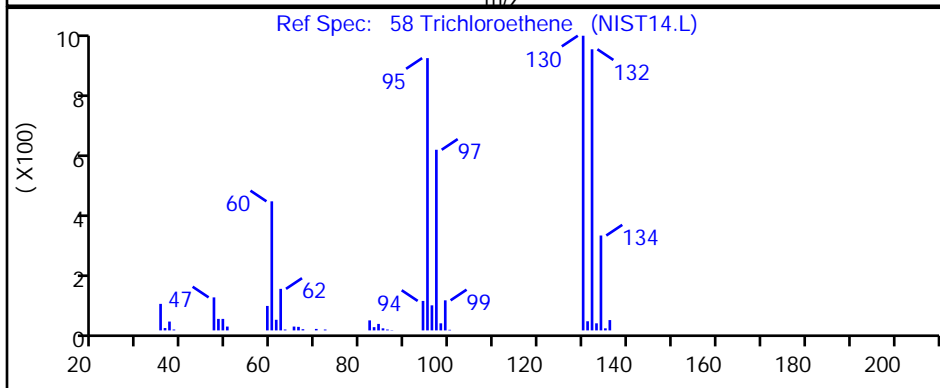
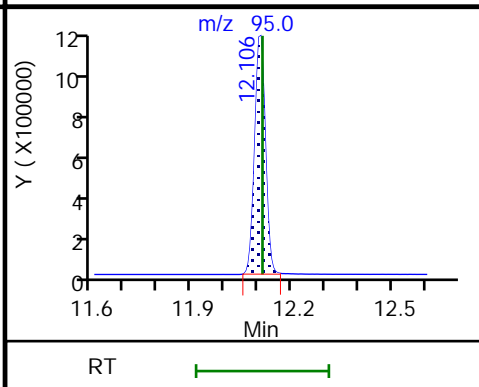
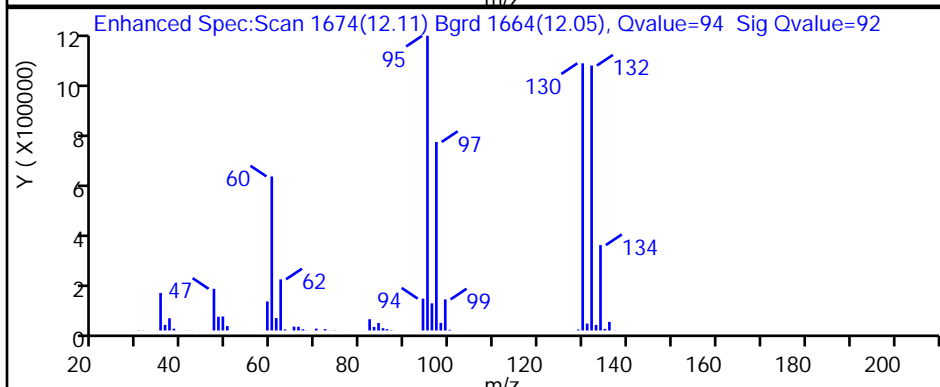
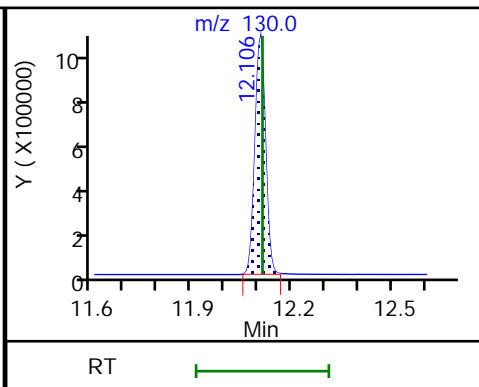
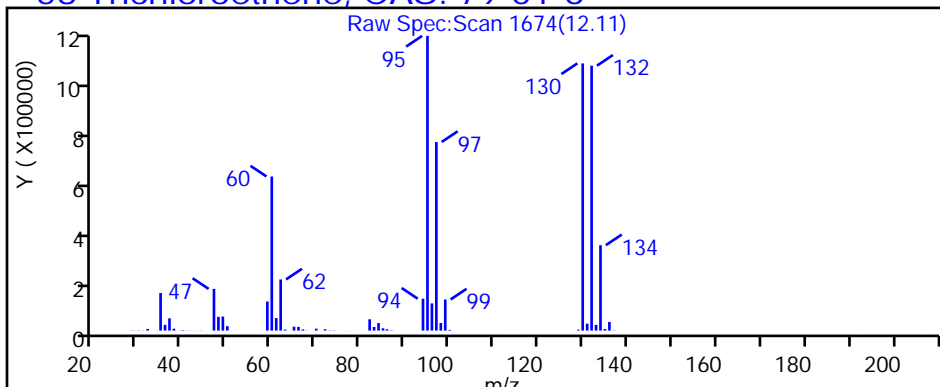
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

58 Trichloroethene, CAS: 79-01-6

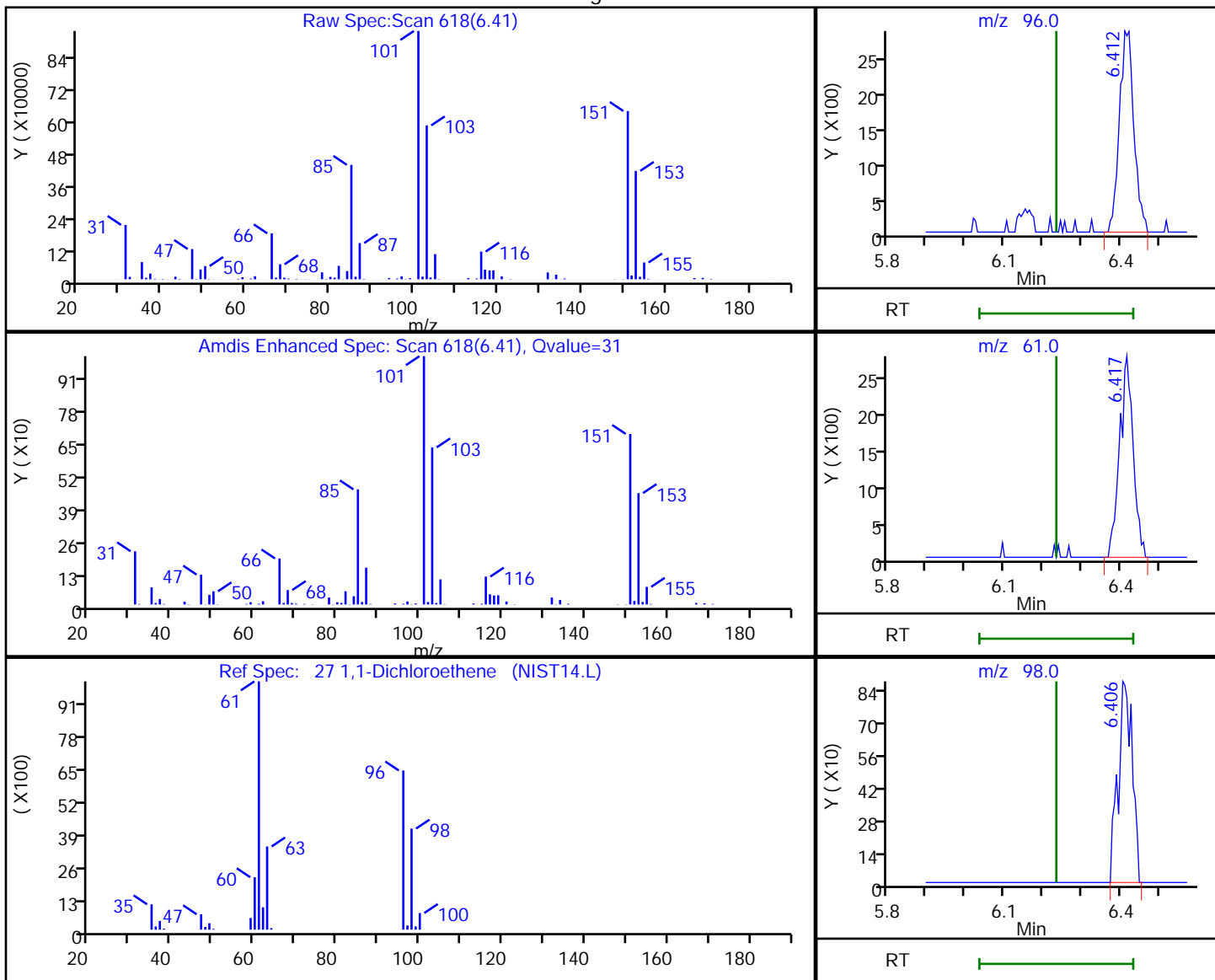


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p101.D
 Injection Date: 27-Feb-2019 17:22:30 Instrument ID: MG
 Lims ID: 140-14389-A-9 Lab Sample ID: 140-14389-9
 Client ID: SV-133-C-26
 Operator ID: 403648 ALS Bottle#: 1 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4

Processing Results



RT	Mass	Response	Amount
6.41	96.00	7362	0.047487
6.42	61.00	6799	
6.41	98.00	2228	

Reviewer: khachitpongpanits, 28-Feb-2019 14:28:17

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-153-C-26 Lab Sample ID: 140-14389-10
 Matrix: Air Lab File ID: GB27p102.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 18:04
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.58		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.0		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.15	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-153-C-26 Lab Sample ID: 140-14389-10
 Matrix: Air Lab File ID: GB27p102.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 18:04
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	0.65	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p102.D
 Lims ID: 140-14389-A-10
 Client ID: SV-153-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 18:04:30 ALS Bottle#: 2 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-009
 Misc. Info.: 140-14389-A-10
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:28:56 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:29:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.221	9.237	-0.016	97	443609	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.410	-0.010	96	2572234	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2373427	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	83	1938413	3.99	
6 Chlorodifluoromethane	51	3.834	3.829	0.005	96	33856	0.1165	
8 Dichlorodifluoromethane	85	3.893	3.889	0.000	100	46397	0.0988	
31 Methylene Chloride	84	6.600	6.600	0.000	98	38305	0.2103	
58 Trichloroethene	130	12.106	12.100	-0.005	94	42487	0.2028	
67 Toluene	91	14.123	14.128	-0.005	94	26981	0.0517	
83 o-Xylene	91	17.088	17.094	-0.006	98	16932	0.0296	
S 124 Xylenes, Total	100				0		0.0296	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p102.D

Injection Date: 27-Feb-2019 18:04:30

Instrument ID: MG

Operator ID: 403648

Lims ID: 140-14389-A-10

Lab Sample ID: 140-14389-10

Worklist Smp#: 9

Client ID: SV-153-C-26

Purge Vol: 500.000 mL

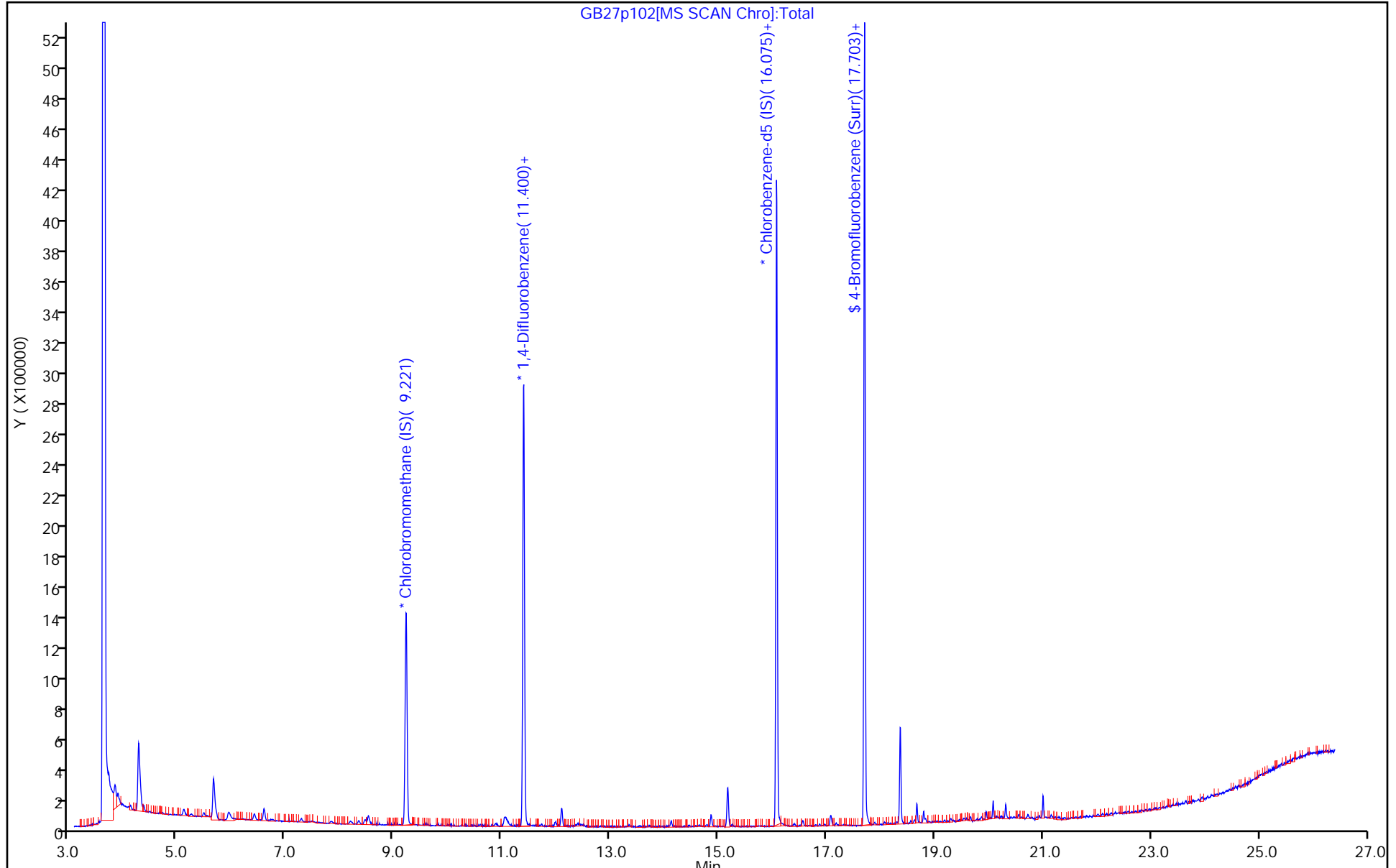
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p102.D
 Lims ID: 140-14389-A-10
 Client ID: SV-153-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 18:04:30 ALS Bottle#: 2 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-009
 Misc. Info.: 140-14389-A-10
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:28:56 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:29:28

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.99	99.64

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p102.D

Injection Date: 27-Feb-2019 18:04:30

Instrument ID: MG

Lims ID: 140-14389-A-10

Lab Sample ID: 140-14389-10

Client ID: SV-153-C-26

Operator ID: 403648

ALS Bottle#: 2

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

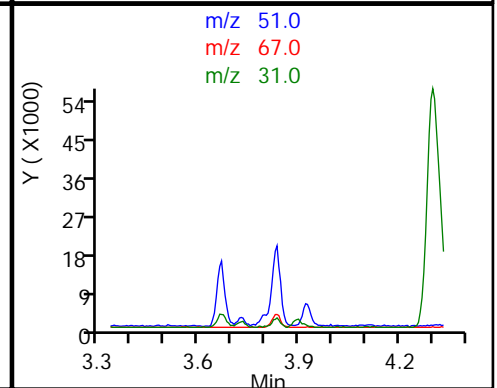
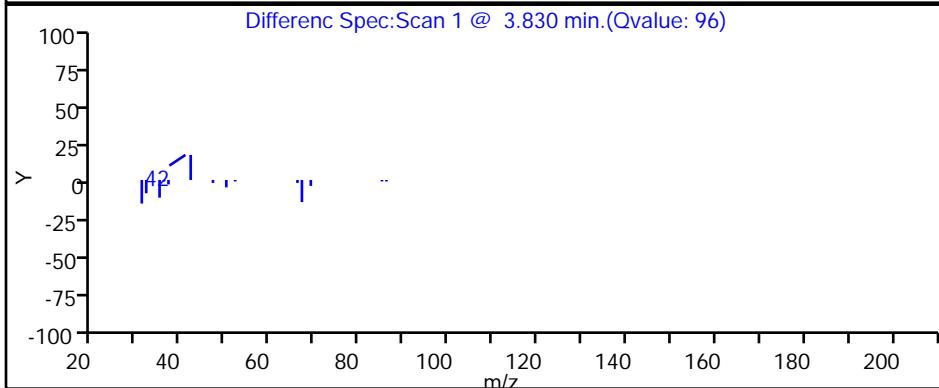
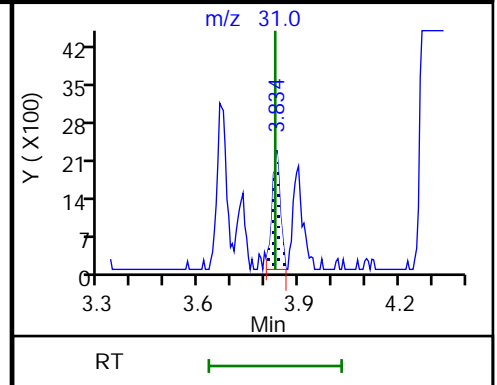
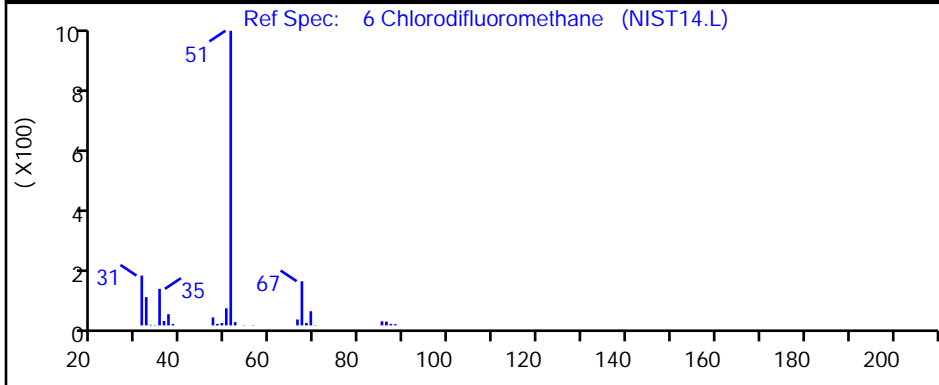
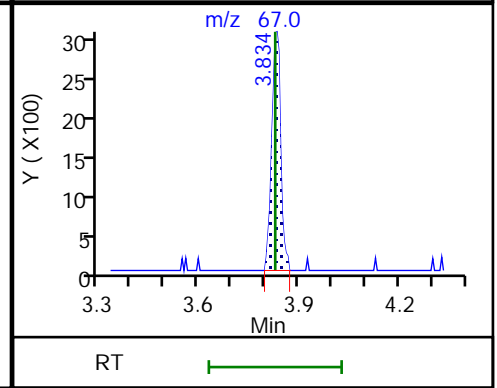
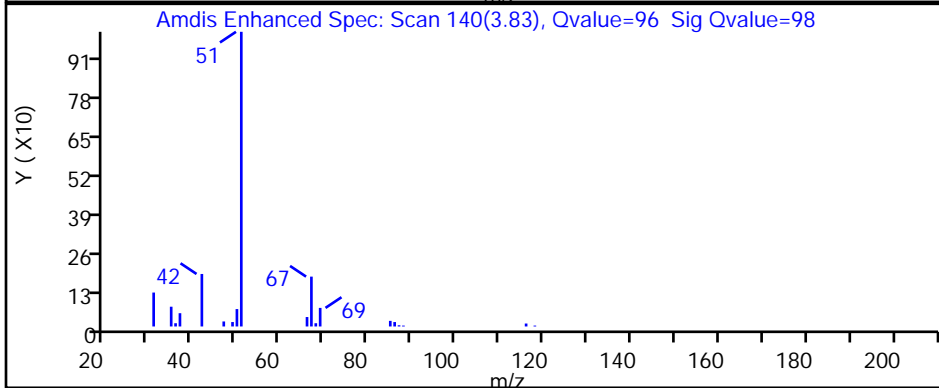
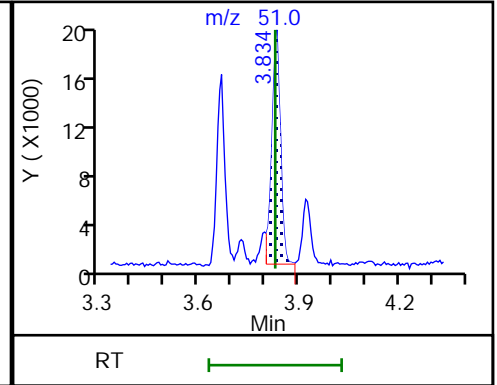
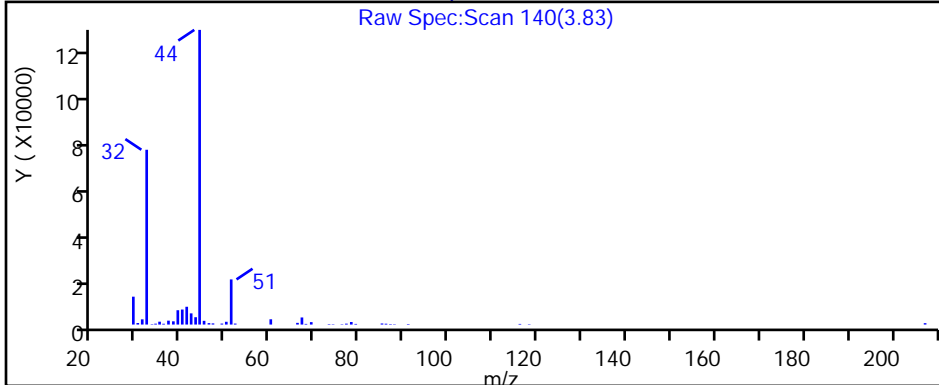
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p102.D

Injection Date: 27-Feb-2019 18:04:30

Instrument ID: MG

Lims ID: 140-14389-A-10

Lab Sample ID: 140-14389-10

Client ID: SV-153-C-26

Operator ID: 403648

ALS Bottle#: 2

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

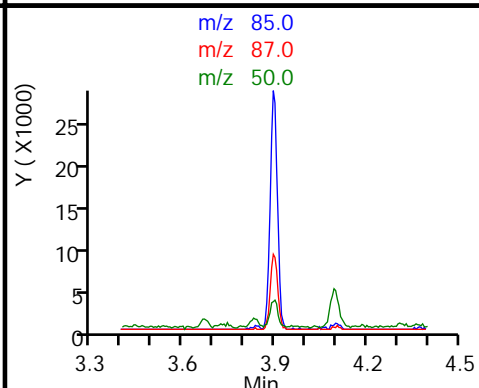
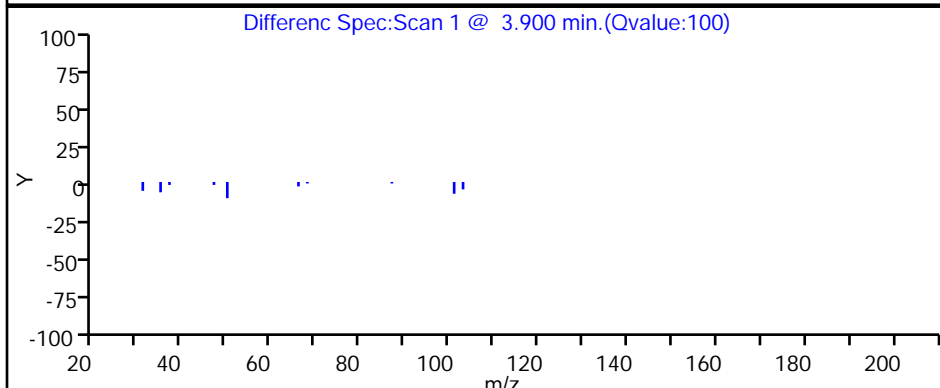
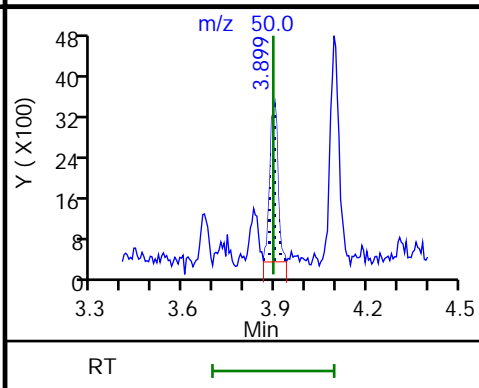
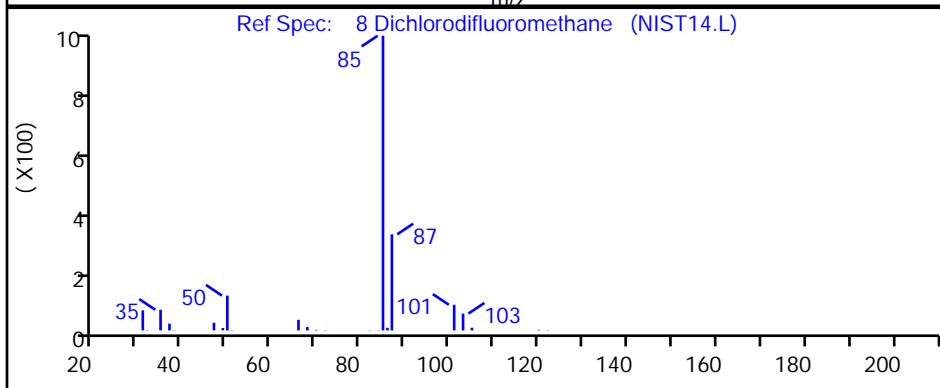
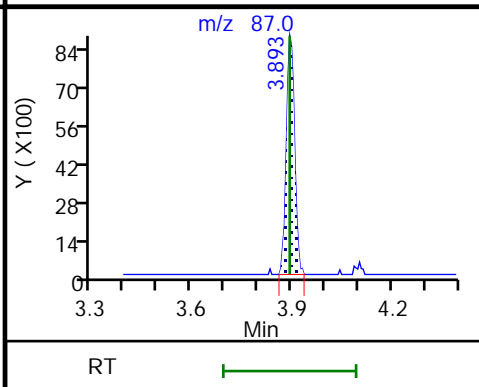
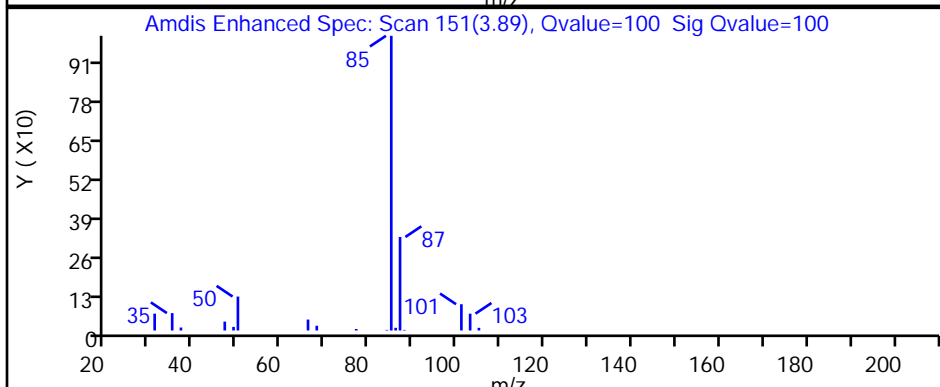
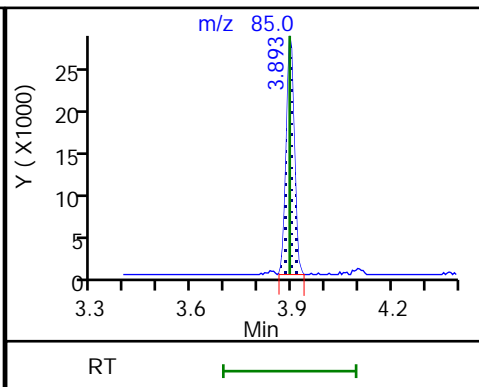
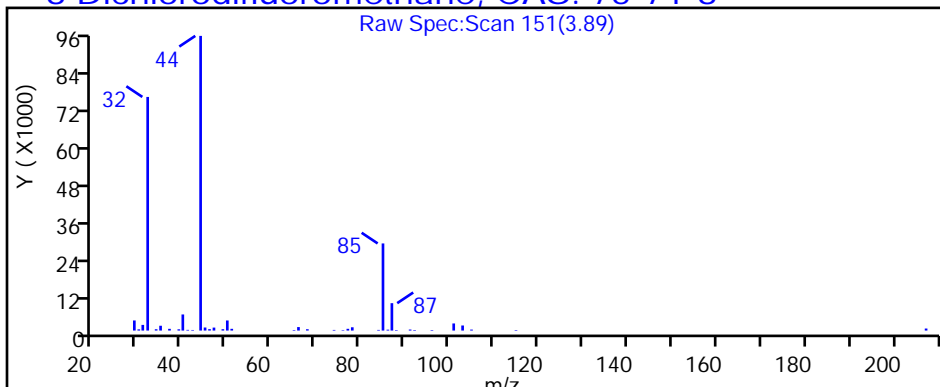
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p102.D

Injection Date: 27-Feb-2019 18:04:30

Instrument ID: MG

Lims ID: 140-14389-A-10

Lab Sample ID: 140-14389-10

Client ID: SV-153-C-26

Operator ID: 403648

ALS Bottle#: 2 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

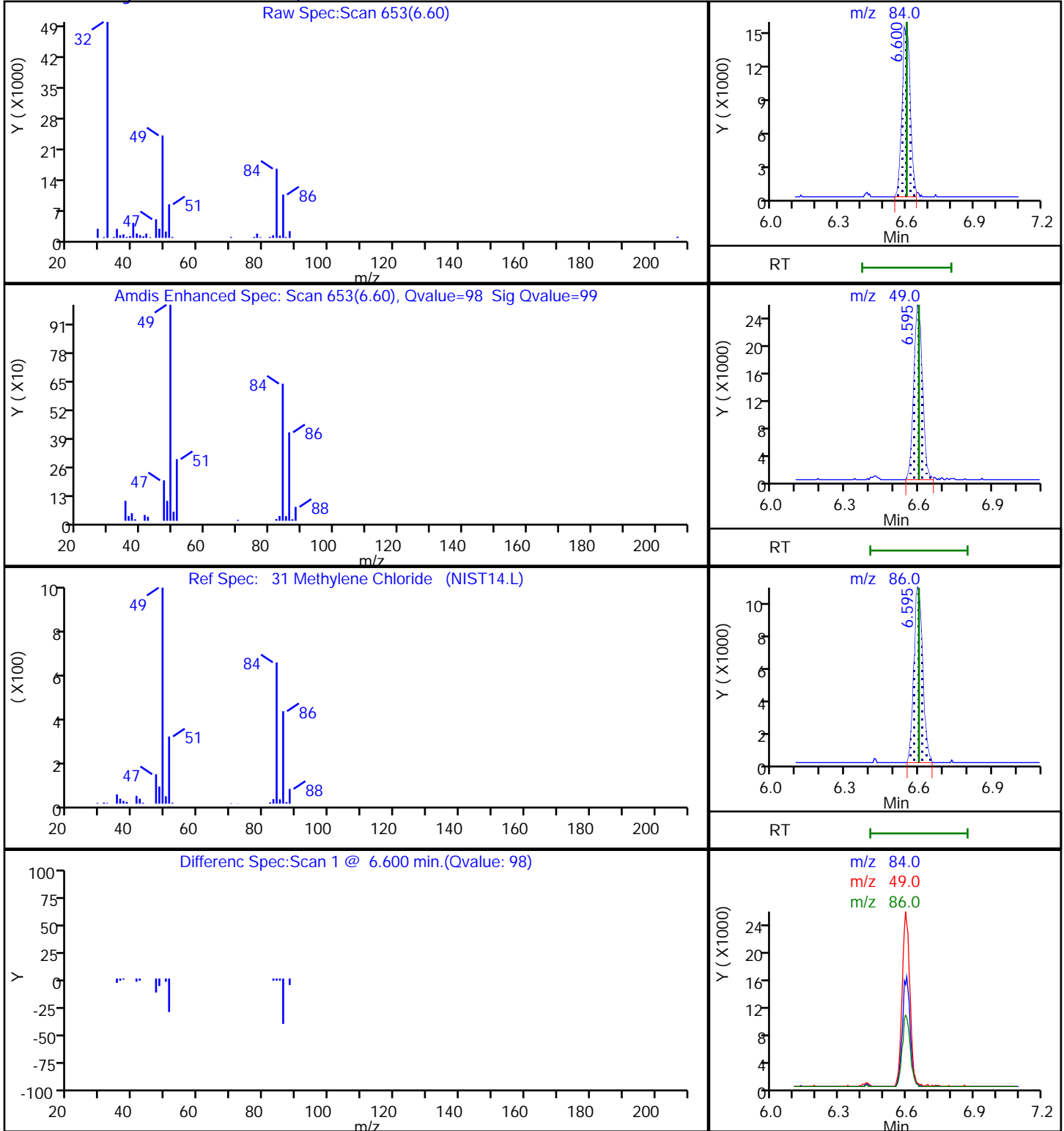
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p102.D

Injection Date: 27-Feb-2019 18:04:30

Instrument ID: MG

Lims ID: 140-14389-A-10

Lab Sample ID: 140-14389-10

Client ID: SV-153-C-26

Operator ID: 403648

ALS Bottle#: 2 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

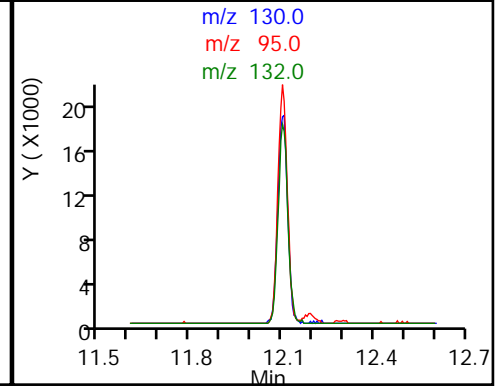
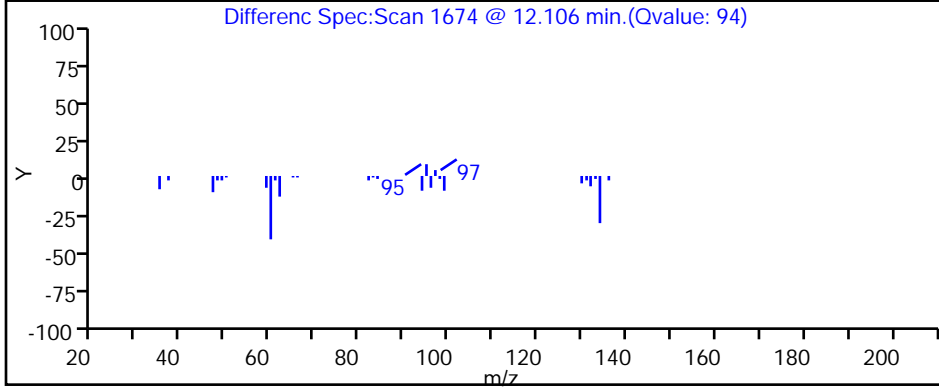
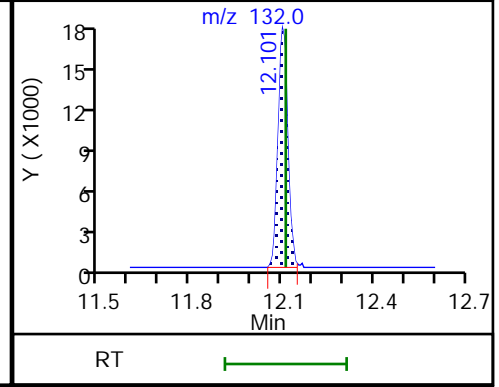
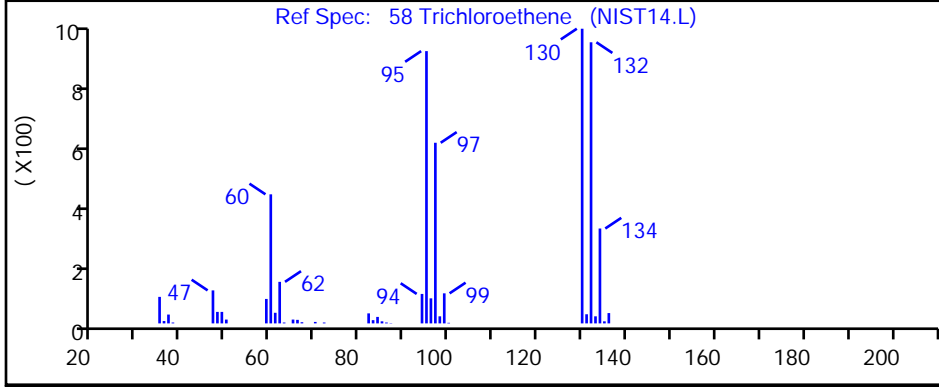
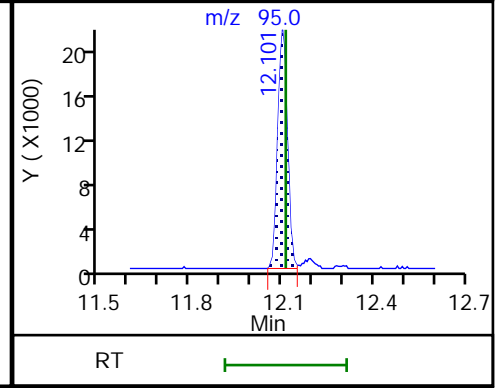
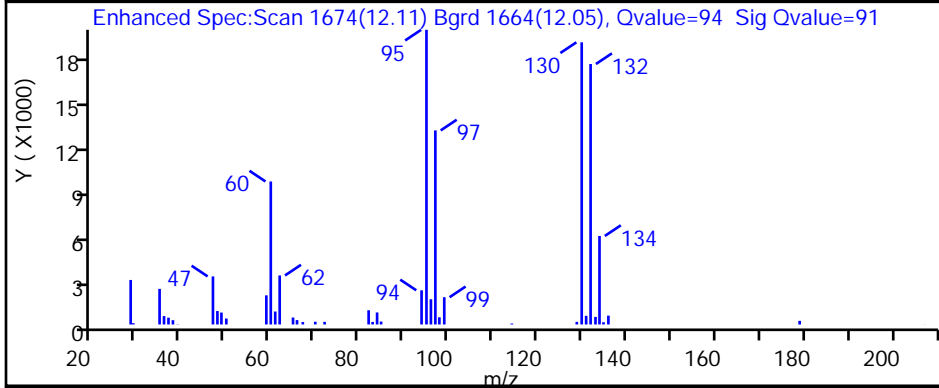
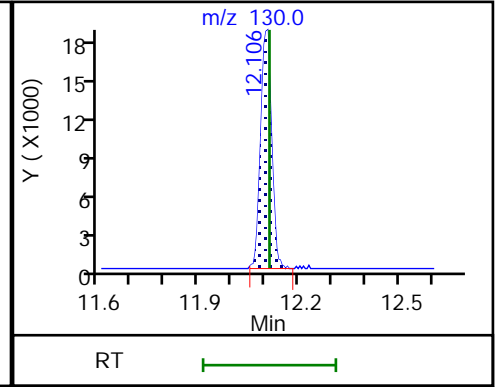
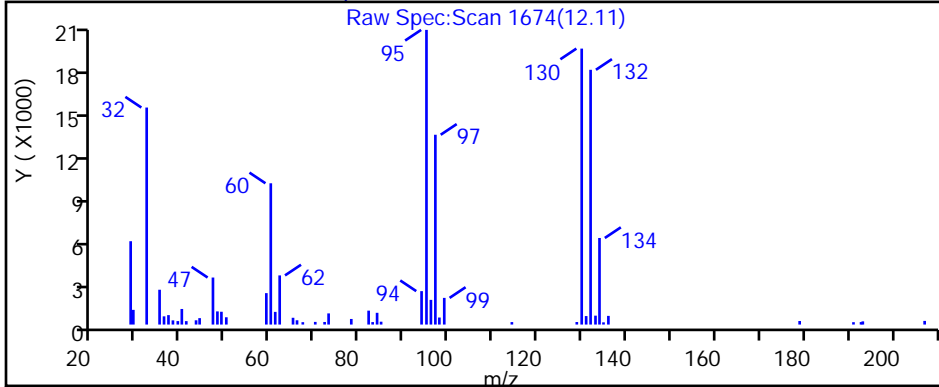
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

58 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p102.D

Injection Date: 27-Feb-2019 18:04:30

Instrument ID: MG

Lims ID: 140-14389-A-10

Lab Sample ID: 140-14389-10

Client ID: SV-153-C-26

Operator ID: 403648

ALS Bottle#: 2 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

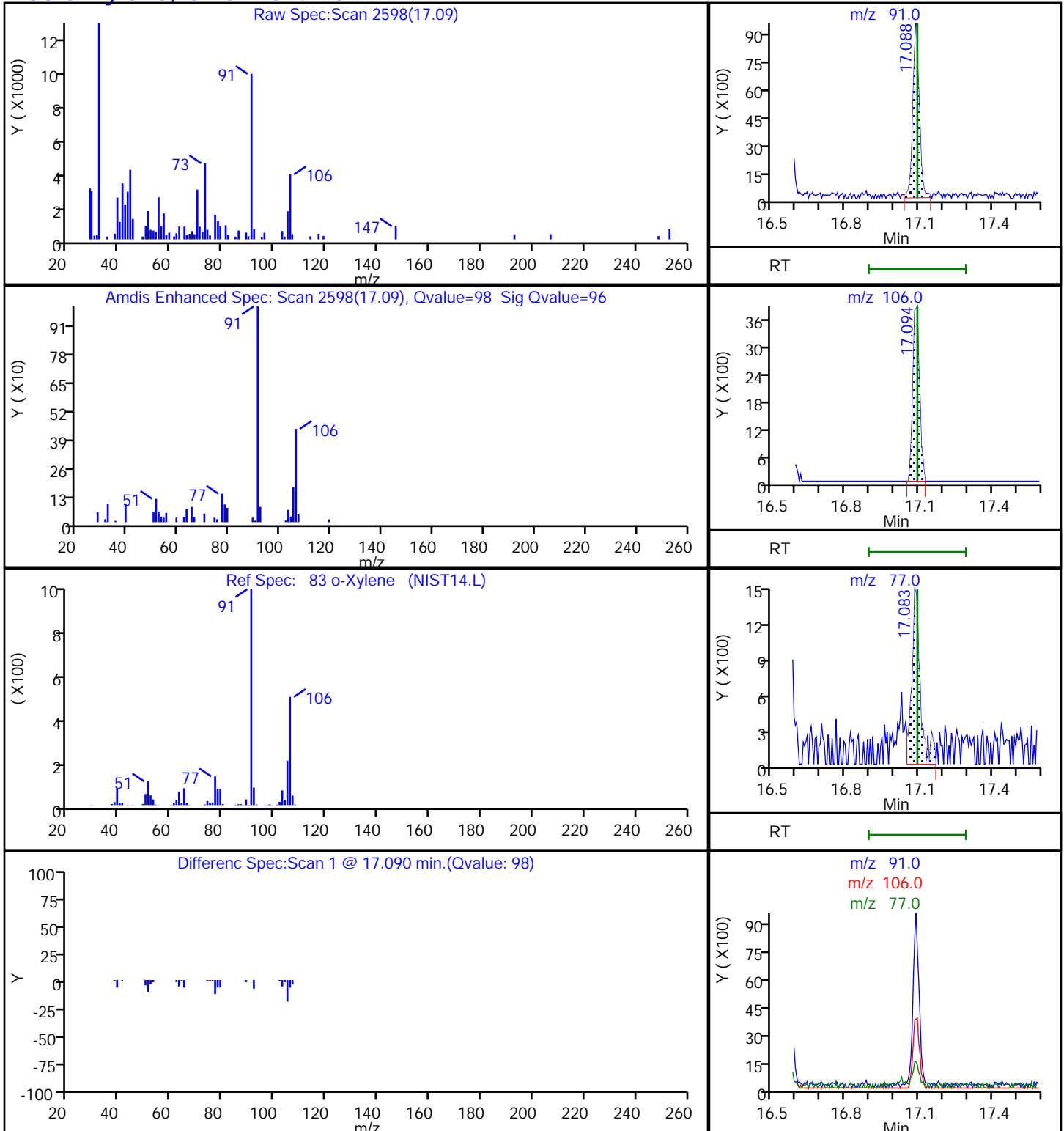
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP02-C-26 Lab Sample ID: 140-14389-11
 Matrix: Air Lab File ID: GB27p103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 18:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.61		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.98	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.084	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.94		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.13	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP02-C-26 Lab Sample ID: 140-14389-11
 Matrix: Air Lab File ID: GB27p103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 18:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.57	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	0.56	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p103.D
 Lims ID: 140-14389-A-11
 Client ID: SV-DUP02-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 18:46:30 ALS Bottle#: 3 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-010
 Misc. Info.: 140-14389-A-11
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:30:21 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:30:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.226	9.237	-0.011	97	448090	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.410	-0.010	96	2630175	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	92	2394397	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	84	1960595	4.00	
6 Chlorodifluoromethane	51	3.834	3.834	0.005	96	35623	0.1214	M
8 Dichlorodifluoromethane	85	3.899	3.889	0.006	99	47994	0.1012	
31 Methylene Chloride	84	6.600	6.600	0.000	99	35952	0.1954	
58 Trichloroethene	130	12.101	12.100	-0.010	93	40451	0.1889	
73 Tetrachloroethene	129	15.261	15.255	0.006	93	3321	0.0168	
83 o-Xylene	91	17.089	17.094	-0.005	98	15590	0.0270	
S 124 Xylenes, Total	100				0		0.0270	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p103.D

Injection Date: 27-Feb-2019 18:46:30

Instrument ID: MG

Operator ID: 403648

Lims ID: 140-14389-A-11

Lab Sample ID: 140-14389-11

Worklist Smp#: 10

Client ID: SV-DUP02-C-26

Purge Vol: 500.000 mL

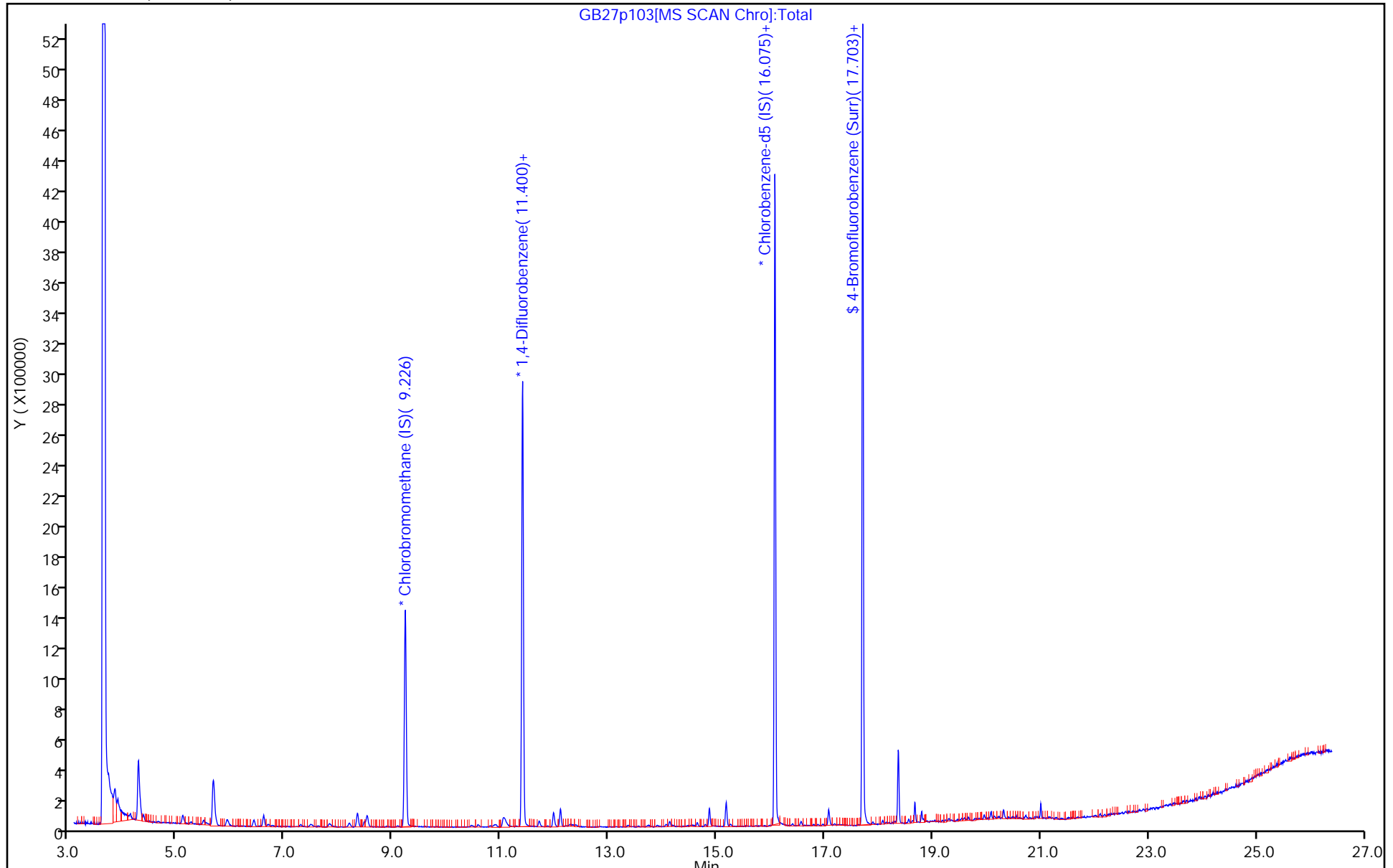
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p103.D
 Lims ID: 140-14389-A-11
 Client ID: SV-DUP02-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 18:46:30 ALS Bottle#: 3 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-010
 Misc. Info.: 140-14389-A-11
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:30:21 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:30:21

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.00	99.90

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p103.D

Injection Date: 27-Feb-2019 18:46:30

Instrument ID: MG

Lims ID: 140-14389-A-11

Lab Sample ID: 140-14389-11

Client ID: SV-DUP02-C-26

Operator ID: 403648

ALS Bottle#: 3

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

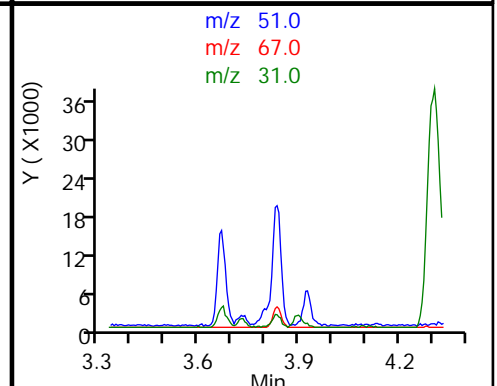
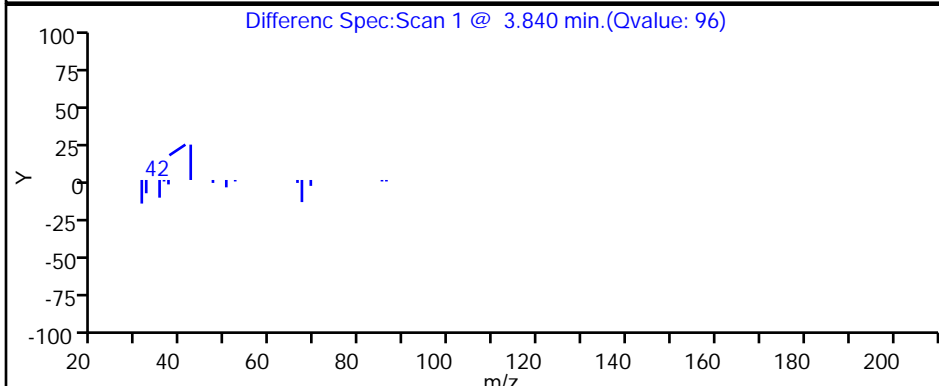
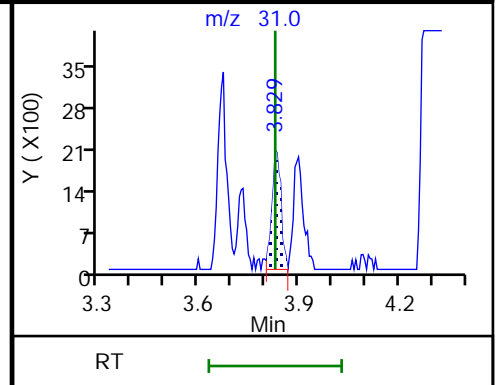
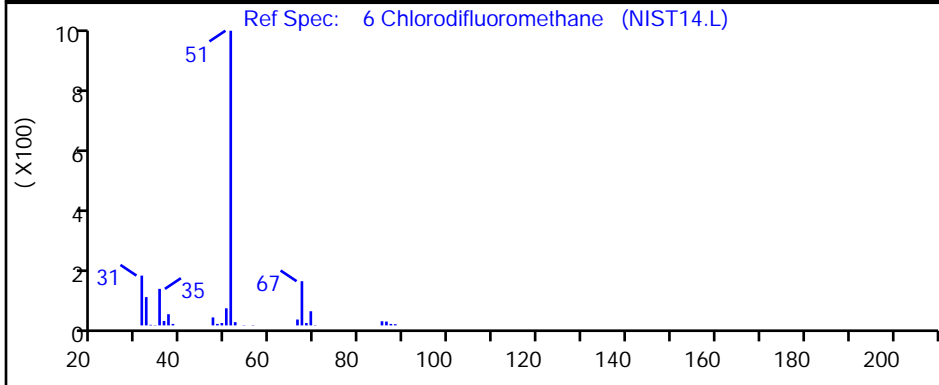
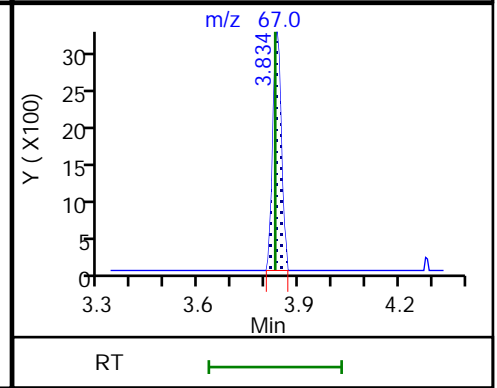
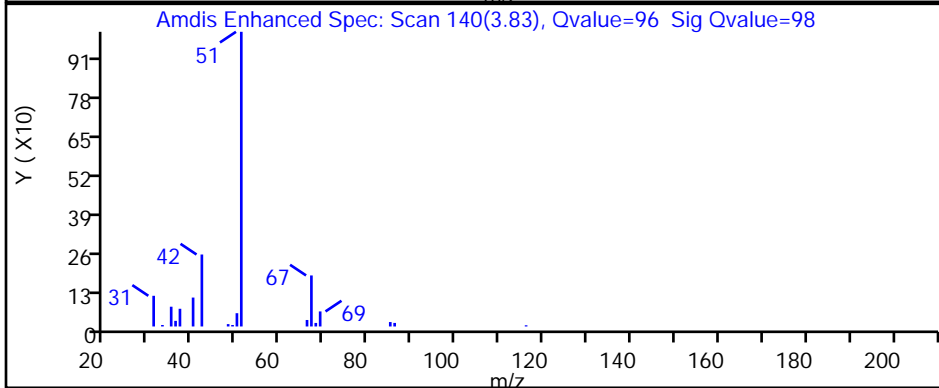
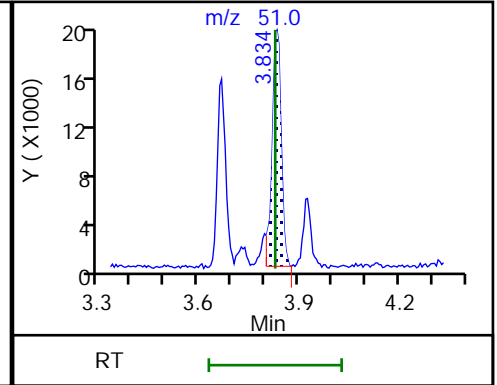
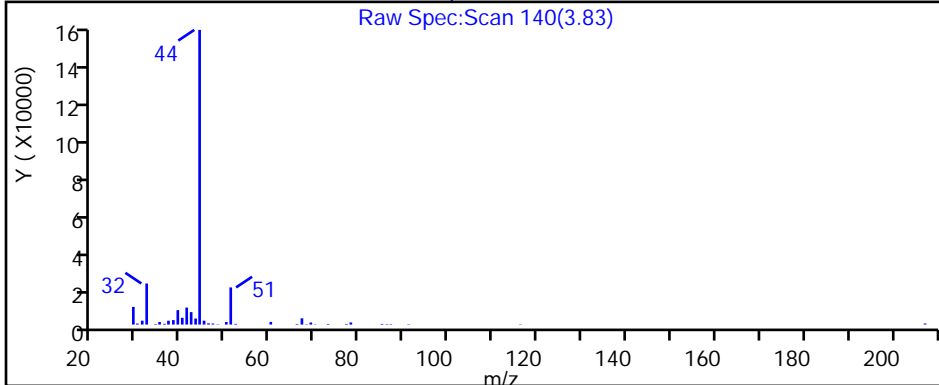
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p103.D

Injection Date: 27-Feb-2019 18:46:30

Instrument ID: MG

Lims ID: 140-14389-A-11

Lab Sample ID: 140-14389-11

Client ID: SV-DUP02-C-26

Operator ID: 403648

ALS Bottle#: 3

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

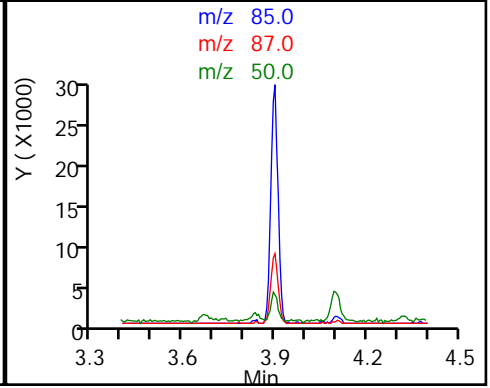
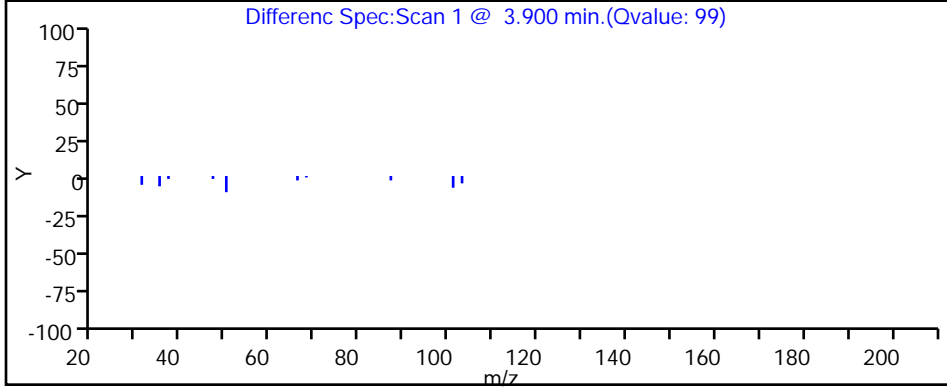
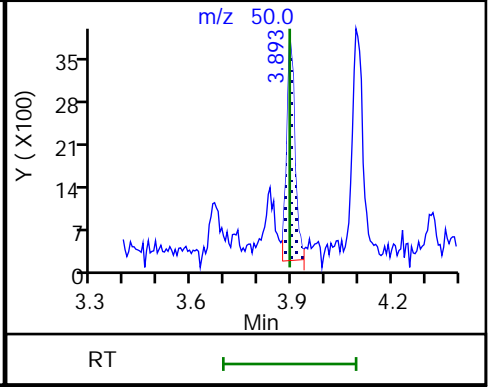
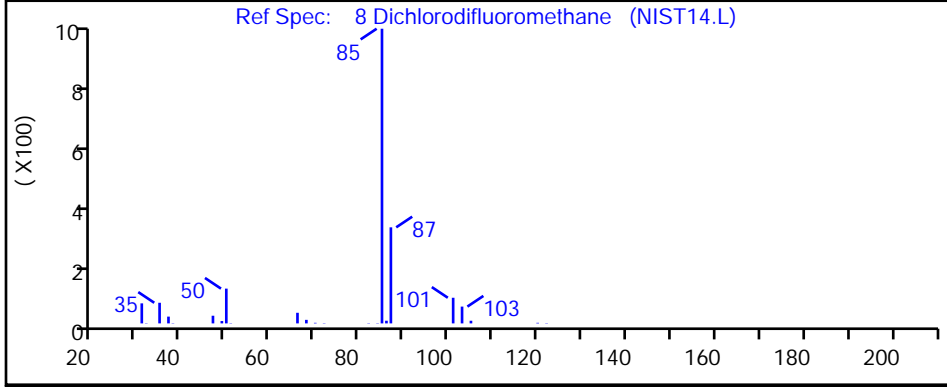
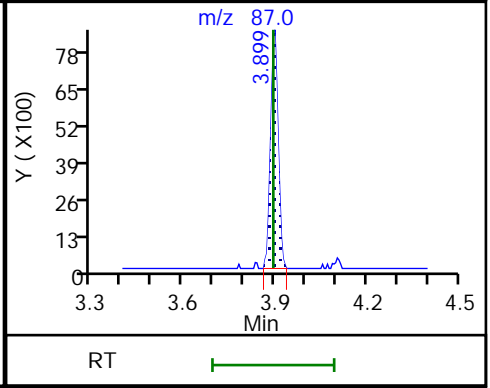
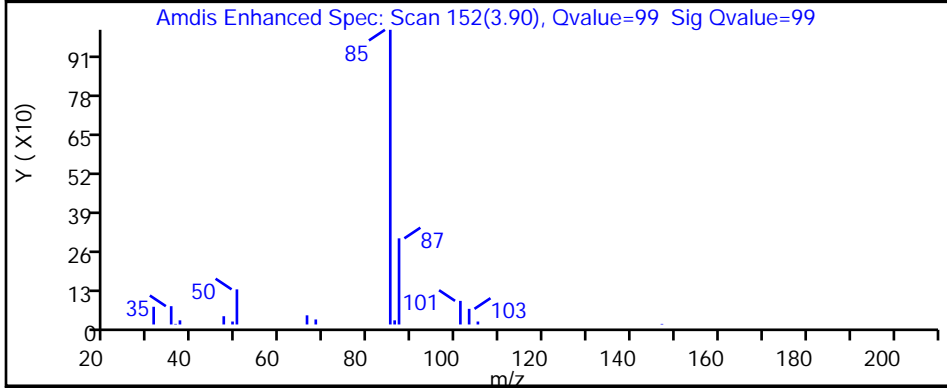
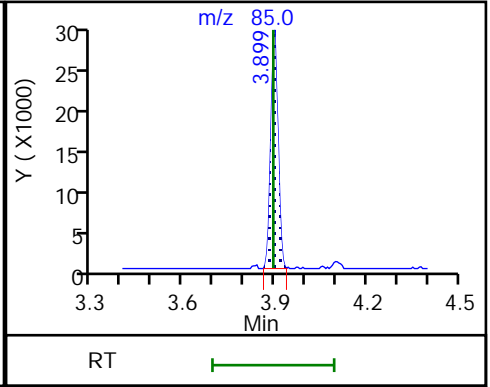
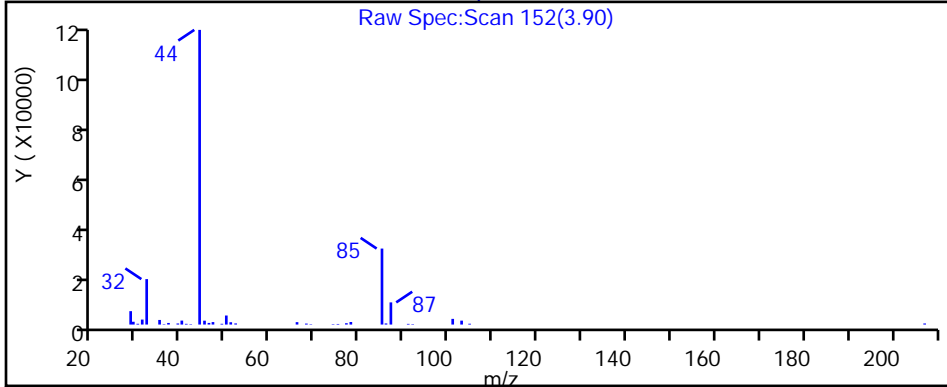
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p103.D

Injection Date: 27-Feb-2019 18:46:30

Instrument ID: MG

Lims ID: 140-14389-A-11

Lab Sample ID: 140-14389-11

Client ID: SV-DUP02-C-26

Operator ID: 403648

ALS Bottle#: 3

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

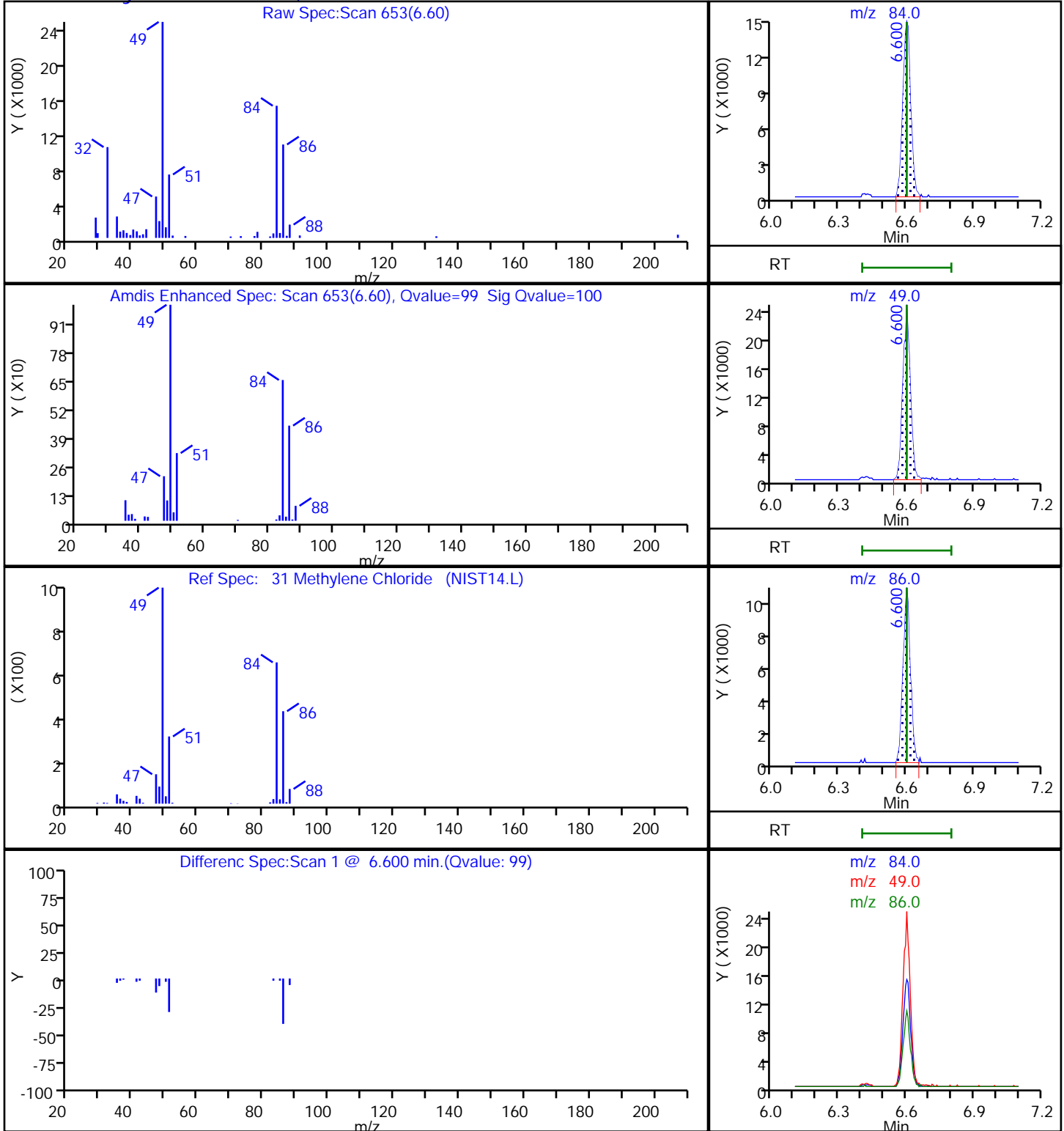
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p103.D

Injection Date: 27-Feb-2019 18:46:30

Instrument ID: MG

Lims ID: 140-14389-A-11

Lab Sample ID: 140-14389-11

Client ID: SV-DUP02-C-26

Operator ID: 403648

ALS Bottle#: 3

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

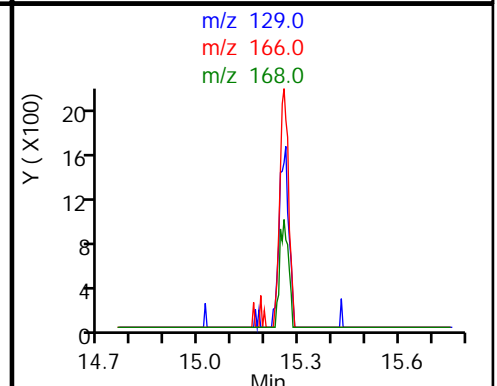
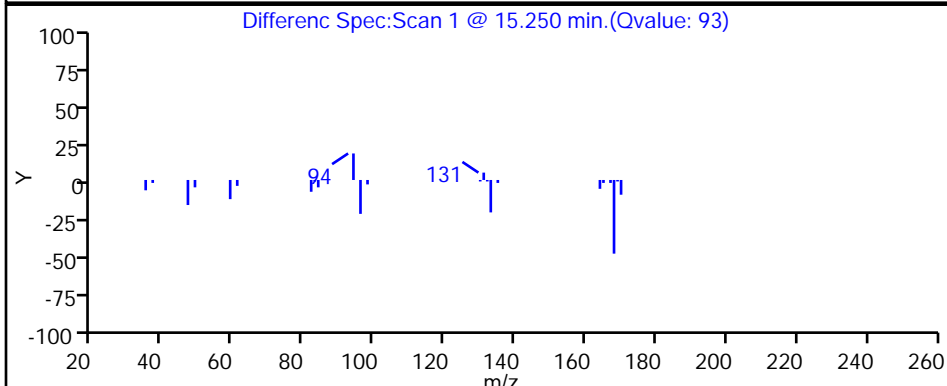
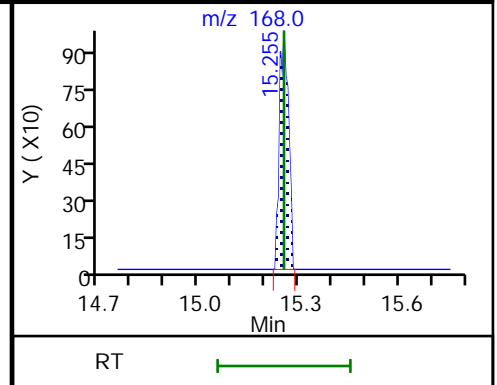
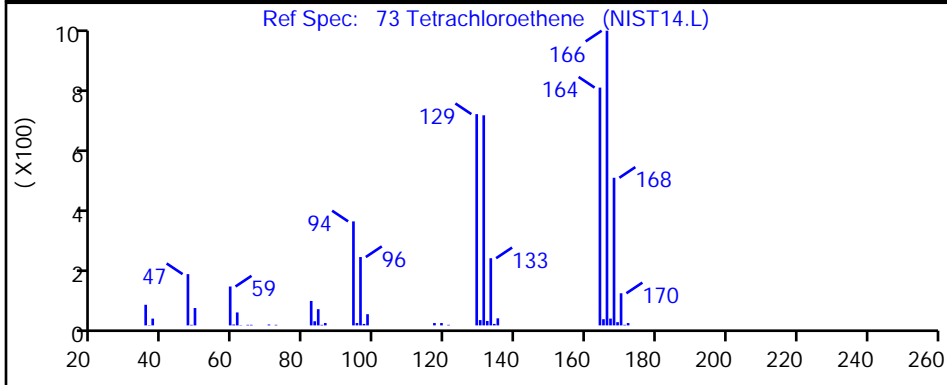
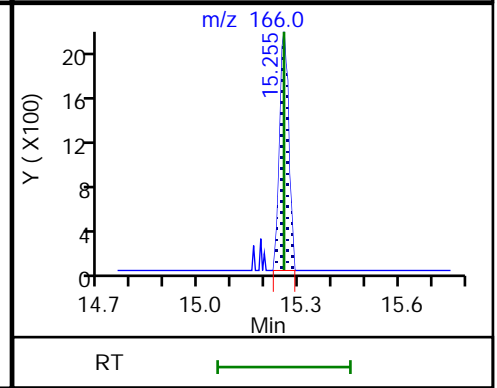
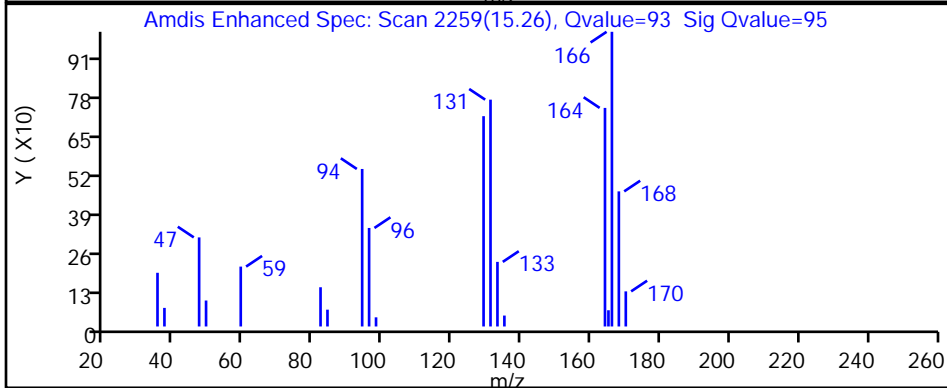
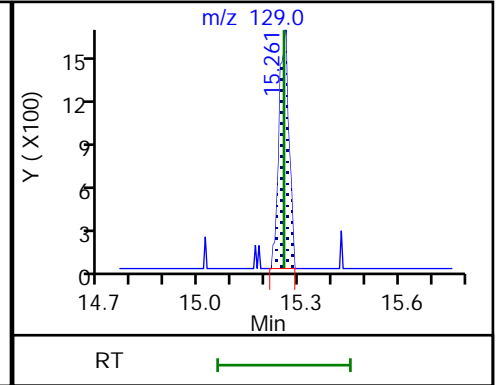
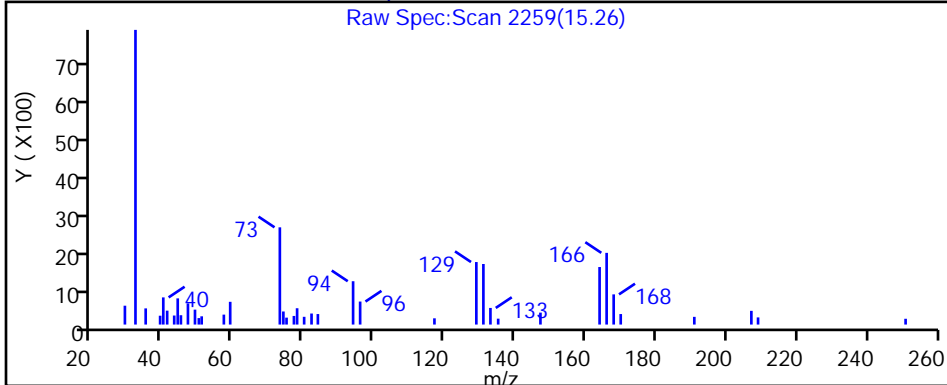
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p103.D

Injection Date: 27-Feb-2019 18:46:30

Instrument ID: MG

Lims ID: 140-14389-A-11

Lab Sample ID: 140-14389-11

Client ID: SV-DUP02-C-26

Operator ID: 403648

ALS Bottle#: 3

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

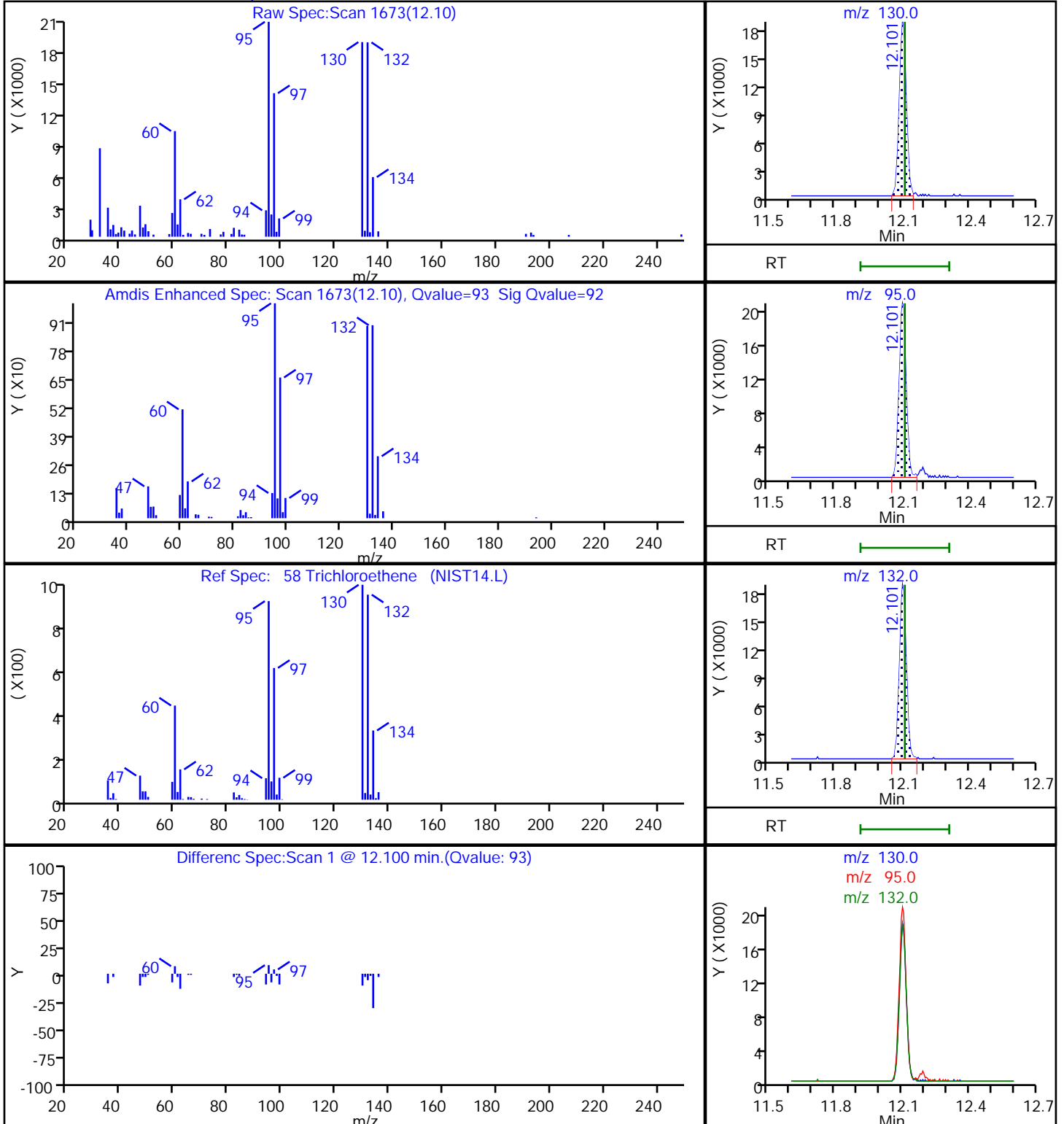
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

58 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p103.D

Injection Date: 27-Feb-2019 18:46:30

Instrument ID: MG

Lims ID: 140-14389-A-11

Lab Sample ID: 140-14389-11

Client ID: SV-DUP02-C-26

Operator ID: 403648

ALS Bottle#: 3 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

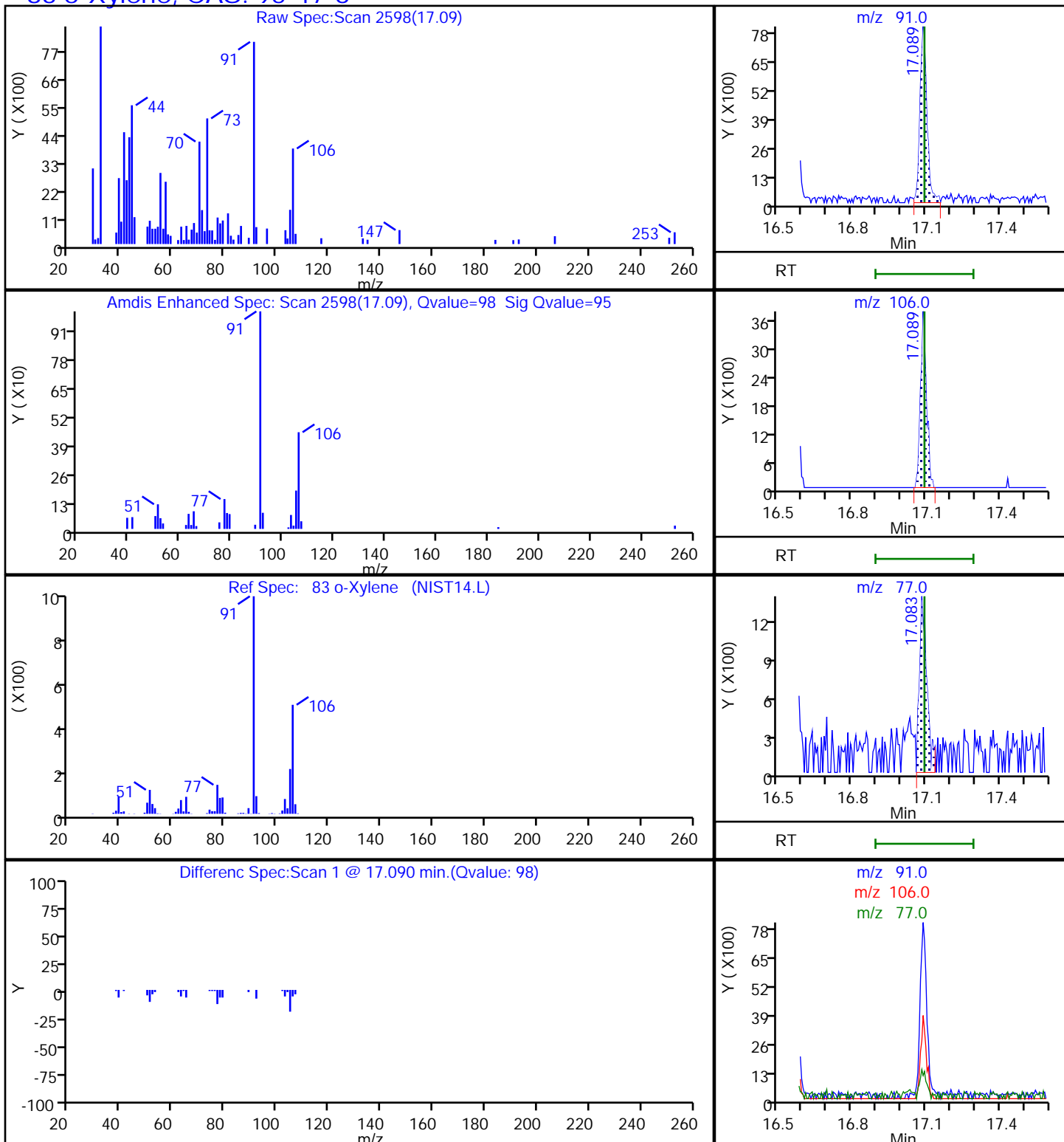
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



TestAmerica Knoxville

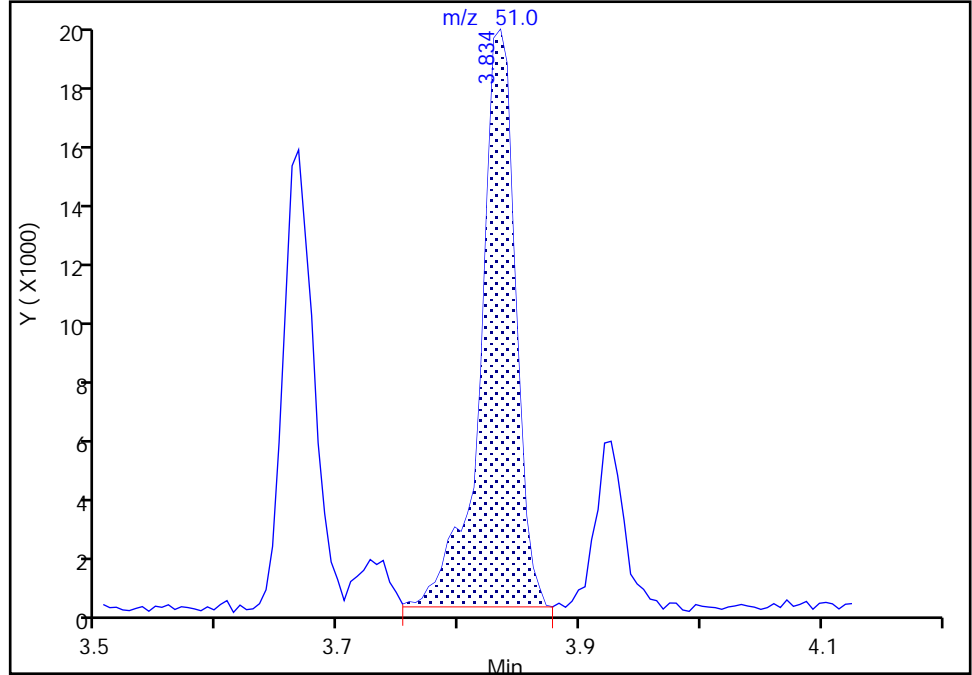
Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p103.D
Injection Date: 27-Feb-2019 18:46:30 Instrument ID: MG
Lims ID: 140-14389-A-11 Lab Sample ID: 140-14389-11
Client ID: SV-DUP02-C-26
Operator ID: 403648 ALS Bottle#: 3 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

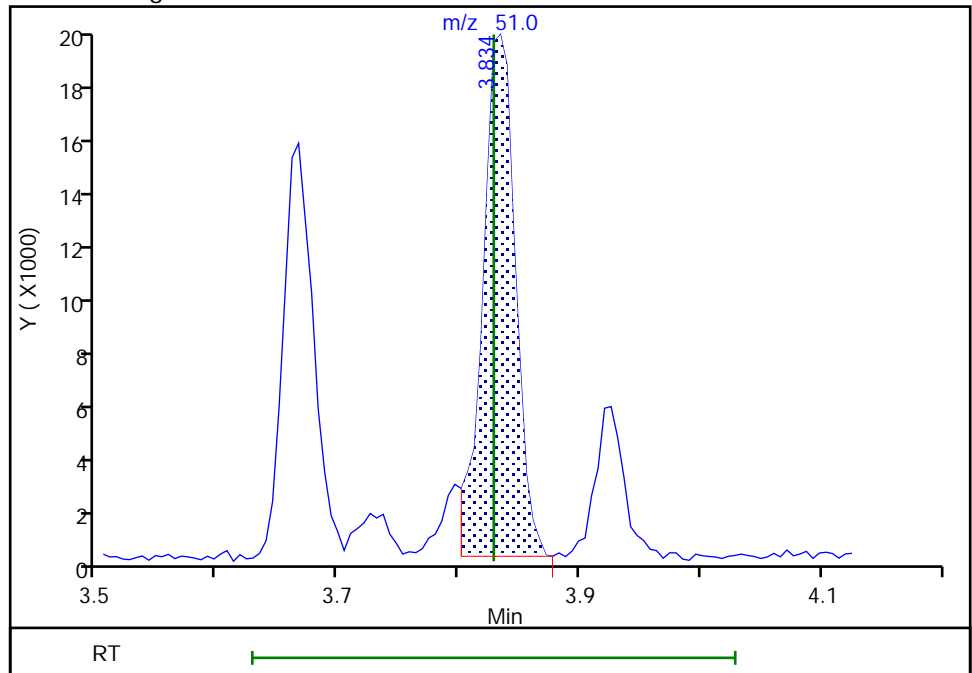
RT: 3.83
Area: 38280
Amount: 0.130409
Amount Units: ppb v/v

Processing Integration Results



RT: 3.83
Area: 35623
Amount: 0.121357
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 28-Feb-2019 14:29:45
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-150-C-26 Lab Sample ID: 140-14389-12
 Matrix: Air Lab File ID: GB27p104R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:05
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 04:34
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	3.4		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	19		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-150-C-26 Lab Sample ID: 140-14389-12
 Matrix: Air Lab File ID: GB27p104R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:05
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 04:34
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	13		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	15		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.70	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	84		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p104R.D
 Lims ID: 140-14389-A-12
 Client ID: SV-150-C-26
 Sample Type: Client
 Inject. Date: 28-Feb-2019 04:34:30 ALS Bottle#: 4 Worklist Smp#: 26
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-026
 Misc. Info.: 140-14389-A-12
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 03:09:52 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 17:22:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.237	-0.005	98	479004	4.00	
* 2 1,4-Difluorobenzene	114	11.399	11.410	-0.011	96	2944153	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2703053	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.697	0.000	87	2121348	3.83	
6 Chlorodifluoromethane	51	3.829	3.826	0.000	96	225156	0.7175	
8 Dichlorodifluoromethane	85	3.893	3.891	0.000	100	46796	0.0923	
31 Methylene Chloride	84	6.606	6.596	0.006	97	41286	0.2099	
50 Benzene	78	10.871	10.872	-0.011	92	39247	0.0745	
67 Toluene	91	14.123	14.123	-0.005	93	160975	0.2707	
78 Ethylbenzene	91	16.404	16.403	-0.005	99	542876	0.6717	
79 m-Xylene & p-Xylene	91	16.560	16.560	-0.005	99	1686865	2.73	
83 o-Xylene	91	17.088	17.088	-0.006	98	708767	1.09	
95 1,2,4-Trimethylbenzene	105	18.830	18.829	-0.006	98	21143	0.0286	
S 124 Xylenes, Total	100				0		3.82	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p104R.D

Injection Date: 28-Feb-2019 04:34:30

Instrument ID: MG

Operator ID: 403648

Lims ID: 140-14389-A-12

Lab Sample ID: 140-14389-12

Worklist Smp#: 26

Client ID: SV-150-C-26

Purge Vol: 500.000 mL

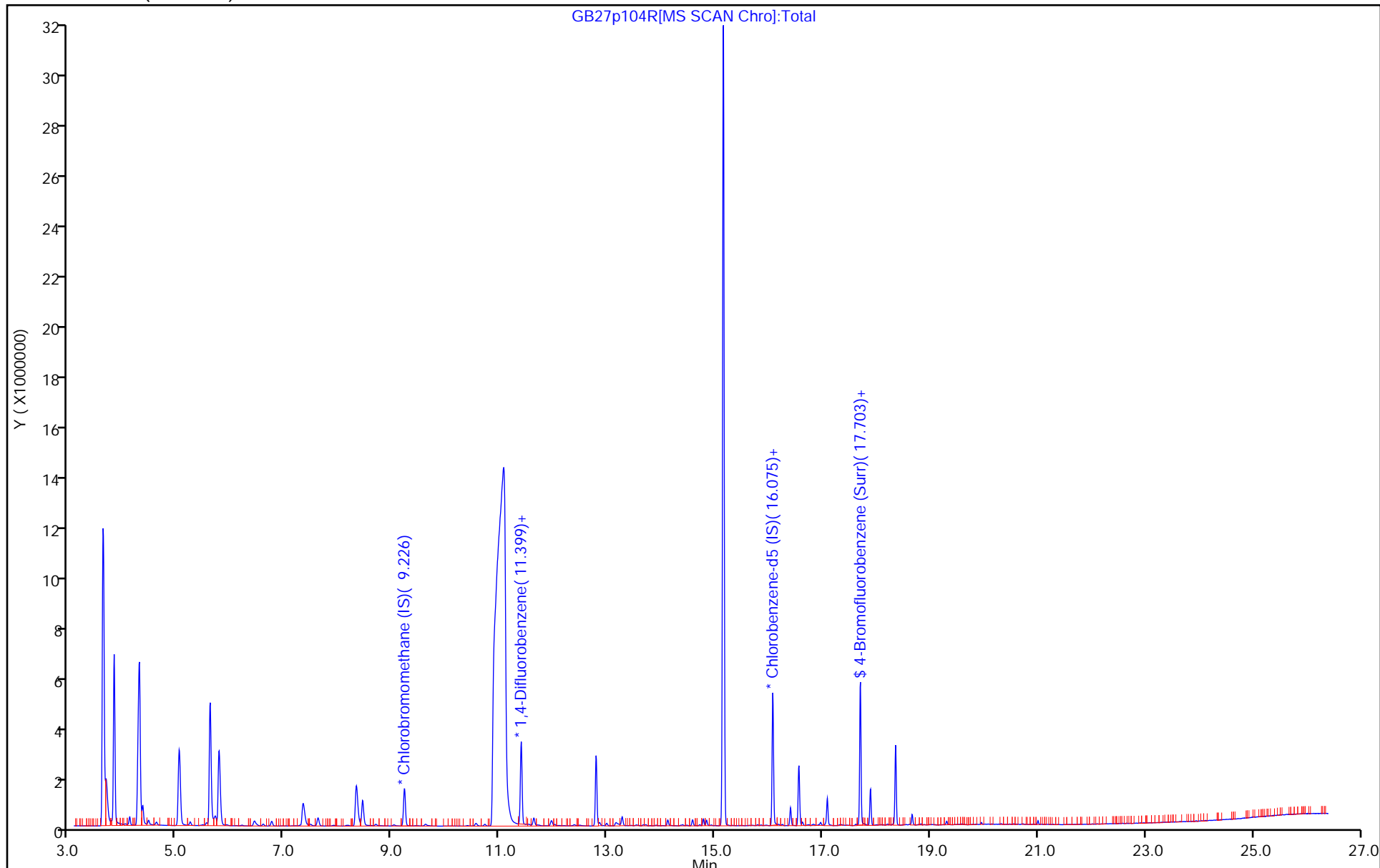
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p104R.D
 Lims ID: 140-14389-A-12
 Client ID: SV-150-C-26
 Sample Type: Client
 Inject. Date: 28-Feb-2019 04:34:30 ALS Bottle#: 4 Worklist Smp#: 26
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-026
 Misc. Info.: 140-14389-A-12
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 03:09:52 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 17:22:48

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.83	95.75

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p104R.D

Injection Date: 28-Feb-2019 04:34:30

Instrument ID: MG

Lims ID: 140-14389-A-12

Lab Sample ID: 140-14389-12

Client ID: SV-150-C-26

Operator ID: 403648

ALS Bottle#: 4 Worklist Smp#: 26

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

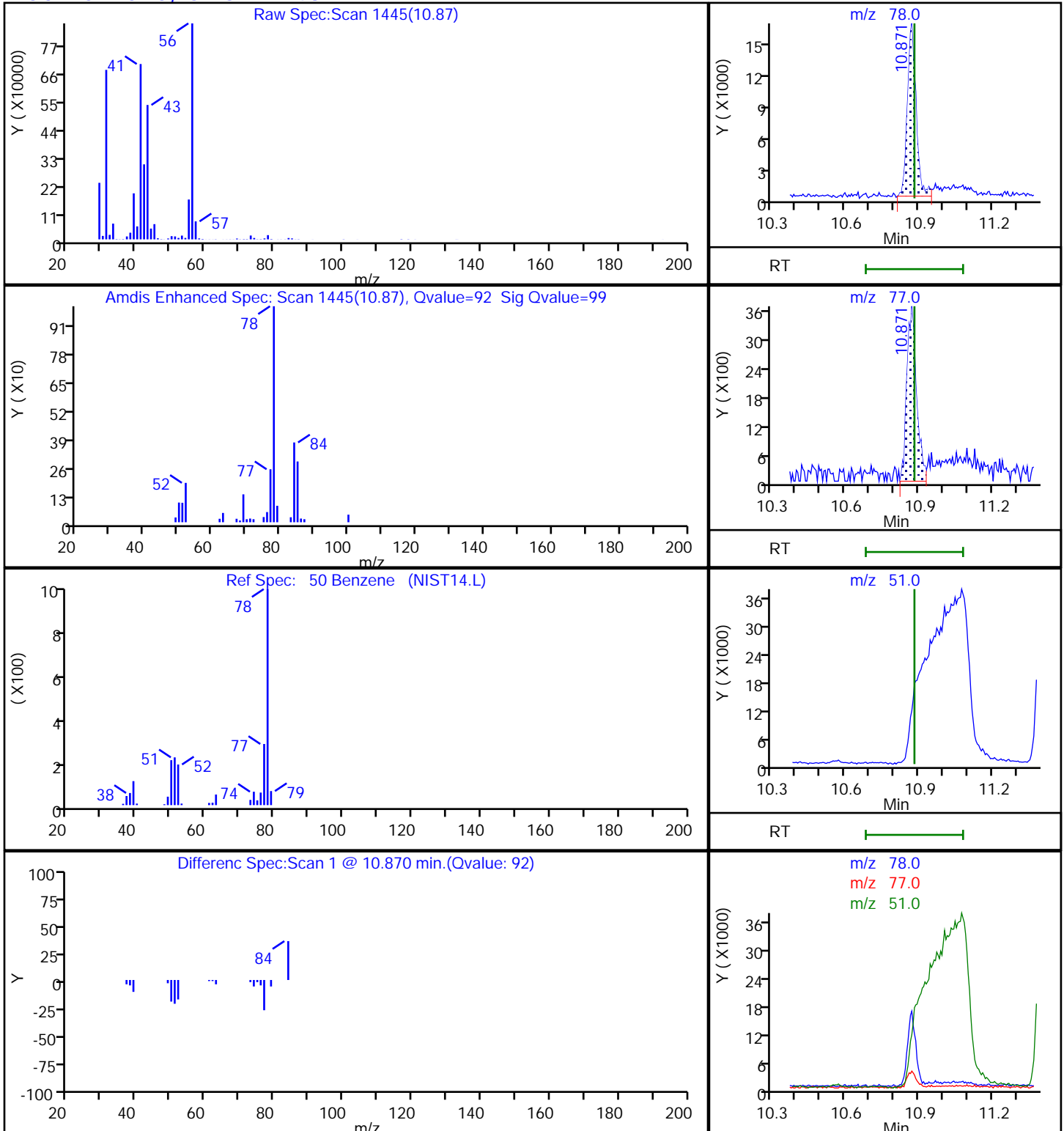
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p104R.D

Injection Date: 28-Feb-2019 04:34:30

Instrument ID: MG

Lims ID: 140-14389-A-12

Lab Sample ID: 140-14389-12

Client ID: SV-150-C-26

Operator ID: 403648

ALS Bottle#: 4 Worklist Smp#: 26

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

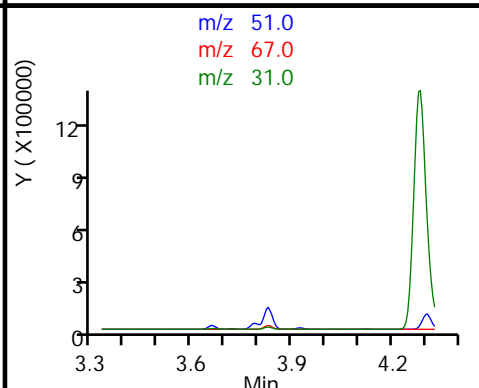
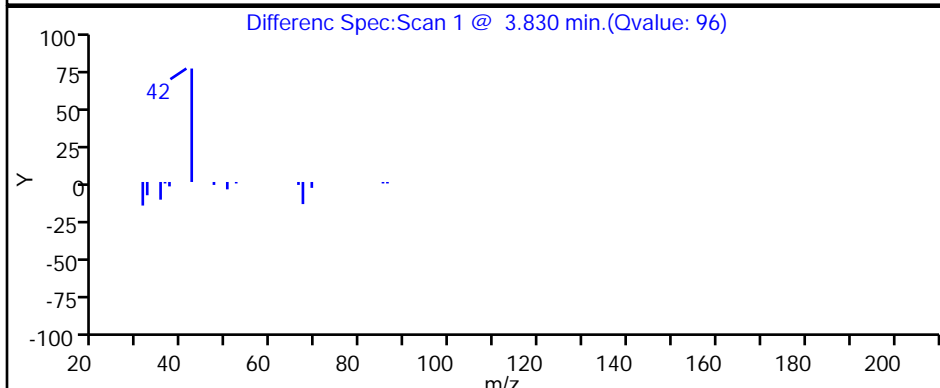
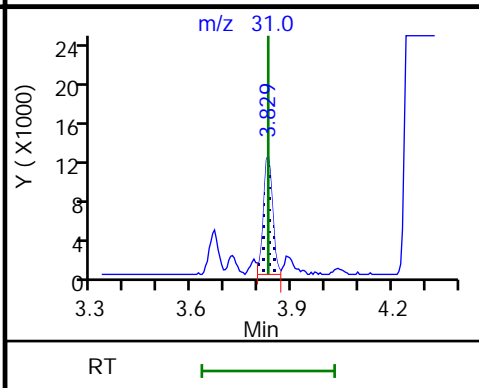
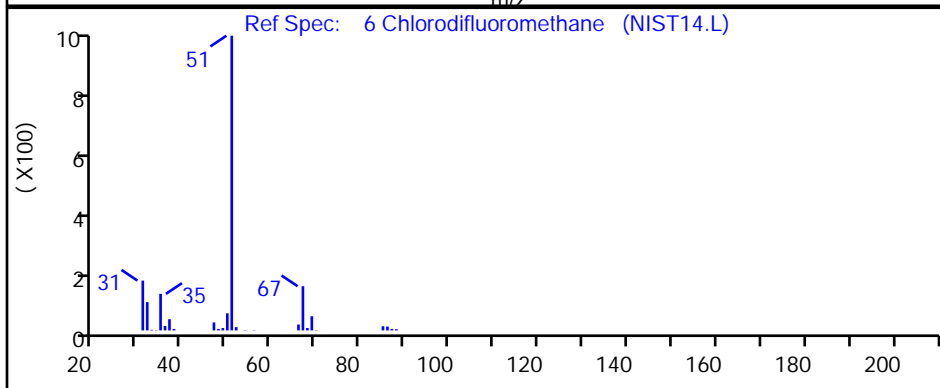
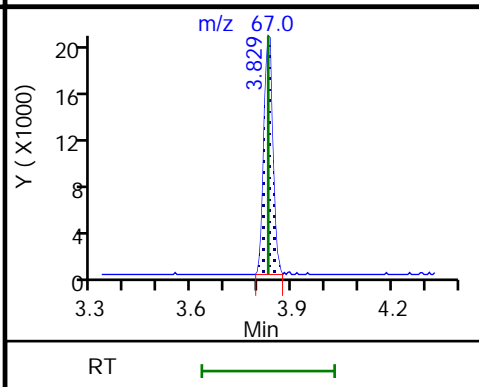
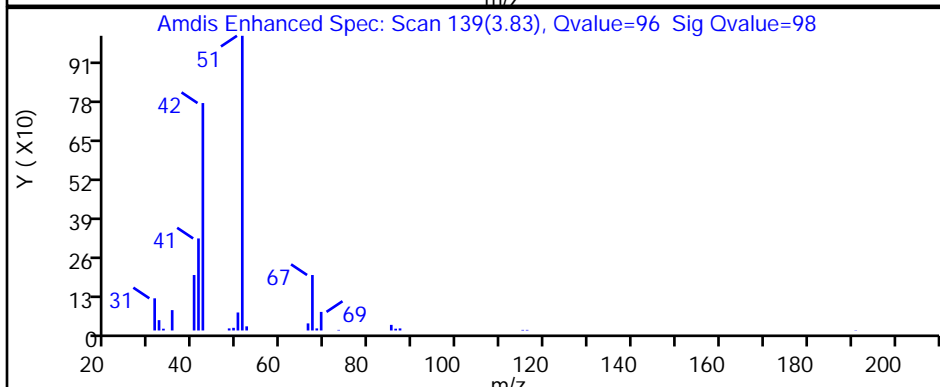
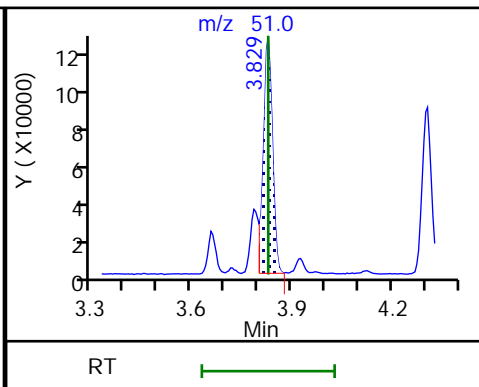
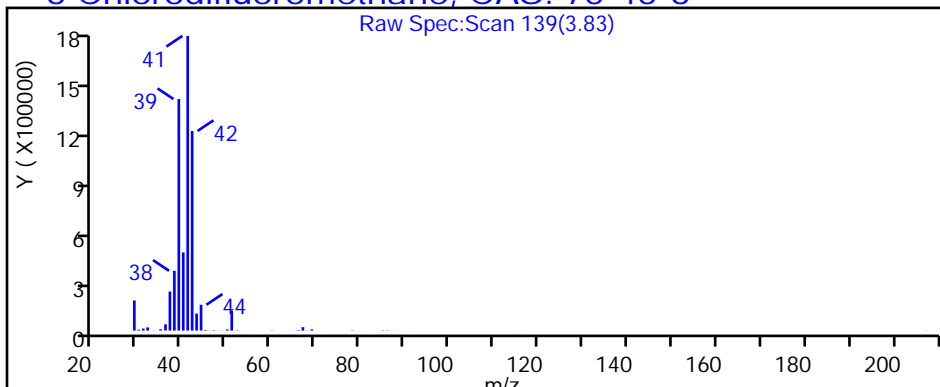
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p104R.D

Injection Date: 28-Feb-2019 04:34:30

Instrument ID: MG

Lims ID: 140-14389-A-12

Lab Sample ID: 140-14389-12

Client ID: SV-150-C-26

Operator ID: 403648

ALS Bottle#: 4

Worklist Smp#: 26

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

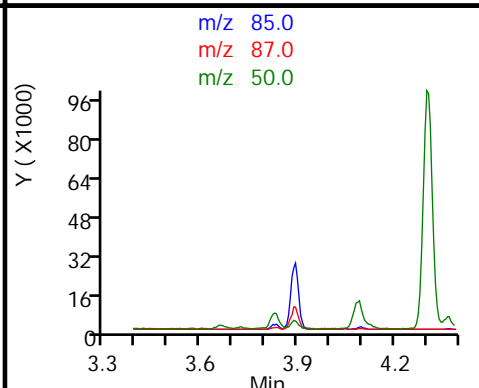
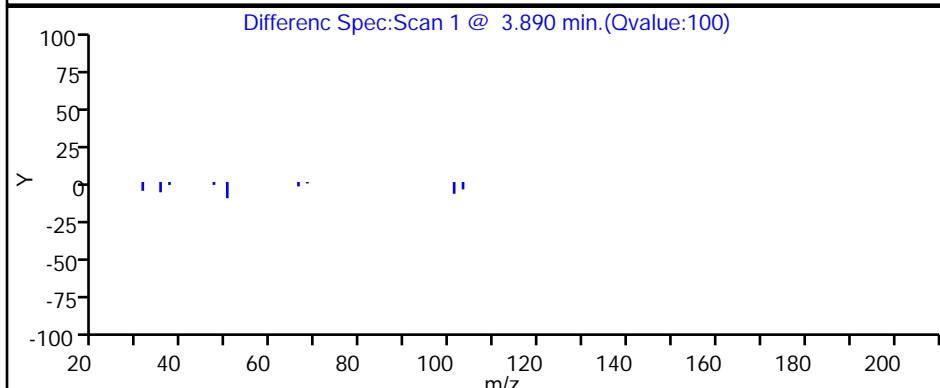
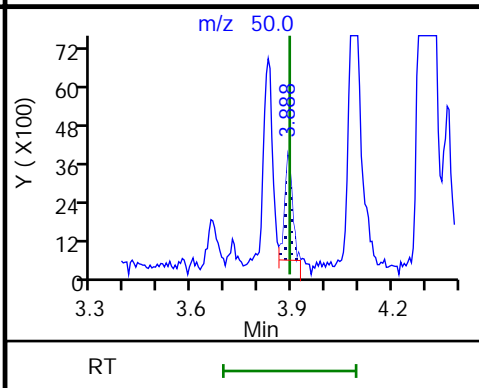
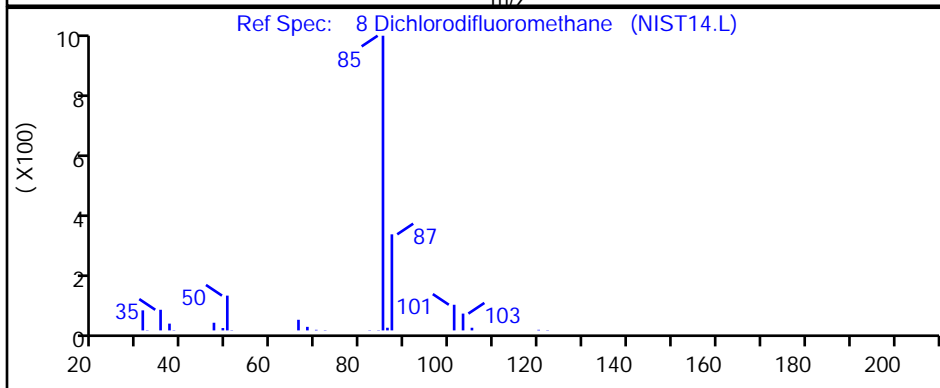
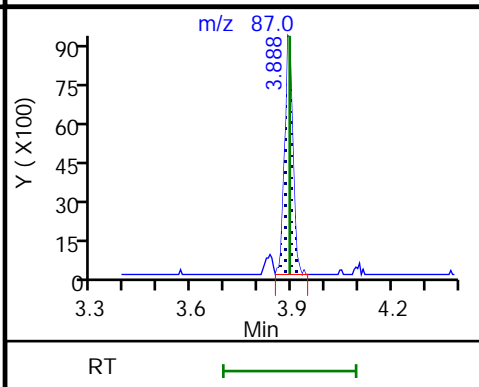
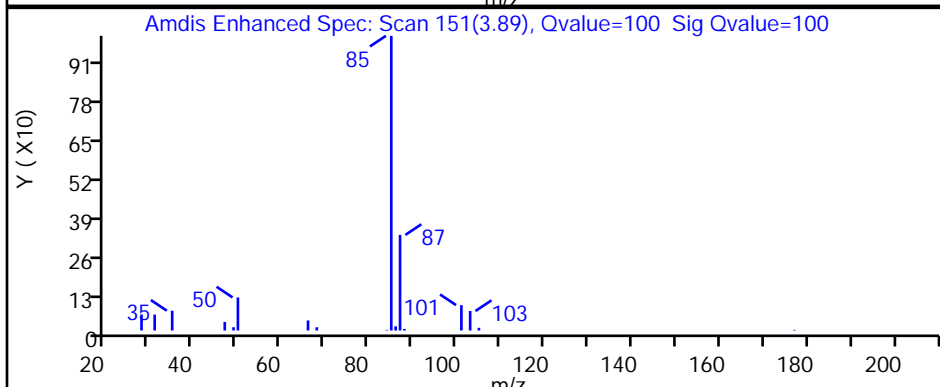
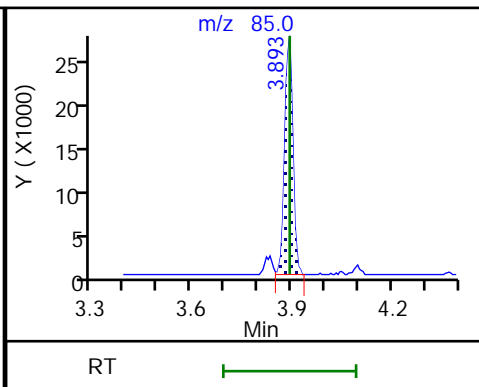
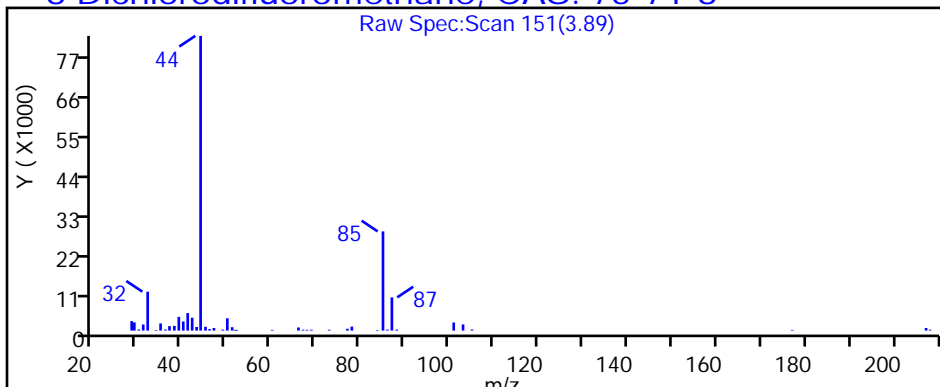
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p104R.D

Injection Date: 28-Feb-2019 04:34:30

Instrument ID: MG

Lims ID: 140-14389-A-12

Lab Sample ID: 140-14389-12

Client ID: SV-150-C-26

Operator ID: 403648

ALS Bottle#: 4 Worklist Smp#: 26

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

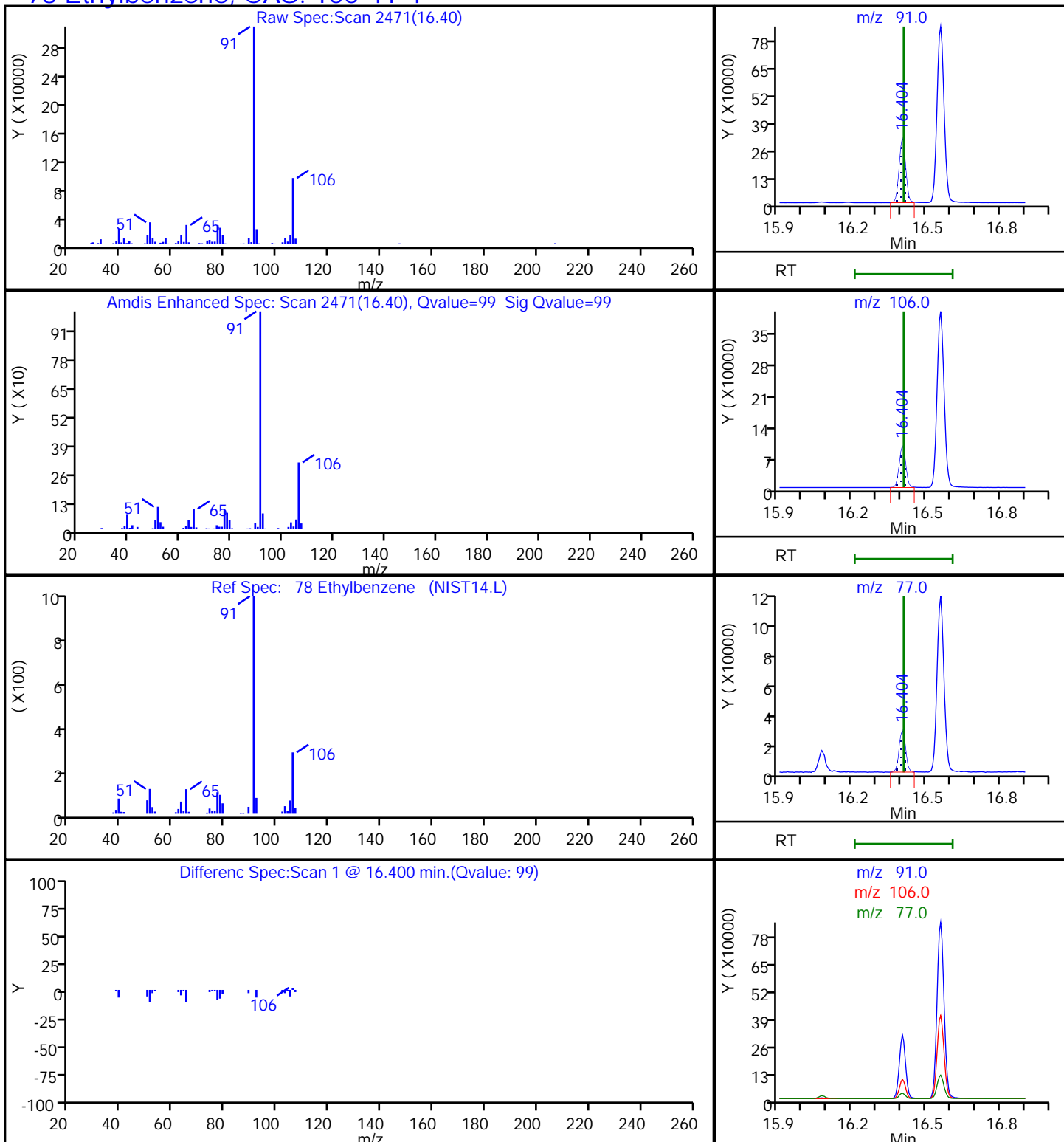
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p104R.D

Injection Date: 28-Feb-2019 04:34:30

Instrument ID: MG

Lims ID: 140-14389-A-12

Lab Sample ID: 140-14389-12

Client ID: SV-150-C-26

Operator ID: 403648

ALS Bottle#: 4 Worklist Smp#: 26

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

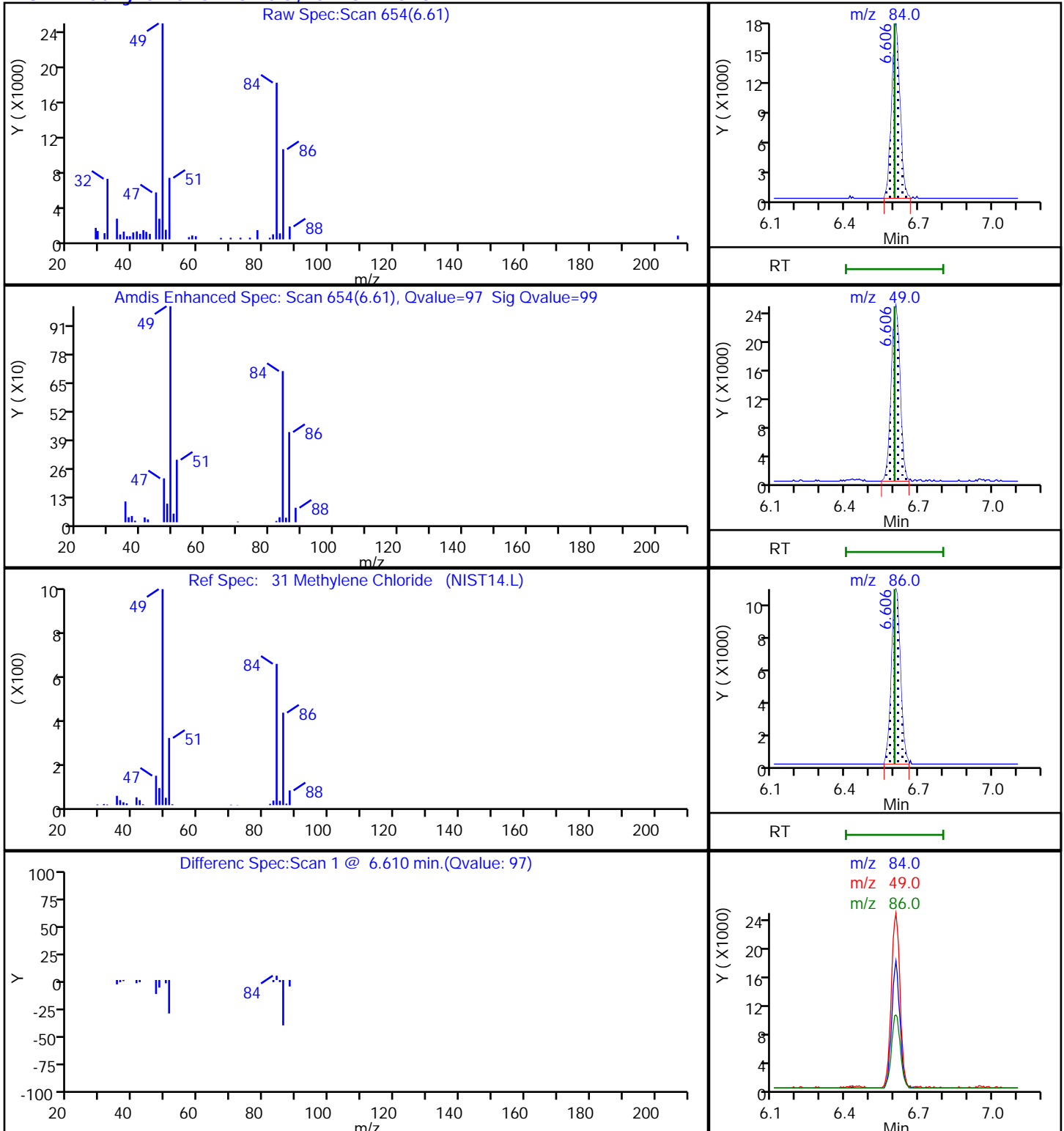
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p104R.D

Injection Date: 28-Feb-2019 04:34:30

Instrument ID: MG

Lims ID: 140-14389-A-12

Lab Sample ID: 140-14389-12

Client ID: SV-150-C-26

Operator ID: 403648

ALS Bottle#: 4

Worklist Smp#: 26

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

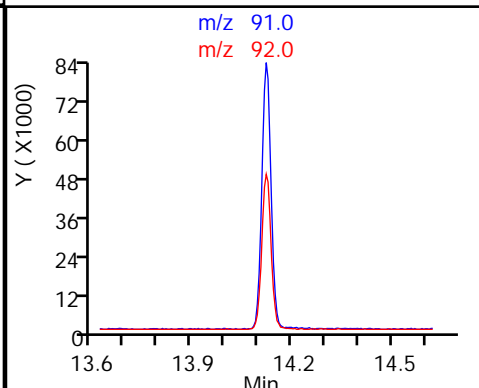
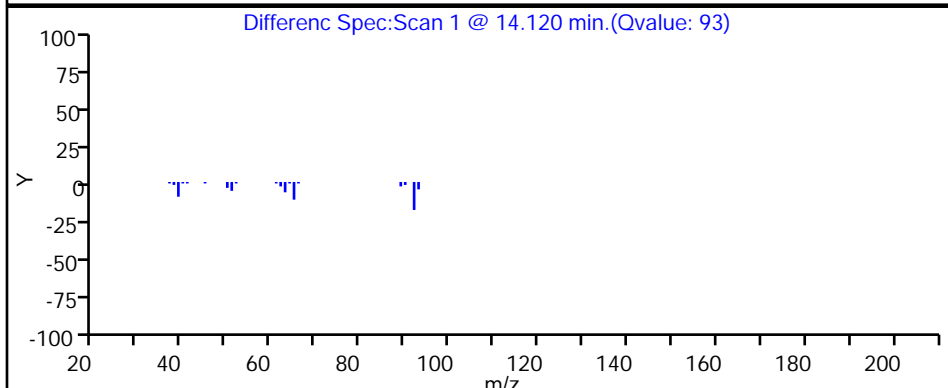
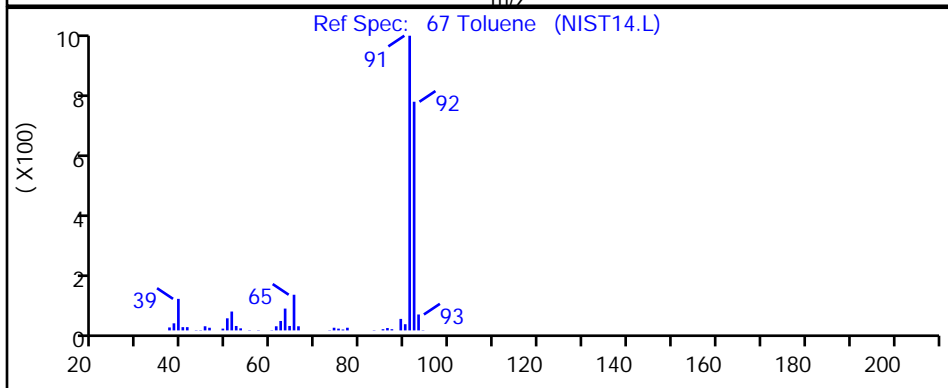
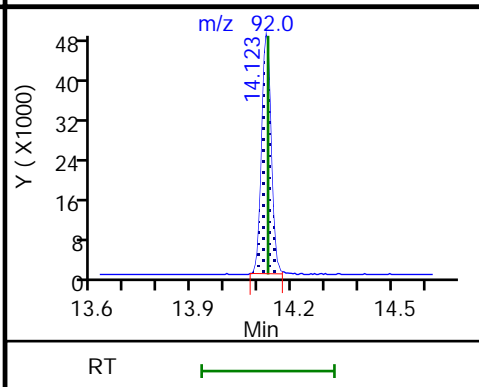
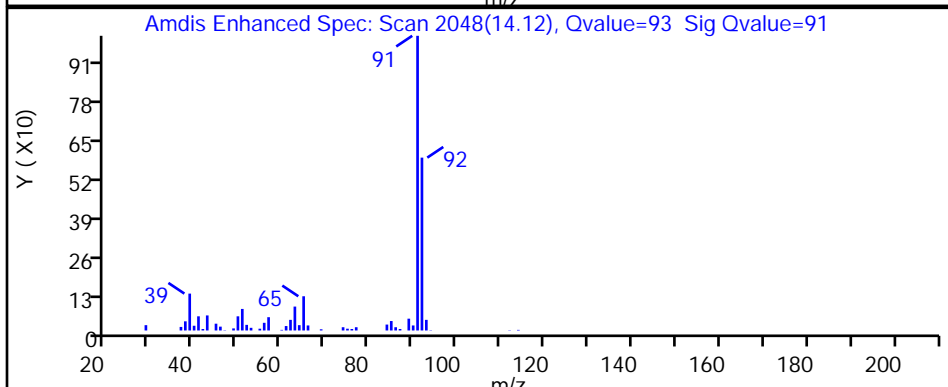
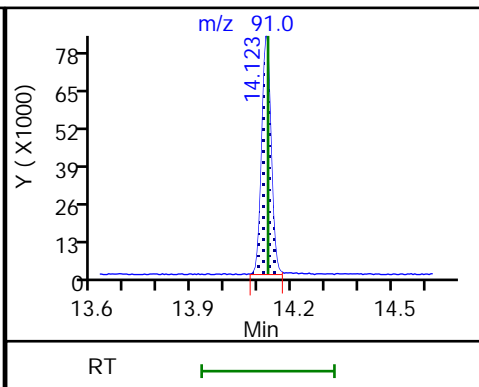
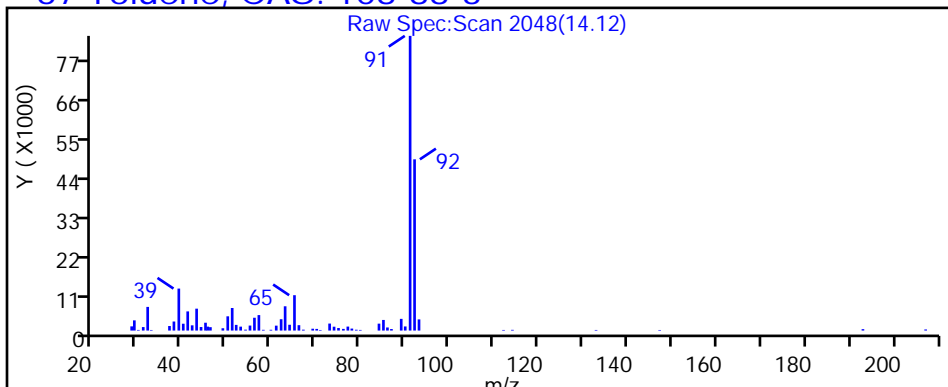
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

67 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p104R.D

Injection Date: 28-Feb-2019 04:34:30

Instrument ID: MG

Lims ID: 140-14389-A-12

Lab Sample ID: 140-14389-12

Client ID: SV-150-C-26

Operator ID: 403648

ALS Bottle#: 4

Worklist Smp#: 26

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

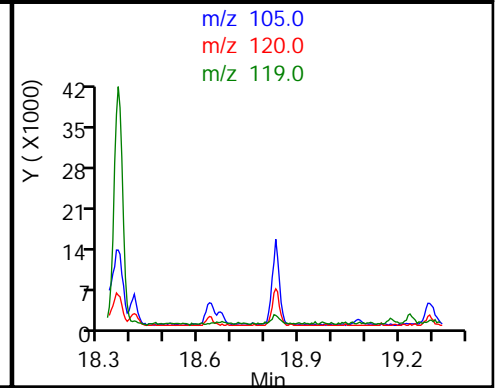
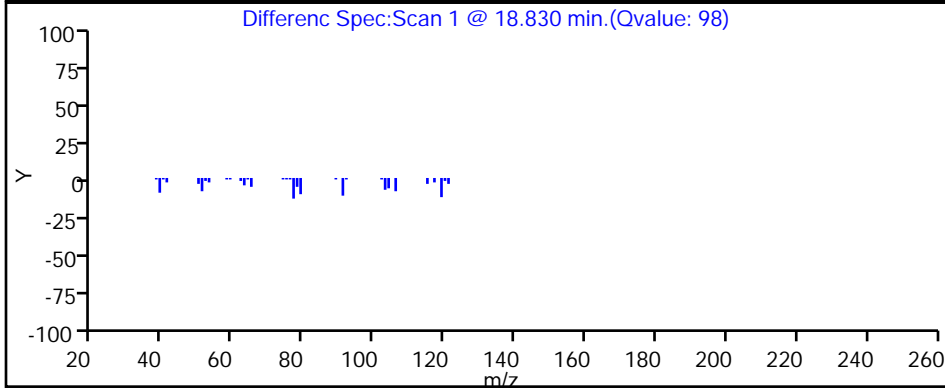
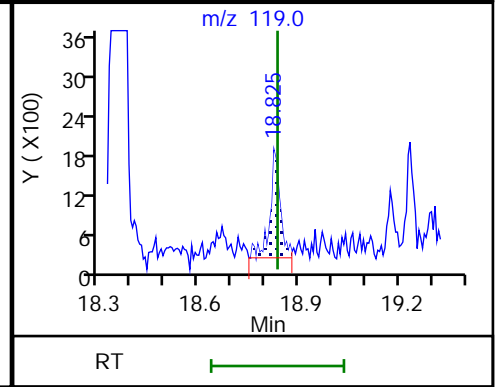
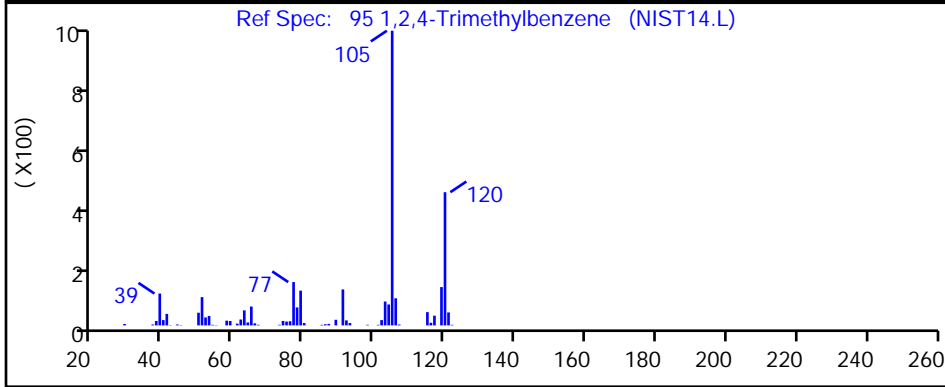
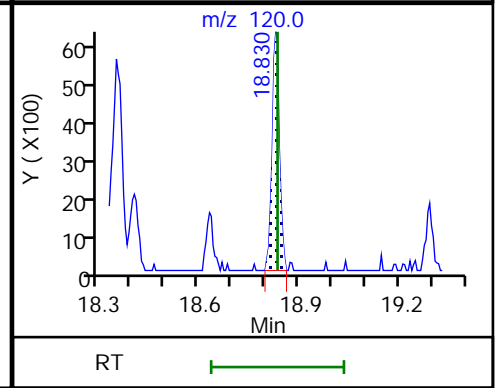
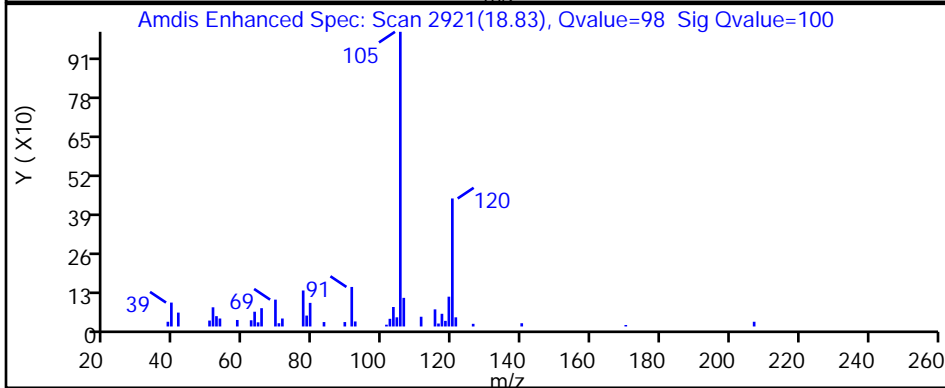
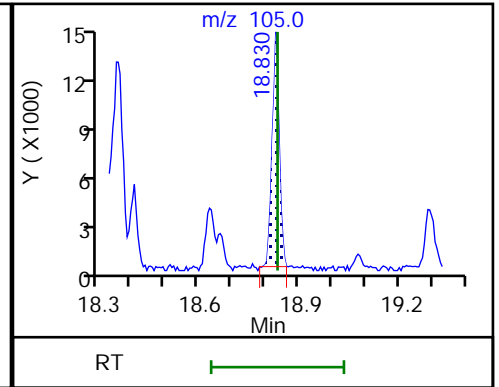
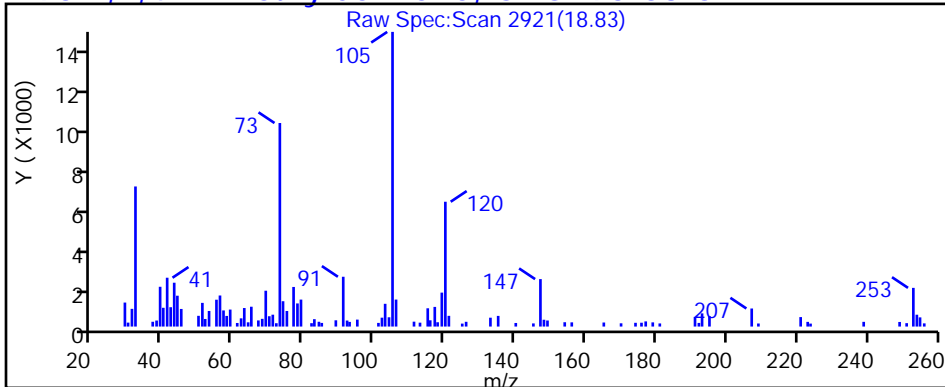
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

95 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p104R.D

Injection Date: 28-Feb-2019 04:34:30

Instrument ID: MG

Lims ID: 140-14389-A-12

Lab Sample ID: 140-14389-12

Client ID: SV-150-C-26

Operator ID: 403648

ALS Bottle#: 4

Worklist Smp#: 26

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

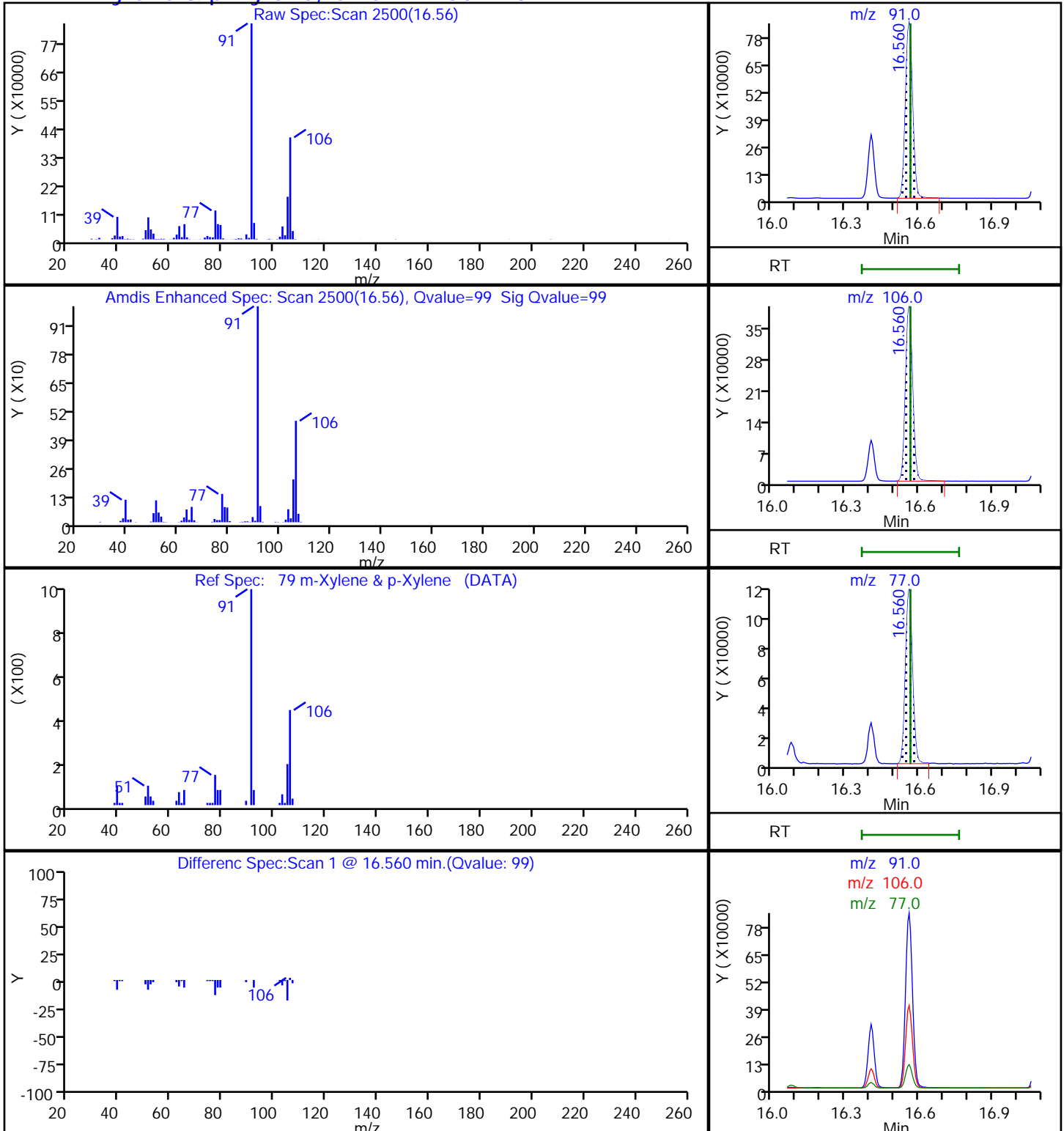
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p104R.D

Injection Date: 28-Feb-2019 04:34:30

Instrument ID: MG

Lims ID: 140-14389-A-12

Lab Sample ID: 140-14389-12

Client ID: SV-150-C-26

Operator ID: 403648

ALS Bottle#: 4 Worklist Smp#: 26

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

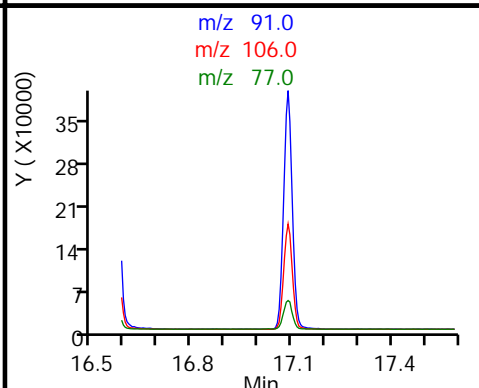
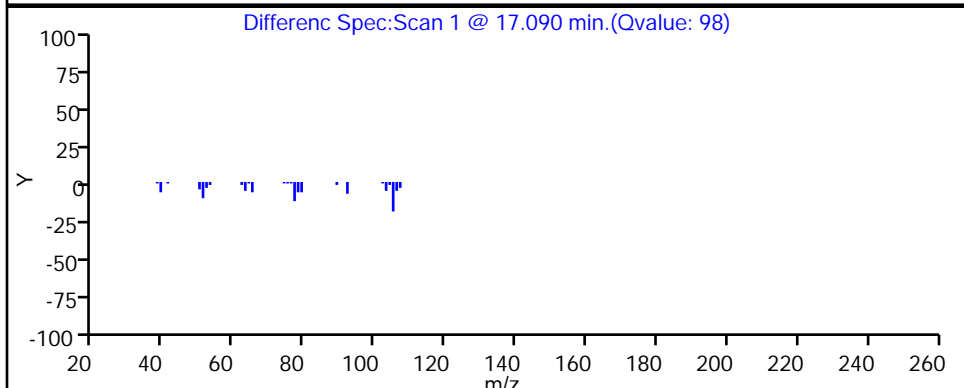
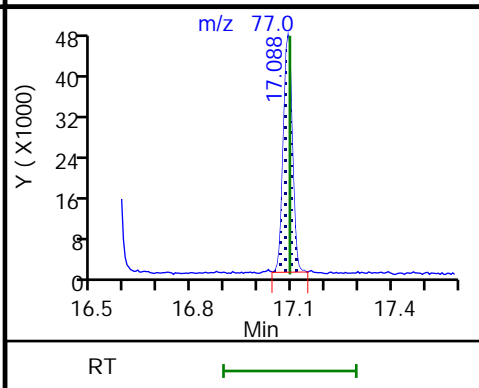
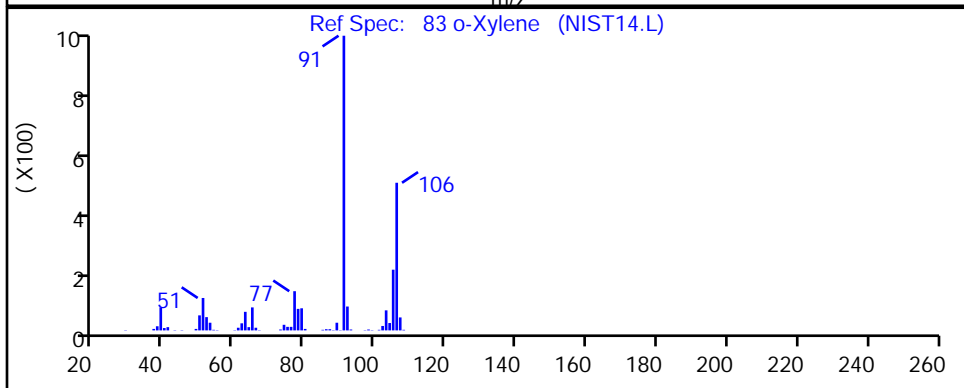
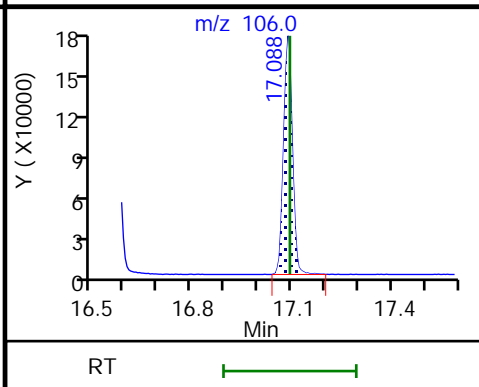
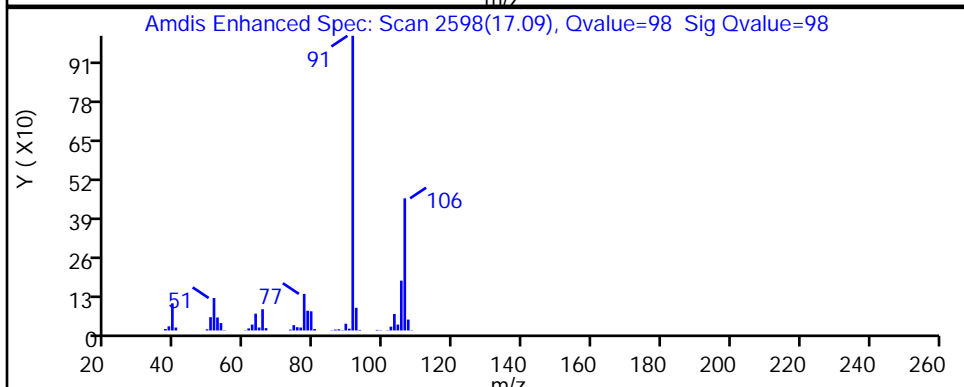
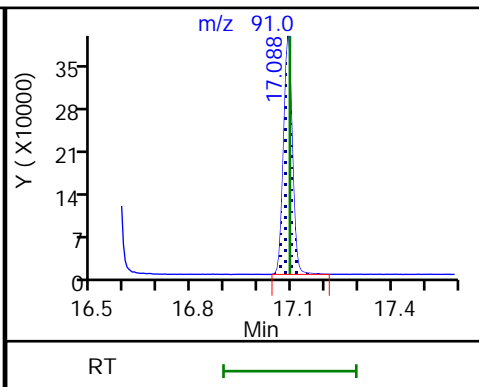
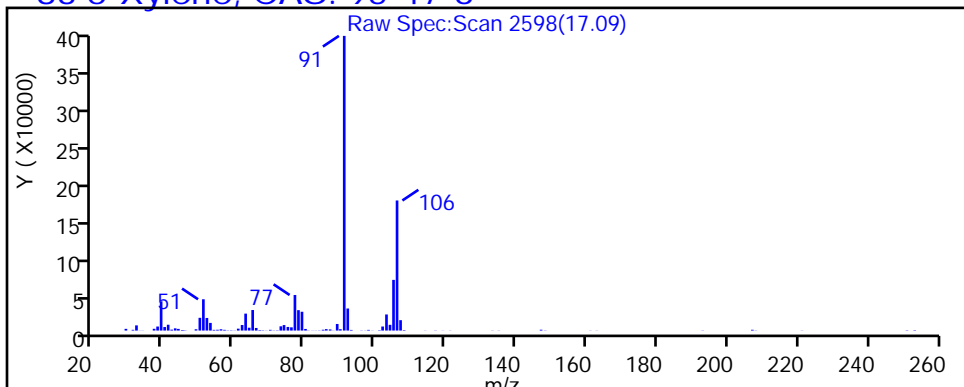
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-152-C-26 Lab Sample ID: 140-14389-13
 Matrix: Air Lab File ID: GB27p105.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:06
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 20:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.33	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.1	CI	0.40	0.075
67-66-3	Chloroform	119.38	0.098	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.74		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.099	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	9.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.50	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-152-C-26 Lab Sample ID: 140-14389-13
 Matrix: Air Lab File ID: GB27p105.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:06
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 20:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	11	CI	1.4	0.27
67-66-3	Chloroform	119.38	0.48	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	2.9		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.54	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	49		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p105.D
 Lims ID: 140-14389-A-13
 Client ID: SV-152-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 20:10:30 ALS Bottle#: 5 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-012
 Misc. Info.: 140-14389-A-13
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:30:21 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:39:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.226	9.237	-0.011	98	495405	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.410	-0.010	96	3052420	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2868489	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2210532	3.76	
6 Chlorodifluoromethane	51	3.829	3.834	0.000	97	198223	0.6108	
8 Dichlorodifluoromethane	85	3.893	3.889	0.000	99	48846	0.0931	
31 Methylene Chloride	84	6.600	6.600	0.000	99	49027	0.2410	
42 cis-1,2-Dichloroethene	96	8.892	8.882	0.000	97	26435	0.1476	
44 Chloroform	83	9.243	9.248	-0.005	35	8159	0.0197	
47 1,1,1-Trichloroethane	97	10.283	10.277	-0.006	95	8838	0.0197	
50 Benzene	78	10.871	10.882	-0.011	96	36507	0.0669	
58 Trichloroethene	130	12.101	12.100	-0.010	94	451297	1.82	
67 Toluene	91	14.123	14.128	-0.005	93	69507	0.1101	
79 m-Xylene & p-Xylene	91	16.560	16.565	-0.005	99	46741	0.0713	
83 o-Xylene	91	17.089	17.094	-0.005	96	18755	0.0271	
S 124 Xylenes, Total	100				0		0.0984	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p105.D

Injection Date: 27-Feb-2019 20:10:30

Instrument ID: MG

Operator ID: 403648

Lims ID: 140-14389-A-13

Lab Sample ID: 140-14389-13

Worklist Smp#: 12

Client ID: SV-152-C-26

Purge Vol: 500.000 mL

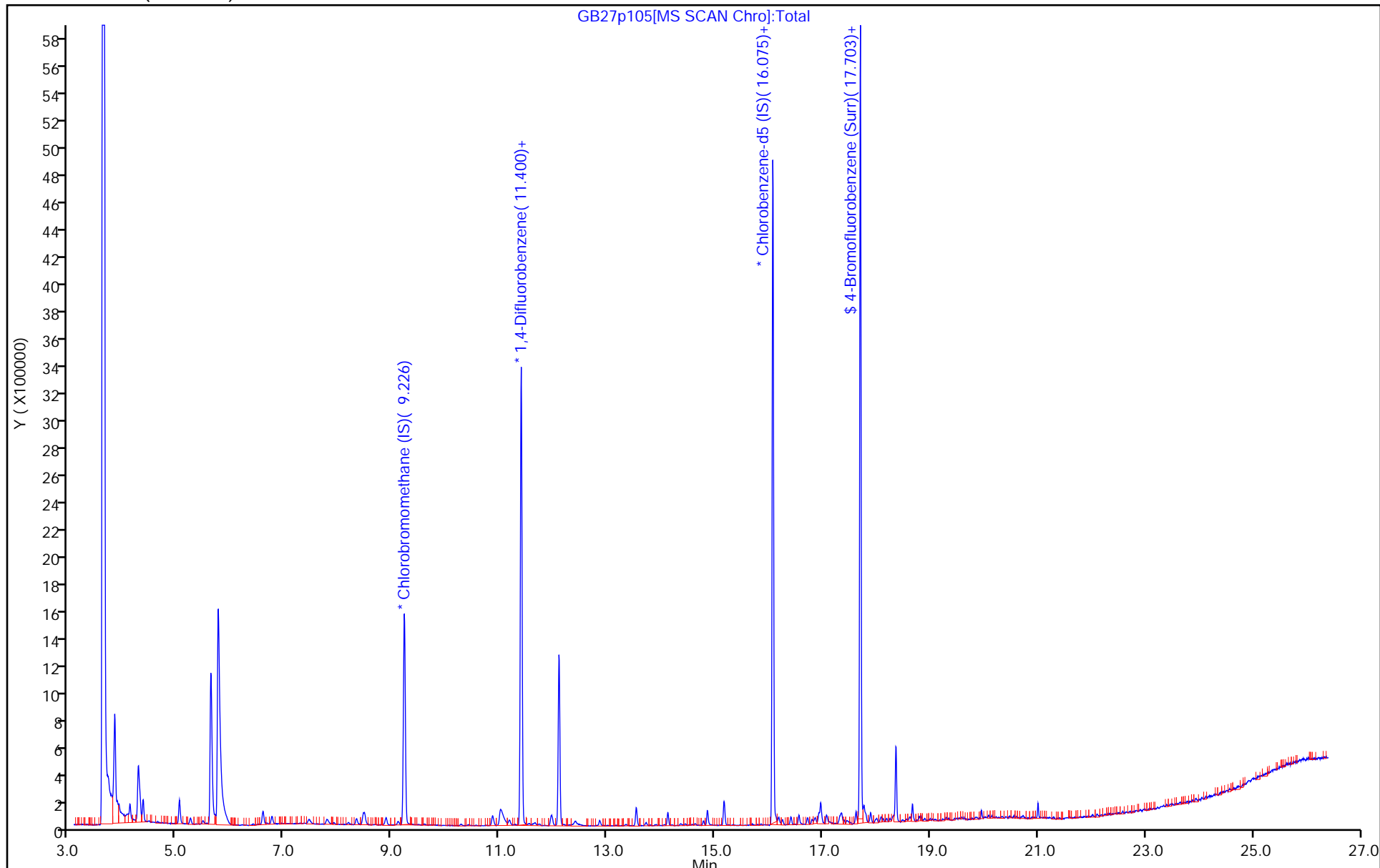
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p105.D
 Lims ID: 140-14389-A-13
 Client ID: SV-152-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 20:10:30 ALS Bottle#: 5 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-012
 Misc. Info.: 140-14389-A-13
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:30:21 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:39:56

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.76	94.02

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p105.D

Injection Date: 27-Feb-2019 20:10:30

Instrument ID: MG

Lims ID: 140-14389-A-13

Lab Sample ID: 140-14389-13

Client ID: SV-152-C-26

Operator ID: 403648

ALS Bottle#: 5 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

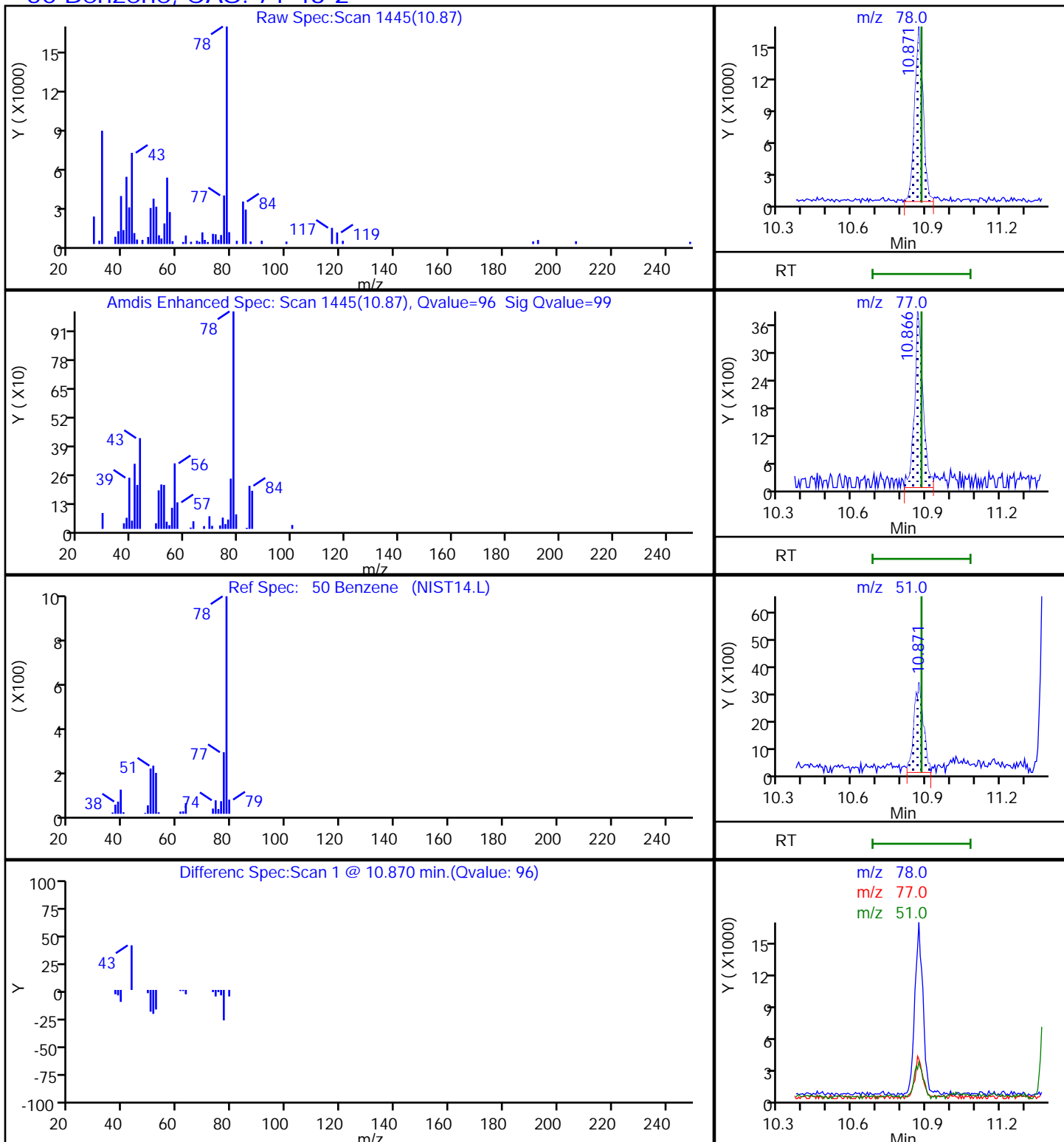
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p105.D

Injection Date: 27-Feb-2019 20:10:30

Instrument ID: MG

Lims ID: 140-14389-A-13

Lab Sample ID: 140-14389-13

Client ID: SV-152-C-26

Operator ID: 403648

ALS Bottle#: 5 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

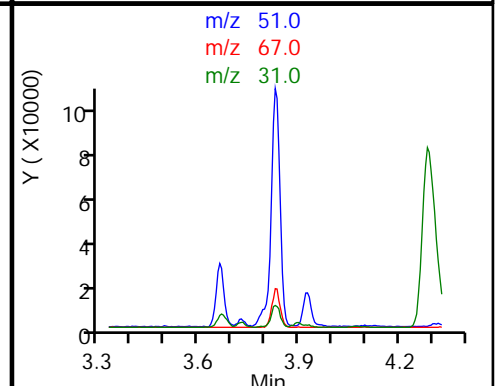
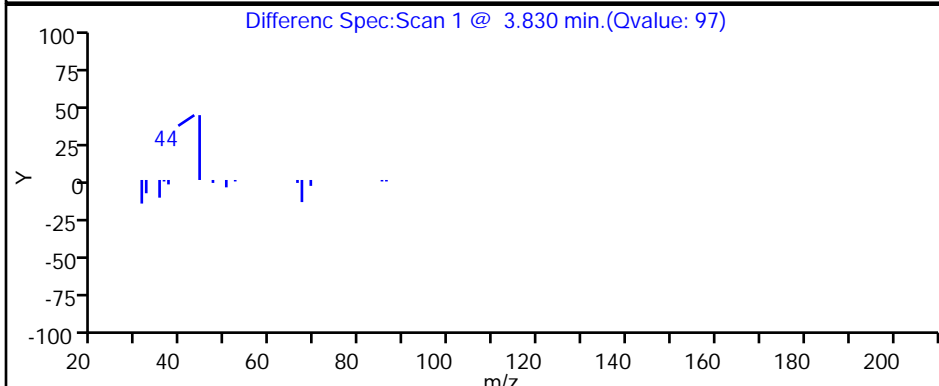
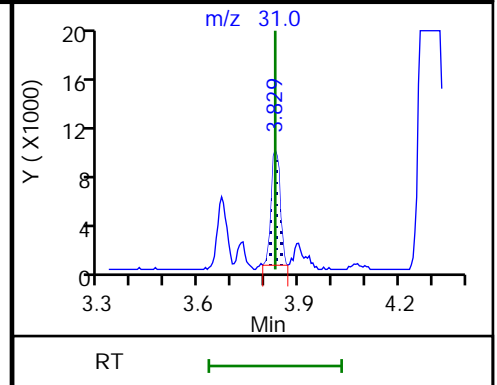
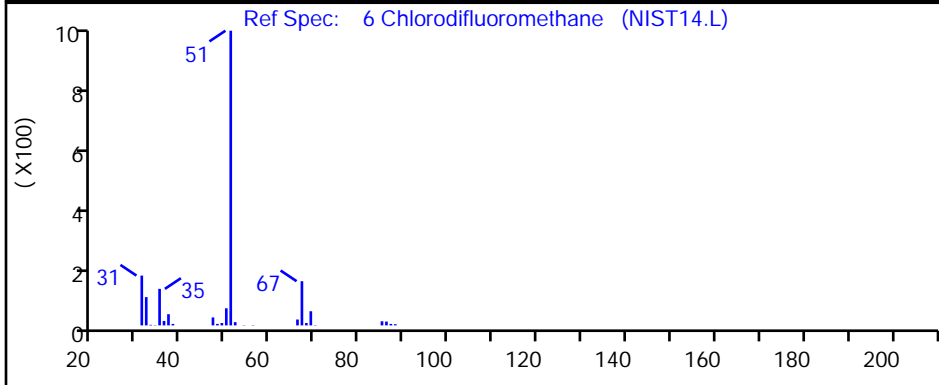
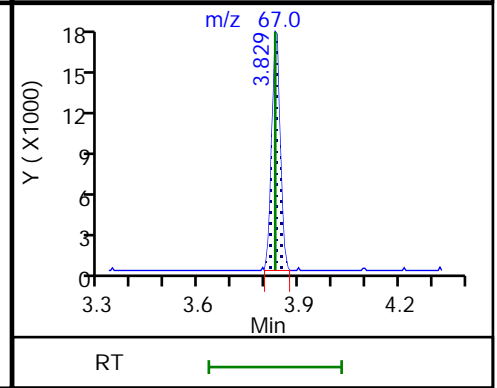
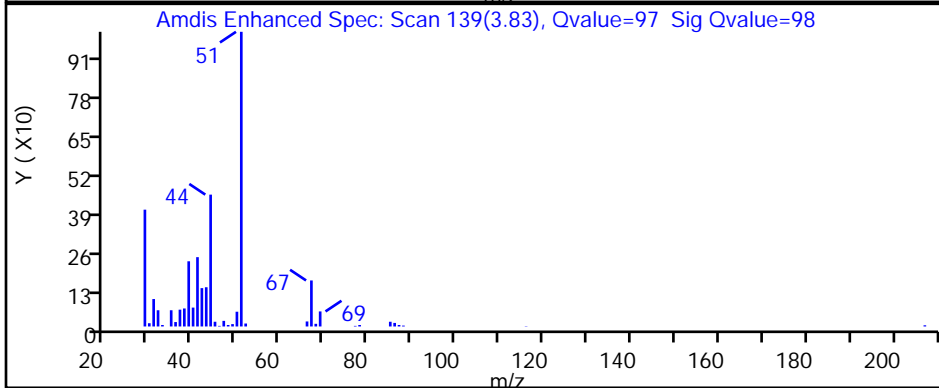
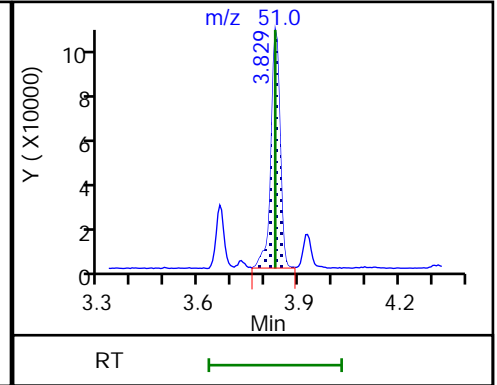
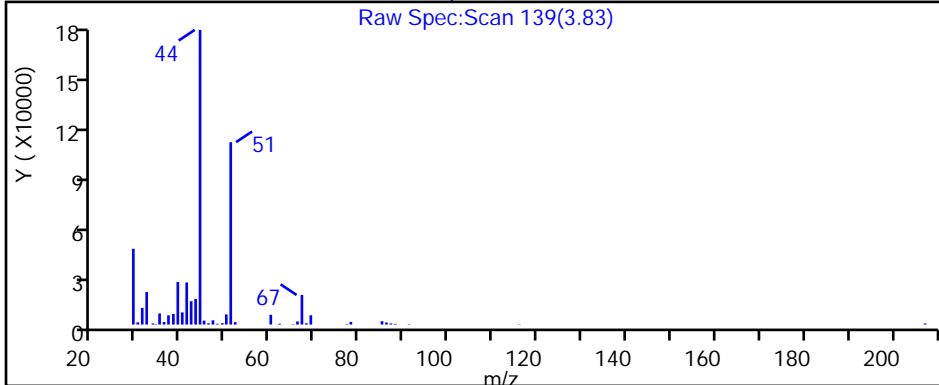
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p105.D

Injection Date: 27-Feb-2019 20:10:30

Instrument ID: MG

Lims ID: 140-14389-A-13

Lab Sample ID: 140-14389-13

Client ID: SV-152-C-26

Operator ID: 403648

ALS Bottle#: 5 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

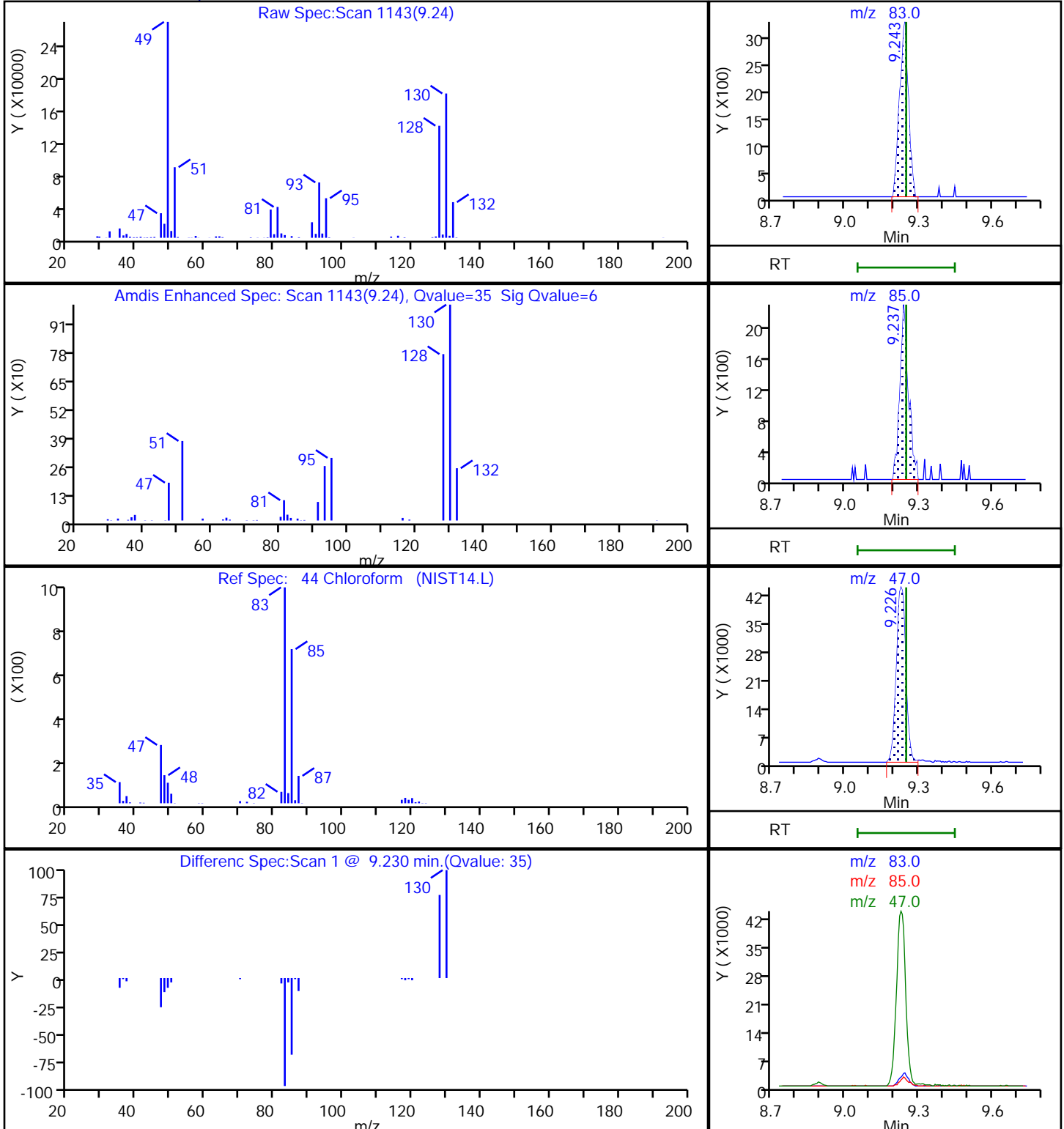
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p105.D

Injection Date: 27-Feb-2019 20:10:30

Instrument ID: MG

Lims ID: 140-14389-A-13

Lab Sample ID: 140-14389-13

Client ID: SV-152-C-26

Operator ID: 403648

ALS Bottle#: 5

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

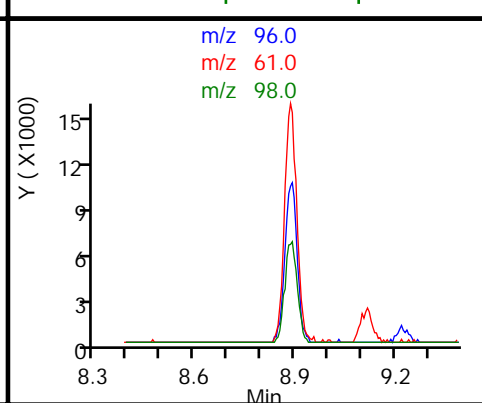
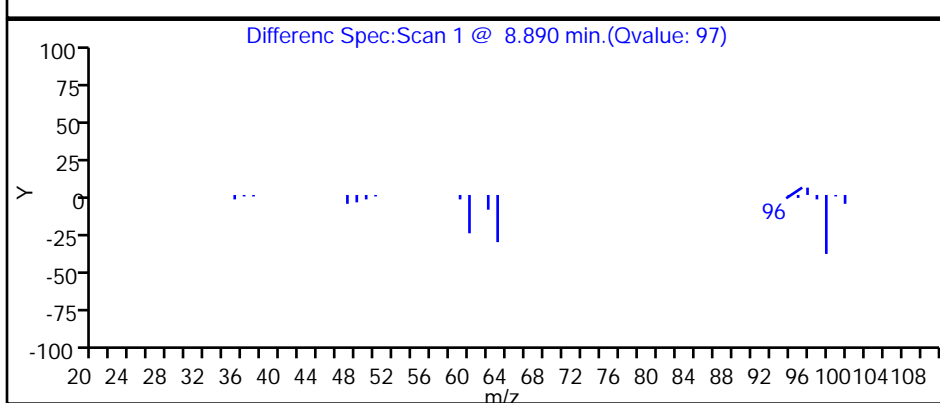
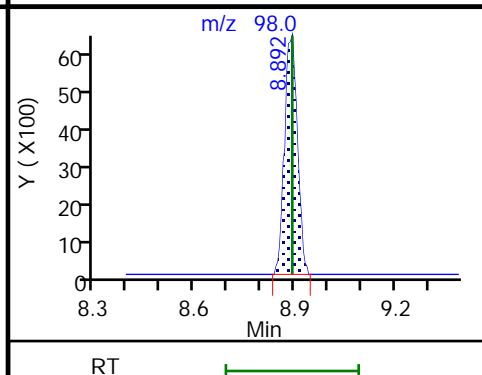
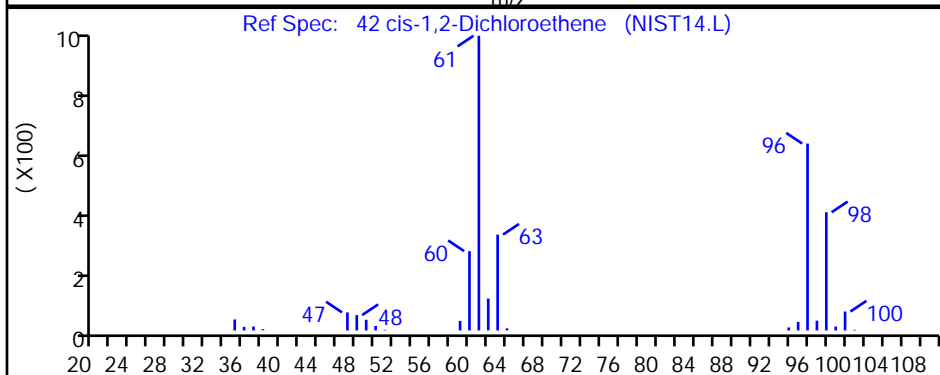
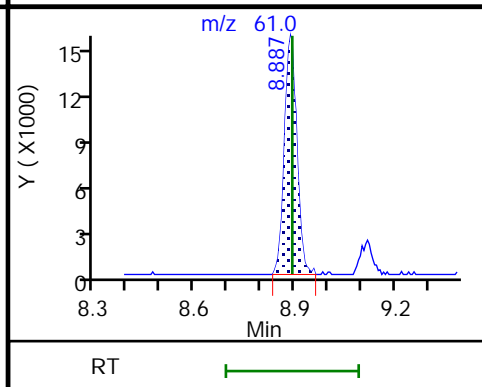
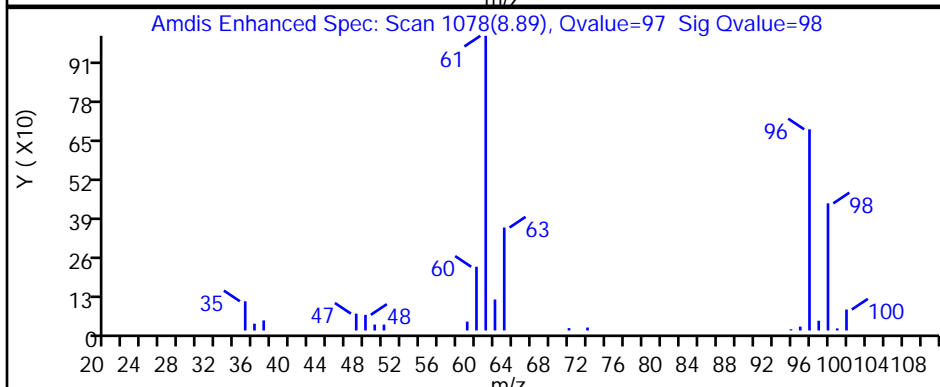
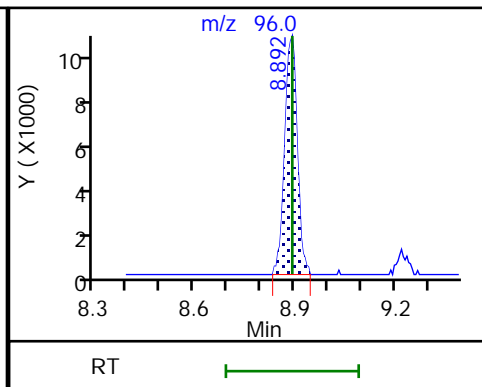
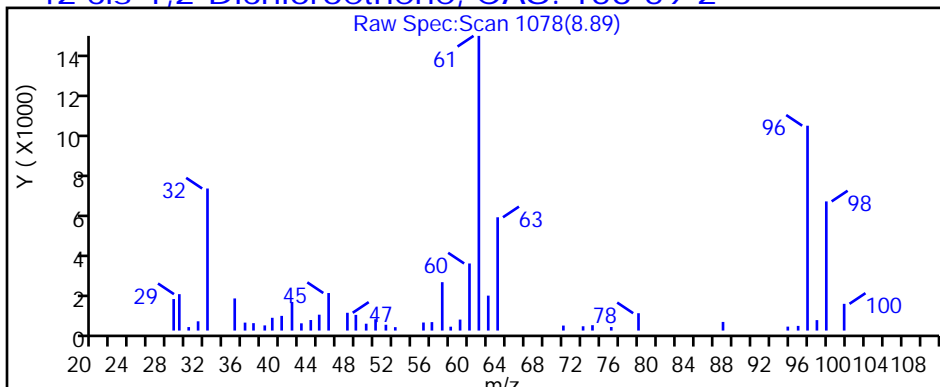
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p105.D

Injection Date: 27-Feb-2019 20:10:30

Instrument ID: MG

Lims ID: 140-14389-A-13

Lab Sample ID: 140-14389-13

Client ID: SV-152-C-26

Operator ID: 403648

ALS Bottle#: 5

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

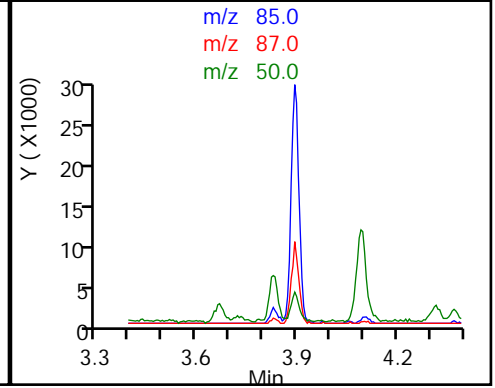
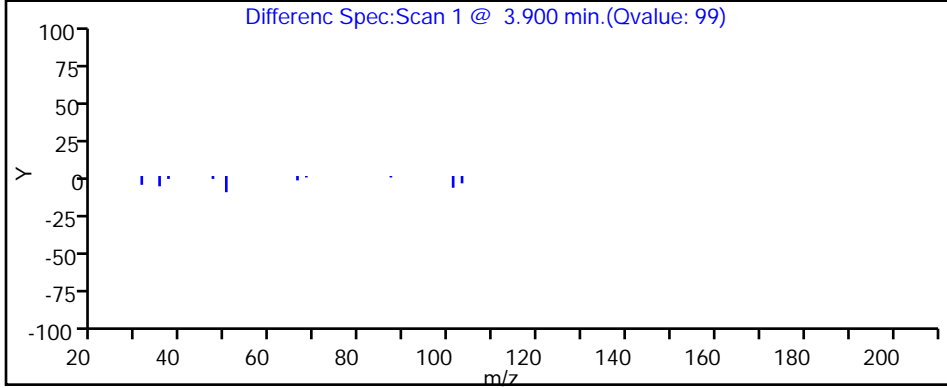
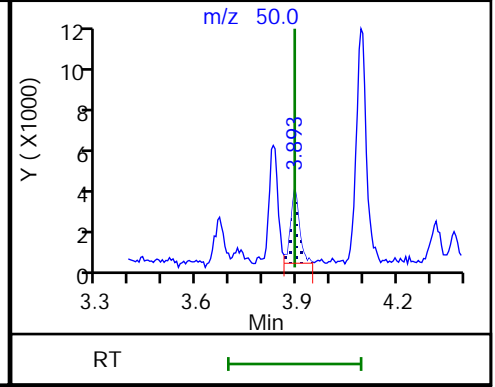
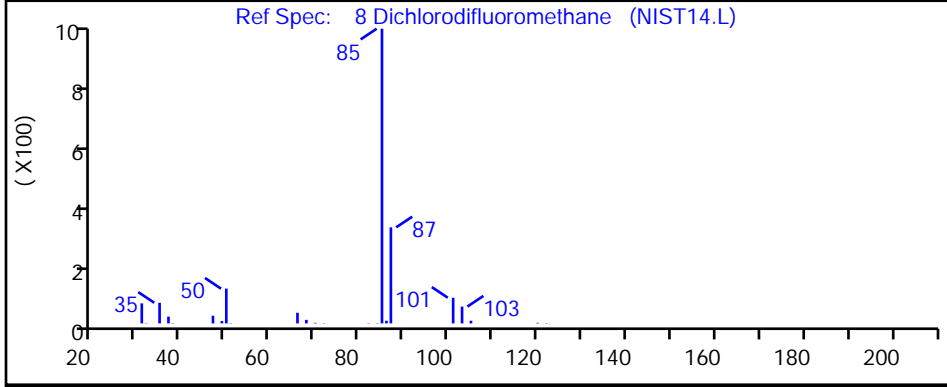
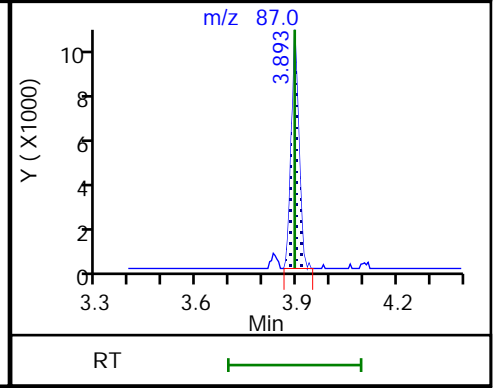
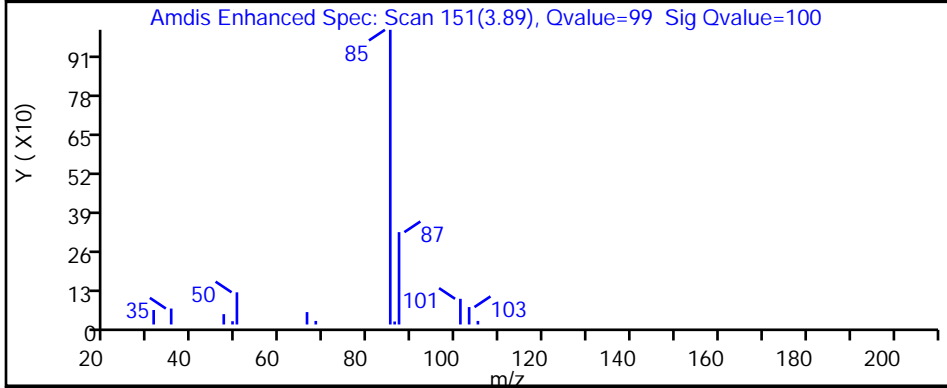
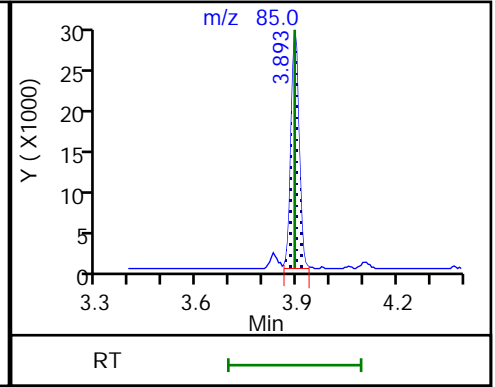
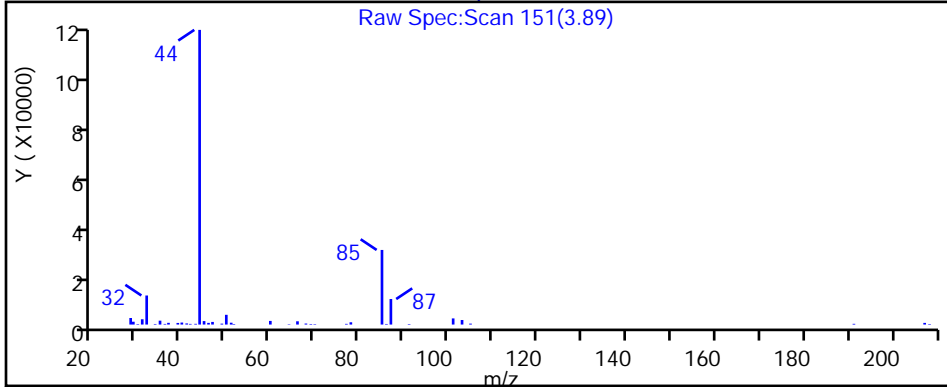
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p105.D

Injection Date: 27-Feb-2019 20:10:30

Instrument ID: MG

Lims ID: 140-14389-A-13

Lab Sample ID: 140-14389-13

Client ID: SV-152-C-26

Operator ID: 403648

ALS Bottle#: 5 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

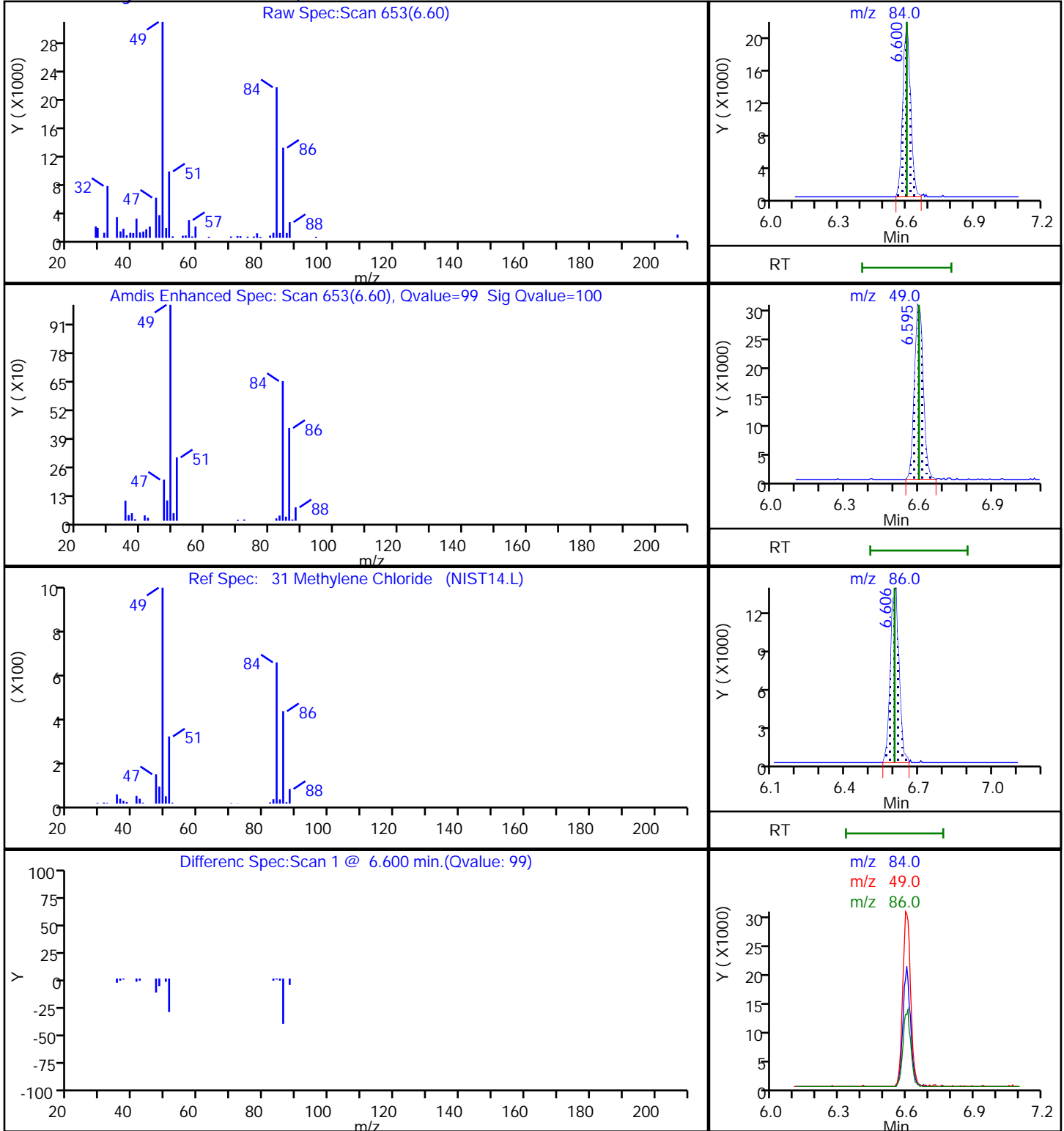
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p105.D

Injection Date: 27-Feb-2019 20:10:30

Instrument ID: MG

Lims ID: 140-14389-A-13

Lab Sample ID: 140-14389-13

Client ID: SV-152-C-26

Operator ID: 403648

ALS Bottle#: 5

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

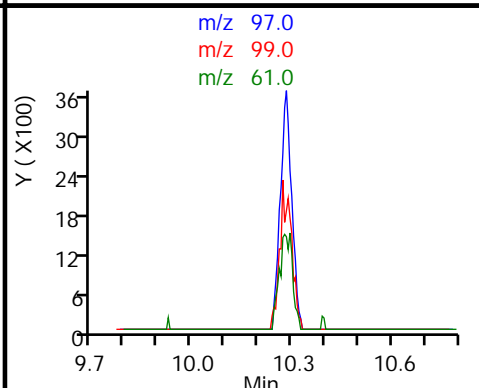
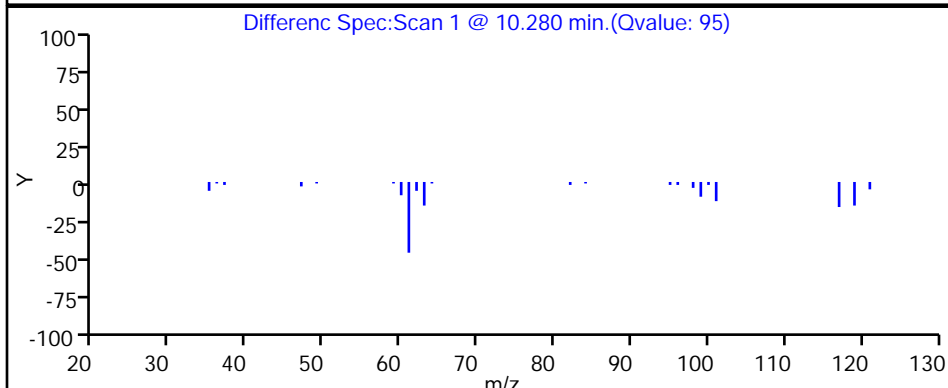
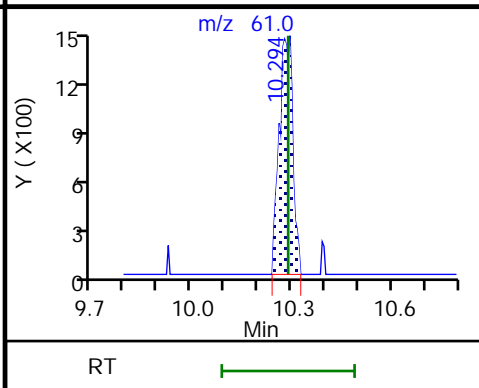
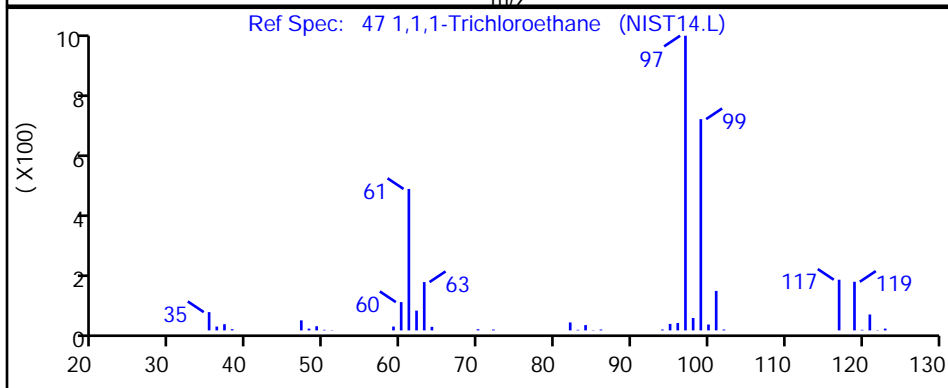
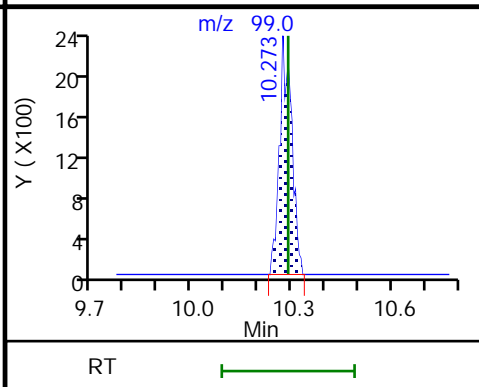
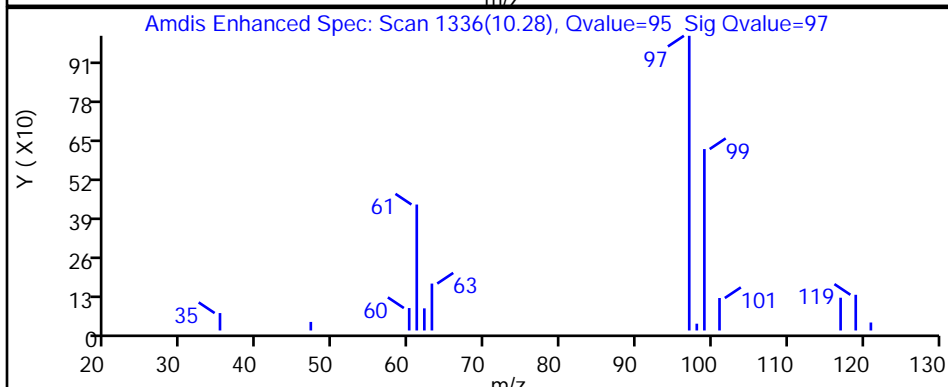
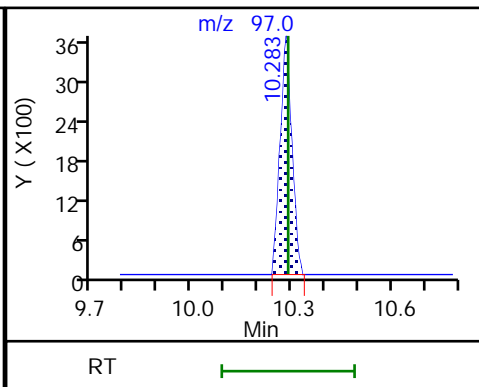
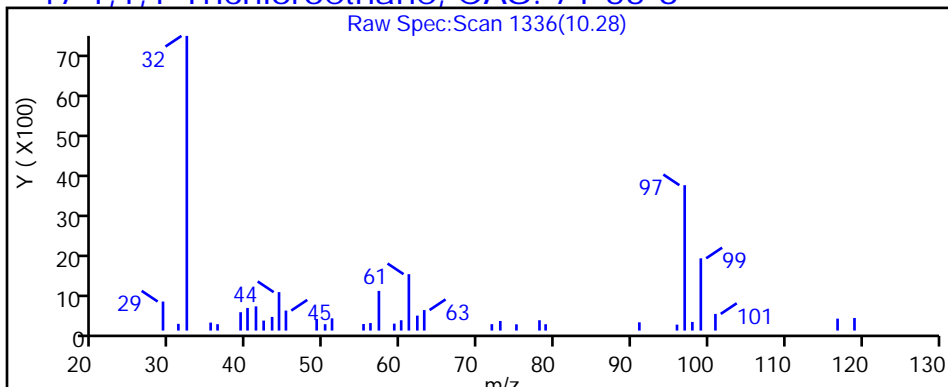
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p105.D

Injection Date: 27-Feb-2019 20:10:30

Instrument ID: MG

Lims ID: 140-14389-A-13

Lab Sample ID: 140-14389-13

Client ID: SV-152-C-26

Operator ID: 403648

ALS Bottle#: 5 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

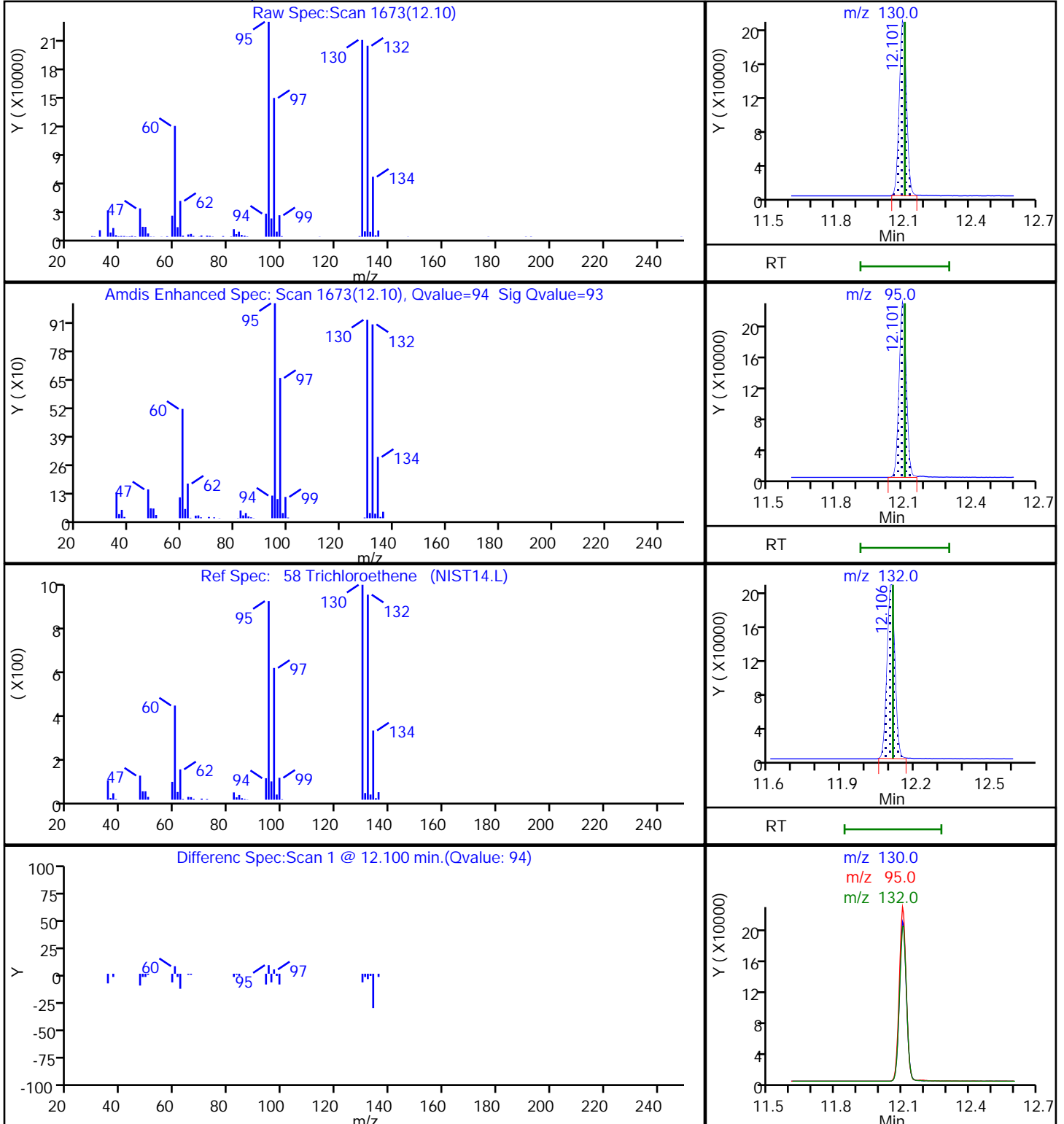
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

58 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p105.D

Injection Date: 27-Feb-2019 20:10:30

Instrument ID: MG

Lims ID: 140-14389-A-13

Lab Sample ID: 140-14389-13

Client ID: SV-152-C-26

Operator ID: 403648

ALS Bottle#: 5

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

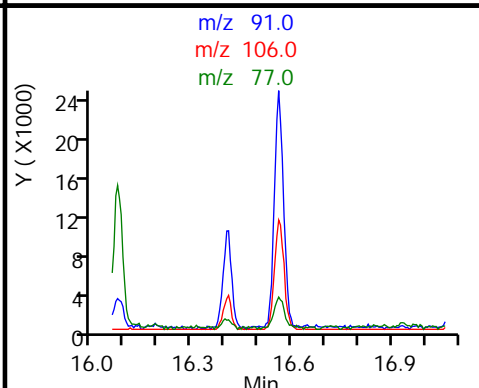
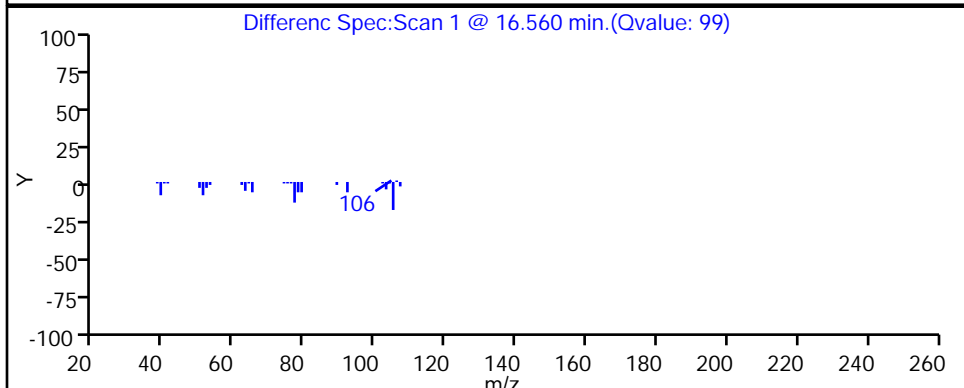
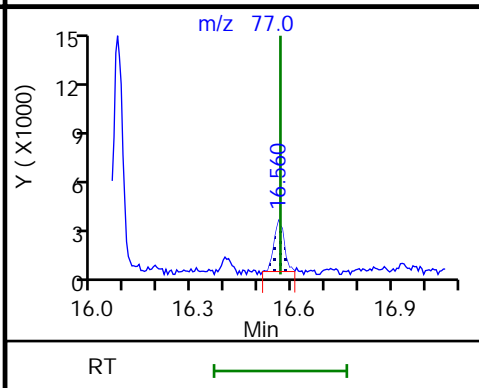
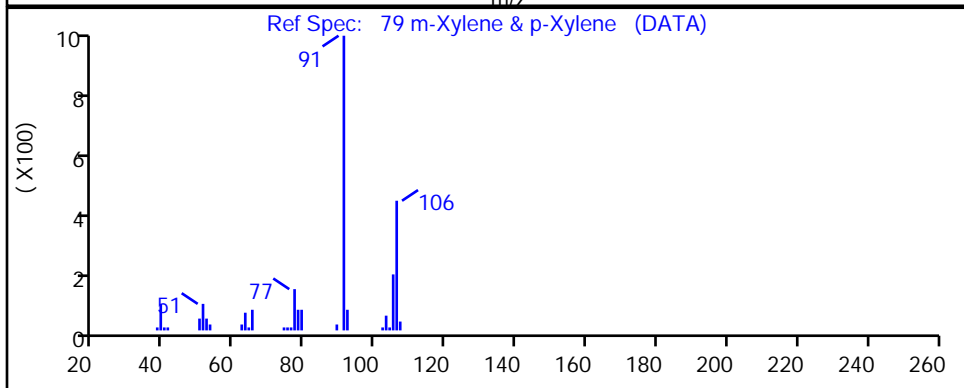
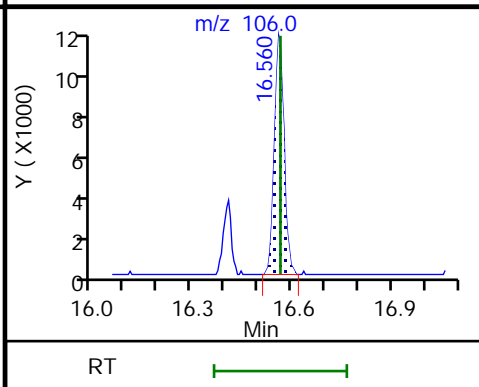
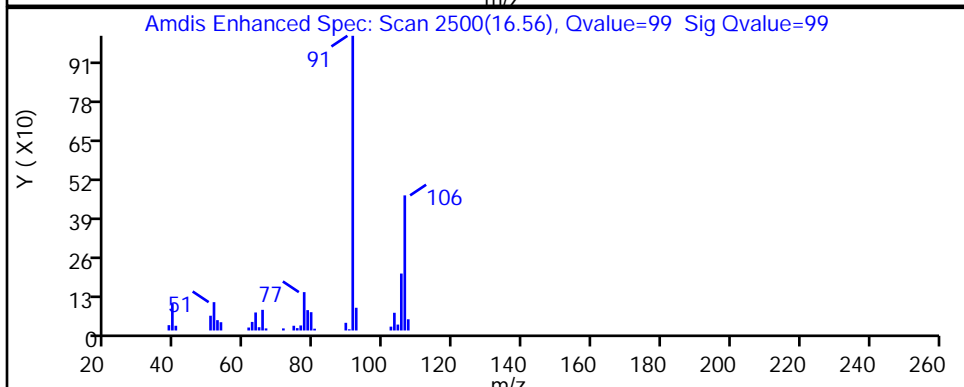
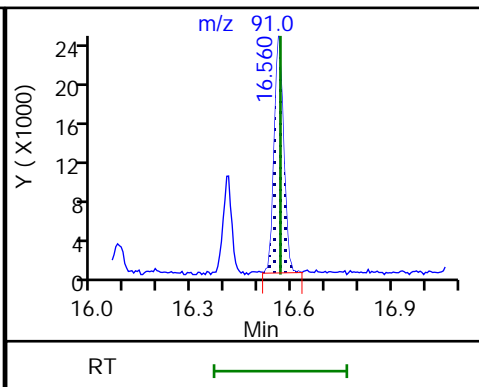
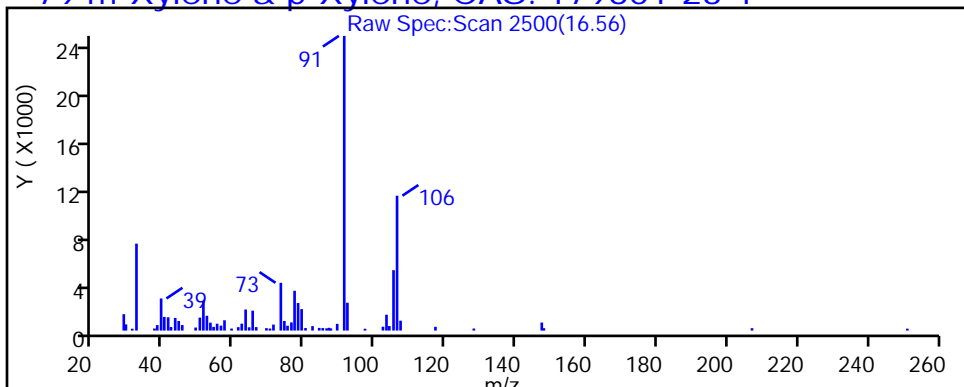
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p105.D

Injection Date: 27-Feb-2019 20:10:30

Instrument ID: MG

Lims ID: 140-14389-A-13

Lab Sample ID: 140-14389-13

Client ID: SV-152-C-26

Operator ID: 403648

ALS Bottle#: 5 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

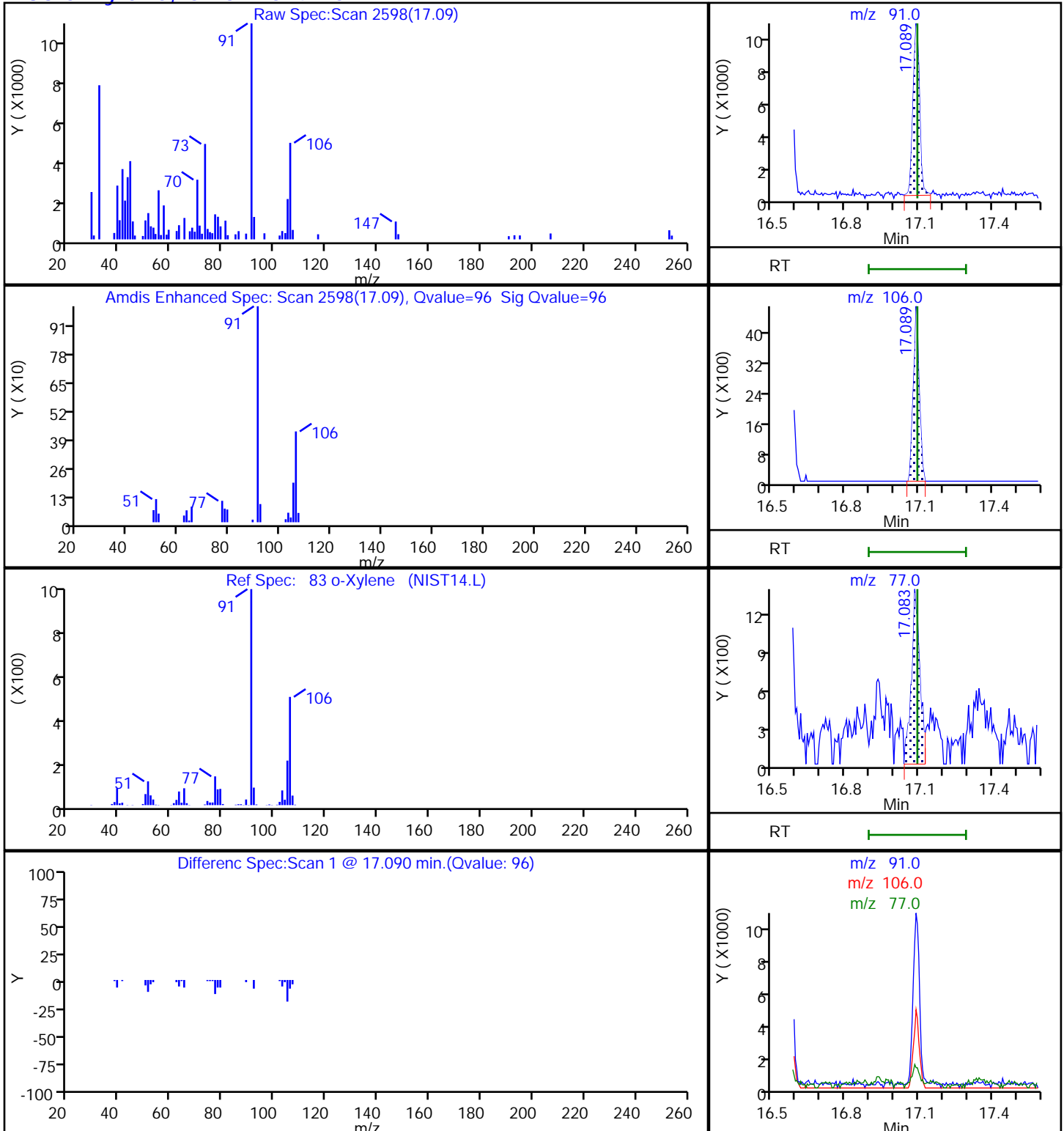
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-141-C-26 Lab Sample ID: 140-14389-14
 Matrix: Air Lab File ID: GB27p106R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:10
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 05:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	0.10	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.8		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.48		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.95	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.3		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.75		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	63		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-141-C-26 Lab Sample ID: 140-14389-14
 Matrix: Air Lab File ID: GB27p106R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:10
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 05:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.4		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.2		1.4	0.27
67-66-3	Chloroform	119.38	0.49	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	11		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.9		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.85	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	9.0		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	3.0		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	340		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D
 Lims ID: 140-14389-A-14
 Client ID: SV-141-C-26
 Sample Type: Client
 Inject. Date: 28-Feb-2019 05:16:30 ALS Bottle#: 6 Worklist Smp#: 27
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-027
 Misc. Info.: 140-14389-A-14
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 03:51:34 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 18:32:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.226	9.237	-0.011	98	479558	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.410	-0.010	96	3005696	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	90	2816785	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.697	0.000	87	2159264	3.74	
6 Chlorodifluoromethane	51	3.829	3.824	0.000	96	74374	0.2367	
8 Dichlorodifluoromethane	85	3.893	3.889	0.000	100	47937	0.0944	
27 1,1-Dichloroethene	96	6.234	6.226	0.000	94	16156	0.0954	
31 Methylene Chloride	84	6.595	6.593	-0.005	98	37504	0.1904	
34 trans-1,2-Dichloroethene	96	7.436	7.433	-0.005	96	25348	0.1495	
42 cis-1,2-Dichloroethene	96	8.881	8.882	-0.011	97	97587	0.5627	
44 Chloroform	83	9.243	9.237	-0.005	27	8105	0.0202	
50 Benzene	78	10.871	10.872	-0.011	97	47377	0.0881	
58 Trichloroethene	130	12.101	12.100	-0.010	95	3077192	12.6	
67 Toluene	91	14.128	14.123	0.000	92	52966	0.0855	
73 Tetrachloroethene	129	15.255	15.250	0.000	95	62037	0.2668	
78 Ethylbenzene	91	16.404	16.404	-0.005	99	32927	0.0391	
79 m-Xylene & p-Xylene	91	16.560	16.560	-0.005	100	125908	0.1955	
83 o-Xylene	91	17.088	17.088	-0.006	97	51555	0.0759	
S 124 Xylenes, Total	100				0		0.2714	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D

Injection Date: 28-Feb-2019 05:16:30

Instrument ID: MG

Operator ID: 403648

Lims ID: 140-14389-A-14

Lab Sample ID: 140-14389-14

Worklist Smp#: 27

Client ID: SV-141-C-26

Purge Vol: 500.000 mL

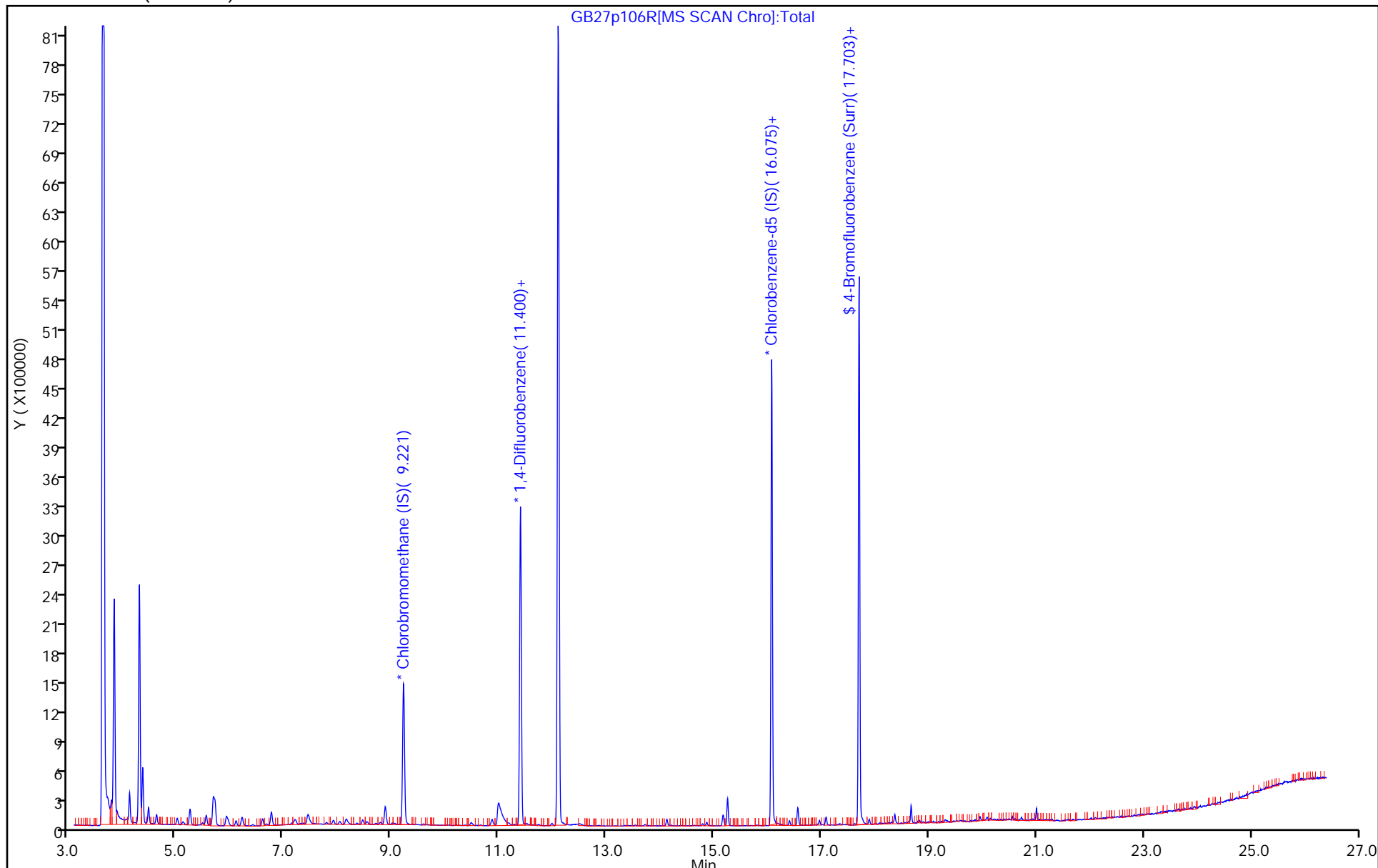
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D
 Lims ID: 140-14389-A-14
 Client ID: SV-141-C-26
 Sample Type: Client
 Inject. Date: 28-Feb-2019 05:16:30 ALS Bottle#: 6 Worklist Smp#: 27
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-027
 Misc. Info.: 140-14389-A-14
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 03:51:34 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 18:32:39

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.74	93.52

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D

Injection Date: 28-Feb-2019 05:16:30

Instrument ID: MG

Lims ID: 140-14389-A-14

Lab Sample ID: 140-14389-14

Client ID: SV-141-C-26

Operator ID: 403648

ALS Bottle#: 6

Worklist Smp#: 27

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

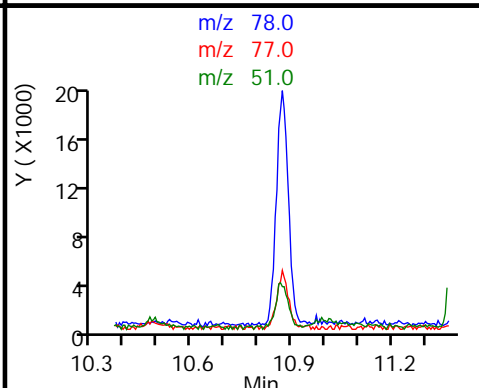
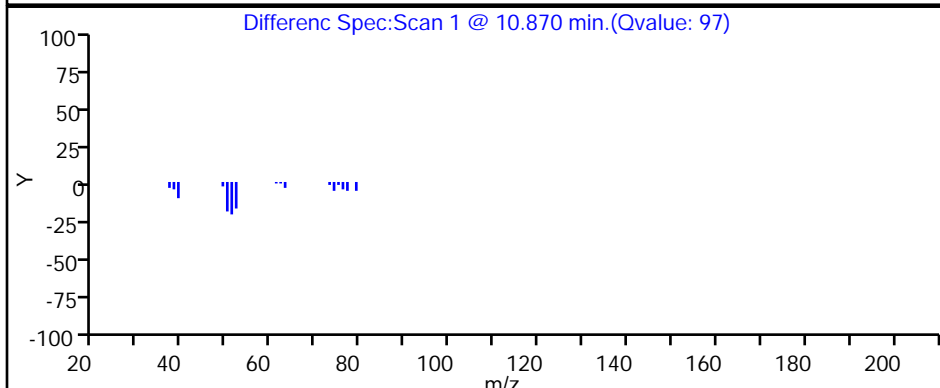
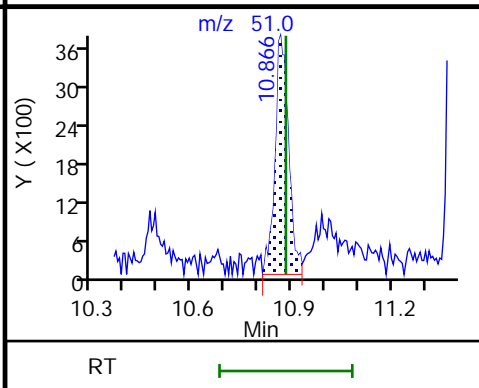
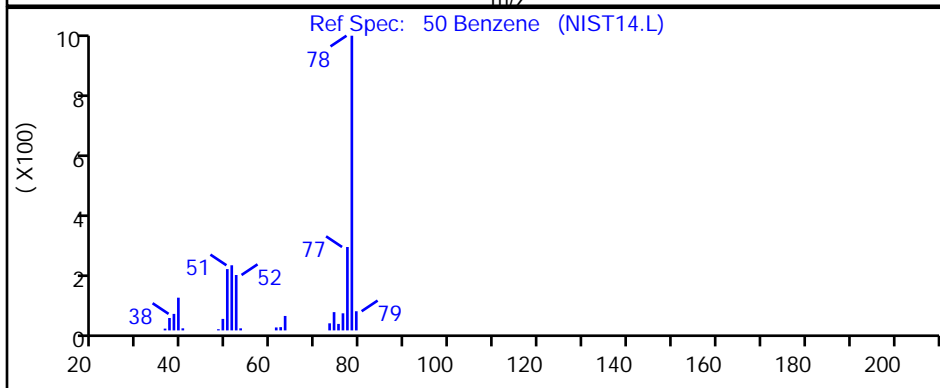
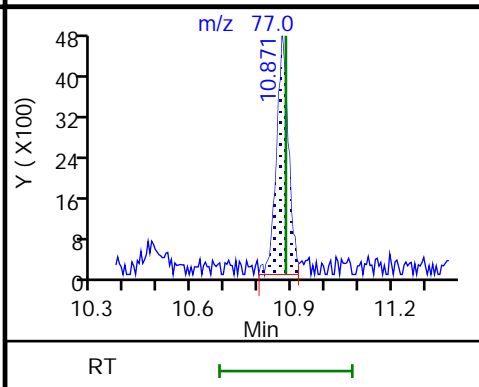
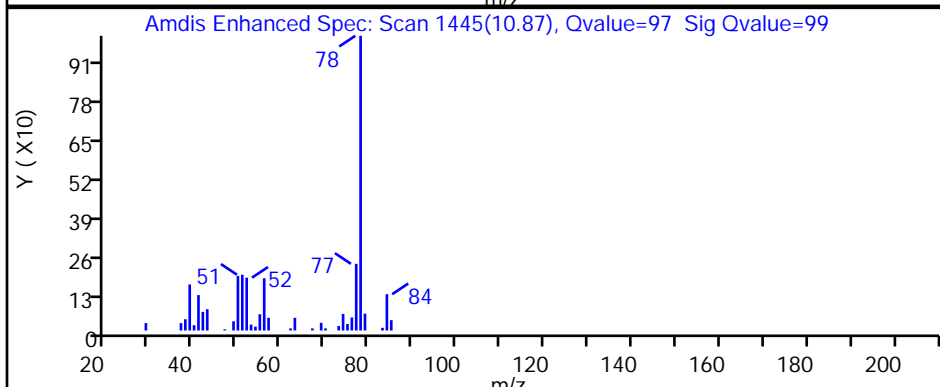
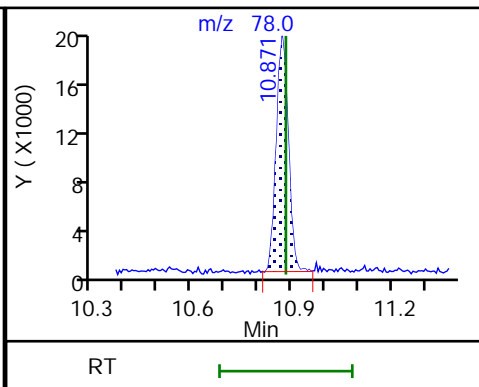
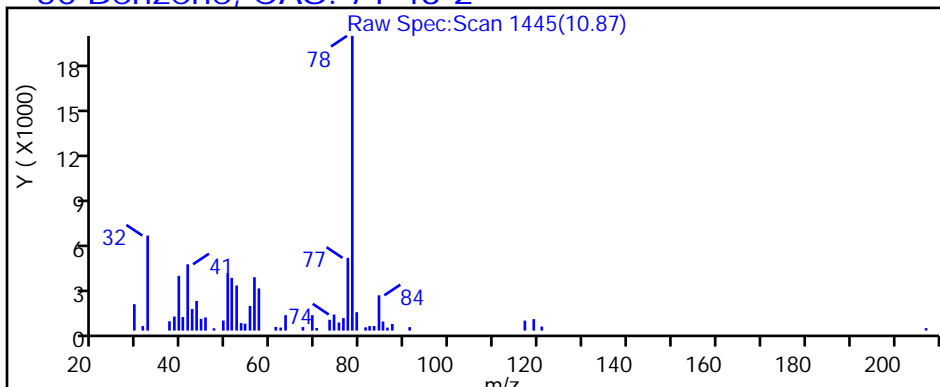
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D

Injection Date: 28-Feb-2019 05:16:30

Instrument ID: MG

Lims ID: 140-14389-A-14

Lab Sample ID: 140-14389-14

Client ID: SV-141-C-26

Operator ID: 403648

ALS Bottle#: 6

Worklist Smp#: 27

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

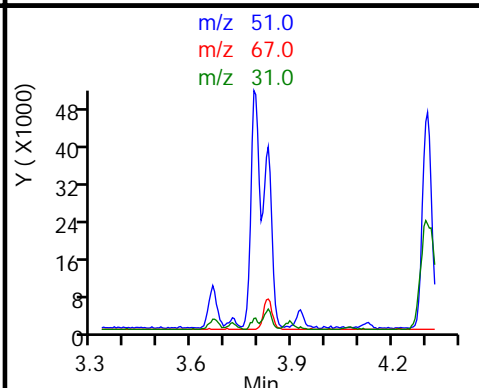
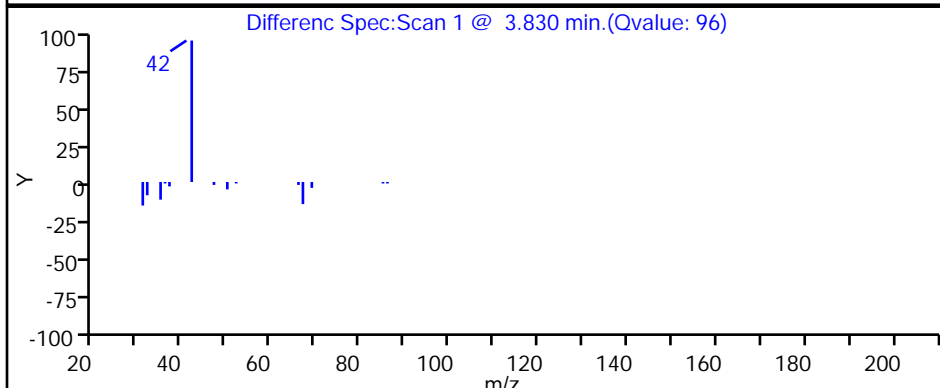
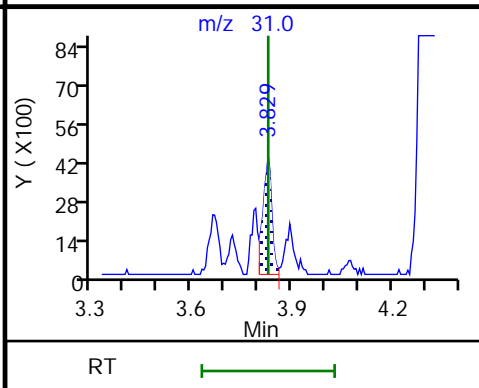
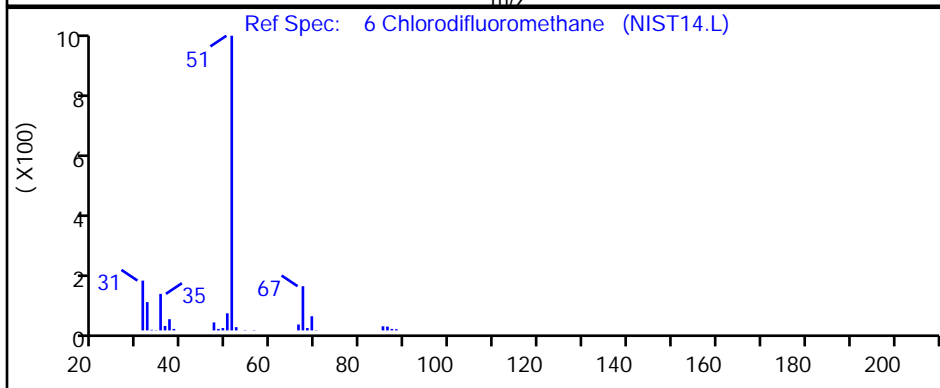
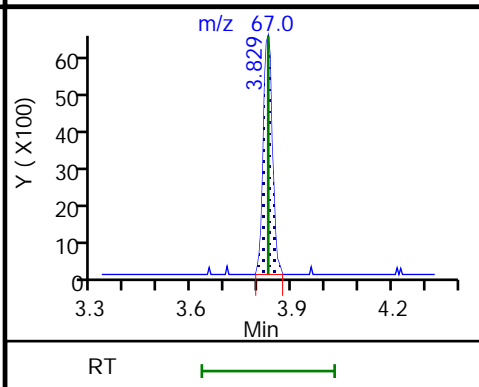
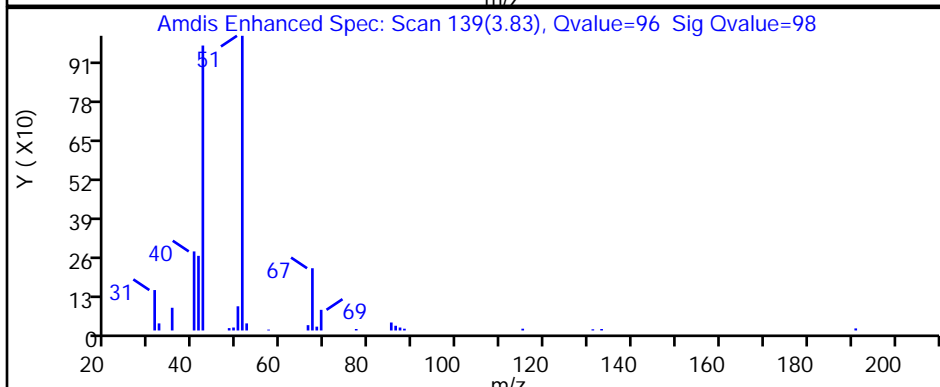
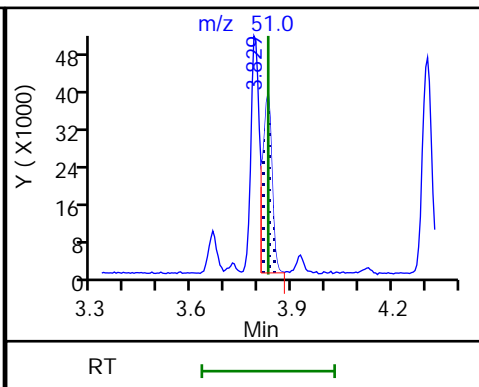
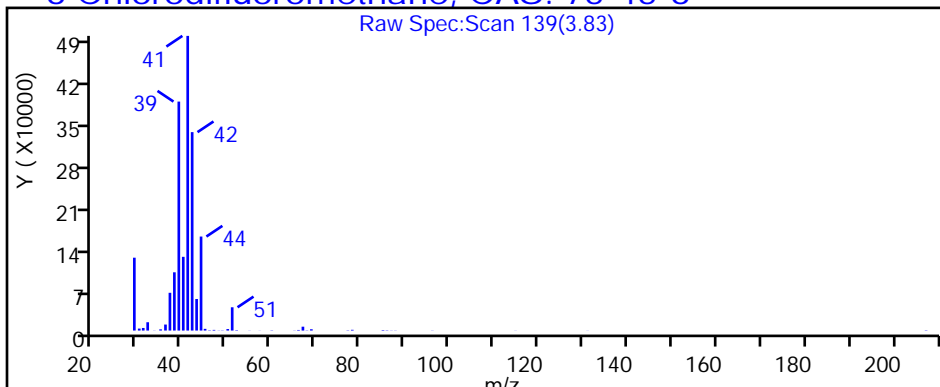
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D

Injection Date: 28-Feb-2019 05:16:30

Instrument ID: MG

Lims ID: 140-14389-A-14

Lab Sample ID: 140-14389-14

Client ID: SV-141-C-26

Operator ID: 403648

ALS Bottle#: 6

Worklist Smp#: 27

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

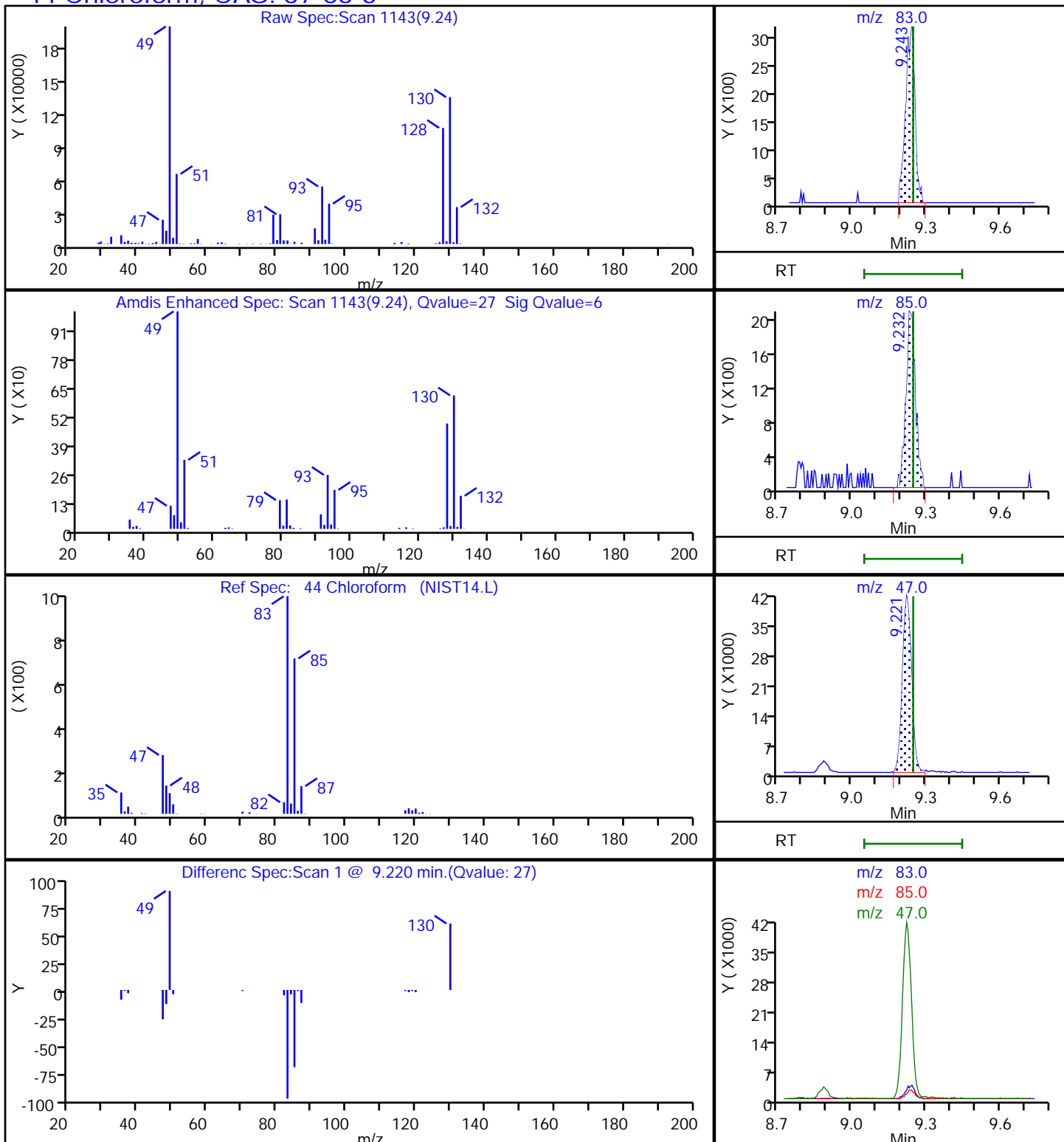
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D

Injection Date: 28-Feb-2019 05:16:30

Instrument ID: MG

Lims ID: 140-14389-A-14

Lab Sample ID: 140-14389-14

Client ID: SV-141-C-26

Operator ID: 403648

ALS Bottle#: 6

Worklist Smp#: 27

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

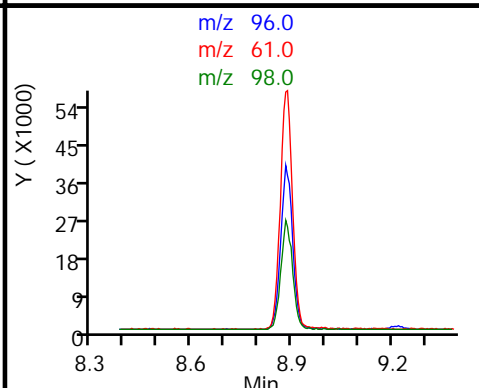
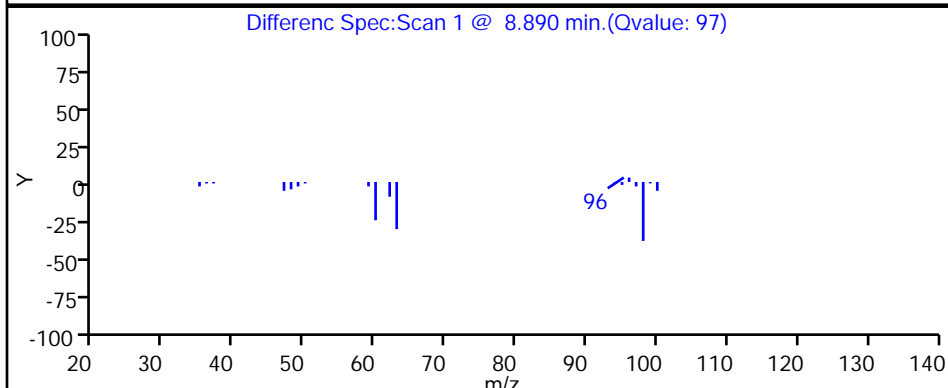
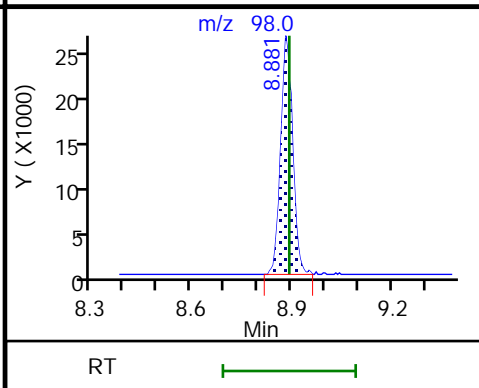
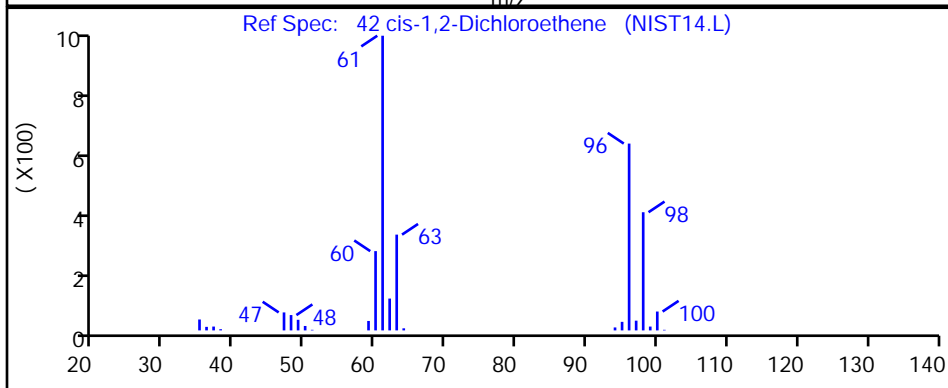
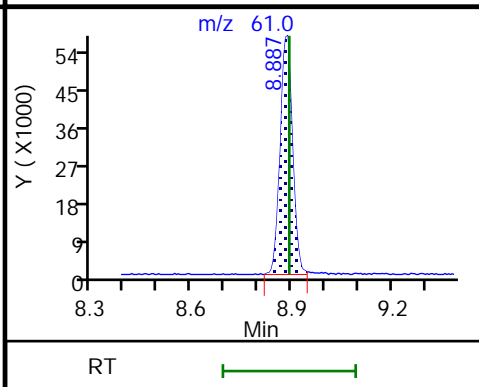
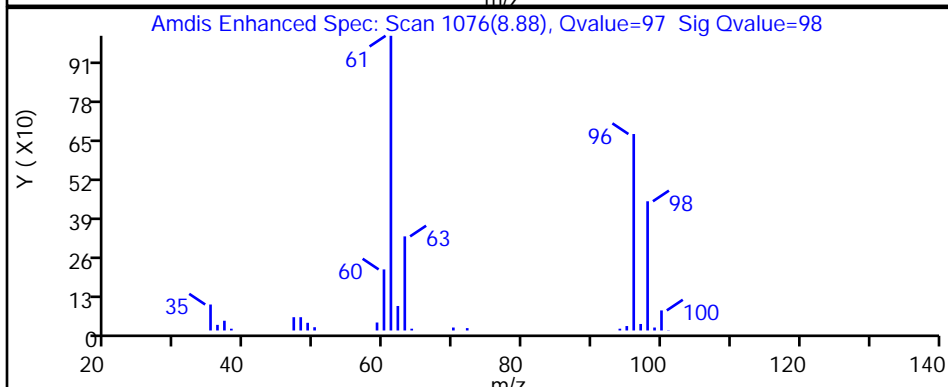
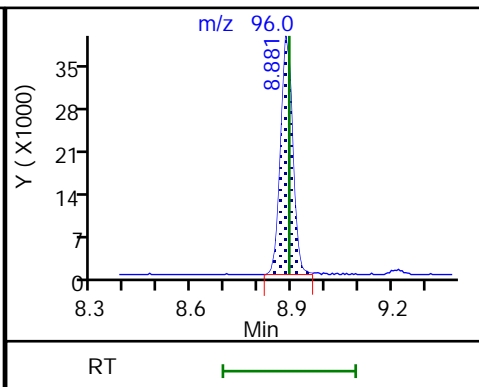
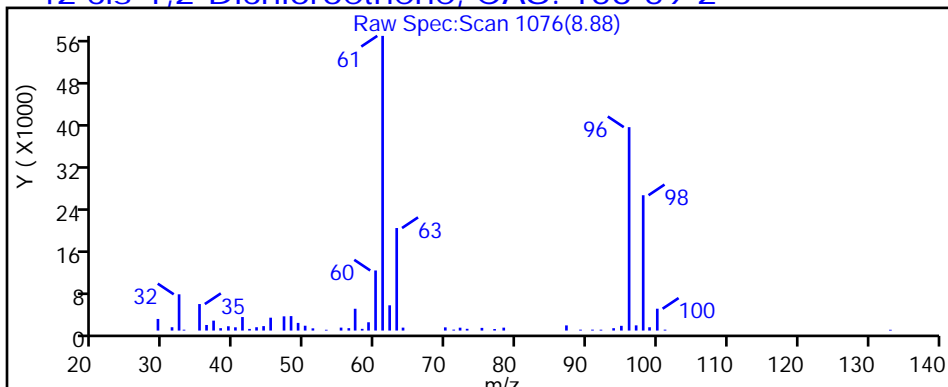
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D

Injection Date: 28-Feb-2019 05:16:30

Instrument ID: MG

Lims ID: 140-14389-A-14

Lab Sample ID: 140-14389-14

Client ID: SV-141-C-26

Operator ID: 403648

ALS Bottle#: 6

Worklist Smp#: 27

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

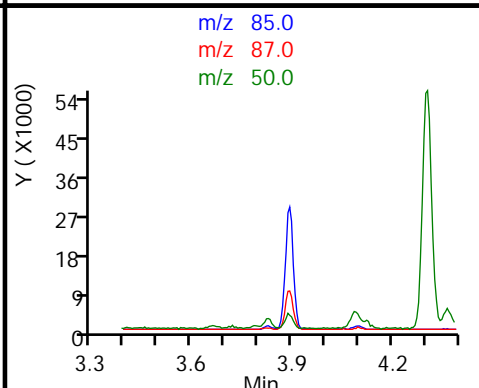
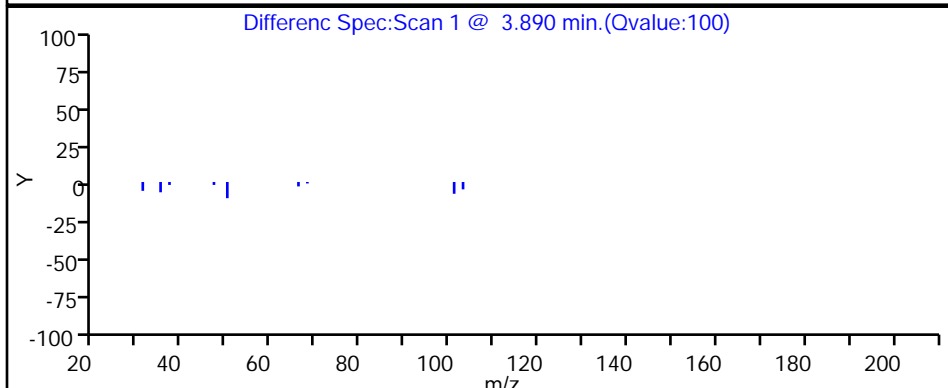
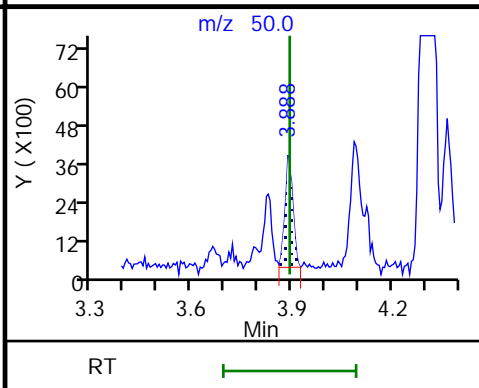
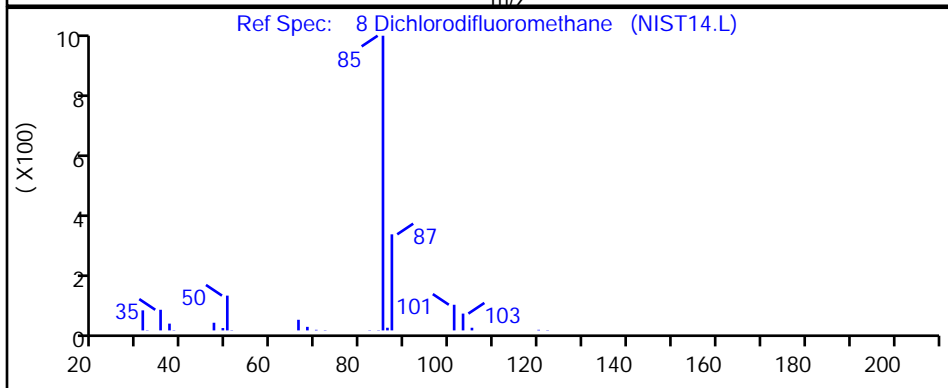
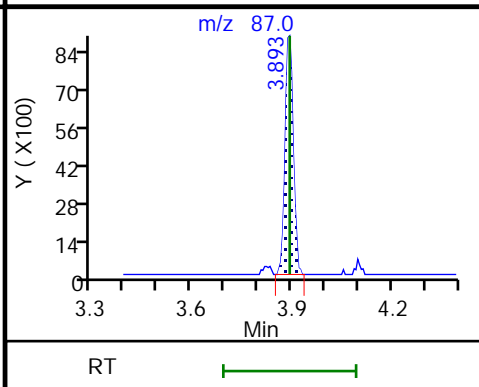
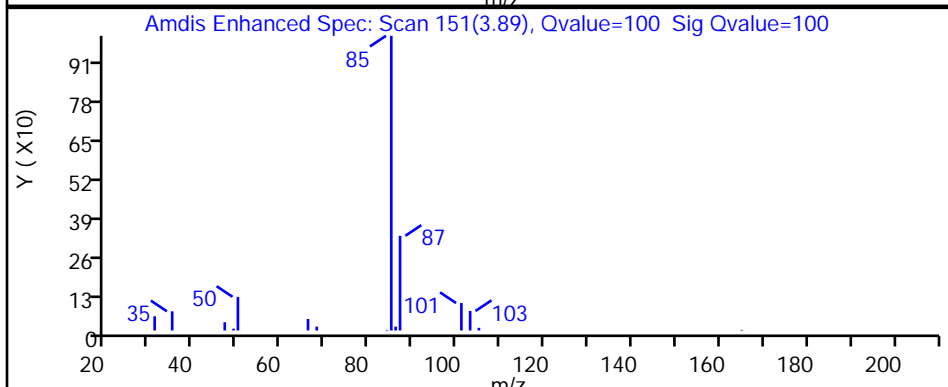
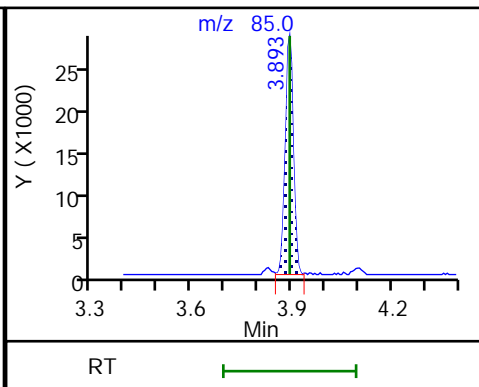
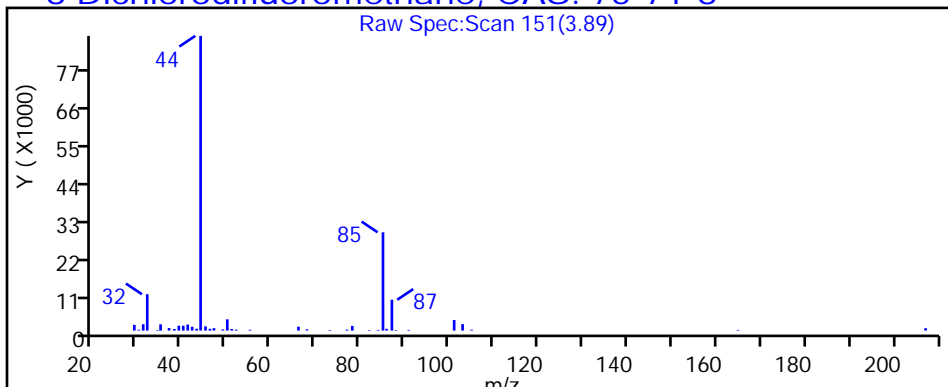
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D

Injection Date: 28-Feb-2019 05:16:30

Instrument ID: MG

Lims ID: 140-14389-A-14

Lab Sample ID: 140-14389-14

Client ID: SV-141-C-26

Operator ID: 403648

ALS Bottle#: 6 Worklist Smp#: 27

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

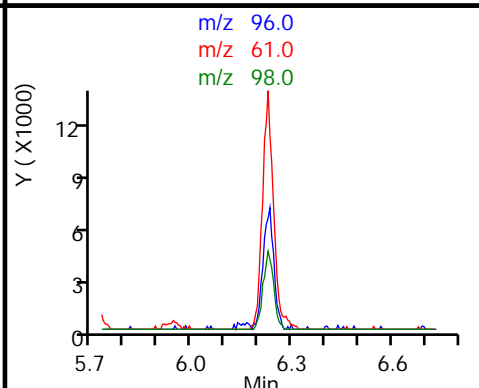
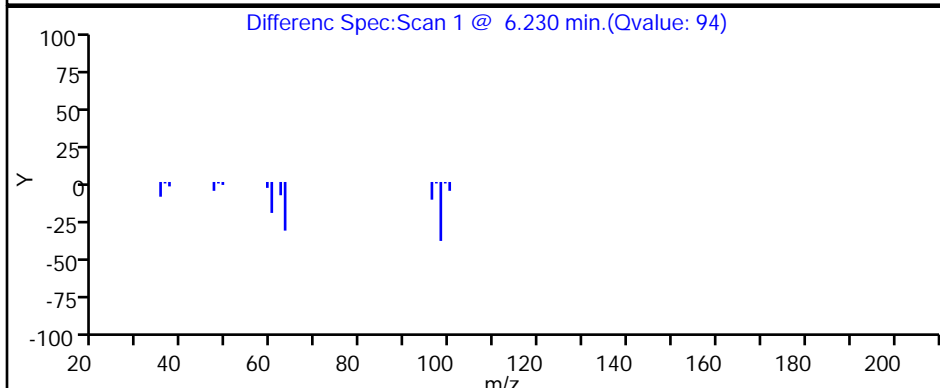
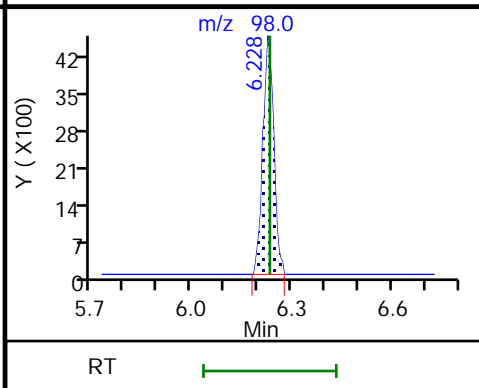
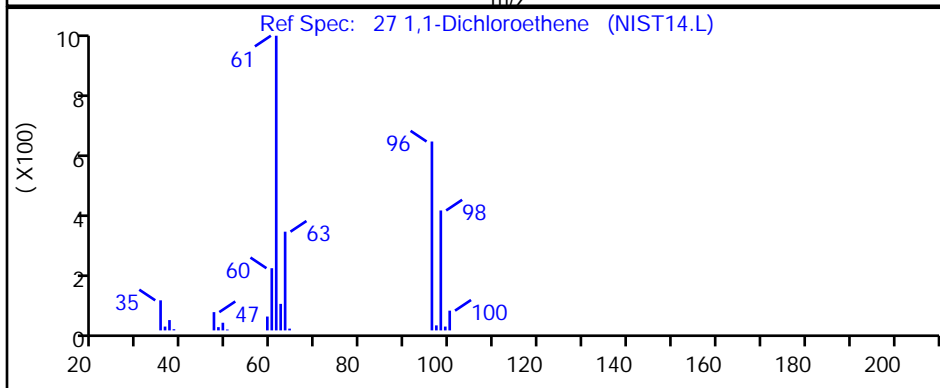
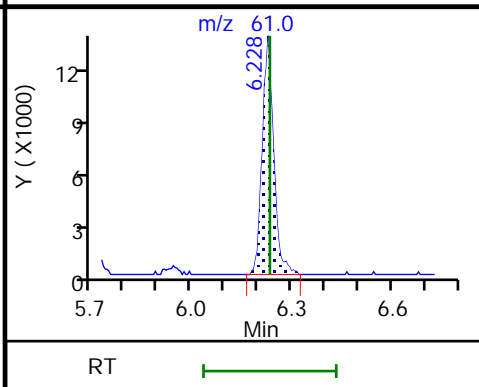
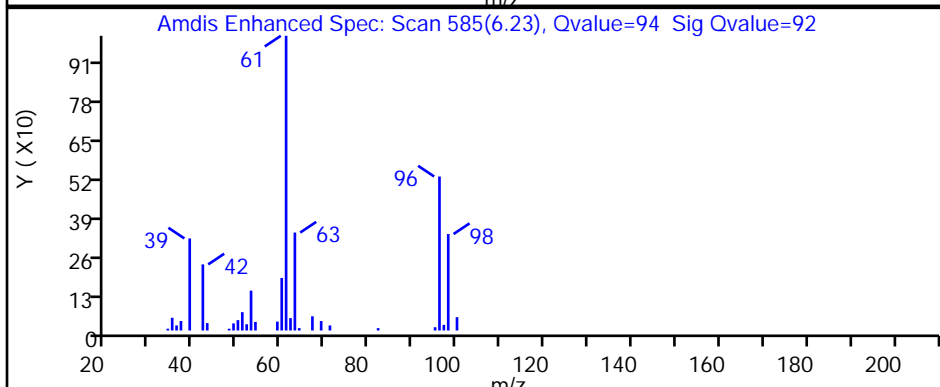
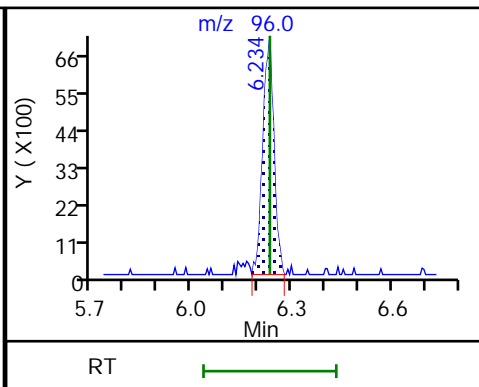
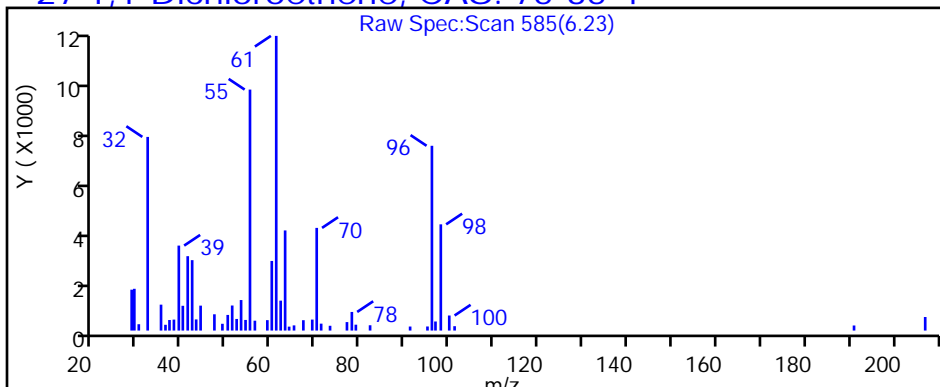
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D

Injection Date: 28-Feb-2019 05:16:30

Instrument ID: MG

Lims ID: 140-14389-A-14

Lab Sample ID: 140-14389-14

Client ID: SV-141-C-26

Operator ID: 403648

ALS Bottle#: 6

Worklist Smp#: 27

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

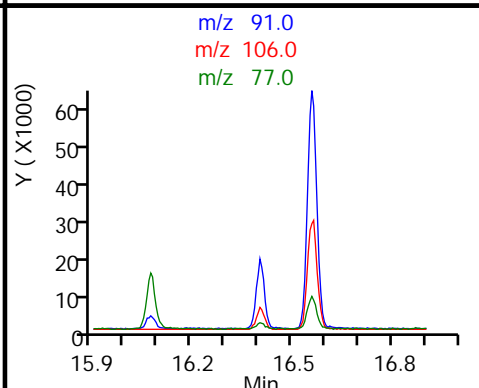
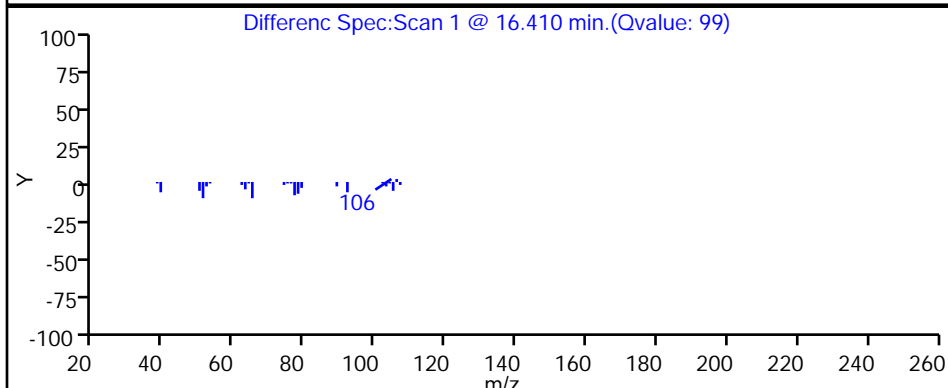
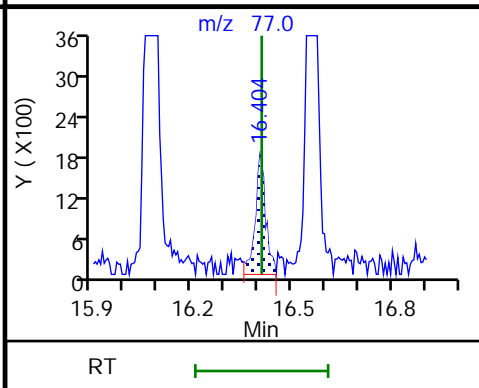
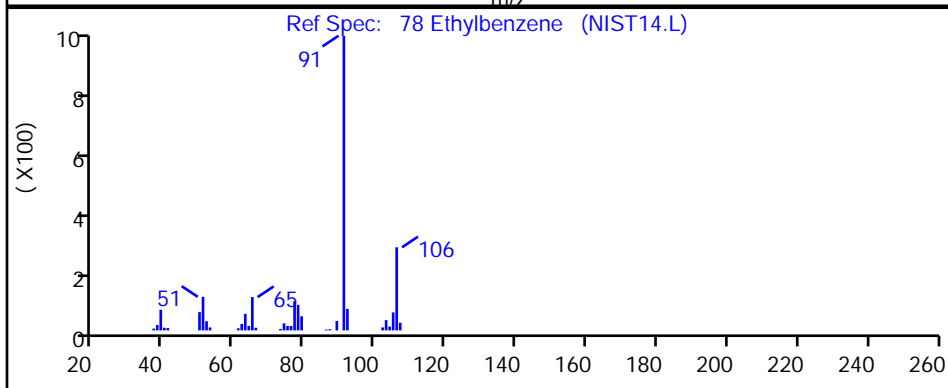
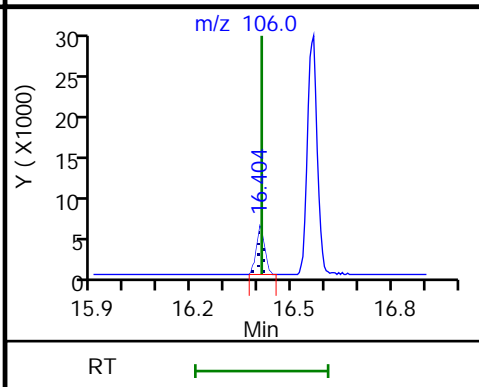
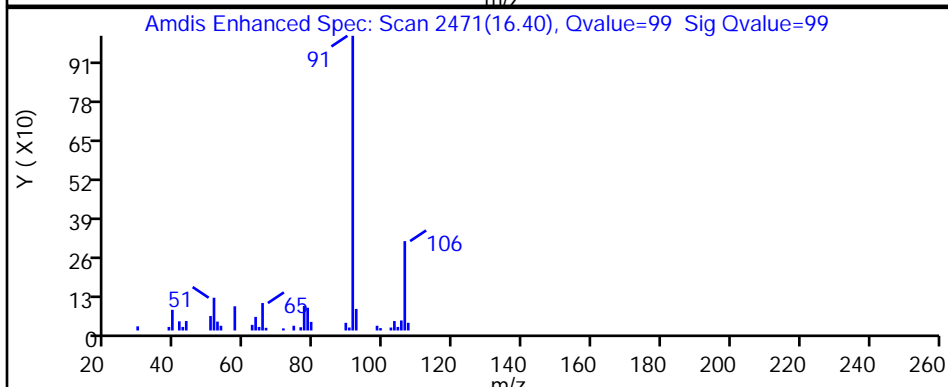
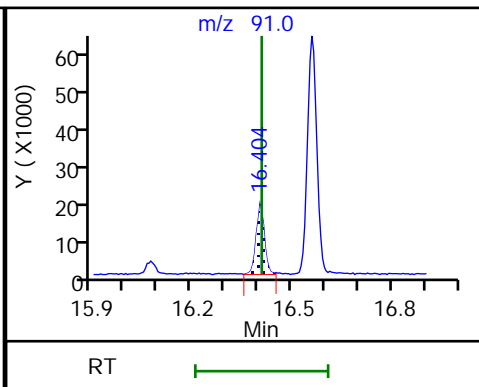
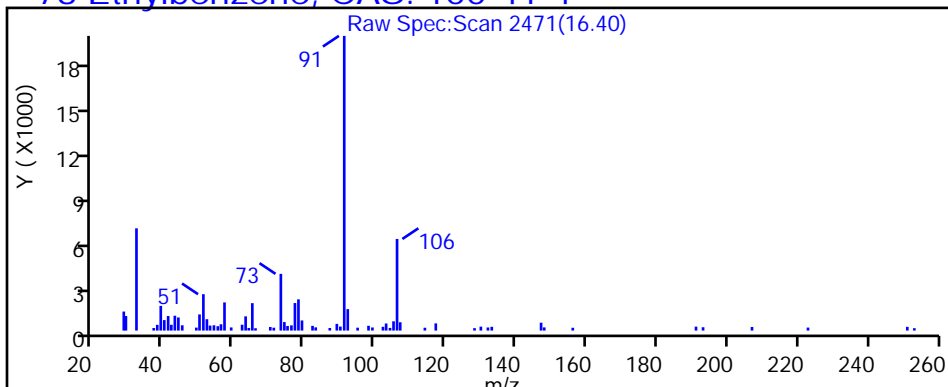
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D

Injection Date: 28-Feb-2019 05:16:30

Instrument ID: MG

Lims ID: 140-14389-A-14

Lab Sample ID: 140-14389-14

Client ID: SV-141-C-26

Operator ID: 403648

ALS Bottle#: 6 Worklist Smp#: 27

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

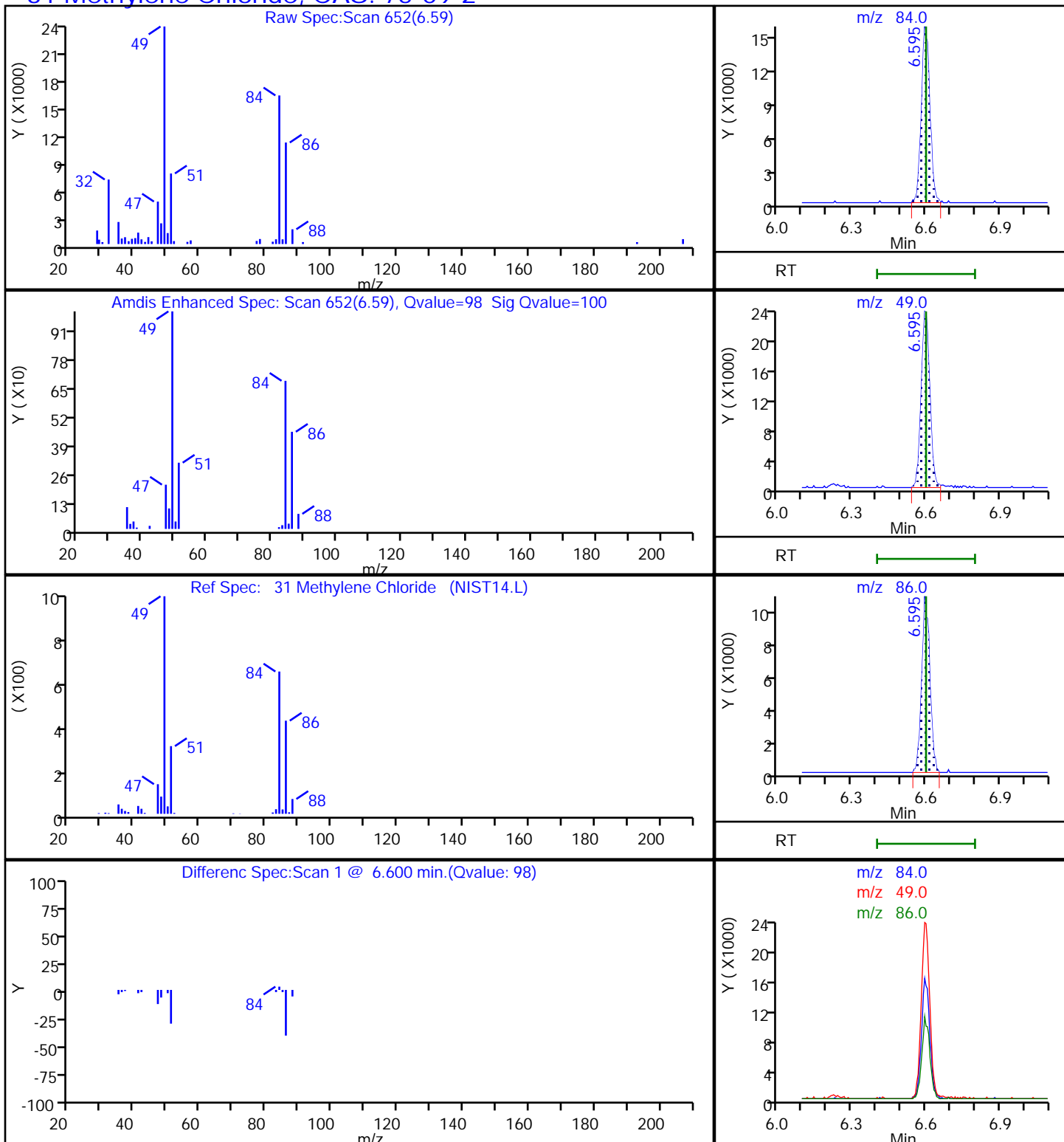
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D

Injection Date: 28-Feb-2019 05:16:30

Instrument ID: MG

Lims ID: 140-14389-A-14

Lab Sample ID: 140-14389-14

Client ID: SV-141-C-26

Operator ID: 403648

ALS Bottle#: 6

Worklist Smp#: 27

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

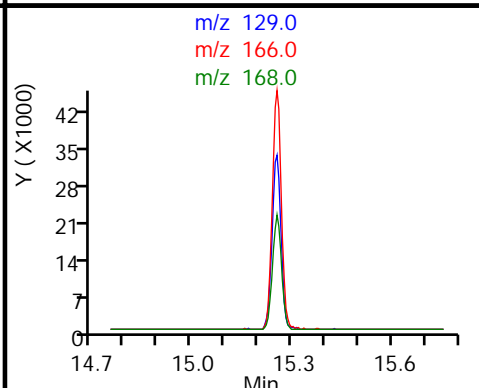
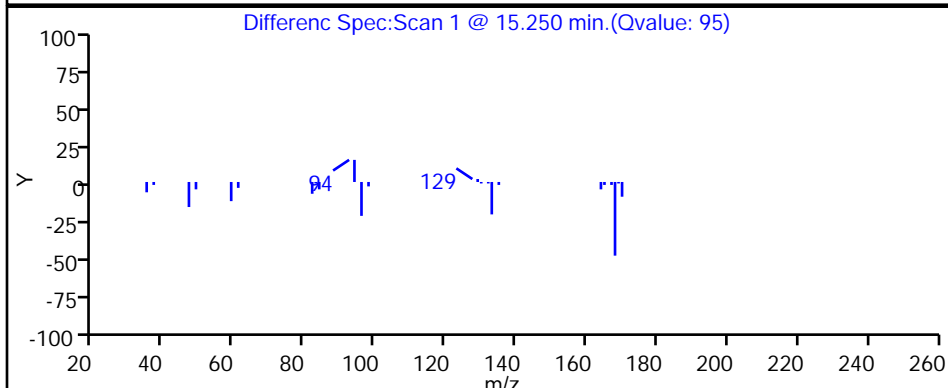
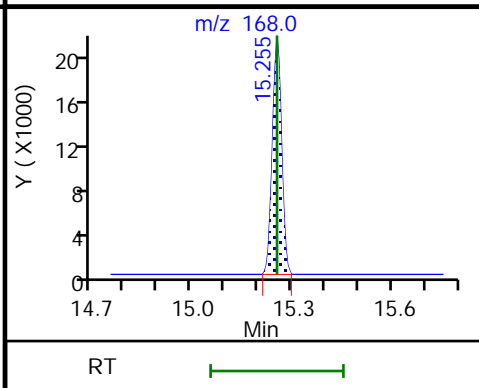
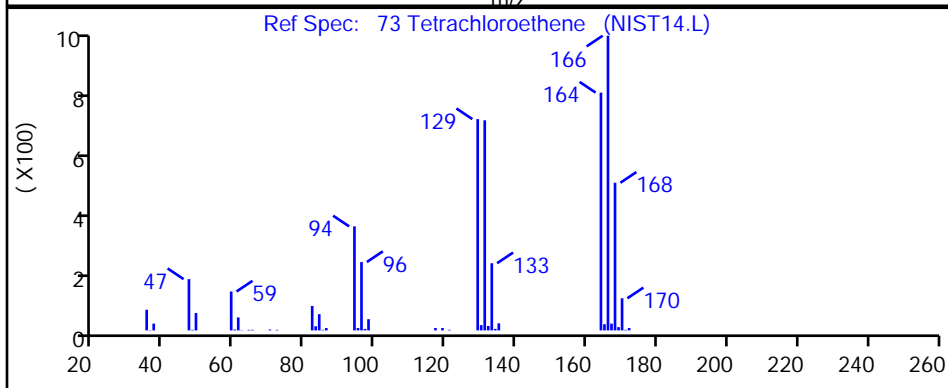
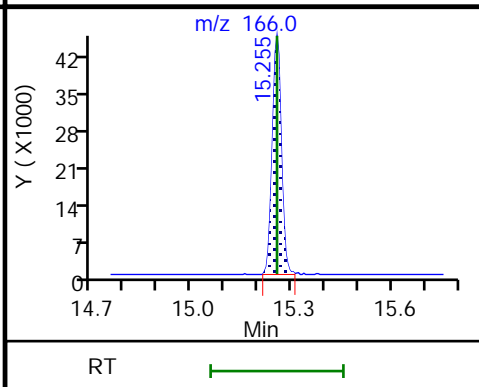
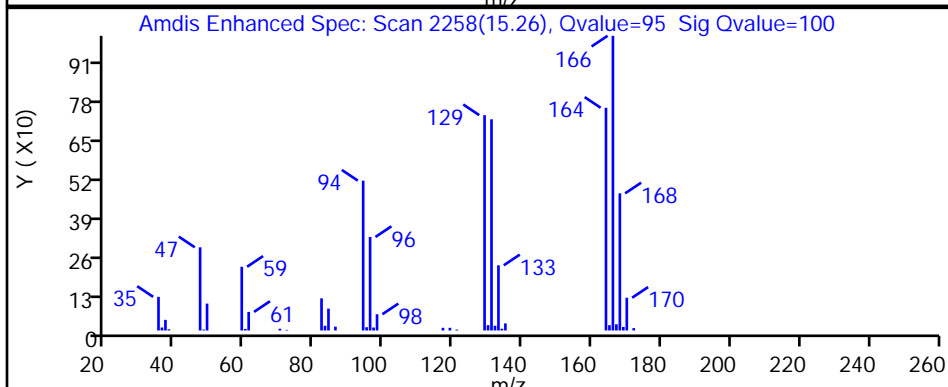
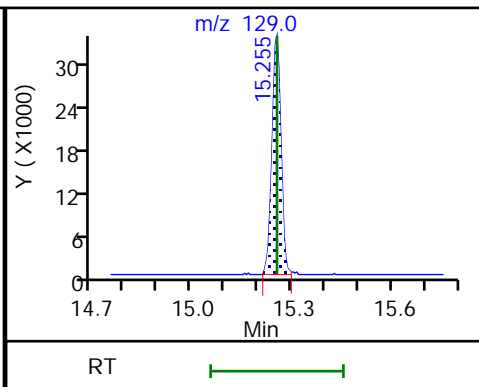
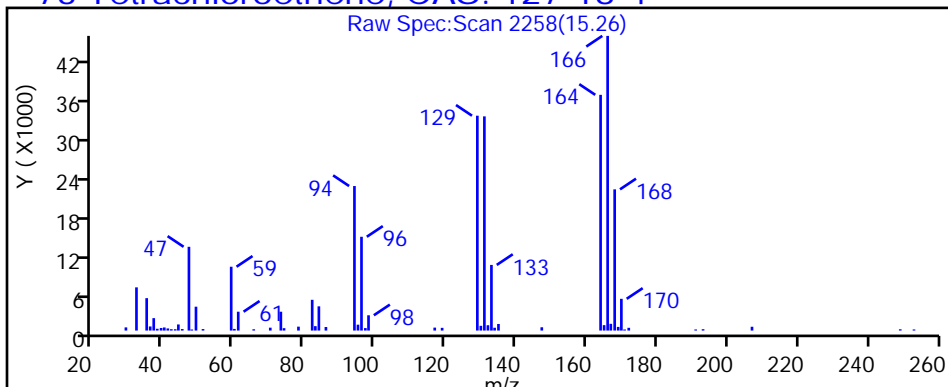
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D

Injection Date: 28-Feb-2019 05:16:30

Instrument ID: MG

Lims ID: 140-14389-A-14

Lab Sample ID: 140-14389-14

Client ID: SV-141-C-26

Operator ID: 403648

ALS Bottle#: 6

Worklist Smp#: 27

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

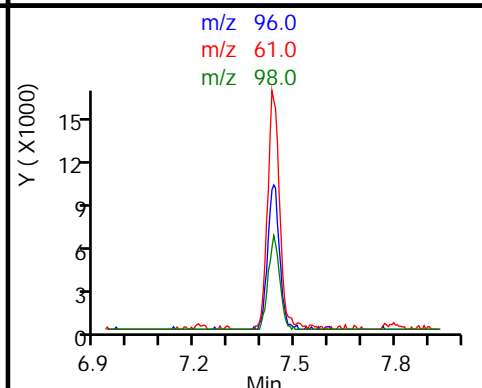
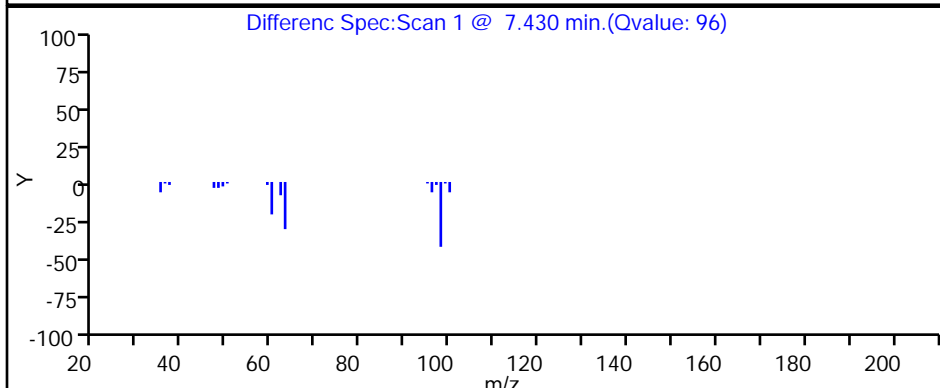
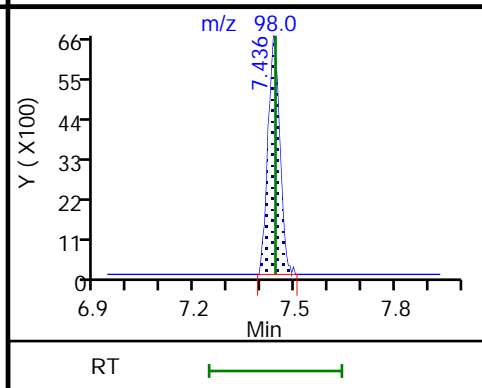
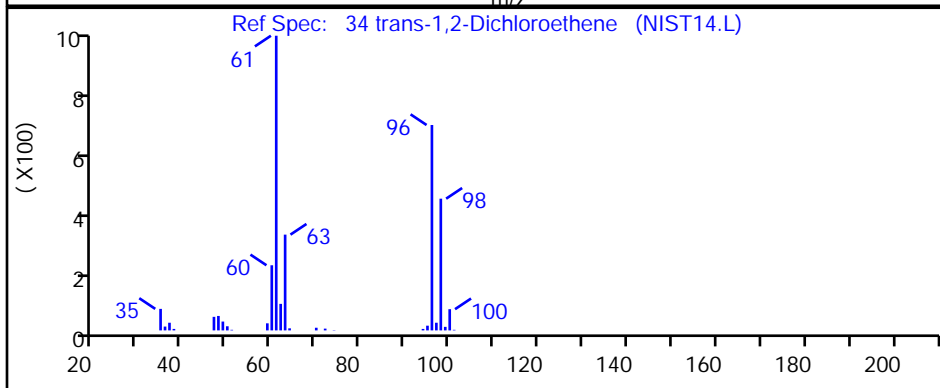
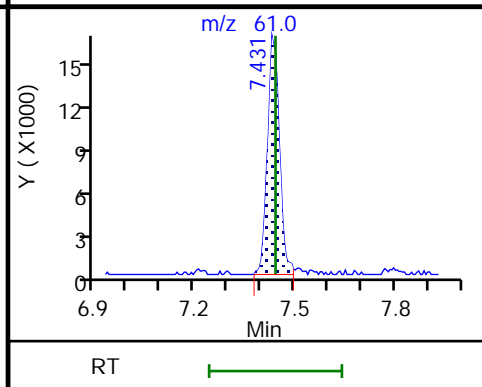
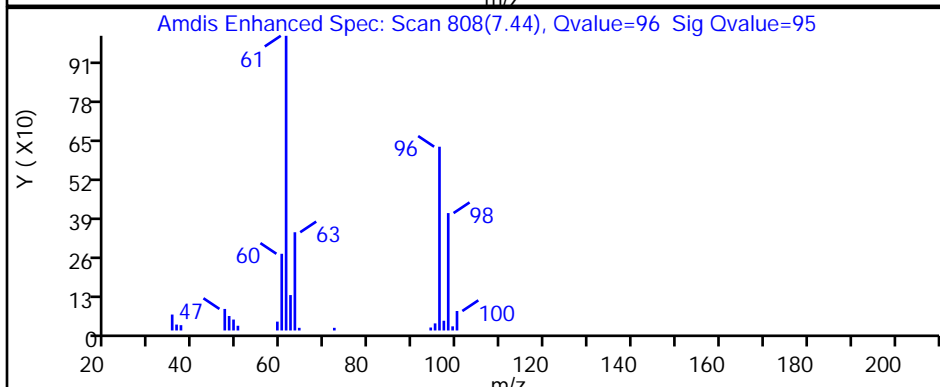
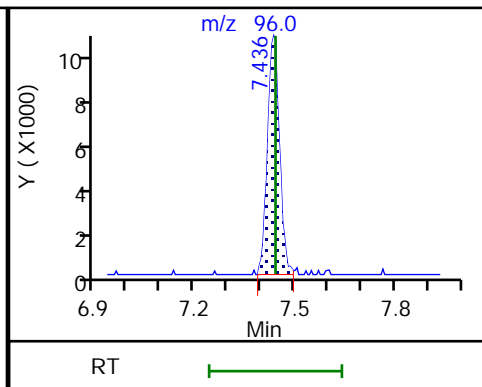
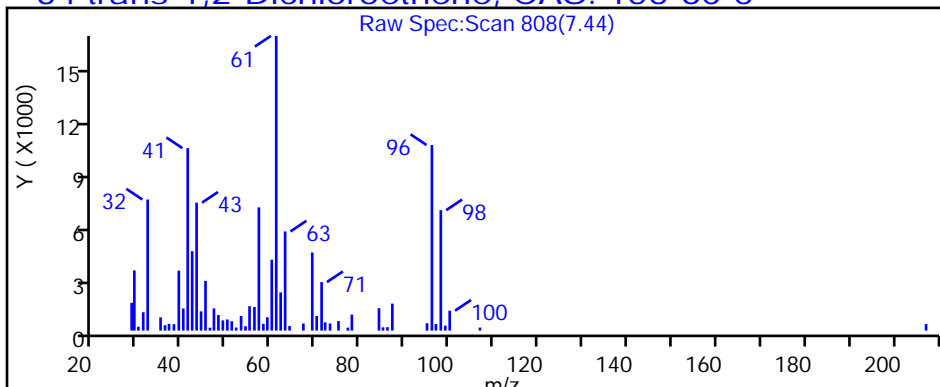
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D

Injection Date: 28-Feb-2019 05:16:30

Instrument ID: MG

Lims ID: 140-14389-A-14

Lab Sample ID: 140-14389-14

Client ID: SV-141-C-26

Operator ID: 403648

ALS Bottle#: 6 Worklist Smp#: 27

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

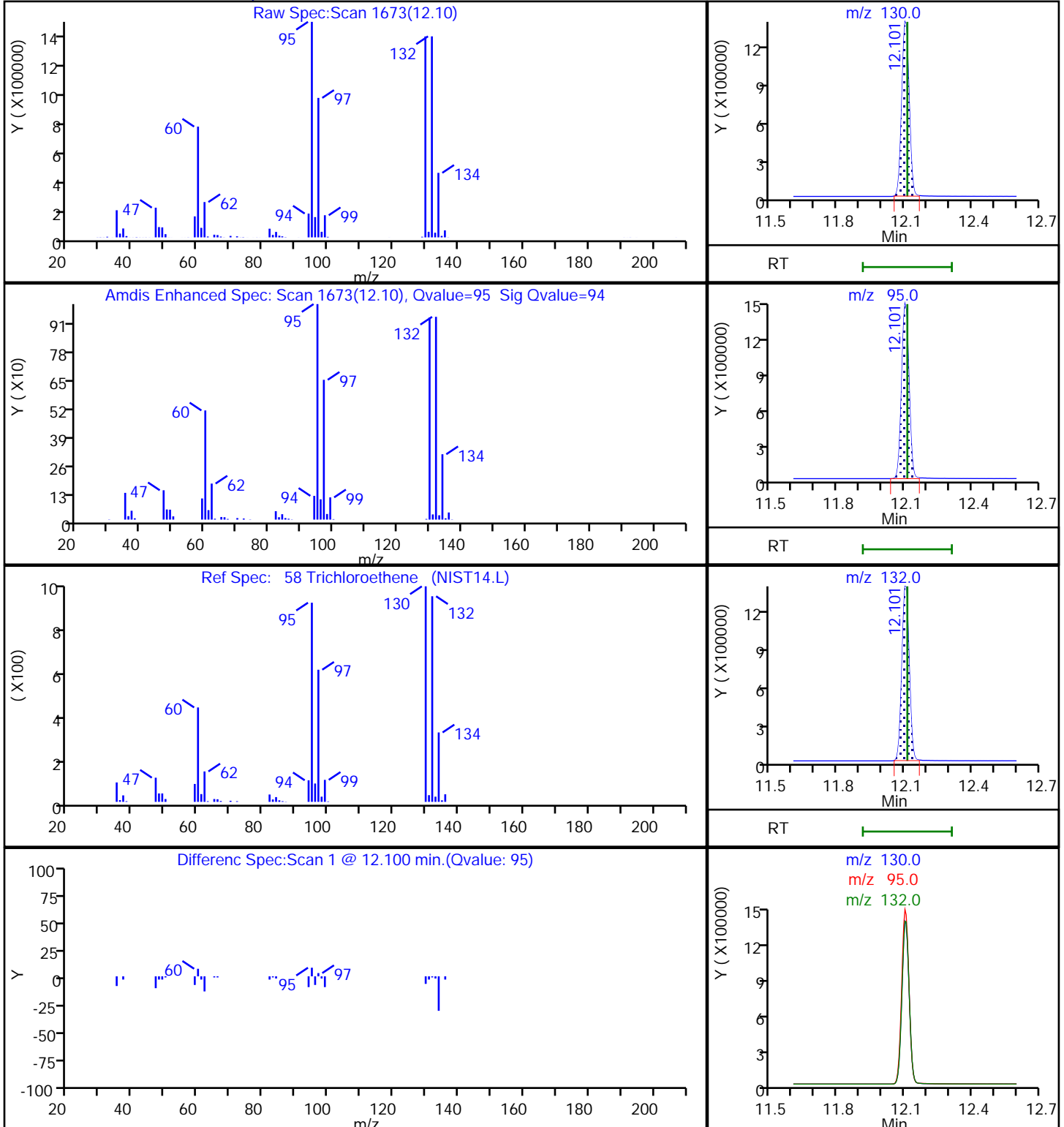
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

58 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D

Injection Date: 28-Feb-2019 05:16:30

Instrument ID: MG

Lims ID: 140-14389-A-14

Lab Sample ID: 140-14389-14

Client ID: SV-141-C-26

Operator ID: 403648

ALS Bottle#: 6

Worklist Smp#: 27

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

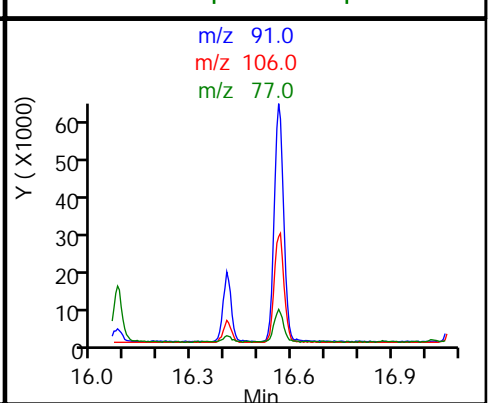
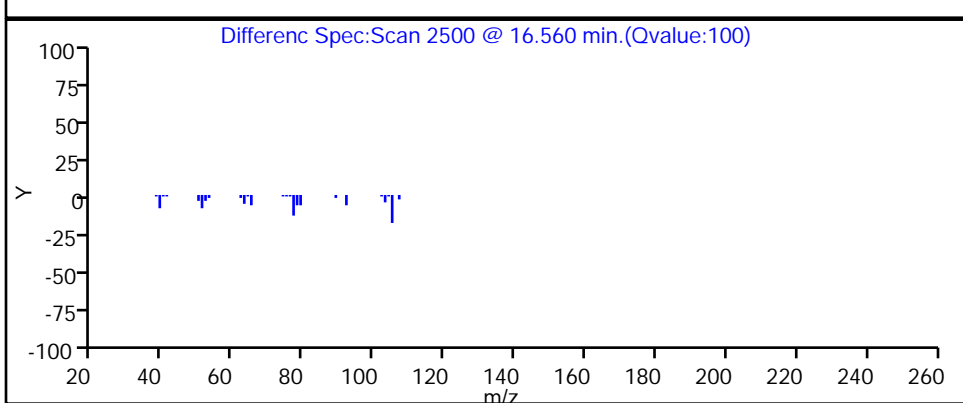
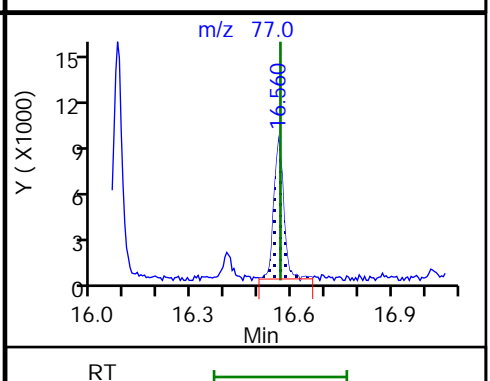
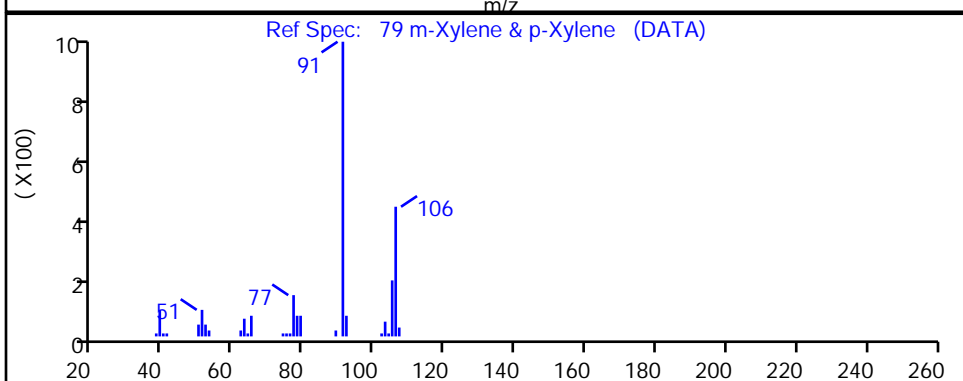
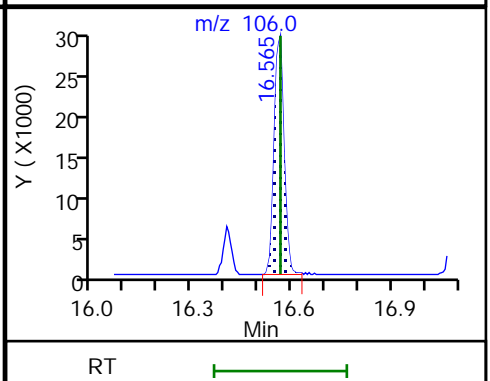
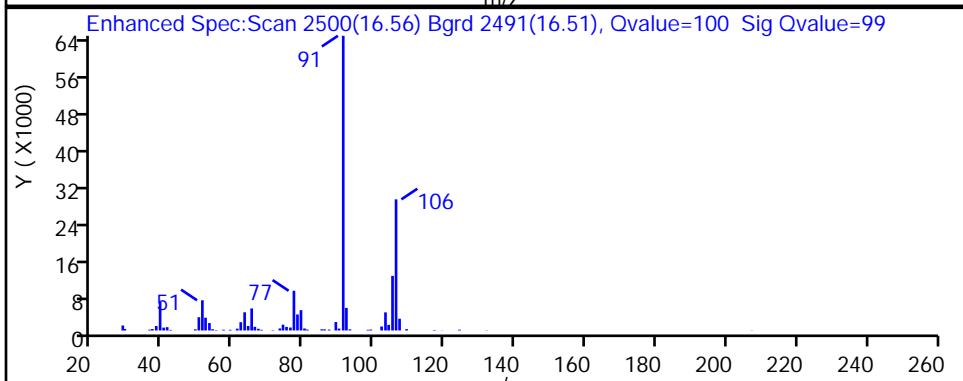
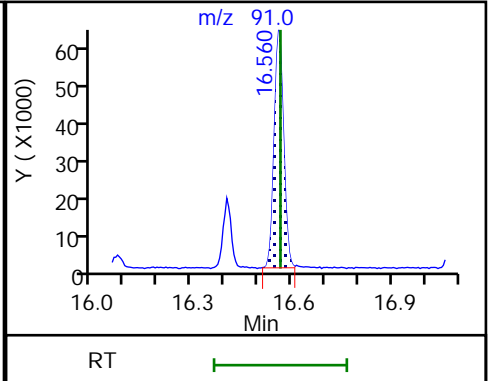
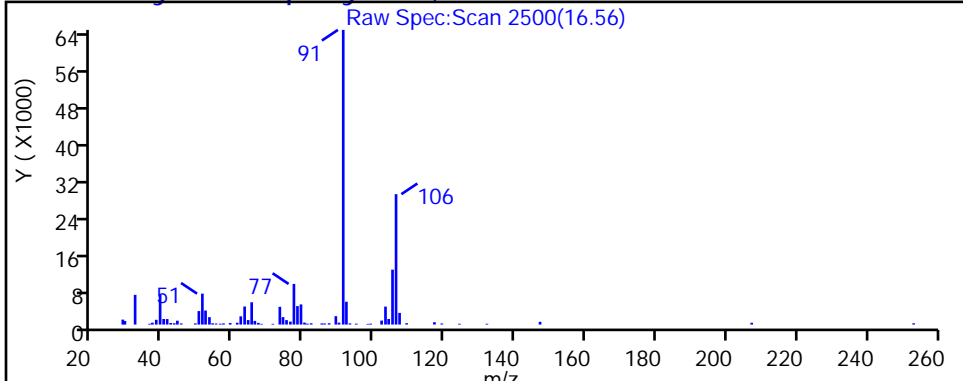
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p106R.D

Injection Date: 28-Feb-2019 05:16:30

Instrument ID: MG

Lims ID: 140-14389-A-14

Lab Sample ID: 140-14389-14

Client ID: SV-141-C-26

Operator ID: 403648

ALS Bottle#: 6 Worklist Smp#: 27

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

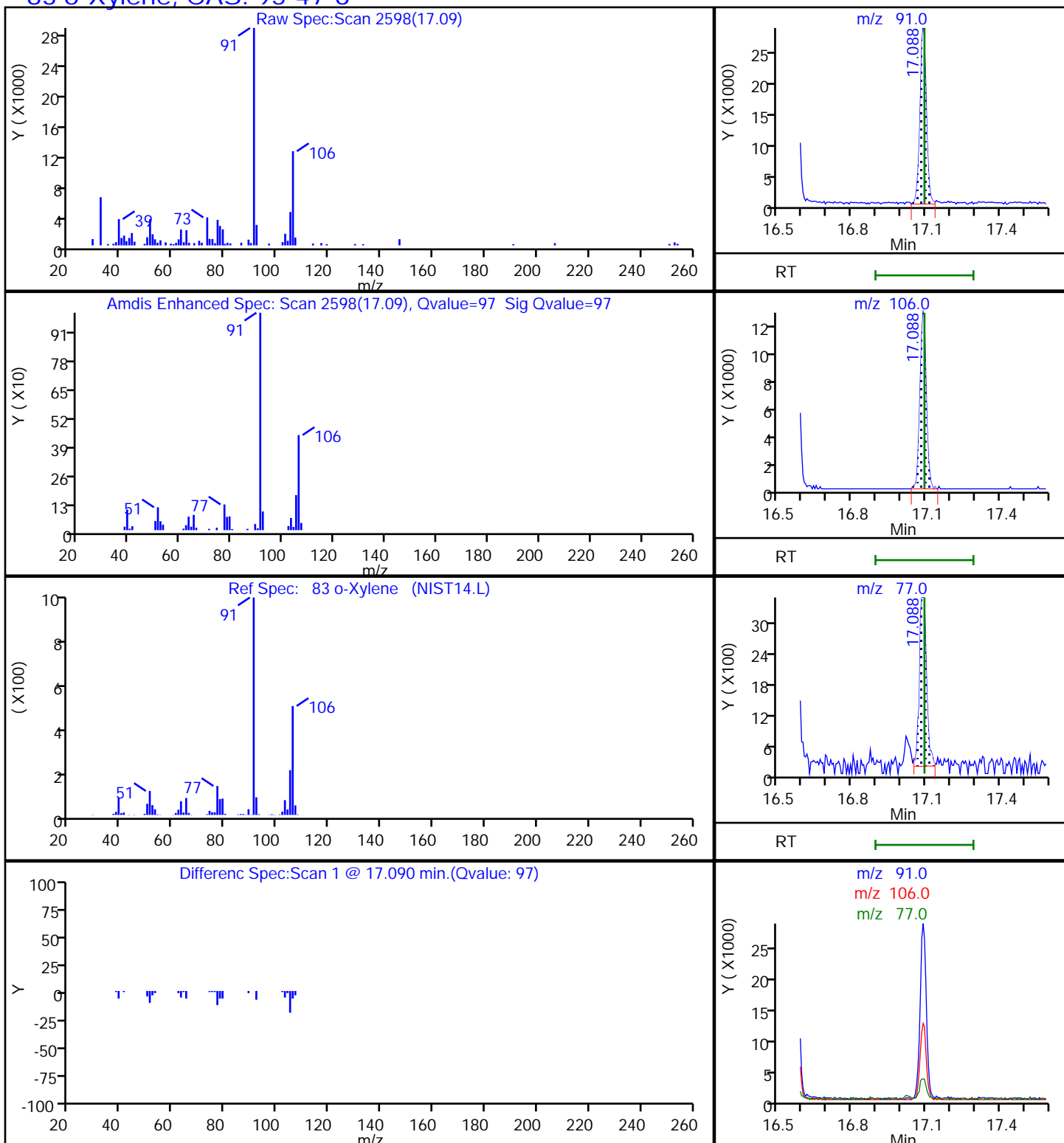
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-088-C-26 Lab Sample ID: 140-14389-15
 Matrix: Air Lab File ID: GB27p107.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:26
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 22:15
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.35	J	0.40	0.075
67-66-3	Chloroform	119.38	0.080	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.4		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	8.5		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.75	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-088-C-26 Lab Sample ID: 140-14389-15
 Matrix: Air Lab File ID: GB27p107.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:26
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 22:15
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	0.39	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	9.6		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	46		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p107.D
 Lims ID: 140-14389-A-15
 Client ID: SV-088-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 22:15:30 ALS Bottle#: 7 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-015
 Misc. Info.: 140-14389-A-15
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:30:21 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:44:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.226	9.237	-0.011	98	497394	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.410	-0.010	96	3117508	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2902566	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	86	2230157	3.75	
6 Chlorodifluoromethane	51	3.829	3.834	0.000	96	23013	0.0706	
8 Dichlorodifluoromethane	85	3.893	3.889	0.000	100	45836	0.0870	
31 Methylene Chloride	84	6.595	6.600	-0.005	97	57962	0.2838	
42 cis-1,2-Dichloroethene	96	8.887	8.882	-0.005	97	87283	0.4853	
44 Chloroform	83	9.243	9.248	-0.005	31	6618	0.0159	
58 Trichloroethene	130	12.101	12.100	-0.010	94	432047	1.70	
67 Toluene	91	14.123	14.128	-0.005	93	33722	0.0528	
79 m-Xylene & p-Xylene	91	16.560	16.565	-0.005	99	52405	0.0789	
83 o-Xylene	91	17.088	17.094	-0.006	98	49990	0.0714	
S 124 Xylenes, Total	100				0		0.1504	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p107.D

Injection Date: 27-Feb-2019 22:15:30

Instrument ID: MG

Operator ID: 403648

Lims ID: 140-14389-A-15

Lab Sample ID: 140-14389-15

Worklist Smp#: 15

Client ID: SV-088-C-26

Purge Vol: 500.000 mL

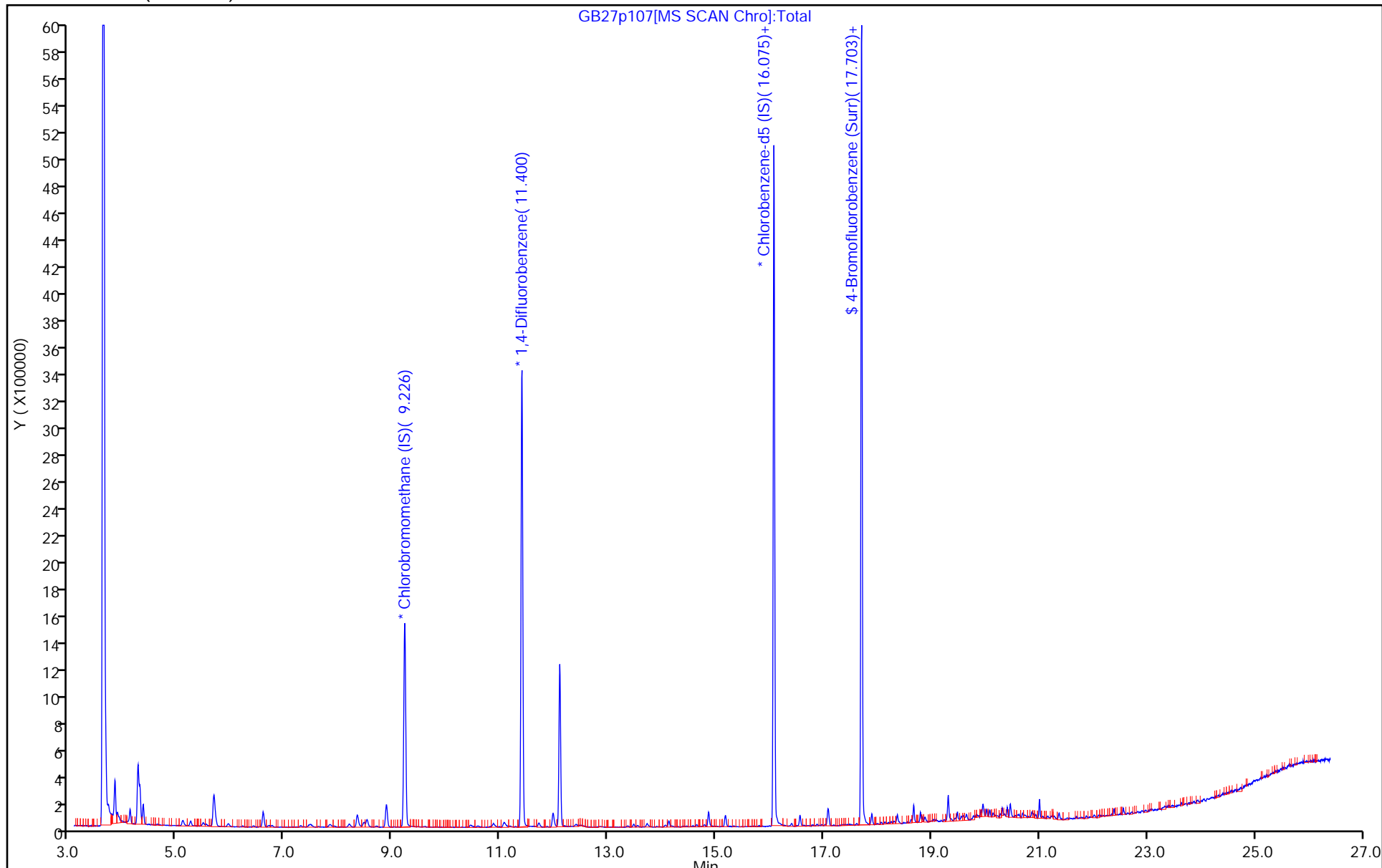
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p107.D
 Lims ID: 140-14389-A-15
 Client ID: SV-088-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 22:15:30 ALS Bottle#: 7 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-015
 Misc. Info.: 140-14389-A-15
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:30:21 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:44:25

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.75	93.74

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p107.D

Injection Date: 27-Feb-2019 22:15:30

Instrument ID: MG

Lims ID: 140-14389-A-15

Lab Sample ID: 140-14389-15

Client ID: SV-088-C-26

Operator ID: 403648

ALS Bottle#: 7 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

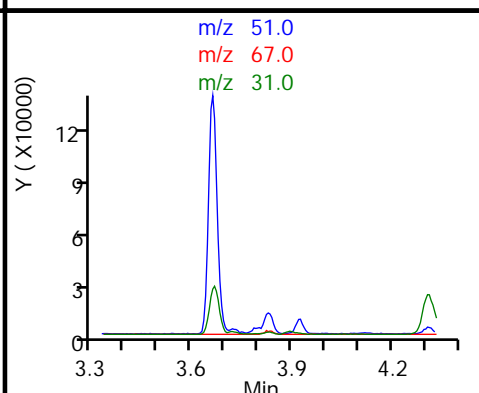
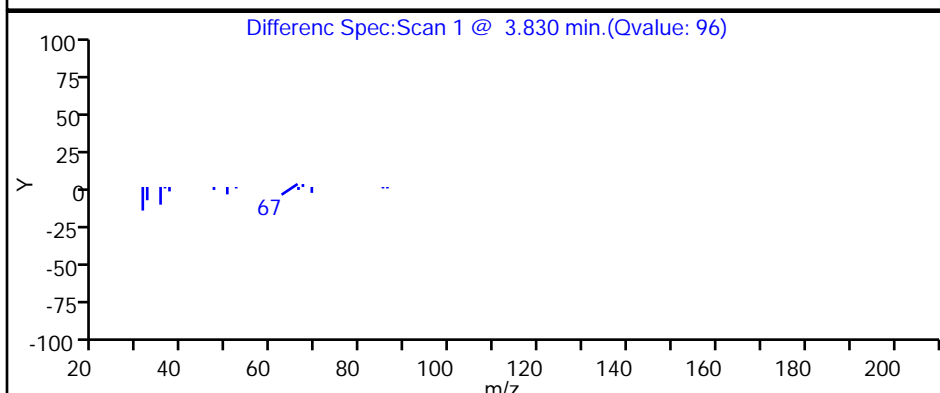
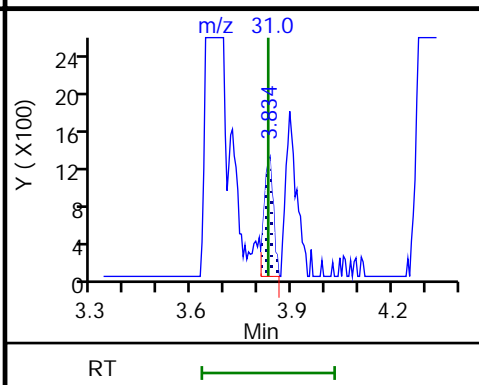
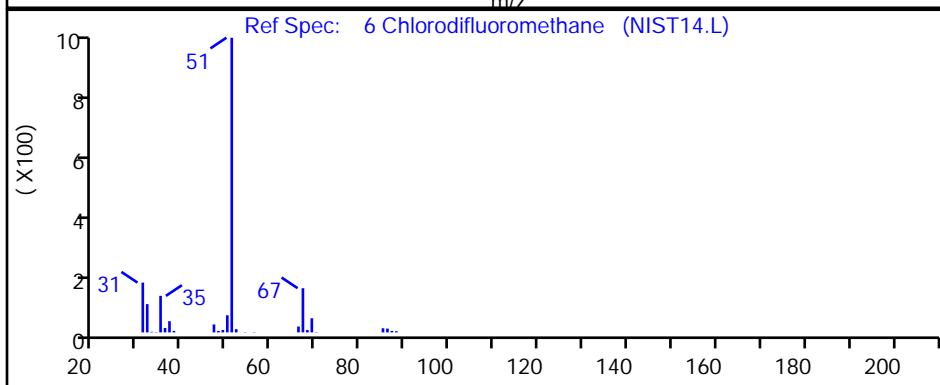
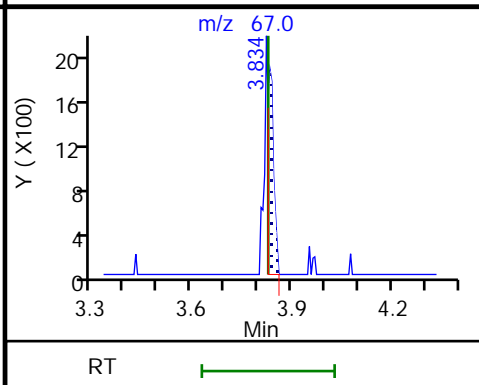
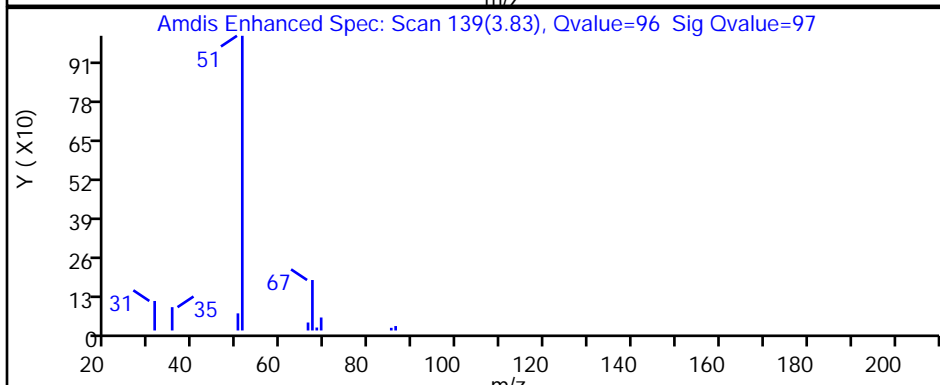
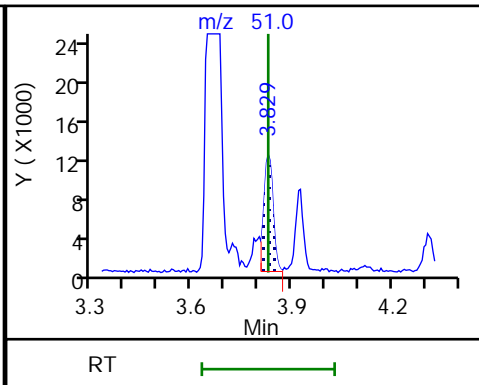
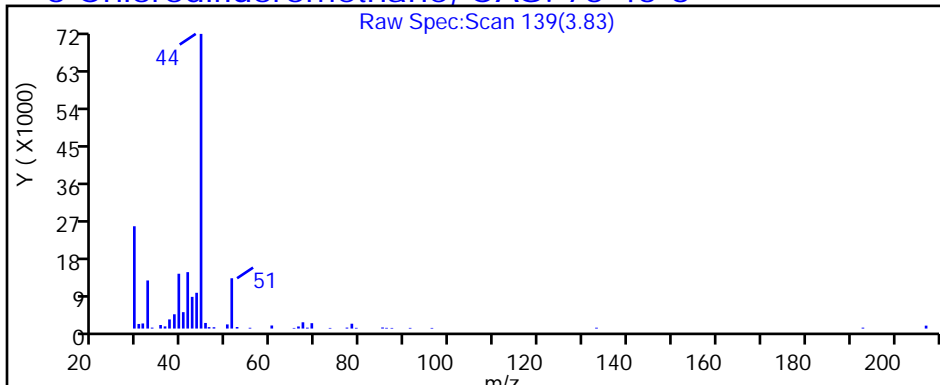
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p107.D

Injection Date: 27-Feb-2019 22:15:30

Instrument ID: MG

Lims ID: 140-14389-A-15

Lab Sample ID: 140-14389-15

Client ID: SV-088-C-26

Operator ID: 403648

ALS Bottle#: 7 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

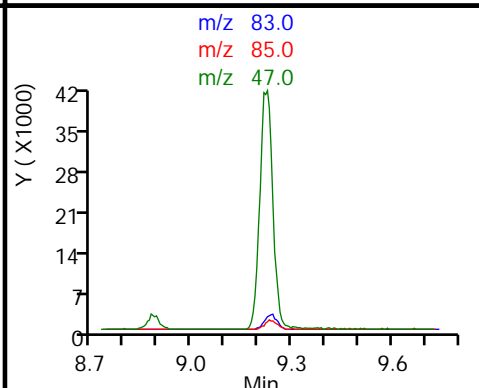
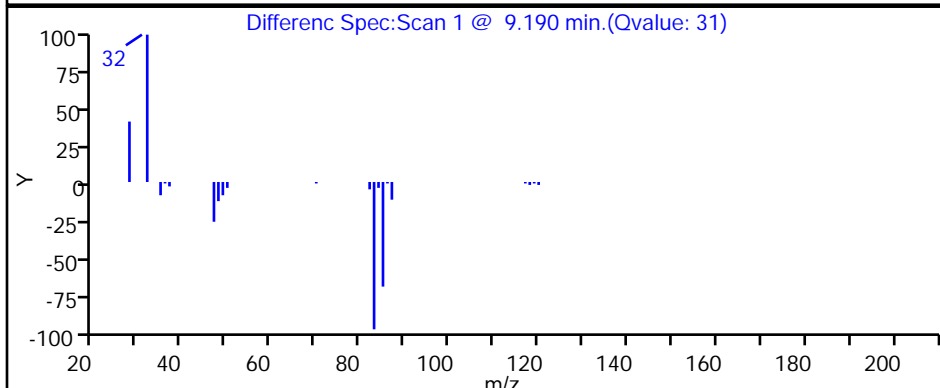
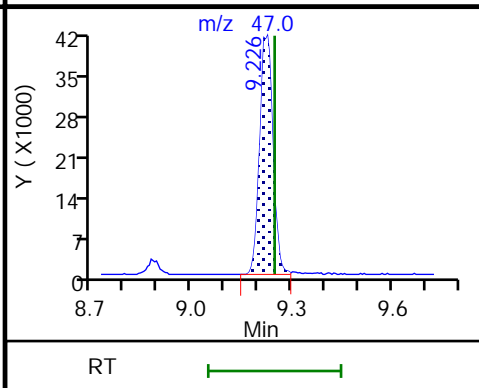
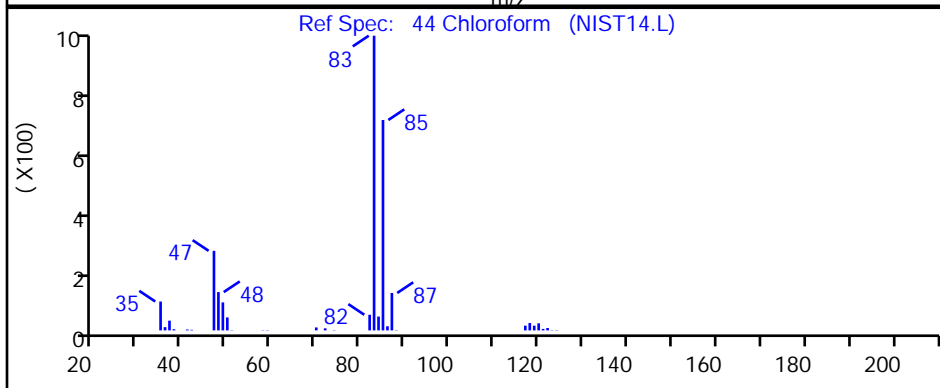
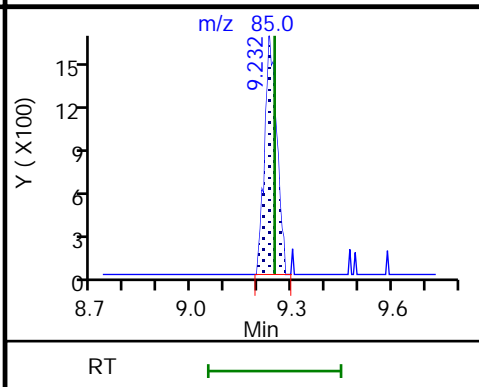
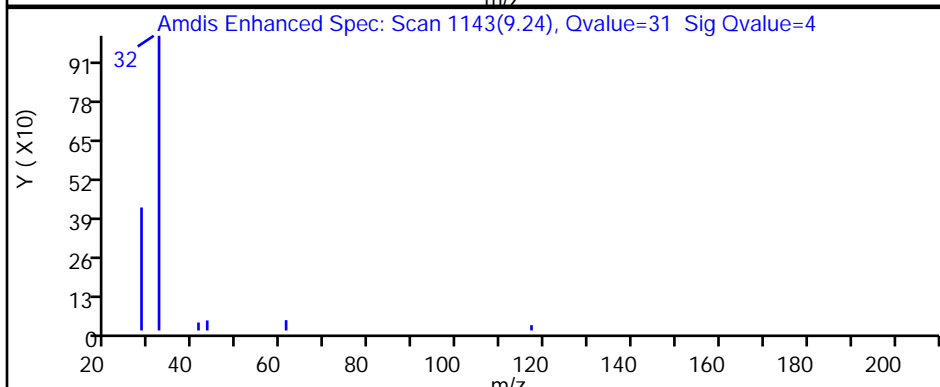
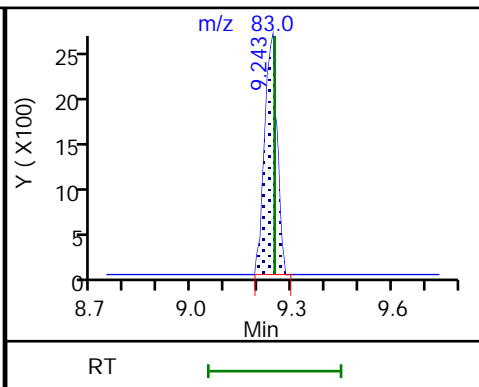
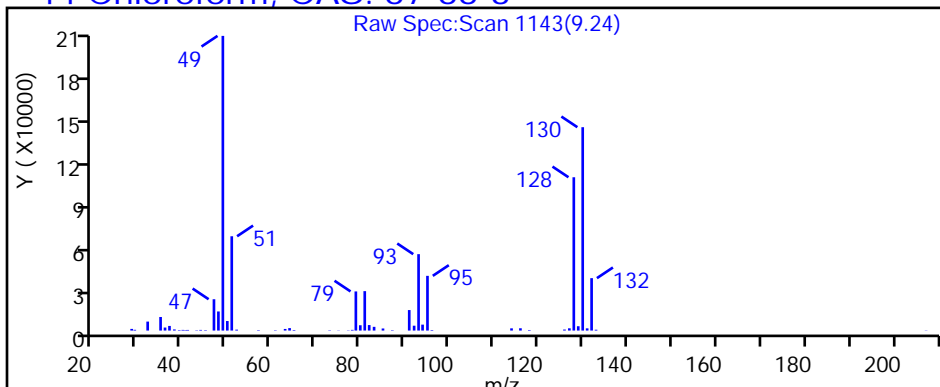
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p107.D

Injection Date: 27-Feb-2019 22:15:30

Instrument ID: MG

Lims ID: 140-14389-A-15

Lab Sample ID: 140-14389-15

Client ID: SV-088-C-26

Operator ID: 403648

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

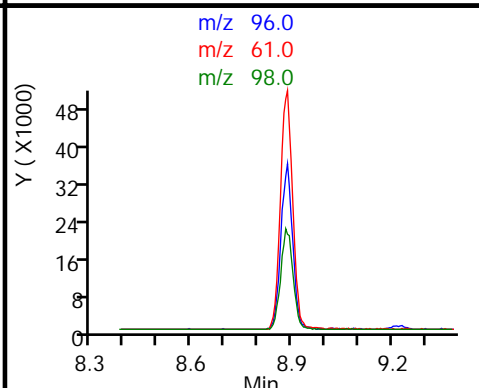
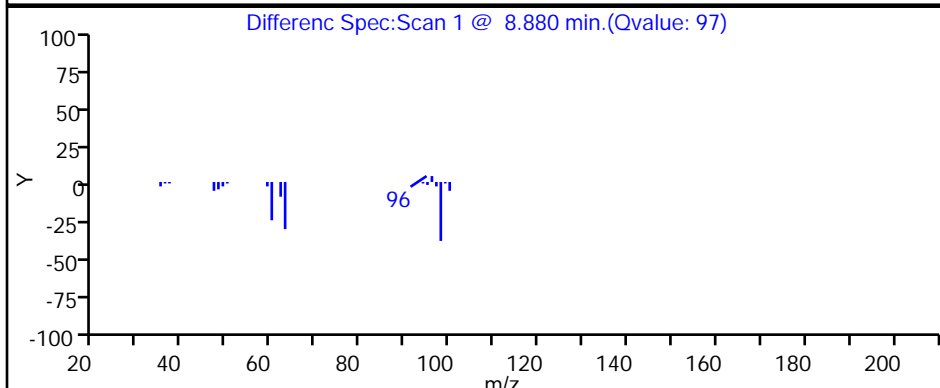
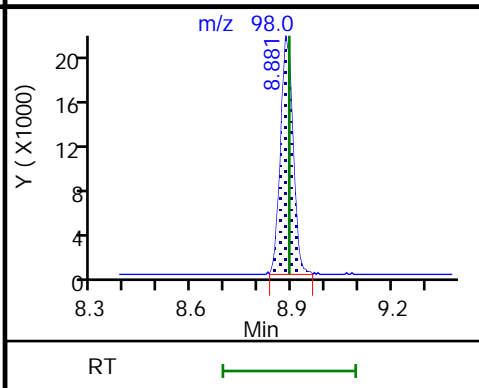
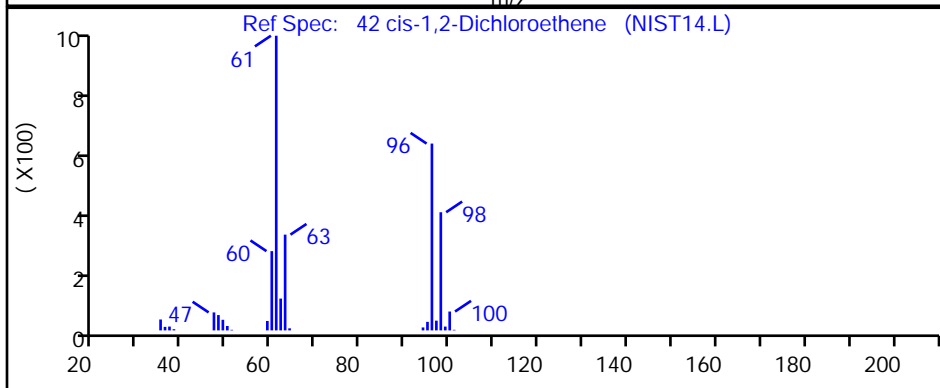
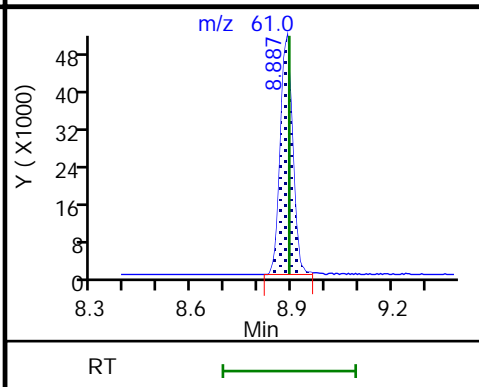
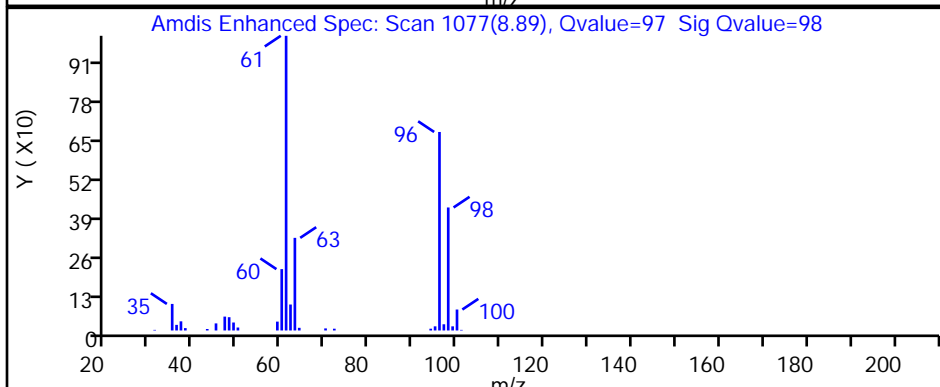
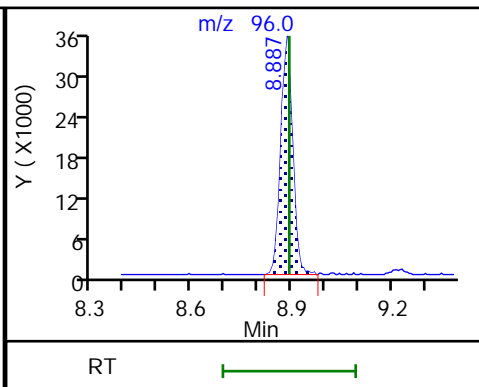
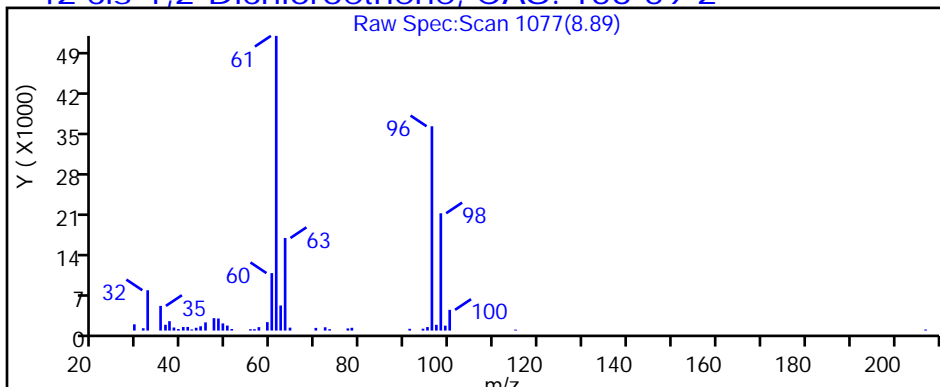
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p107.D

Injection Date: 27-Feb-2019 22:15:30

Instrument ID: MG

Lims ID: 140-14389-A-15

Lab Sample ID: 140-14389-15

Client ID: SV-088-C-26

Operator ID: 403648

ALS Bottle#: 7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

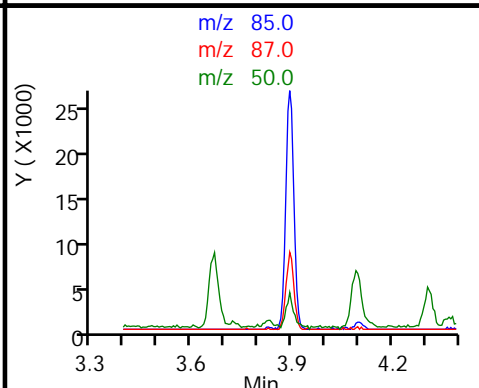
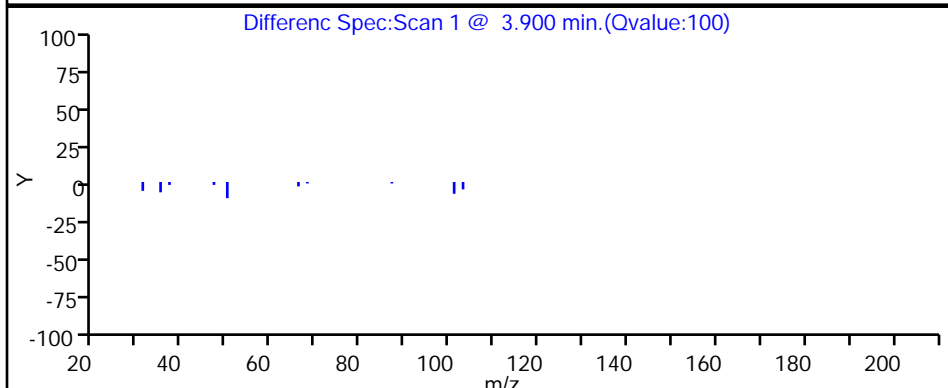
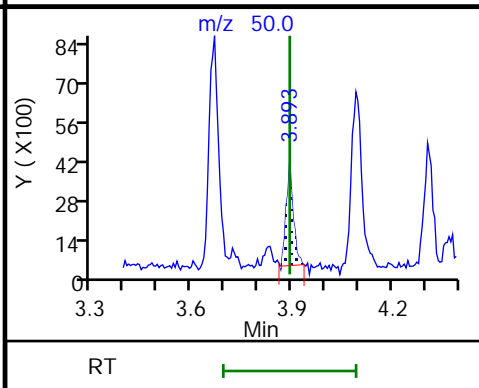
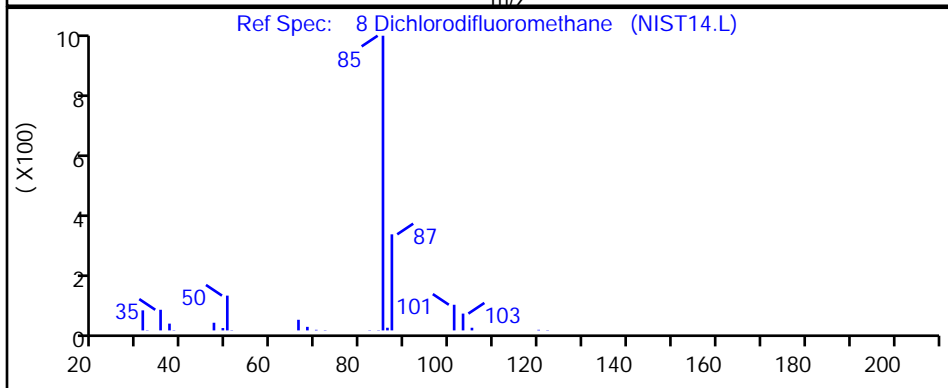
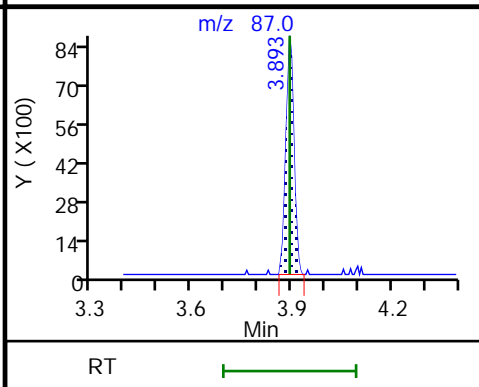
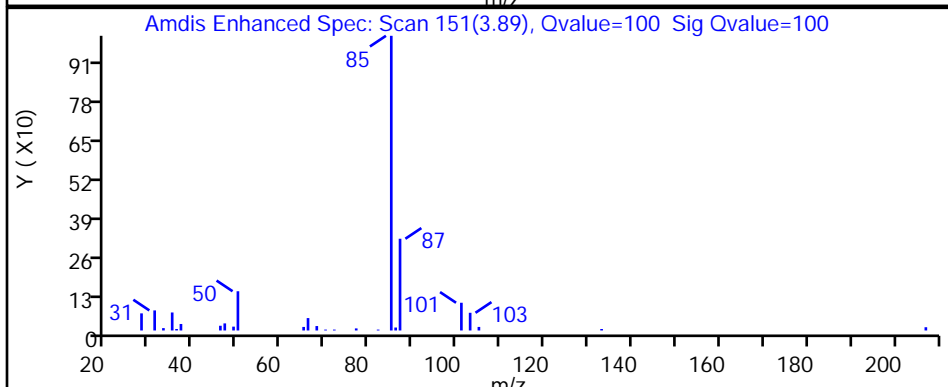
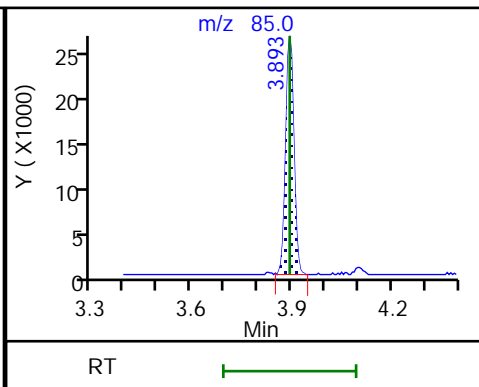
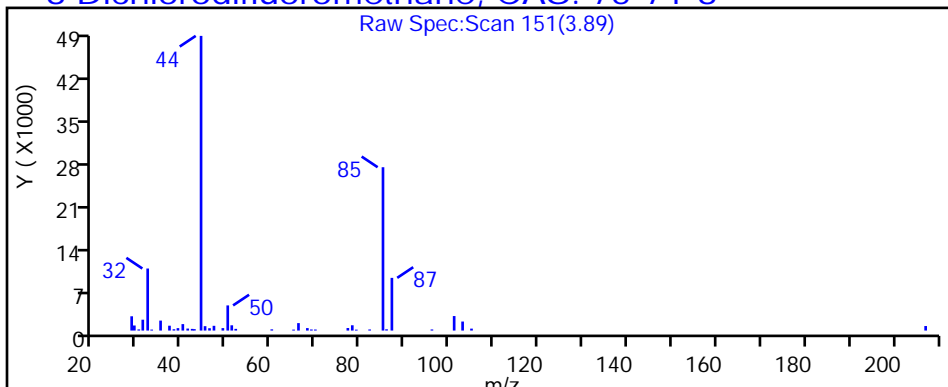
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p107.D

Injection Date: 27-Feb-2019 22:15:30

Instrument ID: MG

Lims ID: 140-14389-A-15

Lab Sample ID: 140-14389-15

Client ID: SV-088-C-26

Operator ID: 403648

ALS Bottle#: 7 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

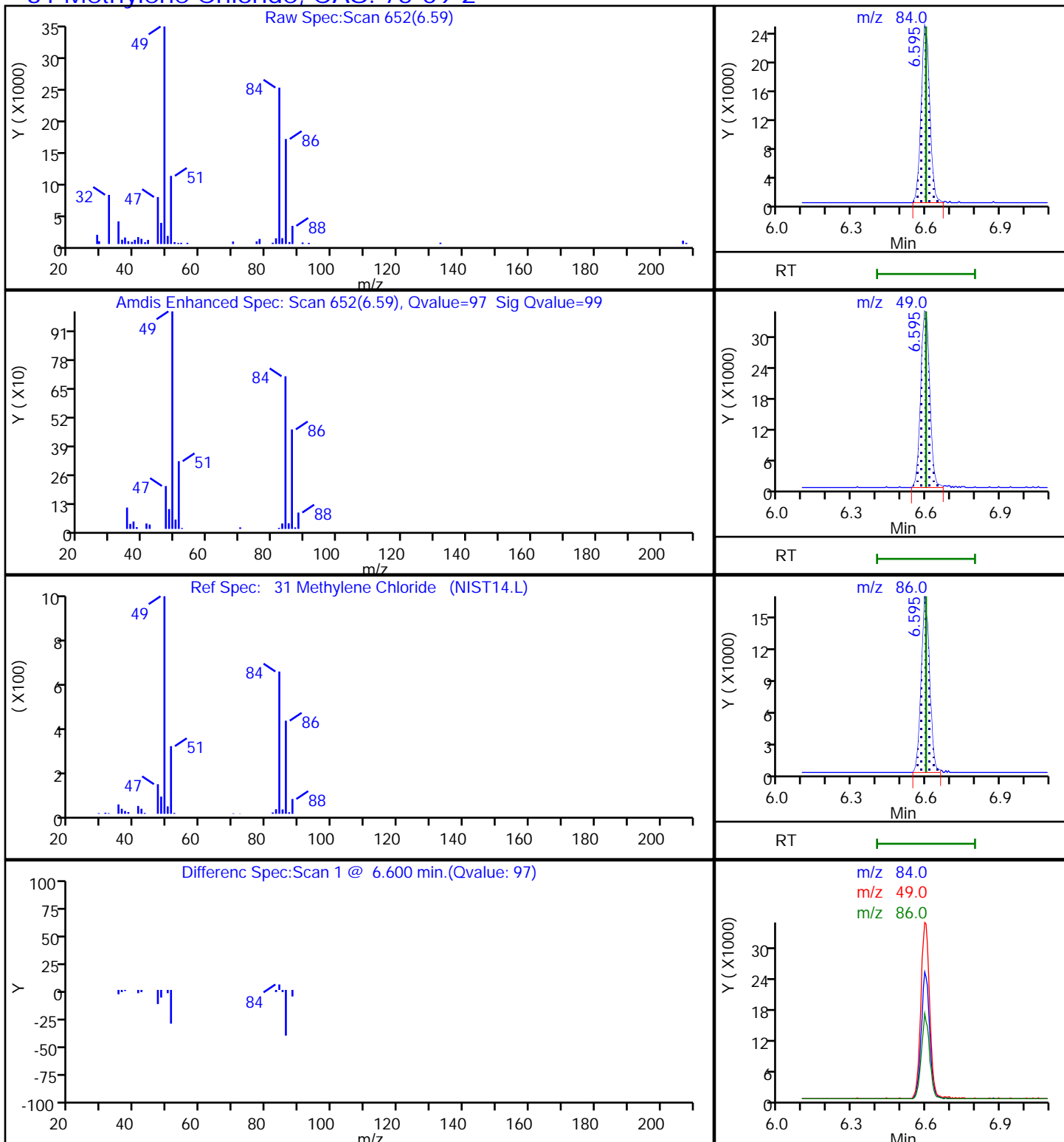
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p107.D

Injection Date: 27-Feb-2019 22:15:30

Instrument ID: MG

Lims ID: 140-14389-A-15

Lab Sample ID: 140-14389-15

Client ID: SV-088-C-26

Operator ID: 403648

ALS Bottle#: 7 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

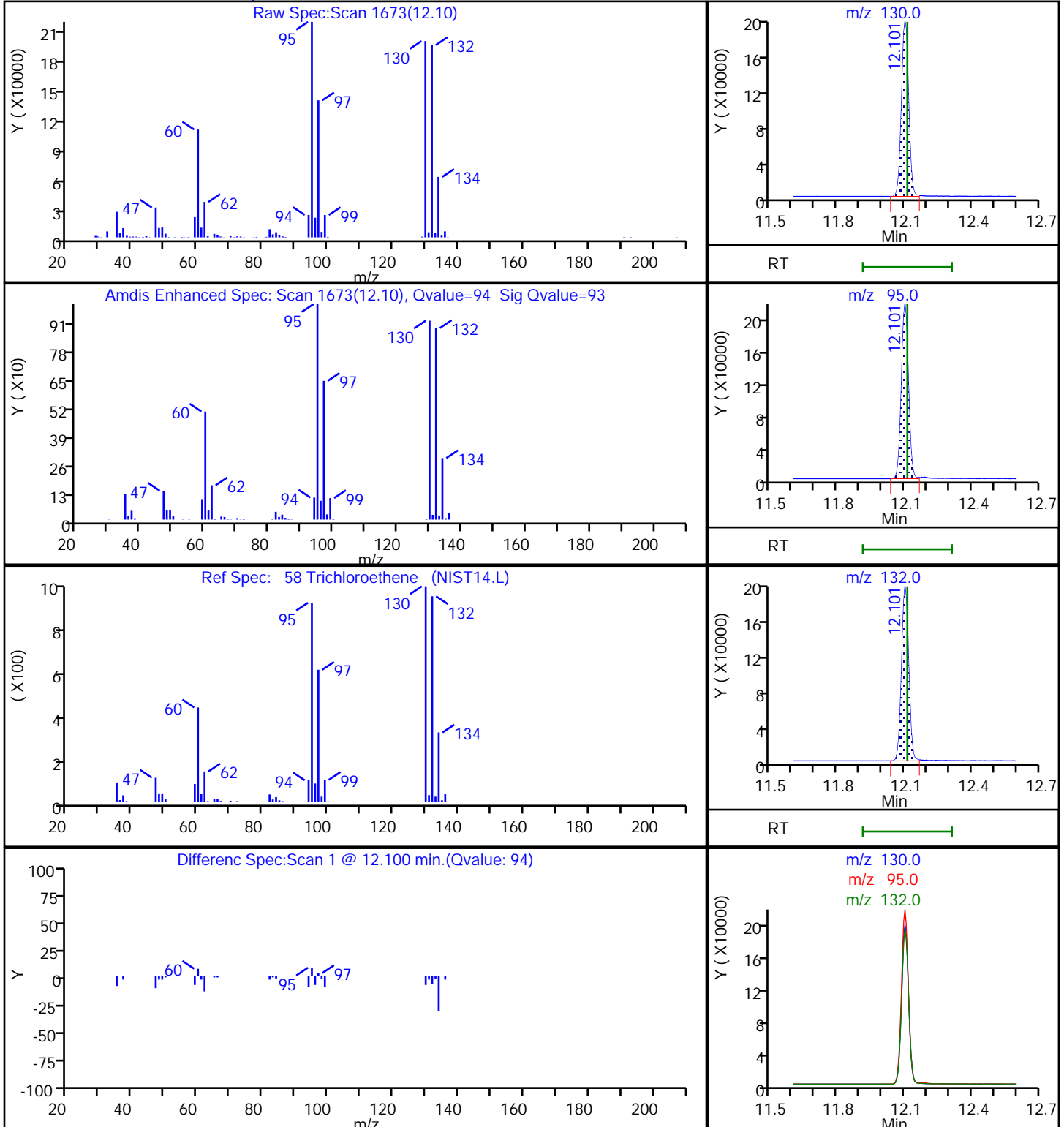
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

58 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p107.D

Injection Date: 27-Feb-2019 22:15:30

Instrument ID: MG

Lims ID: 140-14389-A-15

Lab Sample ID: 140-14389-15

Client ID: SV-088-C-26

Operator ID: 403648

ALS Bottle#: 7 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

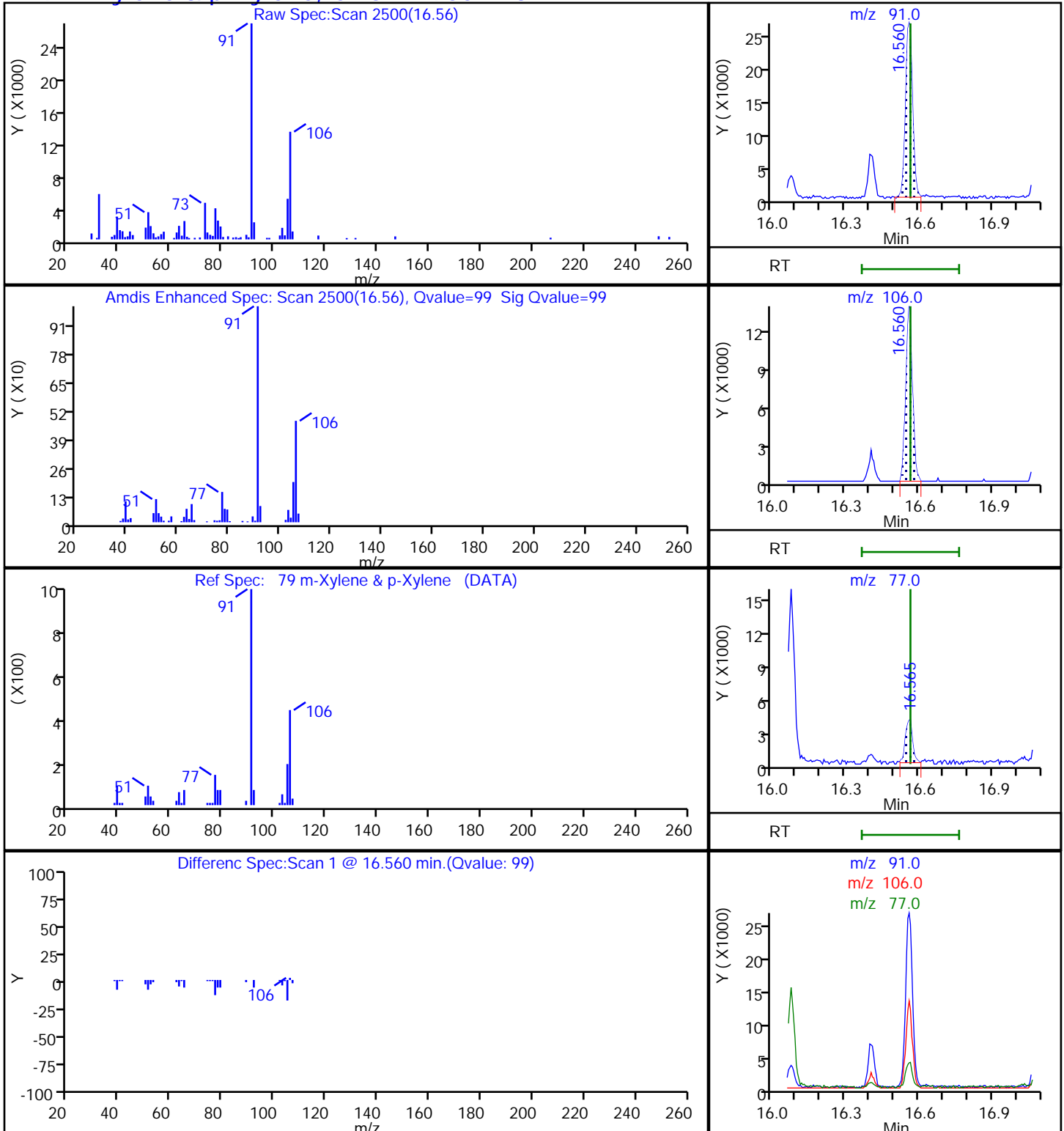
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p107.D

Injection Date: 27-Feb-2019 22:15:30

Instrument ID: MG

Lims ID: 140-14389-A-15

Lab Sample ID: 140-14389-15

Client ID: SV-088-C-26

Operator ID: 403648

ALS Bottle#: 7 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

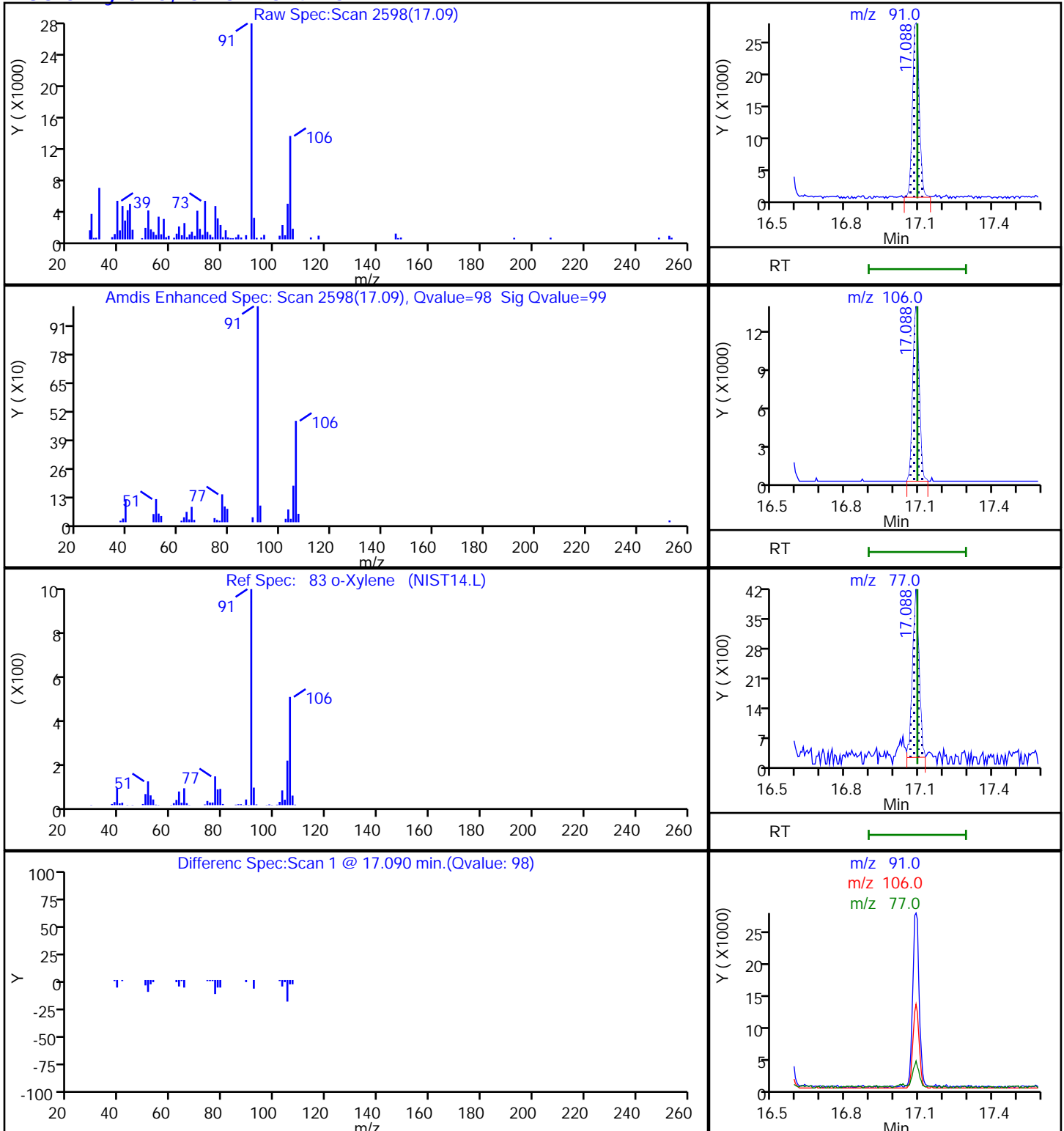
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-142-C-26 Lab Sample ID: 140-14389-16
 Matrix: Air Lab File ID: GB27p108.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:20
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 22:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.084	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	1.4		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.21		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.086	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.61	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-142-C-26 Lab Sample ID: 140-14389-16
 Matrix: Air Lab File ID: GB27p108.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:20
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 22:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	6.7		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.58	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p108.D
 Lims ID: 140-14389-A-16
 Client ID: SV-142-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 22:57:30 ALS Bottle#: 8 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-016
 Misc. Info.: 140-14389-A-16
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:30:21 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:46:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.226	9.237	-0.011	98	469571	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.410	-0.010	96	2857201	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2606400	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2065122	3.87	
6 Chlorodifluoromethane	51	3.834	3.834	0.005	96	22710	0.0738	
8 Dichlorodifluoromethane	85	3.893	3.889	0.000	100	47206	0.0950	
31 Methylene Chloride	84	6.595	6.600	-0.005	98	43517	0.2257	
44 Chloroform	83	9.237	9.248	-0.011	94	107259	0.2732	
52 Carbon tetrachloride	117	10.893	10.888	-0.005	84	7154	0.0169	
58 Trichloroethene	130	12.101	12.100	-0.010	95	58001	0.2493	
67 Toluene	91	14.123	14.128	-0.005	94	39455	0.0688	
73 Tetrachloroethene	129	15.255	15.255	0.000	92	3685	0.0171	
79 m-Xylene & p-Xylene	91	16.560	16.565	-0.005	98	45812	0.0769	
83 o-Xylene	91	17.089	17.094	-0.005	97	28929	0.0460	
112 Naphthalene	128	21.365	21.365	0.000	98	34000	0.0423	
S 124 Xylenes, Total	100				0		0.1229	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p108.D

Injection Date: 27-Feb-2019 22:57:30

Instrument ID: MG

Operator ID: 403648

Lims ID: 140-14389-A-16

Lab Sample ID: 140-14389-16

Worklist Smp#: 16

Client ID: SV-142-C-26

Purge Vol: 500.000 mL

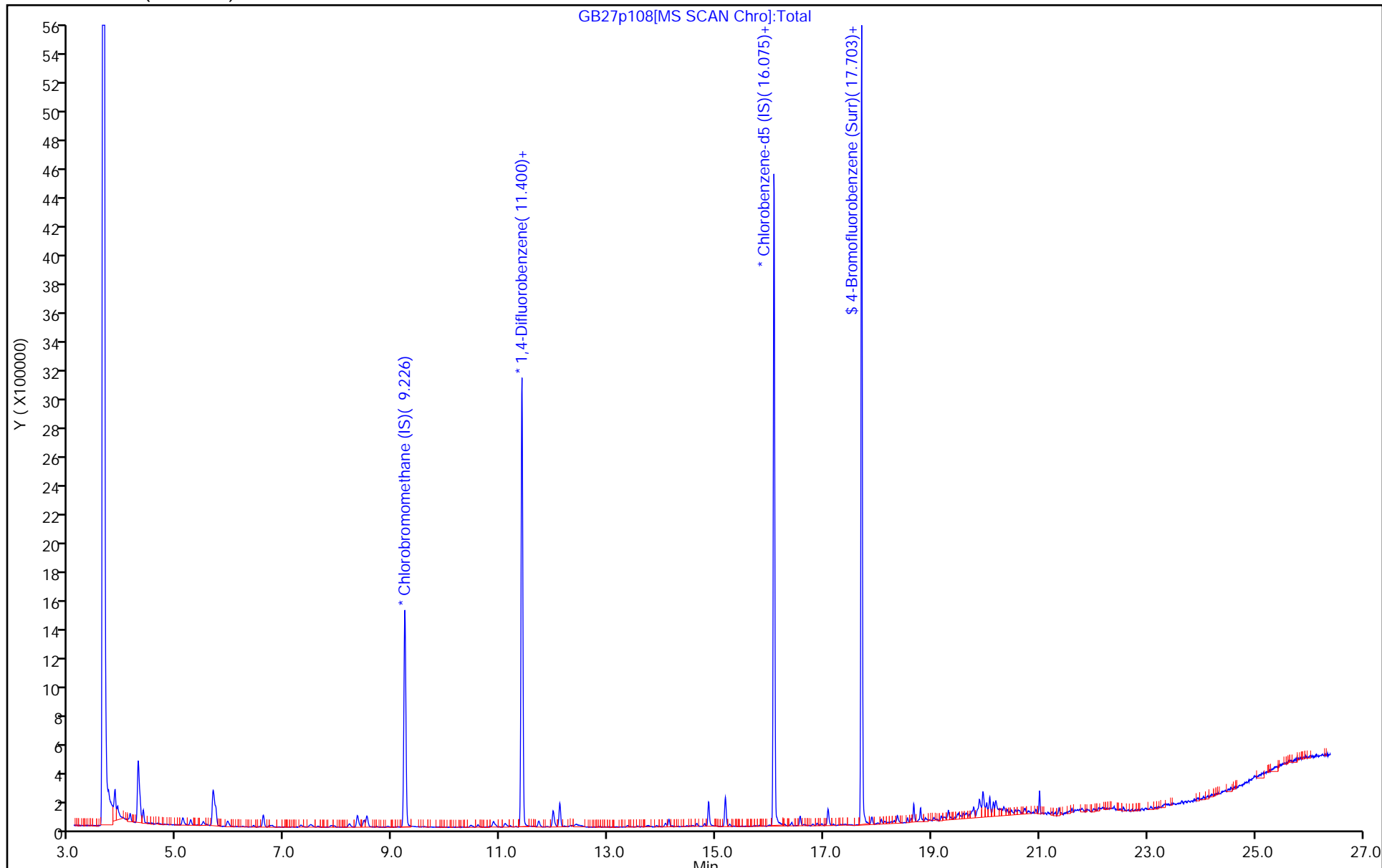
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p108.D
 Lims ID: 140-14389-A-16
 Client ID: SV-142-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 22:57:30 ALS Bottle#: 8 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-016
 Misc. Info.: 140-14389-A-16
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:30:21 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:46:08

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.87	96.67

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p108.D

Injection Date: 27-Feb-2019 22:57:30

Instrument ID: MG

Lims ID: 140-14389-A-16

Lab Sample ID: 140-14389-16

Client ID: SV-142-C-26

Operator ID: 403648

ALS Bottle#: 8 Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

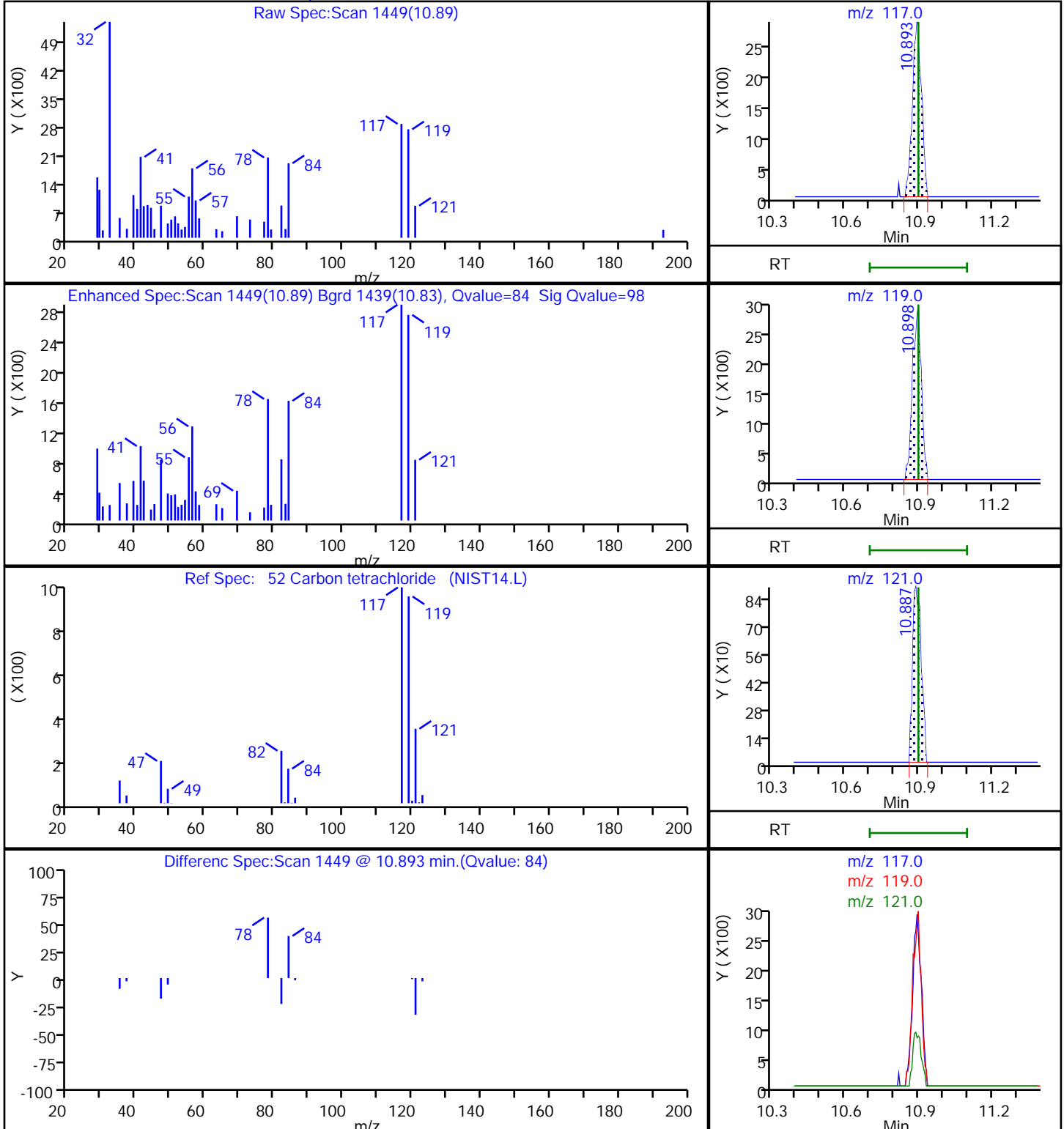
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

52 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p108.D

Injection Date: 27-Feb-2019 22:57:30

Instrument ID: MG

Lims ID: 140-14389-A-16

Lab Sample ID: 140-14389-16

Client ID: SV-142-C-26

Operator ID: 403648

ALS Bottle#: 8 Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

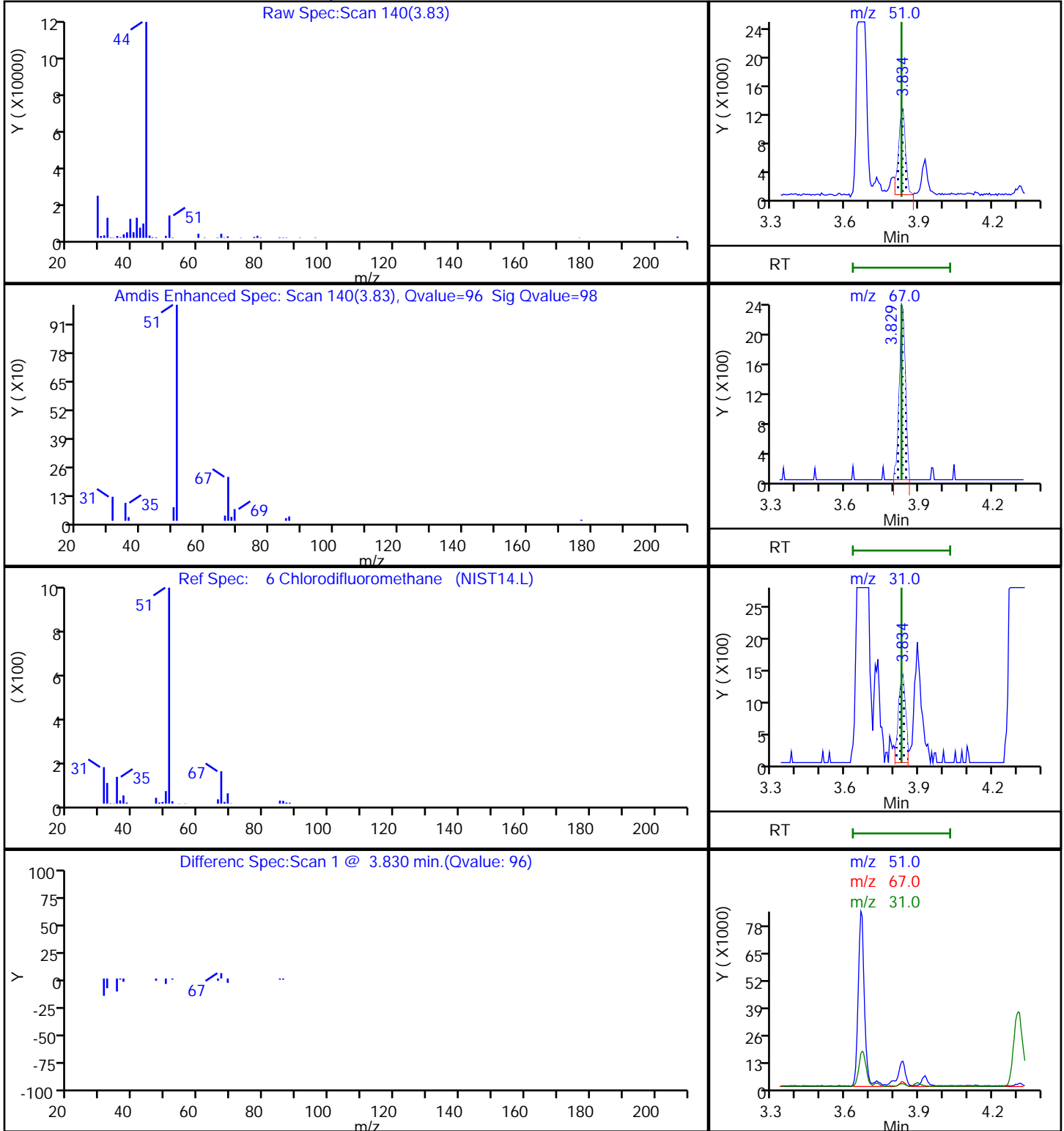
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p108.D

Injection Date: 27-Feb-2019 22:57:30

Instrument ID: MG

Lims ID: 140-14389-A-16

Lab Sample ID: 140-14389-16

Client ID: SV-142-C-26

Operator ID: 403648

ALS Bottle#: 8 Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

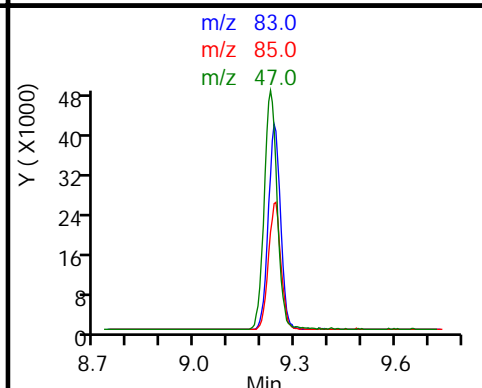
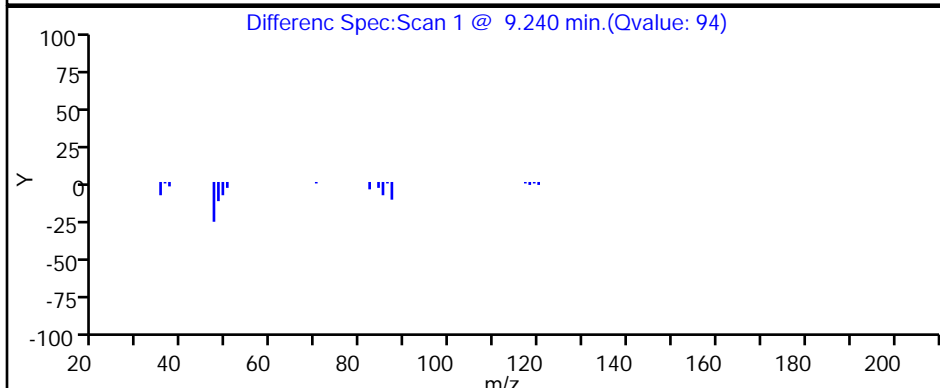
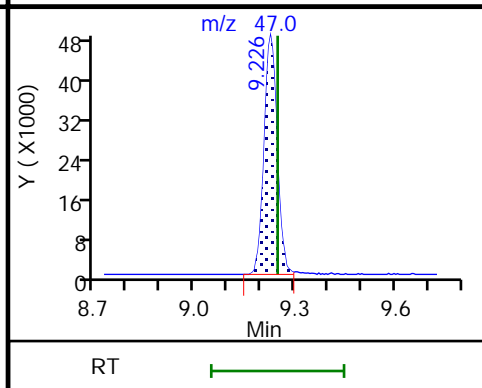
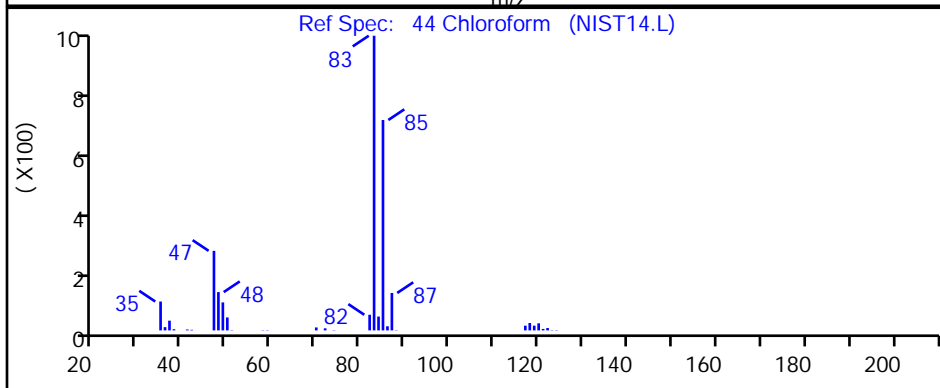
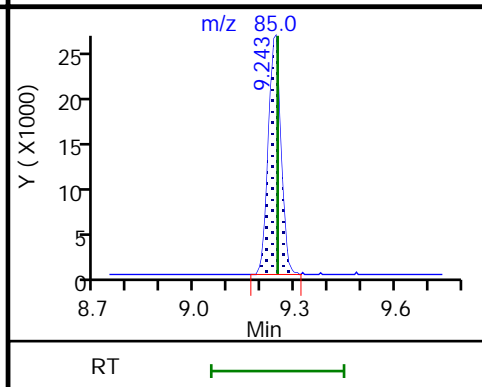
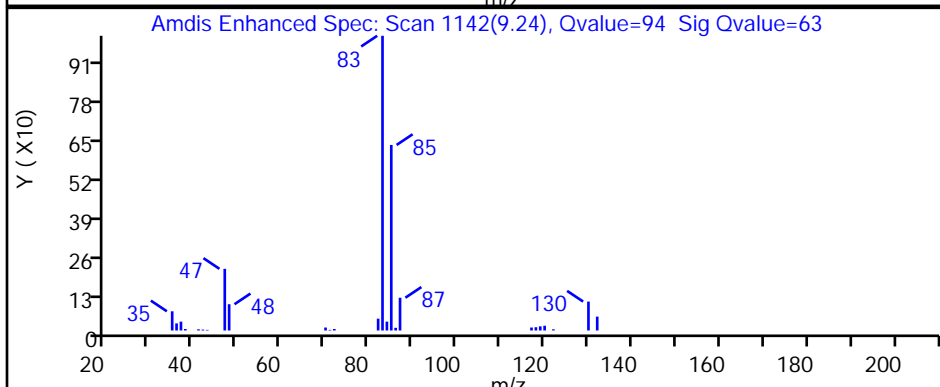
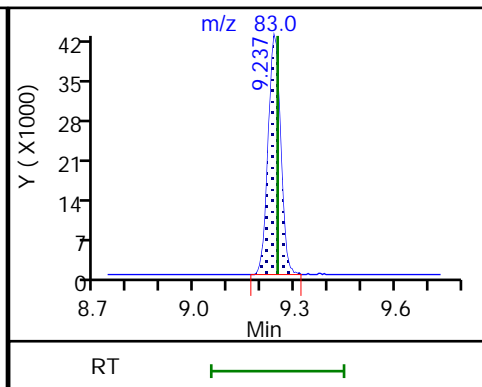
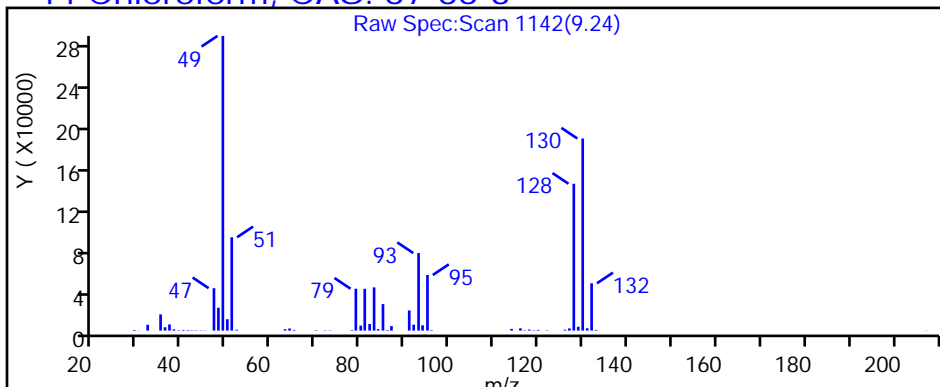
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p108.D

Injection Date: 27-Feb-2019 22:57:30

Instrument ID: MG

Lims ID: 140-14389-A-16

Lab Sample ID: 140-14389-16

Client ID: SV-142-C-26

Operator ID: 403648

ALS Bottle#: 8

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

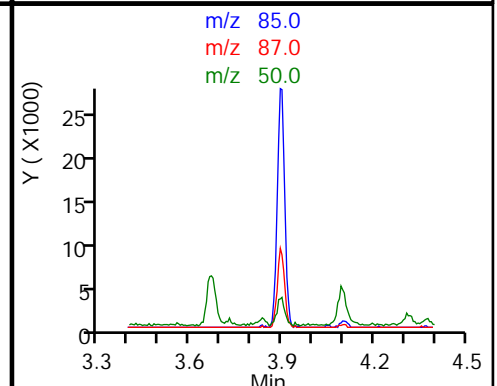
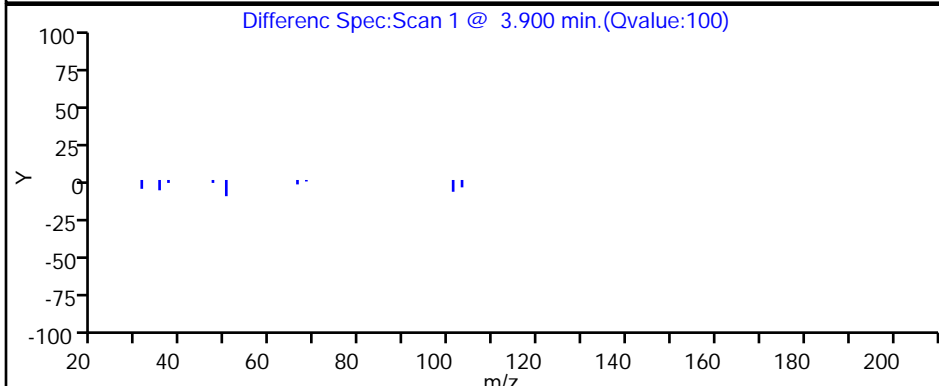
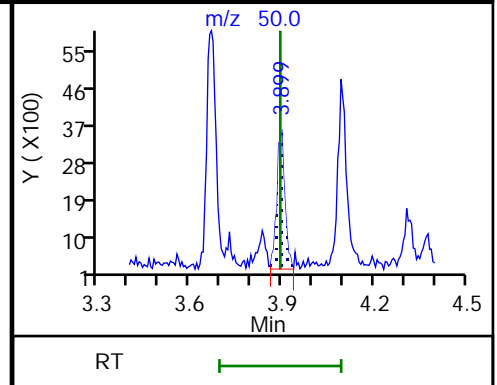
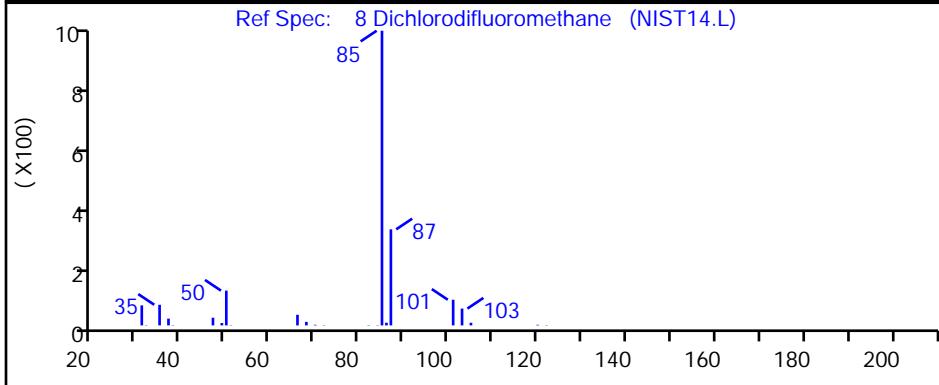
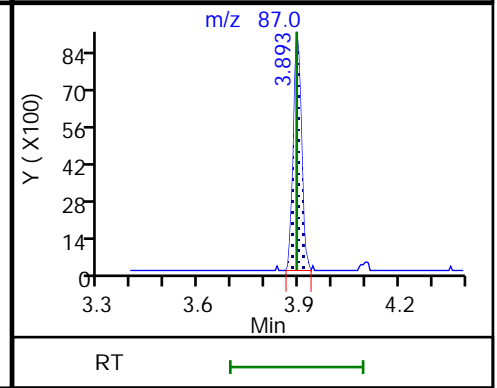
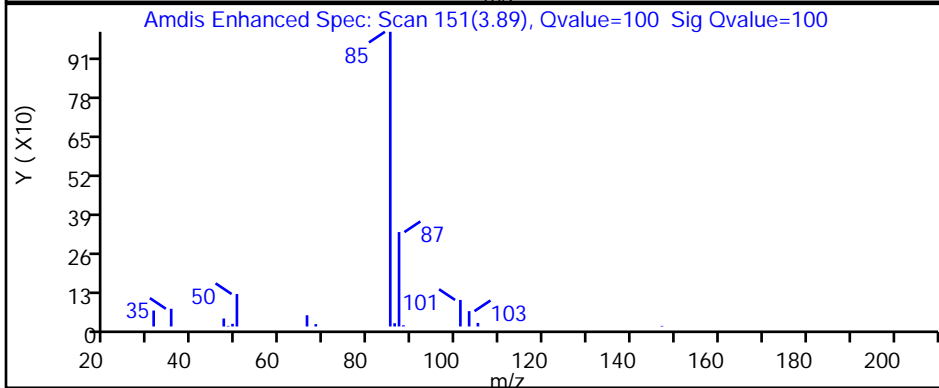
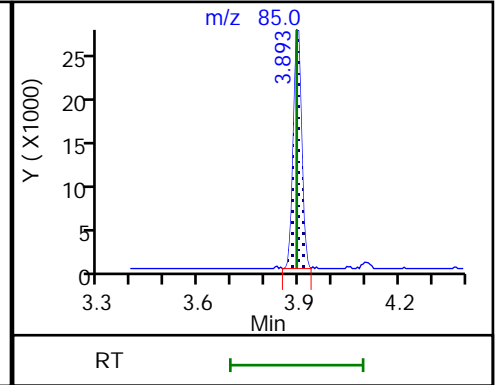
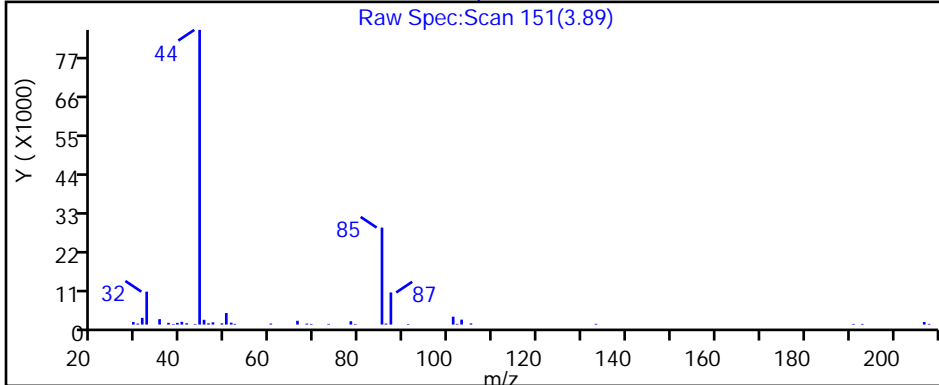
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p108.D

Injection Date: 27-Feb-2019 22:57:30

Instrument ID: MG

Lims ID: 140-14389-A-16

Lab Sample ID: 140-14389-16

Client ID: SV-142-C-26

Operator ID: 403648

ALS Bottle#: 8 Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

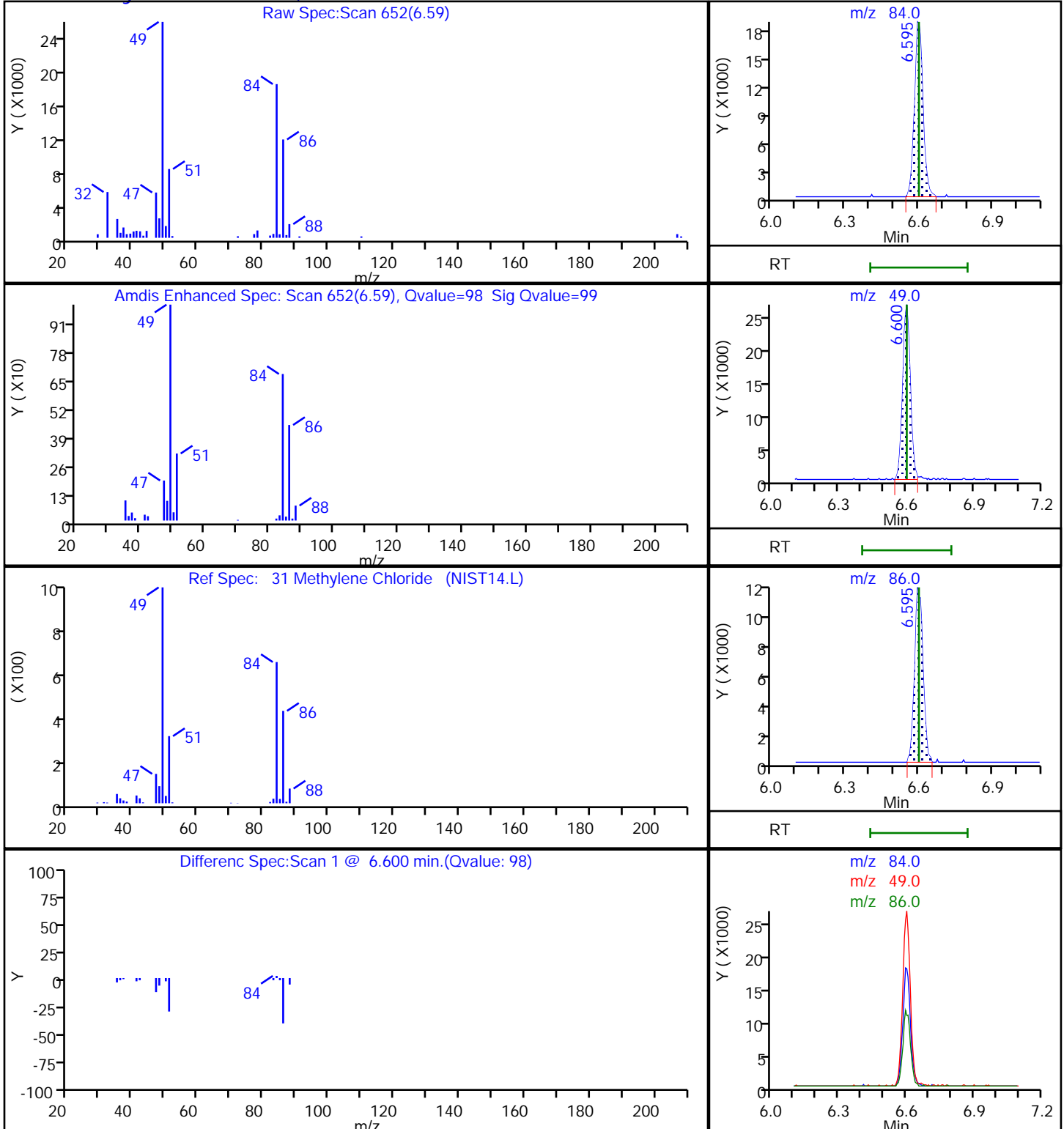
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p108.D

Injection Date: 27-Feb-2019 22:57:30

Instrument ID: MG

Lims ID: 140-14389-A-16

Lab Sample ID: 140-14389-16

Client ID: SV-142-C-26

Operator ID: 403648

ALS Bottle#: 8 Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

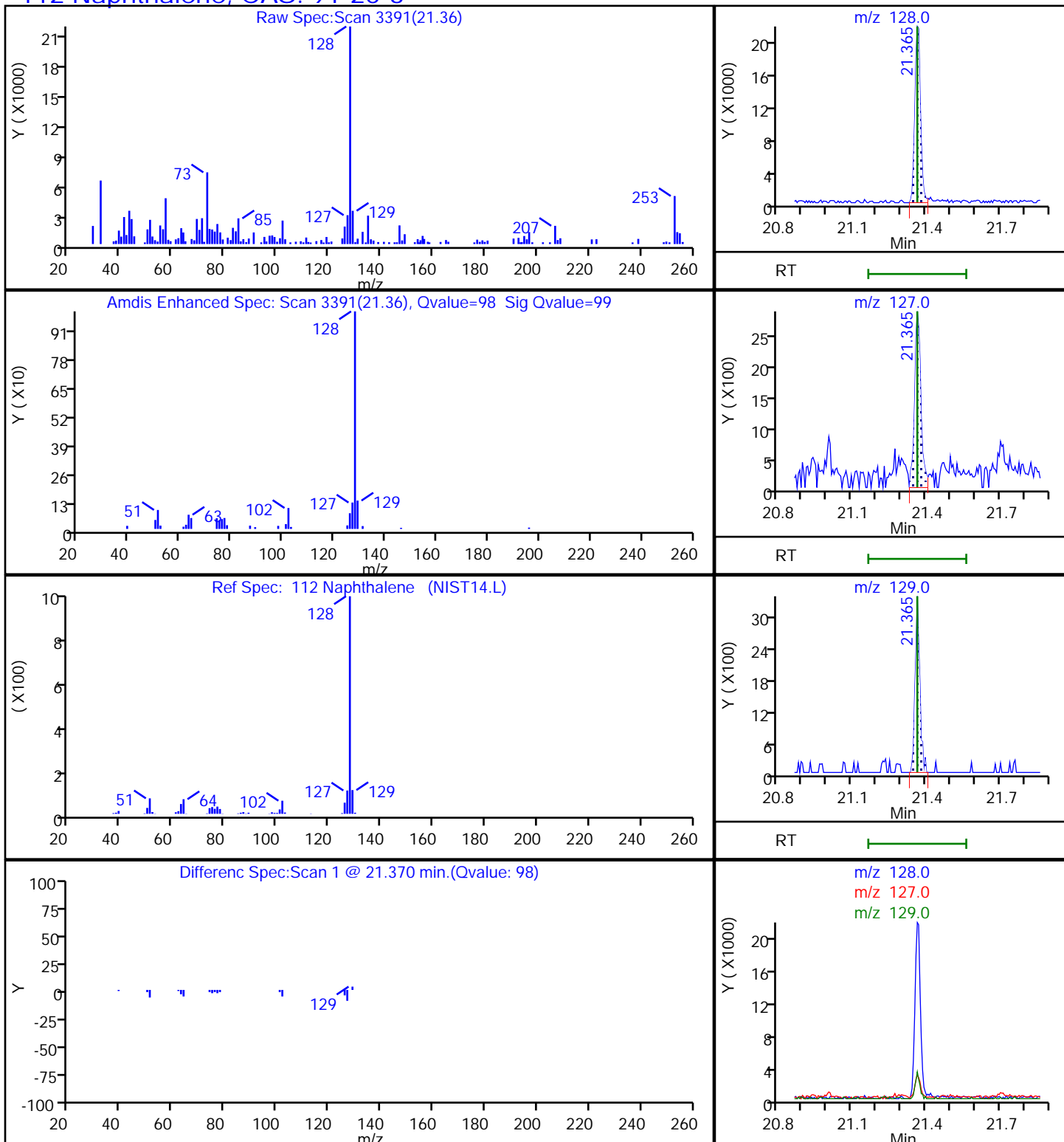
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

112 Naphthalene, CAS: 91-20-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p108.D

Injection Date: 27-Feb-2019 22:57:30

Instrument ID: MG

Lims ID: 140-14389-A-16

Lab Sample ID: 140-14389-16

Client ID: SV-142-C-26

Operator ID: 403648

ALS Bottle#: 8 Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

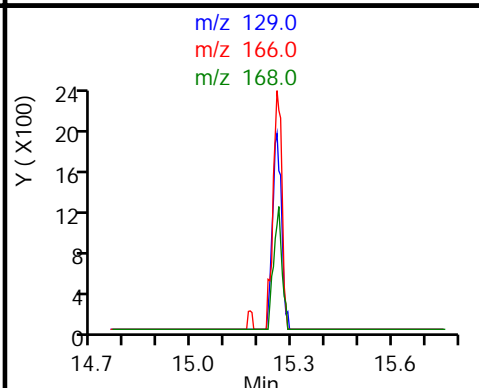
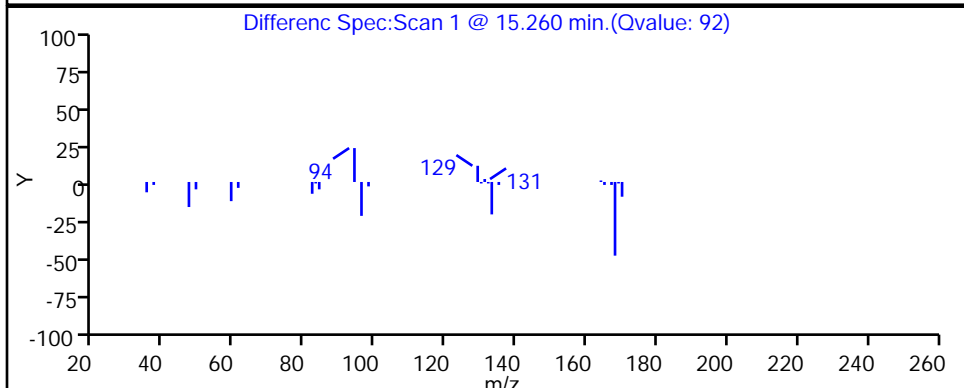
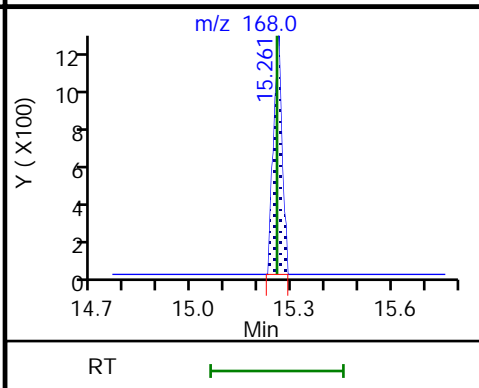
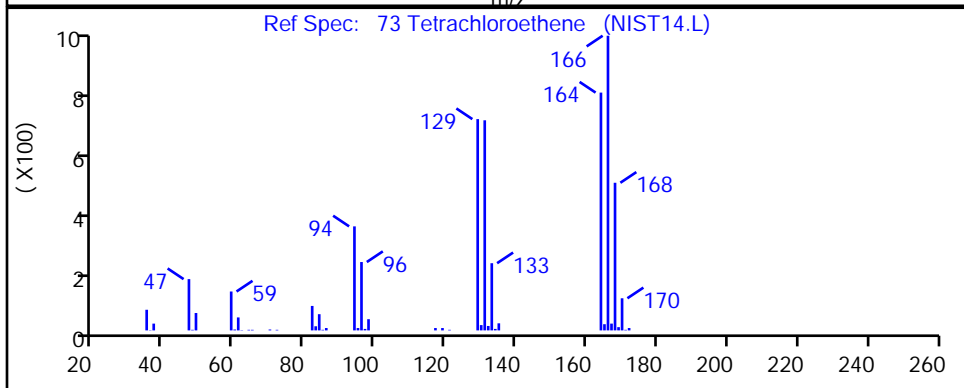
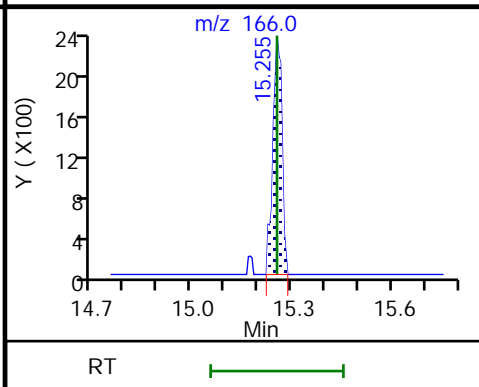
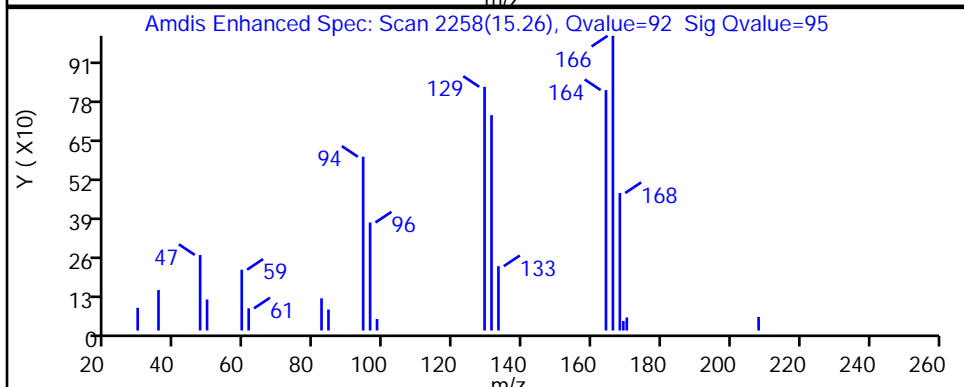
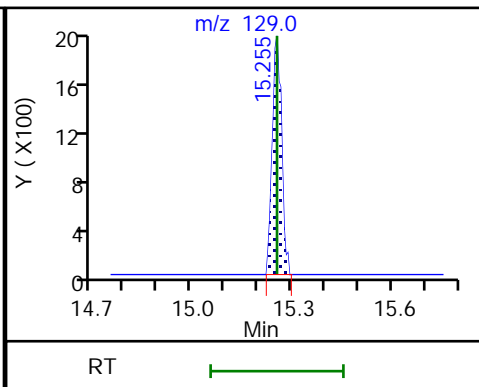
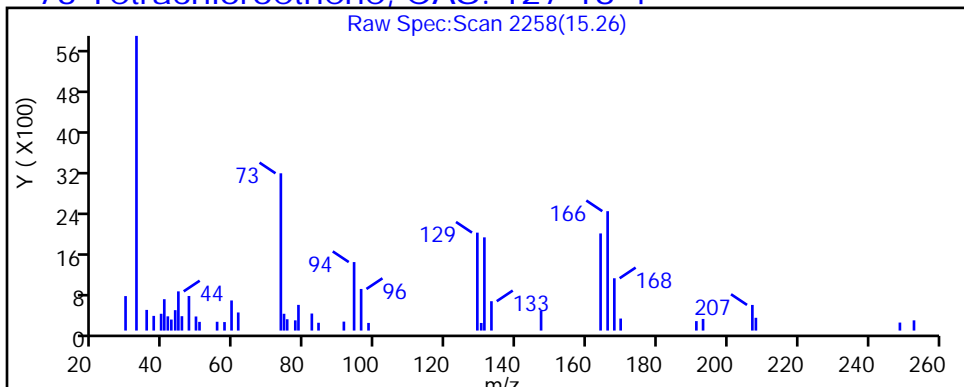
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p108.D

Injection Date: 27-Feb-2019 22:57:30

Instrument ID: MG

Lims ID: 140-14389-A-16

Lab Sample ID: 140-14389-16

Client ID: SV-142-C-26

Operator ID: 403648

ALS Bottle#: 8 Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

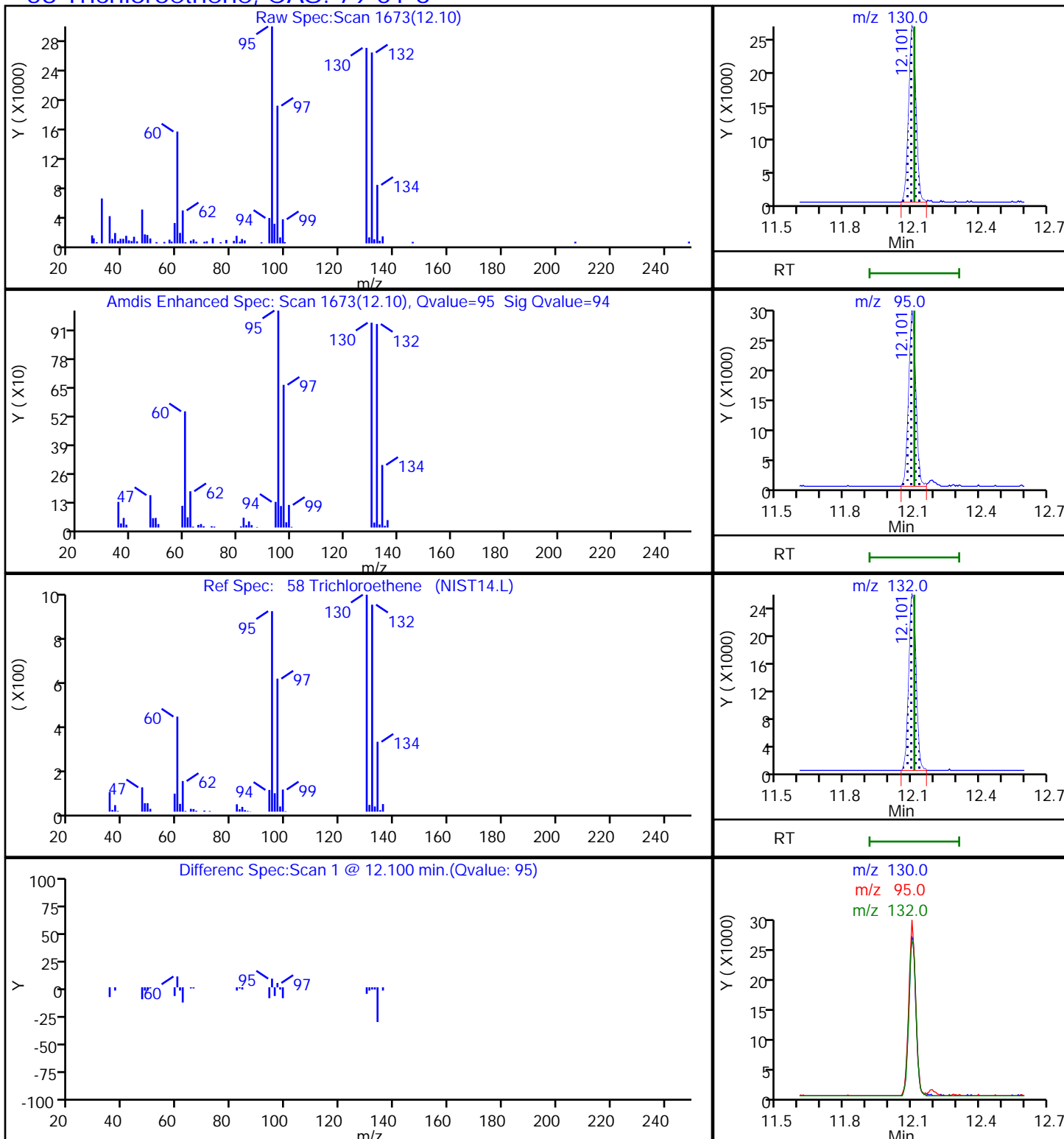
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

58 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p108.D

Injection Date: 27-Feb-2019 22:57:30

Instrument ID: MG

Lims ID: 140-14389-A-16

Lab Sample ID: 140-14389-16

Client ID: SV-142-C-26

Operator ID: 403648

ALS Bottle#: 8 Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

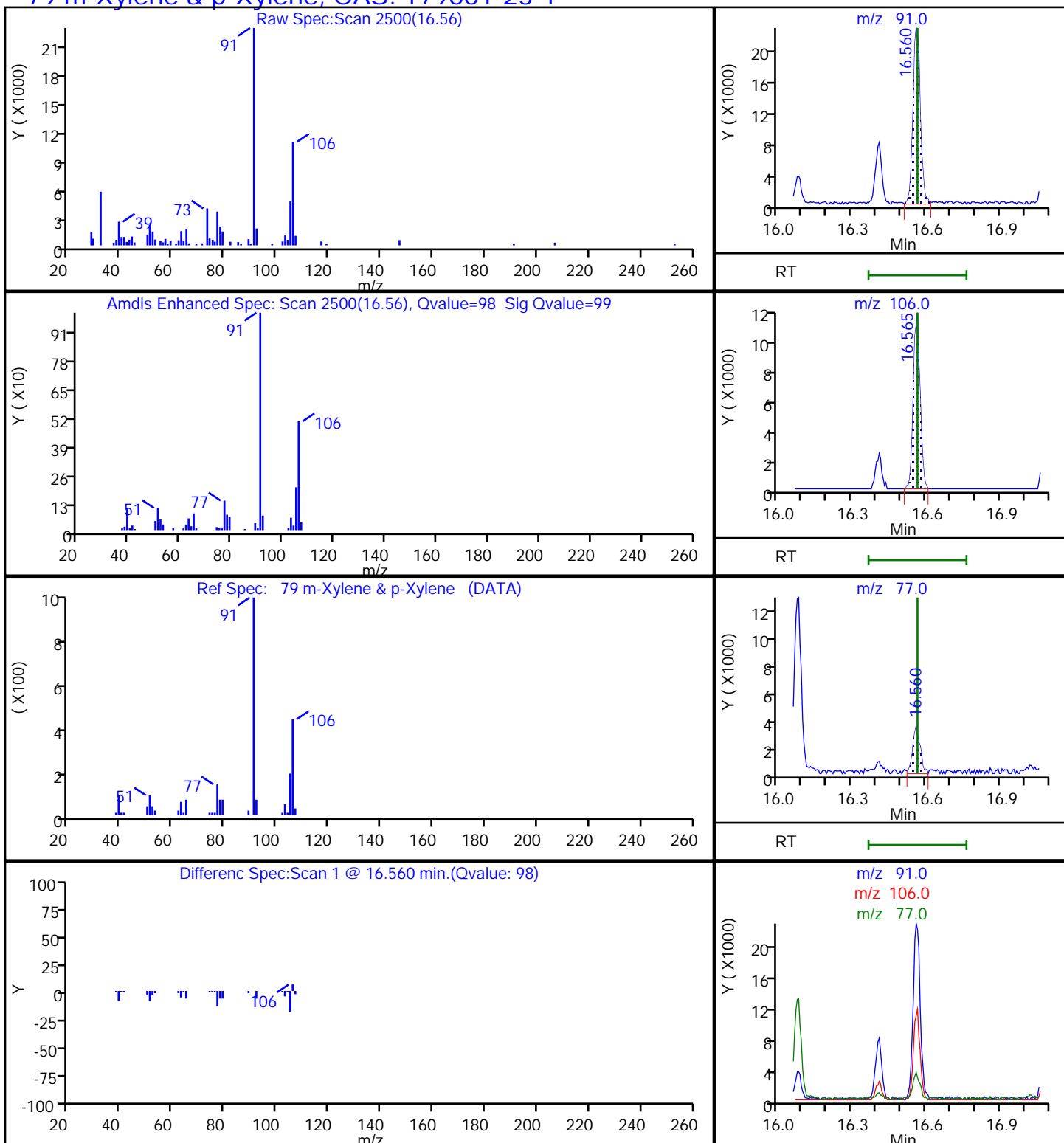
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p108.D

Injection Date: 27-Feb-2019 22:57:30

Instrument ID: MG

Lims ID: 140-14389-A-16

Lab Sample ID: 140-14389-16

Client ID: SV-142-C-26

Operator ID: 403648

ALS Bottle#: 8 Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

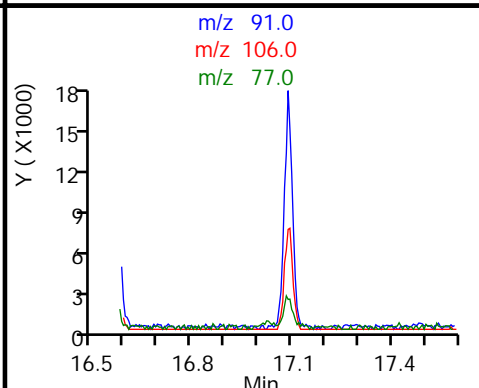
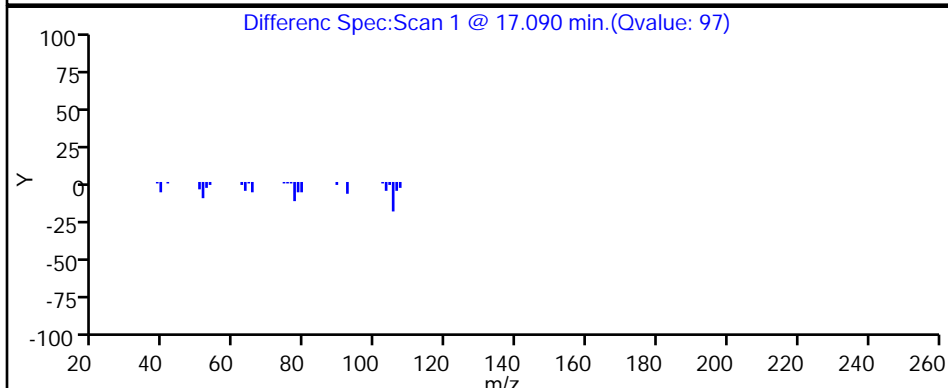
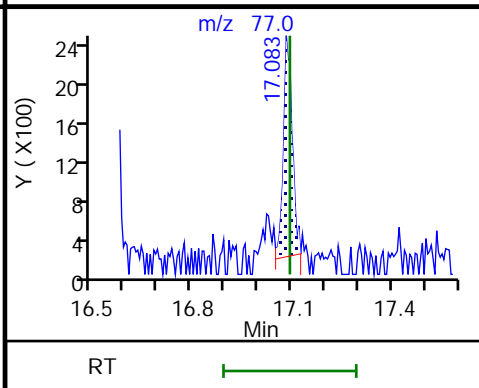
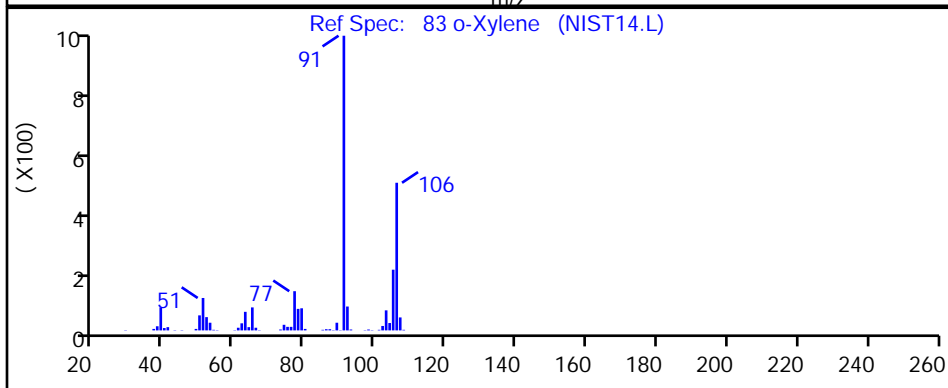
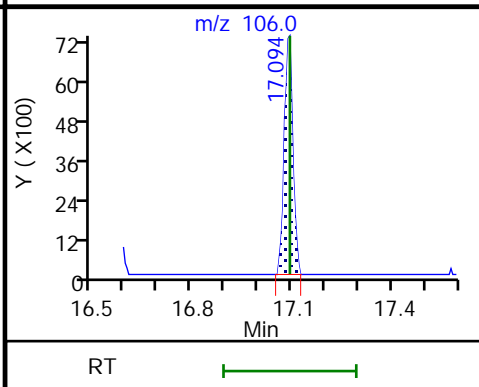
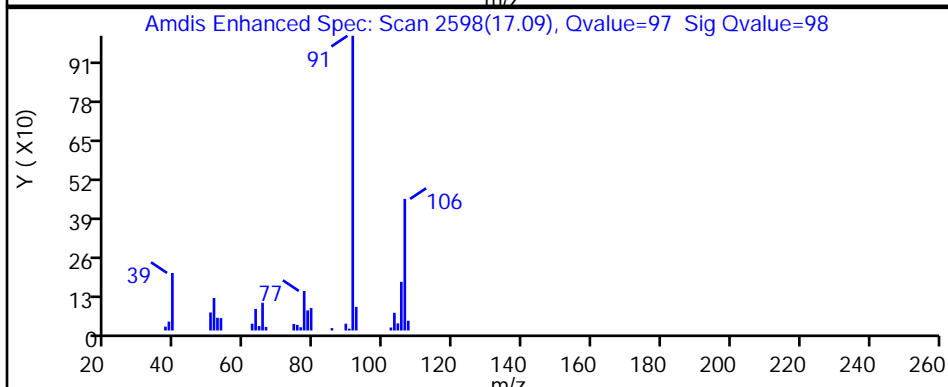
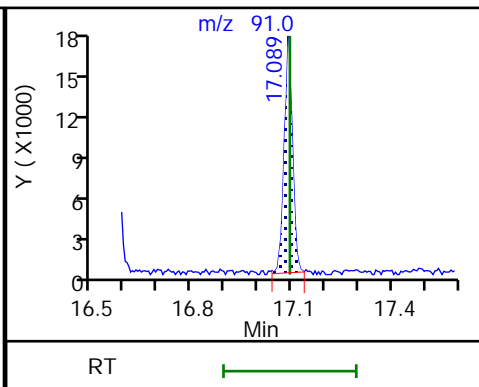
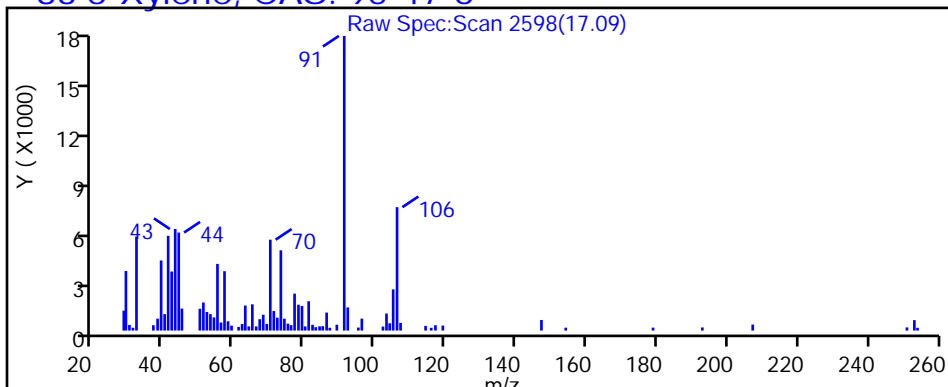
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-113-C-26 Lab Sample ID: 140-14389-17
 Matrix: Air Lab File ID: GB27p109.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:17
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 23:39
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.32	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	7.2		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	33		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.47	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-113-C-26 Lab Sample ID: 140-14389-17
 Matrix: Air Lab File ID: GB27p109.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:17
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 23:39
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	1.6	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	29		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	180		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p109.D
 Lims ID: 140-14389-A-17
 Client ID: SV-113-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 23:39:30 ALS Bottle#: 9 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-017
 Misc. Info.: 140-14389-A-17
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:30:21 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:52:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.226	9.237	-0.011	98	471775	4.00	
* 2 1,4-Difluorobenzene	114	11.399	11.410	-0.011	96	2659937	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.006	93	2435487	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	86	1961341	3.93	
6 Chlorodifluoromethane	51	3.834	3.834	0.005	95	23258	0.0753	
8 Dichlorodifluoromethane	85	3.893	3.889	0.000	100	48515	0.0971	
31 Methylene Chloride	84	6.595	6.600	-0.005	97	33603	0.1734	
42 cis-1,2-Dichloroethene	96	8.886	8.882	-0.006	96	247229	1.45	
44 Chloroform	83	9.237	9.248	-0.011	28	25359	0.0643	
58 Trichloroethene	130	12.100	12.100	-0.011	95	1414690	6.53	
67 Toluene	91	14.128	14.128	0.000	93	38927	0.0726	
79 m-Xylene & p-Xylene	91	16.560	16.565	-0.005	99	34381	0.0617	
83 o-Xylene	91	17.088	17.094	-0.006	98	19191	0.0327	
S 124 Xylenes, Total	100				0		0.0944	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p109.D

Injection Date: 27-Feb-2019 23:39:30

Instrument ID: MG

Operator ID: 403648

Lims ID: 140-14389-A-17

Lab Sample ID: 140-14389-17

Worklist Smp#: 17

Client ID: SV-113-C-26

Purge Vol: 500.000 mL

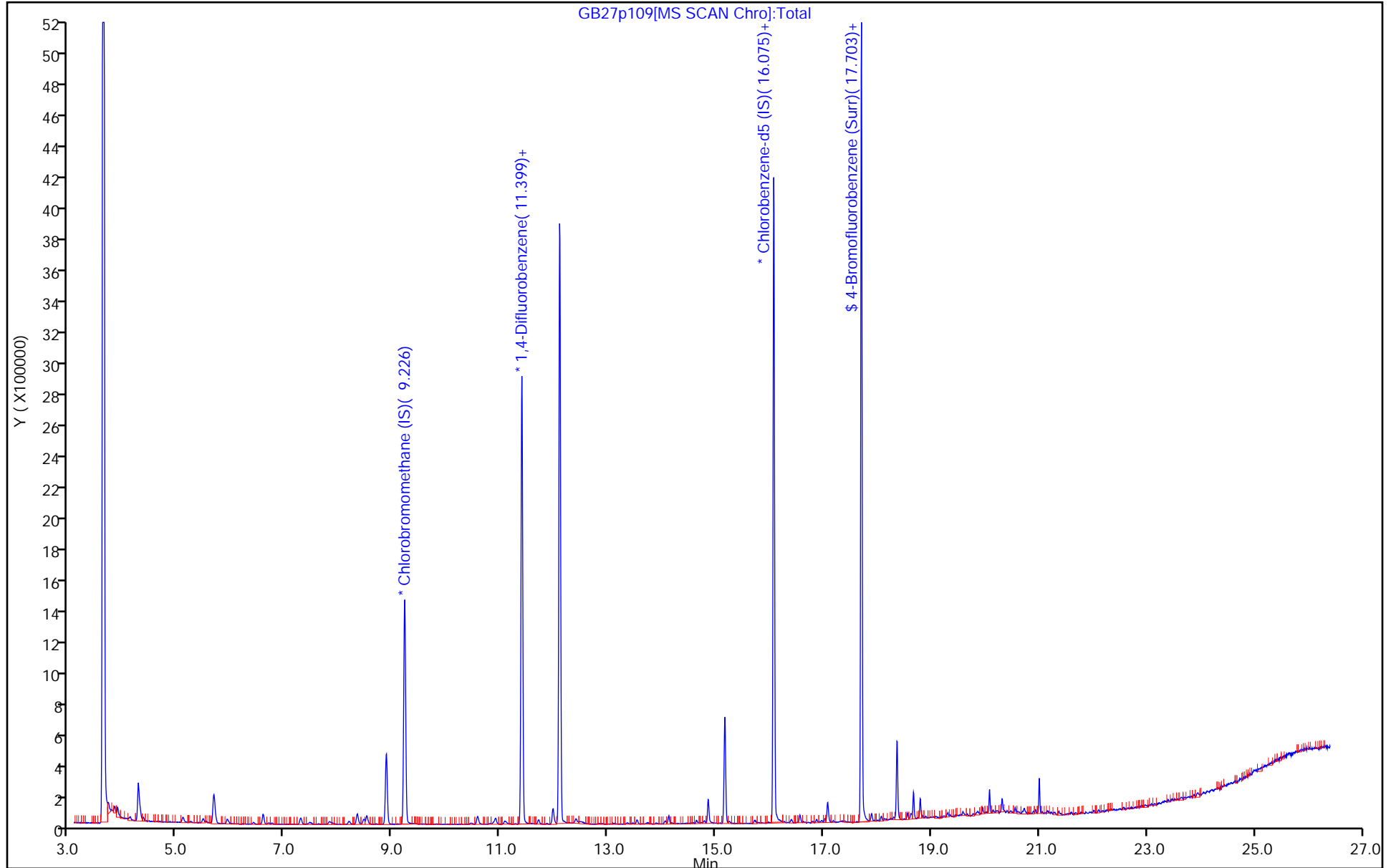
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p109.D
 Lims ID: 140-14389-A-17
 Client ID: SV-113-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 23:39:30 ALS Bottle#: 9 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-017
 Misc. Info.: 140-14389-A-17
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:30:21 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:52:06

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.93	98.25

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p109.D

Injection Date: 27-Feb-2019 23:39:30

Instrument ID: MG

Lims ID: 140-14389-A-17

Lab Sample ID: 140-14389-17

Client ID: SV-113-C-26

Operator ID: 403648

ALS Bottle#: 9

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

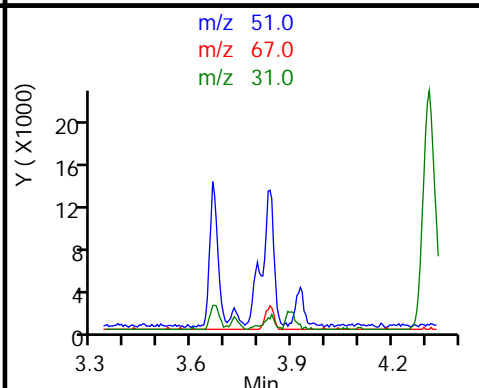
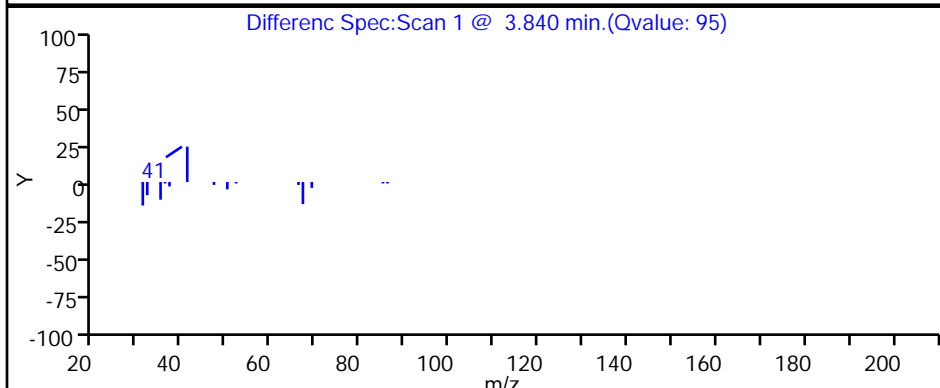
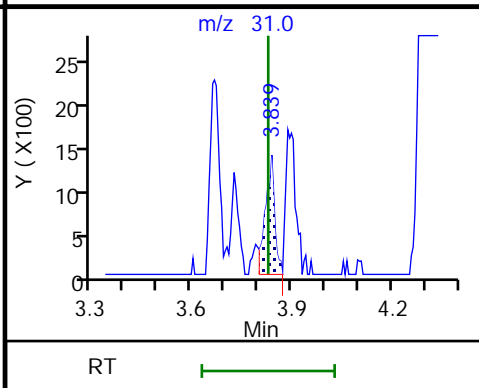
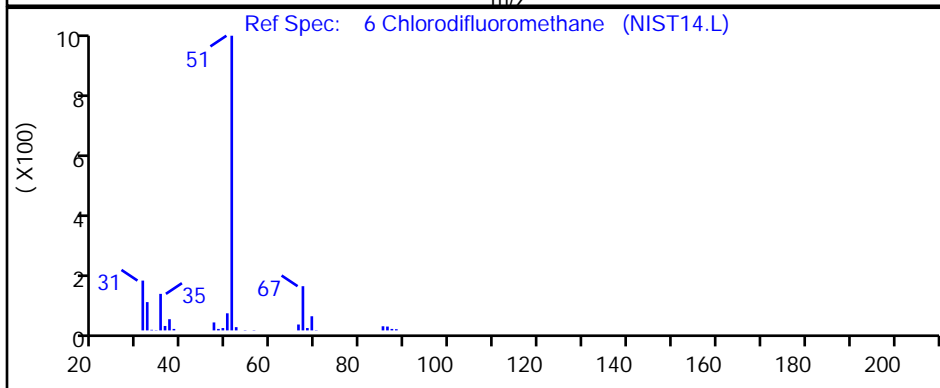
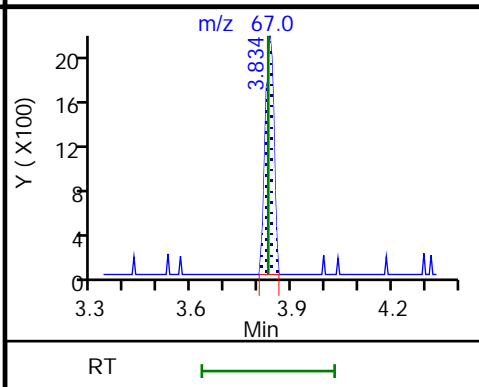
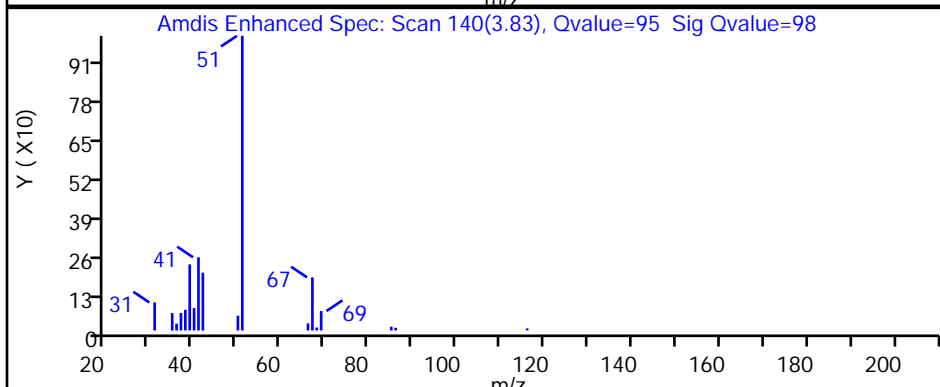
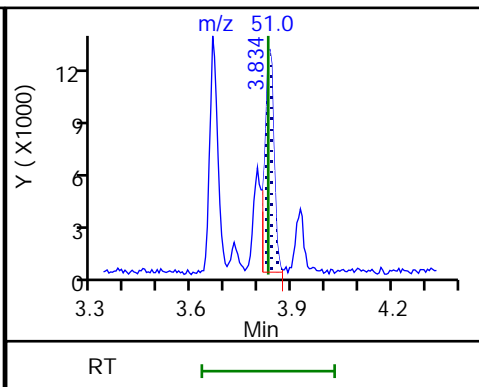
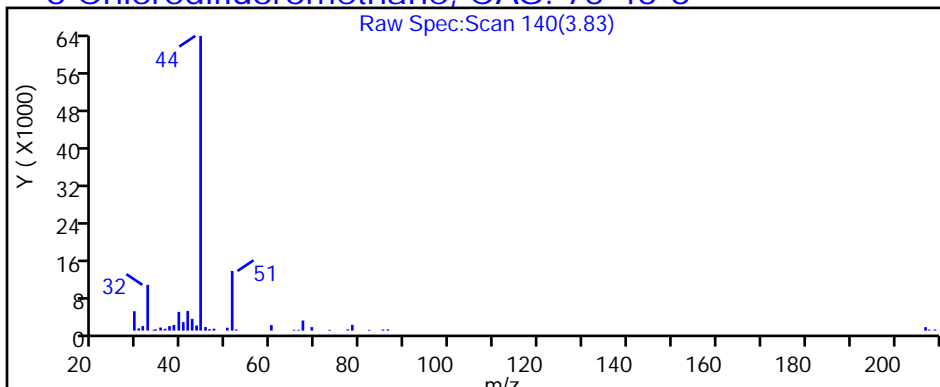
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p109.D

Injection Date: 27-Feb-2019 23:39:30

Instrument ID: MG

Lims ID: 140-14389-A-17

Lab Sample ID: 140-14389-17

Client ID: SV-113-C-26

Operator ID: 403648

ALS Bottle#: 9

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

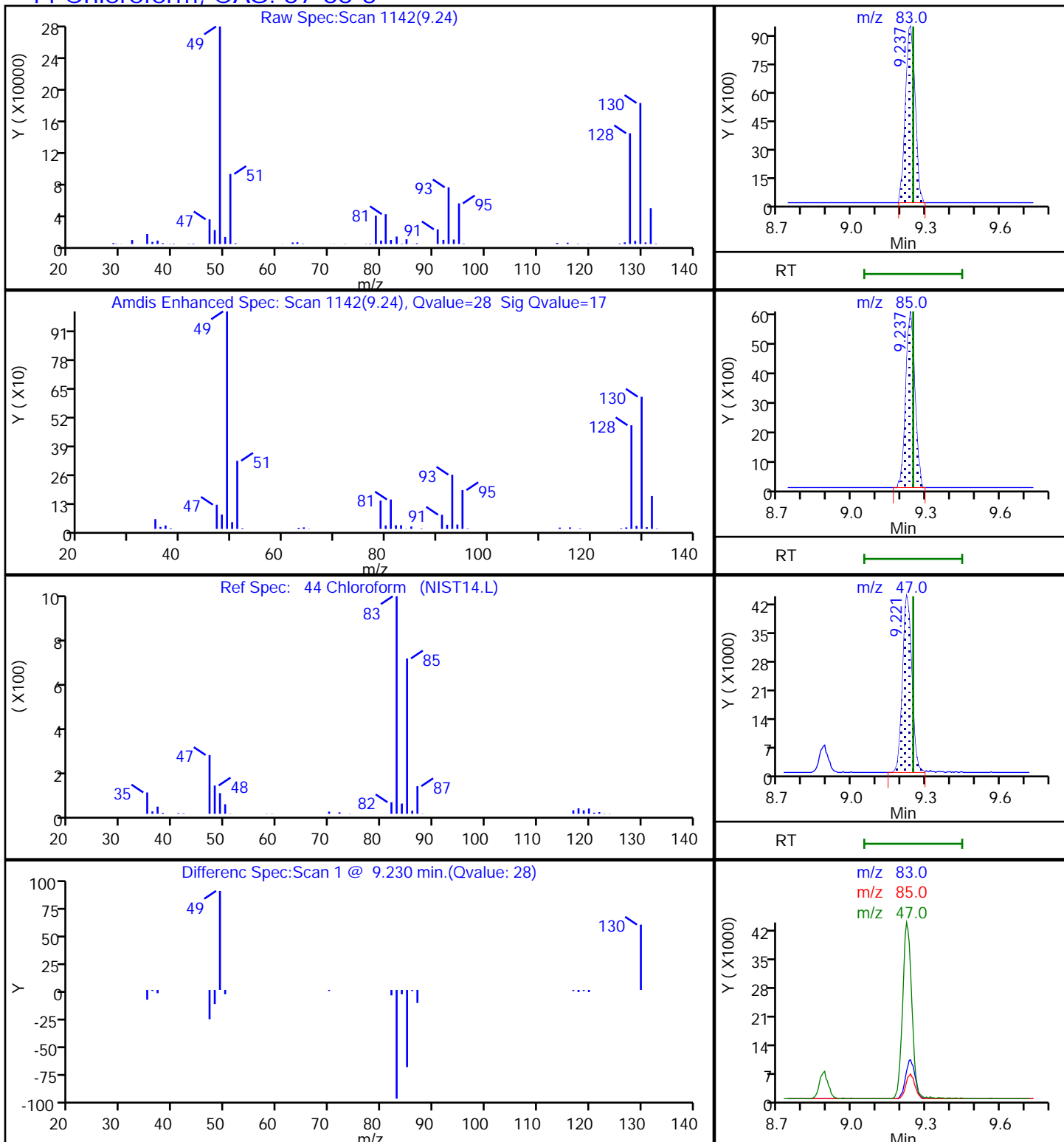
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p109.D

Injection Date: 27-Feb-2019 23:39:30

Instrument ID: MG

Lims ID: 140-14389-A-17

Lab Sample ID: 140-14389-17

Client ID: SV-113-C-26

Operator ID: 403648

ALS Bottle#: 9

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

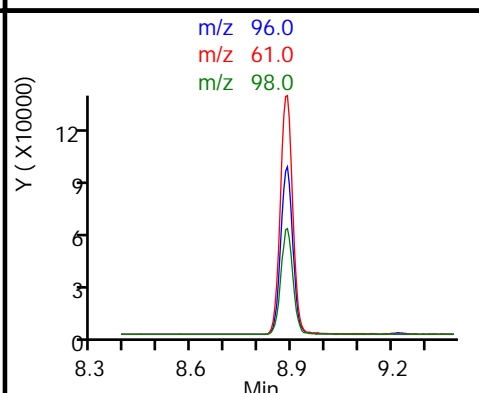
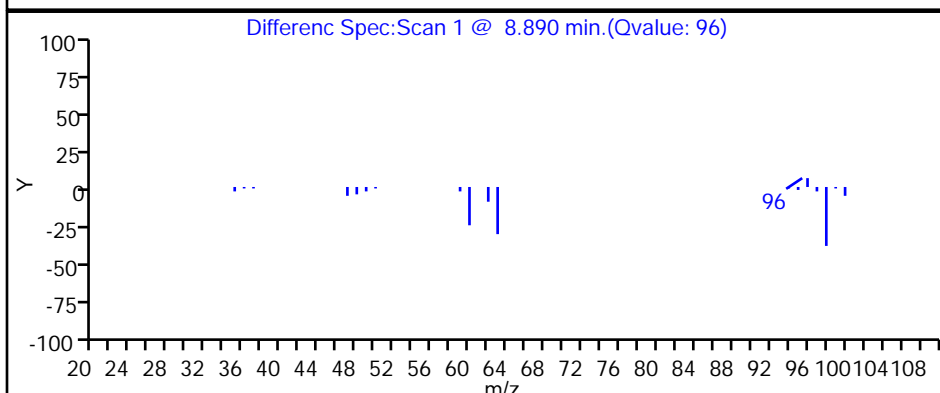
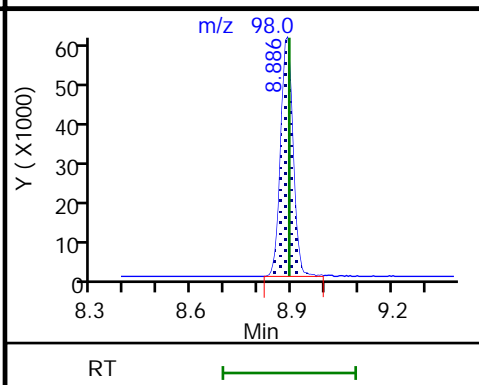
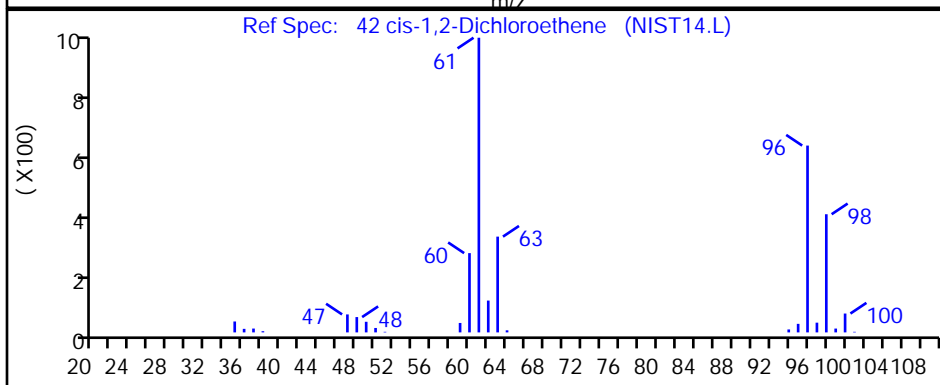
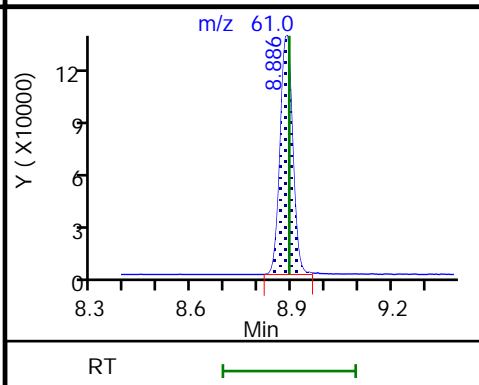
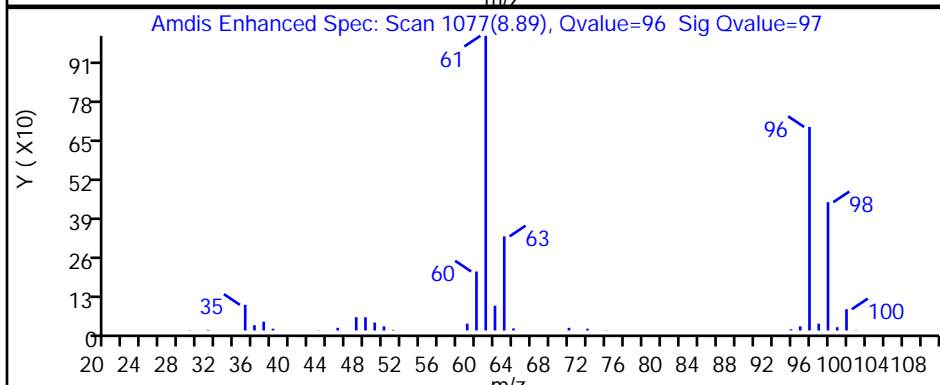
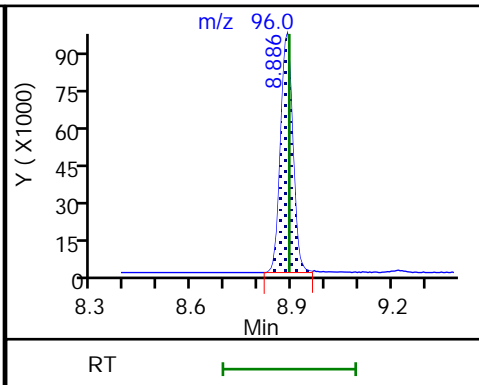
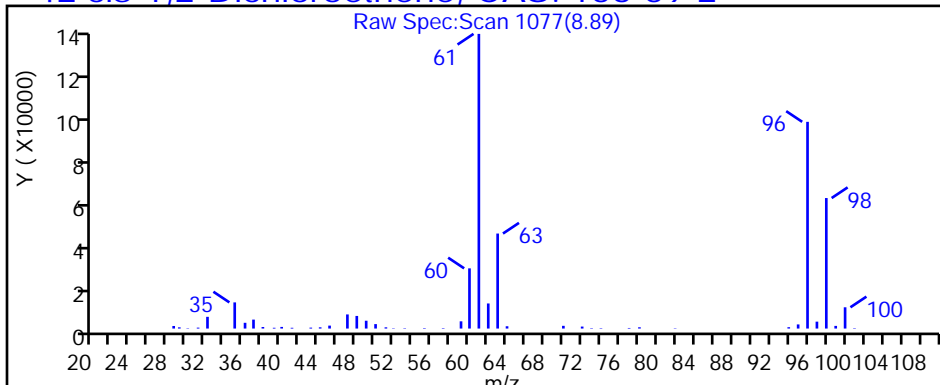
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p109.D

Injection Date: 27-Feb-2019 23:39:30

Instrument ID: MG

Lims ID: 140-14389-A-17

Lab Sample ID: 140-14389-17

Client ID: SV-113-C-26

Operator ID: 403648

ALS Bottle#: 9

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

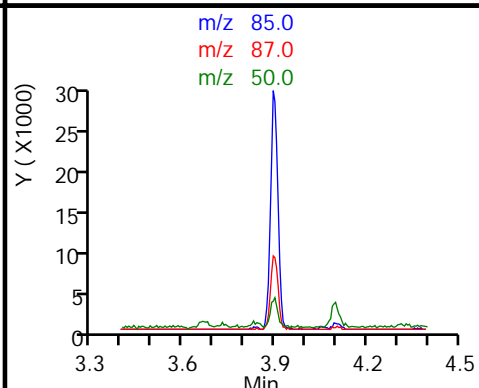
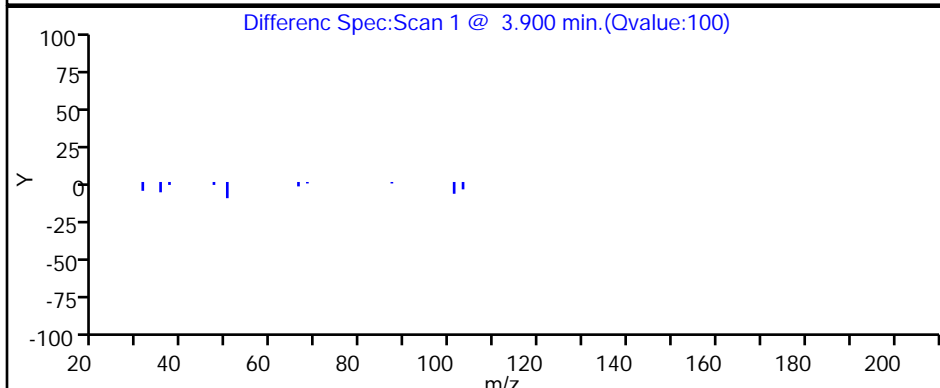
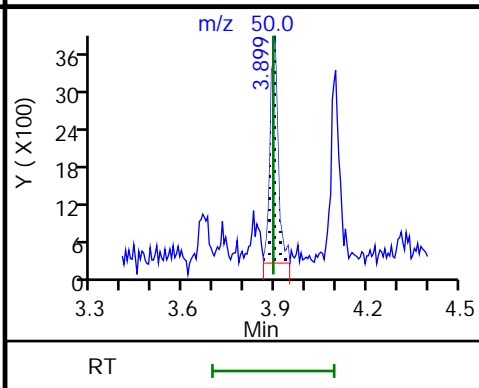
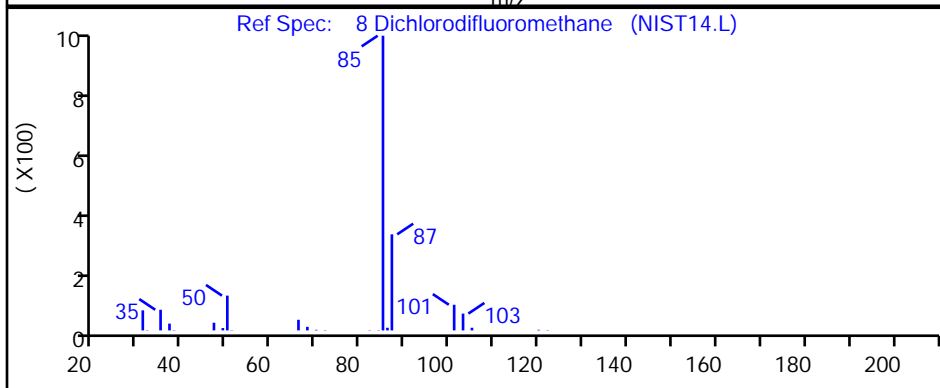
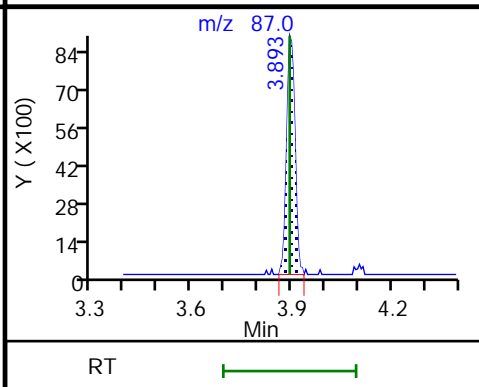
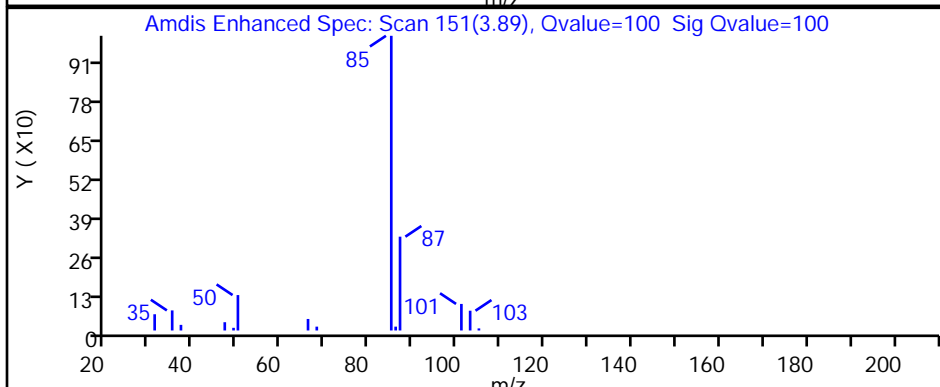
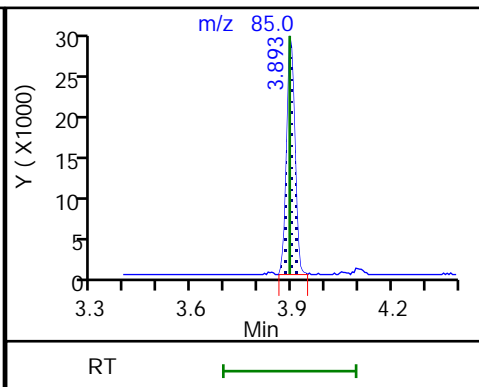
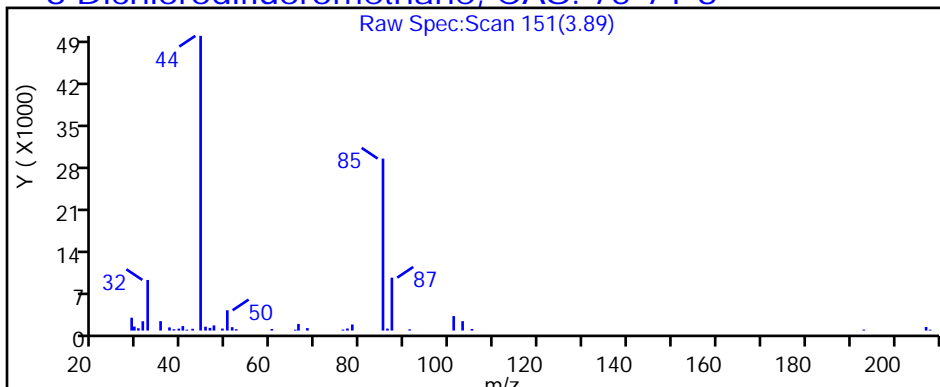
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p109.D

Injection Date: 27-Feb-2019 23:39:30

Instrument ID: MG

Lims ID: 140-14389-A-17

Lab Sample ID: 140-14389-17

Client ID: SV-113-C-26

Operator ID: 403648

ALS Bottle#: 9 Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

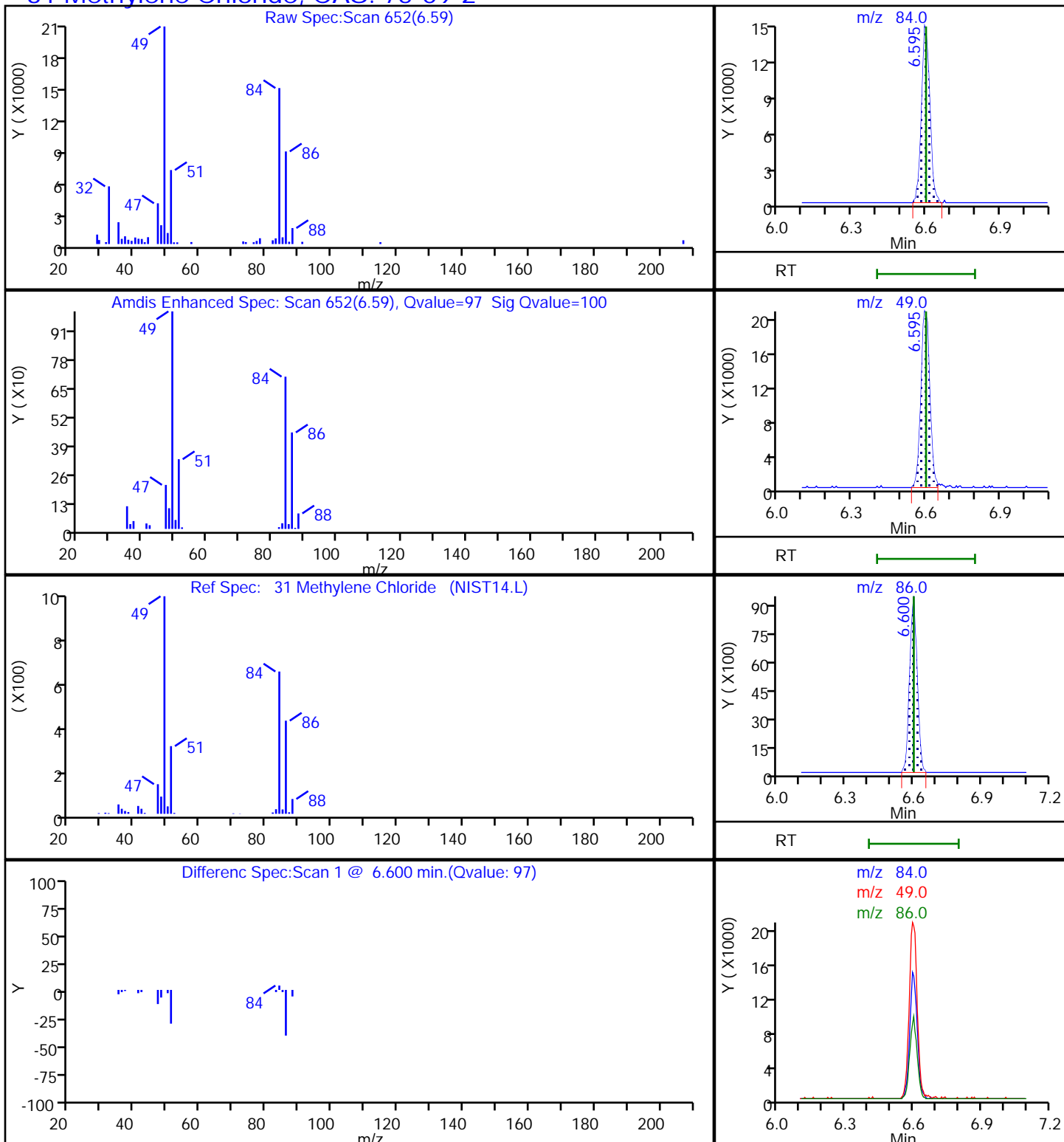
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p109.D

Injection Date: 27-Feb-2019 23:39:30

Instrument ID: MG

Lims ID: 140-14389-A-17

Lab Sample ID: 140-14389-17

Client ID: SV-113-C-26

Operator ID: 403648

ALS Bottle#: 9 Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

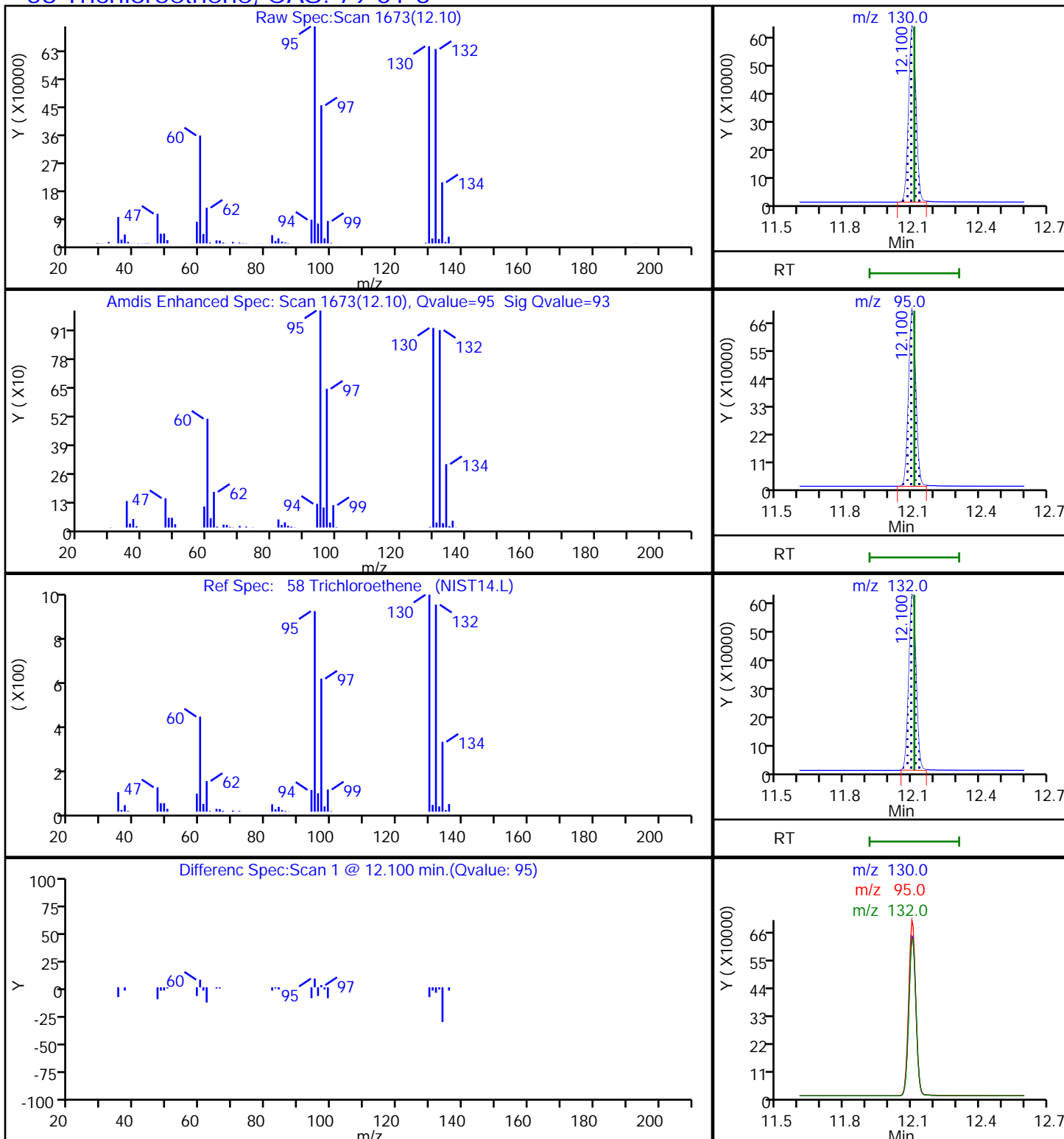
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

58 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p109.D

Injection Date: 27-Feb-2019 23:39:30

Instrument ID: MG

Lims ID: 140-14389-A-17

Lab Sample ID: 140-14389-17

Client ID: SV-113-C-26

Operator ID: 403648

ALS Bottle#: 9 Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

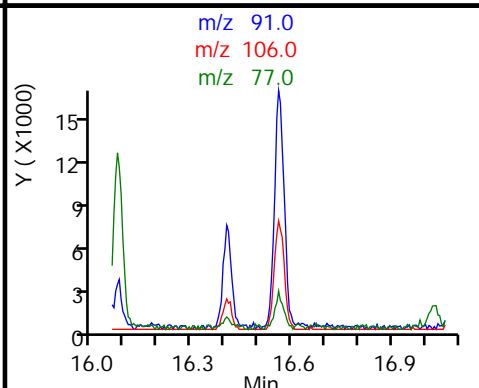
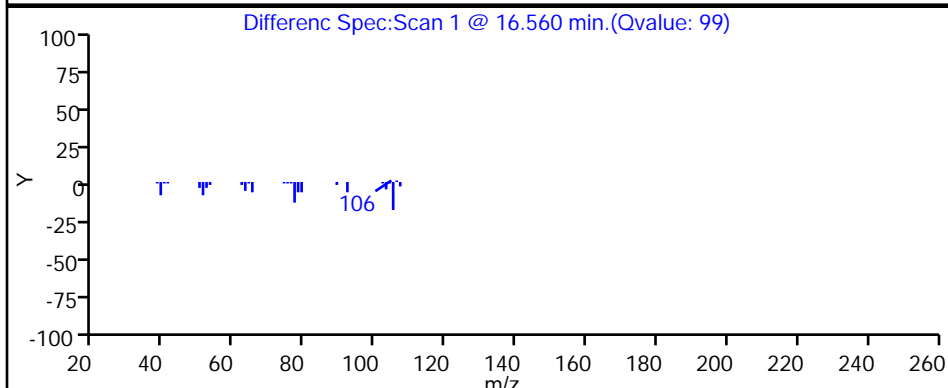
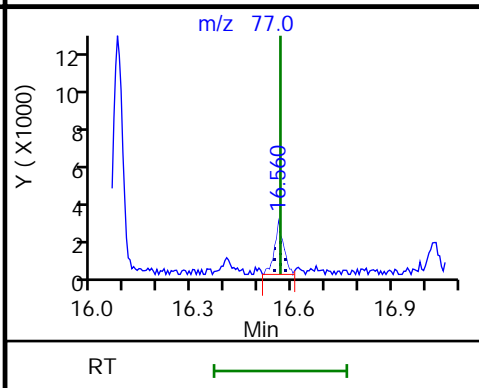
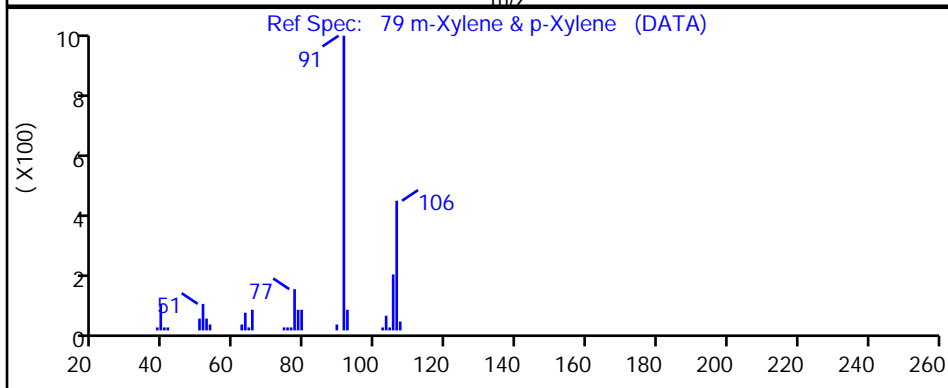
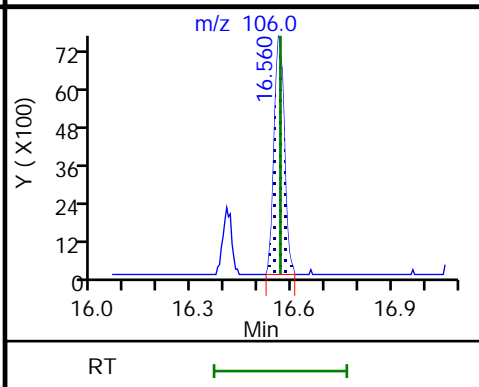
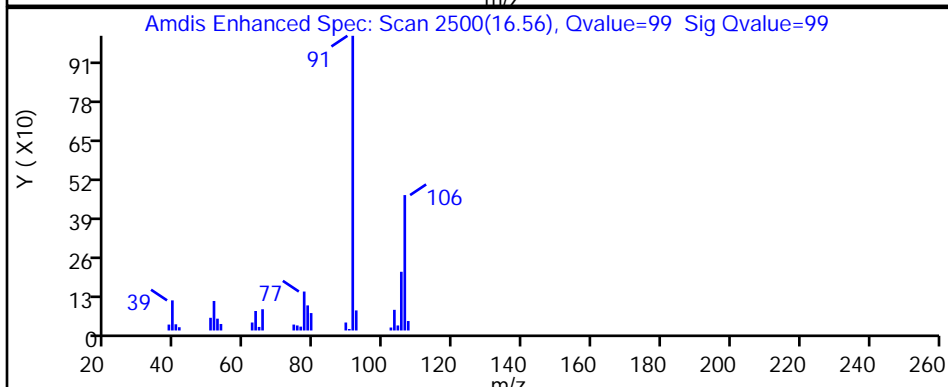
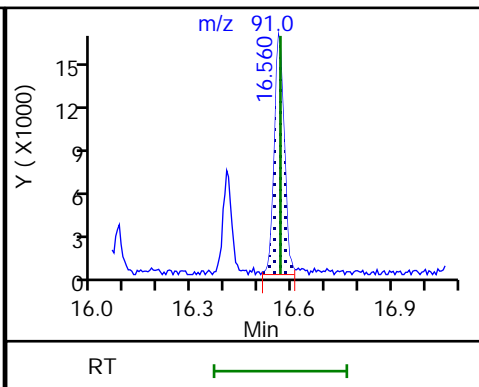
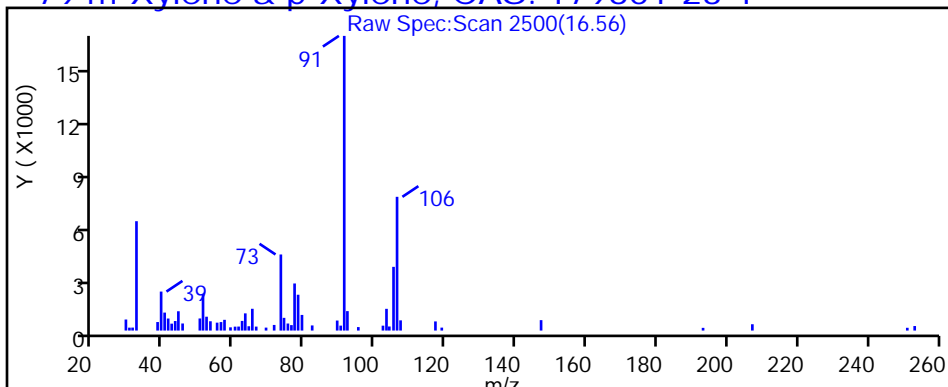
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p109.D

Injection Date: 27-Feb-2019 23:39:30

Instrument ID: MG

Lims ID: 140-14389-A-17

Lab Sample ID: 140-14389-17

Client ID: SV-113-C-26

Operator ID: 403648

ALS Bottle#: 9 Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

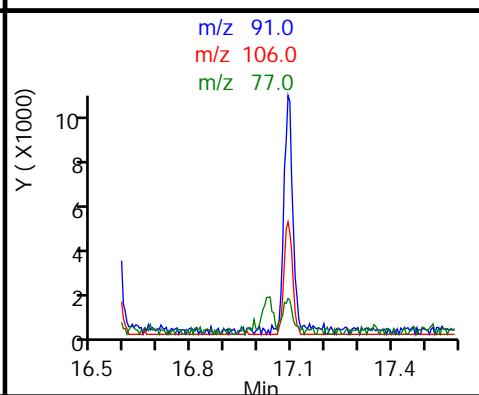
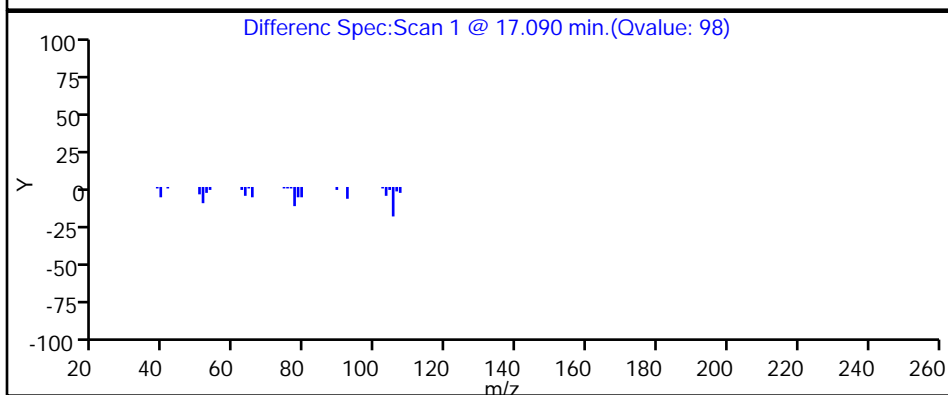
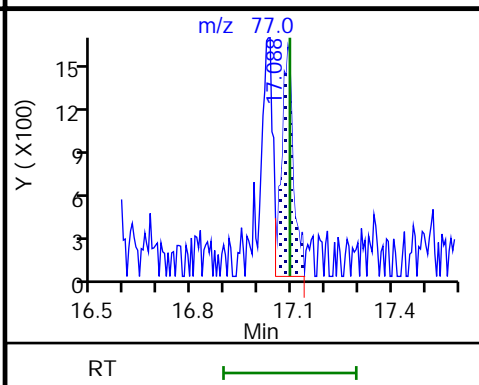
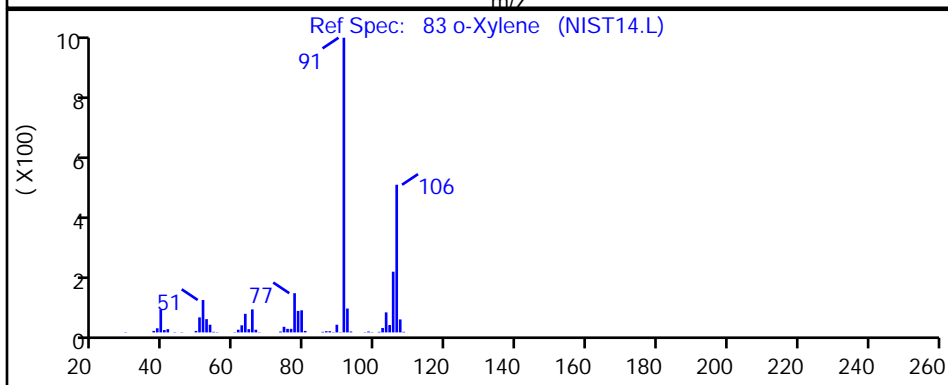
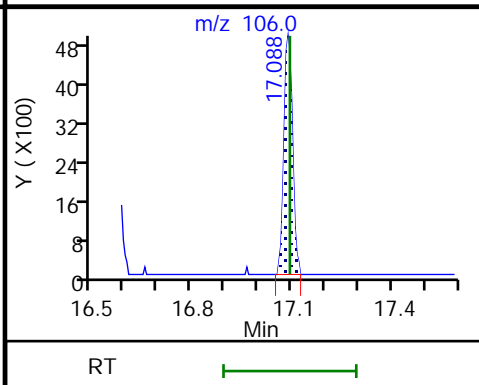
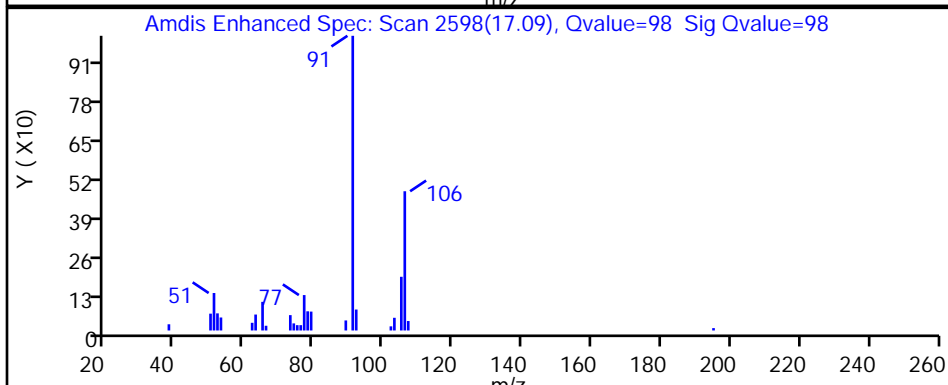
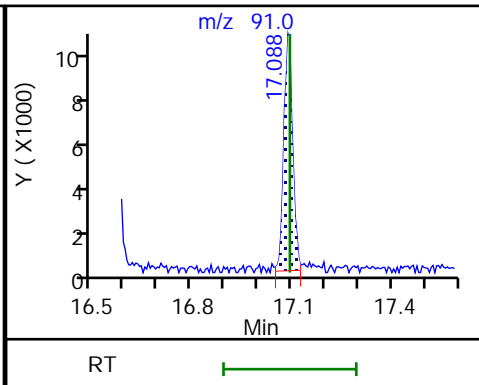
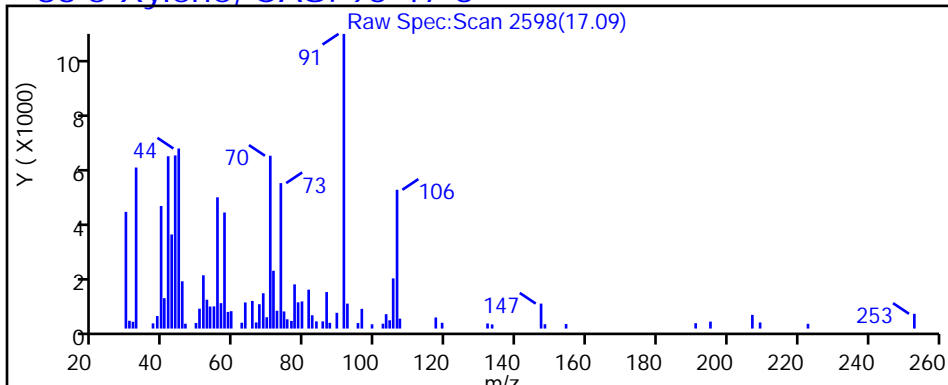
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-149-C-26 Lab Sample ID: 140-14389-18
 Matrix: Air Lab File ID: GB27p110.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:32
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 00:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.27	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.2		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.14	J	0.40	0.080
108-88-3	Toluene	92.14	12		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.077	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.74	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-149-C-26 Lab Sample ID: 140-14389-18
 Matrix: Air Lab File ID: GB27p110.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:32
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 00:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.86	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.76	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.7		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.97	J	2.7	0.54
108-88-3	Toluene	92.14	44		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.42	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.91	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p110.D
 Lims ID: 140-14389-A-18
 Client ID: SV-149-C-26
 Sample Type: Client
 Inject. Date: 28-Feb-2019 00:20:30 ALS Bottle#: 10 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-018
 Misc. Info.: 140-14389-A-18
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:30:21 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:53:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.237	-0.005	98	479671	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.410	-0.010	96	2857167	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2693946	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2128997	3.86	
6 Chlorodifluoromethane	51	3.834	3.834	0.005	48	29036	0.0924	
8 Dichlorodifluoromethane	85	3.894	3.889	0.001	100	46226	0.0910	
31 Methylene Chloride	84	6.601	6.600	0.000	98	87415	0.4438	
50 Benzene	78	10.871	10.882	-0.011	55	27509	0.0538	
58 Trichloroethene	130	12.101	12.100	-0.010	94	3600	0.0155	
67 Toluene	91	14.123	14.128	-0.005	94	1372505	2.32	
73 Tetrachloroethene	129	15.255	15.255	0.000	93	6348	0.0285	
78 Ethylbenzene	91	16.409	16.409	0.000	98	28021	0.0348	
79 m-Xylene & p-Xylene	91	16.560	16.565	-0.005	99	66419	0.1078	
83 o-Xylene	91	17.089	17.094	-0.005	97	25844	0.0398	
95 1,2,4-Trimethylbenzene	105	18.830	18.836	-0.006	98	27413	0.0371	
S 124 Xylenes, Total	100				0		0.1476	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p110.D

Injection Date: 28-Feb-2019 00:20:30

Instrument ID: MG

Operator ID: 403648

Lims ID: 140-14389-A-18

Lab Sample ID: 140-14389-18

Worklist Smp#: 18

Client ID: SV-149-C-26

Purge Vol: 500.000 mL

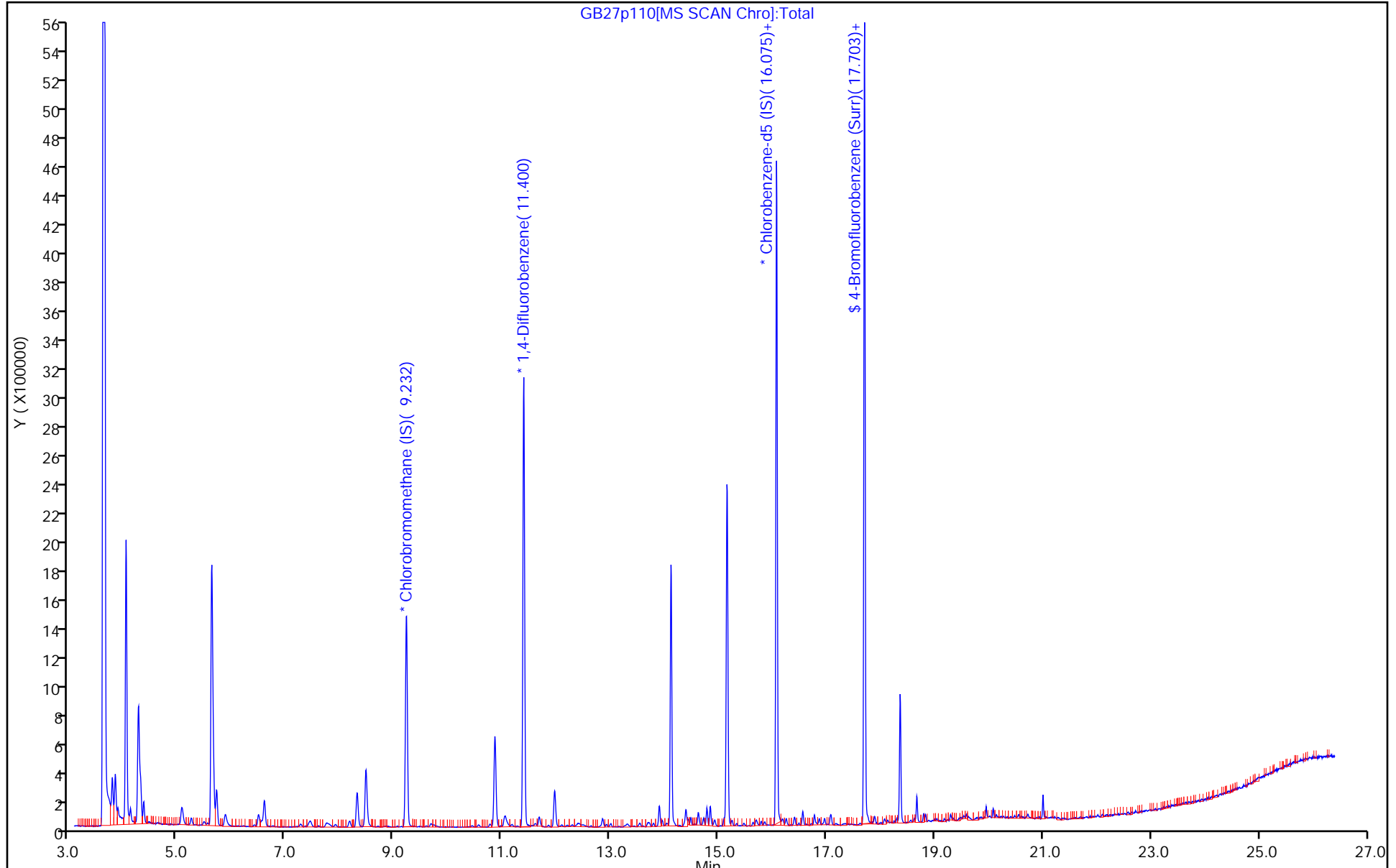
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p110.D
 Lims ID: 140-14389-A-18
 Client ID: SV-149-C-26
 Sample Type: Client
 Inject. Date: 28-Feb-2019 00:20:30 ALS Bottle#: 10 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-018
 Misc. Info.: 140-14389-A-18
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:30:21 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:53:56

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.86	96.42

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p110.D

Injection Date: 28-Feb-2019 00:20:30

Instrument ID: MG

Lims ID: 140-14389-A-18

Lab Sample ID: 140-14389-18

Client ID: SV-149-C-26

Operator ID: 403648

ALS Bottle#: 10 Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

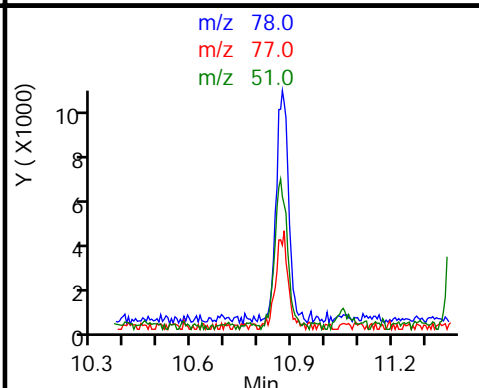
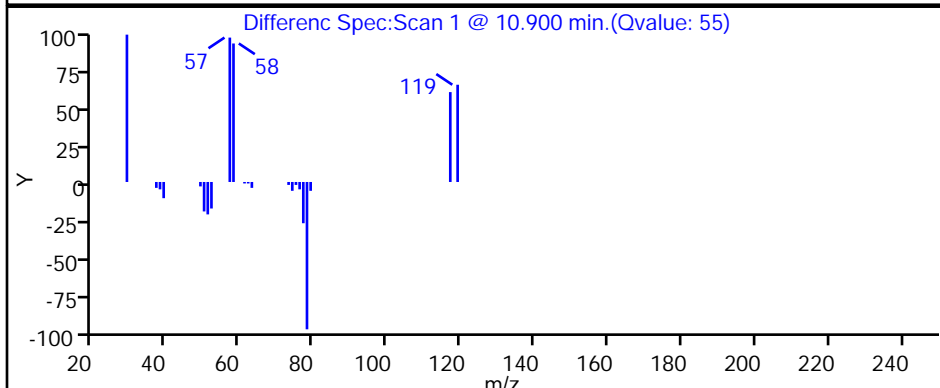
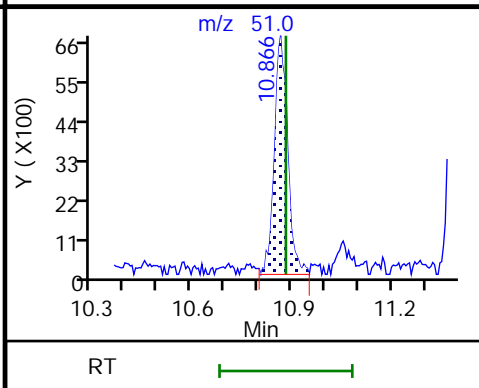
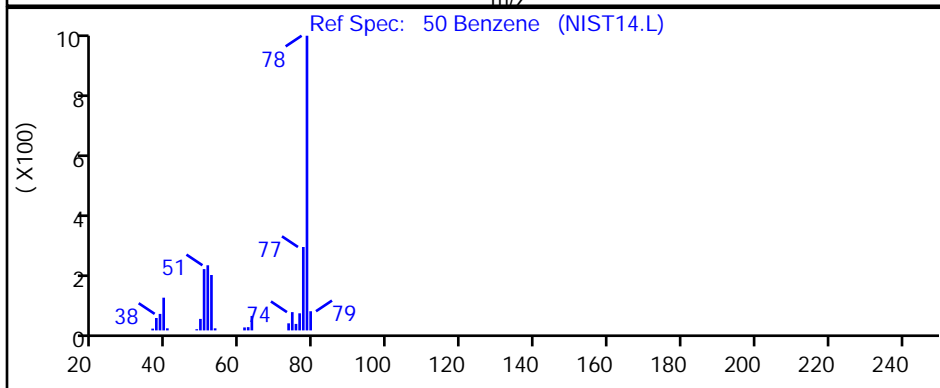
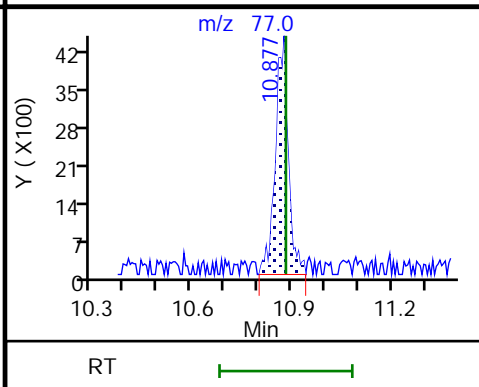
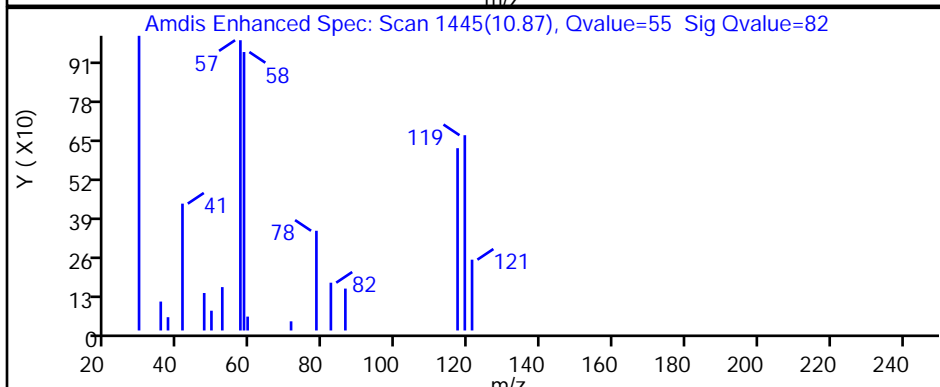
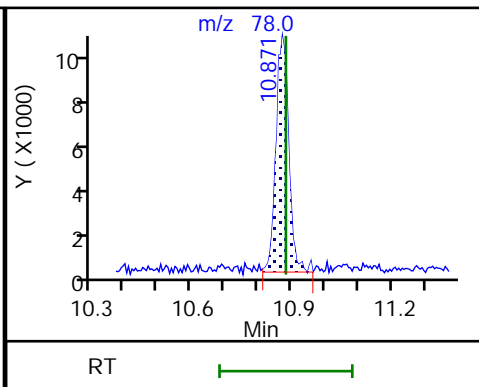
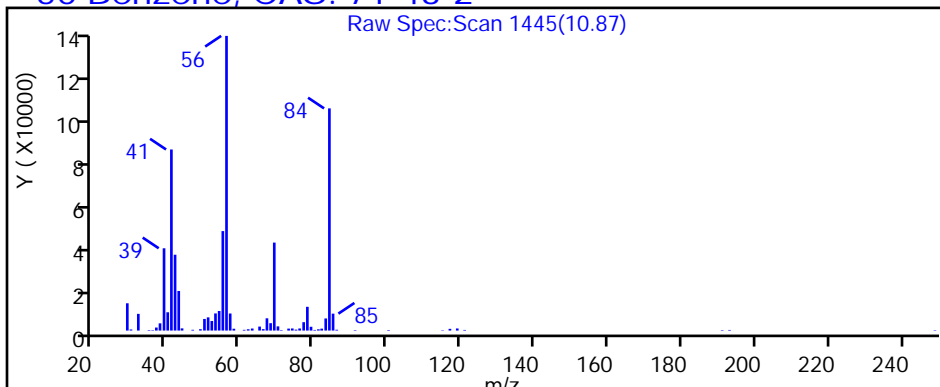
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p110.D

Injection Date: 28-Feb-2019 00:20:30

Instrument ID: MG

Lims ID: 140-14389-A-18

Lab Sample ID: 140-14389-18

Client ID: SV-149-C-26

Operator ID: 403648

ALS Bottle#: 10

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

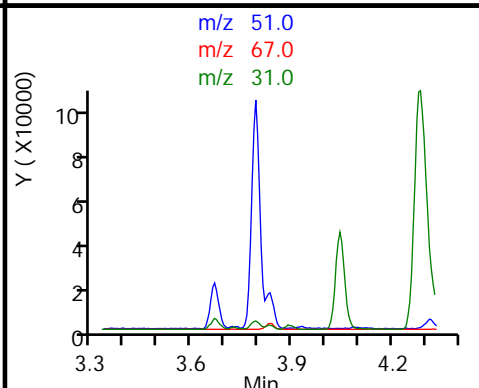
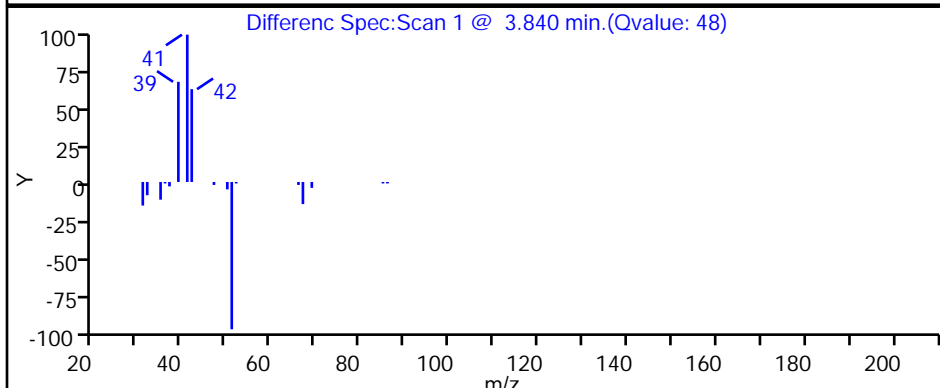
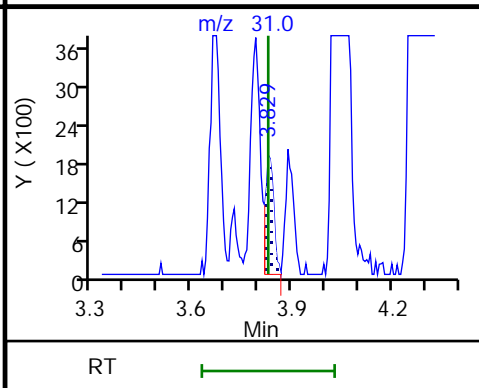
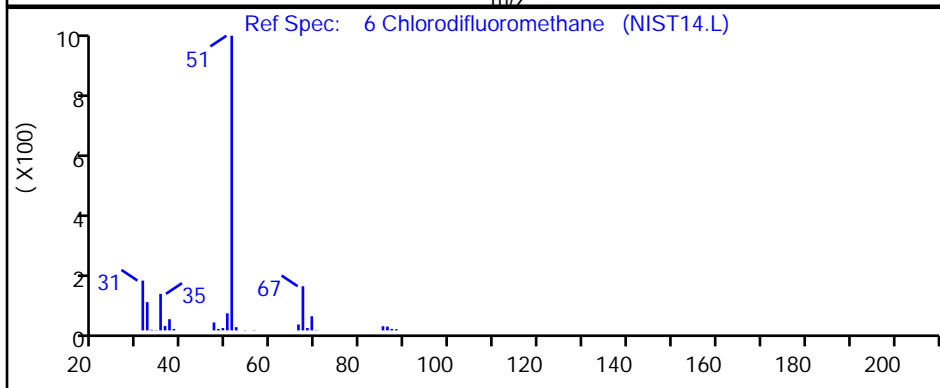
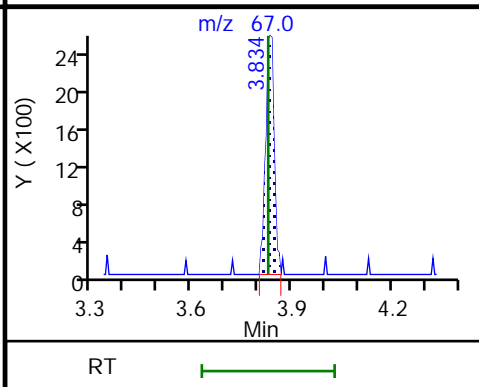
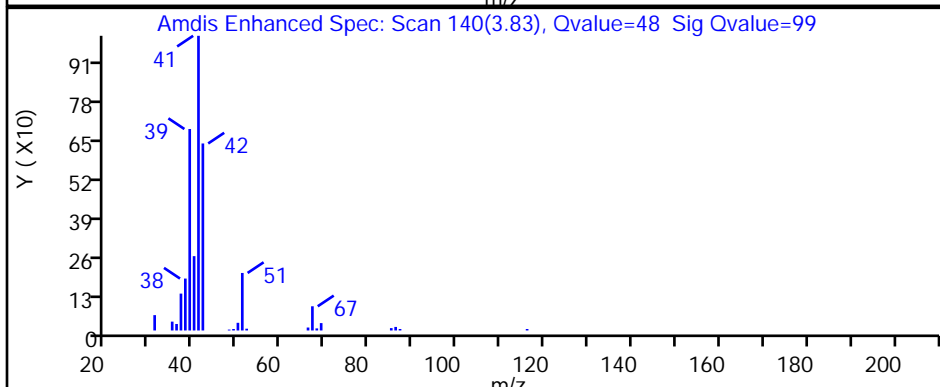
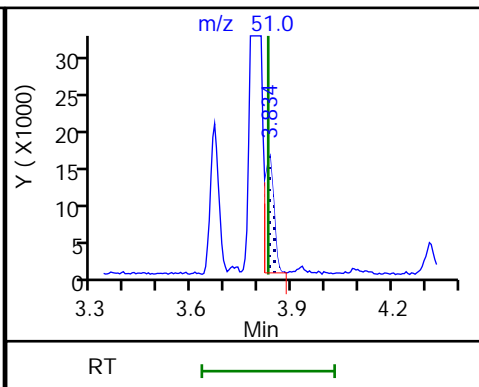
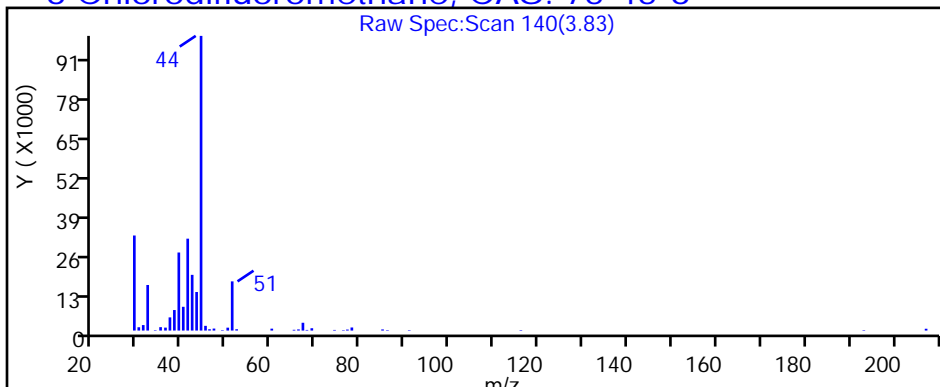
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p110.D

Injection Date: 28-Feb-2019 00:20:30

Instrument ID: MG

Lims ID: 140-14389-A-18

Lab Sample ID: 140-14389-18

Client ID: SV-149-C-26

Operator ID: 403648

ALS Bottle#: 10

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

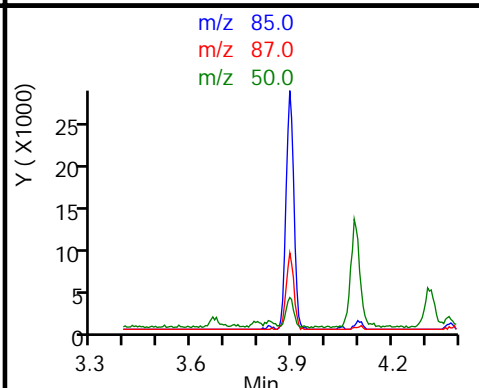
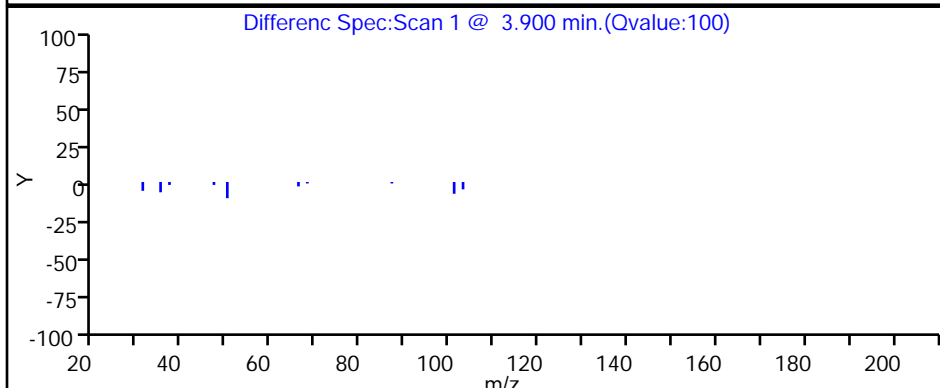
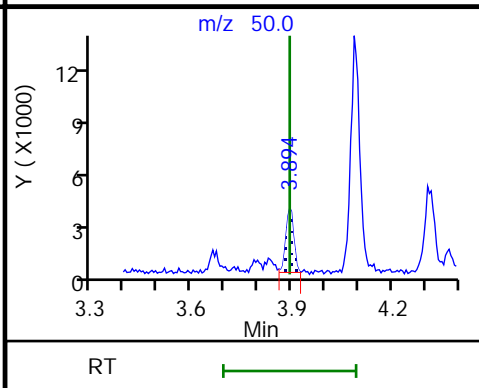
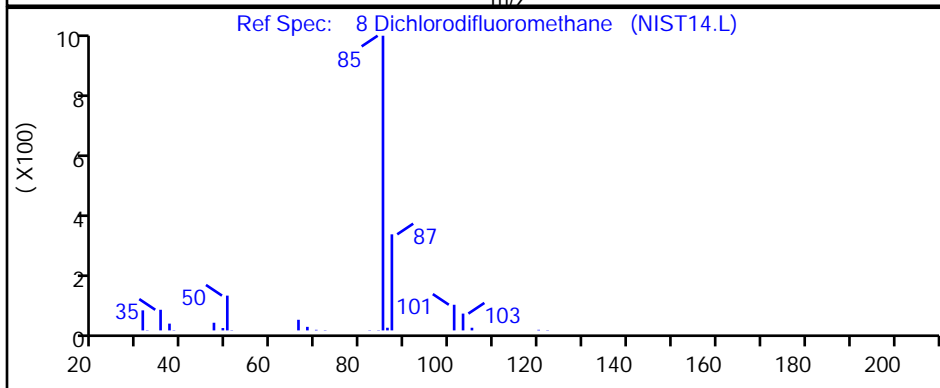
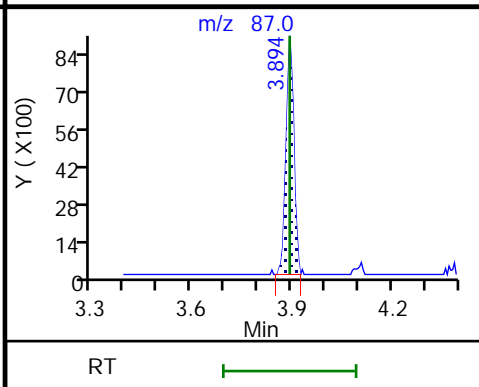
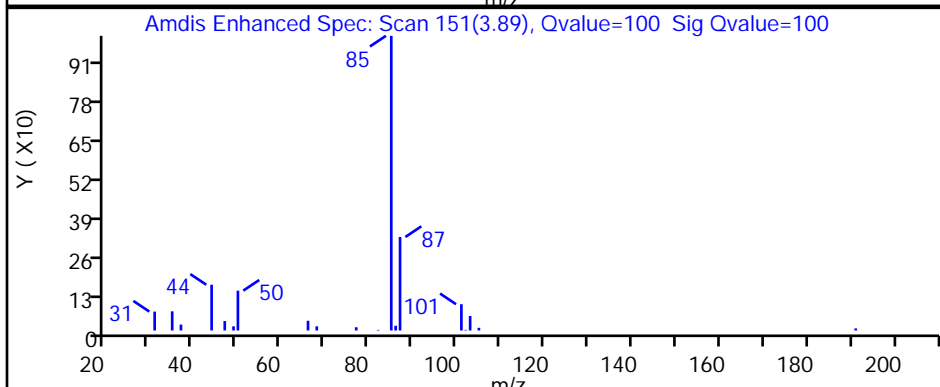
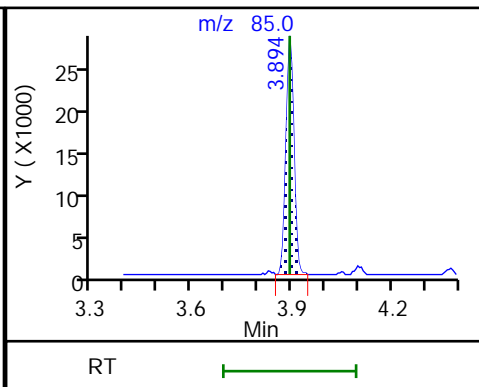
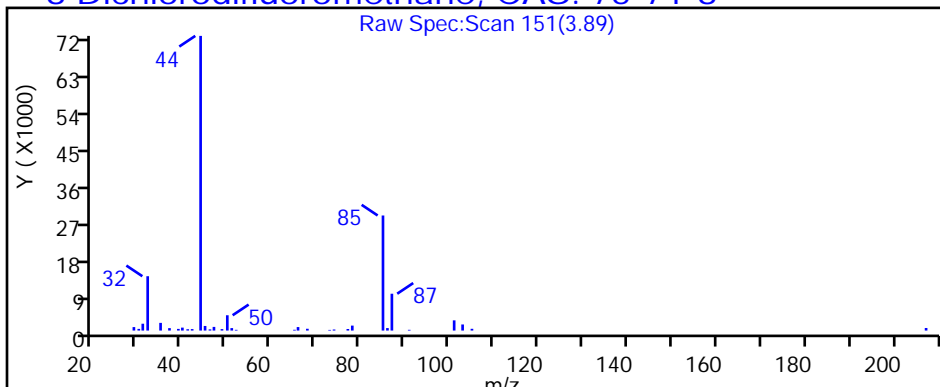
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p110.D

Injection Date: 28-Feb-2019 00:20:30

Instrument ID: MG

Lims ID: 140-14389-A-18

Lab Sample ID: 140-14389-18

Client ID: SV-149-C-26

Operator ID: 403648

ALS Bottle#: 10

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

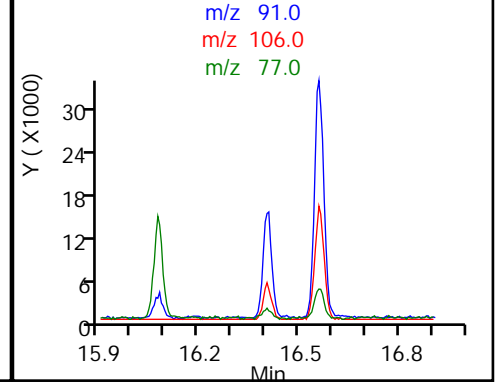
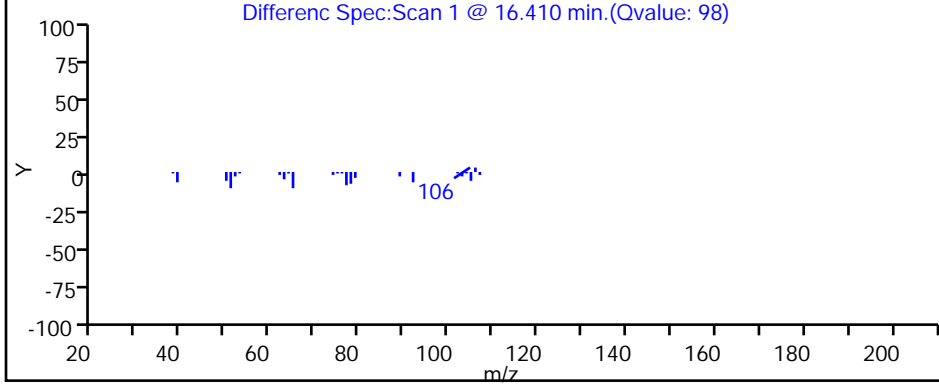
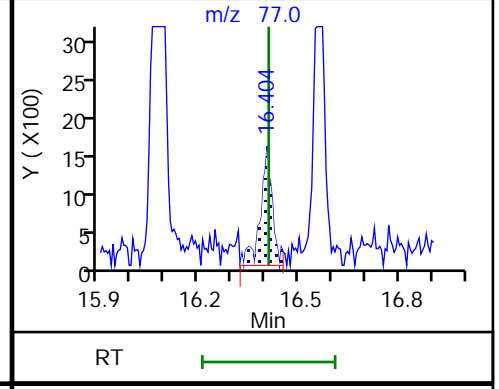
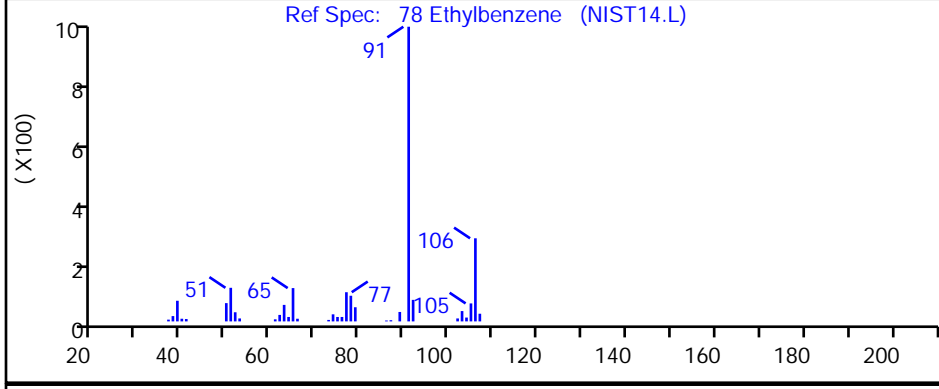
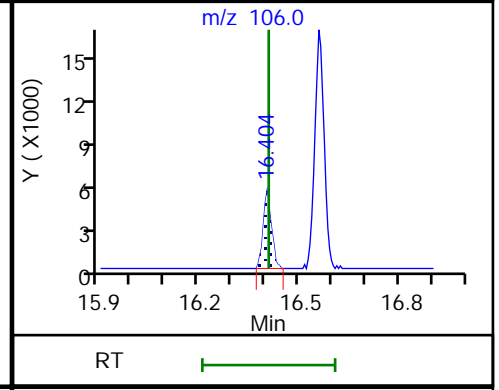
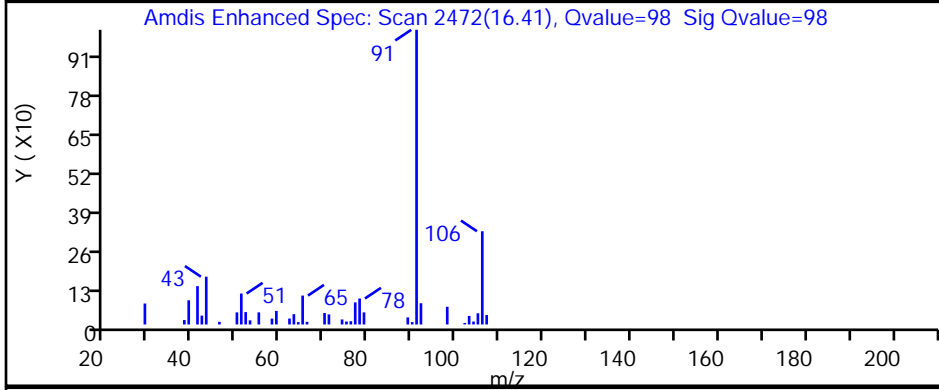
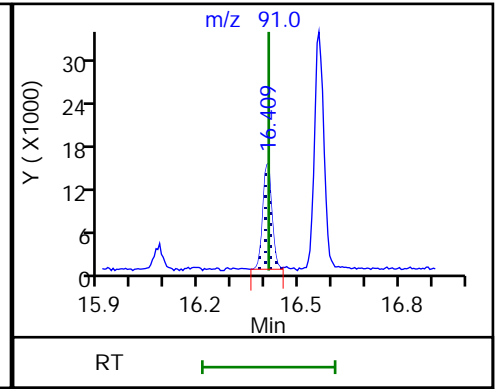
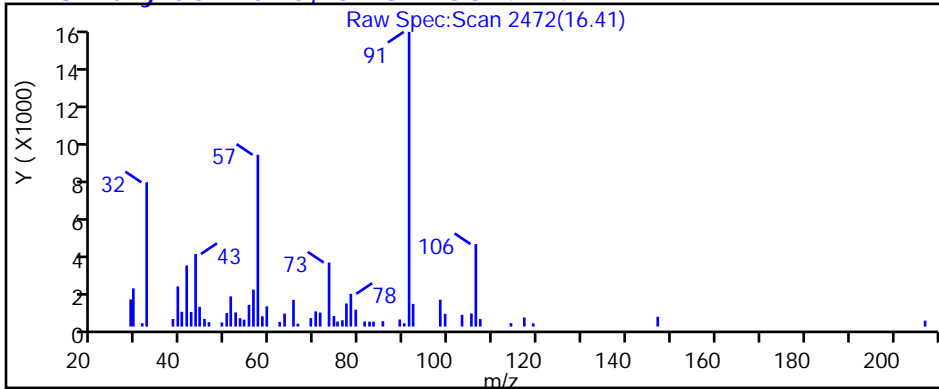
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p110.D

Injection Date: 28-Feb-2019 00:20:30

Instrument ID: MG

Lims ID: 140-14389-A-18

Lab Sample ID: 140-14389-18

Client ID: SV-149-C-26

Operator ID: 403648

ALS Bottle#: 10

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

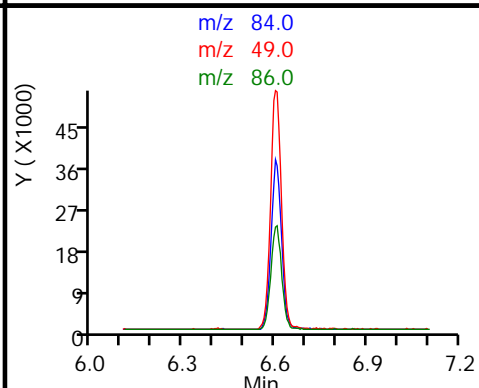
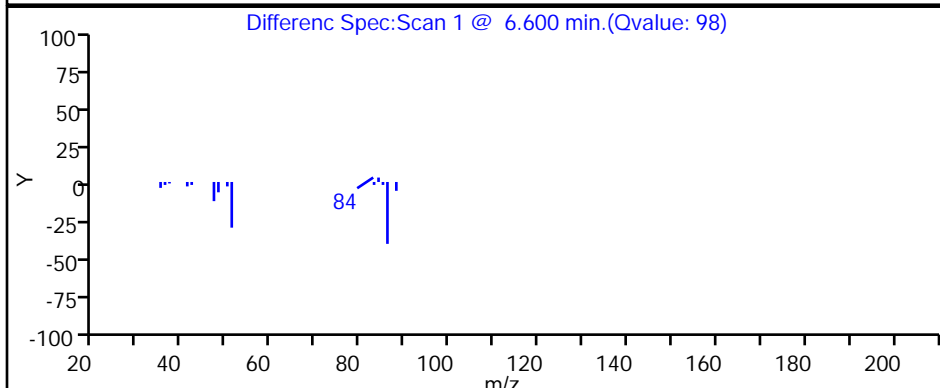
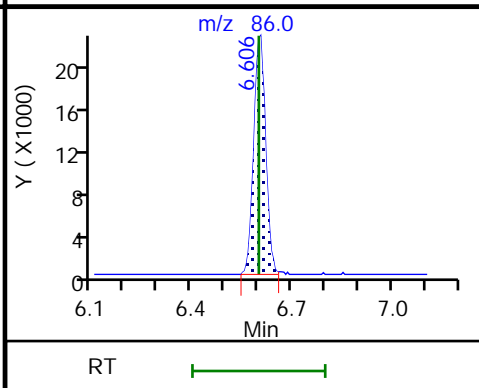
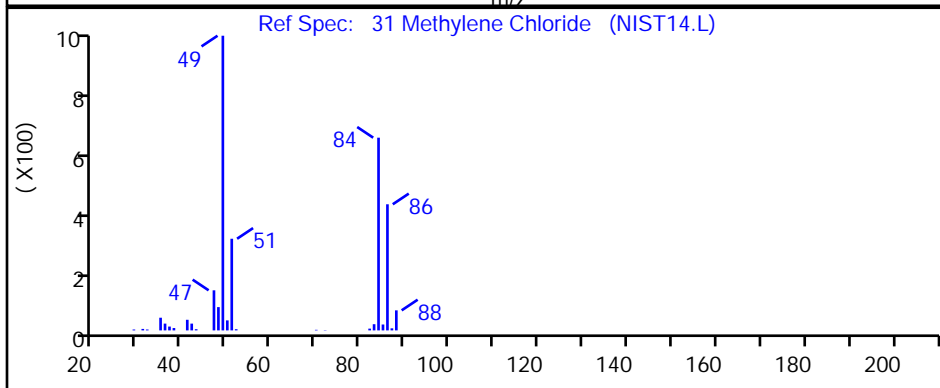
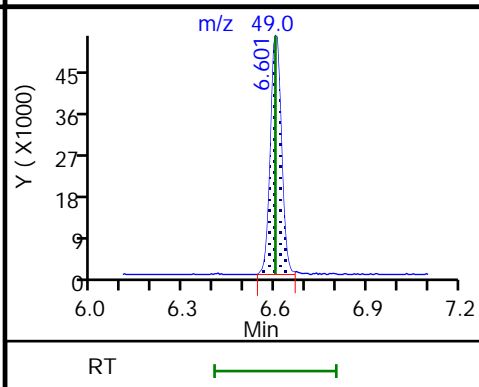
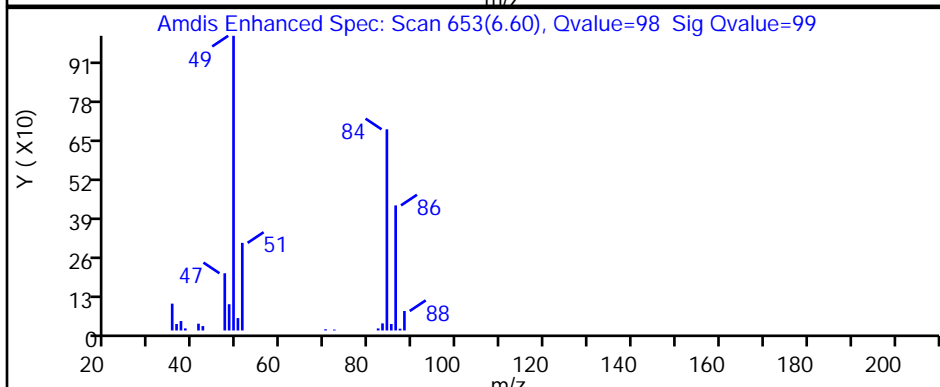
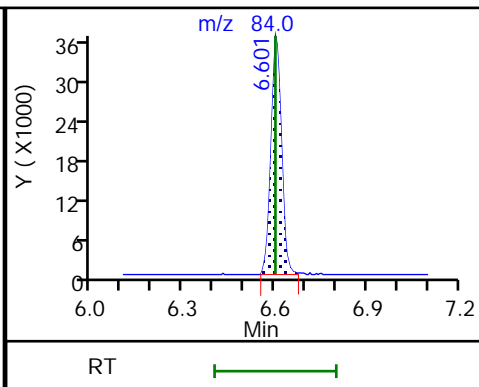
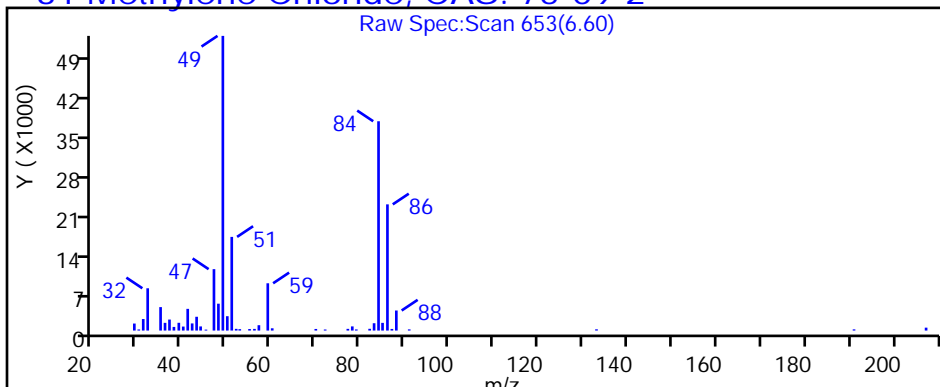
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p110.D

Injection Date: 28-Feb-2019 00:20:30

Instrument ID: MG

Lims ID: 140-14389-A-18

Lab Sample ID: 140-14389-18

Client ID: SV-149-C-26

Operator ID: 403648

ALS Bottle#: 10

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

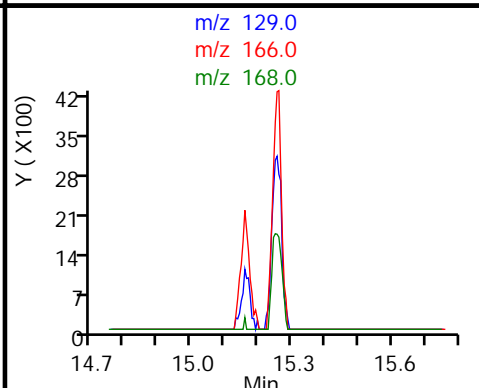
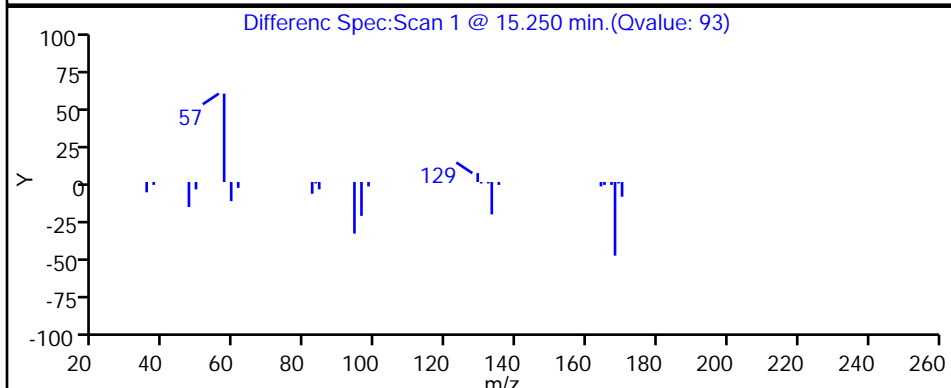
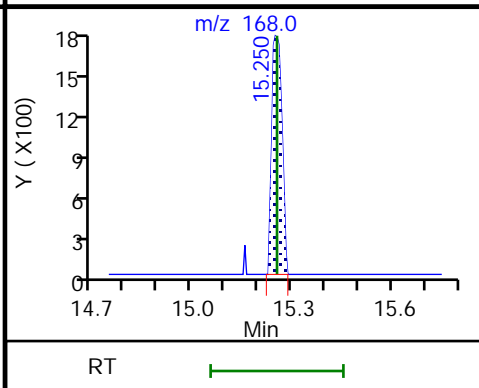
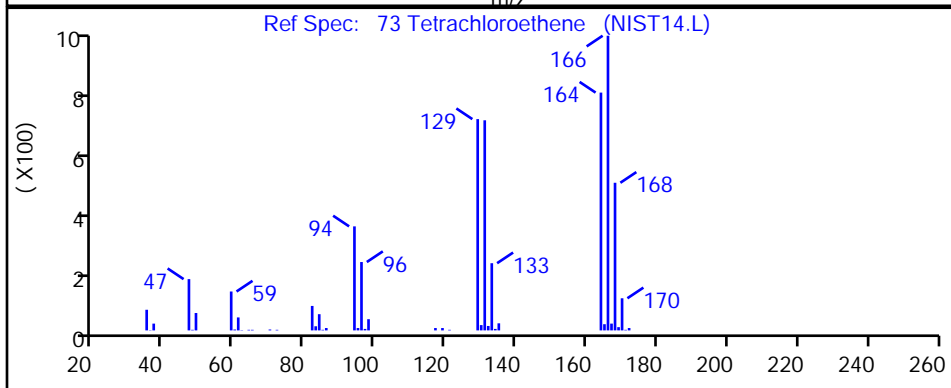
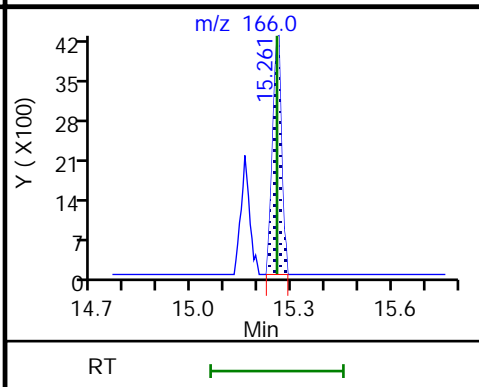
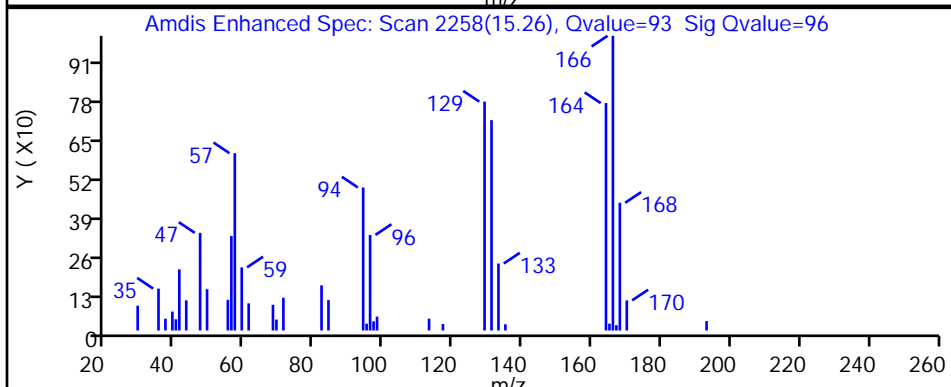
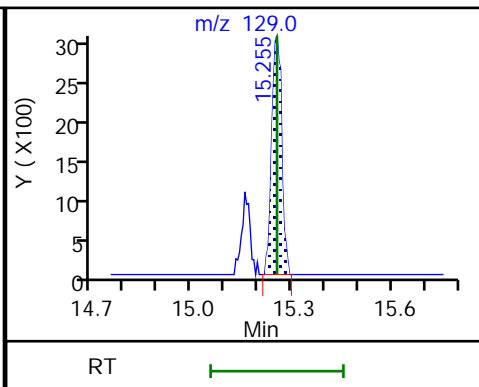
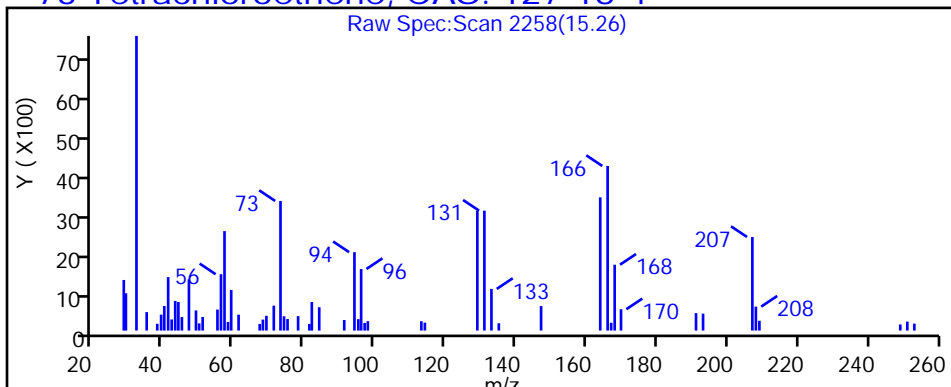
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p110.D

Injection Date: 28-Feb-2019 00:20:30

Instrument ID: MG

Lims ID: 140-14389-A-18

Lab Sample ID: 140-14389-18

Client ID: SV-149-C-26

Operator ID: 403648

ALS Bottle#: 10

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

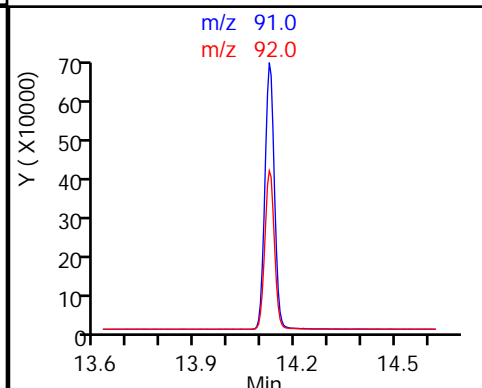
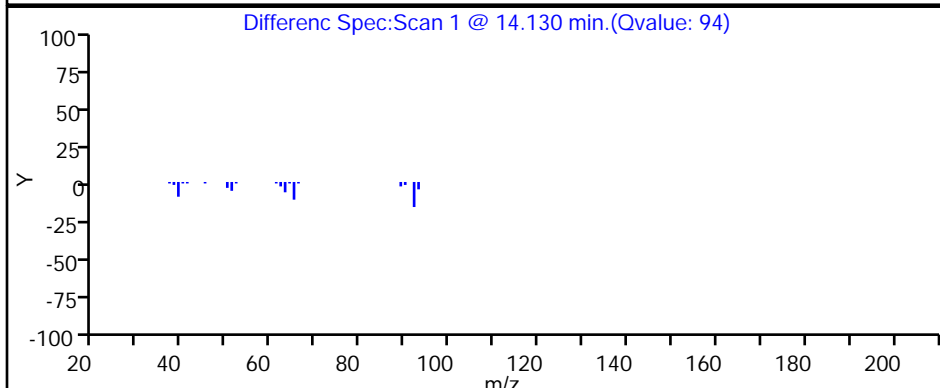
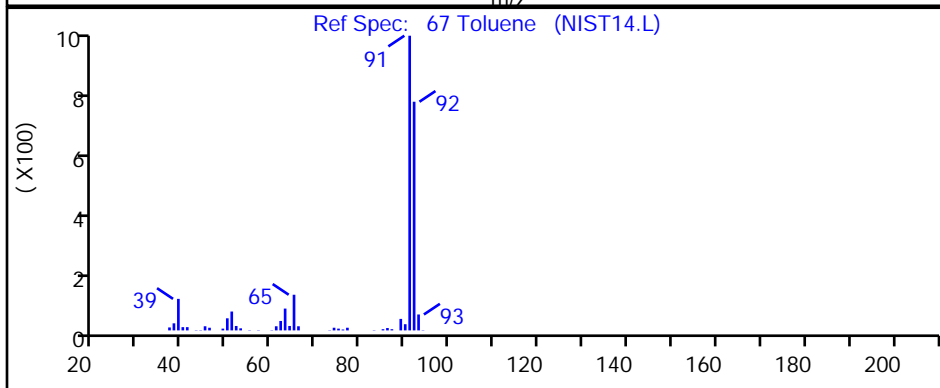
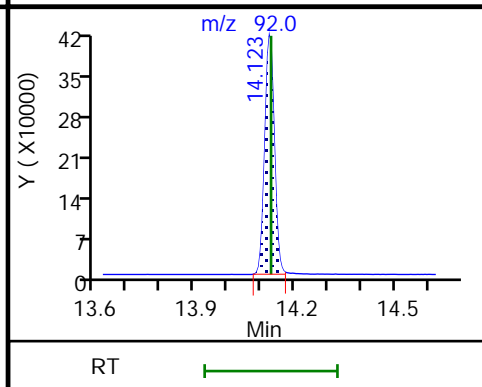
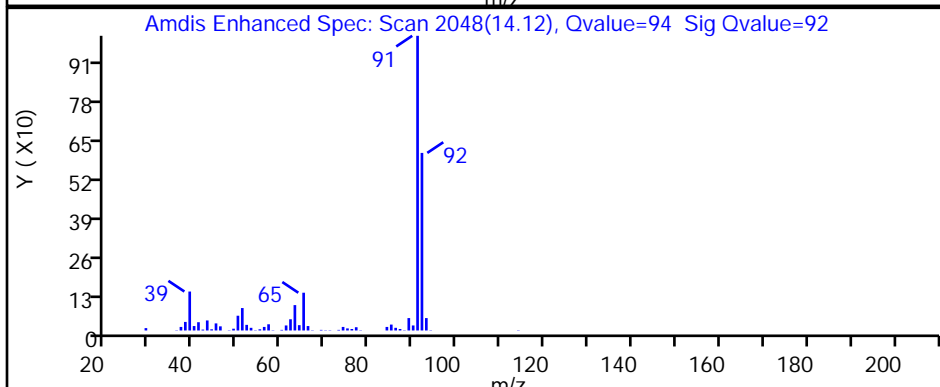
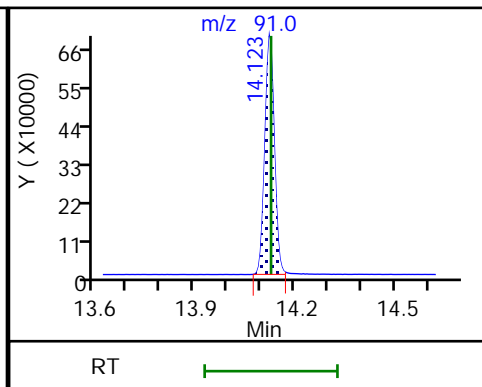
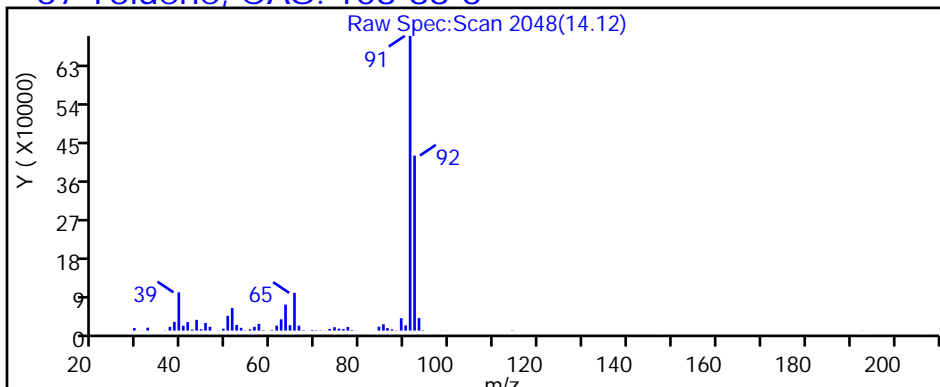
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

67 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p110.D

Injection Date: 28-Feb-2019 00:20:30

Instrument ID: MG

Lims ID: 140-14389-A-18

Lab Sample ID: 140-14389-18

Client ID: SV-149-C-26

Operator ID: 403648

ALS Bottle#: 10 Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

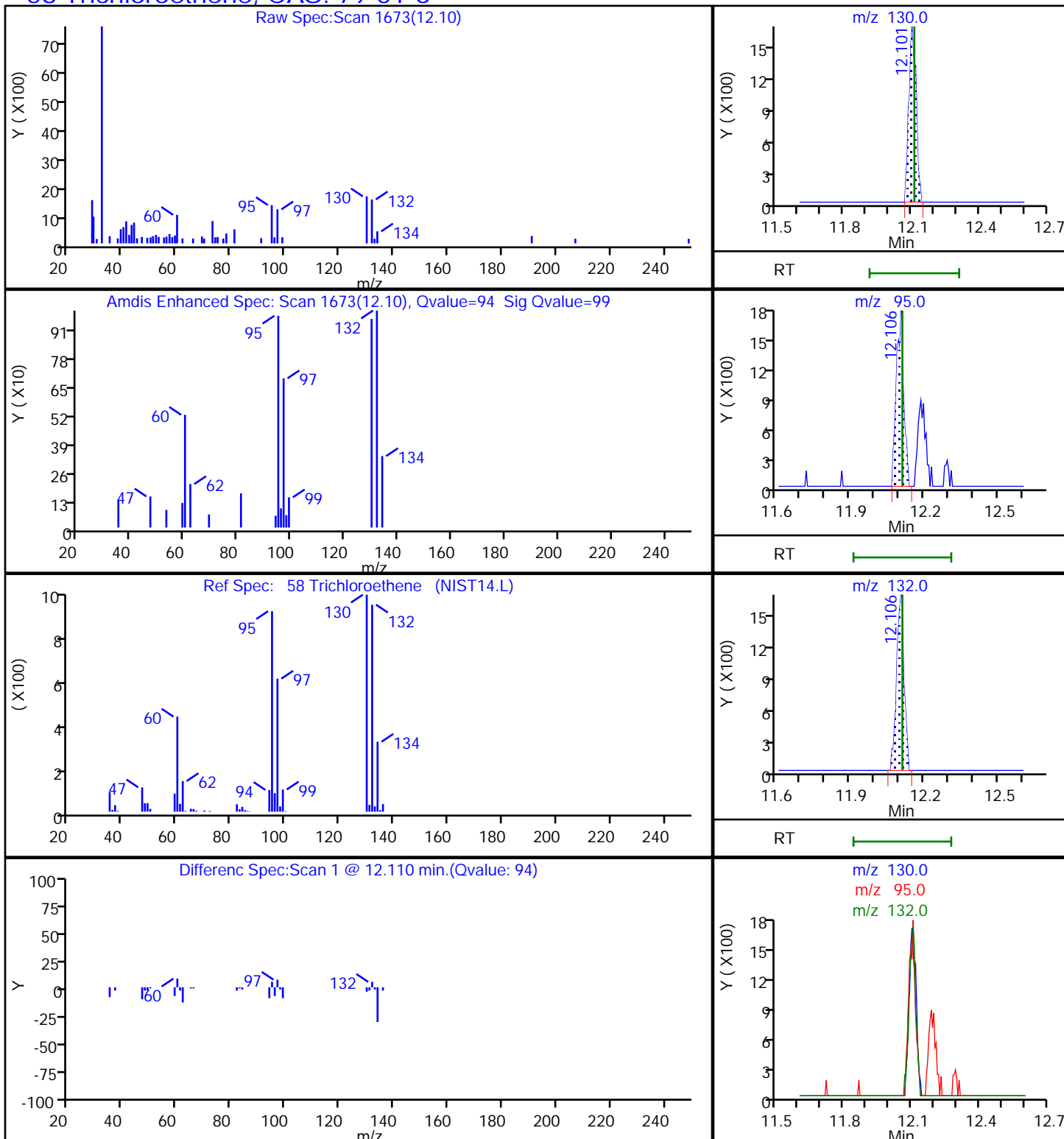
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

58 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p110.D

Injection Date: 28-Feb-2019 00:20:30

Instrument ID: MG

Lims ID: 140-14389-A-18

Lab Sample ID: 140-14389-18

Client ID: SV-149-C-26

Operator ID: 403648

ALS Bottle#: 10

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

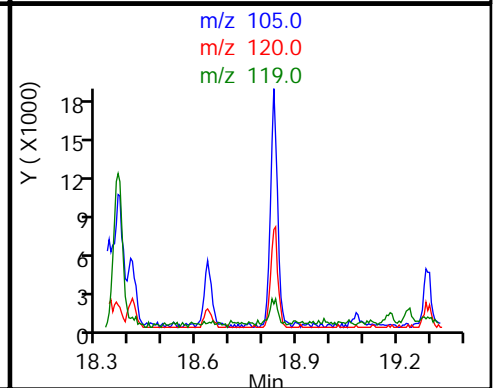
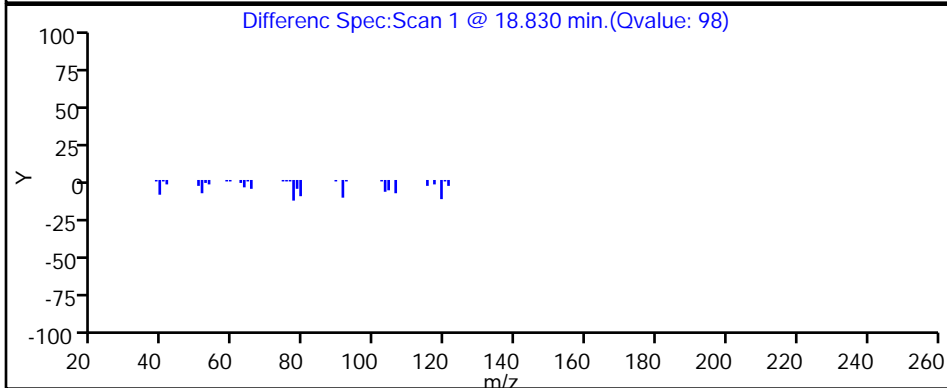
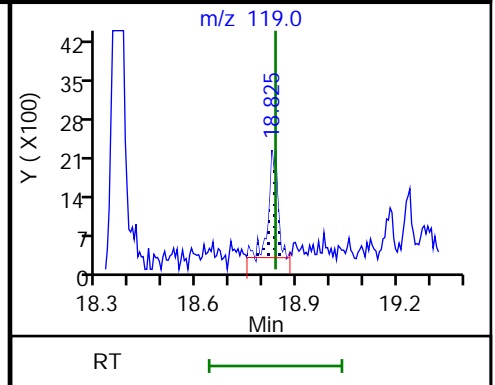
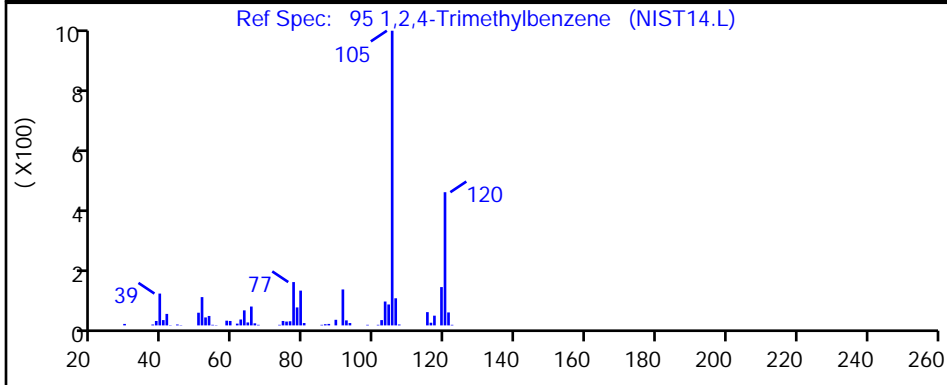
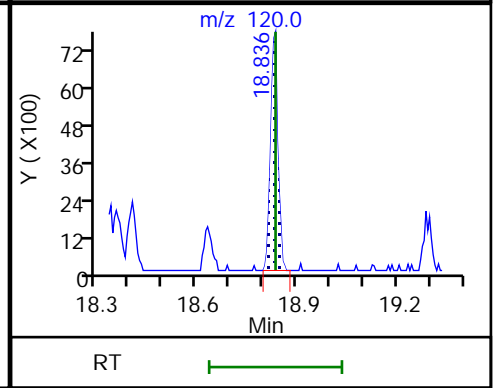
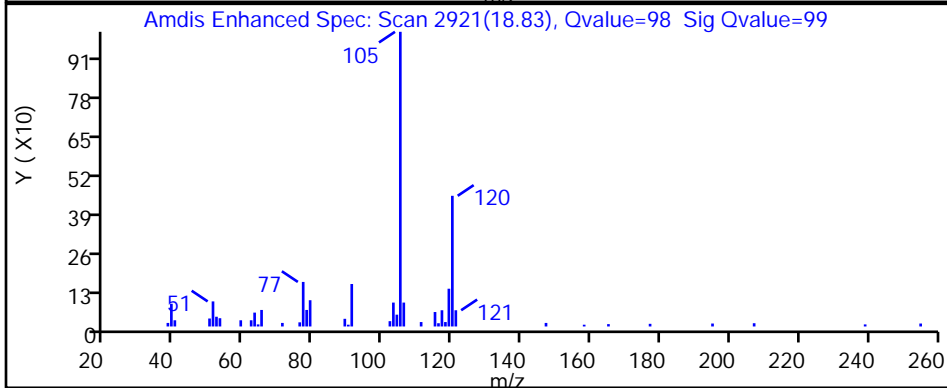
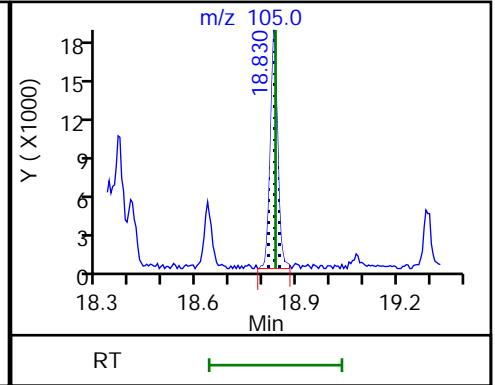
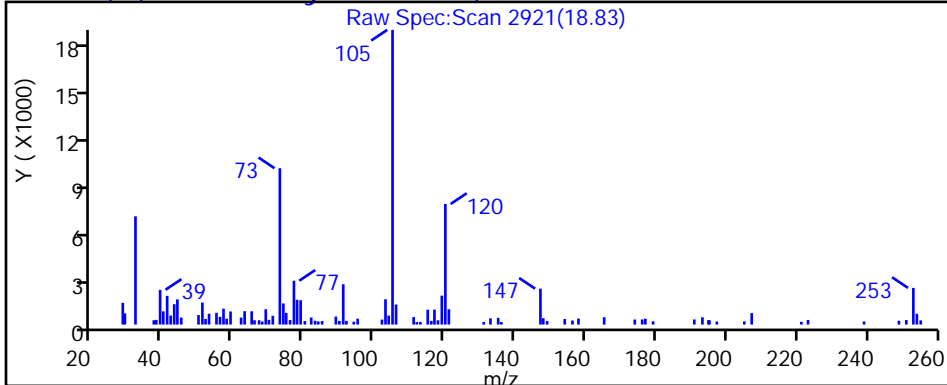
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

95 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p110.D

Injection Date: 28-Feb-2019 00:20:30

Instrument ID: MG

Lims ID: 140-14389-A-18

Lab Sample ID: 140-14389-18

Client ID: SV-149-C-26

Operator ID: 403648

ALS Bottle#: 10 Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

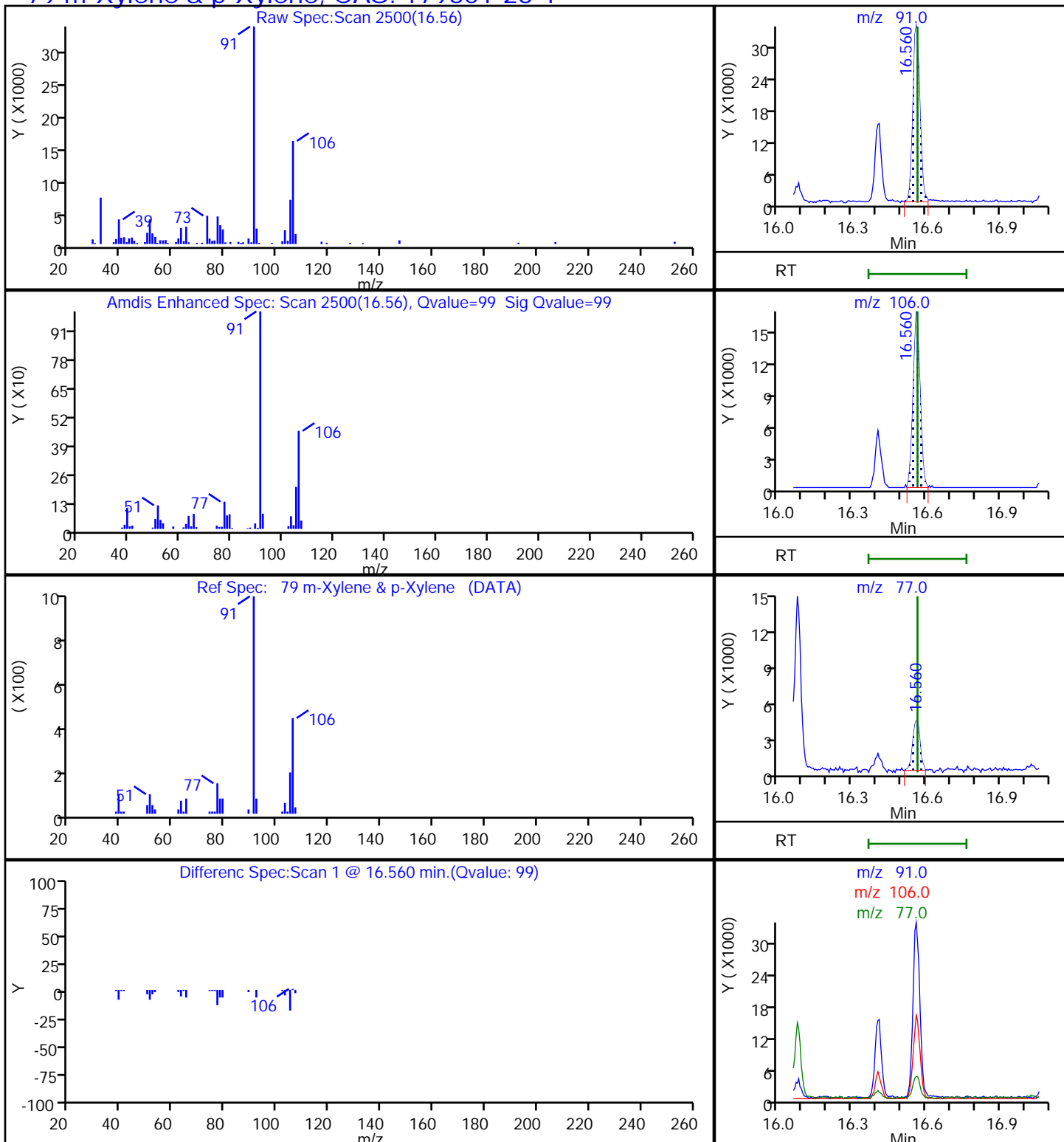
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27p110.D

Injection Date: 28-Feb-2019 00:20:30

Instrument ID: MG

Lims ID: 140-14389-A-18

Lab Sample ID: 140-14389-18

Client ID: SV-149-C-26

Operator ID: 403648

ALS Bottle#: 10

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

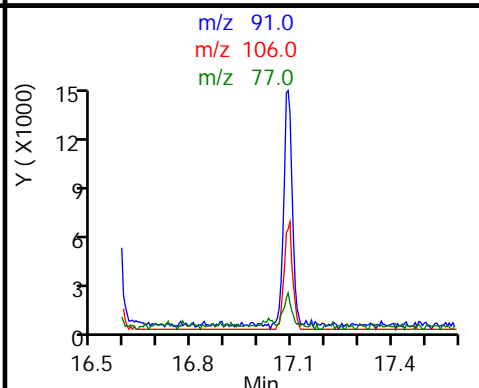
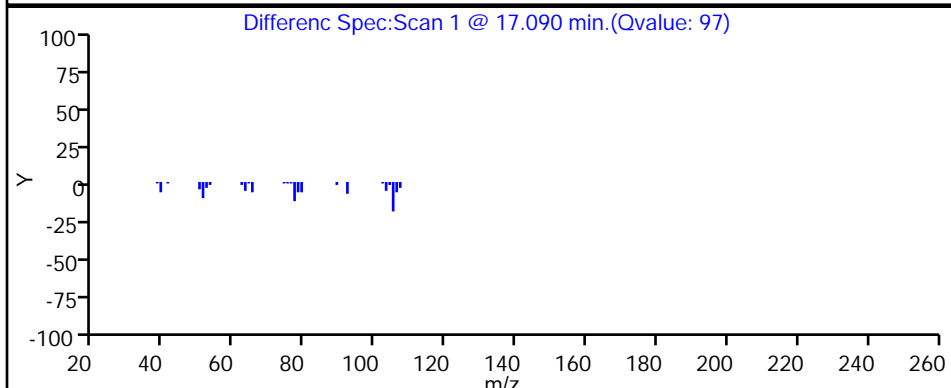
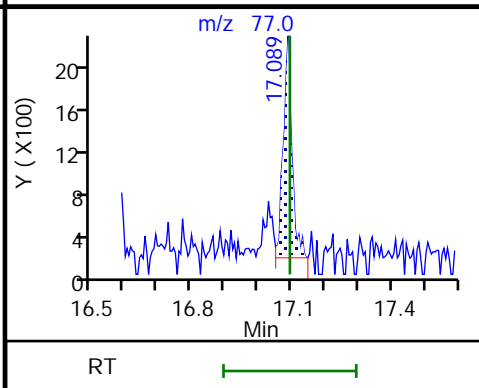
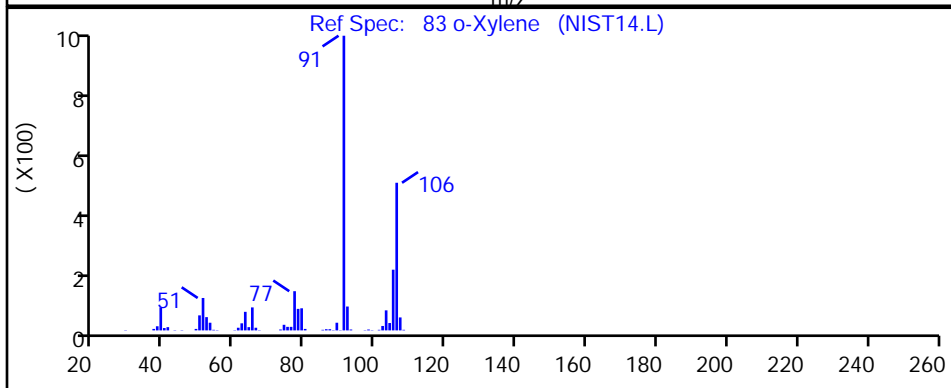
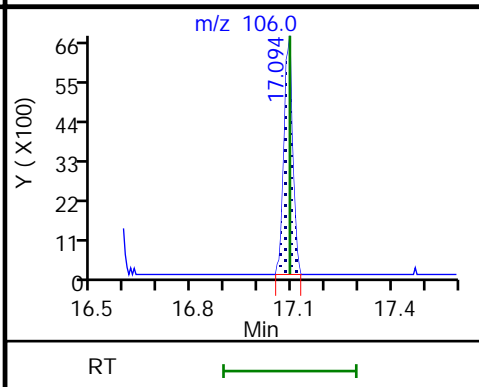
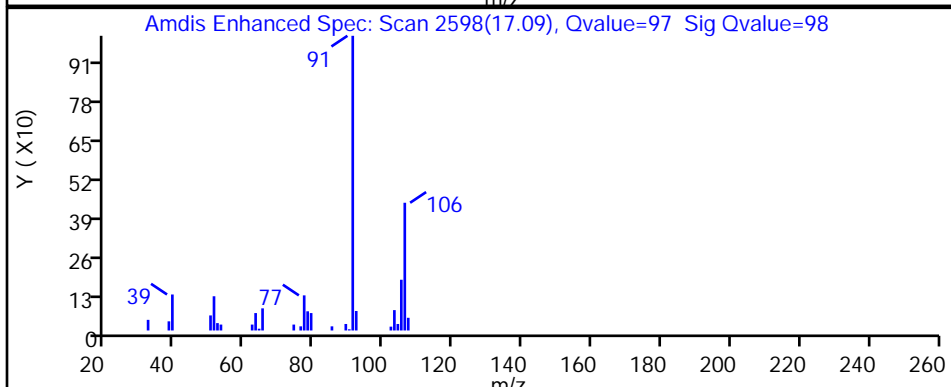
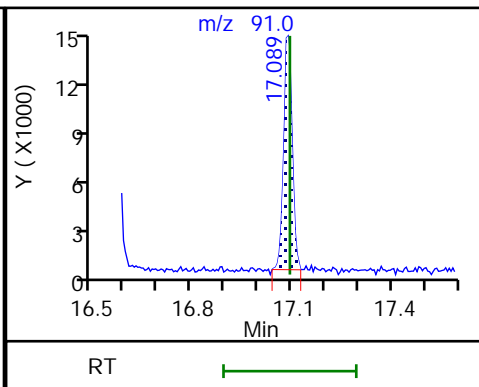
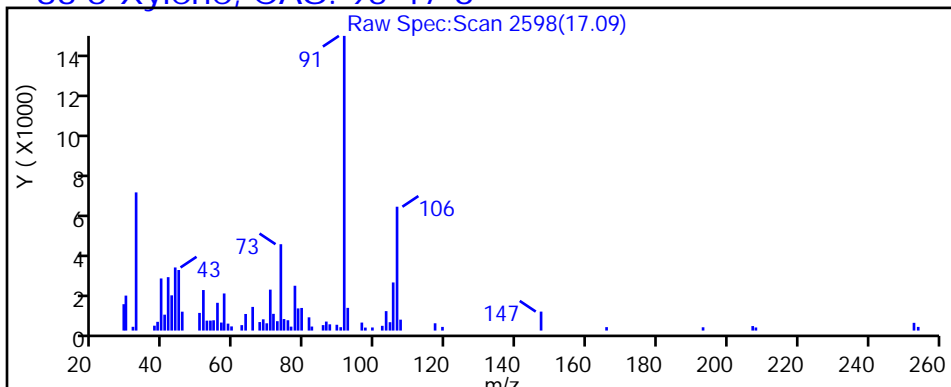
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	++++ 2.4796	++++ 2.3672	2.9523 2.3873	2.7653 2.9026	2.6769 2.4316	Ave		2.6204			9.0		30.0				
Propene	++++ 1.4104	++++ 1.3267	++++ 1.3362	1.8011 1.5897	1.4915 1.2862	Ave		1.4631			12.5		30.0				
Dichlorodifluoromethane	++++ 4.0515	++++ 3.9190	4.4505 3.9550	4.4326 4.7099	4.2183 4.1407	Ave		4.2347			6.5		30.0				
Chloromethane	++++ 0.4445	++++ 0.4230	++++ 0.4254	0.5625 0.4946	0.4891 0.4152	Ave		0.4649			11.5		30.0				
1,2-Dichloro-1,1,2,2-tetrafluoroethane	++++ 2.3633	++++ 2.3423	2.6446 2.3822	2.5541 2.5578	2.4472 2.5047	Ave		2.4745			4.4		30.0				
Vinyl chloride	1.9626 1.4785	1.7167 1.4339	1.7320 1.4573	1.6531 1.6387	1.5626 1.4732	Ave		1.6109			10.3		30.0				
Butane	++++ 2.6258	++++ 2.4782	++++ 2.5038	3.0743 2.8679	2.8454 2.5911	Ave		2.7124			8.2		30.0				
1,3-Butadiene	++++ 1.2041	++++ 1.1760	++++ 1.2078	1.2733 1.3654	1.2439 1.2448	Ave		1.2450			5.0		30.0				
Bromomethane	++++ 1.3078	++++ 1.2877	1.6548 1.3168	1.3996 1.4117	1.3549 1.3995	Ave		1.3916			8.4		30.0				
Chloroethane	++++ 0.7377	++++ 0.7148	0.8627 0.7259	0.8037 0.8118	0.7796 0.7729	Ave		0.7761			6.4		30.0				
Ethanol	++++ 0.5620	++++ 0.7386	++++ 0.5593	0.8657 0.7653	0.7124 0.7259	Ave		0.7042			15.6		30.0				
Vinyl bromide	++++ 1.2366	++++ 1.2145	1.3835 1.2610	1.3207 1.2880	1.2830 1.3321	Ave		1.2899			4.2		30.0				
2-Methylbutane	++++ 1.9302	++++ 1.8374	++++ 1.8471	2.0547 1.9762	2.0422 1.9406	Ave		1.9469			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.9949	4.3785 3.8769	4.2718 3.9322	4.1461 4.3687	4.1452 4.2564	Ave		4.1523			4.4		30.0				
Acrolein	++++ 0.3700	++++ 0.3339	++++ 0.3264	++++ 0.4058	0.3535 0.3546	Ave		0.3574			7.9		30.0				
Acetonitrile	++++ 0.5820	++++ 0.5806	++++ 0.5032	0.4860 0.6106	0.5491 0.5907	Ave		0.5574			8.4		30.0				
Acetone	++++ 0.6952	++++ 0.6071	++++ 0.4923	++++ 0.5713	0.7119 0.5299	Ave		0.6013			14.7		30.0				
Pentane	++++ 0.2650	++++ 0.2567	++++ 0.2534	++++ 0.2741	0.2798 0.2630	Ave		0.2653			3.8		30.0				
Isopropyl alcohol	++++ 1.5842	++++ 1.6884	++++ 1.2216	++++ 1.5921	1.7192 1.5978	Ave		1.6033			11.8		30.0				
Ethyl ether	++++ 1.8397	++++ 1.7705	++++ 1.4542	++++ 1.7361	1.9088 1.6409	Ave		1.7250			9.3		30.0				
1,1-Dichloroethene	1.5300 1.3997	1.3691 1.3378	1.5011 1.4037	1.3769 1.3902	1.4054 1.4041	Ave		1.4118			4.2		30.0				
Acrylonitrile	++++ 0.9861	++++ 0.9774	1.0366 0.8664	0.9476 1.0406	0.9217 1.0215	Ave		0.9747			6.2		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.0568	3.1787 2.9429	3.2903 2.9549	3.0618 2.9993	3.1454 2.9101	Ave		3.0600			4.1		30.0				
tert-Butyl alcohol	++++ 2.2526	++++ 2.2071	++++ 1.7152	2.3096 2.1050	2.4776 2.3062	Ave		2.1962			11.0		30.0				
Methylene Chloride	++++ 1.5026	++++ 1.3595	++++ 1.3036	2.5891 1.2966	1.8042 ++++	Ave		1.6426			30.5	*	30.0				
3-Chloropropene	++++ 1.6369	++++ 1.6110	2.0104 1.5866	1.9432 1.7783	1.7193 1.7236	Ave		1.7512			8.8		30.0				
Carbon disulfide	++++ 4.2983	++++ 4.0822	4.5901 4.1194	4.3819 4.1977	4.3526 4.2529	Ave		4.2844			3.8		30.0				
trans-1,2-Dichloroethene	++++ 1.4444	1.3848 1.3913	1.4554 1.4201	1.3845 1.4125	1.4335 1.3979	Ave		1.4138			1.9		30.0				
2-Methylpentane	++++ 4.0309	++++ 3.8853	4.5901 3.8303	4.3761 4.0757	4.2199 3.7514	Ave		4.0450			5.3		30.0				
Methyl tert-butyl ether	++++ 4.1354	3.5946 4.0399	4.2254 3.4444	3.8763 4.0172	4.1168 3.9425	Ave		3.9325			6.6		30.0				
1,1-Dichloroethane	3.1037 2.8577	3.0105 2.8187	3.0470 2.6559	2.9034 2.9155	2.9080 2.8375	Ave		2.9058			4.4		30.0				
Vinyl acetate	++++ 3.9854	++++ 4.2048	4.0675 3.5720	3.8850 4.4145	3.9427 4.2013	Ave		4.0342			6.3		30.0				
Hexane	++++ 1.3242	++++ 1.2816	++++ 1.3713	++++ 1.3526	1.3260 1.2151	Ave		1.3036			4.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++	++++	++++	0.6854	0.6772	Ave		0.6347			8.5		30.0				
	0.6784	0.6294	0.5376	0.6386	0.5958												
cis-1,2-Dichloroethene	1.5310	1.3850	1.4658	1.4361	1.4213	Ave		1.4465			2.9		30.0				
	1.4515	1.4377	1.3972	1.4588	1.4806												
Ethyl acetate	++++	++++	3.4159	3.2335	3.3337	Ave		3.3124			6.9		30.0				
	3.4792	3.3231	2.8120	3.5743	3.3271												
Chloroform	3.5969	3.3560	3.4112	3.4074	3.2824	Ave		3.3444			4.2		30.0				
	3.2821	3.2211	3.0680	3.4218	3.3970												
Tetrahydrofuran	++++	++++	++++	1.7940	1.8215	Ave		1.7724			6.6		30.0				
	1.8641	1.7946	1.5246	1.8635	1.7446												
1,1,1-Trichloroethane	3.8810	3.4765	3.6941	3.5977	3.6119	Ave		3.6203			4.2		30.0				
	3.5723	3.5364	3.3475	3.7388	3.7470												
1,2-Dichloroethane	0.3890	0.3740	0.4205	0.3853	0.3989	Ave		0.3910			6.7		30.0				
	0.3918	0.3624	0.3439	0.4219	0.4228												
Cyclohexane	++++	++++	++++	0.1383	0.1426	Ave		0.1314			6.9		30.0				
	0.1391	0.1224	0.1193	0.1325	0.1258												
Benzene	++++	0.7122	0.8006	0.7160	0.7636	Ave		0.7153			7.0		30.0				
	0.7488	0.6697	0.6393	0.7124	0.6753												
Carbon tetrachloride	0.5647	0.5298	0.5813	0.5547	0.6331	Ave		0.5933			8.0		30.0				
	0.6279	0.5625	0.5603	0.6718	0.6470												
1-Butanol	++++	++++	++++	0.0897	0.1022	Ave		0.0896			13.7		30.0				
	0.1010	0.0823	0.0665	0.0902	0.0950												
2,3-Dimethylpentane	++++	++++	0.2016	0.1866	0.2067	Ave		0.1886			7.0		30.0				
	0.1994	0.1776	0.1681	0.1880	0.1811												
Thiophene	++++	++++	0.4419	0.4095	0.4328	Ave		0.4156			5.4		30.0				
	0.4205	0.3890	0.3765	0.4241	0.4306												
2,2,4-Trimethylpentane	1.4853	1.4111	1.5290	1.4173	1.5323	Ave		1.4009			8.1		30.0				
	1.4628	1.2640	1.1785	1.3863	1.3426												
Heptane	++++	++++	0.3221	0.2848	0.3010	Ave		0.2875			7.7		30.0				
	0.2942	0.2637	0.2507	0.2927	0.2912												
1,2-Dichloropropane	++++	0.2947	0.3066	0.2799	0.2948	Ave		0.2813			7.5		30.0				
	0.2869	0.2617	0.2359	0.2893	0.2819												
Trichloroethene	0.3496	0.3229	0.3354	0.3064	0.3383	Ave		0.3257			5.2		30.0				
	0.3271	0.3039	0.3006	0.3304	0.3426												
Dibromomethane	++++	++++	++++	0.3027	0.3082	Ave		0.2963			7.9		30.0				
	0.2897	0.2688	0.2632	0.3189	0.3227												
Bromodichloromethane	++++	++++	0.5688	0.5299	0.5916	Ave		0.5843			8.8		30.0				
	0.5840	0.5507	0.5314	0.6523	0.6656												
1,4-Dioxane	++++	++++	++++	0.0947	0.0887	Ave		0.0832			17.3		30.0				
	0.0619	0.0891	0.0629	0.0903	0.0946												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3918	++++ 0.3473	++++ 0.2972	0.3014 0.4093	0.3703 0.3989	Ave		0.3595			12.7		30.0				
Methylcyclohexane	0.4845 0.5152	0.4926 0.4533	0.5068 0.4304	0.4870 0.4877	0.5327 0.5063	Ave		0.4896			6.1		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.6350	++++ 0.5092	0.5796 0.3308	0.5597 0.5890	0.6524 0.6484	Ave		0.5630			18.8		30.0				
cis-1,3-Dichloropropene	++++ 0.4479	0.3952 0.4121	0.4552 0.3828	0.4166 0.4613	0.4382 0.4415	Ave		0.4279			6.4		30.0				
trans-1,3-Dichloropropene	++++ 0.4450	0.3978 0.4156	0.4398 0.3772	0.4049 0.4673	0.4521 0.4806	Ave		0.4311			8.0		30.0				
Toluene	0.8893 0.9181	0.8808 0.8443	0.9072 0.7540	0.8795 0.8738	0.9309 0.9230	Ave		0.8801			5.9		30.0				
1,1,2-Trichloroethane	0.2596 0.2870	0.2566 0.2535	0.2815 0.2299	0.2715 0.2735	0.2904 0.2819	Ave		0.2685			7.0		30.0				
2-Hexanone	++++ 0.3129	++++ 0.2311	0.2486 0.1601	0.2653 0.2620	0.3155 0.3172	Ave		0.2641			20.2		30.0				
Octane	++++ 0.3331	++++ 0.2969	0.3166 0.2807	0.3142 0.3116	0.3533 0.3257	Ave		0.3165			7.0		30.0				
C8 Range	++++ 3.2900	++++ 2.9406	++++ 2.7321	3.2543 3.2050	3.4583 3.2302	Ave		3.1586			7.7		30.0				
Dibromochloromethane	++++ 0.5589	++++ 0.5327	0.4753 0.5204	0.4633 0.6101	0.5345 0.6613	Ave		0.5446			12.1		30.0				
1,2-Dibromoethane (EDB)	++++ 0.4879	++++ 0.4537	0.4324 0.4227	0.4409 0.4933	0.4776 0.5168	Ave		0.4656			7.1		30.0				
Tetrachloroethene	0.3340 0.3413	0.3265 0.3106	0.3184 0.2978	0.3299 0.3362	0.3500 0.3575	Ave		0.3302			5.4		30.0				
Chlorobenzene	0.6503 0.7257	0.6533 0.6547	0.7038 0.5918	0.6891 0.6804	0.7584 0.7332	Ave		0.6841			7.2		30.0				
Ethylbenzene	++++ 1.2841	1.1605 1.1457	1.1820 0.9886	1.2041 1.2050	1.3132 1.2806	Ave		1.1960			8.1		30.0				
m-Xylene & p-Xylene	0.7852 1.0069	0.8464 0.8920	0.9631 0.7597	0.9388 0.9364	1.0264 0.9927	Ave		0.9148			10.1		30.0				
Nonane	++++ 0.7074	0.6367 0.6181	0.6731 0.5580	0.6713 0.6403	0.7319 0.6196	Ave		0.6507			8.0		30.0				
Bromoform	++++ 0.5150	++++ 0.5097	0.3874 0.4824	0.3783 0.6069	0.4530 ++++	Ave		0.4761			16.7		30.0				
Styrene	++++ 0.6772	++++ 0.6274	0.5417 0.5521	0.5440 0.6889	0.6499 0.7776	Ave		0.6323			13.2		30.0				
o-Xylene	++++ 1.0316	0.8434 0.9312	0.9762 0.7934	0.9959 0.9762	1.0612 1.0727	Ave		0.9646			9.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++ 0.6943	++++ 0.6225	0.6477 0.5392	0.6105 0.6980	0.7079 0.6623	Ave		0.6478			8.7		30.0				
1,2,3-Trichloropropane	++++ 0.2201	++++ 0.1963	0.2117 0.1718	0.1933 0.2253	0.2181 0.2233	Ave		0.2075			9.0		30.0				
Isopropylbenzene	++++ 1.3750	1.2061 1.2349	1.2881 1.0540	1.2705 1.3875	1.3916 1.3659	Ave		1.2860			8.6		30.0				
Propylbenzene	++++ 0.3714	++++ 0.3352	0.3426 0.2878	0.3159 0.3755	0.3762 0.3762	Ave		0.3476			9.6		30.0				
2-Chlorotoluene	++++ 0.3404	0.3055 0.2960	0.3209 0.2606	0.3117 0.3372	0.3448 0.3406	Ave		0.3175			8.7		30.0				
4-Ethyltoluene	++++ 1.3518	++++ 1.2430	1.2707 1.0593	1.1808 1.3853	1.3899 1.3849	Ave		1.2832			9.3		30.0				
1,3,5-Trimethylbenzene	++++ 0.5322	++++ 0.4840	0.4931 0.4140	0.4624 0.5337	0.5289 0.5468	Ave		0.4994			9.1		30.0				
Alpha Methyl Styrene	++++ 0.5256	++++ 0.4877	++++ 0.4370	++++ 0.6086	0.3906 0.6006	Ave		0.5043			16.0		30.0				
Decane	++++ 0.8778	0.7603 0.7515	0.8322 0.6337	0.8484 0.8180	0.9143 0.7472	Ave		0.7982			10.6		30.0				
tert-Butylbenzene	++++ 1.2040	++++ 1.0655	1.0703 0.8921	1.0556 1.2542	1.1543 1.2176	Ave		1.1142			10.6		30.0				
1,2,4-Trimethylbenzene	++++ 1.1975	++++ 1.0389	1.0671 0.8751	1.0434 1.2267	1.1402 1.1768	Ave		1.0957			10.4		30.0				
sec-Butylbenzene	++++ 1.7209	++++ 1.4915	1.5212 1.2789	1.5236 1.7227	1.6717 1.6181	Ave		1.5686			9.5		30.0				
1,3-Dichlorobenzene	0.6490 0.7671	0.6444 0.6846	0.6738 0.6125	0.6739 0.8458	0.7415 0.8676	Ave		0.7160			12.1		30.0				
Benzyl chloride	++++ 1.0629	++++ 0.9436	0.8534 0.8465	0.8353 1.1447	0.9958 1.1273	Ave		0.9762			13.0		30.0				
1,4-Dichlorobenzene	0.7017 0.7787	0.6870 0.6945	0.6938 0.6166	0.6879 0.8577	0.7429 0.8826	Ave		0.7344			11.3		30.0				
4-Isopropyltoluene	++++ 1.3919	++++ 1.1997	1.1350 1.0411	1.1617 1.4207	1.3168 1.3719	Ave		1.2548			11.1		30.0				
1,2,3-Trimethylbenzene	0.7568 1.1870	0.8539 1.0454	1.0085 0.9035	1.0349 ++++	1.1364 ++++	Ave		0.9908			14.6		30.0				
Indane	++++ 1.0760	++++ 0.9392	0.9630 0.8123	0.9316 1.1012	1.0002 1.0990	Ave		0.9903			10.1		30.0				
1,2-Dichlorobenzene	++++ 0.7440	++++ 0.6621	0.6671 0.5878	0.6607 0.8263	0.7087 0.8754	Ave		0.7165			13.3		30.0				
Butylbenzene	++++ 1.4543	++++ 1.1174	1.2268 1.0412	1.2695 1.4208	1.3939 1.3499	Ave		1.2768			11.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.9217	++++ 0.8188	0.7590 0.7206	0.7567 0.9791	0.8625 0.9878	Ave		0.8508			12.2		30.0				
Undecane	++++ 0.9412	0.7138 0.7639	0.7854 0.6439	0.8623 0.8142	0.9777 0.7859	Ave		0.8098			13.0		30.0				
1,2-Dibromo-3-Chloropropane	0.2667 0.3713	0.2609 0.3380	0.2709 0.2859	0.2620 ++++	0.3145 ++++	Ave		0.2963			13.8		30.0				
1,2,4,5-Tetramethylbenzene	++++ 1.3103	++++ 1.1118	1.0041 0.8463	1.0551 1.2653	1.2570 1.2867	Ave		1.1421			14.5		30.0				
Dodecane	++++ 0.7978	0.6003 0.5688	0.6899 0.3858	0.7041 0.5331	0.8370 ++++	Ave		0.6396			23.1		30.0				
1,2,4-Trichlorobenzene	++++ 0.6436	0.5319 0.5457	0.4906 0.4989	0.4888 0.6587	0.5772 0.6483	Ave		0.5649			12.4		30.0				
Naphthalene	++++ 1.4994	1.1580 1.2044	1.1489 0.9653	1.0861 1.2974	1.4202 1.3257	Ave		1.2339			13.6		30.0				
Hexachlorobutadiene	++++ 0.6448	++++ 0.5763	0.5100 0.5363	0.5070 0.7409	0.5745 0.7482	Ave		0.6047			16.0		30.0				
1,2,3-Trichlorobenzene	++++ 0.6283	0.5060 0.4951	0.4846 0.4151	0.4581 0.5663	0.5627 0.3728	Ave		0.4988			15.9		30.0				
2-Methylnaphthalene	++++ 0.9181	0.6422 0.5284	0.5584 0.3836	0.4778 0.4940	0.8101 ++++	Ave		0.6016			29.9		50.0				
1-Methylnaphthalene	++++ 1.1220	0.8380 0.6213	0.6877 0.4374	0.6391 0.5433	1.0085 ++++	Ave		0.7372			31.8		50.0				
4-Bromofluorobenzene (Surr)	0.7946 0.8130	0.8076 0.7824	0.8238 0.7807	0.8163 0.9039	0.8357 0.8386	Ave		0.8196			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 261958	++++ 518289	21711 1076565	42570 1857884	107824 3550370	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 149007	++++ 290483	++++ 602545	27727 1017511	60077 1877999	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 428033	++++ 858049	32728 1783528	68237 3014742	169908 6045892	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 46960	++++ 92605	++++ 191831	8660 316575	19699 606292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 249678	++++ 512846	19448 1074243	39319 1637176	98572 3657066	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	3911 156203	6583 313945	12737 657162	25449 1048926	62942 2151077	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 277412	++++ 542597	++++ 1129098	47326 1835688	114610 3783292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 127206	++++ 257490	++++ 544660	19602 873952	50104 1817509	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 138169	++++ 281926	12169 593804	21546 903575	54574 2043364	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 77933	++++ 156493	6344 327330	12373 519647	31401 1128580	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 296853	++++ 808553	++++ 1261075	66636 2449308	143467 5299467	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 130640	++++ 265901	10174 568659	20331 824429	51677 1944996	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 203924	++++ 402287	++++ 832948	31631 1264951	82259 2833506	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 422050	16790 848836	31414 1773236	63826 2796331	166966 6214752	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Acrolein	CBM	Ave	++++ 39091	++++ 73107	++++ 147180	++++ 259717	14239 517814	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 61491	++++ 127125	++++ 226910	++++ 390809	7481 862471	22116 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Acetone	CBM	Ave	++++ 220327	++++ 398773	++++ 665956	++++ 1097098	86023 2321110	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 28000	++++ 56204	++++ 114279	++++ 175439	11269 384054	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 502108	++++ 1108992	++++ 1652685	++++ 3057291	79400 6999063	219917 3.00	++++ 6.00	++++ 12.0	++++ 24.0	0.480 48.0
Ethyl ether	CBM	Ave	++++ 194355	++++ 387640	++++ 655797	++++ 1111229	76885 2395844	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	3049 147877	5250 292909	11039 633007	21196 889868	56607 2050200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 104178	++++ 213988	++++ 390689	++++ 666078	7623 1491458	14588 37127	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 322940	++++ 644340	++++ 1332511	++++ 1919761	47135 4249014	126693 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 237979	++++ 483244	++++ 773470	++++ 1347387	35554 3367365	99796 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Methylene Chloride	CBM	Ave	++++ 158748	++++ 297663	++++ 587875	39858 829908	72672 ++++	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 ++++
3-Chloropropene	CBM	Ave	++++ 172933	++++ 352711	++++ 715500	++++ 1138278	14784 2516658	29914 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
Carbon disulfide	CBM	Ave	++++ 454099	++++ 893782	++++ 1857677	++++ 2686894	33755 6209652	67457 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 152597	++++ 304618	++++ 640390	++++ 904134	21313 2041028	57740 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 425850	++++ 850675	++++ 1727313	++++ 2608750	32181 5477445	64503 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 436887	++++ 884523	++++ 1553256	++++ 2571313	31073 5756531	59673 1.00	++++ 2.00	0.0400 4.00	0.0800 8.00	0.160 16.0
1,1-Dichloroethane	CBM	Ave	6185 301902	11544 617142	22407 1197700	44696 1866128	117133 4143029	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 421041	++++ 920626	++++ 1610829	++++ 2825655	59807 6134377	158808 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 139897	++++ 280600	++++ 564091	++++ 836832	10084 1774150	20822 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 71674	++++ 137814	++++ 242448	++++ 408724	10552 870000	27277 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
cis-1,2-Dichloroethene	CBM	Ave	3051 153350	5311 314771	10779 630074	22108 933768	57247 2161860	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 367561	++++ 727588	25120 1268094	49778 2287831	134280 4857969	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	7168 346742	12869 705235	25085 1383523	52455 2190241	132214 4960016	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 196936	++++ 392928	++++ 687510	27618 1192762	73368 2547299	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7734 377403	13331 774289	27166 1509577	55384 2393121	145486 5471084	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4547 232618	8382 490730	17516 952640	35324 1548479	87574 3502141	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 82609	++++ 165738	++++ 330488	12681 486357	31319 1042096	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 444635	15963 906736	33352 1771104	65637 2614755	167643 5593459	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	6601 372817	11874 761689	24215 1552321	50848 2465819	138991 5358444	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 59954	++++ 111445	++++ 184294	8226 331158	22433 786825	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 118426	++++ 240541	8397 465638	17105 690034	45390 1499809	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 249671	++++ 526684	18410 1043094	37543 1556455	95028 3566561	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	17363 868592	31627 1711484	63694 3264805	129920 5087913	336411 11120269	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 174693	++++ 357021	13419 694408	26105 1074435	66081 2411618	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 170338	6605 354326	12771 653599	25661 1061646	64714 2334951	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4087 194217	7238 411429	13973 832705	28091 1212507	74264 2837545	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 172040	++++ 363939	++++ 729198	27744 1170568	67675 2672665	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 346754	++++ 745629	23694 1472126	48577 2394105	129879 5512449	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 36737	++++ 120654	++++ 174155	8684 331358	19464 783489	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 232640	++++ 470252	++++ 823262	27631 1502138	81302 3304265	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	5664 305916	11041 613752	21112 1192238	44641 1790104	116952 4193256	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 377024	++++ 689509	24146 916498	51311 2161661	143236 5370174	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 265941	8857 558061	18964 1060593	38186 1693124	96201 3656415	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 249246	8494 528240	18209 983862	34634 1678819	93722 3876912	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	9759 514273	18809 1073072	37560 1966647	75222 3139180	192974 7445292	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2849 160780	5479 322166	11656 599648	23218 982519	60205 2274200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 175250	++++ 293749	10295 417616	22692 941298	65409 2558380	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 186587	++++ 377410	13108 732239	26877 1119383	73243 2627265	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	CBZd 5	Ave	++++ 1842861	++++ 3737320	++++ 7125919	278341 11514382	716916 26057226	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	++++ 313050	++++ 676985	19680 1357226	39627 2191805	110810 5334244	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 273278	++++ 576579	17903 1102407	37712 1772227	99001 4168790	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3665 191154	6973 394783	13185 776709	28219 1207845	72561 2883889	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	7137 406499	13951 832085	29142 1543553	58935 2444395	157211 5914764	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	++++ 719275	24780 1456098	48941 2578598	102987 4329132	272217 10330192	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	17235 1128063	36147 2267354	79756 3963090	160595 6728239	425545 16015024	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd 5	Ave	++++ 396249	13596 785625	27868 1455379	57416 2300427	151720 4997986	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd 5	Ave	++++ 288479	++++ 647774	16038 1258109	32352 2180538	93899 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Styrene	CBZd 5	Ave	++++ 379313	++++ 797396	22430 1440043	46527 2475003	134724 6272582	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	++++ 577831	18010 1183498	40418 2069274	85176 3507204	219991 8652988	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	++++ 388902	++++ 791220	26816 1406346	52217 2507616	146757 5342402	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 123267	++++ 249431	8767 448013	16530 809328	45222 1801458	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 770189	++++ 1569505	25754 2749199	53331 4984665	108667 11018383	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	++++ 208028	++++ 425975	14187 750579	27021 1348899	77981 3034911	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 190674	6524 376201	13286 679618	26657 1211506	71471 2747919	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	++++ 757218	++++ 1579790	52613 2762937	100995 4977060	288122 11171652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	++++ 298107	++++ 615118	20417 1079746	39553 1917273	109634 4410950	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 294414	++++ 619837	++++ 1139797	33405 2186650	99545 4845121	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 491714	16235 955171	34455 1652838	72566 2938778	189531 6027860	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	++++ 674397	++++ 1354211	44314 2326877	100985 4505713	288122 9821979	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 670745	++++ 1320347	44184 2282446	89238 4407169	236361 9493306	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	++++ 963943	++++ 1895656	62984 3335709	130314 6189211	346547 13052688	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7122 429682	13761 870050	27898 1597433	57634 3038807	153722 6998909	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 595380	++++ 1199239	35336 2207883	71441 4112439	206433 9093386	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7701 436204	14670 882709	28727 1608243	58838 3081288	154004 7120026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	++++ 779650	++++ 1524715	46995 2715440	99360 5104026	272972 11067094	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	8305 664909	18233 1328651	41757 2356435	88511 ++++	235583 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Indane	CBZd 5	Ave	++++ 602700	++++ 1193709	39872 2118687	79681 3956160	207350 8865173	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 416753	++++ 841536	27621 1533100	56506 2968700	146910 7061726	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	++++ 814617	23860 1547638	50796 2715683	108576 5104411	288957 10889558	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 516302	++++ 1040605	31427 1879451	64720 3517487	178805 7968258	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 527231	15243 970873	32520 1679521	73748 2924996	202684 6339976	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2927 207960	5571 429617	11218 745616	22412 ++++	65206 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 733964	++++ 1413004	41572 2207453	90241 4545804	260569 10379759	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 446881	12818 722978	28563 1006221	60222 1915343	173512 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 360521	11357 693552	20313 1301208	41810 2366361	119662 5229906	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 839854	24728 1530726	47569 2517870	92896 4661002	294401 10693857	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 361175	++++ 732431	21118 1398696	43365 2661640	119102 6035243	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 351962	10806 629244	20063 1082671	39185 2034470	116648 3007302	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 514300	13713 671591	23120 1000580	40866 1774929	167946 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 628512	17895 789694	28473 1141032	54667 1951995	209066 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1743947 1821597	1724522 1988683	1705365 2036360	1745466 1623678	1732344 1691157	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	12.7						50			
Propene	+++++	+++++	+++++	23.1						50		
Dichlorodifluoromethane	+++++	+++++	5.1						50			
Chloromethane	+++++	+++++	+++++	21.0						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	6.9						50			
Vinyl chloride	21.8						50					
Butane	+++++	+++++	+++++	13.3						50		
1,3-Butadiene	+++++	+++++	+++++	2.3						50		
Bromomethane	+++++	+++++	18.9						50			
Chloroethane	+++++	+++++	11.2						50			
Ethanol	+++++	+++++	+++++	22.9						50		
Vinyl bromide	+++++	+++++	7.3						50			
2-Methylbutane	+++++	+++++	+++++	5.5						50		
Trichlorofluoromethane	+++++	5.4						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	+++++	-1.1							50
Acetonitrile	+++++	+++++	+++++	-12.8							50	
Acetone	+++++	+++++	+++++	+++++	18.4							80
Pentane	+++++	+++++	+++++	+++++	5.4							50
Isopropyl alcohol	+++++	+++++	+++++	7.2							50	
Ethyl ether	+++++	+++++	+++++	+++++	10.7							50
1,1-Dichloroethene	8.4						50					
Acrylonitrile	+++++	+++++	6.3						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.9							50			
tert-Butyl alcohol	+++++	+++++	+++++	5.2							50	
Methylene Chloride	+++++	+++++	+++++	57.6 +++++							80	
3-Chloropropene	+++++	+++++	14.8						50			
Carbon disulfide	+++++	+++++	7.1						50			
trans-1,2-Dichloroethene	+++++	-2.1							50			
2-Methylpentane	+++++	+++++	8.2						50			
Methyl tert-butyl ether	+++++	-8.6							50			
1,1-Dichloroethane	6.8						50					
Vinyl acetate	+++++	+++++	0.8						50			
Hexane	+++++	+++++	5.2						50			
2-Butanone (MEK)	+++++	+++++	+++++	8.0							50	
cis-1,2-Dichloroethene	5.8						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	3.1						50			
Chloroform	7.6						50					
Tetrahydrofuran	+++++	+++++	+++++	1.2						50		
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	-0.5						50					
Cyclohexane	+++++	+++++	+++++	5.2						50		
Benzene	+++++	-0.4						50				
Carbon tetrachloride	-4.8						50					
1-Butanol	+++++	+++++	+++++	0.2							50	
2,3-Dimethylpentane	+++++	+++++	6.9						50			
Thiophene	+++++	+++++	6.3						50			
2,2,4-Trimethylpentane	6.0						50					
Heptane	+++++	+++++	12.0						50			
1,2-Dichloropropane	+++++	4.8						50				
Trichloroethene	7.3						50					
Dibromomethane	+++++	+++++	+++++	2.1						50		
Bromodichloromethane	+++++	+++++	-2.7						50			
1,4-Dioxane	+++++	+++++	+++++	13.9						50		
Methyl methacrylate	+++++	+++++	+++++	-16.1						50		
Methylcyclohexane	-1.0						50					
4-Methyl-2-pentanone (MIBK)	+++++	+++++	3.0						50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.6						50				
trans-1,3-Dichloropropene	+++++	-7.7						50				
Toluene	1.0						50					
1,1,2-Trichloroethane	-3.3						50					
2-Hexanone	+++++	+++++	-5.8						50			
Octane	+++++	+++++	0.0						50			
Dibromochloromethane	+++++	+++++	-12.7						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-7.1						50			
Tetrachloroethene	1.1						50					
Chlorobenzene	-4.9						50					
Ethylbenzene	+++++	-3.0						50				
m-Xylene & p-Xylene	-14.2						50					
Nonane	+++++	-2.2						50				
Bromoform	+++++	+++++	-18.6		+++++				50			
Styrene	+++++	+++++	-14.3						50			
o-Xylene	+++++	-12.6						50				
1,1,2,2-Tetrachloroethane	+++++	+++++	0.0						50			
1,2,3-Trichloropropane	+++++	+++++	2.1						50			
Isopropylbenzene	+++++	-6.2						50				
Propylbenzene	+++++	+++++	-1.4						50			
2-Chlorotoluene	+++++	-3.8						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	+++++	+++++	-1.0						50			
1,3,5-Trimethylbenzene	+++++	+++++	-1.3						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-22.6						50		
Decane	+++++	-4.7						50				
tert-Butylbenzene	+++++	+++++	-3.9						50			
1,2,4-Trimethylbenzene	+++++	+++++	-2.6						50			
sec-Butylbenzene	+++++	+++++	-3.0						50			
1,3-Dichlorobenzene	-9.4						50					
Benzyl chloride	+++++	+++++	-12.6						50			
1,4-Dichlorobenzene	-4.4						50					
4-Isopropyltoluene	+++++	+++++	-9.5						50			
1,2,3-Trimethylbenzene	-23.6		+++++	+++++			50					
Indane	+++++	+++++	-2.8						50			
1,2-Dichlorobenzene	+++++	+++++	-6.9						50			
Butylbenzene	+++++	-12.5							50			
Indene	+++++	+++++	-10.8						50			
Undecane	+++++	-11.9							50			
1,2-Dibromo-3-Chloropropane	-10.0		+++++	+++++			50					
1,2,4,5-Tetramethylbenzene	+++++	+++++	-12.1						50			
Dodecane	+++++	-6.1		+++++					50			
1,2,4-Trichlorobenzene	+++++	-5.8							50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-6.2						80				
Hexachlorobutadiene	+++++	+++++	-15.7						50			
1,2,3-Trichlorobenzene	+++++	1.5						50				
2-Methylnaphthalene	+++++	6.7		+++++				80				
1-Methylnaphthalene	+++++	13.7		+++++				80				

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 11-Jan-2019 13:08:30 ALS Bottle#: 14 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-002
 Misc. Info.: 201651
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:31 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa

Date: 14-Jan-2019 17:22:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.264	9.249	0.015	94	320040	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.432	11.421	0.011	97	1835134	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.096	16.094	0.002	93	1796320	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.725	17.718	0.007	86	1623678	4.00	4.41	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	1857884	8.00	8.86	
7 Propene	41	3.834	3.838	-0.004	98	1017511	8.00	8.69	
8 Dichlorodifluoromethane	85	3.893	3.894	-0.001	100	3014742	8.00	8.90	
9 Chloromethane	52	4.093	4.091	0.002	98	316575	8.00	8.51	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	94	1637176	8.00	8.27	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	1048926	8.00	8.14	
11 Acetaldehyde	44	4.266	4.278	-0.012	91	1999939	40.0	41.8	
13 Butane	43	4.373	4.373	0.000	86	1835688	8.00	8.46	
14 Butadiene	54	4.373	4.375	-0.002	67	873952	8.00	8.77	
15 Bromomethane	94	4.724	4.722	0.002	98	903575	8.00	8.12	
16 Chloroethane	64	4.880	4.879	0.001	86	519647	8.00	8.37	
17 Ethanol	31	5.037	5.064	-0.027	98	2449308	40.0	43.5	
18 Vinyl bromide	106	5.209	5.205	0.004	98	824429	8.00	7.99	
19 2-Methylbutane	43	5.258	5.256	0.002	92	1264951	8.00	8.12	
20 Trichlorofluoromethane	101	5.495	5.492	0.003	99	2796331	8.00	8.42	
21 Acrolein	56	5.517	5.526	-0.009	97	259717	8.00	9.08	
22 Acetonitrile	40	5.597	5.603	-0.006	98	390809	8.00	8.76	
23 Acetone	58	5.641	5.666	-0.025	99	1097098	24.0	22.8	
24 Pentane	72	5.727	5.725	0.002	98	175439	8.00	8.26	
25 Isopropyl alcohol	45	5.781	5.840	-0.059	98	3057291	24.0	23.8	
26 Ethyl ether	31	5.910	5.943	-0.033	90	1111229	8.00	8.05	
27 1,1-Dichloroethene	96	6.245	6.242	0.003	94	889868	8.00	7.88	
28 Acrylonitrile	53	6.379	6.375	0.004	94	666078	8.00	8.54	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	93	1919761	8.00	7.84	
30 2-Methyl-2-propanol	59	6.423	6.534	-0.111	95	1347387	8.00	7.67	
31 Methylene Chloride	84	6.617	6.610	0.007	97	829908	8.00	6.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.627	6.626	0.001	96	1138278	8.00	8.12	
33 Carbon disulfide	76	6.784	6.778	0.006	100	2686894	8.00	7.84	
34 trans-1,2-Dichloroethene	96	7.458	7.450	0.008	94	904134	8.00	7.99	
35 2-Methylpentane	43	7.469	7.468	0.001	95	2608750	8.00	8.06	
36 Methyl tert-butyl ether	73	7.598	7.643	-0.045	97	2571313	8.00	8.17	
37 1,1-Dichloroethane	63	7.905	7.892	0.013	100	1866128	8.00	8.03	
38 Vinyl acetate	43	8.013	8.016	-0.003	100	2825655	8.00	8.75	
40 Hexane	56	8.482	8.480	0.002	74	836832	8.00	8.02	
39 2-Butanone (MEK)	72	8.482	8.499	-0.017	83	408724	8.00	8.05	
41 Isopropyl ether	45	8.655	8.679	-0.024	96	3366299	8.00	8.43	
42 cis-1,2-Dichloroethene	96	8.919	8.906	0.013	98	933768	8.00	8.07	
43 Ethyl acetate	43	9.108	9.131	-0.023	98	2287831	8.00	8.63	
44 Chloroform	83	9.275	9.261	0.014	97	2190241	8.00	8.19	
45 Tert-butyl ethyl ether	59	9.351	9.389	-0.038	97	3058584	8.00	8.30	
46 Tetrahydrofuran	42	9.680	9.725	-0.045	93	1192762	8.00	8.41	
47 1,1,1-Trichloroethane	97	10.310	10.303	0.007	96	2393121	8.00	8.26	
48 1,2-Dichloroethane	62	10.429	10.416	0.013	98	1548479	8.00	8.63	
49 Cyclohexane	69	10.893	10.888	0.005	89	486357	8.00	8.06	
50 Benzene	78	10.904	10.893	0.011	99	2614755	8.00	7.97	
52 Carbon tetrachloride	117	10.920	10.913	0.007	96	2465819	8.00	9.06	
53 2,3-Dimethylpentane	71	11.006	11.000	0.006	92	690034	8.00	7.97	
51 n-Butanol	31	10.904	11.004	-0.100	69	331158	8.00	8.06	
54 Thiophene	84	11.173	11.164	0.009	97	1556455	8.00	8.16	
55 Isooctane	57	11.637	11.632	0.005	98	5087913	8.00	7.92	
56 n-Heptane	71	11.998	11.995	0.003	95	1074435	8.00	8.14	
57 1,2-Dichloropropane	63	12.101	12.093	0.008	84	1061646	8.00	8.23	
58 Trichloroethene	130	12.133	12.124	0.009	92	1212507	8.00	8.11	
59 Dibromomethane	93	12.225	12.216	0.009	92	1170568	8.00	8.61	
60 Dichlorobromomethane	83	12.365	12.354	0.011	98	2394105	8.00	8.93	
61 1,4-Dioxane	88	12.386	12.421	-0.035	98	331358	8.00	8.69	
62 Methyl methacrylate	41	12.446	12.453	-0.007	89	1502138	8.00	9.11	
63 Methylcyclohexane	83	12.883	12.879	0.004	91	1790104	8.00	7.97	
64 4-Methyl-2-pentanone (MIBK)	43	13.292	13.321	-0.029	99	2161661	8.00	8.37	
65 cis-1,3-Dichloropropene	75	13.341	13.336	0.005	98	1693124	8.00	8.63	
66 trans-1,3-Dichloropropene	75	14.026	14.019	0.007	96	1678819	8.00	8.67	
67 Toluene	91	14.150	14.144	0.006	93	3139180	8.00	7.94	
68 1,1,2-Trichloroethane	83	14.225	14.220	0.005	97	982519	8.00	8.15	
69 2-Hexanone	58	14.603	14.631	-0.028	91	941298	8.00	7.94	
70 n-Octane	85	14.808	14.804	0.004	95	1119383	8.00	7.87	
71 Chlorodibromomethane	129	14.926	14.920	0.006	97	2191805	8.00	8.96	
72 Ethylene Dibromide	107	15.212	15.207	0.005	98	1772227	8.00	8.48	
73 Tetrachloroethene	129	15.277	15.272	0.005	93	1207845	8.00	8.14	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	95	3728862	8.00	7.72	
75 Chlorobenzene	112	16.145	16.142	0.003	91	2444395	8.00	7.96	
78 Ethylbenzene	91	16.425	16.422	0.003	99	4329132	8.00	8.06	
79 m-Xylene & p-Xylene	91	16.587	16.582	0.005	99	6728239	16.0	16.4	
80 n-Nonane	57	16.981	16.977	0.004	93	2300427	8.00	7.87	
81 Bromoform	173	17.045	17.041	0.004	95	2180538	8.00	10.2	
82 Styrene	104	17.051	17.047	0.004	99	2475003	8.00	8.72	
83 o-Xylene	91	17.110	17.106	0.004	98	3507204	8.00	8.10	
84 1,1,2,2-Tetrachloroethane	83	17.434	17.430	0.004	99	2507616	8.00	8.62	
85 1,2,3-Trichloropropane	110	17.590	17.587	0.003	96	809328	8.00	8.69	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.687	17.684	0.003	97	4984665	8.00	8.63	
87 N-Propylbenzene	120	18.210	18.205	0.005	98	1348899	8.00	8.64	
88 2-Chlorotoluene	126	18.259	18.254	0.005	97	1211506	8.00	8.50	
89 4-Ethyltoluene	105	18.350	18.347	0.003	98	4977060	8.00	8.64	
90 1,3,5-Trimethylbenzene	120	18.426	18.419	0.007	91	1917273	8.00	8.55	
92 Alpha Methyl Styrene	118	18.647	18.644	0.003	86	2186650	8.00	9.65	
93 n-Decane	57	18.685	18.682	0.003	90	2938778	8.00	8.20	
94 tert-Butylbenzene	119	18.836	18.832	0.004	93	4505713	8.00	9.00	
95 1,2,4-Trimethylbenzene	105	18.852	18.846	0.006	97	4407169	8.00	8.96	
96 sec-Butylbenzene	105	19.100	19.094	0.006	98	6189211	8.00	8.79	
97 1,3-Dichlorobenzene	146	19.122	19.117	0.005	99	3038807	8.00	9.45	
98 Benzyl chloride	91	19.192	19.188	0.004	97	4112439	8.00	9.38	
99 1,4-Dichlorobenzene	146	19.202	19.200	0.002	94	3081288	8.00	9.34	
100 4-Isopropyltoluene	119	19.256	19.251	0.005	96	5104026	8.00	9.06	
101 1,2,3-Trimethylbenzene	105	19.310	19.306	0.004	99	4338994	8.00	9.75	
102 Butylcyclohexane	83	19.359	19.353	0.006	90	3386502	8.00	8.34	
103 2,3-Dihydroindene	117	19.553	19.550	0.003	94	3956160	8.00	8.90	
104 1,2-Dichlorobenzene	146	19.558	19.555	0.003	96	2968700	8.00	9.23	
105 n-Butylbenzene	91	19.677	19.673	0.004	99	5104411	8.00	8.90	
106 Indene	116	19.682	19.679	0.003	96	3517487	8.00	9.21	
107 Undecane	57	19.963	19.963	0.000	93	2924996	8.00	8.04	
108 1,2-Dibromo-3-Chloropropan	157	20.146	20.142	0.004	95	1506673	8.00	11.3	
109 1,2,4,5-Tetramethylbenzene	119	20.421	20.417	0.004	97	4545804	8.00	8.86	
110 Dodecane	57	21.014	21.014	0.000	93	1915343	8.00	6.67	
111 1,2,4-Trichlorobenzene	180	21.241	21.236	0.005	94	2366361	8.00	9.33	
112 Naphthalene	128	21.381	21.377	0.004	99	4661002	8.00	8.41	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	94	2661640	8.00	9.80	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	95	2034470	8.00	9.08	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	1774929	8.00	6.57	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	1951995	8.00	5.90	
A 122 C8 Range	1	14.813	(14.749-14.886)		0	11514382	8.00	8.12	
S 123 1,2-Dichloroethene, Total	1				0		16.0	16.1	
S 124 Xylenes, Total	100				0		24.0	24.5	

Reagents:

40L9DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC09.D

Injection Date: 11-Jan-2019 13:08:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L9

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

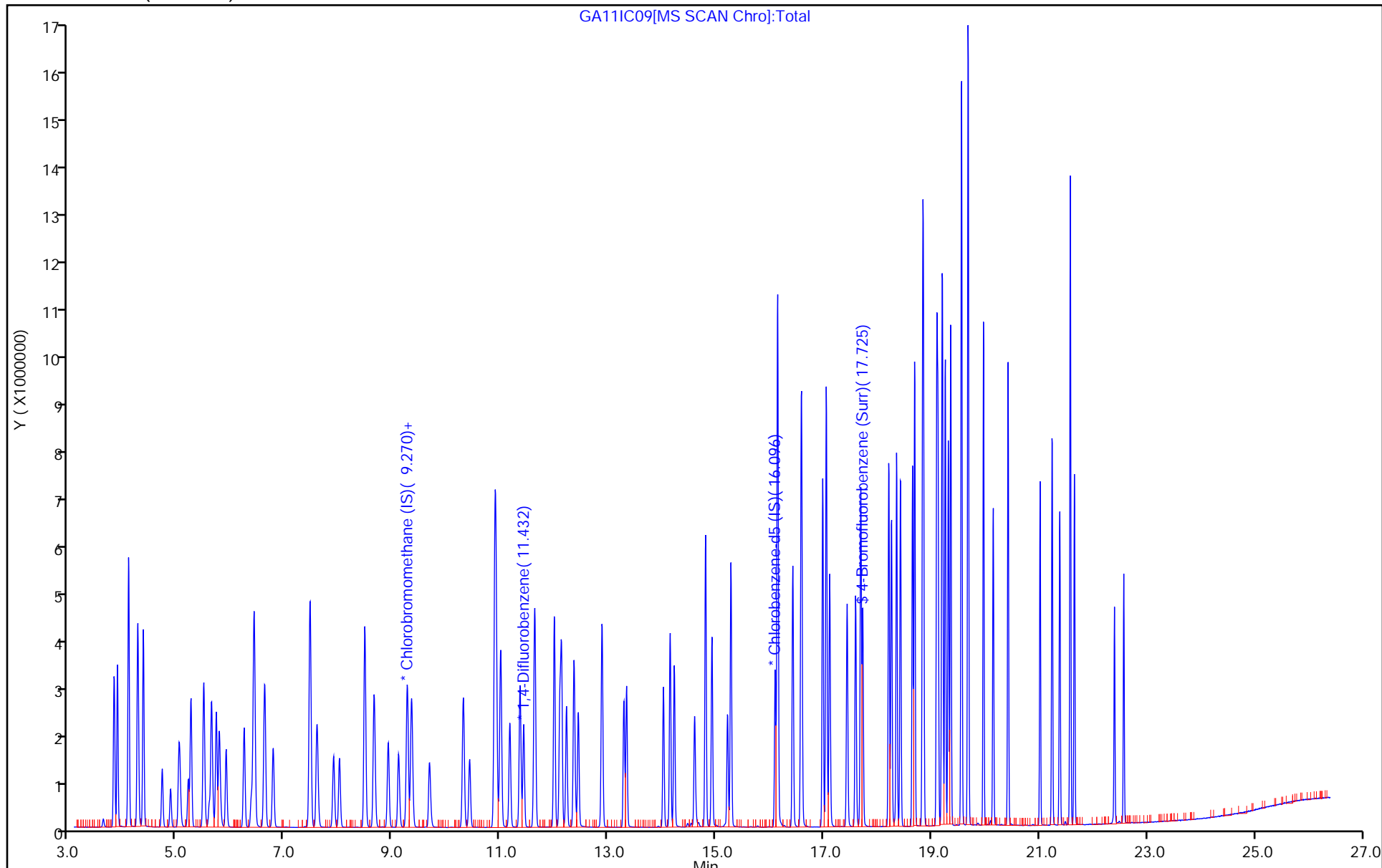
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC09.D

Injection Date: 11-Jan-2019 13:08:30

Instrument ID: MG

Lims ID: IC L9

Client ID:

Operator ID: 007126

ALS Bottle#: 14

Worklist Smp#: 2

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

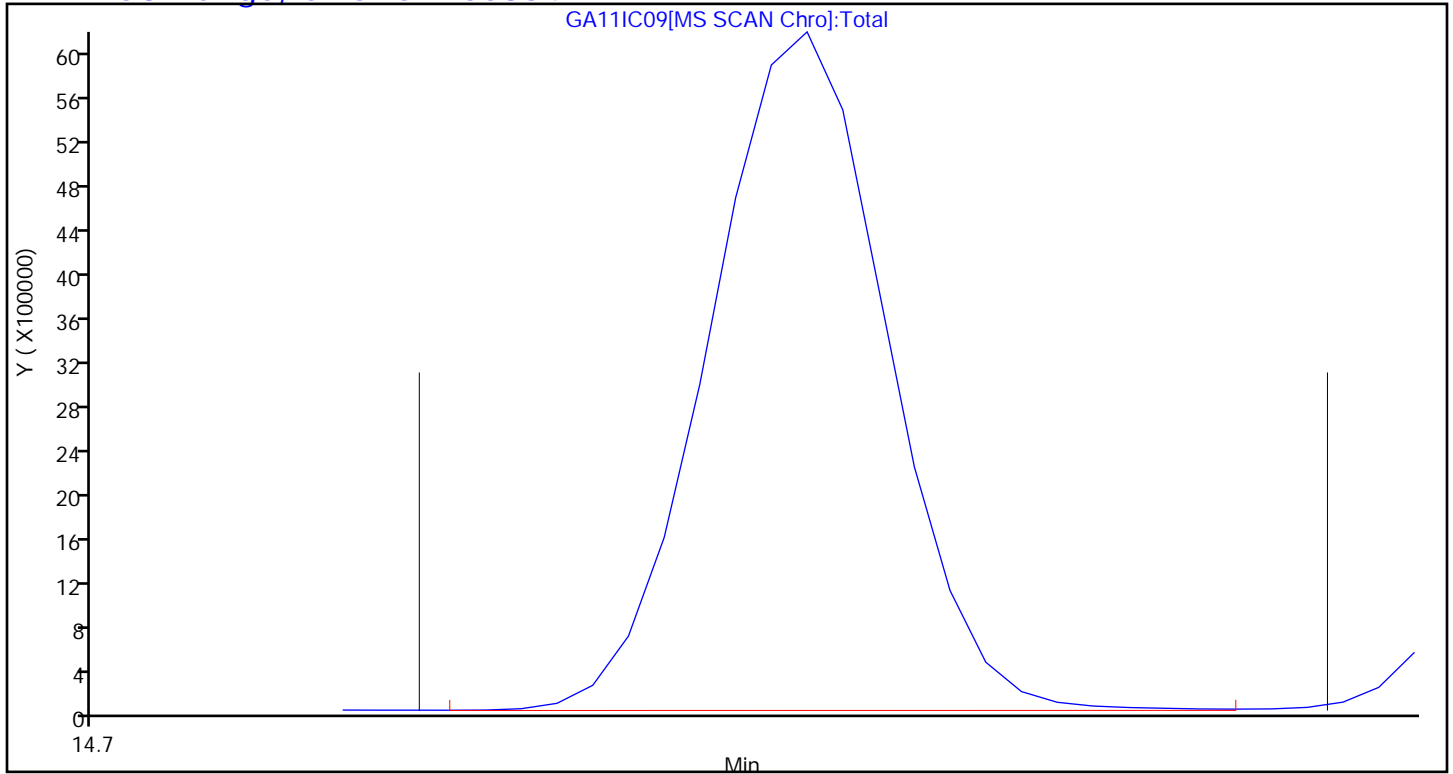
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 11-Jan-2019 14:35:30 ALS Bottle#: 15 Worklist Smp#: 6
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-006
 Misc. Info.: 201650
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:37 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 11-Jan-2019 15:43:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.270	9.249	0.021	94	365027	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.437	11.421	0.016	96	2070632	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.102	16.094	0.008	91	2016686	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.725	17.718	0.007	88	1691157	4.00	4.09	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	3550370	16.0	14.8	
7 Propene	41	3.834	3.838	-0.004	97	1877999	16.0	14.1	
8 Dichlorodifluoromethane	85	3.894	3.894	0.000	100	6045892	16.0	15.6	
9 Chloromethane	52	4.088	4.091	-0.003	100	606292	16.0	14.3	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	92	3657066	16.0	16.2	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	2151077	16.0	14.6	
11 Acetaldehyde	44	4.271	4.278	-0.007	91	4022222	80.0	73.6	
13 Butane	43	4.373	4.373	0.000	85	3783292	16.0	15.3	
14 Butadiene	54	4.373	4.375	-0.002	69	1817509	16.0	16.0	
15 Bromomethane	94	4.724	4.722	0.002	98	2043364	16.0	16.1	
16 Chloroethane	64	4.880	4.879	0.001	85	1128580	16.0	15.9	
17 Ethanol	31	5.058	5.064	-0.006	98	5299467	80.0	82.5	
18 Vinyl bromide	106	5.209	5.205	0.004	98	1944996	16.0	16.5	
19 2-Methylbutane	43	5.258	5.256	0.002	92	2833506	16.0	15.9	
20 Trichlorofluoromethane	101	5.495	5.492	0.003	99	6214752	16.0	16.4	
21 Acrolein	56	5.522	5.526	-0.004	97	517814	16.0	15.9	
22 Acetonitrile	40	5.608	5.603	0.005	98	862471	16.0	17.0	
23 Acetone	58	5.646	5.666	-0.020	99	2321110	48.0	42.3	
24 Pentane	72	5.727	5.725	0.002	97	384054	16.0	15.9	
25 Isopropyl alcohol	45	5.808	5.840	-0.032	99	6999063	48.0	47.8	
26 Ethyl ether	31	5.910	5.943	-0.033	91	2395844	16.0	15.2	
27 1,1-Dichloroethene	96	6.250	6.242	0.008	95	2050200	16.0	15.9	
28 Acrylonitrile	53	6.390	6.375	0.015	94	1491458	16.0	16.8	
29 1,1,2-Trichloro-1,2,2-trif	101	6.433	6.428	0.005	93	4249014	16.0	15.2	
30 2-Methyl-2-propanol	59	6.439	6.534	-0.095	96	3367365	16.0	16.8	
31 Methylene Chloride	84	6.622	6.610	0.012	98	1840784	16.0	12.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.638	6.626	0.012	97	2516658	16.0	15.7	
33 Carbon disulfide	76	6.784	6.778	0.006	100	6209652	16.0	15.9	
34 trans-1,2-Dichloroethene	96	7.463	7.450	0.013	95	2041028	16.0	15.8	
35 2-Methylpentane	43	7.474	7.468	0.006	94	5477445	16.0	14.8	
36 Methyl tert-butyl ether	73	7.598	7.643	-0.045	97	5756531	16.0	16.0	
37 1,1-Dichloroethane	63	7.911	7.892	0.019	100	4143029	16.0	15.6	
38 Vinyl acetate	43	8.019	8.016	0.003	100	6134377	16.0	16.7	
40 Hexane	56	8.488	8.480	0.008	90	1774150	16.0	14.9	
39 2-Butanone (MEK)	72	8.493	8.499	-0.006	97	870000	16.0	15.0	
41 Isopropyl ether	45	8.660	8.679	-0.019	97	7232215	16.0	15.9	
42 cis-1,2-Dichloroethene	96	8.925	8.906	0.019	97	2161860	16.0	16.4	
43 Ethyl acetate	43	9.119	9.131	-0.012	98	4857969	16.0	16.1	
44 Chloroform	83	9.286	9.261	0.025	96	4960016	16.0	16.3	
45 Tert-butyl ethyl ether	59	9.356	9.389	-0.033	97	6802904	16.0	16.2	
46 Tetrahydrofuran	42	9.685	9.725	-0.040	93	2547299	16.0	15.7	
47 1,1,1-Trichloroethane	97	10.316	10.303	0.013	96	5471084	16.0	16.6	
48 1,2-Dichloroethane	62	10.434	10.416	0.018	98	3502141	16.0	17.3	
49 Cyclohexane	69	10.898	10.888	0.010	89	1042096	16.0	15.3	
50 Benzene	78	10.909	10.893	0.016	99	5593459	16.0	15.1	
52 Carbon tetrachloride	117	10.925	10.913	0.012	98	5358444	16.0	17.4	
53 2,3-Dimethylpentane	71	11.011	11.000	0.011	92	1499809	16.0	15.4	
51 n-Butanol	31	10.904	11.004	-0.100	69	786825	16.0	17.0	
54 Thiophene	84	11.184	11.164	0.020	97	3566561	16.0	16.6	
55 Isooctane	57	11.642	11.632	0.010	97	11120269	16.0	15.3	
56 n-Heptane	71	12.009	11.995	0.014	94	2411618	16.0	16.2	
57 1,2-Dichloropropane	63	12.106	12.093	0.013	83	2334951	16.0	16.0	
58 Trichloroethene	130	12.138	12.124	0.014	93	2837545	16.0	16.8	
59 Dibromomethane	93	12.230	12.216	0.014	96	2672665	16.0	17.4	
60 Dichlorobromomethane	83	12.370	12.354	0.016	99	5512449	16.0	18.2	
61 1,4-Dioxane	88	12.392	12.421	-0.029	98	783489	16.0	18.2	
62 Methyl methacrylate	41	12.451	12.453	-0.002	89	3304265	16.0	17.8	
63 Methylcyclohexane	83	12.888	12.879	0.009	92	4193256	16.0	16.5	
64 4-Methyl-2-pentanone (MIBK)	43	13.292	13.321	-0.029	99	5370174	16.0	18.4	
65 cis-1,3-Dichloropropene	75	13.346	13.336	0.010	98	3656415	16.0	16.5	
66 trans-1,3-Dichloropropene	75	14.031	14.019	0.012	96	3876912	16.0	17.8	
67 Toluene	91	14.155	14.144	0.011	93	7445292	16.0	16.8	
68 1,1,2-Trichloroethane	83	14.231	14.220	0.011	98	2274200	16.0	16.8	
69 2-Hexanone	58	14.608	14.631	-0.023	91	2558380	16.0	19.2	
70 n-Octane	85	14.808	14.804	0.004	94	2627265	16.0	16.5	
71 Chlorodibromomethane	129	14.932	14.920	0.012	98	5334244	16.0	19.4	
72 Ethylene Dibromide	107	15.217	15.207	0.010	98	4168790	16.0	17.8	
73 Tetrachloroethene	129	15.282	15.272	0.010	95	2883889	16.0	17.3	
74 2,3-Dimethylheptane	43	16.145	16.139	0.006	96	7774816	16.0	14.3	
75 Chlorobenzene	112	16.150	16.142	0.008	93	5914764	16.0	17.1	
78 Ethylbenzene	91	16.431	16.422	0.009	99	10330192	16.0	17.1	
79 m-Xylene & p-Xylene	91	16.593	16.582	0.011	98	16015024	32.0	34.7	
80 n-Nonane	57	16.986	16.977	0.009	92	4997986	16.0	15.2	
81 Bromoform	173	17.051	17.041	0.010	98	6148940	16.0	25.6	
82 Styrene	104	17.056	17.047	0.009	98	6272582	16.0	19.7	
83 o-Xylene	91	17.116	17.106	0.010	98	8652988	16.0	17.8	
84 1,1,2,2-Tetrachloroethane	83	17.439	17.430	0.009	99	5342402	16.0	16.4	
85 1,2,3-Trichloropropane	110	17.596	17.587	0.009	95	1801458	16.0	17.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.693	17.684	0.009	97	11018383	16.0	17.0	
87 N-Propylbenzene	120	18.210	18.205	0.005	99	3034911	16.0	17.3	
88 2-Chlorotoluene	126	18.259	18.254	0.005	98	2747919	16.0	17.2	
89 4-Ethyltoluene	105	18.356	18.347	0.009	98	11171652	16.0	17.3	
90 1,3,5-Trimethylbenzene	120	18.426	18.419	0.007	92	4410950	16.0	17.5	
92 Alpha Methyl Styrene	118	18.652	18.644	0.008	90	4845121	16.0	19.1	
93 n-Decane	57	18.690	18.682	0.008	92	6027860	16.0	15.0	
94 tert-Butylbenzene	119	18.841	18.832	0.009	90	9821979	16.0	17.5	
95 1,2,4-Trimethylbenzene	105	18.857	18.846	0.011	96	9493306	16.0	17.2	
96 sec-Butylbenzene	105	19.100	19.094	0.006	97	13052688	16.0	16.5	
97 1,3-Dichlorobenzene	146	19.127	19.117	0.010	99	6998909	16.0	19.4	
98 Benzyl chloride	91	19.197	19.188	0.009	98	9093386	16.0	18.5	
99 1,4-Dichlorobenzene	146	19.208	19.200	0.008	96	7120026	16.0	19.2	
100 4-Isopropyltoluene	119	19.262	19.251	0.011	96	11067094	16.0	17.5	
101 1,2,3-Trimethylbenzene	105	19.316	19.306	0.010	99	9391687	16.0	18.8	
102 Butylcyclohexane	83	19.359	19.353	0.006	91	7086712	16.0	15.6	
103 2,3-Dihydroindene	117	19.558	19.550	0.008	94	8865173	16.0	17.8	
104 1,2-Dichlorobenzene	146	19.564	19.555	0.009	97	7061726	16.0	19.5	
105 n-Butylbenzene	91	19.682	19.673	0.009	99	10889558	16.0	16.9	
106 Indene	116	19.688	19.679	0.009	91	7968258	16.0	18.6	
107 Undecane	57	19.968	19.963	0.005	94	6339976	16.0	15.5	
108 1,2-Dibromo-3-Chloropropan	157	20.146	20.142	0.004	98	3643002	16.0	24.4	
109 1,2,4,5-Tetramethylbenzene	119	20.421	20.417	0.004	98	10379759	16.0	18.0	
110 Dodecane	57	21.014	21.014	0.000	93	2461951	16.0	7.63	
111 1,2,4-Trichlorobenzene	180	21.241	21.236	0.005	94	5229906	16.0	18.4	
112 Naphthalene	128	21.381	21.377	0.004	99	10693857	16.0	17.2	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	92	6035243	16.0	19.8	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	95	3007302	16.0	12.0	
115 2-Methylnaphthalene	142	22.400	22.395	0.005	98	11865	16.0	0.0391	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	95	4161	16.0	0.0112	
A 122 C8 Range	1	14.824	(14.755-14.892)		0	26057226	16.0	16.4	
S 123 1,2-Dichloroethene, Total	1				0		32.0	32.2	
S 124 Xylenes, Total	100				0		48.0	52.5	

Reagents:

40L10DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC10.D

Injection Date: 11-Jan-2019 14:35:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L10

Worklist Smp#: 6

Client ID:

Purge Vol: 500.000 mL

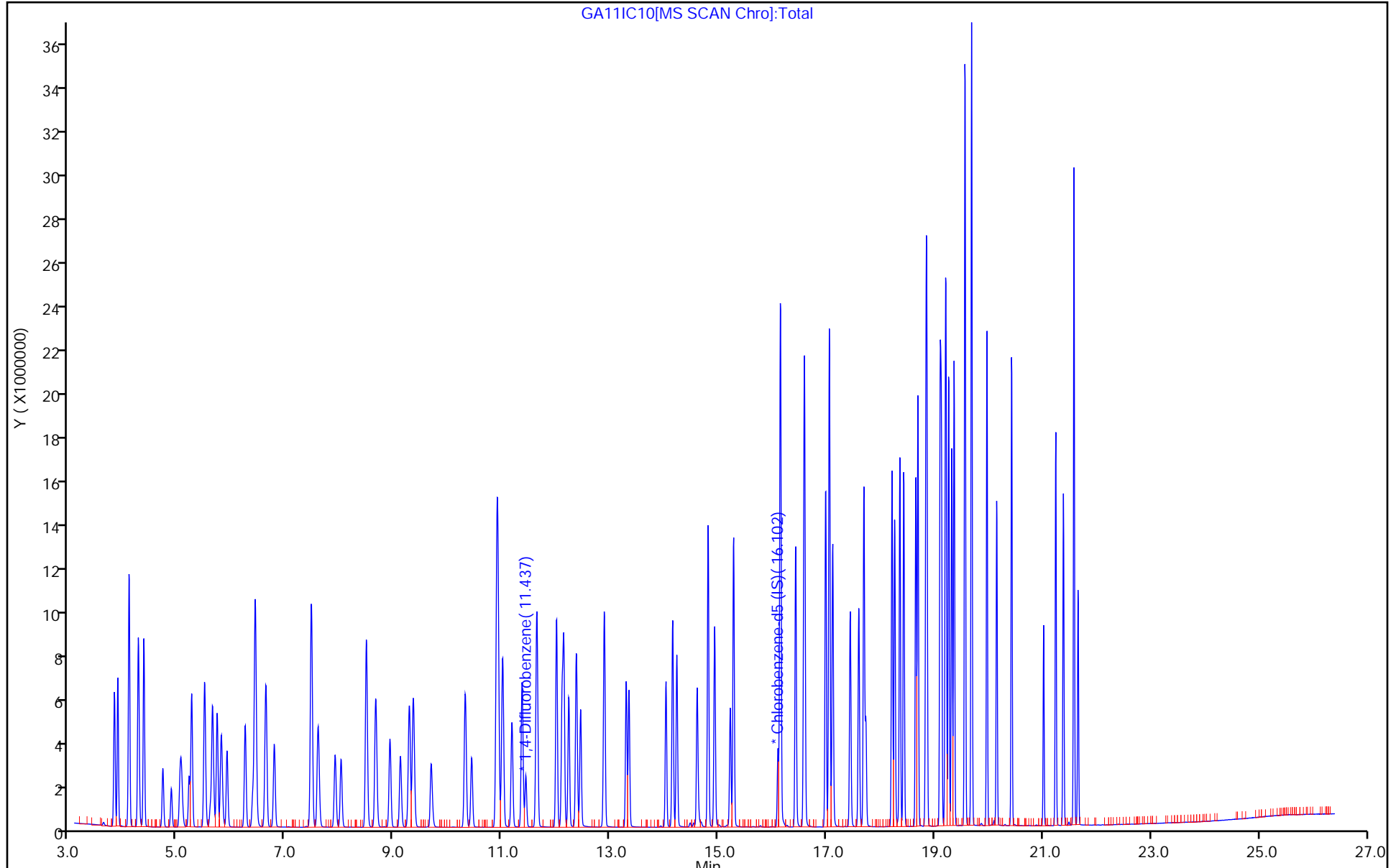
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC10.D

Injection Date: 11-Jan-2019 14:35:30

Instrument ID: MG

Lims ID: IC L10

Client ID:

Operator ID: 007126

ALS Bottle#: 15

Worklist Smp#: 6

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

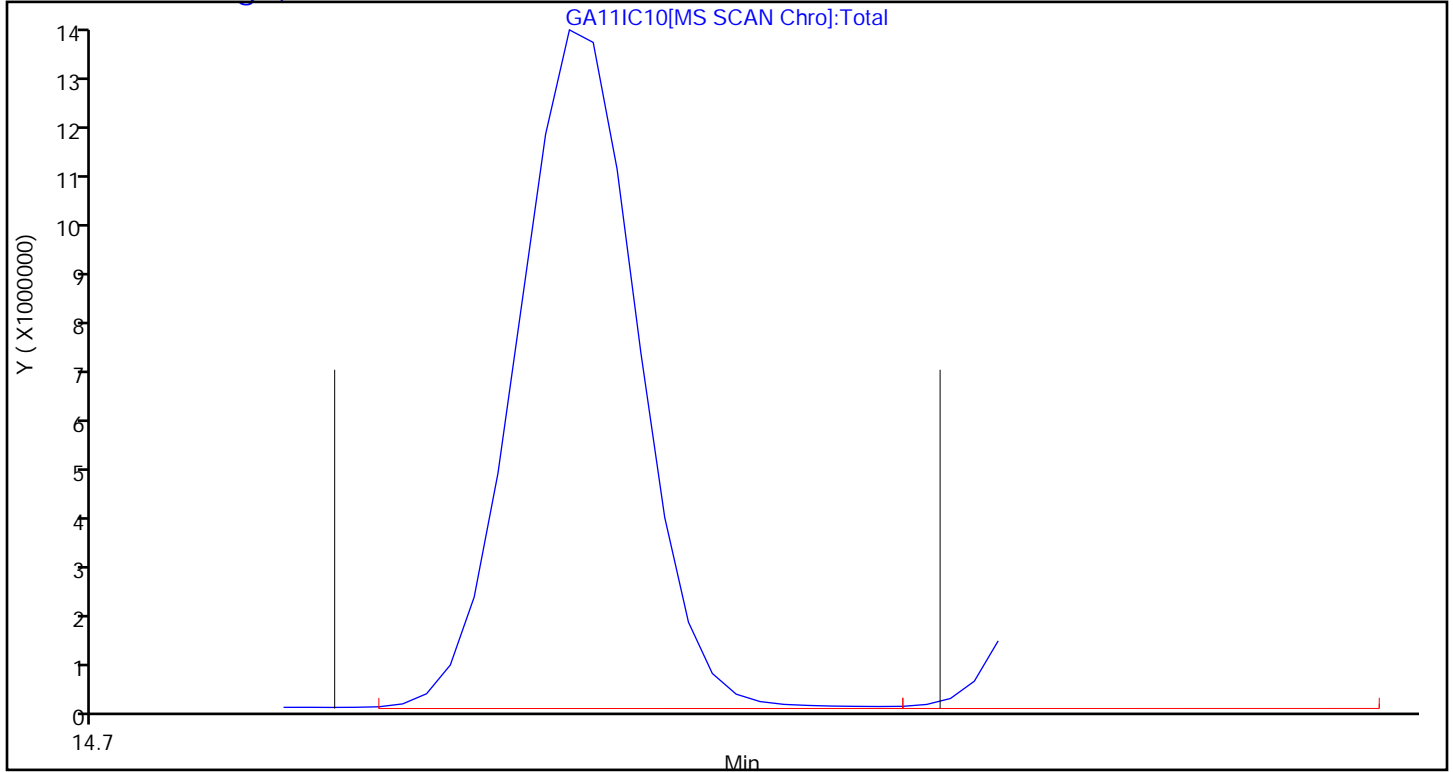
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 11-Jan-2019 16:46:30 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-009
 Misc. Info.: 201657
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:43 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa

Date: 14-Jan-2019 17:21:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	98	398561	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	96	2338002	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	92	2194856	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	84	1743947	4.00	3.88	
6 Chlorodifluoromethane	51	3.840	3.829	0.011	84	6540	0.0200	0.0250	
7 Propene	41	3.840	3.838	0.002	96	7070	0.0200	0.0485	
8 Dichlorodifluoromethane	85	3.894	3.894	0.000	99	9502	0.0200	0.0225	
9 Chloromethane	52	4.088	4.091	-0.003	89	1951	0.0200	0.0421	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	91	5940	0.0200	0.0241	
12 Vinyl chloride	62	4.271	4.277	-0.006	51	3911	0.0200	0.0244	
11 Acetaldehyde	44	4.293	4.278	0.015	95	15130	0.1000	0.2536	
13 Butane	43	4.373	4.373	0.000	88	9641	0.0200	0.0357	
14 Butadiene	54	4.379	4.375	0.004	55	3174	0.0200	0.0256	
15 Bromomethane	94	4.724	4.722	0.002	97	3695	0.0200	0.0266	
16 Chloroethane	64	4.880	4.879	0.001	52	1879	0.0200	0.0243	
17 Ethanol	31	5.107	5.064	0.043	98	7458	0.1000	0.1063	
18 Vinyl bromide	106	5.209	5.205	0.004	98	2938	0.0200	0.0229	
19 2-Methylbutane	43	5.252	5.256	-0.004	90	5353	0.0200	0.0276	
20 Trichlorofluoromethane	101	5.495	5.492	0.003	98	9041	0.0200	0.0219	
21 Acrolein	56	5.549	5.526	0.023	51	1646	0.0200	0.0462	
23 Acetone	58	5.711	5.666	0.045	95	6286	0.0600	0.1049	
24 Pentane	72	5.716	5.725	-0.009	75	537	0.0200	0.0203	
25 Isopropyl alcohol	45	5.937	5.840	0.097	94	10878	0.0600	0.0681	
26 Ethyl ether	31	5.997	5.943	0.054	84	3505	0.0200	0.0204	
27 1,1-Dichloroethene	96	6.250	6.242	0.008	93	3049	0.0200	0.0217	
28 Acrylonitrile	53	6.396	6.375	0.021	76	1686	0.0200	0.0174	
29 1,1,2-Trichloro-1,2,2-trif	101	6.433	6.428	0.005	93	6973	0.0200	0.0229	
30 2-Methyl-2-propanol	59	6.698	6.534	0.164	23	4034	0.0200	0.0184	
31 Methylene Chloride	84	6.611	6.610	0.001	98	21773	0.0200	0.1330	
32 3-Chloro-1-propene	39	6.633	6.626	0.007	89	3831	0.0200	0.0220	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.773	6.778	-0.005	95	9172	0.0200	0.0215	
34 trans-1,2-Dichloroethene	96	7.453	7.450	0.002	95	3112	0.0200	0.0221	
35 2-Methylpentane	43	7.463	7.468	-0.005	94	9490	0.0200	0.0235	
36 Methyl tert-butyl ether	73	7.738	7.643	0.095	72	5606	0.0200	0.0143	
37 1,1-Dichloroethane	63	7.884	7.892	-0.008	98	6185	0.0200	0.0214	
38 Vinyl acetate	43	8.035	8.016	0.019	97	5165	0.0200	0.0128	
40 Hexane	56	8.482	8.480	0.002	85	2997	0.0200	0.0231	
42 cis-1,2-Dichloroethene	96	8.898	8.906	-0.008	95	3051	0.0200	0.0212	
43 Ethyl acetate	43	9.173	9.131	0.042	64	3892	0.0200	0.0118	
44 Chloroform	83	9.248	9.261	-0.013	47	7168	0.0200	0.0215	
45 Tert-butyl ethyl ether	59	9.453	9.389	0.064	94	5828	0.0200	0.0127	
46 Tetrahydrofuran	42	9.804	9.725	0.079	81	2922	0.0200	0.0165	
47 1,1,1-Trichloroethane	97	10.305	10.303	0.002	93	7734	0.0200	0.0214	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	94	4547	0.0200	0.0199	
49 Cyclohexane	69	10.882	10.888	-0.006	73	1534	0.0200	0.0200	
50 Benzene	78	10.882	10.893	-0.011	95	9465	0.0200	0.0226	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	92	6601	0.0200	0.0190	
53 2,3-Dimethylpentane	71	10.990	11.000	-0.010	92	2282	0.0200	0.0207	
51 n-Butanol	31	11.098	11.004	0.094	39	1471	0.0200	0.0281	
54 Thiophene	84	11.157	11.164	-0.007	95	5442	0.0200	0.0224	
55 Isooctane	57	11.632	11.632	0.000	97	17363	0.0200	0.0212	
56 n-Heptane	71	11.993	11.995	-0.002	92	3375	0.0200	0.0201	
57 1,2-Dichloropropane	63	12.085	12.093	-0.008	64	3204	0.0200	0.0195	
58 Trichloroethene	130	12.122	12.124	-0.002	90	4087	0.0200	0.0215	
59 Dibromomethane	93	12.209	12.216	-0.007	89	5771	0.0200	0.0333	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	94	6835	0.0200	0.0200	
62 Methyl methacrylate	41	12.467	12.453	0.014	87	2694	0.0200	0.0128	
63 Methylcyclohexane	83	12.877	12.879	-0.002	87	5664	0.0200	0.0198	
64 4-Methyl-2-pentanone (MIBK)	43	13.368	13.321	0.047	96	4253	0.0200	0.0129	
65 cis-1,3-Dichloropropene	75	13.336	13.336	0.000	95	4540	0.0200	0.0182	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	94	4607	0.0200	0.0195	
67 Toluene	91	14.144	14.144	0.000	92	9759	0.0200	0.0202	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	90	2849	0.0200	0.0193	
69 2-Hexanone	58	14.673	14.631	0.042	90	1948	0.0200	0.0134	
70 n-Octane	85	14.808	14.804	0.004	96	3306	0.0200	0.0190	
71 Chlorodibromomethane	129	14.916	14.920	-0.004	93	4719	0.0200	0.0158	
72 Ethylene Dibromide	107	15.201	15.207	-0.006	94	4392	0.0200	0.0172	
73 Tetrachloroethene	129	15.271	15.272	-0.001	90	3665	0.0200	0.0202	
74 2,3-Dimethylheptane	43	16.134	16.139	-0.005	93	12324	0.0200	0.0209	
75 Chlorobenzene	112	16.140	16.142	-0.002	71	7137	0.0200	0.0190	
78 Ethylbenzene	91	16.420	16.422	-0.002	98	11395	0.0200	0.0174	
79 m-Xylene & p-Xylene	91	16.576	16.582	-0.006	99	17235	0.0400	0.0343	
80 n-Nonane	57	16.975	16.977	-0.002	92	6035	0.0200	0.0169	
81 Bromoform	173	17.035	17.041	-0.006	81	3699	0.0200	0.0142	
82 Styrene	104	17.046	17.047	-0.001	96	5116	0.0200	0.0147	
83 o-Xylene	91	17.105	17.106	-0.001	96	8649	0.0200	0.0163	
84 1,1,2,2-Tetrachloroethane	83	17.434	17.430	0.004	96	4703	0.0200	0.0132	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	93	1596	0.0200	0.0140	
86 Isopropylbenzene	105	17.687	17.684	0.003	91	11142	0.0200	0.0158	
87 N-Propylbenzene	120	18.205	18.205	0.000	97	2584	0.0200	0.0135	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	3051	0.0200	0.0175	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	10441	0.0200	0.0148	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
90 1,3,5-Trimethylbenzene	120	18.421	18.419	0.002	91	3714	0.0200	0.0136	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	86	2842	0.0200	0.0103	
93 n-Decane	57	18.679	18.682	-0.003	87	6640	0.0200	0.0152	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	89	8403	0.0200	0.0137	
95 1,2,4-Trimethylbenzene	105	18.841	18.846	-0.005	94	8194	0.0200	0.0136	
96 sec-Butylbenzene	105	19.095	19.094	0.001	97	12069	0.0200	0.0140	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	97	7122	0.0200	0.0181	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	7056	0.0200	0.0132	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	89	7701	0.0200	0.0191	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	95	9243	0.0200	0.0134	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	97	8305	0.0200	0.0153	
102 Butylcyclohexane	83	19.348	19.353	-0.005	88	9138	0.0200	0.0184	
103 2,3-Dihydroindene	117	19.548	19.550	-0.002	92	8066	0.0200	0.0148	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	80	6474	0.0200	0.0165	
105 n-Butylbenzene	91	19.672	19.673	-0.001	94	9992	0.0200	0.0143	
106 Indene	116	19.677	19.679	-0.002	79	6136	0.0200	0.0131	
107 Undecane	57	19.963	19.963	0.000	90	5997	0.0200	0.0135	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	84	2927	0.0200	0.0180	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	94	8929	0.0200	0.0142	
110 Dodecane	57	21.014	21.014	0.000	87	5086	0.0200	0.0145	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	93	6978	0.0200	0.0225	
112 Naphthalene	128	21.376	21.377	-0.001	99	16242	0.0200	0.0240	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	89	5189	0.0200	0.0156	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	91	7256	0.0200	0.0265	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	98	13967	0.0200	0.0423	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	98	19148	0.0200	0.0473	
A 122 C8 Range	1	14.798	(14.755-14.870)		0	37256	0.0200	0.0215	
S 123 1,2-Dichloroethene, Total	1				0		0.0400	0.0433	
S 124 Xylenes, Total	100				0		0.0600	0.0507	

Reagents:

40L1-3DQP_00011

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D

Injection Date: 11-Jan-2019 16:46:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L1

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

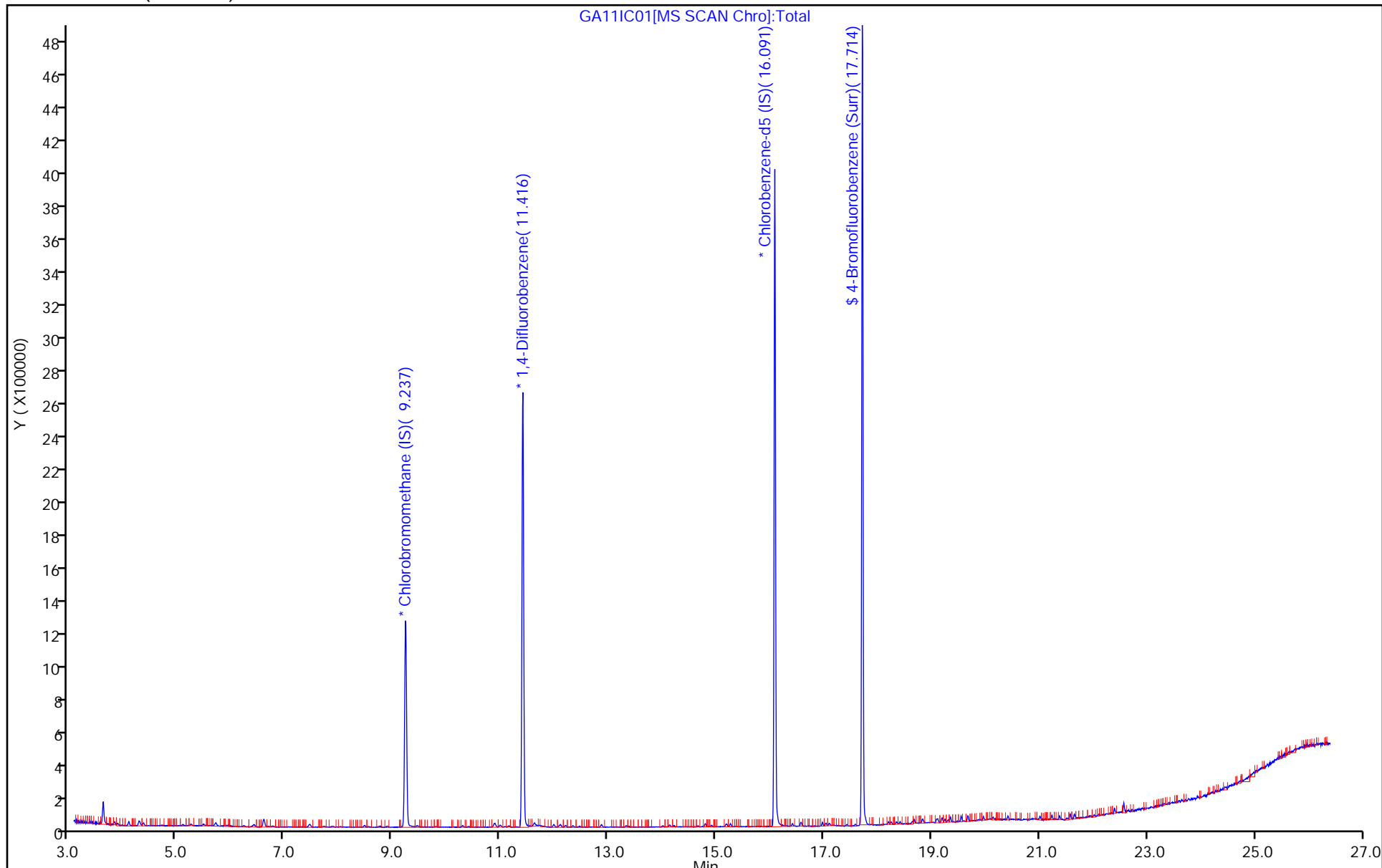
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D

Injection Date: 11-Jan-2019 16:46:30

Instrument ID: MG

Lims ID: IC L1

Client ID:

Operator ID: 007126

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

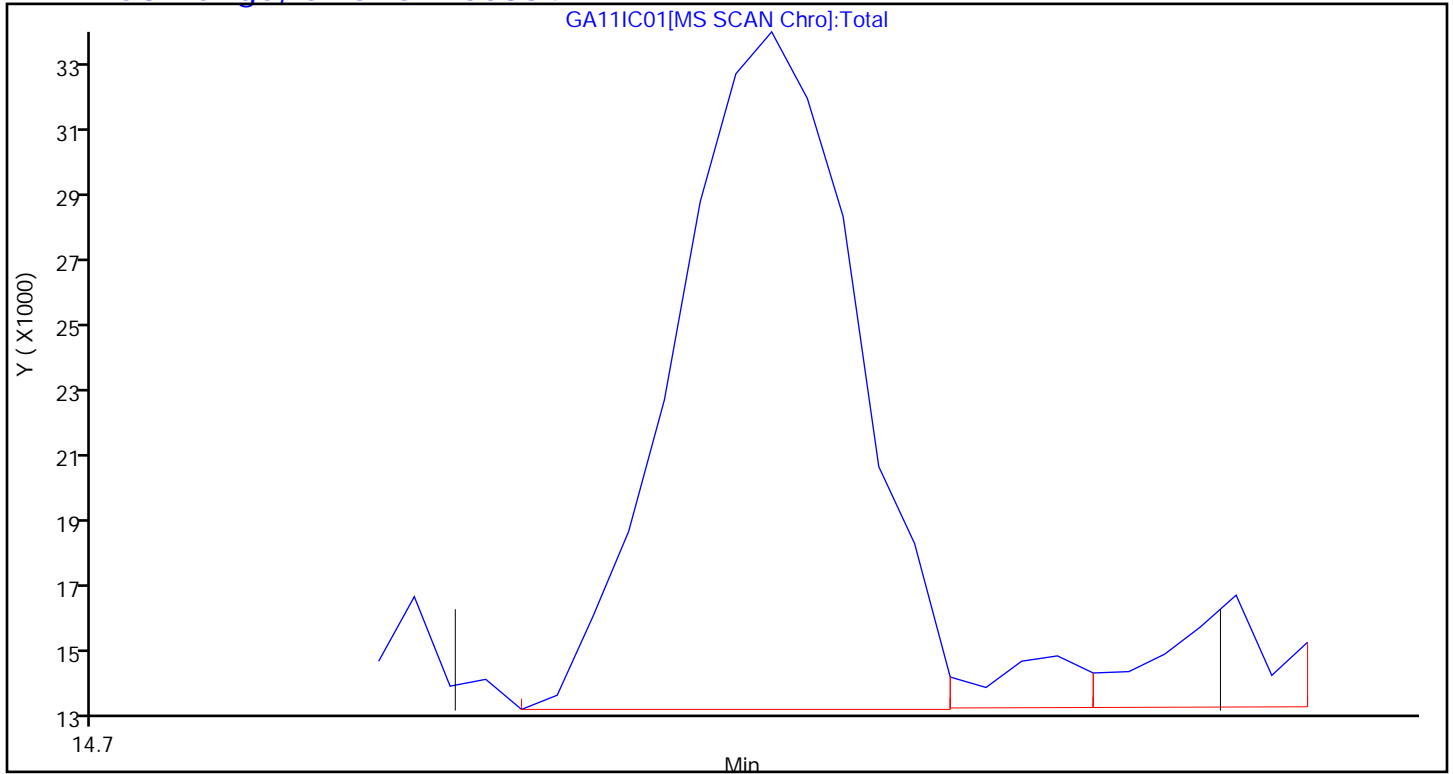
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834

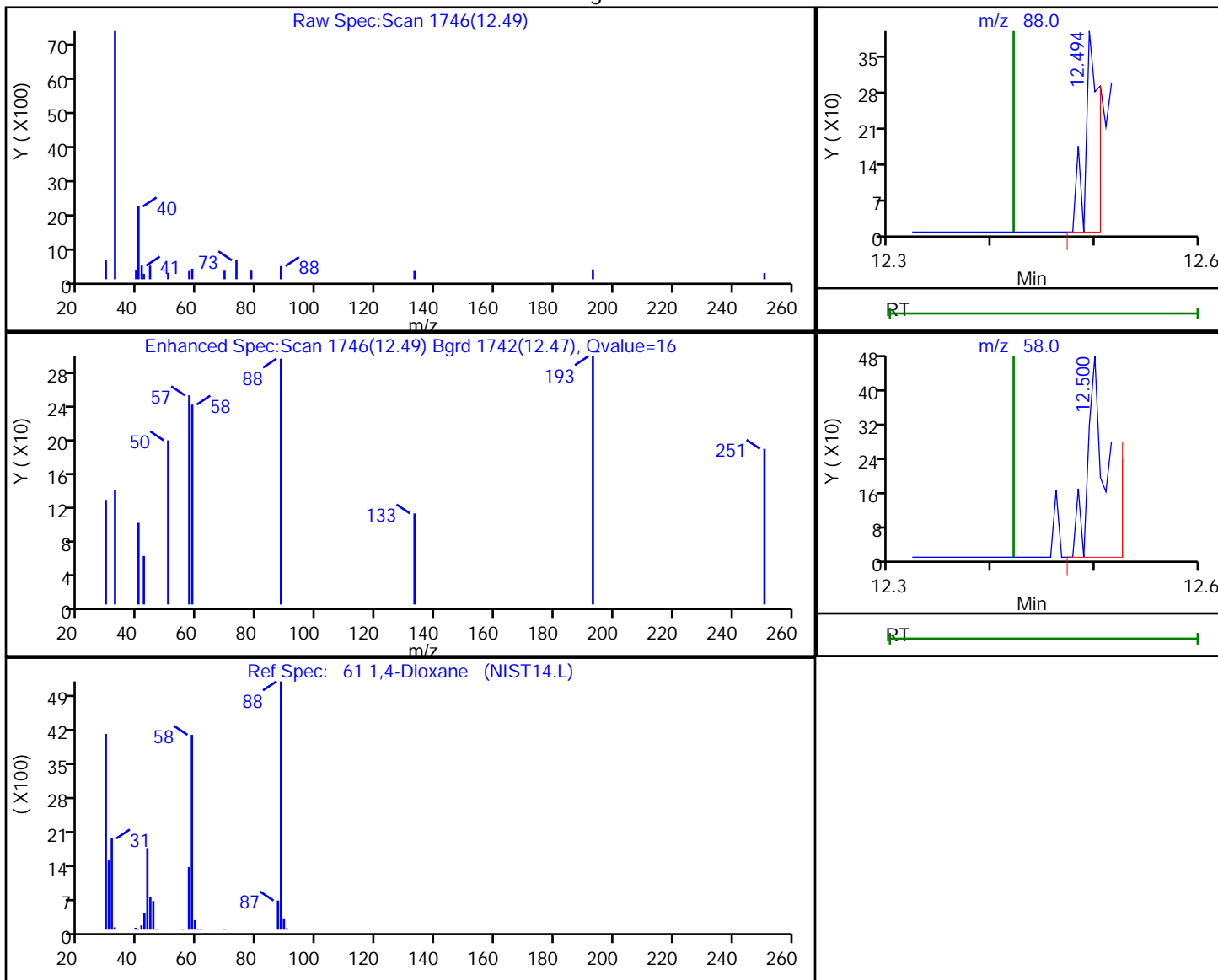


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D
Injection Date: 11-Jan-2019 16:46:30 Instrument ID: MG
Lims ID: IC L1
Client ID:
Operator ID: 007126 ALS Bottle#: 1 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

61 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
12.49	88.00	361	0.007427
12.50	58.00	563	

Reviewer: barlozhetskayaa, 14-Jan-2019 16:39:43

Audit Action: Marked Compound Undetected

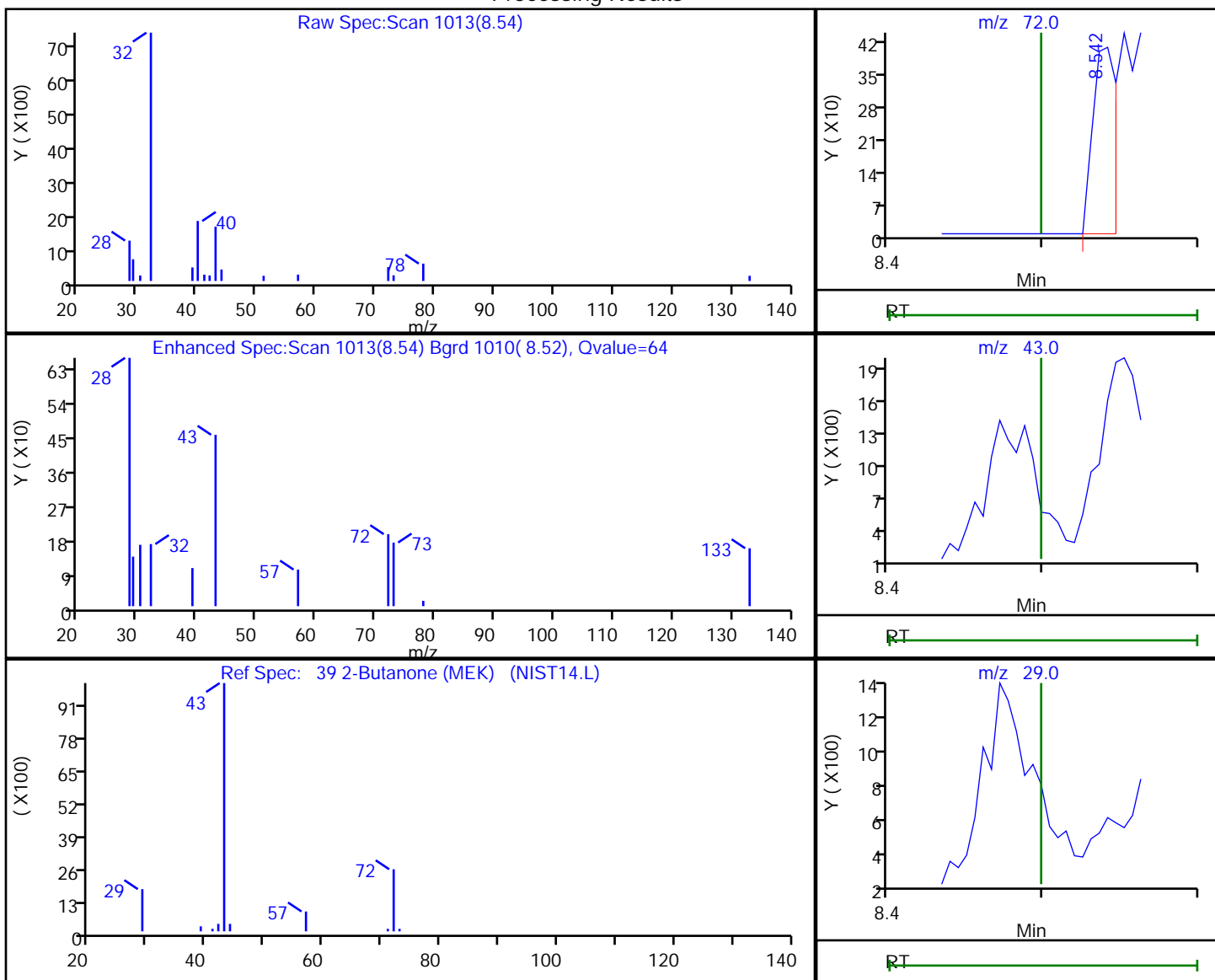
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D
 Injection Date: 11-Jan-2019 16:46:30 Instrument ID: MG
 Lims ID: IC L1
 Client ID:
 Operator ID: 007126 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

39 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
8.54	72.00	434	0.006863
8.50	43.00	0	
8.50	29.00	0	

Reviewer: barlozhetskayaa, 14-Jan-2019 16:39:32

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 11-Jan-2019 17:29:30 ALS Bottle#: 1 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-010
 Misc. Info.: 201657
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:49 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 12:55:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	97	383461	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	96	2241329	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	92	2135368	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	84	1724522	4.00	3.94	
6 Chlorodifluoromethane	51	3.834	3.829	0.005	96	13029	0.0400	0.0519	
7 Propene	41	3.845	3.838	0.007	97	10664	0.0400	0.0760	
8 Dichlorodifluoromethane	85	3.899	3.894	0.005	99	18210	0.0400	0.0449	
9 Chloromethane	52	4.098	4.091	0.007	81	4029	0.0400	0.0904	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	90	10609	0.0400	0.0447	
12 Vinyl chloride	62	4.282	4.277	0.005	39	6583	0.0400	0.0426	
11 Acetaldehyde	44	4.293	4.278	0.015	94	27240	0.2000	0.4746	
13 Butane	43	4.373	4.373	0.000	87	15315	0.0400	0.0589	
14 Butadiene	54	4.379	4.375	0.004	57	4915	0.0400	0.0412	
15 Bromomethane	94	4.724	4.722	0.002	96	6503	0.0400	0.0487	
16 Chloroethane	64	4.875	4.879	-0.004	87	3157	0.0400	0.0424	
17 Ethanol	31	5.101	5.064	0.037	98	16097	0.2000	0.2385	
18 Vinyl bromide	106	5.209	5.205	0.004	96	5557	0.0400	0.0449	
19 2-Methylbutane	43	5.258	5.256	0.002	95	9723	0.0400	0.0521	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	16790	0.0400	0.0422	
21 Acrolein	56	5.538	5.526	0.012	51	2743	0.0400	0.0801	
23 Acetone	58	5.705	5.666	0.039	97	13906	0.1200	0.2412	
24 Pentane	72	5.727	5.725	0.002	80	933	0.0400	0.0367	
25 Isopropyl alcohol	45	5.921	5.840	0.081	98	20121	0.1200	0.1309	
26 Ethyl ether	31	5.986	5.943	0.043	83	7609	0.0400	0.0460	
27 1,1-Dichloroethene	96	6.239	6.242	-0.003	94	5250	0.0400	0.0388	
28 Acrylonitrile	53	6.379	6.375	0.004	88	3780	0.0400	0.0405	
29 1,1,2-Trichloro-1,2,2-trif	101	6.423	6.428	-0.005	94	12189	0.0400	0.0416	
30 2-Methyl-2-propanol	59	6.671	6.534	0.137	88	8632	0.0400	0.0410	
31 Methylene Chloride	84	6.611	6.610	0.001	97	24679	0.0400	0.1567	
32 3-Chloro-1-propene	39	6.627	6.626	0.001	93	7240	0.0400	0.0431	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.778	6.778	0.000	99	17154	0.0400	0.0418	
34 trans-1,2-Dichloroethene	96	7.442	7.450	-0.008	87	5310	0.0400	0.0392	
35 2-Methylpentane	43	7.463	7.468	-0.005	95	17087	0.0400	0.0441	
36 Methyl tert-butyl ether	73	7.706	7.643	0.063	97	13784	0.0400	0.0366	
37 1,1-Dichloroethane	63	7.884	7.892	-0.008	99	11544	0.0400	0.0414	
38 Vinyl acetate	43	8.029	8.016	0.013	100	13405	0.0400	0.0347	
40 Hexane	56	8.477	8.480	-0.003	87	5618	0.0400	0.0450	
39 2-Butanone (MEK)	72	8.536	8.499	0.037	98	2572	0.0400	0.0423	
41 Isopropyl ether	45	8.747	8.679	0.068	96	16803	0.0400	0.0351	
42 cis-1,2-Dichloroethene	96	8.898	8.906	-0.008	95	5311	0.0400	0.0383	
43 Ethyl acetate	43	9.162	9.131	0.031	98	11371	0.0400	0.0358	
44 Chloroform	83	9.248	9.261	-0.013	28	12869	0.0400	0.0401	
45 Tert-butyl ethyl ether	59	9.442	9.389	0.053	97	14659	0.0400	0.0332	
46 Tetrahydrofuran	42	9.793	9.725	0.068	92	6738	0.0400	0.0397	
47 1,1,1-Trichloroethane	97	10.294	10.303	-0.009	96	13331	0.0400	0.0384	
48 1,2-Dichloroethane	62	10.407	10.416	-0.009	97	8382	0.0400	0.0383	
49 Cyclohexane	69	10.882	10.888	-0.006	74	3093	0.0400	0.0420	
50 Benzene	78	10.887	10.893	-0.006	96	15963	0.0400	0.0398	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	97	11874	0.0400	0.0357	
53 2,3-Dimethylpentane	71	11.006	11.000	0.006	90	4248	0.0400	0.0402	
51 n-Butanol	31	11.071	11.004	0.067	54	2052	0.0400	0.0409	
54 Thiophene	84	11.157	11.164	-0.007	96	9203	0.0400	0.0395	
55 Isooctane	57	11.632	11.632	0.000	97	31627	0.0400	0.0403	
56 n-Heptane	71	11.998	11.995	0.003	95	6342	0.0400	0.0394	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	82	6605	0.0400	0.0419	
58 Trichloroethene	130	12.122	12.124	-0.002	92	7238	0.0400	0.0397	
59 Dibromomethane	93	12.203	12.216	-0.013	95	8080	0.0400	0.0487	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	97	11513	0.0400	0.0352	
61 1,4-Dioxane	88	12.489	12.421	0.068	65	2092	0.0400	0.0449	
62 Methyl methacrylate	41	12.473	12.453	0.020	89	6964	0.0400	0.0346	
63 Methylcyclohexane	83	12.877	12.879	-0.002	92	11041	0.0400	0.0402	
64 4-Methyl-2-pentanone (MIBK)	43	13.357	13.321	0.036	98	10902	0.0400	0.0346	
65 cis-1,3-Dichloropropene	75	13.336	13.336	0.000	97	8857	0.0400	0.0369	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	96	8494	0.0400	0.0369	
67 Toluene	91	14.144	14.144	0.000	93	18809	0.0400	0.0400	
68 1,1,2-Trichloroethane	83	14.215	14.220	-0.006	93	5479	0.0400	0.0382	
69 2-Hexanone	58	14.657	14.631	0.026	92	4307	0.0400	0.0305	
70 n-Octane	85	14.808	14.804	0.004	96	6439	0.0400	0.0381	
71 Chlorodibromomethane	129	14.916	14.920	-0.004	96	9202	0.0400	0.0317	
72 Ethylene Dibromide	107	15.201	15.207	-0.006	94	8663	0.0400	0.0348	
73 Tetrachloroethene	129	15.271	15.272	-0.001	87	6973	0.0400	0.0396	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	94	23890	0.0400	0.0416	
75 Chlorobenzene	112	16.140	16.142	-0.002	75	13951	0.0400	0.0382	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	24780	0.0400	0.0388	
79 m-Xylene & p-Xylene	91	16.576	16.582	-0.006	99	36147	0.0800	0.0740	
80 n-Nonane	57	16.975	16.977	-0.002	95	13596	0.0400	0.0391	
81 Bromoform	173	17.040	17.041	-0.001	79	7868	0.0400	0.0310	
82 Styrene	104	17.045	17.047	-0.002	97	10474	0.0400	0.0310	
83 o-Xylene	91	17.099	17.106	-0.007	97	18010	0.0400	0.0350	
84 1,1,1,2,2-Tetrachloroethane	83	17.423	17.430	-0.007	95	11381	0.0400	0.0329	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	95	3874	0.0400	0.0350	
86 Isopropylbenzene	105	17.682	17.684	-0.002	96	25754	0.0400	0.0375	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 N-Propylbenzene	120	18.205	18.205	0.000	97	6114	0.0400	0.0329	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	96	6524	0.0400	0.0385	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	22914	0.0400	0.0334	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	92	9227	0.0400	0.0346	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	86	7231	0.0400	0.0269	
93 n-Decane	57	18.679	18.682	-0.003	89	16235	0.0400	0.0381	
94 tert-Butylbenzene	119	18.836	18.832	0.004	90	19737	0.0400	0.0332	
95 1,2,4-Trimethylbenzene	105	18.847	18.846	0.001	96	18671	0.0400	0.0319	
96 sec-Butylbenzene	105	19.095	19.094	0.001	98	27915	0.0400	0.0333	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	94	13761	0.0400	0.0360	
98 Benzyl chloride	91	19.186	19.188	-0.002	96	15426	0.0400	0.0296	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	87	14670	0.0400	0.0374	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	21389	0.0400	0.0319	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	98	18233	0.0400	0.0345	
102 Butylcyclohexane	83	19.353	19.353	0.000	90	18731	0.0400	0.0388	
103 2,3-Dihydroindene	117	19.548	19.550	-0.002	92	17941	0.0400	0.0339	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	86	12181	0.0400	0.0318	
105 n-Butylbenzene	91	19.672	19.673	-0.001	95	23860	0.0400	0.0350	
106 Indene	116	19.677	19.679	-0.002	76	14464	0.0400	0.0318	
107 Undecane	57	19.963	19.963	0.000	95	15243	0.0400	0.0353	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	84	5571	0.0400	0.0352	
109 1,2,4,5-Tetramethylbenzene	119	20.421	20.417	0.004	96	18455	0.0400	0.0303	
110 Dodecane	57	21.014	21.014	0.000	94	12818	0.0400	0.0375	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	91	11357	0.0400	0.0377	
112 Naphthalene	128	21.376	21.377	-0.001	98	24728	0.0400	0.0375	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	87	9776	0.0400	0.0303	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	93	10806	0.0400	0.0406	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	99	13713	0.0400	0.0427	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	98	17895	0.0400	0.0455	
A 122 C8 Range	1	14.803	(14.755-14.870)		0	79904	0.0400	0.0474	
S 123 1,2-Dichloroethene, Total	1				0		0.0800	0.0775	
S 124 Xylenes, Total	100				0		0.1200	0.1090	

Reagents:

40L1-3DQP_00011

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC02.D

Injection Date: 11-Jan-2019 17:29:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L2

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

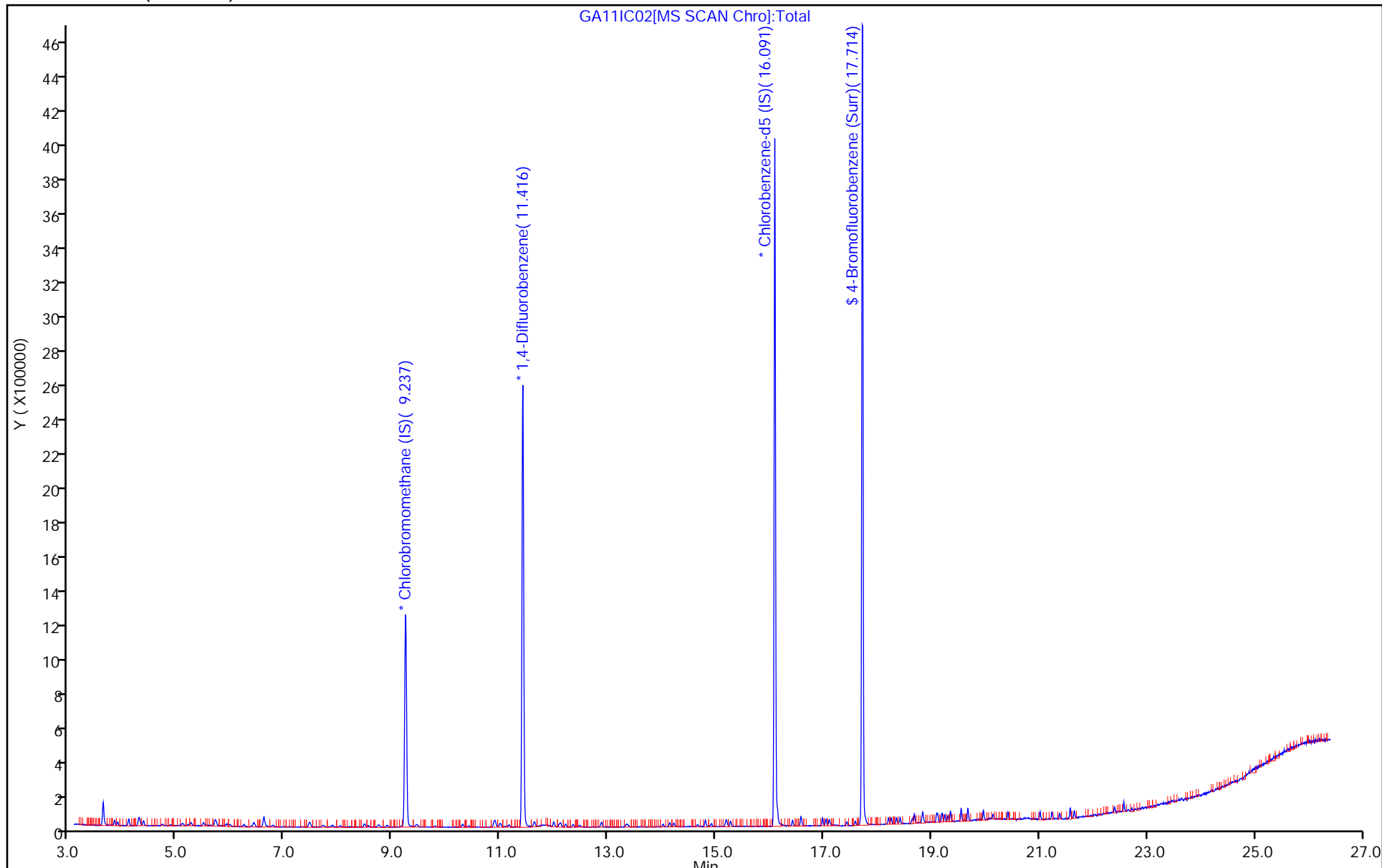
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC02.D

Injection Date: 11-Jan-2019 17:29:30

Instrument ID: MG

Lims ID: IC L2

Client ID:

Operator ID: 007126

ALS Bottle#: 1

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

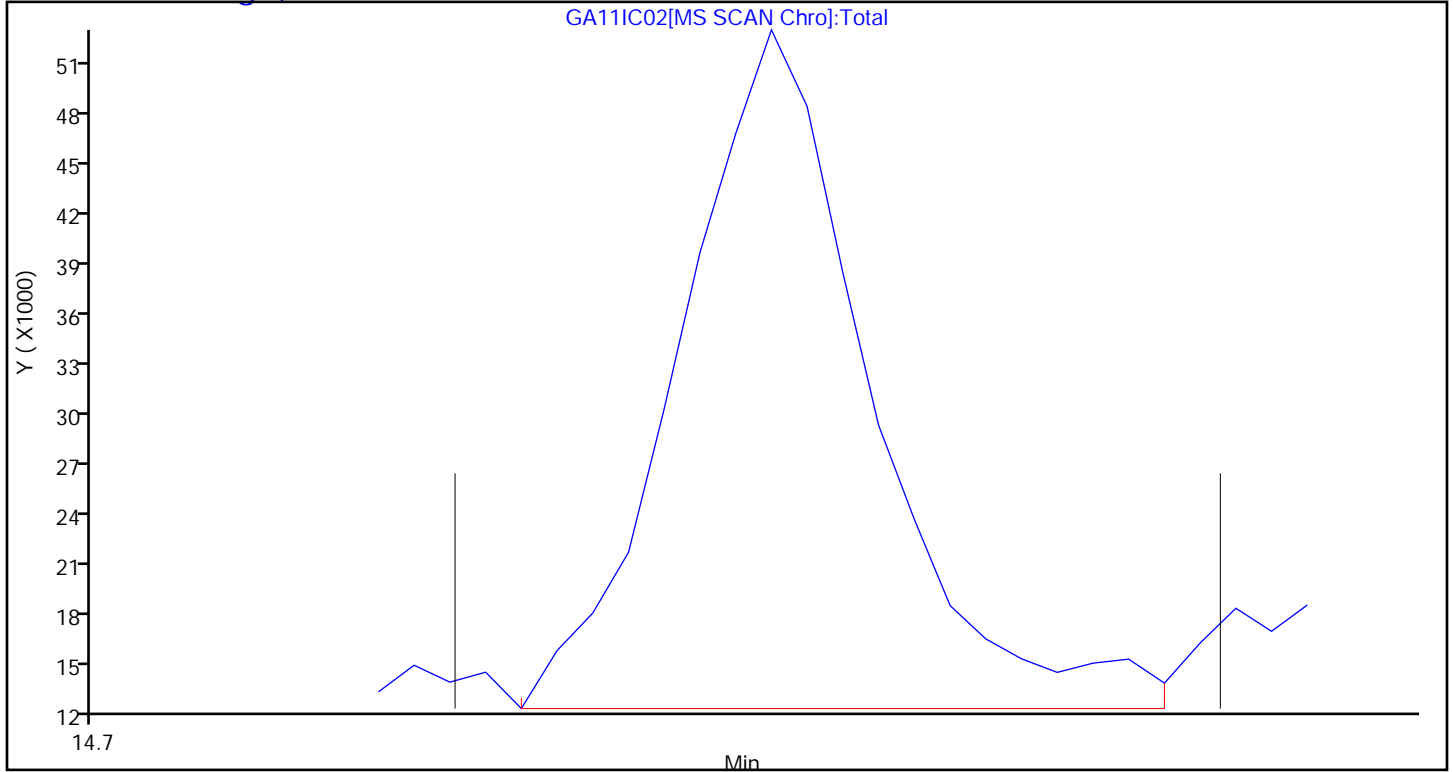
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834

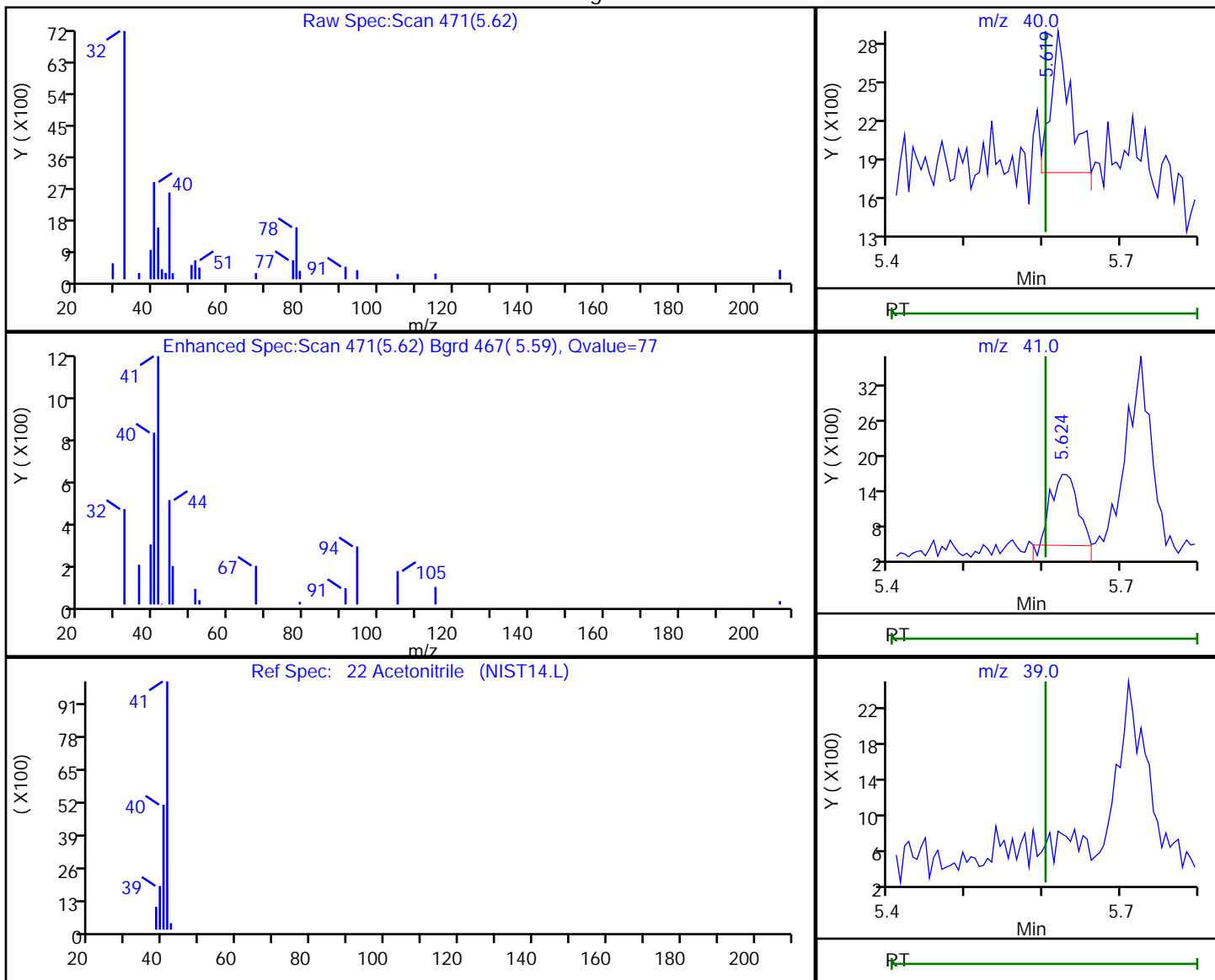


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC02.D
 Injection Date: 11-Jan-2019 17:29:30 Instrument ID: MG
 Lims ID: IC L2
 Client ID:
 Operator ID: 007126 ALS Bottle#: 1 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

22 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
5.62	40.00	1867	0.034937
5.62	41.00	2860	
5.60	39.00	0	

Reviewer: barlozhetskayaa, 14-Jan-2019 16:37:44

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 11-Jan-2019 18:12:30 ALS Bottle#: 1 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-011
 Misc. Info.: 201657
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:56 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa Date: 14-Jan-2019 17:11:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	98	367691	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	96	2082867	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	93	2070201	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	84	1705365	4.00	4.02	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	97	21711	0.0800	0.0901	
7 Propene	41	3.840	3.838	0.002	97	16425	0.0800	0.1221	
8 Dichlorodifluoromethane	85	3.893	3.894	-0.001	99	32728	0.0800	0.0841	
9 Chloromethane	52	4.098	4.091	0.007	67	5382	0.0800	0.1259	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	92	19448	0.0800	0.0855	
12 Vinyl chloride	62	4.282	4.277	0.005	42	12737	0.0800	0.0860	
11 Acetaldehyde	44	4.287	4.278	0.009	92	55698	0.4000	1.01	
13 Butane	43	4.373	4.373	0.000	88	28045	0.0800	0.1125	
14 Butadiene	54	4.379	4.375	0.004	60	10439	0.0800	0.0912	
15 Bromomethane	94	4.729	4.722	0.007	97	12169	0.0800	0.0951	
16 Chloroethane	64	4.880	4.879	0.001	86	6344	0.0800	0.0889	
17 Ethanol	31	5.085	5.064	0.021	98	32740	0.4000	0.5058	
18 Vinyl bromide	106	5.204	5.205	-0.001	98	10174	0.0800	0.0858	
19 2-Methylbutane	43	5.258	5.256	0.002	93	17744	0.0800	0.0991	
20 Trichlorofluoromethane	101	5.495	5.492	0.003	100	31414	0.0800	0.0823	
21 Acrolein	56	5.533	5.526	0.007	91	5061	0.0800	0.1541	
22 Acetonitrile	40	5.614	5.603	0.011	98	4681	0.0800	0.0914	
23 Acetone	58	5.689	5.666	0.023	99	29244	0.2400	0.5291	
24 Pentane	72	5.732	5.725	0.007	67	2263	0.0800	0.0928	
25 Isopropyl alcohol	45	5.878	5.840	0.038	99	39615	0.2400	0.2688	
26 Ethyl ether	31	5.970	5.943	0.027	87	15127	0.0800	0.0954	
27 1,1-Dichloroethene	96	6.245	6.242	0.003	95	11039	0.0800	0.0851	
28 Acrylonitrile	53	6.379	6.375	0.004	95	7623	0.0800	0.0851	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	92	24196	0.0800	0.0860	
30 2-Methyl-2-propanol	59	6.611	6.534	0.077	55	18927	0.0800	0.0938	
31 Methylene Chloride	84	6.606	6.610	-0.004	97	27617	0.0800	0.1829	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.617	6.626	-0.009	55	14784	0.0800	0.0918	
33 Carbon disulfide	76	6.778	6.778	0.000	100	33755	0.0800	0.0857	
34 trans-1,2-Dichloroethene	96	7.442	7.450	-0.008	96	10703	0.0800	0.0824	
35 2-Methylpentane	43	7.469	7.468	0.001	96	32181	0.0800	0.0865	
36 Methyl tert-butyl ether	73	7.679	7.643	0.036	97	31073	0.0800	0.0860	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	99	22407	0.0800	0.0839	
38 Vinyl acetate	43	8.024	8.016	0.008	100	29912	0.0800	0.0807	
40 Hexane	56	8.477	8.480	-0.003	82	10084	0.0800	0.0842	
39 2-Butanone (MEK)	72	8.526	8.499	0.027	98	6283	0.0800	0.1077	
41 Isopropyl ether	45	8.709	8.679	0.030	96	37979	0.0800	0.0828	
42 cis-1,2-Dichloroethene	96	8.892	8.906	-0.014	97	10779	0.0800	0.0811	
43 Ethyl acetate	43	9.151	9.131	0.020	98	25120	0.0800	0.0825	
44 Chloroform	83	9.259	9.261	-0.002	93	25085	0.0800	0.0816	
45 Tert-butyl ethyl ether	59	9.426	9.389	0.037	96	33984	0.0800	0.0803	
46 Tetrahydrofuran	42	9.760	9.725	0.035	93	14658	0.0800	0.0900	
47 1,1,1-Trichloroethane	97	10.294	10.303	-0.009	96	27166	0.0800	0.0816	
48 1,2-Dichloroethane	62	10.407	10.416	-0.009	97	17516	0.0800	0.0860	
49 Cyclohexane	69	10.887	10.888	-0.001	72	5675	0.0800	0.0829	
50 Benzene	78	10.887	10.893	-0.006	97	33352	0.0800	0.0895	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	96	24215	0.0800	0.0784	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	91	8397	0.0800	0.0855	
51 n-Butanol	31	11.060	11.004	0.056	43	4173	0.0800	0.0895	
54 Thiophene	84	11.157	11.164	-0.007	95	18410	0.0800	0.0851	
55 Isooctane	57	11.626	11.632	-0.006	97	63694	0.0800	0.0873	
56 n-Heptane	71	11.993	11.995	-0.002	95	13419	0.0800	0.0896	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	82	12771	0.0800	0.0872	
58 Trichloroethene	130	12.122	12.124	-0.002	91	13973	0.0800	0.0824	
59 Dibromomethane	93	12.214	12.216	-0.002	92	14509	0.0800	0.0940	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	99	23694	0.0800	0.0779	
61 1,4-Dioxane	88	12.462	12.421	0.041	44	4453	0.0800	0.1028	
62 Methyl methacrylate	41	12.457	12.453	0.004	89	14956	0.0800	0.0799	
63 Methylcyclohexane	83	12.877	12.879	-0.002	91	21112	0.0800	0.0828	
64 4-Methyl-2-pentanone (MIBK)	43	13.341	13.321	0.020	90	24146	0.0800	0.0824	
65 cis-1,3-Dichloropropene	75	13.336	13.336	0.000	96	18964	0.0800	0.0851	
66 trans-1,3-Dichloropropene	75	14.010	14.019	-0.009	96	18209	0.0800	0.0816	
67 Toluene	91	14.139	14.144	-0.005	94	37560	0.0800	0.0825	
68 1,1,2-Trichloroethane	83	14.214	14.220	-0.006	95	11656	0.0800	0.0839	
69 2-Hexanone	58	14.651	14.631	0.020	92	10295	0.0800	0.0753	
70 n-Octane	85	14.802	14.804	-0.002	95	13108	0.0800	0.0800	
71 Chlorodibromomethane	129	14.915	14.920	-0.005	97	19680	0.0800	0.0698	
72 Ethylene Dibromide	107	15.201	15.207	-0.006	98	17903	0.0800	0.0743	
73 Tetrachloroethene	129	15.266	15.272	-0.006	91	13185	0.0800	0.0771	
74 2,3-Dimethylheptane	43	16.134	16.139	-0.005	94	47348	0.0800	0.0851	
75 Chlorobenzene	112	16.140	16.142	-0.002	75	29142	0.0800	0.0823	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	48941	0.0800	0.0791	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	79756	0.1600	0.1685	
80 n-Nonane	57	16.975	16.977	-0.002	94	27868	0.0800	0.0827	
81 Bromoform	173	17.035	17.041	-0.006	89	16038	0.0800	0.0651	
82 Styrene	104	17.040	17.047	-0.007	97	22430	0.0800	0.0685	
83 o-Xylene	91	17.105	17.106	-0.001	97	40418	0.0800	0.0810	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	97	26816	0.0800	0.0800	
85 1,2,3-Trichloropropane	110	17.590	17.587	0.003	96	8767	0.0800	0.0816	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	95	53331	0.0800	0.0801	
87 N-Propylbenzene	120	18.199	18.205	-0.006	98	14187	0.0800	0.0789	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	13286	0.0800	0.0808	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	97	52613	0.0800	0.0792	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	93	20417	0.0800	0.0790	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	86	17649	0.0800	0.0676	
93 n-Decane	57	18.679	18.682	-0.003	90	34455	0.0800	0.0834	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	44314	0.0800	0.0768	
95 1,2,4-Trimethylbenzene	105	18.841	18.846	-0.005	96	44184	0.0800	0.0779	
96 sec-Butylbenzene	105	19.089	19.094	-0.005	98	62984	0.0800	0.0776	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	96	27898	0.0800	0.0753	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	35336	0.0800	0.0699	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	90	28727	0.0800	0.0756	
100 4-Isopropyltoluene	119	19.246	19.251	-0.005	96	46995	0.0800	0.0724	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	41757	0.0800	0.0814	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	38846	0.0800	0.0830	
103 2,3-Dihydroindene	117	19.548	19.550	-0.002	92	39872	0.0800	0.0778	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	91	27621	0.0800	0.0745	
105 n-Butylbenzene	91	19.672	19.673	-0.001	96	50796	0.0800	0.0769	
106 Indene	116	19.677	19.679	-0.002	90	31427	0.0800	0.0714	
107 Undecane	57	19.963	19.963	0.000	92	32520	0.0800	0.0776	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	83	11218	0.0800	0.0732	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	96	41572	0.0800	0.0703	
110 Dodecane	57	21.014	21.014	0.000	93	28563	0.0800	0.0863	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	91	20313	0.0800	0.0695	
112 Naphthalene	128	21.376	21.377	-0.001	99	47569	0.0800	0.0745	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	91	21118	0.0800	0.0675	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	94	20063	0.0800	0.0777	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	98	23120	0.0800	0.0743	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	28473	0.0800	0.0746	
A 122 C8 Range	1	14.792	(14.754-14.870)		0	138324	0.0800	0.0846	
S 123 1,2-Dichloroethene, Total	1				0		0.1600	0.1634	
S 124 Xylenes, Total	100				0		0.2400	0.2494	

Reagents:

40L1-3DQP_00011

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC03.D

Injection Date: 11-Jan-2019 18:12:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L3

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

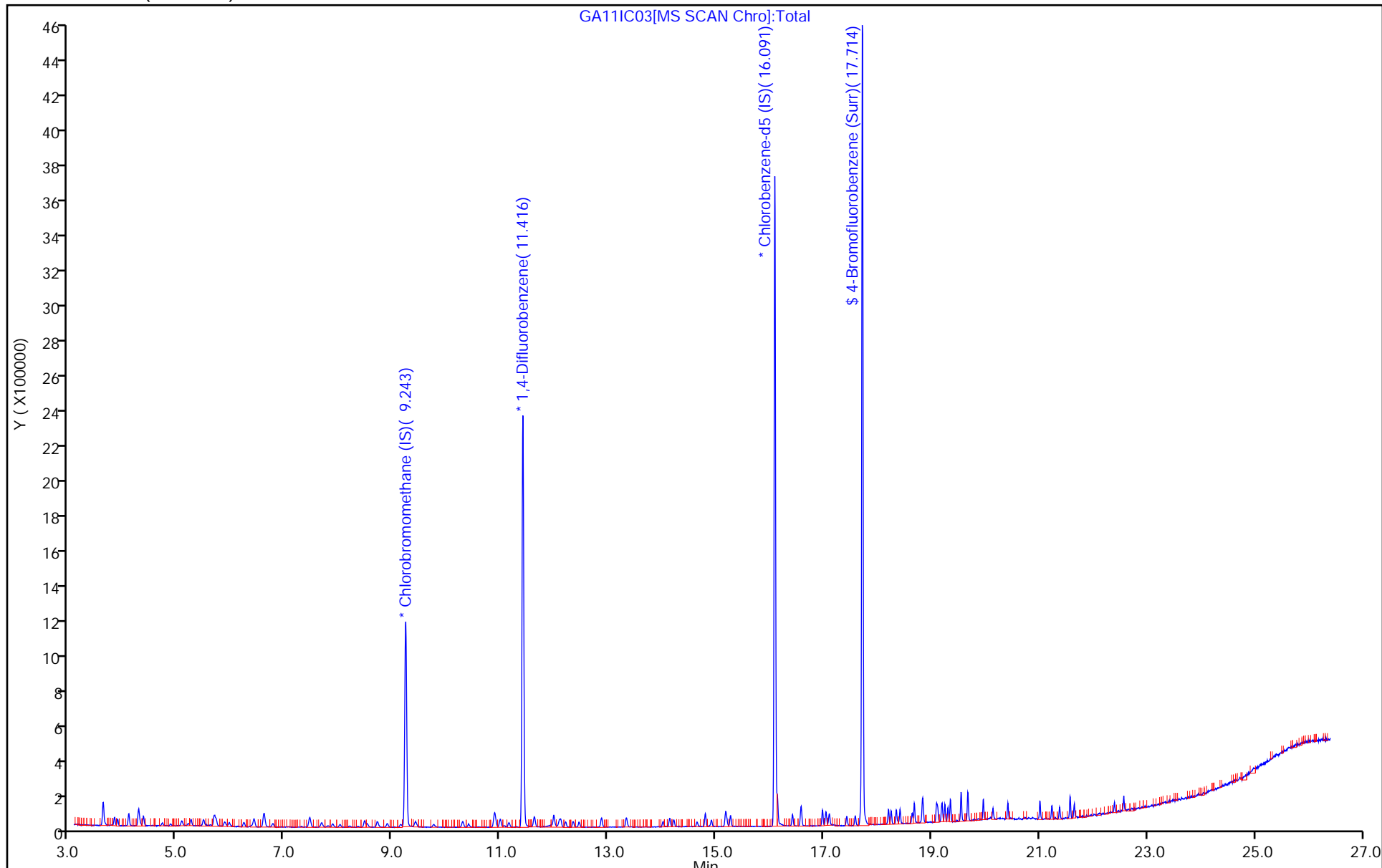
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC03.D

Injection Date: 11-Jan-2019 18:12:30

Instrument ID: MG

Lims ID: IC L3

Client ID:

Operator ID: 007126

ALS Bottle#: 1

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

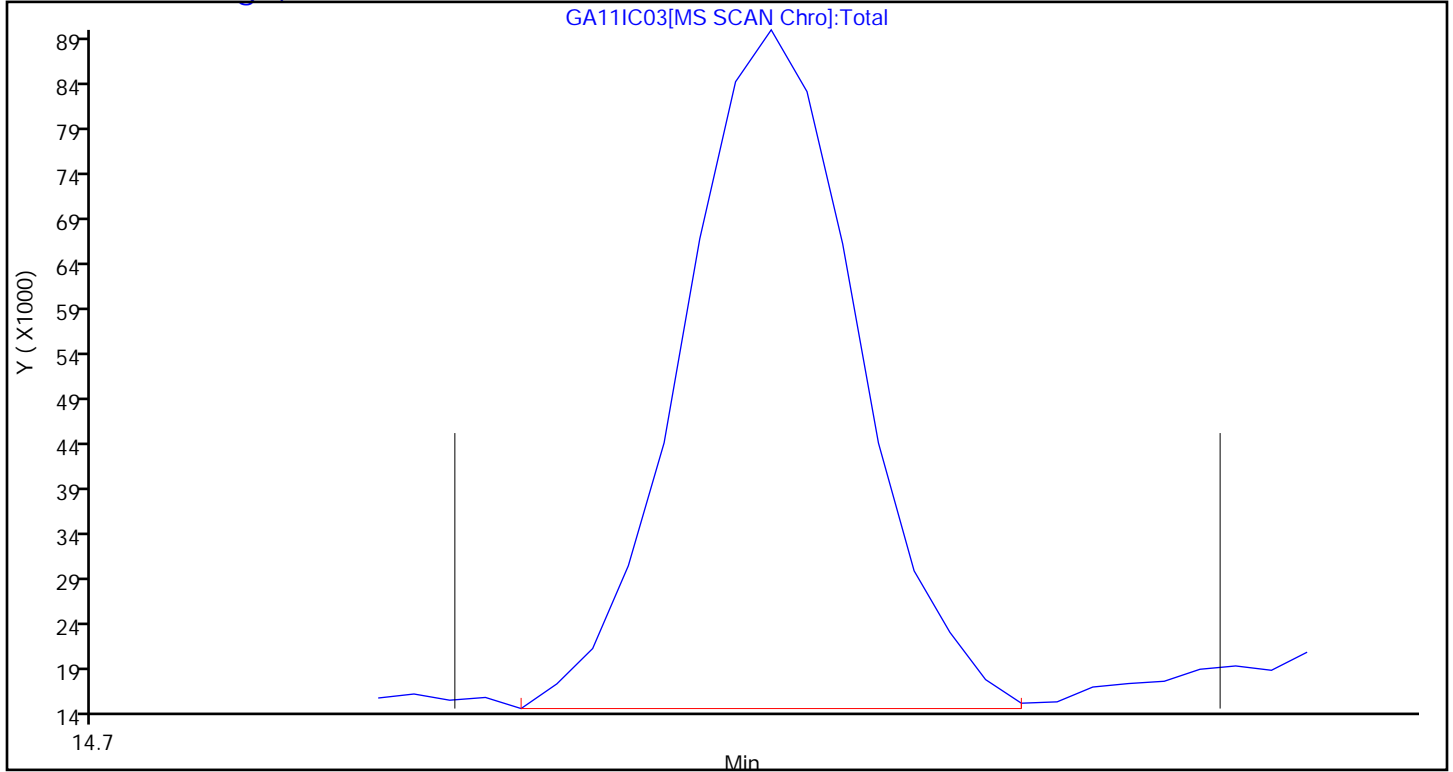
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 11-Jan-2019 18:56:30 ALS Bottle#: 2 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-012
 Misc. Info.: 201656
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:02 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 13:37:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	97	384858	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	97	2291754	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	92	2138235	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	84	1745466	4.00	3.98	
6 Chlorodifluoromethane	51	3.834	3.829	0.005	98	42570	0.1600	0.1689	
7 Propene	41	3.840	3.838	0.002	95	27727	0.1600	0.1970	
8 Dichlorodifluoromethane	85	3.899	3.894	0.005	100	68237	0.1600	0.1675	
9 Chloromethane	52	4.093	4.091	0.002	76	8660	0.1600	0.1936	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.109	4.103	0.006	92	39319	0.1600	0.1651	
12 Vinyl chloride	62	4.282	4.277	0.005	98	25449	0.1600	0.1642	
11 Acetaldehyde	44	4.287	4.278	0.009	95	72390	0.8000	1.26	
13 Butane	43	4.373	4.373	0.000	88	47326	0.1600	0.1813	
14 Butadiene	54	4.379	4.375	0.004	66	19602	0.1600	0.1636	
15 Bromomethane	94	4.724	4.722	0.002	98	21546	0.1600	0.1609	
16 Chloroethane	64	4.886	4.879	0.007	89	12373	0.1600	0.1657	
17 Ethanol	31	5.091	5.064	0.027	97	66636	0.8000	0.9835	
18 Vinyl bromide	106	5.204	5.205	-0.001	97	20331	0.1600	0.1638	
19 2-Methylbutane	43	5.258	5.256	0.002	94	31631	0.1600	0.1689	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	100	63826	0.1600	0.1598	
21 Acrolein	56	5.538	5.526	0.012	78	7324	0.1600	0.2130	
22 Acetonitrile	40	5.619	5.603	0.016	98	7481	0.1600	0.1395	
23 Acetone	58	5.689	5.666	0.023	99	41892	0.4800	0.7241	
24 Pentane	72	5.727	5.725	0.002	78	4701	0.1600	0.1841	
25 Isopropyl alcohol	45	5.889	5.840	0.049	99	79400	0.4800	0.5147	
26 Ethyl ether	31	5.970	5.943	0.027	88	31253	0.1600	0.1883	
27 1,1-Dichloroethene	96	6.245	6.242	0.003	94	21196	0.1600	0.1560	
28 Acrylonitrile	53	6.374	6.375	-0.001	90	14588	0.1600	0.1555	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	93	47135	0.1600	0.1601	
30 2-Methyl-2-propanol	59	6.617	6.534	0.083	49	35554	0.1600	0.1683	
31 Methylene Chloride	84	6.611	6.610	0.001	99	39858	0.1600	0.2522	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.627	6.626	0.001	94	29914	0.1600	0.1775	
33 Carbon disulfide	76	6.778	6.778	0.000	100	67457	0.1600	0.1636	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	21313	0.1600	0.1567	
35 2-Methylpentane	43	7.469	7.468	0.001	96	64503	0.1600	0.1657	
36 Methyl tert-butyl ether	73	7.679	7.643	0.036	97	59673	0.1600	0.1577	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	44696	0.1600	0.1599	
38 Vinyl acetate	43	8.019	8.016	0.003	100	59807	0.1600	0.1541	
40 Hexane	56	8.482	8.480	0.002	88	20822	0.1600	0.1660	
39 2-Butanone (MEK)	72	8.520	8.499	0.021	98	10552	0.1600	0.1728	
41 Isopropyl ether	45	8.709	8.679	0.030	97	77502	0.1600	0.1613	
42 cis-1,2-Dichloroethene	96	8.908	8.906	0.002	97	22108	0.1600	0.1589	
43 Ethyl acetate	43	9.146	9.131	0.015	98	49778	0.1600	0.1562	
44 Chloroform	83	9.253	9.261	-0.008	95	52455	0.1600	0.1630	
45 Tert-butyl ethyl ether	59	9.421	9.389	0.032	98	67993	0.1600	0.1534	
46 Tetrahydrofuran	42	9.755	9.725	0.030	93	27618	0.1600	0.1620	
47 1,1,1-Trichloroethane	97	10.305	10.303	0.002	96	55384	0.1600	0.1590	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	98	35324	0.1600	0.1577	
49 Cyclohexane	69	10.893	10.888	0.005	73	12681	0.1600	0.1684	
50 Benzene	78	10.893	10.893	0.000	97	65637	0.1600	0.1602	
52 Carbon tetrachloride	117	10.914	10.913	0.001	96	50848	0.1600	0.1496	
53 2,3-Dimethylpentane	71	11.001	11.000	0.001	92	17105	0.1600	0.1583	
51 n-Butanol	31	11.081	11.004	0.077	85	8226	0.1600	0.1603	
54 Thiophene	84	11.162	11.164	-0.002	97	37543	0.1600	0.1577	
55 Isooctane	57	11.631	11.632	-0.001	98	129920	0.1600	0.1619	
56 n-Heptane	71	11.993	11.995	-0.002	95	26105	0.1600	0.1585	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	83	25661	0.1600	0.1592	
58 Trichloroethene	130	12.117	12.124	-0.007	91	28091	0.1600	0.1505	
59 Dibromomethane	93	12.214	12.216	-0.002	91	27744	0.1600	0.1634	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	98	48577	0.1600	0.1451	
61 1,4-Dioxane	88	12.446	12.421	0.025	87	8684	0.1600	0.1823	
62 Methyl methacrylate	41	12.462	12.453	0.009	91	27631	0.1600	0.1342	
63 Methylcyclohexane	83	12.877	12.879	-0.002	92	44641	0.1600	0.1591	
64 4-Methyl-2-pentanone (MIBK)	43	13.341	13.321	0.020	98	51311	0.1600	0.1591	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	98	38186	0.1600	0.1558	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	96	34634	0.1600	0.1503	
67 Toluene	91	14.139	14.144	-0.005	93	75222	0.1600	0.1599	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	97	23218	0.1600	0.1617	
69 2-Hexanone	58	14.651	14.631	0.020	92	22692	0.1600	0.1607	
70 n-Octane	85	14.802	14.804	-0.002	97	26877	0.1600	0.1588	
71 Chlorodibromomethane	129	14.921	14.920	0.001	96	39627	0.1600	0.1361	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	37712	0.1600	0.1515	
73 Tetrachloroethene	129	15.271	15.272	-0.001	93	28219	0.1600	0.1599	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	95	96324	0.1600	0.1675	
75 Chlorobenzene	112	16.140	16.142	-0.002	87	58935	0.1600	0.1612	
78 Ethylbenzene	91	16.420	16.422	-0.002	100	102987	0.1600	0.1611	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	160595	0.3200	0.3284	
80 n-Nonane	57	16.975	16.977	-0.002	95	57416	0.1600	0.1651	
81 Bromoform	173	17.040	17.041	-0.001	77	32352	0.1600	0.1271	
82 Styrene	104	17.045	17.047	-0.002	98	46527	0.1600	0.1376	
83 o-Xylene	91	17.105	17.106	-0.001	98	85176	0.1600	0.1652	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	98	52217	0.1600	0.1508	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	16530	0.1600	0.1490	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	96	108667	0.1600	0.1581	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	27021	0.1600	0.1454	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	96	26657	0.1600	0.1571	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	100995	0.1600	0.1472	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	91	39553	0.1600	0.1482	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	33405	0.1600	0.1239	
93 n-Decane	57	18.679	18.682	-0.003	88	72566	0.1600	0.1701	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	89	90284	0.1600	0.1516	
95 1,2,4-Trimethylbenzene	105	18.841	18.846	-0.005	96	89238	0.1600	0.1524	
96 sec-Butylbenzene	105	19.089	19.094	-0.005	98	130314	0.1600	0.1554	
97 1,3-Dichlorobenzene	146	19.111	19.117	-0.006	97	57634	0.1600	0.1506	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	71441	0.1600	0.1369	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	91	58838	0.1600	0.1499	
100 4-Isopropyltoluene	119	19.246	19.251	-0.005	96	99360	0.1600	0.1481	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	88511	0.1600	0.1671	
102 Butylcyclohexane	83	19.348	19.353	-0.005	89	80140	0.1600	0.1659	
103 2,3-Dihydroindene	117	19.547	19.550	-0.003	93	79681	0.1600	0.1505	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	93	56506	0.1600	0.1475	
105 n-Butylbenzene	91	19.672	19.673	-0.001	96	108576	0.1600	0.1591	
106 Indene	116	19.677	19.679	-0.002	96	64720	0.1600	0.1423	
107 Undecane	57	19.963	19.963	0.000	94	73748	0.1600	0.1704	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	86	22412	0.1600	0.1415	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	96	90241	0.1600	0.1478	
110 Dodecane	57	21.014	21.014	0.000	94	60222	0.1600	0.1761	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	92	41810	0.1600	0.1385	
112 Naphthalene	128	21.376	21.377	-0.001	98	92896	0.1600	0.1408	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	92	43365	0.1600	0.1341	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	94	39185	0.1600	0.1470	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	99	40866	0.1600	0.1271	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	98	54667	0.1600	0.1387	
A 122 C8 Range	1	14.798	(14.754-14.881)		0	278341	0.1600	0.1648	
S 123 1,2-Dichloroethene, Total	1				0		0.3200	0.3155	
S 124 Xylenes, Total	100				0		0.4800	0.4936	

Reagents:

40L4DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC04.D

Injection Date: 11-Jan-2019 18:56:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L4

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

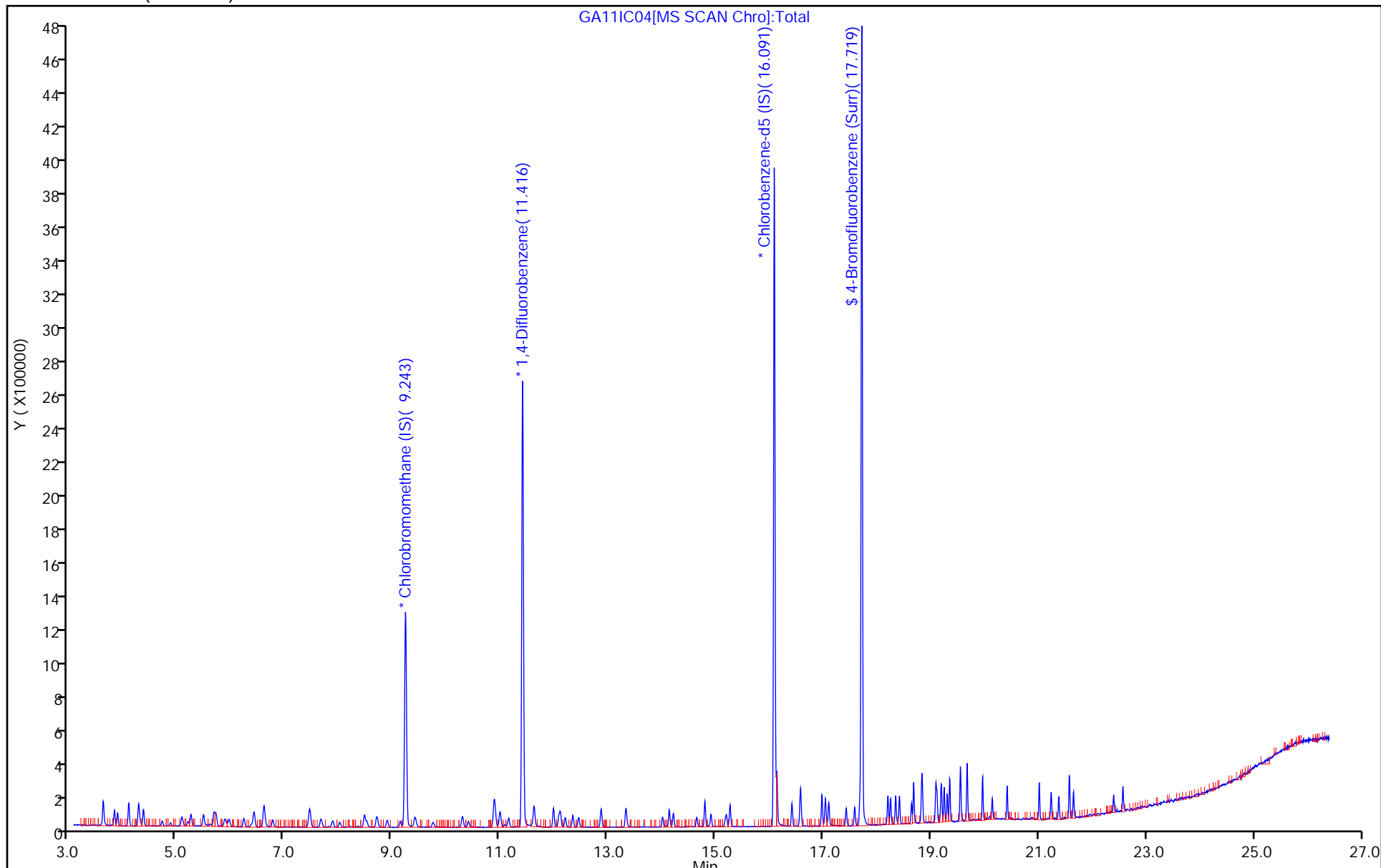
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC04.D

Injection Date: 11-Jan-2019 18:56:30

Instrument ID: MG

Lims ID: IC L4

Client ID:

Operator ID: 007126

ALS Bottle#: 2

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

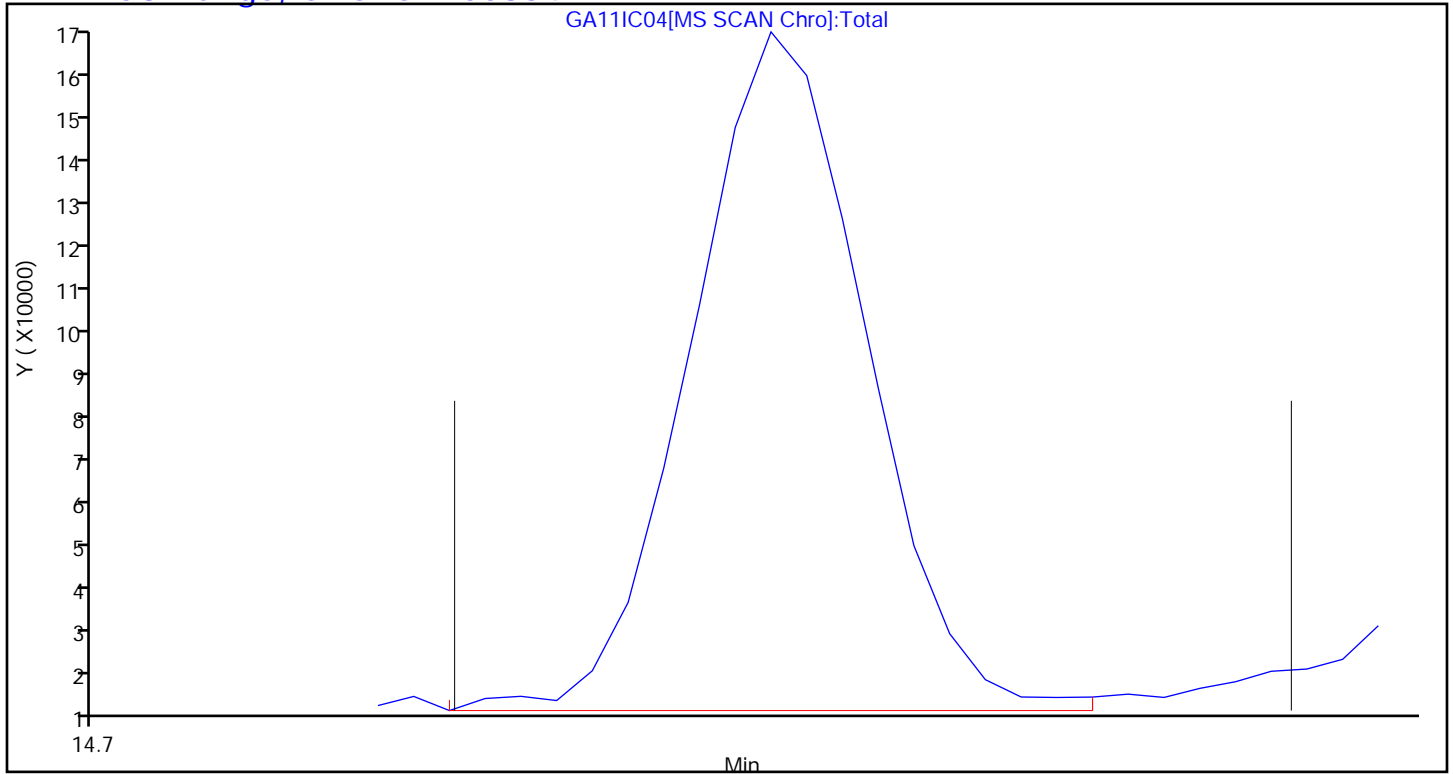
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 11-Jan-2019 19:40:30 ALS Bottle#: 3 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-013
 Misc. Info.: 201655
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:09 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 13:37:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	98	402791	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	96	2195514	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	92	2073004	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.718	0.001	86	1732344	4.00	4.08	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	97	107824	0.4000	0.4086	
7 Propene	41	3.839	3.838	0.001	97	60077	0.4000	0.4078	
8 Dichlorodifluoromethane	85	3.893	3.894	-0.001	100	169908	0.4000	0.3984	
9 Chloromethane	52	4.093	4.091	0.002	66	19699	0.4000	0.4208	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	93	98572	0.4000	0.3956	
12 Vinyl chloride	62	4.276	4.277	-0.001	64	62942	0.4000	0.3880	
11 Acetaldehyde	44	4.276	4.278	-0.002	93	140654	2.00	2.33	
13 Butane	43	4.373	4.373	0.000	87	114610	0.4000	0.4196	
14 Butadiene	54	4.373	4.375	-0.002	64	50104	0.4000	0.3996	
15 Bromomethane	94	4.718	4.722	-0.004	97	54574	0.4000	0.3895	
16 Chloroethane	64	4.880	4.879	0.001	88	31401	0.4000	0.4018	
17 Ethanol	31	5.058	5.064	-0.006	97	143467	2.00	2.02	
18 Vinyl bromide	106	5.198	5.205	-0.007	98	51677	0.4000	0.3978	
19 2-Methylbutane	43	5.252	5.256	-0.004	93	82259	0.4000	0.4196	
20 Trichlorofluoromethane	101	5.489	5.492	-0.003	99	166966	0.4000	0.3993	
21 Acrolein	56	5.522	5.526	-0.004	96	14239	0.4000	0.3957	
22 Acetonitrile	40	5.597	5.603	-0.006	98	22116	0.4000	0.3940	
23 Acetone	58	5.662	5.666	-0.004	99	86023	1.20	1.42	
24 Pentane	72	5.727	5.725	0.002	90	11269	0.4000	0.4218	
25 Isopropyl alcohol	45	5.824	5.840	-0.016	99	219917	1.20	1.36	
26 Ethyl ether	31	5.937	5.943	-0.006	90	76885	0.4000	0.4426	
27 1,1-Dichloroethene	96	6.234	6.242	-0.008	94	56607	0.4000	0.3982	
28 Acrylonitrile	53	6.363	6.375	-0.012	97	37127	0.4000	0.3783	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	94	126693	0.4000	0.4112	
30 2-Methyl-2-propanol	59	6.519	6.534	-0.015	96	99796	0.4000	0.4513	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	72672	0.4000	0.4394	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	94	69253	0.4000	0.3927	
33 Carbon disulfide	76	6.773	6.778	-0.005	100	175320	0.4000	0.4064	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	57740	0.4000	0.4056	
35 2-Methylpentane	43	7.468	7.468	0.000	96	169974	0.4000	0.4173	
36 Methyl tert-butyl ether	73	7.630	7.643	-0.013	97	165819	0.4000	0.4187	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	117133	0.4000	0.4003	
38 Vinyl acetate	43	8.008	8.016	-0.008	100	158808	0.4000	0.3909	
40 Hexane	56	8.482	8.480	0.002	84	53409	0.4000	0.4069	
39 2-Butanone (MEK)	72	8.498	8.499	-0.001	96	27277	0.4000	0.4268	
41 Isopropyl ether	45	8.671	8.679	-0.008	97	213908	0.4000	0.4255	
42 cis-1,2-Dichloroethene	96	8.903	8.906	-0.003	97	57247	0.4000	0.3930	
43 Ethyl acetate	43	9.124	9.131	-0.007	98	134280	0.4000	0.4026	
44 Chloroform	83	9.253	9.261	-0.008	95	132214	0.4000	0.3926	
45 Tert-butyl ethyl ether	59	9.383	9.389	-0.006	97	193609	0.4000	0.4174	
46 Tetrahydrofuran	42	9.717	9.725	-0.008	95	73368	0.4000	0.4111	
47 1,1,1-Trichloroethane	97	10.299	10.303	-0.004	95	145486	0.4000	0.3991	
48 1,2-Dichloroethane	62	10.407	10.416	-0.009	98	87574	0.4000	0.4080	
49 Cyclohexane	69	10.887	10.888	-0.001	92	31319	0.4000	0.4341	
50 Benzene	78	10.887	10.893	-0.006	98	167643	0.4000	0.4270	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	97	138991	0.4000	0.4268	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	90	45390	0.4000	0.4384	
51 n-Butanol	31	11.017	11.004	0.013	68	22433	0.4000	0.4563	
54 Thiophene	84	11.157	11.164	-0.007	97	95028	0.4000	0.4166	
55 Isooctane	57	11.626	11.632	-0.006	97	336411	0.4000	0.4375	
56 n-Heptane	71	11.987	11.995	-0.008	95	66081	0.4000	0.4187	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	88	64714	0.4000	0.4192	
58 Trichloroethene	130	12.117	12.124	-0.007	94	74264	0.4000	0.4154	
59 Dibromomethane	93	12.214	12.216	-0.002	92	67675	0.4000	0.4161	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	98	129879	0.4000	0.4050	
61 1,4-Dioxane	88	12.419	12.421	-0.002	96	19464	0.4000	0.4264	
62 Methyl methacrylate	41	12.446	12.453	-0.007	90	81302	0.4000	0.4121	
63 Methylcyclohexane	83	12.877	12.879	-0.002	94	116952	0.4000	0.4352	
64 4-Methyl-2-pentanone (MIBK)	43	13.314	13.321	-0.007	99	143236	0.4000	0.4635	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	96	96201	0.4000	0.4096	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	97	93722	0.4000	0.4194	
67 Toluene	91	14.139	14.144	-0.005	93	192974	0.4000	0.4231	
68 1,1,2-Trichloroethane	83	14.214	14.220	-0.006	99	60205	0.4000	0.4326	
69 2-Hexanone	58	14.630	14.631	-0.001	91	65409	0.4000	0.4779	
70 n-Octane	85	14.802	14.804	-0.002	96	73243	0.4000	0.4465	
71 Chlorodibromomethane	129	14.915	14.920	-0.005	98	110810	0.4000	0.3926	
72 Ethylene Dibromide	107	15.207	15.207	0.000	99	99001	0.4000	0.4102	
73 Tetrachloroethene	129	15.271	15.272	-0.001	94	72561	0.4000	0.4240	
74 2,3-Dimethylheptane	43	16.139	16.139	0.000	96	247510	0.4000	0.4440	
75 Chlorobenzene	112	16.139	16.142	-0.003	76	157211	0.4000	0.4434	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	272217	0.4000	0.4392	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	425545	0.8000	0.8976	
80 n-Nonane	57	16.975	16.977	-0.002	95	151720	0.4000	0.4499	
81 Bromoform	173	17.040	17.041	-0.001	91	93899	0.4000	0.3806	
82 Styrene	104	17.045	17.047	-0.002	98	134724	0.4000	0.4111	
83 o-Xylene	91	17.105	17.106	-0.001	97	219991	0.4000	0.4401	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	146757	0.4000	0.4371	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	45222	0.4000	0.4206	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	288484	0.4000	0.4329	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	77981	0.4000	0.4329	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	96	71471	0.4000	0.4343	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	288122	0.4000	0.4332	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	92	109634	0.4000	0.4236	
92 Alpha Methyl Styrene	118	18.641	18.644	-0.003	87	99545	0.4000	0.3809	
93 n-Decane	57	18.679	18.682	-0.003	89	189531	0.4000	0.4582	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	239278	0.4000	0.4144	
95 1,2,4-Trimethylbenzene	105	18.841	18.846	-0.005	97	236361	0.4000	0.4162	
96 sec-Butylbenzene	105	19.089	19.094	-0.005	98	346547	0.4000	0.4263	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	98	153722	0.4000	0.4143	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	206433	0.4000	0.4080	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	91	154004	0.4000	0.4047	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	272972	0.4000	0.4197	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	235583	0.4000	0.4588	
102 Butylcyclohexane	83	19.348	19.353	-0.005	91	211972	0.4000	0.4525	
103 2,3-Dihydroindene	117	19.547	19.550	-0.003	93	207350	0.4000	0.4040	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	92	146910	0.4000	0.3956	
105 n-Butylbenzene	91	19.671	19.673	-0.002	98	288957	0.4000	0.4367	
106 Indene	116	19.677	19.679	-0.002	90	178805	0.4000	0.4055	
107 Undecane	57	19.963	19.963	0.000	95	202684	0.4000	0.4829	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	87	65206	0.4000	0.4247	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	96	260569	0.4000	0.4402	
110 Dodecane	57	21.014	21.014	0.000	93	173512	0.4000	0.5235	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	93	119662	0.4000	0.4088	
112 Naphthalene	128	21.375	21.377	-0.002	99	294401	0.4000	0.4604	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	93	119102	0.4000	0.3800	
114 1,2,3-Trichlorobenzene	180	21.650	21.651	-0.001	95	116648	0.4000	0.4513	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	167946	0.4000	0.5387	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	209066	0.4000	0.5472	
A 122 C8 Range	1	14.792	(14.744-14.881)		0	716916	0.4000	0.4380	
S 123 1,2-Dichloroethene, Total	1				0		0.8000	0.7986	
S 124 Xylenes, Total	100				0		1.20	1.34	

Reagents:

40L5DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC05.D

Injection Date: 11-Jan-2019 19:40:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L5

Worklist Smp#: 13

Client ID:

Purge Vol: 500.000 mL

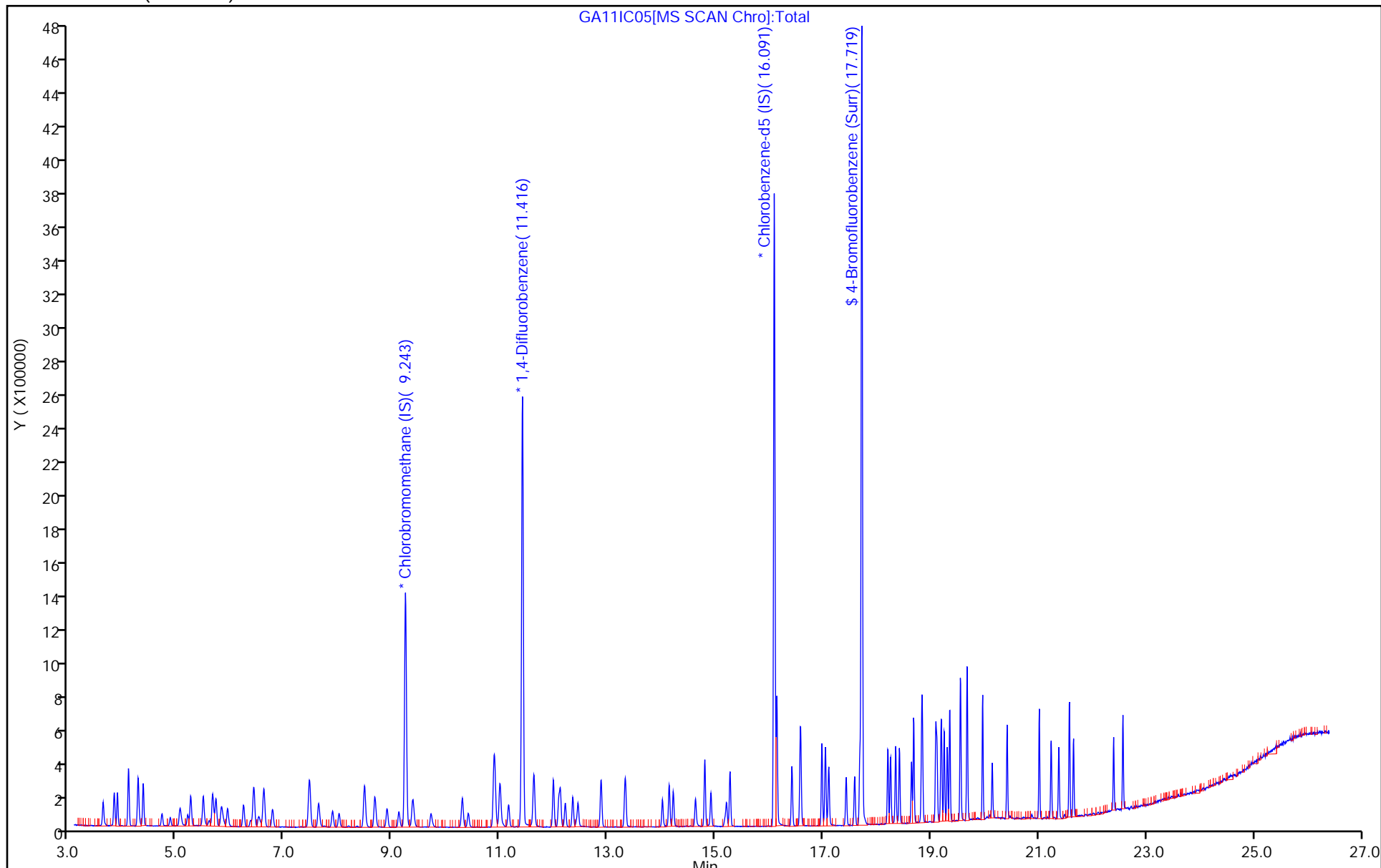
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC05.D

Injection Date: 11-Jan-2019 19:40:30

Instrument ID: MG

Lims ID: IC L5

Client ID:

Operator ID: 007126

ALS Bottle#: 3

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

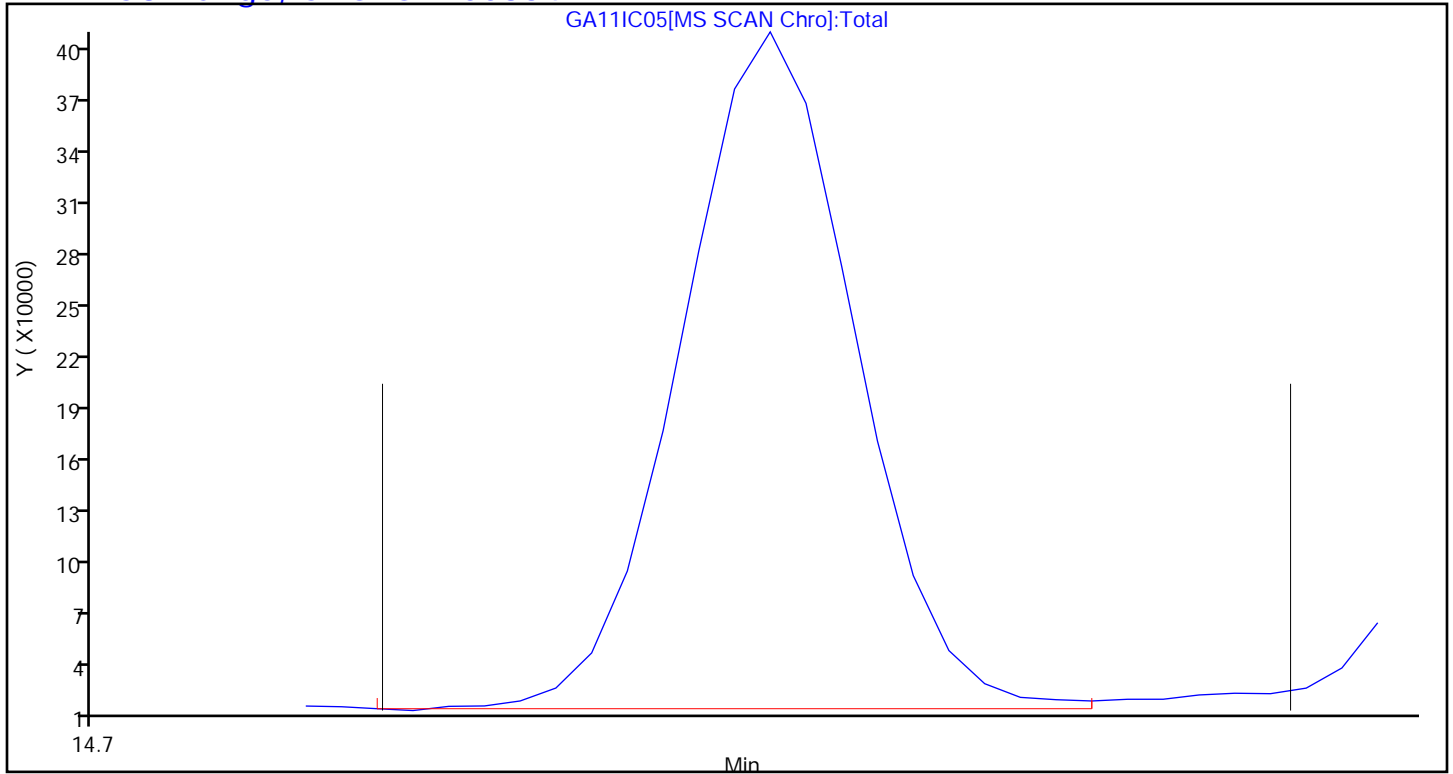
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 11-Jan-2019 20:23:30 ALS Bottle#: 4 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-014
 Misc. Info.: 201654
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:16 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa

Date: 14-Jan-2019 16:59:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.249	-0.001	97	422587	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2375134	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	91	2240571	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	86	1821597	4.00	3.97	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	97	261958	1.00	0.9463	
7 Propene	41	3.840	3.838	0.002	98	149007	1.00	0.9640	
8 Dichlorodifluoromethane	85	3.894	3.894	0.000	100	428033	1.00	0.9568	
9 Chloromethane	52	4.088	4.091	-0.003	99	46960	1.00	0.9561	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	95	249678	1.00	0.9551	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	156203	1.00	0.9178	
11 Acetaldehyde	44	4.271	4.278	-0.007	93	351718	5.00	5.56	
13 Butane	43	4.373	4.373	0.000	86	277412	1.00	0.9681	
14 Butadiene	54	4.373	4.375	-0.002	67	127206	1.00	0.9671	
15 Bromomethane	94	4.719	4.722	-0.003	99	138169	1.00	0.9398	
16 Chloroethane	64	4.875	4.879	-0.004	88	77933	1.00	0.9504	
17 Ethanol	31	5.042	5.064	-0.022	98	296853	5.00	3.99	
18 Vinyl bromide	106	5.204	5.205	-0.001	98	130640	1.00	0.9586	
19 2-Methylbutane	43	5.252	5.256	-0.004	93	203924	1.00	0.99	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	422050	1.00	0.9621	
21 Acrolein	56	5.517	5.526	-0.009	95	39091	1.00	1.04	
22 Acetonitrile	40	5.592	5.603	-0.011	99	61491	1.00	1.04	
23 Acetone	58	5.651	5.666	-0.015	99	220327	3.00	3.47	
24 Pentane	72	5.722	5.725	-0.003	97	28000	1.00	1.00	
25 Isopropyl alcohol	45	5.808	5.840	-0.032	99	502108	3.00	2.96	
26 Ethyl ether	31	5.926	5.943	-0.017	90	194355	1.00	1.07	
27 1,1-Dichloroethene	96	6.239	6.242	-0.003	94	147877	1.00	0.99	
28 Acrylonitrile	53	6.363	6.375	-0.012	95	104178	1.00	1.01	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	94	322940	1.00	1.00	
30 2-Methyl-2-propanol	59	6.477	6.534	-0.058	95	237979	1.00	1.03	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	158748	1.00	0.9148	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	95	172933	1.00	0.9347	
33 Carbon disulfide	76	6.773	6.778	-0.005	100	454099	1.00	1.00	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	152597	1.00	1.02	
35 2-Methylpentane	43	7.469	7.468	0.001	96	425850	1.00	1.00	
36 Methyl tert-butyl ether	73	7.609	7.643	-0.034	97	436887	1.00	1.05	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	301902	1.00	0.9834	
38 Vinyl acetate	43	8.008	8.016	-0.008	100	421041	1.00	0.9879	
40 Hexane	56	8.477	8.480	-0.003	75	139897	1.00	1.02	
39 2-Butanone (MEK)	72	8.482	8.499	-0.017	94	71674	1.00	1.07	
41 Isopropyl ether	45	8.660	8.679	-0.019	96	564806	1.00	1.07	
42 cis-1,2-Dichloroethene	96	8.903	8.906	-0.003	98	153350	1.00	1.00	
43 Ethyl acetate	43	9.113	9.131	-0.018	98	367561	1.00	1.05	
44 Chloroform	83	9.259	9.261	-0.002	96	346742	1.00	0.9814	
45 Tert-butyl ethyl ether	59	9.361	9.389	-0.028	96	516698	1.00	1.06	
46 Tetrahydrofuran	42	9.696	9.725	-0.029	94	196936	1.00	1.05	
47 1,1,1-Trichloroethane	97	10.300	10.303	-0.003	95	377403	1.00	0.9867	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	98	232618	1.00	1.00	
49 Cyclohexane	69	10.882	10.888	-0.006	88	82609	1.00	1.06	
50 Benzene	78	10.893	10.893	0.000	97	444635	1.00	1.05	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	97	372817	1.00	1.06	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	89	118426	1.00	1.06	
51 n-Butanol	31	11.001	11.004	-0.003	70	59954	1.00	1.13	
54 Thiophene	84	11.162	11.164	-0.002	97	249671	1.00	1.01	
55 Isooctane	57	11.632	11.632	0.000	98	868592	1.00	1.04	
56 n-Heptane	71	11.993	11.995	-0.002	94	174693	1.00	1.02	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	86	170338	1.00	1.02	
58 Trichloroethene	130	12.122	12.124	-0.002	94	194217	1.00	1.00	
59 Dibromomethane	93	12.214	12.216	-0.002	94	172040	1.00	0.9778	
60 Dichlorobromomethane	83	12.354	12.354	0.000	98	346754	1.00	1.00	
61 1,4-Dioxane	88	12.414	12.421	-0.007	97	36737	1.00	0.7440	
62 Methyl methacrylate	41	12.446	12.453	-0.007	90	232640	1.00	1.09	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	305916	1.00	1.05	
64 4-Methyl-2-pentanone (MIBK)	43	13.309	13.321	-0.012	97	377024	1.00	1.13	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	98	265941	1.00	1.05	
66 trans-1,3-Dichloropropene	75	14.020	14.019	0.001	97	249246	1.00	1.03	
67 Toluene	91	14.139	14.144	-0.005	93	514273	1.00	1.04	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	98	160780	1.00	1.07	
69 2-Hexanone	58	14.619	14.631	-0.012	91	175250	1.00	1.18	
70 n-Octane	85	14.802	14.804	-0.002	96	186587	1.00	1.05	
71 Chlorodibromomethane	129	14.916	14.920	-0.004	98	313050	1.00	1.03	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	273278	1.00	1.05	
73 Tetrachloroethene	129	15.271	15.272	-0.001	94	191154	1.00	1.03	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	96	641178	1.00	1.06	
75 Chlorobenzene	112	16.140	16.142	-0.002	92	406499	1.00	1.06	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	719275	1.00	1.07	
79 m-Xylene & p-Xylene	91	16.576	16.582	-0.006	99	1128063	2.00	2.20	
80 n-Nonane	57	16.975	16.977	-0.002	94	396249	1.00	1.09	
81 Bromoform	173	17.040	17.041	-0.001	92	288479	1.00	1.08	
82 Styrene	104	17.046	17.047	-0.001	99	379313	1.00	1.07	
83 o-Xylene	91	17.105	17.106	-0.001	98	577831	1.00	1.07	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	388902	1.00	1.07	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	123267	1.00	1.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	770189	1.00	1.07	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	208028	1.00	1.07	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	190674	1.00	1.07	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	757218	1.00	1.05	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	91	298107	1.00	1.07	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	294414	1.00	1.04	
93 n-Decane	57	18.679	18.682	-0.003	89	491714	1.00	1.10	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	674397	1.00	1.08	
95 1,2,4-Trimethylbenzene	105	18.847	18.846	0.001	97	670745	1.00	1.09	
96 sec-Butylbenzene	105	19.095	19.094	0.001	98	963943	1.00	1.10	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	99	429682	1.00	1.07	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	595380	1.00	1.09	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	92	436204	1.00	1.06	
100 4-Isopropyltoluene	119	19.246	19.251	-0.005	96	779650	1.00	1.11	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	664909	1.00	1.20	
102 Butylcyclohexane	83	19.353	19.353	0.000	90	562871	1.00	1.11	
103 2,3-Dihydroindene	117	19.548	19.550	-0.002	93	602700	1.00	1.09	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	94	416753	1.00	1.04	
105 n-Butylbenzene	91	19.672	19.673	-0.001	98	814617	1.00	1.14	
106 Indene	116	19.677	19.679	-0.002	92	516302	1.00	1.08	
107 Undecane	57	19.963	19.963	0.000	95	527231	1.00	1.16	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	90	207960	1.00	1.25	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	96	733964	1.00	1.15	
110 Dodecane	57	21.014	21.014	0.000	94	446881	1.00	1.25	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	360521	1.00	1.14	
112 Naphthalene	128	21.376	21.377	-0.001	99	839854	1.00	1.22	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	95	361175	1.00	1.07	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	95	351962	1.00	1.26	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	514300	1.00	1.53	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	628512	1.00	1.52	
A 122 C8 Range	1	14.803	(14.744-14.902)		0	1842861	1.00	1.04	
S 123 1,2-Dichloroethene, Total	1				0		2.00	2.03	
S 124 Xylenes, Total	100				0		3.00	3.27	

Reagents:

40L6DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC06.D

Injection Date: 11-Jan-2019 20:23:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L6

Worklist Smp#: 14

Client ID:

Purge Vol: 500.000 mL

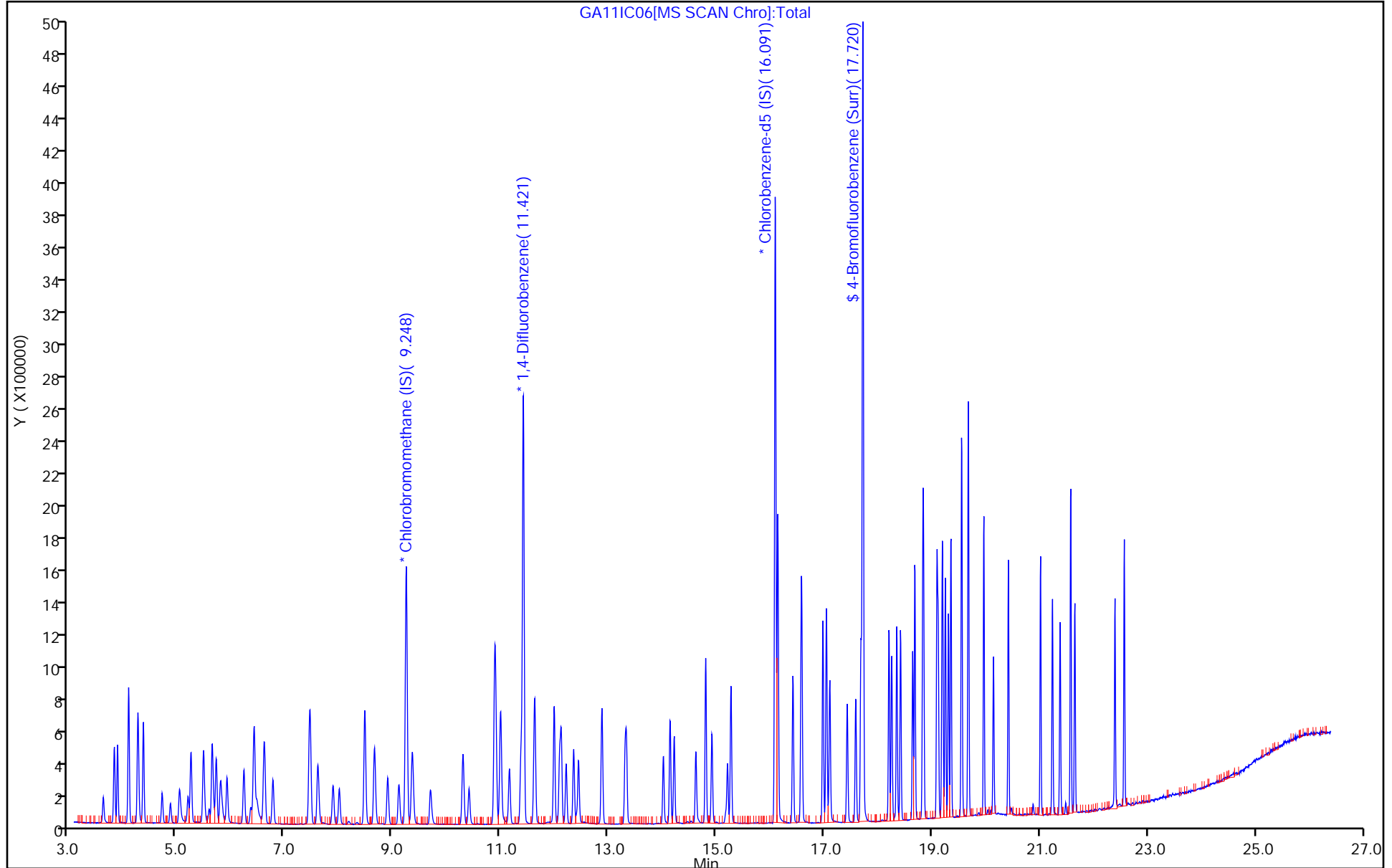
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC06.D

Injection Date: 11-Jan-2019 20:23:30

Instrument ID: MG

Lims ID: IC L6

Client ID:

Operator ID: 007126

ALS Bottle#: 4

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

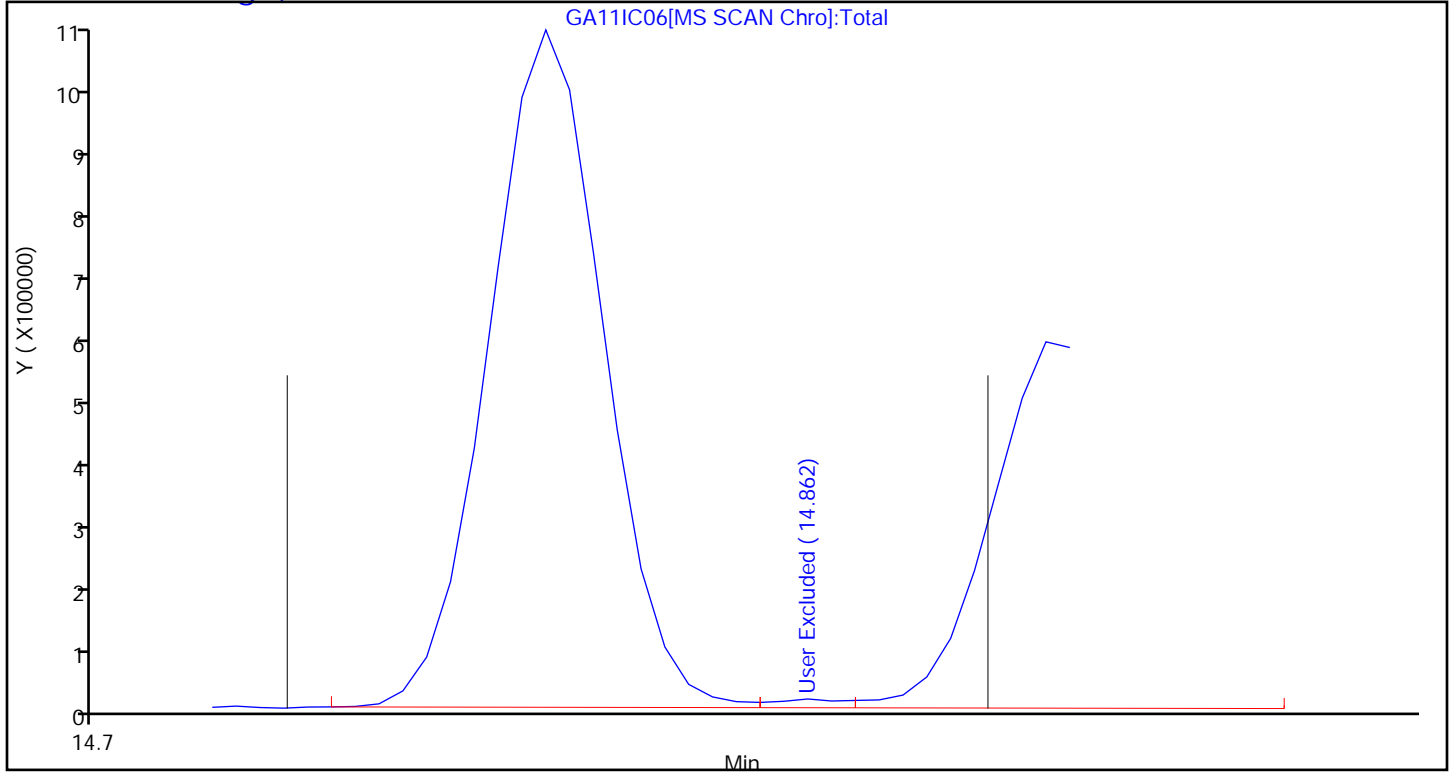
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 11-Jan-2019 21:07:30 ALS Bottle#: 5 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-015
 Misc. Info.: 201653
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:23 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 09:57:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.249	-0.001	97	437891	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2708081	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.096	16.094	0.002	90	2541912	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.720	17.718	0.002	87	1988683	4.00	3.82	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	97	518289	2.00	1.81	
7 Propene	41	3.834	3.838	-0.004	98	290483	2.00	1.81	
8 Dichlorodifluoromethane	85	3.894	3.894	0.000	100	858049	2.00	1.85	
9 Chloromethane	52	4.088	4.091	-0.003	98	92605	2.00	1.82	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	93	512846	2.00	1.89	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	313945	2.00	1.78	
11 Acetaldehyde	44	4.271	4.278	-0.007	93	622934	10.0	9.50	
13 Butane	43	4.373	4.373	0.000	86	542597	2.00	1.83	
14 Butadiene	54	4.373	4.375	-0.002	66	257490	2.00	1.89	
15 Bromomethane	94	4.719	4.722	-0.003	98	281926	2.00	1.85	
16 Chloroethane	64	4.875	4.879	-0.004	89	156493	2.00	1.84	
17 Ethanol	31	5.031	5.064	-0.033	97	808553	10.0	10.5	
18 Vinyl bromide	106	5.198	5.205	-0.007	99	265901	2.00	1.88	
19 2-Methylbutane	43	5.258	5.256	0.002	93	402287	2.00	1.89	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	848836	2.00	1.87	
21 Acrolein	56	5.517	5.526	-0.009	96	73107	2.00	1.87	
22 Acetonitrile	40	5.592	5.603	-0.011	98	127125	2.00	2.08	
23 Acetone	58	5.641	5.666	-0.025	99	398773	6.00	6.06	
24 Pentane	72	5.722	5.725	-0.003	98	56204	2.00	1.93	
25 Isopropyl alcohol	45	5.781	5.840	-0.059	96	1108992	6.00	6.32	
26 Ethyl ether	31	5.916	5.943	-0.027	90	387640	2.00	2.05	
27 1,1-Dichloroethene	96	6.239	6.242	-0.003	95	292909	2.00	1.90	
28 Acrylonitrile	53	6.363	6.375	-0.012	96	213988	2.00	2.01	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	94	644340	2.00	1.92	
30 2-Methyl-2-propanol	59	6.455	6.534	-0.079	95	483244	2.00	2.01	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	297663	2.00	1.66	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	96	352711	2.00	1.84	
33 Carbon disulfide	76	6.778	6.778	0.000	100	893782	2.00	1.91	
34 trans-1,2-Dichloroethene	96	7.452	7.450	0.002	96	304618	2.00	1.97	
35 2-Methylpentane	43	7.469	7.468	0.001	95	850675	2.00	1.92	
36 Methyl tert-butyl ether	73	7.603	7.643	-0.040	97	884523	2.00	2.05	
37 1,1-Dichloroethane	63	7.895	7.892	0.003	100	617142	2.00	1.94	
38 Vinyl acetate	43	8.008	8.016	-0.008	100	920626	2.00	2.08	
40 Hexane	56	8.477	8.480	-0.003	73	280600	2.00	1.97	
39 2-Butanone (MEK)	72	8.477	8.499	-0.022	83	137814	2.00	1.98	
41 Isopropyl ether	45	8.655	8.679	-0.024	97	1119661	2.00	2.05	
42 cis-1,2-Dichloroethene	96	8.908	8.906	0.002	97	314771	2.00	1.99	
43 Ethyl acetate	43	9.108	9.131	-0.023	98	727588	2.00	2.01	
44 Chloroform	83	9.264	9.261	0.003	97	705235	2.00	1.93	
45 Tert-butyl ethyl ether	59	9.351	9.389	-0.038	97	1026205	2.00	2.03	
46 Tetrahydrofuran	42	9.685	9.725	-0.040	94	392928	2.00	2.03	
47 1,1,1-Trichloroethane	97	10.305	10.303	0.002	96	774289	2.00	1.95	
48 1,2-Dichloroethane	62	10.418	10.416	0.002	98	490730	2.00	1.85	
49 Cyclohexane	69	10.887	10.888	-0.001	89	165738	2.00	1.86	
50 Benzene	78	10.893	10.893	0.000	97	906736	2.00	1.87	
52 Carbon tetrachloride	117	10.914	10.913	0.001	99	761689	2.00	1.90	
53 2,3-Dimethylpentane	71	11.001	11.000	0.001	90	240541	2.00	1.88	
51 n-Butanol	31	10.974	11.004	-0.030	74	111445	2.00	1.84	
54 Thiophene	84	11.168	11.164	0.004	97	526684	2.00	1.87	
55 Isooctane	57	11.632	11.632	0.000	98	1711484	2.00	1.80	
56 n-Heptane	71	11.993	11.995	-0.002	94	357021	2.00	1.83	
57 1,2-Dichloropropane	63	12.095	12.093	0.002	86	354326	2.00	1.86	
58 Trichloroethene	130	12.122	12.124	-0.002	95	411429	2.00	1.87	
59 Dibromomethane	93	12.219	12.216	0.003	95	363939	2.00	1.81	
60 Dichlorobromomethane	83	12.354	12.354	0.000	98	745629	2.00	1.88	
61 1,4-Dioxane	88	12.392	12.421	-0.029	98	120654	2.00	2.14	
62 Methyl methacrylate	41	12.440	12.453	-0.013	90	470252	2.00	1.93	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	613752	2.00	1.85	
64 4-Methyl-2-pentanone (MIBK)	43	13.303	13.321	-0.018	99	689509	2.00	1.81	
65 cis-1,3-Dichloropropene	75	13.336	13.336	0.000	98	558061	2.00	1.93	
66 trans-1,3-Dichloropropene	75	14.020	14.019	0.001	97	528240	2.00	1.93	
67 Toluene	91	14.144	14.144	0.000	93	1073072	2.00	1.92	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	99	322166	2.00	1.89	
69 2-Hexanone	58	14.614	14.631	-0.017	91	293749	2.00	1.75	
70 n-Octane	85	14.802	14.804	-0.002	96	377410	2.00	1.88	
71 Chlorodibromomethane	129	14.921	14.920	0.001	98	676985	2.00	1.96	
72 Ethylene Dibromide	107	15.207	15.207	0.000	99	576579	2.00	1.95	
73 Tetrachloroethene	129	15.271	15.272	-0.001	95	394783	2.00	1.88	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	96	1265823	2.00	1.85	
75 Chlorobenzene	112	16.145	16.142	0.003	94	832085	2.00	1.91	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	1456098	2.00	1.92	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	2267354	4.00	3.90	
80 n-Nonane	57	16.975	16.977	-0.002	94	785625	2.00	1.90	
81 Bromoform	173	17.040	17.041	-0.001	92	647774	2.00	2.14	
82 Styrene	104	17.046	17.047	-0.001	99	797396	2.00	1.98	
83 o-Xylene	91	17.105	17.106	-0.001	98	1183498	2.00	1.93	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	791220	2.00	1.92	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	249431	2.00	1.89	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	1569505	2.00	1.92	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	425975	2.00	1.93	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	376201	2.00	1.86	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	1579790	2.00	1.94	
90 1,3,5-Trimethylbenzene	120	18.421	18.419	0.002	92	615118	2.00	1.94	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	619837	2.00	1.93	
93 n-Decane	57	18.685	18.682	0.003	90	955171	2.00	1.88	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	1354211	2.00	1.91	
95 1,2,4-Trimethylbenzene	105	18.847	18.846	0.001	97	1320347	2.00	1.90	
96 sec-Butylbenzene	105	19.095	19.094	0.001	98	1895656	2.00	1.90	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	99	870050	2.00	1.91	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	1199239	2.00	1.93	
99 1,4-Dichlorobenzene	146	19.202	19.200	0.002	93	882709	2.00	1.89	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	97	1524715	2.00	1.91	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	1328651	2.00	2.11	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	1091130	2.00	1.90	
103 2,3-Dihydroindene	117	19.553	19.550	0.003	94	1193709	2.00	1.90	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	95	841536	2.00	1.85	
105 n-Butylbenzene	91	19.672	19.673	-0.001	98	1547638	2.00	1.91	
106 Indene	116	19.677	19.679	-0.002	92	1040605	2.00	1.92	
107 Undecane	57	19.963	19.963	0.000	96	970873	2.00	1.89	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	92	429617	2.00	2.28	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	97	1413004	2.00	1.95	
110 Dodecane	57	21.014	21.014	0.000	94	722978	2.00	1.78	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	693552	2.00	1.93	
112 Naphthalene	128	21.376	21.377	-0.001	99	1530726	2.00	1.95	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	96	732431	2.00	1.91	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	95	629244	2.00	1.99	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	671591	2.00	1.76	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	789694	2.00	1.69	
A 122 C8 Range	1	14.813	(14.749-14.886)		0	3737320	2.00	1.86	
S 123 1,2-Dichloroethene, Total	1				0		4.00	3.96	
S 124 Xylenes, Total	100				0		6.00	5.83	

Reagents:

40L7DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC07.D

Injection Date: 11-Jan-2019 21:07:30

Instrument ID: MG

Operator ID: 007126

Lims ID: ICIS L7

Worklist Smp#: 15

Client ID:

Purge Vol: 500.000 mL

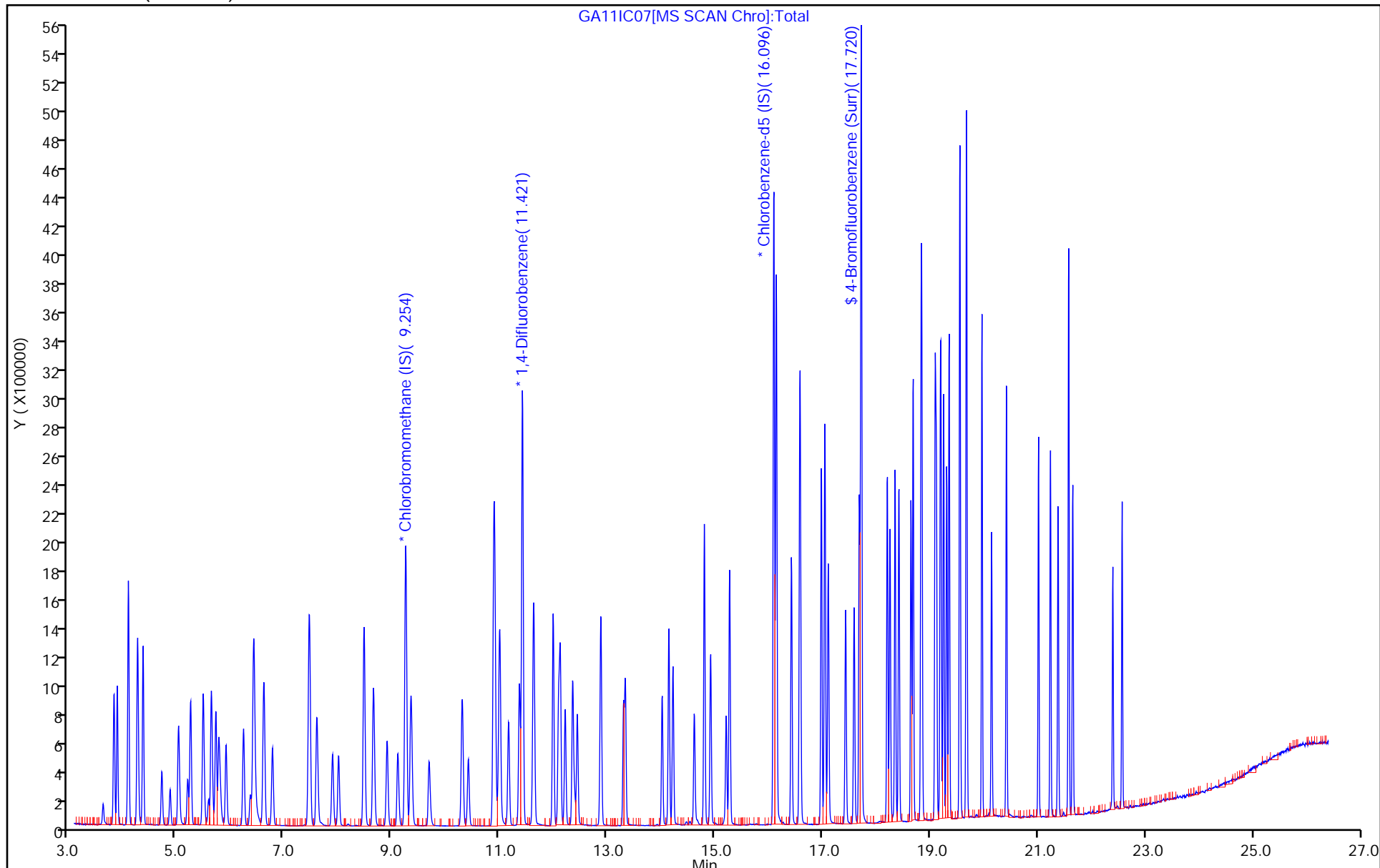
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC07.D

Injection Date: 11-Jan-2019 21:07:30

Instrument ID: MG

Lims ID: ICIS L7

Client ID:

Operator ID: 007126

ALS Bottle#: 5

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

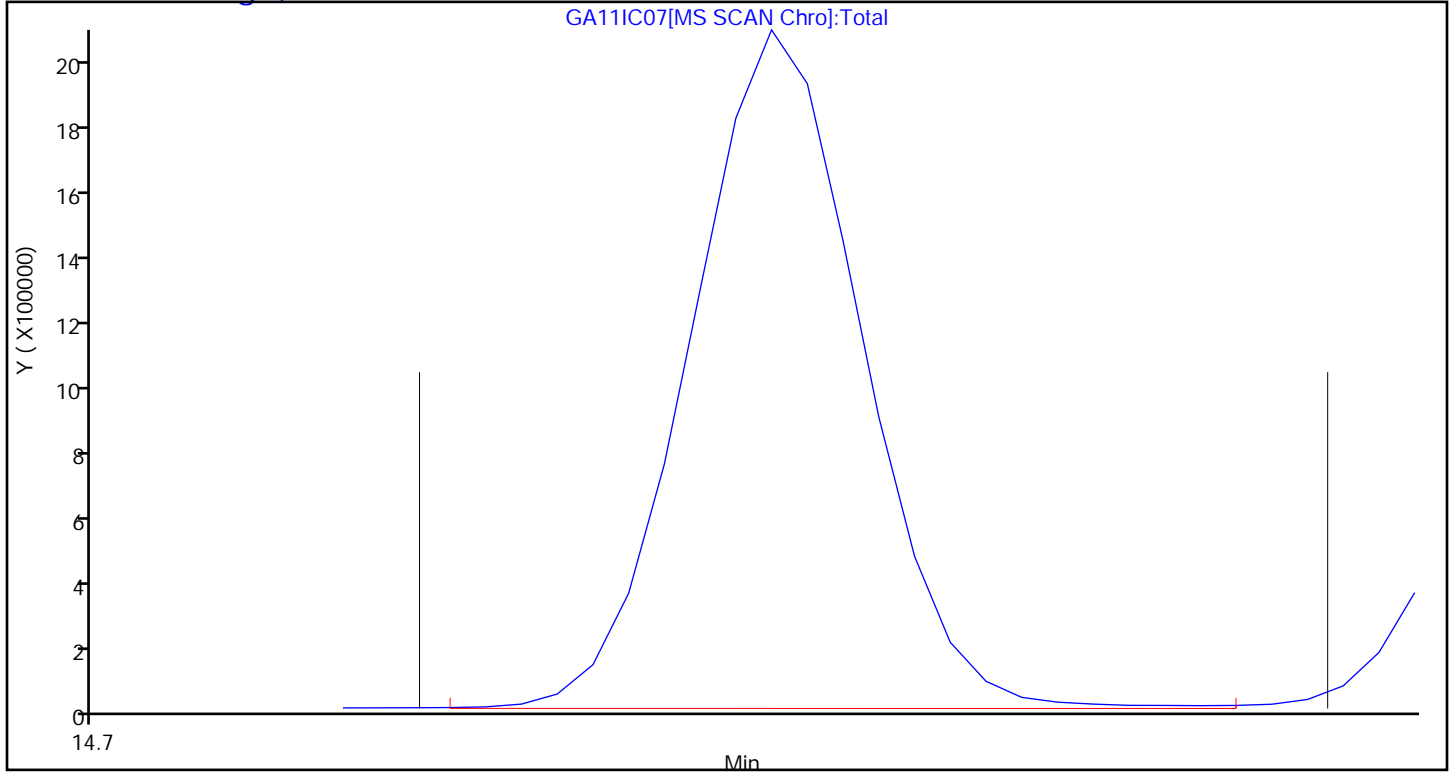
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 11-Jan-2019 21:51:30 ALS Bottle#: 14 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-016
 Misc. Info.: 201651
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:30 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 13:40:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.249	-0.001	98	450955	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2770300	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.096	16.094	0.002	90	2608249	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.718	0.001	87	2036360	4.00	3.81	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	1076565	4.00	3.64	
7 Propene	41	3.834	3.838	-0.004	98	602545	4.00	3.65	
8 Dichlorodifluoromethane	85	3.888	3.894	-0.006	100	1783528	4.00	3.74	
9 Chloromethane	52	4.087	4.091	-0.004	98	191831	4.00	3.66	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	96	1074243	4.00	3.85	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	657162	4.00	3.62	
11 Acetaldehyde	44	4.265	4.278	-0.013	92	1089331	20.0	16.1	
13 Butane	43	4.368	4.373	-0.005	86	1129098	4.00	3.69	
14 Butadiene	54	4.368	4.375	-0.007	67	544660	4.00	3.88	
15 Bromomethane	94	4.718	4.722	-0.004	98	593804	4.00	3.78	
16 Chloroethane	64	4.875	4.879	-0.004	89	327330	4.00	3.74	
17 Ethanol	31	5.026	5.064	-0.038	98	1261075	20.0	15.9	
18 Vinyl bromide	106	5.204	5.205	-0.001	99	568659	4.00	3.91	
19 2-Methylbutane	43	5.252	5.256	-0.004	93	832948	4.00	3.79	
20 Trichlorofluoromethane	101	5.489	5.492	-0.003	99	1773236	4.00	3.79	
21 Acrolein	56	5.511	5.526	-0.015	96	147180	4.00	3.65	
22 Acetonitrile	40	5.587	5.603	-0.016	98	226910	4.00	3.61	
23 Acetone	58	5.630	5.666	-0.036	99	665956	12.0	9.82	
24 Pentane	72	5.721	5.725	-0.004	97	114279	4.00	3.82	
25 Isopropyl alcohol	45	5.770	5.840	-0.070	93	1652685	12.0	9.14	
26 Ethyl ether	31	5.905	5.943	-0.038	91	655797	4.00	3.37	
27 1,1-Dichloroethene	96	6.239	6.242	-0.003	95	633007	4.00	3.98	
28 Acrylonitrile	53	6.363	6.375	-0.012	94	390689	4.00	3.56	
29 1,1,2-Trichloro-1,2,2-trif	101	6.422	6.428	-0.006	94	1332511	4.00	3.86	
30 2-Methyl-2-propanol	59	6.433	6.534	-0.101	95	773470	4.00	3.12	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	587875	4.00	3.17	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	96	715500	4.00	3.62	
33 Carbon disulfide	76	6.778	6.778	0.000	100	1857677	4.00	3.85	
34 trans-1,2-Dichloroethene	96	7.452	7.450	0.002	97	640390	4.00	4.02	
35 2-Methylpentane	43	7.463	7.468	-0.005	95	1727313	4.00	3.79	
36 Methyl tert-butyl ether	73	7.593	7.643	-0.050	97	1553256	4.00	3.50	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	1197700	4.00	3.66	
38 Vinyl acetate	43	8.002	8.016	-0.014	100	1610829	4.00	3.54	
40 Hexane	56	8.477	8.480	-0.003	77	564091	4.00	3.84	
39 2-Butanone (MEK)	72	8.471	8.499	-0.028	95	242448	4.00	3.39	
41 Isopropyl ether	45	8.649	8.679	-0.030	97	1969552	4.00	3.50	
42 cis-1,2-Dichloroethene	96	8.908	8.906	0.002	97	630074	4.00	3.86	
43 Ethyl acetate	43	9.102	9.131	-0.029	98	1268094	4.00	3.40	
44 Chloroform	83	9.264	9.261	0.003	97	1383523	4.00	3.67	
45 Tert-butyl ethyl ether	59	9.345	9.389	-0.044	96	1800930	4.00	3.47	
46 Tetrahydrofuran	42	9.679	9.725	-0.046	94	687510	4.00	3.44	
47 1,1,1-Trichloroethane	97	10.305	10.303	0.002	96	1509577	4.00	3.70	
48 1,2-Dichloroethane	62	10.418	10.416	0.002	98	952640	4.00	3.52	
49 Cyclohexane	69	10.887	10.888	-0.001	94	330488	4.00	3.63	
50 Benzene	78	10.893	10.893	0.000	98	1771104	4.00	3.57	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	99	1552321	4.00	3.78	
53 2,3-Dimethylpentane	71	11.000	11.000	0.000	91	465638	4.00	3.56	
51 n-Butanol	31	10.936	11.004	-0.068	68	184294	4.00	2.97	
54 Thiophene	84	11.162	11.164	-0.002	97	1043094	4.00	3.62	
55 Isooctane	57	11.626	11.632	-0.006	97	3264805	4.00	3.36	
56 n-Heptane	71	11.993	11.995	-0.002	94	694408	4.00	3.49	
57 1,2-Dichloropropane	63	12.095	12.093	0.002	86	653599	4.00	3.36	
58 Trichloroethene	130	12.128	12.124	0.004	96	832705	4.00	3.69	
59 Dibromomethane	93	12.214	12.216	-0.002	96	729198	4.00	3.55	
60 Dichlorobromomethane	83	12.354	12.354	0.000	99	1472126	4.00	3.64	
61 1,4-Dioxane	88	12.386	12.421	-0.035	94	174155	4.00	3.02	
62 Methyl methacrylate	41	12.440	12.453	-0.013	90	823262	4.00	3.31	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	1192238	4.00	3.52	
64 4-Methyl-2-pentanone (MIBK)	43	13.292	13.321	-0.029	99	916498	4.00	2.35	
65 cis-1,3-Dichloropropene	75	13.335	13.336	-0.001	98	1060593	4.00	3.58	
66 trans-1,3-Dichloropropene	75	14.020	14.019	0.001	97	983862	4.00	3.50	
67 Toluene	91	14.144	14.144	0.000	94	1966647	4.00	3.43	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	99	599648	4.00	3.42	
69 2-Hexanone	58	14.608	14.631	-0.023	92	417616	4.00	2.43	
70 n-Octane	85	14.802	14.804	-0.002	95	732239	4.00	3.55	
71 Chlorodibromomethane	129	14.921	14.920	0.001	98	1357226	4.00	3.82	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	1102407	4.00	3.63	
73 Tetrachloroethene	129	15.271	15.272	-0.001	96	776709	4.00	3.61	
74 2,3-Dimethylheptane	43	16.139	16.139	0.000	96	2368408	4.00	3.38	
75 Chlorobenzene	112	16.145	16.142	0.003	93	1543553	4.00	3.46	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	2578598	4.00	3.31	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	3963090	8.00	6.64	
80 n-Nonane	57	16.975	16.977	-0.002	94	1455379	4.00	3.43	
81 Bromoform	173	17.040	17.041	-0.001	94	1258109	4.00	4.05	
82 Styrene	104	17.045	17.047	-0.002	99	1440043	4.00	3.49	
83 o-Xylene	91	17.105	17.106	-0.001	98	2069274	4.00	3.29	
84 1,1,1,2-Tetrachloroethane	83	17.428	17.430	-0.002	100	1406346	4.00	3.33	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	448013	4.00	3.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	96	2749199	4.00	3.28	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	750579	4.00	3.31	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	679618	4.00	3.28	
89 4-Ethyltoluene	105	18.350	18.347	0.003	98	2762937	4.00	3.30	
90 1,3,5-Trimethylbenzene	120	18.420	18.419	0.001	92	1079746	4.00	3.32	
92 Alpha Methyl Styrene	118	18.647	18.644	0.003	87	1139797	4.00	3.47	
93 n-Decane	57	18.685	18.682	0.003	90	1652838	4.00	3.18	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	2326877	4.00	3.20	
95 1,2,4-Trimethylbenzene	105	18.846	18.846	0.000	97	2282446	4.00	3.19	
96 sec-Butylbenzene	105	19.094	19.094	0.000	98	3335709	4.00	3.26	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	99	1597433	4.00	3.42	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	2207883	4.00	3.47	
99 1,4-Dichlorobenzene	146	19.202	19.200	0.002	94	1608243	4.00	3.36	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	2715440	4.00	3.32	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	2356435	4.00	3.65	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	1948051	4.00	3.31	
103 2,3-Dihydroindene	117	19.553	19.550	0.003	94	2118687	4.00	3.28	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	95	1533100	4.00	3.28	
105 n-Butylbenzene	91	19.671	19.673	-0.002	98	2715683	4.00	3.26	
106 Indene	116	19.677	19.679	-0.002	92	1879451	4.00	3.39	
107 Undecane	57	19.963	19.963	0.000	95	1679521	4.00	3.18	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	94	745616	4.00	3.86	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	97	2207453	4.00	2.96	
110 Dodecane	57	21.014	21.014	0.000	94	1006221	4.00	2.41	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	1301208	4.00	3.53	
112 Naphthalene	128	21.375	21.377	-0.002	99	2517870	4.00	3.13	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	96	1398696	4.00	3.55	
114 1,2,3-Trichlorobenzene	180	21.650	21.651	-0.001	95	1082671	4.00	3.33	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	1000580	4.00	2.55	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	1141032	4.00	2.37	
A 122 C8 Range	1	14.813	(14.749-14.875)		0	7125919	4.00	3.46	
S 123 1,2-Dichloroethene, Total	1				0		8.00	7.88	
S 124 Xylenes, Total	100				0		12.0	9.93	

Reagents:

40L9DQP_00008

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D

Injection Date: 11-Jan-2019 21:51:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L8

Worklist Smp#: 16

Client ID:

Purge Vol: 500.000 mL

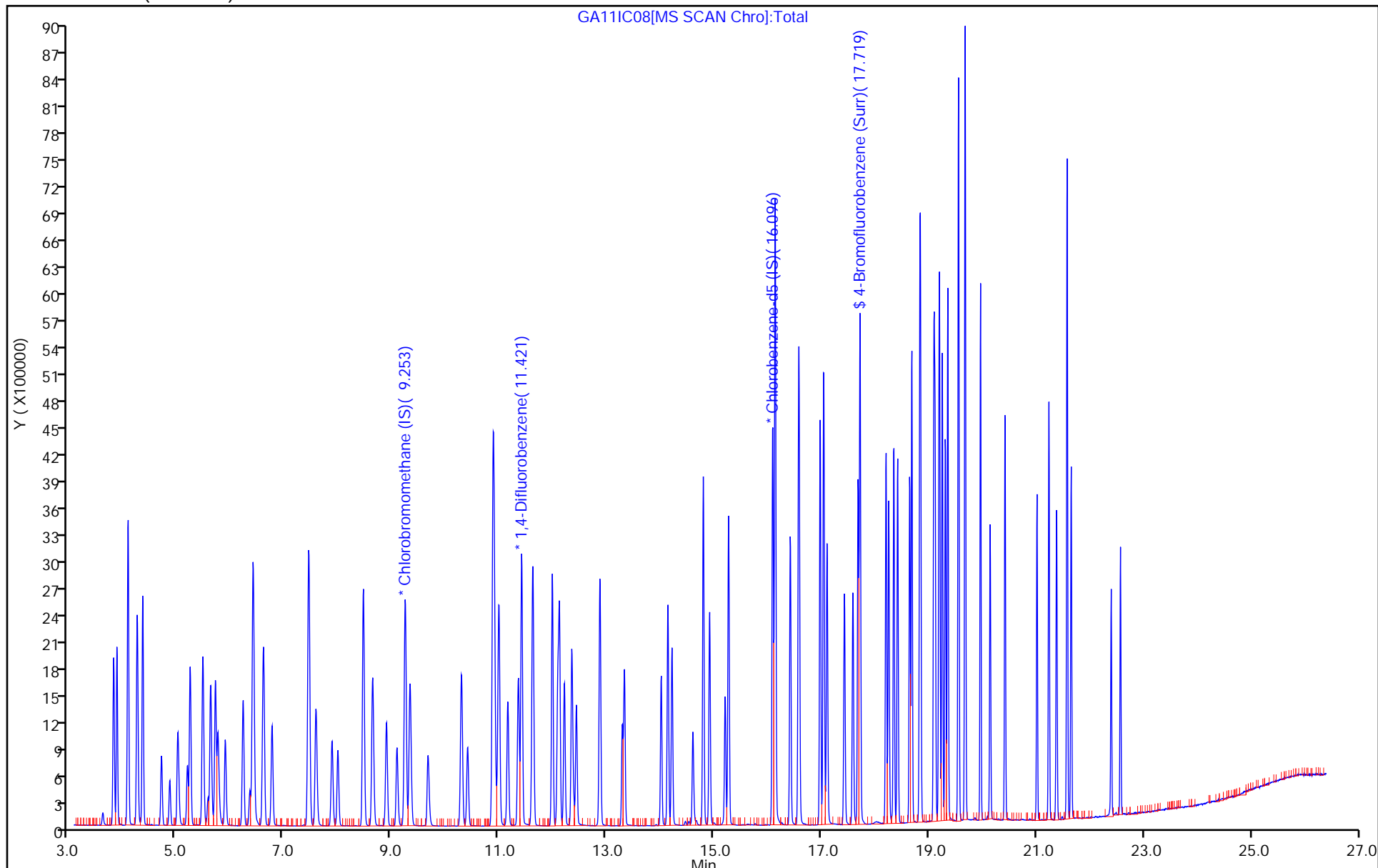
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D

Injection Date: 11-Jan-2019 21:51:30

Instrument ID: MG

Lims ID: IC L8

Client ID:

Operator ID: 007126

ALS Bottle#: 14

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

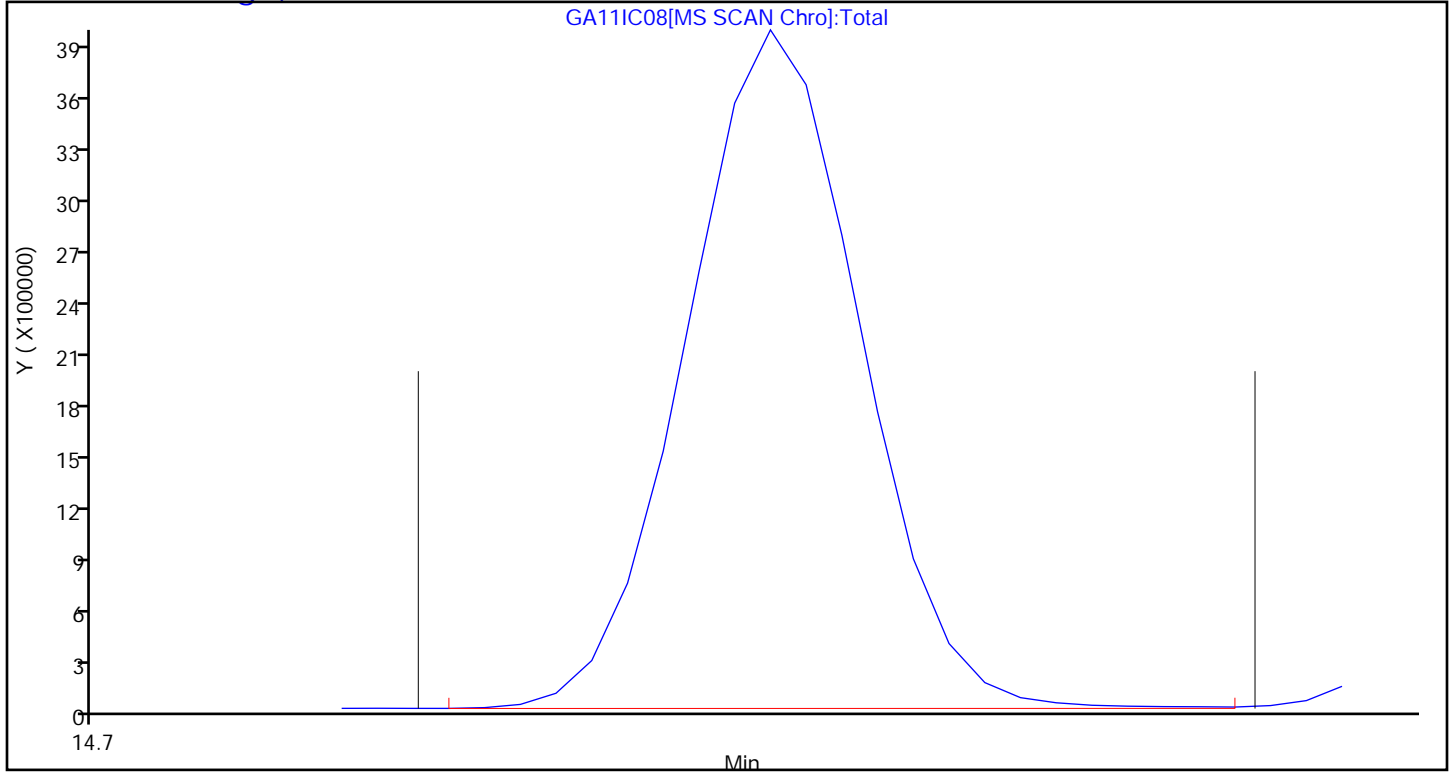
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 06/21/2017 17:00
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/21/2017 22:43
 Lab File ID: GA11ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.7395	0.6739			2.00	-8.9	35.0
3-Methylthiophene	Ave	0.7319	0.6589			2.00	-10.0	35.0
2-Ethylthiophene	Ave	0.9478	0.8011			2.00	-15.5	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.8235			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.8516	0.6095			2.00	-28.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.167	0.8355			2.00	-28.4	35.0
Benzo (b) thiophene	Ave	1.068	0.7208			2.00	-32.5	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11ICV.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 11-Jan-2019 23:17:30 ALS Bottle#: 6 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-018
 Misc. Info.: S83
 Operator ID: 007126 Instrument ID: MG
 Sublist:

Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:47 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa Date: 14-Jan-2019 17:26:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	97	423755	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2327828	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	91	2182908	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.718	0.001	86	1777994	4.00	3.97	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	559021	2.00	2.01	
7 Propene	41	3.834	3.838	-0.004	98	314582	2.00	2.03	
8 Dichlorodifluoromethane	85	3.888	3.894	-0.006	100	919539	2.00	2.05	
9 Chloromethane	52	4.088	4.091	-0.003	99	102368	2.00	2.08	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	93	545988	2.00	2.08	
12 Vinyl chloride	62	4.271	4.277	-0.006	98	347000	2.00	2.03	
11 Acetaldehyde	44	4.265	4.278	-0.013	93	503377	10.0	7.94	
13 Butane	43	4.368	4.373	-0.005	87	595081	2.00	2.07	
14 Butadiene	54	4.368	4.375	-0.007	65	273211	2.00	2.07	
15 Bromomethane	94	4.718	4.722	-0.004	98	291645	2.00	1.98	
16 Chloroethane	64	4.875	4.879	-0.004	91	166315	2.00	2.02	
17 Ethanol	31	5.026	5.064	-0.038	98	540634	10.0	7.25	
18 Vinyl bromide	106	5.198	5.205	-0.007	99	291743	2.00	2.13	
19 2-Methylbutane	43	5.252	5.256	-0.004	92	423451	2.00	2.05	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	871181	2.00	1.98	
21 Acrolein	56	5.511	5.526	-0.015	96	57965	2.00	1.53	
22 Acetonitrile	40	5.581	5.603	-0.022	99	93536	2.00	1.58	
23 Acetone	58	5.651	5.666	-0.015	99	110896	2.00	1.74	
24 Pentane	72	5.721	5.725	-0.004	98	59420	2.00	2.11	
25 Isopropyl alcohol	45	5.786	5.840	-0.054	97	413062	2.00	2.43	
26 Ethyl ether	31	5.921	5.943	-0.022	91	311636	2.00	1.71	
27 1,1-Dichloroethene	96	6.234	6.242	-0.008	95	311458	2.00	2.08	
28 Acrylonitrile	53	6.358	6.375	-0.017	95	182005	2.00	1.76	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	93	655024	2.00	2.02	
30 2-Methyl-2-propanol	59	6.439	6.534	-0.095	96	512083	2.00	2.20	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	298505	2.00	1.72	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	95	335507	2.00	1.81	
33 Carbon disulfide	76	6.773	6.778	-0.005	100	923248	2.00	2.03	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	306868	2.00	2.05	
35 2-Methylpentane	43	7.463	7.468	-0.005	96	797621	2.00	1.86	
36 Methyl tert-butyl ether	73	7.603	7.643	-0.040	97	712180	2.00	1.71	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	597722	2.00	1.94	
38 Vinyl acetate	43	8.002	8.016	-0.014	100	695958	2.00	1.63	
40 Hexane	56	8.477	8.480	-0.003	77	278451	2.00	2.02	
39 2-Butanone (MEK)	72	8.472	8.499	-0.027	96	115958	2.00	1.72	
41 Isopropyl ether	45	8.649	8.679	-0.030	97	961415	2.00	1.82	
42 cis-1,2-Dichloroethene	96	8.903	8.906	-0.003	97	310749	2.00	2.03	
43 Ethyl acetate	43	9.102	9.131	-0.029	98	563610	2.00	1.61	
44 Chloroform	83	9.253	9.261	-0.008	97	672705	2.00	1.90	
45 Tert-butyl ethyl ether	59	9.350	9.389	-0.039	96	809494	2.00	1.66	
46 Tetrahydrofuran	42	9.685	9.725	-0.040	94	314199	2.00	1.67	
47 1,1,1-Trichloroethane	97	10.300	10.303	-0.003	96	734755	2.00	1.92	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	98	445746	2.00	1.96	
49 Cyclohexane	69	10.882	10.888	-0.006	95	166660	2.00	2.18	
50 Benzene	78	10.887	10.893	-0.006	98	889085	2.00	2.14	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	98	749968	2.00	2.17	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	91	227526	2.00	2.07	
51 n-Butanol	31	10.952	11.004	-0.052	78	125495	2.00	2.41	
54 Thiophene	84	11.162	11.164	-0.002	97	483942	2.00	2.00	
55 Isooctane	57	11.626	11.632	-0.006	98	1667827	2.00	2.05	
56 n-Heptane	71	11.993	11.995	-0.002	94	338068	2.00	2.02	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	87	307526	2.00	1.88	
58 Trichloroethene	130	12.122	12.124	-0.002	95	394652	2.00	2.08	
59 Dibromomethane	93	12.214	12.216	-0.002	94	344072	2.00	2.00	
60 Dichlorobromomethane	83	12.354	12.354	0.000	98	685664	2.00	2.02	
61 1,4-Dioxane	88	12.386	12.421	-0.035	98	97309	2.00	2.01	
62 Methyl methacrylate	41	12.440	12.453	-0.013	90	361838	2.00	1.73	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	714807	2.00	2.51	
64 4-Methyl-2-pentanone (MIBK)	43	13.298	13.321	-0.023	99	643830	2.00	1.96	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	98	490279	2.00	1.97	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	97	456019	2.00	1.94	
67 Toluene	91	14.144	14.144	0.000	93	902637	2.00	1.88	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	99	277868	2.00	1.90	
76 2-Methylthiophene	97	14.295	14.295	0.000	98	735484	NC	NC	
77 3-Methylthiophene	97	14.495	14.495	0.000	99	719176	NC	NC	
69 2-Hexanone	58	14.608	14.631	-0.023	91	305613	2.00	2.12	
70 n-Octane	85	14.802	14.804	-0.002	96	361178	2.00	2.09	
71 Chlorodibromomethane	129	14.915	14.920	-0.005	98	628573	2.00	2.12	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	501417	2.00	1.97	
73 Tetrachloroethene	129	15.271	15.272	-0.001	95	370073	2.00	2.05	
74 2,3-Dimethylheptane	43	16.139	16.139	0.000	96	1065455	2.00	1.82	
75 Chlorobenzene	112	16.139	16.142	-0.003	92	752108	2.00	2.01	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	1190399	2.00	1.82	
91 2-Ethylthiophene	97	16.522	16.522	0.000	98	874372	NC	NC	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	1840740	4.00	3.69	
80 n-Nonane	57	16.975	16.977	-0.002	94	721028	2.00	2.03	
81 Bromoform	173	17.040	17.041	-0.001	93	567100	2.00	2.18	
82 Styrene	104	17.045	17.047	-0.002	99	646380	2.00	1.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 o-Xylene	91	17.105	17.106	-0.001	98	939571	2.00	1.78	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	644662	2.00	1.82	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	202004	2.00	1.78	
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	1283692	2.00	1.83	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	347734	2.00	1.83	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	330501	2.00	1.91	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	1189898	2.00	1.70	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	92	543840	2.00	2.00	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	475664	2.00	1.73	
93 n-Decane	57	18.679	18.682	-0.003	90	840779	2.00	1.93	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	91	1089707	2.00	1.79	
95 1,2,4-Trimethylbenzene	105	18.846	18.846	0.000	96	1053331	2.00	1.76	
96 sec-Butylbenzene	105	19.094	19.094	0.000	98	1546183	2.00	1.81	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	98	727360	2.00	1.86	
98 Benzyl chloride	91	19.186	19.188	-0.002	98	972247	2.00	1.83	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	95	730746	2.00	1.82	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	1224528	2.00	1.79	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	783832	2.00	1.45	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	922903	2.00	1.87	
103 2,3-Dihydroindene	117	19.547	19.550	-0.003	94	938000	2.00	1.74	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	94	692280	2.00	1.77	
105 n-Butylbenzene	91	19.671	19.673	-0.002	98	1289575	2.00	1.85	
106 Indene	116	19.677	19.679	-0.002	90	708434	2.00	1.53	
107 Undecane	57	19.963	19.963	0.000	95	845217	2.00	1.91	
117 1,2-Dimethyl-4-Ethylbenzen	119	20.033	20.033	0.000	98	898836	NC	NC	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	92	280496	2.00	1.73	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	97	1105869	2.00	1.77	
118 1,2,3,5-Tetramethylbenzene	119	20.470	20.470	0.000	95	665260	NC	NC	
119 1,2,3,4-Tetramethylbenzene	119	20.874	20.874	0.000	97	911881	NC	NC	
110 Dodecane	57	21.014	21.014	0.000	94	711861	2.00	2.04	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	581479	2.00	1.89	
112 Naphthalene	128	21.375	21.377	-0.002	99	1346876	2.00	2.00	
120 Benzo(b)thiophene	134	21.478	21.478	0.000	99	786705	NC	NC	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	95	590622	2.00	1.79	
114 1,2,3-Trichlorobenzene	180	21.650	21.651	-0.001	95	573612	2.00	2.11	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	763689	2.00	2.33	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	898886	2.00	2.23	
A 122 C8 Range	1	14.813	(14.744-14.902)		0	3557712	2.00	2.06	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.08	
S 124 Xylenes, Total	100				0		6.00	5.47	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00083

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11ICV.D

Injection Date: 11-Jan-2019 23:17:30

Instrument ID: MG

Operator ID: 007126

Lims ID: ICV

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

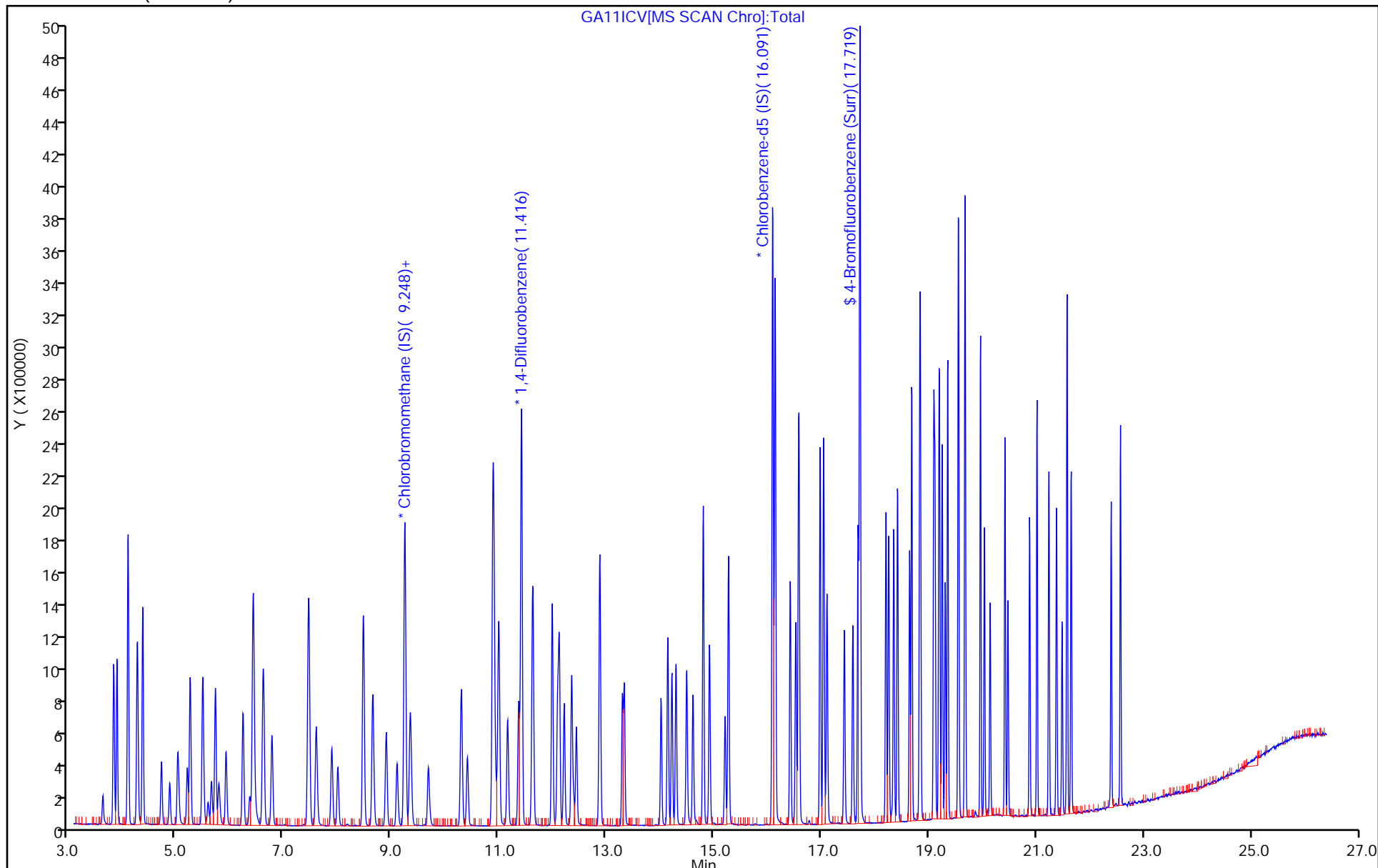
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.638		2.01	2.00	0.7	35.0
Propene	Ave	1.463	1.485		2.03	2.00	1.5	35.0
Dichlorodifluoromethane	Ave	4.235	4.340		2.05	2.00	2.5	35.0
Chloromethane	Ave	0.4649	0.4832		2.08	2.00	3.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.577		2.08	2.00	4.1	35.0
Acetaldehyde	Ave	0.5987	0.4752		7.94	10.0	-20.6	35.0
Vinyl chloride	Ave	1.611	1.638		2.03	2.00	1.7	35.0
1,3-Butadiene	Ave	1.245	1.289		2.07	2.00	3.6	35.0
Butane	Ave	2.712	2.809		2.07	2.00	3.5	35.0
Bromomethane	Ave	1.392	1.376		1.98	2.00	-1.1	35.0
Chloroethane	Ave	0.7761	0.7850		2.02	2.00	1.1	35.0
Ethanol	Ave	0.7042	0.5103		7.25	10.0	-27.5	35.0
Vinyl bromide	Ave	1.290	1.377		2.13	2.00	6.7	35.0
2-Methylbutane	Ave	1.947	1.999		2.05	2.00	2.7	35.0
Trichlorofluoromethane	Ave	4.152	4.112		1.98	2.00	-1.0	35.0
Acrolein	Ave	0.3574	0.2736		1.53	2.00	-23.4	35.0
Acetonitrile	Ave	0.5574	0.4415		1.58	2.00	-20.8	35.0
Acetone	Ave	0.6013	0.5234		1.74	2.00	-13.0	35.0
Pentane	Ave	0.2653	0.2805		2.11	2.00	5.7	35.0
Isopropyl alcohol	Ave	1.603	1.950		2.43	2.00	21.6	35.0
Ethyl ether	Ave	1.725	1.471		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.412	1.470		2.08	2.00	4.1	35.0
Acrylonitrile	Ave	0.9747	0.8590		1.76	2.00	-11.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.092		2.02	2.00	1.0	35.0
tert-Butyl alcohol	Ave	2.196	2.417		2.20	2.00	10.0	35.0
Methylene Chloride	Ave	1.643	1.409		1.72	2.00	-14.2	35.0
3-Chloropropene	Ave	1.751	1.584		1.81	2.00	-9.6	35.0
Carbon disulfide	Ave	4.284	4.357		2.03	2.00	1.7	35.0
trans-1,2-Dichloroethene	Ave	1.414	1.448		2.05	2.00	2.4	35.0
2-Methylpentane	Ave	4.045	3.765		1.86	2.00	-6.9	35.0
Methyl tert-butyl ether	Ave	3.932	3.361		1.71	2.00	-14.5	35.0
1,1-Dichloroethane	Ave	2.906	2.821		1.94	2.00	-2.9	35.0
Vinyl acetate	Ave	4.034	3.285		1.63	2.00	-18.6	35.0
2-Butanone (MEK)	Ave	0.6347	0.5473		1.72	2.00	-13.8	35.0
Hexane	Ave	1.304	1.314		2.02	2.00	0.8	35.0
Isopropyl ether	Ave	4.992	4.538		1.82	2.00	-9.1	35.0
cis-1,2-Dichloroethene	Ave	1.447	1.467		2.03	2.00	1.4	35.0
Ethyl acetate	Ave	3.312	2.660		1.61	2.00	-19.7	35.0
Chloroform	Ave	3.344	3.175		1.90	2.00	-5.1	35.0
Tert-butyl ethyl ether	Ave	4.607	3.821		1.66	2.00	-17.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.483		1.67	2.00	-16.3	35.0
1,1,1-Trichloroethane	Ave	3.620	3.468		1.92	2.00	-4.2	35.0
1,2-Dichloroethane	Ave	0.3910	0.3830		1.96	2.00	-2.1	35.0
Cyclohexane	Ave	0.1314	0.1432		2.18	2.00	8.9	35.0
Benzene	Ave	0.7153	0.7639		2.14	2.00	6.8	35.0
Carbon tetrachloride	Ave	0.5933	0.6444		2.17	2.00	8.6	35.0
1-Butanol	Ave	0.0896	0.1078		2.41	2.00	20.4	35.0
2,3-Dimethylpentane	Ave	0.1886	0.1955		2.07	2.00	3.6	35.0
Thiophene	Ave	0.4156	0.4158		2.00	2.00	0.0	35.0
2,2,4-Trimethylpentane	Ave	1.401	1.433		2.05	2.00	2.3	35.0
Heptane	Ave	0.2875	0.2905		2.02	2.00	1.0	35.0
1,2-Dichloropropane	Ave	0.2813	0.2642		1.88	2.00	-6.1	35.0
Trichloroethene	Ave	0.3257	0.3391		2.08	2.00	4.1	35.0
Dibromomethane	Ave	0.2963	0.2956		2.00	2.00	-0.2	35.0
Bromodichloromethane	Ave	0.5843	0.5891		2.02	2.00	0.8	35.0
1,4-Dioxane	Ave	0.0832	0.0836		2.01	2.00	0.5	35.0
Methyl methacrylate	Ave	0.3595	0.3109		1.73	2.00	-13.5	35.0
Methylcyclohexane	Ave	0.4896	0.6141		2.51	2.00	25.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.5532		1.96	2.00	-1.8	35.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4212		1.97	2.00	-1.5	35.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4178		1.94	2.00	-3.1	35.0
Toluene	Ave	0.8801	0.8270		1.88	2.00	-6.0	35.0
1,1,2-Trichloroethane	Ave	0.2685	0.2546		1.90	2.00	-5.2	35.0
2-Hexanone	Ave	0.2641	0.2800		2.12	2.00	6.0	35.0
Octane	Ave	0.3165	0.3309		2.09	2.00	4.5	35.0
Dibromochloromethane	Ave	0.5446	0.5759		2.12	2.00	5.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4594		1.97	2.00	-1.3	35.0
Tetrachloroethene	Ave	0.3302	0.3391		2.05	2.00	2.7	35.0
2,3-Dimethylheptane	Ave	1.076	0.9762		1.82	2.00	-9.2	35.0
Chlorobenzene	Ave	0.6841	0.6891		2.01	2.00	0.7	35.0
Ethylbenzene	Ave	1.196	1.091		1.82	2.00	-8.8	35.0
m-Xylene & p-Xylene	Ave	0.9148	0.8433		3.69	4.00	-7.8	35.0
Nonane	Ave	0.6507	0.6606		2.03	2.00	1.5	35.0
Bromoform	Ave	0.4761	0.5196		2.18	2.00	9.1	35.0
Styrene	Ave	0.6323	0.5922		1.87	2.00	-6.3	35.0
o-Xylene	Ave	0.9646	0.8608		1.78	2.00	-10.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5907		1.82	2.00	-8.8	35.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	35.0
Isopropylbenzene	Ave	1.286	1.176		1.83	2.00	-8.5	35.0
Propylbenzene	Ave	0.3476	0.3186		1.83	2.00	-8.3	35.0
2-Chlorotoluene	Ave	0.3175	0.3028		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.090		1.70	2.00	-15.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4983		2.00	2.00	-0.2	35.0
Alpha Methyl Styrene	Ave	0.5043	0.4358		1.73	2.00	-13.6	35.0
Decane	Ave	0.7982	0.7703		1.93	2.00	-3.5	35.0
tert-Butylbenzene	Ave	1.114	0.998		1.79	2.00	-10.4	35.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9651		1.76	2.00	-11.9	35.0
sec-Butylbenzene	Ave	1.569	1.417		1.81	2.00	-9.7	35.0
1,3-Dichlorobenzene	Ave	0.7160	0.6664		1.86	2.00	-6.9	35.0
Benzyl chloride	Ave	0.9762	0.8908		1.83	2.00	-8.7	35.0
1,4-Dichlorobenzene	Ave	0.7344	0.6695		1.82	2.00	-8.8	35.0
4-Isopropyltoluene	Ave	1.255	1.122		1.79	2.00	-10.6	35.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.7182		1.45	2.00	-27.5	35.0
Butylcyclohexane	Ave	0.9039	0.8456		1.87	2.00	-6.5	35.0
Indane	Ave	0.9903	0.8594		1.74	2.00	-13.2	35.0
1,2-Dichlorobenzene	Ave	0.7165	0.6343		1.77	2.00	-11.5	35.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	35.0
Indene	Ave	0.8508	0.6491		1.53	2.00	-23.7	35.0
Undecane	Ave	0.8098	0.7744		1.91	2.00	-4.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.2570		1.73	2.00	-13.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.013		1.77	2.00	-11.3	35.0
Dodecane	Ave	0.6396	0.6522		2.04	2.00	2.0	35.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5328		1.89	2.00	-5.7	35.0
Naphthalene	Ave	1.234	1.234		2.00	2.00	0.0	35.0
Hexachlorobutadiene	Ave	0.6047	0.5411		1.79	2.00	-10.5	35.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.5256		2.11	2.00	5.4	35.0
2-Methylnaphthalene	Ave	0.6016	0.6997		2.33	2.00	16.3	50.0
1-Methylnaphthalene	Ave	0.7372	0.8235		2.23	2.00	11.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8145		3.97	4.00	-0.6	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11ICV.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 11-Jan-2019 23:17:30 ALS Bottle#: 6 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-018
 Misc. Info.: S83
 Operator ID: 007126 Instrument ID: MG
 Sublist:

Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:47 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa Date: 14-Jan-2019 17:26:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	97	423755	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2327828	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	91	2182908	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.718	0.001	86	1777994	4.00	3.97	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	559021	2.00	2.01	
7 Propene	41	3.834	3.838	-0.004	98	314582	2.00	2.03	
8 Dichlorodifluoromethane	85	3.888	3.894	-0.006	100	919539	2.00	2.05	
9 Chloromethane	52	4.088	4.091	-0.003	99	102368	2.00	2.08	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	93	545988	2.00	2.08	
12 Vinyl chloride	62	4.271	4.277	-0.006	98	347000	2.00	2.03	
11 Acetaldehyde	44	4.265	4.278	-0.013	93	503377	10.0	7.94	
13 Butane	43	4.368	4.373	-0.005	87	595081	2.00	2.07	
14 Butadiene	54	4.368	4.375	-0.007	65	273211	2.00	2.07	
15 Bromomethane	94	4.718	4.722	-0.004	98	291645	2.00	1.98	
16 Chloroethane	64	4.875	4.879	-0.004	91	166315	2.00	2.02	
17 Ethanol	31	5.026	5.064	-0.038	98	540634	10.0	7.25	
18 Vinyl bromide	106	5.198	5.205	-0.007	99	291743	2.00	2.13	
19 2-Methylbutane	43	5.252	5.256	-0.004	92	423451	2.00	2.05	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	871181	2.00	1.98	
21 Acrolein	56	5.511	5.526	-0.015	96	57965	2.00	1.53	
22 Acetonitrile	40	5.581	5.603	-0.022	99	93536	2.00	1.58	
23 Acetone	58	5.651	5.666	-0.015	99	110896	2.00	1.74	
24 Pentane	72	5.721	5.725	-0.004	98	59420	2.00	2.11	
25 Isopropyl alcohol	45	5.786	5.840	-0.054	97	413062	2.00	2.43	
26 Ethyl ether	31	5.921	5.943	-0.022	91	311636	2.00	1.71	
27 1,1-Dichloroethene	96	6.234	6.242	-0.008	95	311458	2.00	2.08	
28 Acrylonitrile	53	6.358	6.375	-0.017	95	182005	2.00	1.76	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	93	655024	2.00	2.02	
30 2-Methyl-2-propanol	59	6.439	6.534	-0.095	96	512083	2.00	2.20	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	298505	2.00	1.72	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	95	335507	2.00	1.81	
33 Carbon disulfide	76	6.773	6.778	-0.005	100	923248	2.00	2.03	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	306868	2.00	2.05	
35 2-Methylpentane	43	7.463	7.468	-0.005	96	797621	2.00	1.86	
36 Methyl tert-butyl ether	73	7.603	7.643	-0.040	97	712180	2.00	1.71	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	597722	2.00	1.94	
38 Vinyl acetate	43	8.002	8.016	-0.014	100	695958	2.00	1.63	
40 Hexane	56	8.477	8.480	-0.003	77	278451	2.00	2.02	
39 2-Butanone (MEK)	72	8.472	8.499	-0.027	96	115958	2.00	1.72	
41 Isopropyl ether	45	8.649	8.679	-0.030	97	961415	2.00	1.82	
42 cis-1,2-Dichloroethene	96	8.903	8.906	-0.003	97	310749	2.00	2.03	
43 Ethyl acetate	43	9.102	9.131	-0.029	98	563610	2.00	1.61	
44 Chloroform	83	9.253	9.261	-0.008	97	672705	2.00	1.90	
45 Tert-butyl ethyl ether	59	9.350	9.389	-0.039	96	809494	2.00	1.66	
46 Tetrahydrofuran	42	9.685	9.725	-0.040	94	314199	2.00	1.67	
47 1,1,1-Trichloroethane	97	10.300	10.303	-0.003	96	734755	2.00	1.92	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	98	445746	2.00	1.96	
49 Cyclohexane	69	10.882	10.888	-0.006	95	166660	2.00	2.18	
50 Benzene	78	10.887	10.893	-0.006	98	889085	2.00	2.14	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	98	749968	2.00	2.17	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	91	227526	2.00	2.07	
51 n-Butanol	31	10.952	11.004	-0.052	78	125495	2.00	2.41	
54 Thiophene	84	11.162	11.164	-0.002	97	483942	2.00	2.00	
55 Isooctane	57	11.626	11.632	-0.006	98	1667827	2.00	2.05	
56 n-Heptane	71	11.993	11.995	-0.002	94	338068	2.00	2.02	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	87	307526	2.00	1.88	
58 Trichloroethene	130	12.122	12.124	-0.002	95	394652	2.00	2.08	
59 Dibromomethane	93	12.214	12.216	-0.002	94	344072	2.00	2.00	
60 Dichlorobromomethane	83	12.354	12.354	0.000	98	685664	2.00	2.02	
61 1,4-Dioxane	88	12.386	12.421	-0.035	98	97309	2.00	2.01	
62 Methyl methacrylate	41	12.440	12.453	-0.013	90	361838	2.00	1.73	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	714807	2.00	2.51	
64 4-Methyl-2-pentanone (MIBK)	43	13.298	13.321	-0.023	99	643830	2.00	1.96	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	98	490279	2.00	1.97	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	97	456019	2.00	1.94	
67 Toluene	91	14.144	14.144	0.000	93	902637	2.00	1.88	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	99	277868	2.00	1.90	
76 2-Methylthiophene	97	14.295	14.295	0.000	98	735484	NC	NC	
77 3-Methylthiophene	97	14.495	14.495	0.000	99	719176	NC	NC	
69 2-Hexanone	58	14.608	14.631	-0.023	91	305613	2.00	2.12	
70 n-Octane	85	14.802	14.804	-0.002	96	361178	2.00	2.09	
71 Chlorodibromomethane	129	14.915	14.920	-0.005	98	628573	2.00	2.12	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	501417	2.00	1.97	
73 Tetrachloroethene	129	15.271	15.272	-0.001	95	370073	2.00	2.05	
74 2,3-Dimethylheptane	43	16.139	16.139	0.000	96	1065455	2.00	1.82	
75 Chlorobenzene	112	16.139	16.142	-0.003	92	752108	2.00	2.01	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	1190399	2.00	1.82	
91 2-Ethylthiophene	97	16.522	16.522	0.000	98	874372	NC	NC	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	1840740	4.00	3.69	
80 n-Nonane	57	16.975	16.977	-0.002	94	721028	2.00	2.03	
81 Bromoform	173	17.040	17.041	-0.001	93	567100	2.00	2.18	
82 Styrene	104	17.045	17.047	-0.002	99	646380	2.00	1.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 o-Xylene	91	17.105	17.106	-0.001	98	939571	2.00	1.78	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	644662	2.00	1.82	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	202004	2.00	1.78	
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	1283692	2.00	1.83	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	347734	2.00	1.83	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	330501	2.00	1.91	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	1189898	2.00	1.70	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	92	543840	2.00	2.00	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	475664	2.00	1.73	
93 n-Decane	57	18.679	18.682	-0.003	90	840779	2.00	1.93	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	91	1089707	2.00	1.79	
95 1,2,4-Trimethylbenzene	105	18.846	18.846	0.000	96	1053331	2.00	1.76	
96 sec-Butylbenzene	105	19.094	19.094	0.000	98	1546183	2.00	1.81	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	98	727360	2.00	1.86	
98 Benzyl chloride	91	19.186	19.188	-0.002	98	972247	2.00	1.83	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	95	730746	2.00	1.82	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	1224528	2.00	1.79	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	783832	2.00	1.45	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	922903	2.00	1.87	
103 2,3-Dihydroindene	117	19.547	19.550	-0.003	94	938000	2.00	1.74	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	94	692280	2.00	1.77	
105 n-Butylbenzene	91	19.671	19.673	-0.002	98	1289575	2.00	1.85	
106 Indene	116	19.677	19.679	-0.002	90	708434	2.00	1.53	
107 Undecane	57	19.963	19.963	0.000	95	845217	2.00	1.91	
117 1,2-Dimethyl-4-Ethylbenzen	119	20.033	20.033	0.000	98	898836	NC	NC	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	92	280496	2.00	1.73	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	97	1105869	2.00	1.77	
118 1,2,3,5-Tetramethylbenzene	119	20.470	20.470	0.000	95	665260	NC	NC	
119 1,2,3,4-Tetramethylbenzene	119	20.874	20.874	0.000	97	911881	NC	NC	
110 Dodecane	57	21.014	21.014	0.000	94	711861	2.00	2.04	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	581479	2.00	1.89	
112 Naphthalene	128	21.375	21.377	-0.002	99	1346876	2.00	2.00	
120 Benzo(b)thiophene	134	21.478	21.478	0.000	99	786705	NC	NC	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	95	590622	2.00	1.79	
114 1,2,3-Trichlorobenzene	180	21.650	21.651	-0.001	95	573612	2.00	2.11	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	763689	2.00	2.33	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	898886	2.00	2.23	
A 122 C8 Range	1	14.813	(14.744-14.902)		0	3557712	2.00	2.06	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.08	
S 124 Xylenes, Total	100				0		6.00	5.47	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00083

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11ICV.D

Injection Date: 11-Jan-2019 23:17:30

Instrument ID: MG

Operator ID: 007126

Lims ID: ICV

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

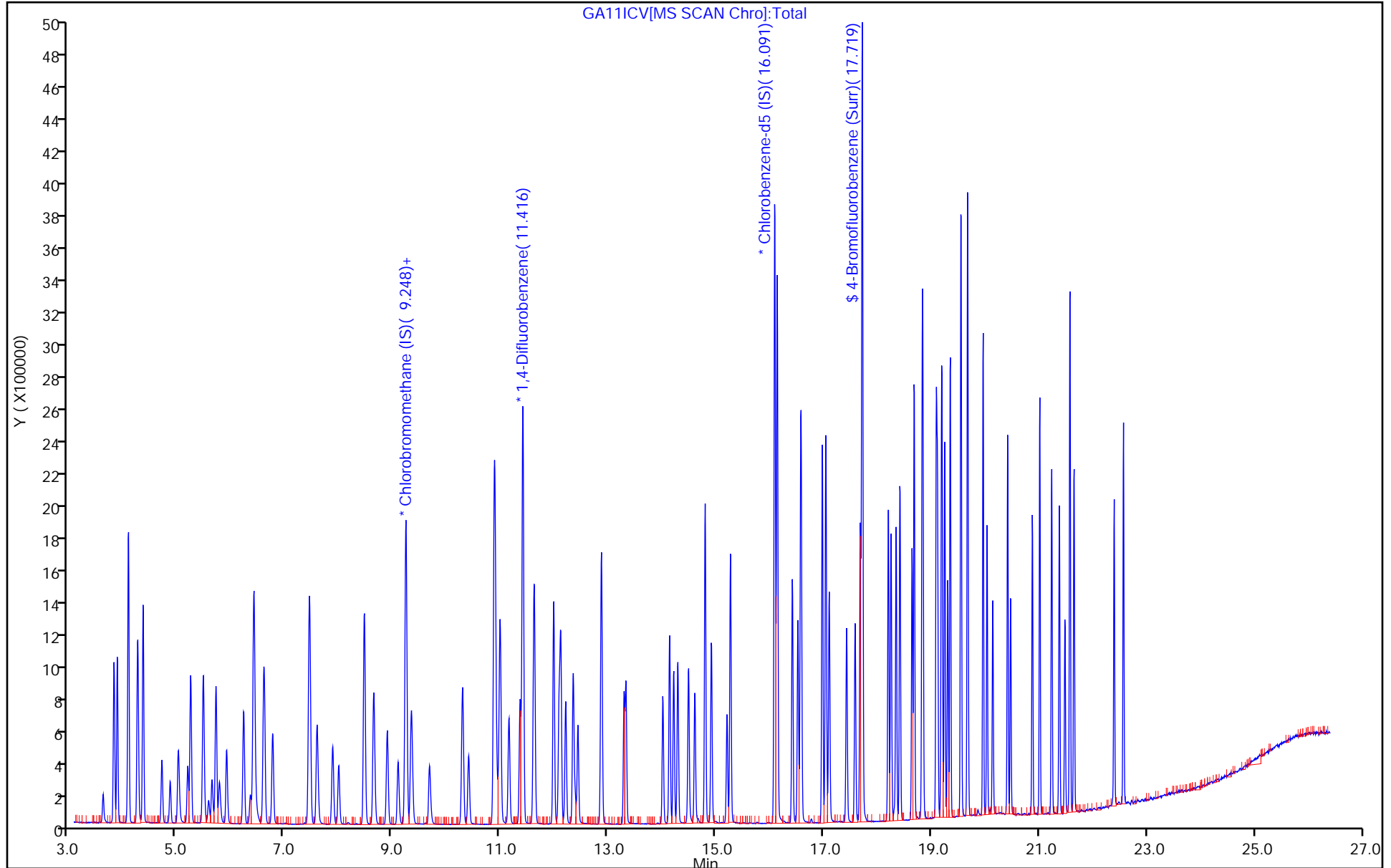
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.652		2.02	2.00	1.2	30.0
Propene	Ave	1.463	1.534		2.10	2.00	4.8	30.0
Dichlorodifluoromethane	Ave	4.235	4.356		2.06	2.00	2.9	30.0
Chloromethane	Ave	0.4649	0.4693		2.02	2.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.404		1.94	2.00	-2.9	30.0
Acetaldehyde	Ave	0.5987	0.5225		8.73	10.0	-12.7	30.0
Vinyl chloride	Ave	1.611	1.586		1.97	2.00	-1.5	30.0
1,3-Butadiene	Ave	1.245	1.283		2.06	2.00	3.0	30.0
Butane	Ave	2.712	2.755		2.03	2.00	1.6	30.0
Bromomethane	Ave	1.392	1.313		1.89	2.00	-5.7	30.0
Chloroethane	Ave	0.7761	0.7469		1.92	2.00	-3.8	30.0
Ethanol	Ave	0.7042	0.7541		10.7	10.0	7.1	30.0
Vinyl bromide	Ave	1.290	1.209		1.87	2.00	-6.3	30.0
2-Methylbutane	Ave	1.947	1.895		1.95	2.00	-2.7	30.0
Trichlorofluoromethane	Ave	4.152	4.042		1.95	2.00	-2.7	30.0
Acrolein	Ave	0.3574	0.3194		1.79	2.00	-10.6	30.0
Acetonitrile	Ave	0.5574	0.5302		1.90	2.00	-4.9	30.0
Acetone	Ave	0.6013	0.4988		4.98	6.00	-17.0	30.0
Pentane	Ave	0.2653	0.2565		1.93	2.00	-3.3	30.0
Isopropyl alcohol	Ave	1.603	1.779		6.66	6.00	10.9	30.0
Ethyl ether	Ave	1.725	1.691		1.96	2.00	-2.0	30.0
1,1-Dichloroethene	Ave	1.412	1.514		2.14	2.00	7.2	30.0
Acrylonitrile	Ave	0.9747	0.9432		1.94	2.00	-3.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.167		2.07	2.00	3.5	30.0
tert-Butyl alcohol	Ave	2.196	2.812		2.56	2.00	28.0	30.0
Methylene Chloride	Ave	1.643	1.484		1.81	2.00	-9.7	30.0
3-Chloropropene	Ave	1.751	1.648		1.88	2.00	-5.9	30.0
Carbon disulfide	Ave	4.284	4.628		2.16	2.00	8.0	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.521		2.15	2.00	7.6	30.0
2-Methylpentane	Ave	4.045	4.401		2.18	2.00	8.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.883		1.97	2.00	-1.3	30.0
1,1-Dichloroethane	Ave	2.906	2.982		2.05	2.00	2.6	30.0
Vinyl acetate	Ave	4.034	3.919		1.94	2.00	-2.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.6318		1.99	2.00	-0.5	30.0
Hexane	Ave	1.304	1.409		2.16	2.00	8.1	30.0
Isopropyl ether	Ave	4.992	5.130		2.06	2.00	2.8	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.511		2.09	2.00	4.4	30.0
Ethyl acetate	Ave	3.312	3.321		2.01	2.00	0.3	30.0
Chloroform	Ave	3.344	3.351		2.00	2.00	0.2	30.0
Tert-butyl ethyl ether	Ave	4.607	4.651		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.780		2.01	2.00	0.4	30.0
1,1,1-Trichloroethane	Ave	3.620	3.686		2.04	2.00	1.8	30.0
1,2-Dichloroethane	Ave	0.3910	0.3917		2.00	2.00	0.2	30.0
Cyclohexane	Ave	0.1314	0.1477		2.25	2.00	12.4	30.0
Benzene	Ave	0.7153	0.7399		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6573		2.22	2.00	10.8	30.0
1-Butanol	Ave	0.0896	0.1263		2.82	2.00	41.0*	30.0
2,3-Dimethylpentane	Ave	0.1886	0.2098		2.22	2.00	11.2	30.0
Thiophene	Ave	0.4156	0.4526		2.18	2.00	8.9	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.515		2.16	2.00	8.2	30.0
Heptane	Ave	0.2875	0.3131		2.18	2.00	8.9	30.0
1,2-Dichloropropane	Ave	0.2813	0.2865		2.04	2.00	1.8	30.0
Trichloroethene	Ave	0.3257	0.3404		2.09	2.00	4.5	30.0
Dibromomethane	Ave	0.2963	0.3076		2.08	2.00	3.8	30.0
Bromodichloromethane	Ave	0.5843	0.6356		2.18	2.00	8.8	30.0
1,4-Dioxane	Ave	0.0832	0.1054		2.53	2.00	26.7	30.0
Methyl methacrylate	Ave	0.3595	0.3845		2.14	2.00	7.0	30.0
Methylcyclohexane	Ave	0.4896	0.5279		2.16	2.00	7.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.6430		2.28	2.00	14.2	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4641		2.17	2.00	8.5	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4612		2.14	2.00	7.0	30.0
Toluene	Ave	0.8801	0.8908		2.02	2.00	1.2	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2829		2.11	2.00	5.3	30.0
2-Hexanone	Ave	0.2641	0.3188		2.41	2.00	20.7	30.0
Octane	Ave	0.3165	0.3439		2.17	2.00	8.7	30.0
Dibromochloromethane	Ave	0.5446	0.5989		2.20	2.00	10.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4929		2.12	2.00	5.8	30.0
Tetrachloroethene	Ave	0.3302	0.3406		2.06	2.00	3.1	30.0
2,3-Dimethylheptane	Ave	1.076	1.161		2.16	2.00	8.0	30.0
Chlorobenzene	Ave	0.6841	0.7203		2.11	2.00	5.3	30.0
Ethylbenzene	Ave	1.196	1.211		2.03	2.00	1.3	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.9437		4.13	4.00	3.2	30.0
Nonane	Ave	0.6507	0.7098		2.18	2.00	9.1	30.0
Bromoform	Ave	0.4761	0.5476		2.30	2.00	15.0	30.0
Styrene	Ave	0.6323	0.6714		2.12	2.00	6.2	30.0
o-Xylene	Ave	0.9646	0.9910		2.05	2.00	2.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.6633		2.05	2.00	2.4	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.2051		1.98	2.00	-1.2	30.0
Isopropylbenzene	Ave	1.286	1.274		1.98	2.00	-1.0	30.0
Propylbenzene	Ave	0.3476	0.3424		1.97	2.00	-1.5	30.0
2-Chlorotoluene	Ave	0.3175	0.3184		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.295		2.02	2.00	0.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4918		1.97	2.00	-1.5	30.0
Alpha Methyl Styrene	Ave	0.5043	0.5202		2.06	2.00	3.1	30.0
Decane	Ave	0.7982	0.8625		2.16	2.00	8.1	30.0
tert-Butylbenzene	Ave	1.114	1.103		1.98	2.00	-1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.096	1.089		1.99	2.00	-0.6	30.0
sec-Butylbenzene	Ave	1.569	1.580		2.01	2.00	0.7	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.7287		2.04	2.00	1.8	30.0
Benzyl chloride	Ave	0.9762	1.033		2.12	2.00	5.8	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.7367		2.01	2.00	0.3	30.0
4-Isopropyltoluene	Ave	1.255	1.277		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	1.101		2.22	2.00	11.1	30.0
Butylcyclohexane	Ave	0.9039	0.9644		2.13	2.00	6.7	30.0
Indane	Ave	0.9903	0.9865		1.99	2.00	-0.4	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.7004		1.95	2.00	-2.3	30.0
Butylbenzene	Ave	1.277	1.325		2.08	2.00	3.8	30.0
Indene	Ave	0.8508	0.8688		2.04	2.00	2.1	30.0
Undecane	Ave	0.8098	0.8597		2.12	2.00	6.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3582		2.42	2.00	20.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.185		2.07	2.00	3.7	30.0
Dodecane	Ave	0.6396	0.6319		1.98	2.00	-1.2	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5181		1.83	2.00	-8.3	30.0
Naphthalene	Ave	1.234	1.197		1.94	2.00	-3.0	30.0
Hexachlorobutadiene	Ave	0.6047	0.5124		1.69	2.00	-15.3	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4625		1.85	2.00	-7.3	30.0
2-Methylnaphthalene	Ave	0.6016	0.4938		1.64	2.00	-17.9	50.0
1-Methylnaphthalene	Ave	0.7372	0.5485		1.49	2.00	-25.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8212		4.01	4.00	0.2	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 26-Feb-2019 11:35:30 ALS Bottle#: 15 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-002
 Misc. Info.: P82
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:22:36 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:22:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.232	0.000	97	496382	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.405	0.000	96	2758157	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	91	2578216	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2117181	4.00	4.01	
6 Chlorodifluoromethane	51	3.823	3.823	0.000	97	658223	2.00	2.02	
7 Propene	41	3.834	3.834	0.000	99	380649	2.00	2.10	
8 Dichlorodifluoromethane	85	3.888	3.888	0.000	100	1081216	2.00	2.06	
9 Chloromethane	52	4.088	4.088	0.000	99	116472	2.00	2.02	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.098	0.000	96	596628	2.00	1.94	
11 Acetaldehyde	44	4.266	4.266	0.000	95	648347	10.0	8.73	
12 Vinyl chloride	62	4.271	4.271	0.000	99	393694	2.00	1.97	
13 Butane	43	4.368	4.368	0.000	86	683696	2.00	2.03	
14 Butadiene	54	4.368	4.368	0.000	66	318396	2.00	2.06	
15 Bromomethane	94	4.713	4.713	0.000	98	325798	2.00	1.89	
16 Chloroethane	64	4.870	4.870	0.000	90	185377	2.00	1.92	
17 Ethanol	31	5.031	5.031	0.000	97	935746	10.0	10.7	
18 Vinyl bromide	106	5.193	5.193	0.000	98	300038	2.00	1.87	
19 2-Methylbutane	43	5.247	5.247	0.000	92	470238	2.00	1.95	
20 Trichlorofluoromethane	101	5.484	5.484	0.000	99	1003068	2.00	1.95	
21 Acrolein	56	5.506	5.506	0.000	96	79264	2.00	1.79	
22 Acetonitrile	40	5.581	5.581	0.000	99	131601	2.00	1.90	
23 Acetone	58	5.635	5.635	0.000	99	371393	6.00	4.98	
24 Pentane	72	5.716	5.716	0.000	98	63668	2.00	1.93	
25 Isopropyl alcohol	45	5.775	5.775	0.000	97	1324509	6.00	6.66	
26 Ethyl ether	31	5.910	5.910	0.000	90	419601	2.00	1.96	
27 1,1-Dichloroethene	96	6.228	6.228	0.000	94	375675	2.00	2.14	
28 Acrylonitrile	53	6.352	6.352	0.000	95	234090	2.00	1.94	
29 1,1,2-Trichloro-1,2,2-trif	101	6.417	6.417	0.000	94	786133	2.00	2.07	
30 2-Methyl-2-propanol	59	6.455	6.455	0.000	92	697915	2.00	2.56	
31 Methylene Chloride	84	6.595	6.595	0.000	98	368192	2.00	1.81	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.611	6.611	0.000	94	408941	2.00	1.88	
33 Carbon disulfide	76	6.768	6.768	0.000	99	1148654	2.00	2.16	
34 trans-1,2-Dichloroethene	96	7.436	7.436	0.000	95	377435	2.00	2.15	
35 2-Methylpentane	43	7.453	7.453	0.000	96	1092237	2.00	2.18	
36 Methyl tert-butyl ether	73	7.587	7.587	0.000	97	963642	2.00	1.97	
37 1,1-Dichloroethane	63	7.879	7.879	0.000	100	740120	2.00	2.05	
38 Vinyl acetate	43	7.992	7.992	0.000	100	972603	2.00	1.94	
39 2-Butanone (MEK)	72	8.461	8.461	0.000	94	156796	2.00	1.99	
40 Hexane	56	8.466	8.466	0.000	75	349595	2.00	2.16	
41 Isopropyl ether	45	8.639	8.639	0.000	97	1273265	2.00	2.06	
42 cis-1,2-Dichloroethene	96	8.887	8.887	0.000	97	374980	2.00	2.09	
43 Ethyl acetate	43	9.086	9.086	0.000	98	824216	2.00	2.01	
44 Chloroform	83	9.243	9.243	0.000	97	831651	2.00	2.00	
45 Tert-butyl ethyl ether	59	9.340	9.340	0.000	96	1154312	2.00	2.02	
46 Tetrahydrofuran	42	9.669	9.669	0.000	94	441834	2.00	2.01	
47 1,1,1-Trichloroethane	97	10.283	10.283	0.000	95	914802	2.00	2.04	
48 1,2-Dichloroethane	62	10.397	10.397	0.000	98	540157	2.00	2.00	
49 Cyclohexane	69	10.871	10.871	0.000	94	203691	2.00	2.25	
50 Benzene	78	10.877	10.877	0.000	98	1020327	2.00	2.07	
52 Carbon tetrachloride	117	10.898	10.898	0.000	98	906489	2.00	2.22	
51 n-Butanol	31	10.963	10.963	0.000	72	174154	2.00	2.82	
53 2,3-Dimethylpentane	71	10.985	10.985	0.000	90	289271	2.00	2.22	
54 Thiophene	84	11.146	11.146	0.000	98	624101	2.00	2.18	
55 Isooctane	57	11.615	11.615	0.000	98	2089798	2.00	2.16	
56 n-Heptane	71	11.977	11.977	0.000	94	431811	2.00	2.18	
57 1,2-Dichloropropane	63	12.074	12.074	0.000	87	395044	2.00	2.04	
58 Trichloroethene	130	12.106	12.106	0.000	95	469444	2.00	2.09	
59 Dibromomethane	93	12.198	12.198	0.000	92	424190	2.00	2.08	
60 Dichlorobromomethane	83	12.338	12.338	0.000	99	876559	2.00	2.18	
61 1,4-Dioxane	88	12.370	12.370	0.000	98	145314	2.00	2.53	
62 Methyl methacrylate	41	12.424	12.424	0.000	90	530253	2.00	2.14	
63 Methylcyclohexane	83	12.861	12.861	0.000	93	728027	2.00	2.16	
64 4-Methyl-2-pentanone (MIBK)	43	13.287	13.287	0.000	99	886750	2.00	2.28	
65 cis-1,3-Dichloropropene	75	13.319	13.319	0.000	98	639985	2.00	2.17	
66 trans-1,3-Dichloropropene	75	13.999	13.999	0.000	97	594581	2.00	2.14	
67 Toluene	91	14.128	14.128	0.000	94	1148311	2.00	2.02	
68 1,1,2-Trichloroethane	83	14.204	14.204	0.000	99	364646	2.00	2.11	
69 2-Hexanone	58	14.603	14.603	0.000	92	411009	2.00	2.41	
70 n-Octane	85	14.786	14.786	0.000	96	443374	2.00	2.17	
71 Chlorodibromomethane	129	14.905	14.905	0.000	98	772027	2.00	2.20	
72 Ethylene Dibromide	107	15.191	15.191	0.000	99	635364	2.00	2.12	
73 Tetrachloroethene	129	15.255	15.255	0.000	93	439005	2.00	2.06	
74 2,3-Dimethylheptane	43	16.123	16.123	0.000	96	1496933	2.00	2.16	
75 Chlorobenzene	112	16.129	16.129	0.000	77	928511	2.00	2.11	
78 Ethylbenzene	91	16.404	16.404	0.000	99	1561015	2.00	2.03	
79 m-Xylene & p-Xylene	91	16.566	16.566	0.000	99	2433053	4.00	4.13	
80 n-Nonane	57	16.965	16.965	0.000	94	915019	2.00	2.18	
81 Bromoform	173	17.024	17.024	0.000	92	705966	2.00	2.30	
82 Styrene	104	17.029	17.029	0.000	99	865556	2.00	2.12	
83 o-Xylene	91	17.089	17.089	0.000	97	1277486	2.00	2.05	
84 1,1,2,2-Tetrachloroethane	83	17.412	17.412	0.000	99	855020	2.00	2.05	
85 1,2,3-Trichloropropane	110	17.574	17.574	0.000	97	264346	2.00	1.98	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.671	17.671	0.000	97	1641690	2.00	1.98	
87 N-Propylbenzene	120	18.189	18.189	0.000	98	441397	2.00	1.97	
88 2-Chlorotoluene	126	18.237	18.237	0.000	97	410417	2.00	2.01	
89 4-Ethyltoluene	105	18.334	18.334	0.000	98	1669466	2.00	2.02	
90 1,3,5-Trimethylbenzene	120	18.404	18.404	0.000	91	633949	2.00	1.97	
92 Alpha Methyl Styrene	118	18.631	18.631	0.000	87	670603	2.00	2.06	
93 n-Decane	57	18.674	18.674	0.000	90	1111794	2.00	2.16	
94 tert-Butylbenzene	119	18.820	18.820	0.000	94	1422084	2.00	1.98	
95 1,2,4-Trimethylbenzene	105	18.830	18.830	0.000	97	1404437	2.00	1.99	
96 sec-Butylbenzene	105	19.084	19.084	0.000	98	2036393	2.00	2.01	
97 1,3-Dichlorobenzene	146	19.105	19.105	0.000	98	939347	2.00	2.04	
98 Benzyl chloride	91	19.176	19.176	0.000	97	1331508	2.00	2.12	
99 1,4-Dichlorobenzene	146	19.186	19.186	0.000	94	949687	2.00	2.01	
100 4-Isopropyltoluene	119	19.240	19.240	0.000	96	1645625	2.00	2.03	
101 1,2,3-Trimethylbenzene	105	19.294	19.294	0.000	99	1419409	2.00	2.22	
102 Butylcyclohexane	83	19.343	19.343	0.000	91	1243201	2.00	2.13	
103 2,3-Dihydroindene	117	19.537	19.537	0.000	93	1271670	2.00	1.99	
104 1,2-Dichlorobenzene	146	19.542	19.542	0.000	95	902853	2.00	1.95	
105 n-Butylbenzene	91	19.661	19.661	0.000	98	1708583	2.00	2.08	
106 Indene	116	19.666	19.666	0.000	90	1119910	2.00	2.04	
107 Undecane	57	19.952	19.952	0.000	96	1108192	2.00	2.12	
108 1,2-Dibromo-3-Chloropropan	157	20.130	20.130	0.000	96	461711	2.00	2.42	
109 1,2,4,5-Tetramethylbenzene	119	20.405	20.405	0.000	96	1527367	2.00	2.07	
110 Dodecane	57	21.004	21.004	0.000	94	814573	2.00	1.98	
111 1,2,4-Trichlorobenzene	180	21.225	21.225	0.000	94	667891	2.00	1.83	
112 Naphthalene	128	21.365	21.365	0.000	99	1542497	2.00	1.94	
113 Hexachlorobutadiene	225	21.564	21.564	0.000	95	660498	2.00	1.69	
114 1,2,3-Trichlorobenzene	180	21.640	21.640	0.000	95	596206	2.00	1.85	
115 2-Methylnaphthalene	142	22.384	22.384	0.000	100	636621	2.00	1.64	
116 1-Methylnaphthalene	142	22.557	22.557	0.000	99	707065	2.00	1.49	
A 122 C8 Range	1	14.787	(14.733-14.870)		0	4392004	2.00	2.16	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.24	
S 124 Xylenes, Total	100				0		6.00	6.18	

Reagents:

40CV101P_00082

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26.D

Injection Date: 26-Feb-2019 11:35:30

Instrument ID: MG

Operator ID: 007126

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

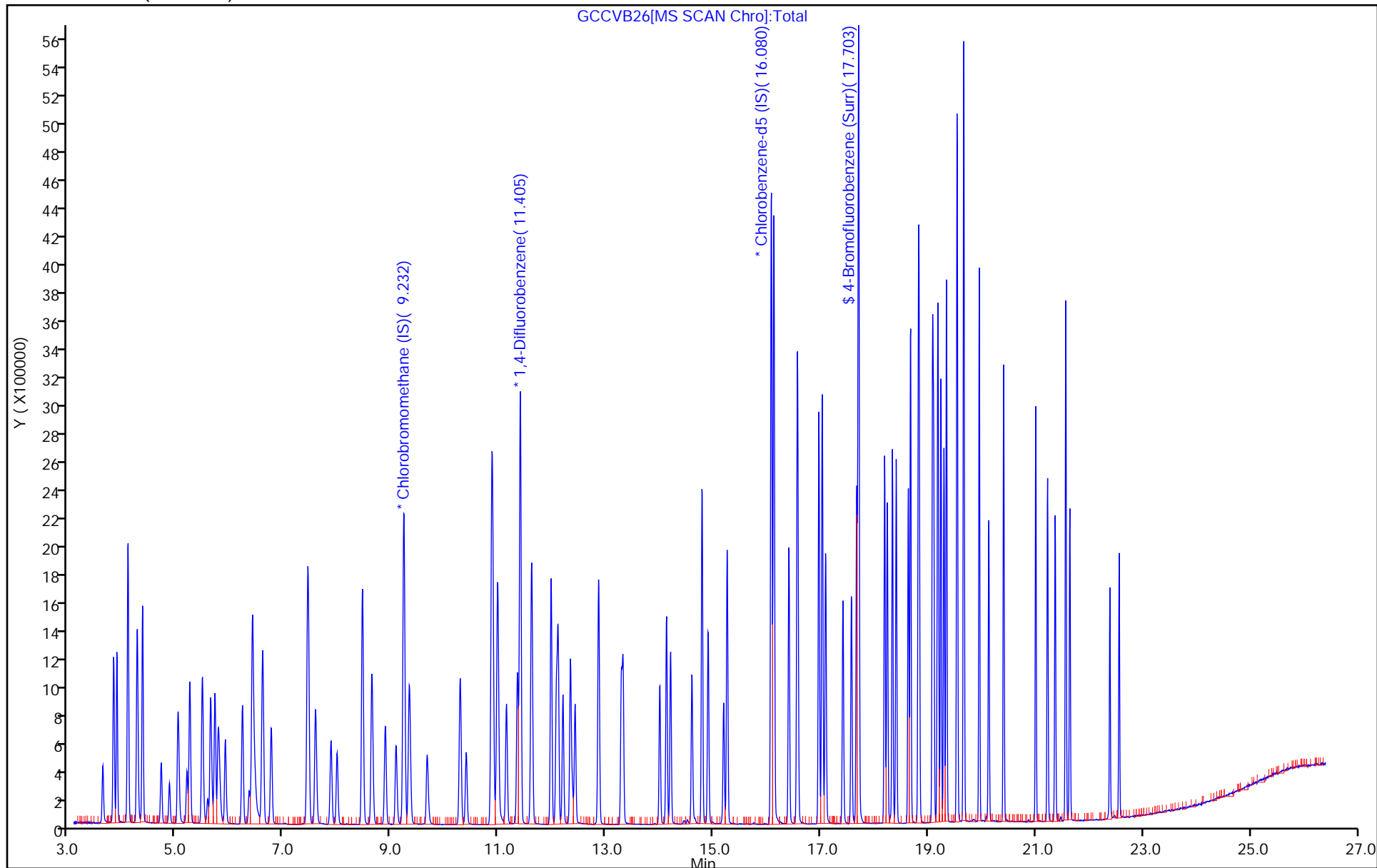
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27932/2 Calibration Date: 02/27/2019 13:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB27a.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.343		1.79	2.00	-10.6	30.0
Propene	Ave	1.463	1.318		1.80	2.00	-9.9	30.0
Dichlorodifluoromethane	Ave	4.235	4.000		1.89	2.00	-5.5	30.0
Chloromethane	Ave	0.4649	0.4249		1.83	2.00	-8.6	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.345		1.90	2.00	-5.2	30.0
Acetaldehyde	Ave	0.5987	0.5000		8.35	10.0	-16.5	30.0
Vinyl chloride	Ave	1.611	1.421		1.76	2.00	-11.8	30.0
1,3-Butadiene	Ave	1.245	1.150		1.85	2.00	-7.6	30.0
Butane	Ave	2.712	2.416		1.78	2.00	-10.9	30.0
Bromomethane	Ave	1.392	1.237		1.78	2.00	-11.1	30.0
Chloroethane	Ave	0.7761	0.6871		1.77	2.00	-11.5	30.0
Ethanol	Ave	0.7042	0.6514		9.25	10.0	-7.5	30.0
Vinyl bromide	Ave	1.290	1.177		1.82	2.00	-8.8	30.0
2-Methylbutane	Ave	1.947	1.713		1.76	2.00	-12.0	30.0
Trichlorofluoromethane	Ave	4.152	3.892		1.87	2.00	-6.3	30.0
Acrolein	Ave	0.3574	0.3013		1.69	2.00	-15.7	30.0
Acetonitrile	Ave	0.5574	0.4750		1.70	2.00	-14.8	30.0
Acetone	Ave	0.6013	0.4639		4.63	6.00	-22.8	30.0
Pentane	Ave	0.2653	0.2431		1.83	2.00	-8.4	30.0
Isopropyl alcohol	Ave	1.603	1.541		5.77	6.00	-3.9	30.0
Ethyl ether	Ave	1.725	1.461		1.69	2.00	-15.3	30.0
1,1-Dichloroethene	Ave	1.412	1.436		2.03	2.00	1.7	30.0
Acrylonitrile	Ave	0.9747	0.8816		1.81	2.00	-9.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.101		2.03	2.00	1.3	30.0
tert-Butyl alcohol	Ave	2.196	2.381		2.17	2.00	8.4	30.0
Methylene Chloride	Ave	1.643	1.422		1.73	2.00	-13.4	30.0
3-Chloropropene	Ave	1.751	1.640		1.87	2.00	-6.3	30.0
Carbon disulfide	Ave	4.284	4.332		2.02	2.00	1.1	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.473		2.08	2.00	4.2	30.0
2-Methylpentane	Ave	4.045	4.117		2.04	2.00	1.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.532		1.80	2.00	-10.2	30.0
1,1-Dichloroethane	Ave	2.906	2.958		2.04	2.00	1.8	30.0
Vinyl acetate	Ave	4.034	3.636		1.80	2.00	-9.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.5868		1.85	2.00	-7.5	30.0
Hexane	Ave	1.304	1.351		2.07	2.00	3.6	30.0
Isopropyl ether	Ave	4.992	4.608		1.85	2.00	-7.7	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.522		2.11	2.00	5.3	30.0
Ethyl acetate	Ave	3.312	2.968		1.79	2.00	-10.4	30.0
Chloroform	Ave	3.344	3.357		2.01	2.00	0.4	30.0
Tert-butyl ethyl ether	Ave	4.607	4.184		1.82	2.00	-9.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27932/2 Calibration Date: 02/27/2019 13:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB27a.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.592		1.80	2.00	-10.2	30.0
1,1,1-Trichloroethane	Ave	3.620	3.695		2.04	2.00	2.1	30.0
1,2-Dichloroethane	Ave	0.3910	0.3874		1.98	2.00	-0.9	30.0
Cyclohexane	Ave	0.1314	0.1357		2.06	2.00	3.2	30.0
Benzene	Ave	0.7153	0.7400		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6334		2.14	2.00	6.8	30.0
1-Butanol	Ave	0.0896	0.1016		2.27	2.00	13.5	30.0
2,3-Dimethylpentane	Ave	0.1886	0.1975		2.09	2.00	4.7	30.0
Thiophene	Ave	0.4156	0.4425		2.13	2.00	6.5	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.412		2.02	2.00	0.8	30.0
Heptane	Ave	0.2875	0.2935		2.04	2.00	2.1	30.0
1,2-Dichloropropane	Ave	0.2813	0.2678		1.90	2.00	-4.8	30.0
Trichloroethene	Ave	0.3257	0.3360		2.06	2.00	3.1	30.0
Dibromomethane	Ave	0.2963	0.2999		2.02	2.00	1.2	30.0
Bromodichloromethane	Ave	0.5843	0.6016		2.06	2.00	3.0	30.0
1,4-Dioxane	Ave	0.0832	0.0945		2.27	2.00	13.7	30.0
Methyl methacrylate	Ave	0.3595	0.3261		1.81	2.00	-9.3	30.0
Methylcyclohexane	Ave	0.4896	0.5068		2.07	2.00	3.5	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.4971		1.77	2.00	-11.7	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4333		2.03	2.00	1.3	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4311		2.00	2.00	0.0	30.0
Toluene	Ave	0.8801	0.8538		1.94	2.00	-3.0	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2622		1.95	2.00	-2.3	30.0
2-Hexanone	Ave	0.2641	0.2523		1.91	2.00	-4.5	30.0
Octane	Ave	0.3165	0.3167		2.00	2.00	0.0	30.0
Dibromochloromethane	Ave	0.5446	0.5739		2.11	2.00	5.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4756		2.04	2.00	2.1	30.0
Tetrachloroethene	Ave	0.3302	0.3300		2.00	2.00	-0.0	30.0
2,3-Dimethylheptane	Ave	1.076	1.057		1.97	2.00	-1.7	30.0
Chlorobenzene	Ave	0.6841	0.6719		1.96	2.00	-1.8	30.0
Ethylbenzene	Ave	1.196	1.124		1.88	2.00	-6.0	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.8615		3.77	4.00	-5.8	30.0
Nonane	Ave	0.6507	0.6447		1.98	2.00	-0.9	30.0
Bromoform	Ave	0.4761	0.5205		2.19	2.00	9.3	30.0
Styrene	Ave	0.6323	0.6158		1.95	2.00	-2.6	30.0
o-Xylene	Ave	0.9646	0.9002		1.87	2.00	-6.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5939		1.83	2.00	-8.3	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	30.0
Isopropylbenzene	Ave	1.286	1.146		1.78	2.00	-10.9	30.0
Propylbenzene	Ave	0.3476	0.3083		1.77	2.00	-11.3	30.0
2-Chlorotoluene	Ave	0.3175	0.2967		1.87	2.00	-6.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27932/2 Calibration Date: 02/27/2019 13:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB27a.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.151		1.79	2.00	-10.3	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4446		1.78	2.00	-11.0	30.0
Alpha Methyl Styrene	Ave	0.5043	0.4618		1.83	2.00	-8.4	30.0
Decane	Ave	0.7982	0.7610		1.91	2.00	-4.7	30.0
tert-Butylbenzene	Ave	1.114	0.9896		1.78	2.00	-11.2	30.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9684		1.77	2.00	-11.6	30.0
sec-Butylbenzene	Ave	1.569	1.412		1.80	2.00	-10.0	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.6715		1.88	2.00	-6.2	30.0
Benzyl chloride	Ave	0.9762	0.9129		1.87	2.00	-6.5	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.6831		1.86	2.00	-7.0	30.0
4-Isopropyltoluene	Ave	1.255	1.146		1.83	2.00	-8.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.9859		1.99	2.00	-0.5	30.0
Butylcyclohexane	Ave	0.9039	0.8816		1.95	2.00	-2.5	30.0
Indane	Ave	0.9903	0.8909		1.80	2.00	-10.0	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.6395		1.79	2.00	-10.7	30.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	30.0
Indene	Ave	0.8508	0.7789		1.83	2.00	-8.4	30.0
Undecane	Ave	0.8098	0.7716		1.91	2.00	-4.7	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3190		2.15	2.00	7.7	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.063		1.86	2.00	-6.9	30.0
Dodecane	Ave	0.6396	0.5967		1.87	2.00	-6.7	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5036		1.78	2.00	-10.9	30.0
Naphthalene	Ave	1.234	1.133		1.84	2.00	-8.2	30.0
Hexachlorobutadiene	Ave	0.6047	0.5154		1.70	2.00	-14.8	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4541		1.82	2.00	-9.0	30.0
2-Methylnaphthalene	Ave	0.6016	0.5475		1.82	2.00	-9.0	50.0
1-Methylnaphthalene	Ave	0.7372	0.6256		1.70	2.00	-15.1	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.7809		3.81	4.00	-4.7	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GCCVB27a.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 27-Feb-2019 13:35:30 ALS Bottle#: 7 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-002
 Misc. Info.: S85
 Operator ID: 403648 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:08:02 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits

Date: 28-Feb-2019 14:08:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.237	9.237	0.000	97	507272	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.410	11.410	0.000	96	2957187	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	90	2771430	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	86	2164296	4.00	3.81	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	97	594315	2.00	1.79	
7 Propene	41	3.839	3.839	0.000	98	334222	2.00	1.80	
8 Dichlorodifluoromethane	85	3.893	3.893	0.000	100	1014668	2.00	1.89	
9 Chloromethane	52	4.087	4.087	0.000	99	107775	2.00	1.83	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.104	0.000	97	594710	2.00	1.90	
11 Acetaldehyde	44	4.271	4.271	0.000	96	634077	10.0	8.35	
12 Vinyl chloride	62	4.276	4.276	0.000	99	360303	2.00	1.76	
13 Butane	43	4.373	4.373	0.000	86	612899	2.00	1.78	
14 Butadiene	54	4.373	4.373	0.000	67	291769	2.00	1.85	
15 Bromomethane	94	4.718	4.718	0.000	99	313784	2.00	1.78	
16 Chloroethane	64	4.869	4.869	0.000	89	174268	2.00	1.77	
17 Ethanol	31	5.042	5.042	0.000	98	826136	10.0	9.25	
18 Vinyl bromide	106	5.198	5.198	0.000	98	298487	2.00	1.82	
19 2-Methylbutane	43	5.252	5.252	0.000	91	434481	2.00	1.76	
20 Trichlorofluoromethane	101	5.484	5.484	0.000	99	987177	2.00	1.87	
21 Acrolein	56	5.516	5.516	0.000	94	76414	2.00	1.69	
22 Acetonitrile	40	5.592	5.592	0.000	99	120487	2.00	1.70	
23 Acetone	58	5.646	5.646	0.000	99	353019	6.00	4.63	
24 Pentane	72	5.721	5.721	0.000	97	61669	2.00	1.83	
25 Isopropyl alcohol	45	5.791	5.791	0.000	99	1172259	6.00	5.77	
26 Ethyl ether	31	5.915	5.915	0.000	91	370544	2.00	1.69	
27 1,1-Dichloroethene	96	6.234	6.234	0.000	94	364274	2.00	2.03	
28 Acrylonitrile	53	6.363	6.363	0.000	95	223606	2.00	1.81	
29 1,1,2-Trichloro-1,2,2-trif	101	6.417	6.417	0.000	94	786405	2.00	2.03	
30 2-Methyl-2-propanol	59	6.465	6.465	0.000	95	603982	2.00	2.17	
31 Methylene Chloride	84	6.600	6.600	0.000	99	360753	2.00	1.73	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.616	6.616	0.000	94	415995	2.00	1.87	
33 Carbon disulfide	76	6.767	6.767	0.000	99	1098679	2.00	2.02	
34 trans-1,2-Dichloroethene	96	7.441	7.441	0.000	96	373725	2.00	2.08	
35 2-Methylpentane	43	7.458	7.458	0.000	95	1044223	2.00	2.04	
36 Methyl tert-butyl ether	73	7.598	7.598	0.000	97	895747	2.00	1.80	
37 1,1-Dichloroethane	63	7.884	7.884	0.000	100	750129	2.00	2.04	
38 Vinyl acetate	43	7.997	7.997	0.000	100	922246	2.00	1.80	
39 2-Butanone (MEK)	72	8.471	8.471	0.000	83	148844	2.00	1.85	
40 Hexane	56	8.471	8.471	0.000	75	342639	2.00	2.07	
41 Isopropyl ether	45	8.644	8.644	0.000	97	1168828	2.00	1.85	
42 cis-1,2-Dichloroethene	96	8.892	8.892	0.000	97	386149	2.00	2.11	
43 Ethyl acetate	43	9.097	9.097	0.000	98	752897	2.00	1.79	
44 Chloroform	83	9.248	9.248	0.000	97	851400	2.00	2.01	
45 Tert-butyl ethyl ether	59	9.345	9.345	0.000	96	1061277	2.00	1.82	
46 Tetrahydrofuran	42	9.674	9.674	0.000	95	403669	2.00	1.80	
47 1,1,1-Trichloroethane	97	10.289	10.289	0.000	96	937084	2.00	2.04	
48 1,2-Dichloroethane	62	10.402	10.402	0.000	98	572811	2.00	1.98	
49 Cyclohexane	69	10.871	10.871	0.000	90	200649	2.00	2.06	
50 Benzene	78	10.882	10.882	0.000	98	1094162	2.00	2.07	
52 Carbon tetrachloride	117	10.898	10.898	0.000	98	936528	2.00	2.14	
51 n-Butanol	31	10.984	10.984	0.000	71	150281	2.00	2.27	
53 2,3-Dimethylpentane	71	10.984	10.984	0.000	90	292060	2.00	2.09	
54 Thiophene	84	11.151	11.151	0.000	97	654245	2.00	2.13	
55 Isooctane	57	11.621	11.621	0.000	98	2087872	2.00	2.02	
56 n-Heptane	71	11.982	11.982	0.000	94	433906	2.00	2.04	
57 1,2-Dichloropropane	63	12.079	12.079	0.000	86	395988	2.00	1.90	
58 Trichloroethene	130	12.111	12.111	0.000	95	496732	2.00	2.06	
59 Dibromomethane	93	12.203	12.203	0.000	94	443387	2.00	2.02	
60 Dichlorobromomethane	83	12.343	12.343	0.000	99	889499	2.00	2.06	
61 1,4-Dioxane	88	12.375	12.375	0.000	97	139785	2.00	2.27	
62 Methyl methacrylate	41	12.429	12.429	0.000	90	482209	2.00	1.81	
63 Methylcyclohexane	83	12.866	12.866	0.000	94	749272	2.00	2.07	
64 4-Methyl-2-pentanone (MIBK)	43	13.287	13.287	0.000	99	735010	2.00	1.77	
65 cis-1,3-Dichloropropene	75	13.319	13.319	0.000	98	640599	2.00	2.03	
66 trans-1,3-Dichloropropene	75	14.004	14.004	0.000	98	597430	2.00	2.00	
67 Toluene	91	14.128	14.128	0.000	93	1183139	2.00	1.94	
68 1,1,2-Trichloroethane	83	14.204	14.204	0.000	99	363384	2.00	1.95	
69 2-Hexanone	58	14.603	14.603	0.000	92	349620	2.00	1.91	
70 n-Octane	85	14.791	14.791	0.000	96	438808	2.00	2.00	
71 Chlorodibromomethane	129	14.905	14.905	0.000	98	795261	2.00	2.11	
72 Ethylene Dibromide	107	15.190	15.190	0.000	98	659040	2.00	2.04	
73 Tetrachloroethene	129	15.255	15.255	0.000	94	457299	2.00	2.00	
74 2,3-Dimethylheptane	43	16.123	16.123	0.000	96	1465287	2.00	1.97	
75 Chlorobenzene	112	16.129	16.129	0.000	78	931053	2.00	1.96	
78 Ethylbenzene	91	16.409	16.409	0.000	99	1557331	2.00	1.88	
79 m-Xylene & p-Xylene	91	16.565	16.565	0.000	99	2387582	4.00	3.77	
80 n-Nonane	57	16.964	16.964	0.000	94	893423	2.00	1.98	
81 Bromoform	173	17.024	17.024	0.000	94	721195	2.00	2.19	
82 Styrene	104	17.029	17.029	0.000	99	853354	2.00	1.95	
83 o-Xylene	91	17.094	17.094	0.000	98	1247436	2.00	1.87	
84 1,1,2,2-Tetrachloroethane	83	17.412	17.412	0.000	99	823009	2.00	1.83	
85 1,2,3-Trichloropropane	110	17.574	17.574	0.000	97	256456	2.00	1.78	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.671	17.671	0.000	97	1587536	2.00	1.78	
87 N-Propylbenzene	120	18.188	18.188	0.000	98	427205	2.00	1.77	
88 2-Chlorotoluene	126	18.237	18.237	0.000	97	411179	2.00	1.87	
89 4-Ethyltoluene	105	18.334	18.334	0.000	98	1595328	2.00	1.79	
90 1,3,5-Trimethylbenzene	120	18.404	18.404	0.000	91	616024	2.00	1.78	
92 Alpha Methyl Styrene	118	18.631	18.631	0.000	87	639852	2.00	1.83	
93 n-Decane	57	18.674	18.674	0.000	89	1054491	2.00	1.91	
94 tert-Butylbenzene	119	18.819	18.819	0.000	89	1371308	2.00	1.78	
95 1,2,4-Trimethylbenzene	105	18.836	18.836	0.000	96	1341868	2.00	1.77	
96 sec-Butylbenzene	105	19.084	19.084	0.000	98	1956350	2.00	1.80	
97 1,3-Dichlorobenzene	146	19.105	19.105	0.000	99	930556	2.00	1.88	
98 Benzyl chloride	91	19.175	19.175	0.000	97	1264988	2.00	1.87	
99 1,4-Dichlorobenzene	146	19.186	19.186	0.000	92	946622	2.00	1.86	
100 4-Isopropyltoluene	119	19.240	19.240	0.000	96	1587970	2.00	1.83	
101 1,2,3-Trimethylbenzene	105	19.294	19.294	0.000	99	1366103	2.00	1.99	
102 Butylcyclohexane	83	19.342	19.342	0.000	91	1221617	2.00	1.95	
103 2,3-Dihydroindene	117	19.537	19.537	0.000	94	1234496	2.00	1.80	
104 1,2-Dichlorobenzene	146	19.542	19.542	0.000	94	886174	2.00	1.79	
105 n-Butylbenzene	91	19.661	19.661	0.000	98	1637453	2.00	1.85	
106 Indene	116	19.666	19.666	0.000	91	1079330	2.00	1.83	
107 Undecane	57	19.952	19.952	0.000	95	1069213	2.00	1.91	
108 1,2-Dibromo-3-Chloropropan	157	20.130	20.130	0.000	92	442060	2.00	2.15	
109 1,2,4,5-Tetramethylbenzene	119	20.405	20.405	0.000	96	1473080	2.00	1.86	
110 Dodecane	57	21.003	21.003	0.000	94	826816	2.00	1.87	
111 1,2,4-Trichlorobenzene	180	21.224	21.224	0.000	94	697777	2.00	1.78	
112 Naphthalene	128	21.365	21.365	0.000	99	1570157	2.00	1.84	
113 Hexachlorobutadiene	225	21.564	21.564	0.000	95	714229	2.00	1.70	
114 1,2,3-Trichlorobenzene	180	21.640	21.640	0.000	95	629178	2.00	1.82	
115 2-Methylnaphthalene	142	22.384	22.384	0.000	100	758706	2.00	1.82	
116 1-Methylnaphthalene	142	22.556	22.556	0.000	99	866888	2.00	1.70	
A 122 C8 Range	1	14.787	(14.733-14.870)		0	4279857	2.00	1.96	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.19	
S 124 Xylenes, Total	100				0		6.00	5.63	

Reagents:

40CV101P_00082

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GCCVB27a.D

Injection Date: 27-Feb-2019 13:35:30

Instrument ID: MG

Operator ID: 403648

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

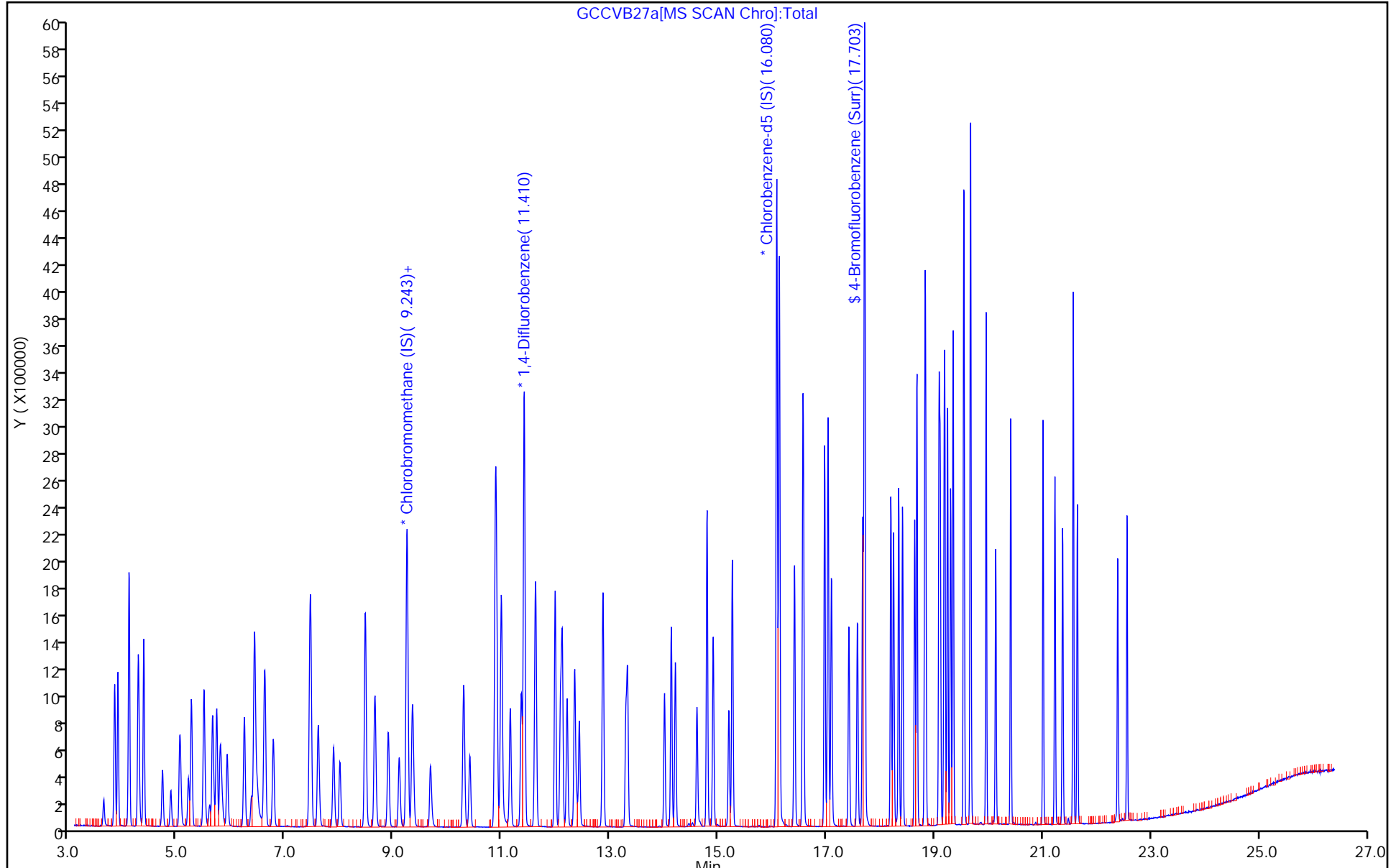
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
 Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11BLK1.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 11-Jan-2019 12:24:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-001
 Misc. Info.: TUNE
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:27:58 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	17.714	17.714	0.000	0	1529277	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

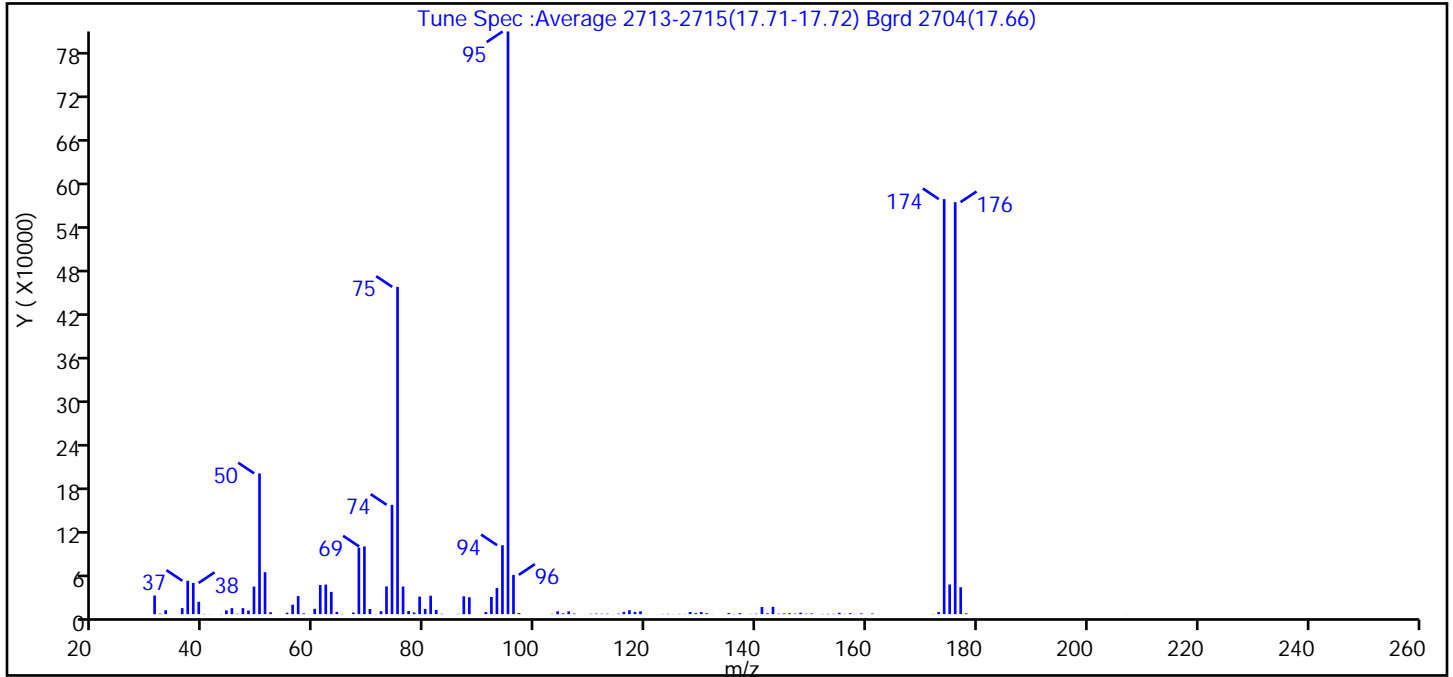
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11BLK1.D
 Injection Date: 11-Jan-2019 12:24:30 Instrument ID: MG
 Lims ID: BFB
 Client ID:
 Operator ID: 007126 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	24.2
75	30 to 60% of m/z 95	56.2
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	71.2
175	5 to 9% of m/z 174	5.1 (7.1)
176	Greater than 95% but less than 101% of m/z 174	70.7 (99.3)
177	5 to 9% of m/z 176	4.6 (6.5)

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11BLK1.D\MG_TO15.rslt\spectra.d
Injection Date: 11-Jan-2019 12:24:30
Spectrum: Tune Spec :Average 2713-2715(17.71-17.72) Bgrd 2704(17.66)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 121

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	40	67.00	2139	107.00	778	143.00	10104
31.00	25632	68.00	91720	110.00	498	144.00	587
32.00	700	69.00	93208	111.00	724	145.00	927
33.00	5381	70.00	7027	112.00	527	146.00	1273
36.00	8248	71.00	202	113.00	608	147.00	708
37.00	45912	72.00	4059	114.00	144	148.00	2025
38.00	42936	73.00	38216	115.00	670	149.00	560
39.00	17016	74.00	150528	116.00	3131	150.00	935
40.00	332	75.00	450624	117.00	5351	152.00	268
41.00	149	76.00	38016	118.00	3117	153.00	484
43.00	197	77.00	4264	119.00	3900	154.00	502
44.00	5113	78.00	2308	120.00	131	155.00	1934
45.00	8252	79.00	24168	122.00	141	156.00	302
46.00	572	80.00	7254	123.00	284	157.00	1307
47.00	8285	81.00	25360	124.00	461	158.00	210
48.00	4923	82.00	5819	125.00	176	159.00	985
49.00	38016	83.00	470	126.00	348	160.00	57
50.00	193792	86.00	468	127.00	225	161.00	843
51.00	57784	87.00	24536	128.00	3031	162.00	53
52.00	2613	88.00	23248	129.00	1392	172.00	318
55.00	1997	91.00	2941	130.00	2824	173.00	2830
56.00	12955	92.00	23664	131.00	1281	174.00	571456
57.00	24800	93.00	36072	132.00	118	175.00	40840
58.00	1003	94.00	94896	134.00	76	176.00	567296
59.00	117	95.00	802304	135.00	1592	177.00	37016
60.00	7338	96.00	54088	136.00	271	178.00	1198
61.00	40160	97.00	1550	137.00	1372	207.00	74
62.00	40712	103.00	429	139.00	267	253.00	65
63.00	30672	104.00	3827	140.00	546		
64.00	2993	105.00	1115	141.00	9796		
65.00	341	106.00	3820	142.00	1128		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11BLK1.D

Injection Date: 11-Jan-2019 12:24:30

Instrument ID: MG

Operator ID: 007126

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

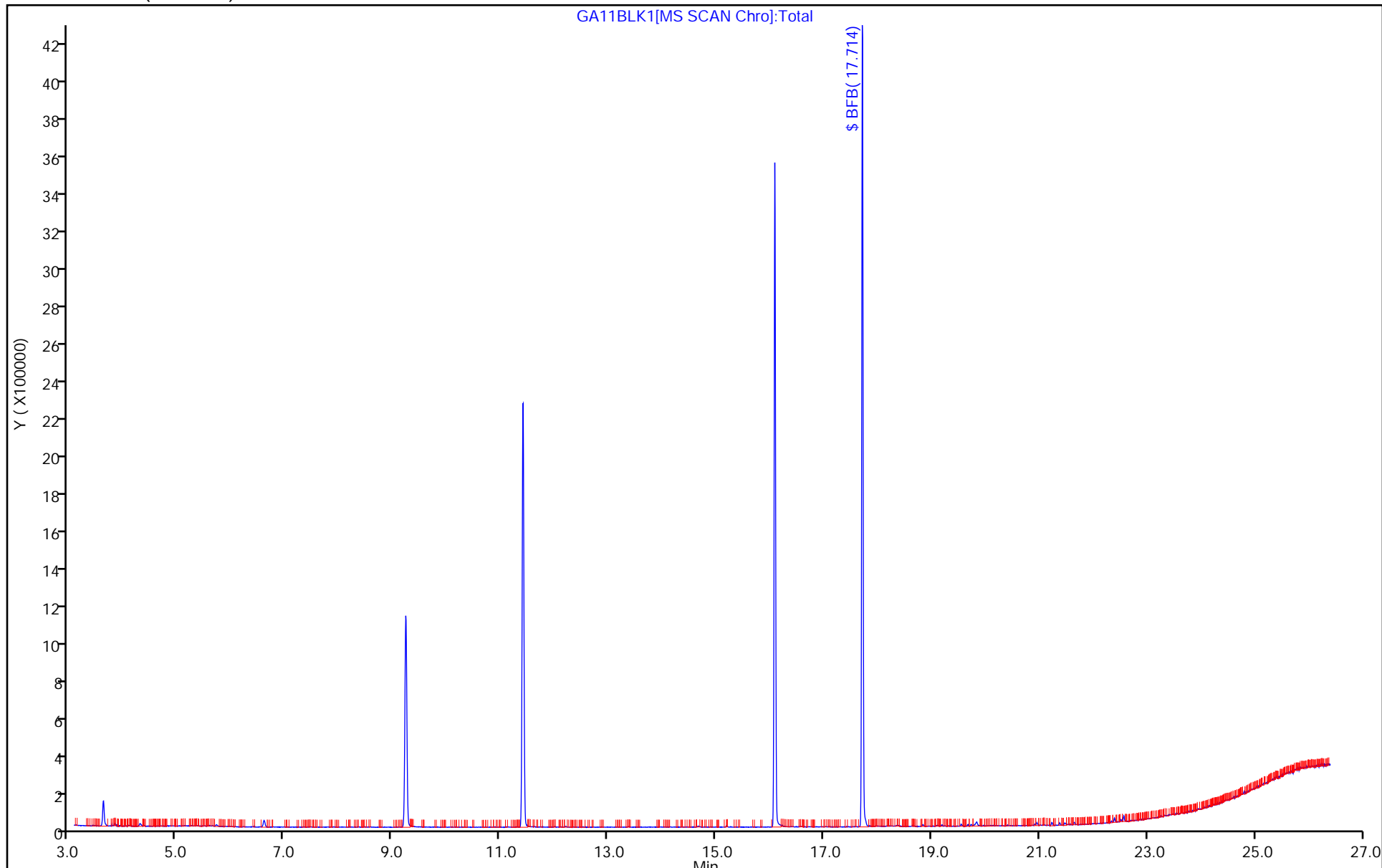
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GBFBB26.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 26-Feb-2019 11:03:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-001
 Misc. Info.: TUNE
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 14:57:11 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 14:57:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.386	5.386	0.000	0	1917303	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

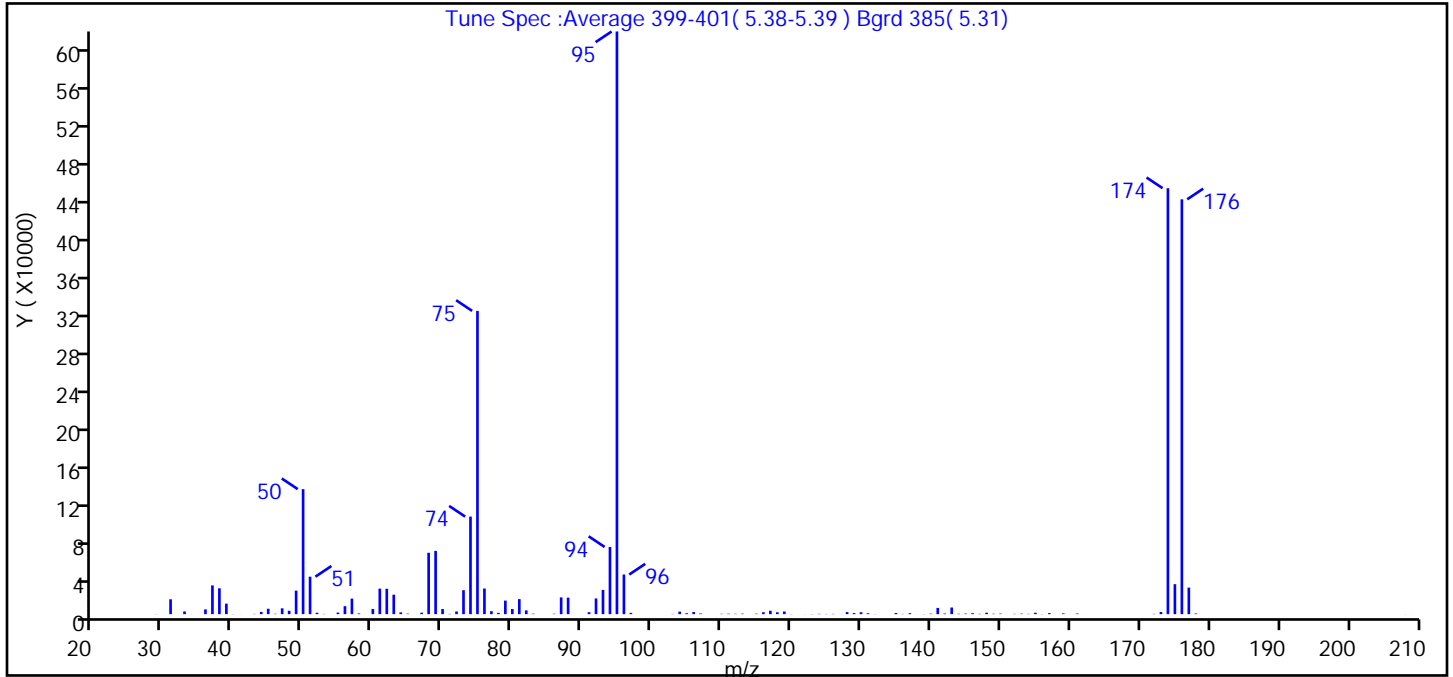
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GBFBB26.D
 Injection Date: 26-Feb-2019 11:03:30 Instrument ID: MG
 Lims ID: BFB
 Client ID:
 Operator ID: 007126 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.5
75	30 to 60% of m/z 95	52.0
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	73.1
175	5 to 9% of m/z 174	5.1 (7.0)
176	Greater than 95% but less than 101% of m/z 174	71.2 (97.4)
177	5 to 9% of m/z 176	4.6 (6.4)

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GBFBB26.D\MG_TO15.rslt\spectra.d
 Injection Date: 26-Feb-2019 11:03:30
 Spectrum: Tune Spec :Average 399-401(5.38-5.39) Bgrd 385(5.31)
 Base Peak: 95.00
 Minimum % Base Peak: 0
 Number of Points: 117

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	132	65.00	510	105.00	971	141.00	6573
31.00	15728	67.00	1546	106.00	2220	142.00	670
33.00	2866	68.00	64928	107.00	668	143.00	7017
34.00	61	69.00	66896	110.00	352	144.00	425
36.00	5049	70.00	5384	111.00	471	145.00	587
37.00	30424	71.00	264	112.00	362	146.00	974
38.00	27344	72.00	2840	113.00	522	147.00	346
39.00	11100	73.00	25352	115.00	478	148.00	1521
40.00	153	74.00	103176	116.00	2038	149.00	412
41.00	61	75.00	320768	117.00	3614	150.00	517
43.00	259	76.00	27120	118.00	1978	152.00	285
44.00	2345	77.00	3106	119.00	2791	153.00	489
45.00	5718	78.00	1363	120.00	128	154.00	328
46.00	415	79.00	14325	122.00	60	155.00	1495
47.00	6168	80.00	5420	123.00	177	156.00	152
48.00	3557	81.00	15906	124.00	347	157.00	1112
49.00	24904	82.00	3962	125.00	183	159.00	784
50.00	132224	83.00	478	126.00	292	161.00	650
51.00	39624	86.00	424	127.00	64	172.00	307
52.00	1446	87.00	17712	128.00	2168	173.00	2258
53.00	249	88.00	17456	129.00	1150	174.00	450560
55.00	1664	91.00	2080	130.00	2016	175.00	31696
56.00	8460	92.00	16592	131.00	943	176.00	438784
57.00	16440	93.00	25600	132.00	127	177.00	28048
58.00	710	94.00	71064	135.00	1217	178.00	696
60.00	5487	95.00	616320	136.00	213	208.00	66
61.00	26976	96.00	41920	137.00	1062	209.00	50
62.00	26816	97.00	1352	138.00	52		
63.00	20584	103.00	221	139.00	133		
64.00	1892	104.00	2685	140.00	483		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GBFB26.D

Injection Date: 26-Feb-2019 11:03:30

Instrument ID: MG

Operator ID: 007126

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

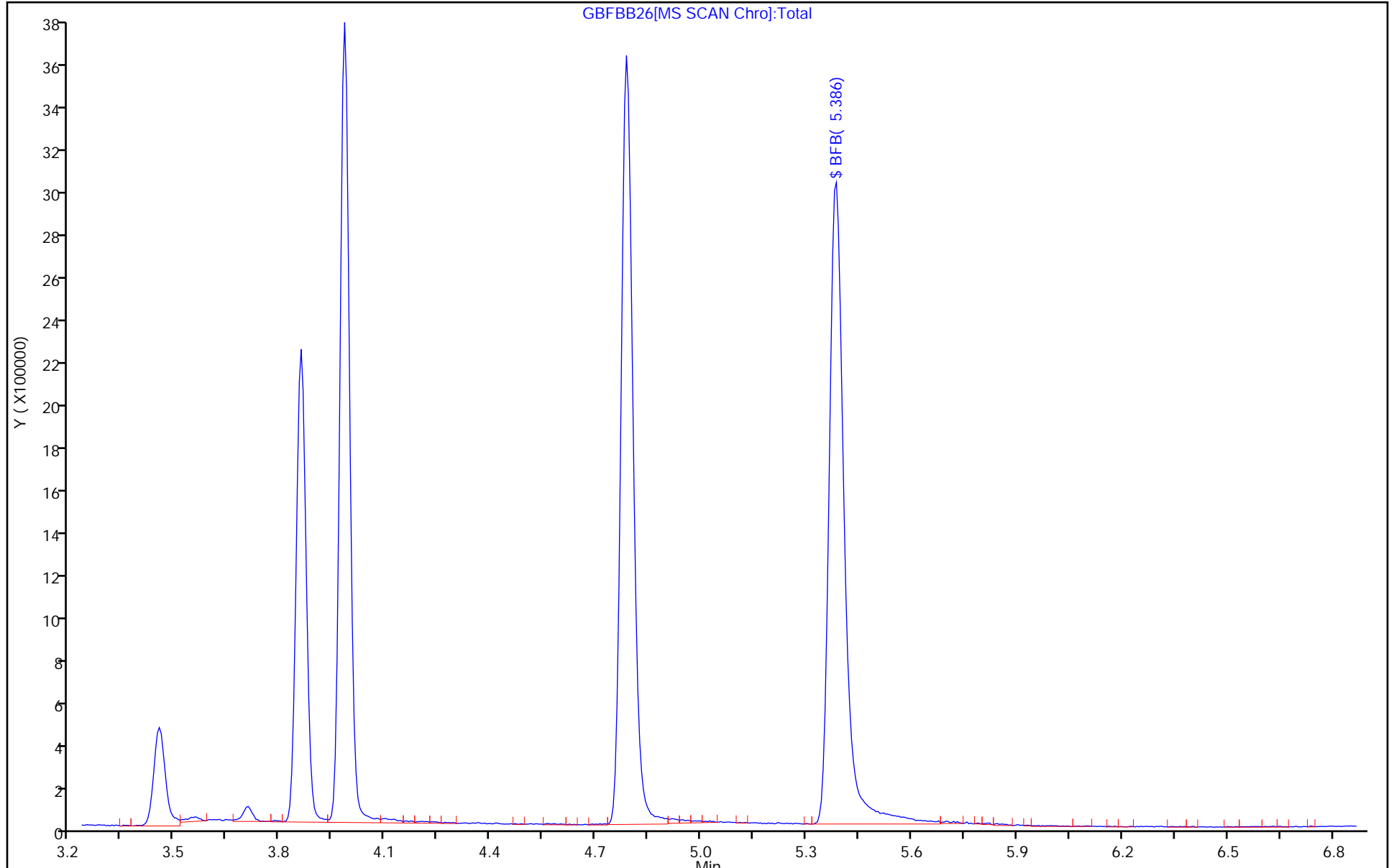
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GBFBB27a.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 27-Feb-2019 13:04:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-001
 Misc. Info.: TUNE
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:04:55 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:04:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.397	5.397	0.000	0	2080936	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

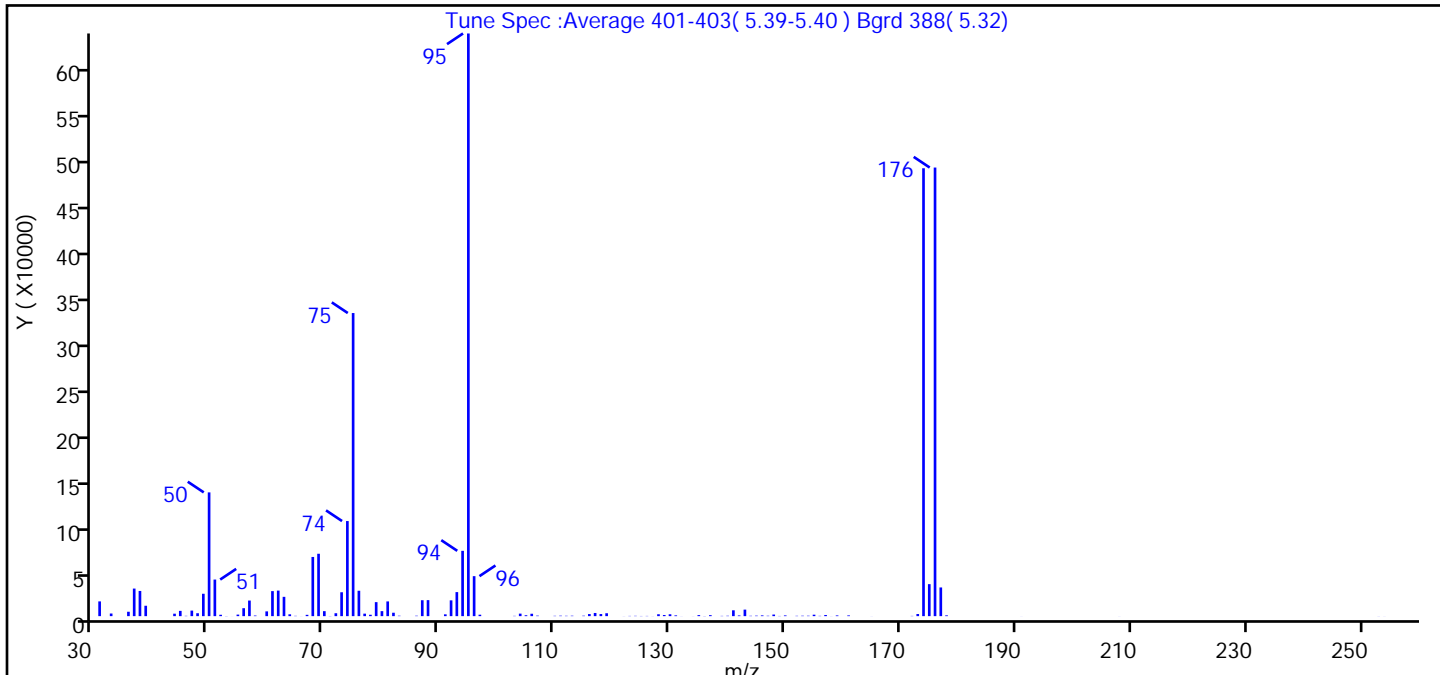
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GBFBB27a.D
 Injection Date: 27-Feb-2019 13:04:30 Instrument ID: MG
 Lims ID: BFB
 Client ID:
 Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.2
75	30 to 60% of m/z 95	52.0
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	76.9
175	5 to 9% of m/z 174	5.5 (7.1)
176	Greater than 95% but less than 101% of m/z 174	77.0 (100.2)
177	5 to 9% of m/z 176	4.9 (6.4)

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GBFBB27a.D\MG_TO15.rslt\spectra.d
Injection Date: 27-Feb-2019 13:04:30
Spectrum: Tune Spec :Average 401-403(5.39-5.40) Bgrd 388(5.32)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 118

m/z	Y	m/z	Y	m/z	Y	m/z	Y
30.00	14	68.00	65008	107.00	552	144.00	375
31.00	16201	69.00	68528	110.00	349	145.00	527
33.00	2894	70.00	5472	111.00	503	146.00	823
36.00	4823	71.00	169	112.00	382	147.00	418
37.00	30288	72.00	3208	113.00	469	148.00	1748
38.00	27656	73.00	26240	115.00	480	149.00	211
39.00	11408	74.00	104448	116.00	2298	150.00	794
44.00	2692	75.00	332928	117.00	3472	152.00	354
45.00	5789	76.00	27896	118.00	2293	153.00	454
46.00	335	77.00	2730	119.00	3185	154.00	456
47.00	6096	78.00	1526	122.00	73	155.00	1592
48.00	3206	79.00	15389	123.00	255	156.00	316
49.00	24592	80.00	5500	124.00	337	157.00	1235
50.00	135936	81.00	16176	125.00	192	158.00	65
51.00	40184	82.00	3749	126.00	241	159.00	777
52.00	1519	83.00	443	127.00	67	161.00	798
53.00	151	86.00	464	128.00	2081	165.00	58
54.00	32	87.00	17488	129.00	1222	172.00	262
55.00	1698	88.00	17592	130.00	2054	173.00	2342
56.00	8733	91.00	1988	131.00	840	174.00	491968
57.00	17136	92.00	17344	132.00	67	175.00	35144
58.00	662	93.00	26400	134.00	56	176.00	492736
60.00	5240	94.00	71736	135.00	1128	177.00	31512
61.00	27480	95.00	640000	136.00	157	178.00	871
62.00	28072	96.00	43920	137.00	1057	191.00	52
63.00	21208	97.00	1586	139.00	283	208.00	54
64.00	2014	103.00	303	140.00	408	253.00	80
65.00	323	104.00	2757	141.00	6421	254.00	53
66.00	51	105.00	986	142.00	748		
67.00	1446	106.00	2631	143.00	7160		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GBFBB27a.D

Injection Date: 27-Feb-2019 13:04:30

Instrument ID: MG

Operator ID: 403648

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

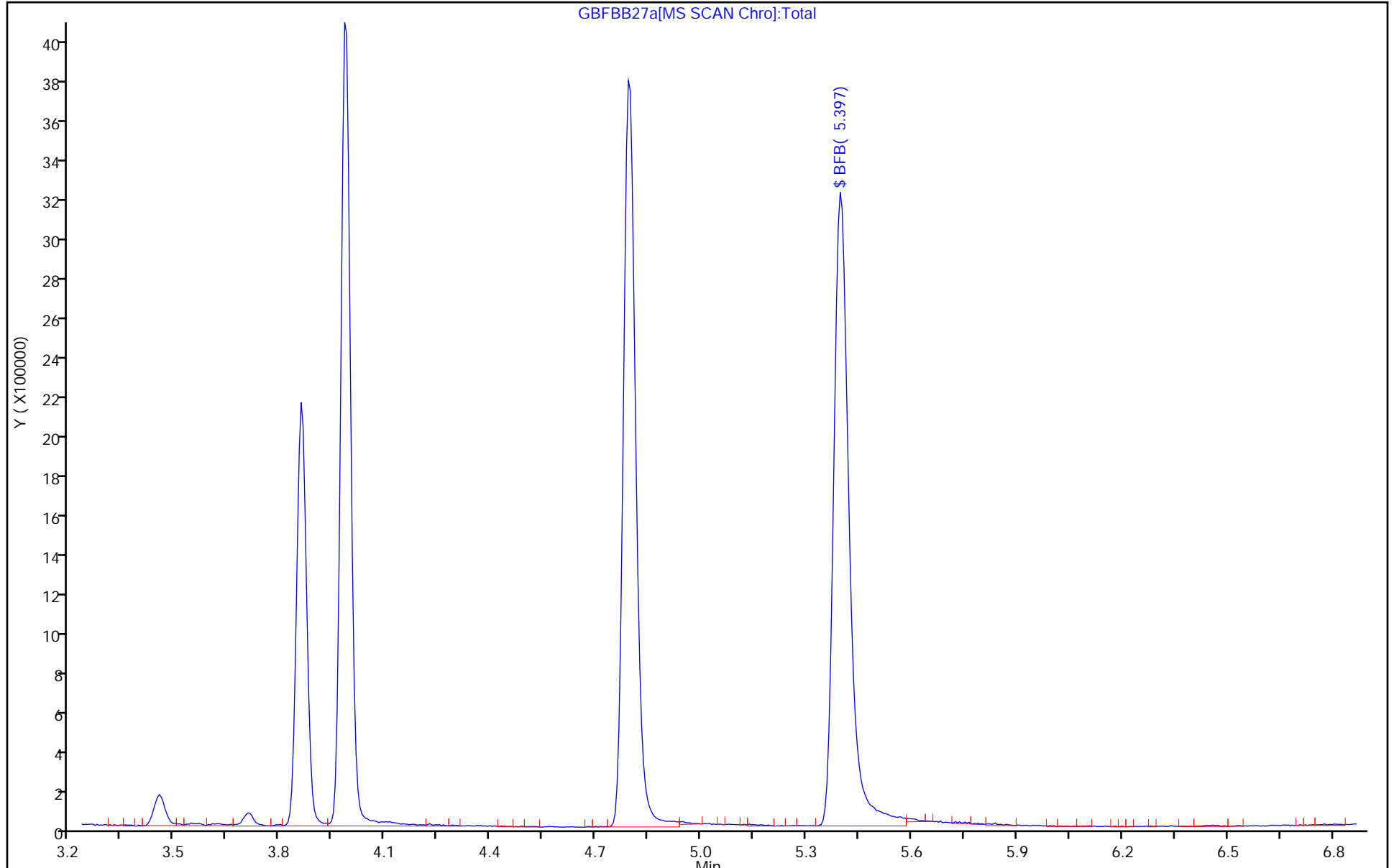
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\G500BB26.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 26-Feb-2019 12:56:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-004
 Misc. Info.: 500ML BLK
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:23:23 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:23:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.227	9.232	-0.005	98	508819	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.405	0.000	96	2920722	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	91	2502760	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	84	1973540	4.00	3.85	
117 1,2-Dimethyl-4-Ethylbenzen	119	20.022	20.027	-0.005	1	540		NC	
118 1,2,3,5-Tetramethylbenzene	119	20.470	20.464	0.006	1	546		NC	
119 1,2,3,4-Tetramethylbenzene	119	20.863	20.869	-0.006	1	1007		NC	
120 Benzo(b)thiophene	134	21.478	21.473	0.005	1	64		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\G500BB26.D

Injection Date: 26-Feb-2019 12:56:30

Instrument ID: MG

Operator ID: 7126

Lims ID: MB

Worklist Smp#: 4

Client ID:

Purge Vol: 500.000 mL

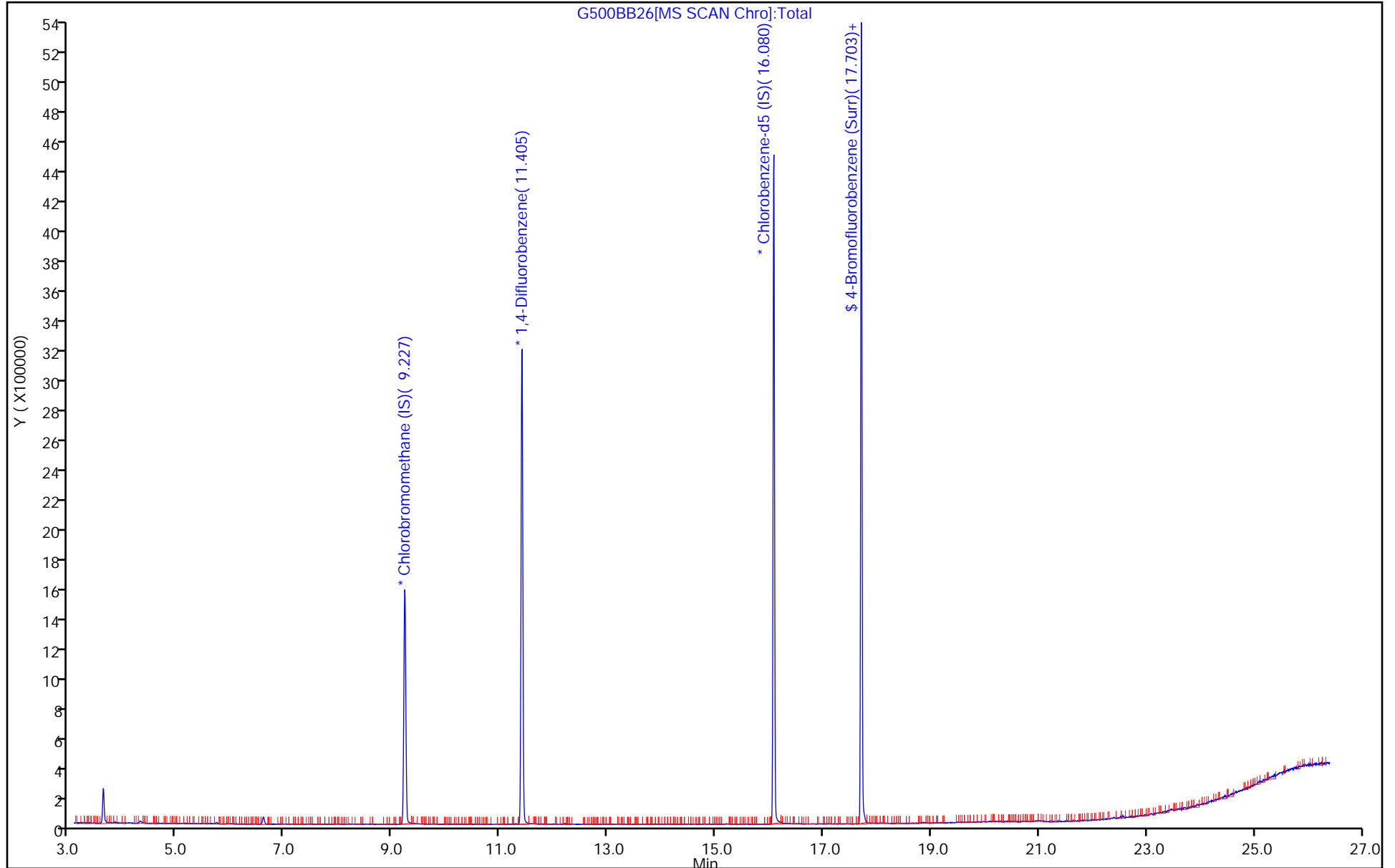
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\G500BB26.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 26-Feb-2019 12:56:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-004
 Misc. Info.: 500ML BLK
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:23:23 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:23:23

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.85	96.21

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27932/7
 Matrix: Air Lab File ID: GB27mb500.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 16:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27932/7
 Matrix: Air Lab File ID: GB27mb500.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 16:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27mb500.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 27-Feb-2019 16:40:30 ALS Bottle#: 16 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-007
 Misc. Info.: mb500mL
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:24:45 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:24:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.227	9.237	-0.011	97	450057	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.410	-0.010	96	2814179	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	92	2588422	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	82	2040508	4.00	3.85	
65 cis-1,3-Dichloropropene	75	13.131	13.319	-0.188	1	117		0.000389	
117 1,2-Dimethyl-4-Ethylbenzen	119	20.027	20.022	0.005	1	171		NC	
118 1,2,3,5-Tetramethylbenzene	119	20.464	20.464	0.000	1	258		NC	
119 1,2,3,4-Tetramethylbenzene	119	20.863	20.863	0.000	1	872		NC	
120 Benzo(b)thiophene	134	21.473	21.467	0.006	10	1218		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27mb500.D

Injection Date: 27-Feb-2019 16:40:30

Instrument ID: MG

Operator ID: 403648

Lims ID: MB

Worklist Smp#: 7

Client ID:

Purge Vol: 500.000 mL

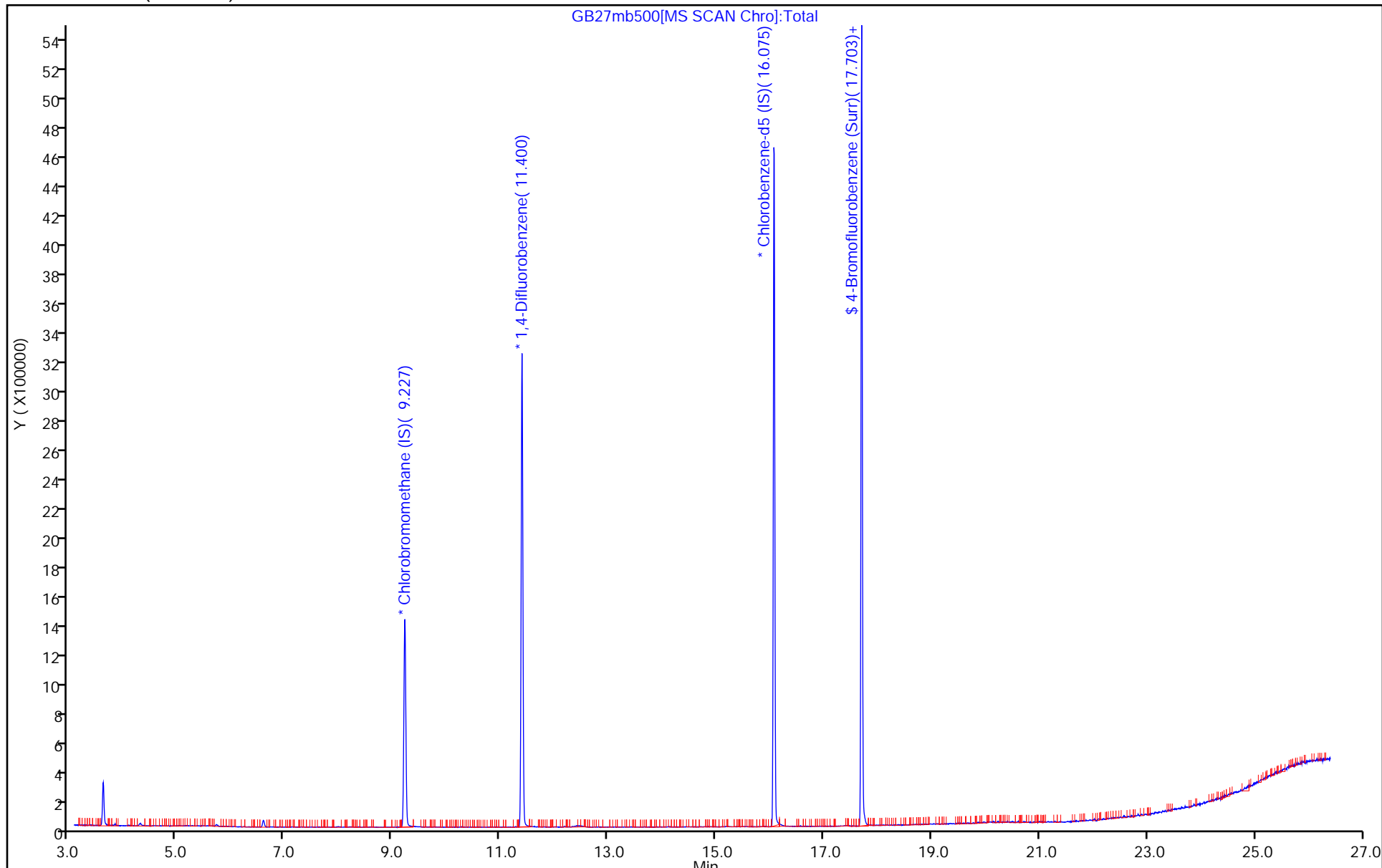
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GB27mb500.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 27-Feb-2019 16:40:30 ALS Bottle#: 16 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-007
 Misc. Info.: mb500mL
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:24:45 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:24:45

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.85	96.18

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27931/1002
 Matrix: Air Lab File ID: GCCVB26-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 11:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.07		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.22		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.02		0.080	0.015
67-66-3	Chloroform	119.38	2.00		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.09		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.06		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.05		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.00		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.14		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.03		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.81		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.97		0.40	0.068
91-20-3	Naphthalene	128.17	1.94		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.06		0.080	0.016
108-88-3	Toluene	92.14	2.02		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.15		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.83		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.04		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.11		0.080	0.021
79-01-6	Trichloroethene	131.39	2.09		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.22		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.99		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.97		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.97		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.18		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 26-Feb-2019 11:35:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-002
 Misc. Info.: P82
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:22:36 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits

Date: 27-Feb-2019 15:22:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.232	0.000	97	496382	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.405	0.000	96	2758157	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	91	2578216	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2117181	4.00	4.01	
6 Chlorodifluoromethane	51	3.823	3.823	0.000	97	658223	2.00	2.02	
7 Propene	41	3.834	3.834	0.000	99	380649	2.00	2.10	
8 Dichlorodifluoromethane	85	3.888	3.888	0.000	100	1081216	2.00	2.06	
9 Chloromethane	52	4.088	4.088	0.000	99	116472	2.00	2.02	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.098	0.000	96	596628	2.00	1.94	
11 Acetaldehyde	44	4.266	4.266	0.000	95	648347	10.0	8.73	
12 Vinyl chloride	62	4.271	4.271	0.000	99	393694	2.00	1.97	
13 Butane	43	4.368	4.368	0.000	86	683696	2.00	2.03	
14 Butadiene	54	4.368	4.368	0.000	66	318396	2.00	2.06	
15 Bromomethane	94	4.713	4.713	0.000	98	325798	2.00	1.89	
16 Chloroethane	64	4.870	4.870	0.000	90	185377	2.00	1.92	
17 Ethanol	31	5.031	5.031	0.000	97	935746	10.0	10.7	
18 Vinyl bromide	106	5.193	5.193	0.000	98	300038	2.00	1.87	
19 2-Methylbutane	43	5.247	5.247	0.000	92	470238	2.00	1.95	
20 Trichlorofluoromethane	101	5.484	5.484	0.000	99	1003068	2.00	1.95	
21 Acrolein	56	5.506	5.506	0.000	96	79264	2.00	1.79	
22 Acetonitrile	40	5.581	5.581	0.000	99	131601	2.00	1.90	
23 Acetone	58	5.635	5.635	0.000	99	371393	6.00	4.98	
24 Pentane	72	5.716	5.716	0.000	98	63668	2.00	1.93	
25 Isopropyl alcohol	45	5.775	5.775	0.000	97	1324509	6.00	6.66	
26 Ethyl ether	31	5.910	5.910	0.000	90	419601	2.00	1.96	
27 1,1-Dichloroethene	96	6.228	6.228	0.000	94	375675	2.00	2.14	
28 Acrylonitrile	53	6.352	6.352	0.000	95	234090	2.00	1.94	
29 1,1,2-Trichloro-1,2,2-trif	101	6.417	6.417	0.000	94	786133	2.00	2.07	
30 2-Methyl-2-propanol	59	6.455	6.455	0.000	92	697915	2.00	2.56	
31 Methylene Chloride	84	6.595	6.595	0.000	98	368192	2.00	1.81	
32 3-Chloro-1-propene	39	6.611	6.611	0.000	94	408941	2.00	1.88	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.768	6.768	0.000	99	1148654	2.00	2.16	
34 trans-1,2-Dichloroethene	96	7.436	7.436	0.000	95	377435	2.00	2.15	
35 2-Methylpentane	43	7.453	7.453	0.000	96	1092237	2.00	2.18	
36 Methyl tert-butyl ether	73	7.587	7.587	0.000	97	963642	2.00	1.97	
37 1,1-Dichloroethane	63	7.879	7.879	0.000	100	740120	2.00	2.05	
38 Vinyl acetate	43	7.992	7.992	0.000	100	972603	2.00	1.94	
39 2-Butanone (MEK)	72	8.461	8.461	0.000	94	156796	2.00	1.99	
40 Hexane	56	8.466	8.466	0.000	75	349595	2.00	2.16	
41 Isopropyl ether	45	8.639	8.639	0.000	97	1273265	2.00	2.06	
42 cis-1,2-Dichloroethene	96	8.887	8.887	0.000	97	374980	2.00	2.09	
43 Ethyl acetate	43	9.086	9.086	0.000	98	824216	2.00	2.01	
44 Chloroform	83	9.243	9.243	0.000	97	831651	2.00	2.00	
45 Tert-butyl ethyl ether	59	9.340	9.340	0.000	96	1154312	2.00	2.02	
46 Tetrahydrofuran	42	9.669	9.669	0.000	94	441834	2.00	2.01	
47 1,1,1-Trichloroethane	97	10.283	10.283	0.000	95	914802	2.00	2.04	
48 1,2-Dichloroethane	62	10.397	10.397	0.000	98	540157	2.00	2.00	
49 Cyclohexane	69	10.871	10.871	0.000	94	203691	2.00	2.25	
50 Benzene	78	10.877	10.877	0.000	98	1020327	2.00	2.07	
52 Carbon tetrachloride	117	10.898	10.898	0.000	98	906489	2.00	2.22	
51 n-Butanol	31	10.963	10.963	0.000	72	174154	2.00	2.82	
53 2,3-Dimethylpentane	71	10.985	10.985	0.000	90	289271	2.00	2.22	
54 Thiophene	84	11.146	11.146	0.000	98	624101	2.00	2.18	
55 Isooctane	57	11.615	11.615	0.000	98	2089798	2.00	2.16	
56 n-Heptane	71	11.977	11.977	0.000	94	431811	2.00	2.18	
57 1,2-Dichloropropane	63	12.074	12.074	0.000	87	395044	2.00	2.04	
58 Trichloroethene	130	12.106	12.106	0.000	95	469444	2.00	2.09	
59 Dibromomethane	93	12.198	12.198	0.000	92	424190	2.00	2.08	
60 Dichlorobromomethane	83	12.338	12.338	0.000	99	876559	2.00	2.18	
61 1,4-Dioxane	88	12.370	12.370	0.000	98	145314	2.00	2.53	
62 Methyl methacrylate	41	12.424	12.424	0.000	90	530253	2.00	2.14	
63 Methylcyclohexane	83	12.861	12.861	0.000	93	728027	2.00	2.16	
64 4-Methyl-2-pentanone (MIBK)	43	13.287	13.287	0.000	99	886750	2.00	2.28	
65 cis-1,3-Dichloropropene	75	13.319	13.319	0.000	98	639985	2.00	2.17	
66 trans-1,3-Dichloropropene	75	13.999	13.999	0.000	97	594581	2.00	2.14	
67 Toluene	91	14.128	14.128	0.000	94	1148311	2.00	2.02	
68 1,1,2-Trichloroethane	83	14.204	14.204	0.000	99	364646	2.00	2.11	
69 2-Hexanone	58	14.603	14.603	0.000	92	411009	2.00	2.41	
70 n-Octane	85	14.786	14.786	0.000	96	443374	2.00	2.17	
71 Chlorodibromomethane	129	14.905	14.905	0.000	98	772027	2.00	2.20	
72 Ethylene Dibromide	107	15.191	15.191	0.000	99	635364	2.00	2.12	
73 Tetrachloroethene	129	15.255	15.255	0.000	93	439005	2.00	2.06	
74 2,3-Dimethylheptane	43	16.123	16.123	0.000	96	1496933	2.00	2.16	
75 Chlorobenzene	112	16.129	16.129	0.000	77	928511	2.00	2.11	
78 Ethylbenzene	91	16.404	16.404	0.000	99	1561015	2.00	2.03	
79 m-Xylene & p-Xylene	91	16.566	16.566	0.000	99	2433053	4.00	4.13	
80 n-Nonane	57	16.965	16.965	0.000	94	915019	2.00	2.18	
81 Bromoform	173	17.024	17.024	0.000	92	705966	2.00	2.30	
82 Styrene	104	17.029	17.029	0.000	99	865556	2.00	2.12	
83 o-Xylene	91	17.089	17.089	0.000	97	1277486	2.00	2.05	
84 1,1,1,2-Tetrachloroethane	83	17.412	17.412	0.000	99	855020	2.00	2.05	
85 1,2,3-Trichloropropane	110	17.574	17.574	0.000	97	264346	2.00	1.98	
86 Isopropylbenzene	105	17.671	17.671	0.000	97	1641690	2.00	1.98	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 N-Propylbenzene	120	18.189	18.189	0.000	98	441397	2.00	1.97	
88 2-Chlorotoluene	126	18.237	18.237	0.000	97	410417	2.00	2.01	
89 4-Ethyltoluene	105	18.334	18.334	0.000	98	1669466	2.00	2.02	
90 1,3,5-Trimethylbenzene	120	18.404	18.404	0.000	91	633949	2.00	1.97	
92 Alpha Methyl Styrene	118	18.631	18.631	0.000	87	670603	2.00	2.06	
93 n-Decane	57	18.674	18.674	0.000	90	1111794	2.00	2.16	
94 tert-Butylbenzene	119	18.820	18.820	0.000	94	1422084	2.00	1.98	
95 1,2,4-Trimethylbenzene	105	18.830	18.830	0.000	97	1404437	2.00	1.99	
96 sec-Butylbenzene	105	19.084	19.084	0.000	98	2036393	2.00	2.01	
97 1,3-Dichlorobenzene	146	19.105	19.105	0.000	98	939347	2.00	2.04	
98 Benzyl chloride	91	19.176	19.176	0.000	97	1331508	2.00	2.12	
99 1,4-Dichlorobenzene	146	19.186	19.186	0.000	94	949687	2.00	2.01	
100 4-Isopropyltoluene	119	19.240	19.240	0.000	96	1645625	2.00	2.03	
101 1,2,3-Trimethylbenzene	105	19.294	19.294	0.000	99	1419409	2.00	2.22	
102 Butylcyclohexane	83	19.343	19.343	0.000	91	1243201	2.00	2.13	
103 2,3-Dihydroindene	117	19.537	19.537	0.000	93	1271670	2.00	1.99	
104 1,2-Dichlorobenzene	146	19.542	19.542	0.000	95	902853	2.00	1.95	
105 n-Butylbenzene	91	19.661	19.661	0.000	98	1708583	2.00	2.08	
106 Indene	116	19.666	19.666	0.000	90	1119910	2.00	2.04	
107 Undecane	57	19.952	19.952	0.000	96	1108192	2.00	2.12	
108 1,2-Dibromo-3-Chloropropan	157	20.130	20.130	0.000	96	461711	2.00	2.42	
109 1,2,4,5-Tetramethylbenzene	119	20.405	20.405	0.000	96	1527367	2.00	2.07	
110 Dodecane	57	21.004	21.004	0.000	94	814573	2.00	1.98	
111 1,2,4-Trichlorobenzene	180	21.225	21.225	0.000	94	667891	2.00	1.83	
112 Naphthalene	128	21.365	21.365	0.000	99	1542497	2.00	1.94	
113 Hexachlorobutadiene	225	21.564	21.564	0.000	95	660498	2.00	1.69	
114 1,2,3-Trichlorobenzene	180	21.640	21.640	0.000	95	596206	2.00	1.85	
115 2-Methylnaphthalene	142	22.384	22.384	0.000	100	636621	2.00	1.64	
116 1-Methylnaphthalene	142	22.557	22.557	0.000	99	707065	2.00	1.49	
A 122 C8 Range	1	14.787	(14.733-14.870)		0	4392004	2.00	2.16	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.24	
S 124 Xylenes, Total	100				0		6.00	6.18	

Reagents:

40CV101P_00082

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26-LCS.d

Injection Date: 26-Feb-2019 11:35:30

Instrument ID: MG

Operator ID: 007126

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

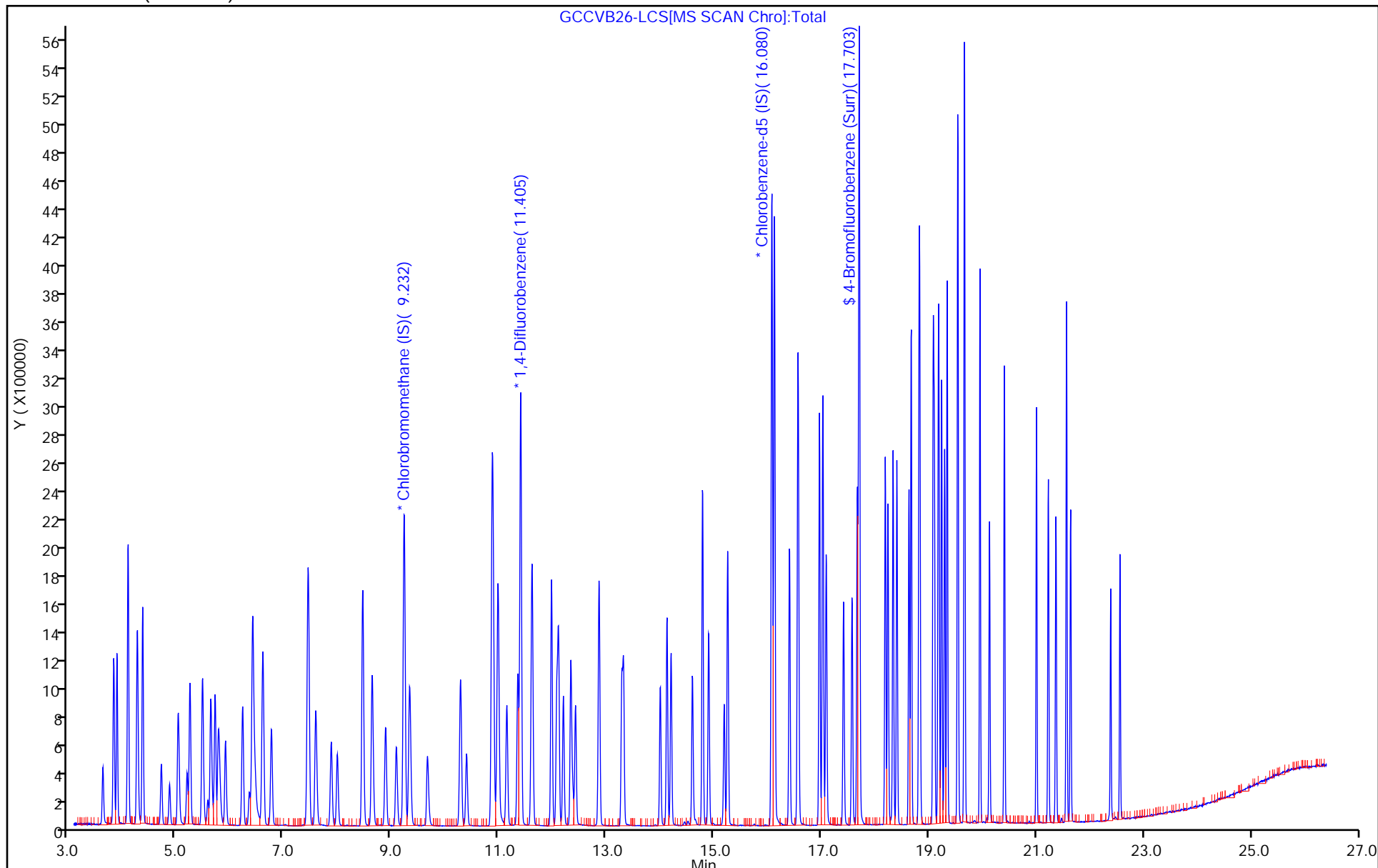
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 26-Feb-2019 11:35:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-002
 Misc. Info.: P82
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:22:36 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:22:36

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.01	100.19

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27932/1002
 Matrix: Air Lab File ID: GCCVB27a-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 02/27/2019 13:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.07		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.14		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.79		0.080	0.015
67-66-3	Chloroform	119.38	2.01		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.11		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.89		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.04		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.98		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.03		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.88		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.73		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.80		0.40	0.068
91-20-3	Naphthalene	128.17	1.84		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.00		0.080	0.016
108-88-3	Toluene	92.14	1.94		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.08		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.78		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.04		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.95		0.080	0.021
79-01-6	Trichloroethene	131.39	2.06		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.99		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.77		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.78		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.76		0.040	0.029
1330-20-7	Xylenes, Total	106.17	5.64		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GCCVB27a-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 27-Feb-2019 13:35:30 ALS Bottle#: 7 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-002
 Misc. Info.: S85
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:08:02 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits

Date: 28-Feb-2019 14:08:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.237	9.237	0.000	97	507272	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.410	11.410	0.000	96	2957187	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	90	2771430	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	86	2164296	4.00	3.81	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	97	594315	2.00	1.79	
7 Propene	41	3.839	3.839	0.000	98	334222	2.00	1.80	
8 Dichlorodifluoromethane	85	3.893	3.893	0.000	100	1014668	2.00	1.89	
9 Chloromethane	52	4.087	4.087	0.000	99	107775	2.00	1.83	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.104	0.000	97	594710	2.00	1.90	
11 Acetaldehyde	44	4.271	4.271	0.000	96	634077	10.0	8.35	
12 Vinyl chloride	62	4.276	4.276	0.000	99	360303	2.00	1.76	
13 Butane	43	4.373	4.373	0.000	86	612899	2.00	1.78	
14 Butadiene	54	4.373	4.373	0.000	67	291769	2.00	1.85	
15 Bromomethane	94	4.718	4.718	0.000	99	313784	2.00	1.78	
16 Chloroethane	64	4.869	4.869	0.000	89	174268	2.00	1.77	
17 Ethanol	31	5.042	5.042	0.000	98	826136	10.0	9.25	
18 Vinyl bromide	106	5.198	5.198	0.000	98	298487	2.00	1.82	
19 2-Methylbutane	43	5.252	5.252	0.000	91	434481	2.00	1.76	
20 Trichlorofluoromethane	101	5.484	5.484	0.000	99	987177	2.00	1.87	
21 Acrolein	56	5.516	5.516	0.000	94	76414	2.00	1.69	
22 Acetonitrile	40	5.592	5.592	0.000	99	120487	2.00	1.70	
23 Acetone	58	5.646	5.646	0.000	99	353019	6.00	4.63	
24 Pentane	72	5.721	5.721	0.000	97	61669	2.00	1.83	
25 Isopropyl alcohol	45	5.791	5.791	0.000	99	1172259	6.00	5.77	
26 Ethyl ether	31	5.915	5.915	0.000	91	370544	2.00	1.69	
27 1,1-Dichloroethene	96	6.234	6.234	0.000	94	364274	2.00	2.03	
28 Acrylonitrile	53	6.363	6.363	0.000	95	223606	2.00	1.81	
29 1,1,2-Trichloro-1,2,2-trif	101	6.417	6.417	0.000	94	786405	2.00	2.03	
30 2-Methyl-2-propanol	59	6.465	6.465	0.000	95	603982	2.00	2.17	
31 Methylene Chloride	84	6.600	6.600	0.000	99	360753	2.00	1.73	
32 3-Chloro-1-propene	39	6.616	6.616	0.000	94	415995	2.00	1.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.767	6.767	0.000	99	1098679	2.00	2.02	
34 trans-1,2-Dichloroethene	96	7.441	7.441	0.000	96	373725	2.00	2.08	
35 2-Methylpentane	43	7.458	7.458	0.000	95	1044223	2.00	2.04	
36 Methyl tert-butyl ether	73	7.598	7.598	0.000	97	895747	2.00	1.80	
37 1,1-Dichloroethane	63	7.884	7.884	0.000	100	750129	2.00	2.04	
38 Vinyl acetate	43	7.997	7.997	0.000	100	922246	2.00	1.80	
39 2-Butanone (MEK)	72	8.471	8.471	0.000	83	148844	2.00	1.85	
40 Hexane	56	8.471	8.471	0.000	75	342639	2.00	2.07	
41 Isopropyl ether	45	8.644	8.644	0.000	97	1168828	2.00	1.85	
42 cis-1,2-Dichloroethene	96	8.892	8.892	0.000	97	386149	2.00	2.11	
43 Ethyl acetate	43	9.097	9.097	0.000	98	752897	2.00	1.79	
44 Chloroform	83	9.248	9.248	0.000	97	851400	2.00	2.01	
45 Tert-butyl ethyl ether	59	9.345	9.345	0.000	96	1061277	2.00	1.82	
46 Tetrahydrofuran	42	9.674	9.674	0.000	95	403669	2.00	1.80	
47 1,1,1-Trichloroethane	97	10.289	10.289	0.000	96	937084	2.00	2.04	
48 1,2-Dichloroethane	62	10.402	10.402	0.000	98	572811	2.00	1.98	
49 Cyclohexane	69	10.871	10.871	0.000	90	200649	2.00	2.06	
50 Benzene	78	10.882	10.882	0.000	98	1094162	2.00	2.07	
52 Carbon tetrachloride	117	10.898	10.898	0.000	98	936528	2.00	2.14	
51 n-Butanol	31	10.984	10.984	0.000	71	150281	2.00	2.27	
53 2,3-Dimethylpentane	71	10.984	10.984	0.000	90	292060	2.00	2.09	
54 Thiophene	84	11.151	11.151	0.000	97	654245	2.00	2.13	
55 Isooctane	57	11.621	11.621	0.000	98	2087872	2.00	2.02	
56 n-Heptane	71	11.982	11.982	0.000	94	433906	2.00	2.04	
57 1,2-Dichloropropane	63	12.079	12.079	0.000	86	395988	2.00	1.90	
58 Trichloroethene	130	12.111	12.111	0.000	95	496732	2.00	2.06	
59 Dibromomethane	93	12.203	12.203	0.000	94	443387	2.00	2.02	
60 Dichlorobromomethane	83	12.343	12.343	0.000	99	889499	2.00	2.06	
61 1,4-Dioxane	88	12.375	12.375	0.000	97	139785	2.00	2.27	
62 Methyl methacrylate	41	12.429	12.429	0.000	90	482209	2.00	1.81	
63 Methylcyclohexane	83	12.866	12.866	0.000	94	749272	2.00	2.07	
64 4-Methyl-2-pentanone (MIBK)	43	13.287	13.287	0.000	99	735010	2.00	1.77	
65 cis-1,3-Dichloropropene	75	13.319	13.319	0.000	98	640599	2.00	2.03	
66 trans-1,3-Dichloropropene	75	14.004	14.004	0.000	98	597430	2.00	2.00	
67 Toluene	91	14.128	14.128	0.000	93	1183139	2.00	1.94	
68 1,1,2-Trichloroethane	83	14.204	14.204	0.000	99	363384	2.00	1.95	
69 2-Hexanone	58	14.603	14.603	0.000	92	349620	2.00	1.91	
70 n-Octane	85	14.791	14.791	0.000	96	438808	2.00	2.00	
71 Chlorodibromomethane	129	14.905	14.905	0.000	98	795261	2.00	2.11	
72 Ethylene Dibromide	107	15.190	15.190	0.000	98	659040	2.00	2.04	
73 Tetrachloroethene	129	15.255	15.255	0.000	94	457299	2.00	2.00	
74 2,3-Dimethylheptane	43	16.123	16.123	0.000	96	1465287	2.00	1.97	
75 Chlorobenzene	112	16.129	16.129	0.000	78	931053	2.00	1.96	
78 Ethylbenzene	91	16.409	16.409	0.000	99	1557331	2.00	1.88	
79 m-Xylene & p-Xylene	91	16.565	16.565	0.000	99	2387582	4.00	3.77	
80 n-Nonane	57	16.964	16.964	0.000	94	893423	2.00	1.98	
81 Bromoform	173	17.024	17.024	0.000	94	721195	2.00	2.19	
82 Styrene	104	17.029	17.029	0.000	99	853354	2.00	1.95	
83 o-Xylene	91	17.094	17.094	0.000	98	1247436	2.00	1.87	
84 1,1,2,2-Tetrachloroethane	83	17.412	17.412	0.000	99	823009	2.00	1.83	
85 1,2,3-Trichloropropane	110	17.574	17.574	0.000	97	256456	2.00	1.78	
86 Isopropylbenzene	105	17.671	17.671	0.000	97	1587536	2.00	1.78	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 N-Propylbenzene	120	18.188	18.188	0.000	98	427205	2.00	1.77	
88 2-Chlorotoluene	126	18.237	18.237	0.000	97	411179	2.00	1.87	
89 4-Ethyltoluene	105	18.334	18.334	0.000	98	1595328	2.00	1.79	
90 1,3,5-Trimethylbenzene	120	18.404	18.404	0.000	91	616024	2.00	1.78	
92 Alpha Methyl Styrene	118	18.631	18.631	0.000	87	639852	2.00	1.83	
93 n-Decane	57	18.674	18.674	0.000	89	1054491	2.00	1.91	
94 tert-Butylbenzene	119	18.819	18.819	0.000	89	1371308	2.00	1.78	
95 1,2,4-Trimethylbenzene	105	18.836	18.836	0.000	96	1341868	2.00	1.77	
96 sec-Butylbenzene	105	19.084	19.084	0.000	98	1956350	2.00	1.80	
97 1,3-Dichlorobenzene	146	19.105	19.105	0.000	99	930556	2.00	1.88	
98 Benzyl chloride	91	19.175	19.175	0.000	97	1264988	2.00	1.87	
99 1,4-Dichlorobenzene	146	19.186	19.186	0.000	92	946622	2.00	1.86	
100 4-Isopropyltoluene	119	19.240	19.240	0.000	96	1587970	2.00	1.83	
101 1,2,3-Trimethylbenzene	105	19.294	19.294	0.000	99	1366103	2.00	1.99	
102 Butylcyclohexane	83	19.342	19.342	0.000	91	1221617	2.00	1.95	
103 2,3-Dihydroindene	117	19.537	19.537	0.000	94	1234496	2.00	1.80	
104 1,2-Dichlorobenzene	146	19.542	19.542	0.000	94	886174	2.00	1.79	
105 n-Butylbenzene	91	19.661	19.661	0.000	98	1637453	2.00	1.85	
106 Indene	116	19.666	19.666	0.000	91	1079330	2.00	1.83	
107 Undecane	57	19.952	19.952	0.000	95	1069213	2.00	1.91	
108 1,2-Dibromo-3-Chloropropan	157	20.130	20.130	0.000	92	442060	2.00	2.15	
109 1,2,4,5-Tetramethylbenzene	119	20.405	20.405	0.000	96	1473080	2.00	1.86	
110 Dodecane	57	21.003	21.003	0.000	94	826816	2.00	1.87	
111 1,2,4-Trichlorobenzene	180	21.224	21.224	0.000	94	697777	2.00	1.78	
112 Naphthalene	128	21.365	21.365	0.000	99	1570157	2.00	1.84	
113 Hexachlorobutadiene	225	21.564	21.564	0.000	95	714229	2.00	1.70	
114 1,2,3-Trichlorobenzene	180	21.640	21.640	0.000	95	629178	2.00	1.82	
115 2-Methylnaphthalene	142	22.384	22.384	0.000	100	758706	2.00	1.82	
116 1-Methylnaphthalene	142	22.556	22.556	0.000	99	866888	2.00	1.70	
A 122 C8 Range	1	14.787	(14.733-14.870)		0	4279857	2.00	1.96	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.19	
S 124 Xylenes, Total	100				0		6.00	5.63	

Reagents:

40CV101P_00082

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GCCVB27a-LCS.d

Injection Date: 27-Feb-2019 13:35:30

Instrument ID: MG

Operator ID: 403648

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

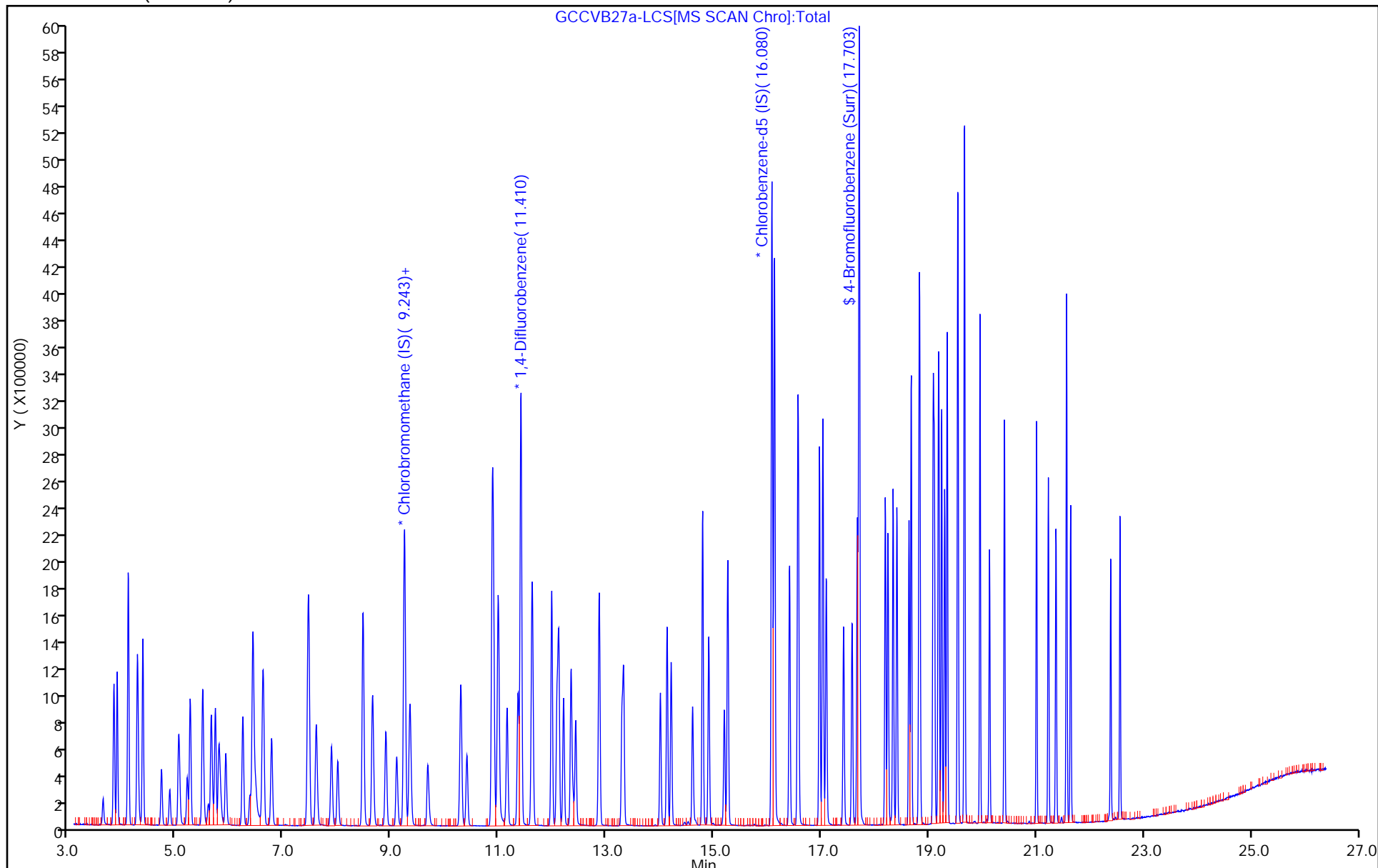
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\GCCVB27a-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 27-Feb-2019 13:35:30 ALS Bottle#: 7 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010932-002
 Misc. Info.: S85
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10932.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 14:08:02 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 14:08:02

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.81	95.28

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1

SDG No.: _____

Instrument ID: MG Start Date: 01/11/2019 12:24

Analysis Batch Number: 26755 End Date: 01/12/2019 04:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-26755/1		01/11/2019 12:24	1	GA11BLK1.D	RTX-5 0.32 (mm)
IC 140-26755/2		01/11/2019 13:08	1	GA11IC09.D	RTX-5 0.32 (mm)
IC 140-26755/6		01/11/2019 14:35	1	GA11IC10.D	RTX-5 0.32 (mm)
IC 140-26755/9		01/11/2019 16:46	1	GA11IC01.D	RTX-5 0.32 (mm)
IC 140-26755/10		01/11/2019 17:29	1	GA11IC02.D	RTX-5 0.32 (mm)
140-13809-A-1 MDLV		01/11/2019 17:29	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 17:29	1		RTX-5 0.32 (mm)
IC 140-26755/11		01/11/2019 18:12	1	GA11IC03.D	RTX-5 0.32 (mm)
140-13809-A-2 MDLV		01/11/2019 18:12	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:12	1		RTX-5 0.32 (mm)
IC 140-26755/12		01/11/2019 18:56	1	GA11IC04.D	RTX-5 0.32 (mm)
140-13809-A-3 MDLV		01/11/2019 18:56	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:56	1		RTX-5 0.32 (mm)
IC 140-26755/13		01/11/2019 19:40	1	GA11IC05.D	RTX-5 0.32 (mm)
140-13809-A-4 MDLV		01/11/2019 19:40	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 19:40	1		RTX-5 0.32 (mm)
IC 140-26755/14		01/11/2019 20:23	1	GA11IC06.D	RTX-5 0.32 (mm)
ICIS 140-26755/15		01/11/2019 21:07	1	GA11IC07.D	RTX-5 0.32 (mm)
IC 140-26755/16		01/11/2019 21:51	1	GA11IC08.D	RTX-5 0.32 (mm)
ICV 140-26755/18		01/11/2019 23:17	1	GA11ICV.D	RTX-5 0.32 (mm)
ZZZZZ		01/12/2019 04:26	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date:	7/11/19	Instrument:	UG	Chrom WL #:	10492	TALS Batch & Event #	TO14/15: 1781/26755						
							DOD:	1782/26846	OHIO: 1783/26847				
Chrom/Worklist Review							1 st	Comments		2 nd			
1. Re-read each Limit Group [method editor-limit groups]							✓			na			
2. Verify LODV in Chrom [method editor -> edit -> MDL]							✓			na			
3. Are the reagents and ini/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]							✓			✓			
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]							✓			✓			
5. Did BFB meet tune criteria? [F8]							✓			✓			
6. Were all standards injected within 24 hr of BFB? [F7]							✓			✓			
7. High point checked for saturation and point removed if so? [Chrom]							✓			✓			
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]							✓			NA			
9. RT for each IS +20 sec avg. RT? [F6 IstdRec]							✓			✓			
10. Area for each IS + 40% avg. area? [F6 IstdRec]							✓			✓			
11. Each analyte + 0.06 RRT of avg. RRT? [F6 - RRT]							✓			✓			
12. Elution order checked on isomeric pairs? [Chrom]													
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane							✓			✓			
• 2-methyl butane / acrolein							✓			✓			
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane							✓			✓			
• vinyl acetate / hexane							✓			✓			
• cis- and trans- isomers							✓			✓			
• ethyl benzene / m/p-xylene / o-xylene							✓			✓			
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene							✓			✓			
• tert-butylbenzene/4-isopropyltoluene							✓			✓			
• 1,3-, 1,4-, and 1,2-dichlorobenzene							✓			✓			
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes							✓	mic		✓			
• 1,2,4- and 1,2,3-trichlorobenzenes							✓			✓			
• 2-, and 1-methylnaphthalene							✓			✓			
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?							✓			✓			
MLG Review							TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1 & 2 methylnaphthalene ≤ 50% Mechl 30.5 [F6 Σ]							✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]							✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]							✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]							✓	✓	✓		NA		→
18. If curves were used, is correlation coefficient ≥ 0.990? [F6]							na	→	→		NA		→
19. Is the intercept less than the RL for each curve? [F6]							na	→	→		NA		→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntl-C, details]							na	→	na		NA	→	na
21. Is low point RSE ≤ 50%? Mechl 63% 58% 7/11/19 [F6]							✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits? [F8 - icv]							✓	✓	✓		✓	✓	✓
Analyst/Date:							2nd Level Reviewer/Date:						
H 7/11/19							AS 7/14/19						
TALS Review							TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL							✓	✓	✓		na	na	na
24. Graphics uploaded? [paperclip]							✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events --Fix ICAL linkage' if needed]							✓	✓	✓		✓	✓	✓
26. Runs linked to BFB? [QC Links]							✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings [F8]							✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?							✓	✓	✓		NA		→
29. After review in TALS, approve the method in TALS.							na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>							na	na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?							na	na	na		✓	✓	✓
Analyst/date:							2nd Level Reviewer/date:						
H 7/15/19							AS 7/15/19						
Comments: Mechl UR 5 1231mbz UR-4 7/15/19							Comments:						
dodecane 12db3chloroprop UR 4 7/15/19													
d Bromotorm													

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1

SDG No.: _____

Instrument ID: MG Start Date: 02/26/2019 11:03

Analysis Batch Number: 27931 End Date: 02/27/2019 03:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27931/1		02/26/2019 11:03	1	GBFBB26.D	RTX-5 0.32 (mm)
CCVIS 140-27931/2		02/26/2019 11:35	1	GCCVB26.D	RTX-5 0.32 (mm)
LCS 140-27931/1002		02/26/2019 11:35	1	GCCVB26-LCS.d	RTX-5 0.32 (mm)
MB 140-27931/4		02/26/2019 12:56	1	G500BB26.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 13:42	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 15:56	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 16:38	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 17:19	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 18:01	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 19:24	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 20:06	1		RTX-5 0.32 (mm)
140-14389-1		02/26/2019 21:30	1	GB26P109.D	RTX-5 0.32 (mm)
140-14389-2		02/26/2019 22:13	1	GB26P110.D	RTX-5 0.32 (mm)
140-14389-3		02/26/2019 22:55	1	GB26P111.D	RTX-5 0.32 (mm)
140-14389-4		02/26/2019 23:37	1	GB26P112.D	RTX-5 0.32 (mm)
140-14389-5		02/27/2019 00:18	1	GB26P113.D	RTX-5 0.32 (mm)
140-14389-6		02/27/2019 01:00	1	GB26P114.D	RTX-5 0.32 (mm)
140-14389-7		02/27/2019 01:42	3.7	GB26P115.D	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 02:23	1		RTX-5 0.32 (mm)
140-14389-8		02/27/2019 03:05	1	GB26P116D.D	RTX-5 0.32 (mm)

190226.zzz

EUROFINS TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	25.5	2/26/2019	11:03:10 AM
CCV	1 - 101 mL	32.2	2/26/2019	11:35:07 AM
DNU	16 - 21 mL	25.5	2/26/2019	12:21:11 PM
BLK	16 - 500 mL	25.1	2/26/2019	12:56:44 PM
14386-17	1 - 101 mL	6.4	2/26/2019	1:42:01 PM
DNU	1 - 21 mL	11	2/26/2019	3:24:59 PM
14386-18	1 - 101 mL	8.8	2/26/2019	3:56:23 PM
14391-19	2 - 101 mL	7.4	2/26/2019	4:38:04 PM
14391-20	3 - 101 mL	7.1	2/26/2019	5:19:41 PM
14387-04	4 - 11 mL	8	2/26/2019	6:01:19 PM
14387-05	5 - 11 mL	8.2	2/26/2019	6:43:00 PM
14387-14	6 - 11 mL	9.5	2/26/2019	7:24:42 PM
14387-16	7 - 11 mL	9.6	2/26/2019	8:06:22 PM
14387-18	8 - 11 mL	6.3	2/26/2019	8:48:03 PM
14389-01	9 - 101 mL	8.2	2/26/2019	9:30:27 PM
14389-02	10 - 101 mL	8.6	2/26/2019	10:13:31 PM
14389-03	11 - 101 mL	9.6	2/26/2019	10:55:40 PM
14389-04	12 - 101 mL	9.9	2/26/2019	11:37:23 PM
14389-05	13 - 101 mL	9.9	2/27/2019	12:18:55 AM
14389-06	14 - 101 mL	10.1	2/27/2019	1:00:35 AM
14389-07	15 - 11 mL	15.4	2/27/2019	1:42:13 AM
14389-08	16 - 101 mL	9.9	2/27/2019	2:23:49 AM
14389-08	16 - 101 mL	7.9	2/27/2019	3:05:31 AM

MG WL 10931

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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Instrument/Date	MG 2/26/2019		Routine	DOD	OHIO VAP
CCAL Chrom WL #	10931	CCAL Batch #	27931		
ICAL Chrom WL #	10492	ICAL Batch # / Event #	26755 / 1781	/	/
Chrom Review			1st	If No, why is data reportable?	
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]			/		na
2. Did BFB meet tune criteria? [F8]			/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]			/	List Target analytes outside CCV limits:	/
4. Elution order checked on isomeric pairs? [Chrom]					
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane			/		/
• 2-methyl butane / acrolein			/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane			/		/
• vinyl acetate / hexane			/		/
• cis- and trans- isomers			/		/
• ethyl benzene / m/p-xylene / o-xylene			/		/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene			/		/
• tert-butylbenzene/4-isopropyltoluene			/		/
• 1,3-, 1,4-, and 1,2-dichlorobenzene			/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes			NA		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene			/		/
• 2-, and 1-methylnaphthalene			/		/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?			NA		NA
6. Has the RT been updated to the method?			/		/
Analyst/date	Suphawan Kh 2/27/2019		2nd Level Reviewer/date w 03/01/19		
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]			/		/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]			/		/
9. Can dilution history verified? [Mgmt Report]			/		/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:			/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	/
11. All runs - peaks ID'd correctly and false positives removed?			/		/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?			/		/
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]			/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur, Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)	/
Sample Reason Sample Reason					
14. Samples outside calibration range scheduled for dilution?			NA	<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution	NA
Chrom Review			1st	If No, why is data reportable?	
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:			/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.	/
Sample Reason Sample Reason					
16. RIC inspected for proper integration for TPH?			NA		NA
17. Obvious non-TPH peaks excluded?			/		/
18. Individual TPH peak area < octane high point area?			/		/

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 2 of 2

TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	NA														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input type="checkbox"/> CCV - %D - LCS criteria met (NCM# _____) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	NA														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random, Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr><td>>90</td><td>5</td></tr> <tr><td>71 - 90</td><td>4</td></tr> <tr><td>51 - 70</td><td>3</td></tr> <tr><td>31 - 50</td><td>2</td></tr> <tr><td>11 - 30</td><td>1</td></tr> <tr><td><11</td><td>0</td></tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	<11	0			
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
<11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	/		/														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		NA														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-27931/4 200 mL blank ID: _____	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	NA		NA														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	na		/														
40. Checklist & Entech report scanned, attached & assigned properly?	na		/														

Analyst: Suphawana Kh.	Date: 2/27/2019	2nd Level Reviewer:	Date: 03/04/19
Comments: CS line 16 for Chlorodifluoromethane		Comments:	
Example Calculation: 140-14389-7 1,1-Dichloroethane			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
7.005013 x 500 x 3.7 = 1178.12			

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1

SDG No.: _____

Instrument ID: MG Start Date: 02/27/2019 13:04

Analysis Batch Number: 27932 End Date: 02/28/2019 05:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27932/1		02/27/2019 13:04	1	GBFBB27a.D	RTX-5 0.32 (mm)
CCVIS 140-27932/2		02/27/2019 13:35	1	GCCVB27a.D	RTX-5 0.32 (mm)
LCS 140-27932/1002		02/27/2019 13:35	1	GCCVB27a-LCS.d	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 15:55	1		RTX-5 0.32 (mm)
MB 140-27932/7		02/27/2019 16:40	1	GB27mb500.D	RTX-5 0.32 (mm)
140-14389-9		02/27/2019 17:22	1	GB27p101.D	RTX-5 0.32 (mm)
140-14389-10		02/27/2019 18:04	1	GB27p102.D	RTX-5 0.32 (mm)
140-14389-11		02/27/2019 18:46	1	GB27p103.D	RTX-5 0.32 (mm)
140-14389-13		02/27/2019 20:10	1	GB27p105.D	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 21:33	1		RTX-5 0.32 (mm)
140-14389-15		02/27/2019 22:15	1	GB27p107.D	RTX-5 0.32 (mm)
140-14389-16		02/27/2019 22:57	1	GB27p108.D	RTX-5 0.32 (mm)
140-14389-17		02/27/2019 23:39	1	GB27p109.D	RTX-5 0.32 (mm)
140-14389-18		02/28/2019 00:20	1	GB27p110.D	RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 01:46	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 02:28	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 03:10	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 03:52	1		RTX-5 0.32 (mm)
140-14389-12		02/28/2019 04:34	1	GB27p104R.D	RTX-5 0.32 (mm)
140-14389-14		02/28/2019 05:16	1	GB27p106R.D	RTX-5 0.32 (mm)

190227.zzz

EUROFINS TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	24.7	2/27/2019	1:04:01 PM
CCV	7 - 101 mL	31.7	2/27/2019	1:35:48 PM
FLUSH	16 - 101 mL	24.6	2/27/2019	3:21:04 PM
MB200	16 - 201 mL	24.2	2/27/2019	3:55:25 PM
MB500	16 - 502 mL	24	2/27/2019	4:40:17 PM
14389-09	1 - 42 mL	10.9	2/27/2019	5:22:46 PM
14389-10	2 - 101 mL	9.6	2/27/2019	6:04:29 PM
14389-11	3 - 101 mL	9.8	2/27/2019	6:46:20 PM
14389-12	4 - 42 mL	10.8	2/27/2019	7:28:13 PM
14389-13	5 - 101 mL	9.3	2/27/2019	8:10:05 PM
14389-14	6 - 50 mL	10.5	2/27/2019	8:51:52 PM
14389-15	7 - 101 mL	9.5	2/27/2019	9:33:57 PM
14389-15	7 - 101 mL	7.4	2/27/2019	10:15:35 PM
14389-16	8 - 101 mL	9.2	2/27/2019	10:57:23 PM
14389-17	9 - 101 mL	9.7	2/27/2019	11:38:58 PM
14389-18	10 - 101 mL	9.1	2/28/2019	12:20:44 AM
14400-01	11 - 500 mL	6.8	2/28/2019	1:05:12 AM
14415-01	12 - 201 mL	6.9	2/28/2019	1:46:54 AM
14415-02	13 - 201 mL	8.4	2/28/2019	2:28:55 AM
14415-03	14 - 201 mL	8	2/28/2019	3:10:43 AM
14415-04	15 - 201 mL	7.1	2/28/2019	3:52:50 AM
14389-12R	4 - 101 mL	8.4	2/28/2019	4:34:32 AM
14389-14R	6 - 101 mL	8.3	2/28/2019	5:16:13 AM
END	16 - 500 mL	23.6	2/28/2019	6:01:57 AM
14400-01	11 - 101 mL	6.5	2/28/2019	9:04:44 AM

MG WL 10932

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 1 of 2

Instrument/Date	MG 2/27/2019		<u>Routine</u>	<u>DOD</u>	<u>OHIO VAP</u>
CCAL Chrom WL #	10932	CCAL Batch #	27932		28038
ICAL Chrom WL #	10492	ICAL Batch # / Event #	26755 / 1781	/	26847 / 1783
Chrom Review			1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]			/		na
2. Did BFB meet tune criteria? [F8]			/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]			/	List Target analytes outside CCV limits: _____ _____	/
4. Elution order checked on isomeric pairs? [Chrom]					
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane			/		/
• 2-methyl butane / acrolein			/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane			/		/
• vinyl acetate / hexane			/		/
• cis- and trans- isomers			/		/
• ethyl benzene / m/p-xylene / o-xylene			/		/
• n-propylbenzene/4-ethylbenzene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene			/		/
• tert-butylbenzene/4-isopropyltoluene			/		/
• 1,3-, 1,4-, and 1,2-dichlorobenzene			/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes			NA		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene			/		/
• 2-, and 1-methylnaphthalene			/		/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?			NA		NA
6. Has the RT been updated to the method?			/		/
Analyst/date <u>Sophomna Kh 2/28/2019</u>			2nd Level Reviewer/date <u>[Signature] 03/01/19</u>		
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]			/		/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]			/		/
9. Can dilution history verified? [Mgmt Report]			/		/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:			/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	/
11. All runs - peaks ID'd correctly and false positives removed?			/		/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?			/		/
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]			/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur, Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)	/
Sample	Reason	Sample	Reason		
_____	_____	_____	_____		
_____	_____	_____	_____		
14. Samples outside calibration range scheduled for dilution?			/	<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution	/
Chrom Review			1st	If No, why is data reportable?	2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:			/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume: see DRC.	/
Sample	Reason	Sample	Reason		
_____	_____	_____	_____		
_____	_____	_____	_____		
16. RIC inspected for proper integration for TPH?			NA		NA
17. Obvious non-TPH peaks excluded?			/		/
18. Individual TPH peak area < octane high point area?			/		/

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 2 of 2

TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	MB														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] TALS-Sample Results Tab	/	<input type="checkbox"/> CCV - %D - LCS criteria met (NCM# _____) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	MB														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random; Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr><td>>90</td><td>5</td></tr> <tr><td>71 - 90</td><td>4</td></tr> <tr><td>51 - 70</td><td>3</td></tr> <tr><td>31 - 50</td><td>2</td></tr> <tr><td>11 - 30</td><td>1</td></tr> <tr><td>< 11</td><td>0</td></tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	< 11	0			/
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
< 11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	NA		MB														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	/		/														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-27932/7, 140-28038/7 200 mL blank ID: 140-27932/4	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	NA		MB														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	-na-		/														
40. Checklist & Entech report scanned, attached & assigned properly?	-na-		/														

Analyst: <u>Suphatrue Kh</u>	Date: <u>2/28/2019</u>	2nd Level Reviewer: <u>[Signature]</u>	Date: <u>2/30/19</u>
Comments: CI line 12 for Chlorodifluoromethane			
1st level Lino 12 on 2/28/19			
Example Calculation: 140-14389-9 Chloroform			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
$\frac{0.214512 \times 500 \times 1.0}{40} = 2.68$			

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1

SDG No.: _____

Batch Number: 27931 Batch Start Date: 02/26/19 11:03 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00082	40MXISSURP 00003
BFB 140-27931/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27931/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27931/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14389-A-1	SV-079-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-2	SV-DUP04-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-3	SV-131-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-4	SV-DUP01-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-5	SV-001-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-6	SV-004-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-7	SV-102-C-26	TO 15 LL	T	11 mL	500 mL	1	1		40 mL
140-14389-A-8	SV-155-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27931/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27931/1		TO 15 LL		40 mL					
CCVIS 140-27931/2		TO 15 LL							
MB 140-27931/4		TO 15 LL							
140-14389-A-1	SV-079-A-26	TO 15 LL	T						
140-14389-A-2	SV-DUP04-A-26	TO 15 LL	T						
140-14389-A-3	SV-131-C-26	TO 15 LL	T						
140-14389-A-4	SV-DUP01-C-26	TO 15 LL	T						
140-14389-A-5	SV-001-C-26	TO 15 LL	T						
140-14389-A-6	SV-004-C-26	TO 15 LL	T						
140-14389-A-7	SV-102-C-26	TO 15 LL	T						
140-14389-A-8	SV-155-C-26	TO 15 LL	T						
LCS 140-27931/1002		TO 15 LL							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1

SDG No.: _____

Batch Number: 27931 Batch Start Date: 02/26/19 11:03 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1

SDG No.: _____

Batch Number: 27932 Batch Start Date: 02/27/19 13:04 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00082	40MXISSURP 00003
BFB 140-27932/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27932/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27932/7		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14389-A-9	SV-133-C-26	TO 15 LL	T	40 mL	500 mL	1	1		40 mL
140-14389-A-10	SV-153-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-11	SV-DUP02-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-13	SV-152-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-15	SV-088-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-16	SV-142-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-17	SV-113-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-18	SV-149-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-12	SV-150-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14389-A-14	SV-141-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27932/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27932/1		TO 15 LL		40 mL					
CCVIS 140-27932/2		TO 15 LL							
MB 140-27932/7		TO 15 LL							
140-14389-A-9	SV-133-C-26	TO 15 LL	T						
140-14389-A-10	SV-153-C-26	TO 15 LL	T						
140-14389-A-11	SV-DUP02-C-26	TO 15 LL	T						
140-14389-A-13	SV-152-C-26	TO 15 LL	T						
140-14389-A-15	SV-088-C-26	TO 15 LL	T						
140-14389-A-16	SV-142-C-26	TO 15 LL	T						
140-14389-A-17	SV-113-C-26	TO 15 LL	T						
140-14389-A-18	SV-149-C-26	TO 15 LL	T						
140-14389-A-12	SV-150-C-26	TO 15 LL	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1

SDG No.: _____

Batch Number: 27932 Batch Start Date: 02/27/19 13:04 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MSUR 00002					
140-14389-A-14	SV-141-C-26	TO 15 LL	T						
LCS 140-27932/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Summa Canister Dilution Worksheet

Client: Tetra Tech, Inc.

Job No.: 140-14389-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Date	Time	Analyst
140-14389-7	1	0.0	1.00	1.00	39.7	3.70	3.70		3.70	3.70	02/26/19	13:45	Barlozhetskaya, Anna F

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg

Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig

Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury ("Hg)

14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D
 Lims ID: 140-14044-A-1
 Client ID: 11547
 Sample Type: Client
 Inject. Date: 24-Jan-2019 15:25:30 ALS Bottle#: 14 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010612-010
 Misc. Info.: 11547
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Jan-2019 09:48:51 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 25-Jan-2019 09:53:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.237	9.237	0.000	97	406723	4.00	
* 2 1,4-Difluorobenzene	114	11.410	11.416	-0.006	97	2310796	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.091	0.000	93	2083397	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.714	0.000	81	1731157	4.06	
31 Methylene Chloride	84	6.606	6.600	0.006	98	25162	0.1507	
47 1,1,1-Trichloroethane	97	10.294	10.294	0.000	95	9292	0.0252	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D

Injection Date: 24-Jan-2019 15:25:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14044-A-1

Lab Sample ID: 140-14044-1

Worklist Smp#: 10

Client ID: 11547

Purge Vol: 500.000 mL

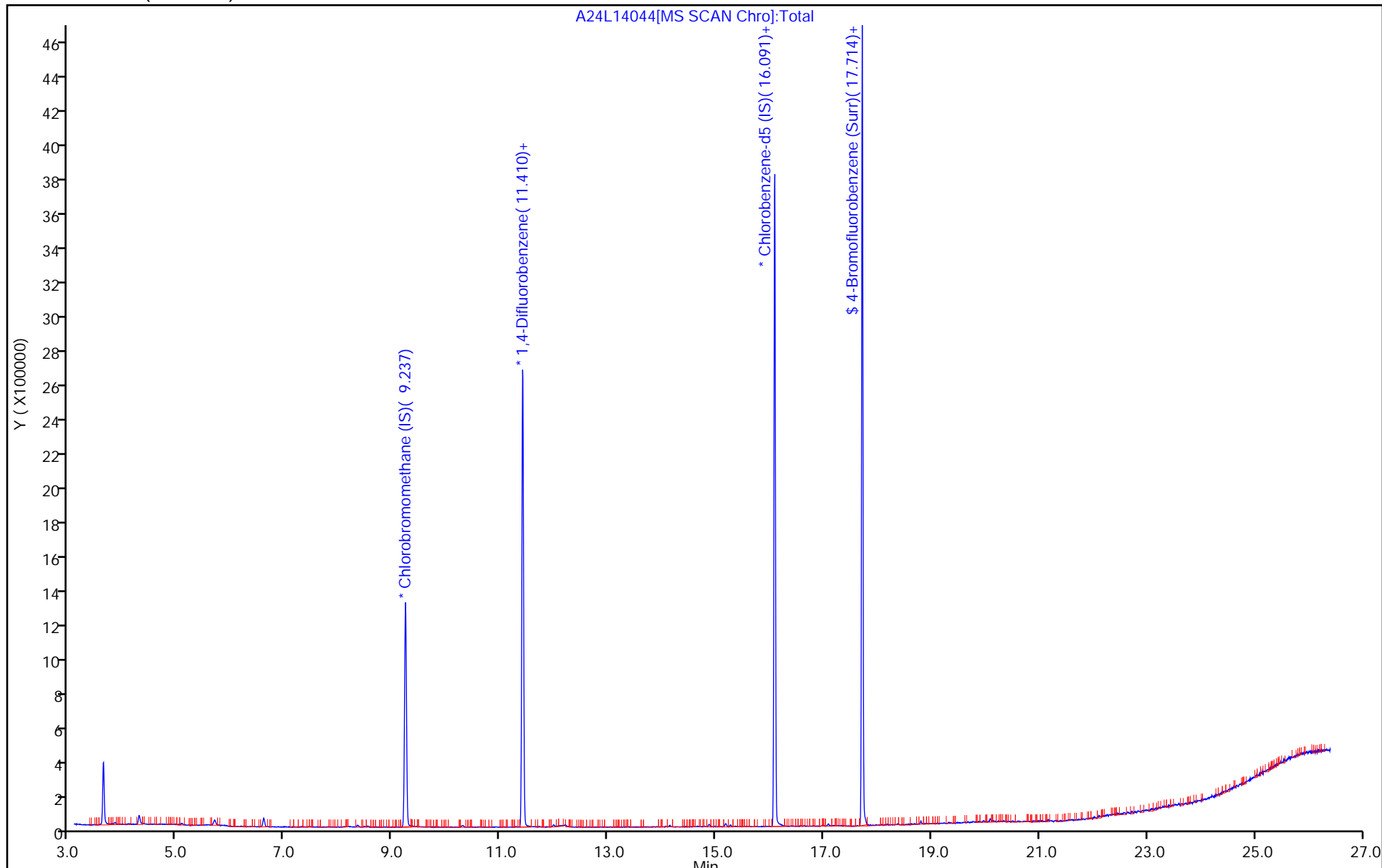
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200 (mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200 (mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND	*	1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200 (mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D
 Lims ID: 140-14051-A-16
 Client ID: 10518
 Sample Type: Client
 Inject. Date: 26-Jan-2019 01:10:30 ALS Bottle#: 10 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010617-022
 Misc. Info.: 10518
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Jan-2019 09:09:11 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0302

First Level Reviewer: khachitpongpanits Date: 28-Jan-2019 09:09:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.406	-0.005	73	173091	4.00	
* 2 1,4-Difluorobenzene	114	9.471	9.477	-0.006	95	1033901	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.519	14.524	-0.005	91	905153	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.244	16.244	0.000	87	793289	4.12	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D

Injection Date: 26-Jan-2019 01:10:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-14051-A-16

Lab Sample ID: 140-14051-16

Worklist Smp#: 22

Client ID: 10518

Purge Vol: 500.000 mL

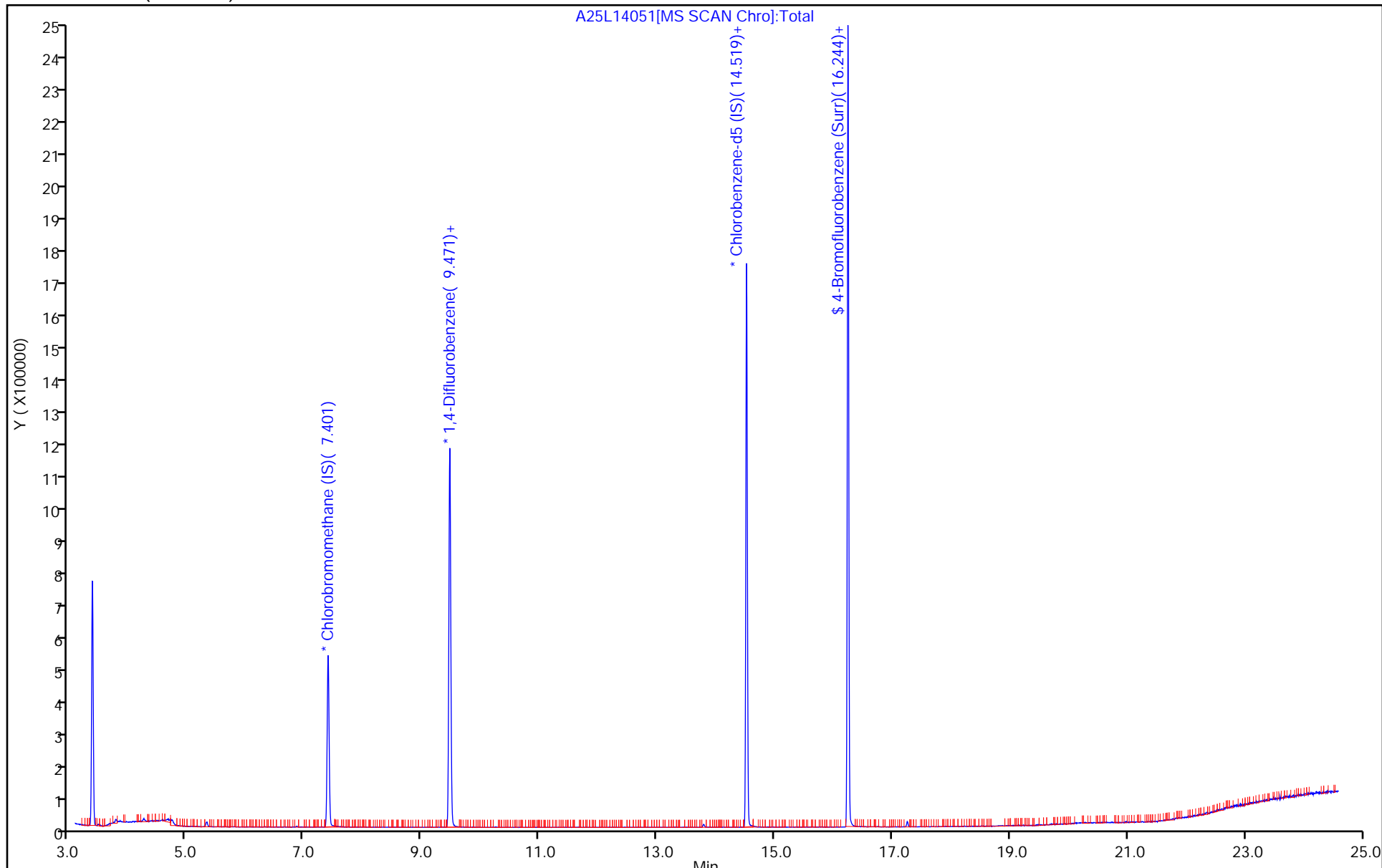
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

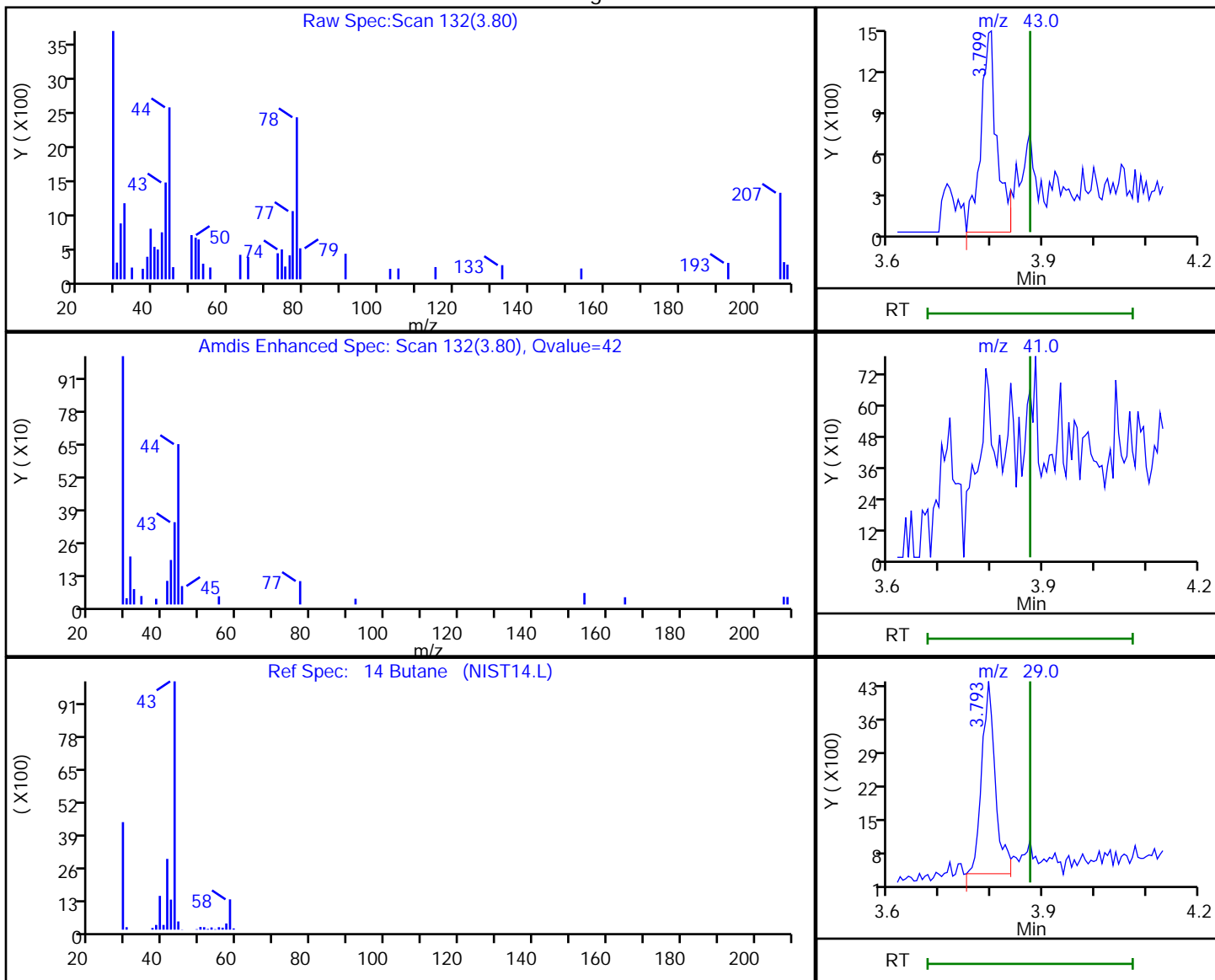


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D
 Injection Date: 26-Jan-2019 01:10:30 Instrument ID: MR
 Lims ID: 140-14051-A-16 Lab Sample ID: 140-14051-16
 Client ID: 10518
 Operator ID: HMT ALS Bottle#: 10 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.80	43.00	3124	0.063769
3.87	41.00	0	
3.79	29.00	7327	

Reviewer: khachitpongpanits, 28-Jan-2019 09:09:01

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200(mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D
 Lims ID: 140-14114-A-3
 Client ID: 11859
 Sample Type: Client
 Inject. Date: 31-Jan-2019 14:24:30 ALS Bottle#: 16 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010665-007
 Misc. Info.: 11859
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 01-Feb-2019 14:53:46 Calib Date: 07-Jan-2019 21:45:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20181224-10406.b\HA07IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0316

First Level Reviewer: khachitpongpanits Date: 01-Feb-2019 15:00:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.834	-0.005	96	226233	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.016	-0.006	95	1257347	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.739	-0.005	89	1030682	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.404	17.409	-0.005	91	693284	4.13	
45 1,1,1-Trichloroethane	97	9.863	9.868	-0.005	95	7970	0.0413	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D

Injection Date: 31-Jan-2019 14:24:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14114-A-3

Lab Sample ID: 140-14114-3

Worklist Smp#: 7

Client ID: 11859

Purge Vol: 500.000 mL

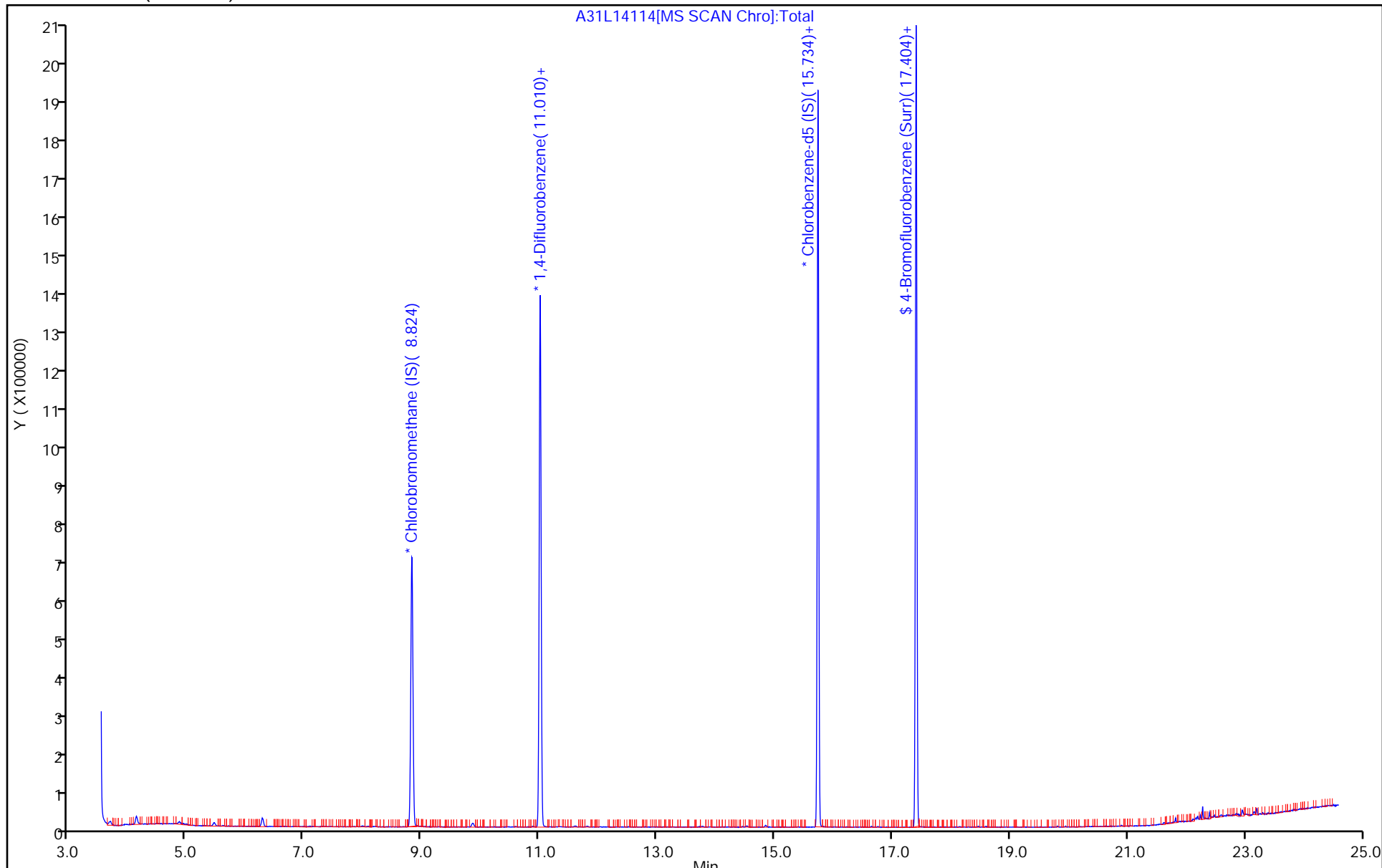
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

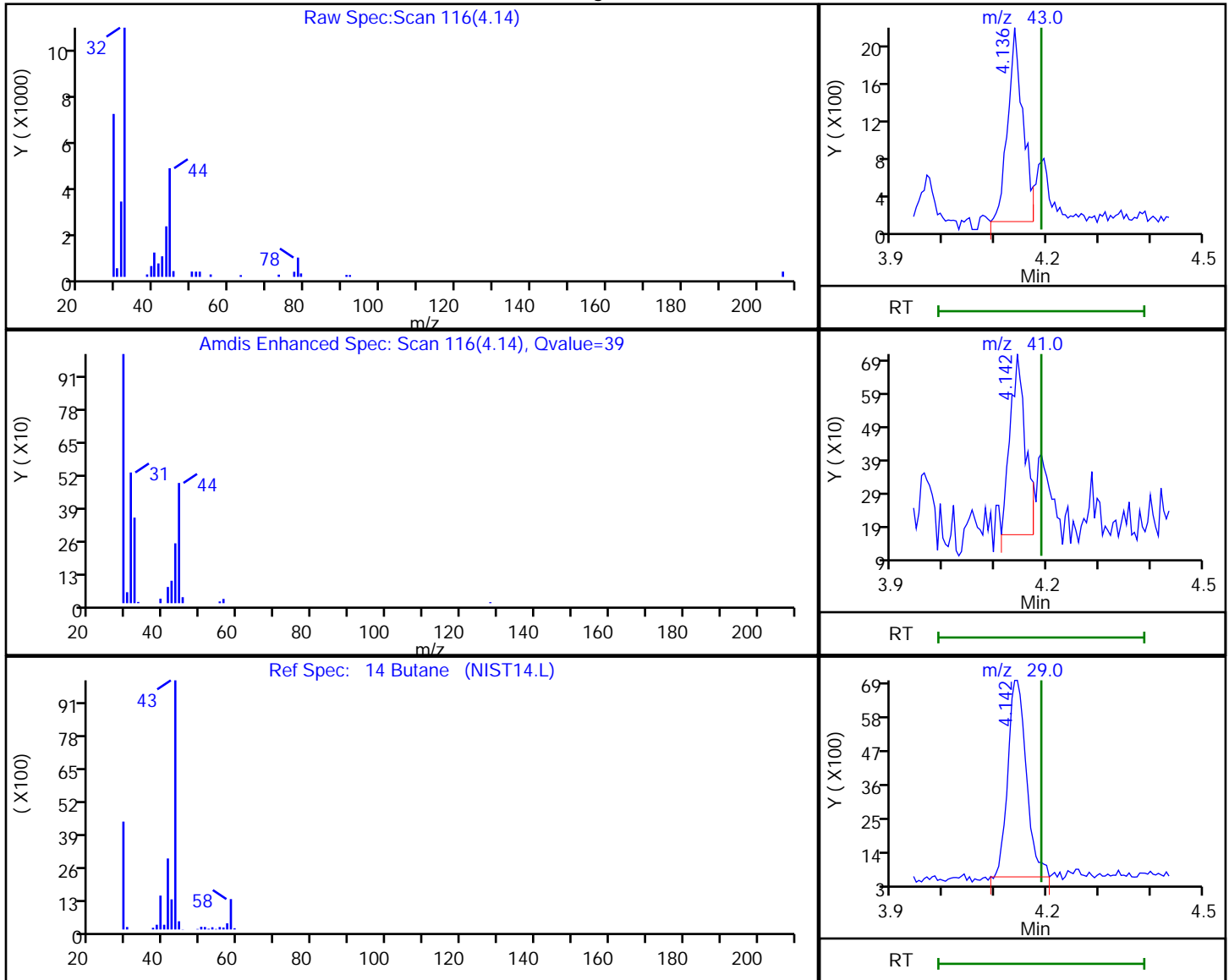


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D
 Injection Date: 31-Jan-2019 14:24:30 Instrument ID: MH
 Lims ID: 140-14114-A-3 Lab Sample ID: 140-14114-3
 Client ID: 11859
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.14	43.00	4267	0.037196
4.14	41.00	1130	
4.14	29.00	16118	

Reviewer: tajh, 31-Jan-2019 14:58:31

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND	*	1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\B05L14136.D
 Lims ID: 140-14136-A-16
 Client ID: 11710
 Sample Type: Client
 Inject. Date: 05-Feb-2019 11:19:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010730-004
 Misc. Info.: 11710
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Feb-2019 10:13:58 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 06-Feb-2019 10:14:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.243	-0.011	95	329997	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.416	-0.011	97	1787592	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.086	16.086	0.000	95	1561576	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.709	17.714	-0.005	79	1327286	4.15	
31 Methylene Chloride	84	6.595	6.606	-0.011	97	17493	0.1291	
110 Dodecane	57	21.009	21.009	0.000	92	19919	0.0798	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\B05L14136.D

Injection Date: 05-Feb-2019 11:19:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14136-A-16

Lab Sample ID: 140-14136-16

Worklist Smp#: 4

Client ID: 11710

Purge Vol: 500.000 mL

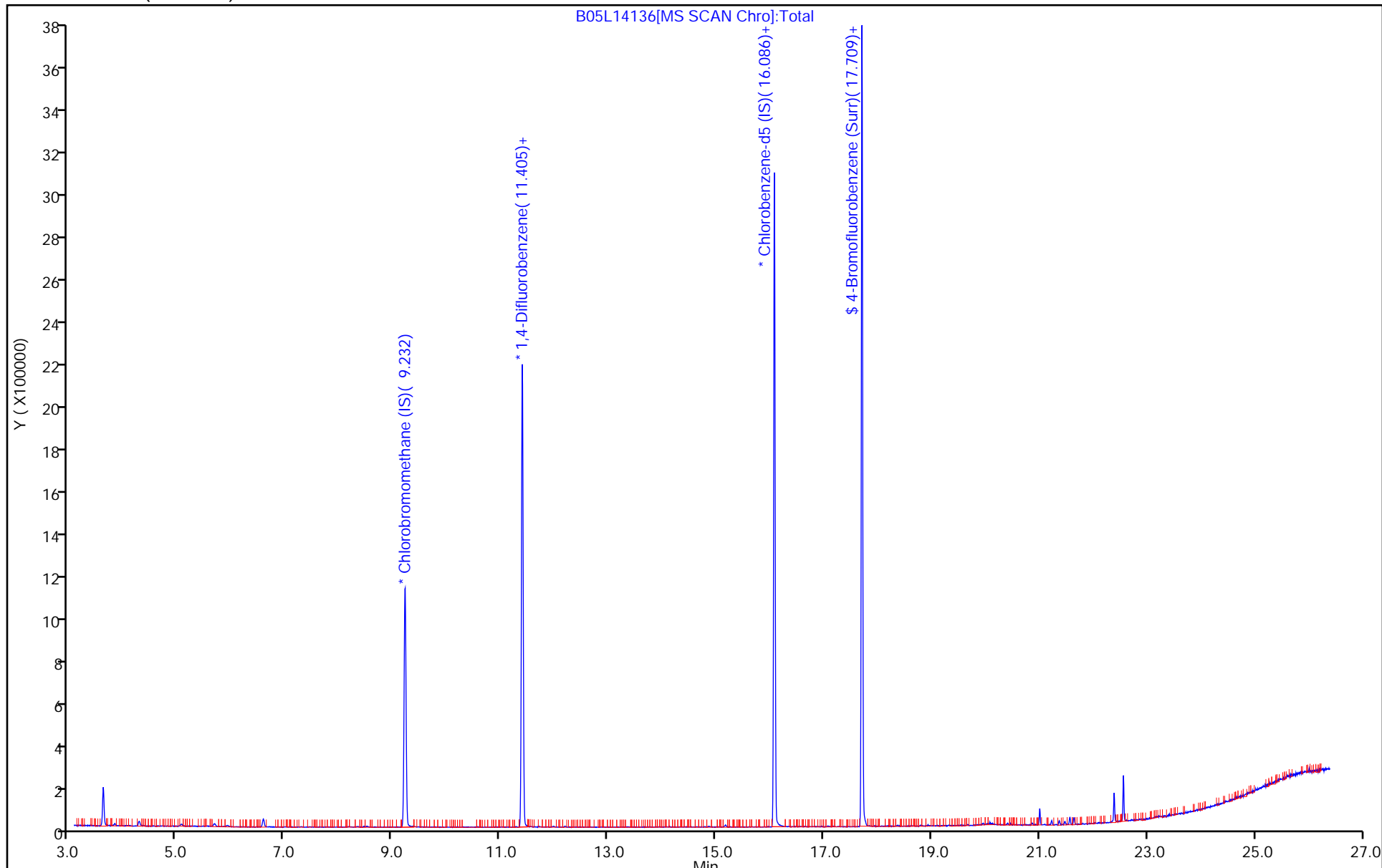
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14159-1
 SDG No.: _____
 Client Sample ID: 09647 Lab Sample ID: 140-14159-1
 Matrix: Air Lab File ID: B05L14159.D
 Analysis Method: TO-15 Date Collected: 02/04/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 20:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27362 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND	*	0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14159-1
 SDG No.: _____
 Client Sample ID: 09647 Lab Sample ID: 140-14159-1
 Matrix: Air Lab File ID: B05L14159.D
 Analysis Method: TO-15 Date Collected: 02/04/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 20:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27362 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14159-1
 SDG No.: _____
 Client Sample ID: 09647 Lab Sample ID: 140-14159-1
 Matrix: Air Lab File ID: B05L14159.D
 Analysis Method: TO-15 Date Collected: 02/04/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 20:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27362 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MJ\20190204-10717.b\B05L14159.D
 Lims ID: 140-14159-A-1
 Client ID: 09647
 Sample Type: Client
 Inject. Date: 05-Feb-2019 20:35:30 ALS Bottle#: 7 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010717-016
 Misc. Info.: 09647
 Operator ID: 007126 Instrument ID: MJ
 Method: \\chromna\Knoxville\ChromData\MJ\20190204-10717.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Feb-2019 13:16:33 Calib Date: 30-Jan-2019 23:00:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MJ\20190130-10689.b\JA30ICL08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 06-Feb-2019 13:18:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.760	9.771	-0.011	92	137691	4.00	
* 2 1,4-Difluorobenzene	114	11.868	11.874	-0.006	95	795074	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.477	16.482	-0.005	90	674023	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	18.074	18.076	-0.005	89	489101	3.88	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MJ\20190204-10717.b\B05L14159.D

Injection Date: 05-Feb-2019 20:35:30

Instrument ID: MJ

Operator ID: 007126

Lims ID: 140-14159-A-1

Lab Sample ID: 140-14159-1

Worklist Smp#: 16

Client ID: 09647

Purge Vol: 500.000 mL

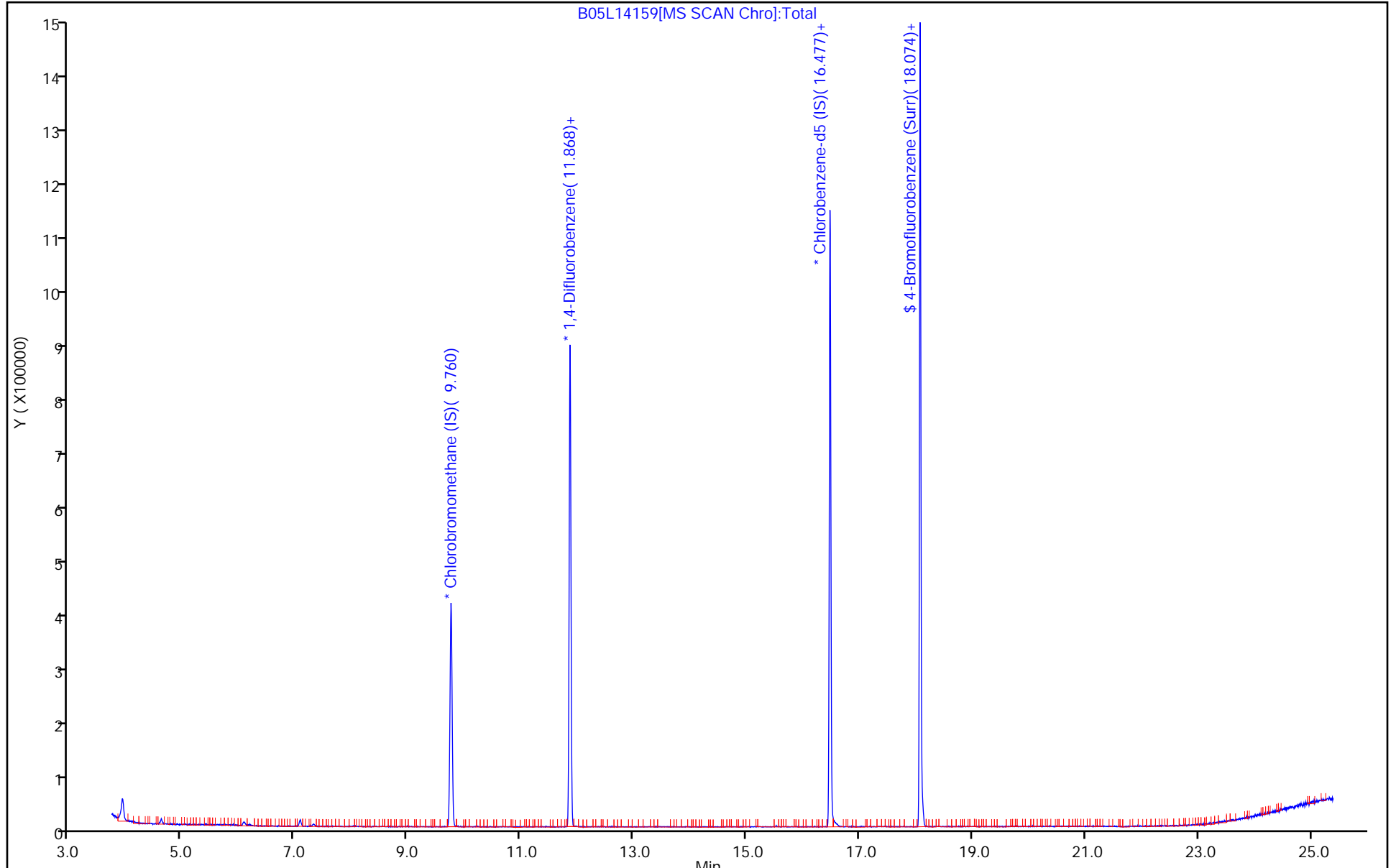
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.



Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor

Project Manager: Tony Apanavage

Phone: 301-528-3000

Site Contact: Tony Apanavage

TAL Contact: Terry Walker Washington

Client Contact Information
Company: Tetra Tech
Address: 20251 Century Blvd #200
City/State/Zip: Germantown, MD 20871
Phone: 301-528-5522
FAX:

Project Name: MRC Indoor Air
Site Location: MRC
PO # 1121COS388

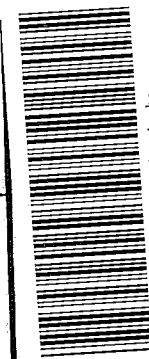
Analysis Turnaround Time
Standard (Specify) X
Rush (Specify)

Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	Other (Please specify in notes section)										
							TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Indoor Air	Ambient Air	Soil Gas	Landfill Gas		
2/21/19	1130	1237	-30	-1	09717	09645	✓										
2/21/19	0000	0000	-21	4	11733	11728	✓										
2/19/19	1029	1129	-29	0	11422	11813	✓										
2/19/19	0000	0000	-29	0	10162	11554	✓										
2/19/19	1036	1136	-26	-1	11536	10941	✓										
2/19/19	1640	1740	0	0	11977	11870	✓										

Baltimore #201

18 CANS / 18 FRAWS

CUSTODY SEALS INTACT
NO EVIDENCE AMBIENT TAPED / CTAD.0C



140-14389 Chain of Custody

Temperature (Fahrenheit)

Start	Interior
Stop	

Start	Interior
Stop	

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: [Signature]	Date/Time: 2/22/19	Received by: [Signature]
Relinquished by: [Signature]	Date/Time: 2/22/19 1700	Received by: [Signature]

Lab Use Only
Sample Name: _____
Created by: _____
Completed by: _____

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record
 TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Project Manager: **Tony Apanavage** Sampled By: **Sophia Lawson, Josh Mullis & Walt Pryor** of **16 COCs**

Client Contact Information
 Company: **Tetra Tech**
 Address: **20251 Century Blvd #200**
 City/State/Zip: **Georgetown, MD 20871**
 Phone: **301-528-552**
 FAX:

Project Name: **MRLC Indoor Air**
 Site/location: **MRLC**
 PO # **112 FC08388**

Analysis Turnaround Time
 Standard (Specify) **X**
 Rush (Specify)

Sample Date	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	ASTM D-1946										
							TO-15	TO-14A	EPA 3C	EPA 25C	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas		
2/19/19	1045	1145	-24	-1	11754	11269	✓										
2/19/19	1048	1148	-30	0	11490	11785	✓										
2/19/19	1052	1152	-30	0	10672	11162	✓										
2/19/19	1055	1155	-30	0	10158	10493	✓										
2/19/19	0000	0000	-30	-2	11497	11658	✓										
2/19/19	1105	1205	-28	0	11931	11841	✓										

Temperature (Fahrenheit)		Pressure (Inches of Hg)	
Start	Stop	Interior	Ambient

Baltimore #201

Sampled by: **Sophia Lawson, Josh Mullis, Walt Pryor**

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: **Tetra Tech** Date/Time: **2/22/19** Canisters Received by:

Samples Relinquished by: **[Signature]** Date/Time: **2/22/19** Received by: **[Signature]**

Relinquished by: **[Signature]** Date/Time: **2/22/19** Received by: **[Signature]**

Lat. Long. Only: _____ Shipper Name: _____

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record
 TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Sampled By: Sophia Lawson, Sosh Mollis & Walt Pryor 9 of 16 COCs

Project Manager: Tony Apanavage
 Phone: 301-528-3000
 Site Contact: Tony Apanavage
 TAL Contact: Terry Walker, Washburn

Client Contact Information
 Company: Tetra Tech
 Address: 20851 Century Blvd #200
 City/State/Zip: Georgetown, MD 20871
 Phone: 301-528-5522
 FAX:

Project Name: MZC Indoor Air
 Site/location: MPC
 PO # 112FC08388
 Analysis Turnaround Time
 Standard (Specify) Rush (Specify)

Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	Other (Please specify in notes section)											
							TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas		
2/19/19	1106	1206	-29	-1	11732	107215												
2/19/19	1110	1210	-30	-1	11595	09831												
2/19/19	1126	1226	-30	-1	09553	11713												
2/19/19	1120	1220	-28	0	10292	11541												
2/19/19	1117	1217	-30	0	10629	11745												
2/19/19	1132	1232	-30	0	11921	11620												

Temperature (Fahrenheit)		Pressure (Inches of Hg)	
Start	Stop	Interior	Ambient

Baltimore #201

Sampled by: Sophia Lawson, Walt Pryor, Sosh Mollis

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: <u>Tetra Tech</u>	Date/Time: <u>2/22/19</u>	Canisters Received by: <u>[Signature]</u>
Samples Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/22/19</u>	Received by: <u>[Signature]</u>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/27/19</u>	Received by: <u>[Signature]</u>

Lab Use Only
 Shipper Name: _____
 Created by: _____
 Conditions: _____

Log In Number:

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	7.SV-155-C-216 COC LIST CANISTER ASSET NUMBER AS 11745 SHOULD BE 11745
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	7.SV-113-C-216 COC LIST CANISTER ASSET NUMBER AS 11745, SHOULD BE 11741
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input checked="" type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	pH test strip lot number: _____
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	Exp Date: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/		Analyst: _____
19. For 1613B water samples is pH<9?			/		Date: _____
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> If no, notify lab to adjust <input type="checkbox"/> Project missing info	Time: _____

Project #: _____ PM Instructions: _____

Sample Receiving Associate: *[Signature]* Date: 8-25-19

ANALYTICAL REPORT

Job Number: 140-14390-1
Job Description: MRC Indoor Air, MRC

For:
Tetra Tech, Inc.
20251 Century Blvd
Suite 200
Germantown, MD 20874
Attention: Samantha Brenner



Approved for release.
Terry Walker Wasmund
Project Manager II
3/7/2019 2:57 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
03/07/2019

cc: Ms. Michelle Woeber

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Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-14390-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC listed a canister asset number as 10796, but it should be 10960.

Samples IA-131-C-26 (140-14390-18) and IA-113-C-26 (140-14391-16) were received with the canister valve in the open position. The samples were at ambient pressure (approximately 0 psi). The samples' integrity could have been jeopardized due to changes in ambient pressure after the sample was taken (i.e., ambient air not associated with the sampling event could have been introduced into the canisters at any point after the sampling was completed).

The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

Air - GC/MS VOA - Method TO-15 LL

Method(s) TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-126-C-26

Lab Sample ID: 140-14390-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	41		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.076	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.16	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	41		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.32	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.19	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	100	E	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.53		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.73	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Naphthalene	0.23		0.20	0.20	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.38	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	10		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.4		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trichlorobenzene	0.41		0.40	0.20	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	74		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.18	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	560	E	0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.95		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene - DL	58		4.0	0.70	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride - DL	450		2.0	1.5	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	130		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.48	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.56	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	160		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.6	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.76	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	400	E	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	2.3		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Naphthalene	1.2		1.0	1.0	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	2.6	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	39		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	9.7		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trichlorobenzene	3.0		3.0	1.4	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	400		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.86	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	1400	E	0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.1		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene - DL	230		16	2.8	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride - DL	1100		5.1	3.7	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-101-C-26

Lab Sample ID: 140-14390-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.20	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.40		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.72	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-101-C-26 (Continued)

Lab Sample ID: 140-14390-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.11	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.15	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.85		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.36	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.22	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Naphthalene	0.27		0.20	0.20	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	6.2		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	5.5		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	34		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	17		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.22	J	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.40		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.31	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	2.7		0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.2		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.64	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	2.5		2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.5	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.54	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.59	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	4.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.4	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.95	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.4	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Naphthalene	1.4		1.0	1.0	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	42		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	21		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	180		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	92		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	1.1	J	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.9		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.5	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	6.9		0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	5.2		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-100-C-26

Lab Sample ID: 140-14390-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.35	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.33	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.42		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.83	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.14	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.078	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.2		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-100-C-26 (Continued)

Lab Sample ID: 140-14390-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	2.2	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.0		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.93	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.43	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	6.3		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.74	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-060-C-26

Lab Sample ID: 140-14390-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.19	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	2.2		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	4.1		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.6		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.3		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.1		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.96	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.11	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.26	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	6.1		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	120	E	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	11		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene - DL	110		0.50	0.18	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.62	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	5.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	11		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	16		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	18		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	5.1		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	4.9		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.72	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.0	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	33		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	670	E	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.93	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	46		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene - DL	600		2.7	0.94	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-118-A-26

Lab Sample ID: 140-14390-5

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-118-A-26 (Continued)

Lab Sample ID: 140-14390-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.30	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.32	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.35	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	46		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	11		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	120	E	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.8		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.1		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.15	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.1		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	3.0		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trichlorobenzene	0.34	J	0.40	0.20	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	5.9		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	450	E	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.59		0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.4		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.93		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.82		0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	17		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene - DL	77		4.0	0.70	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene - DL	330		2.0	0.70	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.97	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.7	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	180		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	46		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	470	E	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	7.7		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	7.4		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.99	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	4.2		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	12		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trichlorobenzene	2.5	J	3.0	1.4	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	32		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	2400	E	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	2.9		2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	7.0		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	4.6		2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	2.1		0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	72		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene - DL	300		16	2.8	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene - DL	1800		11	3.8	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-015-A-26

Lab Sample ID: 140-14390-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.37	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-015-A-26 (Continued)

Lab Sample ID: 140-14390-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.46		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.50		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.1		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.30	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.16	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.4		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.10	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.74		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.81		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.2	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.5		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.2	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.68	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.56	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	4.0		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.5		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-078-A-26

Lab Sample ID: 140-14390-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.29	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.17	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.87	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.1		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.11	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.8		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.21	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.23	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.90		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.58	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.0	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.75	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	4.3		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.58	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	9.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.0	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.9		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-136-A-26

Lab Sample ID: 140-14390-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.63		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.74		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.8		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.33	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.41		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.086	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.2		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	54		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	50		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.20	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	5.3		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.0		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.6		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	8.8		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	1.3	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.0		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.34	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	5.1		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	200		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	270		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.98	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	23		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-076-A-26

Lab Sample ID: 140-14390-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.14	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.75	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.60		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.30	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.1		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.62		0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.46		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.93		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.3		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.61	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.3		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.7	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	5.7		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-076-A-26 (Continued)

Lab Sample ID: 140-14390-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3-Trimethylbenzene	3.0		2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	2.2		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	4.6		2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	5.7		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-168-A-26

Lab Sample ID: 140-14390-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.24	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.081	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.37	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.24	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.32	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	13		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.33	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.9	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.8		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.87		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	34		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.18	J	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.76		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.49	CI	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.7		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.77	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.51	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.2	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.68	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.3	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	50		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.5	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	11		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	4.8		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	180		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.88	J	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	3.8		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	2.4	CI	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	7.5		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-075-A-26

Lab Sample ID: 140-14390-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1.67		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.43		0.40	0.14	ppb v/v	1.67		TO 15 LL	Total/NA
Ethylbenzene	0.34	J	0.40	0.14	ppb v/v	1.67		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-075-A-26 (Continued)

Lab Sample ID: 140-14390-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.90	J	2.0	0.65	ppb v/v	1.67		TO 15 LL	Total/NA
Naphthalene	4.7		0.20	0.20	ppb v/v	1.67		TO 15 LL	Total/NA
Toluene	6.6		0.60	0.60	ppb v/v	1.67		TO 15 LL	Total/NA
Trichloroethene	0.43		0.20	0.070	ppb v/v	1.67		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	3.1		0.40	0.17	ppb v/v	1.67		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	9.7		0.40	0.13	ppb v/v	1.67		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	4.9		0.40	0.13	ppb v/v	1.67		TO 15 LL	Total/NA
Xylenes, Total	3.0		0.80	0.12	ppb v/v	1.67		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1.67		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.1		2.0	0.67	ug/m3	1.67		TO 15 LL	Total/NA
Ethylbenzene	1.5	J	1.7	0.59	ug/m3	1.67		TO 15 LL	Total/NA
Methylene Chloride	3.1	J	6.9	2.3	ug/m3	1.67		TO 15 LL	Total/NA
Naphthalene	25		1.0	1.0	ug/m3	1.67		TO 15 LL	Total/NA
Toluene	25		2.3	2.3	ug/m3	1.67		TO 15 LL	Total/NA
Trichloroethene	2.3		1.1	0.38	ug/m3	1.67		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	15		2.0	0.84	ug/m3	1.67		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	48		2.0	0.61	ug/m3	1.67		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	24		2.0	0.64	ug/m3	1.67		TO 15 LL	Total/NA
Xylenes, Total	13		3.5	0.52	ug/m3	1.67		TO 15 LL	Total/NA

Client Sample ID: BCK-1-26

Lab Sample ID: 140-14390-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.15	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.31	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.91	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.47	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.2	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.72	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BCK-2-26

Lab Sample ID: 140-14390-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.32	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.45	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.1	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.71	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-3-26

Lab Sample ID: 140-14390-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.29	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.44	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.0	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BCK-4-26

Lab Sample ID: 140-14390-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.27	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.72	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.44	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.94	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-001-C-26

Lab Sample ID: 140-14390-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.26	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	3.1		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.53	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.91	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	11		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.71	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-004-C-26

Lab Sample ID: 140-14390-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.39	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.95	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.46	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.4	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-004-C-26 (Continued)

Lab Sample ID: 140-14390-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.68	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-131-C-26

Lab Sample ID: 140-14390-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.40		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.081	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.63		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	3.4		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.53		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	11		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.29		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.18	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.5		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.3		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.32	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	2.8		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	12		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	3.6		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	41		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.92	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.88	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	11		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-126-C-26

Lab Sample ID: 140-14390-1

Date Collected: 02/19/19 12:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	41		0.40	0.12	ppb v/v			02/26/19 13:31	1
Carbon tetrachloride	0.076	J	0.40	0.075	ppb v/v			02/26/19 13:31	1
Chlorodifluoromethane	0.16	J	0.40	0.075	ppb v/v			02/26/19 13:31	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 13:31	1
cis-1,2-Dichloroethene	41		0.40	0.12	ppb v/v			02/26/19 13:31	1
Dichlorodifluoromethane	0.32	J	0.40	0.14	ppb v/v			02/26/19 13:31	1
1,1-Dichloroethane	0.19	J	0.40	0.050	ppb v/v			02/26/19 13:31	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 13:31	1
1,1-Dichloroethene	100	E	0.40	0.070	ppb v/v			02/26/19 13:31	1
Ethylbenzene	0.53		0.40	0.14	ppb v/v			02/26/19 13:31	1
Methylene Chloride	0.73	J	2.0	0.65	ppb v/v			02/26/19 13:31	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 13:31	1
Naphthalene	0.23		0.20	0.20	ppb v/v			02/26/19 13:31	1
Tetrachloroethene	0.38	J	0.40	0.080	ppb v/v			02/26/19 13:31	1
Toluene	10		0.60	0.60	ppb v/v			02/26/19 13:31	1
trans-1,2-Dichloroethene	2.4		0.40	0.10	ppb v/v			02/26/19 13:31	1
1,2,4-Trichlorobenzene	0.41		0.40	0.20	ppb v/v			02/26/19 13:31	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 13:31	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 13:31	1
Trichloroethene	74		0.20	0.070	ppb v/v			02/26/19 13:31	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 13:31	1
1,2,4-Trimethylbenzene	0.18	J	0.40	0.13	ppb v/v			02/26/19 13:31	1
1,3,5-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v			02/26/19 13:31	1
Vinyl chloride	560	E	0.20	0.15	ppb v/v			02/26/19 13:31	1
Xylenes, Total	0.95		0.80	0.12	ppb v/v			02/26/19 13:31	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	130		1.3	0.37	ug/m3			02/26/19 13:31	1
Carbon tetrachloride	0.48	J	2.5	0.47	ug/m3			02/26/19 13:31	1
Chlorodifluoromethane	0.56	J	1.4	0.27	ug/m3			02/26/19 13:31	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 13:31	1
cis-1,2-Dichloroethene	160		1.6	0.48	ug/m3			02/26/19 13:31	1
Dichlorodifluoromethane	1.6	J	2.0	0.67	ug/m3			02/26/19 13:31	1
1,1-Dichloroethane	0.76	J	1.6	0.20	ug/m3			02/26/19 13:31	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 13:31	1
1,1-Dichloroethene	400	E	1.6	0.28	ug/m3			02/26/19 13:31	1
Ethylbenzene	2.3		1.7	0.59	ug/m3			02/26/19 13:31	1
Methylene Chloride	2.5	J	6.9	2.3	ug/m3			02/26/19 13:31	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 13:31	1
Naphthalene	1.2		1.0	1.0	ug/m3			02/26/19 13:31	1
Tetrachloroethene	2.6	J	2.7	0.54	ug/m3			02/26/19 13:31	1
Toluene	39		2.3	2.3	ug/m3			02/26/19 13:31	1
trans-1,2-Dichloroethene	9.7		1.6	0.40	ug/m3			02/26/19 13:31	1
1,2,4-Trichlorobenzene	3.0		3.0	1.4	ug/m3			02/26/19 13:31	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 13:31	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 13:31	1
Trichloroethene	400		1.1	0.38	ug/m3			02/26/19 13:31	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 13:31	1
1,2,4-Trimethylbenzene	0.86	J	2.0	0.61	ug/m3			02/26/19 13:31	1

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-126-C-26

Lab Sample ID: 140-14390-1

Date Collected: 02/19/19 12:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3			02/26/19 13:31	1
Vinyl chloride	1400	E	0.51	0.37	ug/m3			02/26/19 13:31	1
Xylenes, Total	4.1		3.5	0.52	ug/m3			02/26/19 13:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 13:31	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	58		4.0	0.70	ppb v/v			02/27/19 05:28	1
Vinyl chloride	450		2.0	1.5	ppb v/v			02/27/19 05:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/27/19 05:28	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	230		16	2.8	ug/m3			02/27/19 05:28	1
Vinyl chloride	1100		5.1	3.7	ug/m3			02/27/19 05:28	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-101-C-26

Lab Sample ID: 140-14390-2

Date Collected: 02/19/19 12:41

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	J	0.40	0.12	ppb v/v			02/27/19 06:22	1
Carbon tetrachloride	0.40		0.40	0.075	ppb v/v			02/27/19 06:22	1
Chlorodifluoromethane	0.72	CI	0.40	0.075	ppb v/v			02/27/19 06:22	1
Chloroform	0.11	J	0.40	0.075	ppb v/v			02/27/19 06:22	1
cis-1,2-Dichloroethene	0.15	J	0.40	0.12	ppb v/v			02/27/19 06:22	1
Dichlorodifluoromethane	0.85		0.40	0.14	ppb v/v			02/27/19 06:22	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 06:22	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 06:22	1
1,1-Dichloroethene	0.36	J	0.40	0.070	ppb v/v			02/27/19 06:22	1
Ethylbenzene	0.22	J	0.40	0.14	ppb v/v			02/27/19 06:22	1
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v			02/27/19 06:22	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 06:22	1
Naphthalene	0.27		0.20	0.20	ppb v/v			02/27/19 06:22	1
Tetrachloroethene	6.2		0.40	0.080	ppb v/v			02/27/19 06:22	1
Toluene	5.5		0.60	0.60	ppb v/v			02/27/19 06:22	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 06:22	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 06:22	1
1,1,1-Trichloroethane	34		0.40	0.060	ppb v/v			02/27/19 06:22	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 06:22	1
Trichloroethene	17		0.20	0.070	ppb v/v			02/27/19 06:22	1
1,2,3-Trimethylbenzene	0.22	J	0.40	0.17	ppb v/v			02/27/19 06:22	1
1,2,4-Trimethylbenzene	0.40		0.40	0.13	ppb v/v			02/27/19 06:22	1
1,3,5-Trimethylbenzene	0.31	J	0.40	0.13	ppb v/v			02/27/19 06:22	1
Vinyl chloride	2.7		0.20	0.15	ppb v/v			02/27/19 06:22	1
Xylenes, Total	1.2		0.80	0.12	ppb v/v			02/27/19 06:22	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.64	J	1.3	0.37	ug/m3			02/27/19 06:22	1
Carbon tetrachloride	2.5		2.5	0.47	ug/m3			02/27/19 06:22	1
Chlorodifluoromethane	2.5	CI	1.4	0.27	ug/m3			02/27/19 06:22	1
Chloroform	0.54	J	2.0	0.37	ug/m3			02/27/19 06:22	1
cis-1,2-Dichloroethene	0.59	J	1.6	0.48	ug/m3			02/27/19 06:22	1
Dichlorodifluoromethane	4.2		2.0	0.67	ug/m3			02/27/19 06:22	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 06:22	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 06:22	1
1,1-Dichloroethene	1.4	J	1.6	0.28	ug/m3			02/27/19 06:22	1
Ethylbenzene	0.95	J	1.7	0.59	ug/m3			02/27/19 06:22	1
Methylene Chloride	4.4	J	6.9	2.3	ug/m3			02/27/19 06:22	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 06:22	1
Naphthalene	1.4		1.0	1.0	ug/m3			02/27/19 06:22	1
Tetrachloroethene	42		2.7	0.54	ug/m3			02/27/19 06:22	1
Toluene	21		2.3	2.3	ug/m3			02/27/19 06:22	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 06:22	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 06:22	1
1,1,1-Trichloroethane	180		2.2	0.33	ug/m3			02/27/19 06:22	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 06:22	1
Trichloroethene	92		1.1	0.38	ug/m3			02/27/19 06:22	1
1,2,3-Trimethylbenzene	1.1	J	2.0	0.84	ug/m3			02/27/19 06:22	1
1,2,4-Trimethylbenzene	1.9		2.0	0.61	ug/m3			02/27/19 06:22	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-101-C-26

Lab Sample ID: 140-14390-2

Date Collected: 02/19/19 12:41

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.5	J	2.0	0.64	ug/m3			02/27/19 06:22	1
Vinyl chloride	6.9		0.51	0.37	ug/m3			02/27/19 06:22	1
Xylenes, Total	5.2		3.5	0.52	ug/m3			02/27/19 06:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/27/19 06:22	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-100-C-26

Lab Sample ID: 140-14390-3

Date Collected: 02/19/19 12:43

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 15:17	1
Carbon tetrachloride	0.35	J	0.40	0.075	ppb v/v			02/26/19 15:17	1
Chlorodifluoromethane	0.33	J	0.40	0.075	ppb v/v			02/26/19 15:17	1
Chloroform	0.42		0.40	0.075	ppb v/v			02/26/19 15:17	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 15:17	1
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v			02/26/19 15:17	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 15:17	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 15:17	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 15:17	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 15:17	1
Methylene Chloride	0.83	J	2.0	0.65	ppb v/v			02/26/19 15:17	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 15:17	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 15:17	1
Tetrachloroethene	0.14	J	0.40	0.080	ppb v/v			02/26/19 15:17	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 15:17	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 15:17	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 15:17	1
1,1,1-Trichloroethane	0.078	J	0.40	0.060	ppb v/v			02/26/19 15:17	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 15:17	1
Trichloroethene	1.2		0.20	0.070	ppb v/v			02/26/19 15:17	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 15:17	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 15:17	1
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			02/26/19 15:17	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 15:17	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/26/19 15:17	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 15:17	1
Carbon tetrachloride	2.2	J	2.5	0.47	ug/m3			02/26/19 15:17	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/26/19 15:17	1
Chloroform	2.0		2.0	0.37	ug/m3			02/26/19 15:17	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 15:17	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/26/19 15:17	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 15:17	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 15:17	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 15:17	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 15:17	1
Methylene Chloride	2.9	J	6.9	2.3	ug/m3			02/26/19 15:17	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 15:17	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 15:17	1
Tetrachloroethene	0.93	J	2.7	0.54	ug/m3			02/26/19 15:17	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 15:17	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 15:17	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 15:17	1
1,1,1-Trichloroethane	0.43	J	2.2	0.33	ug/m3			02/26/19 15:17	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 15:17	1
Trichloroethene	6.3		1.1	0.38	ug/m3			02/26/19 15:17	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 15:17	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 15:17	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-100-C-26

Lab Sample ID: 140-14390-3

Date Collected: 02/19/19 12:43

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.74	J	2.0	0.64	ug/m3			02/26/19 15:17	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 15:17	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/26/19 15:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/26/19 15:17	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-060-C-26

Lab Sample ID: 140-14390-4

Date Collected: 02/19/19 12:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.19	J	0.40	0.12	ppb v/v			02/26/19 16:10	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 16:10	1
Chlorodifluoromethane	1.6		0.40	0.075	ppb v/v			02/26/19 16:10	1
Chloroform	2.2		0.40	0.075	ppb v/v			02/26/19 16:10	1
cis-1,2-Dichloroethene	4.1		0.40	0.12	ppb v/v			02/26/19 16:10	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/26/19 16:10	1
1,1-Dichloroethane	4.6		0.40	0.050	ppb v/v			02/26/19 16:10	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 16:10	1
1,1-Dichloroethene	1.3		0.40	0.070	ppb v/v			02/26/19 16:10	1
Ethylbenzene	1.1		0.40	0.14	ppb v/v			02/26/19 16:10	1
Methylene Chloride	0.96	J	2.0	0.65	ppb v/v			02/26/19 16:10	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 16:10	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 16:10	1
Tetrachloroethene	0.11	J	0.40	0.080	ppb v/v			02/26/19 16:10	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 16:10	1
trans-1,2-Dichloroethene	0.26	J	0.40	0.10	ppb v/v			02/26/19 16:10	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 16:10	1
1,1,1-Trichloroethane	6.1		0.40	0.060	ppb v/v			02/26/19 16:10	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 16:10	1
Trichloroethene	120	E	0.20	0.070	ppb v/v			02/26/19 16:10	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 16:10	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 16:10	1
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v			02/26/19 16:10	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 16:10	1
Xylenes, Total	11		0.80	0.12	ppb v/v			02/26/19 16:10	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.62	J	1.3	0.37	ug/m3			02/26/19 16:10	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 16:10	1
Chlorodifluoromethane	5.5		1.4	0.27	ug/m3			02/26/19 16:10	1
Chloroform	11		2.0	0.37	ug/m3			02/26/19 16:10	1
cis-1,2-Dichloroethene	16		1.6	0.48	ug/m3			02/26/19 16:10	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/26/19 16:10	1
1,1-Dichloroethane	18		1.6	0.20	ug/m3			02/26/19 16:10	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 16:10	1
1,1-Dichloroethene	5.1		1.6	0.28	ug/m3			02/26/19 16:10	1
Ethylbenzene	4.9		1.7	0.59	ug/m3			02/26/19 16:10	1
Methylene Chloride	3.3	J	6.9	2.3	ug/m3			02/26/19 16:10	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 16:10	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 16:10	1
Tetrachloroethene	0.72	J	2.7	0.54	ug/m3			02/26/19 16:10	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 16:10	1
trans-1,2-Dichloroethene	1.0	J	1.6	0.40	ug/m3			02/26/19 16:10	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 16:10	1
1,1,1-Trichloroethane	33		2.2	0.33	ug/m3			02/26/19 16:10	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 16:10	1
Trichloroethene	670	E	1.1	0.38	ug/m3			02/26/19 16:10	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 16:10	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 16:10	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-060-C-26

Lab Sample ID: 140-14390-4

Date Collected: 02/19/19 12:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.93	J	2.0	0.64	ug/m3			02/26/19 16:10	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 16:10	1
Xylenes, Total	46		3.5	0.52	ug/m3			02/26/19 16:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/26/19 16:10	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	110		0.50	0.18	ppb v/v			02/27/19 08:09	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	600		2.7	0.94	ug/m3			02/27/19 08:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/27/19 08:09	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-118-A-26

Lab Sample ID: 140-14390-5

Date Collected: 02/21/19 12:42

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.30	J	0.40	0.12	ppb v/v			02/26/19 17:03	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 17:03	1
Chlorodifluoromethane	0.32	J	0.40	0.075	ppb v/v			02/26/19 17:03	1
Chloroform	0.35	J	0.40	0.075	ppb v/v			02/26/19 17:03	1
cis-1,2-Dichloroethene	46		0.40	0.12	ppb v/v			02/26/19 17:03	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/26/19 17:03	1
1,1-Dichloroethane	11		0.40	0.050	ppb v/v			02/26/19 17:03	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 17:03	1
1,1-Dichloroethene	120	E	0.40	0.070	ppb v/v			02/26/19 17:03	1
Ethylbenzene	1.8		0.40	0.14	ppb v/v			02/26/19 17:03	1
Methylene Chloride	2.1		2.0	0.65	ppb v/v			02/26/19 17:03	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 17:03	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 17:03	1
Tetrachloroethene	0.15	J	0.40	0.080	ppb v/v			02/26/19 17:03	1
Toluene	1.1		0.60	0.60	ppb v/v			02/26/19 17:03	1
trans-1,2-Dichloroethene	3.0		0.40	0.10	ppb v/v			02/26/19 17:03	1
1,2,4-Trichlorobenzene	0.34	J	0.40	0.20	ppb v/v			02/26/19 17:03	1
1,1,1-Trichloroethane	5.9		0.40	0.060	ppb v/v			02/26/19 17:03	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 17:03	1
Trichloroethene	450	E	0.20	0.070	ppb v/v			02/26/19 17:03	1
1,2,3-Trimethylbenzene	0.59		0.40	0.17	ppb v/v			02/26/19 17:03	1
1,2,4-Trimethylbenzene	1.4		0.40	0.13	ppb v/v			02/26/19 17:03	1
1,3,5-Trimethylbenzene	0.93		0.40	0.13	ppb v/v			02/26/19 17:03	1
Vinyl chloride	0.82		0.20	0.15	ppb v/v			02/26/19 17:03	1
Xylenes, Total	17		0.80	0.12	ppb v/v			02/26/19 17:03	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.97	J	1.3	0.37	ug/m3			02/26/19 17:03	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 17:03	1
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3			02/26/19 17:03	1
Chloroform	1.7	J	2.0	0.37	ug/m3			02/26/19 17:03	1
cis-1,2-Dichloroethene	180		1.6	0.48	ug/m3			02/26/19 17:03	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 17:03	1
1,1-Dichloroethane	46		1.6	0.20	ug/m3			02/26/19 17:03	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 17:03	1
1,1-Dichloroethene	470	E	1.6	0.28	ug/m3			02/26/19 17:03	1
Ethylbenzene	7.7		1.7	0.59	ug/m3			02/26/19 17:03	1
Methylene Chloride	7.4		6.9	2.3	ug/m3			02/26/19 17:03	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 17:03	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 17:03	1
Tetrachloroethene	0.99	J	2.7	0.54	ug/m3			02/26/19 17:03	1
Toluene	4.2		2.3	2.3	ug/m3			02/26/19 17:03	1
trans-1,2-Dichloroethene	12		1.6	0.40	ug/m3			02/26/19 17:03	1
1,2,4-Trichlorobenzene	2.5	J	3.0	1.4	ug/m3			02/26/19 17:03	1
1,1,1-Trichloroethane	32		2.2	0.33	ug/m3			02/26/19 17:03	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 17:03	1
Trichloroethene	2400	E	1.1	0.38	ug/m3			02/26/19 17:03	1
1,2,3-Trimethylbenzene	2.9		2.0	0.84	ug/m3			02/26/19 17:03	1
1,2,4-Trimethylbenzene	7.0		2.0	0.61	ug/m3			02/26/19 17:03	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-118-A-26

Lab Sample ID: 140-14390-5

Date Collected: 02/21/19 12:42

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	4.6		2.0	0.64	ug/m3			02/26/19 17:03	1
Vinyl chloride	2.1		0.51	0.37	ug/m3			02/26/19 17:03	1
Xylenes, Total	72		3.5	0.52	ug/m3			02/26/19 17:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 17:03	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	77		4.0	0.70	ppb v/v			02/28/19 03:30	1
Trichloroethene	330		2.0	0.70	ppb v/v			02/28/19 03:30	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	300		16	2.8	ug/m3			02/28/19 03:30	1
Trichloroethene	1800		11	3.8	ug/m3			02/28/19 03:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/28/19 03:30	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-015-A-26

Lab Sample ID: 140-14390-6

Date Collected: 02/21/19 12:45

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.37	J	0.40	0.12	ppb v/v			02/26/19 17:56	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 17:56	1
Chlorodifluoromethane	0.46		0.40	0.075	ppb v/v			02/26/19 17:56	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 17:56	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 17:56	1
Dichlorodifluoromethane	0.50		0.40	0.14	ppb v/v			02/26/19 17:56	1
1,1-Dichloroethane	1.1		0.40	0.050	ppb v/v			02/26/19 17:56	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 17:56	1
1,1-Dichloroethene	0.30	J	0.40	0.070	ppb v/v			02/26/19 17:56	1
Ethylbenzene	0.16	J	0.40	0.14	ppb v/v			02/26/19 17:56	1
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v			02/26/19 17:56	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 17:56	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 17:56	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 17:56	1
Toluene	1.4		0.60	0.60	ppb v/v			02/26/19 17:56	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 17:56	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 17:56	1
1,1,1-Trichloroethane	0.10	J	0.40	0.060	ppb v/v			02/26/19 17:56	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 17:56	1
Trichloroethene	0.74		0.20	0.070	ppb v/v			02/26/19 17:56	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 17:56	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:56	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:56	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 17:56	1
Xylenes, Total	0.81		0.80	0.12	ppb v/v			02/26/19 17:56	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.2	J	1.3	0.37	ug/m3			02/26/19 17:56	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 17:56	1
Chlorodifluoromethane	1.6		1.4	0.27	ug/m3			02/26/19 17:56	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 17:56	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 17:56	1
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3			02/26/19 17:56	1
1,1-Dichloroethane	4.5		1.6	0.20	ug/m3			02/26/19 17:56	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 17:56	1
1,1-Dichloroethene	1.2	J	1.6	0.28	ug/m3			02/26/19 17:56	1
Ethylbenzene	0.68	J	1.7	0.59	ug/m3			02/26/19 17:56	1
Methylene Chloride	4.3	J	6.9	2.3	ug/m3			02/26/19 17:56	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 17:56	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 17:56	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 17:56	1
Toluene	5.4		2.3	2.3	ug/m3			02/26/19 17:56	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 17:56	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 17:56	1
1,1,1-Trichloroethane	0.56	J	2.2	0.33	ug/m3			02/26/19 17:56	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 17:56	1
Trichloroethene	4.0		1.1	0.38	ug/m3			02/26/19 17:56	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 17:56	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 17:56	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-015-A-26

Lab Sample ID: 140-14390-6

Date Collected: 02/21/19 12:45

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 17:56	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 17:56	1
Xylenes, Total	3.5		3.5	0.52	ug/m3			02/26/19 17:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		60 - 140					02/26/19 17:56	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-078-A-26

Lab Sample ID: 140-14390-7

Date Collected: 02/21/19 12:49

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18	J	0.40	0.12	ppb v/v			02/26/19 18:49	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 18:49	1
Chlorodifluoromethane	0.29	J	0.40	0.075	ppb v/v			02/26/19 18:49	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 18:49	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 18:49	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/26/19 18:49	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 18:49	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 18:49	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 18:49	1
Ethylbenzene	0.17	J	0.40	0.14	ppb v/v			02/26/19 18:49	1
Methylene Chloride	0.87	J	2.0	0.65	ppb v/v			02/26/19 18:49	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 18:49	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 18:49	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 18:49	1
Toluene	1.1		0.60	0.60	ppb v/v			02/26/19 18:49	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 18:49	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 18:49	1
1,1,1-Trichloroethane	0.11	J	0.40	0.060	ppb v/v			02/26/19 18:49	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 18:49	1
Trichloroethene	1.8		0.20	0.070	ppb v/v			02/26/19 18:49	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 18:49	1
1,2,4-Trimethylbenzene	0.21	J	0.40	0.13	ppb v/v			02/26/19 18:49	1
1,3,5-Trimethylbenzene	0.23	J	0.40	0.13	ppb v/v			02/26/19 18:49	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 18:49	1
Xylenes, Total	0.90		0.80	0.12	ppb v/v			02/26/19 18:49	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.58	J	1.3	0.37	ug/m3			02/26/19 18:49	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 18:49	1
Chlorodifluoromethane	1.0	J	1.4	0.27	ug/m3			02/26/19 18:49	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 18:49	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 18:49	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 18:49	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 18:49	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 18:49	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 18:49	1
Ethylbenzene	0.75	J	1.7	0.59	ug/m3			02/26/19 18:49	1
Methylene Chloride	3.0	J	6.9	2.3	ug/m3			02/26/19 18:49	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 18:49	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 18:49	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 18:49	1
Toluene	4.3		2.3	2.3	ug/m3			02/26/19 18:49	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 18:49	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 18:49	1
1,1,1-Trichloroethane	0.58	J	2.2	0.33	ug/m3			02/26/19 18:49	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 18:49	1
Trichloroethene	9.5		1.1	0.38	ug/m3			02/26/19 18:49	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 18:49	1
1,2,4-Trimethylbenzene	1.0	J	2.0	0.61	ug/m3			02/26/19 18:49	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-078-A-26

Lab Sample ID: 140-14390-7

Date Collected: 02/21/19 12:49

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3			02/26/19 18:49	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 18:49	1
Xylenes, Total	3.9		3.5	0.52	ug/m3			02/26/19 18:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 18:49	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-136-A-26

Lab Sample ID: 140-14390-8

Date Collected: 02/21/19 12:53

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.63		0.40	0.12	ppb v/v			02/26/19 19:43	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 19:43	1
Chlorodifluoromethane	0.74		0.40	0.075	ppb v/v			02/26/19 19:43	1
Chloroform	1.8		0.40	0.075	ppb v/v			02/26/19 19:43	1
cis-1,2-Dichloroethene	0.33	J	0.40	0.12	ppb v/v			02/26/19 19:43	1
Dichlorodifluoromethane	0.41		0.40	0.14	ppb v/v			02/26/19 19:43	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 19:43	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 19:43	1
1,1-Dichloroethene	0.086	J	0.40	0.070	ppb v/v			02/26/19 19:43	1
Ethylbenzene	1.2		0.40	0.14	ppb v/v			02/26/19 19:43	1
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			02/26/19 19:43	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 19:43	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 19:43	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 19:43	1
Toluene	54		0.60	0.60	ppb v/v			02/26/19 19:43	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 19:43	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 19:43	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 19:43	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 19:43	1
Trichloroethene	50		0.20	0.070	ppb v/v			02/26/19 19:43	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 19:43	1
1,2,4-Trimethylbenzene	0.20	J	0.40	0.13	ppb v/v			02/26/19 19:43	1
1,3,5-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v			02/26/19 19:43	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 19:43	1
Xylenes, Total	5.3		0.80	0.12	ppb v/v			02/26/19 19:43	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.0		1.3	0.37	ug/m3			02/26/19 19:43	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 19:43	1
Chlorodifluoromethane	2.6		1.4	0.27	ug/m3			02/26/19 19:43	1
Chloroform	8.8		2.0	0.37	ug/m3			02/26/19 19:43	1
cis-1,2-Dichloroethene	1.3	J	1.6	0.48	ug/m3			02/26/19 19:43	1
Dichlorodifluoromethane	2.0		2.0	0.67	ug/m3			02/26/19 19:43	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 19:43	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 19:43	1
1,1-Dichloroethene	0.34	J	1.6	0.28	ug/m3			02/26/19 19:43	1
Ethylbenzene	5.1		1.7	0.59	ug/m3			02/26/19 19:43	1
Methylene Chloride	3.6	J	6.9	2.3	ug/m3			02/26/19 19:43	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 19:43	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 19:43	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 19:43	1
Toluene	200		2.3	2.3	ug/m3			02/26/19 19:43	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 19:43	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 19:43	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 19:43	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 19:43	1
Trichloroethene	270		1.1	0.38	ug/m3			02/26/19 19:43	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 19:43	1
1,2,4-Trimethylbenzene	0.98	J	2.0	0.61	ug/m3			02/26/19 19:43	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-136-A-26

Lab Sample ID: 140-14390-8

Date Collected: 02/21/19 12:53

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3			02/26/19 19:43	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 19:43	1
Xylenes, Total	23		3.5	0.52	ug/m3			02/26/19 19:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 19:43	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-076-A-26

Lab Sample ID: 140-14390-9

Date Collected: 02/21/19 12:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 20:36	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 20:36	1
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/26/19 20:36	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 20:36	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 20:36	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/26/19 20:36	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 20:36	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 20:36	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 20:36	1
Ethylbenzene	0.14	J	0.40	0.14	ppb v/v			02/26/19 20:36	1
Methylene Chloride	0.75	J	2.0	0.65	ppb v/v			02/26/19 20:36	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 20:36	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 20:36	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 20:36	1
Toluene	0.60		0.60	0.60	ppb v/v			02/26/19 20:36	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 20:36	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 20:36	1
1,1,1-Trichloroethane	0.30	J	0.40	0.060	ppb v/v			02/26/19 20:36	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 20:36	1
Trichloroethene	1.1		0.20	0.070	ppb v/v			02/26/19 20:36	1
1,2,3-Trimethylbenzene	0.62		0.40	0.17	ppb v/v			02/26/19 20:36	1
1,2,4-Trimethylbenzene	0.46		0.40	0.13	ppb v/v			02/26/19 20:36	1
1,3,5-Trimethylbenzene	0.93		0.40	0.13	ppb v/v			02/26/19 20:36	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 20:36	1
Xylenes, Total	1.3		0.80	0.12	ppb v/v			02/26/19 20:36	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 20:36	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 20:36	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/26/19 20:36	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 20:36	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 20:36	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/26/19 20:36	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 20:36	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 20:36	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 20:36	1
Ethylbenzene	0.61	J	1.7	0.59	ug/m3			02/26/19 20:36	1
Methylene Chloride	2.6	J	6.9	2.3	ug/m3			02/26/19 20:36	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 20:36	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 20:36	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 20:36	1
Toluene	2.3		2.3	2.3	ug/m3			02/26/19 20:36	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 20:36	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 20:36	1
1,1,1-Trichloroethane	1.7	J	2.2	0.33	ug/m3			02/26/19 20:36	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 20:36	1
Trichloroethene	5.7		1.1	0.38	ug/m3			02/26/19 20:36	1
1,2,3-Trimethylbenzene	3.0		2.0	0.84	ug/m3			02/26/19 20:36	1
1,2,4-Trimethylbenzene	2.2		2.0	0.61	ug/m3			02/26/19 20:36	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-076-A-26

Lab Sample ID: 140-14390-9

Date Collected: 02/21/19 12:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	4.6		2.0	0.64	ug/m3			02/26/19 20:36	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 20:36	1
Xylenes, Total	5.7		3.5	0.52	ug/m3			02/26/19 20:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/26/19 20:36	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-168-A-26

Lab Sample ID: 140-14390-10

Date Collected: 02/21/19 13:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.24	J	0.40	0.12	ppb v/v			02/26/19 21:29	1
Carbon tetrachloride	0.081	J	0.40	0.075	ppb v/v			02/26/19 21:29	1
Chlorodifluoromethane	0.37	J	0.40	0.075	ppb v/v			02/26/19 21:29	1
Chloroform	0.24	J	0.40	0.075	ppb v/v			02/26/19 21:29	1
cis-1,2-Dichloroethene	0.17	J	0.40	0.12	ppb v/v			02/26/19 21:29	1
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v			02/26/19 21:29	1
1,1-Dichloroethane	0.32	J	0.40	0.050	ppb v/v			02/26/19 21:29	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 21:29	1
1,1-Dichloroethene	13		0.40	0.070	ppb v/v			02/26/19 21:29	1
Ethylbenzene	0.33	J	0.40	0.14	ppb v/v			02/26/19 21:29	1
Methylene Chloride	1.9	J	2.0	0.65	ppb v/v			02/26/19 21:29	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 21:29	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 21:29	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 21:29	1
Toluene	2.8		0.60	0.60	ppb v/v			02/26/19 21:29	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 21:29	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 21:29	1
1,1,1-Trichloroethane	0.87		0.40	0.060	ppb v/v			02/26/19 21:29	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 21:29	1
Trichloroethene	34		0.20	0.070	ppb v/v			02/26/19 21:29	1
1,2,3-Trimethylbenzene	0.18	J	0.40	0.17	ppb v/v			02/26/19 21:29	1
1,2,4-Trimethylbenzene	0.76		0.40	0.13	ppb v/v			02/26/19 21:29	1
1,3,5-Trimethylbenzene	0.49	CI	0.40	0.13	ppb v/v			02/26/19 21:29	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 21:29	1
Xylenes, Total	1.7		0.80	0.12	ppb v/v			02/26/19 21:29	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.77	J	1.3	0.37	ug/m3			02/26/19 21:29	1
Carbon tetrachloride	0.51	J	2.5	0.47	ug/m3			02/26/19 21:29	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/26/19 21:29	1
Chloroform	1.2	J	2.0	0.37	ug/m3			02/26/19 21:29	1
cis-1,2-Dichloroethene	0.68	J	1.6	0.48	ug/m3			02/26/19 21:29	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/26/19 21:29	1
1,1-Dichloroethane	1.3	J	1.6	0.20	ug/m3			02/26/19 21:29	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 21:29	1
1,1-Dichloroethene	50		1.6	0.28	ug/m3			02/26/19 21:29	1
Ethylbenzene	1.5	J	1.7	0.59	ug/m3			02/26/19 21:29	1
Methylene Chloride	6.5	J	6.9	2.3	ug/m3			02/26/19 21:29	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 21:29	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 21:29	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 21:29	1
Toluene	11		2.3	2.3	ug/m3			02/26/19 21:29	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 21:29	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 21:29	1
1,1,1-Trichloroethane	4.8		2.2	0.33	ug/m3			02/26/19 21:29	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 21:29	1
Trichloroethene	180		1.1	0.38	ug/m3			02/26/19 21:29	1
1,2,3-Trimethylbenzene	0.88	J	2.0	0.84	ug/m3			02/26/19 21:29	1
1,2,4-Trimethylbenzene	3.8		2.0	0.61	ug/m3			02/26/19 21:29	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-168-A-26

Lab Sample ID: 140-14390-10

Date Collected: 02/21/19 13:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	2.4	CI	2.0	0.64	ug/m3			02/26/19 21:29	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 21:29	1
Xylenes, Total	7.5		3.5	0.52	ug/m3			02/26/19 21:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 21:29	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-075-A-26

Lab Sample ID: 140-14390-11

Date Collected: 02/21/19 13:06

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 22:23	1.67
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 22:23	1.67
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/26/19 22:23	1.67
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 22:23	1.67
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 22:23	1.67
Dichlorodifluoromethane	0.43		0.40	0.14	ppb v/v			02/26/19 22:23	1.67
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 22:23	1.67
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 22:23	1.67
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 22:23	1.67
Ethylbenzene	0.34	J	0.40	0.14	ppb v/v			02/26/19 22:23	1.67
Methylene Chloride	0.90	J	2.0	0.65	ppb v/v			02/26/19 22:23	1.67
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 22:23	1.67
Naphthalene	4.7		0.20	0.20	ppb v/v			02/26/19 22:23	1.67
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 22:23	1.67
Toluene	6.6		0.60	0.60	ppb v/v			02/26/19 22:23	1.67
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 22:23	1.67
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 22:23	1.67
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 22:23	1.67
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 22:23	1.67
Trichloroethene	0.43		0.20	0.070	ppb v/v			02/26/19 22:23	1.67
1,2,3-Trimethylbenzene	3.1		0.40	0.17	ppb v/v			02/26/19 22:23	1.67
1,2,4-Trimethylbenzene	9.7		0.40	0.13	ppb v/v			02/26/19 22:23	1.67
1,3,5-Trimethylbenzene	4.9		0.40	0.13	ppb v/v			02/26/19 22:23	1.67
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 22:23	1.67
Xylenes, Total	3.0		0.80	0.12	ppb v/v			02/26/19 22:23	1.67

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 22:23	1.67
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 22:23	1.67
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/26/19 22:23	1.67
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 22:23	1.67
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 22:23	1.67
Dichlorodifluoromethane	2.1		2.0	0.67	ug/m3			02/26/19 22:23	1.67
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 22:23	1.67
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 22:23	1.67
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 22:23	1.67
Ethylbenzene	1.5	J	1.7	0.59	ug/m3			02/26/19 22:23	1.67
Methylene Chloride	3.1	J	6.9	2.3	ug/m3			02/26/19 22:23	1.67
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 22:23	1.67
Naphthalene	25		1.0	1.0	ug/m3			02/26/19 22:23	1.67
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 22:23	1.67
Toluene	25		2.3	2.3	ug/m3			02/26/19 22:23	1.67
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 22:23	1.67
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 22:23	1.67
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 22:23	1.67
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 22:23	1.67
Trichloroethene	2.3		1.1	0.38	ug/m3			02/26/19 22:23	1.67
1,2,3-Trimethylbenzene	15		2.0	0.84	ug/m3			02/26/19 22:23	1.67
1,2,4-Trimethylbenzene	48		2.0	0.61	ug/m3			02/26/19 22:23	1.67

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-075-A-26

Lab Sample ID: 140-14390-11

Date Collected: 02/21/19 13:06

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	24		2.0	0.64	ug/m3			02/26/19 22:23	1.67
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 22:23	1.67
Xylenes, Total	13		3.5	0.52	ug/m3			02/26/19 22:23	1.67
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 22:23	1.67

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-1-26

Lab Sample ID: 140-14390-12

Date Collected: 02/19/19 16:09

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.15	J	0.40	0.12	ppb v/v			02/27/19 00:09	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 00:09	1
Chlorodifluoromethane	0.31	J	0.40	0.075	ppb v/v			02/27/19 00:09	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 00:09	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 00:09	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/27/19 00:09	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 00:09	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 00:09	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 00:09	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 00:09	1
Methylene Chloride	0.91	J	2.0	0.65	ppb v/v			02/27/19 00:09	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 00:09	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 00:09	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 00:09	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 00:09	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 00:09	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 00:09	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 00:09	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 00:09	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 00:09	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 00:09	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 00:09	1
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			02/27/19 00:09	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 00:09	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/27/19 00:09	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.47	J	1.3	0.37	ug/m3			02/27/19 00:09	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 00:09	1
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3			02/27/19 00:09	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 00:09	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 00:09	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/27/19 00:09	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 00:09	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 00:09	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 00:09	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 00:09	1
Methylene Chloride	3.2	J	6.9	2.3	ug/m3			02/27/19 00:09	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 00:09	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 00:09	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 00:09	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 00:09	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 00:09	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 00:09	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 00:09	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 00:09	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 00:09	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 00:09	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 00:09	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-1-26

Lab Sample ID: 140-14390-12

Date Collected: 02/19/19 16:09

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.72	J	2.0	0.64	ug/m3			02/27/19 00:09	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 00:09	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/27/19 00:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/27/19 00:09	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-2-26

Lab Sample ID: 140-14390-13

Date Collected: 02/19/19 16:19

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.14	J	0.40	0.12	ppb v/v			02/27/19 01:02	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 01:02	1
Chlorodifluoromethane	0.32	J	0.40	0.075	ppb v/v			02/27/19 01:02	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 01:02	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 01:02	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/27/19 01:02	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 01:02	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 01:02	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 01:02	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 01:02	1
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v			02/27/19 01:02	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 01:02	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 01:02	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 01:02	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 01:02	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 01:02	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 01:02	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 01:02	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 01:02	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 01:02	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 01:02	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 01:02	1
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/27/19 01:02	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 01:02	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/27/19 01:02	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.45	J	1.3	0.37	ug/m3			02/27/19 01:02	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 01:02	1
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3			02/27/19 01:02	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 01:02	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 01:02	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/27/19 01:02	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 01:02	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 01:02	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 01:02	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 01:02	1
Methylene Chloride	4.1	J	6.9	2.3	ug/m3			02/27/19 01:02	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 01:02	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 01:02	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 01:02	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 01:02	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 01:02	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 01:02	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 01:02	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 01:02	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 01:02	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 01:02	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 01:02	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-2-26

Lab Sample ID: 140-14390-13

Date Collected: 02/19/19 16:19

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.71	J	2.0	0.64	ug/m3			02/27/19 01:02	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 01:02	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/27/19 01:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		60 - 140					02/27/19 01:02	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-3-26

Lab Sample ID: 140-14390-14

Date Collected: 02/19/19 16:28

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.14	J	0.40	0.12	ppb v/v			02/27/19 01:55	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 01:55	1
Chlorodifluoromethane	0.29	J	0.40	0.075	ppb v/v			02/27/19 01:55	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 01:55	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 01:55	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/27/19 01:55	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 01:55	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 01:55	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 01:55	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 01:55	1
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			02/27/19 01:55	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 01:55	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 01:55	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 01:55	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 01:55	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 01:55	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 01:55	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 01:55	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 01:55	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 01:55	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 01:55	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 01:55	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 01:55	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 01:55	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/27/19 01:55	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.44	J	1.3	0.37	ug/m3			02/27/19 01:55	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 01:55	1
Chlorodifluoromethane	1.0	J	1.4	0.27	ug/m3			02/27/19 01:55	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 01:55	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 01:55	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/27/19 01:55	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 01:55	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 01:55	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 01:55	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 01:55	1
Methylene Chloride	3.5	J	6.9	2.3	ug/m3			02/27/19 01:55	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 01:55	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 01:55	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 01:55	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 01:55	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 01:55	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 01:55	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 01:55	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 01:55	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 01:55	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 01:55	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 01:55	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-3-26

Lab Sample ID: 140-14390-14

Date Collected: 02/19/19 16:28

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 01:55	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 01:55	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/27/19 01:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		60 - 140					02/27/19 01:55	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-4-26

Lab Sample ID: 140-14390-15

Date Collected: 02/19/19 16:35

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.14	J	0.40	0.12	ppb v/v			02/27/19 02:48	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 02:48	1
Chlorodifluoromethane	0.27	J	0.40	0.075	ppb v/v			02/27/19 02:48	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 02:48	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 02:48	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/27/19 02:48	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 02:48	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 02:48	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 02:48	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 02:48	1
Methylene Chloride	0.72	J	2.0	0.65	ppb v/v			02/27/19 02:48	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 02:48	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 02:48	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 02:48	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 02:48	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 02:48	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 02:48	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 02:48	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 02:48	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 02:48	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 02:48	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 02:48	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 02:48	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 02:48	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/27/19 02:48	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.44	J	1.3	0.37	ug/m3			02/27/19 02:48	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 02:48	1
Chlorodifluoromethane	0.94	J	1.4	0.27	ug/m3			02/27/19 02:48	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 02:48	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 02:48	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/27/19 02:48	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 02:48	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 02:48	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 02:48	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 02:48	1
Methylene Chloride	2.5	J	6.9	2.3	ug/m3			02/27/19 02:48	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 02:48	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 02:48	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 02:48	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 02:48	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 02:48	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 02:48	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 02:48	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 02:48	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 02:48	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 02:48	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 02:48	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-4-26

Lab Sample ID: 140-14390-15

Date Collected: 02/19/19 16:35

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 02:48	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 02:48	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/27/19 02:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		60 - 140					02/27/19 02:48	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-001-C-26

Lab Sample ID: 140-14390-16

Date Collected: 02/19/19 16:51

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/27/19 03:41	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 03:41	1
Chlorodifluoromethane	0.26	J	0.40	0.075	ppb v/v			02/27/19 03:41	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 03:41	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 03:41	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/27/19 03:41	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 03:41	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 03:41	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 03:41	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 03:41	1
Methylene Chloride	3.1		2.0	0.65	ppb v/v			02/27/19 03:41	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 03:41	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 03:41	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 03:41	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 03:41	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 03:41	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 03:41	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 03:41	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 03:41	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 03:41	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 03:41	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 03:41	1
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/27/19 03:41	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 03:41	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/27/19 03:41	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.53	J	1.3	0.37	ug/m3			02/27/19 03:41	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 03:41	1
Chlorodifluoromethane	0.91	J	1.4	0.27	ug/m3			02/27/19 03:41	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 03:41	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 03:41	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/27/19 03:41	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 03:41	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 03:41	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 03:41	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 03:41	1
Methylene Chloride	11		6.9	2.3	ug/m3			02/27/19 03:41	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 03:41	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 03:41	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 03:41	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 03:41	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 03:41	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 03:41	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 03:41	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 03:41	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 03:41	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 03:41	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 03:41	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-001-C-26

Lab Sample ID: 140-14390-16

Date Collected: 02/19/19 16:51

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.71	J	2.0	0.64	ug/m3			02/27/19 03:41	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 03:41	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/27/19 03:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/27/19 03:41	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-004-C-26

Lab Sample ID: 140-14390-17

Date Collected: 02/19/19 16:54

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.14	J	0.40	0.12	ppb v/v			02/27/19 07:16	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 07:16	1
Chlorodifluoromethane	0.39	J	0.40	0.075	ppb v/v			02/27/19 07:16	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 07:16	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 07:16	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/27/19 07:16	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 07:16	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 07:16	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 07:16	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 07:16	1
Methylene Chloride	0.95	J	2.0	0.65	ppb v/v			02/27/19 07:16	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 07:16	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 07:16	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 07:16	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 07:16	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 07:16	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 07:16	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 07:16	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 07:16	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 07:16	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 07:16	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 07:16	1
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/27/19 07:16	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 07:16	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/27/19 07:16	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.46	J	1.3	0.37	ug/m3			02/27/19 07:16	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 07:16	1
Chlorodifluoromethane	1.4	J	1.4	0.27	ug/m3			02/27/19 07:16	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 07:16	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 07:16	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/27/19 07:16	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 07:16	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 07:16	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 07:16	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 07:16	1
Methylene Chloride	3.3	J	6.9	2.3	ug/m3			02/27/19 07:16	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 07:16	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 07:16	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 07:16	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 07:16	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 07:16	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 07:16	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 07:16	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 07:16	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 07:16	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 07:16	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 07:16	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-004-C-26

Lab Sample ID: 140-14390-17

Date Collected: 02/19/19 16:54

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.68	J	2.0	0.64	ug/m3			02/27/19 07:16	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 07:16	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/27/19 07:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/27/19 07:16	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-131-C-26

Lab Sample ID: 140-14390-18

Date Collected: 02/19/19 17:02

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.40		0.40	0.12	ppb v/v			02/28/19 04:23	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/28/19 04:23	1
Chlorodifluoromethane	ND		0.40	0.075	ppb v/v			02/28/19 04:23	1
Chloroform	ND		0.40	0.075	ppb v/v			02/28/19 04:23	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/28/19 04:23	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/28/19 04:23	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/28/19 04:23	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/28/19 04:23	1
1,1-Dichloroethene	0.081	J	0.40	0.070	ppb v/v			02/28/19 04:23	1
Ethylbenzene	0.63		0.40	0.14	ppb v/v			02/28/19 04:23	1
Methylene Chloride	3.4		2.0	0.65	ppb v/v			02/28/19 04:23	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/28/19 04:23	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/28/19 04:23	1
Tetrachloroethene	0.53		0.40	0.080	ppb v/v			02/28/19 04:23	1
Toluene	11		0.60	0.60	ppb v/v			02/28/19 04:23	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/28/19 04:23	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/28/19 04:23	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/28/19 04:23	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/28/19 04:23	1
Trichloroethene	0.29		0.20	0.070	ppb v/v			02/28/19 04:23	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/28/19 04:23	1
1,2,4-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v			02/28/19 04:23	1
1,3,5-Trimethylbenzene	0.18	J	0.40	0.13	ppb v/v			02/28/19 04:23	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/28/19 04:23	1
Xylenes, Total	2.5		0.80	0.12	ppb v/v			02/28/19 04:23	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.3		1.3	0.37	ug/m3			02/28/19 04:23	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/28/19 04:23	1
Chlorodifluoromethane	ND		1.4	0.27	ug/m3			02/28/19 04:23	1
Chloroform	ND		2.0	0.37	ug/m3			02/28/19 04:23	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/28/19 04:23	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/28/19 04:23	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/28/19 04:23	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/28/19 04:23	1
1,1-Dichloroethene	0.32	J	1.6	0.28	ug/m3			02/28/19 04:23	1
Ethylbenzene	2.8		1.7	0.59	ug/m3			02/28/19 04:23	1
Methylene Chloride	12		6.9	2.3	ug/m3			02/28/19 04:23	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/28/19 04:23	1
Naphthalene	ND		1.0	1.0	ug/m3			02/28/19 04:23	1
Tetrachloroethene	3.6		2.7	0.54	ug/m3			02/28/19 04:23	1
Toluene	41		2.3	2.3	ug/m3			02/28/19 04:23	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/28/19 04:23	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/28/19 04:23	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/28/19 04:23	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/28/19 04:23	1
Trichloroethene	1.5		1.1	0.38	ug/m3			02/28/19 04:23	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/28/19 04:23	1
1,2,4-Trimethylbenzene	0.92	J	2.0	0.61	ug/m3			02/28/19 04:23	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-131-C-26

Lab Sample ID: 140-14390-18

Date Collected: 02/19/19 17:02

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.88	J	2.0	0.64	ug/m3			02/28/19 04:23	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/28/19 04:23	1
Xylenes, Total	11		3.5	0.52	ug/m3			02/28/19 04:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/28/19 04:23	1

Default Detection Limits

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-14390-1 - DL	SV-126-C-26	98
140-14390-1	SV-126-C-26	101
140-14390-2	SV-101-C-26	99
140-14390-3	SV-100-C-26	98
140-14390-4 - DL	SV-060-C-26	100
140-14390-4	SV-060-C-26	98
140-14390-5	SV-118-A-26	101
140-14390-5 - DL	SV-118-A-26	99
140-14390-6	SV-015-A-26	97
140-14390-7	SV-078-A-26	101
140-14390-8	SV-136-A-26	100
140-14390-9	SV-076-A-26	99
140-14390-10	SV-168-A-26	101
140-14390-11	SV-075-A-26	100
140-14390-12	BCK-1-26	99
140-14390-13	BCK-2-26	97
140-14390-14	BCK-3-26	97
140-14390-15	BCK-4-26	97
140-14390-16	IA-001-C-26	99
140-14390-17	IA-004-C-26	98
140-14390-18	IA-131-C-26	98
LCS 140-27936/1002	Lab Control Sample	99
LCS 140-27980/1002	Lab Control Sample	103
MB 140-27936/4	Method Blank	97
MB 140-27980/5	Method Blank	96

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-27936/4
Matrix: Air
Analysis Batch: 27936

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			02/26/19 12:38	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/26/19 12:38	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/26/19 12:38	1
Chloroform	ND		0.080	0.015	ppb v/v			02/26/19 12:38	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/26/19 12:38	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/26/19 12:38	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/26/19 12:38	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/26/19 12:38	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/26/19 12:38	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/26/19 12:38	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/26/19 12:38	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/26/19 12:38	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/26/19 12:38	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/26/19 12:38	1
Toluene	ND		0.12	0.12	ppb v/v			02/26/19 12:38	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/26/19 12:38	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/26/19 12:38	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/26/19 12:38	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/26/19 12:38	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/26/19 12:38	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/26/19 12:38	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/26/19 12:38	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/26/19 12:38	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/26/19 12:38	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/26/19 12:38	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/26/19 12:38	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/26/19 12:38	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/26/19 12:38	1
Chloroform	ND		0.39	0.073	ug/m3			02/26/19 12:38	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/26/19 12:38	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/26/19 12:38	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/26/19 12:38	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/26/19 12:38	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/26/19 12:38	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/26/19 12:38	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/26/19 12:38	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/26/19 12:38	1
Naphthalene	ND		0.21	0.21	ug/m3			02/26/19 12:38	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/26/19 12:38	1
Toluene	ND		0.45	0.45	ug/m3			02/26/19 12:38	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/26/19 12:38	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/26/19 12:38	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/26/19 12:38	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/26/19 12:38	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/26/19 12:38	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/26/19 12:38	1

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27936/4
Matrix: Air
Analysis Batch: 27936

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/26/19 12:38	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/26/19 12:38	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/26/19 12:38	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/26/19 12:38	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	97		60 - 140		02/26/19 12:38	1

Lab Sample ID: LCS 140-27936/1002
Matrix: Air
Analysis Batch: 27936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	1.00	1.02		ppb v/v		102	70 - 130
Chlorodifluoromethane	1.00	1.01		ppb v/v		101	60 - 140
Chloroform	1.00	1.04		ppb v/v		104	70 - 130
cis-1,2-Dichloroethene	1.00	1.03		ppb v/v		103	70 - 130
Dichlorodifluoromethane	1.00	0.997		ppb v/v		100	60 - 140
1,1-Dichloroethane	1.00	1.03		ppb v/v		103	70 - 130
1,2-Dichloroethane	1.00	1.01		ppb v/v		101	70 - 130
1,1-Dichloroethene	1.00	1.01		ppb v/v		101	70 - 130
Ethylbenzene	1.00	1.03		ppb v/v		103	70 - 130
Methylene Chloride	1.00	0.996		ppb v/v		100	70 - 130
Methyl tert-butyl ether	1.00	1.05		ppb v/v		105	60 - 140
Naphthalene	1.00	0.944		ppb v/v		94	60 - 140
Tetrachloroethene	1.00	1.01		ppb v/v		101	70 - 130
Toluene	1.00	1.04		ppb v/v		104	70 - 130
trans-1,2-Dichloroethene	1.00	1.01		ppb v/v		101	70 - 130
1,2,4-Trichlorobenzene	1.00	0.789		ppb v/v		79	60 - 140
1,1,1-Trichloroethane	1.00	1.02		ppb v/v		102	70 - 130
1,1,2-Trichloroethane	1.00	1.04		ppb v/v		104	70 - 130
Trichloroethene	1.00	0.998		ppb v/v		100	70 - 130
1,2,3-Trimethylbenzene	1.00	0.759		ppb v/v		76	70 - 130
1,2,4-Trimethylbenzene	1.00	1.03		ppb v/v		103	70 - 130
1,3,5-Trimethylbenzene	1.00	1.08		ppb v/v		108	70 - 130
Vinyl chloride	1.00	1.06		ppb v/v		106	70 - 130
Xylenes, Total	3.00	3.15		ppb v/v		105	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	6.3	6.41		ug/m3		102	70 - 130
Chlorodifluoromethane	3.5	3.58		ug/m3		101	60 - 140
Chloroform	4.9	5.07		ug/m3		104	70 - 130
cis-1,2-Dichloroethene	4.0	4.08		ug/m3		103	70 - 130
Dichlorodifluoromethane	4.9	4.93		ug/m3		100	60 - 140
1,1-Dichloroethane	4.0	4.19		ug/m3		103	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27936/1002
Matrix: Air
Analysis Batch: 27936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	4.0	4.10		ug/m3		101	70 - 130
1,1-Dichloroethene	4.0	4.00		ug/m3		101	70 - 130
Ethylbenzene	4.3	4.46		ug/m3		103	70 - 130
Methylene Chloride	3.5	3.46		ug/m3		100	70 - 130
Methyl tert-butyl ether	3.6	3.78		ug/m3		105	60 - 140
Naphthalene	5.2	4.95		ug/m3		94	60 - 140
Tetrachloroethene	6.8	6.85		ug/m3		101	70 - 130
Toluene	3.8	3.93		ug/m3		104	70 - 130
trans-1,2-Dichloroethene	4.0	4.00		ug/m3		101	70 - 130
1,2,4-Trichlorobenzene	7.4	5.85		ug/m3		79	60 - 140
1,1,1-Trichloroethane	5.5	5.57		ug/m3		102	70 - 130
1,1,2-Trichloroethane	5.5	5.70		ug/m3		104	70 - 130
Trichloroethene	5.4	5.36		ug/m3		100	70 - 130
1,2,3-Trimethylbenzene	4.9	3.73		ug/m3		76	70 - 130
1,2,4-Trimethylbenzene	4.9	5.05		ug/m3		103	70 - 130
1,3,5-Trimethylbenzene	4.9	5.33		ug/m3		108	70 - 130
Vinyl chloride	2.6	2.72		ug/m3		106	70 - 130
Xylenes, Total	13	13.7		ug/m3		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		60 - 140

Lab Sample ID: MB 140-27980/5
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/27/19 13:42	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/27/19 13:42	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/27/19 13:42	1
Chloroform	ND		0.080	0.015	ppb v/v			02/27/19 13:42	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/27/19 13:42	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/27/19 13:42	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/27/19 13:42	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/27/19 13:42	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/27/19 13:42	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/27/19 13:42	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/27/19 13:42	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/27/19 13:42	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/27/19 13:42	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/27/19 13:42	1
Toluene	ND		0.12	0.12	ppb v/v			02/27/19 13:42	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/27/19 13:42	1
1,2,4-Trichlorobenzene	0.0691	J	0.080	0.039	ppb v/v			02/27/19 13:42	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/27/19 13:42	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/27/19 13:42	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/27/19 13:42	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27980/5
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/27/19 13:42	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/27/19 13:42	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/27/19 13:42	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/27/19 13:42	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/27/19 13:42	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/27/19 13:42	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/27/19 13:42	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/27/19 13:42	1
Chloroform	ND		0.39	0.073	ug/m3			02/27/19 13:42	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/27/19 13:42	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/27/19 13:42	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/27/19 13:42	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/27/19 13:42	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/27/19 13:42	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/27/19 13:42	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/27/19 13:42	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/27/19 13:42	1
Naphthalene	ND		0.21	0.21	ug/m3			02/27/19 13:42	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/27/19 13:42	1
Toluene	ND		0.45	0.45	ug/m3			02/27/19 13:42	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/27/19 13:42	1
1,2,4-Trichlorobenzene	0.513	J	0.59	0.29	ug/m3			02/27/19 13:42	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/27/19 13:42	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/27/19 13:42	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/27/19 13:42	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/27/19 13:42	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/27/19 13:42	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/27/19 13:42	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/27/19 13:42	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/27/19 13:42	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		60 - 140		02/27/19 13:42	1

Lab Sample ID: LCS 140-27980/1002
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	1.00	1.09		ppb v/v		109	70 - 130
Chlorodifluoromethane	1.00	1.09		ppb v/v		109	60 - 140
Chloroform	1.00	1.15		ppb v/v		115	70 - 130
cis-1,2-Dichloroethene	1.00	1.09		ppb v/v		109	70 - 130
Dichlorodifluoromethane	1.00	1.06		ppb v/v		106	60 - 140

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27980/1002
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				
1,1-Dichloroethane	1.00	1.11		ppb v/v		111	70 - 130
1,2-Dichloroethane	1.00	1.09		ppb v/v		109	70 - 130
1,1-Dichloroethene	1.00	1.06		ppb v/v		106	70 - 130
Ethylbenzene	1.00	1.09		ppb v/v		109	70 - 130
Methylene Chloride	1.00	1.06		ppb v/v		106	70 - 130
Methyl tert-butyl ether	1.00	1.08		ppb v/v		108	60 - 140
Naphthalene	1.00	1.16		ppb v/v		116	60 - 140
Tetrachloroethene	1.00	1.06		ppb v/v		106	70 - 130
Toluene	1.00	1.10		ppb v/v		110	70 - 130
trans-1,2-Dichloroethene	1.00	1.04		ppb v/v		104	70 - 130
1,2,4-Trichlorobenzene	1.00	0.910		ppb v/v		91	60 - 140
1,1,1-Trichloroethane	1.00	1.09		ppb v/v		109	70 - 130
1,1,2-Trichloroethane	1.00	1.12		ppb v/v		112	70 - 130
Trichloroethene	1.00	1.04		ppb v/v		104	70 - 130
1,2,3-Trimethylbenzene	1.00	0.835		ppb v/v		83	70 - 130
1,2,4-Trimethylbenzene	1.00	1.15		ppb v/v		115	70 - 130
1,3,5-Trimethylbenzene	1.00	1.18		ppb v/v		118	70 - 130
Vinyl chloride	1.00	1.11		ppb v/v		111	70 - 130
Xylenes, Total	3.00	3.43		ppb v/v		114	70 - 130
Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				
Benzene	3.2	3.46		ug/m3		108	70 - 130
Carbon tetrachloride	6.3	6.85		ug/m3		109	70 - 130
Chlorodifluoromethane	3.5	3.86		ug/m3		109	60 - 140
Chloroform	4.9	5.60		ug/m3		115	70 - 130
cis-1,2-Dichloroethene	4.0	4.34		ug/m3		109	70 - 130
Dichlorodifluoromethane	4.9	5.24		ug/m3		106	60 - 140
1,1-Dichloroethane	4.0	4.51		ug/m3		111	70 - 130
1,2-Dichloroethane	4.0	4.42		ug/m3		109	70 - 130
1,1-Dichloroethene	4.0	4.19		ug/m3		106	70 - 130
Ethylbenzene	4.3	4.73		ug/m3		109	70 - 130
Methylene Chloride	3.5	3.68		ug/m3		106	70 - 130
Methyl tert-butyl ether	3.6	3.90		ug/m3		108	60 - 140
Naphthalene	5.2	6.06		ug/m3		116	60 - 140
Tetrachloroethene	6.8	7.17		ug/m3		106	70 - 130
Toluene	3.8	4.13		ug/m3		110	70 - 130
trans-1,2-Dichloroethene	4.0	4.13		ug/m3		104	70 - 130
1,2,4-Trichlorobenzene	7.4	6.75		ug/m3		91	60 - 140
1,1,1-Trichloroethane	5.5	5.95		ug/m3		109	70 - 130
1,1,2-Trichloroethane	5.5	6.10		ug/m3		112	70 - 130
Trichloroethene	5.4	5.58		ug/m3		104	70 - 130
1,2,3-Trimethylbenzene	4.9	4.10		ug/m3		83	70 - 130
1,2,4-Trimethylbenzene	4.9	5.66		ug/m3		115	70 - 130
1,3,5-Trimethylbenzene	4.9	5.80		ug/m3		118	70 - 130
Vinyl chloride	2.6	2.83		ug/m3		111	70 - 130
Xylenes, Total	13	14.9		ug/m3		114	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27980/1002
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>LCS</i> <i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	103		60 - 140

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Air - GC/MS VOA

Analysis Batch: 27936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14390-1	SV-126-C-26	Total/NA	Air	TO 15 LL	
140-14390-1 - DL	SV-126-C-26	Total/NA	Air	TO 15 LL	
140-14390-2	SV-101-C-26	Total/NA	Air	TO 15 LL	
140-14390-3	SV-100-C-26	Total/NA	Air	TO 15 LL	
140-14390-4	SV-060-C-26	Total/NA	Air	TO 15 LL	
140-14390-4 - DL	SV-060-C-26	Total/NA	Air	TO 15 LL	
140-14390-5	SV-118-A-26	Total/NA	Air	TO 15 LL	
140-14390-6	SV-015-A-26	Total/NA	Air	TO 15 LL	
140-14390-7	SV-078-A-26	Total/NA	Air	TO 15 LL	
140-14390-8	SV-136-A-26	Total/NA	Air	TO 15 LL	
140-14390-9	SV-076-A-26	Total/NA	Air	TO 15 LL	
140-14390-10	SV-168-A-26	Total/NA	Air	TO 15 LL	
140-14390-11	SV-075-A-26	Total/NA	Air	TO 15 LL	
140-14390-12	BCK-1-26	Total/NA	Air	TO 15 LL	
140-14390-13	BCK-2-26	Total/NA	Air	TO 15 LL	
140-14390-14	BCK-3-26	Total/NA	Air	TO 15 LL	
140-14390-15	BCK-4-26	Total/NA	Air	TO 15 LL	
140-14390-16	IA-001-C-26	Total/NA	Air	TO 15 LL	
140-14390-17	IA-004-C-26	Total/NA	Air	TO 15 LL	
MB 140-27936/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27936/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 27980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14390-5 - DL	SV-118-A-26	Total/NA	Air	TO 15 LL	
140-14390-18	IA-131-C-26	Total/NA	Air	TO 15 LL	
MB 140-27980/5	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27980/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-126-C-26

Date Collected: 02/19/19 12:34

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14390-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL Instrument ID: MH		1	100 mL	500 mL	27936	02/26/19 13:31	S1K	TAL KNX
Total/NA	Analysis	TO 15 LL Instrument ID: MH	DL	1	10 mL	500 mL	27936	02/27/19 05:28	S1K	TAL KNX

Client Sample ID: SV-101-C-26

Date Collected: 02/19/19 12:41

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14390-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL Instrument ID: MH		1	100 mL	500 mL	27936	02/27/19 06:22	S1K	TAL KNX

Client Sample ID: SV-100-C-26

Date Collected: 02/19/19 12:43

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14390-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL Instrument ID: MH		1	100 mL	500 mL	27936	02/26/19 15:17	S1K	TAL KNX

Client Sample ID: SV-060-C-26

Date Collected: 02/19/19 12:57

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14390-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL Instrument ID: MH		1	100 mL	500 mL	27936	02/26/19 16:10	S1K	TAL KNX
Total/NA	Analysis	TO 15 LL Instrument ID: MH	DL	1	40 mL	500 mL	27936	02/27/19 08:09	S1K	TAL KNX

Client Sample ID: SV-118-A-26

Date Collected: 02/21/19 12:42

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14390-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL Instrument ID: MH		1	100 mL	500 mL	27936	02/26/19 17:03	S1K	TAL KNX
Total/NA	Analysis	TO 15 LL Instrument ID: MH	DL	1	10 mL	500 mL	27980	02/28/19 03:30	S1K	TAL KNX

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-015-A-26

Lab Sample ID: 140-14390-6

Date Collected: 02/21/19 12:45

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/26/19 17:56	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-078-A-26

Lab Sample ID: 140-14390-7

Date Collected: 02/21/19 12:49

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/26/19 18:49	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-136-A-26

Lab Sample ID: 140-14390-8

Date Collected: 02/21/19 12:53

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/26/19 19:43	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-076-A-26

Lab Sample ID: 140-14390-9

Date Collected: 02/21/19 12:57

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/26/19 20:36	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-168-A-26

Lab Sample ID: 140-14390-10

Date Collected: 02/21/19 13:00

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/26/19 21:29	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-075-A-26

Lab Sample ID: 140-14390-11

Date Collected: 02/21/19 13:06

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.67	167 mL	500 mL	27936	02/26/19 22:23	S1K	TAL KNX
Instrument ID: MH										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-1-26

Lab Sample ID: 140-14390-12

Date Collected: 02/19/19 16:09

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/27/19 00:09	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: BCK-2-26

Lab Sample ID: 140-14390-13

Date Collected: 02/19/19 16:19

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/27/19 01:02	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: BCK-3-26

Lab Sample ID: 140-14390-14

Date Collected: 02/19/19 16:28

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/27/19 01:55	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: BCK-4-26

Lab Sample ID: 140-14390-15

Date Collected: 02/19/19 16:35

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/27/19 02:48	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: IA-001-C-26

Lab Sample ID: 140-14390-16

Date Collected: 02/19/19 16:51

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/27/19 03:41	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: IA-004-C-26

Lab Sample ID: 140-14390-17

Date Collected: 02/19/19 16:54

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/27/19 07:16	S1K	TAL KNX
Instrument ID: MH										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-131-C-26

Lab Sample ID: 140-14390-18

Date Collected: 02/19/19 17:02

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27980	02/28/19 04:23	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27936/4

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27936	02/26/19 12:38	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27980/5

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27980	02/27/19 13:42	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27936/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27936	02/26/19 10:24	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27980/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27980	02/27/19 11:50	S1K	TAL KNX
Instrument ID: MH										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14390-1	SV-126-C-26	Air	02/19/19 12:34	02/23/19 10:10
140-14390-2	SV-101-C-26	Air	02/19/19 12:41	02/23/19 10:10
140-14390-3	SV-100-C-26	Air	02/19/19 12:43	02/23/19 10:10
140-14390-4	SV-060-C-26	Air	02/19/19 12:57	02/23/19 10:10
140-14390-5	SV-118-A-26	Air	02/21/19 12:42	02/23/19 10:10
140-14390-6	SV-015-A-26	Air	02/21/19 12:45	02/23/19 10:10
140-14390-7	SV-078-A-26	Air	02/21/19 12:49	02/23/19 10:10
140-14390-8	SV-136-A-26	Air	02/21/19 12:53	02/23/19 10:10
140-14390-9	SV-076-A-26	Air	02/21/19 12:57	02/23/19 10:10
140-14390-10	SV-168-A-26	Air	02/21/19 13:00	02/23/19 10:10
140-14390-11	SV-075-A-26	Air	02/21/19 13:06	02/23/19 10:10
140-14390-12	BCK-1-26	Air	02/19/19 16:09	02/23/19 10:10
140-14390-13	BCK-2-26	Air	02/19/19 16:19	02/23/19 10:10
140-14390-14	BCK-3-26	Air	02/19/19 16:28	02/23/19 10:10
140-14390-15	BCK-4-26	Air	02/19/19 16:35	02/23/19 10:10
140-14390-16	IA-001-C-26	Air	02/19/19 16:51	02/23/19 10:10
140-14390-17	IA-004-C-26	Air	02/19/19 16:54	02/23/19 10:10
140-14390-18	IA-131-C-26	Air	02/19/19 17:02	02/23/19 10:10

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14390-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
SV-126-C-26	140-14390-1	101
SV-126-C-26 DL	140-14390-1 DL	98
SV-101-C-26	140-14390-2	99
SV-100-C-26	140-14390-3	98
SV-060-C-26	140-14390-4	98
SV-060-C-26 DL	140-14390-4 DL	100
SV-118-A-26	140-14390-5	101
SV-118-A-26 DL	140-14390-5 DL	99
SV-015-A-26	140-14390-6	97
SV-078-A-26	140-14390-7	101
SV-136-A-26	140-14390-8	100
SV-076-A-26	140-14390-9	99
SV-168-A-26	140-14390-10	101
SV-075-A-26	140-14390-11	100
BCK-1-26	140-14390-12	99
BCK-2-26	140-14390-13	97
BCK-3-26	140-14390-14	97
BCK-4-26	140-14390-15	97
IA-001-C-26	140-14390-16	99
IA-004-C-26	140-14390-17	98
IA-131-C-26	140-14390-18	98
	MB 140-27936/4	97
	MB 140-27980/5	96
	LCS 140-27936/1002	99
	LCS 140-27980/1002	103

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB20-LCS.d
 Lab ID: LCS 140-27936/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	1.03	103	70-130	
Carbon tetrachloride	1.00	1.02	102	70-130	
Chlorodifluoromethane	1.00	1.01	101	60-140	
Chloroform	1.00	1.04	104	70-130	
cis-1,2-Dichloroethene	1.00	1.03	103	70-130	
Dichlorodifluoromethane	1.00	0.997	100	60-140	
1,1-Dichloroethane	1.00	1.03	103	70-130	
1,2-Dichloroethane	1.00	1.01	101	70-130	
1,1-Dichloroethene	1.00	1.01	101	70-130	
Ethylbenzene	1.00	1.03	103	70-130	
Methylene Chloride	1.00	0.996	100	70-130	
Methyl tert-butyl ether	1.00	1.05	105	60-140	
Naphthalene	1.00	0.944	94	60-140	
Tetrachloroethene	1.00	1.01	101	70-130	
Toluene	1.00	1.04	104	70-130	
trans-1,2-Dichloroethene	1.00	1.01	101	70-130	
1,2,4-Trichlorobenzene	1.00	0.789	79	60-140	
1,1,1-Trichloroethane	1.00	1.02	102	70-130	
1,1,2-Trichloroethane	1.00	1.04	104	70-130	
Trichloroethene	1.00	0.998	100	70-130	
1,2,3-Trimethylbenzene	1.00	0.759	76	70-130	
1,2,4-Trimethylbenzene	1.00	1.03	103	70-130	
1,3,5-Trimethylbenzene	1.00	1.08	108	70-130	
Vinyl chloride	1.00	1.06	106	70-130	
Xylenes, Total	3.00	3.15	105	70-130	

Column to be used to flag recovery and RPD values

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB27-LCS.d
 Lab ID: LCS 140-27980/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	1.08	108	70-130	
Carbon tetrachloride	1.00	1.09	109	70-130	
Chlorodifluoromethane	1.00	1.09	109	60-140	
Chloroform	1.00	1.15	115	70-130	
cis-1,2-Dichloroethene	1.00	1.09	109	70-130	
Dichlorodifluoromethane	1.00	1.06	106	60-140	
1,1-Dichloroethane	1.00	1.11	111	70-130	
1,2-Dichloroethane	1.00	1.09	109	70-130	
1,1-Dichloroethene	1.00	1.06	106	70-130	
Ethylbenzene	1.00	1.09	109	70-130	
Methylene Chloride	1.00	1.06	106	70-130	
Methyl tert-butyl ether	1.00	1.08	108	60-140	
Naphthalene	1.00	1.16	116	60-140	
Tetrachloroethene	1.00	1.06	106	70-130	
Toluene	1.00	1.10	110	70-130	
trans-1,2-Dichloroethene	1.00	1.04	104	70-130	
1,2,4-Trichlorobenzene	1.00	0.910	91	60-140	
1,1,1-Trichloroethane	1.00	1.09	109	70-130	
1,1,2-Trichloroethane	1.00	1.12	112	70-130	
Trichloroethene	1.00	1.04	104	70-130	
1,2,3-Trimethylbenzene	1.00	0.835	83	70-130	
1,2,4-Trimethylbenzene	1.00	1.15	115	70-130	
1,3,5-Trimethylbenzene	1.00	1.18	118	70-130	
Vinyl chloride	1.00	1.11	111	70-130	
Xylenes, Total	3.00	3.43	114	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: H500BB22.D Lab Sample ID: MB 140-27936/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/26/2019 12:38
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27936/1002	HCCVB20-LCS .d	02/26/2019 10:24
SV-126-C-26	140-14390-1	HB26P101.D	02/26/2019 13:31
SV-100-C-26	140-14390-3	HB26P103.D	02/26/2019 15:17
SV-060-C-26	140-14390-4	HB26P104.D	02/26/2019 16:10
SV-118-A-26	140-14390-5	HB26P105.D	02/26/2019 17:03
SV-015-A-26	140-14390-6	HB26P106.D	02/26/2019 17:56
SV-078-A-26	140-14390-7	HB26P107.D	02/26/2019 18:49
SV-136-A-26	140-14390-8	HB26P108.D	02/26/2019 19:43
SV-076-A-26	140-14390-9	HB26P109.D	02/26/2019 20:36
SV-168-A-26	140-14390-10	HB26P110.D	02/26/2019 21:29
SV-075-A-26	140-14390-11	HB26P111.D	02/26/2019 22:23
BCK-1-26	140-14390-12	HB26P112.D	02/27/2019 00:09
BCK-2-26	140-14390-13	HB26P113.D	02/27/2019 01:02
BCK-3-26	140-14390-14	HB26P114.D	02/27/2019 01:55
BCK-4-26	140-14390-15	HB26P115.D	02/27/2019 02:48
IA-001-C-26	140-14390-16	HB26P116D.D	02/27/2019 03:41
SV-126-C-26 DL	140-14390-1 DL	HB26P101D.D	02/27/2019 05:28
SV-101-C-26	140-14390-2	HB26P102R.D	02/27/2019 06:22
IA-004-C-26	140-14390-17	HB26P203R.D	02/27/2019 07:16
SV-060-C-26 DL	140-14390-4 DL	HB26P104DL. D	02/27/2019 08:09

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: HB27LOT14399MB.D Lab Sample ID: MB 140-27980/5
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/27/2019 13:42
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27980/1002	HCCVB27-LCS .d	02/27/2019 11:50
SV-118-A-26 DL	140-14390-5 DL	HB27P112.D	02/28/2019 03:30
IA-131-C-26	140-14390-18	HB27P113.D	02/28/2019 04:23

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: HBFB20IC.D BFB Injection Date: 02/20/2019
 Instrument ID: MH BFB Injection Time: 13:11
 Analysis Batch No.: 27843

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.2
75	30.0 - 60.0 % of mass 95	48.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	7.0
173	Less than 2.0 % of mass 174	0.5 (0.5) 1
174	50.0 - 120.00 % of mass 95	93.5
175	5.0 - 9.0 % of mass 174	6.7 (7.1) 1
176	95.0 - 101.0 % of mass 174	91.9 (98.2) 1
177	5.0 - 9.0 % of mass 176	6.0 (6.6) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-27843/3	HB20IC09.D	02/20/2019	15:12
	IC 140-27843/5	HB20IC10.D	02/20/2019	16:59
	IC 140-27843/8	HB20IC01.D	02/20/2019	19:38
	IC 140-27843/9	HB20IC02.D	02/20/2019	20:31
	IC 140-27843/10	HB20IC03.D	02/20/2019	21:26
	IC 140-27843/11	HB20IC04.D	02/20/2019	22:20
	IC 140-27843/12	HB20IC05.D	02/20/2019	23:14
	IC 140-27843/13	HB20IC06.D	02/21/2019	00:08
	ICIS 140-27843/14	HB20IC07.D	02/21/2019	01:03
	IC 140-27843/15	HB20IC08.D	02/21/2019	01:57
	ICV 140-27843/17	HB20ICV.D	02/21/2019	03:43

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: HBFB20.D BFB Injection Date: 02/26/2019
 Instrument ID: MH BFB Injection Time: 09:56
 Analysis Batch No.: 27936

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	19.8
75	30.0 - 60.0 % of mass 95	46.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.9
173	Less than 2.0 % of mass 174	0.5 (0.5) 1
174	50.0 - 120.00 % of mass 95	98.0
175	5.0 - 9.0 % of mass 174	6.8 (7.0) 1
176	95.0 - 101.0 % of mass 174	94.9 (96.9) 1
177	5.0 - 9.0 % of mass 176	6.1 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27936/2	HCCVB20.D	02/26/2019	10:24
	LCS 140-27936/1002	HCCVB20-LCS. d	02/26/2019	10:24
	MB 140-27936/4	H500BB22.D	02/26/2019	12:38
SV-126-C-26	140-14390-1	HB26P101.D	02/26/2019	13:31
SV-100-C-26	140-14390-3	HB26P103.D	02/26/2019	15:17
SV-060-C-26	140-14390-4	HB26P104.D	02/26/2019	16:10
SV-118-A-26	140-14390-5	HB26P105.D	02/26/2019	17:03
SV-015-A-26	140-14390-6	HB26P106.D	02/26/2019	17:56
SV-078-A-26	140-14390-7	HB26P107.D	02/26/2019	18:49
SV-136-A-26	140-14390-8	HB26P108.D	02/26/2019	19:43
SV-076-A-26	140-14390-9	HB26P109.D	02/26/2019	20:36
SV-168-A-26	140-14390-10	HB26P110.D	02/26/2019	21:29
SV-075-A-26	140-14390-11	HB26P111.D	02/26/2019	22:23
BCK-1-26	140-14390-12	HB26P112.D	02/27/2019	00:09
BCK-2-26	140-14390-13	HB26P113.D	02/27/2019	01:02
BCK-3-26	140-14390-14	HB26P114.D	02/27/2019	01:55
BCK-4-26	140-14390-15	HB26P115.D	02/27/2019	02:48
IA-001-C-26	140-14390-16	HB26P116D.D	02/27/2019	03:41
SV-126-C-26 DL	140-14390-1 DL	HB26P101D.D	02/27/2019	05:28
SV-101-C-26	140-14390-2	HB26P102R.D	02/27/2019	06:22
IA-004-C-26	140-14390-17	HB26P203R.D	02/27/2019	07:16
SV-060-C-26 DL	140-14390-4 DL	HB26P104DL.D	02/27/2019	08:09

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: HBFB27.D BFB Injection Date: 02/27/2019
 Instrument ID: MH BFB Injection Time: 11:22
 Analysis Batch No.: 27980

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.7
75	30.0 - 60.0 % of mass 95	48.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.4) 1
174	50.0 - 120.00 % of mass 95	91.8
175	5.0 - 9.0 % of mass 174	6.5 (7.0) 1
176	95.0 - 101.0 % of mass 174	88.9 (96.8) 1
177	5.0 - 9.0 % of mass 176	5.8 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27980/2	HCCVB27.D	02/27/2019	11:50
	LCS 140-27980/1002	HCCVB27-LCS. d	02/27/2019	11:50
	MB 140-27980/5	HB27LOT14399 MB.D	02/27/2019	13:42
SV-118-A-26 DL	140-14390-5 DL	HB27P112.D	02/28/2019	03:30
IA-131-C-26	140-14390-18	HB27P113.D	02/28/2019	04:23

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Sample No.: ICIS 140-27843/14 Date Analyzed: 02/21/2019 01:03
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HB20IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBZd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	348949	8.83	1879497	11.01	1644075	15.73
UPPER LIMIT	488529	9.16	2631296	11.34	2301705	16.06
LOWER LIMIT	209369	8.50	1127698	10.68	986445	15.40
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-27843/17	382438	8.83	2064078	11.01	1803849	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Sample No.: CCVIS 140-27936/2 Date Analyzed: 02/26/2019 10:24
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB20.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	342352	8.82	1857782	11.00	1578748	15.73	
UPPER LIMIT	479293	9.15	2600895	11.33	2210247	16.06	
LOWER LIMIT	205411	8.49	1114669	10.67	947249	15.40	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27936/1002	342352	8.82	1857782	11.00	1578748	15.73	
MB 140-27936/4	328212	8.82	1777677	11.00	1496441	15.73	
140-14390-1	SV-126-C-26	295256	8.83	1628772	11.01	1445440	15.73
140-14390-3	SV-100-C-26	321718	8.82	1742188	11.01	1463732	15.73
140-14390-4	SV-060-C-26	306344	8.82	1657033	11.01	1388582	15.73
140-14390-5	SV-118-A-26	296259	8.82	1615475	11.01	1362515	15.73
140-14390-6	SV-015-A-26	280411	8.84	1524680	11.01	1263585	15.73
140-14390-7	SV-078-A-26	293368	8.83	1591119	11.01	1358343	15.73
140-14390-8	SV-136-A-26	290143	8.86	1608111	11.02	1411221	15.73
140-14390-9	SV-076-A-26	320518	8.83	1732928	11.01	1534202	15.73
140-14390-10	SV-168-A-26	300597	8.86	1666175	11.02	1440458	15.73
140-14390-11	SV-075-A-26	334101	8.83	1835120	11.01	1535193	15.73
140-14390-12	BCK-1-26	305965	8.82	1633864	11.01	1349634	15.73
140-14390-13	BCK-2-26	304769	8.82	1668266	11.01	1397553	15.73
140-14390-14	BCK-3-26	288397	8.82	1563358	11.00	1284217	15.73
140-14390-15	BCK-4-26	292070	8.82	1594766	11.01	1318806	15.73
140-14390-16	IA-001-C-26	282998	8.82	1535197	11.01	1298941	15.73
140-14390-1 DL	SV-126-C-26 DL	270028	8.82	1457588	11.01	1214881	15.73
140-14390-2	SV-101-C-26	259365	8.82	1401170	11.01	1231013	15.73
140-14390-17	IA-004-C-26	272850	8.82	1484861	11.01	1264664	15.73
140-14390-4 DL	SV-060-C-26 DL	260606	8.82	1404632	11.01	1209563	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Sample No.: CCVIS 140-27980/2 Date Analyzed: 02/27/2019 11:50
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB27.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBzd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	226060	8.81	1253478	11.00	1073197	15.72	
UPPER LIMIT	316484	9.14	1754869	11.33	1502476	16.05	
LOWER LIMIT	135636	8.48	752087	10.67	643918	15.39	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27980/1002	226060	8.81	1253478	11.00	1073197	15.72	
MB 140-27980/5	264467	8.81	1438660	11.00	1193009	15.72	
140-14390-5 DL	SV-118-A-26 DL	308902	8.82	1657088	11.00	1400401	15.73
140-14390-18	IA-131-C-26	303298	8.82	1660254	11.01	1406034	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-126-C-26 Lab Sample ID: 140-14390-1
 Matrix: Air Lab File ID: HB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:34
 Sample wt/vol: 100 (mL) Date Analyzed: 02/26/2019 13:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	41		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.16	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	41		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.32	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.19	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	100	E	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.53		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.73	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.23		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.38	J	0.40	0.080
108-88-3	Toluene	92.14	10		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	2.4		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	0.41		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	74		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.18	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.22	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	560	E	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.95		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-126-C-26 Lab Sample ID: 140-14390-1
 Matrix: Air Lab File ID: HB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	130		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.56	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	160		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.76	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	400	E	1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.2		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.6	J	2.7	0.54
108-88-3	Toluene	92.14	39		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	9.7		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	3.0		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	400		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.86	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	1400	E	0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-126-C-26 DL Lab Sample ID: 140-14390-1 DL
 Matrix: Air Lab File ID: HB26P101D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:34
 Sample wt/vol: 10 (mL) Date Analyzed: 02/27/2019 05:28
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	58		4.0	0.70
75-01-4	Vinyl chloride	62.50	450		2.0	1.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-126-C-26 DL Lab Sample ID: 140-14390-1 DL
 Matrix: Air Lab File ID: HB26P101D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:34
 Sample wt/vol: 10 (mL) Date Analyzed: 02/27/2019 05:28
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	230		16	2.8
75-01-4	Vinyl chloride	62.50	1100		5.1	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-101-C-26 Lab Sample ID: 140-14390-2
 Matrix: Air Lab File ID: HB26P102R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:41
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 06:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.40		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.72	CI	0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.15	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.85		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.36	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.22	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.27		0.20	0.20
127-18-4	Tetrachloroethene	165.83	6.2		0.40	0.080
108-88-3	Toluene	92.14	5.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	34		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	17		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.22	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.40		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.31	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	2.7		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-101-C-26 Lab Sample ID: 140-14390-2
 Matrix: Air Lab File ID: HB26P102R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:41
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 06:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.64	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	2.5		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.5	CI	1.4	0.27
67-66-3	Chloroform	119.38	0.54	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.59	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	4.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.4	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	0.95	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.4		1.0	1.0
127-18-4	Tetrachloroethene	165.83	42		2.7	0.54
108-88-3	Toluene	92.14	21		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	180		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	92		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.1	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.9		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.5	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	6.9		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-100-C-26 Lab Sample ID: 140-14390-3
 Matrix: Air Lab File ID: HB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:43
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.35	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.33	J	0.40	0.075
67-66-3	Chloroform	119.38	0.42		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.83	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.14	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.078	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.15	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-100-C-26 Lab Sample ID: 140-14390-3
 Matrix: Air Lab File ID: HB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:43
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	2.2	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	2.0		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.93	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.43	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.74	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-060-C-26 Lab Sample ID: 140-14390-4
 Matrix: Air Lab File ID: HB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6		0.40	0.075
67-66-3	Chloroform	119.38	2.2		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	4.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	4.6		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	1.3		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.1		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.96	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.11	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.26	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	6.1		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	120	E	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.19	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	11		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-060-C-26 Lab Sample ID: 140-14390-4
 Matrix: Air Lab File ID: HB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.62	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.5		1.4	0.27
67-66-3	Chloroform	119.38	11		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	16		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	18		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	5.1		1.6	0.28
100-41-4	Ethylbenzene	106.17	4.9		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.72	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.0	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	33		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	670	E	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.93	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	46		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-060-C-26 DL Lab Sample ID: 140-14390-4 DL
 Matrix: Air Lab File ID: HB26P104DL.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:57
 Sample wt/vol: 40 (mL) Date Analyzed: 02/27/2019 08:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	110		0.50	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-060-C-26 DL Lab Sample ID: 140-14390-4 DL
 Matrix: Air Lab File ID: HB26P104DL.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:57
 Sample wt/vol: 40 (mL) Date Analyzed: 02/27/2019 08:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	600		2.7	0.94

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-118-A-26 Lab Sample ID: 140-14390-5
 Matrix: Air Lab File ID: HB26P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:42
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.30	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	0.35	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	46		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	11		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	120	E	0.40	0.070
100-41-4	Ethylbenzene	106.17	1.8		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.1		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.15	J	0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	3.0		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	0.34	J	0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	5.9		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	450	E	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.59		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.4		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.93		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.82		0.20	0.15
1330-20-7	Xylenes, Total	106.17	17		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-118-A-26 Lab Sample ID: 140-14390-5
 Matrix: Air Lab File ID: HB26P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:42
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.97	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	1.7	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	180		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	46		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	470	E	1.6	0.28
100-41-4	Ethylbenzene	106.17	7.7		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.4		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.99	J	2.7	0.54
108-88-3	Toluene	92.14	4.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	12		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	2.5	J	3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	32		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2400	E	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	2.9		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	7.0		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	4.6		2.0	0.64
75-01-4	Vinyl chloride	62.50	2.1		0.51	0.37
1330-20-7	Xylenes, Total	106.17	72		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-118-A-26 DL Lab Sample ID: 140-14390-5 DL
 Matrix: Air Lab File ID: HB27P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:42
 Sample wt/vol: 10 (mL) Date Analyzed: 02/28/2019 03:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	77		4.0	0.70
79-01-6	Trichloroethene	131.39	330		2.0	0.70

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-118-A-26 DL Lab Sample ID: 140-14390-5 DL
 Matrix: Air Lab File ID: HB27P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:42
 Sample wt/vol: 10 (mL) Date Analyzed: 02/28/2019 03:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	300		16	2.8
79-01-6	Trichloroethene	131.39	1800		11	3.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-015-A-26 Lab Sample ID: 140-14390-6
 Matrix: Air Lab File ID: HB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:45
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.1		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.30	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.10	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.74		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.81		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-015-A-26 Lab Sample ID: 140-14390-6
 Matrix: Air Lab File ID: HB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:45
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	4.5		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.2	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	0.68	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.56	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-078-A-26 Lab Sample ID: 140-14390-7
 Matrix: Air Lab File ID: HB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:49
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 18:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.8		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.23	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.90		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-078-A-26 Lab Sample ID: 140-14390-7
 Matrix: Air Lab File ID: HB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:49
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 18:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.58	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.75	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.58	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	9.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-136-A-26 Lab Sample ID: 140-14390-8
 Matrix: Air Lab File ID: HB26P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:53
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 19:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.74		0.40	0.075
67-66-3	Chloroform	119.38	1.8		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.33	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.086	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	1.2		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	54		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	50		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.20	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.22	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	5.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-136-A-26 Lab Sample ID: 140-14390-8
 Matrix: Air Lab File ID: HB26P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:53
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 19:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.0		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.6		1.4	0.27
67-66-3	Chloroform	119.38	8.8		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.3	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.34	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	5.1		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	200		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	270		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.98	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	23		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-076-A-26 Lab Sample ID: 140-14390-9
 Matrix: Air Lab File ID: HB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 20:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.75	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.60		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.30	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.62		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.46		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.93		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-076-A-26 Lab Sample ID: 140-14390-9
 Matrix: Air Lab File ID: HB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 20:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.61	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.7	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	3.0		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	4.6		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-168-A-26 Lab Sample ID: 140-14390-10
 Matrix: Air Lab File ID: HB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 13:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:29
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	0.24	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.17	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.32	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	13		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.33	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.87		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	34		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.18	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.76		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.49	CI	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-168-A-26 Lab Sample ID: 140-14390-10
 Matrix: Air Lab File ID: HB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 13:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:29
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.77	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	1.2	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.68	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.3	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	50		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	11		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	4.8		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	180		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	0.88	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	3.8		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	2.4	CI	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-075-A-26 Lab Sample ID: 140-14390-11
 Matrix: Air Lab File ID: HB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 13:06
 Sample wt/vol: 167(mL) Date Analyzed: 02/26/2019 22:23
 Soil Aliquot Vol: _____ Dilution Factor: 1.67
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.34	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.90	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	4.7		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	6.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.43		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	3.1		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	9.7		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	4.9		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-075-A-26 Lab Sample ID: 140-14390-11
 Matrix: Air Lab File ID: HB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 13:06
 Sample wt/vol: 167(mL) Date Analyzed: 02/26/2019 22:23
 Soil Aliquot Vol: _____ Dilution Factor: 1.67
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	25		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	25		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	15		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	48		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	24		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	13		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-1-26 Lab Sample ID: 140-14390-12
 Matrix: Air Lab File ID: HB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:09
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.31	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.91	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.15	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-1-26 Lab Sample ID: 140-14390-12
 Matrix: Air Lab File ID: HB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:09
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.72	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-2-26 Lab Sample ID: 140-14390-13
 Matrix: Air Lab File ID: HB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:19
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-2-26 Lab Sample ID: 140-14390-13
 Matrix: Air Lab File ID: HB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:19
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.45	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.71	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-3-26 Lab Sample ID: 140-14390-14
 Matrix: Air Lab File ID: HB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:28
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-3-26 Lab Sample ID: 140-14390-14
 Matrix: Air Lab File ID: HB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:28
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-4-26 Lab Sample ID: 140-14390-15
 Matrix: Air Lab File ID: HB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:35
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 02:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.27	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-4-26 Lab Sample ID: 140-14390-15
 Matrix: Air Lab File ID: HB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:35
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 02:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.94	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-001-C-26 Lab Sample ID: 140-14390-16
 Matrix: Air Lab File ID: HB26P116D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:51
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.26	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.1		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-001-C-26 Lab Sample ID: 140-14390-16
 Matrix: Air Lab File ID: HB26P116D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:51
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.91	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	11		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.71	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-004-C-26 Lab Sample ID: 140-14390-17
 Matrix: Air Lab File ID: HB26P203R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:54
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 07:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.95	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-004-C-26 Lab Sample ID: 140-14390-17
 Matrix: Air Lab File ID: HB26P203R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:54
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 07:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.68	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-131-C-26 Lab Sample ID: 140-14390-18
 Matrix: Air Lab File ID: HB27P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:02
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 04:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.081	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.63		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.4		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.53		0.40	0.080
108-88-3	Toluene	92.14	11		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.29		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.18	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-131-C-26 Lab Sample ID: 140-14390-18
 Matrix: Air Lab File ID: HB27P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:02
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 04:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.3		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.32	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	2.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	12		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.6		2.7	0.54
108-88-3	Toluene	92.14	41		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.92	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.88	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	3.4653	3.1705	3.1944	3.1500	Ave		3.2799			4.2		30.0				
	3.1939	3.2579	3.1981	3.5227	3.3659												
Propene	+++++	+++++	1.7587	1.4845	1.4290	Ave		1.4914			7.7		30.0				
	1.4326	1.4362	1.4091	1.5280	1.4530												
Dichlorodifluoromethane	5.8144	5.0640	4.8366	4.9504	4.8580	Ave		5.0379			6.0		30.0				
	4.8876	5.0248	4.8446	5.2377	4.8608												
Chloromethane	+++++	+++++	+++++	0.6715	0.5966	Ave		0.5876			7.4		30.0				
	0.5872	0.5848	0.5550	0.5865	0.5318												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.7320	3.4028	3.3465	3.4027	Ave		3.4749			3.3		30.0				
	3.4272	3.5307	3.4425	3.5488	3.4411												
Vinyl chloride	+++++	2.0465	1.8423	1.8473	1.8163	Ave		1.8271			5.6		30.0				
	1.8203	1.8334	1.7435	1.8315	1.6623												
Butane	+++++	+++++	2.7879	2.8437	2.7009	Ave		2.6143			7.2		30.0				
	2.6844	2.6215	2.4361	2.5669	2.2728												
1,3-Butadiene	+++++	+++++	1.3389	1.3779	1.3208	Ave		1.3198			4.0		30.0				
	1.3288	1.3568	1.2722	1.3471	1.2155												
Bromomethane	+++++	+++++	1.8623	1.9344	1.8572	Ave		1.8480			3.2		30.0				
	1.8498	1.8745	1.7805	1.8774	1.7481												
Chloroethane	+++++	+++++	0.8855	0.8409	0.8547	Ave		0.8331			3.9		30.0				
	0.8383	0.8323	0.8039	0.8312	0.7778												
Ethanol	+++++	+++++	0.8934	0.8231	0.8080	Ave		0.8189			6.1		30.0				
	0.8037	0.8564	0.8028	0.8429	0.7211												
Vinyl bromide	+++++	1.9018	1.7722	1.7366	1.7418	Ave		1.7583			3.6		30.0				
	1.7437	1.7838	1.7019	1.7701	1.6732												
2-Methylbutane	+++++	+++++	2.0515	1.9633	1.9838	Ave		1.9393			4.2		30.0				
	1.9590	1.9816	1.8753	1.9172	1.7822												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 4.5968	4.8919 4.5966	4.5963 4.4102	4.6432 4.6616	4.6819 4.3585	Ave		4.6041			3.4		30.0				
Acrolein	++++ 0.5846	++++ 0.5959	++++ 0.5782	0.6004 0.6012	0.5874 0.5473	Ave		0.5850			3.2		30.0				
Acetonitrile	++++ 0.7177	++++ 0.7681	++++ 0.7379	0.7408 0.7567	0.7405 0.6910	Ave		0.7361			3.4		30.0				
Acetone	++++ 0.7514	++++ 0.7610	++++ 0.7228	0.8447 0.7183	0.7906 0.6754	Ave		0.7520			7.3		30.0				
Pentane	++++ 0.2123	++++ 0.2170	++++ 0.2070	0.2190 0.2038	0.2202 0.1943	Ave		0.2105			4.5		30.0				
Isopropyl alcohol	2.7418 2.1881	2.3188 2.2924	2.2272 2.1969	2.1770 2.2190	1.6999 1.9893	QuaF		2.3689	-0.007836					1.0000		0.9900	
Ethyl ether	++++ 1.8837	2.0347 1.9038	1.8861 1.7817	1.8427 1.8377	1.9152 1.6737	Ave		1.8621			5.3		30.0				
1,1-Dichloroethene	++++ 1.5290	1.7340 1.5543	1.5403 1.5141	1.5633 1.5140	1.5440 1.4908	Ave		1.5537			4.6		30.0				
Acrylonitrile	++++ 1.1815	++++ 1.2218	1.1258 1.2125	1.1965 1.2550	1.1794 1.1889	Ave		1.1952			3.1		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.6645	4.0846 3.6642	3.7625 3.5412	3.7405 3.6163	3.7204 3.4760	Ave		3.6967			4.7		30.0				
tert-Butyl alcohol	++++ 2.5653	++++ 2.7860	2.5284 2.7619	2.5014 2.8005	2.5277 2.6087	Ave		2.6350			4.8		30.0				
Methylene Chloride	++++ 1.5650	++++ 1.4959	++++ 1.3885	2.4719 1.3565	1.8784 1.2927	Ave		1.6355			25.4		30.0				
3-Chloropropene	++++ 1.4263	++++ 1.4402	1.7866 1.3797	1.5003 1.4158	1.4252 1.3047	Ave		1.4598			9.8		30.0				
Carbon disulfide	++++ 4.5267	++++ 4.6305	4.5536 4.4426	4.5843 4.4448	4.5189 4.2681	Ave		4.4962			2.5		30.0				
trans-1,2-Dichloroethene	++++ 1.5549	1.7812 1.5959	1.5579 1.5626	1.5474 1.5716	1.5873 1.5791	Ave		1.5931			4.5		30.0				
2-Methylpentane	++++ 3.6495	3.8413 3.7329	3.6302 3.5934	3.6663 3.6789	3.6726 3.4794	Ave		3.6605			2.7		30.0				
Methyl tert-butyl ether	++++ 3.8063	++++ 3.9290	3.6249 3.8501	3.6903 3.7951	3.7667 3.7289	Ave		3.7739			2.5		30.0				
1,1-Dichloroethane	++++ 3.0039	3.2165 3.0616	3.0410 2.9531	3.0857 3.0007	3.0099 2.9039	Ave		3.0307			2.9		30.0				
Vinyl acetate	++++ 4.3714	++++ 4.6452	3.6694 4.6119	3.8279 4.8234	4.0421 4.6436	Ave		4.3293			9.9		30.0				
Hexane	++++ 1.2057	1.3026 1.2192	1.1775 1.1910	1.1729 1.2227	1.1991 1.2068	Ave		1.2108			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14390-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++ 0.6760	++++ 0.7192	++++ 0.7039	0.6508 0.6996	0.6769 0.6879	Ave		0.6878			3.3		30.0				
cis-1,2-Dichloroethene	++++ 1.5744	1.7468 1.6363	1.5933 1.5970	1.6008 1.5970	1.5882 1.5988	Ave		1.6147			3.2		30.0				
Ethyl acetate	++++ 3.8330	++++ 3.9793	3.7437 3.9131	3.7153 4.0646	3.7356 3.8788	Ave		3.8579			3.2		30.0				
Chloroform	++++ 3.4568	3.6507 3.5041	3.4694 3.4001	3.5102 3.4590	3.4542 3.3756	Ave		3.4756			2.3		30.0				
Tetrahydrofuran	++++ 1.8356	2.0384 1.8762	1.8755 1.8441	1.8215 1.9023	1.7999 1.8263	Ave		1.8689			3.8		30.0				
1,1,1-Trichloroethane	++++ 3.2539	3.3591 3.4003	3.1133 3.3660	3.1042 3.4402	3.2027 3.5047	Ave		3.3049			4.3		30.0				
1,2-Dichloroethane	0.4792 0.4208	0.4342 0.4309	0.4004 0.4260	0.4094 0.4468	0.4128 0.4496	Ave		0.4310			5.4		30.0				
Cyclohexane	++++ 0.1234	++++ 0.1282	++++ 0.1287	0.1130 0.1363	0.1144 0.1399	Ave		0.1257			7.6		30.0				
Benzene	++++ 0.8262	0.8954 0.8466	0.8112 0.8440	0.7881 0.8945	0.8065 0.8990	Ave		0.8457			5.0		30.0				
Carbon tetrachloride	0.7487 0.6708	0.6490 0.7010	0.6034 0.7125	0.5747 0.7615	0.6367 0.7873	Ave		0.6846			10.2		30.0				
1-Butanol	++++ 0.1071	++++ 0.1245	++++ 0.1248	0.0965 0.1330	0.0979 0.1172	Ave		0.1144			12.4		30.0				
2,3-Dimethylpentane	++++ 0.1796	0.1766 0.1801	0.1665 0.1766	0.1668 0.1780	0.1769 0.1774	Ave		0.1754			2.9		30.0				
Thiophene	++++ 0.4824	0.4876 0.4945	0.4639 0.4890	0.4560 0.4969	0.4750 0.5094	Ave		0.4839			3.4		30.0				
2,2,4-Trimethylpentane	++++ 1.3660	1.4676 1.4074	1.3177 1.3906	1.3230 1.4688	1.3297 1.4871	Ave		1.3953			4.8		30.0				
Heptane	++++ 0.2663	0.2712 0.2737	0.2506 0.2749	0.2452 0.2881	0.2558 0.2989	Ave		0.2694			6.4		30.0				
1,2-Dichloropropane	++++ 0.3549	0.3683 0.3641	0.3346 0.3586	0.3506 0.3775	0.3450 0.3847	Ave		0.3598			4.4		30.0				
Trichloroethene	0.4632 0.3841	0.4095 0.3944	0.3655 0.3956	0.3672 0.4073	0.3757 0.4285	Ave		0.3991			7.5		30.0				
Dibromomethane	++++ 0.3974	0.4765 0.4115	0.4099 0.4077	0.4084 0.4323	0.3933 0.4360	Ave		0.4192			6.1		30.0				
Bromodichloromethane	0.6604 0.6222	0.5793 0.6529	0.5629 0.6534	0.5714 0.6923	0.5879 0.7149	Ave		0.6298			8.4		30.0				
1,4-Dioxane	++++ 0.1219	0.1357 0.1302	0.1276 0.1307	0.1218 0.1288	0.1227 0.1236	Ave		0.1270			3.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	0.4034	0.3437	0.2975	0.3269	0.3551	Ave		0.3781			12.1		30.0				
	0.3789	0.4060	0.4068	0.4343	0.4280												
Methylcyclohexane	++++	++++	0.4245	0.4287	0.4498	LinF		0.5272						0.9990		0.9900	
	0.4648	0.4877	0.4844	0.5074	0.5357												
4-Methyl-2-pentanone (MIBK)	++++	++++	0.7143	0.6509	0.6822	Ave		0.7577			10.3		30.0				
	0.7301	0.7728	0.7841	0.8611	0.8658												
cis-1,3-Dichloropropene	0.4871	0.3999	0.3931	0.4158	0.4395	Ave		0.4735			12.4		30.0				
	0.4778	0.5104	0.5121	0.5406	0.5587												
trans-1,3-Dichloropropene	0.4944	0.4260	0.4038	0.4133	0.4518	Ave		0.4856			12.2		30.0				
	0.4884	0.5211	0.5365	0.5532	0.5670												
Toluene	++++	1.1979	1.0972	1.0779	1.1122	Ave		1.1386			3.2		30.0				
	1.1442	1.1566	1.1486	1.1597	1.1532												
1,1,2-Trichloroethane	0.4133	0.3819	0.3518	0.3774	0.3800	Ave		0.3780			4.2		30.0				
	0.3813	0.3829	0.3732	0.3756	0.3625												
2-Hexanone	++++	++++	++++	0.2822	0.3272	Ave		0.3734			14.2		30.0				
	0.3617	0.3952	0.4022	0.4230	0.4226												
Octane	0.3431	0.2979	0.2983	0.3057	0.3158	Ave		0.3251			5.7		30.0				
	0.3345	0.3387	0.3351	0.3409	0.3405												
C8 Range	++++	++++	++++	2.6905	2.7814	Ave		2.9596			6.7		30.0				
	2.8847	2.9768	2.9653	3.2221	3.1962												
Dibromochloromethane	0.7111	0.6553	0.6167	0.6360	0.7095	Ave		0.7610			14.5		30.0				
	0.7798	0.8336	0.8540	0.8994	0.9146												
1,2-Dibromoethane (EDB)	0.7556	0.6517	0.5952	0.6231	0.6489	Ave		0.6894			8.3		30.0				
	0.6861	0.7166	0.7185	0.7452	0.7529												
Tetrachloroethene	0.5382	0.4943	0.4320	0.4547	0.4475	Ave		0.4638			6.6		30.0				
	0.4481	0.4549	0.4479	0.4602	0.4599												
Chlorobenzene	1.0921	0.9609	0.8656	0.8563	0.8903	Ave		0.9365			7.5		30.0				
	0.8958	0.9195	0.9278	0.9856	0.9706												
Ethylbenzene	1.6135	1.4227	1.3082	1.3322	1.3865	Ave		1.4498			6.5		30.0				
	1.4269	1.4796	1.4755	1.5346	1.5189												
m-Xylene & p-Xylene	1.2072	1.0640	0.9982	1.0439	1.0836	Ave		1.1179			6.4		30.0				
	1.1213	1.1561	1.1505	1.2259	1.1287												
Nonane	0.7214	0.6646	0.6269	0.6551	0.7128	Ave		0.7205			7.7		30.0				
	0.7434	0.7638	0.7531	0.8016	0.7620												
Bromoform	++++	++++	0.5650	0.5843	0.6966	Ave		0.8550			26.6		30.0				
	0.8072	0.9326	0.9922	1.1394	1.1231												
Styrene	0.7205	0.5902	0.6127	0.6375	0.7228	Ave		0.7534			15.1		30.0				
	0.7904	0.8466	0.8542	0.9160	0.8426												
o-Xylene	1.2934	1.1325	1.0847	1.1027	1.1495	Ave		1.1384			5.3		30.0				
	1.1502	1.1572	1.1094	1.1237	1.0809												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.9096	0.8625	0.8260	0.8361	0.9096	Ave		0.9221			7.0		30.0				
	0.9401	0.9755	0.9610	1.0114	0.9889												
1,2,3-Trichloropropane	0.2447	0.2178	0.2113	0.2130	0.2227	Ave		0.2272			5.1		30.0				
	0.2256	0.2303	0.2271	0.2361	0.2431												
Isopropylbenzene	1.7967	1.5351	1.4440	1.4632	1.5279	Ave		1.5707			6.3		30.0				
	1.5633	1.5715	1.5587	1.6321	1.6144												
Propylbenzene	0.4012	0.3808	0.3409	0.3592	0.3891	Ave		0.4111			11.6		30.0				
	0.4107	0.4308	0.4332	0.4685	0.4967												
2-Chlorotoluene	0.4669	0.3905	0.3655	0.3667	0.3951	Ave		0.4027			7.3		30.0				
	0.3964	0.4055	0.3991	0.4165	0.4244												
4-Ethyltoluene	1.4351	1.3019	1.3077	1.3685	1.4589	Ave		1.4935			9.5		30.0				
	1.5278	1.5863	1.5805	1.6912	1.6776												
1,3,5-Trimethylbenzene	++++	++++	0.5413	0.5786	0.6024	Lin1	-0.018	0.6744						0.9990		0.9900	
	0.6176	0.6376	0.6340	0.6743	0.6871												
Alpha Methyl Styrene	++++	++++	++++	0.4208	0.4981	Ave		0.6224			21.8		30.0				
	0.5685	0.6414	0.6778	0.7497	0.8004												
Decane	0.8670	0.8318	0.8501	0.8994	0.9689	Ave		0.9226			6.4		30.0				
	0.9743	0.9881	0.9374	0.9947	0.9138												
tert-Butylbenzene	1.3232	1.2918	1.2707	1.3008	1.3524	Ave		1.3980			8.3		30.0				
	1.3873	1.4399	1.4507	1.6252	1.5376												
1,2,4-Trimethylbenzene	1.2112	1.1922	1.2018	1.2261	1.2756	Ave		1.3033			7.8		30.0				
	1.3135	1.3589	1.3540	1.5084	1.3912												
sec-Butylbenzene	1.9008	1.7647	1.7019	1.7864	1.8764	Ave		1.9482			9.3		30.0				
	1.9575	2.0412	2.0527	2.3032	2.0968												
1,3-Dichlorobenzene	0.9710	0.9136	0.8392	0.8456	0.8596	Ave		0.9455			10.4		30.0				
	0.8871	0.9433	0.9831	1.1213	1.0913												
Benzyl chloride	++++	++++	++++	0.5869	0.7162	Ave		0.9648			27.2		30.0				
	0.8511	0.9916	1.0755	1.2636	1.2685												
1,4-Dichlorobenzene	0.8993	0.8397	0.7743	0.7878	0.8054	Ave		0.8947			11.9		30.0				
	0.8484	0.9077	0.9477	1.0688	1.0683												
4-Isopropyltoluene	1.3948	1.3577	1.3402	1.4210	1.5104	Ave		1.5120			8.5		30.0				
	1.5570	1.5989	1.5830	1.7130	1.6444												
1,2,3-Trimethylbenzene	1.2663	1.2149	1.1671	1.2381	1.2887	Ave		1.2797			4.8		30.0				
	1.2982	1.3173	1.2872	1.3672	1.3515												
Indane	1.2186	1.1243	1.0675	1.0961	1.1826	Ave		1.2519			11.7		30.0				
	1.2431	1.3163	1.3515	1.5395	1.3790												
1,2-Dichlorobenzene	0.9498	0.8850	0.8350	0.8518	0.8698	Ave		0.9417			10.4		30.0				
	0.8906	0.9443	0.9892	1.1350	1.0670												
Indene	++++	++++	++++	0.8141	0.9137	Ave		1.0768			17.1		30.0				
	0.9935	1.0962	1.1520	1.3505	1.2176												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.3790 1.6516	1.3189 1.6880	1.3874 1.6768	1.4670 1.8898	1.5846 1.5798	Ave		1.5623			11.2		30.0				
Undecane	++++ 1.1148	++++ 1.1251	++++ 1.0648	++++ 1.1605	0.9201 1.0623	Ave		1.0667			7.5		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.4502	0.2917 0.5017	0.2809 0.5356	0.3021 ++++	0.3712 ++++	Ave		0.3905			27.0		30.0				
1,2,4,5-Tetramethylbenzene	1.1786 1.4737	1.0742 1.5594	1.1053 1.5930	1.2141 1.8040	1.3311 1.7554	Ave		1.4089			18.9		30.0				
Dodecane	++++ 1.0804	++++ 1.1437	++++ 1.1280	0.7863 1.2231	0.8699 ++++	Ave		1.0386			16.5		30.0				
1,2,4-Trichlorobenzene	++++ 0.6454	++++ 0.7369	0.3966 0.8248	0.4284 ++++	0.4829 ++++	Lin1	-0.053	0.7893						0.9900		0.9900	
Naphthalene	++++ 1.4915	0.9793 1.6065	0.9607 1.6241	1.0249 1.8355	1.1613 1.9378	Ave		1.4024			27.0		30.0				
Hexachlorobutadiene	1.0176 0.8427	0.8796 0.9000	0.8143 0.9493	0.7902 1.0467	0.7652 0.8828	Ave		0.8888			10.5		30.0				
1,2,3-Trichlorobenzene	0.8505 0.7703	0.6300 0.8209	0.5889 0.8468	0.6086 0.9455	0.6198 0.8106	Ave		0.7492			16.9		30.0				
2-Methylnaphthalene	++++ 0.5646	++++ 0.6759	++++ 0.7544	0.3700 ++++	0.3309 ++++	Ave		0.5392			34.4		50.0				
1-Methylnaphthalene	++++ 0.8761	++++ 0.9590	0.6260 0.9457	0.6372 ++++	0.5405 ++++	Ave		0.7641			24.0		50.0				
4-Bromofluorobenzene (Surr)	0.6541 0.6669	0.6584 0.6518	0.6640 0.6390	0.6638 0.6459	0.6727 0.6015	Ave		0.6518			3.1		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 276110	13216 568429	23324 1166346	44738 2080315	110343 4483179	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 123848	++++ 250579	12938 513903	20791 902358	50058 1935361	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	11347 422528	19313 876701	35581 1766802	69332 3093057	170173 6474307	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 50767	++++ 102040	++++ 202413	9404 346372	20898 708335	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 296279	14233 616018	25033 1255454	46869 2095695	119194 4583276	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	++++ 157361	7805 319887	13553 635845	25872 1081563	63624 2214114	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 232065	++++ 457383	20509 888442	39827 1515853	94610 3027220	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 114876	++++ 236733	9850 463965	19298 795542	46266 1618919	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 159914	++++ 327044	13700 649354	27091 1108697	65057 2328401	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 72470	++++ 145223	6514 293162	11777 490862	29938 1035993	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 347389	++++ 747094	32861 1463846	57636 2488750	141512 4802553	++++ 5.00	++++ 10.0	0.400 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 150739	7253 311230	13037 620663	24322 1045304	61012 2228635	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 169357	++++ 345741	15092 683911	27497 1132183	69491 2373804	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 397394	18657 801987	33813 1608364	65029 2752862	164002 5805275	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14390-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	++++ 50534	++++ 103966	++++ 210875	8409 355043	20576 728953	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 62042	++++ 134006	++++ 269093	10375 446888	25939 920347	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Acetone	CBM	Ave	++++ 194862	++++ 398344	++++ 790789	35492 1272613	83084 2698817	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 18350	++++ 37863	++++ 75489	3067 120364	7712 258741	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Isopropyl alcohol	CBM	QuaF	16052 567468	26530 1199879	49153 2403555	91466 3931291	228028 7948950	0.0600 3.00	0.120 6.00	0.240 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 162847	7760 332157	13875 649774	25807 1085214	67088 2229204	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	++++ 132183	6613 271177	11331 552199	21894 894072	54085 1985588	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 102139	++++ 213181	++++ 442205	8282 741130	16757 1583584	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 316796	15578 639315	27679 1291447	52386 2135574	130321 4629798	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 221767	++++ 486078	++++ 1007263	18600 1653787	35033 3474636	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 135290	++++ 260991	++++ 506389	34620 801053	65799 1721729	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 123300	++++ 251273	++++ 503167	13143 836069	21012 1737749	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 391326	++++ 807906	++++ 1620181	33499 2624808	64204 5684871	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 134418	6793 278440	11461 569867	21671 928087	55602 2103238	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 315498	14650 651289	26706 1310496	51347 2172520	128649 4634316	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 329050	++++ 685507	++++ 1404124	26667 2241171	51683 4966677	131945 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
1,1-Dichloroethane	CBM	Ave	++++ 259689	12267 534165	22371 1076990	43216 1772013	105434 3867799	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 377904	++++ 810467	++++ 1681929	26994 2848393	53610 6184921	141592 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
Hexane	CBM	Ave	++++ 104228	4968 212722	8662 434352	16426 722047	42005 1607432	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 58444	++++ 125474	++++ 256700	++++ 413154	9115 916246	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	++++ 136108	6662 285498	11721 582417	22419 943075	55633 2129500	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14390-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 331359	++++ 694293	27541 1427087	52034 2400330	130856 5166288	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	++++ 298839	13923 611378	25523 1239987	49161 2042657	120999 4496097	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 158683	7774 327341	13797 672532	25511 1123394	63048 2432538	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	++++ 281296	12811 593273	22903 1227570	43475 2031546	112189 4668064	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	5129 196209	9022 404925	16131 824860	31582 1368173	79080 2983220	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 57530	++++ 120448	4554 249183	8824 417405	23383 928409	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 385270	18606 795627	32682 1634406	60789 2739521	154496 5964977	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	8013 312823	13486 658731	24310 1379762	44327 2331942	121964 5223763	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 49965	++++ 117031	++++ 241678	7444 407327	18761 777405	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 83728	3670 169285	6708 341915	12865 545270	33896 1177164	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 224938	10131 464737	18692 946920	35178 1521788	90994 3380138	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 636999	30494 1322559	53089 2692898	102056 4498015	254726 9866899	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 124160	5635 257254	10096 532315	18913 882284	49010 1982995	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 165502	7652 342173	13479 694484	27042 1156069	66097 2552409	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4957 179106	8508 370632	14725 766083	28328 1247479	71975 2842892	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 185331	9901 386676	16515 789473	31506 1323802	75334 2892720	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	7068 290134	12036 613591	22677 1265402	44079 2120110	112623 4743566	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 56823	2819 122358	5140 253088	9393 394321	23501 819819	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	4317 176703	7141 381574	11987 787734	25219 1330076	68030 2839739	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	LinF	++++ 216746	++++ 458293	17104 937963	33070 1553838	86171 3554415	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 340468	++++ 726276	28778 1518450	50210 2637007	130687 5744756	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14390-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	5213	8310	15836	32071	84191	0.0200	0.0400	0.0800	0.160	0.400
			222810	479642	991696	1655482	3706962	1.00	2.00	4.00	8.00	16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	4369	7302	13490	26441	71850	0.0200	0.0400	0.0800	0.160	0.400
			193590	428343	930378	1585219	3716627	1.00	2.00	4.00	8.00	16.0
Toluene	CBZd 5	Ave	++++	20535	36650	68961	176860	++++	0.0400	0.0800	0.160	0.400
			453543	950794	1991754	3322999	7558388	1.00	2.00	4.00	8.00	16.0
1,1,2-Trichloroethane	CBZd 5	Ave	3652	6546	11751	24147	60427	0.0200	0.0400	0.0800	0.160	0.400
			151135	314780	647099	1076123	2376053	1.00	2.00	4.00	8.00	16.0
2-Hexanone	CBZd 5	Ave	++++	++++	++++	18055	52036	++++	++++	++++	0.160	0.400
			143357	324836	697429	1212184	2770142	1.00	2.00	4.00	8.00	16.0
Octane	CBZd 5	Ave	3032	5107	9965	19559	50220	0.0200	0.0400	0.0800	0.160	0.400
			132598	278400	581056	976945	2231497	1.00	2.00	4.00	8.00	16.0
C8 Range	DFBZ	Ave	++++	++++	++++	207536	532812	++++	++++	++++	0.160	0.400
			1345188	2797431	5742340	9867518	21206896	1.00	2.00	4.00	8.00	16.0
Dibromochloromethane	CBZd 5	Ave	6284	11234	20599	40693	112826	0.0200	0.0400	0.0800	0.160	0.400
			309096	685217	1481007	2576992	5994726	1.00	2.00	4.00	8.00	16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	6677	11172	19884	39867	103182	0.0200	0.0400	0.0800	0.160	0.400
			271955	589031	1245997	2135184	4934830	1.00	2.00	4.00	8.00	16.0
Tetrachloroethene	CBZd 5	Ave	4756	8474	14431	29094	71154	0.0200	0.0400	0.0800	0.160	0.400
			177605	373916	776667	1318629	3014432	1.00	2.00	4.00	8.00	16.0
Chlorobenzene	CBZd 5	Ave	9651	16472	28914	54785	141575	0.0200	0.0400	0.0800	0.160	0.400
			355092	755892	1608983	2824132	6361822	1.00	2.00	4.00	8.00	16.0
Ethylbenzene	CBZd 5	Ave	14258	24388	43699	85231	220476	0.0200	0.0400	0.0800	0.160	0.400
			565594	1216288	2558634	4397072	9955892	1.00	2.00	4.00	8.00	16.0
m-Xylene & p-Xylene	CBZd 5	Ave	21336	36478	66686	133574	344621	0.0400	0.0800	0.160	0.320	0.800
			888953	1900753	3990112	7025357	14796297	2.00	4.00	8.00	16.0	32.0
Nonane	CBZd 5	Ave	6375	11392	20941	41910	113340	0.0200	0.0400	0.0800	0.160	0.400
			294667	627904	1305941	2296867	4994379	1.00	2.00	4.00	8.00	16.0
Bromoform	CBZd 5	Ave	++++	++++	18872	37380	110767	++++	++++	0.0800	0.160	0.400
			319968	766620	1720677	3264688	7361436	1.00	2.00	4.00	8.00	16.0
Styrene	CBZd 5	Ave	6367	10118	20466	40788	114936	0.0200	0.0400	0.0800	0.160	0.400
			313291	695917	1481246	2624790	5523081	1.00	2.00	4.00	8.00	16.0
o-Xylene	CBZd 5	Ave	11430	19414	36234	70551	182797	0.0200	0.0400	0.0800	0.160	0.400
			455942	951287	1923859	3219909	7084529	1.00	2.00	4.00	8.00	16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	8038	14785	27592	53490	144640	0.0200	0.0400	0.0800	0.160	0.400
			372659	801869	1666518	2898094	6482057	1.00	2.00	4.00	8.00	16.0
1,2,3-Trichloropropane	CBZd 5	Ave	2162	3733	7060	13629	35414	0.0200	0.0400	0.0800	0.160	0.400
			89428	189343	393840	676648	1593385	1.00	2.00	4.00	8.00	16.0
Isopropylbenzene	CBZd 5	Ave	15877	26315	48237	93612	242959	0.0200	0.0400	0.0800	0.160	0.400
			619680	1291872	2702973	4676667	10581270	1.00	2.00	4.00	8.00	16.0
Propylbenzene	CBZd 5	Ave	3545	6527	11389	22978	61876	0.0200	0.0400	0.0800	0.160	0.400
			162793	354102	751306	1342310	3255751	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14390-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
2-Chlorotoluene	CBZd 5	Ave	4126 157132	6694 333374	12209 692051	23459 1193527	62820 2781675	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	12682 605609	22317 1303962	43683 2740797	87555 4845851	231995 10995513	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Lin1	++++ 244828	++++ 524101	18083 1099439	37017 1932203	95792 4503336	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 225351	++++ 527224	++++ 1175360	26923 2148167	79203 5246512	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	7662 386206	14259 812284	28397 1625532	57543 2850078	154065 5989503	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11693 549927	22144 1183628	42446 2515614	83223 4656890	215060 10078350	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	10703 520658	20437 1117062	40145 2348070	78441 4322006	202848 9118755	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	16797 775934	30251 1677953	56852 3559589	114293 6599605	298383 13743682	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	8581 351654	15661 775428	28033 1704781	54101 3212950	136687 7153027	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 337367	++++ 815150	++++ 1864979	++++ 3620768	37546 8314062	113885 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7947 336295	14394 746169	25865 1643413	50401 3062438	128080 7002419	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	12326 617168	23274 1314396	44768 2745113	90912 4908356	240183 10778521	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	11190 514577	20826 1082845	38988 2232197	79211 3917469	204927 8858717	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	10769 492757	19273 1082048	35661 2343708	70126 4411376	188062 9038955	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	8393 353004	15171 776291	27892 1715395	54498 3252238	138306 6993755	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 393793	++++ 901129	++++ 1997698	++++ 3869631	52088 7980555	145299 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Butylbenzene	CBZd 5	Ave	12186 654668	22609 1387617	46347 2907810	93855 5414943	251979 10355110	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 441877	++++ 924853	++++ 1846517	++++ 3325148	58868 6962530	162146 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 178449	5000 412385	9382 928720	19327 ++++	59034 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	10415 584141	18414 1281919	36923 2762451	77678 5169036	211664 11505782	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 428247	++++ 940184	++++ 1956105	50308 3504521	138324 ++++	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 ++++

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Lin1	++++ 255822	++++ 605730	13247 1430337	27410 ++++	76796 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Naphthalene	CBZd 5	Ave	++++ 591214	16787 1320630	32092 2816456	65571 5259311	184664 12701015	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	8992 334056	15078 739806	27202 1646161	50558 2999218	121678 5786078	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	7516 305351	10800 674773	19673 1468485	38937 2709115	98554 5313205	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 223829	++++ 555653	++++ 1308281	23671 ++++	52618 ++++	++++ 1.00	++++ 2.00	++++ 4.00	0.160 ++++	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 347276	++++ 788345	20912 1640040	40771 ++++	85954 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1156116 1057465	1128690 1071605	1108968 1108097	1061718 925381	1069670 985627	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD Lin1 = Linear 1/conc ISTD LinF = Linear ISTD forced zero QuaF = Quadratic ISTD forced zero
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FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	5.7						50				
Propene	+++++	+++++	17.9						50			
Dichlorodifluoromethane	15.4						50					
Chloromethane	+++++	+++++	+++++	14.3						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	7.4						50				
Vinyl chloride	+++++	12.0						50				
Butane	+++++	+++++	6.6						50			
1,3-Butadiene	+++++	+++++	1.5						50			
Bromomethane	+++++	+++++	0.8						50			
Chloroethane	+++++	+++++	6.3						50			
Ethanol	+++++	+++++	9.1						50			
Vinyl bromide	+++++	8.2						50				
2-Methylbutane	+++++	+++++	5.8						50			
Trichlorofluoromethane	+++++	6.3						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	2.6						50		
Acetonitrile	+++++	+++++	+++++	0.6						50		
Acetone	+++++	+++++	+++++	12.3						80		
Pentane	+++++	+++++	+++++	4.0						50		
Isopropyl alcohol	15.8						50					
Ethyl ether	+++++	9.3						50				
1,1-Dichloroethene	+++++	11.6						50				
Acrylonitrile	+++++	+++++	-5.8						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	10.5						50				
tert-Butyl alcohol	+++++	+++++	-4.0						50			
Methylene Chloride	+++++	+++++	+++++	51.1						80		
3-Chloropropene	+++++	+++++	22.4						50			
Carbon disulfide	+++++	+++++	1.3						50			
trans-1,2-Dichloroethene	+++++	11.8						50				
2-Methylpentane	+++++	4.9						50				
Methyl tert-butyl ether	+++++	+++++	-3.9						50			
1,1-Dichloroethane	+++++	6.1						50				
Vinyl acetate	+++++	+++++	-15.2						50			
Hexane	+++++	7.6						50				
2-Butanone (MEK)	+++++	+++++	+++++	-5.4						50		
cis-1,2-Dichloroethene	+++++	8.2						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-3.0						50			
Chloroform	+++++	5.0						50				
Tetrahydrofuran	+++++	9.1						50				
1,1,1-Trichloroethane	+++++	1.6						50				
1,2-Dichloroethane	11.2						50					
Cyclohexane	+++++	+++++	-10.1						50			
Benzene	+++++	5.9						50				
Carbon tetrachloride	9.4						50					
1-Butanol	+++++	+++++	+++++	-15.7							50	
2,3-Dimethylpentane	+++++	0.7						50				
Thiophene	+++++	0.8						50				
2,2,4-Trimethylpentane	+++++	5.2						50				
Heptane	+++++	0.7						50				
1,2-Dichloropropane	+++++	2.4						50				
Trichloroethene	16.1						50					
Dibromomethane	+++++	13.7						50				
Bromodichloromethane	4.9						50					
1,4-Dioxane	+++++	6.8						50				
Methyl methacrylate	6.7						50					
Methylcyclohexane	+++++	+++++	-19.5						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	-5.7						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	2.9						50					
trans-1,3-Dichloropropene	1.8						50					
Toluene	+++++	5.2						50				
1,1,2-Trichloroethane	9.3						50					
2-Hexanone	+++++	+++++	+++++	-24.4						50		
Octane	5.6						50					
Dibromochloromethane	-6.6						50					
1,2-Dibromoethane (EDB)	9.6						50					
Tetrachloroethene	16.0						50					
Chlorobenzene	16.6						50					
Ethylbenzene	11.3						50					
m-Xylene & p-Xylene	8.0						50					
Nonane	0.1						50					
Bromoform	+++++	+++++	-33.9						50			
Styrene	-4.4						50					
o-Xylene	13.6						50					
1,1,2,2-Tetrachloroethane	-1.4						50					
1,2,3-Trichloropropane	7.7						50					
Isopropylbenzene	14.4						50					
Propylbenzene	-2.4						50					
2-Chlorotoluene	16.0						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	-3.9						50					
1,3,5-Trimethylbenzene	+++++	+++++	14.0						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-32.4						50		
Decane	-6.0						50					
tert-Butylbenzene	-5.3						50					
1,2,4-Trimethylbenzene	-7.1						50					
sec-Butylbenzene	-2.4						50					
1,3-Dichlorobenzene	2.7						50					
Benzyl chloride	+++++	+++++	+++++	-39.2						50		
1,4-Dichlorobenzene	0.5						50					
4-Isopropyltoluene	-7.8						50					
1,2,3-Trimethylbenzene	-1.0						50					
Indane	-2.7						50					
1,2-Dichlorobenzene	0.9						50					
Indene	+++++	+++++	+++++	-24.4						50		
Butylbenzene	-11.7						50					
Undecane	+++++	+++++	+++++	-13.7						50		
1,2-Dibromo-3-Chloropropane	+++++	-25.3	+++++	+++++				50				
1,2,4,5-Tetramethylbenzene	-16.3						50					
Dodecane	+++++	+++++	+++++	-24.3	+++++					50		
1,2,4-Trichlorobenzene	+++++	+++++	34.3	+++++	+++++				50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-30.2						80				
Hexachlorobutadiene	14.5						50					
1,2,3-Trichlorobenzene	13.5						50					
2-Methylnaphthalene	+++++	+++++	+++++	-31.4						80		
1-Methylnaphthalene	+++++	+++++	-18.1	+++++					80			
			+++++	+++++								

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.231		1.97	2.00	-1.5	35.0
Propene	Ave	1.491	1.400		1.88	2.00	-6.1	35.0
Dichlorodifluoromethane	Ave	5.038	4.975		1.97	2.00	-1.3	35.0
Chloromethane	Ave	0.5876	0.5516		1.88	2.00	-6.1	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.543		2.04	2.00	2.0	35.0
Vinyl chloride	Ave	1.827	1.812		1.98	2.00	-0.8	35.0
Acetaldehyde	Ave	0.7017	0.6186		8.81	10.0	-11.9	35.0
1,3-Butadiene	Ave	1.320	1.310		1.98	2.00	-0.8	35.0
Butane	Ave	2.614	2.580		1.97	2.00	-1.3	35.0
Bromomethane	Ave	1.848	1.784		1.93	2.00	-3.4	35.0
Chloroethane	Ave	0.8331	0.8331		2.00	2.00	0.0	35.0
Ethanol	Ave	0.8189	0.6091		7.44	10.0	-25.6	35.0
Vinyl bromide	Ave	1.758	1.854		2.11	2.00	5.4	35.0
2-Methylbutane	Ave	1.939	1.998		2.06	2.00	3.0	35.0
Trichlorofluoromethane	Ave	4.604	4.525		1.97	2.00	-1.7	35.0
Acrolein	Ave	0.5850	0.6530		2.23	2.00	11.6	35.0
Acetonitrile	Ave	0.7361	0.7152		1.94	2.00	-2.8	35.0
Acetone	Ave	0.7520	0.7484		1.99	2.00	-0.5	35.0
Pentane	Ave	0.2105	0.2264		2.15	2.00	7.5	35.0
Isopropyl alcohol	QuaF		2.642		2.25	2.00	12.4	35.0
Ethyl ether	Ave	1.862	1.936		2.08	2.00	4.0	35.0
1,1-Dichloroethene	Ave	1.554	1.575		2.03	2.00	1.4	35.0
Acrylonitrile	Ave	1.195	1.264		2.12	2.00	5.8	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	3.681		1.99	2.00	-0.4	35.0
tert-Butyl alcohol	Ave	2.635	2.747		2.08	2.00	4.2	35.0
Methylene Chloride	Ave	1.636	1.497		1.83	2.00	-8.5	35.0
3-Chloropropene	Ave	1.460	1.308		1.79	2.00	-10.4	35.0
Carbon disulfide	Ave	4.496	4.585		2.04	2.00	2.0	35.0
trans-1,2-Dichloroethene	Ave	1.593	1.590		2.00	2.00	-0.2	35.0
2-Methylpentane	Ave	3.661	3.368		1.84	2.00	-8.0	35.0
Methyl tert-butyl ether	Ave	3.774	3.976		2.11	2.00	5.3	35.0
1,1-Dichloroethane	Ave	3.031	3.103		2.05	2.00	2.4	35.0
Vinyl acetate	Ave	4.329	4.787		2.21	2.00	10.6	35.0
Hexane	Ave	1.211	1.222		2.02	2.00	0.9	35.0
2-Butanone (MEK)	Ave	0.6878	0.7069		2.06	2.00	2.8	35.0
Isopropyl ether	Ave	5.664	5.931		2.09	2.00	4.7	35.0
cis-1,2-Dichloroethene	Ave	1.615	1.679		2.08	2.00	4.0	35.0
Ethyl acetate	Ave	3.858	3.811		1.98	2.00	-1.2	35.0
Chloroform	Ave	3.476	3.526		2.03	2.00	1.5	35.0
Tert-butyl ethyl ether	Ave	4.715	4.645		1.97	2.00	-1.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	1.886		2.02	2.00	0.9	35.0
1,1,1-Trichloroethane	Ave	3.305	3.421		2.07	2.00	3.5	35.0
1,2-Dichloroethane	Ave	0.4310	0.4324		2.01	2.00	0.3	35.0
Cyclohexane	Ave	0.1257	0.1289		2.05	2.00	2.5	35.0
Benzene	Ave	0.8457	0.8700		2.06	2.00	2.9	35.0
Carbon tetrachloride	Ave	0.6846	0.7122		2.08	2.00	4.0	35.0
1-Butanol	Ave	0.1144	0.1208		2.11	2.00	5.6	35.0
2,3-Dimethylpentane	Ave	0.1754	0.1733		1.98	2.00	-1.2	35.0
Thiophene	Ave	0.4839	0.4800		1.98	2.00	-0.8	35.0
2,2,4-Trimethylpentane	Ave	1.395	1.420		2.04	2.00	1.8	35.0
Heptane	Ave	0.2694	0.2742		2.04	2.00	1.8	35.0
1,2-Dichloropropane	Ave	0.3598	0.3655		2.03	2.00	1.6	35.0
Trichloroethene	Ave	0.3991	0.4065		2.04	2.00	1.8	35.0
Dibromomethane	Ave	0.4192	0.4231		2.02	2.00	0.9	35.0
Bromodichloromethane	Ave	0.6298	0.6609		2.10	2.00	4.9	35.0
1,4-Dioxane	Ave	0.1270	0.1217		1.92	2.00	-4.2	35.0
Methyl methacrylate	Ave	0.3781	0.4011		2.12	2.00	6.1	35.0
Methylcyclohexane	LinF		0.5855		2.22	2.00	11.1	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.7683		2.03	2.00	1.4	35.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5252		2.22	2.00	10.9	35.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5421		2.23	2.00	11.6	35.0
Toluene	Ave	1.139	1.196		2.10	2.00	5.0	35.0
1,1,2-Trichloroethane	Ave	0.3780	0.3876		2.05	2.00	2.5	35.0
2-Hexanone	Ave	0.3734	0.3927		2.10	2.00	5.2	35.0
Octane	Ave	0.3251	0.3451		2.12	2.00	6.2	35.0
Dibromochloromethane	Ave	0.7610	0.8504		2.24	2.00	11.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7285		2.11	2.00	5.7	35.0
Tetrachloroethene	Ave	0.4638	0.4651		2.01	2.00	0.3	35.0
Chlorobenzene	Ave	0.9365	0.9565		2.04	2.00	2.1	35.0
2,3-Dimethylheptane	Ave	1.197	1.077		1.80	2.00	-10.0	35.0
Ethylbenzene	Ave	1.450	1.522		2.10	2.00	5.0	35.0
m-Xylene & p-Xylene	Ave	1.118	1.189		4.25	4.00	6.3	35.0
Nonane	Ave	0.7205	0.7824		2.17	2.00	8.6	35.0
Bromoform	Ave	0.8550	0.9411		2.20	2.00	10.1	35.0
Styrene	Ave	0.7534	0.8717		2.31	2.00	15.7	35.0
o-Xylene	Ave	1.138	1.168		2.05	2.00	2.6	35.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	0.9802		2.13	2.00	6.3	35.0
1,2,3-Trichloropropane	Ave	0.2272	0.2354		2.07	2.00	3.6	35.0
Isopropylbenzene	Ave	1.571	1.652		2.10	2.00	5.2	35.0
Propylbenzene	Ave	0.4111	0.4566		2.22	2.00	11.1	35.0
2-Chlorotoluene	Ave	0.4027	0.4284		2.13	2.00	6.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.553		2.08	2.00	4.0	35.0
1,3,5-Trimethylbenzene	Lin1		0.7424		2.23	2.00	11.4	35.0
Alpha Methyl Styrene	Ave	0.6224	0.6616		2.13	2.00	6.3	35.0
Decane	Ave	0.9226	1.006		2.18	2.00	9.0	35.0
tert-Butylbenzene	Ave	1.398	1.493		2.14	2.00	6.8	35.0
1,2,4-Trimethylbenzene	Ave	1.303	1.389		2.13	2.00	6.6	35.0
sec-Butylbenzene	Ave	1.948	2.098		2.15	2.00	7.7	35.0
1,3-Dichlorobenzene	Ave	0.9455	0.9755		2.06	2.00	3.2	35.0
Benzyl chloride	Ave	0.9648	1.027		2.13	2.00	6.4	35.0
1,4-Dichlorobenzene	Ave	0.8947	0.9383		2.10	2.00	4.9	35.0
4-Isopropyltoluene	Ave	1.512	1.631		2.16	2.00	7.9	35.0
1,2,3-Trimethylbenzene	Ave	1.280	0.9816		1.53	2.00	-23.3	35.0
Butylcyclohexane	Ave	1.039	1.012		1.95	2.00	-2.6	35.0
1,2-Dichlorobenzene	Ave	0.9417	0.9787		2.08	2.00	3.9	35.0
Indane	Ave	1.252	1.300		2.08	2.00	3.9	35.0
Indene	Ave	1.077	0.9377		1.74	2.00	-12.9	35.0
Butylbenzene	Ave	1.562	1.735		2.22	2.00	11.0	35.0
Undecane	Ave	1.067	1.128		2.11	2.00	5.7	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.4026		2.06	2.00	3.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.478		2.10	2.00	4.9	35.0
Dodecane	Ave	1.039	1.175		2.26	2.00	13.1	35.0
1,2,4-Trichlorobenzene	Lin1		0.7912		2.07	2.00	3.6	35.0
Naphthalene	Ave	1.402	1.687		2.41	2.00	20.3	35.0
Hexachlorobutadiene	Ave	0.8888	0.9262		2.08	2.00	4.2	35.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.8815		2.35	2.00	17.7	35.0
2-Methylnaphthalene	Ave	0.5392	0.5260		1.95	2.00	-2.4	50.0
1-Methylnaphthalene	Ave	0.7641	0.6284		1.65	2.00	-17.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6484		3.98	4.00	-0.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27936/2 Calibration Date: 02/26/2019 10:24
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB20.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.316		1.01	1.00	1.1	30.0
Propene	Ave	1.491	1.449		0.971	1.00	-2.9	30.0
Dichlorodifluoromethane	Ave	5.038	5.024		0.997	1.00	-0.3	30.0
Chloromethane	Ave	0.5876	0.5928		1.01	1.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.602		1.04	1.00	3.7	30.0
Vinyl chloride	Ave	1.827	1.941		1.06	1.00	6.2	30.0
Acetaldehyde	Ave	0.7017	0.6786		4.84	5.00	-3.3	30.0
1,3-Butadiene	Ave	1.320	1.386		1.05	1.00	5.0	30.0
Butane	Ave	2.614	2.867		1.10	1.00	9.7	30.0
Bromomethane	Ave	1.848	1.891		1.02	1.00	2.3	30.0
Chloroethane	Ave	0.8331	0.8788		1.05	1.00	5.5	30.0
Ethanol	Ave	0.8189	0.6709		4.10	5.00	-18.1	30.0
Vinyl bromide	Ave	1.758	1.931		1.10	1.00	9.8	30.0
2-Methylbutane	Ave	1.939	2.073		1.07	1.00	6.9	30.0
Trichlorofluoromethane	Ave	4.604	4.705		1.02	1.00	2.2	30.0
Acrolein	Ave	0.5850	0.6123		1.05	1.00	4.7	30.0
Acetonitrile	Ave	0.7361	0.7478		1.02	1.00	1.6	30.0
Acetone	Ave	0.7520	0.8069		1.07	1.00	7.3	30.0
Pentane	Ave	0.2105	0.2289		1.09	1.00	8.8	30.0
Isopropyl alcohol	QuaF		2.687		1.14	1.00	13.8	30.0
Ethyl ether	Ave	1.862	2.011		1.08	1.00	8.0	30.0
1,1-Dichloroethene	Ave	1.554	1.566		1.01	1.00	0.8	30.0
Acrylonitrile	Ave	1.195	1.264		1.06	1.00	5.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	3.776		1.02	1.00	2.2	30.0
tert-Butyl alcohol	Ave	2.635	2.689		1.02	1.00	2.0	30.0
Methylene Chloride	Ave	1.636	1.629		0.996	1.00	-0.4	30.0
3-Chloropropene	Ave	1.460	1.526		1.05	1.00	4.5	30.0
Carbon disulfide	Ave	4.496	4.677		1.04	1.00	4.0	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.607		1.01	1.00	0.9	30.0
2-Methylpentane	Ave	3.661	3.447		0.942	1.00	-5.8	30.0
Methyl tert-butyl ether	Ave	3.774	3.956		1.05	1.00	4.8	30.0
1,1-Dichloroethane	Ave	3.031	3.136		1.03	1.00	3.5	30.0
Vinyl acetate	Ave	4.329	4.623		1.07	1.00	6.8	30.0
Hexane	Ave	1.211	1.226		1.01	1.00	1.2	30.0
2-Butanone (MEK)	Ave	0.6878	0.6996		1.02	1.00	1.7	30.0
Isopropyl ether	Ave	5.664	5.960		1.05	1.00	5.2	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.662		1.03	1.00	2.9	30.0
Ethyl acetate	Ave	3.858	3.837		0.995	1.00	-0.5	30.0
Chloroform	Ave	3.476	3.608		1.04	1.00	3.8	30.0
Tert-butyl ethyl ether	Ave	4.715	4.610		0.978	1.00	-2.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27936/2 Calibration Date: 02/26/2019 10:24
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB20.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	1.901		1.02	1.00	1.7	30.0
1,1,1-Trichloroethane	Ave	3.305	3.372		1.02	1.00	2.0	30.0
1,2-Dichloroethane	Ave	0.4310	0.4365		1.01	1.00	1.3	30.0
Cyclohexane	Ave	0.1257	0.1245		0.990	1.00	-1.0	30.0
Benzene	Ave	0.8457	0.8690		1.03	1.00	2.8	30.0
Carbon tetrachloride	Ave	0.6846	0.6978		1.02	1.00	1.9	30.0
1-Butanol	Ave	0.1144	0.1135		0.992	1.00	-0.8	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1772		1.01	1.00	1.0	30.0
Thiophene	Ave	0.4839	0.4812		0.995	1.00	-0.5	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.415		1.01	1.00	1.4	30.0
Heptane	Ave	0.2694	0.2673		0.992	1.00	-0.8	30.0
1,2-Dichloropropane	Ave	0.3598	0.3680		1.02	1.00	2.3	30.0
Trichloroethene	Ave	0.3991	0.3983		0.998	1.00	-0.2	30.0
Dibromomethane	Ave	0.4192	0.4221		1.01	1.00	0.7	30.0
Bromodichloromethane	Ave	0.6298	0.6505		1.03	1.00	3.3	30.0
1,4-Dioxane	Ave	0.1270	0.1221		0.961	1.00	-3.9	30.0
Methyl methacrylate	Ave	0.3781	0.3880		1.03	1.00	2.6	30.0
Methylcyclohexane	LinF		0.5744		1.09	1.00	9.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.7558		0.997	1.00	-0.3	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5127		1.08	1.00	8.3	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5249		1.08	1.00	8.1	30.0
Toluene	Ave	1.139	1.187		1.04	1.00	4.3	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.3949		1.04	1.00	4.5	30.0
2-Hexanone	Ave	0.3734	0.3804		1.02	1.00	1.9	30.0
Octane	Ave	0.3251	0.3428		1.05	1.00	5.5	30.0
Dibromochloromethane	Ave	0.7610	0.8224		1.08	1.00	8.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7180		1.04	1.00	4.1	30.0
Tetrachloroethene	Ave	0.4638	0.4683		1.01	1.00	1.0	30.0
Chlorobenzene	Ave	0.9365	0.9443		1.01	1.00	0.8	30.0
2,3-Dimethylheptane	Ave	1.197	1.102		0.921	1.00	-7.9	30.0
Ethylbenzene	Ave	1.450	1.490		1.03	1.00	2.8	30.0
m-Xylene & p-Xylene	Ave	1.118	1.185		2.12	2.00	6.0	30.0
Nonane	Ave	0.7205	0.7611		1.06	1.00	5.6	30.0
Bromoform	Ave	0.8550	0.8200		0.959	1.00	-4.1	30.0
Styrene	Ave	0.7534	0.8226		1.09	1.00	9.2	30.0
o-Xylene	Ave	1.138	1.170		1.03	1.00	2.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	0.9693		1.05	1.00	5.1	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2290		1.01	1.00	0.8	30.0
Isopropylbenzene	Ave	1.571	1.625		1.03	1.00	3.5	30.0
Propylbenzene	Ave	0.4111	0.4243		1.03	1.00	3.2	30.0
2-Chlorotoluene	Ave	0.4027	0.4135		1.03	1.00	2.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27936/2 Calibration Date: 02/26/2019 10:24
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB20.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.476		0.988	1.00	-1.2	30.0
1,3,5-Trimethylbenzene	Lin1		0.7128		1.08	1.00	8.4	30.0
Alpha Methyl Styrene	Ave	0.6224	0.5801		0.932	1.00	-6.8	30.0
Decane	Ave	0.9226	0.9868		1.07	1.00	7.0	30.0
tert-Butylbenzene	Ave	1.398	1.428		1.02	1.00	2.2	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.339		1.03	1.00	2.7	30.0
sec-Butylbenzene	Ave	1.948	2.002		1.03	1.00	2.8	30.0
1,3-Dichlorobenzene	Ave	0.9455	0.8984		0.950	1.00	-5.0	30.0
Benzyl chloride	Ave	0.9648	0.9208		0.954	1.00	-4.6	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.8455		0.945	1.00	-5.5	30.0
4-Isopropyltoluene	Ave	1.512	1.580		1.05	1.00	4.5	30.0
1,2,3-Trimethylbenzene	Ave	1.280	0.9713		0.759	1.00	-24.1	30.0
Butylcyclohexane	Ave	1.039	1.018		0.980	1.00	-2.0	30.0
1,2-Dichlorobenzene	Ave	0.9417	0.8992		0.955	1.00	-4.5	30.0
Indane	Ave	1.252	1.217		0.972	1.00	-2.8	30.0
Indene	Ave	1.077	0.8337		0.774	1.00	-22.6	30.0
Butylbenzene	Ave	1.562	1.697		1.09	1.00	8.6	30.0
Undecane	Ave	1.067	1.082		1.01	1.00	1.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3539		0.906	1.00	-9.4	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.314		0.933	1.00	-6.7	30.0
Dodecane	Ave	1.039	0.9684		0.932	1.00	-6.8	30.0
1,2,4-Trichlorobenzene	Lin1		0.5696		0.789	1.00	-21.1	30.0
Naphthalene	Ave	1.402	1.323		0.944	1.00	-5.6	30.0
Hexachlorobutadiene	Ave	0.8888	0.8093		0.911	1.00	-8.9	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.6973		0.931	1.00	-6.9	30.0
2-Methylnaphthalene	Ave	0.5392	0.2757		0.511	1.00	-48.9	50.0
1-Methylnaphthalene	Ave	0.7641	0.3387		0.443	1.00	-55.7*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6429		3.95	4.00	-1.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.582		1.09	1.00	9.2	30.0
Propene	Ave	1.491	1.525		1.02	1.00	2.3	30.0
Dichlorodifluoromethane	Ave	5.038	5.333		1.06	1.00	5.9	30.0
Chloromethane	Ave	0.5876	0.6486		1.10	1.00	10.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.636		1.05	1.00	4.6	30.0
Vinyl chloride	Ave	1.827	2.022		1.11	1.00	10.7	30.0
Acetaldehyde	Ave	0.7017	0.7335		5.23	5.00	4.5	30.0
1,3-Butadiene	Ave	1.320	1.465		1.11	1.00	11.0	30.0
Butane	Ave	2.614	3.037		1.16	1.00	16.2	30.0
Bromomethane	Ave	1.848	2.013		1.09	1.00	8.9	30.0
Chloroethane	Ave	0.8331	0.9136		1.10	1.00	9.7	30.0
Ethanol	Ave	0.8189	0.7398		4.52	5.00	-9.7	30.0
Vinyl bromide	Ave	1.758	2.069		1.18	1.00	17.6	30.0
2-Methylbutane	Ave	1.939	2.241		1.16	1.00	15.6	30.0
Trichlorofluoromethane	Ave	4.604	5.060		1.10	1.00	9.9	30.0
Acrolein	Ave	0.5850	0.6401		1.09	1.00	9.4	30.0
Acetonitrile	Ave	0.7361	0.8155		1.11	1.00	10.8	30.0
Acetone	Ave	0.7520	0.8565		1.14	1.00	13.9	30.0
Pentane	Ave	0.2105	0.2364		1.12	1.00	12.3	30.0
Isopropyl alcohol	QuaF		2.815		1.19	1.00	19.3	30.0
Ethyl ether	Ave	1.862	2.216		1.19	1.00	19.0	30.0
1,1-Dichloroethene	Ave	1.554	1.640		1.06	1.00	5.6	30.0
Acrylonitrile	Ave	1.195	1.332		1.11	1.00	11.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	4.086		1.11	1.00	10.5	30.0
tert-Butyl alcohol	Ave	2.635	2.774		1.05	1.00	5.3	30.0
Methylene Chloride	Ave	1.636	1.731		1.06	1.00	5.9	30.0
3-Chloropropene	Ave	1.460	1.651		1.13	1.00	13.1	30.0
Carbon disulfide	Ave	4.496	5.037		1.12	1.00	12.0	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.661		1.04	1.00	4.2	30.0
2-Methylpentane	Ave	3.661	3.712		1.01	1.00	1.4	30.0
Methyl tert-butyl ether	Ave	3.774	4.086		1.08	1.00	8.3	30.0
1,1-Dichloroethane	Ave	3.031	3.376		1.11	1.00	11.4	30.0
Vinyl acetate	Ave	4.329	4.892		1.13	1.00	13.0	30.0
Hexane	Ave	1.211	1.291		1.07	1.00	6.6	30.0
2-Butanone (MEK)	Ave	0.6878	0.7365		1.07	1.00	7.1	30.0
Isopropyl ether	Ave	5.664	6.416		1.13	1.00	13.3	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.767		1.09	1.00	9.4	30.0
Ethyl acetate	Ave	3.858	4.156		1.08	1.00	7.7	30.0
Chloroform	Ave	3.476	3.989		1.15	1.00	14.8	30.0
Tert-butyl ethyl ether	Ave	4.715	4.863		1.03	1.00	3.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	2.014		1.08	1.00	7.7	30.0
1,1,1-Trichloroethane	Ave	3.305	3.602		1.09	1.00	9.0	30.0
1,2-Dichloroethane	Ave	0.4310	0.4711		1.09	1.00	9.3	30.0
Benzene	Ave	0.8457	0.9162		1.08	1.00	8.3	30.0
Cyclohexane	Ave	0.1257	0.1264		1.00	1.00	0.5	30.0
Carbon tetrachloride	Ave	0.6846	0.7453		1.09	1.00	8.9	30.0
1-Butanol	Ave	0.1144	0.1225		1.07	1.00	7.1	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1843		1.05	1.00	5.1	30.0
Thiophene	Ave	0.4839	0.5031		1.04	1.00	4.0	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.506		1.08	1.00	7.9	30.0
Heptane	Ave	0.2694	0.2772		1.03	1.00	2.9	30.0
1,2-Dichloropropane	Ave	0.3598	0.3965		1.10	1.00	10.2	30.0
Trichloroethene	Ave	0.3991	0.4146		1.04	1.00	3.9	30.0
Dibromomethane	Ave	0.4192	0.4613		1.10	1.00	10.0	30.0
Bromodichloromethane	Ave	0.6298	0.7064		1.12	1.00	12.2	30.0
1,4-Dioxane	Ave	0.1270	0.1235		0.973	1.00	-2.7	30.0
Methyl methacrylate	Ave	0.3781	0.4271		1.13	1.00	13.0	30.0
Methylcyclohexane	LinF		0.5957		1.13	1.00	13.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.8028		1.06	1.00	6.0	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5430		1.15	1.00	14.7	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5432		1.12	1.00	11.9	30.0
Toluene	Ave	1.139	1.249		1.10	1.00	9.7	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.4227		1.12	1.00	11.8	30.0
2-Hexanone	Ave	0.3734	0.3986		1.07	1.00	6.7	30.0
Octane	Ave	0.3251	0.3570		1.10	1.00	9.8	30.0
Dibromochloromethane	Ave	0.7610	0.8783		1.15	1.00	15.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7564		1.10	1.00	9.7	30.0
Tetrachloroethene	Ave	0.4638	0.4906		1.06	1.00	5.8	30.0
Chlorobenzene	Ave	0.9365	1.016		1.08	1.00	8.5	30.0
2,3-Dimethylheptane	Ave	1.197	1.242		1.04	1.00	3.8	30.0
Ethylbenzene	Ave	1.450	1.579		1.09	1.00	8.9	30.0
m-Xylene & p-Xylene	Ave	1.118	1.285		2.30	2.00	14.9	30.0
Nonane	Ave	0.7205	0.8189		1.14	1.00	13.7	30.0
Bromoform	Ave	0.8550	0.8677		1.01	1.00	1.5	30.0
Styrene	Ave	0.7534	0.8913		1.18	1.00	18.3	30.0
o-Xylene	Ave	1.138	1.284		1.13	1.00	12.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	1.065		1.15	1.00	15.5	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2451		1.08	1.00	7.9	30.0
Isopropylbenzene	Ave	1.571	1.737		1.11	1.00	10.6	30.0
Propylbenzene	Ave	0.4111	0.4533		1.10	1.00	10.3	30.0
2-Chlorotoluene	Ave	0.4027	0.4454		1.11	1.00	10.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.617		1.08	1.00	8.2	30.0
1,3,5-Trimethylbenzene	Lin1		0.7773		1.18	1.00	17.9	30.0
Alpha Methyl Styrene	Ave	0.6224	0.6345		1.02	1.00	2.0	30.0
Decane	Ave	0.9226	1.120		1.21	1.00	21.4	30.0
tert-Butylbenzene	Ave	1.398	1.570		1.12	1.00	12.3	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.500		1.15	1.00	15.1	30.0
sec-Butylbenzene	Ave	1.948	2.219		1.14	1.00	13.9	30.0
1,3-Dichlorobenzene	Ave	0.9455	1.004		1.06	1.00	6.1	30.0
Benzyl chloride	Ave	0.9648	1.031		1.07	1.00	6.9	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.9350		1.05	1.00	4.5	30.0
4-Isopropyltoluene	Ave	1.512	1.756		1.16	1.00	16.2	30.0
1,2,3-Trimethylbenzene	Ave	1.280	1.068		0.835	1.00	-16.5	30.0
Butylcyclohexane	Ave	1.039	1.173		1.13	1.00	13.0	30.0
Indane	Ave	1.252	1.365		1.09	1.00	9.0	30.0
1,2-Dichlorobenzene	Ave	0.9417	1.007		1.07	1.00	7.0	30.0
Indene	Ave	1.077	0.9492		0.882	1.00	-11.8	30.0
Butylbenzene	Ave	1.562	1.974		1.26	1.00	26.3	30.0
Undecane	Ave	1.067	1.264		1.18	1.00	18.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3904		1.00	1.00	-0.0	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.500		1.06	1.00	6.4	30.0
Dodecane	Ave	1.039	1.259		1.21	1.00	21.3	30.0
1,2,4-Trichlorobenzene	Lin1		0.6653		0.910	1.00	-9.0	30.0
Naphthalene	Ave	1.402	1.620		1.16	1.00	15.5	30.0
Hexachlorobutadiene	Ave	0.8888	0.9313		1.05	1.00	4.8	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.8521		1.14	1.00	13.7	30.0
2-Methylnaphthalene	Ave	0.5392	0.4269		0.792	1.00	-20.8	50.0
1-Methylnaphthalene	Ave	0.7641	0.5441		0.712	1.00	-28.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6727		4.13	4.00	3.2	30.0

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27936/4
 Matrix: Air Lab File ID: H500BB22.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27936/4
 Matrix: Air Lab File ID: H500BB22.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27980/5
 Matrix: Air Lab File ID: HB27LOT14399MB.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.0691	J	0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27980/5
 Matrix: Air Lab File ID: HB27LOT14399MB.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 02/27/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	0.513	J	0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27936/1002
 Matrix: Air Lab File ID: HCCVB20-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 10:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.03		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.02		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.01		0.080	0.015
67-66-3	Chloroform	119.38	1.04		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.03		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	0.997		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.03		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.01		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.01		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.03		0.080	0.027
75-09-2	Methylene Chloride	84.93	0.996		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.05		0.40	0.068
91-20-3	Naphthalene	128.17	0.944		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.01		0.080	0.016
108-88-3	Toluene	92.14	1.04		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.01		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.789		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.02		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.04		0.080	0.021
79-01-6	Trichloroethene	131.39	0.998		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	0.759		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.03		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.08		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.06		0.040	0.029
1330-20-7	Xylenes, Total	106.17	3.15		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27980/1002
 Matrix: Air Lab File ID: HCCVB27-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 11:50
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.08		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.09		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.09		0.080	0.015
67-66-3	Chloroform	119.38	1.15		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.09		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.06		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.11		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.09		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.06		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.09		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.06		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.08		0.40	0.068
91-20-3	Naphthalene	128.17	1.16		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.06		0.080	0.016
108-88-3	Toluene	92.14	1.10		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.04		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.910		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.09		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.12		0.080	0.021
79-01-6	Trichloroethene	131.39	1.04		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	0.835		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.15		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.18		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.11		0.040	0.029
1330-20-7	Xylenes, Total	106.17	3.43		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Instrument ID: MH Start Date: 02/20/2019 13:11

Analysis Batch Number: 27843 End Date: 02/21/2019 03:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27843/1		02/20/2019 13:11	1	HBFB20IC.D	RTX-5 0.32 (mm)
IC 140-27843/3		02/20/2019 15:12	1	HB20IC09.D	RTX-5 0.32 (mm)
IC 140-27843/5		02/20/2019 16:59	1	HB20IC10.D	RTX-5 0.32 (mm)
IC 140-27843/8		02/20/2019 19:38	1	HB20IC01.D	RTX-5 0.32 (mm)
IC 140-27843/9		02/20/2019 20:31	1	HB20IC02.D	RTX-5 0.32 (mm)
IC 140-27843/10		02/20/2019 21:26	1	HB20IC03.D	RTX-5 0.32 (mm)
IC 140-27843/11		02/20/2019 22:20	1	HB20IC04.D	RTX-5 0.32 (mm)
IC 140-27843/12		02/20/2019 23:14	1	HB20IC05.D	RTX-5 0.32 (mm)
IC 140-27843/13		02/21/2019 00:08	1	HB20IC06.D	RTX-5 0.32 (mm)
ICIS 140-27843/14		02/21/2019 01:03	1	HB20IC07.D	RTX-5 0.32 (mm)
IC 140-27843/15		02/21/2019 01:57	1	HB20IC08.D	RTX-5 0.32 (mm)
ICV 140-27843/17		02/21/2019 03:43	1	HB20ICV.D	RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Instrument ID: MH Start Date: 02/26/2019 09:56

Analysis Batch Number: 27936 End Date: 02/27/2019 09:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27936/1		02/26/2019 09:56	1	HBFB20.D	RTX-5 0.32 (mm)
CCVIS 140-27936/2		02/26/2019 10:24	1	HCCVB20.D	RTX-5 0.32 (mm)
LCS 140-27936/1002		02/26/2019 10:24	1	HCCVB20-LCS.d	RTX-5 0.32 (mm)
MB 140-27936/4		02/26/2019 12:38	1	H500BB22.D	RTX-5 0.32 (mm)
140-14390-1		02/26/2019 13:31	1	HB26P101.D	RTX-5 0.32 (mm)
140-14390-3		02/26/2019 15:17	1	HB26P103.D	RTX-5 0.32 (mm)
140-14390-4		02/26/2019 16:10	1	HB26P104.D	RTX-5 0.32 (mm)
140-14390-5		02/26/2019 17:03	1	HB26P105.D	RTX-5 0.32 (mm)
140-14390-6		02/26/2019 17:56	1	HB26P106.D	RTX-5 0.32 (mm)
140-14390-7		02/26/2019 18:49	1	HB26P107.D	RTX-5 0.32 (mm)
140-14390-8		02/26/2019 19:43	1	HB26P108.D	RTX-5 0.32 (mm)
140-14390-9		02/26/2019 20:36	1	HB26P109.D	RTX-5 0.32 (mm)
140-14390-10		02/26/2019 21:29	1	HB26P110.D	RTX-5 0.32 (mm)
140-14390-11		02/26/2019 22:23	1.67	HB26P111.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 23:16	1		RTX-5 0.32 (mm)
140-14390-12		02/27/2019 00:09	1	HB26P112.D	RTX-5 0.32 (mm)
140-14390-13		02/27/2019 01:02	1	HB26P113.D	RTX-5 0.32 (mm)
140-14390-14		02/27/2019 01:55	1	HB26P114.D	RTX-5 0.32 (mm)
140-14390-15		02/27/2019 02:48	1	HB26P115.D	RTX-5 0.32 (mm)
140-14390-16		02/27/2019 03:41	1	HB26P116D.D	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 04:35	1		RTX-5 0.32 (mm)
140-14390-1 DL		02/27/2019 05:28	1	HB26P101D.D	RTX-5 0.32 (mm)
140-14390-2		02/27/2019 06:22	1	HB26P102R.D	RTX-5 0.32 (mm)
140-14390-17		02/27/2019 07:16	1	HB26P203R.D	RTX-5 0.32 (mm)
140-14390-4 DL		02/27/2019 08:09	1	HB26P104DL.D	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 09:56	1		RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Instrument ID: MH Start Date: 02/27/2019 11:22

Analysis Batch Number: 27980 End Date: 02/28/2019 07:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27980/1		02/27/2019 11:22	1	HBFB27.D	RTX-5 0.32 (mm)
CCVIS 140-27980/2		02/27/2019 11:50	1	HCCVB27.D	RTX-5 0.32 (mm)
LCS 140-27980/1002		02/27/2019 11:50	1	HCCVB27-LCS.d	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 13:42	1		RTX-5 0.32 (mm)
MB 140-27980/5		02/27/2019 13:42	1	HB27LOT14399MB.D	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 14:36	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 16:42	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 18:27	1.33		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 19:20	4.93		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 20:14	1		RTX-5 0.32 (mm)
140-14390-5 DL		02/28/2019 03:30	1	HB27P112.D	RTX-5 0.32 (mm)
140-14390-18		02/28/2019 04:23	1	HB27P113.D	RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 06:06	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 07:01	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 07:56	1.33		RTX-5 0.32 (mm)

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Batch Number: 27936 Batch Start Date: 02/26/19 09:56 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101S 00087	40MXISSURP 00003
BFB 140-27936/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27936/2		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL
MB 140-27936/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14390-A-1	SV-126-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-3	SV-100-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-4	SV-060-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-5	SV-118-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-6	SV-015-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-7	SV-078-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-8	SV-136-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-9	SV-076-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-10	SV-168-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-11	SV-075-A-26	TO 15 LL	T	167 mL	500 mL	1	1		40 mL
140-14390-A-12	BCK-1-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-13	BCK-2-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-14	BCK-3-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-15	BCK-4-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-16	IA-001-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-1	SV-126-C-26	TO 15 LL	T	10 mL	500 mL	1	1		40 mL
140-14390-A-2	SV-101-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-17	IA-004-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-4	SV-060-C-26	TO 15 LL	T	40 mL	500 mL	1	1		40 mL
LCS 140-27936/1002		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27936/1		TO 15 LL		40 mL					
CCVIS 140-27936/2		TO 15 LL							
MB 140-27936/4		TO 15 LL							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Batch Number: 27936 Batch Start Date: 02/26/19 09:56 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MSUR 00002				
140-14390-A-1	SV-126-C-26	TO 15 LL	T					
140-14390-A-3	SV-100-C-26	TO 15 LL	T					
140-14390-A-4	SV-060-C-26	TO 15 LL	T					
140-14390-A-5	SV-118-A-26	TO 15 LL	T					
140-14390-A-6	SV-015-A-26	TO 15 LL	T					
140-14390-A-7	SV-078-A-26	TO 15 LL	T					
140-14390-A-8	SV-136-A-26	TO 15 LL	T					
140-14390-A-9	SV-076-A-26	TO 15 LL	T					
140-14390-A-10	SV-168-A-26	TO 15 LL	T					
140-14390-A-11	SV-075-A-26	TO 15 LL	T					
140-14390-A-12	BCK-1-26	TO 15 LL	T					
140-14390-A-13	BCK-2-26	TO 15 LL	T					
140-14390-A-14	BCK-3-26	TO 15 LL	T					
140-14390-A-15	BCK-4-26	TO 15 LL	T					
140-14390-A-16	IA-001-C-26	TO 15 LL	T					
140-14390-A-1	SV-126-C-26	TO 15 LL	T					
140-14390-A-2	SV-101-C-26	TO 15 LL	T					
140-14390-A-17	IA-004-C-26	TO 15 LL	T					
140-14390-A-4	SV-060-C-26	TO 15 LL	T					
LCS 140-27936/1002		TO 15 LL						

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Batch Number: 27980 Batch Start Date: 02/27/19 11:22 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101S 00087	40MXISSURP 00003
BFB 140-27980/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27980/2		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL
MB 140-27980/5		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14390-A-5	SV-118-A-26	TO 15 LL	T	10 mL	500 mL	1	1		40 mL
140-14390-A-18	IA-131-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27980/1002		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27980/1		TO 15 LL		40 mL					
CCVIS 140-27980/2		TO 15 LL							
MB 140-27980/5		TO 15 LL							
140-14390-A-5	SV-118-A-26	TO 15 LL	T						
140-14390-A-18	IA-131-C-26	TO 15 LL	T						
LCS 140-27980/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Summa Canister Dilution Worksheet

Client: Tetra Tech, Inc.

Job No.: 140-14390-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Date	Time	Analyst
140-14390-11	1	-8.6	0.71	0.71	2.8	1.19	1.19		1.67	1.67	02/25/19	16:43	Barlozhetskaya, Anna F

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg

Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig

Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury ("Hg)

14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\A17L13969.D
 Lims ID: 140-13969-A-16
 Client ID: 11644
 Sample Type: Client
 Inject. Date: 17-Jan-2019 21:08:30 ALS Bottle#: 7 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010550-015
 Misc. Info.: 11644
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Jan-2019 14:24:21 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0302

First Level Reviewer: khachitpongpanits Date: 18-Jan-2019 12:50:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.412	7.412	0.000	72	192779	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.482	-0.005	95	1113636	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.529	14.530	-0.001	91	977169	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.244	0.000	88	842571	4.05	
25 Isopropyl alcohol	45	4.764	4.758	0.032	29	2291	0.0420	
40 Hexane	56	6.878	6.867	0.006	81	1852	0.0460	
73 Tetrachloroethene	129	13.672	13.662	0.005	89	4691	0.0404	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\A17L13969.D

Injection Date: 17-Jan-2019 21:08:30

Instrument ID: MR

Operator ID:

Lims ID: 140-13969-A-16

Lab Sample ID: 140-13969-16

Worklist Smp#: 15

Client ID: 11644

Purge Vol: 500.000 mL

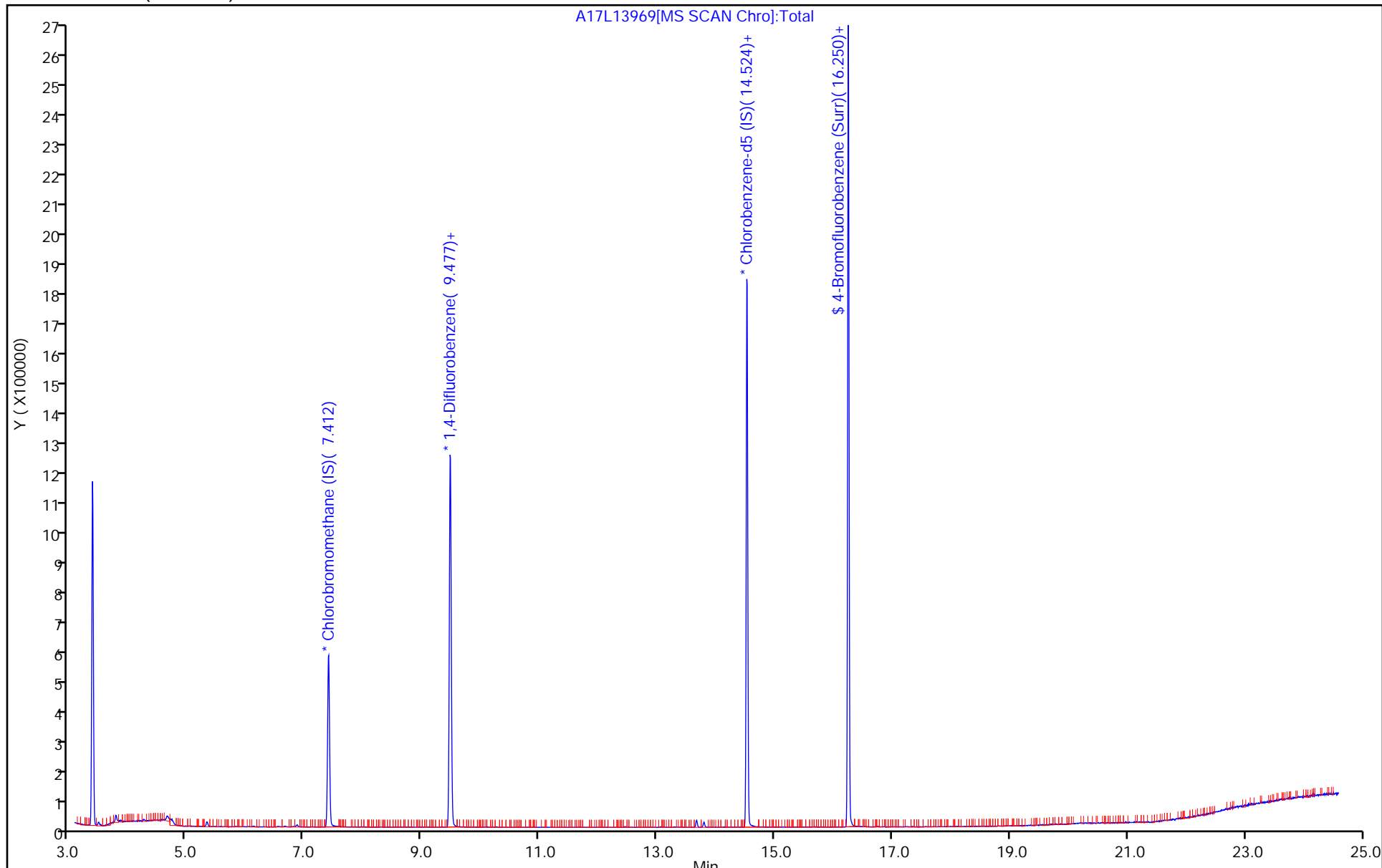
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\A17L13969.D

Injection Date: 17-Jan-2019 21:08:30

Instrument ID: MR

Lims ID: 140-13969-A-16

Lab Sample ID: 140-13969-16

Client ID: 11644

Operator ID:

ALS Bottle#: 7 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

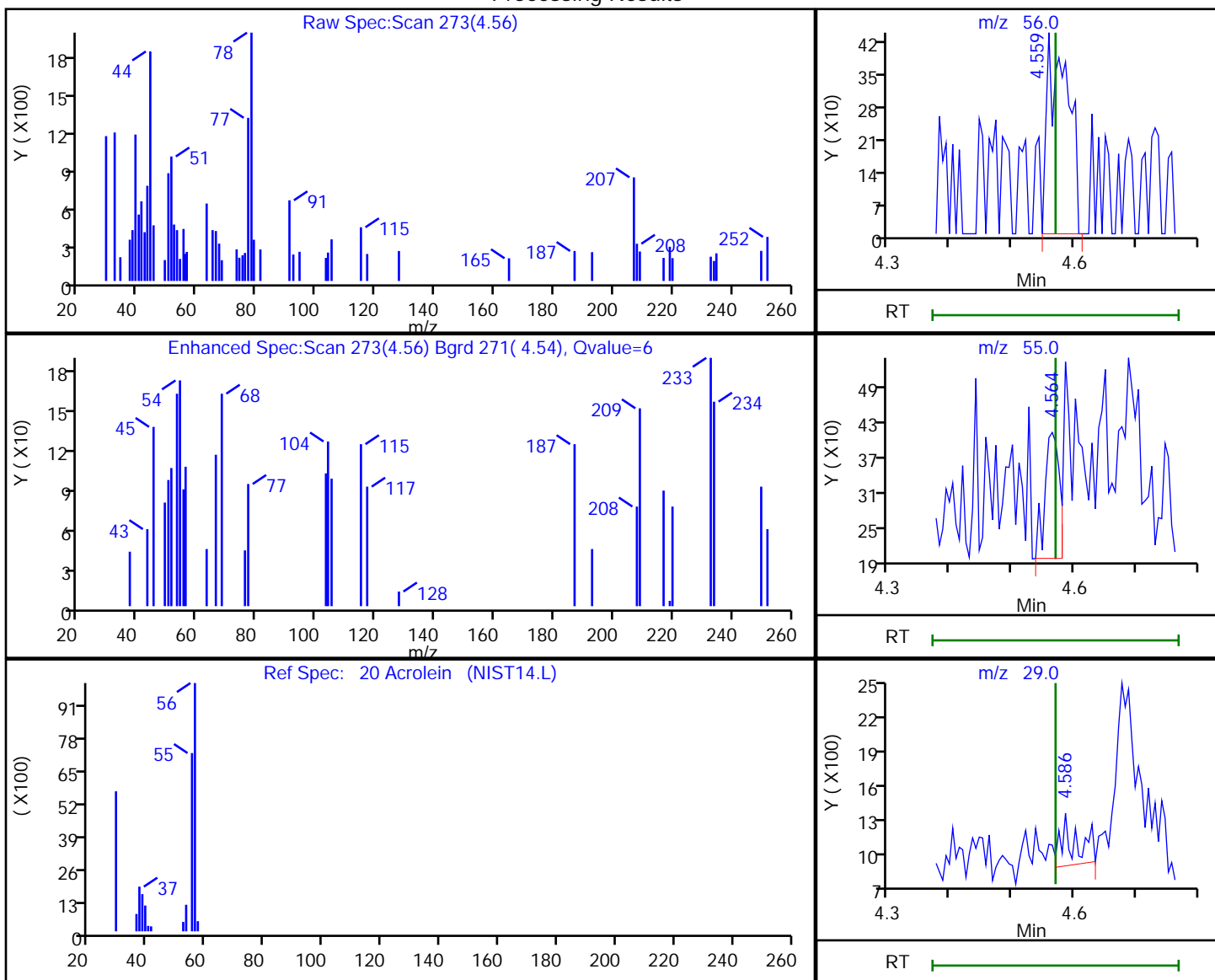
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

20 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
4.56	56.00	1018	0.083544
4.56	55.00	358	
4.59	29.00	740	

Reviewer: khachitpongpanits, 18-Jan-2019 12:49:22

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200(mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200(mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
 Lims ID: 140-13978-A-1
 Client ID: 11819
 Sample Type: Client
 Inject. Date: 19-Jan-2019 00:52:30 ALS Bottle#: 9 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010551-020
 Misc. Info.: 10560
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 21-Jan-2019 11:02:45 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa Date: 21-Jan-2019 11:02:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.406	-0.005	73	181347	4.00	
* 2 1,4-Difluorobenzene	114	9.471	9.482	-0.011	95	1079451	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.529	-0.005	91	948092	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.249	16.243	-0.001	88	823709	4.09	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D

Injection Date: 19-Jan-2019 00:52:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13978-A-1

Lab Sample ID: 140-13978-1

Worklist Smp#: 21

Client ID: 11819

Purge Vol: 500.000 mL

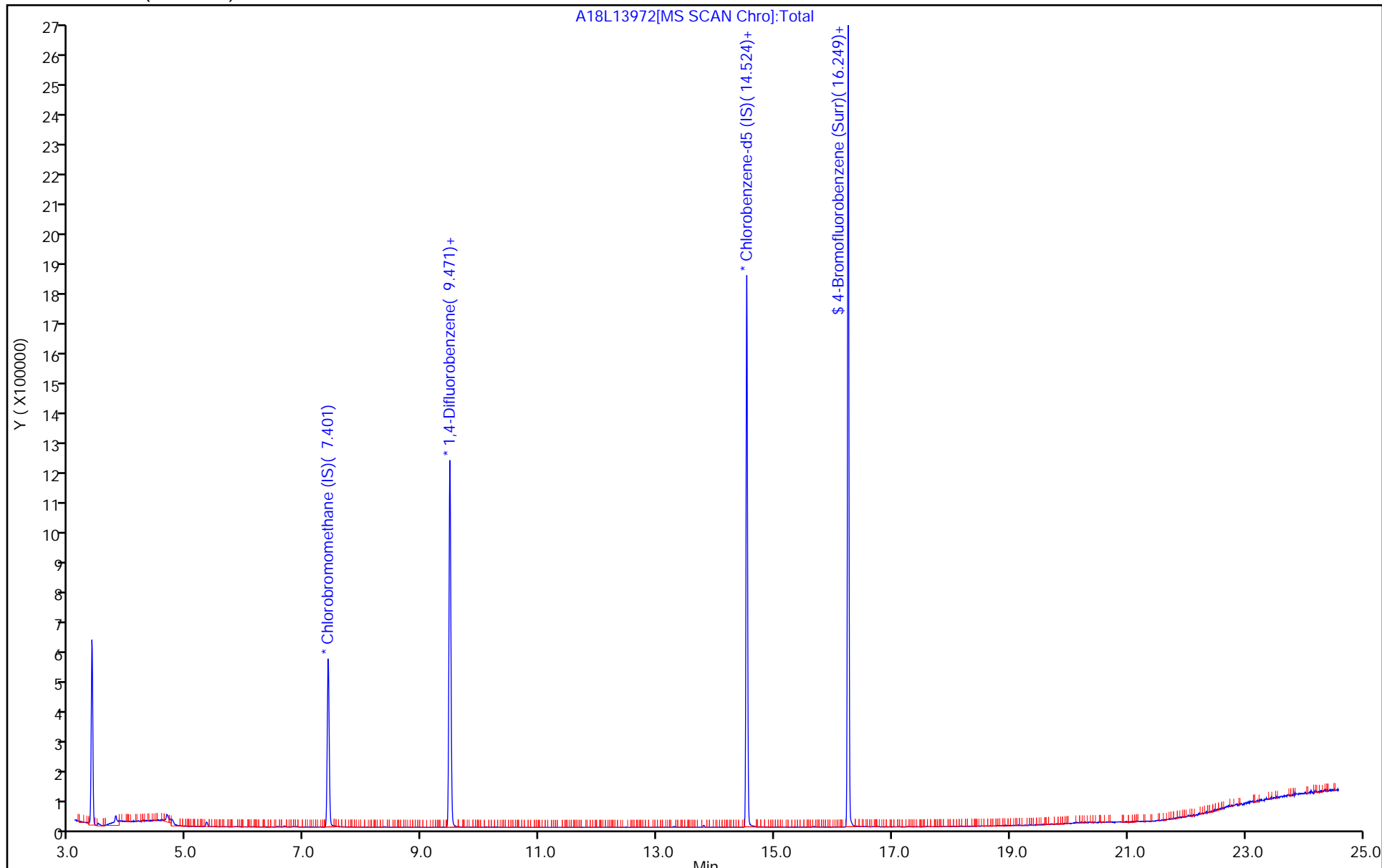
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

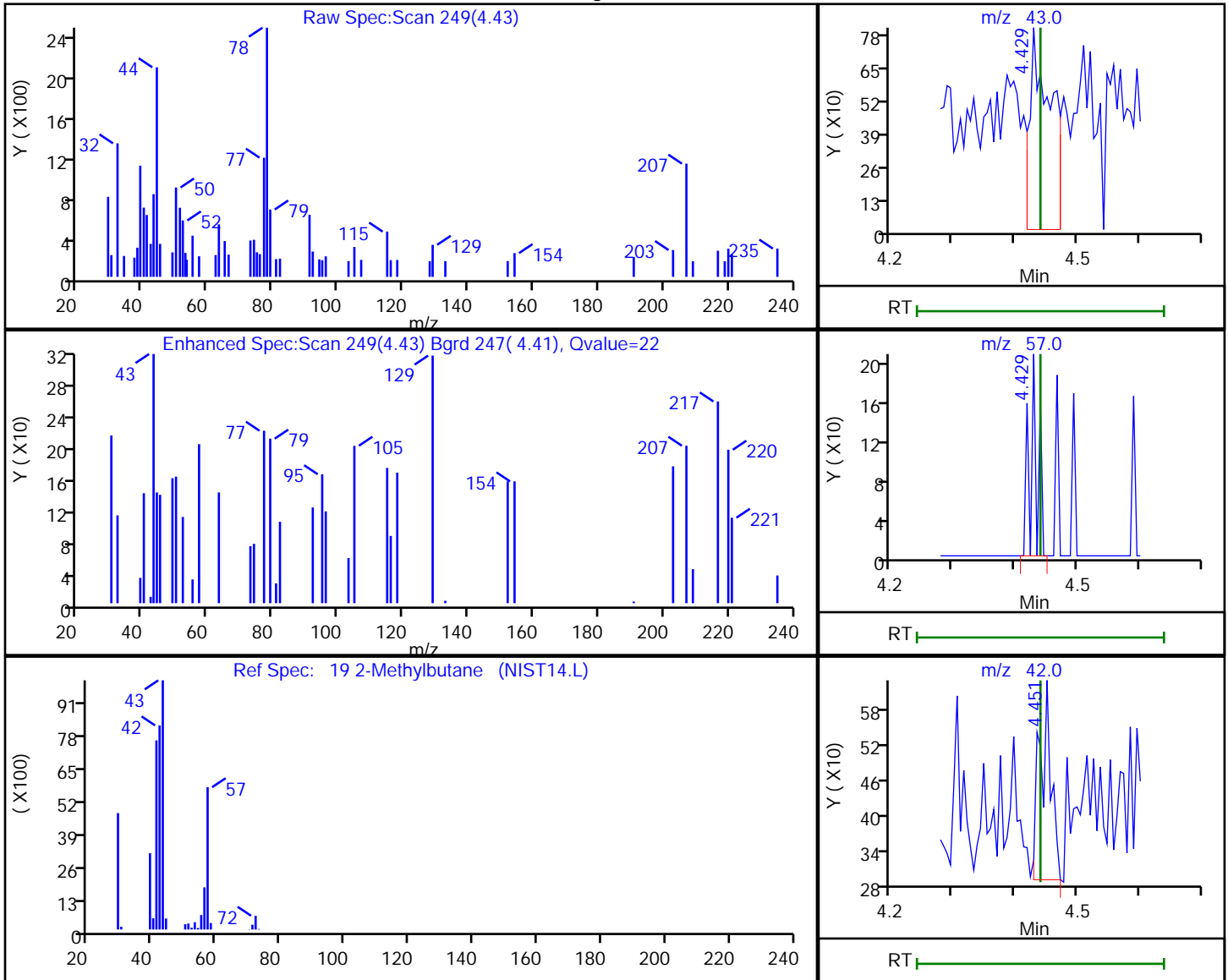


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
 Injection Date: 19-Jan-2019 00:52:30 Instrument ID: MR
 Lims ID: 140-13978-A-1 Lab Sample ID: 140-13978-1
 Client ID: 11819
 Operator ID: HMT ALS Bottle#: 9 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.43	43.00	1906	0.052558
4.43	57.00	164	
4.45	42.00	425	

Reviewer: barlozhetskayaa, 21-Jan-2019 11:02:07

Audit Action: Marked Compound Undetected

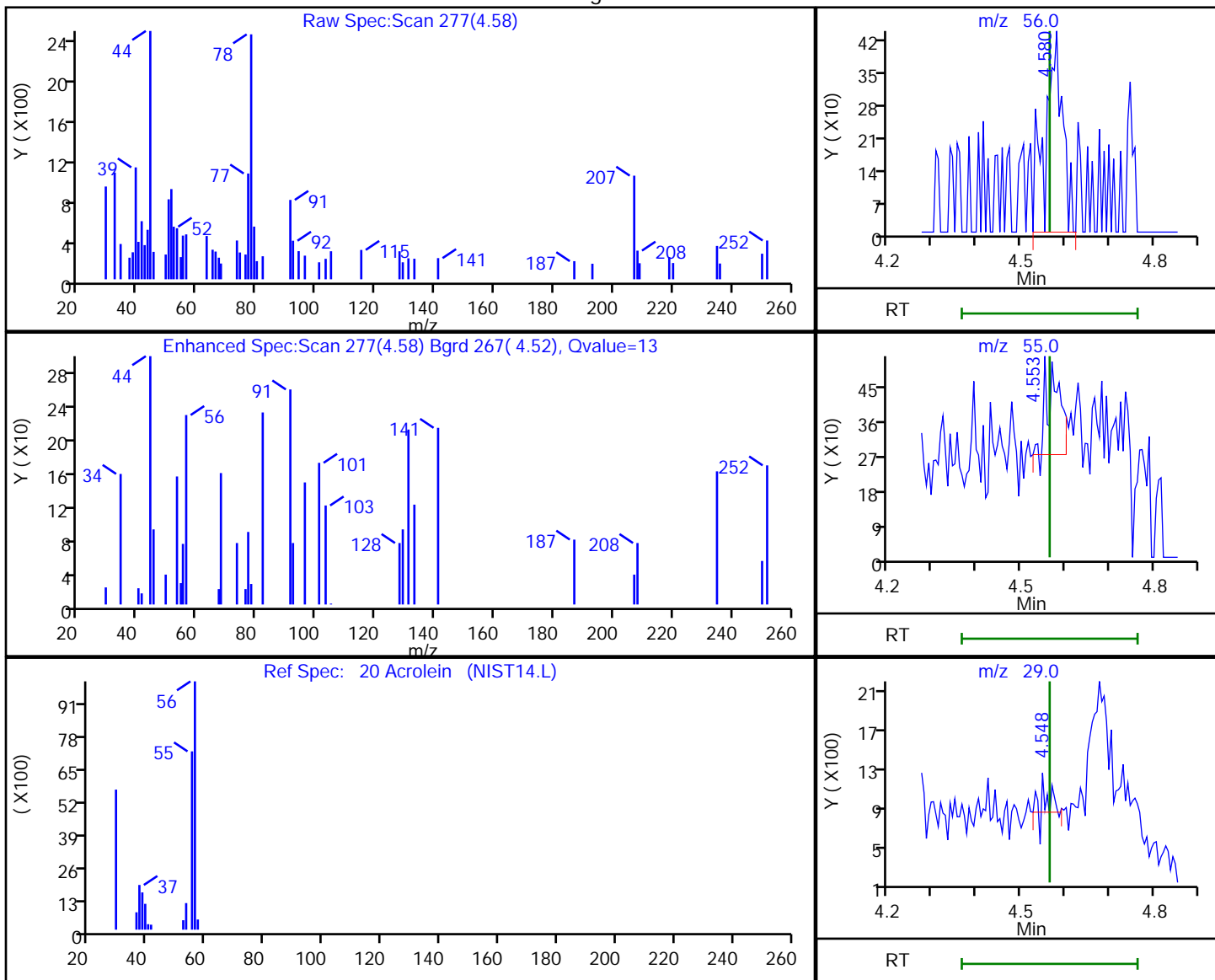
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
 Injection Date: 19-Jan-2019 00:52:30 Instrument ID: MR
 Lims ID: 140-13978-A-1 Lab Sample ID: 140-13978-1
 Client ID: 11819
 Operator ID: HMT ALS Bottle#: 9 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

20 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
4.58	56.00	1194	0.104165
4.55	55.00	499	
4.55	29.00	323	

Reviewer: barlozhetskayaa, 21-Jan-2019 11:02:03

Audit Action: Marked Compound Undetected

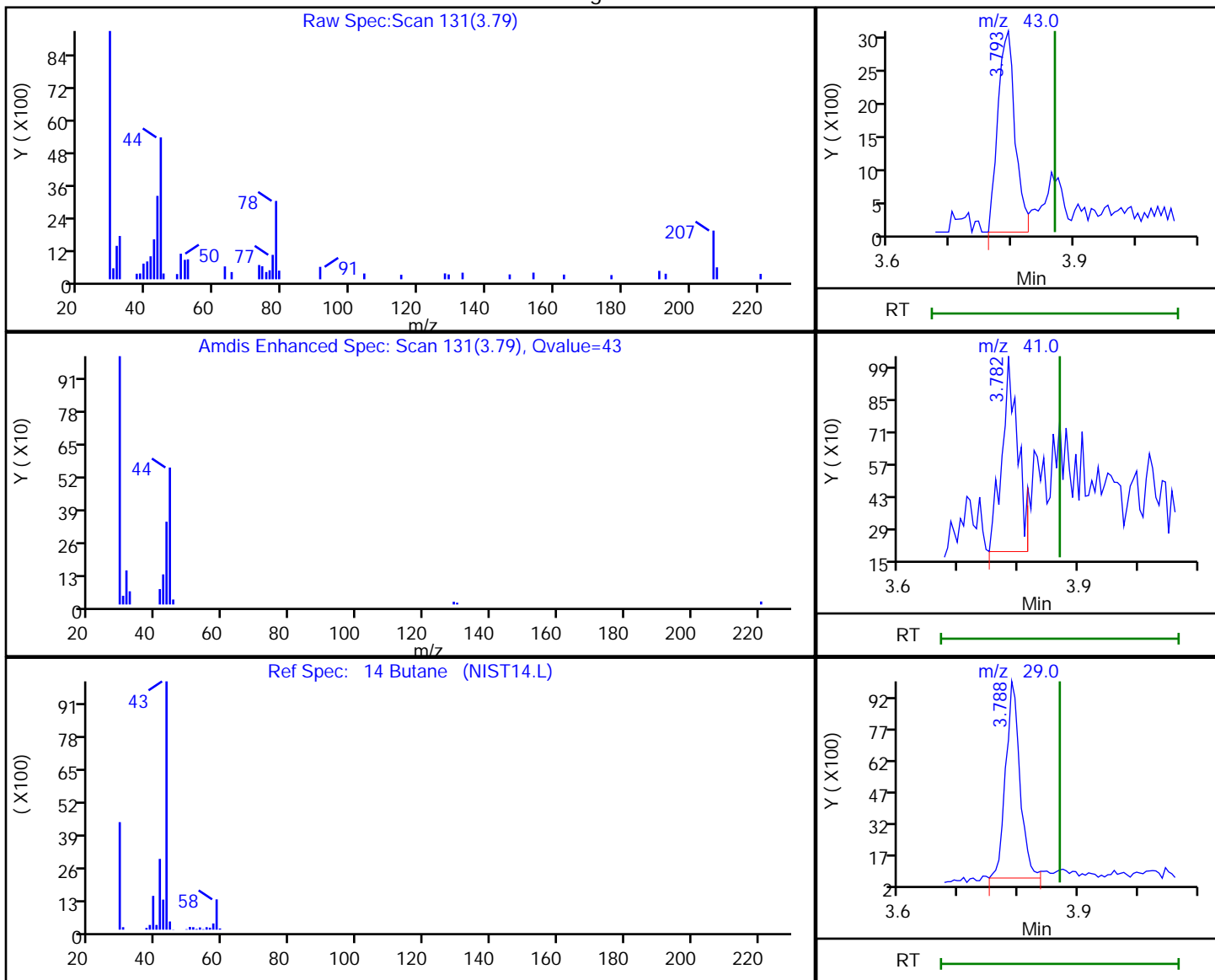
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
 Injection Date: 19-Jan-2019 00:52:30 Instrument ID: MR
 Lims ID: 140-13978-A-1 Lab Sample ID: 140-13978-1
 Client ID: 11819
 Operator ID: HMT ALS Bottle#: 9 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.79	43.00	6012	0.117133
3.78	41.00	1598	
3.79	29.00	15994	

Reviewer: barlozhetskayaa, 21-Jan-2019 11:02:10

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT14002.D
 Lims ID: 140-14002-A-1
 Client ID: 11257
 Sample Type: Client
 Inject. Date: 22-Jan-2019 04:16:30 ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010578-018
 Misc. Info.: 11257
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 17:03:14 Calib Date: 07-Jan-2019 21:45:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20181224-10406.b\HA07IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 17:10:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.824	0.005	94	232573	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.010	0.000	95	1264864	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.734	0.000	88	1049085	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.378	17.404	-0.026	94	706692	4.13	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT14002.D

Injection Date: 22-Jan-2019 04:16:30

Instrument ID: MH

Operator ID: AFB

Lims ID: 140-14002-A-1

Lab Sample ID: 140-14002-1

Worklist Smp#: 18

Client ID: 11257

Purge Vol: 500.000 mL

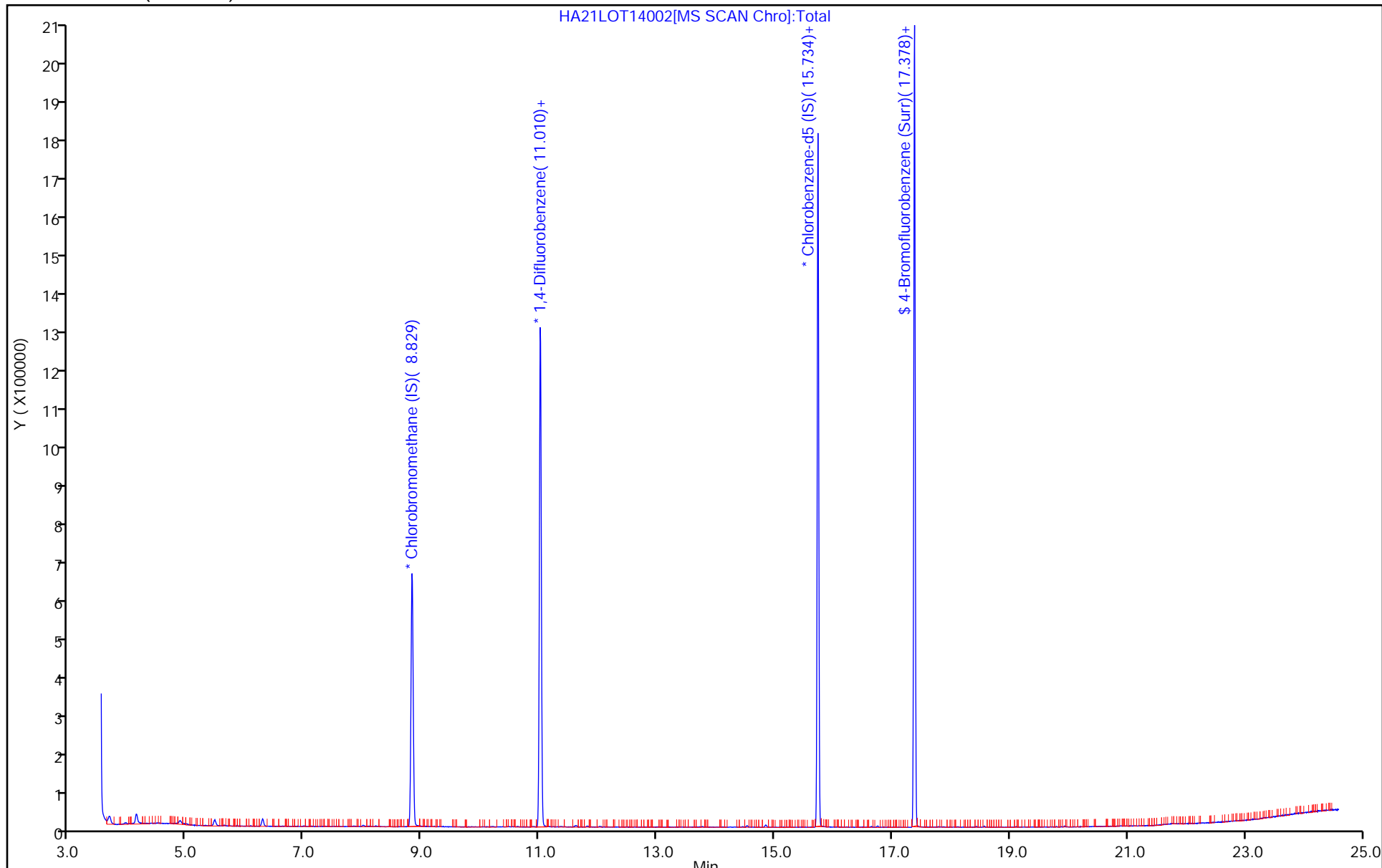
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

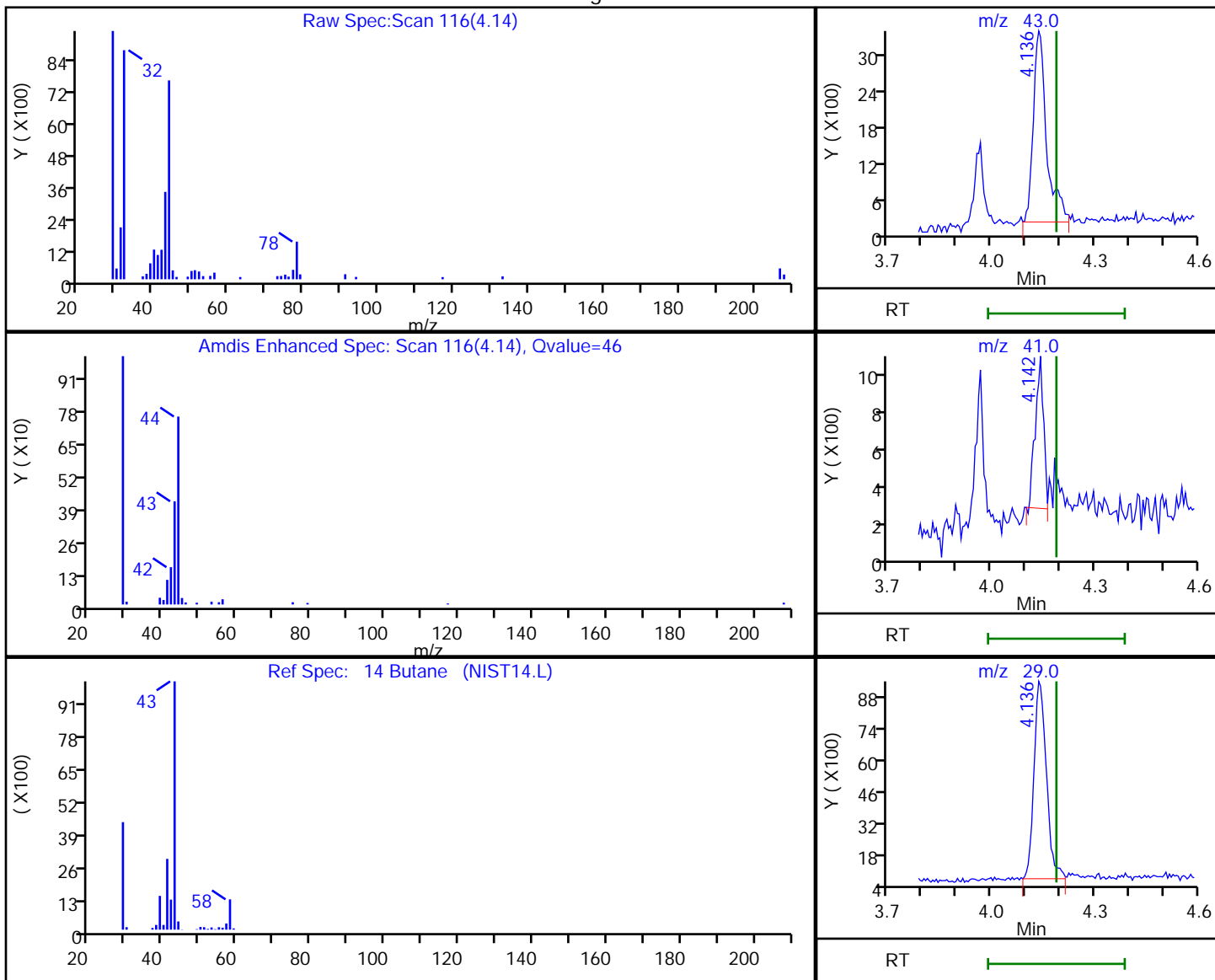


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT14002.D
 Injection Date: 22-Jan-2019 04:16:30 Instrument ID: MH
 Lims ID: 140-14002-A-1 Lab Sample ID: 140-14002-1
 Client ID: 11257
 Operator ID: AFB ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.14	43.00	8576	0.072720
4.14	41.00	1337	
4.14	29.00	22463	

Reviewer: khachitpongpanits, 22-Jan-2019 17:02:48

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190118-10577.b\A23L14031.D
 Lims ID: 140-14031-A-9
 Client ID: 09788
 Sample Type: Client
 Inject. Date: 23-Jan-2019 22:00:30 ALS Bottle#: 14 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010577-017
 Misc. Info.: 09788
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190118-10577.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 23-Jan-2019 20:35:32 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0318

First Level Reviewer: khachitpongpanits Date: 24-Jan-2019 11:15:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.237	0.006	97	473706	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.416	0.000	96	2660006	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.091	0.000	92	2472220	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.714	0.000	82	1959190	3.87	
9 Chloromethane	52	4.098	4.090	0.010	98	6355	0.1154	
31 Methylene Chloride	84	6.611	6.604	0.011	98	26651	0.1370	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190118-10577.b\A23L14031.D

Injection Date: 23-Jan-2019 22:00:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14031-A-9

Lab Sample ID: 140-14031-9

Worklist Smp#: 17

Client ID: 09788

Purge Vol: 500.000 mL

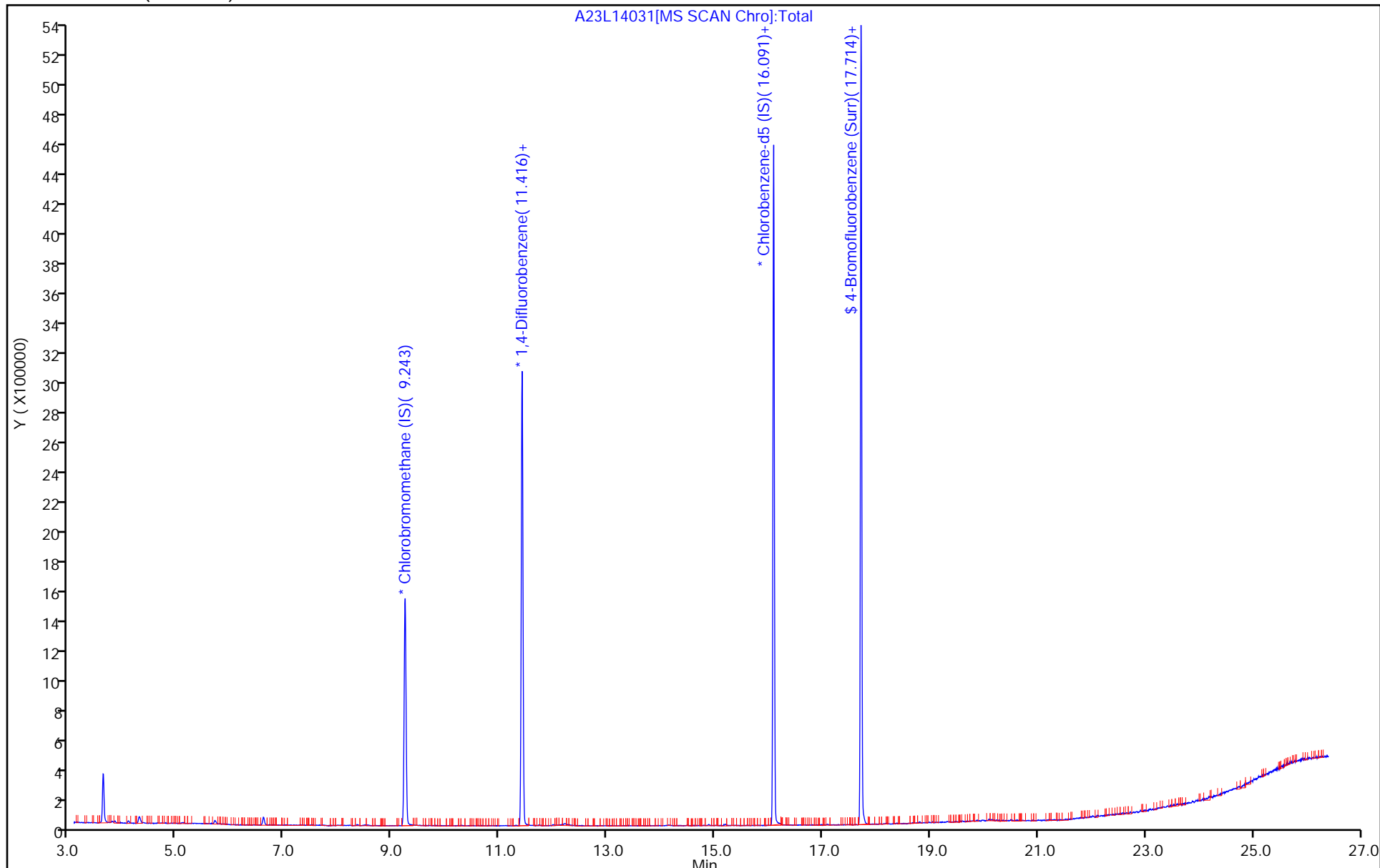
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200(mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D
 Lims ID: 140-14044-A-1
 Client ID: 11547
 Sample Type: Client
 Inject. Date: 24-Jan-2019 15:25:30 ALS Bottle#: 14 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010612-010
 Misc. Info.: 11547
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Jan-2019 09:48:51 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 25-Jan-2019 09:53:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.237	9.237	0.000	97	406723	4.00	
* 2 1,4-Difluorobenzene	114	11.410	11.416	-0.006	97	2310796	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.091	0.000	93	2083397	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.714	0.000	81	1731157	4.06	
31 Methylene Chloride	84	6.606	6.600	0.006	98	25162	0.1507	
47 1,1,1-Trichloroethane	97	10.294	10.294	0.000	95	9292	0.0252	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D

Injection Date: 24-Jan-2019 15:25:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14044-A-1

Lab Sample ID: 140-14044-1

Worklist Smp#: 10

Client ID: 11547

Purge Vol: 500.000 mL

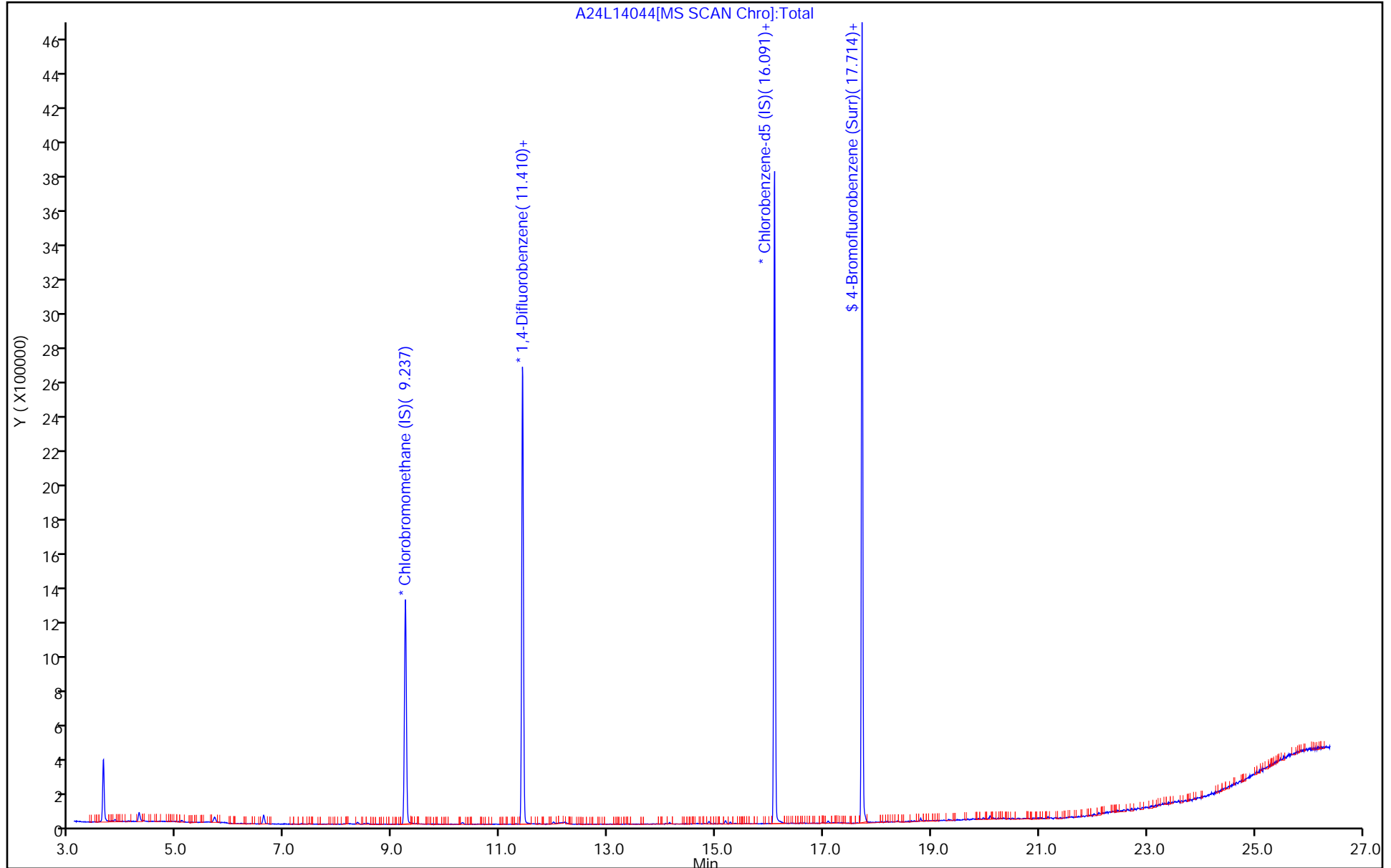
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200(mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200 (mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND	*	1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200 (mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D
 Lims ID: 140-14051-A-16
 Client ID: 10518
 Sample Type: Client
 Inject. Date: 26-Jan-2019 01:10:30 ALS Bottle#: 10 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010617-022
 Misc. Info.: 10518
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Jan-2019 09:09:11 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0302

First Level Reviewer: khachitpongpanits Date: 28-Jan-2019 09:09:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.406	-0.005	73	173091	4.00	
* 2 1,4-Difluorobenzene	114	9.471	9.477	-0.006	95	1033901	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.519	14.524	-0.005	91	905153	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.244	16.244	0.000	87	793289	4.12	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D

Injection Date: 26-Jan-2019 01:10:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-14051-A-16

Lab Sample ID: 140-14051-16

Worklist Smp#: 22

Client ID: 10518

Purge Vol: 500.000 mL

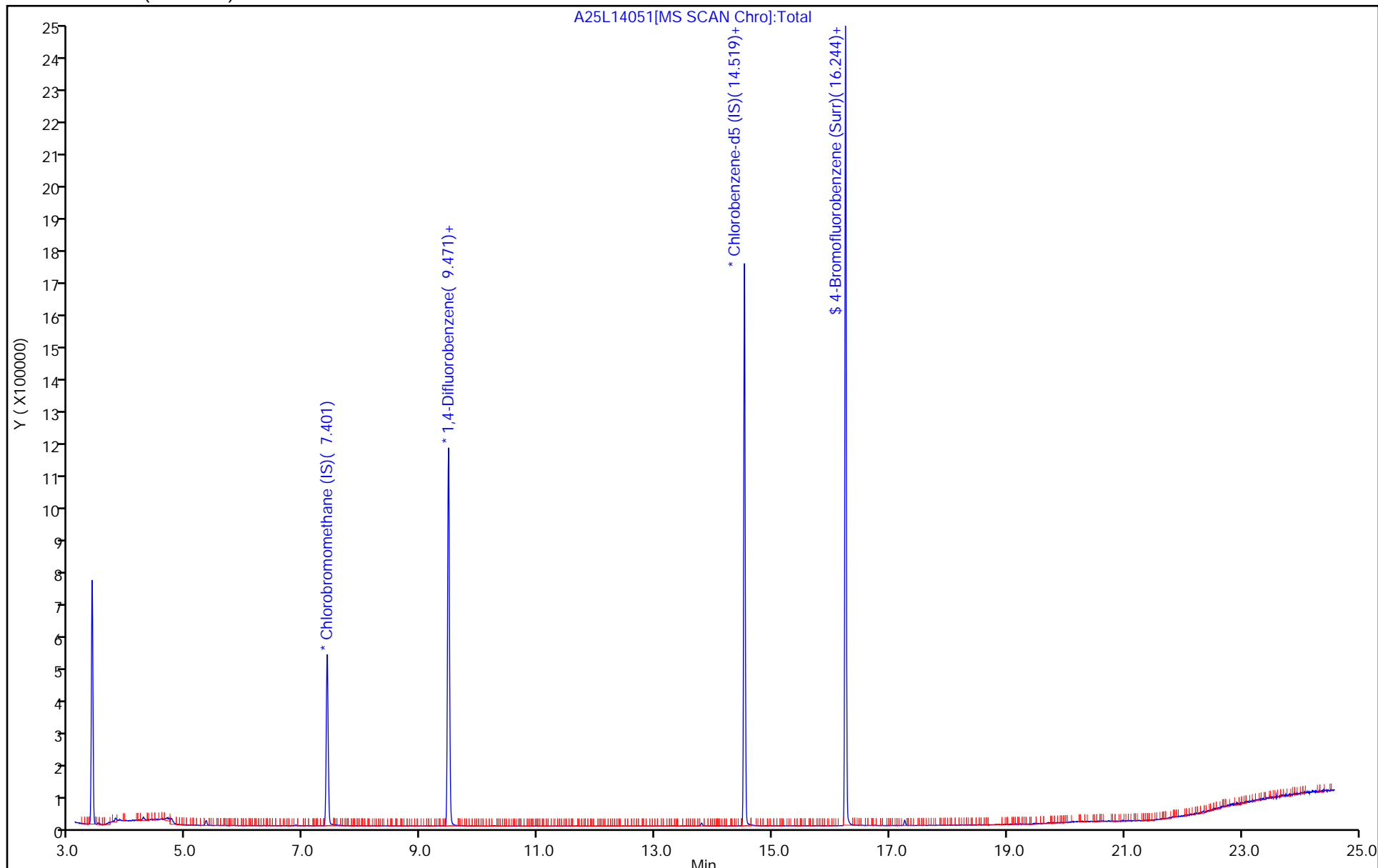
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

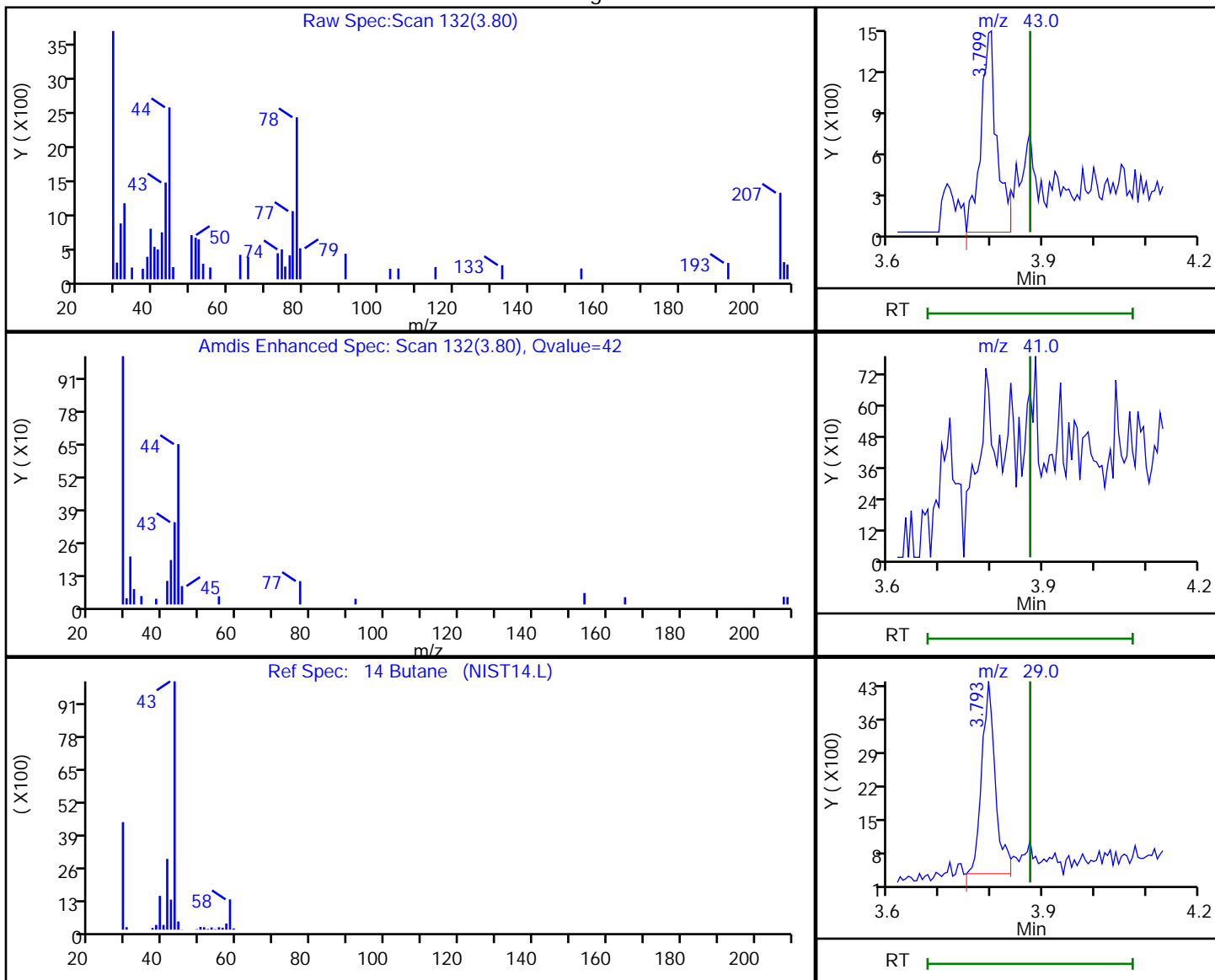


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D
 Injection Date: 26-Jan-2019 01:10:30 Instrument ID: MR
 Lims ID: 140-14051-A-16 Lab Sample ID: 140-14051-16
 Client ID: 10518
 Operator ID: HMT ALS Bottle#: 10 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.80	43.00	3124	0.063769
3.87	41.00	0	
3.79	29.00	7327	

Reviewer: khachitpongpanits, 28-Jan-2019 09:09:01

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D
 Lims ID: 140-14114-A-3
 Client ID: 11859
 Sample Type: Client
 Inject. Date: 31-Jan-2019 14:24:30 ALS Bottle#: 16 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010665-007
 Misc. Info.: 11859
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 01-Feb-2019 14:53:46 Calib Date: 07-Jan-2019 21:45:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20181224-10406.b\HA07IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0316

First Level Reviewer: khachitpongpanits Date: 01-Feb-2019 15:00:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.834	-0.005	96	226233	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.016	-0.006	95	1257347	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.739	-0.005	89	1030682	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.404	17.409	-0.005	91	693284	4.13	
45 1,1,1-Trichloroethane	97	9.863	9.868	-0.005	95	7970	0.0413	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D

Injection Date: 31-Jan-2019 14:24:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14114-A-3

Lab Sample ID: 140-14114-3

Worklist Smp#: 7

Client ID: 11859

Purge Vol: 500.000 mL

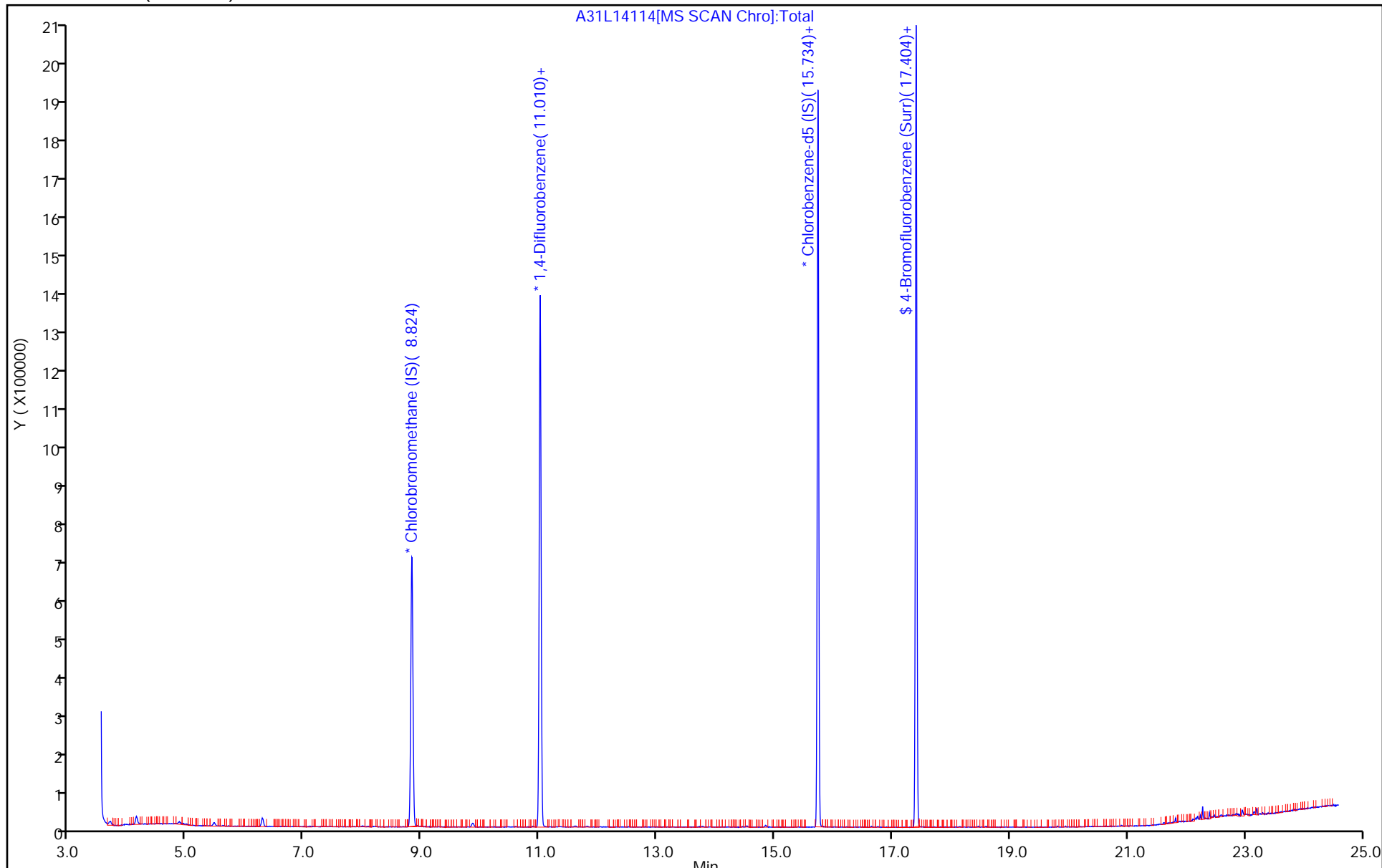
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

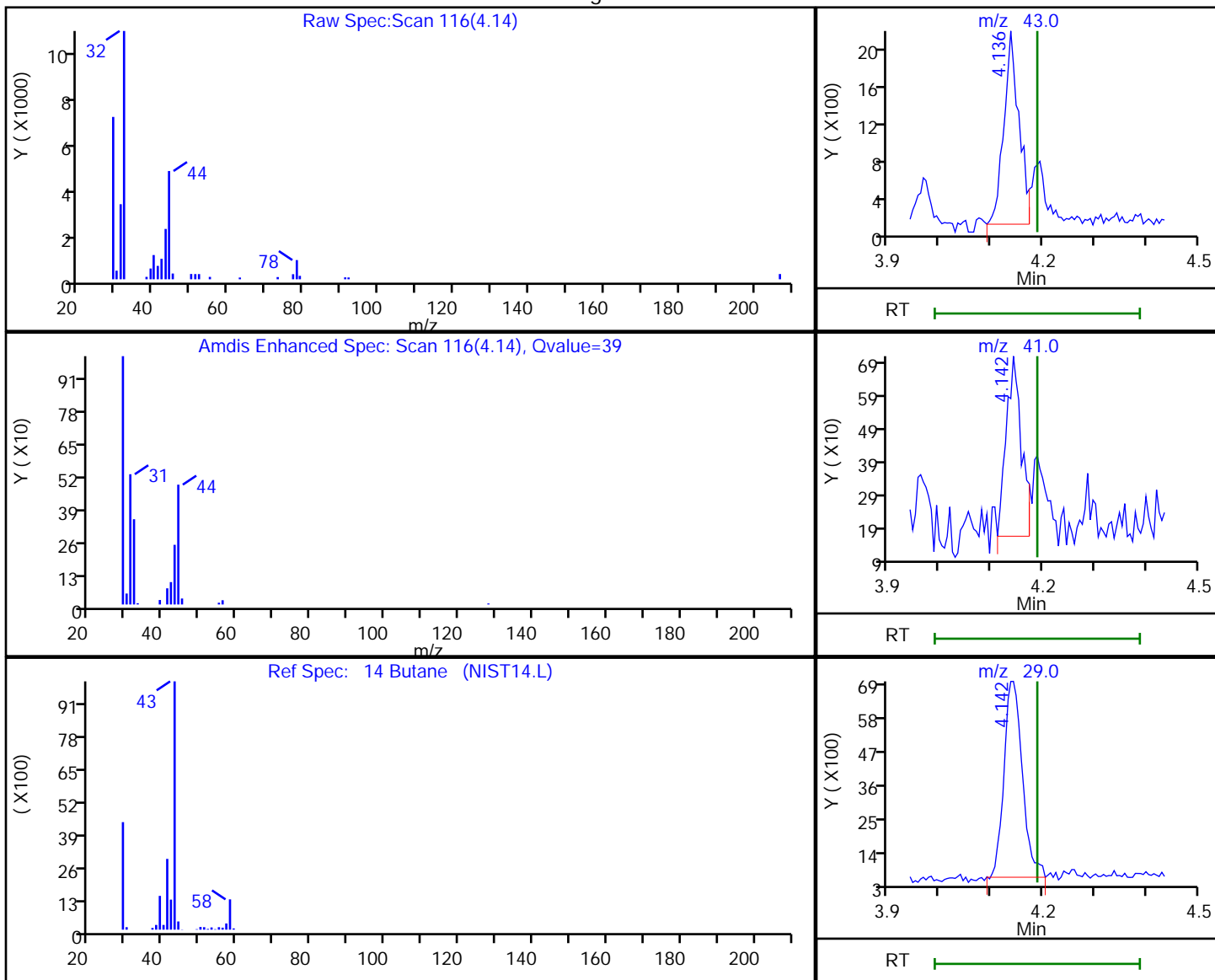


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D
 Injection Date: 31-Jan-2019 14:24:30 Instrument ID: MH
 Lims ID: 140-14114-A-3 Lab Sample ID: 140-14114-3
 Client ID: 11859
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.14	43.00	4267	0.037196
4.14	41.00	1130	
4.14	29.00	16118	

Reviewer: tajh, 31-Jan-2019 14:58:31

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND	*	1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
 Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\B05L14136.D
 Lims ID: 140-14136-A-16
 Client ID: 11710
 Sample Type: Client
 Inject. Date: 05-Feb-2019 11:19:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010730-004
 Misc. Info.: 11710
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Feb-2019 10:13:58 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 06-Feb-2019 10:14:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.243	-0.011	95	329997	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.416	-0.011	97	1787592	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.086	16.086	0.000	95	1561576	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.709	17.714	-0.005	79	1327286	4.15	
31 Methylene Chloride	84	6.595	6.606	-0.011	97	17493	0.1291	
110 Dodecane	57	21.009	21.009	0.000	92	19919	0.0798	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\B05L14136.D

Injection Date: 05-Feb-2019 11:19:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14136-A-16

Lab Sample ID: 140-14136-16

Worklist Smp#: 4

Client ID: 11710

Purge Vol: 500.000 mL

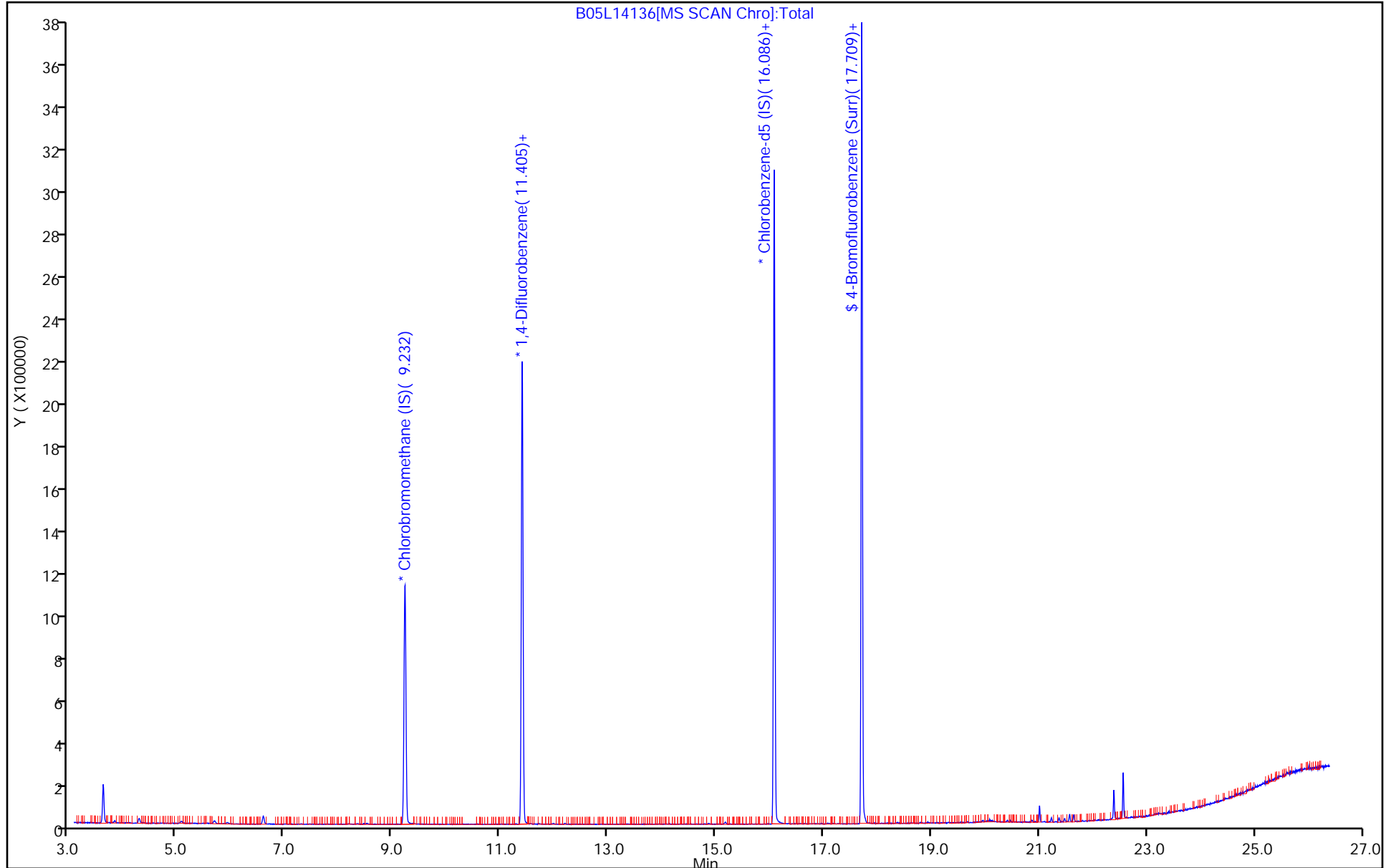
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14159-1
 SDG No.: _____
 Client Sample ID: 09647 Lab Sample ID: 140-14159-1
 Matrix: Air Lab File ID: B05L14159.D
 Analysis Method: TO-15 Date Collected: 02/04/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 20:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27362 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND	*	0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14159-1
 SDG No.: _____
 Client Sample ID: 09647 Lab Sample ID: 140-14159-1
 Matrix: Air Lab File ID: B05L14159.D
 Analysis Method: TO-15 Date Collected: 02/04/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 20:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27362 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14159-1
 SDG No.: _____
 Client Sample ID: 09647 Lab Sample ID: 140-14159-1
 Matrix: Air Lab File ID: B05L14159.D
 Analysis Method: TO-15 Date Collected: 02/04/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 20:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27362 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MJ\20190204-10717.b\B05L14159.D
 Lims ID: 140-14159-A-1
 Client ID: 09647
 Sample Type: Client
 Inject. Date: 05-Feb-2019 20:35:30 ALS Bottle#: 7 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010717-016
 Misc. Info.: 09647
 Operator ID: 007126 Instrument ID: MJ
 Method: \\chromna\Knoxville\ChromData\MJ\20190204-10717.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Feb-2019 13:16:33 Calib Date: 30-Jan-2019 23:00:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MJ\20190130-10689.b\JA30ICL08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 06-Feb-2019 13:18:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.760	9.771	-0.011	92	137691	4.00	
* 2 1,4-Difluorobenzene	114	11.868	11.874	-0.006	95	795074	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.477	16.482	-0.005	90	674023	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	18.074	18.076	-0.005	89	489101	3.88	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MJ\20190204-10717.b\B05L14159.D

Injection Date: 05-Feb-2019 20:35:30

Instrument ID: MJ

Operator ID: 007126

Lims ID: 140-14159-A-1

Lab Sample ID: 140-14159-1

Worklist Smp#: 16

Client ID: 09647

Purge Vol: 500.000 mL

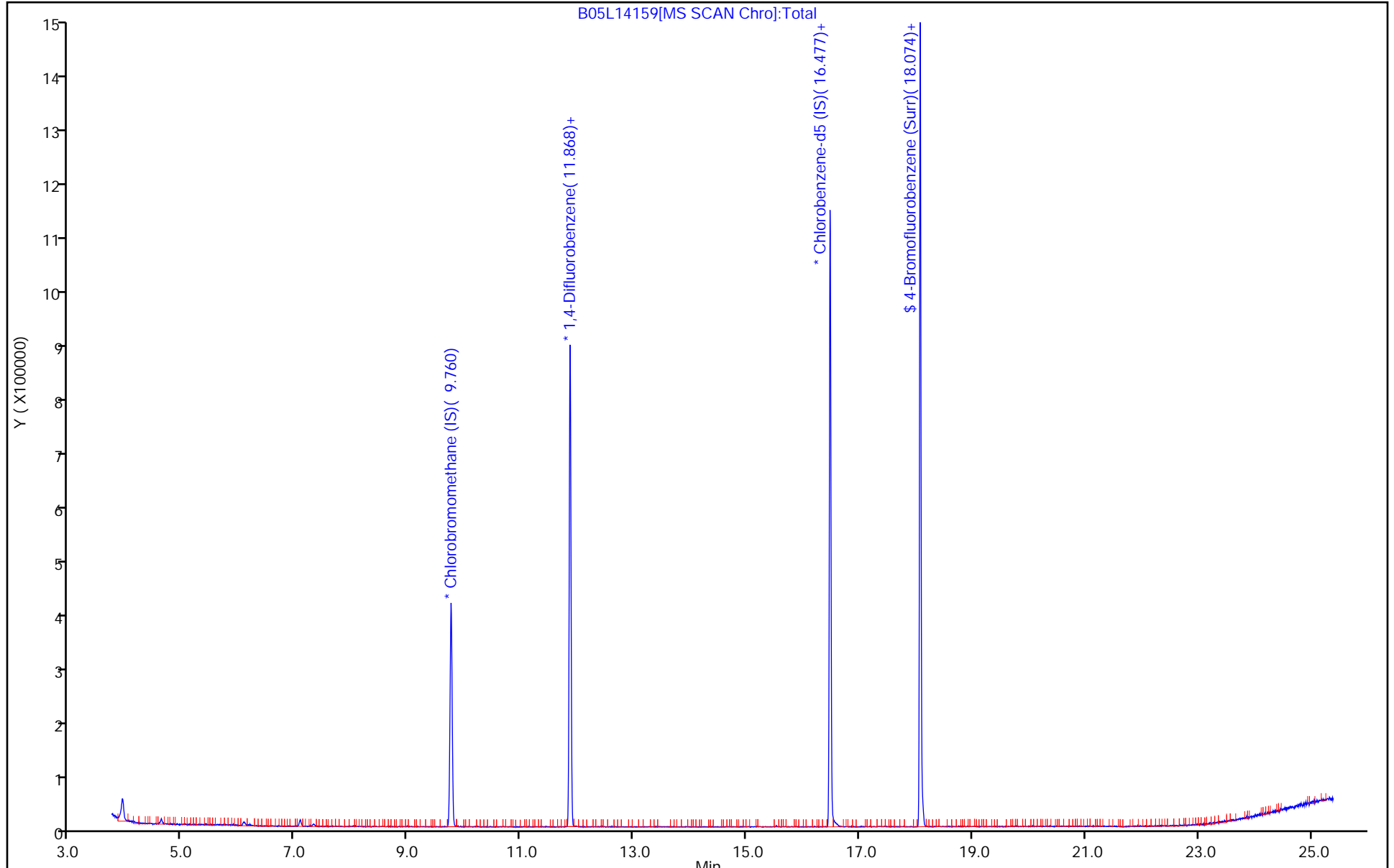
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)




Shipping and Receiving Documents

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor		10 of 16 COCs													
Company: Tetra Tech		Phone: 301-528-3000																	
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage																	
City/State/Zip: Germantown, MD, 20871		TAL Contact: terry walker washmond																	
Phone: 301-528-552																			
FAX:																			
Project Name: MRC Indoor Air		Analysis Turnaround Time																	
Site/location: MRC		Standard (Specify) X																	
PO# 112FC08388		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
SV-106-C-26	2/19/19	1134	1234	-36	0	11476	09886	✓											
SV-101-C-26	2/19/19	1141	1241	-26	0	10874	11140	✓											
SV-100-C-26	2/19/19	1143	1243	-30	0	11503	11710	✓											
SV-060-C-26	2/19/19	1157	1257	-30	0	10448	11492	✓											
SV-118-A-26	2/21/19	1135	1242	-24	0	11314	11832	✓											
SV-015-A-26	2/21/19	1142	1248	-30	0	11991	09748	✓											
Sampled by: Sophia Lawson, Josh Mullis, Walt Pryor		Temperature (Fahrenheit)																	
		Interior		Ambient															
		Start																	
		Stop																	
		Pressure (Inches of Hg)																	
		Interior		Ambient															
		Start																	
		Stop																	
Special Instructions/QC Requirements & Comments:																			
										 140-14390 Chain of Custody									
Canisters Shipped by: Tetra Tech				Date/Time: 2/22/19				Canisters Received by:											
Samples Relinquished by: <i>[Signature]</i>				Date/Time: 2/22/19				Received by: <i>[Signature]</i>											
Relinquished by: <i>[Signature]</i>				Date/Time: 2/22/19 1700				Received by: TA KWX 2-23-19 10:10											
Lab Use Only: _____ Shipper Name: _____ Operator: _____ Condition: _____																			

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03/07/2019

Baltimore #201

18 cans / 18 flows
 CUSTODY SEAL INTACT
 RECEIVED AMBIENT RT 20.0 / CT 20.0 C

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Larson, Josh Mullis & Walt Pryor		11 of 16 COCs																									
Company: Tetra Tech		Phone: 301-528-3000																													
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage																													
City/State/Zip: Germantown, MD, 20871		TAL Contact: terry walker washund																													
Phone: 301-528-552																															
FAX:																															
Project Name: MRC Indoor Air		Analysis Turnaround Time																													
Site/location: MRC		Standard (Specify): X																													
PO#: 112108388		Rush (Specify):																													
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)													
SV-078-A-26	2/21/19	1147	1249	-25	-5	10175	1177a	✓																							
SV-136-A-26	2/21/19	1150	1253	-30	-3	11513	11861	✓																							
SV-076-A-26	2/21/19	1157	1257	-30	-4	09842	11848	✓																							
SV-168-A-26	2/21/19	1200	1300	-30	-4	7605	10796	✓																							
SV-075-A-26	2/21/19	1206	1306	-27	-6	11500	11138	✓																							
BCK-1-26	2/19/19	0609	1609	-28	-2	10492	11132	✓																							
Sampled by: Sophia Larson, Walt Pryor, Josh Mullis		Temperature (Fahrenheit)		<h2>Baltimore #201</h2>																											
			Interior															Ambient													
		Start																													
		Stop																													
		Pressure (Inches of Hg)																													
			Interior																												
Start																															
Stop																															
Special Instructions/QC Requirements & Comments:																															
Canisters Shipped by: Tetra Tech		Date/Time: 2/22/19		Canisters Received by:																											
Samples Relinquished by:		Date/Time: 2/22/19		Received by:																											
Relinquished by:		Date/Time: 2/22/19 1700		Received by: [Signature] TA Kvx 2-23-19 10:10																											
Lab Use Only																															

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03/07/2019

10960

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Pryor</u>		12 of 16 COCs												
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																
City/State/Zip: <u>Germentown, MD, 20871</u>		TAL Contact: <u>Terry Walker Washburn</u>																
Phone: <u>301-528-552</u>																		
FAX:																		
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																
PO# <u>112108388</u>		Rush (Specify)																
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BCK-2-26	2/19/19	0819	1619	-30	-5	11601	10492	✓										
BCK-3-26	2/19/19	0828	1628	-25	-1	8815	09798	✓										
BCK-4-26	2/19/19	0835	1635	-30	-3	10149	11764	✓										
IA-001-C-26	2/19/19	0851	1651	-30	-4	11437	10919	✓										
IA-004-C-26	2/19/19	0854	1654	-18	0	7283	10759	✓										
IA-131-C-26	2/19/19	0902	1702	-30	0	7461	11604	✓										
Sampled by: <u>Sophia Lawson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)				<h2>Baltimore #201</h2>												
		Interior		Ambient														
		Start																
		Stop																
		Pressure (Inches of Hg)																
		Interior		Ambient														
Start																		
Stop																		
Special Instructions/QC Requirements & Comments:																		
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:														
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>														
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19 1700</u>		Received by: <u>[Signature] JAKX 2-23-19 10:10</u>														
Lab Use Only		Shipper Name		Canned by		Condition												

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Log In Number:

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

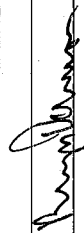
Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	7, SV-105-A-26, COC WAS CANISTER ASSET NUMBER AS 10796, SHOULD BE 10960
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID: _____ Correction factor: _____	/		/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input checked="" type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/		
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	

Labeling Verified by: _____ Date: _____

pH test strip lot number: _____

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative: _____	
Lot Number: _____	
Exp Date: _____	
Analyst: _____	
Date: _____	
Time: _____	

Project #: _____ PM Instructions: _____

Sample Receiving Associate:  Date: 2-25-19

ANALYTICAL REPORT

Job Number: 140-14390-1

Job Description: MRC Indoor Air, MRC

For:

Tetra Tech, Inc.

20251 Century Blvd

Suite 200

Germantown, MD 20874

Attention: Samantha Brenner



Approved for release.
Terry Walker Wasmund
Project Manager II
3/7/2019 3:14 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
03/07/2019

cc: Amy Thomson

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Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-14390-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC listed a canister asset number as 10796, but it should be 10960.

Samples IA-131-C-26 (140-14390-18) and IA-113-C-26 (140-14391-16) were received with the canister valve in the open position. The samples were at ambient pressure (approximately 0 psi). The samples' integrity could have been jeopardized due to changes in ambient pressure after the sample was taken (i.e., ambient air not associated with the sampling event could have been introduced into the canisters at any point after the sampling was completed).

The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

Air - GC/MS VOA - Method TO-15 LL

Method(s) TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-126-C-26

Lab Sample ID: 140-14390-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	41		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.076	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.16	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	41		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.32	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.19	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	100	E	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.53		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.73	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Naphthalene	0.23		0.20	0.20	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.38	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	10		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.4		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trichlorobenzene	0.41		0.40	0.20	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	74		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.18	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	560	E	0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.95		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene - DL	58		4.0	0.70	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride - DL	450		2.0	1.5	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	130		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.48	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.56	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	160		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.6	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.76	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	400	E	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	2.3		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Naphthalene	1.2		1.0	1.0	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	2.6	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	39		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	9.7		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trichlorobenzene	3.0		3.0	1.4	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	400		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.86	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	1400	E	0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.1		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene - DL	230		16	2.8	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride - DL	1100		5.1	3.7	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-101-C-26

Lab Sample ID: 140-14390-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.20	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.40		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.72	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-101-C-26 (Continued)

Lab Sample ID: 140-14390-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.11	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.15	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.85		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.36	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.22	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Naphthalene	0.27		0.20	0.20	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	6.2		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	5.5		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	34		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	17		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.22	J	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.40		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.31	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	2.7		0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.2		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.64	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	2.5		2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.5	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.54	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.59	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	4.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.4	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.95	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.4	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Naphthalene	1.4		1.0	1.0	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	42		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	21		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	180		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	92		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	1.1	J	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.9		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.5	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	6.9		0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	5.2		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-100-C-26

Lab Sample ID: 140-14390-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	0.35	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.33	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.42		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.83	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.14	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.078	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.2		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-100-C-26 (Continued)

Lab Sample ID: 140-14390-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	2.2	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.0		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.9	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.93	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.43	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	6.3		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.74	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-060-C-26

Lab Sample ID: 140-14390-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.19	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	2.2		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	4.1		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.6		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.3		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.1		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.96	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.11	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.26	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	6.1		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	120	E	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	11		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene - DL	110		0.50	0.18	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.62	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	5.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	11		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	16		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	18		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	5.1		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	4.9		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.72	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.0	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	33		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	670	E	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.93	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	46		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene - DL	600		2.7	0.94	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-118-A-26

Lab Sample ID: 140-14390-5

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-118-A-26 (Continued)

Lab Sample ID: 140-14390-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.30	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.32	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.35	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	46		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	11		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	120	E	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.8		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.1		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.15	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.1		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	3.0		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trichlorobenzene	0.34	J	0.40	0.20	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	5.9		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	450	E	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.59		0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.4		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.93		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.82		0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	17		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene - DL	77		4.0	0.70	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene - DL	330		2.0	0.70	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.97	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.7	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	180		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	46		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	470	E	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	7.7		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	7.4		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.99	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	4.2		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	12		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trichlorobenzene	2.5	J	3.0	1.4	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	32		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	2400	E	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	2.9		2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	7.0		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	4.6		2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	2.1		0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	72		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene - DL	300		16	2.8	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene - DL	1800		11	3.8	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-015-A-26

Lab Sample ID: 140-14390-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.37	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-015-A-26 (Continued)

Lab Sample ID: 140-14390-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.46		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.50		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.1		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.30	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.16	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.4		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.10	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.74		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.81		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.2	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.5		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.2	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.68	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.56	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	4.0		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.5		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-078-A-26

Lab Sample ID: 140-14390-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.29	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.17	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.87	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.1		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.11	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.8		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.21	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.23	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.90		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.58	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.0	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.75	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	4.3		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.58	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	9.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.0	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.9		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-136-A-26

Lab Sample ID: 140-14390-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.63		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.74		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.8		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.33	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.41		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.086	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	1.2		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	54		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	50		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.20	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	5.3		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.0		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.6		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	8.8		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	1.3	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.0		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.34	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	5.1		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	200		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	270		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.98	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	23		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-076-A-26

Lab Sample ID: 140-14390-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.14	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.75	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.60		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.30	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.1		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.62		0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.46		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.93		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.3		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.61	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.3		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.7	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	5.7		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-076-A-26 (Continued)

Lab Sample ID: 140-14390-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3-Trimethylbenzene	3.0		2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	2.2		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	4.6		2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	5.7		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-168-A-26

Lab Sample ID: 140-14390-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.24	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.081	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.37	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.24	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.32	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	13		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.33	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.9	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.8		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.87		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	34		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.18	J	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.76		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.49	CI	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.7		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.77	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.51	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.2	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.68	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.3	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	50		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.5	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	11		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	4.8		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	180		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.88	J	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	3.8		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	2.4	CI	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	7.5		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: SV-075-A-26

Lab Sample ID: 140-14390-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v	1.67		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.43		0.40	0.14	ppb v/v	1.67		TO 15 LL	Total/NA
Ethylbenzene	0.34	J	0.40	0.14	ppb v/v	1.67		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-075-A-26 (Continued)

Lab Sample ID: 140-14390-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.90	J	2.0	0.65	ppb v/v	1.67		TO 15 LL	Total/NA
Naphthalene	4.7		0.20	0.20	ppb v/v	1.67		TO 15 LL	Total/NA
Toluene	6.6		0.60	0.60	ppb v/v	1.67		TO 15 LL	Total/NA
Trichloroethene	0.43		0.20	0.070	ppb v/v	1.67		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	3.1		0.40	0.17	ppb v/v	1.67		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	9.7		0.40	0.13	ppb v/v	1.67		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	4.9		0.40	0.13	ppb v/v	1.67		TO 15 LL	Total/NA
Xylenes, Total	3.0		0.80	0.12	ppb v/v	1.67		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1.67		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.1		2.0	0.67	ug/m3	1.67		TO 15 LL	Total/NA
Ethylbenzene	1.5	J	1.7	0.59	ug/m3	1.67		TO 15 LL	Total/NA
Methylene Chloride	3.1	J	6.9	2.3	ug/m3	1.67		TO 15 LL	Total/NA
Naphthalene	25		1.0	1.0	ug/m3	1.67		TO 15 LL	Total/NA
Toluene	25		2.3	2.3	ug/m3	1.67		TO 15 LL	Total/NA
Trichloroethene	2.3		1.1	0.38	ug/m3	1.67		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	15		2.0	0.84	ug/m3	1.67		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	48		2.0	0.61	ug/m3	1.67		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	24		2.0	0.64	ug/m3	1.67		TO 15 LL	Total/NA
Xylenes, Total	13		3.5	0.52	ug/m3	1.67		TO 15 LL	Total/NA

Client Sample ID: BCK-1-26

Lab Sample ID: 140-14390-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.15	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.31	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.91	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.47	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.2	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.72	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BCK-2-26

Lab Sample ID: 140-14390-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.32	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.45	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.1	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.71	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-3-26

Lab Sample ID: 140-14390-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.29	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.44	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.0	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BCK-4-26

Lab Sample ID: 140-14390-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.27	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.72	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.44	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.94	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-001-C-26

Lab Sample ID: 140-14390-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.26	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	3.1		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.53	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.91	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	11		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.71	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-004-C-26

Lab Sample ID: 140-14390-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.39	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.95	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.46	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.4	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-004-C-26 (Continued)

Lab Sample ID: 140-14390-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.68	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-131-C-26

Lab Sample ID: 140-14390-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.40		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.081	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.63		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	3.4		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.53		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	11		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.29		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.18	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.5		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.3		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.32	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	2.8		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	12		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	3.6		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	41		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.92	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.88	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	11		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-126-C-26

Lab Sample ID: 140-14390-1

Date Collected: 02/19/19 12:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	41		0.40	0.12	ppb v/v			02/26/19 13:31	1
Carbon tetrachloride	0.076	J	0.40	0.075	ppb v/v			02/26/19 13:31	1
Chlorodifluoromethane	0.16	J	0.40	0.075	ppb v/v			02/26/19 13:31	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 13:31	1
cis-1,2-Dichloroethene	41		0.40	0.12	ppb v/v			02/26/19 13:31	1
Dichlorodifluoromethane	0.32	J	0.40	0.14	ppb v/v			02/26/19 13:31	1
1,1-Dichloroethane	0.19	J	0.40	0.050	ppb v/v			02/26/19 13:31	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 13:31	1
1,1-Dichloroethene	100	E	0.40	0.070	ppb v/v			02/26/19 13:31	1
Ethylbenzene	0.53		0.40	0.14	ppb v/v			02/26/19 13:31	1
Methylene Chloride	0.73	J	2.0	0.65	ppb v/v			02/26/19 13:31	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 13:31	1
Naphthalene	0.23		0.20	0.20	ppb v/v			02/26/19 13:31	1
Tetrachloroethene	0.38	J	0.40	0.080	ppb v/v			02/26/19 13:31	1
Toluene	10		0.60	0.60	ppb v/v			02/26/19 13:31	1
trans-1,2-Dichloroethene	2.4		0.40	0.10	ppb v/v			02/26/19 13:31	1
1,2,4-Trichlorobenzene	0.41		0.40	0.20	ppb v/v			02/26/19 13:31	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 13:31	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 13:31	1
Trichloroethene	74		0.20	0.070	ppb v/v			02/26/19 13:31	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 13:31	1
1,2,4-Trimethylbenzene	0.18	J	0.40	0.13	ppb v/v			02/26/19 13:31	1
1,3,5-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v			02/26/19 13:31	1
Vinyl chloride	560	E	0.20	0.15	ppb v/v			02/26/19 13:31	1
Xylenes, Total	0.95		0.80	0.12	ppb v/v			02/26/19 13:31	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	130		1.3	0.37	ug/m3			02/26/19 13:31	1
Carbon tetrachloride	0.48	J	2.5	0.47	ug/m3			02/26/19 13:31	1
Chlorodifluoromethane	0.56	J	1.4	0.27	ug/m3			02/26/19 13:31	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 13:31	1
cis-1,2-Dichloroethene	160		1.6	0.48	ug/m3			02/26/19 13:31	1
Dichlorodifluoromethane	1.6	J	2.0	0.67	ug/m3			02/26/19 13:31	1
1,1-Dichloroethane	0.76	J	1.6	0.20	ug/m3			02/26/19 13:31	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 13:31	1
1,1-Dichloroethene	400	E	1.6	0.28	ug/m3			02/26/19 13:31	1
Ethylbenzene	2.3		1.7	0.59	ug/m3			02/26/19 13:31	1
Methylene Chloride	2.5	J	6.9	2.3	ug/m3			02/26/19 13:31	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 13:31	1
Naphthalene	1.2		1.0	1.0	ug/m3			02/26/19 13:31	1
Tetrachloroethene	2.6	J	2.7	0.54	ug/m3			02/26/19 13:31	1
Toluene	39		2.3	2.3	ug/m3			02/26/19 13:31	1
trans-1,2-Dichloroethene	9.7		1.6	0.40	ug/m3			02/26/19 13:31	1
1,2,4-Trichlorobenzene	3.0		3.0	1.4	ug/m3			02/26/19 13:31	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 13:31	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 13:31	1
Trichloroethene	400		1.1	0.38	ug/m3			02/26/19 13:31	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 13:31	1
1,2,4-Trimethylbenzene	0.86	J	2.0	0.61	ug/m3			02/26/19 13:31	1

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-126-C-26

Lab Sample ID: 140-14390-1

Date Collected: 02/19/19 12:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3			02/26/19 13:31	1
Vinyl chloride	1400	E	0.51	0.37	ug/m3			02/26/19 13:31	1
Xylenes, Total	4.1		3.5	0.52	ug/m3			02/26/19 13:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 13:31	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	58		4.0	0.70	ppb v/v			02/27/19 05:28	1
Vinyl chloride	450		2.0	1.5	ppb v/v			02/27/19 05:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/27/19 05:28	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	230		16	2.8	ug/m3			02/27/19 05:28	1
Vinyl chloride	1100		5.1	3.7	ug/m3			02/27/19 05:28	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-101-C-26

Lab Sample ID: 140-14390-2

Date Collected: 02/19/19 12:41

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	J	0.40	0.12	ppb v/v			02/27/19 06:22	1
Carbon tetrachloride	0.40		0.40	0.075	ppb v/v			02/27/19 06:22	1
Chlorodifluoromethane	0.72	CI	0.40	0.075	ppb v/v			02/27/19 06:22	1
Chloroform	0.11	J	0.40	0.075	ppb v/v			02/27/19 06:22	1
cis-1,2-Dichloroethene	0.15	J	0.40	0.12	ppb v/v			02/27/19 06:22	1
Dichlorodifluoromethane	0.85		0.40	0.14	ppb v/v			02/27/19 06:22	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 06:22	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 06:22	1
1,1-Dichloroethene	0.36	J	0.40	0.070	ppb v/v			02/27/19 06:22	1
Ethylbenzene	0.22	J	0.40	0.14	ppb v/v			02/27/19 06:22	1
Methylene Chloride	1.3	J	2.0	0.65	ppb v/v			02/27/19 06:22	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 06:22	1
Naphthalene	0.27		0.20	0.20	ppb v/v			02/27/19 06:22	1
Tetrachloroethene	6.2		0.40	0.080	ppb v/v			02/27/19 06:22	1
Toluene	5.5		0.60	0.60	ppb v/v			02/27/19 06:22	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 06:22	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 06:22	1
1,1,1-Trichloroethane	34		0.40	0.060	ppb v/v			02/27/19 06:22	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 06:22	1
Trichloroethene	17		0.20	0.070	ppb v/v			02/27/19 06:22	1
1,2,3-Trimethylbenzene	0.22	J	0.40	0.17	ppb v/v			02/27/19 06:22	1
1,2,4-Trimethylbenzene	0.40		0.40	0.13	ppb v/v			02/27/19 06:22	1
1,3,5-Trimethylbenzene	0.31	J	0.40	0.13	ppb v/v			02/27/19 06:22	1
Vinyl chloride	2.7		0.20	0.15	ppb v/v			02/27/19 06:22	1
Xylenes, Total	1.2		0.80	0.12	ppb v/v			02/27/19 06:22	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.64	J	1.3	0.37	ug/m3			02/27/19 06:22	1
Carbon tetrachloride	2.5		2.5	0.47	ug/m3			02/27/19 06:22	1
Chlorodifluoromethane	2.5	CI	1.4	0.27	ug/m3			02/27/19 06:22	1
Chloroform	0.54	J	2.0	0.37	ug/m3			02/27/19 06:22	1
cis-1,2-Dichloroethene	0.59	J	1.6	0.48	ug/m3			02/27/19 06:22	1
Dichlorodifluoromethane	4.2		2.0	0.67	ug/m3			02/27/19 06:22	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 06:22	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 06:22	1
1,1-Dichloroethene	1.4	J	1.6	0.28	ug/m3			02/27/19 06:22	1
Ethylbenzene	0.95	J	1.7	0.59	ug/m3			02/27/19 06:22	1
Methylene Chloride	4.4	J	6.9	2.3	ug/m3			02/27/19 06:22	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 06:22	1
Naphthalene	1.4		1.0	1.0	ug/m3			02/27/19 06:22	1
Tetrachloroethene	42		2.7	0.54	ug/m3			02/27/19 06:22	1
Toluene	21		2.3	2.3	ug/m3			02/27/19 06:22	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 06:22	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 06:22	1
1,1,1-Trichloroethane	180		2.2	0.33	ug/m3			02/27/19 06:22	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 06:22	1
Trichloroethene	92		1.1	0.38	ug/m3			02/27/19 06:22	1
1,2,3-Trimethylbenzene	1.1	J	2.0	0.84	ug/m3			02/27/19 06:22	1
1,2,4-Trimethylbenzene	1.9		2.0	0.61	ug/m3			02/27/19 06:22	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-101-C-26

Lab Sample ID: 140-14390-2

Date Collected: 02/19/19 12:41

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.5	J	2.0	0.64	ug/m3			02/27/19 06:22	1
Vinyl chloride	6.9		0.51	0.37	ug/m3			02/27/19 06:22	1
Xylenes, Total	5.2		3.5	0.52	ug/m3			02/27/19 06:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/27/19 06:22	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-100-C-26

Lab Sample ID: 140-14390-3

Date Collected: 02/19/19 12:43

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 15:17	1
Carbon tetrachloride	0.35	J	0.40	0.075	ppb v/v			02/26/19 15:17	1
Chlorodifluoromethane	0.33	J	0.40	0.075	ppb v/v			02/26/19 15:17	1
Chloroform	0.42		0.40	0.075	ppb v/v			02/26/19 15:17	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 15:17	1
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v			02/26/19 15:17	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 15:17	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 15:17	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 15:17	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 15:17	1
Methylene Chloride	0.83	J	2.0	0.65	ppb v/v			02/26/19 15:17	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 15:17	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 15:17	1
Tetrachloroethene	0.14	J	0.40	0.080	ppb v/v			02/26/19 15:17	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 15:17	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 15:17	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 15:17	1
1,1,1-Trichloroethane	0.078	J	0.40	0.060	ppb v/v			02/26/19 15:17	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 15:17	1
Trichloroethene	1.2		0.20	0.070	ppb v/v			02/26/19 15:17	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 15:17	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 15:17	1
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			02/26/19 15:17	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 15:17	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/26/19 15:17	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 15:17	1
Carbon tetrachloride	2.2	J	2.5	0.47	ug/m3			02/26/19 15:17	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/26/19 15:17	1
Chloroform	2.0		2.0	0.37	ug/m3			02/26/19 15:17	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 15:17	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/26/19 15:17	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 15:17	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 15:17	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 15:17	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 15:17	1
Methylene Chloride	2.9	J	6.9	2.3	ug/m3			02/26/19 15:17	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 15:17	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 15:17	1
Tetrachloroethene	0.93	J	2.7	0.54	ug/m3			02/26/19 15:17	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 15:17	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 15:17	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 15:17	1
1,1,1-Trichloroethane	0.43	J	2.2	0.33	ug/m3			02/26/19 15:17	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 15:17	1
Trichloroethene	6.3		1.1	0.38	ug/m3			02/26/19 15:17	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 15:17	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 15:17	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-100-C-26

Lab Sample ID: 140-14390-3

Date Collected: 02/19/19 12:43

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.74	J	2.0	0.64	ug/m3			02/26/19 15:17	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 15:17	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/26/19 15:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/26/19 15:17	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-060-C-26

Lab Sample ID: 140-14390-4

Date Collected: 02/19/19 12:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.19	J	0.40	0.12	ppb v/v			02/26/19 16:10	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 16:10	1
Chlorodifluoromethane	1.6		0.40	0.075	ppb v/v			02/26/19 16:10	1
Chloroform	2.2		0.40	0.075	ppb v/v			02/26/19 16:10	1
cis-1,2-Dichloroethene	4.1		0.40	0.12	ppb v/v			02/26/19 16:10	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/26/19 16:10	1
1,1-Dichloroethane	4.6		0.40	0.050	ppb v/v			02/26/19 16:10	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 16:10	1
1,1-Dichloroethene	1.3		0.40	0.070	ppb v/v			02/26/19 16:10	1
Ethylbenzene	1.1		0.40	0.14	ppb v/v			02/26/19 16:10	1
Methylene Chloride	0.96	J	2.0	0.65	ppb v/v			02/26/19 16:10	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 16:10	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 16:10	1
Tetrachloroethene	0.11	J	0.40	0.080	ppb v/v			02/26/19 16:10	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 16:10	1
trans-1,2-Dichloroethene	0.26	J	0.40	0.10	ppb v/v			02/26/19 16:10	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 16:10	1
1,1,1-Trichloroethane	6.1		0.40	0.060	ppb v/v			02/26/19 16:10	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 16:10	1
Trichloroethene	120	E	0.20	0.070	ppb v/v			02/26/19 16:10	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 16:10	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 16:10	1
1,3,5-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v			02/26/19 16:10	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 16:10	1
Xylenes, Total	11		0.80	0.12	ppb v/v			02/26/19 16:10	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.62	J	1.3	0.37	ug/m3			02/26/19 16:10	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 16:10	1
Chlorodifluoromethane	5.5		1.4	0.27	ug/m3			02/26/19 16:10	1
Chloroform	11		2.0	0.37	ug/m3			02/26/19 16:10	1
cis-1,2-Dichloroethene	16		1.6	0.48	ug/m3			02/26/19 16:10	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/26/19 16:10	1
1,1-Dichloroethane	18		1.6	0.20	ug/m3			02/26/19 16:10	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 16:10	1
1,1-Dichloroethene	5.1		1.6	0.28	ug/m3			02/26/19 16:10	1
Ethylbenzene	4.9		1.7	0.59	ug/m3			02/26/19 16:10	1
Methylene Chloride	3.3	J	6.9	2.3	ug/m3			02/26/19 16:10	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 16:10	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 16:10	1
Tetrachloroethene	0.72	J	2.7	0.54	ug/m3			02/26/19 16:10	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 16:10	1
trans-1,2-Dichloroethene	1.0	J	1.6	0.40	ug/m3			02/26/19 16:10	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 16:10	1
1,1,1-Trichloroethane	33		2.2	0.33	ug/m3			02/26/19 16:10	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 16:10	1
Trichloroethene	670	E	1.1	0.38	ug/m3			02/26/19 16:10	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 16:10	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 16:10	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-060-C-26

Lab Sample ID: 140-14390-4

Date Collected: 02/19/19 12:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.93	J	2.0	0.64	ug/m3			02/26/19 16:10	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 16:10	1
Xylenes, Total	46		3.5	0.52	ug/m3			02/26/19 16:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/26/19 16:10	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	110		0.50	0.18	ppb v/v			02/27/19 08:09	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	600		2.7	0.94	ug/m3			02/27/19 08:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/27/19 08:09	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-118-A-26

Lab Sample ID: 140-14390-5

Date Collected: 02/21/19 12:42

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.30	J	0.40	0.12	ppb v/v			02/26/19 17:03	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 17:03	1
Chlorodifluoromethane	0.32	J	0.40	0.075	ppb v/v			02/26/19 17:03	1
Chloroform	0.35	J	0.40	0.075	ppb v/v			02/26/19 17:03	1
cis-1,2-Dichloroethene	46		0.40	0.12	ppb v/v			02/26/19 17:03	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/26/19 17:03	1
1,1-Dichloroethane	11		0.40	0.050	ppb v/v			02/26/19 17:03	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 17:03	1
1,1-Dichloroethene	120	E	0.40	0.070	ppb v/v			02/26/19 17:03	1
Ethylbenzene	1.8		0.40	0.14	ppb v/v			02/26/19 17:03	1
Methylene Chloride	2.1		2.0	0.65	ppb v/v			02/26/19 17:03	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 17:03	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 17:03	1
Tetrachloroethene	0.15	J	0.40	0.080	ppb v/v			02/26/19 17:03	1
Toluene	1.1		0.60	0.60	ppb v/v			02/26/19 17:03	1
trans-1,2-Dichloroethene	3.0		0.40	0.10	ppb v/v			02/26/19 17:03	1
1,2,4-Trichlorobenzene	0.34	J	0.40	0.20	ppb v/v			02/26/19 17:03	1
1,1,1-Trichloroethane	5.9		0.40	0.060	ppb v/v			02/26/19 17:03	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 17:03	1
Trichloroethene	450	E	0.20	0.070	ppb v/v			02/26/19 17:03	1
1,2,3-Trimethylbenzene	0.59		0.40	0.17	ppb v/v			02/26/19 17:03	1
1,2,4-Trimethylbenzene	1.4		0.40	0.13	ppb v/v			02/26/19 17:03	1
1,3,5-Trimethylbenzene	0.93		0.40	0.13	ppb v/v			02/26/19 17:03	1
Vinyl chloride	0.82		0.20	0.15	ppb v/v			02/26/19 17:03	1
Xylenes, Total	17		0.80	0.12	ppb v/v			02/26/19 17:03	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.97	J	1.3	0.37	ug/m3			02/26/19 17:03	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 17:03	1
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3			02/26/19 17:03	1
Chloroform	1.7	J	2.0	0.37	ug/m3			02/26/19 17:03	1
cis-1,2-Dichloroethene	180		1.6	0.48	ug/m3			02/26/19 17:03	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 17:03	1
1,1-Dichloroethane	46		1.6	0.20	ug/m3			02/26/19 17:03	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 17:03	1
1,1-Dichloroethene	470	E	1.6	0.28	ug/m3			02/26/19 17:03	1
Ethylbenzene	7.7		1.7	0.59	ug/m3			02/26/19 17:03	1
Methylene Chloride	7.4		6.9	2.3	ug/m3			02/26/19 17:03	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 17:03	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 17:03	1
Tetrachloroethene	0.99	J	2.7	0.54	ug/m3			02/26/19 17:03	1
Toluene	4.2		2.3	2.3	ug/m3			02/26/19 17:03	1
trans-1,2-Dichloroethene	12		1.6	0.40	ug/m3			02/26/19 17:03	1
1,2,4-Trichlorobenzene	2.5	J	3.0	1.4	ug/m3			02/26/19 17:03	1
1,1,1-Trichloroethane	32		2.2	0.33	ug/m3			02/26/19 17:03	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 17:03	1
Trichloroethene	2400	E	1.1	0.38	ug/m3			02/26/19 17:03	1
1,2,3-Trimethylbenzene	2.9		2.0	0.84	ug/m3			02/26/19 17:03	1
1,2,4-Trimethylbenzene	7.0		2.0	0.61	ug/m3			02/26/19 17:03	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-118-A-26

Lab Sample ID: 140-14390-5

Date Collected: 02/21/19 12:42

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	4.6		2.0	0.64	ug/m3			02/26/19 17:03	1
Vinyl chloride	2.1		0.51	0.37	ug/m3			02/26/19 17:03	1
Xylenes, Total	72		3.5	0.52	ug/m3			02/26/19 17:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 17:03	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	77		4.0	0.70	ppb v/v			02/28/19 03:30	1
Trichloroethene	330		2.0	0.70	ppb v/v			02/28/19 03:30	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	300		16	2.8	ug/m3			02/28/19 03:30	1
Trichloroethene	1800		11	3.8	ug/m3			02/28/19 03:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/28/19 03:30	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-015-A-26

Lab Sample ID: 140-14390-6

Date Collected: 02/21/19 12:45

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.37	J	0.40	0.12	ppb v/v			02/26/19 17:56	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 17:56	1
Chlorodifluoromethane	0.46		0.40	0.075	ppb v/v			02/26/19 17:56	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 17:56	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 17:56	1
Dichlorodifluoromethane	0.50		0.40	0.14	ppb v/v			02/26/19 17:56	1
1,1-Dichloroethane	1.1		0.40	0.050	ppb v/v			02/26/19 17:56	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 17:56	1
1,1-Dichloroethene	0.30	J	0.40	0.070	ppb v/v			02/26/19 17:56	1
Ethylbenzene	0.16	J	0.40	0.14	ppb v/v			02/26/19 17:56	1
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v			02/26/19 17:56	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 17:56	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 17:56	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 17:56	1
Toluene	1.4		0.60	0.60	ppb v/v			02/26/19 17:56	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 17:56	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 17:56	1
1,1,1-Trichloroethane	0.10	J	0.40	0.060	ppb v/v			02/26/19 17:56	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 17:56	1
Trichloroethene	0.74		0.20	0.070	ppb v/v			02/26/19 17:56	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 17:56	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:56	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:56	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 17:56	1
Xylenes, Total	0.81		0.80	0.12	ppb v/v			02/26/19 17:56	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.2	J	1.3	0.37	ug/m3			02/26/19 17:56	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 17:56	1
Chlorodifluoromethane	1.6		1.4	0.27	ug/m3			02/26/19 17:56	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 17:56	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 17:56	1
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3			02/26/19 17:56	1
1,1-Dichloroethane	4.5		1.6	0.20	ug/m3			02/26/19 17:56	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 17:56	1
1,1-Dichloroethene	1.2	J	1.6	0.28	ug/m3			02/26/19 17:56	1
Ethylbenzene	0.68	J	1.7	0.59	ug/m3			02/26/19 17:56	1
Methylene Chloride	4.3	J	6.9	2.3	ug/m3			02/26/19 17:56	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 17:56	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 17:56	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 17:56	1
Toluene	5.4		2.3	2.3	ug/m3			02/26/19 17:56	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 17:56	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 17:56	1
1,1,1-Trichloroethane	0.56	J	2.2	0.33	ug/m3			02/26/19 17:56	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 17:56	1
Trichloroethene	4.0		1.1	0.38	ug/m3			02/26/19 17:56	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 17:56	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 17:56	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-015-A-26

Lab Sample ID: 140-14390-6

Date Collected: 02/21/19 12:45

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 17:56	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 17:56	1
Xylenes, Total	3.5		3.5	0.52	ug/m3			02/26/19 17:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		60 - 140					02/26/19 17:56	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-078-A-26

Lab Sample ID: 140-14390-7

Date Collected: 02/21/19 12:49

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18	J	0.40	0.12	ppb v/v			02/26/19 18:49	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 18:49	1
Chlorodifluoromethane	0.29	J	0.40	0.075	ppb v/v			02/26/19 18:49	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 18:49	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 18:49	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/26/19 18:49	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 18:49	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 18:49	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 18:49	1
Ethylbenzene	0.17	J	0.40	0.14	ppb v/v			02/26/19 18:49	1
Methylene Chloride	0.87	J	2.0	0.65	ppb v/v			02/26/19 18:49	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 18:49	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 18:49	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 18:49	1
Toluene	1.1		0.60	0.60	ppb v/v			02/26/19 18:49	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 18:49	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 18:49	1
1,1,1-Trichloroethane	0.11	J	0.40	0.060	ppb v/v			02/26/19 18:49	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 18:49	1
Trichloroethene	1.8		0.20	0.070	ppb v/v			02/26/19 18:49	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 18:49	1
1,2,4-Trimethylbenzene	0.21	J	0.40	0.13	ppb v/v			02/26/19 18:49	1
1,3,5-Trimethylbenzene	0.23	J	0.40	0.13	ppb v/v			02/26/19 18:49	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 18:49	1
Xylenes, Total	0.90		0.80	0.12	ppb v/v			02/26/19 18:49	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.58	J	1.3	0.37	ug/m3			02/26/19 18:49	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 18:49	1
Chlorodifluoromethane	1.0	J	1.4	0.27	ug/m3			02/26/19 18:49	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 18:49	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 18:49	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 18:49	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 18:49	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 18:49	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 18:49	1
Ethylbenzene	0.75	J	1.7	0.59	ug/m3			02/26/19 18:49	1
Methylene Chloride	3.0	J	6.9	2.3	ug/m3			02/26/19 18:49	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 18:49	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 18:49	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 18:49	1
Toluene	4.3		2.3	2.3	ug/m3			02/26/19 18:49	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 18:49	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 18:49	1
1,1,1-Trichloroethane	0.58	J	2.2	0.33	ug/m3			02/26/19 18:49	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 18:49	1
Trichloroethene	9.5		1.1	0.38	ug/m3			02/26/19 18:49	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 18:49	1
1,2,4-Trimethylbenzene	1.0	J	2.0	0.61	ug/m3			02/26/19 18:49	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-078-A-26

Lab Sample ID: 140-14390-7

Date Collected: 02/21/19 12:49

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3			02/26/19 18:49	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 18:49	1
Xylenes, Total	3.9		3.5	0.52	ug/m3			02/26/19 18:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 18:49	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-136-A-26

Lab Sample ID: 140-14390-8

Date Collected: 02/21/19 12:53

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.63		0.40	0.12	ppb v/v			02/26/19 19:43	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 19:43	1
Chlorodifluoromethane	0.74		0.40	0.075	ppb v/v			02/26/19 19:43	1
Chloroform	1.8		0.40	0.075	ppb v/v			02/26/19 19:43	1
cis-1,2-Dichloroethene	0.33	J	0.40	0.12	ppb v/v			02/26/19 19:43	1
Dichlorodifluoromethane	0.41		0.40	0.14	ppb v/v			02/26/19 19:43	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 19:43	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 19:43	1
1,1-Dichloroethene	0.086	J	0.40	0.070	ppb v/v			02/26/19 19:43	1
Ethylbenzene	1.2		0.40	0.14	ppb v/v			02/26/19 19:43	1
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			02/26/19 19:43	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 19:43	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 19:43	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 19:43	1
Toluene	54		0.60	0.60	ppb v/v			02/26/19 19:43	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 19:43	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 19:43	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 19:43	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 19:43	1
Trichloroethene	50		0.20	0.070	ppb v/v			02/26/19 19:43	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 19:43	1
1,2,4-Trimethylbenzene	0.20	J	0.40	0.13	ppb v/v			02/26/19 19:43	1
1,3,5-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v			02/26/19 19:43	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 19:43	1
Xylenes, Total	5.3		0.80	0.12	ppb v/v			02/26/19 19:43	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.0		1.3	0.37	ug/m3			02/26/19 19:43	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 19:43	1
Chlorodifluoromethane	2.6		1.4	0.27	ug/m3			02/26/19 19:43	1
Chloroform	8.8		2.0	0.37	ug/m3			02/26/19 19:43	1
cis-1,2-Dichloroethene	1.3	J	1.6	0.48	ug/m3			02/26/19 19:43	1
Dichlorodifluoromethane	2.0		2.0	0.67	ug/m3			02/26/19 19:43	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 19:43	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 19:43	1
1,1-Dichloroethene	0.34	J	1.6	0.28	ug/m3			02/26/19 19:43	1
Ethylbenzene	5.1		1.7	0.59	ug/m3			02/26/19 19:43	1
Methylene Chloride	3.6	J	6.9	2.3	ug/m3			02/26/19 19:43	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 19:43	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 19:43	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 19:43	1
Toluene	200		2.3	2.3	ug/m3			02/26/19 19:43	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 19:43	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 19:43	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 19:43	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 19:43	1
Trichloroethene	270		1.1	0.38	ug/m3			02/26/19 19:43	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 19:43	1
1,2,4-Trimethylbenzene	0.98	J	2.0	0.61	ug/m3			02/26/19 19:43	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-136-A-26

Lab Sample ID: 140-14390-8

Date Collected: 02/21/19 12:53

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3			02/26/19 19:43	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 19:43	1
Xylenes, Total	23		3.5	0.52	ug/m3			02/26/19 19:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 19:43	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-076-A-26

Lab Sample ID: 140-14390-9

Date Collected: 02/21/19 12:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 20:36	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 20:36	1
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/26/19 20:36	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 20:36	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 20:36	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/26/19 20:36	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 20:36	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 20:36	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 20:36	1
Ethylbenzene	0.14	J	0.40	0.14	ppb v/v			02/26/19 20:36	1
Methylene Chloride	0.75	J	2.0	0.65	ppb v/v			02/26/19 20:36	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 20:36	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 20:36	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 20:36	1
Toluene	0.60		0.60	0.60	ppb v/v			02/26/19 20:36	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 20:36	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 20:36	1
1,1,1-Trichloroethane	0.30	J	0.40	0.060	ppb v/v			02/26/19 20:36	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 20:36	1
Trichloroethene	1.1		0.20	0.070	ppb v/v			02/26/19 20:36	1
1,2,3-Trimethylbenzene	0.62		0.40	0.17	ppb v/v			02/26/19 20:36	1
1,2,4-Trimethylbenzene	0.46		0.40	0.13	ppb v/v			02/26/19 20:36	1
1,3,5-Trimethylbenzene	0.93		0.40	0.13	ppb v/v			02/26/19 20:36	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 20:36	1
Xylenes, Total	1.3		0.80	0.12	ppb v/v			02/26/19 20:36	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 20:36	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 20:36	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/26/19 20:36	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 20:36	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 20:36	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/26/19 20:36	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 20:36	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 20:36	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 20:36	1
Ethylbenzene	0.61	J	1.7	0.59	ug/m3			02/26/19 20:36	1
Methylene Chloride	2.6	J	6.9	2.3	ug/m3			02/26/19 20:36	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 20:36	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 20:36	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 20:36	1
Toluene	2.3		2.3	2.3	ug/m3			02/26/19 20:36	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 20:36	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 20:36	1
1,1,1-Trichloroethane	1.7	J	2.2	0.33	ug/m3			02/26/19 20:36	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 20:36	1
Trichloroethene	5.7		1.1	0.38	ug/m3			02/26/19 20:36	1
1,2,3-Trimethylbenzene	3.0		2.0	0.84	ug/m3			02/26/19 20:36	1
1,2,4-Trimethylbenzene	2.2		2.0	0.61	ug/m3			02/26/19 20:36	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-076-A-26

Lab Sample ID: 140-14390-9

Date Collected: 02/21/19 12:57

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	4.6		2.0	0.64	ug/m3			02/26/19 20:36	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 20:36	1
Xylenes, Total	5.7		3.5	0.52	ug/m3			02/26/19 20:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/26/19 20:36	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-168-A-26

Lab Sample ID: 140-14390-10

Date Collected: 02/21/19 13:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.24	J	0.40	0.12	ppb v/v			02/26/19 21:29	1
Carbon tetrachloride	0.081	J	0.40	0.075	ppb v/v			02/26/19 21:29	1
Chlorodifluoromethane	0.37	J	0.40	0.075	ppb v/v			02/26/19 21:29	1
Chloroform	0.24	J	0.40	0.075	ppb v/v			02/26/19 21:29	1
cis-1,2-Dichloroethene	0.17	J	0.40	0.12	ppb v/v			02/26/19 21:29	1
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v			02/26/19 21:29	1
1,1-Dichloroethane	0.32	J	0.40	0.050	ppb v/v			02/26/19 21:29	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 21:29	1
1,1-Dichloroethene	13		0.40	0.070	ppb v/v			02/26/19 21:29	1
Ethylbenzene	0.33	J	0.40	0.14	ppb v/v			02/26/19 21:29	1
Methylene Chloride	1.9	J	2.0	0.65	ppb v/v			02/26/19 21:29	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 21:29	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 21:29	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 21:29	1
Toluene	2.8		0.60	0.60	ppb v/v			02/26/19 21:29	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 21:29	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 21:29	1
1,1,1-Trichloroethane	0.87		0.40	0.060	ppb v/v			02/26/19 21:29	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 21:29	1
Trichloroethene	34		0.20	0.070	ppb v/v			02/26/19 21:29	1
1,2,3-Trimethylbenzene	0.18	J	0.40	0.17	ppb v/v			02/26/19 21:29	1
1,2,4-Trimethylbenzene	0.76		0.40	0.13	ppb v/v			02/26/19 21:29	1
1,3,5-Trimethylbenzene	0.49	CI	0.40	0.13	ppb v/v			02/26/19 21:29	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 21:29	1
Xylenes, Total	1.7		0.80	0.12	ppb v/v			02/26/19 21:29	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.77	J	1.3	0.37	ug/m3			02/26/19 21:29	1
Carbon tetrachloride	0.51	J	2.5	0.47	ug/m3			02/26/19 21:29	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/26/19 21:29	1
Chloroform	1.2	J	2.0	0.37	ug/m3			02/26/19 21:29	1
cis-1,2-Dichloroethene	0.68	J	1.6	0.48	ug/m3			02/26/19 21:29	1
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3			02/26/19 21:29	1
1,1-Dichloroethane	1.3	J	1.6	0.20	ug/m3			02/26/19 21:29	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 21:29	1
1,1-Dichloroethene	50		1.6	0.28	ug/m3			02/26/19 21:29	1
Ethylbenzene	1.5	J	1.7	0.59	ug/m3			02/26/19 21:29	1
Methylene Chloride	6.5	J	6.9	2.3	ug/m3			02/26/19 21:29	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 21:29	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 21:29	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 21:29	1
Toluene	11		2.3	2.3	ug/m3			02/26/19 21:29	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 21:29	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 21:29	1
1,1,1-Trichloroethane	4.8		2.2	0.33	ug/m3			02/26/19 21:29	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 21:29	1
Trichloroethene	180		1.1	0.38	ug/m3			02/26/19 21:29	1
1,2,3-Trimethylbenzene	0.88	J	2.0	0.84	ug/m3			02/26/19 21:29	1
1,2,4-Trimethylbenzene	3.8		2.0	0.61	ug/m3			02/26/19 21:29	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-168-A-26

Lab Sample ID: 140-14390-10

Date Collected: 02/21/19 13:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	2.4	CI	2.0	0.64	ug/m3			02/26/19 21:29	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 21:29	1
Xylenes, Total	7.5		3.5	0.52	ug/m3			02/26/19 21:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 21:29	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-075-A-26

Lab Sample ID: 140-14390-11

Date Collected: 02/21/19 13:06

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/26/19 22:23	1.67
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 22:23	1.67
Chlorodifluoromethane	0.34	J	0.40	0.075	ppb v/v			02/26/19 22:23	1.67
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 22:23	1.67
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 22:23	1.67
Dichlorodifluoromethane	0.43		0.40	0.14	ppb v/v			02/26/19 22:23	1.67
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 22:23	1.67
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 22:23	1.67
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 22:23	1.67
Ethylbenzene	0.34	J	0.40	0.14	ppb v/v			02/26/19 22:23	1.67
Methylene Chloride	0.90	J	2.0	0.65	ppb v/v			02/26/19 22:23	1.67
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 22:23	1.67
Naphthalene	4.7		0.20	0.20	ppb v/v			02/26/19 22:23	1.67
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 22:23	1.67
Toluene	6.6		0.60	0.60	ppb v/v			02/26/19 22:23	1.67
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 22:23	1.67
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 22:23	1.67
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 22:23	1.67
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 22:23	1.67
Trichloroethene	0.43		0.20	0.070	ppb v/v			02/26/19 22:23	1.67
1,2,3-Trimethylbenzene	3.1		0.40	0.17	ppb v/v			02/26/19 22:23	1.67
1,2,4-Trimethylbenzene	9.7		0.40	0.13	ppb v/v			02/26/19 22:23	1.67
1,3,5-Trimethylbenzene	4.9		0.40	0.13	ppb v/v			02/26/19 22:23	1.67
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 22:23	1.67
Xylenes, Total	3.0		0.80	0.12	ppb v/v			02/26/19 22:23	1.67

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/26/19 22:23	1.67
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 22:23	1.67
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			02/26/19 22:23	1.67
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 22:23	1.67
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 22:23	1.67
Dichlorodifluoromethane	2.1		2.0	0.67	ug/m3			02/26/19 22:23	1.67
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 22:23	1.67
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 22:23	1.67
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 22:23	1.67
Ethylbenzene	1.5	J	1.7	0.59	ug/m3			02/26/19 22:23	1.67
Methylene Chloride	3.1	J	6.9	2.3	ug/m3			02/26/19 22:23	1.67
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 22:23	1.67
Naphthalene	25		1.0	1.0	ug/m3			02/26/19 22:23	1.67
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 22:23	1.67
Toluene	25		2.3	2.3	ug/m3			02/26/19 22:23	1.67
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 22:23	1.67
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 22:23	1.67
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 22:23	1.67
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 22:23	1.67
Trichloroethene	2.3		1.1	0.38	ug/m3			02/26/19 22:23	1.67
1,2,3-Trimethylbenzene	15		2.0	0.84	ug/m3			02/26/19 22:23	1.67
1,2,4-Trimethylbenzene	48		2.0	0.61	ug/m3			02/26/19 22:23	1.67

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-075-A-26

Lab Sample ID: 140-14390-11

Date Collected: 02/21/19 13:06

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	24		2.0	0.64	ug/m3			02/26/19 22:23	1.67
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 22:23	1.67
Xylenes, Total	13		3.5	0.52	ug/m3			02/26/19 22:23	1.67
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 22:23	1.67

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-1-26

Lab Sample ID: 140-14390-12

Date Collected: 02/19/19 16:09

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.15	J	0.40	0.12	ppb v/v			02/27/19 00:09	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 00:09	1
Chlorodifluoromethane	0.31	J	0.40	0.075	ppb v/v			02/27/19 00:09	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 00:09	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 00:09	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/27/19 00:09	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 00:09	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 00:09	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 00:09	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 00:09	1
Methylene Chloride	0.91	J	2.0	0.65	ppb v/v			02/27/19 00:09	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 00:09	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 00:09	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 00:09	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 00:09	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 00:09	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 00:09	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 00:09	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 00:09	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 00:09	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 00:09	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 00:09	1
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			02/27/19 00:09	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 00:09	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/27/19 00:09	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.47	J	1.3	0.37	ug/m3			02/27/19 00:09	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 00:09	1
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3			02/27/19 00:09	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 00:09	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 00:09	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/27/19 00:09	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 00:09	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 00:09	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 00:09	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 00:09	1
Methylene Chloride	3.2	J	6.9	2.3	ug/m3			02/27/19 00:09	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 00:09	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 00:09	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 00:09	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 00:09	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 00:09	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 00:09	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 00:09	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 00:09	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 00:09	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 00:09	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 00:09	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-1-26

Lab Sample ID: 140-14390-12

Date Collected: 02/19/19 16:09

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.72	J	2.0	0.64	ug/m3			02/27/19 00:09	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 00:09	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/27/19 00:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/27/19 00:09	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-2-26

Lab Sample ID: 140-14390-13

Date Collected: 02/19/19 16:19

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.14	J	0.40	0.12	ppb v/v			02/27/19 01:02	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 01:02	1
Chlorodifluoromethane	0.32	J	0.40	0.075	ppb v/v			02/27/19 01:02	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 01:02	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 01:02	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/27/19 01:02	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 01:02	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 01:02	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 01:02	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 01:02	1
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v			02/27/19 01:02	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 01:02	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 01:02	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 01:02	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 01:02	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 01:02	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 01:02	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 01:02	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 01:02	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 01:02	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 01:02	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 01:02	1
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/27/19 01:02	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 01:02	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/27/19 01:02	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.45	J	1.3	0.37	ug/m3			02/27/19 01:02	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 01:02	1
Chlorodifluoromethane	1.1	J	1.4	0.27	ug/m3			02/27/19 01:02	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 01:02	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 01:02	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/27/19 01:02	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 01:02	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 01:02	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 01:02	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 01:02	1
Methylene Chloride	4.1	J	6.9	2.3	ug/m3			02/27/19 01:02	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 01:02	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 01:02	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 01:02	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 01:02	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 01:02	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 01:02	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 01:02	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 01:02	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 01:02	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 01:02	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 01:02	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-2-26

Lab Sample ID: 140-14390-13

Date Collected: 02/19/19 16:19

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.71	J	2.0	0.64	ug/m3			02/27/19 01:02	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 01:02	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/27/19 01:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		60 - 140					02/27/19 01:02	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-3-26

Lab Sample ID: 140-14390-14

Date Collected: 02/19/19 16:28

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.14	J	0.40	0.12	ppb v/v			02/27/19 01:55	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 01:55	1
Chlorodifluoromethane	0.29	J	0.40	0.075	ppb v/v			02/27/19 01:55	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 01:55	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 01:55	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/27/19 01:55	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 01:55	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 01:55	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 01:55	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 01:55	1
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			02/27/19 01:55	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 01:55	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 01:55	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 01:55	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 01:55	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 01:55	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 01:55	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 01:55	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 01:55	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 01:55	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 01:55	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 01:55	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 01:55	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 01:55	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/27/19 01:55	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.44	J	1.3	0.37	ug/m3			02/27/19 01:55	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 01:55	1
Chlorodifluoromethane	1.0	J	1.4	0.27	ug/m3			02/27/19 01:55	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 01:55	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 01:55	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/27/19 01:55	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 01:55	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 01:55	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 01:55	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 01:55	1
Methylene Chloride	3.5	J	6.9	2.3	ug/m3			02/27/19 01:55	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 01:55	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 01:55	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 01:55	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 01:55	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 01:55	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 01:55	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 01:55	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 01:55	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 01:55	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 01:55	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 01:55	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-3-26

Lab Sample ID: 140-14390-14

Date Collected: 02/19/19 16:28

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 01:55	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 01:55	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/27/19 01:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		60 - 140					02/27/19 01:55	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-4-26

Lab Sample ID: 140-14390-15

Date Collected: 02/19/19 16:35

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.14	J	0.40	0.12	ppb v/v			02/27/19 02:48	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 02:48	1
Chlorodifluoromethane	0.27	J	0.40	0.075	ppb v/v			02/27/19 02:48	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 02:48	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 02:48	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/27/19 02:48	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 02:48	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 02:48	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 02:48	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 02:48	1
Methylene Chloride	0.72	J	2.0	0.65	ppb v/v			02/27/19 02:48	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 02:48	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 02:48	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 02:48	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 02:48	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 02:48	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 02:48	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 02:48	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 02:48	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 02:48	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 02:48	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 02:48	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 02:48	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 02:48	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/27/19 02:48	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.44	J	1.3	0.37	ug/m3			02/27/19 02:48	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 02:48	1
Chlorodifluoromethane	0.94	J	1.4	0.27	ug/m3			02/27/19 02:48	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 02:48	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 02:48	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/27/19 02:48	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 02:48	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 02:48	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 02:48	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 02:48	1
Methylene Chloride	2.5	J	6.9	2.3	ug/m3			02/27/19 02:48	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 02:48	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 02:48	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 02:48	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 02:48	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 02:48	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 02:48	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 02:48	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 02:48	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 02:48	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 02:48	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 02:48	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-4-26

Lab Sample ID: 140-14390-15

Date Collected: 02/19/19 16:35

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 02:48	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 02:48	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/27/19 02:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		60 - 140					02/27/19 02:48	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-001-C-26

Lab Sample ID: 140-14390-16

Date Collected: 02/19/19 16:51

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/27/19 03:41	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 03:41	1
Chlorodifluoromethane	0.26	J	0.40	0.075	ppb v/v			02/27/19 03:41	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 03:41	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 03:41	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/27/19 03:41	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 03:41	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 03:41	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 03:41	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 03:41	1
Methylene Chloride	3.1		2.0	0.65	ppb v/v			02/27/19 03:41	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 03:41	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 03:41	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 03:41	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 03:41	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 03:41	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 03:41	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 03:41	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 03:41	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 03:41	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 03:41	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 03:41	1
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/27/19 03:41	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 03:41	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/27/19 03:41	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.53	J	1.3	0.37	ug/m3			02/27/19 03:41	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 03:41	1
Chlorodifluoromethane	0.91	J	1.4	0.27	ug/m3			02/27/19 03:41	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 03:41	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 03:41	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/27/19 03:41	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 03:41	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 03:41	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 03:41	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 03:41	1
Methylene Chloride	11		6.9	2.3	ug/m3			02/27/19 03:41	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 03:41	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 03:41	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 03:41	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 03:41	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 03:41	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 03:41	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 03:41	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 03:41	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 03:41	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 03:41	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 03:41	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-001-C-26

Lab Sample ID: 140-14390-16

Date Collected: 02/19/19 16:51

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.71	J	2.0	0.64	ug/m3			02/27/19 03:41	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 03:41	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/27/19 03:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/27/19 03:41	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-004-C-26

Lab Sample ID: 140-14390-17

Date Collected: 02/19/19 16:54

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.14	J	0.40	0.12	ppb v/v			02/27/19 07:16	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 07:16	1
Chlorodifluoromethane	0.39	J	0.40	0.075	ppb v/v			02/27/19 07:16	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 07:16	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 07:16	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/27/19 07:16	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 07:16	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 07:16	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 07:16	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 07:16	1
Methylene Chloride	0.95	J	2.0	0.65	ppb v/v			02/27/19 07:16	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 07:16	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 07:16	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 07:16	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 07:16	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 07:16	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 07:16	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 07:16	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 07:16	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 07:16	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 07:16	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 07:16	1
1,3,5-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/27/19 07:16	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 07:16	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/27/19 07:16	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.46	J	1.3	0.37	ug/m3			02/27/19 07:16	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 07:16	1
Chlorodifluoromethane	1.4	J	1.4	0.27	ug/m3			02/27/19 07:16	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 07:16	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 07:16	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/27/19 07:16	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 07:16	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 07:16	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 07:16	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 07:16	1
Methylene Chloride	3.3	J	6.9	2.3	ug/m3			02/27/19 07:16	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 07:16	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 07:16	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 07:16	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 07:16	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 07:16	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 07:16	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 07:16	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 07:16	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 07:16	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 07:16	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 07:16	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-004-C-26

Lab Sample ID: 140-14390-17

Date Collected: 02/19/19 16:54

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.68	J	2.0	0.64	ug/m3			02/27/19 07:16	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 07:16	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/27/19 07:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/27/19 07:16	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-131-C-26

Lab Sample ID: 140-14390-18

Date Collected: 02/19/19 17:02

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.40		0.40	0.12	ppb v/v			02/28/19 04:23	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/28/19 04:23	1
Chlorodifluoromethane	ND		0.40	0.075	ppb v/v			02/28/19 04:23	1
Chloroform	ND		0.40	0.075	ppb v/v			02/28/19 04:23	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/28/19 04:23	1
Dichlorodifluoromethane	0.45		0.40	0.14	ppb v/v			02/28/19 04:23	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/28/19 04:23	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/28/19 04:23	1
1,1-Dichloroethene	0.081	J	0.40	0.070	ppb v/v			02/28/19 04:23	1
Ethylbenzene	0.63		0.40	0.14	ppb v/v			02/28/19 04:23	1
Methylene Chloride	3.4		2.0	0.65	ppb v/v			02/28/19 04:23	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/28/19 04:23	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/28/19 04:23	1
Tetrachloroethene	0.53		0.40	0.080	ppb v/v			02/28/19 04:23	1
Toluene	11		0.60	0.60	ppb v/v			02/28/19 04:23	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/28/19 04:23	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/28/19 04:23	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/28/19 04:23	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/28/19 04:23	1
Trichloroethene	0.29		0.20	0.070	ppb v/v			02/28/19 04:23	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/28/19 04:23	1
1,2,4-Trimethylbenzene	0.19	J	0.40	0.13	ppb v/v			02/28/19 04:23	1
1,3,5-Trimethylbenzene	0.18	J	0.40	0.13	ppb v/v			02/28/19 04:23	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/28/19 04:23	1
Xylenes, Total	2.5		0.80	0.12	ppb v/v			02/28/19 04:23	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.3		1.3	0.37	ug/m3			02/28/19 04:23	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/28/19 04:23	1
Chlorodifluoromethane	ND		1.4	0.27	ug/m3			02/28/19 04:23	1
Chloroform	ND		2.0	0.37	ug/m3			02/28/19 04:23	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/28/19 04:23	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			02/28/19 04:23	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/28/19 04:23	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/28/19 04:23	1
1,1-Dichloroethene	0.32	J	1.6	0.28	ug/m3			02/28/19 04:23	1
Ethylbenzene	2.8		1.7	0.59	ug/m3			02/28/19 04:23	1
Methylene Chloride	12		6.9	2.3	ug/m3			02/28/19 04:23	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/28/19 04:23	1
Naphthalene	ND		1.0	1.0	ug/m3			02/28/19 04:23	1
Tetrachloroethene	3.6		2.7	0.54	ug/m3			02/28/19 04:23	1
Toluene	41		2.3	2.3	ug/m3			02/28/19 04:23	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/28/19 04:23	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/28/19 04:23	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/28/19 04:23	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/28/19 04:23	1
Trichloroethene	1.5		1.1	0.38	ug/m3			02/28/19 04:23	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/28/19 04:23	1
1,2,4-Trimethylbenzene	0.92	J	2.0	0.61	ug/m3			02/28/19 04:23	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-131-C-26

Lab Sample ID: 140-14390-18

Date Collected: 02/19/19 17:02

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.88	J	2.0	0.64	ug/m3			02/28/19 04:23	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/28/19 04:23	1
Xylenes, Total	11		3.5	0.52	ug/m3			02/28/19 04:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		60 - 140					02/28/19 04:23	1

Default Detection Limits

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-14390-1 - DL	SV-126-C-26	98
140-14390-1	SV-126-C-26	101
140-14390-2	SV-101-C-26	99
140-14390-3	SV-100-C-26	98
140-14390-4 - DL	SV-060-C-26	100
140-14390-4	SV-060-C-26	98
140-14390-5	SV-118-A-26	101
140-14390-5 - DL	SV-118-A-26	99
140-14390-6	SV-015-A-26	97
140-14390-7	SV-078-A-26	101
140-14390-8	SV-136-A-26	100
140-14390-9	SV-076-A-26	99
140-14390-10	SV-168-A-26	101
140-14390-11	SV-075-A-26	100
140-14390-12	BCK-1-26	99
140-14390-13	BCK-2-26	97
140-14390-14	BCK-3-26	97
140-14390-15	BCK-4-26	97
140-14390-16	IA-001-C-26	99
140-14390-17	IA-004-C-26	98
140-14390-18	IA-131-C-26	98
LCS 140-27936/1002	Lab Control Sample	99
LCS 140-27980/1002	Lab Control Sample	103
MB 140-27936/4	Method Blank	97
MB 140-27980/5	Method Blank	96

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-27936/4
Matrix: Air
Analysis Batch: 27936

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			02/26/19 12:38	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/26/19 12:38	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/26/19 12:38	1
Chloroform	ND		0.080	0.015	ppb v/v			02/26/19 12:38	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/26/19 12:38	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/26/19 12:38	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/26/19 12:38	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/26/19 12:38	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/26/19 12:38	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/26/19 12:38	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/26/19 12:38	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/26/19 12:38	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/26/19 12:38	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/26/19 12:38	1
Toluene	ND		0.12	0.12	ppb v/v			02/26/19 12:38	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/26/19 12:38	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/26/19 12:38	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/26/19 12:38	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/26/19 12:38	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/26/19 12:38	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/26/19 12:38	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/26/19 12:38	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/26/19 12:38	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/26/19 12:38	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/26/19 12:38	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/26/19 12:38	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/26/19 12:38	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/26/19 12:38	1
Chloroform	ND		0.39	0.073	ug/m3			02/26/19 12:38	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/26/19 12:38	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/26/19 12:38	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/26/19 12:38	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/26/19 12:38	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/26/19 12:38	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/26/19 12:38	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/26/19 12:38	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/26/19 12:38	1
Naphthalene	ND		0.21	0.21	ug/m3			02/26/19 12:38	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/26/19 12:38	1
Toluene	ND		0.45	0.45	ug/m3			02/26/19 12:38	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/26/19 12:38	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/26/19 12:38	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/26/19 12:38	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/26/19 12:38	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/26/19 12:38	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/26/19 12:38	1

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27936/4
Matrix: Air
Analysis Batch: 27936

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/26/19 12:38	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/26/19 12:38	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/26/19 12:38	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/26/19 12:38	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	97		60 - 140		02/26/19 12:38	1

Lab Sample ID: LCS 140-27936/1002
Matrix: Air
Analysis Batch: 27936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	1.00	1.02		ppb v/v		102	70 - 130
Chlorodifluoromethane	1.00	1.01		ppb v/v		101	60 - 140
Chloroform	1.00	1.04		ppb v/v		104	70 - 130
cis-1,2-Dichloroethene	1.00	1.03		ppb v/v		103	70 - 130
Dichlorodifluoromethane	1.00	0.997		ppb v/v		100	60 - 140
1,1-Dichloroethane	1.00	1.03		ppb v/v		103	70 - 130
1,2-Dichloroethane	1.00	1.01		ppb v/v		101	70 - 130
1,1-Dichloroethene	1.00	1.01		ppb v/v		101	70 - 130
Ethylbenzene	1.00	1.03		ppb v/v		103	70 - 130
Methylene Chloride	1.00	0.996		ppb v/v		100	70 - 130
Methyl tert-butyl ether	1.00	1.05		ppb v/v		105	60 - 140
Naphthalene	1.00	0.944		ppb v/v		94	60 - 140
Tetrachloroethene	1.00	1.01		ppb v/v		101	70 - 130
Toluene	1.00	1.04		ppb v/v		104	70 - 130
trans-1,2-Dichloroethene	1.00	1.01		ppb v/v		101	70 - 130
1,2,4-Trichlorobenzene	1.00	0.789		ppb v/v		79	60 - 140
1,1,1-Trichloroethane	1.00	1.02		ppb v/v		102	70 - 130
1,1,2-Trichloroethane	1.00	1.04		ppb v/v		104	70 - 130
Trichloroethene	1.00	0.998		ppb v/v		100	70 - 130
1,2,3-Trimethylbenzene	1.00	0.759		ppb v/v		76	70 - 130
1,2,4-Trimethylbenzene	1.00	1.03		ppb v/v		103	70 - 130
1,3,5-Trimethylbenzene	1.00	1.08		ppb v/v		108	70 - 130
Vinyl chloride	1.00	1.06		ppb v/v		106	70 - 130
Xylenes, Total	3.00	3.15		ppb v/v		105	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	6.3	6.41		ug/m3		102	70 - 130
Chlorodifluoromethane	3.5	3.58		ug/m3		101	60 - 140
Chloroform	4.9	5.07		ug/m3		104	70 - 130
cis-1,2-Dichloroethene	4.0	4.08		ug/m3		103	70 - 130
Dichlorodifluoromethane	4.9	4.93		ug/m3		100	60 - 140
1,1-Dichloroethane	4.0	4.19		ug/m3		103	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27936/1002
Matrix: Air
Analysis Batch: 27936

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	4.0	4.10		ug/m3		101	70 - 130
1,1-Dichloroethene	4.0	4.00		ug/m3		101	70 - 130
Ethylbenzene	4.3	4.46		ug/m3		103	70 - 130
Methylene Chloride	3.5	3.46		ug/m3		100	70 - 130
Methyl tert-butyl ether	3.6	3.78		ug/m3		105	60 - 140
Naphthalene	5.2	4.95		ug/m3		94	60 - 140
Tetrachloroethene	6.8	6.85		ug/m3		101	70 - 130
Toluene	3.8	3.93		ug/m3		104	70 - 130
trans-1,2-Dichloroethene	4.0	4.00		ug/m3		101	70 - 130
1,2,4-Trichlorobenzene	7.4	5.85		ug/m3		79	60 - 140
1,1,1-Trichloroethane	5.5	5.57		ug/m3		102	70 - 130
1,1,2-Trichloroethane	5.5	5.70		ug/m3		104	70 - 130
Trichloroethene	5.4	5.36		ug/m3		100	70 - 130
1,2,3-Trimethylbenzene	4.9	3.73		ug/m3		76	70 - 130
1,2,4-Trimethylbenzene	4.9	5.05		ug/m3		103	70 - 130
1,3,5-Trimethylbenzene	4.9	5.33		ug/m3		108	70 - 130
Vinyl chloride	2.6	2.72		ug/m3		106	70 - 130
Xylenes, Total	13	13.7		ug/m3		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		60 - 140

Lab Sample ID: MB 140-27980/5
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/27/19 13:42	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/27/19 13:42	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/27/19 13:42	1
Chloroform	ND		0.080	0.015	ppb v/v			02/27/19 13:42	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/27/19 13:42	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/27/19 13:42	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/27/19 13:42	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/27/19 13:42	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/27/19 13:42	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/27/19 13:42	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/27/19 13:42	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/27/19 13:42	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/27/19 13:42	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/27/19 13:42	1
Toluene	ND		0.12	0.12	ppb v/v			02/27/19 13:42	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/27/19 13:42	1
1,2,4-Trichlorobenzene	0.0691	J	0.080	0.039	ppb v/v			02/27/19 13:42	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/27/19 13:42	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/27/19 13:42	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/27/19 13:42	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27980/5
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/27/19 13:42	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/27/19 13:42	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/27/19 13:42	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/27/19 13:42	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/27/19 13:42	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/27/19 13:42	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/27/19 13:42	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/27/19 13:42	1
Chloroform	ND		0.39	0.073	ug/m3			02/27/19 13:42	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/27/19 13:42	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/27/19 13:42	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/27/19 13:42	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/27/19 13:42	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/27/19 13:42	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/27/19 13:42	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/27/19 13:42	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/27/19 13:42	1
Naphthalene	ND		0.21	0.21	ug/m3			02/27/19 13:42	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/27/19 13:42	1
Toluene	ND		0.45	0.45	ug/m3			02/27/19 13:42	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/27/19 13:42	1
1,2,4-Trichlorobenzene	0.513	J	0.59	0.29	ug/m3			02/27/19 13:42	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/27/19 13:42	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/27/19 13:42	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/27/19 13:42	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/27/19 13:42	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/27/19 13:42	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/27/19 13:42	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/27/19 13:42	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/27/19 13:42	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		60 - 140		02/27/19 13:42	1

Lab Sample ID: LCS 140-27980/1002
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	1.00	1.09		ppb v/v		109	70 - 130
Chlorodifluoromethane	1.00	1.09		ppb v/v		109	60 - 140
Chloroform	1.00	1.15		ppb v/v		115	70 - 130
cis-1,2-Dichloroethene	1.00	1.09		ppb v/v		109	70 - 130
Dichlorodifluoromethane	1.00	1.06		ppb v/v		106	60 - 140

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27980/1002

Matrix: Air

Analysis Batch: 27980

**Client Sample ID: Lab Control Sample
Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
1,1-Dichloroethane	1.00	1.11		ppb v/v		111	70 - 130
1,2-Dichloroethane	1.00	1.09		ppb v/v		109	70 - 130
1,1-Dichloroethene	1.00	1.06		ppb v/v		106	70 - 130
Ethylbenzene	1.00	1.09		ppb v/v		109	70 - 130
Methylene Chloride	1.00	1.06		ppb v/v		106	70 - 130
Methyl tert-butyl ether	1.00	1.08		ppb v/v		108	60 - 140
Naphthalene	1.00	1.16		ppb v/v		116	60 - 140
Tetrachloroethene	1.00	1.06		ppb v/v		106	70 - 130
Toluene	1.00	1.10		ppb v/v		110	70 - 130
trans-1,2-Dichloroethene	1.00	1.04		ppb v/v		104	70 - 130
1,2,4-Trichlorobenzene	1.00	0.910		ppb v/v		91	60 - 140
1,1,1-Trichloroethane	1.00	1.09		ppb v/v		109	70 - 130
1,1,2-Trichloroethane	1.00	1.12		ppb v/v		112	70 - 130
Trichloroethene	1.00	1.04		ppb v/v		104	70 - 130
1,2,3-Trimethylbenzene	1.00	0.835		ppb v/v		83	70 - 130
1,2,4-Trimethylbenzene	1.00	1.15		ppb v/v		115	70 - 130
1,3,5-Trimethylbenzene	1.00	1.18		ppb v/v		118	70 - 130
Vinyl chloride	1.00	1.11		ppb v/v		111	70 - 130
Xylenes, Total	3.00	3.43		ppb v/v		114	70 - 130
Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
Benzene	3.2	3.46		ug/m3		108	70 - 130
Carbon tetrachloride	6.3	6.85		ug/m3		109	70 - 130
Chlorodifluoromethane	3.5	3.86		ug/m3		109	60 - 140
Chloroform	4.9	5.60		ug/m3		115	70 - 130
cis-1,2-Dichloroethene	4.0	4.34		ug/m3		109	70 - 130
Dichlorodifluoromethane	4.9	5.24		ug/m3		106	60 - 140
1,1-Dichloroethane	4.0	4.51		ug/m3		111	70 - 130
1,2-Dichloroethane	4.0	4.42		ug/m3		109	70 - 130
1,1-Dichloroethene	4.0	4.19		ug/m3		106	70 - 130
Ethylbenzene	4.3	4.73		ug/m3		109	70 - 130
Methylene Chloride	3.5	3.68		ug/m3		106	70 - 130
Methyl tert-butyl ether	3.6	3.90		ug/m3		108	60 - 140
Naphthalene	5.2	6.06		ug/m3		116	60 - 140
Tetrachloroethene	6.8	7.17		ug/m3		106	70 - 130
Toluene	3.8	4.13		ug/m3		110	70 - 130
trans-1,2-Dichloroethene	4.0	4.13		ug/m3		104	70 - 130
1,2,4-Trichlorobenzene	7.4	6.75		ug/m3		91	60 - 140
1,1,1-Trichloroethane	5.5	5.95		ug/m3		109	70 - 130
1,1,2-Trichloroethane	5.5	6.10		ug/m3		112	70 - 130
Trichloroethene	5.4	5.58		ug/m3		104	70 - 130
1,2,3-Trimethylbenzene	4.9	4.10		ug/m3		83	70 - 130
1,2,4-Trimethylbenzene	4.9	5.66		ug/m3		115	70 - 130
1,3,5-Trimethylbenzene	4.9	5.80		ug/m3		118	70 - 130
Vinyl chloride	2.6	2.83		ug/m3		111	70 - 130
Xylenes, Total	13	14.9		ug/m3		114	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27980/1002
Matrix: Air
Analysis Batch: 27980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>LCS</i> <i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	103		60 - 140

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Air - GC/MS VOA

Analysis Batch: 27936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14390-1	SV-126-C-26	Total/NA	Air	TO 15 LL	
140-14390-1 - DL	SV-126-C-26	Total/NA	Air	TO 15 LL	
140-14390-2	SV-101-C-26	Total/NA	Air	TO 15 LL	
140-14390-3	SV-100-C-26	Total/NA	Air	TO 15 LL	
140-14390-4	SV-060-C-26	Total/NA	Air	TO 15 LL	
140-14390-4 - DL	SV-060-C-26	Total/NA	Air	TO 15 LL	
140-14390-5	SV-118-A-26	Total/NA	Air	TO 15 LL	
140-14390-6	SV-015-A-26	Total/NA	Air	TO 15 LL	
140-14390-7	SV-078-A-26	Total/NA	Air	TO 15 LL	
140-14390-8	SV-136-A-26	Total/NA	Air	TO 15 LL	
140-14390-9	SV-076-A-26	Total/NA	Air	TO 15 LL	
140-14390-10	SV-168-A-26	Total/NA	Air	TO 15 LL	
140-14390-11	SV-075-A-26	Total/NA	Air	TO 15 LL	
140-14390-12	BCK-1-26	Total/NA	Air	TO 15 LL	
140-14390-13	BCK-2-26	Total/NA	Air	TO 15 LL	
140-14390-14	BCK-3-26	Total/NA	Air	TO 15 LL	
140-14390-15	BCK-4-26	Total/NA	Air	TO 15 LL	
140-14390-16	IA-001-C-26	Total/NA	Air	TO 15 LL	
140-14390-17	IA-004-C-26	Total/NA	Air	TO 15 LL	
MB 140-27936/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27936/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 27980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14390-5 - DL	SV-118-A-26	Total/NA	Air	TO 15 LL	
140-14390-18	IA-131-C-26	Total/NA	Air	TO 15 LL	
MB 140-27980/5	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27980/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-126-C-26

Date Collected: 02/19/19 12:34

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14390-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL Instrument ID: MH		1	100 mL	500 mL	27936	02/26/19 13:31	S1K	TAL KNX
Total/NA	Analysis	TO 15 LL Instrument ID: MH	DL	1	10 mL	500 mL	27936	02/27/19 05:28	S1K	TAL KNX

Client Sample ID: SV-101-C-26

Date Collected: 02/19/19 12:41

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14390-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL Instrument ID: MH		1	100 mL	500 mL	27936	02/27/19 06:22	S1K	TAL KNX

Client Sample ID: SV-100-C-26

Date Collected: 02/19/19 12:43

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14390-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL Instrument ID: MH		1	100 mL	500 mL	27936	02/26/19 15:17	S1K	TAL KNX

Client Sample ID: SV-060-C-26

Date Collected: 02/19/19 12:57

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14390-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL Instrument ID: MH		1	100 mL	500 mL	27936	02/26/19 16:10	S1K	TAL KNX
Total/NA	Analysis	TO 15 LL Instrument ID: MH	DL	1	40 mL	500 mL	27936	02/27/19 08:09	S1K	TAL KNX

Client Sample ID: SV-118-A-26

Date Collected: 02/21/19 12:42

Date Received: 02/23/19 10:10

Lab Sample ID: 140-14390-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL Instrument ID: MH		1	100 mL	500 mL	27936	02/26/19 17:03	S1K	TAL KNX
Total/NA	Analysis	TO 15 LL Instrument ID: MH	DL	1	10 mL	500 mL	27980	02/28/19 03:30	S1K	TAL KNX

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: SV-015-A-26

Lab Sample ID: 140-14390-6

Date Collected: 02/21/19 12:45

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/26/19 17:56	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-078-A-26

Lab Sample ID: 140-14390-7

Date Collected: 02/21/19 12:49

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/26/19 18:49	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-136-A-26

Lab Sample ID: 140-14390-8

Date Collected: 02/21/19 12:53

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/26/19 19:43	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-076-A-26

Lab Sample ID: 140-14390-9

Date Collected: 02/21/19 12:57

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/26/19 20:36	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-168-A-26

Lab Sample ID: 140-14390-10

Date Collected: 02/21/19 13:00

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/26/19 21:29	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: SV-075-A-26

Lab Sample ID: 140-14390-11

Date Collected: 02/21/19 13:06

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1.67	167 mL	500 mL	27936	02/26/19 22:23	S1K	TAL KNX
Instrument ID: MH										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: BCK-1-26

Lab Sample ID: 140-14390-12

Date Collected: 02/19/19 16:09

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/27/19 00:09	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: BCK-2-26

Lab Sample ID: 140-14390-13

Date Collected: 02/19/19 16:19

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/27/19 01:02	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: BCK-3-26

Lab Sample ID: 140-14390-14

Date Collected: 02/19/19 16:28

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/27/19 01:55	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: BCK-4-26

Lab Sample ID: 140-14390-15

Date Collected: 02/19/19 16:35

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/27/19 02:48	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: IA-001-C-26

Lab Sample ID: 140-14390-16

Date Collected: 02/19/19 16:51

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/27/19 03:41	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: IA-004-C-26

Lab Sample ID: 140-14390-17

Date Collected: 02/19/19 16:54

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27936	02/27/19 07:16	S1K	TAL KNX
Instrument ID: MH										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Client Sample ID: IA-131-C-26

Lab Sample ID: 140-14390-18

Date Collected: 02/19/19 17:02

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27980	02/28/19 04:23	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27936/4

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27936	02/26/19 12:38	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27980/5

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27980	02/27/19 13:42	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27936/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27936	02/26/19 10:24	S1K	TAL KNX
Instrument ID: MH										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27980/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27980	02/27/19 11:50	S1K	TAL KNX
Instrument ID: MH										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14390-1	SV-126-C-26	Air	02/19/19 12:34	02/23/19 10:10
140-14390-2	SV-101-C-26	Air	02/19/19 12:41	02/23/19 10:10
140-14390-3	SV-100-C-26	Air	02/19/19 12:43	02/23/19 10:10
140-14390-4	SV-060-C-26	Air	02/19/19 12:57	02/23/19 10:10
140-14390-5	SV-118-A-26	Air	02/21/19 12:42	02/23/19 10:10
140-14390-6	SV-015-A-26	Air	02/21/19 12:45	02/23/19 10:10
140-14390-7	SV-078-A-26	Air	02/21/19 12:49	02/23/19 10:10
140-14390-8	SV-136-A-26	Air	02/21/19 12:53	02/23/19 10:10
140-14390-9	SV-076-A-26	Air	02/21/19 12:57	02/23/19 10:10
140-14390-10	SV-168-A-26	Air	02/21/19 13:00	02/23/19 10:10
140-14390-11	SV-075-A-26	Air	02/21/19 13:06	02/23/19 10:10
140-14390-12	BCK-1-26	Air	02/19/19 16:09	02/23/19 10:10
140-14390-13	BCK-2-26	Air	02/19/19 16:19	02/23/19 10:10
140-14390-14	BCK-3-26	Air	02/19/19 16:28	02/23/19 10:10
140-14390-15	BCK-4-26	Air	02/19/19 16:35	02/23/19 10:10
140-14390-16	IA-001-C-26	Air	02/19/19 16:51	02/23/19 10:10
140-14390-17	IA-004-C-26	Air	02/19/19 16:54	02/23/19 10:10
140-14390-18	IA-131-C-26	Air	02/19/19 17:02	02/23/19 10:10

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14390-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
SV-126-C-26	140-14390-1	101
SV-126-C-26 DL	140-14390-1 DL	98
SV-101-C-26	140-14390-2	99
SV-100-C-26	140-14390-3	98
SV-060-C-26	140-14390-4	98
SV-060-C-26 DL	140-14390-4 DL	100
SV-118-A-26	140-14390-5	101
SV-118-A-26 DL	140-14390-5 DL	99
SV-015-A-26	140-14390-6	97
SV-078-A-26	140-14390-7	101
SV-136-A-26	140-14390-8	100
SV-076-A-26	140-14390-9	99
SV-168-A-26	140-14390-10	101
SV-075-A-26	140-14390-11	100
BCK-1-26	140-14390-12	99
BCK-2-26	140-14390-13	97
BCK-3-26	140-14390-14	97
BCK-4-26	140-14390-15	97
IA-001-C-26	140-14390-16	99
IA-004-C-26	140-14390-17	98
IA-131-C-26	140-14390-18	98
	MB 140-27936/4	97
	MB 140-27980/5	96
	LCS 140-27936/1002	99
	LCS 140-27980/1002	103

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB20-LCS.d
 Lab ID: LCS 140-27936/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	1.03	103	70-130	
Carbon tetrachloride	1.00	1.02	102	70-130	
Chlorodifluoromethane	1.00	1.01	101	60-140	
Chloroform	1.00	1.04	104	70-130	
cis-1,2-Dichloroethene	1.00	1.03	103	70-130	
Dichlorodifluoromethane	1.00	0.997	100	60-140	
1,1-Dichloroethane	1.00	1.03	103	70-130	
1,2-Dichloroethane	1.00	1.01	101	70-130	
1,1-Dichloroethene	1.00	1.01	101	70-130	
Ethylbenzene	1.00	1.03	103	70-130	
Methylene Chloride	1.00	0.996	100	70-130	
Methyl tert-butyl ether	1.00	1.05	105	60-140	
Naphthalene	1.00	0.944	94	60-140	
Tetrachloroethene	1.00	1.01	101	70-130	
Toluene	1.00	1.04	104	70-130	
trans-1,2-Dichloroethene	1.00	1.01	101	70-130	
1,2,4-Trichlorobenzene	1.00	0.789	79	60-140	
1,1,1-Trichloroethane	1.00	1.02	102	70-130	
1,1,2-Trichloroethane	1.00	1.04	104	70-130	
Trichloroethene	1.00	0.998	100	70-130	
1,2,3-Trimethylbenzene	1.00	0.759	76	70-130	
1,2,4-Trimethylbenzene	1.00	1.03	103	70-130	
1,3,5-Trimethylbenzene	1.00	1.08	108	70-130	
Vinyl chloride	1.00	1.06	106	70-130	
Xylenes, Total	3.00	3.15	105	70-130	

Column to be used to flag recovery and RPD values

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB27-LCS.d
 Lab ID: LCS 140-27980/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	1.08	108	70-130	
Carbon tetrachloride	1.00	1.09	109	70-130	
Chlorodifluoromethane	1.00	1.09	109	60-140	
Chloroform	1.00	1.15	115	70-130	
cis-1,2-Dichloroethene	1.00	1.09	109	70-130	
Dichlorodifluoromethane	1.00	1.06	106	60-140	
1,1-Dichloroethane	1.00	1.11	111	70-130	
1,2-Dichloroethane	1.00	1.09	109	70-130	
1,1-Dichloroethene	1.00	1.06	106	70-130	
Ethylbenzene	1.00	1.09	109	70-130	
Methylene Chloride	1.00	1.06	106	70-130	
Methyl tert-butyl ether	1.00	1.08	108	60-140	
Naphthalene	1.00	1.16	116	60-140	
Tetrachloroethene	1.00	1.06	106	70-130	
Toluene	1.00	1.10	110	70-130	
trans-1,2-Dichloroethene	1.00	1.04	104	70-130	
1,2,4-Trichlorobenzene	1.00	0.910	91	60-140	
1,1,1-Trichloroethane	1.00	1.09	109	70-130	
1,1,2-Trichloroethane	1.00	1.12	112	70-130	
Trichloroethene	1.00	1.04	104	70-130	
1,2,3-Trimethylbenzene	1.00	0.835	83	70-130	
1,2,4-Trimethylbenzene	1.00	1.15	115	70-130	
1,3,5-Trimethylbenzene	1.00	1.18	118	70-130	
Vinyl chloride	1.00	1.11	111	70-130	
Xylenes, Total	3.00	3.43	114	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: H500BB22.D Lab Sample ID: MB 140-27936/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/26/2019 12:38
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27936/1002	HCCVB20-LCS .d	02/26/2019 10:24
SV-126-C-26	140-14390-1	HB26P101.D	02/26/2019 13:31
SV-100-C-26	140-14390-3	HB26P103.D	02/26/2019 15:17
SV-060-C-26	140-14390-4	HB26P104.D	02/26/2019 16:10
SV-118-A-26	140-14390-5	HB26P105.D	02/26/2019 17:03
SV-015-A-26	140-14390-6	HB26P106.D	02/26/2019 17:56
SV-078-A-26	140-14390-7	HB26P107.D	02/26/2019 18:49
SV-136-A-26	140-14390-8	HB26P108.D	02/26/2019 19:43
SV-076-A-26	140-14390-9	HB26P109.D	02/26/2019 20:36
SV-168-A-26	140-14390-10	HB26P110.D	02/26/2019 21:29
SV-075-A-26	140-14390-11	HB26P111.D	02/26/2019 22:23
BCK-1-26	140-14390-12	HB26P112.D	02/27/2019 00:09
BCK-2-26	140-14390-13	HB26P113.D	02/27/2019 01:02
BCK-3-26	140-14390-14	HB26P114.D	02/27/2019 01:55
BCK-4-26	140-14390-15	HB26P115.D	02/27/2019 02:48
IA-001-C-26	140-14390-16	HB26P116D.D	02/27/2019 03:41
SV-126-C-26 DL	140-14390-1 DL	HB26P101D.D	02/27/2019 05:28
SV-101-C-26	140-14390-2	HB26P102R.D	02/27/2019 06:22
IA-004-C-26	140-14390-17	HB26P203R.D	02/27/2019 07:16
SV-060-C-26 DL	140-14390-4 DL	HB26P104DL. D	02/27/2019 08:09

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: HB27LOT14399MB.D Lab Sample ID: MB 140-27980/5
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/27/2019 13:42
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27980/1002	HCCVB27-LCS .d	02/27/2019 11:50
SV-118-A-26 DL	140-14390-5 DL	HB27P112.D	02/28/2019 03:30
IA-131-C-26	140-14390-18	HB27P113.D	02/28/2019 04:23

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: HBFB20IC.D BFB Injection Date: 02/20/2019
 Instrument ID: MH BFB Injection Time: 13:11
 Analysis Batch No.: 27843

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.2	
75	30.0 - 60.0 % of mass 95	48.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	93.5	
175	5.0 - 9.0 % of mass 174	6.7	(7.1) 1
176	95.0 - 101.0 % of mass 174	91.9	(98.2) 1
177	5.0 - 9.0 % of mass 176	6.0	(6.6) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-27843/3	HB20IC09.D	02/20/2019	15:12
	IC 140-27843/5	HB20IC10.D	02/20/2019	16:59
	IC 140-27843/8	HB20IC01.D	02/20/2019	19:38
	IC 140-27843/9	HB20IC02.D	02/20/2019	20:31
	IC 140-27843/10	HB20IC03.D	02/20/2019	21:26
	IC 140-27843/11	HB20IC04.D	02/20/2019	22:20
	IC 140-27843/12	HB20IC05.D	02/20/2019	23:14
	IC 140-27843/13	HB20IC06.D	02/21/2019	00:08
	ICIS 140-27843/14	HB20IC07.D	02/21/2019	01:03
	IC 140-27843/15	HB20IC08.D	02/21/2019	01:57
	ICV 140-27843/17	HB20ICV.D	02/21/2019	03:43

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: HBFB20.D BFB Injection Date: 02/26/2019
 Instrument ID: MH BFB Injection Time: 09:56
 Analysis Batch No.: 27936

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	19.8
75	30.0 - 60.0 % of mass 95	46.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.9
173	Less than 2.0 % of mass 174	0.5 (0.5) 1
174	50.0 - 120.00 % of mass 95	98.0
175	5.0 - 9.0 % of mass 174	6.8 (7.0) 1
176	95.0 - 101.0 % of mass 174	94.9 (96.9) 1
177	5.0 - 9.0 % of mass 176	6.1 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27936/2	HCCVB20.D	02/26/2019	10:24
	LCS 140-27936/1002	HCCVB20-LCS.d	02/26/2019	10:24
	MB 140-27936/4	H500BB22.D	02/26/2019	12:38
SV-126-C-26	140-14390-1	HB26P101.D	02/26/2019	13:31
SV-100-C-26	140-14390-3	HB26P103.D	02/26/2019	15:17
SV-060-C-26	140-14390-4	HB26P104.D	02/26/2019	16:10
SV-118-A-26	140-14390-5	HB26P105.D	02/26/2019	17:03
SV-015-A-26	140-14390-6	HB26P106.D	02/26/2019	17:56
SV-078-A-26	140-14390-7	HB26P107.D	02/26/2019	18:49
SV-136-A-26	140-14390-8	HB26P108.D	02/26/2019	19:43
SV-076-A-26	140-14390-9	HB26P109.D	02/26/2019	20:36
SV-168-A-26	140-14390-10	HB26P110.D	02/26/2019	21:29
SV-075-A-26	140-14390-11	HB26P111.D	02/26/2019	22:23
BCK-1-26	140-14390-12	HB26P112.D	02/27/2019	00:09
BCK-2-26	140-14390-13	HB26P113.D	02/27/2019	01:02
BCK-3-26	140-14390-14	HB26P114.D	02/27/2019	01:55
BCK-4-26	140-14390-15	HB26P115.D	02/27/2019	02:48
IA-001-C-26	140-14390-16	HB26P116D.D	02/27/2019	03:41
SV-126-C-26 DL	140-14390-1 DL	HB26P101D.D	02/27/2019	05:28
SV-101-C-26	140-14390-2	HB26P102R.D	02/27/2019	06:22
IA-004-C-26	140-14390-17	HB26P203R.D	02/27/2019	07:16
SV-060-C-26 DL	140-14390-4 DL	HB26P104DL.D	02/27/2019	08:09

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: HBFB27.D BFB Injection Date: 02/27/2019
 Instrument ID: MH BFB Injection Time: 11:22
 Analysis Batch No.: 27980

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.7
75	30.0 - 60.0 % of mass 95	48.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.4) 1
174	50.0 - 120.00 % of mass 95	91.8
175	5.0 - 9.0 % of mass 174	6.5 (7.0) 1
176	95.0 - 101.0 % of mass 174	88.9 (96.8) 1
177	5.0 - 9.0 % of mass 176	5.8 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27980/2	HCCVB27.D	02/27/2019	11:50
	LCS 140-27980/1002	HCCVB27-LCS. d	02/27/2019	11:50
	MB 140-27980/5	HB27LOT14399 MB.D	02/27/2019	13:42
SV-118-A-26 DL	140-14390-5 DL	HB27P112.D	02/28/2019	03:30
IA-131-C-26	140-14390-18	HB27P113.D	02/28/2019	04:23

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Sample No.: ICIS 140-27843/14 Date Analyzed: 02/21/2019 01:03
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HB20IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBZd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	348949	8.83	1879497	11.01	1644075	15.73
UPPER LIMIT	488529	9.16	2631296	11.34	2301705	16.06
LOWER LIMIT	209369	8.50	1127698	10.68	986445	15.40
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-27843/17	382438	8.83	2064078	11.01	1803849	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Sample No.: CCVIS 140-27936/2 Date Analyzed: 02/26/2019 10:24
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB20.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	342352	8.82	1857782	11.00	1578748	15.73	
UPPER LIMIT	479293	9.15	2600895	11.33	2210247	16.06	
LOWER LIMIT	205411	8.49	1114669	10.67	947249	15.40	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27936/1002	342352	8.82	1857782	11.00	1578748	15.73	
MB 140-27936/4	328212	8.82	1777677	11.00	1496441	15.73	
140-14390-1	SV-126-C-26	295256	8.83	1628772	11.01	1445440	15.73
140-14390-3	SV-100-C-26	321718	8.82	1742188	11.01	1463732	15.73
140-14390-4	SV-060-C-26	306344	8.82	1657033	11.01	1388582	15.73
140-14390-5	SV-118-A-26	296259	8.82	1615475	11.01	1362515	15.73
140-14390-6	SV-015-A-26	280411	8.84	1524680	11.01	1263585	15.73
140-14390-7	SV-078-A-26	293368	8.83	1591119	11.01	1358343	15.73
140-14390-8	SV-136-A-26	290143	8.86	1608111	11.02	1411221	15.73
140-14390-9	SV-076-A-26	320518	8.83	1732928	11.01	1534202	15.73
140-14390-10	SV-168-A-26	300597	8.86	1666175	11.02	1440458	15.73
140-14390-11	SV-075-A-26	334101	8.83	1835120	11.01	1535193	15.73
140-14390-12	BCK-1-26	305965	8.82	1633864	11.01	1349634	15.73
140-14390-13	BCK-2-26	304769	8.82	1668266	11.01	1397553	15.73
140-14390-14	BCK-3-26	288397	8.82	1563358	11.00	1284217	15.73
140-14390-15	BCK-4-26	292070	8.82	1594766	11.01	1318806	15.73
140-14390-16	IA-001-C-26	282998	8.82	1535197	11.01	1298941	15.73
140-14390-1 DL	SV-126-C-26 DL	270028	8.82	1457588	11.01	1214881	15.73
140-14390-2	SV-101-C-26	259365	8.82	1401170	11.01	1231013	15.73
140-14390-17	IA-004-C-26	272850	8.82	1484861	11.01	1264664	15.73
140-14390-4 DL	SV-060-C-26 DL	260606	8.82	1404632	11.01	1209563	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Sample No.: CCVIS 140-27980/2 Date Analyzed: 02/27/2019 11:50
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB27.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBzd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	226060	8.81	1253478	11.00	1073197	15.72	
UPPER LIMIT	316484	9.14	1754869	11.33	1502476	16.05	
LOWER LIMIT	135636	8.48	752087	10.67	643918	15.39	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27980/1002	226060	8.81	1253478	11.00	1073197	15.72	
MB 140-27980/5	264467	8.81	1438660	11.00	1193009	15.72	
140-14390-5 DL	SV-118-A-26 DL	308902	8.82	1657088	11.00	1400401	15.73
140-14390-18	IA-131-C-26	303298	8.82	1660254	11.01	1406034	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-126-C-26 Lab Sample ID: 140-14390-1
 Matrix: Air Lab File ID: HB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	41		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.16	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	41		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.32	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.19	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	100	E	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.53		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.73	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.23		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.38	J	0.40	0.080
108-88-3	Toluene	92.14	10		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	2.4		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	0.41		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	74		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.18	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.22	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	560	E	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.95		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-126-C-26 Lab Sample ID: 140-14390-1
 Matrix: Air Lab File ID: HB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	130		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.56	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	160		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.76	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	400	E	1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.2		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.6	J	2.7	0.54
108-88-3	Toluene	92.14	39		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	9.7		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	3.0		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	400		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.86	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	1400	E	0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D
 Lims ID: 140-14390-A-1
 Client ID: SV-126-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 13:31:30 ALS Bottle#: 1 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-005
 Misc. Info.: 140-14390-a-1
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:51:45 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:53:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.819	0.010	95	295256	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.000	0.010	95	1628772	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	87	1445440	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	96	952932	4.05	
6 Chlorodifluoromethane	51	3.681	3.682	-0.001	96	7625	0.0315	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	23768	0.0639	
12 Vinyl chloride	62	4.100	4.095	0.005	99	14991567	111.2	E
27 1,1-Dichloroethene	96	5.940	5.919	0.021	97	2322386	20.2	E
31 Methylene Chloride	84	6.291	6.271	0.020	98	17694	0.1466	
34 trans-1,2-Dichloroethene	96	7.098	7.077	0.021	97	57534	0.4893	
37 1,1-Dichloroethane	63	7.516	7.501	0.015	98	8435	0.0377	
41 cis-1,2-Dichloroethene	96	8.498	8.483	0.015	96	975555	8.18	
47 Benzene	78	10.467	10.457	0.010	97	2825796	8.21	
50 Carbon tetrachloride	117	10.483	10.473	0.010	93	4232	0.0152	
56 Trichloroethene	130	11.718	11.713	0.005	97	2405214	14.8	
65 Toluene	91	13.765	13.760	0.005	93	848626	2.06	
73 Tetrachloroethene	129	14.902	14.897	0.005	95	12902	0.0770	
76 Ethylbenzene	91	16.065	16.060	0.005	99	55802	0.1065	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	59102	0.1463	
82 o-Xylene	91	16.747	16.752	-0.005	98	18335	0.0446	
89 1,3,5-Trimethylbenzene	120	18.132	18.158	-0.026	81	4151	0.0441	
93 1,2,4-Trimethylbenzene	105	18.592	18.613	-0.021	99	16493	0.0350	
111 1,2,4-Trichlorobenzene	180	21.099	21.109	-0.010	94	4240	0.0821	
113 Naphthalene	128	21.249	21.254	-0.005	98	22994	0.0454	
S 121 Xylenes, Total	100				0		0.1909	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Worklist Smp#: 5

Client ID: SV-126-C-26

Purge Vol: 500.000 mL

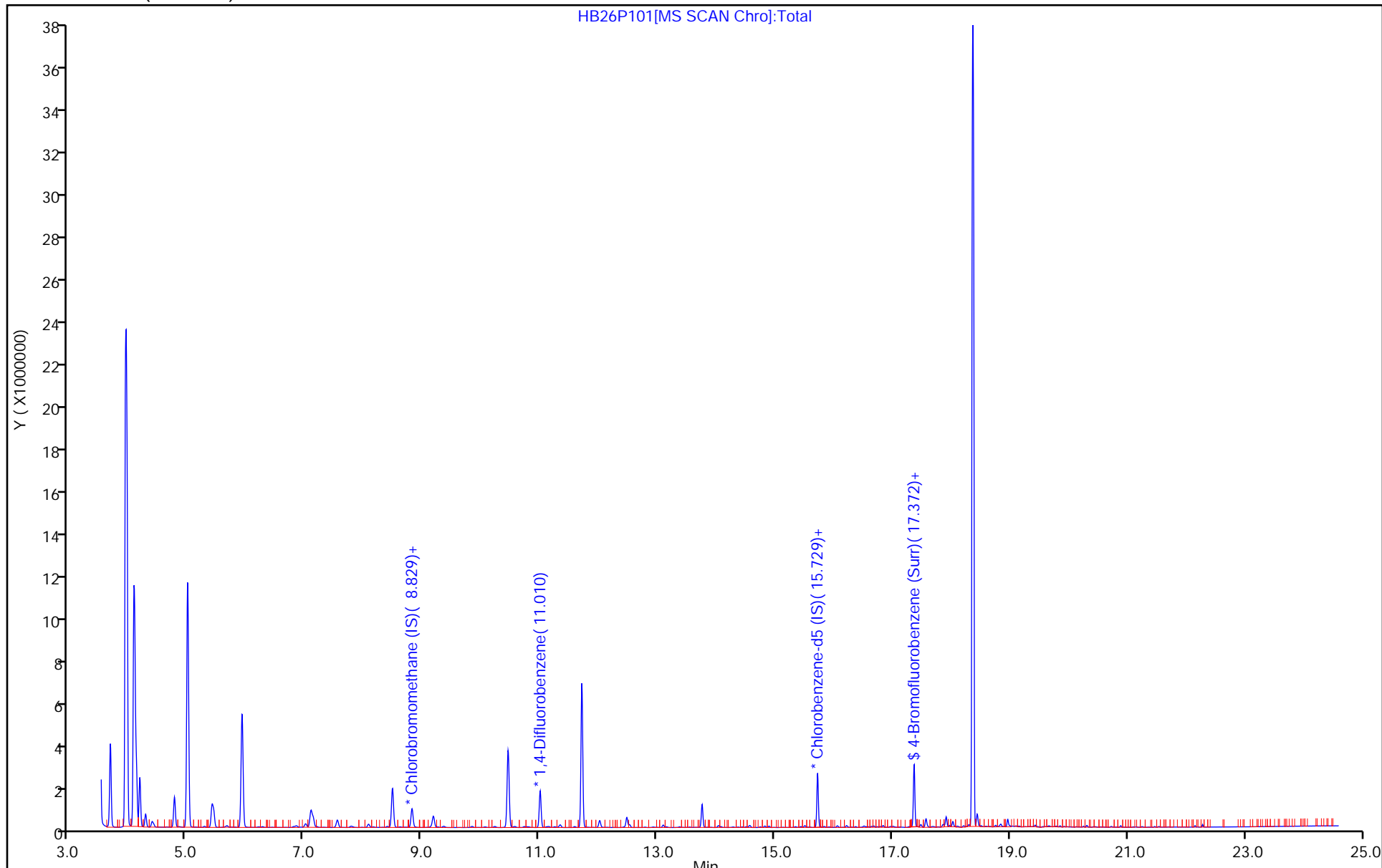
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D
 Lims ID: 140-14390-A-1
 Client ID: SV-126-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 13:31:30 ALS Bottle#: 1 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-005
 Misc. Info.: 140-14390-a-1
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:51:45 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

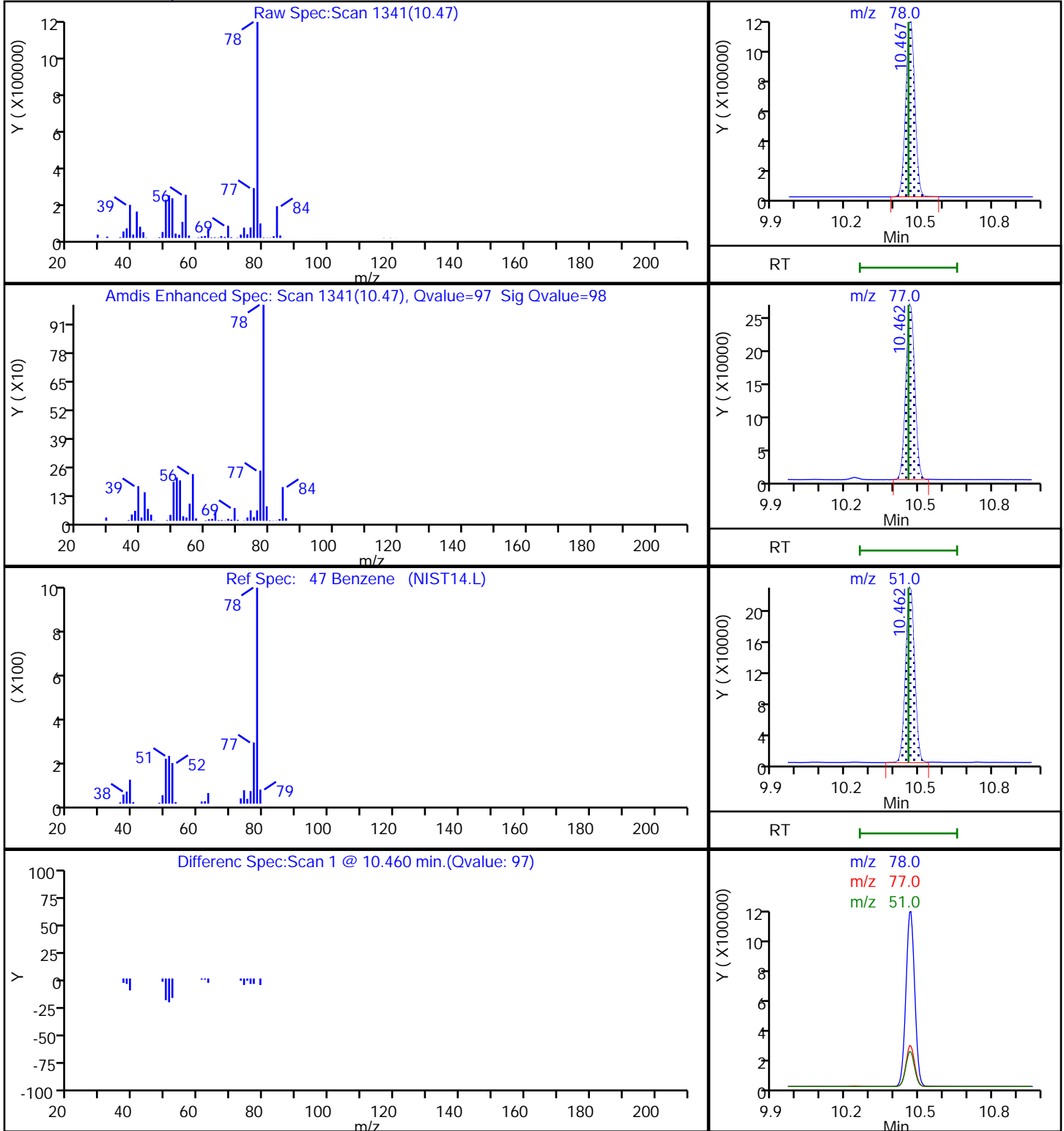
First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:53:28

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.05	101.14

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D
Injection Date: 26-Feb-2019 13:31:30 Instrument ID: MH
Lims ID: 140-14390-A-1 Lab Sample ID: 140-14390-1
Client ID: SV-126-C-26
Operator ID: HMT ALS Bottle#: 1 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

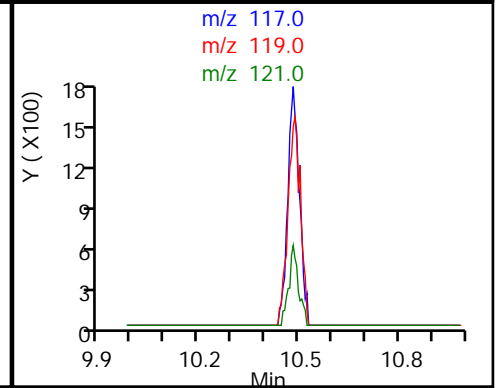
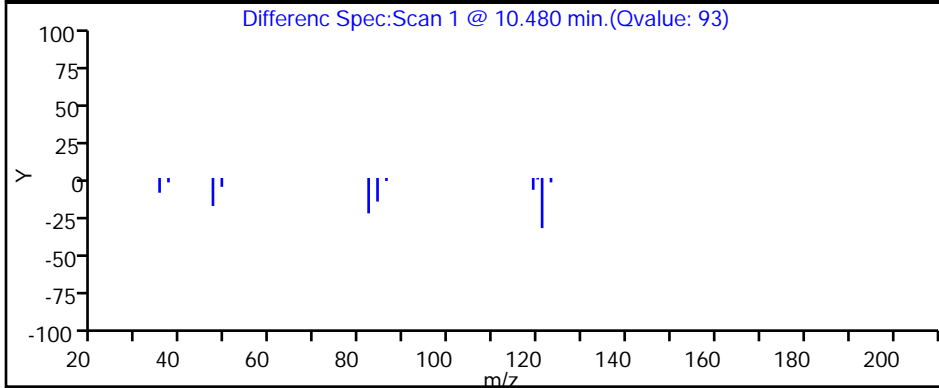
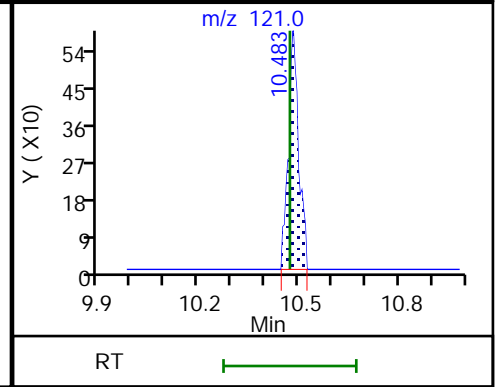
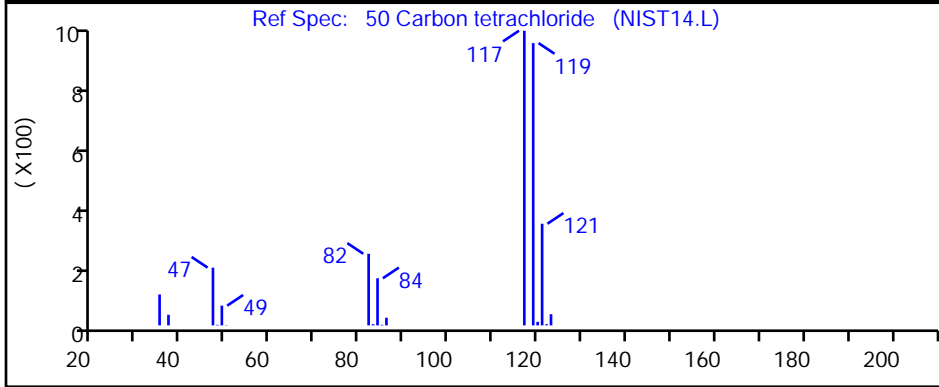
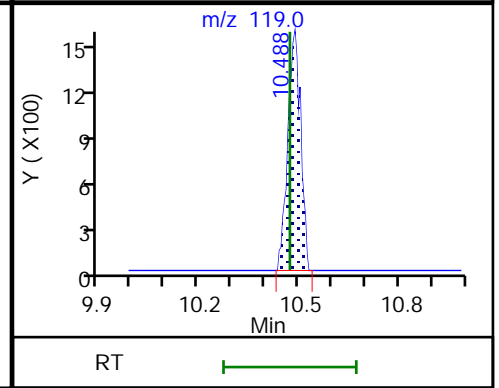
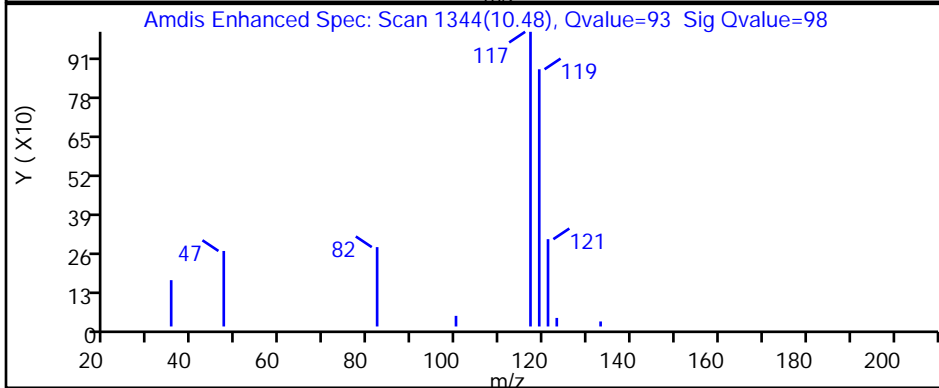
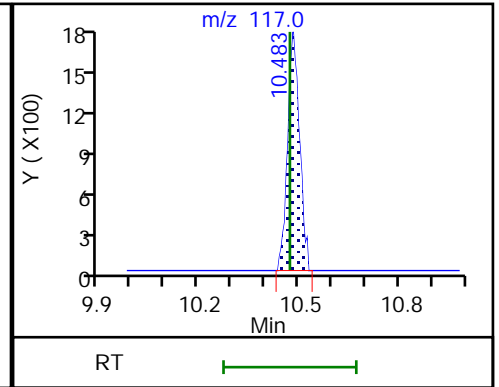
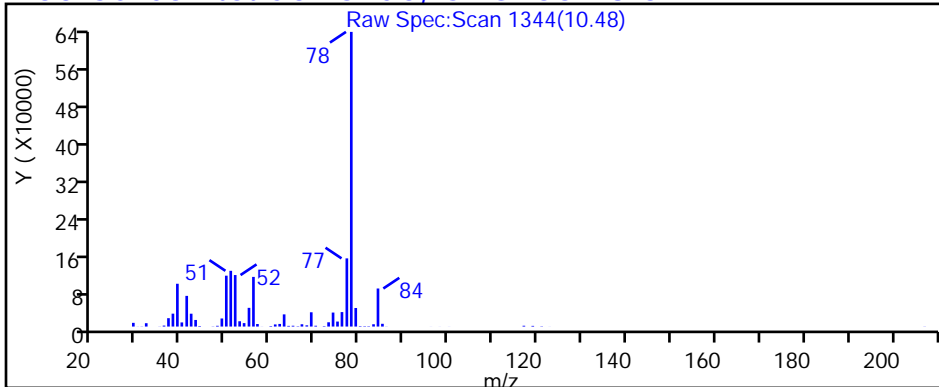
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

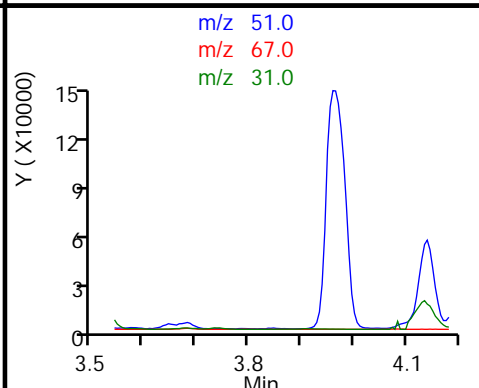
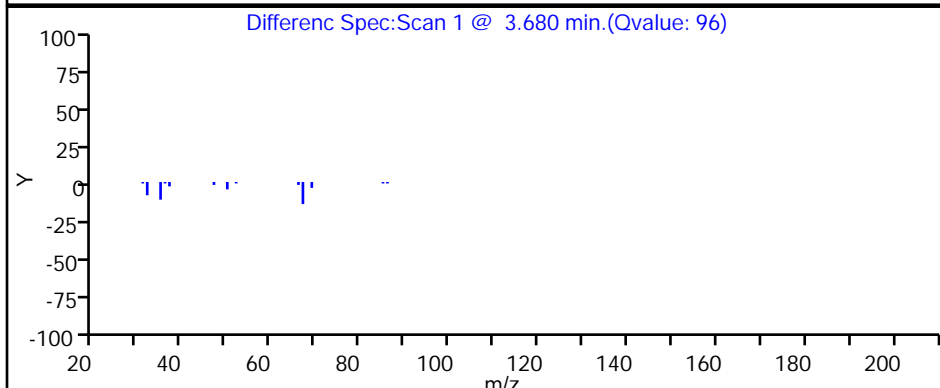
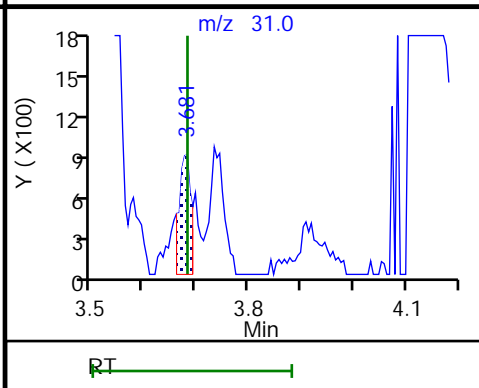
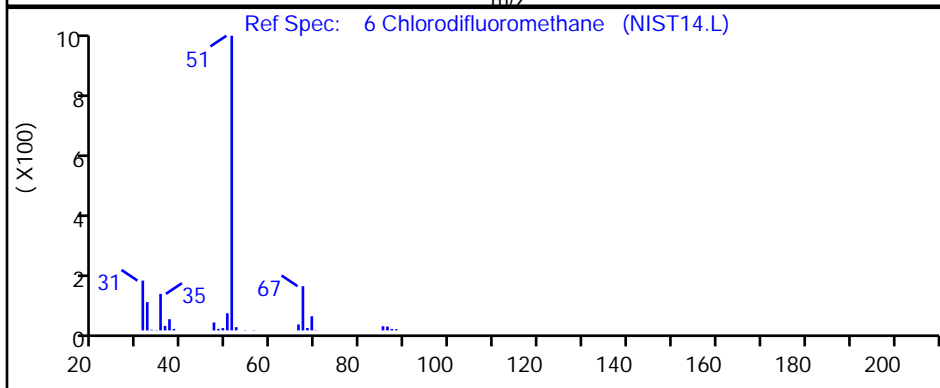
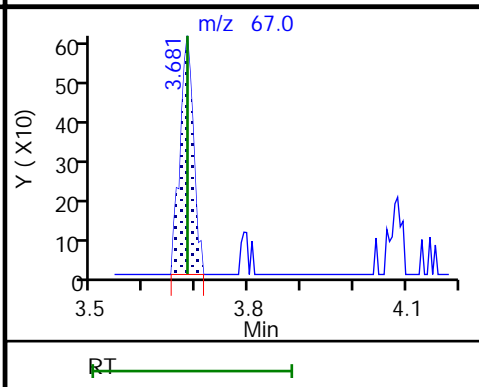
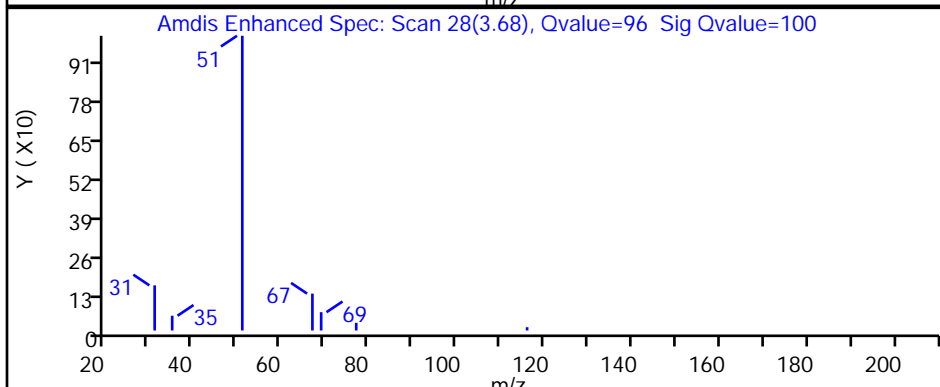
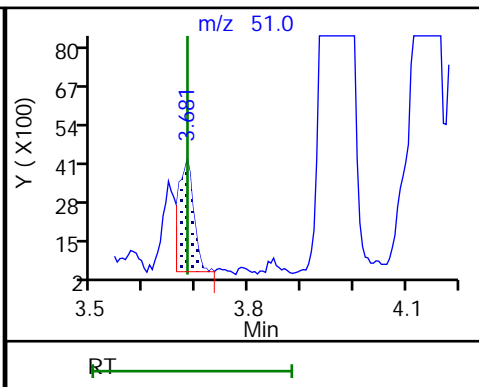
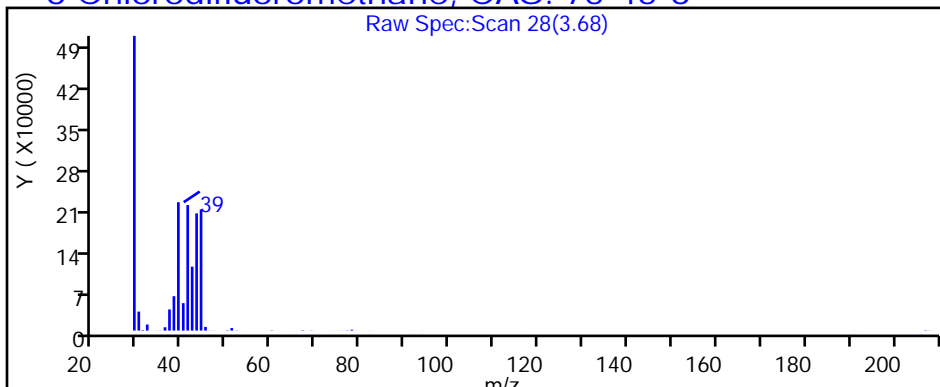
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1 Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

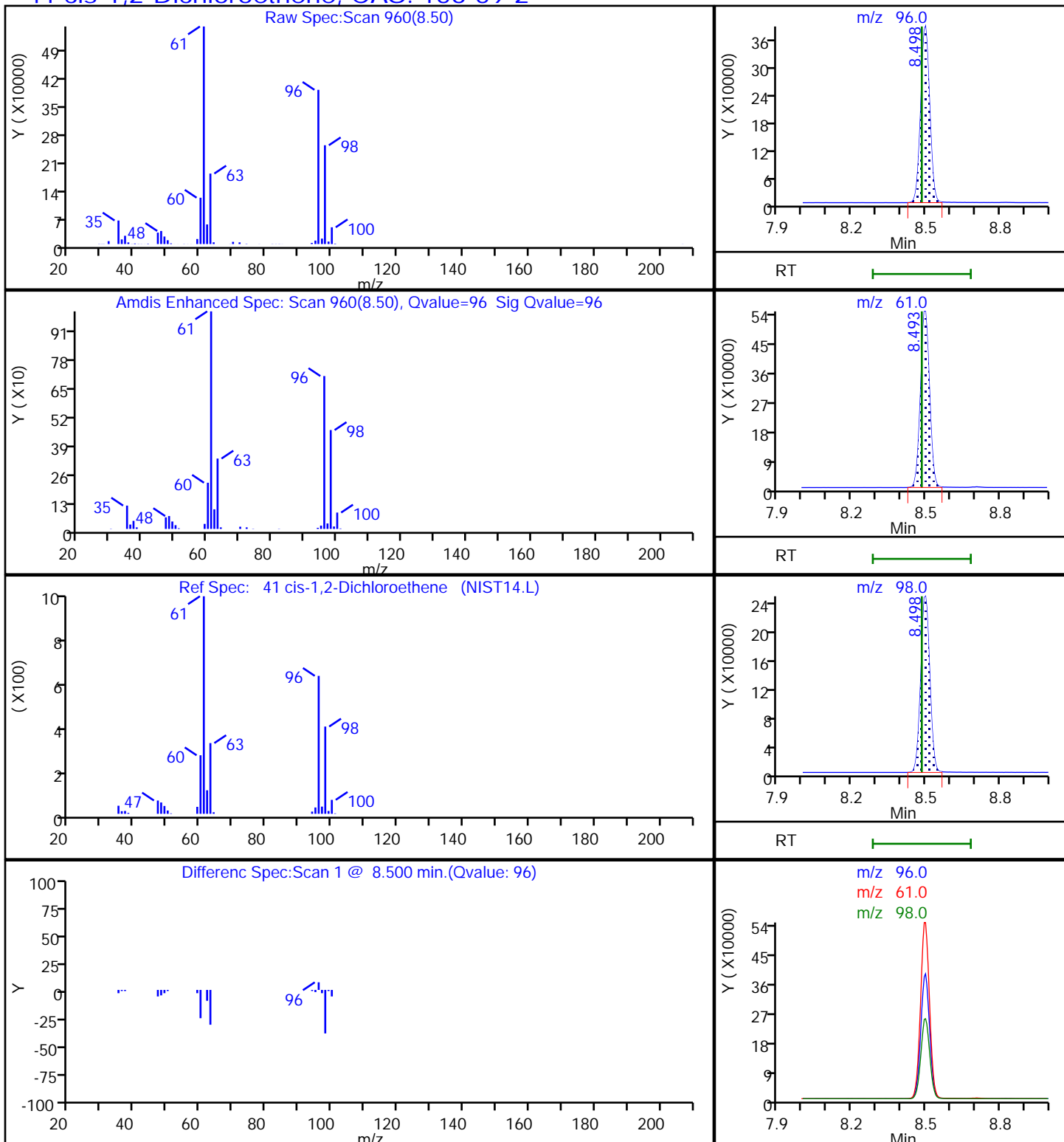
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

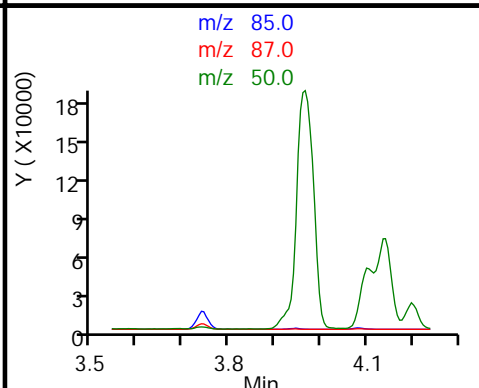
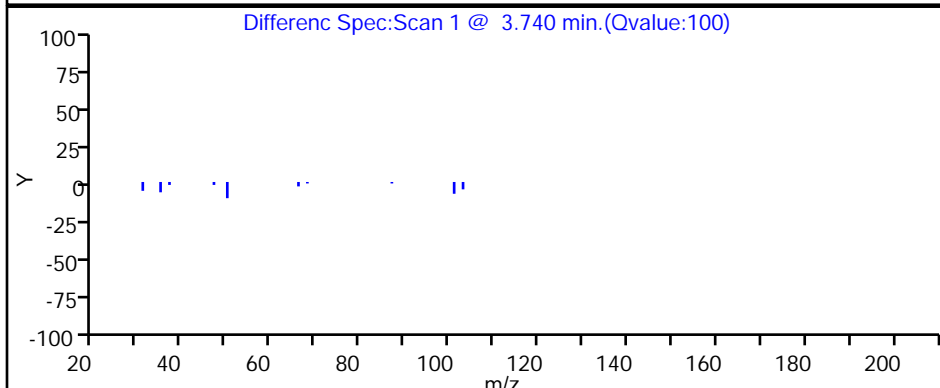
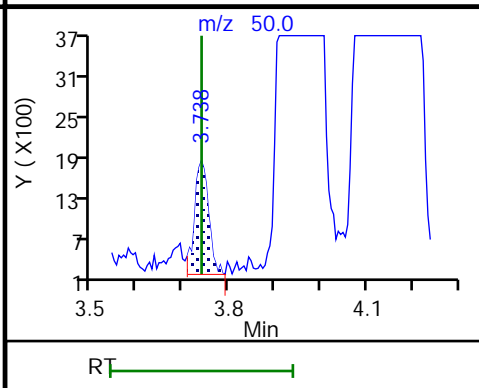
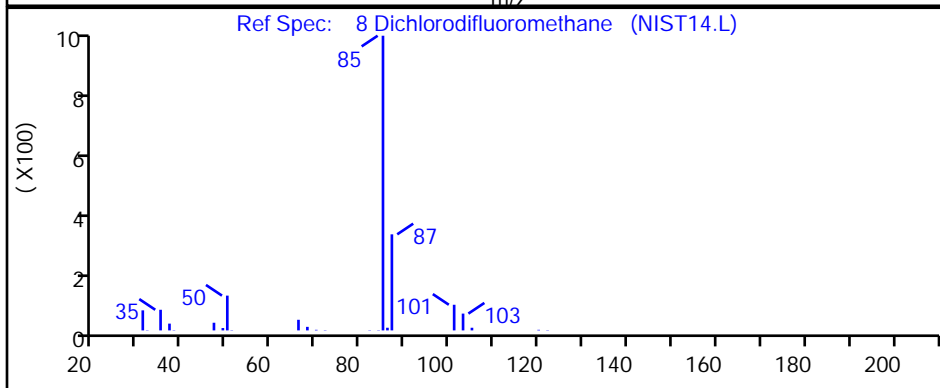
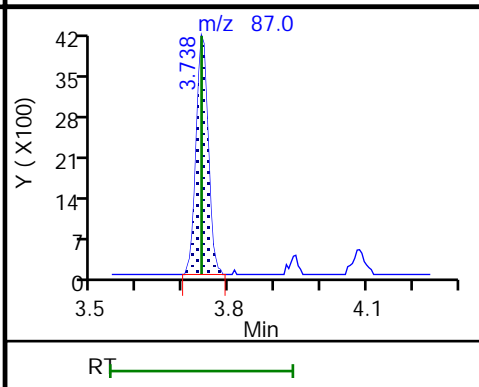
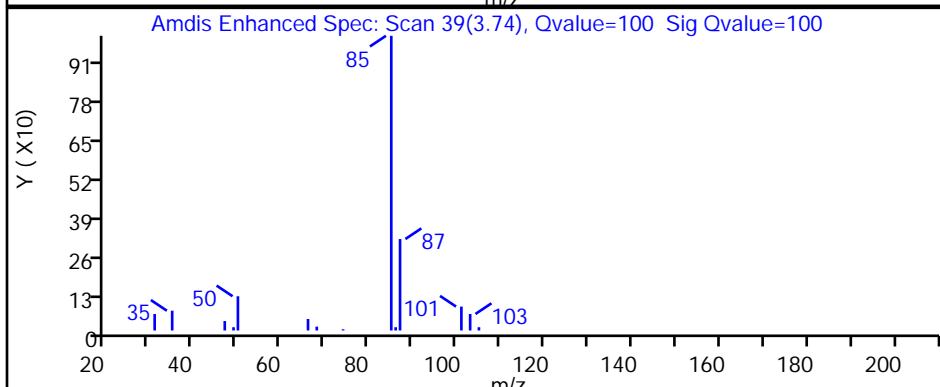
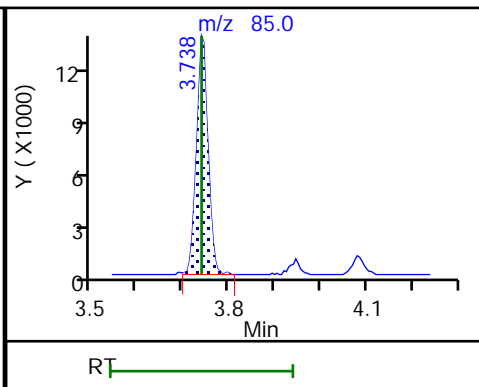
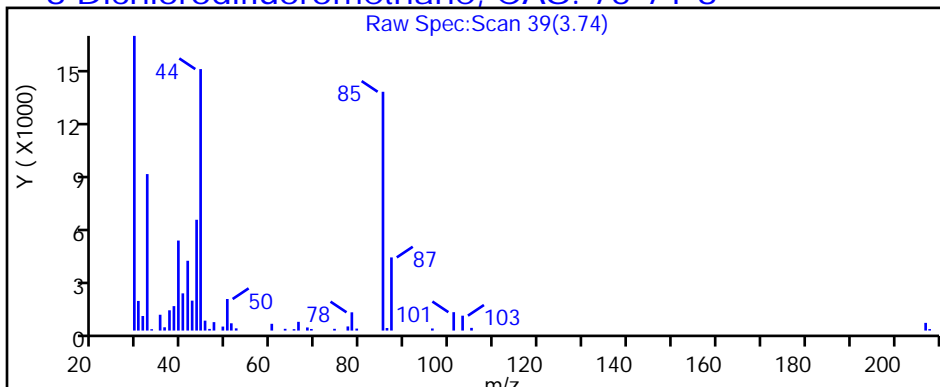
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

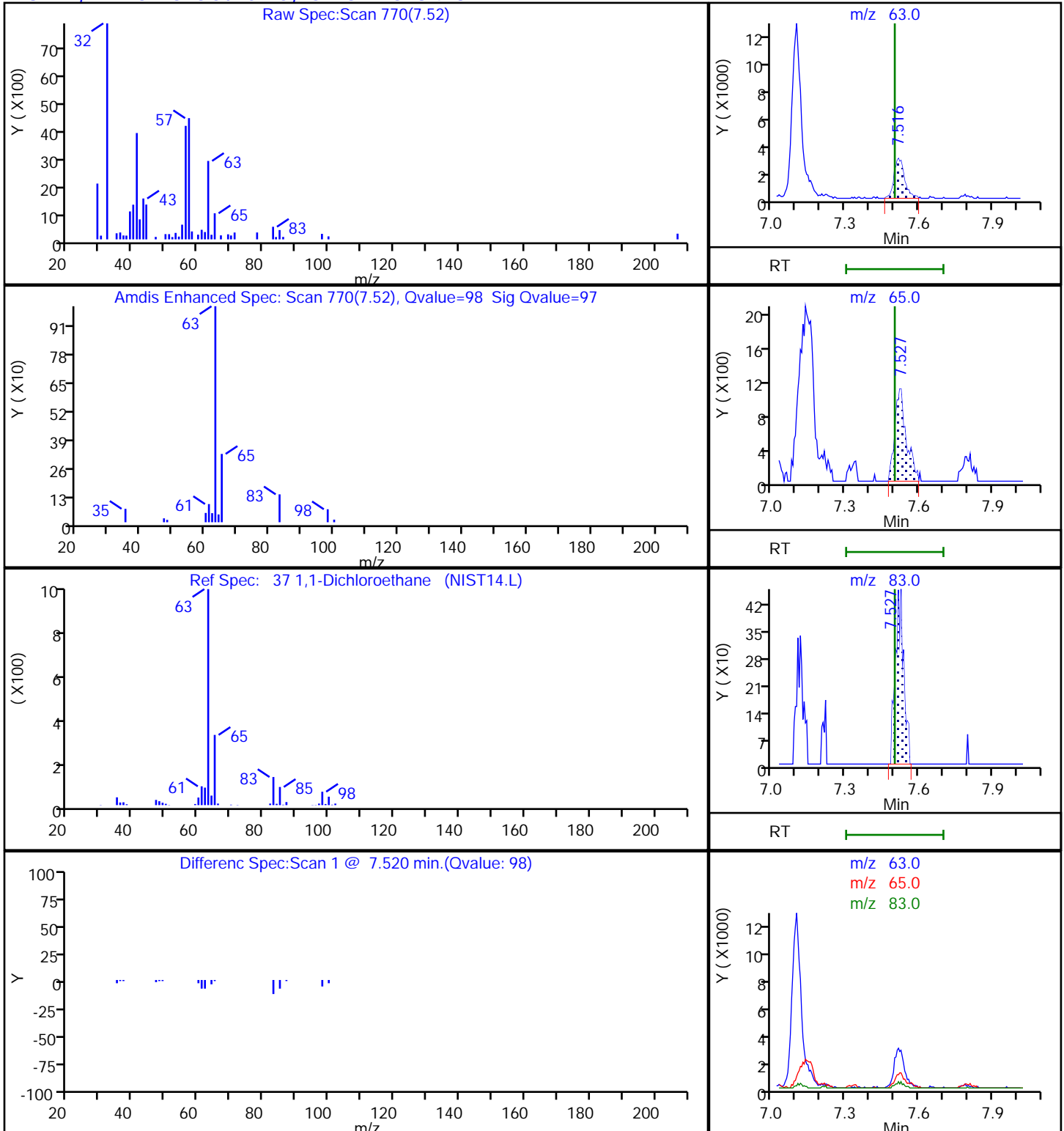
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

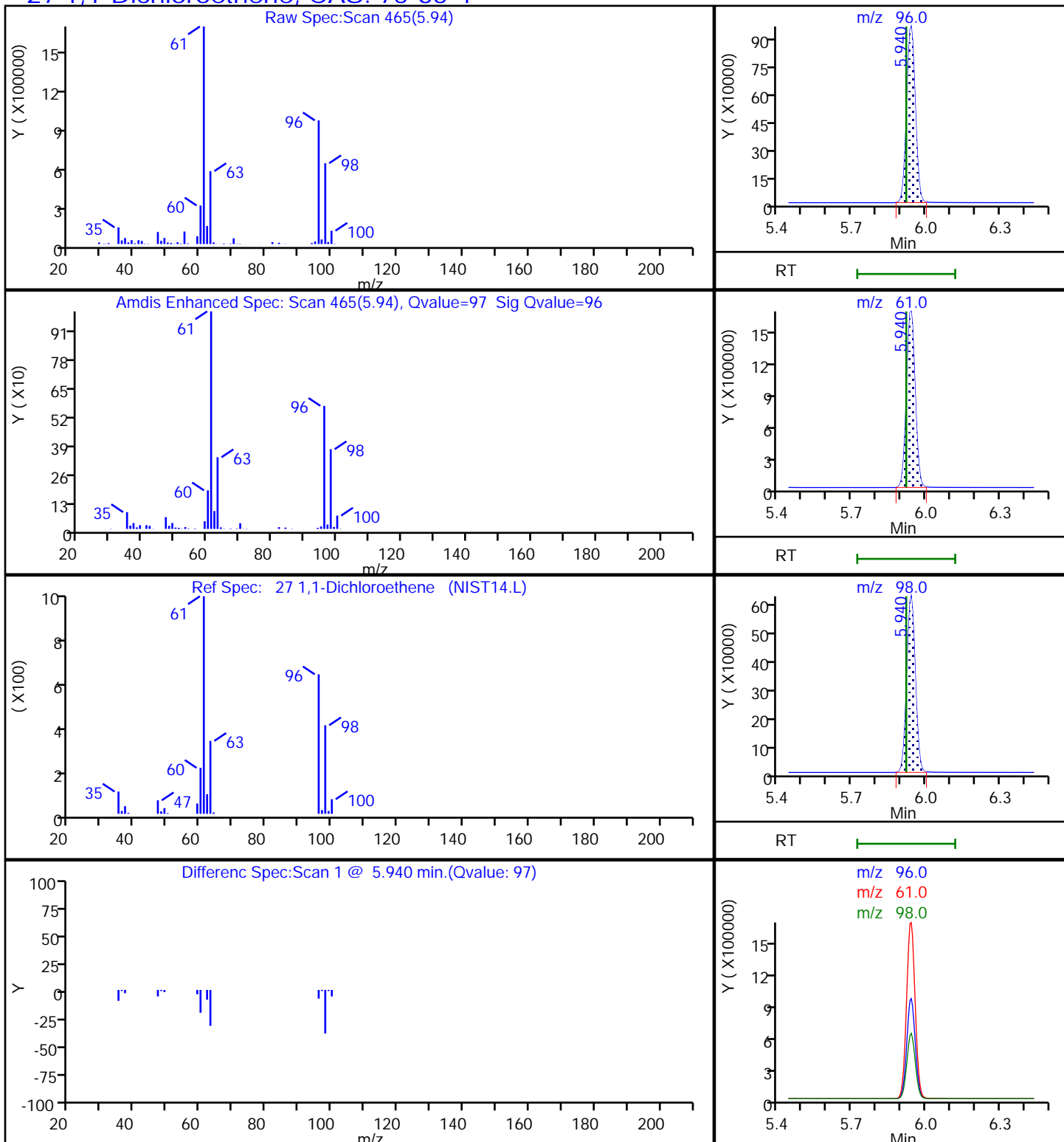
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

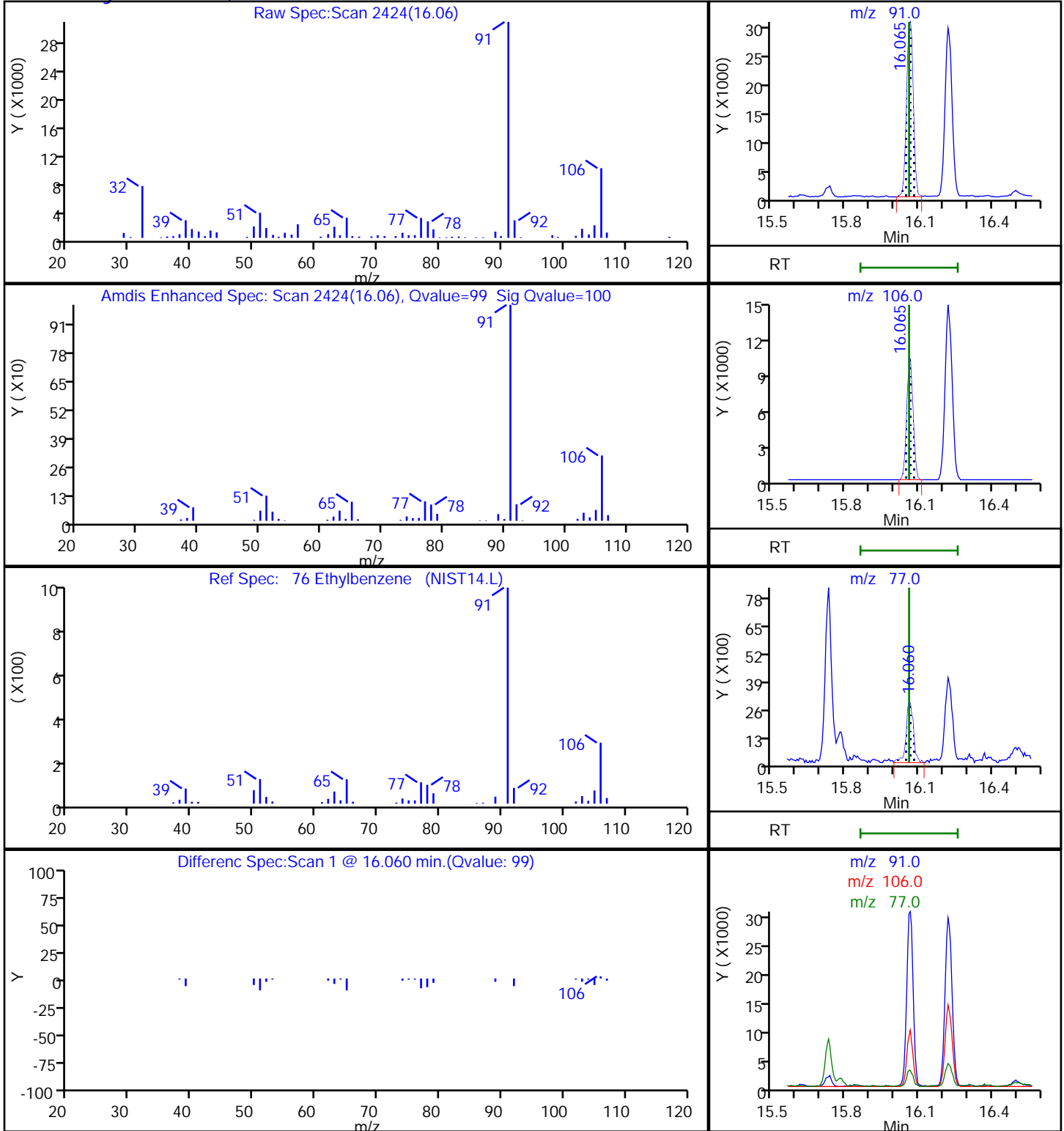
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1 Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

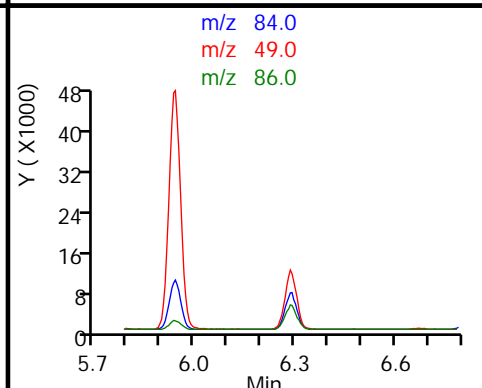
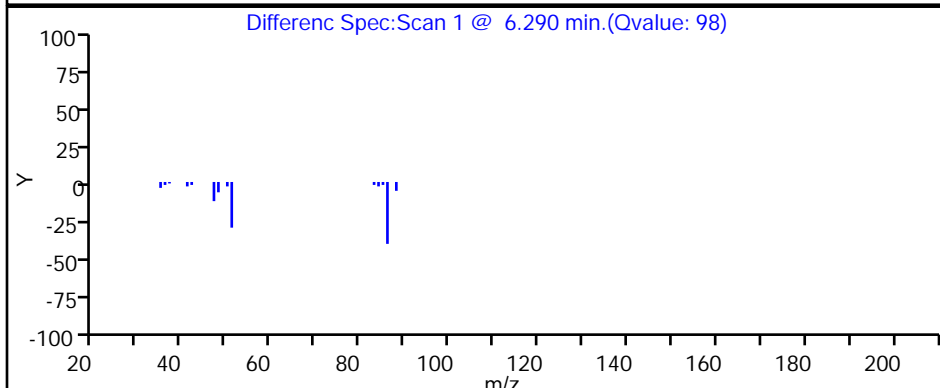
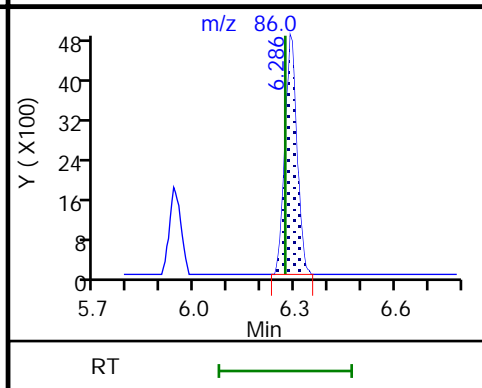
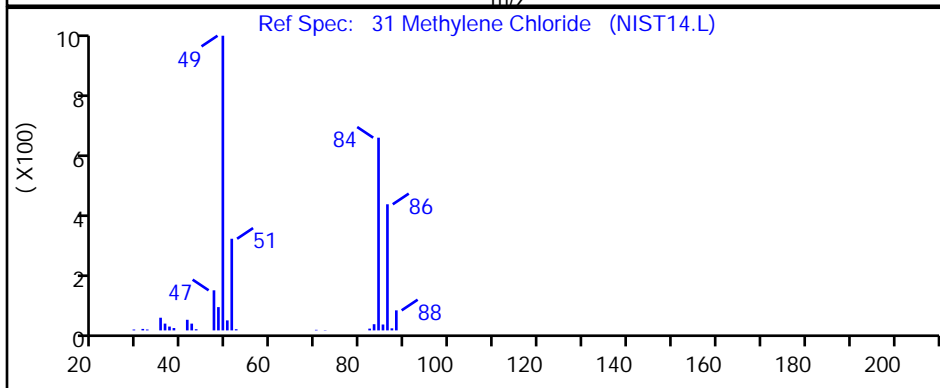
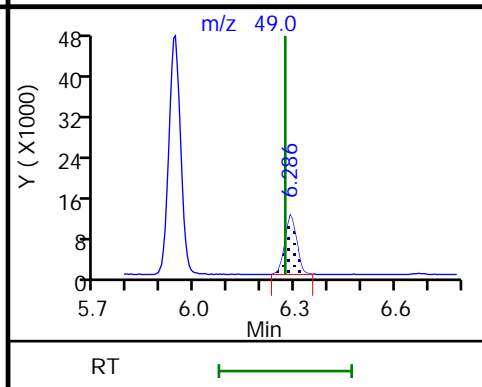
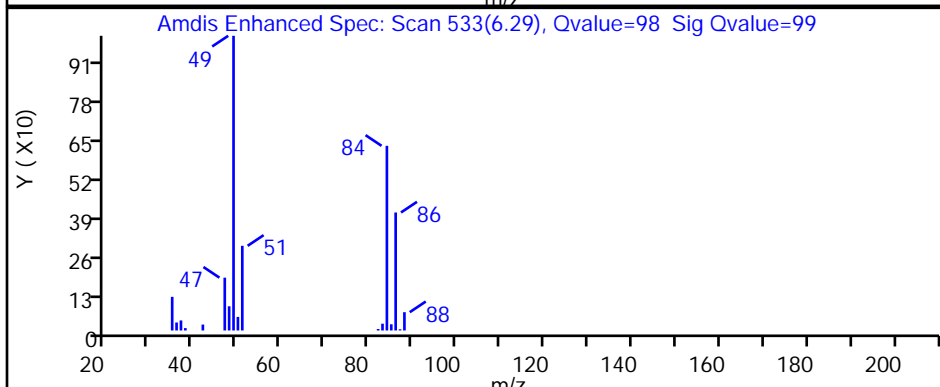
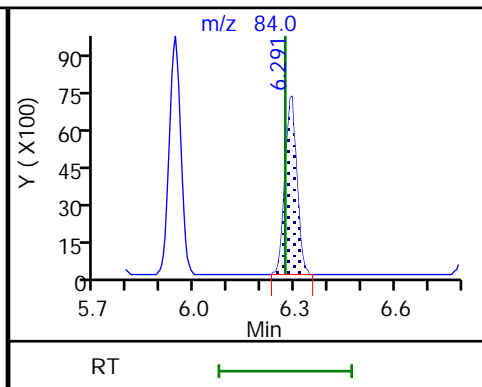
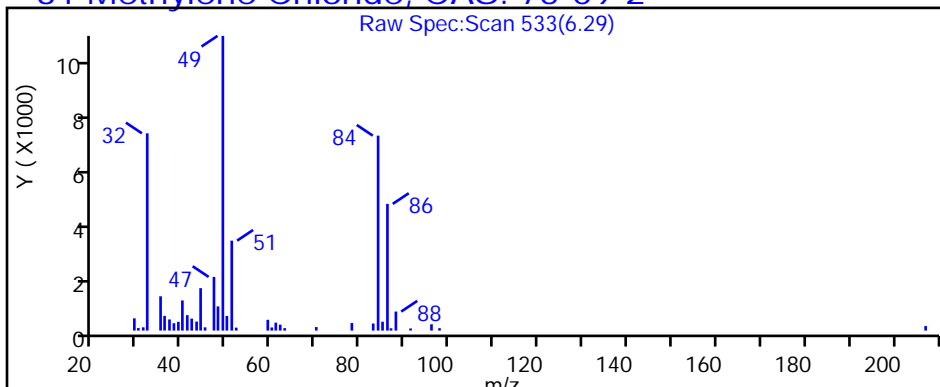
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

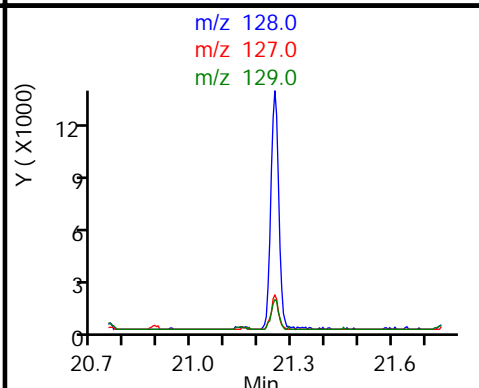
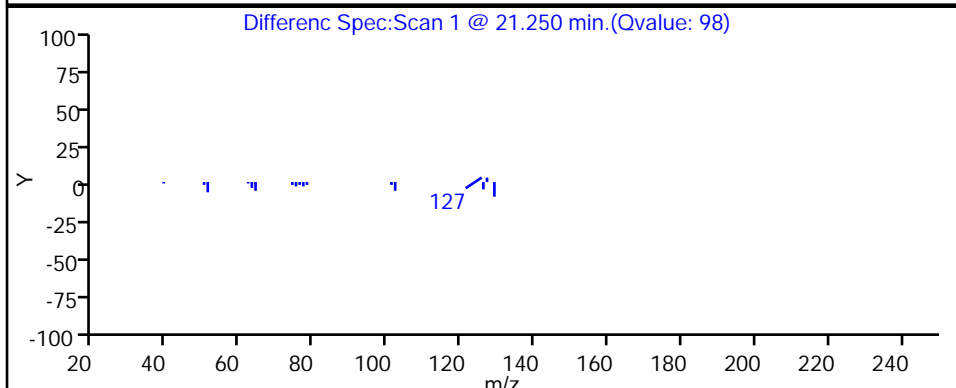
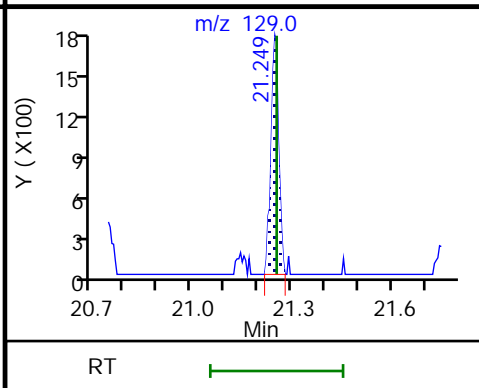
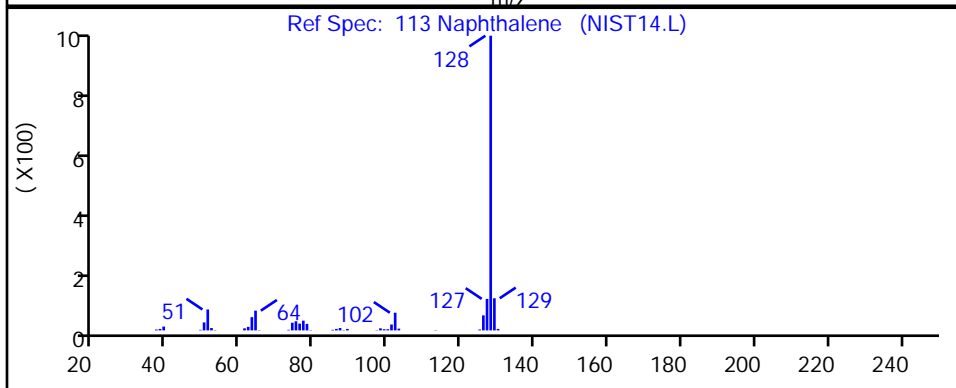
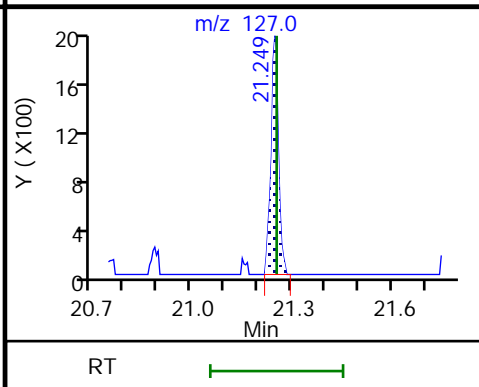
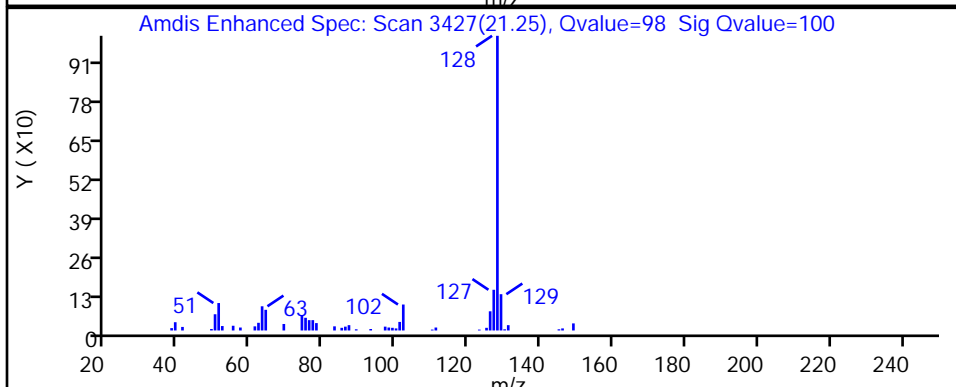
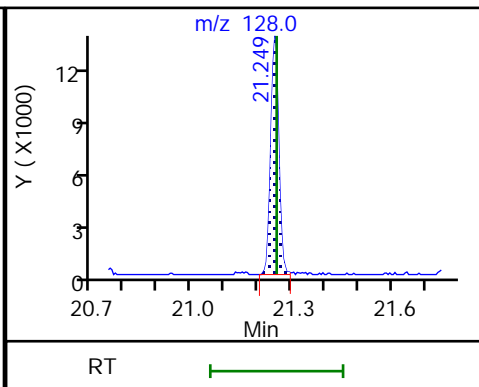
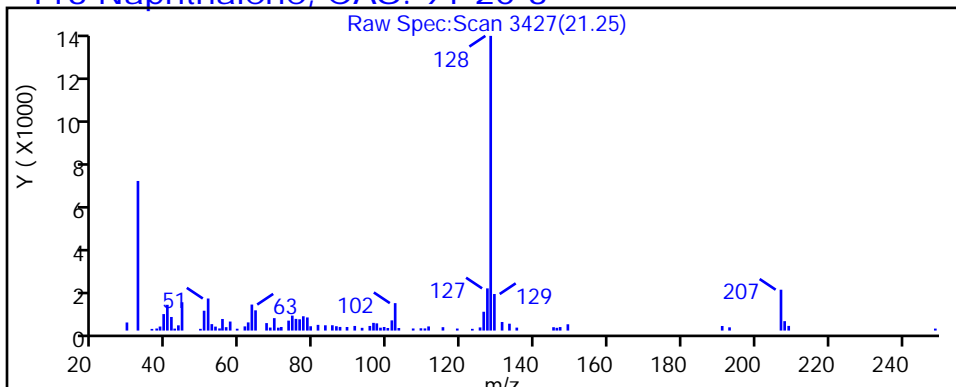
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

113 Naphthalene, CAS: 91-20-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1 Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

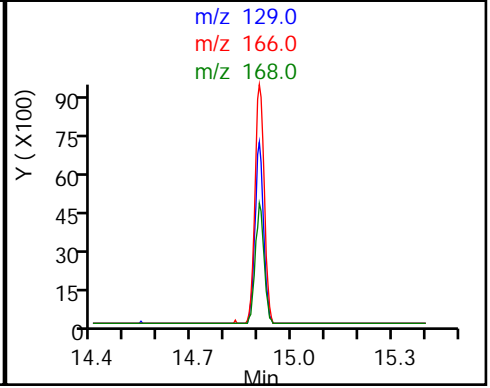
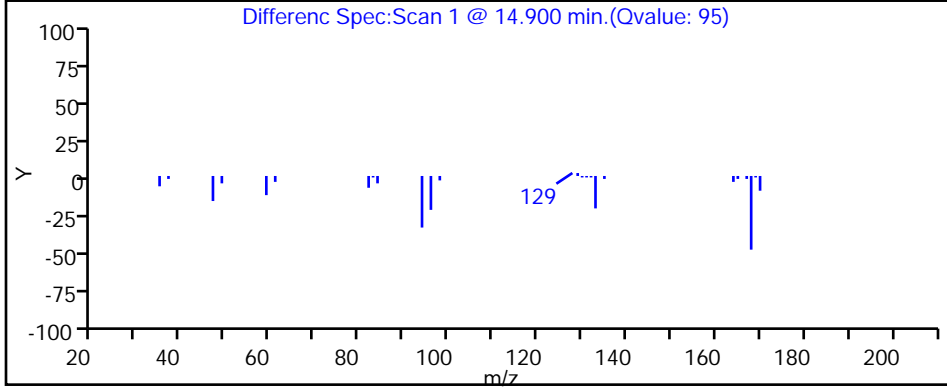
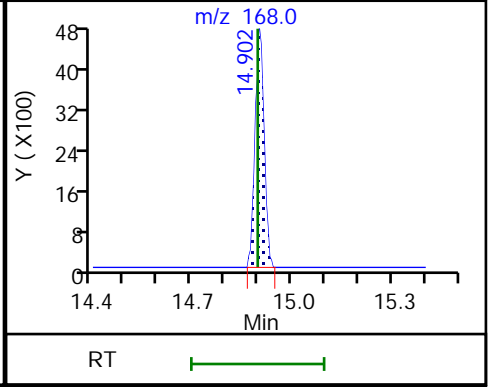
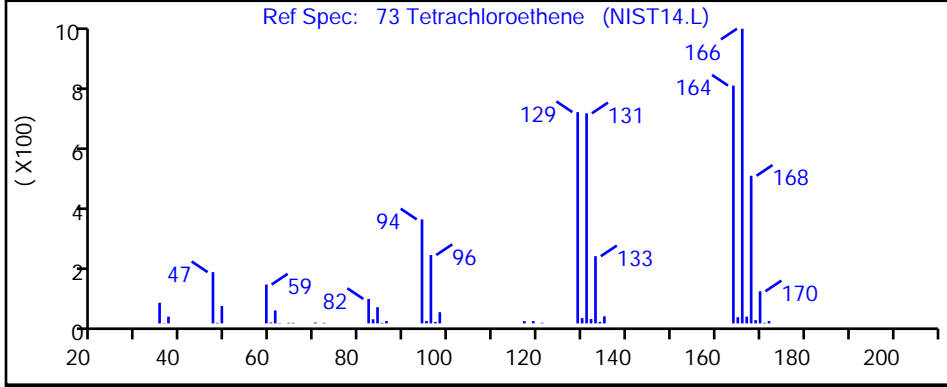
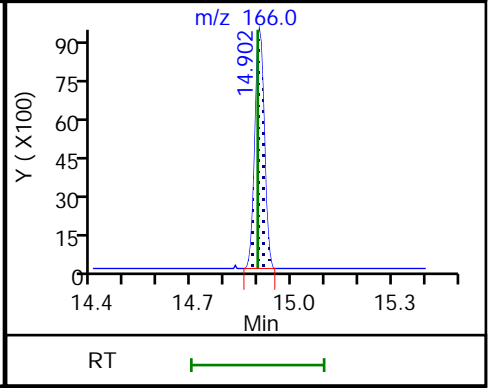
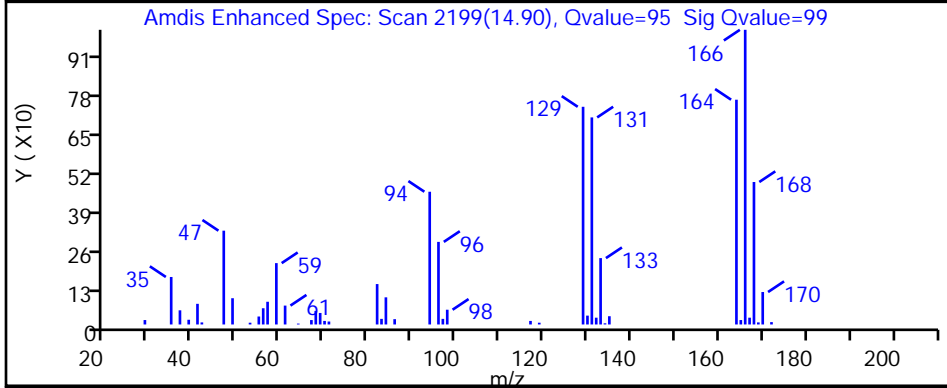
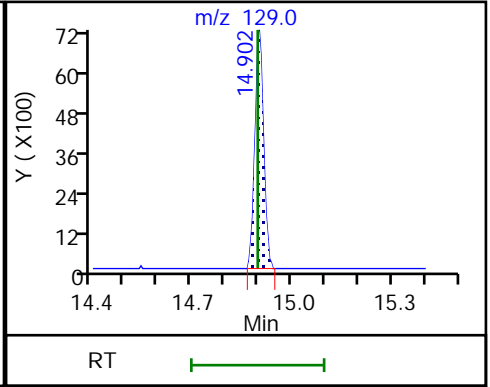
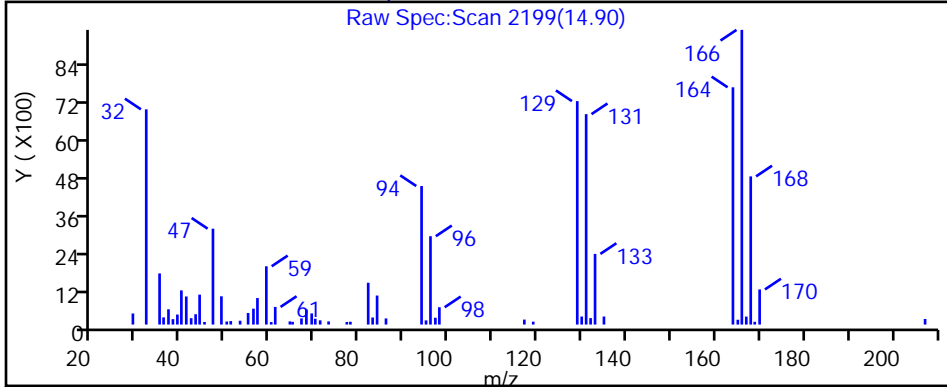
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

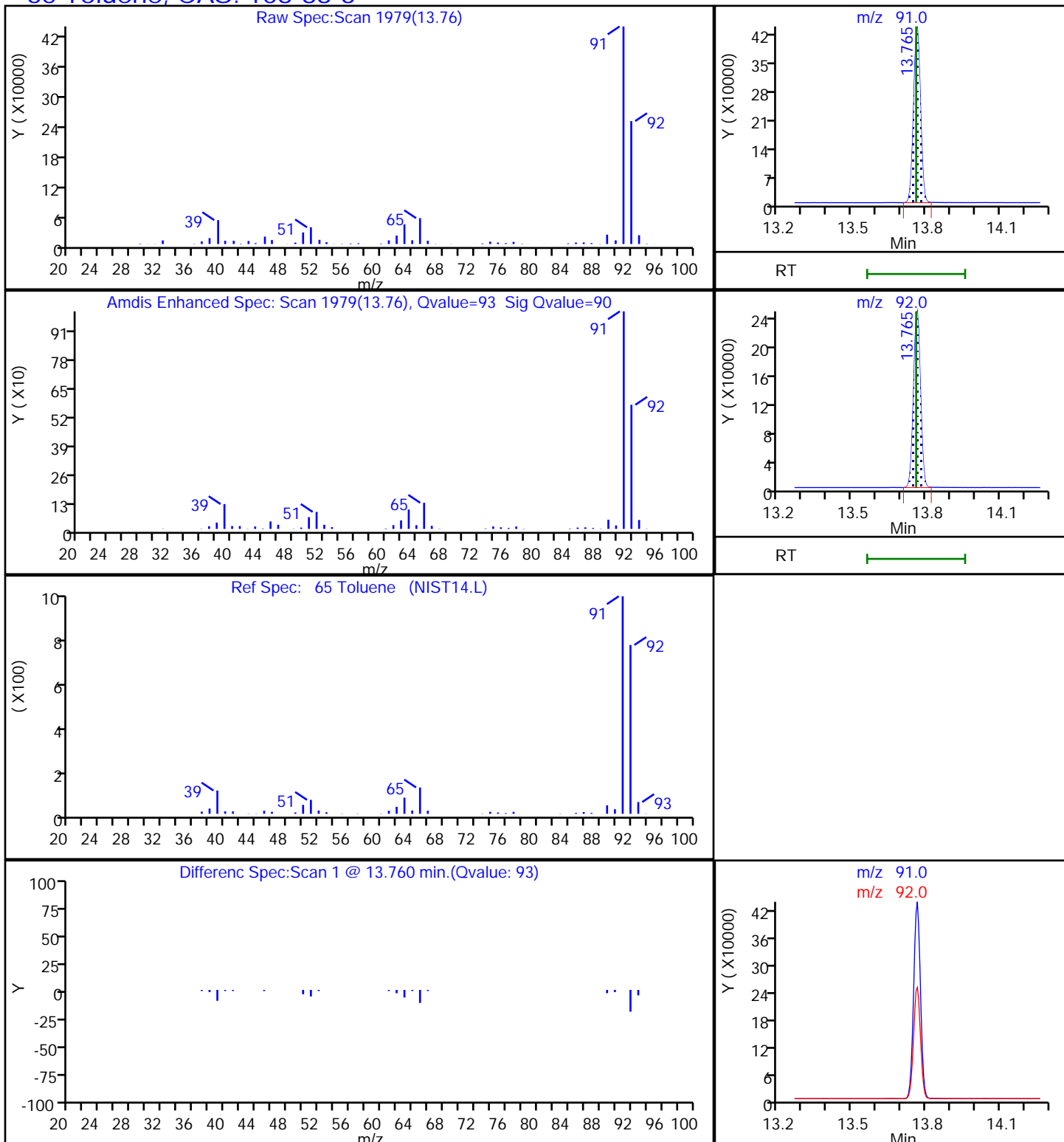
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

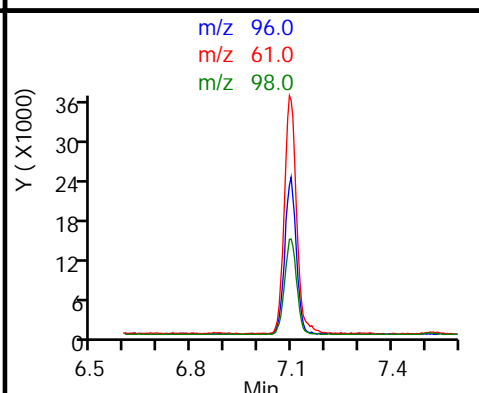
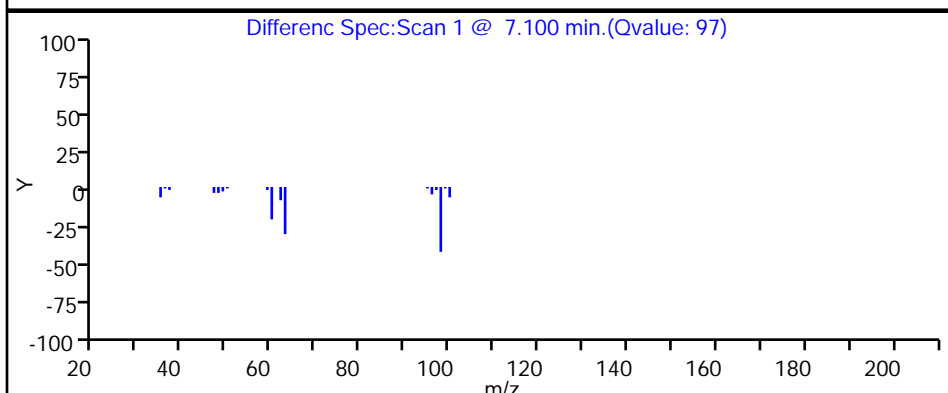
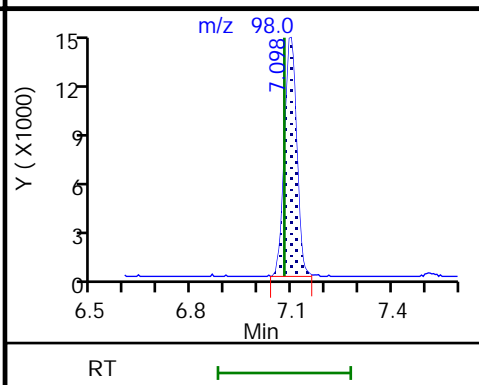
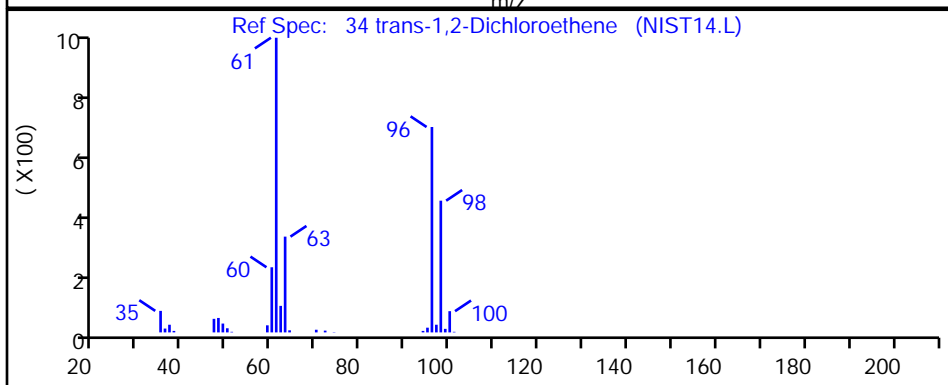
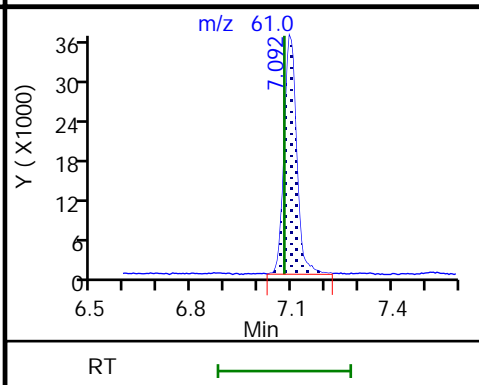
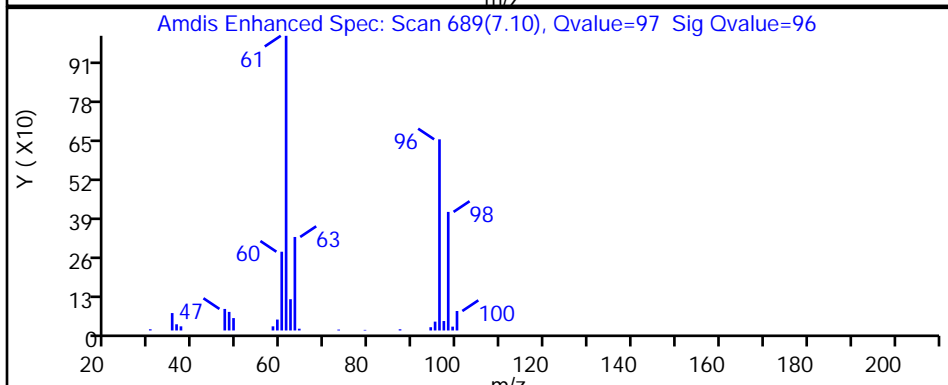
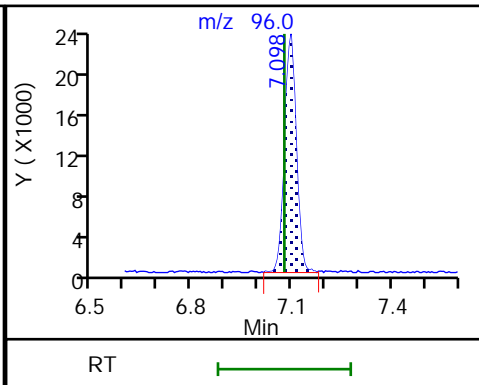
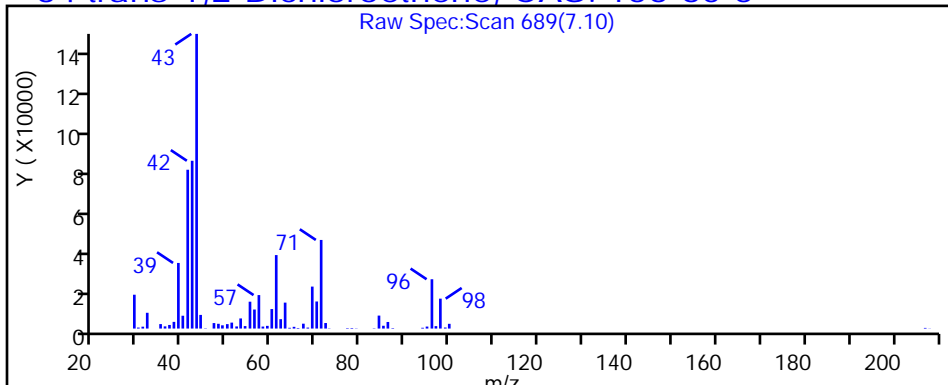
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

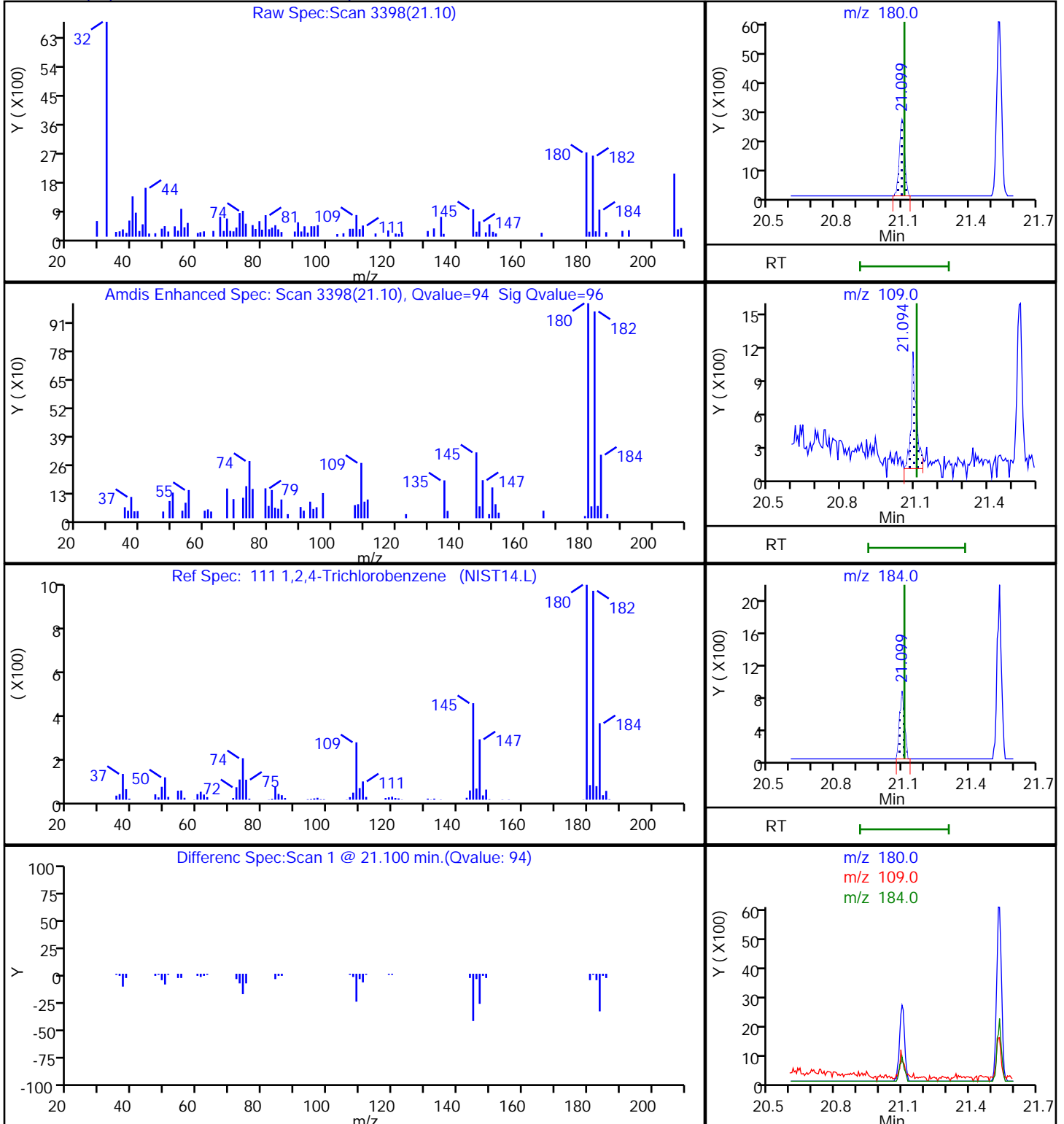
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

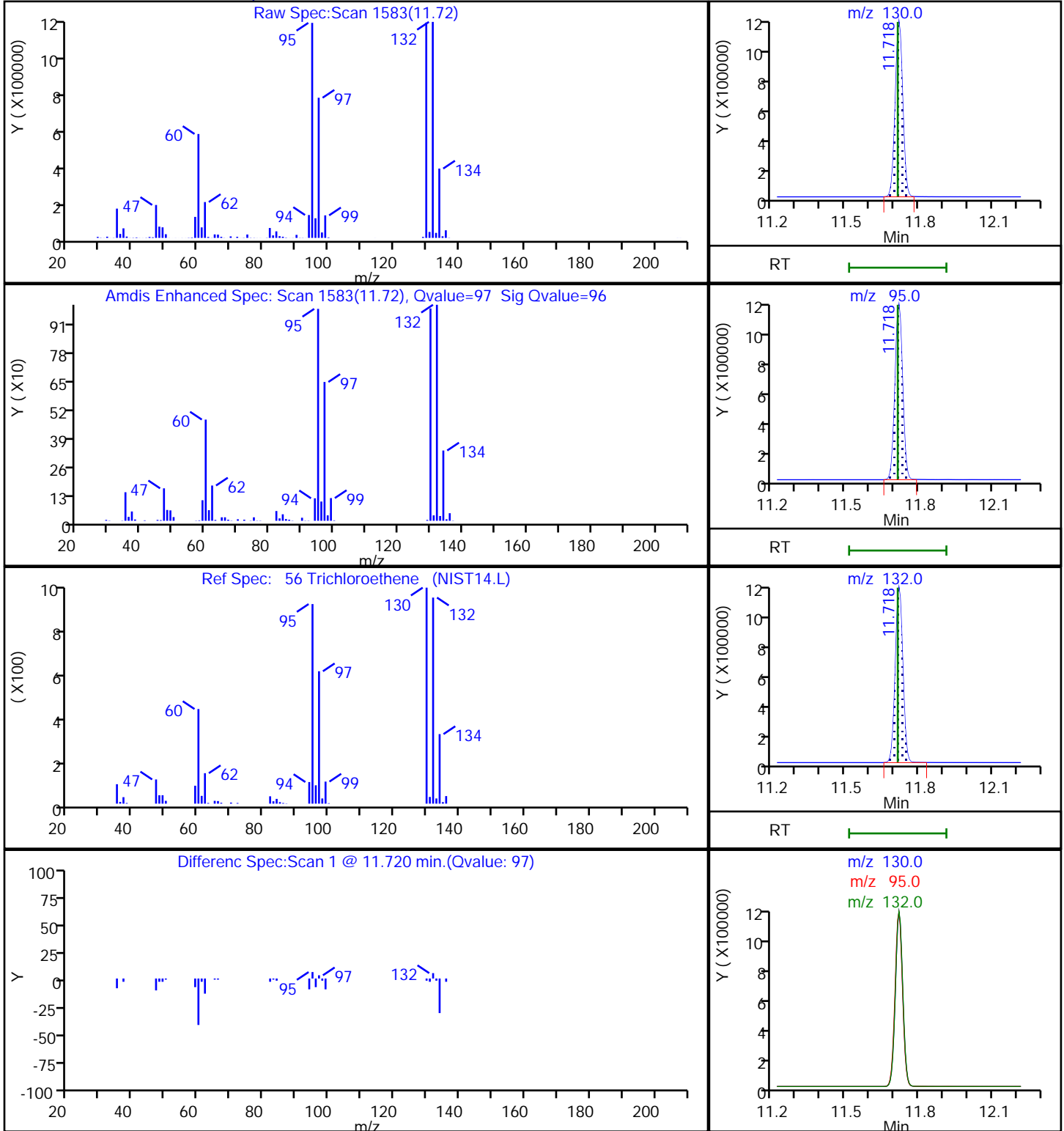
111 1,2,4-Trichlorobenzene, CAS: 120-82-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D
Injection Date: 26-Feb-2019 13:31:30 Instrument ID: MH
Lims ID: 140-14390-A-1 Lab Sample ID: 140-14390-1
Client ID: SV-126-C-26
Operator ID: HMT ALS Bottle#: 1 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

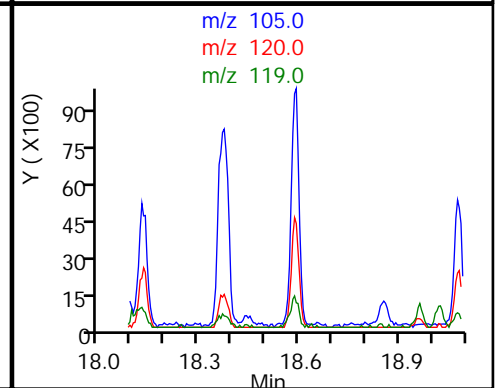
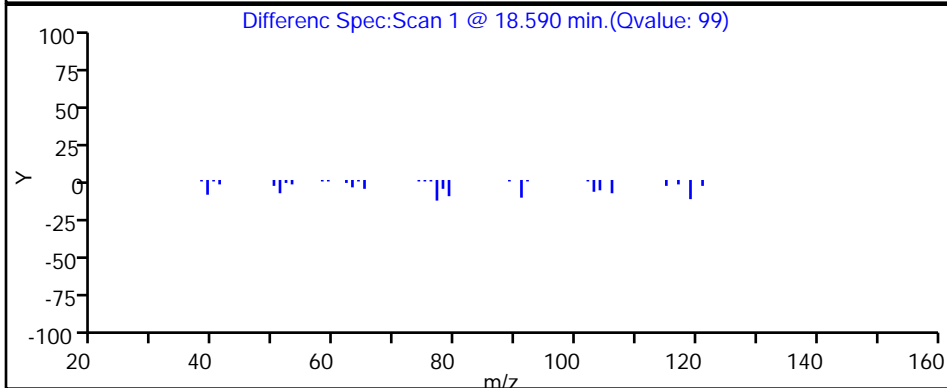
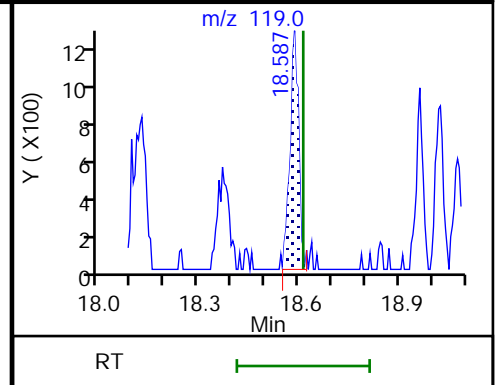
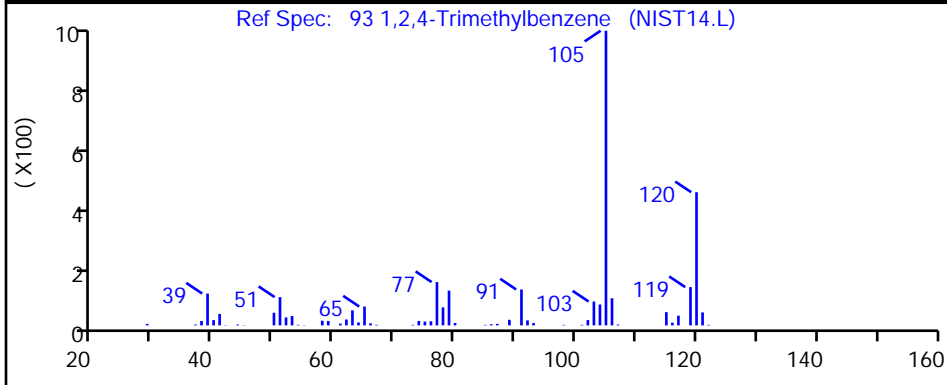
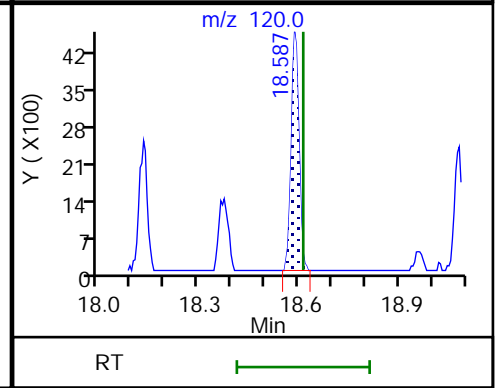
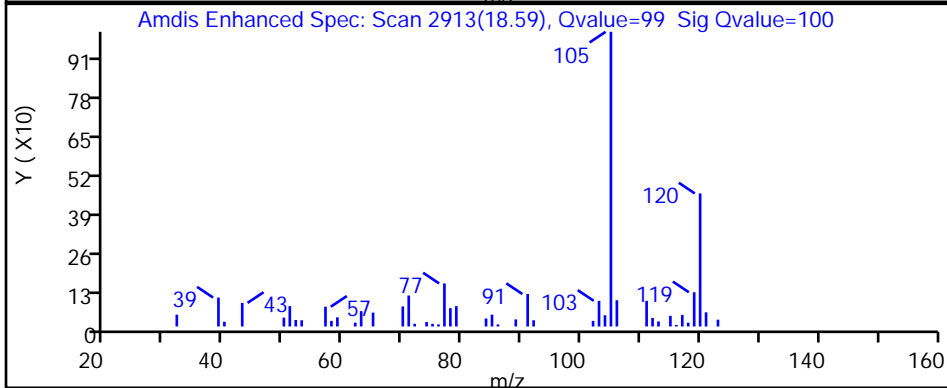
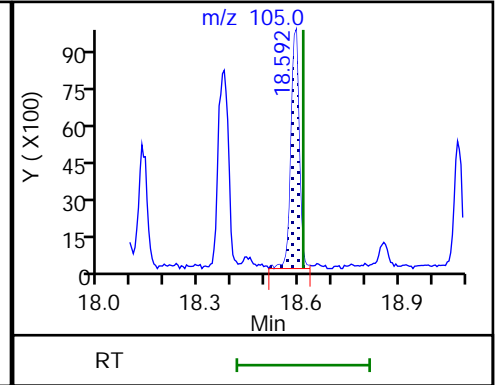
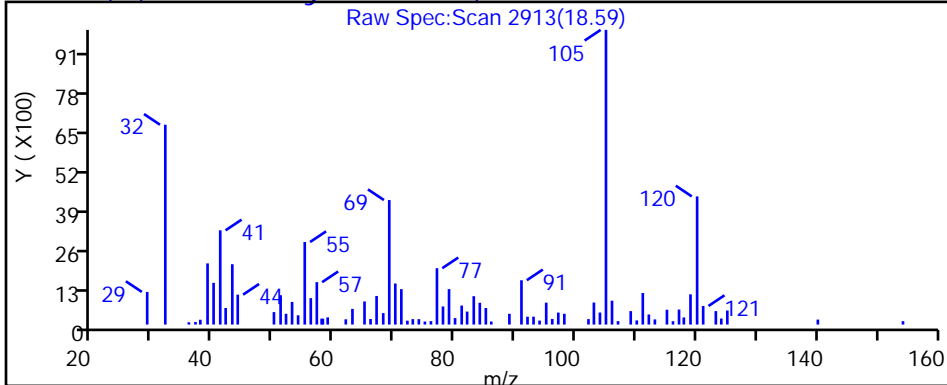
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

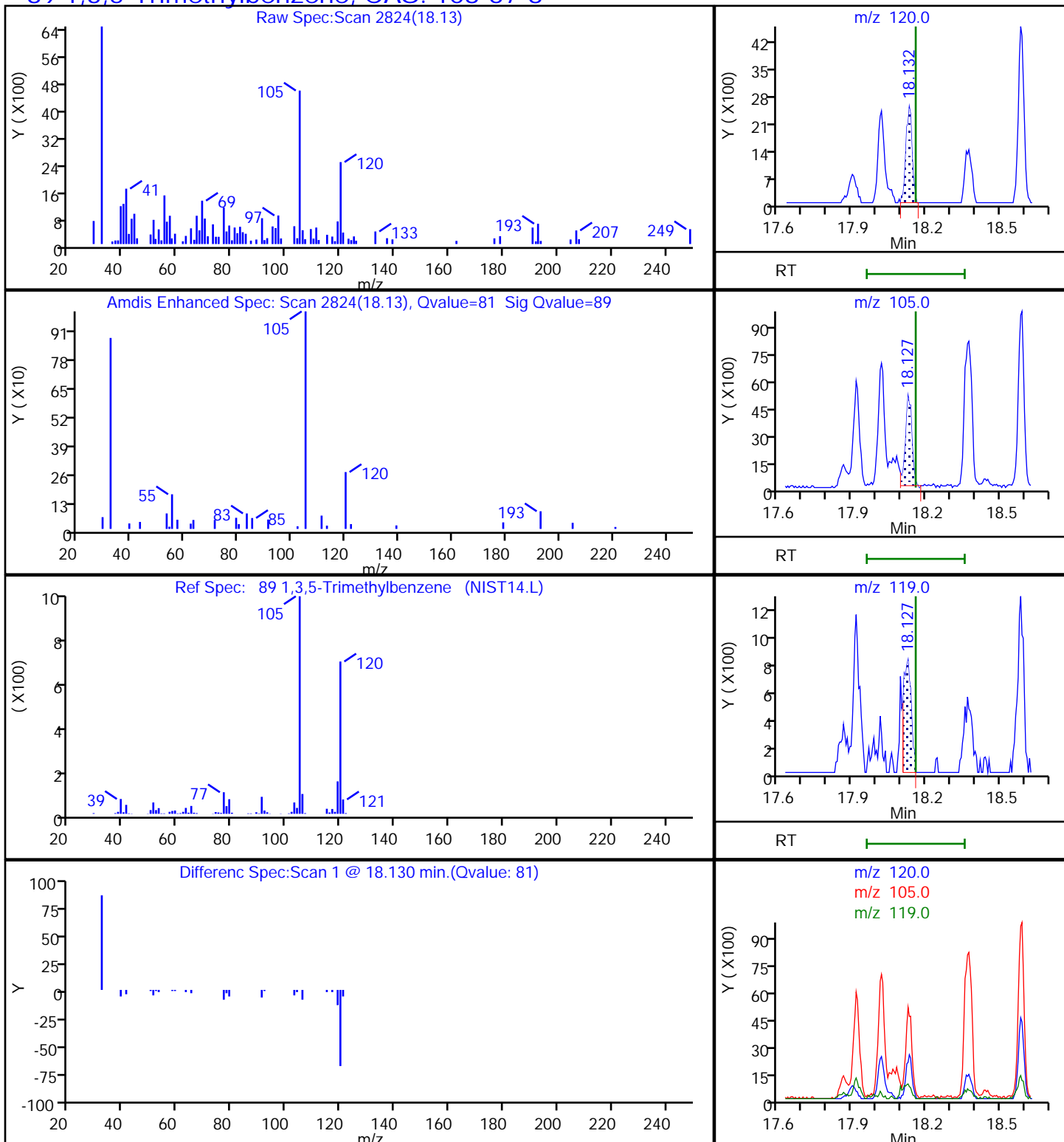
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

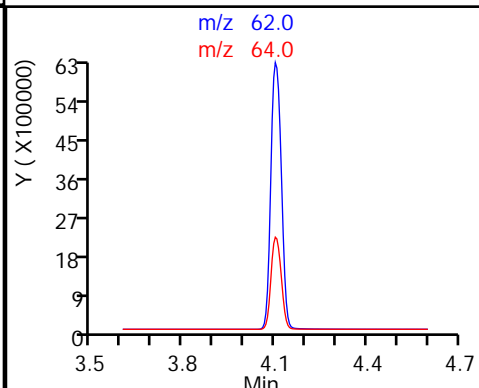
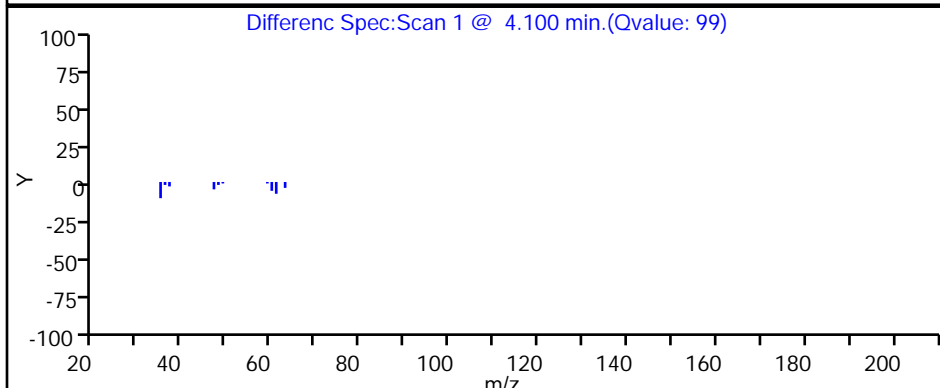
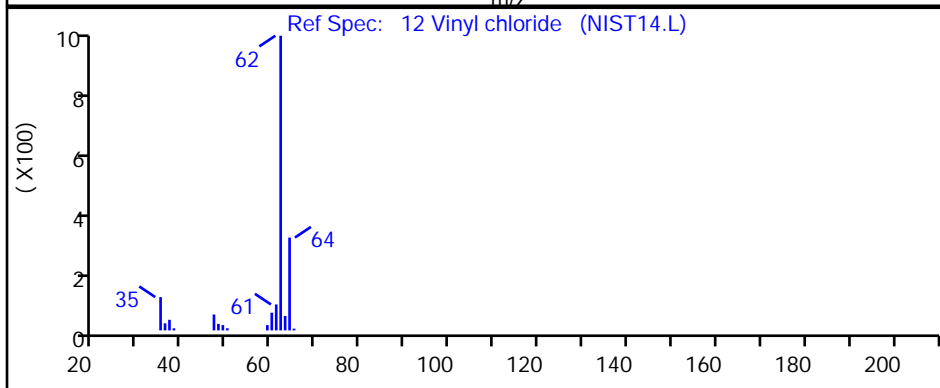
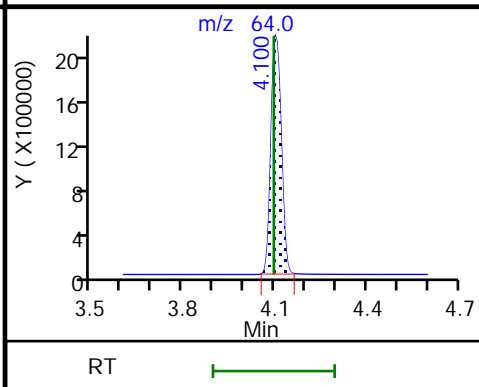
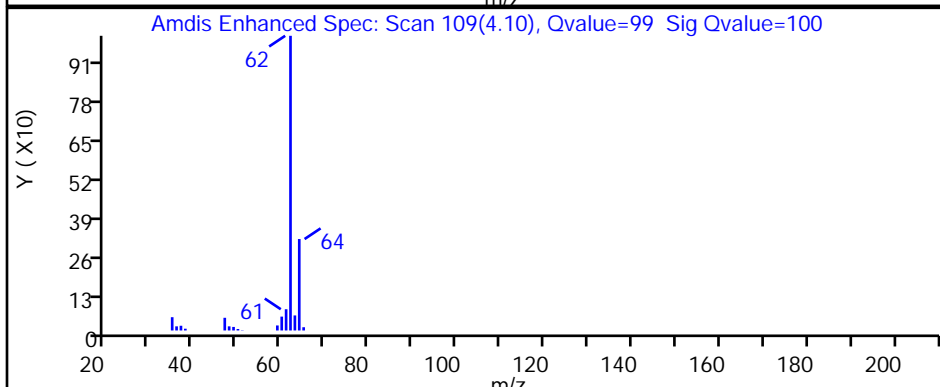
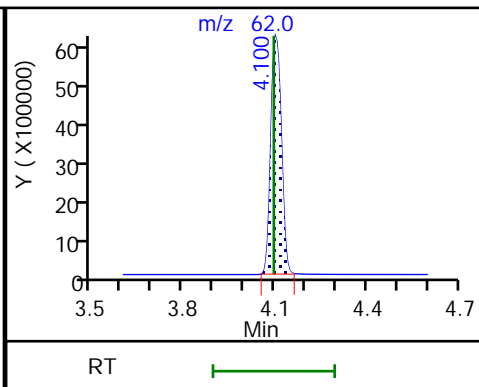
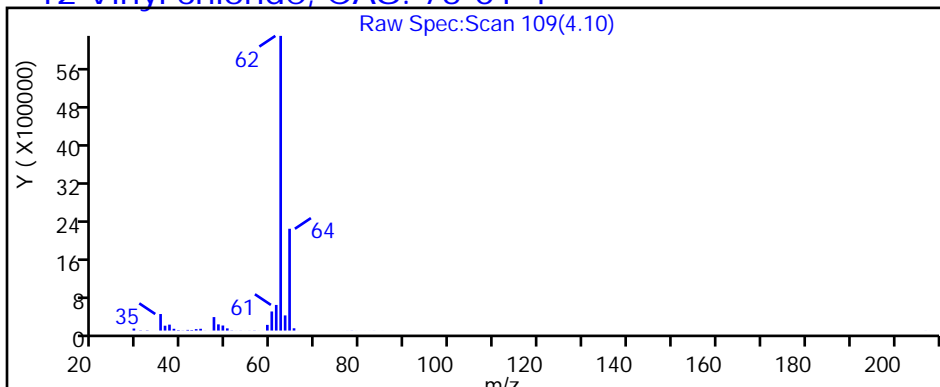
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

12 Vinyl chloride, CAS: 75-01-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1 Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

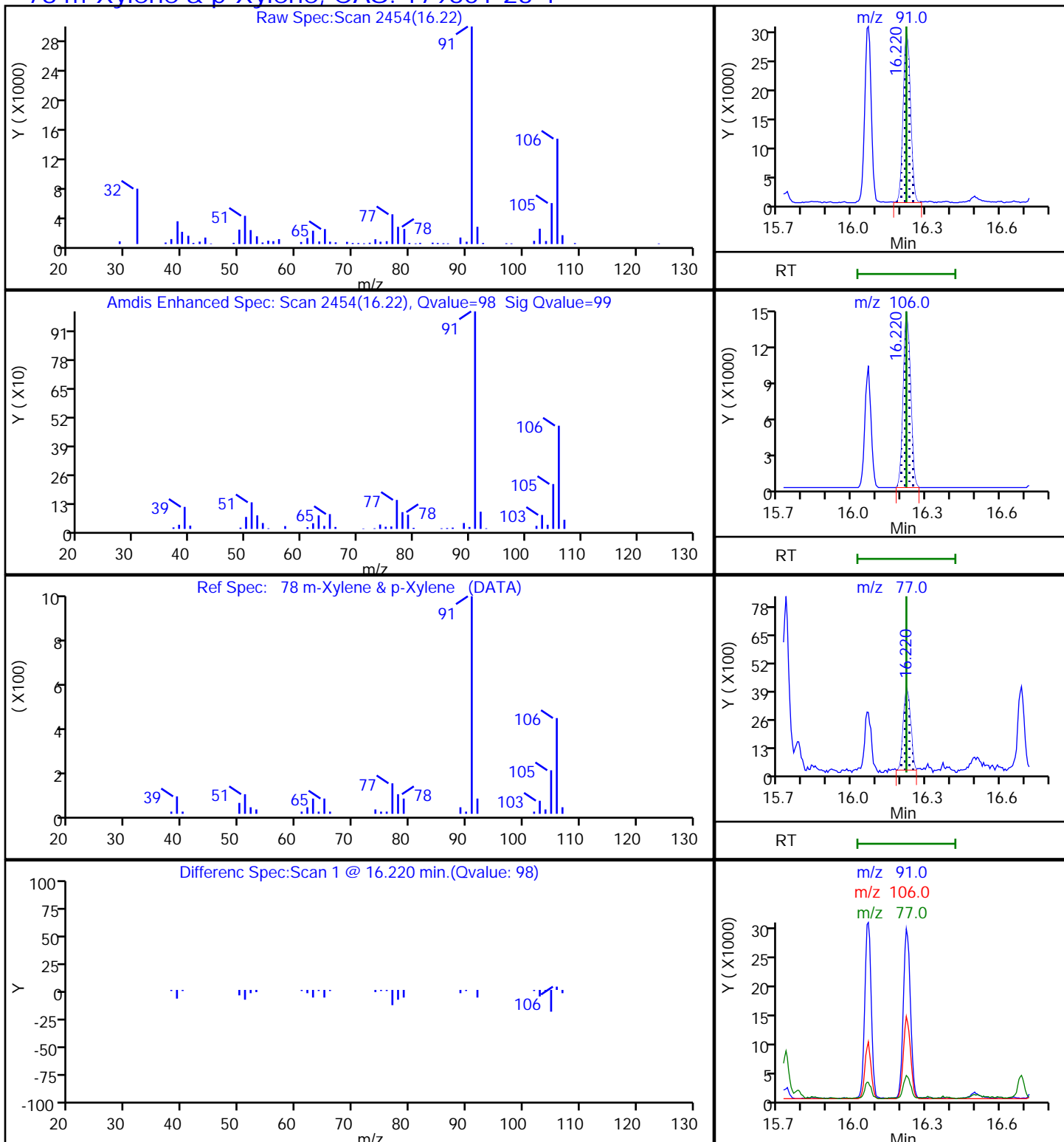
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101.D

Injection Date: 26-Feb-2019 13:31:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

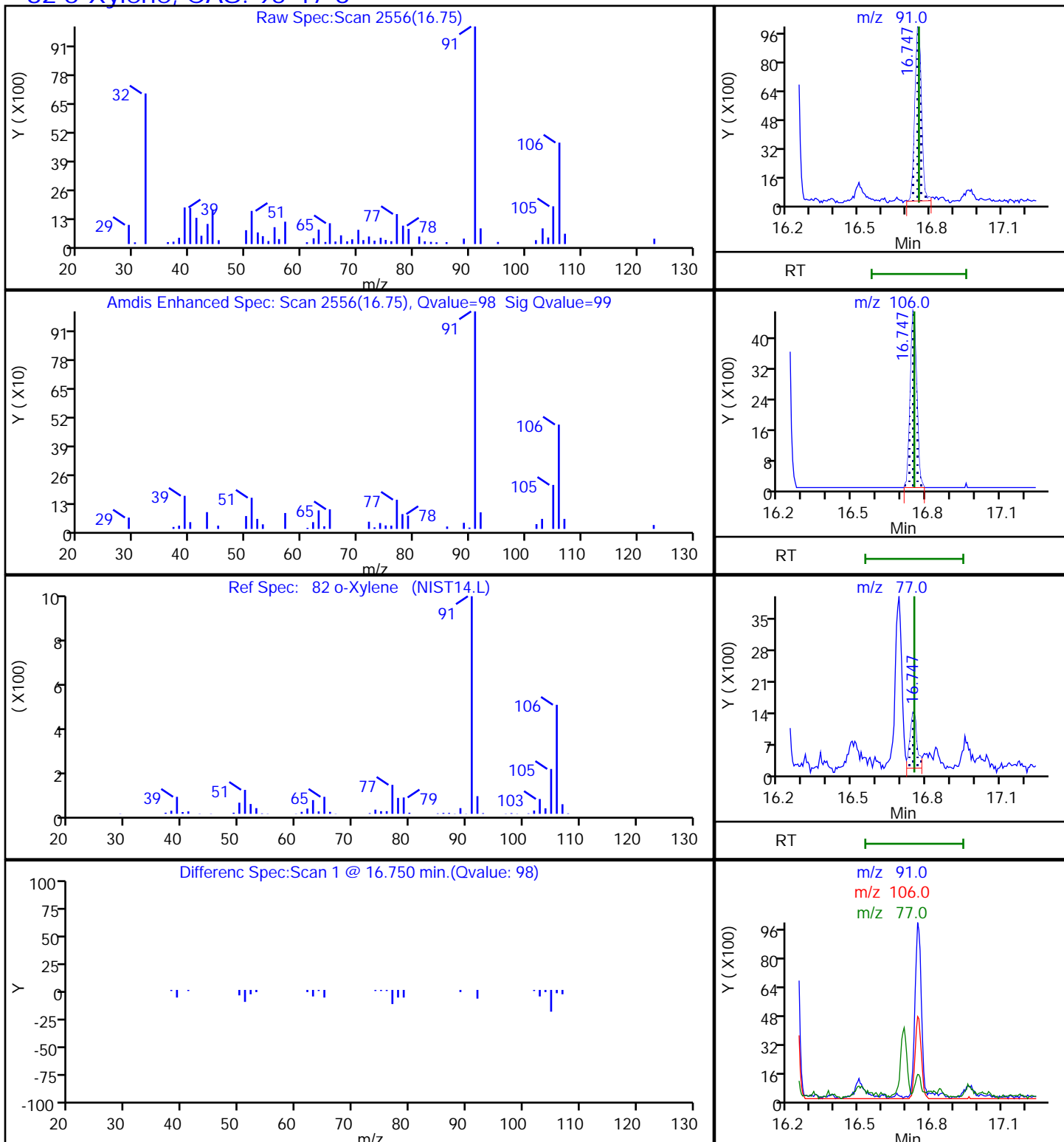
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-126-C-26 DL Lab Sample ID: 140-14390-1 DL
 Matrix: Air Lab File ID: HB26P101D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:34
 Sample wt/vol: 10 (mL) Date Analyzed: 02/27/2019 05:28
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	58		4.0	0.70
75-01-4	Vinyl chloride	62.50	450		2.0	1.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-126-C-26 DL Lab Sample ID: 140-14390-1 DL
 Matrix: Air Lab File ID: HB26P101D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:34
 Sample wt/vol: 10 (mL) Date Analyzed: 02/27/2019 05:28
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	230		16	2.8
75-01-4	Vinyl chloride	62.50	1100		5.1	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101D.D
 Lims ID: 140-14390-A-1
 Client ID: SV-126-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 05:28:30 ALS Bottle#: 1 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-022
 Misc. Info.: 140-14390-a-1
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:14:03 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:19:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.819	0.000	96	270028	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1457588	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1214881	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	772882	3.90	
12 Vinyl chloride	62	4.095	4.097	0.000	99	1105903	8.97	
27 1,1-Dichloroethene	96	5.925	5.923	0.006	97	121296	1.16	
34 trans-1,2-Dichloroethene	96	7.082	7.081	0.005	90	3196	0.0297	
41 cis-1,2-Dichloroethene	96	8.488	8.488	0.005	96	48231	0.4425	
47 Benzene	78	10.457	10.462	0.000	97	139768	0.4535	
56 Trichloroethene	130	11.713	11.719	0.000	95	104786	0.7205	
65 Toluene	91	13.760	13.760	0.000	92	36337	0.1051	
89 1,3,5-Trimethylbenzene	120	18.138	18.122	-0.020	1	93	0.0275	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101D.D

Injection Date: 27-Feb-2019 05:28:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Worklist Smp#: 22

Client ID: SV-126-C-26

Purge Vol: 500.000 mL

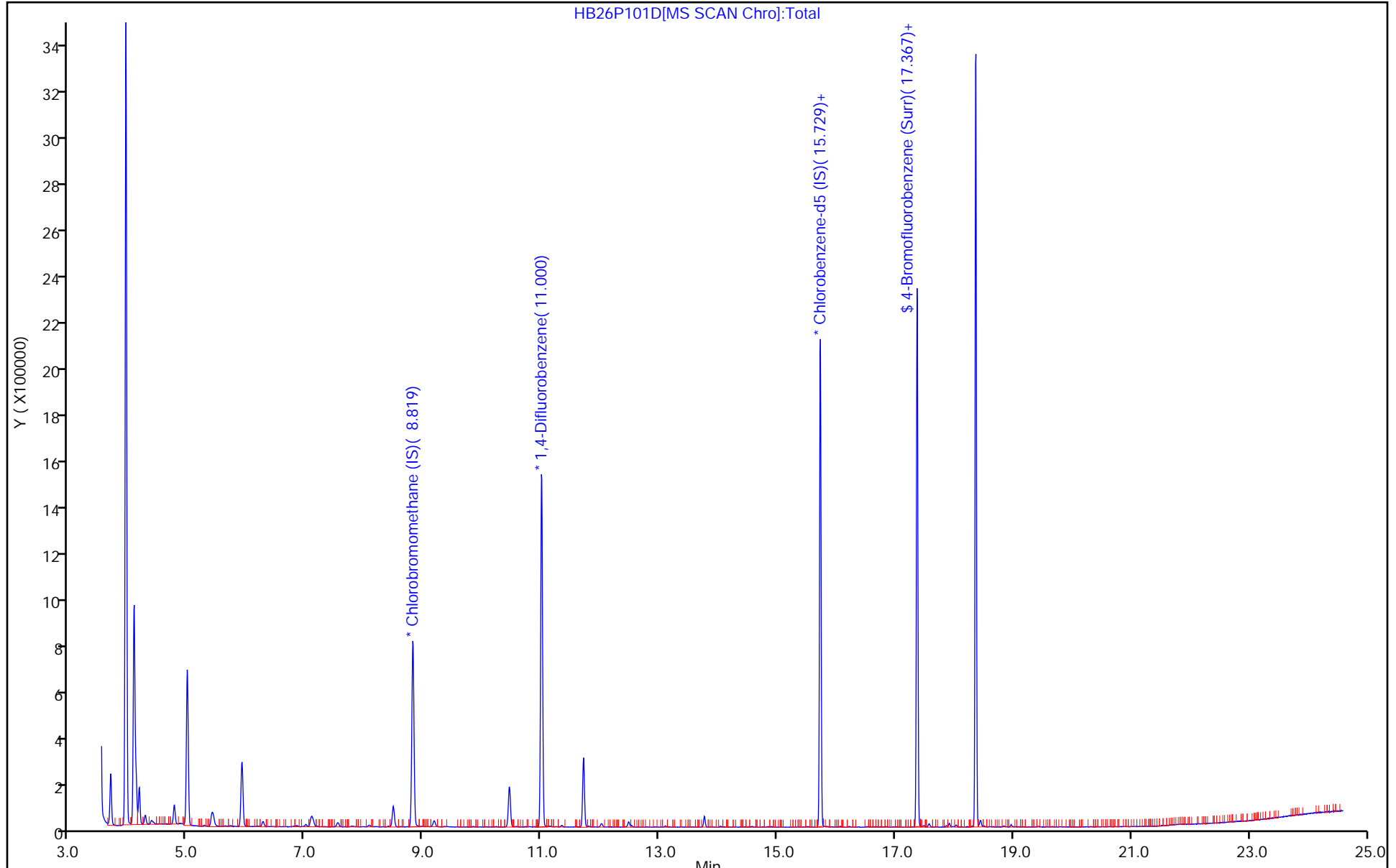
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101D.D
 Lims ID: 140-14390-A-1
 Client ID: SV-126-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 05:28:30 ALS Bottle#: 1 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-022
 Misc. Info.: 140-14390-a-1
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:14:03 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:19:44

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.90	97.60

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101D.D

Injection Date: 27-Feb-2019 05:28:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

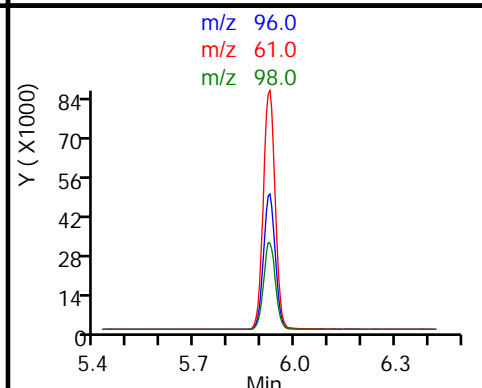
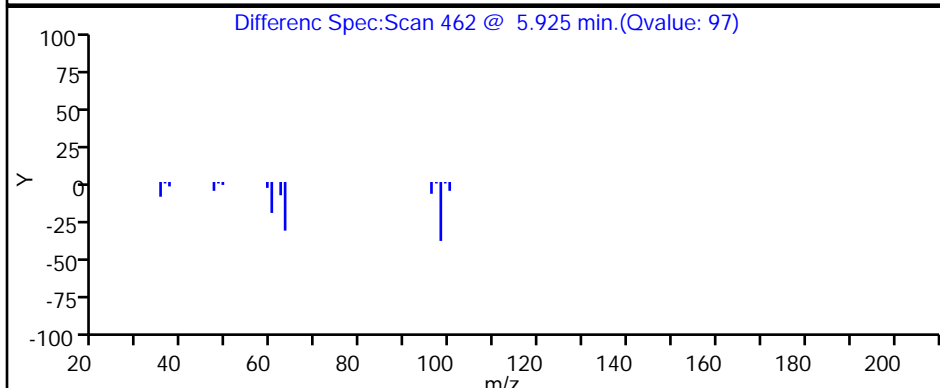
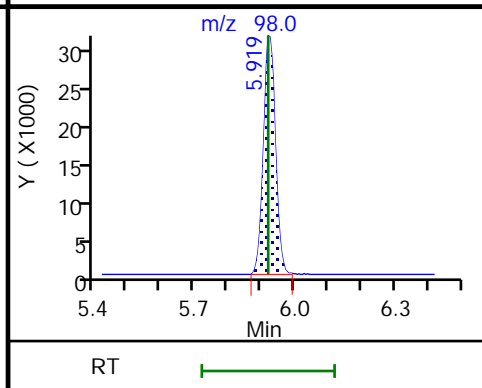
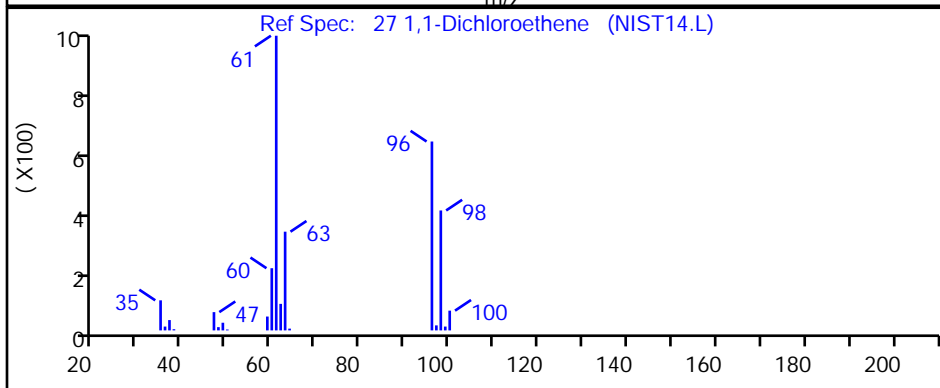
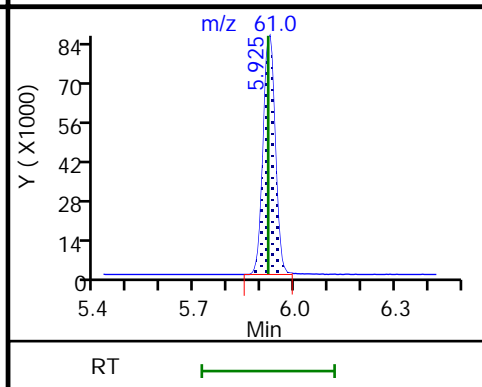
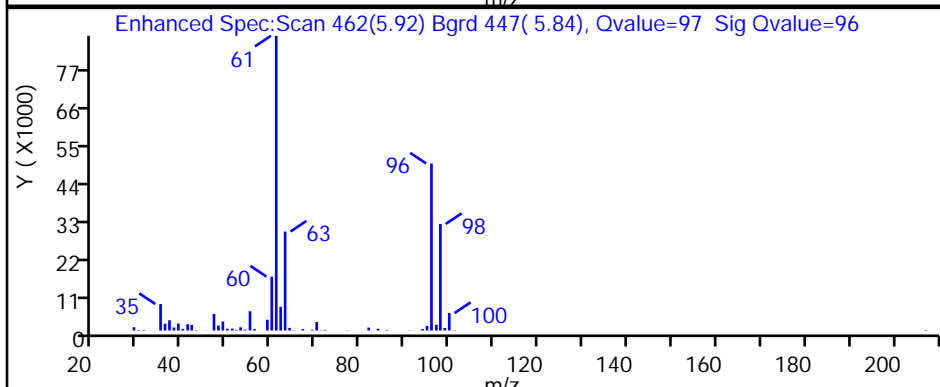
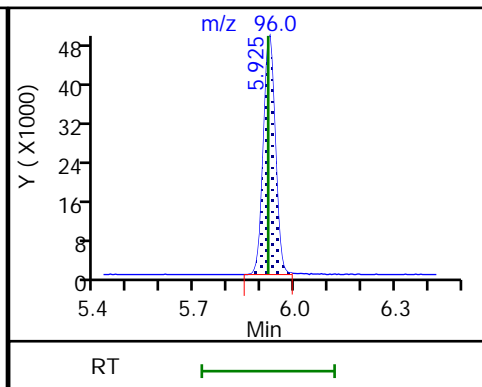
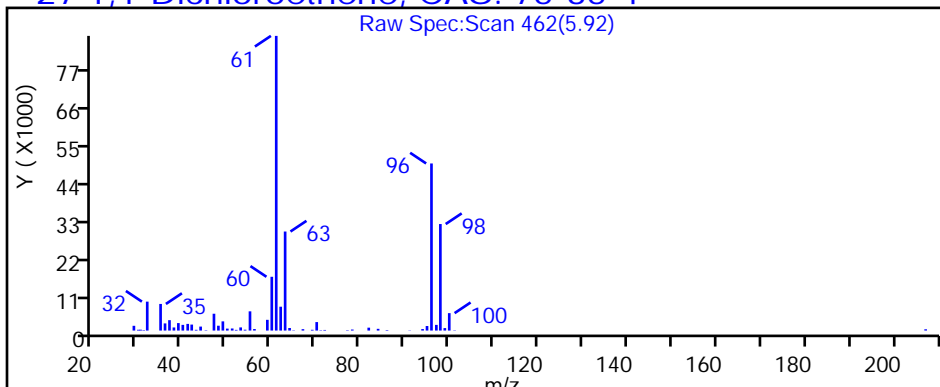
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P101D.D

Injection Date: 27-Feb-2019 05:28:30

Instrument ID: MH

Lims ID: 140-14390-A-1

Lab Sample ID: 140-14390-1

Client ID: SV-126-C-26

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

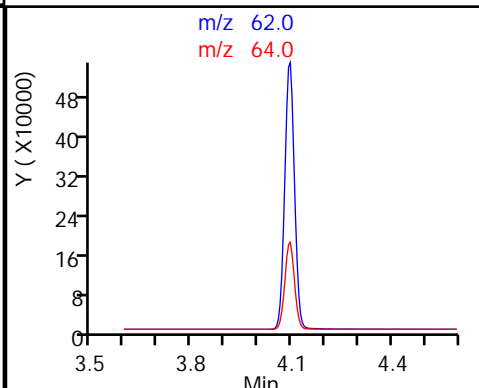
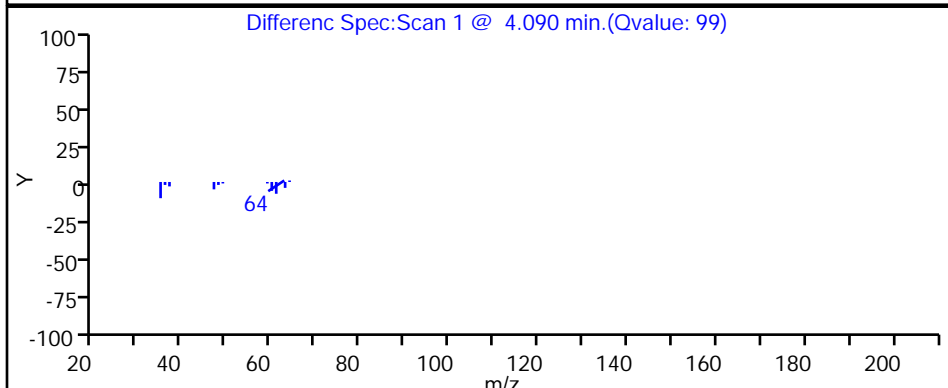
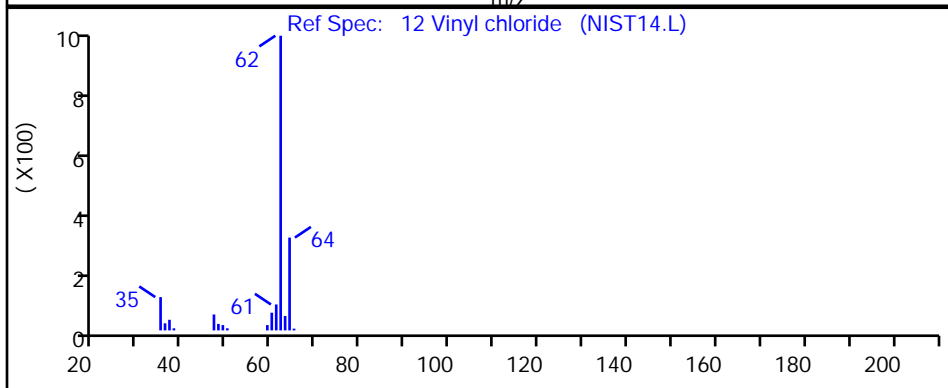
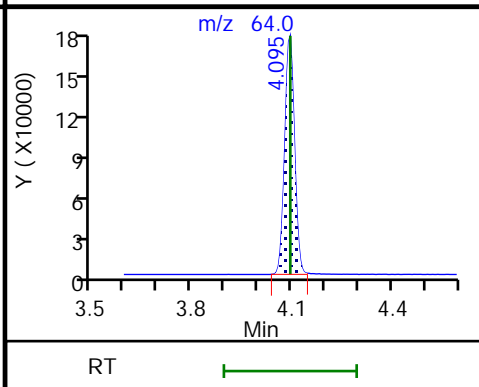
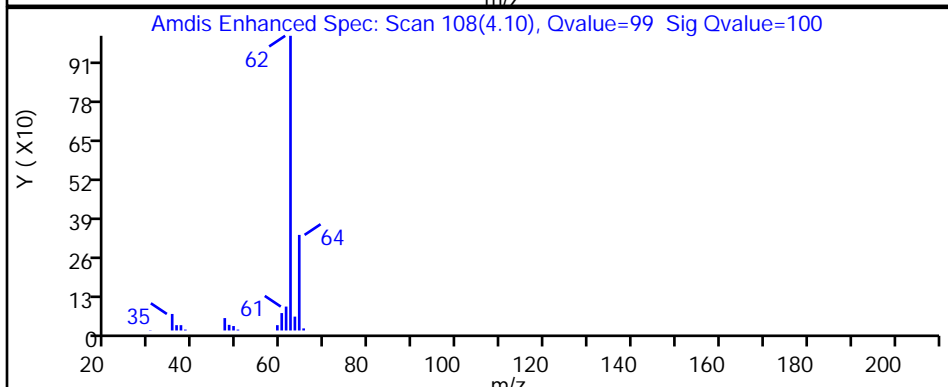
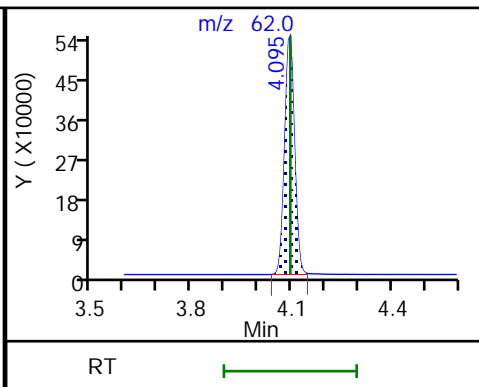
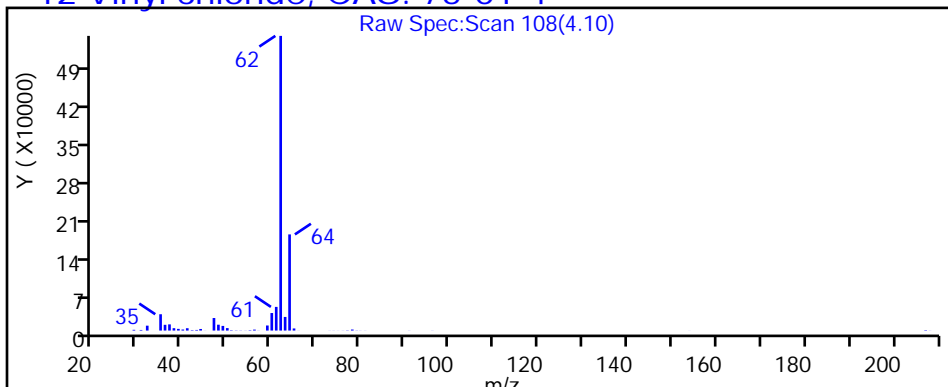
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

12 Vinyl chloride, CAS: 75-01-4



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-101-C-26 Lab Sample ID: 140-14390-2
 Matrix: Air Lab File ID: HB26P102R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:41
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 06:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.40		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.72	CI	0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.15	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.85		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.36	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.22	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.27		0.20	0.20
127-18-4	Tetrachloroethene	165.83	6.2		0.40	0.080
108-88-3	Toluene	92.14	5.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	34		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	17		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.22	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.40		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.31	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	2.7		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-101-C-26 Lab Sample ID: 140-14390-2
 Matrix: Air Lab File ID: HB26P102R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:41
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 06:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.64	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	2.5		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.5	CI	1.4	0.27
67-66-3	Chloroform	119.38	0.54	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.59	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	4.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.4	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	0.95	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.4		1.0	1.0
127-18-4	Tetrachloroethene	165.83	42		2.7	0.54
108-88-3	Toluene	92.14	21		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	180		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	92		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.1	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.9		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.5	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	6.9		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D
 Lims ID: 140-14390-A-2
 Client ID: SV-101-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 06:22:30 ALS Bottle#: 2 Worklist Smp#: 23
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-023
 Misc. Info.: 140-14390-a-2
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:14:03 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:15:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.819	0.000	96	259365	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1401170	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1231013	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	797630	3.98	
6 Chlorodifluoromethane	51	3.682	3.682	0.000	95	30455	0.1432	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	55421	0.1697	
12 Vinyl chloride	62	4.090	4.097	-0.005	99	63662	0.5374	
27 1,1-Dichloroethene	96	5.919	5.923	0.000	97	7320	0.0727	
31 Methylene Chloride	84	6.276	6.271	0.005	98	26598	0.2508	
41 cis-1,2-Dichloroethene	96	8.488	8.488	0.005	93	3101	0.0296	
43 Chloroform	83	8.829	8.829	0.000	27	4940	0.0219	
45 1,1,1-Trichloroethane	97	9.853	9.864	-0.005	97	1441142	6.72	
47 Benzene	78	10.457	10.462	0.000	95	11826	0.0399	
50 Carbon tetrachloride	117	10.478	10.478	0.005	96	19350	0.0807	
56 Trichloroethene	130	11.713	11.719	0.000	96	479114	3.43	
65 Toluene	91	13.760	13.760	0.000	94	388919	1.11	
73 Tetrachloroethene	129	14.902	14.897	0.005	95	176585	1.24	
76 Ethylbenzene	91	16.060	16.060	0.000	99	19559	0.0438	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	56904	0.1654	
82 o-Xylene	91	16.747	16.752	-0.005	98	24950	0.0712	
89 1,3,5-Trimethylbenzene	120	18.127	18.122	-0.031	91	7105	0.0613	
93 1,2,4-Trimethylbenzene	105	18.587	18.613	-0.026	98	31765	0.0792	
99 1,2,3-Trimethylbenzene	105	19.078	19.099	-0.021	99	17343	0.0440	
113 Naphthalene	128	21.249	21.254	-0.005	98	23268	0.0539	
S 121 Xylenes, Total	100				0		0.2366	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Worklist Smp#: 23

Client ID: SV-101-C-26

Purge Vol: 500.000 mL

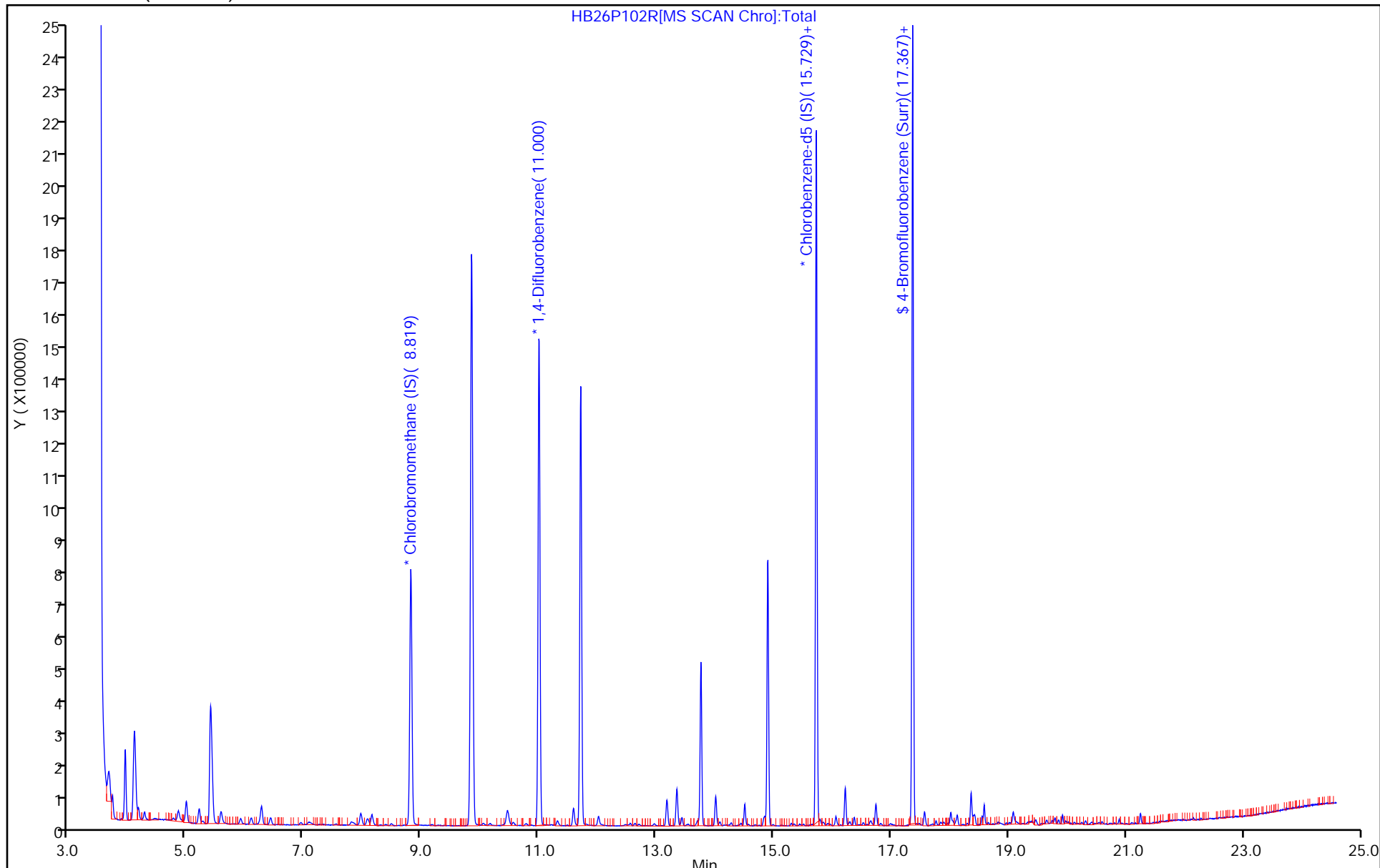
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D
 Lims ID: 140-14390-A-2
 Client ID: SV-101-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 06:22:30 ALS Bottle#: 2 Worklist Smp#: 23
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-023
 Misc. Info.: 140-14390-a-2
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:14:03 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:15:30

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.98	99.41

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

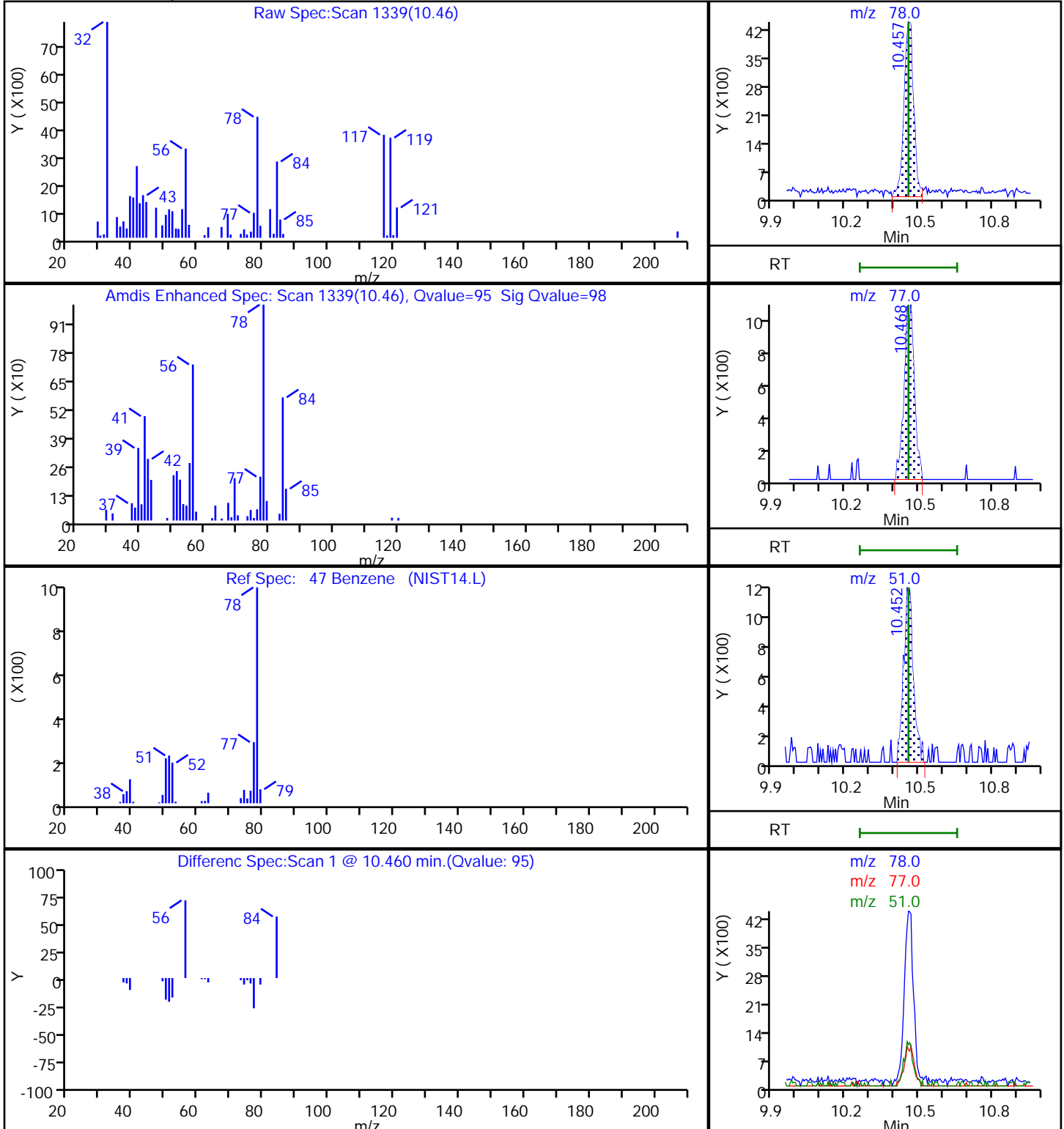
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

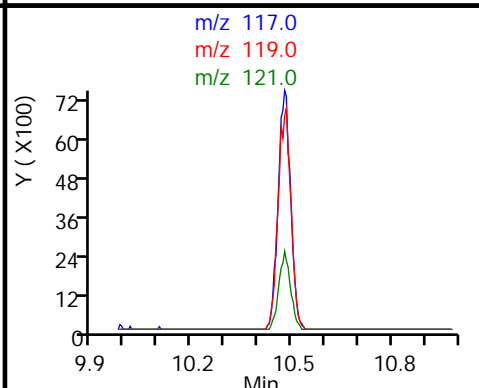
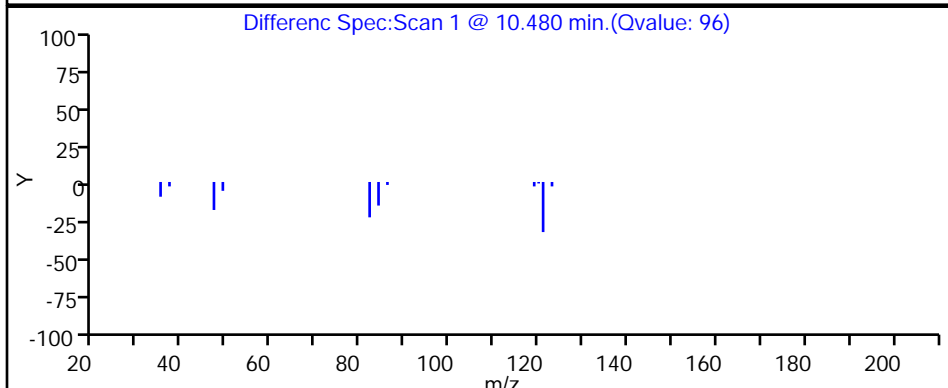
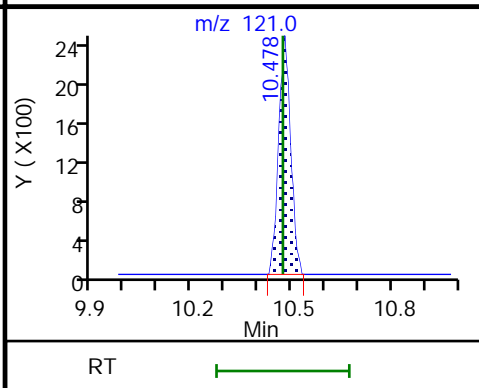
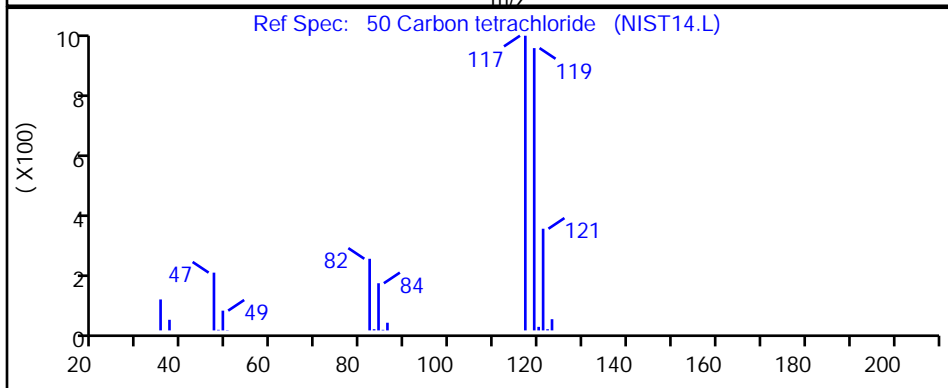
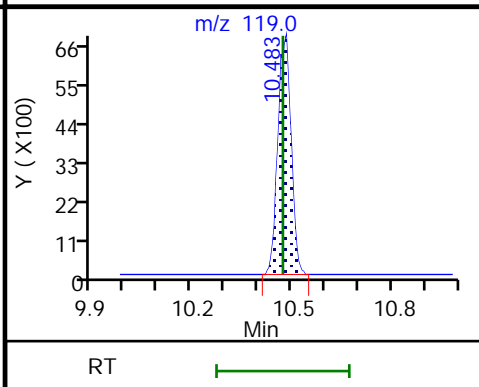
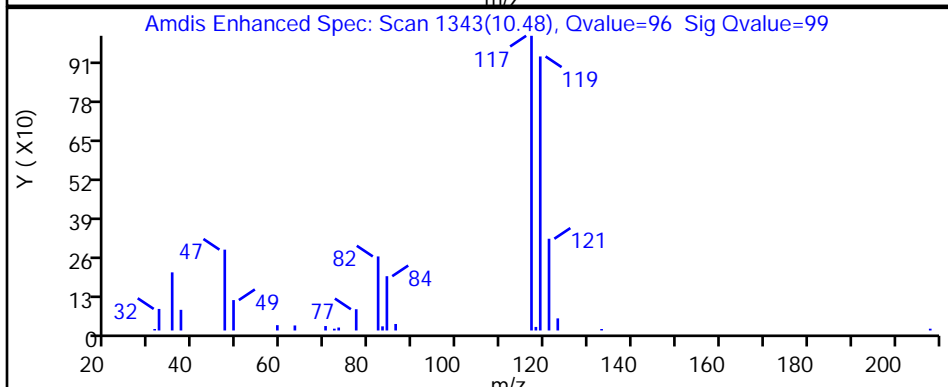
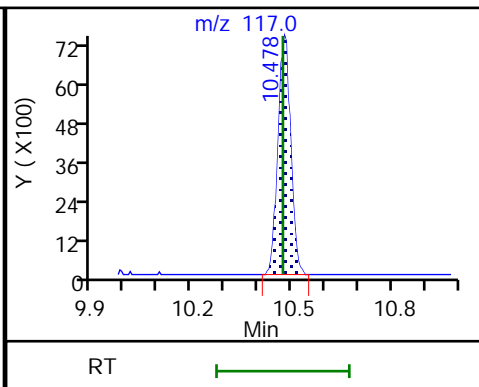
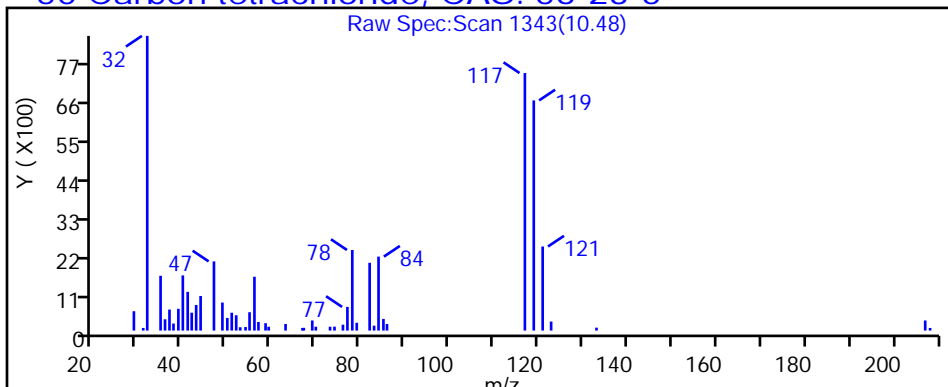
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

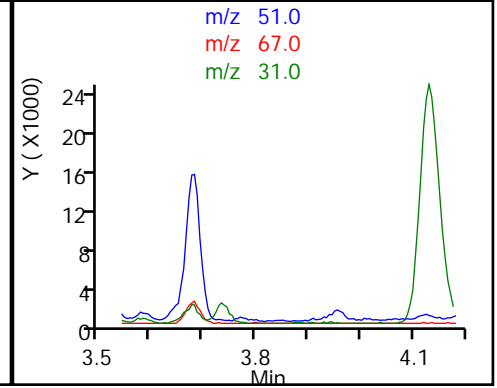
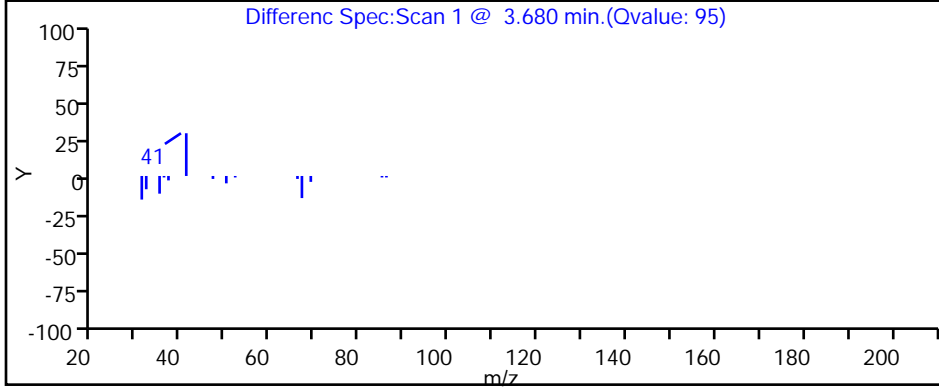
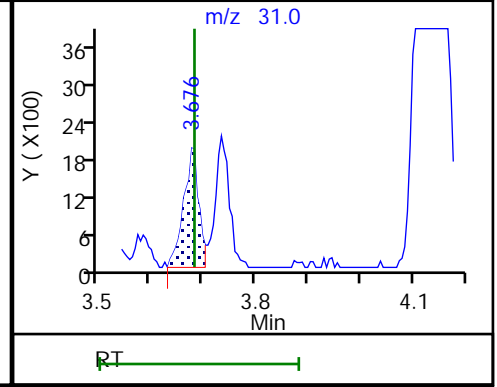
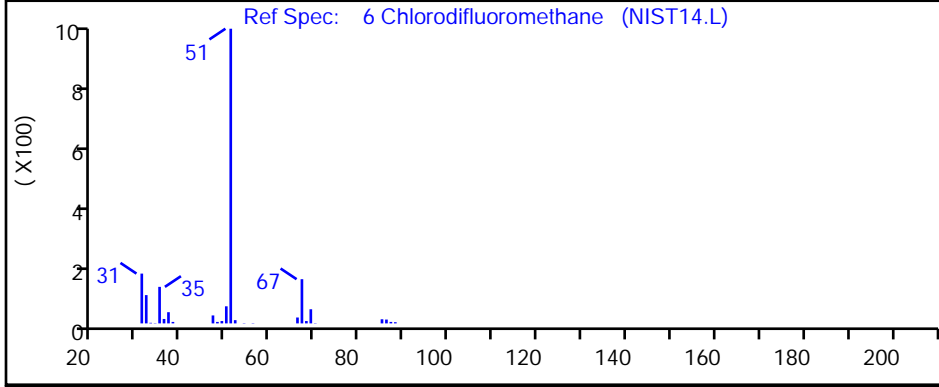
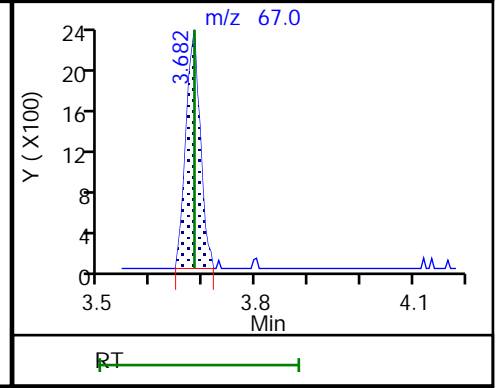
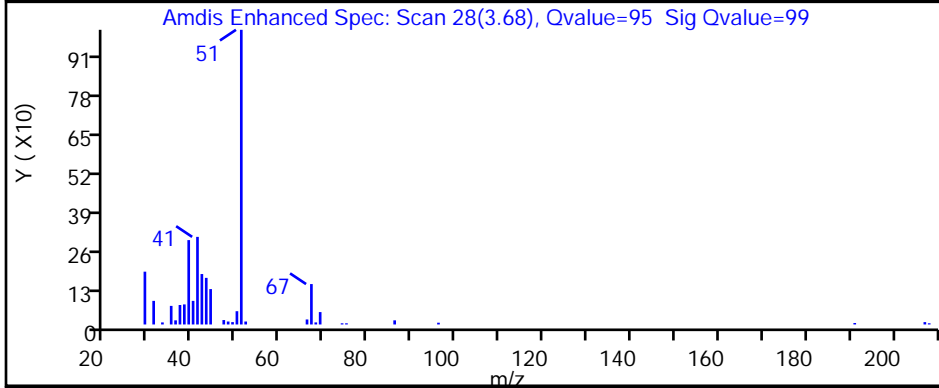
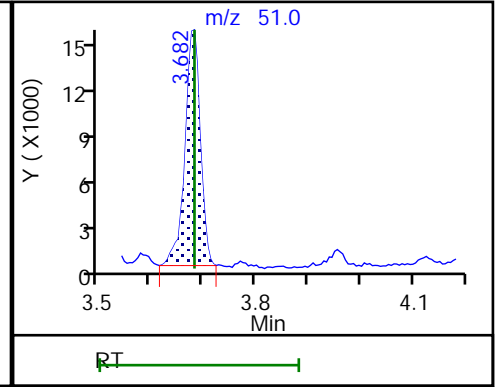
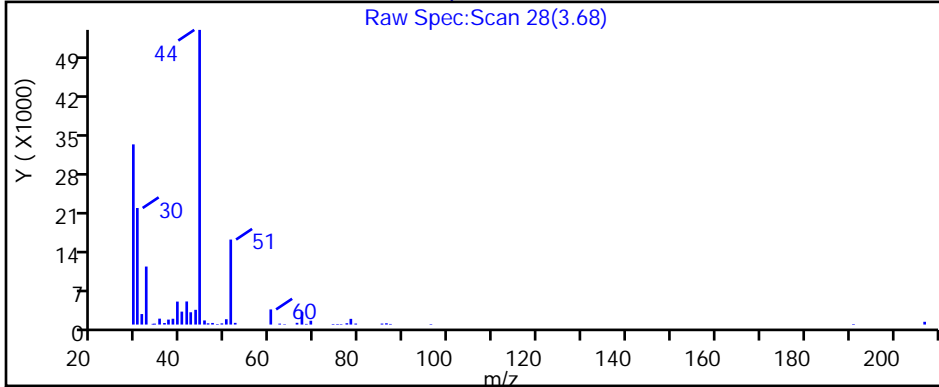
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

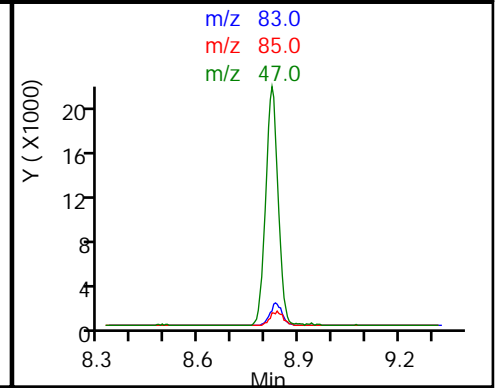
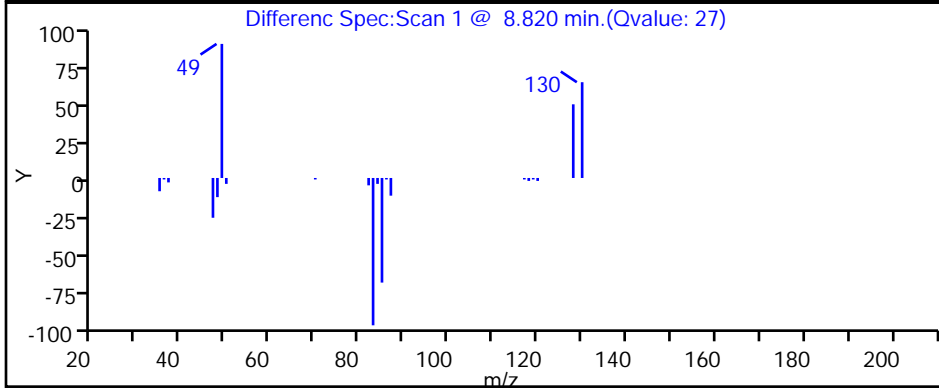
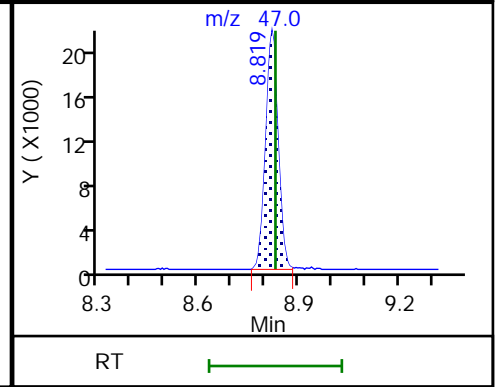
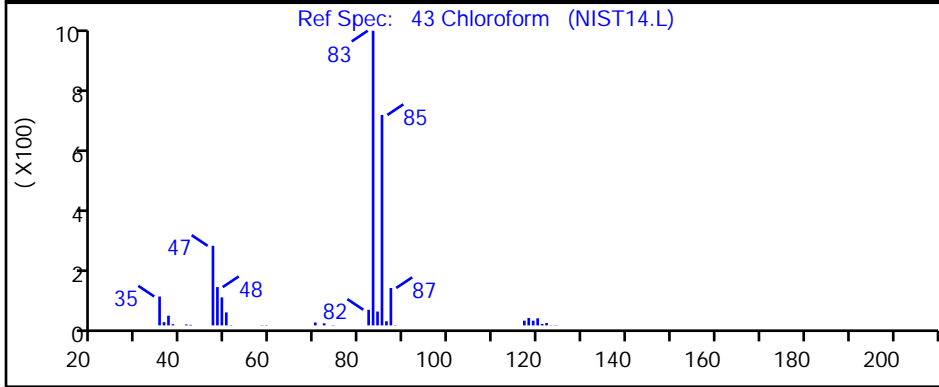
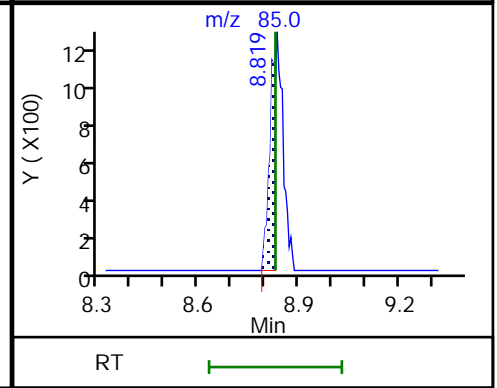
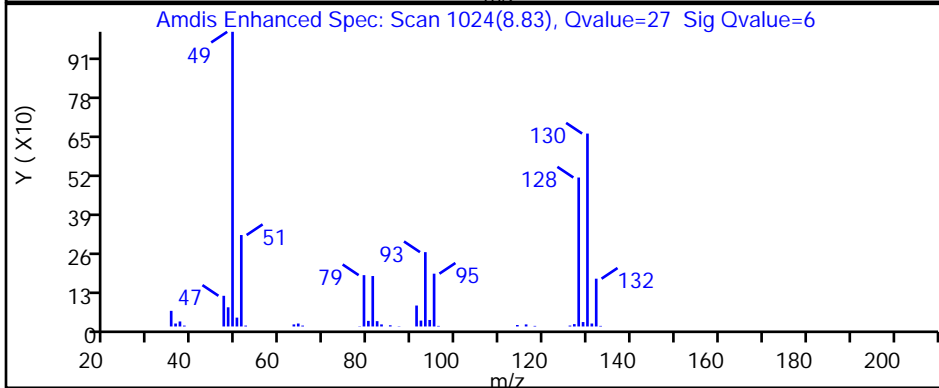
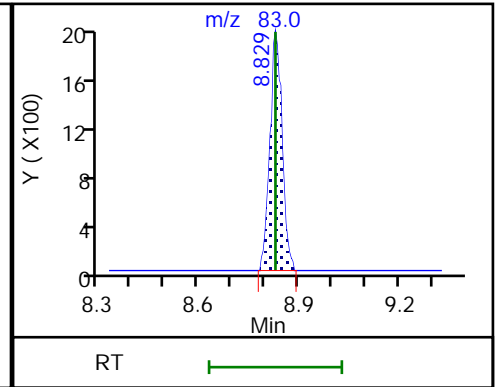
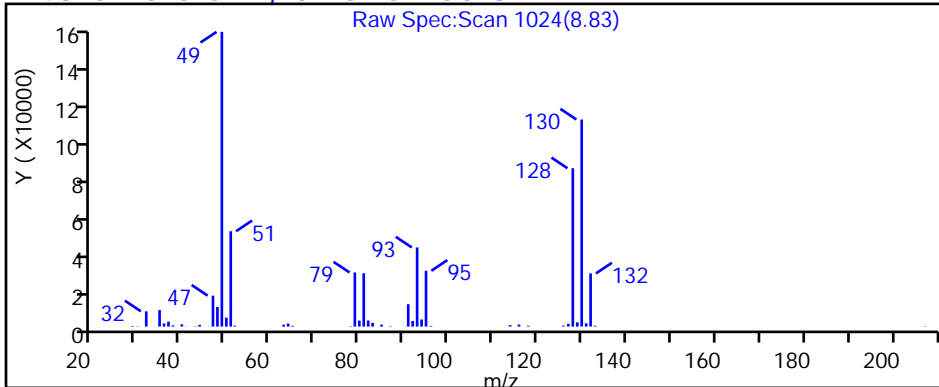
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

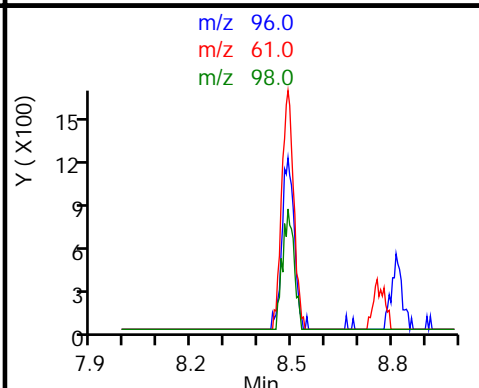
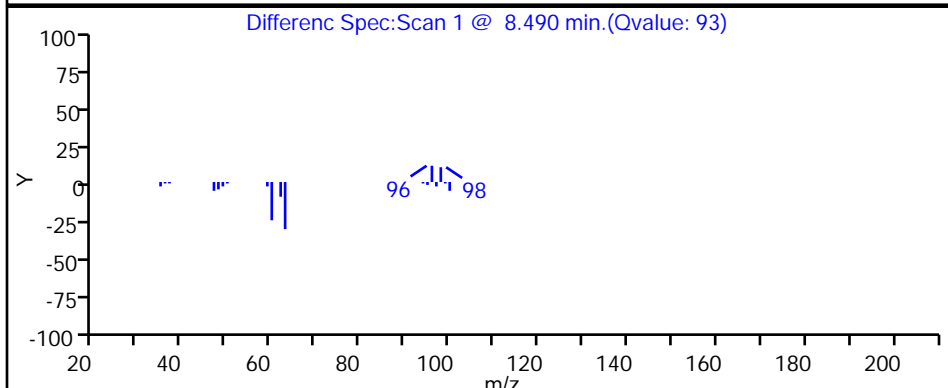
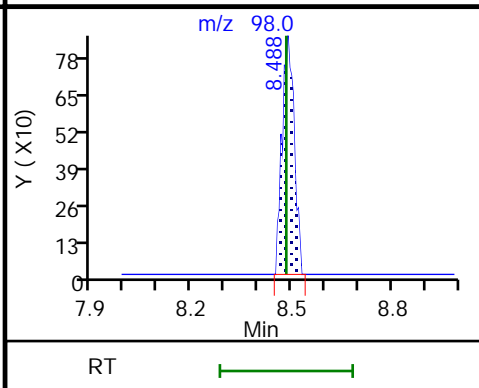
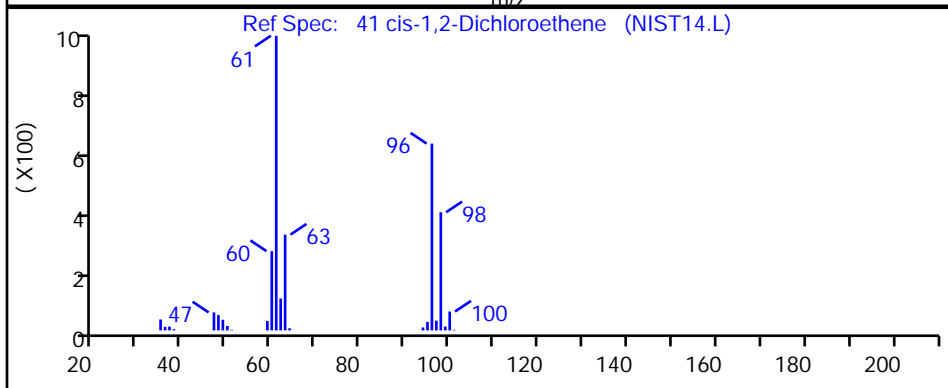
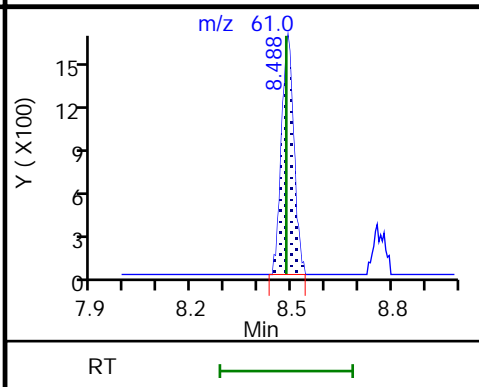
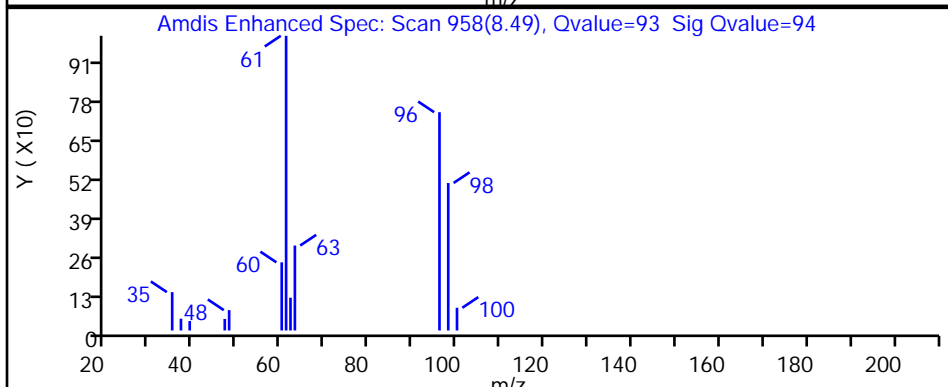
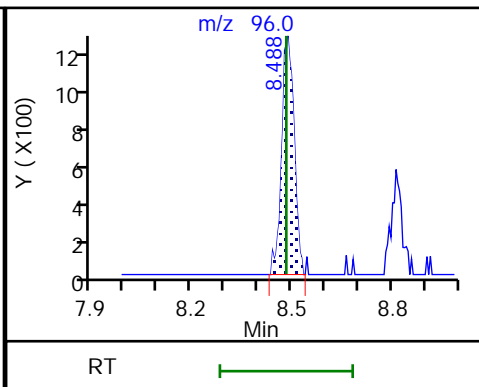
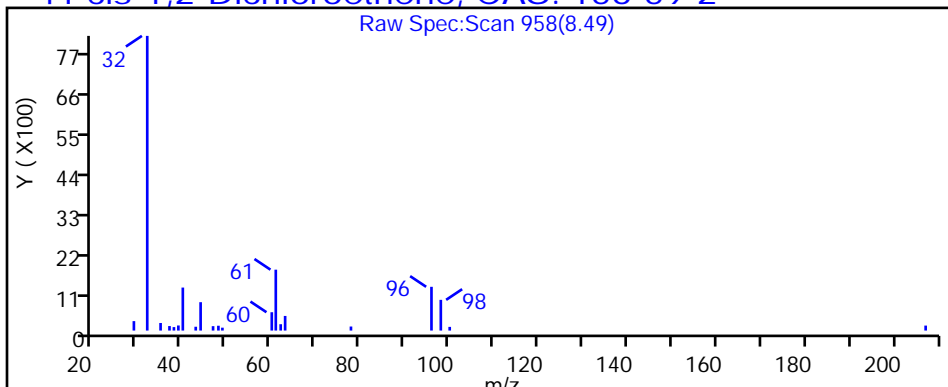
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

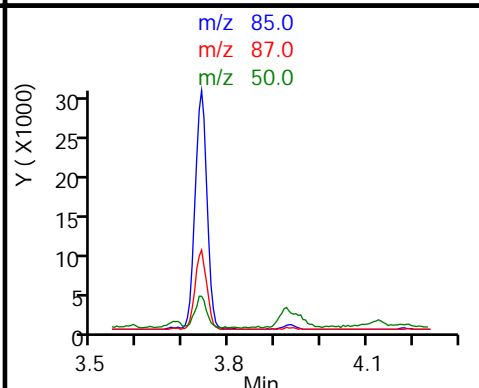
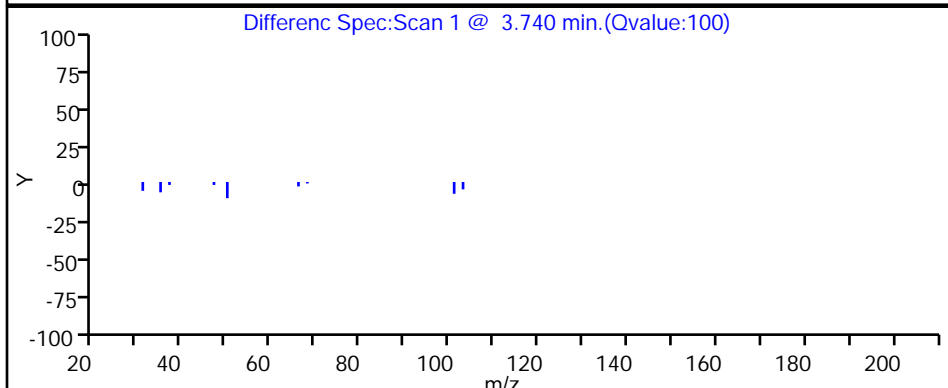
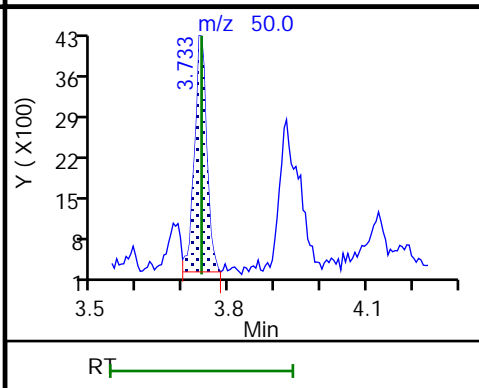
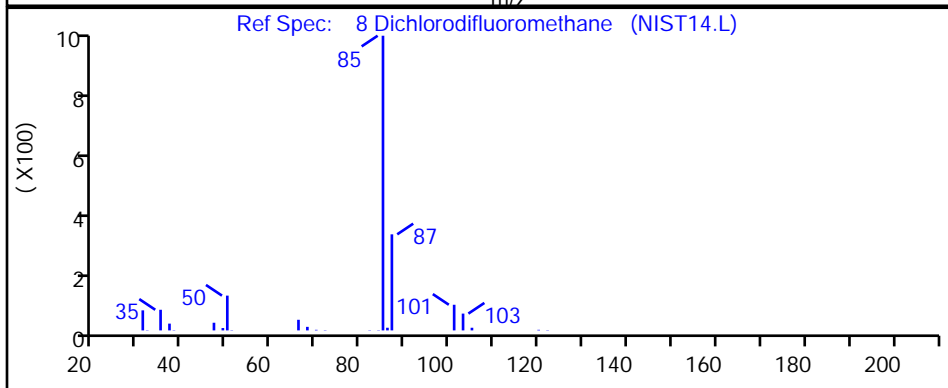
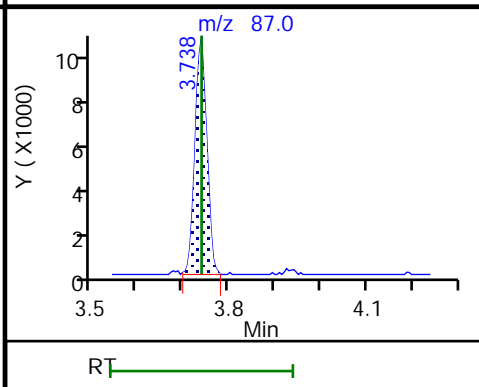
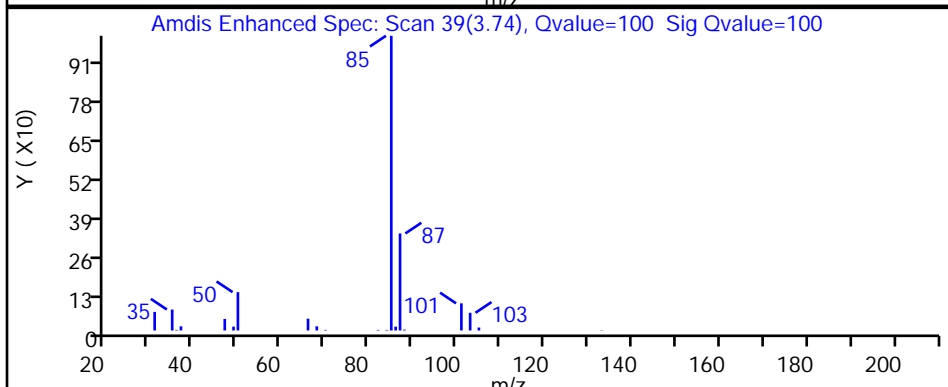
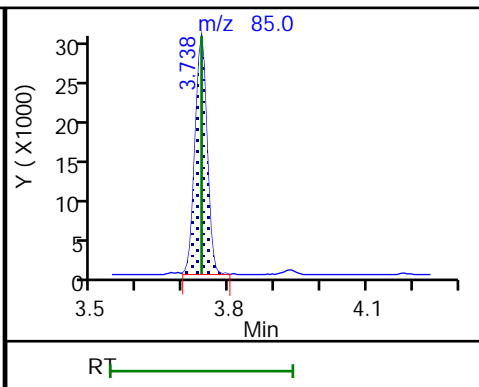
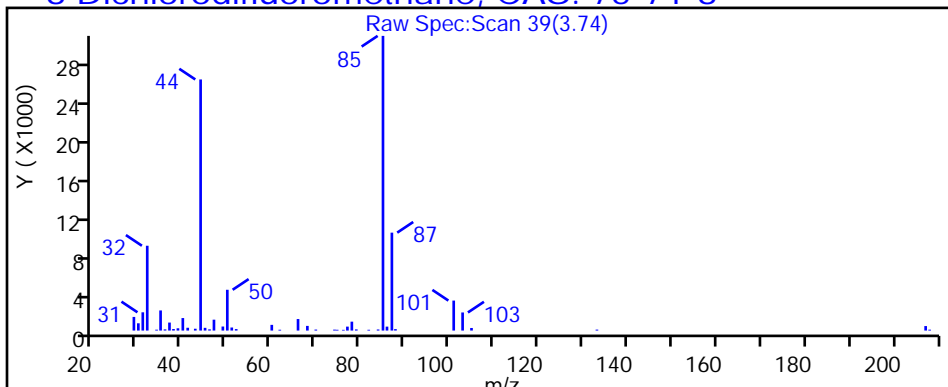
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

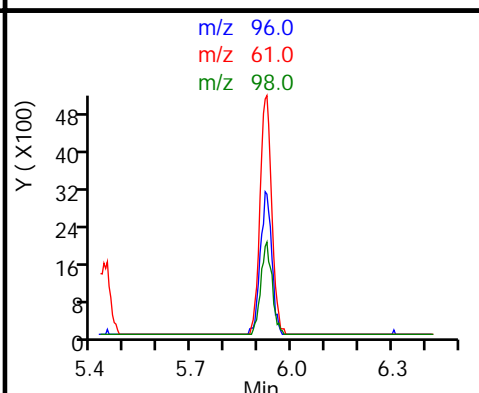
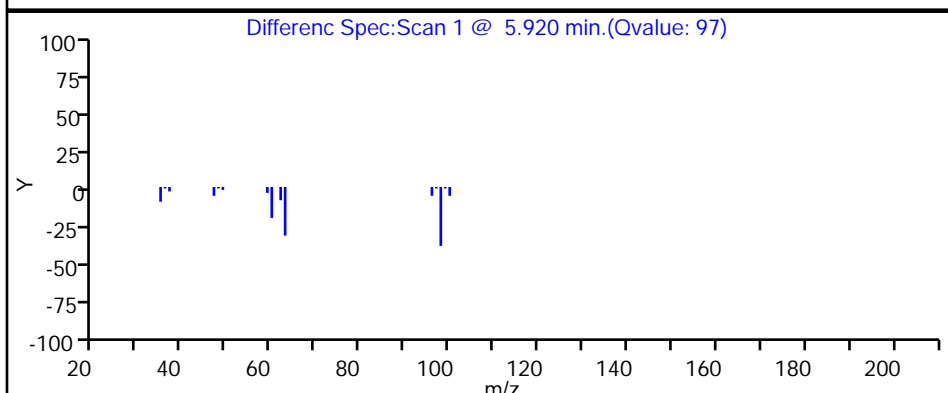
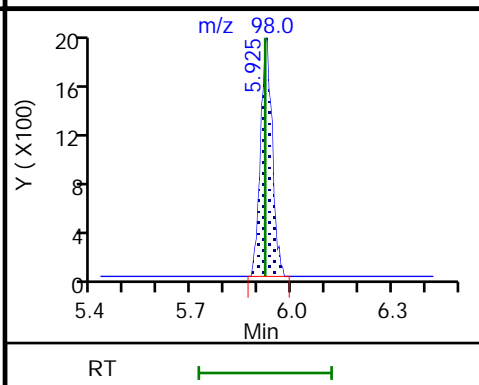
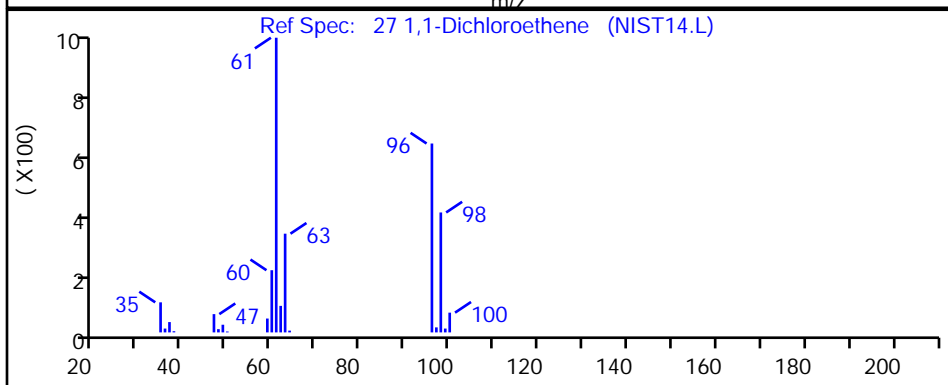
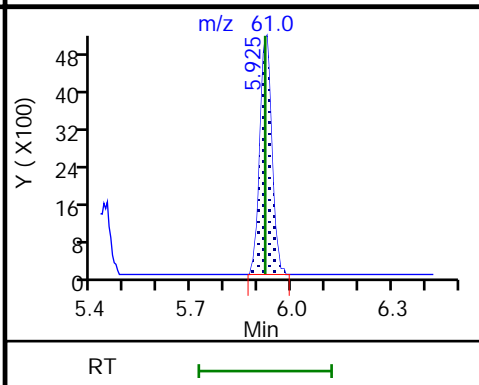
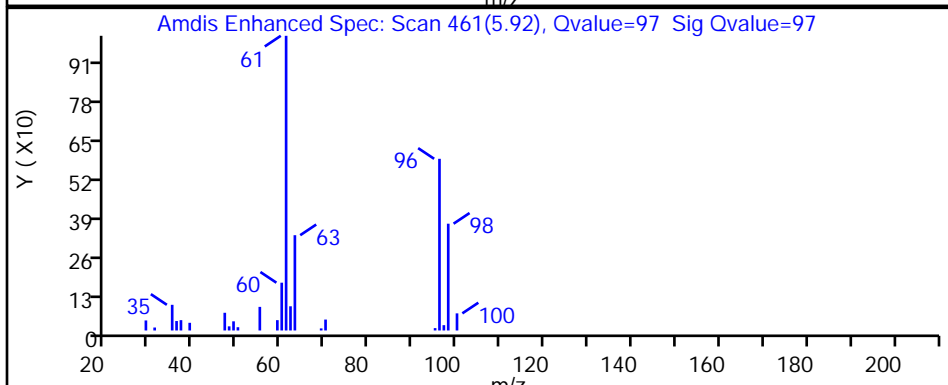
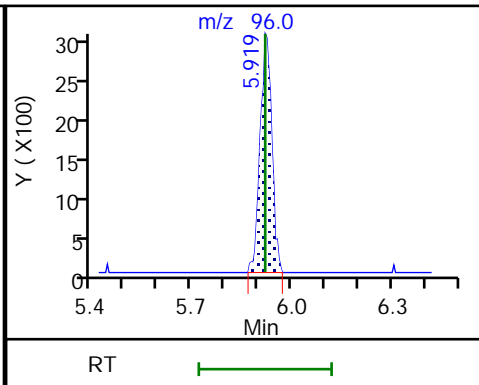
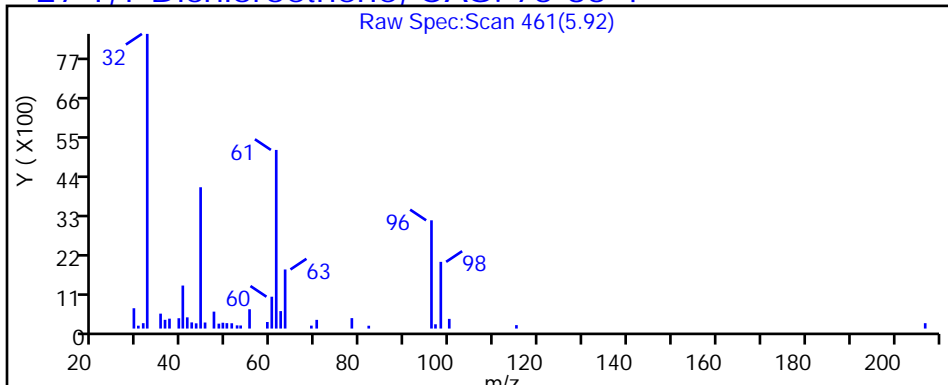
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

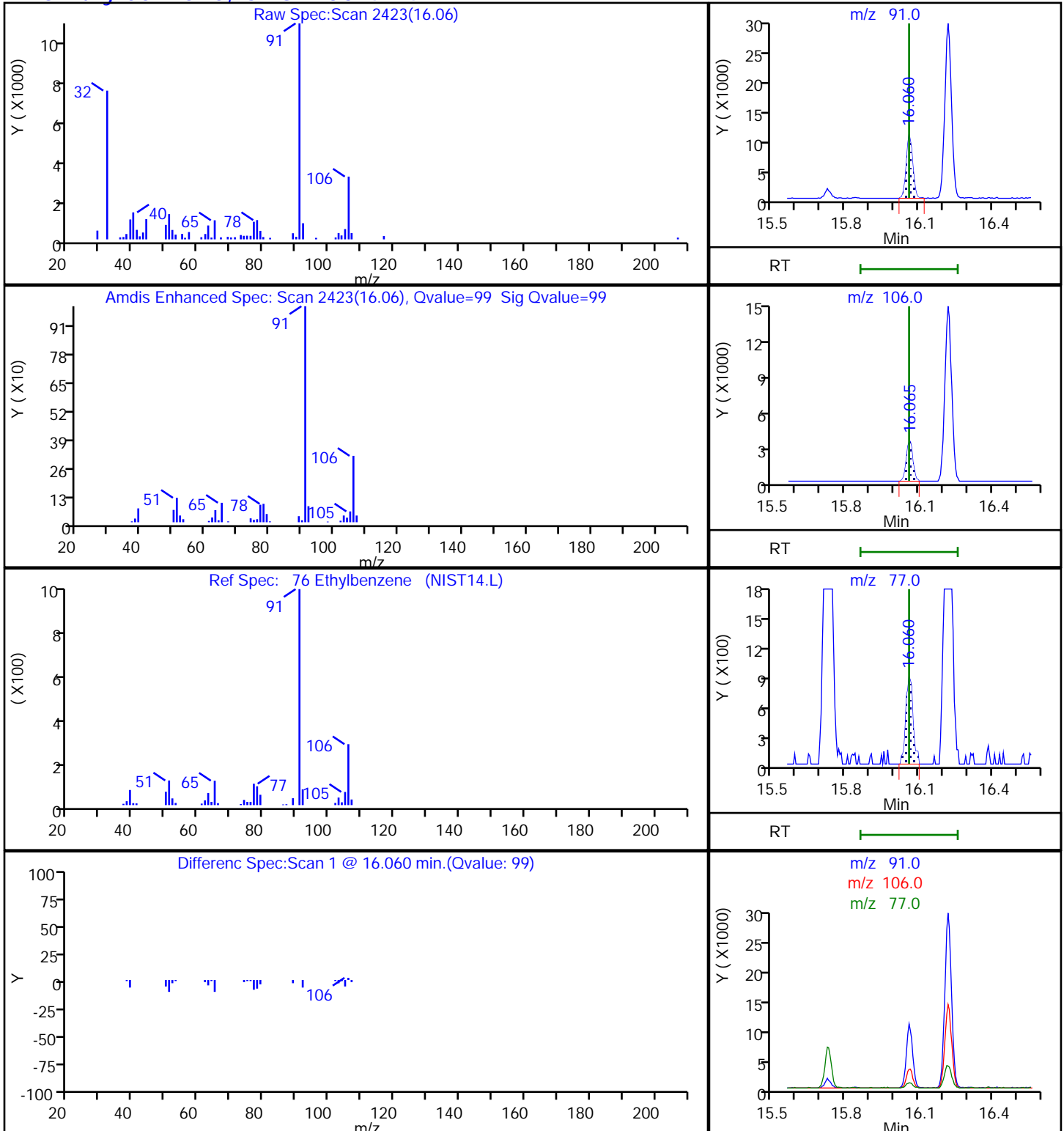
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

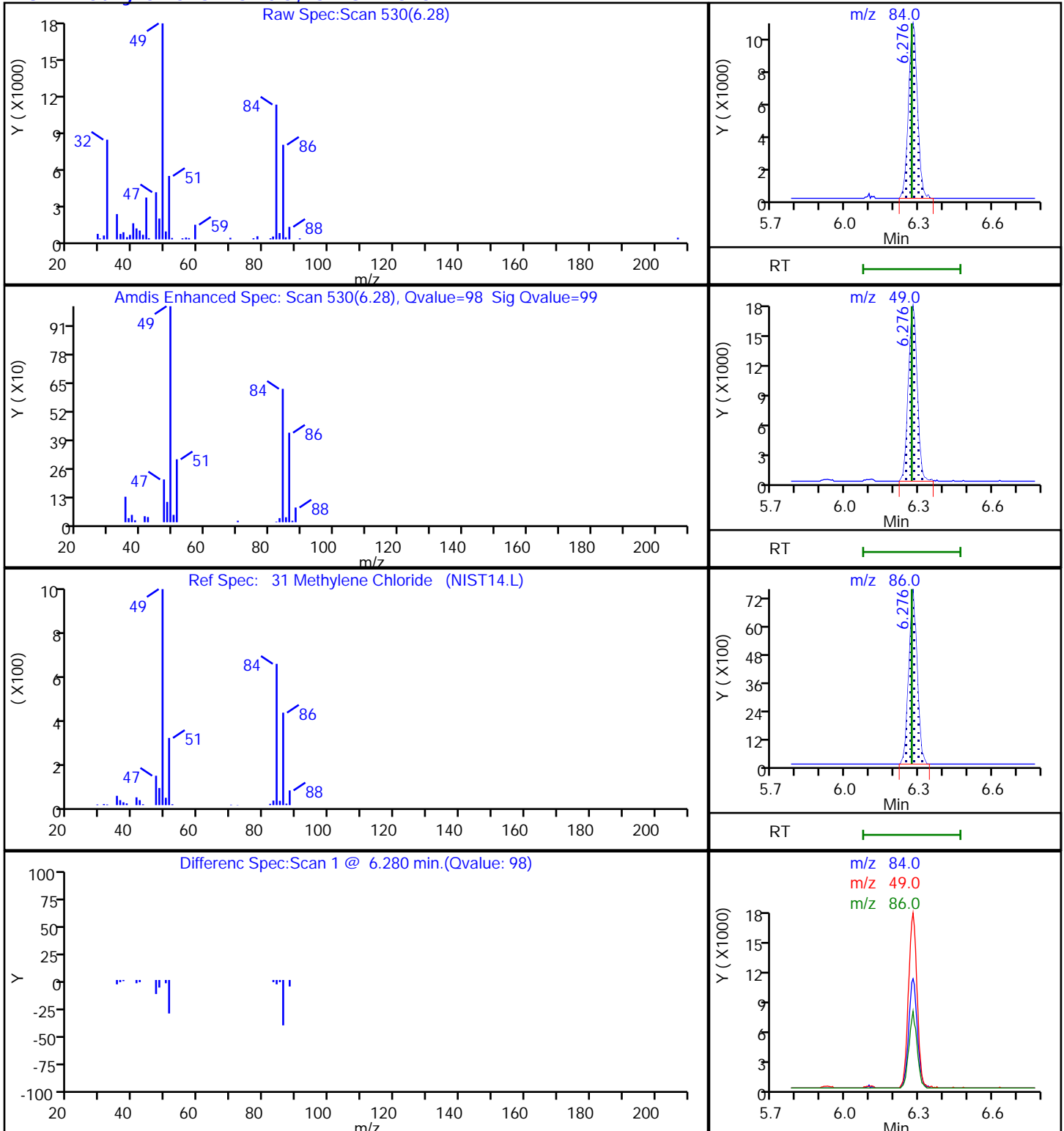
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

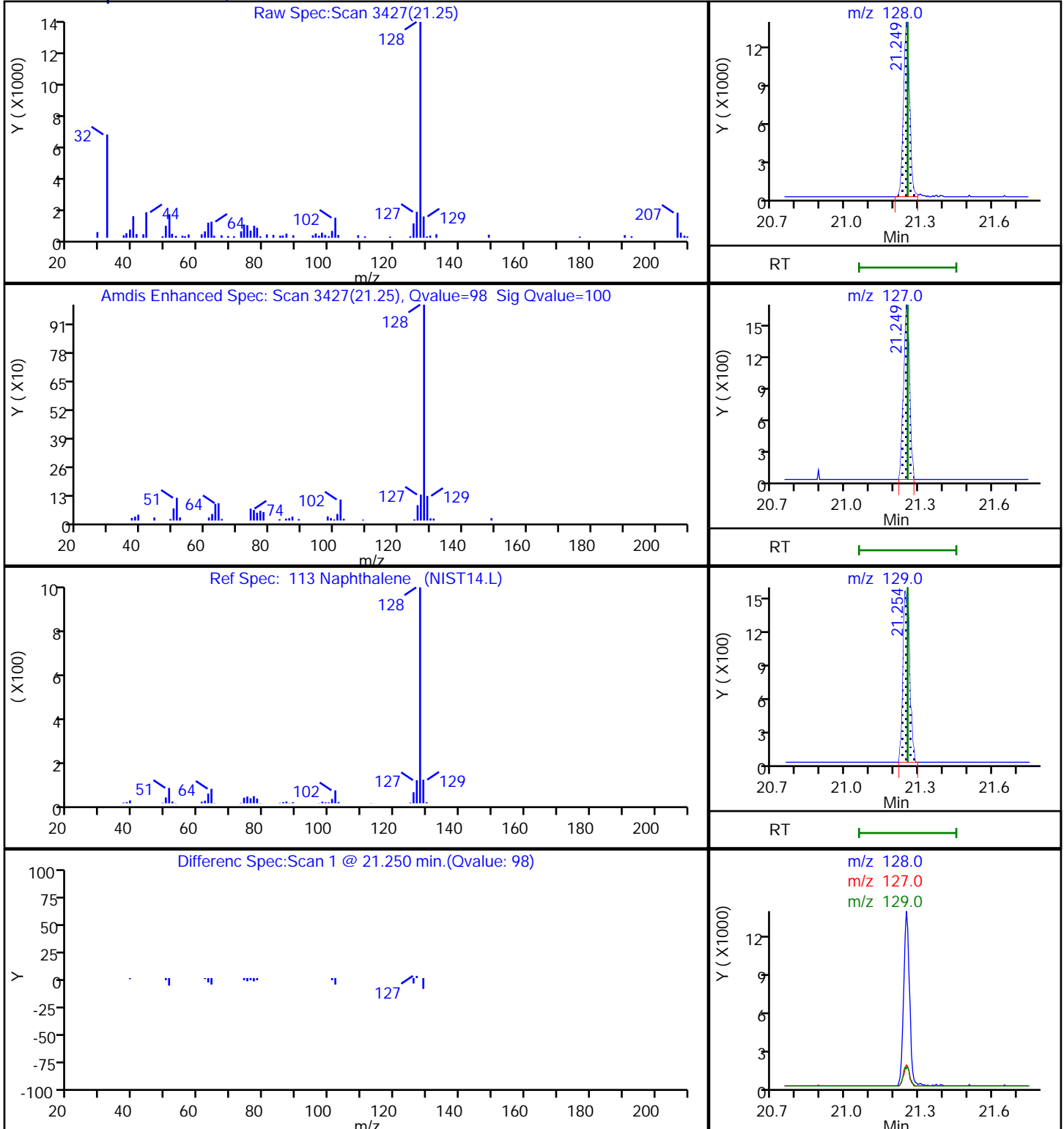
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

113 Naphthalene, CAS: 91-20-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

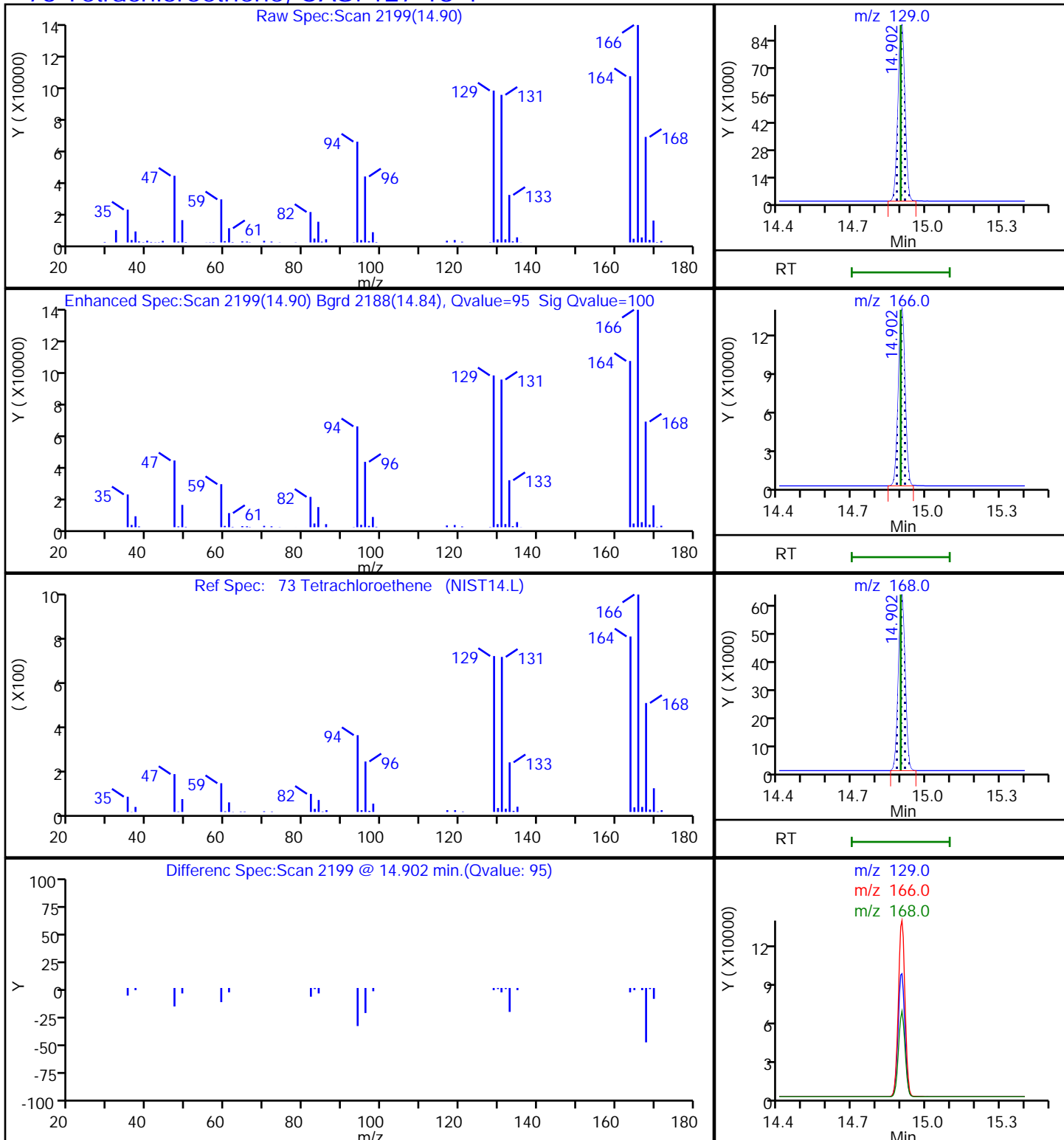
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

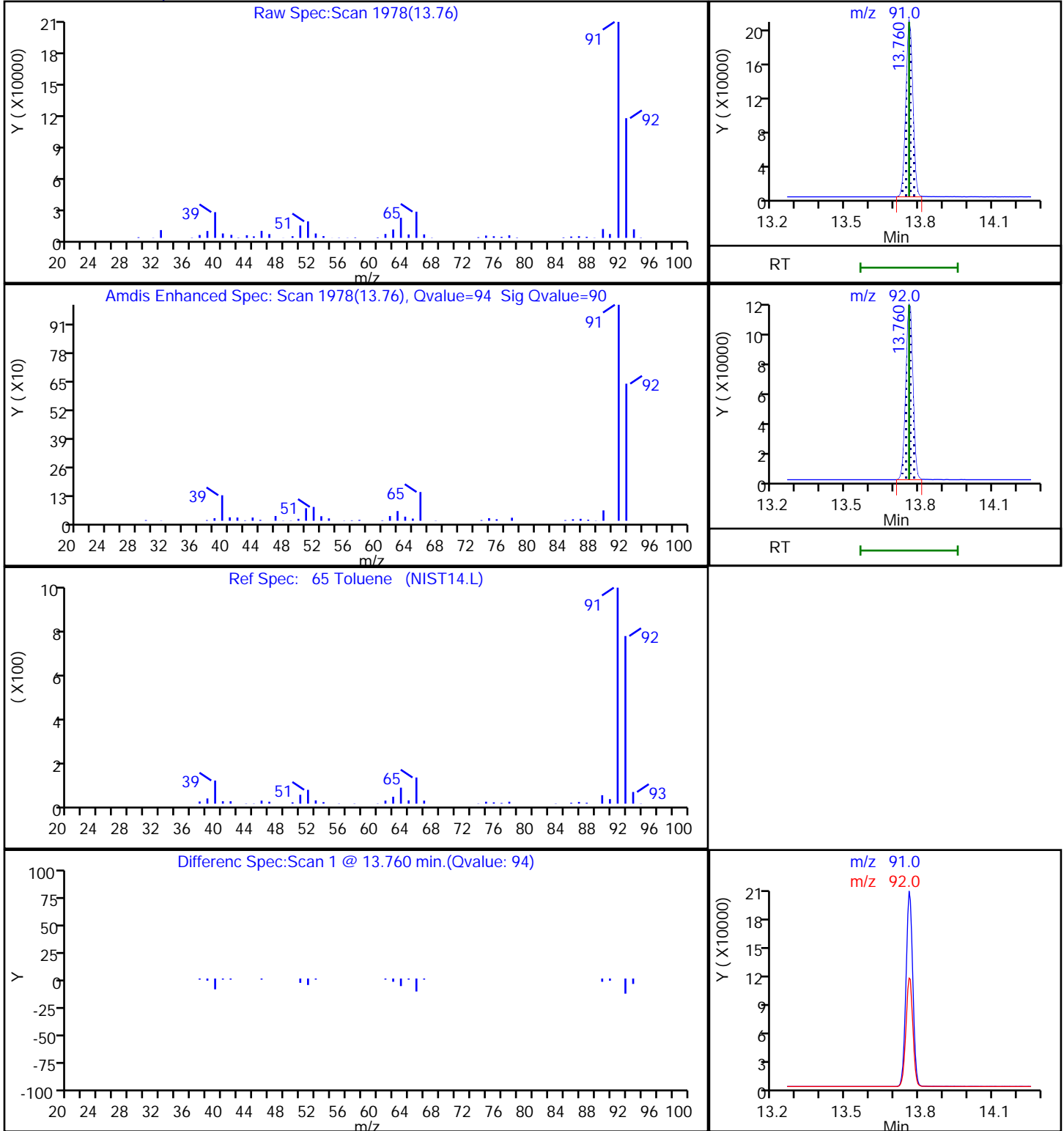
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

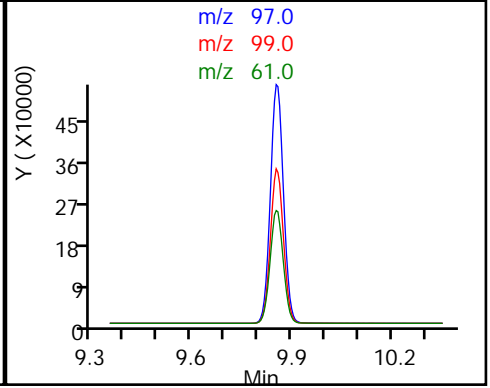
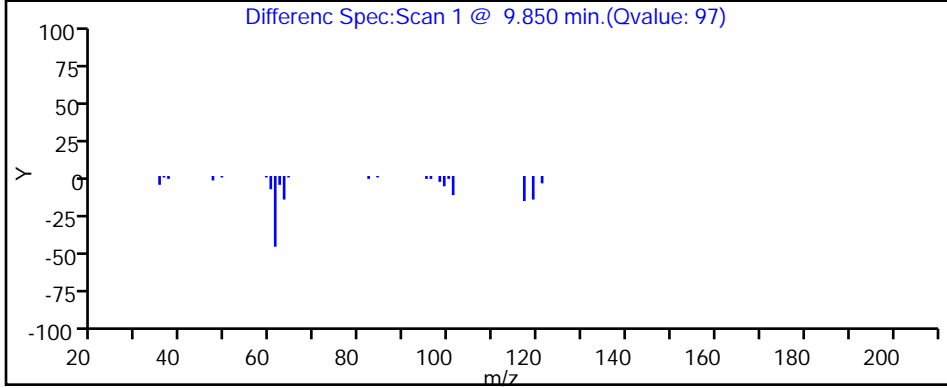
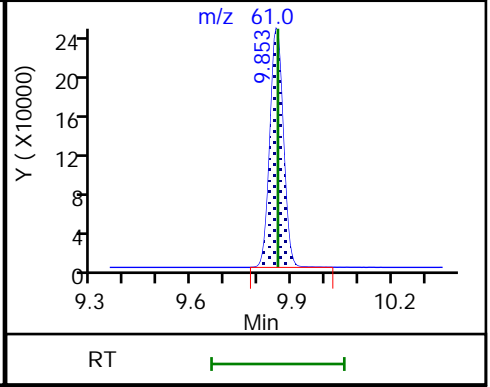
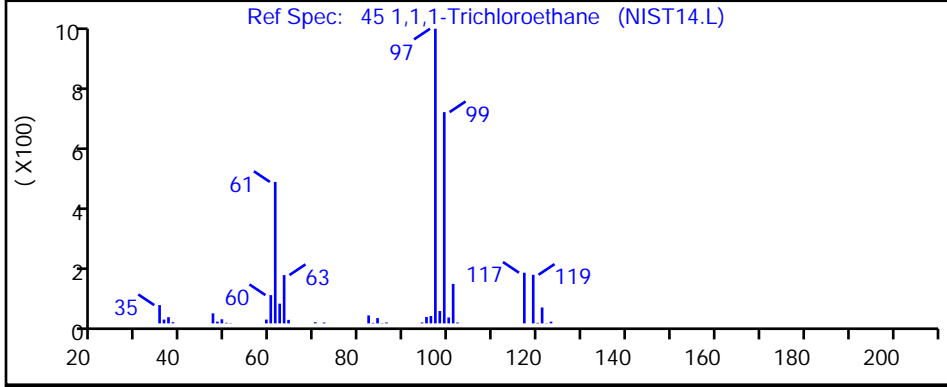
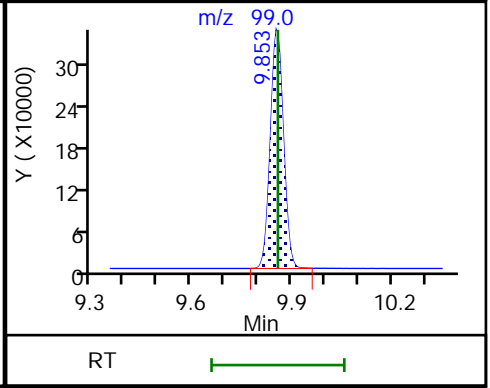
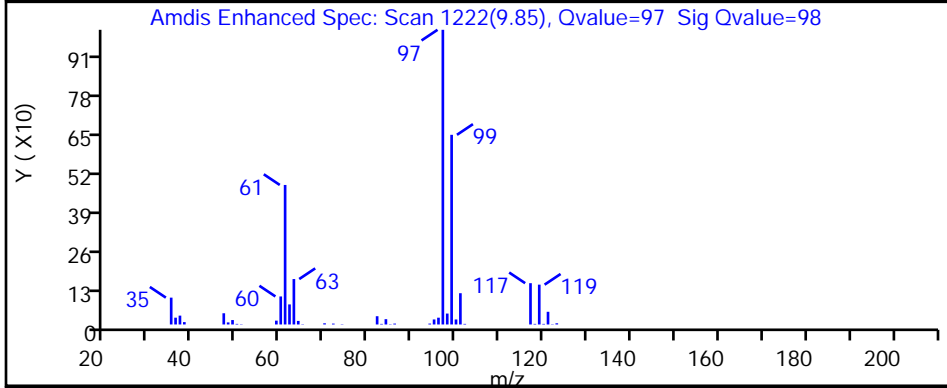
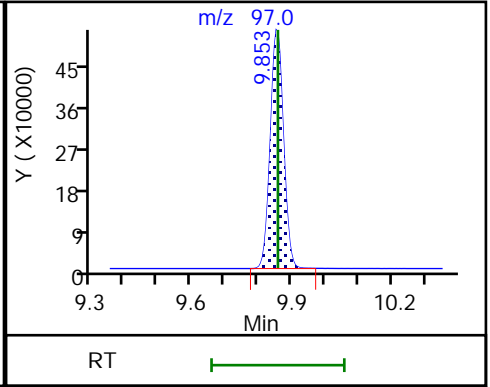
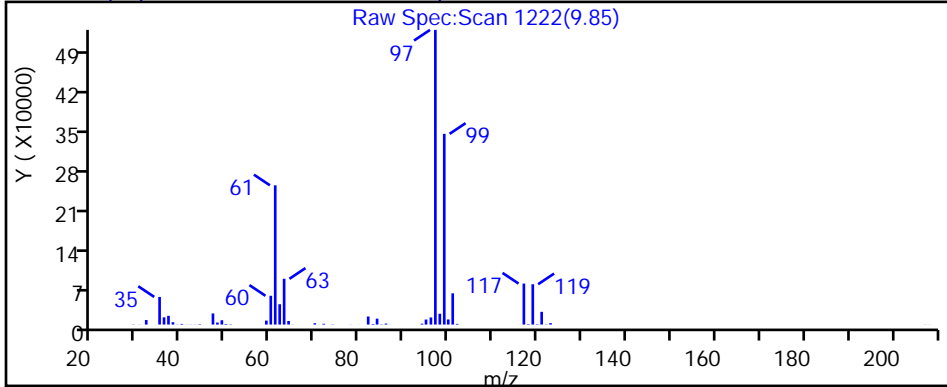
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

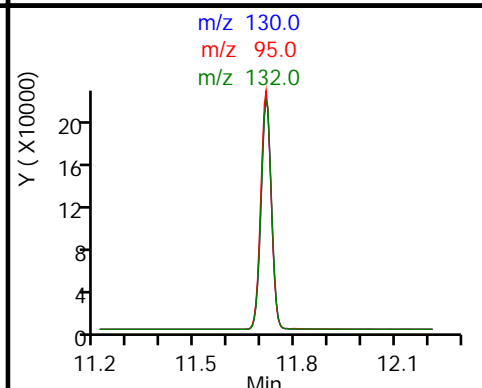
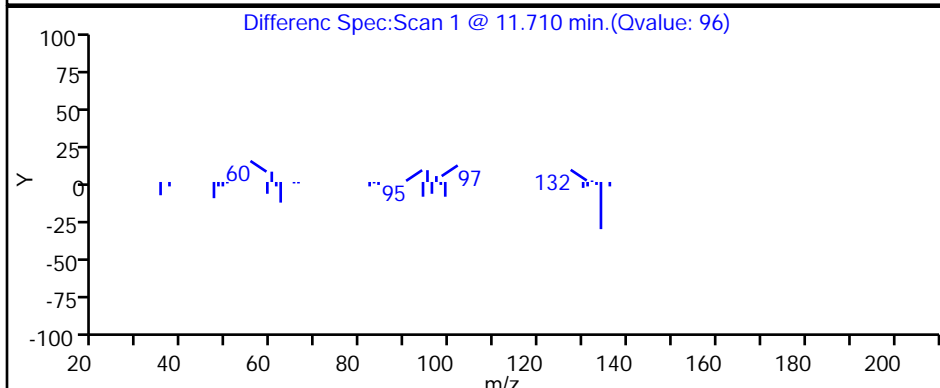
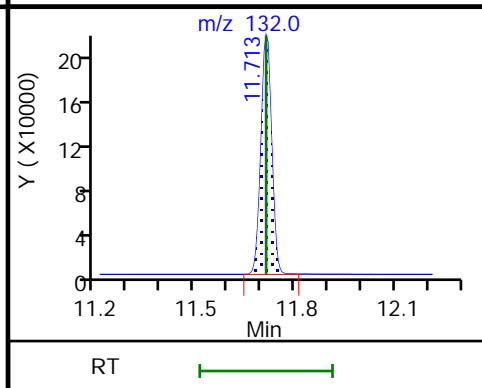
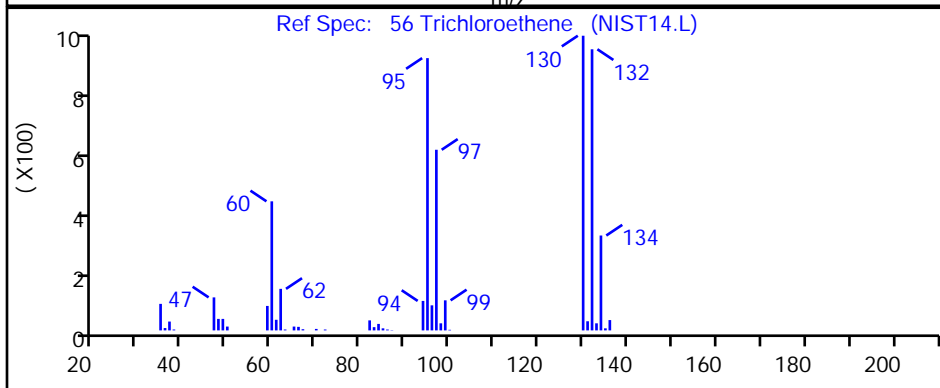
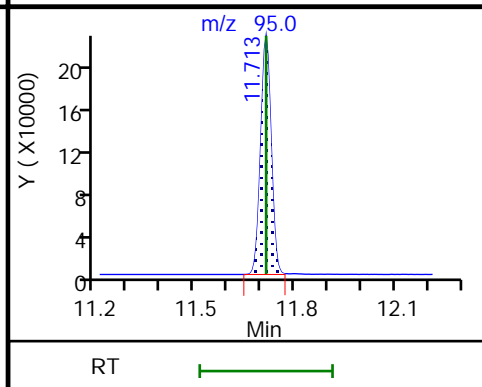
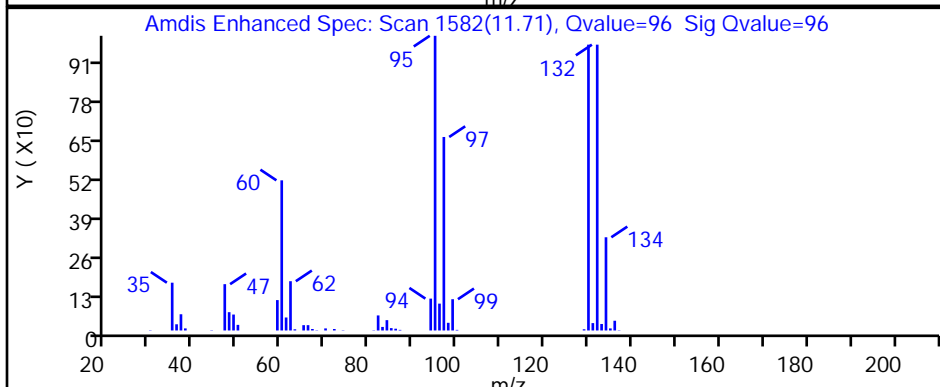
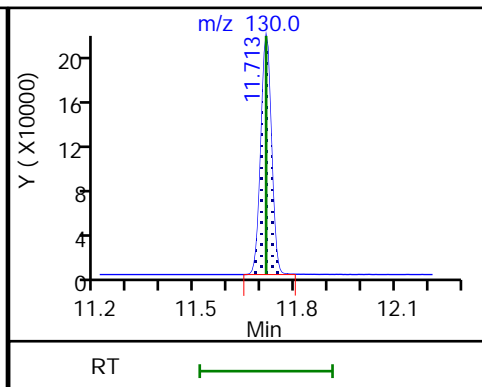
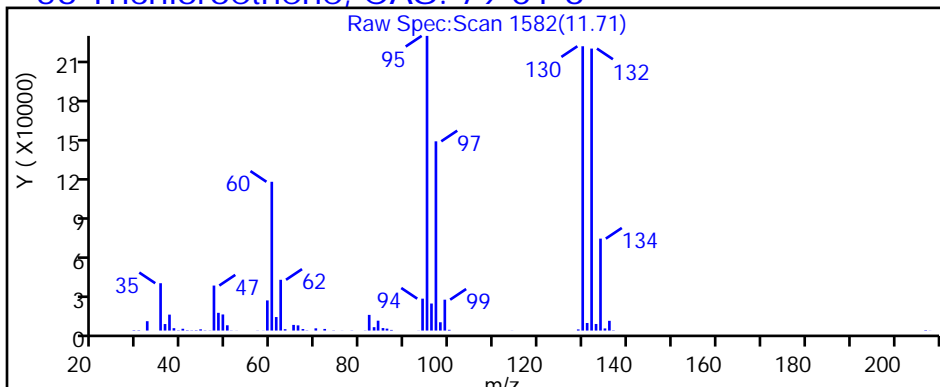
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

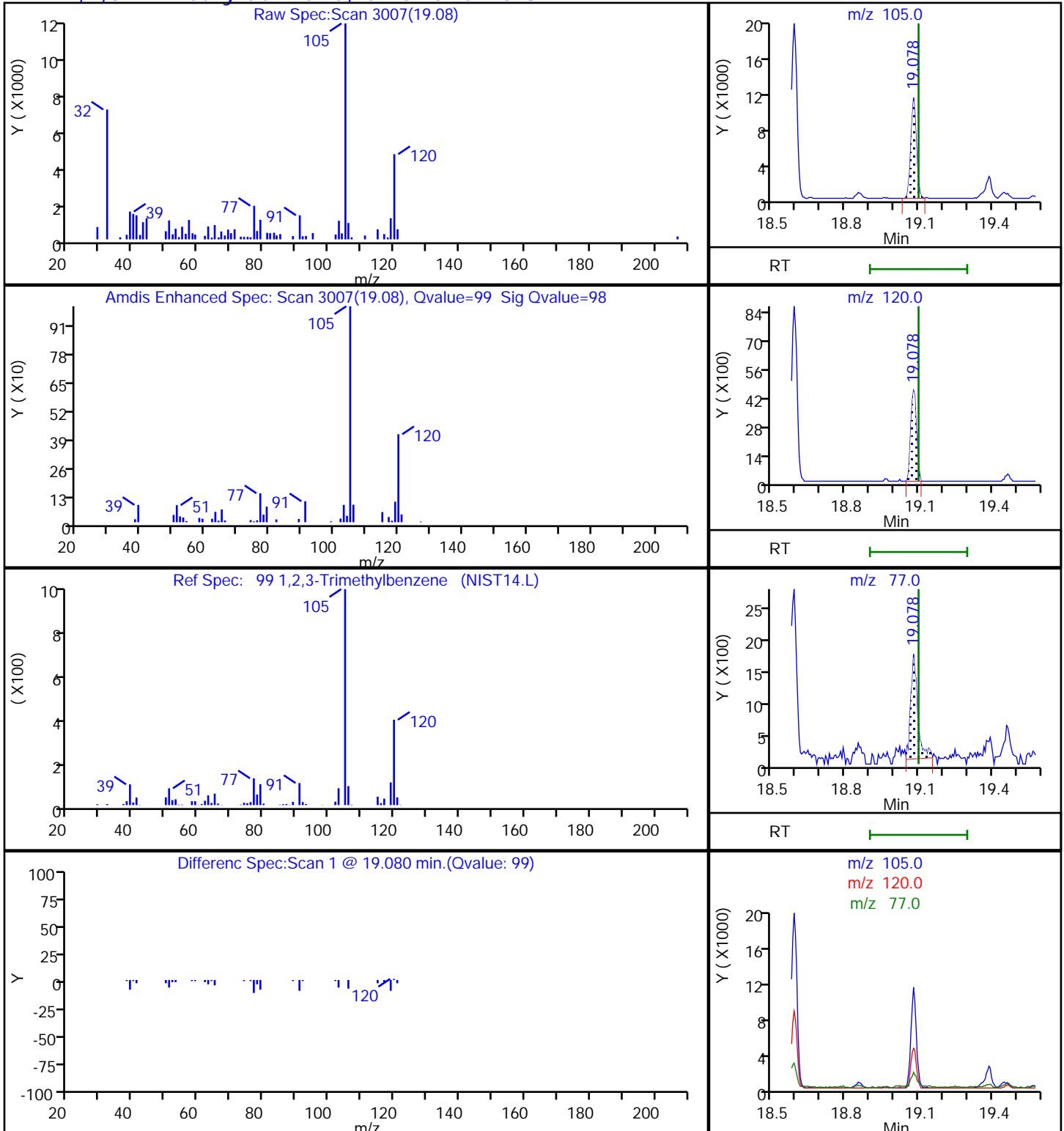
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

99 1,2,3-Trimethylbenzene, CAS: 526-73-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

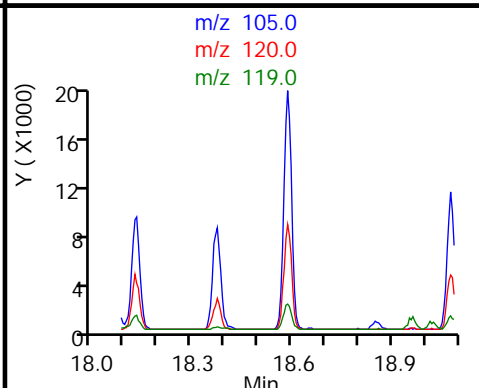
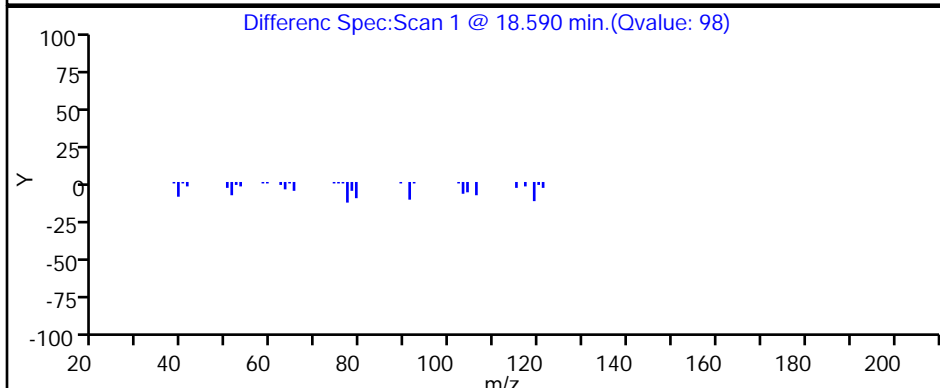
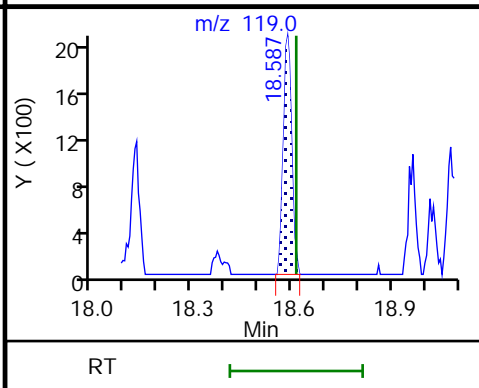
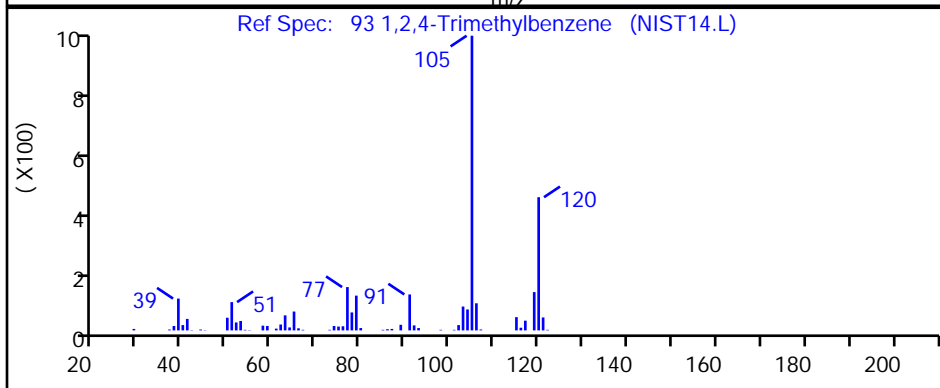
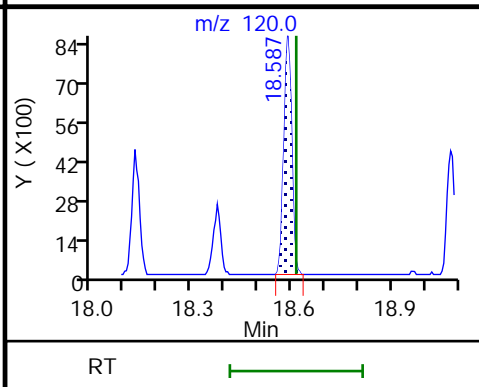
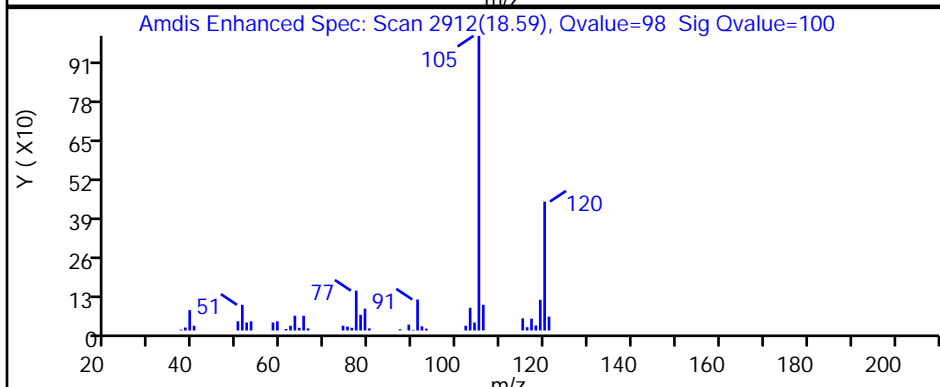
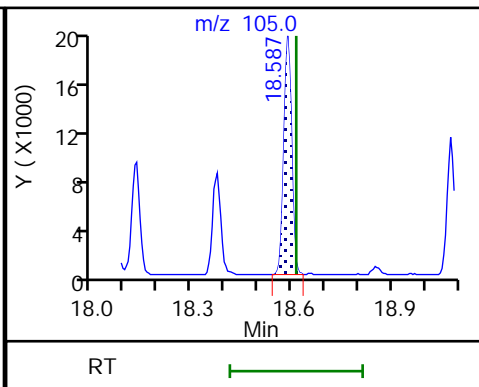
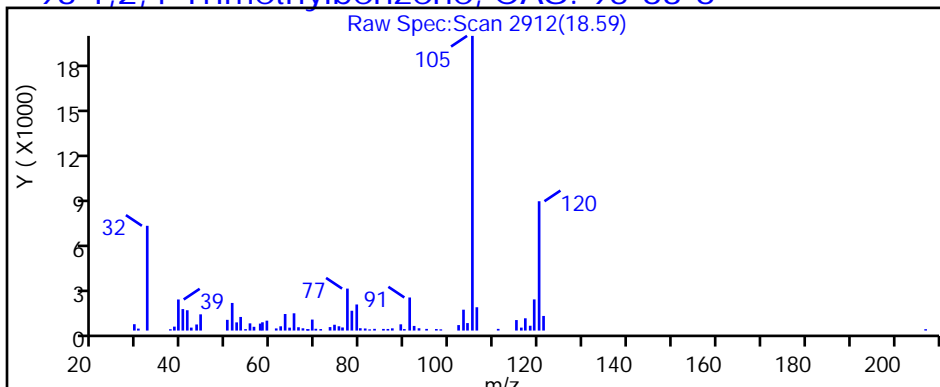
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

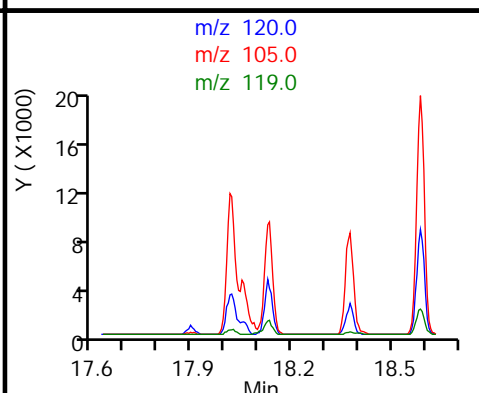
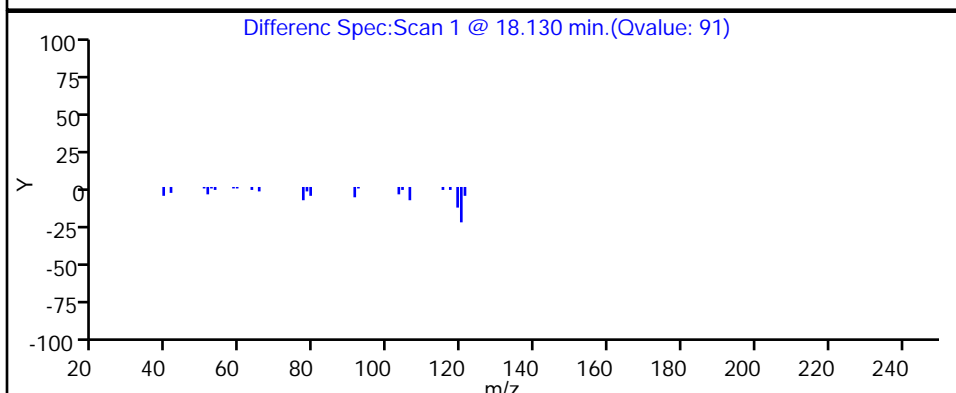
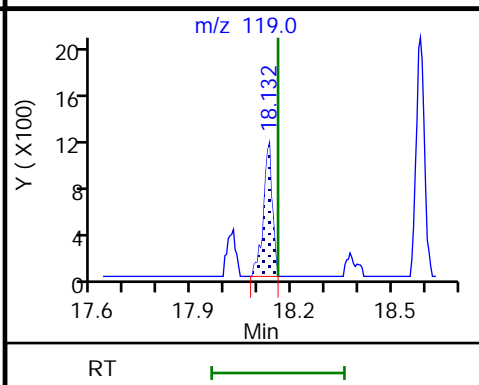
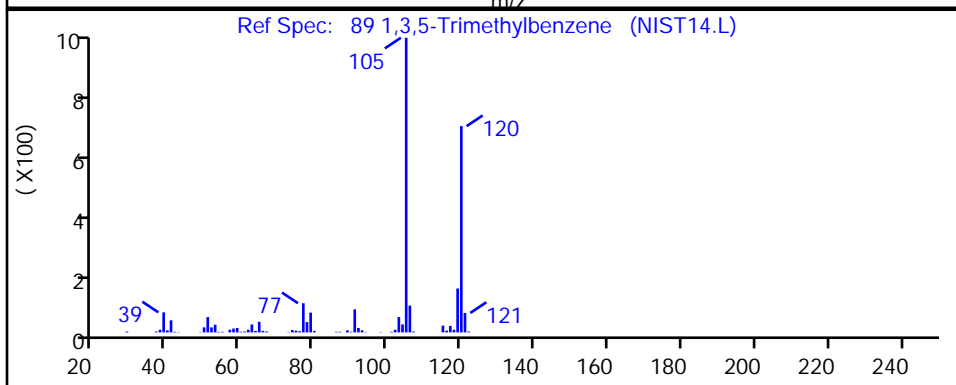
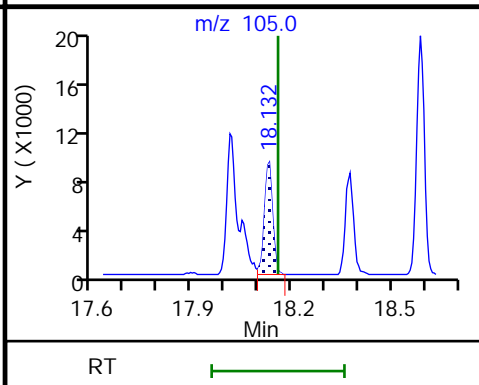
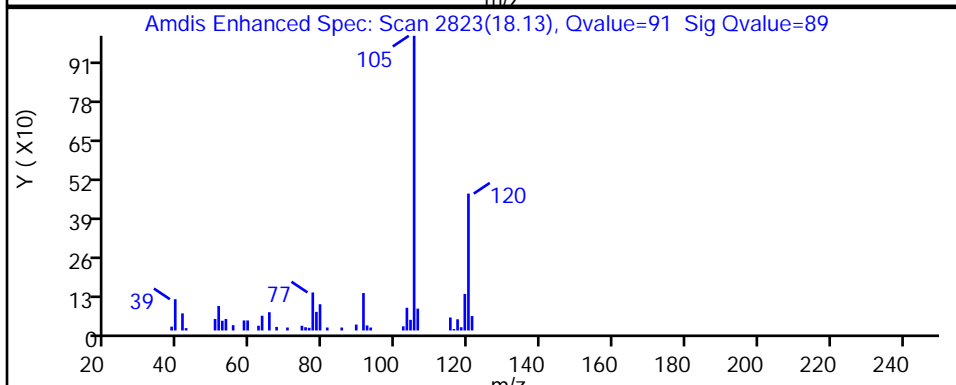
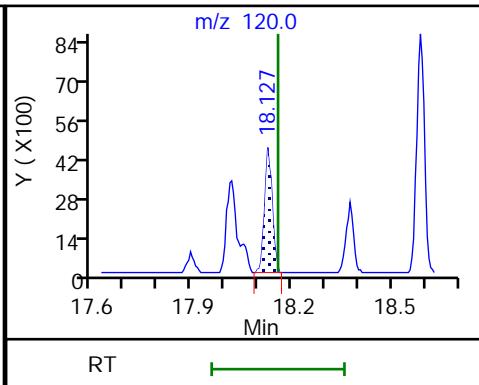
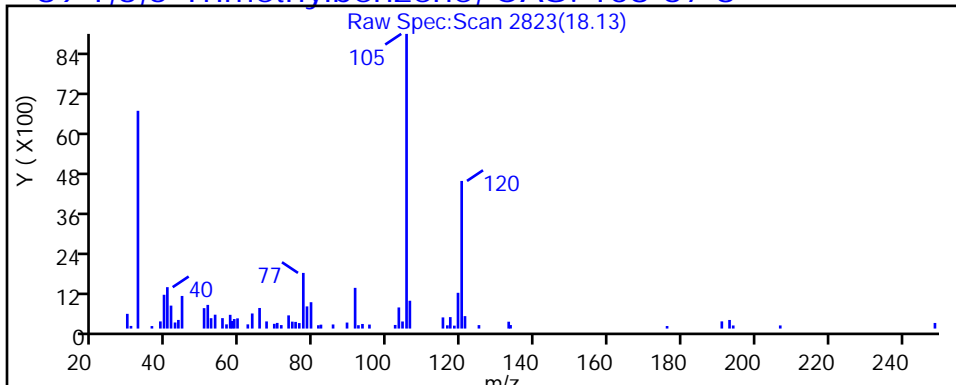
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

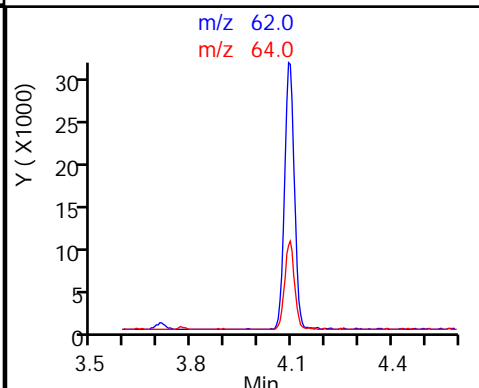
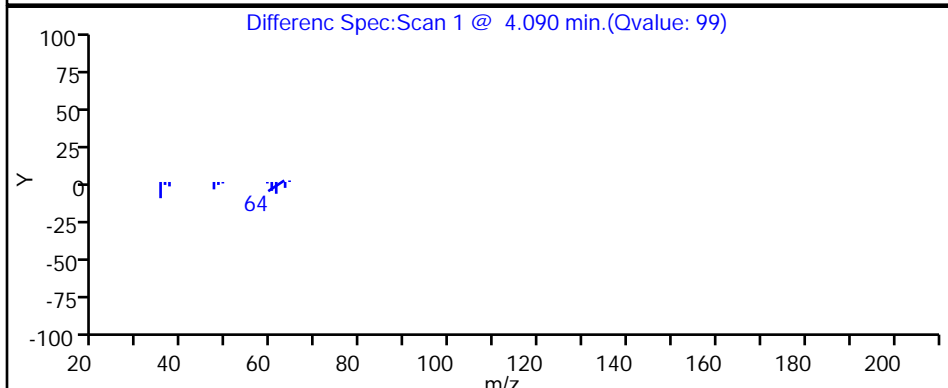
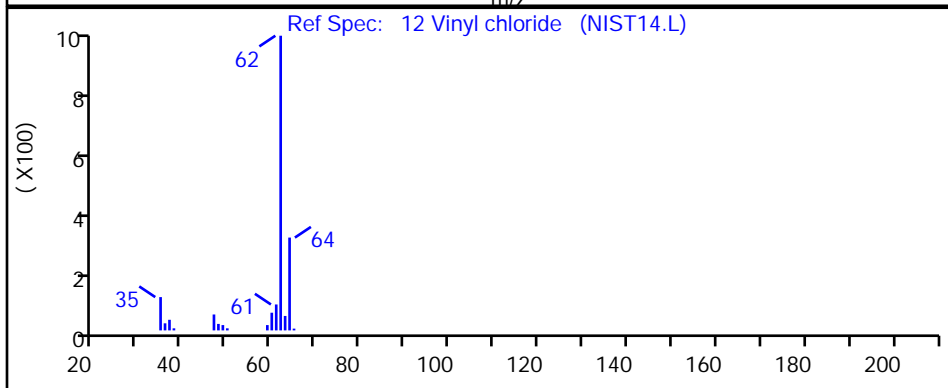
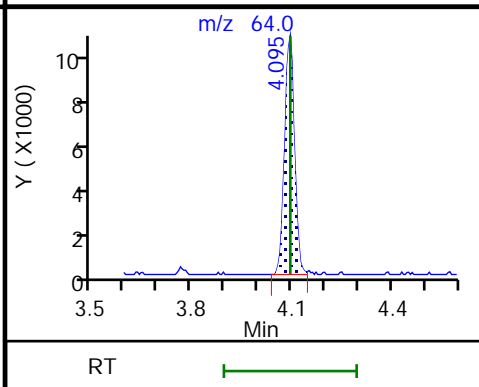
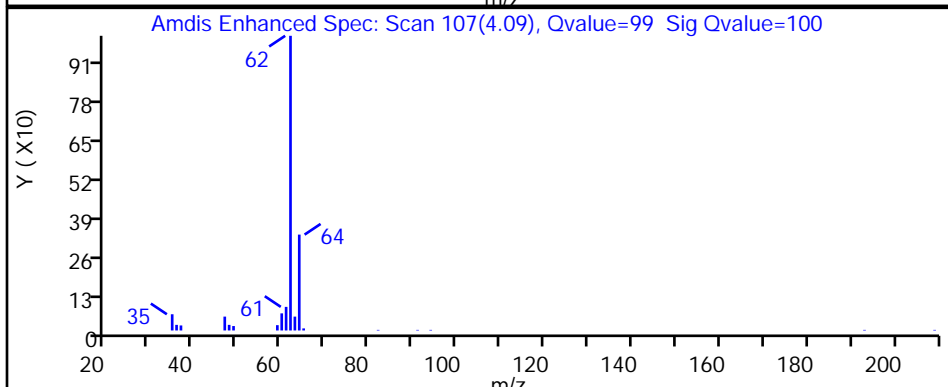
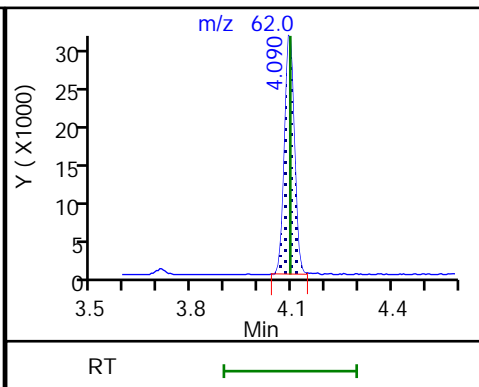
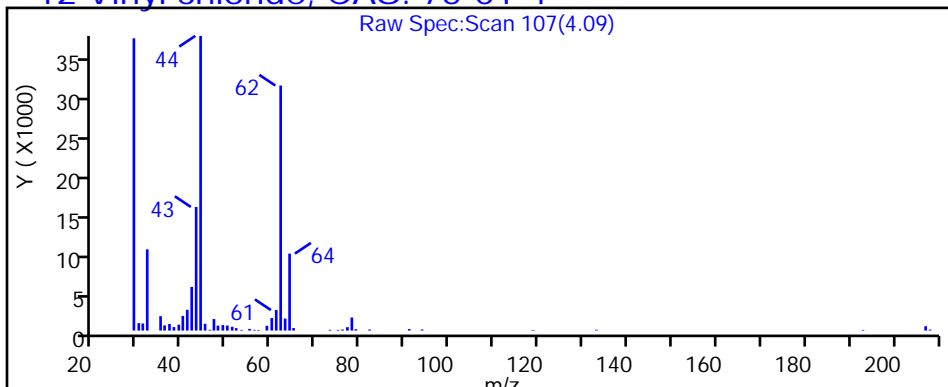
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

12 Vinyl chloride, CAS: 75-01-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

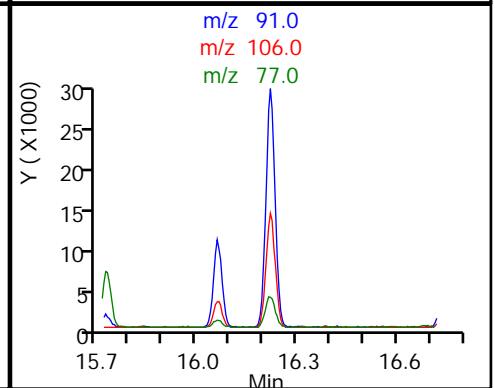
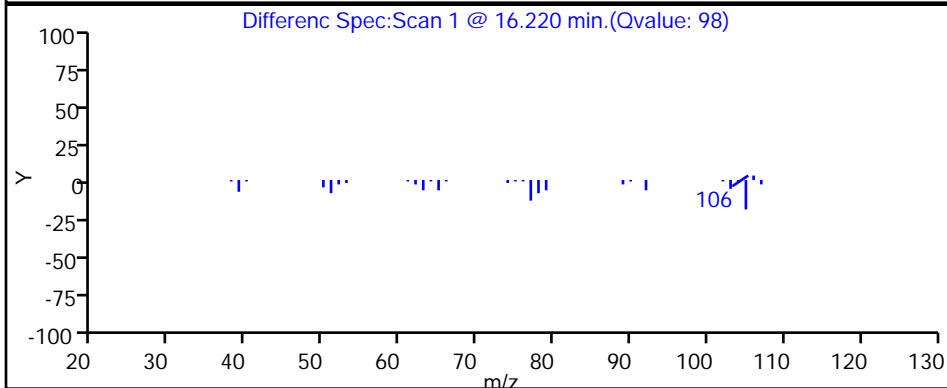
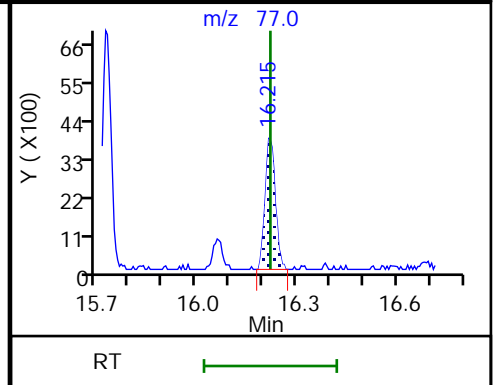
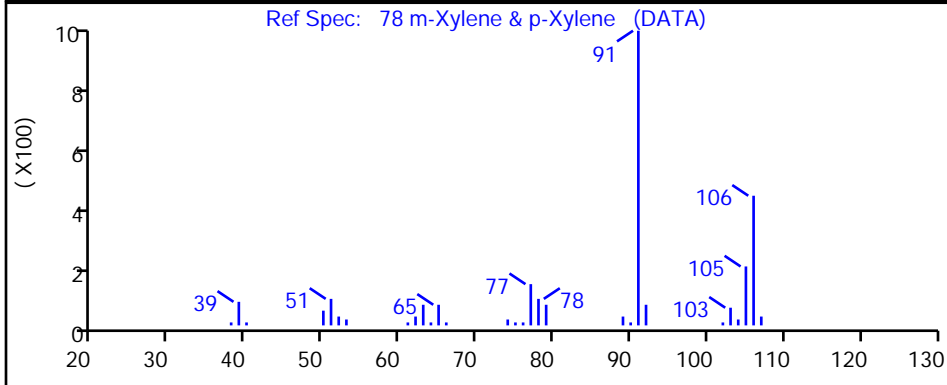
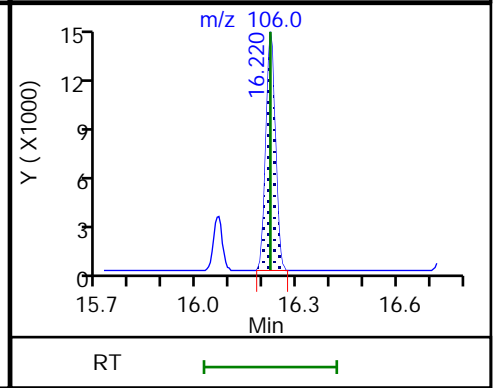
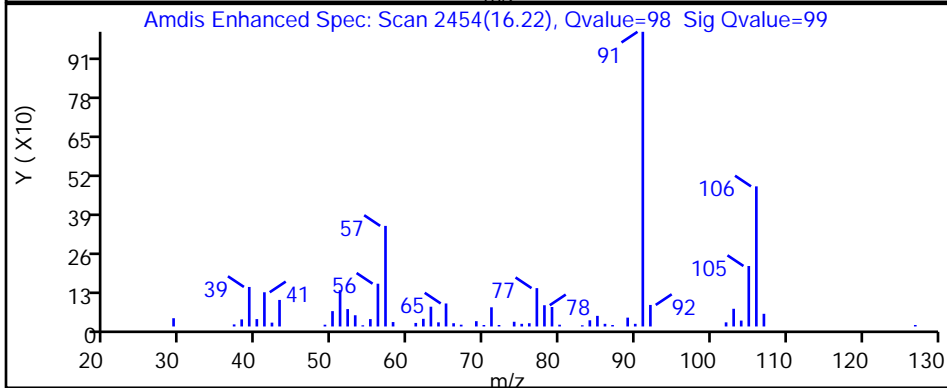
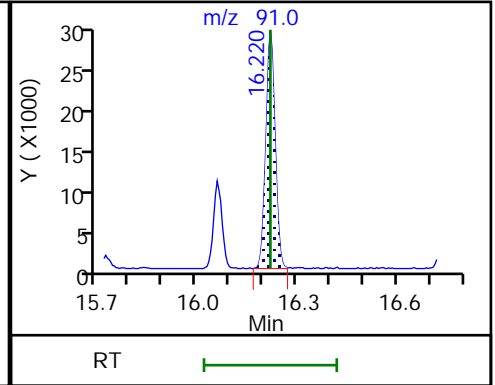
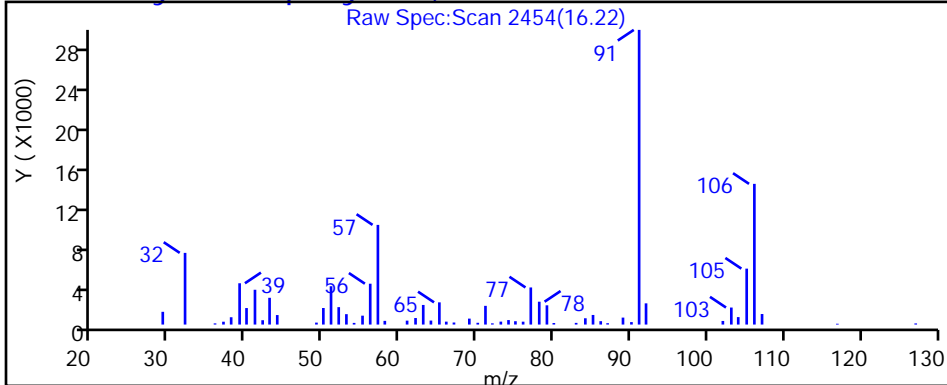
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P102R.D

Injection Date: 27-Feb-2019 06:22:30

Instrument ID: MH

Lims ID: 140-14390-A-2

Lab Sample ID: 140-14390-2

Client ID: SV-101-C-26

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

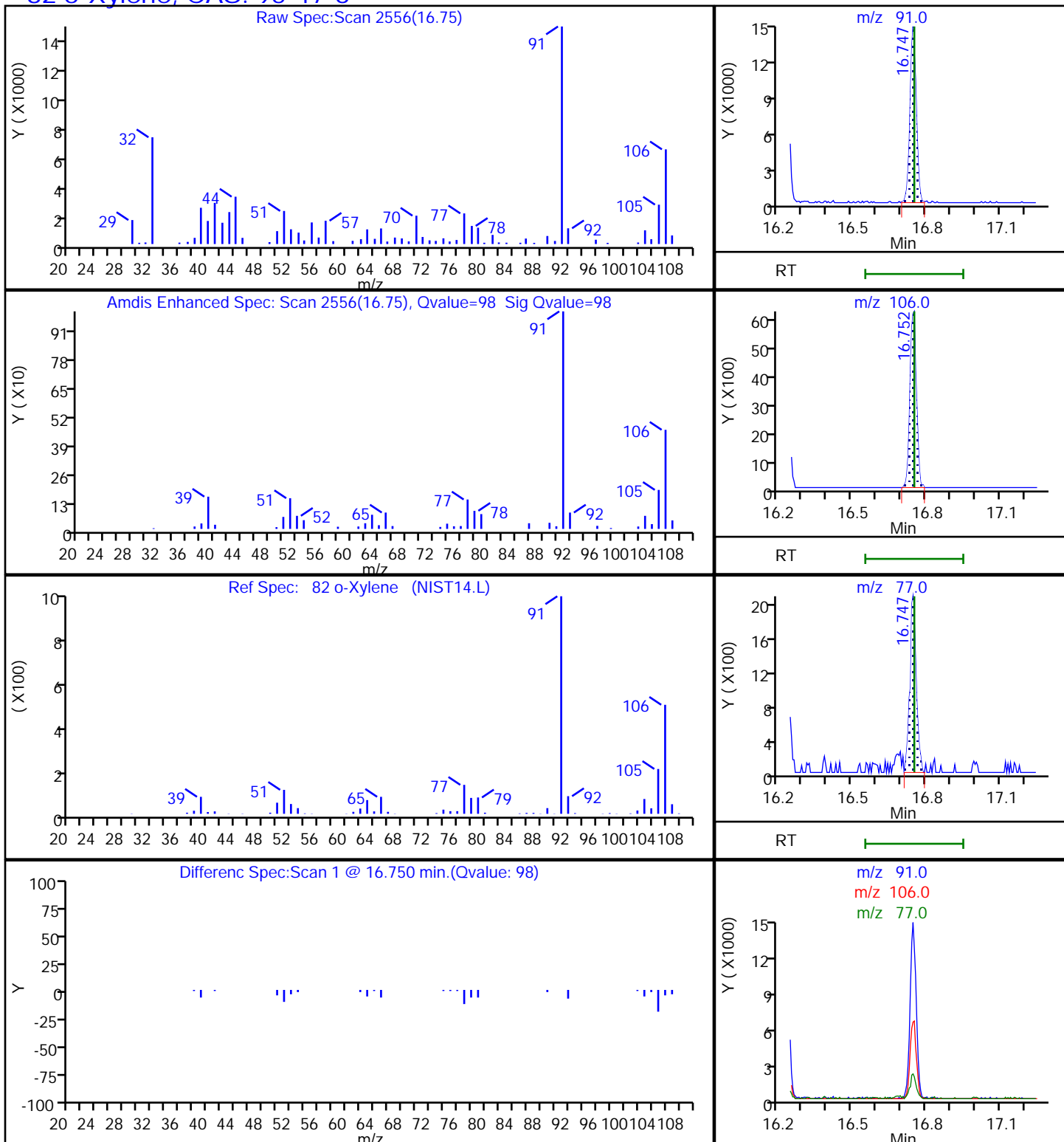
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-100-C-26 Lab Sample ID: 140-14390-3
 Matrix: Air Lab File ID: HB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:43
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.35	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.33	J	0.40	0.075
67-66-3	Chloroform	119.38	0.42		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.83	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.14	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.078	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.15	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-100-C-26 Lab Sample ID: 140-14390-3
 Matrix: Air Lab File ID: HB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:43
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	2.2	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	2.0		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.93	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.43	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.74	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P103.D
 Lims ID: 140-14390-A-3
 Client ID: SV-100-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 15:17:30 ALS Bottle#: 3 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-007
 Misc. Info.: 140-14390-a-3
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:51:45 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:55:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.819	0.005	95	321718	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1742188	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1463732	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	94	932223	3.91	
6 Chlorodifluoromethane	51	3.687	3.682	0.005	95	17663	0.0670	
8 Dichlorodifluoromethane	85	3.744	3.738	0.006	100	35953	0.0887	
31 Methylene Chloride	84	6.281	6.271	0.010	99	21710	0.1650	
43 Chloroform	83	8.840	8.829	0.011	95	23269	0.0832	
45 1,1,1-Trichloroethane	97	9.858	9.858	0.000	94	4162	0.0157	
50 Carbon tetrachloride	117	10.478	10.473	0.005	97	20843	0.0699	
56 Trichloroethene	130	11.713	11.713	0.000	96	40925	0.2354	
73 Tetrachloroethene	129	14.902	14.897	0.005	92	4644	0.0274	
89 1,3,5-Trimethylbenzene	120	18.132	18.158	-0.026	85	756	0.0301	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P103.D

Injection Date: 26-Feb-2019 15:17:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-3

Lab Sample ID: 140-14390-3

Worklist Smp#: 7

Client ID: SV-100-C-26

Purge Vol: 500.000 mL

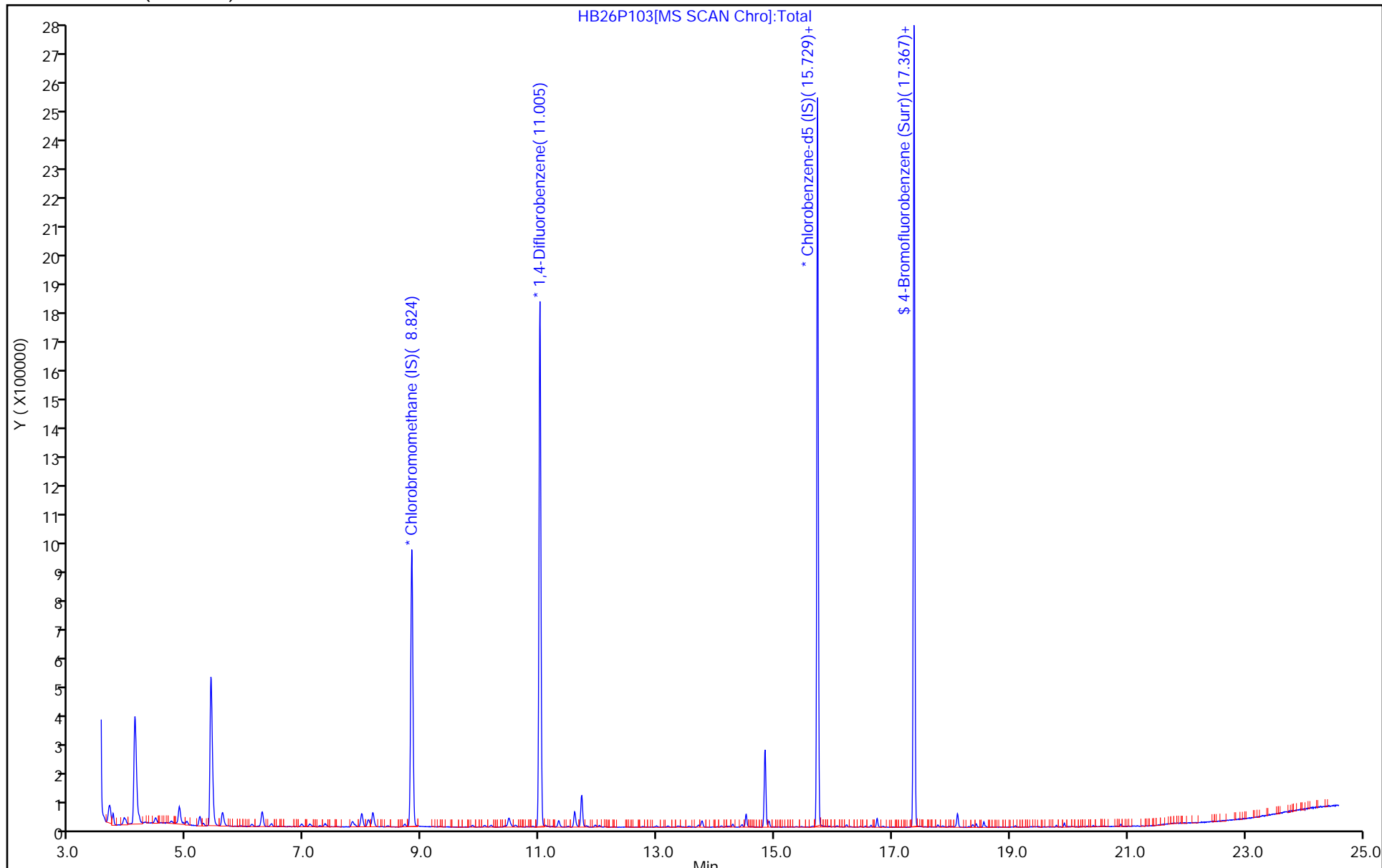
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P103.D
 Lims ID: 140-14390-A-3
 Client ID: SV-100-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 15:17:30 ALS Bottle#: 3 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-007
 Misc. Info.: 140-14390-a-3
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:51:45 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:55:09

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.91	97.71

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P103.D

Injection Date: 26-Feb-2019 15:17:30

Instrument ID: MH

Lims ID: 140-14390-A-3

Lab Sample ID: 140-14390-3

Client ID: SV-100-C-26

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

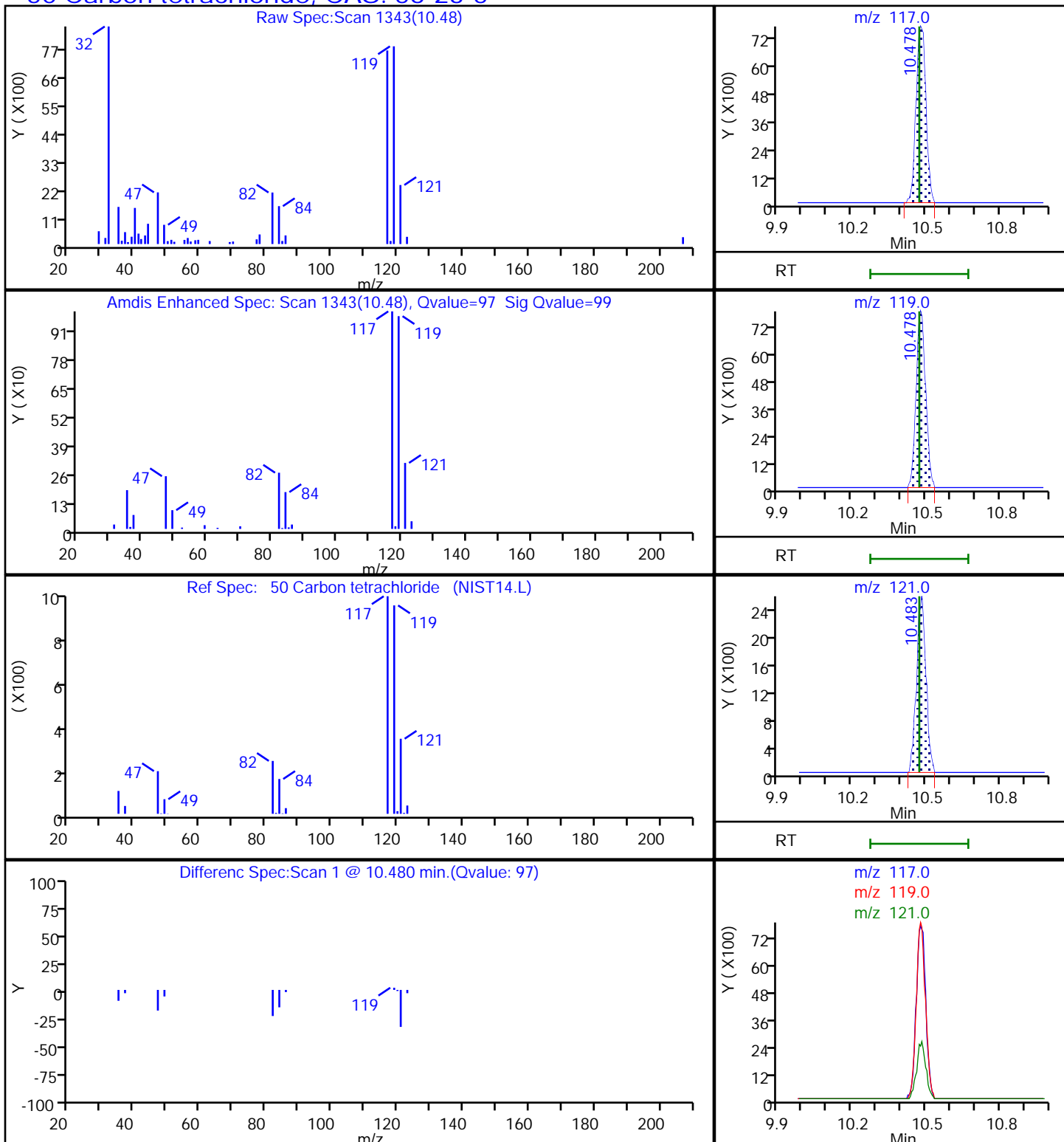
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P103.D

Injection Date: 26-Feb-2019 15:17:30

Instrument ID: MH

Lims ID: 140-14390-A-3

Lab Sample ID: 140-14390-3

Client ID: SV-100-C-26

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

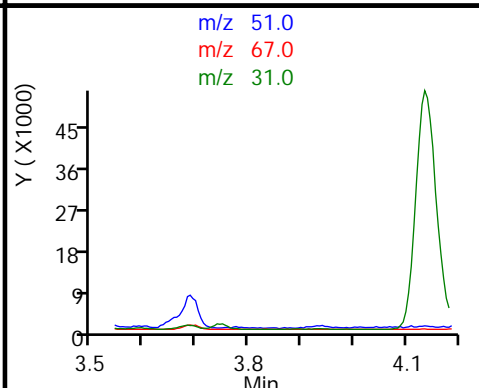
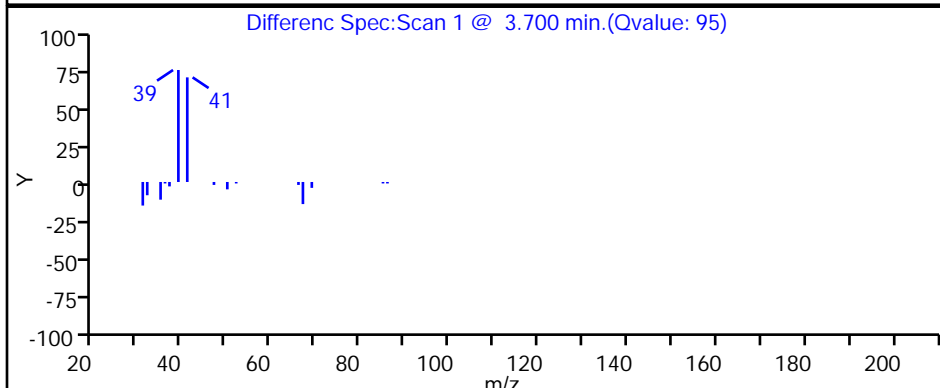
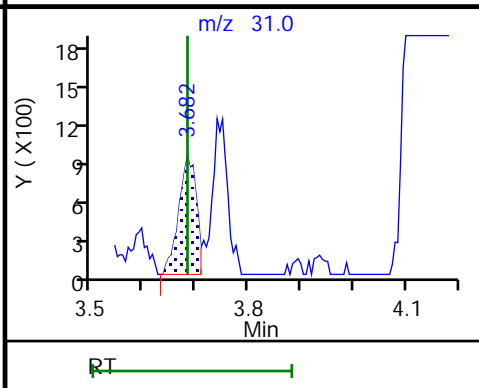
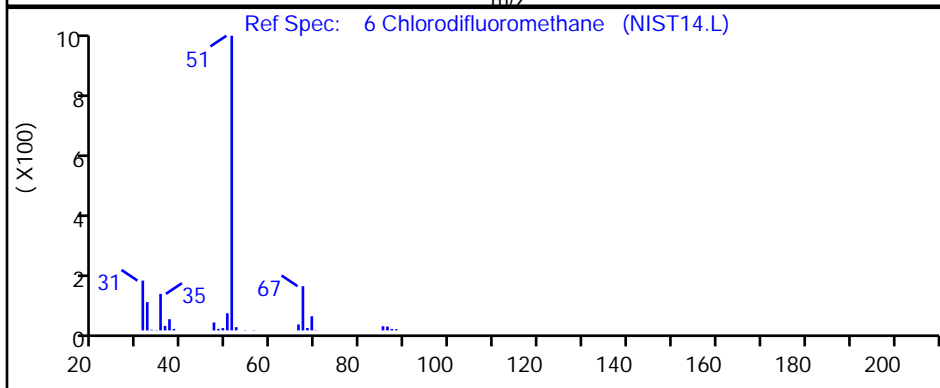
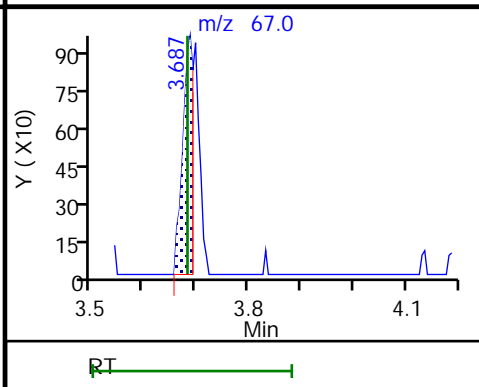
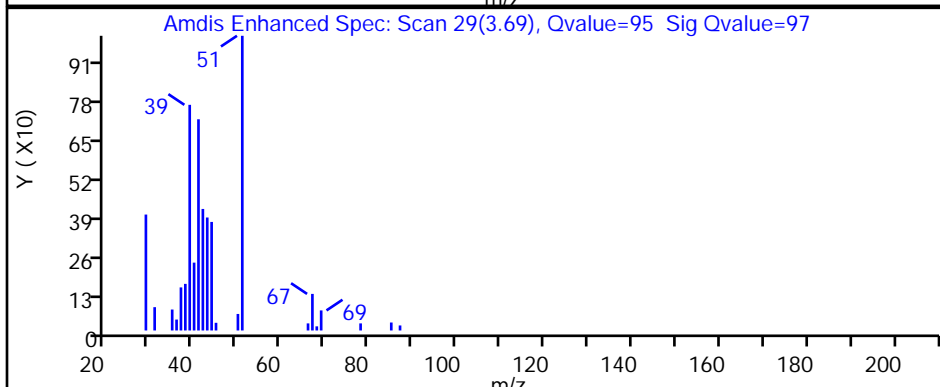
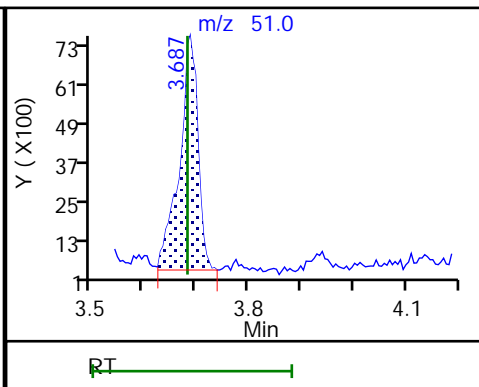
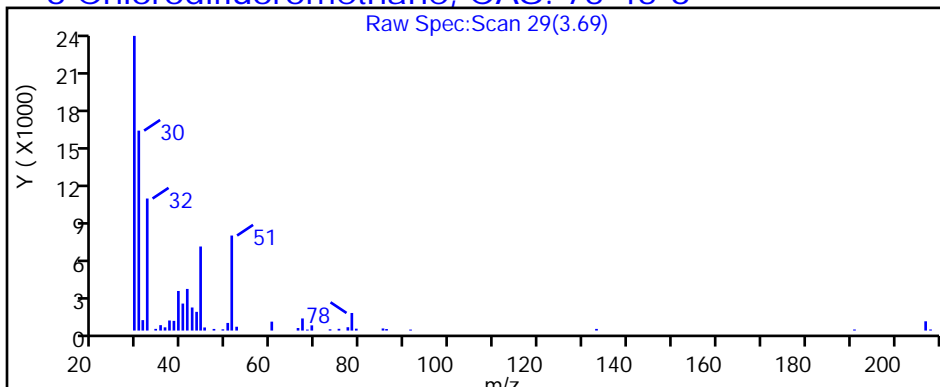
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P103.D

Injection Date: 26-Feb-2019 15:17:30

Instrument ID: MH

Lims ID: 140-14390-A-3

Lab Sample ID: 140-14390-3

Client ID: SV-100-C-26

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

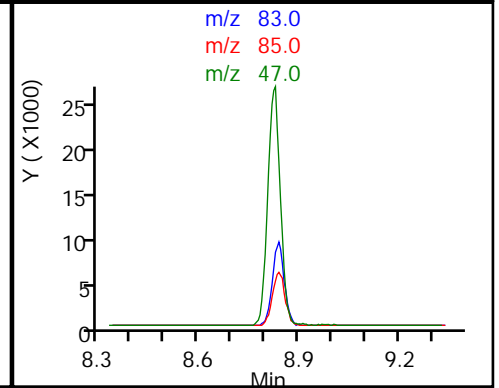
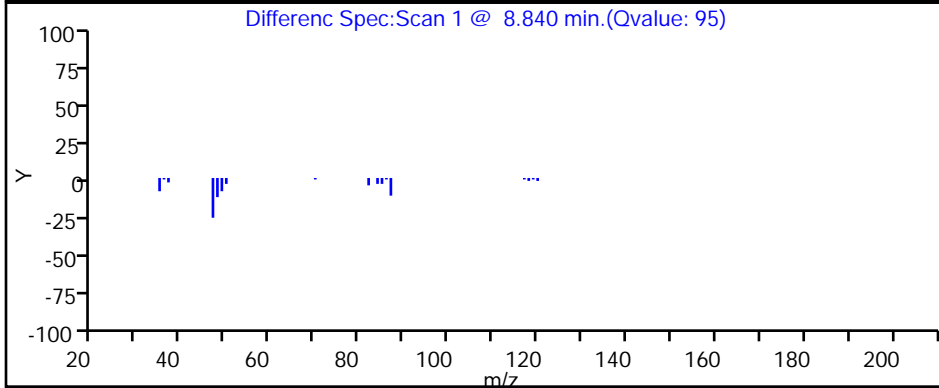
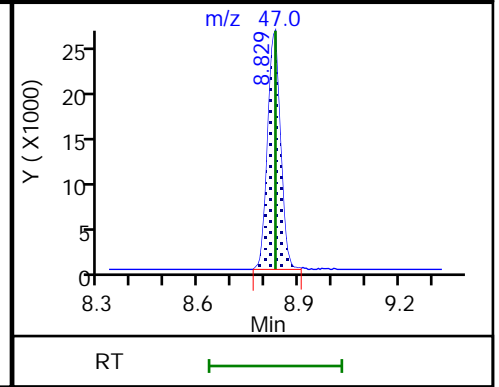
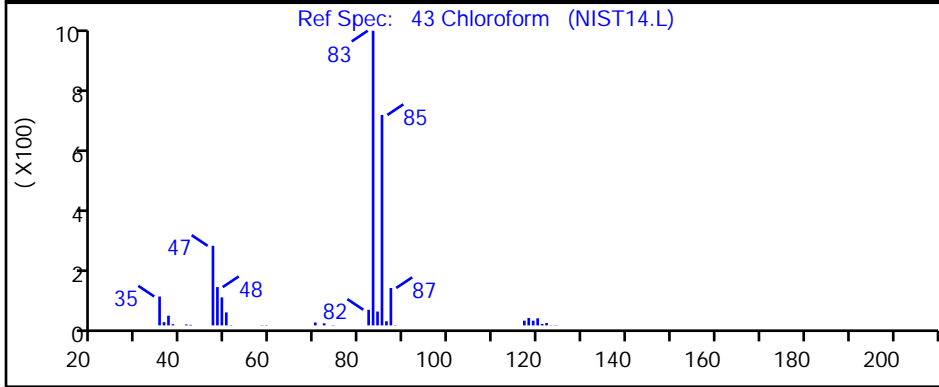
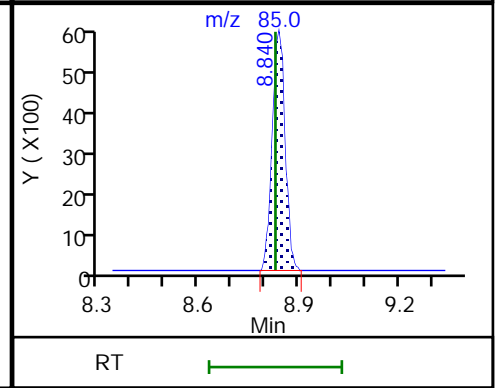
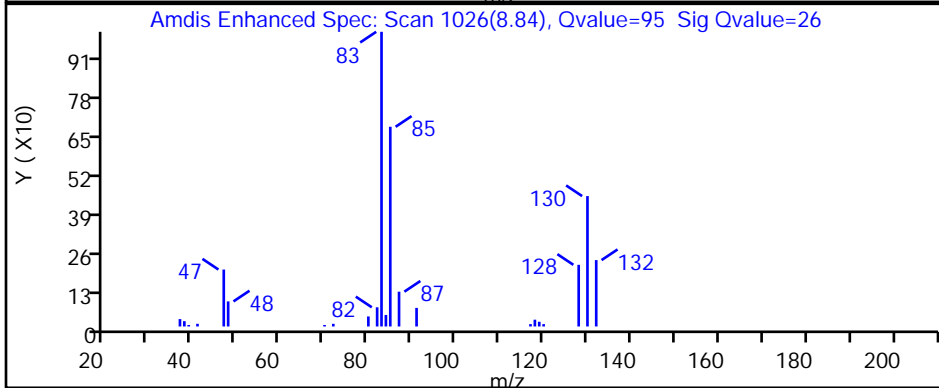
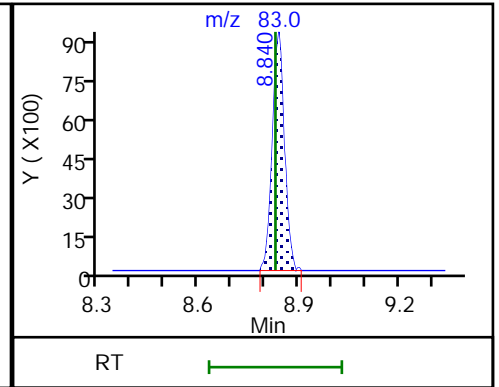
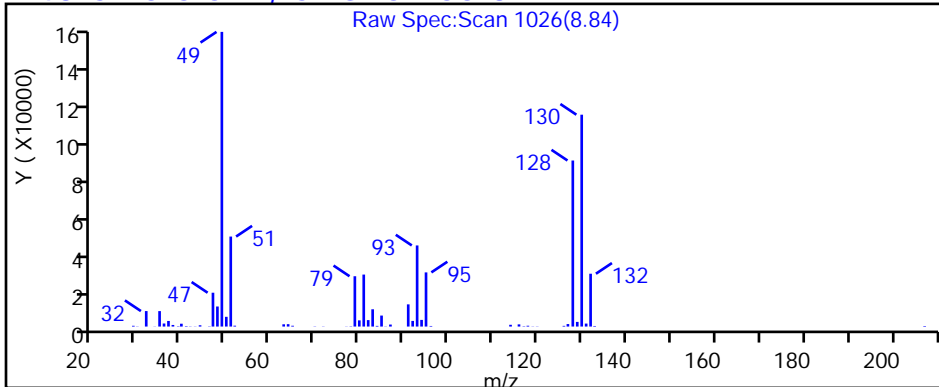
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P103.D

Injection Date: 26-Feb-2019 15:17:30

Instrument ID: MH

Lims ID: 140-14390-A-3

Lab Sample ID: 140-14390-3

Client ID: SV-100-C-26

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

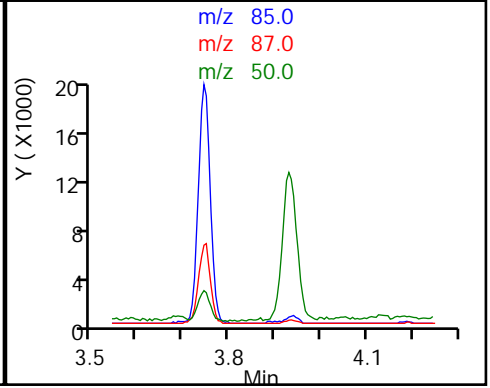
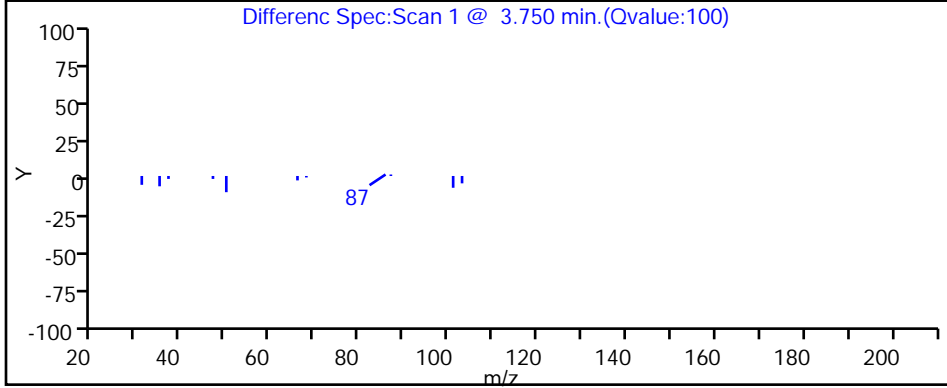
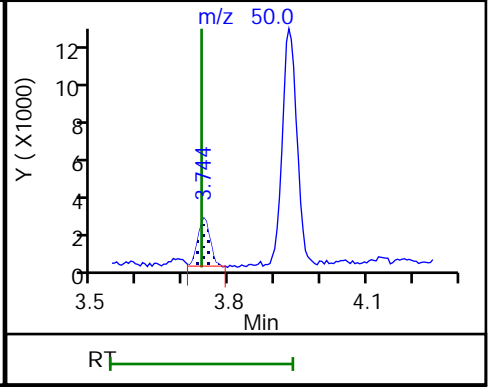
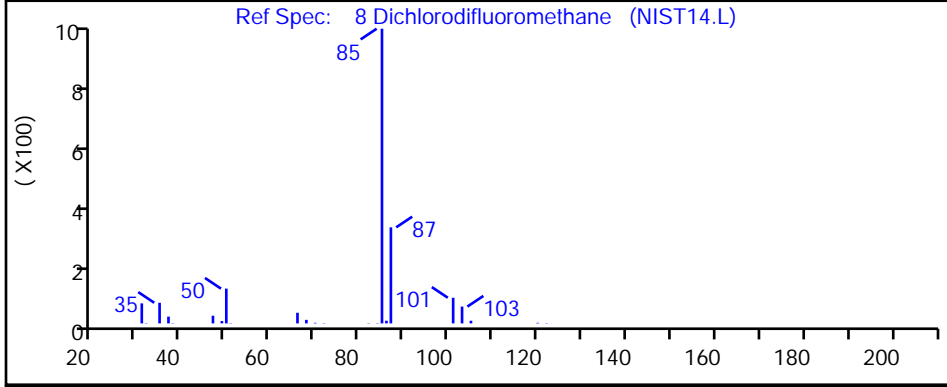
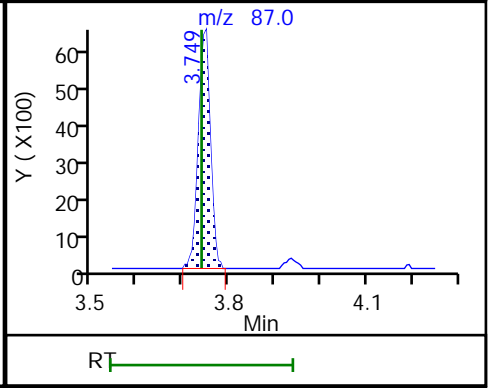
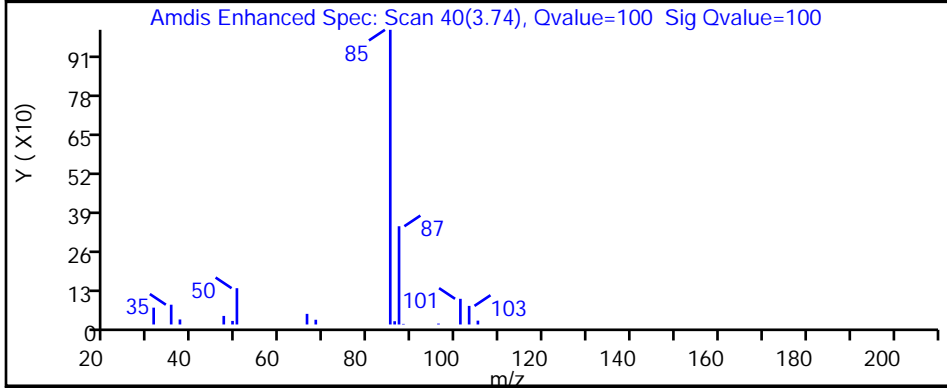
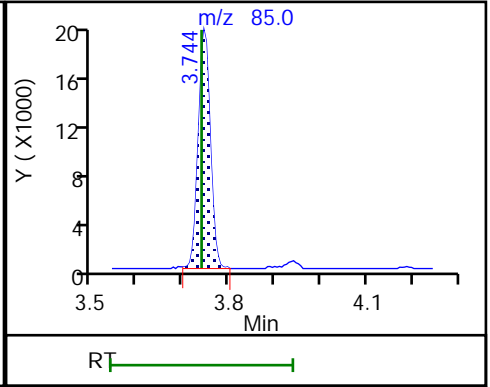
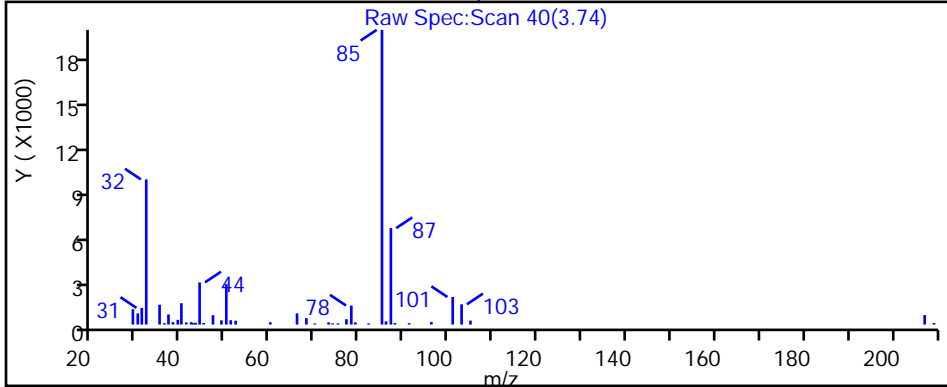
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P103.D

Injection Date: 26-Feb-2019 15:17:30

Instrument ID: MH

Lims ID: 140-14390-A-3

Lab Sample ID: 140-14390-3

Client ID: SV-100-C-26

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

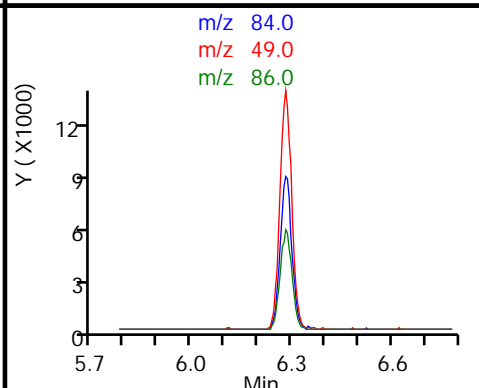
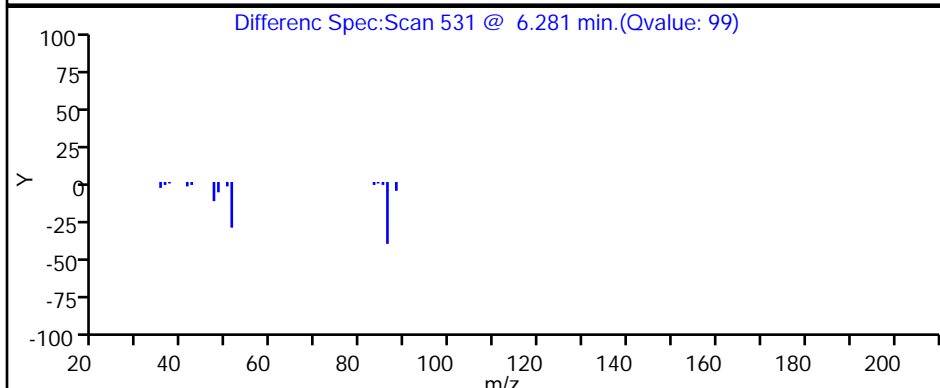
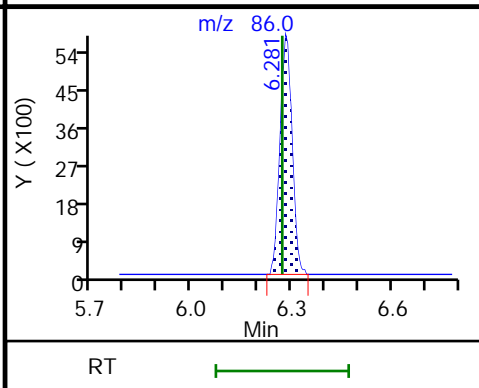
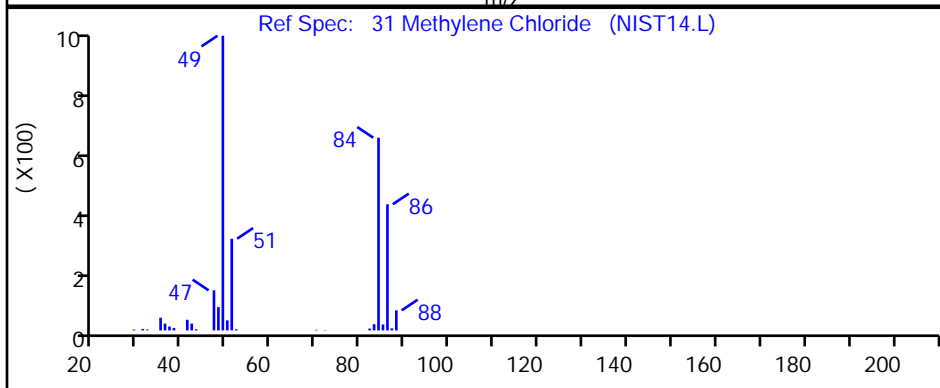
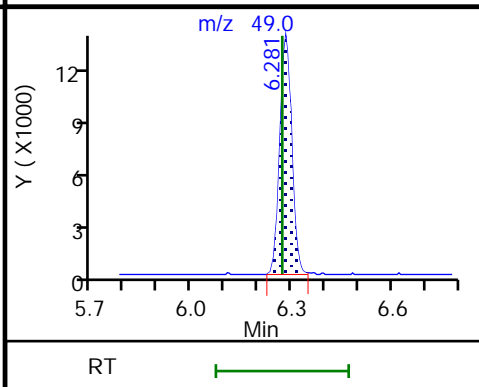
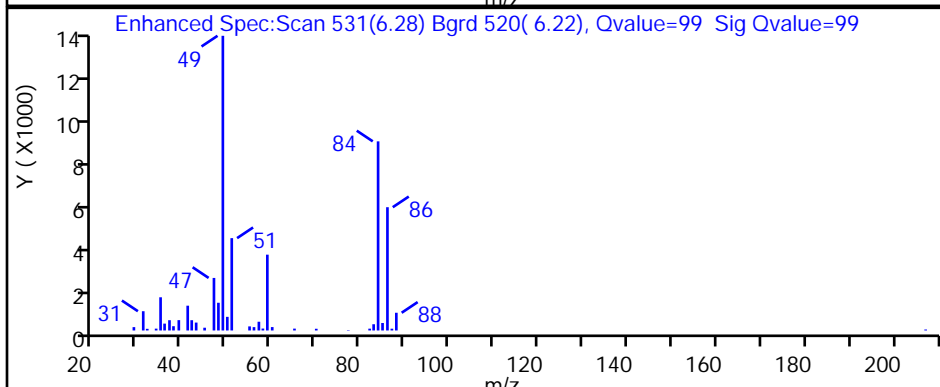
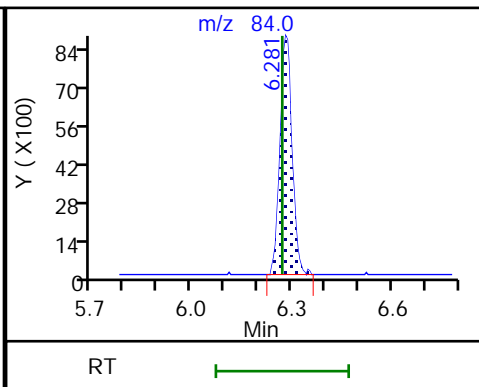
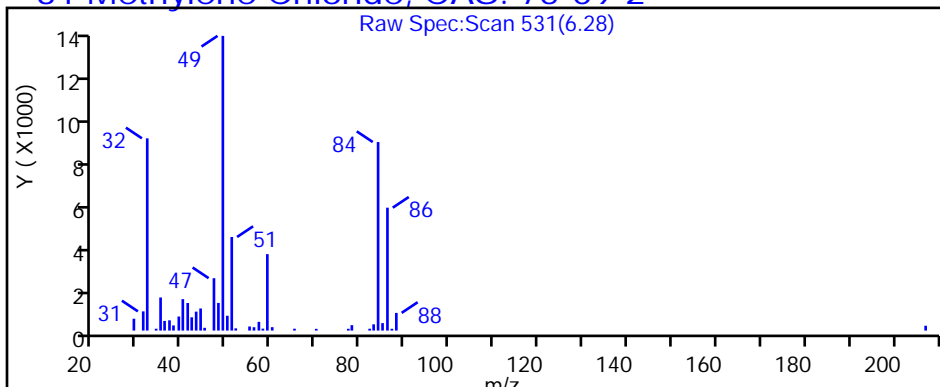
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P103.D

Injection Date: 26-Feb-2019 15:17:30

Instrument ID: MH

Lims ID: 140-14390-A-3

Lab Sample ID: 140-14390-3

Client ID: SV-100-C-26

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

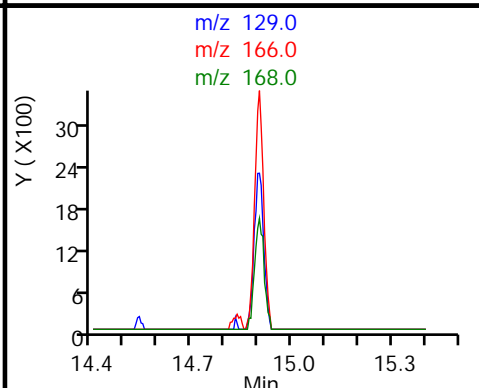
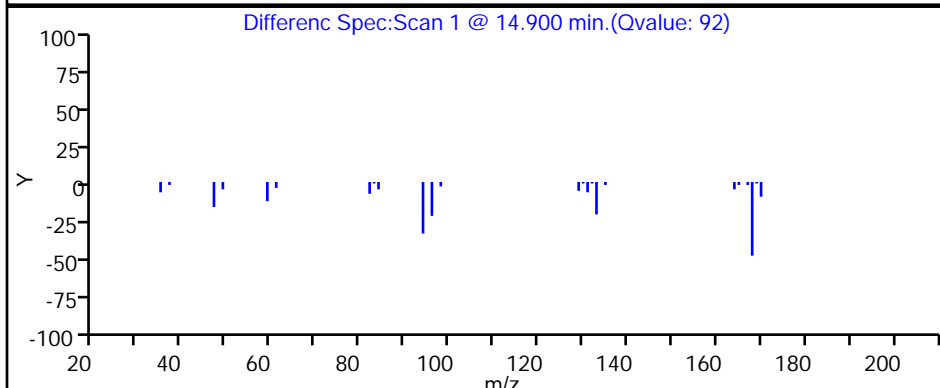
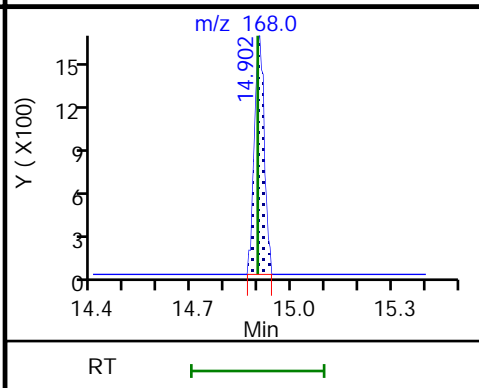
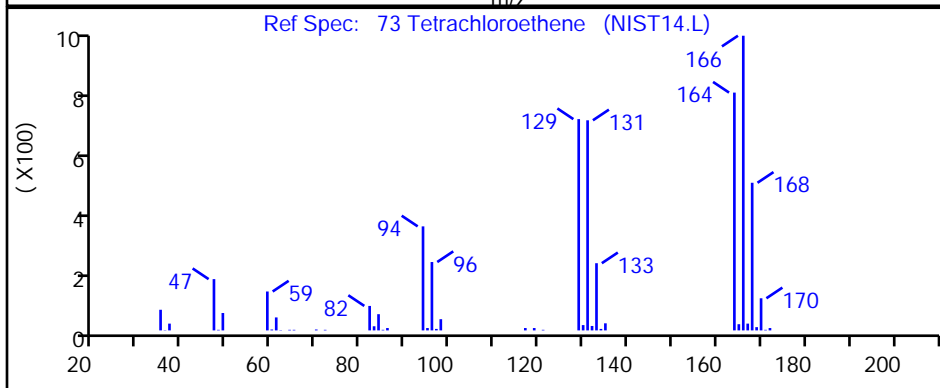
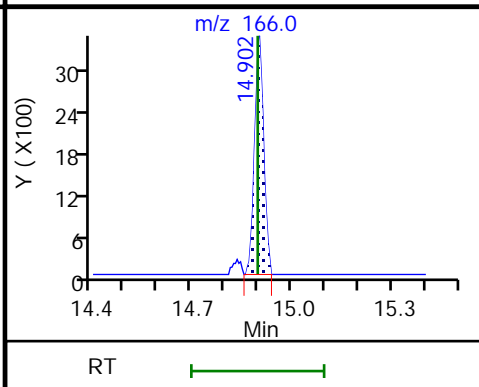
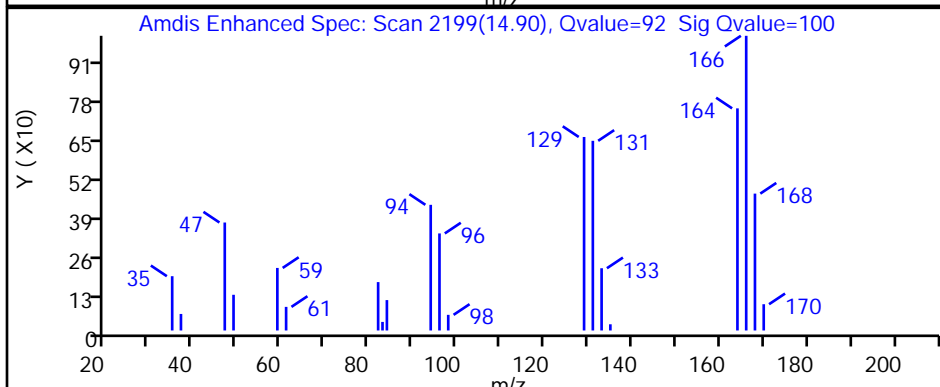
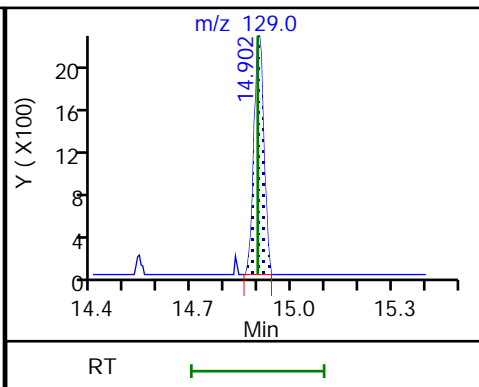
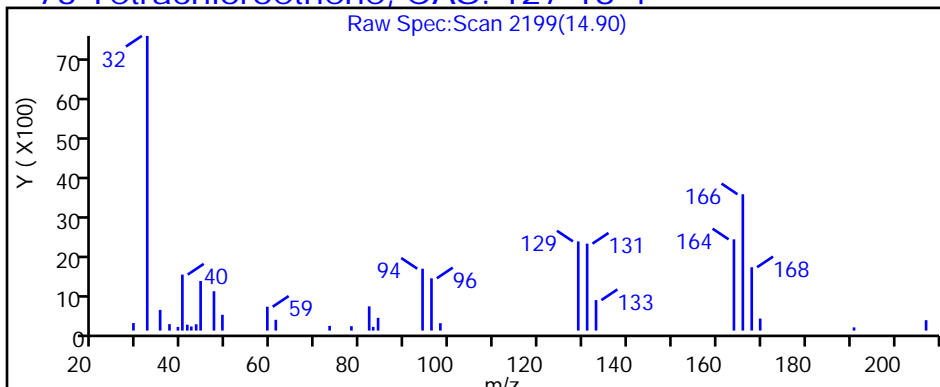
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P103.D

Injection Date: 26-Feb-2019 15:17:30

Instrument ID: MH

Lims ID: 140-14390-A-3

Lab Sample ID: 140-14390-3

Client ID: SV-100-C-26

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

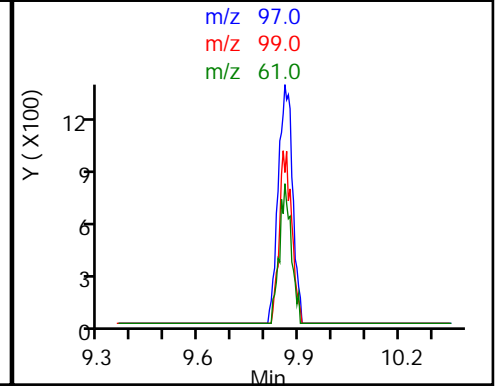
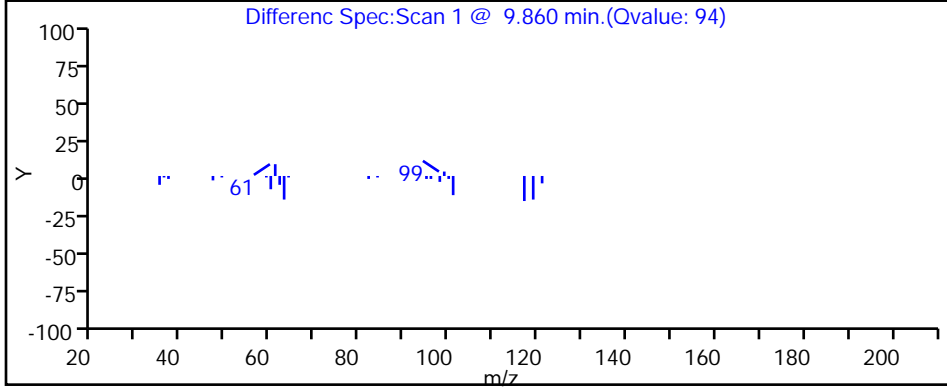
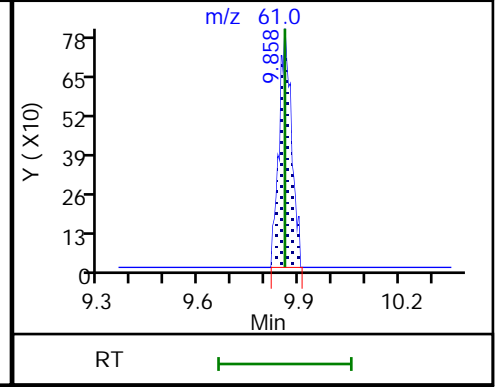
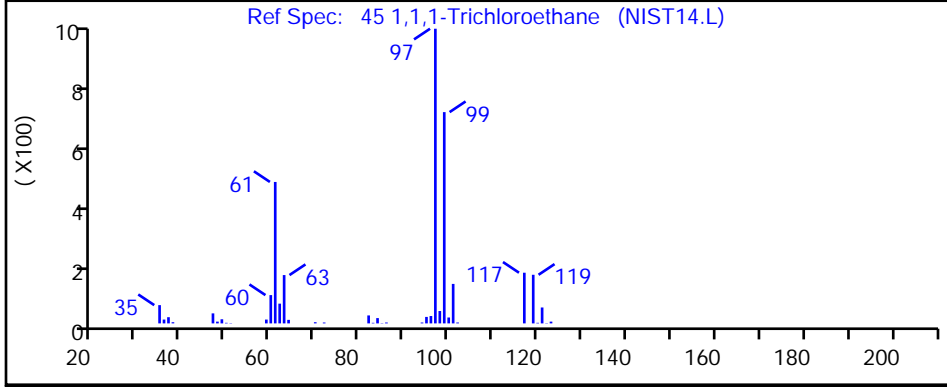
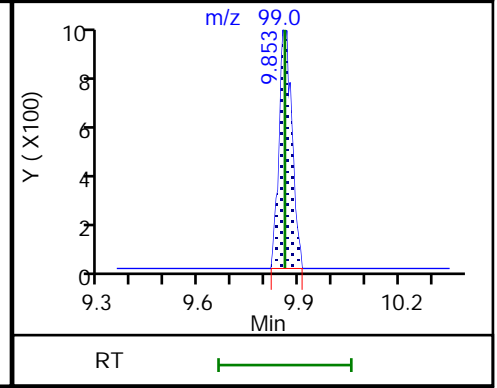
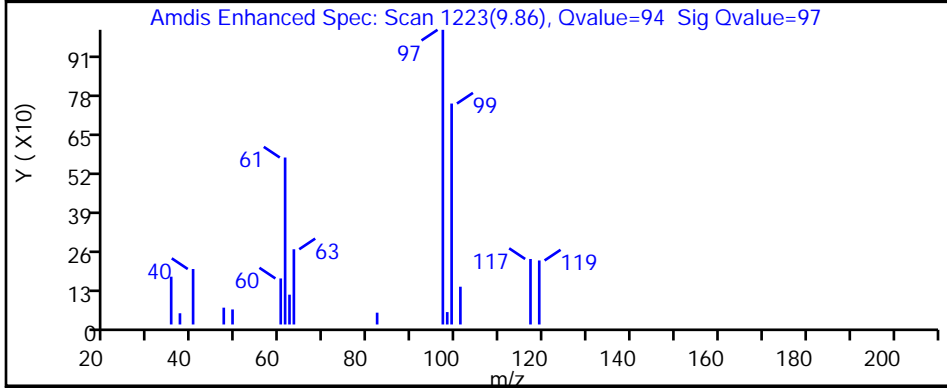
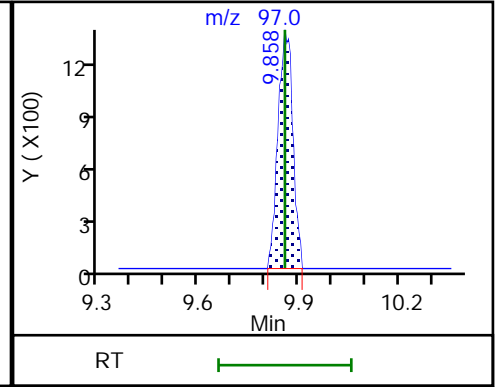
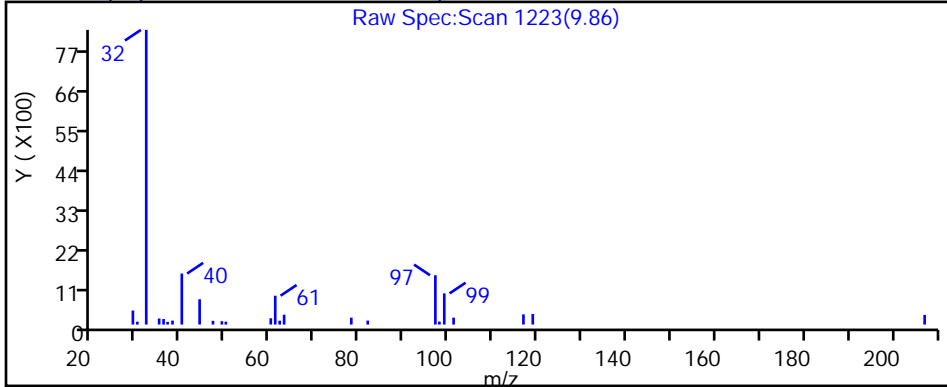
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P103.D

Injection Date: 26-Feb-2019 15:17:30

Instrument ID: MH

Lims ID: 140-14390-A-3

Lab Sample ID: 140-14390-3

Client ID: SV-100-C-26

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

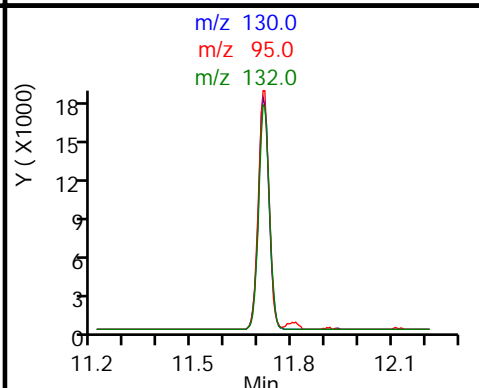
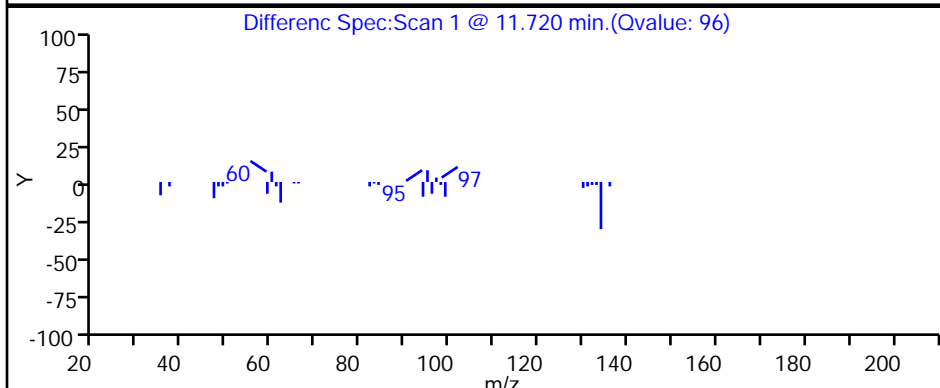
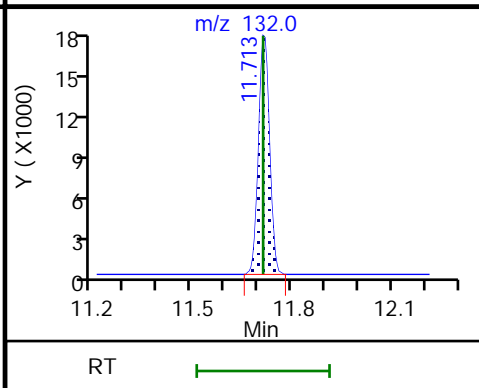
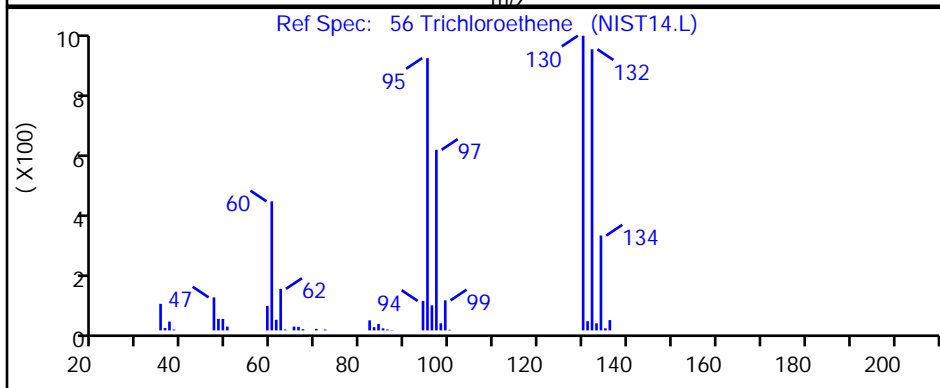
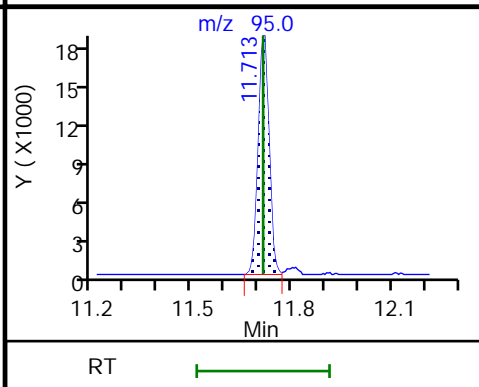
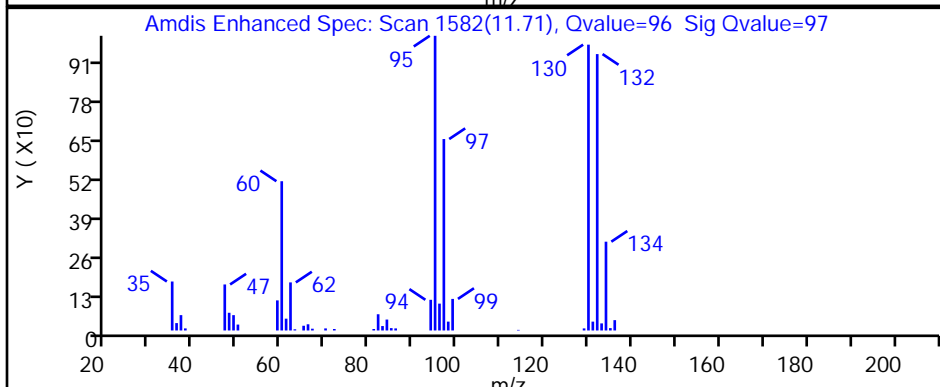
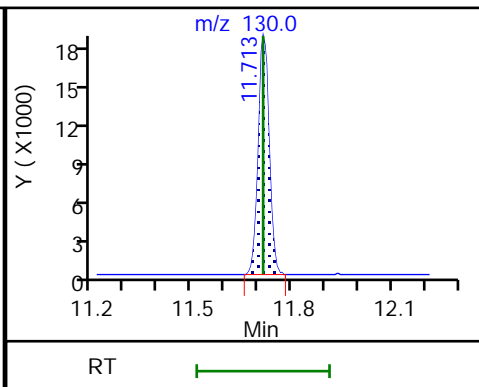
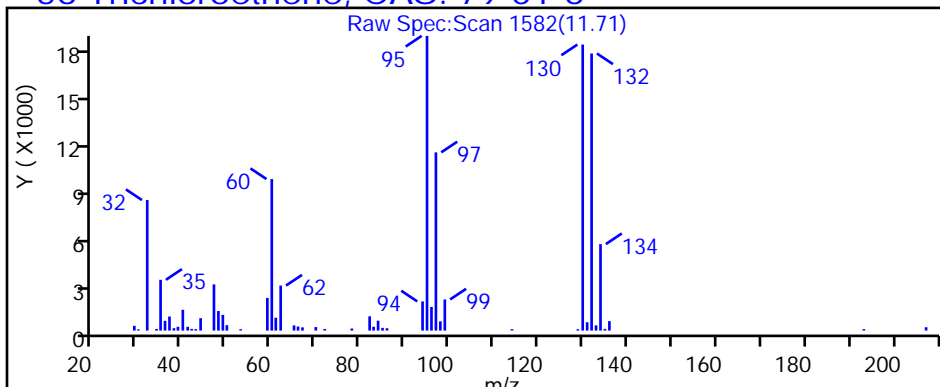
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P103.D

Injection Date: 26-Feb-2019 15:17:30

Instrument ID: MH

Lims ID: 140-14390-A-3

Lab Sample ID: 140-14390-3

Client ID: SV-100-C-26

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

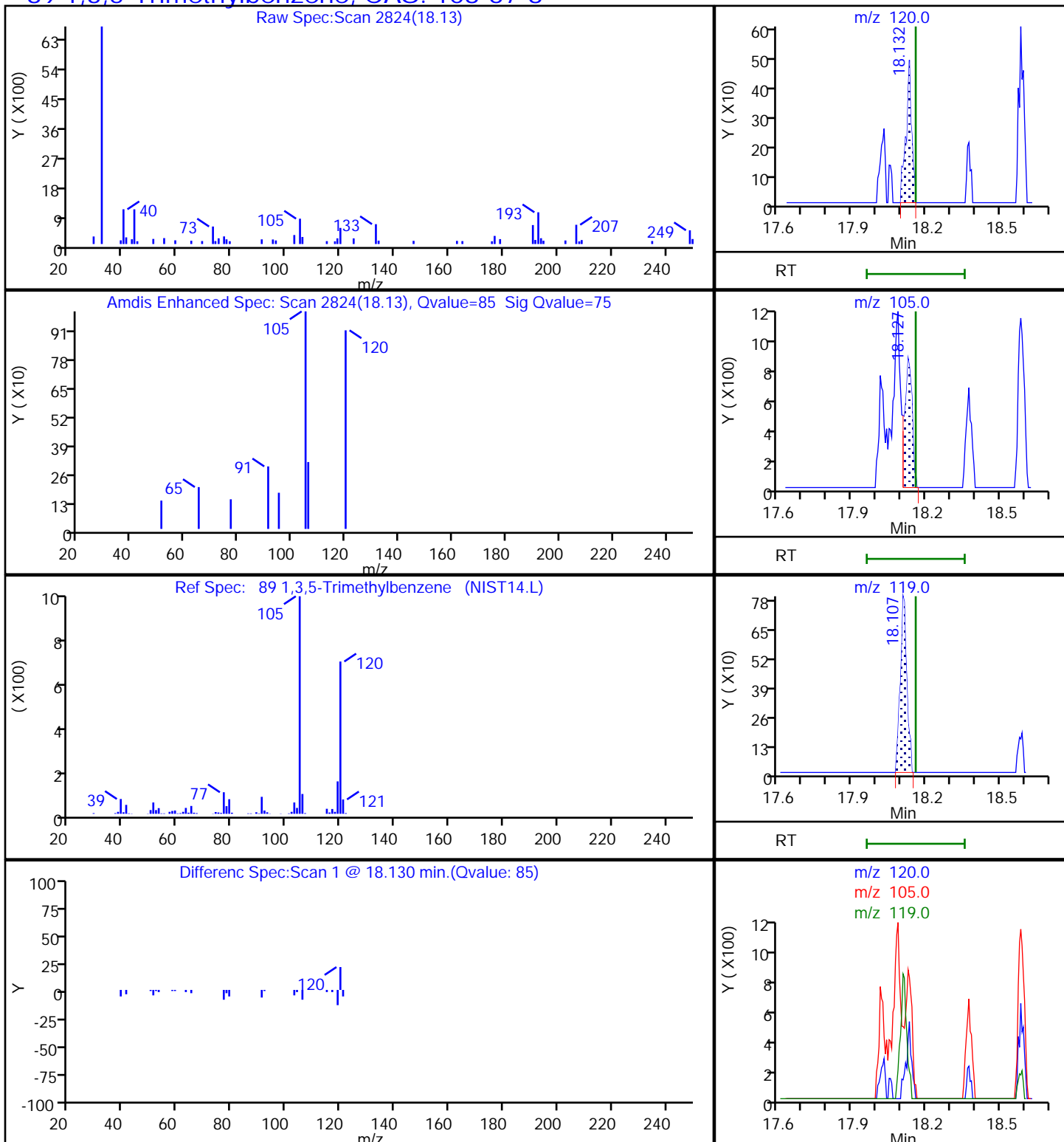
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-060-C-26 Lab Sample ID: 140-14390-4
 Matrix: Air Lab File ID: HB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6		0.40	0.075
67-66-3	Chloroform	119.38	2.2		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	4.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	4.6		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	1.3		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.1		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.96	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.11	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.26	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	6.1		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	120	E	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.19	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	11		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-060-C-26 Lab Sample ID: 140-14390-4
 Matrix: Air Lab File ID: HB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.62	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.5		1.4	0.27
67-66-3	Chloroform	119.38	11		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	16		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	18		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	5.1		1.6	0.28
100-41-4	Ethylbenzene	106.17	4.9		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.72	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.0	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	33		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	670	E	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.93	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	46		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D
 Lims ID: 140-14390-A-4
 Client ID: SV-060-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 16:10:30 ALS Bottle#: 4 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-008
 Misc. Info.: 140-14390-a-4
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:57:07 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:57:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.819	0.000	97	306344	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1657033	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1388582	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	94	884667	3.91	
6 Chlorodifluoromethane	51	3.681	3.681	-0.001	96	78547	0.3127	M
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	34813	0.0902	
27 1,1-Dichloroethene	96	5.924	5.919	0.005	96	30508	0.2564	
31 Methylene Chloride	84	6.276	6.271	0.005	98	23930	0.1910	
34 trans-1,2-Dichloroethene	96	7.082	7.077	0.005	95	6303	0.0517	
37 1,1-Dichloroethane	63	7.506	7.501	0.005	99	211980	0.9133	
41 cis-1,2-Dichloroethene	96	8.493	8.483	0.010	96	101454	0.8204	
43 Chloroform	83	8.834	8.829	0.005	98	115403	0.4336	
45 1,1,1-Trichloroethane	97	9.858	9.858	0.000	98	307016	1.21	
47 Benzene	78	10.457	10.457	0.000	98	13497	0.0385	
56 Trichloroethene	130	11.718	11.713	0.005	98	4117582	24.9	E
65 Toluene	91	13.765	13.760	0.005	92	23182	0.0586	
73 Tetrachloroethene	129	14.907	14.897	0.010	93	3436	0.0213	
76 Ethylbenzene	91	16.060	16.060	0.000	99	114537	0.2276	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	571975	1.47	
82 o-Xylene	91	16.747	16.752	-0.005	98	264386	0.6690	
89 1,3,5-Trimethylbenzene	120	18.132	18.158	-0.026	91	2509	0.0377	
S 121 Xylenes, Total	100				0		2.14	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Worklist Smp#: 8

Client ID: SV-060-C-26

Purge Vol: 500.000 mL

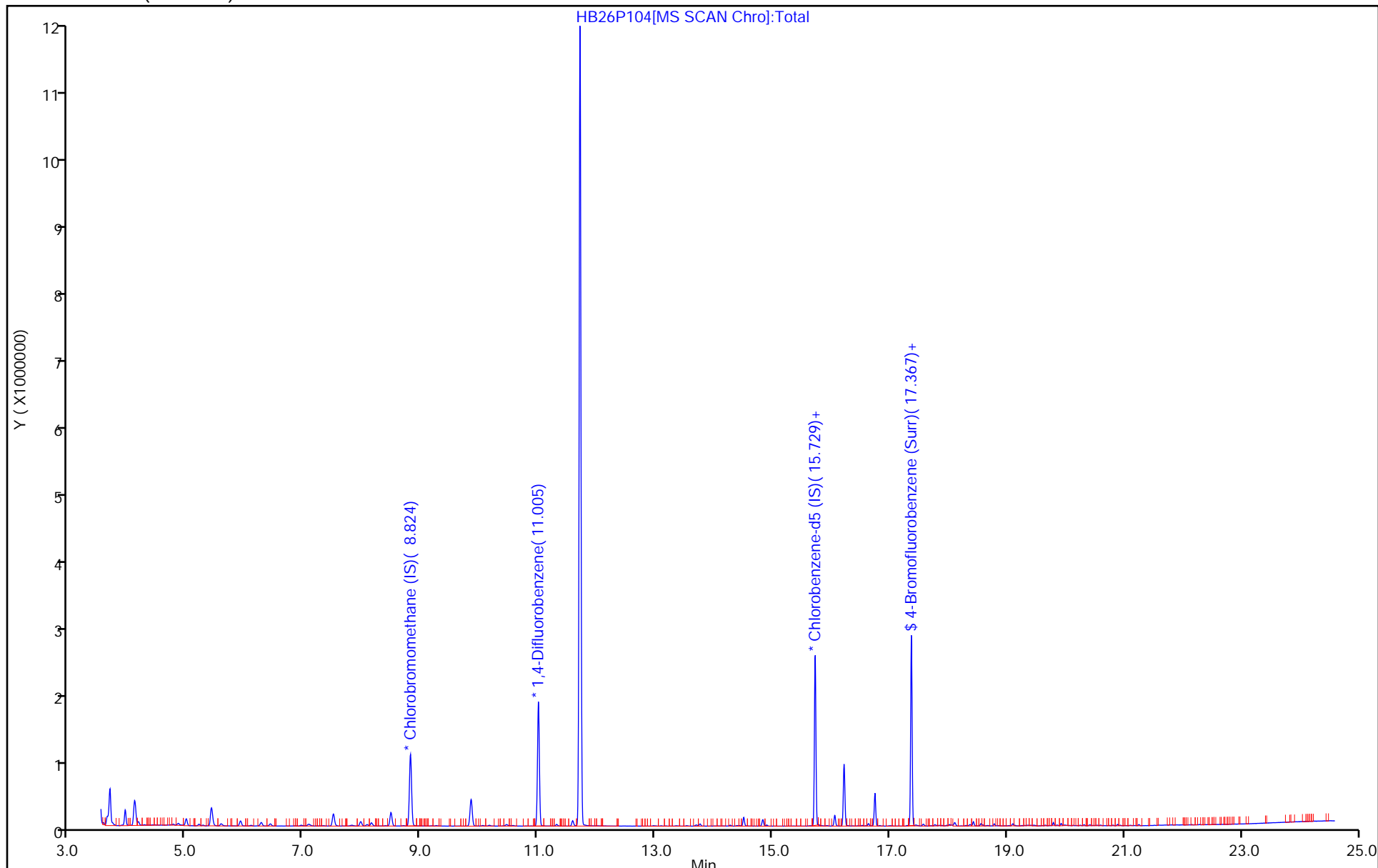
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D
 Lims ID: 140-14390-A-4
 Client ID: SV-060-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 16:10:30 ALS Bottle#: 4 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-008
 Misc. Info.: 140-14390-a-4
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:57:07 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:57:07

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.91	97.74

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

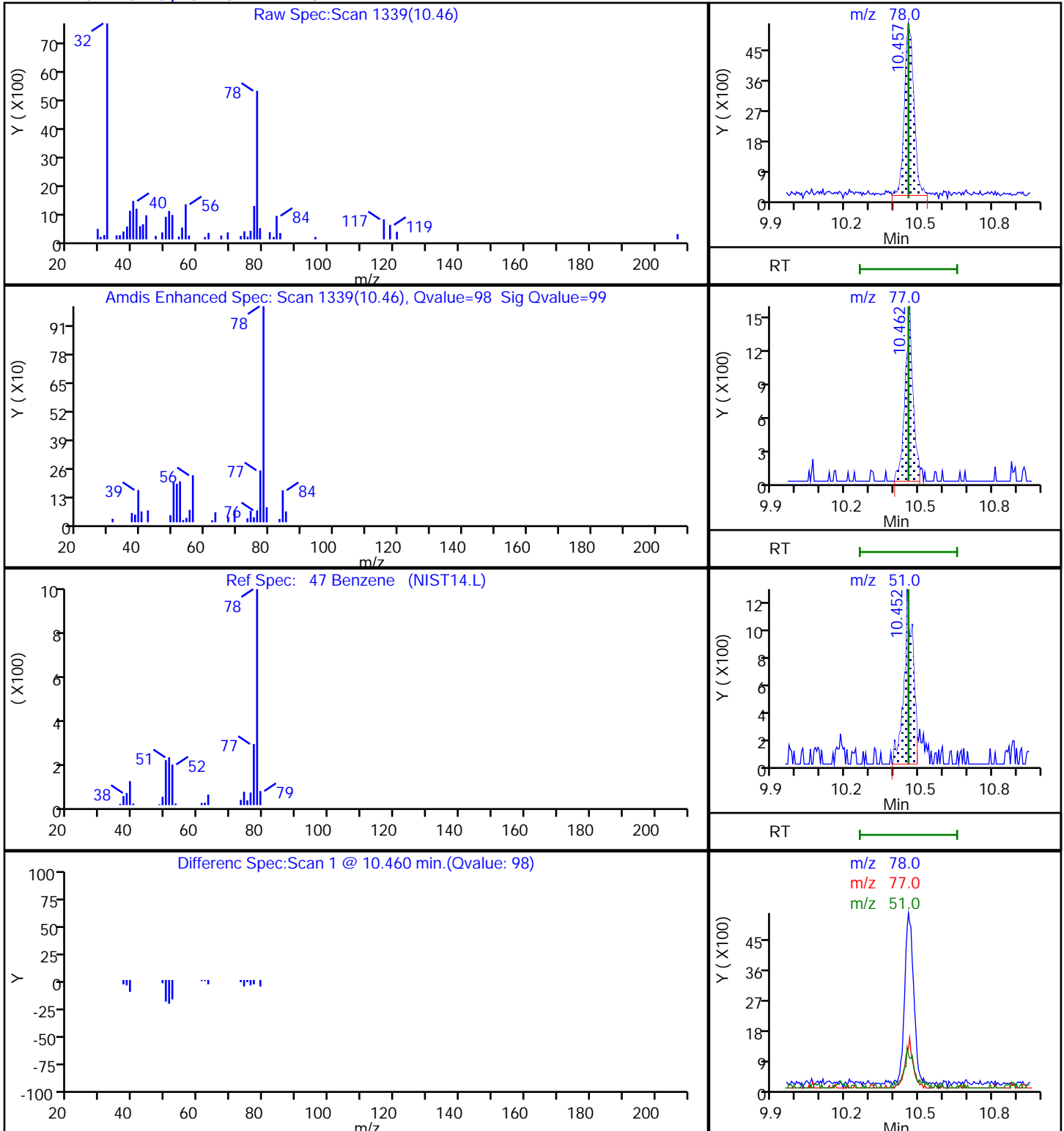
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

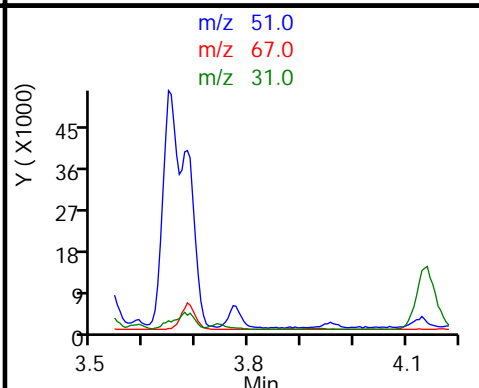
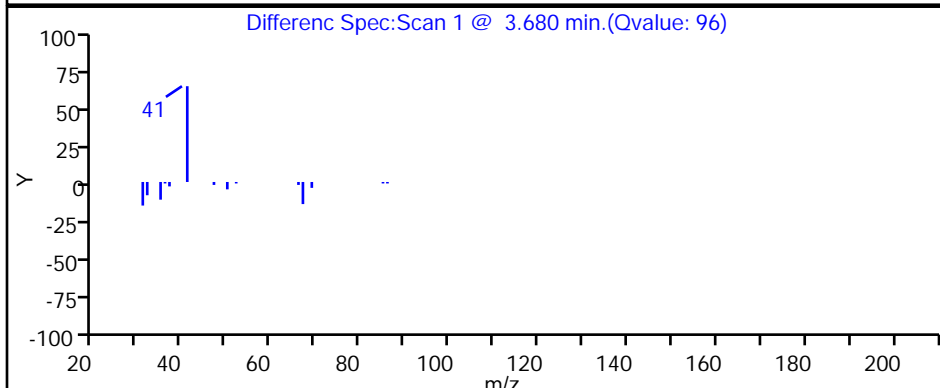
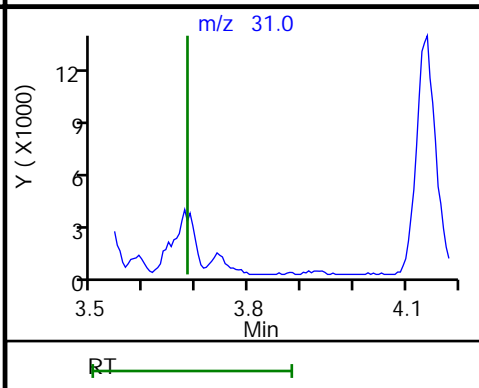
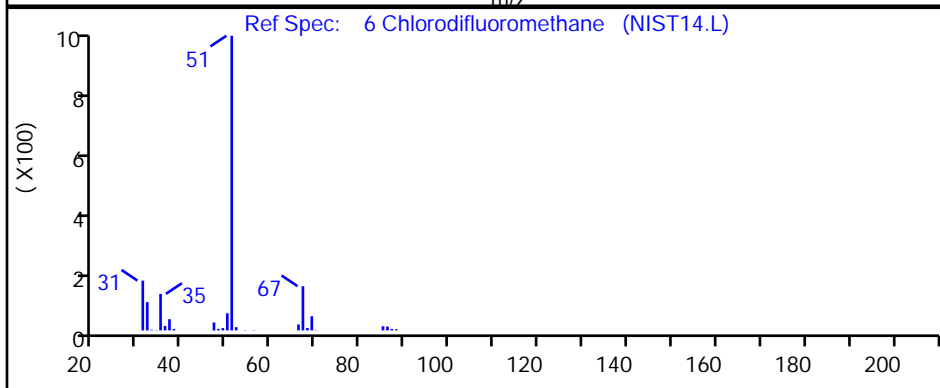
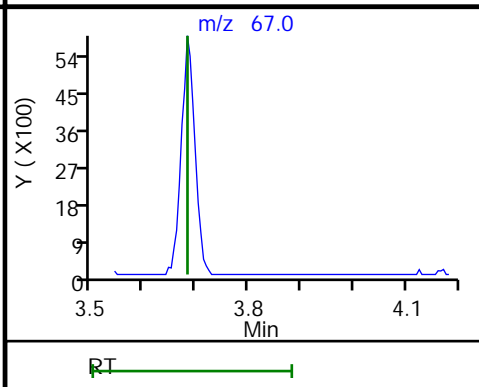
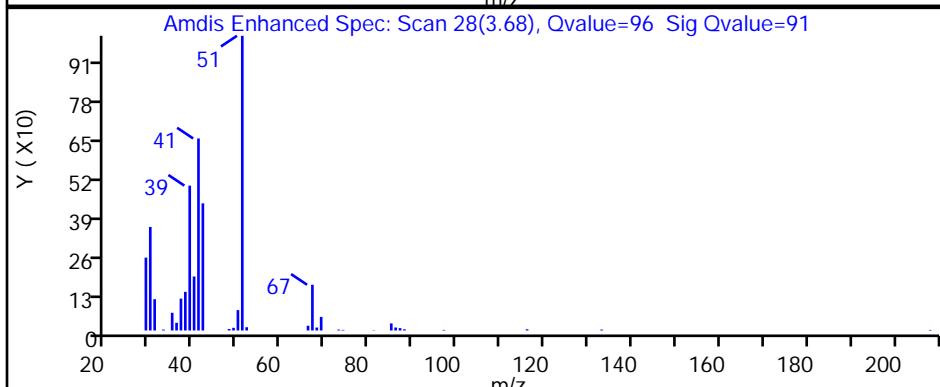
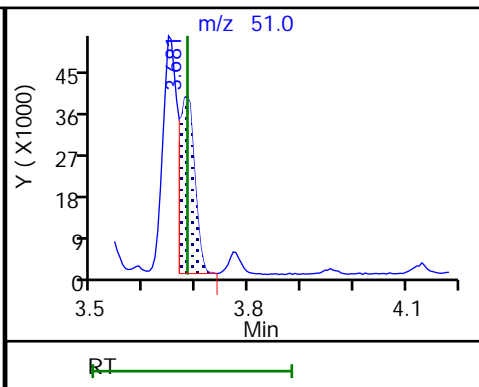
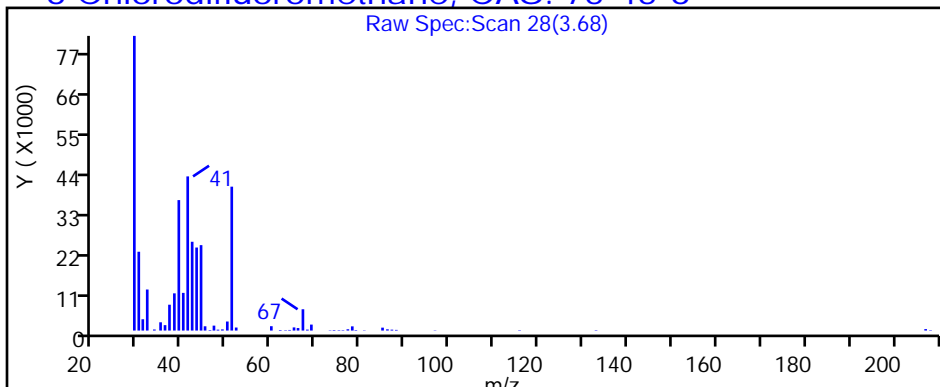
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

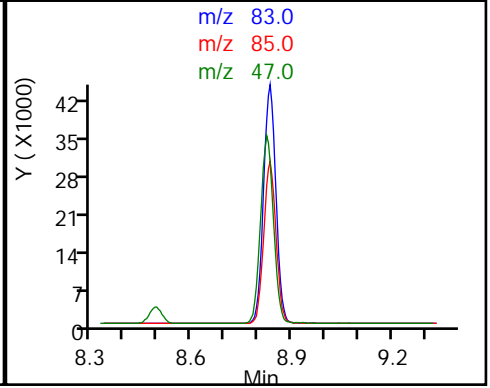
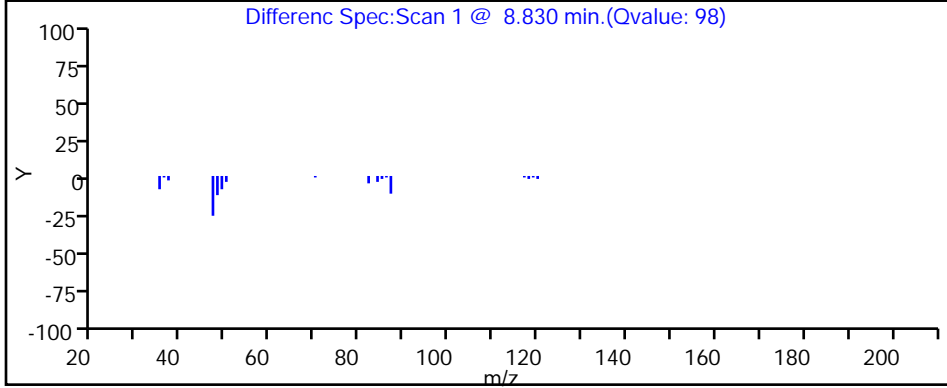
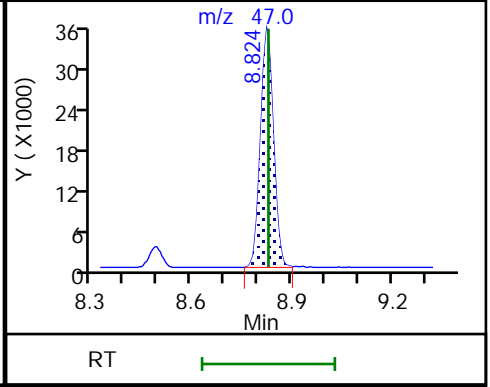
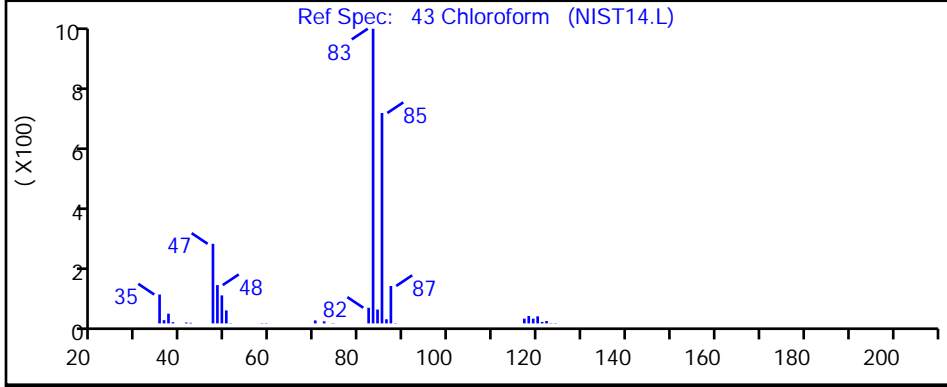
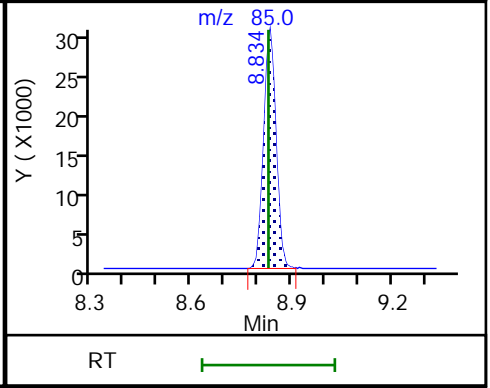
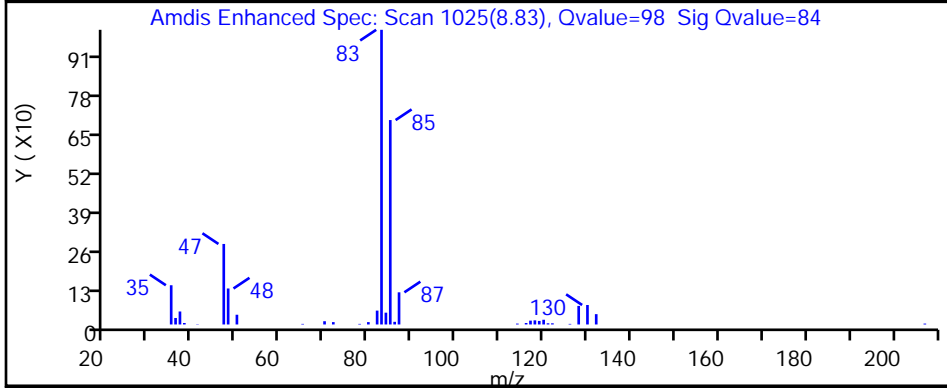
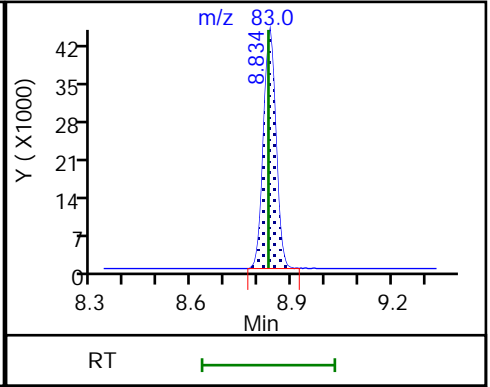
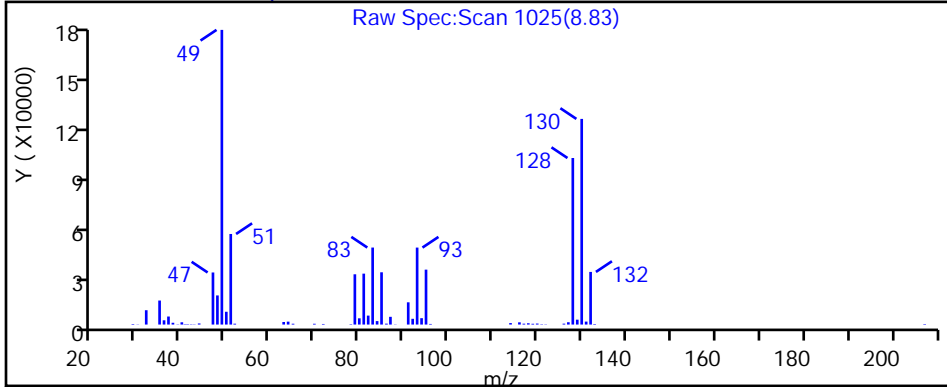
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

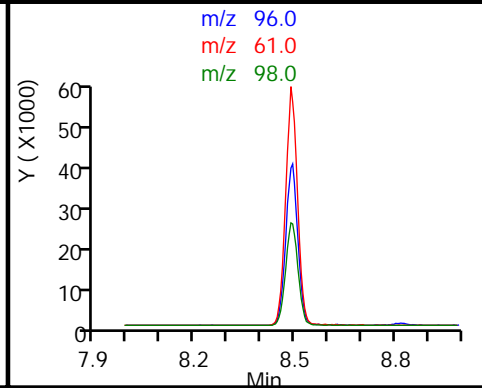
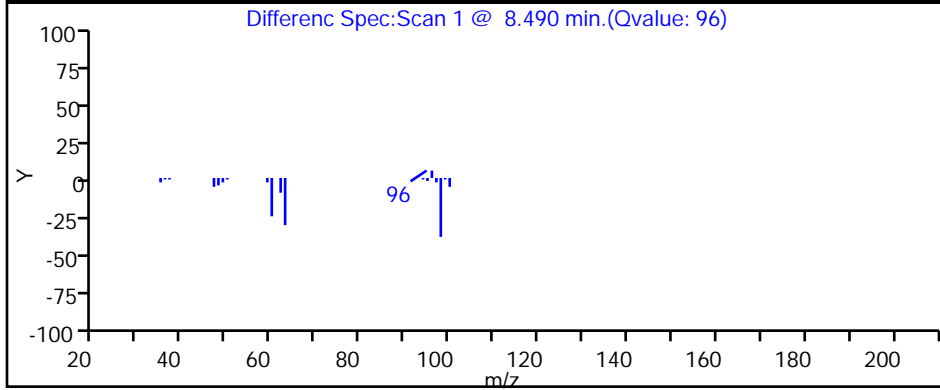
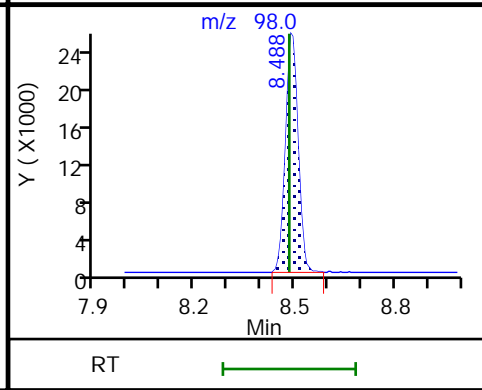
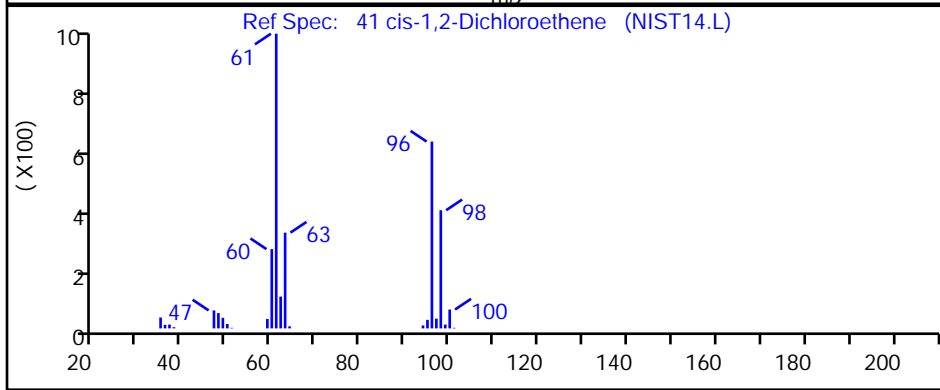
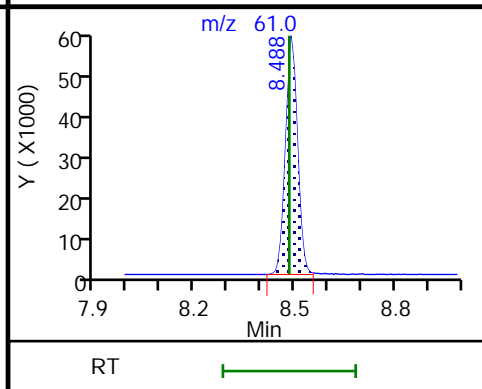
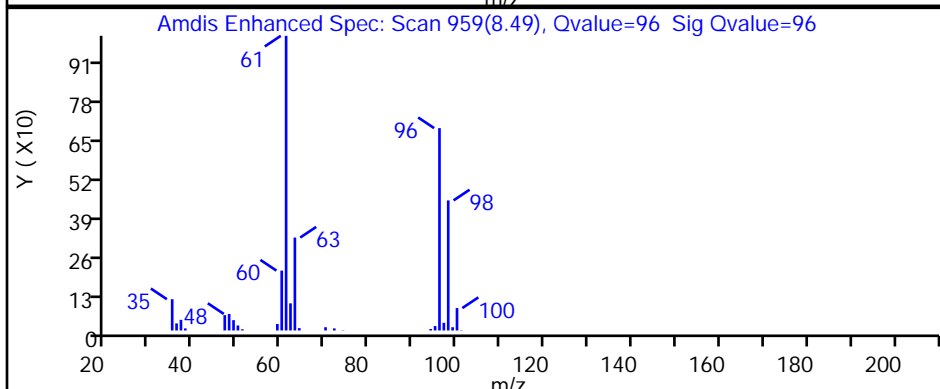
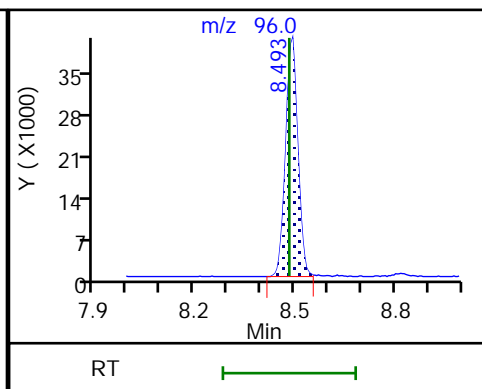
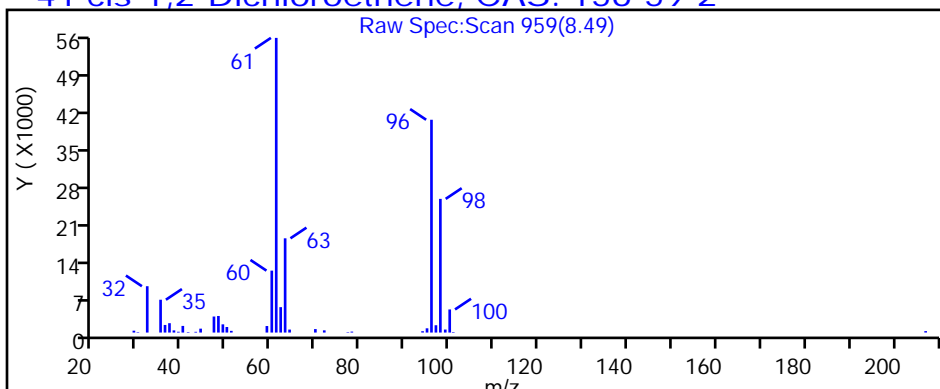
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

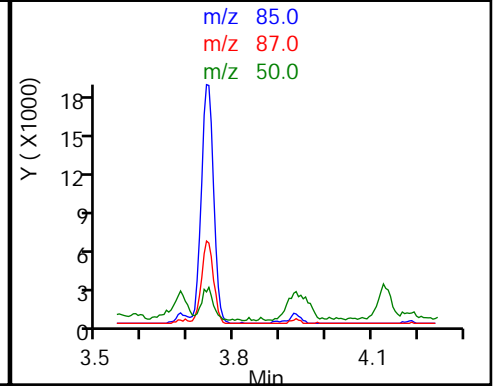
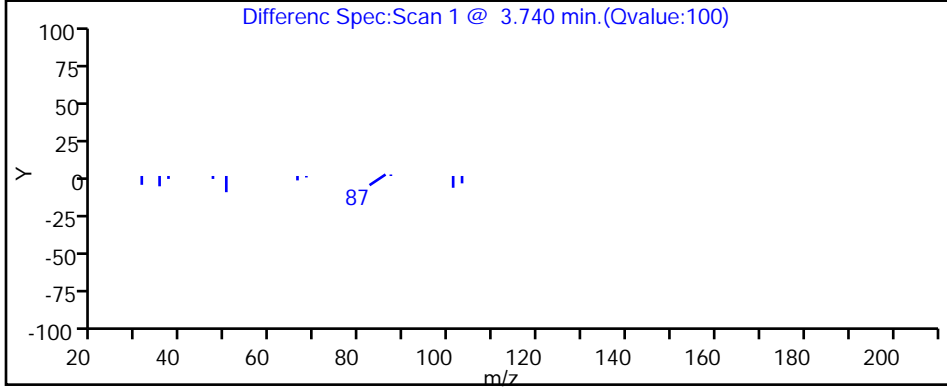
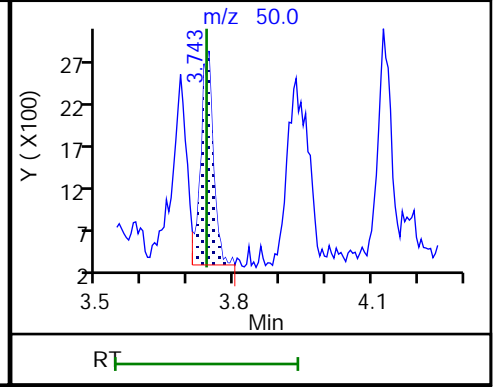
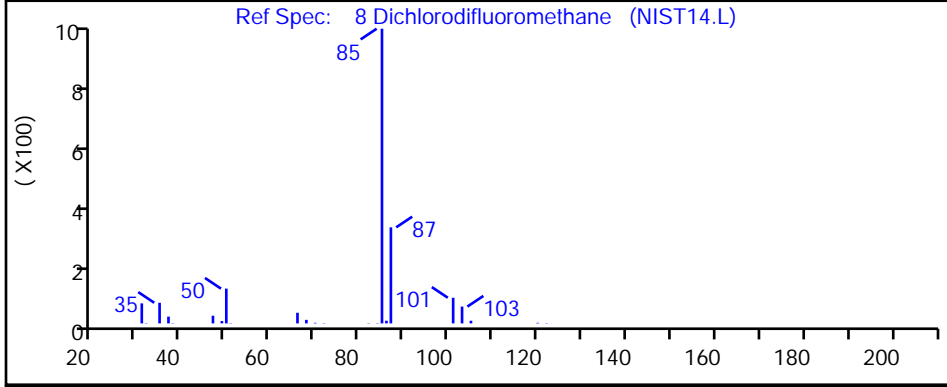
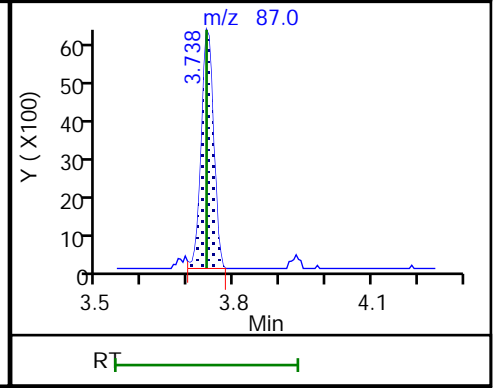
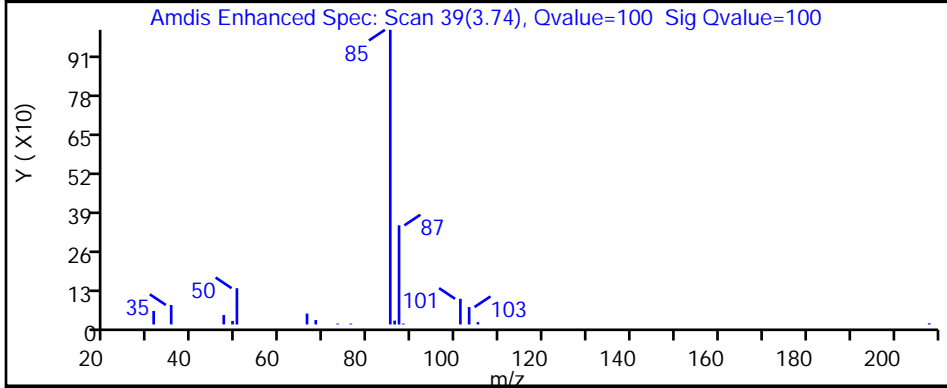
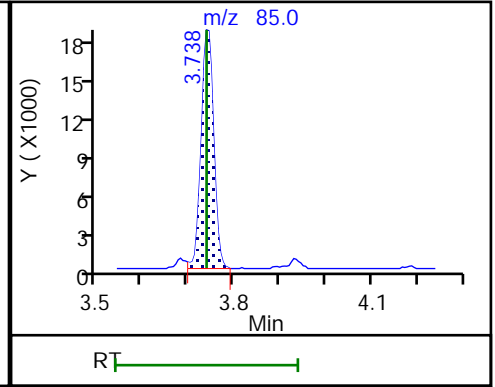
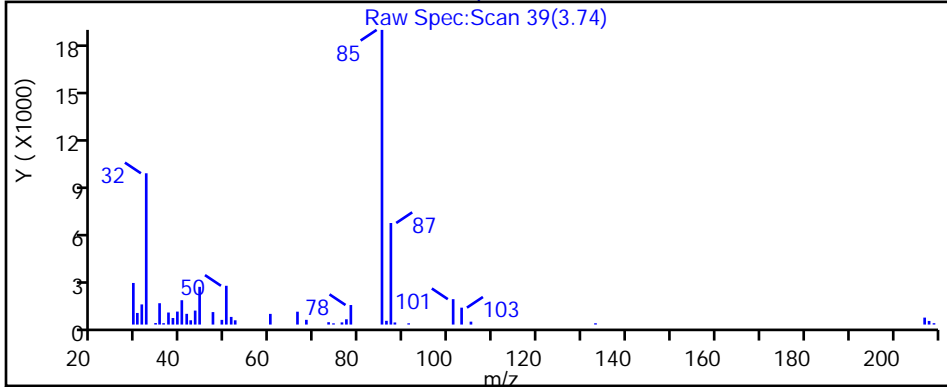
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

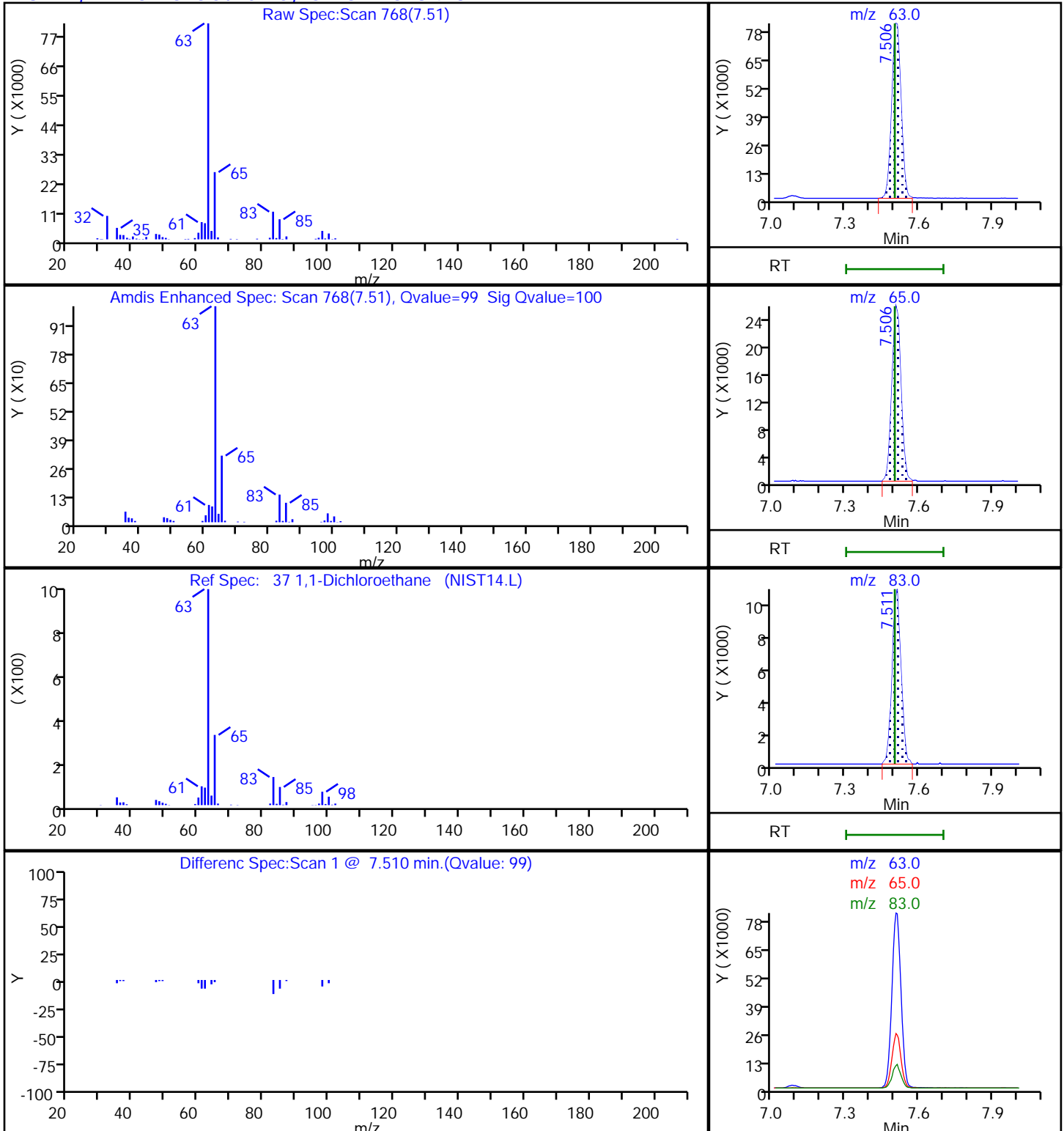
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

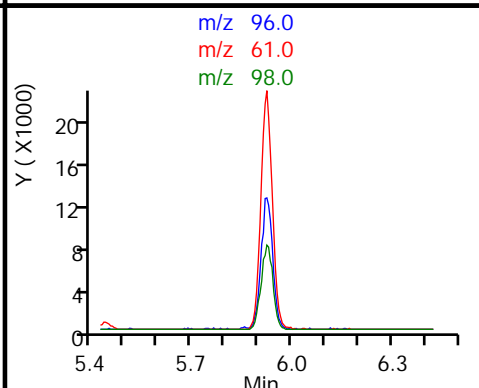
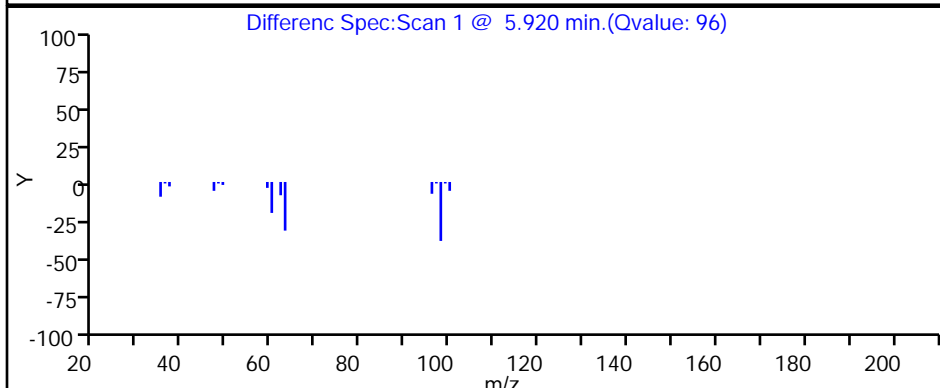
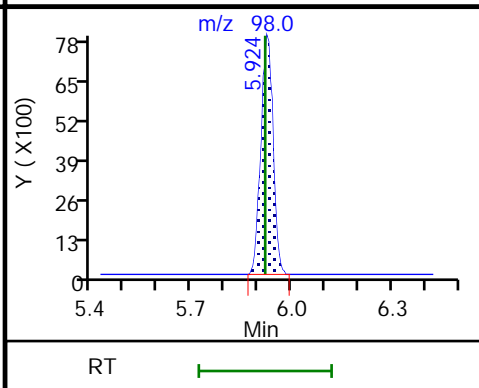
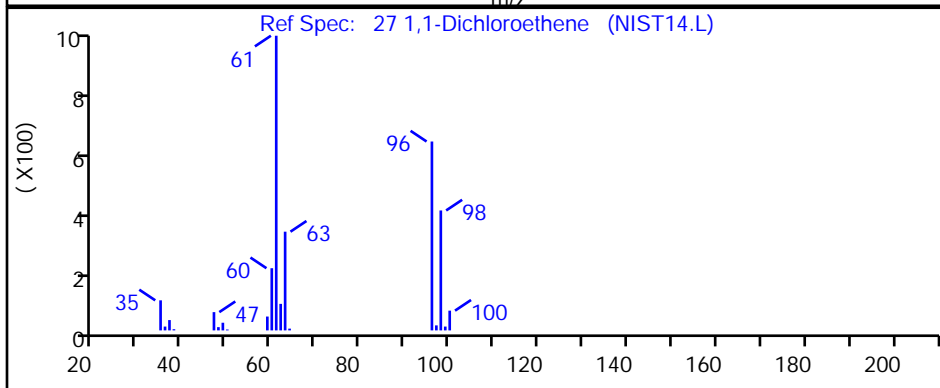
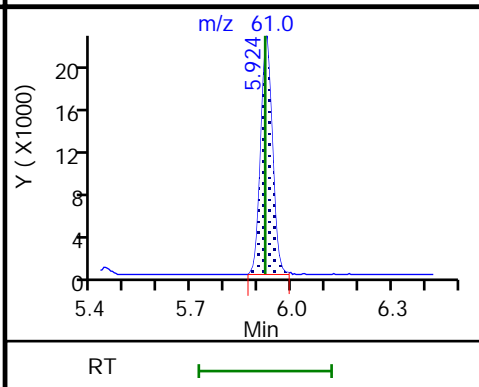
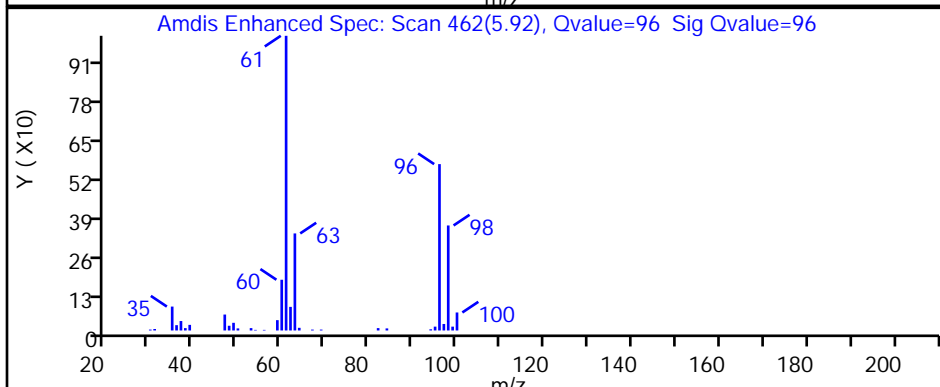
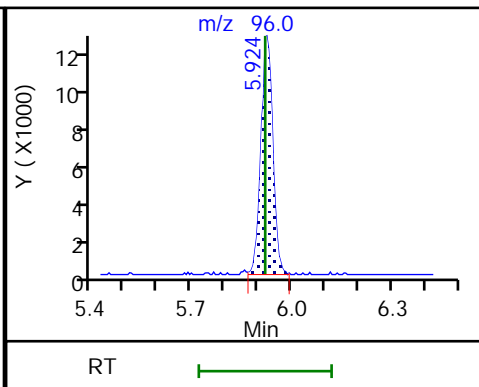
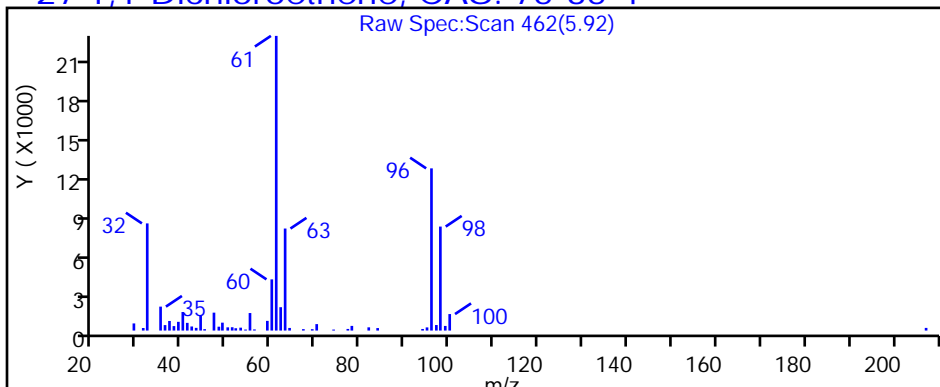
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

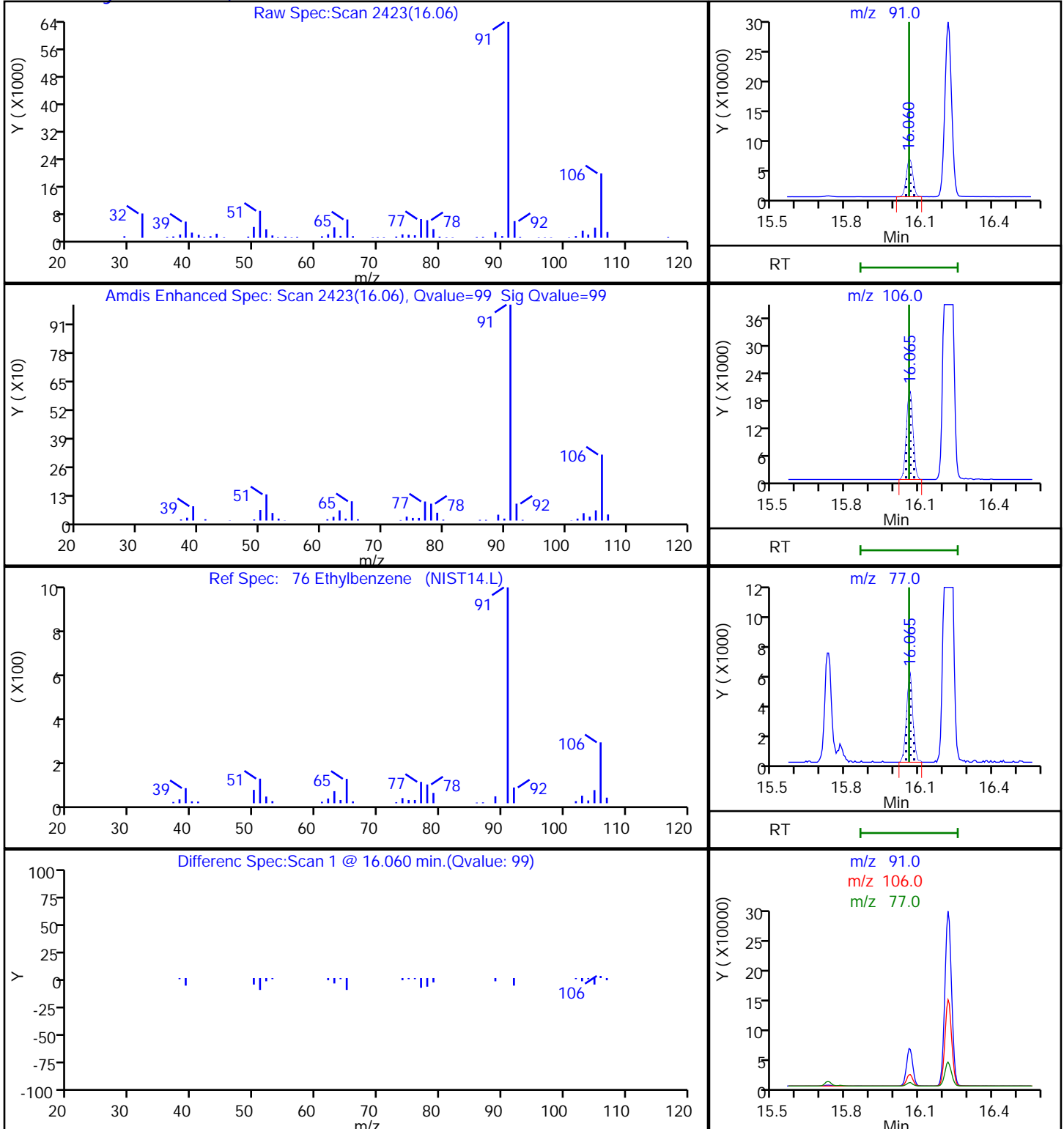
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

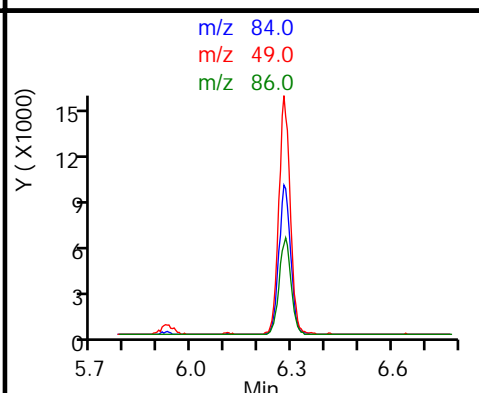
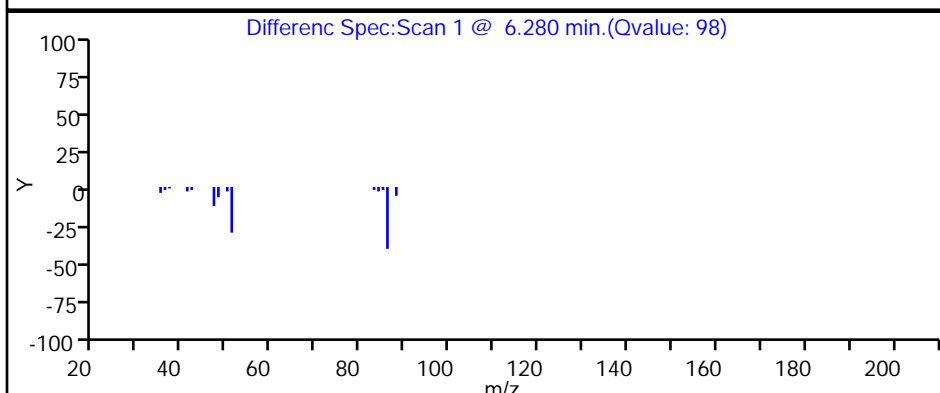
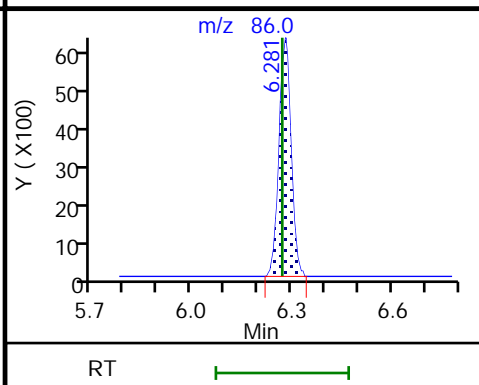
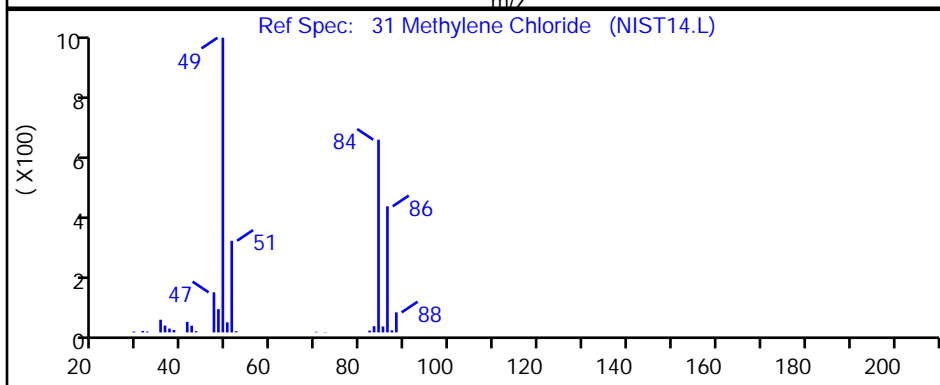
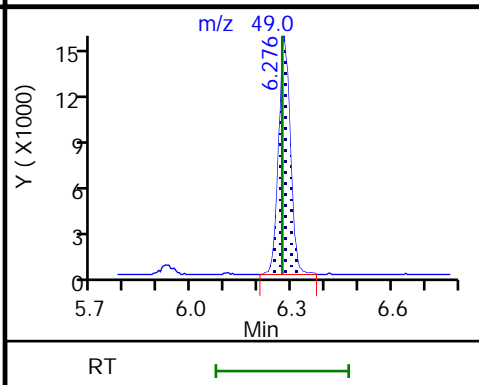
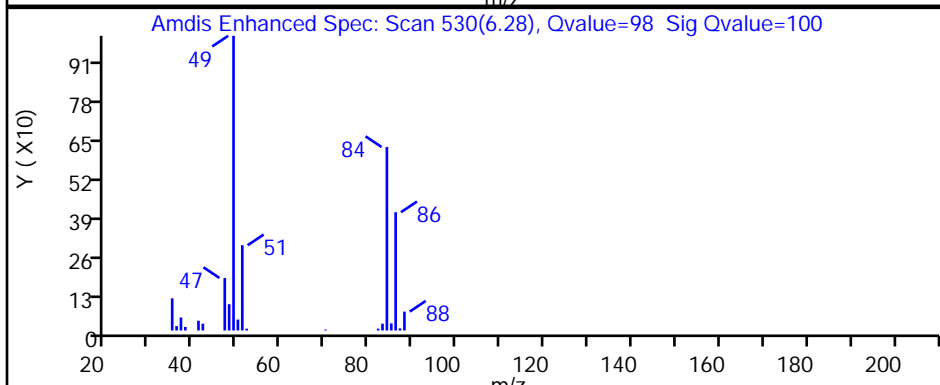
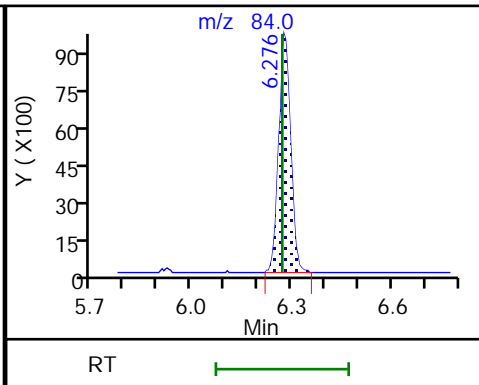
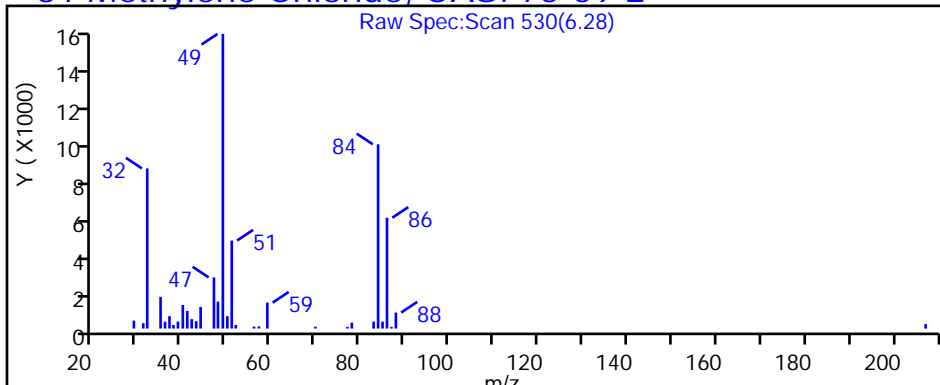
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

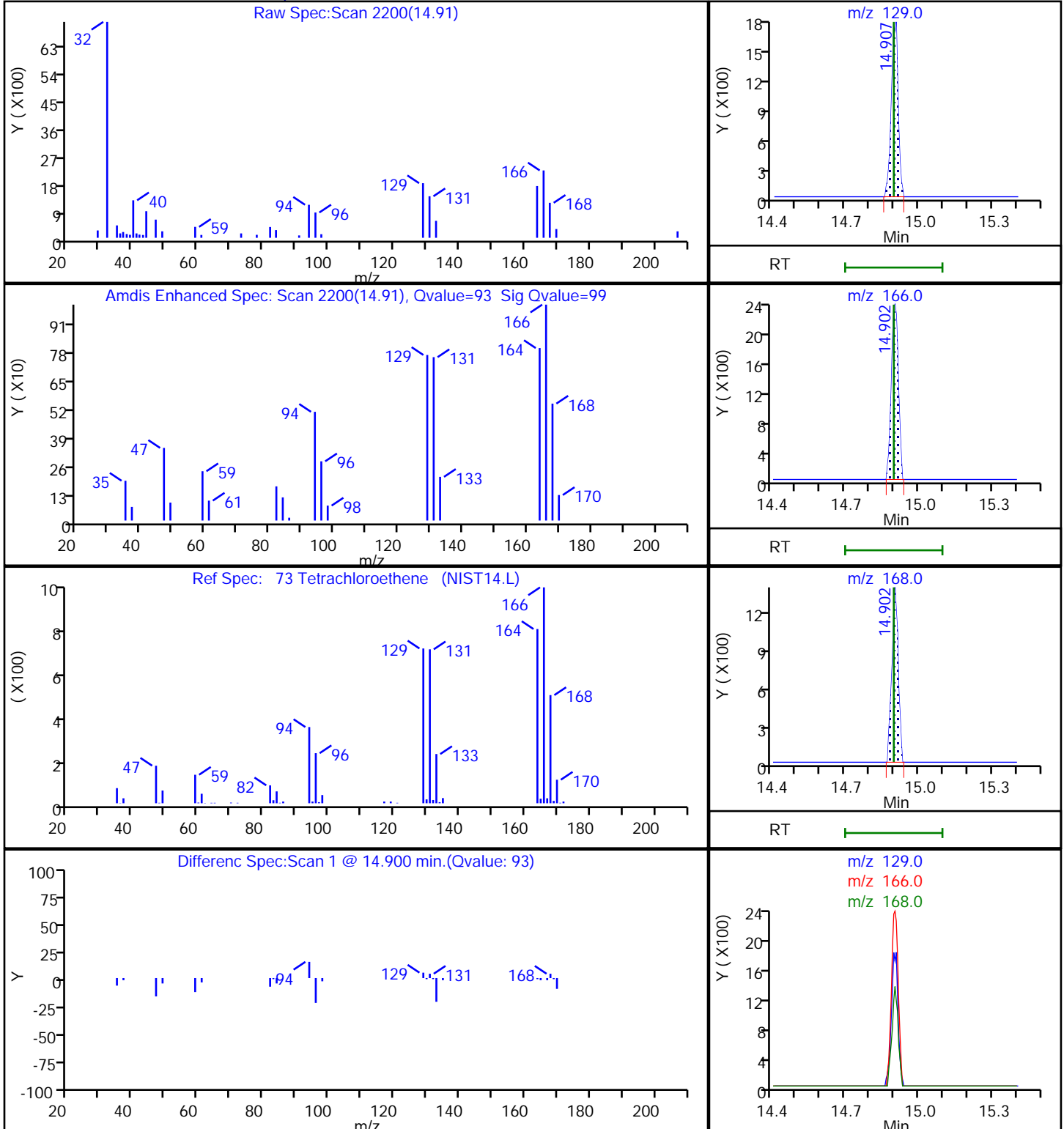
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

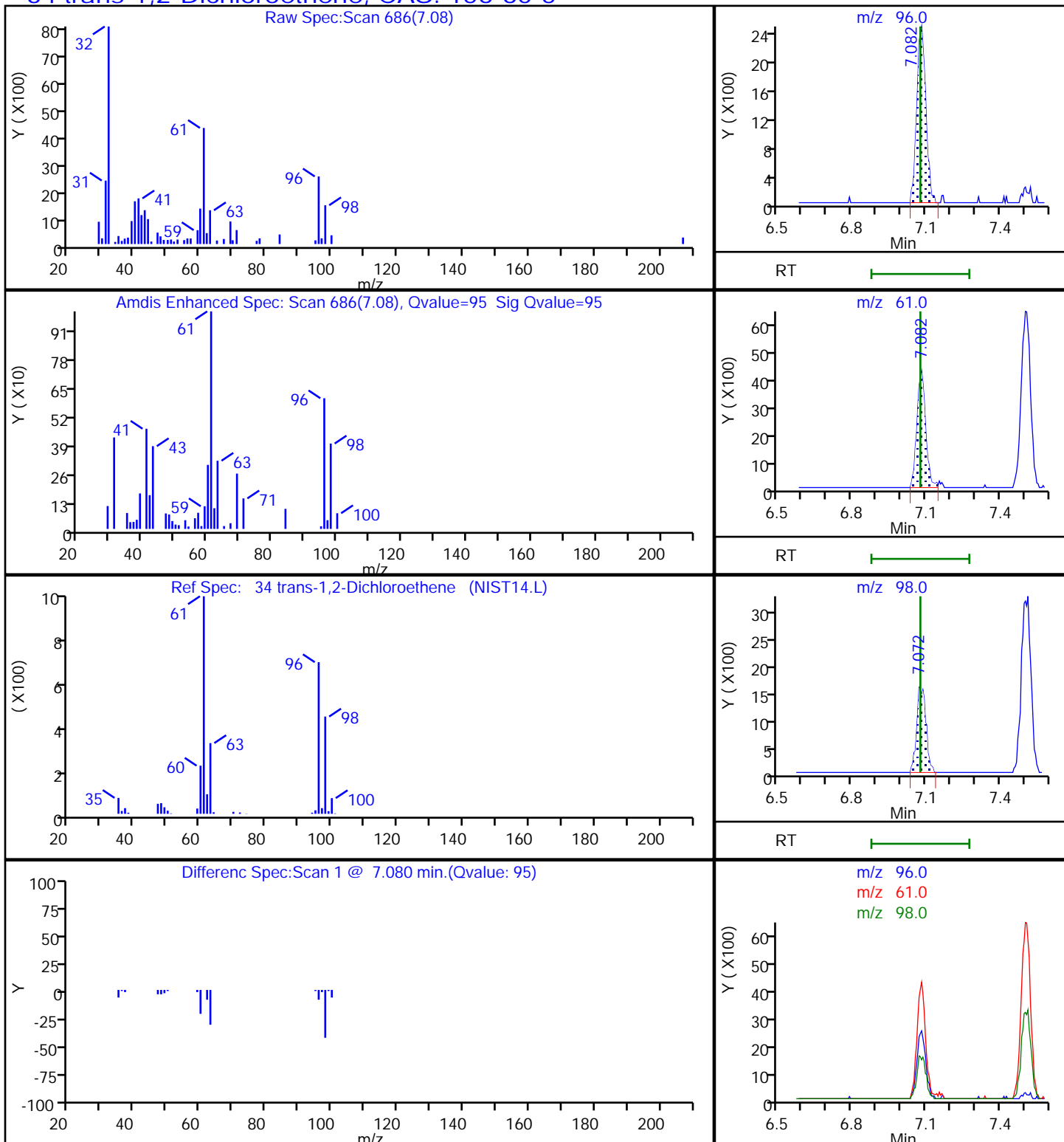
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

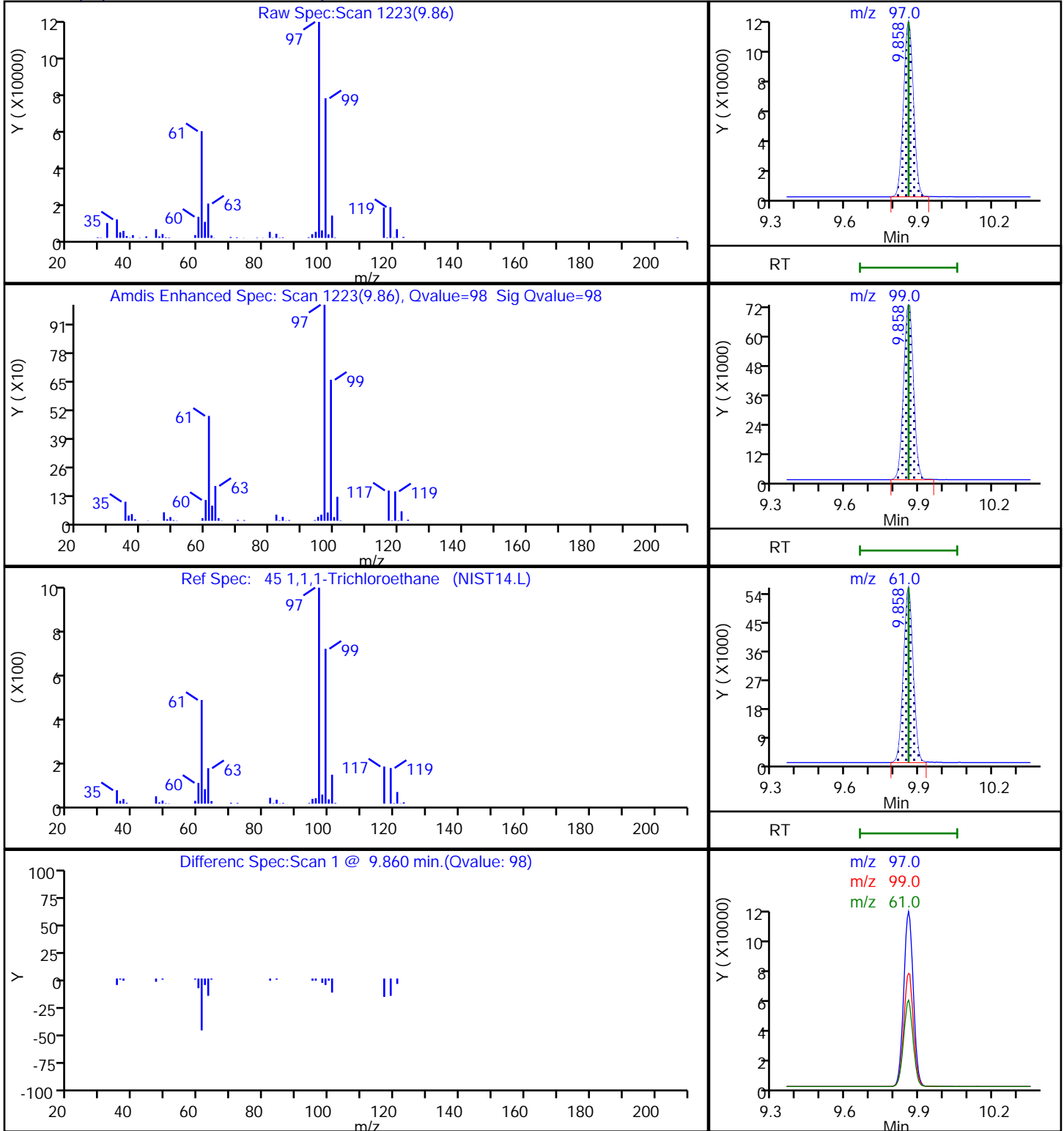
34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D
Injection Date: 26-Feb-2019 16:10:30 Instrument ID: MH
Lims ID: 140-14390-A-4 Lab Sample ID: 140-14390-4
Client ID: SV-060-C-26
Operator ID: HMT ALS Bottle#: 4 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

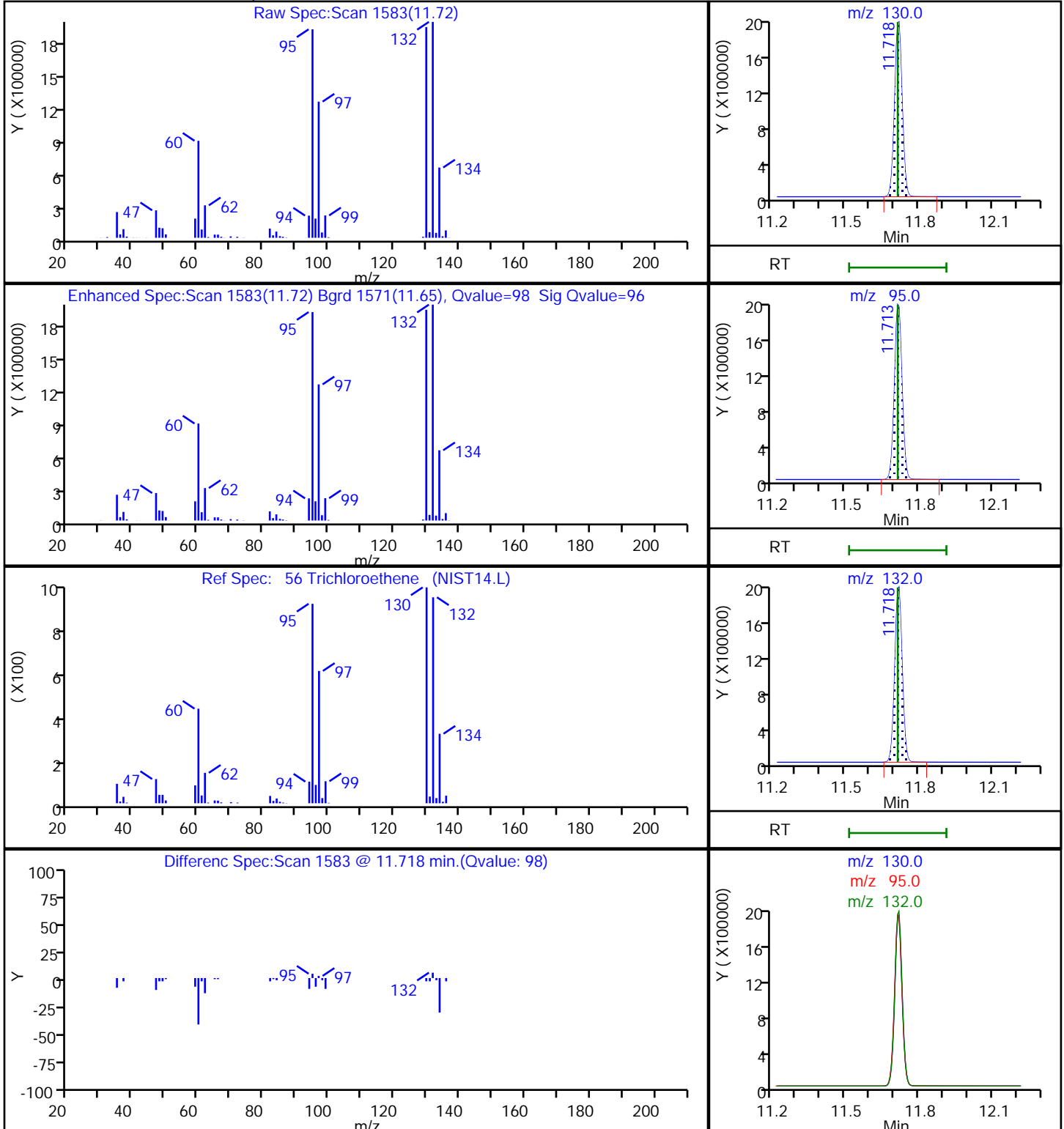
45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D
Injection Date: 26-Feb-2019 16:10:30 Instrument ID: MH
Lims ID: 140-14390-A-4 Lab Sample ID: 140-14390-4
Client ID: SV-060-C-26
Operator ID: HMT ALS Bottle#: 4 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

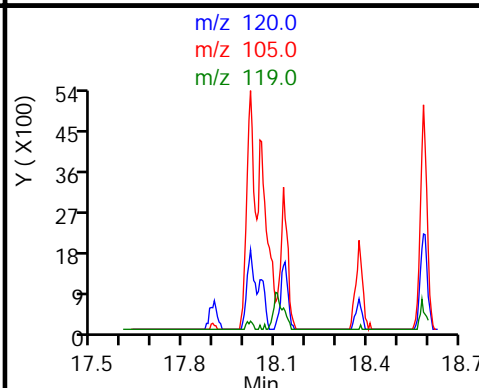
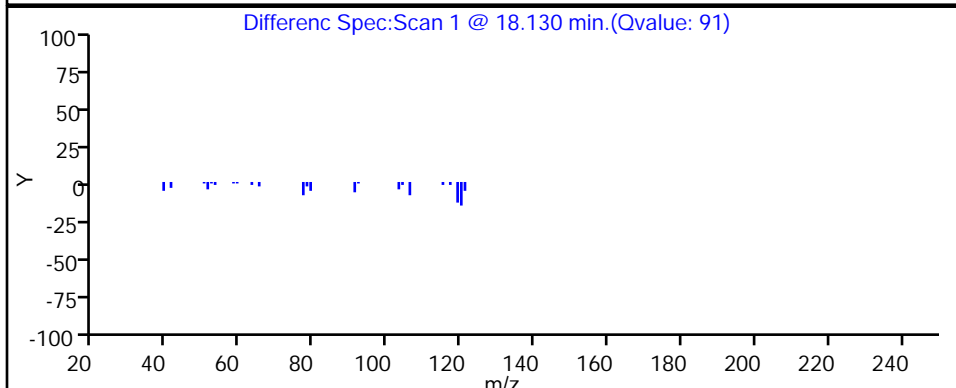
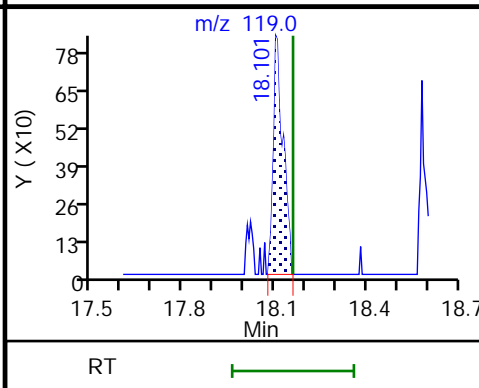
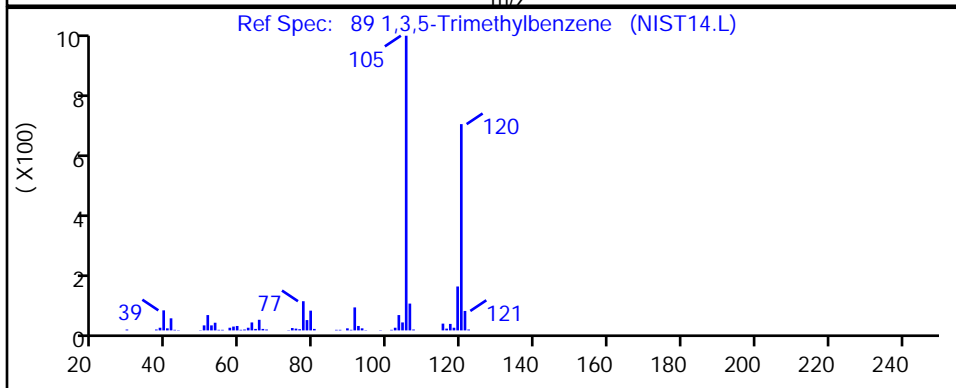
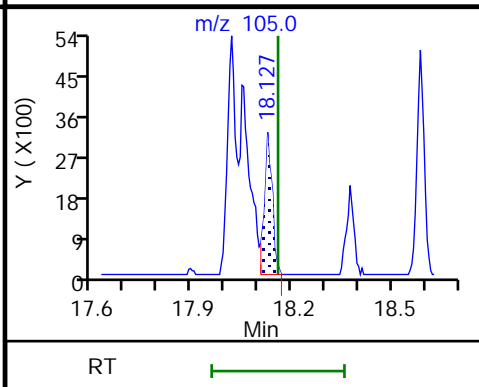
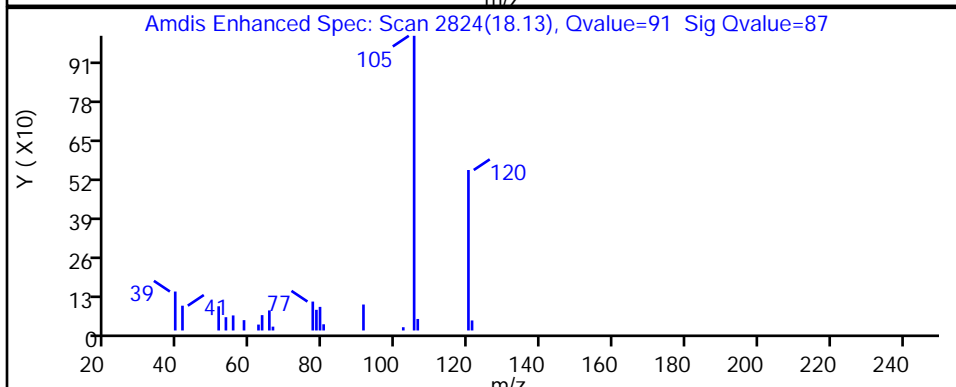
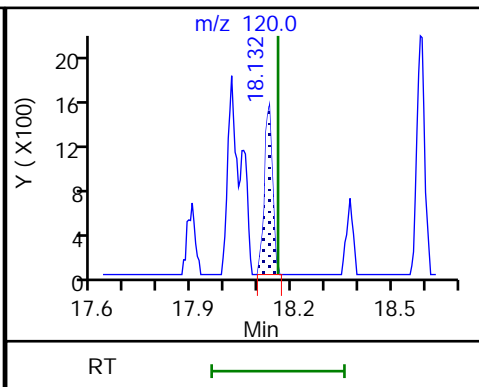
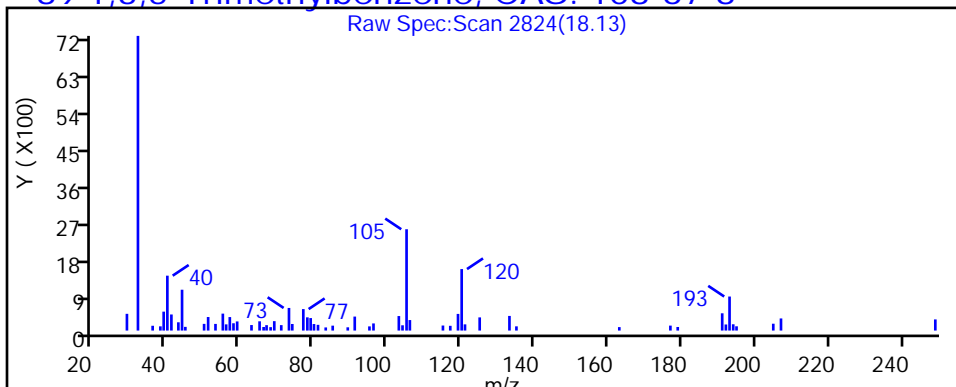
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

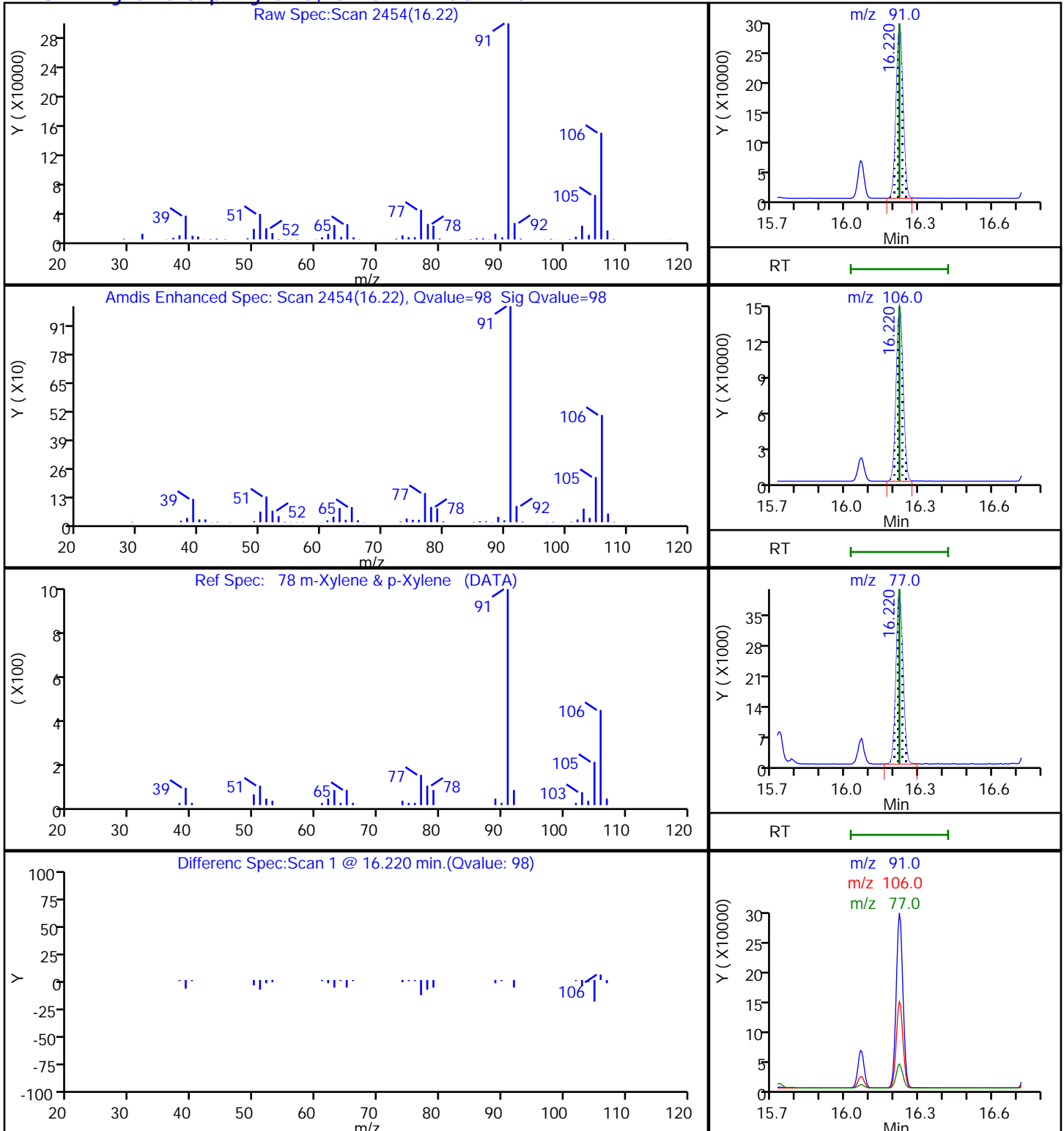
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D

Injection Date: 26-Feb-2019 16:10:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

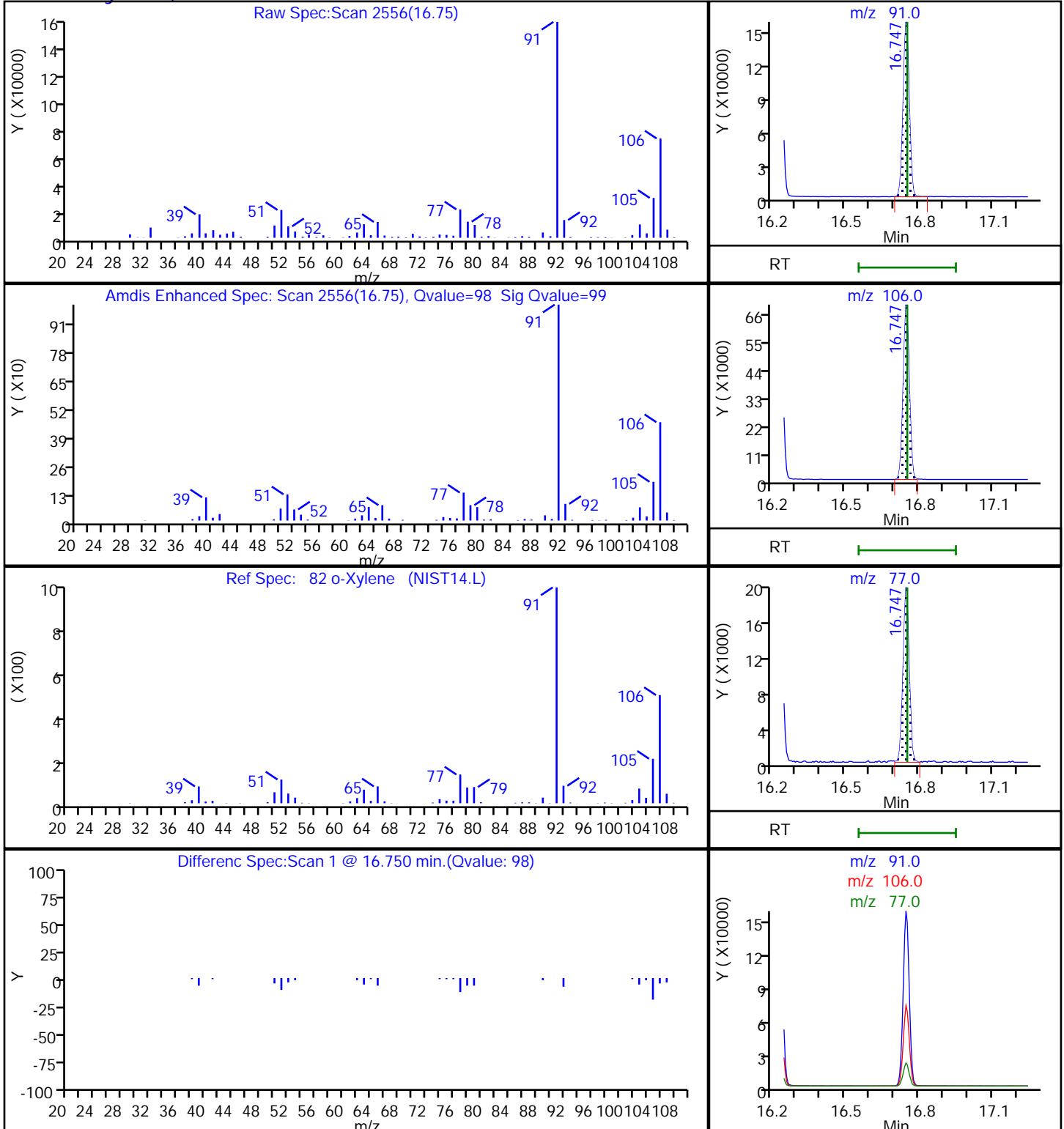
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



TestAmerica Knoxville

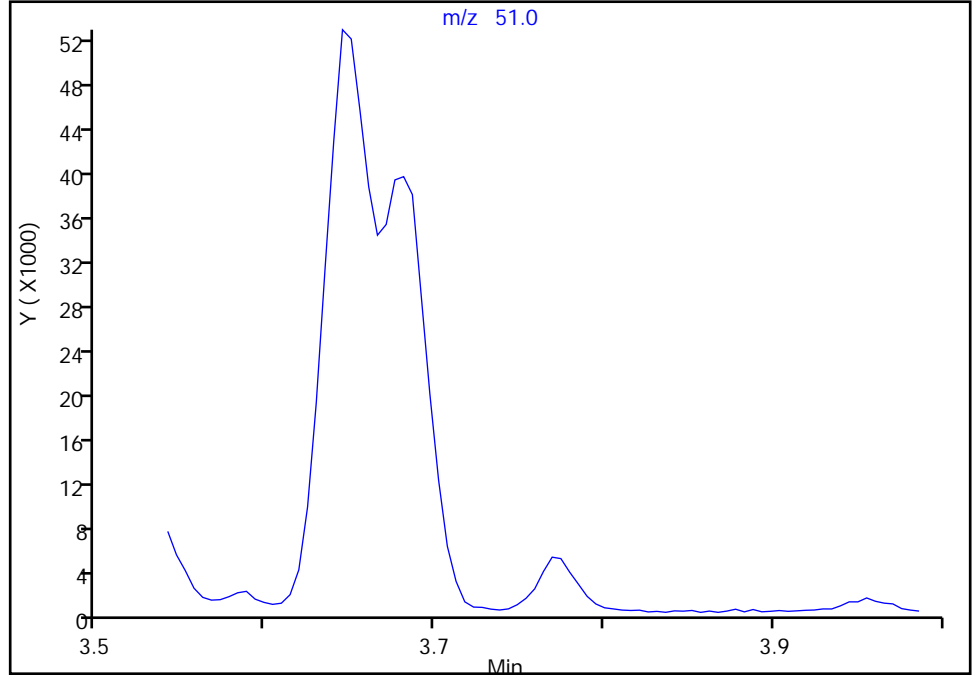
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104.D
Injection Date: 26-Feb-2019 16:10:30 Instrument ID: MH
Lims ID: 140-14390-A-4 Lab Sample ID: 140-14390-4
Client ID: SV-060-C-26
Operator ID: HMT ALS Bottle#: 4 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

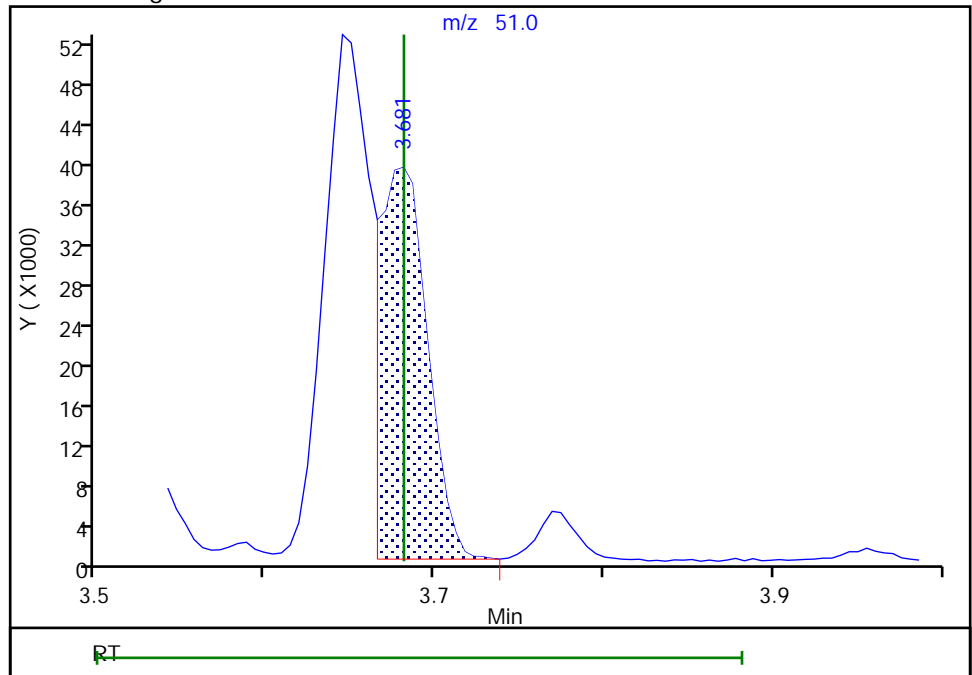
Not Detected
Expected RT: 3.68

Processing Integration Results



Manual Integration Results

RT: 3.68
Area: 78547
Amount: 0.312696
Amount Units: ppb v/v



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-060-C-26 DL Lab Sample ID: 140-14390-4 DL
 Matrix: Air Lab File ID: HB26P104DL.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:57
 Sample wt/vol: 40 (mL) Date Analyzed: 02/27/2019 08:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	110		0.50	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-060-C-26 DL Lab Sample ID: 140-14390-4 DL
 Matrix: Air Lab File ID: HB26P104DL.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:57
 Sample wt/vol: 40 (mL) Date Analyzed: 02/27/2019 08:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	600		2.7	0.94

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104DL.D
 Lims ID: 140-14390-A-4
 Client ID: SV-060-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 08:09:30 ALS Bottle#: 4 Worklist Smp#: 26
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-026
 Misc. Info.: 140-14390-a-4
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 11:55:39 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0335

First Level Reviewer: barlozhetskayaa Date: 27-Feb-2019 11:55:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.819	0.000	96	260606	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1404632	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1209563	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	784922	3.98	
6 Chlorodifluoromethane	51	3.681	3.690	-0.001	76	23948	0.1121	
8 Dichlorodifluoromethane	85	3.743	3.747	0.005	99	11986	0.0365	
27 1,1-Dichloroethene	96	5.919	5.933	0.000	94	10216	0.1009	
31 Methylene Chloride	84	6.276	6.286	0.005	98	14446	0.1356	
34 trans-1,2-Dichloroethene	96	7.082	7.094	0.005	96	2275	0.0219	
37 1,1-Dichloroethane	63	7.506	7.519	0.005	99	69725	0.3531	
41 cis-1,2-Dichloroethene	96	8.488	8.503	0.005	96	33004	0.3137	
43 Chloroform	83	8.834	8.850	0.005	93	37755	0.1667	
45 1,1,1-Trichloroethane	97	9.858	9.881	0.000	98	98101	0.4556	
56 Trichloroethene	130	11.713	11.719	0.000	96	1255791	8.96	
76 Ethylbenzene	91	16.065	16.060	0.005	99	32368	0.0738	
78 m-Xylene & p-Xylene	91	16.225	16.220	0.005	98	162823	0.4816	
82 o-Xylene	91	16.747	16.752	-0.005	99	74283	0.2158	
89 1,3,5-Trimethylbenzene	120	18.132	18.158	-0.026	88	516	0.0295	
S 121 Xylenes, Total	100				0		0.6974	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104DL.D

Injection Date: 27-Feb-2019 08:09:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Worklist Smp#: 26

Client ID: SV-060-C-26

Purge Vol: 500.000 mL

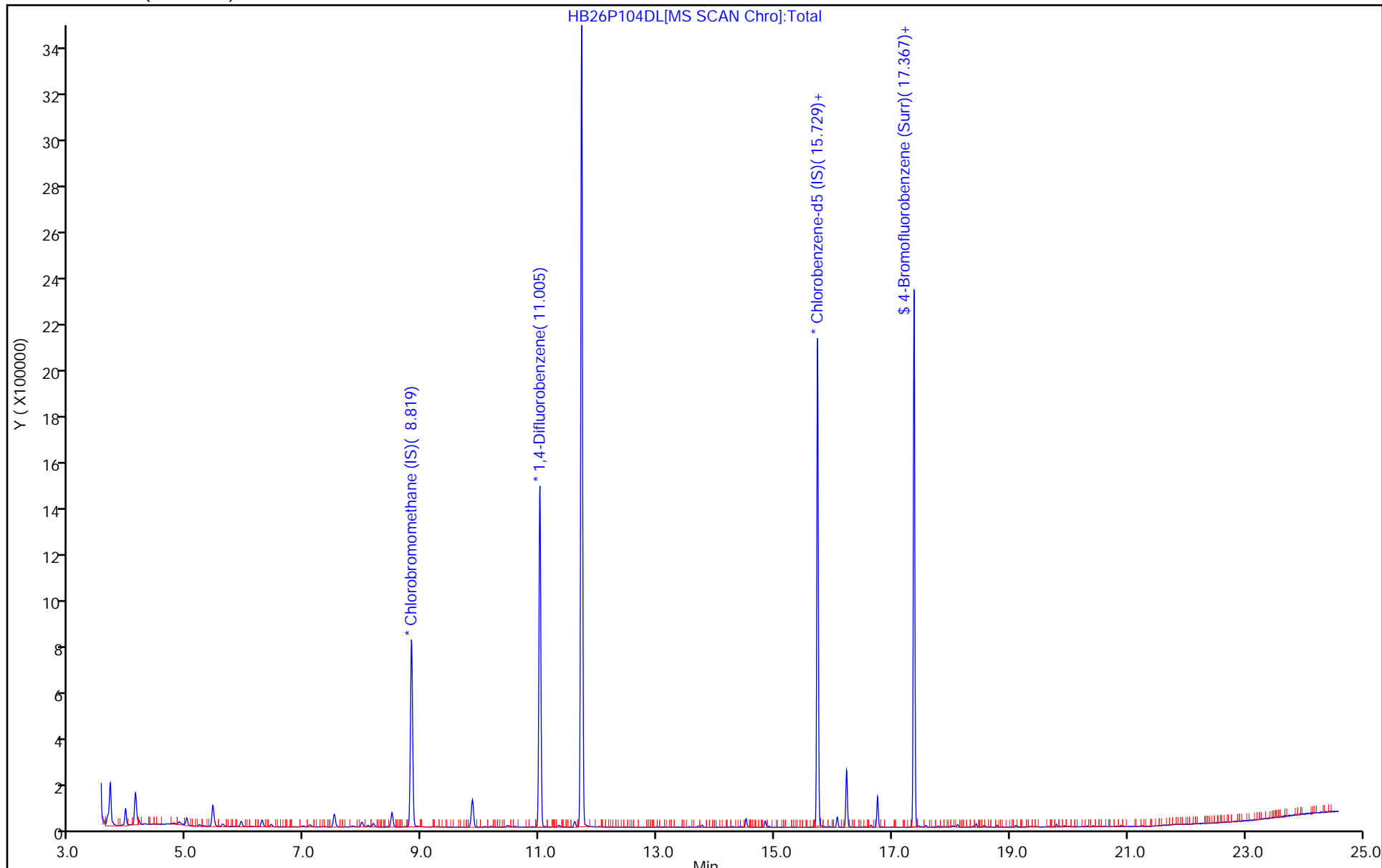
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104DL.D
 Lims ID: 140-14390-A-4
 Client ID: SV-060-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 08:09:30 ALS Bottle#: 4 Worklist Smp#: 26
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-026
 Misc. Info.: 140-14390-a-4
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 11:55:39 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0335

First Level Reviewer: barlozhetskayaa Date: 27-Feb-2019 11:55:39

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.98	99.56

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P104DL.D

Injection Date: 27-Feb-2019 08:09:30

Instrument ID: MH

Lims ID: 140-14390-A-4

Lab Sample ID: 140-14390-4

Client ID: SV-060-C-26

Operator ID: HMT

ALS Bottle#: 4 Worklist Smp#: 26

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

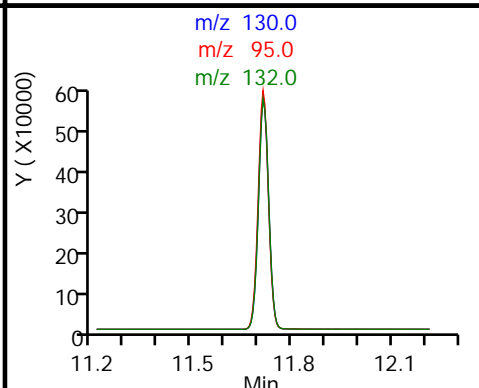
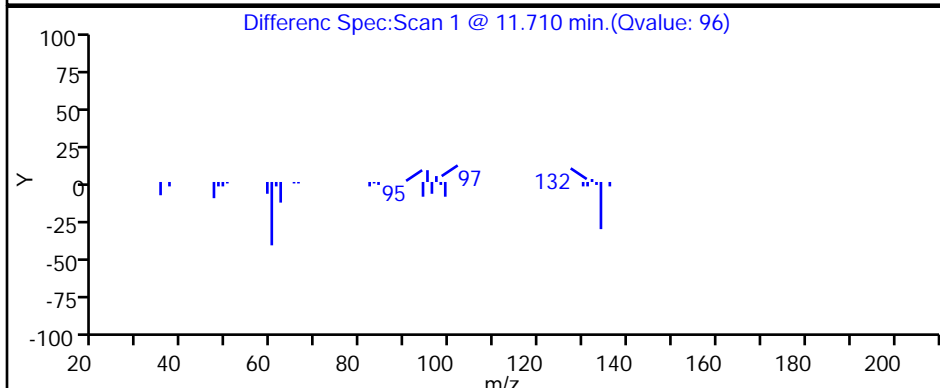
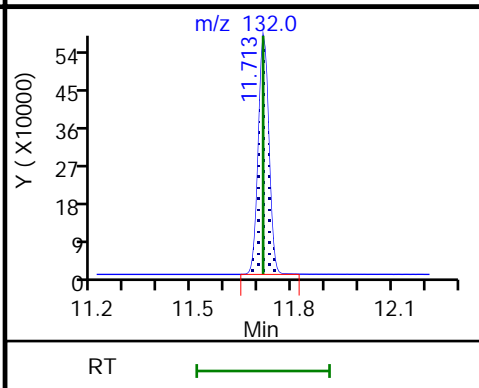
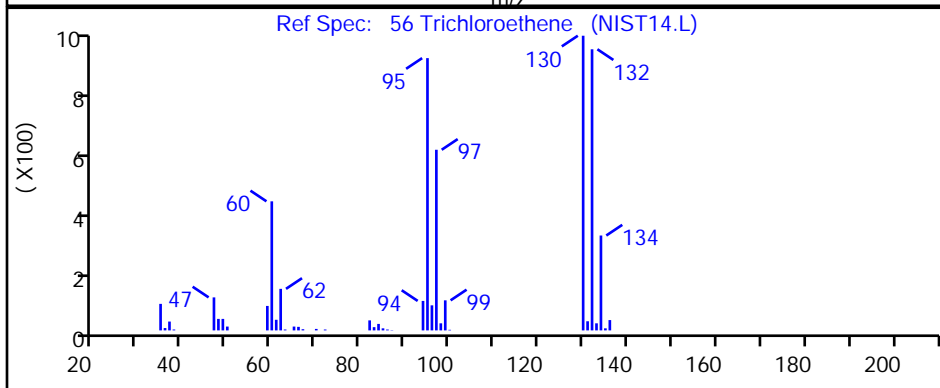
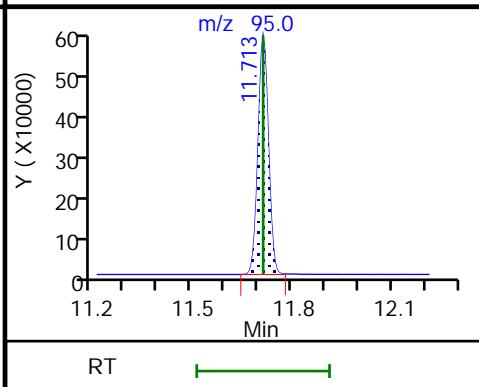
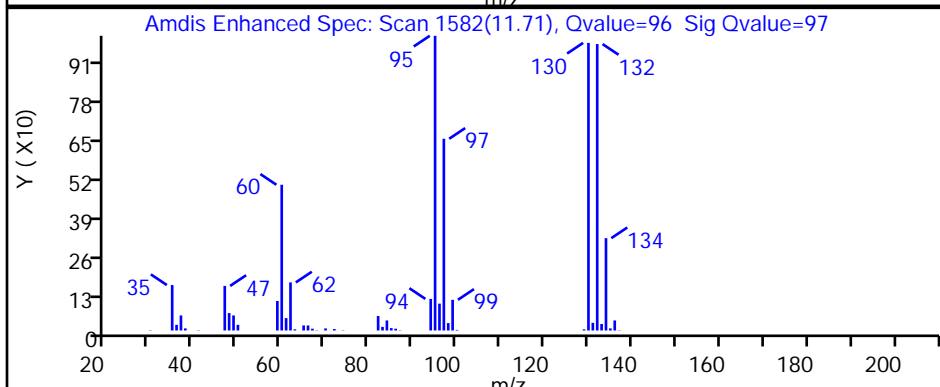
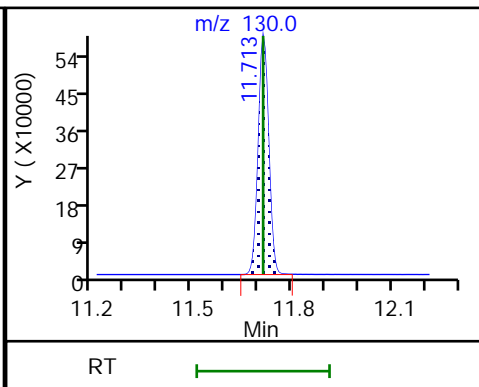
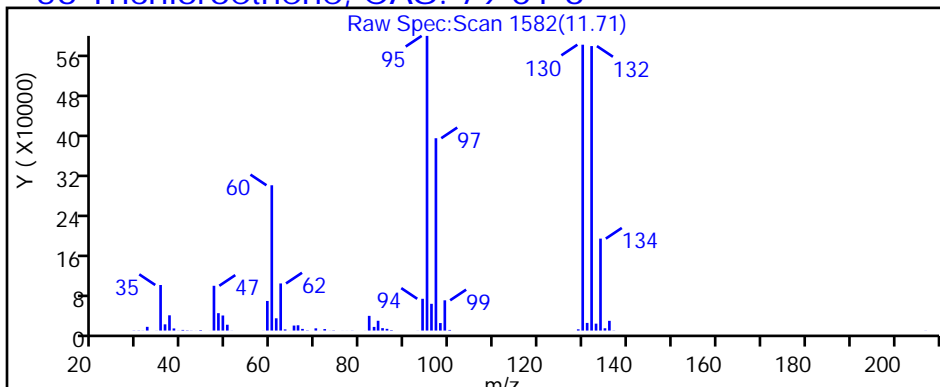
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-118-A-26 Lab Sample ID: 140-14390-5
 Matrix: Air Lab File ID: HB26P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:42
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.30	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	0.35	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	46		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	11		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	120	E	0.40	0.070
100-41-4	Ethylbenzene	106.17	1.8		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.1		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.15	J	0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	3.0		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	0.34	J	0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	5.9		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	450	E	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.59		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.4		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.93		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.82		0.20	0.15
1330-20-7	Xylenes, Total	106.17	17		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-118-A-26 Lab Sample ID: 140-14390-5
 Matrix: Air Lab File ID: HB26P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:42
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.97	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	1.7	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	180		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	46		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	470	E	1.6	0.28
100-41-4	Ethylbenzene	106.17	7.7		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.4		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.99	J	2.7	0.54
108-88-3	Toluene	92.14	4.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	12		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	2.5	J	3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	32		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2400	E	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	2.9		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	7.0		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	4.6		2.0	0.64
75-01-4	Vinyl chloride	62.50	2.1		0.51	0.37
1330-20-7	Xylenes, Total	106.17	72		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D
 Lims ID: 140-14390-A-5
 Client ID: SV-118-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 17:03:30 ALS Bottle#: 5 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-009
 Misc. Info.: 140-14390-a-5
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:57:07 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:57:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.819	0.005	95	296259	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.000	0.010	95	1615475	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1362515	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	94	897200	4.04	
6 Chlorodifluoromethane	51	3.687	3.681	0.005	42	15575	0.0641	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	34968	0.0937	
12 Vinyl chloride	62	4.095	4.095	0.000	99	22276	0.1646	
27 1,1-Dichloroethene	96	5.925	5.919	0.005	97	2744369	23.8	E
31 Methylene Chloride	84	6.276	6.271	0.005	98	51432	0.4246	
34 trans-1,2-Dichloroethene	96	7.087	7.077	0.010	97	71656	0.6073	
37 1,1-Dichloroethane	63	7.506	7.501	0.005	99	511693	2.28	
41 cis-1,2-Dichloroethene	96	8.493	8.483	0.010	96	1109296	9.28	
43 Chloroform	83	8.834	8.829	0.005	29	18065	0.0702	
45 1,1,1-Trichloroethane	97	9.858	9.858	0.000	97	288409	1.18	
47 Benzene	78	10.462	10.457	0.005	97	20709	0.0606	
56 Trichloroethene	130	11.718	11.713	0.005	98	14369713	89.2	E
65 Toluene	91	13.765	13.760	0.005	93	86300	0.2225	
73 Tetrachloroethene	129	14.902	14.897	0.005	93	4610	0.0292	
76 Ethylbenzene	91	16.060	16.060	0.000	99	175389	0.3551	
78 m-Xylene & p-Xylene	91	16.215	16.220	-0.005	98	912747	2.40	
82 o-Xylene	91	16.747	16.752	-0.005	98	352408	0.9088	
89 1,3,5-Trimethylbenzene	120	18.132	18.158	-0.026	92	36646	0.1865	
93 1,2,4-Trimethylbenzene	105	18.587	18.613	-0.026	98	126460	0.2849	
99 1,2,3-Trimethylbenzene	105	19.078	19.099	-0.021	99	51760	0.1187	
111 1,2,4-Trichlorobenzene	180	21.109	21.109	0.000	1	151	0.0678	
S 121 Xylenes, Total	100				0		3.31	

[QC Flag Legend](#)

Processing Flags

E - Exceeded Maximum Amount

[Reagents:](#)

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Worklist Smp#: 9

Client ID: SV-118-A-26

Purge Vol: 500.000 mL

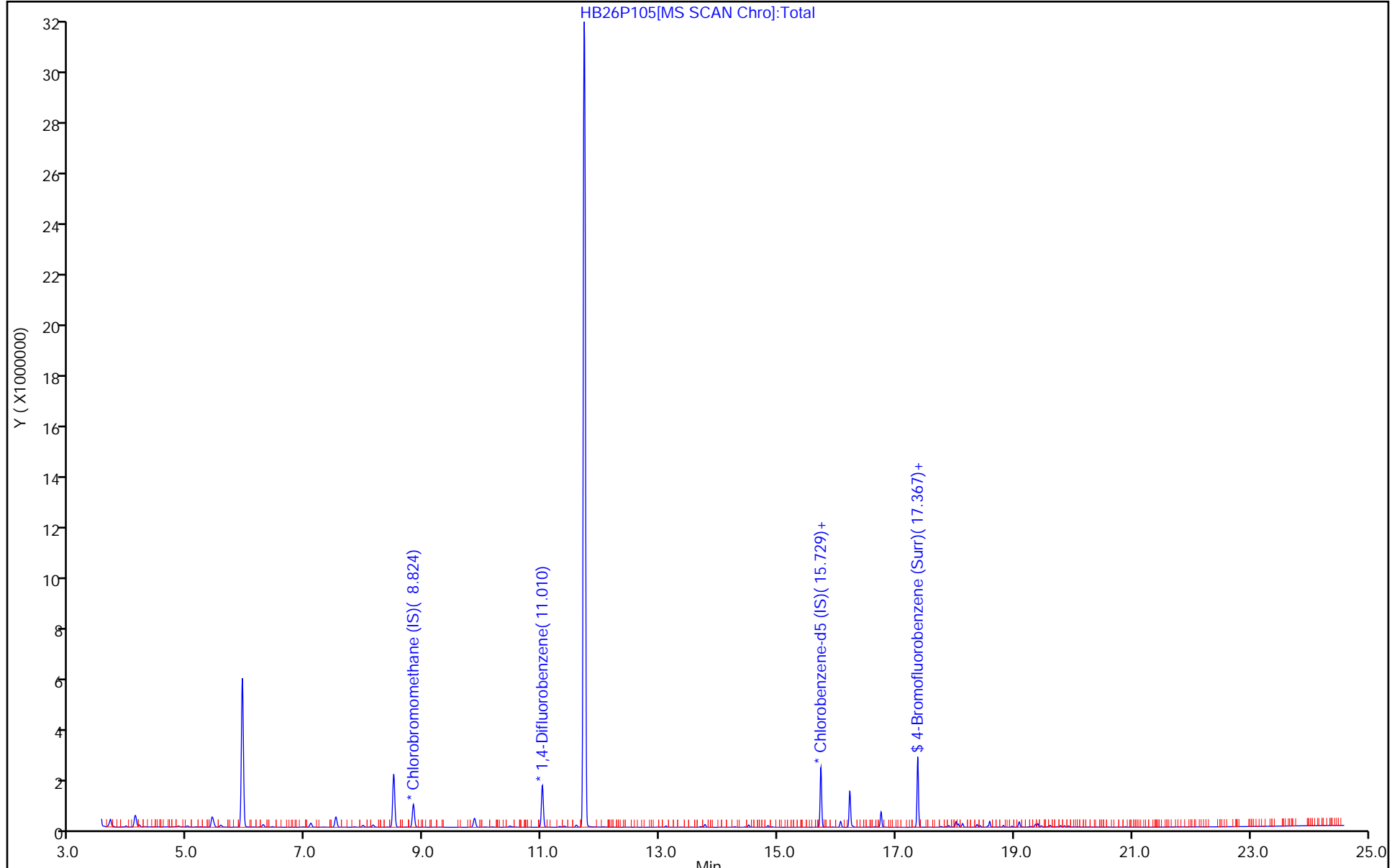
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D
 Lims ID: 140-14390-A-5
 Client ID: SV-118-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 17:03:30 ALS Bottle#: 5 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-009
 Misc. Info.: 140-14390-a-5
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:57:07 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:57:56

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.04	101.02

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

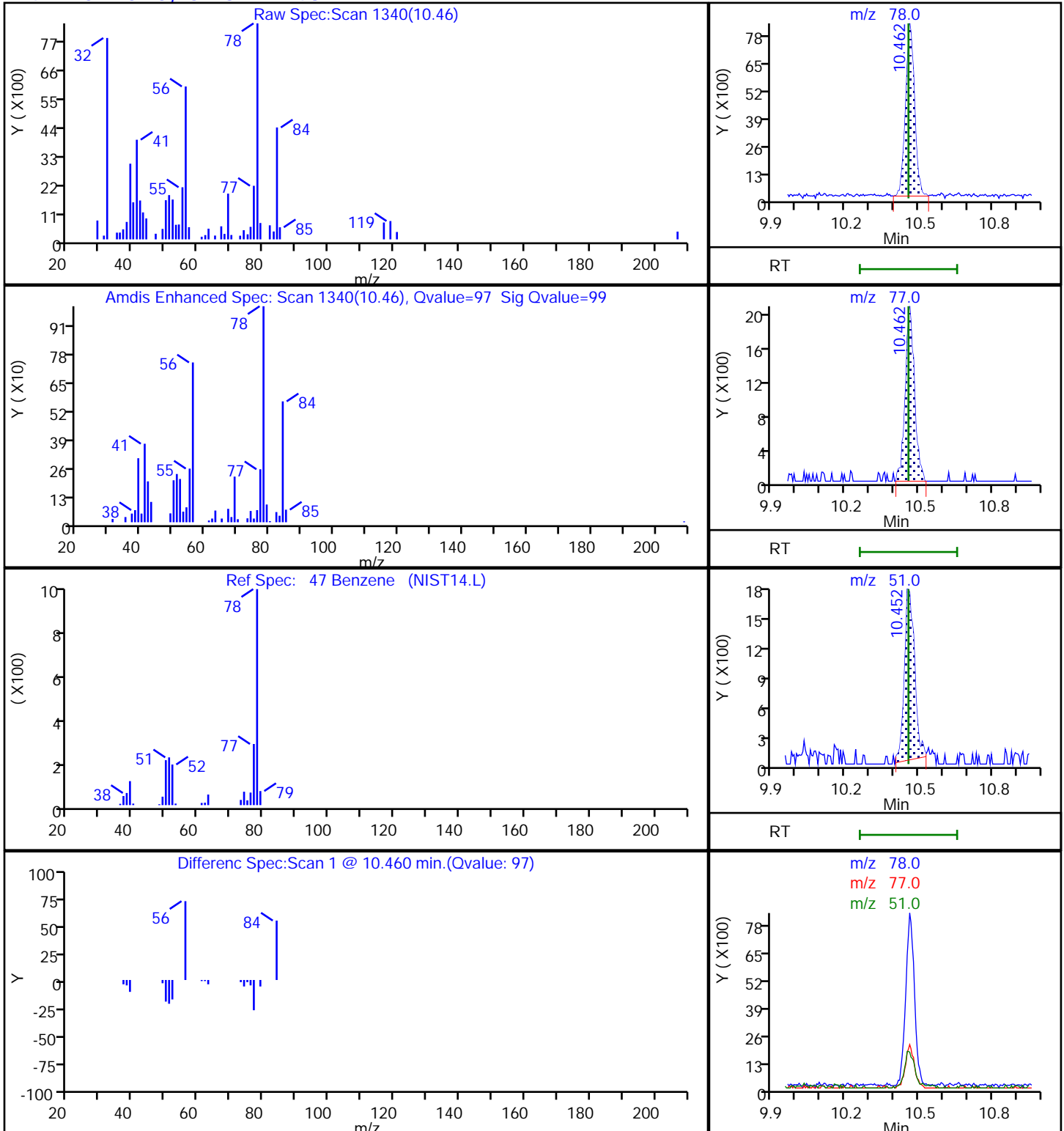
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

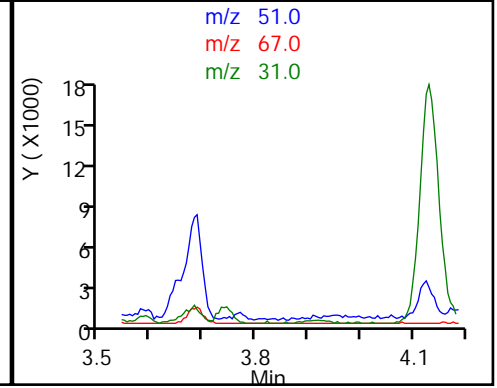
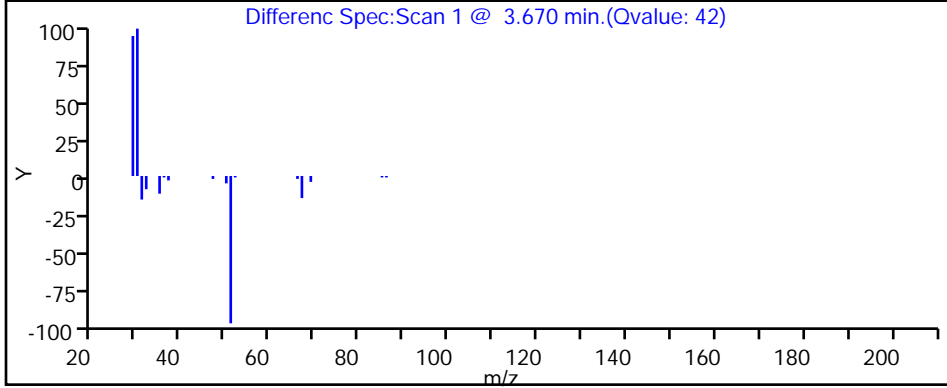
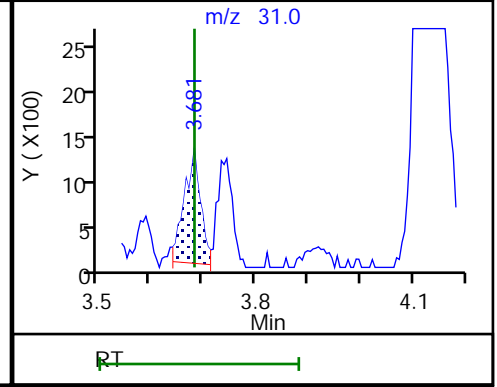
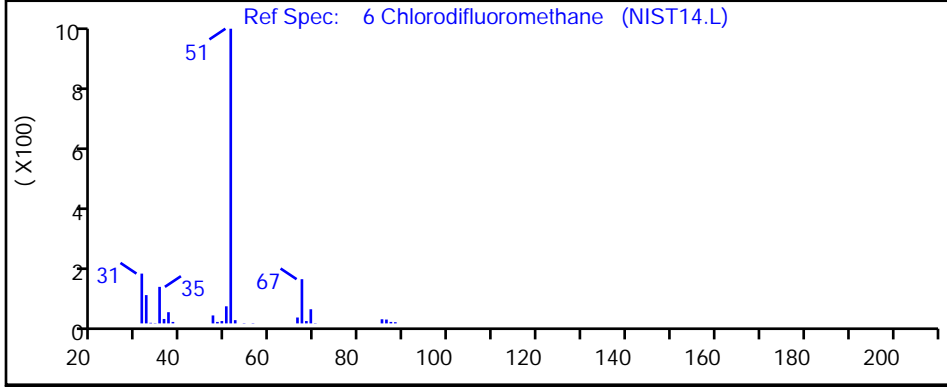
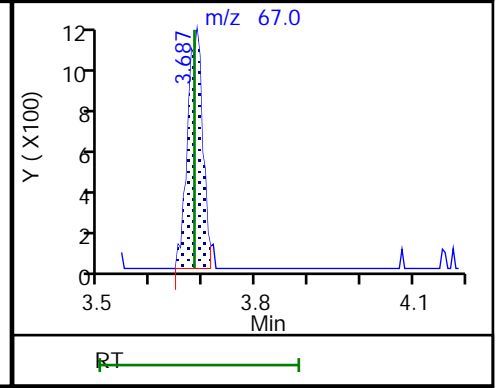
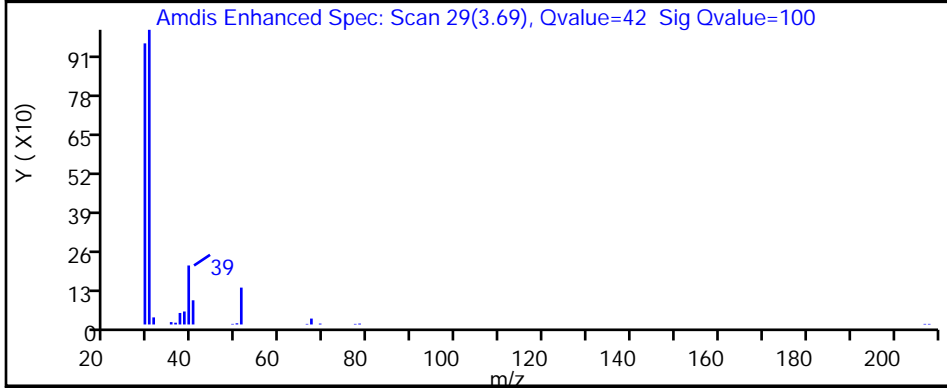
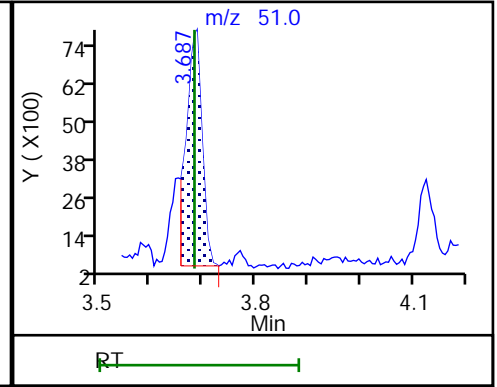
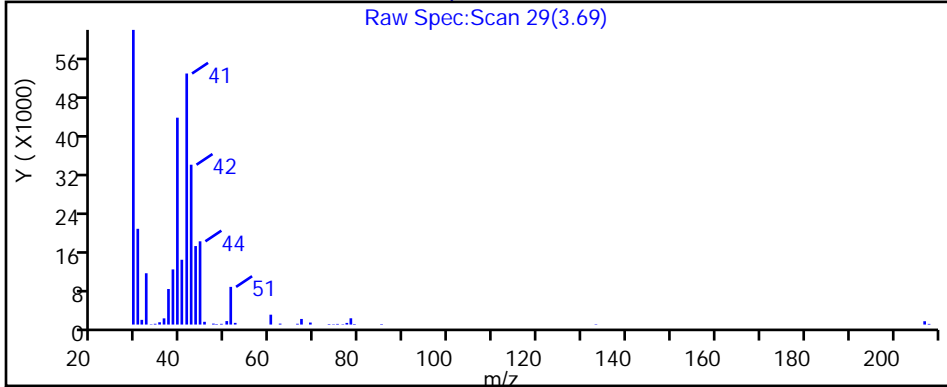
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

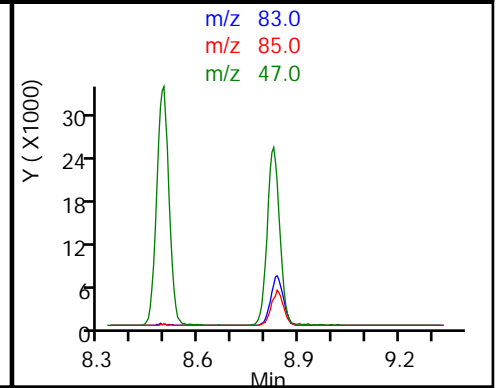
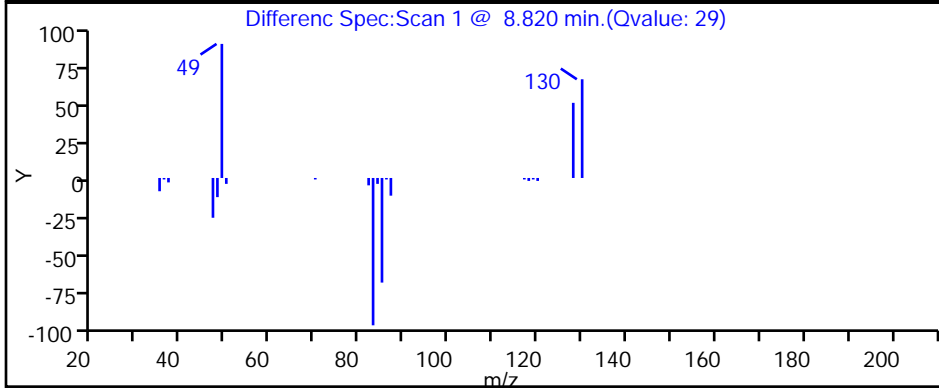
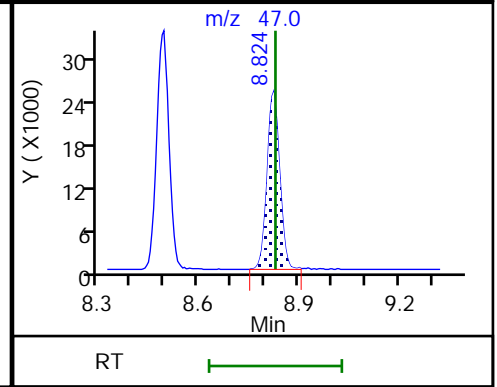
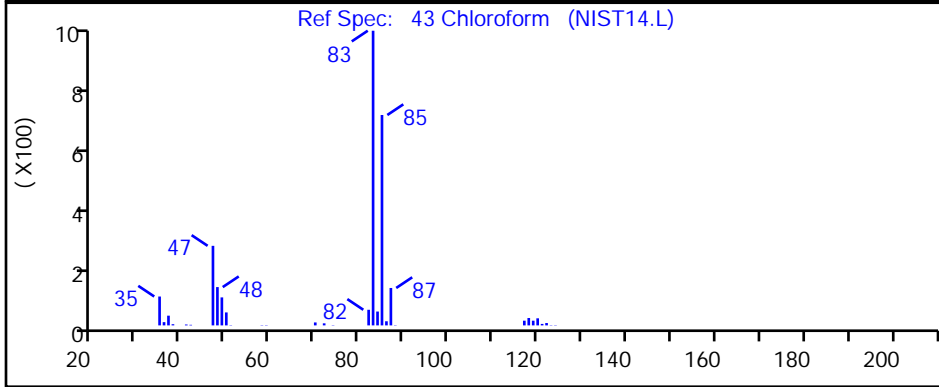
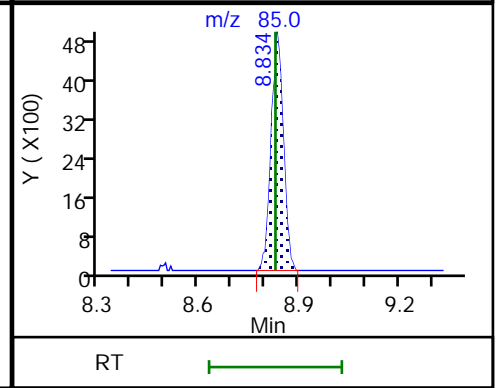
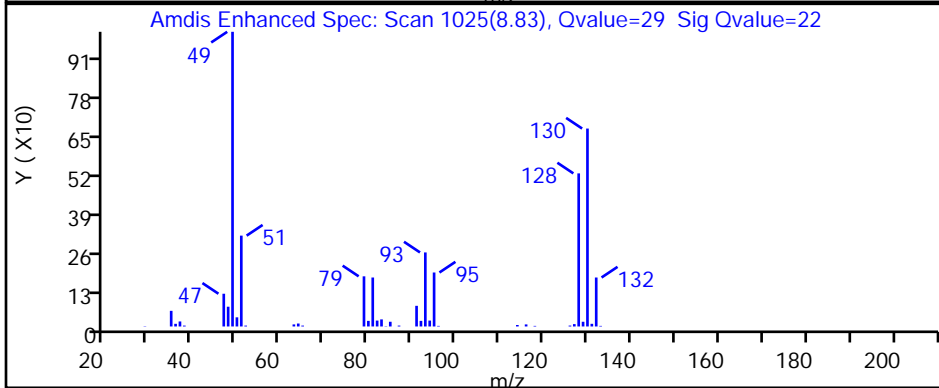
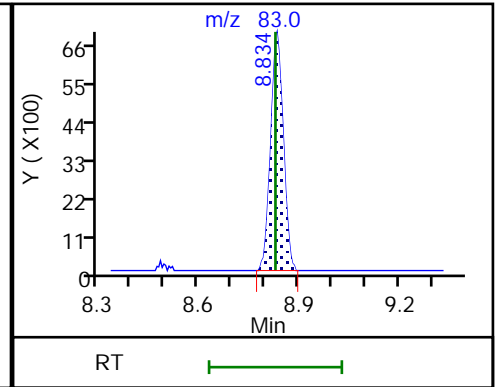
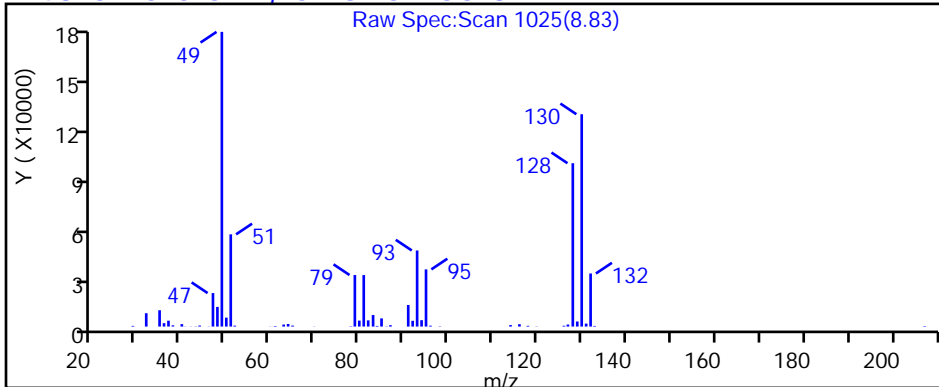
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

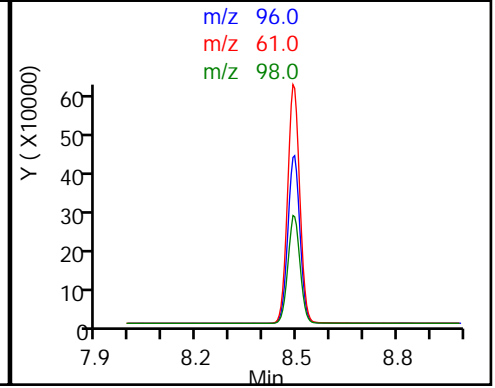
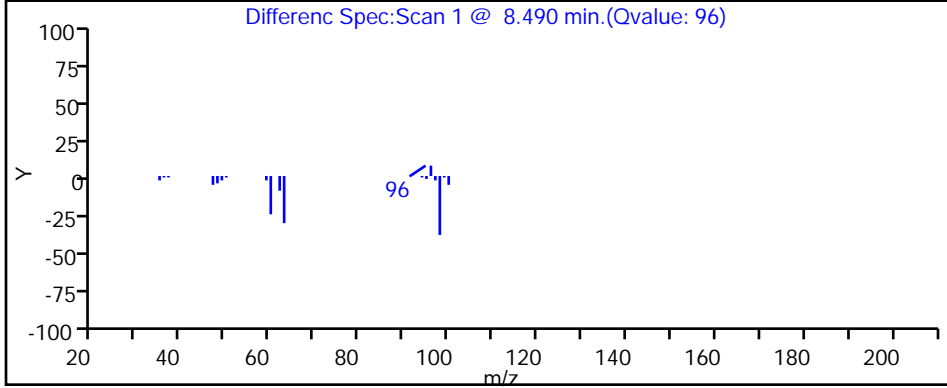
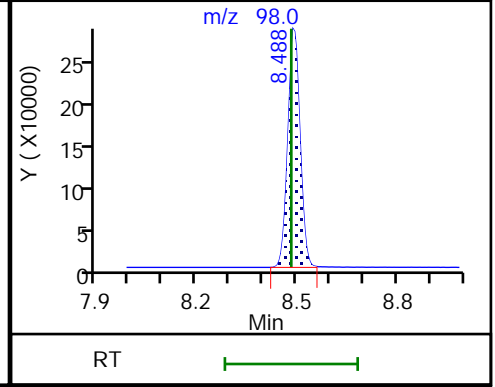
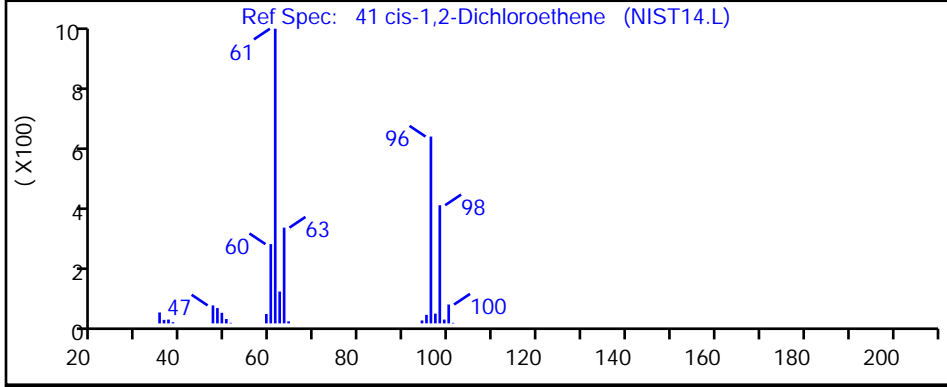
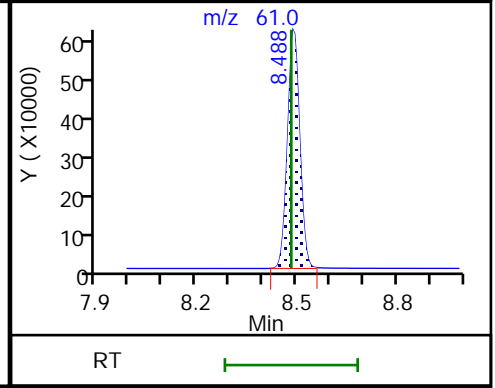
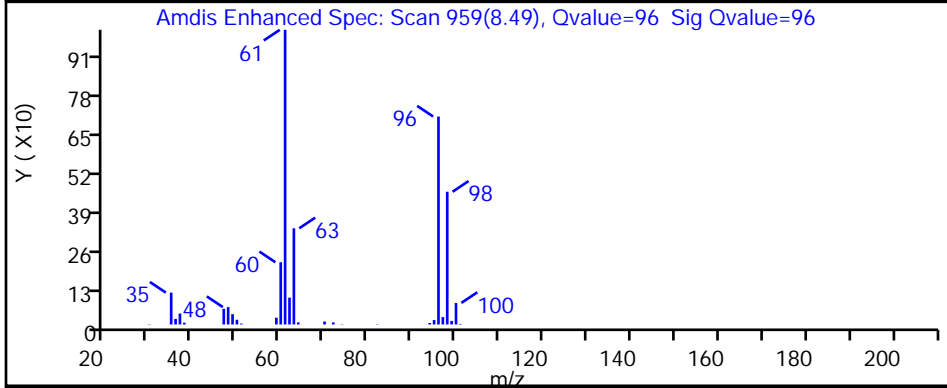
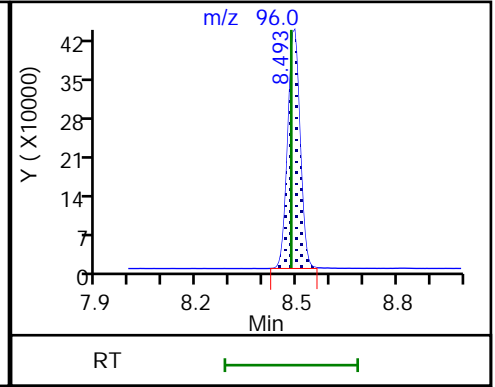
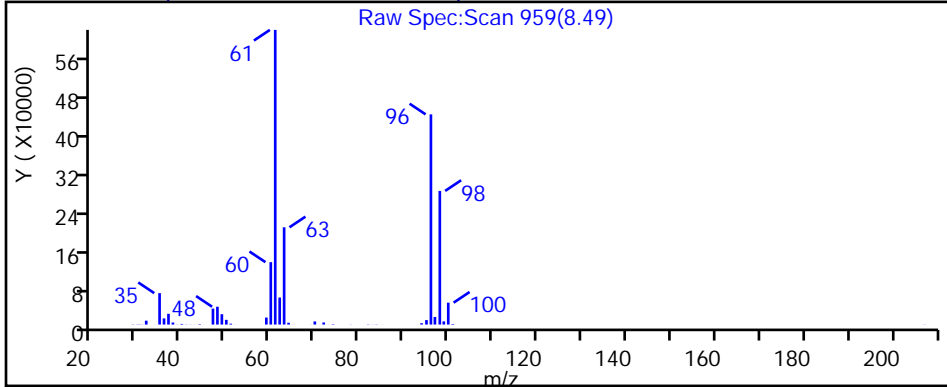
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

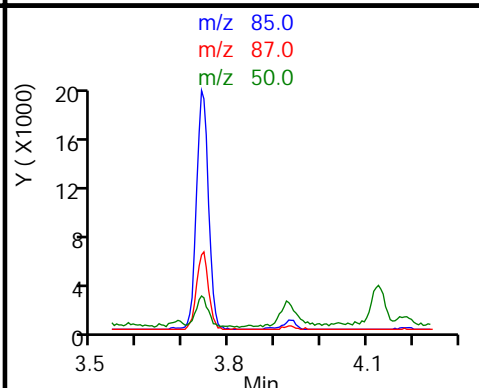
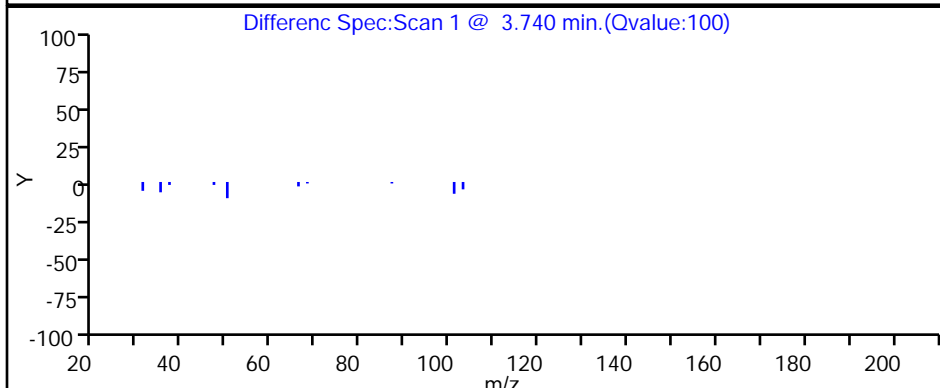
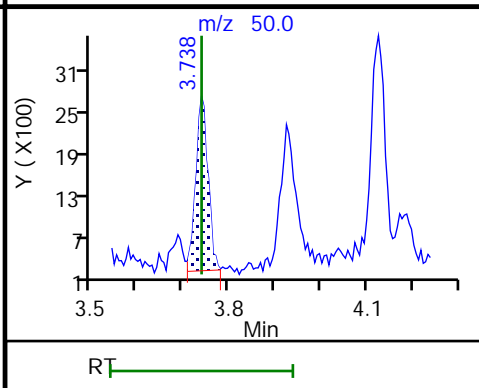
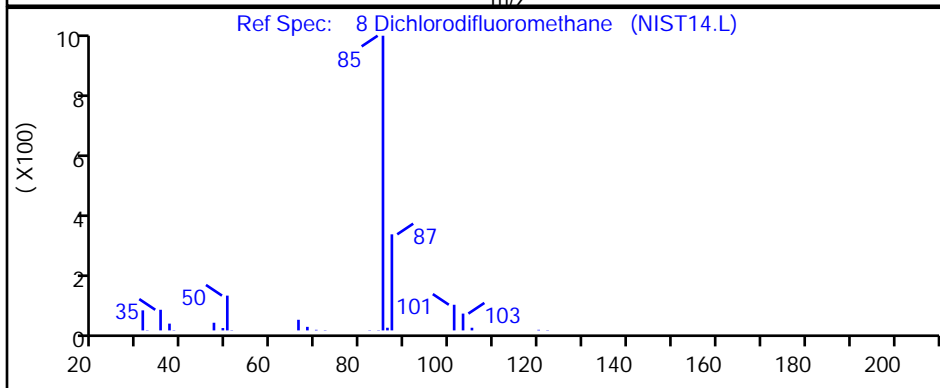
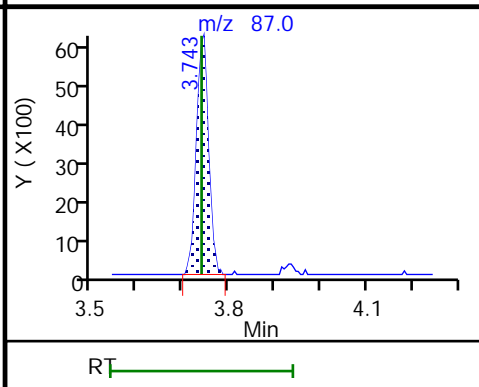
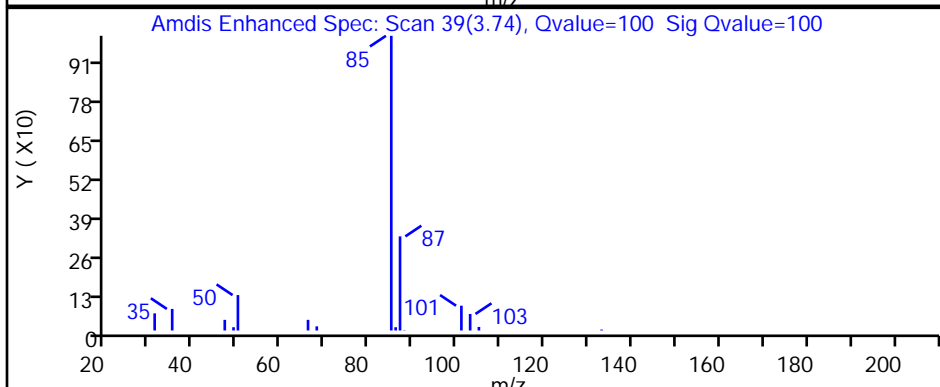
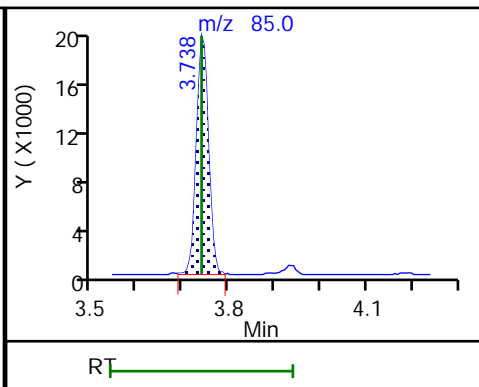
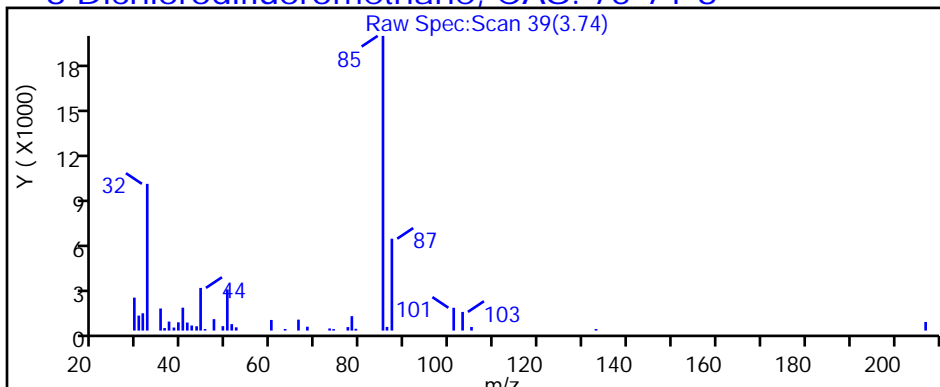
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

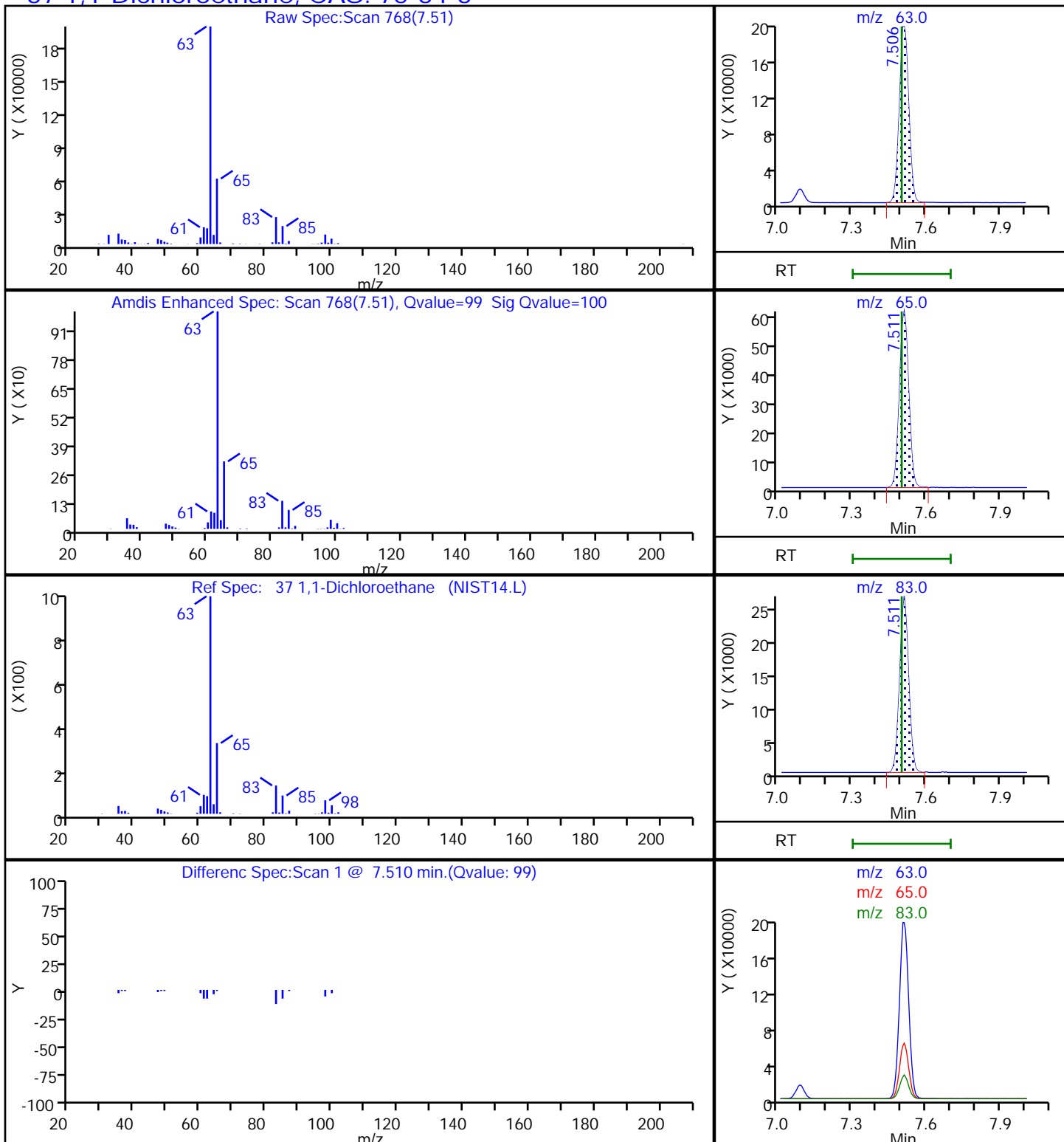
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

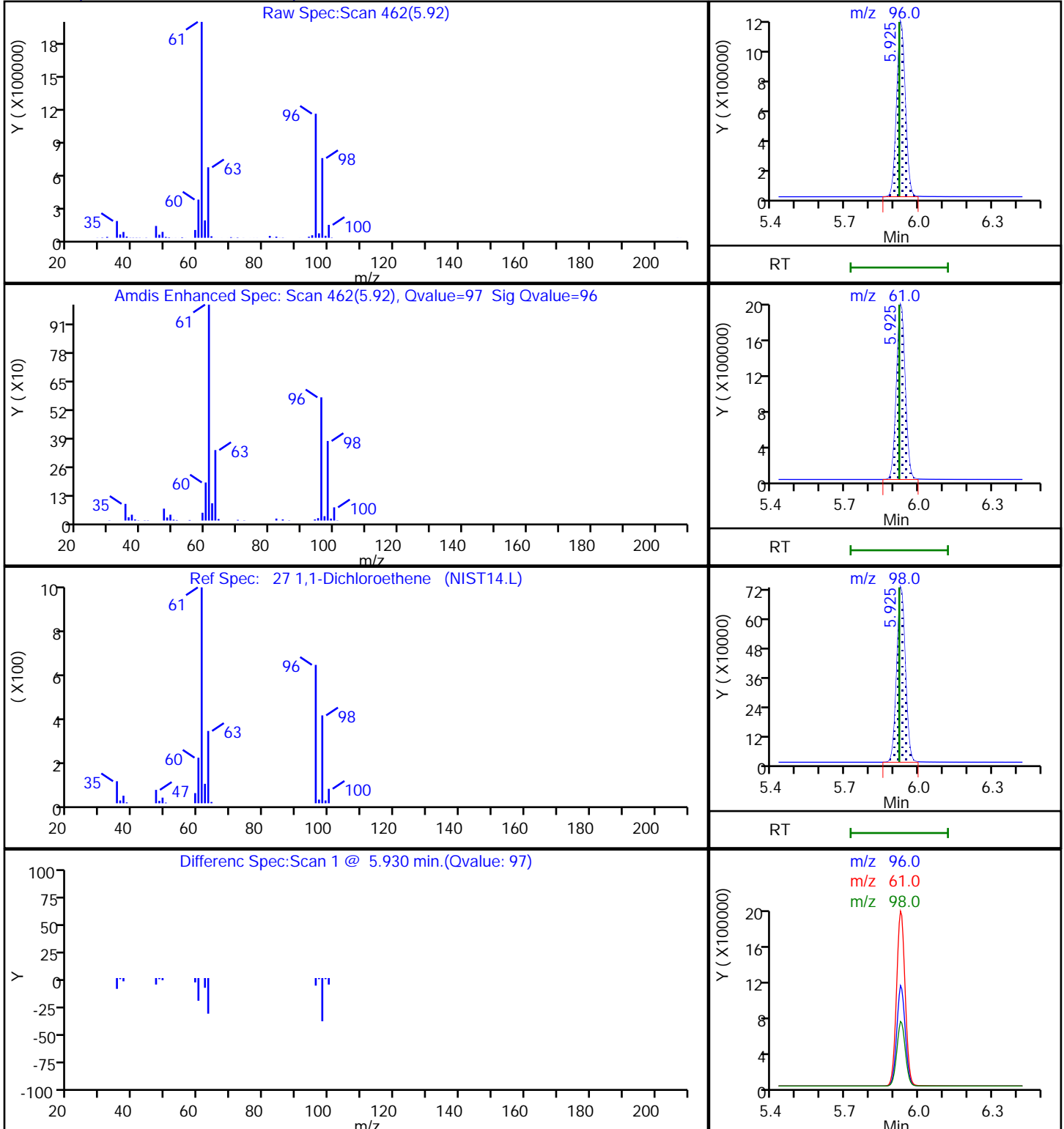
37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D
Injection Date: 26-Feb-2019 17:03:30 Instrument ID: MH
Lims ID: 140-14390-A-5 Lab Sample ID: 140-14390-5
Client ID: SV-118-A-26
Operator ID: HMT ALS Bottle#: 5 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

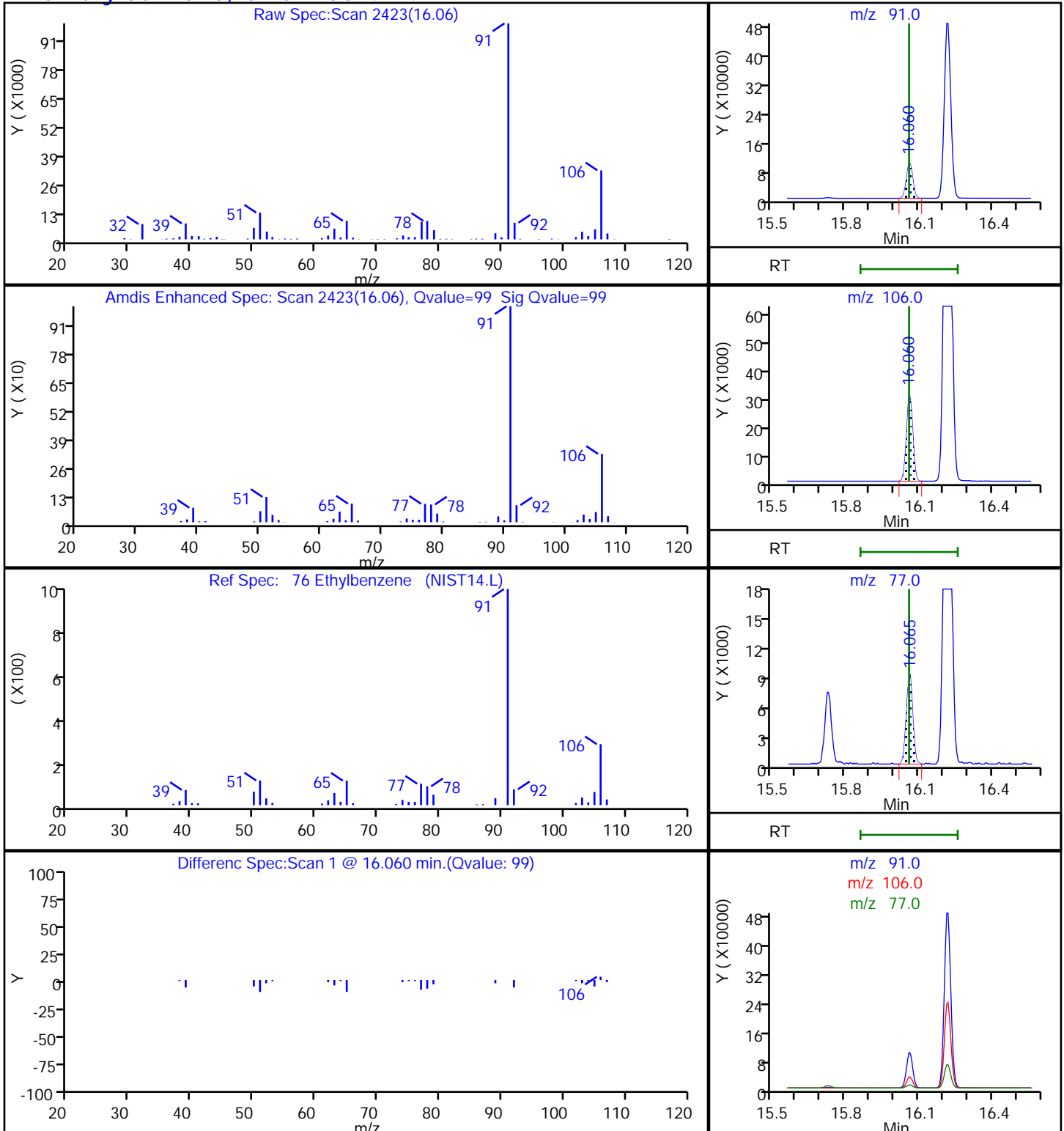
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

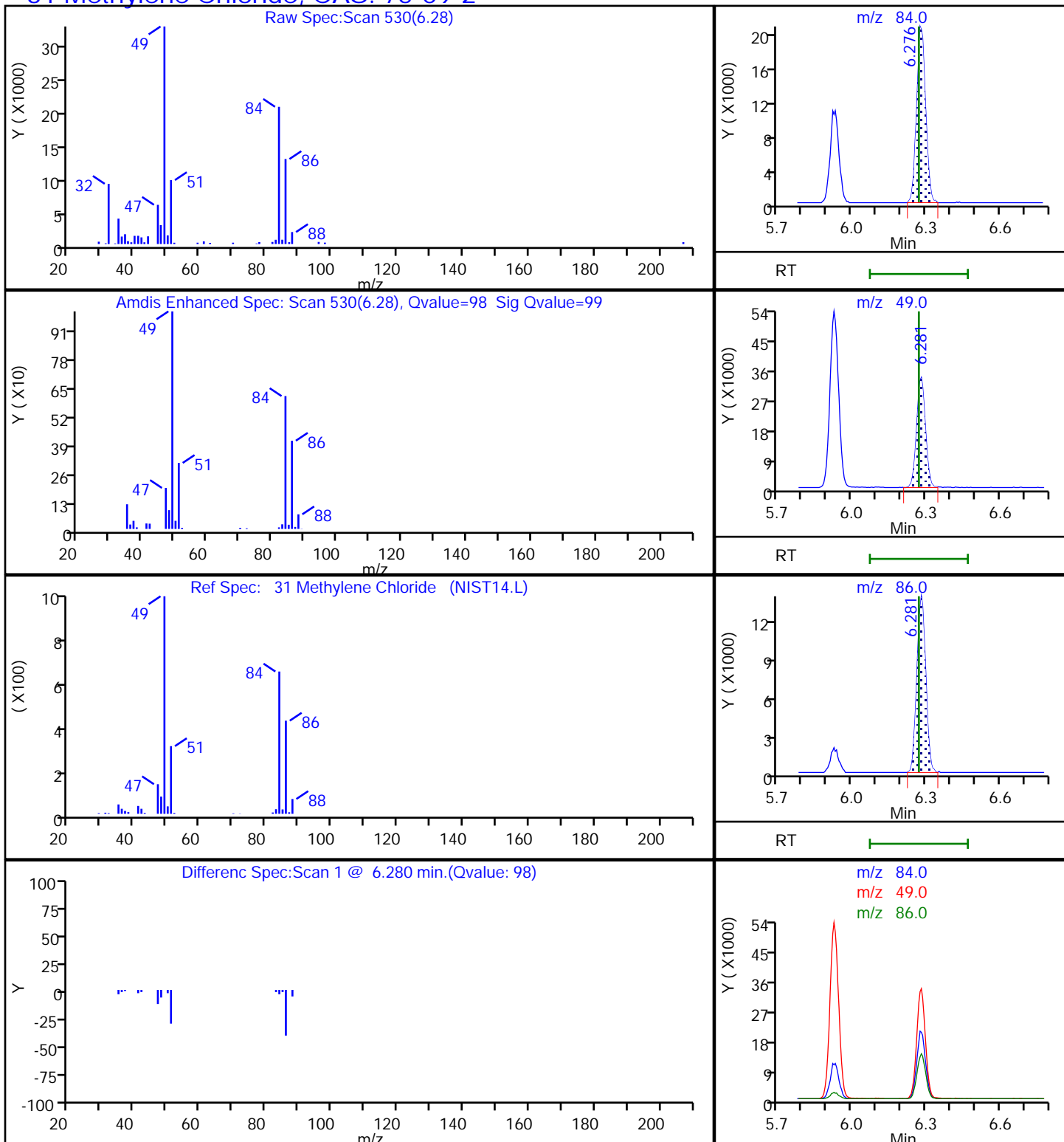
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

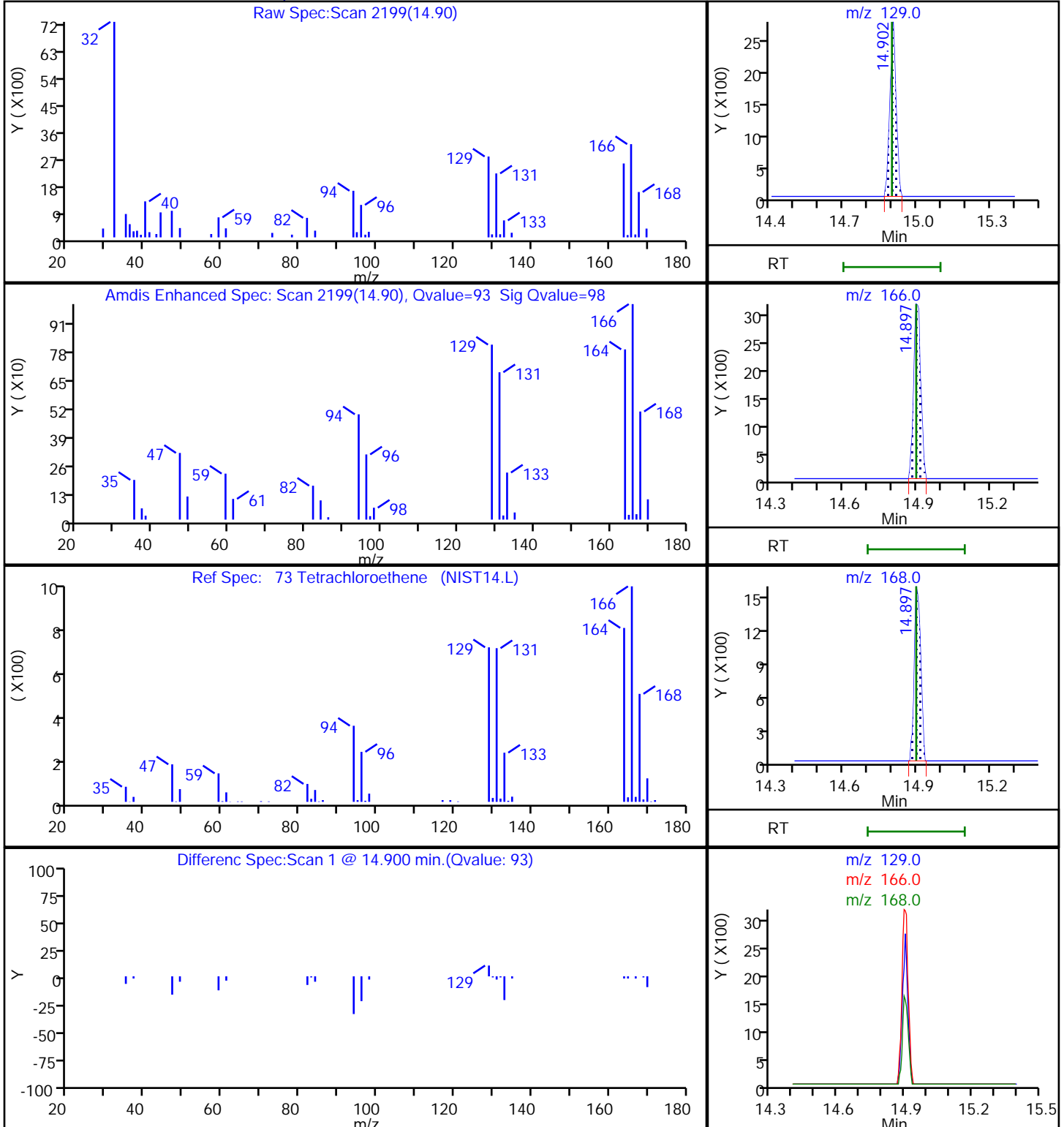
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

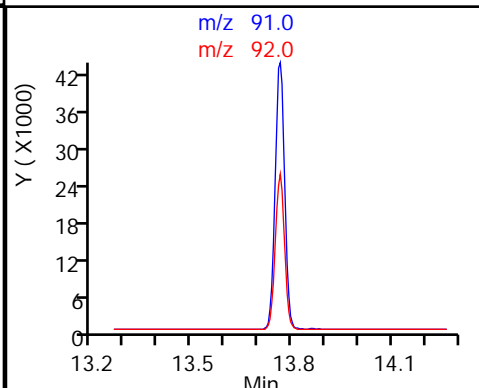
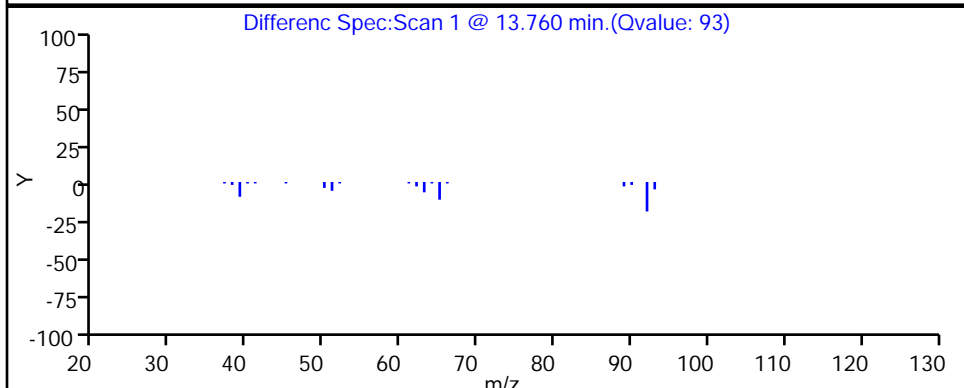
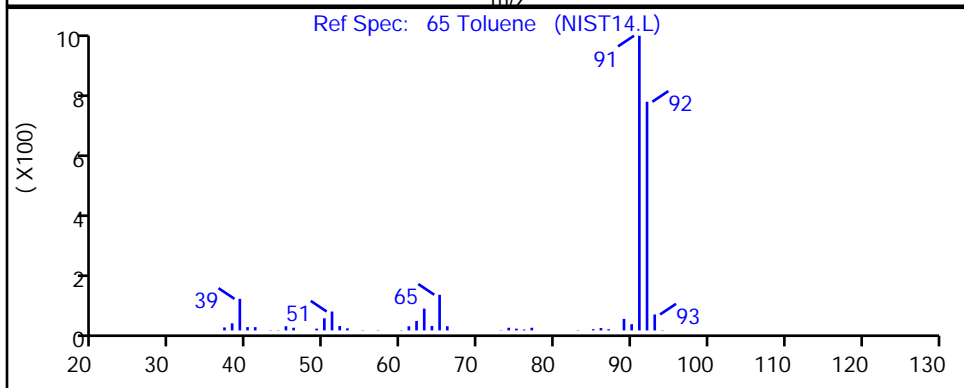
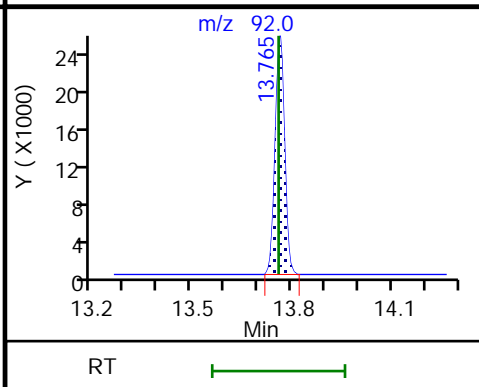
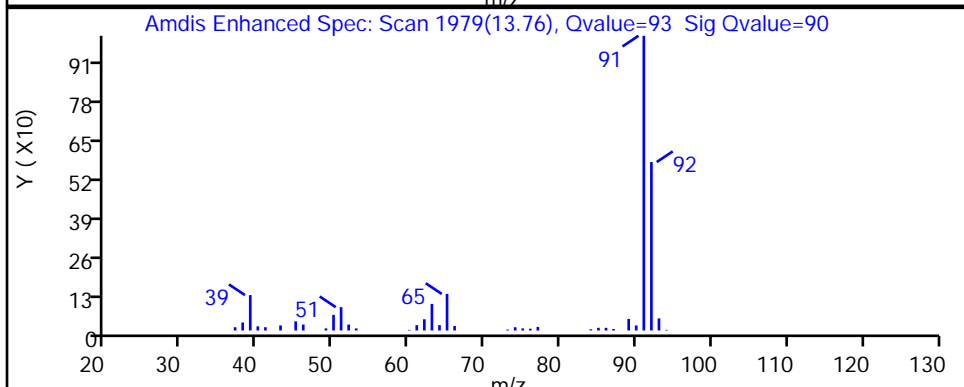
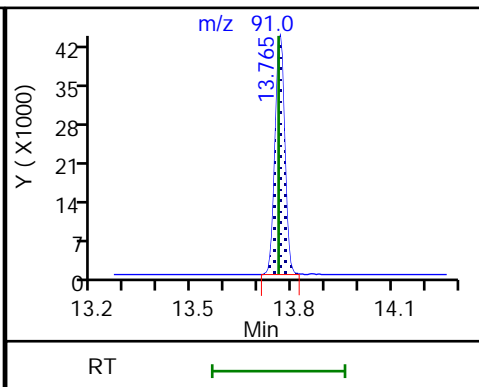
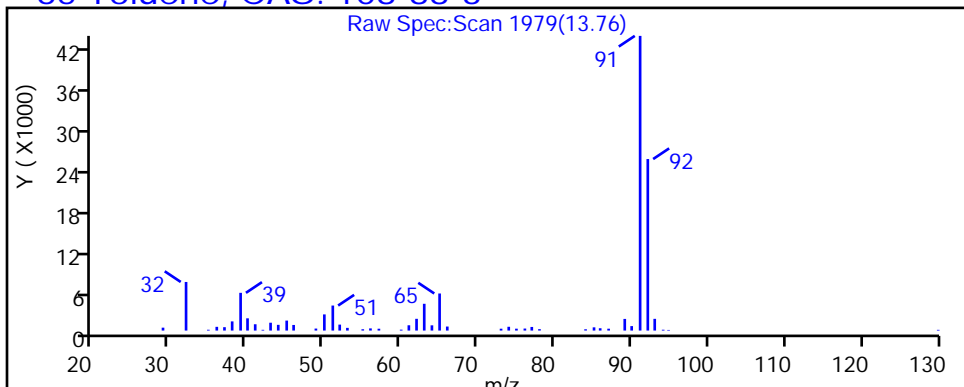
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

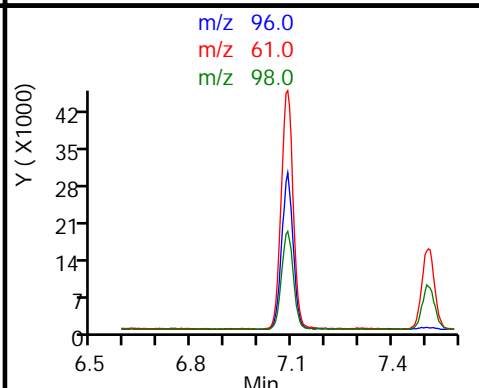
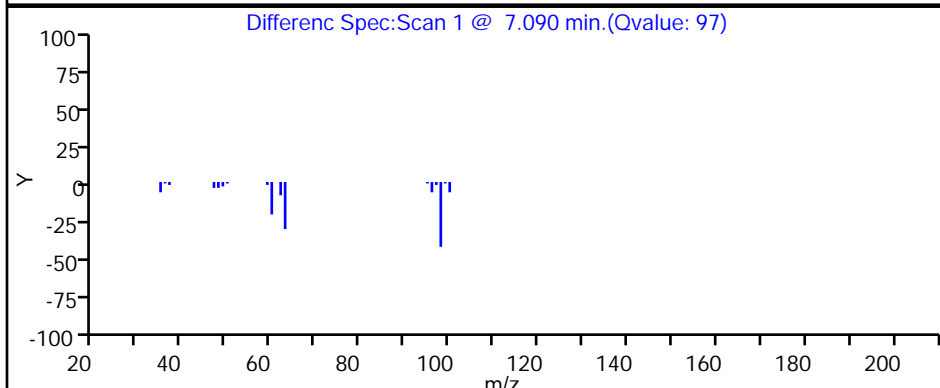
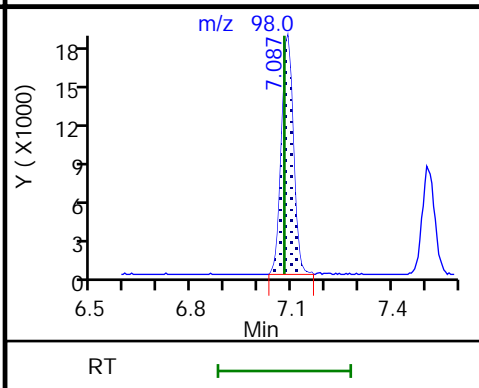
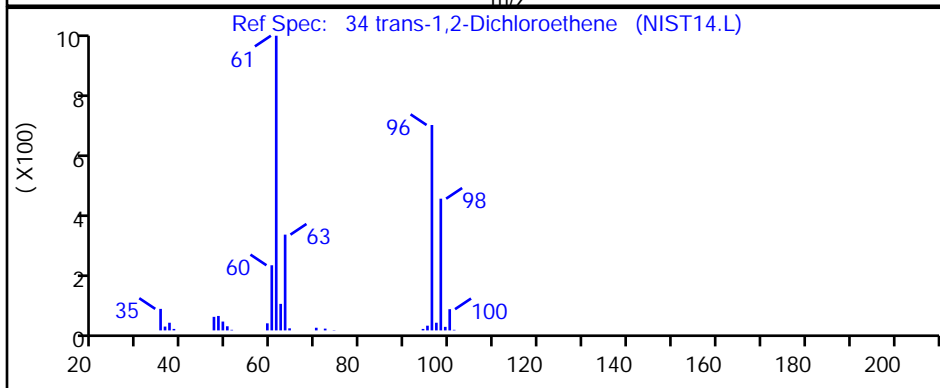
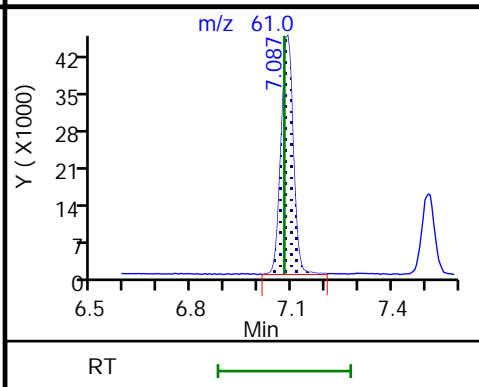
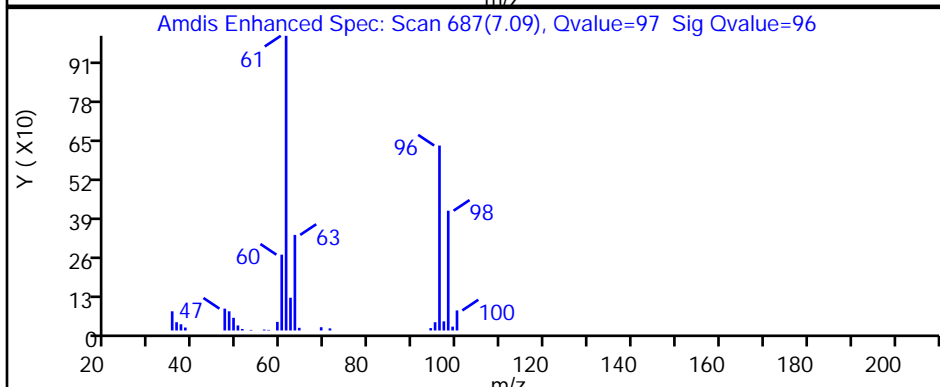
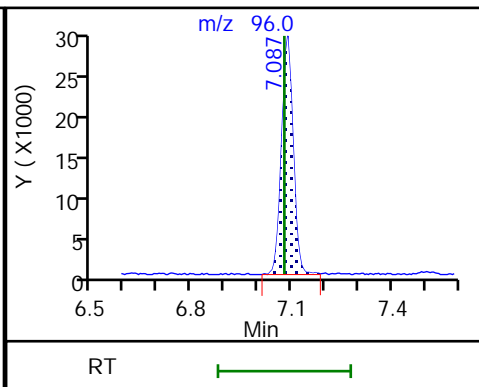
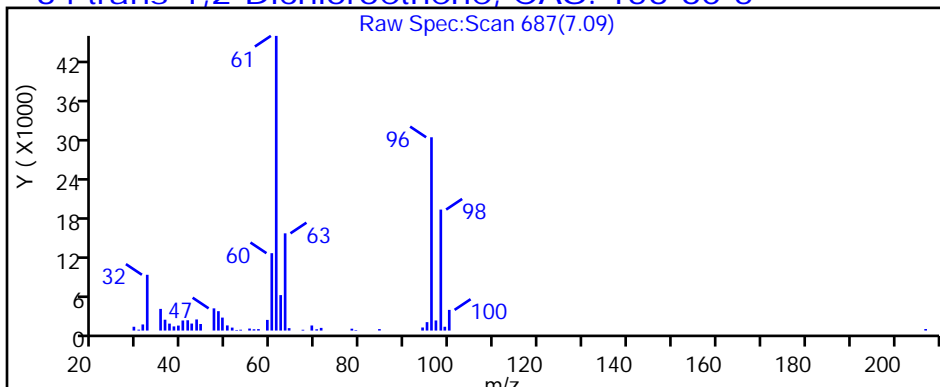
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

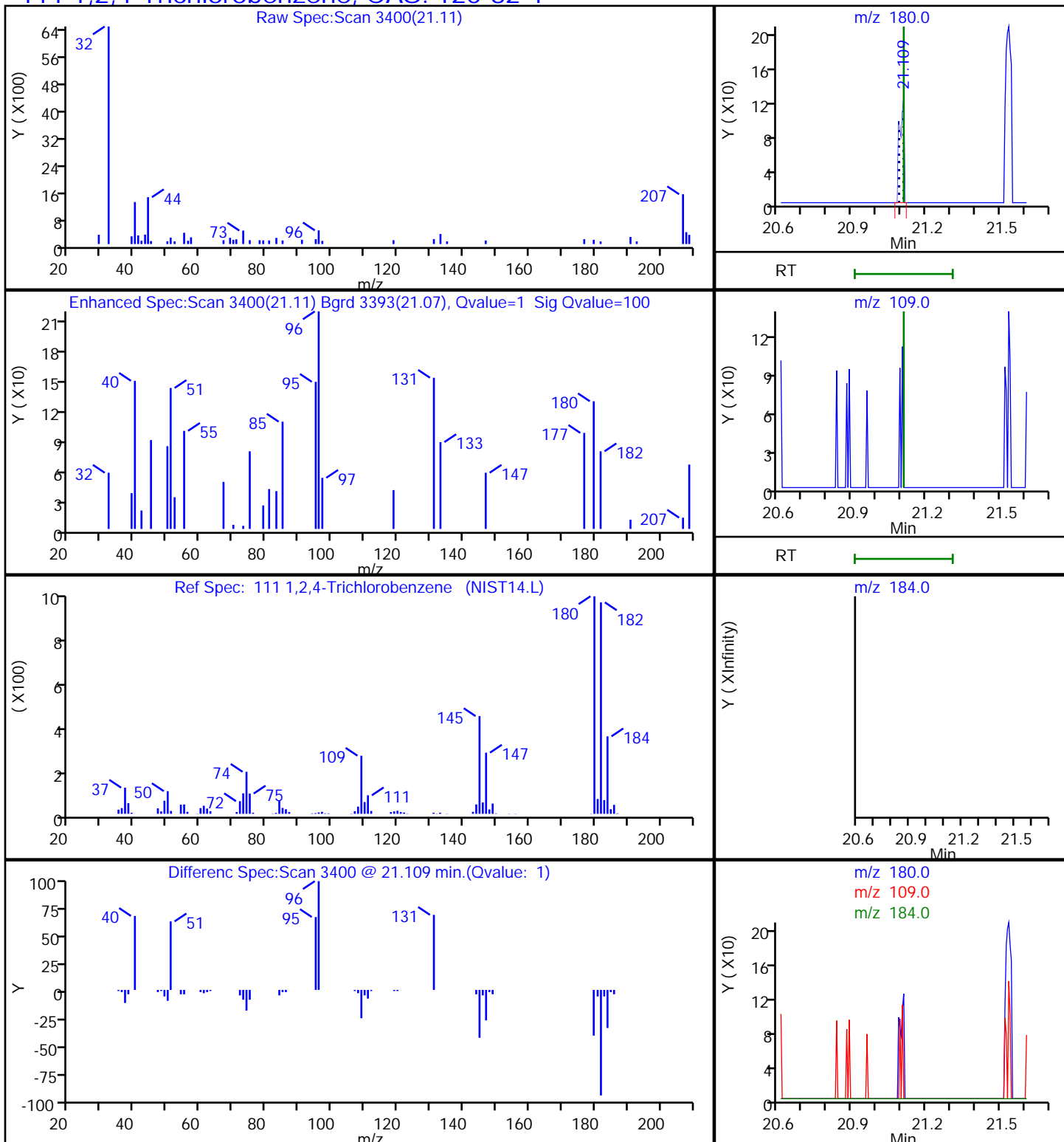
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

111 1,2,4-Trichlorobenzene, CAS: 120-82-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

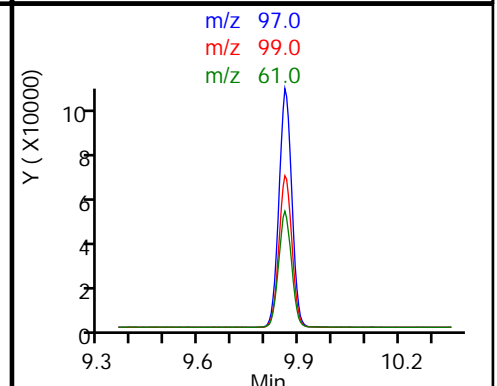
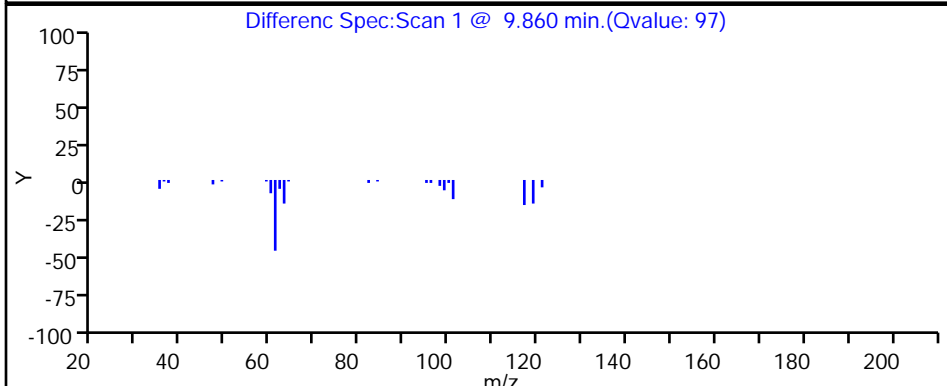
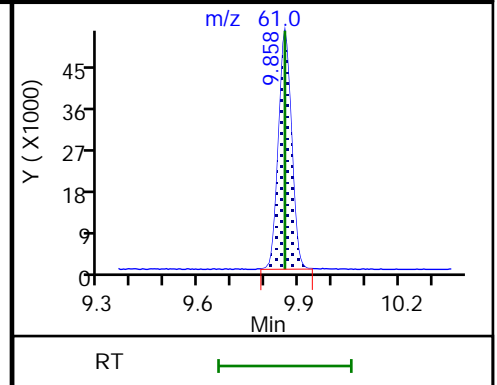
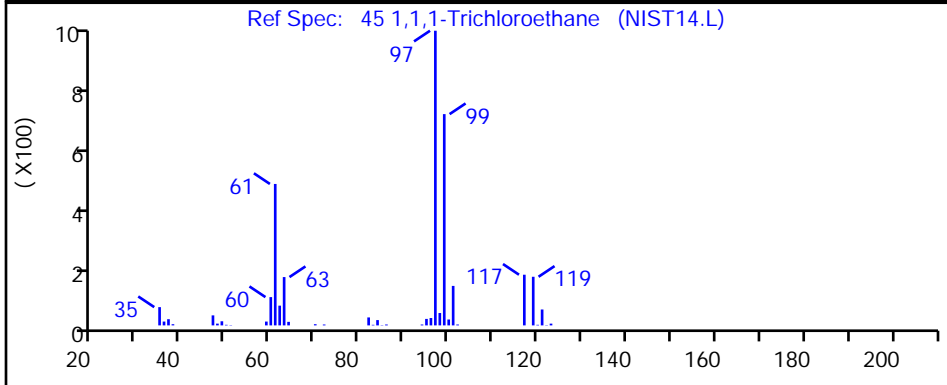
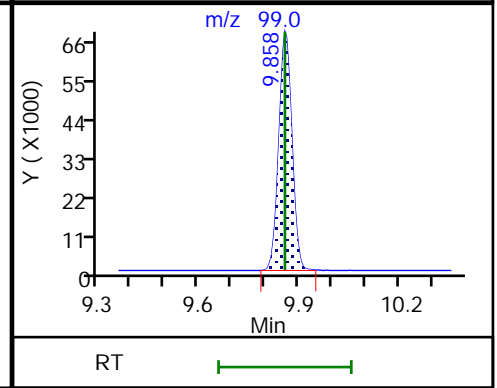
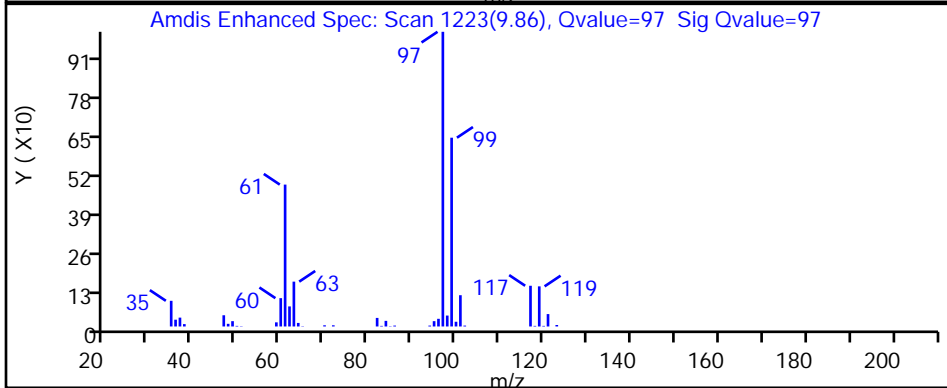
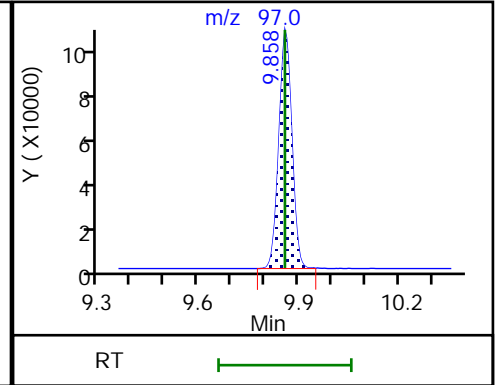
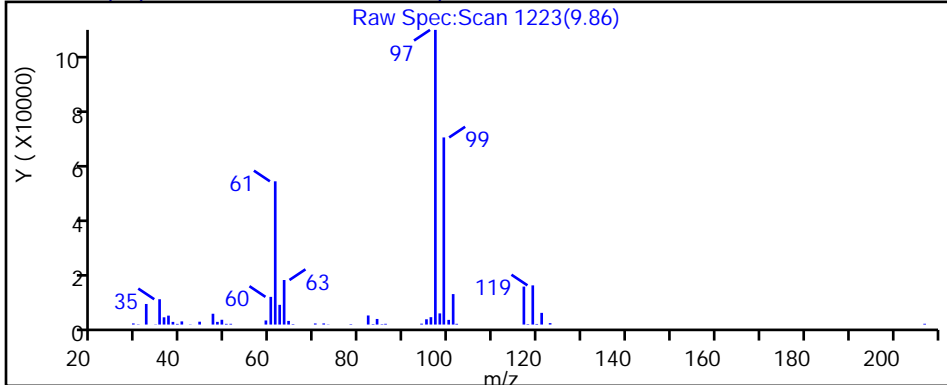
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

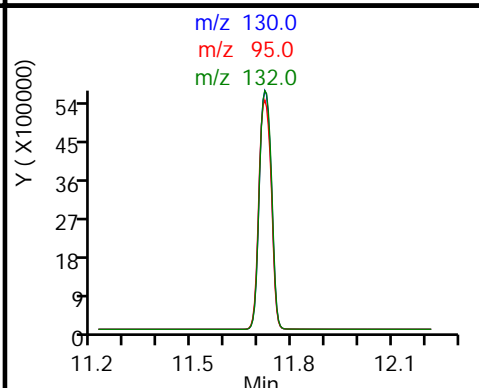
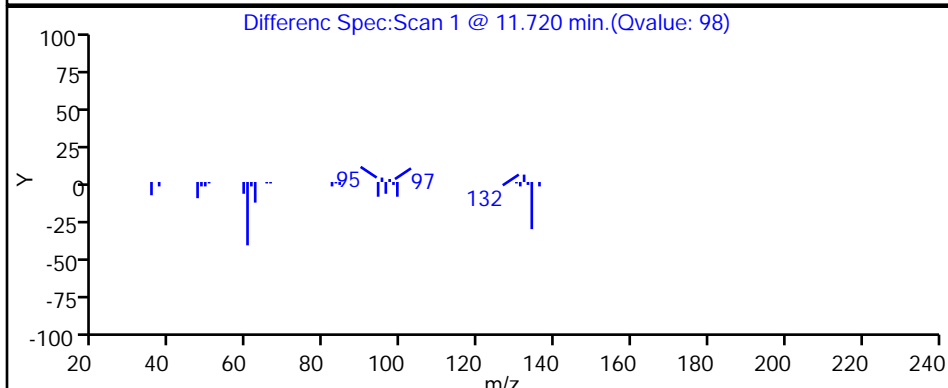
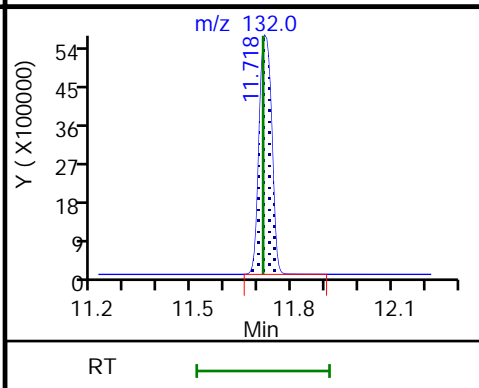
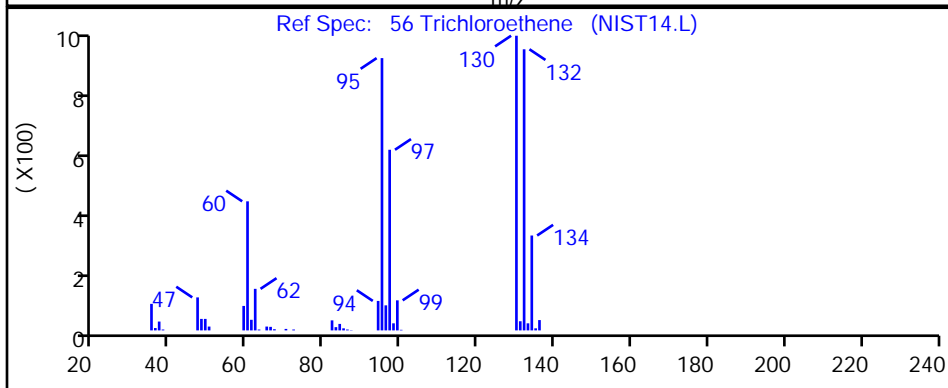
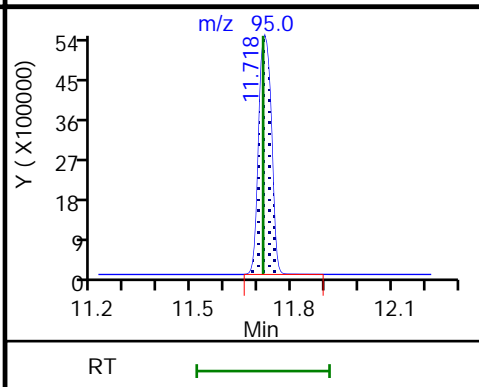
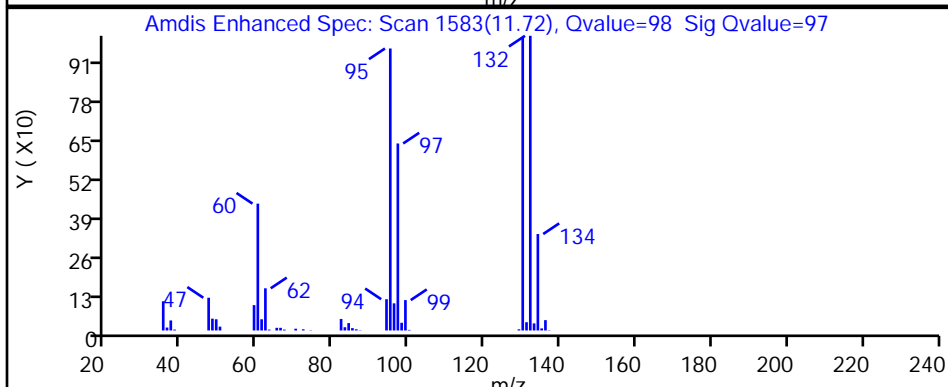
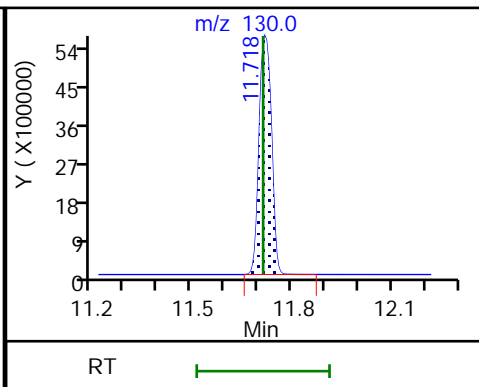
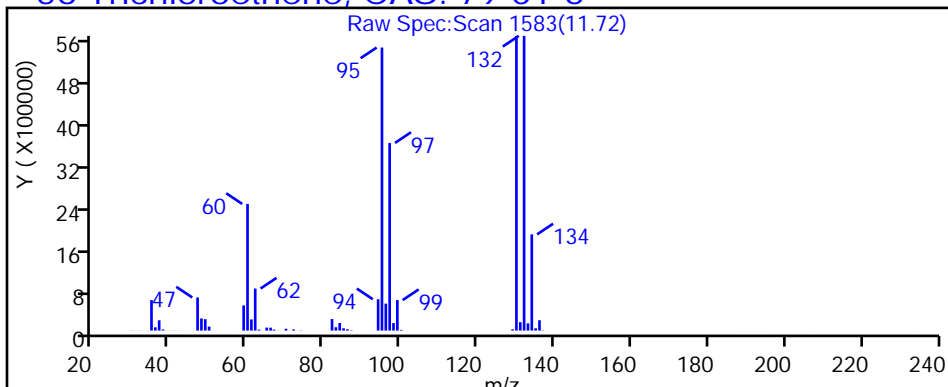
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

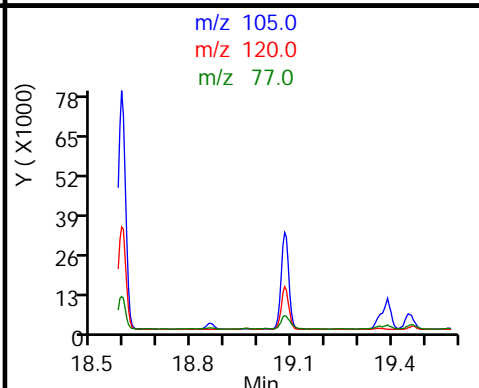
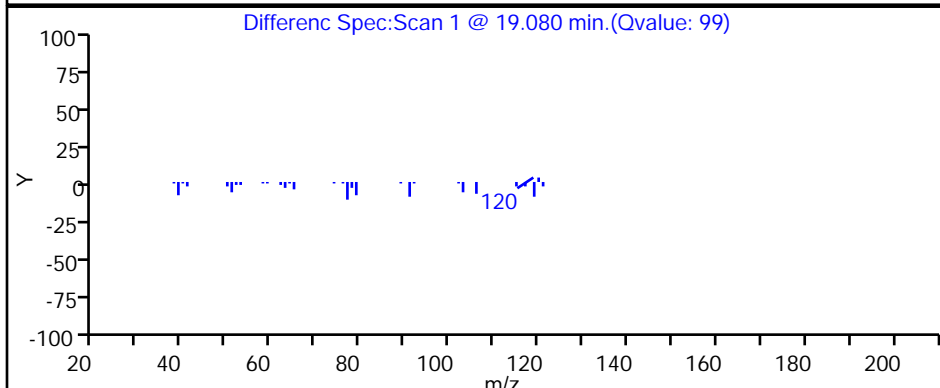
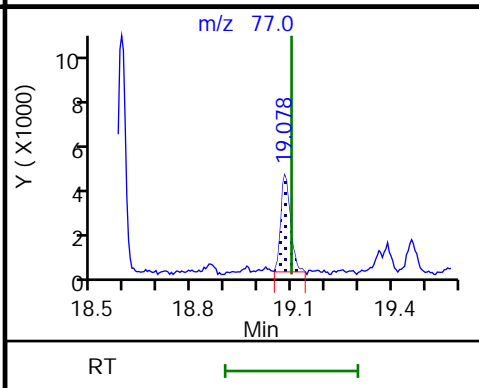
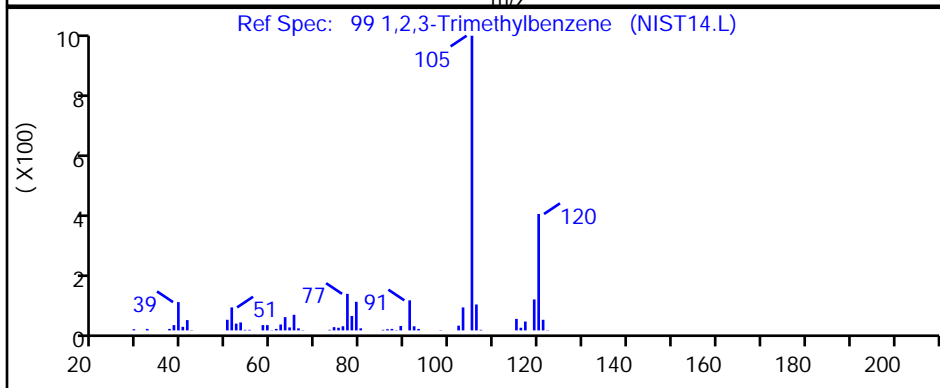
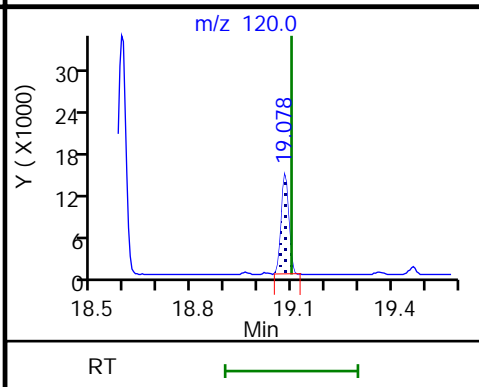
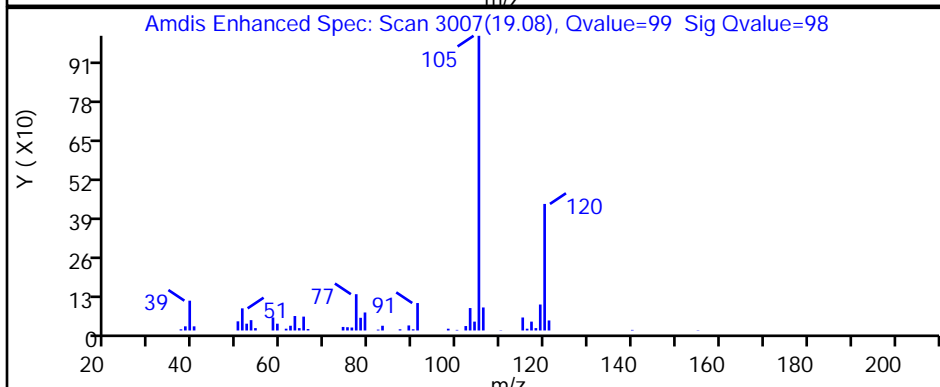
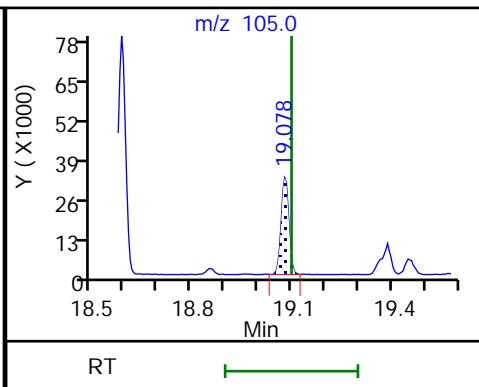
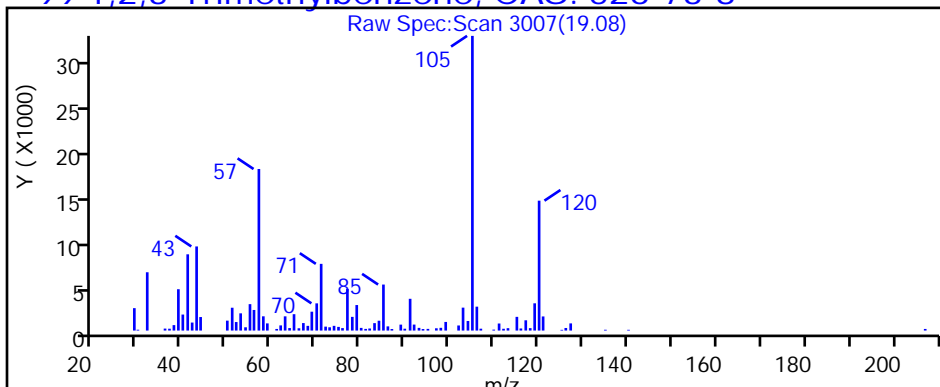
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

99 1,2,3-Trimethylbenzene, CAS: 526-73-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

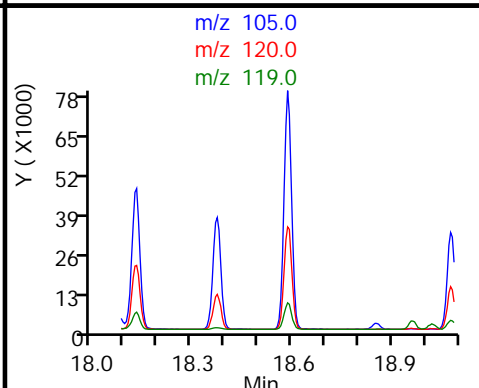
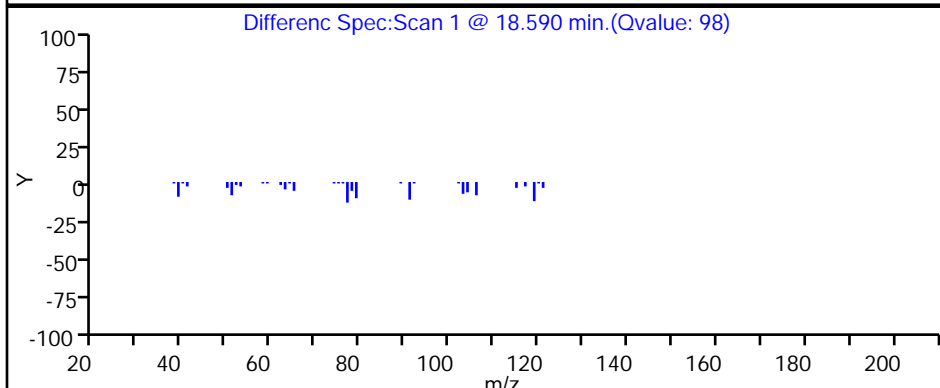
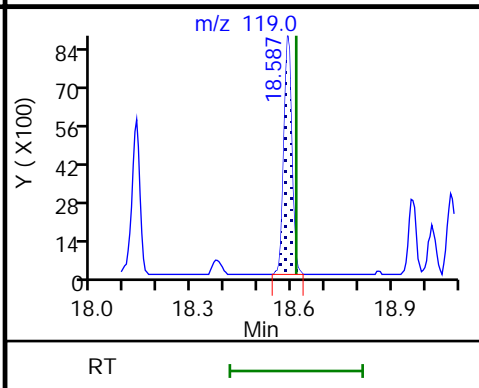
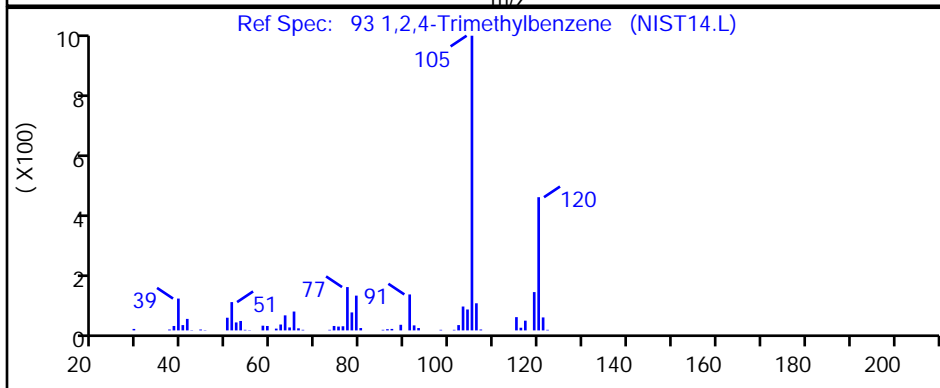
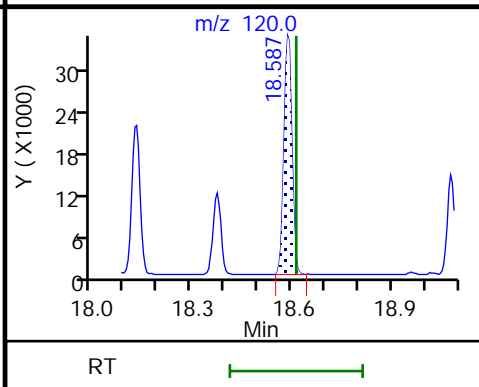
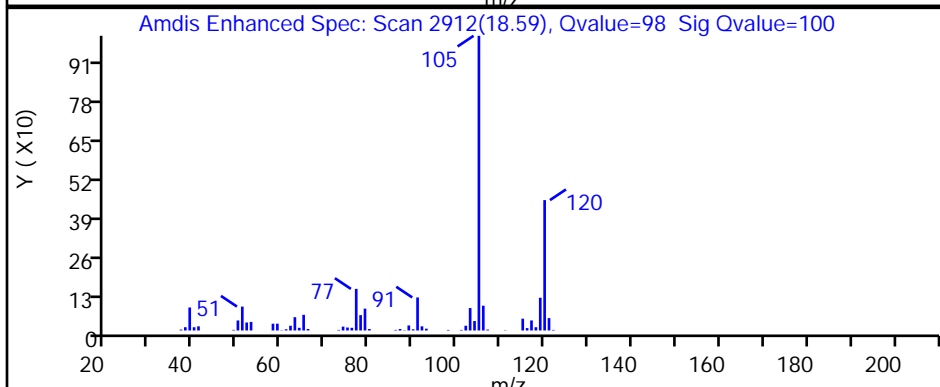
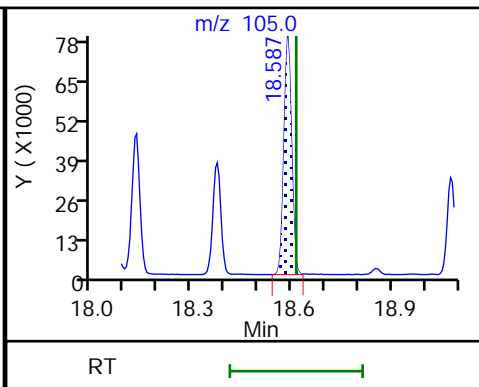
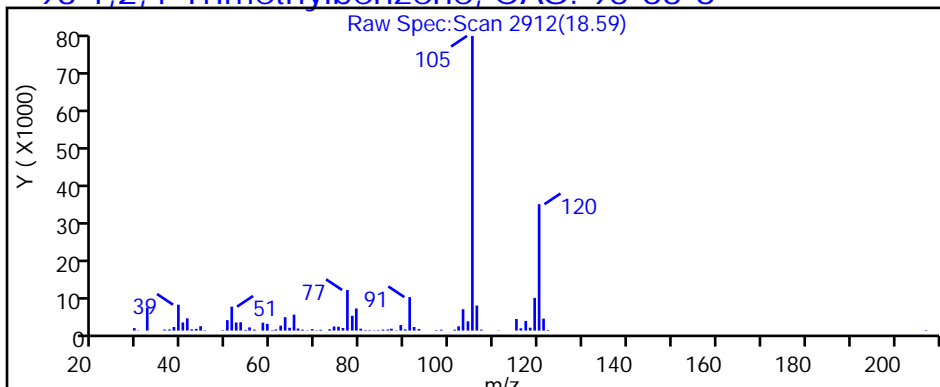
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

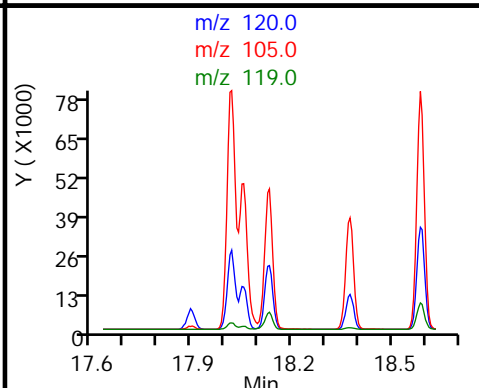
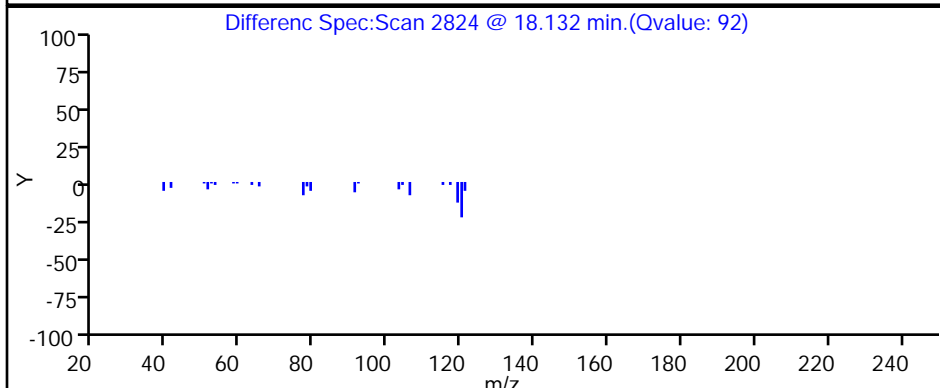
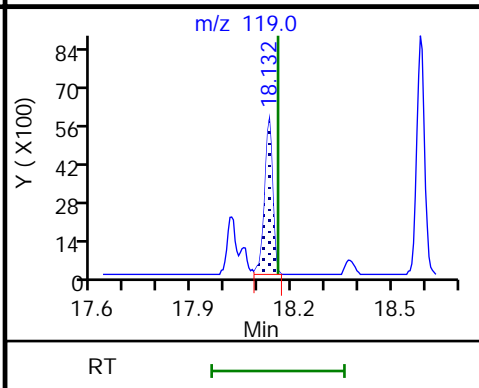
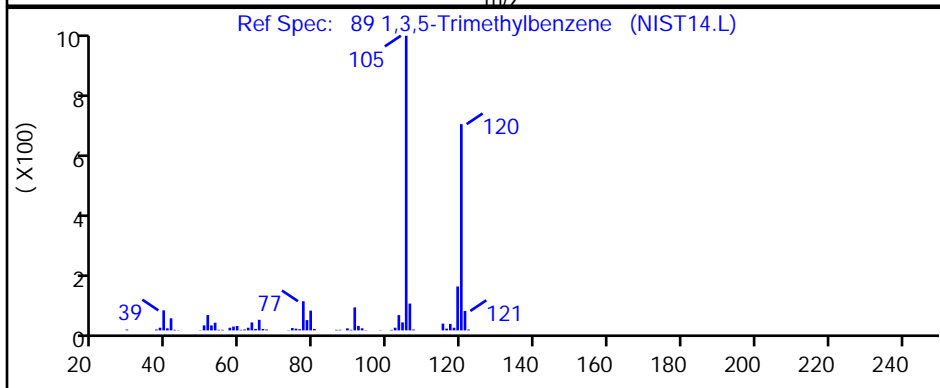
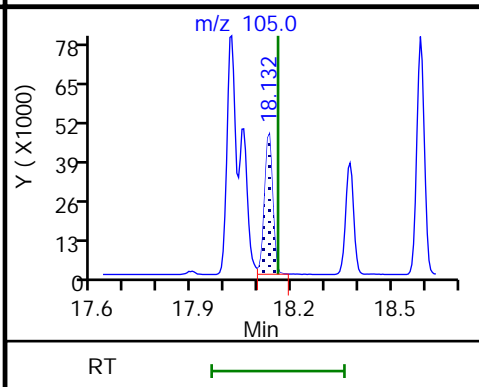
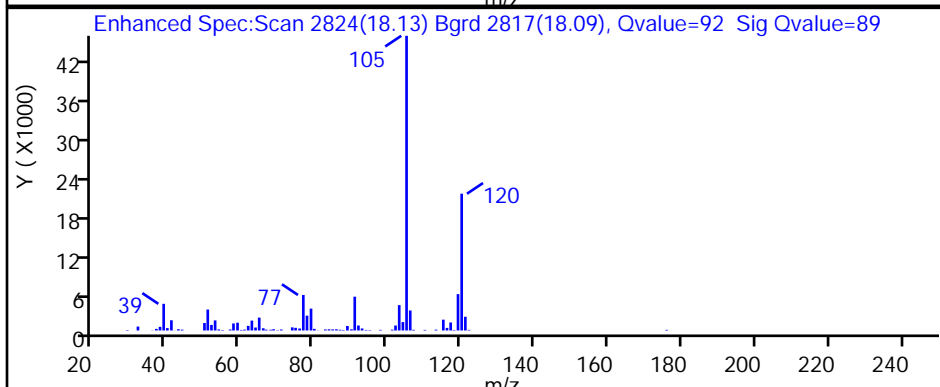
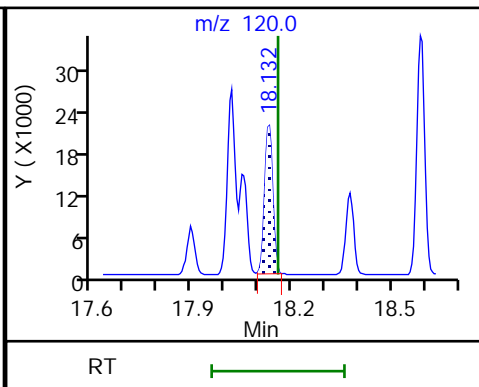
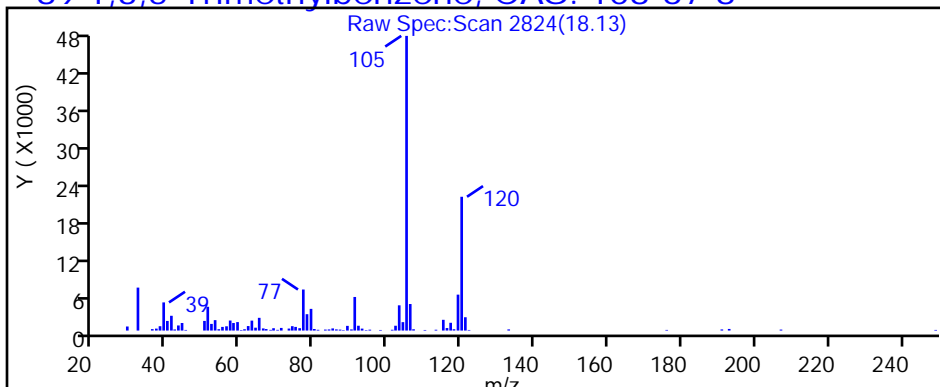
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

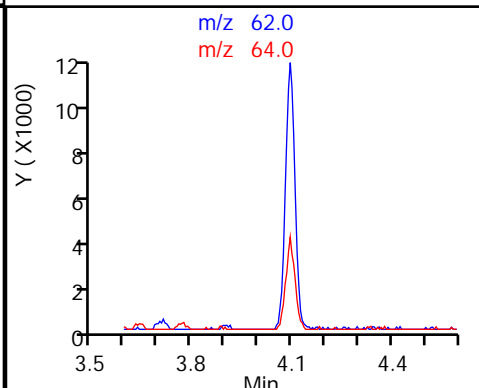
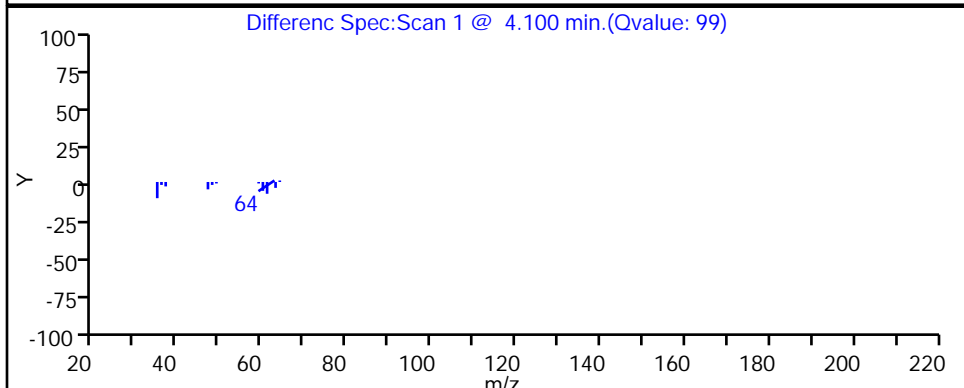
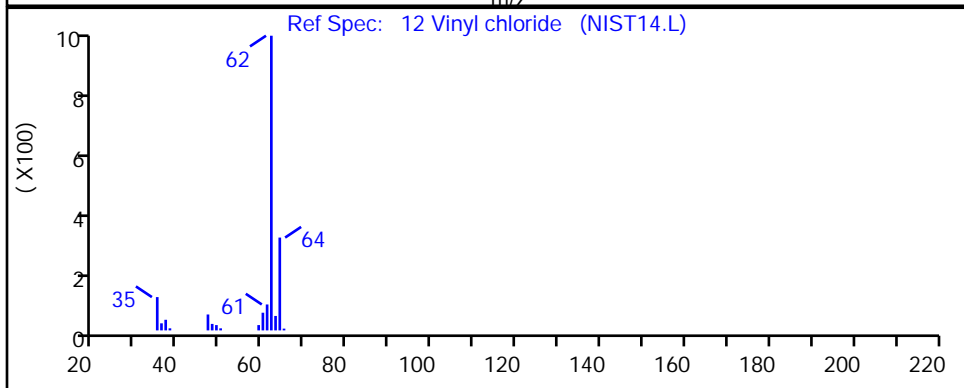
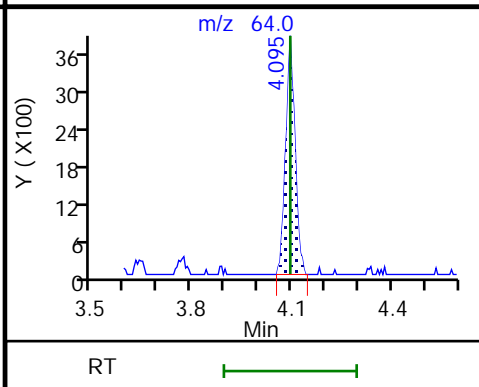
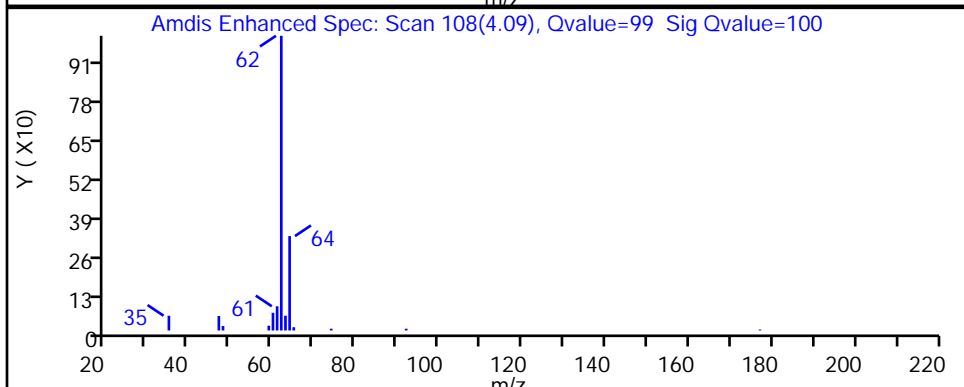
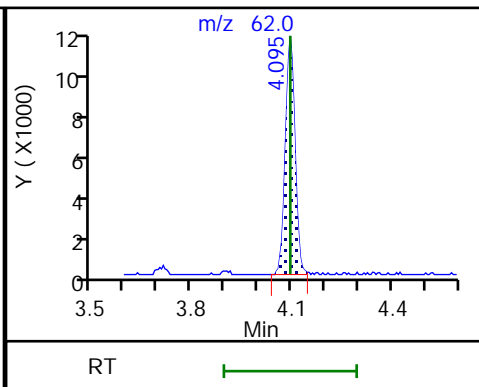
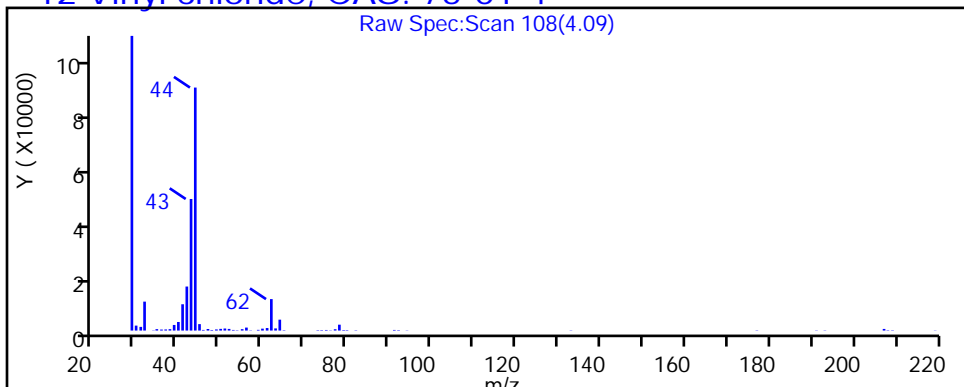
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

12 Vinyl chloride, CAS: 75-01-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

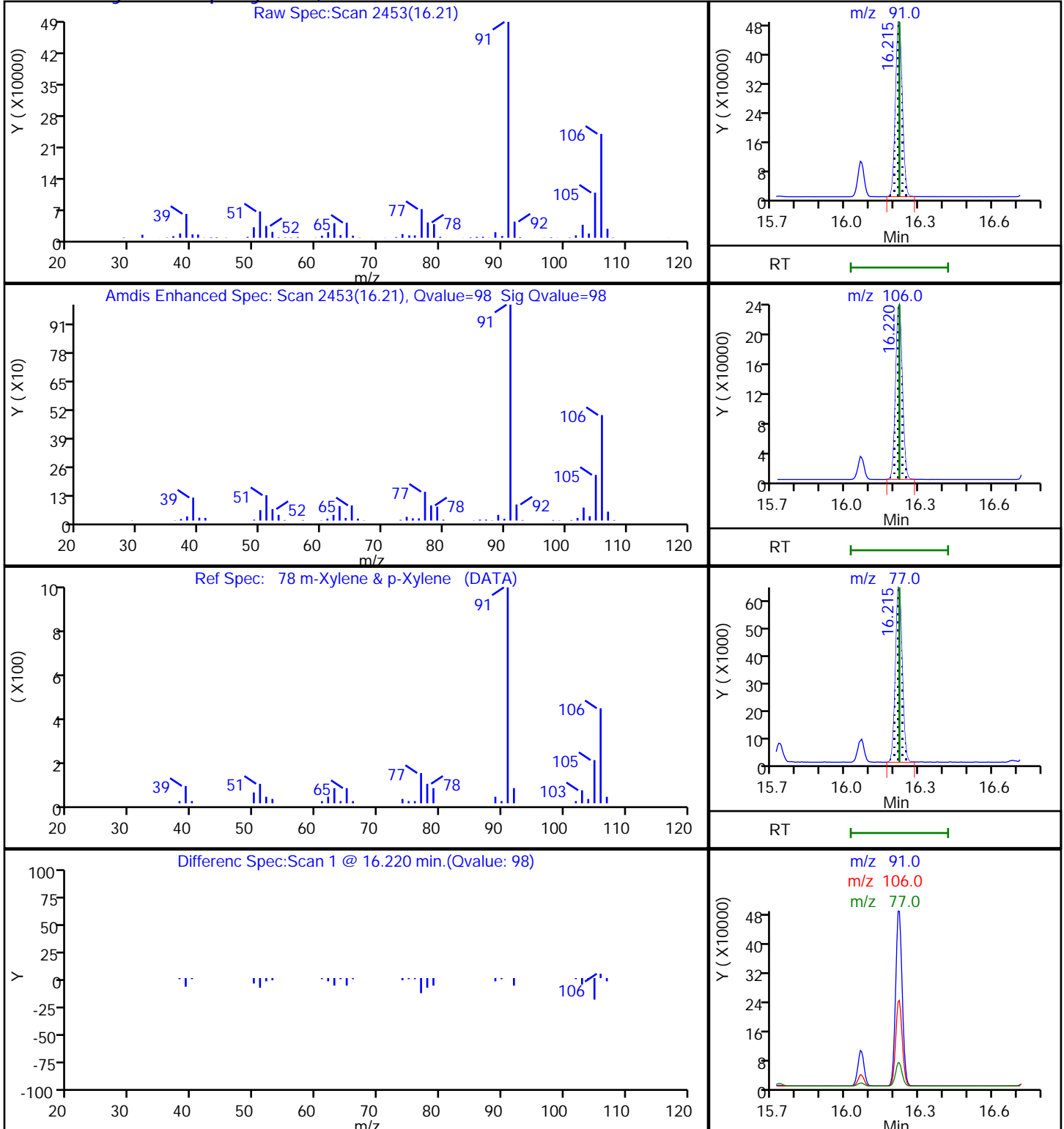
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P105.D

Injection Date: 26-Feb-2019 17:03:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

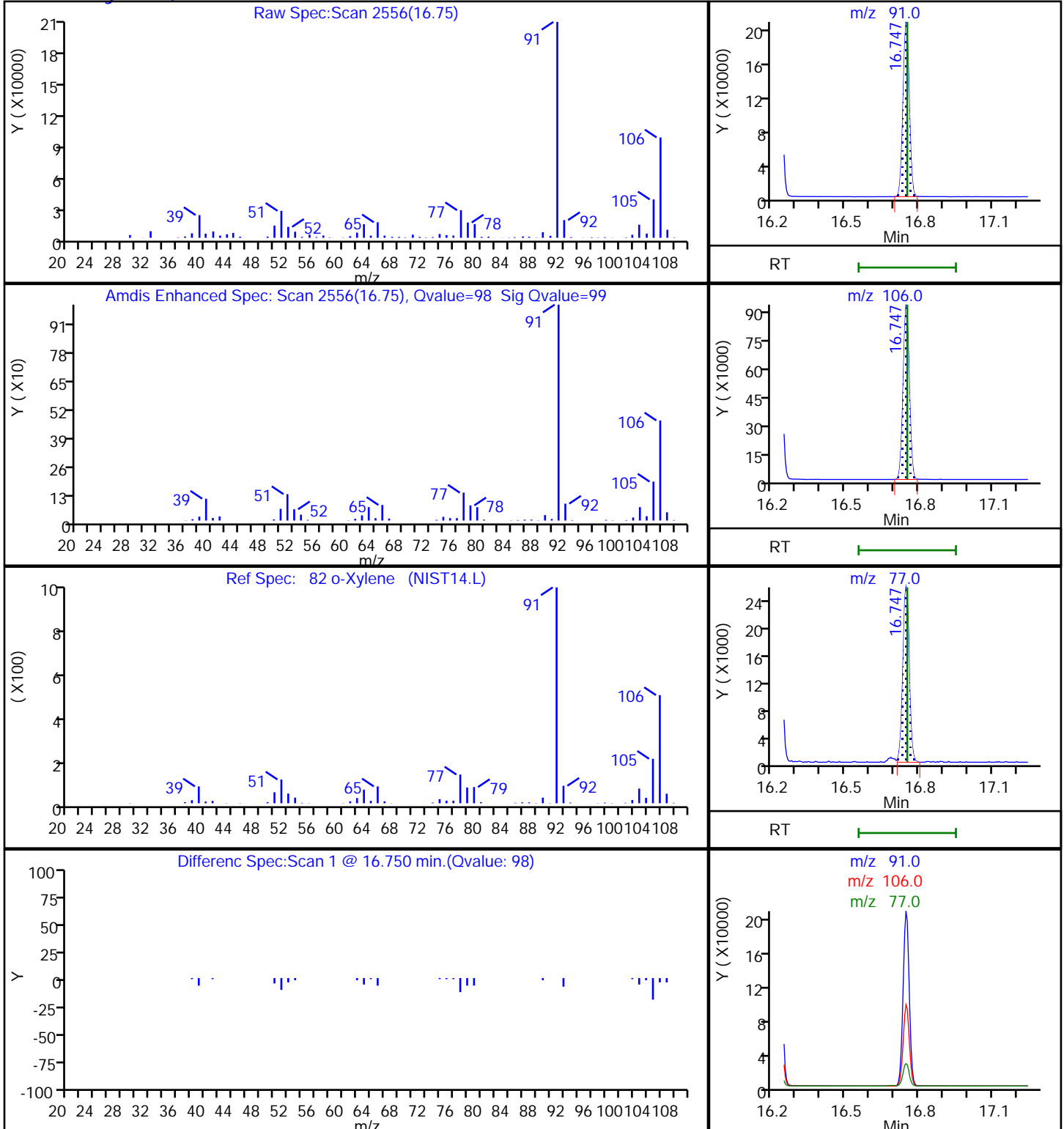
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-118-A-26 DL Lab Sample ID: 140-14390-5 DL
 Matrix: Air Lab File ID: HB27P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:42
 Sample wt/vol: 10 (mL) Date Analyzed: 02/28/2019 03:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	77		4.0	0.70
79-01-6	Trichloroethene	131.39	330		2.0	0.70

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-118-A-26 DL Lab Sample ID: 140-14390-5 DL
 Matrix: Air Lab File ID: HB27P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:42
 Sample wt/vol: 10 (mL) Date Analyzed: 02/28/2019 03:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	300		16	2.8
79-01-6	Trichloroethene	131.39	1800		11	3.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P112.D
 Lims ID: 140-14390-A-5
 Client ID: SV-118-A-26
 Sample Type: Client
 Inject. Date: 28-Feb-2019 03:30:30 ALS Bottle#: 12 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-020
 Misc. Info.: 140-14390-a-5
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 19:01:51 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 19:11:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.814	0.005	95	308902	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1657088	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1400401	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.404	-0.031	94	904258	3.96	
27 1,1-Dichloroethene	96	5.920	5.926	0.000	96	184014	1.53	
34 trans-1,2-Dichloroethene	96	7.082	7.086	0.005	98	5452	0.0443	
37 1,1-Dichloroethane	63	7.506	7.510	0.005	100	35182	0.1503	
41 cis-1,2-Dichloroethene	96	8.488	8.493	0.005	96	73814	0.5919	
45 1,1,1-Trichloroethane	97	9.858	9.864	0.005	97	19622	0.0769	
56 Trichloroethene	130	11.713	11.714	0.005	96	1077374	6.52	
78 m-Xylene & p-Xylene	91	16.220	16.225	0.000	98	41445	0.1059	
82 o-Xylene	91	16.752	16.758	0.000	98	15165	0.0380	
89 1,3,5-Trimethylbenzene	120	18.132	18.127	-0.026	91	1386	0.0329	
S 121 Xylenes, Total	100				0		0.1439	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P112.D

Injection Date: 28-Feb-2019 03:30:30

Instrument ID: MH

Operator ID: AFB

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Worklist Smp#: 20

Client ID: SV-118-A-26

Purge Vol: 500.000 mL

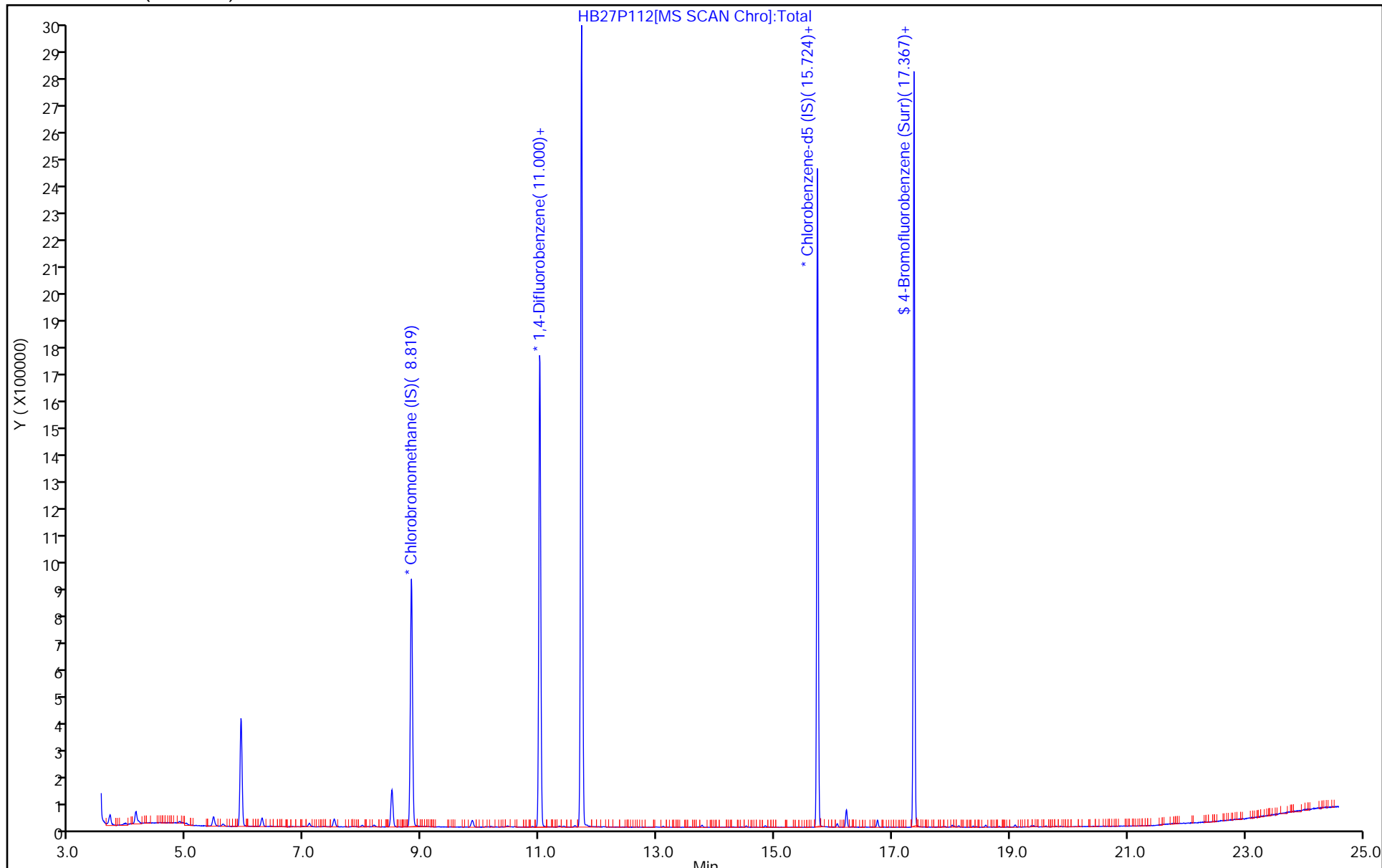
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P112.D
 Lims ID: 140-14390-A-5
 Client ID: SV-118-A-26
 Sample Type: Client
 Inject. Date: 28-Feb-2019 03:30:30 ALS Bottle#: 12 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-020
 Misc. Info.: 140-14390-a-5
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 19:01:51 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 19:11:48

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.96	99.06

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P112.D

Injection Date: 28-Feb-2019 03:30:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: AFB

ALS Bottle#: 12

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

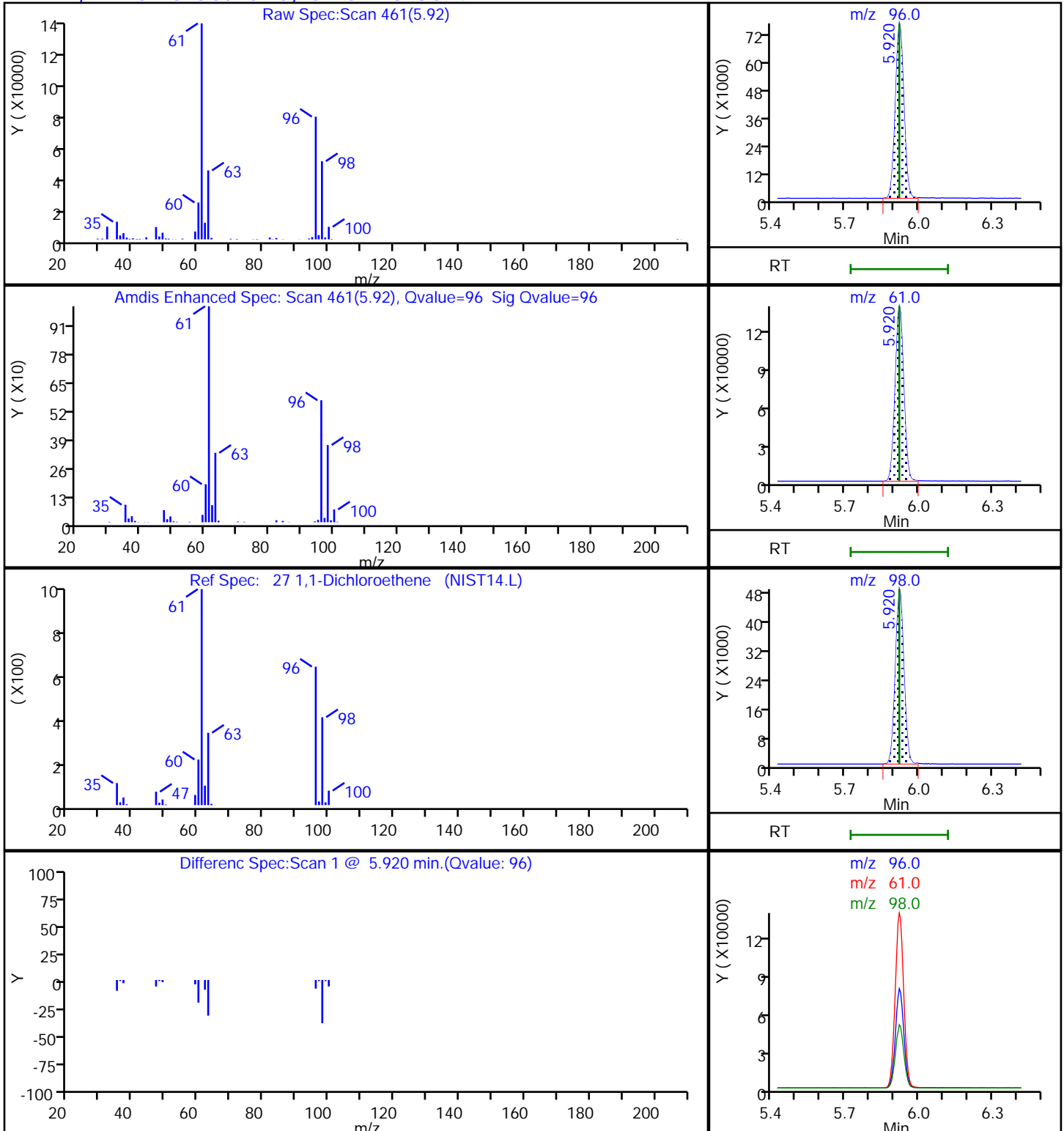
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P112.D

Injection Date: 28-Feb-2019 03:30:30

Instrument ID: MH

Lims ID: 140-14390-A-5

Lab Sample ID: 140-14390-5

Client ID: SV-118-A-26

Operator ID: AFB

ALS Bottle#: 12 Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

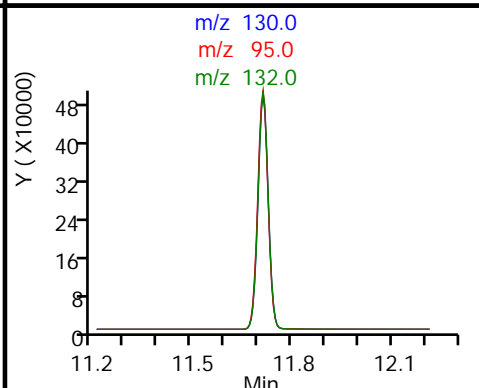
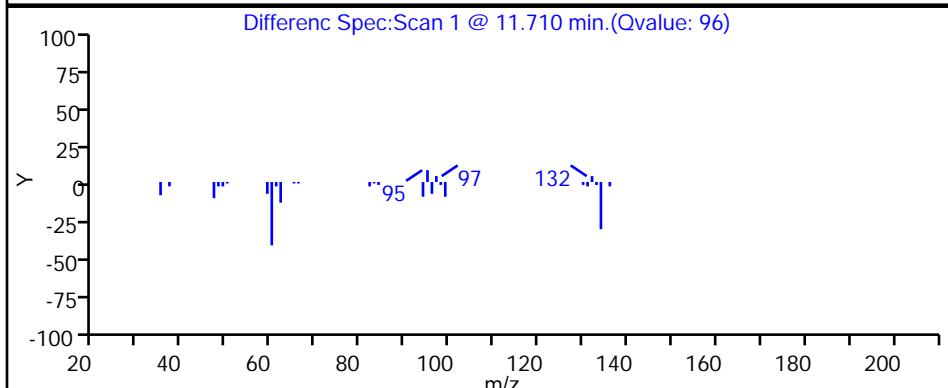
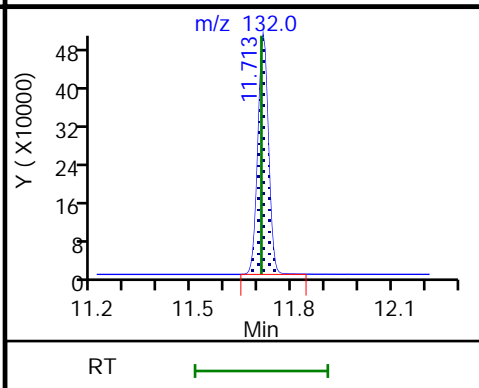
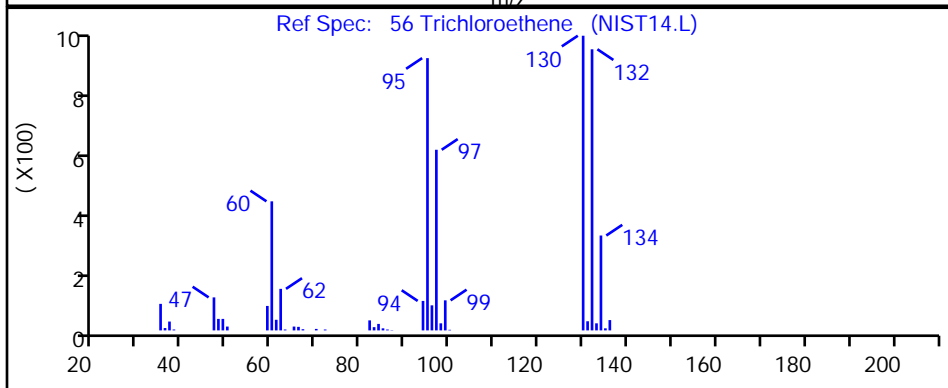
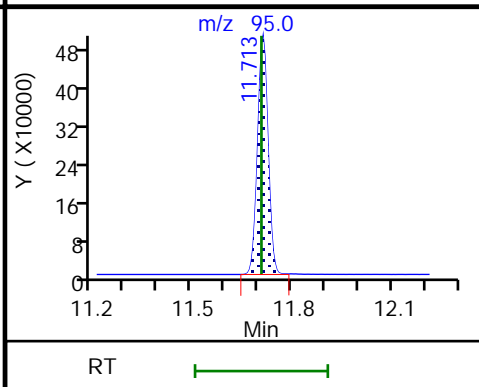
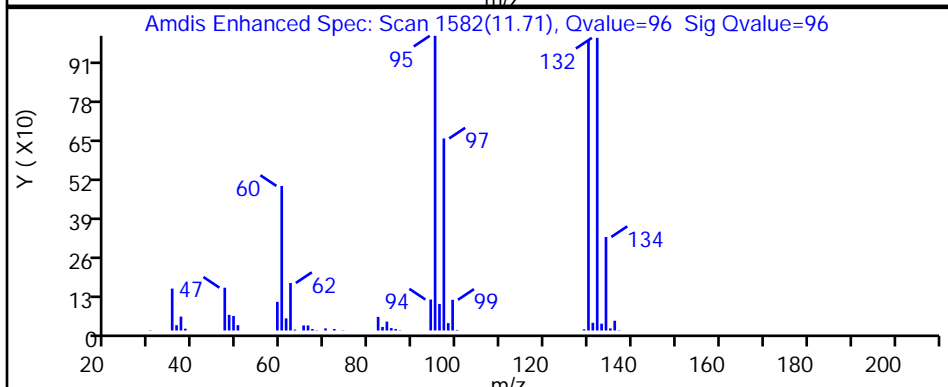
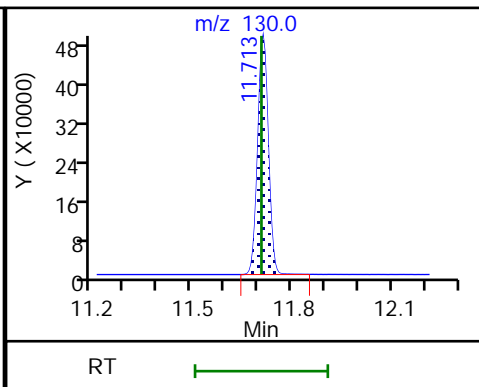
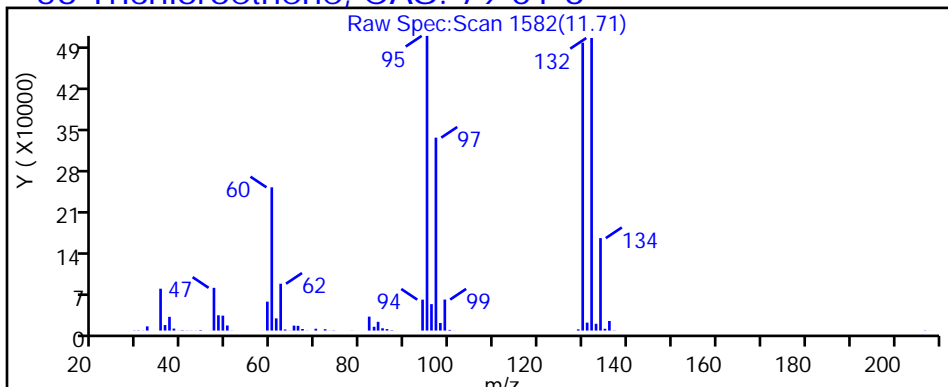
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-015-A-26 Lab Sample ID: 140-14390-6
 Matrix: Air Lab File ID: HB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:45
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.1		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.30	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.10	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.74		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.81		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-015-A-26 Lab Sample ID: 140-14390-6
 Matrix: Air Lab File ID: HB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:45
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	4.5		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.2	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	0.68	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.56	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D
 Lims ID: 140-14390-A-6
 Client ID: SV-015-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 17:56:30 ALS Bottle#: 6 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-010
 Misc. Info.: 140-14390-a-6
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 11:55:09 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0335

First Level Reviewer: barlozhetskayaa Date: 27-Feb-2019 11:55:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.840	8.819	0.021	95	280411	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.000	0.010	95	1524680	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1263585	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	802405	3.90	
6 Chlorodifluoromethane	51	3.687	3.690	0.005	96	21236	0.0924	
8 Dichlorodifluoromethane	85	3.744	3.747	0.006	100	35139	0.0995	
27 1,1-Dichloroethene	96	5.925	5.933	0.006	96	6514	0.0598	
31 Methylene Chloride	84	6.307	6.286	0.036	99	28570	0.2492	
37 1,1-Dichloroethane	63	7.532	7.519	0.031	99	47286	0.2226	
45 1,1,1-Trichloroethane	97	9.863	9.881	0.005	80	4741	0.0205	
47 Benzene	78	10.468	10.462	0.011	98	23664	0.0734	
56 Trichloroethene	130	11.718	11.719	0.005	96	22525	0.1481	
65 Toluene	91	13.765	13.760	0.005	93	103264	0.2871	
76 Ethylbenzene	91	16.060	16.060	0.000	98	14309	0.0312	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	40173	0.1138	
82 o-Xylene	91	16.747	16.752	-0.005	98	17574	0.0489	
S 121 Xylenes, Total	100				0		0.1626	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D

Injection Date: 26-Feb-2019 17:56:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-6

Lab Sample ID: Client 140-27936/10-A

Worklist Smp#: 10

Client ID: SV-015-A-26

Purge Vol: 500.000 mL

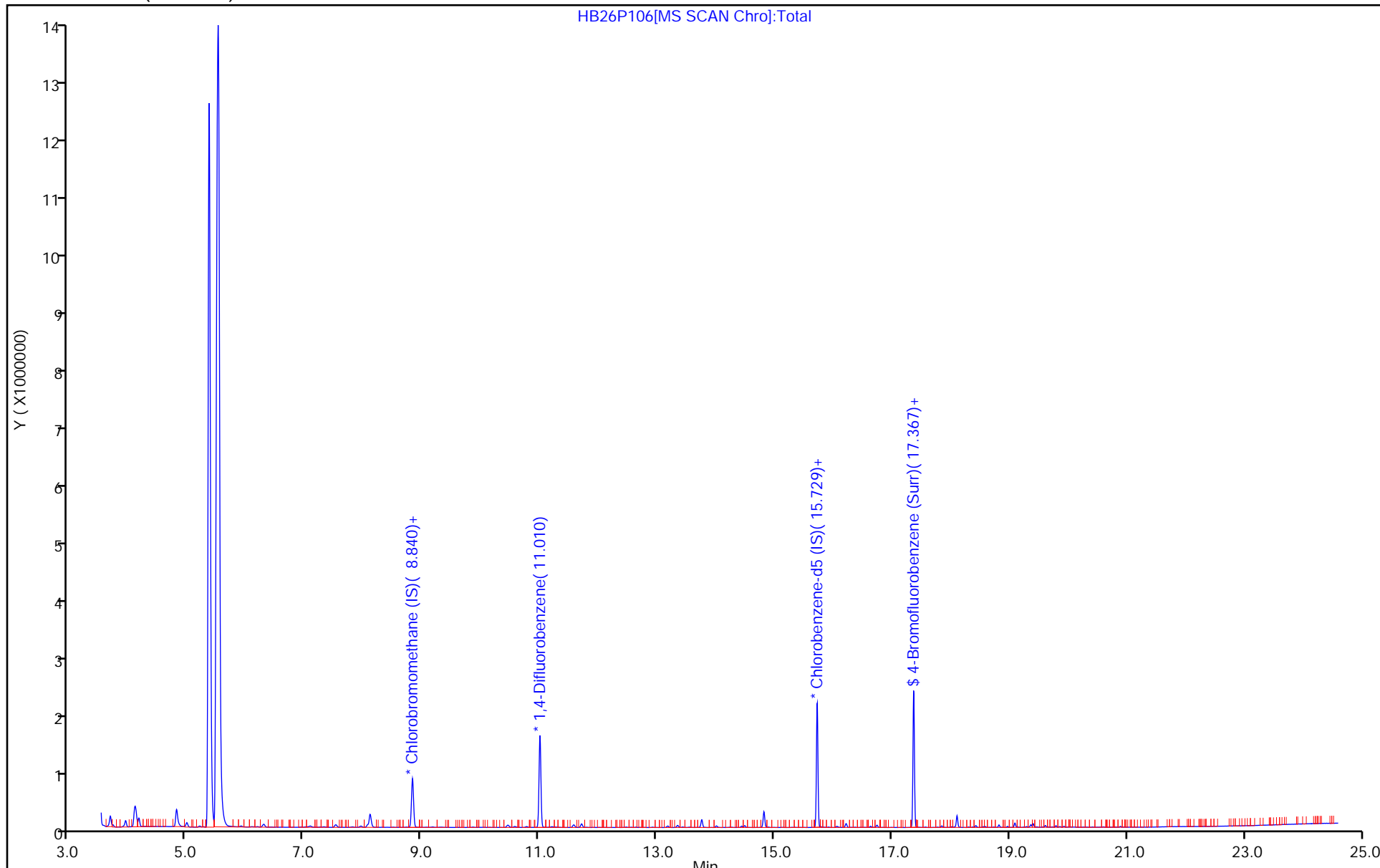
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D
 Lims ID: 140-14390-A-6
 Client ID: SV-015-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 17:56:30 ALS Bottle#: 6 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-010
 Misc. Info.: 140-14390-a-6
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 11:55:09 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0335

First Level Reviewer: barlozhetskayaa Date: 27-Feb-2019 11:55:09

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.90	97.42

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D

Injection Date: 26-Feb-2019 17:56:30

Instrument ID: MH

Lims ID: 140-14390-A-6

Lab Sample ID: Client 140-27936/10-A

Client ID: SV-015-A-26

Operator ID: HMT

ALS Bottle#: 6 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

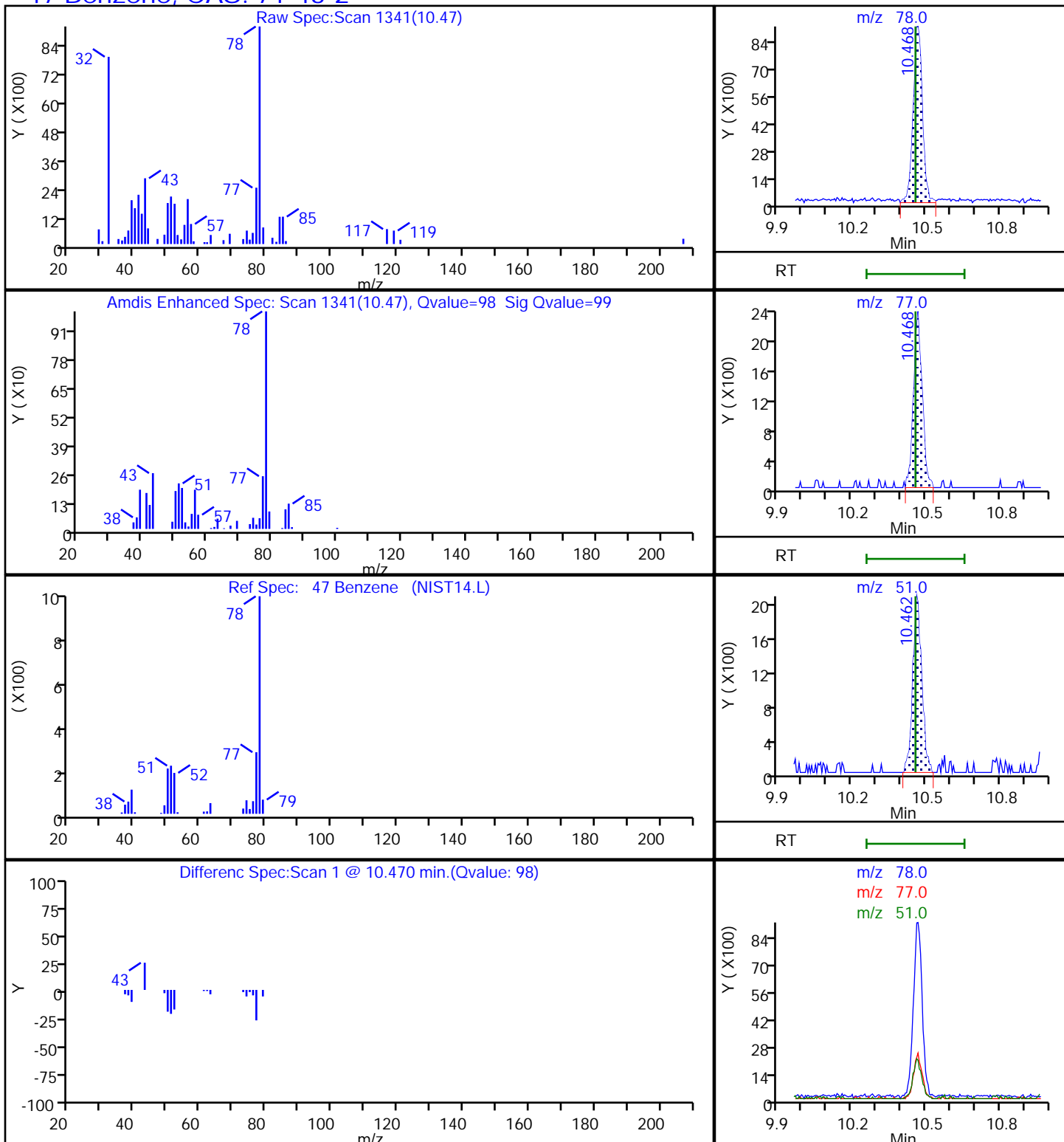
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D

Injection Date: 26-Feb-2019 17:56:30

Instrument ID: MH

Lims ID: 140-14390-A-6

Lab Sample ID: Client 140-27936/10-A

Client ID: SV-015-A-26

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

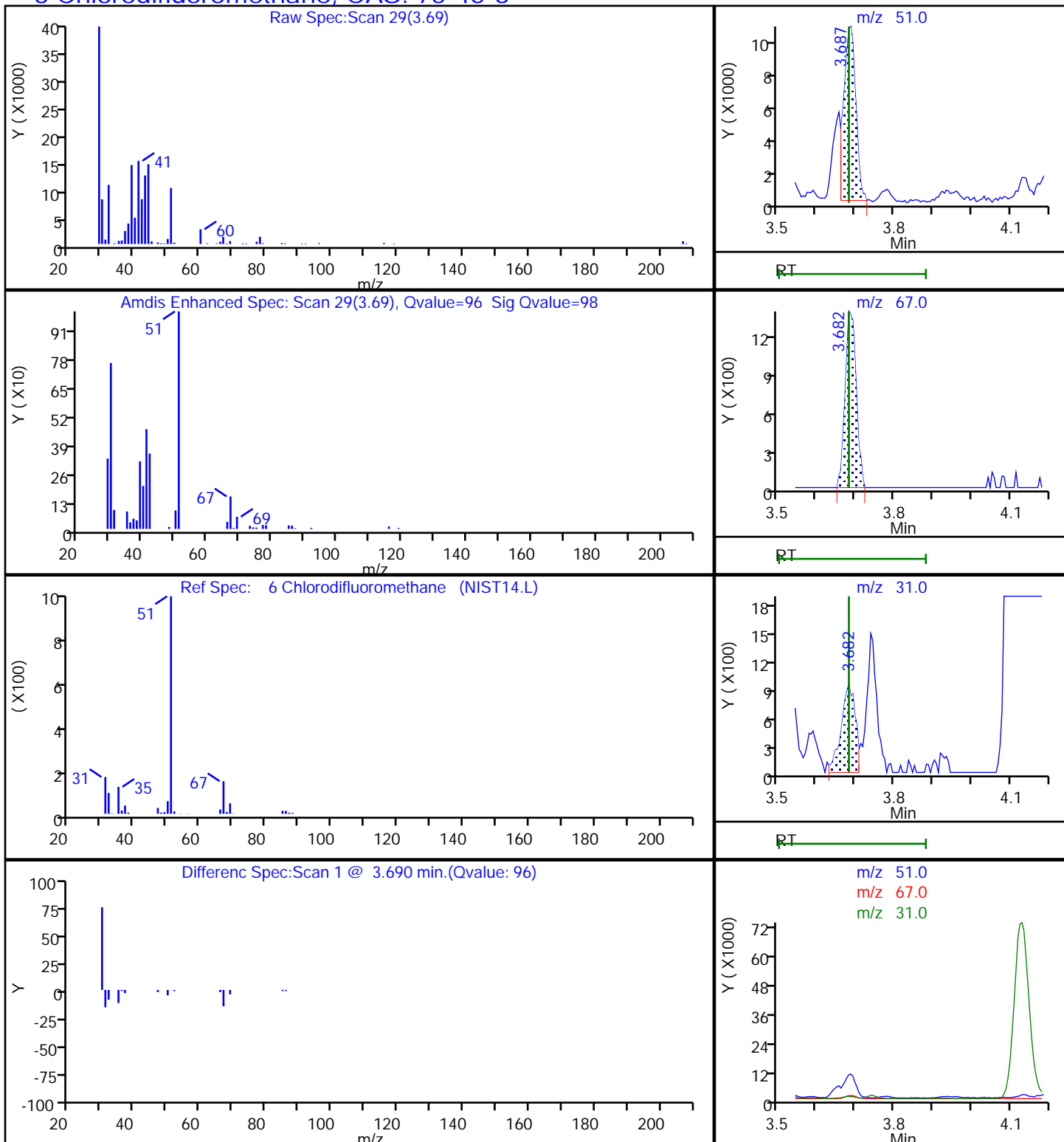
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D

Injection Date: 26-Feb-2019 17:56:30

Instrument ID: MH

Lims ID: 140-14390-A-6

Lab Sample ID: Client 140-27936/10-A

Client ID: SV-015-A-26

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

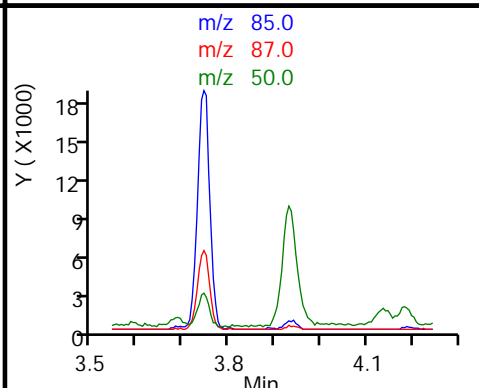
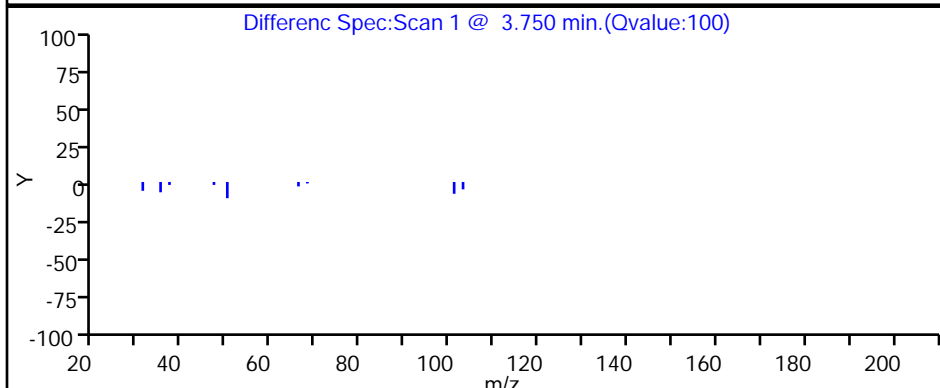
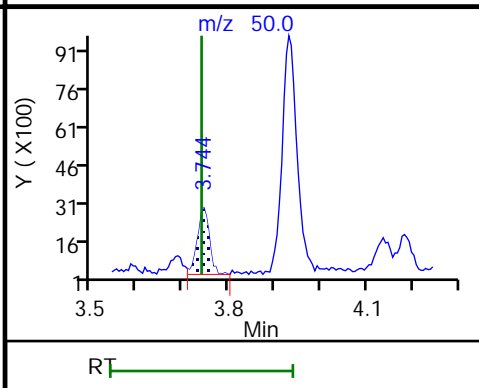
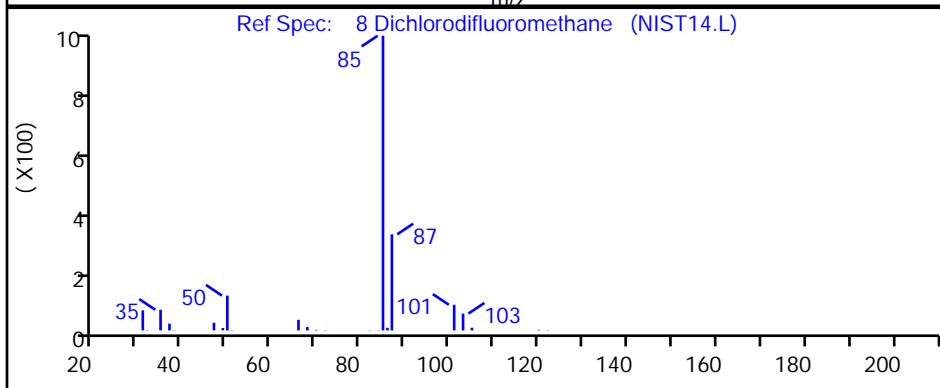
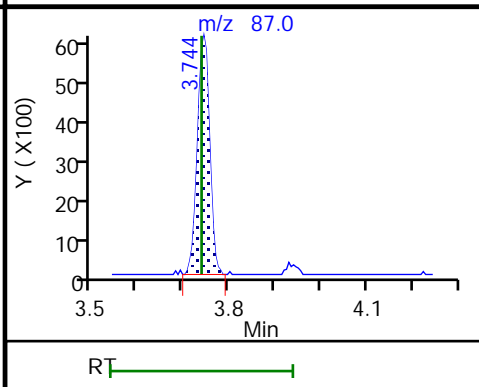
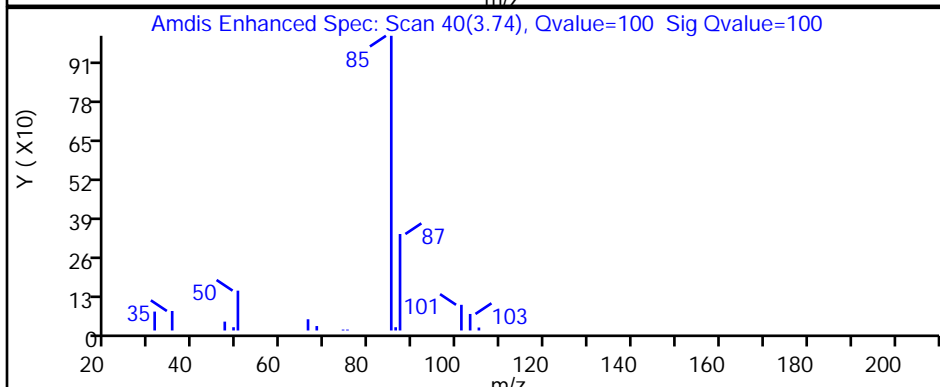
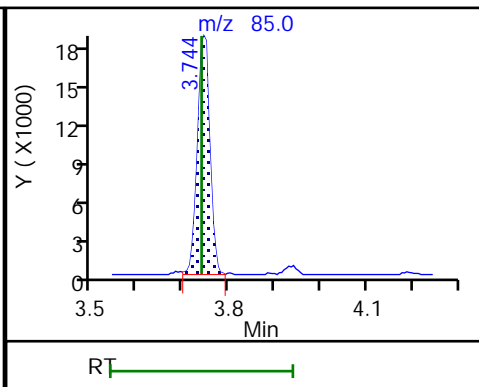
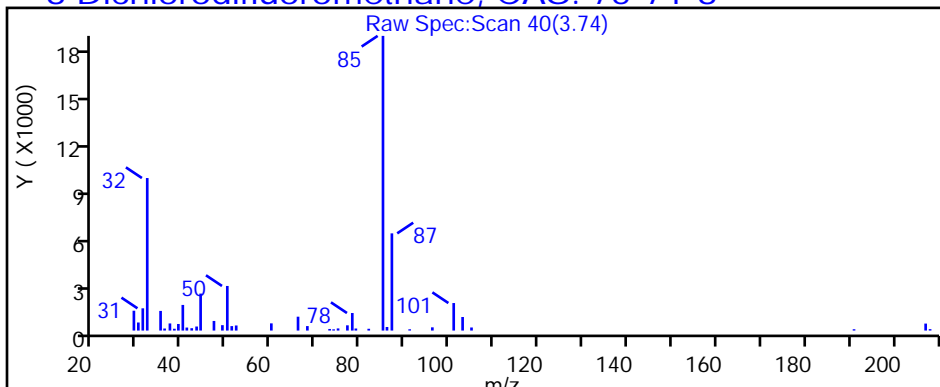
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D

Injection Date: 26-Feb-2019 17:56:30

Instrument ID: MH

Lims ID: 140-14390-A-6

Lab Sample ID: Client 140-27936/10-A

Client ID: SV-015-A-26

Operator ID: HMT

ALS Bottle#: 6 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

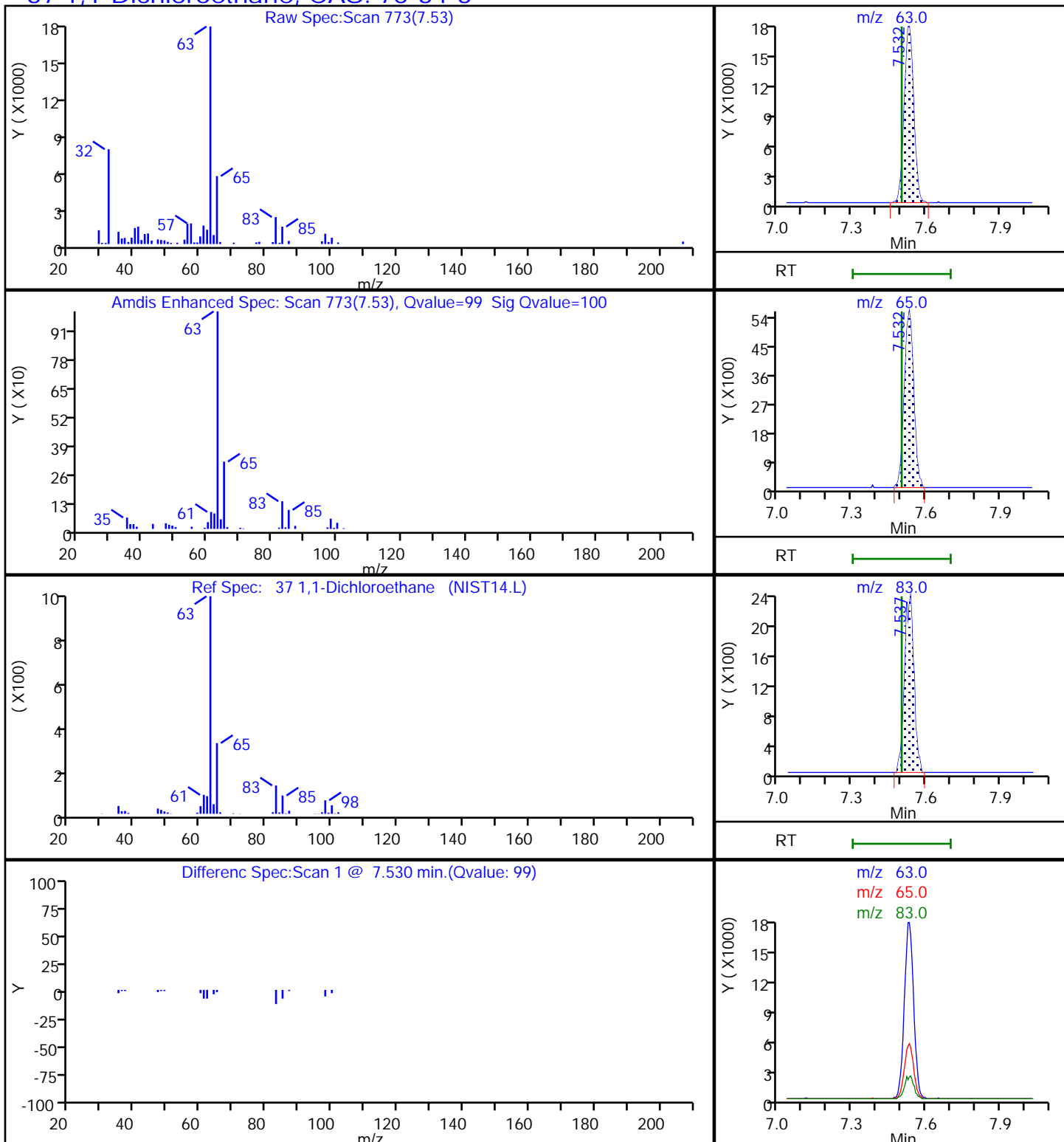
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D

Injection Date: 26-Feb-2019 17:56:30

Instrument ID: MH

Lims ID: 140-14390-A-6

Lab Sample ID: Client 140-27936/10-A

Client ID: SV-015-A-26

Operator ID: HMT

ALS Bottle#: 6 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

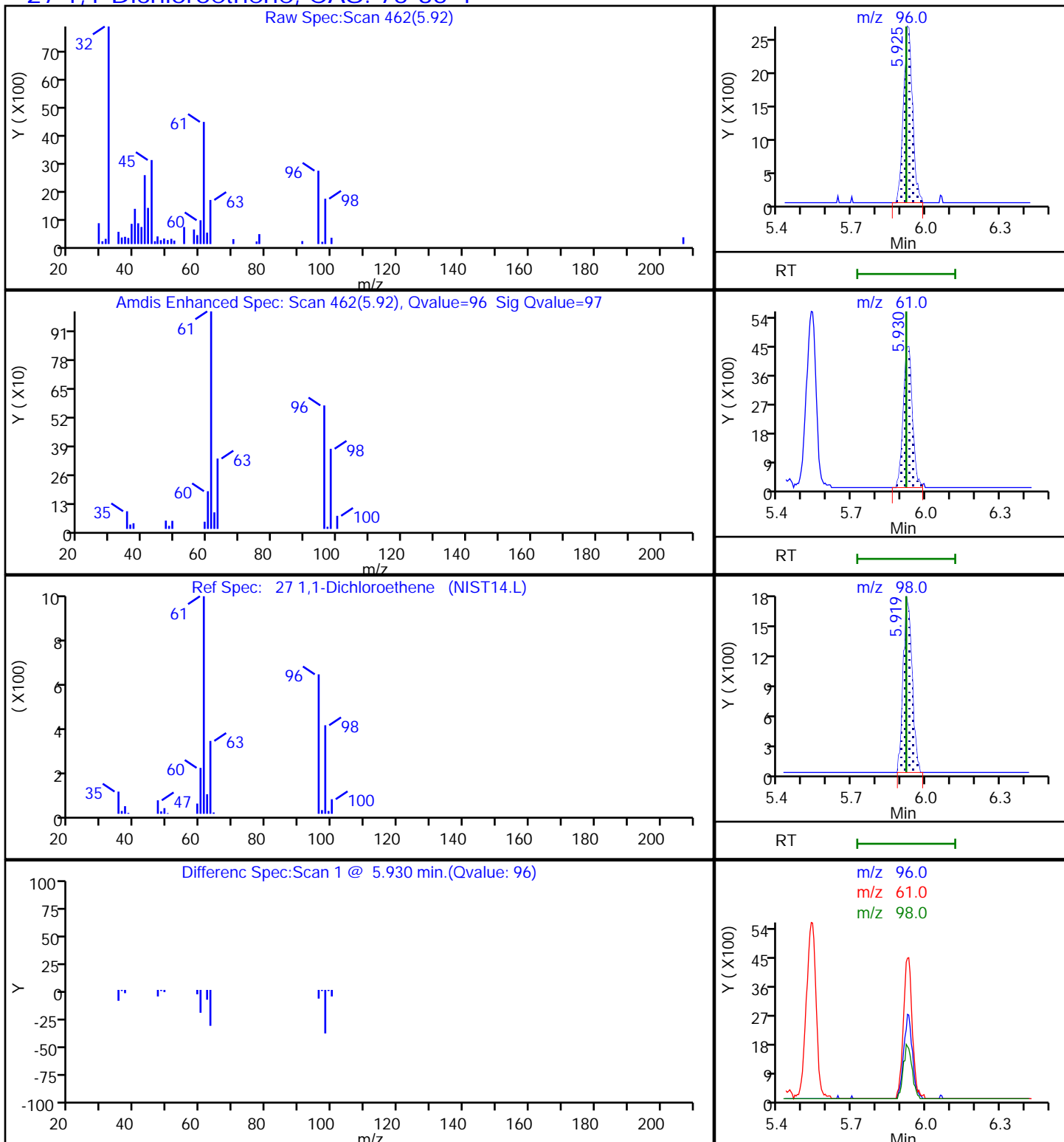
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D

Injection Date: 26-Feb-2019 17:56:30

Instrument ID: MH

Lims ID: 140-14390-A-6

Lab Sample ID: Client 140-27936/10-A

Client ID: SV-015-A-26

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

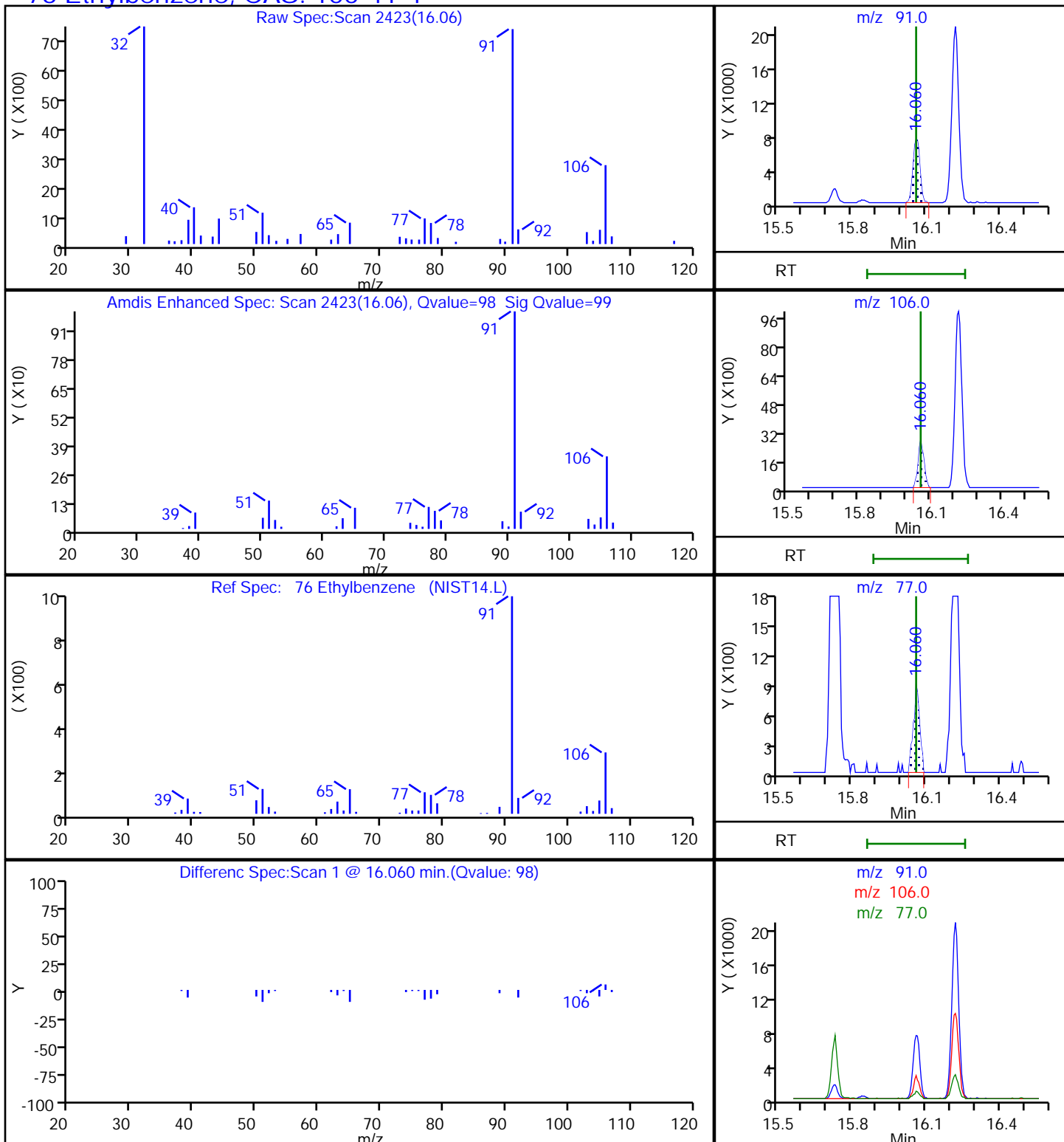
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D

Injection Date: 26-Feb-2019 17:56:30

Instrument ID: MH

Lims ID: 140-14390-A-6

Lab Sample ID: Client 140-27936/10-A

Client ID: SV-015-A-26

Operator ID: HMT

ALS Bottle#: 6 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

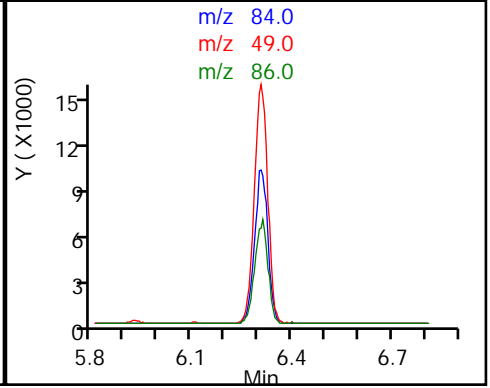
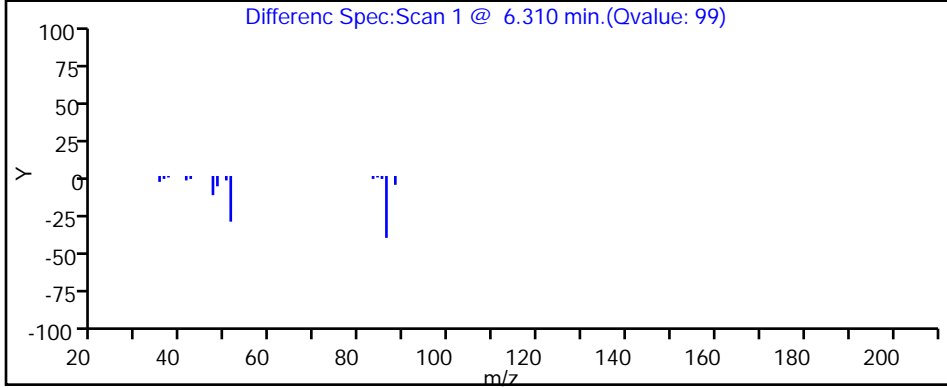
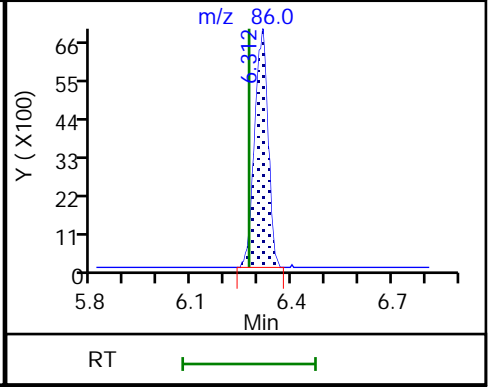
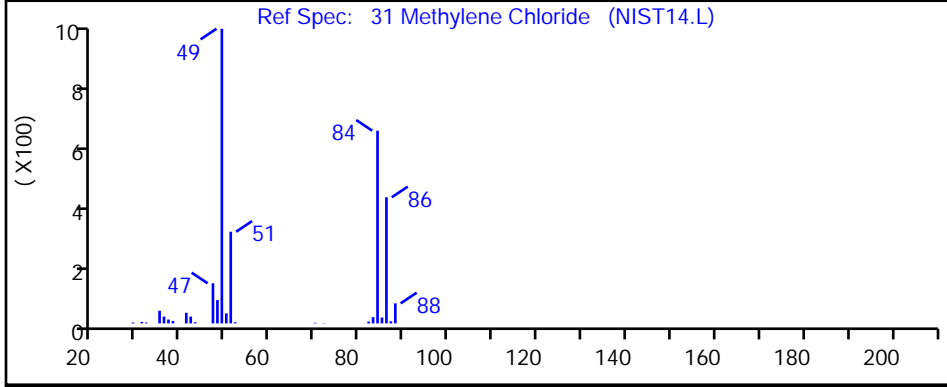
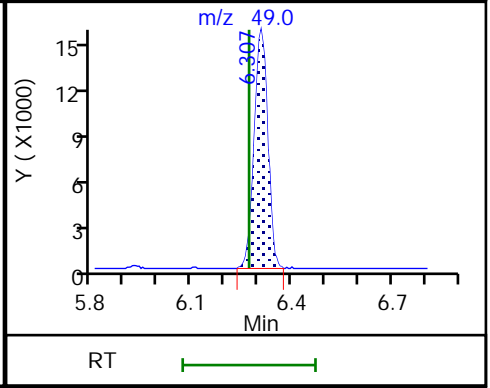
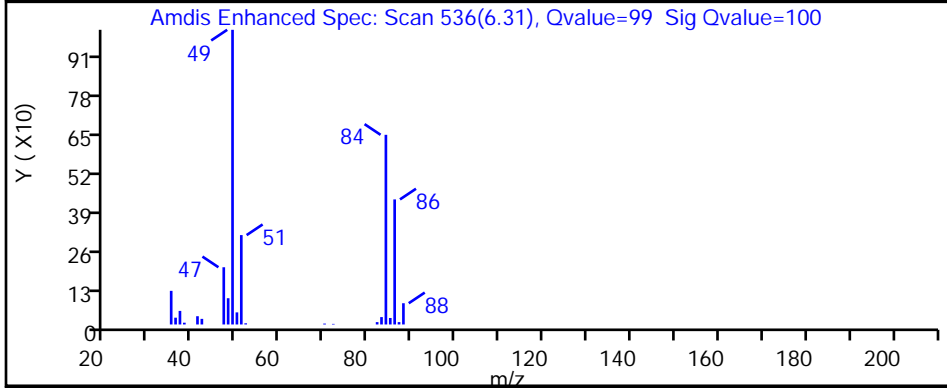
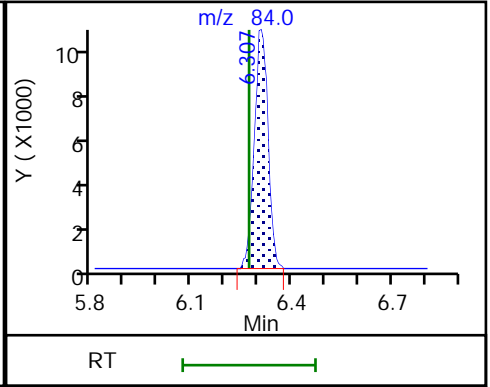
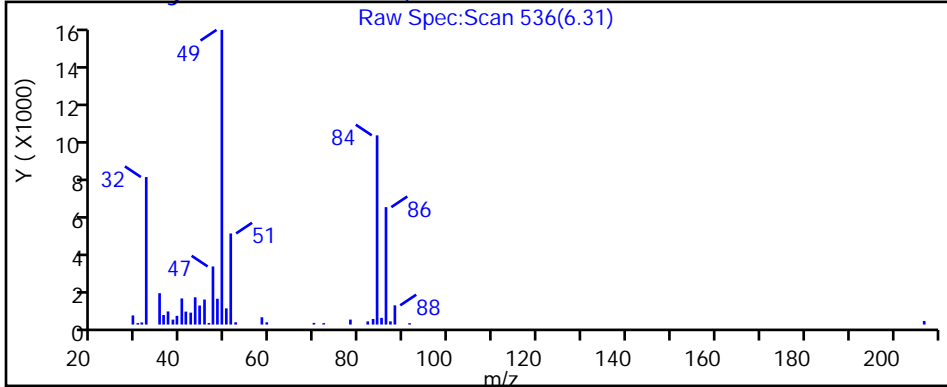
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D

Injection Date: 26-Feb-2019 17:56:30

Instrument ID: MH

Lims ID: 140-14390-A-6

Lab Sample ID: Client 140-27936/10-A

Client ID: SV-015-A-26

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

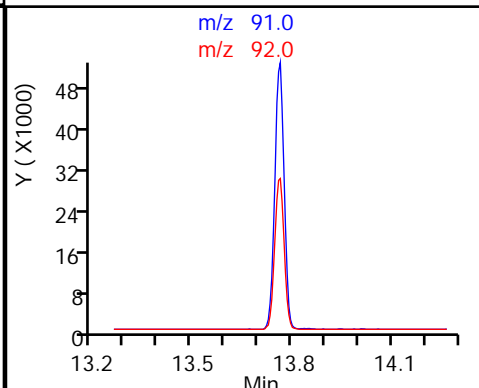
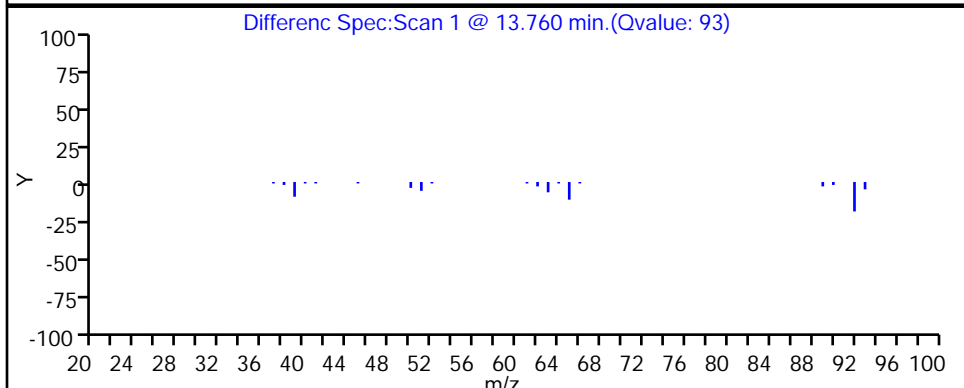
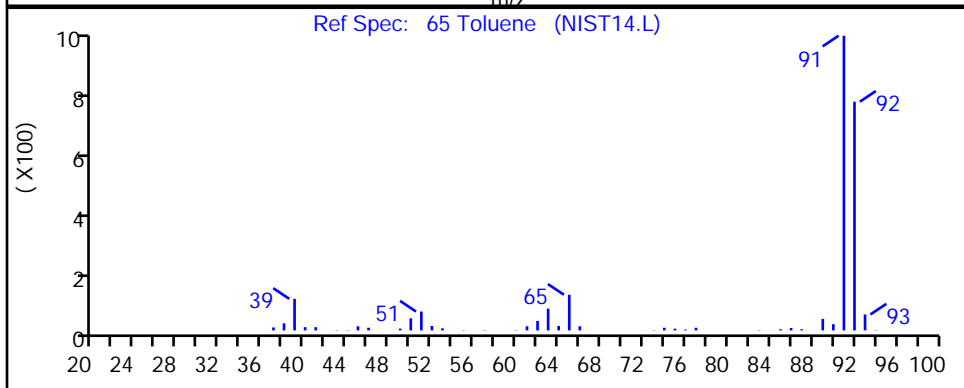
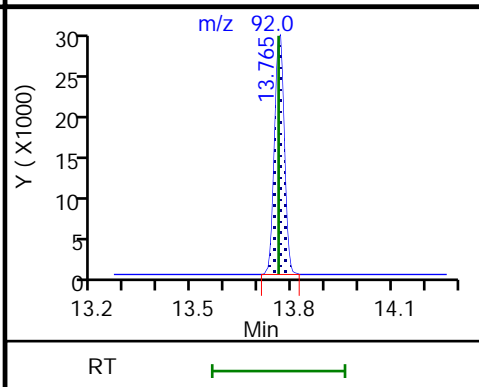
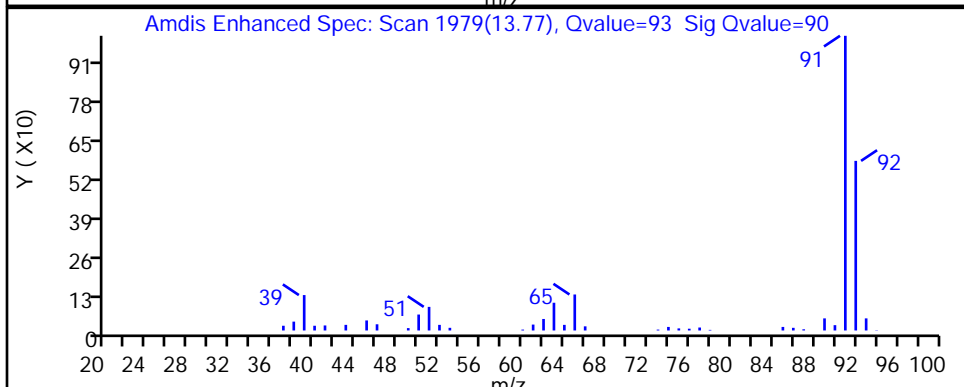
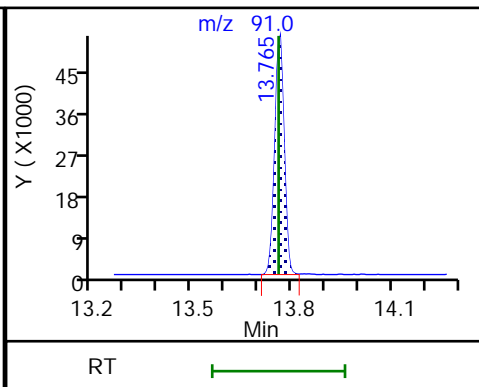
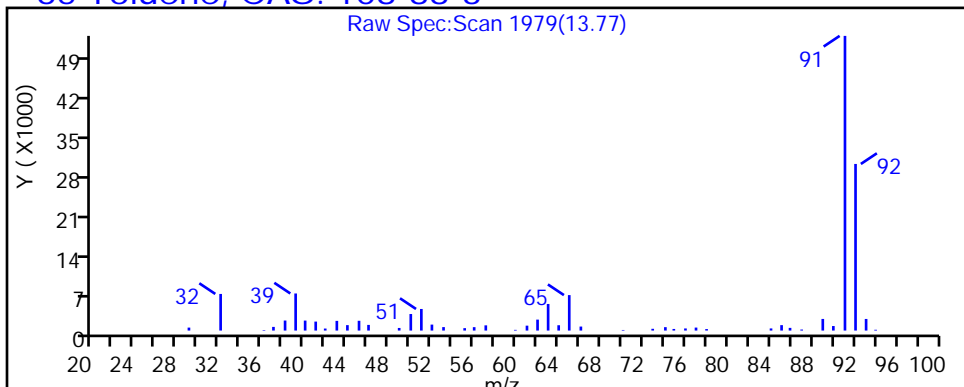
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D

Injection Date: 26-Feb-2019 17:56:30

Instrument ID: MH

Lims ID: 140-14390-A-6

Lab Sample ID: Client 140-27936/10-A

Client ID: SV-015-A-26

Operator ID: HMT

ALS Bottle#: 6 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

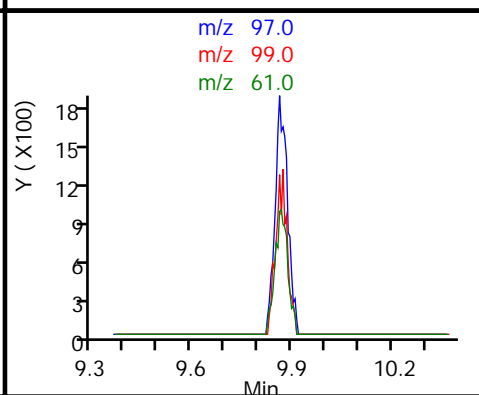
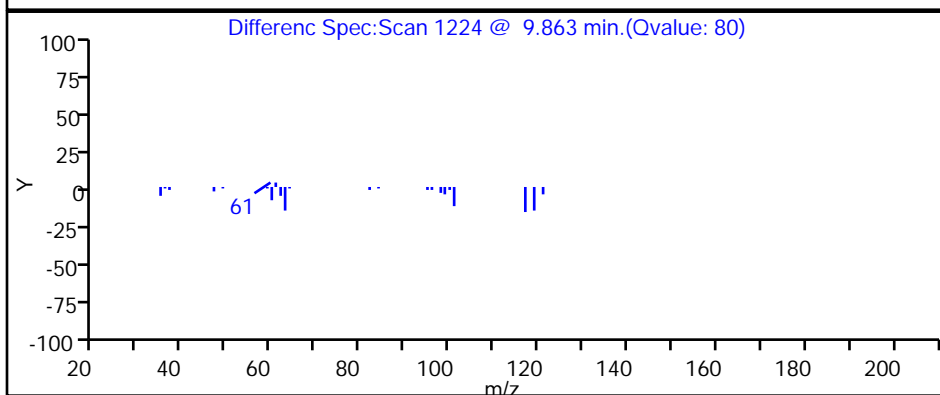
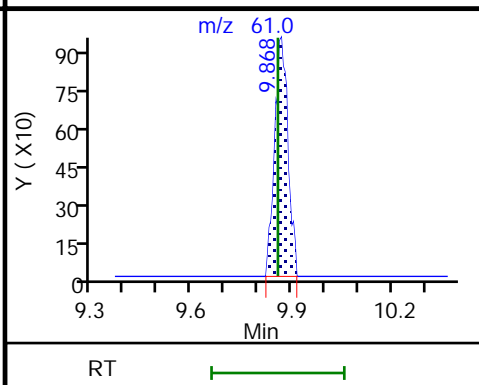
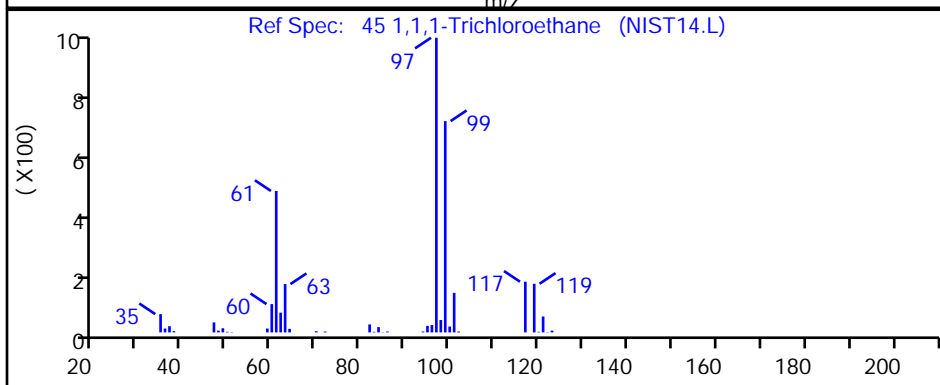
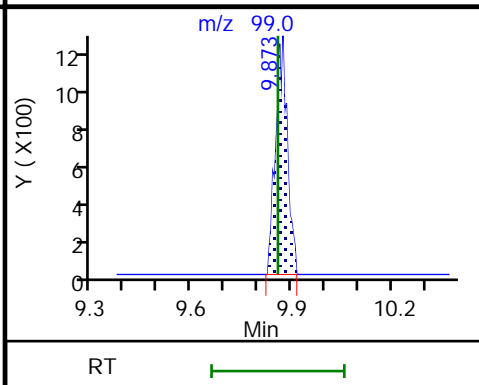
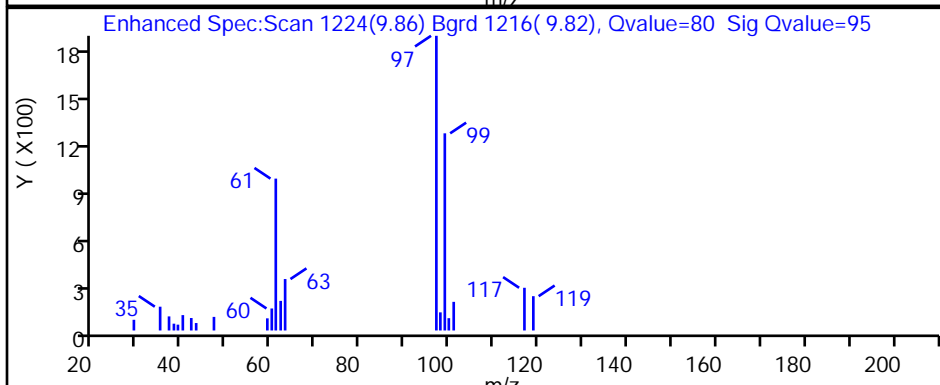
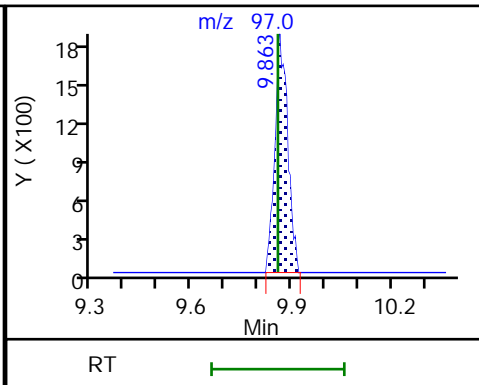
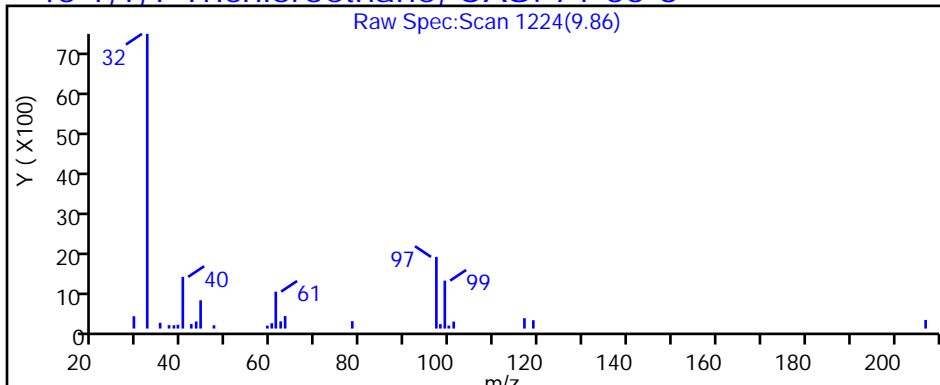
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D

Injection Date: 26-Feb-2019 17:56:30

Instrument ID: MH

Lims ID: 140-14390-A-6

Lab Sample ID: Client 140-27936/10-A

Client ID: SV-015-A-26

Operator ID: HMT

ALS Bottle#: 6 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

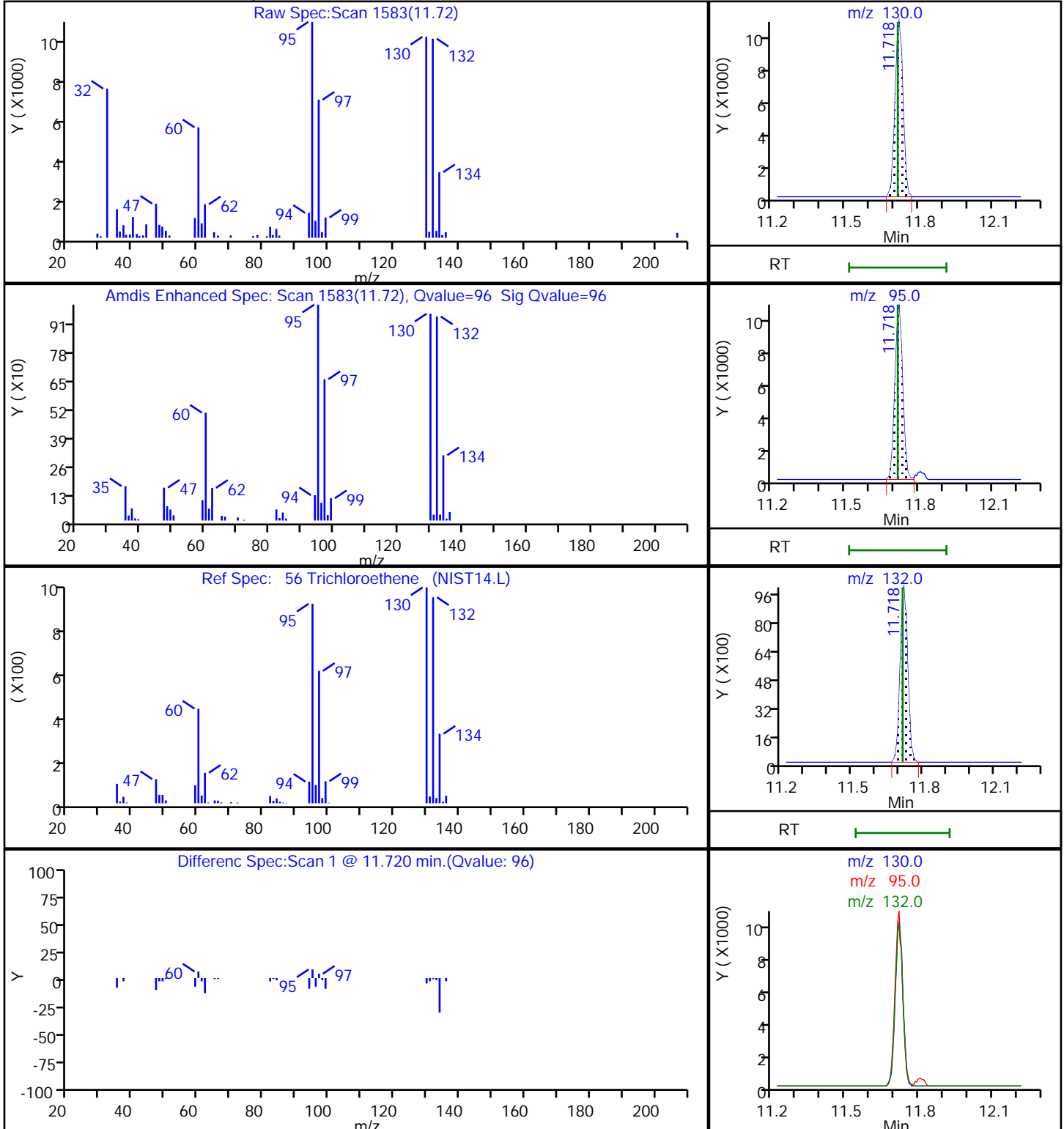
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D

Injection Date: 26-Feb-2019 17:56:30

Instrument ID: MH

Lims ID: 140-14390-A-6

Lab Sample ID: Client 140-27936/10-A

Client ID: SV-015-A-26

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

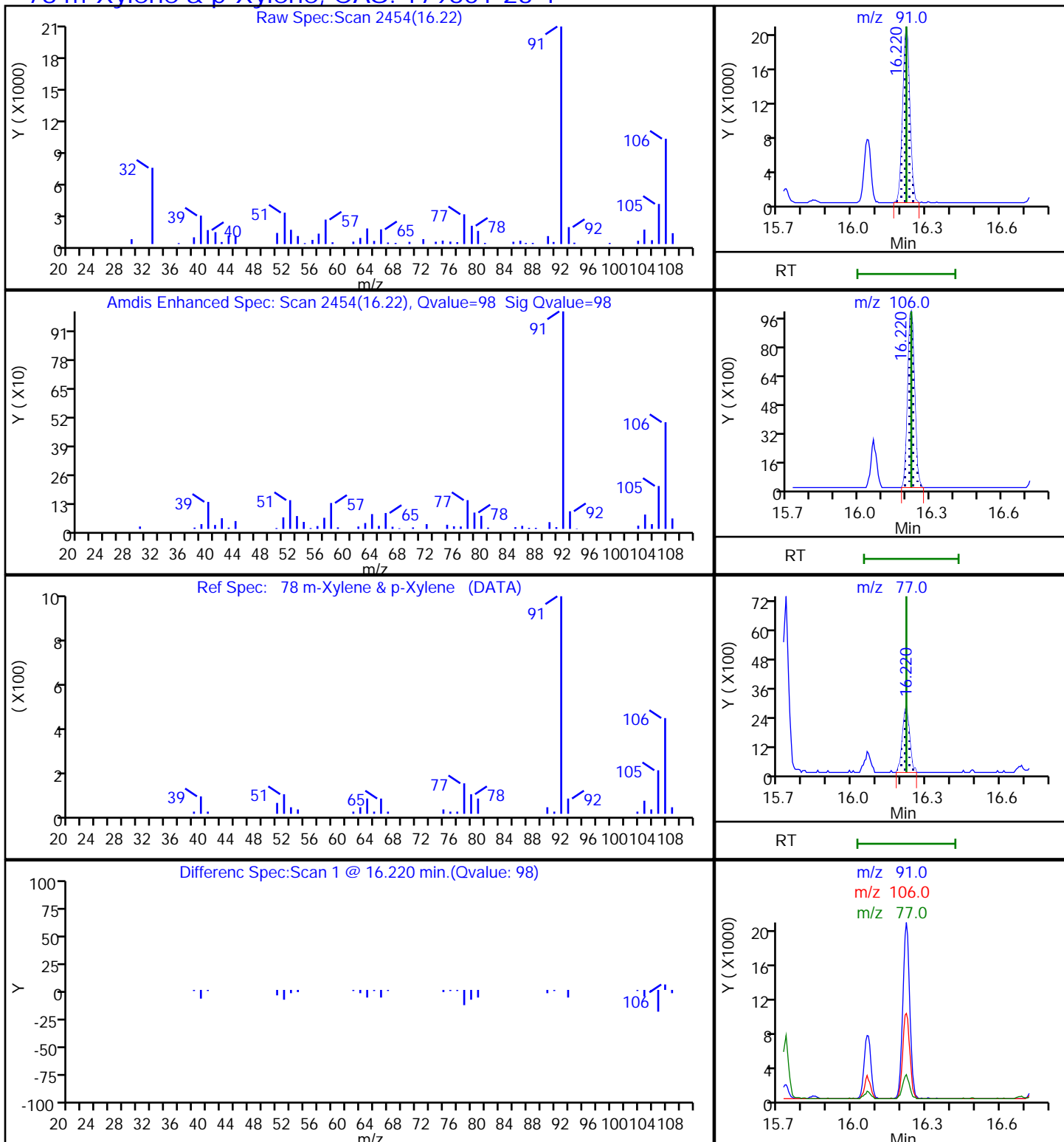
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D

Injection Date: 26-Feb-2019 17:56:30

Instrument ID: MH

Lims ID: 140-14390-A-6

Lab Sample ID: Client 140-27936/10-A

Client ID: SV-015-A-26

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

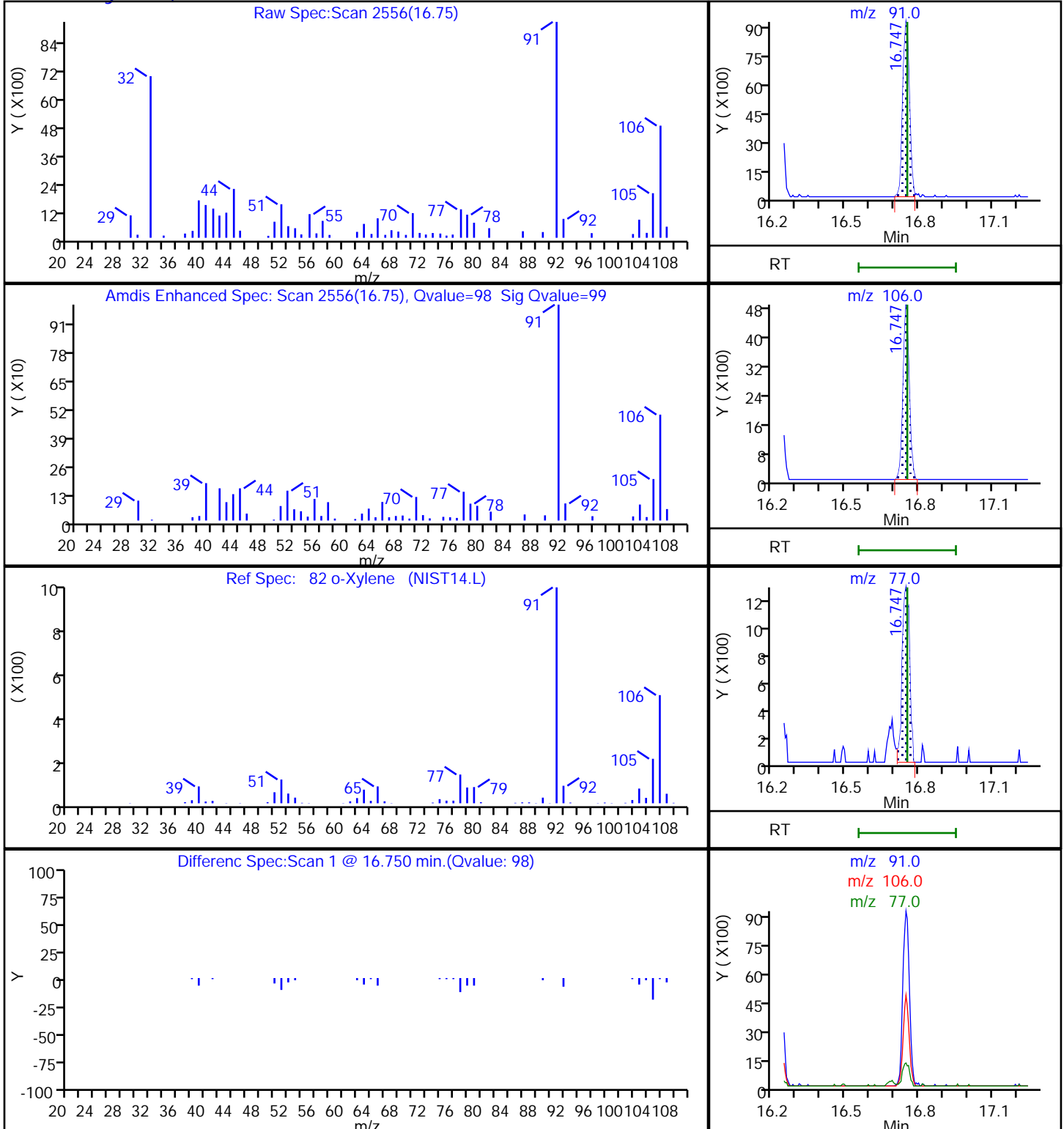
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6

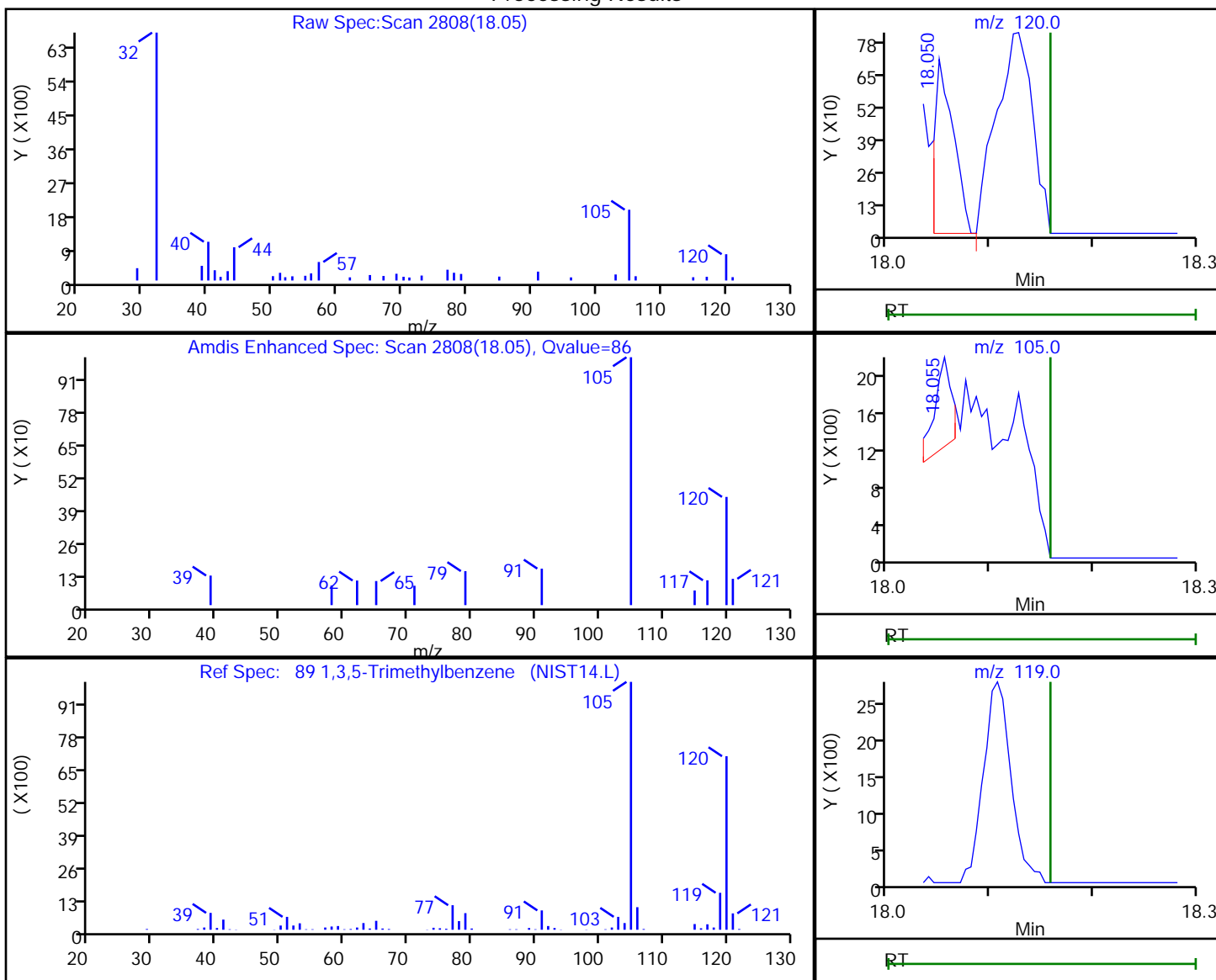


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P106.D
 Injection Date: 26-Feb-2019 17:56:30 Instrument ID: MH
 Lims ID: 140-14390-A-6 Lab Sample ID: Client 140-27936/10-A
 Client ID: SV-015-A-26
 Operator ID: HMT ALS Bottle#: 6 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Processing Results



RT	Mass	Response	Amount
18.05	120.00	886	0.031178
18.05	105.00	1109	
18.16	119.00	0	

Reviewer: barlozhetskayaa, 27-Feb-2019 11:54:45

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-078-A-26 Lab Sample ID: 140-14390-7
 Matrix: Air Lab File ID: HB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:49
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 18:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.8		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.23	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.90		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-078-A-26 Lab Sample ID: 140-14390-7
 Matrix: Air Lab File ID: HB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:49
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 18:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.58	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.75	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.58	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	9.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D
 Lims ID: 140-14390-A-7
 Client ID: SV-078-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 18:49:30 ALS Bottle#: 7 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-011
 Misc. Info.: 140-14390-a-7
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:57:07 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:58:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.819	0.010	95	293368	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1591119	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1358343	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	94	891563	4.03	
6 Chlorodifluoromethane	51	3.687	3.681	0.005	55	14023	0.0583	
8 Dichlorodifluoromethane	85	3.744	3.738	0.006	100	34133	0.0924	
31 Methylene Chloride	84	6.281	6.271	0.010	98	20915	0.1744	
45 1,1,1-Trichloroethane	97	9.863	9.858	0.005	97	5162	0.0213	
47 Benzene	78	10.462	10.457	0.005	98	12220	0.0363	
56 Trichloroethene	130	11.718	11.713	0.005	96	56080	0.3533	
65 Toluene	91	13.760	13.760	0.000	93	88154	0.2280	
76 Ethylbenzene	91	16.060	16.060	0.000	99	17064	0.0347	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	47898	0.1262	
82 o-Xylene	91	16.752	16.752	0.000	97	20754	0.0537	
89 1,3,5-Trimethylbenzene	120	18.122	18.158	-0.036	88	4154	0.0452	
93 1,2,4-Trimethylbenzene	105	18.592	18.613	-0.021	99	18899	0.0427	
S 121 Xylenes, Total	100				0		0.1799	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D

Injection Date: 26-Feb-2019 18:49:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-7

Lab Sample ID: 140-14390-7

Worklist Smp#: 11

Client ID: SV-078-A-26

Purge Vol: 500.000 mL

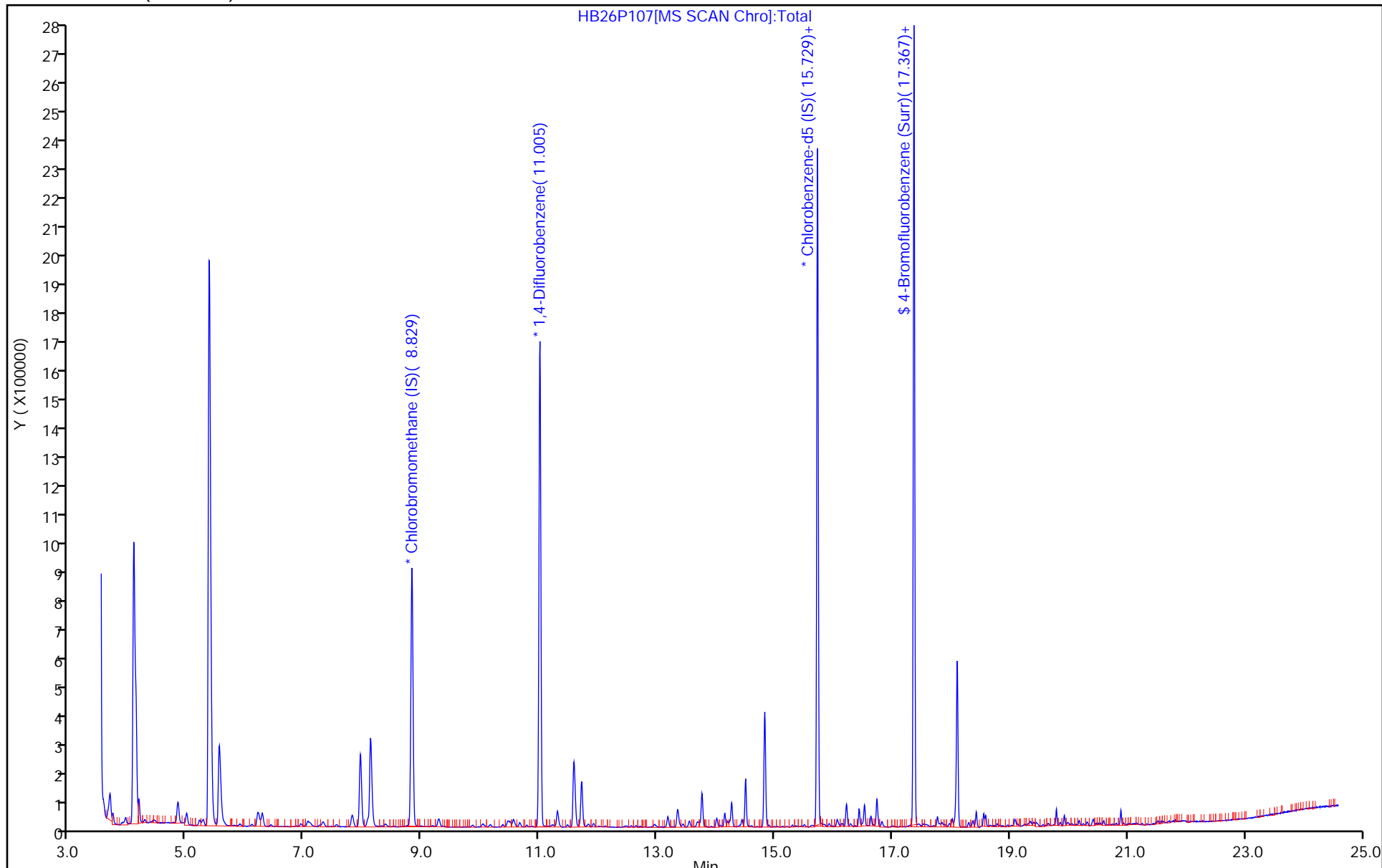
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D
 Lims ID: 140-14390-A-7
 Client ID: SV-078-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 18:49:30 ALS Bottle#: 7 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-011
 Misc. Info.: 140-14390-a-7
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:57:07 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:58:49

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.03	100.70

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D

Injection Date: 26-Feb-2019 18:49:30

Instrument ID: MH

Lims ID: 140-14390-A-7

Lab Sample ID: 140-14390-7

Client ID: SV-078-A-26

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

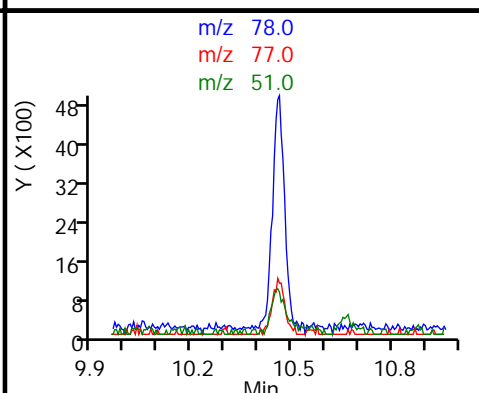
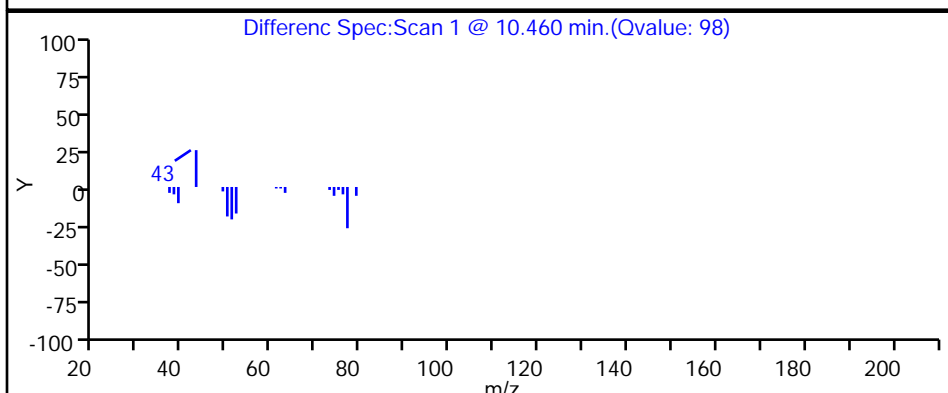
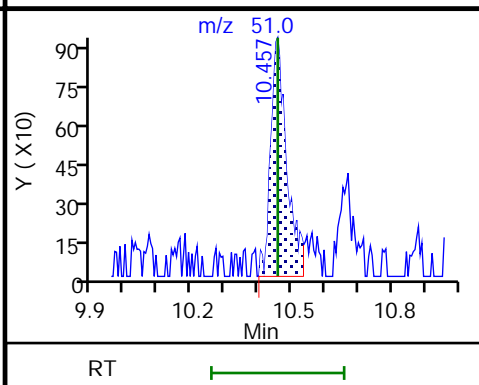
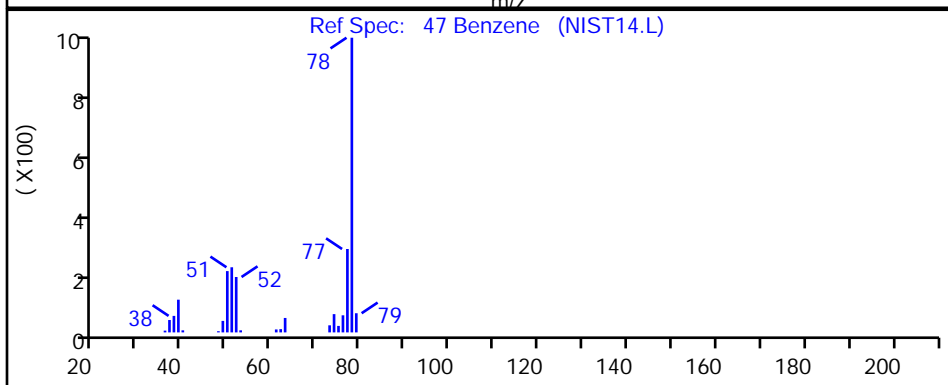
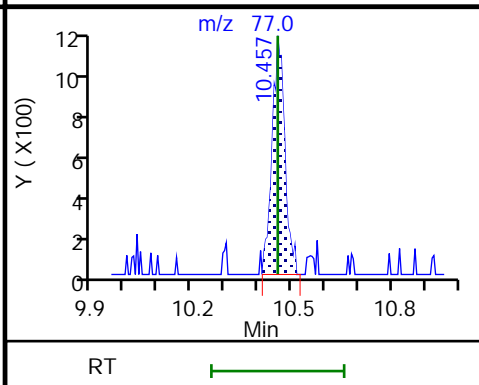
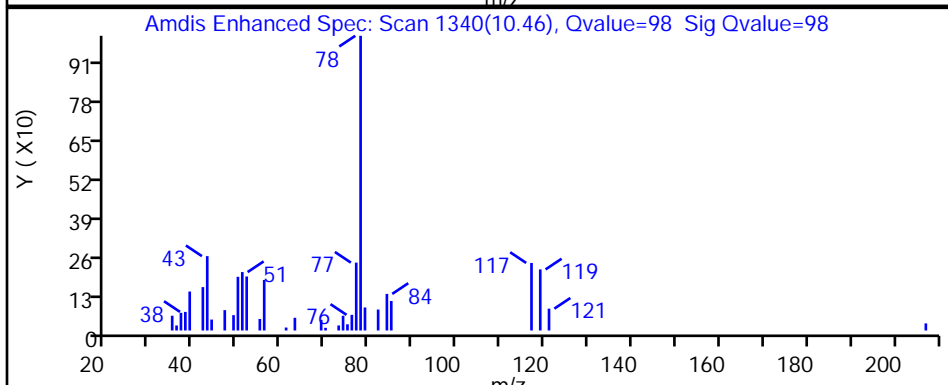
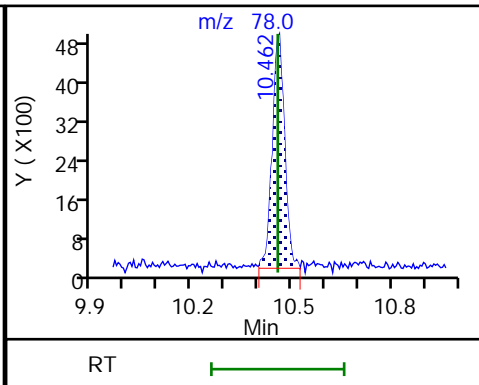
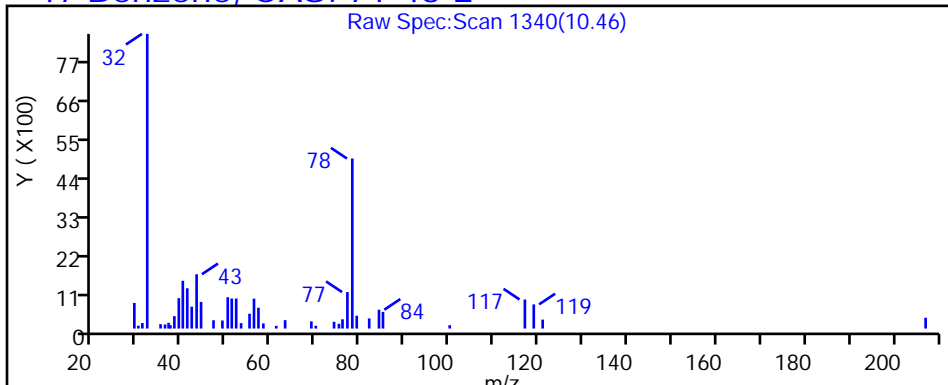
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D

Injection Date: 26-Feb-2019 18:49:30

Instrument ID: MH

Lims ID: 140-14390-A-7

Lab Sample ID: 140-14390-7

Client ID: SV-078-A-26

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

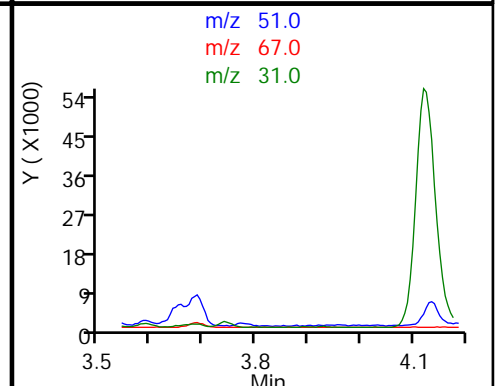
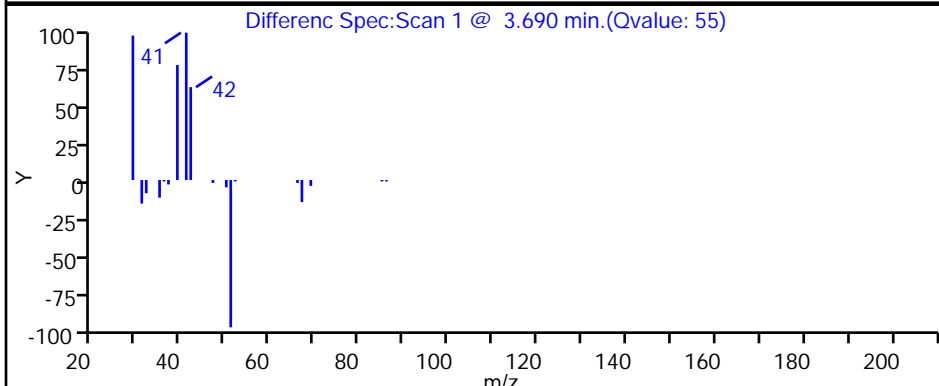
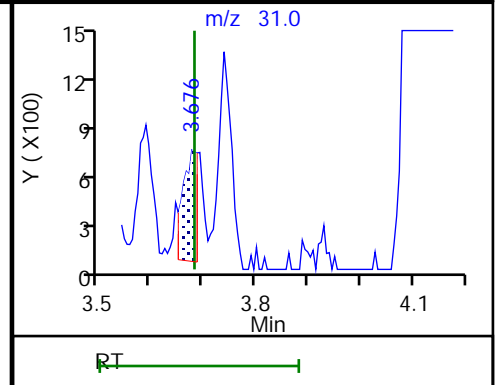
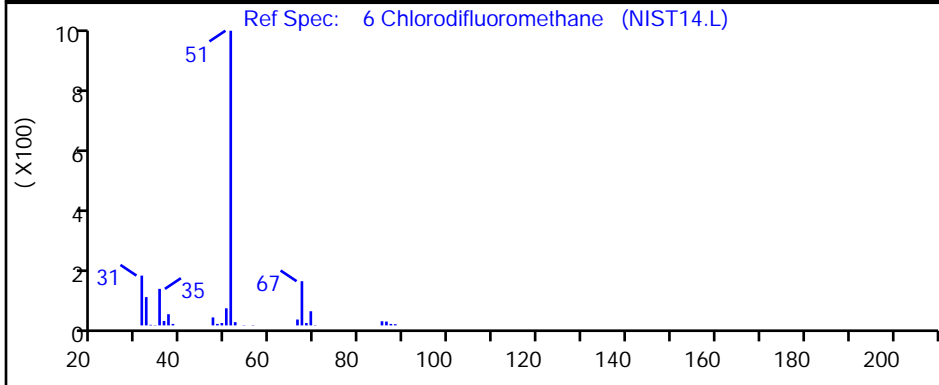
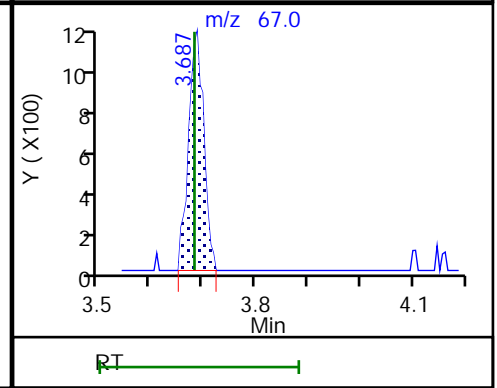
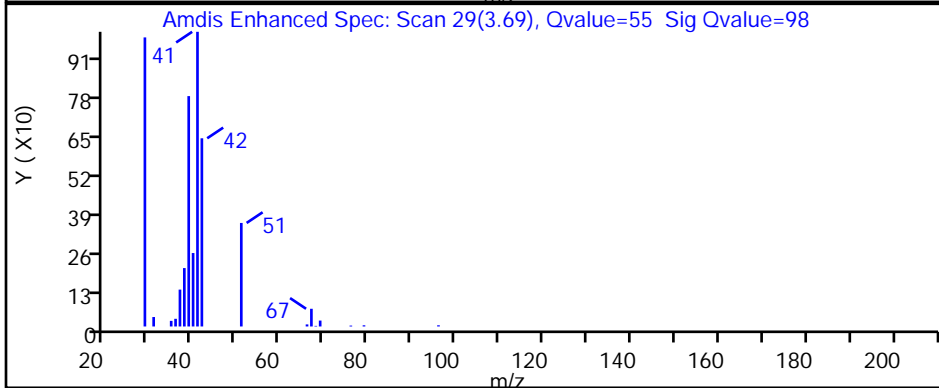
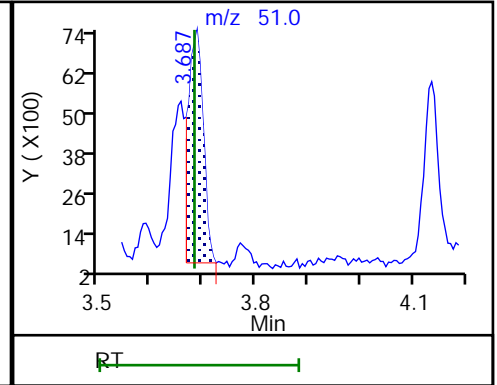
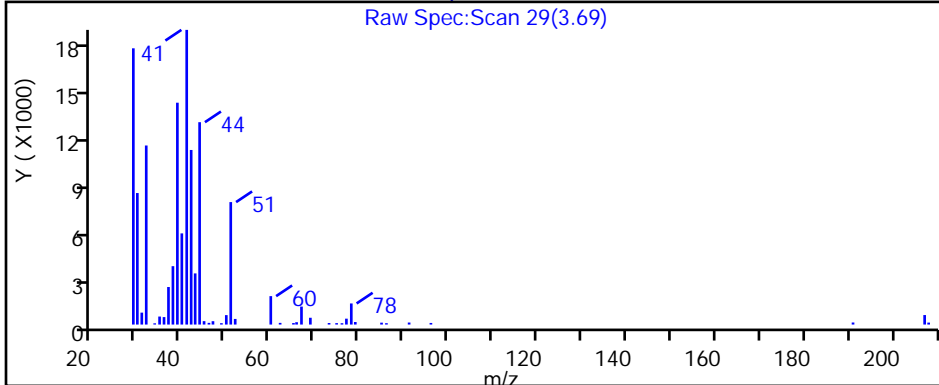
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D

Injection Date: 26-Feb-2019 18:49:30

Instrument ID: MH

Lims ID: 140-14390-A-7

Lab Sample ID: 140-14390-7

Client ID: SV-078-A-26

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

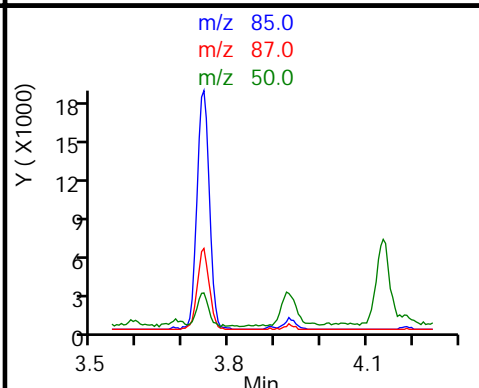
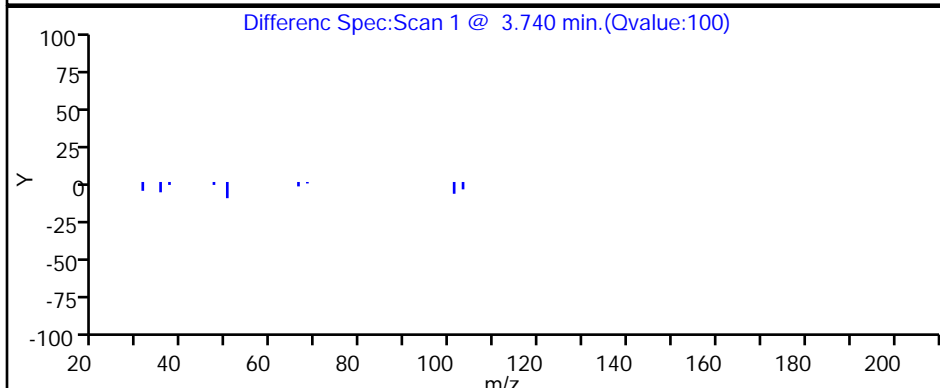
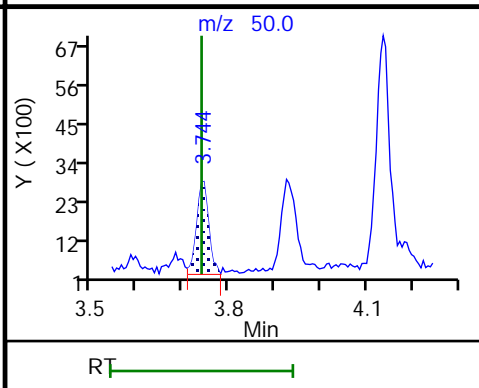
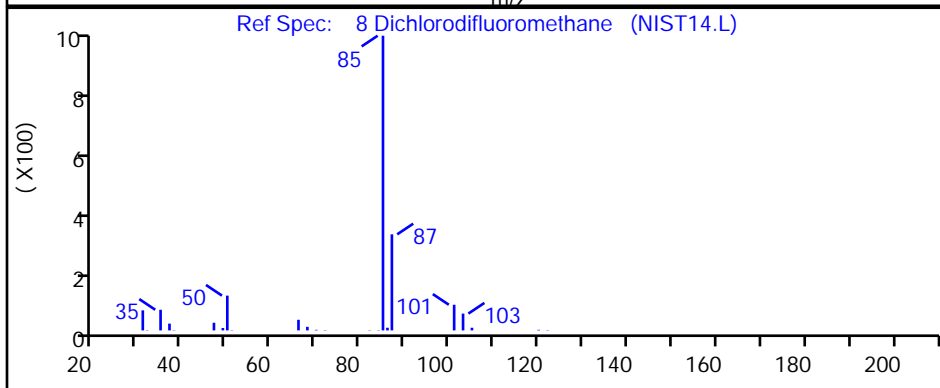
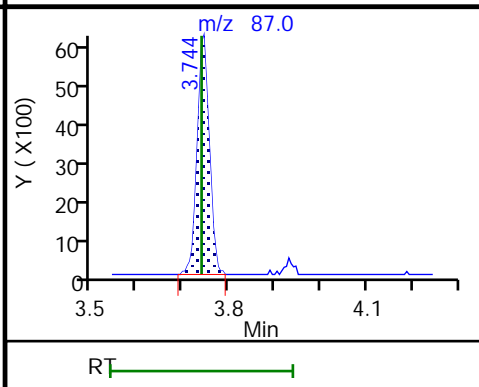
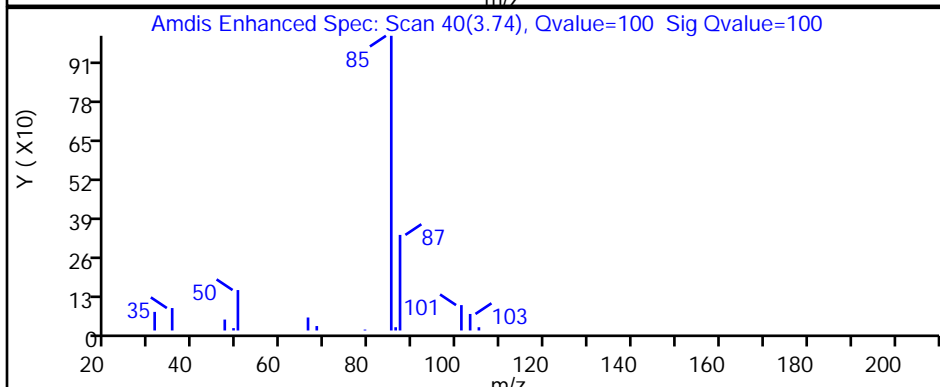
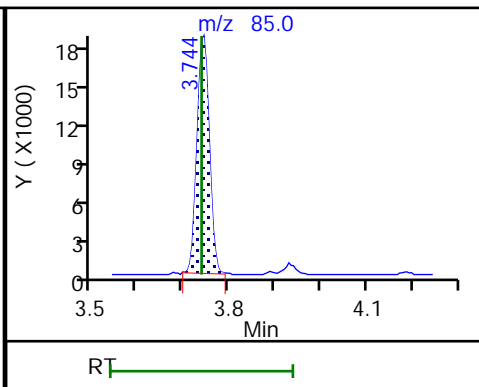
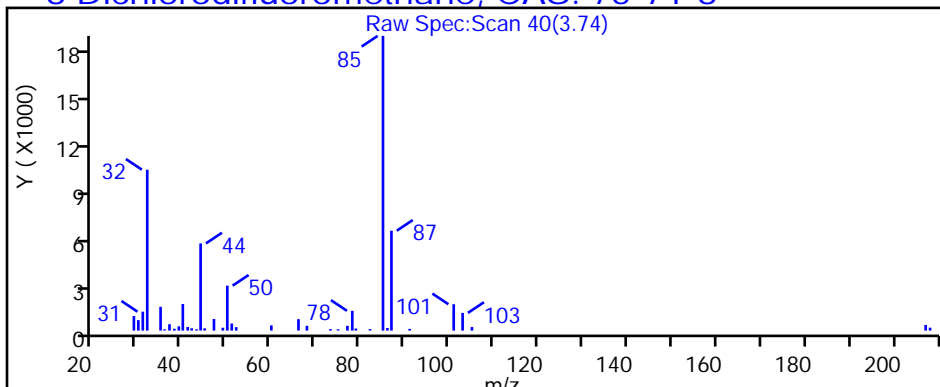
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D

Injection Date: 26-Feb-2019 18:49:30

Instrument ID: MH

Lims ID: 140-14390-A-7

Lab Sample ID: 140-14390-7

Client ID: SV-078-A-26

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

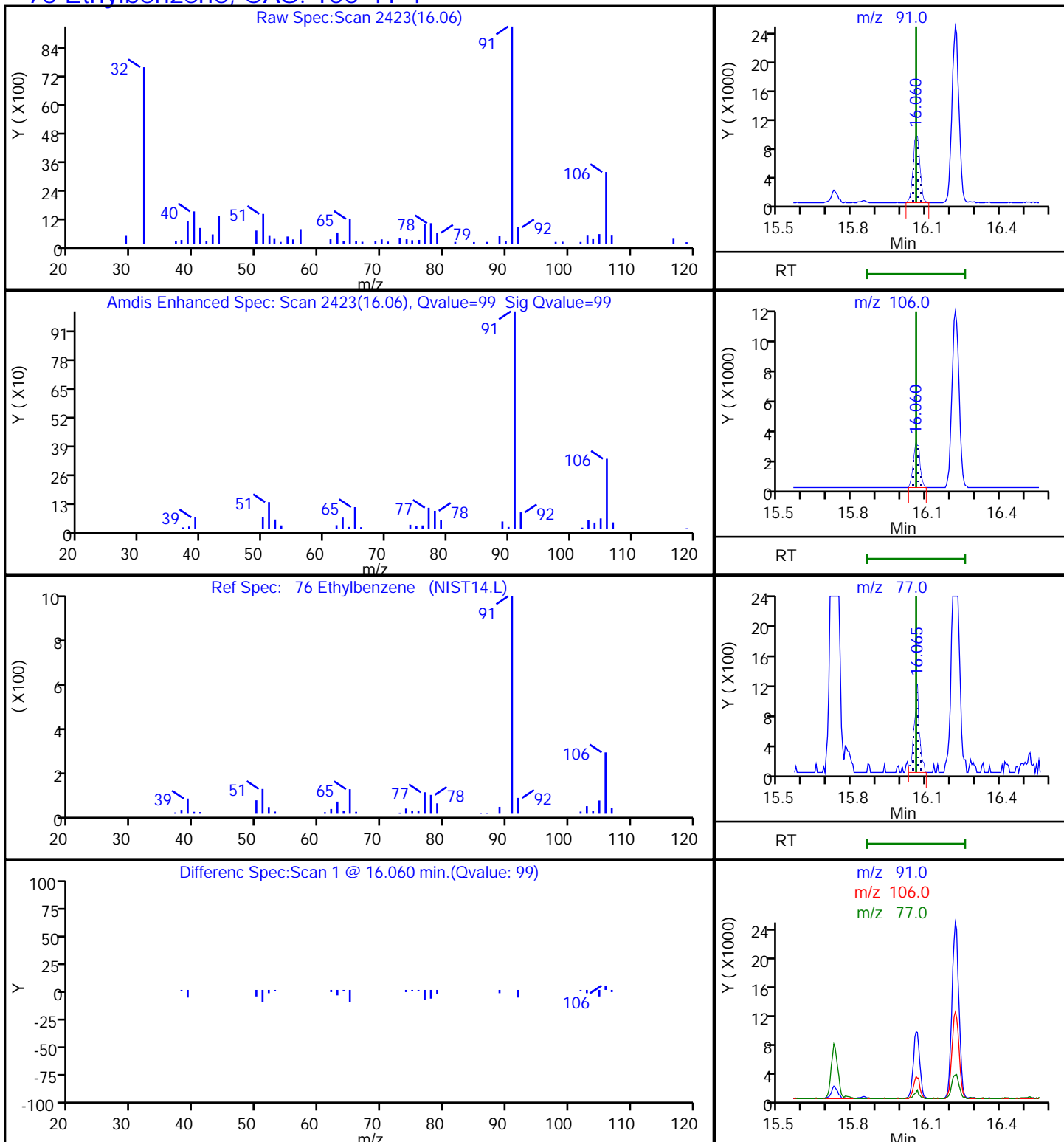
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D

Injection Date: 26-Feb-2019 18:49:30

Instrument ID: MH

Lims ID: 140-14390-A-7

Lab Sample ID: 140-14390-7

Client ID: SV-078-A-26

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

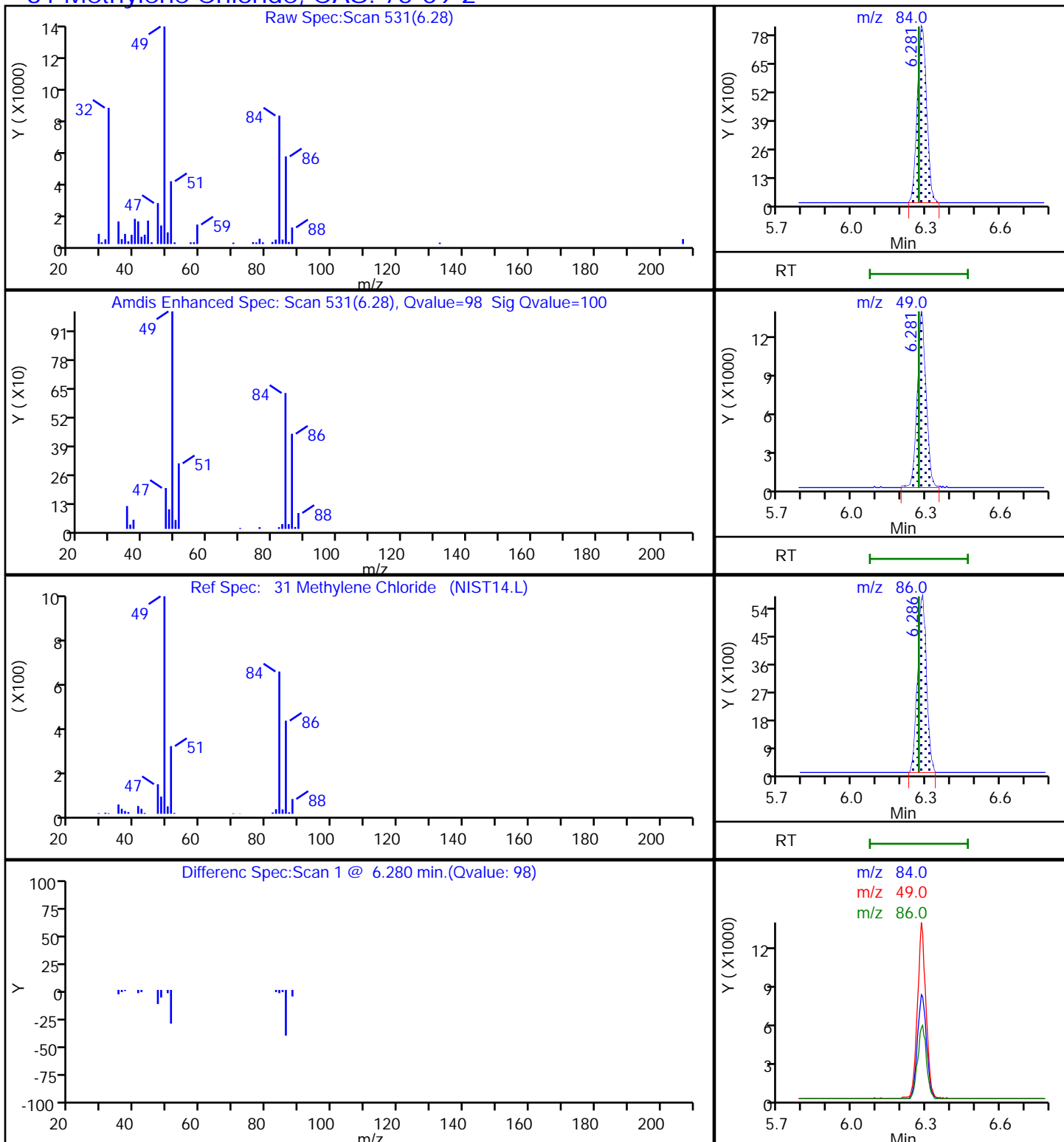
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D

Injection Date: 26-Feb-2019 18:49:30

Instrument ID: MH

Lims ID: 140-14390-A-7

Lab Sample ID: 140-14390-7

Client ID: SV-078-A-26

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

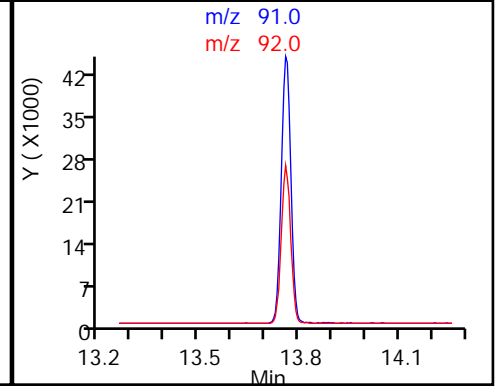
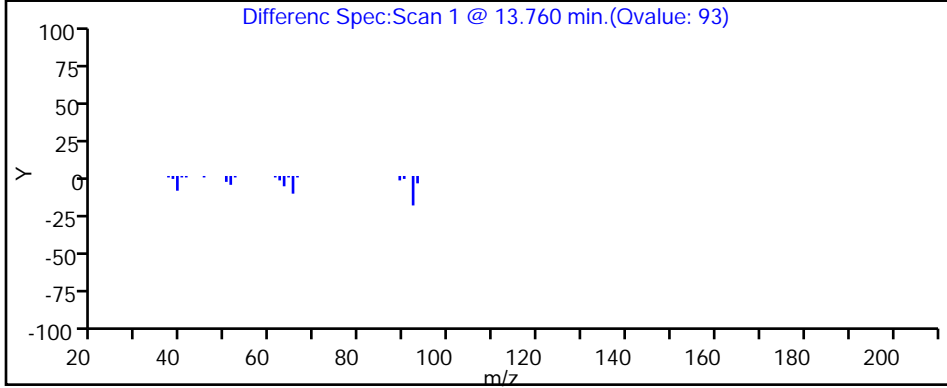
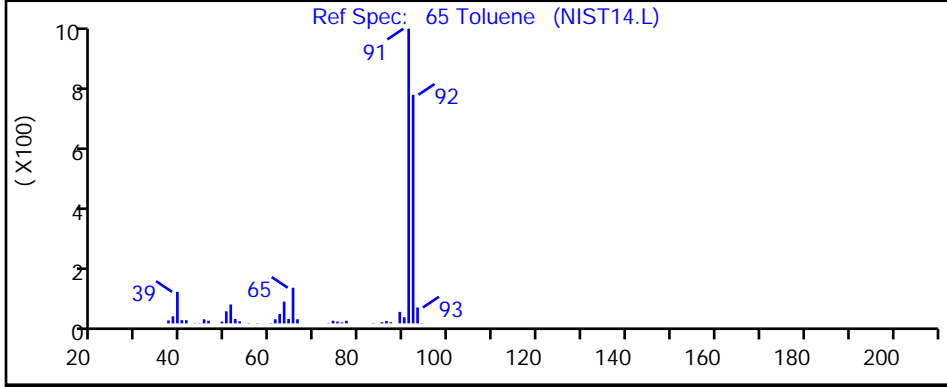
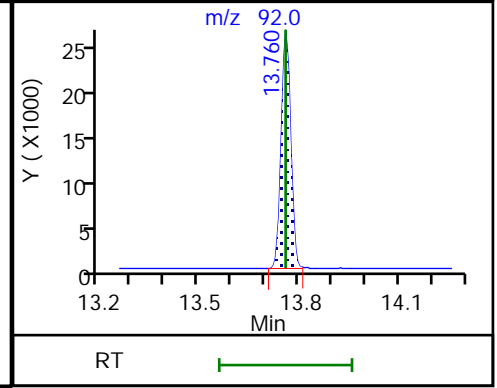
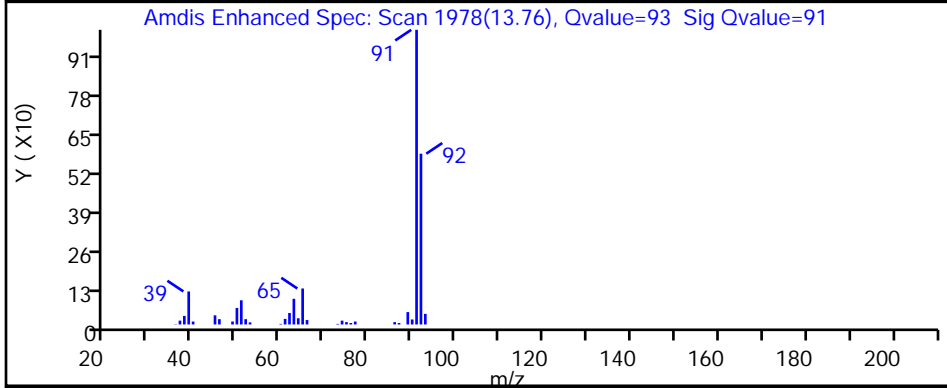
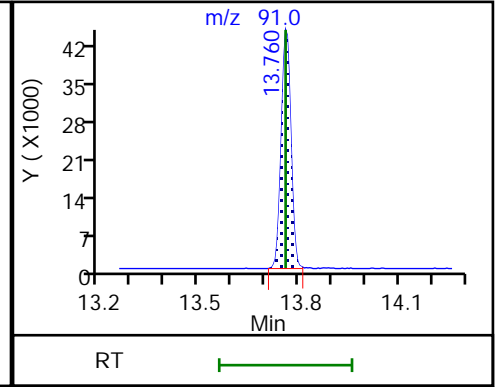
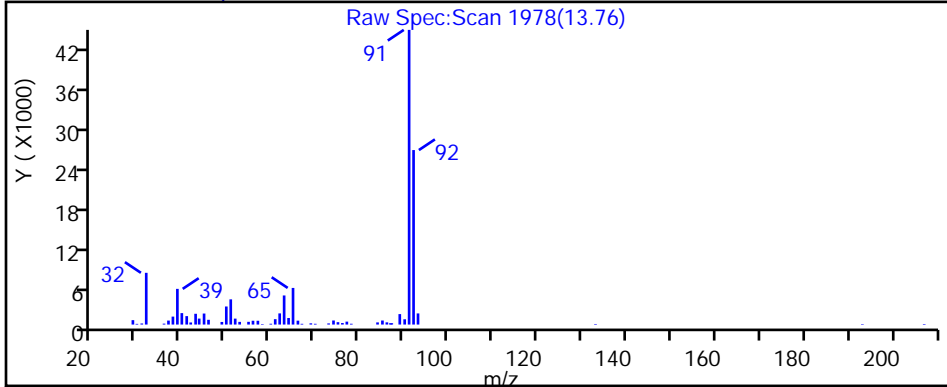
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D

Injection Date: 26-Feb-2019 18:49:30

Instrument ID: MH

Lims ID: 140-14390-A-7

Lab Sample ID: 140-14390-7

Client ID: SV-078-A-26

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

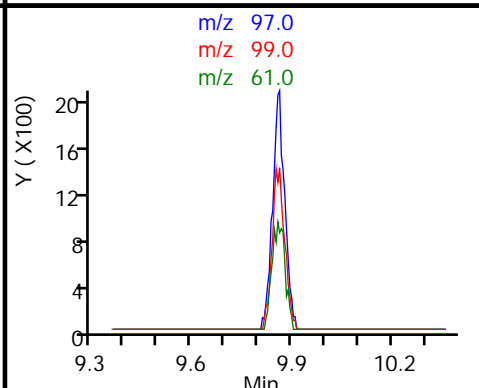
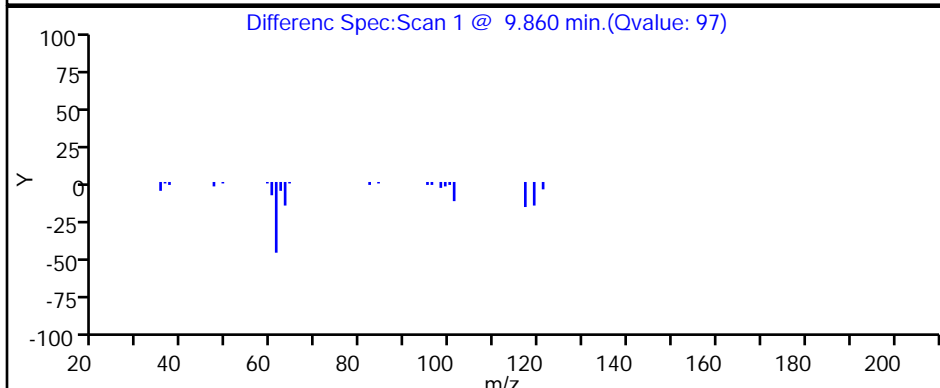
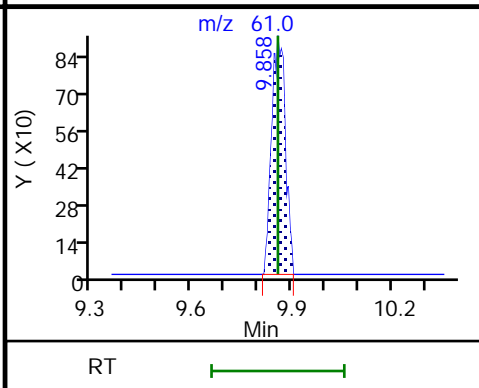
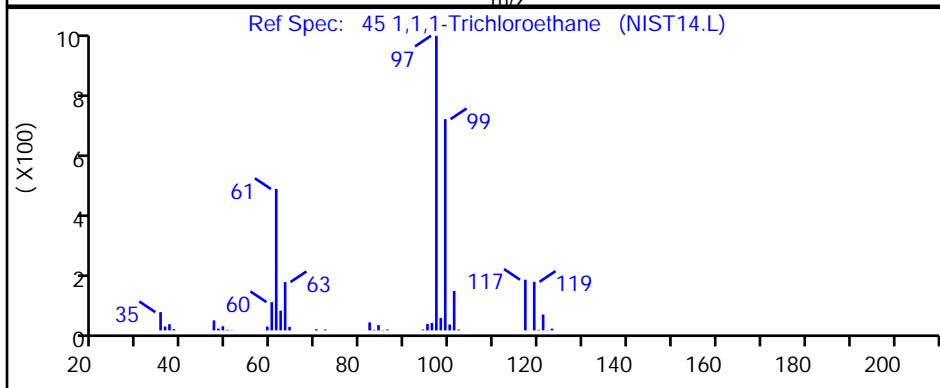
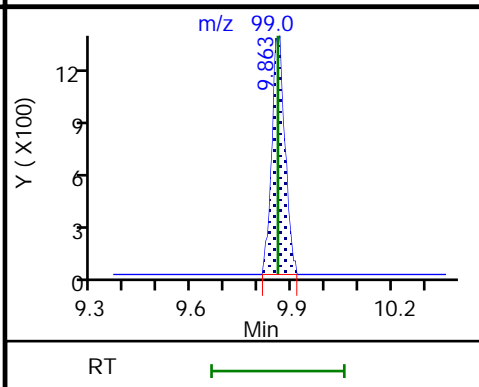
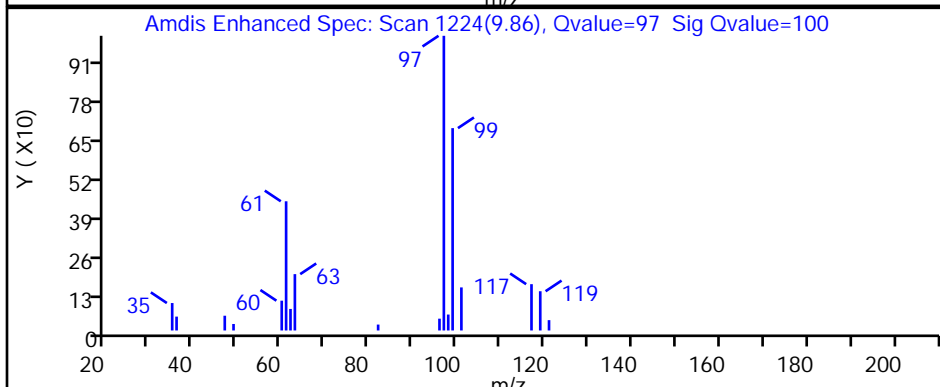
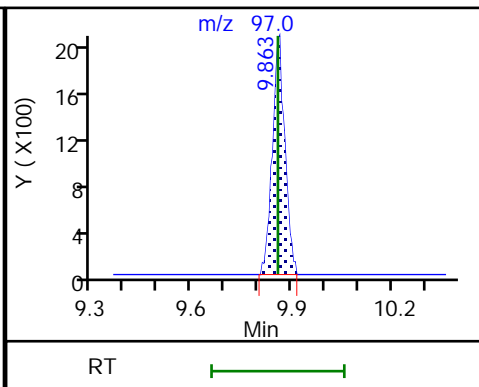
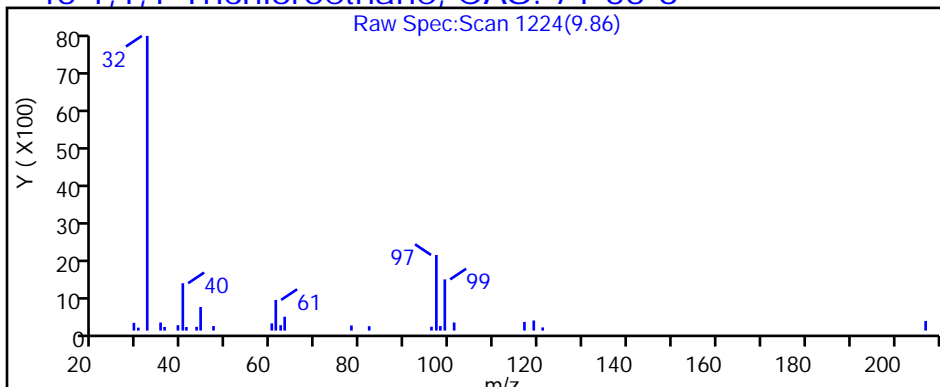
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D

Injection Date: 26-Feb-2019 18:49:30

Instrument ID: MH

Lims ID: 140-14390-A-7

Lab Sample ID: 140-14390-7

Client ID: SV-078-A-26

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

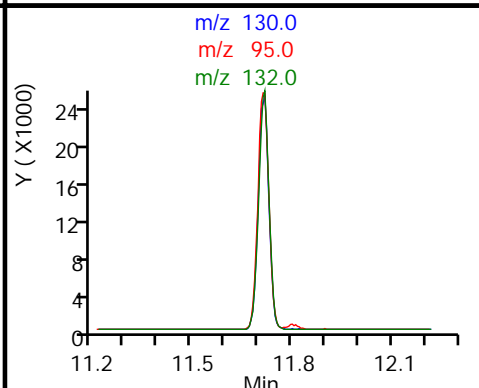
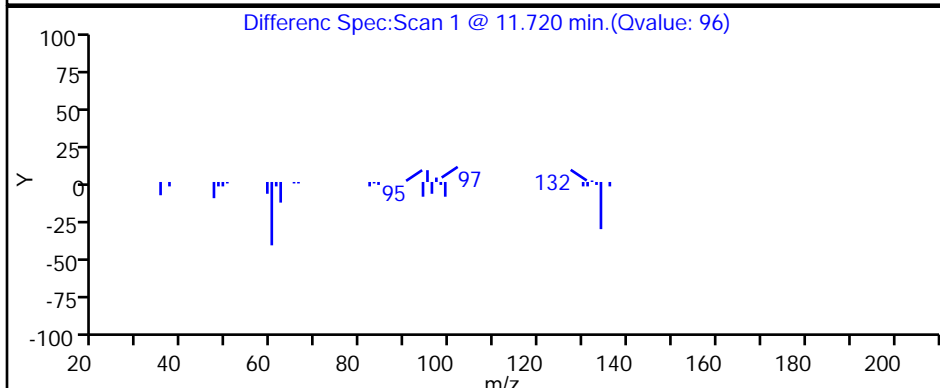
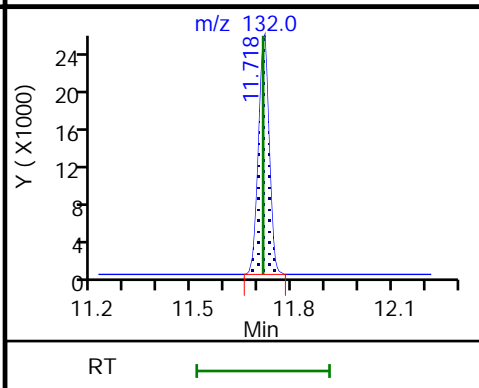
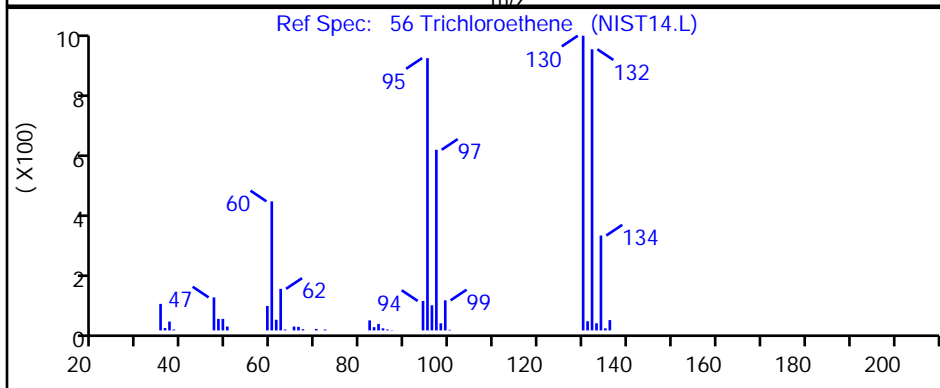
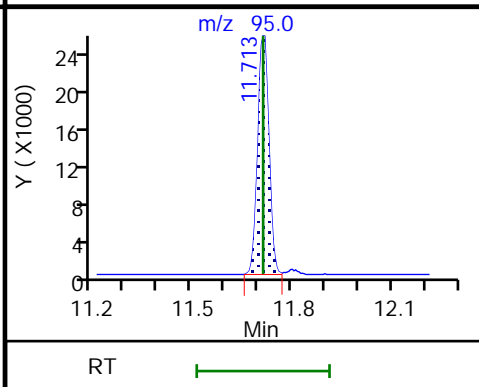
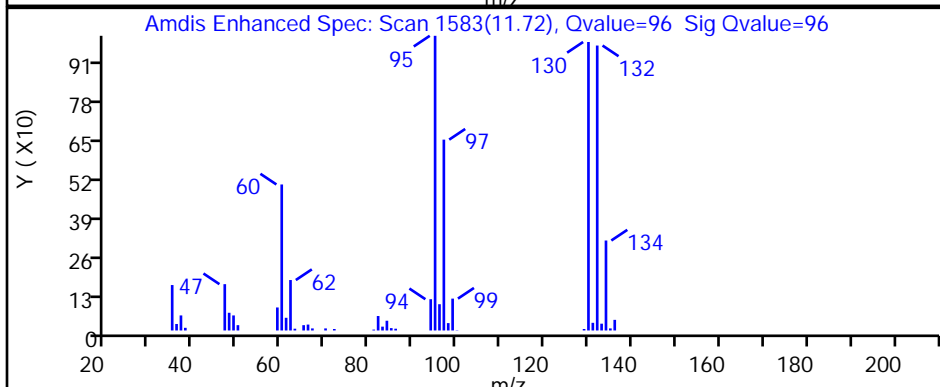
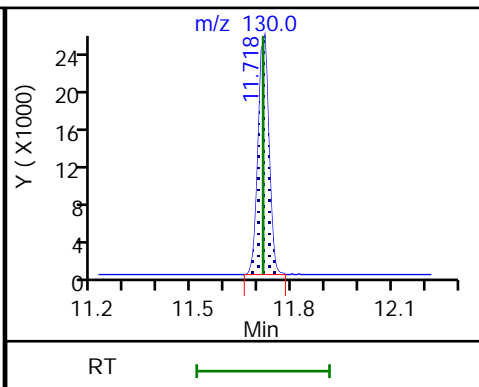
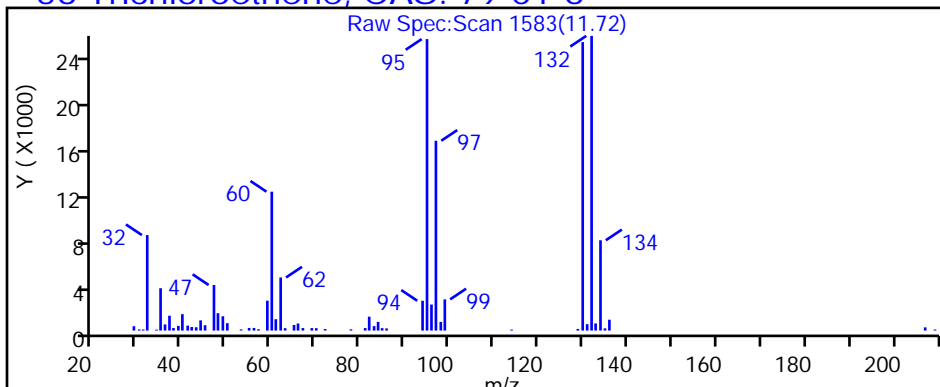
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D

Injection Date: 26-Feb-2019 18:49:30

Instrument ID: MH

Lims ID: 140-14390-A-7

Lab Sample ID: 140-14390-7

Client ID: SV-078-A-26

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

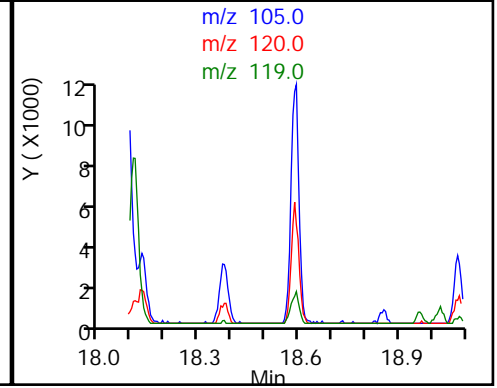
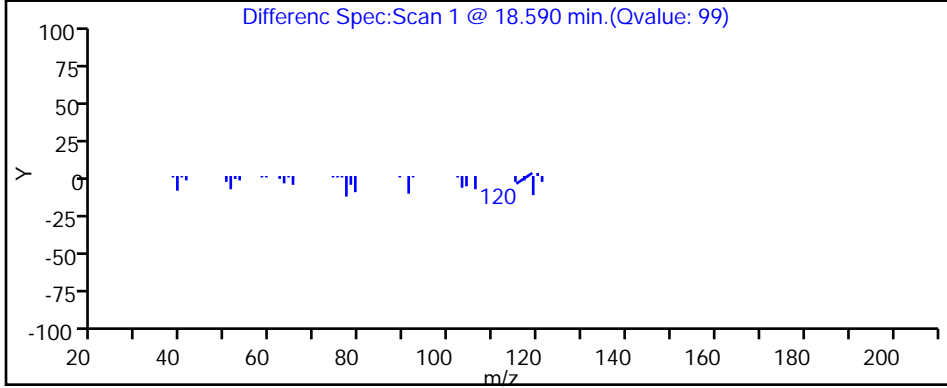
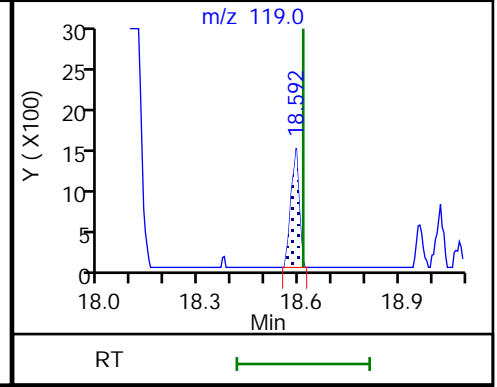
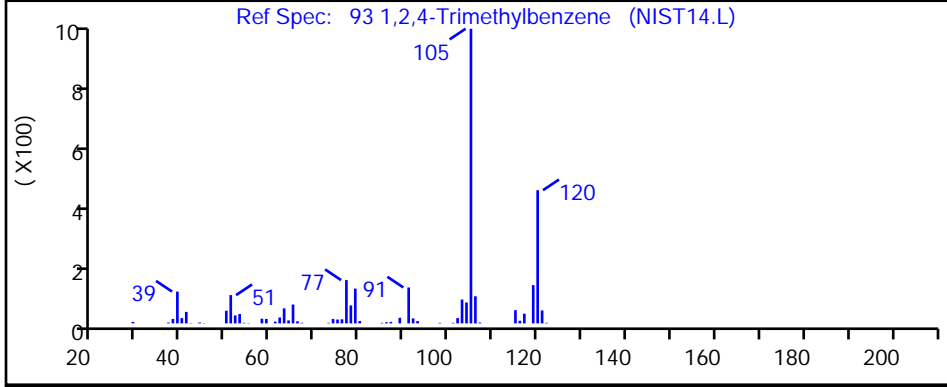
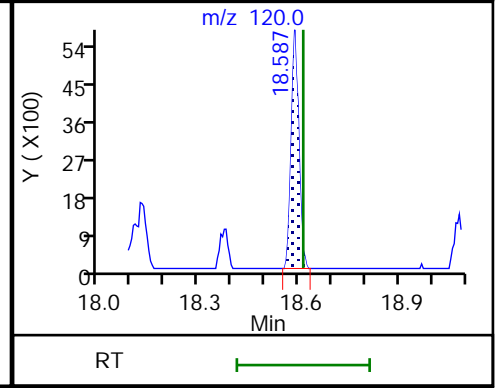
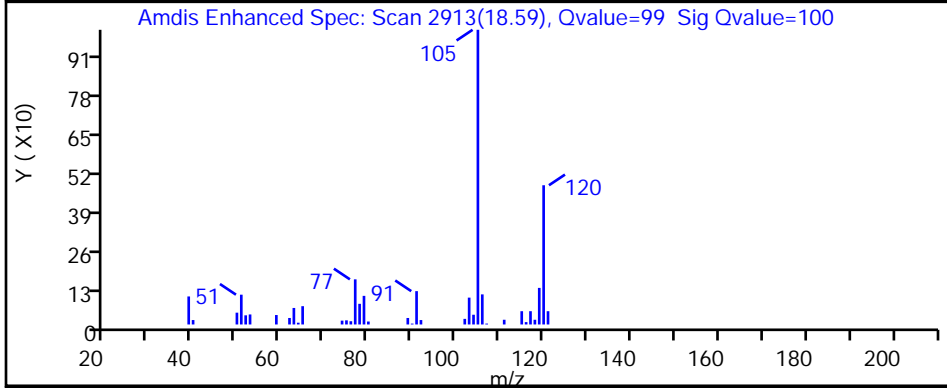
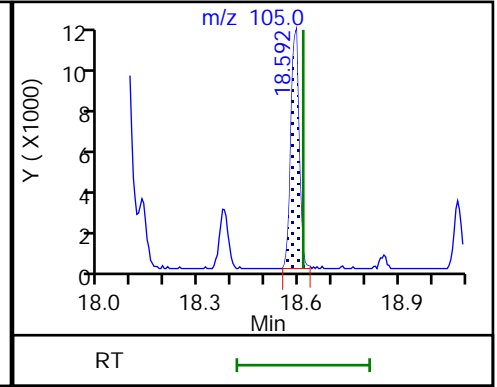
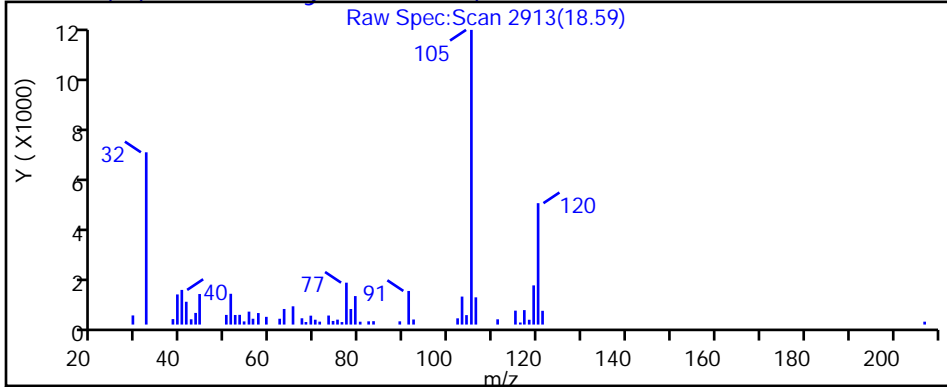
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D

Injection Date: 26-Feb-2019 18:49:30

Instrument ID: MH

Lims ID: 140-14390-A-7

Lab Sample ID: 140-14390-7

Client ID: SV-078-A-26

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

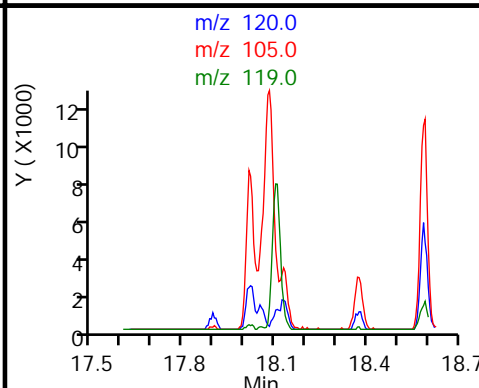
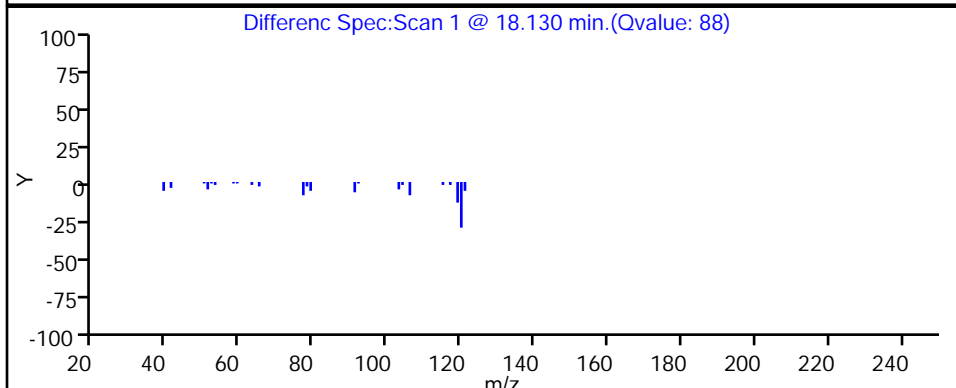
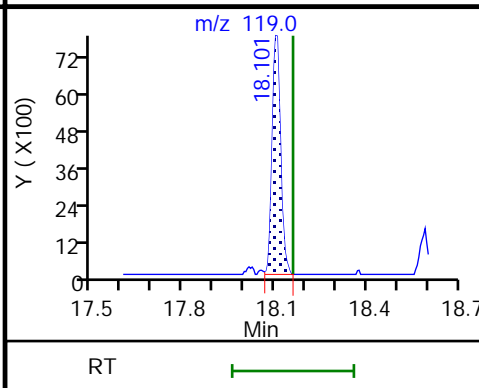
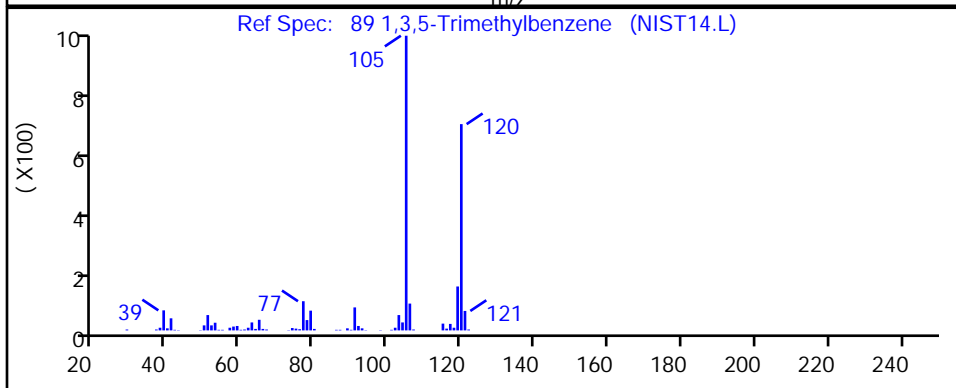
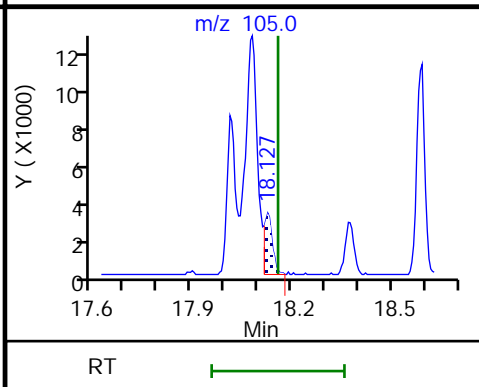
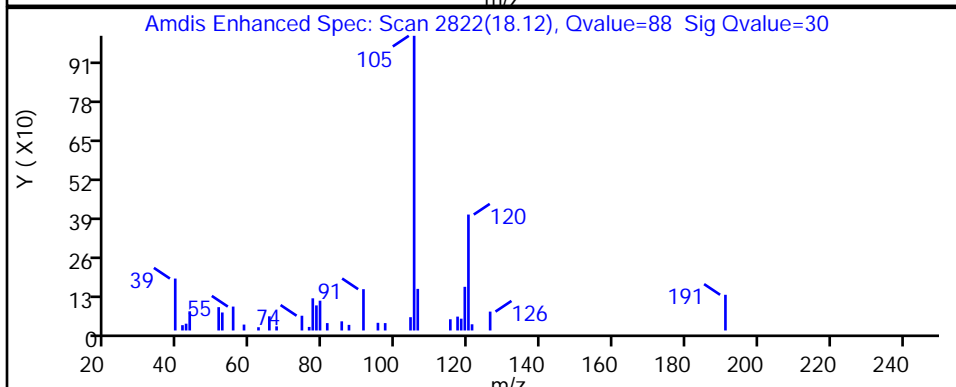
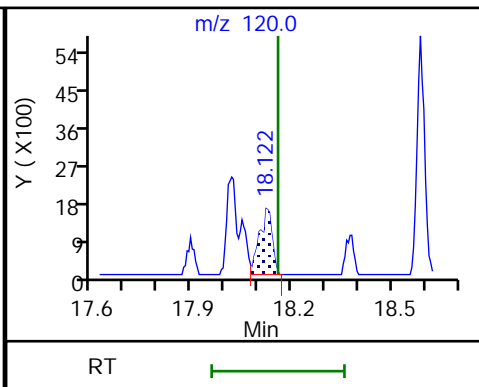
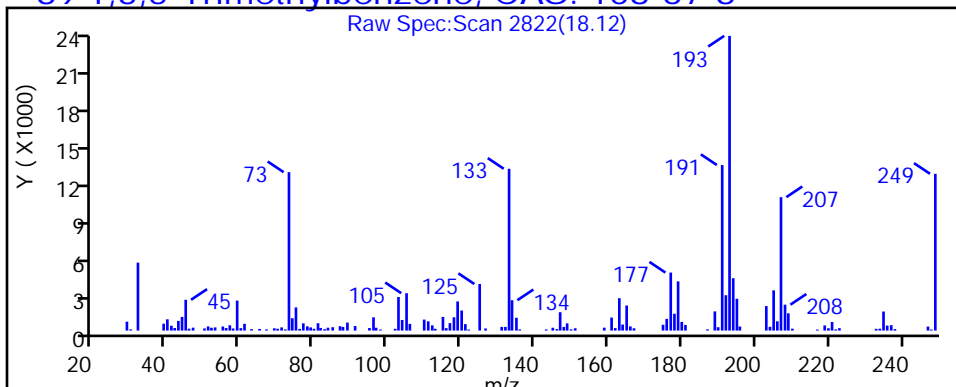
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D

Injection Date: 26-Feb-2019 18:49:30

Instrument ID: MH

Lims ID: 140-14390-A-7

Lab Sample ID: 140-14390-7

Client ID: SV-078-A-26

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

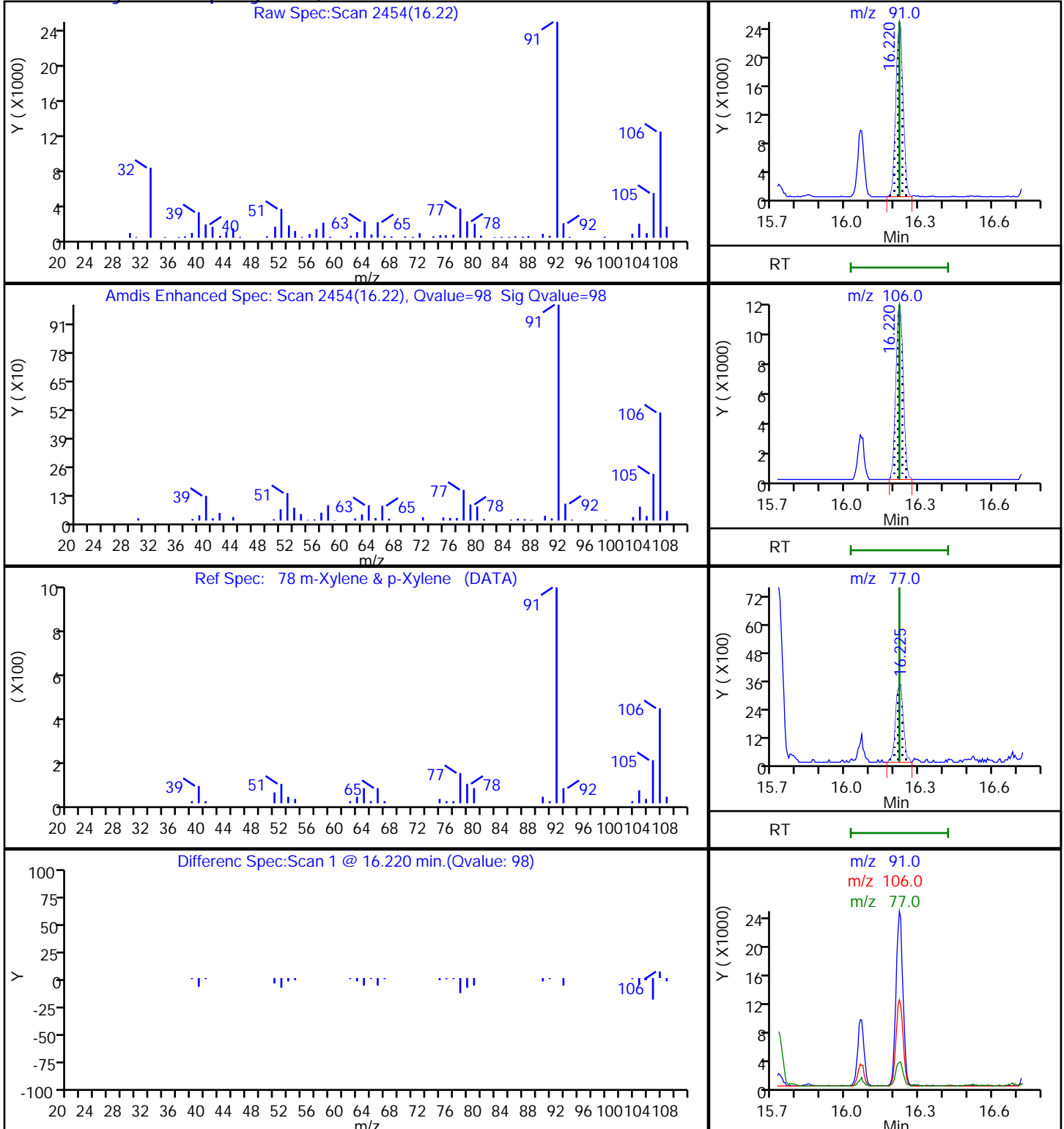
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P107.D

Injection Date: 26-Feb-2019 18:49:30

Instrument ID: MH

Lims ID: 140-14390-A-7

Lab Sample ID: 140-14390-7

Client ID: SV-078-A-26

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

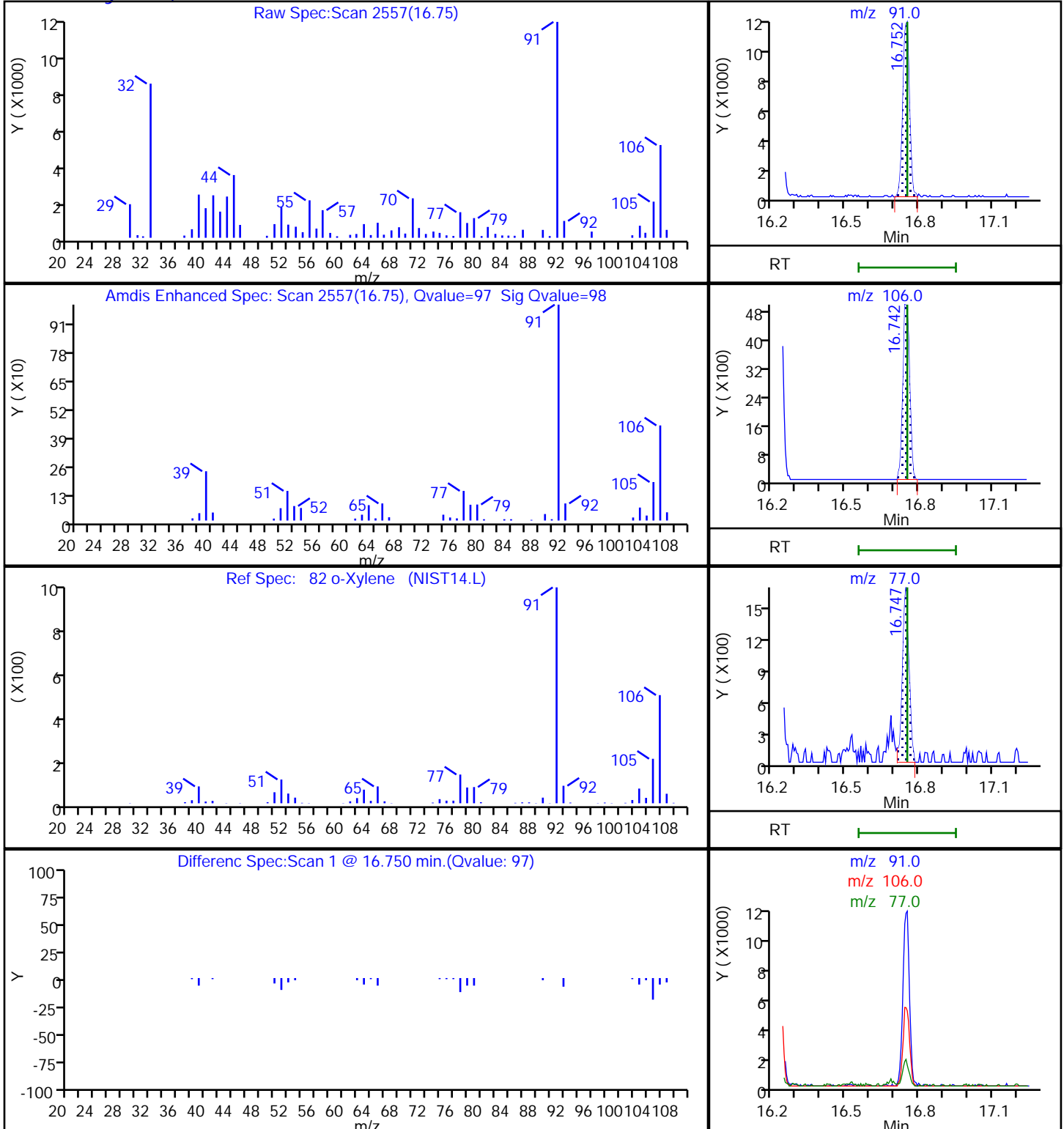
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-136-A-26 Lab Sample ID: 140-14390-8
 Matrix: Air Lab File ID: HB26P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:53
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 19:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.74		0.40	0.075
67-66-3	Chloroform	119.38	1.8		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.33	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.086	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	1.2		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	54		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	50		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.20	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.22	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	5.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-136-A-26 Lab Sample ID: 140-14390-8
 Matrix: Air Lab File ID: HB26P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:53
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 19:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.0		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.6		1.4	0.27
67-66-3	Chloroform	119.38	8.8		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.3	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.34	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	5.1		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	200		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	270		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.98	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	23		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D
 Lims ID: 140-14390-A-8
 Client ID: SV-136-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 19:43:30 ALS Bottle#: 8 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-012
 Misc. Info.: 140-14390-a-8
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:57:07 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:01:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.855	8.819	0.036	95	290143	4.00	
* 2 1,4-Difluorobenzene	114	11.015	11.000	0.015	95	1608111	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	87	1411221	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	94	924007	4.02	
6 Chlorodifluoromethane	51	3.676	3.681	-0.006	43	35177	0.1479	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	30238	0.0827	
27 1,1-Dichloroethene	96	5.930	5.919	0.011	31	1936	0.0172	
31 Methylene Chloride	84	6.323	6.271	0.052	99	24713	0.2083	
41 cis-1,2-Dichloroethene	96	8.529	8.483	0.046	94	7675	0.0655	
43 Chloroform	83	8.865	8.829	0.036	98	90904	0.3606	
47 Benzene	78	10.473	10.457	0.016	97	43161	0.1269	
56 Trichloroethene	130	11.724	11.713	0.011	96	1614922	10.1	
65 Toluene	91	13.765	13.760	0.005	93	4352287	10.8	
76 Ethylbenzene	91	16.060	16.060	0.000	99	119142	0.2329	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	325999	0.8265	
82 o-Xylene	91	16.747	16.752	-0.005	98	98677	0.2457	
89 1,3,5-Trimethylbenzene	120	18.127	18.158	-0.031	93	4152	0.0445	
93 1,2,4-Trimethylbenzene	105	18.587	18.613	-0.026	97	18295	0.0398	
S 121 Xylenes, Total	100				0		1.07	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Worklist Smp#: 12

Client ID: SV-136-A-26

Purge Vol: 500.000 mL

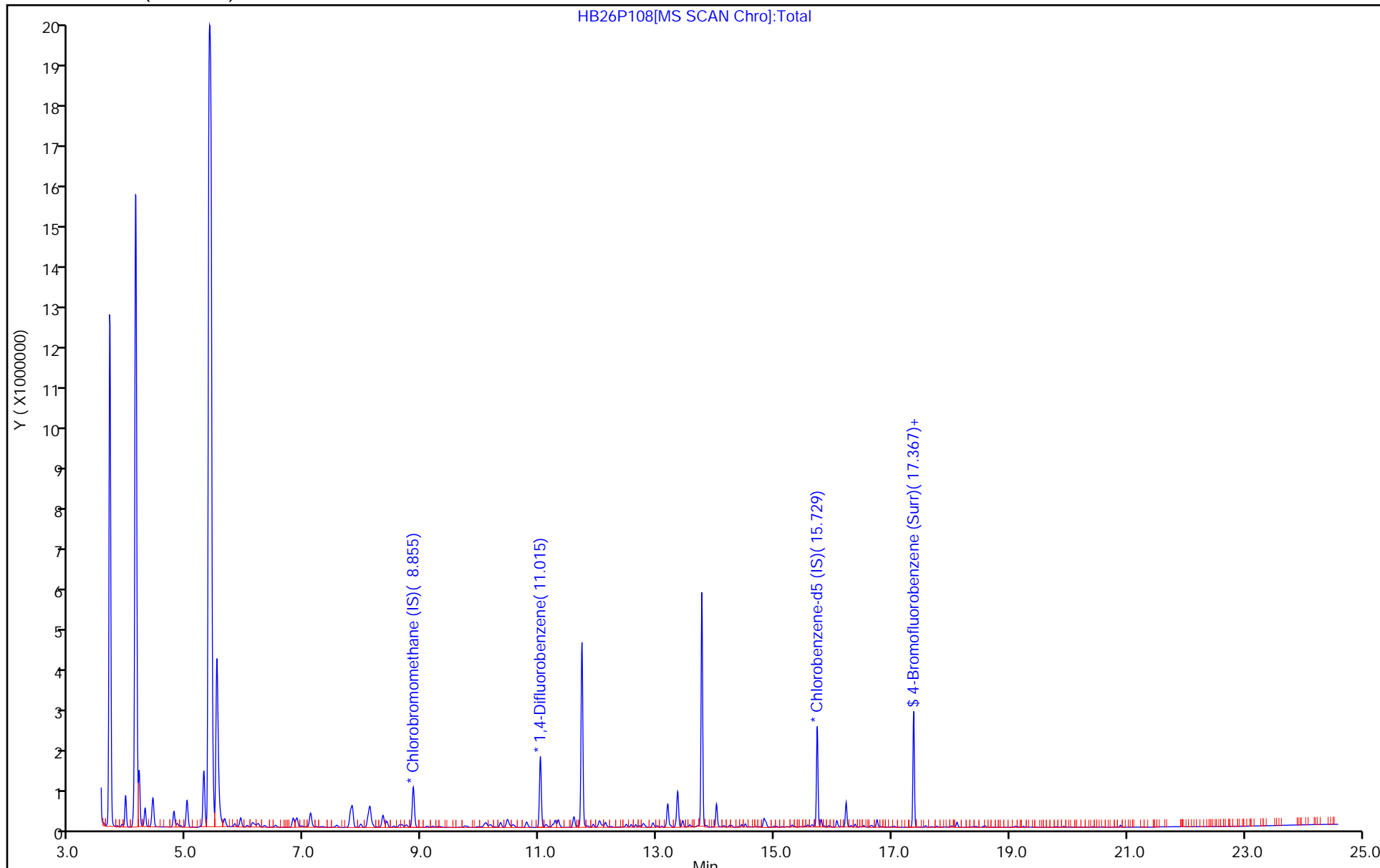
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D
 Lims ID: 140-14390-A-8
 Client ID: SV-136-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 19:43:30 ALS Bottle#: 8 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-012
 Misc. Info.: 140-14390-a-8
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:57:07 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:01:26

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.02	100.45

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Client ID: SV-136-A-26

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

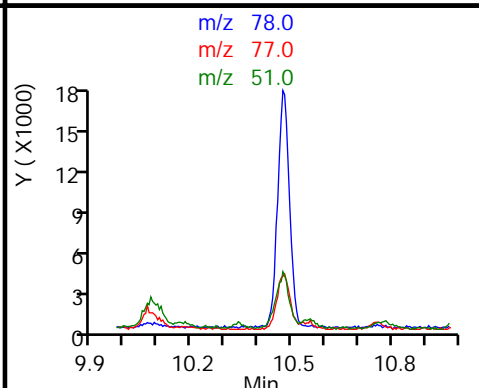
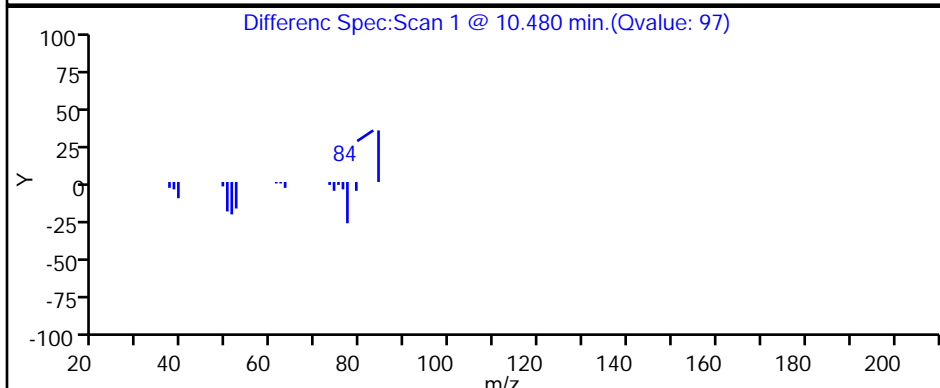
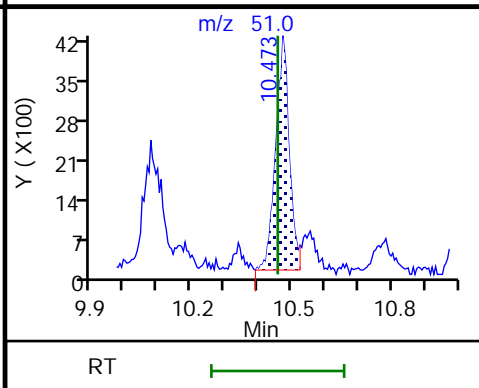
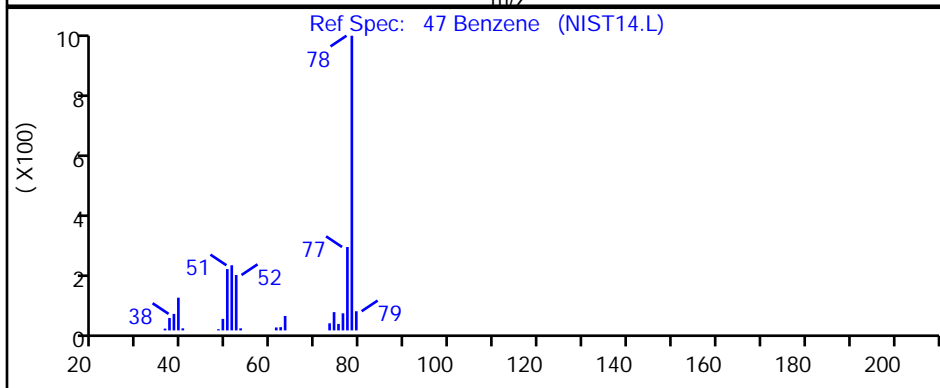
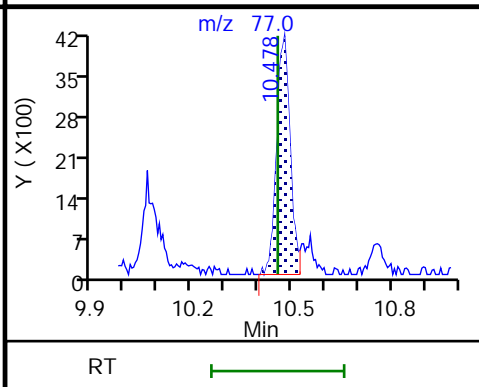
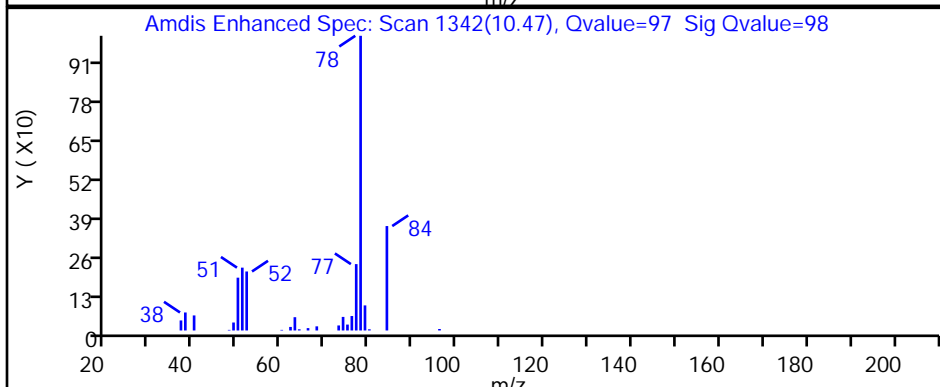
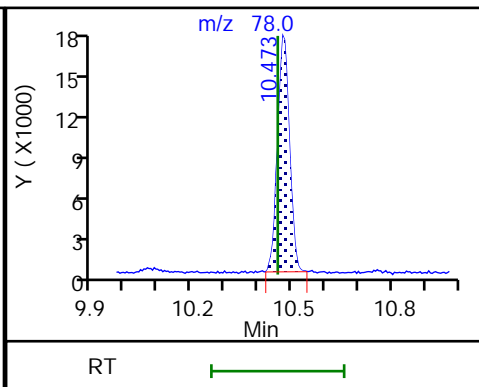
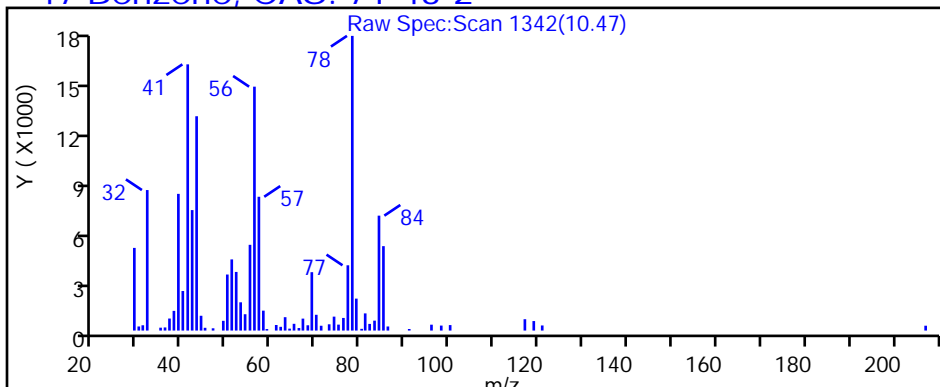
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Client ID: SV-136-A-26

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

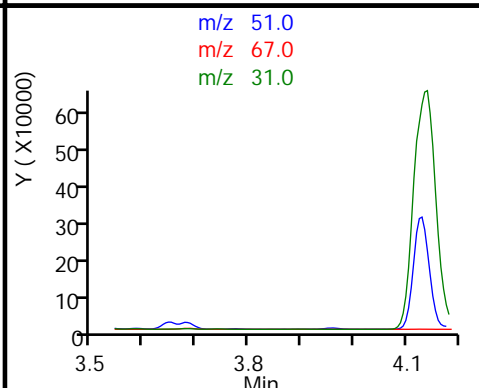
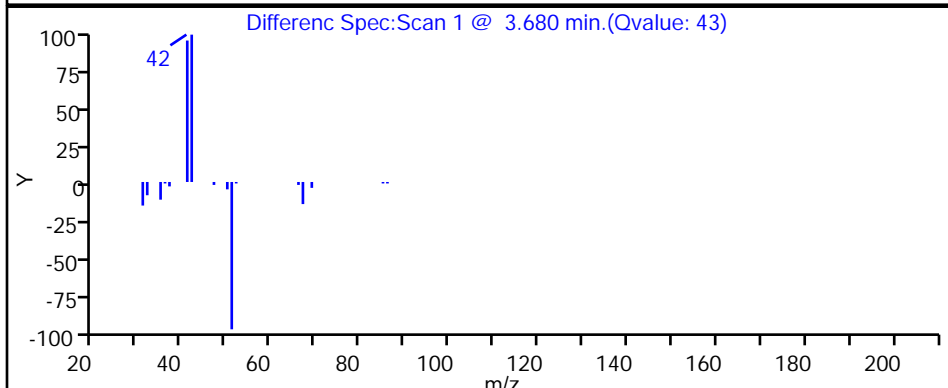
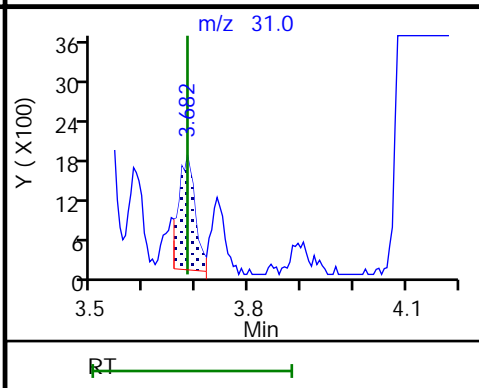
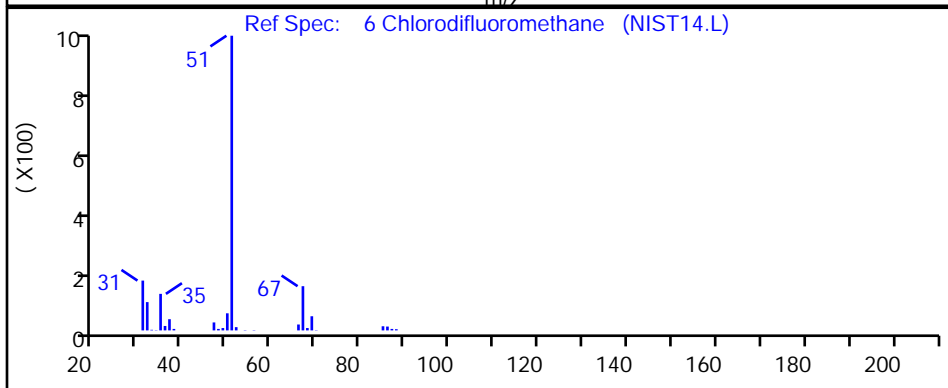
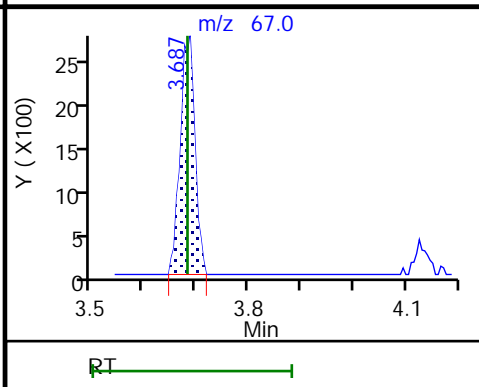
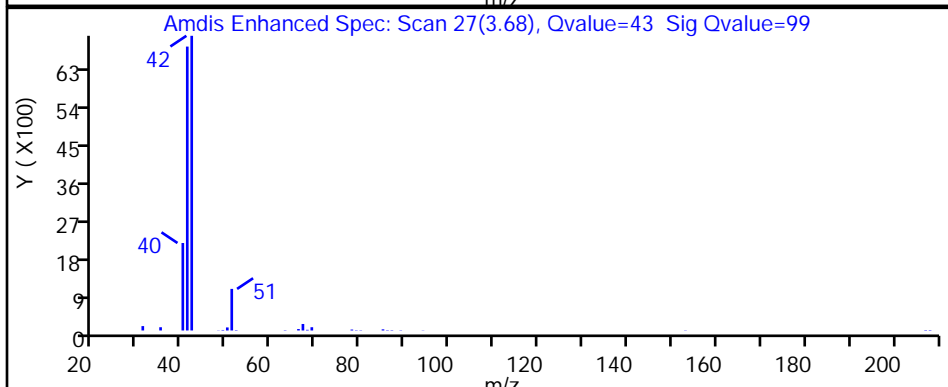
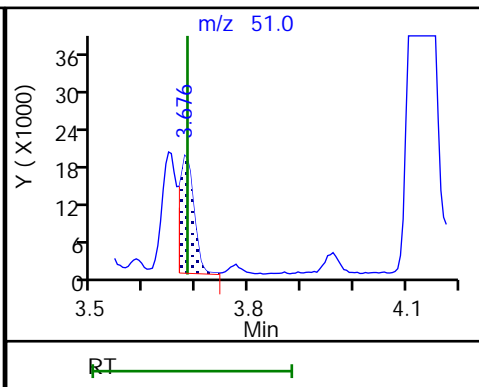
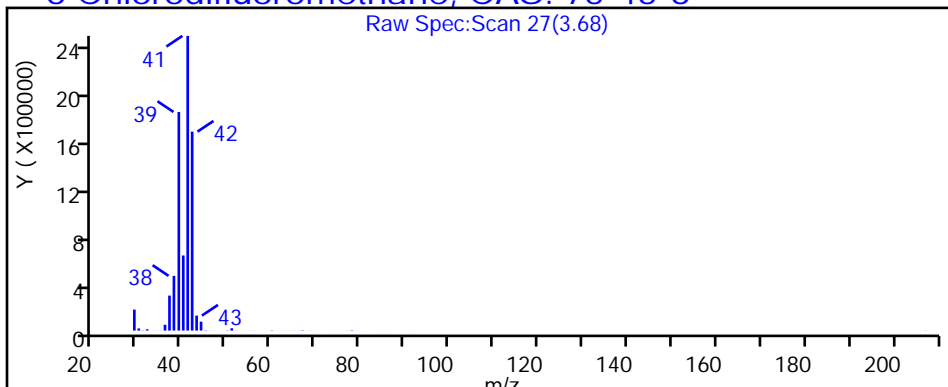
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Client ID: SV-136-A-26

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

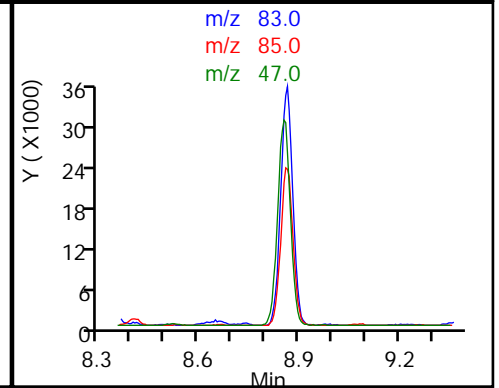
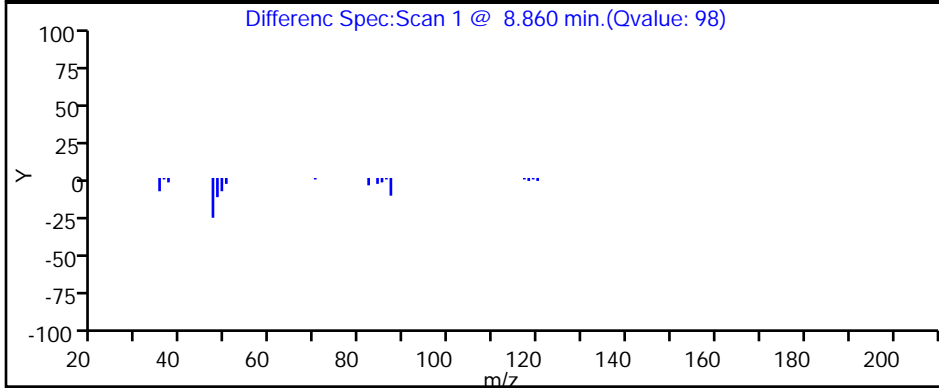
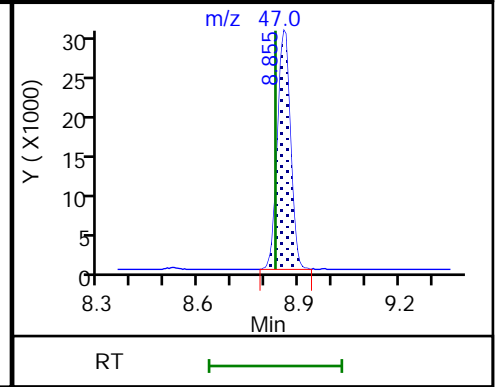
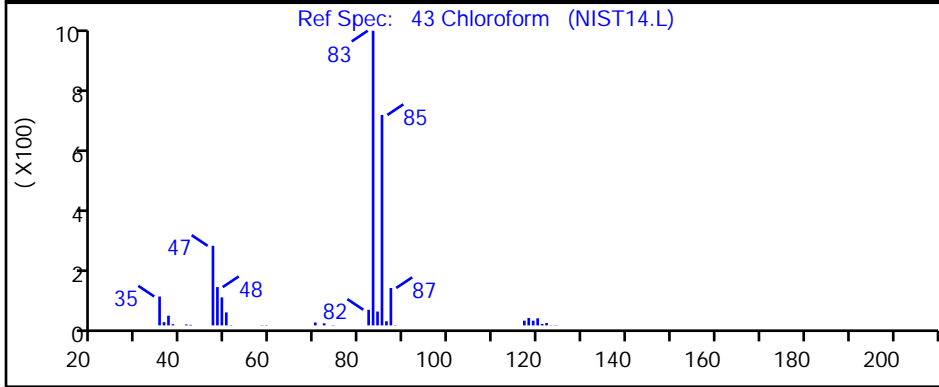
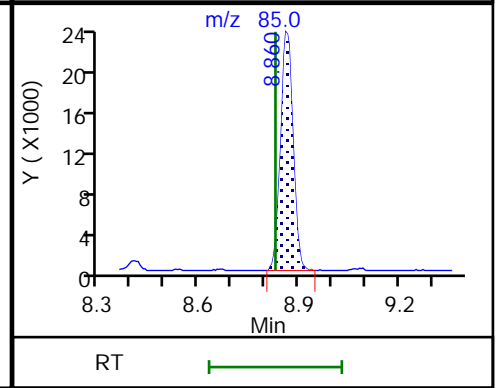
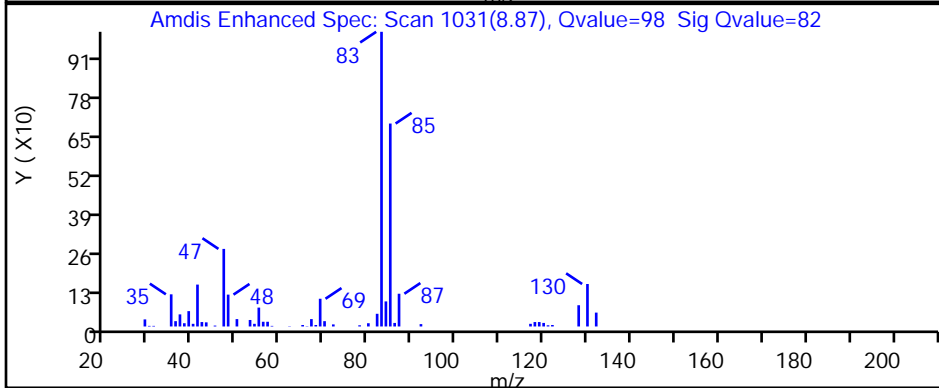
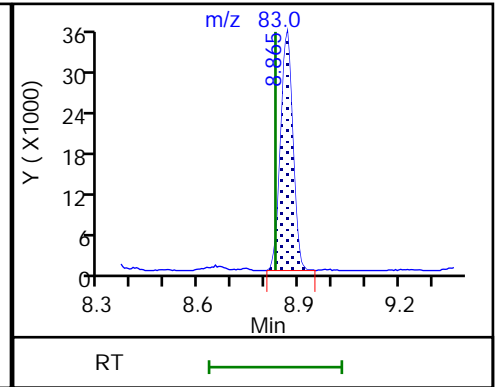
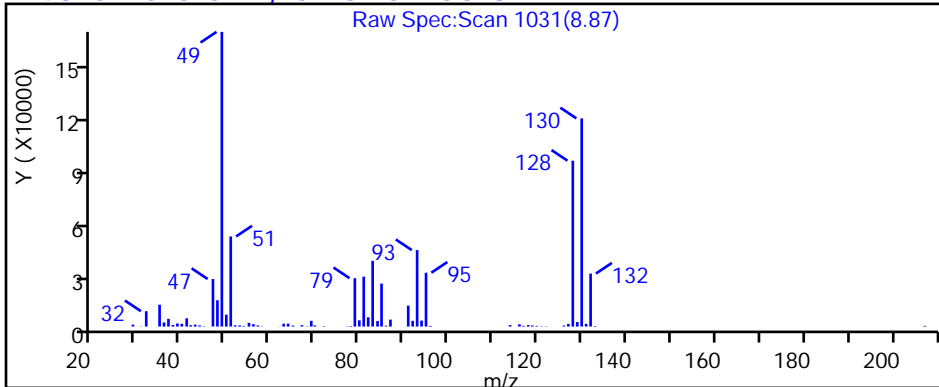
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Client ID: SV-136-A-26

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

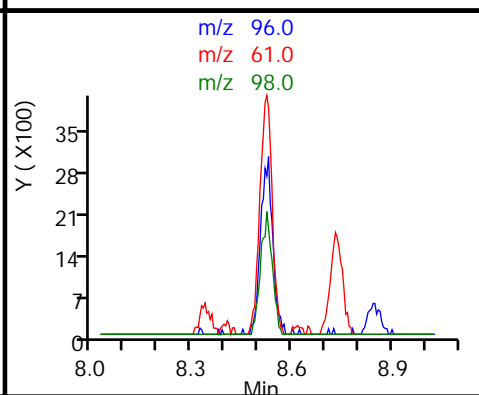
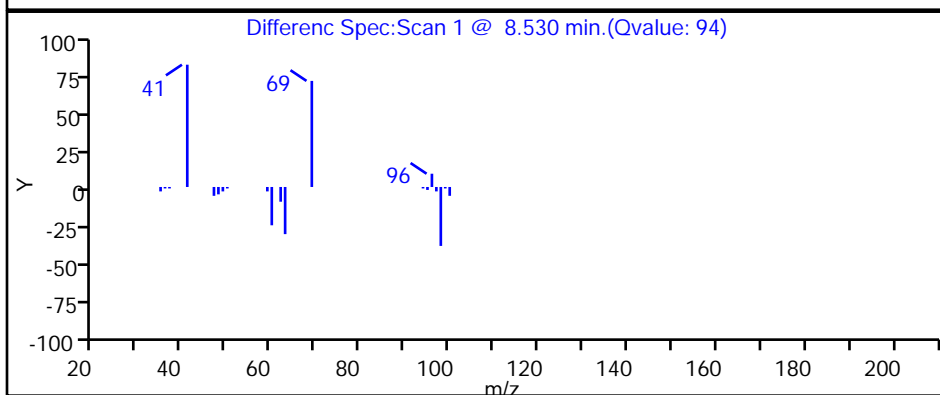
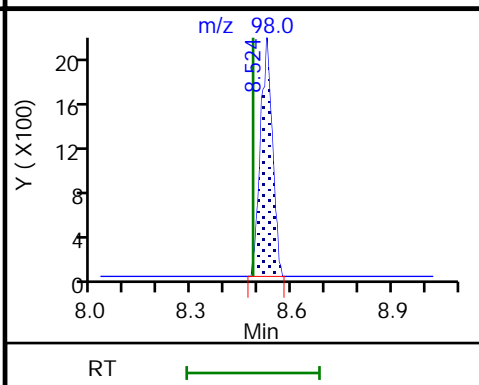
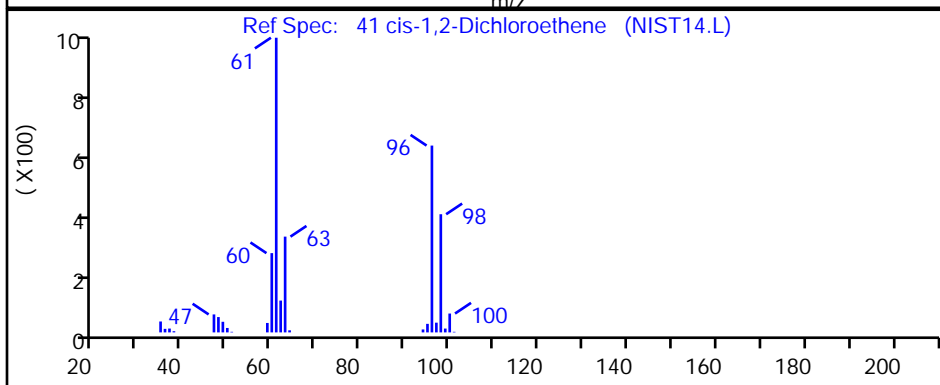
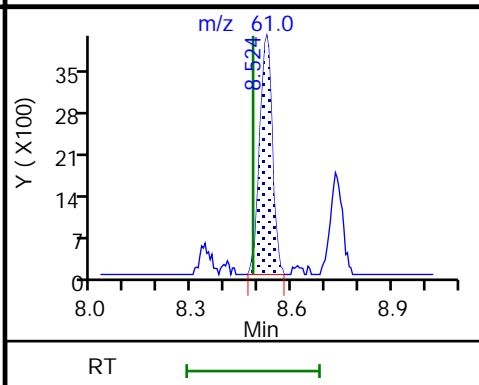
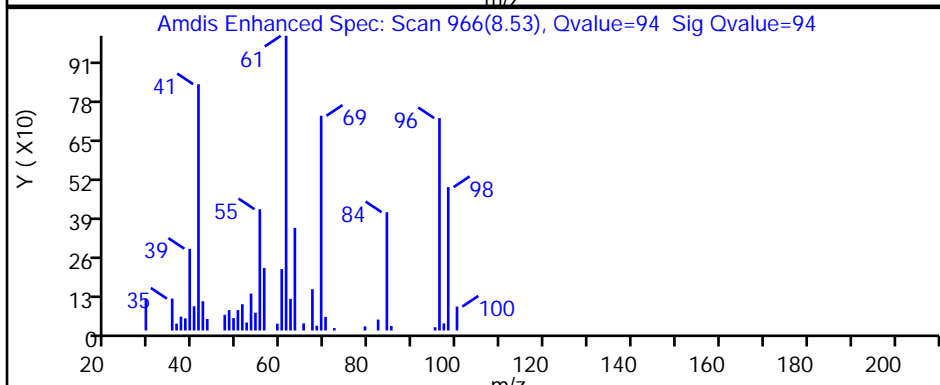
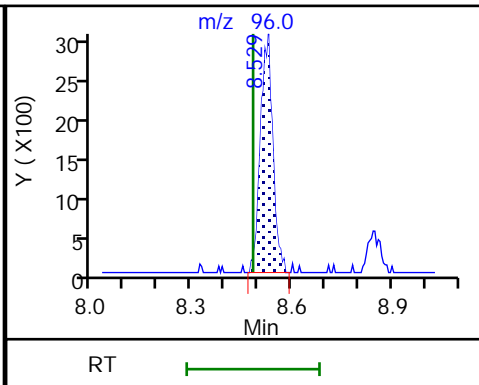
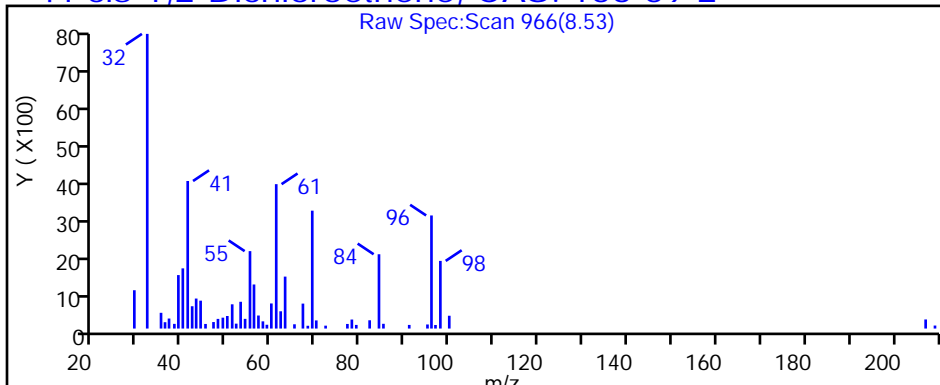
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Client ID: SV-136-A-26

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

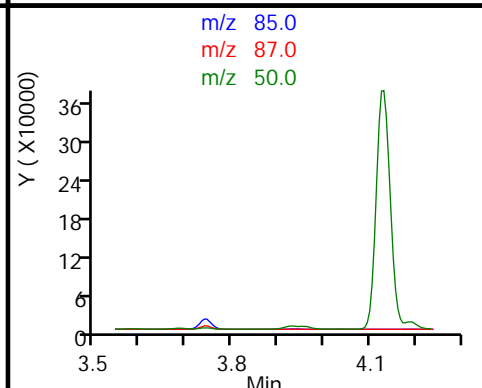
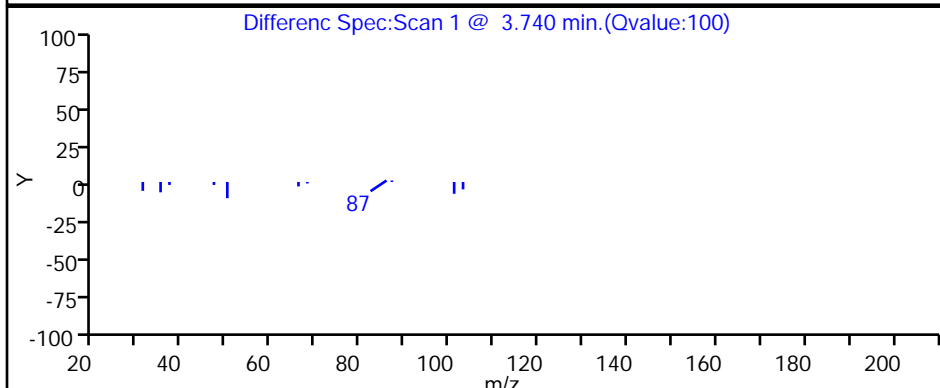
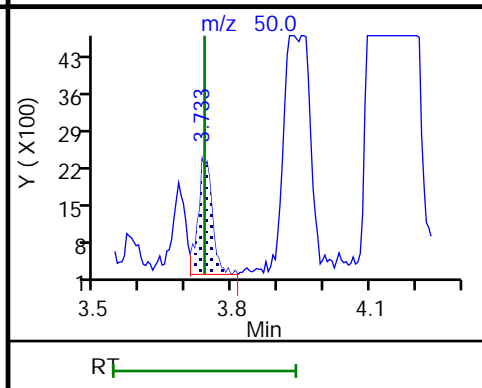
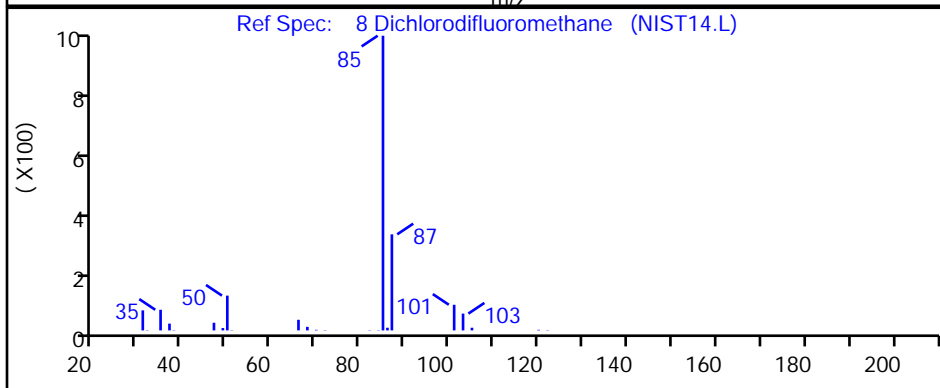
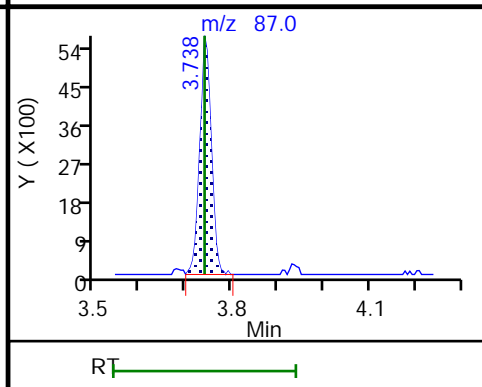
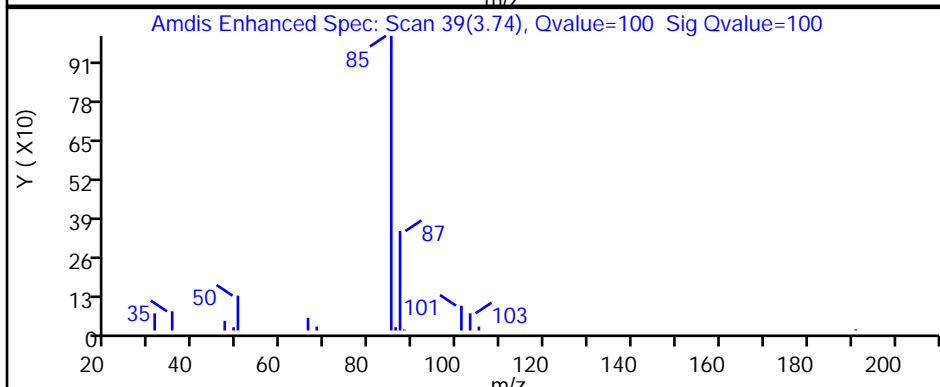
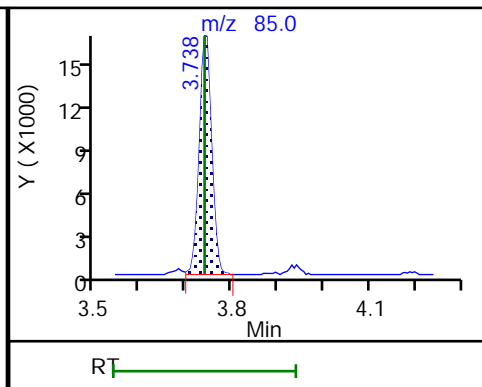
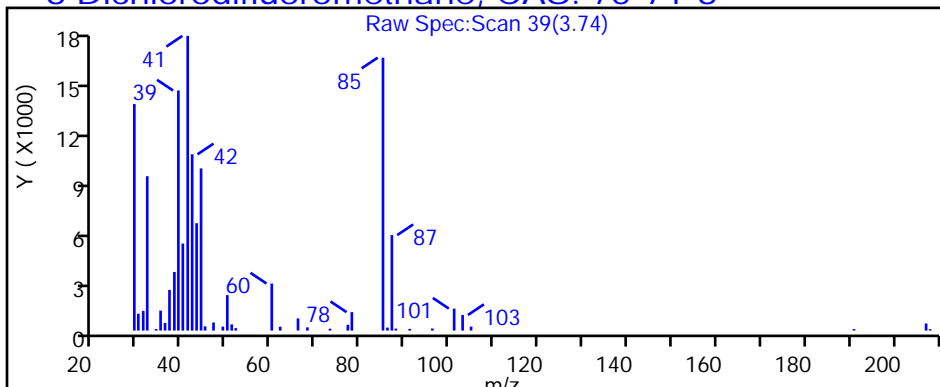
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Client ID: SV-136-A-26

Operator ID: HMT

ALS Bottle#: 8 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

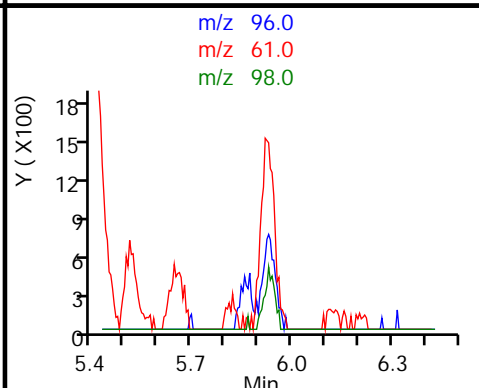
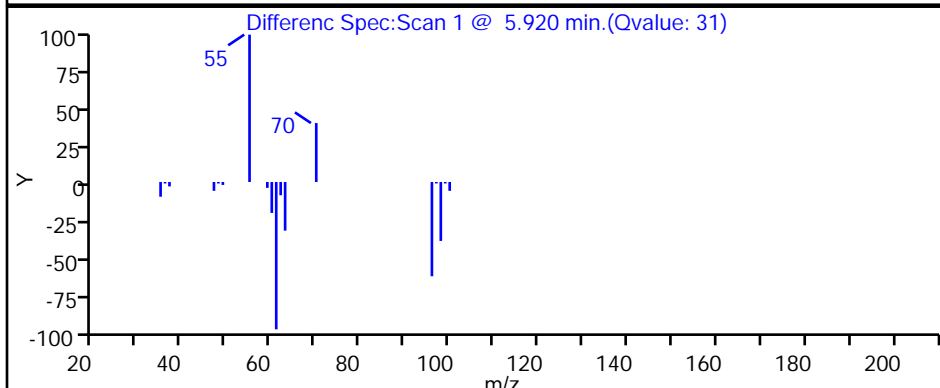
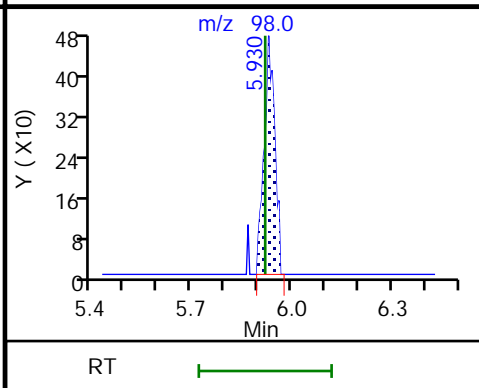
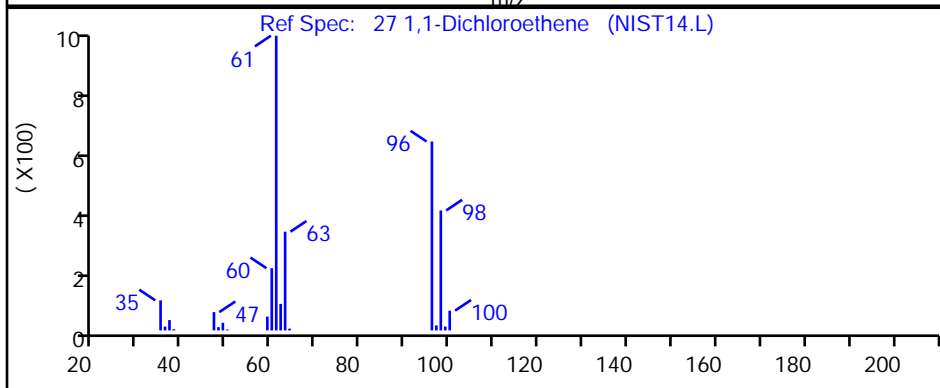
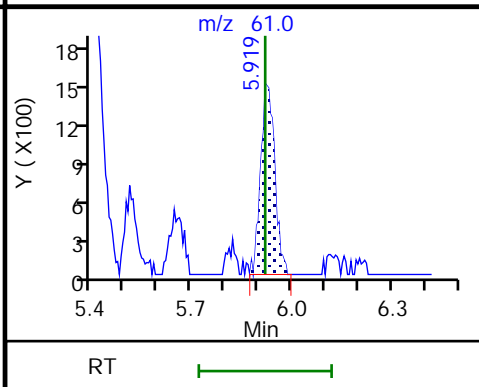
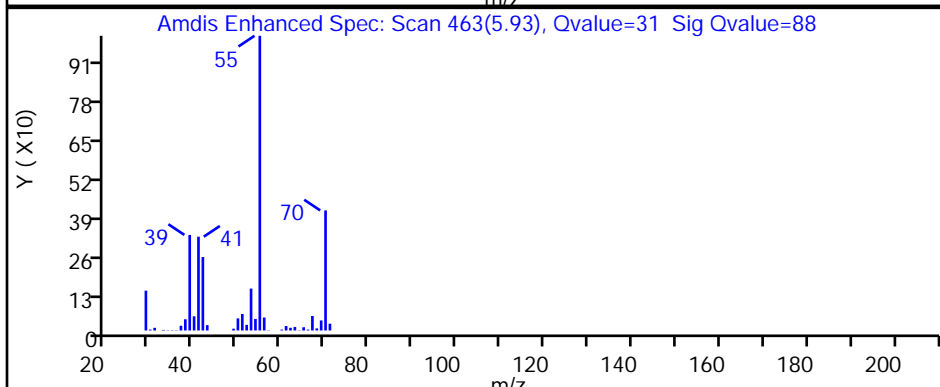
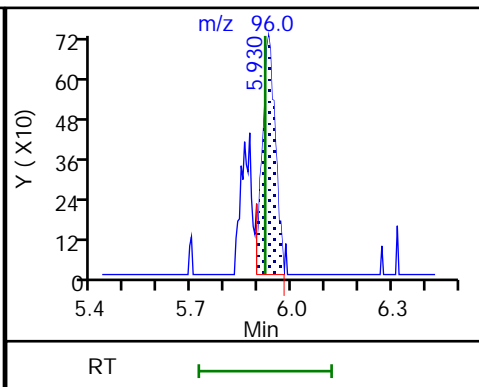
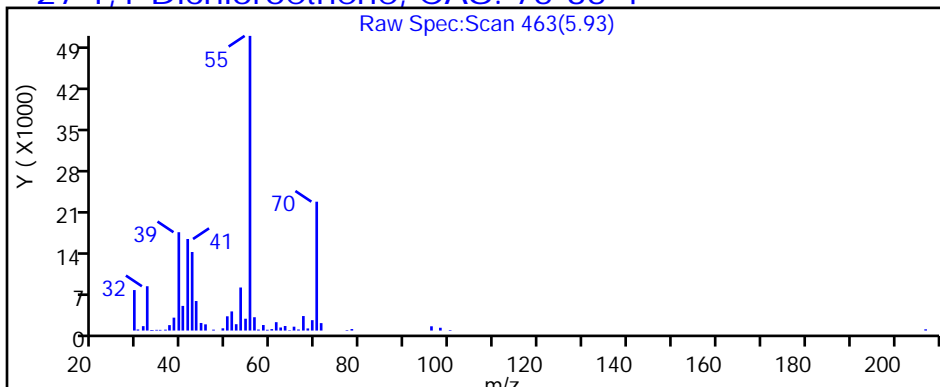
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Client ID: SV-136-A-26

Operator ID: HMT

ALS Bottle#: 8 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

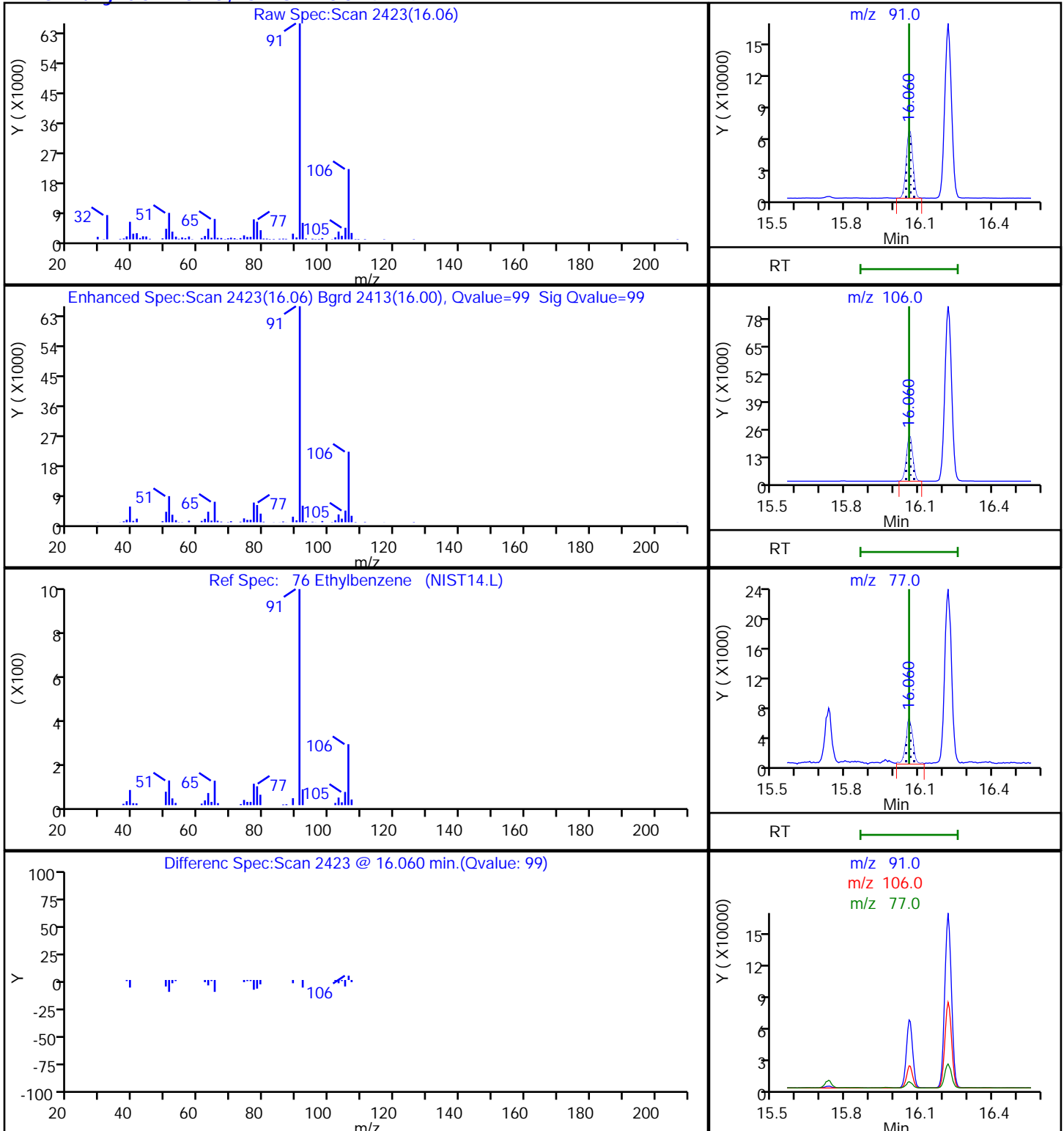
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Client ID: SV-136-A-26

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

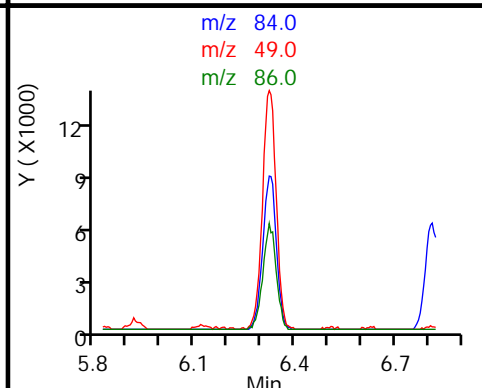
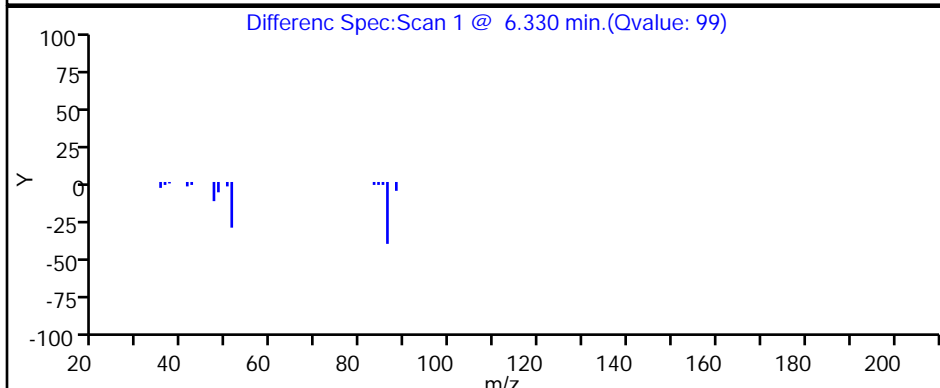
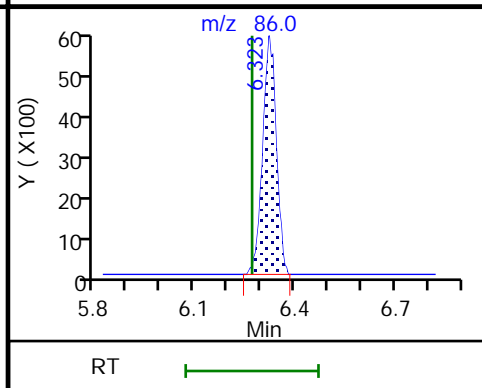
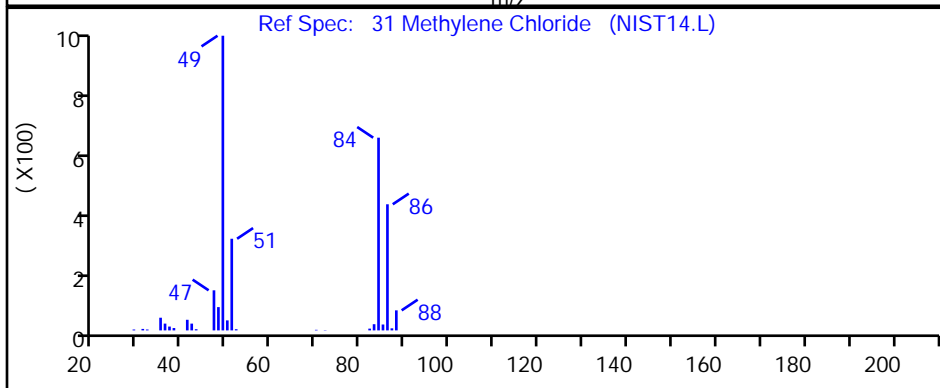
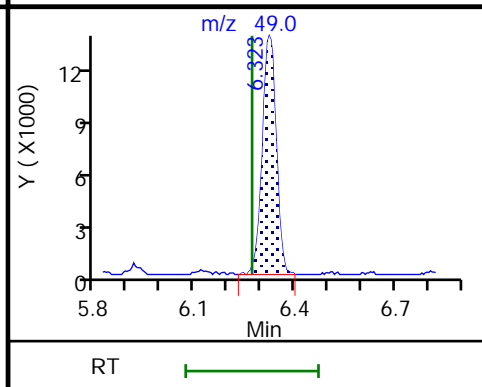
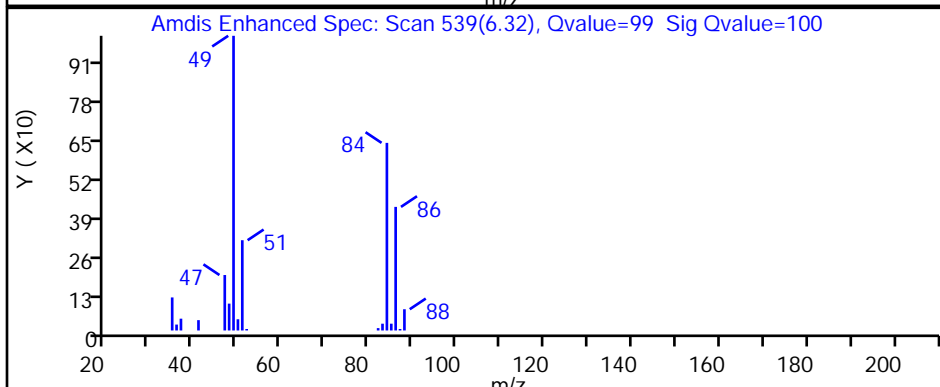
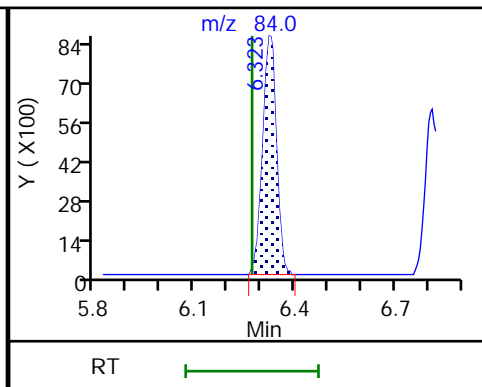
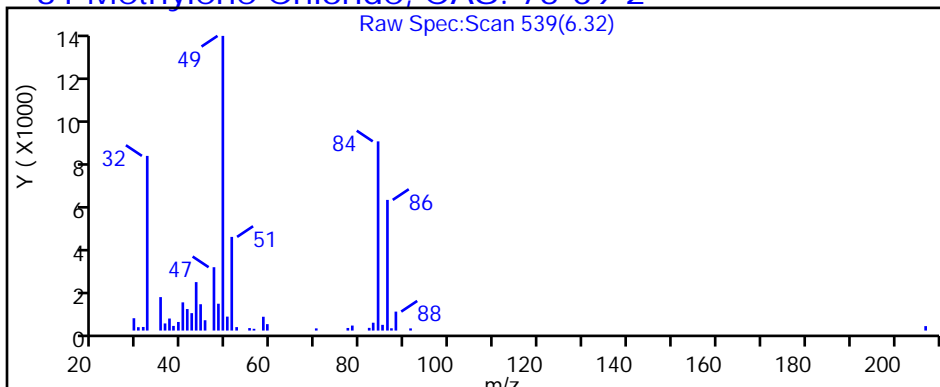
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Client ID: SV-136-A-26

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

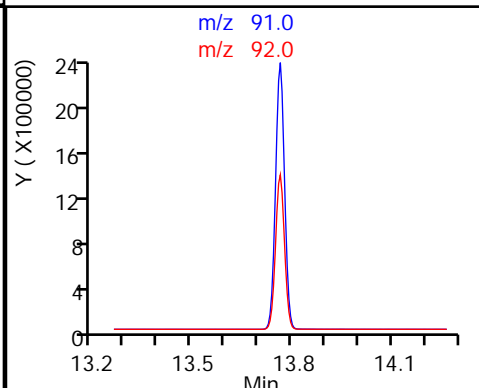
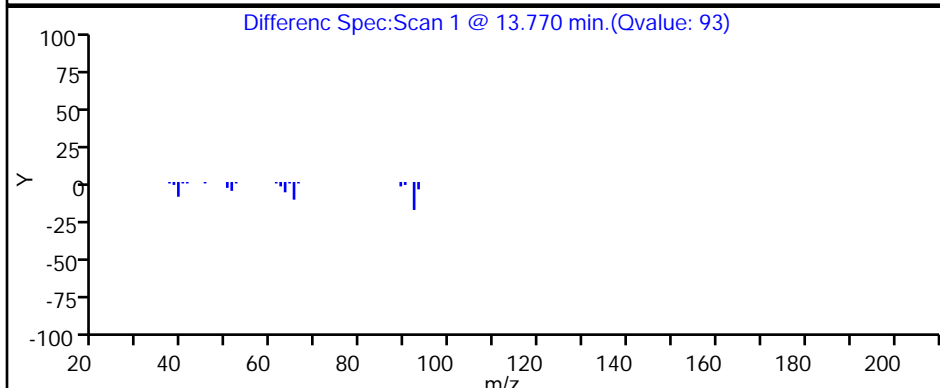
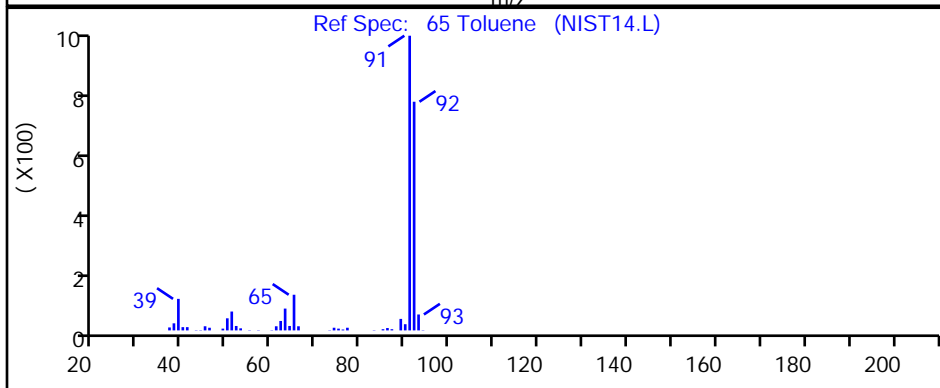
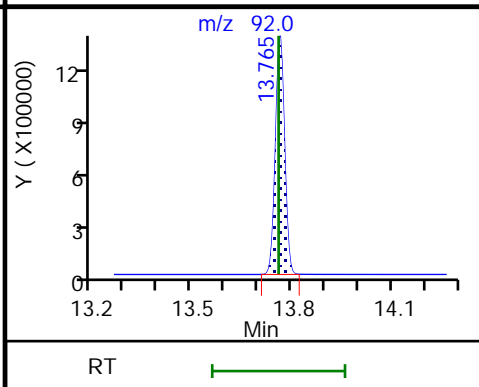
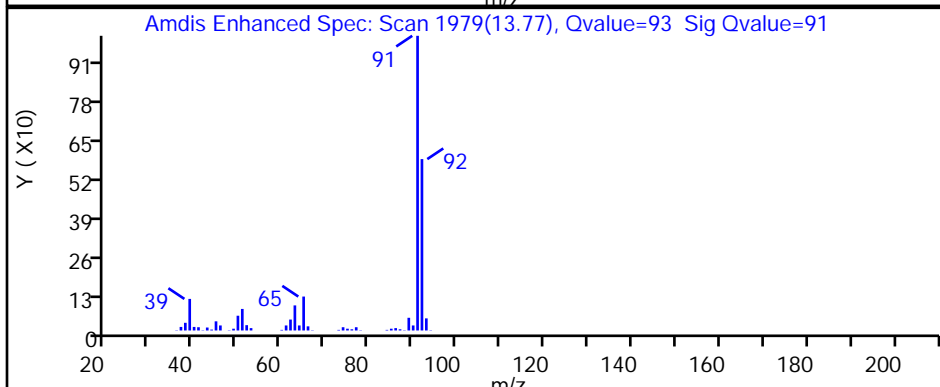
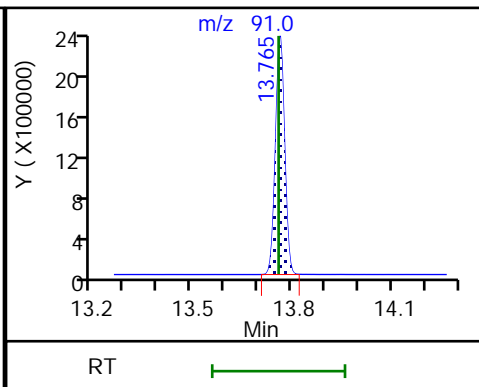
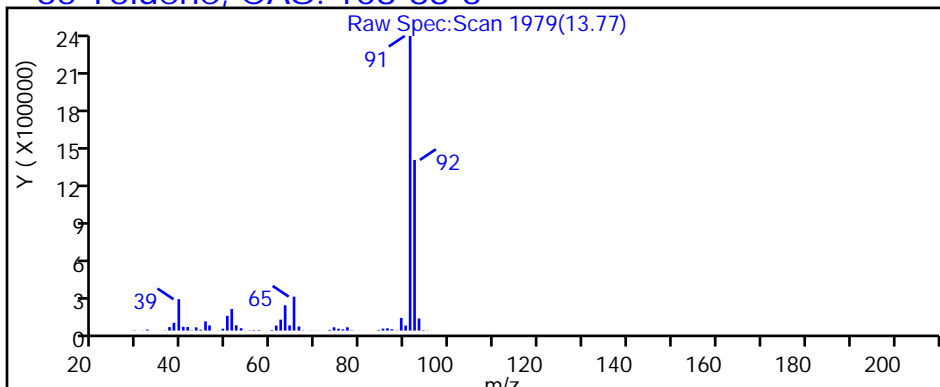
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Client ID: SV-136-A-26

Operator ID: HMT

ALS Bottle#: 8 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

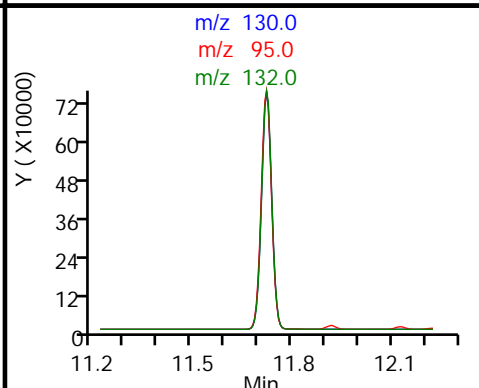
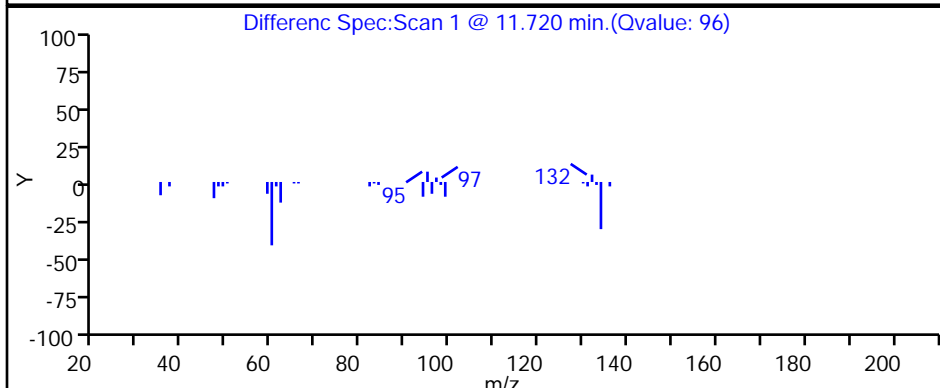
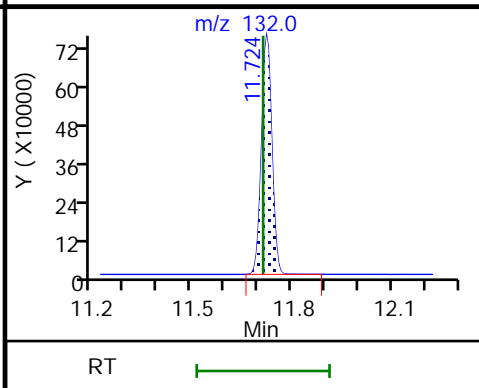
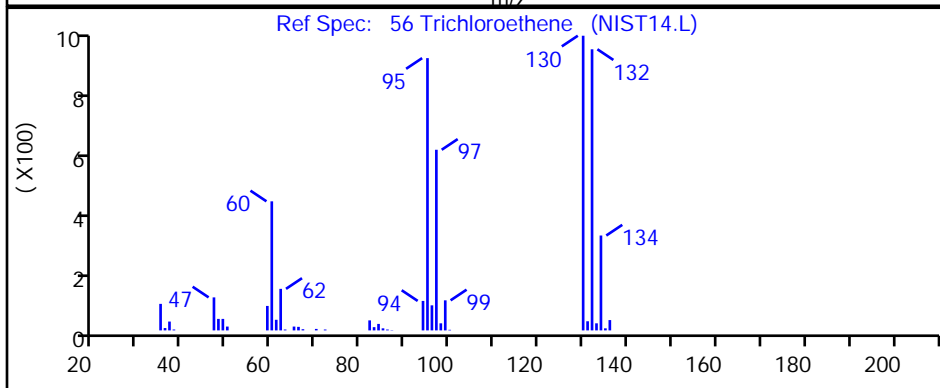
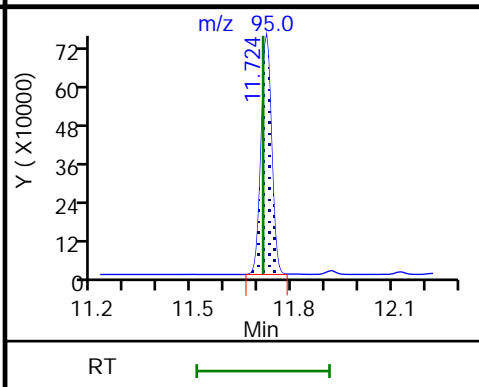
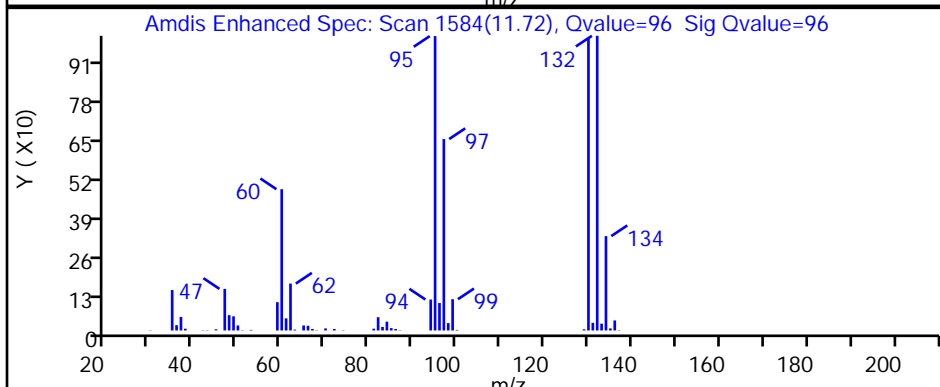
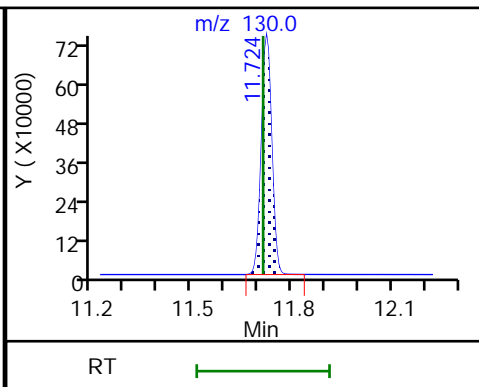
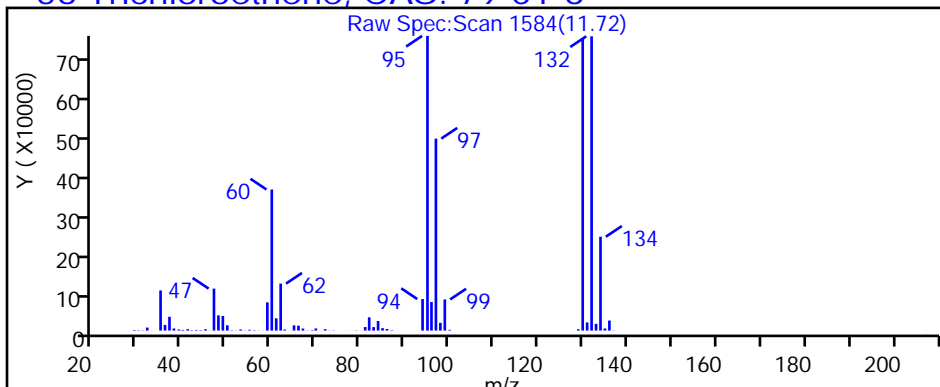
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Client ID: SV-136-A-26

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

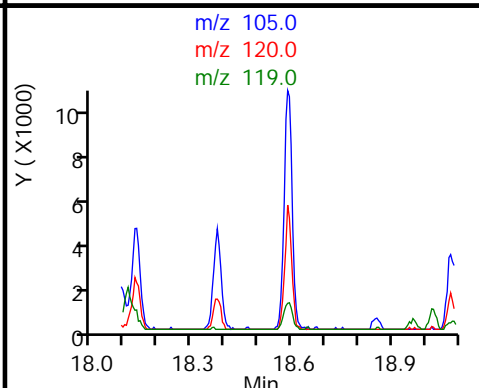
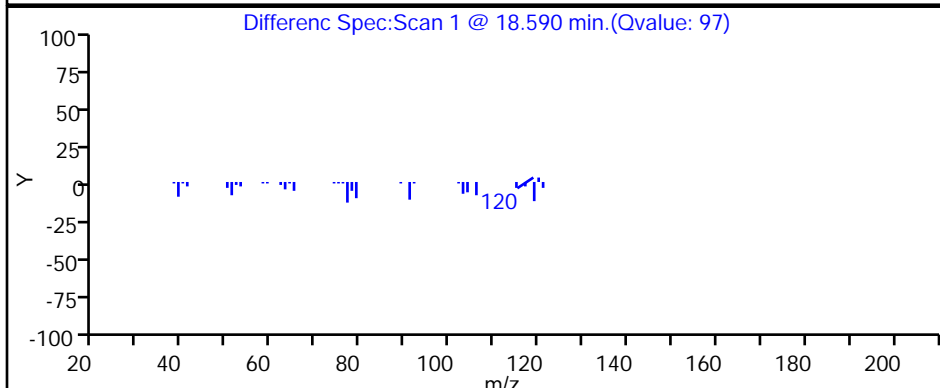
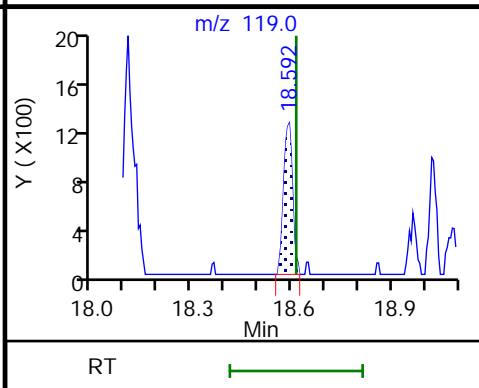
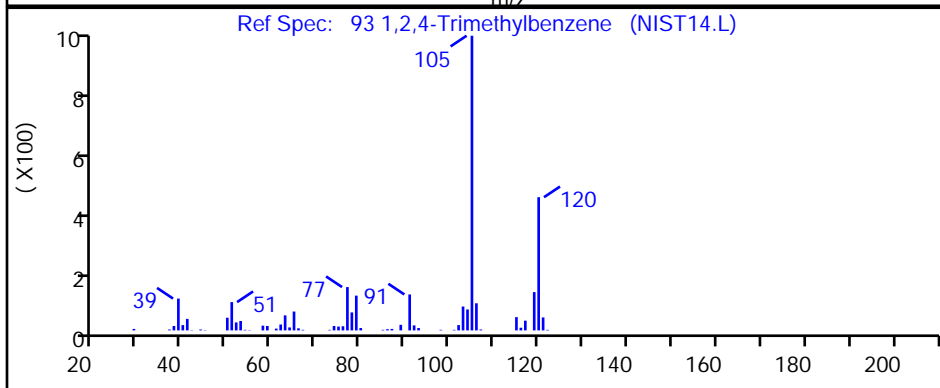
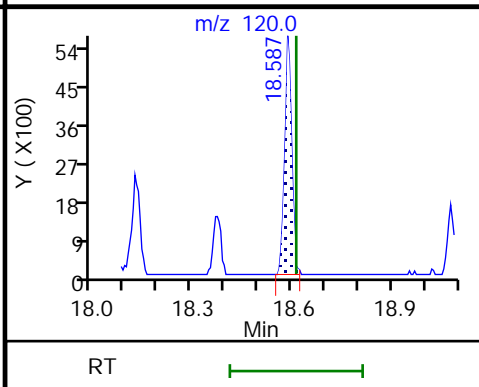
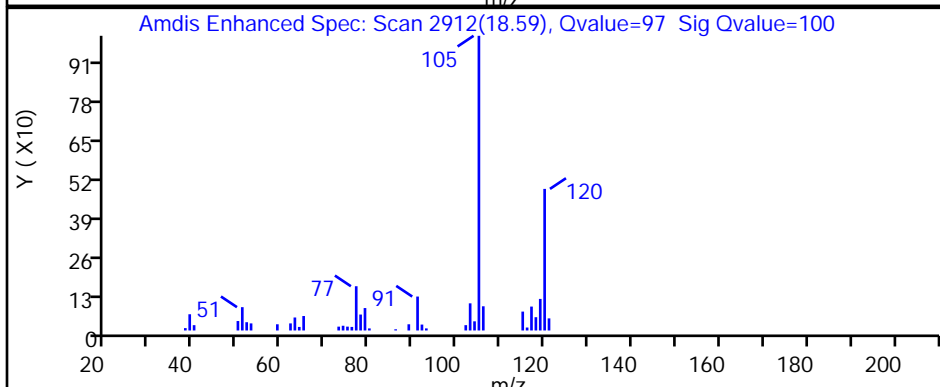
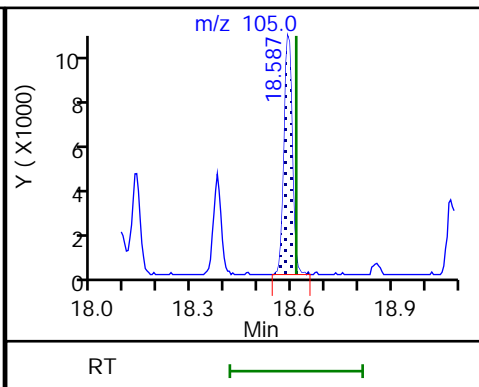
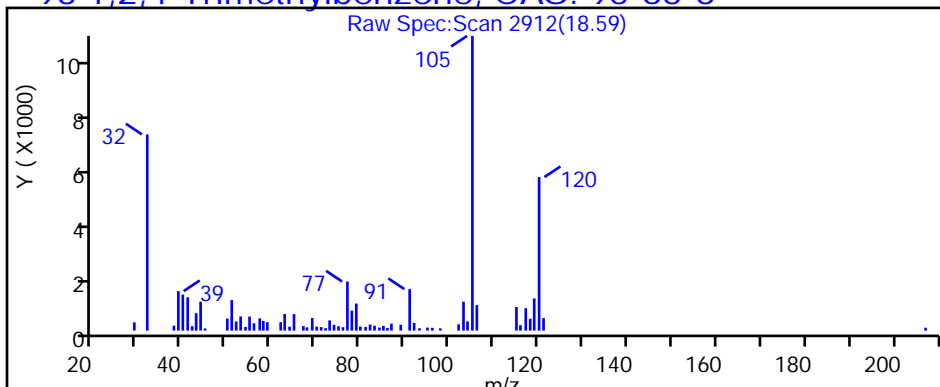
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Client ID: SV-136-A-26

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

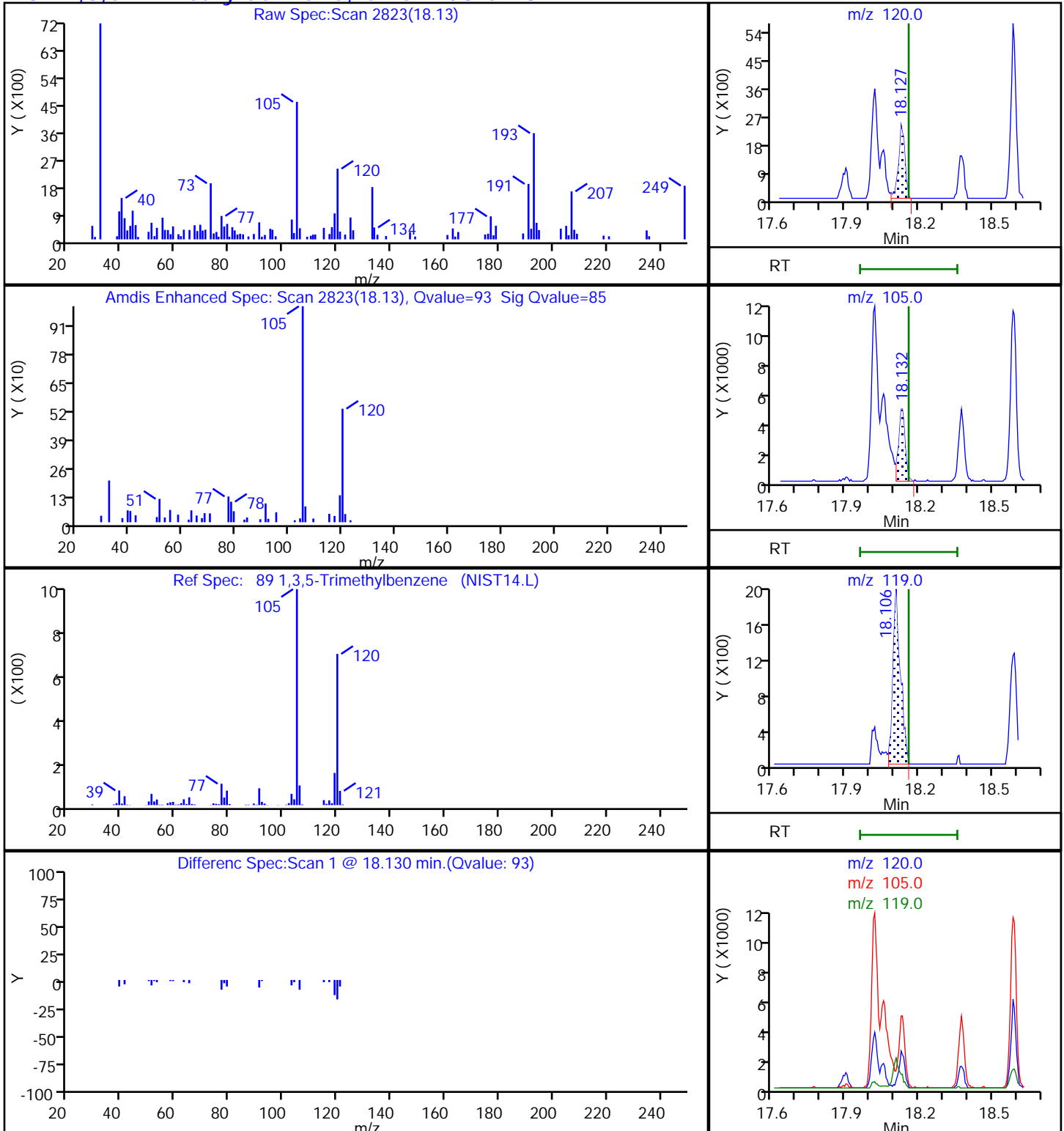
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Client ID: SV-136-A-26

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

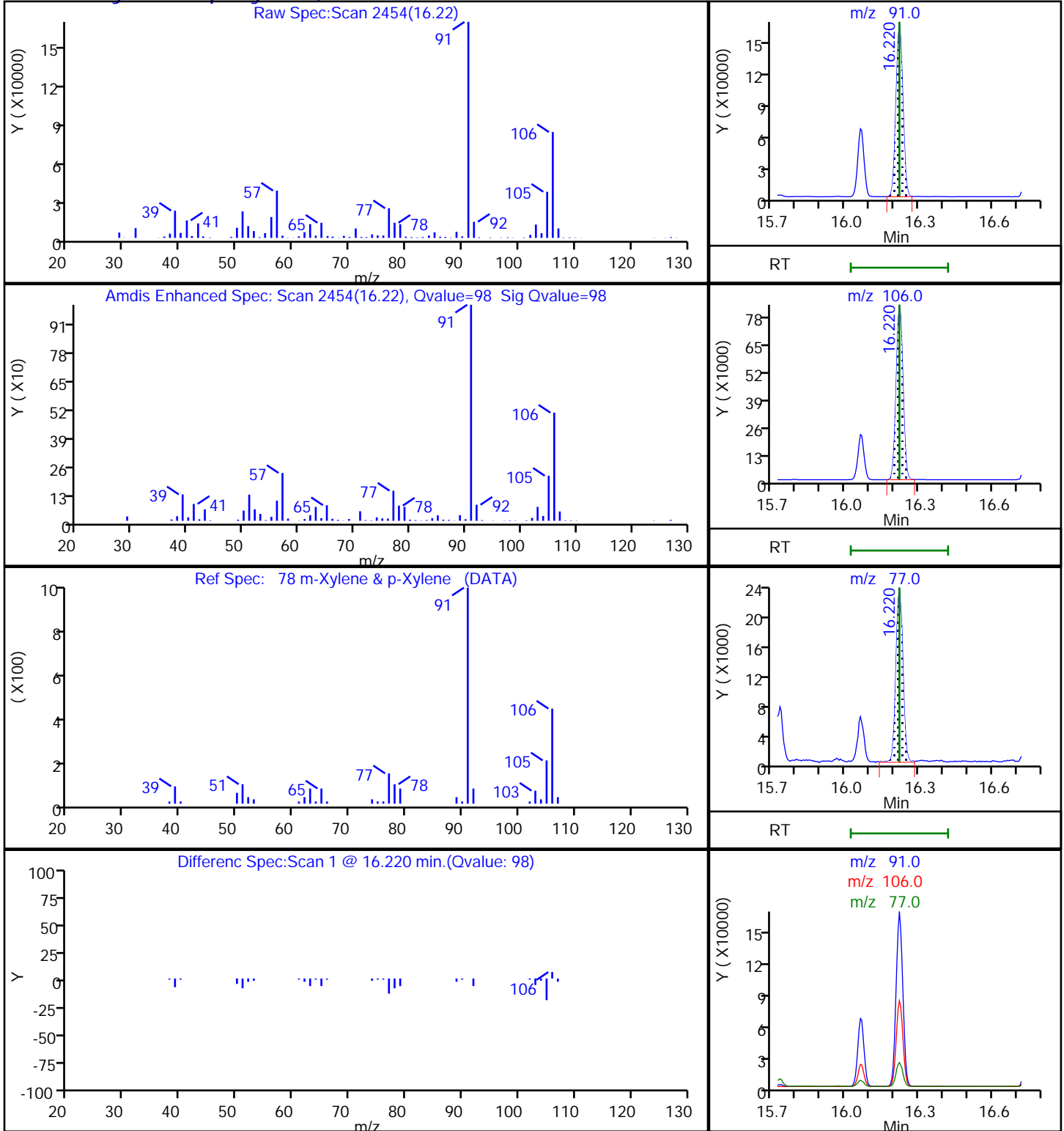
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P108.D

Injection Date: 26-Feb-2019 19:43:30

Instrument ID: MH

Lims ID: 140-14390-A-8

Lab Sample ID: 140-14390-8

Client ID: SV-136-A-26

Operator ID: HMT

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

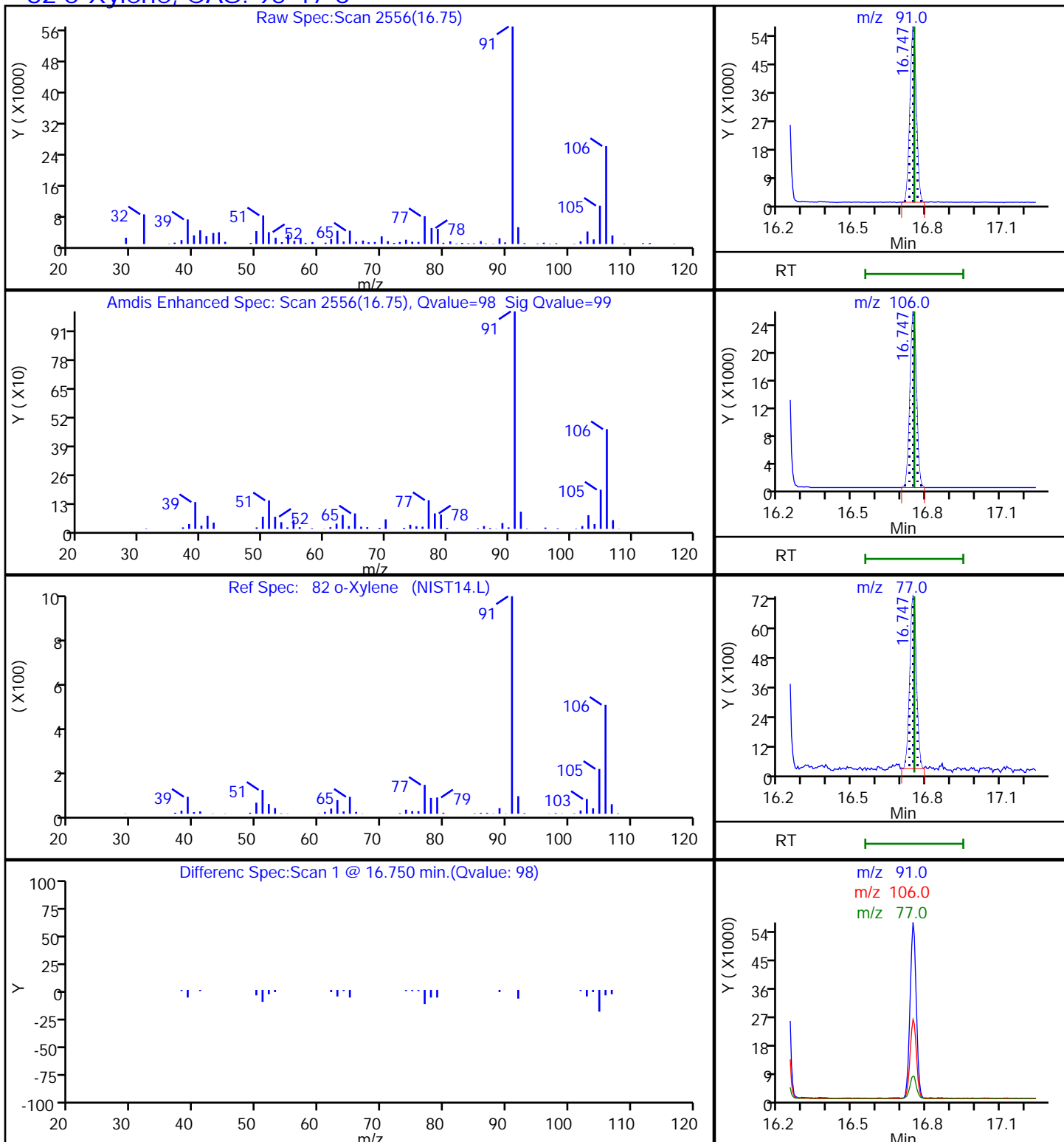
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-076-A-26 Lab Sample ID: 140-14390-9
 Matrix: Air Lab File ID: HB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 20:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.75	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.60		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.30	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.62		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.46		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.93		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-076-A-26 Lab Sample ID: 140-14390-9
 Matrix: Air Lab File ID: HB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 20:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.61	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.7	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	3.0		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	4.6		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D
 Lims ID: 140-14390-A-9
 Client ID: SV-076-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 20:36:30 ALS Bottle#: 9 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-013
 Misc. Info.: 140-14390-a-9
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:57:07 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:02:40

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.819	0.010	95	320518	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1732928	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	87	1534202	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	94	985766	3.94	
6 Chlorodifluoromethane	51	3.687	3.681	0.005	63	17919	0.0682	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	35976	0.0891	
31 Methylene Chloride	84	6.292	6.271	0.021	98	19576	0.1494	
45 1,1,1-Trichloroethane	97	9.858	9.858	0.000	97	16120	0.0609	
56 Trichloroethene	130	11.718	11.713	0.005	97	36541	0.2113	
65 Toluene	91	13.760	13.760	0.000	93	52565	0.1204	
76 Ethylbenzene	91	16.060	16.060	0.000	98	15574	0.0280	
78 m-Xylene & p-Xylene	91	16.225	16.220	0.005	98	98615	0.2300	
82 o-Xylene	91	16.747	16.752	-0.005	97	18478	0.0423	
89 1,3,5-Trimethylbenzene	120	18.132	18.158	-0.026	93	40984	0.1855	
93 1,2,4-Trimethylbenzene	105	18.587	18.613	-0.026	98	45725	0.0915	
99 1,2,3-Trimethylbenzene	105	19.078	19.099	-0.021	99	60864	0.1240	
S 121 Xylenes, Total	100				0		0.2723	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D

Injection Date: 26-Feb-2019 20:36:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-9

Lab Sample ID: 140-14390-9

Worklist Smp#: 13

Client ID: SV-076-A-26

Purge Vol: 500.000 mL

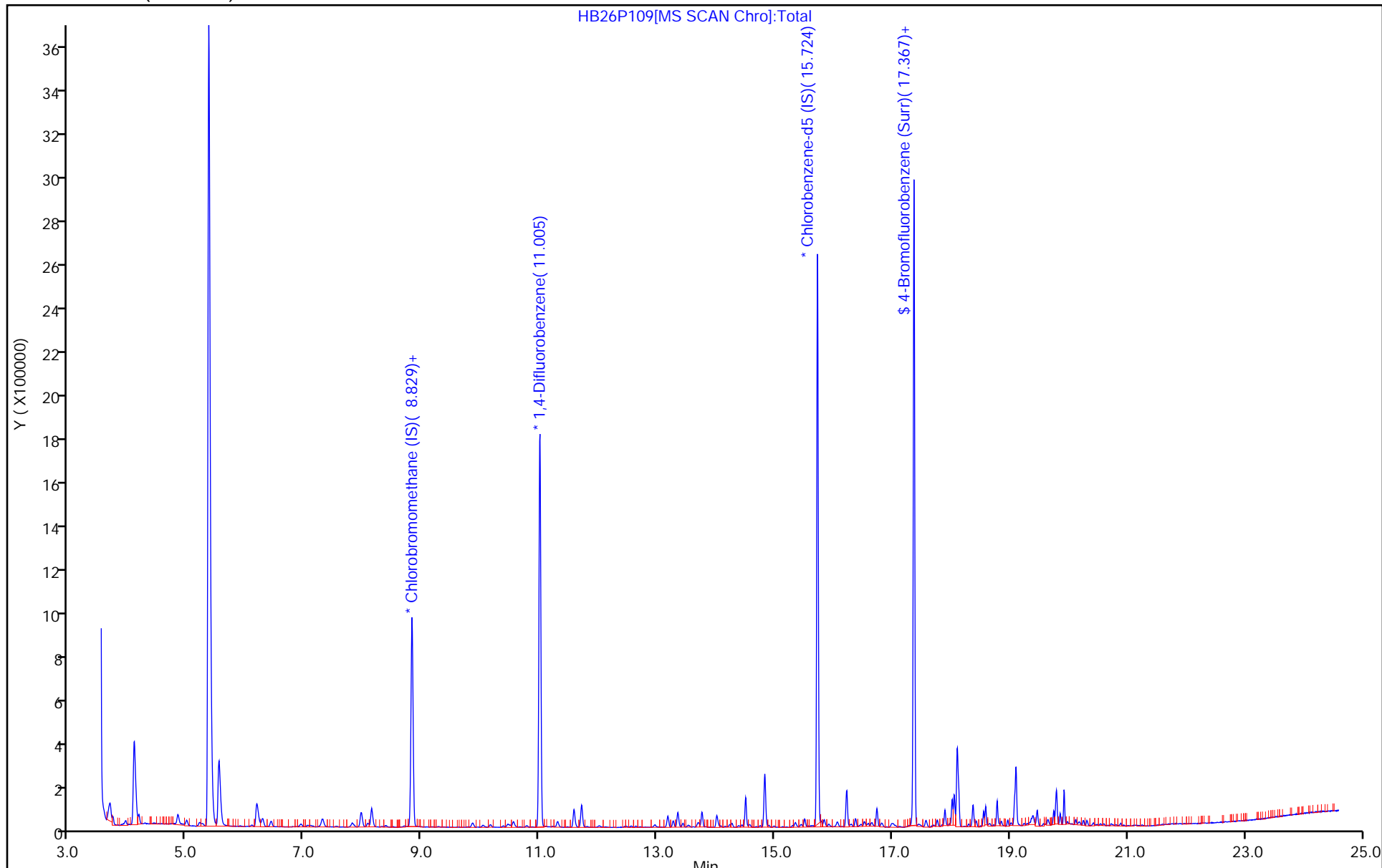
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D
 Lims ID: 140-14390-A-9
 Client ID: SV-076-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 20:36:30 ALS Bottle#: 9 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-013
 Misc. Info.: 140-14390-a-9
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:57:07 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:02:40

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.94	98.58

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D

Injection Date: 26-Feb-2019 20:36:30

Instrument ID: MH

Lims ID: 140-14390-A-9

Lab Sample ID: 140-14390-9

Client ID: SV-076-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

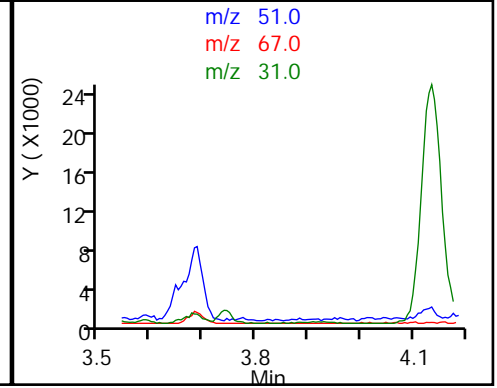
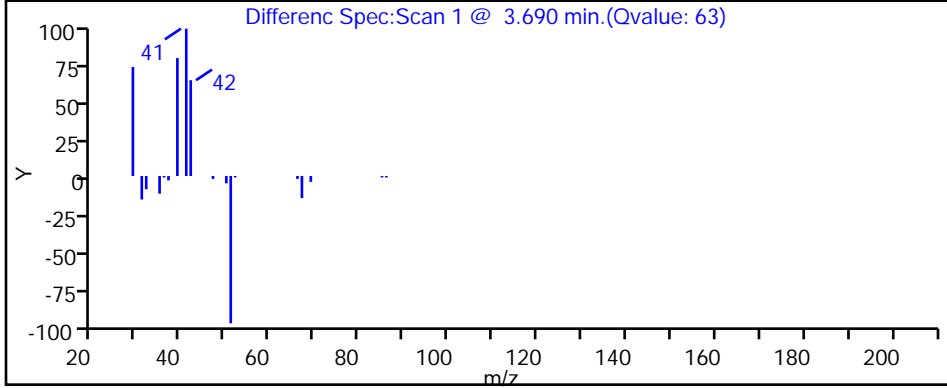
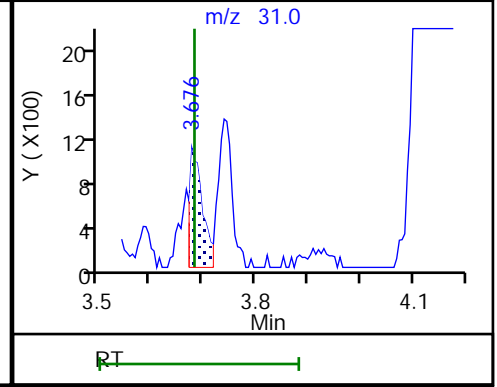
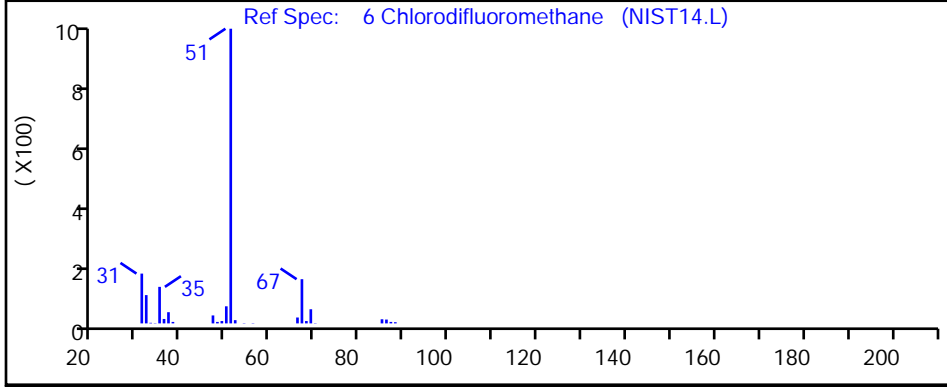
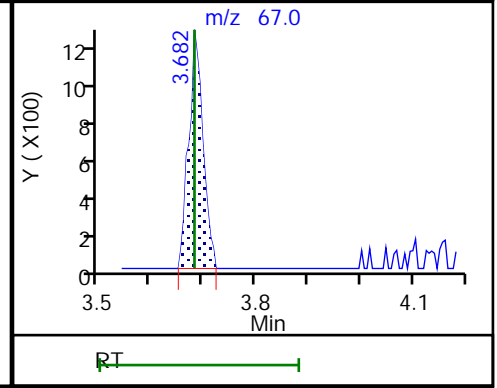
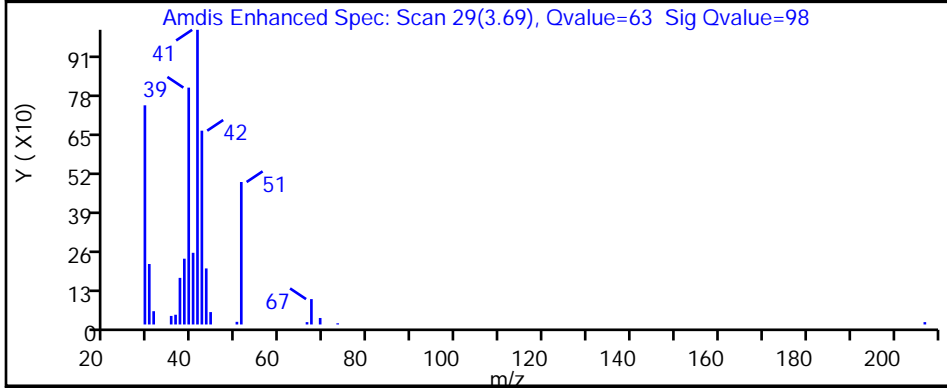
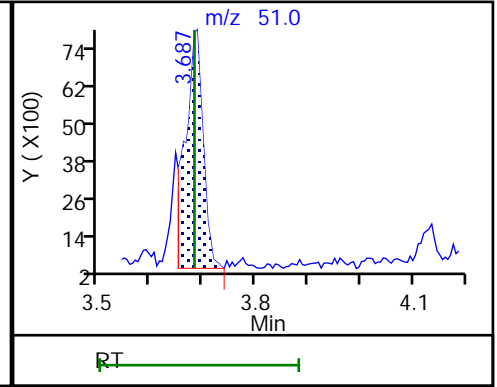
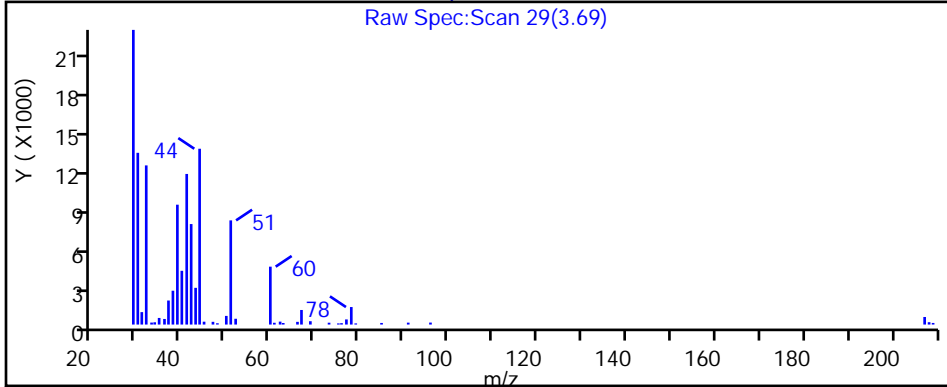
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D

Injection Date: 26-Feb-2019 20:36:30

Instrument ID: MH

Lims ID: 140-14390-A-9

Lab Sample ID: 140-14390-9

Client ID: SV-076-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

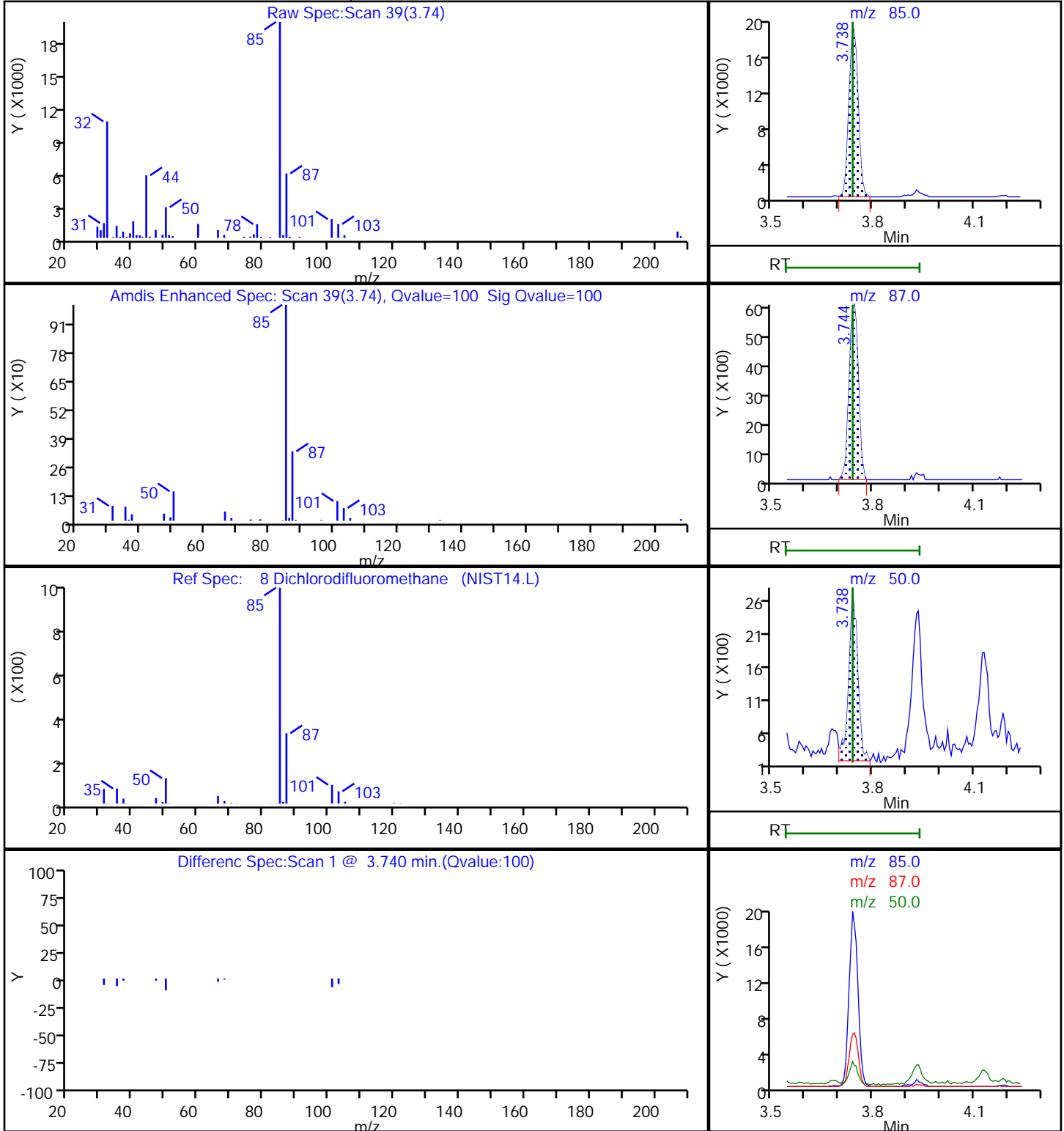
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D

Injection Date: 26-Feb-2019 20:36:30

Instrument ID: MH

Lims ID: 140-14390-A-9

Lab Sample ID: 140-14390-9

Client ID: SV-076-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

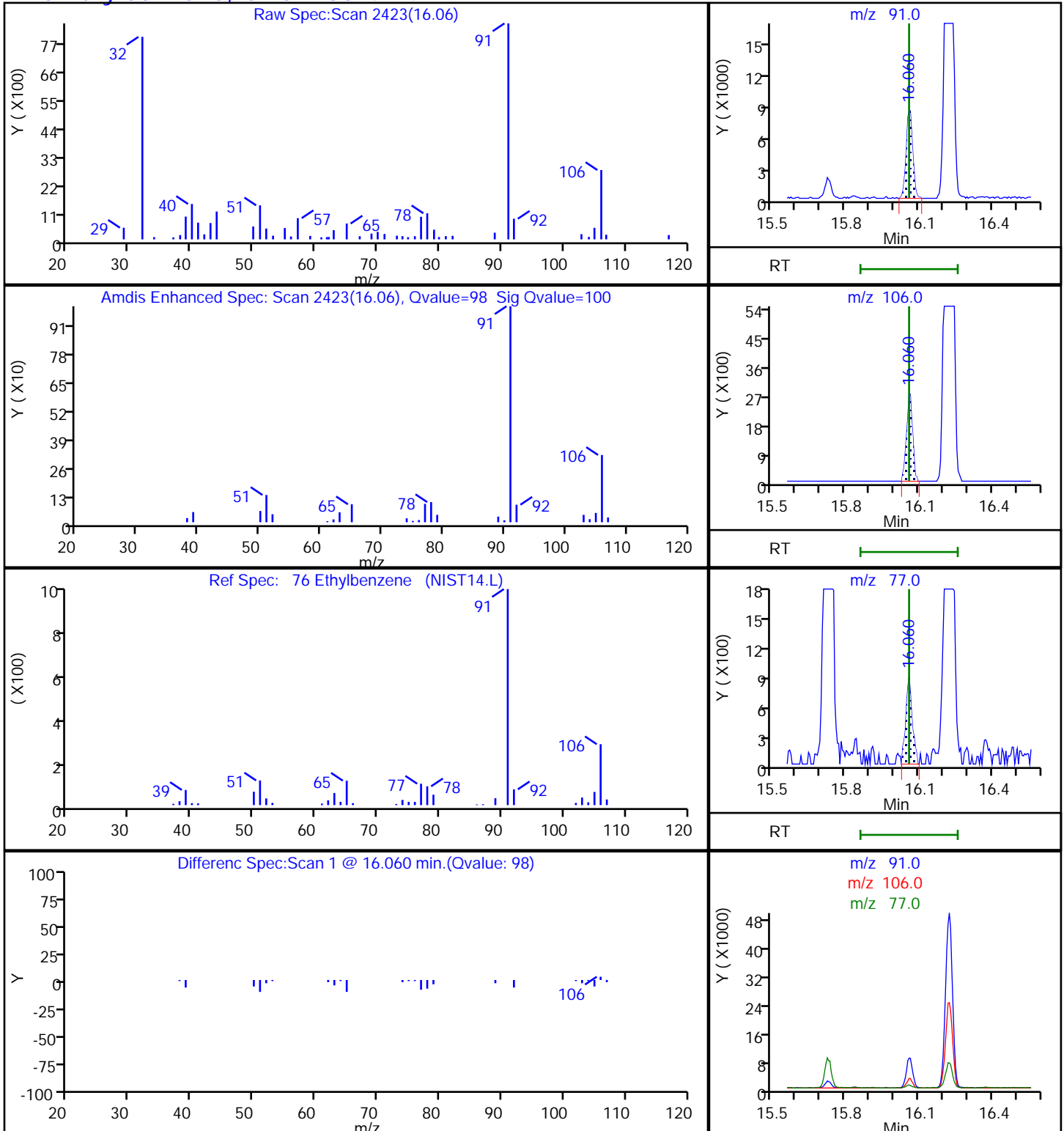
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D

Injection Date: 26-Feb-2019 20:36:30

Instrument ID: MH

Lims ID: 140-14390-A-9

Lab Sample ID: 140-14390-9

Client ID: SV-076-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

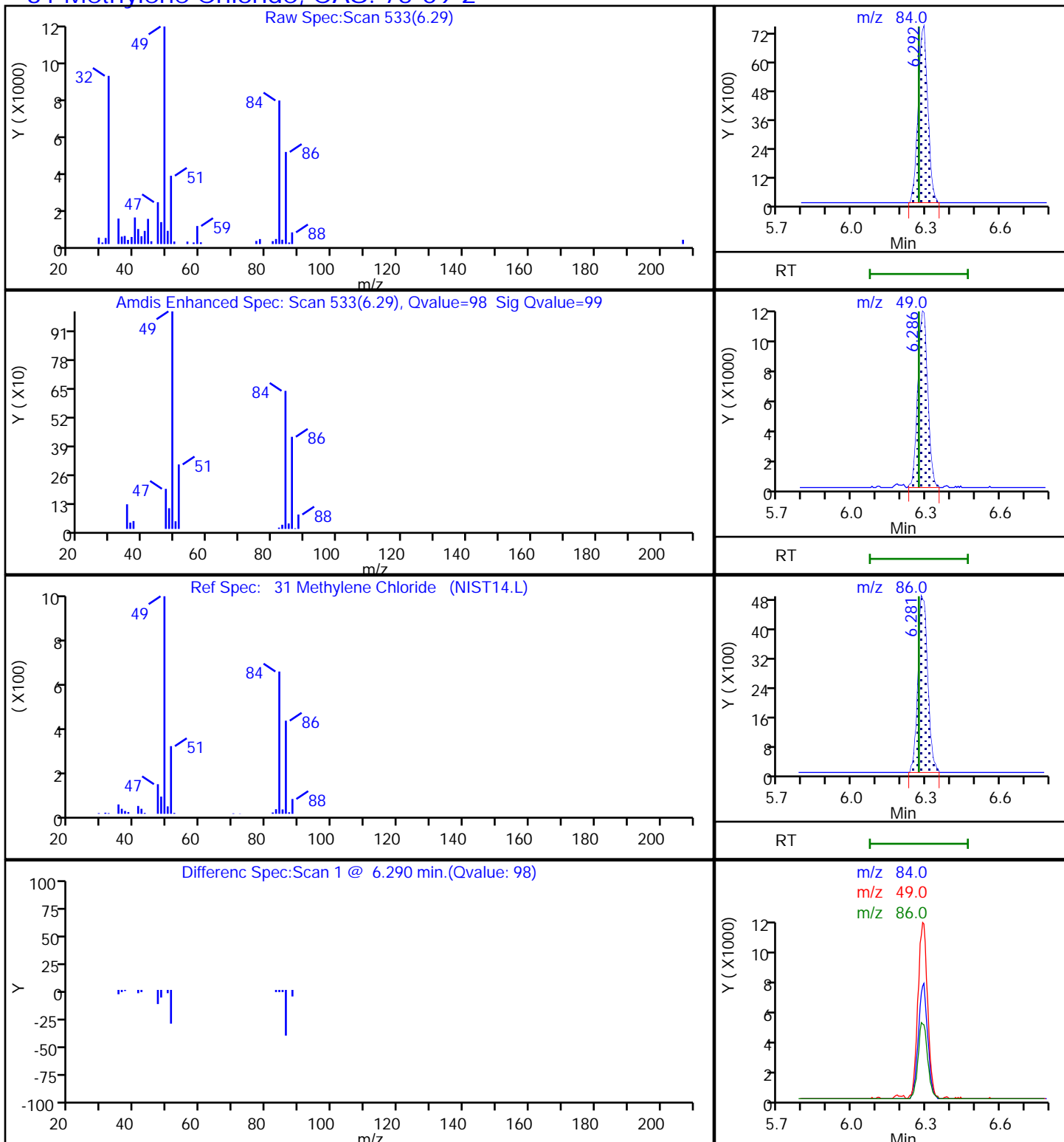
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D

Injection Date: 26-Feb-2019 20:36:30

Instrument ID: MH

Lims ID: 140-14390-A-9

Lab Sample ID: 140-14390-9

Client ID: SV-076-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

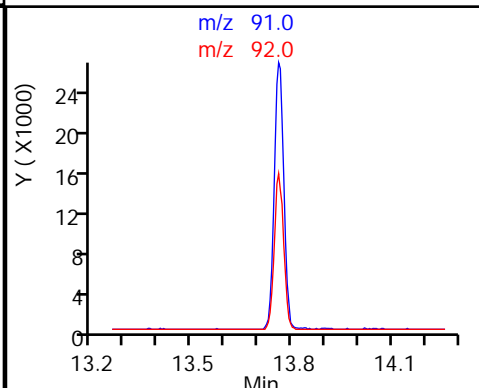
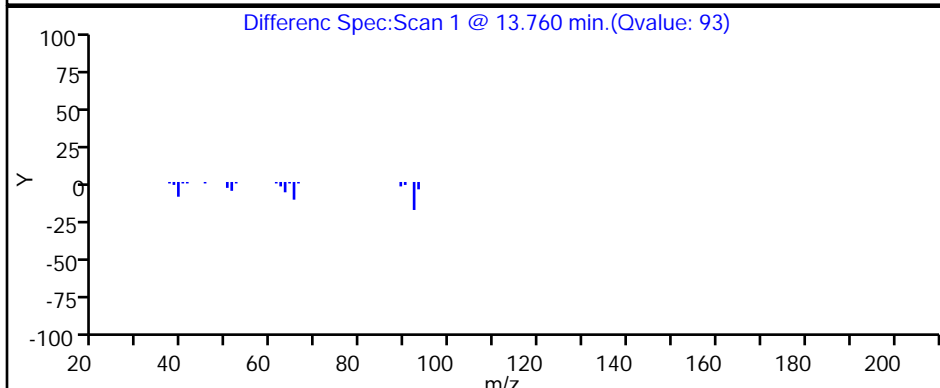
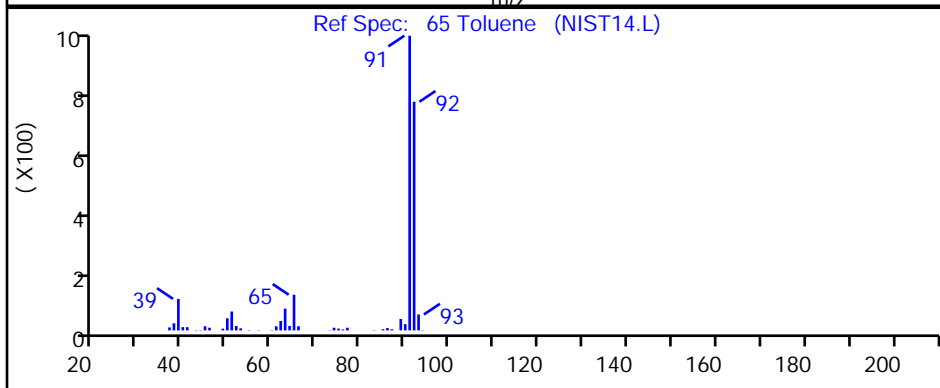
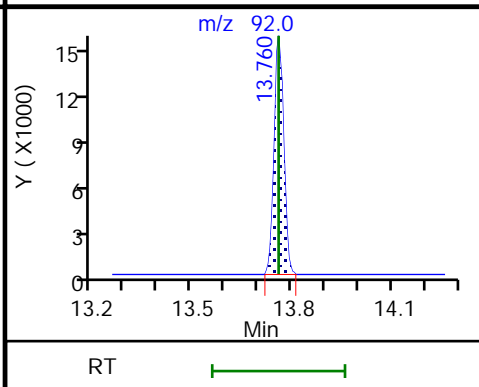
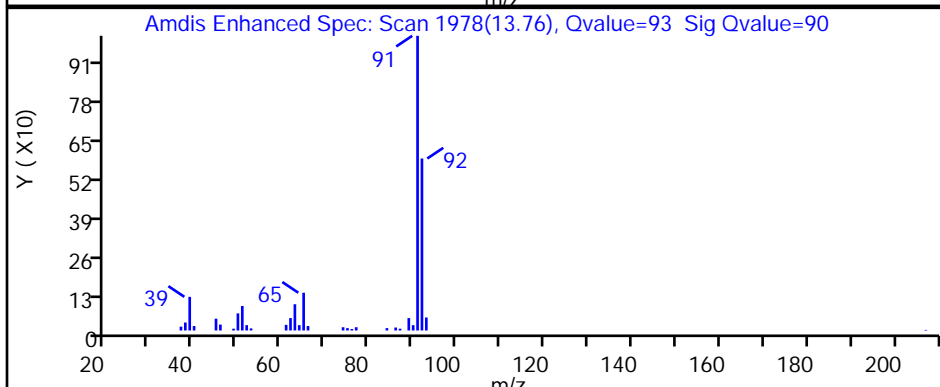
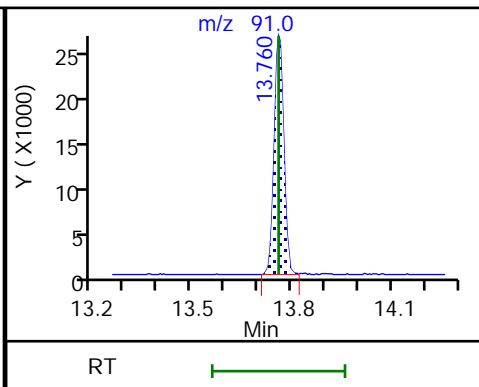
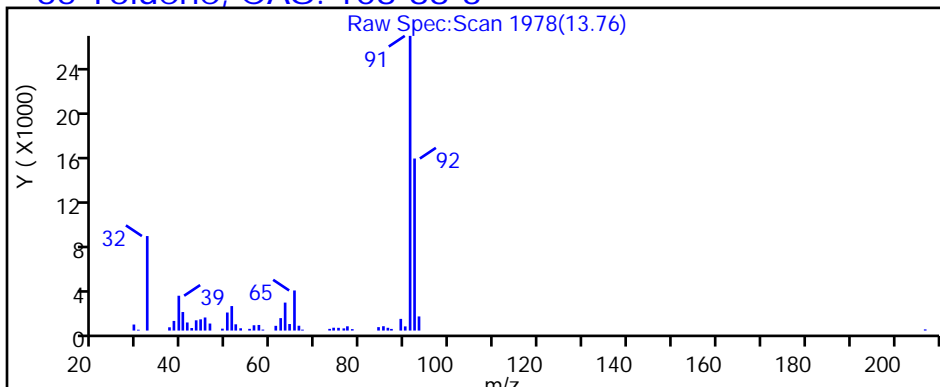
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D

Injection Date: 26-Feb-2019 20:36:30

Instrument ID: MH

Lims ID: 140-14390-A-9

Lab Sample ID: 140-14390-9

Client ID: SV-076-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

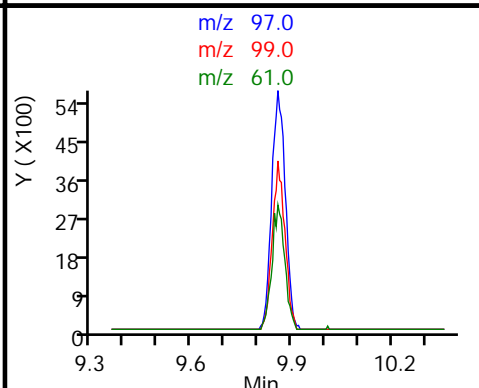
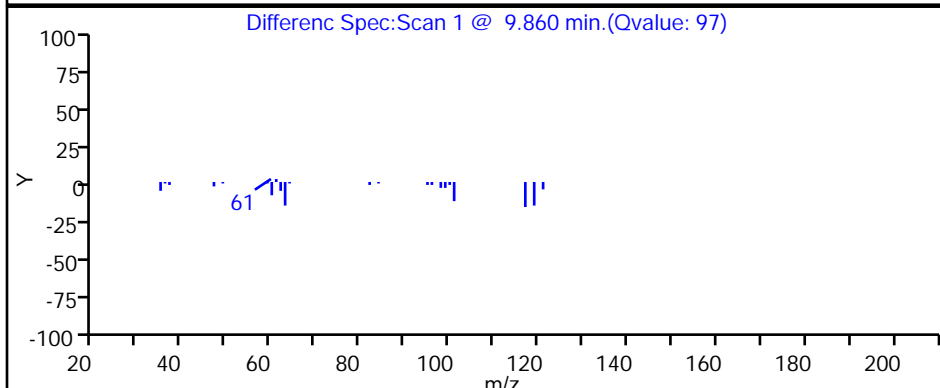
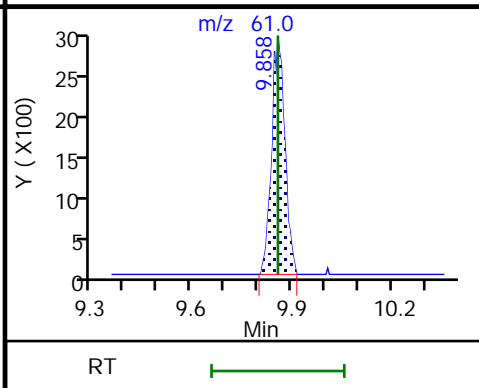
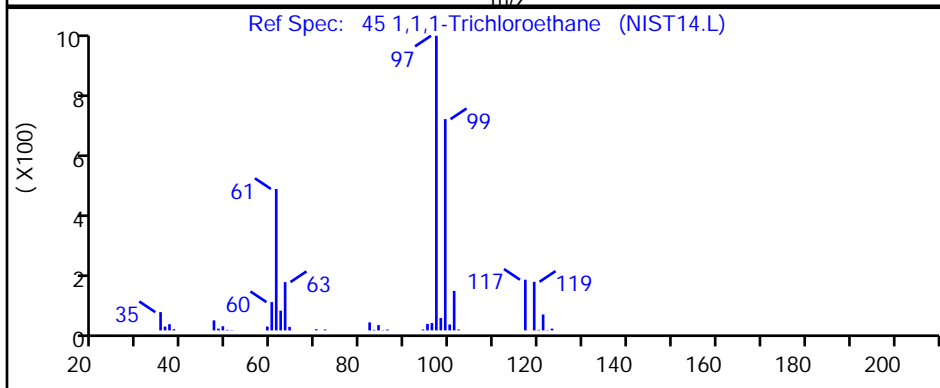
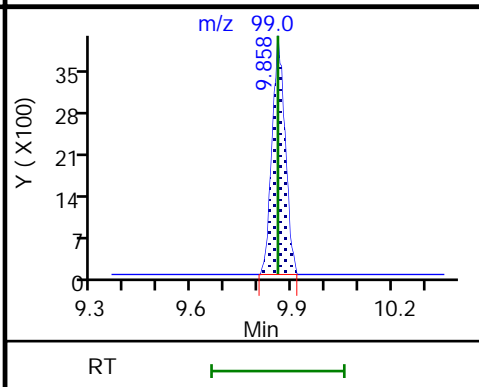
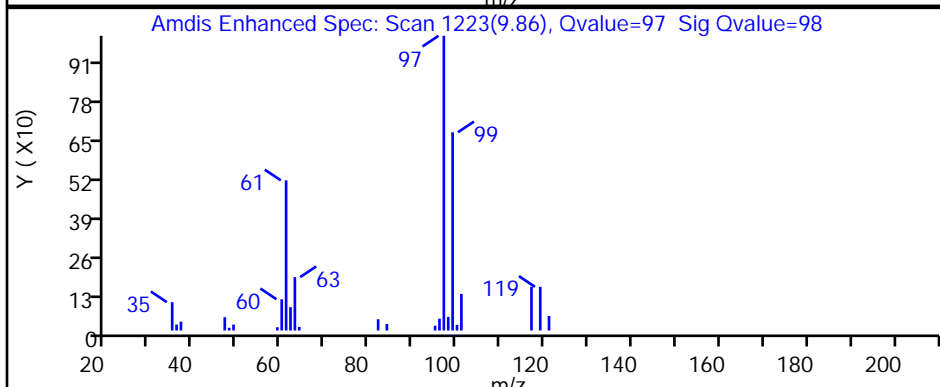
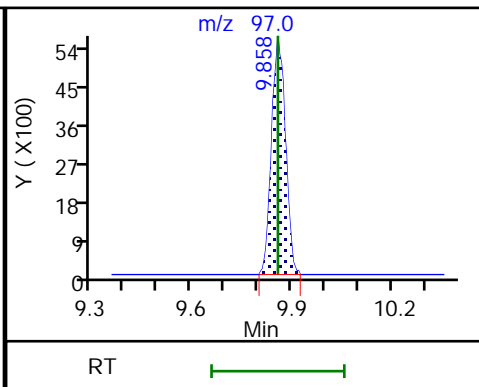
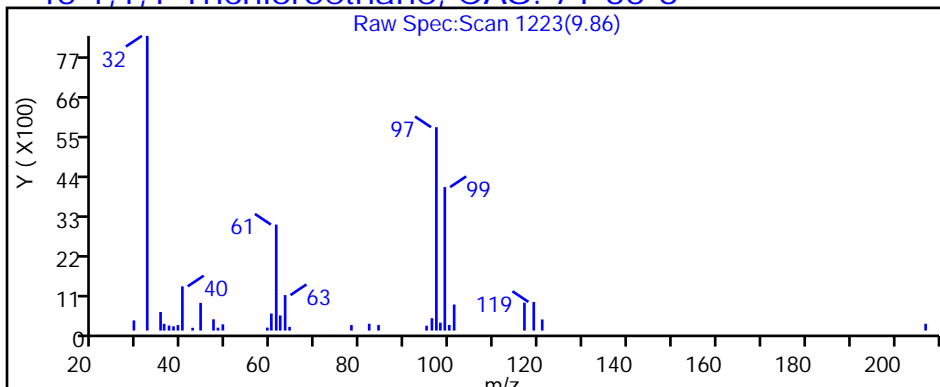
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

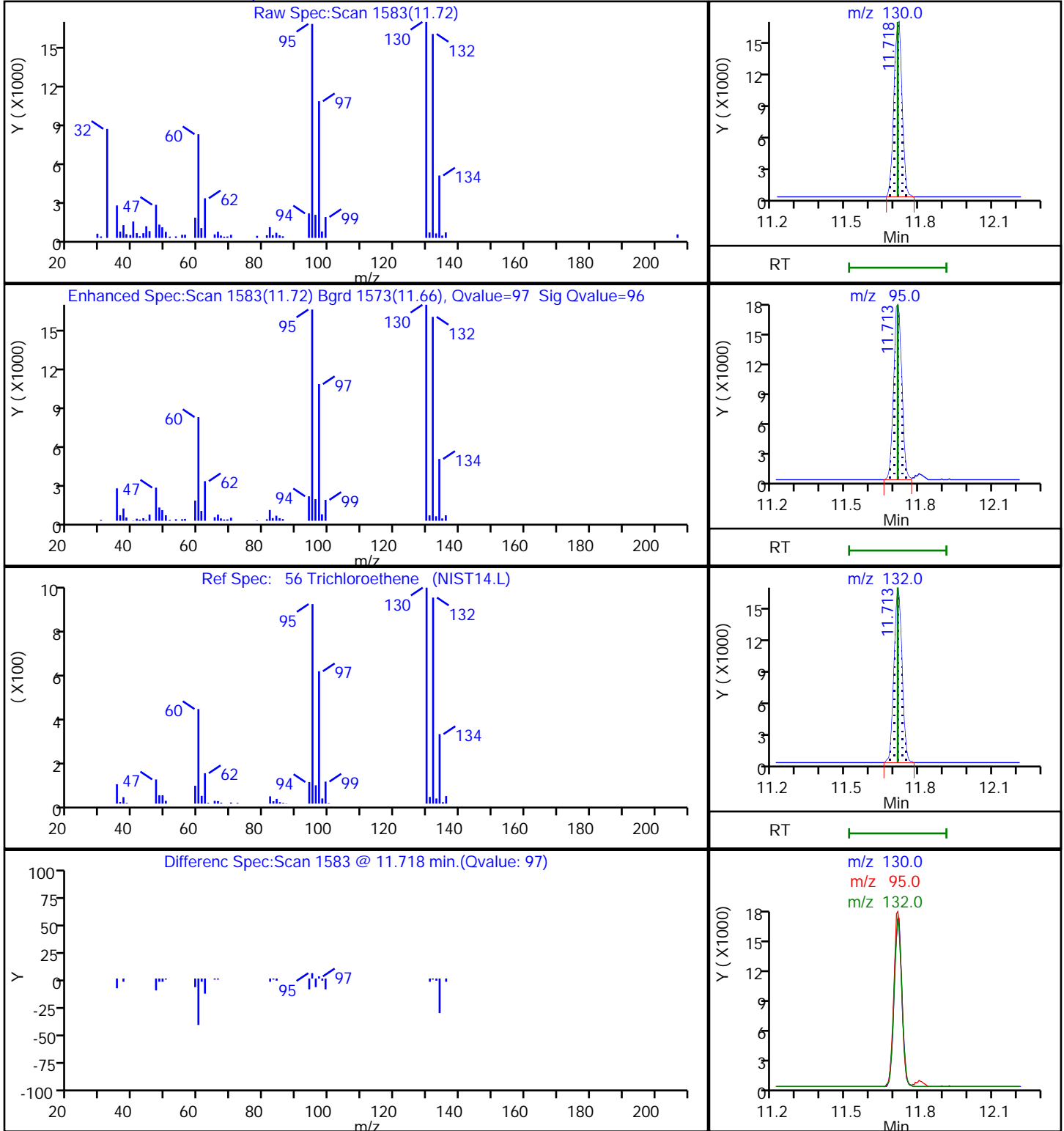
45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D
Injection Date: 26-Feb-2019 20:36:30 Instrument ID: MH
Lims ID: 140-14390-A-9 Lab Sample ID: 140-14390-9
Client ID: SV-076-A-26
Operator ID: HMT ALS Bottle#: 9 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D

Injection Date: 26-Feb-2019 20:36:30

Instrument ID: MH

Lims ID: 140-14390-A-9

Lab Sample ID: 140-14390-9

Client ID: SV-076-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

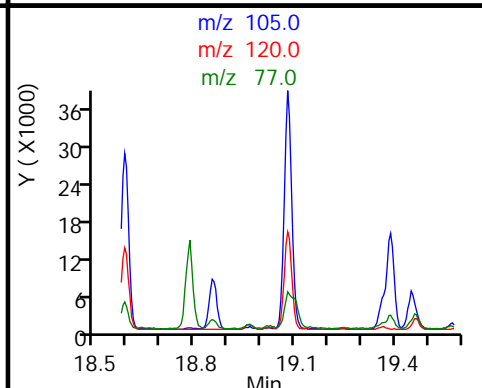
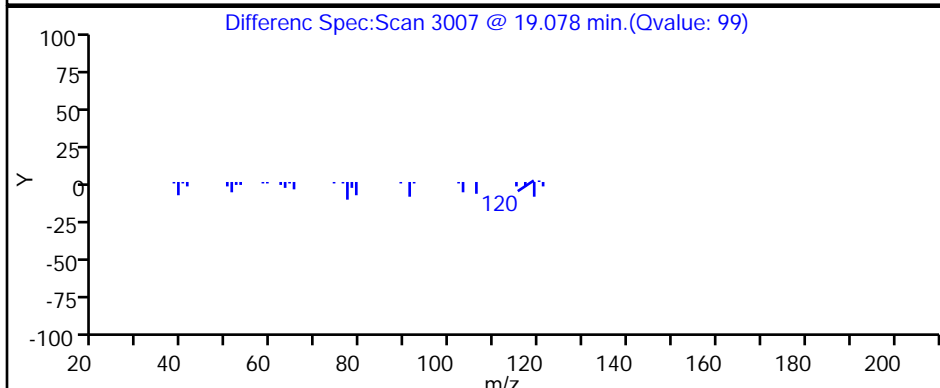
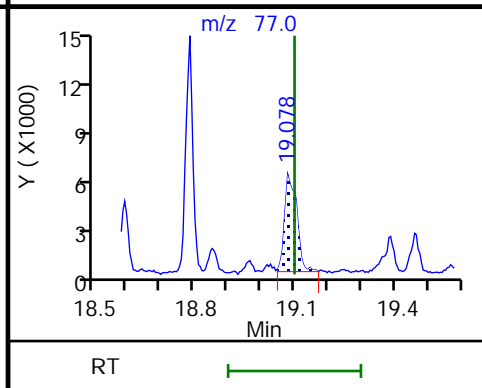
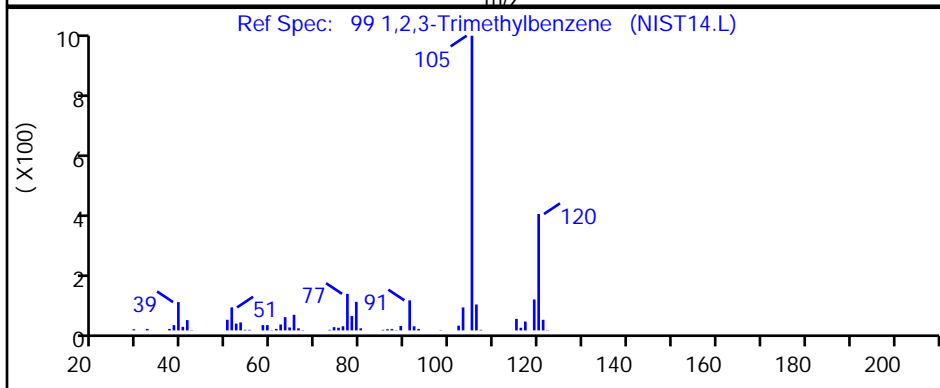
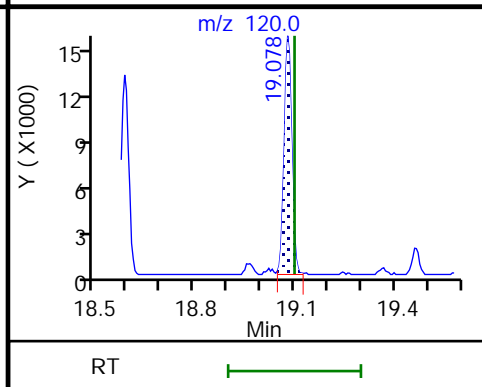
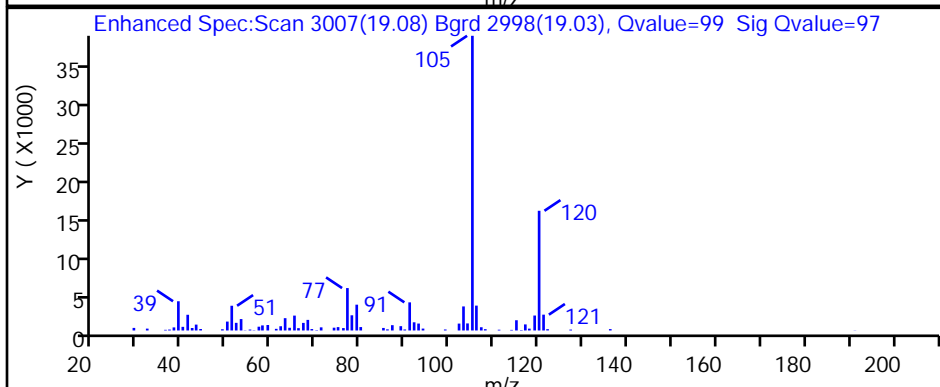
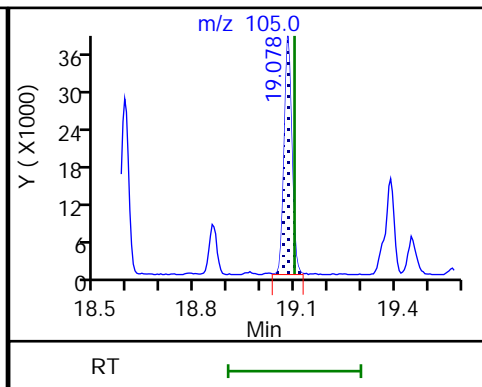
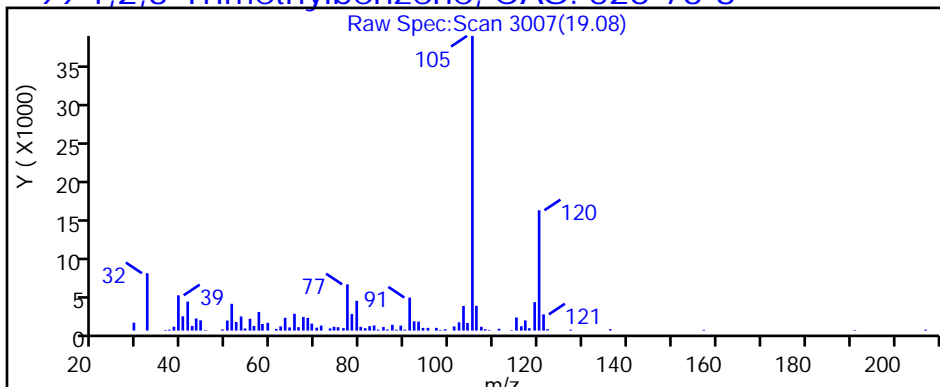
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

99 1,2,3-Trimethylbenzene, CAS: 526-73-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D

Injection Date: 26-Feb-2019 20:36:30

Instrument ID: MH

Lims ID: 140-14390-A-9

Lab Sample ID: 140-14390-9

Client ID: SV-076-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

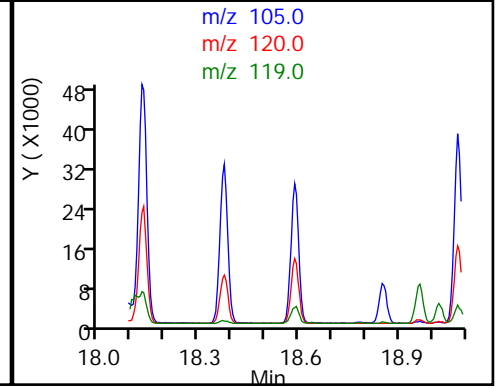
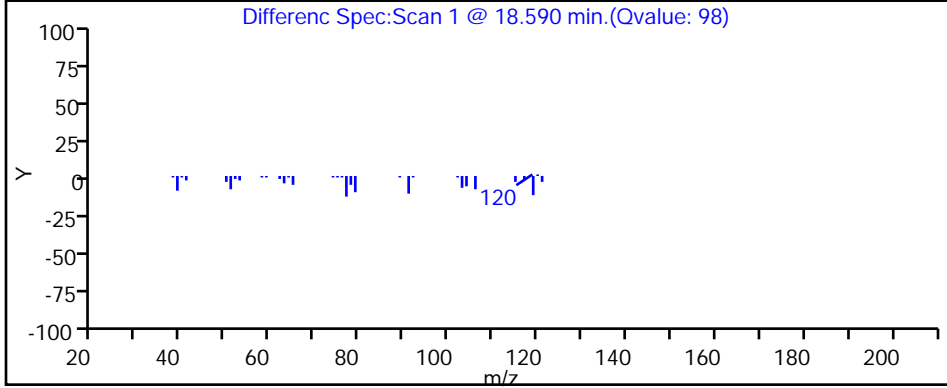
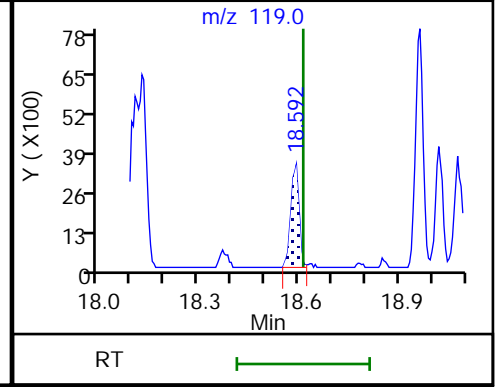
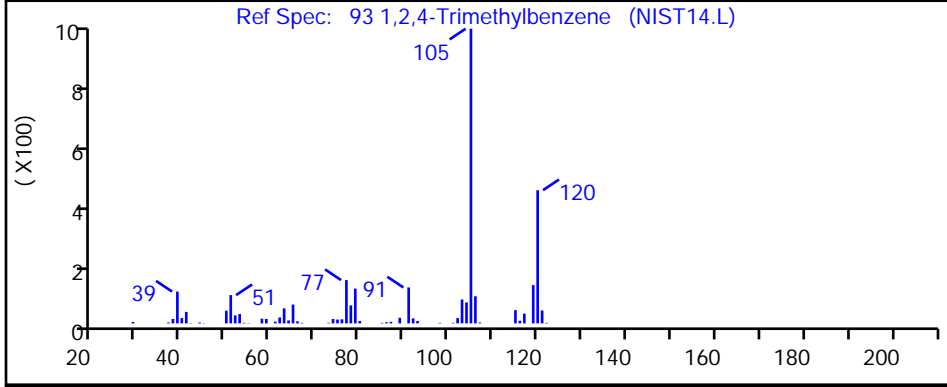
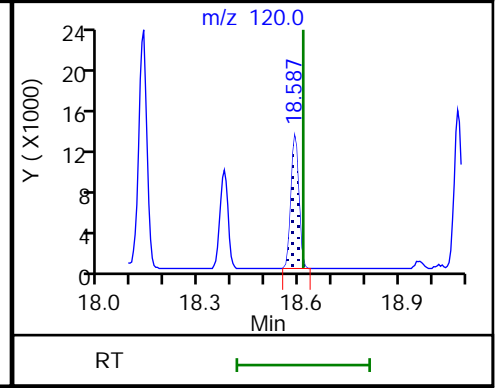
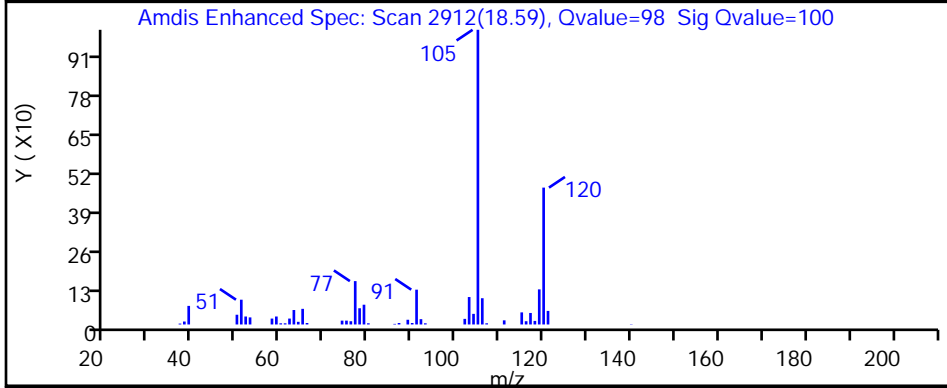
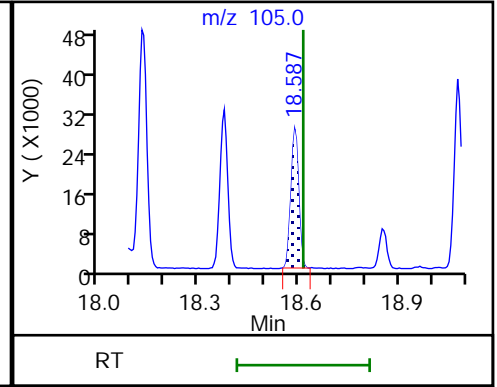
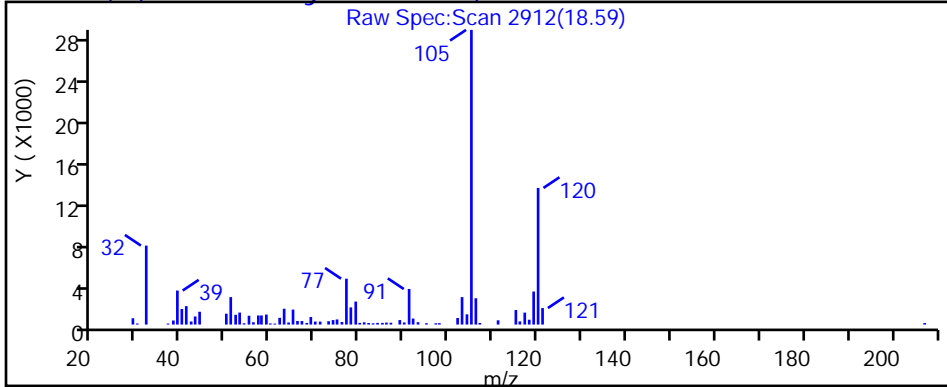
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D

Injection Date: 26-Feb-2019 20:36:30

Instrument ID: MH

Lims ID: 140-14390-A-9

Lab Sample ID: 140-14390-9

Client ID: SV-076-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

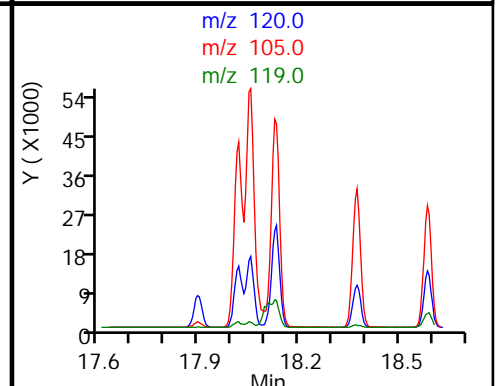
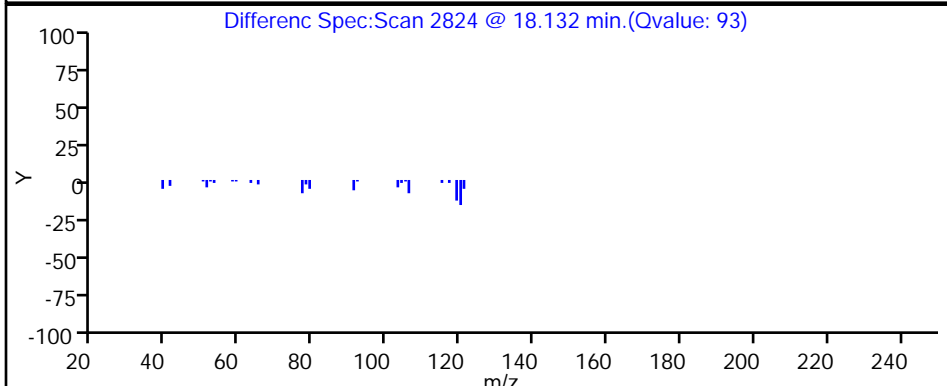
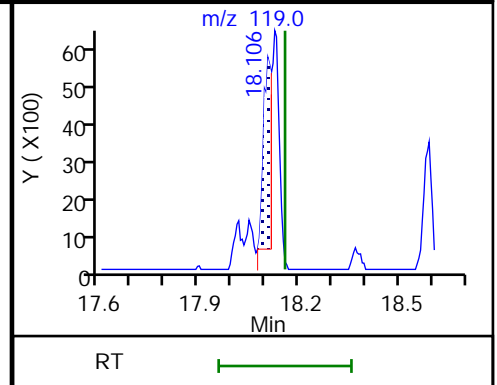
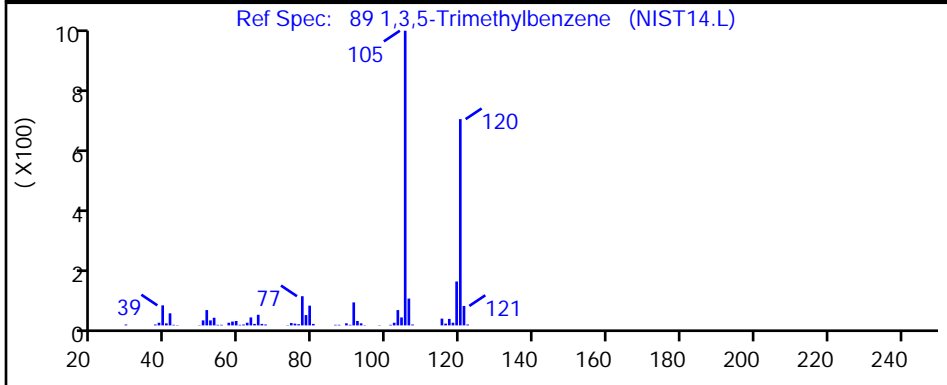
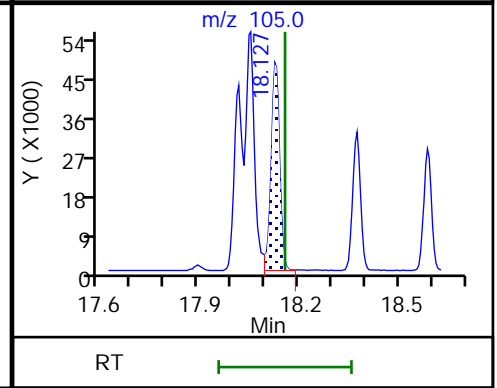
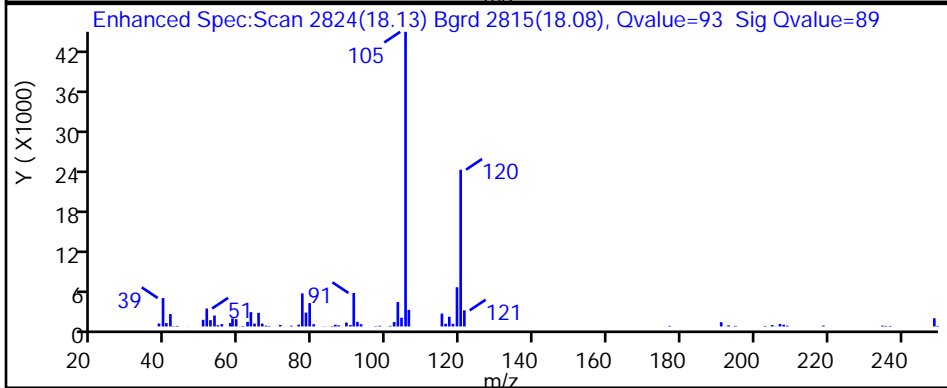
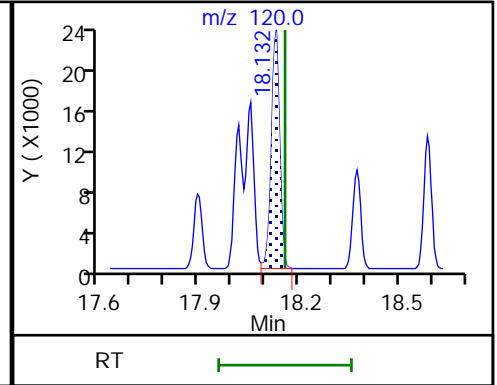
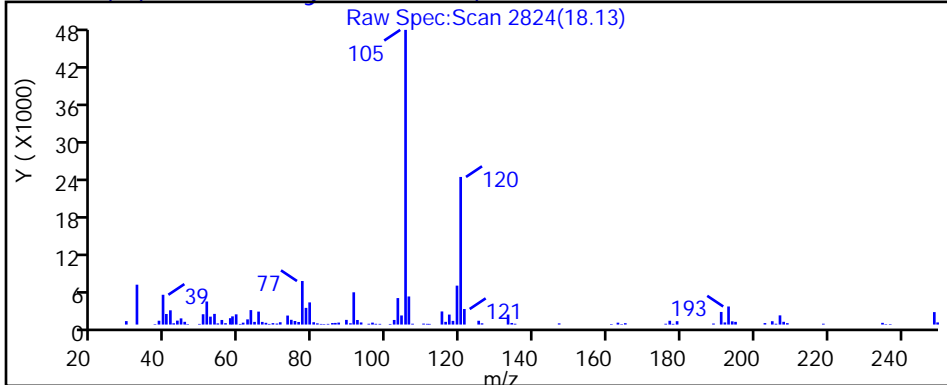
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D

Injection Date: 26-Feb-2019 20:36:30

Instrument ID: MH

Lims ID: 140-14390-A-9

Lab Sample ID: 140-14390-9

Client ID: SV-076-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

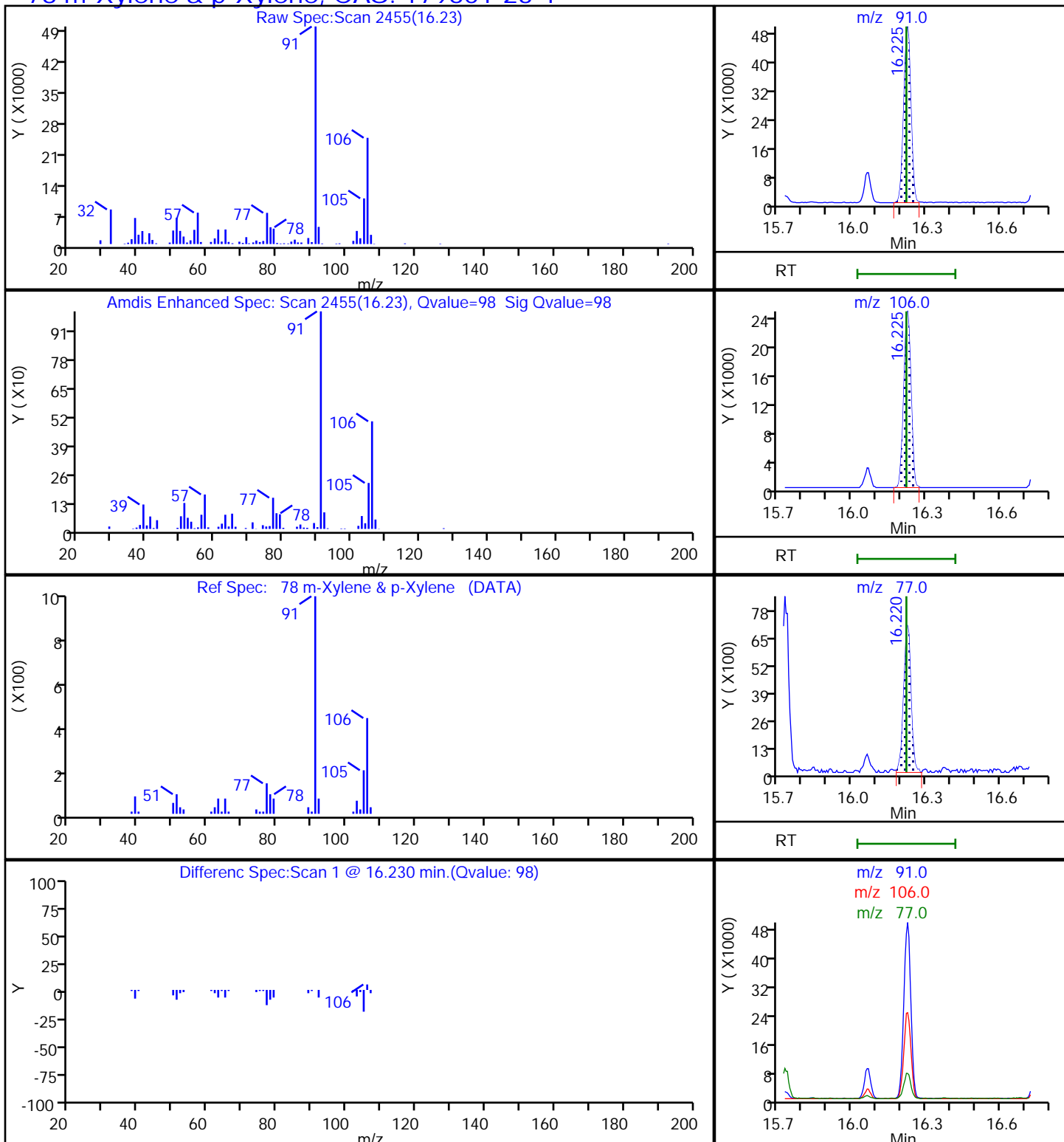
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P109.D

Injection Date: 26-Feb-2019 20:36:30

Instrument ID: MH

Lims ID: 140-14390-A-9

Lab Sample ID: 140-14390-9

Client ID: SV-076-A-26

Operator ID: HMT

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

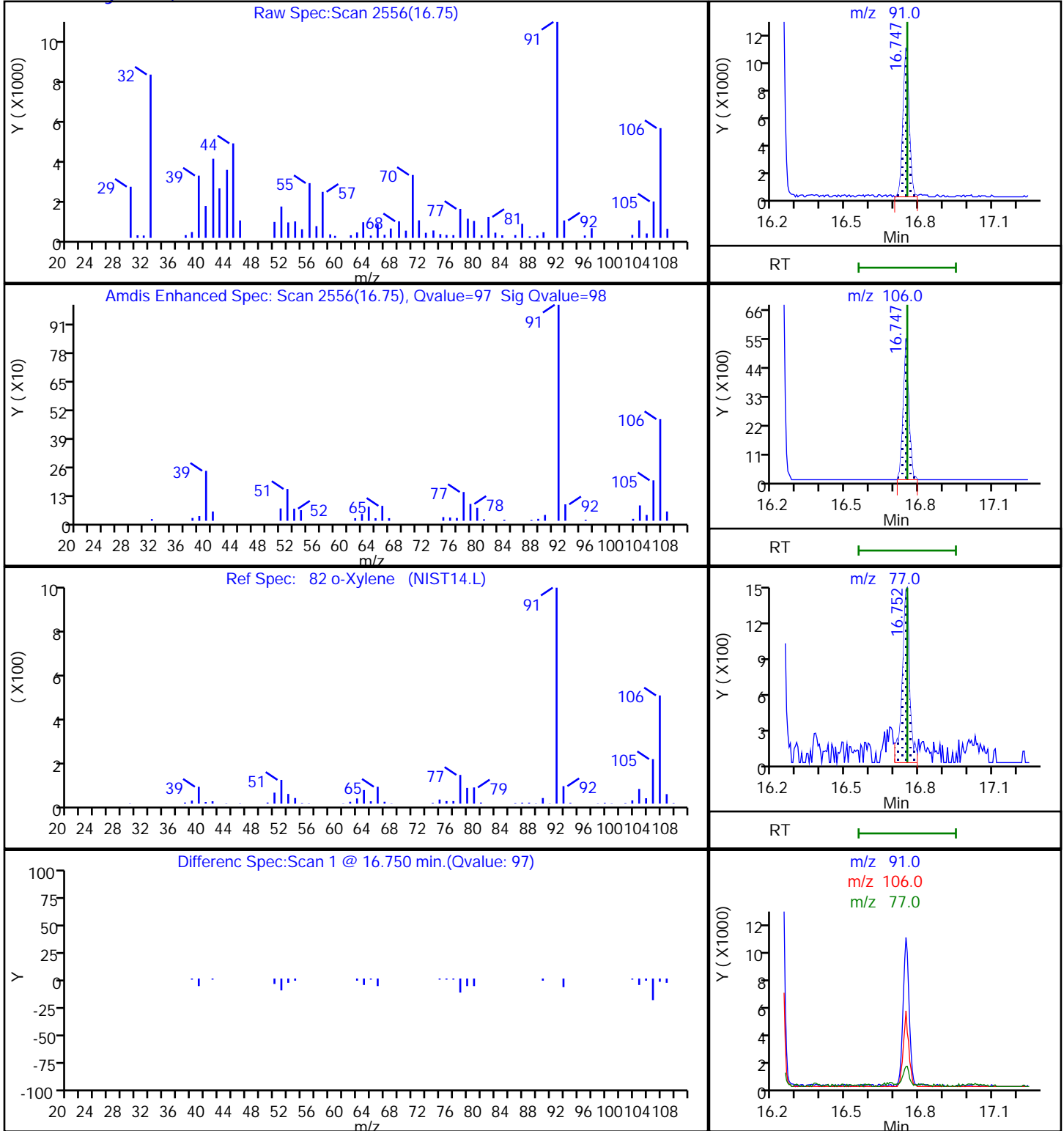
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-168-A-26 Lab Sample ID: 140-14390-10
 Matrix: Air Lab File ID: HB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 13:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:29
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	0.24	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.17	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.32	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	13		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.33	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.87		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	34		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.18	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.76		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.49	CI	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-168-A-26 Lab Sample ID: 140-14390-10
 Matrix: Air Lab File ID: HB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 13:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:29
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.77	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	1.2	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.68	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.3	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	50		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	11		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	4.8		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	180		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	0.88	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	3.8		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	2.4	CI	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D
 Lims ID: 140-14390-A-10
 Client ID: SV-168-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 21:29:30 ALS Bottle#: 10 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-014
 Misc. Info.: 140-14390-a-10
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:04:42 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:04:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.855	8.819	0.036	95	300597	4.00	
* 2 1,4-Difluorobenzene	114	11.015	11.000	0.015	95	1666175	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	87	1440458	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	97	945738	4.03	
6 Chlorodifluoromethane	51	3.676	3.676	-0.006	47	18425	0.0748	M
8 Dichlorodifluoromethane	85	3.743	3.738	0.005	100	37127	0.0981	
27 1,1-Dichloroethene	96	5.924	5.919	0.005	97	294011	2.52	
31 Methylene Chloride	84	6.328	6.271	0.057	98	45956	0.3739	
37 1,1-Dichloroethane	63	7.542	7.501	0.041	99	14454	0.0635	
41 cis-1,2-Dichloroethene	96	8.529	8.483	0.046	93	4152	0.0342	
43 Chloroform	83	8.860	8.829	0.031	81	12794	0.0490	
45 1,1,1-Trichloroethane	97	9.878	9.858	0.020	98	43321	0.1744	
47 Benzene	78	10.473	10.457	0.016	94	16972	0.0482	
50 Carbon tetrachloride	117	10.509	10.473	0.036	28	4608	0.0162	
56 Trichloroethene	130	11.723	11.713	0.010	96	1136173	6.83	
65 Toluene	91	13.765	13.760	0.005	94	229334	0.5593	
76 Ethylbenzene	91	16.060	16.060	0.000	98	34962	0.0670	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	95539	0.2373	
82 o-Xylene	91	16.747	16.752	-0.005	97	43518	0.1061	
89 1,3,5-Trimethylbenzene	120	18.127	18.158	-0.031	92	17249	0.0980	
93 1,2,4-Trimethylbenzene	105	18.587	18.613	-0.026	98	71805	0.1530	
99 1,2,3-Trimethylbenzene	105	19.078	19.099	-0.021	97	16590	0.0360	
S 121 Xylenes, Total	100				0		0.3435	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Worklist Smp#: 14

Client ID: SV-168-A-26

Purge Vol: 500.000 mL

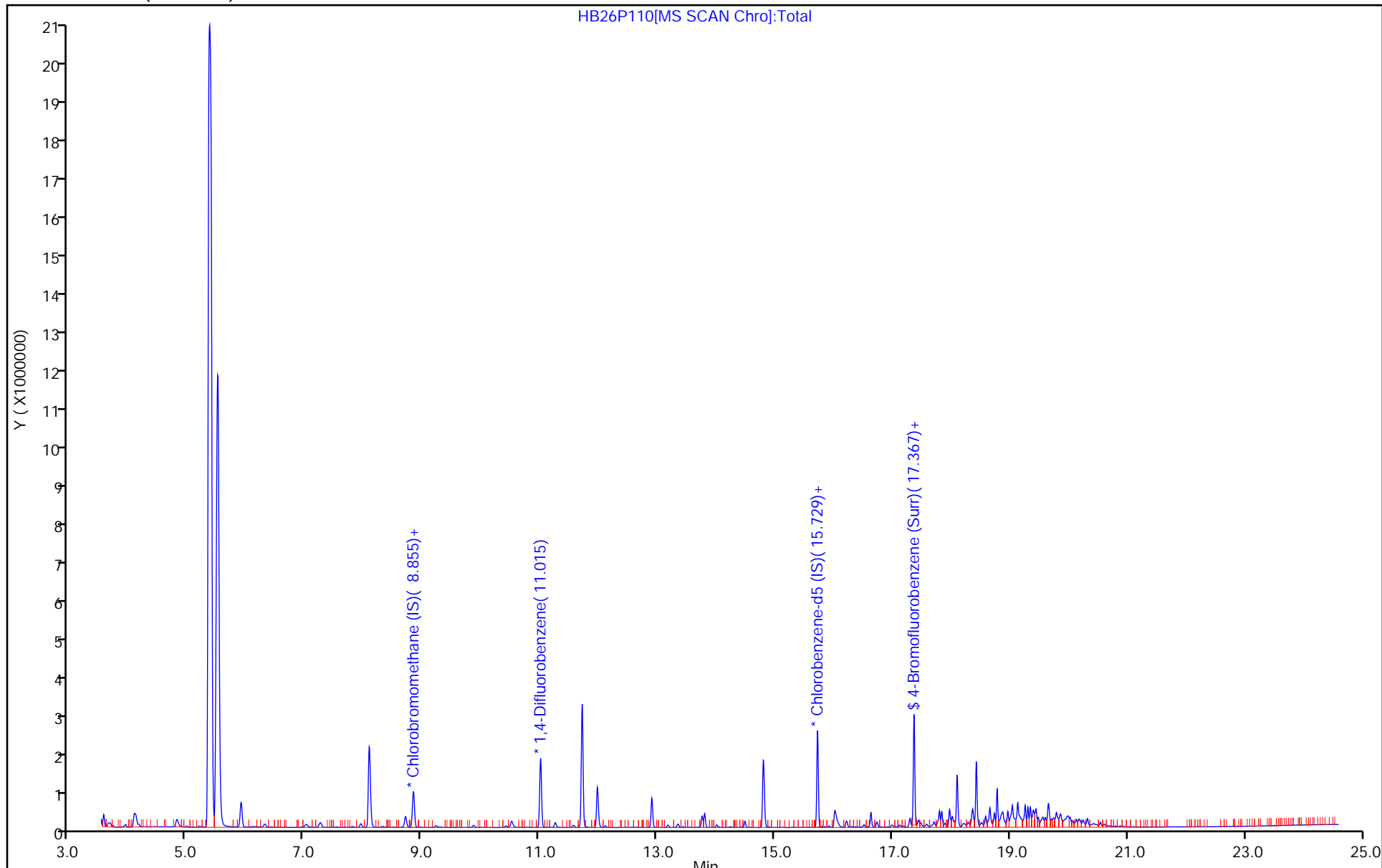
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D
 Lims ID: 140-14390-A-10
 Client ID: SV-168-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 21:29:30 ALS Bottle#: 10 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-014
 Misc. Info.: 140-14390-a-10
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:04:42 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:04:42

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.03	100.73

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

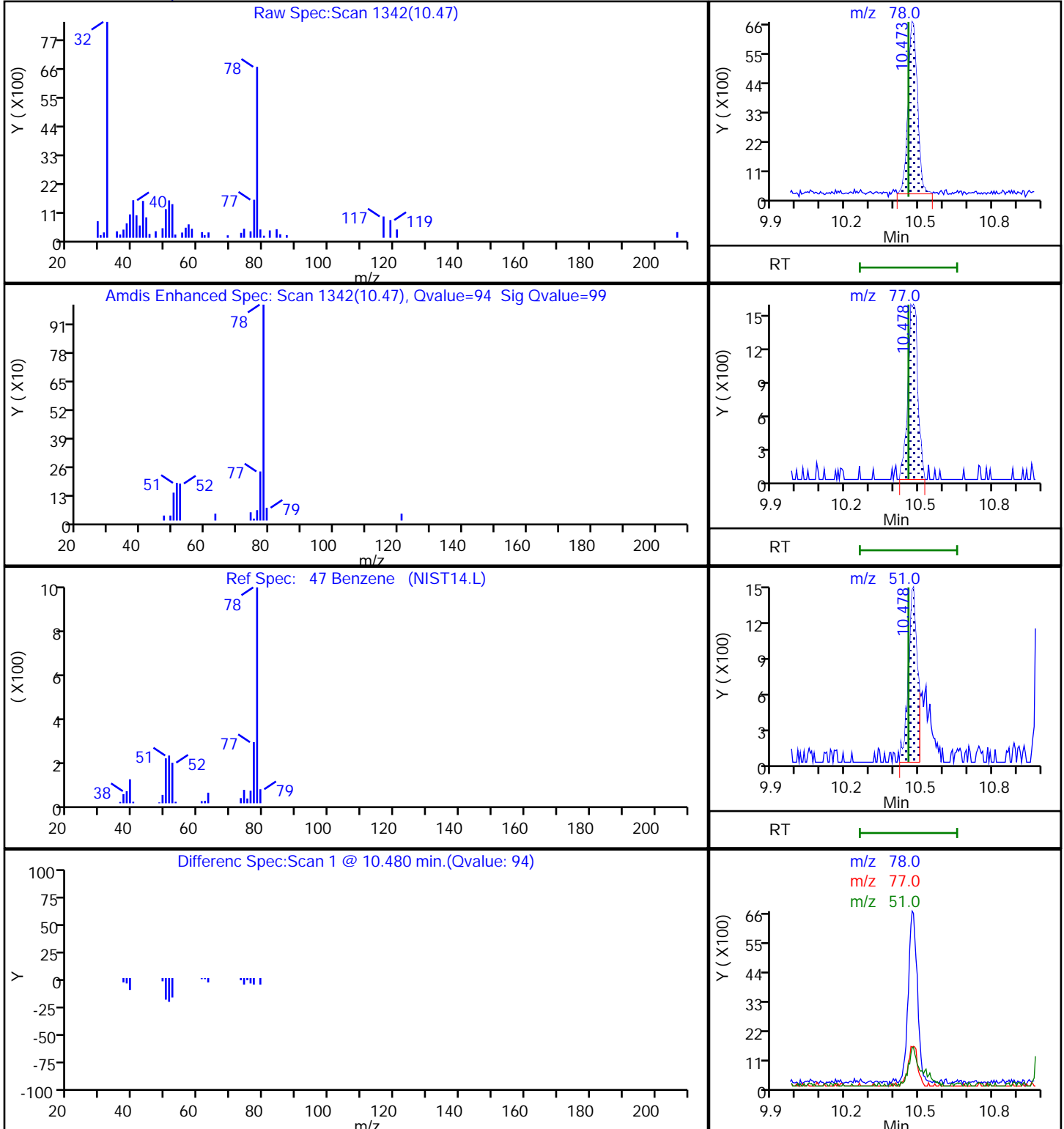
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

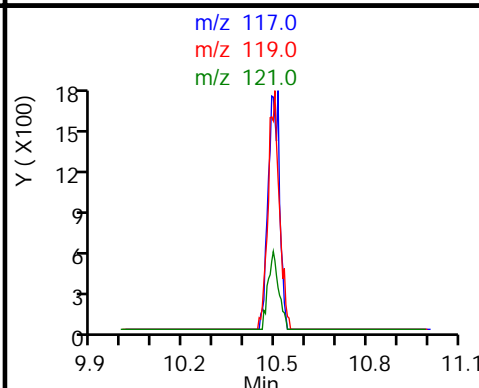
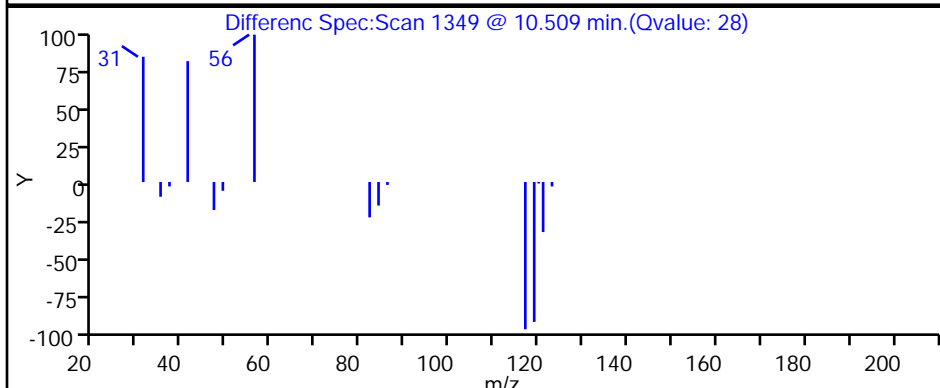
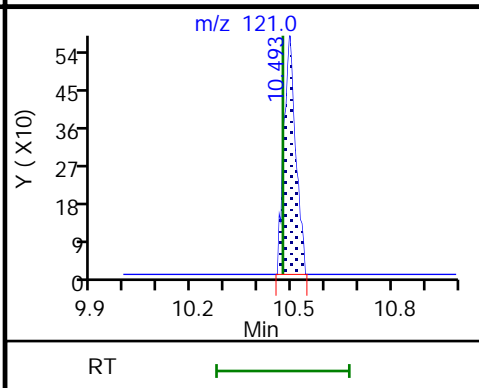
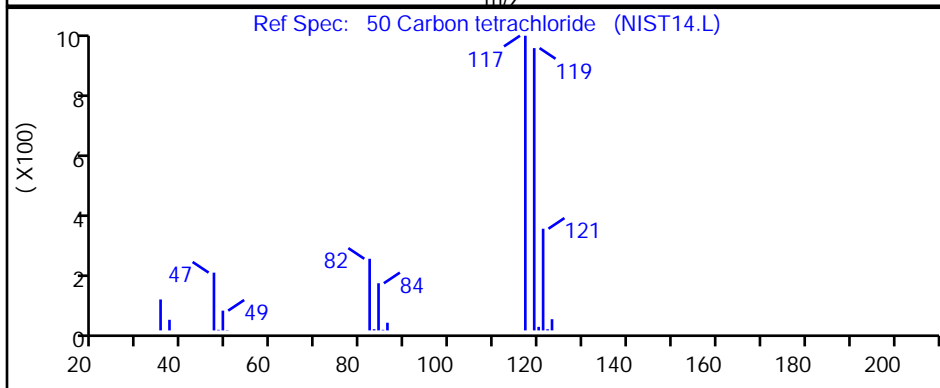
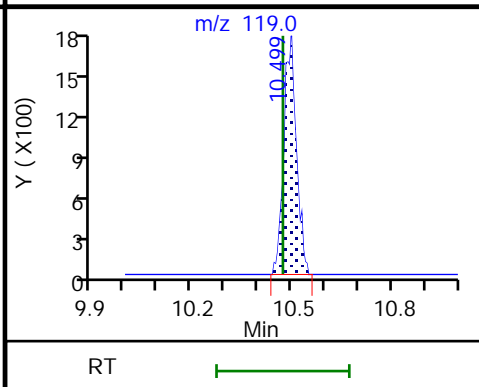
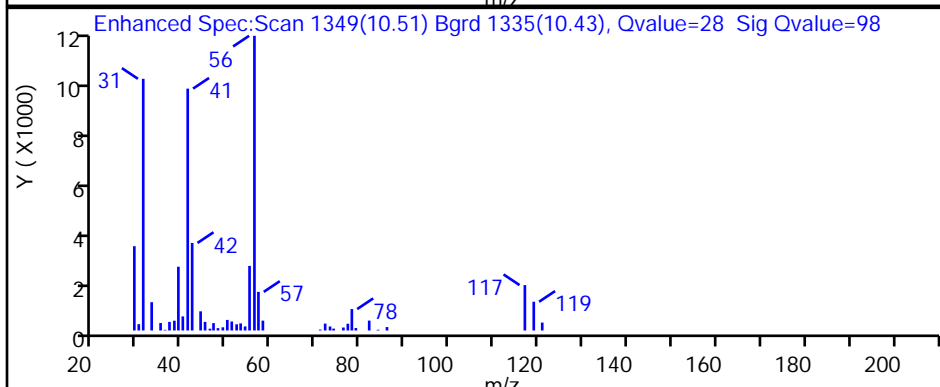
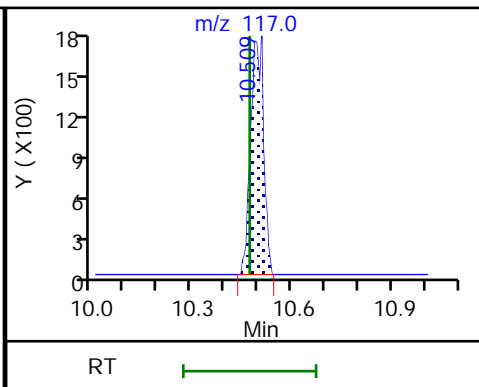
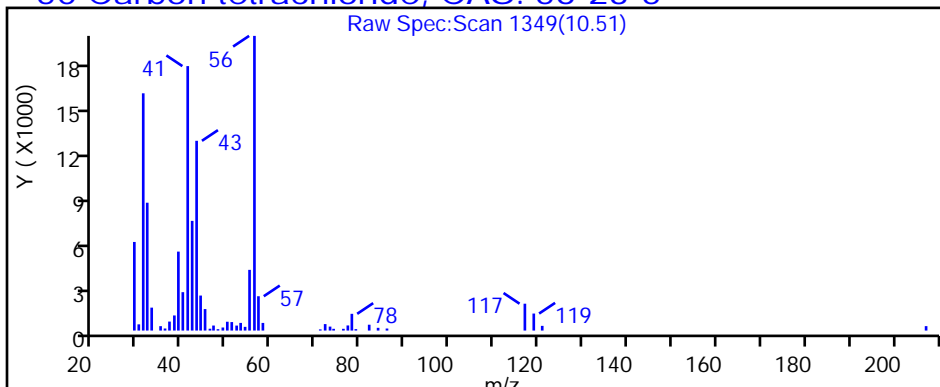
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

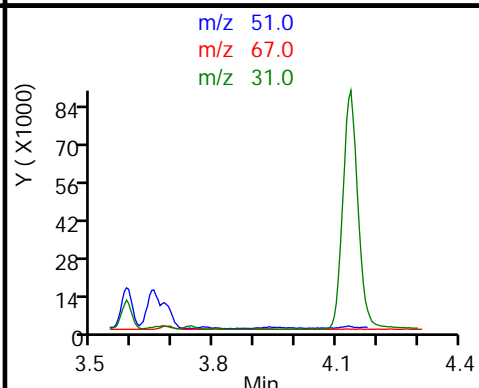
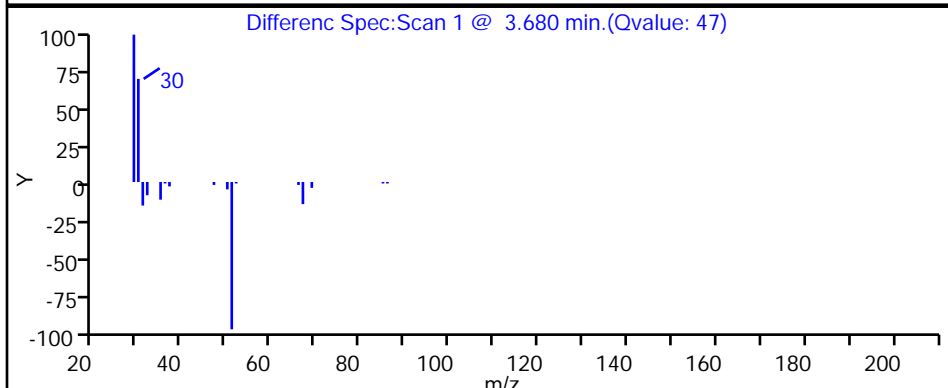
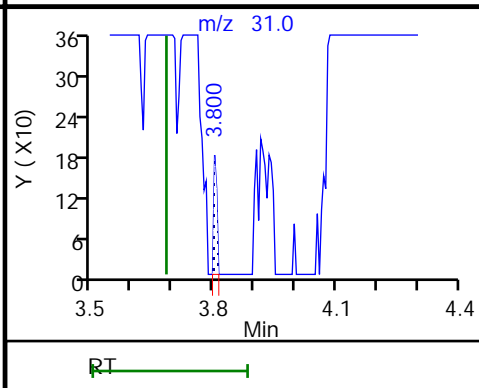
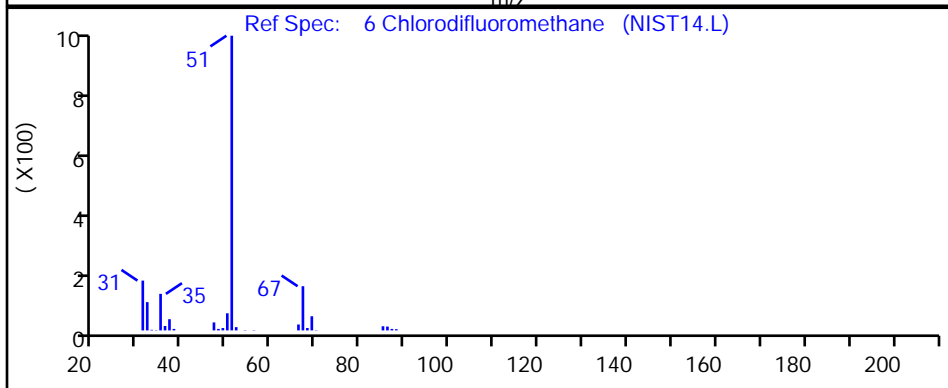
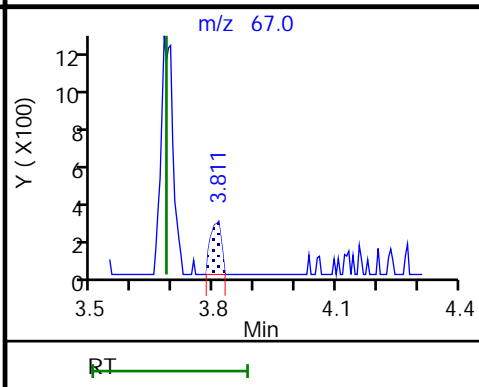
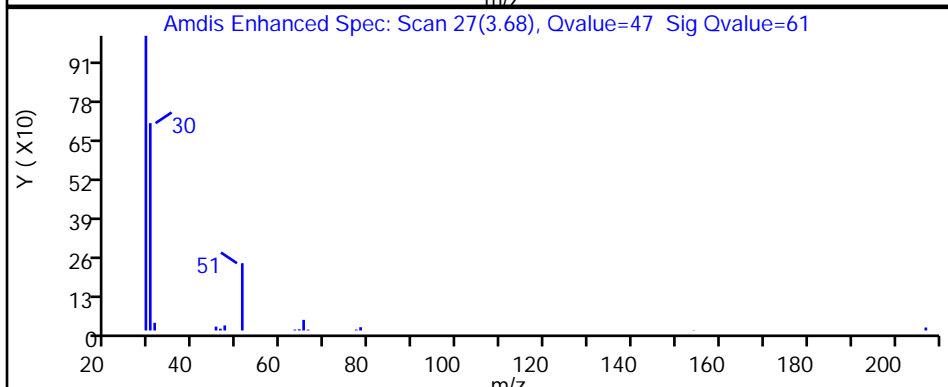
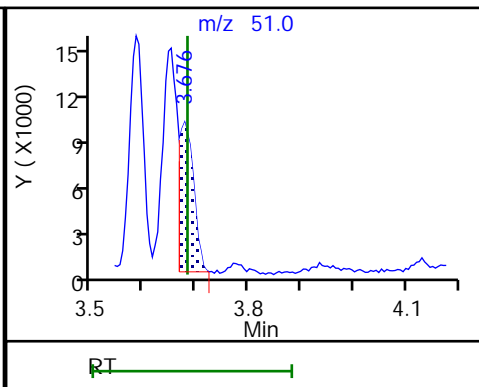
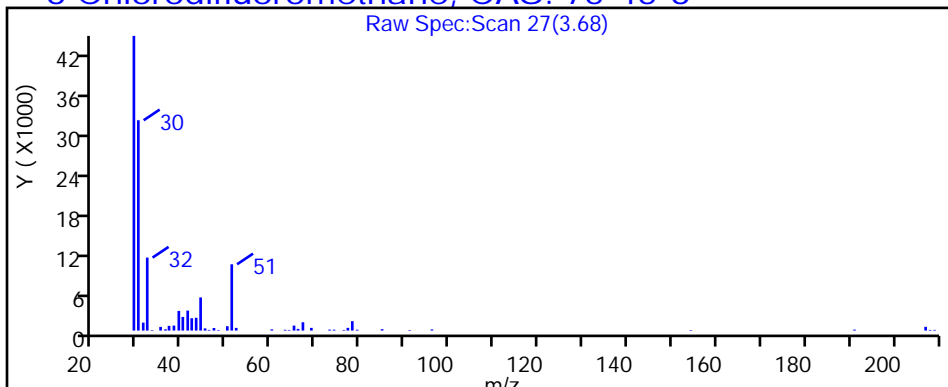
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

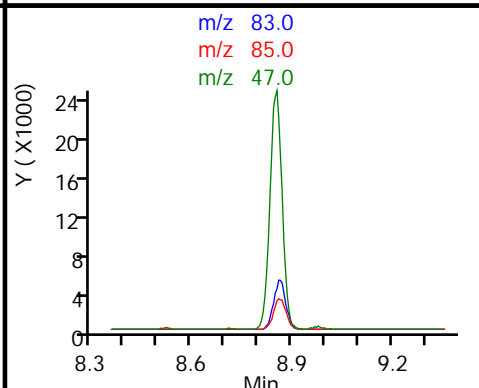
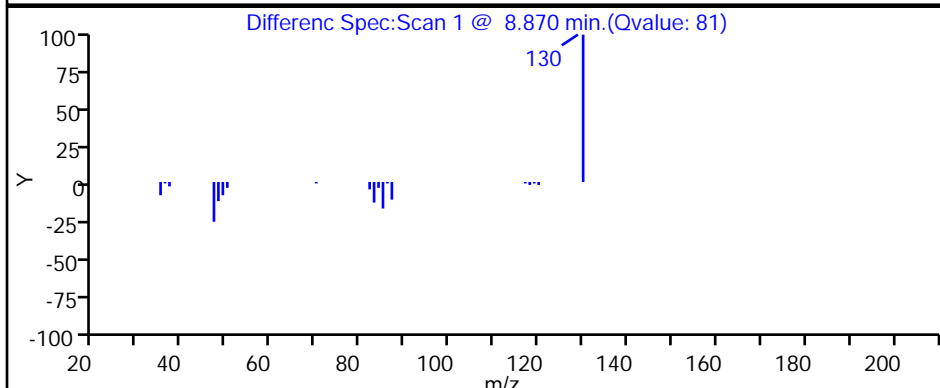
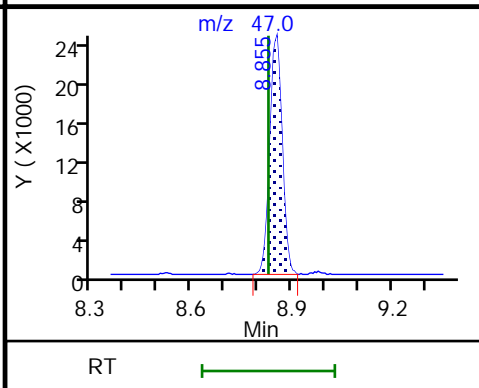
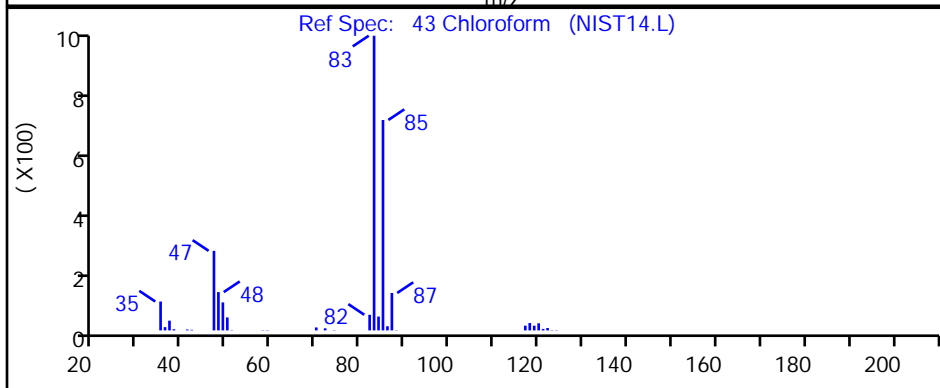
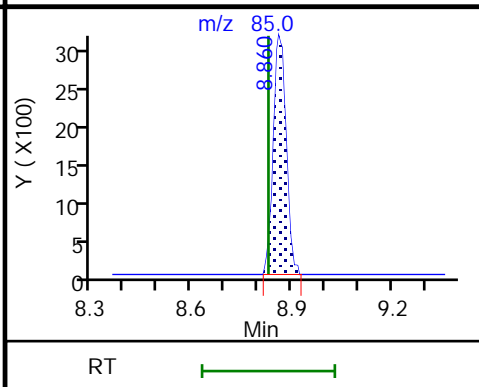
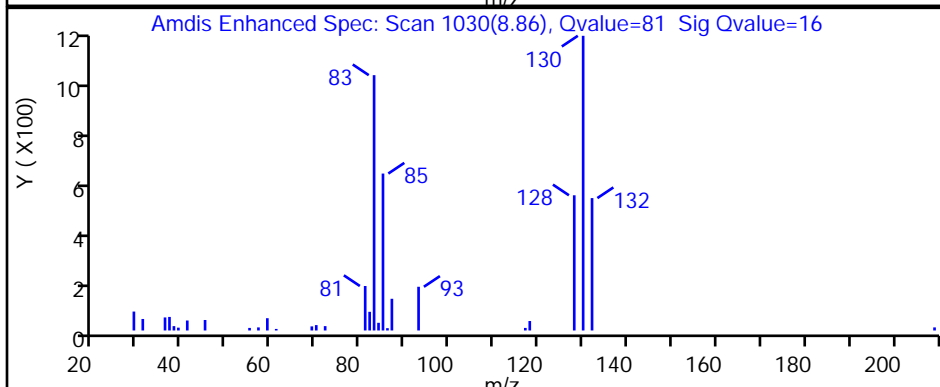
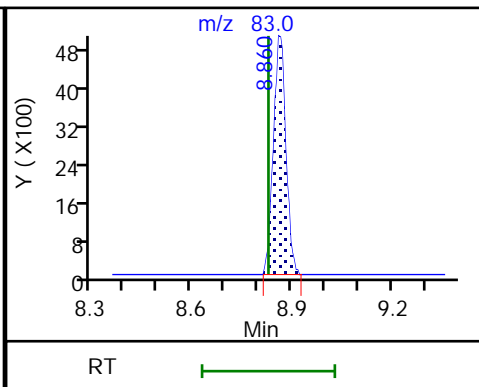
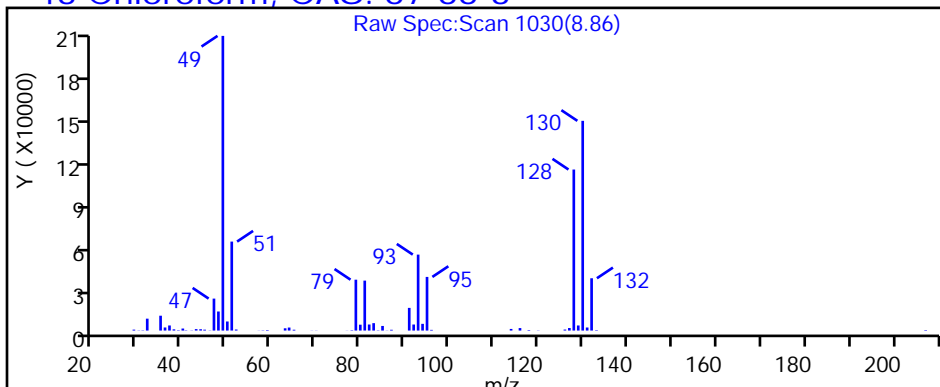
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

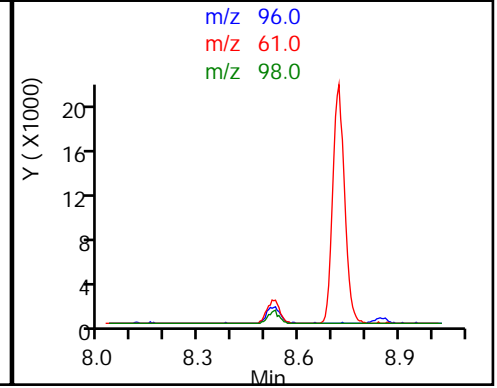
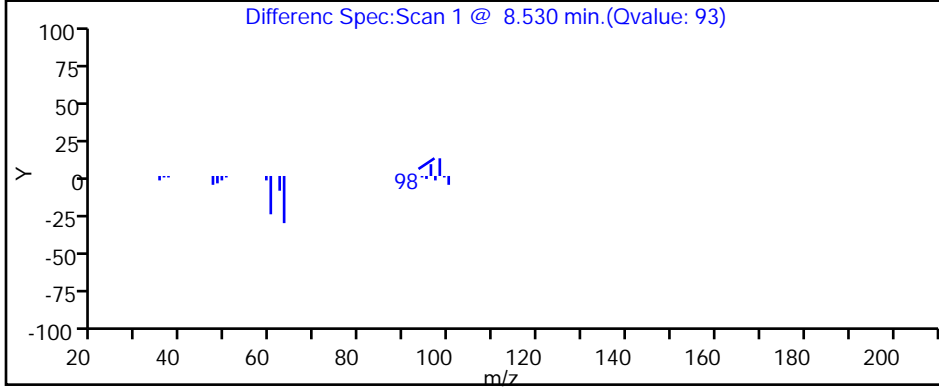
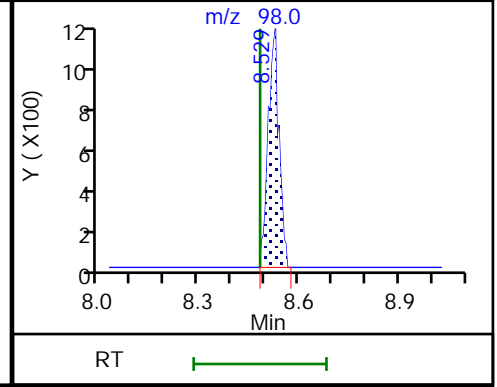
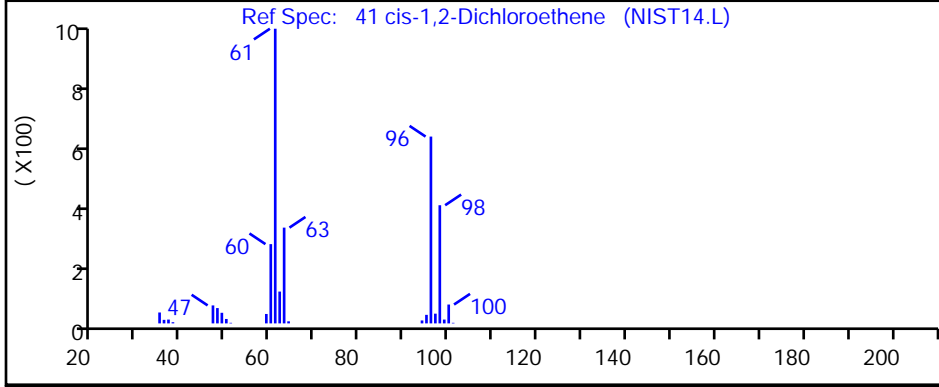
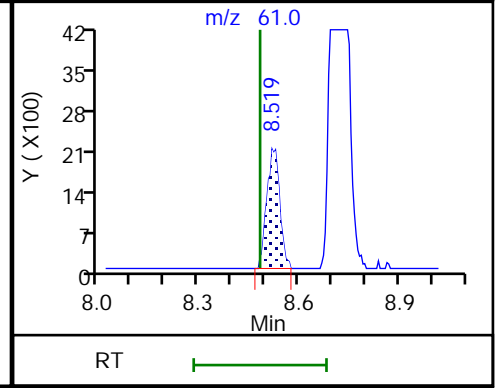
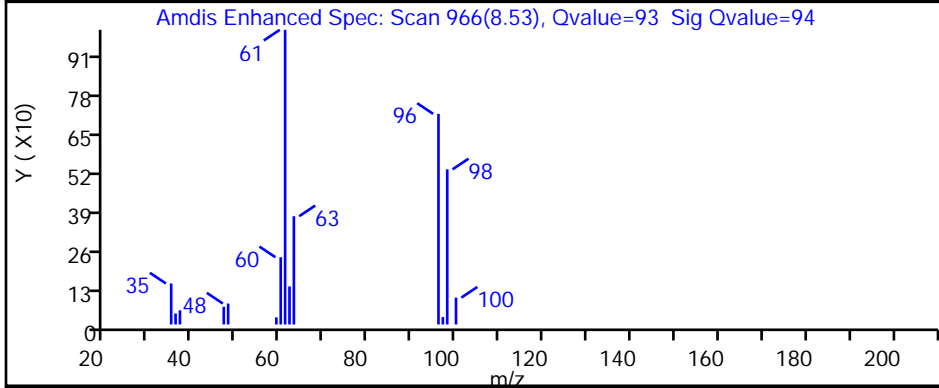
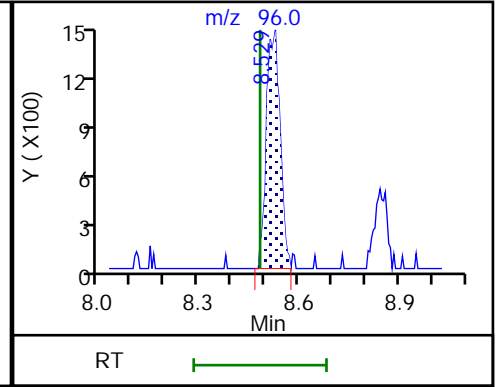
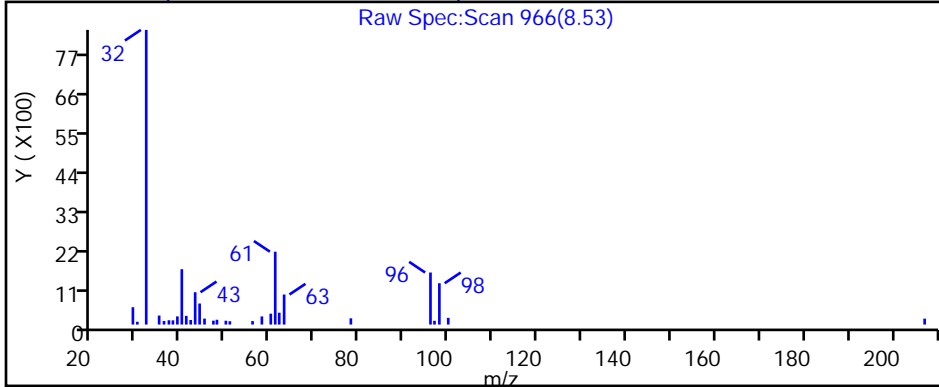
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

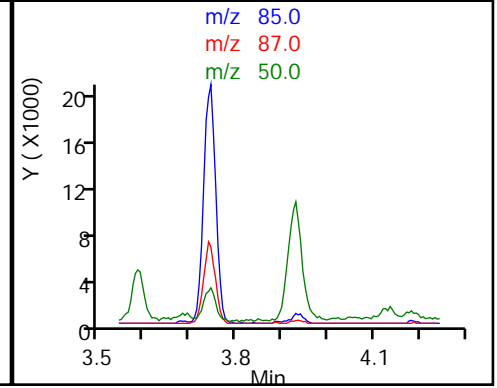
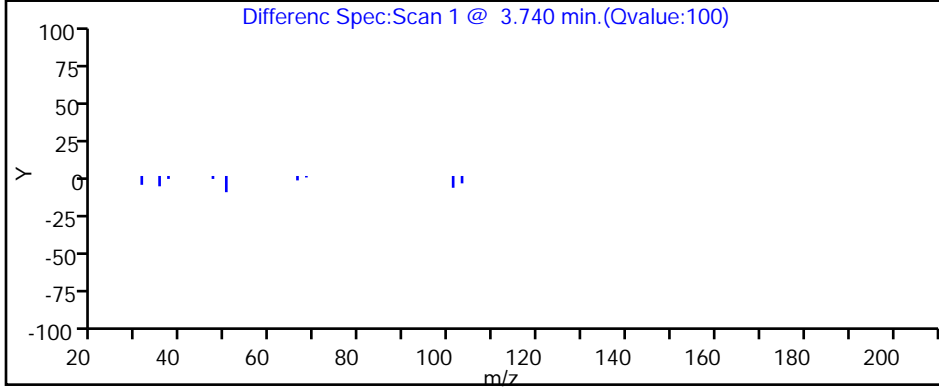
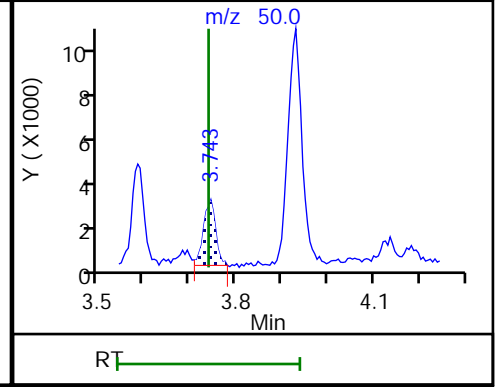
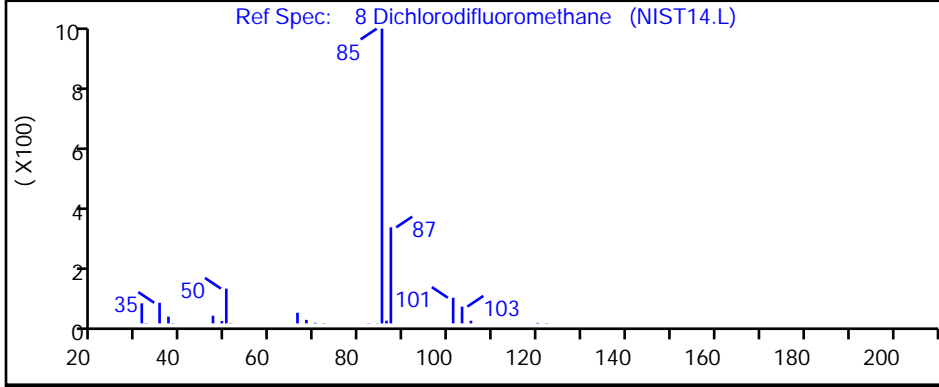
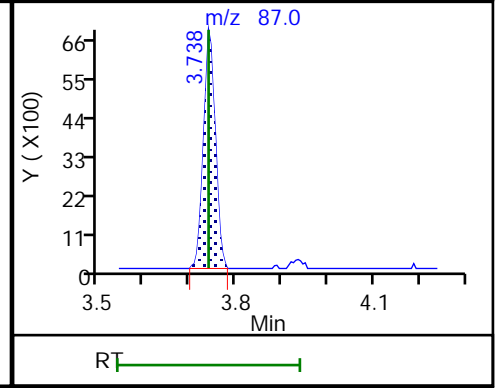
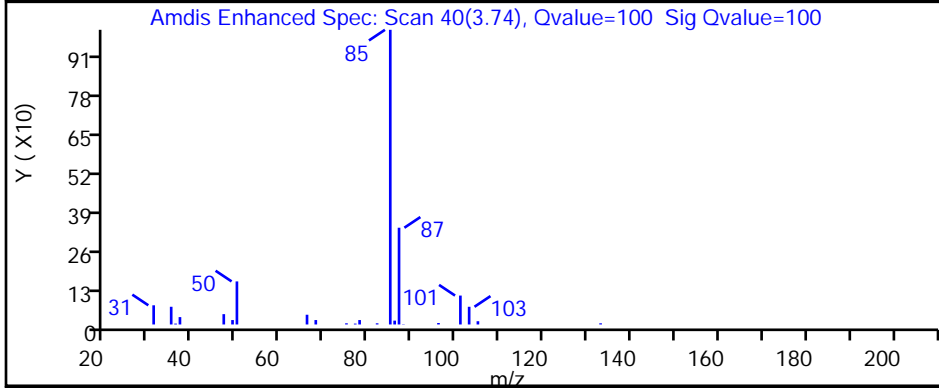
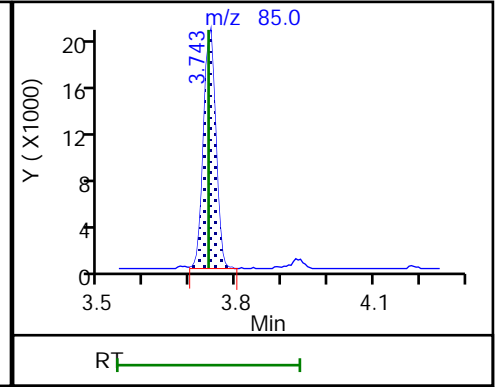
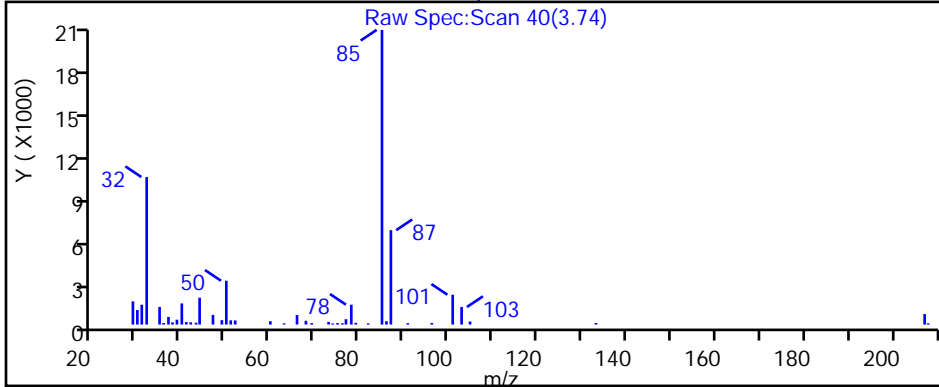
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

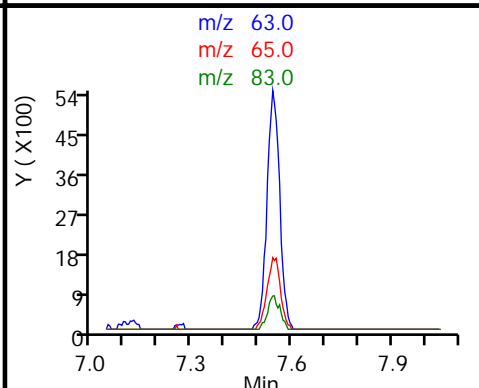
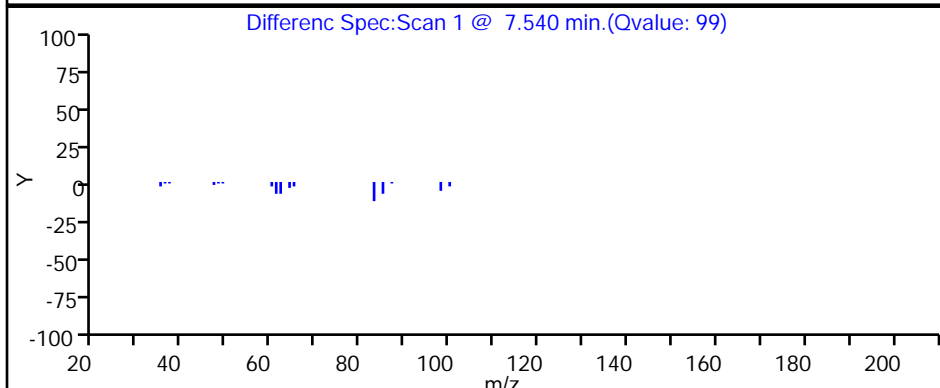
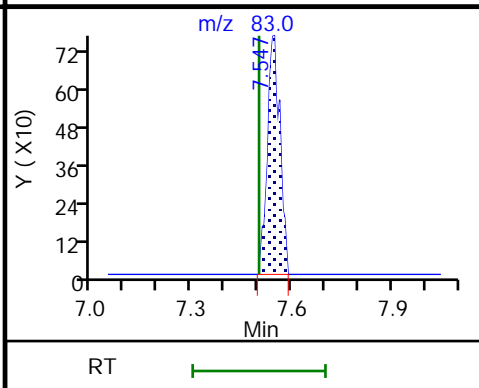
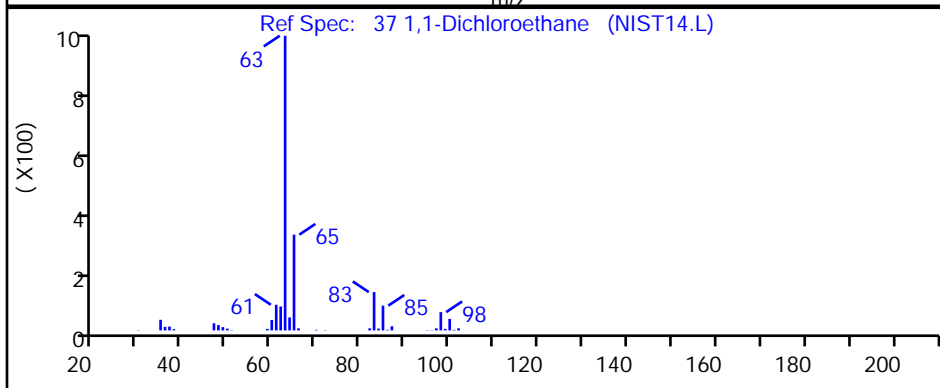
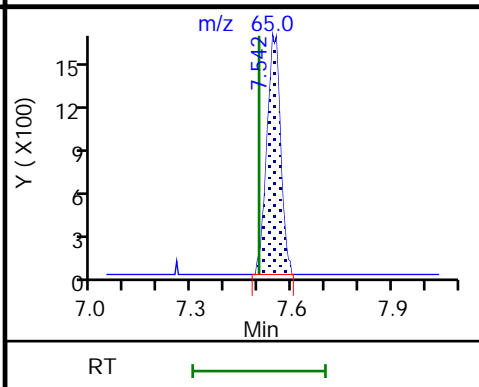
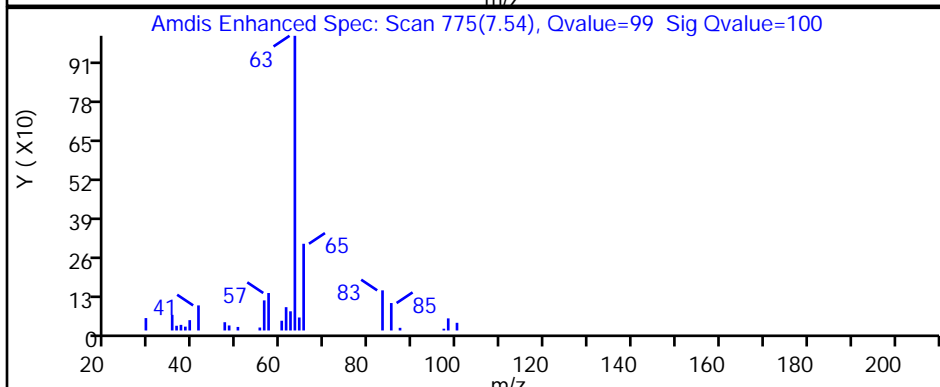
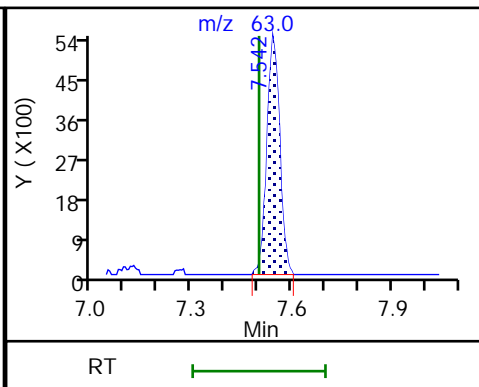
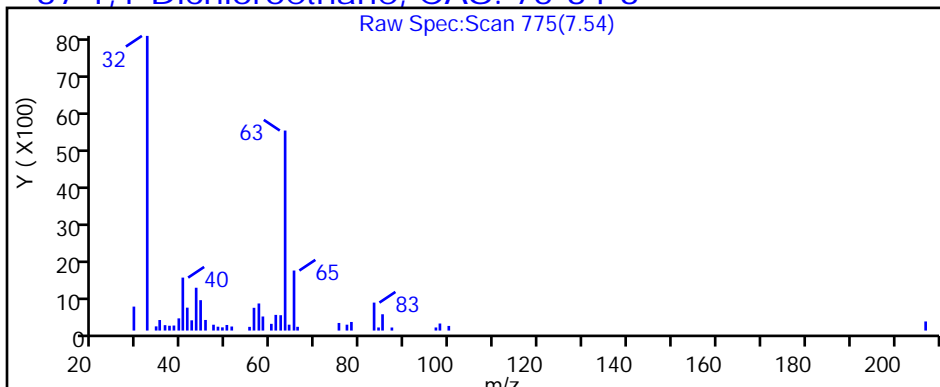
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

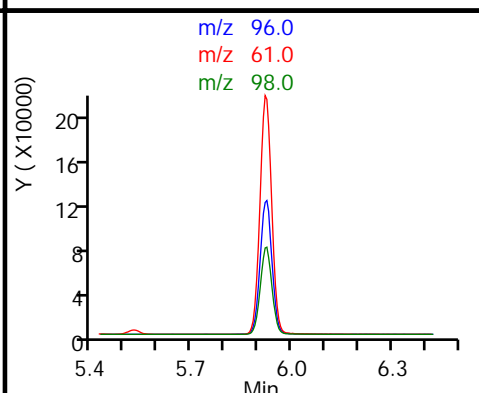
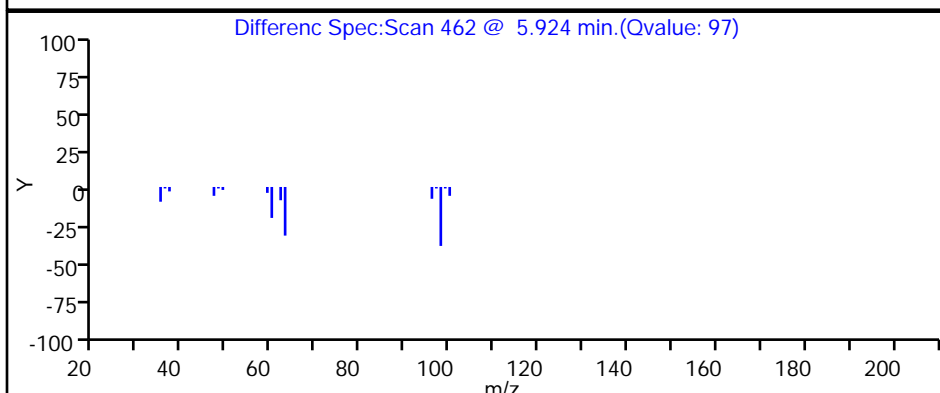
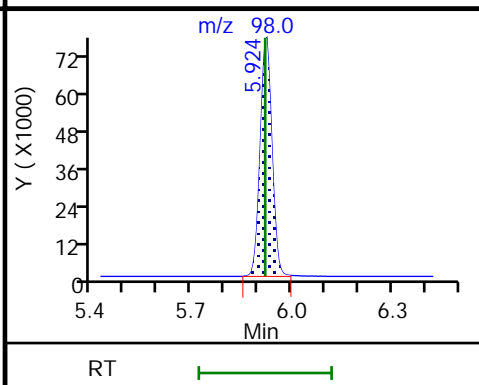
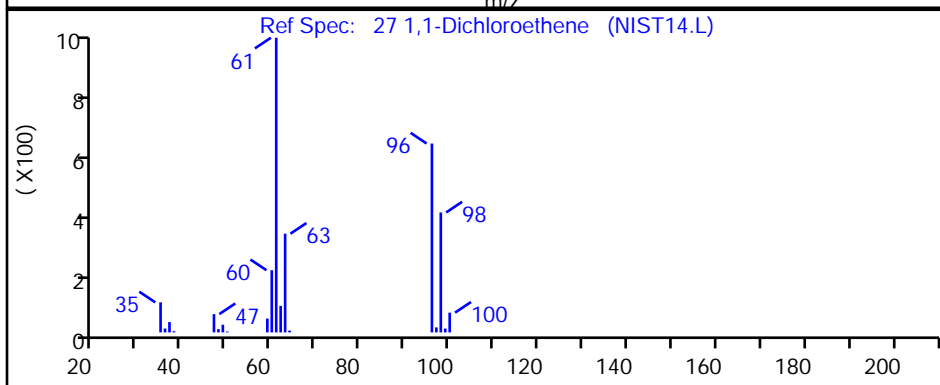
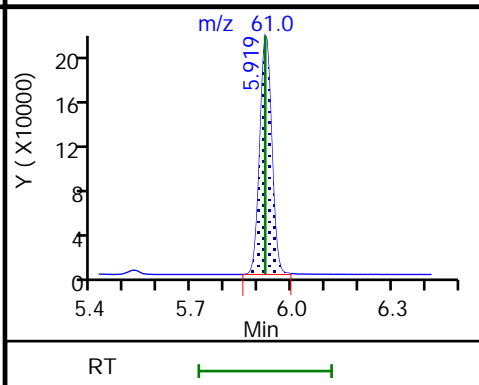
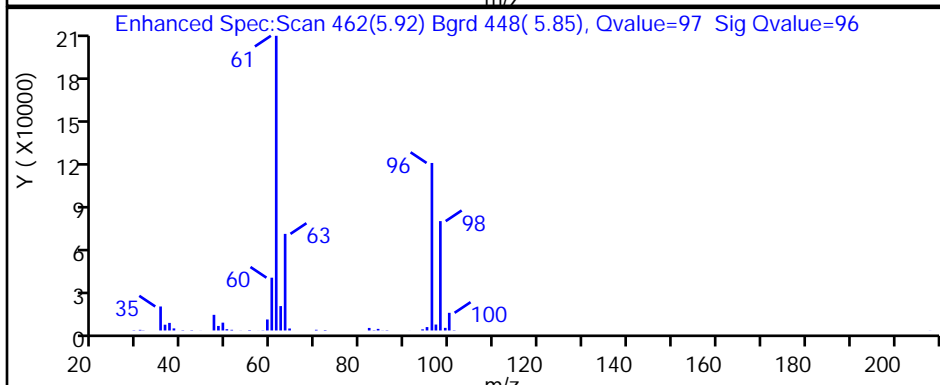
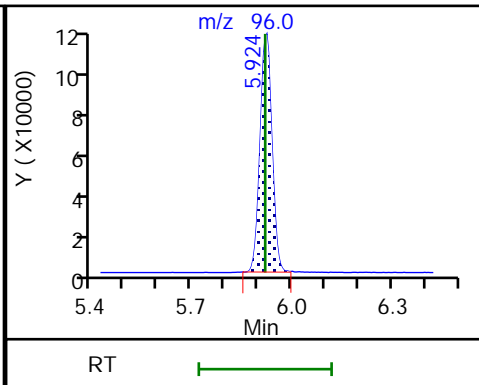
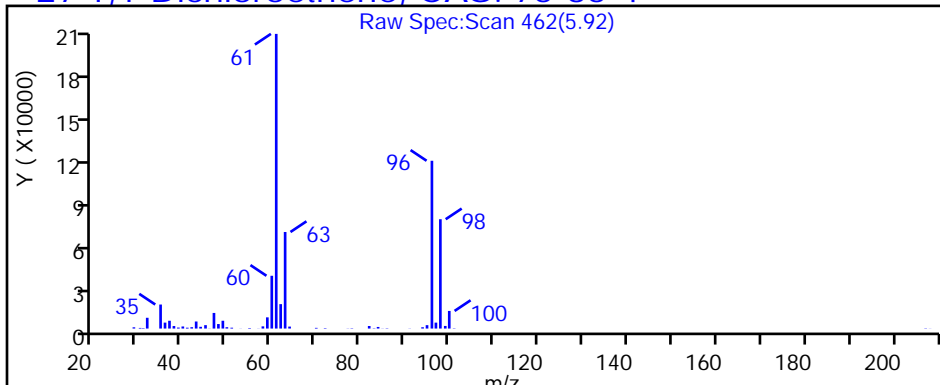
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

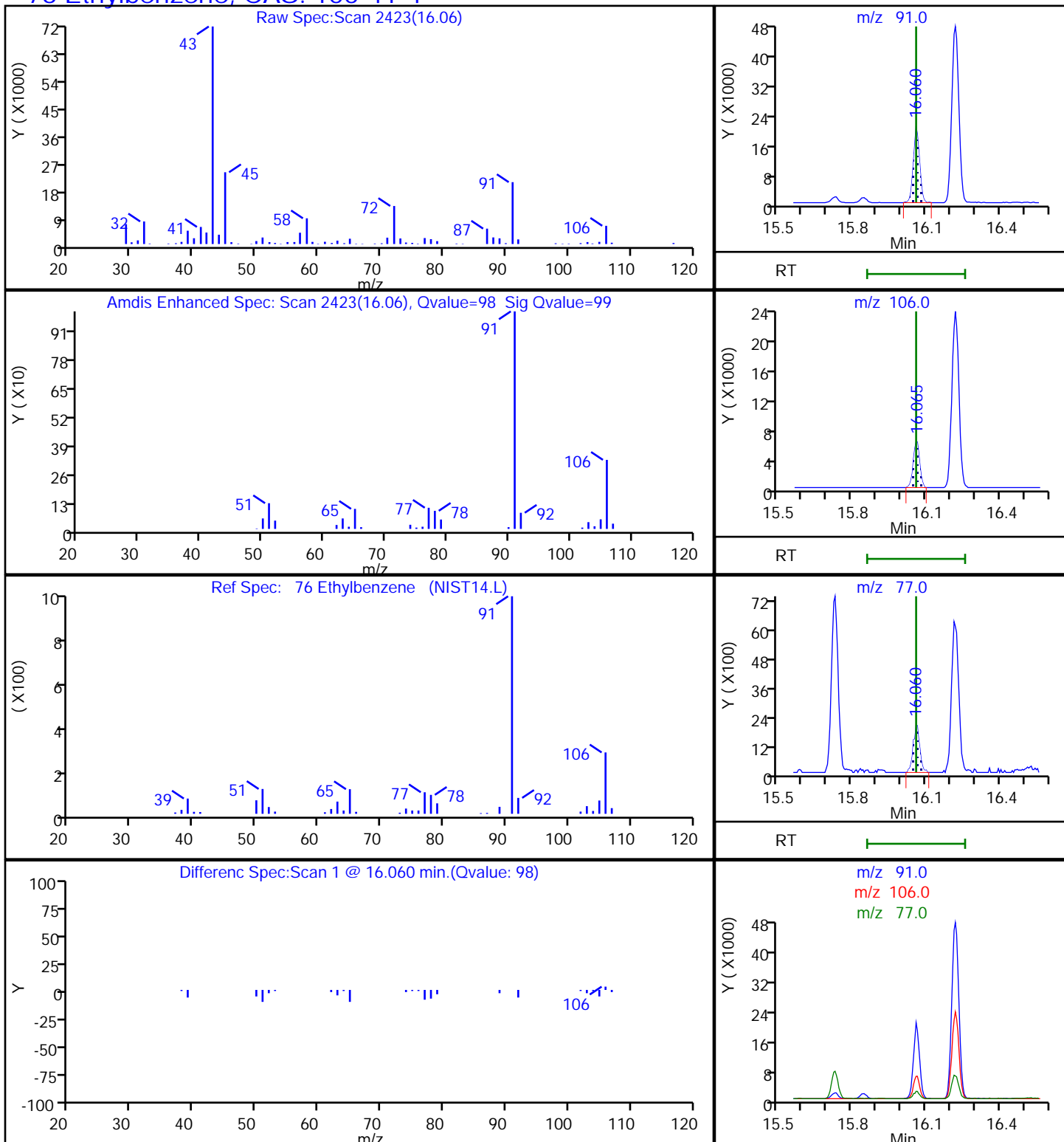
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

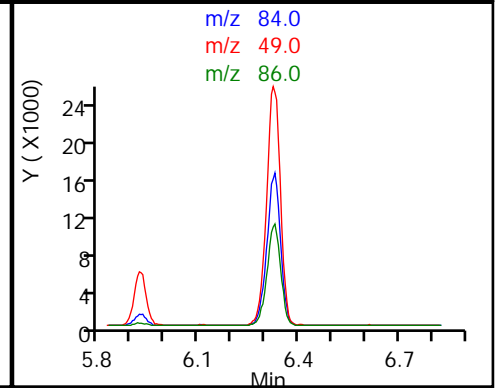
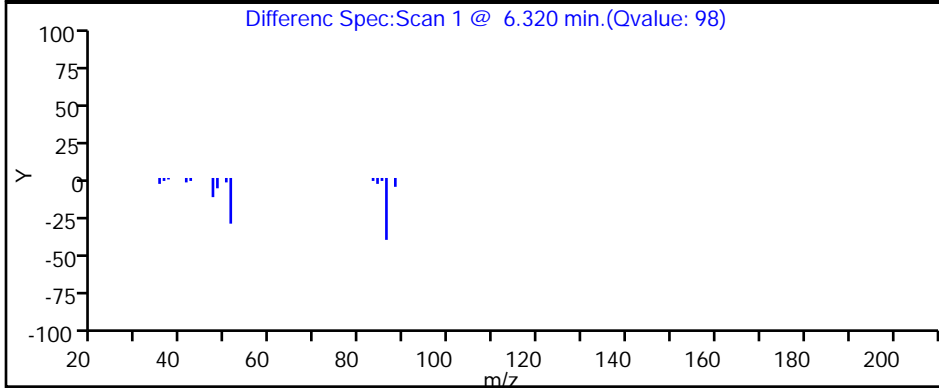
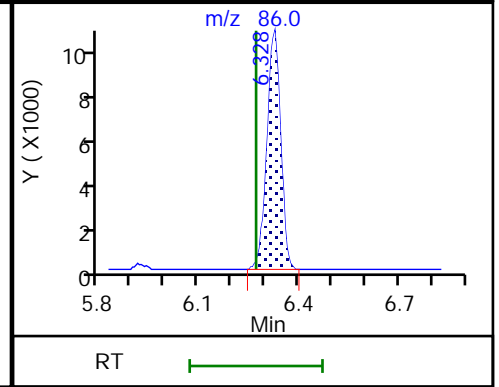
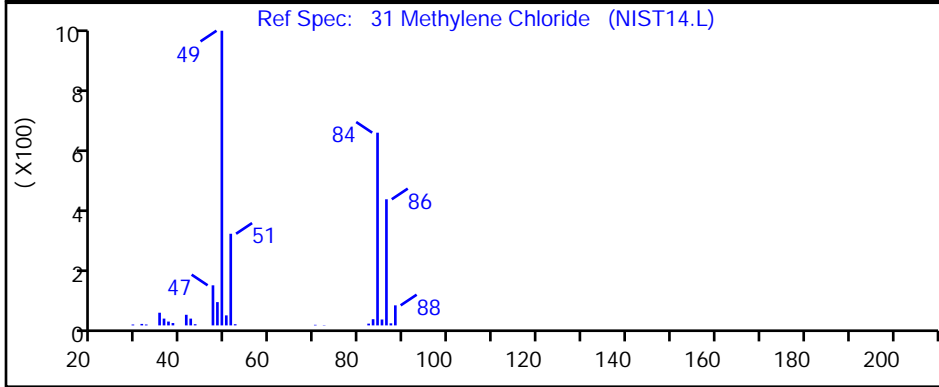
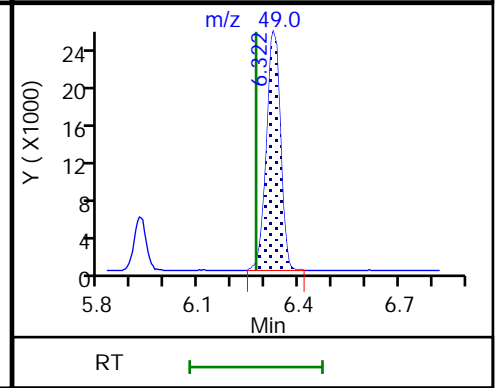
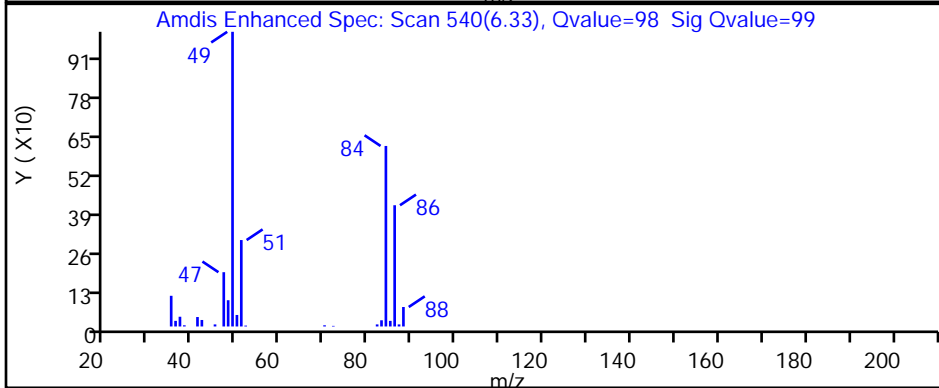
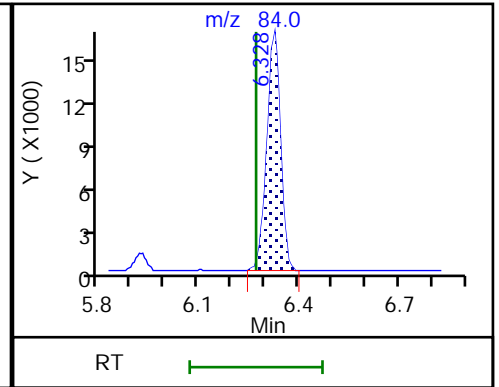
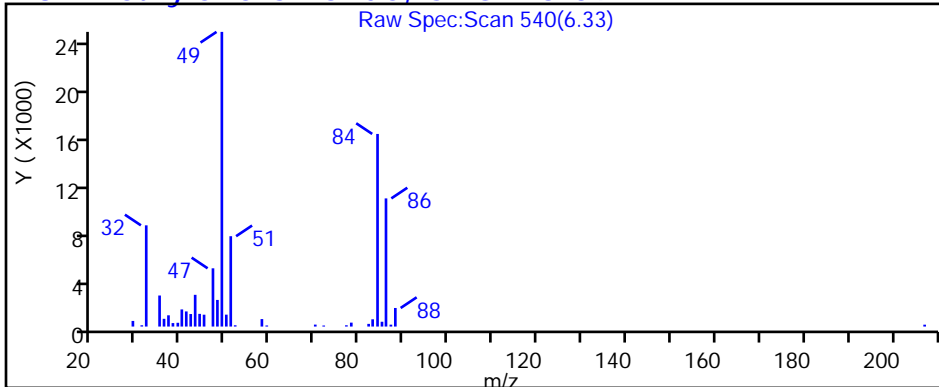
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

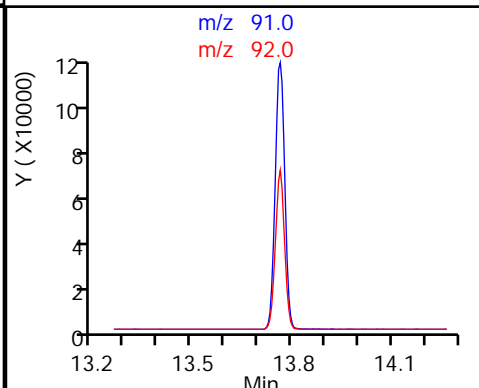
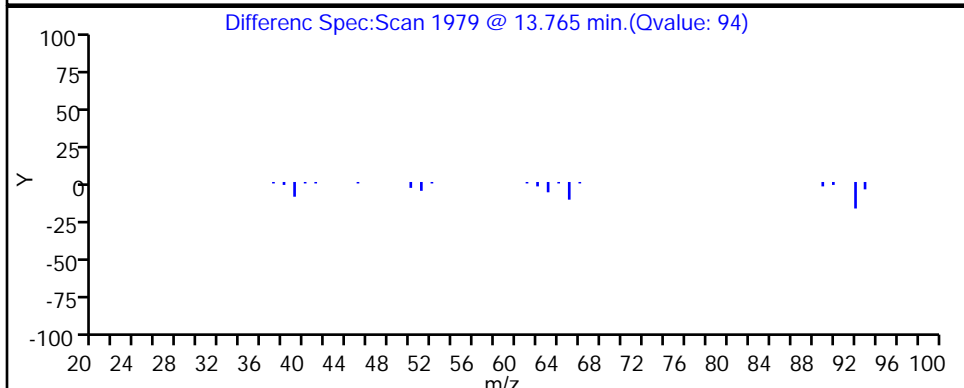
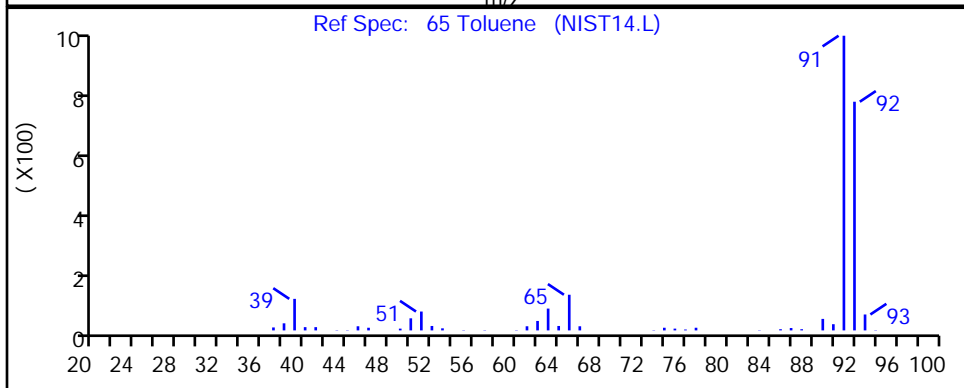
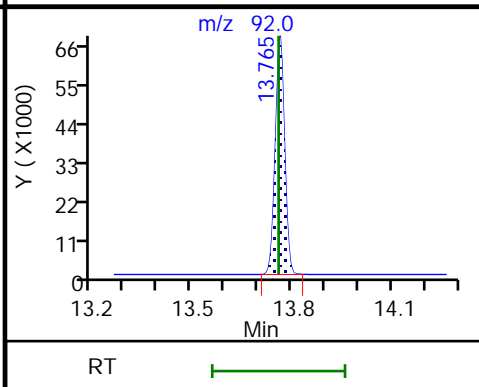
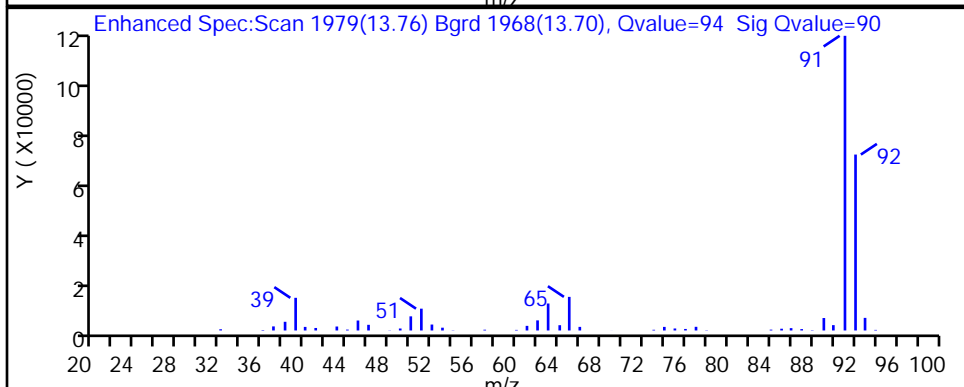
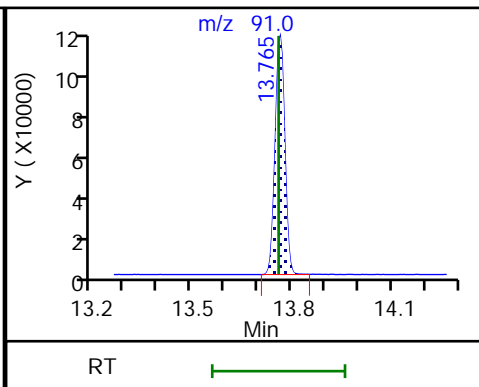
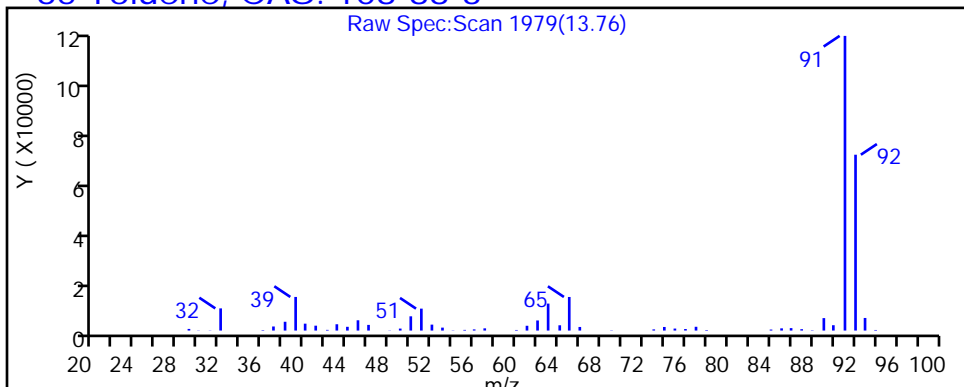
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

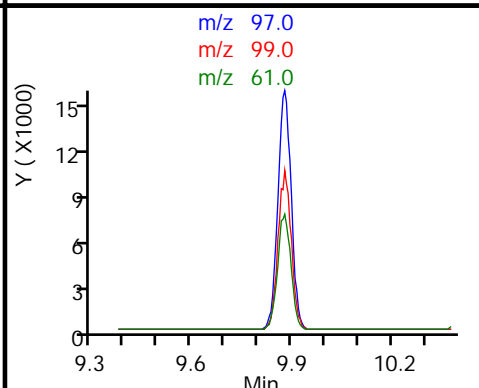
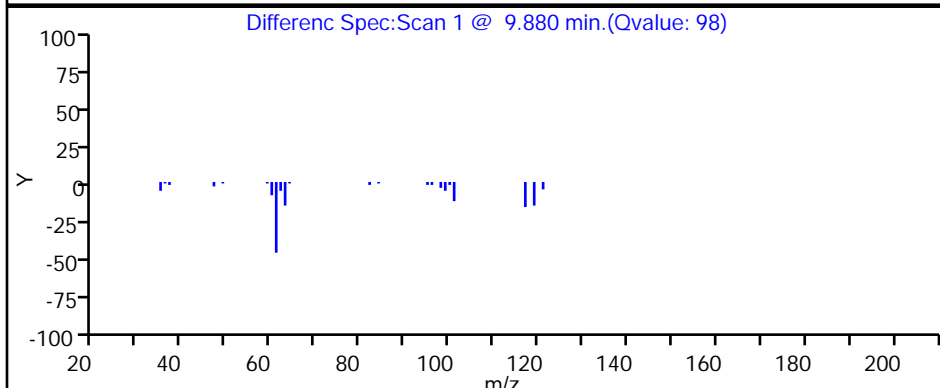
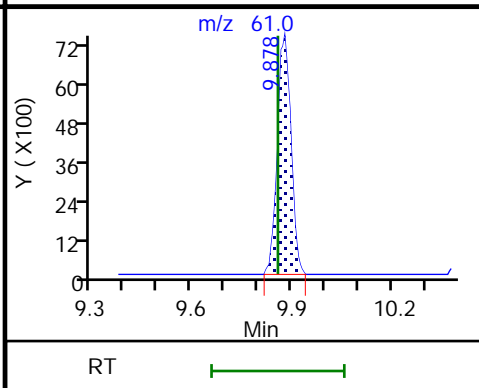
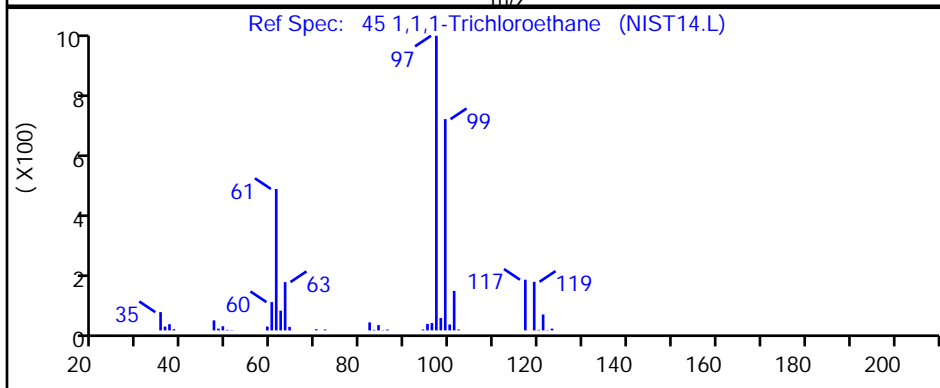
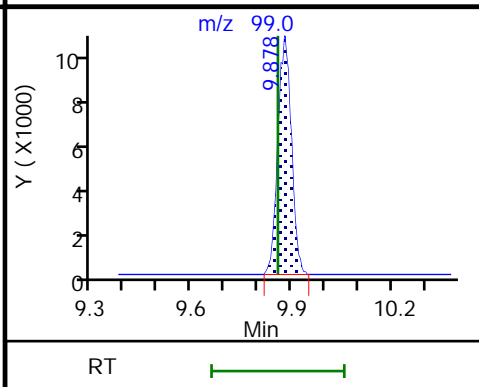
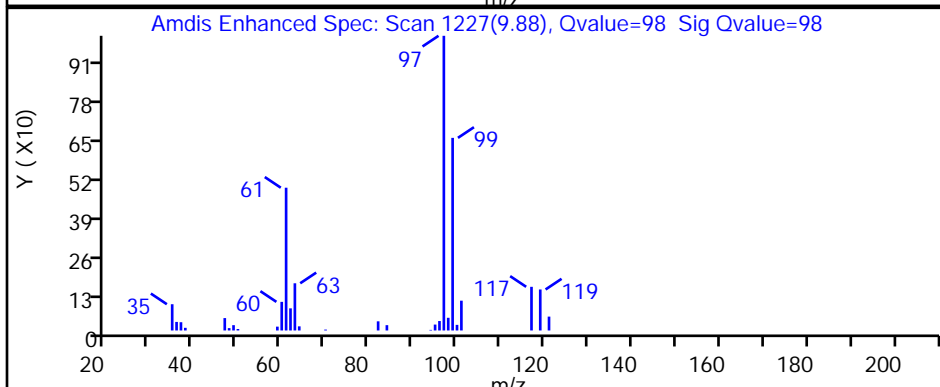
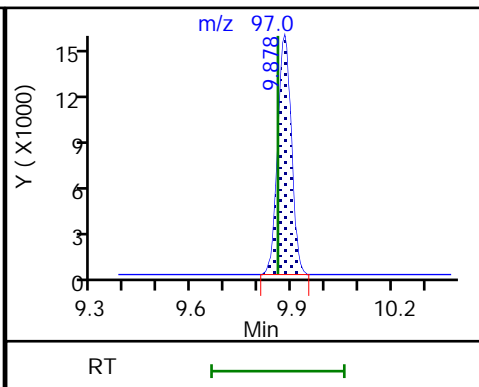
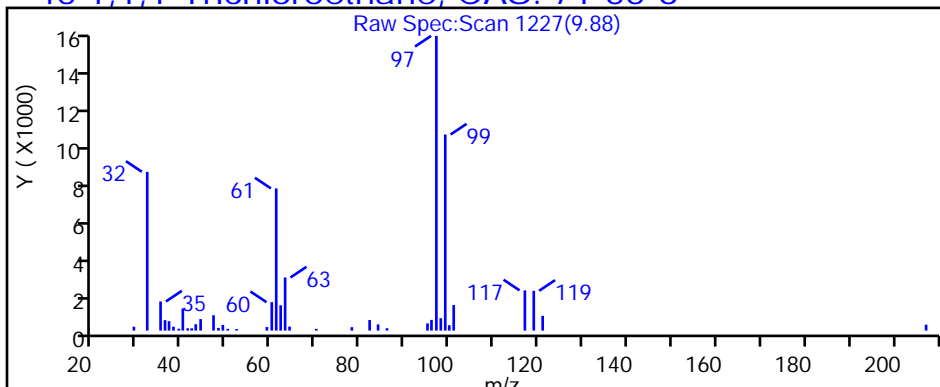
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

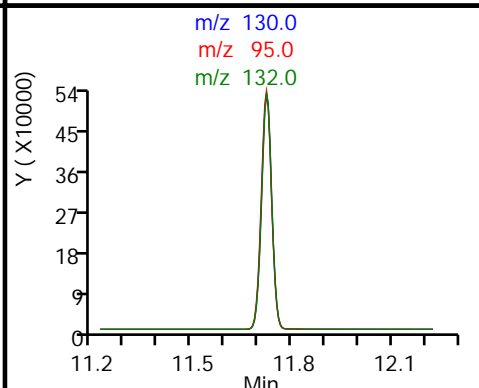
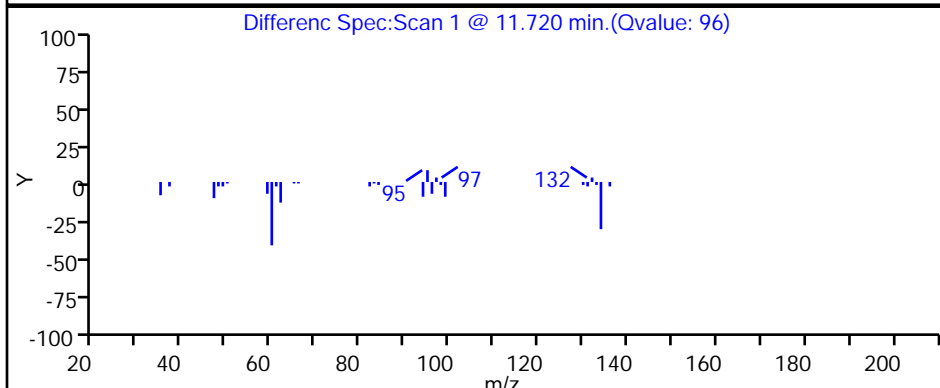
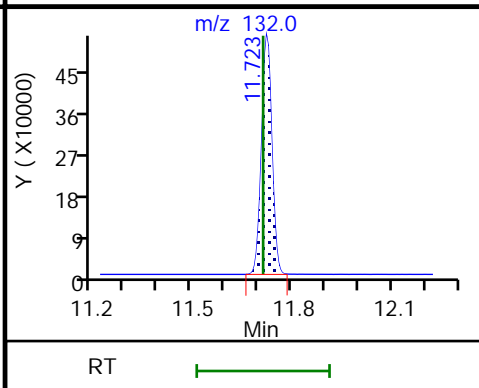
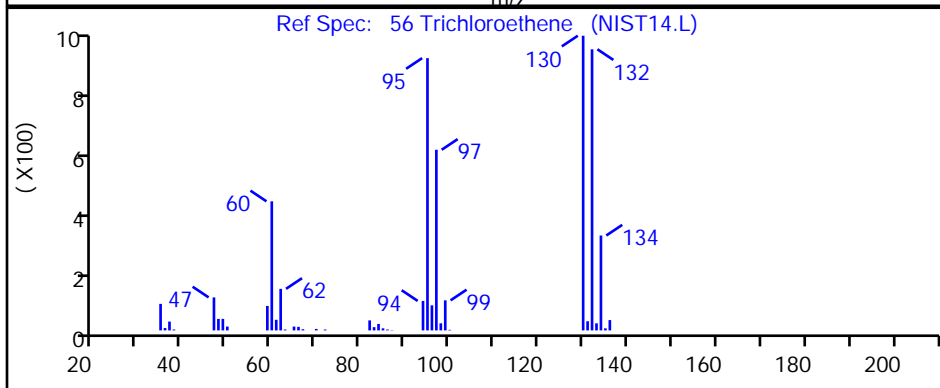
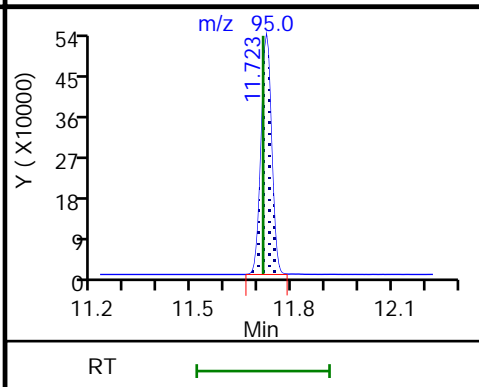
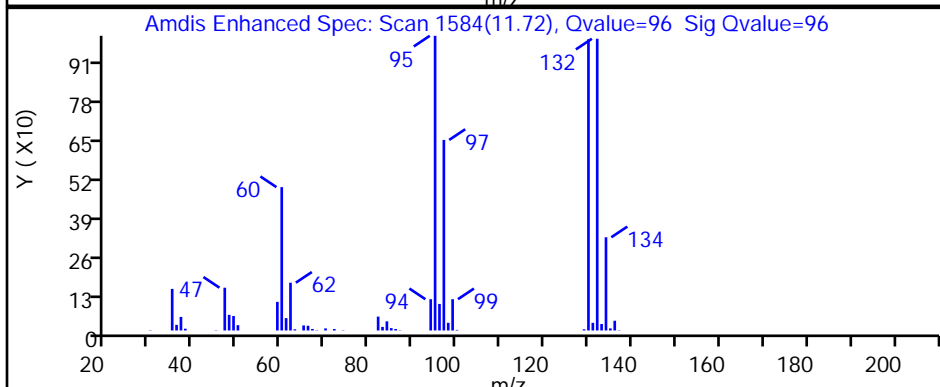
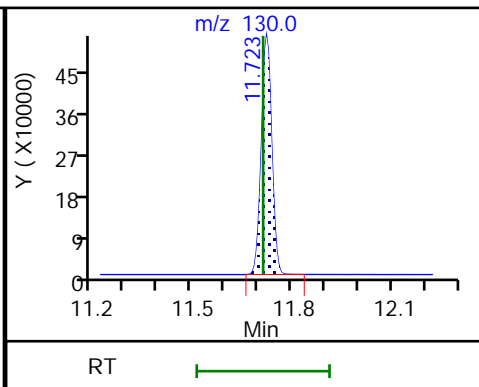
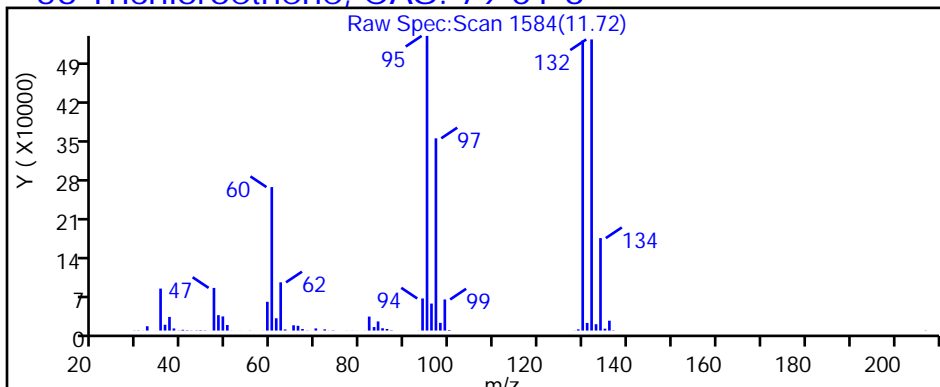
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

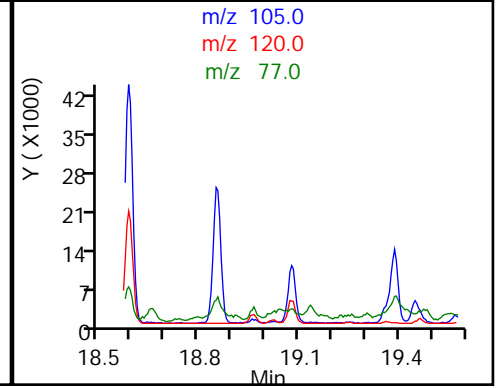
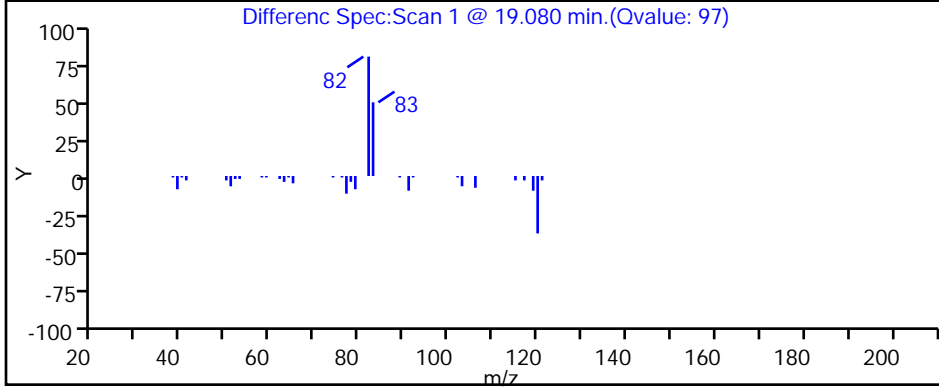
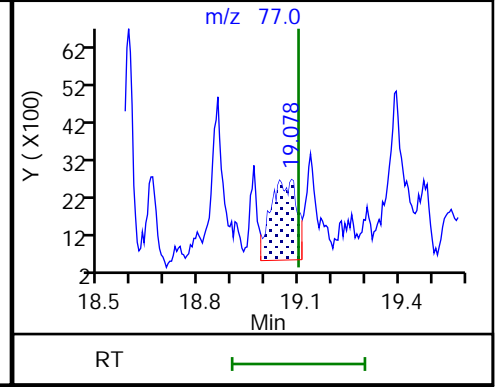
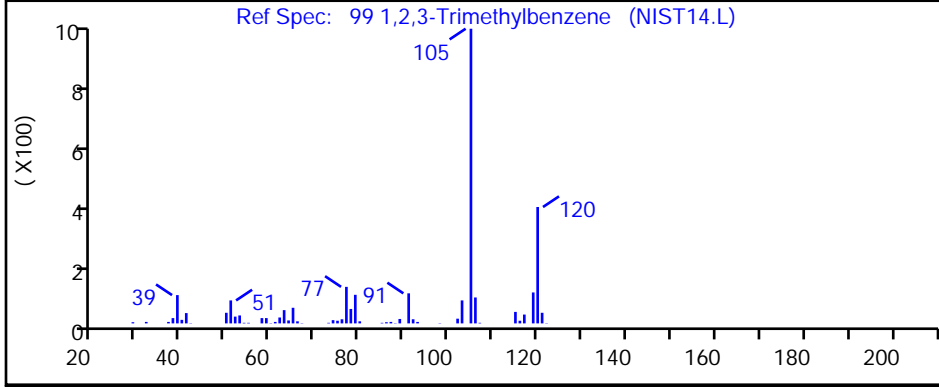
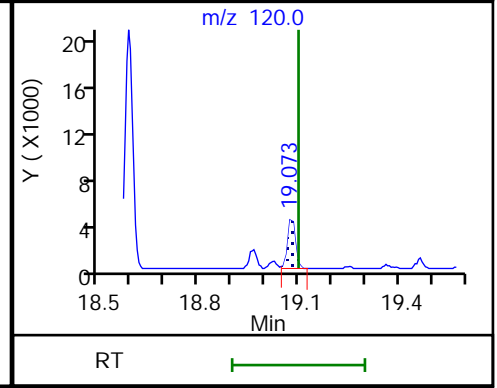
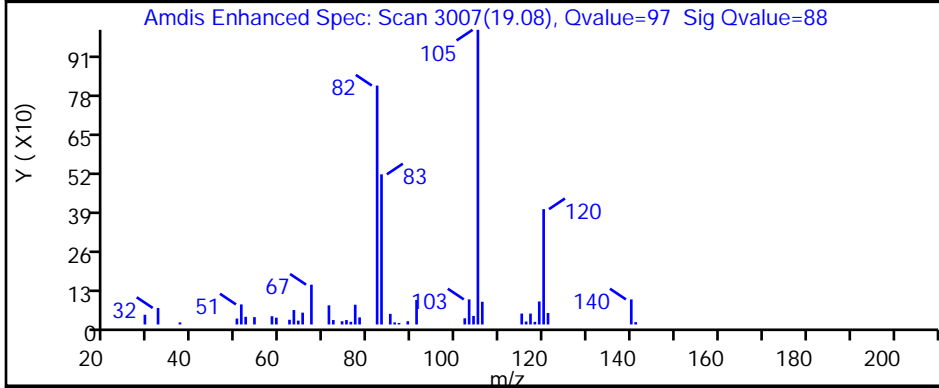
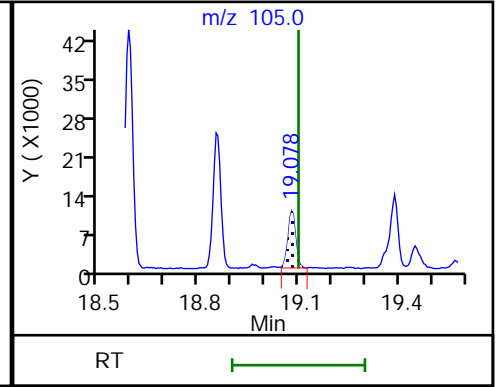
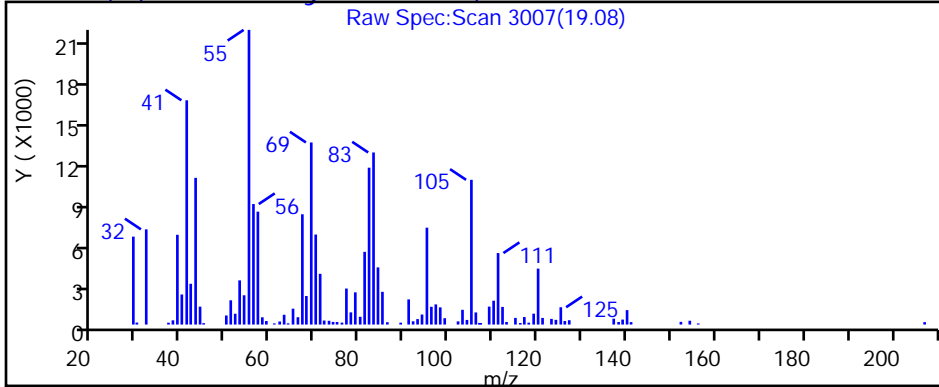
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

99 1,2,3-Trimethylbenzene, CAS: 526-73-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

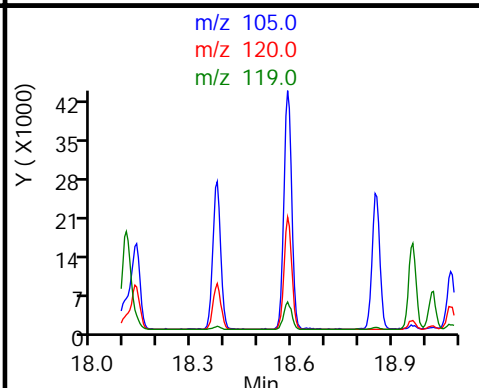
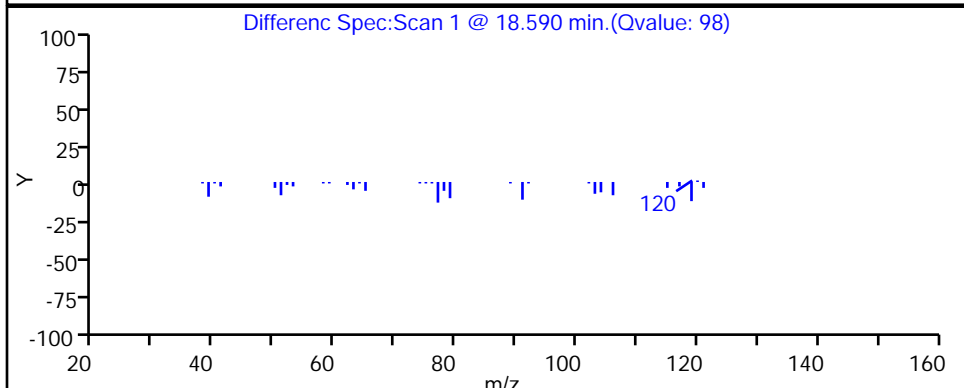
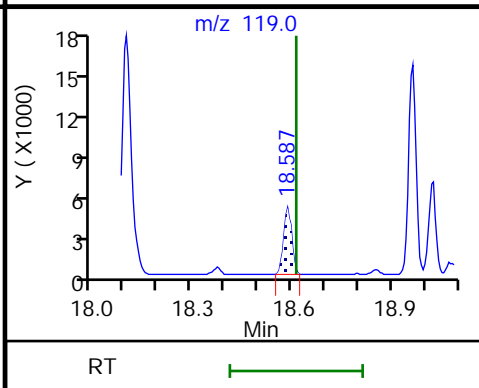
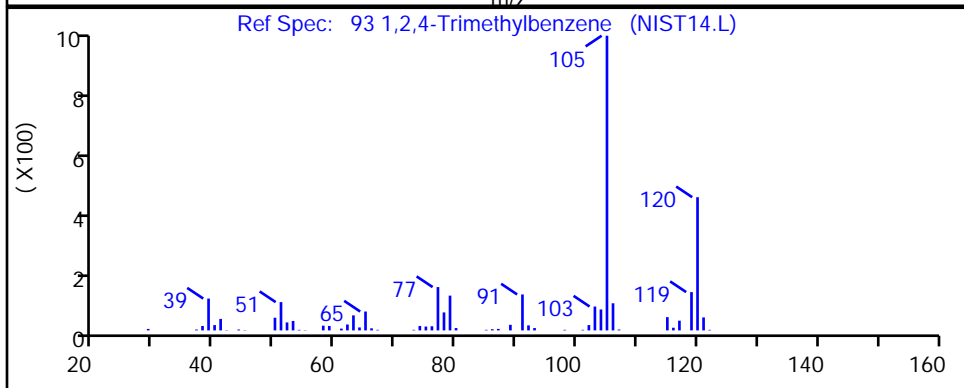
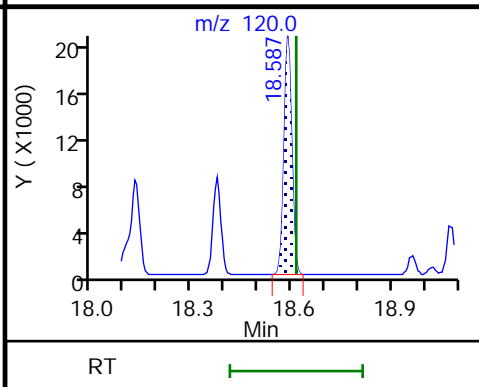
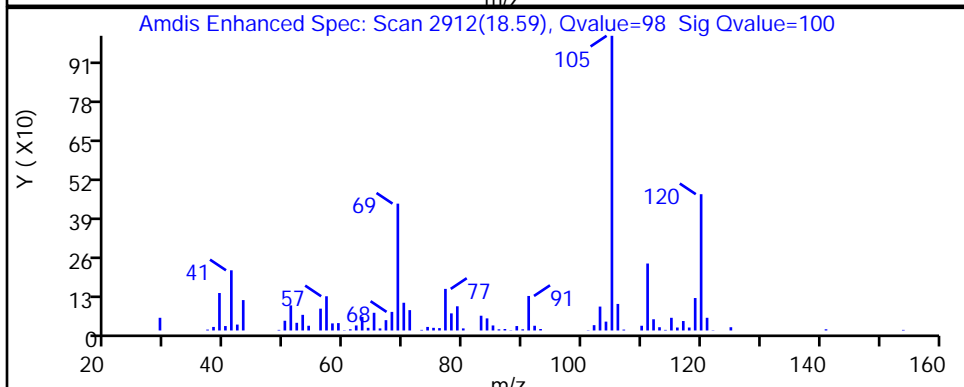
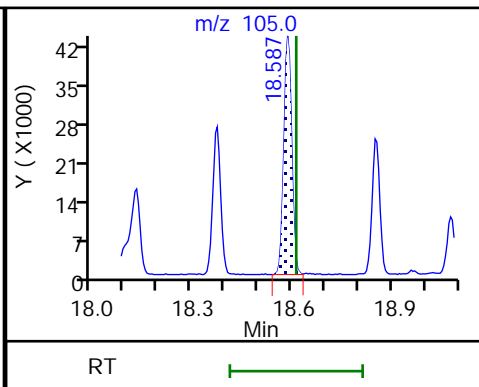
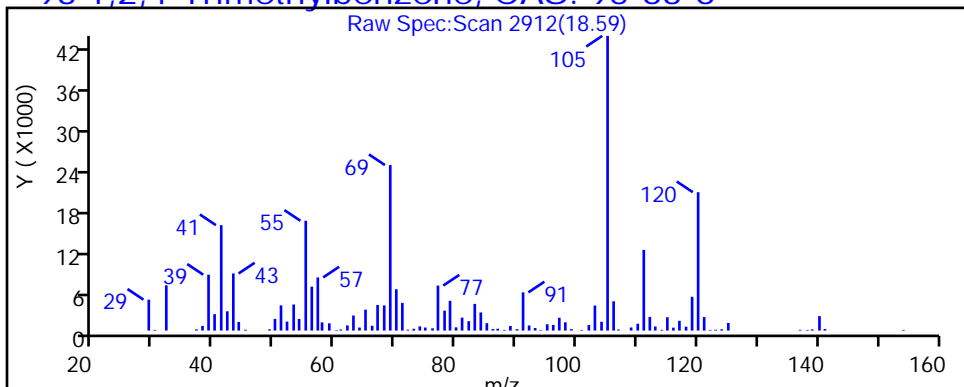
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

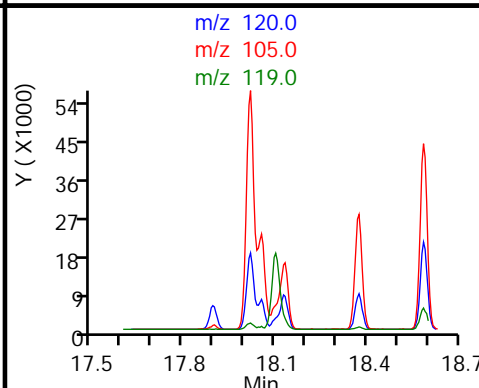
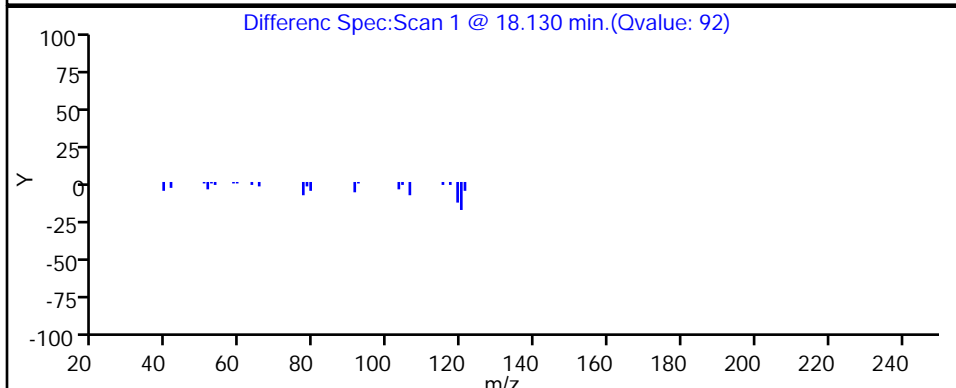
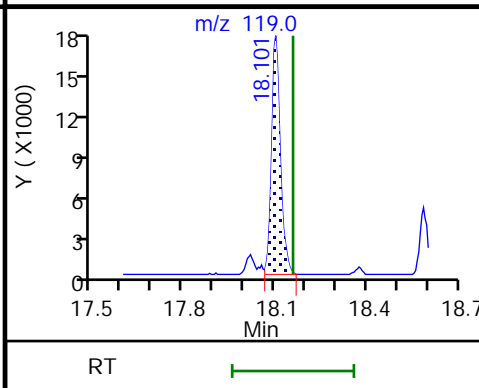
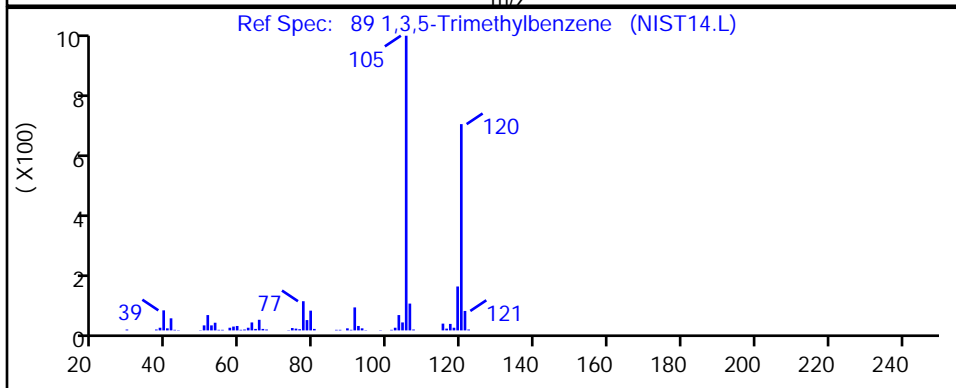
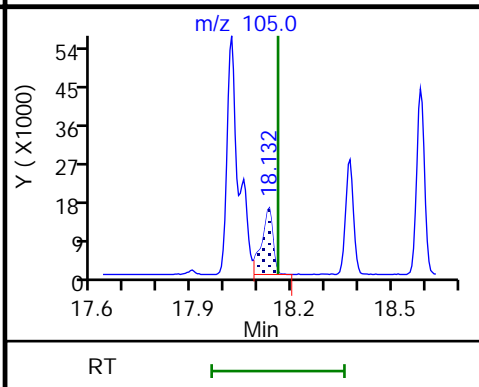
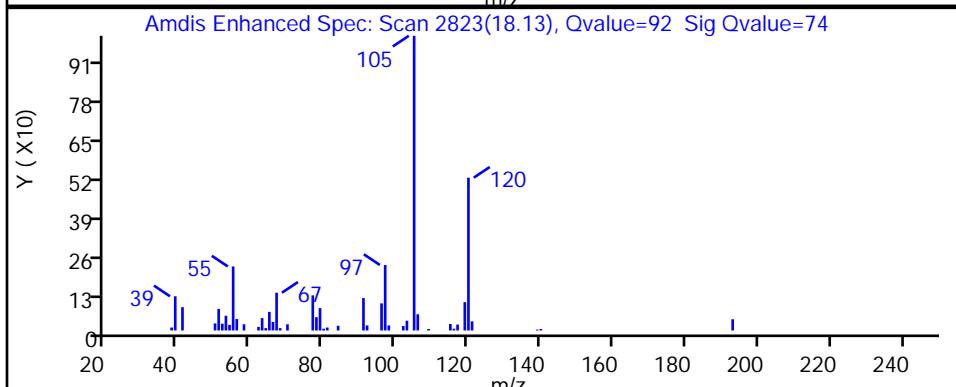
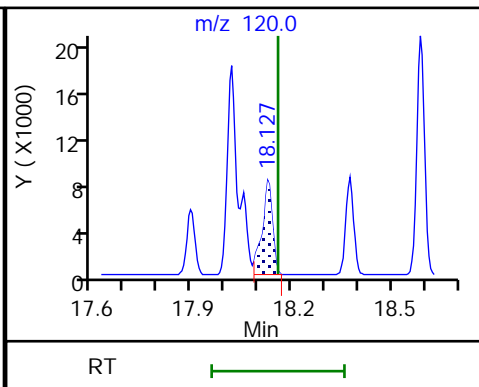
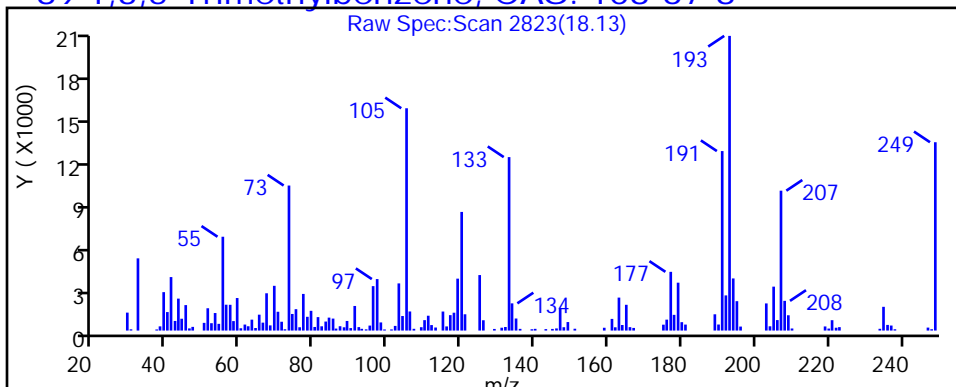
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

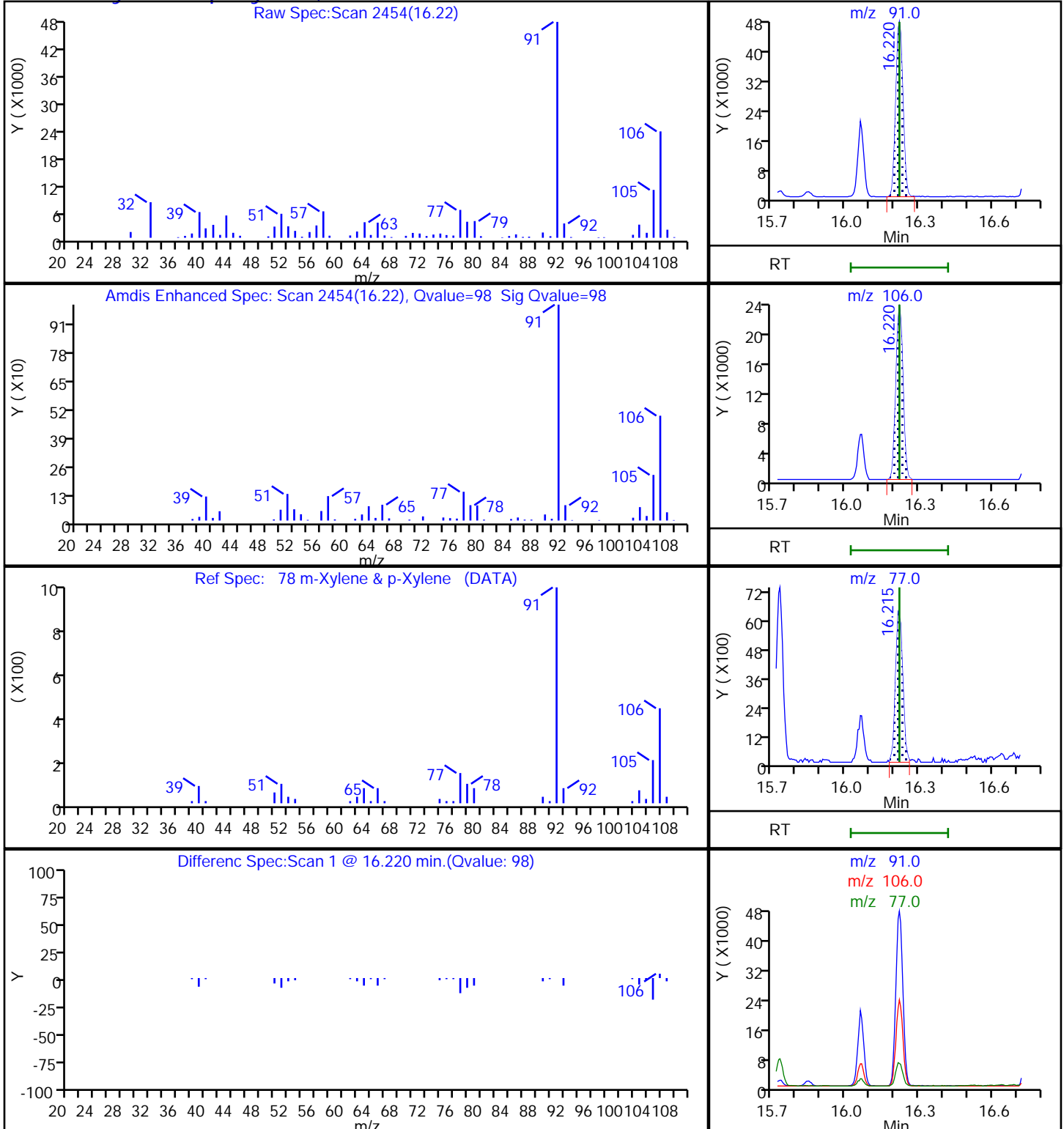
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D

Injection Date: 26-Feb-2019 21:29:30

Instrument ID: MH

Lims ID: 140-14390-A-10

Lab Sample ID: 140-14390-10

Client ID: SV-168-A-26

Operator ID: HMT

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

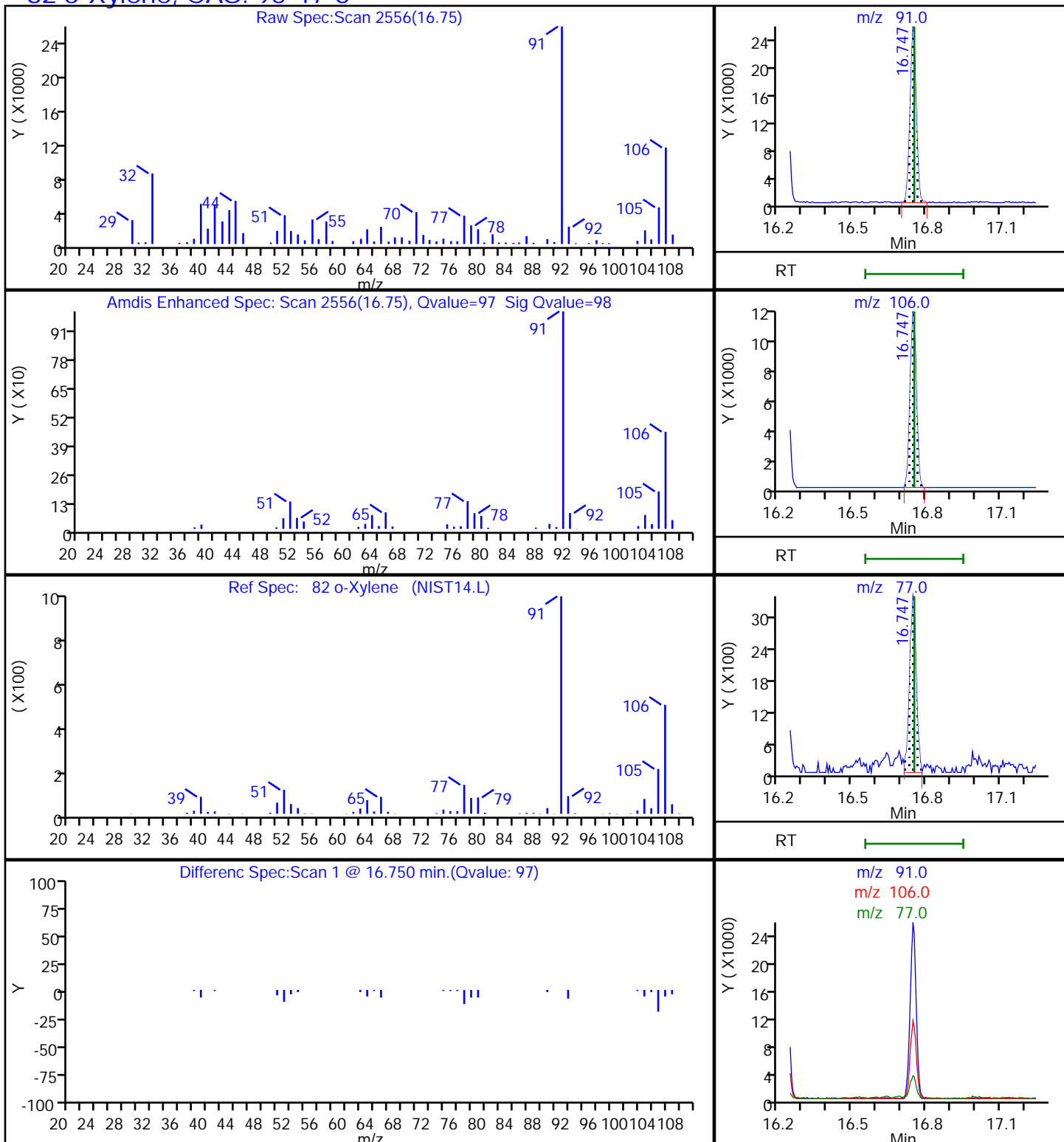
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



TestAmerica Knoxville

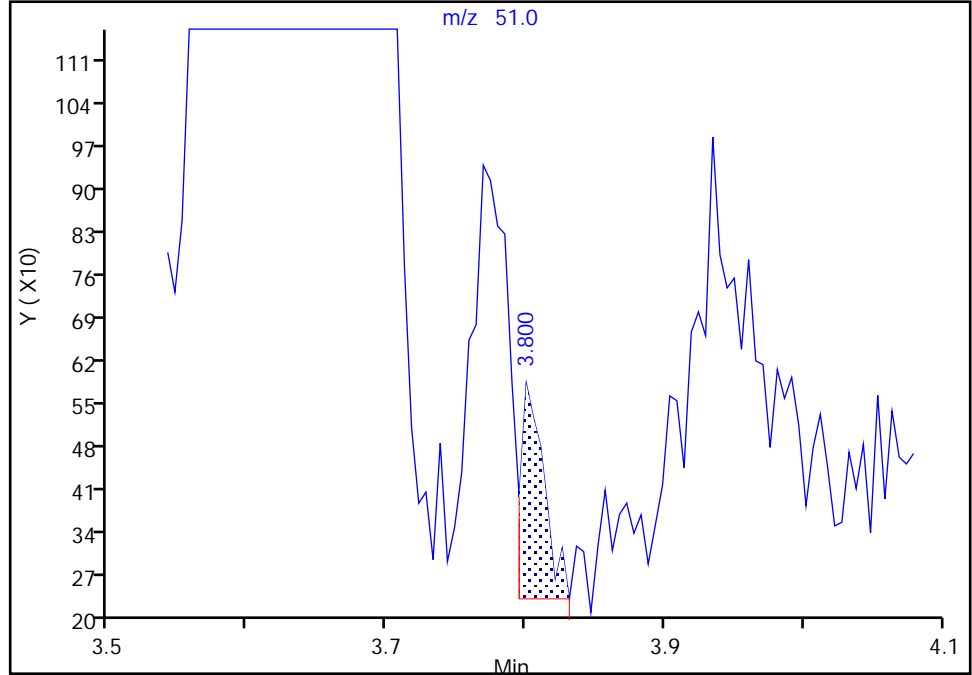
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P110.D
Injection Date: 26-Feb-2019 21:29:30 Instrument ID: MH
Lims ID: 140-14390-A-10 Lab Sample ID: 140-14390-10
Client ID: SV-168-A-26
Operator ID: HMT ALS Bottle#: 10 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

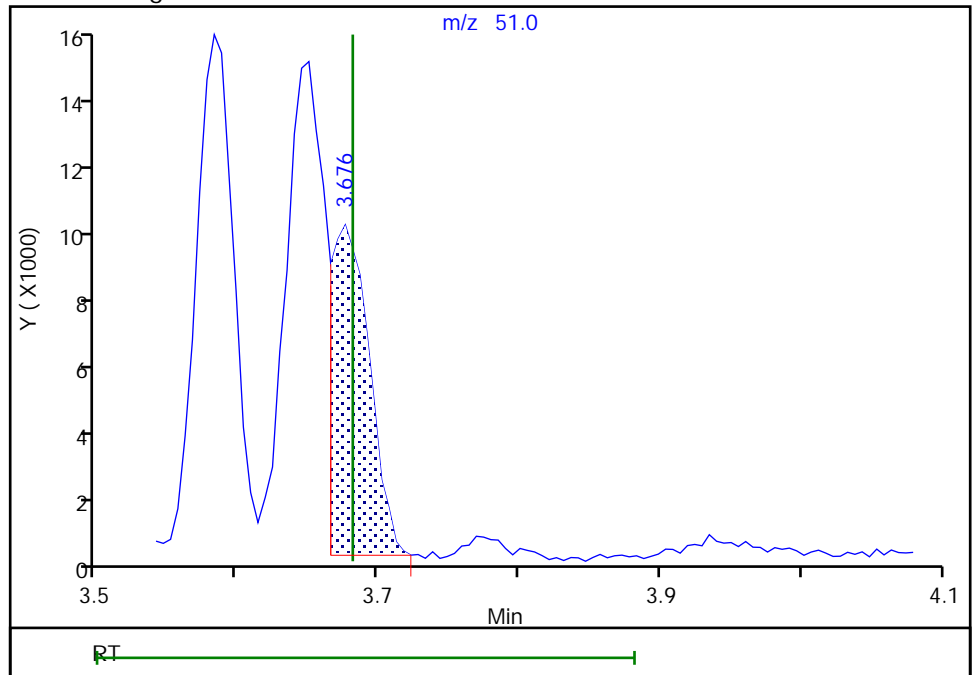
RT: 3.80
Area: 408
Amount: 0.001655
Amount Units: ppb v/v

Processing Integration Results



RT: 3.68
Area: 18425
Amount: 0.074752
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 19:03:29

Audit Action: Split an Integrated Peak

Audit Reason: Wrong peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-075-A-26 Lab Sample ID: 140-14390-11
 Matrix: Air Lab File ID: HB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 13:06
 Sample wt/vol: 167(mL) Date Analyzed: 02/26/2019 22:23
 Soil Aliquot Vol: _____ Dilution Factor: 1.67
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.34	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.90	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	4.7		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	6.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.43		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	3.1		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	9.7		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	4.9		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-075-A-26 Lab Sample ID: 140-14390-11
 Matrix: Air Lab File ID: HB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 13:06
 Sample wt/vol: 167(mL) Date Analyzed: 02/26/2019 22:23
 Soil Aliquot Vol: _____ Dilution Factor: 1.67
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	25		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	25		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	15		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	48		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	24		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	13		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D
 Lims ID: 140-14390-A-11
 Client ID: SV-075-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 22:23:30 ALS Bottle#: 11 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.6700
 Sample Info: 140-0010936-015
 Misc. Info.: 140-14390-a-11@1.67
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:05:29 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:05:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.819	0.010	95	334101	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1835120	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	87	1535193	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	95	1001854	4.00	
6 Chlorodifluoromethane	51	3.687	3.687	0.005	98	18526	0.0676	M
8 Dichlorodifluoromethane	85	3.744	3.738	0.006	100	36420	0.0866	
31 Methylene Chloride	84	6.281	6.271	0.010	99	24538	0.1796	
56 Trichloroethene	130	11.713	11.713	0.000	95	15870	0.0867	
65 Toluene	91	13.760	13.760	0.000	93	575655	1.32	
76 Ethylbenzene	91	16.060	16.060	0.000	99	37590	0.0676	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	140878	0.3283	
82 o-Xylene	91	16.747	16.752	-0.005	99	122181	0.2796	
89 1,3,5-Trimethylbenzene	120	18.132	18.158	-0.026	92	244105	0.9701	
93 1,2,4-Trimethylbenzene	105	18.587	18.613	-0.026	98	967593	1.93	
99 1,2,3-Trimethylbenzene	105	19.078	19.099	-0.021	99	300196	0.6112	
113 Naphthalene	128	21.249	21.254	-0.005	99	508196	0.9442	
S 121 Xylenes, Total	100				0		0.6080	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D

Injection Date: 26-Feb-2019 22:23:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-11

Lab Sample ID: 140-14390-11

Worklist Smp#: 15

Client ID: SV-075-A-26

Purge Vol: 500.000 mL

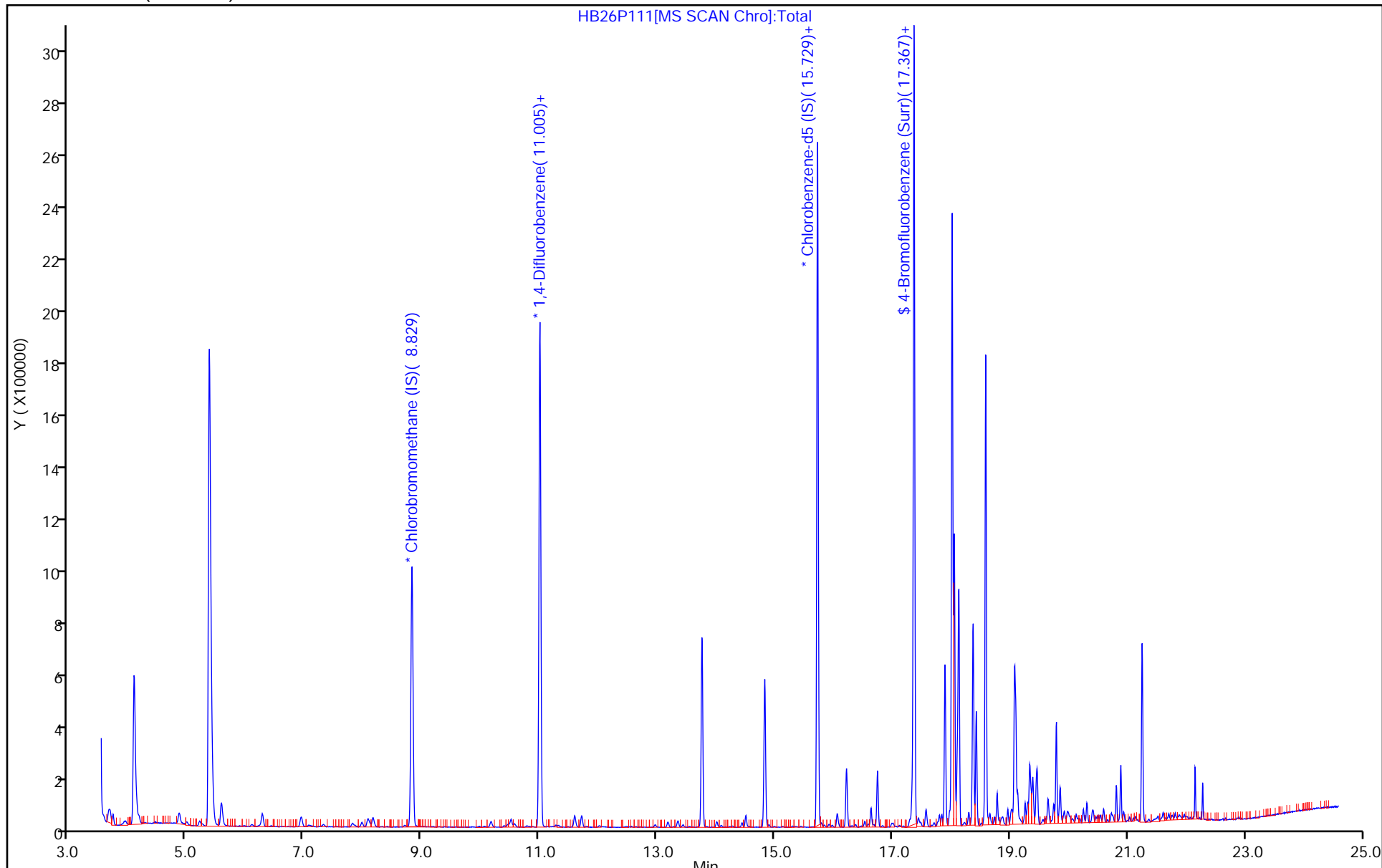
Dil. Factor: 1.6700

ALS Bottle#: 11

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D
 Lims ID: 140-14390-A-11
 Client ID: SV-075-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 22:23:30 ALS Bottle#: 11 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.6700
 Sample Info: 140-0010936-015
 Misc. Info.: 140-14390-a-11@1.67
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:05:29 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:05:29

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.00	100.12

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D

Injection Date: 26-Feb-2019 22:23:30

Instrument ID: MH

Lims ID: 140-14390-A-11

Lab Sample ID: 140-14390-11

Client ID: SV-075-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.6700

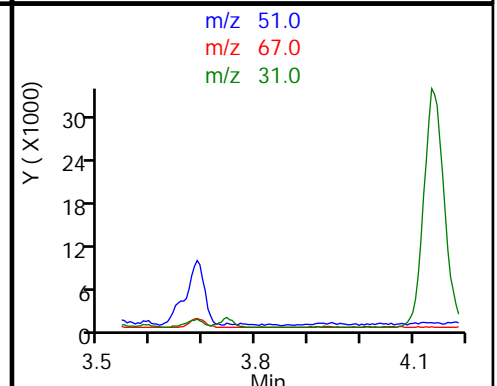
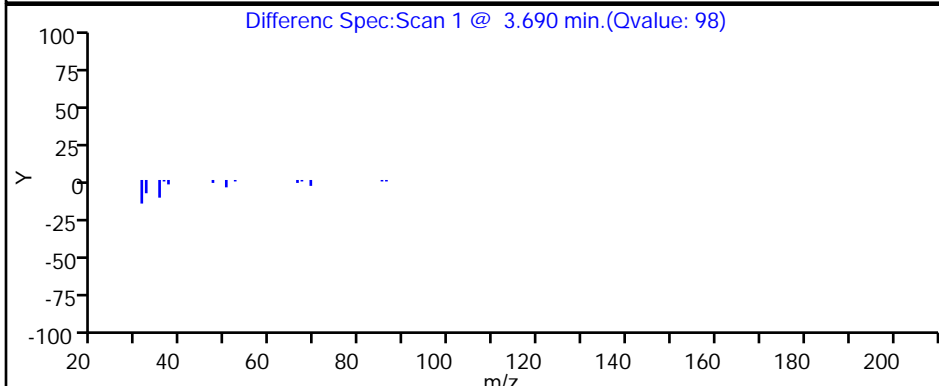
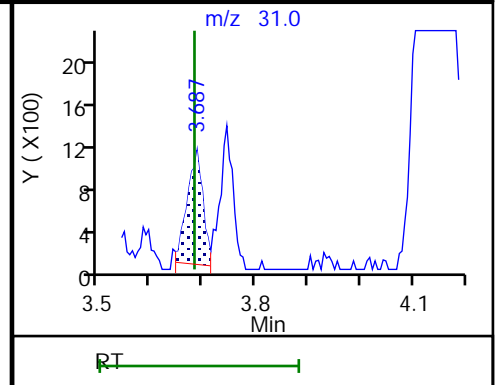
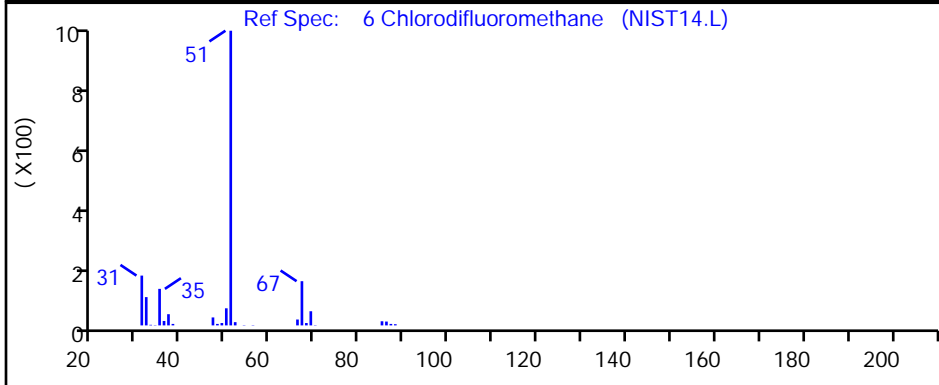
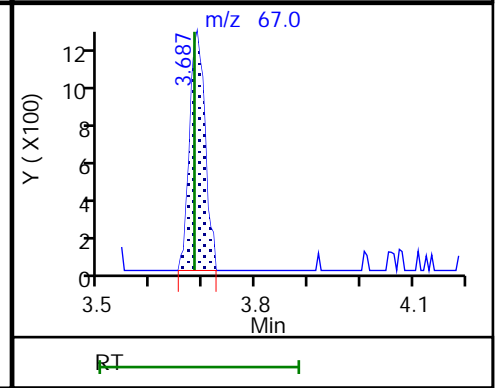
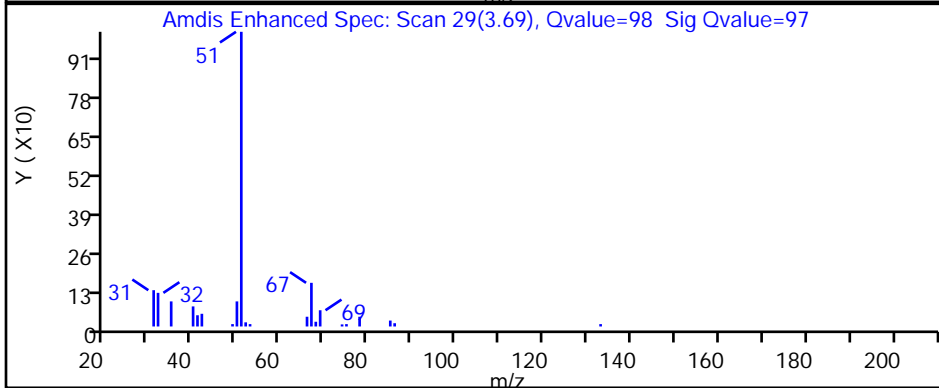
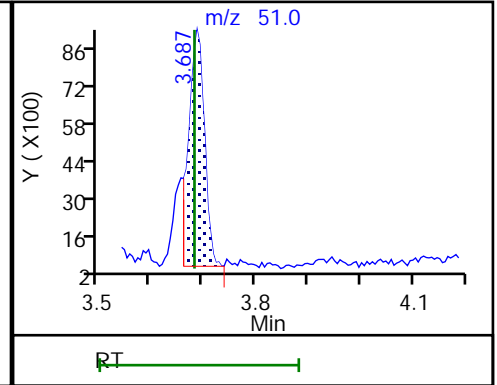
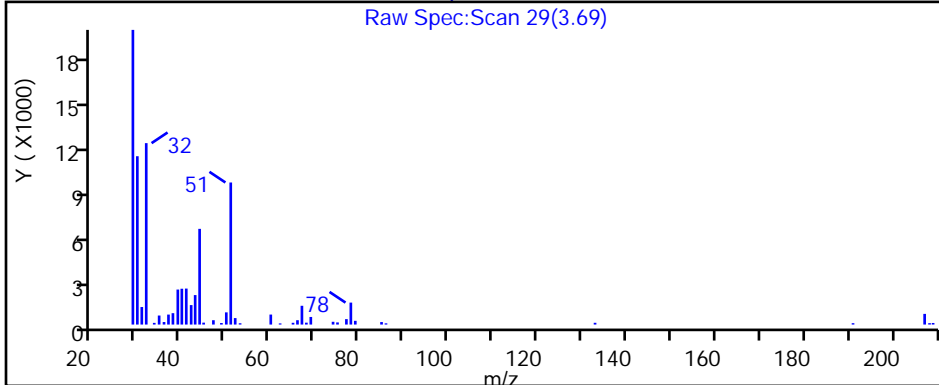
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D

Injection Date: 26-Feb-2019 22:23:30

Instrument ID: MH

Lims ID: 140-14390-A-11

Lab Sample ID: 140-14390-11

Client ID: SV-075-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.6700

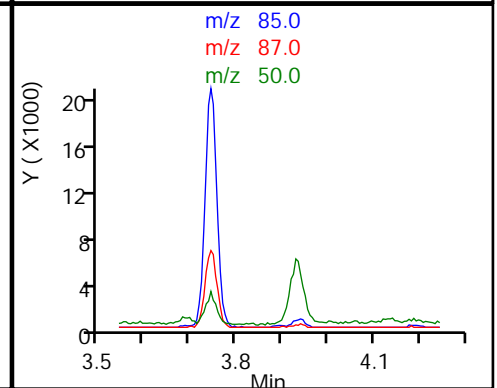
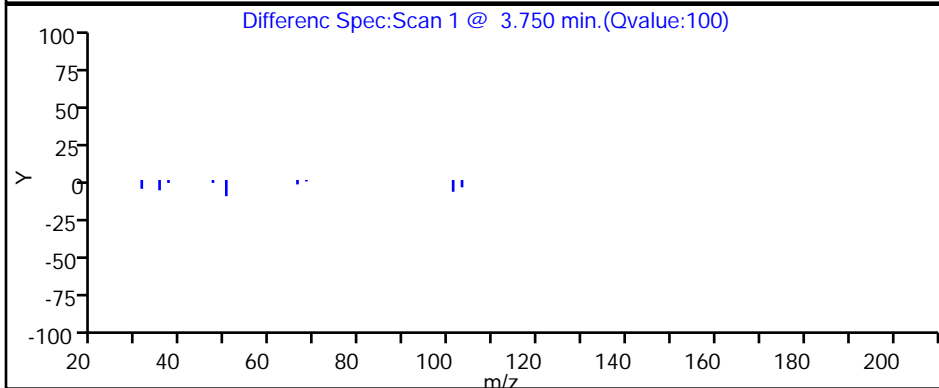
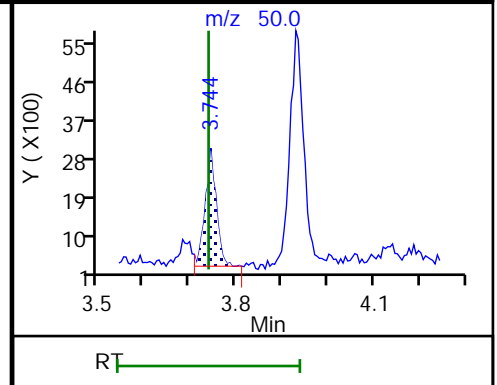
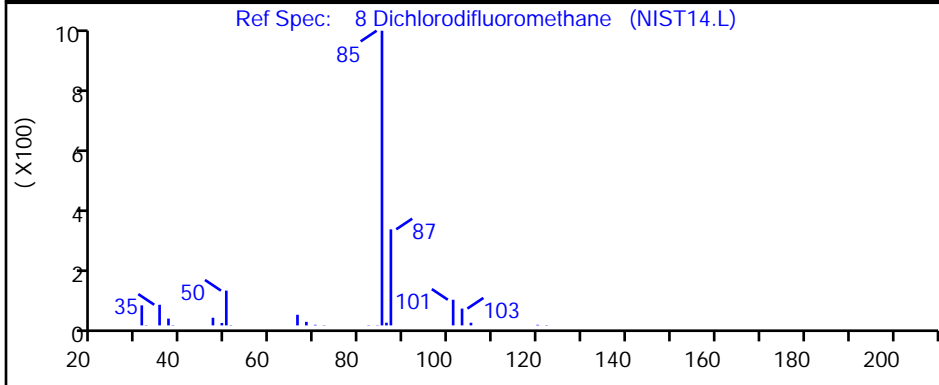
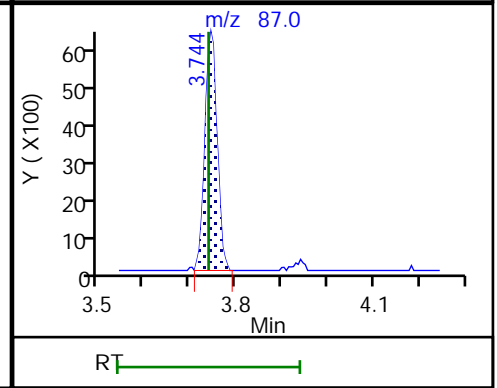
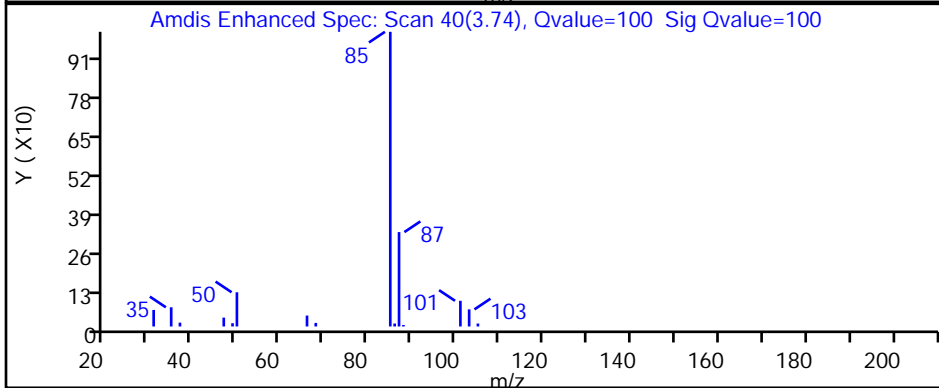
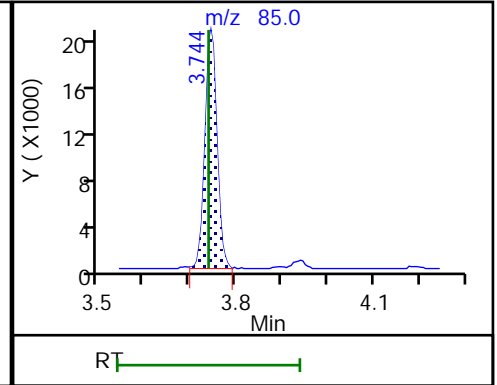
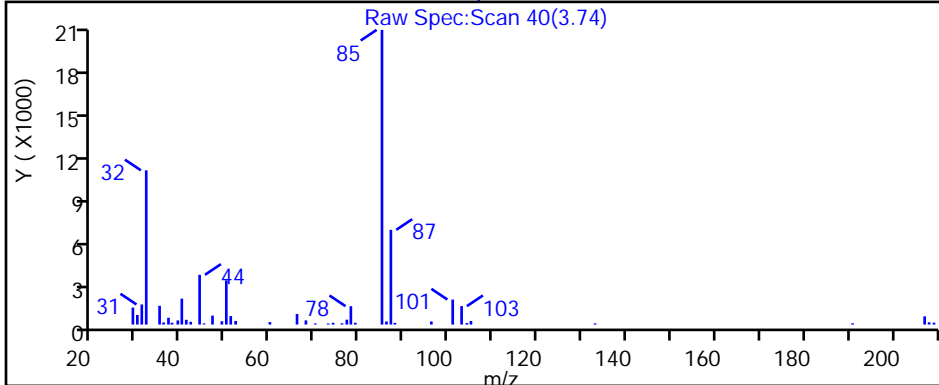
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D

Injection Date: 26-Feb-2019 22:23:30

Instrument ID: MH

Lims ID: 140-14390-A-11

Lab Sample ID: 140-14390-11

Client ID: SV-075-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.6700

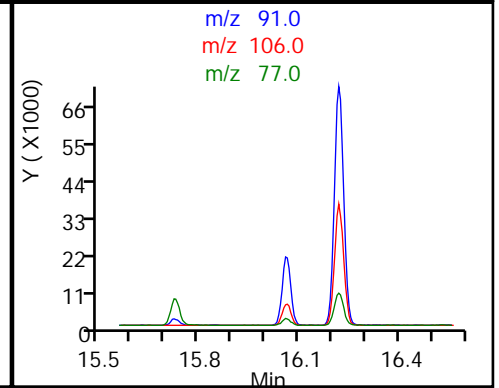
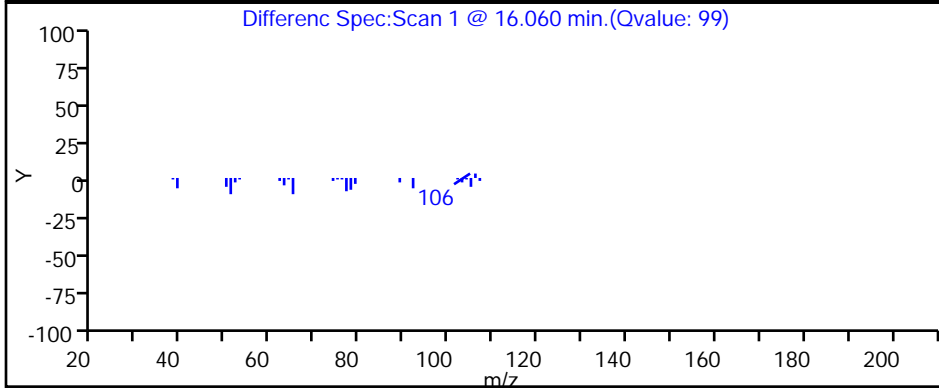
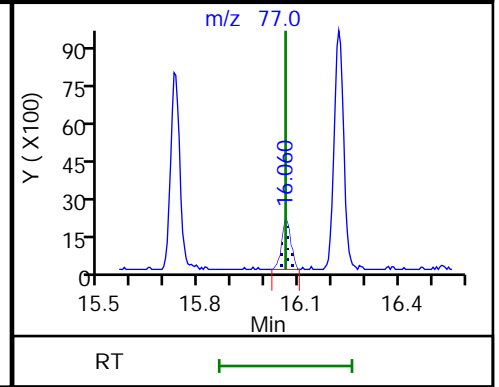
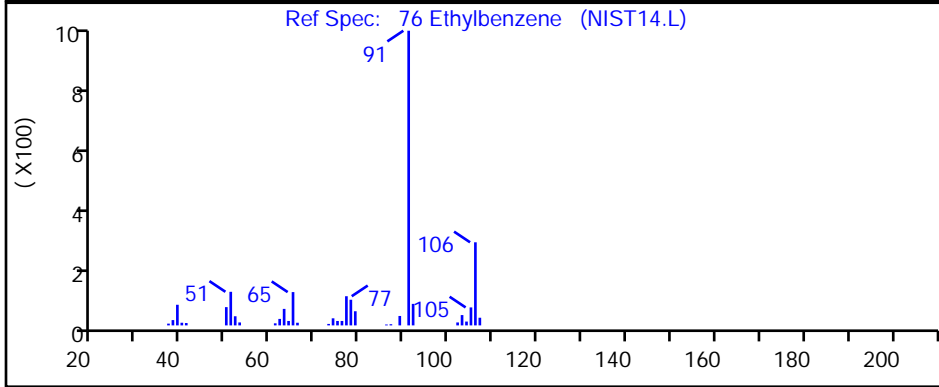
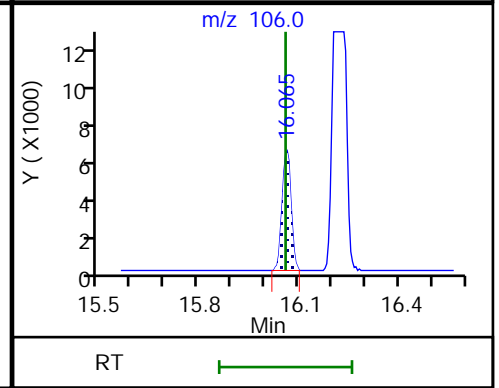
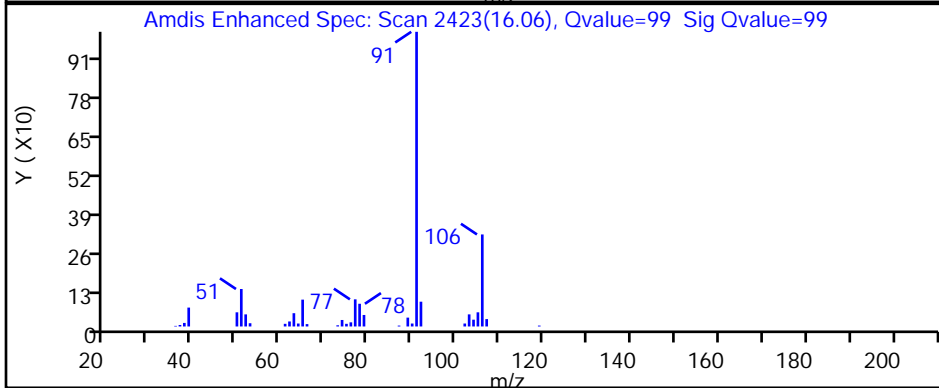
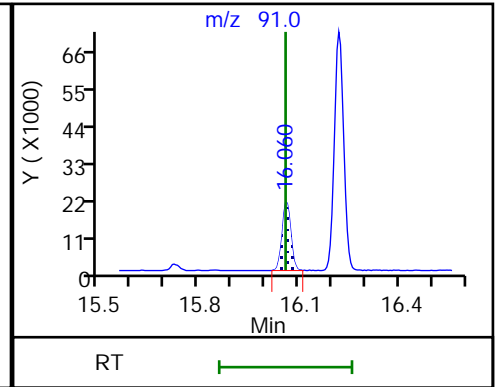
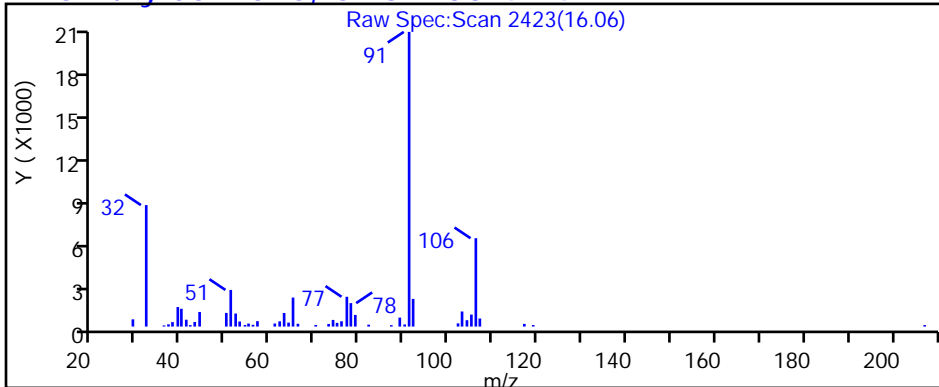
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D

Injection Date: 26-Feb-2019 22:23:30

Instrument ID: MH

Lims ID: 140-14390-A-11

Lab Sample ID: 140-14390-11

Client ID: SV-075-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.6700

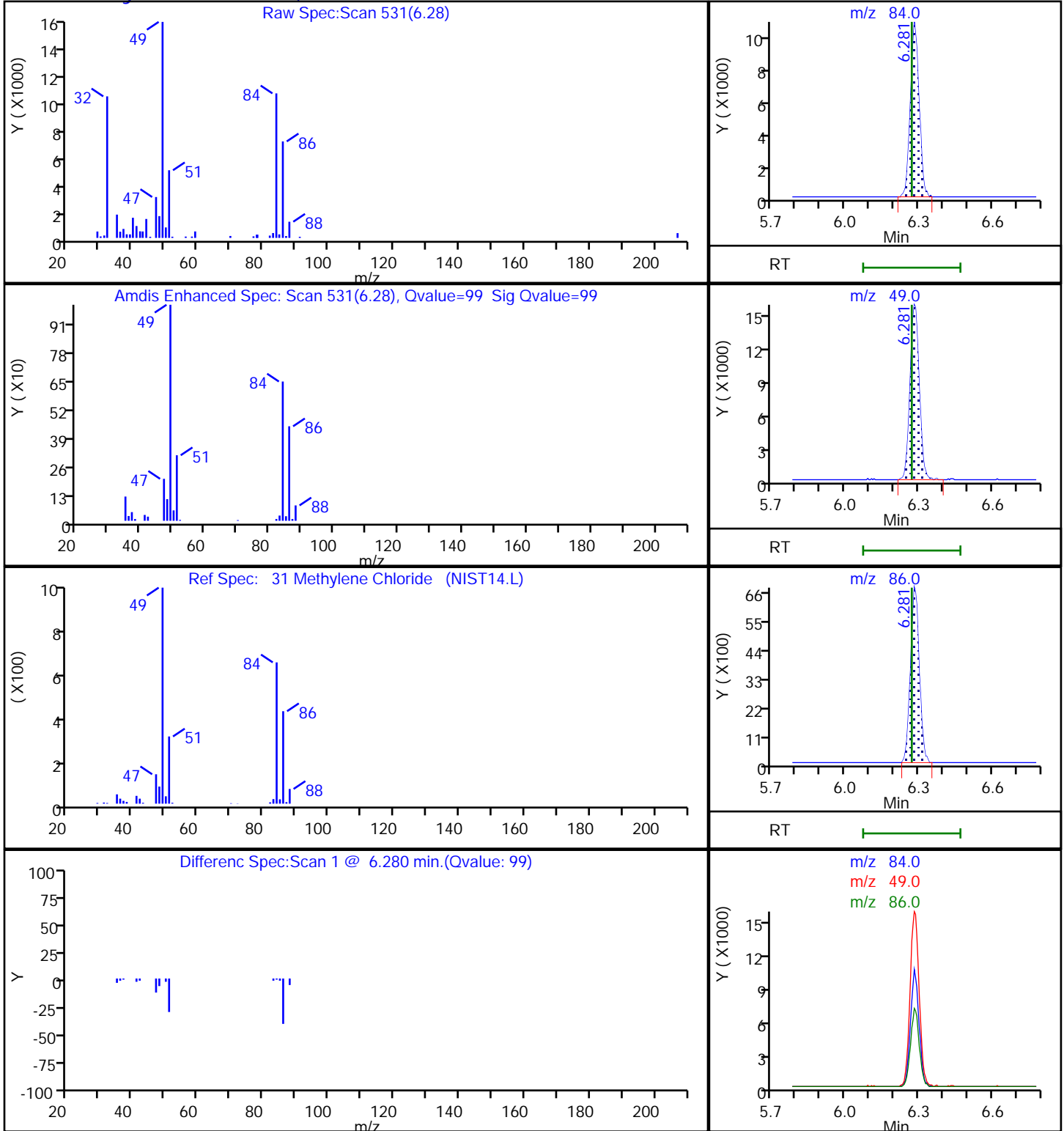
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D

Injection Date: 26-Feb-2019 22:23:30

Instrument ID: MH

Lims ID: 140-14390-A-11

Lab Sample ID: 140-14390-11

Client ID: SV-075-A-26

Operator ID: HMT

ALS Bottle#: 11 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.6700

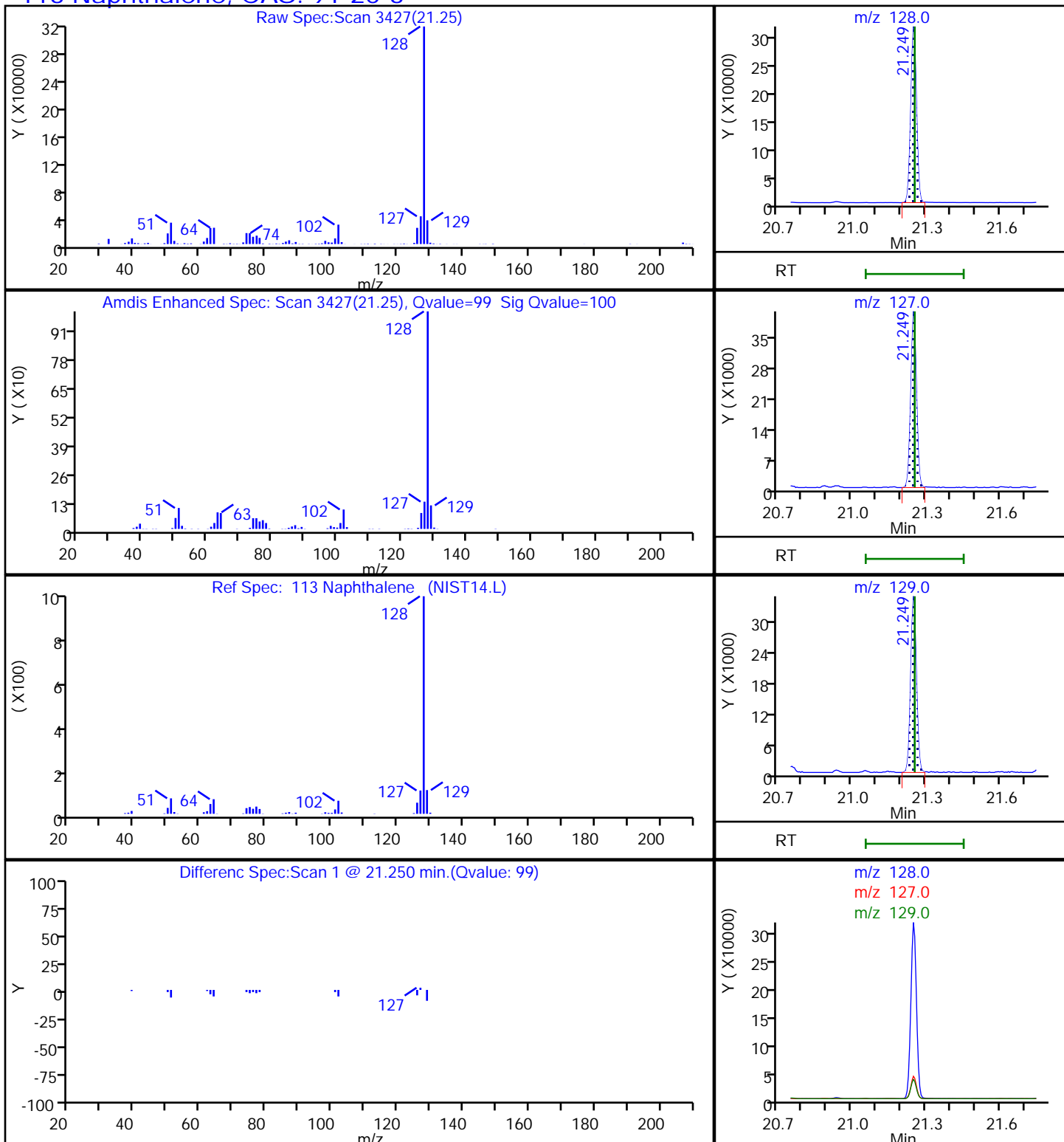
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

113 Naphthalene, CAS: 91-20-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D

Injection Date: 26-Feb-2019 22:23:30

Instrument ID: MH

Lims ID: 140-14390-A-11

Lab Sample ID: 140-14390-11

Client ID: SV-075-A-26

Operator ID: HMT

ALS Bottle#: 11 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.6700

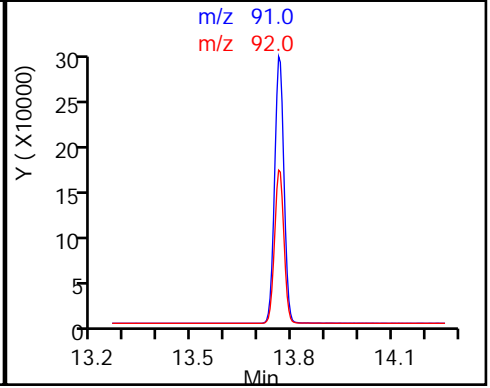
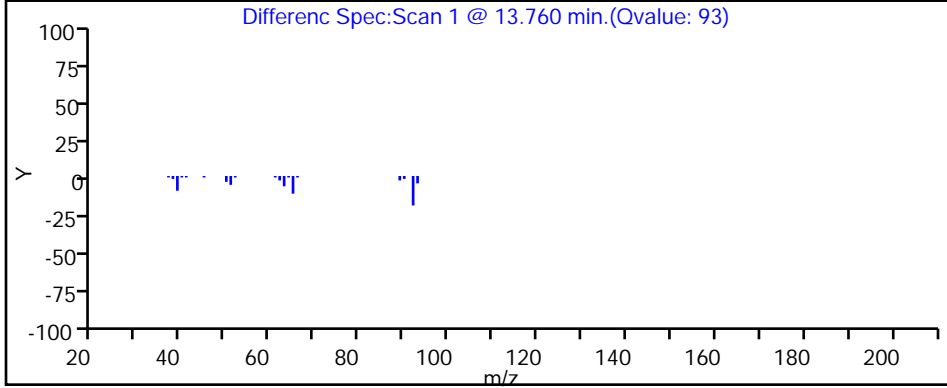
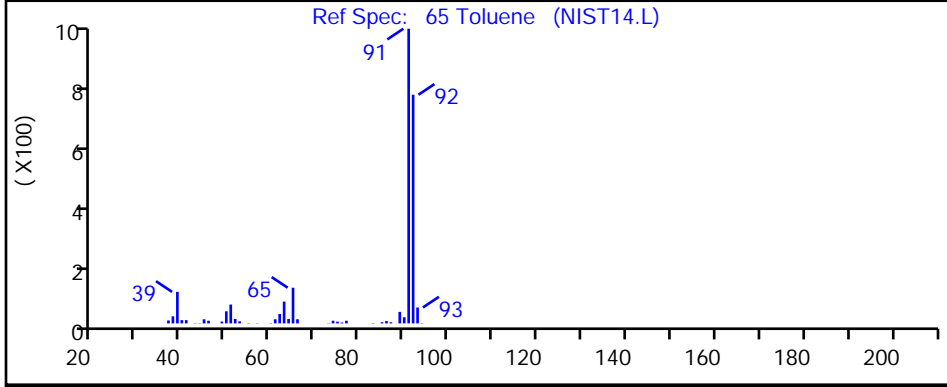
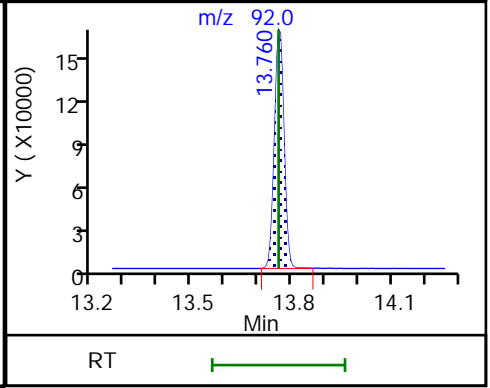
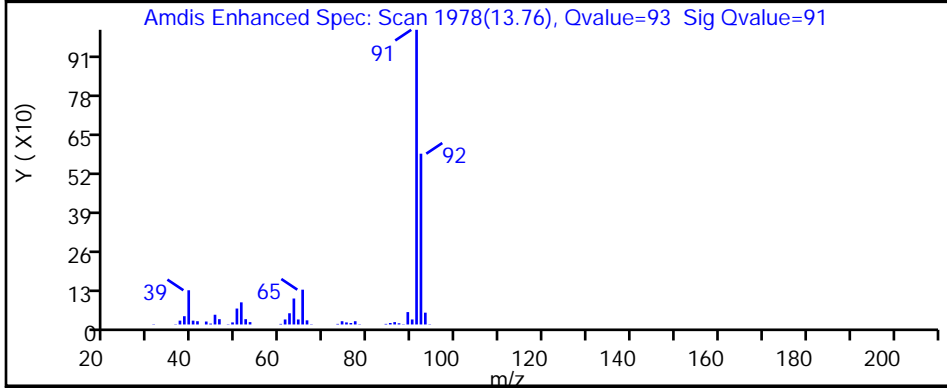
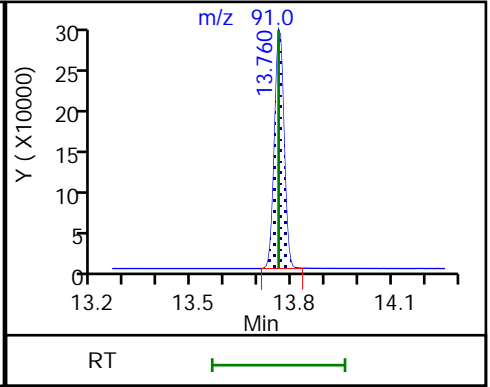
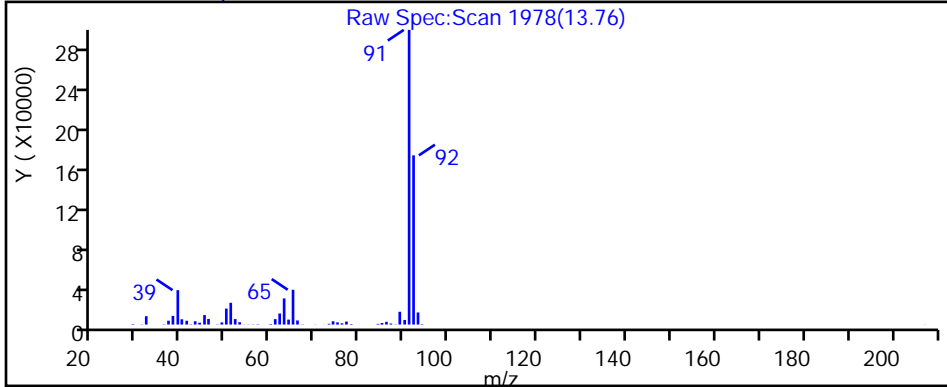
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D

Injection Date: 26-Feb-2019 22:23:30

Instrument ID: MH

Lims ID: 140-14390-A-11

Lab Sample ID: 140-14390-11

Client ID: SV-075-A-26

Operator ID: HMT

ALS Bottle#: 11 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.6700

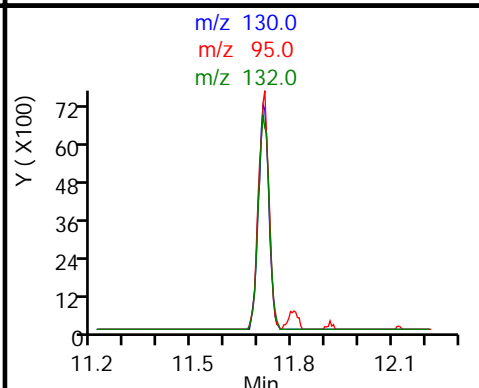
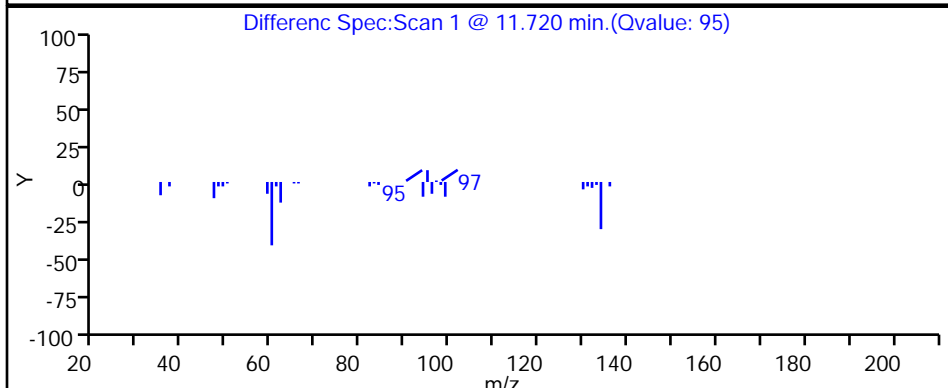
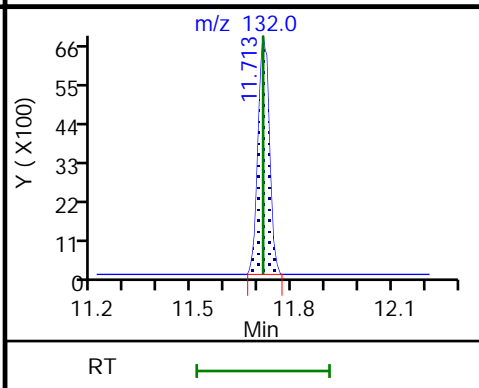
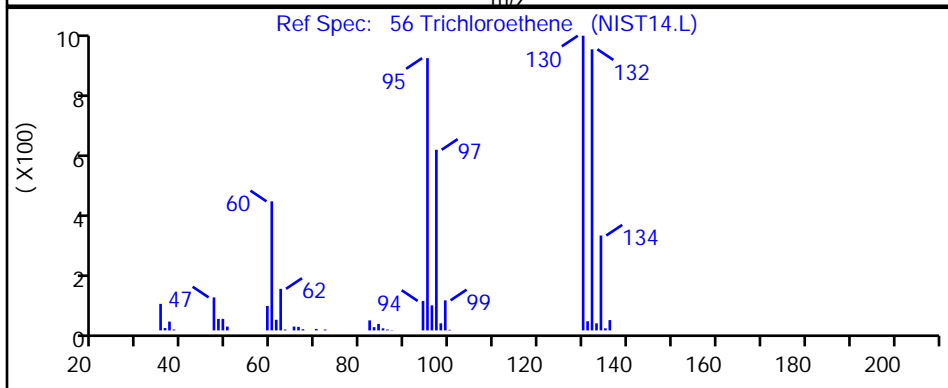
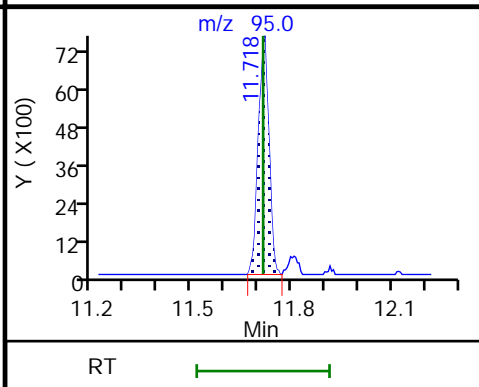
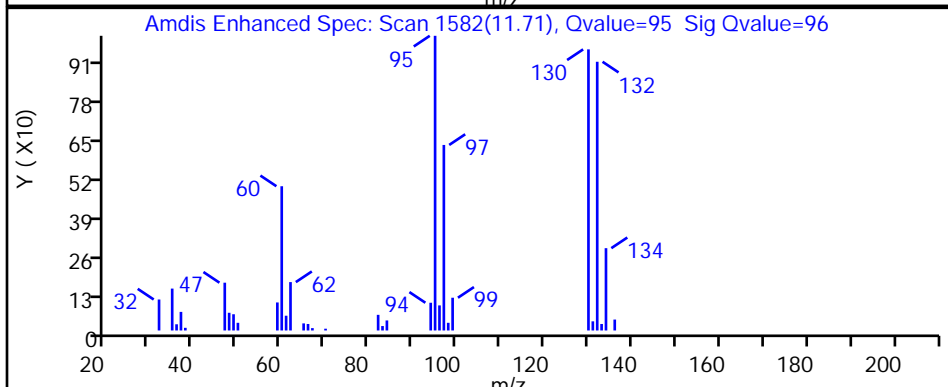
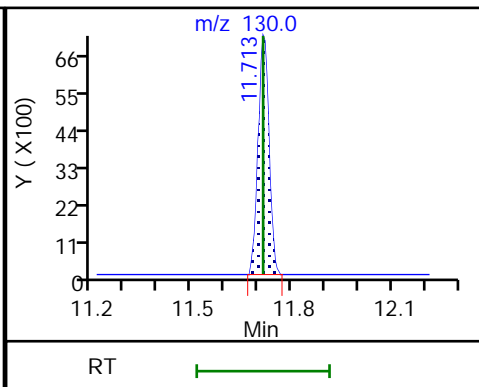
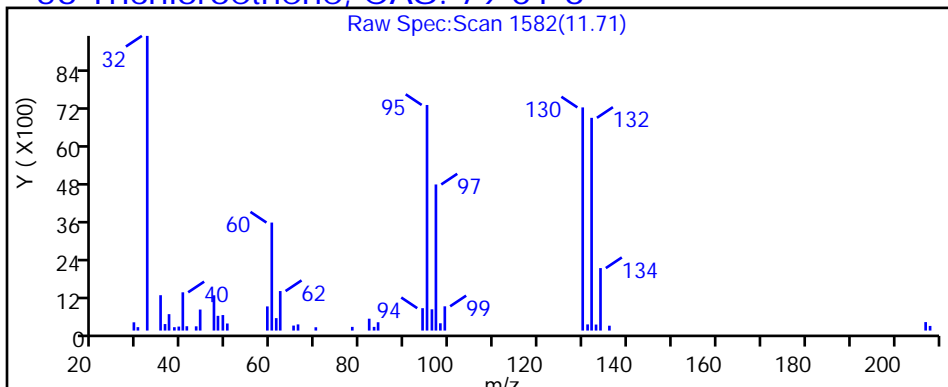
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D

Injection Date: 26-Feb-2019 22:23:30

Instrument ID: MH

Lims ID: 140-14390-A-11

Lab Sample ID: 140-14390-11

Client ID: SV-075-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.6700

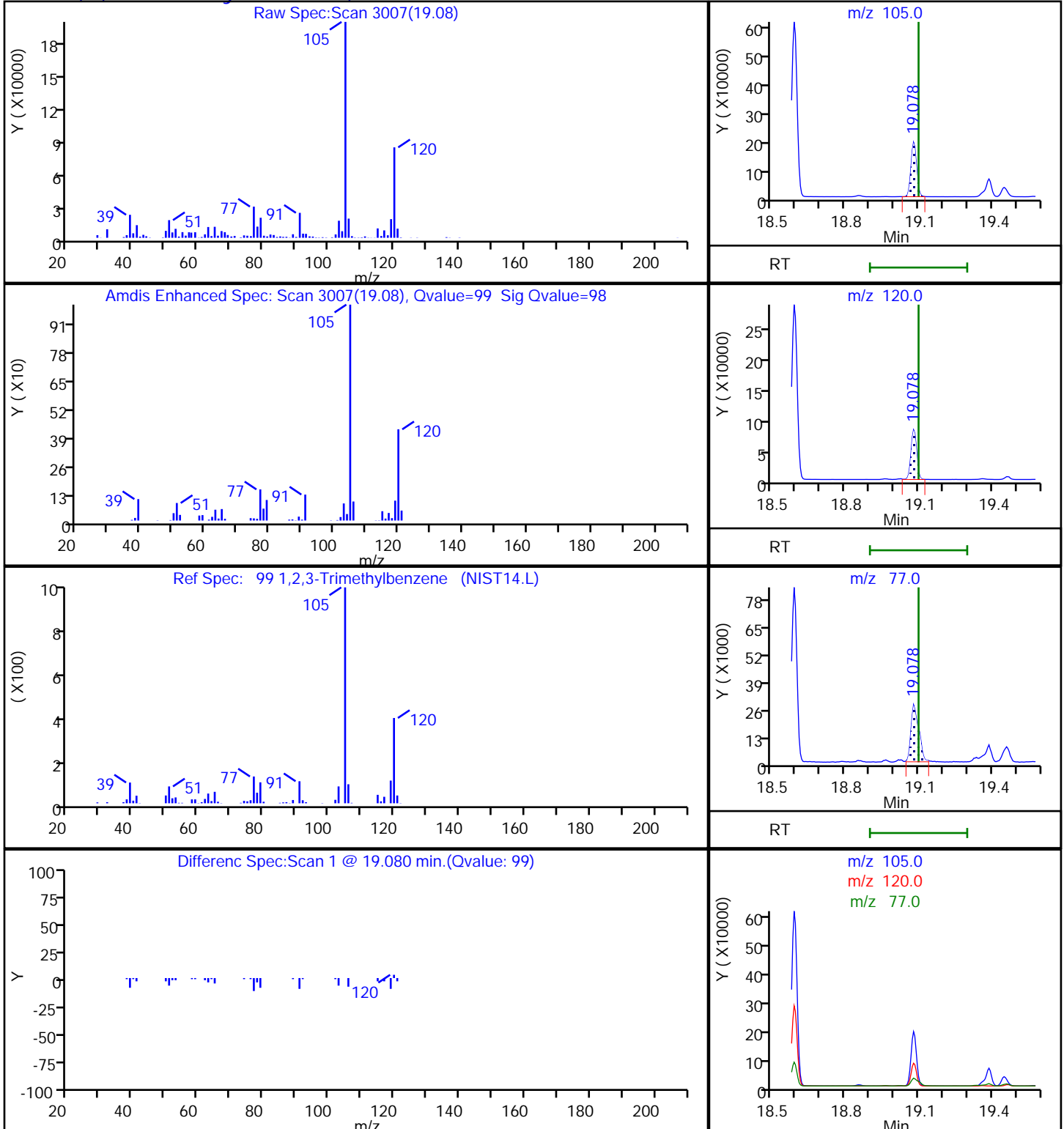
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

99 1,2,3-Trimethylbenzene, CAS: 526-73-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D

Injection Date: 26-Feb-2019 22:23:30

Instrument ID: MH

Lims ID: 140-14390-A-11

Lab Sample ID: 140-14390-11

Client ID: SV-075-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.6700

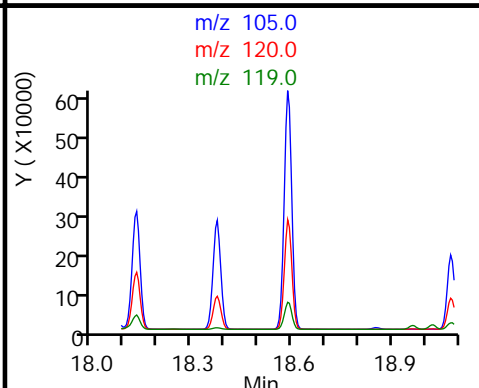
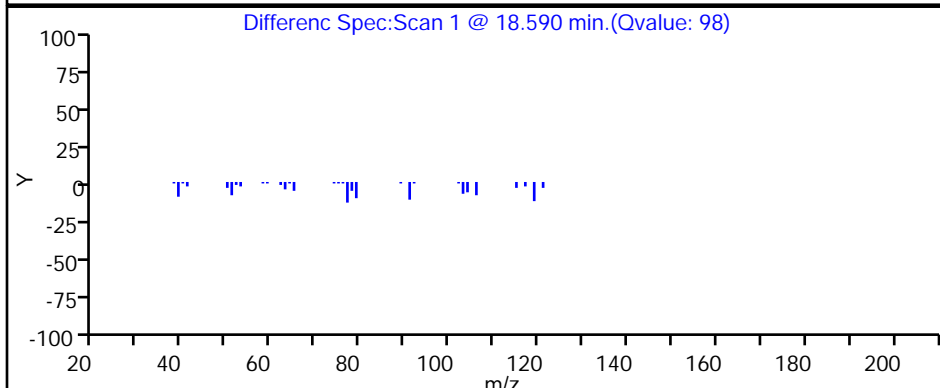
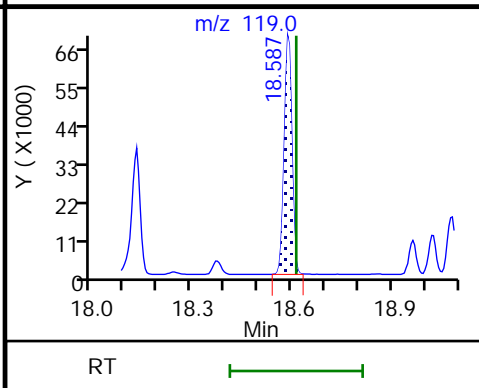
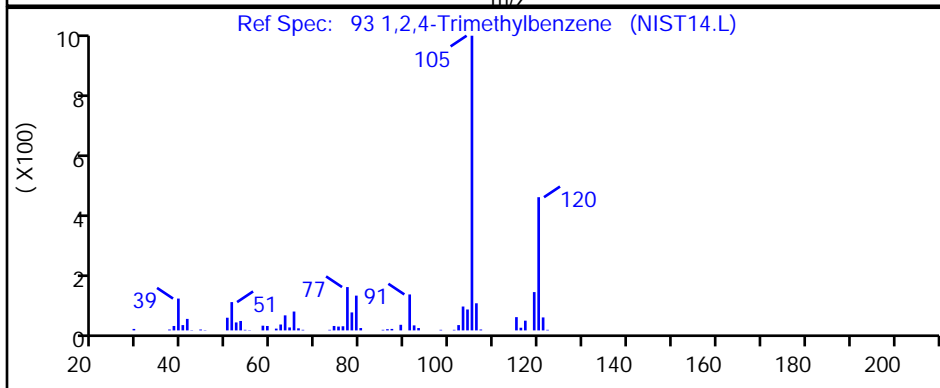
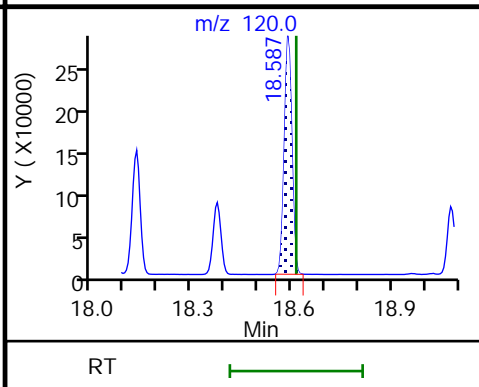
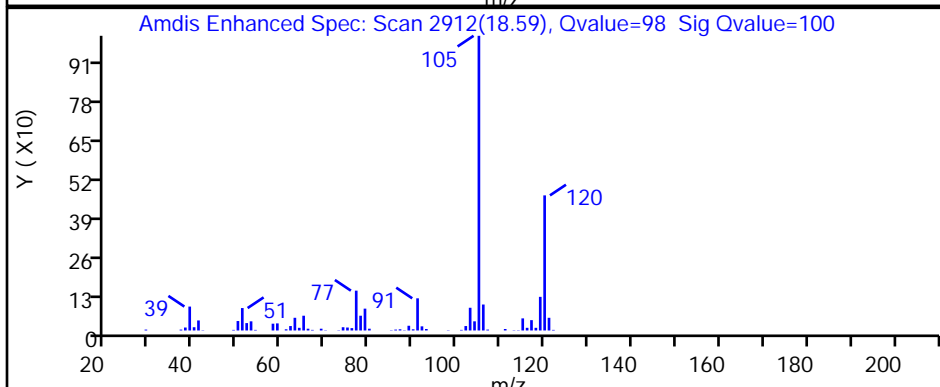
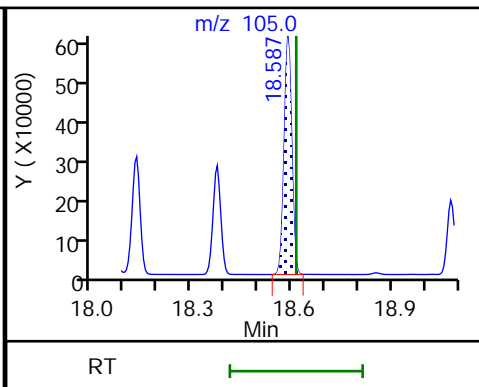
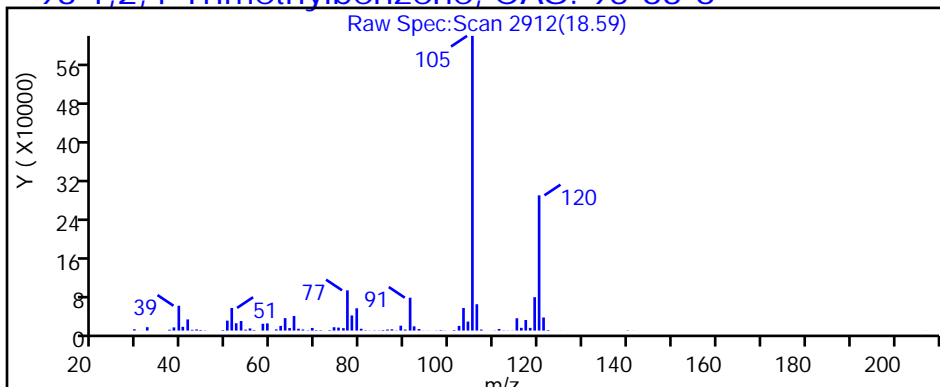
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D

Injection Date: 26-Feb-2019 22:23:30

Instrument ID: MH

Lims ID: 140-14390-A-11

Lab Sample ID: 140-14390-11

Client ID: SV-075-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.6700

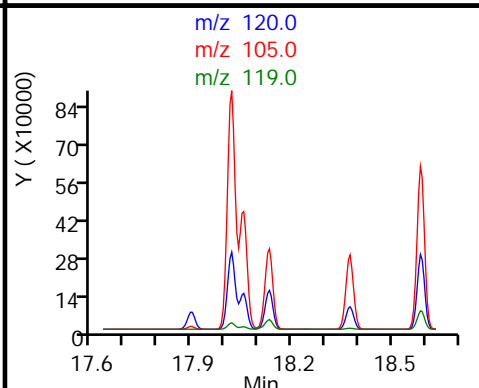
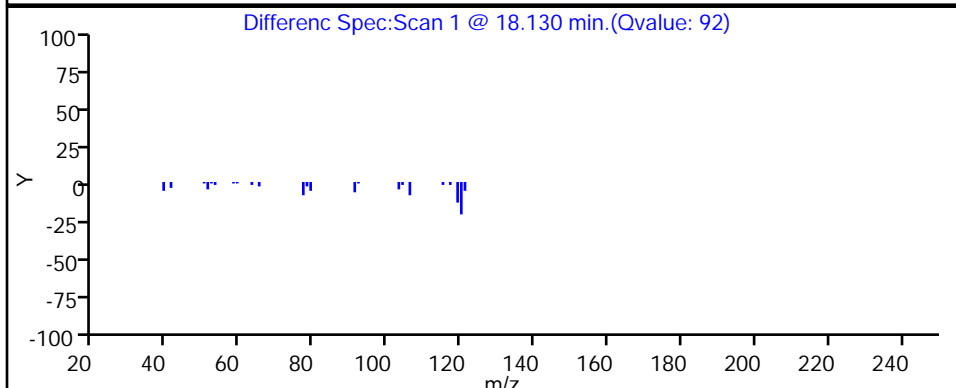
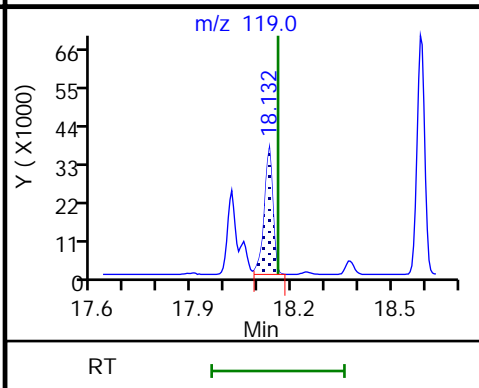
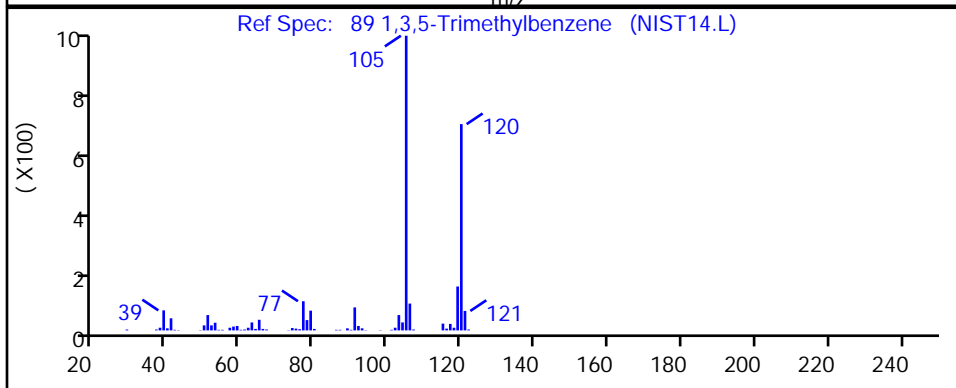
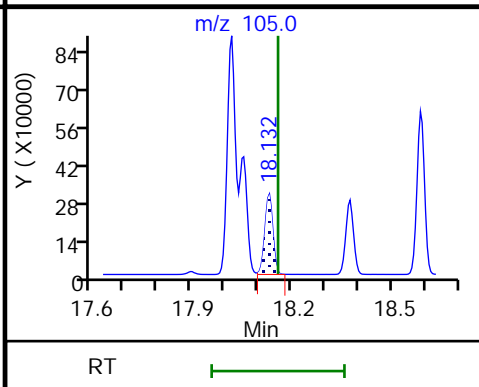
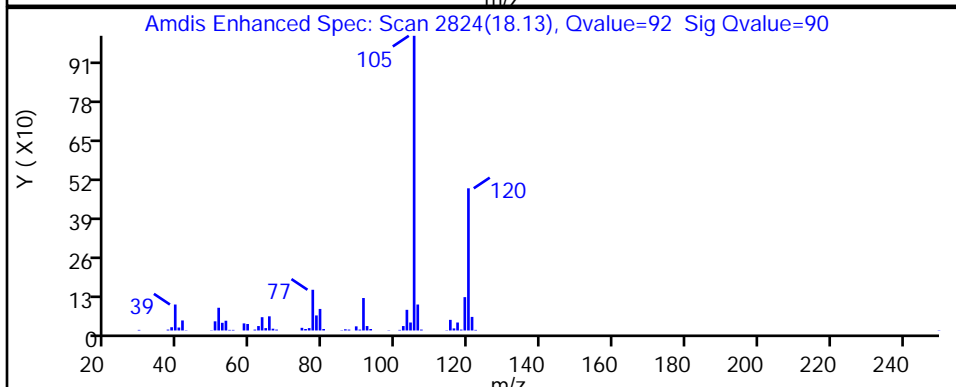
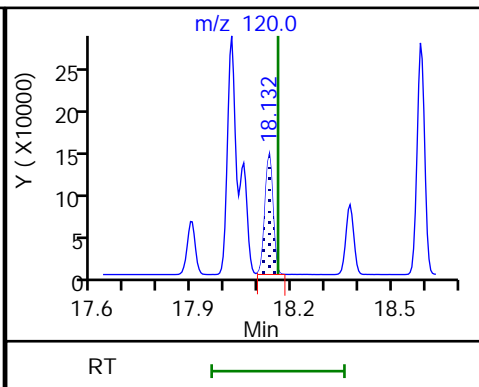
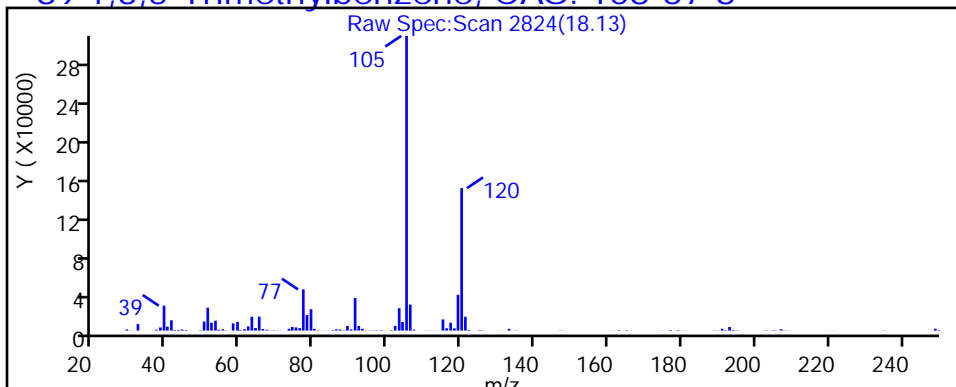
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D

Injection Date: 26-Feb-2019 22:23:30

Instrument ID: MH

Lims ID: 140-14390-A-11

Lab Sample ID: 140-14390-11

Client ID: SV-075-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.6700

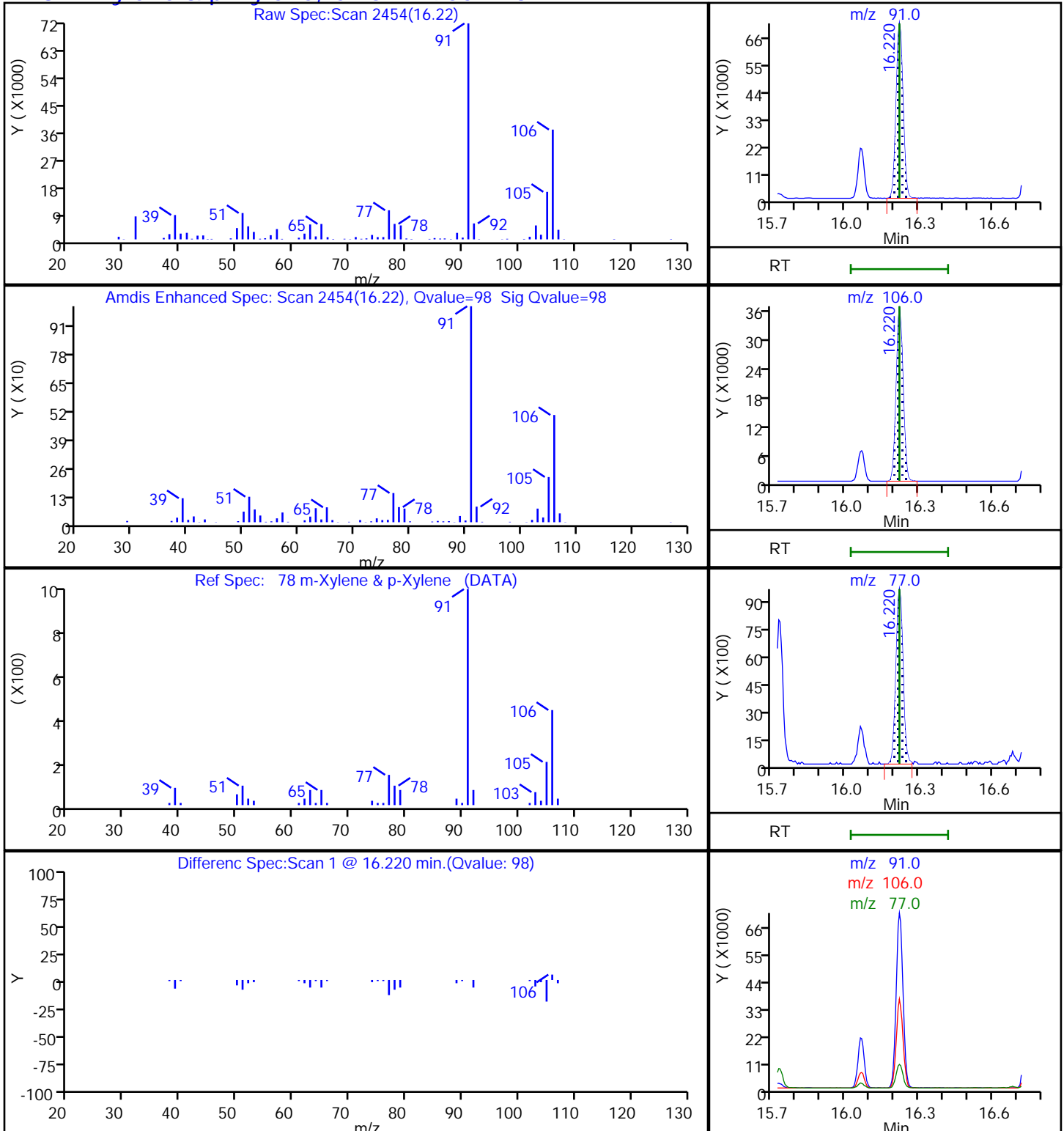
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D

Injection Date: 26-Feb-2019 22:23:30

Instrument ID: MH

Lims ID: 140-14390-A-11

Lab Sample ID: 140-14390-11

Client ID: SV-075-A-26

Operator ID: HMT

ALS Bottle#: 11

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.6700

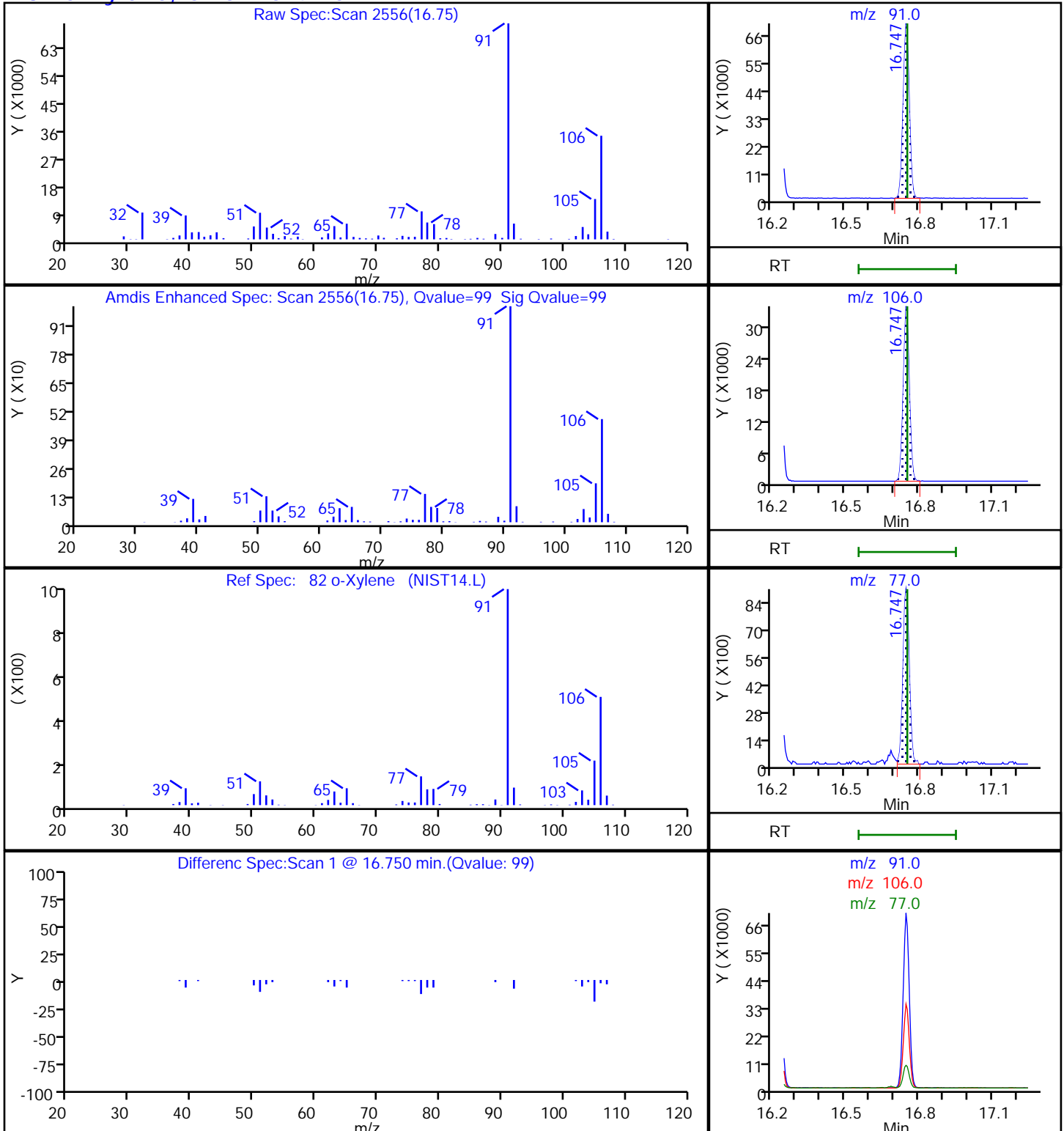
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



TestAmerica Knoxville

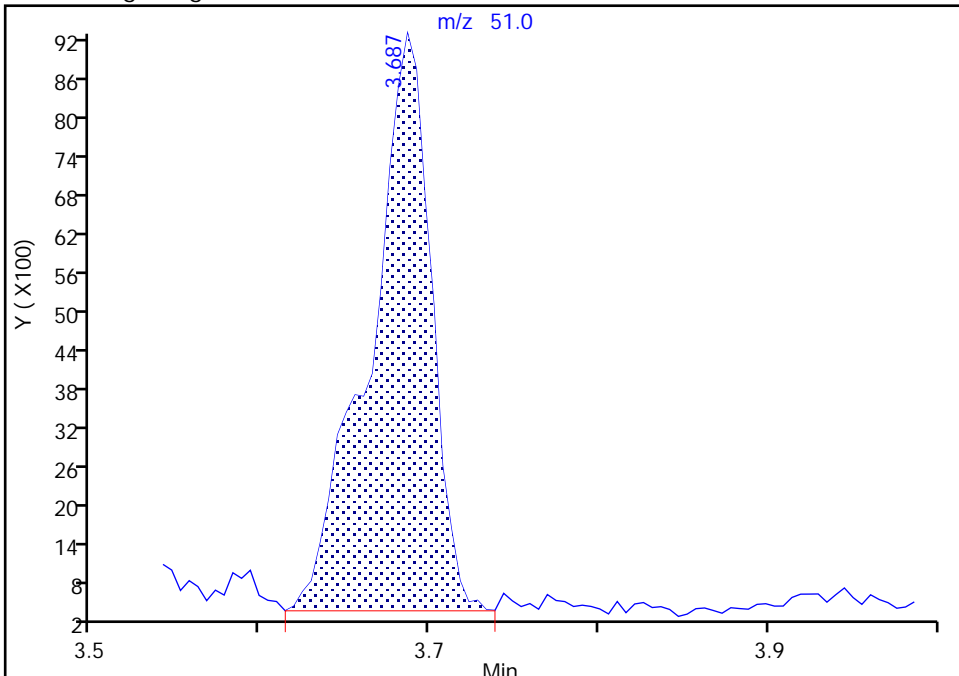
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P111.D
Injection Date: 26-Feb-2019 22:23:30 Instrument ID: MH
Lims ID: 140-14390-A-11 Lab Sample ID: 140-14390-11
Client ID: SV-075-A-26
Operator ID: HMT ALS Bottle#: 11 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.6700
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

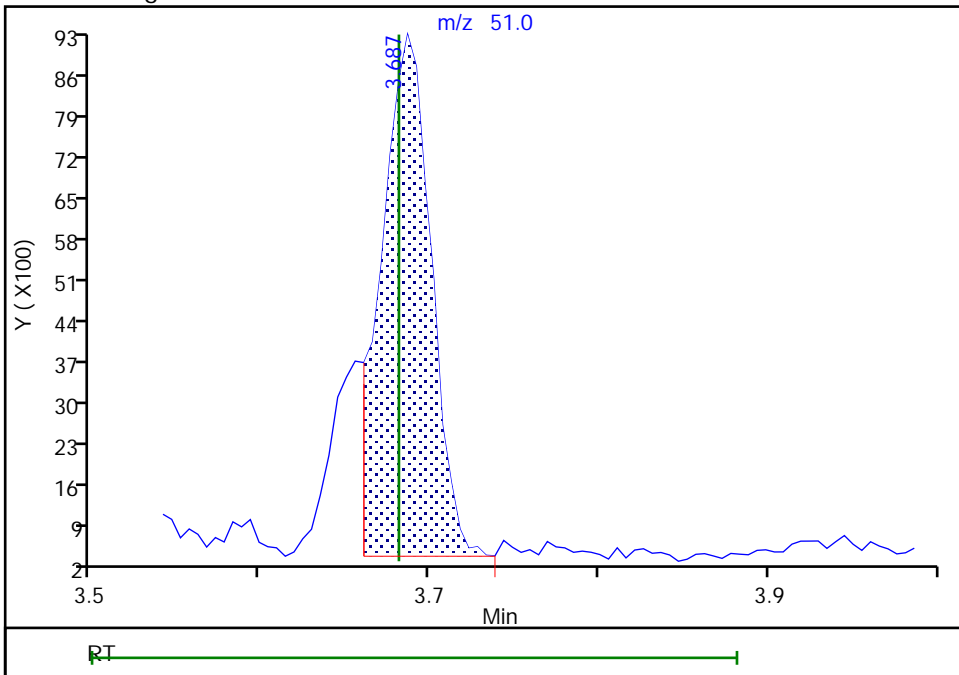
RT: 3.69
Area: 22477
Amount: 0.082047
Amount Units: ppb v/v

Processing Integration Results



RT: 3.69
Area: 18526
Amount: 0.067625
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 19:05:01

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-1-26 Lab Sample ID: 140-14390-12
 Matrix: Air Lab File ID: HB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:09
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.31	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.91	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.15	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-1-26 Lab Sample ID: 140-14390-12
 Matrix: Air Lab File ID: HB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:09
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.72	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P112.D
 Lims ID: 140-14390-A-12
 Client ID: BCK-1-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 00:09:30 ALS Bottle#: 12 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-016
 Misc. Info.: 140-14390-a-12
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:06:59 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:06:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.819	0.005	95	305965	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1633864	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1349634	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	94	871552	3.96	
6 Chlorodifluoromethane	51	3.692	3.692	0.010	50	15645	0.0624	M
8 Dichlorodifluoromethane	85	3.743	3.738	0.005	100	34742	0.0902	
31 Methylene Chloride	84	6.281	6.271	0.010	98	22842	0.1826	
47 Benzene	78	10.462	10.462	0.005	98	10074	0.0292	
89 1,3,5-Trimethylbenzene	120	18.127	18.158	-0.031	85	503	0.0292	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P112.D

Injection Date: 27-Feb-2019 00:09:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-12

Lab Sample ID: 140-14390-12

Worklist Smp#: 16

Client ID: BCK-1-26

Purge Vol: 500.000 mL

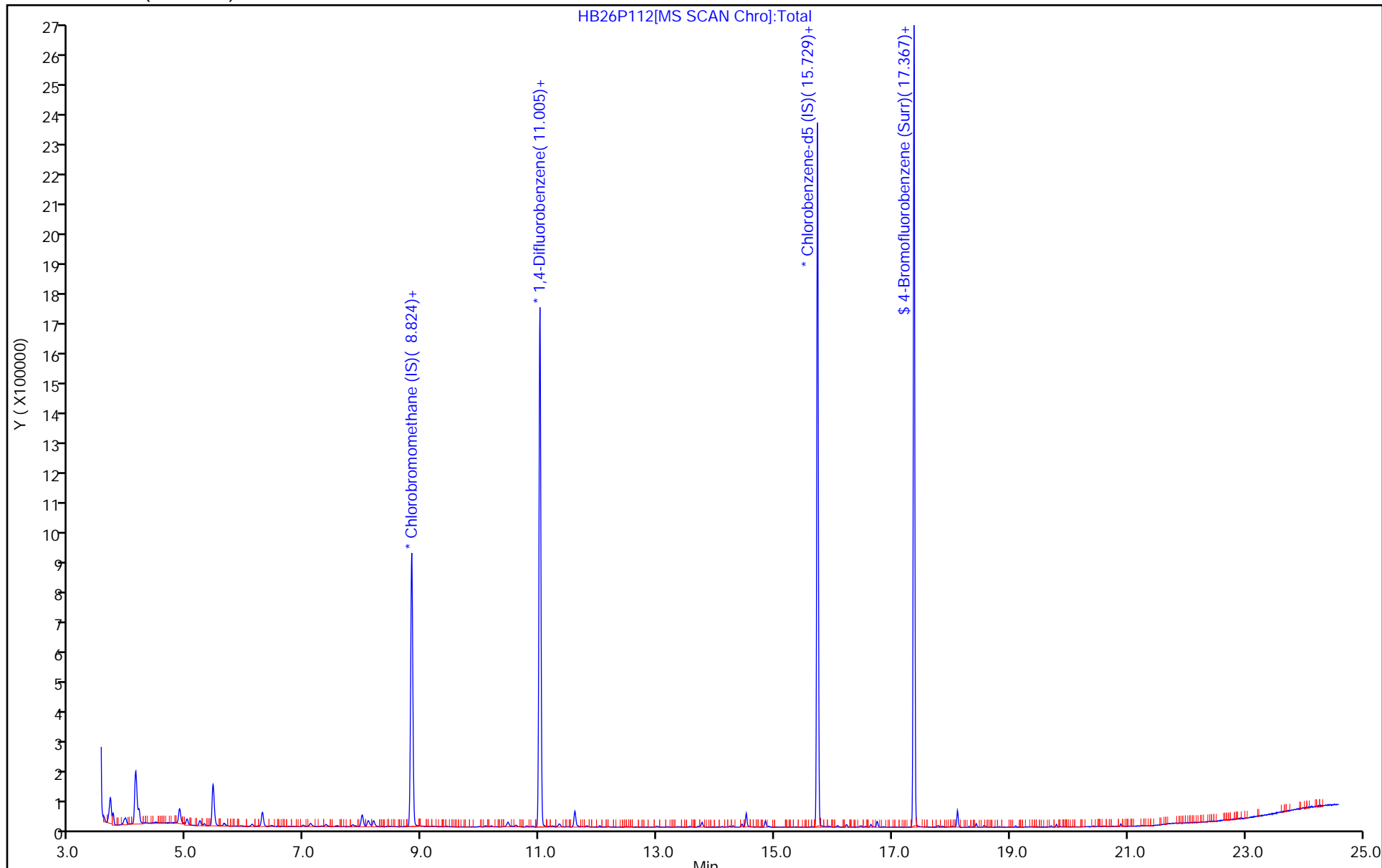
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P112.D
 Lims ID: 140-14390-A-12
 Client ID: BCK-1-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 00:09:30 ALS Bottle#: 12 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-016
 Misc. Info.: 140-14390-a-12
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:06:59 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:06:59

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.96	99.07

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P112.D

Injection Date: 27-Feb-2019 00:09:30

Instrument ID: MH

Lims ID: 140-14390-A-12

Lab Sample ID: 140-14390-12

Client ID: BCK-1-26

Operator ID: HMT

ALS Bottle#: 12

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

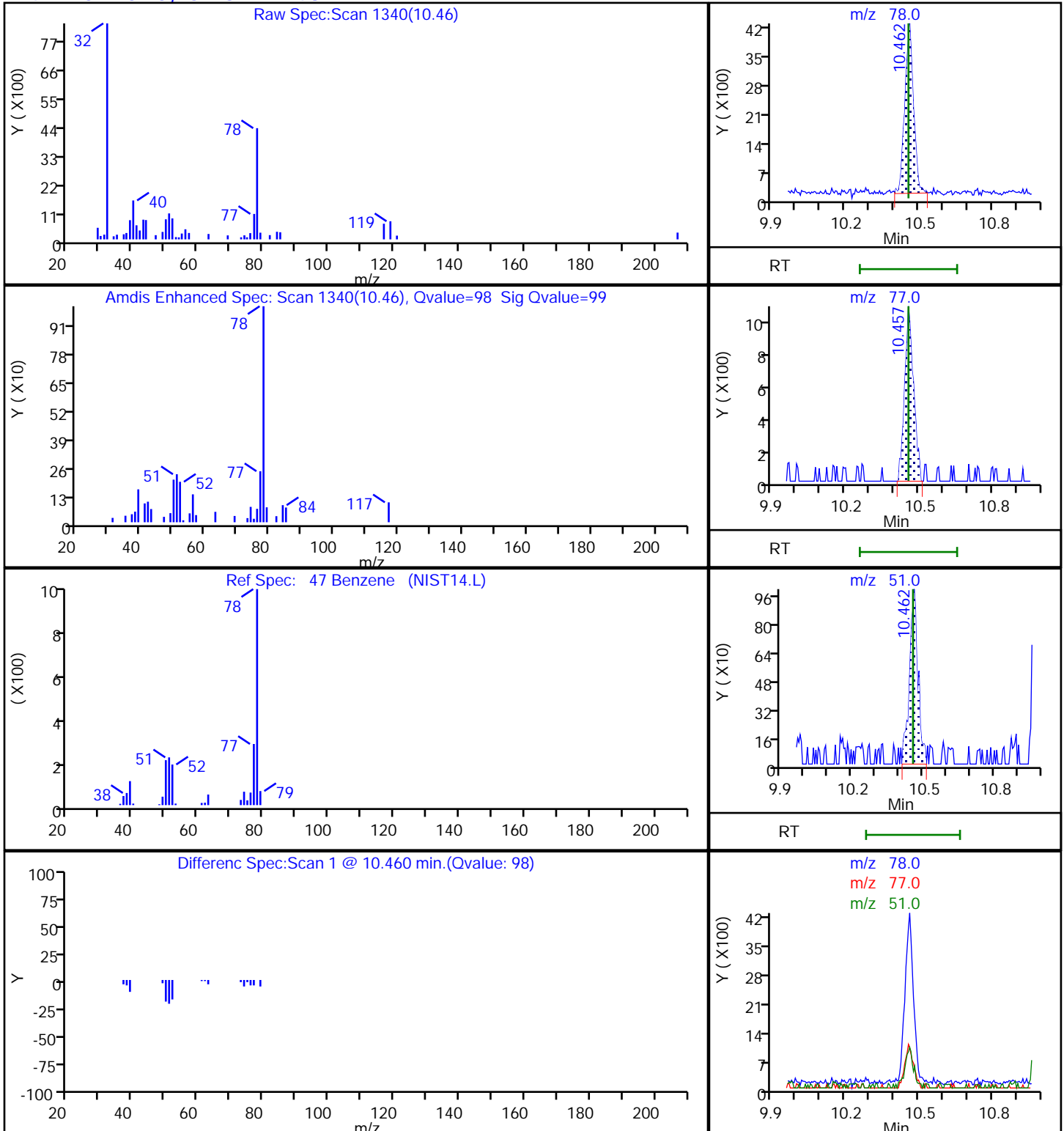
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P112.D

Injection Date: 27-Feb-2019 00:09:30

Instrument ID: MH

Lims ID: 140-14390-A-12

Lab Sample ID: 140-14390-12

Client ID: BCK-1-26

Operator ID: HMT

ALS Bottle#: 12

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

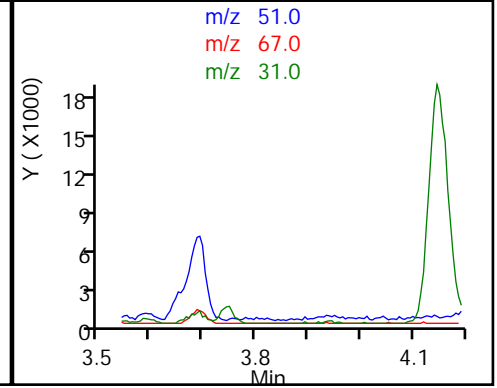
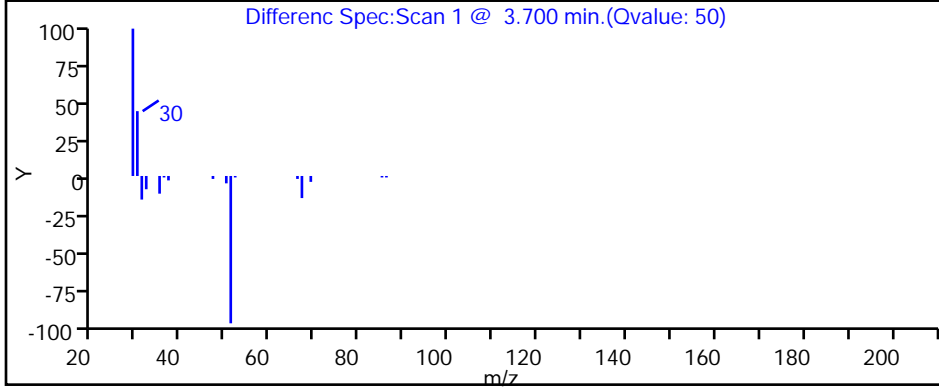
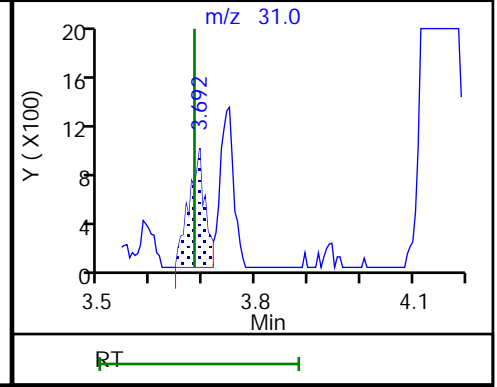
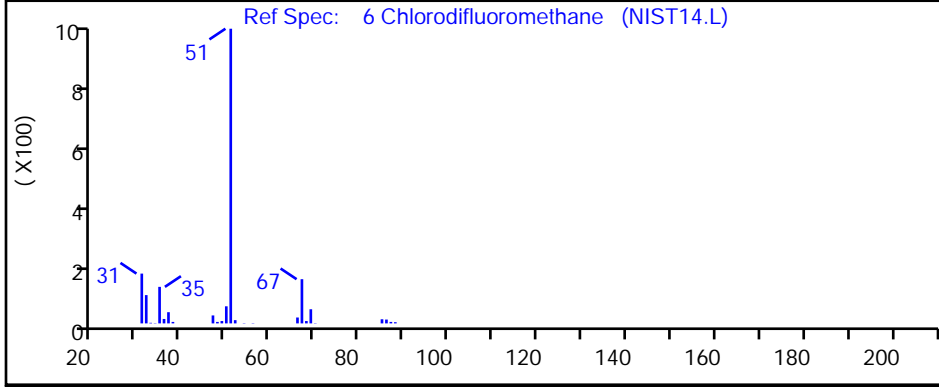
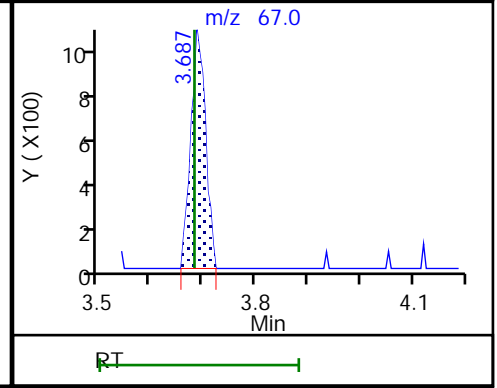
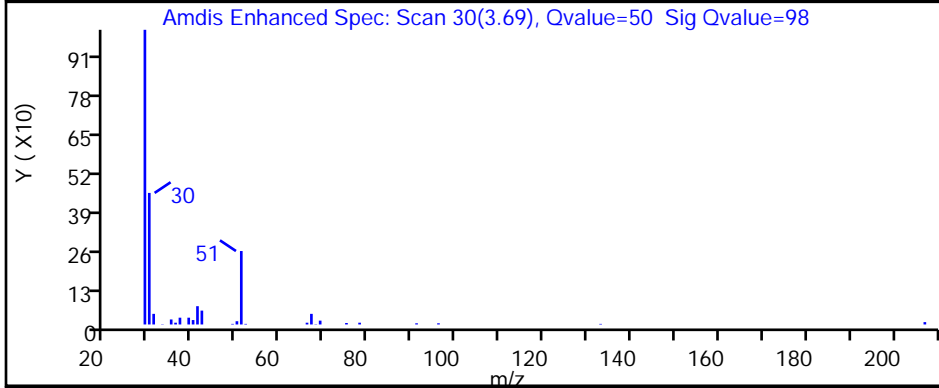
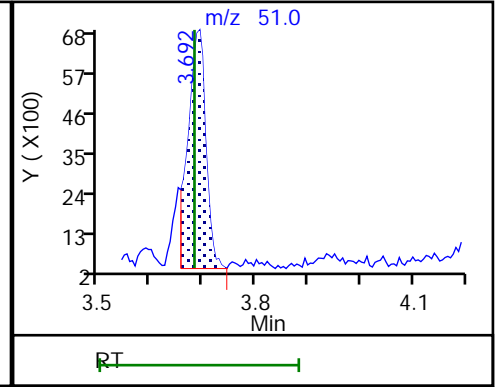
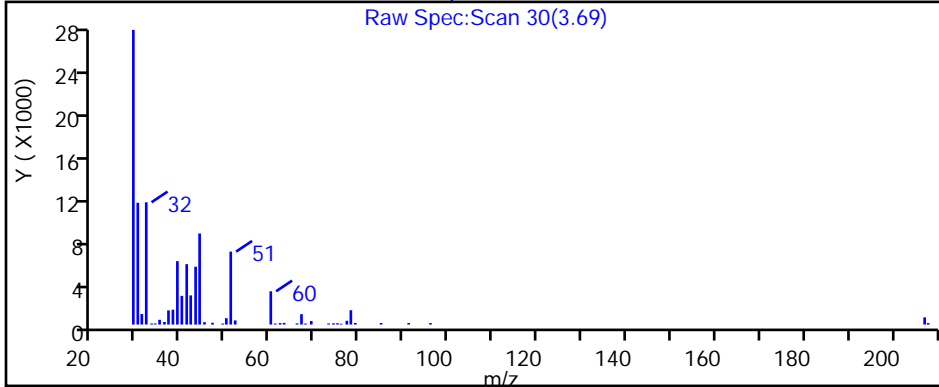
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P112.D

Injection Date: 27-Feb-2019 00:09:30

Instrument ID: MH

Lims ID: 140-14390-A-12

Lab Sample ID: 140-14390-12

Client ID: BCK-1-26

Operator ID: HMT

ALS Bottle#: 12

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

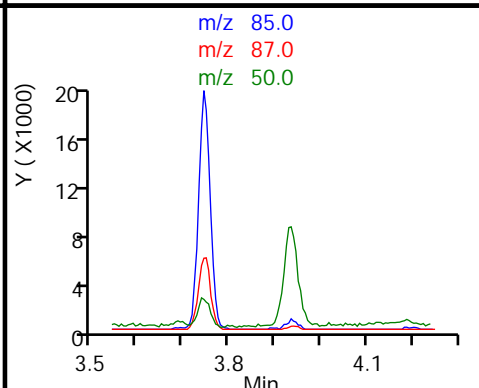
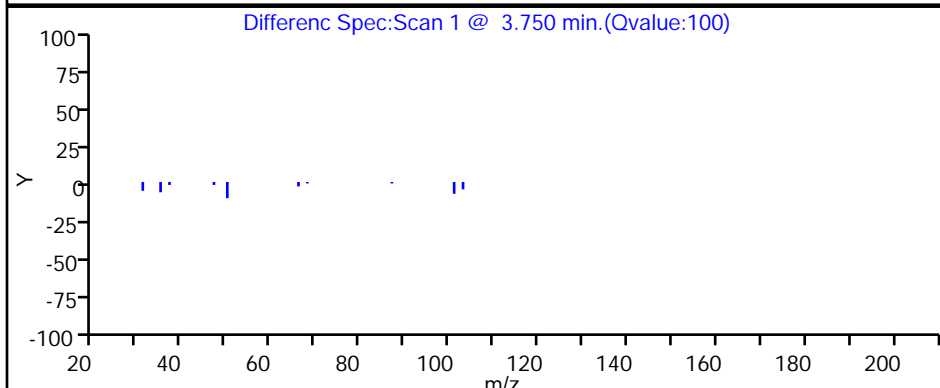
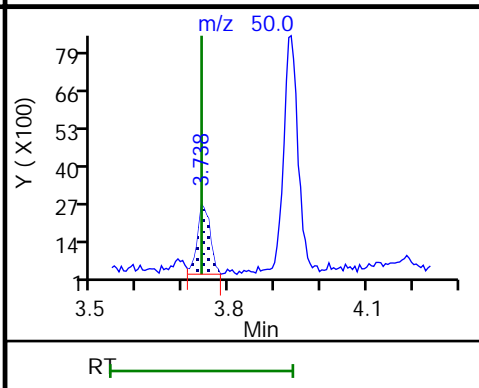
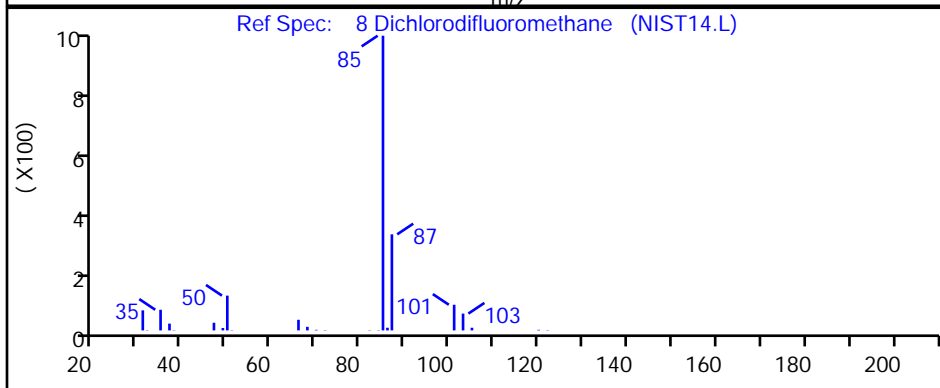
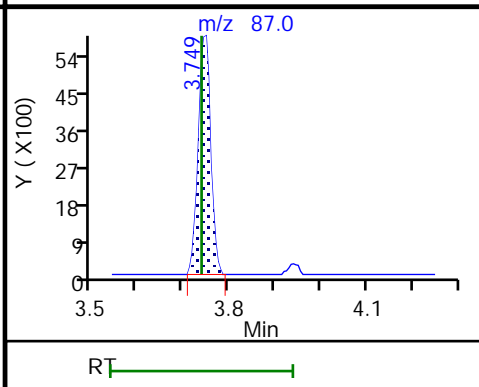
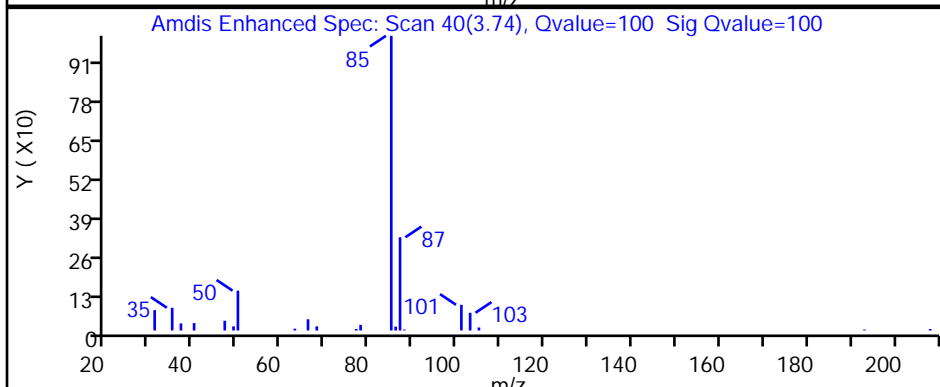
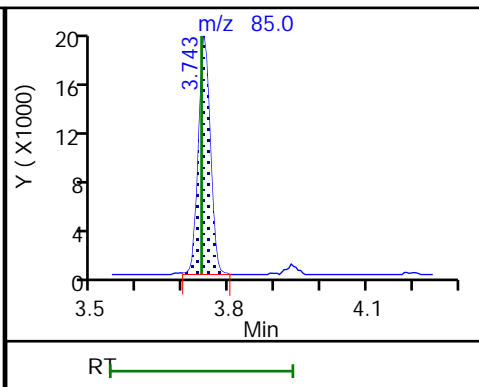
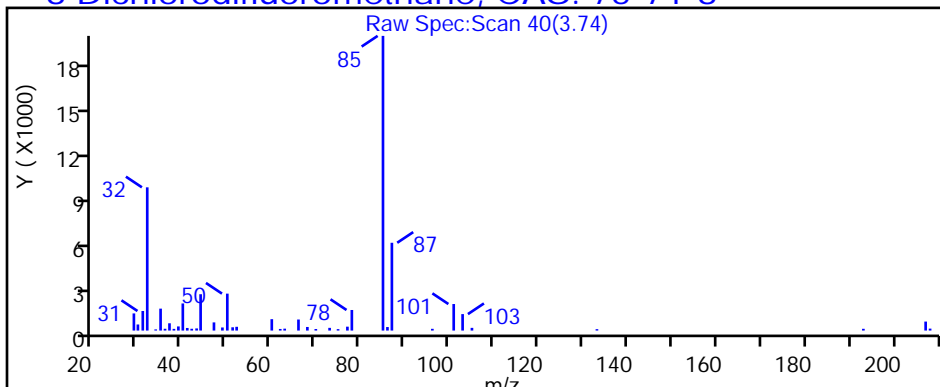
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P112.D

Injection Date: 27-Feb-2019 00:09:30

Instrument ID: MH

Lims ID: 140-14390-A-12

Lab Sample ID: 140-14390-12

Client ID: BCK-1-26

Operator ID: HMT

ALS Bottle#: 12

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

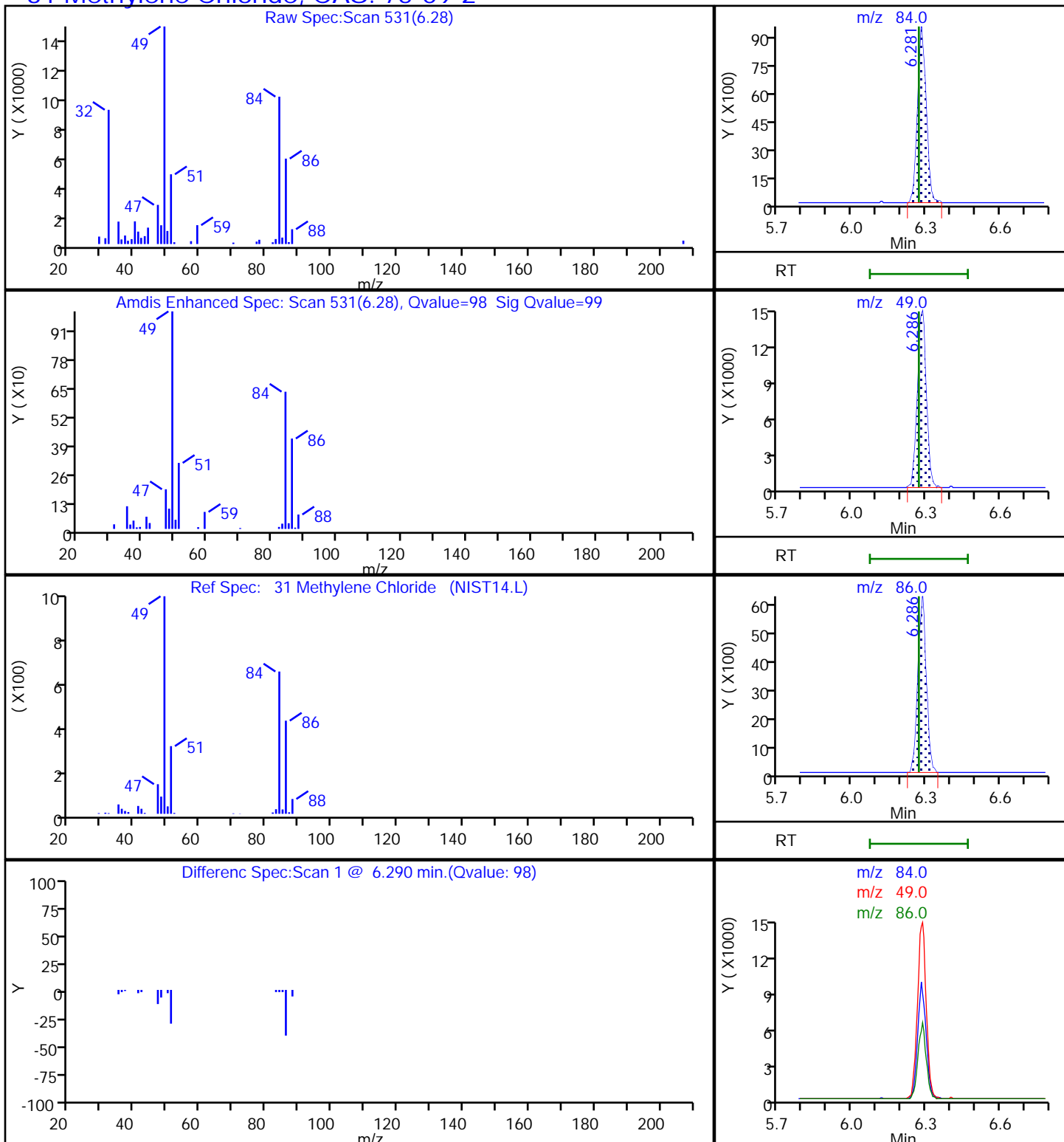
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P112.D

Injection Date: 27-Feb-2019 00:09:30

Instrument ID: MH

Lims ID: 140-14390-A-12

Lab Sample ID: 140-14390-12

Client ID: BCK-1-26

Operator ID: HMT

ALS Bottle#: 12

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

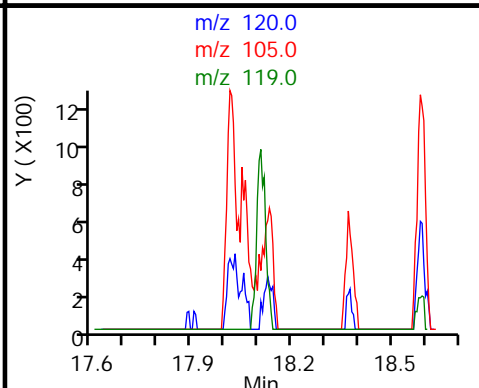
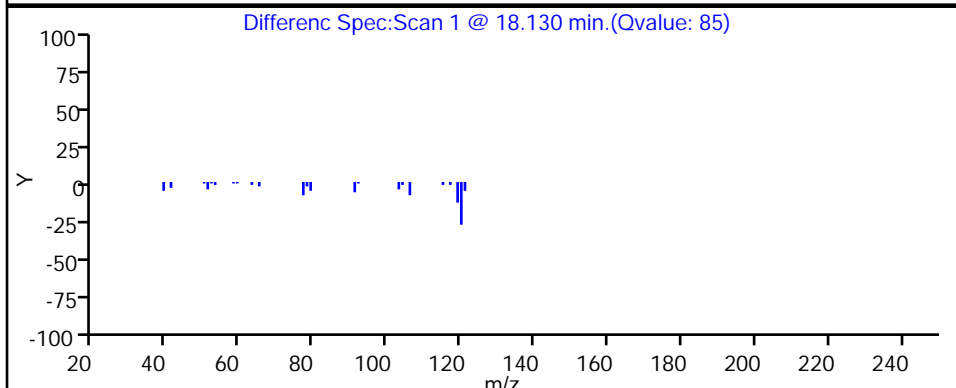
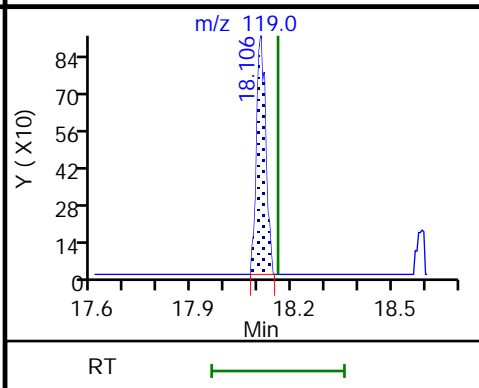
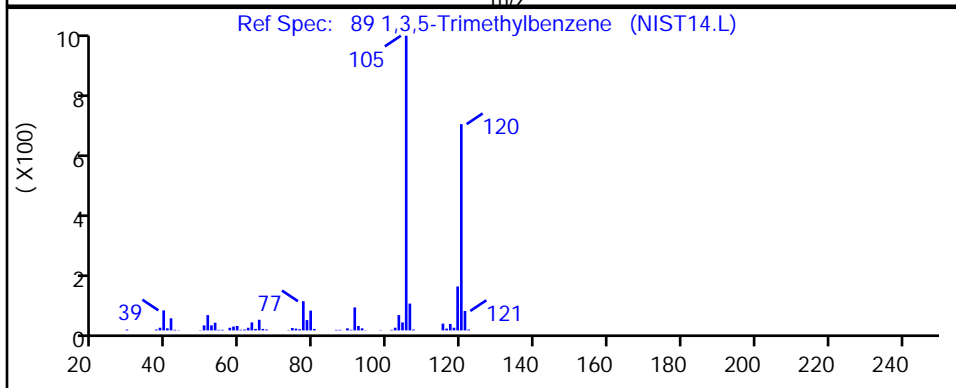
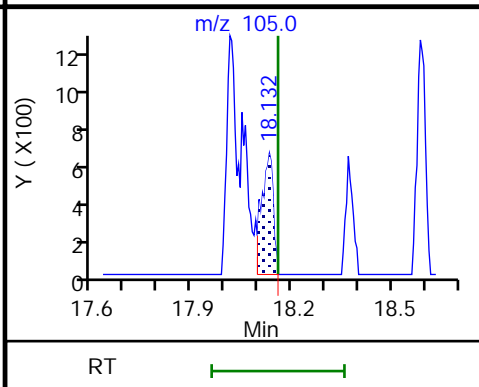
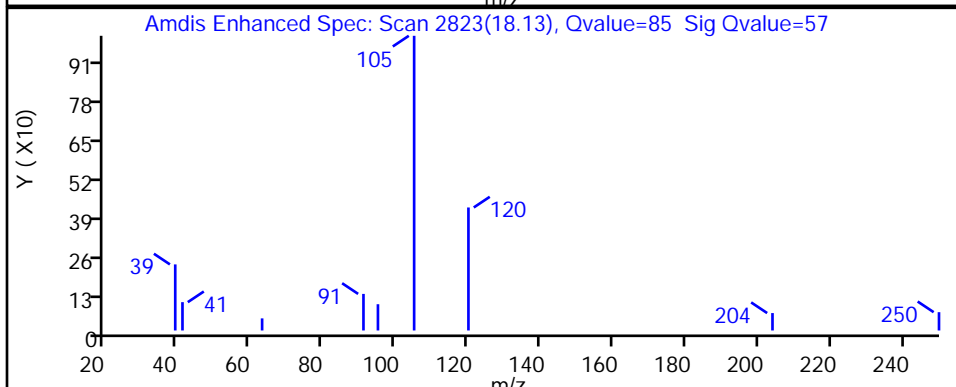
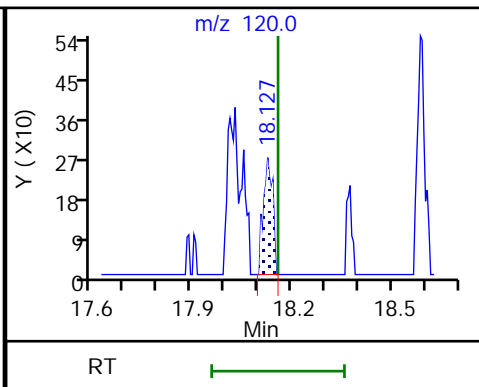
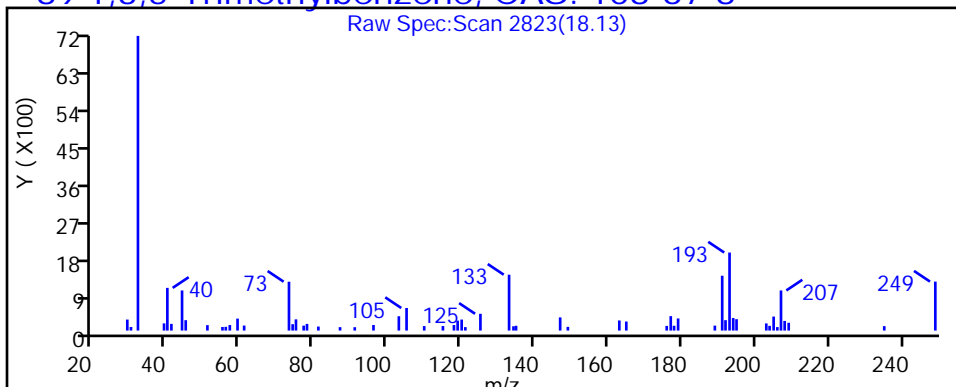
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

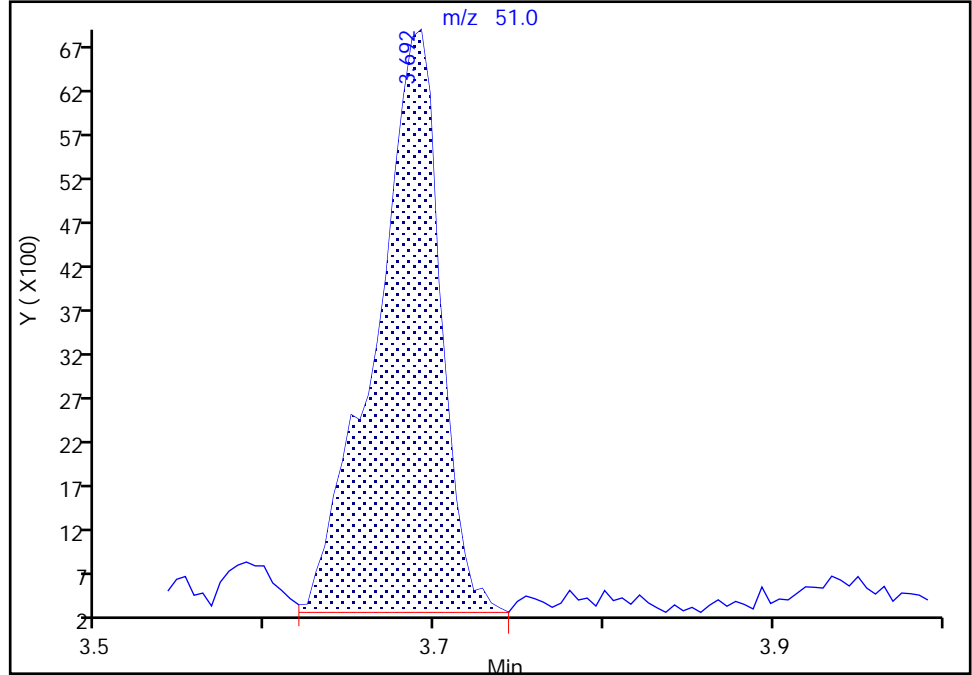
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P112.D
Injection Date: 27-Feb-2019 00:09:30 Instrument ID: MH
Lims ID: 140-14390-A-12 Lab Sample ID: 140-14390-12
Client ID: BCK-1-26
Operator ID: HMT ALS Bottle#: 12 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

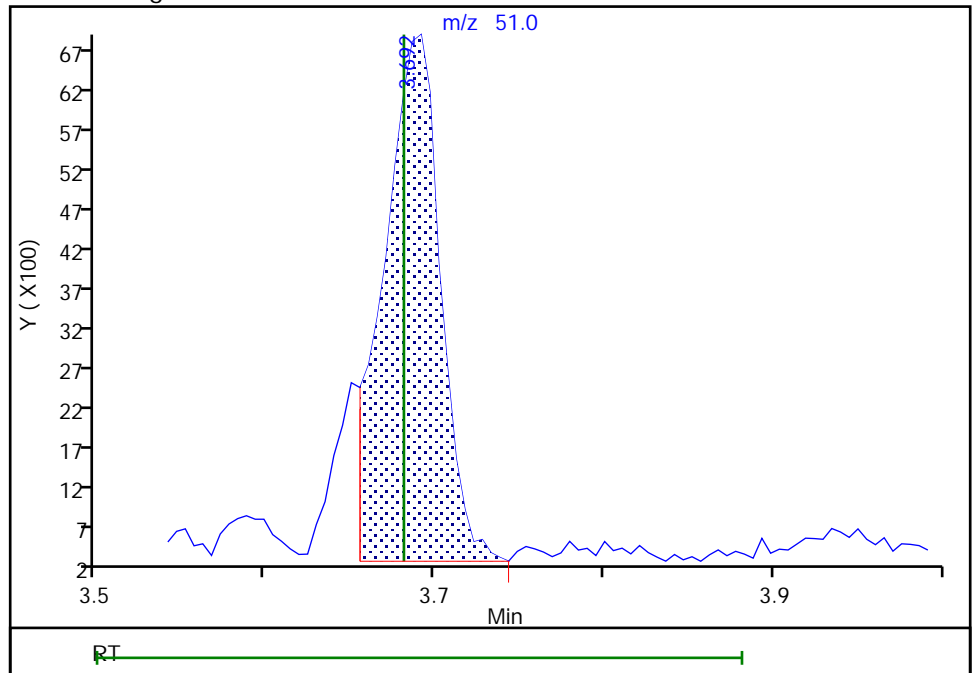
RT: 3.69
Area: 17720
Amount: 0.070631
Amount Units: ppb v/v

Processing Integration Results



RT: 3.69
Area: 15645
Amount: 0.062360
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 19:06:36

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-2-26 Lab Sample ID: 140-14390-13
 Matrix: Air Lab File ID: HB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:19
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-2-26 Lab Sample ID: 140-14390-13
 Matrix: Air Lab File ID: HB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:19
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.45	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.71	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P113.D
 Lims ID: 140-14390-A-13
 Client ID: BCK-2-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 01:02:30 ALS Bottle#: 13 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-017
 Misc. Info.: 140-14390-a-13
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:08:23 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:08:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.819	0.005	95	304769	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1668266	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1397553	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	94	882772	3.88	
6 Chlorodifluoromethane	51	3.687	3.687	0.005	79	15866	0.0635	M
8 Dichlorodifluoromethane	85	3.743	3.738	0.005	99	34869	0.0908	
31 Methylene Chloride	84	6.281	6.271	0.010	98	29477	0.2365	
47 Benzene	78	10.462	10.462	0.005	98	9846	0.0279	
65 Toluene	91	13.765	13.760	0.005	93	23294	0.0586	
89 1,3,5-Trimethylbenzene	120	18.122	18.122	-0.036	44	424	0.0288	a

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P113.D

Injection Date: 27-Feb-2019 01:02:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-13

Lab Sample ID: 140-14390-13

Worklist Smp#: 17

Client ID: BCK-2-26

Purge Vol: 500.000 mL

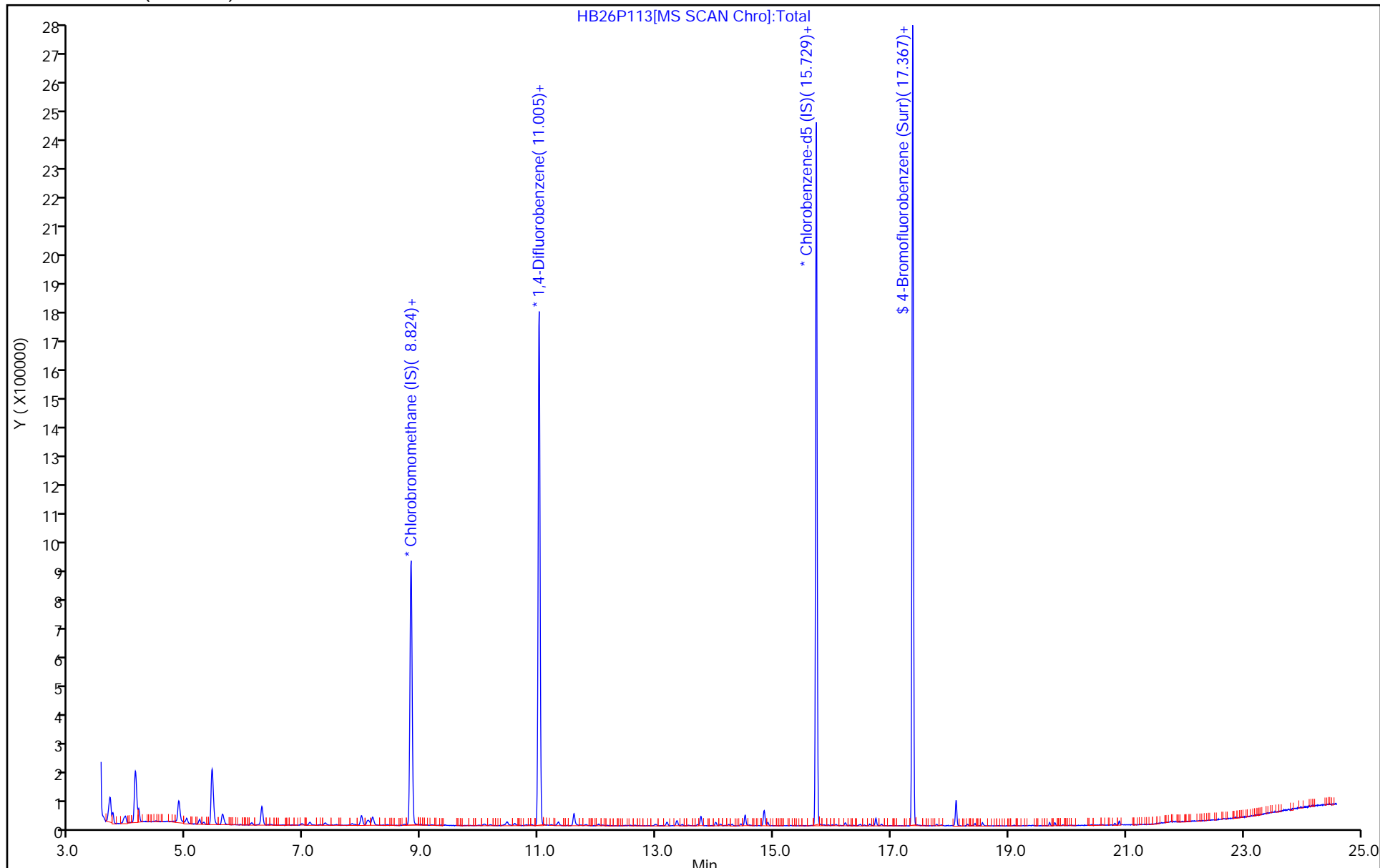
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P113.D
 Lims ID: 140-14390-A-13
 Client ID: BCK-2-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 01:02:30 ALS Bottle#: 13 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-017
 Misc. Info.: 140-14390-a-13
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:08:23 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:08:23

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.88	96.91

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P113.D

Injection Date: 27-Feb-2019 01:02:30

Instrument ID: MH

Lims ID: 140-14390-A-13

Lab Sample ID: 140-14390-13

Client ID: BCK-2-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

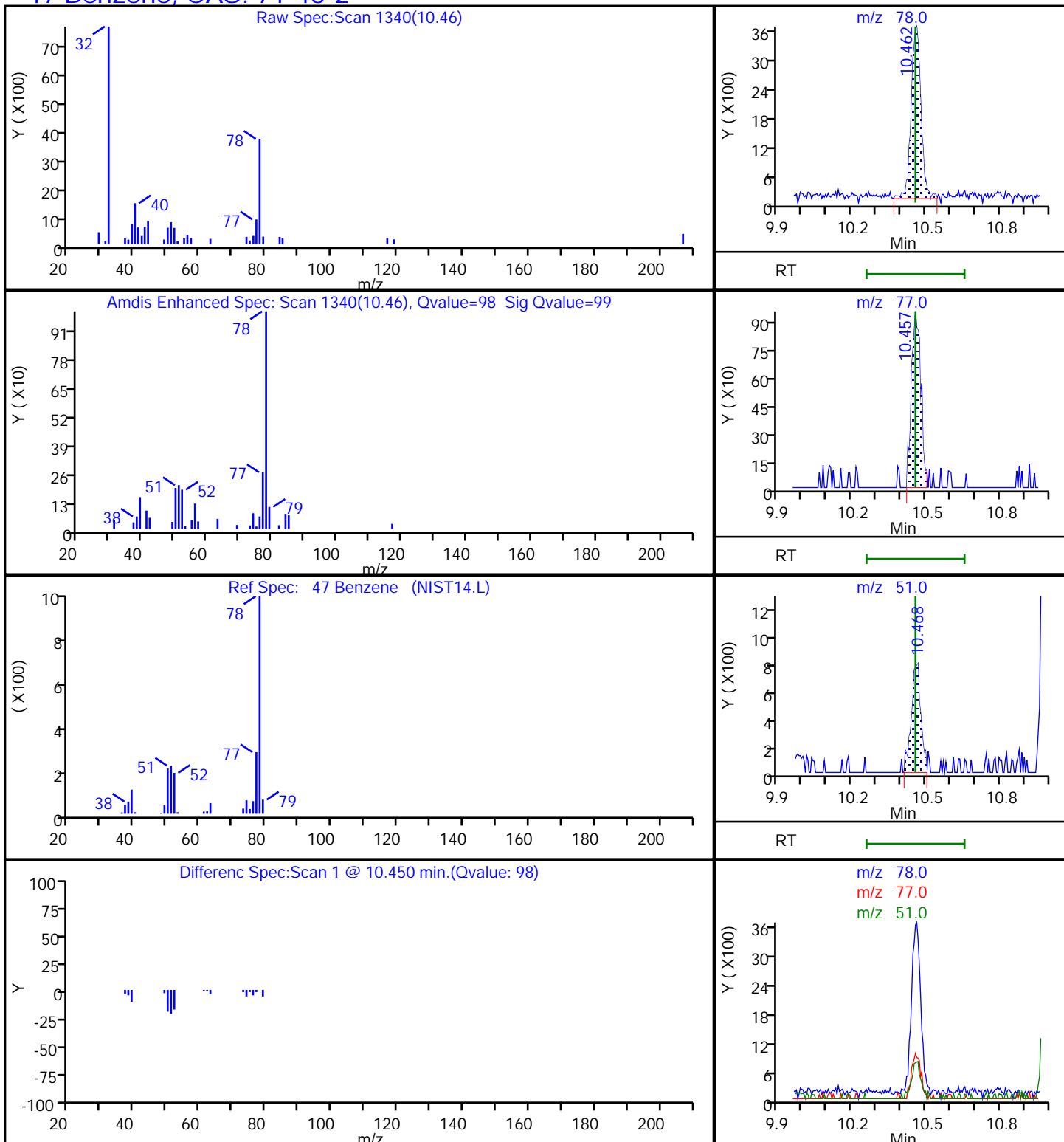
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P113.D

Injection Date: 27-Feb-2019 01:02:30

Instrument ID: MH

Lims ID: 140-14390-A-13

Lab Sample ID: 140-14390-13

Client ID: BCK-2-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

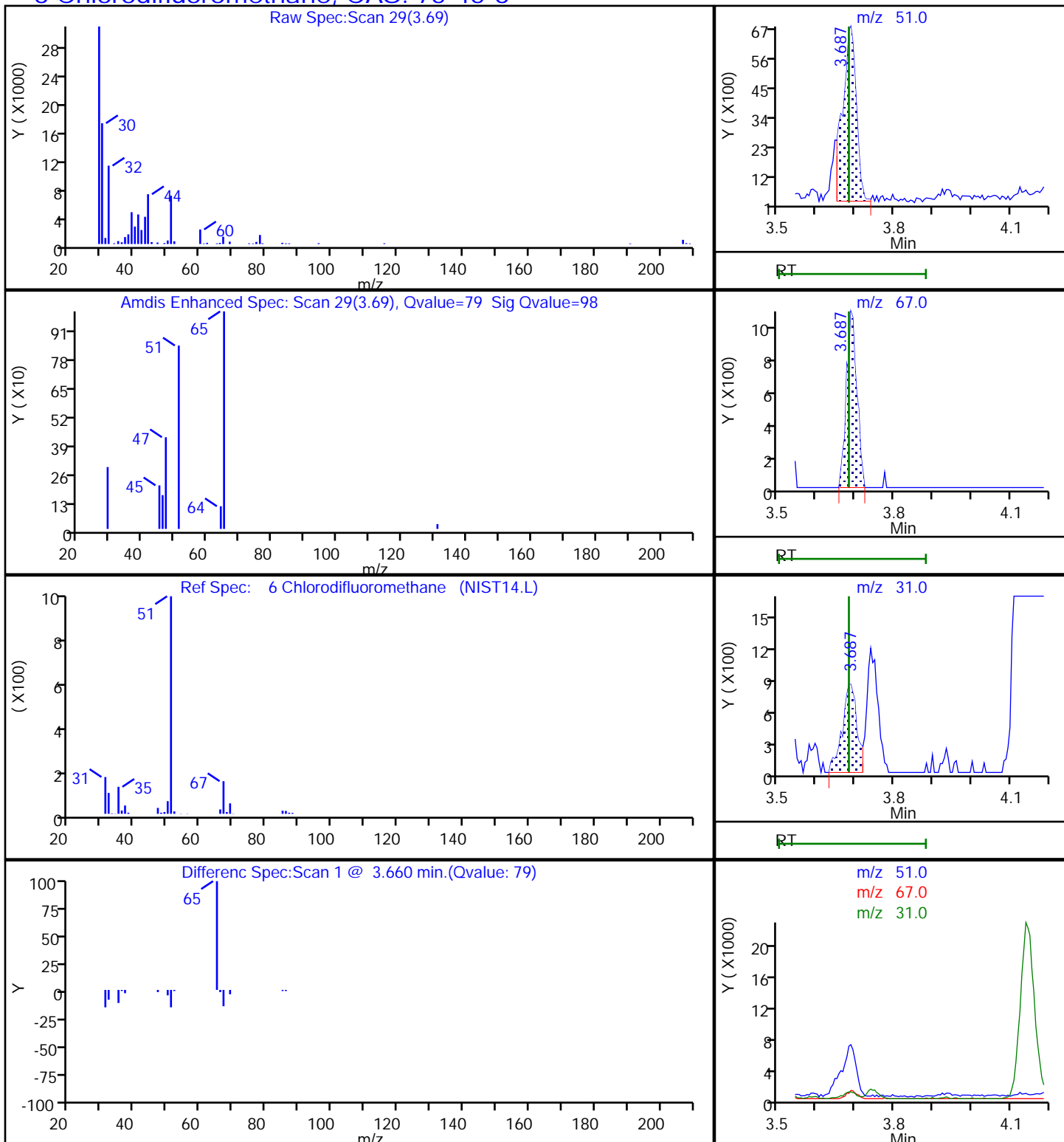
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P113.D

Injection Date: 27-Feb-2019 01:02:30

Instrument ID: MH

Lims ID: 140-14390-A-13

Lab Sample ID: 140-14390-13

Client ID: BCK-2-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

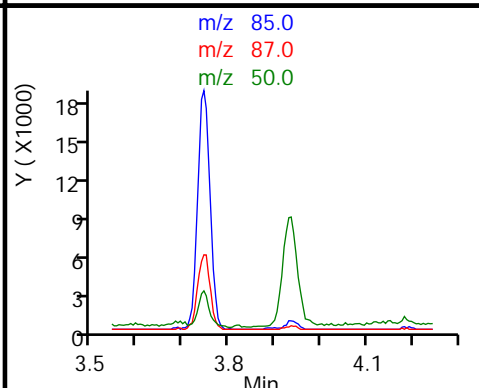
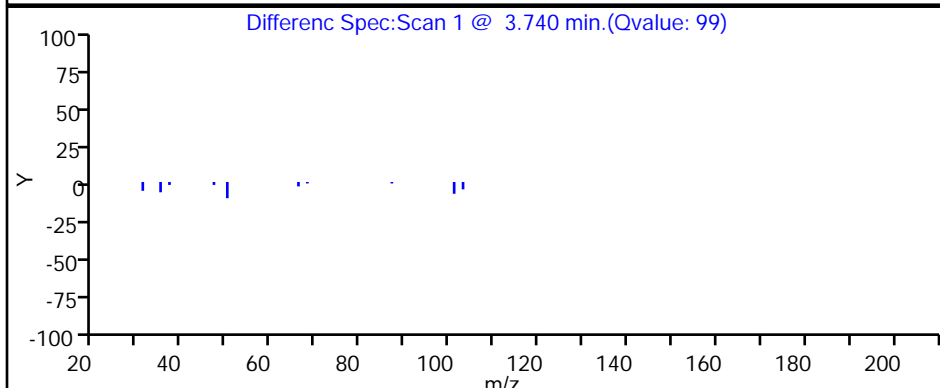
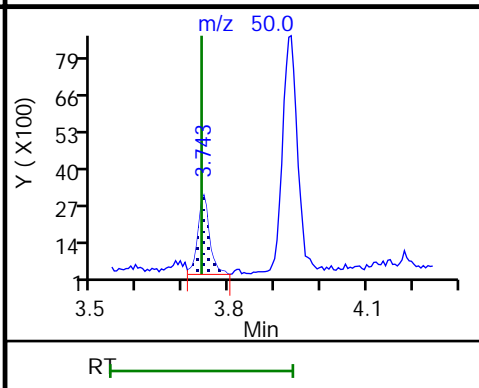
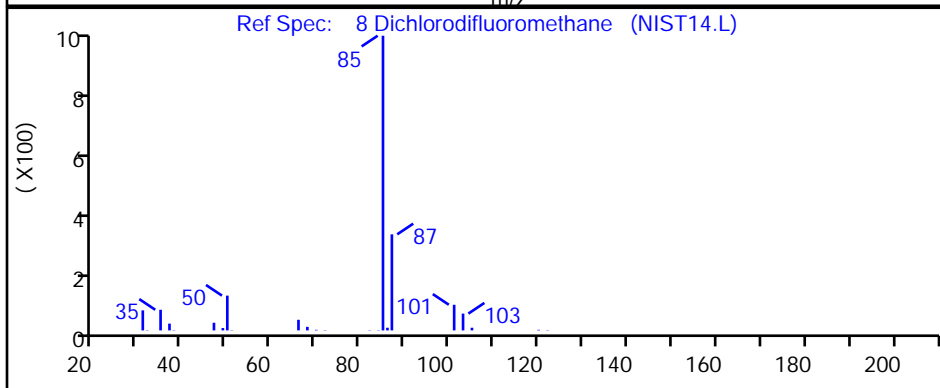
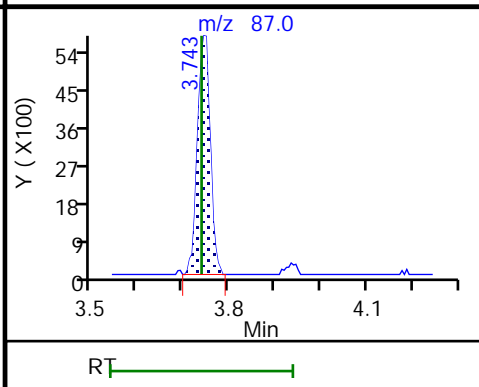
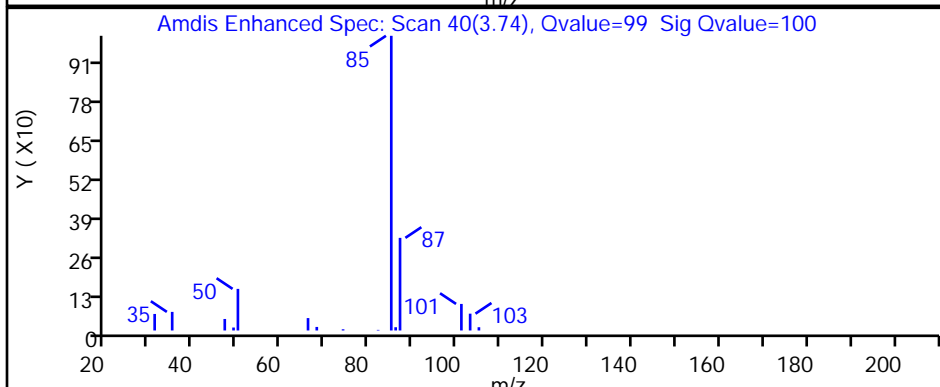
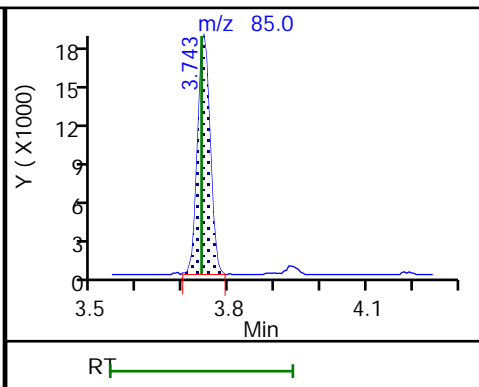
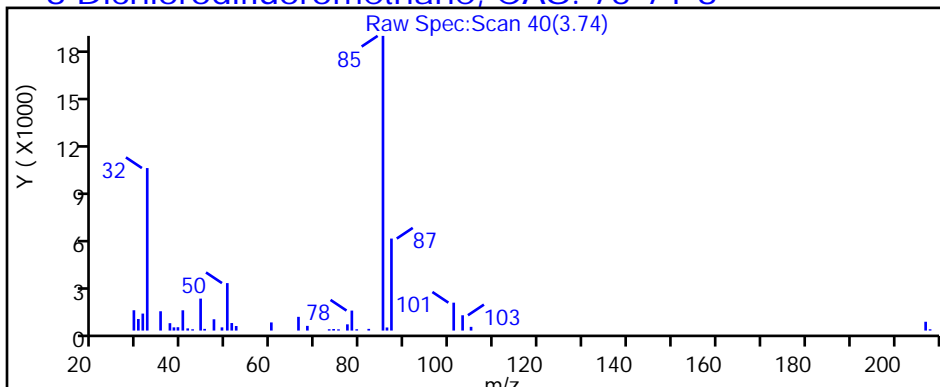
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P113.D

Injection Date: 27-Feb-2019 01:02:30

Instrument ID: MH

Lims ID: 140-14390-A-13

Lab Sample ID: 140-14390-13

Client ID: BCK-2-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

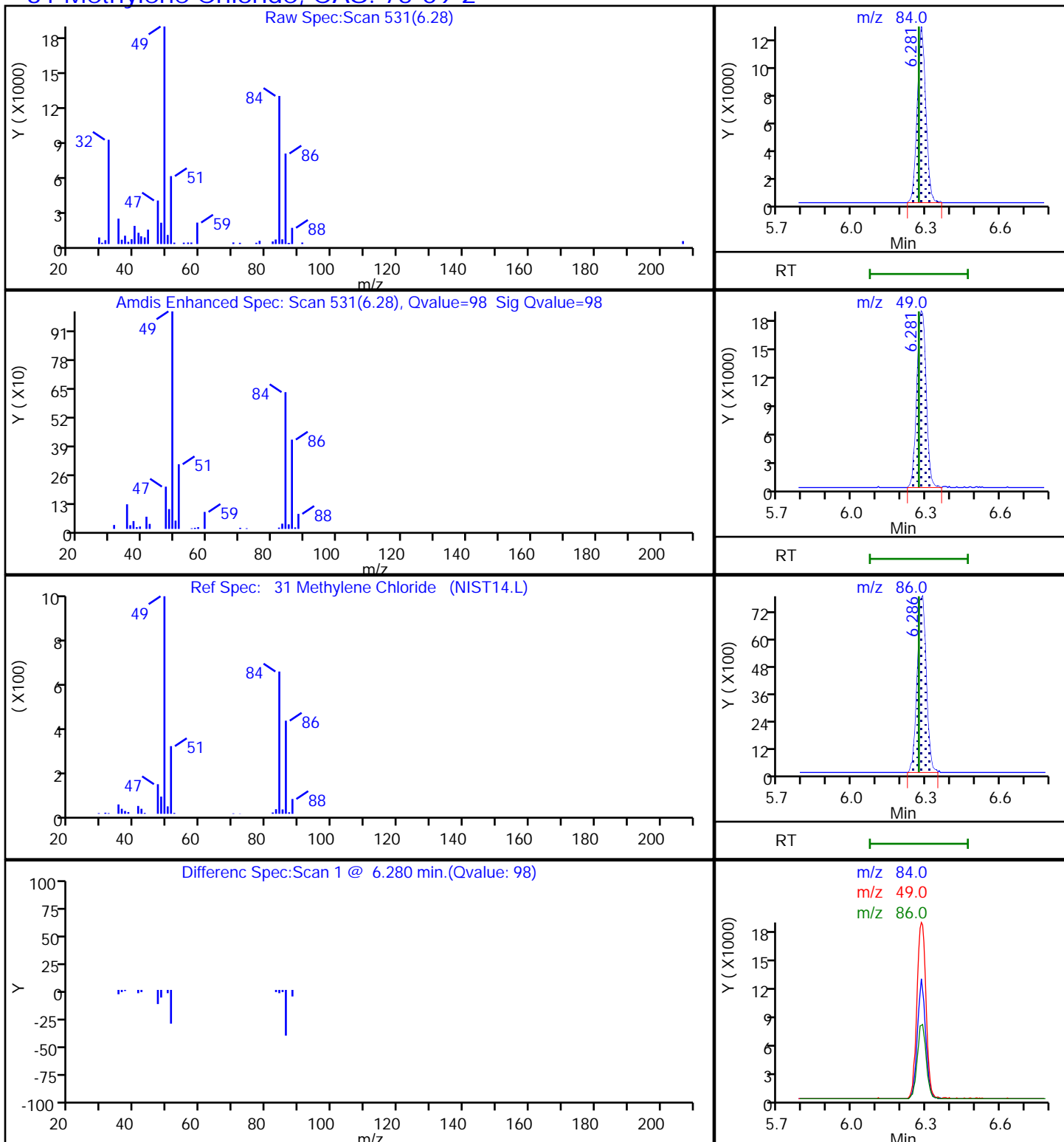
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P113.D

Injection Date: 27-Feb-2019 01:02:30

Instrument ID: MH

Lims ID: 140-14390-A-13

Lab Sample ID: 140-14390-13

Client ID: BCK-2-26

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

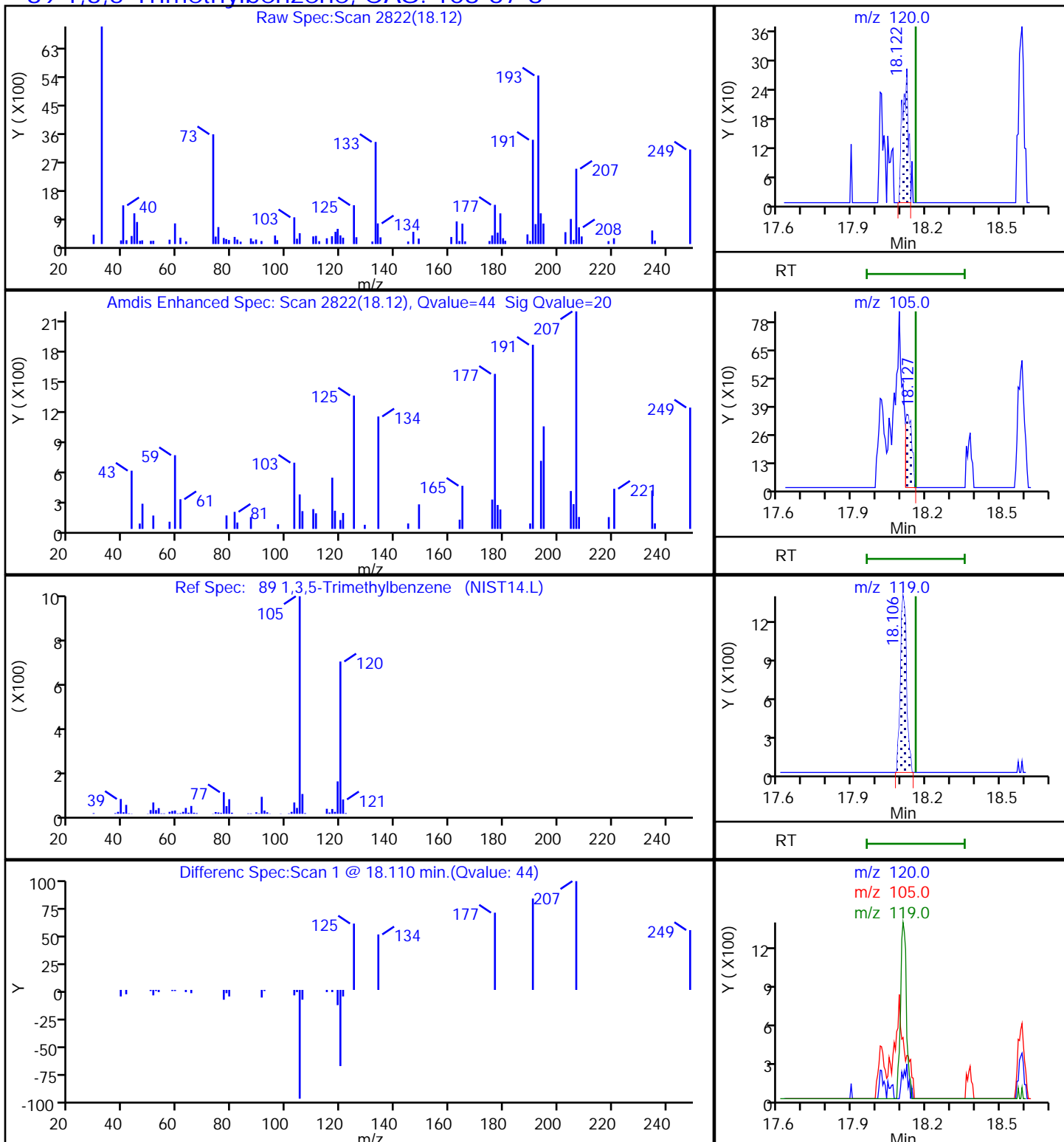
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

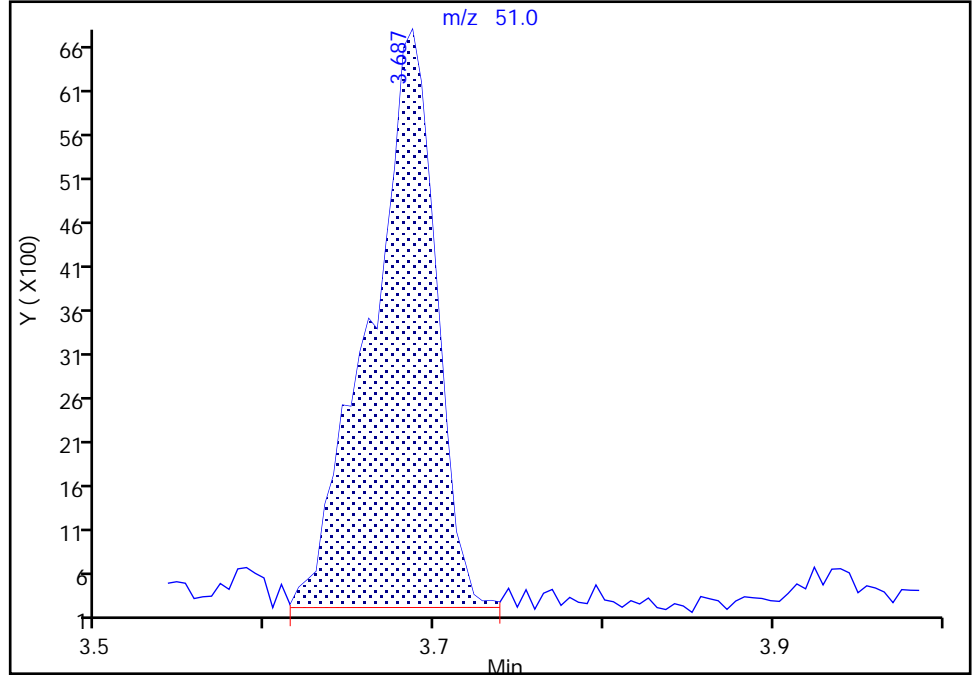
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Injection Date: 27-Feb-2019 01:02:30 Instrument ID: MH
Lims ID: 140-14390-A-13 Lab Sample ID: 140-14390-13
Client ID: BCK-2-26
Operator ID: HMT ALS Bottle#: 13 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

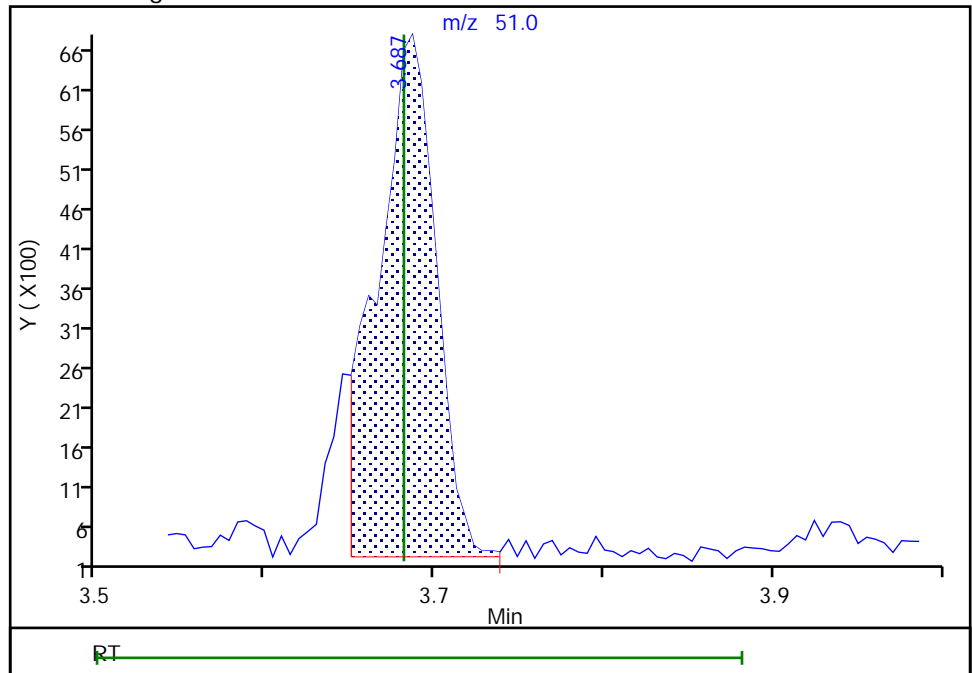
RT: 3.69
Area: 17704
Amount: 0.070844
Amount Units: ppb v/v

Processing Integration Results



RT: 3.69
Area: 15866
Amount: 0.063489
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 19:07:52
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

TestAmerica Knoxville

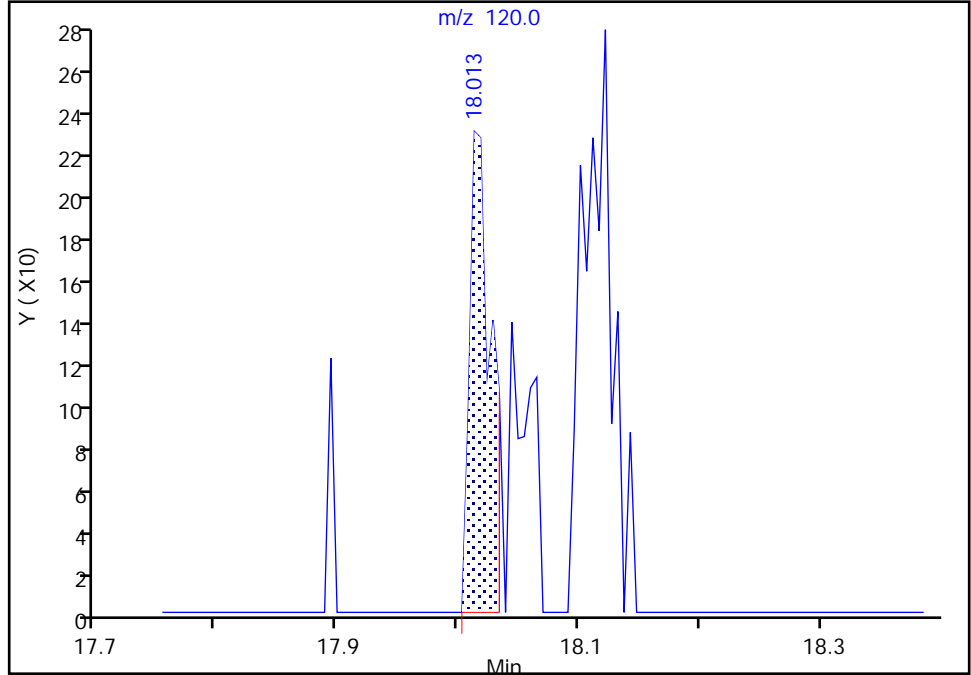
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Injection Date: 27-Feb-2019 01:02:30 Instrument ID: MH
Lims ID: 140-14390-A-13 Lab Sample ID: 140-14390-13
Client ID: BCK-2-26
Operator ID: HMT ALS Bottle#: 13 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Signal: 1

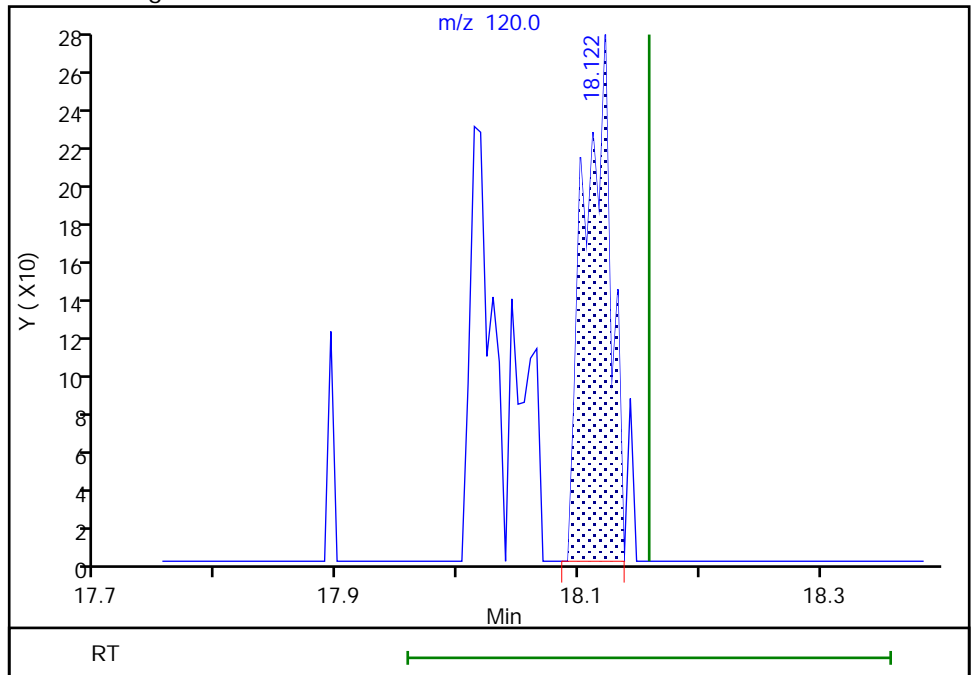
RT: 18.01
Area: 277
Amount: 0.028195
Amount Units: ppb v/v

Processing Integration Results



RT: 18.12
Area: 424
Amount: 0.028818
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 19:08:17

Audit Action: Assigned Compound ID

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-3-26 Lab Sample ID: 140-14390-14
 Matrix: Air Lab File ID: HB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:28
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-3-26 Lab Sample ID: 140-14390-14
 Matrix: Air Lab File ID: HB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:28
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P114.D
 Lims ID: 140-14390-A-14
 Client ID: BCK-3-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 01:55:30 ALS Bottle#: 14 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-018
 Misc. Info.: 140-14390-a-14
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:09:34 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:09:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.819	0.000	96	288397	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1563358	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1284217	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	809975	3.87	
6 Chlorodifluoromethane	51	3.682	3.682	0.000	50	13617	0.0576	M
8 Dichlorodifluoromethane	85	3.744	3.738	0.006	100	34404	0.0947	
31 Methylene Chloride	84	6.281	6.271	0.010	99	24077	0.2042	
47 Benzene	78	10.462	10.462	0.005	98	9031	0.0273	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P114.D

Injection Date: 27-Feb-2019 01:55:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-14

Lab Sample ID: 140-14390-14

Worklist Smp#: 18

Client ID: BCK-3-26

Purge Vol: 500.000 mL

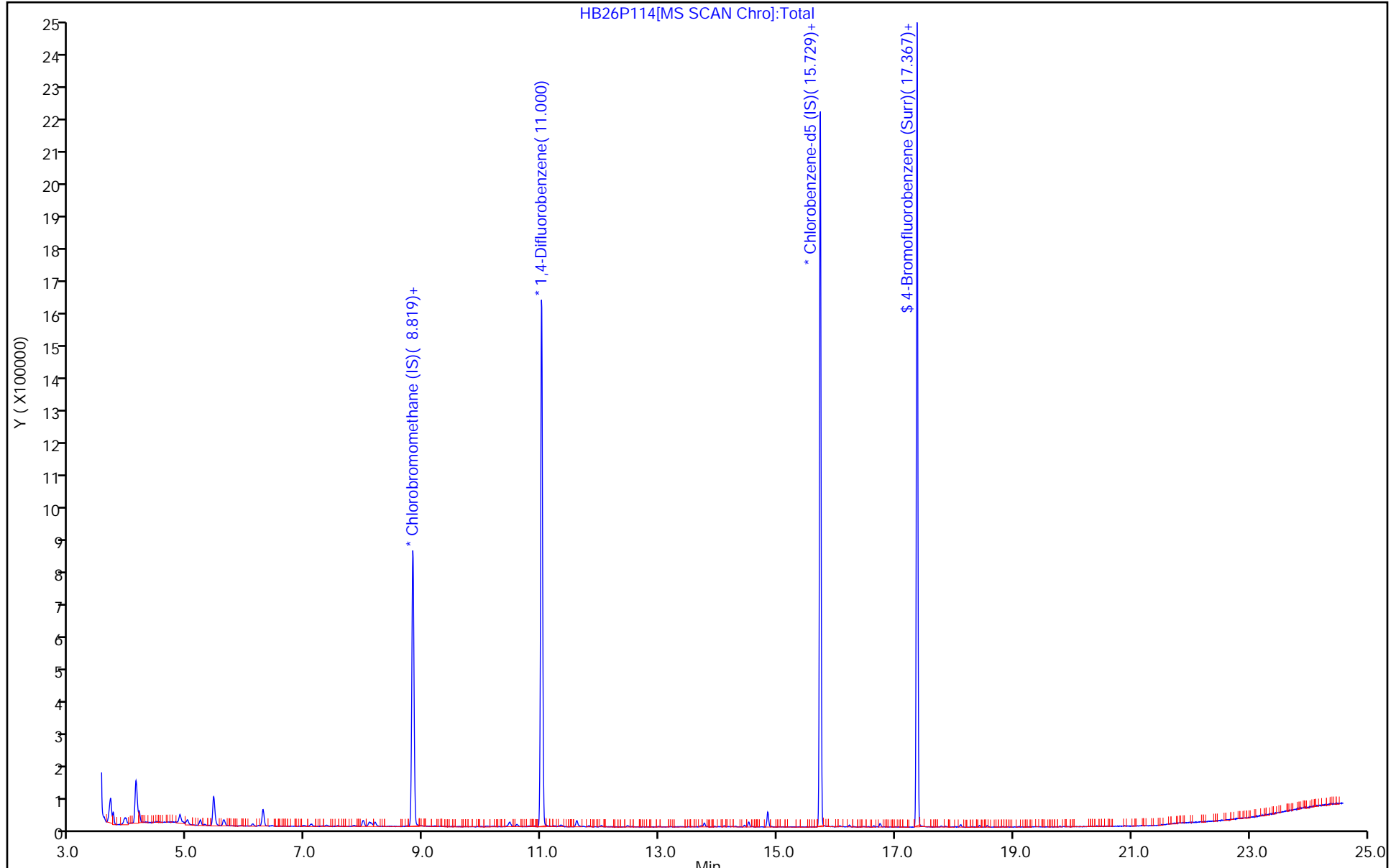
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P114.D
 Lims ID: 140-14390-A-14
 Client ID: BCK-3-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 01:55:30 ALS Bottle#: 14 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-018
 Misc. Info.: 140-14390-a-14
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:09:34 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:09:34

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.87	96.76

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P114.D

Injection Date: 27-Feb-2019 01:55:30

Instrument ID: MH

Lims ID: 140-14390-A-14

Lab Sample ID: 140-14390-14

Client ID: BCK-3-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

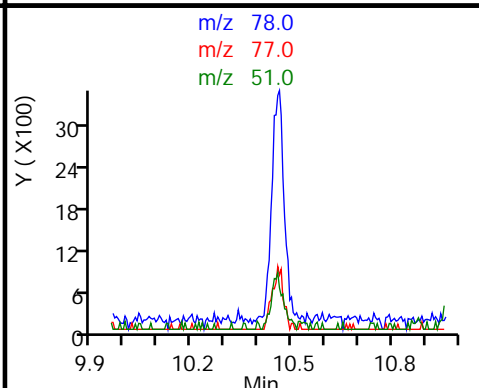
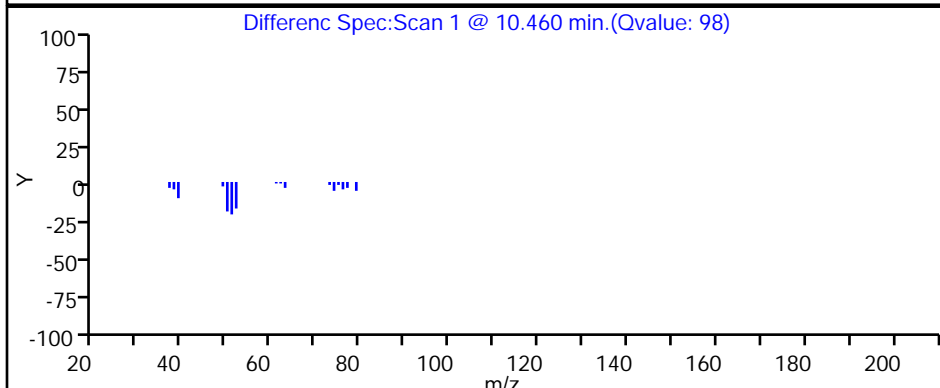
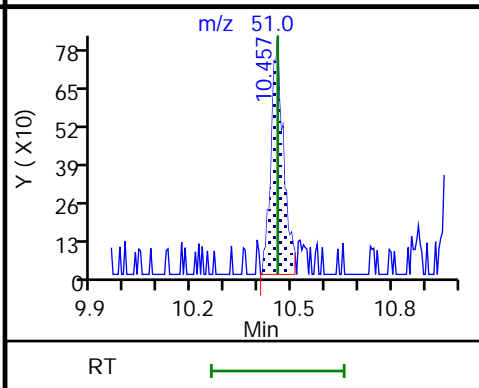
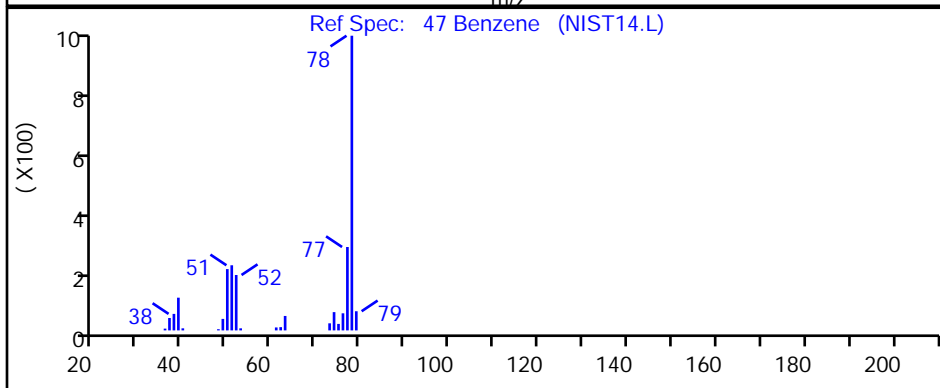
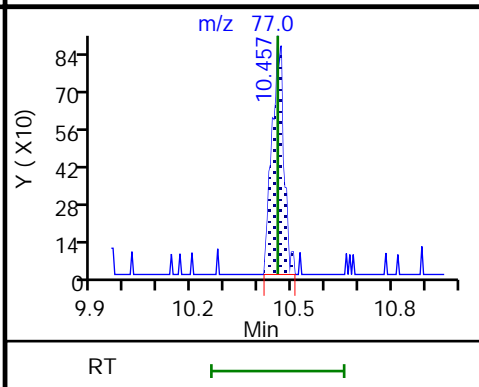
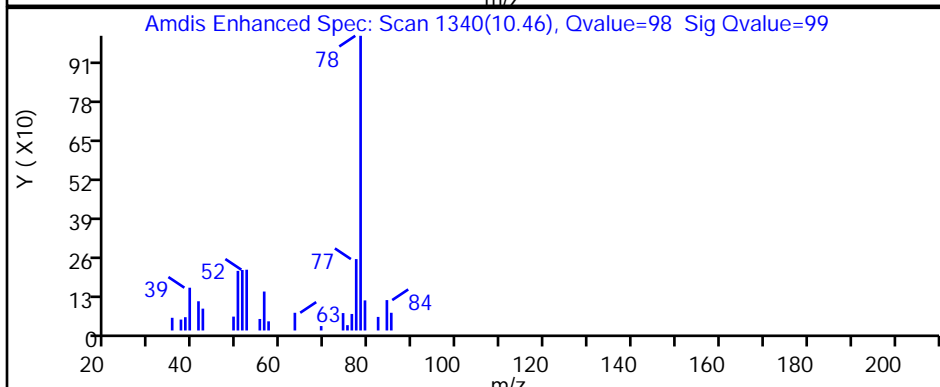
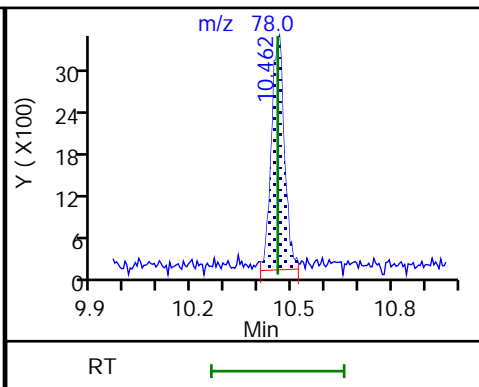
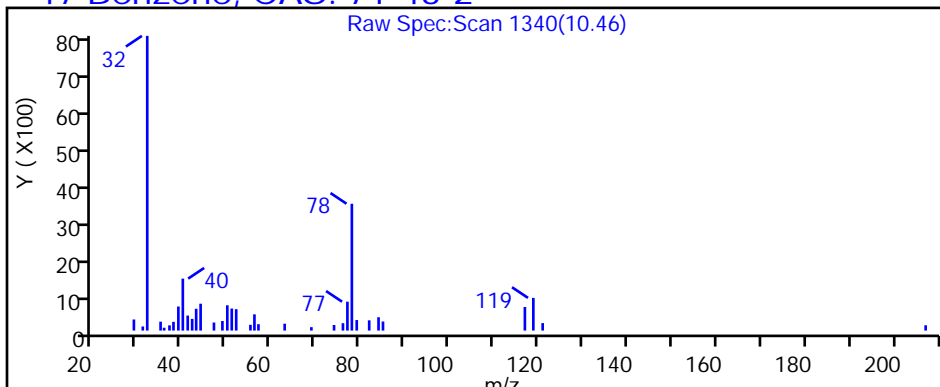
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P114.D

Injection Date: 27-Feb-2019 01:55:30

Instrument ID: MH

Lims ID: 140-14390-A-14

Lab Sample ID: 140-14390-14

Client ID: BCK-3-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

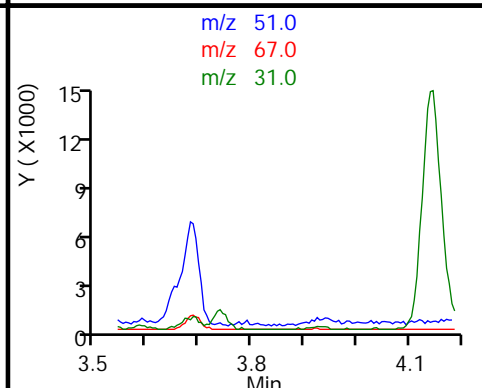
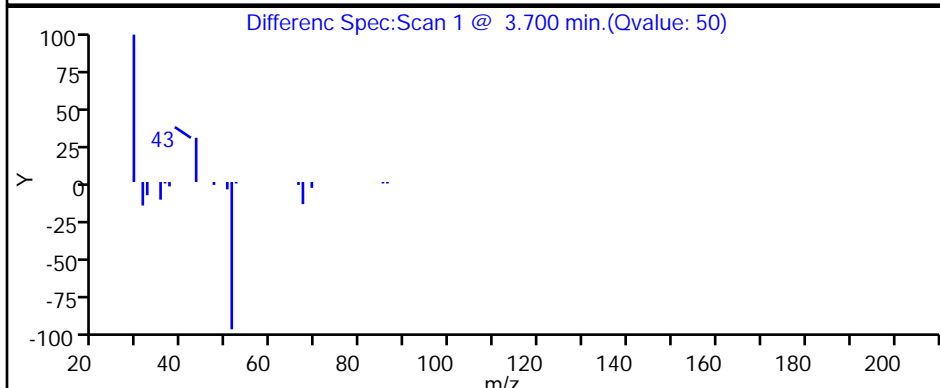
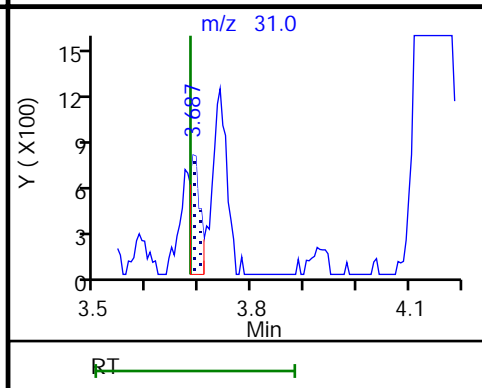
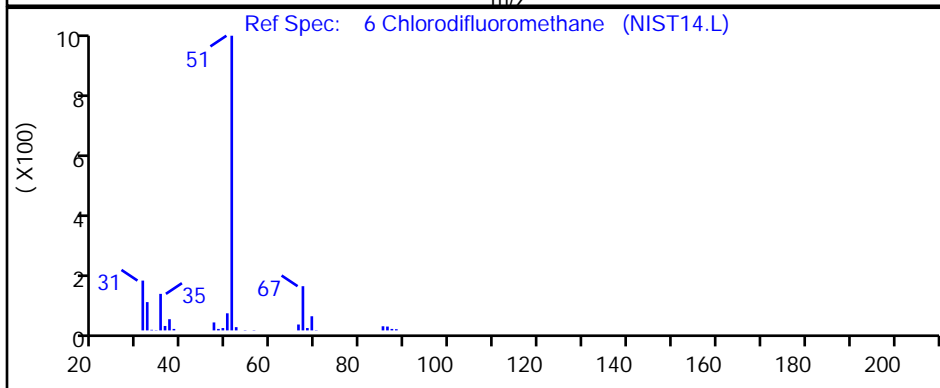
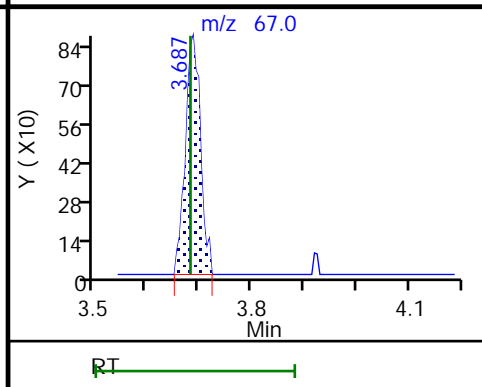
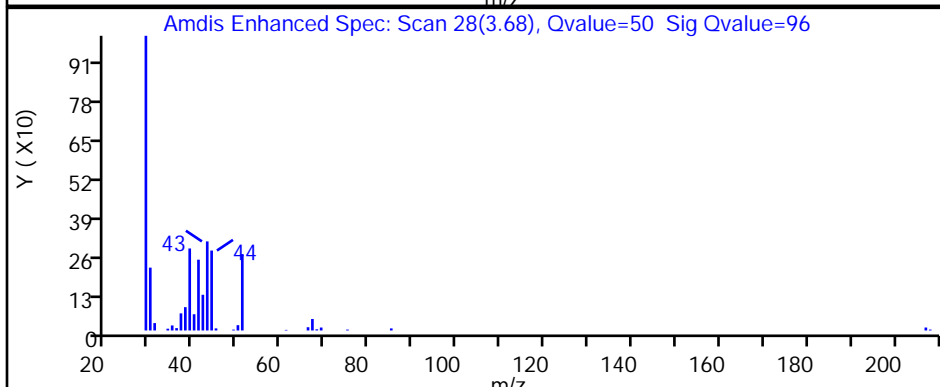
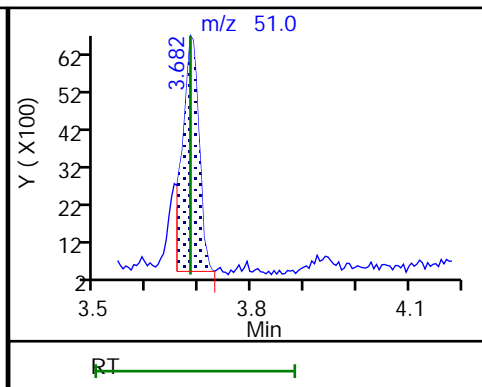
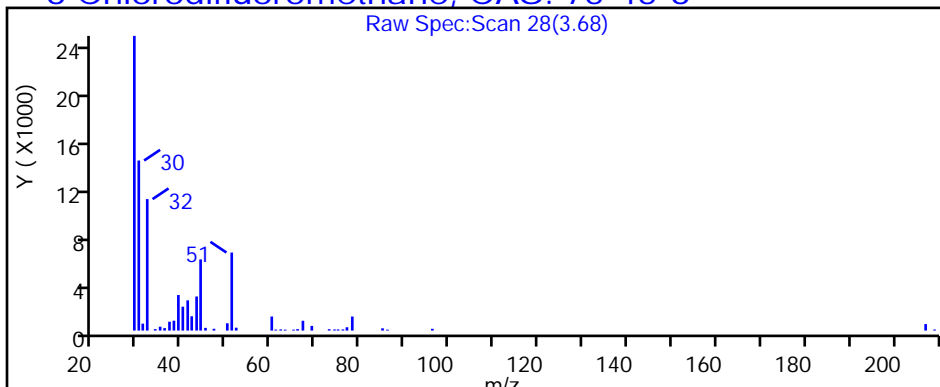
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P114.D

Injection Date: 27-Feb-2019 01:55:30

Instrument ID: MH

Lims ID: 140-14390-A-14

Lab Sample ID: 140-14390-14

Client ID: BCK-3-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

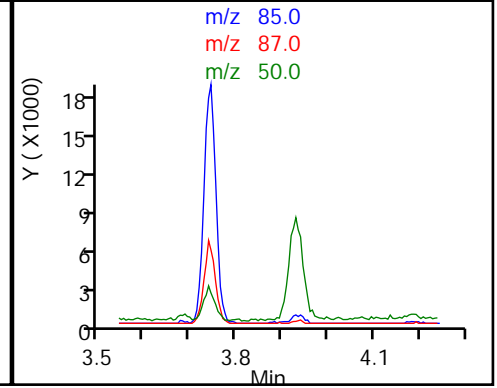
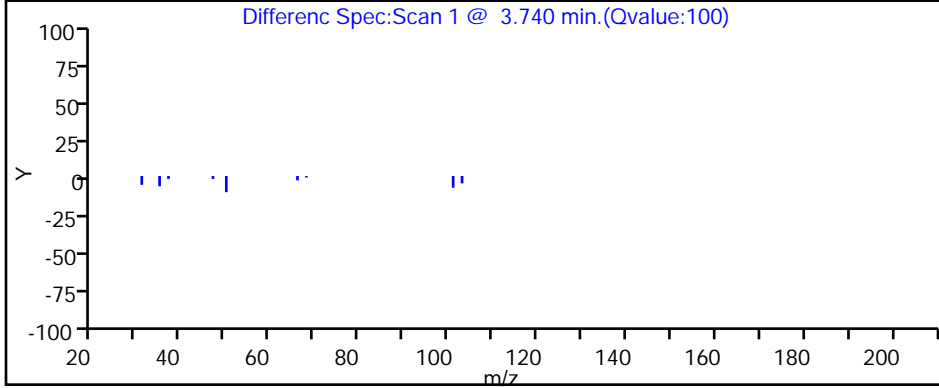
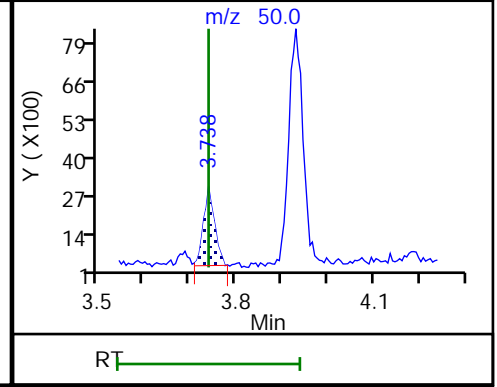
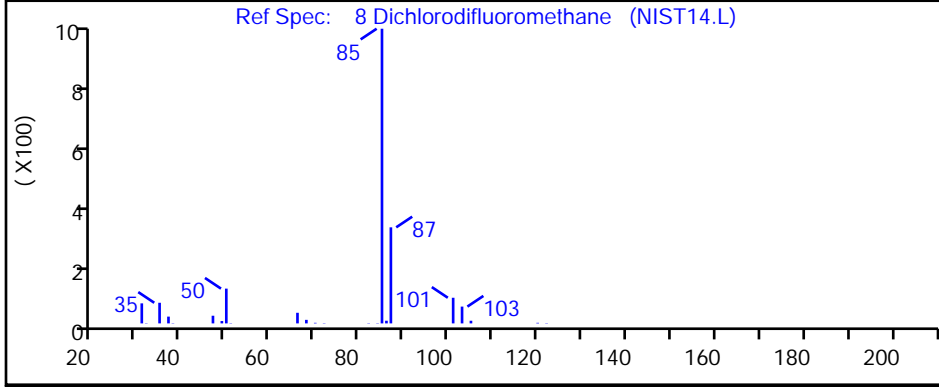
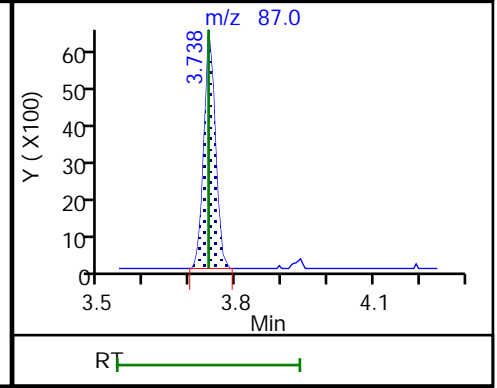
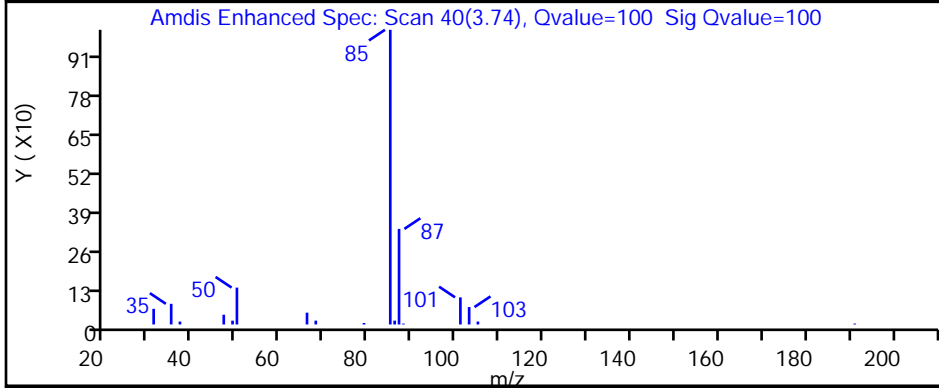
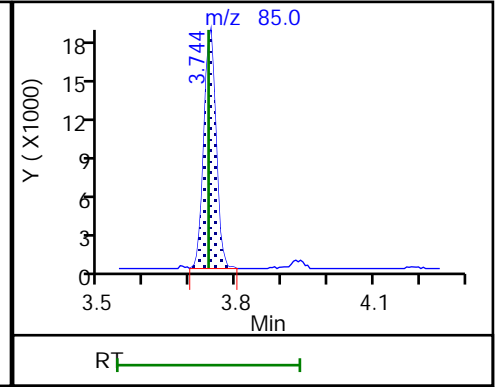
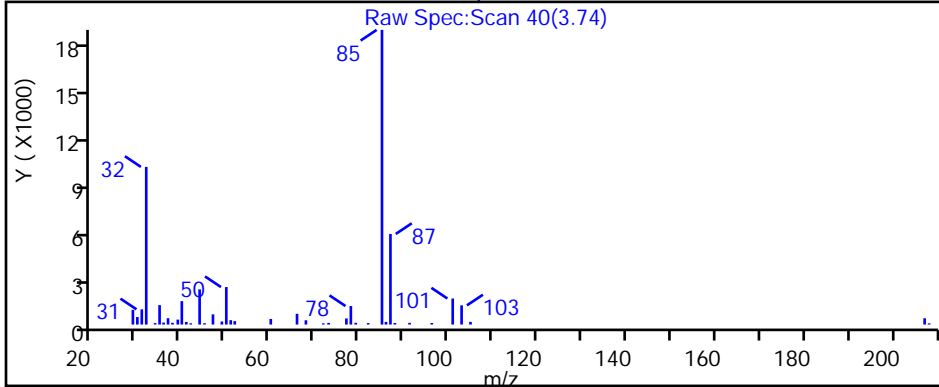
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P114.D

Injection Date: 27-Feb-2019 01:55:30

Instrument ID: MH

Lims ID: 140-14390-A-14

Lab Sample ID: 140-14390-14

Client ID: BCK-3-26

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

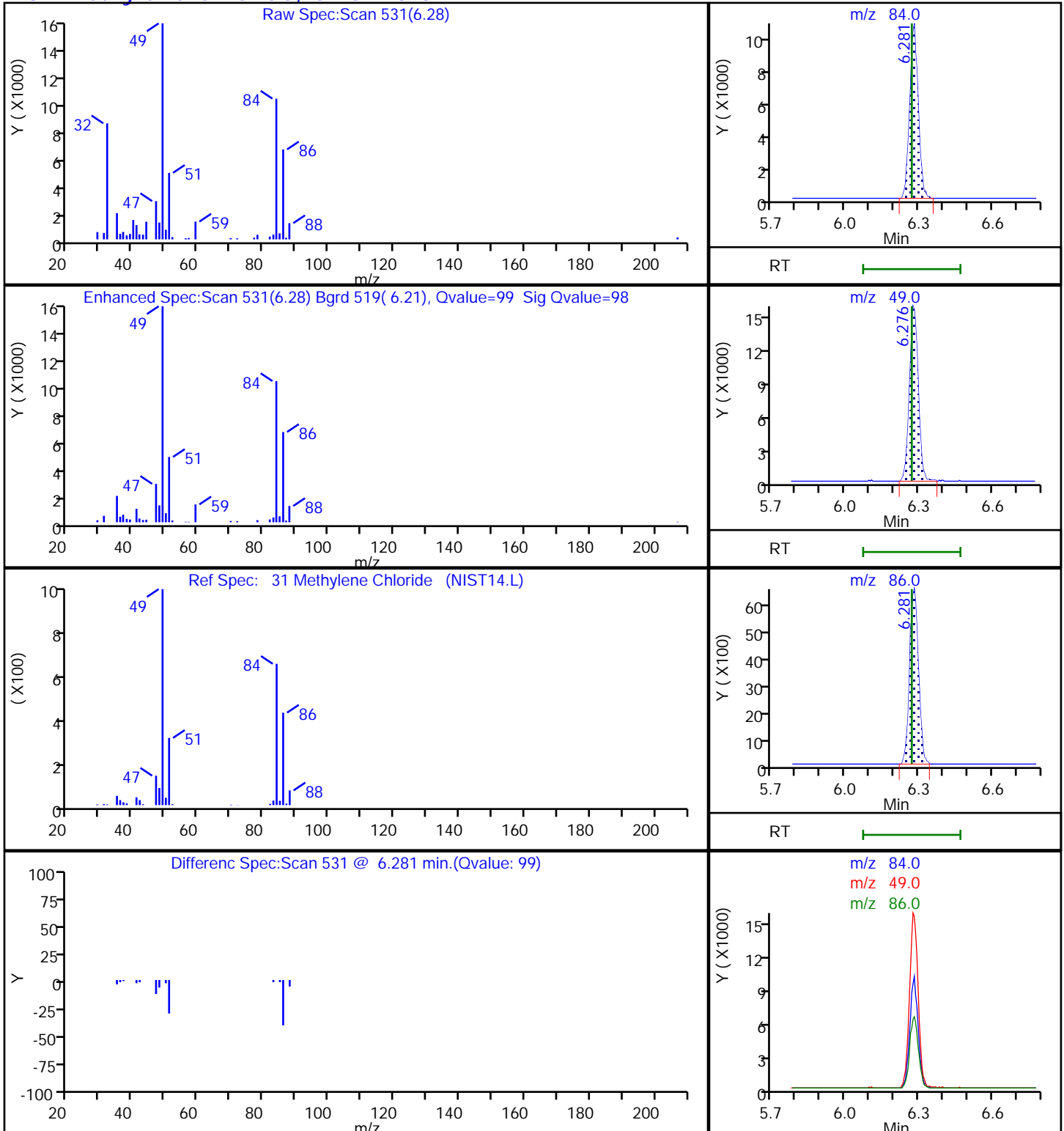
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

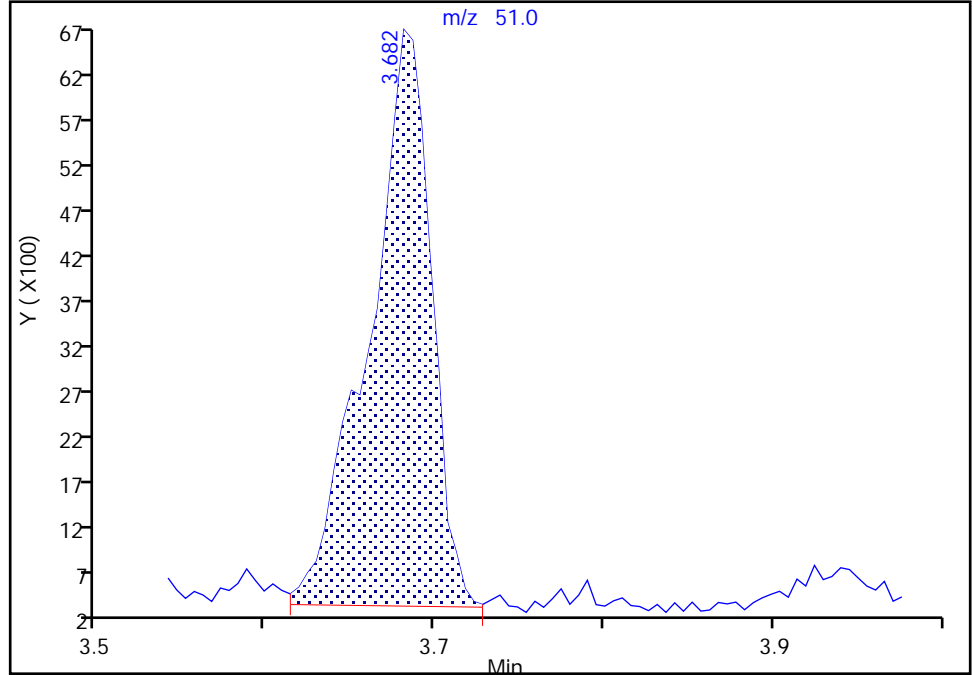
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Injection Date: 27-Feb-2019 01:55:30 Instrument ID: MH
Lims ID: 140-14390-A-14 Lab Sample ID: 140-14390-14
Client ID: BCK-3-26
Operator ID: HMT ALS Bottle#: 14 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

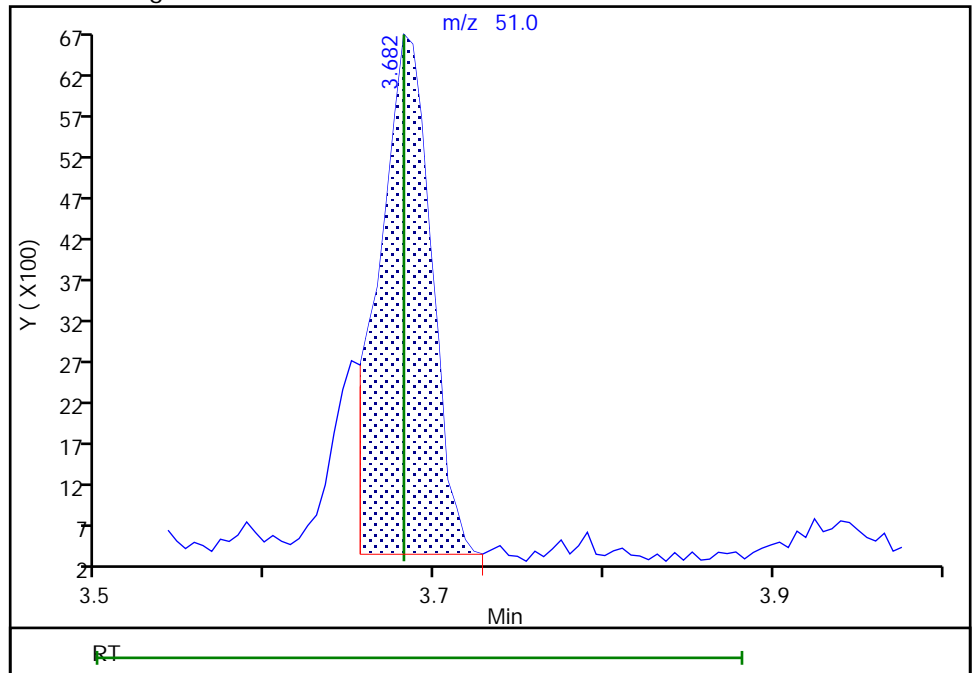
RT: 3.68
Area: 16138
Amount: 0.068244
Amount Units: ppb v/v

Processing Integration Results



RT: 3.68
Area: 13617
Amount: 0.057583
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 19:09:03
Audit Action: Manually Integrated

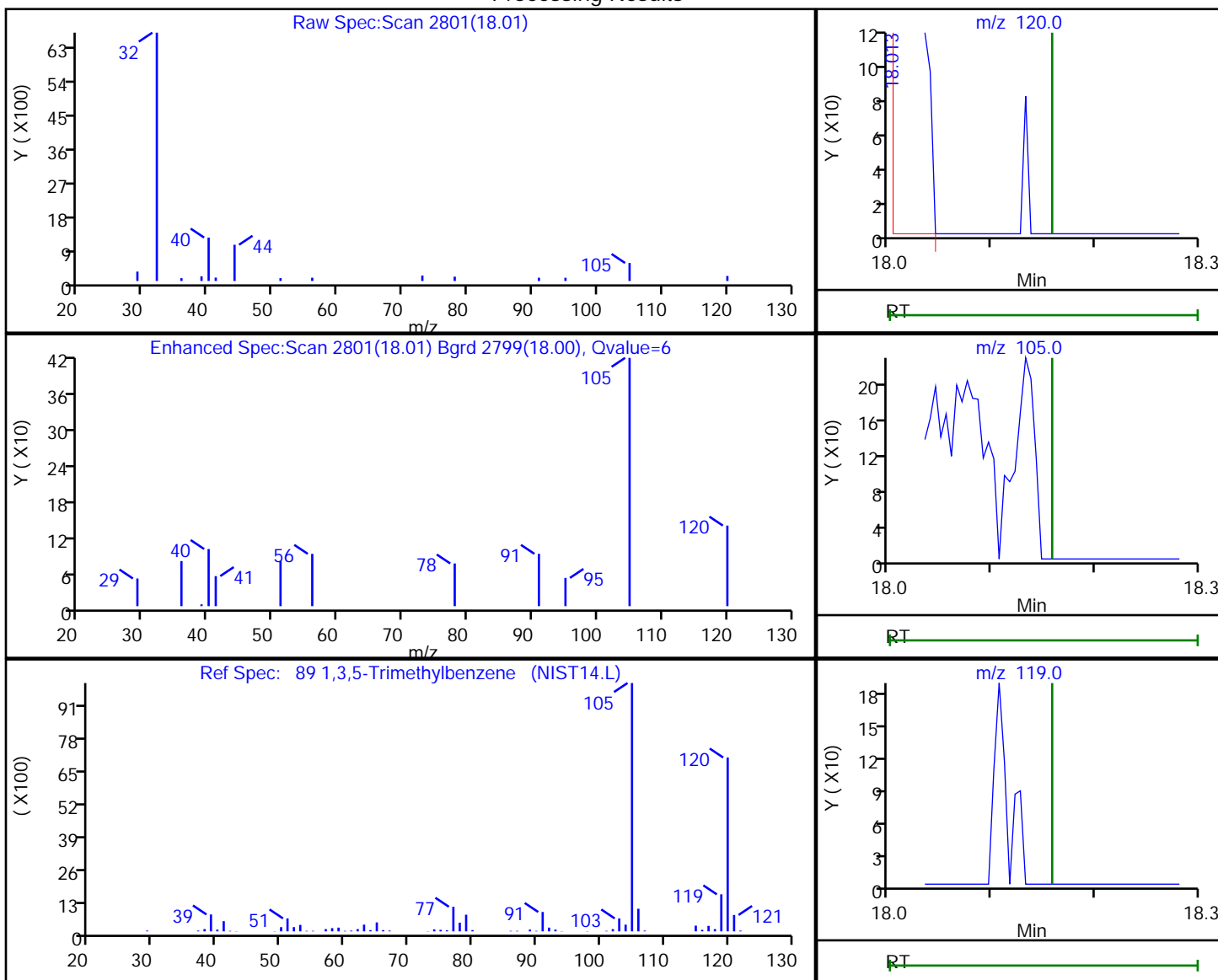
Audit Reason: Split Peak

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P114.D
 Injection Date: 27-Feb-2019 01:55:30 Instrument ID: MH
 Lims ID: 140-14390-A-14 Lab Sample ID: 140-14390-14
 Client ID: BCK-3-26
 Operator ID: HMT ALS Bottle#: 14 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Processing Results



RT	Mass	Response	Amount
18.01	120.00	198	0.027933
18.01	105.00	572	
18.16	119.00	0	

Reviewer: khachitpongpanits, 27-Feb-2019 19:09:28

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-4-26 Lab Sample ID: 140-14390-15
 Matrix: Air Lab File ID: HB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:35
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 02:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.27	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-4-26 Lab Sample ID: 140-14390-15
 Matrix: Air Lab File ID: HB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:35
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 02:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.94	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P115.D
 Lims ID: 140-14390-A-15
 Client ID: BCK-4-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 02:48:30 ALS Bottle#: 15 Worklist Smp#: 19
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-019
 Misc. Info.: 140-14390-a-15
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:10:14 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:10:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.819	0.005	96	292070	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1594766	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1318806	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	831460	3.87	
6 Chlorodifluoromethane	51	3.687	3.687	0.005	97	12738	0.0532	M
8 Dichlorodifluoromethane	85	3.743	3.738	0.005	100	33381	0.0907	
31 Methylene Chloride	84	6.276	6.271	0.005	98	17235	0.1443	
47 Benzene	78	10.452	10.462	-0.005	97	9194	0.0273	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P115.D

Injection Date: 27-Feb-2019 02:48:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-15

Lab Sample ID: 140-14390-15

Worklist Smp#: 19

Client ID: BCK-4-26

Purge Vol: 500.000 mL

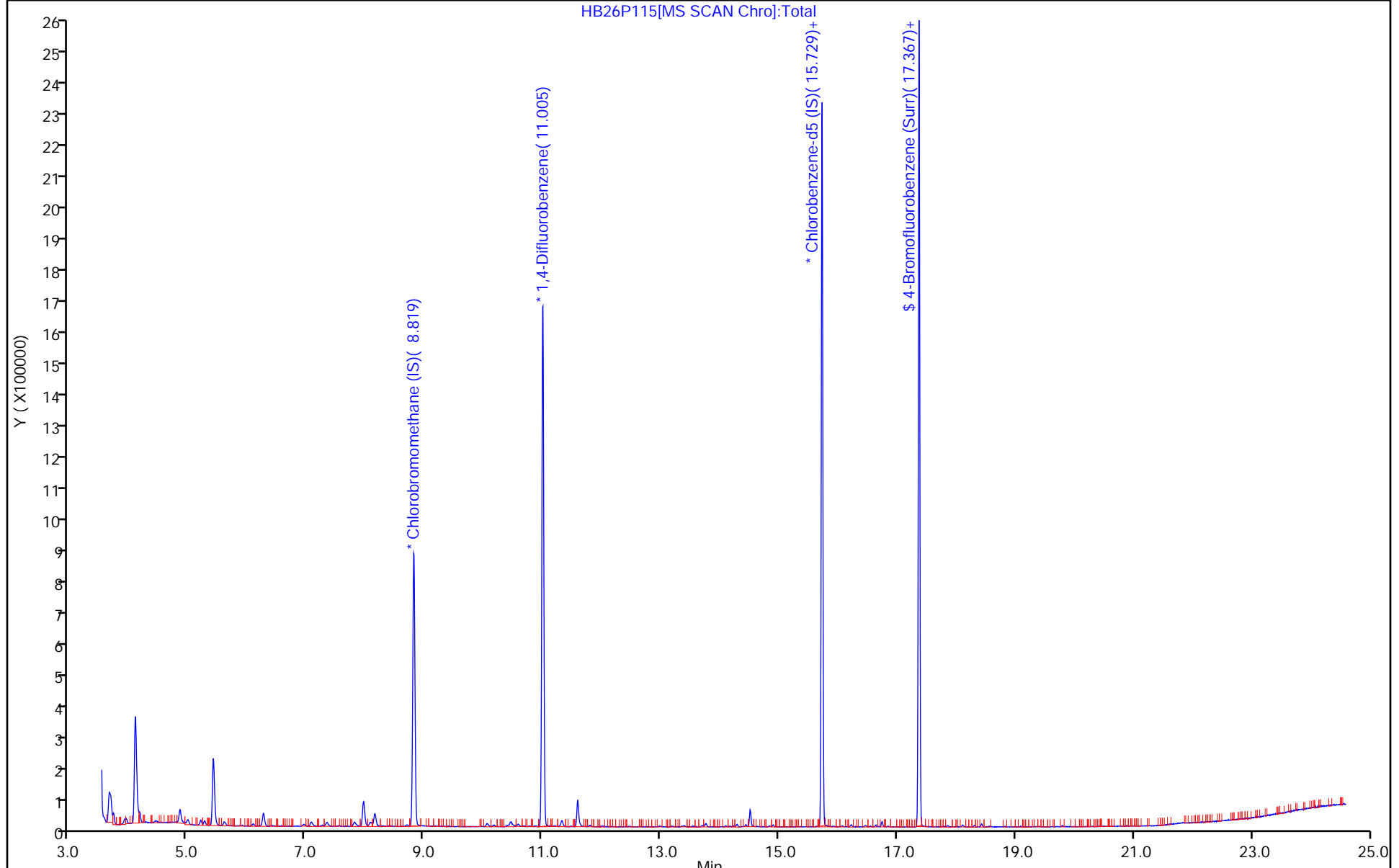
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



HB26P115[MS SCAN Chro]:Total

TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P115.D
 Lims ID: 140-14390-A-15
 Client ID: BCK-4-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 02:48:30 ALS Bottle#: 15 Worklist Smp#: 19
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-019
 Misc. Info.: 140-14390-a-15
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:10:14 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:10:14

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.87	96.72

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P115.D

Injection Date: 27-Feb-2019 02:48:30

Instrument ID: MH

Lims ID: 140-14390-A-15

Lab Sample ID: 140-14390-15

Client ID: BCK-4-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

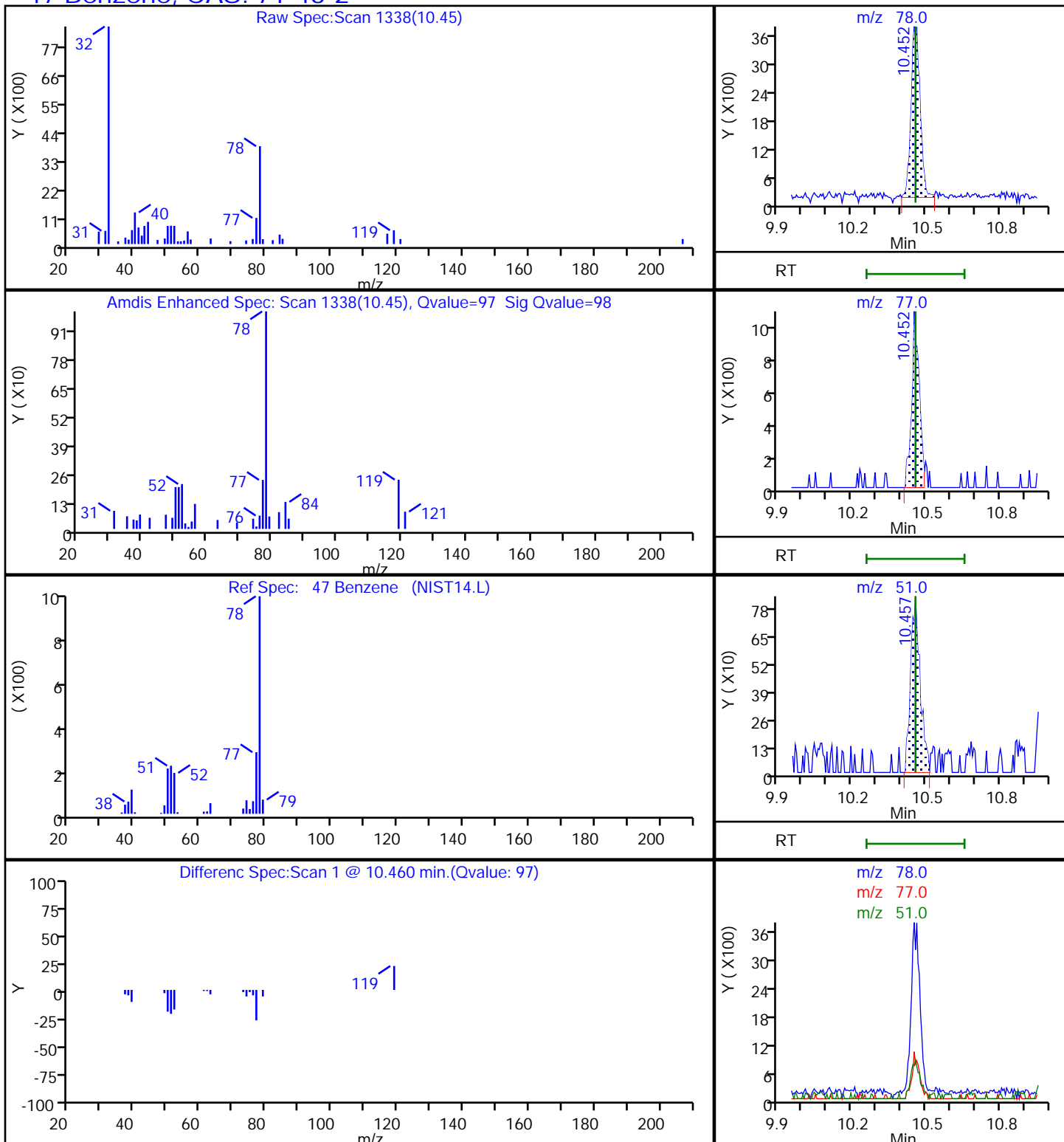
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P115.D

Injection Date: 27-Feb-2019 02:48:30

Instrument ID: MH

Lims ID: 140-14390-A-15

Lab Sample ID: 140-14390-15

Client ID: BCK-4-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

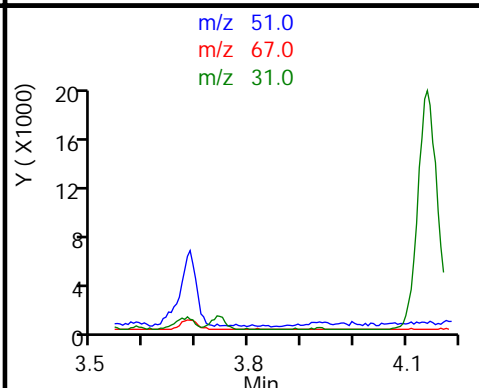
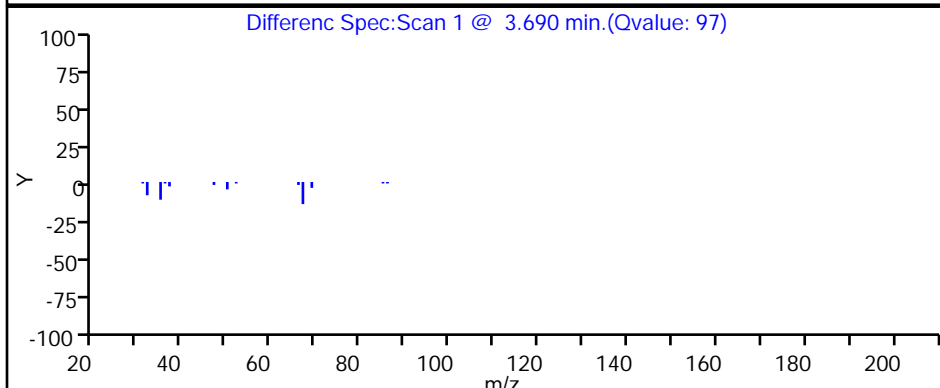
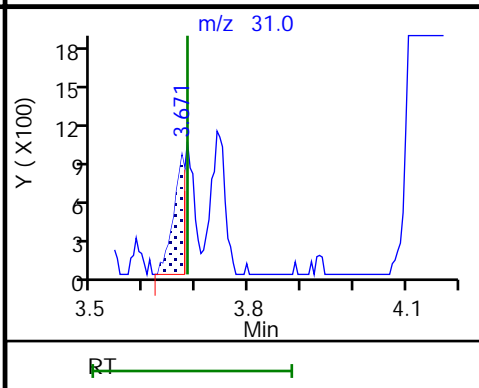
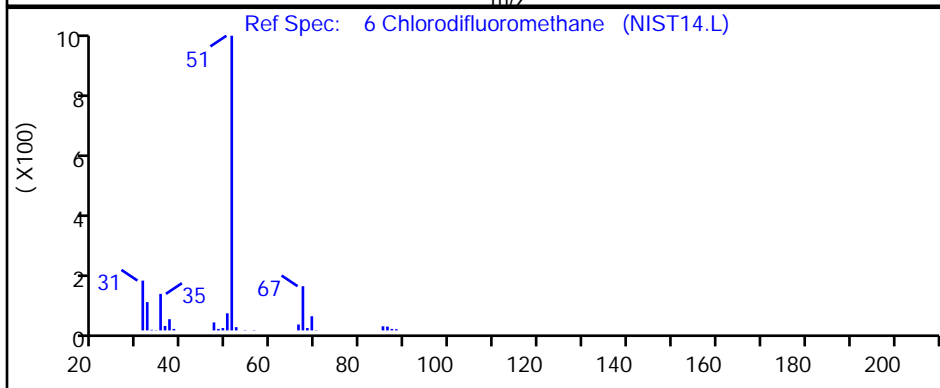
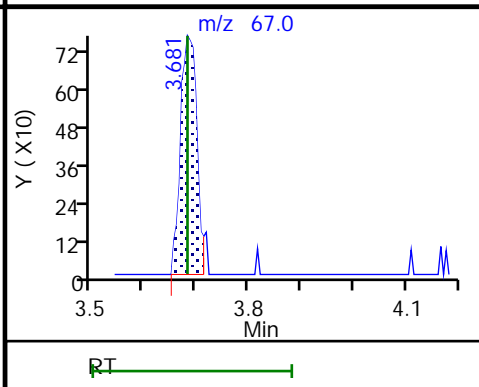
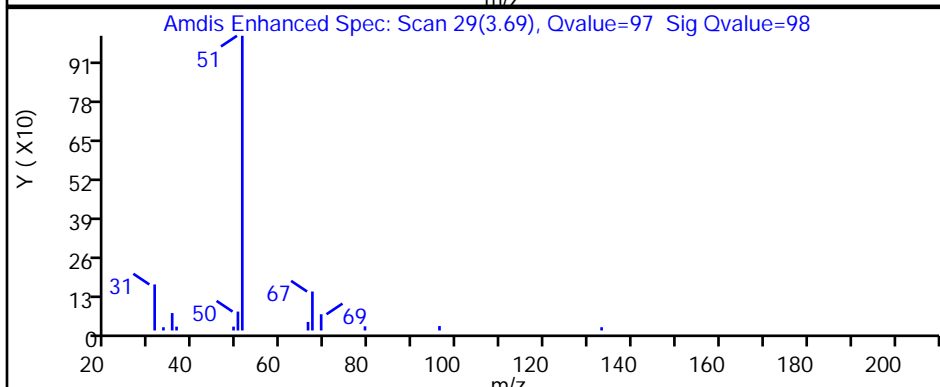
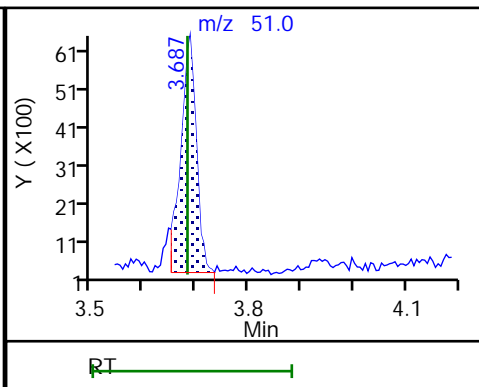
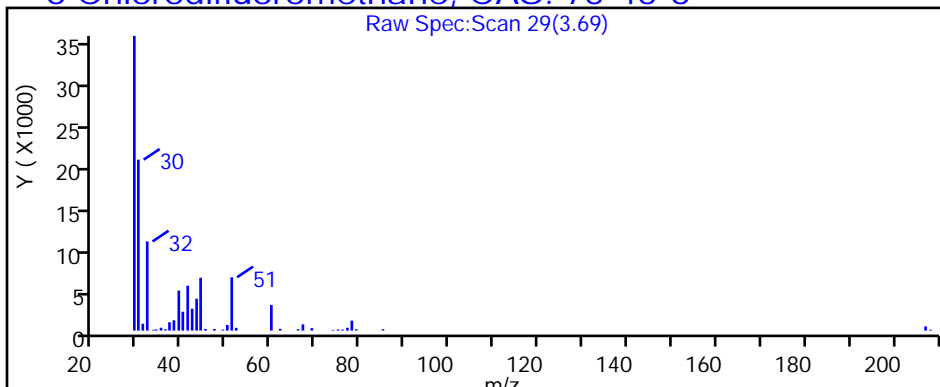
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P115.D

Injection Date: 27-Feb-2019 02:48:30

Instrument ID: MH

Lims ID: 140-14390-A-15

Lab Sample ID: 140-14390-15

Client ID: BCK-4-26

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

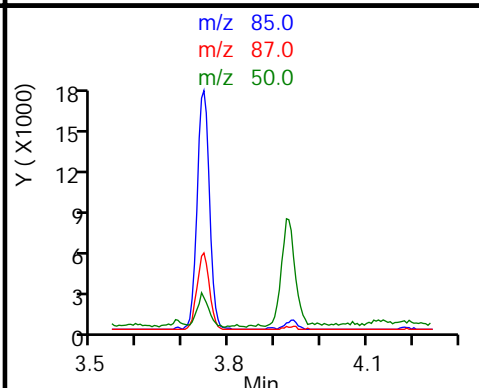
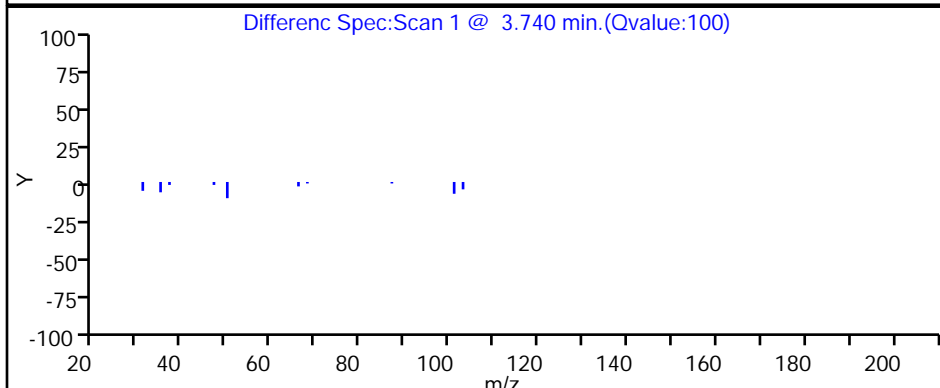
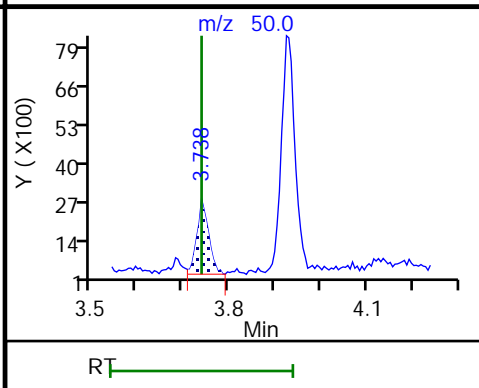
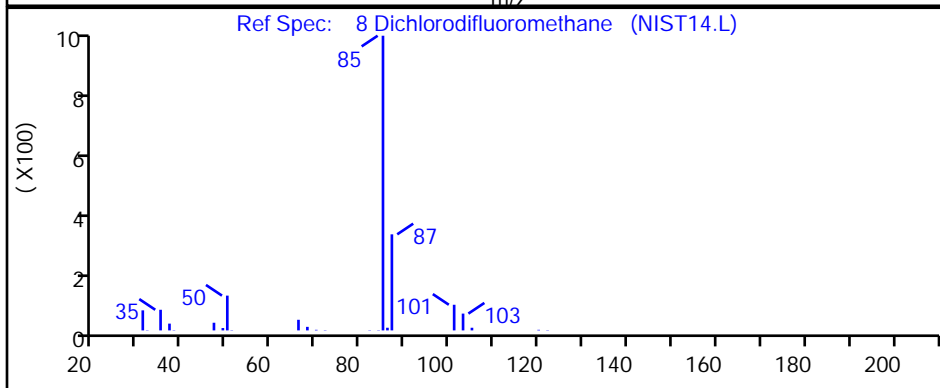
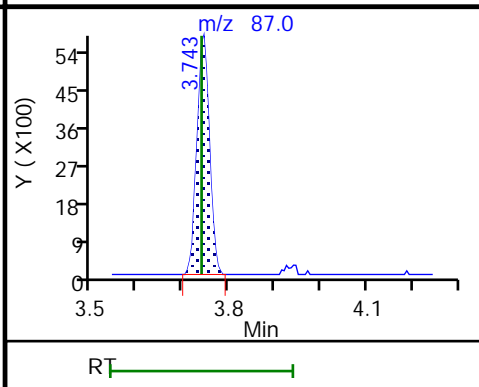
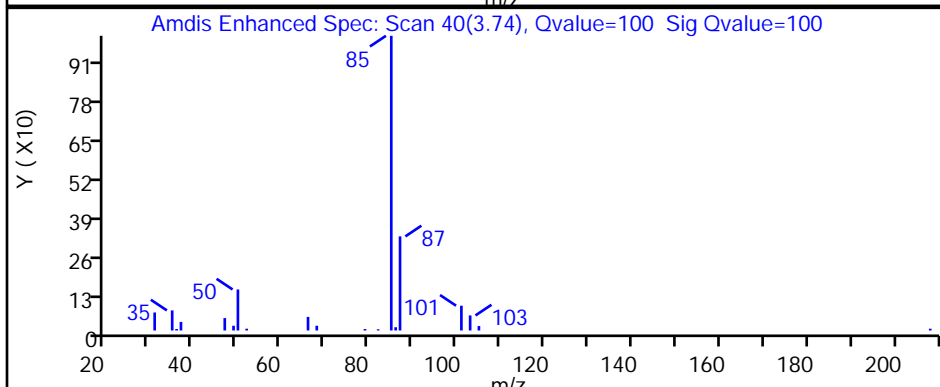
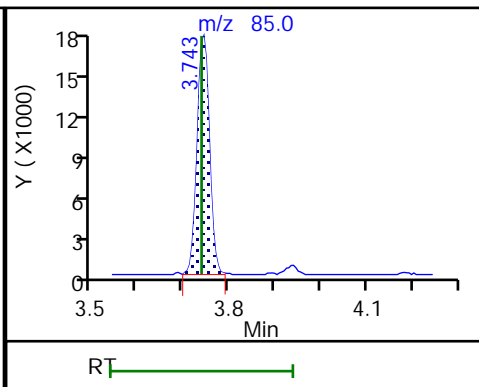
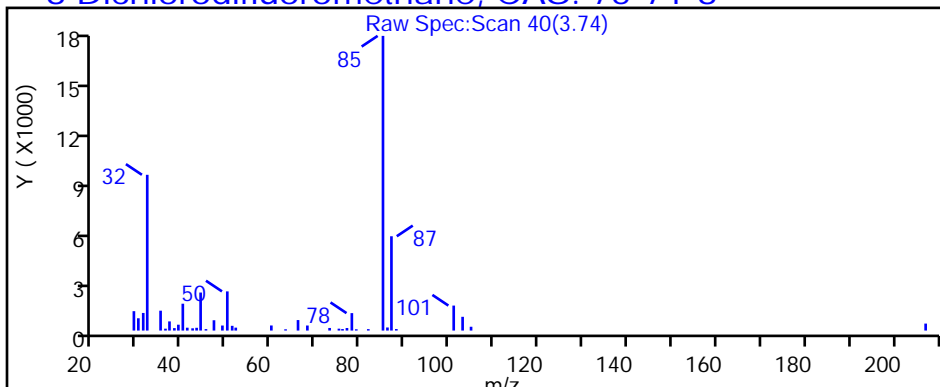
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P115.D

Injection Date: 27-Feb-2019 02:48:30

Instrument ID: MH

Lims ID: 140-14390-A-15

Lab Sample ID: 140-14390-15

Client ID: BCK-4-26

Operator ID: HMT

ALS Bottle#: 15 Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

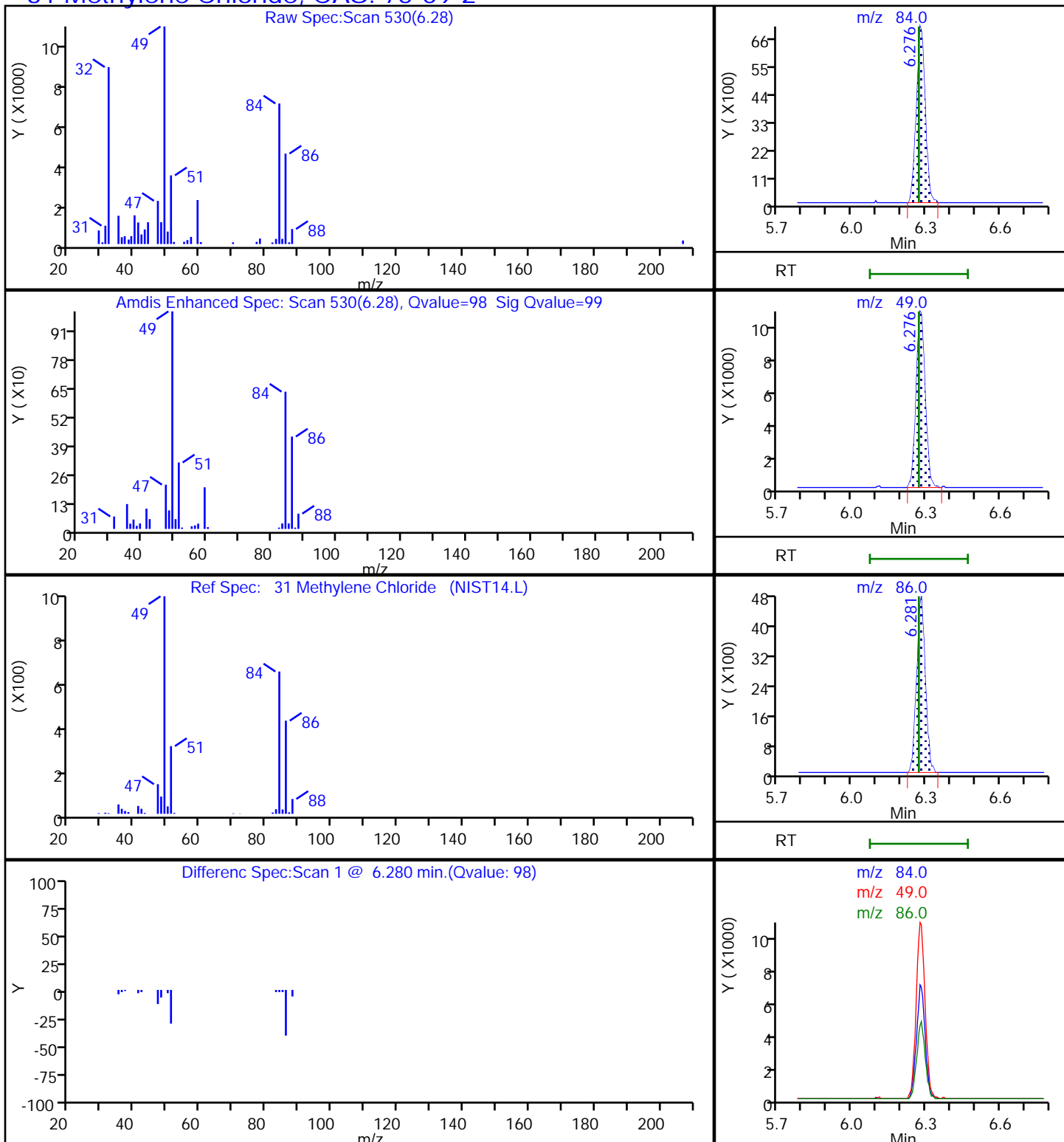
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

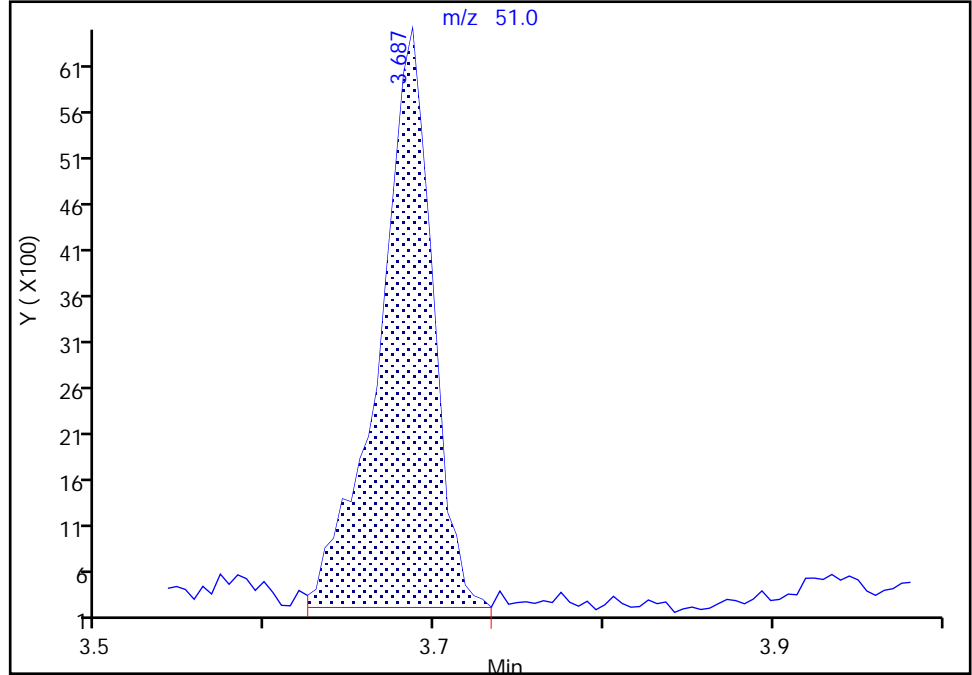
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P115.D
Injection Date: 27-Feb-2019 02:48:30 Instrument ID: MH
Lims ID: 140-14390-A-15 Lab Sample ID: 140-14390-15
Client ID: BCK-4-26
Operator ID: HMT ALS Bottle#: 15 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

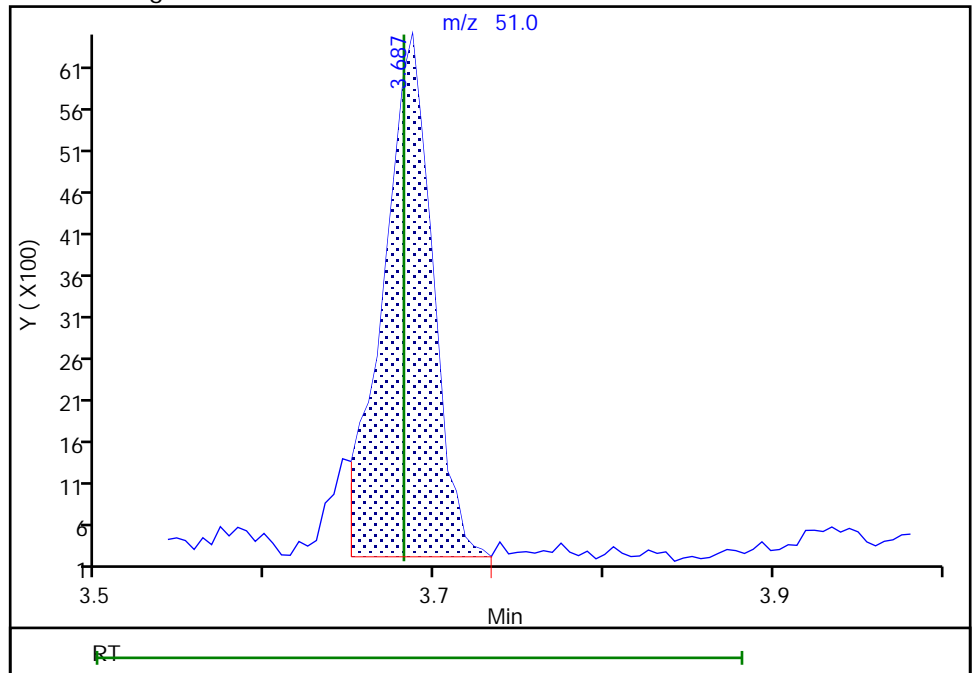
RT: 3.69
Area: 13633
Amount: 0.056926
Amount Units: ppb v/v

Processing Integration Results



RT: 3.69
Area: 12738
Amount: 0.053188
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 19:09:51

Audit Action: Split an Integrated Peak

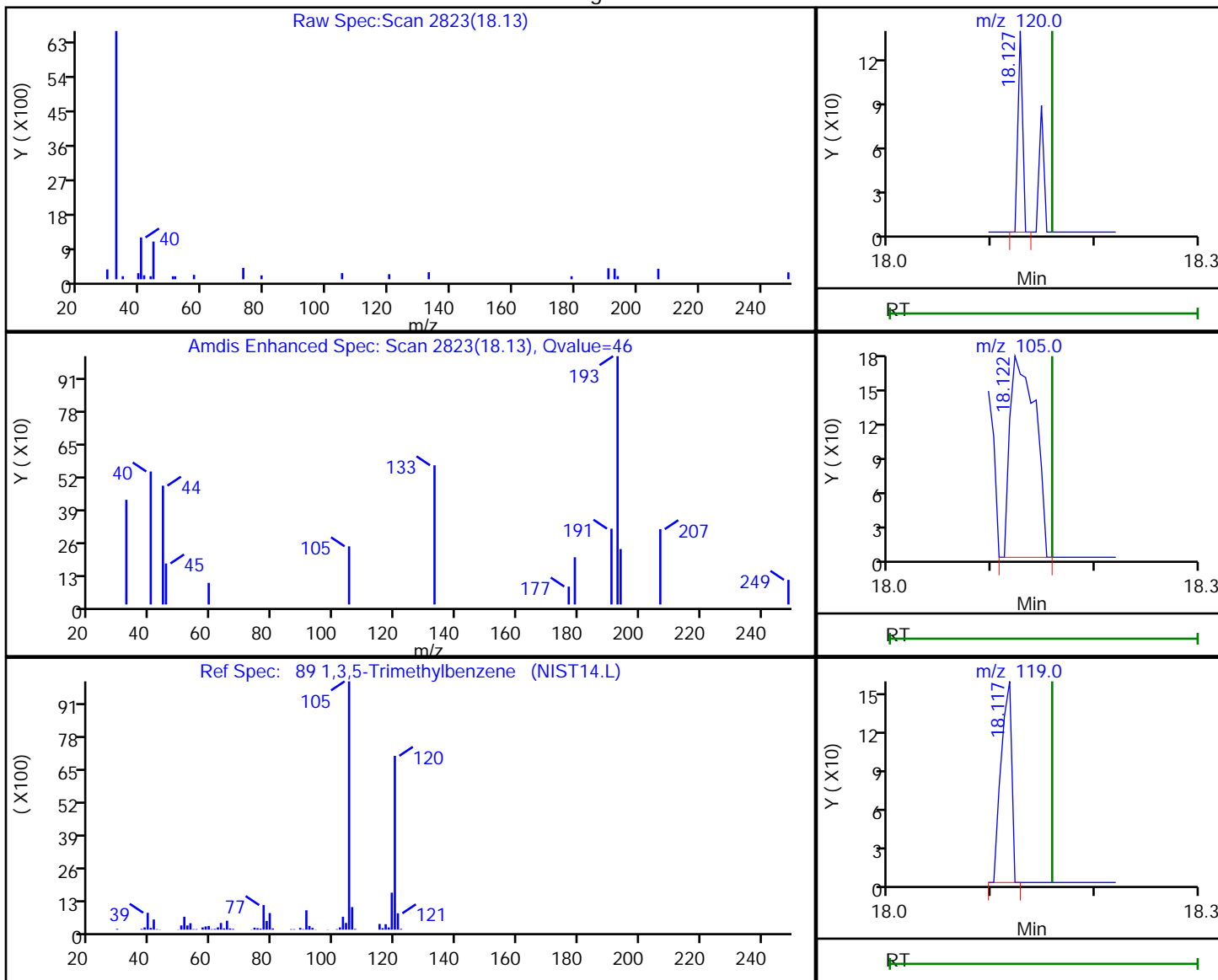
Audit Reason: Split Peak

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P115.D
 Injection Date: 27-Feb-2019 02:48:30 Instrument ID: MH
 Lims ID: 140-14390-A-15 Lab Sample ID: 140-14390-15
 Client ID: BCK-4-26
 Operator ID: HMT ALS Bottle#: 15 Worklist Smp#: 19
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Processing Results



RT	Mass	Response	Amount
18.13	120.00	42	0.027208
18.12	105.00	305	
18.12	119.00	113	

Reviewer: khachitpongpanits, 27-Feb-2019 19:10:08

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-001-C-26 Lab Sample ID: 140-14390-16
 Matrix: Air Lab File ID: HB26P116D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:51
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.26	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.1		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-001-C-26 Lab Sample ID: 140-14390-16
 Matrix: Air Lab File ID: HB26P116D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:51
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.91	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	11		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.71	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P116D.D
 Lims ID: 140-14390-A-16
 Client ID: IA-001-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 03:41:30 ALS Bottle#: 16 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-020
 Misc. Info.: 140-14390-a-16
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:11:40 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:11:40

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.819	0.005	96	282998	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1535197	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1298941	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	838246	3.96	
6 Chlorodifluoromethane	51	3.687	3.687	0.005	41	11965	0.0516	M
8 Dichlorodifluoromethane	85	3.743	3.738	0.005	100	32963	0.0925	
31 Methylene Chloride	84	6.276	6.271	0.005	97	72541	0.6269	
47 Benzene	78	10.457	10.462	0.000	96	10773	0.0332	
65 Toluene	91	13.765	13.760	0.005	92	41522	0.1123	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	18704	0.0515	
89 1,3,5-Trimethylbenzene	120	18.132	18.122	-0.026	90	413	0.0289	
S 121 Xylenes, Total	100				0		0.0515	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P116D.D

Injection Date: 27-Feb-2019 03:41:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-16

Lab Sample ID: 140-14390-16

Worklist Smp#: 20

Client ID: IA-001-C-26

Purge Vol: 500.000 mL

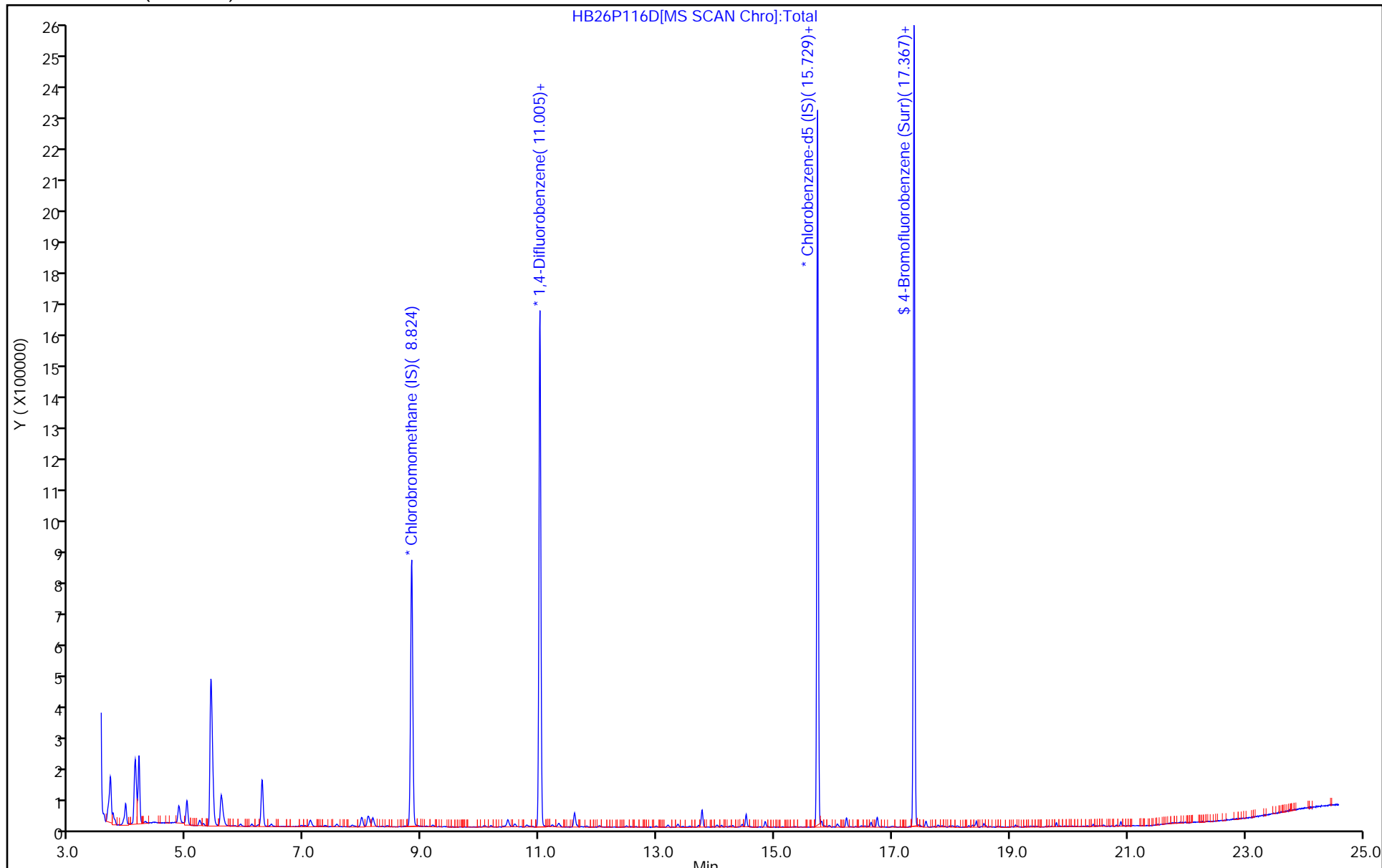
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P116D.D
 Lims ID: 140-14390-A-16
 Client ID: IA-001-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 03:41:30 ALS Bottle#: 16 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-020
 Misc. Info.: 140-14390-a-16
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 19:11:40 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 19:11:40

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.96	99.01

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P116D.D

Injection Date: 27-Feb-2019 03:41:30

Instrument ID: MH

Lims ID: 140-14390-A-16

Lab Sample ID: 140-14390-16

Client ID: IA-001-C-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

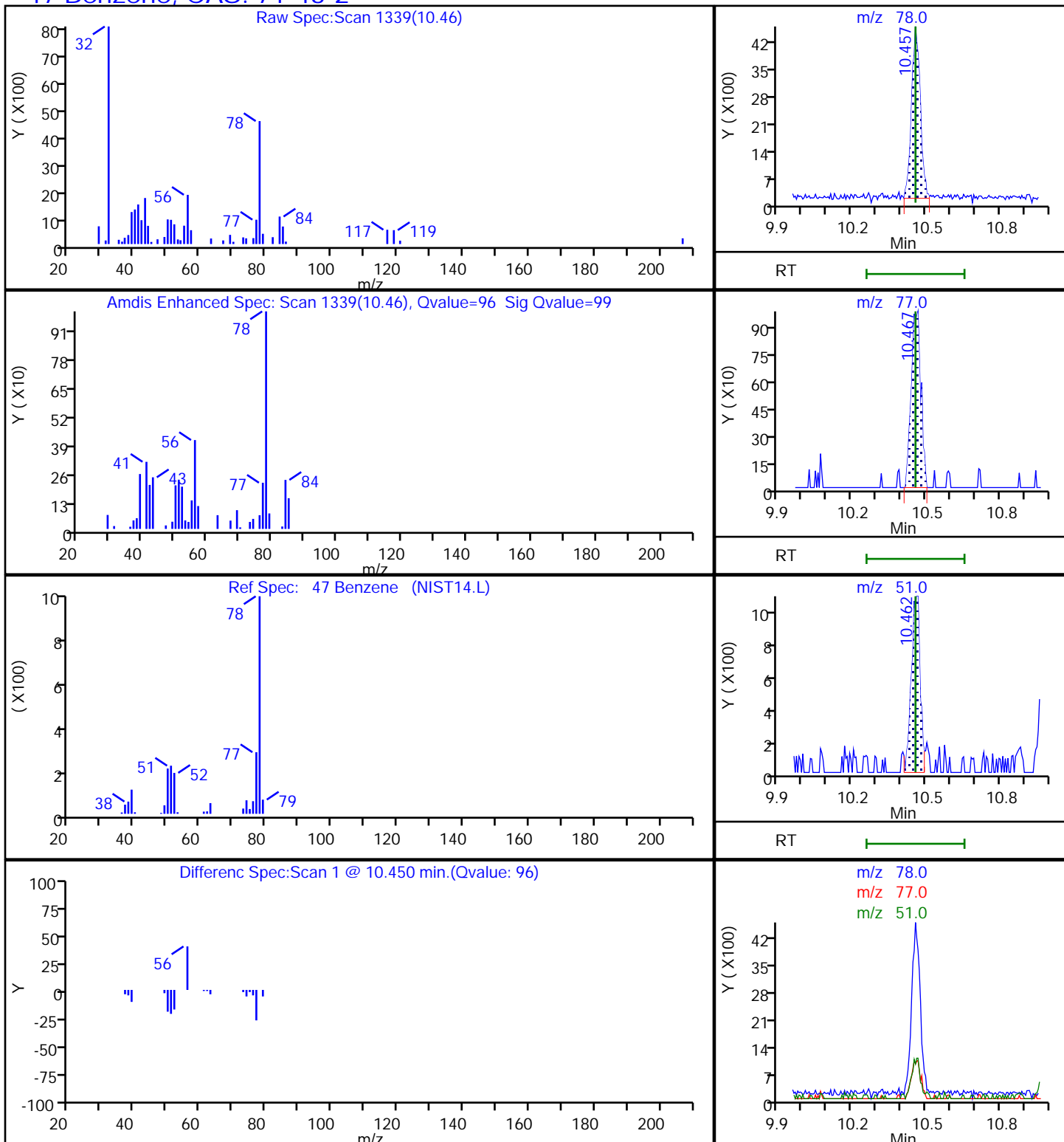
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P116D.D

Injection Date: 27-Feb-2019 03:41:30

Instrument ID: MH

Lims ID: 140-14390-A-16

Lab Sample ID: 140-14390-16

Client ID: IA-001-C-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

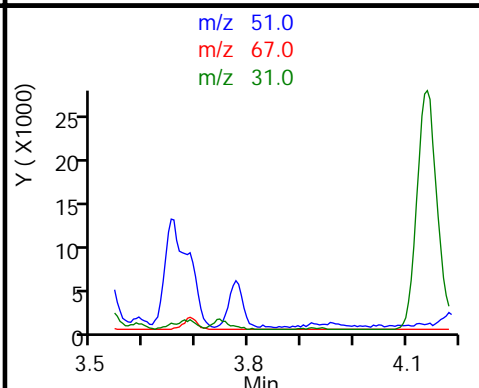
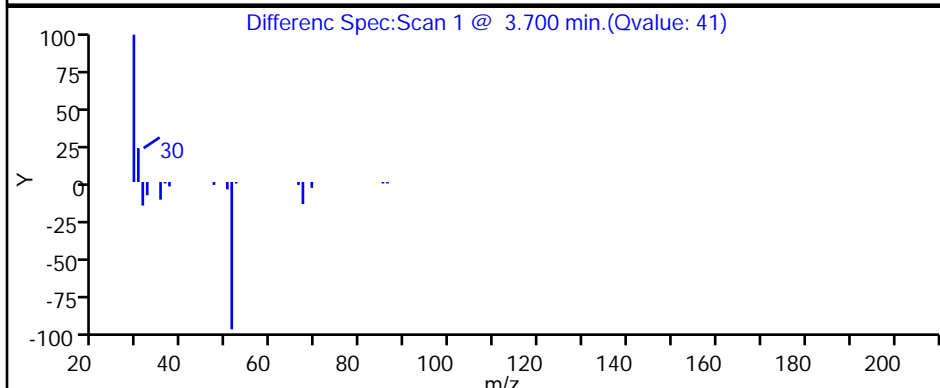
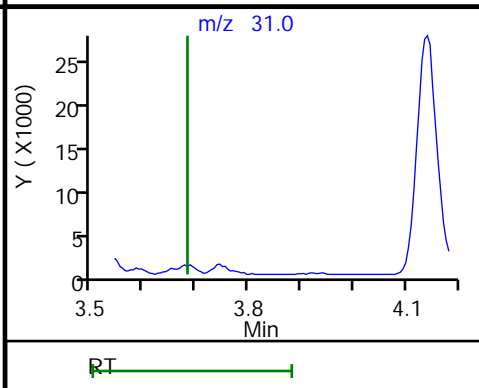
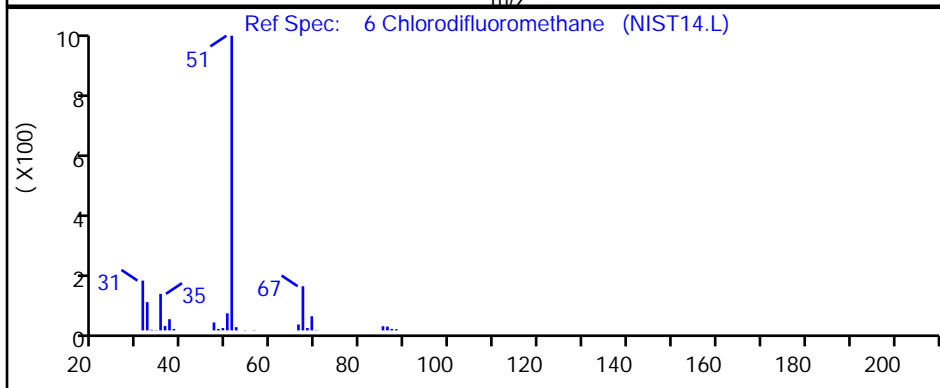
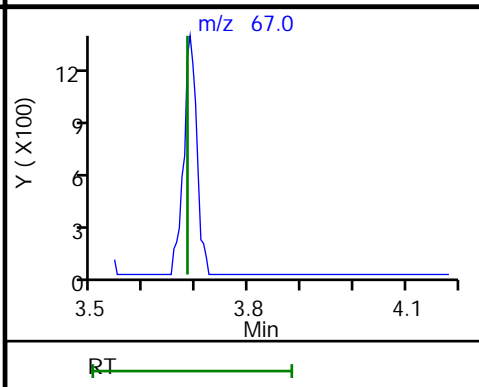
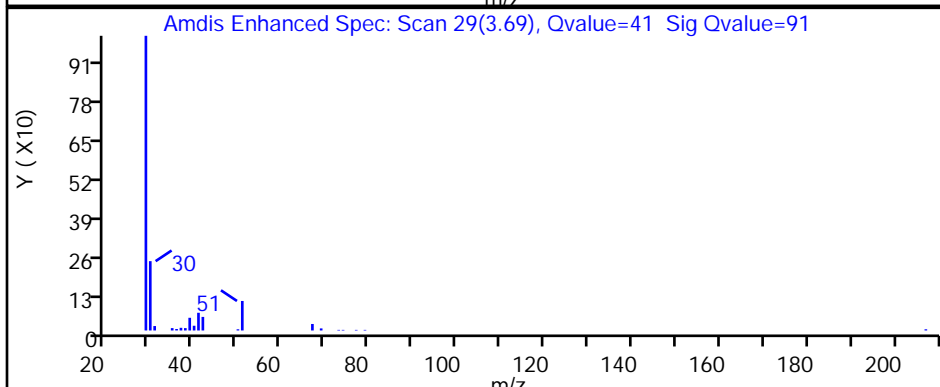
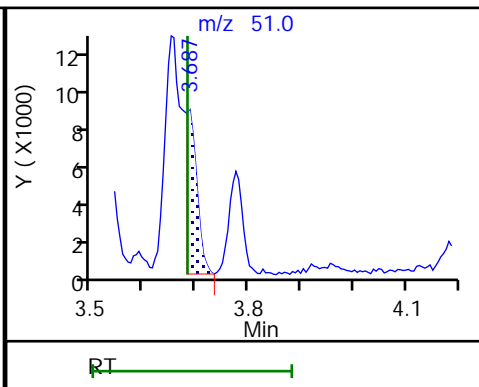
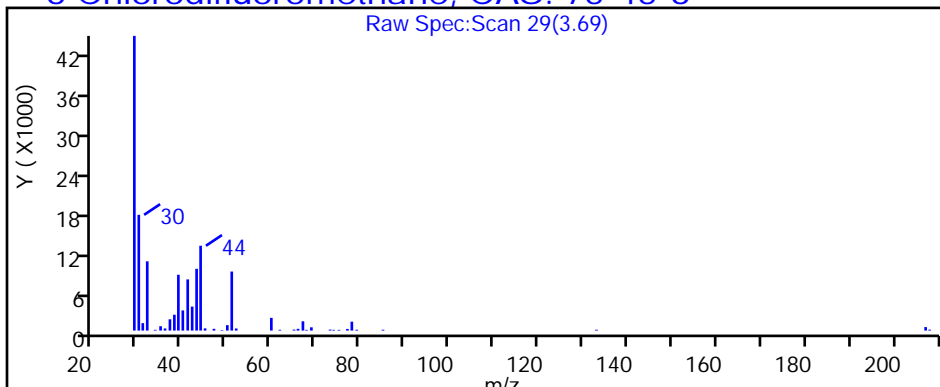
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P116D.D

Injection Date: 27-Feb-2019 03:41:30

Instrument ID: MH

Lims ID: 140-14390-A-16

Lab Sample ID: 140-14390-16

Client ID: IA-001-C-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

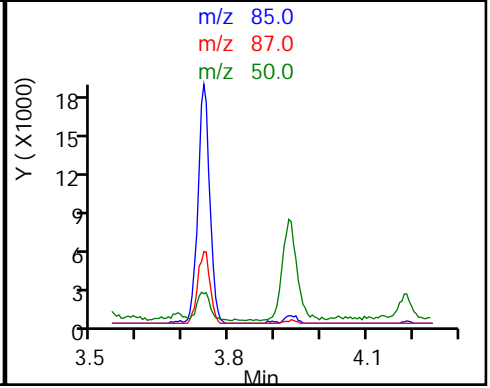
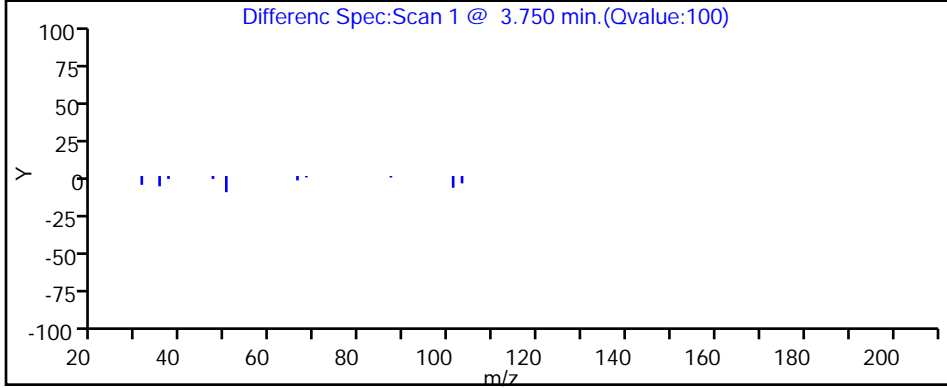
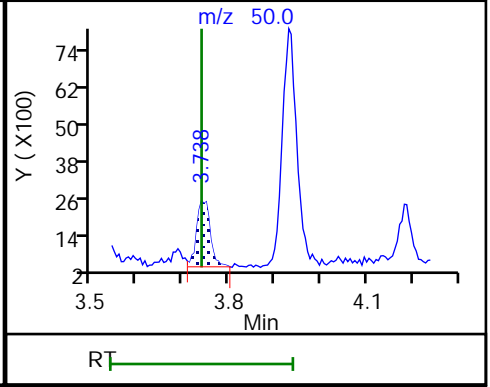
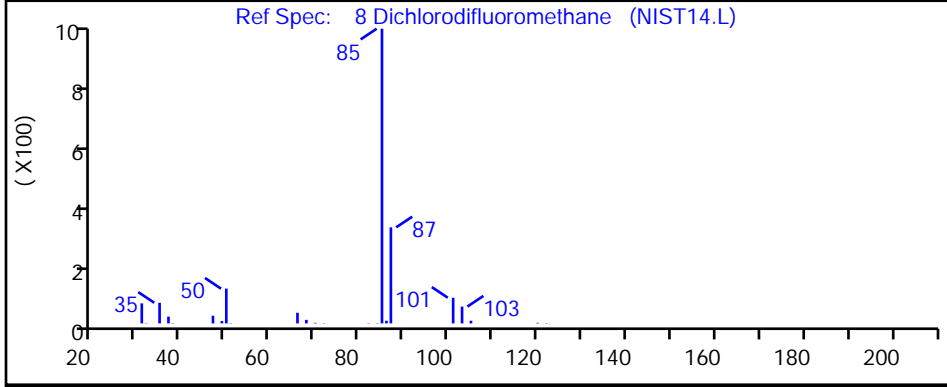
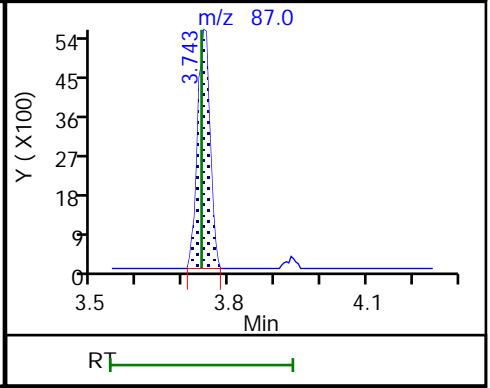
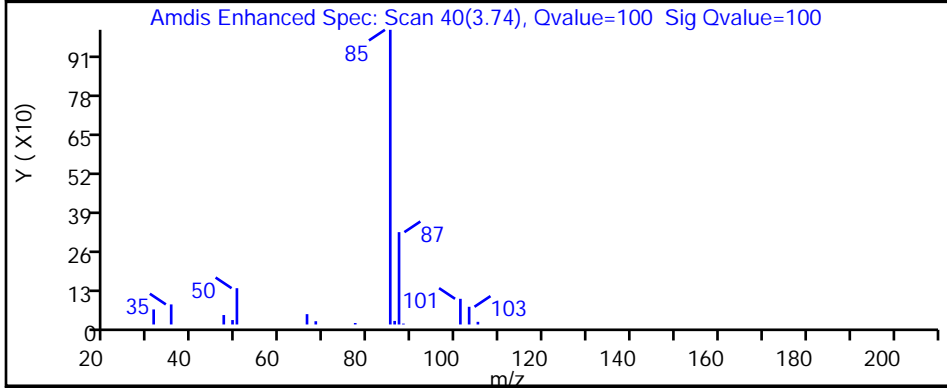
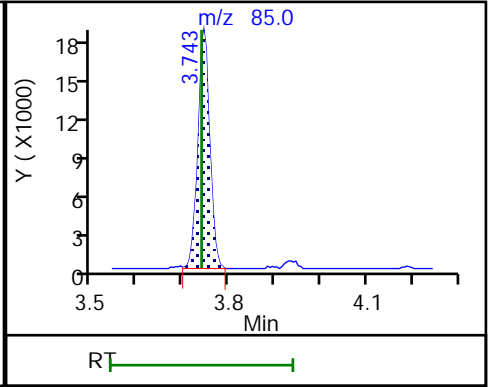
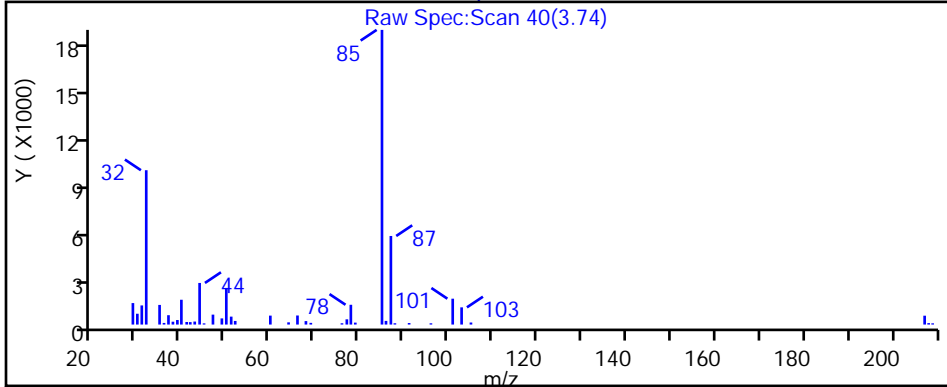
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P116D.D

Injection Date: 27-Feb-2019 03:41:30

Instrument ID: MH

Lims ID: 140-14390-A-16

Lab Sample ID: 140-14390-16

Client ID: IA-001-C-26

Operator ID: HMT

ALS Bottle#: 16 Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

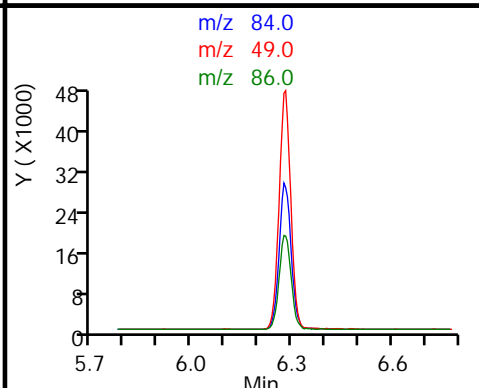
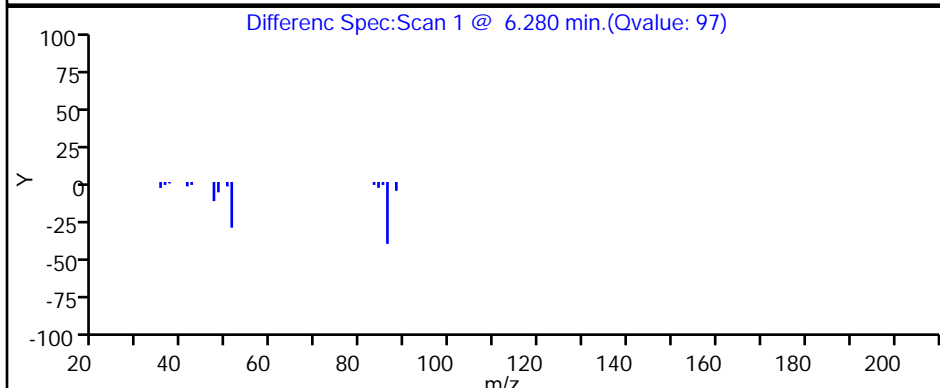
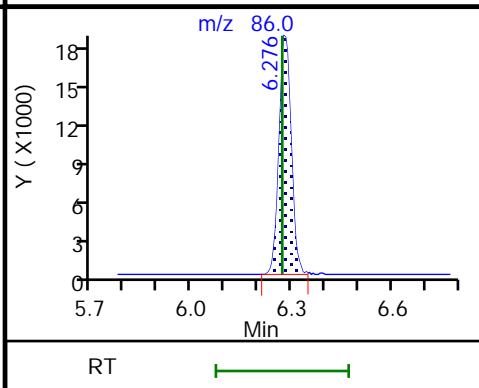
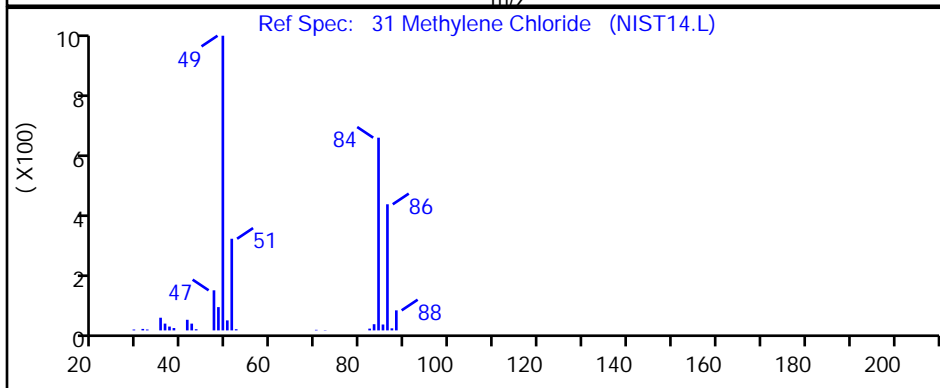
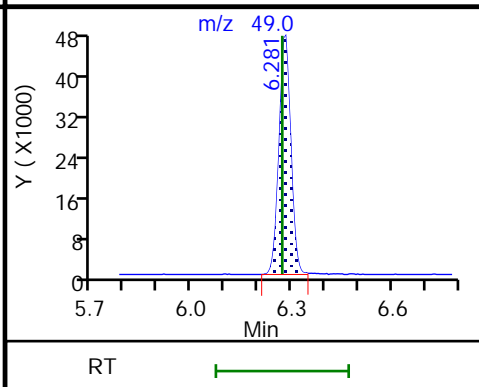
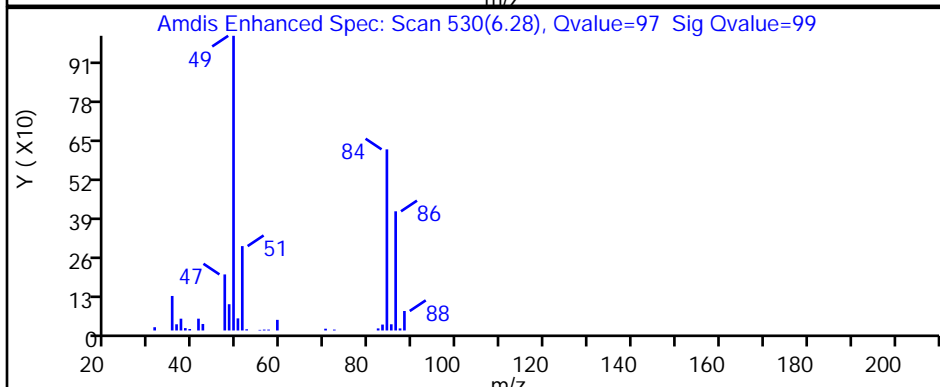
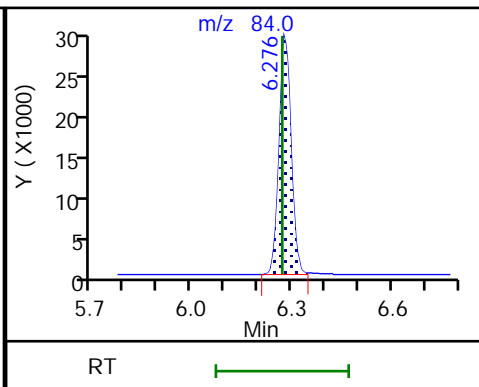
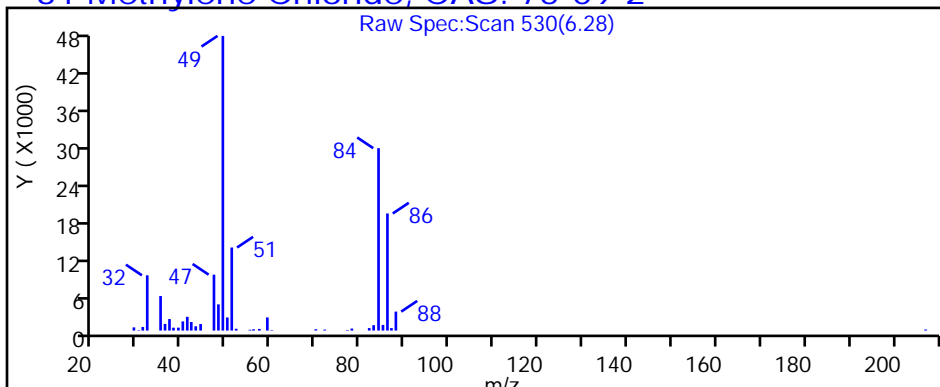
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P116D.D

Injection Date: 27-Feb-2019 03:41:30

Instrument ID: MH

Lims ID: 140-14390-A-16

Lab Sample ID: 140-14390-16

Client ID: IA-001-C-26

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 20

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

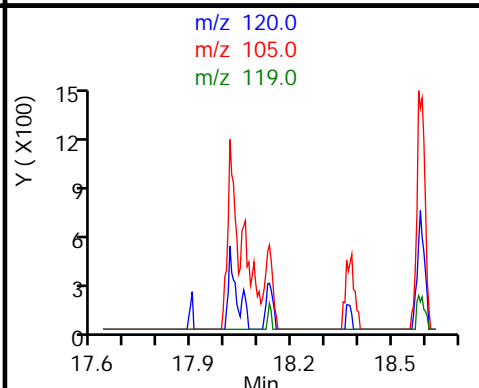
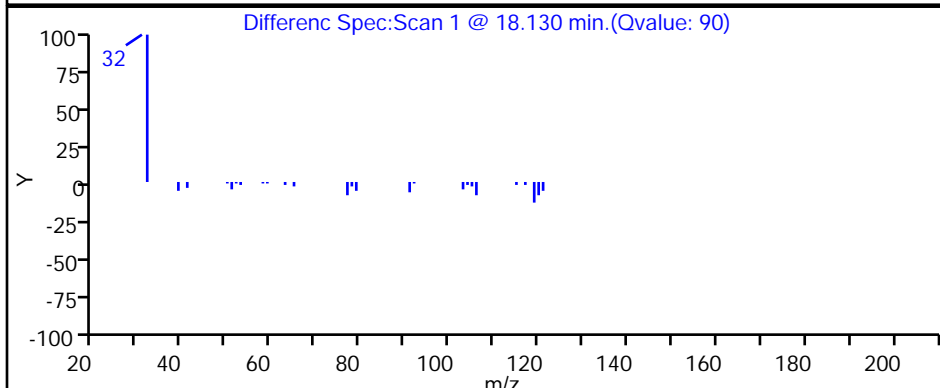
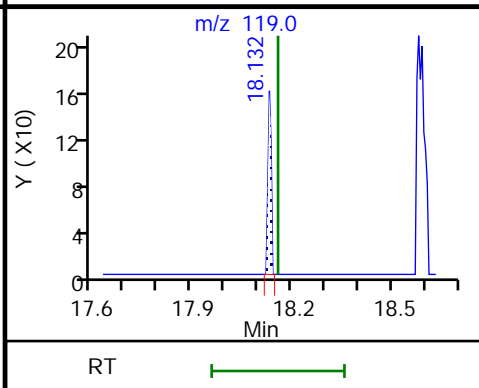
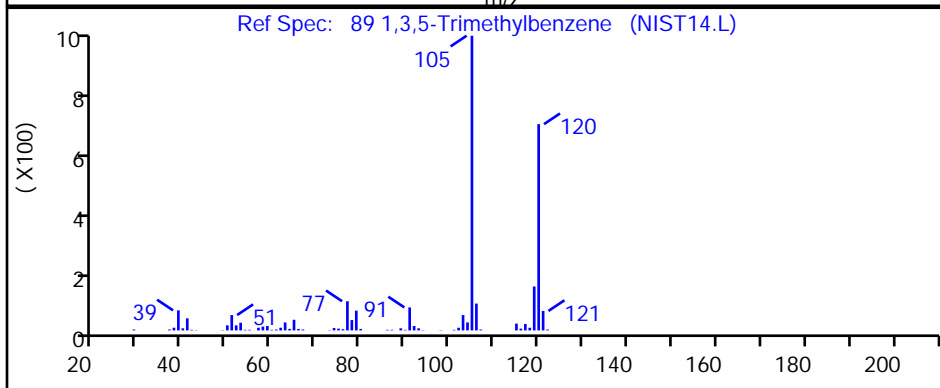
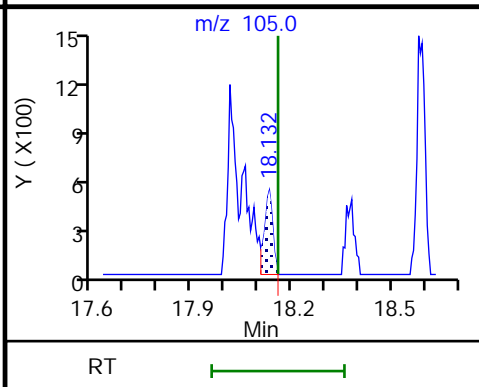
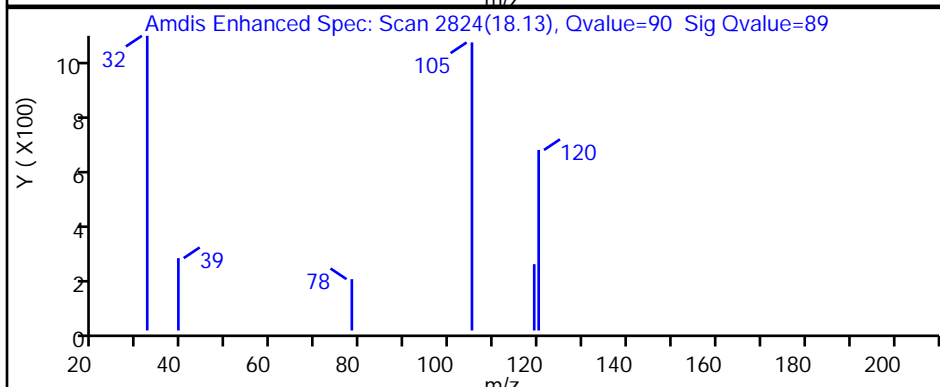
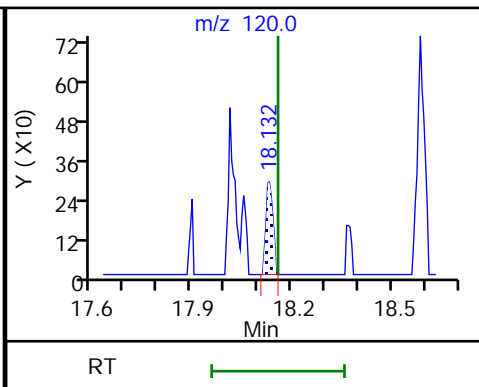
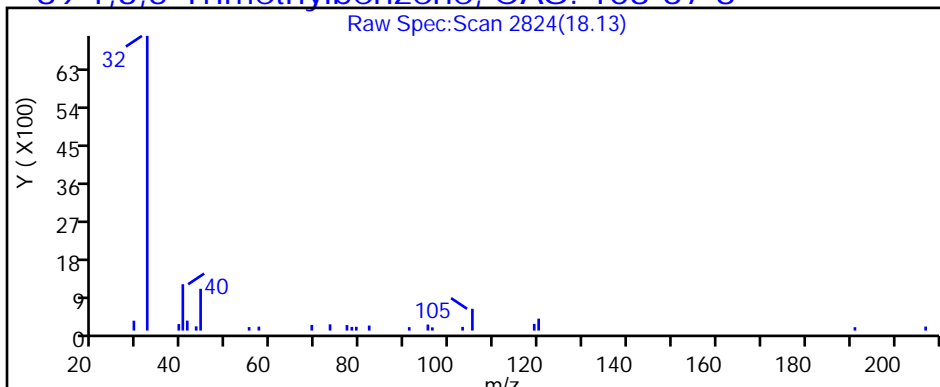
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

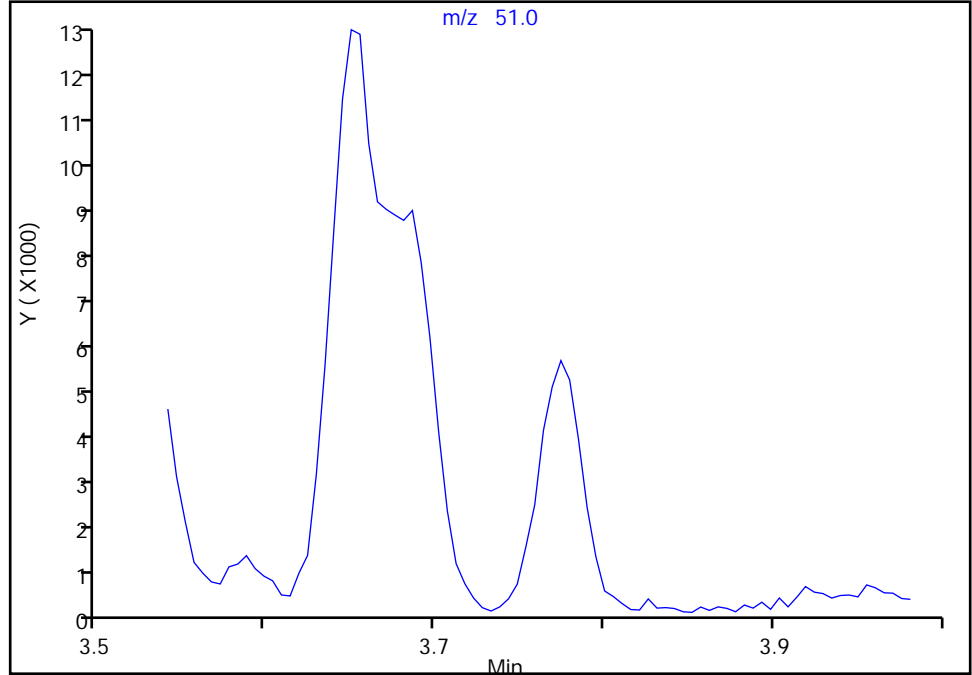
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Injection Date: 27-Feb-2019 03:41:30 Instrument ID: MH
Lims ID: 140-14390-A-16 Lab Sample ID: 140-14390-16
Client ID: IA-001-C-26
Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

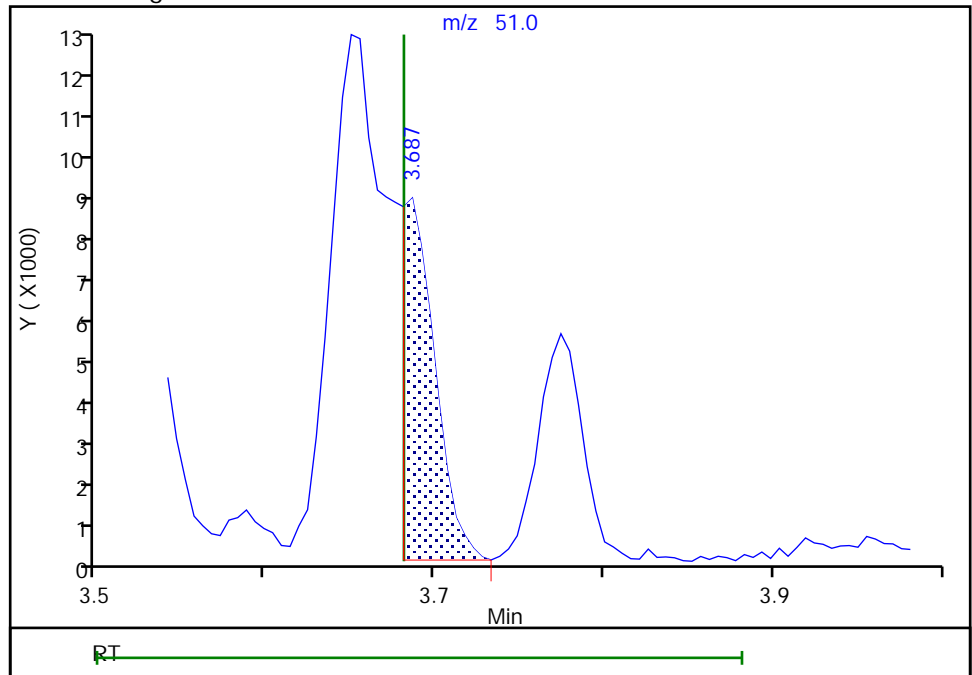
Not Detected
Expected RT: 3.68

Processing Integration Results



Manual Integration Results

RT: 3.69
Area: 11965
Amount: 0.051562
Amount Units: ppb v/v



Reviewer: khachitpongpanits, 27-Feb-2019 19:11:11

Audit Action: Split an Integrated Peak

Audit Reason: Missed Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-004-C-26 Lab Sample ID: 140-14390-17
 Matrix: Air Lab File ID: HB26P203R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:54
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 07:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.95	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-004-C-26 Lab Sample ID: 140-14390-17
 Matrix: Air Lab File ID: HB26P203R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:54
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 07:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.68	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P203R.D
 Lims ID: 140-14390-A-17
 Client ID: IA-004-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 07:16:30 ALS Bottle#: 3 Worklist Smp#: 25
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-025
 Misc. Info.: 140-14390-a-17
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 20:02:45 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 20:02:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.819	0.000	96	272850	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1484861	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	88	1264664	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	810220	3.93	
6 Chlorodifluoromethane	51	3.687	3.687	0.005	68	17335	0.0775	M
8 Dichlorodifluoromethane	85	3.744	3.738	0.006	100	30726	0.0894	
31 Methylene Chloride	84	6.281	6.271	0.010	97	21161	0.1897	
47 Benzene	78	10.462	10.462	0.005	98	9000	0.0287	
65 Toluene	91	13.760	13.760	0.000	93	27854	0.0774	
89 1,3,5-Trimethylbenzene	120	18.132	18.158	-0.026	82	150	0.0277	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P203R.D

Injection Date: 27-Feb-2019 07:16:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14390-A-17

Lab Sample ID: 140-14390-17

Worklist Smp#: 25

Client ID: IA-004-C-26

Purge Vol: 500.000 mL

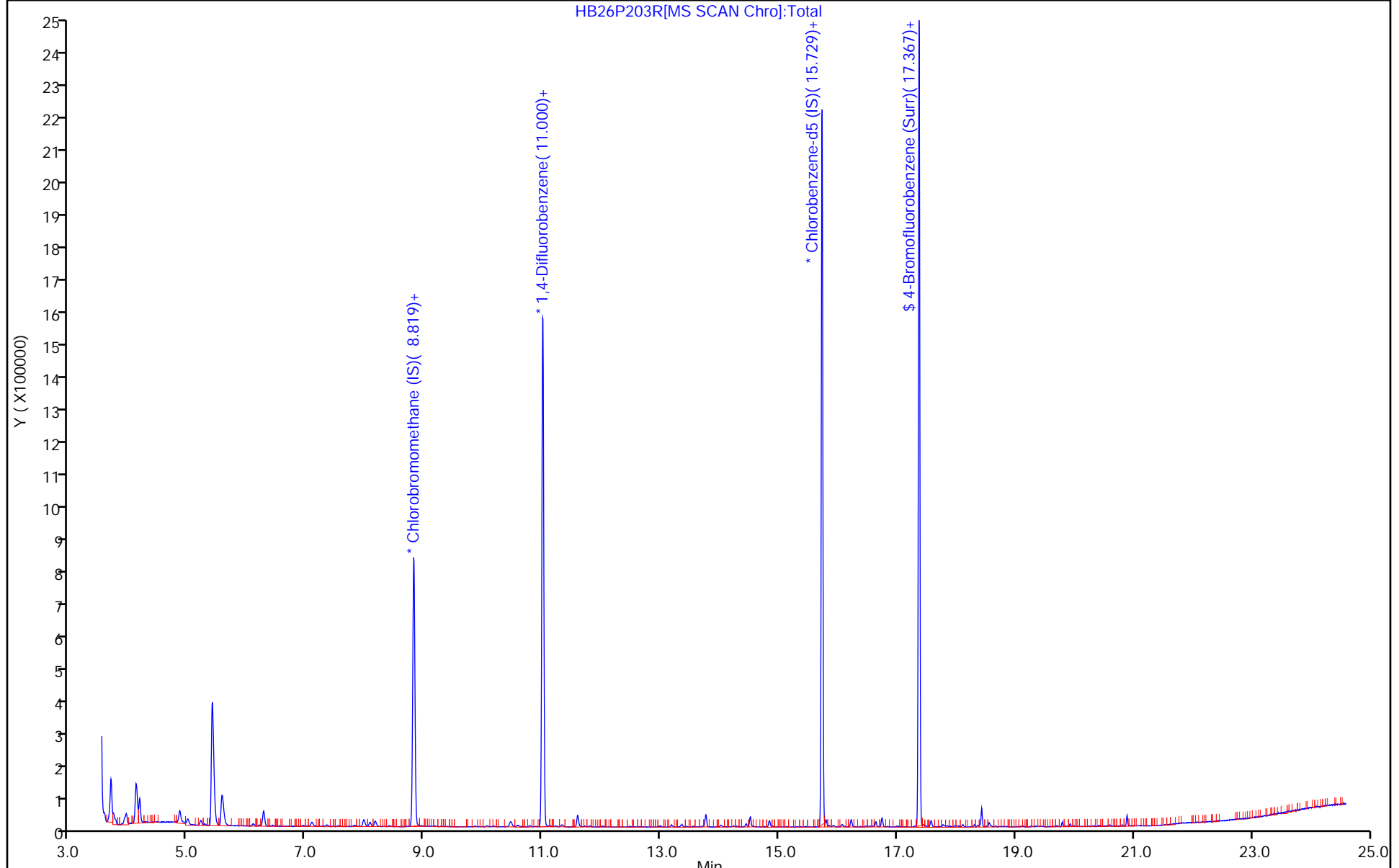
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P203R.D
 Lims ID: 140-14390-A-17
 Client ID: IA-004-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 07:16:30 ALS Bottle#: 3 Worklist Smp#: 25
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-025
 Misc. Info.: 140-14390-a-17
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 20:02:45 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 20:02:45

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.93	98.29

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P203R.D

Injection Date: 27-Feb-2019 07:16:30

Instrument ID: MH

Lims ID: 140-14390-A-17

Lab Sample ID: 140-14390-17

Client ID: IA-004-C-26

Operator ID: HMT

ALS Bottle#: 3 Worklist Smp#: 25

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

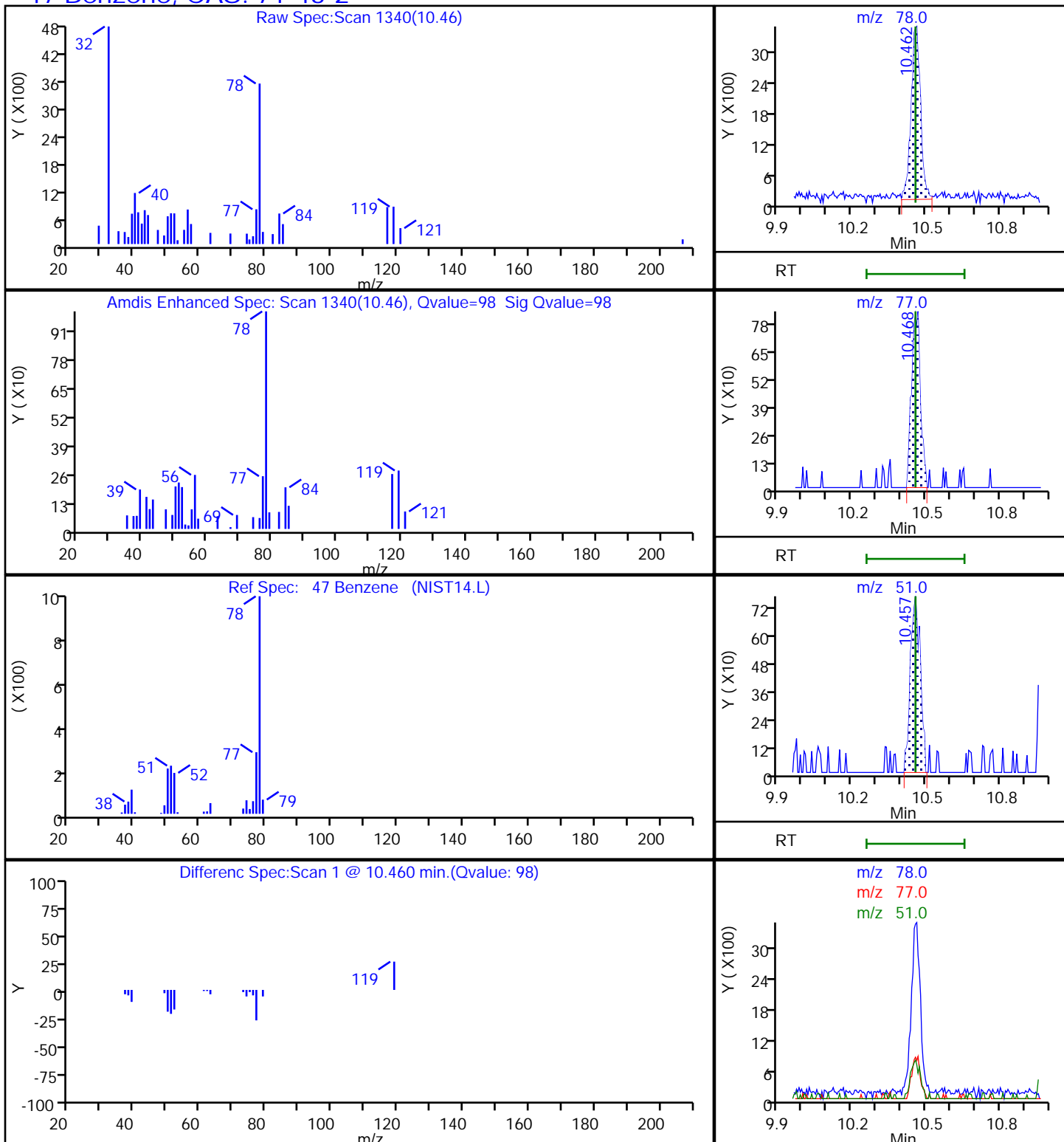
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P203R.D

Injection Date: 27-Feb-2019 07:16:30

Instrument ID: MH

Lims ID: 140-14390-A-17

Lab Sample ID: 140-14390-17

Client ID: IA-004-C-26

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 25

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

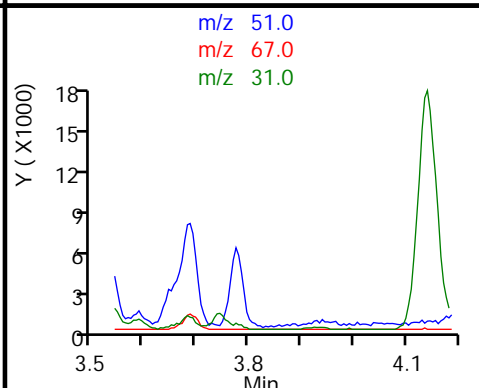
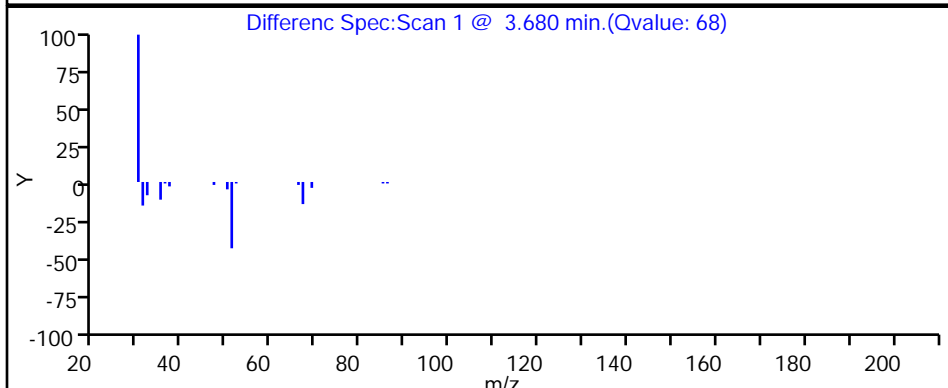
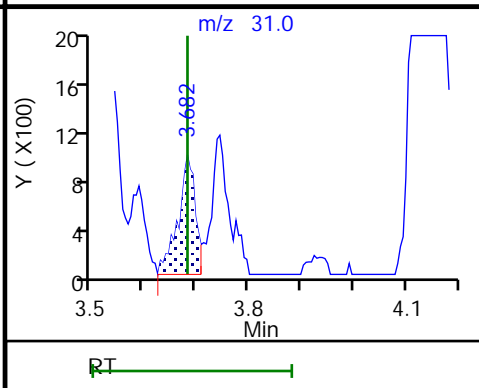
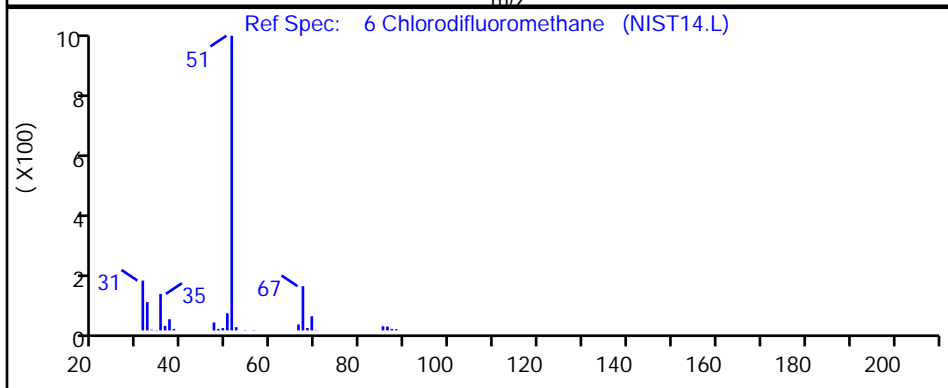
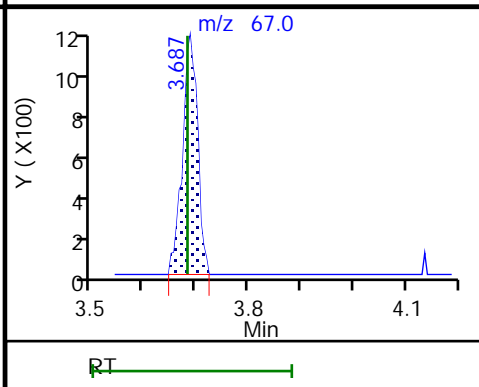
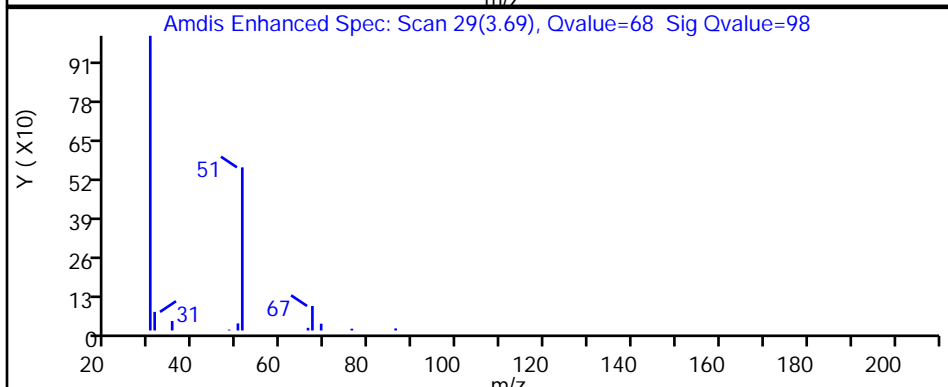
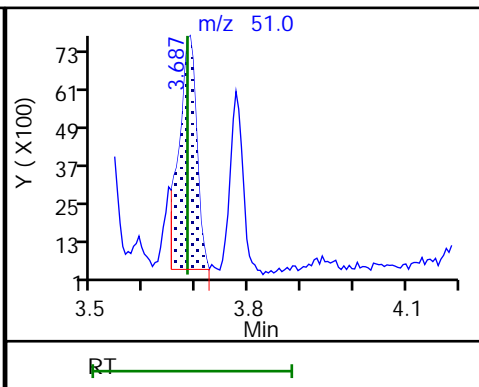
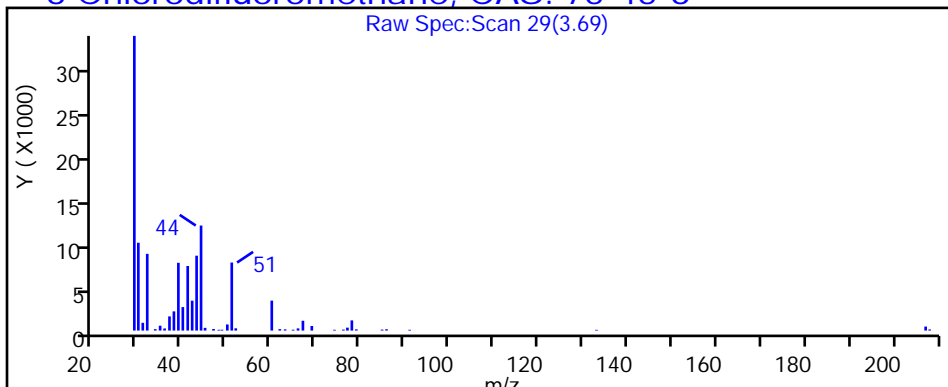
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P203R.D

Injection Date: 27-Feb-2019 07:16:30

Instrument ID: MH

Lims ID: 140-14390-A-17

Lab Sample ID: 140-14390-17

Client ID: IA-004-C-26

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 25

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

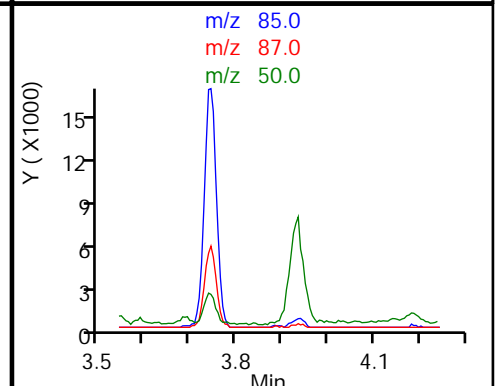
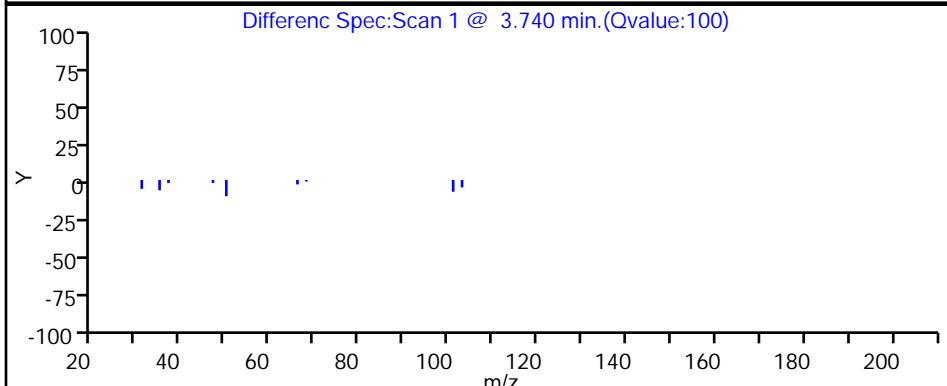
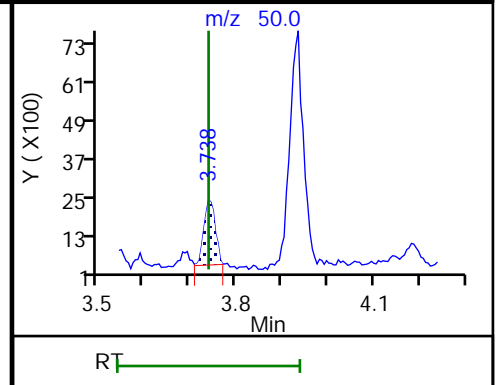
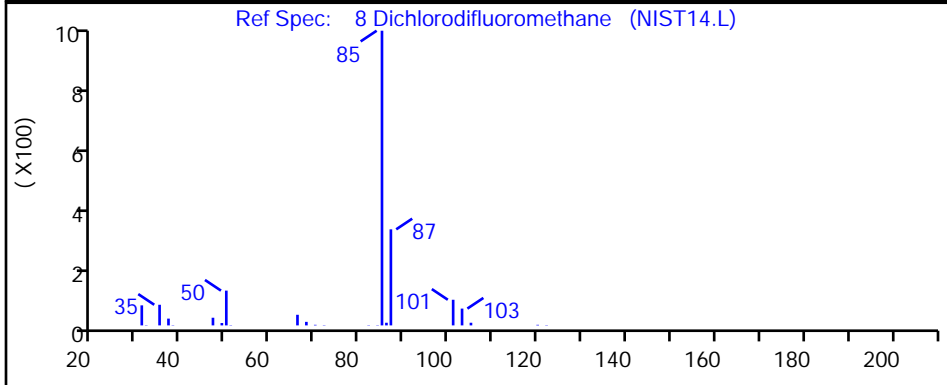
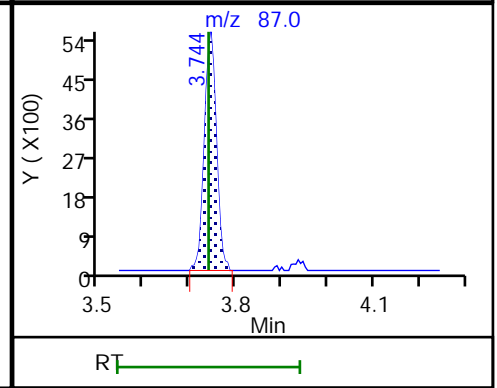
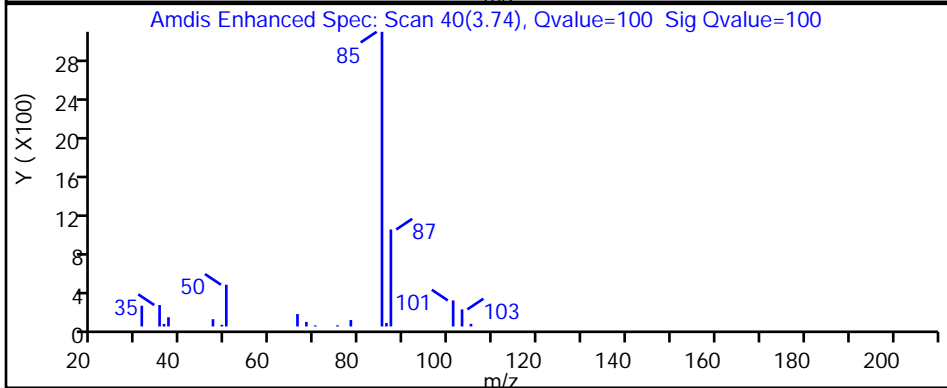
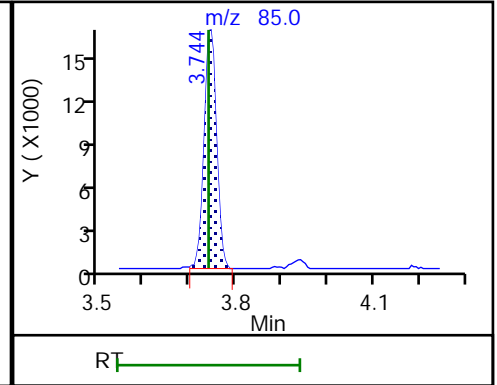
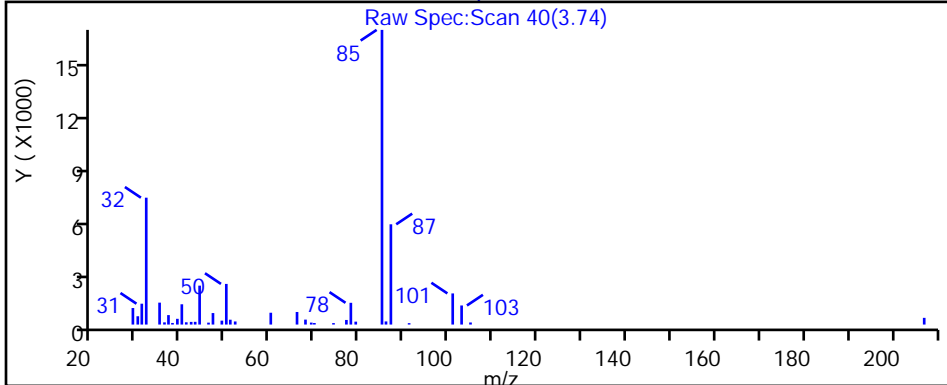
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P203R.D

Injection Date: 27-Feb-2019 07:16:30

Instrument ID: MH

Lims ID: 140-14390-A-17

Lab Sample ID: 140-14390-17

Client ID: IA-004-C-26

Operator ID: HMT

ALS Bottle#: 3 Worklist Smp#: 25

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

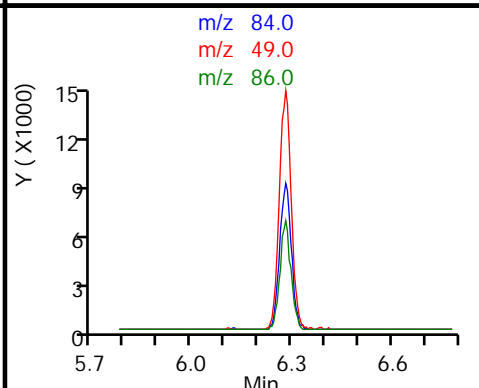
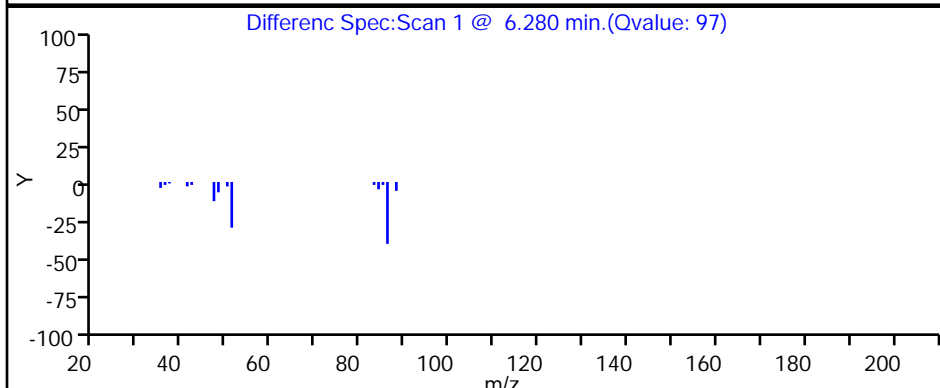
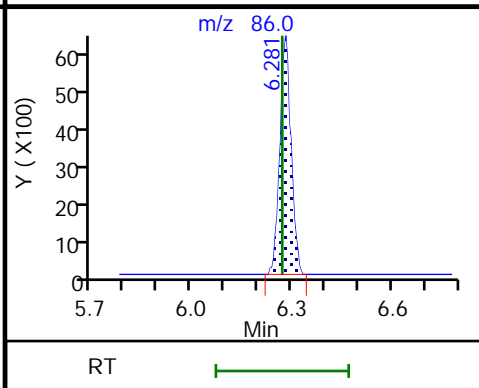
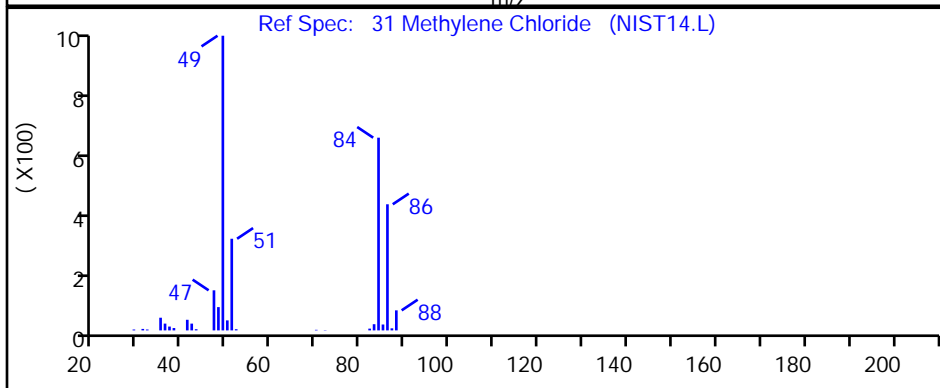
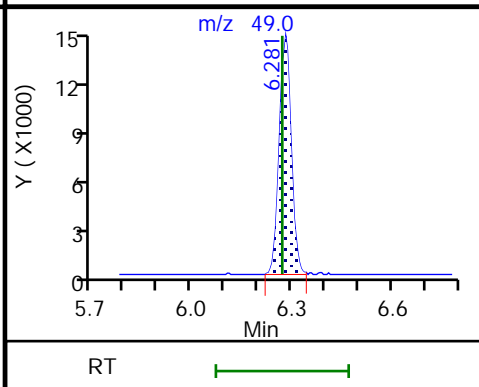
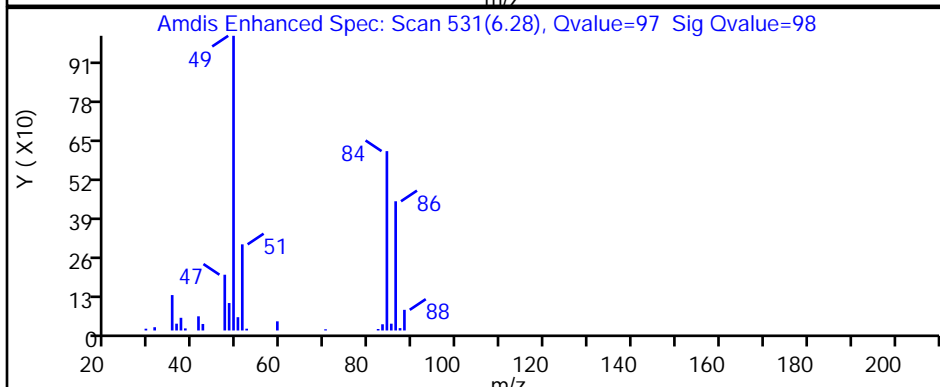
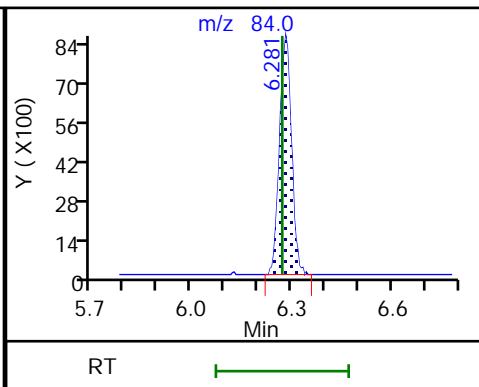
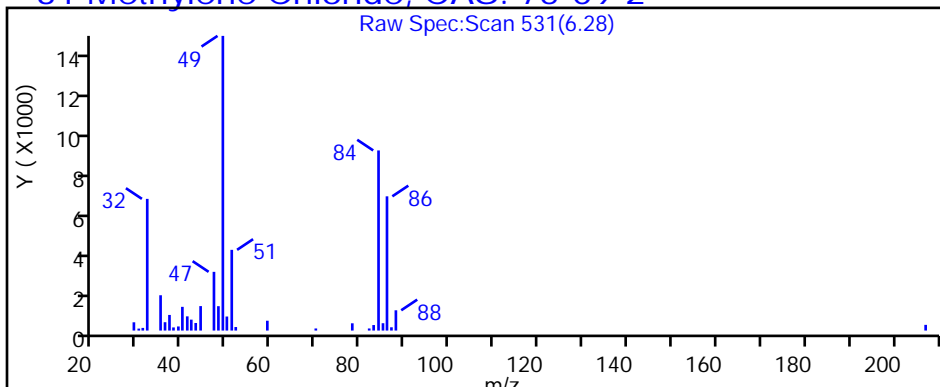
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P203R.D

Injection Date: 27-Feb-2019 07:16:30

Instrument ID: MH

Lims ID: 140-14390-A-17

Lab Sample ID: 140-14390-17

Client ID: IA-004-C-26

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 25

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

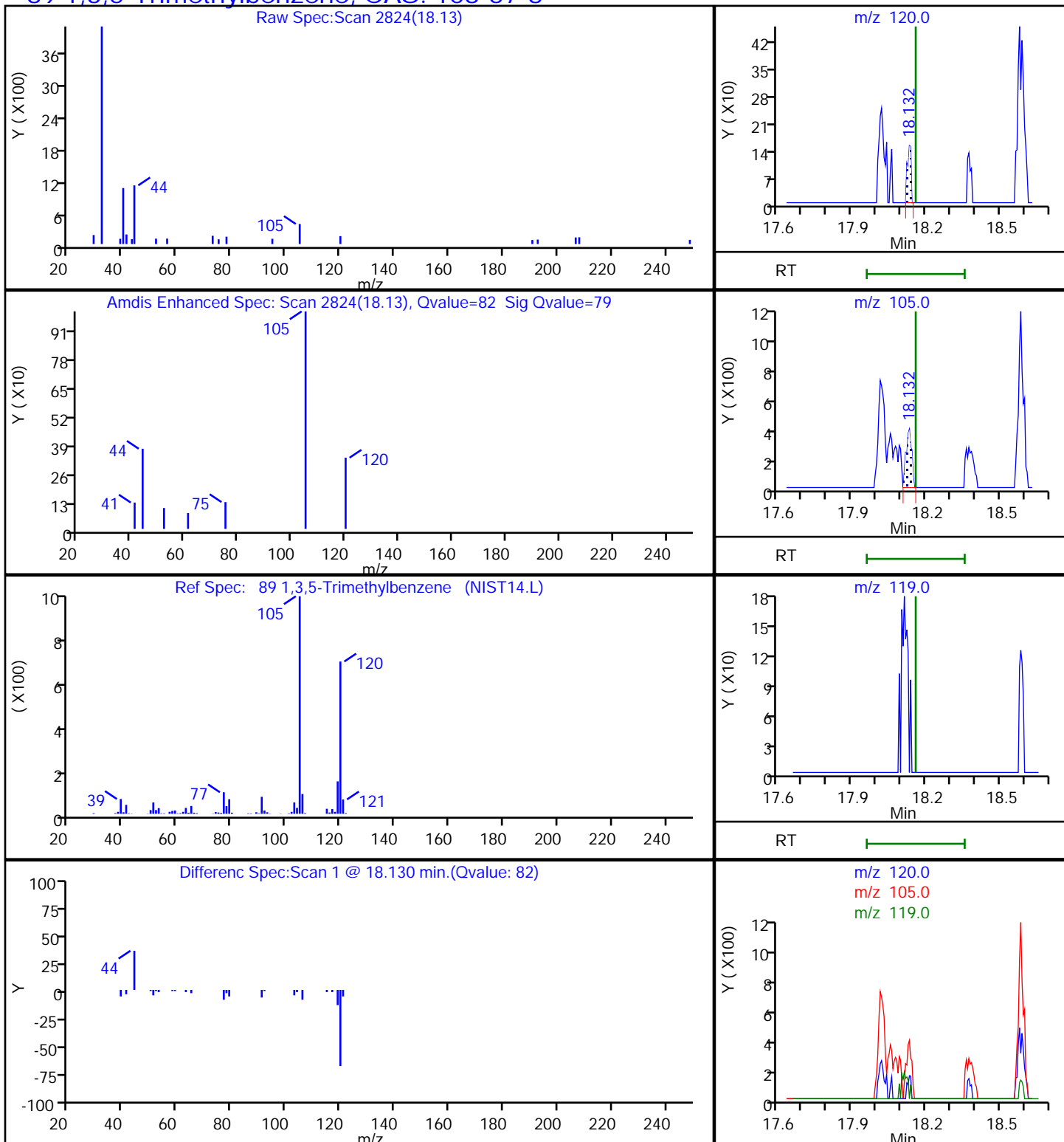
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

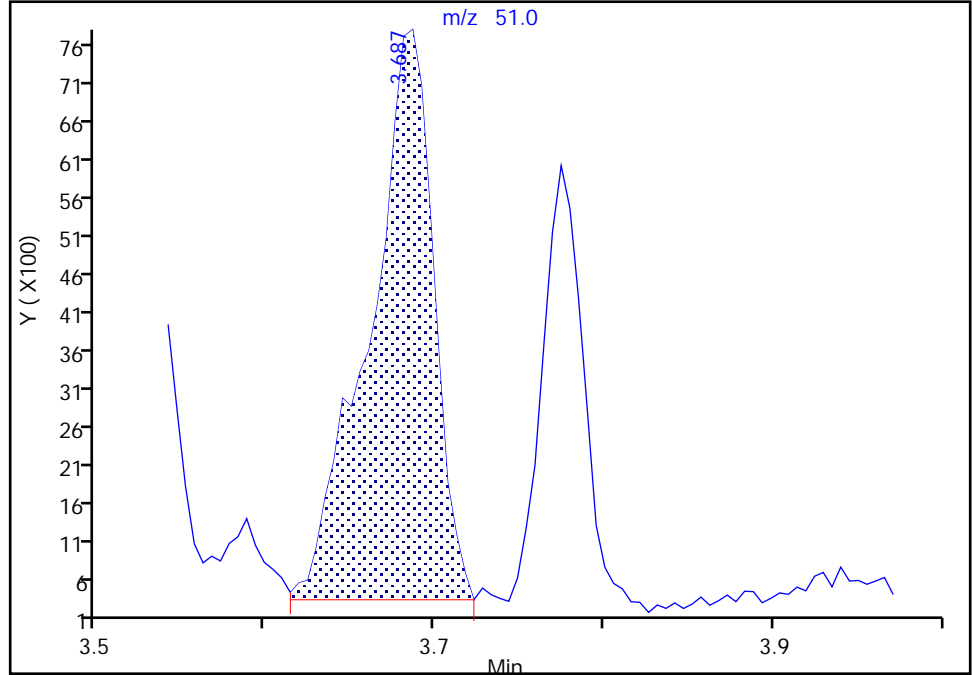
Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HB26P203R.D
Injection Date: 27-Feb-2019 07:16:30 Instrument ID: MH
Lims ID: 140-14390-A-17 Lab Sample ID: 140-14390-17
Client ID: IA-004-C-26
Operator ID: HMT ALS Bottle#: 3 Worklist Smp#: 25
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

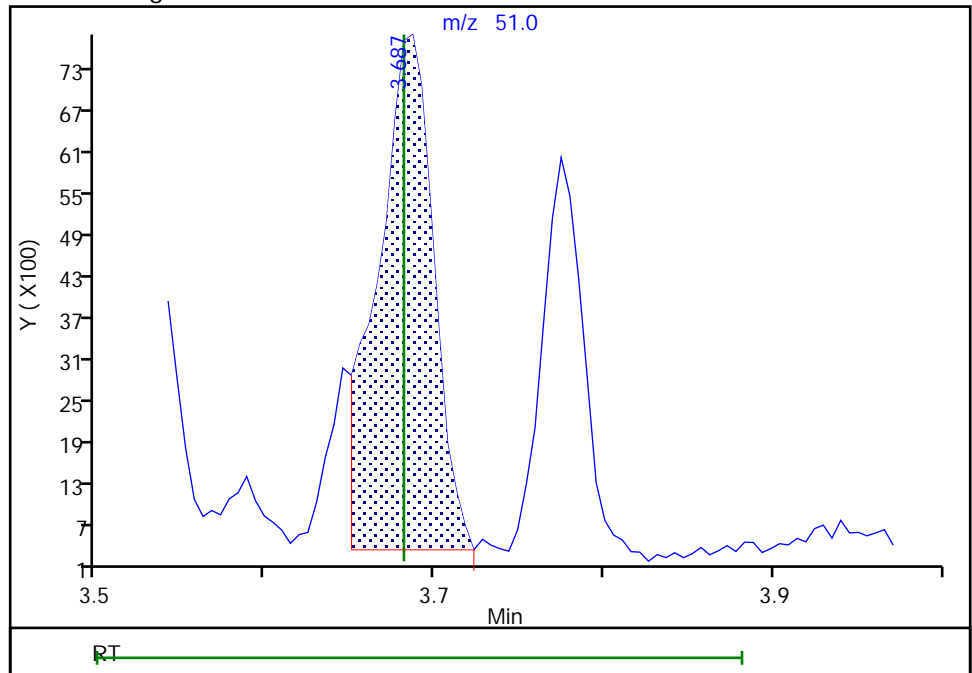
RT: 3.69
Area: 19513
Amount: 0.087217
Amount Units: ppb v/v

Processing Integration Results



RT: 3.69
Area: 17335
Amount: 0.077482
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 20:02:10

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-131-C-26 Lab Sample ID: 140-14390-18
 Matrix: Air Lab File ID: HB27P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:02
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 04:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.081	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.63		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.4		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.53		0.40	0.080
108-88-3	Toluene	92.14	11		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.29		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.18	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-131-C-26 Lab Sample ID: 140-14390-18
 Matrix: Air Lab File ID: HB27P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:02
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 04:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.3		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.32	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	2.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	12		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.6		2.7	0.54
108-88-3	Toluene	92.14	41		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.92	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.88	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D
 Lims ID: 140-14390-A-18
 Client ID: IA-131-C-26
 Sample Type: Client
 Inject. Date: 28-Feb-2019 04:23:30 ALS Bottle#: 13 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-021
 Misc. Info.: 140-14390-a-18
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 19:01:51 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 19:12:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.814	0.010	95	303298	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1660254	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1406034	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.398	17.404	0.000	94	896824	3.91	
8 Dichlorodifluoromethane	85	3.738	3.743	0.000	100	34416	0.0901	
27 1,1-Dichloroethene	96	5.925	5.926	0.005	96	1919	0.0163	
31 Methylene Chloride	84	6.281	6.278	0.010	98	85007	0.6855	
47 Benzene	78	10.452	10.457	0.000	49	28158	0.0802	
56 Trichloroethene	130	11.713	11.714	0.005	96	9536	0.0576	
65 Toluene	91	13.760	13.764	0.000	93	870607	2.18	
73 Tetrachloroethene	129	14.897	14.902	0.000	95	17385	0.1066	
76 Ethylbenzene	91	16.065	16.065	0.005	99	64589	0.1267	
78 m-Xylene & p-Xylene	91	16.220	16.225	0.000	99	133648	0.3401	
82 o-Xylene	91	16.752	16.758	0.000	98	61153	0.1528	
89 1,3,5-Trimethylbenzene	120	18.163	18.127	0.005	89	2081	0.0358	
93 1,2,4-Trimethylbenzene	105	18.613	18.619	0.000	96	17218	0.0376	
S 121 Xylenes, Total	100				0		0.4929	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D

Injection Date: 28-Feb-2019 04:23:30

Instrument ID: MH

Operator ID: AFB

Lims ID: 140-14390-A-18

Lab Sample ID: 140-14390-18

Worklist Smp#: 21

Client ID: IA-131-C-26

Purge Vol: 500.000 mL

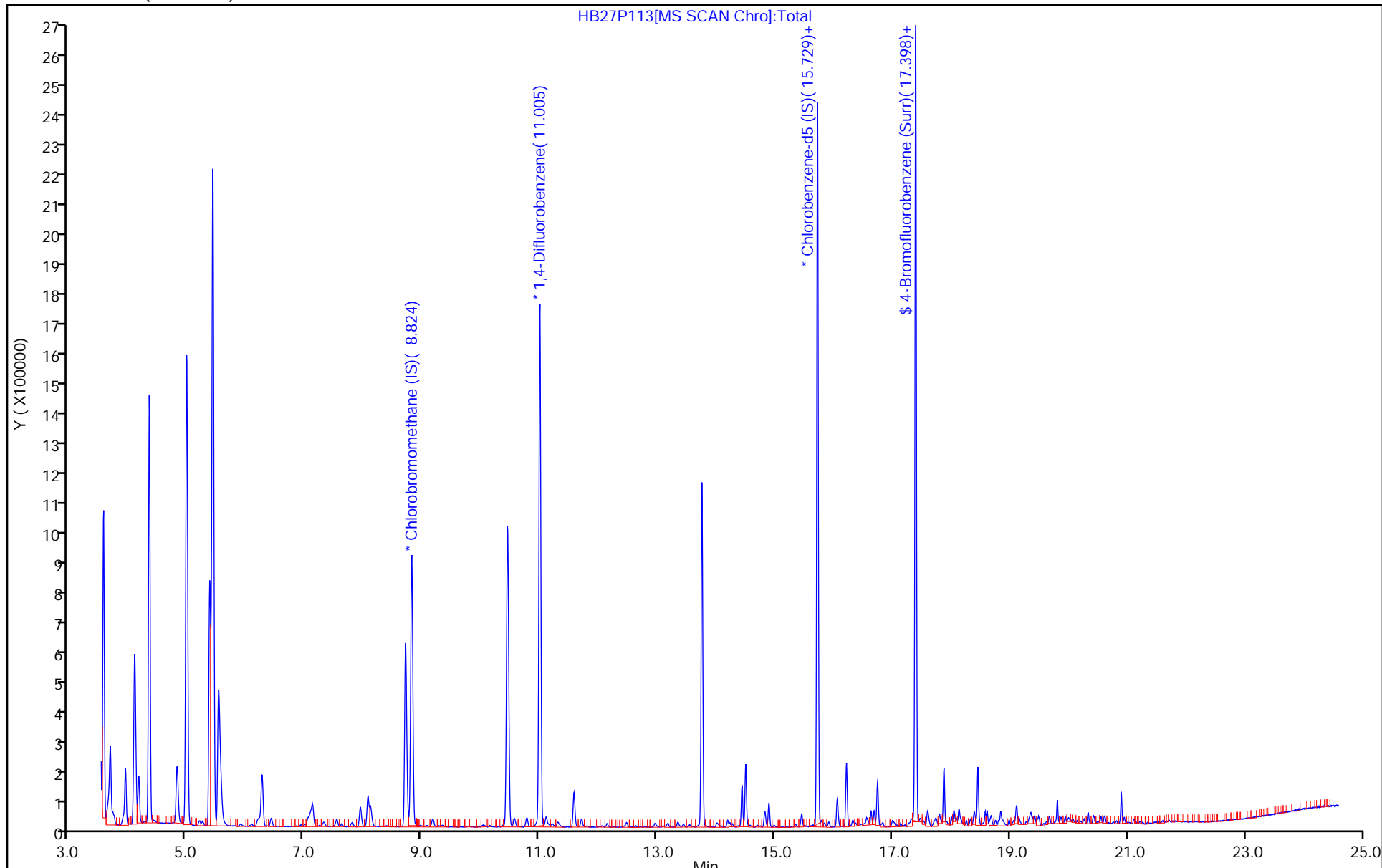
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D
 Lims ID: 140-14390-A-18
 Client ID: IA-131-C-26
 Sample Type: Client
 Inject. Date: 28-Feb-2019 04:23:30 ALS Bottle#: 13 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-021
 Misc. Info.: 140-14390-a-18
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 19:01:51 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 19:12:11

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.91	97.86

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D

Injection Date: 28-Feb-2019 04:23:30

Instrument ID: MH

Lims ID: 140-14390-A-18

Lab Sample ID: 140-14390-18

Client ID: IA-131-C-26

Operator ID: AFB

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

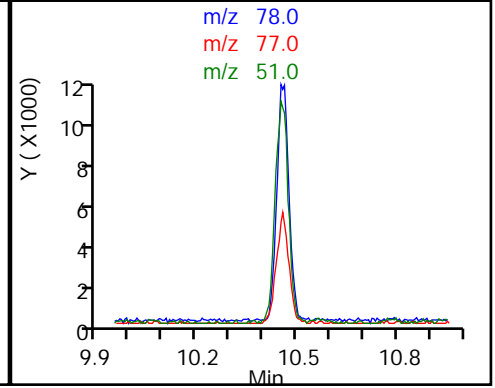
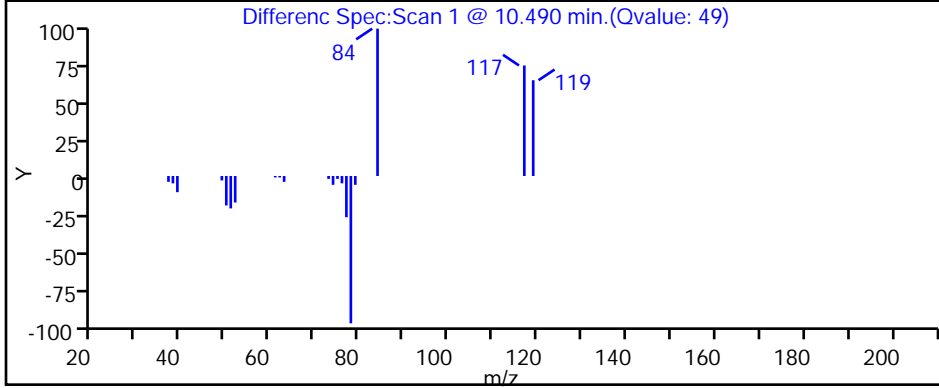
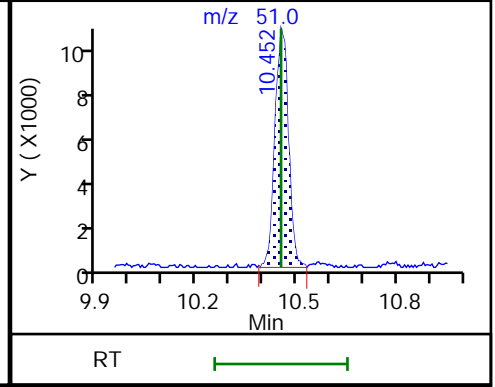
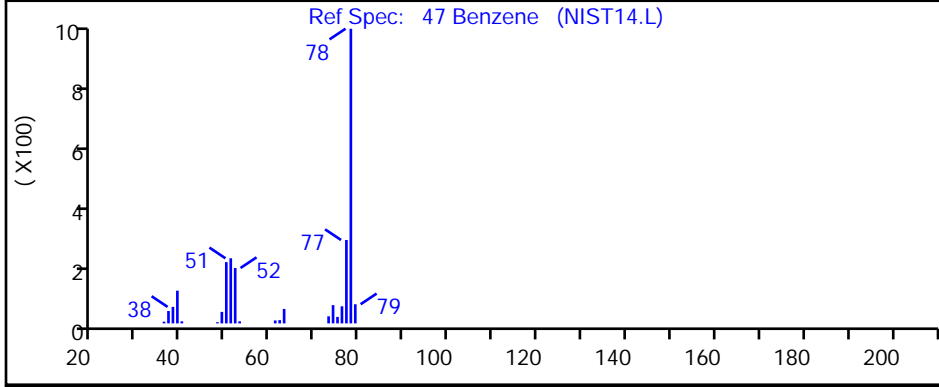
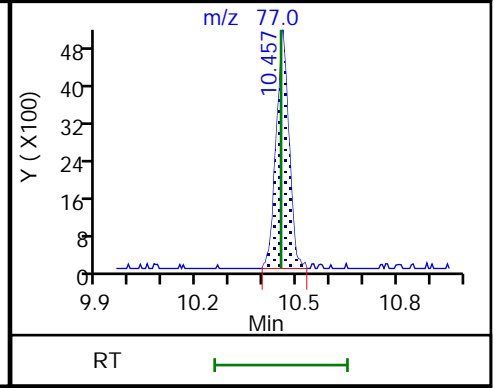
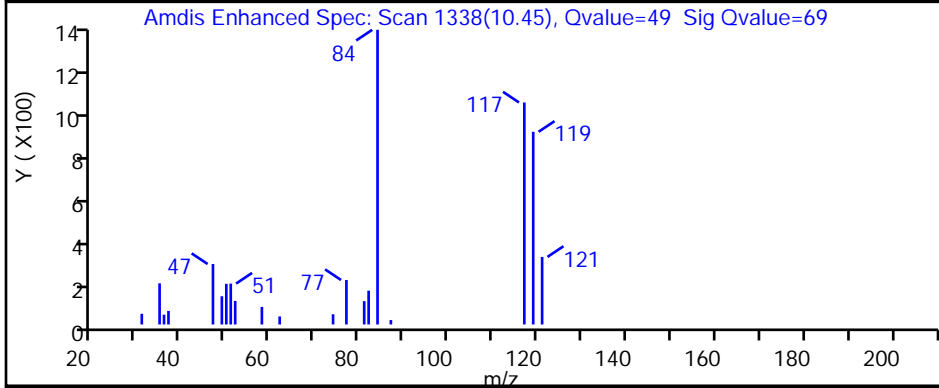
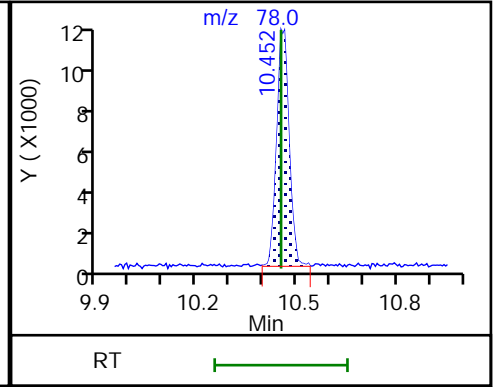
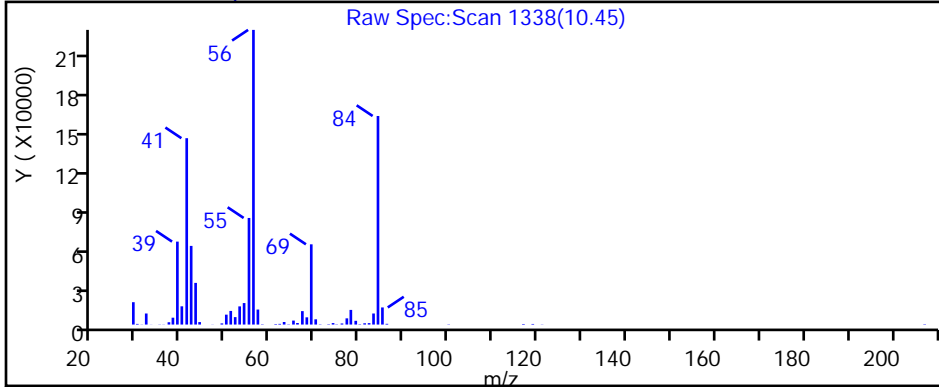
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D

Injection Date: 28-Feb-2019 04:23:30

Instrument ID: MH

Lims ID: 140-14390-A-18

Lab Sample ID: 140-14390-18

Client ID: IA-131-C-26

Operator ID: AFB

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

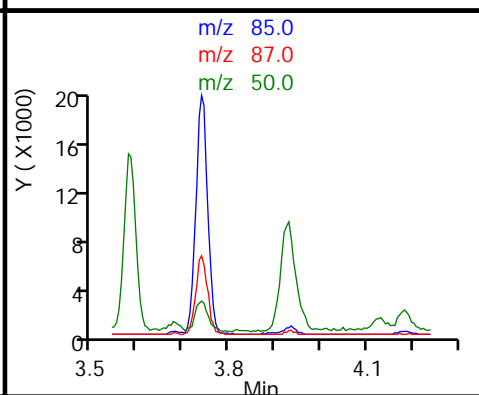
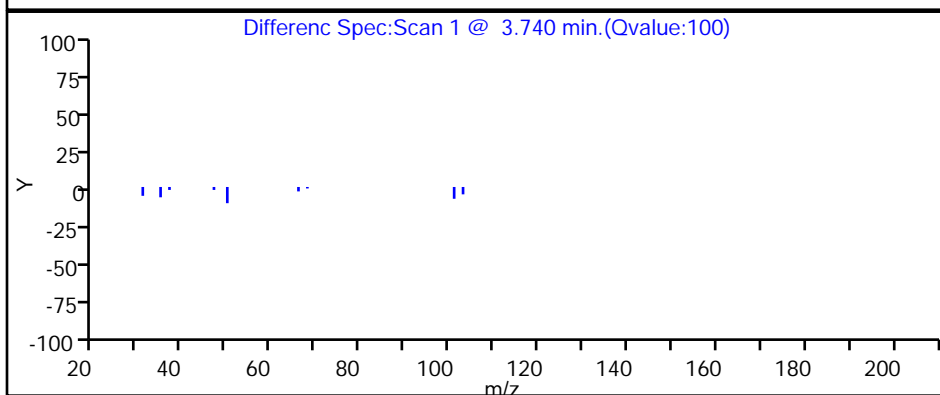
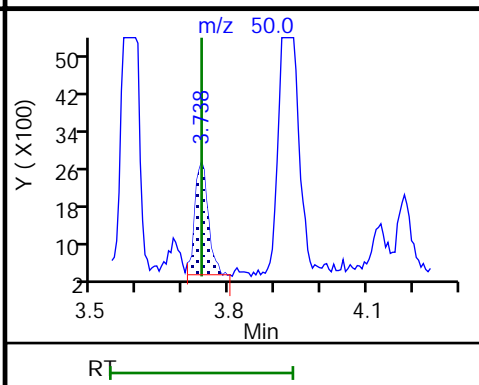
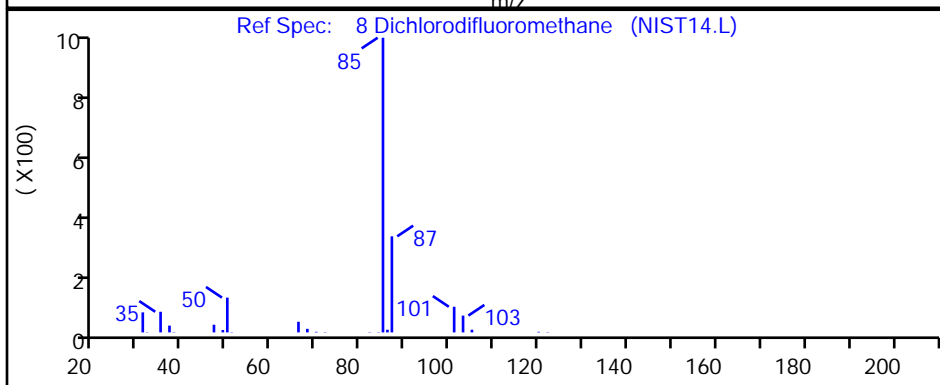
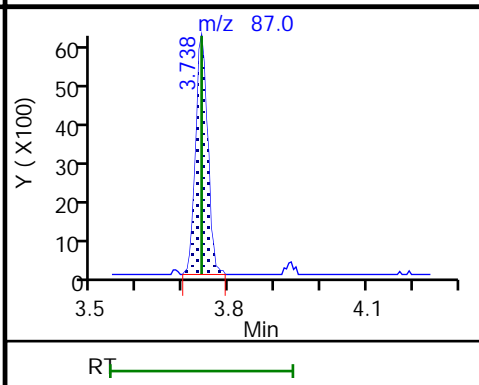
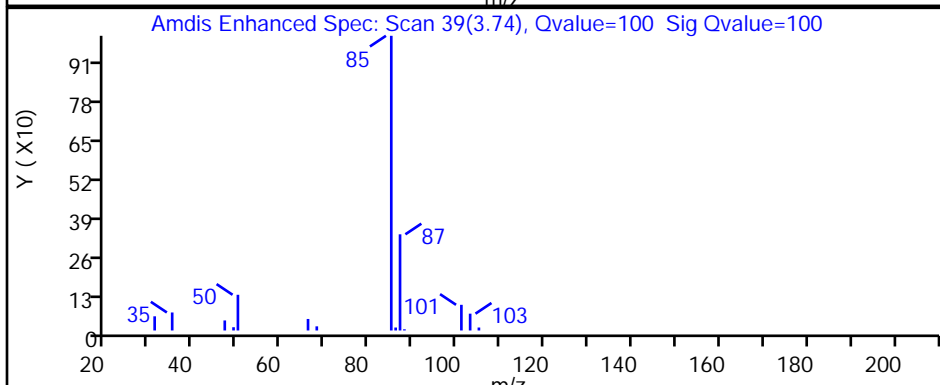
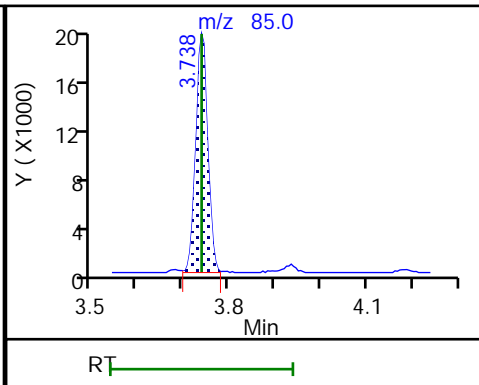
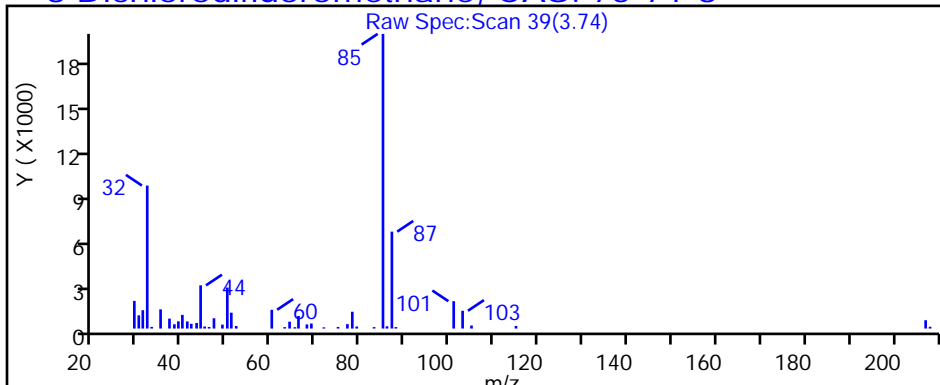
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D

Injection Date: 28-Feb-2019 04:23:30

Instrument ID: MH

Lims ID: 140-14390-A-18

Lab Sample ID: 140-14390-18

Client ID: IA-131-C-26

Operator ID: AFB

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

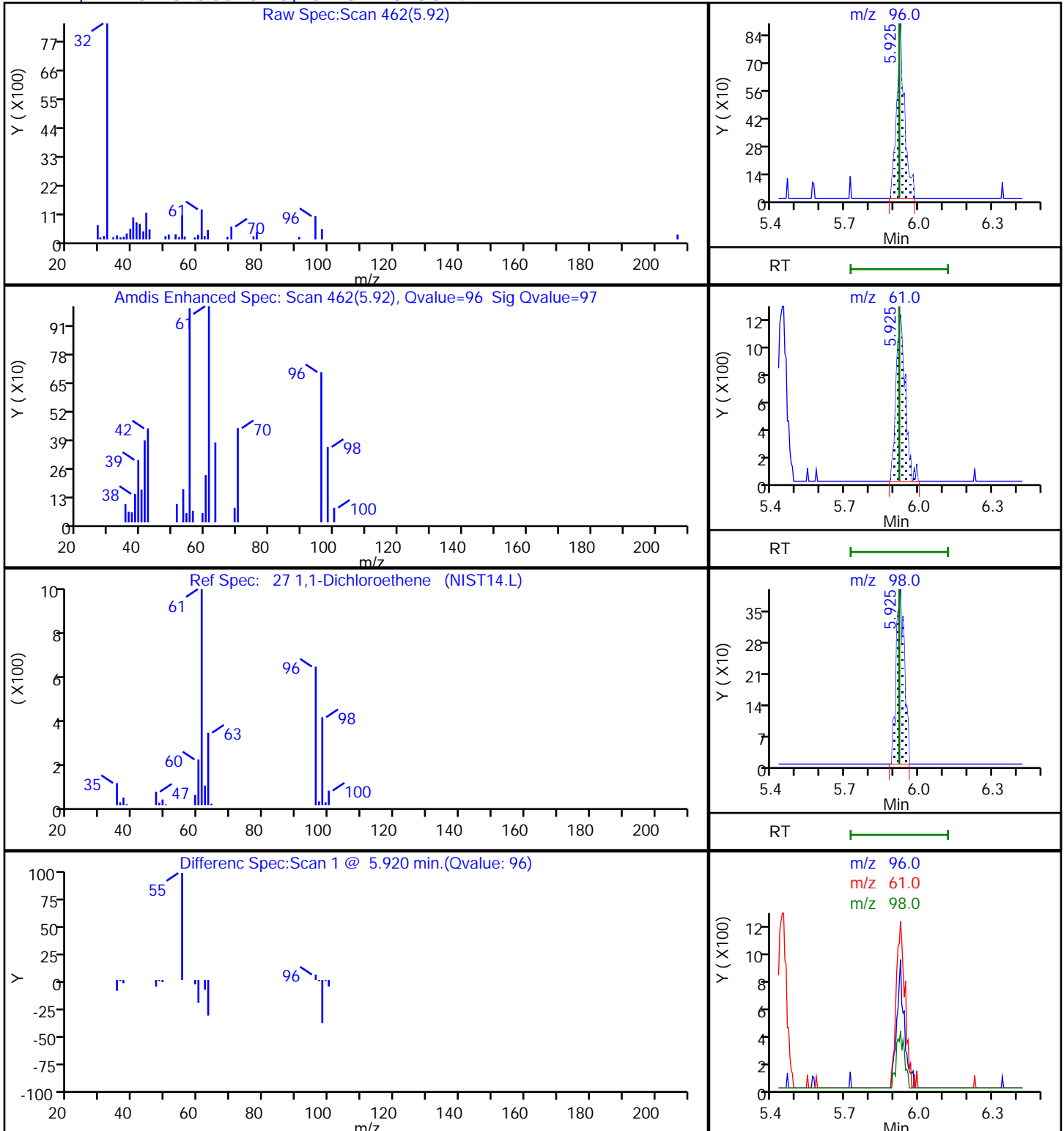
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D

Injection Date: 28-Feb-2019 04:23:30

Instrument ID: MH

Lims ID: 140-14390-A-18

Lab Sample ID: 140-14390-18

Client ID: IA-131-C-26

Operator ID: AFB

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

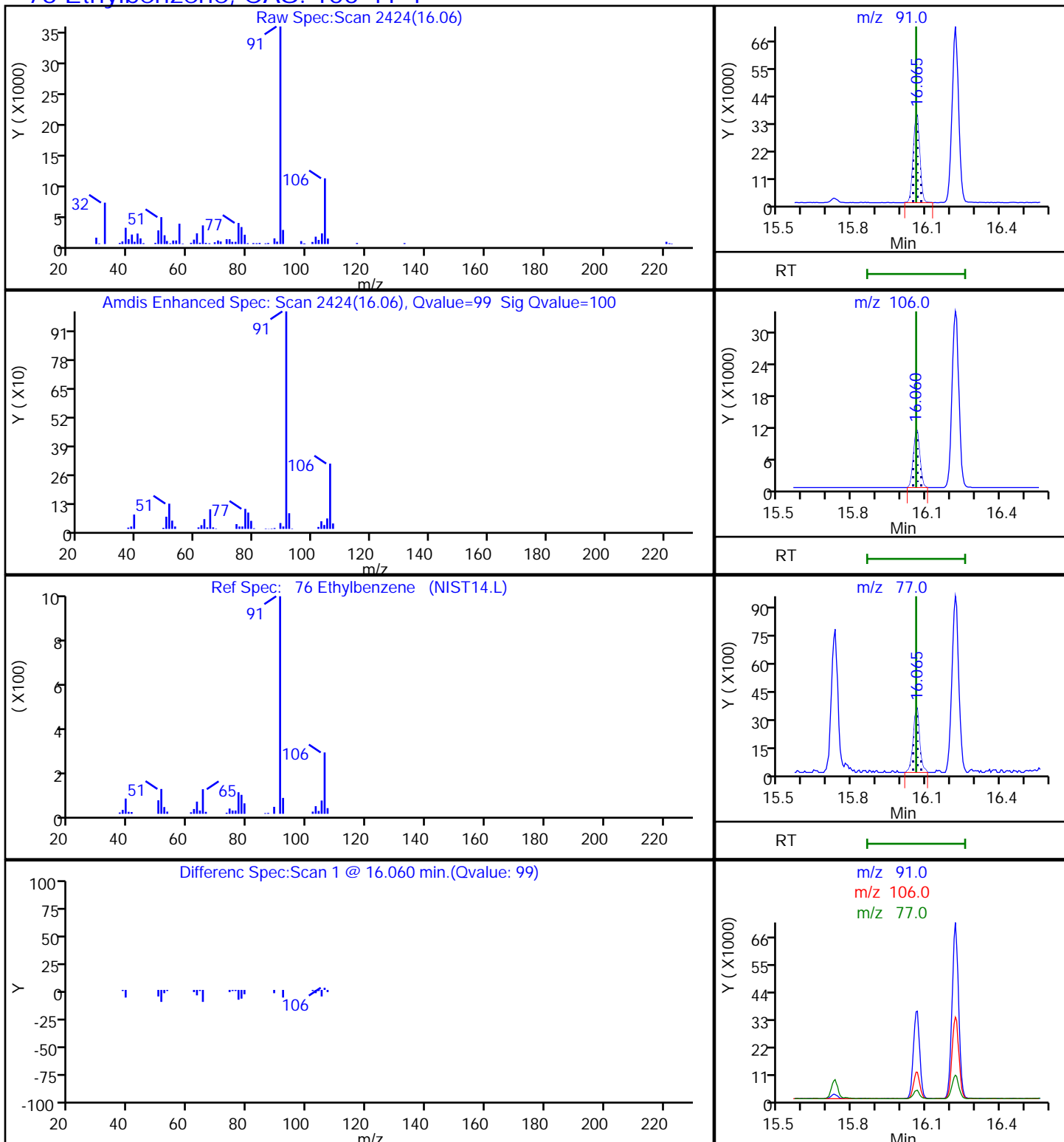
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D

Injection Date: 28-Feb-2019 04:23:30

Instrument ID: MH

Lims ID: 140-14390-A-18

Lab Sample ID: 140-14390-18

Client ID: IA-131-C-26

Operator ID: AFB

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

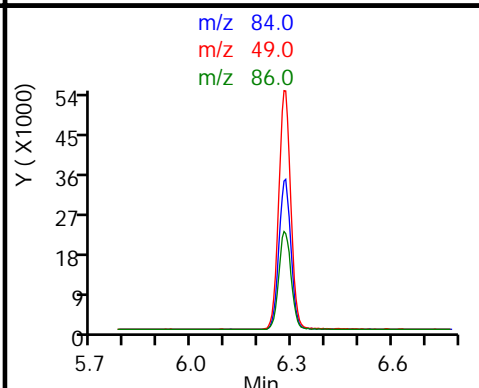
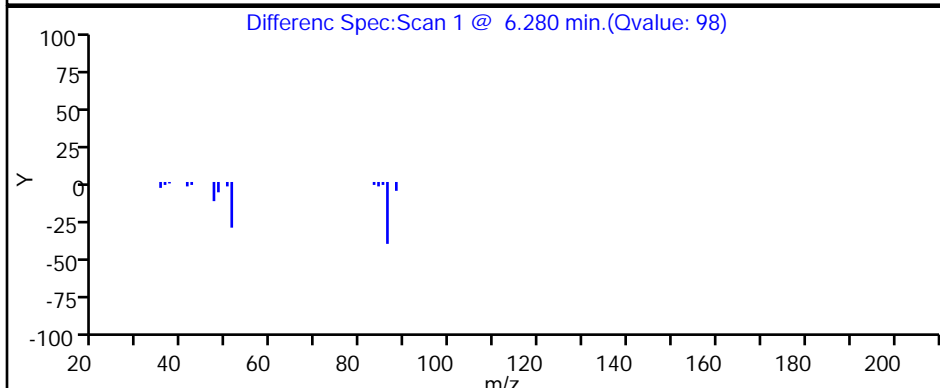
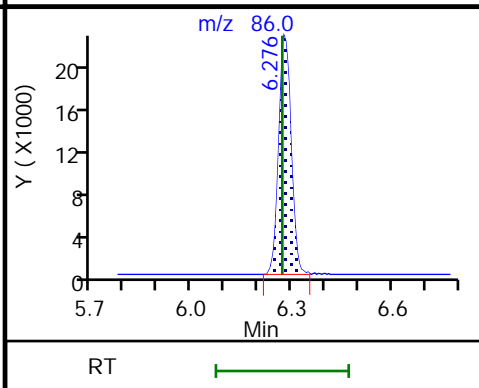
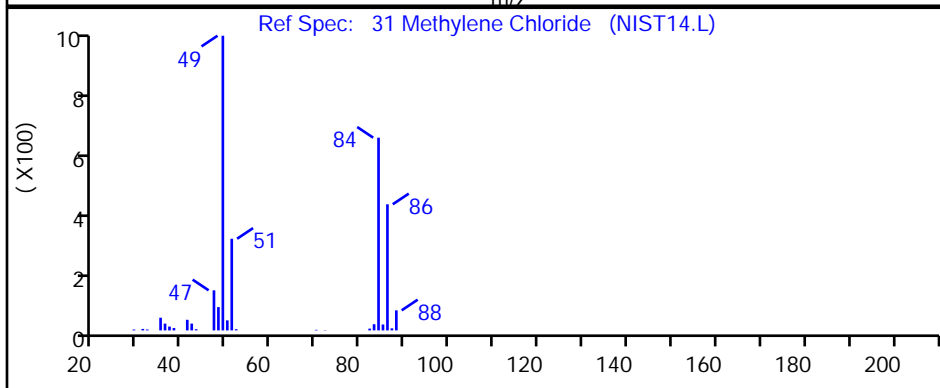
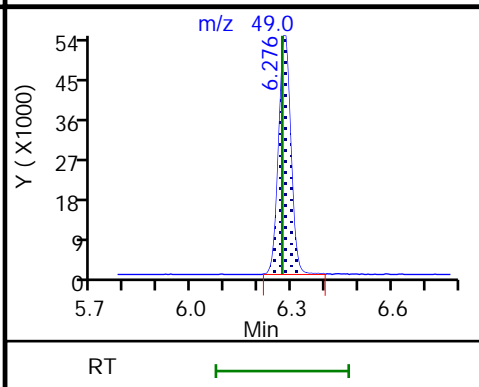
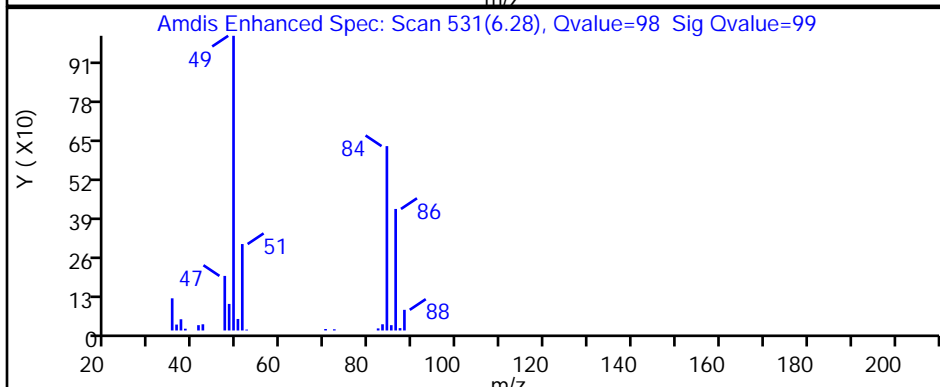
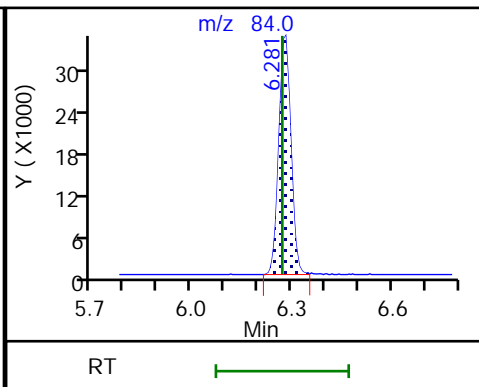
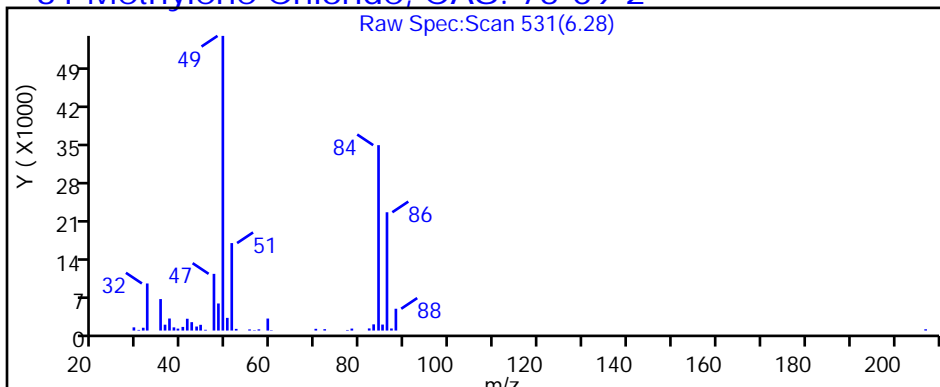
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D

Injection Date: 28-Feb-2019 04:23:30

Instrument ID: MH

Lims ID: 140-14390-A-18

Lab Sample ID: 140-14390-18

Client ID: IA-131-C-26

Operator ID: AFB

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

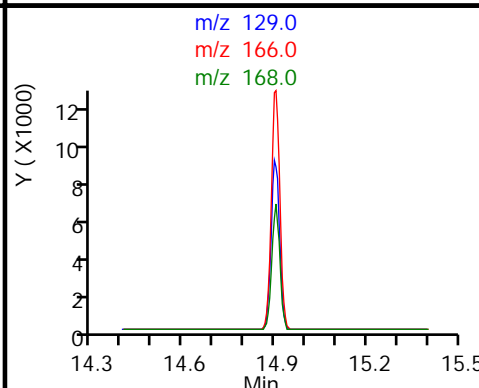
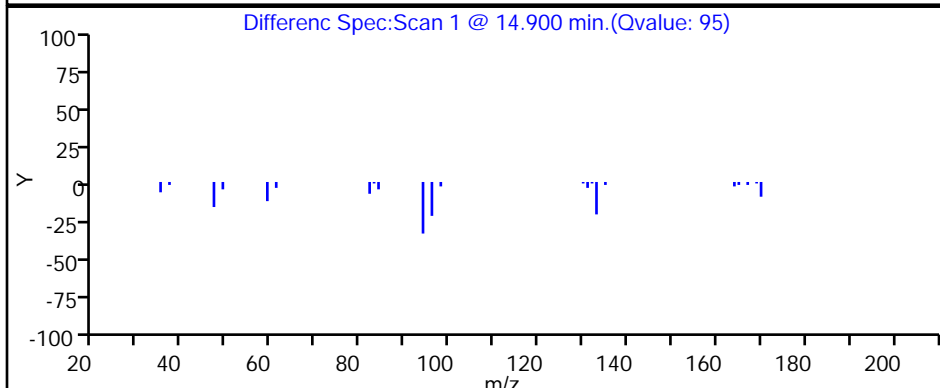
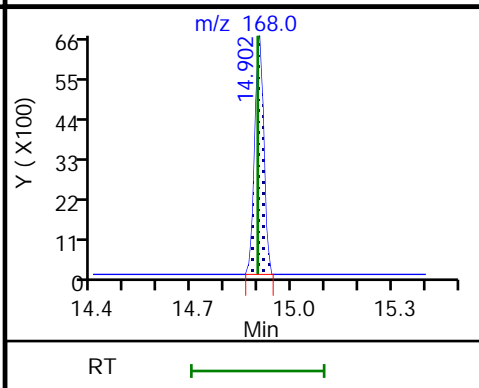
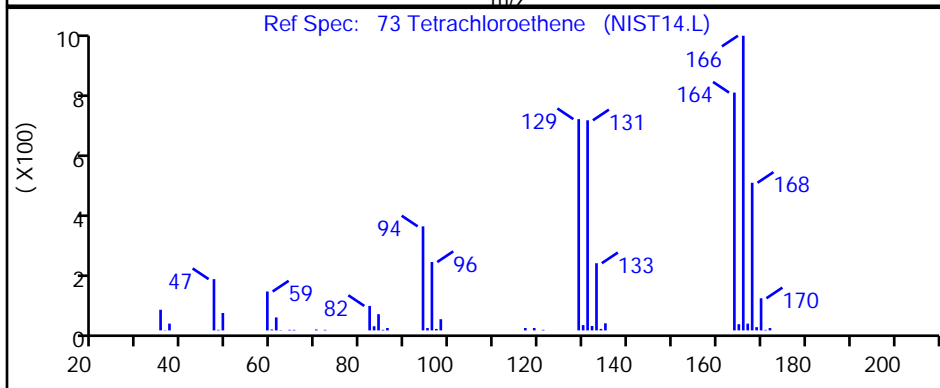
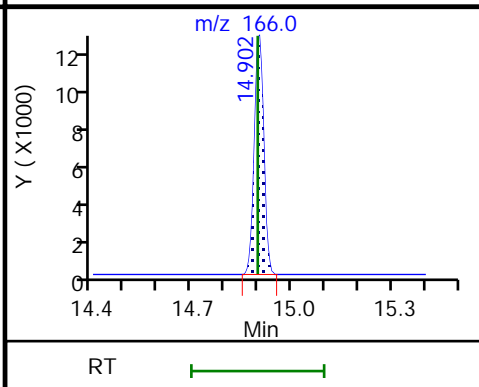
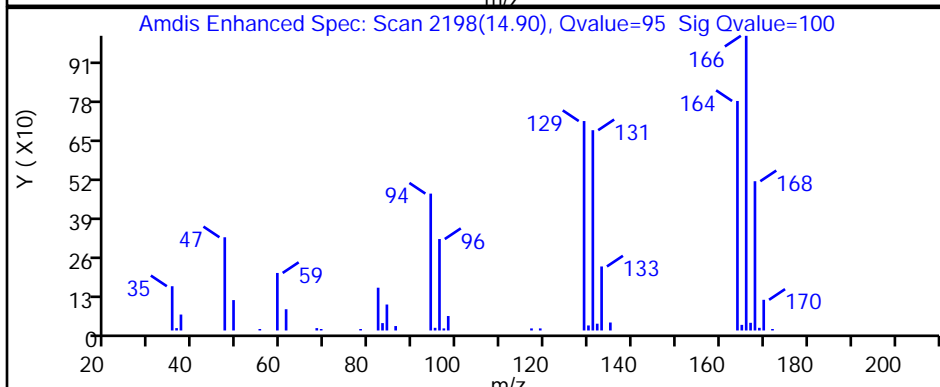
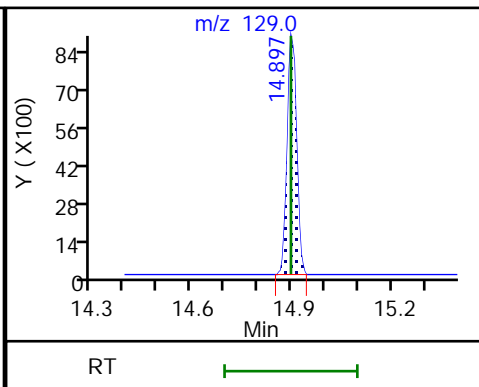
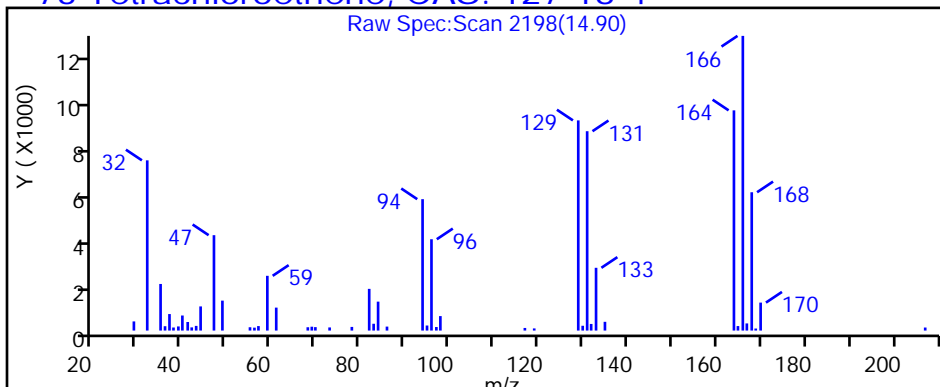
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D

Injection Date: 28-Feb-2019 04:23:30

Instrument ID: MH

Lims ID: 140-14390-A-18

Lab Sample ID: 140-14390-18

Client ID: IA-131-C-26

Operator ID: AFB

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

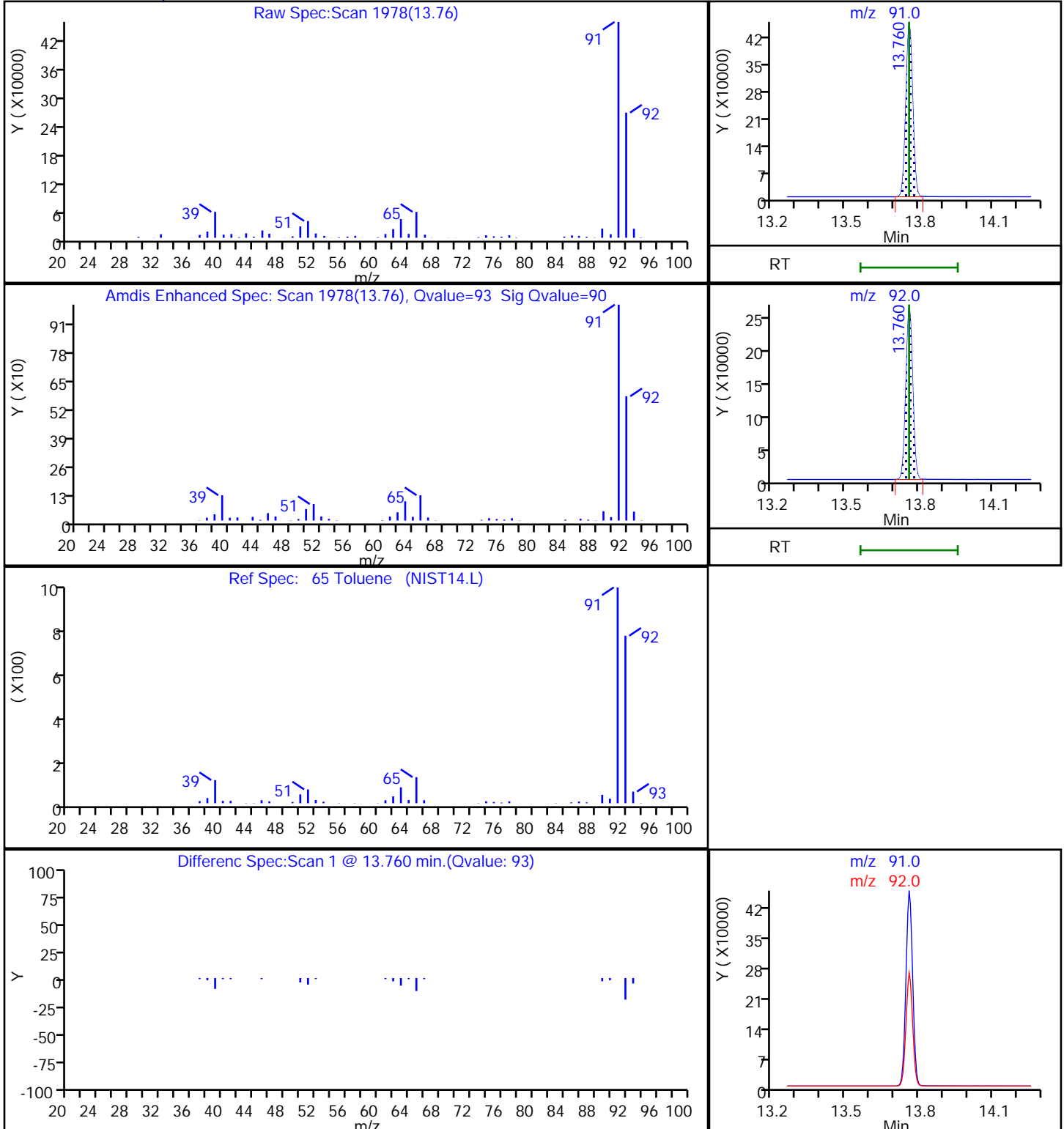
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D

Injection Date: 28-Feb-2019 04:23:30

Instrument ID: MH

Lims ID: 140-14390-A-18

Lab Sample ID: 140-14390-18

Client ID: IA-131-C-26

Operator ID: AFB

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

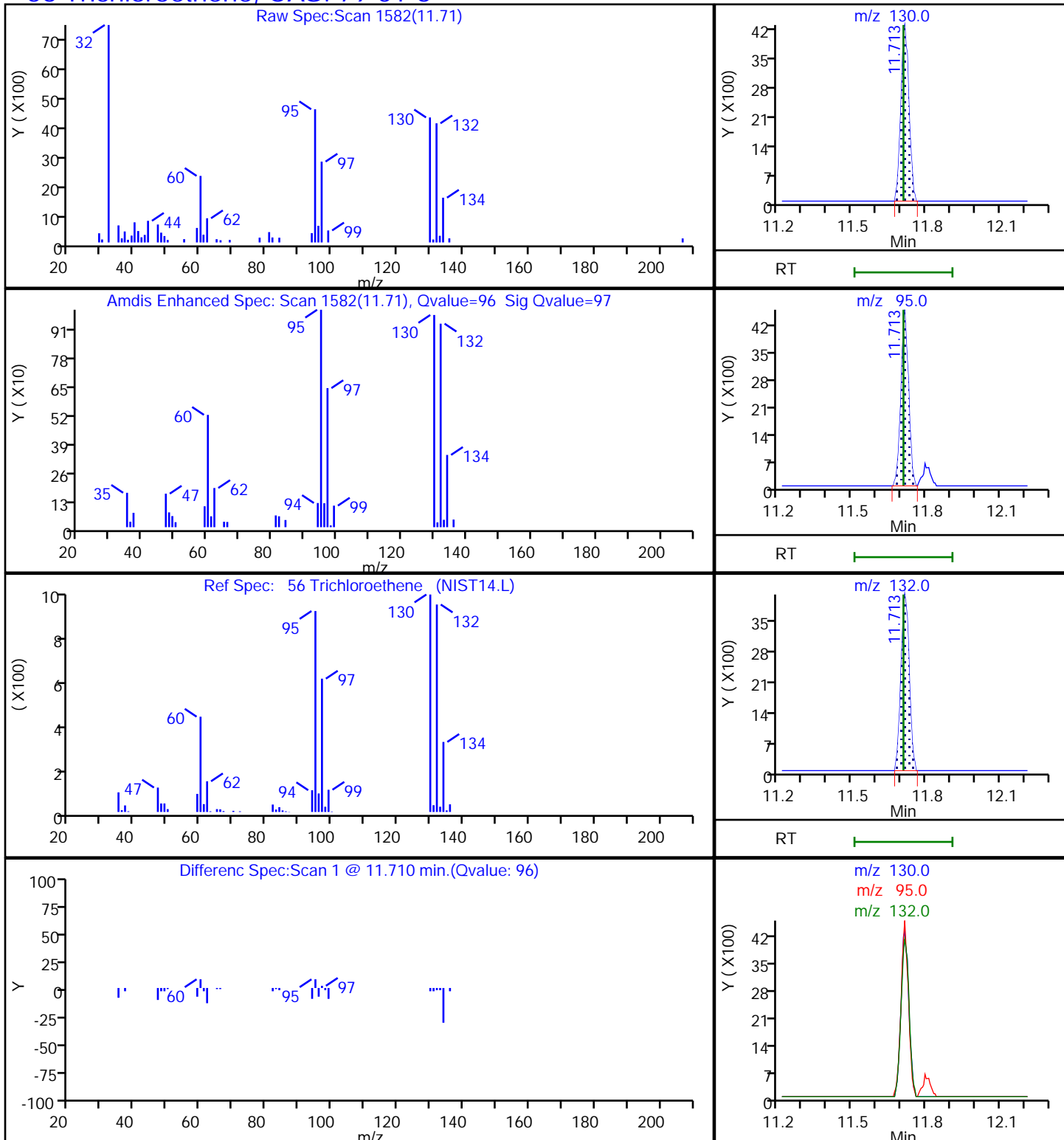
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D

Injection Date: 28-Feb-2019 04:23:30

Instrument ID: MH

Lims ID: 140-14390-A-18

Lab Sample ID: 140-14390-18

Client ID: IA-131-C-26

Operator ID: AFB

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

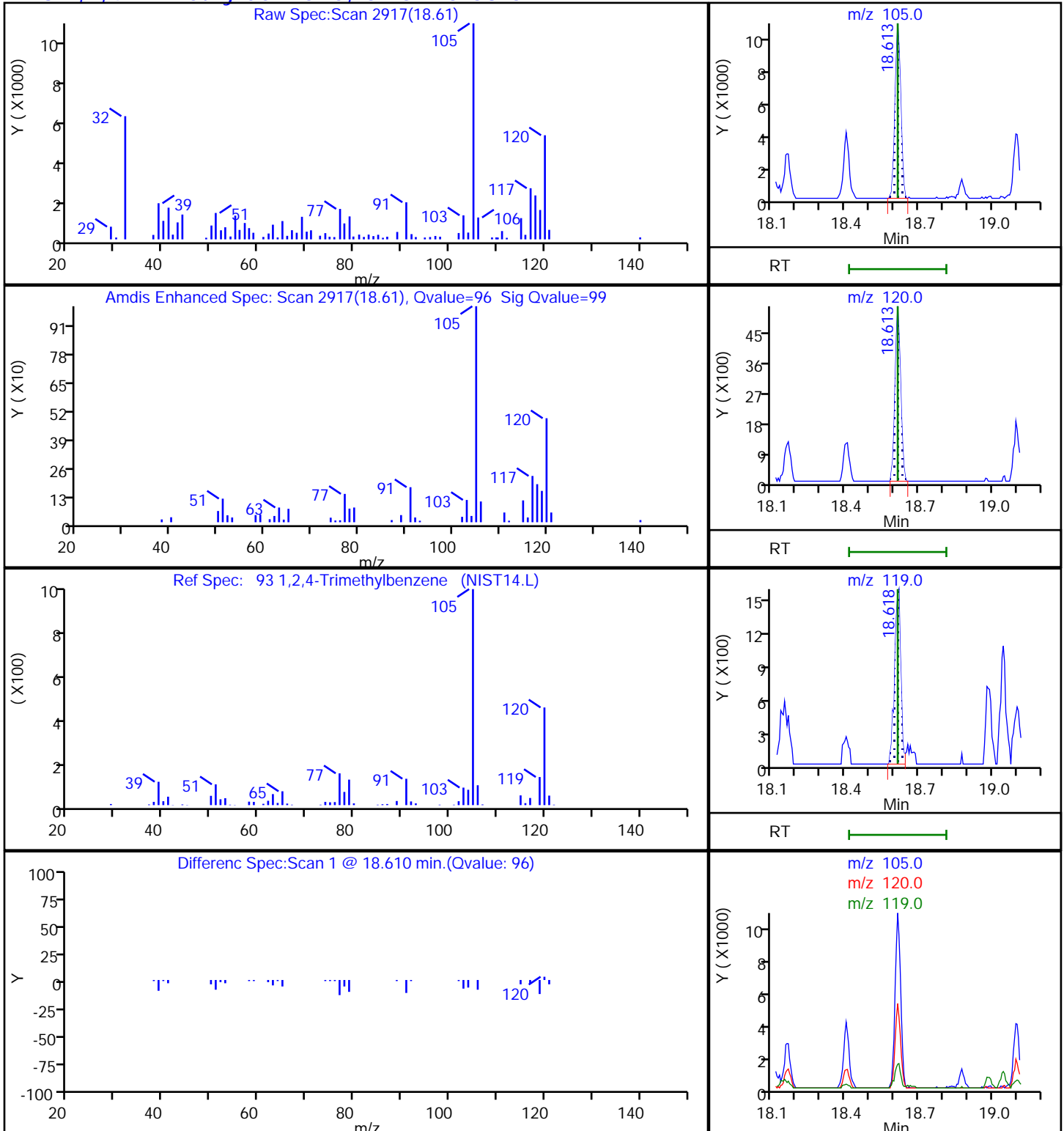
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D

Injection Date: 28-Feb-2019 04:23:30

Instrument ID: MH

Lims ID: 140-14390-A-18

Lab Sample ID: 140-14390-18

Client ID: IA-131-C-26

Operator ID: AFB

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

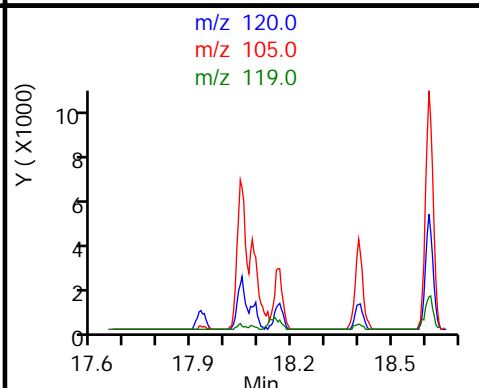
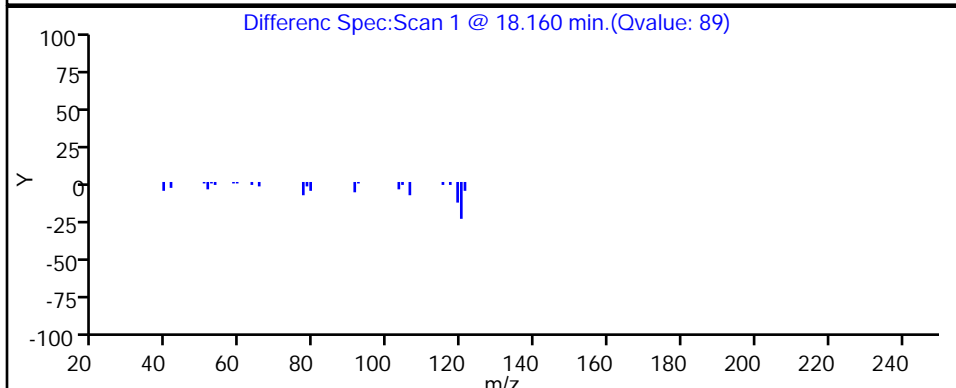
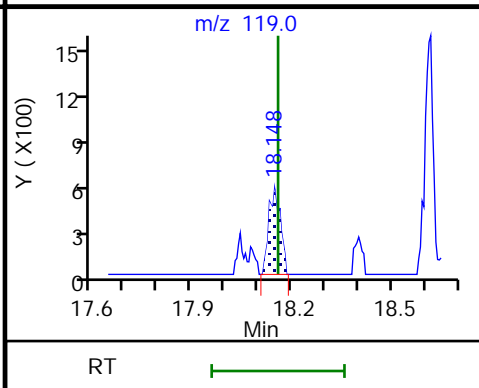
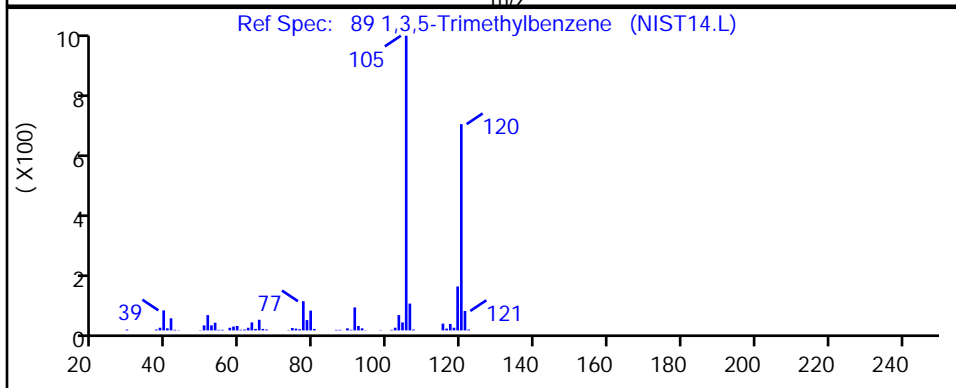
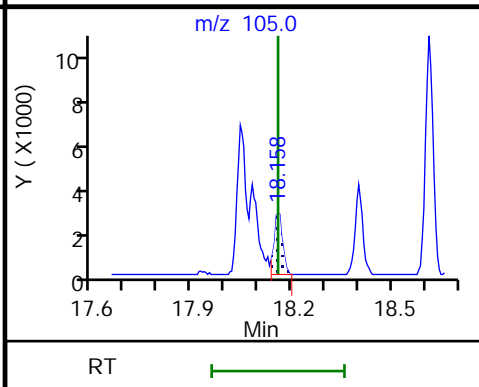
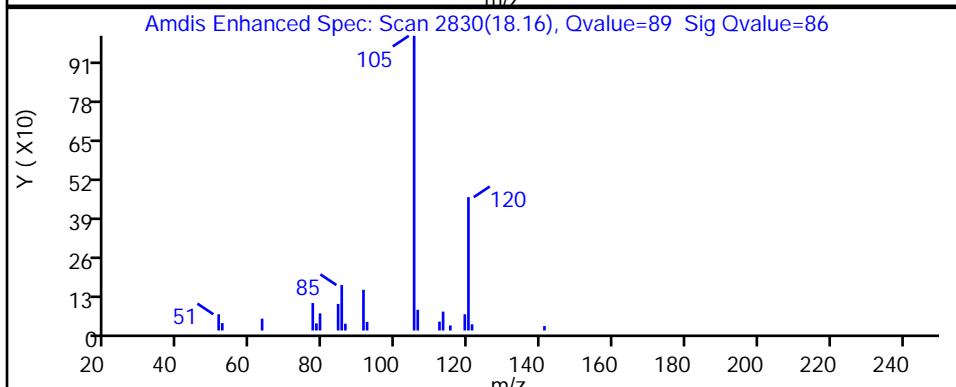
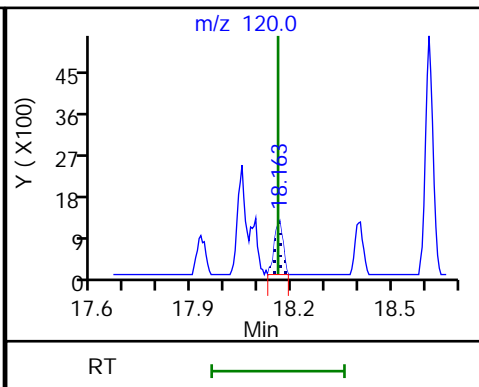
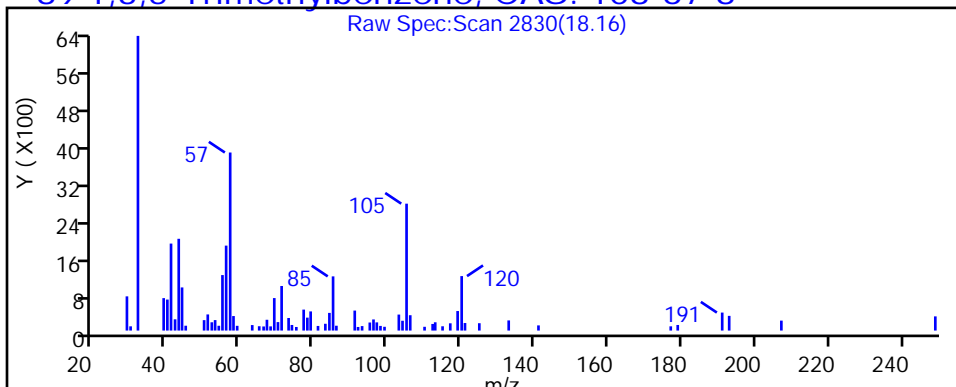
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D

Injection Date: 28-Feb-2019 04:23:30

Instrument ID: MH

Lims ID: 140-14390-A-18

Lab Sample ID: 140-14390-18

Client ID: IA-131-C-26

Operator ID: AFB

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

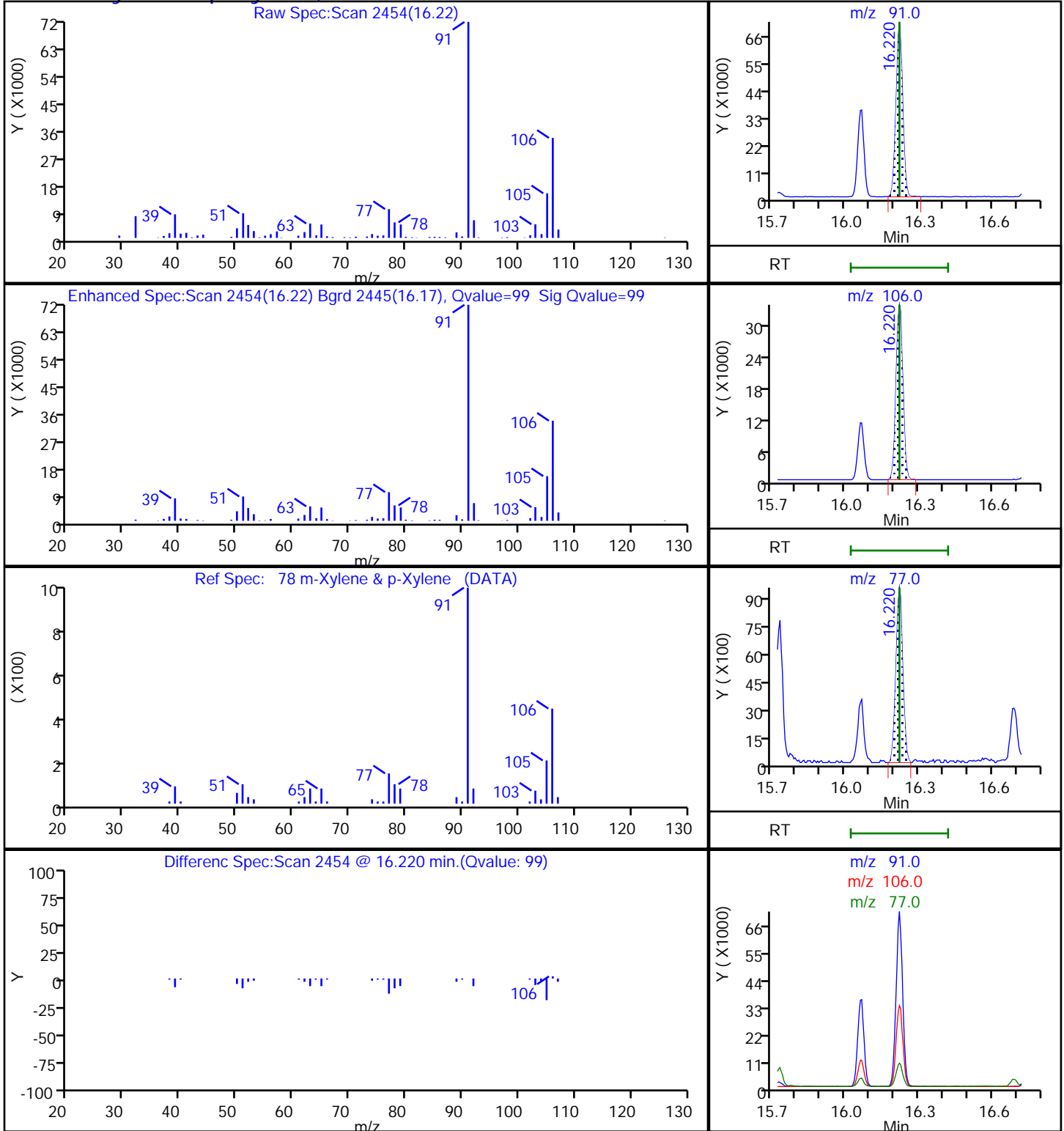
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P113.D

Injection Date: 28-Feb-2019 04:23:30

Instrument ID: MH

Lims ID: 140-14390-A-18

Lab Sample ID: 140-14390-18

Client ID: IA-131-C-26

Operator ID: AFB

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

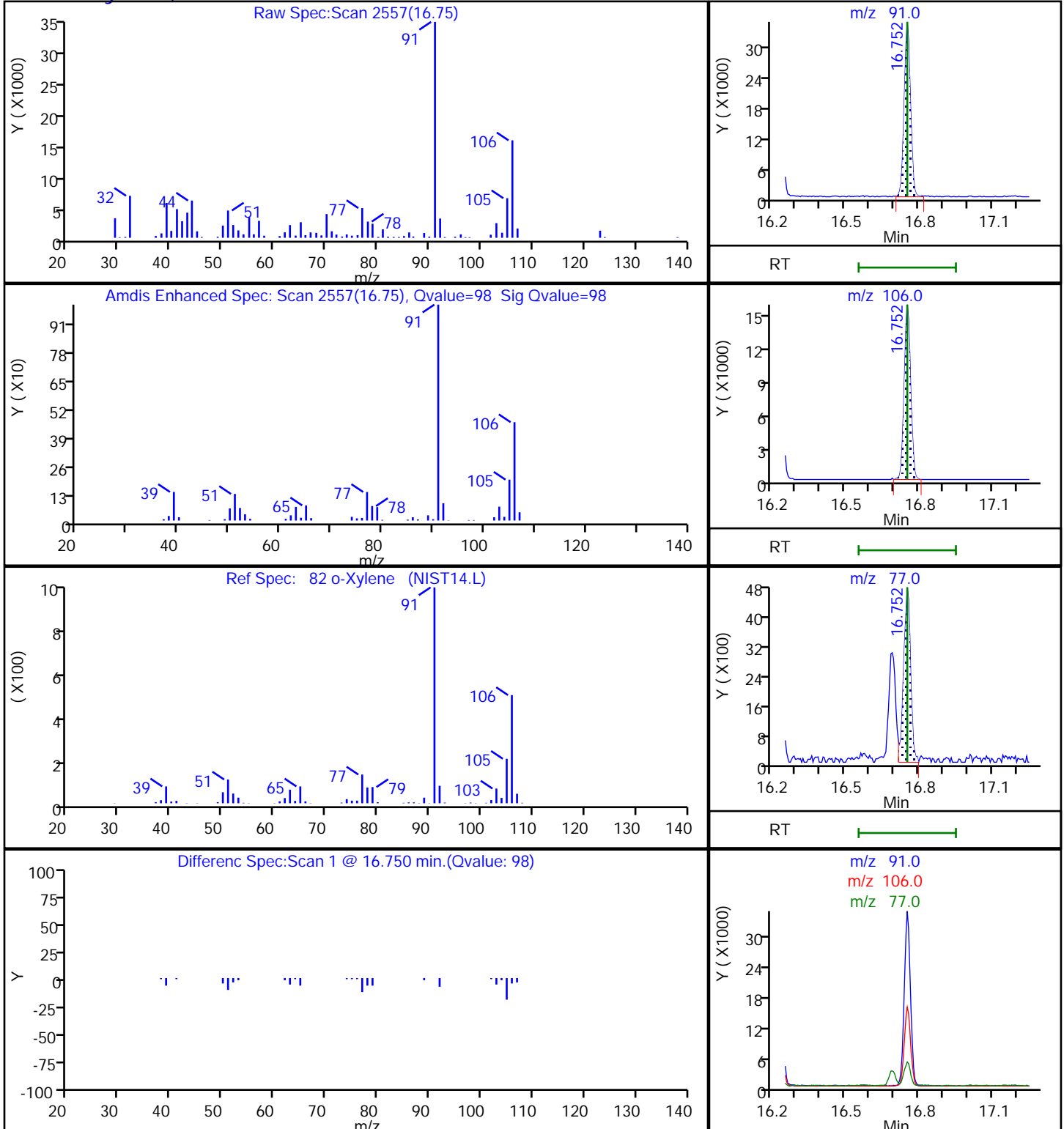
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	3.4653	3.1705	3.1944	3.1500	Ave		3.2799			4.2		30.0				
	3.1939	3.2579	3.1981	3.5227	3.3659												
Propene	+++++	+++++	1.7587	1.4845	1.4290	Ave		1.4914			7.7		30.0				
	1.4326	1.4362	1.4091	1.5280	1.4530												
Dichlorodifluoromethane	5.8144	5.0640	4.8366	4.9504	4.8580	Ave		5.0379			6.0		30.0				
	4.8876	5.0248	4.8446	5.2377	4.8608												
Chloromethane	+++++	+++++	+++++	0.6715	0.5966	Ave		0.5876			7.4		30.0				
	0.5872	0.5848	0.5550	0.5865	0.5318												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.7320	3.4028	3.3465	3.4027	Ave		3.4749			3.3		30.0				
	3.4272	3.5307	3.4425	3.5488	3.4411												
Vinyl chloride	+++++	2.0465	1.8423	1.8473	1.8163	Ave		1.8271			5.6		30.0				
	1.8203	1.8334	1.7435	1.8315	1.6623												
Butane	+++++	+++++	2.7879	2.8437	2.7009	Ave		2.6143			7.2		30.0				
	2.6844	2.6215	2.4361	2.5669	2.2728												
1,3-Butadiene	+++++	+++++	1.3389	1.3779	1.3208	Ave		1.3198			4.0		30.0				
	1.3288	1.3568	1.2722	1.3471	1.2155												
Bromomethane	+++++	+++++	1.8623	1.9344	1.8572	Ave		1.8480			3.2		30.0				
	1.8498	1.8745	1.7805	1.8774	1.7481												
Chloroethane	+++++	+++++	0.8855	0.8409	0.8547	Ave		0.8331			3.9		30.0				
	0.8383	0.8323	0.8039	0.8312	0.7778												
Ethanol	+++++	+++++	0.8934	0.8231	0.8080	Ave		0.8189			6.1		30.0				
	0.8037	0.8564	0.8028	0.8429	0.7211												
Vinyl bromide	+++++	1.9018	1.7722	1.7366	1.7418	Ave		1.7583			3.6		30.0				
	1.7437	1.7838	1.7019	1.7701	1.6732												
2-Methylbutane	+++++	+++++	2.0515	1.9633	1.9838	Ave		1.9393			4.2		30.0				
	1.9590	1.9816	1.8753	1.9172	1.7822												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14390-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 4.5968	4.8919 4.5966	4.5963 4.4102	4.6432 4.6616	4.6819 4.3585	Ave		4.6041			3.4		30.0				
Acrolein	++++ 0.5846	++++ 0.5959	++++ 0.5782	0.6004 0.6012	0.5874 0.5473	Ave		0.5850			3.2		30.0				
Acetonitrile	++++ 0.7177	++++ 0.7681	++++ 0.7379	0.7408 0.7567	0.7405 0.6910	Ave		0.7361			3.4		30.0				
Acetone	++++ 0.7514	++++ 0.7610	++++ 0.7228	0.8447 0.7183	0.7906 0.6754	Ave		0.7520			7.3		30.0				
Pentane	++++ 0.2123	++++ 0.2170	++++ 0.2070	0.2190 0.2038	0.2202 0.1943	Ave		0.2105			4.5		30.0				
Isopropyl alcohol	2.7418 2.1881	2.3188 2.2924	2.2272 2.1969	2.1770 2.2190	1.6999 1.9893	QuaF		2.3689	-0.007836					1.0000		0.9900	
Ethyl ether	++++ 1.8837	2.0347 1.9038	1.8861 1.7817	1.8427 1.8377	1.9152 1.6737	Ave		1.8621			5.3		30.0				
1,1-Dichloroethene	++++ 1.5290	1.7340 1.5543	1.5403 1.5141	1.5633 1.5140	1.5440 1.4908	Ave		1.5537			4.6		30.0				
Acrylonitrile	++++ 1.1815	++++ 1.2218	1.1258 1.2125	1.1965 1.2550	1.1794 1.1889	Ave		1.1952			3.1		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.6645	4.0846 3.6642	3.7625 3.5412	3.7405 3.6163	3.7204 3.4760	Ave		3.6967			4.7		30.0				
tert-Butyl alcohol	++++ 2.5653	++++ 2.7860	2.5284 2.7619	2.5014 2.8005	2.5277 2.6087	Ave		2.6350			4.8		30.0				
Methylene Chloride	++++ 1.5650	++++ 1.4959	++++ 1.3885	2.4719 1.3565	1.8784 1.2927	Ave		1.6355			25.4		30.0				
3-Chloropropene	++++ 1.4263	++++ 1.4402	1.7866 1.3797	1.5003 1.4158	1.4252 1.3047	Ave		1.4598			9.8		30.0				
Carbon disulfide	++++ 4.5267	++++ 4.6305	4.5536 4.4426	4.5843 4.4448	4.5189 4.2681	Ave		4.4962			2.5		30.0				
trans-1,2-Dichloroethene	++++ 1.5549	1.7812 1.5959	1.5579 1.5626	1.5474 1.5716	1.5873 1.5791	Ave		1.5931			4.5		30.0				
2-Methylpentane	++++ 3.6495	3.8413 3.7329	3.6302 3.5934	3.6663 3.6789	3.6726 3.4794	Ave		3.6605			2.7		30.0				
Methyl tert-butyl ether	++++ 3.8063	++++ 3.9290	3.6249 3.8501	3.6903 3.7951	3.7667 3.7289	Ave		3.7739			2.5		30.0				
1,1-Dichloroethane	++++ 3.0039	3.2165 3.0616	3.0410 2.9531	3.0857 3.0007	3.0099 2.9039	Ave		3.0307			2.9		30.0				
Vinyl acetate	++++ 4.3714	++++ 4.6452	3.6694 4.6119	3.8279 4.8234	4.0421 4.6436	Ave		4.3293			9.9		30.0				
Hexane	++++ 1.2057	1.3026 1.2192	1.1775 1.1910	1.1729 1.2227	1.1991 1.2068	Ave		1.2108			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14390-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++	++++	++++	0.6508	0.6769	Ave		0.6878			3.3		30.0				
	0.6760	0.7192	0.7039	0.6996	0.6879												
cis-1,2-Dichloroethene	++++	1.7468	1.5933	1.6008	1.5882	Ave		1.6147			3.2		30.0				
	1.5744	1.6363	1.5970	1.5970	1.5988												
Ethyl acetate	++++	++++	3.7437	3.7153	3.7356	Ave		3.8579			3.2		30.0				
	3.8330	3.9793	3.9131	4.0646	3.8788												
Chloroform	++++	3.6507	3.4694	3.5102	3.4542	Ave		3.4756			2.3		30.0				
	3.4568	3.5041	3.4001	3.4590	3.3756												
Tetrahydrofuran	++++	2.0384	1.8755	1.8215	1.7999	Ave		1.8689			3.8		30.0				
	1.8356	1.8762	1.8441	1.9023	1.8263												
1,1,1-Trichloroethane	++++	3.3591	3.1133	3.1042	3.2027	Ave		3.3049			4.3		30.0				
	3.2539	3.4003	3.3660	3.4402	3.5047												
1,2-Dichloroethane	0.4792	0.4342	0.4004	0.4094	0.4128	Ave		0.4310			5.4		30.0				
	0.4208	0.4309	0.4260	0.4468	0.4496												
Cyclohexane	++++	++++	0.1130	0.1144	0.1221	Ave		0.1257			7.6		30.0				
	0.1234	0.1282	0.1287	0.1363	0.1399												
Benzene	++++	0.8954	0.8112	0.7881	0.8065	Ave		0.8457			5.0		30.0				
	0.8262	0.8466	0.8440	0.8945	0.8990												
Carbon tetrachloride	0.7487	0.6490	0.6034	0.5747	0.6367	Ave		0.6846			10.2		30.0				
	0.6708	0.7010	0.7125	0.7615	0.7873												
1-Butanol	++++	++++	++++	0.0965	0.0979	Ave		0.1144			12.4		30.0				
	0.1071	0.1245	0.1248	0.1330	0.1172												
2,3-Dimethylpentane	++++	0.1766	0.1665	0.1668	0.1769	Ave		0.1754			2.9		30.0				
	0.1796	0.1801	0.1766	0.1780	0.1774												
Thiophene	++++	0.4876	0.4639	0.4560	0.4750	Ave		0.4839			3.4		30.0				
	0.4824	0.4945	0.4890	0.4969	0.5094												
2,2,4-Trimethylpentane	++++	1.4676	1.3177	1.3230	1.3297	Ave		1.3953			4.8		30.0				
	1.3660	1.4074	1.3906	1.4688	1.4871												
Heptane	++++	0.2712	0.2506	0.2452	0.2558	Ave		0.2694			6.4		30.0				
	0.2663	0.2737	0.2749	0.2881	0.2989												
1,2-Dichloropropane	++++	0.3683	0.3346	0.3506	0.3450	Ave		0.3598			4.4		30.0				
	0.3549	0.3641	0.3586	0.3775	0.3847												
Trichloroethene	0.4632	0.4095	0.3655	0.3672	0.3757	Ave		0.3991			7.5		30.0				
	0.3841	0.3944	0.3956	0.4073	0.4285												
Dibromomethane	++++	0.4765	0.4099	0.4084	0.3933	Ave		0.4192			6.1		30.0				
	0.3974	0.4115	0.4077	0.4323	0.4360												
Bromodichloromethane	0.6604	0.5793	0.5629	0.5714	0.5879	Ave		0.6298			8.4		30.0				
	0.6222	0.6529	0.6534	0.6923	0.7149												
1,4-Dioxane	++++	0.1357	0.1276	0.1218	0.1227	Ave		0.1270			3.8		30.0				
	0.1219	0.1302	0.1307	0.1288	0.1236												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	0.4034	0.3437	0.2975	0.3269	0.3551	Ave		0.3781			12.1		30.0				
	0.3789	0.4060	0.4068	0.4343	0.4280												
Methylcyclohexane	++++	++++	0.4245	0.4287	0.4498	LinF		0.5272						0.9990		0.9900	
	0.4648	0.4877	0.4844	0.5074	0.5357												
4-Methyl-2-pentanone (MIBK)	++++	++++	0.7143	0.6509	0.6822	Ave		0.7577			10.3		30.0				
	0.7301	0.7728	0.7841	0.8611	0.8658												
cis-1,3-Dichloropropene	0.4871	0.3999	0.3931	0.4158	0.4395	Ave		0.4735			12.4		30.0				
	0.4778	0.5104	0.5121	0.5406	0.5587												
trans-1,3-Dichloropropene	0.4944	0.4260	0.4038	0.4133	0.4518	Ave		0.4856			12.2		30.0				
	0.4884	0.5211	0.5365	0.5532	0.5670												
Toluene	++++	1.1979	1.0972	1.0779	1.1122	Ave		1.1386			3.2		30.0				
	1.1442	1.1566	1.1486	1.1597	1.1532												
1,1,2-Trichloroethane	0.4133	0.3819	0.3518	0.3774	0.3800	Ave		0.3780			4.2		30.0				
	0.3813	0.3829	0.3732	0.3756	0.3625												
2-Hexanone	++++	++++	++++	0.2822	0.3272	Ave		0.3734			14.2		30.0				
	0.3617	0.3952	0.4022	0.4230	0.4226												
Octane	0.3431	0.2979	0.2983	0.3057	0.3158	Ave		0.3251			5.7		30.0				
	0.3345	0.3387	0.3351	0.3409	0.3405												
C8 Range	++++	++++	++++	2.6905	2.7814	Ave		2.9596			6.7		30.0				
	2.8847	2.9768	2.9653	3.2221	3.1962												
Dibromochloromethane	0.7111	0.6553	0.6167	0.6360	0.7095	Ave		0.7610			14.5		30.0				
	0.7798	0.8336	0.8540	0.8994	0.9146												
1,2-Dibromoethane (EDB)	0.7556	0.6517	0.5952	0.6231	0.6489	Ave		0.6894			8.3		30.0				
	0.6861	0.7166	0.7185	0.7452	0.7529												
Tetrachloroethene	0.5382	0.4943	0.4320	0.4547	0.4475	Ave		0.4638			6.6		30.0				
	0.4481	0.4549	0.4479	0.4602	0.4599												
Chlorobenzene	1.0921	0.9609	0.8656	0.8563	0.8903	Ave		0.9365			7.5		30.0				
	0.8958	0.9195	0.9278	0.9856	0.9706												
Ethylbenzene	1.6135	1.4227	1.3082	1.3322	1.3865	Ave		1.4498			6.5		30.0				
	1.4269	1.4796	1.4755	1.5346	1.5189												
m-Xylene & p-Xylene	1.2072	1.0640	0.9982	1.0439	1.0836	Ave		1.1179			6.4		30.0				
	1.1213	1.1561	1.1505	1.2259	1.1287												
Nonane	0.7214	0.6646	0.6269	0.6551	0.7128	Ave		0.7205			7.7		30.0				
	0.7434	0.7638	0.7531	0.8016	0.7620												
Bromoform	++++	++++	0.5650	0.5843	0.6966	Ave		0.8550			26.6		30.0				
	0.8072	0.9326	0.9922	1.1394	1.1231												
Styrene	0.7205	0.5902	0.6127	0.6375	0.7228	Ave		0.7534			15.1		30.0				
	0.7904	0.8466	0.8542	0.9160	0.8426												
o-Xylene	1.2934	1.1325	1.0847	1.1027	1.1495	Ave		1.1384			5.3		30.0				
	1.1502	1.1572	1.1094	1.1237	1.0809												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.9096	0.8625	0.8260	0.8361	0.9096	Ave		0.9221			7.0		30.0				
	0.9401	0.9755	0.9610	1.0114	0.9889												
1,2,3-Trichloropropane	0.2447	0.2178	0.2113	0.2130	0.2227	Ave		0.2272			5.1		30.0				
	0.2256	0.2303	0.2271	0.2361	0.2431												
Isopropylbenzene	1.7967	1.5351	1.4440	1.4632	1.5279	Ave		1.5707			6.3		30.0				
	1.5633	1.5715	1.5587	1.6321	1.6144												
Propylbenzene	0.4012	0.3808	0.3409	0.3592	0.3891	Ave		0.4111			11.6		30.0				
	0.4107	0.4308	0.4332	0.4685	0.4967												
2-Chlorotoluene	0.4669	0.3905	0.3655	0.3667	0.3951	Ave		0.4027			7.3		30.0				
	0.3964	0.4055	0.3991	0.4165	0.4244												
4-Ethyltoluene	1.4351	1.3019	1.3077	1.3685	1.4589	Ave		1.4935			9.5		30.0				
	1.5278	1.5863	1.5805	1.6912	1.6776												
1,3,5-Trimethylbenzene	++++	++++	0.5413	0.5786	0.6024	Lin1	-0.018	0.6744						0.9990		0.9900	
	0.6176	0.6376	0.6340	0.6743	0.6871												
Alpha Methyl Styrene	++++	++++	++++	0.4208	0.4981	Ave		0.6224			21.8		30.0				
	0.5685	0.6414	0.6778	0.7497	0.8004												
Decane	0.8670	0.8318	0.8501	0.8994	0.9689	Ave		0.9226			6.4		30.0				
	0.9743	0.9881	0.9374	0.9947	0.9138												
tert-Butylbenzene	1.3232	1.2918	1.2707	1.3008	1.3524	Ave		1.3980			8.3		30.0				
	1.3873	1.4399	1.4507	1.6252	1.5376												
1,2,4-Trimethylbenzene	1.2112	1.1922	1.2018	1.2261	1.2756	Ave		1.3033			7.8		30.0				
	1.3135	1.3589	1.3540	1.5084	1.3912												
sec-Butylbenzene	1.9008	1.7647	1.7019	1.7864	1.8764	Ave		1.9482			9.3		30.0				
	1.9575	2.0412	2.0527	2.3032	2.0968												
1,3-Dichlorobenzene	0.9710	0.9136	0.8392	0.8456	0.8596	Ave		0.9455			10.4		30.0				
	0.8871	0.9433	0.9831	1.1213	1.0913												
Benzyl chloride	++++	++++	++++	0.5869	0.7162	Ave		0.9648			27.2		30.0				
	0.8511	0.9916	1.0755	1.2636	1.2685												
1,4-Dichlorobenzene	0.8993	0.8397	0.7743	0.7878	0.8054	Ave		0.8947			11.9		30.0				
	0.8484	0.9077	0.9477	1.0688	1.0683												
4-Isopropyltoluene	1.3948	1.3577	1.3402	1.4210	1.5104	Ave		1.5120			8.5		30.0				
	1.5570	1.5989	1.5830	1.7130	1.6444												
1,2,3-Trimethylbenzene	1.2663	1.2149	1.1671	1.2381	1.2887	Ave		1.2797			4.8		30.0				
	1.2982	1.3173	1.2872	1.3672	1.3515												
Indane	1.2186	1.1243	1.0675	1.0961	1.1826	Ave		1.2519			11.7		30.0				
	1.2431	1.3163	1.3515	1.5395	1.3790												
1,2-Dichlorobenzene	0.9498	0.8850	0.8350	0.8518	0.8698	Ave		0.9417			10.4		30.0				
	0.8906	0.9443	0.9892	1.1350	1.0670												
Indene	++++	++++	++++	0.8141	0.9137	Ave		1.0768			17.1		30.0				
	0.9935	1.0962	1.1520	1.3505	1.2176												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.3790 1.6516	1.3189 1.6880	1.3874 1.6768	1.4670 1.8898	1.5846 1.5798	Ave		1.5623			11.2		30.0				
Undecane	++++ 1.1148	++++ 1.1251	++++ 1.0648	++++ 1.1605	0.9201 1.0623	Ave		1.0667			7.5		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.4502	0.2917 0.5017	0.2809 0.5356	0.3021 ++++	0.3712 ++++	Ave		0.3905			27.0		30.0				
1,2,4,5-Tetramethylbenzene	1.1786 1.4737	1.0742 1.5594	1.1053 1.5930	1.2141 1.8040	1.3311 1.7554	Ave		1.4089			18.9		30.0				
Dodecane	++++ 1.0804	++++ 1.1437	++++ 1.1280	0.7863 1.2231	0.8699 ++++	Ave		1.0386			16.5		30.0				
1,2,4-Trichlorobenzene	++++ 0.6454	++++ 0.7369	0.3966 0.8248	0.4284 ++++	0.4829 ++++	Lin1	-0.053	0.7893						0.9900		0.9900	
Naphthalene	++++ 1.4915	0.9793 1.6065	0.9607 1.6241	1.0249 1.8355	1.1613 1.9378	Ave		1.4024			27.0		30.0				
Hexachlorobutadiene	1.0176 0.8427	0.8796 0.9000	0.8143 0.9493	0.7902 1.0467	0.7652 0.8828	Ave		0.8888			10.5		30.0				
1,2,3-Trichlorobenzene	0.8505 0.7703	0.6300 0.8209	0.5889 0.8468	0.6086 0.9455	0.6198 0.8106	Ave		0.7492			16.9		30.0				
2-Methylnaphthalene	++++ 0.5646	++++ 0.6759	++++ 0.7544	0.3700 ++++	0.3309 ++++	Ave		0.5392			34.4		50.0				
1-Methylnaphthalene	++++ 0.8761	++++ 0.9590	0.6260 0.9457	0.6372 ++++	0.5405 ++++	Ave		0.7641			24.0		50.0				
4-Bromofluorobenzene (Surr)	0.6541 0.6669	0.6584 0.6518	0.6640 0.6390	0.6638 0.6459	0.6727 0.6015	Ave		0.6518			3.1		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 276110	13216 568429	23324 1166346	44738 2080315	110343 4483179	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 123848	++++ 250579	12938 513903	20791 902358	50058 1935361	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	11347 422528	19313 876701	35581 1766802	69332 3093057	170173 6474307	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 50767	++++ 102040	++++ 202413	9404 346372	20898 708335	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 296279	14233 616018	25033 1255454	46869 2095695	119194 4583276	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	++++ 157361	7805 319887	13553 635845	25872 1081563	63624 2214114	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 232065	++++ 457383	20509 888442	39827 1515853	94610 3027220	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 114876	++++ 236733	9850 463965	19298 795542	46266 1618919	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 159914	++++ 327044	13700 649354	27091 1108697	65057 2328401	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 72470	++++ 145223	6514 293162	11777 490862	29938 1035993	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 347389	++++ 747094	32861 1463846	57636 2488750	141512 4802553	++++ 5.00	++++ 10.0	0.400 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 150739	7253 311230	13037 620663	24322 1045304	61012 2228635	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 169357	++++ 345741	15092 683911	27497 1132183	69491 2373804	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 397394	18657 801987	33813 1608364	65029 2752862	164002 5805275	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14390-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Acrolein	CBM	Ave	++++ 50534	++++ 103966	++++ 210875	8409 355043	20576 728953	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 62042	++++ 134006	++++ 269093	10375 446888	25939 920347	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Acetone	CBM	Ave	++++ 194862	++++ 398344	++++ 790789	35492 1272613	83084 2698817	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 18350	++++ 37863	++++ 75489	3067 120364	7712 258741	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Isopropyl alcohol	CBM	QuaF	16052 567468	26530 1199879	49153 2403555	91466 3931291	228028 7948950	0.0600 3.00	0.120 6.00	0.240 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 162847	7760 332157	13875 649774	25807 1085214	67088 2229204	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	++++ 132183	6613 271177	11331 552199	21894 894072	54085 1985588	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 102139	++++ 213181	++++ 442205	8282 741130	16757 1583584	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 316796	15578 639315	27679 1291447	52386 2135574	130321 4629798	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 221767	++++ 486078	++++ 1007263	18600 1653787	35033 3474636	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 135290	++++ 260991	++++ 506389	34620 801053	65799 1721729	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 123300	++++ 251273	++++ 503167	13143 836069	21012 1737749	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 391326	++++ 807906	++++ 1620181	33499 2624808	64204 5684871	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 134418	6793 278440	11461 569867	21671 928087	55602 2103238	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 315498	14650 651289	26706 1310496	51347 2172520	128649 4634316	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 329050	++++ 685507	++++ 1404124	26667 2241171	51683 4966677	131945 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
1,1-Dichloroethane	CBM	Ave	++++ 259689	12267 534165	22371 1076990	43216 1772013	105434 3867799	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 377904	++++ 810467	++++ 1681929	26994 2848393	53610 6184921	141592 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
Hexane	CBM	Ave	++++ 104228	4968 212722	8662 434352	16426 722047	42005 1607432	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 58444	++++ 125474	++++ 256700	9115 413154	23711 916246	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	++++ 136108	6662 285498	11721 582417	22419 943075	55633 2129500	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14390-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 331359	++++ 694293	27541 1427087	52034 2400330	130856 5166288	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	++++ 298839	13923 611378	25523 1239987	49161 2042657	120999 4496097	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 158683	7774 327341	13797 672532	25511 1123394	63048 2432538	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	++++ 281296	12811 593273	22903 1227570	43475 2031546	112189 4668064	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	5129 196209	9022 404925	16131 824860	31582 1368173	79080 2983220	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 57530	++++ 120448	4554 249183	8824 417405	23383 928409	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 385270	18606 795627	32682 1634406	60789 2739521	154496 5964977	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	8013 312823	13486 658731	24310 1379762	44327 2331942	121964 5223763	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 49965	++++ 117031	++++ 241678	7444 407327	18761 777405	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 83728	3670 169285	6708 341915	12865 545270	33896 1177164	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 224938	10131 464737	18692 946920	35178 1521788	90994 3380138	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 636999	30494 1322559	53089 2692898	102056 4498015	254726 9866899	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 124160	5635 257254	10096 532315	18913 882284	49010 1982995	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 165502	7652 342173	13479 694484	27042 1156069	66097 2552409	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4957 179106	8508 370632	14725 766083	28328 1247479	71975 2842892	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 185331	9901 386676	16515 789473	31506 1323802	75334 2892720	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	7068 290134	12036 613591	22677 1265402	44079 2120110	112623 4743566	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 56823	2819 122358	5140 253088	9393 394321	23501 819819	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	4317 176703	7141 381574	11987 787734	25219 1330076	68030 2839739	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	LinF	++++ 216746	++++ 458293	17104 937963	33070 1553838	86171 3554415	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 340468	++++ 726276	28778 1518450	50210 2637007	130687 5744756	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	5213	8310	15836	32071	84191	0.0200	0.0400	0.0800	0.160	0.400
			222810	479642	991696	1655482	3706962	1.00	2.00	4.00	8.00	16.0
trans-1,3-Dichloropropene	CBZd	Ave	4369	7302	13490	26441	71850	0.0200	0.0400	0.0800	0.160	0.400
			5	193590	428343	930378	1585219	3716627	1.00	2.00	4.00	8.00
Toluene	CBZd	Ave	++++	20535	36650	68961	176860	++++	0.0400	0.0800	0.160	0.400
			5	453543	950794	1991754	3322999	7558388	1.00	2.00	4.00	8.00
1,1,2-Trichloroethane	CBZd	Ave	3652	6546	11751	24147	60427	0.0200	0.0400	0.0800	0.160	0.400
			5	151135	314780	647099	1076123	2376053	1.00	2.00	4.00	8.00
2-Hexanone	CBZd	Ave	++++	++++	++++	18055	52036	++++	++++	++++	0.160	0.400
			5	143357	324836	697429	1212184	2770142	1.00	2.00	4.00	8.00
Octane	CBZd	Ave	3032	5107	9965	19559	50220	0.0200	0.0400	0.0800	0.160	0.400
			5	132598	278400	581056	976945	2231497	1.00	2.00	4.00	8.00
C8 Range	DFBZ	Ave	++++	++++	++++	207536	532812	++++	++++	++++	0.160	0.400
			5	1345188	2797431	5742340	9867518	21206896	1.00	2.00	4.00	8.00
Dibromochloromethane	CBZd	Ave	6284	11234	20599	40693	112826	0.0200	0.0400	0.0800	0.160	0.400
			5	309096	685217	1481007	2576992	5994726	1.00	2.00	4.00	8.00
1,2-Dibromoethane (EDB)	CBZd	Ave	6677	11172	19884	39867	103182	0.0200	0.0400	0.0800	0.160	0.400
			5	271955	589031	1245997	2135184	4934830	1.00	2.00	4.00	8.00
Tetrachloroethene	CBZd	Ave	4756	8474	14431	29094	71154	0.0200	0.0400	0.0800	0.160	0.400
			5	177605	373916	776667	1318629	3014432	1.00	2.00	4.00	8.00
Chlorobenzene	CBZd	Ave	9651	16472	28914	54785	141575	0.0200	0.0400	0.0800	0.160	0.400
			5	355092	755892	1608983	2824132	6361822	1.00	2.00	4.00	8.00
Ethylbenzene	CBZd	Ave	14258	24388	43699	85231	220476	0.0200	0.0400	0.0800	0.160	0.400
			5	565594	1216288	2558634	4397072	9955892	1.00	2.00	4.00	8.00
m-Xylene & p-Xylene	CBZd	Ave	21336	36478	66686	133574	344621	0.0400	0.0800	0.160	0.320	0.800
			5	888953	1900753	3990112	7025357	14796297	2.00	4.00	8.00	16.0
Nonane	CBZd	Ave	6375	11392	20941	41910	113340	0.0200	0.0400	0.0800	0.160	0.400
			5	294667	627904	1305941	2296867	4994379	1.00	2.00	4.00	8.00
Bromoform	CBZd	Ave	++++	++++	18872	37380	110767	++++	++++	0.0800	0.160	0.400
			5	319968	766620	1720677	3264688	7361436	1.00	2.00	4.00	8.00
Styrene	CBZd	Ave	6367	10118	20466	40788	114936	0.0200	0.0400	0.0800	0.160	0.400
			5	313291	695917	1481246	2624790	5523081	1.00	2.00	4.00	8.00
o-Xylene	CBZd	Ave	11430	19414	36234	70551	182797	0.0200	0.0400	0.0800	0.160	0.400
			5	455942	951287	1923859	3219909	7084529	1.00	2.00	4.00	8.00
1,1,2,2-Tetrachloroethane	CBZd	Ave	8038	14785	27592	53490	144640	0.0200	0.0400	0.0800	0.160	0.400
			5	372659	801869	1666518	2898094	6482057	1.00	2.00	4.00	8.00
1,2,3-Trichloropropane	CBZd	Ave	2162	3733	7060	13629	35414	0.0200	0.0400	0.0800	0.160	0.400
			5	89428	189343	393840	676648	1593385	1.00	2.00	4.00	8.00
Isopropylbenzene	CBZd	Ave	15877	26315	48237	93612	242959	0.0200	0.0400	0.0800	0.160	0.400
			5	619680	1291872	2702973	4676667	10581270	1.00	2.00	4.00	8.00
Propylbenzene	CBZd	Ave	3545	6527	11389	22978	61876	0.0200	0.0400	0.0800	0.160	0.400
			5	162793	354102	751306	1342310	3255751	1.00	2.00	4.00	8.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14390-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
2-Chlorotoluene	CBZd 5	Ave	4126 157132	6694 333374	12209 692051	23459 1193527	62820 2781675	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	12682 605609	22317 1303962	43683 2740797	87555 4845851	231995 10995513	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Lin1	++++ 244828	++++ 524101	18083 1099439	37017 1932203	95792 4503336	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 225351	++++ 527224	++++ 1175360	26923 2148167	79203 5246512	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	7662 386206	14259 812284	28397 1625532	57543 2850078	154065 5989503	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11693 549927	22144 1183628	42446 2515614	83223 4656890	215060 10078350	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	10703 520658	20437 1117062	40145 2348070	78441 4322006	202848 9118755	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	16797 775934	30251 1677953	56852 3559589	114293 6599605	298383 13743682	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	8581 351654	15661 775428	28033 1704781	54101 3212950	136687 7153027	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 337367	++++ 815150	++++ 1864979	++++ 3620768	37546 8314062	113885 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7947 336295	14394 746169	25865 1643413	50401 3062438	128080 7002419	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	12326 617168	23274 1314396	44768 2745113	90912 4908356	240183 10778521	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	11190 514577	20826 1082845	38988 2232197	79211 3917469	204927 8858717	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	10769 492757	19273 1082048	35661 2343708	70126 4411376	188062 9038955	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	8393 353004	15171 776291	27892 1715395	54498 3252238	138306 6993755	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 393793	++++ 901129	++++ 1997698	++++ 3869631	52088 7980555	145299 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Butylbenzene	CBZd 5	Ave	12186 654668	22609 1387617	46347 2907810	93855 5414943	251979 10355110	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 441877	++++ 924853	++++ 1846517	++++ 3325148	58868 6962530	162146 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 178449	5000 412385	9382 928720	19327 ++++	59034 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	10415 584141	18414 1281919	36923 2762451	77678 5169036	211664 11505782	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 428247	++++ 940184	++++ 1956105	50308 3504521	138324 ++++	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 ++++

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Lin1	++++ 255822	++++ 605730	13247 1430337	27410 ++++	76796 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Naphthalene	CBZd 5	Ave	++++ 591214	16787 1320630	32092 2816456	65571 5259311	184664 12701015	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	8992 334056	15078 739806	27202 1646161	50558 2999218	121678 5786078	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	7516 305351	10800 674773	19673 1468485	38937 2709115	98554 5313205	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 223829	++++ 555653	++++ 1308281	23671 ++++	52618 ++++	++++ 1.00	++++ 2.00	++++ 4.00	0.160 ++++	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 347276	++++ 788345	20912 1640040	40771 ++++	85954 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1156116 1057465	1128690 1071605	1108968 1108097	1061718 925381	1069670 985627	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
LinF = Linear ISTD forced zero
QuaF = Quadratic ISTD forced zero

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	5.7						50				
Propene	+++++	+++++	17.9						50			
Dichlorodifluoromethane	15.4						50					
Chloromethane	+++++	+++++	+++++	14.3						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	7.4						50				
Vinyl chloride	+++++	12.0						50				
Butane	+++++	+++++	6.6						50			
1,3-Butadiene	+++++	+++++	1.5						50			
Bromomethane	+++++	+++++	0.8						50			
Chloroethane	+++++	+++++	6.3						50			
Ethanol	+++++	+++++	9.1						50			
Vinyl bromide	+++++	8.2						50				
2-Methylbutane	+++++	+++++	5.8						50			
Trichlorofluoromethane	+++++	6.3						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	2.6						50		
Acetonitrile	+++++	+++++	+++++	0.6						50		
Acetone	+++++	+++++	+++++	12.3						80		
Pentane	+++++	+++++	+++++	4.0						50		
Isopropyl alcohol	15.8						50					
Ethyl ether	+++++	9.3						50				
1,1-Dichloroethene	+++++	11.6						50				
Acrylonitrile	+++++	+++++	-5.8						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	10.5						50				
tert-Butyl alcohol	+++++	+++++	-4.0						50			
Methylene Chloride	+++++	+++++	+++++	51.1						80		
3-Chloropropene	+++++	+++++	22.4						50			
Carbon disulfide	+++++	+++++	1.3						50			
trans-1,2-Dichloroethene	+++++	11.8						50				
2-Methylpentane	+++++	4.9						50				
Methyl tert-butyl ether	+++++	+++++	-3.9						50			
1,1-Dichloroethane	+++++	6.1						50				
Vinyl acetate	+++++	+++++	-15.2						50			
Hexane	+++++	7.6						50				
2-Butanone (MEK)	+++++	+++++	+++++	-5.4						50		
cis-1,2-Dichloroethene	+++++	8.2						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-3.0						50			
Chloroform	+++++	5.0						50				
Tetrahydrofuran	+++++	9.1						50				
1,1,1-Trichloroethane	+++++	1.6						50				
1,2-Dichloroethane	11.2						50					
Cyclohexane	+++++	+++++	-10.1						50			
Benzene	+++++	5.9						50				
Carbon tetrachloride	9.4						50					
1-Butanol	+++++	+++++	+++++	-15.7							50	
2,3-Dimethylpentane	+++++	0.7						50				
Thiophene	+++++	0.8						50				
2,2,4-Trimethylpentane	+++++	5.2						50				
Heptane	+++++	0.7						50				
1,2-Dichloropropane	+++++	2.4						50				
Trichloroethene	16.1						50					
Dibromomethane	+++++	13.7						50				
Bromodichloromethane	4.9						50					
1,4-Dioxane	+++++	6.8						50				
Methyl methacrylate	6.7						50					
Methylcyclohexane	+++++	+++++	-19.5						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	-5.7						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	2.9						50					
trans-1,3-Dichloropropene	1.8						50					
Toluene	+++++	5.2						50				
1,1,2-Trichloroethane	9.3						50					
2-Hexanone	+++++	+++++	+++++	-24.4						50		
Octane	5.6						50					
Dibromochloromethane	-6.6						50					
1,2-Dibromoethane (EDB)	9.6						50					
Tetrachloroethene	16.0						50					
Chlorobenzene	16.6						50					
Ethylbenzene	11.3						50					
m-Xylene & p-Xylene	8.0						50					
Nonane	0.1						50					
Bromoform	+++++	+++++	-33.9						50			
Styrene	-4.4						50					
o-Xylene	13.6						50					
1,1,2,2-Tetrachloroethane	-1.4						50					
1,2,3-Trichloropropane	7.7						50					
Isopropylbenzene	14.4						50					
Propylbenzene	-2.4						50					
2-Chlorotoluene	16.0						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	-3.9						50					
1,3,5-Trimethylbenzene	+++++	+++++	14.0						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-32.4						50		
Decane	-6.0						50					
tert-Butylbenzene	-5.3						50					
1,2,4-Trimethylbenzene	-7.1						50					
sec-Butylbenzene	-2.4						50					
1,3-Dichlorobenzene	2.7						50					
Benzyl chloride	+++++	+++++	+++++	-39.2						50		
1,4-Dichlorobenzene	0.5						50					
4-Isopropyltoluene	-7.8						50					
1,2,3-Trimethylbenzene	-1.0						50					
Indane	-2.7						50					
1,2-Dichlorobenzene	0.9						50					
Indene	+++++	+++++	+++++	-24.4						50		
Butylbenzene	-11.7						50					
Undecane	+++++	+++++	+++++	-13.7						50		
1,2-Dibromo-3-Chloropropane	+++++	-25.3	+++++	+++++					50			
1,2,4,5-Tetramethylbenzene	-16.3						50					
Dodecane	+++++	+++++	+++++	-24.3	+++++					50		
1,2,4-Trichlorobenzene	+++++	+++++	34.3	+++++					50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-30.2						80				
Hexachlorobutadiene	14.5						50					
1,2,3-Trichlorobenzene	13.5						50					
2-Methylnaphthalene	+++++	+++++	+++++	-31.4						80		
1-Methylnaphthalene	+++++	+++++	-18.1	+++++					80			
			+++++	+++++								

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 20-Feb-2019 15:12:30 ALS Bottle#: 14 Worklist Smp#: 3
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-003
 Misc. Info.: 210537
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:47:13 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 20-Feb-2019 16:26:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.845	8.830	0.015	96	295269	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.021	11.010	0.011	95	1531239	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.730	0.004	87	1432684	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.373	17.371	0.002	95	925381	4.00	3.96	
6 Chlorodifluoromethane	51	3.682	3.681	0.001	97	2080315	8.00	8.59	
7 Propene	41	3.692	3.691	0.001	99	902358	8.00	8.20	
8 Dichlorodifluoromethane	85	3.744	3.741	0.003	100	3093057	8.00	8.32	
9 Chloromethane	52	3.930	3.928	0.002	100	346372	8.00	7.98	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.935	3.933	0.002	93	2095695	8.00	8.17	
12 Vinyl chloride	62	4.100	4.097	0.003	98	1081563	8.00	8.02	
11 Acetaldehyde	44	4.100	4.111	-0.011	99	2099908	40.0	40.5	
14 Butane	43	4.188	4.183	0.005	84	1515853	8.00	7.86	
13 Butadiene	54	4.188	4.185	0.003	73	795542	8.00	8.17	
15 Bromomethane	94	4.509	4.508	0.001	98	1108697	8.00	8.13	
16 Chloroethane	64	4.653	4.653	0.000	97	490862	8.00	7.98	
17 Ethanol	31	4.819	4.836	-0.017	96	2488750	40.0	41.2	
18 Vinyl bromide	106	4.958	4.951	0.007	98	1045304	8.00	8.05	
19 2-Methylbutane	43	5.005	4.999	0.006	92	1132183	8.00	7.91	
21 Trichlorofluoromethane	101	5.227	5.219	0.008	100	2752862	8.00	8.10	
20 Acrolein	56	5.263	5.277	-0.014	94	355043	8.00	8.22	
22 Acetonitrile	40	5.341	5.351	-0.010	98	446888	8.00	8.22	
23 Acetone	58	5.387	5.416	-0.029	98	1272613	24.0	22.9	
24 Pentane	72	5.454	5.444	0.010	93	120364	8.00	7.75	
25 Isopropyl alcohol	45	5.511	5.555	-0.044	97	3931291	24.0	24.5	
26 Ethyl ether	31	5.640	5.672	-0.032	93	1085214	8.00	7.89	
27 1,1-Dichloroethene	96	5.940	5.929	0.011	96	894072	8.00	7.80	
28 Acrylonitrile	53	6.075	6.075	0.000	94	741130	8.00	8.40	
30 1,1,2-Trichloro-1,2,2-trif	101	6.116	6.107	0.009	96	2135574	8.00	7.83	
29 2-Methyl-2-propanol	59	6.111	6.186	-0.075	95	1653787	8.00	8.50	
31 Methylene Chloride	84	6.297	6.284	0.013	97	801053	8.00	6.63	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.307	6.297	0.010	97	836069	8.00	7.76	
33 Carbon disulfide	76	6.452	6.437	0.015	100	2624808	8.00	7.91	
34 trans-1,2-Dichloroethene	96	7.103	7.088	0.015	96	928087	8.00	7.89	
35 2-Methylpentane	43	7.113	7.104	0.009	96	2172520	8.00	8.04	
36 Methyl tert-butyl ether	73	7.253	7.296	-0.043	97	2241171	8.00	8.04	
37 1,1-Dichloroethane	63	7.527	7.514	0.013	99	1772013	8.00	7.92	
38 Vinyl acetate	43	7.641	7.645	-0.004	100	2848393	8.00	8.91	
40 Hexane	56	8.090	8.082	0.008	79	722047	8.00	8.08	
39 2-Butanone (MEK)	72	8.106	8.133	-0.027	95	413154	8.00	8.14	
171 Isopropyl ether	45	8.271	8.306	-0.035	99	3420757	8.00	8.18	
41 cis-1,2-Dichloroethene	96	8.509	8.497	0.012	96	943075	8.00	7.91	
42 Ethyl acetate	43	8.716	8.736	-0.020	98	2400330	8.00	8.43	
43 Chloroform	83	8.860	8.842	0.018	98	2042657	8.00	7.96	
173 Tert-butyl ethyl ether	59	8.948	8.986	-0.038	96	2864134	8.00	8.23	
44 Tetrahydrofuran	42	9.284	9.329	-0.045	95	1123394	8.00	8.14	
45 1,1,1-Trichloroethane	97	9.873	9.862	0.011	97	2031546	8.00	8.33	
46 1,2-Dichloroethane	62	9.992	9.980	0.012	97	1368173	8.00	8.29	
48 Cyclohexane	69	10.468	10.458	0.010	91	417405	8.00	8.67	
47 Benzene	78	10.473	10.465	0.008	97	2739521	8.00	8.46	
50 Carbon tetrachloride	117	10.493	10.483	0.010	97	2331942	8.00	8.90	
49 n-Butanol	31	10.483	10.538	-0.055	66	407327	8.00	9.30	
51 2,3-Dimethylpentane	71	10.587	10.577	0.010	92	545270	8.00	8.12	
52 Thiophene	84	10.752	10.740	0.012	97	1521788	8.00	8.22	
53 Isooctane	57	11.227	11.219	0.008	98	4498015	8.00	8.42	
55 n-Heptane	71	11.600	11.594	0.006	94	882284	8.00	8.55	
54 1,2-Dichloropropane	63	11.693	11.685	0.008	91	1156069	8.00	8.39	
56 Trichloroethene	130	11.729	11.718	0.011	95	1247479	8.00	8.17	
57 Dibromomethane	93	11.817	11.808	0.009	95	1323802	8.00	8.25	
58 Dichlorobromomethane	83	11.961	11.953	0.009	99	2120110	8.00	8.79	
59 1,4-Dioxane	88	11.997	12.035	-0.038	93	394321	8.00	8.11	
60 Methyl methacrylate	41	12.060	12.068	-0.008	92	1330076	8.00	9.19	
61 Methylcyclohexane	83	12.488	12.484	0.004	94	1553838	8.00	7.70	
62 4-Methyl-2-pentanone (MIBK)	43	12.917	12.944	-0.027	98	2637007	8.00	9.09	
63 cis-1,3-Dichloropropene	75	12.954	12.950	0.004	95	1655482	8.00	9.13	
64 trans-1,3-Dichloropropene	75	13.651	13.645	0.006	99	1585219	8.00	9.12	
65 Toluene	91	13.770	13.765	0.005	93	3322999	8.00	8.15	
66 1,1,2-Trichloroethane	83	13.848	13.844	0.004	97	1076123	8.00	7.95	
69 2-Hexanone	58	14.246	14.265	-0.019	91	1212184	8.00	9.06	
71 n-Octane	85	14.447	14.446	0.001	96	976945	8.00	8.39	
70 Chlorodibromomethane	129	14.551	14.544	0.007	98	2576992	8.00	9.45	
72 Ethylene Dibromide	107	14.840	14.835	0.005	98	2135184	8.00	8.65	
73 Tetrachloroethene	129	14.907	14.903	0.004	95	1318629	8.00	7.94	
74 Chlorobenzene	112	15.781	15.778	0.003	94	2824132	8.00	8.42	
75 2,3-Dimethylheptane	43	15.791	15.790	0.001	96	3487932	8.00	8.14	
76 Ethylbenzene	91	16.065	16.065	0.000	99	4397072	8.00	8.47	
78 m-Xylene & p-Xylene	91	16.230	16.226	0.004	98	7025357	16.0	17.5	
81 n-Nonane	57	16.639	16.639	0.000	94	2296867	8.00	8.90	
79 Bromoform	173	16.680	16.679	0.001	95	3264688	8.00	10.7	
80 Styrene	104	16.690	16.690	0.000	99	2624790	8.00	9.73	
82 o-Xylene	91	16.752	16.751	0.001	99	3219909	8.00	7.90	
83 1,1,2,2-Tetrachloroethane	83	17.078	17.077	0.001	98	2898094	8.00	8.78	
84 1,2,3-Trichloropropane	110	17.238	17.237	0.001	98	676648	8.00	8.32	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.342	17.337	0.005	96	4676667	8.00	8.31	
86 N-Propylbenzene	120	17.900	17.900	0.000	99	1342310	8.00	9.12	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	1193527	8.00	8.28	
88 4-Ethyltoluene	105	18.060	18.056	0.004	99	4845851	8.00	9.06	
89 1,3,5-Trimethylbenzene	120	18.138	18.134	0.004	93	1932203	8.00	8.03	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	88	2148167	8.00	9.64	
91 n-Decane	57	18.432	18.430	0.002	89	2850078	8.00	8.63	
92 tert-Butylbenzene	119	18.577	18.577	0.000	93	4656890	8.00	9.30	
93 1,2,4-Trimethylbenzene	105	18.592	18.592	0.000	96	4322006	8.00	9.26	
95 sec-Butylbenzene	105	18.861	18.857	0.004	99	6599605	8.00	9.46	
94 1,3-Dichlorobenzene	146	18.877	18.874	0.003	97	3212950	8.00	9.49	
96 Benzyl chloride	91	18.954	18.955	-0.001	98	3620768	8.00	10.5	
97 1,4-Dichlorobenzene	146	18.964	18.965	-0.001	96	3062438	8.00	9.56	
98 4-Isopropyltoluene	119	19.026	19.027	-0.001	97	4908356	8.00	9.06	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	99	3917469	8.00	8.55	
100 Butylcyclohexane	83	19.135	19.136	-0.001	93	3043212	8.00	8.18	
102 2,3-Dihydroindene	117	19.342	19.338	0.004	94	4411376	8.00	9.84	
101 1,2-Dichlorobenzene	146	19.342	19.338	0.004	92	3252238	8.00	9.64	
103 Indene	116	19.471	19.471	0.000	92	3869631	8.00	10.0	
104 n-Butylbenzene	91	19.476	19.477	-0.001	97	5414943	8.00	9.68	
105 Undecane	57	19.791	19.792	-0.001	96	3325148	8.00	8.70	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	97	1805415	8.00	12.9	
107 1,2,4,5-Tetramethylbenzene	119	20.257	20.255	0.002	97	5169036	8.00	10.2	
110 Dodecane	57	20.887	20.889	-0.002	95	3504521	8.00	9.42	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	94	2876339	8.00	10.2	
113 Naphthalene	128	21.254	21.255	-0.001	99	5259311	8.00	10.5	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	91	2999218	8.00	9.42	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	95	2709115	8.00	10.1	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	99	2652971	8.00	13.7	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	99	3022634	8.00	11.0	
A 120 C8 Range	1	14.452	(14.401-14.494)		0	9867518	8.00	8.71	
S 121 Xylenes, Total	100				0		24.0	25.4	
S 122 1,2-Dichloroethene, Total	1				0		16.0	15.8	

Reagents:

40L9DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC09.D

Injection Date: 20-Feb-2019 15:12:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L9

Worklist Smp#: 3

Client ID:

Purge Vol: 500.000 mL

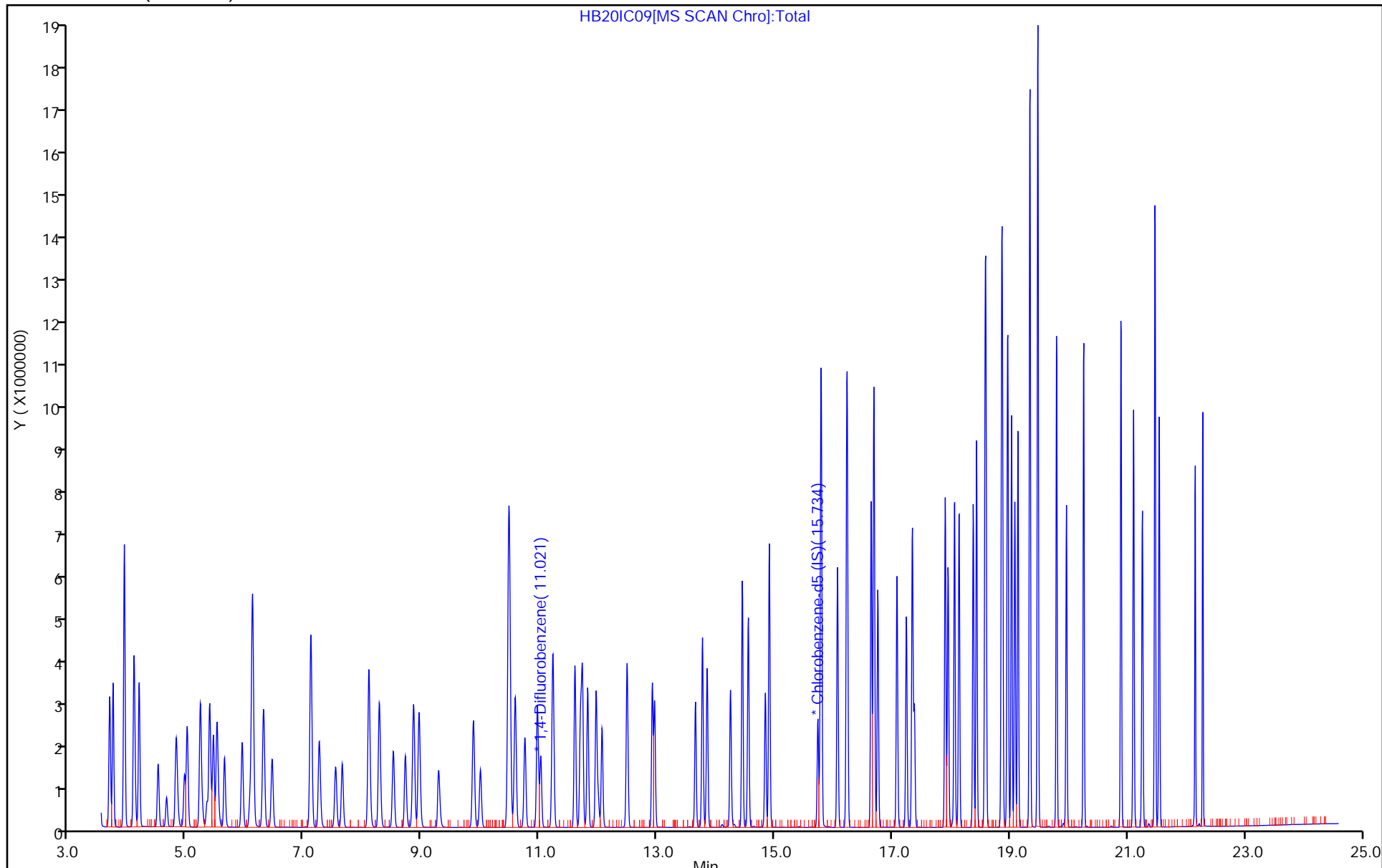
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC09.D

Injection Date: 20-Feb-2019 15:12:30

Instrument ID: MH

Lims ID: IC L9

Client ID:

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

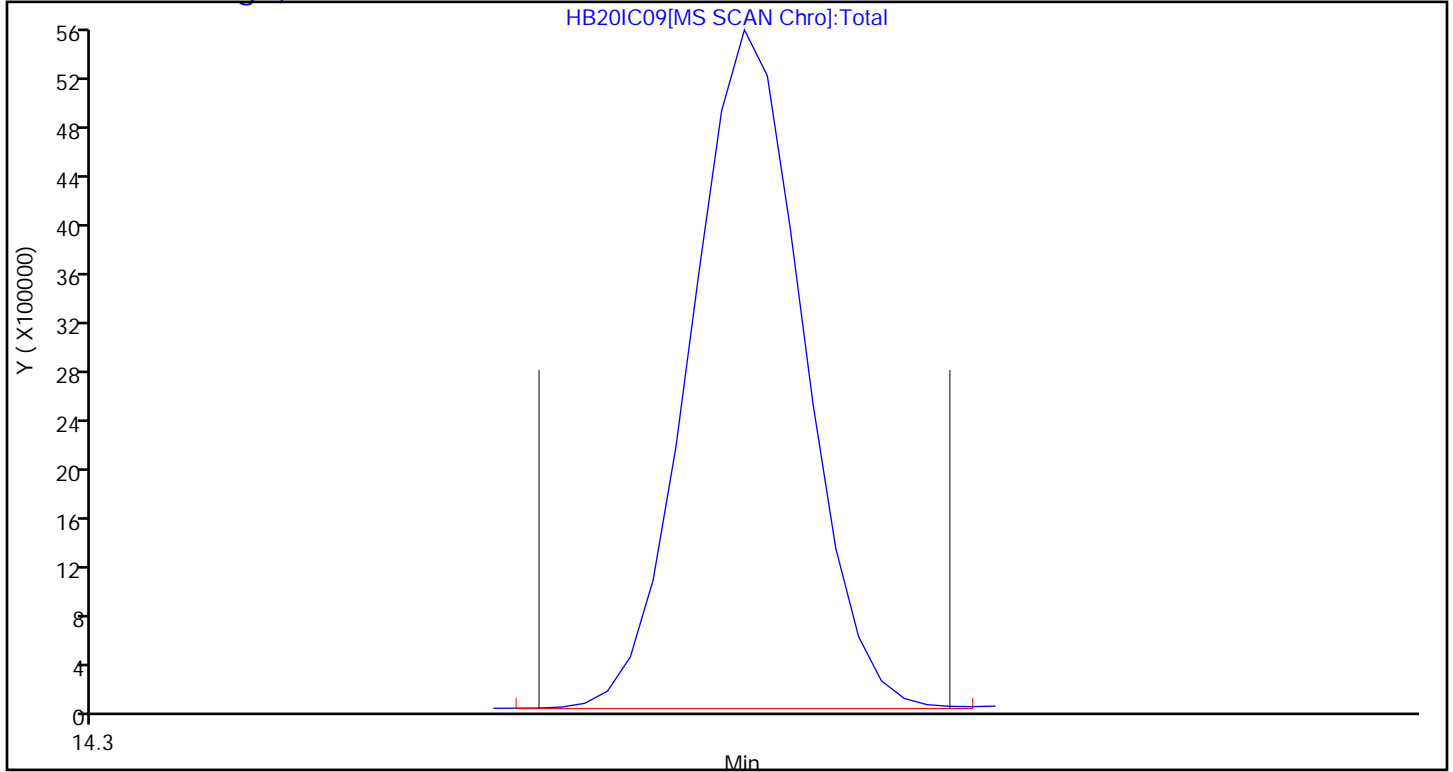
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 20-Feb-2019 16:59:30 ALS Bottle#: 15 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-005
 Misc. Info.: 210536
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:47:29 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 22-Feb-2019 14:10:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.855	8.830	0.025	95	332984	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.026	11.010	0.016	94	1658781	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.730	0.004	86	1638623	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.378	17.371	0.007	96	985627	4.00	3.69	
6 Chlorodifluoromethane	51	3.676	3.681	-0.005	97	4483179	16.0	16.4	
7 Propene	41	3.687	3.691	-0.004	99	1935361	16.0	15.6	
8 Dichlorodifluoromethane	85	3.738	3.741	-0.003	100	6474307	16.0	15.4	
9 Chloromethane	52	3.924	3.928	-0.004	100	708335	16.0	14.5	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.935	3.933	0.002	96	4583276	16.0	15.8	
12 Vinyl chloride	62	4.095	4.097	-0.002	99	2214114	16.0	14.6	
11 Acetaldehyde	44	4.100	4.111	-0.011	98	4126254	80.0	70.6	
14 Butane	43	4.188	4.183	0.005	84	3027220	16.0	13.9	
13 Butadiene	54	4.188	4.185	0.003	75	1618919	16.0	14.7	
15 Bromomethane	94	4.508	4.508	0.000	99	2328401	16.0	15.1	
16 Chloroethane	64	4.658	4.653	0.005	98	1035993	16.0	14.9	
17 Ethanol	31	4.829	4.836	-0.007	95	4802553	80.0	70.4	
18 Vinyl bromide	106	4.963	4.951	0.012	98	2228635	16.0	15.2	
19 2-Methylbutane	43	5.005	4.999	0.006	93	2373804	16.0	14.7	
21 Trichlorofluoromethane	101	5.232	5.219	0.013	100	5805275	16.0	15.1	
20 Acrolein	56	5.263	5.277	-0.014	95	728953	16.0	15.0	
22 Acetonitrile	40	5.351	5.351	0.000	98	920347	16.0	15.0	
23 Acetone	58	5.387	5.416	-0.029	98	2698817	48.0	43.1	
24 Pentane	72	5.454	5.444	0.010	94	258741	16.0	14.8	
25 Isopropyl alcohol	45	5.527	5.555	-0.028	98	7948950	48.0	47.9	
26 Ethyl ether	31	5.640	5.672	-0.032	95	2229204	16.0	14.4	
27 1,1-Dichloroethene	96	5.945	5.929	0.016	97	1985588	16.0	15.4	
28 Acrylonitrile	53	6.080	6.075	0.005	93	1583584	16.0	15.9	
30 1,1,2-Trichloro-1,2,2-trif	101	6.121	6.107	0.014	96	4629798	16.0	15.0	
29 2-Methyl-2-propanol	59	6.121	6.186	-0.065	78	3474636	16.0	15.8	
31 Methylene Chloride	84	6.302	6.284	0.018	98	1721729	16.0	12.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.312	6.297	0.015	97	1737749	16.0	14.3	
33 Carbon disulfide	76	6.452	6.437	0.015	99	5684871	16.0	15.2	
34 trans-1,2-Dichloroethene	96	7.108	7.088	0.020	96	2103238	16.0	15.9	
35 2-Methylpentane	43	7.113	7.104	0.009	95	4634316	16.0	15.2	
36 Methyl tert-butyl ether	73	7.248	7.296	-0.048	97	4966677	16.0	15.8	
37 1,1-Dichloroethane	63	7.537	7.514	0.023	99	3867799	16.0	15.3	
38 Vinyl acetate	43	7.646	7.645	0.001	100	6184921	16.0	17.2	
40 Hexane	56	8.095	8.082	0.013	81	1607432	16.0	15.9	
39 2-Butanone (MEK)	72	8.111	8.133	-0.022	97	916246	16.0	16.0	
171 Isopropyl ether	45	8.276	8.306	-0.030	98	7355329	16.0	15.6	
41 cis-1,2-Dichloroethene	96	8.519	8.497	0.022	96	2129500	16.0	15.8	
42 Ethyl acetate	43	8.721	8.736	-0.015	99	5166288	16.0	16.1	
43 Chloroform	83	8.865	8.842	0.023	98	4496097	16.0	15.5	
173 Tert-butyl ethyl ether	59	8.953	8.986	-0.033	96	6312338	16.0	16.1	
44 Tetrahydrofuran	42	9.284	9.329	-0.045	95	2432538	16.0	15.6	
45 1,1,1-Trichloroethane	97	9.878	9.862	0.016	97	4668064	16.0	17.0	
46 1,2-Dichloroethane	62	9.997	9.980	0.017	97	2983220	16.0	16.7	
48 Cyclohexane	69	10.468	10.458	0.010	90	928409	16.0	17.8	
47 Benzene	78	10.478	10.465	0.013	98	5964977	16.0	17.0	
50 Carbon tetrachloride	117	10.499	10.483	0.016	98	5223763	16.0	18.4	
49 n-Butanol	31	10.478	10.538	-0.060	66	777405	16.0	16.4	
51 2,3-Dimethylpentane	71	10.587	10.577	0.009	91	1177164	16.0	16.2	
52 Thiophene	84	10.757	10.740	0.017	97	3380138	16.0	16.8	
53 Isooctane	57	11.227	11.219	0.008	98	9866899	16.0	17.1	
55 n-Heptane	71	11.605	11.594	0.011	93	1982995	16.0	17.7	
54 1,2-Dichloropropane	63	11.698	11.685	0.013	92	2552409	16.0	17.1	
56 Trichloroethene	130	11.734	11.718	0.016	97	2842892	16.0	17.2	
57 Dibromomethane	93	11.822	11.808	0.014	92	2892720	16.0	16.6	
58 Dichlorobromomethane	83	11.966	11.953	0.014	100	4743566	16.0	18.2	
59 1,4-Dioxane	88	11.997	12.035	-0.038	95	819819	16.0	15.6	
60 Methyl methacrylate	41	12.065	12.068	-0.003	93	2839739	16.0	18.1	
61 Methylcyclohexane	83	12.494	12.484	0.010	95	3554415	16.0	16.3	
62 4-Methyl-2-pentanone (MIBK)	43	12.917	12.944	-0.027	97	5744756	16.0	18.3	
63 cis-1,3-Dichloropropene	75	12.959	12.950	0.009	93	3706962	16.0	18.9	
64 trans-1,3-Dichloropropene	75	13.657	13.645	0.011	99	3716627	16.0	18.7	
65 Toluene	91	13.775	13.765	0.010	94	7558388	16.0	16.2	
66 1,1,2-Trichloroethane	83	13.853	13.844	0.009	97	2376053	16.0	15.3	
69 2-Hexanone	58	14.246	14.265	-0.019	92	2770142	16.0	18.1	
71 n-Octane	85	14.452	14.446	0.006	94	2231497	16.0	16.8	
70 Chlorodibromomethane	129	14.551	14.544	0.007	97	5994726	16.0	19.2	
72 Ethylene Dibromide	107	14.845	14.835	0.010	98	4934830	16.0	17.5	
73 Tetrachloroethene	129	14.907	14.903	0.004	96	3014432	16.0	15.9	
74 Chlorobenzene	112	15.786	15.778	0.008	95	6361822	16.0	16.6	
75 2,3-Dimethylheptane	43	15.796	15.790	0.006	97	6685301	16.0	13.6	
76 Ethylbenzene	91	16.070	16.065	0.005	98	9955892	16.0	16.8	
78 m-Xylene & p-Xylene	91	16.230	16.226	0.004	97	14796297	32.0	32.3	
81 n-Nonane	57	16.644	16.639	0.005	92	4994379	16.0	16.9	
79 Bromoform	173	16.685	16.679	0.006	96	7361436	16.0	21.0	
80 Styrene	104	16.696	16.690	0.006	98	5523081	16.0	17.9	
82 o-Xylene	91	16.758	16.751	0.007	99	7084529	16.0	15.2	
83 1,1,2,2-Tetrachloroethane	83	17.083	17.077	0.006	98	6482057	16.0	17.2	
84 1,2,3-Trichloropropane	110	17.243	17.237	0.006	98	1593385	16.0	17.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.342	17.337	0.005	96	10581270	16.0	16.4	
86 N-Propylbenzene	120	17.905	17.900	0.005	99	3255751	16.0	19.3	
87 2-Chlorotoluene	126	17.951	17.947	0.004	97	2781675	16.0	16.9	
88 4-Ethyltoluene	105	18.060	18.056	0.004	98	10995513	16.0	18.0	
89 1,3,5-Trimethylbenzene	120	18.137	18.134	0.003	93	4503336	16.0	16.3	
90 Alpha Methyl Styrene	118	18.380	18.376	0.004	90	5246512	16.0	20.6	
91 n-Decane	57	18.437	18.430	0.007	90	5989503	16.0	15.8	
92 tert-Butylbenzene	119	18.582	18.577	0.005	93	10078350	16.0	17.6	
93 1,2,4-Trimethylbenzene	105	18.597	18.592	0.005	95	9118755	16.0	17.1	
95 sec-Butylbenzene	105	18.861	18.857	0.004	98	13743682	16.0	17.2	
94 1,3-Dichlorobenzene	146	18.882	18.874	0.008	97	7153027	16.0	18.5	
96 Benzyl chloride	91	18.959	18.955	0.004	99	8314062	16.0	21.0	
97 1,4-Dichlorobenzene	146	18.975	18.965	0.010	96	7002419	16.0	19.1	
98 4-Isopropyltoluene	119	19.032	19.027	0.005	97	10778521	16.0	17.4	
99 1,2,3-Trimethylbenzene	105	19.088	19.083	0.005	98	8858717	16.0	16.9	
100 Butylcyclohexane	83	19.140	19.136	0.004	94	6451190	16.0	15.2	
102 2,3-Dihydroindene	117	19.342	19.338	0.004	94	9038955	16.0	17.6	
101 1,2-Dichlorobenzene	146	19.347	19.338	0.009	94	6993755	16.0	18.1	
103 Indene	116	19.476	19.471	0.005	92	7980555	16.0	18.1	
104 n-Butylbenzene	91	19.481	19.477	0.004	98	10355110	16.0	16.2	
105 Undecane	57	19.797	19.792	0.005	95	6962530	16.0	15.9	
106 1,2-Dibromo-3-Chloropropan	157	19.967	19.962	0.005	94	4532026	16.0	28.3	
107 1,2,4,5-Tetramethylbenzene	119	20.257	20.255	0.002	97	11505782	16.0	19.9	
110 Dodecane	57	20.892	20.889	0.003	96	3514769	16.0	8.26	
111 1,2,4-Trichlorobenzene	180	21.109	21.105	0.004	94	7159328	16.0	22.2	
113 Naphthalene	128	21.259	21.255	0.004	99	12701015	16.0	22.1	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	90	5786078	16.0	15.9	
116 1,2,3-Trichlorobenzene	180	21.543	21.540	0.003	95	5313205	16.0	17.3	
117 2-Methylnaphthalene	142	22.158	22.154	0.004	99	46317	16.0	0.2097	
118 1-Methylnaphthalene	142	22.288	22.283	0.005	97	8734	16.0	0.0279	
A 120 C8 Range	1	14.452	(14.401-14.504)		0	21206896	16.0	17.3	
S 121 Xylenes, Total	100				0		48.0	47.5	
S 122 1,2-Dichloroethene, Total	1				0		32.0	31.7	

Reagents:

40L10DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC10.D

Injection Date: 20-Feb-2019 16:59:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L10

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

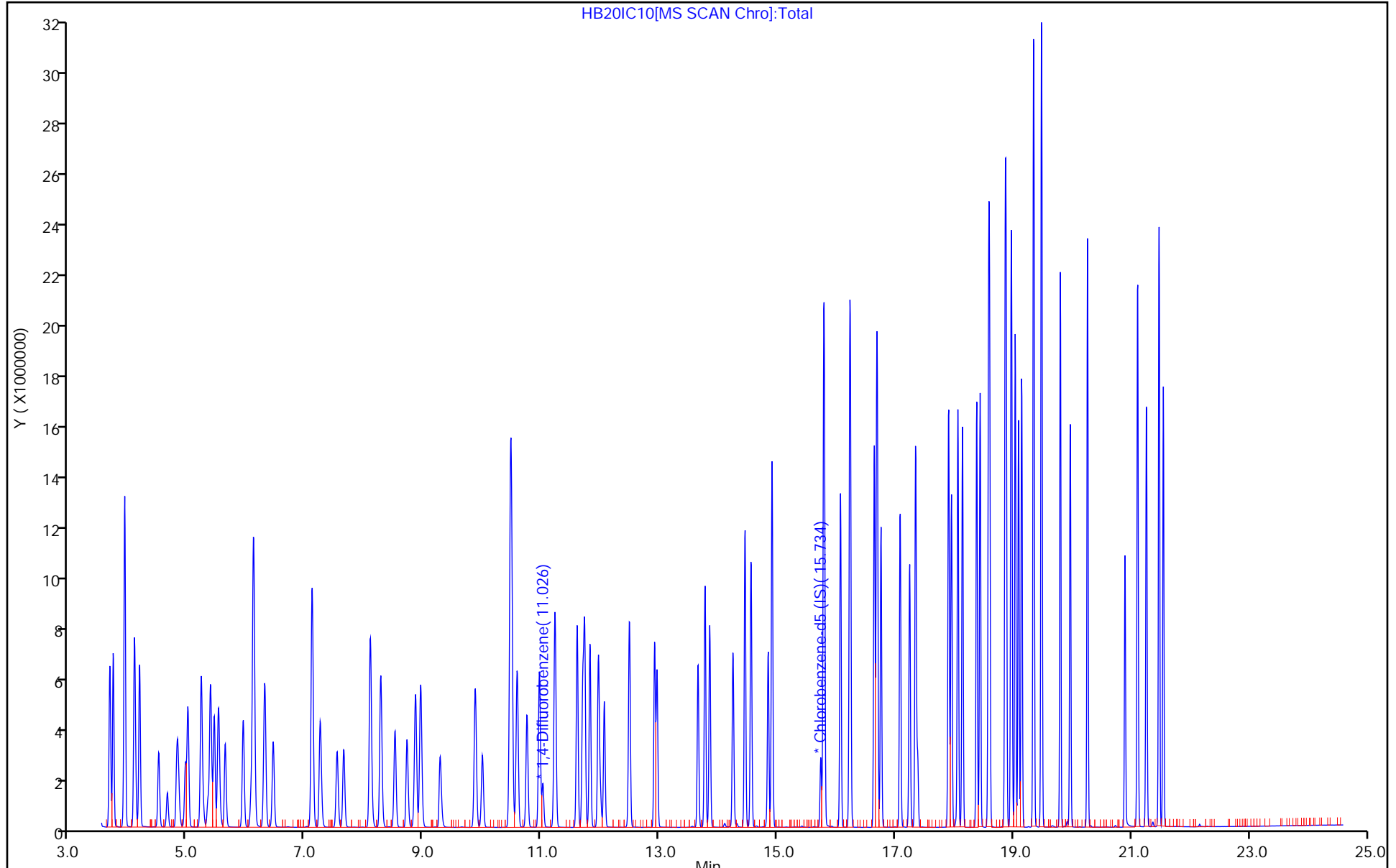
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC10.D

Injection Date: 20-Feb-2019 16:59:30

Instrument ID: MH

Lims ID: IC L10

Client ID:

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

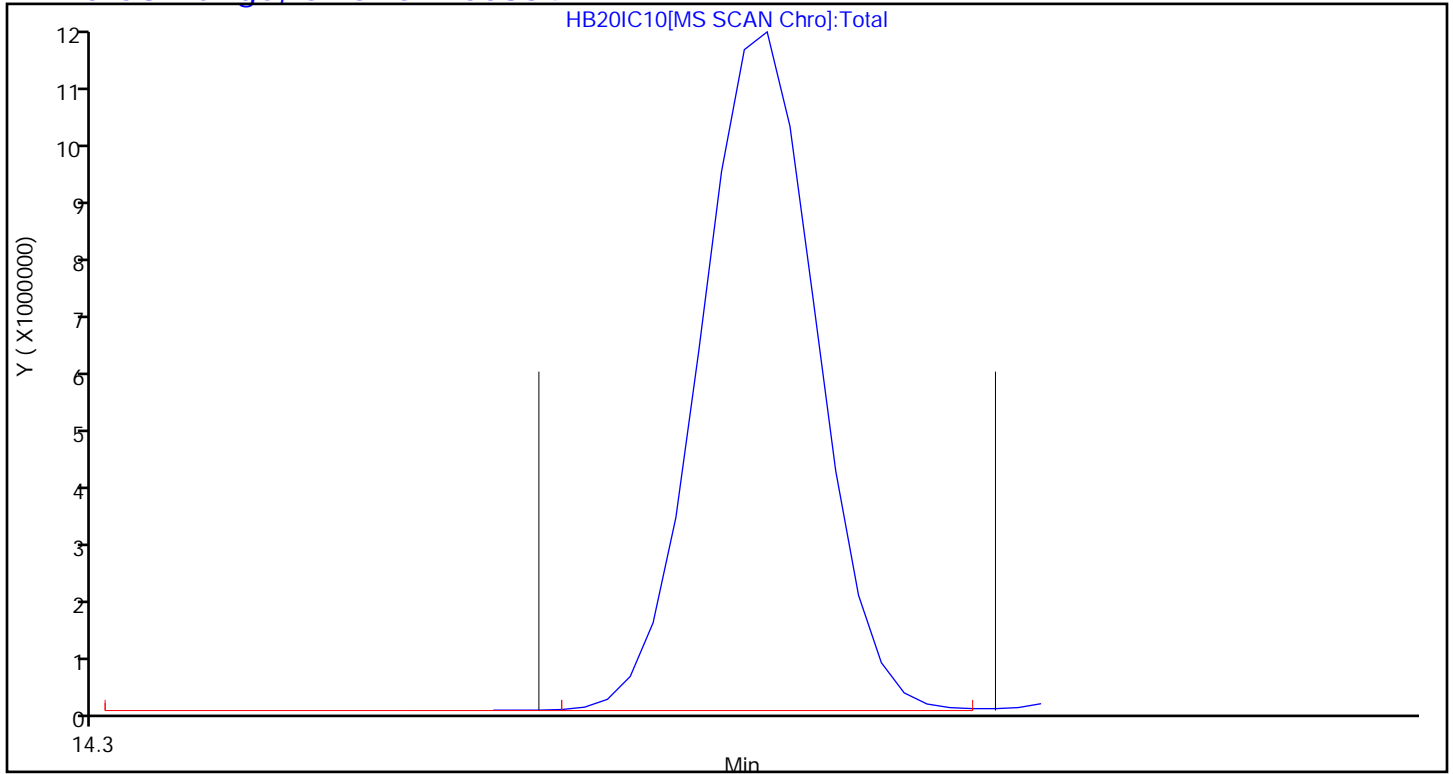
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 20-Feb-2019 19:38:30 ALS Bottle#: 1 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-008
 Misc. Info.: 210543
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:47:38 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 21-Feb-2019 13:23:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.830	-0.006	95	390308	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.010	-0.005	95	2140459	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	87	1767378	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.373	17.371	0.002	96	1156116	4.00	4.01	
6 Chlorodifluoromethane	51	3.687	3.681	0.006	97	8002	0.0200	0.0250	
7 Propene	41	3.697	3.691	0.006	70	5198	0.0200	0.0357	
8 Dichlorodifluoromethane	85	3.744	3.741	0.003	99	11347	0.0200	0.0231	
9 Chloromethane	52	3.935	3.928	0.007	74	2722	0.0200	0.0475	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.935	3.933	0.002	90	7806	0.0200	0.0230	
12 Vinyl chloride	62	4.105	4.097	0.008	99	4947	0.0200	0.0277	
14 Butane	43	4.183	4.183	0.000	82	7776	0.0200	0.0305	
13 Butadiene	54	4.188	4.185	0.003	86	3167	0.0200	0.0246	
15 Bromomethane	94	4.514	4.508	0.006	97	5726	0.0200	0.0318	
16 Chloroethane	64	4.664	4.653	0.011	95	2374	0.0200	0.0292	
17 Ethanol	31	4.870	4.836	0.034	96	10675	0.1000	0.1336	
18 Vinyl bromide	106	4.953	4.951	0.002	97	4433	0.0200	0.0258	
19 2-Methylbutane	43	4.994	4.999	-0.005	93	5244	0.0200	0.0277	
21 Trichlorofluoromethane	101	5.217	5.219	-0.002	99	10937	0.0200	0.0243	
20 Acrolein	56	5.310	5.277	0.033	77	1763	0.0200	0.0309	
22 Acetonitrile	40	5.387	5.351	0.036	93	2696	0.0200	0.0375	
23 Acetone	58	5.459	5.416	0.043	97	8206	0.0600	0.1118	
24 Pentane	72	5.449	5.444	0.005	71	663	0.0200	0.0323	
25 Isopropyl alcohol	45	5.620	5.555	0.065	98	16052	0.0600	0.0695	
26 Ethyl ether	31	5.723	5.672	0.051	91	4547	0.0200	0.0250	
27 1,1-Dichloroethene	96	5.930	5.929	0.001	97	4045	0.0200	0.0267	
28 Acrylonitrile	53	6.090	6.075	0.015	55	3124	0.0200	0.0268	
30 1,1,2-Trichloro-1,2,2-trif	101	6.111	6.107	0.004	94	9169	0.0200	0.0254	
29 2-Methyl-2-propanol	59	6.276	6.186	0.090	48	5856	0.0200	0.0228	
31 Methylene Chloride	84	6.281	6.284	-0.003	98	19195	0.0200	0.1203	
32 3-Chloro-1-propene	39	6.286	6.297	-0.011	32	4307	0.0200	0.0302	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.436	6.437	-0.001	95	10725	0.0200	0.0244	
34 trans-1,2-Dichloroethene	96	7.077	7.088	-0.011	96	3953	0.0200	0.0254	
35 2-Methylpentane	43	7.103	7.104	-0.001	95	9208	0.0200	0.0258	
36 Methyl tert-butyl ether	73	7.377	7.296	0.081	96	8518	0.0200	0.0231	
37 1,1-Dichloroethane	63	7.511	7.514	-0.003	99	7365	0.0200	0.0249	
38 Vinyl acetate	43	7.666	7.645	0.021	100	8590	0.0200	0.0203	
40 Hexane	56	8.080	8.082	-0.002	89	3108	0.0200	0.0263	
39 2-Butanone (MEK)	72	8.194	8.133	0.061	99	1787	0.0200	0.0266	
171 Isopropyl ether	45	8.369	8.306	0.063	96	13234	0.0200	0.0239	
41 cis-1,2-Dichloroethene	96	8.493	8.497	-0.004	94	4072	0.0200	0.0258	
42 Ethyl acetate	43	8.778	8.736	0.042	98	8889	0.0200	0.0236	
43 Chloroform	83	8.834	8.842	-0.008	31	8539	0.0200	0.0252	
173 Tert-butyl ethyl ether	59	9.046	8.986	0.060	97	10421	0.0200	0.0227	
44 Tetrahydrofuran	42	9.398	9.329	0.069	92	4517	0.0200	0.0248	
45 1,1,1-Trichloroethane	97	9.863	9.862	0.001	97	7742	0.0200	0.0240	
46 1,2-Dichloroethane	62	9.971	9.980	-0.009	96	5129	0.0200	0.0222	
48 Cyclohexane	69	10.457	10.458	-0.001	66	1556	0.0200	0.0231	
47 Benzene	78	10.462	10.465	-0.003	98	10667	0.0200	0.0236	
50 Carbon tetrachloride	117	10.478	10.483	-0.005	96	8013	0.0200	0.0219	
49 n-Butanol	31	10.581	10.538	0.043	72	1408	0.0200	0.0230	
51 2,3-Dimethylpentane	71	10.571	10.577	-0.006	86	2436	0.0200	0.0260	
52 Thiophene	84	10.736	10.740	-0.004	96	6281	0.0200	0.0243	
53 Isooctane	57	11.217	11.219	-0.002	98	19352	0.0200	0.0259	
55 n-Heptane	71	11.589	11.594	-0.005	92	3329	0.0200	0.0231	
54 1,2-Dichloropropane	63	11.682	11.685	-0.003	92	4864	0.0200	0.0253	
56 Trichloroethene	130	11.713	11.718	-0.005	94	4957	0.0200	0.0232	
57 Dibromomethane	93	11.806	11.808	-0.002	94	6488	0.0200	0.0289	
58 Dichlorobromomethane	83	11.951	11.953	-0.001	98	7068	0.0200	0.0210	
59 1,4-Dioxane	88	12.096	12.035	0.061	53	1690	0.0200	0.0249	
60 Methyl methacrylate	41	12.085	12.068	0.017	90	4317	0.0200	0.0213	
61 Methylcyclohexane	83	12.483	12.484	-0.001	94	5773	0.0200	0.0205	
62 4-Methyl-2-pentanone (MIBK)	43	12.979	12.944	0.035	97	8853	0.0200	0.0218	
63 cis-1,3-Dichloropropene	75	12.948	12.950	-0.002	94	5213	0.0200	0.0206	
64 trans-1,3-Dichloropropene	75	13.641	13.645	-0.004	98	4369	0.0200	0.0204	
65 Toluene	91	13.760	13.765	-0.005	94	12625	0.0200	0.0251	
66 1,1,2-Trichloroethane	83	13.843	13.844	-0.001	96	3652	0.0200	0.0219	
69 2-Hexanone	58	14.292	14.265	0.027	91	2825	0.0200	0.0171	
71 n-Octane	85	14.447	14.446	0.001	95	3032	0.0200	0.0211	
70 Chlorodibromomethane	129	14.540	14.544	-0.004	97	6284	0.0200	0.0187	
72 Ethylene Dibromide	107	14.835	14.835	0.000	97	6677	0.0200	0.0219	
73 Tetrachloroethene	129	14.902	14.903	-0.001	94	4756	0.0200	0.0232	
74 Chlorobenzene	112	15.776	15.778	-0.002	95	9651	0.0200	0.0233	
75 2,3-Dimethylheptane	43	15.786	15.790	-0.004	94	12305	0.0200	0.0233	
76 Ethylbenzene	91	16.060	16.065	-0.005	98	14258	0.0200	0.0223	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	21336	0.0400	0.0432	
81 n-Nonane	57	16.639	16.639	0.000	92	6375	0.0200	0.0200	
79 Bromoform	173	16.680	16.679	0.001	83	5840	0.0200	0.0155	
80 Styrene	104	16.690	16.690	0.000	97	6367	0.0200	0.0191	
82 o-Xylene	91	16.747	16.751	-0.004	98	11430	0.0200	0.0227	
83 1,1,2,2-Tetrachloroethane	83	17.073	17.077	-0.004	95	8038	0.0200	0.0197	
84 1,2,3-Trichloropropane	110	17.238	17.237	0.001	95	2162	0.0200	0.0215	
85 Isopropylbenzene	105	17.336	17.337	-0.001	95	15877	0.0200	0.0229	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	17.900	17.900	0.000	98	3545	0.0200	0.0195	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	97	4126	0.0200	0.0232	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	98	12682	0.0200	0.0192	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	92	5287	0.0200	0.0448	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	85	3536	0.0200	0.0129	
91 n-Decane	57	18.427	18.430	-0.003	90	7662	0.0200	0.0188	
92 tert-Butylbenzene	119	18.577	18.577	0.000	90	11693	0.0200	0.0189	
93 1,2,4-Trimethylbenzene	105	18.592	18.592	0.000	95	10703	0.0200	0.0186	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	98	16797	0.0200	0.0195	
94 1,3-Dichlorobenzene	146	18.877	18.874	0.003	98	8581	0.0200	0.0205	
96 Benzyl chloride	91	18.954	18.955	-0.001	96	4885	0.0200	0.0115	
97 1,4-Dichlorobenzene	146	18.964	18.965	-0.001	91	7947	0.0200	0.0201	
98 4-Isopropyltoluene	119	19.026	19.027	-0.001	96	12326	0.0200	0.0184	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	98	11190	0.0200	0.0198	
100 Butylcyclohexane	83	19.135	19.136	-0.001	93	9271	0.0200	0.0202	
102 2,3-Dihydroindene	117	19.337	19.338	-0.001	91	10769	0.0200	0.0195	
101 1,2-Dichlorobenzene	146	19.337	19.338	-0.001	86	8393	0.0200	0.0202	
103 Indene	116	19.471	19.471	0.000	71	6594	0.0200	0.0139	
104 n-Butylbenzene	91	19.476	19.477	-0.001	94	12186	0.0200	0.0177	
105 Undecane	57	19.791	19.792	-0.001	89	7169	0.0200	0.0152	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	84	2699	0.0200	0.0156	
107 1,2,4,5-Tetramethylbenzene	119	20.251	20.255	-0.004	96	10415	0.0200	0.0167	
110 Dodecane	57	20.887	20.889	-0.002	90	6236	0.0200	0.0136	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	94	4766	0.0200	0.0809	
113 Naphthalene	128	21.254	21.255	-0.001	98	10836	0.0200	0.0175	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	91	8992	0.0200	0.0229	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	95	7516	0.0200	0.0227	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	96	4738	0.0200	0.0199	
118 1-Methylnaphthalene	142	22.283	22.283	-0.001	99	6869	0.0200	0.0203	
A 120 C8 Range	1	14.447	(14.416-14.478)		0	34835	0.0200	0.0220	
S 121 Xylenes, Total	100				0		0.0600	0.0659	
S 122 1,2-Dichloroethene, Total	1				0		0.0400	0.0513	

Reagents:

40L1-3DQP_00012

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC01.D

Injection Date: 20-Feb-2019 19:38:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L1

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

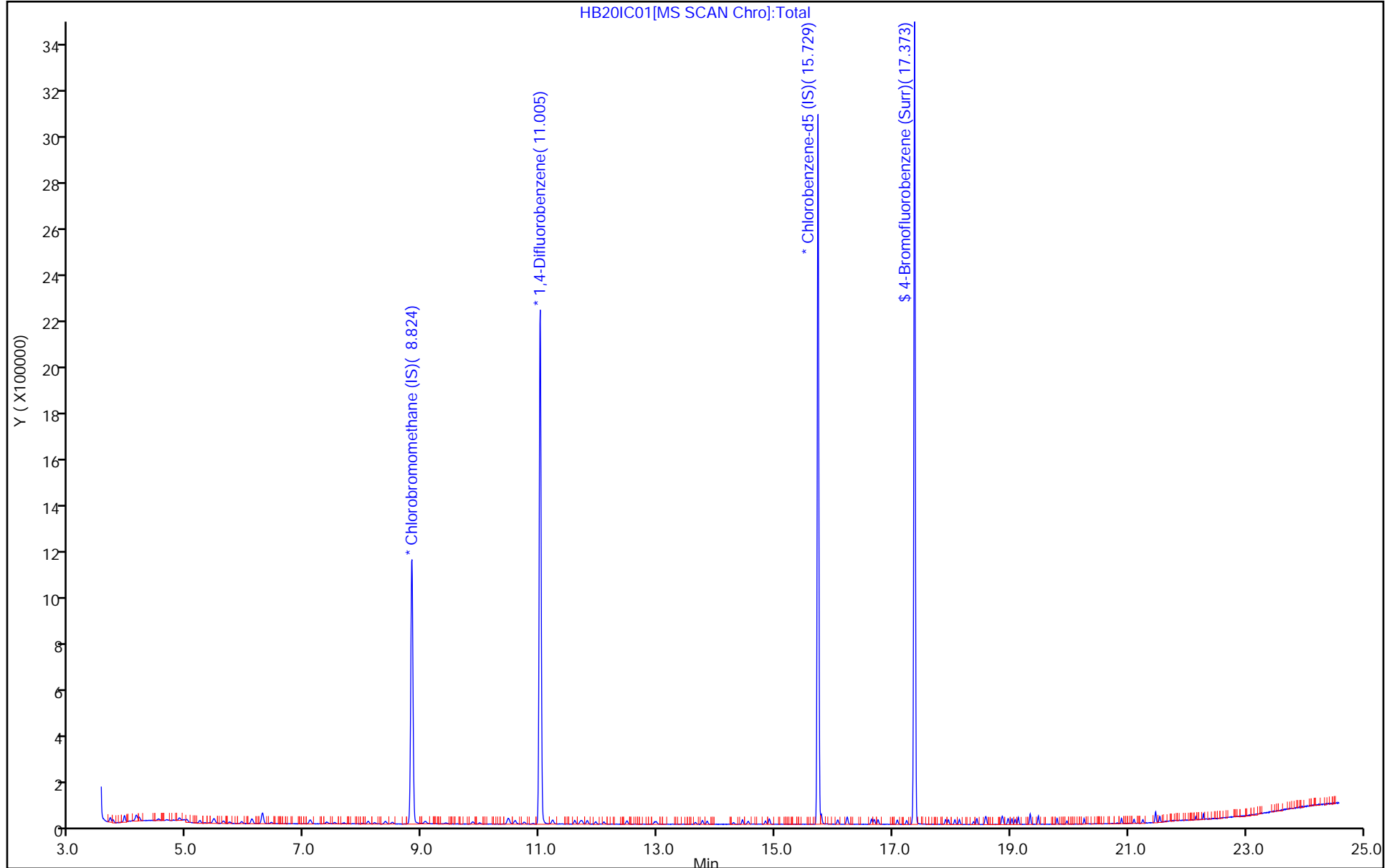
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC01.D

Injection Date: 20-Feb-2019 19:38:30

Instrument ID: MH

Lims ID: IC L1

Client ID:

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

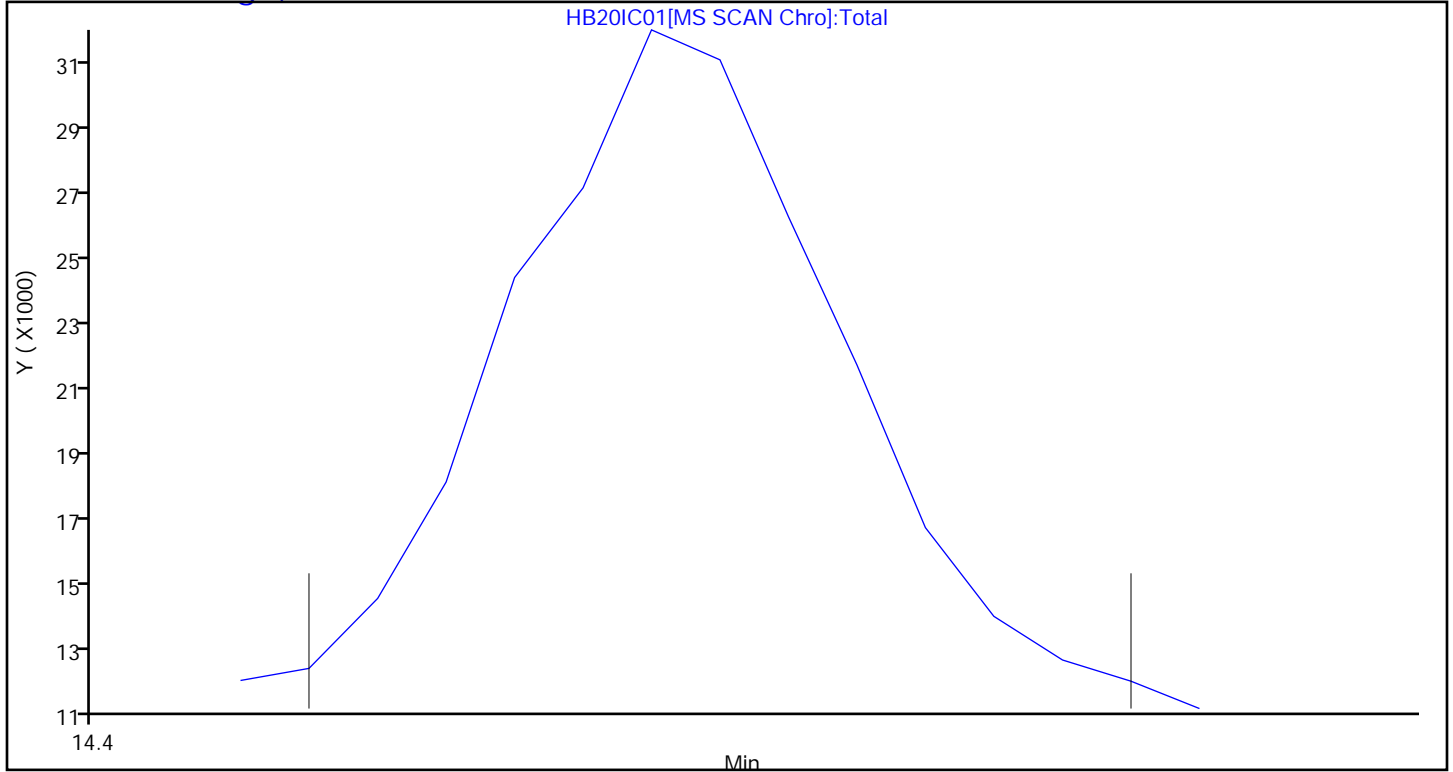
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 20-Feb-2019 20:31:30 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-009
 Misc. Info.: 210543
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7

Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:47:50 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.830	-0.006	95	381382	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.010	-0.005	95	2077846	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	87	1714201	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.371	-0.004	95	1128690	4.00	4.04	
6 Chlorodifluoromethane	51	3.682	3.681	0.001	97	13216	0.0400	0.0423	
7 Propene	41	3.697	3.691	0.006	90	7176	0.0400	0.0505	
8 Dichlorodifluoromethane	85	3.744	3.741	0.003	100	19313	0.0400	0.0402	
9 Chloromethane	52	3.935	3.928	0.007	64	3813	0.0400	0.0681	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.935	3.933	0.002	90	14233	0.0400	0.0430	
12 Vinyl chloride	62	4.105	4.097	0.008	99	7805	0.0400	0.0448	
11 Acetaldehyde	44	4.131	4.111	0.020	98	26744	0.2000	0.3997	
14 Butane	43	4.183	4.183	0.000	77	11645	0.0400	0.0467	
13 Butadiene	54	4.193	4.185	0.008	94	5647	0.0400	0.0449	
15 Bromomethane	94	4.508	4.508	0.000	95	8193	0.0400	0.0465	
16 Chloroethane	64	4.658	4.653	0.005	97	3876	0.0400	0.0488	
17 Ethanol	31	4.860	4.836	0.024	95	18981	0.2000	0.2431	
18 Vinyl bromide	106	4.953	4.951	0.002	98	7253	0.0400	0.0433	
19 2-Methylbutane	43	4.999	4.999	0.000	94	8854	0.0400	0.0479	
21 Trichlorofluoromethane	101	5.222	5.219	0.003	98	18657	0.0400	0.0425	
20 Acrolein	56	5.294	5.277	0.017	94	3006	0.0400	0.0539	
22 Acetonitrile	40	5.366	5.351	0.015	98	3555	0.0400	0.0507	
23 Acetone	58	5.449	5.416	0.033	97	14037	0.1200	0.1958	
24 Pentane	72	5.439	5.444	-0.005	78	977	0.0400	0.0487	
25 Isopropyl alcohol	45	5.599	5.555	0.044	98	26530	0.1200	0.1175	
26 Ethyl ether	31	5.713	5.672	0.041	94	7760	0.0400	0.0437	
27 1,1-Dichloroethene	96	5.925	5.929	-0.004	97	6613	0.0400	0.0446	
28 Acrylonitrile	53	6.090	6.075	0.015	55	4892	0.0400	0.0429	
30 1,1,2-Trichloro-1,2,2-trif	101	6.105	6.107	-0.002	95	15578	0.0400	0.0442	
29 2-Methyl-2-propanol	59	6.250	6.186	0.064	92	10031	0.0400	0.0399	
31 Methylene Chloride	84	6.281	6.284	-0.003	98	22688	0.0400	0.1455	
32 3-Chloro-1-propene	39	6.297	6.297	0.000	49	6713	0.0400	0.0482	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.431	6.437	-0.006	99	18652	0.0400	0.0435	
34 trans-1,2-Dichloroethene	96	7.077	7.088	-0.011	97	6793	0.0400	0.0447	
35 2-Methylpentane	43	7.103	7.104	-0.001	94	14650	0.0400	0.0420	
36 Methyl tert-butyl ether	73	7.351	7.296	0.055	96	15116	0.0400	0.0420	
37 1,1-Dichloroethane	63	7.506	7.514	-0.008	99	12267	0.0400	0.0425	
38 Vinyl acetate	43	7.661	7.645	0.016	100	14397	0.0400	0.0349	
40 Hexane	56	8.085	8.082	0.003	90	4968	0.0400	0.0430	
39 2-Butanone (MEK)	72	8.173	8.133	0.040	98	2857	0.0400	0.0436	
171 Isopropyl ether	45	8.354	8.306	0.048	97	22261	0.0400	0.0412	
41 cis-1,2-Dichloroethene	96	8.488	8.497	-0.009	94	6662	0.0400	0.0433	
42 Ethyl acetate	43	8.772	8.736	0.036	99	14942	0.0400	0.0406	
43 Chloroform	83	8.829	8.842	-0.013	28	13923	0.0400	0.0420	
173 Tert-butyl ethyl ether	59	9.031	8.986	0.045	98	18463	0.0400	0.0411	
44 Tetrahydrofuran	42	9.387	9.329	0.058	93	7774	0.0400	0.0436	
45 1,1,1-Trichloroethane	97	9.853	9.862	-0.009	97	12811	0.0400	0.0407	
46 1,2-Dichloroethane	62	9.977	9.980	-0.003	96	9022	0.0400	0.0403	
48 Cyclohexane	69	10.452	10.458	-0.006	67	2698	0.0400	0.0413	
47 Benzene	78	10.457	10.465	-0.008	97	18606	0.0400	0.0424	
50 Carbon tetrachloride	117	10.478	10.483	-0.005	97	13486	0.0400	0.0379	
49 n-Butanol	31	10.576	10.538	0.038	73	2478	0.0400	0.0417	
51 2,3-Dimethylpentane	71	10.576	10.577	-0.001	87	3670	0.0400	0.0403	
52 Thiophene	84	10.736	10.740	-0.004	97	10131	0.0400	0.0403	
53 Isooctane	57	11.217	11.219	-0.002	98	30494	0.0400	0.0421	
55 n-Heptane	71	11.589	11.594	-0.005	92	5635	0.0400	0.0403	
54 1,2-Dichloropropane	63	11.682	11.685	-0.003	87	7652	0.0400	0.0409	
56 Trichloroethene	130	11.713	11.718	-0.005	96	8508	0.0400	0.0410	
57 Dibromomethane	93	11.801	11.808	-0.007	96	9901	0.0400	0.0455	
58 Dichlorobromomethane	83	11.951	11.953	-0.001	99	12036	0.0400	0.0368	
59 1,4-Dioxane	88	12.075	12.035	0.040	50	2819	0.0400	0.0427	
60 Methyl methacrylate	41	12.080	12.068	0.012	89	7141	0.0400	0.0364	
61 Methylcyclohexane	83	12.483	12.484	-0.001	95	9772	0.0400	0.0357	
62 4-Methyl-2-pentanone (MIBK)	43	12.964	12.944	0.020	96	14502	0.0400	0.0368	
63 cis-1,3-Dichloropropene	75	12.948	12.950	-0.002	98	8310	0.0400	0.0338	
64 trans-1,3-Dichloropropene	75	13.646	13.645	0.001	98	7302	0.0400	0.0351	
65 Toluene	91	13.765	13.765	0.000	93	20535	0.0400	0.0421	
66 1,1,2-Trichloroethane	83	13.843	13.844	-0.001	98	6546	0.0400	0.0404	
69 2-Hexanone	58	14.282	14.265	0.017	89	4605	0.0400	0.0288	
71 n-Octane	85	14.447	14.446	0.001	97	5107	0.0400	0.0367	
70 Chlorodibromomethane	129	14.545	14.544	0.001	97	11234	0.0400	0.0344	
72 Ethylene Dibromide	107	14.830	14.835	-0.005	97	11172	0.0400	0.0378	
73 Tetrachloroethene	129	14.902	14.903	-0.001	93	8474	0.0400	0.0426	
74 Chlorobenzene	112	15.776	15.778	-0.002	97	16472	0.0400	0.0410	
75 2,3-Dimethylheptane	43	15.791	15.790	0.001	94	21252	0.0400	0.0414	
76 Ethylbenzene	91	16.065	16.065	0.000	99	24388	0.0400	0.0393	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	97	36478	0.0800	0.0761	
81 n-Nonane	57	16.639	16.639	0.000	93	11392	0.0400	0.0369	
79 Bromoform	173	16.680	16.679	0.001	92	9937	0.0400	0.0271	
80 Styrene	104	16.690	16.690	0.000	98	10118	0.0400	0.0313	
82 o-Xylene	91	16.747	16.751	-0.004	99	19414	0.0400	0.0398	
83 1,1,2,2-Tetrachloroethane	83	17.073	17.077	-0.004	97	14785	0.0400	0.0374	
84 1,2,3-Trichloropropane	110	17.238	17.237	0.001	96	3733	0.0400	0.0383	
85 Isopropylbenzene	105	17.336	17.337	-0.001	94	26315	0.0400	0.0391	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	17.895	17.900	-0.005	98	6527	0.0400	0.0370	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	6694	0.0400	0.0388	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	98	22317	0.0400	0.0349	
89 1,3,5-Trimethylbenzene	120	18.137	18.134	0.003	91	9243	0.0400	0.0590	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	86	6797	0.0400	0.0255	
91 n-Decane	57	18.427	18.430	-0.003	88	14259	0.0400	0.0361	
92 tert-Butylbenzene	119	18.577	18.577	0.000	90	22144	0.0400	0.0370	
93 1,2,4-Trimethylbenzene	105	18.592	18.592	0.000	96	20437	0.0400	0.0366	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	98	30251	0.0400	0.0362	
94 1,3-Dichlorobenzene	146	18.877	18.874	0.003	97	15661	0.0400	0.0386	
96 Benzyl chloride	91	18.954	18.955	-0.001	98	9643	0.0400	0.0233	
97 1,4-Dichlorobenzene	146	18.959	18.965	-0.006	93	14394	0.0400	0.0375	
98 4-Isopropyltoluene	119	19.026	19.027	-0.001	96	23274	0.0400	0.0359	
99 1,2,3-Trimethylbenzene	105	19.078	19.083	-0.005	99	20826	0.0400	0.0380	
100 Butylcyclohexane	83	19.135	19.136	-0.001	92	17674	0.0400	0.0397	
102 2,3-Dihydroindene	117	19.337	19.338	-0.002	91	19273	0.0400	0.0359	
101 1,2-Dichlorobenzene	146	19.337	19.338	-0.002	86	15171	0.0400	0.0376	
103 Indene	116	19.471	19.471	0.000	89	12723	0.0400	0.0276	
104 n-Butylbenzene	91	19.476	19.477	-0.001	95	22609	0.0400	0.0338	
105 Undecane	57	19.791	19.792	-0.001	93	14241	0.0400	0.0312	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	85	5000	0.0400	0.0299	
107 1,2,4,5-Tetramethylbenzene	119	20.256	20.255	0.001	96	18414	0.0400	0.0305	
110 Dodecane	57	20.892	20.889	0.003	90	11941	0.0400	0.0268	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	91	7491	0.0400	0.0894	
113 Naphthalene	128	21.254	21.255	-0.001	98	16787	0.0400	0.0279	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	91	15078	0.0400	0.0396	
116 1,2,3-Trichlorobenzene	180	21.543	21.540	0.003	95	10800	0.0400	0.0336	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	99	7348	0.0400	0.0318	
118 1-Methylnaphthalene	142	22.282	22.283	-0.001	98	11223	0.0400	0.0343	
A 120 C8 Range	1	14.442	(14.406-14.478)		0	59484	0.0400	0.0387	
S 121 Xylenes, Total	100				0		0.1200	0.1159	
S 122 1,2-Dichloroethene, Total	1				0		0.0800	0.0880	

Reagents:

40L1-3DQP_00012

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC02.D

Injection Date: 20-Feb-2019 20:31:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L2

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

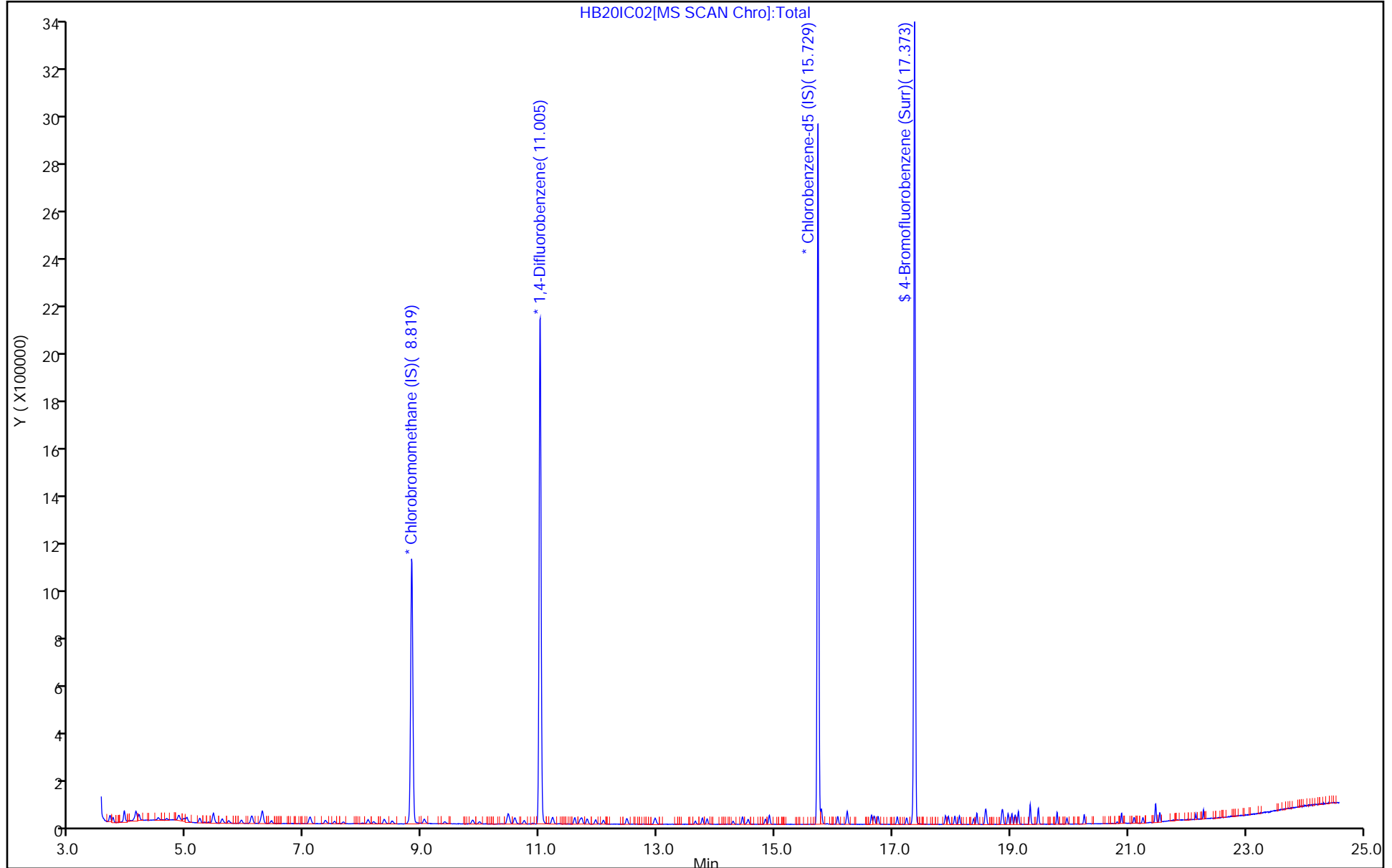
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC02.D

Injection Date: 20-Feb-2019 20:31:30

Instrument ID: MH

Lims ID: IC L2

Client ID:

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

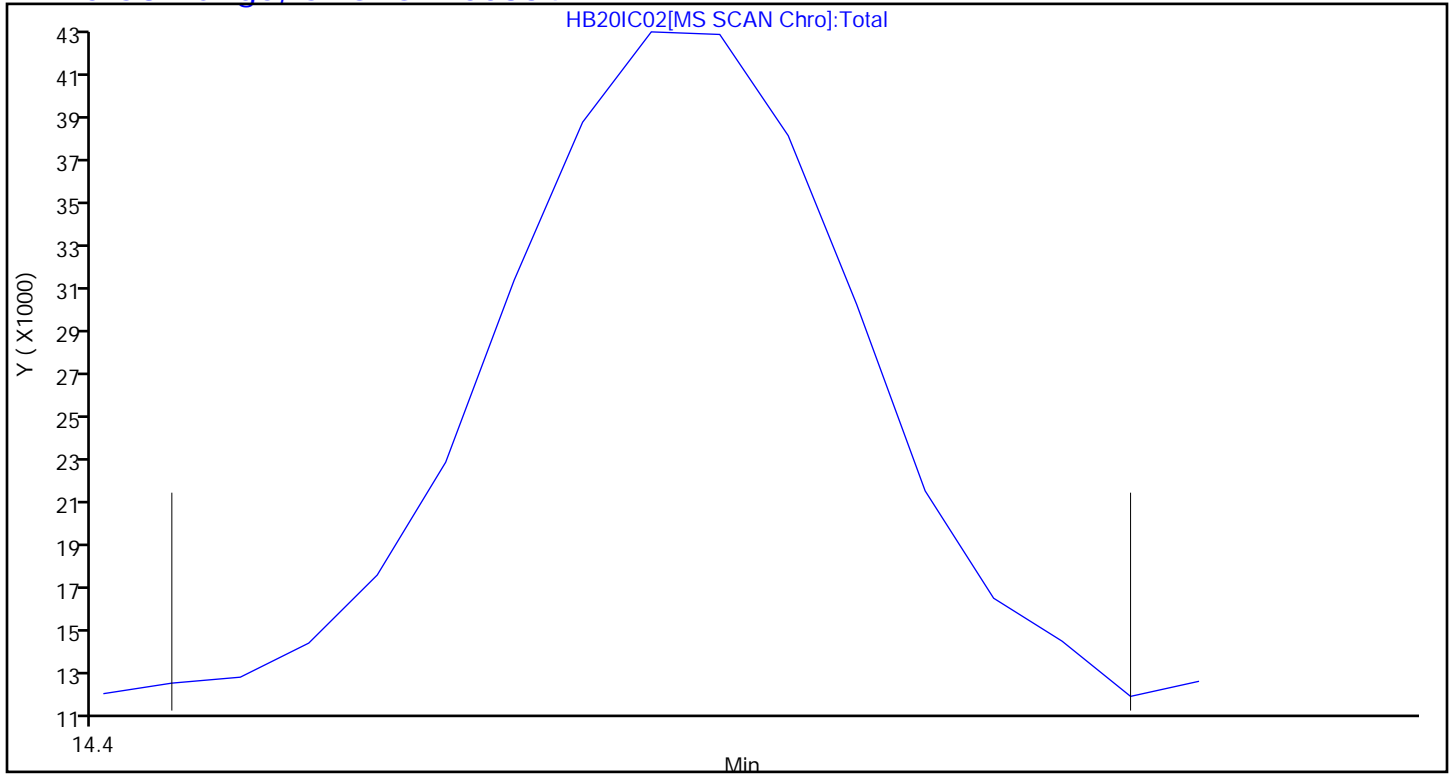
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 20-Feb-2019 21:26:30 ALS Bottle#: 1 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-010
 Misc. Info.: 210543
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:47:59 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 22-Feb-2019 09:49:03

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.830	-0.011	95	367827	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.010	-0.005	95	2014478	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	87	1670231	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.368	17.371	-0.003	95	1108968	4.00	4.07	
6 Chlorodifluoromethane	51	3.682	3.681	0.001	97	23324	0.0800	0.0773	
7 Propene	41	3.692	3.691	0.001	97	12938	0.0800	0.0943	
8 Dichlorodifluoromethane	85	3.744	3.741	0.003	100	35581	0.0800	0.0768	
9 Chloromethane	52	3.930	3.928	0.002	63	5453	0.0800	0.1009	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.935	3.933	0.002	92	25033	0.0800	0.0783	
12 Vinyl chloride	62	4.095	4.097	-0.002	99	13553	0.0800	0.0807	
11 Acetaldehyde	44	4.131	4.111	0.020	98	47256	0.4000	0.7323	
14 Butane	43	4.183	4.183	0.000	79	20509	0.0800	0.0853	
13 Butadiene	54	4.188	4.185	0.003	77	9850	0.0800	0.0812	
15 Bromomethane	94	4.509	4.508	0.001	98	13700	0.0800	0.0806	
16 Chloroethane	64	4.659	4.653	0.005	97	6514	0.0800	0.0850	
17 Ethanol	31	4.860	4.836	0.024	95	32861	0.4000	0.4364	
18 Vinyl bromide	106	4.948	4.951	-0.003	98	13037	0.0800	0.0806	
19 2-Methylbutane	43	5.005	4.999	0.006	95	15092	0.0800	0.0846	
21 Trichlorofluoromethane	101	5.217	5.219	-0.002	99	33813	0.0800	0.0799	
20 Acrolein	56	5.289	5.277	0.012	95	5242	0.0800	0.0974	
22 Acetonitrile	40	5.361	5.351	0.010	99	6265	0.0800	0.0926	
23 Acetone	58	5.449	5.416	0.033	97	24570	0.2400	0.3553	
24 Pentane	72	5.444	5.444	0.000	73	1560	0.0800	0.0806	
25 Isopropyl alcohol	45	5.599	5.555	0.044	98	49153	0.2400	0.2258	
26 Ethyl ether	31	5.708	5.672	0.036	95	13875	0.0800	0.0810	
27 1,1-Dichloroethene	96	5.925	5.929	-0.004	97	11331	0.0800	0.0793	
28 Acrylonitrile	53	6.085	6.075	0.010	97	8282	0.0800	0.0754	
30 1,1,2-Trichloro-1,2,2-trif	101	6.100	6.107	-0.007	96	27679	0.0800	0.0814	
29 2-Methyl-2-propanol	59	6.250	6.186	0.064	94	18600	0.0800	0.0768	
31 Methylene Chloride	84	6.276	6.284	-0.008	98	27222	0.0800	0.1810	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.292	6.297	-0.005	97	13143	0.0800	0.0979	
33 Carbon disulfide	76	6.431	6.437	-0.006	100	33499	0.0800	0.0810	
34 trans-1,2-Dichloroethene	96	7.088	7.088	0.000	97	11461	0.0800	0.0782	
35 2-Methylpentane	43	7.098	7.104	-0.006	95	26706	0.0800	0.0793	
36 Methyl tert-butyl ether	73	7.346	7.296	0.050	96	26667	0.0800	0.0768	
37 1,1-Dichloroethane	63	7.511	7.514	-0.003	99	22371	0.0800	0.0803	
38 Vinyl acetate	43	7.651	7.645	0.006	100	26994	0.0800	0.0678	
40 Hexane	56	8.075	8.082	-0.007	90	8662	0.0800	0.0778	
39 2-Butanone (MEK)	72	8.163	8.133	0.030	98	5239	0.0800	0.0828	
171 Isopropyl ether	45	8.344	8.306	0.038	97	40220	0.0800	0.0772	
41 cis-1,2-Dichloroethene	96	8.488	8.497	-0.009	97	11721	0.0800	0.0789	
42 Ethyl acetate	43	8.757	8.736	0.021	98	27541	0.0800	0.0776	
43 Chloroform	83	8.829	8.842	-0.013	38	25523	0.0800	0.0799	
173 Tert-butyl ethyl ether	59	9.026	8.986	0.040	98	32408	0.0800	0.0748	
44 Tetrahydrofuran	42	9.372	9.329	0.043	93	13797	0.0800	0.0803	
45 1,1,1-Trichloroethane	97	9.858	9.862	-0.004	97	22903	0.0800	0.0754	
46 1,2-Dichloroethane	62	9.972	9.980	-0.008	96	16131	0.0800	0.0743	
48 Cyclohexane	69	10.452	10.458	-0.006	69	4554	0.0800	0.0719	
47 Benzene	78	10.457	10.465	-0.008	97	32682	0.0800	0.0767	
50 Carbon tetrachloride	117	10.478	10.483	-0.005	95	24310	0.0800	0.0705	
49 n-Butanol	31	10.581	10.538	0.043	73	4171	0.0800	0.0724	
51 2,3-Dimethylpentane	71	10.571	10.577	-0.006	86	6708	0.0800	0.0759	
52 Thiophene	84	10.731	10.740	-0.009	97	18692	0.0800	0.0767	
53 Isooctane	57	11.217	11.219	-0.002	98	53089	0.0800	0.0755	
55 n-Heptane	71	11.589	11.594	-0.005	94	10096	0.0800	0.0744	
54 1,2-Dichloropropane	63	11.682	11.685	-0.003	89	13479	0.0800	0.0744	
56 Trichloroethene	130	11.708	11.718	-0.010	96	14725	0.0800	0.0733	
57 Dibromomethane	93	11.801	11.808	-0.007	96	16515	0.0800	0.0782	
58 Dichlorobromomethane	83	11.946	11.953	-0.006	97	22677	0.0800	0.0715	
59 1,4-Dioxane	88	12.070	12.035	0.035	97	5140	0.0800	0.0804	
60 Methyl methacrylate	41	12.075	12.068	0.007	93	11987	0.0800	0.0630	
61 Methylcyclohexane	83	12.478	12.484	-0.006	92	17104	0.0800	0.0644	
62 4-Methyl-2-pentanone (MIBK)	43	12.969	12.944	0.025	97	28778	0.0800	0.0754	
63 cis-1,3-Dichloropropene	75	12.949	12.950	-0.001	97	15836	0.0800	0.0664	
64 trans-1,3-Dichloropropene	75	13.641	13.645	-0.004	98	13490	0.0800	0.0665	
65 Toluene	91	13.760	13.765	-0.005	93	36650	0.0800	0.0771	
66 1,1,2-Trichloroethane	83	13.843	13.844	-0.001	97	11751	0.0800	0.0745	
69 2-Hexanone	58	14.282	14.265	0.017	92	8963	0.0800	0.0575	
71 n-Octane	85	14.442	14.446	-0.004	95	9965	0.0800	0.0734	
70 Chlorodibromomethane	129	14.540	14.544	-0.004	97	20599	0.0800	0.0648	
72 Ethylene Dibromide	107	14.830	14.835	-0.005	96	19884	0.0800	0.0691	
73 Tetrachloroethene	129	14.902	14.903	-0.001	94	14431	0.0800	0.0745	
74 Chlorobenzene	112	15.776	15.778	-0.002	95	28914	0.0800	0.0739	
75 2,3-Dimethylheptane	43	15.786	15.790	-0.004	94	38282	0.0800	0.0766	
76 Ethylbenzene	91	16.065	16.065	0.000	99	43699	0.0800	0.0722	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	66686	0.1600	0.1429	
81 n-Nonane	57	16.639	16.639	0.000	94	20941	0.0800	0.0696	
79 Bromoform	173	16.675	16.679	-0.004	93	18872	0.0800	0.0529	
80 Styrene	104	16.685	16.690	-0.005	98	20466	0.0800	0.0651	
82 o-Xylene	91	16.752	16.751	0.001	98	36234	0.0800	0.0762	
83 1,1,2,2-Tetrachloroethane	83	17.073	17.077	-0.004	97	27592	0.0800	0.0717	
84 1,2,3-Trichloropropane	110	17.233	17.237	-0.004	96	7060	0.0800	0.0744	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.337	17.337	0.000	96	48237	0.0800	0.0735	
86 N-Propylbenzene	120	17.900	17.900	0.000	98	11389	0.0800	0.0663	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	12209	0.0800	0.0726	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	98	43683	0.0800	0.0700	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	92	18083	0.0800	0.0912	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	83	12726	0.0800	0.0490	
91 n-Decane	57	18.427	18.430	-0.003	89	28397	0.0800	0.0737	
92 tert-Butylbenzene	119	18.572	18.577	-0.005	90	42446	0.0800	0.0727	
93 1,2,4-Trimethylbenzene	105	18.587	18.592	-0.005	96	40145	0.0800	0.0738	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	98	56852	0.0800	0.0699	
94 1,3-Dichlorobenzene	146	18.872	18.874	-0.002	98	28033	0.0800	0.0710	
96 Benzyl chloride	91	18.954	18.955	-0.001	96	18773	0.0800	0.0466	
97 1,4-Dichlorobenzene	146	18.965	18.965	0.000	92	25865	0.0800	0.0692	
98 4-Isopropyltoluene	119	19.027	19.027	0.000	97	44768	0.0800	0.0709	
99 1,2,3-Trimethylbenzene	105	19.078	19.083	-0.005	99	38988	0.0800	0.0730	
100 Butylcyclohexane	83	19.135	19.136	-0.001	90	33076	0.0800	0.0763	
102 2,3-Dihydroindene	117	19.337	19.338	-0.001	92	35661	0.0800	0.0682	
101 1,2-Dichlorobenzene	146	19.337	19.338	-0.001	85	27892	0.0800	0.0709	
103 Indene	116	19.471	19.471	0.000	86	25488	0.0800	0.0567	
104 n-Butylbenzene	91	19.476	19.477	-0.001	98	46347	0.0800	0.0710	
105 Undecane	57	19.791	19.792	-0.001	94	28477	0.0800	0.0639	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	86	9382	0.0800	0.0575	
107 1,2,4,5-Tetramethylbenzene	119	20.257	20.255	0.002	96	36923	0.0800	0.0628	
110 Dodecane	57	20.892	20.889	0.003	92	25472	0.0800	0.0587	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	94	13247	0.0800	0.1074	
113 Naphthalene	128	21.254	21.255	-0.001	98	32092	0.0800	0.0548	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	91	27202	0.0800	0.0733	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	94	19673	0.0800	0.0629	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	99	11594	0.0800	0.0515	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	99	20912	0.0800	0.0655	
A 120 C8 Range	1	14.447	(14.396-14.489)		0	108321	0.0800	0.0727	
S 121 Xylenes, Total	100				0		0.2400	0.2191	
S 122 1,2-Dichloroethene, Total	1				0		0.1600	0.1572	

Reagents:

40L1-3DQP_00012

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC03.D

Injection Date: 20-Feb-2019 21:26:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L3

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

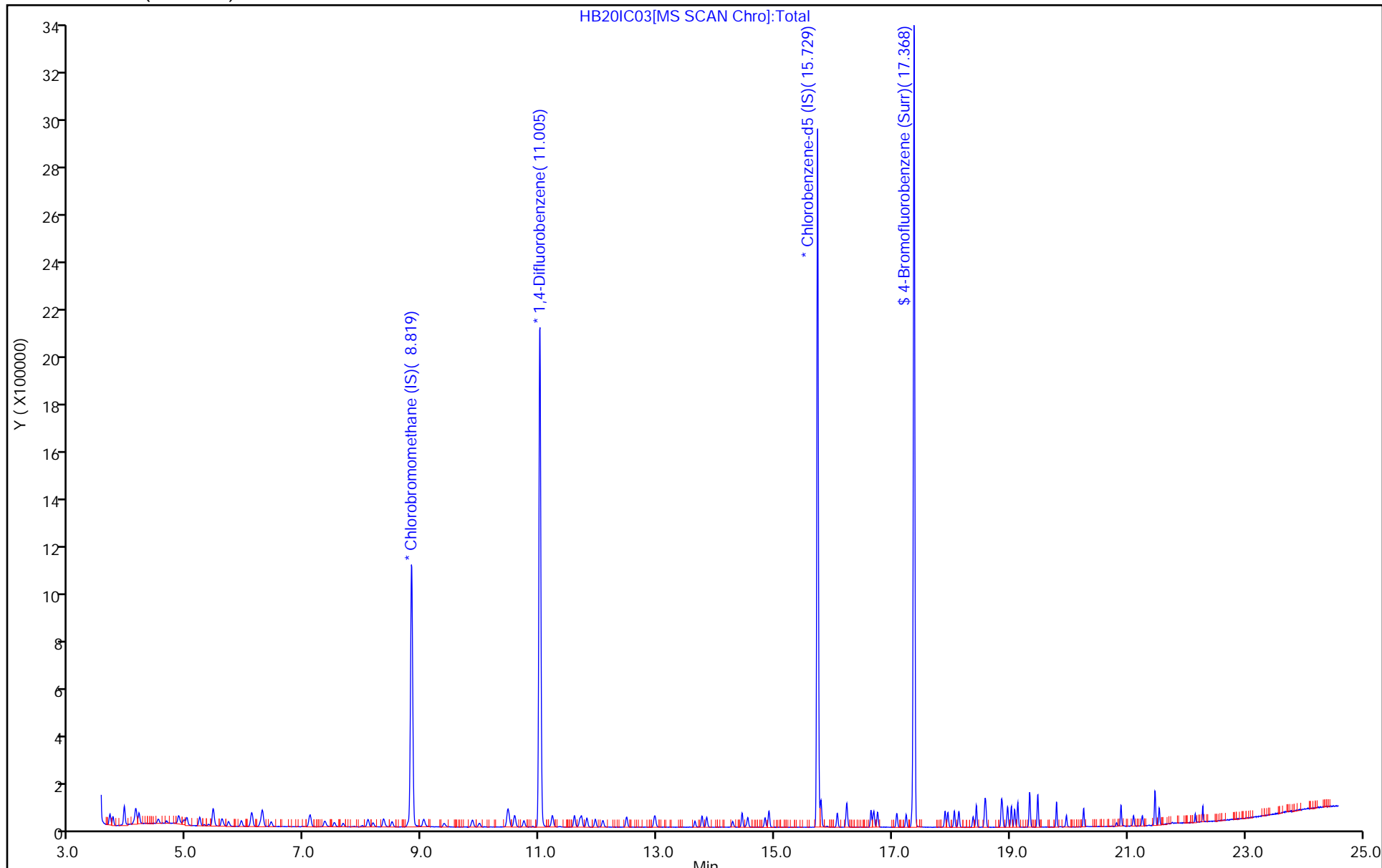
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC03.D

Injection Date: 20-Feb-2019 21:26:30

Instrument ID: MH

Lims ID: IC L3

Client ID:

Operator ID: HMT

ALS Bottle#: 1

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

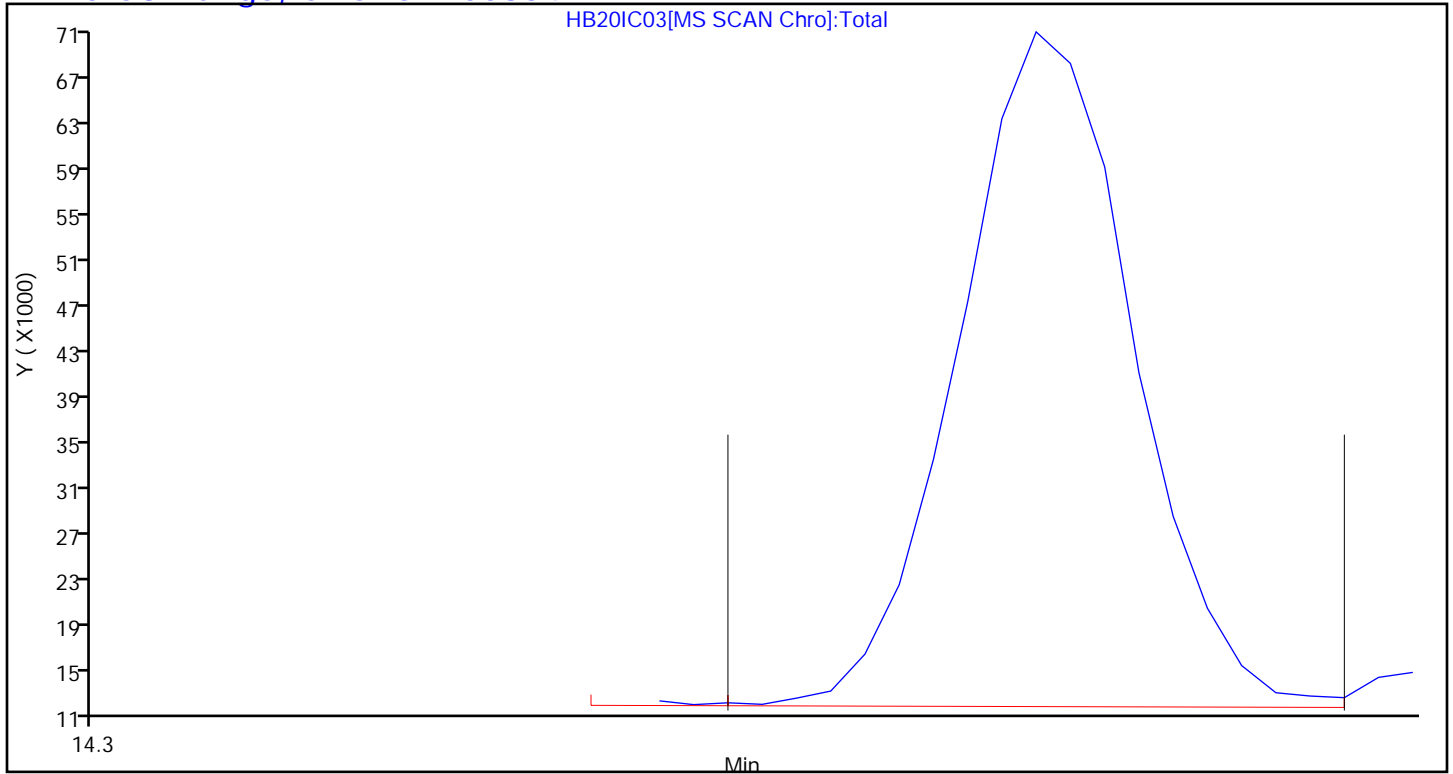
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 20-Feb-2019 22:20:30 ALS Bottle#: 2 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-011
 Misc. Info.: 210542
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7

Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:48:13 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 22-Feb-2019 09:52:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.830	-0.006	95	350130	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.010	-0.005	95	1928430	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	88	1599462	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.368	17.371	-0.003	97	1061718	4.00	4.07	
6 Chlorodifluoromethane	51	3.682	3.681	0.001	97	44738	0.1600	0.1558	
7 Propene	41	3.692	3.691	0.001	97	20791	0.1600	0.1593	
8 Dichlorodifluoromethane	85	3.744	3.741	0.003	100	69332	0.1600	0.1572	
9 Chloromethane	52	3.930	3.928	0.002	58	9404	0.1600	0.1828	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.935	3.933	0.002	92	46869	0.1600	0.1541	
12 Vinyl chloride	62	4.095	4.097	-0.002	99	25872	0.1600	0.1618	
11 Acetaldehyde	44	4.126	4.111	0.015	97	56113	0.8000	0.9135	
14 Butane	43	4.183	4.183	0.000	86	39827	0.1600	0.1740	
13 Butadiene	54	4.183	4.185	-0.002	80	19298	0.1600	0.1670	
15 Bromomethane	94	4.514	4.508	0.006	99	27091	0.1600	0.1675	
16 Chloroethane	64	4.653	4.653	0.000	97	11777	0.1600	0.1615	
17 Ethanol	31	4.850	4.836	0.014	96	57636	0.8000	0.8041	
18 Vinyl bromide	106	4.948	4.951	-0.003	97	24322	0.1600	0.1580	
19 2-Methylbutane	43	5.000	4.999	0.001	94	27497	0.1600	0.1620	
21 Trichlorofluoromethane	101	5.217	5.219	-0.002	100	65029	0.1600	0.1614	
20 Acrolein	56	5.294	5.277	0.017	93	8409	0.1600	0.1642	
22 Acetonitrile	40	5.361	5.351	0.010	98	10375	0.1600	0.1610	
23 Acetone	58	5.439	5.416	0.023	96	35492	0.4800	0.5392	
24 Pentane	72	5.444	5.444	0.000	74	3067	0.1600	0.1665	
25 Isopropyl alcohol	45	5.589	5.555	0.034	98	91466	0.4800	0.4417	
26 Ethyl ether	31	5.697	5.672	0.025	93	25807	0.1600	0.1583	
27 1,1-Dichloroethene	96	5.925	5.929	-0.004	97	21894	0.1600	0.1610	
28 Acrylonitrile	53	6.080	6.075	0.005	94	16757	0.1600	0.1602	
30 1,1,2-Trichloro-1,2,2-trif	101	6.100	6.107	-0.007	96	52386	0.1600	0.1619	
29 2-Methyl-2-propanol	59	6.235	6.186	0.049	97	35033	0.1600	0.1519	
31 Methylene Chloride	84	6.281	6.284	-0.003	98	34620	0.1600	0.2418	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.297	6.297	0.000	82	21012	0.1600	0.1644	
33 Carbon disulfide	76	6.431	6.437	-0.006	100	64204	0.1600	0.1631	
34 trans-1,2-Dichloroethene	96	7.082	7.088	-0.006	98	21671	0.1600	0.1554	
35 2-Methylpentane	43	7.103	7.104	-0.001	95	51347	0.1600	0.1603	
36 Methyl tert-butyl ether	73	7.325	7.296	0.029	96	51683	0.1600	0.1565	
37 1,1-Dichloroethane	63	7.506	7.514	-0.008	99	43216	0.1600	0.1629	
38 Vinyl acetate	43	7.651	7.645	0.006	100	53610	0.1600	0.1415	
40 Hexane	56	8.075	8.082	-0.007	90	16426	0.1600	0.1550	
39 2-Butanone (MEK)	72	8.147	8.133	0.014	97	9115	0.1600	0.1514	
171 Isopropyl ether	45	8.333	8.306	0.027	97	77390	0.1600	0.1561	
41 cis-1,2-Dichloroethene	96	8.488	8.497	-0.009	96	22419	0.1600	0.1586	
42 Ethyl acetate	43	8.752	8.736	0.016	98	52034	0.1600	0.1541	
43 Chloroform	83	8.835	8.842	-0.007	97	49161	0.1600	0.1616	
173 Tert-butyl ethyl ether	59	9.015	8.986	0.029	98	63088	0.1600	0.1529	
44 Tetrahydrofuran	42	9.362	9.329	0.033	94	25511	0.1600	0.1559	
45 1,1,1-Trichloroethane	97	9.858	9.862	-0.004	97	43475	0.1600	0.1503	
46 1,2-Dichloroethane	62	9.977	9.980	-0.003	96	31582	0.1600	0.1520	
48 Cyclohexane	69	10.452	10.458	-0.006	70	8824	0.1600	0.1456	
47 Benzene	78	10.463	10.465	-0.002	97	60789	0.1600	0.1491	
50 Carbon tetrachloride	117	10.478	10.483	-0.005	97	44327	0.1600	0.1343	
49 n-Butanol	31	10.571	10.538	0.033	73	7444	0.1600	0.1349	
51 2,3-Dimethylpentane	71	10.576	10.577	-0.001	87	12865	0.1600	0.1521	
52 Thiophene	84	10.736	10.740	-0.004	97	35178	0.1600	0.1508	
53 Isooctane	57	11.217	11.219	-0.002	98	102056	0.1600	0.1517	
55 n-Heptane	71	11.594	11.594	0.000	94	18913	0.1600	0.1456	
54 1,2-Dichloropropane	63	11.682	11.685	-0.003	91	27042	0.1600	0.1559	
56 Trichloroethene	130	11.713	11.718	-0.005	95	28328	0.1600	0.1472	
57 Dibromomethane	93	11.801	11.808	-0.007	96	31506	0.1600	0.1559	
58 Dichlorobromomethane	83	11.946	11.953	-0.006	98	44079	0.1600	0.1452	
59 1,4-Dioxane	88	12.060	12.035	0.025	96	9393	0.1600	0.1534	
60 Methyl methacrylate	41	12.075	12.068	0.007	91	25219	0.1600	0.1384	
61 Methylcyclohexane	83	12.478	12.484	-0.006	91	33070	0.1600	0.1301	
62 4-Methyl-2-pentanone (MIBK)	43	12.959	12.944	0.015	96	50210	0.1600	0.1375	
63 cis-1,3-Dichloropropene	75	12.949	12.950	-0.001	99	32071	0.1600	0.1405	
64 trans-1,3-Dichloropropene	75	13.641	13.645	-0.004	98	26441	0.1600	0.1362	
65 Toluene	91	13.760	13.765	-0.005	92	68961	0.1600	0.1515	
66 1,1,2-Trichloroethane	83	13.843	13.844	-0.001	96	24147	0.1600	0.1598	
69 2-Hexanone	58	14.282	14.265	0.017	91	18055	0.1600	0.1209	
71 n-Octane	85	14.442	14.446	-0.004	96	19559	0.1600	0.1505	
70 Chlorodibromomethane	129	14.540	14.544	-0.004	97	40693	0.1600	0.1337	
72 Ethylene Dibromide	107	14.830	14.835	-0.005	97	39867	0.1600	0.1446	
73 Tetrachloroethene	129	14.902	14.903	-0.001	95	29094	0.1600	0.1569	
74 Chlorobenzene	112	15.776	15.778	-0.002	94	54785	0.1600	0.1463	
75 2,3-Dimethylheptane	43	15.791	15.790	0.001	95	74909	0.1600	0.1565	
76 Ethylbenzene	91	16.065	16.065	0.000	99	85231	0.1600	0.1470	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	133574	0.3200	0.2988	
81 n-Nonane	57	16.639	16.639	0.000	95	41910	0.1600	0.1455	
79 Bromoform	173	16.675	16.679	-0.004	93	37380	0.1600	0.1093	
80 Styrene	104	16.690	16.690	0.000	99	40788	0.1600	0.1354	
82 o-Xylene	91	16.747	16.751	-0.004	98	70551	0.1600	0.1550	
83 1,1,2,2-Tetrachloroethane	83	17.078	17.077	0.001	98	53490	0.1600	0.1451	
84 1,2,3-Trichloropropane	110	17.238	17.237	0.001	97	13629	0.1600	0.1500	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.336	17.337	-0.001	97	93612	0.1600	0.1490	
86 N-Propylbenzene	120	17.900	17.900	0.000	98	22978	0.1600	0.1398	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	23459	0.1600	0.1457	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	98	87555	0.1600	0.1466	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	92	37017	0.1600	0.1643	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	87	26923	0.1600	0.1082	
91 n-Decane	57	18.427	18.430	-0.003	88	57543	0.1600	0.1560	
92 tert-Butylbenzene	119	18.577	18.577	0.000	91	83223	0.1600	0.1489	
93 1,2,4-Trimethylbenzene	105	18.587	18.592	-0.005	96	78441	0.1600	0.1505	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	98	114293	0.1600	0.1467	
94 1,3-Dichlorobenzene	146	18.871	18.874	-0.003	98	54101	0.1600	0.1431	
96 Benzyl chloride	91	18.954	18.955	-0.001	97	37546	0.1600	0.0973	
97 1,4-Dichlorobenzene	146	18.965	18.965	0.000	93	50401	0.1600	0.1409	
98 4-Isopropyltoluene	119	19.027	19.027	0.000	96	90912	0.1600	0.1504	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	99	79211	0.1600	0.1548	
100 Butylcyclohexane	83	19.135	19.136	-0.001	90	66383	0.1600	0.1599	
102 2,3-Dihydroindene	117	19.337	19.338	-0.001	92	70126	0.1600	0.1401	
101 1,2-Dichlorobenzene	146	19.337	19.338	-0.001	84	54498	0.1600	0.1447	
103 Indene	116	19.471	19.471	0.000	90	52088	0.1600	0.1210	
104 n-Butylbenzene	91	19.476	19.477	-0.001	97	93855	0.1600	0.1502	
105 Undecane	57	19.791	19.792	-0.001	93	58868	0.1600	0.1380	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	90	19327	0.1600	0.1238	
107 1,2,4,5-Tetramethylbenzene	119	20.251	20.255	-0.004	96	77678	0.1600	0.1379	
110 Dodecane	57	20.887	20.889	-0.002	91	50308	0.1600	0.1211	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	93	27410	0.1600	0.1541	
113 Naphthalene	128	21.254	21.255	-0.001	98	65571	0.1600	0.1169	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	91	50558	0.1600	0.1423	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	95	38937	0.1600	0.1300	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	99	23671	0.1600	0.1098	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	99	40771	0.1600	0.1334	
A 120 C8 Range	1	14.447	(14.406-14.489)		0	207536	0.1600	0.1455	
S 121 Xylenes, Total	100				0		0.4800	0.4538	
S 122 1,2-Dichloroethene, Total	1				0		0.3200	0.3140	

Reagents:

40L4DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC04.D

Injection Date: 20-Feb-2019 22:20:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L4

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

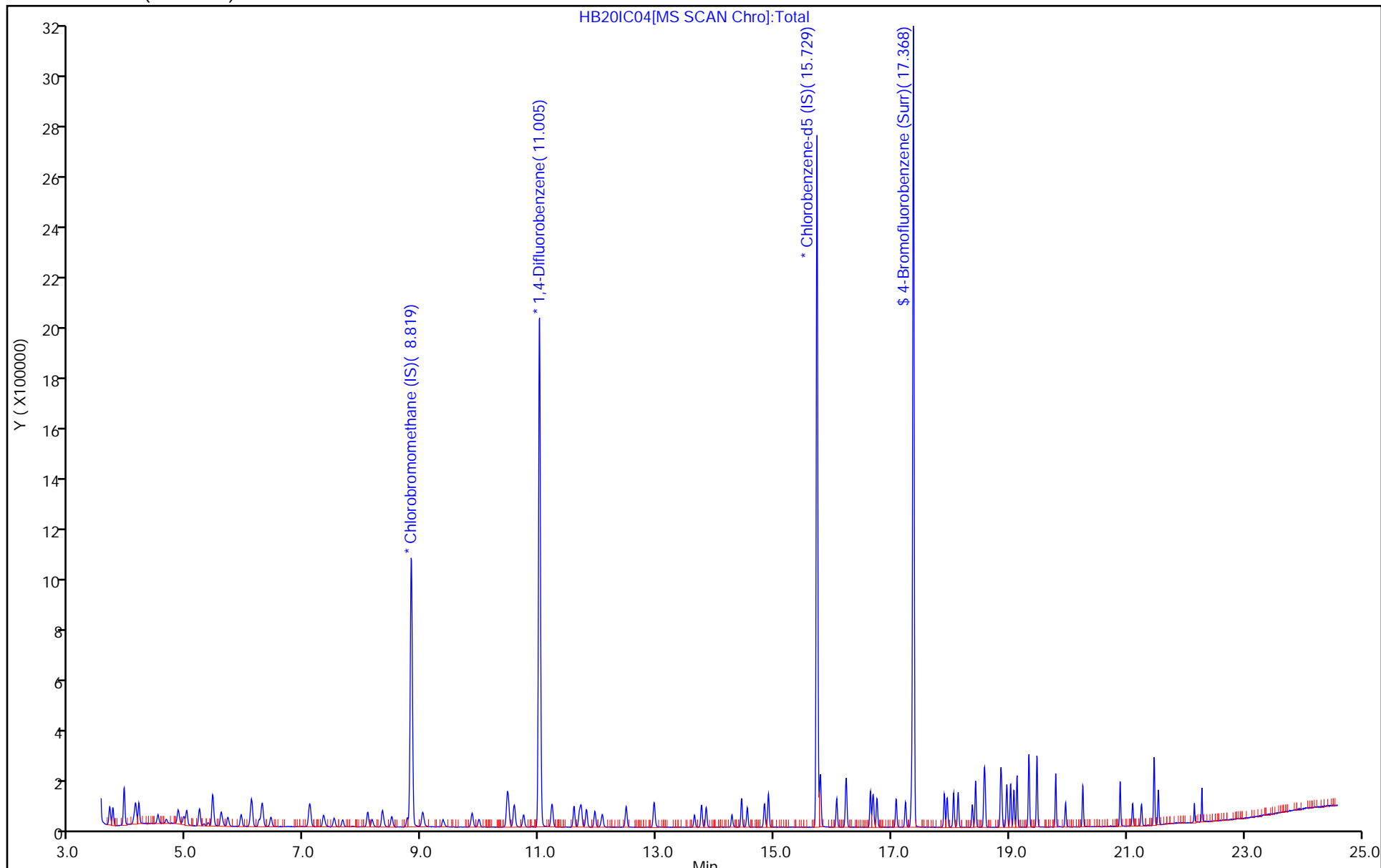
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC04.D

Injection Date: 20-Feb-2019 22:20:30

Instrument ID: MH

Lims ID: IC L4

Client ID:

Operator ID: HMT

ALS Bottle#: 2

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

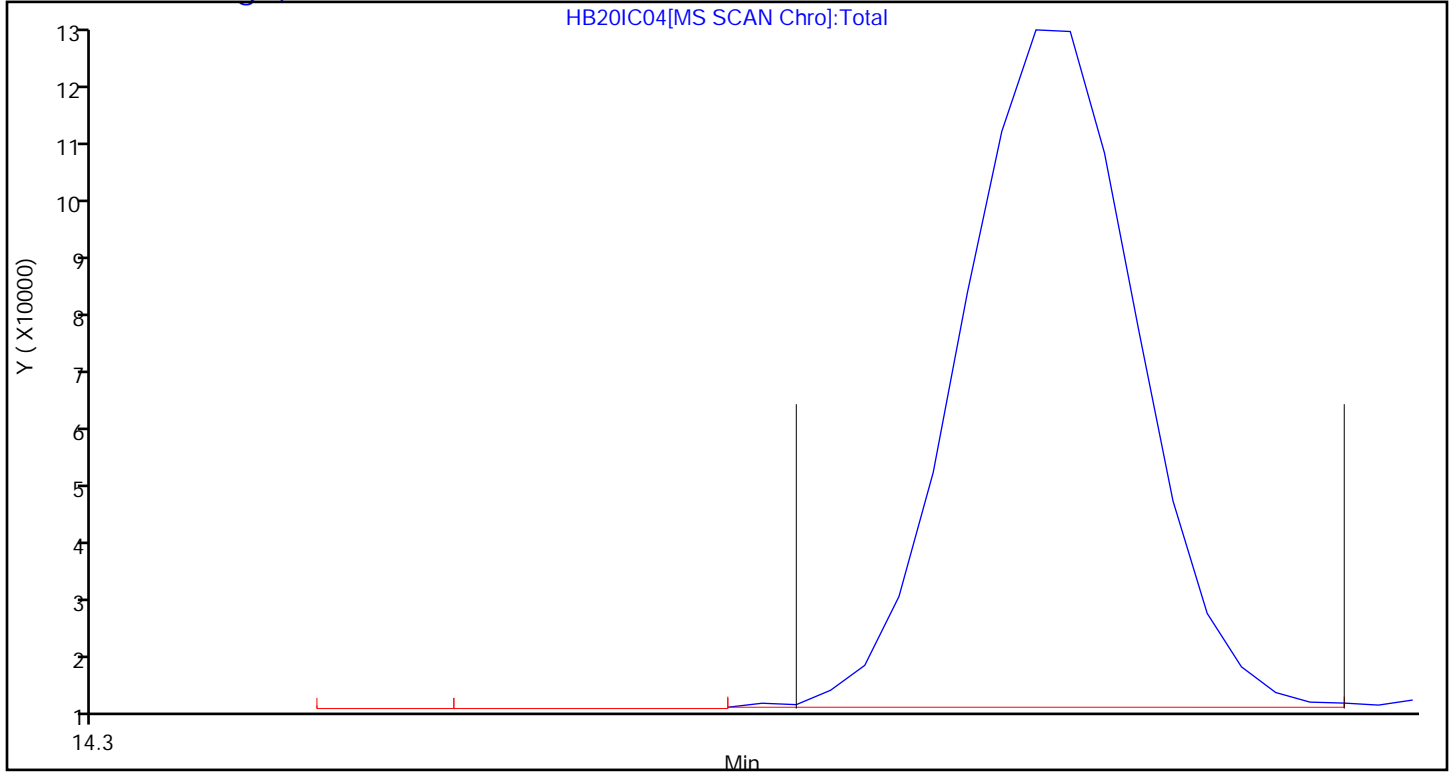
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 20-Feb-2019 23:14:30 ALS Bottle#: 3 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-012
 Misc. Info.: 210541
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:48:23 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 21-Feb-2019 13:38:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.830	-0.006	97	350291	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.010	-0.005	96	1915626	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	88	1590176	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.373	17.371	0.002	96	1069670	4.00	4.13	
6 Chlorodifluoromethane	51	3.682	3.681	0.001	97	110343	0.4000	0.3842	
7 Propene	41	3.692	3.691	0.001	98	50058	0.4000	0.3833	
8 Dichlorodifluoromethane	85	3.738	3.741	-0.003	100	170173	0.4000	0.3857	
9 Chloromethane	52	3.930	3.928	0.002	98	20898	0.4000	0.4061	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.935	3.933	0.002	92	119194	0.4000	0.3917	
12 Vinyl chloride	62	4.095	4.097	-0.002	99	63624	0.4000	0.3977	
11 Acetaldehyde	44	4.116	4.111	0.005	99	132159	2.00	2.15	
14 Butane	43	4.183	4.183	0.000	90	94610	0.4000	0.4133	
13 Butadiene	54	4.183	4.185	-0.002	92	46266	0.4000	0.4003	
15 Bromomethane	94	4.509	4.508	0.000	98	65057	0.4000	0.4020	
16 Chloroethane	64	4.653	4.653	0.000	98	29938	0.4000	0.4104	
17 Ethanol	31	4.839	4.836	0.003	96	141512	2.00	1.97	
18 Vinyl bromide	106	4.948	4.951	-0.003	98	61012	0.4000	0.3962	
19 2-Methylbutane	43	4.994	4.999	-0.005	92	69491	0.4000	0.4092	
21 Trichlorofluoromethane	101	5.217	5.219	-0.002	100	164002	0.4000	0.4068	
20 Acrolein	56	5.279	5.277	0.002	95	20576	0.4000	0.4016	
22 Acetonitrile	40	5.351	5.351	0.000	98	25939	0.4000	0.4024	
23 Acetone	58	5.423	5.416	0.007	98	83084	1.20	1.26	
24 Pentane	72	5.444	5.444	0.000	80	7712	0.4000	0.4184	
25 Isopropyl alcohol	45	5.563	5.555	0.008	99	228028	1.20	1.10	
26 Ethyl ether	31	5.677	5.672	0.005	93	67088	0.4000	0.4114	
27 1,1-Dichloroethene	96	5.925	5.929	-0.004	96	54085	0.4000	0.3975	
28 Acrylonitrile	53	6.069	6.075	-0.006	93	41315	0.4000	0.3947	
30 1,1,2-Trichloro-1,2,2-trif	101	6.106	6.107	-0.001	96	130321	0.4000	0.4026	
29 2-Methyl-2-propanol	59	6.209	6.186	0.023	97	88542	0.4000	0.3837	
31 Methylene Chloride	84	6.281	6.284	-0.003	98	65799	0.4000	0.4594	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.292	6.297	-0.005	96	49922	0.4000	0.3905	
33 Carbon disulfide	76	6.431	6.437	-0.006	100	158292	0.4000	0.4020	
34 trans-1,2-Dichloroethene	96	7.082	7.088	-0.006	97	55602	0.4000	0.3985	
35 2-Methylpentane	43	7.098	7.104	-0.006	96	128649	0.4000	0.4013	
36 Methyl tert-butyl ether	73	7.299	7.296	0.003	97	131945	0.4000	0.3992	
37 1,1-Dichloroethane	63	7.506	7.514	-0.008	100	105434	0.4000	0.3973	
38 Vinyl acetate	43	7.646	7.645	0.001	100	141592	0.4000	0.3735	
40 Hexane	56	8.080	8.082	-0.002	88	42005	0.4000	0.3961	
39 2-Butanone (MEK)	72	8.137	8.133	0.004	97	23711	0.4000	0.3937	
171 Isopropyl ether	45	8.307	8.306	0.001	97	197900	0.4000	0.3990	
41 cis-1,2-Dichloroethene	96	8.493	8.497	-0.004	97	55633	0.4000	0.3934	
42 Ethyl acetate	43	8.736	8.736	0.000	98	130856	0.4000	0.3873	
43 Chloroform	83	8.834	8.842	-0.008	97	120999	0.4000	0.3975	
173 Tert-butyl ethyl ether	59	8.995	8.986	0.009	97	161632	0.4000	0.3915	
44 Tetrahydrofuran	42	9.336	9.329	0.007	93	63048	0.4000	0.3852	
45 1,1,1-Trichloroethane	97	9.858	9.862	-0.004	98	112189	0.4000	0.3876	
46 1,2-Dichloroethane	62	9.977	9.980	-0.003	96	79080	0.4000	0.3831	
48 Cyclohexane	69	10.457	10.458	-0.001	92	23383	0.4000	0.3883	
47 Benzene	78	10.462	10.465	-0.003	97	154496	0.4000	0.3814	
50 Carbon tetrachloride	117	10.478	10.483	-0.005	96	121964	0.4000	0.3720	
49 n-Butanol	31	10.566	10.538	0.028	70	18761	0.4000	0.3423	
51 2,3-Dimethylpentane	71	10.576	10.577	-0.001	88	33896	0.4000	0.4035	
52 Thiophene	84	10.736	10.740	-0.004	96	90994	0.4000	0.3927	
53 Isooctane	57	11.217	11.219	-0.002	98	254726	0.4000	0.3812	
55 n-Heptane	71	11.594	11.594	0.000	94	49010	0.4000	0.3799	
54 1,2-Dichloropropane	63	11.682	11.685	-0.003	91	66097	0.4000	0.3836	
56 Trichloroethene	130	11.713	11.718	-0.005	95	71975	0.4000	0.3766	
57 Dibromomethane	93	11.806	11.808	-0.002	97	75334	0.4000	0.3752	
58 Dichlorobromomethane	83	11.946	11.953	-0.006	98	112623	0.4000	0.3734	
59 1,4-Dioxane	88	12.039	12.035	0.004	93	23501	0.4000	0.3865	
60 Methyl methacrylate	41	12.070	12.068	0.002	91	68030	0.4000	0.3757	
61 Methylcyclohexane	83	12.483	12.484	-0.001	93	86171	0.4000	0.3413	
62 4-Methyl-2-pentanone (MIBK)	43	12.954	12.944	0.010	96	130687	0.4000	0.3602	
63 cis-1,3-Dichloropropene	75	12.948	12.950	-0.002	96	84191	0.4000	0.3713	
64 trans-1,3-Dichloropropene	75	13.641	13.645	-0.004	99	71850	0.4000	0.3722	
65 Toluene	91	13.765	13.765	0.000	94	176860	0.4000	0.3907	
66 1,1,2-Trichloroethane	83	13.843	13.844	-0.001	97	60427	0.4000	0.4021	
69 2-Hexanone	58	14.272	14.265	0.007	90	52036	0.4000	0.3505	
71 n-Octane	85	14.447	14.446	0.001	96	50220	0.4000	0.3886	
70 Chlorodibromomethane	129	14.540	14.544	-0.004	98	112826	0.4000	0.3729	
72 Ethylene Dibromide	107	14.835	14.835	0.000	97	103182	0.4000	0.3765	
73 Tetrachloroethene	129	14.902	14.903	-0.001	95	71154	0.4000	0.3859	
74 Chlorobenzene	112	15.781	15.778	0.003	94	141575	0.4000	0.3803	
75 2,3-Dimethylheptane	43	15.791	15.790	0.001	95	190542	0.4000	0.4005	
76 Ethylbenzene	91	16.065	16.065	0.000	99	220476	0.4000	0.3825	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	344621	0.8000	0.7754	
81 n-Nonane	57	16.639	16.639	0.000	94	113340	0.4000	0.3957	
79 Bromoform	173	16.680	16.679	0.001	93	110767	0.4000	0.3259	
80 Styrene	104	16.690	16.690	0.000	99	114936	0.4000	0.3838	
82 o-Xylene	91	16.747	16.751	-0.004	98	182797	0.4000	0.4039	
83 1,1,2,2-Tetrachloroethane	83	17.078	17.077	0.001	98	144640	0.4000	0.3946	
84 1,2,3-Trichloropropane	110	17.238	17.237	0.001	97	35414	0.4000	0.3921	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.336	17.337	-0.001	97	242959	0.4000	0.3891	
86 N-Propylbenzene	120	17.900	17.900	0.000	98	61876	0.4000	0.3786	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	62820	0.4000	0.3924	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	98	231995	0.4000	0.3907	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	92	95792	0.4000	0.3843	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	88	79203	0.4000	0.3201	
91 n-Decane	57	18.427	18.430	-0.003	88	154065	0.4000	0.4201	
92 tert-Butylbenzene	119	18.577	18.577	0.000	91	215060	0.4000	0.3870	
93 1,2,4-Trimethylbenzene	105	18.592	18.592	0.000	96	202848	0.4000	0.3915	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	98	298383	0.4000	0.3853	
94 1,3-Dichlorobenzene	146	18.871	18.874	-0.003	98	136687	0.4000	0.3636	
96 Benzyl chloride	91	18.954	18.955	-0.001	97	113885	0.4000	0.2969	
97 1,4-Dichlorobenzene	146	18.964	18.965	-0.001	94	128080	0.4000	0.3601	
98 4-Isopropyltoluene	119	19.026	19.027	-0.001	97	240183	0.4000	0.3996	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	99	204927	0.4000	0.4028	
100 Butylcyclohexane	83	19.135	19.136	-0.001	91	171441	0.4000	0.4153	
102 2,3-Dihydroindene	117	19.337	19.338	-0.001	93	188062	0.4000	0.3779	
101 1,2-Dichlorobenzene	146	19.337	19.338	-0.001	83	138306	0.4000	0.3694	
103 Indene	116	19.471	19.471	0.000	89	145299	0.4000	0.3394	
104 n-Butylbenzene	91	19.476	19.477	-0.001	97	251979	0.4000	0.4057	
105 Undecane	57	19.791	19.792	-0.001	94	162146	0.4000	0.3824	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	93	59034	0.4000	0.3803	
107 1,2,4,5-Tetramethylbenzene	119	20.251	20.255	-0.004	96	211664	0.4000	0.3779	
110 Dodecane	57	20.887	20.889	-0.002	92	138324	0.4000	0.3350	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	93	76796	0.4000	0.3120	
113 Naphthalene	128	21.254	21.255	-0.001	99	184664	0.4000	0.3312	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	92	121678	0.4000	0.3444	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	95	98554	0.4000	0.3309	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	100	52618	0.4000	0.2455	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	100	85954	0.4000	0.2830	
A 120 C8 Range	1	14.442	(14.396-14.499)		0	532812	0.4000	0.3759	
S 121 Xylenes, Total	100				0		1.20	1.18	
S 122 1,2-Dichloroethene, Total	1				0		0.8000	0.7920	

Reagents:

40L5DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC05.D

Injection Date: 20-Feb-2019 23:14:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L5

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

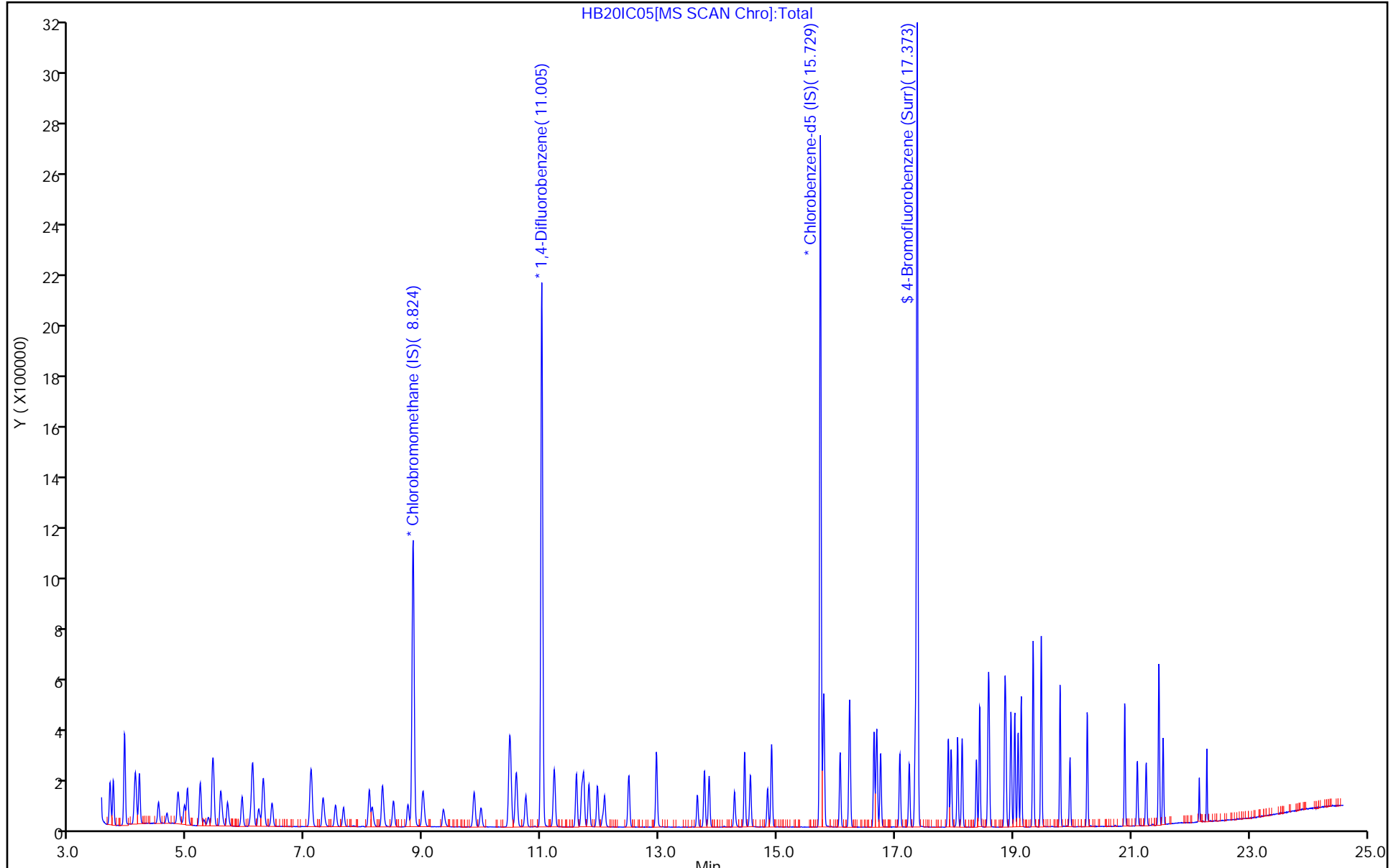
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC05.D

Injection Date: 20-Feb-2019 23:14:30

Instrument ID: MH

Lims ID: IC L5

Client ID:

Operator ID: HMT

ALS Bottle#: 3

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

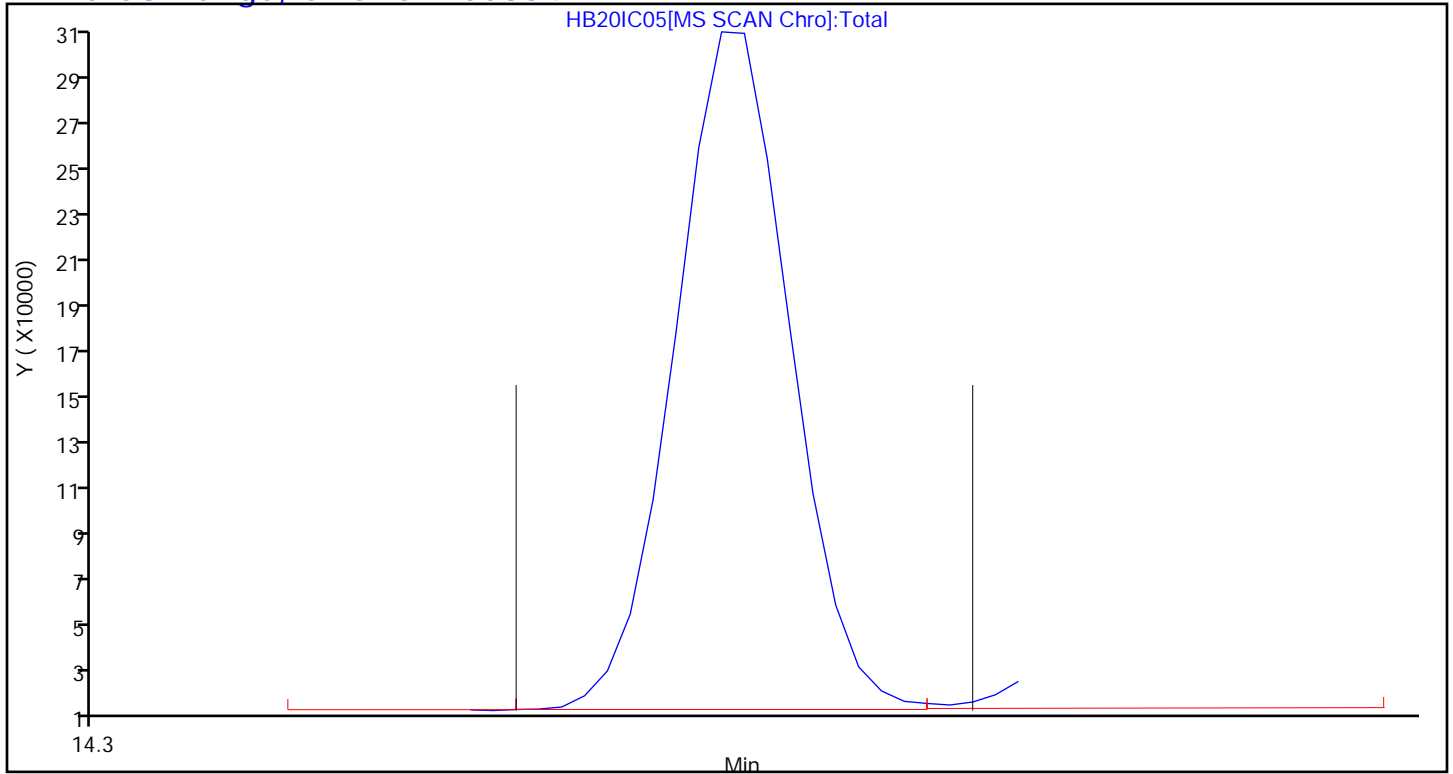
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 21-Feb-2019 00:08:30 ALS Bottle#: 4 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-013
 Misc. Info.: 210540
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:48:33 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 21-Feb-2019 13:37:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.830	-0.006	96	345797	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.010	-0.005	95	1865244	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	87	1585553	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.371	-0.004	96	1057465	4.00	4.09	
6 Chlorodifluoromethane	51	3.681	3.681	0.000	97	276110	1.00	0.9738	
7 Propene	41	3.687	3.691	-0.004	98	123848	1.00	0.9606	
8 Dichlorodifluoromethane	85	3.738	3.741	-0.003	100	422528	1.00	0.9702	
9 Chloromethane	52	3.924	3.928	-0.004	98	50767	1.00	1.00	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.933	-0.003	93	296279	1.00	0.9863	
12 Vinyl chloride	62	4.090	4.097	-0.007	99	157361	1.00	1.00	
11 Acetaldehyde	44	4.105	4.111	-0.006	100	314152	5.00	5.18	
14 Butane	43	4.183	4.183	0.000	84	232065	1.00	1.03	
13 Butadiene	54	4.183	4.185	-0.002	79	114876	1.00	1.01	
15 Bromomethane	94	4.503	4.508	-0.005	99	159914	1.00	1.00	
16 Chloroethane	64	4.643	4.653	-0.010	97	72470	1.00	1.01	
17 Ethanol	31	4.813	4.836	-0.023	96	347389	5.00	4.91	
18 Vinyl bromide	106	4.948	4.951	-0.003	98	150739	1.00	0.99	
19 2-Methylbutane	43	4.994	4.999	-0.005	92	169357	1.00	1.01	
21 Trichlorofluoromethane	101	5.211	5.219	-0.008	100	397394	1.00	1.00	
20 Acrolein	56	5.263	5.277	-0.014	93	50534	1.00	1.00	
22 Acetonitrile	40	5.330	5.351	-0.021	98	62042	1.00	0.9750	
23 Acetone	58	5.397	5.416	-0.019	97	194862	3.00	3.00	
24 Pentane	72	5.434	5.444	-0.010	94	18350	1.00	1.01	
25 Isopropyl alcohol	45	5.532	5.555	-0.023	99	567468	3.00	2.80	
26 Ethyl ether	31	5.651	5.672	-0.021	93	162847	1.00	1.01	
27 1,1-Dichloroethene	96	5.925	5.929	-0.004	96	132183	1.00	0.9841	
28 Acrylonitrile	53	6.059	6.075	-0.016	93	102139	1.00	0.9885	
30 1,1,2-Trichloro-1,2,2-trif	101	6.100	6.107	-0.007	97	316796	1.00	0.99	
29 2-Methyl-2-propanol	59	6.162	6.186	-0.024	97	221767	1.00	0.9736	
31 Methylene Chloride	84	6.276	6.284	-0.008	97	135290	1.00	0.9568	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.291	6.297	-0.006	95	123300	1.00	0.9770	
33 Carbon disulfide	76	6.431	6.437	-0.006	100	391326	1.00	1.01	
34 trans-1,2-Dichloroethene	96	7.082	7.088	-0.006	97	134418	1.00	0.9760	
35 2-Methylpentane	43	7.098	7.104	-0.006	96	315498	1.00	1.00	
36 Methyl tert-butyl ether	73	7.263	7.296	-0.033	97	329050	1.00	1.01	
37 1,1-Dichloroethane	63	7.506	7.514	-0.008	99	259689	1.00	0.99	
38 Vinyl acetate	43	7.630	7.645	-0.015	100	377904	1.00	1.01	
40 Hexane	56	8.080	8.082	-0.002	91	104228	1.00	1.00	
39 2-Butanone (MEK)	72	8.106	8.133	-0.027	97	58444	1.00	0.9830	
171 Isopropyl ether	45	8.276	8.306	-0.030	98	491190	1.00	1.00	
41 cis-1,2-Dichloroethene	96	8.488	8.497	-0.009	96	136108	1.00	0.9750	
42 Ethyl acetate	43	8.715	8.736	-0.021	99	331359	1.00	0.99	
43 Chloroform	83	8.839	8.842	-0.003	98	298839	1.00	0.99	
173 Tert-butyl ethyl ether	59	8.958	8.986	-0.028	97	409604	1.00	1.00	
44 Tetrahydrofuran	42	9.305	9.329	-0.024	94	158683	1.00	0.9822	
45 1,1,1-Trichloroethane	97	9.858	9.862	-0.004	97	281296	1.00	0.9846	
46 1,2-Dichloroethane	62	9.977	9.980	-0.003	96	196209	1.00	0.9763	
48 Cyclohexane	69	10.457	10.458	-0.001	91	57530	1.00	0.9812	
47 Benzene	78	10.462	10.465	-0.003	98	385270	1.00	0.9769	
50 Carbon tetrachloride	117	10.478	10.483	-0.005	96	312823	1.00	0.9800	
49 n-Butanol	31	10.530	10.538	-0.008	67	49965	1.00	0.9363	
51 2,3-Dimethylpentane	71	10.576	10.577	-0.001	93	83728	1.00	1.02	
52 Thiophene	84	10.736	10.740	-0.004	97	224938	1.00	1.00	
53 Isooctane	57	11.217	11.219	-0.002	98	636999	1.00	0.9790	
55 n-Heptane	71	11.589	11.594	-0.005	94	124160	1.00	0.9883	
54 1,2-Dichloropropane	63	11.682	11.685	-0.003	92	165502	1.00	0.9864	
56 Trichloroethene	130	11.718	11.718	0.000	95	179106	1.00	0.9624	
57 Dibromomethane	93	11.806	11.808	-0.002	97	185331	1.00	0.9481	
58 Dichlorobromomethane	83	11.951	11.953	-0.001	99	290134	1.00	0.9880	
59 1,4-Dioxane	88	12.018	12.035	-0.017	93	56823	1.00	0.9597	
60 Methyl methacrylate	41	12.059	12.068	-0.009	91	176703	1.00	1.00	
61 Methylcyclohexane	83	12.483	12.484	-0.001	93	216746	1.00	0.8817	
62 4-Methyl-2-pentanone (MIBK)	43	12.933	12.944	-0.011	96	340468	1.00	0.9636	
63 cis-1,3-Dichloropropene	75	12.948	12.950	-0.002	98	222810	1.00	1.01	
64 trans-1,3-Dichloropropene	75	13.641	13.645	-0.004	99	193590	1.00	1.01	
65 Toluene	91	13.765	13.765	0.000	93	453543	1.00	1.00	
66 1,1,2-Trichloroethane	83	13.842	13.844	-0.002	97	151135	1.00	1.01	
69 2-Hexanone	58	14.256	14.265	-0.009	90	143357	1.00	0.9684	
71 n-Octane	85	14.442	14.446	-0.004	97	132598	1.00	1.03	
70 Chlorodibromomethane	129	14.545	14.544	0.001	98	309096	1.00	1.02	
72 Ethylene Dibromide	107	14.835	14.835	0.000	98	271955	1.00	1.00	
73 Tetrachloroethene	129	14.902	14.903	-0.001	95	177605	1.00	0.9661	
74 Chlorobenzene	112	15.775	15.778	-0.003	94	355092	1.00	0.9566	
75 2,3-Dimethylheptane	43	15.786	15.790	-0.004	95	479292	1.00	1.01	
76 Ethylbenzene	91	16.065	16.065	0.000	99	565594	1.00	0.9842	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	888953	2.00	2.01	
81 n-Nonane	57	16.639	16.639	0.000	95	294667	1.00	1.03	
79 Bromoform	173	16.680	16.679	0.001	93	319968	1.00	0.9441	
80 Styrene	104	16.690	16.690	0.000	99	313291	1.00	1.05	
82 o-Xylene	91	16.752	16.751	0.001	99	455942	1.00	1.01	
83 1,1,2,2-Tetrachloroethane	83	17.078	17.077	0.001	98	372659	1.00	1.02	
84 1,2,3-Trichloropropane	110	17.233	17.237	-0.004	98	89428	1.00	0.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.336	17.337	-0.001	97	619680	1.00	1.00	
86 N-Propylbenzene	120	17.900	17.900	0.000	99	162793	1.00	1.00	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	157132	1.00	0.9845	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	98	605609	1.00	1.02	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	92	244828	1.00	0.9428	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	86	225351	1.00	0.9134	
91 n-Decane	57	18.432	18.430	0.002	88	386206	1.00	1.06	
92 tert-Butylbenzene	119	18.577	18.577	0.000	90	549927	1.00	0.99	
93 1,2,4-Trimethylbenzene	105	18.592	18.592	0.000	96	520658	1.00	1.01	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	98	775934	1.00	1.00	
94 1,3-Dichlorobenzene	146	18.871	18.874	-0.003	98	351654	1.00	0.9383	
96 Benzyl chloride	91	18.954	18.955	-0.001	97	337367	1.00	0.8822	
97 1,4-Dichlorobenzene	146	18.964	18.965	-0.001	95	336295	1.00	0.9482	
98 4-Isopropyltoluene	119	19.026	19.027	-0.001	97	617168	1.00	1.03	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	99	514577	1.00	1.01	
100 Butylcyclohexane	83	19.135	19.136	-0.001	92	424597	1.00	1.03	
102 2,3-Dihydroindene	117	19.336	19.338	-0.002	93	492757	1.00	0.99	
101 1,2-Dichlorobenzene	146	19.336	19.338	-0.002	82	353004	1.00	0.9456	
103 Indene	116	19.471	19.471	0.000	90	393793	1.00	0.9226	
104 n-Butylbenzene	91	19.476	19.477	-0.001	97	654668	1.00	1.06	
105 Undecane	57	19.791	19.792	-0.001	95	441877	1.00	1.05	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	96	178449	1.00	1.15	
107 1,2,4,5-Tetramethylbenzene	119	20.256	20.255	0.001	97	584141	1.00	1.05	
110 Dodecane	57	20.887	20.889	-0.002	93	428247	1.00	1.04	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	93	255822	1.00	0.8849	
113 Naphthalene	128	21.254	21.255	-0.001	99	591214	1.00	1.06	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	92	334056	1.00	0.9482	
116 1,2,3-Trichlorobenzene	180	21.543	21.540	0.003	95	305351	1.00	1.03	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	100	223829	1.00	1.05	
118 1-Methylnaphthalene	142	22.282	22.283	-0.001	100	347276	1.00	1.15	
A 120 C8 Range	1	14.442	(14.395-14.499)		0	1345188	1.00	0.9747	
S 121 Xylenes, Total	100				0		3.00	3.02	
S 122 1,2-Dichloroethene, Total	1				0		2.00	1.95	

Reagents:

40L6DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC06.D

Injection Date: 21-Feb-2019 00:08:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L6

Worklist Smp#: 13

Client ID:

Purge Vol: 500.000 mL

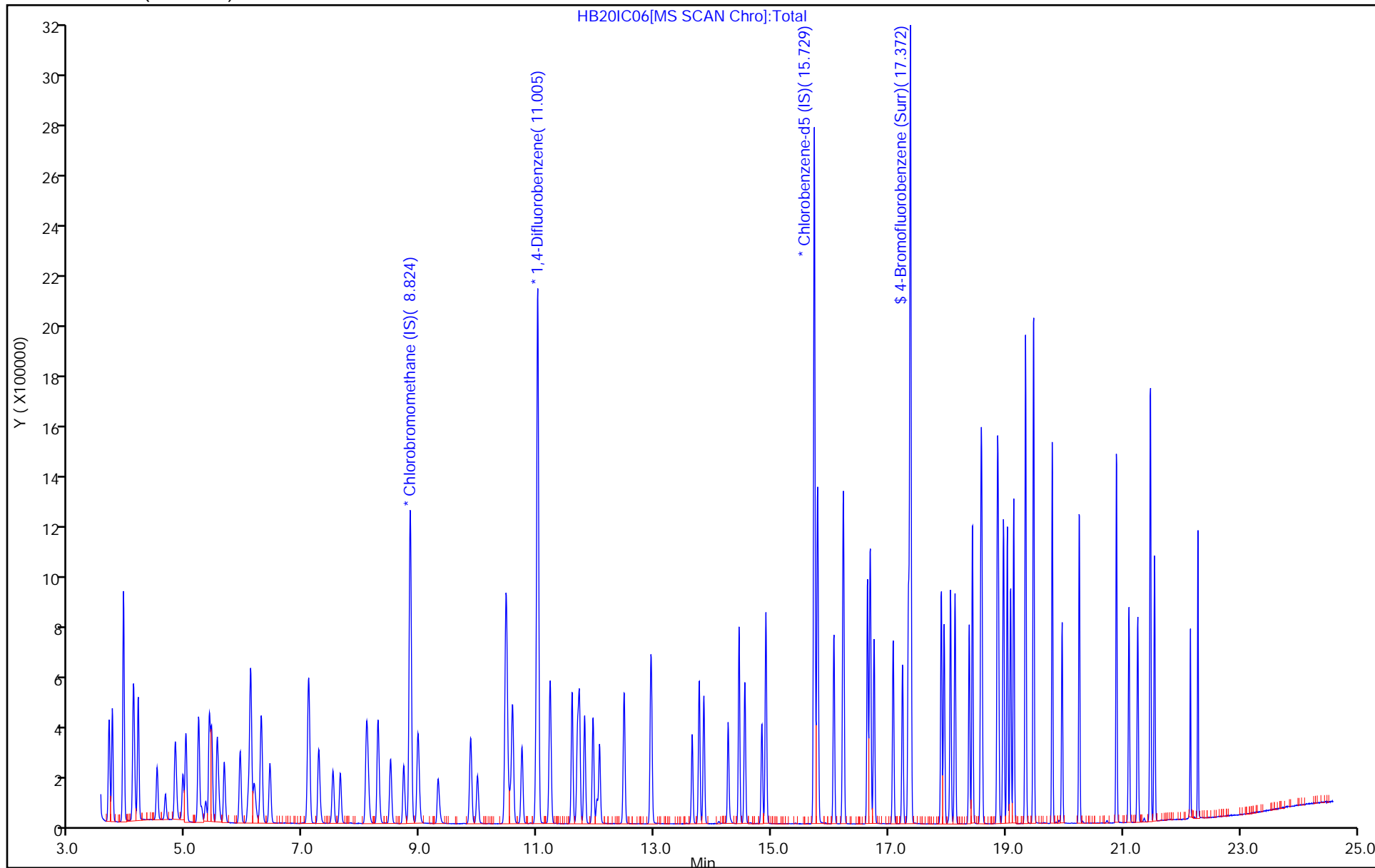
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC06.D

Injection Date: 21-Feb-2019 00:08:30

Instrument ID: MH

Lims ID: IC L6

Client ID:

Operator ID: HMT

ALS Bottle#: 4

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

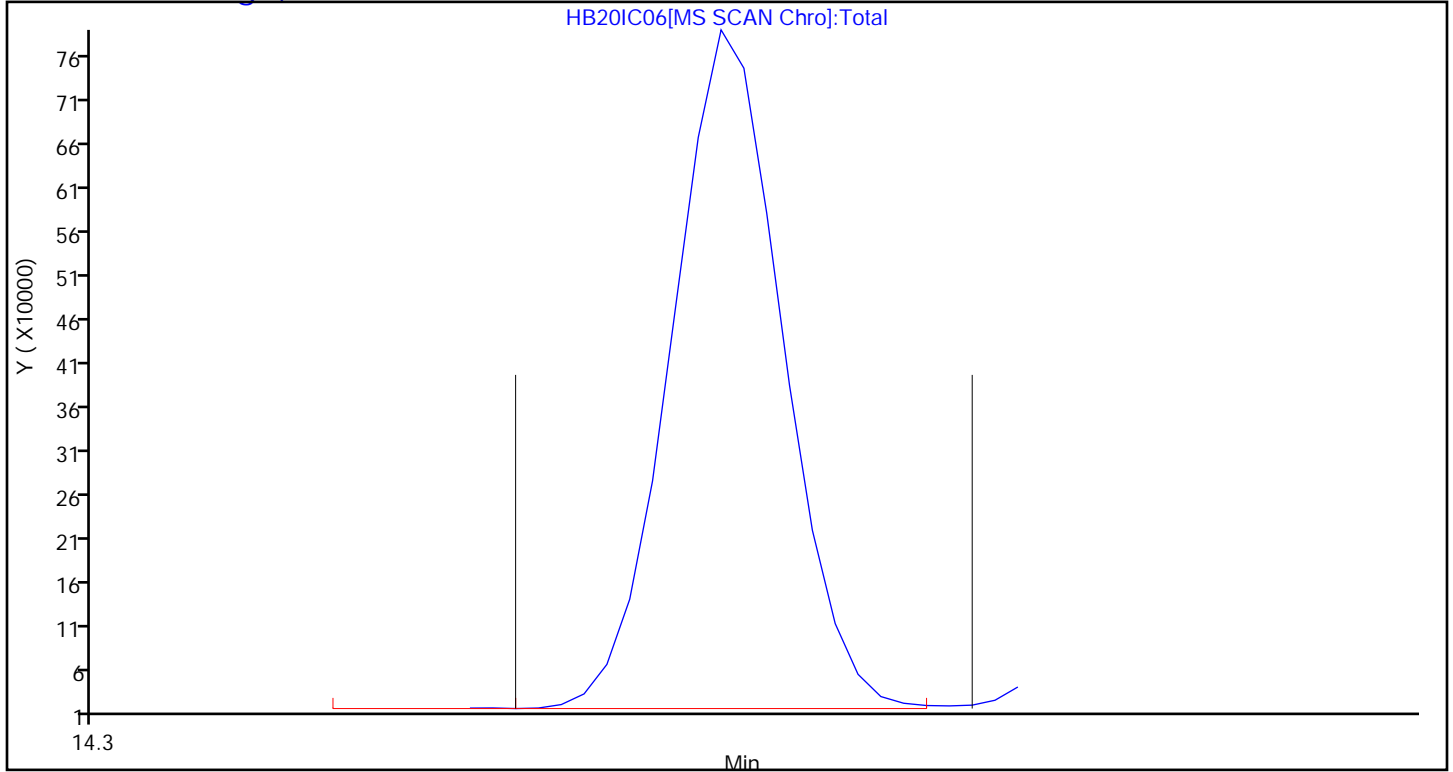
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 21-Feb-2019 01:03:30 ALS Bottle#: 5 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-014
 Misc. Info.: 210539
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:48:42 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 21-Feb-2019 09:40:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.830	-0.001	95	348949	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.010	0.000	95	1879497	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	87	1644075	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.373	17.371	0.002	96	1071605	4.00	4.00	
6 Chlorodifluoromethane	51	3.676	3.681	-0.005	97	568429	2.00	1.99	
7 Propene	41	3.687	3.691	-0.004	98	250579	2.00	1.93	
8 Dichlorodifluoromethane	85	3.738	3.741	-0.003	100	876701	2.00	1.99	
9 Chloromethane	52	3.925	3.928	-0.003	99	102040	2.00	1.99	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.933	-0.003	93	616018	2.00	2.03	
12 Vinyl chloride	62	4.095	4.097	-0.002	99	319887	2.00	2.01	
11 Acetaldehyde	44	4.095	4.111	-0.016	99	631044	10.0	10.3	
14 Butane	43	4.183	4.183	0.000	84	457383	2.00	2.01	
13 Butadiene	54	4.183	4.185	-0.002	70	236733	2.00	2.06	
15 Bromomethane	94	4.503	4.508	-0.005	99	327044	2.00	2.03	
16 Chloroethane	64	4.643	4.653	-0.010	97	145223	2.00	2.00	
17 Ethanol	31	4.808	4.836	-0.028	95	747094	10.0	10.5	
18 Vinyl bromide	106	4.943	4.951	-0.008	98	311230	2.00	2.03	
19 2-Methylbutane	43	5.000	4.999	0.001	93	345741	2.00	2.04	
21 Trichlorofluoromethane	101	5.217	5.219	-0.002	99	801987	2.00	2.00	
20 Acrolein	56	5.258	5.277	-0.019	93	103966	2.00	2.04	
22 Acetonitrile	40	5.330	5.351	-0.021	99	134006	2.00	2.09	
23 Acetone	58	5.387	5.416	-0.029	97	398344	6.00	6.07	
24 Pentane	72	5.439	5.444	-0.005	89	37863	2.00	2.06	
25 Isopropyl alcohol	45	5.511	5.555	-0.044	98	1199879	6.00	5.92	
26 Ethyl ether	31	5.640	5.672	-0.032	93	332157	2.00	2.04	
27 1,1-Dichloroethene	96	5.925	5.929	-0.004	96	271177	2.00	2.00	
28 Acrylonitrile	53	6.059	6.075	-0.016	93	213181	2.00	2.04	
30 1,1,2-Trichloro-1,2,2-trif	101	6.100	6.107	-0.007	97	639315	2.00	1.98	
29 2-Methyl-2-propanol	59	6.137	6.186	-0.049	93	486078	2.00	2.11	
31 Methylene Chloride	84	6.281	6.284	-0.003	97	260991	2.00	1.83	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.297	6.297	0.000	95	251273	2.00	1.97	
33 Carbon disulfide	76	6.436	6.437	-0.001	100	807906	2.00	2.06	
34 trans-1,2-Dichloroethene	96	7.088	7.088	0.000	97	278440	2.00	2.00	
35 2-Methylpentane	43	7.103	7.104	-0.001	96	651289	2.00	2.04	
36 Methyl tert-butyl ether	73	7.253	7.296	-0.043	97	685507	2.00	2.08	
37 1,1-Dichloroethane	63	7.511	7.514	-0.003	100	534165	2.00	2.02	
38 Vinyl acetate	43	7.630	7.645	-0.015	100	810467	2.00	2.15	
40 Hexane	56	8.080	8.082	-0.002	87	212722	2.00	2.01	
39 2-Butanone (MEK)	72	8.101	8.133	-0.032	96	125474	2.00	2.09	
171 Isopropyl ether	45	8.266	8.306	-0.040	98	1016630	2.00	2.06	
41 cis-1,2-Dichloroethene	96	8.499	8.497	0.002	96	285498	2.00	2.03	
42 Ethyl acetate	43	8.710	8.736	-0.026	98	694293	2.00	2.06	
43 Chloroform	83	8.845	8.842	0.003	98	611378	2.00	2.02	
173 Tert-butyl ethyl ether	59	8.948	8.986	-0.038	97	856511	2.00	2.08	
44 Tetrahydrofuran	42	9.284	9.329	-0.045	95	327341	2.00	2.01	
45 1,1,1-Trichloroethane	97	9.858	9.862	-0.004	97	593273	2.00	2.06	
46 1,2-Dichloroethane	62	9.982	9.980	0.002	97	404925	2.00	2.00	
48 Cyclohexane	69	10.463	10.458	0.005	93	120448	2.00	2.04	
47 Benzene	78	10.463	10.465	-0.002	98	795627	2.00	2.00	
50 Carbon tetrachloride	117	10.483	10.483	0.000	96	658731	2.00	2.05	
49 n-Butanol	31	10.519	10.538	-0.019	79	117031	2.00	2.18	
51 2,3-Dimethylpentane	71	10.576	10.577	-0.001	93	169285	2.00	2.05	
52 Thiophene	84	10.736	10.740	-0.004	97	464737	2.00	2.04	
53 Isooctane	57	11.217	11.219	-0.002	98	1322559	2.00	2.02	
55 n-Heptane	71	11.594	11.594	0.000	94	257254	2.00	2.03	
54 1,2-Dichloropropane	63	11.682	11.685	-0.003	92	342173	2.00	2.02	
56 Trichloroethene	130	11.718	11.718	0.000	96	370632	2.00	1.98	
57 Dibromomethane	93	11.806	11.808	-0.002	96	386676	2.00	1.96	
58 Dichlorobromomethane	83	11.951	11.953	-0.001	99	613591	2.00	2.07	
59 1,4-Dioxane	88	12.003	12.035	-0.032	94	122358	2.00	2.05	
60 Methyl methacrylate	41	12.054	12.068	-0.014	92	381574	2.00	2.15	
61 Methylcyclohexane	83	12.483	12.484	-0.001	94	458293	2.00	1.85	
62 4-Methyl-2-pentanone (MIBK)	43	12.928	12.944	-0.016	96	726276	2.00	2.04	
63 cis-1,3-Dichloropropene	75	12.949	12.950	-0.002	98	479642	2.00	2.16	
64 trans-1,3-Dichloropropene	75	13.646	13.645	0.001	99	428343	2.00	2.15	
65 Toluene	91	13.765	13.765	0.000	93	950794	2.00	2.03	
66 1,1,2-Trichloroethane	83	13.843	13.844	-0.001	97	314780	2.00	2.03	
69 2-Hexanone	58	14.251	14.265	-0.014	91	324836	2.00	2.12	
71 n-Octane	85	14.442	14.446	-0.004	96	278400	2.00	2.08	
70 Chlorodibromomethane	129	14.546	14.544	0.002	98	685217	2.00	2.19	
72 Ethylene Dibromide	107	14.835	14.835	0.000	98	589031	2.00	2.08	
73 Tetrachloroethene	129	14.902	14.903	-0.001	95	373916	2.00	1.96	
74 Chlorobenzene	112	15.776	15.778	-0.002	94	755892	2.00	1.96	
75 2,3-Dimethylheptane	43	15.791	15.790	0.001	95	998396	2.00	2.03	
76 Ethylbenzene	91	16.065	16.065	0.000	99	1216288	2.00	2.04	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	1900753	4.00	4.14	
81 n-Nonane	57	16.639	16.639	0.000	94	627904	2.00	2.12	
79 Bromoform	173	16.675	16.679	-0.004	94	766620	2.00	2.18	
80 Styrene	104	16.690	16.690	0.000	99	695917	2.00	2.25	
82 o-Xylene	91	16.752	16.751	0.001	98	951287	2.00	2.03	
83 1,1,2,2-Tetrachloroethane	83	17.078	17.077	0.001	99	801869	2.00	2.12	
84 1,2,3-Trichloropropane	110	17.233	17.237	-0.004	98	189343	2.00	2.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.336	17.337	-0.001	96	1291872	2.00	2.00	
86 N-Propylbenzene	120	17.900	17.900	0.000	99	354102	2.00	2.10	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	333374	2.00	2.01	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	99	1303962	2.00	2.12	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	92	524101	2.00	1.92	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	87	527224	2.00	2.06	
91 n-Decane	57	18.432	18.430	0.002	89	812284	2.00	2.14	
92 tert-Butylbenzene	119	18.577	18.577	0.000	90	1183628	2.00	2.06	
93 1,2,4-Trimethylbenzene	105	18.592	18.592	0.000	96	1117062	2.00	2.09	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	99	1677953	2.00	2.10	
94 1,3-Dichlorobenzene	146	18.871	18.874	-0.003	98	775428	2.00	2.00	
96 Benzyl chloride	91	18.954	18.955	-0.001	97	815150	2.00	2.06	
97 1,4-Dichlorobenzene	146	18.964	18.965	-0.001	95	746169	2.00	2.03	
98 4-Isopropyltoluene	119	19.027	19.027	-0.001	97	1314396	2.00	2.11	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	99	1082845	2.00	2.06	
100 Butylcyclohexane	83	19.135	19.136	-0.001	92	882078	2.00	2.07	
102 2,3-Dihydroindene	117	19.337	19.338	-0.001	93	1082048	2.00	2.10	
101 1,2-Dichlorobenzene	146	19.337	19.338	-0.001	83	776291	2.00	2.01	
103 Indene	116	19.471	19.471	0.000	90	901129	2.00	2.04	
104 n-Butylbenzene	91	19.476	19.477	-0.001	97	1387617	2.00	2.16	
105 Undecane	57	19.791	19.792	-0.001	96	924853	2.00	2.11	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	97	412385	2.00	2.57	
107 1,2,4,5-Tetramethylbenzene	119	20.257	20.255	0.002	97	1281919	2.00	2.21	
110 Dodecane	57	20.887	20.889	-0.002	93	940184	2.00	2.20	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	94	605730	2.00	1.93	
113 Naphthalene	128	21.254	21.255	-0.001	99	1320630	2.00	2.29	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	93	739806	2.00	2.03	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	95	674773	2.00	2.19	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	99	555653	2.00	2.51	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	99	788345	2.00	2.51	
A 120 C8 Range	1	14.442	(14.396-14.489)		0	2797431	2.00	2.01	
S 121 Xylenes, Total	100				0		6.00	6.17	
S 122 1,2-Dichloroethene, Total	1				0		4.00	4.03	

Reagents:

40L7DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC07.D

Injection Date: 21-Feb-2019 01:03:30

Instrument ID: MH

Operator ID: HMT

Lims ID: ICIS L7

Worklist Smp#: 14

Client ID:

Purge Vol: 500.000 mL

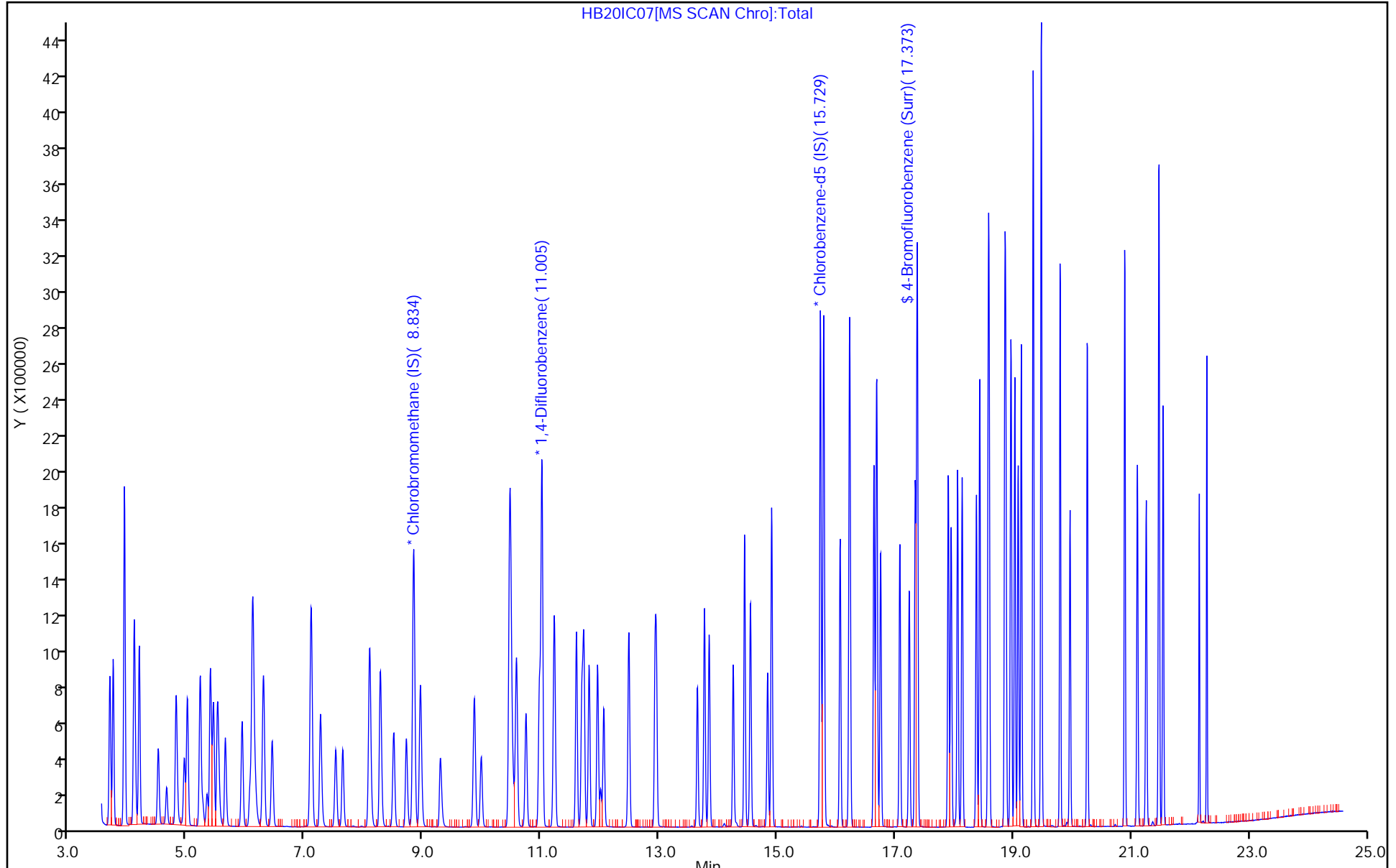
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC07.D

Injection Date: 21-Feb-2019 01:03:30

Instrument ID: MH

Lims ID: ICIS L7

Client ID:

Operator ID: HMT

ALS Bottle#: 5

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

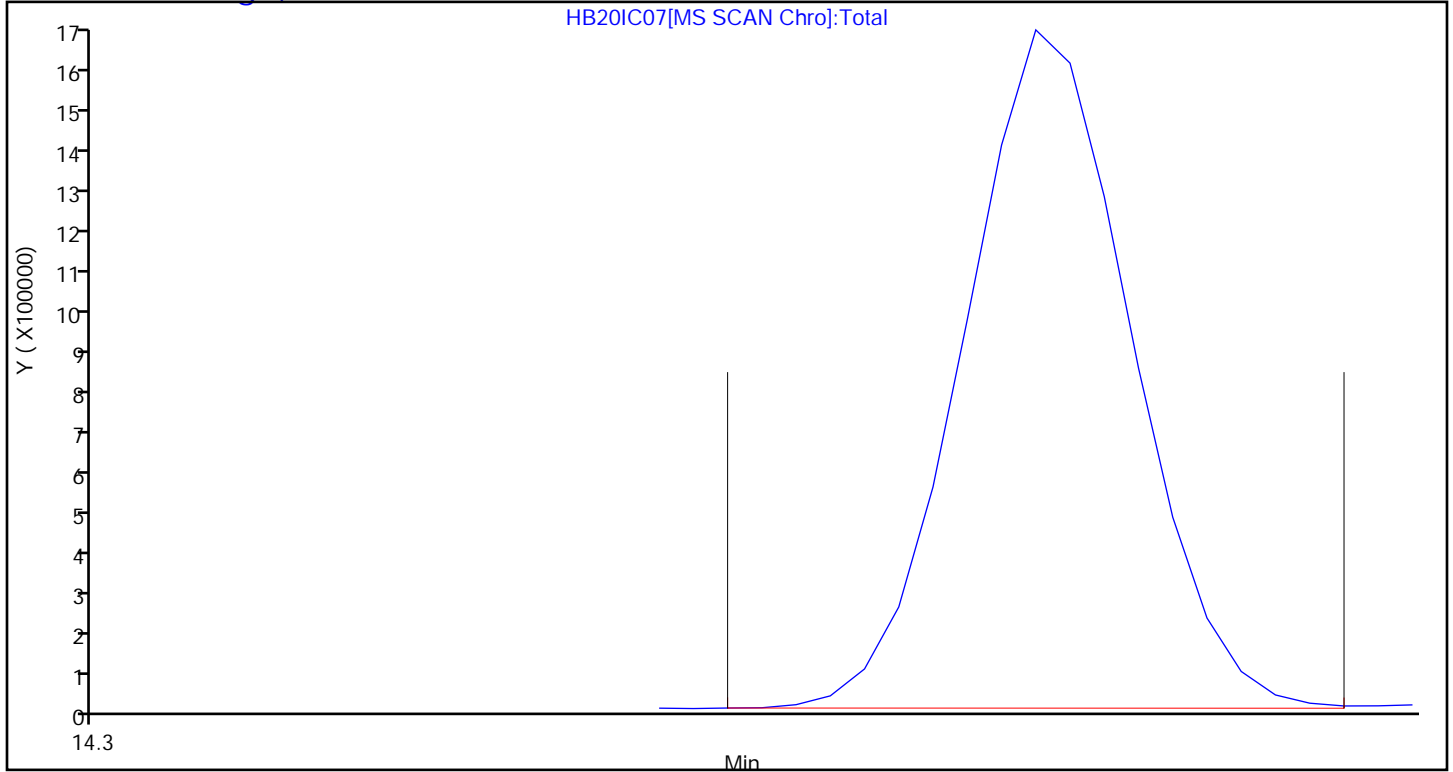
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 21-Feb-2019 01:57:30 ALS Bottle#: 6 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-015
 Misc. Info.: 210538
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7

Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:48:52 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 21-Feb-2019 09:43:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.834	8.830	0.004	94	364694	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.010	0.000	94	1936517	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	87	1734121	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.372	17.371	0.001	97	1108097	4.00	3.92	
6 Chlorodifluoromethane	51	3.676	3.681	-0.005	97	1166346	4.00	3.90	
7 Propene	41	3.687	3.691	-0.004	99	513903	4.00	3.78	
8 Dichlorodifluoromethane	85	3.738	3.741	-0.003	100	1766802	4.00	3.85	
9 Chloromethane	52	3.919	3.928	-0.009	98	202413	4.00	3.78	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.933	-0.003	98	1255454	4.00	3.96	
12 Vinyl chloride	62	4.090	4.097	-0.007	99	635845	4.00	3.82	
11 Acetaldehyde	44	4.095	4.111	-0.016	99	1230613	20.0	19.2	
14 Butane	43	4.178	4.183	-0.005	85	888442	4.00	3.73	
13 Butadiene	54	4.178	4.185	-0.007	70	463965	4.00	3.86	
15 Bromomethane	94	4.503	4.508	-0.005	98	649354	4.00	3.85	
16 Chloroethane	64	4.643	4.653	-0.010	97	293162	4.00	3.86	
17 Ethanol	31	4.808	4.836	-0.028	95	1463846	20.0	19.6	
18 Vinyl bromide	106	4.948	4.951	-0.003	98	620663	4.00	3.87	
19 2-Methylbutane	43	4.994	4.999	-0.005	92	683911	4.00	3.87	
21 Trichlorofluoromethane	101	5.216	5.219	-0.003	100	1608364	4.00	3.83	
20 Acrolein	56	5.253	5.277	-0.024	93	210875	4.00	3.95	
22 Acetonitrile	40	5.330	5.351	-0.021	99	269093	4.00	4.01	
23 Acetone	58	5.382	5.416	-0.034	98	790789	12.0	11.5	
24 Pentane	72	5.444	5.444	0.000	94	75489	4.00	3.93	
25 Isopropyl alcohol	45	5.501	5.555	-0.054	97	2403555	12.0	11.6	
26 Ethyl ether	31	5.635	5.672	-0.037	94	649774	4.00	3.83	
27 1,1-Dichloroethene	96	5.930	5.929	0.001	97	552199	4.00	3.90	
28 Acrylonitrile	53	6.064	6.075	-0.011	94	442205	4.00	4.06	
30 1,1,2-Trichloro-1,2,2-trif	101	6.105	6.107	-0.002	96	1291447	4.00	3.83	
29 2-Methyl-2-propanol	59	6.111	6.186	-0.075	95	1007263	4.00	4.19	
31 Methylene Chloride	84	6.286	6.284	0.002	98	506389	4.00	3.40	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.297	6.297	0.000	96	503167	4.00	3.78	
33 Carbon disulfide	76	6.441	6.437	0.004	99	1620181	4.00	3.95	
34 trans-1,2-Dichloroethene	96	7.093	7.088	0.005	97	569867	4.00	3.92	
35 2-Methylpentane	43	7.103	7.104	-0.001	96	1310496	4.00	3.93	
36 Methyl tert-butyl ether	73	7.248	7.296	-0.048	97	1404124	4.00	4.08	
37 1,1-Dichloroethane	63	7.516	7.514	0.002	99	1076990	4.00	3.90	
38 Vinyl acetate	43	7.630	7.645	-0.015	100	1681929	4.00	4.26	
40 Hexane	56	8.085	8.082	0.003	77	434352	4.00	3.93	
39 2-Butanone (MEK)	72	8.095	8.133	-0.038	95	256700	4.00	4.09	
171 Isopropyl ether	45	8.266	8.306	-0.040	98	2067346	4.00	4.00	
41 cis-1,2-Dichloroethene	96	8.504	8.497	0.007	96	582417	4.00	3.96	
42 Ethyl acetate	43	8.705	8.736	-0.031	99	1427087	4.00	4.06	
43 Chloroform	83	8.850	8.842	0.008	97	1239987	4.00	3.91	
173 Tert-butyl ethyl ether	59	8.943	8.986	-0.043	96	1761469	4.00	4.10	
44 Tetrahydrofuran	42	9.279	9.329	-0.050	95	672532	4.00	3.95	
45 1,1,1-Trichloroethane	97	9.863	9.862	0.001	97	1227570	4.00	4.07	
46 1,2-Dichloroethane	62	9.982	9.980	0.002	97	824860	4.00	3.95	
48 Cyclohexane	69	10.457	10.458	-0.001	95	249183	4.00	4.09	
47 Benzene	78	10.468	10.465	0.003	97	1634406	4.00	3.99	
50 Carbon tetrachloride	117	10.483	10.483	0.000	97	1379762	4.00	4.16	
49 n-Butanol	31	10.493	10.538	-0.045	66	241678	4.00	4.36	
51 2,3-Dimethylpentane	71	10.576	10.577	-0.001	94	341915	4.00	4.03	
52 Thiophene	84	10.741	10.740	0.001	97	946920	4.00	4.04	
53 Isooctane	57	11.217	11.219	-0.002	98	2692898	4.00	3.99	
55 n-Heptane	71	11.594	11.594	0.000	94	532315	4.00	4.08	
54 1,2-Dichloropropane	63	11.687	11.685	0.002	92	694484	4.00	3.99	
56 Trichloroethene	130	11.718	11.718	0.000	96	766083	4.00	3.96	
57 Dibromomethane	93	11.811	11.808	0.003	95	789473	4.00	3.89	
58 Dichlorobromomethane	83	11.956	11.953	0.004	99	1265402	4.00	4.15	
59 1,4-Dioxane	88	11.997	12.035	-0.038	91	253088	4.00	4.12	
60 Methyl methacrylate	41	12.054	12.068	-0.014	92	787734	4.00	4.30	
61 Methylcyclohexane	83	12.483	12.484	-0.001	94	937963	4.00	3.68	
62 4-Methyl-2-pentanone (MIBK)	43	12.917	12.944	-0.027	97	1518450	4.00	4.14	
63 cis-1,3-Dichloropropene	75	12.948	12.950	-0.002	96	991696	4.00	4.33	
64 trans-1,3-Dichloropropene	75	13.646	13.645	0.001	99	930378	4.00	4.42	
65 Toluene	91	13.765	13.765	0.000	93	1991754	4.00	4.04	
66 1,1,2-Trichloroethane	83	13.842	13.844	-0.002	97	647099	4.00	3.95	
69 2-Hexanone	58	14.246	14.265	-0.019	91	697429	4.00	4.31	
71 n-Octane	85	14.447	14.446	0.001	96	581056	4.00	4.12	
70 Chlorodibromomethane	129	14.545	14.544	0.001	98	1481007	4.00	4.49	
72 Ethylene Dibromide	107	14.835	14.835	0.000	98	1245997	4.00	4.17	
73 Tetrachloroethene	129	14.902	14.903	-0.001	95	776667	4.00	3.86	
74 Chlorobenzene	112	15.781	15.778	0.003	94	1608983	4.00	3.96	
75 2,3-Dimethylheptane	43	15.791	15.790	0.001	96	2009738	4.00	3.87	
76 Ethylbenzene	91	16.065	16.065	0.000	98	2558634	4.00	4.07	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	3990112	8.00	8.23	
81 n-Nonane	57	16.639	16.639	0.000	94	1305941	4.00	4.18	
79 Bromoform	173	16.680	16.679	0.001	95	1720677	4.00	4.64	
80 Styrene	104	16.690	16.690	0.000	99	1481246	4.00	4.54	
82 o-Xylene	91	16.752	16.751	0.001	99	1923859	4.00	3.90	
83 1,1,2,2-Tetrachloroethane	83	17.078	17.077	0.001	98	1666518	4.00	4.17	
84 1,2,3-Trichloropropane	110	17.238	17.237	0.001	98	393840	4.00	4.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.336	17.337	-0.001	96	2702973	4.00	3.97	
86 N-Propylbenzene	120	17.900	17.900	0.000	99	751306	4.00	4.22	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	692051	4.00	3.96	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	99	2740797	4.00	4.23	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	93	1099439	4.00	3.79	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	88	1175360	4.00	4.36	
91 n-Decane	57	18.432	18.430	0.002	89	1625532	4.00	4.06	
92 tert-Butylbenzene	119	18.577	18.577	0.000	93	2515614	4.00	4.15	
93 1,2,4-Trimethylbenzene	105	18.592	18.592	0.000	96	2348070	4.00	4.16	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	99	3559589	4.00	4.21	
94 1,3-Dichlorobenzene	146	18.871	18.874	-0.003	98	1704781	4.00	4.16	
96 Benzyl chloride	91	18.954	18.955	-0.001	98	1864979	4.00	4.46	
97 1,4-Dichlorobenzene	146	18.964	18.965	-0.001	96	1643413	4.00	4.24	
98 4-Isopropyltoluene	119	19.026	19.027	-0.001	97	2745113	4.00	4.19	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	99	2232197	4.00	4.02	
100 Butylcyclohexane	83	19.135	19.136	-0.001	93	1748922	4.00	3.88	
102 2,3-Dihydroindene	117	19.336	19.338	-0.002	94	2343708	4.00	4.32	
101 1,2-Dichlorobenzene	146	19.336	19.338	-0.002	83	1715395	4.00	4.20	
103 Indene	116	19.471	19.471	0.000	91	1997698	4.00	4.28	
104 n-Butylbenzene	91	19.476	19.477	-0.001	97	2907810	4.00	4.29	
105 Undecane	57	19.791	19.792	-0.001	96	1846517	4.00	3.99	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	98	928720	4.00	5.49	
107 1,2,4,5-Tetramethylbenzene	119	20.256	20.255	0.001	97	2762451	4.00	4.52	
110 Dodecane	57	20.887	20.889	-0.002	95	1956105	4.00	4.34	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	94	1430337	4.00	4.25	
113 Naphthalene	128	21.254	21.255	-0.001	99	2816456	4.00	4.63	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	92	1646161	4.00	4.27	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	95	1468485	4.00	4.52	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	99	1308281	4.00	5.60	
118 1-Methylnaphthalene	142	22.282	22.283	-0.001	99	1640040	4.00	4.95	
A 120 C8 Range	1	14.452	(14.395-14.499)		0	5742340	4.00	4.01	
S 121 Xylenes, Total	100				0		12.0	12.1	
S 122 1,2-Dichloroethene, Total	1				0		8.00	7.88	

Reagents:

40L8DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D

Injection Date: 21-Feb-2019 01:57:30

Instrument ID: MH

Operator ID: HMT

Lims ID: IC L8

Worklist Smp#: 15

Client ID:

Purge Vol: 500.000 mL

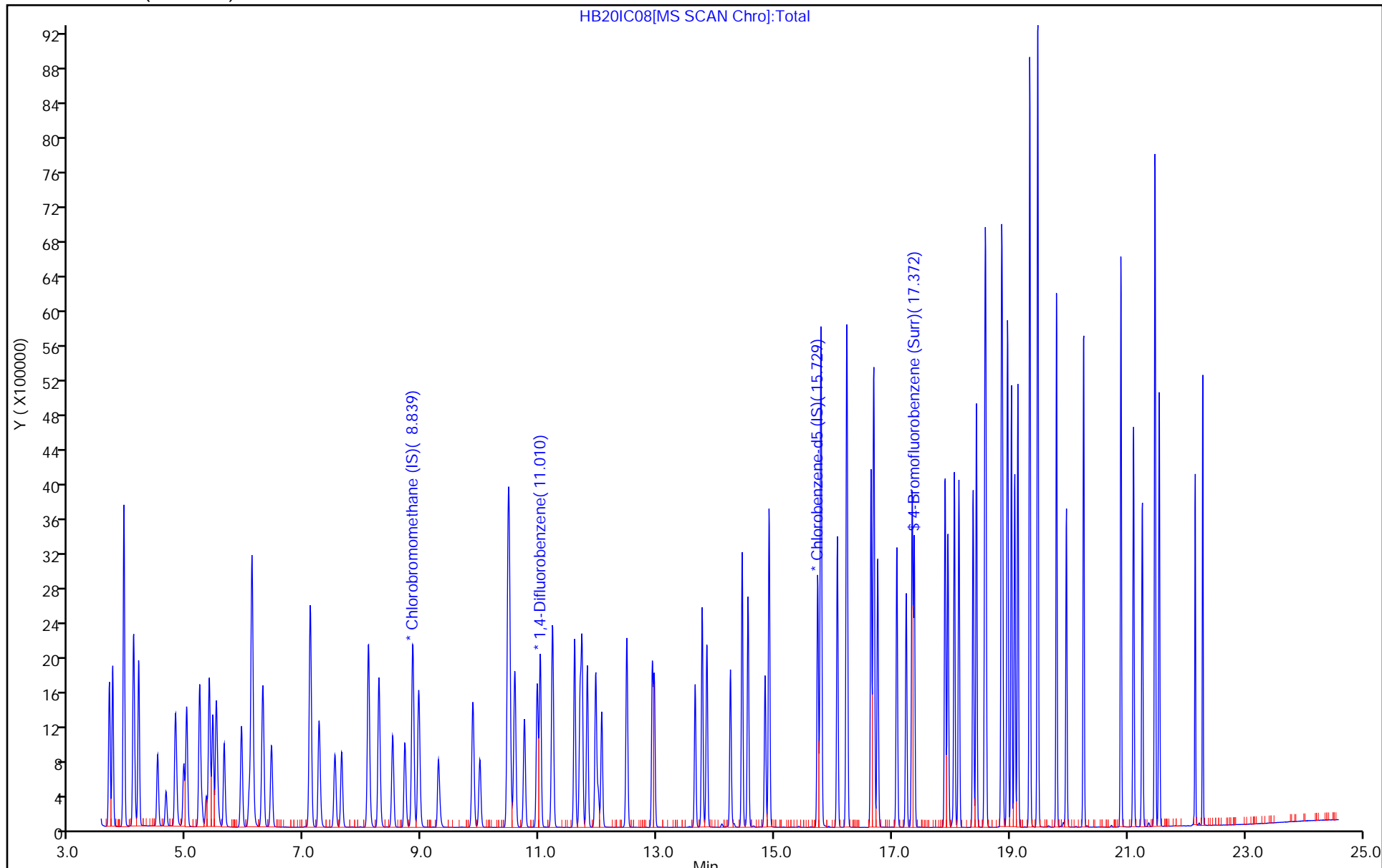
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D

Injection Date: 21-Feb-2019 01:57:30

Instrument ID: MH

Lims ID: IC L8

Client ID:

Operator ID: HMT

ALS Bottle#: 6

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

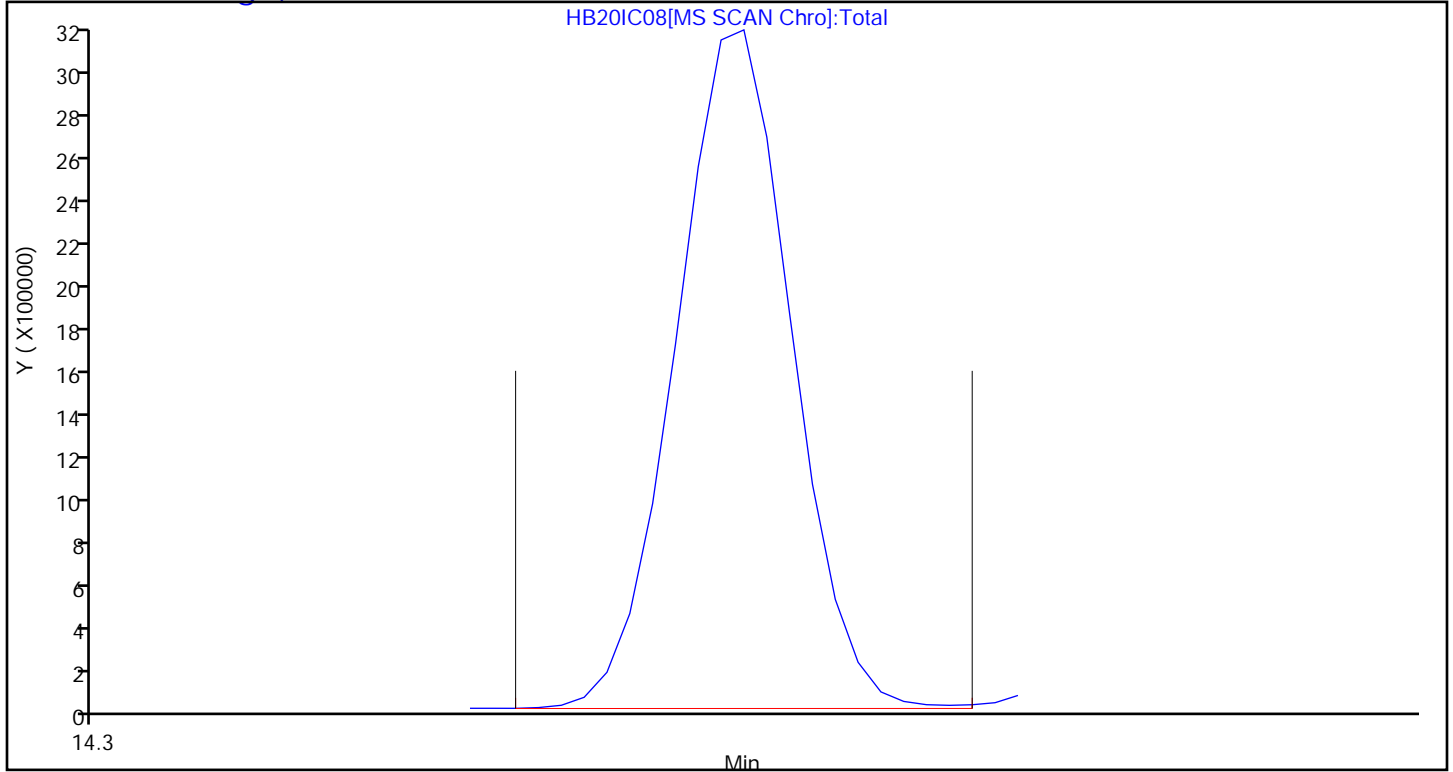
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector MS SCAN

A 120 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.231		1.97	2.00	-1.5	35.0
Propene	Ave	1.491	1.400		1.88	2.00	-6.1	35.0
Dichlorodifluoromethane	Ave	5.038	4.975		1.97	2.00	-1.3	35.0
Chloromethane	Ave	0.5876	0.5516		1.88	2.00	-6.1	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.543		2.04	2.00	2.0	35.0
Vinyl chloride	Ave	1.827	1.812		1.98	2.00	-0.8	35.0
Acetaldehyde	Ave	0.7017	0.6186		8.81	10.0	-11.9	35.0
1,3-Butadiene	Ave	1.320	1.310		1.98	2.00	-0.8	35.0
Butane	Ave	2.614	2.580		1.97	2.00	-1.3	35.0
Bromomethane	Ave	1.848	1.784		1.93	2.00	-3.4	35.0
Chloroethane	Ave	0.8331	0.8331		2.00	2.00	0.0	35.0
Ethanol	Ave	0.8189	0.6091		7.44	10.0	-25.6	35.0
Vinyl bromide	Ave	1.758	1.854		2.11	2.00	5.4	35.0
2-Methylbutane	Ave	1.939	1.998		2.06	2.00	3.0	35.0
Trichlorofluoromethane	Ave	4.604	4.525		1.97	2.00	-1.7	35.0
Acrolein	Ave	0.5850	0.6530		2.23	2.00	11.6	35.0
Acetonitrile	Ave	0.7361	0.7152		1.94	2.00	-2.8	35.0
Acetone	Ave	0.7520	0.7484		1.99	2.00	-0.5	35.0
Pentane	Ave	0.2105	0.2264		2.15	2.00	7.5	35.0
Isopropyl alcohol	QuaF		2.642		2.25	2.00	12.4	35.0
Ethyl ether	Ave	1.862	1.936		2.08	2.00	4.0	35.0
1,1-Dichloroethene	Ave	1.554	1.575		2.03	2.00	1.4	35.0
Acrylonitrile	Ave	1.195	1.264		2.12	2.00	5.8	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	3.681		1.99	2.00	-0.4	35.0
tert-Butyl alcohol	Ave	2.635	2.747		2.08	2.00	4.2	35.0
Methylene Chloride	Ave	1.636	1.497		1.83	2.00	-8.5	35.0
3-Chloropropene	Ave	1.460	1.308		1.79	2.00	-10.4	35.0
Carbon disulfide	Ave	4.496	4.585		2.04	2.00	2.0	35.0
trans-1,2-Dichloroethene	Ave	1.593	1.590		2.00	2.00	-0.2	35.0
2-Methylpentane	Ave	3.661	3.368		1.84	2.00	-8.0	35.0
Methyl tert-butyl ether	Ave	3.774	3.976		2.11	2.00	5.3	35.0
1,1-Dichloroethane	Ave	3.031	3.103		2.05	2.00	2.4	35.0
Vinyl acetate	Ave	4.329	4.787		2.21	2.00	10.6	35.0
Hexane	Ave	1.211	1.222		2.02	2.00	0.9	35.0
2-Butanone (MEK)	Ave	0.6878	0.7069		2.06	2.00	2.8	35.0
Isopropyl ether	Ave	5.664	5.931		2.09	2.00	4.7	35.0
cis-1,2-Dichloroethene	Ave	1.615	1.679		2.08	2.00	4.0	35.0
Ethyl acetate	Ave	3.858	3.811		1.98	2.00	-1.2	35.0
Chloroform	Ave	3.476	3.526		2.03	2.00	1.5	35.0
Tert-butyl ethyl ether	Ave	4.715	4.645		1.97	2.00	-1.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	1.886		2.02	2.00	0.9	35.0
1,1,1-Trichloroethane	Ave	3.305	3.421		2.07	2.00	3.5	35.0
1,2-Dichloroethane	Ave	0.4310	0.4324		2.01	2.00	0.3	35.0
Cyclohexane	Ave	0.1257	0.1289		2.05	2.00	2.5	35.0
Benzene	Ave	0.8457	0.8700		2.06	2.00	2.9	35.0
Carbon tetrachloride	Ave	0.6846	0.7122		2.08	2.00	4.0	35.0
1-Butanol	Ave	0.1144	0.1208		2.11	2.00	5.6	35.0
2,3-Dimethylpentane	Ave	0.1754	0.1733		1.98	2.00	-1.2	35.0
Thiophene	Ave	0.4839	0.4800		1.98	2.00	-0.8	35.0
2,2,4-Trimethylpentane	Ave	1.395	1.420		2.04	2.00	1.8	35.0
Heptane	Ave	0.2694	0.2742		2.04	2.00	1.8	35.0
1,2-Dichloropropane	Ave	0.3598	0.3655		2.03	2.00	1.6	35.0
Trichloroethene	Ave	0.3991	0.4065		2.04	2.00	1.8	35.0
Dibromomethane	Ave	0.4192	0.4231		2.02	2.00	0.9	35.0
Bromodichloromethane	Ave	0.6298	0.6609		2.10	2.00	4.9	35.0
1,4-Dioxane	Ave	0.1270	0.1217		1.92	2.00	-4.2	35.0
Methyl methacrylate	Ave	0.3781	0.4011		2.12	2.00	6.1	35.0
Methylcyclohexane	LinF		0.5855		2.22	2.00	11.1	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.7683		2.03	2.00	1.4	35.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5252		2.22	2.00	10.9	35.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5421		2.23	2.00	11.6	35.0
Toluene	Ave	1.139	1.196		2.10	2.00	5.0	35.0
1,1,2-Trichloroethane	Ave	0.3780	0.3876		2.05	2.00	2.5	35.0
2-Hexanone	Ave	0.3734	0.3927		2.10	2.00	5.2	35.0
Octane	Ave	0.3251	0.3451		2.12	2.00	6.2	35.0
Dibromochloromethane	Ave	0.7610	0.8504		2.24	2.00	11.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7285		2.11	2.00	5.7	35.0
Tetrachloroethene	Ave	0.4638	0.4651		2.01	2.00	0.3	35.0
Chlorobenzene	Ave	0.9365	0.9565		2.04	2.00	2.1	35.0
2,3-Dimethylheptane	Ave	1.197	1.077		1.80	2.00	-10.0	35.0
Ethylbenzene	Ave	1.450	1.522		2.10	2.00	5.0	35.0
m-Xylene & p-Xylene	Ave	1.118	1.189		4.25	4.00	6.3	35.0
Nonane	Ave	0.7205	0.7824		2.17	2.00	8.6	35.0
Bromoform	Ave	0.8550	0.9411		2.20	2.00	10.1	35.0
Styrene	Ave	0.7534	0.8717		2.31	2.00	15.7	35.0
o-Xylene	Ave	1.138	1.168		2.05	2.00	2.6	35.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	0.9802		2.13	2.00	6.3	35.0
1,2,3-Trichloropropane	Ave	0.2272	0.2354		2.07	2.00	3.6	35.0
Isopropylbenzene	Ave	1.571	1.652		2.10	2.00	5.2	35.0
Propylbenzene	Ave	0.4111	0.4566		2.22	2.00	11.1	35.0
2-Chlorotoluene	Ave	0.4027	0.4284		2.13	2.00	6.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.553		2.08	2.00	4.0	35.0
1,3,5-Trimethylbenzene	Lin1		0.7424		2.23	2.00	11.4	35.0
Alpha Methyl Styrene	Ave	0.6224	0.6616		2.13	2.00	6.3	35.0
Decane	Ave	0.9226	1.006		2.18	2.00	9.0	35.0
tert-Butylbenzene	Ave	1.398	1.493		2.14	2.00	6.8	35.0
1,2,4-Trimethylbenzene	Ave	1.303	1.389		2.13	2.00	6.6	35.0
sec-Butylbenzene	Ave	1.948	2.098		2.15	2.00	7.7	35.0
1,3-Dichlorobenzene	Ave	0.9455	0.9755		2.06	2.00	3.2	35.0
Benzyl chloride	Ave	0.9648	1.027		2.13	2.00	6.4	35.0
1,4-Dichlorobenzene	Ave	0.8947	0.9383		2.10	2.00	4.9	35.0
4-Isopropyltoluene	Ave	1.512	1.631		2.16	2.00	7.9	35.0
1,2,3-Trimethylbenzene	Ave	1.280	0.9816		1.53	2.00	-23.3	35.0
Butylcyclohexane	Ave	1.039	1.012		1.95	2.00	-2.6	35.0
1,2-Dichlorobenzene	Ave	0.9417	0.9787		2.08	2.00	3.9	35.0
Indane	Ave	1.252	1.300		2.08	2.00	3.9	35.0
Indene	Ave	1.077	0.9377		1.74	2.00	-12.9	35.0
Butylbenzene	Ave	1.562	1.735		2.22	2.00	11.0	35.0
Undecane	Ave	1.067	1.128		2.11	2.00	5.7	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.4026		2.06	2.00	3.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.478		2.10	2.00	4.9	35.0
Dodecane	Ave	1.039	1.175		2.26	2.00	13.1	35.0
1,2,4-Trichlorobenzene	Lin1		0.7912		2.07	2.00	3.6	35.0
Naphthalene	Ave	1.402	1.687		2.41	2.00	20.3	35.0
Hexachlorobutadiene	Ave	0.8888	0.9262		2.08	2.00	4.2	35.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.8815		2.35	2.00	17.7	35.0
2-Methylnaphthalene	Ave	0.5392	0.5260		1.95	2.00	-2.4	50.0
1-Methylnaphthalene	Ave	0.7641	0.6284		1.65	2.00	-17.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6484		3.98	4.00	-0.5	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20ICV.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 21-Feb-2019 03:43:30 ALS Bottle#: 7 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010894-017
 Misc. Info.: S86
 Operator ID: HMT Instrument ID: MH
 Sublist:
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 14:08:38 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0315

First Level Reviewer: liul

Date: 25-Feb-2019 14:08:38

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.830	-0.001	94	382438	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.010	0.000	95	2064078	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.730	-0.001	87	1803849	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.373	17.371	0.002	96	1169524	4.00	3.98	
6 Chlorodifluoromethane	51	3.682	3.681	0.001	97	617765	2.00	1.97	
7 Propene	41	3.687	3.691	-0.004	66	267681	2.00	1.88	
8 Dichlorodifluoromethane	85	3.738	3.741	-0.003	100	951243	2.00	1.97	
9 Chloromethane	52	3.925	3.928	-0.003	98	105477	2.00	1.88	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.933	-0.003	92	677453	2.00	2.04	
12 Vinyl chloride	62	4.095	4.097	-0.002	99	346461	2.00	1.98	
11 Acetaldehyde	44	4.100	4.111	-0.011	99	591409	10.0	8.81	
14 Butane	43	4.183	4.183	0.000	85	493412	2.00	1.97	
13 Butadiene	54	4.183	4.185	-0.002	70	250455	2.00	1.98	
15 Bromomethane	94	4.503	4.508	-0.005	98	341202	2.00	1.93	
16 Chloroethane	64	4.643	4.653	-0.010	97	159305	2.00	2.00	
17 Ethanol	31	4.808	4.836	-0.028	96	582334	10.0	7.44	
18 Vinyl bromide	106	4.943	4.951	-0.008	98	354424	2.00	2.11	
19 2-Methylbutane	43	4.994	4.999	-0.005	92	382016	2.00	2.06	
21 Trichlorofluoromethane	101	5.217	5.219	-0.002	100	865216	2.00	1.97	
20 Acrolein	56	5.258	5.277	-0.019	93	124872	2.00	2.23	
22 Acetonitrile	40	5.330	5.351	-0.021	99	136752	2.00	1.94	
23 Acetone	58	5.398	5.416	-0.018	95	143100	2.00	1.99	
24 Pentane	72	5.439	5.444	-0.005	97	43283	2.00	2.15	
25 Isopropyl alcohol	45	5.522	5.555	-0.033	99	505212	2.00	2.25	
26 Ethyl ether	31	5.646	5.672	-0.026	94	370195	2.00	2.08	
27 1,1-Dichloroethene	96	5.925	5.929	-0.004	96	301235	2.00	2.03	
28 Acrylonitrile	53	6.059	6.075	-0.016	94	241691	2.00	2.12	
30 1,1,2-Trichloro-1,2,2-trif	101	6.106	6.107	-0.001	97	703813	2.00	1.99	
29 2-Methyl-2-propanol	59	6.137	6.186	-0.049	93	525236	2.00	2.08	
31 Methylene Chloride	84	6.276	6.284	-0.008	98	286292	2.00	1.83	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.297	6.297	0.000	95	250101	2.00	1.79	
33 Carbon disulfide	76	6.436	6.437	-0.001	99	876804	2.00	2.04	
34 trans-1,2-Dichloroethene	96	7.088	7.088	0.000	97	304107	2.00	2.00	
35 2-Methylpentane	43	7.103	7.104	-0.001	96	643940	2.00	1.84	
36 Methyl tert-butyl ether	73	7.253	7.296	-0.043	97	760214	2.00	2.11	
37 1,1-Dichloroethane	63	7.511	7.514	-0.003	99	593313	2.00	2.05	
38 Vinyl acetate	43	7.630	7.645	-0.015	100	915298	2.00	2.21	
40 Hexane	56	8.085	8.082	0.003	86	233594	2.00	2.02	
39 2-Butanone (MEK)	72	8.101	8.133	-0.032	97	135177	2.00	2.06	
171 Isopropyl ether	45	8.271	8.306	-0.035	98	1134212	2.00	2.09	
41 cis-1,2-Dichloroethene	96	8.493	8.497	-0.004	96	320969	2.00	2.08	
42 Ethyl acetate	43	8.710	8.736	-0.026	99	728786	2.00	1.98	
43 Chloroform	83	8.840	8.842	-0.002	98	674313	2.00	2.03	
173 Tert-butyl ethyl ether	59	8.948	8.986	-0.038	96	888290	2.00	1.97	
44 Tetrahydrofuran	42	9.289	9.329	-0.040	94	360625	2.00	2.02	
45 1,1,1-Trichloroethane	97	9.863	9.862	0.001	97	654213	2.00	2.07	
46 1,2-Dichloroethane	62	9.982	9.980	0.002	97	446299	2.00	2.01	
48 Cyclohexane	69	10.457	10.458	-0.001	96	132992	2.00	2.05	
47 Benzene	78	10.463	10.465	-0.002	98	897852	2.00	2.06	
50 Carbon tetrachloride	117	10.483	10.483	0.000	98	735005	2.00	2.08	
49 n-Butanol	31	10.514	10.538	-0.024	70	124681	2.00	2.11	
51 2,3-Dimethylpentane	71	10.581	10.577	0.004	93	178851	2.00	1.98	
52 Thiophene	84	10.736	10.740	-0.004	97	495384	2.00	1.98	
53 Isooctane	57	11.217	11.219	-0.002	98	1465747	2.00	2.04	
55 n-Heptane	71	11.594	11.594	0.000	94	283016	2.00	2.04	
54 1,2-Dichloropropane	63	11.687	11.685	0.002	92	377234	2.00	2.03	
56 Trichloroethene	130	11.718	11.718	0.000	96	419469	2.00	2.04	
57 Dibromomethane	93	11.806	11.808	-0.002	95	436657	2.00	2.02	
58 Dichlorobromomethane	83	11.951	11.953	-0.001	99	682097	2.00	2.10	
59 1,4-Dioxane	88	12.008	12.035	-0.027	91	125570	2.00	1.92	
60 Methyl methacrylate	41	12.060	12.068	-0.008	92	413900	2.00	2.12	
61 Methylcyclohexane	83	12.483	12.484	-0.001	94	604237	2.00	2.22	
62 4-Methyl-2-pentanone (MIBK)	43	12.923	12.944	-0.021	97	792879	2.00	2.03	
63 cis-1,3-Dichloropropene	75	12.949	12.950	-0.002	98	542018	2.00	2.22	
64 trans-1,3-Dichloropropene	75	13.646	13.645	0.001	99	488900	2.00	2.23	
65 Toluene	91	13.765	13.765	0.000	93	1078502	2.00	2.10	
67 2-Methylthiophene	97	13.843	13.843	0.001	76	383182	NC	NC	
66 1,1,2-Trichloroethane	83	13.843	13.844	-0.001	97	349586	2.00	2.05	
68 3-Methylthiophene	97	13.920	13.920	0.000	98	855357	NC	NC	
69 2-Hexanone	58	14.251	14.265	-0.014	91	354172	2.00	2.10	
71 n-Octane	85	14.442	14.446	-0.004	96	311236	2.00	2.12	
70 Chlorodibromomethane	129	14.546	14.544	0.002	98	767036	2.00	2.24	
72 Ethylene Dibromide	107	14.835	14.835	0.000	98	657081	2.00	2.11	
73 Tetrachloroethene	129	14.902	14.903	-0.001	95	419495	2.00	2.01	
74 Chlorobenzene	112	15.776	15.778	-0.002	94	862691	2.00	2.04	
75 2,3-Dimethylheptane	43	15.791	15.790	0.001	96	970922	2.00	1.80	
76 Ethylbenzene	91	16.065	16.065	0.000	99	1372758	2.00	2.10	
77 2-Ethylthiophene	97	16.168	16.168	0.000	98	1009674	NC	NC	
78 m-Xylene & p-Xylene	91	16.225	16.226	-0.001	98	2144593	4.00	4.25	
81 n-Nonane	57	16.639	16.639	0.000	94	705700	2.00	2.17	
79 Bromoform	173	16.680	16.679	0.001	95	848788	2.00	2.20	
80 Styrene	104	16.690	16.690	0.000	99	786176	2.00	2.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
82 o-Xylene	91	16.752	16.751	0.001	99	1053264	2.00	2.05	
83 1,1,2,2-Tetrachloroethane	83	17.078	17.077	0.001	98	884056	2.00	2.13	
84 1,2,3-Trichloropropane	110	17.238	17.237	0.001	99	212322	2.00	2.07	
85 Isopropylbenzene	105	17.336	17.337	-0.001	96	1490233	2.00	2.10	
86 N-Propylbenzene	120	17.900	17.900	0.000	99	411776	2.00	2.22	
87 2-Chlorotoluene	126	17.946	17.947	-0.001	98	386376	2.00	2.13	
88 4-Ethyltoluene	105	18.055	18.056	-0.001	99	1401067	2.00	2.08	
89 1,3,5-Trimethylbenzene	120	18.132	18.134	-0.002	92	669587	2.00	2.23	
90 Alpha Methyl Styrene	118	18.375	18.376	-0.001	88	596734	2.00	2.13	
91 n-Decane	57	18.432	18.430	0.002	89	907085	2.00	2.18	
92 tert-Butylbenzene	119	18.577	18.577	0.000	91	1346139	2.00	2.14	
93 1,2,4-Trimethylbenzene	105	18.587	18.592	-0.005	96	1252491	2.00	2.13	
95 sec-Butylbenzene	105	18.856	18.857	-0.001	99	1891976	2.00	2.15	
94 1,3-Dichlorobenzene	146	18.871	18.874	-0.003	98	879845	2.00	2.06	
96 Benzyl chloride	91	18.954	18.955	-0.001	98	926122	2.00	2.13	
97 1,4-Dichlorobenzene	146	18.964	18.965	-0.001	96	846228	2.00	2.10	
98 4-Isopropyltoluene	119	19.027	19.027	-0.001	97	1471101	2.00	2.16	
99 1,2,3-Trimethylbenzene	105	19.083	19.083	0.000	99	885289	2.00	1.53	
100 Butylcyclohexane	83	19.135	19.136	-0.001	92	912300	2.00	1.95	
102 2,3-Dihydroindene	117	19.337	19.338	-0.001	93	1172674	2.00	2.08	
101 1,2-Dichlorobenzene	146	19.337	19.338	-0.001	84	882718	2.00	2.08	
103 Indene	116	19.471	19.471	0.000	91	845755	2.00	1.74	
104 n-Butylbenzene	91	19.476	19.477	-0.001	97	1564533	2.00	2.22	
105 Undecane	57	19.791	19.792	-0.001	96	1017297	2.00	2.11	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.859	19.858	0.001	98	1067343	NC	NC	
106 1,2-Dibromo-3-Chloropropan	157	19.962	19.962	0.000	97	363141	2.00	2.06	
107 1,2,4,5-Tetramethylbenzene	119	20.257	20.255	0.002	97	1333063	2.00	2.10	
109 1,2,3,5-Tetramethylbenzene	119	20.308	20.313	-0.005	95	782595	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	20.727	20.727	0.000	97	1086744	NC	NC	
110 Dodecane	57	20.887	20.889	-0.002	94	1059860	2.00	2.26	
111 1,2,4-Trichlorobenzene	180	21.104	21.105	-0.001	94	713581	2.00	2.07	
113 Naphthalene	128	21.254	21.255	-0.001	99	1521866	2.00	2.41	
114 Benzo(b)thiophene	134	21.363	21.362	0.001	99	733535	NC	NC	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	93	835372	2.00	2.08	
116 1,2,3-Trichlorobenzene	180	21.538	21.540	-0.002	95	795001	2.00	2.35	
117 2-Methylnaphthalene	142	22.153	22.154	-0.001	99	474401	2.00	1.95	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	100	566821	2.00	1.65	
A 120 C8 Range	1	14.452	(14.395-14.499)		0	3101174	2.00	2.03	
S 121 Xylenes, Total	100				0		6.00	6.31	
S 122 1,2-Dichloroethene, Total	1				0		4.00	4.08	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00086

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20ICV.D

Injection Date: 21-Feb-2019 03:43:30

Instrument ID: MH

Operator ID: HMT

Lims ID: ICV

Worklist Smp#: 17

Client ID:

Purge Vol: 500.000 mL

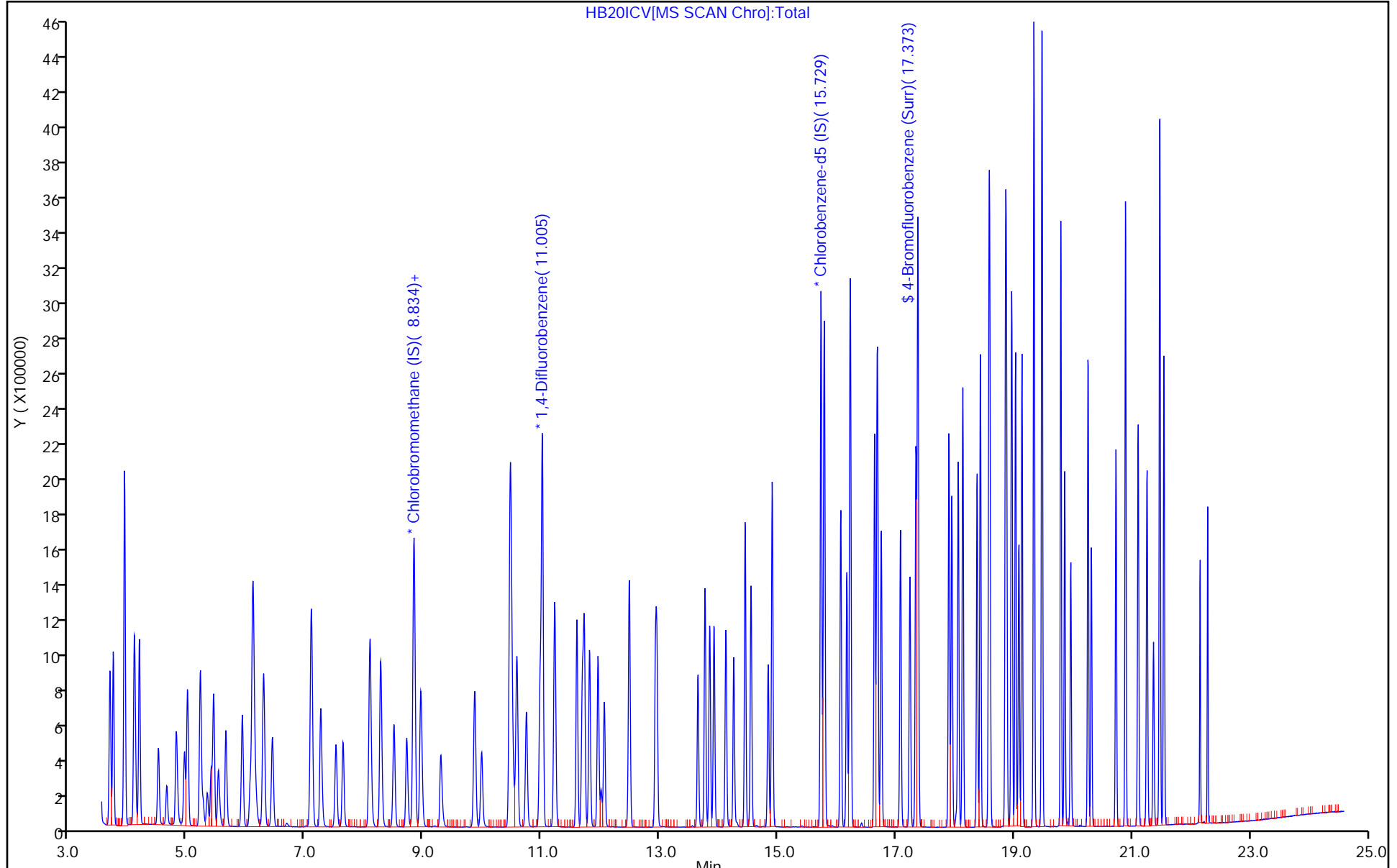
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27936/2 Calibration Date: 02/26/2019 10:24
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB20.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.316		1.01	1.00	1.1	30.0
Propene	Ave	1.491	1.449		0.971	1.00	-2.9	30.0
Dichlorodifluoromethane	Ave	5.038	5.024		0.997	1.00	-0.3	30.0
Chloromethane	Ave	0.5876	0.5928		1.01	1.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.602		1.04	1.00	3.7	30.0
Vinyl chloride	Ave	1.827	1.941		1.06	1.00	6.2	30.0
Acetaldehyde	Ave	0.7017	0.6786		4.84	5.00	-3.3	30.0
1,3-Butadiene	Ave	1.320	1.386		1.05	1.00	5.0	30.0
Butane	Ave	2.614	2.867		1.10	1.00	9.7	30.0
Bromomethane	Ave	1.848	1.891		1.02	1.00	2.3	30.0
Chloroethane	Ave	0.8331	0.8788		1.05	1.00	5.5	30.0
Ethanol	Ave	0.8189	0.6709		4.10	5.00	-18.1	30.0
Vinyl bromide	Ave	1.758	1.931		1.10	1.00	9.8	30.0
2-Methylbutane	Ave	1.939	2.073		1.07	1.00	6.9	30.0
Trichlorofluoromethane	Ave	4.604	4.705		1.02	1.00	2.2	30.0
Acrolein	Ave	0.5850	0.6123		1.05	1.00	4.7	30.0
Acetonitrile	Ave	0.7361	0.7478		1.02	1.00	1.6	30.0
Acetone	Ave	0.7520	0.8069		1.07	1.00	7.3	30.0
Pentane	Ave	0.2105	0.2289		1.09	1.00	8.8	30.0
Isopropyl alcohol	QuaF		2.687		1.14	1.00	13.8	30.0
Ethyl ether	Ave	1.862	2.011		1.08	1.00	8.0	30.0
1,1-Dichloroethene	Ave	1.554	1.566		1.01	1.00	0.8	30.0
Acrylonitrile	Ave	1.195	1.264		1.06	1.00	5.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	3.776		1.02	1.00	2.2	30.0
tert-Butyl alcohol	Ave	2.635	2.689		1.02	1.00	2.0	30.0
Methylene Chloride	Ave	1.636	1.629		0.996	1.00	-0.4	30.0
3-Chloropropene	Ave	1.460	1.526		1.05	1.00	4.5	30.0
Carbon disulfide	Ave	4.496	4.677		1.04	1.00	4.0	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.607		1.01	1.00	0.9	30.0
2-Methylpentane	Ave	3.661	3.447		0.942	1.00	-5.8	30.0
Methyl tert-butyl ether	Ave	3.774	3.956		1.05	1.00	4.8	30.0
1,1-Dichloroethane	Ave	3.031	3.136		1.03	1.00	3.5	30.0
Vinyl acetate	Ave	4.329	4.623		1.07	1.00	6.8	30.0
Hexane	Ave	1.211	1.226		1.01	1.00	1.2	30.0
2-Butanone (MEK)	Ave	0.6878	0.6996		1.02	1.00	1.7	30.0
Isopropyl ether	Ave	5.664	5.960		1.05	1.00	5.2	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.662		1.03	1.00	2.9	30.0
Ethyl acetate	Ave	3.858	3.837		0.995	1.00	-0.5	30.0
Chloroform	Ave	3.476	3.608		1.04	1.00	3.8	30.0
Tert-butyl ethyl ether	Ave	4.715	4.610		0.978	1.00	-2.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27936/2 Calibration Date: 02/26/2019 10:24
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB20.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	1.901		1.02	1.00	1.7	30.0
1,1,1-Trichloroethane	Ave	3.305	3.372		1.02	1.00	2.0	30.0
1,2-Dichloroethane	Ave	0.4310	0.4365		1.01	1.00	1.3	30.0
Cyclohexane	Ave	0.1257	0.1245		0.990	1.00	-1.0	30.0
Benzene	Ave	0.8457	0.8690		1.03	1.00	2.8	30.0
Carbon tetrachloride	Ave	0.6846	0.6978		1.02	1.00	1.9	30.0
1-Butanol	Ave	0.1144	0.1135		0.992	1.00	-0.8	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1772		1.01	1.00	1.0	30.0
Thiophene	Ave	0.4839	0.4812		0.995	1.00	-0.5	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.415		1.01	1.00	1.4	30.0
Heptane	Ave	0.2694	0.2673		0.992	1.00	-0.8	30.0
1,2-Dichloropropane	Ave	0.3598	0.3680		1.02	1.00	2.3	30.0
Trichloroethene	Ave	0.3991	0.3983		0.998	1.00	-0.2	30.0
Dibromomethane	Ave	0.4192	0.4221		1.01	1.00	0.7	30.0
Bromodichloromethane	Ave	0.6298	0.6505		1.03	1.00	3.3	30.0
1,4-Dioxane	Ave	0.1270	0.1221		0.961	1.00	-3.9	30.0
Methyl methacrylate	Ave	0.3781	0.3880		1.03	1.00	2.6	30.0
Methylcyclohexane	LinF		0.5744		1.09	1.00	9.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.7558		0.997	1.00	-0.3	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5127		1.08	1.00	8.3	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5249		1.08	1.00	8.1	30.0
Toluene	Ave	1.139	1.187		1.04	1.00	4.3	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.3949		1.04	1.00	4.5	30.0
2-Hexanone	Ave	0.3734	0.3804		1.02	1.00	1.9	30.0
Octane	Ave	0.3251	0.3428		1.05	1.00	5.5	30.0
Dibromochloromethane	Ave	0.7610	0.8224		1.08	1.00	8.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7180		1.04	1.00	4.1	30.0
Tetrachloroethene	Ave	0.4638	0.4683		1.01	1.00	1.0	30.0
Chlorobenzene	Ave	0.9365	0.9443		1.01	1.00	0.8	30.0
2,3-Dimethylheptane	Ave	1.197	1.102		0.921	1.00	-7.9	30.0
Ethylbenzene	Ave	1.450	1.490		1.03	1.00	2.8	30.0
m-Xylene & p-Xylene	Ave	1.118	1.185		2.12	2.00	6.0	30.0
Nonane	Ave	0.7205	0.7611		1.06	1.00	5.6	30.0
Bromoform	Ave	0.8550	0.8200		0.959	1.00	-4.1	30.0
Styrene	Ave	0.7534	0.8226		1.09	1.00	9.2	30.0
o-Xylene	Ave	1.138	1.170		1.03	1.00	2.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	0.9693		1.05	1.00	5.1	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2290		1.01	1.00	0.8	30.0
Isopropylbenzene	Ave	1.571	1.625		1.03	1.00	3.5	30.0
Propylbenzene	Ave	0.4111	0.4243		1.03	1.00	3.2	30.0
2-Chlorotoluene	Ave	0.4027	0.4135		1.03	1.00	2.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27936/2 Calibration Date: 02/26/2019 10:24
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB20.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.476		0.988	1.00	-1.2	30.0
1,3,5-Trimethylbenzene	Lin1		0.7128		1.08	1.00	8.4	30.0
Alpha Methyl Styrene	Ave	0.6224	0.5801		0.932	1.00	-6.8	30.0
Decane	Ave	0.9226	0.9868		1.07	1.00	7.0	30.0
tert-Butylbenzene	Ave	1.398	1.428		1.02	1.00	2.2	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.339		1.03	1.00	2.7	30.0
sec-Butylbenzene	Ave	1.948	2.002		1.03	1.00	2.8	30.0
1,3-Dichlorobenzene	Ave	0.9455	0.8984		0.950	1.00	-5.0	30.0
Benzyl chloride	Ave	0.9648	0.9208		0.954	1.00	-4.6	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.8455		0.945	1.00	-5.5	30.0
4-Isopropyltoluene	Ave	1.512	1.580		1.05	1.00	4.5	30.0
1,2,3-Trimethylbenzene	Ave	1.280	0.9713		0.759	1.00	-24.1	30.0
Butylcyclohexane	Ave	1.039	1.018		0.980	1.00	-2.0	30.0
1,2-Dichlorobenzene	Ave	0.9417	0.8992		0.955	1.00	-4.5	30.0
Indane	Ave	1.252	1.217		0.972	1.00	-2.8	30.0
Indene	Ave	1.077	0.8337		0.774	1.00	-22.6	30.0
Butylbenzene	Ave	1.562	1.697		1.09	1.00	8.6	30.0
Undecane	Ave	1.067	1.082		1.01	1.00	1.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3539		0.906	1.00	-9.4	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.314		0.933	1.00	-6.7	30.0
Dodecane	Ave	1.039	0.9684		0.932	1.00	-6.8	30.0
1,2,4-Trichlorobenzene	Lin1		0.5696		0.789	1.00	-21.1	30.0
Naphthalene	Ave	1.402	1.323		0.944	1.00	-5.6	30.0
Hexachlorobutadiene	Ave	0.8888	0.8093		0.911	1.00	-8.9	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.6973		0.931	1.00	-6.9	30.0
2-Methylnaphthalene	Ave	0.5392	0.2757		0.511	1.00	-48.9	50.0
1-Methylnaphthalene	Ave	0.7641	0.3387		0.443	1.00	-55.7*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6429		3.95	4.00	-1.4	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HCCVB20.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 26-Feb-2019 10:24:30 ALS Bottle#: 15 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-002
 Misc. Info.: S87
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub6
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:32:18 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits

Date: 27-Feb-2019 18:32:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.819	0.000	97	342352	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1857782	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	87	1578748	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.393	17.393	0.000	94	1014975	4.00	3.95	
6 Chlorodifluoromethane	51	3.682	3.682	0.000	97	283805	1.00	1.01	
7 Propene	41	3.692	3.692	0.000	94	123974	1.00	0.9712	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	430013	1.00	1.00	
9 Chloromethane	52	3.924	3.924	0.000	98	50737	1.00	1.01	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.930	0.000	96	308310	1.00	1.04	
12 Vinyl chloride	62	4.095	4.095	0.000	99	166103	1.00	1.06	
11 Acetaldehyde	44	4.105	4.105	0.000	99	290390	5.00	4.84	
13 Butadiene	54	4.183	4.183	0.000	71	118600	1.00	1.05	
14 Butane	43	4.183	4.183	0.000	85	245390	1.00	1.10	
15 Bromomethane	94	4.503	4.503	0.000	98	161886	1.00	1.02	
16 Chloroethane	64	4.648	4.648	0.000	96	75214	1.00	1.05	
17 Ethanol	31	4.819	4.819	0.000	96	287104	5.00	4.10	
18 Vinyl bromide	106	4.948	4.948	0.000	98	165294	1.00	1.10	
19 2-Methylbutane	43	4.994	4.994	0.000	92	177390	1.00	1.07	
21 Trichlorofluoromethane	101	5.211	5.211	0.000	100	402719	1.00	1.02	
20 Acrolein	56	5.258	5.258	0.000	93	52403	1.00	1.05	
22 Acetonitrile	40	5.330	5.330	0.000	98	64006	1.00	1.02	
23 Acetone	58	5.403	5.403	0.000	97	69063	1.00	1.07	
24 Pentane	72	5.434	5.434	0.000	95	19594	1.00	1.09	
25 Isopropyl alcohol	45	5.537	5.537	0.000	99	229943	1.00	1.14	
26 Ethyl ether	31	5.651	5.651	0.000	93	172097	1.00	1.08	
27 1,1-Dichloroethene	96	5.919	5.919	0.000	96	134004	1.00	1.01	
28 Acrylonitrile	53	6.054	6.054	0.000	94	108179	1.00	1.06	
30 1,1,2-Trichloro-1,2,2-trif	101	6.100	6.100	0.000	96	323203	1.00	1.02	
29 2-Methyl-2-propanol	59	6.162	6.162	0.000	95	230138	1.00	1.02	
31 Methylene Chloride	84	6.271	6.271	0.000	97	139413	1.00	1.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.286	6.286	0.000	95	130607	1.00	1.05	
33 Carbon disulfide	76	6.431	6.431	0.000	100	400315	1.00	1.04	
34 trans-1,2-Dichloroethene	96	7.077	7.077	0.000	97	137582	1.00	1.01	
35 2-Methylpentane	43	7.098	7.098	0.000	96	295023	1.00	0.9417	
36 Methyl tert-butyl ether	73	7.258	7.258	0.000	97	338570	1.00	1.05	
37 1,1-Dichloroethane	63	7.501	7.501	0.000	99	268402	1.00	1.03	
38 Vinyl acetate	43	7.625	7.625	0.000	100	395665	1.00	1.07	
40 Hexane	56	8.075	8.075	0.000	92	104893	1.00	1.01	
39 2-Butanone (MEK)	72	8.106	8.106	0.000	97	59880	1.00	1.02	
171 Isopropyl ether	45	8.271	8.271	0.000	98	510129	1.00	1.05	
41 cis-1,2-Dichloroethene	96	8.483	8.483	0.000	96	142221	1.00	1.03	
42 Ethyl acetate	43	8.710	8.710	0.000	98	328391	1.00	0.99	
43 Chloroform	83	8.829	8.829	0.000	98	308803	1.00	1.04	
173 Tert-butyl ethyl ether	59	8.958	8.958	0.000	97	394591	1.00	0.9779	
44 Tetrahydrofuran	42	9.300	9.300	0.000	94	162694	1.00	1.02	
45 1,1,1-Trichloroethane	97	9.858	9.858	0.000	97	288612	1.00	1.02	
46 1,2-Dichloroethane	62	9.966	9.966	0.000	97	202712	1.00	1.01	
48 Cyclohexane	69	10.452	10.452	0.000	90	57830	1.00	0.99	
47 Benzene	78	10.457	10.457	0.000	98	403621	1.00	1.03	
50 Carbon tetrachloride	117	10.473	10.473	0.000	98	324072	1.00	1.02	
49 n-Butanol	31	10.540	10.540	0.000	71	52726	1.00	0.99	
51 2,3-Dimethylpentane	71	10.571	10.571	0.000	89	82278	1.00	1.01	
52 Thiophene	84	10.731	10.731	0.000	97	223510	1.00	0.99	
53 Isooctane	57	11.212	11.212	0.000	98	657202	1.00	1.01	
55 n-Heptane	71	11.589	11.589	0.000	94	124131	1.00	0.99	
54 1,2-Dichloropropane	63	11.677	11.677	0.000	92	170931	1.00	1.02	
56 Trichloroethene	130	11.713	11.713	0.000	95	184992	1.00	1.00	
57 Dibromomethane	93	11.796	11.796	0.000	97	196048	1.00	1.01	
58 Dichlorobromomethane	83	11.946	11.946	0.000	99	302139	1.00	1.03	
59 1,4-Dioxane	88	12.018	12.018	0.000	91	56691	1.00	0.9613	
60 Methyl methacrylate	41	12.059	12.059	0.000	92	180209	1.00	1.03	
61 Methylcyclohexane	83	12.478	12.478	0.000	94	266754	1.00	1.09	
62 4-Methyl-2-pentanone (MIBK)	43	12.933	12.933	0.000	98	351009	1.00	1.00	
63 cis-1,3-Dichloropropene	75	12.943	12.943	0.000	98	238123	1.00	1.08	
64 trans-1,3-Dichloropropene	75	13.641	13.641	0.000	99	207163	1.00	1.08	
65 Toluene	91	13.760	13.760	0.000	93	468532	1.00	1.04	
66 1,1,2-Trichloroethane	83	13.837	13.837	0.000	97	155868	1.00	1.04	
67 2-Methylthiophene	97	13.843	13.843	0.000	76	171472	NC	NC	
68 3-Methylthiophene	97	13.915	13.915	0.000	99	375426	NC	NC	
69 2-Hexanone	58	14.256	14.256	0.000	90	150133	1.00	1.02	
71 n-Octane	85	14.442	14.442	0.000	96	135297	1.00	1.05	
70 Chlorodibromomethane	129	14.540	14.540	0.000	98	324587	1.00	1.08	
72 Ethylene Dibromide	107	14.830	14.830	0.000	98	283378	1.00	1.04	
73 Tetrachloroethene	129	14.897	14.897	0.000	95	184848	1.00	1.01	
74 Chlorobenzene	112	15.776	15.776	0.000	94	372704	1.00	1.01	
75 2,3-Dimethylheptane	43	15.786	15.786	0.000	95	435055	1.00	0.9211	
76 Ethylbenzene	91	16.060	16.060	0.000	99	587980	1.00	1.03	
77 2-Ethylthiophene	97	16.163	16.163	0.000	99	430782	NC	NC	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	935406	2.00	2.12	
81 n-Nonane	57	16.639	16.639	0.000	95	300388	1.00	1.06	
79 Bromoform	173	16.680	16.680	0.000	93	323629	1.00	0.9590	
80 Styrene	104	16.690	16.690	0.000	99	324685	1.00	1.09	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
82 o-Xylene	91	16.752	16.752	0.000	99	461832	1.00	1.03	
83 1,1,2,2-Tetrachloroethane	83	17.093	17.093	0.000	99	382587	1.00	1.05	
84 1,2,3-Trichloropropane	110	17.259	17.259	0.000	97	90368	1.00	1.01	
85 Isopropylbenzene	105	17.362	17.362	0.000	97	641486	1.00	1.03	
86 N-Propylbenzene	120	17.926	17.926	0.000	98	167472	1.00	1.03	
87 2-Chlorotoluene	126	17.972	17.972	0.000	98	163197	1.00	1.03	
88 4-Ethyltoluene	105	18.081	18.081	0.000	98	582392	1.00	0.9880	
89 1,3,5-Trimethylbenzene	120	18.158	18.158	0.000	92	281321	1.00	1.08	
90 Alpha Methyl Styrene	118	18.401	18.401	0.000	87	228950	1.00	0.9320	
91 n-Decane	57	18.453	18.453	0.000	88	389456	1.00	1.07	
92 tert-Butylbenzene	119	18.597	18.597	0.000	90	563791	1.00	1.02	
93 1,2,4-Trimethylbenzene	105	18.613	18.613	0.000	96	528367	1.00	1.03	
95 sec-Butylbenzene	105	18.877	18.877	0.000	99	790099	1.00	1.03	
94 1,3-Dichlorobenzene	146	18.892	18.892	0.000	98	354582	1.00	0.9502	
96 Benzyl chloride	91	18.970	18.970	0.000	97	363423	1.00	0.9544	
97 1,4-Dichlorobenzene	146	18.985	18.985	0.000	95	333714	1.00	0.9450	
98 4-Isopropyltoluene	119	19.042	19.042	0.000	97	623731	1.00	1.05	
99 1,2,3-Trimethylbenzene	105	19.099	19.099	0.000	99	383341	1.00	0.7590	
100 Butylcyclohexane	83	19.150	19.150	0.000	92	401867	1.00	0.9804	
102 2,3-Dihydroindene	117	19.352	19.352	0.000	93	480462	1.00	0.9724	
101 1,2-Dichlorobenzene	146	19.352	19.352	0.000	83	354892	1.00	0.9548	
103 Indene	116	19.486	19.486	0.000	88	329049	1.00	0.7742	
104 n-Butylbenzene	91	19.492	19.492	0.000	96	669649	1.00	1.09	
105 Undecane	57	19.802	19.802	0.000	94	427211	1.00	1.01	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.869	19.869	0.000	98	439637	NC	NC	
106 1,2-Dibromo-3-Chloropropan	157	19.972	19.972	0.000	95	139664	1.00	0.9062	
107 1,2,4,5-Tetramethylbenzene	119	20.262	20.262	0.000	97	518612	1.00	0.9326	
109 1,2,3,5-Tetramethylbenzene	119	20.319	20.319	0.000	95	308075	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	20.732	20.732	0.000	97	403323	NC	NC	
110 Dodecane	57	20.892	20.892	0.000	93	382220	1.00	0.9325	
111 1,2,4-Trichlorobenzene	180	21.109	21.109	0.000	93	224793	1.00	0.7888	
113 Naphthalene	128	21.254	21.254	0.000	99	522360	1.00	0.9437	
114 Benzo(b)thiophene	134	21.368	21.368	0.000	99	218307	NC	NC	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	93	319432	1.00	0.9106	
116 1,2,3-Trichlorobenzene	180	21.543	21.543	0.000	95	275205	1.00	0.9307	
117 2-Methylnaphthalene	142	22.153	22.153	0.000	100	108812	1.00	0.5113	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	100	133674	1.00	0.4433	
A 120 C8 Range	1	14.442	(14.396-14.489)		0	1388951	1.00	1.01	
S 121 Xylenes, Total	100				0		3.00	3.15	
S 122 1,2-Dichloroethene, Total	1				0		2.00	2.04	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00087

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HCCVB20.D

Injection Date: 26-Feb-2019 10:24:30

Instrument ID: MH

Operator ID: HMT

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

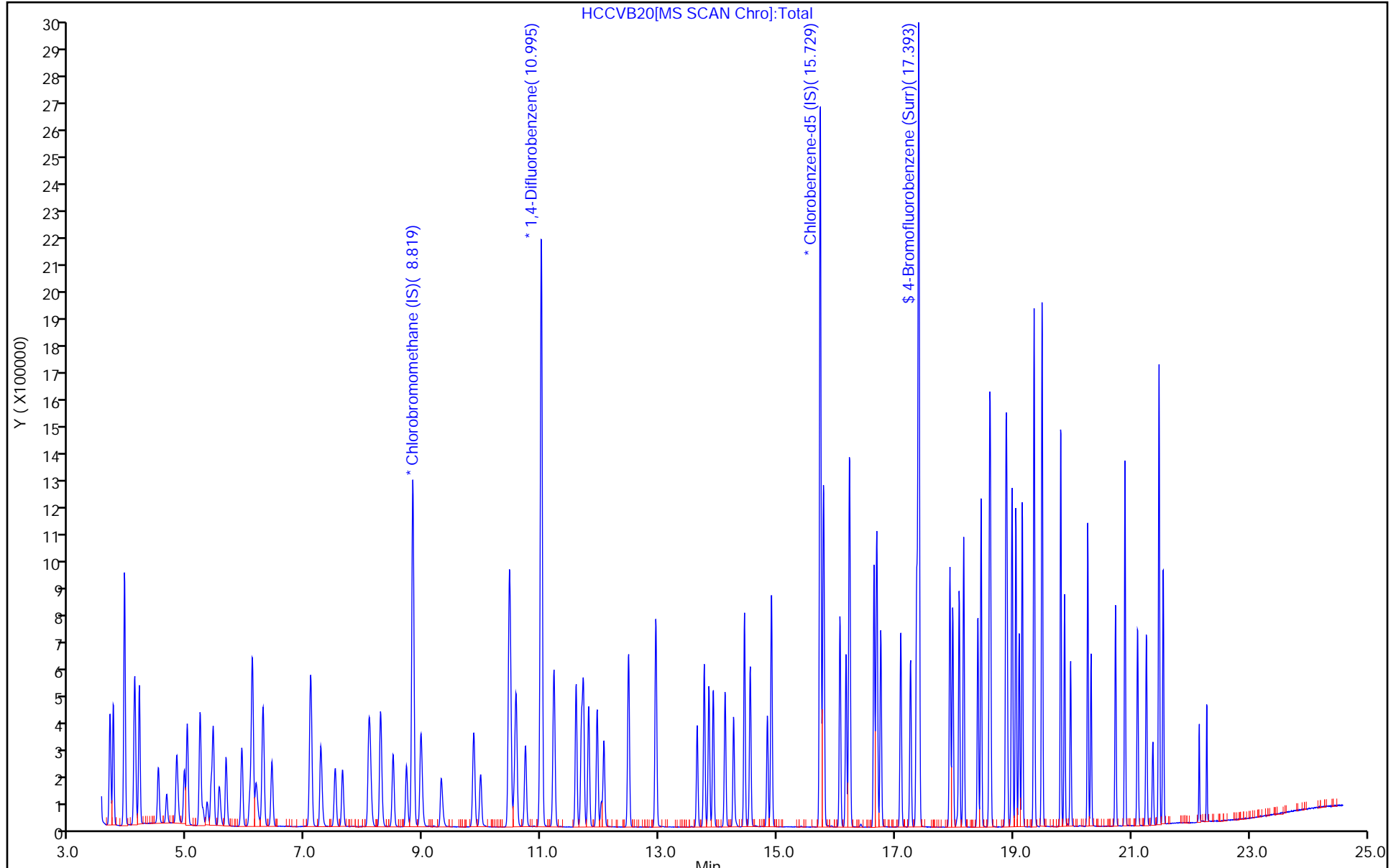
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.582		1.09	1.00	9.2	30.0
Propene	Ave	1.491	1.525		1.02	1.00	2.3	30.0
Dichlorodifluoromethane	Ave	5.038	5.333		1.06	1.00	5.9	30.0
Chloromethane	Ave	0.5876	0.6486		1.10	1.00	10.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.636		1.05	1.00	4.6	30.0
Vinyl chloride	Ave	1.827	2.022		1.11	1.00	10.7	30.0
Acetaldehyde	Ave	0.7017	0.7335		5.23	5.00	4.5	30.0
1,3-Butadiene	Ave	1.320	1.465		1.11	1.00	11.0	30.0
Butane	Ave	2.614	3.037		1.16	1.00	16.2	30.0
Bromomethane	Ave	1.848	2.013		1.09	1.00	8.9	30.0
Chloroethane	Ave	0.8331	0.9136		1.10	1.00	9.7	30.0
Ethanol	Ave	0.8189	0.7398		4.52	5.00	-9.7	30.0
Vinyl bromide	Ave	1.758	2.069		1.18	1.00	17.6	30.0
2-Methylbutane	Ave	1.939	2.241		1.16	1.00	15.6	30.0
Trichlorofluoromethane	Ave	4.604	5.060		1.10	1.00	9.9	30.0
Acrolein	Ave	0.5850	0.6401		1.09	1.00	9.4	30.0
Acetonitrile	Ave	0.7361	0.8155		1.11	1.00	10.8	30.0
Acetone	Ave	0.7520	0.8565		1.14	1.00	13.9	30.0
Pentane	Ave	0.2105	0.2364		1.12	1.00	12.3	30.0
Isopropyl alcohol	QuaF		2.815		1.19	1.00	19.3	30.0
Ethyl ether	Ave	1.862	2.216		1.19	1.00	19.0	30.0
1,1-Dichloroethene	Ave	1.554	1.640		1.06	1.00	5.6	30.0
Acrylonitrile	Ave	1.195	1.332		1.11	1.00	11.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	4.086		1.11	1.00	10.5	30.0
tert-Butyl alcohol	Ave	2.635	2.774		1.05	1.00	5.3	30.0
Methylene Chloride	Ave	1.636	1.731		1.06	1.00	5.9	30.0
3-Chloropropene	Ave	1.460	1.651		1.13	1.00	13.1	30.0
Carbon disulfide	Ave	4.496	5.037		1.12	1.00	12.0	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.661		1.04	1.00	4.2	30.0
2-Methylpentane	Ave	3.661	3.712		1.01	1.00	1.4	30.0
Methyl tert-butyl ether	Ave	3.774	4.086		1.08	1.00	8.3	30.0
1,1-Dichloroethane	Ave	3.031	3.376		1.11	1.00	11.4	30.0
Vinyl acetate	Ave	4.329	4.892		1.13	1.00	13.0	30.0
Hexane	Ave	1.211	1.291		1.07	1.00	6.6	30.0
2-Butanone (MEK)	Ave	0.6878	0.7365		1.07	1.00	7.1	30.0
Isopropyl ether	Ave	5.664	6.416		1.13	1.00	13.3	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.767		1.09	1.00	9.4	30.0
Ethyl acetate	Ave	3.858	4.156		1.08	1.00	7.7	30.0
Chloroform	Ave	3.476	3.989		1.15	1.00	14.8	30.0
Tert-butyl ethyl ether	Ave	4.715	4.863		1.03	1.00	3.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	2.014		1.08	1.00	7.7	30.0
1,1,1-Trichloroethane	Ave	3.305	3.602		1.09	1.00	9.0	30.0
1,2-Dichloroethane	Ave	0.4310	0.4711		1.09	1.00	9.3	30.0
Benzene	Ave	0.8457	0.9162		1.08	1.00	8.3	30.0
Cyclohexane	Ave	0.1257	0.1264		1.00	1.00	0.5	30.0
Carbon tetrachloride	Ave	0.6846	0.7453		1.09	1.00	8.9	30.0
1-Butanol	Ave	0.1144	0.1225		1.07	1.00	7.1	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1843		1.05	1.00	5.1	30.0
Thiophene	Ave	0.4839	0.5031		1.04	1.00	4.0	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.506		1.08	1.00	7.9	30.0
Heptane	Ave	0.2694	0.2772		1.03	1.00	2.9	30.0
1,2-Dichloropropane	Ave	0.3598	0.3965		1.10	1.00	10.2	30.0
Trichloroethene	Ave	0.3991	0.4146		1.04	1.00	3.9	30.0
Dibromomethane	Ave	0.4192	0.4613		1.10	1.00	10.0	30.0
Bromodichloromethane	Ave	0.6298	0.7064		1.12	1.00	12.2	30.0
1,4-Dioxane	Ave	0.1270	0.1235		0.973	1.00	-2.7	30.0
Methyl methacrylate	Ave	0.3781	0.4271		1.13	1.00	13.0	30.0
Methylcyclohexane	LinF		0.5957		1.13	1.00	13.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.8028		1.06	1.00	6.0	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5430		1.15	1.00	14.7	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5432		1.12	1.00	11.9	30.0
Toluene	Ave	1.139	1.249		1.10	1.00	9.7	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.4227		1.12	1.00	11.8	30.0
2-Hexanone	Ave	0.3734	0.3986		1.07	1.00	6.7	30.0
Octane	Ave	0.3251	0.3570		1.10	1.00	9.8	30.0
Dibromochloromethane	Ave	0.7610	0.8783		1.15	1.00	15.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7564		1.10	1.00	9.7	30.0
Tetrachloroethene	Ave	0.4638	0.4906		1.06	1.00	5.8	30.0
Chlorobenzene	Ave	0.9365	1.016		1.08	1.00	8.5	30.0
2,3-Dimethylheptane	Ave	1.197	1.242		1.04	1.00	3.8	30.0
Ethylbenzene	Ave	1.450	1.579		1.09	1.00	8.9	30.0
m-Xylene & p-Xylene	Ave	1.118	1.285		2.30	2.00	14.9	30.0
Nonane	Ave	0.7205	0.8189		1.14	1.00	13.7	30.0
Bromoform	Ave	0.8550	0.8677		1.01	1.00	1.5	30.0
Styrene	Ave	0.7534	0.8913		1.18	1.00	18.3	30.0
o-Xylene	Ave	1.138	1.284		1.13	1.00	12.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	1.065		1.15	1.00	15.5	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2451		1.08	1.00	7.9	30.0
Isopropylbenzene	Ave	1.571	1.737		1.11	1.00	10.6	30.0
Propylbenzene	Ave	0.4111	0.4533		1.10	1.00	10.3	30.0
2-Chlorotoluene	Ave	0.4027	0.4454		1.11	1.00	10.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.617		1.08	1.00	8.2	30.0
1,3,5-Trimethylbenzene	Lin1		0.7773		1.18	1.00	17.9	30.0
Alpha Methyl Styrene	Ave	0.6224	0.6345		1.02	1.00	2.0	30.0
Decane	Ave	0.9226	1.120		1.21	1.00	21.4	30.0
tert-Butylbenzene	Ave	1.398	1.570		1.12	1.00	12.3	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.500		1.15	1.00	15.1	30.0
sec-Butylbenzene	Ave	1.948	2.219		1.14	1.00	13.9	30.0
1,3-Dichlorobenzene	Ave	0.9455	1.004		1.06	1.00	6.1	30.0
Benzyl chloride	Ave	0.9648	1.031		1.07	1.00	6.9	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.9350		1.05	1.00	4.5	30.0
4-Isopropyltoluene	Ave	1.512	1.756		1.16	1.00	16.2	30.0
1,2,3-Trimethylbenzene	Ave	1.280	1.068		0.835	1.00	-16.5	30.0
Butylcyclohexane	Ave	1.039	1.173		1.13	1.00	13.0	30.0
Indane	Ave	1.252	1.365		1.09	1.00	9.0	30.0
1,2-Dichlorobenzene	Ave	0.9417	1.007		1.07	1.00	7.0	30.0
Indene	Ave	1.077	0.9492		0.882	1.00	-11.8	30.0
Butylbenzene	Ave	1.562	1.974		1.26	1.00	26.3	30.0
Undecane	Ave	1.067	1.264		1.18	1.00	18.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3904		1.00	1.00	-0.0	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.500		1.06	1.00	6.4	30.0
Dodecane	Ave	1.039	1.259		1.21	1.00	21.3	30.0
1,2,4-Trichlorobenzene	Lin1		0.6653		0.910	1.00	-9.0	30.0
Naphthalene	Ave	1.402	1.620		1.16	1.00	15.5	30.0
Hexachlorobutadiene	Ave	0.8888	0.9313		1.05	1.00	4.8	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.8521		1.14	1.00	13.7	30.0
2-Methylnaphthalene	Ave	0.5392	0.4269		0.792	1.00	-20.8	50.0
1-Methylnaphthalene	Ave	0.7641	0.5441		0.712	1.00	-28.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6727		4.13	4.00	3.2	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HCCVB27.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 27-Feb-2019 11:50:30 ALS Bottle#: 7 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-002
 Misc. Info.: S87
 Operator ID: AFB Instrument ID: MH
 Sublist: chrom-MH_TO15*sub6
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 15:09:58 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits

Date: 28-Feb-2019 15:09:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.814	8.814	0.000	98	226060	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1253478	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.724	15.724	0.000	88	1073197	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.398	17.398	0.000	93	721930	4.00	4.13	
6 Chlorodifluoromethane	51	3.682	3.682	0.000	97	202448	1.00	1.09	
7 Propene	41	3.692	3.692	0.000	97	86192	1.00	1.02	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	301415	1.00	1.06	
9 Chloromethane	52	3.925	3.925	0.000	98	36653	1.00	1.10	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.930	0.000	93	205505	1.00	1.05	
12 Vinyl chloride	62	4.090	4.090	0.000	99	114280	1.00	1.11	
11 Acetaldehyde	44	4.100	4.100	0.000	98	207270	5.00	5.23	
14 Butane	43	4.183	4.183	0.000	85	171633	1.00	1.16	
13 Butadiene	54	4.183	4.183	0.000	71	82818	1.00	1.11	
15 Bromomethane	94	4.503	4.503	0.000	98	113762	1.00	1.09	
16 Chloroethane	64	4.648	4.648	0.000	94	51634	1.00	1.10	
17 Ethanol	31	4.824	4.824	0.000	97	209034	5.00	4.52	
18 Vinyl bromide	106	4.943	4.943	0.000	98	116901	1.00	1.18	
19 2-Methylbutane	43	4.994	4.994	0.000	93	126651	1.00	1.16	
21 Trichlorofluoromethane	101	5.211	5.211	0.000	99	285948	1.00	1.10	
20 Acrolein	56	5.263	5.263	0.000	94	36175	1.00	1.09	
22 Acetonitrile	40	5.330	5.330	0.000	98	46088	1.00	1.11	
23 Acetone	58	5.403	5.403	0.000	96	48405	1.00	1.14	
24 Pentane	72	5.434	5.434	0.000	97	13358	1.00	1.12	
25 Isopropyl alcohol	45	5.542	5.542	0.000	98	159072	1.00	1.19	
26 Ethyl ether	31	5.651	5.651	0.000	91	125248	1.00	1.19	
27 1,1-Dichloroethene	96	5.920	5.920	0.000	96	92705	1.00	1.06	
28 Acrylonitrile	53	6.054	6.054	0.000	94	75257	1.00	1.11	
30 1,1,2-Trichloro-1,2,2-trif	101	6.095	6.095	0.000	95	230920	1.00	1.11	
29 2-Methyl-2-propanol	59	6.168	6.168	0.000	97	156753	1.00	1.05	
31 Methylene Chloride	84	6.271	6.271	0.000	96	97855	1.00	1.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.286	6.286	0.000	95	93284	1.00	1.13	
33 Carbon disulfide	76	6.426	6.426	0.000	100	284642	1.00	1.12	
34 trans-1,2-Dichloroethene	96	7.077	7.077	0.000	96	93857	1.00	1.04	
35 2-Methylpentane	43	7.093	7.093	0.000	96	209797	1.00	1.01	
36 Methyl tert-butyl ether	73	7.258	7.258	0.000	96	230900	1.00	1.08	
37 1,1-Dichloroethane	63	7.501	7.501	0.000	100	190789	1.00	1.11	
38 Vinyl acetate	43	7.625	7.625	0.000	100	276476	1.00	1.13	
40 Hexane	56	8.075	8.075	0.000	92	72970	1.00	1.07	
39 2-Butanone (MEK)	72	8.106	8.106	0.000	98	41623	1.00	1.07	
171 Isopropyl ether	45	8.271	8.271	0.000	97	362606	1.00	1.13	
41 cis-1,2-Dichloroethene	96	8.483	8.483	0.000	97	99834	1.00	1.09	
42 Ethyl acetate	43	8.710	8.710	0.000	98	234901	1.00	1.08	
43 Chloroform	83	8.824	8.824	0.000	97	225441	1.00	1.15	
173 Tert-butyl ethyl ether	59	8.959	8.959	0.000	98	274855	1.00	1.03	
44 Tetrahydrofuran	42	9.300	9.300	0.000	94	113795	1.00	1.08	
45 1,1,1-Trichloroethane	97	9.853	9.853	0.000	97	203571	1.00	1.09	
46 1,2-Dichloroethane	62	9.966	9.966	0.000	96	147638	1.00	1.09	
48 Cyclohexane	69	10.452	10.452	0.000	88	39593	1.00	1.00	
47 Benzene	78	10.452	10.452	0.000	97	287118	1.00	1.08	
50 Carbon tetrachloride	117	10.473	10.473	0.000	97	233556	1.00	1.09	
49 n-Butanol	31	10.545	10.545	0.000	68	38399	1.00	1.07	
51 2,3-Dimethylpentane	71	10.566	10.566	0.000	89	57748	1.00	1.05	
52 Thiophene	84	10.731	10.731	0.000	97	157660	1.00	1.04	
53 Isooctane	57	11.212	11.212	0.000	98	471784	1.00	1.08	
55 n-Heptane	71	11.589	11.589	0.000	94	86852	1.00	1.03	
54 1,2-Dichloropropane	63	11.677	11.677	0.000	92	124250	1.00	1.10	
56 Trichloroethene	130	11.708	11.708	0.000	94	129936	1.00	1.04	
57 Dibromomethane	93	11.801	11.801	0.000	95	144568	1.00	1.10	
58 Dichlorobromomethane	83	11.946	11.946	0.000	98	221351	1.00	1.12	
59 1,4-Dioxane	88	12.018	12.018	0.000	95	38707	1.00	0.9728	
60 Methyl methacrylate	41	12.060	12.060	0.000	90	133849	1.00	1.13	
61 Methylcyclohexane	83	12.478	12.478	0.000	93	186682	1.00	1.13	
62 4-Methyl-2-pentanone (MIBK)	43	12.933	12.933	0.000	98	251565	1.00	1.06	
63 cis-1,3-Dichloropropene	75	12.943	12.943	0.000	98	170173	1.00	1.15	
64 trans-1,3-Dichloropropene	75	13.641	13.641	0.000	97	145734	1.00	1.12	
65 Toluene	91	13.760	13.760	0.000	92	335127	1.00	1.10	
66 1,1,2-Trichloroethane	83	13.837	13.837	0.000	97	113418	1.00	1.12	
67 2-Methylthiophene	97	13.837	13.837	0.000	77	123193	NC	NC	
68 3-Methylthiophene	97	13.910	13.910	0.000	99	263912	NC	NC	
69 2-Hexanone	58	14.261	14.261	0.000	90	106946	1.00	1.07	
71 n-Octane	85	14.442	14.442	0.000	97	95789	1.00	1.10	
70 Chlorodibromomethane	129	14.540	14.540	0.000	97	235642	1.00	1.15	
72 Ethylene Dibromide	107	14.830	14.830	0.000	98	202945	1.00	1.10	
73 Tetrachloroethene	129	14.897	14.897	0.000	94	131616	1.00	1.06	
74 Chlorobenzene	112	15.776	15.776	0.000	93	272503	1.00	1.08	
75 2,3-Dimethylheptane	43	15.786	15.786	0.000	94	333152	1.00	1.04	
76 Ethylbenzene	91	16.060	16.060	0.000	99	423517	1.00	1.09	
77 2-Ethylthiophene	97	16.163	16.163	0.000	99	315340	NC	NC	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	689557	2.00	2.30	
81 n-Nonane	57	16.639	16.639	0.000	95	219720	1.00	1.14	
79 Bromoform	173	16.680	16.680	0.000	92	232814	1.00	1.01	
80 Styrene	104	16.690	16.690	0.000	98	239143	1.00	1.18	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
82 o-Xylene	91	16.752	16.752	0.000	98	344391	1.00	1.13	
83 1,1,2,2-Tetrachloroethane	83	17.094	17.094	0.000	99	285654	1.00	1.15	
84 1,2,3-Trichloropropane	110	17.259	17.259	0.000	96	65759	1.00	1.08	
85 Isopropylbenzene	105	17.362	17.362	0.000	97	466039	1.00	1.11	
86 N-Propylbenzene	120	17.926	17.926	0.000	98	121617	1.00	1.10	
87 2-Chlorotoluene	126	17.977	17.977	0.000	98	119504	1.00	1.11	
88 4-Ethyltoluene	105	18.086	18.086	0.000	98	433728	1.00	1.08	
89 1,3,5-Trimethylbenzene	120	18.158	18.158	0.000	92	208540	1.00	1.18	
90 Alpha Methyl Styrene	118	18.401	18.401	0.000	86	170243	1.00	1.02	
91 n-Decane	57	18.453	18.453	0.000	88	300572	1.00	1.21	
92 tert-Butylbenzene	119	18.598	18.598	0.000	90	421160	1.00	1.12	
93 1,2,4-Trimethylbenzene	105	18.613	18.613	0.000	96	402528	1.00	1.15	
95 sec-Butylbenzene	105	18.877	18.877	0.000	98	595352	1.00	1.14	
94 1,3-Dichlorobenzene	146	18.892	18.892	0.000	98	269246	1.00	1.06	
96 Benzyl chloride	91	18.975	18.975	0.000	97	276584	1.00	1.07	
97 1,4-Dichlorobenzene	146	18.985	18.985	0.000	96	250865	1.00	1.05	
98 4-Isopropyltoluene	119	19.047	19.047	0.000	97	471219	1.00	1.16	
99 1,2,3-Trimethylbenzene	105	19.099	19.099	0.000	99	286666	1.00	0.8350	
100 Butylcyclohexane	83	19.156	19.156	0.000	91	314740	1.00	1.13	
102 2,3-Dihydroindene	117	19.352	19.352	0.000	93	366103	1.00	1.09	
101 1,2-Dichlorobenzene	146	19.357	19.357	0.000	83	270251	1.00	1.07	
103 Indene	116	19.486	19.486	0.000	87	254677	1.00	0.8815	
104 n-Butylbenzene	91	19.492	19.492	0.000	96	529546	1.00	1.26	
105 Undecane	57	19.807	19.807	0.000	94	339087	1.00	1.18	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.874	19.874	0.000	98	333863	NC	NC	
106 1,2-Dibromo-3-Chloropropan	157	19.977	19.977	0.000	95	104745	1.00	1.00	
107 1,2,4,5-Tetramethylbenzene	119	20.267	20.267	0.000	96	402327	1.00	1.06	
109 1,2,3,5-Tetramethylbenzene	119	20.319	20.319	0.000	94	237961	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	20.737	20.737	0.000	97	317760	NC	NC	
110 Dodecane	57	20.897	20.897	0.000	92	337919	1.00	1.21	
111 1,2,4-Trichlorobenzene	180	21.109	21.109	0.000	93	178505	1.00	0.9102	
113 Naphthalene	128	21.259	21.259	0.000	99	434769	1.00	1.16	
114 Benzo(b)thiophene	134	21.368	21.368	0.000	99	182005	NC	NC	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	91	249871	1.00	1.05	
116 1,2,3-Trichlorobenzene	180	21.544	21.544	0.000	95	228620	1.00	1.14	
117 2-Methylnaphthalene	142	22.153	22.153	0.000	100	114535	1.00	0.7918	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	100	145977	1.00	0.7121	
A 120 C8 Range	1	14.442	(14.390-14.504)		0	1047632	1.00	1.13	
S 121 Xylenes, Total	100				0		3.00	3.43	
S 122 1,2-Dichloroethene, Total	1				0		2.00	2.14	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00087

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HCCVB27.D

Injection Date: 27-Feb-2019 11:50:30

Instrument ID: MH

Operator ID: AFB

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

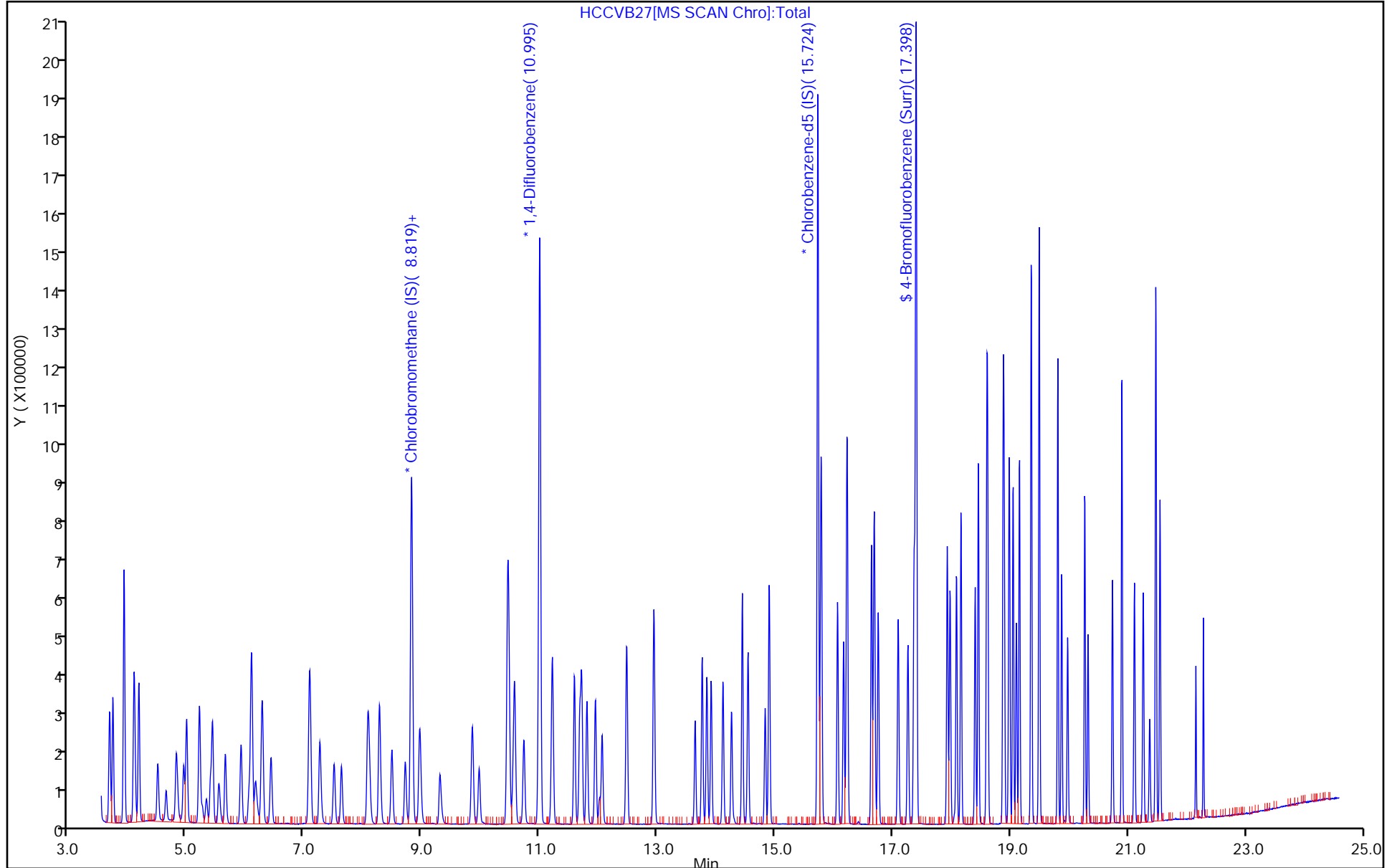
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HBFBB20IC.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 20-Feb-2019 13:11:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info:
 Misc. Info.: BFB
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Feb-2019 12:47:05 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	4.714	4.514	0.200	0	1073113	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

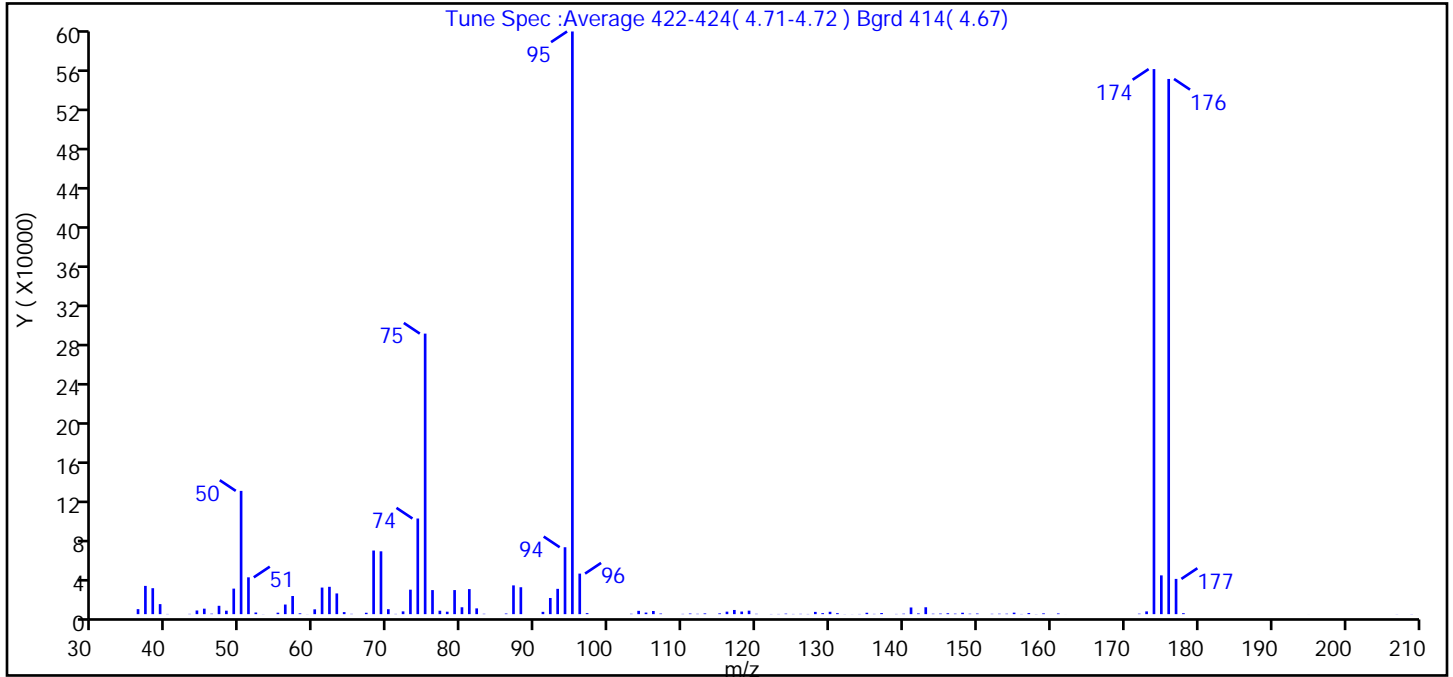
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HBFBB20IC.D
 Injection Date: 20-Feb-2019 13:11:30 Instrument ID: MH
 Lims ID: BFB
 Client ID:
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.2
75	30 to 60% of m/z 95	48.1
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.5 (0.5)
174	50 to 120% of m/z 95	93.5
175	5 to 9% of m/z 174	6.7 (7.1)
176	Greater than 95% but less than 101% of m/z 174	91.9 (98.2)
177	5 to 9% of m/z 176	6.0 (6.6)

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HBFBB20IC.D\MH_TO15.rsl\spectra.d
Injection Date: 20-Feb-2019 13:11:30
Spectrum: Tune Spec :Average 422-424(4.71-4.72) Bgrd 414(4.67)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 119

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	5122	70.00	5075	111.00	644	144.00	429
37.00	28936	71.00	250	112.00	342	145.00	579
38.00	26584	72.00	2835	113.00	755	146.00	933
39.00	10274	73.00	25072	115.00	798	147.00	503
40.00	196	74.00	97952	116.00	2559	148.00	1441
43.00	270	75.00	287360	117.00	4285	149.00	432
44.00	3748	76.00	24640	118.00	2652	150.00	625
45.00	5615	77.00	3520	119.00	3565	152.00	338
46.00	473	78.00	2506	120.00	334	153.00	432
47.00	8552	79.00	24648	122.00	167	154.00	437
48.00	3540	80.00	7055	123.00	200	155.00	1524
49.00	26152	81.00	25648	124.00	510	156.00	183
50.00	126264	82.00	5899	125.00	205	157.00	1129
51.00	37712	83.00	357	126.00	302	158.00	137
52.00	1673	86.00	640	127.00	190	159.00	797
53.00	105	87.00	29456	128.00	2307	160.00	25
55.00	1481	88.00	27568	129.00	1019	161.00	723
56.00	9852	91.00	2370	130.00	2423	162.00	26
57.00	18568	92.00	16552	131.00	1022	172.00	473
58.00	827	93.00	25912	132.00	114	173.00	2816
59.00	79	94.00	68536	133.00	83	174.00	558336
60.00	4936	95.00	596864	134.00	194	175.00	39712
61.00	27232	96.00	41528	135.00	1417	176.00	548224
62.00	28000	97.00	1044	136.00	272	177.00	36104
63.00	21216	103.00	371	137.00	1110	178.00	967
64.00	2084	104.00	3382	139.00	217	193.00	13
65.00	304	105.00	1607	140.00	460	195.00	28
67.00	1418	106.00	3231	141.00	6836	207.00	98
68.00	65168	107.00	618	142.00	743	209.00	138
69.00	64360	110.00	271	143.00	7053		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HBFBB20IC.D

Injection Date: 20-Feb-2019 13:11:30

Instrument ID: MH

Operator ID: HMT

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

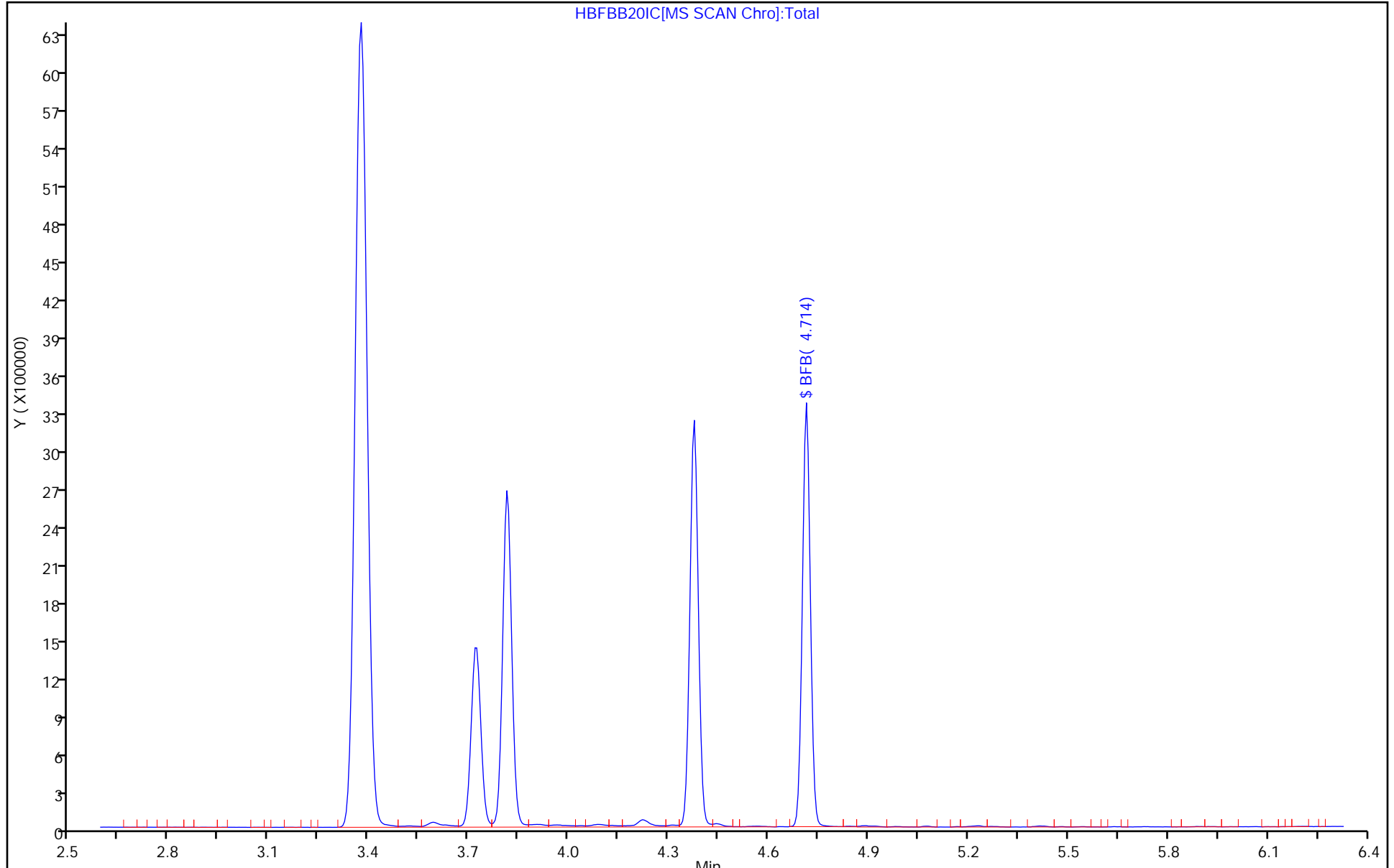
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HBFBB20.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 26-Feb-2019 09:56:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-001
 Misc. Info.: BFB
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:31:35 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:31:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	4.734	4.734	0.000	0	1044080	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

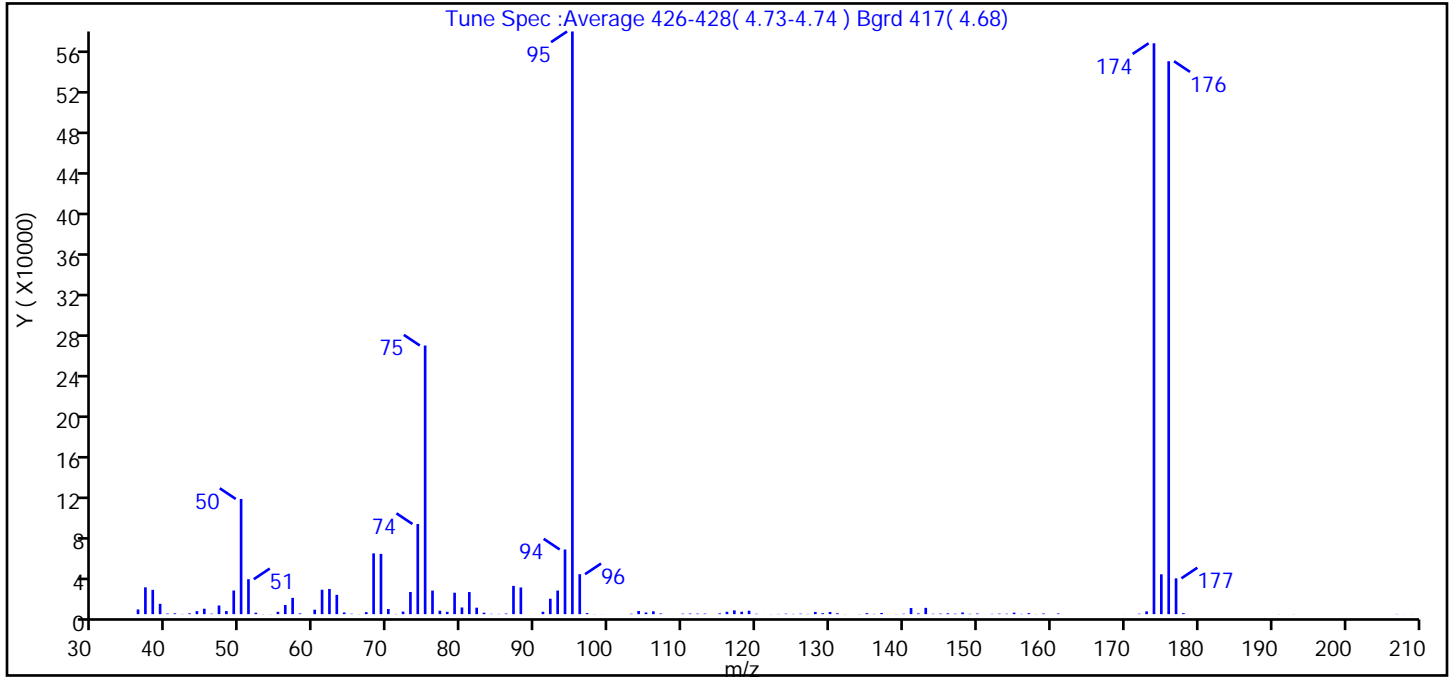
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HBFBB20.D
 Injection Date: 26-Feb-2019 09:56:30 Instrument ID: MH
 Lims ID: BFB
 Client ID:
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.8
75	30 to 60% of m/z 95	46.1
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.5 (0.5)
174	50 to 120% of m/z 95	98.0
175	5 to 9% of m/z 174	6.8 (7.0)
176	Greater than 95% but less than 101% of m/z 174	94.9 (96.9)
177	5 to 9% of m/z 176	6.1 (6.5)

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HBFBB20.D\MH_TO15.rslt\spectra.d
Injection Date: 26-Feb-2019 09:56:30
Spectrum: Tune Spec :Average 426-428(4.73-4.74) Bgrd 417(4.68)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 129

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4610	70.00	5051	107.00	655	145.00	506
37.00	26296	71.00	170	110.00	470	146.00	816
38.00	23832	72.00	2519	111.00	579	147.00	444
39.00	10144	73.00	21704	112.00	494	148.00	1634
40.00	554	74.00	88392	113.00	532	149.00	314
41.00	788	75.00	263424	115.00	757	150.00	613
42.00	208	76.00	23120	116.00	2333	151.00	26
43.00	809	77.00	3373	117.00	3689	152.00	281
44.00	2950	78.00	2284	118.00	2373	153.00	486
45.00	5346	79.00	21000	119.00	3349	154.00	409
46.00	439	80.00	6529	120.00	357	155.00	1459
47.00	8487	81.00	21656	121.00	31	156.00	243
48.00	2999	82.00	6327	122.00	121	157.00	989
49.00	23192	83.00	1441	123.00	203	158.00	117
50.00	112952	84.00	280	124.00	465	159.00	639
51.00	34264	85.00	205	125.00	248	161.00	665
52.00	1413	86.00	591	126.00	439	162.00	29
53.00	136	87.00	27688	127.00	239	170.00	42
54.00	129	88.00	26144	128.00	2148	172.00	438
55.00	2300	91.00	2342	129.00	953	173.00	2698
56.00	8959	92.00	15114	130.00	2147	174.00	559808
57.00	15964	93.00	23144	131.00	866	175.00	39072
58.00	731	94.00	63408	132.00	111	176.00	542208
60.00	4365	95.00	571392	134.00	153	177.00	35104
61.00	23928	96.00	39192	135.00	998	178.00	1008
62.00	24672	97.00	1011	136.00	253	191.00	82
63.00	18920	98.00	122	137.00	1174	193.00	96
64.00	1664	99.00	66	139.00	159	207.00	193
65.00	385	102.00	26	140.00	402	208.00	49
66.00	120	103.00	398	141.00	6039	209.00	61
67.00	1975	104.00	3084	142.00	740		
68.00	59608	105.00	1643	143.00	6173		
69.00	59104	106.00	2817	144.00	360		

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	4610	70.00	5051	107.00	655	145.00	506
37.00	26296	71.00	170	110.00	470	146.00	816
38.00	23832	72.00	2519	111.00	579	147.00	444
39.00	10144	73.00	21704	112.00	494	148.00	1634
40.00	554	74.00	88392	113.00	532	149.00	314
41.00	788	75.00	263424	115.00	757	150.00	613
42.00	208	76.00	23120	116.00	2333	151.00	26
43.00	809	77.00	3373	117.00	3689	152.00	281
44.00	2950	78.00	2284	118.00	2373	153.00	486
45.00	5346	79.00	21000	119.00	3349	154.00	409
46.00	439	80.00	6529	120.00	357	155.00	1459
47.00	8487	81.00	21656	121.00	31	156.00	243
48.00	2999	82.00	6327	122.00	121	157.00	989
49.00	23192	83.00	1441	123.00	203	158.00	117
50.00	112952	84.00	280	124.00	465	159.00	639
51.00	34264	85.00	205	125.00	248	161.00	665
52.00	1413	86.00	591	126.00	439	162.00	29
53.00	136	87.00	27688	127.00	239	170.00	42
54.00	129	88.00	26144	128.00	2148	172.00	438
55.00	2300	91.00	2342	129.00	953	173.00	2698
56.00	8959	92.00	15114	130.00	2147	174.00	559808
57.00	15964	93.00	23144	131.00	866	175.00	39072
58.00	731	94.00	63408	132.00	111	176.00	542208
60.00	4365	95.00	571392	134.00	153	177.00	35104
61.00	23928	96.00	39192	135.00	998	178.00	1008
62.00	24672	97.00	1011	136.00	253	191.00	82
63.00	18920	98.00	122	137.00	1174	193.00	96
64.00	1664	99.00	66	139.00	159	207.00	193
65.00	385	102.00	26	140.00	402	208.00	49
66.00	120	103.00	398	141.00	6039	209.00	61
67.00	1975	104.00	3084	142.00	740		
68.00	59608	105.00	1643	143.00	6173		
69.00	59104	106.00	2817	144.00	360		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HBFBB20.D

Injection Date: 26-Feb-2019 09:56:30

Instrument ID: MH

Operator ID: HMT

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

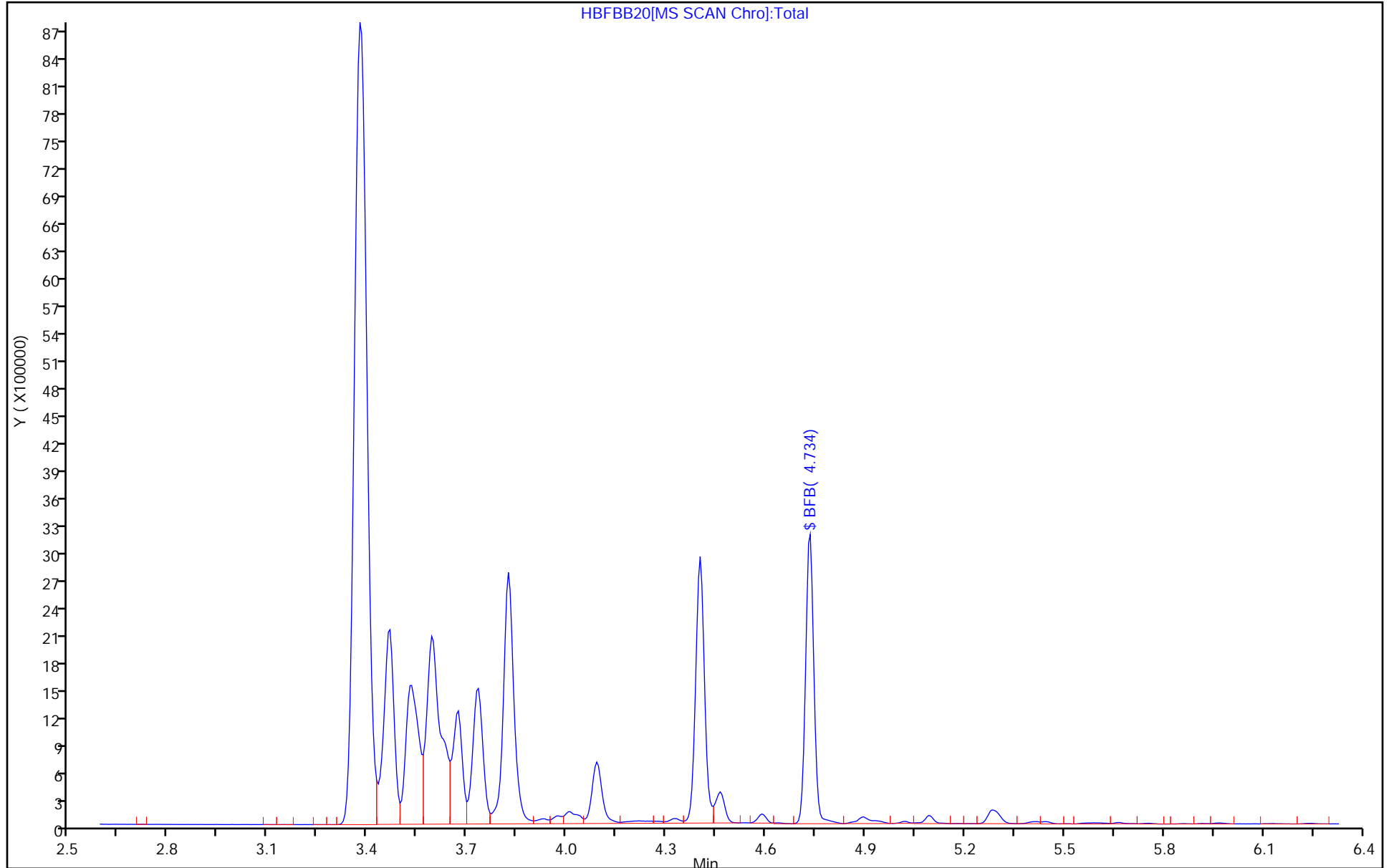
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HBFBB27.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 27-Feb-2019 11:22:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-001
 Misc. Info.: BFB
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 15:09:11 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 15:09:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	4.725	4.725	0.000	0	713144	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

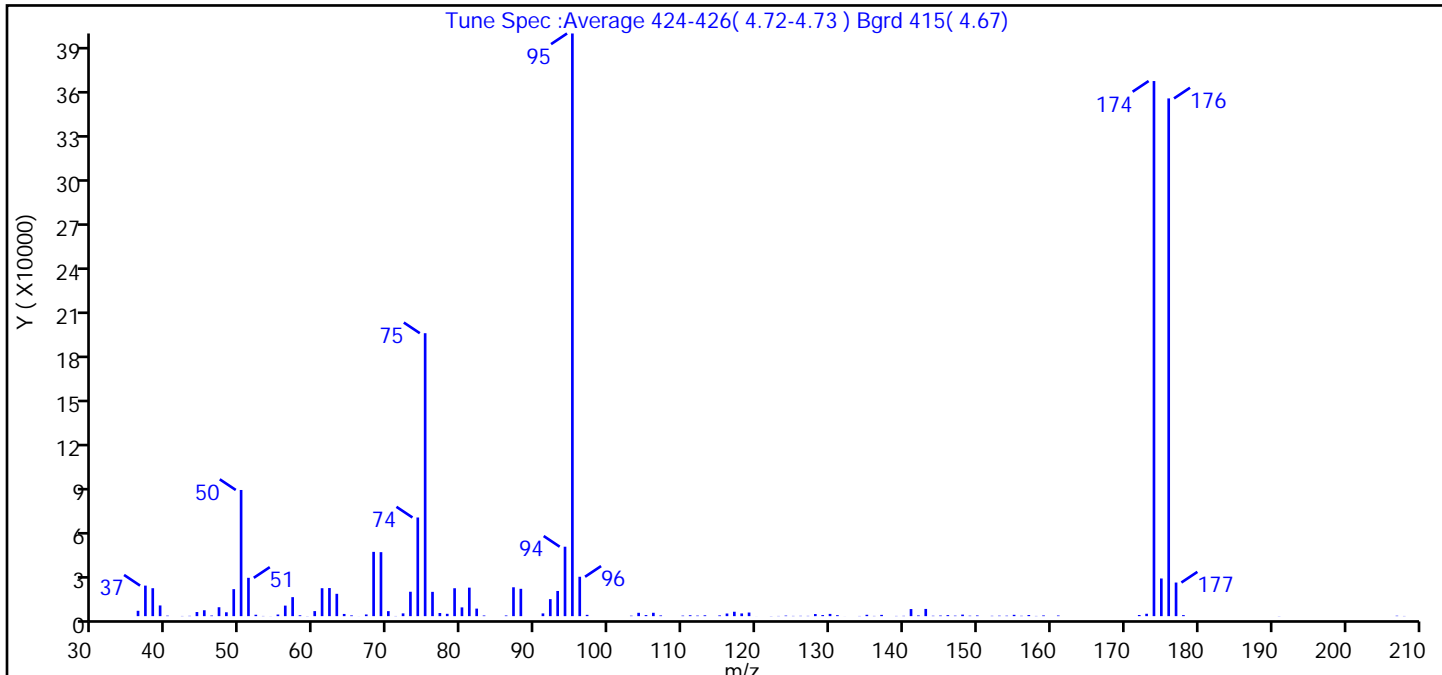
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HBFBB27.D
 Injection Date: 27-Feb-2019 11:22:30 Instrument ID: MH
 Lims ID: BFB
 Client ID:
 Operator ID: AFB ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.7
75	30 to 60% of m/z 95	48.6
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.4 (0.4)
174	50 to 120% of m/z 95	91.8
175	5 to 9% of m/z 174	6.5 (7.0)
176	Greater than 95% but less than 101% of m/z 174	88.9 (96.8)
177	5 to 9% of m/z 176	5.8 (6.5)

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HBFBB27.D\MH_TO15.rslt\spectra.d
Injection Date: 27-Feb-2019 11:22:30
Spectrum: Tune Spec :Average 424-426(4.72-4.73) Bgrd 415(4.67)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 118

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3633	67.00	1140	106.00	2283	142.00	473
37.00	20704	68.00	43584	107.00	483	143.00	4892
38.00	18944	69.00	43392	110.00	348	144.00	254
39.00	7248	70.00	3394	111.00	604	145.00	403
40.00	329	71.00	116	112.00	371	146.00	692
42.00	126	72.00	1871	113.00	573	147.00	322
43.00	201	73.00	16544	115.00	508	148.00	1035
44.00	2791	74.00	66904	116.00	1783	149.00	292
45.00	3997	75.00	191872	117.00	2988	150.00	463
46.00	403	76.00	16472	118.00	1835	152.00	218
47.00	6043	77.00	2124	119.00	2444	153.00	308
48.00	2623	78.00	1587	120.00	28	154.00	291
49.00	18312	79.00	18928	122.00	95	155.00	901
50.00	85560	80.00	5940	123.00	136	156.00	233
51.00	25992	81.00	19328	124.00	358	157.00	746
52.00	951	82.00	5105	125.00	160	158.00	142
53.00	133	83.00	438	126.00	207	159.00	471
54.00	54	86.00	452	127.00	178	161.00	430
55.00	1101	87.00	19576	128.00	1420	172.00	780
56.00	7140	88.00	18528	129.00	730	173.00	1622
57.00	12879	91.00	1854	130.00	1510	174.00	362880
58.00	572	92.00	11531	131.00	662	175.00	25536
59.00	91	93.00	17072	132.00	28	176.00	351104
60.00	3416	94.00	47088	134.00	130	177.00	22792
61.00	18936	95.00	395136	135.00	931	178.00	700
62.00	19048	96.00	26712	136.00	153	191.00	88
63.00	15142	97.00	888	137.00	859	207.00	274
64.00	1491	103.00	307	139.00	151	208.00	121
65.00	498	104.00	2265	140.00	201		
66.00	33	105.00	719	141.00	4811		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HBFBB27.D

Injection Date: 27-Feb-2019 11:22:30

Instrument ID: MH

Operator ID: AFB

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

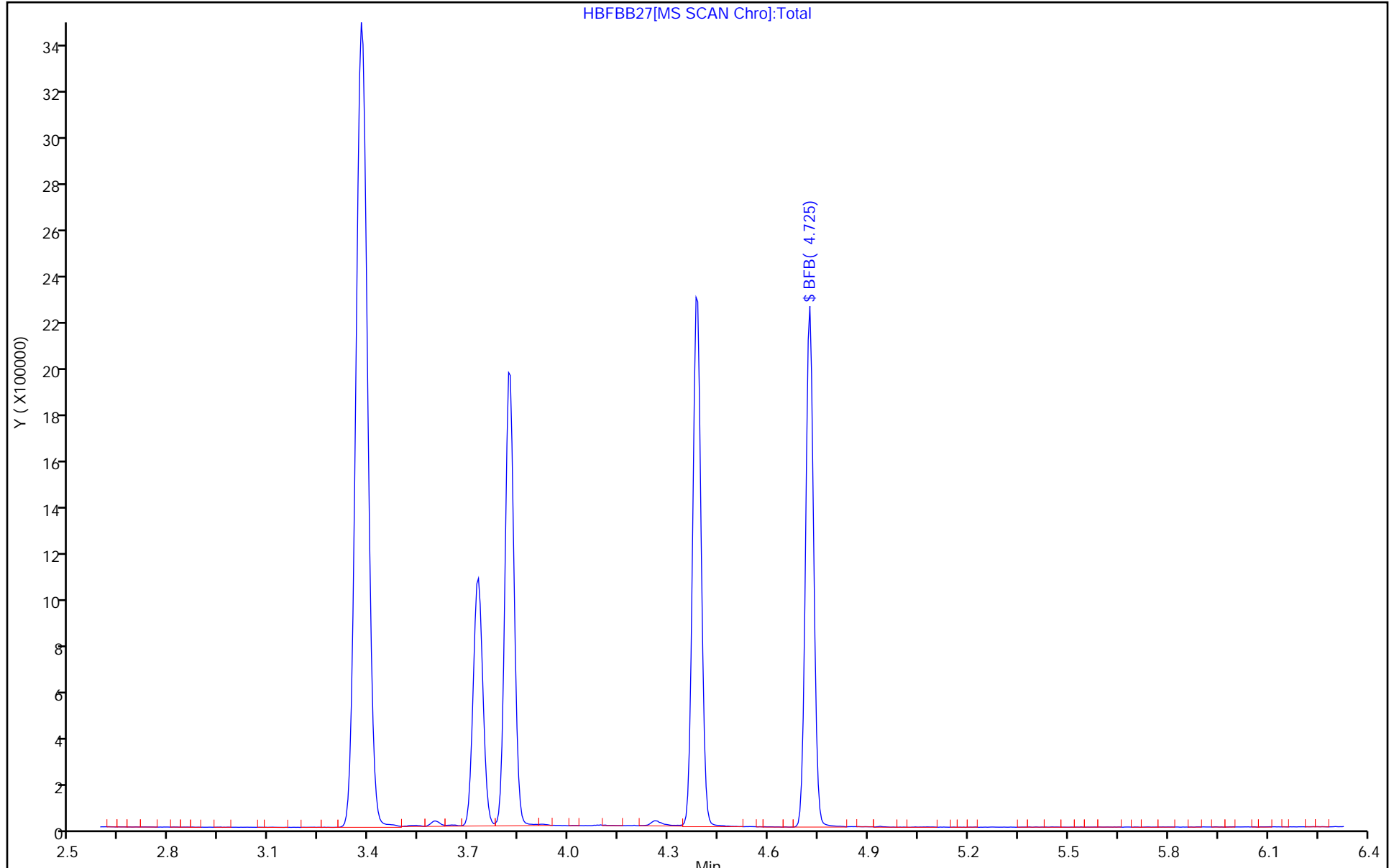
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27936/4
 Matrix: Air Lab File ID: H500BB22.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27936/4
 Matrix: Air Lab File ID: H500BB22.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\H500BB22.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 26-Feb-2019 12:38:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-004
 Misc. Info.: 500ML BLK
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:51:45 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:51:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.819	0.000	95	328212	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1777677	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	87	1496441	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	94	944455	4.00	3.87	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.859	19.869	-0.011	1	456		NC	
109 1,2,3,5-Tetramethylbenzene	119	20.308	20.319	-0.011	1	360		NC	
112 1,2,3,4-Tetramethylbenzene	119	20.727	20.732	-0.005	1	465		NC	
114 Benzo(b)thiophene	134	21.357	21.368	-0.011	1	441		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\H500BB22.D

Injection Date: 26-Feb-2019 12:38:30

Instrument ID: MH

Operator ID: HMT

Lims ID: MB

Worklist Smp#: 4

Client ID:

Purge Vol: 500.000 mL

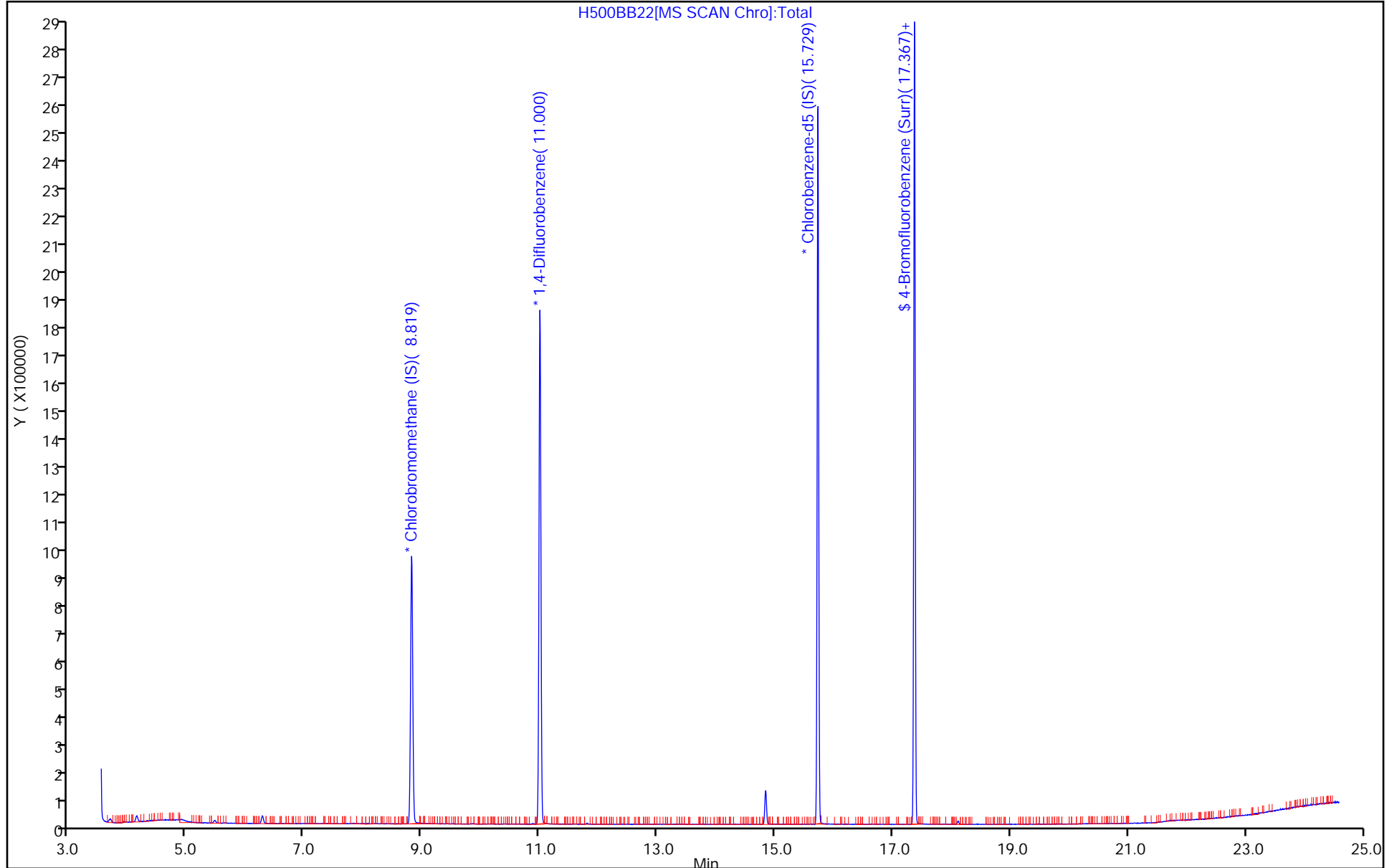
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\H500BB22.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 26-Feb-2019 12:38:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-004
 Misc. Info.: 500ML BLK
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:51:45 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:51:45

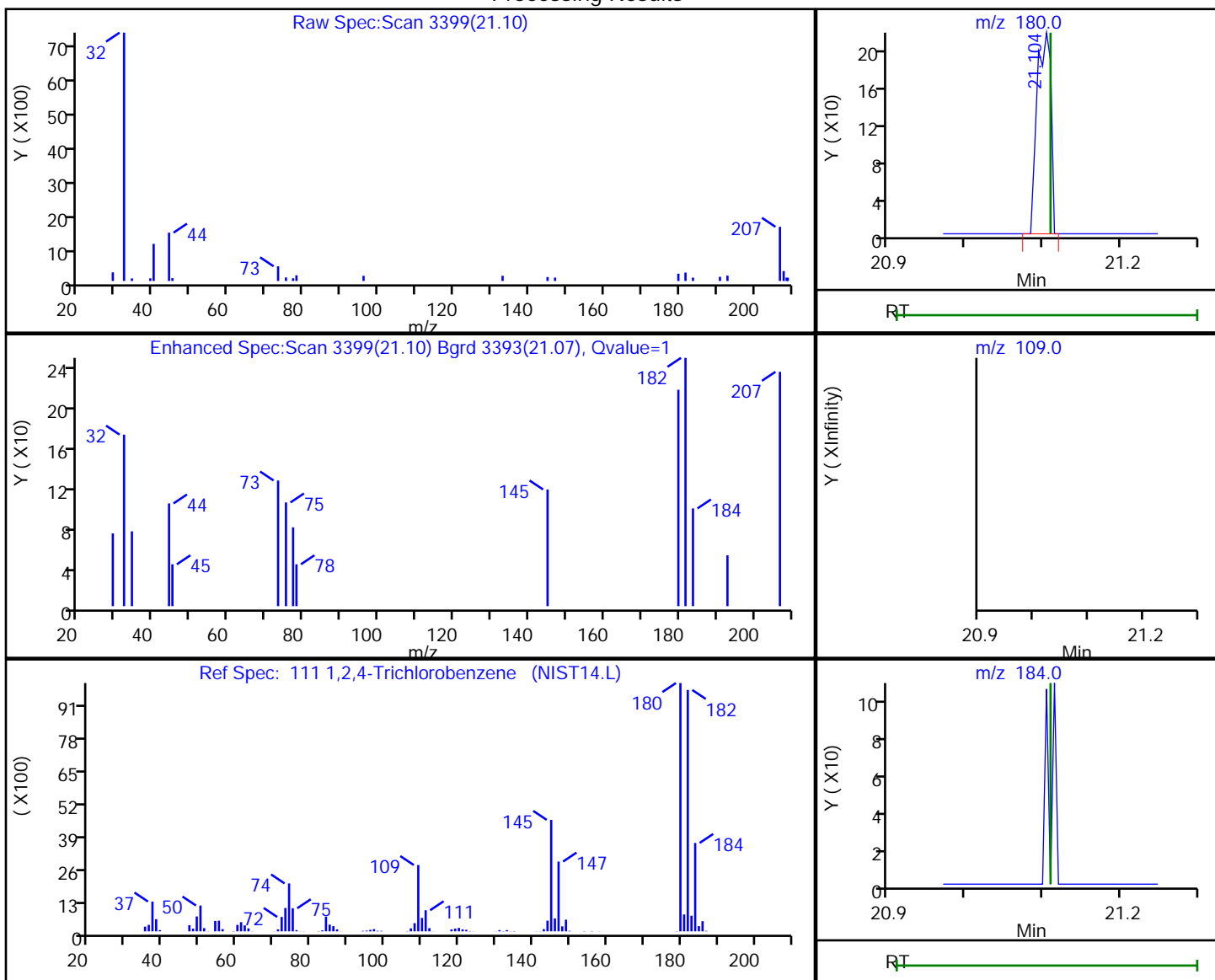
Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.87	96.83

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\H500BB22.D
 Injection Date: 26-Feb-2019 12:38:30 Instrument ID: MH
 Lims ID: MB
 Client ID:
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

111 1,2,4-Trichlorobenzene, CAS: 120-82-1

Processing Results



RT	Mass	Response	Amount
21.10	180.00	271	0.068168
21.11	109.00	0	
21.11	184.00	0	

Reviewer: khachitpongpanits, 27-Feb-2019 18:51:29

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27980/5
 Matrix: Air Lab File ID: HB27LOT14399MB.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 02/27/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.0691	J	0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27980/5
 Matrix: Air Lab File ID: HB27LOT14399MB.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	0.513	J	0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27LOT14399MB.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 27-Feb-2019 13:42:30 ALS Bottle#: 7 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-004
 Misc. Info.: 10107
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 15:50:38 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 15:50:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.814	8.814	0.000	96	264467	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1438660	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.724	15.724	0.000	88	1193009	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.404	-0.031	92	744381	4.00	3.83	
14 Butane	43	4.188	4.188	0.005	84	6426		0.0372	
19 2-Methylbutane	43	4.994	5.000	0.000	90	1907		0.0149	
109 1,2,3,5-Tetramethylbenzene	119	20.313	20.325	-0.006	6	267		NC	
112 1,2,3,4-Tetramethylbenzene	119	20.732	20.744	-0.005	7	402		NC	
111 1,2,4-Trichlorobenzene	180	21.099	21.116	-0.010	0	435		0.0691	
114 Benzo(b)thiophene	134	21.362	21.375	-0.006	1	499		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27LOT14399MB.D

Injection Date: 27-Feb-2019 13:42:30

Instrument ID: MH

Operator ID: AFB

Lims ID: MB

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

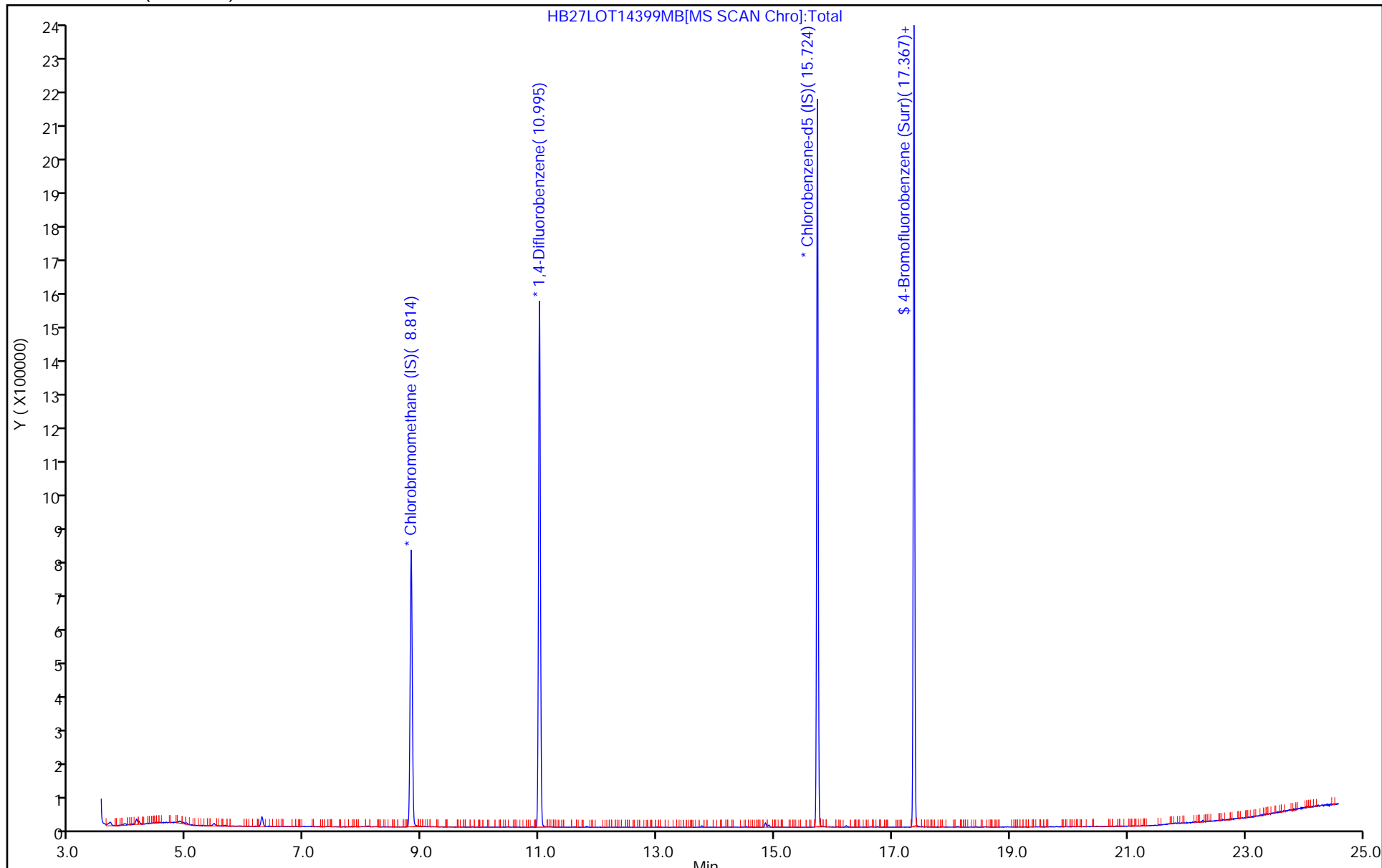
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27LOT14399MB.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 27-Feb-2019 13:42:30 ALS Bottle#: 7 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-004
 Misc. Info.: 10107
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 15:50:38 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 15:50:50

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.83	95.73

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27LOT14399MB.D

Injection Date: 27-Feb-2019 13:42:30

Instrument ID: MH

Lims ID: MB

Client ID:

Operator ID: AFB

ALS Bottle#: 7

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

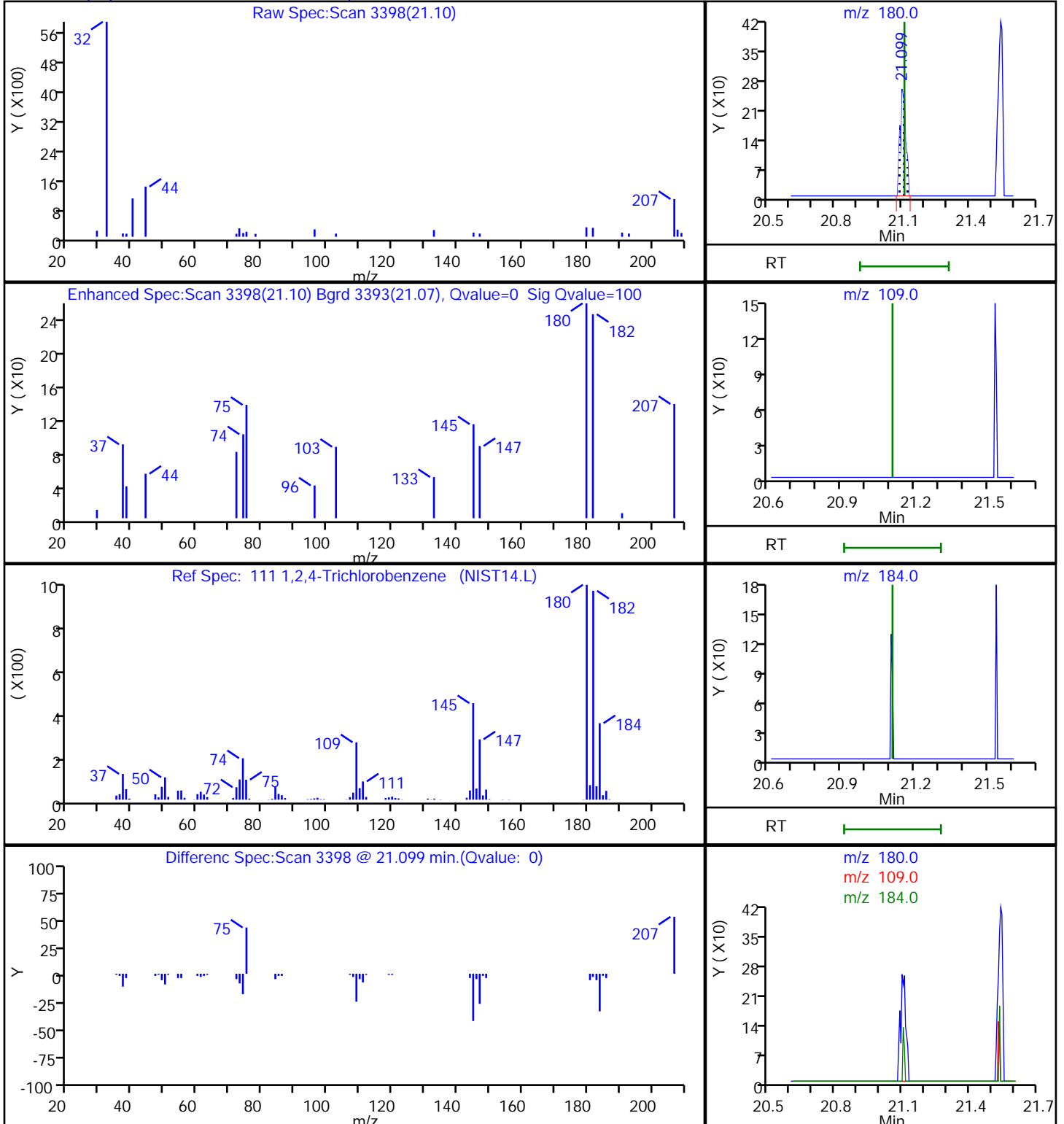
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

111 1,2,4-Trichlorobenzene, CAS: 120-82-1

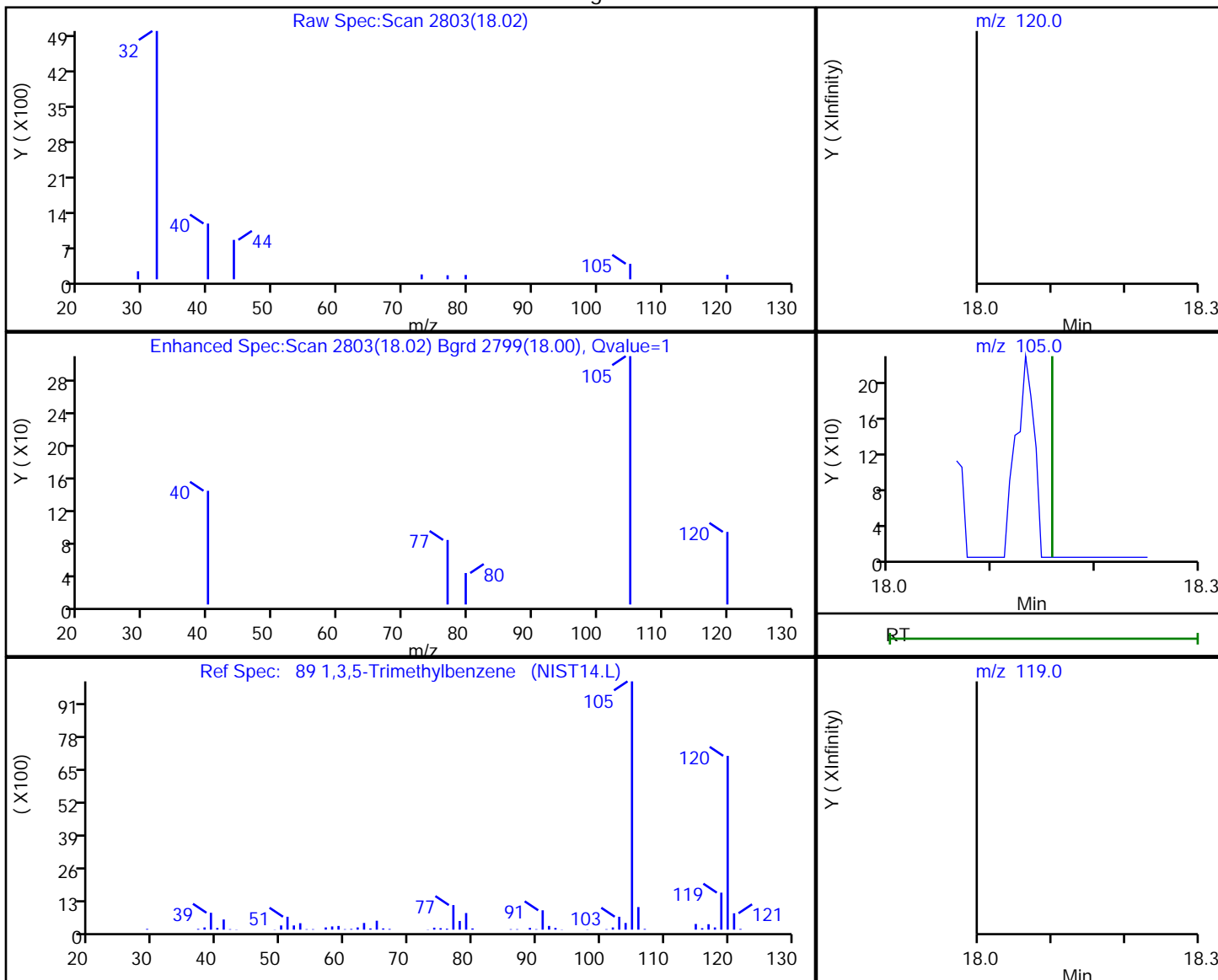


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27LOT14399MB.D
 Injection Date: 27-Feb-2019 13:42:30 Instrument ID: MH
 Lims ID: MB
 Client ID:
 Operator ID: AFB ALS Bottle#: 7 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Processing Results



RT	Mass	Response	Amount
18.02	120.00	52	0.027278
18.01	105.00	464	
18.16	119.00	0	

Reviewer: khachitpongpanits, 28-Feb-2019 15:50:23

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27936/1002
 Matrix: Air Lab File ID: HCCVB20-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 10:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.03		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.02		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.01		0.080	0.015
67-66-3	Chloroform	119.38	1.04		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.03		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	0.997		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.03		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.01		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.01		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.03		0.080	0.027
75-09-2	Methylene Chloride	84.93	0.996		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.05		0.40	0.068
91-20-3	Naphthalene	128.17	0.944		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.01		0.080	0.016
108-88-3	Toluene	92.14	1.04		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.01		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.789		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.02		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.04		0.080	0.021
79-01-6	Trichloroethene	131.39	0.998		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	0.759		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.03		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.08		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.06		0.040	0.029
1330-20-7	Xylenes, Total	106.17	3.15		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HCCVB20-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 26-Feb-2019 10:24:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-002
 Misc. Info.: S87
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:32:18 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:32:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.819	0.000	97	342352	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1857782	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.729	0.000	87	1578748	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.393	17.393	0.000	94	1014975	4.00	3.95	
6 Chlorodifluoromethane	51	3.682	3.682	0.000	97	283805	1.00	1.01	
7 Propene	41	3.692	3.692	0.000	94	123974	1.00	0.9712	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	430013	1.00	1.00	
9 Chloromethane	52	3.924	3.924	0.000	98	50737	1.00	1.01	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.930	0.000	96	308310	1.00	1.04	
12 Vinyl chloride	62	4.095	4.095	0.000	99	166103	1.00	1.06	
11 Acetaldehyde	44	4.105	4.105	0.000	99	290390	5.00	4.84	
13 Butadiene	54	4.183	4.183	0.000	71	118600	1.00	1.05	
14 Butane	43	4.183	4.183	0.000	85	245390	1.00	1.10	
15 Bromomethane	94	4.503	4.503	0.000	98	161886	1.00	1.02	
16 Chloroethane	64	4.648	4.648	0.000	96	75214	1.00	1.05	
17 Ethanol	31	4.819	4.819	0.000	96	287104	5.00	4.10	
18 Vinyl bromide	106	4.948	4.948	0.000	98	165294	1.00	1.10	
19 2-Methylbutane	43	4.994	4.994	0.000	92	177390	1.00	1.07	
21 Trichlorofluoromethane	101	5.211	5.211	0.000	100	402719	1.00	1.02	
20 Acrolein	56	5.258	5.258	0.000	93	52403	1.00	1.05	
22 Acetonitrile	40	5.330	5.330	0.000	98	64006	1.00	1.02	
23 Acetone	58	5.403	5.403	0.000	97	69063	1.00	1.07	
24 Pentane	72	5.434	5.434	0.000	95	19594	1.00	1.09	
25 Isopropyl alcohol	45	5.537	5.537	0.000	99	229943	1.00	1.14	
26 Ethyl ether	31	5.651	5.651	0.000	93	172097	1.00	1.08	
27 1,1-Dichloroethene	96	5.919	5.919	0.000	96	134004	1.00	1.01	
28 Acrylonitrile	53	6.054	6.054	0.000	94	108179	1.00	1.06	
30 1,1,2-Trichloro-1,2,2-trif	101	6.100	6.100	0.000	96	323203	1.00	1.02	
29 2-Methyl-2-propanol	59	6.162	6.162	0.000	95	230138	1.00	1.02	
31 Methylene Chloride	84	6.271	6.271	0.000	97	139413	1.00	1.00	
32 3-Chloro-1-propene	39	6.286	6.286	0.000	95	130607	1.00	1.05	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.431	6.431	0.000	100	400315	1.00	1.04	
34 trans-1,2-Dichloroethene	96	7.077	7.077	0.000	97	137582	1.00	1.01	
35 2-Methylpentane	43	7.098	7.098	0.000	96	295023	1.00	0.9417	
36 Methyl tert-butyl ether	73	7.258	7.258	0.000	97	338570	1.00	1.05	
37 1,1-Dichloroethane	63	7.501	7.501	0.000	99	268402	1.00	1.03	
38 Vinyl acetate	43	7.625	7.625	0.000	100	395665	1.00	1.07	
40 Hexane	56	8.075	8.075	0.000	92	104893	1.00	1.01	
39 2-Butanone (MEK)	72	8.106	8.106	0.000	97	59880	1.00	1.02	
171 Isopropyl ether	45	8.271	8.271	0.000	98	510129	1.00	1.05	
41 cis-1,2-Dichloroethene	96	8.483	8.483	0.000	96	142221	1.00	1.03	
42 Ethyl acetate	43	8.710	8.710	0.000	98	328391	1.00	0.99	
43 Chloroform	83	8.829	8.829	0.000	98	308803	1.00	1.04	
173 Tert-butyl ethyl ether	59	8.958	8.958	0.000	97	394591	1.00	0.9779	
44 Tetrahydrofuran	42	9.300	9.300	0.000	94	162694	1.00	1.02	
45 1,1,1-Trichloroethane	97	9.858	9.858	0.000	97	288612	1.00	1.02	
46 1,2-Dichloroethane	62	9.966	9.966	0.000	97	202712	1.00	1.01	
48 Cyclohexane	69	10.452	10.452	0.000	90	57830	1.00	0.99	
47 Benzene	78	10.457	10.457	0.000	98	403621	1.00	1.03	
50 Carbon tetrachloride	117	10.473	10.473	0.000	98	324072	1.00	1.02	
49 n-Butanol	31	10.540	10.540	0.000	71	52726	1.00	0.99	
51 2,3-Dimethylpentane	71	10.571	10.571	0.000	89	82278	1.00	1.01	
52 Thiophene	84	10.731	10.731	0.000	97	223510	1.00	0.99	
53 Isooctane	57	11.212	11.212	0.000	98	657202	1.00	1.01	
55 n-Heptane	71	11.589	11.589	0.000	94	124131	1.00	0.99	
54 1,2-Dichloropropane	63	11.677	11.677	0.000	92	170931	1.00	1.02	
56 Trichloroethene	130	11.713	11.713	0.000	95	184992	1.00	1.00	
57 Dibromomethane	93	11.796	11.796	0.000	97	196048	1.00	1.01	
58 Dichlorobromomethane	83	11.946	11.946	0.000	99	302139	1.00	1.03	
59 1,4-Dioxane	88	12.018	12.018	0.000	91	56691	1.00	0.9613	
60 Methyl methacrylate	41	12.059	12.059	0.000	92	180209	1.00	1.03	
61 Methylcyclohexane	83	12.478	12.478	0.000	94	266754	1.00	1.09	
62 4-Methyl-2-pentanone (MIBK)	43	12.933	12.933	0.000	98	351009	1.00	1.00	
63 cis-1,3-Dichloropropene	75	12.943	12.943	0.000	98	238123	1.00	1.08	
64 trans-1,3-Dichloropropene	75	13.641	13.641	0.000	99	207163	1.00	1.08	
65 Toluene	91	13.760	13.760	0.000	93	468532	1.00	1.04	
66 1,1,2-Trichloroethane	83	13.837	13.837	0.000	97	155868	1.00	1.04	
67 2-Methylthiophene	97	13.843	13.843	0.000	76	171472	NC	NC	
68 3-Methylthiophene	97	13.915	13.915	0.000	99	375426	NC	NC	
69 2-Hexanone	58	14.256	14.256	0.000	90	150133	1.00	1.02	
71 n-Octane	85	14.442	14.442	0.000	96	135297	1.00	1.05	
70 Chlorodibromomethane	129	14.540	14.540	0.000	98	324587	1.00	1.08	
72 Ethylene Dibromide	107	14.830	14.830	0.000	98	283378	1.00	1.04	
73 Tetrachloroethene	129	14.897	14.897	0.000	95	184848	1.00	1.01	
74 Chlorobenzene	112	15.776	15.776	0.000	94	372704	1.00	1.01	
75 2,3-Dimethylheptane	43	15.786	15.786	0.000	95	435055	1.00	0.9211	
76 Ethylbenzene	91	16.060	16.060	0.000	99	587980	1.00	1.03	
77 2-Ethylthiophene	97	16.163	16.163	0.000	99	430782	NC	NC	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	935406	2.00	2.12	
81 n-Nonane	57	16.639	16.639	0.000	95	300388	1.00	1.06	
79 Bromoform	173	16.680	16.680	0.000	93	323629	1.00	0.9590	
80 Styrene	104	16.690	16.690	0.000	99	324685	1.00	1.09	
82 o-Xylene	91	16.752	16.752	0.000	99	461832	1.00	1.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 1,1,2,2-Tetrachloroethane	83	17.093	17.093	0.000	99	382587	1.00	1.05	
84 1,2,3-Trichloropropane	110	17.259	17.259	0.000	97	90368	1.00	1.01	
85 Isopropylbenzene	105	17.362	17.362	0.000	97	641486	1.00	1.03	
86 N-Propylbenzene	120	17.926	17.926	0.000	98	167472	1.00	1.03	
87 2-Chlorotoluene	126	17.972	17.972	0.000	98	163197	1.00	1.03	
88 4-Ethyltoluene	105	18.081	18.081	0.000	98	582392	1.00	0.9880	
89 1,3,5-Trimethylbenzene	120	18.158	18.158	0.000	92	281321	1.00	1.08	
90 Alpha Methyl Styrene	118	18.401	18.401	0.000	87	228950	1.00	0.9320	
91 n-Decane	57	18.453	18.453	0.000	88	389456	1.00	1.07	
92 tert-Butylbenzene	119	18.597	18.597	0.000	90	563791	1.00	1.02	
93 1,2,4-Trimethylbenzene	105	18.613	18.613	0.000	96	528367	1.00	1.03	
95 sec-Butylbenzene	105	18.877	18.877	0.000	99	790099	1.00	1.03	
94 1,3-Dichlorobenzene	146	18.892	18.892	0.000	98	354582	1.00	0.9502	
96 Benzyl chloride	91	18.970	18.970	0.000	97	363423	1.00	0.9544	
97 1,4-Dichlorobenzene	146	18.985	18.985	0.000	95	333714	1.00	0.9450	
98 4-Isopropyltoluene	119	19.042	19.042	0.000	97	623731	1.00	1.05	
99 1,2,3-Trimethylbenzene	105	19.099	19.099	0.000	99	383341	1.00	0.7590	
100 Butylcyclohexane	83	19.150	19.150	0.000	92	401867	1.00	0.9804	
102 2,3-Dihydroindene	117	19.352	19.352	0.000	93	480462	1.00	0.9724	
101 1,2-Dichlorobenzene	146	19.352	19.352	0.000	83	354892	1.00	0.9548	
103 Indene	116	19.486	19.486	0.000	88	329049	1.00	0.7742	
104 n-Butylbenzene	91	19.492	19.492	0.000	96	669649	1.00	1.09	
105 Undecane	57	19.802	19.802	0.000	94	427211	1.00	1.01	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.869	19.869	0.000	98	439637	NC	NC	
106 1,2-Dibromo-3-Chloropropan	157	19.972	19.972	0.000	95	139664	1.00	0.9062	
107 1,2,4,5-Tetramethylbenzene	119	20.262	20.262	0.000	97	518612	1.00	0.9326	
109 1,2,3,5-Tetramethylbenzene	119	20.319	20.319	0.000	95	308075	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	20.732	20.732	0.000	97	403323	NC	NC	
110 Dodecane	57	20.892	20.892	0.000	93	382220	1.00	0.9325	
111 1,2,4-Trichlorobenzene	180	21.109	21.109	0.000	93	224793	1.00	0.7888	
113 Naphthalene	128	21.254	21.254	0.000	99	522360	1.00	0.9437	
114 Benzo(b)thiophene	134	21.368	21.368	0.000	99	218307	NC	NC	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	93	319432	1.00	0.9106	
116 1,2,3-Trichlorobenzene	180	21.543	21.543	0.000	95	275205	1.00	0.9307	
117 2-Methylnaphthalene	142	22.153	22.153	0.000	100	108812	1.00	0.5113	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	100	133674	1.00	0.4433	
A 120 C8 Range	1	14.442	(14.396-14.489)		0	1388951	1.00	1.01	
S 121 Xylenes, Total	100				0		3.00	3.15	
S 122 1,2-Dichloroethene, Total	1				0		2.00	2.04	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00087

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HCCVB20-LCS.d

Injection Date: 26-Feb-2019 10:24:30

Instrument ID: MH

Operator ID: HMT

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

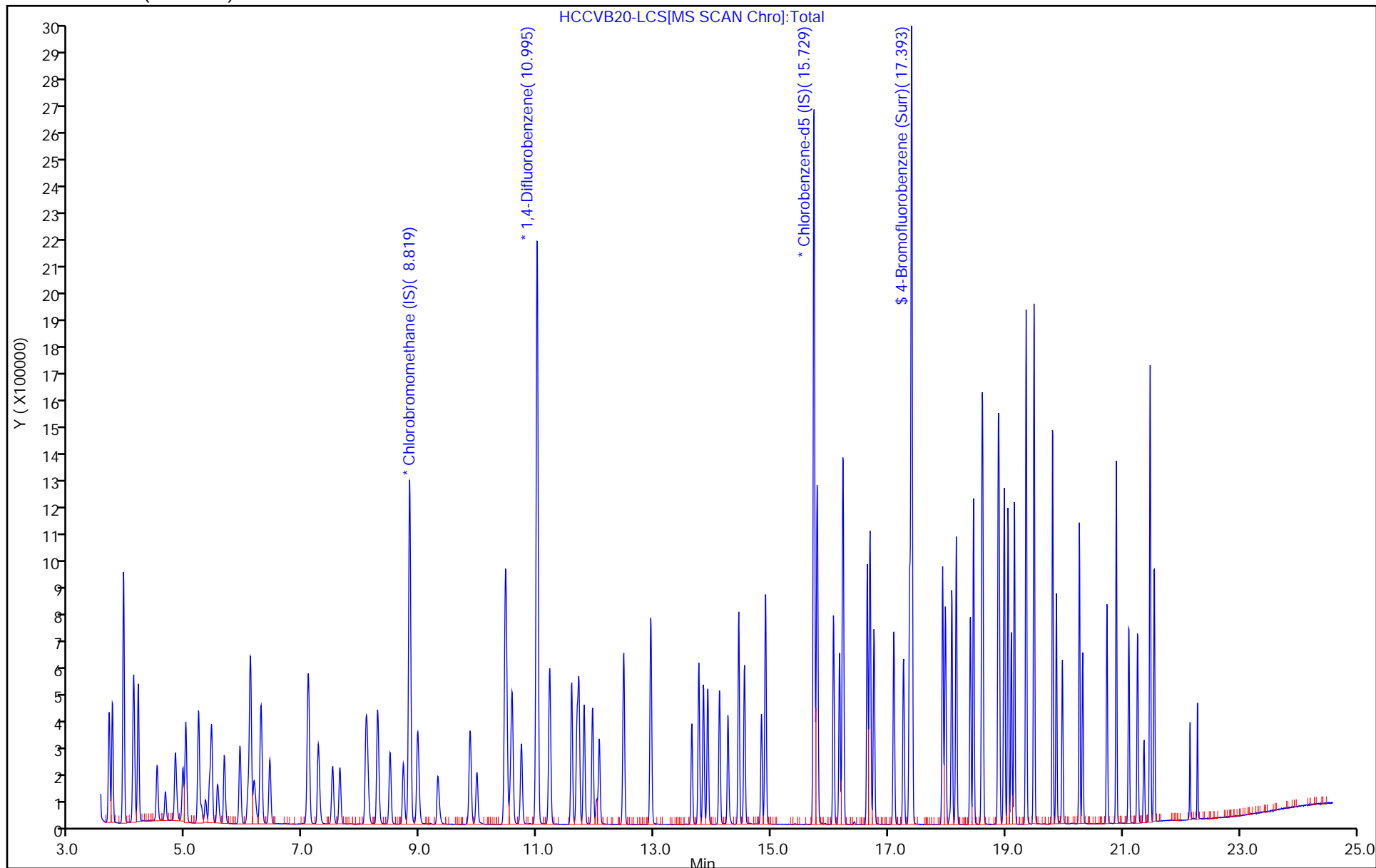
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\HCCVB20-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 26-Feb-2019 10:24:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010936-002
 Misc. Info.: S87
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10936.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:32:18 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 18:32:18

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.95	98.63

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27980/1002
 Matrix: Air Lab File ID: HCCVB27-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 11:50
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.08		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.09		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.09		0.080	0.015
67-66-3	Chloroform	119.38	1.15		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.09		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.06		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.11		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.09		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.06		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.09		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.06		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.08		0.40	0.068
91-20-3	Naphthalene	128.17	1.16		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.06		0.080	0.016
108-88-3	Toluene	92.14	1.10		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.04		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.910		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.09		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.12		0.080	0.021
79-01-6	Trichloroethene	131.39	1.04		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	0.835		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.15		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.18		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.11		0.040	0.029
1330-20-7	Xylenes, Total	106.17	3.43		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HCCVB27-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 27-Feb-2019 11:50:30 ALS Bottle#: 7 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-002
 Misc. Info.: S87
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 15:09:58 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits

Date: 28-Feb-2019 15:09:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.814	8.814	0.000	98	226060	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1253478	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.724	15.724	0.000	88	1073197	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.398	17.398	0.000	93	721930	4.00	4.13	
6 Chlorodifluoromethane	51	3.682	3.682	0.000	97	202448	1.00	1.09	
7 Propene	41	3.692	3.692	0.000	97	86192	1.00	1.02	
8 Dichlorodifluoromethane	85	3.738	3.738	0.000	100	301415	1.00	1.06	
9 Chloromethane	52	3.925	3.925	0.000	98	36653	1.00	1.10	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.930	0.000	93	205505	1.00	1.05	
12 Vinyl chloride	62	4.090	4.090	0.000	99	114280	1.00	1.11	
11 Acetaldehyde	44	4.100	4.100	0.000	98	207270	5.00	5.23	
14 Butane	43	4.183	4.183	0.000	85	171633	1.00	1.16	
13 Butadiene	54	4.183	4.183	0.000	71	82818	1.00	1.11	
15 Bromomethane	94	4.503	4.503	0.000	98	113762	1.00	1.09	
16 Chloroethane	64	4.648	4.648	0.000	94	51634	1.00	1.10	
17 Ethanol	31	4.824	4.824	0.000	97	209034	5.00	4.52	
18 Vinyl bromide	106	4.943	4.943	0.000	98	116901	1.00	1.18	
19 2-Methylbutane	43	4.994	4.994	0.000	93	126651	1.00	1.16	
21 Trichlorofluoromethane	101	5.211	5.211	0.000	99	285948	1.00	1.10	
20 Acrolein	56	5.263	5.263	0.000	94	36175	1.00	1.09	
22 Acetonitrile	40	5.330	5.330	0.000	98	46088	1.00	1.11	
23 Acetone	58	5.403	5.403	0.000	96	48405	1.00	1.14	
24 Pentane	72	5.434	5.434	0.000	97	13358	1.00	1.12	
25 Isopropyl alcohol	45	5.542	5.542	0.000	98	159072	1.00	1.19	
26 Ethyl ether	31	5.651	5.651	0.000	91	125248	1.00	1.19	
27 1,1-Dichloroethene	96	5.920	5.920	0.000	96	92705	1.00	1.06	
28 Acrylonitrile	53	6.054	6.054	0.000	94	75257	1.00	1.11	
30 1,1,2-Trichloro-1,2,2-trif	101	6.095	6.095	0.000	95	230920	1.00	1.11	
29 2-Methyl-2-propanol	59	6.168	6.168	0.000	97	156753	1.00	1.05	
31 Methylene Chloride	84	6.271	6.271	0.000	96	97855	1.00	1.06	
32 3-Chloro-1-propene	39	6.286	6.286	0.000	95	93284	1.00	1.13	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.426	6.426	0.000	100	284642	1.00	1.12	
34 trans-1,2-Dichloroethene	96	7.077	7.077	0.000	96	93857	1.00	1.04	
35 2-Methylpentane	43	7.093	7.093	0.000	96	209797	1.00	1.01	
36 Methyl tert-butyl ether	73	7.258	7.258	0.000	96	230900	1.00	1.08	
37 1,1-Dichloroethane	63	7.501	7.501	0.000	100	190789	1.00	1.11	
38 Vinyl acetate	43	7.625	7.625	0.000	100	276476	1.00	1.13	
40 Hexane	56	8.075	8.075	0.000	92	72970	1.00	1.07	
39 2-Butanone (MEK)	72	8.106	8.106	0.000	98	41623	1.00	1.07	
171 Isopropyl ether	45	8.271	8.271	0.000	97	362606	1.00	1.13	
41 cis-1,2-Dichloroethene	96	8.483	8.483	0.000	97	99834	1.00	1.09	
42 Ethyl acetate	43	8.710	8.710	0.000	98	234901	1.00	1.08	
43 Chloroform	83	8.824	8.824	0.000	97	225441	1.00	1.15	
173 Tert-butyl ethyl ether	59	8.959	8.959	0.000	98	274855	1.00	1.03	
44 Tetrahydrofuran	42	9.300	9.300	0.000	94	113795	1.00	1.08	
45 1,1,1-Trichloroethane	97	9.853	9.853	0.000	97	203571	1.00	1.09	
46 1,2-Dichloroethane	62	9.966	9.966	0.000	96	147638	1.00	1.09	
48 Cyclohexane	69	10.452	10.452	0.000	88	39593	1.00	1.00	
47 Benzene	78	10.452	10.452	0.000	97	287118	1.00	1.08	
50 Carbon tetrachloride	117	10.473	10.473	0.000	97	233556	1.00	1.09	
49 n-Butanol	31	10.545	10.545	0.000	68	38399	1.00	1.07	
51 2,3-Dimethylpentane	71	10.566	10.566	0.000	89	57748	1.00	1.05	
52 Thiophene	84	10.731	10.731	0.000	97	157660	1.00	1.04	
53 Isooctane	57	11.212	11.212	0.000	98	471784	1.00	1.08	
55 n-Heptane	71	11.589	11.589	0.000	94	86852	1.00	1.03	
54 1,2-Dichloropropane	63	11.677	11.677	0.000	92	124250	1.00	1.10	
56 Trichloroethene	130	11.708	11.708	0.000	94	129936	1.00	1.04	
57 Dibromomethane	93	11.801	11.801	0.000	95	144568	1.00	1.10	
58 Dichlorobromomethane	83	11.946	11.946	0.000	98	221351	1.00	1.12	
59 1,4-Dioxane	88	12.018	12.018	0.000	95	38707	1.00	0.9728	
60 Methyl methacrylate	41	12.060	12.060	0.000	90	133849	1.00	1.13	
61 Methylcyclohexane	83	12.478	12.478	0.000	93	186682	1.00	1.13	
62 4-Methyl-2-pentanone (MIBK)	43	12.933	12.933	0.000	98	251565	1.00	1.06	
63 cis-1,3-Dichloropropene	75	12.943	12.943	0.000	98	170173	1.00	1.15	
64 trans-1,3-Dichloropropene	75	13.641	13.641	0.000	97	145734	1.00	1.12	
65 Toluene	91	13.760	13.760	0.000	92	335127	1.00	1.10	
66 1,1,2-Trichloroethane	83	13.837	13.837	0.000	97	113418	1.00	1.12	
67 2-Methylthiophene	97	13.837	13.837	0.000	77	123193	NC	NC	
68 3-Methylthiophene	97	13.910	13.910	0.000	99	263912	NC	NC	
69 2-Hexanone	58	14.261	14.261	0.000	90	106946	1.00	1.07	
71 n-Octane	85	14.442	14.442	0.000	97	95789	1.00	1.10	
70 Chlorodibromomethane	129	14.540	14.540	0.000	97	235642	1.00	1.15	
72 Ethylene Dibromide	107	14.830	14.830	0.000	98	202945	1.00	1.10	
73 Tetrachloroethene	129	14.897	14.897	0.000	94	131616	1.00	1.06	
74 Chlorobenzene	112	15.776	15.776	0.000	93	272503	1.00	1.08	
75 2,3-Dimethylheptane	43	15.786	15.786	0.000	94	333152	1.00	1.04	
76 Ethylbenzene	91	16.060	16.060	0.000	99	423517	1.00	1.09	
77 2-Ethylthiophene	97	16.163	16.163	0.000	99	315340	NC	NC	
78 m-Xylene & p-Xylene	91	16.220	16.220	0.000	98	689557	2.00	2.30	
81 n-Nonane	57	16.639	16.639	0.000	95	219720	1.00	1.14	
79 Bromoform	173	16.680	16.680	0.000	92	232814	1.00	1.01	
80 Styrene	104	16.690	16.690	0.000	98	239143	1.00	1.18	
82 o-Xylene	91	16.752	16.752	0.000	98	344391	1.00	1.13	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 1,1,2,2-Tetrachloroethane	83	17.094	17.094	0.000	99	285654	1.00	1.15	
84 1,2,3-Trichloropropane	110	17.259	17.259	0.000	96	65759	1.00	1.08	
85 Isopropylbenzene	105	17.362	17.362	0.000	97	466039	1.00	1.11	
86 N-Propylbenzene	120	17.926	17.926	0.000	98	121617	1.00	1.10	
87 2-Chlorotoluene	126	17.977	17.977	0.000	98	119504	1.00	1.11	
88 4-Ethyltoluene	105	18.086	18.086	0.000	98	433728	1.00	1.08	
89 1,3,5-Trimethylbenzene	120	18.158	18.158	0.000	92	208540	1.00	1.18	
90 Alpha Methyl Styrene	118	18.401	18.401	0.000	86	170243	1.00	1.02	
91 n-Decane	57	18.453	18.453	0.000	88	300572	1.00	1.21	
92 tert-Butylbenzene	119	18.598	18.598	0.000	90	421160	1.00	1.12	
93 1,2,4-Trimethylbenzene	105	18.613	18.613	0.000	96	402528	1.00	1.15	
95 sec-Butylbenzene	105	18.877	18.877	0.000	98	595352	1.00	1.14	
94 1,3-Dichlorobenzene	146	18.892	18.892	0.000	98	269246	1.00	1.06	
96 Benzyl chloride	91	18.975	18.975	0.000	97	276584	1.00	1.07	
97 1,4-Dichlorobenzene	146	18.985	18.985	0.000	96	250865	1.00	1.05	
98 4-Isopropyltoluene	119	19.047	19.047	0.000	97	471219	1.00	1.16	
99 1,2,3-Trimethylbenzene	105	19.099	19.099	0.000	99	286666	1.00	0.8350	
100 Butylcyclohexane	83	19.156	19.156	0.000	91	314740	1.00	1.13	
102 2,3-Dihydroindene	117	19.352	19.352	0.000	93	366103	1.00	1.09	
101 1,2-Dichlorobenzene	146	19.357	19.357	0.000	83	270251	1.00	1.07	
103 Indene	116	19.486	19.486	0.000	87	254677	1.00	0.8815	
104 n-Butylbenzene	91	19.492	19.492	0.000	96	529546	1.00	1.26	
105 Undecane	57	19.807	19.807	0.000	94	339087	1.00	1.18	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.874	19.874	0.000	98	333863	NC	NC	
106 1,2-Dibromo-3-Chloropropan	157	19.977	19.977	0.000	95	104745	1.00	1.00	
107 1,2,4,5-Tetramethylbenzene	119	20.267	20.267	0.000	96	402327	1.00	1.06	
109 1,2,3,5-Tetramethylbenzene	119	20.319	20.319	0.000	94	237961	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	20.737	20.737	0.000	97	317760	NC	NC	
110 Dodecane	57	20.897	20.897	0.000	92	337919	1.00	1.21	
111 1,2,4-Trichlorobenzene	180	21.109	21.109	0.000	93	178505	1.00	0.9102	
113 Naphthalene	128	21.259	21.259	0.000	99	434769	1.00	1.16	
114 Benzo(b)thiophene	134	21.368	21.368	0.000	99	182005	NC	NC	
115 Hexachlorobutadiene	225	21.471	21.471	0.000	91	249871	1.00	1.05	
116 1,2,3-Trichlorobenzene	180	21.544	21.544	0.000	95	228620	1.00	1.14	
117 2-Methylnaphthalene	142	22.153	22.153	0.000	100	114535	1.00	0.7918	
118 1-Methylnaphthalene	142	22.283	22.283	0.000	100	145977	1.00	0.7121	
A 120 C8 Range	1	14.442	(14.390-14.504)		0	1047632	1.00	1.13	
S 121 Xylenes, Total	100				0		3.00	3.43	
S 122 1,2-Dichloroethene, Total	1				0		2.00	2.14	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00087

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HCCVB27-LCS.d

Injection Date: 27-Feb-2019 11:50:30

Instrument ID: MH

Operator ID: AFB

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

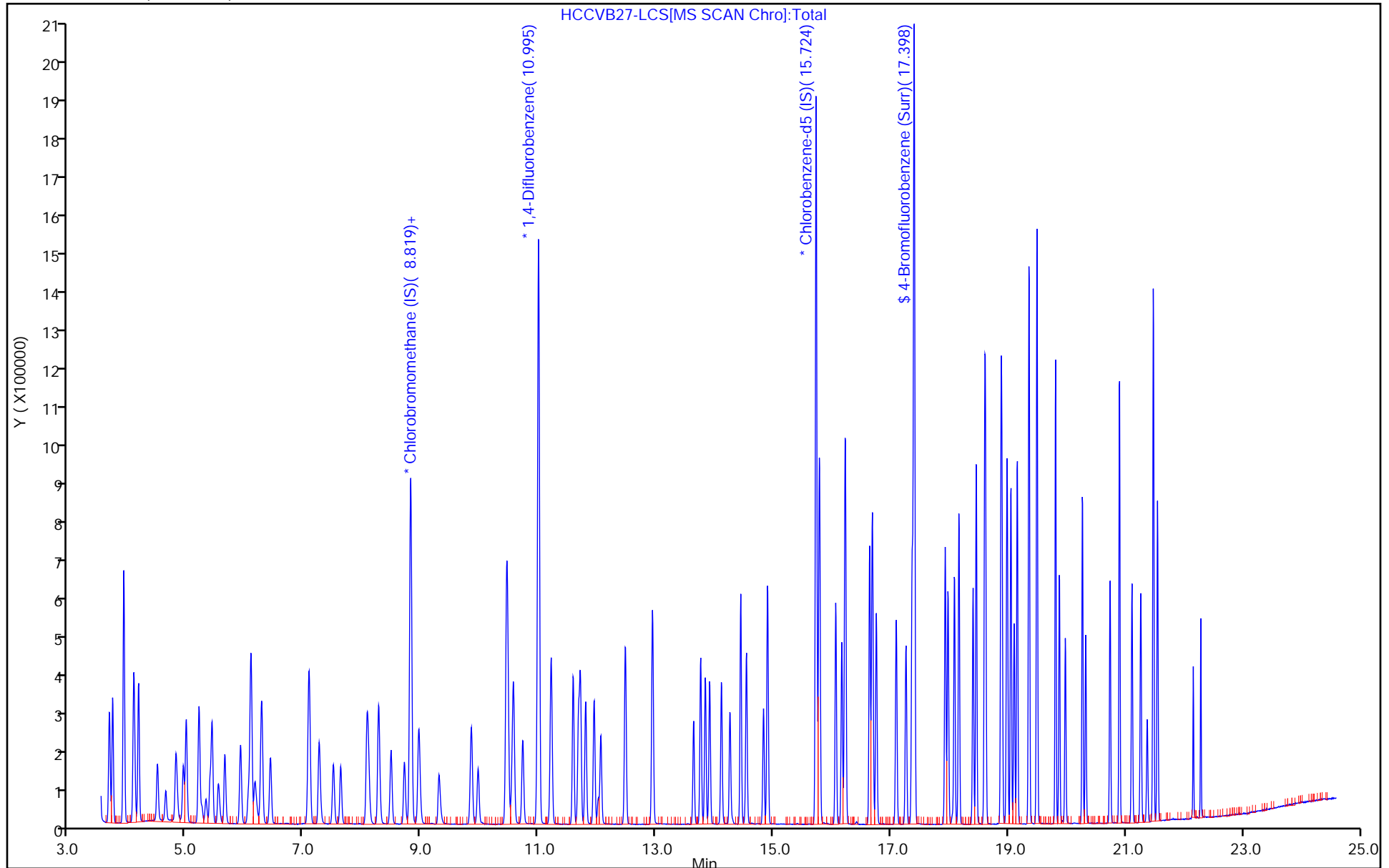
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HCCVB27-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 27-Feb-2019 11:50:30 ALS Bottle#: 7 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-002
 Misc. Info.: S87
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 15:09:58 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 15:09:58

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.13	103.20

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Instrument ID: MH Start Date: 02/20/2019 13:11

Analysis Batch Number: 27843 End Date: 02/21/2019 03:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27843/1		02/20/2019 13:11	1	HBFB20IC.D	RTX-5 0.32 (mm)
IC 140-27843/3		02/20/2019 15:12	1	HB20IC09.D	RTX-5 0.32 (mm)
IC 140-27843/5		02/20/2019 16:59	1	HB20IC10.D	RTX-5 0.32 (mm)
IC 140-27843/8		02/20/2019 19:38	1	HB20IC01.D	RTX-5 0.32 (mm)
IC 140-27843/9		02/20/2019 20:31	1	HB20IC02.D	RTX-5 0.32 (mm)
IC 140-27843/10		02/20/2019 21:26	1	HB20IC03.D	RTX-5 0.32 (mm)
IC 140-27843/11		02/20/2019 22:20	1	HB20IC04.D	RTX-5 0.32 (mm)
IC 140-27843/12		02/20/2019 23:14	1	HB20IC05.D	RTX-5 0.32 (mm)
IC 140-27843/13		02/21/2019 00:08	1	HB20IC06.D	RTX-5 0.32 (mm)
ICIS 140-27843/14		02/21/2019 01:03	1	HB20IC07.D	RTX-5 0.32 (mm)
IC 140-27843/15		02/21/2019 01:57	1	HB20IC08.D	RTX-5 0.32 (mm)
ICV 140-27843/17		02/21/2019 03:43	1	HB20ICV.D	RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date:	4/20/19	Instrument:	MH	Chrom WL #:	10899	TALS Batch & Event #	TO14/15: 1829 27843	DOD:	1830 / 27844	OHIO:	1831 / 27845		
Chrom/Worklist Review							1 st	Comments			2 nd		
1. Re-read each Limit Group	[method editor-limit groups]					✓					na		
2. Verify LODV in Chrom	[method editor -> edit -> MDL]					✓					na		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level)	[WL Sample Reagents Tab vs. Entech]					✓					✓		
4. Files linked properly to calibration levels?	[Sample List- Lab ID vs. Info]					✓					✓		
5. Did BFB meet tune criteria?	[F8]					✓					✓		
6. Were all standards injected within 24 hr of BFB?	[F7]					✓					✓		
7. High point checked for saturation and point removed if so?	[Chrom]					✓					✓		
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given?	[Chrom]					✓					na		
9. RT for each IS +20 sec avg. RT?	[F6 IstdRec]					✓					✓		
10. Area for each IS ± 40% avg. area?	[F6 IstdRec]					✓					✓		
11. Each analyte ± 0.06 RRT of avg. RRT?	[F6 - RRT]					✓					✓		
12. Elution order checked on isomeric pairs?	[Chrom]												
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane						✓					✓		
• 2-methyl butane / acrolein						✓					✓		
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane						✓					✓		
• vinyl acetate / hexane						✓					✓		
• cis- and trans- isomers						✓					✓		
• ethyl benzene / m/p-xylene / o-xylene						✓					✓		
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene						✓					✓		
• tert-butylbenzene/4-isopropyltoluene						✓					✓		
• 1,3-, 1,4-, and 1,2-dichlorobenzene						✓					✓		
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes						✓					na		
• 1,2,4- and 1,2,3-trichlorobenzenes						✓					✓		
• 2-, and 1-methylnaphthalene						✓					✓		
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?						✓					✓		
MLG Review							TO	DOD	OH	Comments	TO	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50%	[F6 Σ]					✓	✓	✓			✓	✓	✓
15. Were at least 5 levels of each compound analyzed?	[F6]					✓	✓	✓			✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.?	[F6]					✓	✓	✓			✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad)	[F6]					✓	✓	✓			✓	✓	✓
18. If curves were used, is correlation coefficient ≥ 0.990?	[F6]					✓	✓	✓			✓	✓	✓
19. Is the intercept less than the RL for each curve?	[F6]					✓	✓	✓			✓	✓	✓
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous.	[Cntl-C, details]					✓	✓	na			✓	✓	na
21. Is low point RSE < 50 %?	[F6]					✓	✓	✓			✓	✓	✓
22. Is the second source analysis within limits?	[F8 - icv]					✓	✓	✓			✓	✓	✓
Analyst/Date:	JH 4/20/19					2nd Level Reviewer/Date: [Signature] 02/25/19							
TALS Review							TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL						✓					na	na	na
24. Graphics uploaded?	[paperclip]					✓	✓	✓			✓	✓	✓
25. All points are in the most recent active calibration event?	[Calibration Events - 'Fix ICAL linkage' if needed]					✓	✓	✓			✓	✓	✓
26. Runs linked to BFB?	[QC Links]					✓	✓	✓			✓	✓	✓
27. Run Checklist and acknowledge findings	[F8]					✓	✓	✓			✓	✓	✓
28. If criteria not met, was a NCM generated?						na	na	na			na	na	na
29. After review in TALS, approve the method in TALS.						na	na	na			na	na	na
30. After verifying TALS is correct, lock method in Chrom	<resolve any error issues>					na	na	na			na	na	na
31. Checklist & Entech report scanned, attached & assigned properly?						na	na	na			na	na	na
Analyst/date:	JH 4/20/19					2nd Level Reviewer/date: [Signature] 02/25/19							
Comments:						Comments:							

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Instrument ID: MH Start Date: 02/26/2019 09:56

Analysis Batch Number: 27936 End Date: 02/27/2019 09:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27936/1		02/26/2019 09:56	1	HBFB20.D	RTX-5 0.32 (mm)
CCVIS 140-27936/2		02/26/2019 10:24	1	HCCVB20.D	RTX-5 0.32 (mm)
LCS 140-27936/1002		02/26/2019 10:24	1	HCCVB20-LCS.d	RTX-5 0.32 (mm)
MB 140-27936/4		02/26/2019 12:38	1	H500BB22.D	RTX-5 0.32 (mm)
140-14390-1		02/26/2019 13:31	1	HB26P101.D	RTX-5 0.32 (mm)
140-14390-3		02/26/2019 15:17	1	HB26P103.D	RTX-5 0.32 (mm)
140-14390-4		02/26/2019 16:10	1	HB26P104.D	RTX-5 0.32 (mm)
140-14390-5		02/26/2019 17:03	1	HB26P105.D	RTX-5 0.32 (mm)
140-14390-6		02/26/2019 17:56	1	HB26P106.D	RTX-5 0.32 (mm)
140-14390-7		02/26/2019 18:49	1	HB26P107.D	RTX-5 0.32 (mm)
140-14390-8		02/26/2019 19:43	1	HB26P108.D	RTX-5 0.32 (mm)
140-14390-9		02/26/2019 20:36	1	HB26P109.D	RTX-5 0.32 (mm)
140-14390-10		02/26/2019 21:29	1	HB26P110.D	RTX-5 0.32 (mm)
140-14390-11		02/26/2019 22:23	1.67	HB26P111.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 23:16	1		RTX-5 0.32 (mm)
140-14390-12		02/27/2019 00:09	1	HB26P112.D	RTX-5 0.32 (mm)
140-14390-13		02/27/2019 01:02	1	HB26P113.D	RTX-5 0.32 (mm)
140-14390-14		02/27/2019 01:55	1	HB26P114.D	RTX-5 0.32 (mm)
140-14390-15		02/27/2019 02:48	1	HB26P115.D	RTX-5 0.32 (mm)
140-14390-16		02/27/2019 03:41	1	HB26P116D.D	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 04:35	1		RTX-5 0.32 (mm)
140-14390-1 DL		02/27/2019 05:28	1	HB26P101D.D	RTX-5 0.32 (mm)
140-14390-2		02/27/2019 06:22	1	HB26P102R.D	RTX-5 0.32 (mm)
140-14390-17		02/27/2019 07:16	1	HB26P203R.D	RTX-5 0.32 (mm)
140-14390-4 DL		02/27/2019 08:09	1	HB26P104DL.D	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 09:56	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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Instrument/Date	MH 2/26/2019	Routine	DOD	OHIO VAP
CCAL Chrom WL #	70936	CCAL Batch #	27936	
ICAL Chrom WL #	10894	ICAL Batch # / Event #	27843 / 1829	
Chrom Review		1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]		/		na
2. Did BFB meet tune criteria? [F8]		/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]		/	List Target analytes outside CCV limits: _____	/
4. Elution order checked on isomeric pairs? [Chrom]				
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		/		/
• 2-methyl butane / acrolein		/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		/		/
• vinyl acetate / hexane		/		/
• cis- and trans- isomers		/		/
• ethyl benzene / m/p-xylene / o-xylene		/		/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene		/		/
• tert-butylbenzene/4-isopropyltoluene		/		/
• 1,3-, 1,4-, and 1,2-dichlorobenzene		/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		NA		na
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene		/		na
• 2-, and 1-methylnaphthalene		/		/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?		NA		na
6. Has the RT been updated to the method?		/		/
Analyst/date	Suphanna Kh 2/27/2019	2nd Level Reviewer/date	[Signature] 02/28/19	
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]		/	Volumes ✓ on screen 2/27/19	/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]		/		/
9. Can dilution history verified? [Mgmt Report]		/		/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:		/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	/
11. All runs - peaks ID'd correctly and false positives removed?		/		/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?		/		/
13. IS/Surr within limits? List samples and reason (e.g. 1 thru 5): [Batch Results IS & SUR Tab]		/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur, Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)	/
Sample Reason Sample Reason				
14. Samples outside calibration range scheduled for dilution?		/	<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution	/
Chrom Review		1st	If No, why is data reportable?	2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:		/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.	/
Sample Reason Sample Reason				
16. RIC inspected for proper integration for TPH?		NA		na
17. Obvious non-TPH peaks excluded?		/		na
18. Individual TPH peak area < octane high point area?		/		na

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	NA														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input type="checkbox"/> CCV - %D - LCS criteria met (NCM# _____) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		NA														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	NA														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random; Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr> <td>>90</td> <td>5</td> </tr> <tr> <td>71 - 90</td> <td>4</td> </tr> <tr> <td>51 - 70</td> <td>3</td> </tr> <tr> <td>31 - 50</td> <td>2</td> </tr> <tr> <td>11 - 30</td> <td>1</td> </tr> <tr> <td>< 11</td> <td>0</td> </tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	< 11	0			
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
< 11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	/		/														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	/		/														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-27936/4 200 mL blank ID: _____	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	NA		NA														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	NA		/														
40. Checklist & Entech report scanned, attached & assigned properly?	NA		/														

Analyst: Suphanya Kh.	Date: 2/27/2019	2nd Level Reviewer:	Date: 2/25/19
Comments:		Comments:	
CI line 14 for 1,3,5-trimethylbenzene			
line 23 for Chlorodifluoromethane			
<p>Example Calculation: 140-14990-3 Chloroform</p> <p>On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF</p> $0.083240 \times \frac{500}{100} \times 1.0 = 0.42$			
Worked up lines #26-28, & #10 2/27/19			

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Instrument ID: MH Start Date: 02/27/2019 11:22

Analysis Batch Number: 27980 End Date: 02/28/2019 07:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27980/1		02/27/2019 11:22	1	HBFB27.D	RTX-5 0.32 (mm)
CCVIS 140-27980/2		02/27/2019 11:50	1	HCCVB27.D	RTX-5 0.32 (mm)
LCS 140-27980/1002		02/27/2019 11:50	1	HCCVB27-LCS.d	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 13:42	1		RTX-5 0.32 (mm)
MB 140-27980/5		02/27/2019 13:42	1	HB27LOT14399MB.D	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 14:36	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 16:42	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 18:27	1.33		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 19:20	4.93		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 20:14	1		RTX-5 0.32 (mm)
140-14390-5 DL		02/28/2019 03:30	1	HB27P112.D	RTX-5 0.32 (mm)
140-14390-18		02/28/2019 04:23	1	HB27P113.D	RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 06:06	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 07:01	1		RTX-5 0.32 (mm)
ZZZZZ		02/28/2019 07:56	1.33		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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Instrument/Date	MH 2/27/2019	<u>Routine</u>	<u>DOD</u>	<u>OHIO VAP</u>
CCAL Chrom WL #	10949	CCAL Batch #	27980	28040
ICAL Chrom WL #	10894	ICAL Batch # / Event #	27843 / 1829	27844 / 1830
Chrom Review		1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]		/		na
2. Did BFB meet tune criteria? [F8]		/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]		/	List Target analytes outside CCV limits: _____	/
4. Elution order checked on isomeric pairs? [Chrom]				
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		/		/
• 2-methyl butane / acrolein		/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		/		/
• vinyl acetate / hexane		/		/
• cis- and trans- isomers		/		/
• ethyl benzene / m/p-xylene / o-xylene		/		/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene		/		/
• tert-butylbenzene/4-isopropyltoluene		/		/
• 1,3-, 1,4-, and 1,2-dichlorobenzene		/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		NA		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene		/		/
• 2-, and 1-methylnaphthalene		/		/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?		/		/
6. Has the RT been updated to the method?		/		/
Analyst/date	Sophomna Kh. 2/28/2019	2nd Level Reviewer/date [Signature] 02/28/19		
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]		/	✓ on seen chart	/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]		/		/
9. Can dilution history verified? [Mgmt Report]		/		/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:		/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	/
11. All runs - peaks ID'd correctly and false positives removed?		/		/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?		/		/
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]		/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate - RX concur. Report both (NCM# _____) <input checked="" type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# 16593)	/
14. Samples outside calibration range scheduled for dilution?	Sample Reason 149411-3 150ml like 25 reporting dil like 10 due to interferences.	/	<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution	/
Chrom Review		1st	If No, why is data reportable?	2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason: Sample Reason Sample Reason		/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.	/
16. RIC inspected for proper integration for TPH?		/		/
17. Obvious non-TPH peaks excluded?		/		/
18. Individual TPH peak area < octane high point area?		/		/

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 2 of 2

TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	NO														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input type="checkbox"/> CCV - %D - LCS criteria met (NCM# _____) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	/	<input checked="" type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	/														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random; Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr><td>>90</td><td>5</td></tr> <tr><td>71 - 90</td><td>4</td></tr> <tr><td>51 - 70</td><td>3</td></tr> <tr><td>31 - 50</td><td>2</td></tr> <tr><td>11 - 30</td><td>1</td></tr> <tr><td>< 11</td><td>0</td></tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	< 11	0			
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
< 11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	/		/														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	/		/														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/	15 dup - will run re dup's. next rep. all were w/in limits	/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-27980/5 200 mL blank ID: 140-27980/6, 140-28040/5	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	/		/														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/		/														
39. QC checker run and items addressed?	-na-	Runs set to 2 nd level review?	/														
40. Checklist & Entech report scanned, attached & assigned properly?	-na-		/														

Analyst: Suphawan Klu	Date: 2/28/2019	2nd Level Reviewer: [Signature]	Date: 2/28/19
Comments: c line 12 for Chlorodifluoromethane and Chloromethane		Comments:	
1st level - like 11, 10, 25, 28 2/28/19			
Example Calculation: 140-14390-5 Trichloroethene			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
6,576321 x 500 x 1.0 = 325.82			

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Batch Number: 27936 Batch Start Date: 02/26/19 09:56 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101S 00087	40MXISSURP 00003
BFB 140-27936/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27936/2		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL
MB 140-27936/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14390-A-1	SV-126-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-3	SV-100-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-4	SV-060-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-5	SV-118-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-6	SV-015-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-7	SV-078-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-8	SV-136-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-9	SV-076-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-10	SV-168-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-11	SV-075-A-26	TO 15 LL	T	167 mL	500 mL	1	1		40 mL
140-14390-A-12	BCK-1-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-13	BCK-2-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-14	BCK-3-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-15	BCK-4-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-16	IA-001-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-1	SV-126-C-26	TO 15 LL	T	10 mL	500 mL	1	1		40 mL
140-14390-A-2	SV-101-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-17	IA-004-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-4	SV-060-C-26	TO 15 LL	T	40 mL	500 mL	1	1		40 mL
LCS 140-27936/1002		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27936/1		TO 15 LL		40 mL					
CCVIS 140-27936/2		TO 15 LL							
MB 140-27936/4		TO 15 LL							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Batch Number: 27936 Batch Start Date: 02/26/19 09:56 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MSUR 00002				
140-14390-A-1	SV-126-C-26	TO 15 LL	T					
140-14390-A-3	SV-100-C-26	TO 15 LL	T					
140-14390-A-4	SV-060-C-26	TO 15 LL	T					
140-14390-A-5	SV-118-A-26	TO 15 LL	T					
140-14390-A-6	SV-015-A-26	TO 15 LL	T					
140-14390-A-7	SV-078-A-26	TO 15 LL	T					
140-14390-A-8	SV-136-A-26	TO 15 LL	T					
140-14390-A-9	SV-076-A-26	TO 15 LL	T					
140-14390-A-10	SV-168-A-26	TO 15 LL	T					
140-14390-A-11	SV-075-A-26	TO 15 LL	T					
140-14390-A-12	BCK-1-26	TO 15 LL	T					
140-14390-A-13	BCK-2-26	TO 15 LL	T					
140-14390-A-14	BCK-3-26	TO 15 LL	T					
140-14390-A-15	BCK-4-26	TO 15 LL	T					
140-14390-A-16	IA-001-C-26	TO 15 LL	T					
140-14390-A-1	SV-126-C-26	TO 15 LL	T					
140-14390-A-2	SV-101-C-26	TO 15 LL	T					
140-14390-A-17	IA-004-C-26	TO 15 LL	T					
140-14390-A-4	SV-060-C-26	TO 15 LL	T					
LCS 140-27936/1002		TO 15 LL						

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Batch Number: 27980 Batch Start Date: 02/27/19 11:22 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101S 00087	40MXISSURP 00003
BFB 140-27980/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27980/2		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL
MB 140-27980/5		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14390-A-5	SV-118-A-26	TO 15 LL	T	10 mL	500 mL	1	1		40 mL
140-14390-A-18	IA-131-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27980/1002		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27980/1		TO 15 LL		40 mL					
CCVIS 140-27980/2		TO 15 LL							
MB 140-27980/5		TO 15 LL							
140-14390-A-5	SV-118-A-26	TO 15 LL	T						
140-14390-A-18	IA-131-C-26	TO 15 LL	T						
LCS 140-27980/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Summa Canister Dilution Worksheet

Client: Tetra Tech, Inc.

Job No.: 140-14390-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Date	Analyst
140-14390-11	1	-8.6	0.71	0.71	2.8	1.19	1.19		1.67	1.67	02/25/19 16:43	Barlozhetskaya, Anna F

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg

Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig

Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury ("Hg)

14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\A17L13969.D
 Lims ID: 140-13969-A-16
 Client ID: 11644
 Sample Type: Client
 Inject. Date: 17-Jan-2019 21:08:30 ALS Bottle#: 7 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010550-015
 Misc. Info.: 11644
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Jan-2019 14:24:21 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0302

First Level Reviewer: khachitpongpanits Date: 18-Jan-2019 12:50:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.412	7.412	0.000	72	192779	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.482	-0.005	95	1113636	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.529	14.530	-0.001	91	977169	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.244	0.000	88	842571	4.05	
25 Isopropyl alcohol	45	4.764	4.758	0.032	29	2291	0.0420	
40 Hexane	56	6.878	6.867	0.006	81	1852	0.0460	
73 Tetrachloroethene	129	13.672	13.662	0.005	89	4691	0.0404	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\A17L13969.D

Injection Date: 17-Jan-2019 21:08:30

Instrument ID: MR

Operator ID:

Lims ID: 140-13969-A-16

Lab Sample ID: 140-13969-16

Worklist Smp#: 15

Client ID: 11644

Purge Vol: 500.000 mL

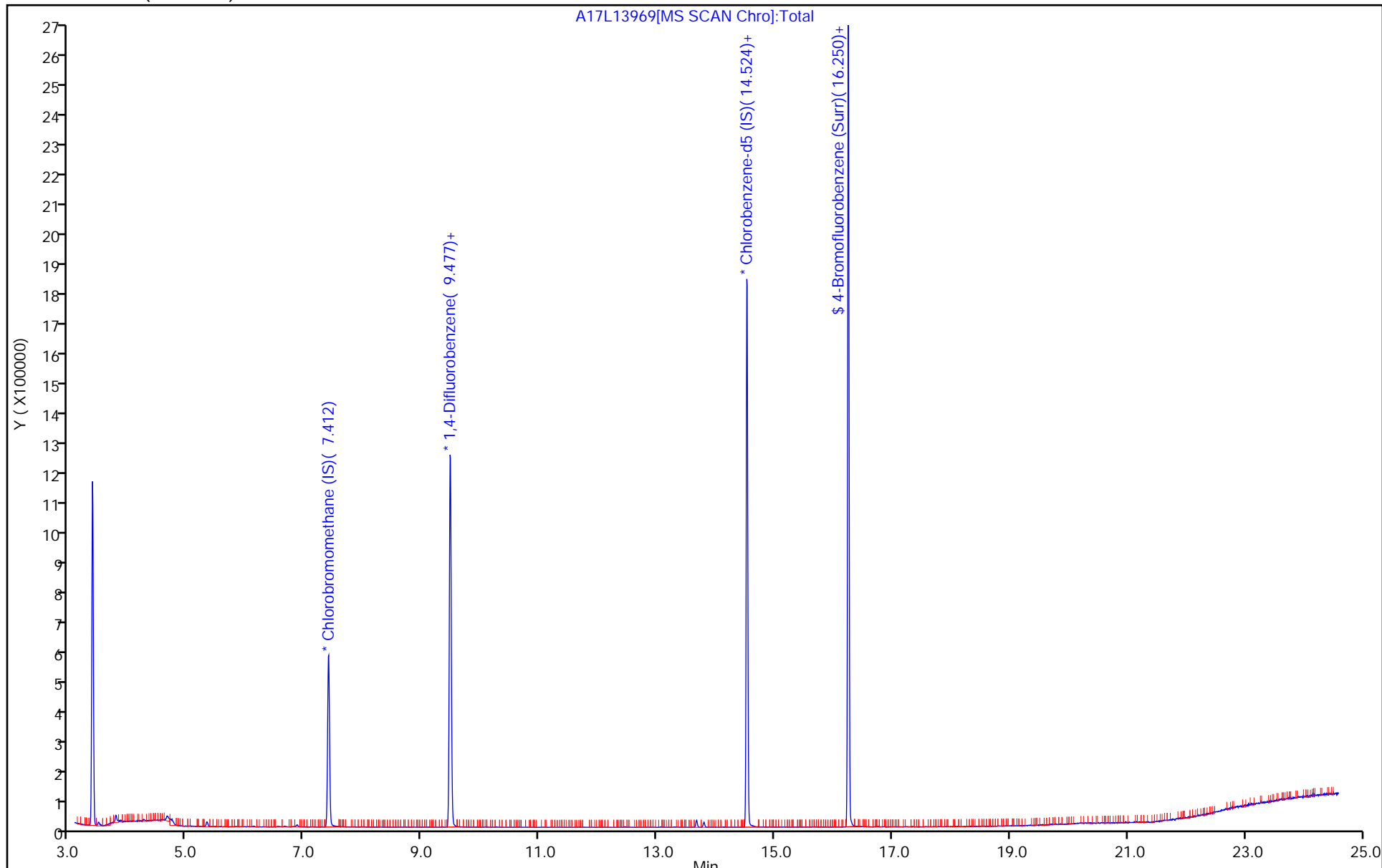
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\A17L13969.D

Injection Date: 17-Jan-2019 21:08:30

Instrument ID: MR

Lims ID: 140-13969-A-16

Lab Sample ID: 140-13969-16

Client ID: 11644

Operator ID:

ALS Bottle#: 7 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

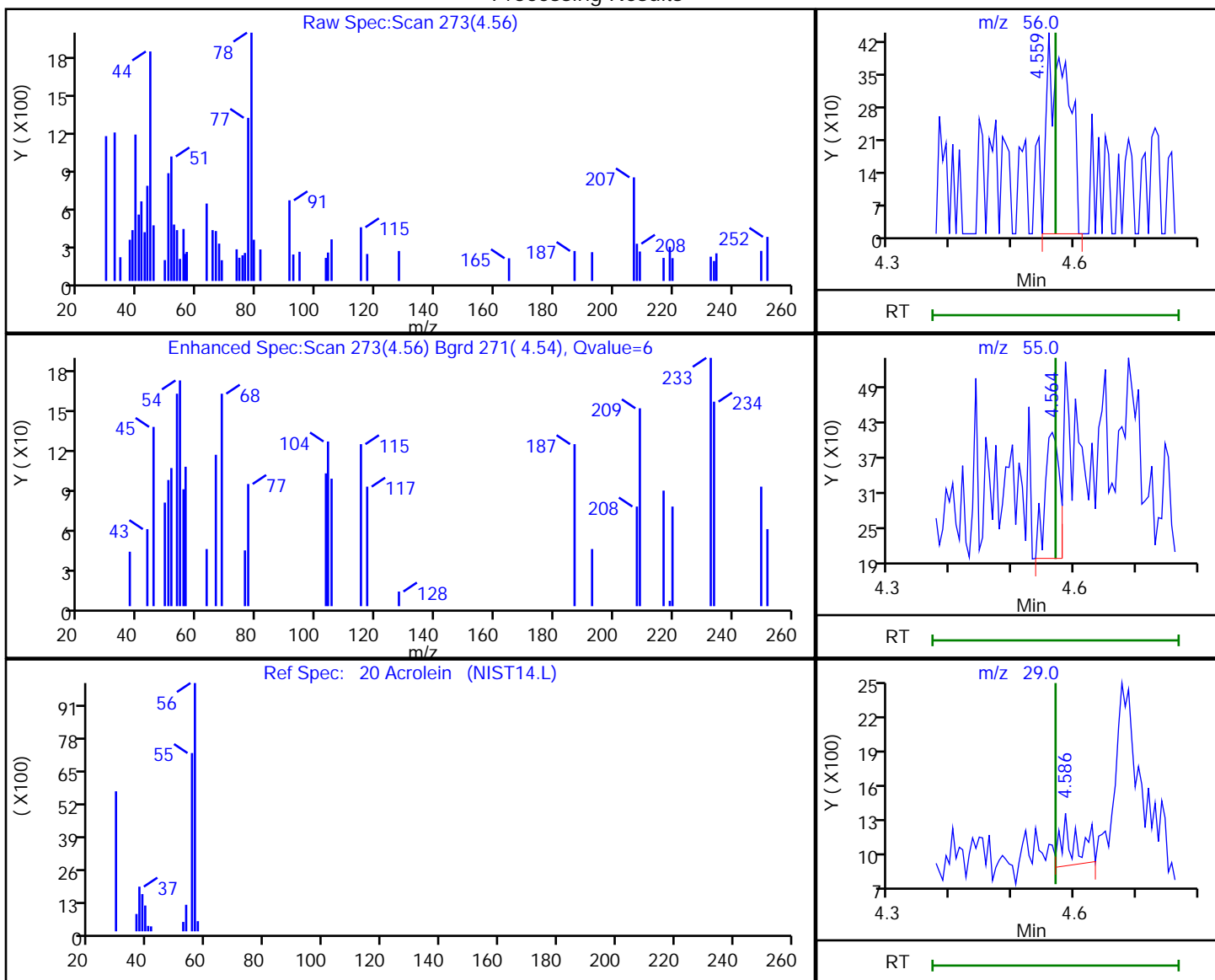
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

20 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
4.56	56.00	1018	0.083544
4.56	55.00	358	
4.59	29.00	740	

Reviewer: khachitpongpanits, 18-Jan-2019 12:49:22

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
 Lims ID: 140-13978-A-1
 Client ID: 11819
 Sample Type: Client
 Inject. Date: 19-Jan-2019 00:52:30 ALS Bottle#: 9 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010551-020
 Misc. Info.: 10560
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 21-Jan-2019 11:02:45 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa Date: 21-Jan-2019 11:02:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.406	-0.005	73	181347	4.00	
* 2 1,4-Difluorobenzene	114	9.471	9.482	-0.011	95	1079451	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.529	-0.005	91	948092	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.249	16.243	-0.001	88	823709	4.09	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D

Injection Date: 19-Jan-2019 00:52:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13978-A-1

Lab Sample ID: 140-13978-1

Worklist Smp#: 21

Client ID: 11819

Purge Vol: 500.000 mL

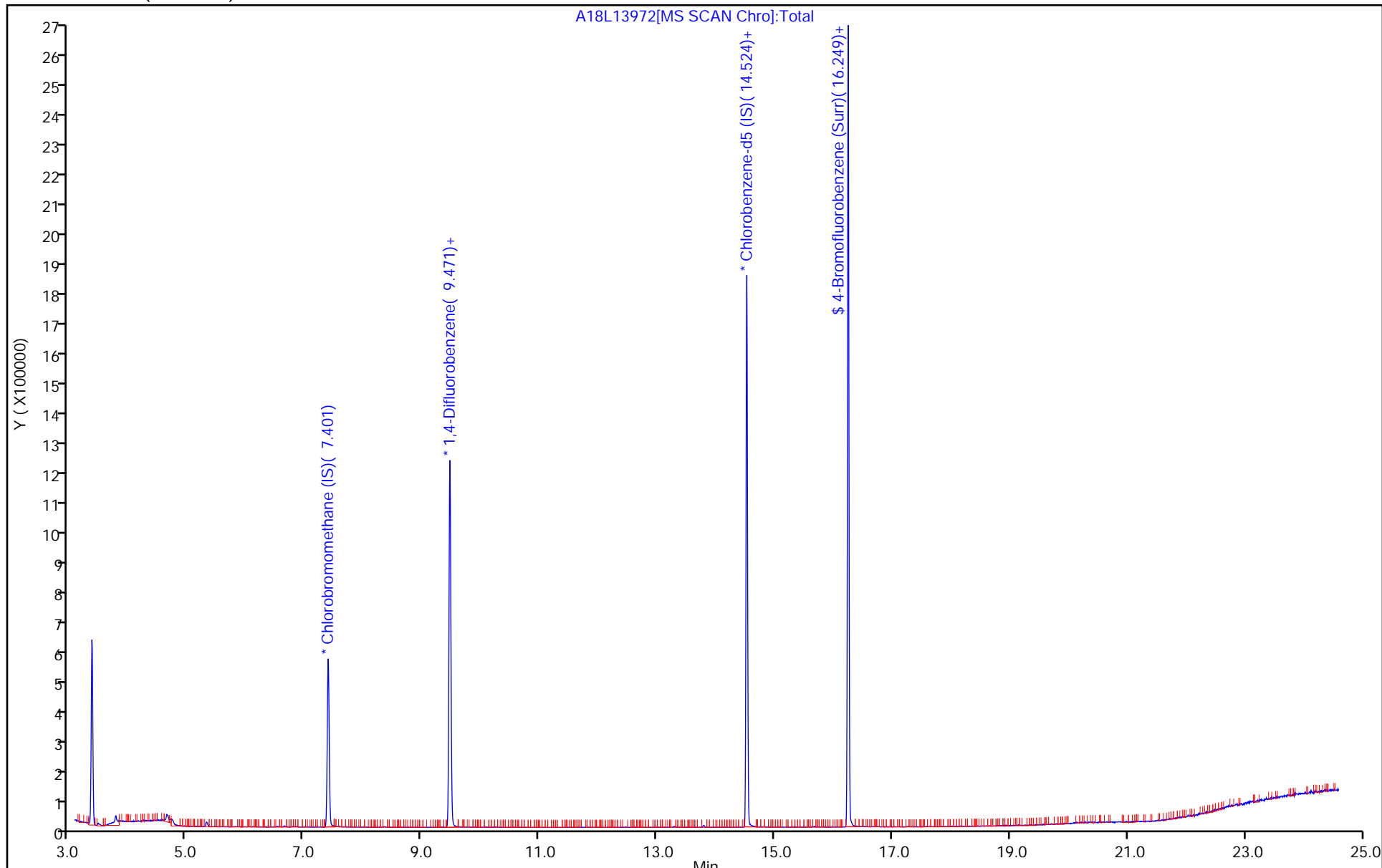
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

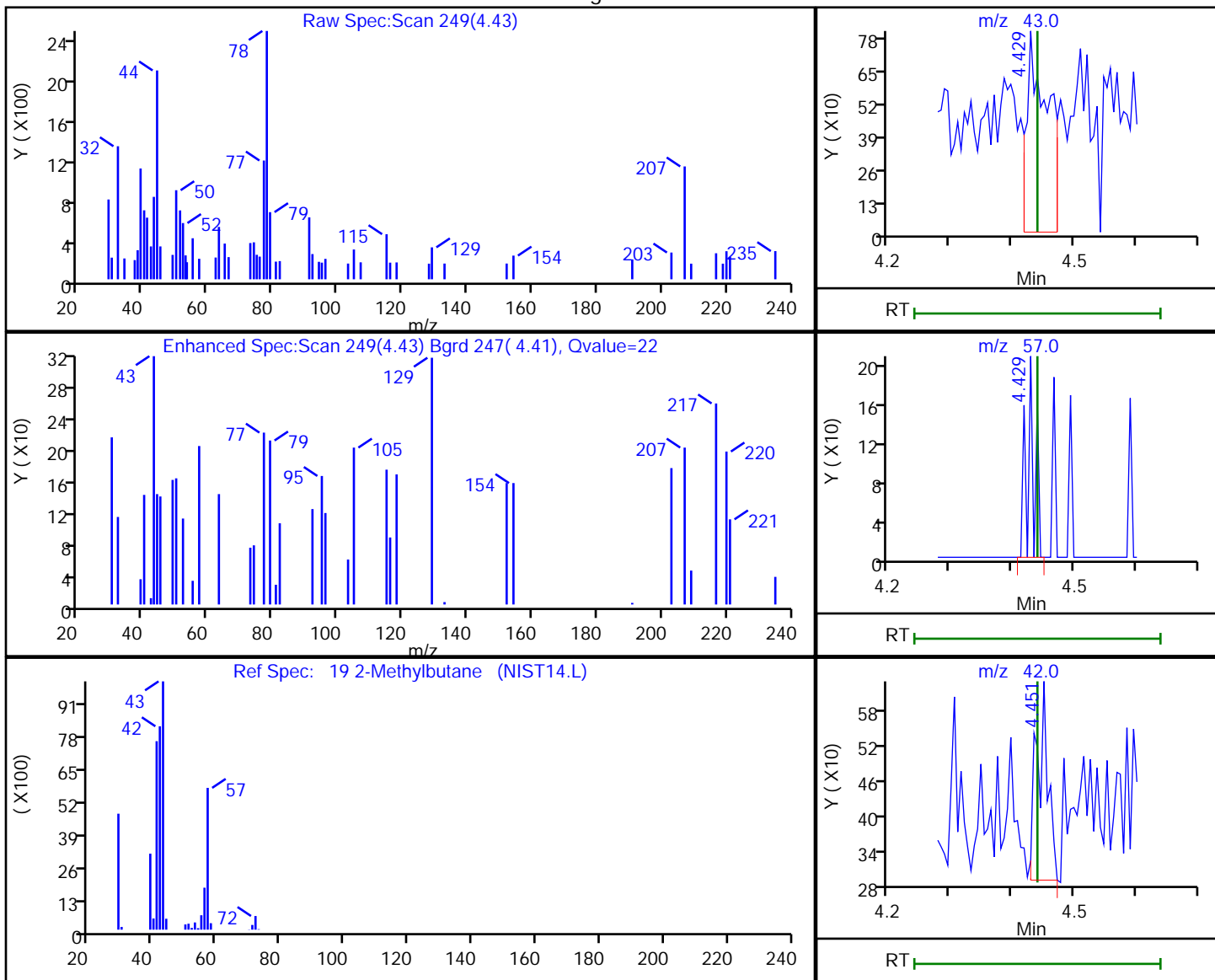


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
 Injection Date: 19-Jan-2019 00:52:30 Instrument ID: MR
 Lims ID: 140-13978-A-1 Lab Sample ID: 140-13978-1
 Client ID: 11819
 Operator ID: HMT ALS Bottle#: 9 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.43	43.00	1906	0.052558
4.43	57.00	164	
4.45	42.00	425	

Reviewer: barlozhetskayaa, 21-Jan-2019 11:02:07

Audit Action: Marked Compound Undetected

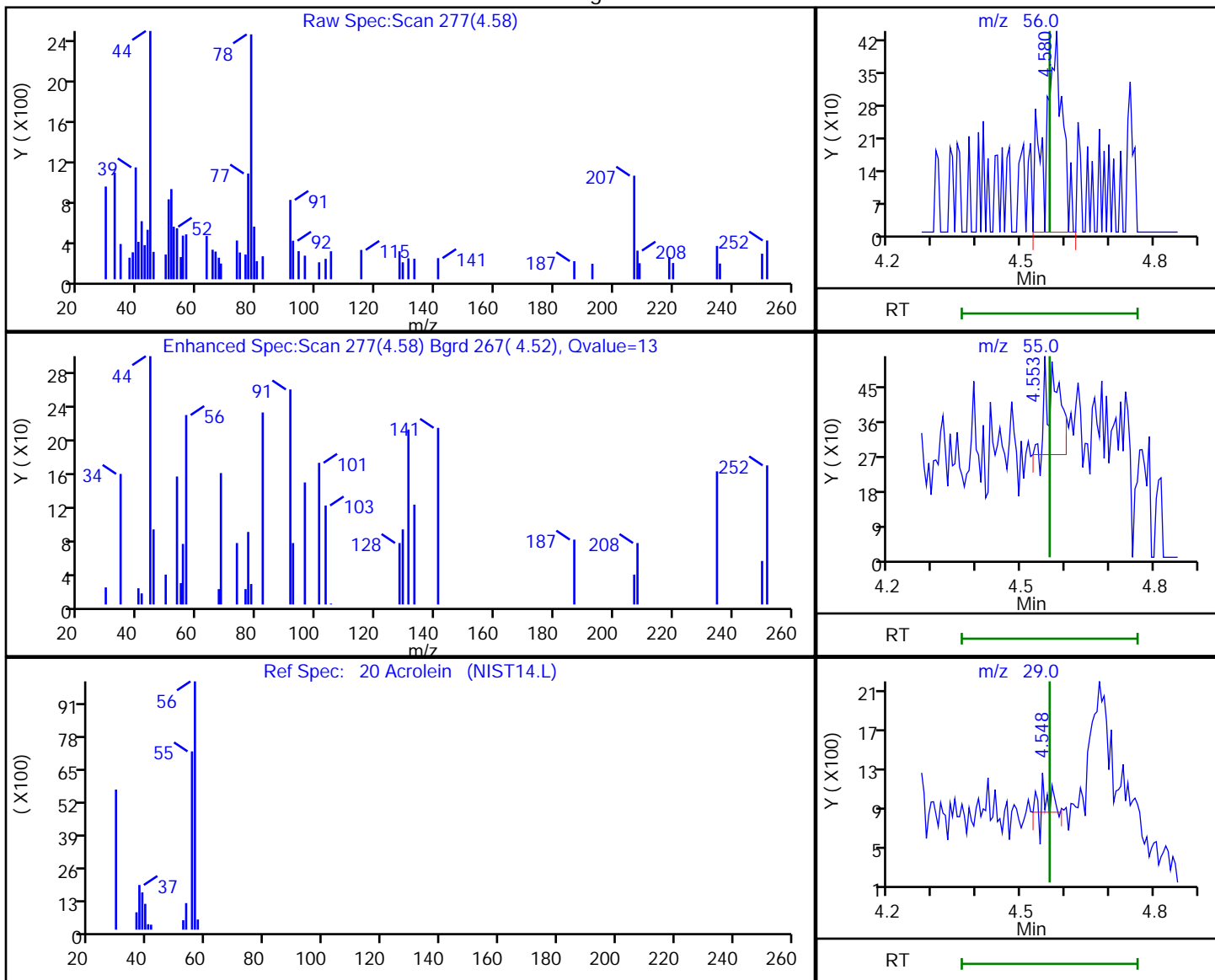
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
 Injection Date: 19-Jan-2019 00:52:30 Instrument ID: MR
 Lims ID: 140-13978-A-1 Lab Sample ID: 140-13978-1
 Client ID: 11819
 Operator ID: HMT ALS Bottle#: 9 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

20 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
4.58	56.00	1194	0.104165
4.55	55.00	499	
4.55	29.00	323	

Reviewer: barlozhetskayaa, 21-Jan-2019 11:02:03

Audit Action: Marked Compound Undetected

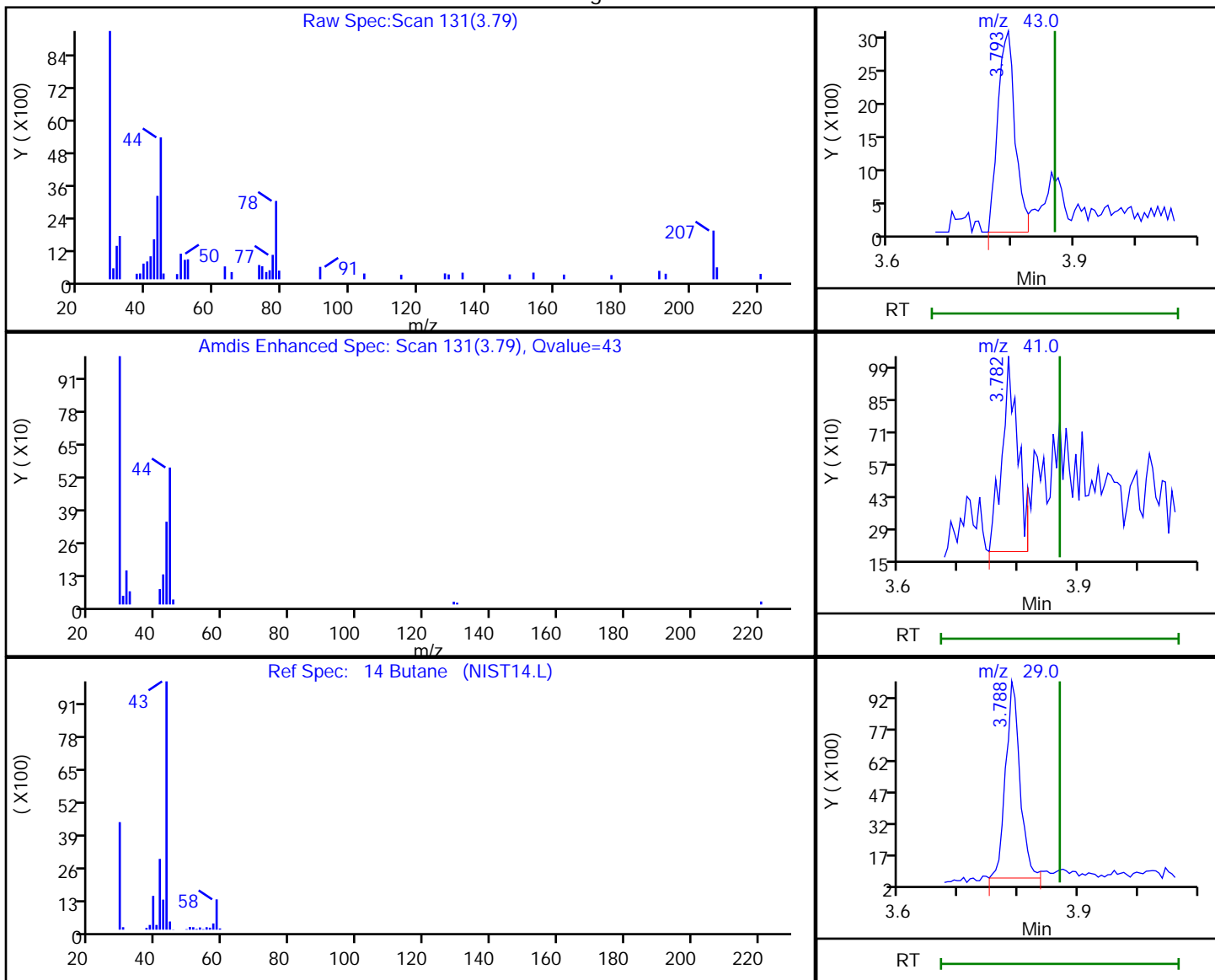
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
 Injection Date: 19-Jan-2019 00:52:30 Instrument ID: MR
 Lims ID: 140-13978-A-1 Lab Sample ID: 140-13978-1
 Client ID: 11819
 Operator ID: HMT ALS Bottle#: 9 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.79	43.00	6012	0.117133
3.78	41.00	1598	
3.79	29.00	15994	

Reviewer: barlozhetskayaa, 21-Jan-2019 11:02:10

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT14002.D
 Lims ID: 140-14002-A-1
 Client ID: 11257
 Sample Type: Client
 Inject. Date: 22-Jan-2019 04:16:30 ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010578-018
 Misc. Info.: 11257
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 17:03:14 Calib Date: 07-Jan-2019 21:45:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20181224-10406.b\HA07IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 17:10:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.824	0.005	94	232573	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.010	0.000	95	1264864	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.734	0.000	88	1049085	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.378	17.404	-0.026	94	706692	4.13	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT14002.D

Injection Date: 22-Jan-2019 04:16:30

Instrument ID: MH

Operator ID: AFB

Lims ID: 140-14002-A-1

Lab Sample ID: 140-14002-1

Worklist Smp#: 18

Client ID: 11257

Purge Vol: 500.000 mL

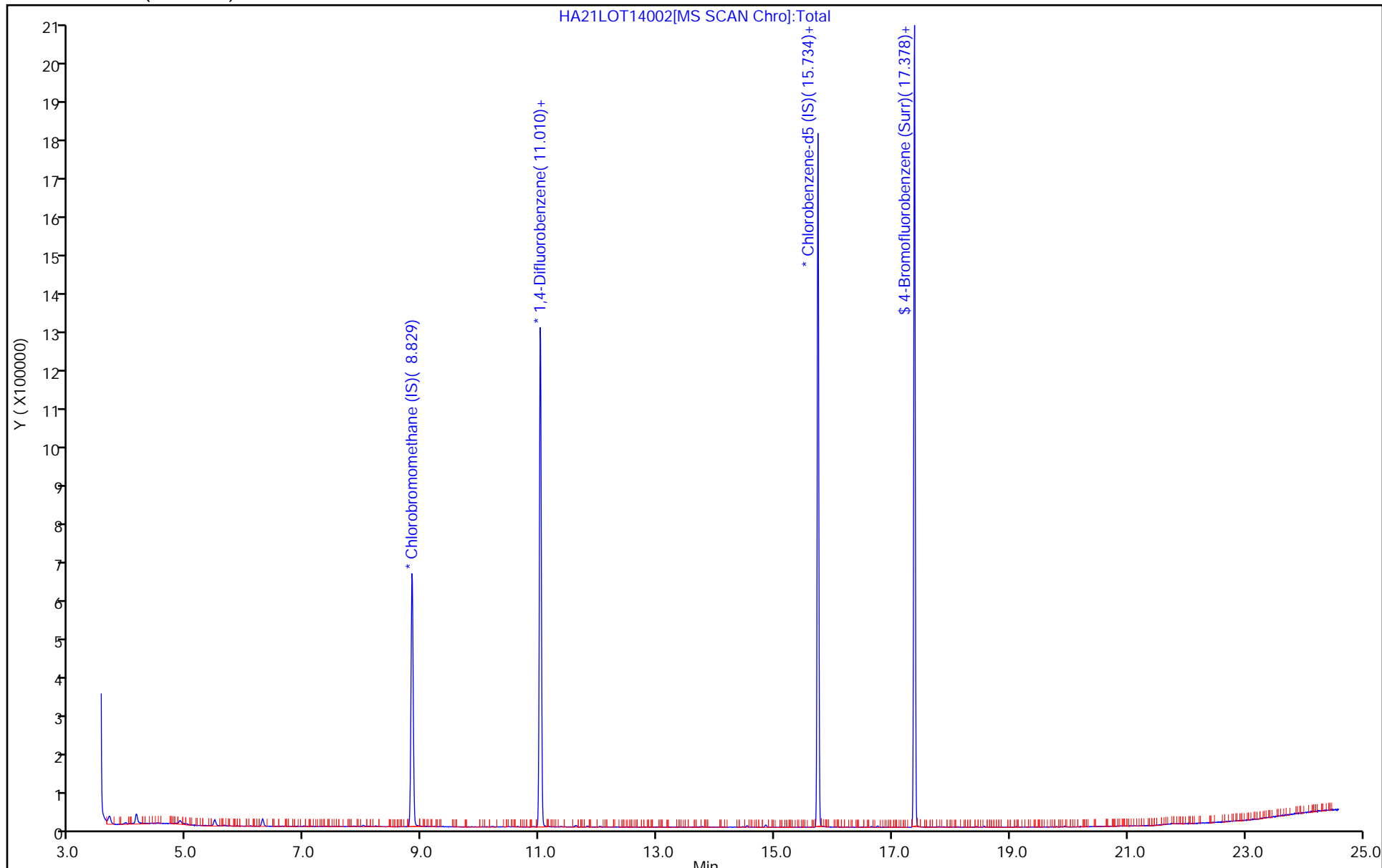
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

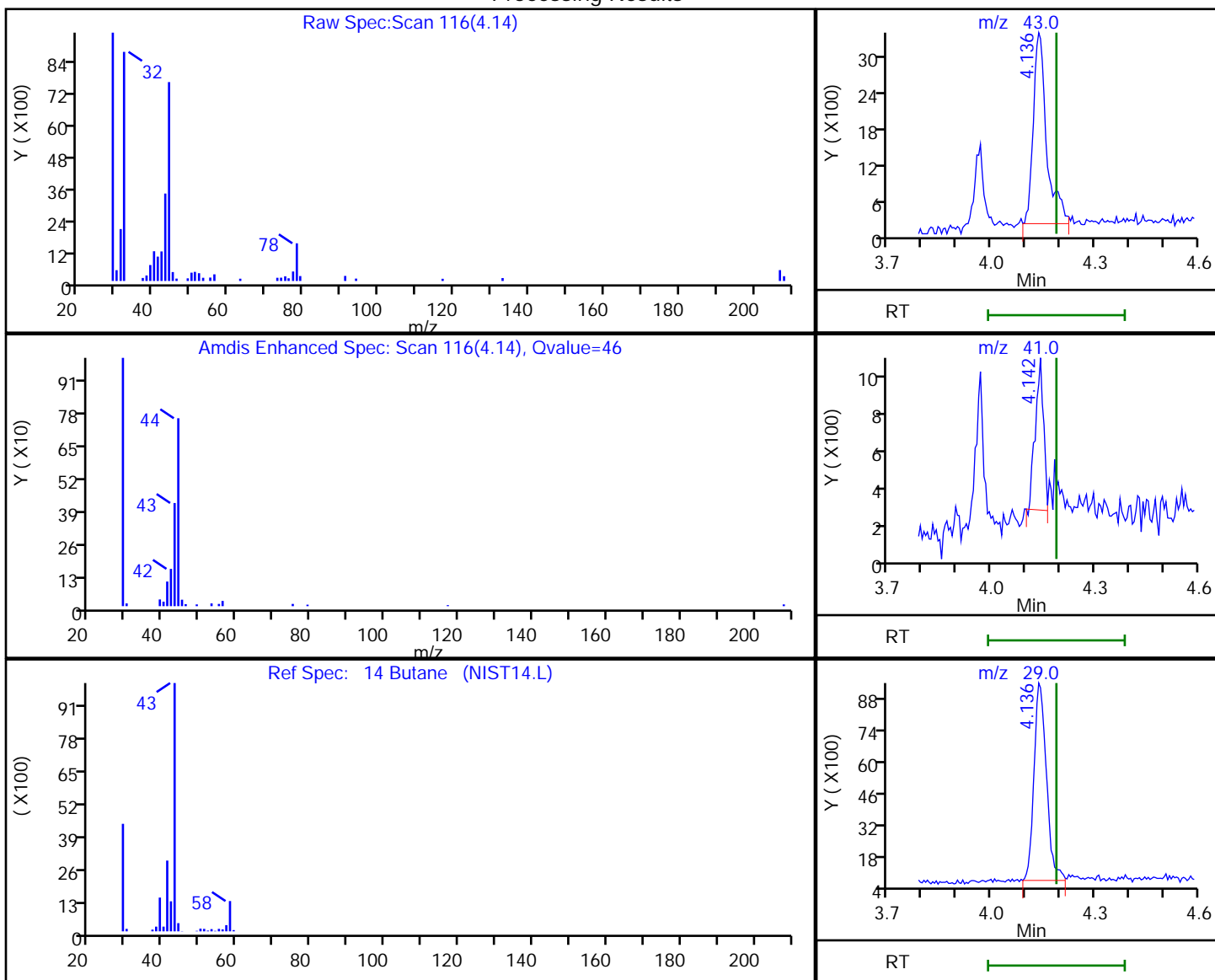


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT14002.D
 Injection Date: 22-Jan-2019 04:16:30 Instrument ID: MH
 Lims ID: 140-14002-A-1 Lab Sample ID: 140-14002-1
 Client ID: 11257
 Operator ID: AFB ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.14	43.00	8576	0.072720
4.14	41.00	1337	
4.14	29.00	22463	

Reviewer: khachitpongpanits, 22-Jan-2019 17:02:48

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190118-10577.b\A23L14031.D
 Lims ID: 140-14031-A-9
 Client ID: 09788
 Sample Type: Client
 Inject. Date: 23-Jan-2019 22:00:30 ALS Bottle#: 14 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010577-017
 Misc. Info.: 09788
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190118-10577.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 23-Jan-2019 20:35:32 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0318

First Level Reviewer: khachitpongpanits Date: 24-Jan-2019 11:15:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.237	0.006	97	473706	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.416	0.000	96	2660006	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.091	0.000	92	2472220	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.714	0.000	82	1959190	3.87	
9 Chloromethane	52	4.098	4.090	0.010	98	6355	0.1154	
31 Methylene Chloride	84	6.611	6.604	0.011	98	26651	0.1370	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190118-10577.b\A23L14031.D

Injection Date: 23-Jan-2019 22:00:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14031-A-9

Lab Sample ID: 140-14031-9

Worklist Smp#: 17

Client ID: 09788

Purge Vol: 500.000 mL

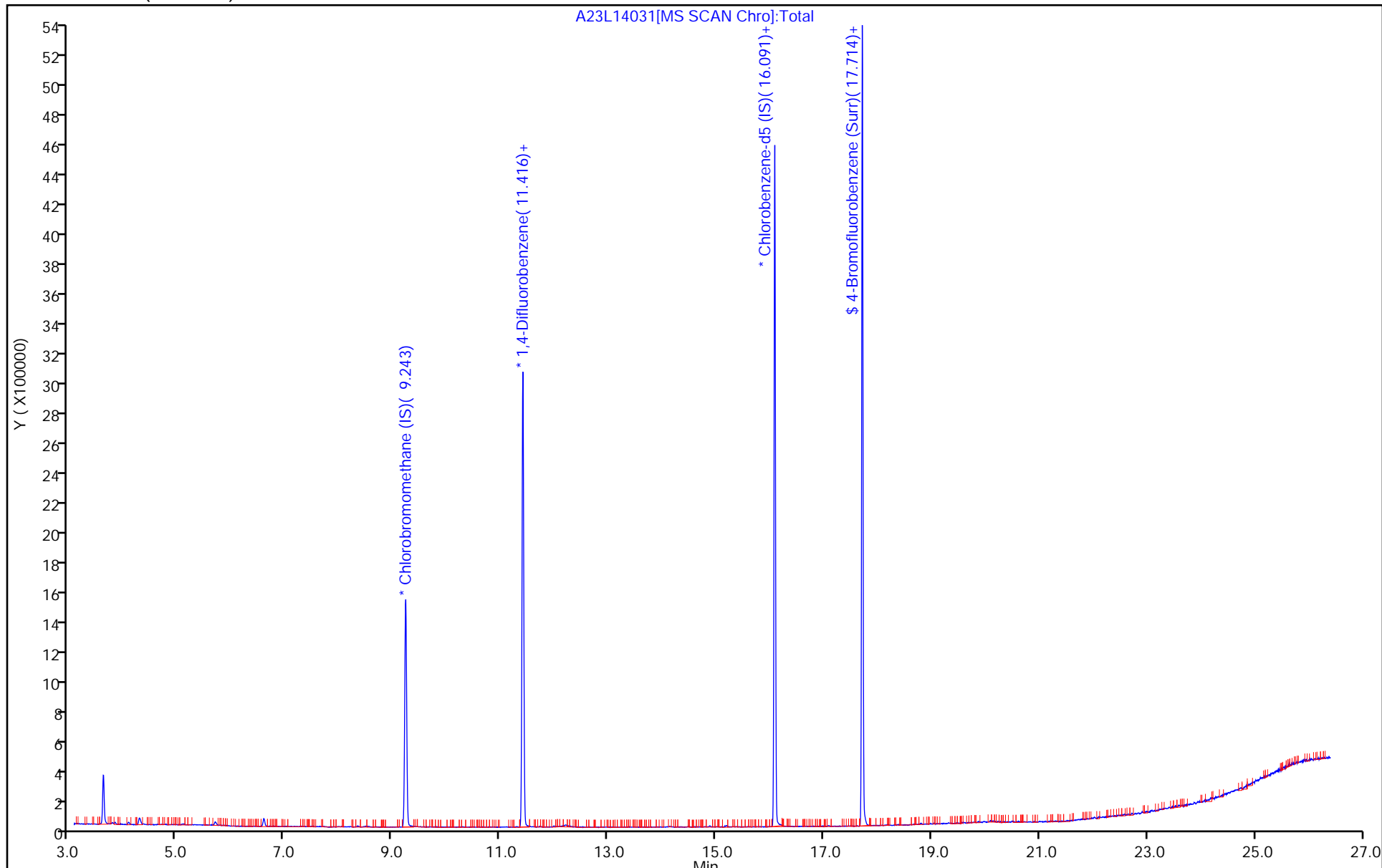
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D
 Lims ID: 140-14044-A-1
 Client ID: 11547
 Sample Type: Client
 Inject. Date: 24-Jan-2019 15:25:30 ALS Bottle#: 14 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010612-010
 Misc. Info.: 11547
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Jan-2019 09:48:51 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 25-Jan-2019 09:53:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.237	9.237	0.000	97	406723	4.00	
* 2 1,4-Difluorobenzene	114	11.410	11.416	-0.006	97	2310796	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.091	0.000	93	2083397	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.714	0.000	81	1731157	4.06	
31 Methylene Chloride	84	6.606	6.600	0.006	98	25162	0.1507	
47 1,1,1-Trichloroethane	97	10.294	10.294	0.000	95	9292	0.0252	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D

Injection Date: 24-Jan-2019 15:25:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14044-A-1

Lab Sample ID: 140-14044-1

Worklist Smp#: 10

Client ID: 11547

Purge Vol: 500.000 mL

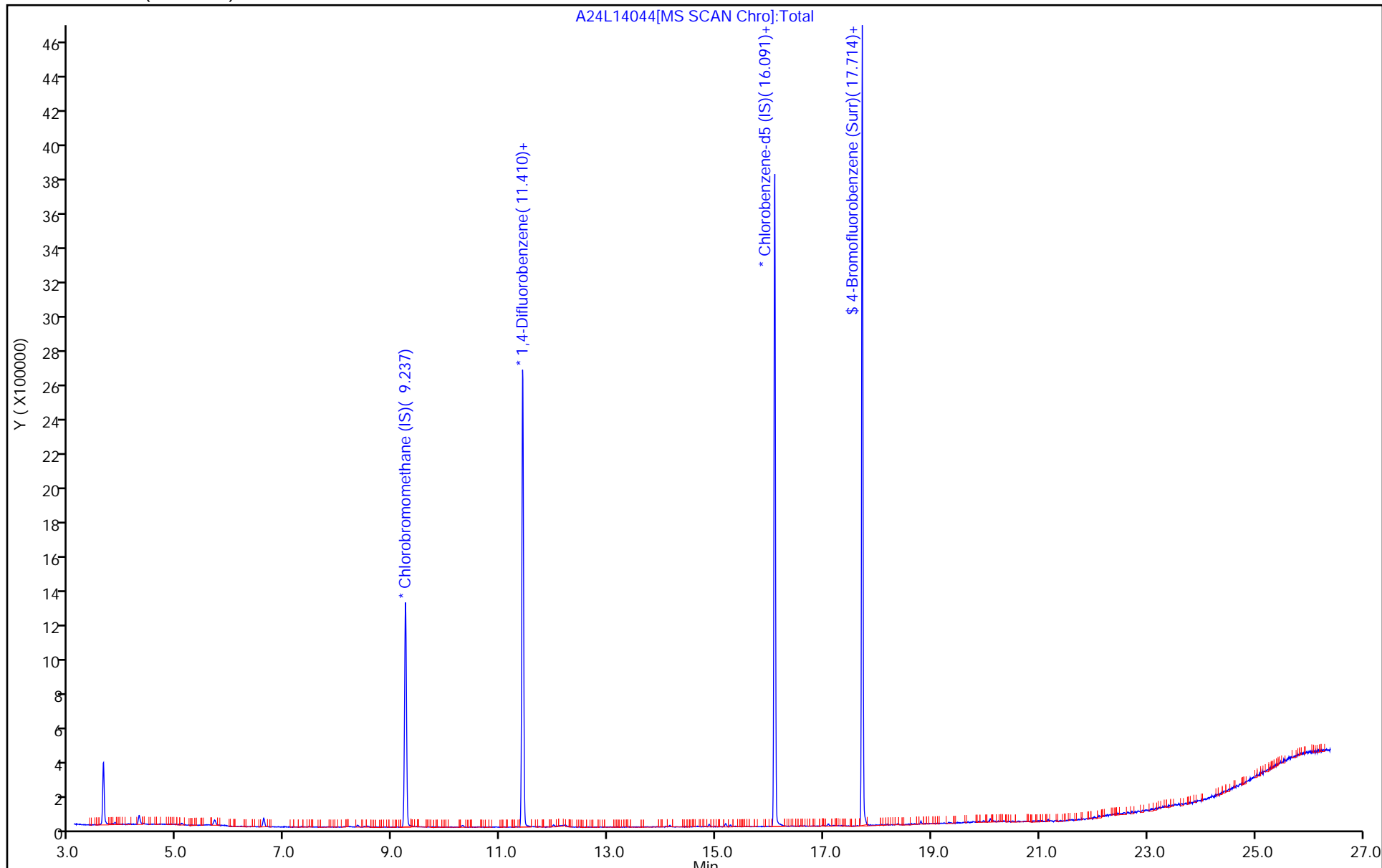
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200(mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200 (mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND	*	1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14051-1
 SDG No.: _____
 Client Sample ID: 10518 Lab Sample ID: 140-14051-16
 Matrix: Air Lab File ID: A25L14051.D
 Analysis Method: TO-15 Date Collected: 01/24/2019 16:25
 Sample wt/vol: 200(mL) Date Analyzed: 01/26/2019 01:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27101 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D
 Lims ID: 140-14051-A-16
 Client ID: 10518
 Sample Type: Client
 Inject. Date: 26-Jan-2019 01:10:30 ALS Bottle#: 10 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010617-022
 Misc. Info.: 10518
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Jan-2019 09:09:11 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0302

First Level Reviewer: khachitpongpanits Date: 28-Jan-2019 09:09:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.406	-0.005	73	173091	4.00	
* 2 1,4-Difluorobenzene	114	9.471	9.477	-0.006	95	1033901	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.519	14.524	-0.005	91	905153	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.244	16.244	0.000	87	793289	4.12	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D

Injection Date: 26-Jan-2019 01:10:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-14051-A-16

Lab Sample ID: 140-14051-16

Worklist Smp#: 22

Client ID: 10518

Purge Vol: 500.000 mL

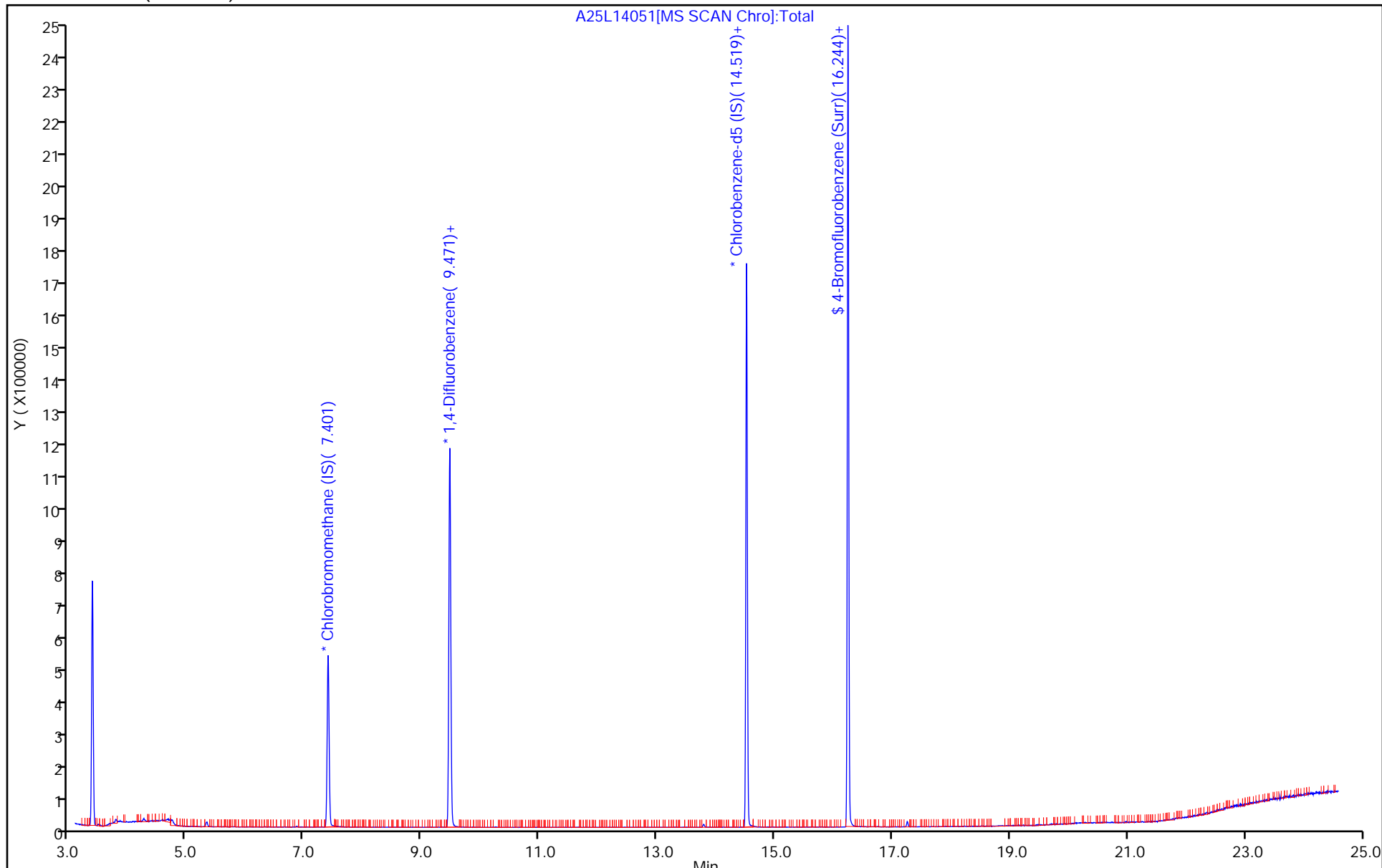
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

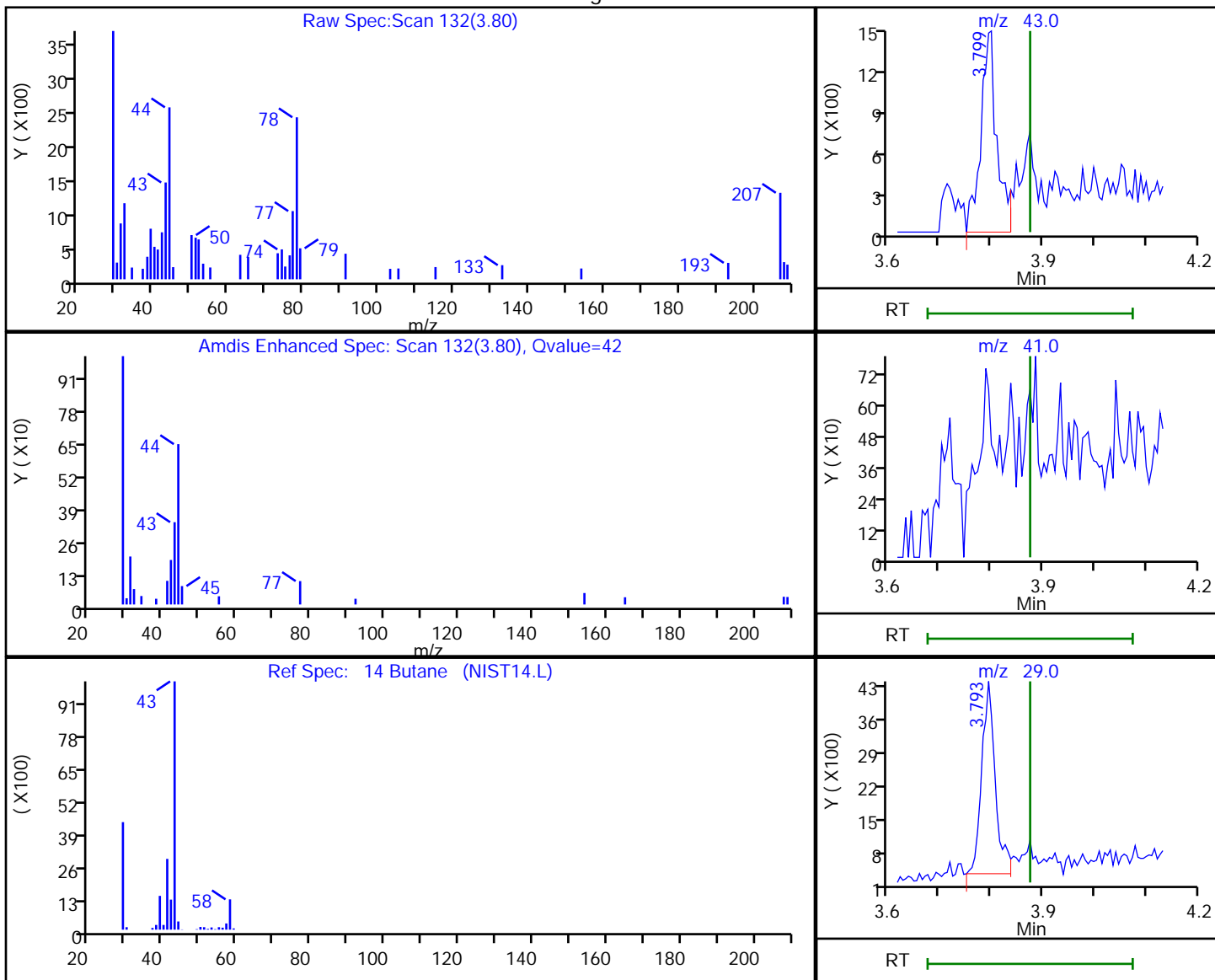


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190122-10617.b\A25L14051.D
 Injection Date: 26-Jan-2019 01:10:30 Instrument ID: MR
 Lims ID: 140-14051-A-16 Lab Sample ID: 140-14051-16
 Client ID: 10518
 Operator ID: HMT ALS Bottle#: 10 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.80	43.00	3124	0.063769
3.87	41.00	0	
3.79	29.00	7327	

Reviewer: khachitpongpanits, 28-Jan-2019 09:09:01

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14114-1
 SDG No.: _____
 Client Sample ID: 11859 Lab Sample ID: 140-14114-3
 Matrix: Air Lab File ID: A31L14114.D
 Analysis Method: TO-15 Date Collected: 01/30/2019 11:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/31/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27233 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D
 Lims ID: 140-14114-A-3
 Client ID: 11859
 Sample Type: Client
 Inject. Date: 31-Jan-2019 14:24:30 ALS Bottle#: 16 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010665-007
 Misc. Info.: 11859
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 01-Feb-2019 14:53:46 Calib Date: 07-Jan-2019 21:45:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20181224-10406.b\HA07IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0316

First Level Reviewer: khachitpongpanits Date: 01-Feb-2019 15:00:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.834	-0.005	96	226233	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.016	-0.006	95	1257347	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.739	-0.005	89	1030682	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.404	17.409	-0.005	91	693284	4.13	
45 1,1,1-Trichloroethane	97	9.863	9.868	-0.005	95	7970	0.0413	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D

Injection Date: 31-Jan-2019 14:24:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-14114-A-3

Lab Sample ID: 140-14114-3

Worklist Smp#: 7

Client ID: 11859

Purge Vol: 500.000 mL

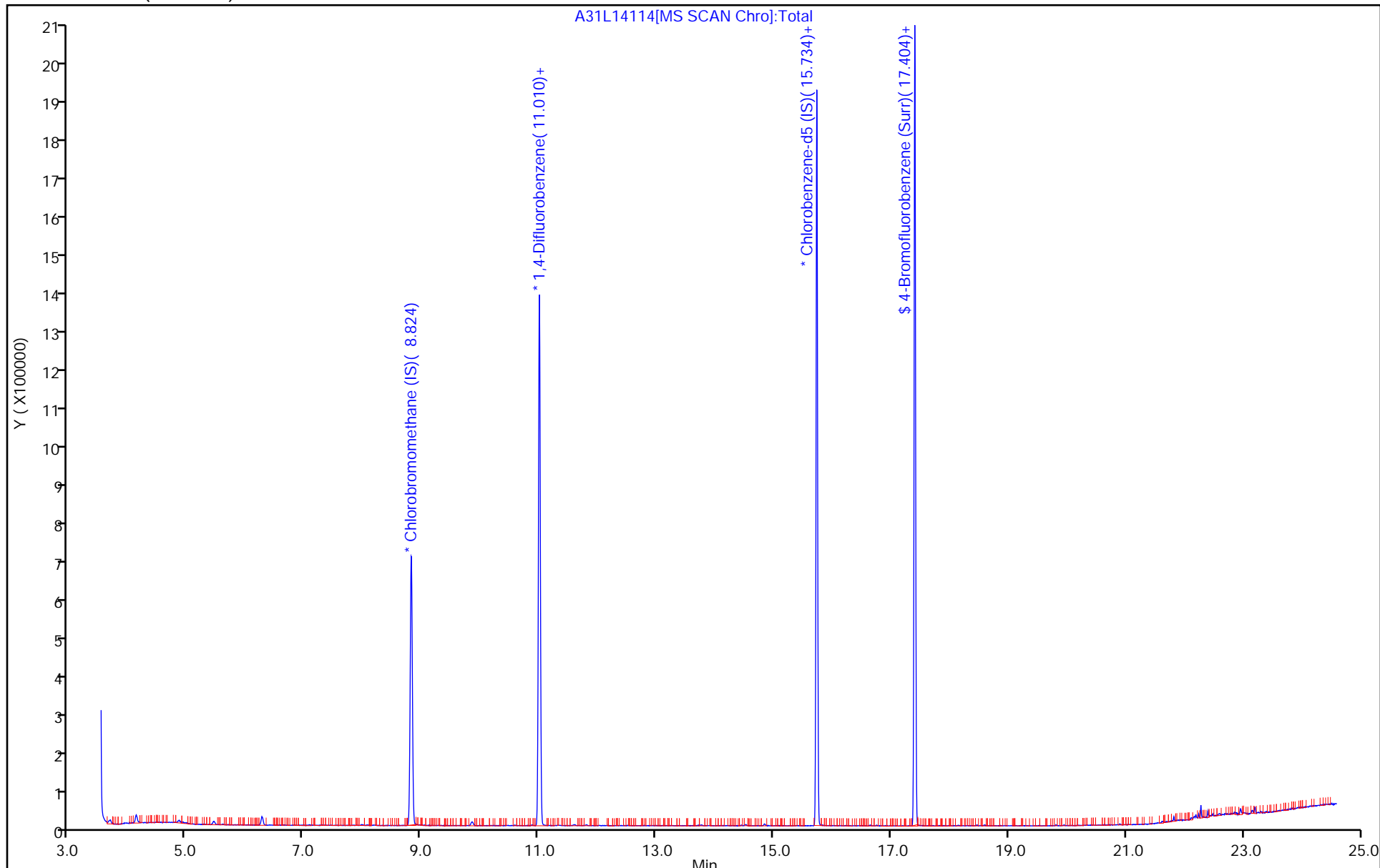
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

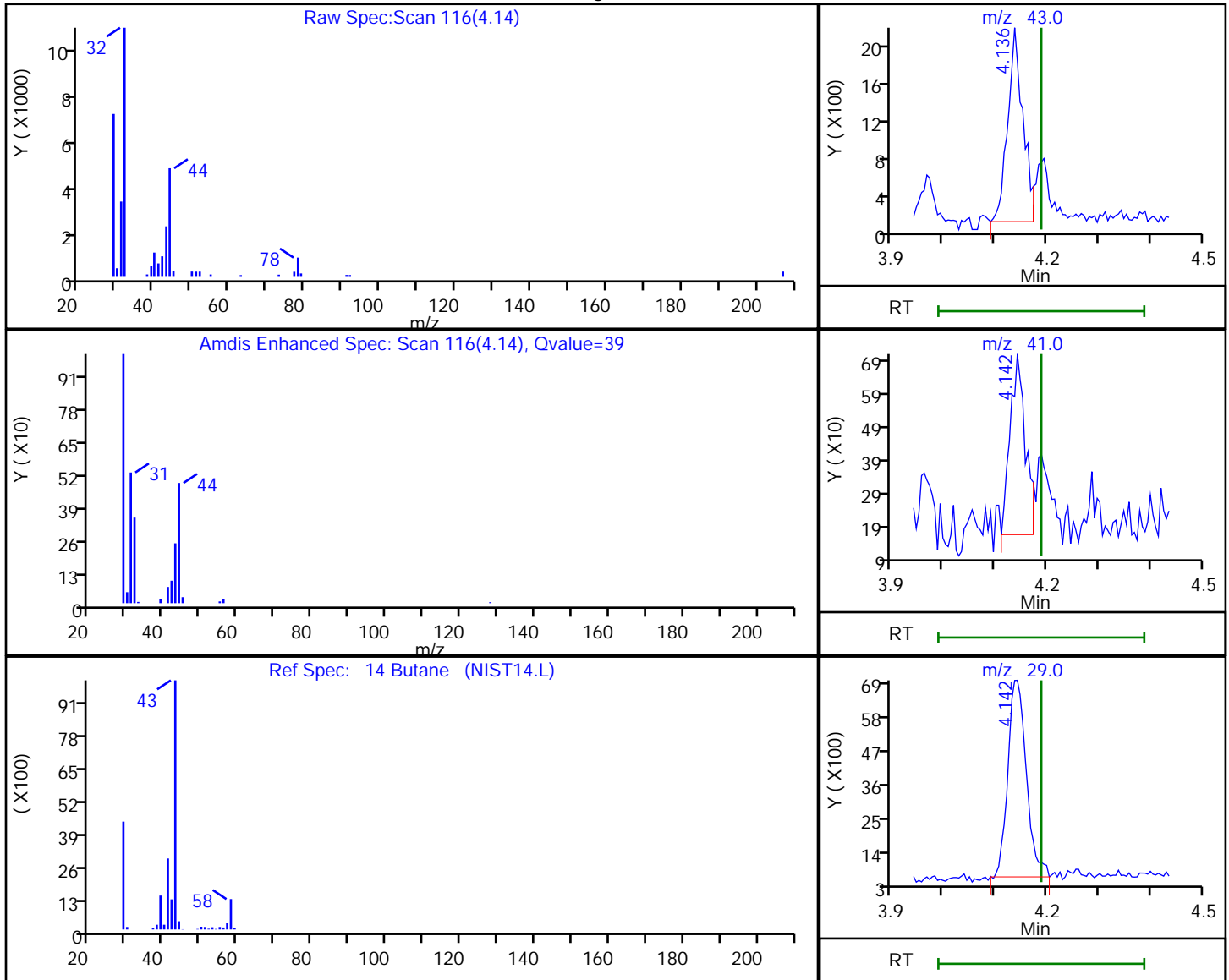


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190129-10665.b\A31L14114.D
 Injection Date: 31-Jan-2019 14:24:30 Instrument ID: MH
 Lims ID: 140-14114-A-3 Lab Sample ID: 140-14114-3
 Client ID: 11859
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.14	43.00	4267	0.037196
4.14	41.00	1130	
4.14	29.00	16118	

Reviewer: tajh, 31-Jan-2019 14:58:31

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND	*	1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14136-1
 SDG No.: _____
 Client Sample ID: 11710 Lab Sample ID: 140-14136-16
 Matrix: Air Lab File ID: B05L14136.D
 Analysis Method: TO-15 Date Collected: 02/01/2019 10:10
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 11:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27387 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\B05L14136.D
 Lims ID: 140-14136-A-16
 Client ID: 11710
 Sample Type: Client
 Inject. Date: 05-Feb-2019 11:19:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010730-004
 Misc. Info.: 11710
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Feb-2019 10:13:58 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 06-Feb-2019 10:14:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.243	-0.011	95	329997	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.416	-0.011	97	1787592	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.086	16.086	0.000	95	1561576	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.709	17.714	-0.005	79	1327286	4.15	
31 Methylene Chloride	84	6.595	6.606	-0.011	97	17493	0.1291	
110 Dodecane	57	21.009	21.009	0.000	92	19919	0.0798	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190205-10730.b\B05L14136.D

Injection Date: 05-Feb-2019 11:19:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14136-A-16

Lab Sample ID: 140-14136-16

Worklist Smp#: 4

Client ID: 11710

Purge Vol: 500.000 mL

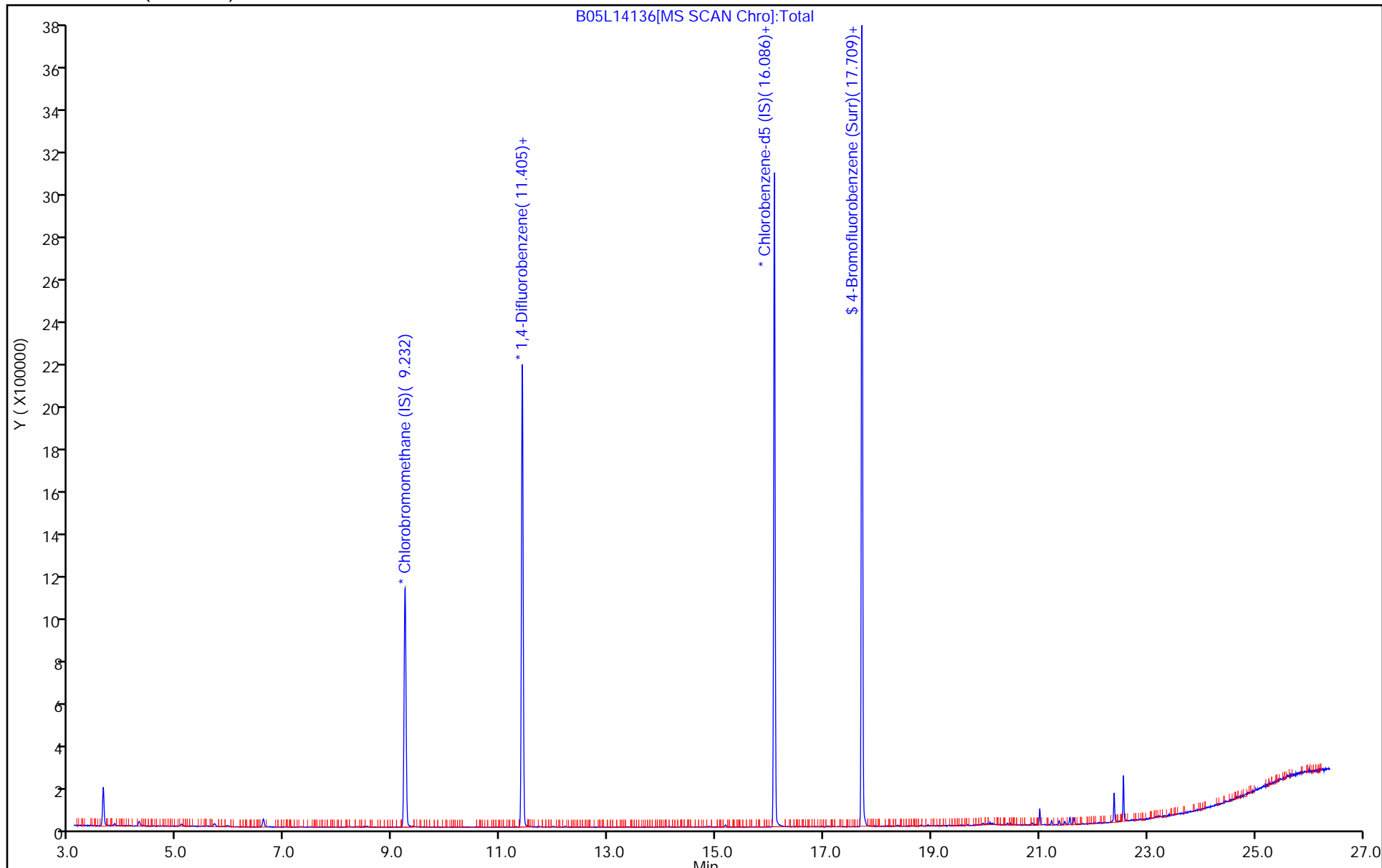
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14159-1
 SDG No.: _____
 Client Sample ID: 09647 Lab Sample ID: 140-14159-1
 Matrix: Air Lab File ID: B05L14159.D
 Analysis Method: TO-15 Date Collected: 02/04/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 20:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27362 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND	*	0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14159-1
 SDG No.: _____
 Client Sample ID: 09647 Lab Sample ID: 140-14159-1
 Matrix: Air Lab File ID: B05L14159.D
 Analysis Method: TO-15 Date Collected: 02/04/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 20:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27362 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14159-1
 SDG No.: _____
 Client Sample ID: 09647 Lab Sample ID: 140-14159-1
 Matrix: Air Lab File ID: B05L14159.D
 Analysis Method: TO-15 Date Collected: 02/04/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 02/05/2019 20:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27362 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MJ\20190204-10717.b\B05L14159.D
 Lims ID: 140-14159-A-1
 Client ID: 09647
 Sample Type: Client
 Inject. Date: 05-Feb-2019 20:35:30 ALS Bottle#: 7 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010717-016
 Misc. Info.: 09647
 Operator ID: 007126 Instrument ID: MJ
 Method: \\chromna\Knoxville\ChromData\MJ\20190204-10717.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Feb-2019 13:16:33 Calib Date: 30-Jan-2019 23:00:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MJ\20190130-10689.b\JA30ICL08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 06-Feb-2019 13:18:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.760	9.771	-0.011	92	137691	4.00	
* 2 1,4-Difluorobenzene	114	11.868	11.874	-0.006	95	795074	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.477	16.482	-0.005	90	674023	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	18.074	18.076	-0.005	89	489101	3.88	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MJ\20190204-10717.b\B05L14159.D

Injection Date: 05-Feb-2019 20:35:30

Instrument ID: MJ

Operator ID: 007126

Lims ID: 140-14159-A-1

Lab Sample ID: 140-14159-1

Worklist Smp#: 16

Client ID: 09647

Purge Vol: 500.000 mL

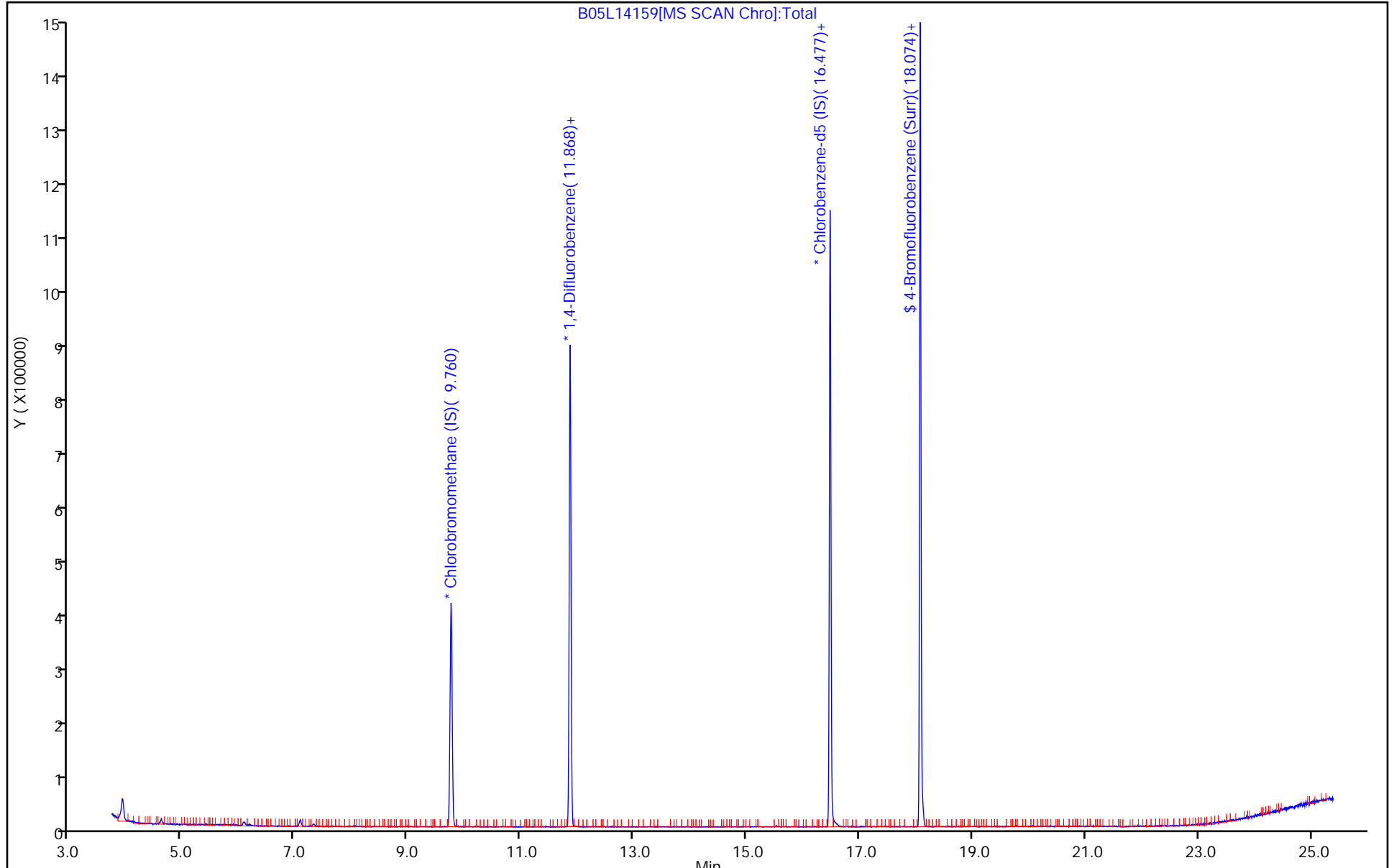
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

10 of 16 COCs

Project Manager: Tony Apanavage
Phone: 301-528-3000
Site Contact: Tony Apanavage
TAL Contact: Terry Walker Wushmond

Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor

Client Contact Information
Company: Tetra Tech
Address: 20251 Century Blvd #200
City/State/Zip: Germantown, MD 20871
Phone: 301-528-552
FAX:

Project Name: MRC Indoor Air
Site/Location: MRC
PO# 112FC08388

Analysis Turnaround Time
Standard (Specify) X
Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)				
													Indoor Air	Ambient Air	Soil Gas	Landfill Gas	
SV-126-C-26	2/19/19	1134	1234	-36	0	11476	09886	✓									
SV-101-C-26	2/19/19	1141	1241	-26	0	10874	11140	✓									
SV-100-C-26	2/19/19	1143	1243	-30	0	11503	11710	✓									
SV-060-C-26	2/19/19	1157	1257	-30	0	10448	11442	✓									
SV-118-A-26	2/21/19	1135	1242	-24	0	11314	11832	✓									
SV-015-A-26	2/21/19	1142	1242	-30	0	11991	09748	✓									

Baltimore #201

18 CMV 18 FLOW
CUSTODY SEAL INTACT
RE-DESIGNED AMBIENT RT 20.0/CT 20.0 C

Temperature (Fahrenheit)	
Start	Interior
Stop	Ambient
Start	Interior
Stop	Ambient



140-14390 Chain of Custody

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:	
Samples Relinquished by: [Signature]	Date/Time: 2/22/19	Received by:	[Signature]
Relinquished by: [Signature]	Date/Time: 2/22/19 1700	Received by: [Signature]	Date/Time: 2-23-19 10:10

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.



11 of 16 COCs

Client Contact Information
 Company: Tetra Tech
 Address: 20251 Century Blvd #200
 City/State/Zip: Germantown, MD 20871
 Phone: 301-528-552
 FAX:
 Project Name: MRC Indoor Air
 Site/location: MRC
 PO# 112108388

Project Manager: Tony Apanavage
Phone: 301-528-3000
Site Contact: Tony Apanavage
TAL Contact: Terry Walker Washburn

Sampled By: Sophia Larson, Josh Mullis & Walt Pryor

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946		Other (Please specify in notes section)	
												Indoor Air	Ambient Air	Soil Gas	Landfill Gas
SV-078-A-26	2/21/19	1147	1249	-25	-5	10175	1177a	✓							
SV-136-A-26	2/21/19	1150	1253	-30	-3	11513	11861	✓							
SV-076-A-26	2/21/19	1157	1257	-30	-4	09842	11848	✓							
SV-168-A-26	2/21/19	1200	1306	-30	-4	7605	10796	✓							
SV-075-A-26	2/21/19	1206	1306	-27	-6	11500	11138	✓							
BCK-1-26	2/19/19	0609	1609	-28	-2	10492	11132	✓							

Sampled by:
 Sophia Larson, Walt Pryor,
 Josh Mullis

Baltimore #201

Temperature (Fahrenheit)		Pressure (inches of Hg)	
Start	Stop	Interior	Ambient
Start	Stop	Interior	Ambient

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: ~~_____~~ Date/Time: 2/22/19
 Samples Relinquished by: ~~_____~~ Date/Time: 2/22/19
 Relinquished by: ~~_____~~ Date/Time: 2/22/19 1700

Canisters Received by: _____
 Received by: _____
 Received by: _____

Lab Use Only

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Project Manager: **Tony Apanavage** Sampled By: **Sophia Lawson, Josh Pryor** 12 of 16 COCs

Phone: 301-528-3000
 Site Contact: **Tony Apanavage**
 TAL Contact: **Terry Walker, Walsunde**

Client Contact Information
 Company: **Tetra Tech**
 Address: **20251 Century Blvd #200**
 City/State/Zip: **Georgetown, MD 20871**
 Phone: **301-528-5522**
 FAX:

Project Name: **MRC Indoor Air**
 Site/location: **MRC**
 PO # **12108388**

Analyses Turnaround Time
 Standard (Specify) **X**
 Rush (Specify)

Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	Temperature (Fahrenheit)		Other (Please specify in notes section)	ASTM D-1946	EPA 3C	EPA 25C	TO-14A	TO-15	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)		
							Interior	Ambient													
2/19/19	0819	1619	-30	-5	11601	10492															
2/19/19	0828	1628	-25	-1	8815	09798															
2/19/19	0835	1635	-30	-3	10149	11764															
2/19/19	0851	1651	-30	-4	11437	10919															
2/19/19	0854	1654	-18	0	7283	10759															
2/19/19	0902	1702	-30	0	7461	11604															
Start		Interior		Ambient																	
Stop		Interior		Ambient																	

Baltimore #201

Sampled by: **Sophia Lawson, Walt Pryor, Josh Mullis**

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: [Signature]	Date/Time: 2/22/19	Received by:
Relinquished by: [Signature]	Date/Time: 2/22/19 1700	Received by: [Signature]

Lab User Only: _____ Signature Name: _____ Control by: _____

Log In Number:

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

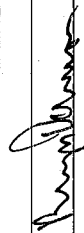
Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	7, SV-108-A-26, COC WAS CANISTER ASSET NUMBER AS 10796, SHOULD BE 10960
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID: _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input checked="" type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/		
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	

Labeling Verified by: _____ Date: _____

pH test strip lot number: _____

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative: _____	
Lot Number: _____	
Exp Date: _____	
Analyst: _____	
Date: _____	
Time: _____	

Project #: _____ PM Instructions: _____

Sample Receiving Associate:  Date: 2-25-19

ANALYTICAL REPORT

Job Number: 140-14391-1
Job Description: MRC Indoor Air, MRC

For:
Tetra Tech, Inc.
20251 Century Blvd
Suite 200
Germantown, MD 20874
Attention: Samantha Brenner



Approved for release.
Terry Walker Wasmund
Project Manager II
3/7/2019 4:25 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
03/07/2019

cc: Ms. Michelle Woeber

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Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-14391-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

Samples IA-131-C-26 (140-14390-18) and IA-113-C-26 (140-14391-16) were received with the canister valve in the open position. The samples were at ambient pressure (approximately 0 psi). The samples' integrity could have been jeopardized due to changes in ambient pressure after the samples were taken (i.e., ambient air not associated with the sampling event could have been introduced into the canister at any point after the sampling was completed).

The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

Air - GC/MS VOA - Method TO-15 LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-DUP01-C-26

Lab Sample ID: 140-14391-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.15	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.29	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.47	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-102-C-26

Lab Sample ID: 140-14391-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.50		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.6	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.74	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.54	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-155-C-26

Lab Sample ID: 140-14391-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.43		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.85	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.80		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.54	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.5		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-133-C-26

Lab Sample ID: 140-14391-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.42		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.80	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.72	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-133-C-26 (Continued)

Lab Sample ID: 140-14391-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.56	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.1	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-153-C-26

Lab Sample ID: 140-14391-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.077	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.8	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.67		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.63	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.53	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.48	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.2	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.5		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.7	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-DUP02-C-26

Lab Sample ID: 140-14391-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.16	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.53	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.60		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.54	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.52	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.2		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-060-C-26

Lab Sample ID: 140-14391-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.66		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.9		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.3		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-060-C-26 (Continued)

Lab Sample ID: 140-14391-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	0.64	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.55	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.3		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	10		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.1		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.8	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-150-C-26

Lab Sample ID: 140-14391-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	5.8	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.6	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.7		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.86		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.57	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	21	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.64	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	10		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.7		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-145-C-26

Lab Sample ID: 140-14391-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.19	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	6.0	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.3		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.6		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.82		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.61	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	21	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.65	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	7.9		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	9.7		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.6		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-146-C-26

Lab Sample ID: 140-14391-10

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-146-C-26 (Continued)

Lab Sample ID: 140-14391-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	5.9	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.14	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.6		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.85		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.55	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	21	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.60	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.1	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	10		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.7		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-152-C-26

Lab Sample ID: 140-14391-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.075	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.2	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.23	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.8		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.3		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.57	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.47	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	11	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.99	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	6.9		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.67	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	5.4		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-144-C-26

Lab Sample ID: 140-14391-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.7	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.23	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.0		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.5		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.2		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-144-C-26 (Continued)

Lab Sample ID: 140-14391-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.57	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	9.5	CI	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.0	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.8		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.7		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	5.4		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-141-C-26

Lab Sample ID: 140-14391-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.19	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.1	CI	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.17	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.9	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	8.6		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.95		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.59	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	7.4	CI	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.73	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	32		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.1		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-088-C-26

Lab Sample ID: 140-14391-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.42		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.55	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.56	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.4	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-142-C-26

Lab Sample ID: 140-14391-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.16	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.47	CI	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.6		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.48	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-142-C-26 (Continued)

Lab Sample ID: 140-14391-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.52	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.7	CI	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	9.2		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.1	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-113-C-26

Lab Sample ID: 140-14391-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.60		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.74		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	3.6		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	1.1		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	14		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.9		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.9		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	3.2		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	13		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	7.2		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	53		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.72	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	13		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-149-C-26

Lab Sample ID: 140-14391-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.29	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.33	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	4.5		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.2		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.22		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.47	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.94	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.6	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	16		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	8.1		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.2		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.0	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-126-C-26

Lab Sample ID: 140-14391-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.32	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-126-C-26 (Continued)

Lab Sample ID: 140-14391-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	5.9		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	4.6		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.27		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.30	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.0	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	21		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	17		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.4		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-101-B-26

Lab Sample ID: 140-14391-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.13	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.70		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.0		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	24		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	3.3		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.54	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	4.2		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.64	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	3.0		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.9		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	92		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	14		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-100-B-26

Lab Sample ID: 140-14391-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.11	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	24		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.2		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.45	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.55	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-100-B-26 (Continued)

Lab Sample ID: 140-14391-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	2.0		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	91		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	9.6		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-DUP01-C-26

Lab Sample ID: 140-14391-1

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.15	J	0.40	0.12	ppb v/v			02/26/19 13:41	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 13:41	1
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v			02/26/19 13:41	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 13:41	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 13:41	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 13:41	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 13:41	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 13:41	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 13:41	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 13:41	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/26/19 13:41	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 13:41	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 13:41	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 13:41	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 13:41	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 13:41	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 13:41	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 13:41	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 13:41	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 13:41	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 13:41	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 13:41	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 13:41	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 13:41	1
Xylenes, Total	0.29	J	0.80	0.12	ppb v/v			02/26/19 13:41	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.47	J	1.3	0.37	ug/m3			02/26/19 13:41	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 13:41	1
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3			02/26/19 13:41	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 13:41	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 13:41	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 13:41	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 13:41	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 13:41	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 13:41	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 13:41	1
Methylene Chloride	3.7	J	6.9	2.3	ug/m3			02/26/19 13:41	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 13:41	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 13:41	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 13:41	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 13:41	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 13:41	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 13:41	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 13:41	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 13:41	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 13:41	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 13:41	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 13:41	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-DUP01-C-26

Lab Sample ID: 140-14391-1

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 13:41	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 13:41	1
Xylenes, Total	1.3	J	3.5	0.52	ug/m3			02/26/19 13:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/26/19 13:41	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-102-C-26

Lab Sample ID: 140-14391-2

Date Collected: 02/19/19 17:06

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/26/19 14:30	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 14:30	1
Chlorodifluoromethane	0.50		0.40	0.075	ppb v/v			02/26/19 14:30	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 14:30	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 14:30	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/26/19 14:30	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 14:30	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 14:30	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 14:30	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 14:30	1
Methylene Chloride	1.6	J	2.0	0.65	ppb v/v			02/26/19 14:30	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 14:30	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 14:30	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 14:30	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 14:30	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 14:30	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 14:30	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 14:30	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 14:30	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 14:30	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 14:30	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 14:30	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 14:30	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 14:30	1
Xylenes, Total	0.74	J	0.80	0.12	ppb v/v			02/26/19 14:30	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.54	J	1.3	0.37	ug/m3			02/26/19 14:30	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 14:30	1
Chlorodifluoromethane	1.8		1.4	0.27	ug/m3			02/26/19 14:30	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 14:30	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 14:30	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 14:30	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 14:30	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 14:30	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 14:30	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 14:30	1
Methylene Chloride	5.7	J	6.9	2.3	ug/m3			02/26/19 14:30	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 14:30	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 14:30	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 14:30	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 14:30	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 14:30	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 14:30	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 14:30	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 14:30	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 14:30	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 14:30	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 14:30	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-102-C-26

Lab Sample ID: 140-14391-2

Date Collected: 02/19/19 17:06

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 14:30	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 14:30	1
Xylenes, Total	3.2	J	3.5	0.52	ug/m3			02/26/19 14:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/26/19 14:30	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-155-C-26

Lab Sample ID: 140-14391-3

Date Collected: 02/19/19 17:08

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/26/19 15:31	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 15:31	1
Chlorodifluoromethane	0.43		0.40	0.075	ppb v/v			02/26/19 15:31	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 15:31	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 15:31	1
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v			02/26/19 15:31	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 15:31	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 15:31	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 15:31	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 15:31	1
Methylene Chloride	0.85	J	2.0	0.65	ppb v/v			02/26/19 15:31	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 15:31	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 15:31	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 15:31	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 15:31	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 15:31	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 15:31	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 15:31	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 15:31	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 15:31	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 15:31	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 15:31	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 15:31	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 15:31	1
Xylenes, Total	0.80		0.80	0.12	ppb v/v			02/26/19 15:31	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.54	J	1.3	0.37	ug/m3			02/26/19 15:31	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 15:31	1
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3			02/26/19 15:31	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 15:31	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 15:31	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 15:31	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 15:31	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 15:31	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 15:31	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 15:31	1
Methylene Chloride	3.0	J	6.9	2.3	ug/m3			02/26/19 15:31	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 15:31	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 15:31	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 15:31	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 15:31	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 15:31	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 15:31	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 15:31	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 15:31	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 15:31	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 15:31	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 15:31	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-155-C-26

Lab Sample ID: 140-14391-3

Date Collected: 02/19/19 17:08

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 15:31	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 15:31	1
Xylenes, Total	3.5		3.5	0.52	ug/m3			02/26/19 15:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/26/19 15:31	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-133-C-26

Lab Sample ID: 140-14391-4

Date Collected: 02/19/19 17:09

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18	J	0.40	0.12	ppb v/v			02/26/19 16:20	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 16:20	1
Chlorodifluoromethane	0.42		0.40	0.075	ppb v/v			02/26/19 16:20	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 16:20	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 16:20	1
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v			02/26/19 16:20	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 16:20	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 16:20	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 16:20	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 16:20	1
Methylene Chloride	0.80	J	2.0	0.65	ppb v/v			02/26/19 16:20	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 16:20	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 16:20	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 16:20	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 16:20	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 16:20	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 16:20	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 16:20	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 16:20	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 16:20	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 16:20	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 16:20	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 16:20	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 16:20	1
Xylenes, Total	0.72	J	0.80	0.12	ppb v/v			02/26/19 16:20	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.56	J	1.3	0.37	ug/m3			02/26/19 16:20	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 16:20	1
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3			02/26/19 16:20	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 16:20	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 16:20	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/26/19 16:20	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 16:20	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 16:20	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 16:20	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 16:20	1
Methylene Chloride	2.8	J	6.9	2.3	ug/m3			02/26/19 16:20	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 16:20	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 16:20	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 16:20	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 16:20	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 16:20	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 16:20	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 16:20	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 16:20	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 16:20	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 16:20	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 16:20	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-133-C-26

Lab Sample ID: 140-14391-4

Date Collected: 02/19/19 17:09

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 16:20	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 16:20	1
Xylenes, Total	3.1	J	3.5	0.52	ug/m3			02/26/19 16:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/26/19 16:20	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-153-C-26

Lab Sample ID: 140-14391-5

Date Collected: 02/19/19 17:11

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/26/19 17:09	1
Carbon tetrachloride	0.077	J	0.40	0.075	ppb v/v			02/26/19 17:09	1
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v			02/26/19 17:09	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 17:09	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 17:09	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 17:09	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 17:09	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 17:09	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 17:09	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 17:09	1
Methylene Chloride	1.8	J	2.0	0.65	ppb v/v			02/26/19 17:09	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 17:09	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 17:09	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 17:09	1
Toluene	0.67		0.60	0.60	ppb v/v			02/26/19 17:09	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 17:09	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 17:09	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 17:09	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 17:09	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 17:09	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 17:09	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:09	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:09	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 17:09	1
Xylenes, Total	0.63	J	0.80	0.12	ppb v/v			02/26/19 17:09	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.53	J	1.3	0.37	ug/m3			02/26/19 17:09	1
Carbon tetrachloride	0.48	J	2.5	0.47	ug/m3			02/26/19 17:09	1
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3			02/26/19 17:09	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 17:09	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 17:09	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 17:09	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 17:09	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 17:09	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 17:09	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 17:09	1
Methylene Chloride	6.2	J	6.9	2.3	ug/m3			02/26/19 17:09	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 17:09	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 17:09	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 17:09	1
Toluene	2.5		2.3	2.3	ug/m3			02/26/19 17:09	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 17:09	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 17:09	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 17:09	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 17:09	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 17:09	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 17:09	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 17:09	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-153-C-26

Lab Sample ID: 140-14391-5

Date Collected: 02/19/19 17:11

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 17:09	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 17:09	1
Xylenes, Total	2.7	J	3.5	0.52	ug/m3			02/26/19 17:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/26/19 17:09	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-DUP02-C-26

Lab Sample ID: 140-14391-6

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.16	J	0.40	0.12	ppb v/v			02/26/19 17:58	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 17:58	1
Chlorodifluoromethane	0.53	CI	0.40	0.075	ppb v/v			02/26/19 17:58	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 17:58	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 17:58	1
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v			02/26/19 17:58	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 17:58	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 17:58	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 17:58	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 17:58	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/26/19 17:58	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 17:58	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 17:58	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 17:58	1
Toluene	0.60		0.60	0.60	ppb v/v			02/26/19 17:58	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 17:58	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 17:58	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 17:58	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 17:58	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 17:58	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 17:58	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:58	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:58	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 17:58	1
Xylenes, Total	0.54	J	0.80	0.12	ppb v/v			02/26/19 17:58	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.52	J	1.3	0.37	ug/m3			02/26/19 17:58	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 17:58	1
Chlorodifluoromethane	1.9	CI	1.4	0.27	ug/m3			02/26/19 17:58	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 17:58	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 17:58	1
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3			02/26/19 17:58	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 17:58	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 17:58	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 17:58	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 17:58	1
Methylene Chloride	3.8	J	6.9	2.3	ug/m3			02/26/19 17:58	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 17:58	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 17:58	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 17:58	1
Toluene	2.2		2.3	2.3	ug/m3			02/26/19 17:58	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 17:58	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 17:58	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 17:58	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 17:58	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 17:58	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 17:58	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 17:58	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-DUP02-C-26

Lab Sample ID: 140-14391-6

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 17:58	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 17:58	1
Xylenes, Total	2.3	J	3.5	0.52	ug/m3			02/26/19 17:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/26/19 17:58	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-060-C-26

Lab Sample ID: 140-14391-7

Date Collected: 02/19/19 17:14

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/26/19 18:47	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 18:47	1
Chlorodifluoromethane	0.66		0.40	0.075	ppb v/v			02/26/19 18:47	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 18:47	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 18:47	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/26/19 18:47	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 18:47	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 18:47	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 18:47	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 18:47	1
Methylene Chloride	2.9		2.0	0.65	ppb v/v			02/26/19 18:47	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 18:47	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 18:47	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 18:47	1
Toluene	1.3		0.60	0.60	ppb v/v			02/26/19 18:47	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 18:47	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 18:47	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 18:47	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 18:47	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 18:47	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 18:47	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 18:47	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 18:47	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 18:47	1
Xylenes, Total	0.64	J	0.80	0.12	ppb v/v			02/26/19 18:47	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.55	J	1.3	0.37	ug/m3			02/26/19 18:47	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 18:47	1
Chlorodifluoromethane	2.3		1.4	0.27	ug/m3			02/26/19 18:47	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 18:47	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 18:47	1
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3			02/26/19 18:47	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 18:47	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 18:47	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 18:47	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 18:47	1
Methylene Chloride	10		6.9	2.3	ug/m3			02/26/19 18:47	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 18:47	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 18:47	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 18:47	1
Toluene	5.1		2.3	2.3	ug/m3			02/26/19 18:47	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 18:47	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 18:47	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 18:47	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 18:47	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 18:47	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 18:47	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 18:47	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-060-C-26

Lab Sample ID: 140-14391-7

Date Collected: 02/19/19 17:14

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 18:47	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 18:47	1
Xylenes, Total	2.8	J	3.5	0.52	ug/m3			02/26/19 18:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 18:47	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-150-C-26

Lab Sample ID: 140-14391-8

Date Collected: 02/19/19 17:16

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18	J	0.40	0.12	ppb v/v			02/26/19 19:36	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 19:36	1
Chlorodifluoromethane	5.8	CI	0.40	0.075	ppb v/v			02/26/19 19:36	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 19:36	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 19:36	1
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v			02/26/19 19:36	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 19:36	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 19:36	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 19:36	1
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v			02/26/19 19:36	1
Methylene Chloride	1.6	J	2.0	0.65	ppb v/v			02/26/19 19:36	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 19:36	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 19:36	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 19:36	1
Toluene	2.7		0.60	0.60	ppb v/v			02/26/19 19:36	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 19:36	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 19:36	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 19:36	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 19:36	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 19:36	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 19:36	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 19:36	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 19:36	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 19:36	1
Xylenes, Total	0.86		0.80	0.12	ppb v/v			02/26/19 19:36	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.57	J	1.3	0.37	ug/m3			02/26/19 19:36	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 19:36	1
Chlorodifluoromethane	21	CI	1.4	0.27	ug/m3			02/26/19 19:36	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 19:36	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 19:36	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/26/19 19:36	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 19:36	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 19:36	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 19:36	1
Ethylbenzene	0.64	J	1.7	0.59	ug/m3			02/26/19 19:36	1
Methylene Chloride	5.7	J	6.9	2.3	ug/m3			02/26/19 19:36	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 19:36	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 19:36	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 19:36	1
Toluene	10		2.3	2.3	ug/m3			02/26/19 19:36	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 19:36	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 19:36	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 19:36	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 19:36	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 19:36	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 19:36	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 19:36	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-150-C-26

Lab Sample ID: 140-14391-8

Date Collected: 02/19/19 17:16

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 19:36	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 19:36	1
Xylenes, Total	3.7		3.5	0.52	ug/m3			02/26/19 19:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 19:36	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-145-C-26

Lab Sample ID: 140-14391-9

Date Collected: 02/19/19 17:17

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.19	J	0.40	0.12	ppb v/v			02/26/19 20:25	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 20:25	1
Chlorodifluoromethane	6.0	CI	0.40	0.075	ppb v/v			02/26/19 20:25	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 20:25	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 20:25	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/26/19 20:25	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 20:25	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 20:25	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 20:25	1
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v			02/26/19 20:25	1
Methylene Chloride	2.3		2.0	0.65	ppb v/v			02/26/19 20:25	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 20:25	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 20:25	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 20:25	1
Toluene	2.6		0.60	0.60	ppb v/v			02/26/19 20:25	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 20:25	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 20:25	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 20:25	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 20:25	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 20:25	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 20:25	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 20:25	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 20:25	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 20:25	1
Xylenes, Total	0.82		0.80	0.12	ppb v/v			02/26/19 20:25	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.61	J	1.3	0.37	ug/m3			02/26/19 20:25	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 20:25	1
Chlorodifluoromethane	21	CI	1.4	0.27	ug/m3			02/26/19 20:25	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 20:25	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 20:25	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 20:25	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 20:25	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 20:25	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 20:25	1
Ethylbenzene	0.65	J	1.7	0.59	ug/m3			02/26/19 20:25	1
Methylene Chloride	7.9		6.9	2.3	ug/m3			02/26/19 20:25	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 20:25	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 20:25	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 20:25	1
Toluene	9.7		2.3	2.3	ug/m3			02/26/19 20:25	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 20:25	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 20:25	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 20:25	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 20:25	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 20:25	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 20:25	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 20:25	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-145-C-26

Lab Sample ID: 140-14391-9

Date Collected: 02/19/19 17:17

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 20:25	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 20:25	1
Xylenes, Total	3.6		3.5	0.52	ug/m3			02/26/19 20:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/26/19 20:25	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-146-C-26

Lab Sample ID: 140-14391-10

Date Collected: 02/19/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/26/19 21:14	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 21:14	1
Chlorodifluoromethane	5.9	CI	0.40	0.075	ppb v/v			02/26/19 21:14	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 21:14	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 21:14	1
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v			02/26/19 21:14	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 21:14	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 21:14	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 21:14	1
Ethylbenzene	0.14	J	0.40	0.14	ppb v/v			02/26/19 21:14	1
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v			02/26/19 21:14	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 21:14	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 21:14	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 21:14	1
Toluene	2.6		0.60	0.60	ppb v/v			02/26/19 21:14	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 21:14	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 21:14	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 21:14	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 21:14	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 21:14	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 21:14	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 21:14	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 21:14	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 21:14	1
Xylenes, Total	0.85		0.80	0.12	ppb v/v			02/26/19 21:14	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.55	J	1.3	0.37	ug/m3			02/26/19 21:14	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 21:14	1
Chlorodifluoromethane	21	CI	1.4	0.27	ug/m3			02/26/19 21:14	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 21:14	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 21:14	1
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3			02/26/19 21:14	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 21:14	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 21:14	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 21:14	1
Ethylbenzene	0.60	J	1.7	0.59	ug/m3			02/26/19 21:14	1
Methylene Chloride	4.1	J	6.9	2.3	ug/m3			02/26/19 21:14	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 21:14	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 21:14	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 21:14	1
Toluene	10		2.3	2.3	ug/m3			02/26/19 21:14	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 21:14	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 21:14	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 21:14	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 21:14	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 21:14	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 21:14	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 21:14	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-146-C-26

Lab Sample ID: 140-14391-10

Date Collected: 02/19/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 21:14	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 21:14	1
Xylenes, Total	3.7		3.5	0.52	ug/m3			02/26/19 21:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/26/19 21:14	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-152-C-26

Lab Sample ID: 140-14391-11

Date Collected: 02/19/19 17:19

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18	J	0.40	0.12	ppb v/v			02/26/19 22:03	1
Carbon tetrachloride	0.075	J	0.40	0.075	ppb v/v			02/26/19 22:03	1
Chlorodifluoromethane	3.2	CI	0.40	0.075	ppb v/v			02/26/19 22:03	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 22:03	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 22:03	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 22:03	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 22:03	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 22:03	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 22:03	1
Ethylbenzene	0.23	J	0.40	0.14	ppb v/v			02/26/19 22:03	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/26/19 22:03	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 22:03	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 22:03	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 22:03	1
Toluene	1.8		0.60	0.60	ppb v/v			02/26/19 22:03	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 22:03	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 22:03	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 22:03	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 22:03	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 22:03	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 22:03	1
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/26/19 22:03	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 22:03	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 22:03	1
Xylenes, Total	1.3		0.80	0.12	ppb v/v			02/26/19 22:03	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.57	J	1.3	0.37	ug/m3			02/26/19 22:03	1
Carbon tetrachloride	0.47	J	2.5	0.47	ug/m3			02/26/19 22:03	1
Chlorodifluoromethane	11	CI	1.4	0.27	ug/m3			02/26/19 22:03	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 22:03	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 22:03	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 22:03	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 22:03	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 22:03	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 22:03	1
Ethylbenzene	0.99	J	1.7	0.59	ug/m3			02/26/19 22:03	1
Methylene Chloride	3.6	J	6.9	2.3	ug/m3			02/26/19 22:03	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 22:03	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 22:03	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 22:03	1
Toluene	6.9		2.3	2.3	ug/m3			02/26/19 22:03	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 22:03	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 22:03	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 22:03	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 22:03	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 22:03	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 22:03	1
1,2,4-Trimethylbenzene	0.67	J	2.0	0.61	ug/m3			02/26/19 22:03	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-152-C-26

Lab Sample ID: 140-14391-11

Date Collected: 02/19/19 17:19

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 22:03	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 22:03	1
Xylenes, Total	5.4		3.5	0.52	ug/m3			02/26/19 22:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		60 - 140					02/26/19 22:03	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-144-C-26

Lab Sample ID: 140-14391-12

Date Collected: 02/19/19 17:21

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18	J	0.40	0.12	ppb v/v			02/26/19 22:52	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 22:52	1
Chlorodifluoromethane	2.7	CI	0.40	0.075	ppb v/v			02/26/19 22:52	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 22:52	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 22:52	1
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v			02/26/19 22:52	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 22:52	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 22:52	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 22:52	1
Ethylbenzene	0.23	J	0.40	0.14	ppb v/v			02/26/19 22:52	1
Methylene Chloride	2.0		2.0	0.65	ppb v/v			02/26/19 22:52	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 22:52	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 22:52	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 22:52	1
Toluene	1.5		0.60	0.60	ppb v/v			02/26/19 22:52	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 22:52	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 22:52	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 22:52	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 22:52	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 22:52	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 22:52	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 22:52	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 22:52	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 22:52	1
Xylenes, Total	1.2		0.80	0.12	ppb v/v			02/26/19 22:52	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.57	J	1.3	0.37	ug/m3			02/26/19 22:52	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 22:52	1
Chlorodifluoromethane	9.5	CI	1.4	0.27	ug/m3			02/26/19 22:52	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 22:52	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 22:52	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/26/19 22:52	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 22:52	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 22:52	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 22:52	1
Ethylbenzene	1.0	J	1.7	0.59	ug/m3			02/26/19 22:52	1
Methylene Chloride	6.8		6.9	2.3	ug/m3			02/26/19 22:52	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 22:52	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 22:52	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 22:52	1
Toluene	5.7		2.3	2.3	ug/m3			02/26/19 22:52	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 22:52	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 22:52	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 22:52	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 22:52	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 22:52	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 22:52	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 22:52	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-144-C-26

Lab Sample ID: 140-14391-12

Date Collected: 02/19/19 17:21

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 22:52	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 22:52	1
Xylenes, Total	5.4		3.5	0.52	ug/m3			02/26/19 22:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/26/19 22:52	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-141-C-26

Lab Sample ID: 140-14391-13

Date Collected: 02/19/19 17:24

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.19	J	0.40	0.12	ppb v/v			02/26/19 23:41	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 23:41	1
Chlorodifluoromethane	2.1	CI	0.40	0.075	ppb v/v			02/26/19 23:41	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 23:41	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 23:41	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 23:41	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 23:41	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 23:41	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 23:41	1
Ethylbenzene	0.17	J	0.40	0.14	ppb v/v			02/26/19 23:41	1
Methylene Chloride	1.9	J	2.0	0.65	ppb v/v			02/26/19 23:41	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 23:41	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 23:41	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 23:41	1
Toluene	8.6		0.60	0.60	ppb v/v			02/26/19 23:41	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 23:41	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 23:41	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 23:41	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 23:41	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 23:41	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 23:41	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 23:41	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 23:41	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 23:41	1
Xylenes, Total	0.95		0.80	0.12	ppb v/v			02/26/19 23:41	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.59	J	1.3	0.37	ug/m3			02/26/19 23:41	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 23:41	1
Chlorodifluoromethane	7.4	CI	1.4	0.27	ug/m3			02/26/19 23:41	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 23:41	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 23:41	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 23:41	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 23:41	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 23:41	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 23:41	1
Ethylbenzene	0.73	J	1.7	0.59	ug/m3			02/26/19 23:41	1
Methylene Chloride	6.5	J	6.9	2.3	ug/m3			02/26/19 23:41	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 23:41	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 23:41	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 23:41	1
Toluene	32		2.3	2.3	ug/m3			02/26/19 23:41	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 23:41	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 23:41	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 23:41	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 23:41	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 23:41	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 23:41	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 23:41	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-141-C-26

Lab Sample ID: 140-14391-13

Date Collected: 02/19/19 17:24

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 23:41	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 23:41	1
Xylenes, Total	4.1		3.5	0.52	ug/m3			02/26/19 23:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 23:41	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-088-C-26

Lab Sample ID: 140-14391-14

Date Collected: 02/19/19 17:28

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18	J	0.40	0.12	ppb v/v			02/27/19 00:30	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 00:30	1
Chlorodifluoromethane	0.42		0.40	0.075	ppb v/v			02/27/19 00:30	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 00:30	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 00:30	1
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v			02/27/19 00:30	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 00:30	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 00:30	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 00:30	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 00:30	1
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v			02/27/19 00:30	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 00:30	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 00:30	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 00:30	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 00:30	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 00:30	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 00:30	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 00:30	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 00:30	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 00:30	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 00:30	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 00:30	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 00:30	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 00:30	1
Xylenes, Total	0.55	J	0.80	0.12	ppb v/v			02/27/19 00:30	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.56	J	1.3	0.37	ug/m3			02/27/19 00:30	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 00:30	1
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3			02/27/19 00:30	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 00:30	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 00:30	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/27/19 00:30	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 00:30	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 00:30	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 00:30	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 00:30	1
Methylene Chloride	4.0	J	6.9	2.3	ug/m3			02/27/19 00:30	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 00:30	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 00:30	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 00:30	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 00:30	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 00:30	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 00:30	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 00:30	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 00:30	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 00:30	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 00:30	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 00:30	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-088-C-26

Lab Sample ID: 140-14391-14

Date Collected: 02/19/19 17:28

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 00:30	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 00:30	1
Xylenes, Total	2.4	J	3.5	0.52	ug/m3			02/27/19 00:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/27/19 00:30	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-142-C-26

Lab Sample ID: 140-14391-15

Date Collected: 02/19/19 17:24

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.16	J	0.40	0.12	ppb v/v			02/27/19 01:19	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 01:19	1
Chlorodifluoromethane	0.47	CI	0.40	0.075	ppb v/v			02/27/19 01:19	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 01:19	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 01:19	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/27/19 01:19	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 01:19	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 01:19	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 01:19	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 01:19	1
Methylene Chloride	2.6		2.0	0.65	ppb v/v			02/27/19 01:19	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 01:19	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 01:19	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 01:19	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 01:19	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 01:19	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 01:19	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 01:19	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 01:19	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 01:19	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 01:19	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 01:19	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 01:19	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 01:19	1
Xylenes, Total	0.48	J	0.80	0.12	ppb v/v			02/27/19 01:19	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.52	J	1.3	0.37	ug/m3			02/27/19 01:19	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 01:19	1
Chlorodifluoromethane	1.7	CI	1.4	0.27	ug/m3			02/27/19 01:19	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 01:19	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 01:19	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/27/19 01:19	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 01:19	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 01:19	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 01:19	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 01:19	1
Methylene Chloride	9.2		6.9	2.3	ug/m3			02/27/19 01:19	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 01:19	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 01:19	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 01:19	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 01:19	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 01:19	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 01:19	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 01:19	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 01:19	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 01:19	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 01:19	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 01:19	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-142-C-26

Lab Sample ID: 140-14391-15

Date Collected: 02/19/19 17:24

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 01:19	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 01:19	1
Xylenes, Total	2.1	J	3.5	0.52	ug/m3			02/27/19 01:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/27/19 01:19	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-113-C-26

Lab Sample ID: 140-14391-16

Date Collected: 02/19/19 17:30

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.60		0.40	0.12	ppb v/v			02/27/19 02:57	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 02:57	1
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v			02/27/19 02:57	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 02:57	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 02:57	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/27/19 02:57	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 02:57	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 02:57	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 02:57	1
Ethylbenzene	0.74		0.40	0.14	ppb v/v			02/27/19 02:57	1
Methylene Chloride	3.6		2.0	0.65	ppb v/v			02/27/19 02:57	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 02:57	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 02:57	1
Tetrachloroethene	1.1		0.40	0.080	ppb v/v			02/27/19 02:57	1
Toluene	14		0.60	0.60	ppb v/v			02/27/19 02:57	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 02:57	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 02:57	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 02:57	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 02:57	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 02:57	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 02:57	1
1,2,4-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			02/27/19 02:57	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 02:57	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 02:57	1
Xylenes, Total	2.9		0.80	0.12	ppb v/v			02/27/19 02:57	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.9		1.3	0.37	ug/m3			02/27/19 02:57	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 02:57	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/27/19 02:57	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 02:57	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 02:57	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/27/19 02:57	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 02:57	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 02:57	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 02:57	1
Ethylbenzene	3.2		1.7	0.59	ug/m3			02/27/19 02:57	1
Methylene Chloride	13		6.9	2.3	ug/m3			02/27/19 02:57	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 02:57	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 02:57	1
Tetrachloroethene	7.2		2.7	0.54	ug/m3			02/27/19 02:57	1
Toluene	53		2.3	2.3	ug/m3			02/27/19 02:57	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 02:57	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 02:57	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 02:57	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 02:57	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 02:57	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 02:57	1
1,2,4-Trimethylbenzene	0.72	J	2.0	0.61	ug/m3			02/27/19 02:57	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-113-C-26

Lab Sample ID: 140-14391-16

Date Collected: 02/19/19 17:30

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 02:57	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 02:57	1
Xylenes, Total	13		3.5	0.52	ug/m3			02/27/19 02:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/27/19 02:57	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-149-C-26

Lab Sample ID: 140-14391-17

Date Collected: 02/19/19 17:33

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.29	J	0.40	0.12	ppb v/v			02/27/19 03:46	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 03:46	1
Chlorodifluoromethane	ND		0.40	0.075	ppb v/v			02/27/19 03:46	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 03:46	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 03:46	1
Dichlorodifluoromethane	0.33	J	0.40	0.14	ppb v/v			02/27/19 03:46	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 03:46	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 03:46	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 03:46	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 03:46	1
Methylene Chloride	4.5		2.0	0.65	ppb v/v			02/27/19 03:46	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 03:46	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 03:46	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 03:46	1
Toluene	2.2		0.60	0.60	ppb v/v			02/27/19 03:46	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 03:46	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 03:46	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 03:46	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 03:46	1
Trichloroethene	0.22		0.20	0.070	ppb v/v			02/27/19 03:46	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 03:46	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 03:46	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 03:46	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 03:46	1
Xylenes, Total	0.47	J	0.80	0.12	ppb v/v			02/27/19 03:46	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.94	J	1.3	0.37	ug/m3			02/27/19 03:46	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 03:46	1
Chlorodifluoromethane	ND		1.4	0.27	ug/m3			02/27/19 03:46	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 03:46	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 03:46	1
Dichlorodifluoromethane	1.6	J	2.0	0.67	ug/m3			02/27/19 03:46	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 03:46	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 03:46	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 03:46	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 03:46	1
Methylene Chloride	16		6.9	2.3	ug/m3			02/27/19 03:46	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 03:46	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 03:46	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 03:46	1
Toluene	8.1		2.3	2.3	ug/m3			02/27/19 03:46	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 03:46	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 03:46	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 03:46	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 03:46	1
Trichloroethene	1.2		1.1	0.38	ug/m3			02/27/19 03:46	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 03:46	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 03:46	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-149-C-26

Lab Sample ID: 140-14391-17

Date Collected: 02/19/19 17:33

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 03:46	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 03:46	1
Xylenes, Total	2.0	J	3.5	0.52	ug/m3			02/27/19 03:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/27/19 03:46	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-126-C-26

Lab Sample ID: 140-14391-18

Date Collected: 02/19/19 17:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.32	J	0.40	0.12	ppb v/v			02/27/19 04:35	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 04:35	1
Chlorodifluoromethane	ND		0.40	0.075	ppb v/v			02/27/19 04:35	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 04:35	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 04:35	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/27/19 04:35	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 04:35	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 04:35	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 04:35	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 04:35	1
Methylene Chloride	5.9		2.0	0.65	ppb v/v			02/27/19 04:35	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 04:35	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 04:35	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 04:35	1
Toluene	4.6		0.60	0.60	ppb v/v			02/27/19 04:35	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 04:35	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 04:35	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 04:35	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 04:35	1
Trichloroethene	0.27		0.20	0.070	ppb v/v			02/27/19 04:35	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 04:35	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 04:35	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 04:35	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 04:35	1
Xylenes, Total	0.30	J	0.80	0.12	ppb v/v			02/27/19 04:35	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	J	1.3	0.37	ug/m3			02/27/19 04:35	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 04:35	1
Chlorodifluoromethane	ND		1.4	0.27	ug/m3			02/27/19 04:35	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 04:35	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 04:35	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/27/19 04:35	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 04:35	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 04:35	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 04:35	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 04:35	1
Methylene Chloride	21		6.9	2.3	ug/m3			02/27/19 04:35	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 04:35	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 04:35	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 04:35	1
Toluene	17		2.3	2.3	ug/m3			02/27/19 04:35	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 04:35	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 04:35	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 04:35	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 04:35	1
Trichloroethene	1.4		1.1	0.38	ug/m3			02/27/19 04:35	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 04:35	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 04:35	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-126-C-26

Lab Sample ID: 140-14391-18

Date Collected: 02/19/19 17:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 04:35	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 04:35	1
Xylenes, Total	1.3	J	3.5	0.52	ug/m3			02/27/19 04:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/27/19 04:35	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-101-B-26

Lab Sample ID: 140-14391-19

Date Collected: 02/19/19 17:43

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/26/19 16:38	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 16:38	1
Chlorodifluoromethane	1.2		0.40	0.075	ppb v/v			02/26/19 16:38	1
Chloroform	0.13	J	0.40	0.075	ppb v/v			02/26/19 16:38	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 16:38	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/26/19 16:38	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 16:38	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 16:38	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 16:38	1
Ethylbenzene	0.70		0.40	0.14	ppb v/v			02/26/19 16:38	1
Methylene Chloride	2.0		2.0	0.65	ppb v/v			02/26/19 16:38	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 16:38	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 16:38	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 16:38	1
Toluene	24		0.60	0.60	ppb v/v			02/26/19 16:38	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 16:38	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 16:38	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 16:38	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 16:38	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 16:38	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 16:38	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 16:38	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 16:38	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 16:38	1
Xylenes, Total	3.3		0.80	0.12	ppb v/v			02/26/19 16:38	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.54	J	1.3	0.37	ug/m3			02/26/19 16:38	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 16:38	1
Chlorodifluoromethane	4.2		1.4	0.27	ug/m3			02/26/19 16:38	1
Chloroform	0.64	J	2.0	0.37	ug/m3			02/26/19 16:38	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 16:38	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 16:38	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 16:38	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 16:38	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 16:38	1
Ethylbenzene	3.0		1.7	0.59	ug/m3			02/26/19 16:38	1
Methylene Chloride	6.9		6.9	2.3	ug/m3			02/26/19 16:38	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 16:38	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 16:38	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 16:38	1
Toluene	92		2.3	2.3	ug/m3			02/26/19 16:38	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 16:38	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 16:38	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 16:38	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 16:38	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 16:38	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 16:38	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 16:38	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-101-B-26

Lab Sample ID: 140-14391-19

Date Collected: 02/19/19 17:43

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 16:38	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 16:38	1
Xylenes, Total	14		3.5	0.52	ug/m3			02/26/19 16:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					02/26/19 16:38	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-100-B-26

Lab Sample ID: 140-14391-20

Date Collected: 02/19/19 17:44

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.14	J	0.40	0.12	ppb v/v			02/26/19 17:19	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 17:19	1
Chlorodifluoromethane	1.1		0.40	0.075	ppb v/v			02/26/19 17:19	1
Chloroform	0.11	J	0.40	0.075	ppb v/v			02/26/19 17:19	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 17:19	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/26/19 17:19	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 17:19	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 17:19	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 17:19	1
Ethylbenzene	0.46		0.40	0.14	ppb v/v			02/26/19 17:19	1
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			02/26/19 17:19	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 17:19	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 17:19	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 17:19	1
Toluene	24		0.60	0.60	ppb v/v			02/26/19 17:19	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 17:19	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 17:19	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 17:19	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 17:19	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 17:19	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 17:19	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:19	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:19	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 17:19	1
Xylenes, Total	2.2		0.80	0.12	ppb v/v			02/26/19 17:19	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.45	J	1.3	0.37	ug/m3			02/26/19 17:19	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 17:19	1
Chlorodifluoromethane	3.8		1.4	0.27	ug/m3			02/26/19 17:19	1
Chloroform	0.55	J	2.0	0.37	ug/m3			02/26/19 17:19	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 17:19	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 17:19	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 17:19	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 17:19	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 17:19	1
Ethylbenzene	2.0		1.7	0.59	ug/m3			02/26/19 17:19	1
Methylene Chloride	3.5	J	6.9	2.3	ug/m3			02/26/19 17:19	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 17:19	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 17:19	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 17:19	1
Toluene	91		2.3	2.3	ug/m3			02/26/19 17:19	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 17:19	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 17:19	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 17:19	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 17:19	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 17:19	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 17:19	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 17:19	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-100-B-26

Lab Sample ID: 140-14391-20

Date Collected: 02/19/19 17:44

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 17:19	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 17:19	1
Xylenes, Total	9.6		3.5	0.52	ug/m3			02/26/19 17:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		60 - 140					02/26/19 17:19	1

Default Detection Limits

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-14391-1	IA-DUP01-C-26	102
140-14391-2	IA-102-C-26	102
140-14391-3	IA-155-C-26	99
140-14391-4	IA-133-C-26	99
140-14391-5	IA-153-C-26	102
140-14391-6	IA-DUP02-C-26	99
140-14391-7	IA-060-C-26	101
140-14391-8	IA-150-C-26	101
140-14391-9	IA-145-C-26	102
140-14391-10	IA-146-C-26	99
140-14391-11	IA-152-C-26	104
140-14391-12	IA-144-C-26	102
140-14391-13	IA-141-C-26	100
140-14391-14	IA-088-C-26	100
140-14391-15	IA-142-C-26	99
140-14391-16	IA-113-C-26	101
140-14391-17	IA-149-C-26	101
140-14391-18	IA-126-C-26	100
140-14391-19	IA-101-B-26	96
140-14391-20	IA-100-B-26	94
LCS 140-27909/1002	Lab Control Sample	104
LCS 140-27931/1002	Lab Control Sample	100
MB 140-27909/4	Method Blank	101
MB 140-27931/4	Method Blank	96

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-27909/4
Matrix: Air
Analysis Batch: 27909

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			02/26/19 12:52	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/26/19 12:52	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/26/19 12:52	1
Chloroform	ND		0.080	0.015	ppb v/v			02/26/19 12:52	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/26/19 12:52	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/26/19 12:52	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/26/19 12:52	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/26/19 12:52	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/26/19 12:52	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/26/19 12:52	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/26/19 12:52	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/26/19 12:52	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/26/19 12:52	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/26/19 12:52	1
Toluene	ND		0.12	0.12	ppb v/v			02/26/19 12:52	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/26/19 12:52	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/26/19 12:52	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/26/19 12:52	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/26/19 12:52	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/26/19 12:52	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/26/19 12:52	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/26/19 12:52	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/26/19 12:52	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/26/19 12:52	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/26/19 12:52	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/26/19 12:52	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/26/19 12:52	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/26/19 12:52	1
Chloroform	ND		0.39	0.073	ug/m3			02/26/19 12:52	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/26/19 12:52	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/26/19 12:52	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/26/19 12:52	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/26/19 12:52	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/26/19 12:52	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/26/19 12:52	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/26/19 12:52	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/26/19 12:52	1
Naphthalene	ND		0.21	0.21	ug/m3			02/26/19 12:52	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/26/19 12:52	1
Toluene	ND		0.45	0.45	ug/m3			02/26/19 12:52	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/26/19 12:52	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/26/19 12:52	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/26/19 12:52	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/26/19 12:52	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/26/19 12:52	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/26/19 12:52	1

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27909/4
Matrix: Air
Analysis Batch: 27909

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/26/19 12:52	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/26/19 12:52	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/26/19 12:52	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/26/19 12:52	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	101		60 - 140		02/26/19 12:52	1

Lab Sample ID: LCS 140-27909/1002
Matrix: Air
Analysis Batch: 27909

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.04		ppb v/v		102	70 - 130
Chlorodifluoromethane	2.00	1.75		ppb v/v		87	60 - 140
Chloroform	2.00	1.92		ppb v/v		96	70 - 130
cis-1,2-Dichloroethene	2.00	1.95		ppb v/v		98	70 - 130
Dichlorodifluoromethane	2.00	1.74		ppb v/v		87	60 - 140
1,1-Dichloroethane	2.00	1.90		ppb v/v		95	70 - 130
1,2-Dichloroethane	2.00	1.91		ppb v/v		95	70 - 130
1,1-Dichloroethene	2.00	1.90		ppb v/v		95	70 - 130
Ethylbenzene	2.00	2.12		ppb v/v		106	70 - 130
Methylene Chloride	2.00	1.75		ppb v/v		88	70 - 130
Methyl tert-butyl ether	2.00	2.00		ppb v/v		100	60 - 140
Naphthalene	2.00	1.70		ppb v/v		85	60 - 140
Tetrachloroethene	2.00	2.06		ppb v/v		103	70 - 130
Toluene	2.00	2.11		ppb v/v		105	70 - 130
trans-1,2-Dichloroethene	2.00	1.86		ppb v/v		93	70 - 130
1,2,4-Trichlorobenzene	2.00	1.90		ppb v/v		95	60 - 140
1,1,1-Trichloroethane	2.00	1.94		ppb v/v		97	70 - 130
1,1,2-Trichloroethane	2.00	2.06		ppb v/v		103	70 - 130
Trichloroethene	2.00	2.01		ppb v/v		101	70 - 130
1,2,3-Trimethylbenzene	2.00	2.12		ppb v/v		106	70 - 130
1,2,4-Trimethylbenzene	2.00	2.16		ppb v/v		108	70 - 130
1,3,5-Trimethylbenzene	2.00	2.11		ppb v/v		105	70 - 130
Vinyl chloride	2.00	2.10		ppb v/v		105	70 - 130
Xylenes, Total	6.00	6.63		ppb v/v		111	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	13	12.8		ug/m3		102	70 - 130
Chlorodifluoromethane	7.1	6.17		ug/m3		87	60 - 140
Chloroform	9.8	9.37		ug/m3		96	70 - 130
cis-1,2-Dichloroethene	7.9	7.74		ug/m3		98	70 - 130
Dichlorodifluoromethane	9.9	8.61		ug/m3		87	60 - 140
1,1-Dichloroethane	8.1	7.70		ug/m3		95	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27909/1002
Matrix: Air
Analysis Batch: 27909

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	7.71		ug/m3		95	70 - 130
1,1-Dichloroethene	7.9	7.55		ug/m3		95	70 - 130
Ethylbenzene	8.7	9.21		ug/m3		106	70 - 130
Methylene Chloride	6.9	6.08		ug/m3		88	70 - 130
Methyl tert-butyl ether	7.2	7.19		ug/m3		100	60 - 140
Naphthalene	10	8.92		ug/m3		85	60 - 140
Tetrachloroethene	14	14.0		ug/m3		103	70 - 130
Toluene	7.5	7.93		ug/m3		105	70 - 130
trans-1,2-Dichloroethene	7.9	7.37		ug/m3		93	70 - 130
1,2,4-Trichlorobenzene	15	14.1		ug/m3		95	60 - 140
1,1,1-Trichloroethane	11	10.6		ug/m3		97	70 - 130
1,1,2-Trichloroethane	11	11.3		ug/m3		103	70 - 130
Trichloroethene	11	10.8		ug/m3		101	70 - 130
1,2,3-Trimethylbenzene	9.8	10.4		ug/m3		106	70 - 130
1,2,4-Trimethylbenzene	9.8	10.6		ug/m3		108	70 - 130
1,3,5-Trimethylbenzene	9.8	10.4		ug/m3		105	70 - 130
Vinyl chloride	5.1	5.37		ug/m3		105	70 - 130
Xylenes, Total	26	28.8		ug/m3		111	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		60 - 140

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/26/19 12:56	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chloroform	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/26/19 12:56	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/26/19 12:56	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/26/19 12:56	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/26/19 12:56	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/26/19 12:56	1
Toluene	ND		0.12	0.12	ppb v/v			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/26/19 12:56	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/26/19 12:56	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/26/19 12:56	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/26/19 12:56	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/26/19 12:56	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/26/19 12:56	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/26/19 12:56	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/26/19 12:56	1
Chloroform	ND		0.39	0.073	ug/m3			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/26/19 12:56	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/26/19 12:56	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/26/19 12:56	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/26/19 12:56	1
Naphthalene	ND		0.21	0.21	ug/m3			02/26/19 12:56	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/26/19 12:56	1
Toluene	ND		0.45	0.45	ug/m3			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/26/19 12:56	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/26/19 12:56	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/26/19 12:56	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/26/19 12:56	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/26/19 12:56	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/26/19 12:56	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		60 - 140		02/26/19 12:56	1

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.22		ppb v/v		111	70 - 130
Chlorodifluoromethane	2.00	2.02		ppb v/v		101	60 - 140
Chloroform	2.00	2.00		ppb v/v		100	70 - 130
cis-1,2-Dichloroethene	2.00	2.09		ppb v/v		104	70 - 130
Dichlorodifluoromethane	2.00	2.06		ppb v/v		103	60 - 140

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
1,1-Dichloroethane	2.00	2.05		ppb v/v		103	70 - 130
1,2-Dichloroethane	2.00	2.00		ppb v/v		100	70 - 130
1,1-Dichloroethene	2.00	2.14		ppb v/v		107	70 - 130
Ethylbenzene	2.00	2.03		ppb v/v		101	70 - 130
Methylene Chloride	2.00	1.81		ppb v/v		90	70 - 130
Methyl tert-butyl ether	2.00	1.97		ppb v/v		99	60 - 140
Naphthalene	2.00	1.94		ppb v/v		97	60 - 140
Tetrachloroethene	2.00	2.06		ppb v/v		103	70 - 130
Toluene	2.00	2.02		ppb v/v		101	70 - 130
trans-1,2-Dichloroethene	2.00	2.15		ppb v/v		108	70 - 130
1,2,4-Trichlorobenzene	2.00	1.83		ppb v/v		92	60 - 140
1,1,1-Trichloroethane	2.00	2.04		ppb v/v		102	70 - 130
1,1,2-Trichloroethane	2.00	2.11		ppb v/v		105	70 - 130
Trichloroethene	2.00	2.09		ppb v/v		105	70 - 130
1,2,3-Trimethylbenzene	2.00	2.22		ppb v/v		111	70 - 130
1,2,4-Trimethylbenzene	2.00	1.99		ppb v/v		99	70 - 130
1,3,5-Trimethylbenzene	2.00	1.97		ppb v/v		98	70 - 130
Vinyl chloride	2.00	1.97		ppb v/v		98	70 - 130
Xylenes, Total	6.00	6.18		ppb v/v		103	70 - 130
Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
Benzene	6.4	6.61		ug/m3		103	70 - 130
Carbon tetrachloride	13	13.9		ug/m3		111	70 - 130
Chlorodifluoromethane	7.1	7.16		ug/m3		101	60 - 140
Chloroform	9.8	9.78		ug/m3		100	70 - 130
cis-1,2-Dichloroethene	7.9	8.28		ug/m3		104	70 - 130
Dichlorodifluoromethane	9.9	10.2		ug/m3		103	60 - 140
1,1-Dichloroethane	8.1	8.31		ug/m3		103	70 - 130
1,2-Dichloroethane	8.1	8.11		ug/m3		100	70 - 130
1,1-Dichloroethene	7.9	8.50		ug/m3		107	70 - 130
Ethylbenzene	8.7	8.79		ug/m3		101	70 - 130
Methylene Chloride	6.9	6.27		ug/m3		90	70 - 130
Methyl tert-butyl ether	7.2	7.12		ug/m3		99	60 - 140
Naphthalene	10	10.2		ug/m3		97	60 - 140
Tetrachloroethene	14	14.0		ug/m3		103	70 - 130
Toluene	7.5	7.63		ug/m3		101	70 - 130
trans-1,2-Dichloroethene	7.9	8.53		ug/m3		108	70 - 130
1,2,4-Trichlorobenzene	15	13.6		ug/m3		92	60 - 140
1,1,1-Trichloroethane	11	11.1		ug/m3		102	70 - 130
1,1,2-Trichloroethane	11	11.5		ug/m3		105	70 - 130
Trichloroethene	11	11.2		ug/m3		105	70 - 130
1,2,3-Trimethylbenzene	9.8	10.9		ug/m3		111	70 - 130
1,2,4-Trimethylbenzene	9.8	9.78		ug/m3		99	70 - 130
1,3,5-Trimethylbenzene	9.8	9.68		ug/m3		98	70 - 130
Vinyl chloride	5.1	5.03		ug/m3		98	70 - 130
Xylenes, Total	26	26.8		ug/m3		103	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>LCS</i> <i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	100		60 - 140

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Air - GC/MS VOA

Analysis Batch: 27909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14391-1	IA-DUP01-C-26	Total/NA	Air	TO 15 LL	
140-14391-2	IA-102-C-26	Total/NA	Air	TO 15 LL	
140-14391-3	IA-155-C-26	Total/NA	Air	TO 15 LL	
140-14391-4	IA-133-C-26	Total/NA	Air	TO 15 LL	
140-14391-5	IA-153-C-26	Total/NA	Air	TO 15 LL	
140-14391-6	IA-DUP02-C-26	Total/NA	Air	TO 15 LL	
140-14391-7	IA-060-C-26	Total/NA	Air	TO 15 LL	
140-14391-8	IA-150-C-26	Total/NA	Air	TO 15 LL	
140-14391-9	IA-145-C-26	Total/NA	Air	TO 15 LL	
140-14391-10	IA-146-C-26	Total/NA	Air	TO 15 LL	
140-14391-11	IA-152-C-26	Total/NA	Air	TO 15 LL	
140-14391-12	IA-144-C-26	Total/NA	Air	TO 15 LL	
140-14391-13	IA-141-C-26	Total/NA	Air	TO 15 LL	
140-14391-14	IA-088-C-26	Total/NA	Air	TO 15 LL	
140-14391-15	IA-142-C-26	Total/NA	Air	TO 15 LL	
140-14391-16	IA-113-C-26	Total/NA	Air	TO 15 LL	
140-14391-17	IA-149-C-26	Total/NA	Air	TO 15 LL	
140-14391-18	IA-126-C-26	Total/NA	Air	TO 15 LL	
MB 140-27909/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27909/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 27931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14391-19	IA-101-B-26	Total/NA	Air	TO 15 LL	
140-14391-20	IA-100-B-26	Total/NA	Air	TO 15 LL	
MB 140-27931/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27931/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-DUP01-C-26

Lab Sample ID: 140-14391-1

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 13:41	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-102-C-26

Lab Sample ID: 140-14391-2

Date Collected: 02/19/19 17:06

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 14:30	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-155-C-26

Lab Sample ID: 140-14391-3

Date Collected: 02/19/19 17:08

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 15:31	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-133-C-26

Lab Sample ID: 140-14391-4

Date Collected: 02/19/19 17:09

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 16:20	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-153-C-26

Lab Sample ID: 140-14391-5

Date Collected: 02/19/19 17:11

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 17:09	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-DUP02-C-26

Lab Sample ID: 140-14391-6

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 17:58	S1K	TAL KNX
Instrument ID: MR										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-060-C-26

Lab Sample ID: 140-14391-7

Date Collected: 02/19/19 17:14

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 18:47	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-150-C-26

Lab Sample ID: 140-14391-8

Date Collected: 02/19/19 17:16

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 19:36	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-145-C-26

Lab Sample ID: 140-14391-9

Date Collected: 02/19/19 17:17

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 20:25	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-146-C-26

Lab Sample ID: 140-14391-10

Date Collected: 02/19/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 21:14	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-152-C-26

Lab Sample ID: 140-14391-11

Date Collected: 02/19/19 17:19

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 22:03	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-144-C-26

Lab Sample ID: 140-14391-12

Date Collected: 02/19/19 17:21

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 22:52	S1K	TAL KNX
Instrument ID: MR										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-141-C-26

Lab Sample ID: 140-14391-13

Date Collected: 02/19/19 17:24

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 23:41	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-088-C-26

Lab Sample ID: 140-14391-14

Date Collected: 02/19/19 17:28

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/27/19 00:30	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-142-C-26

Lab Sample ID: 140-14391-15

Date Collected: 02/19/19 17:24

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/27/19 01:19	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-113-C-26

Lab Sample ID: 140-14391-16

Date Collected: 02/19/19 17:30

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/27/19 02:57	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-149-C-26

Lab Sample ID: 140-14391-17

Date Collected: 02/19/19 17:33

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/27/19 03:46	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-126-C-26

Lab Sample ID: 140-14391-18

Date Collected: 02/19/19 17:34

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/27/19 04:35	S1K	TAL KNX
Instrument ID: MR										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-101-B-26

Lab Sample ID: 140-14391-19

Date Collected: 02/19/19 17:43

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 16:38	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: IA-100-B-26

Lab Sample ID: 140-14391-20

Date Collected: 02/19/19 17:44

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 17:19	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27909/4

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27909	02/26/19 12:52	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27931/4

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 12:56	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27909/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27909	02/26/19 10:22	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27931/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 11:35	S1K	TAL KNX
Instrument ID: MG										

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14391-1	IA-DUP01-C-26	Air	02/19/19 00:00	02/23/19 10:10
140-14391-2	IA-102-C-26	Air	02/19/19 17:06	02/23/19 10:10
140-14391-3	IA-155-C-26	Air	02/19/19 17:08	02/23/19 10:10
140-14391-4	IA-133-C-26	Air	02/19/19 17:09	02/23/19 10:10
140-14391-5	IA-153-C-26	Air	02/19/19 17:11	02/23/19 10:10
140-14391-6	IA-DUP02-C-26	Air	02/19/19 00:00	02/23/19 10:10
140-14391-7	IA-060-C-26	Air	02/19/19 17:14	02/23/19 10:10
140-14391-8	IA-150-C-26	Air	02/19/19 17:16	02/23/19 10:10
140-14391-9	IA-145-C-26	Air	02/19/19 17:17	02/23/19 10:10
140-14391-10	IA-146-C-26	Air	02/19/19 17:18	02/23/19 10:10
140-14391-11	IA-152-C-26	Air	02/19/19 17:19	02/23/19 10:10
140-14391-12	IA-144-C-26	Air	02/19/19 17:21	02/23/19 10:10
140-14391-13	IA-141-C-26	Air	02/19/19 17:24	02/23/19 10:10
140-14391-14	IA-088-C-26	Air	02/19/19 17:28	02/23/19 10:10
140-14391-15	IA-142-C-26	Air	02/19/19 17:24	02/23/19 10:10
140-14391-16	IA-113-C-26	Air	02/19/19 17:30	02/23/19 10:10
140-14391-17	IA-149-C-26	Air	02/19/19 17:33	02/23/19 10:10
140-14391-18	IA-126-C-26	Air	02/19/19 17:34	02/23/19 10:10
140-14391-19	IA-101-B-26	Air	02/19/19 17:43	02/23/19 10:10
140-14391-20	IA-100-B-26	Air	02/19/19 17:44	02/23/19 10:10

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
IA-DUP01-C-26	140-14391-1	102
IA-102-C-26	140-14391-2	102
IA-155-C-26	140-14391-3	99
IA-133-C-26	140-14391-4	99
IA-153-C-26	140-14391-5	102
IA-DUP02-C-26	140-14391-6	99
IA-060-C-26	140-14391-7	101
IA-150-C-26	140-14391-8	101
IA-145-C-26	140-14391-9	102
IA-146-C-26	140-14391-10	99
IA-152-C-26	140-14391-11	104
IA-144-C-26	140-14391-12	102
IA-141-C-26	140-14391-13	100
IA-088-C-26	140-14391-14	100
IA-142-C-26	140-14391-15	99
IA-113-C-26	140-14391-16	101
IA-149-C-26	140-14391-17	101
IA-126-C-26	140-14391-18	100
IA-101-B-26	140-14391-19	96
IA-100-B-26	140-14391-20	94
	MB 140-27909/4	101
	MB 140-27931/4	96
	LCS 140-27909/1002	104
	LCS 140-27931/1002	100

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: RCCVB26-LCS.d
 Lab ID: LCS 140-27909/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.95	97	70-130	
Carbon tetrachloride	2.00	2.04	102	70-130	
Chlorodifluoromethane	2.00	1.75	87	60-140	
Chloroform	2.00	1.92	96	70-130	
cis-1,2-Dichloroethene	2.00	1.95	98	70-130	
Dichlorodifluoromethane	2.00	1.74	87	60-140	
1,1-Dichloroethane	2.00	1.90	95	70-130	
1,2-Dichloroethane	2.00	1.91	95	70-130	
1,1-Dichloroethene	2.00	1.90	95	70-130	
Ethylbenzene	2.00	2.12	106	70-130	
Methylene Chloride	2.00	1.75	88	70-130	
Methyl tert-butyl ether	2.00	2.00	100	60-140	
Naphthalene	2.00	1.70	85	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.11	105	70-130	
trans-1,2-Dichloroethene	2.00	1.86	93	70-130	
1,2,4-Trichlorobenzene	2.00	1.90	95	60-140	
1,1,1-Trichloroethane	2.00	1.94	97	70-130	
1,1,2-Trichloroethane	2.00	2.06	103	70-130	
Trichloroethene	2.00	2.01	101	70-130	
1,2,3-Trimethylbenzene	2.00	2.12	106	70-130	
1,2,4-Trimethylbenzene	2.00	2.16	108	70-130	
1,3,5-Trimethylbenzene	2.00	2.11	105	70-130	
Vinyl chloride	2.00	2.10	105	70-130	
Xylenes, Total	6.00	6.63	111	70-130	

Column to be used to flag recovery and RPD values

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB26-LCS.d
 Lab ID: LCS 140-27931/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.22	111	70-130	
Chlorodifluoromethane	2.00	2.02	101	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	2.09	104	70-130	
Dichlorodifluoromethane	2.00	2.06	103	60-140	
1,1-Dichloroethane	2.00	2.05	103	70-130	
1,2-Dichloroethane	2.00	2.00	100	70-130	
1,1-Dichloroethene	2.00	2.14	107	70-130	
Ethylbenzene	2.00	2.03	101	70-130	
Methylene Chloride	2.00	1.81	90	70-130	
Methyl tert-butyl ether	2.00	1.97	99	60-140	
Naphthalene	2.00	1.94	97	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	2.15	108	70-130	
1,2,4-Trichlorobenzene	2.00	1.83	92	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	2.11	105	70-130	
Trichloroethene	2.00	2.09	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.22	111	70-130	
1,2,4-Trimethylbenzene	2.00	1.99	99	70-130	
1,3,5-Trimethylbenzene	2.00	1.97	98	70-130	
Vinyl chloride	2.00	1.97	98	70-130	
Xylenes, Total	6.00	6.18	103	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: G500BB26.D Lab Sample ID: MB 140-27931/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/26/2019 12:56
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27931/1002	GCCVB26-LCS .d	02/26/2019 11:35
IA-101-B-26	140-14391-19	GB26P102.D	02/26/2019 16:38
IA-100-B-26	140-14391-20	GB26P103.D	02/26/2019 17:19

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: R500BB26.D Lab Sample ID: MB 140-27909/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MR Date Analyzed: 02/26/2019 12:52
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27909/1002	RCCVB26-LCS .d	02/26/2019 10:22
IA-DUP01-C-26	140-14391-1	RB26P101.D	02/26/2019 13:41
IA-102-C-26	140-14391-2	RB26P102Q.D	02/26/2019 14:30
IA-155-C-26	140-14391-3	RB26P103.D	02/26/2019 15:31
IA-133-C-26	140-14391-4	RB26P104.D	02/26/2019 16:20
IA-153-C-26	140-14391-5	RB26P105.D	02/26/2019 17:09
IA-DUP02-C-26	140-14391-6	RB26P106.D	02/26/2019 17:58
IA-060-C-26	140-14391-7	RB26P107.D	02/26/2019 18:47
IA-150-C-26	140-14391-8	RB26P108.D	02/26/2019 19:36
IA-145-C-26	140-14391-9	RB26P109.D	02/26/2019 20:25
IA-146-C-26	140-14391-10	RB26P110.D	02/26/2019 21:14
IA-152-C-26	140-14391-11	RB26P111.D	02/26/2019 22:03
IA-144-C-26	140-14391-12	RB26P112.D	02/26/2019 22:52
IA-141-C-26	140-14391-13	RB26P113.D	02/26/2019 23:41
IA-088-C-26	140-14391-14	RB26P114.D	02/27/2019 00:30
IA-142-C-26	140-14391-15	RB26P115.D	02/27/2019 01:19
IA-113-C-26	140-14391-16	RB26P116.D	02/27/2019 02:57
IA-149-C-26	140-14391-17	RB26P201.D	02/27/2019 03:46
IA-126-C-26	140-14391-18	RB26P202.D	02/27/2019 04:35

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: GA11BLK1.D BFB Injection Date: 01/11/2019
 Instrument ID: MG BFB Injection Time: 12:24
 Analysis Batch No.: 26755

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.2	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	71.2	
175	5.0 - 9.0 % of mass 174	5.1	(7.1) 1
176	95.0 - 101.0 % of mass 174	70.7	(99.3) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-26755/2	GA11IC09.D	01/11/2019	13:08
	IC 140-26755/6	GA11IC10.D	01/11/2019	14:35
	IC 140-26755/9	GA11IC01.D	01/11/2019	16:46
	IC 140-26755/10	GA11IC02.D	01/11/2019	17:29
	IC 140-26755/11	GA11IC03.D	01/11/2019	18:12
	IC 140-26755/12	GA11IC04.D	01/11/2019	18:56
	IC 140-26755/13	GA11IC05.D	01/11/2019	19:40
	IC 140-26755/14	GA11IC06.D	01/11/2019	20:23
	ICIS 140-26755/15	GA11IC07.D	01/11/2019	21:07
	IC 140-26755/16	GA11IC08.D	01/11/2019	21:51
	ICV 140-26755/18	GA11ICV.D	01/11/2019	23:17

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: GBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MG BFB Injection Time: 11:03
 Analysis Batch No.: 27931

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.5
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	73.1
175	5.0 - 9.0 % of mass 174	5.1 (7.0) 1
176	95.0 - 101.0 % of mass 174	71.2 (97.4) 1
177	5.0 - 9.0 % of mass 176	4.6 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27931/2	GCCVB26.D	02/26/2019	11:35
	LCS 140-27931/1002	GCCVB26-LCS. d	02/26/2019	11:35
	MB 140-27931/4	G500BB26.D	02/26/2019	12:56
IA-101-B-26	140-14391-19	GB26P102.D	02/26/2019	16:38
IA-100-B-26	140-14391-20	GB26P103.D	02/26/2019	17:19

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: RFBK16I.D BFB Injection Date: 11/16/2018
 Instrument ID: MR BFB Injection Time: 16:00
 Analysis Batch No.: 25490

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	58.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	91.0	
175	5.0 - 9.0 % of mass 174	6.6	(7.3) 1
176	95.0 - 101.0 % of mass 174	88.8	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-25490/3	RK16IC09.D	11/16/2018	17:23
	IC 140-25490/5	RK16IC10.D	11/16/2018	19:07
	IC 140-25490/8	RK16IC01.D	11/16/2018	21:42
	IC 140-25490/9	RK16IC02.D	11/16/2018	22:34
	IC 140-25490/10	RK16IC03.D	11/16/2018	23:27
	IC 140-25490/11	RK16IC04.D	11/17/2018	00:20
	IC 140-25490/12	RK16IC05.D	11/17/2018	01:12
	IC 140-25490/13	RK16IC06.D	11/17/2018	02:05
	ICIS 140-25490/14	RK16IC07.D	11/17/2018	02:58
	IC 140-25490/15	RK16IC08.D	11/17/2018	03:51
	ICV 140-25490/18	RK16ICV.D	11/17/2018	06:27

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: RBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MR BFB Injection Time: 09:53
 Analysis Batch No.: 27909

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.6	
75	30.0 - 60.0 % of mass 95	58.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	88.4	
175	5.0 - 9.0 % of mass 174	6.4	(7.3) 1
176	95.0 - 101.0 % of mass 174	87.6	(99.1) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.3) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27909/2	RCCVB26.D	02/26/2019	10:22
	LCS 140-27909/1002	RCCVB26-LCS.d	02/26/2019	10:22
	MB 140-27909/4	R500BB26.D	02/26/2019	12:52
IA-DUP01-C-26	140-14391-1	RB26P101.D	02/26/2019	13:41
IA-102-C-26	140-14391-2	RB26P102Q.D	02/26/2019	14:30
IA-155-C-26	140-14391-3	RB26P103.D	02/26/2019	15:31
IA-133-C-26	140-14391-4	RB26P104.D	02/26/2019	16:20
IA-153-C-26	140-14391-5	RB26P105.D	02/26/2019	17:09
IA-DUP02-C-26	140-14391-6	RB26P106.D	02/26/2019	17:58
IA-060-C-26	140-14391-7	RB26P107.D	02/26/2019	18:47
IA-150-C-26	140-14391-8	RB26P108.D	02/26/2019	19:36
IA-145-C-26	140-14391-9	RB26P109.D	02/26/2019	20:25
IA-146-C-26	140-14391-10	RB26P110.D	02/26/2019	21:14
IA-152-C-26	140-14391-11	RB26P111.D	02/26/2019	22:03
IA-144-C-26	140-14391-12	RB26P112.D	02/26/2019	22:52
IA-141-C-26	140-14391-13	RB26P113.D	02/26/2019	23:41
IA-088-C-26	140-14391-14	RB26P114.D	02/27/2019	00:30
IA-142-C-26	140-14391-15	RB26P115.D	02/27/2019	01:19
IA-113-C-26	140-14391-16	RB26P116.D	02/27/2019	02:57
IA-149-C-26	140-14391-17	RB26P201.D	02/27/2019	03:46
IA-126-C-26	140-14391-18	RB26P202.D	02/27/2019	04:35

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Sample No.: ICIS 140-26755/15 Date Analyzed: 01/11/2019 21:07
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GAl1IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	437891	9.25	2708081	11.42	2541912	16.10
UPPER LIMIT	613047	9.58	3791313	11.75	3558677	16.43
LOWER LIMIT	262735	8.92	1624849	11.09	1525147	15.77
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-26755/18	423755	9.24	2327828	11.42	2182908	16.09

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Sample No.: CCVIS 140-27931/2 Date Analyzed: 02/26/2019 11:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	496382	9.23	2758157	11.41	2578216	16.08	
UPPER LIMIT	694935	9.56	3861420	11.74	3609502	16.41	
LOWER LIMIT	297829	8.90	1654894	11.08	1546930	15.75	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27931/1002	496382	9.23	2758157	11.41	2578216	16.08	
MB 140-27931/4	508819	9.23	2920722	11.41	2502760	16.08	
140-14391-19	IA-101-B-26	455853	9.27	2490634	11.42	2381715	16.08
140-14391-20	IA-100-B-26	488432	9.25	2976485	11.41	2650552	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Sample No.: ICIS 140-25490/14 Date Analyzed: 11/17/2018 02:58
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RK16IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	298864	7.40	1677758	9.49	1487799	14.56
UPPER LIMIT	418410	7.73	2348861	9.82	2082919	14.89
LOWER LIMIT	179318	7.07	1006655	9.16	892679	14.23
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-25490/18	299493	7.38	1671036	9.48	1499042	14.55

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Sample No.: CCVIS 140-27909/2 Date Analyzed: 02/26/2019 10:22
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBZd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	225849	7.38	1327690	9.45	1164037	14.50
UPPER LIMIT	316189	7.71	1858766	9.78	1629652	14.83
LOWER LIMIT	135509	7.05	796614	9.12	698422	14.17
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 140-27909/1002	225849	7.38	1327690	9.45	1164037	14.50
MB 140-27909/4	200361	7.39	1182430	9.45	1042401	14.50
140-14391-1	IA-DUP01-C-26	205663	1190969	9.45	1040519	14.50
140-14391-2	IA-102-C-26	208040	1200928	9.45	1044720	14.50
140-14391-3	IA-155-C-26	208708	1228572	9.44	1073711	14.50
140-14391-4	IA-133-C-26	202020	1187994	9.44	1031290	14.50
140-14391-5	IA-153-C-26	199769	1174122	9.44	1016536	14.50
140-14391-6	IA-DUP02-C-26	204618	1201090	9.45	1038008	14.50
140-14391-7	IA-060-C-26	192250	1119769	9.45	987214	14.50
140-14391-8	IA-150-C-26	199155	1158636	9.45	1013298	14.50
140-14391-9	IA-145-C-26	193624	1129234	9.45	998867	14.50
140-14391-10	IA-146-C-26	198030	1151165	9.45	1011578	14.50
140-14391-11	IA-152-C-26	193341	1128620	9.45	990629	14.50
140-14391-12	IA-144-C-26	197269	1155355	9.45	1025834	14.50
140-14391-13	IA-141-C-26	200446	1187004	9.45	1030803	14.50
140-14391-14	IA-088-C-26	205122	1197107	9.44	1049569	14.50
140-14391-15	IA-142-C-26	201844	1182104	9.44	1032728	14.50
140-14391-16	IA-113-C-26	205033	1201066	9.45	1040158	14.50
140-14391-17	IA-149-C-26	196512	1164319	9.45	1009555	14.50
140-14391-18	IA-126-C-26	203305	1197023	9.45	1043940	14.50

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-DUP01-C-26 Lab Sample ID: 140-14391-1
 Matrix: Air Lab File ID: RB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.29	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-DUP01-C-26 Lab Sample ID: 140-14391-1
 Matrix: Air Lab File ID: RB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-102-C-26 Lab Sample ID: 140-14391-2
 Matrix: Air Lab File ID: RB26P102Q.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:06
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 14:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.50		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.74	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-102-C-26 Lab Sample ID: 140-14391-2
 Matrix: Air Lab File ID: RB26P102Q.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:06
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 14:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-155-C-26 Lab Sample ID: 140-14391-3
 Matrix: Air Lab File ID: RB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:08
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.43		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.27	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.85	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.80		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-155-C-26 Lab Sample ID: 140-14391-3
 Matrix: Air Lab File ID: RB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:08
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-133-C-26 Lab Sample ID: 140-14391-4
 Matrix: Air Lab File ID: RB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:09
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.27	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.72	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-133-C-26 Lab Sample ID: 140-14391-4
 Matrix: Air Lab File ID: RB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:09
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-153-C-26 Lab Sample ID: 140-14391-5
 Matrix: Air Lab File ID: RB26P105.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:11
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.077	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.67		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.63	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-153-C-26 Lab Sample ID: 140-14391-5
 Matrix: Air Lab File ID: RB26P105.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:11
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-DUP02-C-26 Lab Sample ID: 140-14391-6
 Matrix: Air Lab File ID: RB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.30	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.60		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.54	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-DUP02-C-26 Lab Sample ID: 140-14391-6
 Matrix: Air Lab File ID: RB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-060-C-26 Lab Sample ID: 140-14391-7
 Matrix: Air Lab File ID: RB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:14
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 18:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.66		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.9		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.64	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-060-C-26 Lab Sample ID: 140-14391-7
 Matrix: Air Lab File ID: RB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:14
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 18:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	10		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.8	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-150-C-26 Lab Sample ID: 140-14391-8
 Matrix: Air Lab File ID: RB26P108.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:16
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 19:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.8	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.27	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.86		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-150-C-26 Lab Sample ID: 140-14391-8
 Matrix: Air Lab File ID: RB26P108.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:16
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 19:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	21	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	10		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-145-C-26 Lab Sample ID: 140-14391-9
 Matrix: Air Lab File ID: RB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:17
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 20:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	6.0	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.82		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-145-C-26 Lab Sample ID: 140-14391-9
 Matrix: Air Lab File ID: RB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:17
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 20:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	21	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.65	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.9		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	9.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-146-C-26 Lab Sample ID: 140-14391-10
 Matrix: Air Lab File ID: RB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.9	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.30	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.85		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-146-C-26 Lab Sample ID: 140-14391-10
 Matrix: Air Lab File ID: RB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	21	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.60	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	10		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-152-C-26 Lab Sample ID: 140-14391-11
 Matrix: Air Lab File ID: RB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:19
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.2	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.23	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-152-C-26 Lab Sample ID: 140-14391-11
 Matrix: Air Lab File ID: RB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:19
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	11	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.99	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.67	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-144-C-26 Lab Sample ID: 140-14391-12
 Matrix: Air Lab File ID: RB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:21
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.7	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.27	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.23	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-144-C-26 Lab Sample ID: 140-14391-12
 Matrix: Air Lab File ID: RB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:21
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.5	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.0	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.8		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-141-C-26 Lab Sample ID: 140-14391-13
 Matrix: Air Lab File ID: RB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:24
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 23:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.1	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	8.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.95		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-141-C-26 Lab Sample ID: 140-14391-13
 Matrix: Air Lab File ID: RB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:24
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 23:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.59	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	7.4	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.73	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	32		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-088-C-26 Lab Sample ID: 140-14391-14
 Matrix: Air Lab File ID: RB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:28
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.55	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-088-C-26 Lab Sample ID: 140-14391-14
 Matrix: Air Lab File ID: RB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:28
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-142-C-26 Lab Sample ID: 140-14391-15
 Matrix: Air Lab File ID: RB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:24
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.47	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.6		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.48	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-142-C-26 Lab Sample ID: 140-14391-15
 Matrix: Air Lab File ID: RB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:24
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	9.2		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-113-C-26 Lab Sample ID: 140-14391-16
 Matrix: Air Lab File ID: RB26P116.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:30
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 02:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.74		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.6		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.1		0.40	0.080
108-88-3	Toluene	92.14	14		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-113-C-26 Lab Sample ID: 140-14391-16
 Matrix: Air Lab File ID: RB26P116.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:30
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 02:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.9		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.2		1.7	0.59
75-09-2	Methylene Chloride	84.93	13		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	7.2		2.7	0.54
108-88-3	Toluene	92.14	53		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.72	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	13		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-149-C-26 Lab Sample ID: 140-14391-17
 Matrix: Air Lab File ID: RB26P201.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:33
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.29	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.33	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	4.5		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.22		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.47	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-149-C-26 Lab Sample ID: 140-14391-17
 Matrix: Air Lab File ID: RB26P201.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:33
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.94	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	16		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-126-C-26 Lab Sample ID: 140-14391-18
 Matrix: Air Lab File ID: RB26P202.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 04:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.32	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	5.9		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	4.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.27		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.30	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-126-C-26 Lab Sample ID: 140-14391-18
 Matrix: Air Lab File ID: RB26P202.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 04:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	21		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	17		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-101-B-26 Lab Sample ID: 140-14391-19
 Matrix: Air Lab File ID: GB26P102.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:43
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.70		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	24		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-101-B-26 Lab Sample ID: 140-14391-19
 Matrix: Air Lab File ID: GB26P102.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:43
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.2		1.4	0.27
67-66-3	Chloroform	119.38	0.64	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.0		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.9		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	92		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	14		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-100-B-26 Lab Sample ID: 140-14391-20
 Matrix: Air Lab File ID: GB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:44
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.46		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	24		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-100-B-26 Lab Sample ID: 140-14391-20
 Matrix: Air Lab File ID: GB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:44
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.45	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.8		1.4	0.27
67-66-3	Chloroform	119.38	0.55	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.0		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	91		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.9523	2.7653	2.6769	Ave		2.6204			9.0		30.0				
	2.4796	2.3672	2.3873	2.9026	2.4316												
Propene	+++++	+++++	+++++	1.8011	1.4915	Ave		1.4631			12.5		30.0				
	1.4104	1.3267	1.3362	1.5897	1.2862												
Dichlorodifluoromethane	+++++	+++++	4.4505	4.4326	4.2183	Ave		4.2347			6.5		30.0				
	4.0515	3.9190	3.9550	4.7099	4.1407												
Chloromethane	+++++	+++++	+++++	0.5625	0.4891	Ave		0.4649			11.5		30.0				
	0.4445	0.4230	0.4254	0.4946	0.4152												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	2.6446	2.5541	2.4472	Ave		2.4745			4.4		30.0				
	2.3633	2.3423	2.3822	2.5578	2.5047												
Vinyl chloride	1.9626	1.7167	1.7320	1.6531	1.5626	Ave		1.6109			10.3		30.0				
	1.4785	1.4339	1.4573	1.6387	1.4732												
Butane	+++++	+++++	+++++	3.0743	2.8454	Ave		2.7124			8.2		30.0				
	2.6258	2.4782	2.5038	2.8679	2.5911												
1,3-Butadiene	+++++	+++++	+++++	1.2733	1.2439	Ave		1.2450			5.0		30.0				
	1.2041	1.1760	1.2078	1.3654	1.2448												
Bromomethane	+++++	+++++	1.6548	1.3996	1.3549	Ave		1.3916			8.4		30.0				
	1.3078	1.2877	1.3168	1.4117	1.3995												
Chloroethane	+++++	+++++	0.8627	0.8037	0.7796	Ave		0.7761			6.4		30.0				
	0.7377	0.7148	0.7259	0.8118	0.7729												
Ethanol	+++++	+++++	+++++	0.8657	0.7124	Ave		0.7042			15.6		30.0				
	0.5620	0.7386	0.5593	0.7653	0.7259												
Vinyl bromide	+++++	+++++	1.3835	1.3207	1.2830	Ave		1.2899			4.2		30.0				
	1.2366	1.2145	1.2610	1.2880	1.3321												
2-Methylbutane	+++++	+++++	+++++	2.0547	2.0422	Ave		1.9469			4.4		30.0				
	1.9302	1.8374	1.8471	1.9762	1.9406												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.9949	4.3785 3.8769	4.2718 3.9322	4.1461 4.3687	4.1452 4.2564	Ave		4.1523			4.4		30.0				
Acrolein	++++ 0.3700	++++ 0.3339	++++ 0.3264	++++ 0.4058	0.3535 0.3546	Ave		0.3574			7.9		30.0				
Acetonitrile	++++ 0.5820	++++ 0.5806	++++ 0.5032	0.4860 0.6106	0.5491 0.5907	Ave		0.5574			8.4		30.0				
Acetone	++++ 0.6952	++++ 0.6071	++++ 0.4923	++++ 0.5713	0.7119 0.5299	Ave		0.6013			14.7		30.0				
Pentane	++++ 0.2650	++++ 0.2567	++++ 0.2534	++++ 0.2741	0.2798 0.2630	Ave		0.2653			3.8		30.0				
Isopropyl alcohol	++++ 1.5842	++++ 1.6884	++++ 1.2216	++++ 1.5921	1.7192 1.5978	Ave		1.6033			11.8		30.0				
Ethyl ether	++++ 1.8397	++++ 1.7705	++++ 1.4542	++++ 1.7361	1.9088 1.6409	Ave		1.7250			9.3		30.0				
1,1-Dichloroethene	1.5300 1.3997	1.3691 1.3378	1.5011 1.4037	1.3769 1.3902	1.4054 1.4041	Ave		1.4118			4.2		30.0				
Acrylonitrile	++++ 0.9861	++++ 0.9774	1.0366 0.8664	0.9476 1.0406	0.9217 1.0215	Ave		0.9747			6.2		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.0568	3.1787 2.9429	3.2903 2.9549	3.0618 2.9993	3.1454 2.9101	Ave		3.0600			4.1		30.0				
tert-Butyl alcohol	++++ 2.2526	++++ 2.2071	++++ 1.7152	2.3096 2.1050	2.4776 2.3062	Ave		2.1962			11.0		30.0				
Methylene Chloride	++++ 1.5026	++++ 1.3595	++++ 1.3036	2.5891 1.2966	1.8042 ++++	Ave		1.6426			30.5	*	30.0				
3-Chloropropene	++++ 1.6369	++++ 1.6110	2.0104 1.5866	1.9432 1.7783	1.7193 1.7236	Ave		1.7512			8.8		30.0				
Carbon disulfide	++++ 4.2983	++++ 4.0822	4.5901 4.1194	4.3819 4.1977	4.3526 4.2529	Ave		4.2844			3.8		30.0				
trans-1,2-Dichloroethene	++++ 1.4444	1.3848 1.3913	1.4554 1.4201	1.3845 1.4125	1.4335 1.3979	Ave		1.4138			1.9		30.0				
2-Methylpentane	++++ 4.0309	++++ 3.8853	4.5901 3.8303	4.1901 4.0757	4.2199 3.7514	Ave		4.0450			5.3		30.0				
Methyl tert-butyl ether	++++ 4.1354	3.5946 4.0399	4.2254 3.4444	3.8763 4.0172	4.1168 3.9425	Ave		3.9325			6.6		30.0				
1,1-Dichloroethane	3.1037 2.8577	3.0105 2.8187	3.0470 2.6559	2.9034 2.9155	2.9080 2.8375	Ave		2.9058			4.4		30.0				
Vinyl acetate	++++ 3.9854	++++ 4.2048	4.0675 3.5720	3.8850 4.4145	3.9427 4.2013	Ave		4.0342			6.3		30.0				
Hexane	++++ 1.3242	++++ 1.2816	++++ 1.3713	1.3526 1.3074	1.3260 1.2151	Ave		1.3036			4.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++	++++	++++	0.6854	0.6772	Ave		0.6347			8.5		30.0				
	0.6784	0.6294	0.5376	0.6386	0.5958												
cis-1,2-Dichloroethene	1.5310	1.3850	1.4658	1.4361	1.4213	Ave		1.4465			2.9		30.0				
	1.4515	1.4377	1.3972	1.4588	1.4806												
Ethyl acetate	++++	++++	3.4159	3.2335	3.3337	Ave		3.3124			6.9		30.0				
	3.4792	3.3231	2.8120	3.5743	3.3271												
Chloroform	3.5969	3.3560	3.4112	3.4074	3.2824	Ave		3.3444			4.2		30.0				
	3.2821	3.2211	3.0680	3.4218	3.3970												
Tetrahydrofuran	++++	++++	++++	1.7940	1.8215	Ave		1.7724			6.6		30.0				
	1.8641	1.7946	1.5246	1.8635	1.7446												
1,1,1-Trichloroethane	3.8810	3.4765	3.6941	3.5977	3.6119	Ave		3.6203			4.2		30.0				
	3.5723	3.5364	3.3475	3.7388	3.7470												
1,2-Dichloroethane	0.3890	0.3740	0.4205	0.3853	0.3989	Ave		0.3910			6.7		30.0				
	0.3918	0.3624	0.3439	0.4219	0.4228												
Cyclohexane	++++	++++	++++	0.1383	0.1426	Ave		0.1314			6.9		30.0				
	0.1391	0.1224	0.1193	0.1325	0.1258												
Benzene	++++	0.7122	0.8006	0.7160	0.7636	Ave		0.7153			7.0		30.0				
	0.7488	0.6697	0.6393	0.7124	0.6753												
Carbon tetrachloride	0.5647	0.5298	0.5813	0.5547	0.6331	Ave		0.5933			8.0		30.0				
	0.6279	0.5625	0.5603	0.6718	0.6470												
1-Butanol	++++	++++	++++	0.0897	0.1022	Ave		0.0896			13.7		30.0				
	0.1010	0.0823	0.0665	0.0902	0.0950												
2,3-Dimethylpentane	++++	++++	0.2016	0.1866	0.2067	Ave		0.1886			7.0		30.0				
	0.1994	0.1776	0.1681	0.1880	0.1811												
Thiophene	++++	++++	0.4419	0.4095	0.4328	Ave		0.4156			5.4		30.0				
	0.4205	0.3890	0.3765	0.4241	0.4306												
2,2,4-Trimethylpentane	1.4853	1.4111	1.5290	1.4173	1.5323	Ave		1.4009			8.1		30.0				
	1.4628	1.2640	1.1785	1.3863	1.3426												
Heptane	++++	++++	0.3221	0.2848	0.3010	Ave		0.2875			7.7		30.0				
	0.2942	0.2637	0.2507	0.2927	0.2912												
1,2-Dichloropropane	++++	0.2947	0.3066	0.2799	0.2948	Ave		0.2813			7.5		30.0				
	0.2869	0.2617	0.2359	0.2893	0.2819												
Trichloroethene	0.3496	0.3229	0.3354	0.3064	0.3383	Ave		0.3257			5.2		30.0				
	0.3271	0.3039	0.3006	0.3304	0.3426												
Dibromomethane	++++	++++	++++	0.3027	0.3082	Ave		0.2963			7.9		30.0				
	0.2897	0.2688	0.2632	0.3189	0.3227												
Bromodichloromethane	++++	++++	0.5688	0.5299	0.5916	Ave		0.5843			8.8		30.0				
	0.5840	0.5507	0.5314	0.6523	0.6656												
1,4-Dioxane	++++	++++	++++	0.0947	0.0887	Ave		0.0832			17.3		30.0				
	0.0619	0.0891	0.0629	0.0903	0.0946												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3918	++++ 0.3473	++++ 0.2972	0.3014 0.4093	0.3703 0.3989	Ave		0.3595			12.7		30.0				
Methylcyclohexane	0.4845 0.5152	0.4926 0.4533	0.5068 0.4304	0.4870 0.4877	0.5327 0.5063	Ave		0.4896			6.1		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.6350	++++ 0.5092	0.5796 0.3308	0.5597 0.5890	0.6524 0.6484	Ave		0.5630			18.8		30.0				
cis-1,3-Dichloropropene	++++ 0.4479	0.3952 0.4121	0.4552 0.3828	0.4166 0.4613	0.4382 0.4415	Ave		0.4279			6.4		30.0				
trans-1,3-Dichloropropene	++++ 0.4450	0.3978 0.4156	0.4398 0.3772	0.4049 0.4673	0.4521 0.4806	Ave		0.4311			8.0		30.0				
Toluene	0.8893 0.9181	0.8808 0.8443	0.9072 0.7540	0.8795 0.8738	0.9309 0.9230	Ave		0.8801			5.9		30.0				
1,1,2-Trichloroethane	0.2596 0.2870	0.2566 0.2535	0.2815 0.2299	0.2715 0.2735	0.2904 0.2819	Ave		0.2685			7.0		30.0				
2-Hexanone	++++ 0.3129	++++ 0.2311	0.2486 0.1601	0.2653 0.2620	0.3155 0.3172	Ave		0.2641			20.2		30.0				
Octane	++++ 0.3331	++++ 0.2969	0.3166 0.2807	0.3142 0.3116	0.3533 0.3257	Ave		0.3165			7.0		30.0				
C8 Range	++++ 3.2900	++++ 2.9406	++++ 2.7321	3.2543 3.2050	3.4583 3.2302	Ave		3.1586			7.7		30.0				
Dibromochloromethane	++++ 0.5589	++++ 0.5327	0.4753 0.5204	0.4633 0.6101	0.5345 0.6613	Ave		0.5446			12.1		30.0				
1,2-Dibromoethane (EDB)	++++ 0.4879	++++ 0.4537	0.4324 0.4227	0.4409 0.4933	0.4776 0.5168	Ave		0.4656			7.1		30.0				
Tetrachloroethene	0.3340 0.3413	0.3265 0.3106	0.3184 0.2978	0.3299 0.3362	0.3500 0.3575	Ave		0.3302			5.4		30.0				
Chlorobenzene	0.6503 0.7257	0.6533 0.6547	0.7038 0.5918	0.6891 0.6804	0.7584 0.7332	Ave		0.6841			7.2		30.0				
Ethylbenzene	++++ 1.2841	1.1605 1.1457	1.1820 0.9886	1.2041 1.2050	1.3132 1.2806	Ave		1.1960			8.1		30.0				
m-Xylene & p-Xylene	0.7852 1.0069	0.8464 0.8920	0.9631 0.7597	0.9388 0.9364	1.0264 0.9927	Ave		0.9148			10.1		30.0				
Nonane	++++ 0.7074	0.6367 0.6181	0.6731 0.5580	0.6713 0.6403	0.7319 0.6196	Ave		0.6507			8.0		30.0				
Bromoform	++++ 0.5150	++++ 0.5097	0.3874 0.4824	0.3783 0.6069	0.4530 ++++	Ave		0.4761			16.7		30.0				
Styrene	++++ 0.6772	++++ 0.6274	0.5417 0.5521	0.5440 0.6889	0.6499 0.7776	Ave		0.6323			13.2		30.0				
o-Xylene	++++ 1.0316	0.8434 0.9312	0.9762 0.7934	0.9959 0.9762	1.0612 1.0727	Ave		0.9646			9.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++	++++	0.6477	0.6105	0.7079	Ave		0.6478			8.7	30.0					
	0.6943	0.6225	0.5392	0.6980	0.6623												
1,2,3-Trichloropropane	++++	++++	0.2117	0.1933	0.2181	Ave		0.2075			9.0	30.0					
	0.2201	0.1963	0.1718	0.2253	0.2233												
Isopropylbenzene	++++	1.2061	1.2881	1.2705	1.3916	Ave		1.2860			8.6	30.0					
	1.3750	1.2349	1.0540	1.3875	1.3659												
Propylbenzene	++++	++++	0.3426	0.3159	0.3762	Ave		0.3476			9.6	30.0					
	0.3714	0.3352	0.2878	0.3755	0.3762												
2-Chlorotoluene	++++	0.3055	0.3209	0.3117	0.3448	Ave		0.3175			8.7	30.0					
	0.3404	0.2960	0.2606	0.3372	0.3406												
4-Ethyltoluene	++++	++++	1.2707	1.1808	1.3899	Ave		1.2832			9.3	30.0					
	1.3518	1.2430	1.0593	1.3853	1.3849												
1,3,5-Trimethylbenzene	++++	++++	0.4931	0.4624	0.5289	Ave		0.4994			9.1	30.0					
	0.5322	0.4840	0.4140	0.5337	0.5468												
Alpha Methyl Styrene	++++	++++	++++	++++	0.3906	Ave		0.5043			16.0	30.0					
	0.5256	0.4877	0.4370	0.6086	0.6006												
Decane	++++	0.7603	0.8322	0.8484	0.9143	Ave		0.7982			10.6	30.0					
	0.8778	0.7515	0.6337	0.8180	0.7472												
tert-Butylbenzene	++++	++++	1.0703	1.0556	1.1543	Ave		1.1142			10.6	30.0					
	1.2040	1.0655	0.8921	1.2542	1.2176												
1,2,4-Trimethylbenzene	++++	++++	1.0671	1.0434	1.1402	Ave		1.0957			10.4	30.0					
	1.1975	1.0389	0.8751	1.2267	1.1768												
sec-Butylbenzene	++++	++++	1.5212	1.5236	1.6717	Ave		1.5686			9.5	30.0					
	1.7209	1.4915	1.2789	1.7227	1.6181												
1,3-Dichlorobenzene	0.6490	0.6444	0.6738	0.6739	0.7415	Ave		0.7160			12.1	30.0					
	0.7671	0.6846	0.6125	0.8458	0.8676												
Benzyl chloride	++++	++++	0.8534	0.8353	0.9958	Ave		0.9762			13.0	30.0					
	1.0629	0.9436	0.8465	1.1447	1.1273												
1,4-Dichlorobenzene	0.7017	0.6870	0.6938	0.6879	0.7429	Ave		0.7344			11.3	30.0					
	0.7787	0.6945	0.6166	0.8577	0.8826												
4-Isopropyltoluene	++++	++++	1.1350	1.1617	1.3168	Ave		1.2548			11.1	30.0					
	1.3919	1.1997	1.0411	1.4207	1.3719												
1,2,3-Trimethylbenzene	0.7568	0.8539	1.0085	1.0349	1.1364	Ave		0.9908			14.6	30.0					
	1.1870	1.0454	0.9035	++++	++++												
Indane	++++	++++	0.9630	0.9316	1.0002	Ave		0.9903			10.1	30.0					
	1.0760	0.9392	0.8123	1.1012	1.0990												
1,2-Dichlorobenzene	++++	++++	0.6671	0.6607	0.7087	Ave		0.7165			13.3	30.0					
	0.7440	0.6621	0.5878	0.8263	0.8754												
Butylbenzene	++++	1.1174	1.2268	1.2695	1.3939	Ave		1.2768			11.0	30.0					
	1.4543	1.2177	1.0412	1.4208	1.3499												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.9217	++++ 0.8188	0.7590 0.7206	0.7567 0.9791	0.8625 0.9878	Ave		0.8508			12.2		30.0				
Undecane	++++ 0.9412	0.7138 0.7639	0.7854 0.6439	0.8623 0.8142	0.9777 0.7859	Ave		0.8098			13.0		30.0				
1,2-Dibromo-3-Chloropropane	0.2667 0.3713	0.2609 0.3380	0.2709 0.2859	0.2620 ++++	0.3145 ++++	Ave		0.2963			13.8		30.0				
1,2,4,5-Tetramethylbenzene	++++ 1.3103	++++ 1.1118	1.0041 0.8463	1.0551 1.2653	1.2570 1.2867	Ave		1.1421			14.5		30.0				
Dodecane	++++ 0.7978	0.6003 0.5688	0.6899 0.3858	0.7041 0.5331	0.8370 ++++	Ave		0.6396			23.1		30.0				
1,2,4-Trichlorobenzene	++++ 0.6436	0.5319 0.5457	0.4906 0.4989	0.4888 0.6587	0.5772 0.6483	Ave		0.5649			12.4		30.0				
Naphthalene	++++ 1.4994	1.1580 1.2044	1.1489 0.9653	1.0861 1.2974	1.4202 1.3257	Ave		1.2339			13.6		30.0				
Hexachlorobutadiene	++++ 0.6448	++++ 0.5763	0.5100 0.5363	0.5070 0.7409	0.5745 0.7482	Ave		0.6047			16.0		30.0				
1,2,3-Trichlorobenzene	++++ 0.6283	0.5060 0.4951	0.4846 0.4151	0.4581 0.5663	0.5627 0.3728	Ave		0.4988			15.9		30.0				
2-Methylnaphthalene	++++ 0.9181	0.6422 0.5284	0.5584 0.3836	0.4778 0.4940	0.8101 ++++	Ave		0.6016			29.9		50.0				
1-Methylnaphthalene	++++ 1.1220	0.8380 0.6213	0.6877 0.4374	0.6391 0.5433	1.0085 ++++	Ave		0.7372			31.8		50.0				
4-Bromofluorobenzene (Surr)	0.7946 0.8130	0.8076 0.7824	0.8238 0.7807	0.8163 0.9039	0.8357 0.8386	Ave		0.8196			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 261958	++++ 518289	21711 1076565	42570 1857884	107824 3550370	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 149007	++++ 290483	++++ 602545	27727 1017511	60077 1877999	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 428033	++++ 858049	32728 1783528	68237 3014742	169908 6045892	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 46960	++++ 92605	++++ 191831	8660 316575	19699 606292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 249678	++++ 512846	19448 1074243	39319 1637176	98572 3657066	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	3911 156203	6583 313945	12737 657162	25449 1048926	62942 2151077	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 277412	++++ 542597	++++ 1129098	47326 1835688	114610 3783292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 127206	++++ 257490	++++ 544660	19602 873952	50104 1817509	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 138169	++++ 281926	12169 593804	21546 903575	54574 2043364	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 77933	++++ 156493	6344 327330	12373 519647	31401 1128580	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 296853	++++ 808553	++++ 1261075	66636 2449308	143467 5299467	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 130640	++++ 265901	10174 568659	20331 824429	51677 1944996	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 203924	++++ 402287	++++ 832948	31631 1264951	82259 2833506	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 422050	16790 848836	31414 1773236	63826 2796331	166966 6214752	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	++++ 39091	++++ 73107	++++ 147180	++++ 259717	14239 517814	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 61491	++++ 127125	++++ 226910	++++ 390809	7481 862471	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Acetone	CBM	Ave	++++ 220327	++++ 398773	++++ 665956	++++ 1097098	86023 2321110	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 28000	++++ 56204	++++ 114279	++++ 175439	11269 384054	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 502108	++++ 1108992	++++ 1652685	++++ 3057291	219917 6999063	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 194355	++++ 387640	++++ 655797	++++ 1111229	76885 2395844	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	3049 147877	5250 292909	11039 633007	21196 889868	56607 2050200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 104178	++++ 213988	++++ 390689	++++ 666078	7623 14588 1491458	++++ 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 322940	++++ 644340	++++ 1332511	++++ 1919761	47135 126693 4249014	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 237979	++++ 483244	++++ 773470	++++ 1347387	35554 99796 3367365	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Methylene Chloride	CBM	Ave	++++ 158748	++++ 297663	++++ 587875	++++ 829908	39858 72672 ++++	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 0.400 ++++
3-Chloropropene	CBM	Ave	++++ 172933	++++ 352711	++++ 715500	++++ 1138278	14784 29914 2516658	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 454099	++++ 893782	++++ 1857677	++++ 2686894	33755 67457 175320 6209652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 152597	++++ 304618	++++ 640390	++++ 904134	21313 57740 2041028	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 425850	++++ 850675	++++ 1727313	++++ 2608750	32181 64503 169974 5477445	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 436887	++++ 884523	++++ 1553256	++++ 2571313	13784 31073 59673 165819 5756531	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	6185 301902	11544 617142	22407 1197700	44696 1866128	117133 4143029	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 421041	++++ 920626	++++ 1610829	++++ 2825655	59807 158808 6134377	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 139897	++++ 280600	++++ 564091	++++ 836832	10084 20822 53409 1774150	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 71674	++++ 137814	++++ 242448	++++ 408724	10552 870000	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
cis-1,2-Dichloroethene	CBM	Ave	3051 153350	5311 314771	10779 630074	22108 933768	57247 2161860	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 367561	++++ 727588	25120 1268094	49778 2287831	134280 4857969	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	7168 346742	12869 705235	25085 1383523	52455 2190241	132214 4960016	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 196936	++++ 392928	++++ 687510	27618 1192762	73368 2547299	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7734 377403	13331 774289	27166 1509577	55384 2393121	145486 5471084	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4547 232618	8382 490730	17516 952640	35324 1548479	87574 3502141	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 82609	++++ 165738	++++ 330488	12681 486357	31319 1042096	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 444635	15963 906736	33352 1771104	65637 2614755	167643 5593459	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	6601 372817	11874 761689	24215 1552321	50848 2465819	138991 5358444	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 59954	++++ 111445	++++ 184294	8226 331158	22433 786825	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 118426	++++ 240541	8397 465638	17105 690034	45390 1499809	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 249671	++++ 526684	18410 1043094	37543 1556455	95028 3566561	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	17363 868592	31627 1711484	63694 3264805	129920 5087913	336411 11120269	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 174693	++++ 357021	13419 694408	26105 1074435	66081 2411618	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 170338	6605 354326	12771 653599	25661 1061646	64714 2334951	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4087 194217	7238 411429	13973 832705	28091 1212507	74264 2837545	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 172040	++++ 363939	++++ 729198	27744 1170568	67675 2672665	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 346754	++++ 745629	23694 1472126	48577 2394105	129879 5512449	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 36737	++++ 120654	++++ 174155	8684 331358	19464 783489	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 232640	++++ 470252	++++ 823262	27631 1502138	81302 3304265	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	5664 305916	11041 613752	21112 1192238	44641 1790104	116952 4193256	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 377024	++++ 689509	24146 916498	51311 2161661	143236 5370174	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 265941	8857 558061	18964 1060593	38186 1693124	96201 3656415	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 249246	8494 528240	18209 983862	34634 1678819	93722 3876912	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	9759 514273	18809 1073072	37560 1966647	75222 3139180	192974 7445292	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2849 160780	5479 322166	11656 599648	23218 982519	60205 2274200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 175250	++++ 293749	10295 417616	22692 941298	65409 2558380	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 186587	++++ 377410	13108 732239	26877 1119383	73243 2627265	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	CBZd 5	Ave	++++ 1842861	++++ 3737320	++++ 7125919	278341 11514382	716916 26057226	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	++++ 313050	++++ 676985	19680 1357226	39627 2191805	110810 5334244	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 273278	++++ 576579	17903 1102407	37712 1772227	99001 4168790	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3665 191154	6973 394783	13185 776709	28219 1207845	72561 2883889	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	7137 406499	13951 832085	29142 1543553	58935 2444395	157211 5914764	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	++++ 719275	24780 1456098	48941 2578598	102987 4329132	272217 10330192	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	17235 1128063	36147 2267354	79756 3963090	160595 6728239	425545 16015024	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd 5	Ave	++++ 396249	13596 785625	27868 1455379	57416 2300427	151720 4997986	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd 5	Ave	++++ 288479	++++ 647774	16038 1258109	32352 2180538	93899 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Styrene	CBZd 5	Ave	++++ 379313	++++ 797396	22430 1440043	46527 2475003	134724 6272582	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	++++ 577831	18010 1183498	40418 2069274	85176 3507204	219991 8652988	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	++++ 388902	++++ 791220	26816 1406346	52217 2507616	146757 5342402	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 123267	++++ 249431	8767 448013	16530 809328	45222 1801458	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 770189	++++ 1569505	25754 2749199	53331 4984665	108667 11018383	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	++++ 208028	++++ 425975	14187 750579	27021 1348899	77981 3034911	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 190674	6524 376201	13286 679618	26657 1211506	71471 2747919	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	++++ 757218	++++ 1579790	52613 2762937	100995 4977060	288122 11171652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	++++ 298107	++++ 615118	20417 1079746	39553 1917273	109634 4410950	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 294414	++++ 619837	++++ 1139797	33405 2186650	99545 4845121	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 491714	16235 955171	34455 1652838	72566 2938778	189531 6027860	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	++++ 674397	++++ 1354211	44314 2326877	90284 4505713	239278 9821979	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 670745	++++ 1320347	44184 2282446	89238 4407169	236361 9493306	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	++++ 963943	++++ 1895656	62984 3335709	130314 6189211	346547 13052688	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7122 429682	13761 870050	27898 1597433	57634 3038807	153722 6998909	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 595380	++++ 1199239	35336 2207883	71441 4112439	206433 9093386	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7701 436204	14670 882709	28727 1608243	58838 3081288	154004 7120026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	++++ 779650	++++ 1524715	46995 2715440	99360 5104026	272972 11067094	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	8305 664909	18233 1328651	41757 2356435	88511 ++++	235583 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Indane	CBZd 5	Ave	++++ 602700	++++ 1193709	39872 2118687	79681 3956160	207350 8865173	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 416753	++++ 841536	27621 1533100	56506 2968700	146910 7061726	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	++++ 814617	23860 1547638	50796 2715683	108576 5104411	288957 10889558	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 516302	++++ 1040605	31427 1879451	64720 3517487	178805 7968258	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 527231	15243 970873	32520 1679521	73748 2924996	202684 6339976	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2927 207960	5571 429617	11218 745616	22412 ++++	65206 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 733964	++++ 1413004	41572 2207453	90241 4545804	260569 10379759	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 446881	12818 722978	28563 1006221	60222 1915343	173512 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 360521	11357 693552	20313 1301208	41810 2366361	119662 5229906	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 839854	24728 1530726	47569 2517870	92896 4661002	294401 10693857	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 361175	++++ 732431	21118 1398696	43365 2661640	119102 6035243	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 351962	10806 629244	20063 1082671	39185 2034470	116648 3007302	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 514300	13713 671591	23120 1000580	40866 1774929	167946 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 628512	17895 789694	28473 1141032	54667 1951995	209066 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1743947 1821597	1724522 1988683	1705365 2036360	1745466 1623678	1732344 1691157	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	12.7						50			
Propene	+++++	+++++	+++++	23.1						50		
Dichlorodifluoromethane	+++++	+++++	5.1						50			
Chloromethane	+++++	+++++	+++++	21.0						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	6.9						50			
Vinyl chloride	21.8						50					
Butane	+++++	+++++	+++++	13.3						50		
1,3-Butadiene	+++++	+++++	+++++	2.3						50		
Bromomethane	+++++	+++++	18.9						50			
Chloroethane	+++++	+++++	11.2						50			
Ethanol	+++++	+++++	+++++	22.9						50		
Vinyl bromide	+++++	+++++	7.3						50			
2-Methylbutane	+++++	+++++	+++++	5.5						50		
Trichlorofluoromethane	+++++	5.4						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	+++++	-1.1						50	
Acetonitrile	+++++	+++++	+++++	-12.8						50		
Acetone	+++++	+++++	+++++	+++++	18.4						80	
Pentane	+++++	+++++	+++++	+++++	5.4						50	
Isopropyl alcohol	+++++	+++++	+++++	7.2						50		
Ethyl ether	+++++	+++++	+++++	+++++	10.7						50	
1,1-Dichloroethene	8.4						50					
Acrylonitrile	+++++	+++++	6.3						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.9						50				
tert-Butyl alcohol	+++++	+++++	+++++	5.2							50	
Methylene Chloride	+++++	+++++	+++++	57.6 +++++							80	
3-Chloropropene	+++++	+++++	14.8						50			
Carbon disulfide	+++++	+++++	7.1						50			
trans-1,2-Dichloroethene	+++++	-2.1						50				
2-Methylpentane	+++++	+++++	8.2						50			
Methyl tert-butyl ether	+++++	-8.6						50				
1,1-Dichloroethane	6.8						50					
Vinyl acetate	+++++	+++++	0.8						50			
Hexane	+++++	+++++	5.2						50			
2-Butanone (MEK)	+++++	+++++	+++++	8.0						50		
cis-1,2-Dichloroethene	5.8						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	3.1						50			
Chloroform	7.6						50					
Tetrahydrofuran	+++++	+++++	+++++	1.2						50		
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	-0.5						50					
Cyclohexane	+++++	+++++	+++++	5.2						50		
Benzene	+++++	-0.4						50				
Carbon tetrachloride	-4.8						50					
1-Butanol	+++++	+++++	+++++	0.2						50		
2,3-Dimethylpentane	+++++	+++++	6.9						50			
Thiophene	+++++	+++++	6.3						50			
2,2,4-Trimethylpentane	6.0						50					
Heptane	+++++	+++++	12.0						50			
1,2-Dichloropropane	+++++	4.8						50				
Trichloroethene	7.3						50					
Dibromomethane	+++++	+++++	+++++	2.1						50		
Bromodichloromethane	+++++	+++++	-2.7						50			
1,4-Dioxane	+++++	+++++	+++++	13.9						50		
Methyl methacrylate	+++++	+++++	+++++	-16.1						50		
Methylcyclohexane	-1.0						50					
4-Methyl-2-pentanone (MIBK)	+++++	+++++	3.0						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.6						50				
trans-1,3-Dichloropropene	+++++	-7.7						50				
Toluene	1.0						50					
1,1,2-Trichloroethane	-3.3						50					
2-Hexanone	+++++	+++++	-5.8						50			
Octane	+++++	+++++	0.0						50			
Dibromochloromethane	+++++	+++++	-12.7						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-7.1						50			
Tetrachloroethene	1.1						50					
Chlorobenzene	-4.9						50					
Ethylbenzene	+++++	-3.0						50				
m-Xylene & p-Xylene	-14.2						50					
Nonane	+++++	-2.2						50				
Bromoform	+++++	+++++	-18.6		+++++				50			
Styrene	+++++	+++++	-14.3						50			
o-Xylene	+++++	-12.6						50				
1,1,2,2-Tetrachloroethane	+++++	+++++	0.0						50			
1,2,3-Trichloropropane	+++++	+++++	2.1						50			
Isopropylbenzene	+++++	-6.2						50				
Propylbenzene	+++++	+++++	-1.4						50			
2-Chlorotoluene	+++++	-3.8						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	+++++	+++++	-1.0						50			
1,3,5-Trimethylbenzene	+++++	+++++	-1.3						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-22.6						50		
Decane	+++++	-4.7						50				
tert-Butylbenzene	+++++	+++++	-3.9						50			
1,2,4-Trimethylbenzene	+++++	+++++	-2.6						50			
sec-Butylbenzene	+++++	+++++	-3.0						50			
1,3-Dichlorobenzene	-9.4						50					
Benzyl chloride	+++++	+++++	-12.6						50			
1,4-Dichlorobenzene	-4.4						50					
4-Isopropyltoluene	+++++	+++++	-9.5						50			
1,2,3-Trimethylbenzene	-23.6		+++++	+++++			50					
Indane	+++++	+++++	-2.8						50			
1,2-Dichlorobenzene	+++++	+++++	-6.9						50			
Butylbenzene	+++++	-12.5						50				
Indene	+++++	+++++	-10.8						50			
Undecane	+++++	-11.9						50				
1,2-Dibromo-3-Chloropropane	-10.0		+++++	+++++			50					
1,2,4,5-Tetramethylbenzene	+++++	+++++	-12.1						50			
Dodecane	+++++	-6.1		+++++				50				
1,2,4-Trichlorobenzene	+++++	-5.8						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-6.2						80				
Hexachlorobutadiene	+++++	+++++	-15.7						50			
1,2,3-Trichlorobenzene	+++++	1.5						50				
2-Methylnaphthalene	+++++	6.7		+++++				80				
1-Methylnaphthalene	+++++	13.7		+++++				80				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.6032	2.5523	2.4630	Ave		2.3734			6.7		30.0				
	2.3273	2.2136	2.2367	2.4103	2.1808												
Propene	+++++	+++++	+++++	0.8419	0.7507	Ave		0.7296			8.2		30.0				
	0.7221	0.6895	0.6844	0.7524	0.6660												
Dichlorodifluoromethane	+++++	+++++	4.5412	4.2461	5.3003	Ave		4.3524			11.7		30.0				
	4.1510	3.9686	4.0428	4.8211	3.7479												
Chloromethane	+++++	+++++	0.4314	0.2960	0.3371	Ave		0.3061			18.1		30.0				
	0.2871	0.2733	0.2689	0.2912	0.2638												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.8991	3.2433	3.1843	3.5538	Ave		3.2404			10.6		30.0				
	3.0989	3.0537	3.1101	3.3433	2.6767												
Vinyl chloride	1.3396	1.3354	1.1215	1.1058	1.0442	Ave		1.0731			14.4		30.0				
	0.9887	0.9559	0.9544	0.9748	0.9105												
1,3-Butadiene	+++++	+++++	+++++	0.7017	0.6571	Ave		0.6506			4.0		30.0				
	0.6523	0.6352	0.6377	0.6500	0.6202												
Butane	+++++	+++++	1.3166	1.1752	1.2095	Ave		1.1321			8.5		30.0				
	1.1091	1.0560	1.0795	1.0850	1.0260												
Bromomethane	+++++	+++++	1.4266	1.2696	1.2705	Ave		1.2354			7.2		30.0				
	1.2054	1.1811	1.1809	1.2035	1.1456												
Chloroethane	+++++	+++++	0.6023	0.5518	0.4948	Ave		0.4970			10.7		30.0				
	0.4893	0.4606	0.4673	0.4597	0.4499												
Ethanol	+++++	+++++	+++++	0.3286	0.3153	Ave		0.2997			6.1		30.0				
	0.2949	0.2999	0.2981	0.2885	0.2724												
Vinyl bromide	+++++	+++++	1.4513	1.3532	1.3493	Ave		1.3020			5.9		30.0				
	1.2738	1.2507	1.2699	1.2460	1.2216												
2-Methylbutane	+++++	+++++	0.8639	0.8536	0.8359	Ave		0.7999			5.7		30.0				
	0.7979	0.7734	0.7606	0.7713	0.7425												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Acrolein	++++ 0.2149	++++ 0.2505	++++ 0.2493	0.3397 0.2426	0.2316 0.2411	Ave		0.2528			15.9		30.0				
Trichlorofluoromethane	6.6790 5.8128	6.2714 5.6498	6.2323 5.6579	6.0249 5.5584	5.9679 5.2697	Ave		5.9124			6.9		30.0				
Acetonitrile	++++ 0.2348	++++ 0.2373	++++ 0.2818	0.2630 0.2803	0.2428 0.2703	Ave		0.2586			7.8		30.0				
Acetone	++++ 0.4175	++++ 0.3860	++++ 0.3784	0.5760 0.3627	0.4291 0.3557	Ave		0.4151			18.3		30.0				
Pentane	++++ 0.1987	++++ 0.1907	++++ 0.1944	0.2412 0.1914	0.2034 0.1879	Ave		0.2011			9.2		30.0				
Isopropyl alcohol	++++ 1.1215	++++ 1.1376	++++ 1.1294	1.2584 1.0760	1.1488 1.0492	Ave		1.1316			5.9		30.0				
Ethyl ether	++++ 0.6540	++++ 0.6244	++++ 0.6327	0.7089 0.6995	0.6970 0.6464	Ave		0.6661			5.2		30.0				
1,1-Dichloroethene	1.6400 1.3612	1.4528 1.3523	1.4077 1.3829	1.3842 1.3970	1.3751 1.3233	Ave		1.4076			6.3		30.0				
Acrylonitrile	++++ 0.6195	++++ 0.6124	++++ 0.6202	++++ 0.6572	0.6255 0.6313	Ave		0.6277			2.5		30.0				
tert-Butyl alcohol	++++ 2.6737	++++ 2.7383	++++ 2.6973	2.6805 2.6655	2.7132 2.5593	Ave		2.6773			2.0		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.5282	3.6010 3.4530	3.7397 3.4392	3.5306 3.4042	3.5510 3.1580	Ave		3.4894			4.6		30.0				
Methylene Chloride	++++ 1.2853	++++ 1.1917	++++ 1.1531	2.0228 1.1482	1.5003 1.0647	Ave		1.3380			24.9		30.0				
3-Chloropropene	++++ 1.3439	++++ 1.2944	1.1777 1.2837	1.4302 1.3374	1.3141 1.2919	Ave		1.3092			5.4		30.0				
Carbon disulfide	++++ 3.4096	++++ 3.3395	3.3655 3.3248	3.2471 3.4285	3.3320 3.2774	Ave		3.3406			1.8		30.0				
trans-1,2-Dichloroethene	1.5926 1.4009	1.5829 1.3797	1.4276 1.4044	1.3885 1.4254	1.3834 1.3721	Ave		1.4358			5.7		30.0				
2-Methylpentane	++++ 1.8951	++++ 1.8425	++++ 1.8466	1.9630 1.9346	1.9304 1.8132	Ave		1.8940			2.8		30.0				
Methyl tert-butyl ether	++++ 4.5873	++++ 4.5288	4.7495 4.5802	4.4631 4.6026	4.5963 4.4400	Ave		4.5685			2.1		30.0				
1,1-Dichloroethane	2.6815 2.3300	2.6739 2.2911	2.4729 2.3182	2.3130 2.3408	2.3587 2.2447	Ave		2.4025			6.5		30.0				
Vinyl acetate	++++ 2.2364	++++ 2.3368	++++ 2.4359	2.0297 2.5381	2.1537 2.5129	Ave		2.3205			8.2		30.0				
2-Butanone (MEK)	++++ 0.5380	++++ 0.5309	++++ 0.5519	0.5759 0.5616	0.5098 0.5445	Ave		0.5446			3.9		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	++++ 0.8187	++++ 0.8108	0.9023 0.8291	0.8416 0.8382	0.8376 0.8031	Ave		0.8352			3.6		30.0				
cis-1,2-Dichloroethene	1.6200 1.4112	1.4958 1.4310	1.4342 1.4304	1.4272 1.4418	1.3943 1.3928	Ave		1.4479			4.6		30.0				
Ethyl acetate	++++ 2.0207	++++ 2.0336	1.8097 2.1099	1.9184 2.1701	1.9214 2.1110	Ave		2.0119			6.0		30.0				
Chloroform	4.2334 3.7394	4.0960 3.6835	3.8341 3.7449	3.7602 3.7523	3.7763 3.5872	Ave		3.8207			5.1		30.0				
Tetrahydrofuran	++++ 0.8846	++++ 0.8714	++++ 0.8870	0.8784 0.9150	0.8832 0.8836	Ave		0.8862			1.5		30.0				
1,1,1-Trichloroethane	4.9709 4.7770	4.9939 4.7670	5.0122 4.8476	4.7467 4.8764	4.7402 4.7023	Ave		4.8434			2.4		30.0				
1,2-Dichloroethane	0.5380 0.5057	0.5327 0.4936	0.5166 0.4997	0.4858 0.5068	0.4926 0.4915	Ave		0.5063			3.5		30.0				
Benzene	0.7533 0.6321	0.7075 0.6240	0.7019 0.6266	0.6312 0.6238	0.6214 0.5956	Ave		0.6517			7.8		30.0				
Cyclohexane	++++ 0.1013	++++ 0.0986	++++ 0.1001	0.0959 0.0971	0.0939 0.0911	Ave		0.0968			3.7		30.0				
1-Butanol	++++ 0.0448	++++ 0.0477	++++ 0.0492	++++ 0.0516	0.0330 0.0509	Ave		0.0462			14.9		30.0				
Carbon tetrachloride	0.9231 0.9489	0.9429 0.9372	0.7537 0.9263	0.9038 0.9692	0.9350 0.9273	Ave		0.9167			6.5		30.0				
2,3-Dimethylpentane	++++ 0.1378	++++ 0.1390	++++ 0.1212	0.1277 0.1410	0.1355 0.1365	Ave		0.1349			5.2		30.0				
Thiophene	++++ 0.3778	++++ 0.3718	0.3563 0.3816	0.3607 0.3893	0.3698 0.3754	Ave		0.3728			2.9		30.0				
2,2,4-Trimethylpentane	++++ 0.8423	++++ 0.8248	++++ 0.8652	0.8182 0.8535	0.8128 0.8176	Ave		0.8342			2.3		30.0				
1,2-Dichloropropane	++++ 0.2041	++++ 0.2015	0.2130 0.2054	0.1991 0.2089	0.2024 0.2020	Ave		0.2045			2.2		30.0				
Heptane	++++ 0.2142	++++ 0.2122	++++ 0.1976	0.1979 0.2154	0.2071 0.2066	Ave		0.2083			3.5		30.0				
Trichloroethene	0.4192 0.3857	0.3851 0.3869	0.4007 0.4221	0.3771 0.3913	0.3880 0.3727	Ave		0.3929			4.2		30.0				
Dibromomethane	++++ 0.3459	++++ 0.3374	++++ 0.3725	0.3565 0.3576	0.3464 0.3447	Ave		0.3514			3.1		30.0				
Bromodichloromethane	++++ 0.6680	++++ 0.6726	0.5971 0.7005	0.5918 0.7174	0.6239 0.6980	Ave		0.6587			7.4		30.0				
1,4-Dioxane	++++ 0.0965	++++ 0.1030	++++ 0.1037	0.0992 0.1007	0.0973 0.0954	Ave		0.0994			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++	++++	0.2139	0.1766	0.2044	Ave		0.2275			12.8		30.0				
	0.2243	0.2331	0.2468	0.2628	0.2582												
Methylcyclohexane	++++	++++	0.3972	0.3842	0.3938	Ave		0.4024			2.5		30.0				
	0.4067	0.4050	0.4110	0.4158	0.4053												
4-Methyl-2-pentanone (MIBK)	++++	++++	++++	0.2895	0.3277	Ave		0.3626			11.5		30.0				
	0.3577	0.3715	0.3933	0.4035	0.3952												
cis-1,3-Dichloropropene	++++	0.3635	0.3972	0.3514	0.3808	Ave		0.3948			8.2		30.0				
	0.3940	0.4127	0.4288	0.4368	0.4249												
trans-1,3-Dichloropropene	++++	0.4035	0.3959	0.4276	0.4537	Ave		0.4674			10.5		30.0				
	0.4780	0.4968	0.5178	0.5209	0.5119												
Toluene	1.0184	0.9133	0.9750	0.9478	0.9541	Ave		0.9586			3.2		30.0				
	0.9698	0.9624	0.9710	0.9638	0.9102												
1,1,2-Trichloroethane	0.2339	0.2426	0.2564	0.2580	0.2596	Ave		0.2543			4.0		30.0				
	0.2639	0.2594	0.2610	0.2630	0.2452												
2-Hexanone	++++	++++	++++	0.1399	0.1787	Ave		0.2006			16.0		30.0				
	0.1981	0.2103	0.2238	0.2293	0.2239												
Dibromochloromethane	0.6655	0.5795	0.6334	0.6501	0.6985	Ave		0.7414			14.6		30.0				
	0.7840	0.8296	0.8666	0.8735	0.8331												
Octane	++++	++++	0.2922	0.3033	0.2998	Ave		0.3054			3.1		30.0				
	0.3146	0.3133	0.3156	0.3109	0.2932												
C8 Range	++++	++++	++++	++++	2.0961	Ave		2.1360			2.5		30.0				
	2.1678	2.1237	2.1591	2.2092	2.0601												
1,2-Dibromoethane (EDB)	++++	++++	0.5000	0.4942	0.5448	Ave		0.5574			7.3		30.0				
	0.5766	0.5804	0.5952	0.5984	0.5694												
Tetrachloroethene	0.4858	0.4864	0.4732	0.4838	0.4706	Ave		0.4749			2.9		30.0				
	0.4849	0.4819	0.4752	0.4653	0.4417												
Chlorobenzene	0.8210	0.8425	0.8551	0.8450	0.8379	Ave		0.8374			2.0		30.0				
	0.8508	0.8373	0.8444	0.8430	0.7968												
Ethylbenzene	1.3703	1.3589	1.4055	1.3343	1.4017	Ave		1.3820			2.9		30.0				
	1.4178	1.4128	1.4174	1.4023	1.2986												
m-Xylene & p-Xylene	1.1137	1.1023	1.1618	1.1488	1.1673	Ave		1.1335			4.1		30.0				
	1.1838	1.1550	1.1536	1.1251	1.0234												
Bromoform	++++	++++	0.5893	0.6166	0.6638	Ave		0.7786			18.1		30.0				
	0.7606	0.8485	0.9286	0.9279	0.8938												
Styrene	++++	++++	0.6004	0.6182	0.6786	Ave		0.7430			13.0		30.0				
	0.7750	0.7975	0.8292	0.8487	0.7961												
o-Xylene	1.1430	1.1230	1.2624	1.2290	1.2492	Ave		1.1905			5.0		30.0				
	1.2366	1.2060	1.1986	1.1769	1.0804												
Nonane	++++	++++	0.4455	0.4515	0.4801	Ave		0.4511			5.2		30.0				
	0.4737	0.4580	0.4538	0.4433	0.4032												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.5797 0.6456	0.5118 0.6455	0.5697 0.6181	0.5802 0.6658	0.6188 0.6146	Ave		0.6050			7.5		30.0				
1,2,3-Trichloropropane	++++ 0.3084	++++ 0.3034	0.2911 0.3046	0.2918 0.3115	0.2978 0.2914	Ave		0.3000			2.7		30.0				
Isopropylbenzene	++++ 1.7012	++++ 1.6661	1.8308 1.6871	1.7528 1.6694	1.7150 1.5307	Ave		1.6941			5.0		30.0				
Propylbenzene	0.4435 0.4963	0.4328 0.4795	0.4534 0.4859	0.4640 0.4778	0.4755 0.4438	Ave		0.4652			4.5		30.0				
2-Chlorotoluene	++++ 0.4524	0.3991 0.4310	0.4619 0.4318	0.4417 0.4245	0.4398 0.3929	Ave		0.4306			5.3		30.0				
4-Ethyltoluene	1.5529 1.8829	1.6047 1.8611	1.7828 1.8557	1.7531 1.8469	1.7972 1.6563	Ave		1.7594			6.6		30.0				
1,3,5-Trimethylbenzene	0.6792 0.7724	0.6523 0.7416	0.7326 0.7410	0.7228 0.7434	0.7292 0.6843	Ave		0.7199			5.1		30.0				
Alpha Methyl Styrene	++++ 0.6781	++++ 0.7295	++++ 0.7535	0.5439 0.7838	0.5731 0.7289	Ave		0.6844			13.4		30.0				
Decane	++++ 0.6849	++++ 0.6585	0.6176 0.6522	0.6408 0.6491	0.6488 0.5849	Ave		0.6421			4.6		30.0				
tert-Butylbenzene	1.6566 1.8841	1.6665 1.7827	1.8313 1.7468	1.8740 1.6988	1.8639 1.5293	Ave		1.7534			6.6		30.0				
1,2,4-Trimethylbenzene	1.4293 1.7233	1.4880 1.6671	1.6887 1.6372	1.6986 1.5922	1.7123 1.4293	Ave		1.6066			7.2		30.0				
1,3-Dichlorobenzene	1.1997 1.1856	1.0963 1.1603	1.2442 1.1572	1.1823 1.1516	1.1621 1.0583	Ave		1.1598			4.5		30.0				
sec-Butylbenzene	2.0787 2.3069	2.1298 2.2195	2.2743 2.1908	2.2407 2.1561	2.2363 1.8732	Ave		2.1706			5.7		30.0				
Benzyl chloride	++++ 1.2529	++++ 1.3231	1.0998 1.4041	1.0436 1.3938	1.1034 1.2924	Ave		1.2392			11.3		30.0				
1,4-Dichlorobenzene	1.2196 1.2112	1.1487 1.1594	1.2267 1.1399	1.2179 1.1212	1.1651 1.0340	Ave		1.1644			5.1		30.0				
4-Isopropyltoluene	2.1095 2.3345	2.1432 2.2554	2.2305 2.2238	2.2370 2.1784	2.2728 1.9244	Ave		2.1910			5.2		30.0				
1,2,3-Trimethylbenzene	1.6103 1.8346	1.5786 1.7874	1.8623 1.7524	1.7831 1.7335	1.7558 1.5556	Ave		1.7253			6.2		30.0				
1,2-Dichlorobenzene	1.1708 1.1557	1.2083 1.1157	1.2580 1.1029	1.2065 1.0865	1.1355 1.0034	Ave		1.1443			6.3		30.0				
Indane	1.4503 1.4994	1.3817 1.4300	1.4785 1.4226	1.4862 1.3893	1.4419 1.2529	Ave		1.4233			5.0		30.0				
Indene	++++ 1.2013	++++ 1.2223	1.0339 1.2542	1.0803 1.2953	1.0663 1.1920	Ave		1.1682			8.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.8231 1.8829	1.6985 1.8028	1.8359 1.7871	1.8719 1.7597	1.8266 1.5551	Ave		1.7844			5.4		30.0				
Undecane	++++ 0.8059	++++ 0.7917	++++ 0.7809	++++ 0.7402	0.7701 0.6720	Ave		0.7598			5.8		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.5799	++++ 0.6160	0.4391 0.6515	0.4709 0.6213	0.4861 0.5926	Ave		0.5572			14.3		30.0				
1,2,4,5-Tetramethylbenzene	++++ 2.1235	++++ 2.1635	2.1451 2.1540	2.1430 1.9985	1.9593 1.8488	Ave		2.0670			5.7		30.0				
Dodecane	++++ 0.7733	++++ 0.8936	++++ 0.8877	0.8688 0.7212	0.6803 0.7447	Ave		0.7957			10.9		30.0				
1,2,4-Trichlorobenzene	++++ 1.1894	++++ 1.2694	1.4472 1.2818	1.3888 1.0940	1.0856 1.1269	Ave		1.2354			10.9		30.0				
Naphthalene	++++ 2.0750	3.4525 2.4487	2.8184 2.5087	2.7367 2.1182	1.8255 ++++	Ave		2.4980			20.6		30.0				
Hexachlorobutadiene	++++ 1.4923	++++ 1.4393	1.7181 1.4314	1.5746 1.2072	1.3912 1.2353	Ave		1.4362			11.7		30.0				
1,2,3-Trichlorobenzene	++++ 1.1295	++++ 1.2212	1.4432 1.2323	1.3860 0.9868	1.0237 1.0761	Ave		1.1873			13.9		30.0				
2-Methylnaphthalene	++++ 0.3586	++++ 0.9509	++++ 1.0808	++++ 0.6399	++++ 0.9374	Ave		0.7935			36.8		50.0				
1-Methylnaphthalene	++++ 0.3899	++++ 0.8629	++++ 0.9496	++++ 0.5203	++++ 0.7770	Ave		0.6999			33.7		50.0				
4-Bromofluorobenzene (Surr)	0.8488 0.8636	0.8528 0.8535	0.8654 0.8546	0.8648 0.8319	0.8641 0.8066	Ave		0.8506			2.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 165552	++++ 330784	13488 670931	27178 1511149	67965 2786793	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 51364	++++ 103039	++++ 205301	8965 471697	20715 851034	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 295289	++++ 593041	23530 1212691	45214 3022572	146259 4789313	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 20420	++++ 40844	2235 80675	3152 182542	9302 337068	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 220441	10161 456323	16805 932912	33908 2096072	98065 3420506	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	1811 70331	3480 142840	5811 286294	11775 611179	28814 1163551	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 46402	++++ 94920	++++ 191280	7472 407531	18132 792495	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 78896	++++ 157806	6822 323819	12514 680235	33375 1311043	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 85746	++++ 176496	7392 354225	13519 754560	35058 1463890	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 34804	++++ 68833	3121 140181	5876 288211	13655 574974	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 104882	++++ 224069	++++ 447098	17498 904290	43508 1740692	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 90610	++++ 186899	7520 380924	14410 781185	37233 1560991	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 56760	++++ 115570	4476 228167	9090 483547	23067 948871	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrolein	CBM	Ave	++++ 15289	++++ 37440	++++ 74788	3617 152096	6392 308108	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	9029 413497	16343 844261	32292 1697186	64156 3484877	164680 6733950	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 16703	++++ 35460	++++ 84531	++++ 175714	2801 345458	6701 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Acetone	CBM	Ave	++++ 89101	++++ 173059	++++ 340521	18402 682117	35521 1363433	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 14137	++++ 28499	++++ 58302	2568 119973	5613 240067	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 239341	++++ 509997	++++ 1016357	40201 2023732	95103 4022317	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 46526	++++ 93310	++++ 189800	7549 438542	19232 826066	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	2217 96830	3786 202076	7294 414812	14740 875865	37945 1690964	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 44072	++++ 91512	++++ 186041	++++ 412056	17259 806690	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 190196	++++ 409183	13889 809098	28891 1671112	74242 3270376	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 250984	9384 515989	19377 1031649	37596 2134286	97989 4035478	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 91431	++++ 178076	++++ 345898	21540 719893	41401 1360585	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 95603	++++ 193431	6102 385054	15229 838478	36262 1650820	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 242543	++++ 499031	17438 997332	34577 2149500	91945 4188128	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	2153 99652	4125 206172	7397 421281	14785 893667	38175 1753401	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 134813	++++ 275324	10171 553915	20556 1212878	53163 2316982	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 326320	++++ 676752	24609 1373906	47525 2885627	126834 5673760	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	3625 165748	6968 342362	12813 695373	24630 1467554	65086 2868475	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 159088	++++ 349189	++++ 730693	21613 1591261	59429 3211124	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 38268	++++ 79333	++++ 165553	6132 352107	14067 695780	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 58239	++++ 121155	++++ 248691	4675 525494	8962 1026278	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	2190 100389	3898 213838	7431 429081	15197 903953	38474 1779827	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 143745	++++ 303889	9377 632910	20428 1360573	53019 2697533	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	5723 266010	10674 550434	19866 1123349	40040 2352521	104204 4583947	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 62926	++++ 130211	++++ 266070	9354 573668	24371 1129072	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	6720 339819	13014 712345	25970 1454125	50545 3057281	130803 6008857	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4162 199683	7880 414101	15042 837957	29238 1778626	76773 3480930	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	5827 249589	10465 523482	20437 1050705	37991 2189441	96837 4217712	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 39991	++++ 82675	++++ 167839	5770 340746	14632 645373	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 17690	++++ 40004	++++ 82457	++++ 181076	5146 360622	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7141 374679	13947 786171	21947 1553305	54395 3401707	145724 6567265	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 54415	++++ 116636	++++ 235995	3528 494713	7686 966448	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 149183	++++ 311873	++++ 639928	10374 1366267	21711 2658371	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 332582	++++ 691902	++++ 1407509	25192 2995449	49245 5790015	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 80581	++++ 169011	++++ 344383	6201 733246	11982 1430590	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 84592	++++ 178041	++++ 361284	5754 756110	32279 1463381	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	3243 152289	5696 324569	11668 707793	22698 1373208	60473 2639630	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 136587	++++ 283066	++++ 586890	10846 1255108	53985 2441282	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 263754	++++ 564189	++++ 1174659	17387 2518000	35620 4943175	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 38117	++++ 86437	++++ 173912	5968 353467	15165 675333	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 88559	++++ 195505	++++ 413937	6227 922467	10629 1828238	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	++++ 160604	++++ 339768	++++ 689164	11565 1459181	23124 2870166	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 141224	++++ 311634	++++ 659470	17423 1416282	51070 2798783	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 155584	5376 346235	10488 719012	21150 1532867	59340 3009068	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 165754	5189 369600	10066 783879	22215 1677181	61443 3381888	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	6779 336279	11744 715966	24790 1469948	49243 3103222	129198 6012505	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	1557 91510	3120 192987	6520 395113	13406 846792	35149 1619482	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 68694	++++ 156406	++++ 338784	7267 738442	24199 1478910	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	4430 271846	7451 617174	16103 1311808	33778 2812660	94584 5503585	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 109095	++++ 233063	7429 477723	15759 1000926	40600 1936591	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	DFBZ	Ave	++++ 855982	++++ 1781529	++++ 3620641	++++ 7753468	++++ 14589114	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 199953	++++ 431756	12712 900939	25676 1926667	73769 3761382	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3234 168145	6255 358488	12031 719415	25138 1498188	63725 2918044	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	5465 295002	10833 622855	21742 1278293	43900 2714425	113462 5263414	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	9121 491615	17474 1050972	35735 2145561	69322 4515180	189812 8578718	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	14827 820994	28347 1718390	59080 3492522	119367 7245395	316153 13520878	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	++++ 263744	++++ 631165	14982 1405685	32037 2987666	89888 5904670	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd 5	Ave	++++ 268745	++++ 593262	15265 1255220	32117 2732738	91899 5258738	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	7608 428791	14440 897122	32097 1814388	63851 3789404	169158 7137002	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Nonane	CBZd 5	Ave	++++ 164273	++++ 340741	11326 686883	23460 1427330	65019 2663319	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	3859 223872	6581 480219	14484 935594	30142 2143813	83793 4060026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 106933	++++ 225670	7400 461156	15160 1003093	40330 1925261	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 589911	++++ 1239416	46548 2553866	91067 5375264	232238 10111819	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	2952 172077	5565 356669	11527 735475	24106 1538516	64393 2931395	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 156859	5132 320641	11745 653681	22951 1366689	59552 2595696	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	10337 652888	20634 1384436	45329 2809081	91082 5946732	243377 10941125	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	4521 267835	8388 551670	18627 1121740	37553 2393487	98748 4520211	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 235120	++++ 542707	++++ 1140621	28257 2523695	77610 4814736	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 237483	++++ 489862	15703 987208	33292 2090024	87862 3864099	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11027 653325	21429 1326146	46562 2644216	97365 5469769	252400 10102100	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	9514 597546	19133 1240172	42935 2478370	88253 5126755	231880 9441765	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7986 411115	14097 863153	31633 1751738	61425 3707873	157370 6991250	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	13837 799929	27386 1651103	57824 3316313	116417 6942238	302828 12374020	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 434461	++++ 984275	27963 2125520	54221 4487660	149421 8537696	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	8118 419983	14770 862511	31188 1725619	63275 3610216	157774 6830228	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	14042 809499	27559 1677824	56711 3366403	116224 7014221	307780 12712650	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	10719 636168	20298 1329610	47349 2652674	92640 5581569	237762 10276226	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	7793 400754	15537 829934	31984 1669523	62682 3498467	153773 6628325	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	9654 519916	17767 1063787	37591 2153540	77218 4473280	195256 8276746	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 416558	++++ 909289	26287 1898638	56129 4170791	144394 7874065	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	12135 652919	21840 1341073	46679 2705337	97253 5666096	247354 10272864	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 279455	++++ 588913	++++ 1182131	40009 2383371	102646 4439100	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 201092	++++ 458234	11163 986255	24464 2000539	65829 3914341	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 736323	++++ 1609444	54539 3260653	111338 6434741	265327 12213199	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 268129	++++ 664765	++++ 1343815	45141 2322024	92125 4919414	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 412431	++++ 944306	36794 1940306	72153 3522363	147015 7444026	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 719521	++++ 1821564	44394 3797602	71658 6820345	142183 247207 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Hexachlorobutadiene	CBZd 5	Ave	++++ 517445	++++ 1070672	43683 2166873	81808 3886960	188387 8160248	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 391665	++++ 908417	36693 1865471	72007 3177370	138621 7108780	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 124366	++++ 707384	++++ 1636134	++++ 2060557	++++ 6192720	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 135206	++++ 641933	++++ 1437560	++++ 1675488	++++ 5133017	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1129964 1197793	1096528 1269845	1100173 1293730	1123241 1339226	1170099 1332053	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	9.7						50			
Propene	+++++	+++++	+++++	15.4						50		
Dichlorodifluoromethane	+++++	+++++	4.3						50			
Chloromethane	+++++	+++++	40.9						50			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	20.3						50				
Vinyl chloride	24.8						50					
1,3-Butadiene	+++++	+++++	+++++	7.9						50		
Butane	+++++	+++++	16.3						50			
Bromomethane	+++++	+++++	15.5						50			
Chloroethane	+++++	+++++	21.2						50			
Ethanol	+++++	+++++	+++++	9.7						50		
Vinyl bromide	+++++	+++++	11.5						50			
2-Methylbutane	+++++	+++++	8.0						50			
Acrolein	+++++	+++++	+++++	34.3						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Trichlorofluoromethane	13.0						50					
Acetonitrile	+++++	+++++	+++++	1.7						50		
Acetone	+++++	+++++	+++++	38.8						80		
Pentane	+++++	+++++	+++++	19.9						50		
Isopropyl alcohol	+++++	+++++	+++++	11.2						50		
Ethyl ether	+++++	+++++	+++++	6.4						50		
1,1-Dichloroethene	16.5						50					
Acrylonitrile	+++++	+++++	+++++	+++++	-0.4						50	
tert-Butyl alcohol	+++++	+++++	0.1						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.2						50				
Methylene Chloride	+++++	+++++	+++++	51.2						80		
3-Chloropropene	+++++	+++++	-10.0						50			
Carbon disulfide	+++++	+++++	0.7						50			
trans-1,2-Dichloroethene	10.9						50					
2-Methylpentane	+++++	+++++	3.6						50			
Methyl tert-butyl ether	+++++	+++++	4.0						50			
1,1-Dichloroethane	11.6						50					
Vinyl acetate	+++++	+++++	+++++	-12.5						50		
2-Butanone (MEK)	+++++	+++++	+++++	5.7						50		
Hexane	+++++	+++++	8.0						50			
cis-1,2-Dichloroethene	11.9						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-10.0						50			
Chloroform	10.8						50					
Tetrahydrofuran	+++++	+++++	+++++	-0.9						50		
1,1,1-Trichloroethane	2.6						50					
1,2-Dichloroethane	6.3						50					
Benzene	15.6						50					
Cyclohexane	+++++	+++++	+++++	-1.0						50		
1-Butanol	+++++	+++++	+++++	+++++	-28.5						50	
Carbon tetrachloride	0.7						50					
2,3-Dimethylpentane	+++++	+++++	-10.2						50			
Thiophene	+++++	+++++	-4.4						50			
2,2,4-Trimethylpentane	+++++	+++++	3.7						50			
1,2-Dichloropropane	+++++	+++++	4.1						50			
Heptane	+++++	+++++	-5.1						50			
Trichloroethene	6.7						50					
Dibromomethane	+++++	+++++	6.0						50			
Bromodichloromethane	+++++	+++++	-9.3						50			
1,4-Dioxane	+++++	+++++	+++++	-0.2						50		
Methyl methacrylate	+++++	+++++	-6.0						50			
Methylcyclohexane	+++++	+++++	-1.3						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	-20.2						50		

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.9						50				
trans-1,3-Dichloropropene	+++++	-13.7						50				
Toluene	6.2						50					
1,1,2-Trichloroethane	-8.0						50					
2-Hexanone	+++++	+++++	+++++	-30.3						50		
Dibromochloromethane	-10.2						50					
Octane	+++++	+++++	-4.3						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-10.3						50			
Tetrachloroethene	2.3						50					
Chlorobenzene	-2.0						50					
Ethylbenzene	-0.8						50					
m-Xylene & p-Xylene	-1.7						50					
Bromoform	+++++	+++++	-24.3						50			
Styrene	+++++	+++++	-19.2						50			
o-Xylene	-4.0						50					
Nonane	+++++	+++++	-1.3						50			
1,1,2,2-Tetrachloroethane	-4.2						50					
1,2,3-Trichloropropane	+++++	+++++	-3.0						50			
Isopropylbenzene	+++++	+++++	8.1						50			
Propylbenzene	-4.7						50					
2-Chlorotoluene	+++++	-7.3						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	-11.7						50					
1,3,5-Trimethylbenzene	-5.7						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-20.5						50		
Decane	+++++	+++++	-3.8						50			
tert-Butylbenzene	-5.5						50					
1,2,4-Trimethylbenzene	-11.0						50					
1,3-Dichlorobenzene	3.4						50					
sec-Butylbenzene	-4.2						50					
Benzyl chloride	+++++	+++++	-11.2						50			
1,4-Dichlorobenzene	4.7						50					
4-Isopropyltoluene	-3.7						50					
1,2,3-Trimethylbenzene	-6.7						50					
1,2-Dichlorobenzene	2.3						50					
Indane	1.9						50					
Indene	+++++	+++++	-11.5						50			
Butylbenzene	2.2						50					
Undecane	+++++	+++++	+++++	1.3						50		
1,2-Dibromo-3-Chloropropane	+++++	+++++	-21.2						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	3.8						50			
Dodecane	+++++	+++++	+++++	9.2						50		
1,2,4-Trichlorobenzene	+++++	+++++	17.1						50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	38.2		+++++				80				
Hexachlorobutadiene	+++++	+++++	19.6						50			
1,2,3-Trichlorobenzene	+++++	+++++	21.5						50			
2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-54.8						80
1-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-44.3						80

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 06/21/2017 17:00
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/21/2017 22:43
 Lab File ID: GA11ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.7395	0.6739			2.00	-8.9	35.0
3-Methylthiophene	Ave	0.7319	0.6589			2.00	-10.0	35.0
2-Ethylthiophene	Ave	0.9478	0.8011			2.00	-15.5	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.8235			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.8516	0.6095			2.00	-28.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.167	0.8355			2.00	-28.4	35.0
Benzo (b) thiophene	Ave	1.068	0.7208			2.00	-32.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.638		2.01	2.00	0.7	35.0
Propene	Ave	1.463	1.485		2.03	2.00	1.5	35.0
Dichlorodifluoromethane	Ave	4.235	4.340		2.05	2.00	2.5	35.0
Chloromethane	Ave	0.4649	0.4832		2.08	2.00	3.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.577		2.08	2.00	4.1	35.0
Acetaldehyde	Ave	0.5987	0.4752		7.94	10.0	-20.6	35.0
Vinyl chloride	Ave	1.611	1.638		2.03	2.00	1.7	35.0
1,3-Butadiene	Ave	1.245	1.289		2.07	2.00	3.6	35.0
Butane	Ave	2.712	2.809		2.07	2.00	3.5	35.0
Bromomethane	Ave	1.392	1.376		1.98	2.00	-1.1	35.0
Chloroethane	Ave	0.7761	0.7850		2.02	2.00	1.1	35.0
Ethanol	Ave	0.7042	0.5103		7.25	10.0	-27.5	35.0
Vinyl bromide	Ave	1.290	1.377		2.13	2.00	6.7	35.0
2-Methylbutane	Ave	1.947	1.999		2.05	2.00	2.7	35.0
Trichlorofluoromethane	Ave	4.152	4.112		1.98	2.00	-1.0	35.0
Acrolein	Ave	0.3574	0.2736		1.53	2.00	-23.4	35.0
Acetonitrile	Ave	0.5574	0.4415		1.58	2.00	-20.8	35.0
Acetone	Ave	0.6013	0.5234		1.74	2.00	-13.0	35.0
Pentane	Ave	0.2653	0.2805		2.11	2.00	5.7	35.0
Isopropyl alcohol	Ave	1.603	1.950		2.43	2.00	21.6	35.0
Ethyl ether	Ave	1.725	1.471		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.412	1.470		2.08	2.00	4.1	35.0
Acrylonitrile	Ave	0.9747	0.8590		1.76	2.00	-11.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.092		2.02	2.00	1.0	35.0
tert-Butyl alcohol	Ave	2.196	2.417		2.20	2.00	10.0	35.0
Methylene Chloride	Ave	1.643	1.409		1.72	2.00	-14.2	35.0
3-Chloropropene	Ave	1.751	1.584		1.81	2.00	-9.6	35.0
Carbon disulfide	Ave	4.284	4.357		2.03	2.00	1.7	35.0
trans-1,2-Dichloroethene	Ave	1.414	1.448		2.05	2.00	2.4	35.0
2-Methylpentane	Ave	4.045	3.765		1.86	2.00	-6.9	35.0
Methyl tert-butyl ether	Ave	3.932	3.361		1.71	2.00	-14.5	35.0
1,1-Dichloroethane	Ave	2.906	2.821		1.94	2.00	-2.9	35.0
Vinyl acetate	Ave	4.034	3.285		1.63	2.00	-18.6	35.0
2-Butanone (MEK)	Ave	0.6347	0.5473		1.72	2.00	-13.8	35.0
Hexane	Ave	1.304	1.314		2.02	2.00	0.8	35.0
Isopropyl ether	Ave	4.992	4.538		1.82	2.00	-9.1	35.0
cis-1,2-Dichloroethene	Ave	1.447	1.467		2.03	2.00	1.4	35.0
Ethyl acetate	Ave	3.312	2.660		1.61	2.00	-19.7	35.0
Chloroform	Ave	3.344	3.175		1.90	2.00	-5.1	35.0
Tert-butyl ethyl ether	Ave	4.607	3.821		1.66	2.00	-17.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.483		1.67	2.00	-16.3	35.0
1,1,1-Trichloroethane	Ave	3.620	3.468		1.92	2.00	-4.2	35.0
1,2-Dichloroethane	Ave	0.3910	0.3830		1.96	2.00	-2.1	35.0
Cyclohexane	Ave	0.1314	0.1432		2.18	2.00	8.9	35.0
Benzene	Ave	0.7153	0.7639		2.14	2.00	6.8	35.0
Carbon tetrachloride	Ave	0.5933	0.6444		2.17	2.00	8.6	35.0
1-Butanol	Ave	0.0896	0.1078		2.41	2.00	20.4	35.0
2,3-Dimethylpentane	Ave	0.1886	0.1955		2.07	2.00	3.6	35.0
Thiophene	Ave	0.4156	0.4158		2.00	2.00	0.0	35.0
2,2,4-Trimethylpentane	Ave	1.401	1.433		2.05	2.00	2.3	35.0
Heptane	Ave	0.2875	0.2905		2.02	2.00	1.0	35.0
1,2-Dichloropropane	Ave	0.2813	0.2642		1.88	2.00	-6.1	35.0
Trichloroethene	Ave	0.3257	0.3391		2.08	2.00	4.1	35.0
Dibromomethane	Ave	0.2963	0.2956		2.00	2.00	-0.2	35.0
Bromodichloromethane	Ave	0.5843	0.5891		2.02	2.00	0.8	35.0
1,4-Dioxane	Ave	0.0832	0.0836		2.01	2.00	0.5	35.0
Methyl methacrylate	Ave	0.3595	0.3109		1.73	2.00	-13.5	35.0
Methylcyclohexane	Ave	0.4896	0.6141		2.51	2.00	25.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.5532		1.96	2.00	-1.8	35.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4212		1.97	2.00	-1.5	35.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4178		1.94	2.00	-3.1	35.0
Toluene	Ave	0.8801	0.8270		1.88	2.00	-6.0	35.0
1,1,2-Trichloroethane	Ave	0.2685	0.2546		1.90	2.00	-5.2	35.0
2-Hexanone	Ave	0.2641	0.2800		2.12	2.00	6.0	35.0
Octane	Ave	0.3165	0.3309		2.09	2.00	4.5	35.0
Dibromochloromethane	Ave	0.5446	0.5759		2.12	2.00	5.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4594		1.97	2.00	-1.3	35.0
Tetrachloroethene	Ave	0.3302	0.3391		2.05	2.00	2.7	35.0
2,3-Dimethylheptane	Ave	1.076	0.9762		1.82	2.00	-9.2	35.0
Chlorobenzene	Ave	0.6841	0.6891		2.01	2.00	0.7	35.0
Ethylbenzene	Ave	1.196	1.091		1.82	2.00	-8.8	35.0
m-Xylene & p-Xylene	Ave	0.9148	0.8433		3.69	4.00	-7.8	35.0
Nonane	Ave	0.6507	0.6606		2.03	2.00	1.5	35.0
Bromoform	Ave	0.4761	0.5196		2.18	2.00	9.1	35.0
Styrene	Ave	0.6323	0.5922		1.87	2.00	-6.3	35.0
o-Xylene	Ave	0.9646	0.8608		1.78	2.00	-10.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5907		1.82	2.00	-8.8	35.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	35.0
Isopropylbenzene	Ave	1.286	1.176		1.83	2.00	-8.5	35.0
Propylbenzene	Ave	0.3476	0.3186		1.83	2.00	-8.3	35.0
2-Chlorotoluene	Ave	0.3175	0.3028		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.090		1.70	2.00	-15.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4983		2.00	2.00	-0.2	35.0
Alpha Methyl Styrene	Ave	0.5043	0.4358		1.73	2.00	-13.6	35.0
Decane	Ave	0.7982	0.7703		1.93	2.00	-3.5	35.0
tert-Butylbenzene	Ave	1.114	0.998		1.79	2.00	-10.4	35.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9651		1.76	2.00	-11.9	35.0
sec-Butylbenzene	Ave	1.569	1.417		1.81	2.00	-9.7	35.0
1,3-Dichlorobenzene	Ave	0.7160	0.6664		1.86	2.00	-6.9	35.0
Benzyl chloride	Ave	0.9762	0.8908		1.83	2.00	-8.7	35.0
1,4-Dichlorobenzene	Ave	0.7344	0.6695		1.82	2.00	-8.8	35.0
4-Isopropyltoluene	Ave	1.255	1.122		1.79	2.00	-10.6	35.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.7182		1.45	2.00	-27.5	35.0
Butylcyclohexane	Ave	0.9039	0.8456		1.87	2.00	-6.5	35.0
Indane	Ave	0.9903	0.8594		1.74	2.00	-13.2	35.0
1,2-Dichlorobenzene	Ave	0.7165	0.6343		1.77	2.00	-11.5	35.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	35.0
Indene	Ave	0.8508	0.6491		1.53	2.00	-23.7	35.0
Undecane	Ave	0.8098	0.7744		1.91	2.00	-4.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.2570		1.73	2.00	-13.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.013		1.77	2.00	-11.3	35.0
Dodecane	Ave	0.6396	0.6522		2.04	2.00	2.0	35.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5328		1.89	2.00	-5.7	35.0
Naphthalene	Ave	1.234	1.234		2.00	2.00	0.0	35.0
Hexachlorobutadiene	Ave	0.6047	0.5411		1.79	2.00	-10.5	35.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.5256		2.11	2.00	5.4	35.0
2-Methylnaphthalene	Ave	0.6016	0.6997		2.33	2.00	16.3	50.0
1-Methylnaphthalene	Ave	0.7372	0.8235		2.23	2.00	11.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8145		3.97	4.00	-0.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.652		2.02	2.00	1.2	30.0
Propene	Ave	1.463	1.534		2.10	2.00	4.8	30.0
Dichlorodifluoromethane	Ave	4.235	4.356		2.06	2.00	2.9	30.0
Chloromethane	Ave	0.4649	0.4693		2.02	2.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.404		1.94	2.00	-2.9	30.0
Acetaldehyde	Ave	0.5987	0.5225		8.73	10.0	-12.7	30.0
Vinyl chloride	Ave	1.611	1.586		1.97	2.00	-1.5	30.0
1,3-Butadiene	Ave	1.245	1.283		2.06	2.00	3.0	30.0
Butane	Ave	2.712	2.755		2.03	2.00	1.6	30.0
Bromomethane	Ave	1.392	1.313		1.89	2.00	-5.7	30.0
Chloroethane	Ave	0.7761	0.7469		1.92	2.00	-3.8	30.0
Ethanol	Ave	0.7042	0.7541		10.7	10.0	7.1	30.0
Vinyl bromide	Ave	1.290	1.209		1.87	2.00	-6.3	30.0
2-Methylbutane	Ave	1.947	1.895		1.95	2.00	-2.7	30.0
Trichlorofluoromethane	Ave	4.152	4.042		1.95	2.00	-2.7	30.0
Acrolein	Ave	0.3574	0.3194		1.79	2.00	-10.6	30.0
Acetonitrile	Ave	0.5574	0.5302		1.90	2.00	-4.9	30.0
Acetone	Ave	0.6013	0.4988		4.98	6.00	-17.0	30.0
Pentane	Ave	0.2653	0.2565		1.93	2.00	-3.3	30.0
Isopropyl alcohol	Ave	1.603	1.779		6.66	6.00	10.9	30.0
Ethyl ether	Ave	1.725	1.691		1.96	2.00	-2.0	30.0
1,1-Dichloroethene	Ave	1.412	1.514		2.14	2.00	7.2	30.0
Acrylonitrile	Ave	0.9747	0.9432		1.94	2.00	-3.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.167		2.07	2.00	3.5	30.0
tert-Butyl alcohol	Ave	2.196	2.812		2.56	2.00	28.0	30.0
Methylene Chloride	Ave	1.643	1.484		1.81	2.00	-9.7	30.0
3-Chloropropene	Ave	1.751	1.648		1.88	2.00	-5.9	30.0
Carbon disulfide	Ave	4.284	4.628		2.16	2.00	8.0	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.521		2.15	2.00	7.6	30.0
2-Methylpentane	Ave	4.045	4.401		2.18	2.00	8.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.883		1.97	2.00	-1.3	30.0
1,1-Dichloroethane	Ave	2.906	2.982		2.05	2.00	2.6	30.0
Vinyl acetate	Ave	4.034	3.919		1.94	2.00	-2.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.6318		1.99	2.00	-0.5	30.0
Hexane	Ave	1.304	1.409		2.16	2.00	8.1	30.0
Isopropyl ether	Ave	4.992	5.130		2.06	2.00	2.8	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.511		2.09	2.00	4.4	30.0
Ethyl acetate	Ave	3.312	3.321		2.01	2.00	0.3	30.0
Chloroform	Ave	3.344	3.351		2.00	2.00	0.2	30.0
Tert-butyl ethyl ether	Ave	4.607	4.651		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.780		2.01	2.00	0.4	30.0
1,1,1-Trichloroethane	Ave	3.620	3.686		2.04	2.00	1.8	30.0
1,2-Dichloroethane	Ave	0.3910	0.3917		2.00	2.00	0.2	30.0
Cyclohexane	Ave	0.1314	0.1477		2.25	2.00	12.4	30.0
Benzene	Ave	0.7153	0.7399		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6573		2.22	2.00	10.8	30.0
1-Butanol	Ave	0.0896	0.1263		2.82	2.00	41.0*	30.0
2,3-Dimethylpentane	Ave	0.1886	0.2098		2.22	2.00	11.2	30.0
Thiophene	Ave	0.4156	0.4526		2.18	2.00	8.9	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.515		2.16	2.00	8.2	30.0
Heptane	Ave	0.2875	0.3131		2.18	2.00	8.9	30.0
1,2-Dichloropropane	Ave	0.2813	0.2865		2.04	2.00	1.8	30.0
Trichloroethene	Ave	0.3257	0.3404		2.09	2.00	4.5	30.0
Dibromomethane	Ave	0.2963	0.3076		2.08	2.00	3.8	30.0
Bromodichloromethane	Ave	0.5843	0.6356		2.18	2.00	8.8	30.0
1,4-Dioxane	Ave	0.0832	0.1054		2.53	2.00	26.7	30.0
Methyl methacrylate	Ave	0.3595	0.3845		2.14	2.00	7.0	30.0
Methylcyclohexane	Ave	0.4896	0.5279		2.16	2.00	7.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.6430		2.28	2.00	14.2	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4641		2.17	2.00	8.5	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4612		2.14	2.00	7.0	30.0
Toluene	Ave	0.8801	0.8908		2.02	2.00	1.2	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2829		2.11	2.00	5.3	30.0
2-Hexanone	Ave	0.2641	0.3188		2.41	2.00	20.7	30.0
Octane	Ave	0.3165	0.3439		2.17	2.00	8.7	30.0
Dibromochloromethane	Ave	0.5446	0.5989		2.20	2.00	10.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4929		2.12	2.00	5.8	30.0
Tetrachloroethene	Ave	0.3302	0.3406		2.06	2.00	3.1	30.0
2,3-Dimethylheptane	Ave	1.076	1.161		2.16	2.00	8.0	30.0
Chlorobenzene	Ave	0.6841	0.7203		2.11	2.00	5.3	30.0
Ethylbenzene	Ave	1.196	1.211		2.03	2.00	1.3	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.9437		4.13	4.00	3.2	30.0
Nonane	Ave	0.6507	0.7098		2.18	2.00	9.1	30.0
Bromoform	Ave	0.4761	0.5476		2.30	2.00	15.0	30.0
Styrene	Ave	0.6323	0.6714		2.12	2.00	6.2	30.0
o-Xylene	Ave	0.9646	0.9910		2.05	2.00	2.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.6633		2.05	2.00	2.4	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.2051		1.98	2.00	-1.2	30.0
Isopropylbenzene	Ave	1.286	1.274		1.98	2.00	-1.0	30.0
Propylbenzene	Ave	0.3476	0.3424		1.97	2.00	-1.5	30.0
2-Chlorotoluene	Ave	0.3175	0.3184		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.295		2.02	2.00	0.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4918		1.97	2.00	-1.5	30.0
Alpha Methyl Styrene	Ave	0.5043	0.5202		2.06	2.00	3.1	30.0
Decane	Ave	0.7982	0.8625		2.16	2.00	8.1	30.0
tert-Butylbenzene	Ave	1.114	1.103		1.98	2.00	-1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.096	1.089		1.99	2.00	-0.6	30.0
sec-Butylbenzene	Ave	1.569	1.580		2.01	2.00	0.7	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.7287		2.04	2.00	1.8	30.0
Benzyl chloride	Ave	0.9762	1.033		2.12	2.00	5.8	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.7367		2.01	2.00	0.3	30.0
4-Isopropyltoluene	Ave	1.255	1.277		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	1.101		2.22	2.00	11.1	30.0
Butylcyclohexane	Ave	0.9039	0.9644		2.13	2.00	6.7	30.0
Indane	Ave	0.9903	0.9865		1.99	2.00	-0.4	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.7004		1.95	2.00	-2.3	30.0
Butylbenzene	Ave	1.277	1.325		2.08	2.00	3.8	30.0
Indene	Ave	0.8508	0.8688		2.04	2.00	2.1	30.0
Undecane	Ave	0.8098	0.8597		2.12	2.00	6.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3582		2.42	2.00	20.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.185		2.07	2.00	3.7	30.0
Dodecane	Ave	0.6396	0.6319		1.98	2.00	-1.2	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5181		1.83	2.00	-8.3	30.0
Naphthalene	Ave	1.234	1.197		1.94	2.00	-3.0	30.0
Hexachlorobutadiene	Ave	0.6047	0.5124		1.69	2.00	-15.3	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4625		1.85	2.00	-7.3	30.0
2-Methylnaphthalene	Ave	0.6016	0.4938		1.64	2.00	-17.9	50.0
1-Methylnaphthalene	Ave	0.7372	0.5485		1.49	2.00	-25.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8212		4.01	4.00	0.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 06/28/2017 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/28/2017 21:58
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6999	0.3362			2.00	-52.0*	35.0
3-Methylthiophene	Ave	0.6908	0.7960			2.00	15.2	35.0
2-Ethylthiophene	Ave	0.9153	1.134			2.00	23.9	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.640			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.275			2.00	39.5*	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.768			2.00	43.0*	35.0
Benzo (b) thiophene	Ave	0.9147	1.487			2.00	62.6*	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.256		1.90	2.00	-4.9	35.0
Propene	Ave	0.7296	0.6790		1.86	2.00	-6.9	35.0
Dichlorodifluoromethane	Ave	4.352	5.057		2.32	2.00	16.2	35.0
Chloromethane	Ave	0.3061	0.2731		1.78	2.00	-10.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	3.469		2.14	2.00	7.1	35.0
Acetaldehyde	Ave	0.2860	0.2397		8.38	10.0	-16.2	35.0
Vinyl chloride	Ave	1.073	0.9669		1.80	2.00	-9.9	35.0
1,3-Butadiene	Ave	0.6506	0.6233		1.92	2.00	-4.2	35.0
Butane	Ave	1.132	1.086		1.92	2.00	-4.0	35.0
Bromomethane	Ave	1.235	1.146		1.86	2.00	-7.2	35.0
Chloroethane	Ave	0.4970	0.4655		1.87	2.00	-6.3	35.0
Ethanol	Ave	0.2997	0.2300		7.67	10.0	-23.3	35.0
Vinyl bromide	Ave	1.302	1.320		2.03	2.00	1.4	35.0
2-Methylbutane	Ave	0.7999	0.7818		1.95	2.00	-2.3	35.0
Acrolein	Ave	0.2528	0.2785		2.20	2.00	10.2	35.0
Trichlorofluoromethane	Ave	5.912	5.646		1.91	2.00	-4.5	35.0
Acetonitrile	Ave	0.2586	0.2377		1.84	2.00	-8.1	35.0
Acetone	Ave	0.4151	0.3821		1.84	2.00	-7.9	35.0
Pentane	Ave	0.2011	0.2005		1.99	2.00	-0.3	35.0
Isopropyl alcohol	Ave	1.132	1.401		2.48	2.00	23.8	35.0
Ethyl ether	Ave	0.6661	0.5684		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.408	1.325		1.88	2.00	-5.9	35.0
Acrylonitrile	Ave	0.6277	0.6236		1.99	2.00	-0.6	35.0
tert-Butyl alcohol	Ave	2.677	2.710		2.02	2.00	1.2	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.433		1.97	2.00	-1.6	35.0
Methylene Chloride	Ave	1.338	1.169		1.75	2.00	-12.6	35.0
3-Chloropropene	Ave	1.309	1.297		1.98	2.00	-0.9	35.0
Carbon disulfide	Ave	3.341	3.259		1.95	2.00	-2.4	35.0
trans-1,2-Dichloroethene	Ave	1.436	1.363		1.90	2.00	-5.1	35.0
2-Methylpentane	Ave	1.894	1.705		1.80	2.00	-10.0	35.0
Methyl tert-butyl ether	Ave	4.568	4.614		2.02	2.00	1.0	35.0
1,1-Dichloroethane	Ave	2.402	2.312		1.92	2.00	-3.8	35.0
Vinyl acetate	Ave	2.320	2.445		2.11	2.00	5.4	35.0
2-Butanone (MEK)	Ave	0.5446	0.5251		1.93	2.00	-3.6	35.0
Hexane	Ave	0.8352	0.8172		1.96	2.00	-2.2	35.0
Isopropyl ether	Ave	2.873	2.961		2.06	2.00	3.0	35.0
cis-1,2-Dichloroethene	Ave	1.448	1.418		1.96	2.00	-2.1	35.0
Ethyl acetate	Ave	2.012	1.960		1.95	2.00	-2.6	35.0
Chloroform	Ave	3.821	3.708		1.94	2.00	-3.0	35.0
Tert-butyl ethyl ether	Ave	4.141	3.948		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.8745		1.97	2.00	-1.3	35.0
1,1,1-Trichloroethane	Ave	4.843	4.775		1.97	2.00	-1.4	35.0
1,2-Dichloroethane	Ave	0.5063	0.5017		1.98	2.00	-0.9	35.0
Benzene	Ave	0.6517	0.6483		1.99	2.00	-0.5	35.0
Cyclohexane	Ave	0.0968	0.1018		2.10	2.00	5.2	35.0
1-Butanol	Ave	0.0462	0.0484		2.09	2.00	4.7	35.0
Carbon tetrachloride	Ave	0.9167	0.9855		2.15	2.00	7.5	35.0
2,3-Dimethylpentane	Ave	0.1349	0.1359		2.01	2.00	0.7	35.0
Thiophene	Ave	0.3728	0.3687		1.98	2.00	-1.1	35.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8439		2.02	2.00	1.2	35.0
1,2-Dichloropropane	Ave	0.2045	0.2036		1.99	2.00	-0.5	35.0
Heptane	Ave	0.2083	0.2143		2.06	2.00	2.8	35.0
Trichloroethene	Ave	0.3929	0.3984		2.03	2.00	1.4	35.0
Dibromomethane	Ave	0.3514	0.3500		1.99	2.00	-0.4	35.0
Bromodichloromethane	Ave	0.6587	0.6852		2.08	2.00	4.0	35.0
1,4-Dioxane	Ave	0.0994	0.1029		2.07	2.00	3.5	35.0
Methyl methacrylate	Ave	0.2275	0.2348		2.06	2.00	3.2	35.0
Methylcyclohexane	Ave	0.4024	0.4961		2.47	2.00	23.3	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3776		2.08	2.00	4.1	35.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4285		2.17	2.00	8.5	35.0
trans-1,3-Dichloropropene	Ave	0.4674	0.5177		2.22	2.00	10.8	35.0
Toluene	Ave	0.9586	0.9853		2.06	2.00	2.8	35.0
1,1,2-Trichloroethane	Ave	0.2543	0.2613		2.05	2.00	2.7	35.0
2-Hexanone	Ave	0.2006	0.2098		2.09	2.00	4.6	35.0
Dibromochloromethane	Ave	0.7414	0.8418		2.27	2.00	13.5	35.0
Octane	Ave	0.3054	0.3220		2.11	2.00	5.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5875		2.11	2.00	5.4	35.0
Tetrachloroethene	Ave	0.4749	0.4840		2.04	2.00	1.9	35.0
Chlorobenzene	Ave	0.8374	0.8605		2.06	2.00	2.8	35.0
2,3-Dimethylheptane	Ave	0.5626	0.5171		1.84	2.00	-8.1	35.0
Ethylbenzene	Ave	1.382	1.443		2.09	2.00	4.4	35.0
m-Xylene & p-Xylene	Ave	1.133	1.199		4.23	4.00	5.8	35.0
Bromoform	Ave	0.7786	0.8773		2.25	2.00	12.7	35.0
Styrene	Ave	0.7430	0.8258		2.22	2.00	11.1	35.0
o-Xylene	Ave	1.190	1.212		2.04	2.00	1.8	35.0
Nonane	Ave	0.4511	0.4700		2.08	2.00	4.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6491		2.15	2.00	7.3	35.0
1,2,3-Trichloropropane	Ave	0.3000	0.3085		2.06	2.00	2.8	35.0
Isopropylbenzene	Ave	1.694	1.742		2.06	2.00	2.8	35.0
Propylbenzene	Ave	0.4652	0.5071		2.18	2.00	9.0	35.0
2-Chlorotoluene	Ave	0.4306	0.4514		2.10	2.00	4.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.816		2.06	2.00	3.2	35.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.8591		2.39	2.00	19.3	35.0
Alpha Methyl Styrene	Ave	0.6844	0.7376		2.16	2.00	7.8	35.0
Decane	Ave	0.6421	0.6805		2.12	2.00	6.0	35.0
tert-Butylbenzene	Ave	1.753	1.837		2.10	2.00	4.8	35.0
1,2,4-Trimethylbenzene	Ave	1.607	1.694		2.11	2.00	5.5	35.0
1,3-Dichlorobenzene	Ave	1.160	1.185		2.04	2.00	2.2	35.0
sec-Butylbenzene	Ave	2.171	2.287		2.11	2.00	5.4	35.0
Benzyl chloride	Ave	1.239	1.386		2.24	2.00	11.9	35.0
1,4-Dichlorobenzene	Ave	1.164	1.184		2.03	2.00	1.7	35.0
4-Isopropyltoluene	Ave	2.191	2.267		2.07	2.00	3.5	35.0
1,2,3-Trimethylbenzene	Ave	1.725	1.385		1.61	2.00	-19.7	35.0
Butylcyclohexane	Ave	0.9488	0.9354		1.97	2.00	-1.4	35.0
1,2-Dichlorobenzene	Ave	1.144	1.144		2.00	2.00	-0.0	35.0
Indane	Ave	1.423	1.451		2.04	2.00	2.0	35.0
Indene	Ave	1.168	1.080		1.85	2.00	-7.6	35.0
Butylbenzene	Ave	1.784	1.888		2.12	2.00	5.8	35.0
Undecane	Ave	0.7598	0.8223		2.16	2.00	8.2	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5157		1.85	2.00	-7.4	35.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.082		2.01	2.00	0.7	35.0
Dodecane	Ave	0.7957	0.9180		2.31	2.00	15.4	35.0
1,2,4-Trichlorobenzene	Ave	1.235	1.334		2.16	2.00	7.9	35.0
Naphthalene	Ave	2.498	2.601		2.08	2.00	4.1	35.0
Hexachlorobutadiene	Ave	1.436	1.487		2.07	2.00	3.5	35.0
1,2,3-Trichlorobenzene	Ave	1.187	1.295		2.18	2.00	9.1	35.0
2-Methylnaphthalene	Ave	0.7935	1.016		2.56	2.00	28.1	50.0
1-Methylnaphthalene	Ave	0.6999	0.9471		2.71	2.00	35.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8473		3.98	4.00	-0.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27909/2 Calibration Date: 02/26/2019 10:22
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.072		1.75	2.00	-12.7	30.0
Propene	Ave	0.7296	0.6284		1.72	2.00	-13.9	30.0
Dichlorodifluoromethane	Ave	4.352	3.788		1.74	2.00	-13.0	30.0
Chloromethane	Ave	0.3061	0.2615		1.71	2.00	-14.6	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	2.650		1.64	2.00	-18.2	30.0
Acetaldehyde	Ave	0.2860	0.3209		11.2	10.0	12.2	30.0
Vinyl chloride	Ave	1.073	1.127		2.10	2.00	5.0	30.0
1,3-Butadiene	Ave	0.6506	0.7849		2.41	2.00	20.6	30.0
Butane	Ave	1.132	1.346		2.38	2.00	18.9	30.0
Bromomethane	Ave	1.235	1.444		2.34	2.00	16.9	30.0
Chloroethane	Ave	0.4970	0.5753		2.32	2.00	15.8	30.0
Ethanol	Ave	0.2997	0.3815		12.7	10.0	27.3	30.0
Vinyl bromide	Ave	1.302	1.515		2.33	2.00	16.3	30.0
2-Methylbutane	Ave	0.7999	1.036		2.59	2.00	29.5	30.0
Acrolein	Ave	0.2528	0.3682		2.91	2.00	45.6*	30.0
Trichlorofluoromethane	Ave	5.912	6.983		2.36	2.00	18.1	30.0
Acetonitrile	Ave	0.2586	0.3307		2.56	2.00	27.9	30.0
Acetone	Ave	0.4151	0.4983		7.20	6.00	20.0	30.0
Isopropyl alcohol	Ave	1.132	1.540		8.16	6.00	36.1*	30.0
Pentane	Ave	0.2011	0.2447		2.43	2.00	21.7	30.0
Ethyl ether	Ave	0.6661	0.8066		2.42	2.00	21.1	30.0
1,1-Dichloroethene	Ave	1.408	1.340		1.90	2.00	-4.8	30.0
Acrylonitrile	Ave	0.6277	0.6856		2.18	2.00	9.2	30.0
tert-Butyl alcohol	Ave	2.677	2.714		2.03	2.00	1.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.489		2.00	2.00	0.0	30.0
Methylene Chloride	Ave	1.338	1.171		1.75	2.00	-12.5	30.0
3-Chloropropene	Ave	1.309	1.436		2.19	2.00	9.7	30.0
Carbon disulfide	Ave	3.341	3.319		1.99	2.00	-0.6	30.0
trans-1,2-Dichloroethene	Ave	1.436	1.334		1.86	2.00	-7.1	30.0
2-Methylpentane	Ave	1.894	2.162		2.28	2.00	14.1	30.0
Methyl tert-butyl ether	Ave	4.568	4.558		2.00	2.00	-0.2	30.0
1,1-Dichloroethane	Ave	2.402	2.284		1.90	2.00	-4.9	30.0
Vinyl acetate	Ave	2.320	2.644		2.28	2.00	13.9	30.0
2-Butanone (MEK)	Ave	0.5446	0.5252		1.93	2.00	-3.6	30.0
Hexane	Ave	0.8352	0.9323		2.23	2.00	11.6	30.0
Isopropyl ether	Ave	2.873	3.088		2.15	2.00	7.5	30.0
cis-1,2-Dichloroethene	Ave	1.448	1.413		1.95	2.00	-2.4	30.0
Ethyl acetate	Ave	2.012	2.222		2.21	2.00	10.4	30.0
Chloroform	Ave	3.821	3.665		1.92	2.00	-4.1	30.0
Tert-butyl ethyl ether	Ave	4.141	4.363		2.11	2.00	5.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27909/2 Calibration Date: 02/26/2019 10:22
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.9694		2.19	2.00	9.4	30.0
1,1,1-Trichloroethane	Ave	4.843	4.707		1.94	2.00	-2.8	30.0
1,2-Dichloroethane	Ave	0.5063	0.4825		1.91	2.00	-4.7	30.0
Benzene	Ave	0.6517	0.6340		1.95	2.00	-2.7	30.0
1-Butanol	Ave	0.0462	0.0531		2.30	2.00	15.0	30.0
Cyclohexane	Ave	0.0968	0.1072		2.21	2.00	10.7	30.0
Carbon tetrachloride	Ave	0.9167	0.9348		2.04	2.00	2.0	30.0
2,3-Dimethylpentane	Ave	0.1349	0.1403		2.08	2.00	4.0	30.0
Thiophene	Ave	0.3728	0.3788		2.03	2.00	1.6	30.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8882		2.13	2.00	6.5	30.0
1,2-Dichloropropane	Ave	0.2045	0.2045		2.00	2.00	-0.0	30.0
Heptane	Ave	0.2083	0.2198		2.11	2.00	5.5	30.0
Trichloroethene	Ave	0.3929	0.3954		2.01	2.00	0.6	30.0
Dibromomethane	Ave	0.3514	0.3412		1.94	2.00	-2.9	30.0
Bromodichloromethane	Ave	0.6587	0.6501		1.97	2.00	-1.3	30.0
1,4-Dioxane	Ave	0.0994	0.1021		2.05	2.00	2.7	30.0
Methyl methacrylate	Ave	0.2275	0.2473		2.17	2.00	8.7	30.0
Methylcyclohexane	Ave	0.4024	0.4151		2.06	2.00	3.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.4099		2.26	2.00	13.0	30.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4179		2.12	2.00	5.9	30.0
trans-1,3-Dichloropropene	Ave	0.4674	0.4842		2.07	2.00	3.6	30.0
Toluene	Ave	0.9586	1.009		2.11	2.00	5.3	30.0
1,1,2-Trichloroethane	Ave	0.2543	0.2624		2.06	2.00	3.2	30.0
2-Hexanone	Ave	0.2006	0.2275		2.27	2.00	13.4	30.0
Dibromochloromethane	Ave	0.7414	0.8263		2.23	2.00	11.5	30.0
Octane	Ave	0.3054	0.3361		2.20	2.00	10.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5709		2.05	2.00	2.4	30.0
Tetrachloroethene	Ave	0.4749	0.4896		2.06	2.00	3.1	30.0
Chlorobenzene	Ave	0.8374	0.8730		2.09	2.00	4.3	30.0
2,3-Dimethylheptane	Ave	0.5626	0.6857		2.44	2.00	21.9	30.0
Ethylbenzene	Ave	1.382	1.466		2.12	2.00	6.1	30.0
m-Xylene & p-Xylene	Ave	1.133	1.261		4.45	4.00	11.2	30.0
Bromoform	Ave	0.7786	0.8760		2.25	2.00	12.5	30.0
Styrene	Ave	0.7430	0.8157		2.20	2.00	9.8	30.0
o-Xylene	Ave	1.190	1.295		2.18	2.00	8.8	30.0
Nonane	Ave	0.4511	0.5582		2.47	2.00	23.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6602		2.18	2.00	9.1	30.0
1,2,3-Trichloropropane	Ave	0.3000	0.2901		1.93	2.00	-3.3	30.0
Isopropylbenzene	Ave	1.694	1.747		2.06	2.00	3.1	30.0
Propylbenzene	Ave	0.4652	0.4827		2.08	2.00	3.8	30.0
2-Chlorotoluene	Ave	0.4306	0.4438		2.06	2.00	3.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27909/2 Calibration Date: 02/26/2019 10:22
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.830		2.08	2.00	4.0	30.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.7586		2.11	2.00	5.4	30.0
Alpha Methyl Styrene	Ave	0.6844	0.7085		2.07	2.00	3.5	30.0
Decane	Ave	0.6421	0.7459		2.32	2.00	16.2	30.0
tert-Butylbenzene	Ave	1.753	1.845		2.10	2.00	5.2	30.0
1,2,4-Trimethylbenzene	Ave	1.607	1.734		2.16	2.00	7.9	30.0
1,3-Dichlorobenzene	Ave	1.160	1.145		1.97	2.00	-1.3	30.0
sec-Butylbenzene	Ave	2.171	2.194		2.02	2.00	1.1	30.0
Benzyl chloride	Ave	1.239	1.347		2.17	2.00	8.7	30.0
1,4-Dichlorobenzene	Ave	1.164	1.170		2.01	2.00	0.5	30.0
4-Isopropyltoluene	Ave	2.191	2.280		2.08	2.00	4.0	30.0
1,2,3-Trimethylbenzene	Ave	1.725	1.832		2.12	2.00	6.2	30.0
Butylcyclohexane	Ave	0.9488	0.9760		2.06	2.00	2.9	30.0
1,2-Dichlorobenzene	Ave	1.144	1.124		1.97	2.00	-1.7	30.0
Indane	Ave	1.423	1.480		2.08	2.00	4.0	30.0
Indene	Ave	1.168	1.207		2.07	2.00	3.4	30.0
Butylbenzene	Ave	1.784	1.813		2.03	2.00	1.6	30.0
Undecane	Ave	0.7598	0.8782		2.31	2.00	15.6	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.6135		2.20	2.00	10.1	30.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.095		2.03	2.00	1.4	30.0
Dodecane	Ave	0.7957	0.8817		2.22	2.00	10.8	30.0
1,2,4-Trichlorobenzene	Ave	1.235	1.172		1.90	2.00	-5.1	30.0
Naphthalene	Ave	2.498	2.125		1.70	2.00	-14.9	30.0
Hexachlorobutadiene	Ave	1.436	1.305		1.82	2.00	-9.2	30.0
1,2,3-Trichlorobenzene	Ave	1.187	1.069		1.80	2.00	-10.0	30.0
2-Methylnaphthalene	Ave	0.7935	0.9577		2.41	2.00	20.7	50.0
1-Methylnaphthalene	Ave	0.6999	1.046		2.99	2.00	49.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8849		4.16	4.00	4.0	30.0

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27909/4
 Matrix: Air Lab File ID: R500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27909/4
 Matrix: Air Lab File ID: R500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27909/1002
 Matrix: Air Lab File ID: RCCVB26-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 10:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.95		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.04		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.75		0.080	0.015
67-66-3	Chloroform	119.38	1.92		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.95		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.74		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.90		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.91		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.90		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.12		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.75		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.00		0.40	0.068
91-20-3	Naphthalene	128.17	1.70		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.06		0.080	0.016
108-88-3	Toluene	92.14	2.11		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.86		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.90		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.94		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.06		0.080	0.021
79-01-6	Trichloroethene	131.39	2.01		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.12		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.16		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.11		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.10		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.63		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27931/1002
 Matrix: Air Lab File ID: GCCVB26-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 02/26/2019 11:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.07		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.22		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.02		0.080	0.015
67-66-3	Chloroform	119.38	2.00		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.09		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.06		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.05		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.00		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.14		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.03		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.81		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.97		0.40	0.068
91-20-3	Naphthalene	128.17	1.94		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.06		0.080	0.016
108-88-3	Toluene	92.14	2.02		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.15		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.83		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.04		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.11		0.080	0.021
79-01-6	Trichloroethene	131.39	2.09		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.22		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.99		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.97		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.97		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.18		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Instrument ID: MG Start Date: 01/11/2019 12:24

Analysis Batch Number: 26755 End Date: 01/12/2019 04:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-26755/1		01/11/2019 12:24	1	GA11BLK1.D	RTX-5 0.32 (mm)
IC 140-26755/2		01/11/2019 13:08	1	GA11IC09.D	RTX-5 0.32 (mm)
IC 140-26755/6		01/11/2019 14:35	1	GA11IC10.D	RTX-5 0.32 (mm)
IC 140-26755/9		01/11/2019 16:46	1	GA11IC01.D	RTX-5 0.32 (mm)
IC 140-26755/10		01/11/2019 17:29	1	GA11IC02.D	RTX-5 0.32 (mm)
140-13809-A-1 MDLV		01/11/2019 17:29	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 17:29	1		RTX-5 0.32 (mm)
IC 140-26755/11		01/11/2019 18:12	1	GA11IC03.D	RTX-5 0.32 (mm)
140-13809-A-2 MDLV		01/11/2019 18:12	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:12	1		RTX-5 0.32 (mm)
IC 140-26755/12		01/11/2019 18:56	1	GA11IC04.D	RTX-5 0.32 (mm)
140-13809-A-3 MDLV		01/11/2019 18:56	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:56	1		RTX-5 0.32 (mm)
IC 140-26755/13		01/11/2019 19:40	1	GA11IC05.D	RTX-5 0.32 (mm)
140-13809-A-4 MDLV		01/11/2019 19:40	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 19:40	1		RTX-5 0.32 (mm)
IC 140-26755/14		01/11/2019 20:23	1	GA11IC06.D	RTX-5 0.32 (mm)
ICIS 140-26755/15		01/11/2019 21:07	1	GA11IC07.D	RTX-5 0.32 (mm)
IC 140-26755/16		01/11/2019 21:51	1	GA11IC08.D	RTX-5 0.32 (mm)
ICV 140-26755/18		01/11/2019 23:17	1	GA11ICV.D	RTX-5 0.32 (mm)
ZZZZZ		01/12/2019 04:26	1		RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Instrument ID: MG Start Date: 02/26/2019 11:03

Analysis Batch Number: 27931 End Date: 02/27/2019 03:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27931/1		02/26/2019 11:03	1	GBFBB26.D	RTX-5 0.32 (mm)
CCVIS 140-27931/2		02/26/2019 11:35	1	GCCVB26.D	RTX-5 0.32 (mm)
LCS 140-27931/1002		02/26/2019 11:35	1	GCCVB26-LCS.d	RTX-5 0.32 (mm)
MB 140-27931/4		02/26/2019 12:56	1	G500BB26.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 13:42	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 15:56	1		RTX-5 0.32 (mm)
140-14391-19		02/26/2019 16:38	1	GB26P102.D	RTX-5 0.32 (mm)
140-14391-20		02/26/2019 17:19	1	GB26P103.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 18:01	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 19:24	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 20:06	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 21:30	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 22:13	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 22:55	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 23:37	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 00:18	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 01:00	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 01:42	3.7		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 02:23	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 03:05	1		RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Instrument ID: MR Start Date: 11/16/2018 16:00

Analysis Batch Number: 25490 End Date: 11/17/2018 06:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25490/1		11/16/2018 16:00	1	RBFBK16I.D	RTX-5 0.32 (mm)
IC 140-25490/3		11/16/2018 17:23	1	RK16IC09.D	RTX-5 0.32 (mm)
IC 140-25490/5		11/16/2018 19:07	1	RK16IC10.D	RTX-5 0.32 (mm)
IC 140-25490/8		11/16/2018 21:42	1	RK16IC01.D	RTX-5 0.32 (mm)
IC 140-25490/9		11/16/2018 22:34	1	RK16IC02.D	RTX-5 0.32 (mm)
IC 140-25490/10		11/16/2018 23:27	1	RK16IC03.D	RTX-5 0.32 (mm)
IC 140-25490/11		11/17/2018 00:20	1	RK16IC04.D	RTX-5 0.32 (mm)
IC 140-25490/12		11/17/2018 01:12	1	RK16IC05.D	RTX-5 0.32 (mm)
IC 140-25490/13		11/17/2018 02:05	1	RK16IC06.D	RTX-5 0.32 (mm)
ICIS 140-25490/14		11/17/2018 02:58	1	RK16IC07.D	RTX-5 0.32 (mm)
IC 140-25490/15		11/17/2018 03:51	1	RK16IC08.D	RTX-5 0.32 (mm)
ICV 140-25490/18		11/17/2018 06:27	1	RK16ICV.D	RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Instrument ID: MR Start Date: 02/26/2019 09:53

Analysis Batch Number: 27909 End Date: 02/27/2019 04:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27909/1		02/26/2019 09:53	1	RBFB26.D	RTX-5 0.32 (mm)
CCVIS 140-27909/2		02/26/2019 10:22	1	RCCVB26.D	RTX-5 0.32 (mm)
LCS 140-27909/1002		02/26/2019 10:22	1	RCCVB26-LCS.d	RTX-5 0.32 (mm)
MB 140-27909/4		02/26/2019 12:52	1	R500BB26.D	RTX-5 0.32 (mm)
140-14391-1		02/26/2019 13:41	1	RB26P101.D	RTX-5 0.32 (mm)
140-14391-2		02/26/2019 14:30	1	RB26P102Q.D	RTX-5 0.32 (mm)
140-14391-3		02/26/2019 15:31	1	RB26P103.D	RTX-5 0.32 (mm)
140-14391-4		02/26/2019 16:20	1	RB26P104.D	RTX-5 0.32 (mm)
140-14391-5		02/26/2019 17:09	1	RB26P105.D	RTX-5 0.32 (mm)
140-14391-6		02/26/2019 17:58	1	RB26P106.D	RTX-5 0.32 (mm)
140-14391-7		02/26/2019 18:47	1	RB26P107.D	RTX-5 0.32 (mm)
140-14391-8		02/26/2019 19:36	1	RB26P108.D	RTX-5 0.32 (mm)
140-14391-9		02/26/2019 20:25	1	RB26P109.D	RTX-5 0.32 (mm)
140-14391-10		02/26/2019 21:14	1	RB26P110.D	RTX-5 0.32 (mm)
140-14391-11		02/26/2019 22:03	1	RB26P111.D	RTX-5 0.32 (mm)
140-14391-12		02/26/2019 22:52	1	RB26P112.D	RTX-5 0.32 (mm)
140-14391-13		02/26/2019 23:41	1	RB26P113.D	RTX-5 0.32 (mm)
140-14391-14		02/27/2019 00:30	1	RB26P114.D	RTX-5 0.32 (mm)
140-14391-15		02/27/2019 01:19	1	RB26P115.D	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 02:08	1		RTX-5 0.32 (mm)
140-14391-16		02/27/2019 02:57	1	RB26P116.D	RTX-5 0.32 (mm)
140-14391-17		02/27/2019 03:46	1	RB26P201.D	RTX-5 0.32 (mm)
140-14391-18		02/27/2019 04:35	1	RB26P202.D	RTX-5 0.32 (mm)

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Batch Number: 27909 Batch Start Date: 02/26/19 09:53 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00083	40MXISSURP 00003
BFB 140-27909/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27909/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27909/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14391-A-1	IA-DUP01-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-2	IA-102-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-3	IA-155-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-4	IA-133-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-5	IA-153-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-6	IA-DUP02-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-7	IA-060-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-8	IA-150-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-9	IA-145-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-10	IA-146-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-11	IA-152-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-12	IA-144-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-13	IA-141-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-14	IA-088-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-15	IA-142-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-16	IA-113-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-17	IA-149-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-18	IA-126-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27909/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27909/1		TO 15 LL		40 mL					
CCVIS 140-27909/2		TO 15 LL							
MB 140-27909/4		TO 15 LL							
140-14391-A-1	IA-DUP01-C-26	TO 15 LL	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Batch Number: 27909 Batch Start Date: 02/26/19 09:53 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002				
140-14391-A-2	IA-102-C-26	TO 15 LL	T					
140-14391-A-3	IA-155-C-26	TO 15 LL	T					
140-14391-A-4	IA-133-C-26	TO 15 LL	T					
140-14391-A-5	IA-153-C-26	TO 15 LL	T					
140-14391-A-6	IA-DUP02-C-26	TO 15 LL	T					
140-14391-A-7	IA-060-C-26	TO 15 LL	T					
140-14391-A-8	IA-150-C-26	TO 15 LL	T					
140-14391-A-9	IA-145-C-26	TO 15 LL	T					
140-14391-A-10	IA-146-C-26	TO 15 LL	T					
140-14391-A-11	IA-152-C-26	TO 15 LL	T					
140-14391-A-12	IA-144-C-26	TO 15 LL	T					
140-14391-A-13	IA-141-C-26	TO 15 LL	T					
140-14391-A-14	IA-088-C-26	TO 15 LL	T					
140-14391-A-15	IA-142-C-26	TO 15 LL	T					
140-14391-A-16	IA-113-C-26	TO 15 LL	T					
140-14391-A-17	IA-149-C-26	TO 15 LL	T					
140-14391-A-18	IA-126-C-26	TO 15 LL	T					
LCS 140-27909/1002		TO 15 LL						

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Batch Number: 27931 Batch Start Date: 02/26/19 11:03 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00082	40MXISSURP 00003
BFB 140-27931/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27931/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27931/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14391-A-19	IA-101-B-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-20	IA-100-B-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27931/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27931/1		TO 15 LL		40 mL					
CCVIS 140-27931/2		TO 15 LL							
MB 140-27931/4		TO 15 LL							
140-14391-A-19	IA-101-B-26	TO 15 LL	T						
140-14391-A-20	IA-100-B-26	TO 15 LL	T						
LCS 140-27931/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\A17L13969.D
 Lims ID: 140-13969-A-16
 Client ID: 11644
 Sample Type: Client
 Inject. Date: 17-Jan-2019 21:08:30 ALS Bottle#: 7 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010550-015
 Misc. Info.: 11644
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Jan-2019 14:24:21 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0302

First Level Reviewer: khachitpongpanits Date: 18-Jan-2019 12:50:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.412	7.412	0.000	72	192779	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.482	-0.005	95	1113636	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.529	14.530	-0.001	91	977169	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.244	0.000	88	842571	4.05	
25 Isopropyl alcohol	45	4.764	4.758	0.032	29	2291	0.0420	
40 Hexane	56	6.878	6.867	0.006	81	1852	0.0460	
73 Tetrachloroethene	129	13.672	13.662	0.005	89	4691	0.0404	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\A17L13969.D

Injection Date: 17-Jan-2019 21:08:30

Instrument ID: MR

Operator ID:

Lims ID: 140-13969-A-16

Lab Sample ID: 140-13969-16

Worklist Smp#: 15

Client ID: 11644

Purge Vol: 500.000 mL

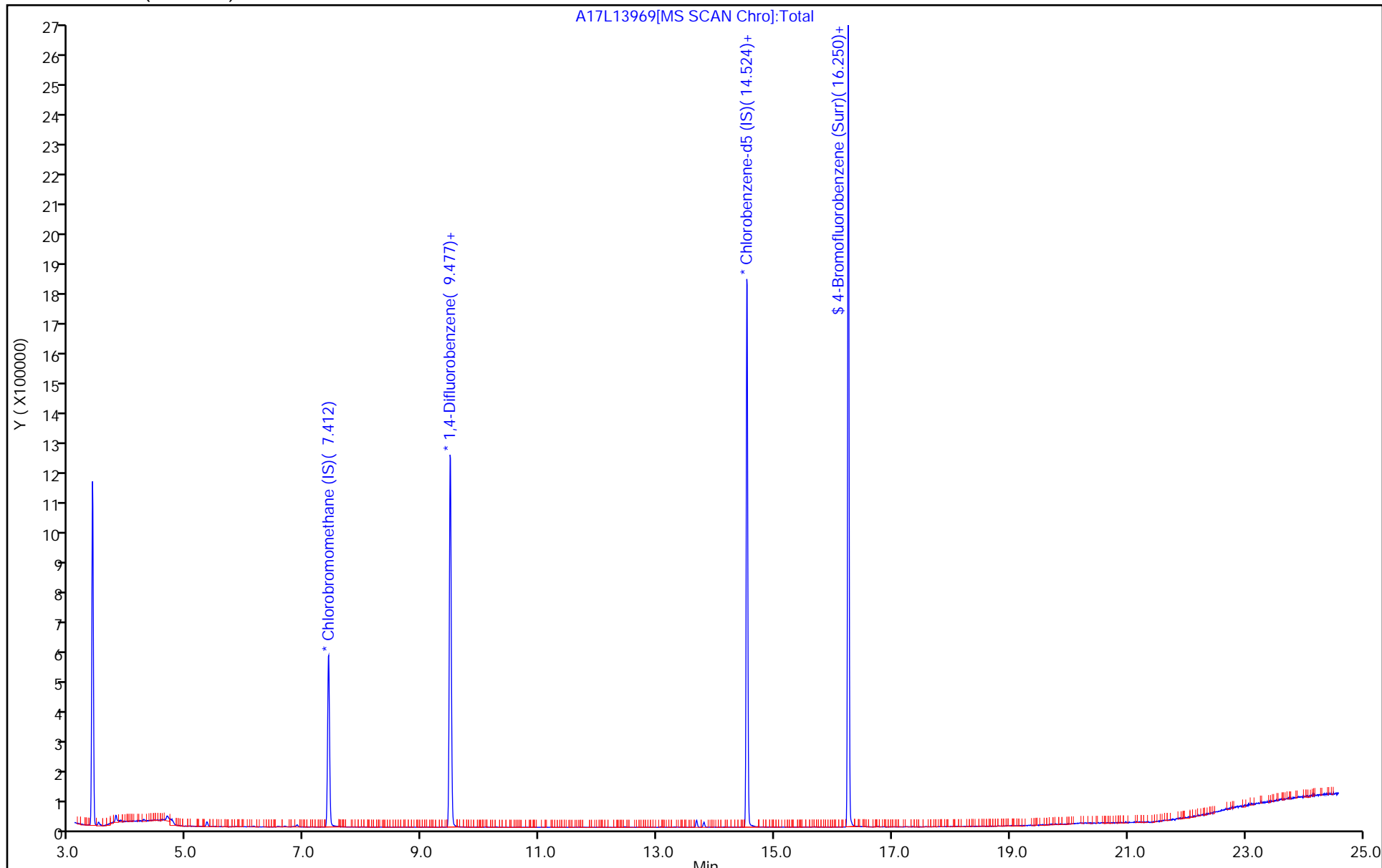
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\A17L13969.D

Injection Date: 17-Jan-2019 21:08:30

Instrument ID: MR

Lims ID: 140-13969-A-16

Lab Sample ID: 140-13969-16

Client ID: 11644

Operator ID:

ALS Bottle#: 7 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

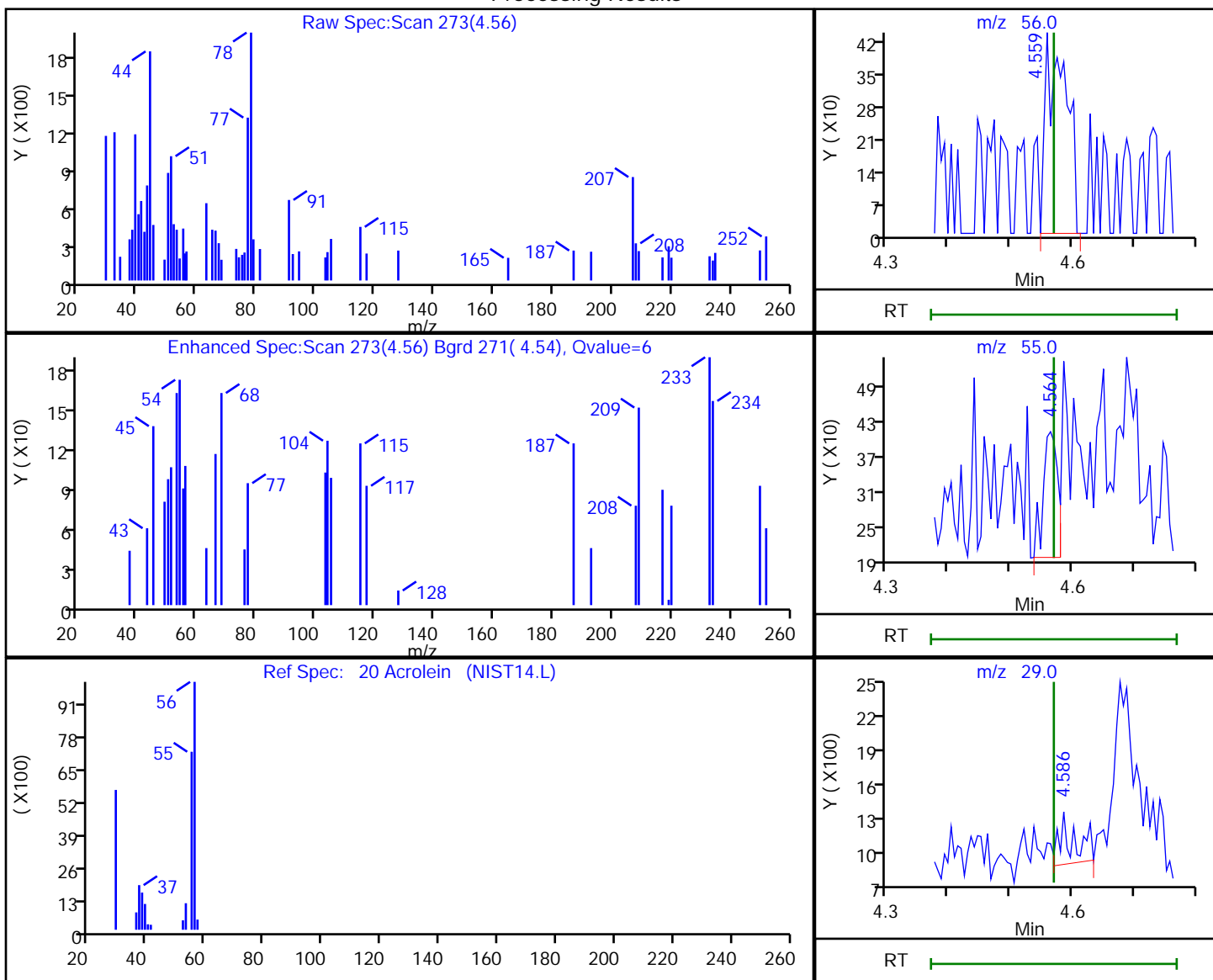
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

20 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
4.56	56.00	1018	0.083544
4.56	55.00	358	
4.59	29.00	740	

Reviewer: khachitpongpanits, 18-Jan-2019 12:49:22

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
 Lims ID: 140-13978-A-1
 Client ID: 11819
 Sample Type: Client
 Inject. Date: 19-Jan-2019 00:52:30 ALS Bottle#: 9 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010551-020
 Misc. Info.: 10560
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 21-Jan-2019 11:02:45 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa Date: 21-Jan-2019 11:02:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.406	-0.005	73	181347	4.00	
* 2 1,4-Difluorobenzene	114	9.471	9.482	-0.011	95	1079451	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.529	-0.005	91	948092	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.249	16.243	-0.001	88	823709	4.09	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D

Injection Date: 19-Jan-2019 00:52:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13978-A-1

Lab Sample ID: 140-13978-1

Worklist Smp#: 21

Client ID: 11819

Purge Vol: 500.000 mL

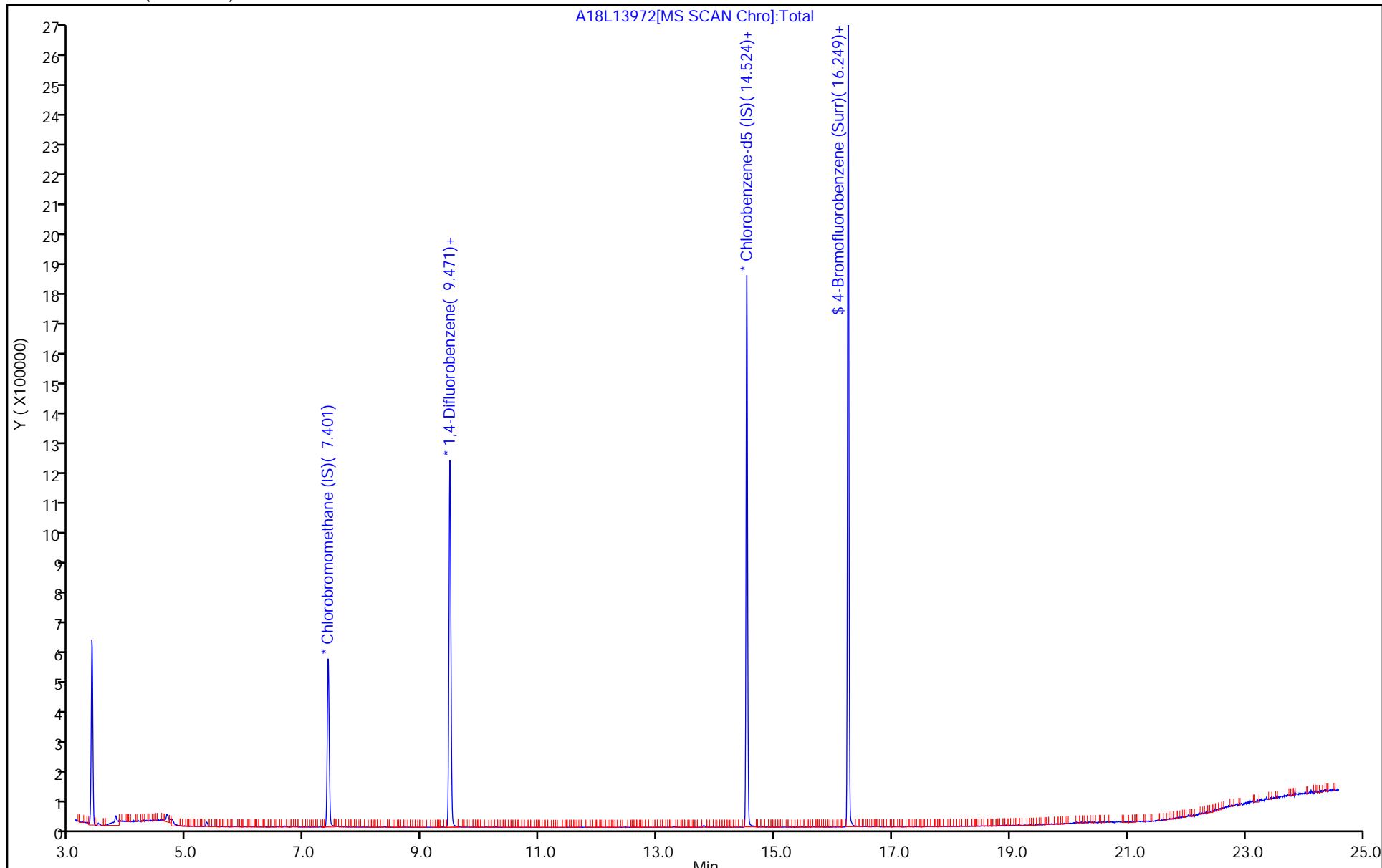
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

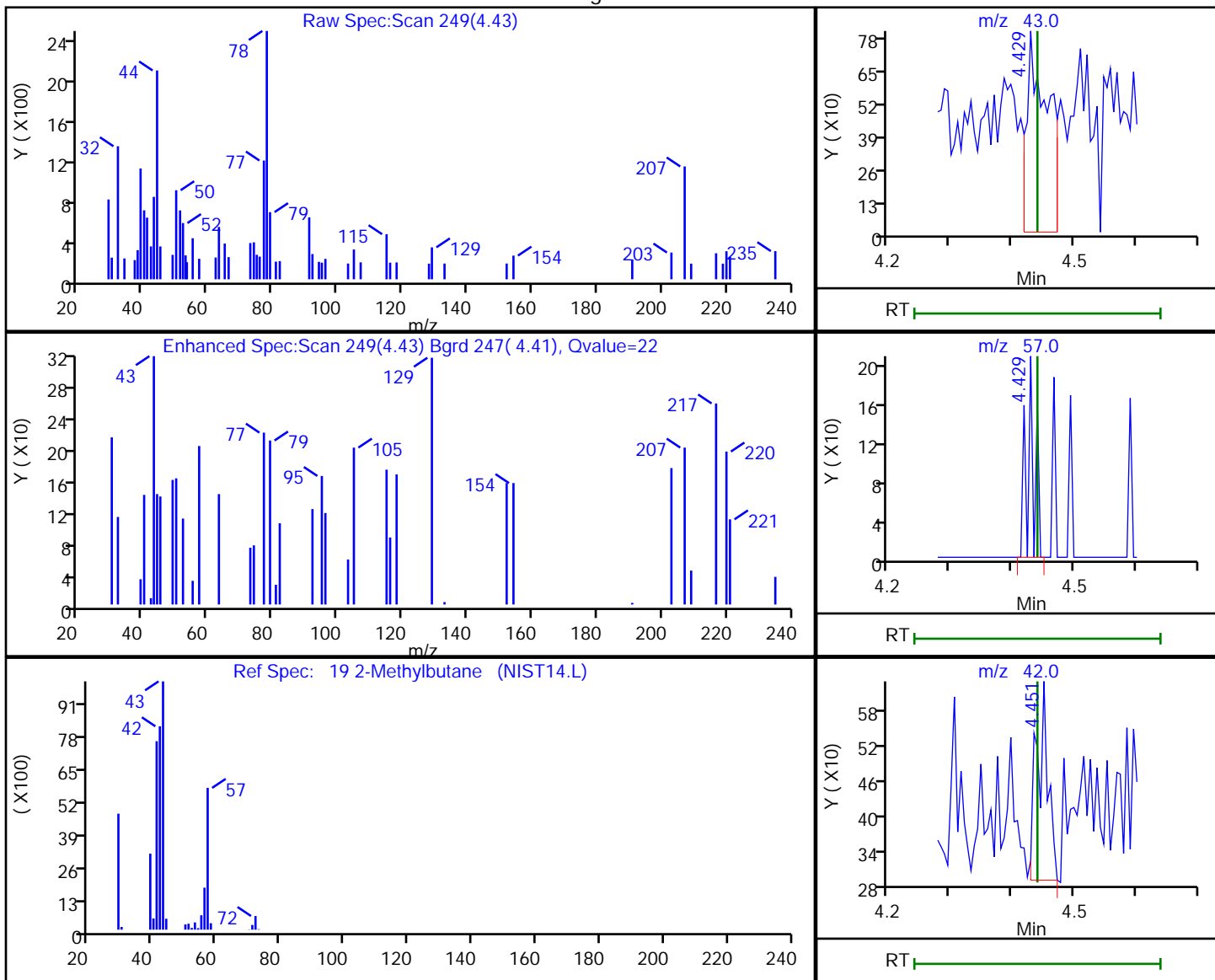


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
 Injection Date: 19-Jan-2019 00:52:30 Instrument ID: MR
 Lims ID: 140-13978-A-1 Lab Sample ID: 140-13978-1
 Client ID: 11819
 Operator ID: HMT ALS Bottle#: 9 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.43	43.00	1906	0.052558
4.43	57.00	164	
4.45	42.00	425	

Reviewer: barlozhetskayaa, 21-Jan-2019 11:02:07

Audit Action: Marked Compound Undetected

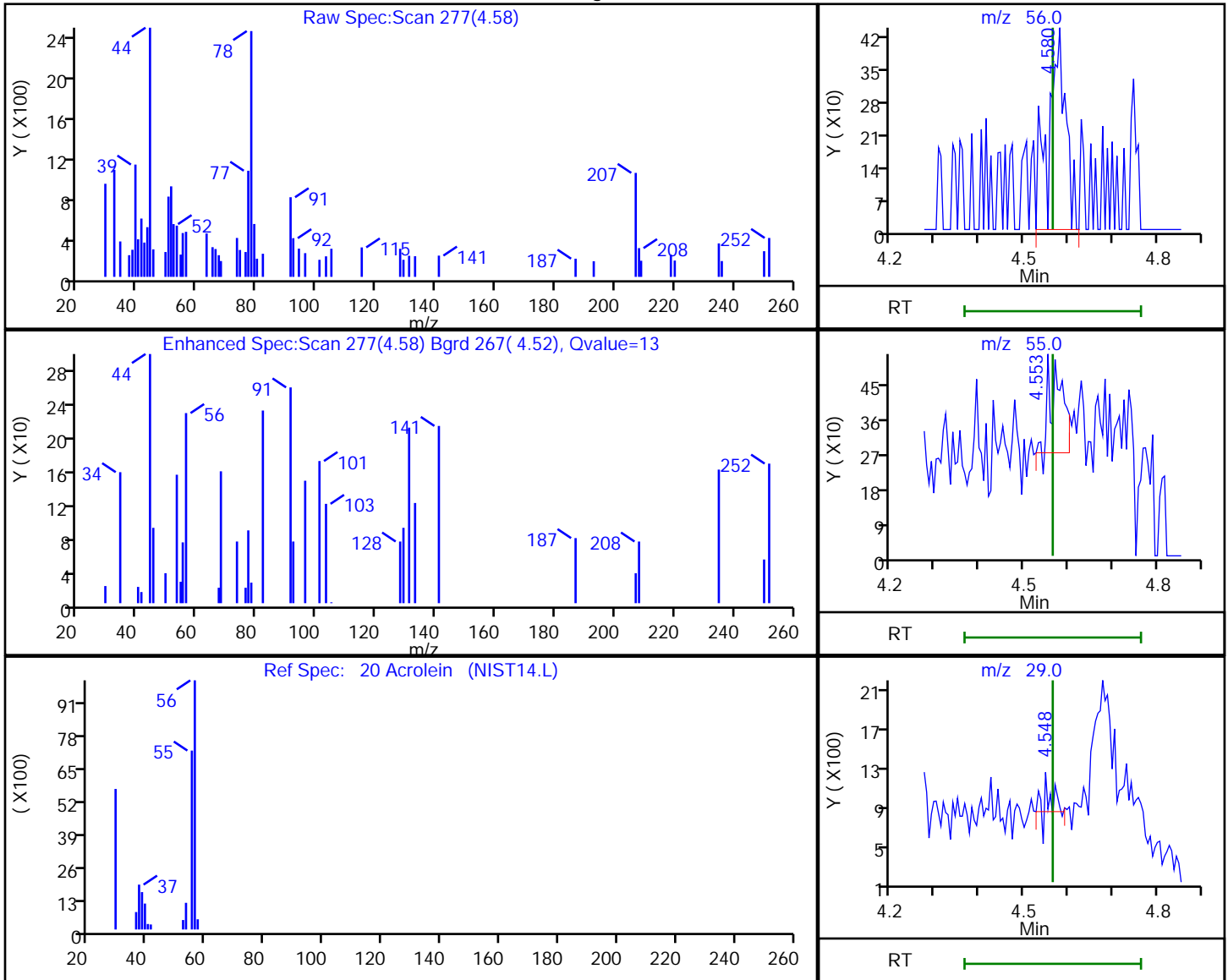
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
 Injection Date: 19-Jan-2019 00:52:30 Instrument ID: MR
 Lims ID: 140-13978-A-1 Lab Sample ID: 140-13978-1
 Client ID: 11819
 Operator ID: HMT ALS Bottle#: 9 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

20 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
4.58	56.00	1194	0.104165
4.55	55.00	499	
4.55	29.00	323	

Reviewer: barlozhetskayaa, 21-Jan-2019 11:02:03

Audit Action: Marked Compound Undetected

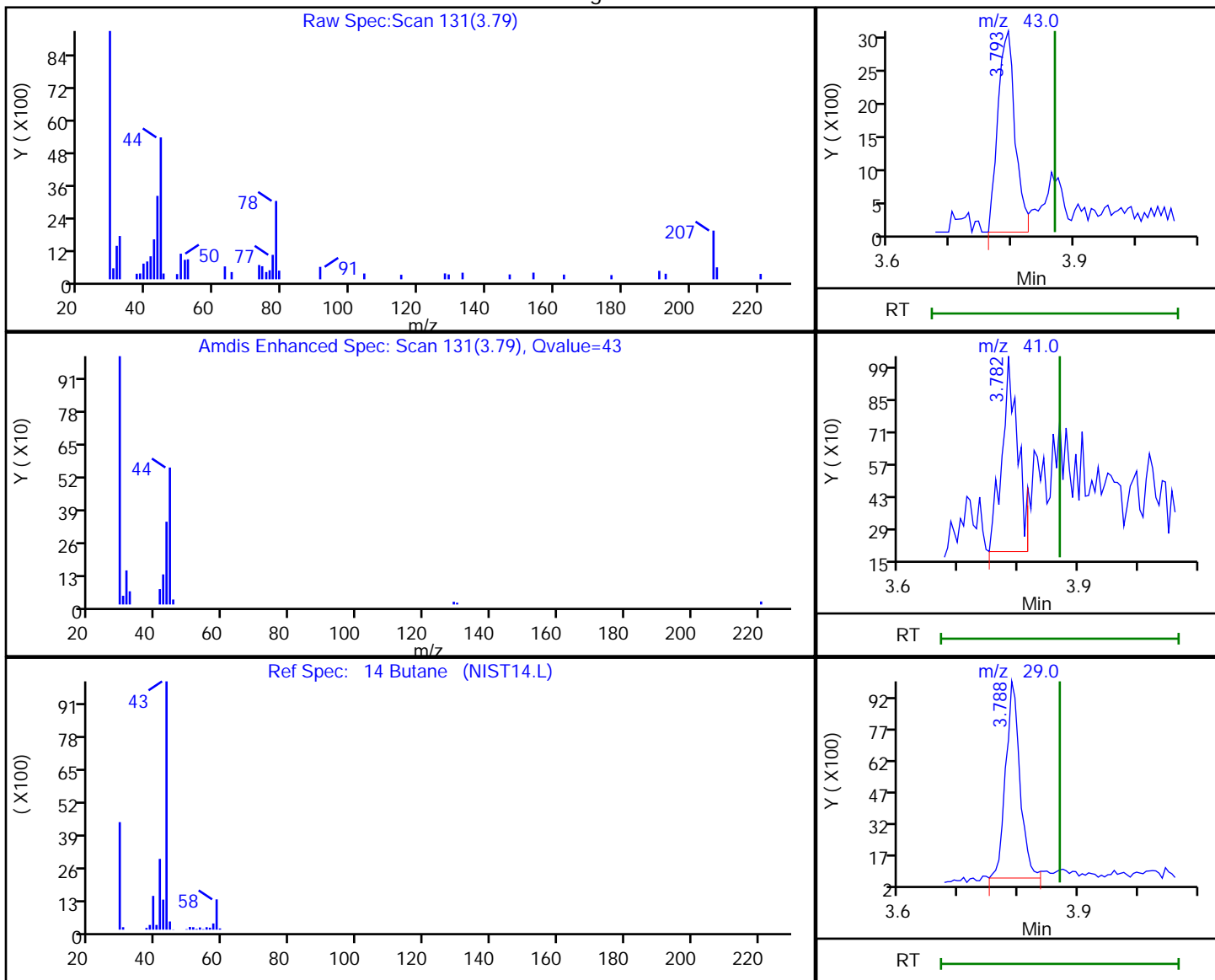
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
 Injection Date: 19-Jan-2019 00:52:30 Instrument ID: MR
 Lims ID: 140-13978-A-1 Lab Sample ID: 140-13978-1
 Client ID: 11819
 Operator ID: HMT ALS Bottle#: 9 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.79	43.00	6012	0.117133
3.78	41.00	1598	
3.79	29.00	15994	

Reviewer: barlozhetskayaa, 21-Jan-2019 11:02:10

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13994-1
 SDG No.: _____
 Client Sample ID: 09583 Lab Sample ID: 140-13994-1
 Matrix: Air Lab File ID: HA21LOT13994.D
 Analysis Method: TO-15 Date Collected: 01/18/2019 00:14
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 03:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13994-1
 SDG No.: _____
 Client Sample ID: 09583 Lab Sample ID: 140-13994-1
 Matrix: Air Lab File ID: HA21LOT13994.D
 Analysis Method: TO-15 Date Collected: 01/18/2019 00:14
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 03:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13994-1
 SDG No.: _____
 Client Sample ID: 09583 Lab Sample ID: 140-13994-1
 Matrix: Air Lab File ID: HA21LOT13994.D
 Analysis Method: TO-15 Date Collected: 01/18/2019 00:14
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 03:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT13994.D
 Lims ID: 140-13994-A-1
 Client ID: 09583
 Sample Type: Client
 Inject. Date: 22-Jan-2019 03:23:30 ALS Bottle#: 11 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010578-017
 Misc. Info.: 09583
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 16:28:14 Calib Date: 07-Jan-2019 21:45:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20181224-10406.b\HA07IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 16:28:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.824	0.005	94	234659	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.010	0.000	95	1285580	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.734	0.000	87	1065808	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.378	17.403	-0.026	95	718551	4.14	
14 Butane	43	4.188	4.188	0.000	80	2954	0.0248	7M
40 Hexane	56	8.090	8.090	0.005	86	1015	0.0153	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT13994.D

Injection Date: 22-Jan-2019 03:23:30

Instrument ID: MH

Operator ID: AFB

Lims ID: 140-13994-A-1

Lab Sample ID: 140-13994-1

Worklist Smp#: 17

Client ID: 09583

Purge Vol: 500.000 mL

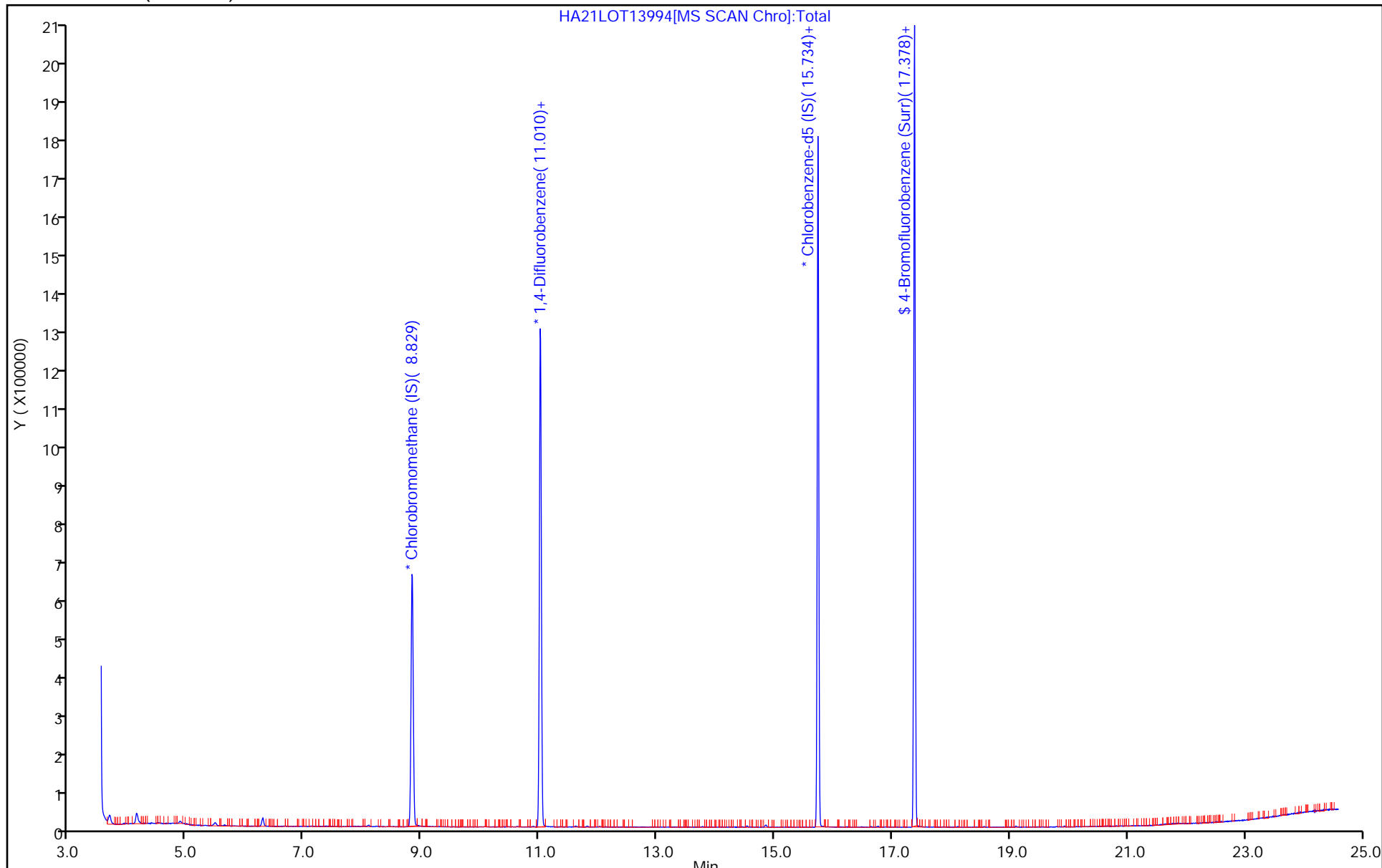
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

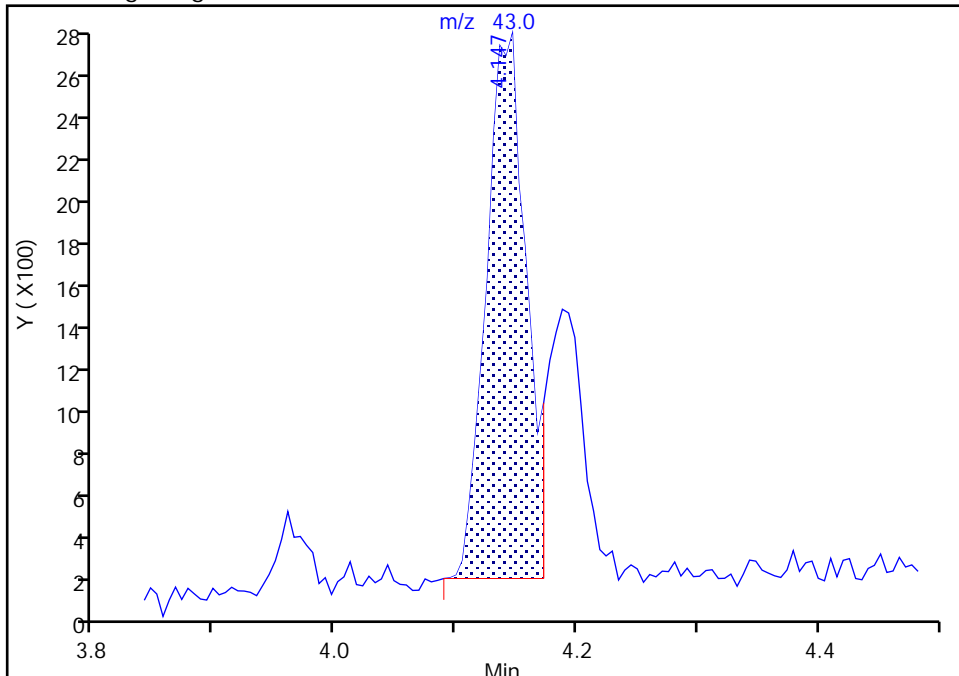
Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT13994.D
Injection Date: 22-Jan-2019 03:23:30 Instrument ID: MH
Lims ID: 140-13994-A-1 Lab Sample ID: 140-13994-1
Client ID: 09583
Operator ID: AFB ALS Bottle#: 11 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Signal: 1

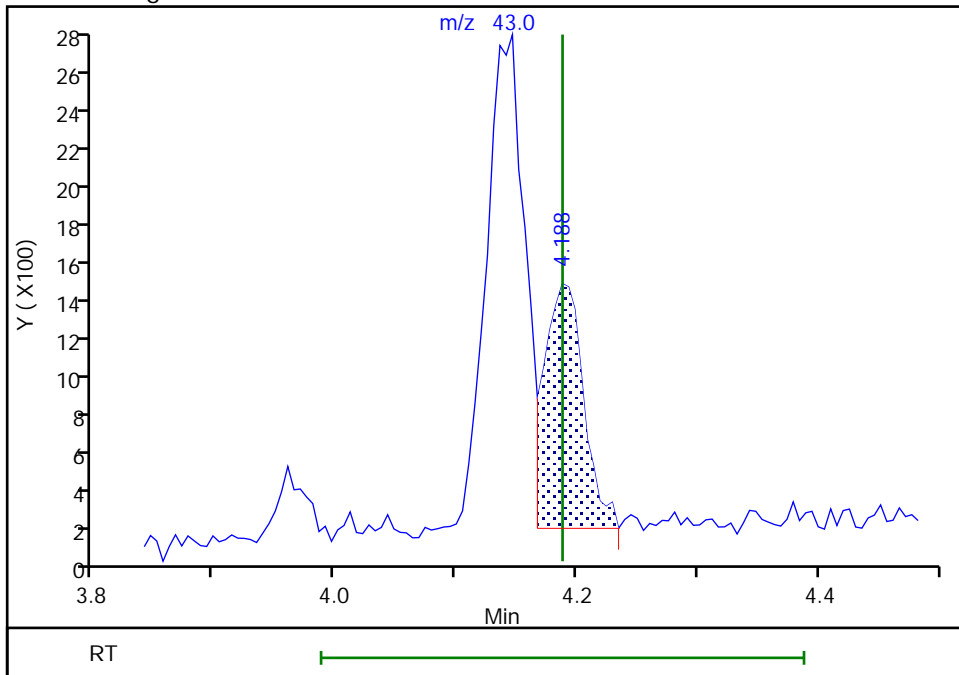
RT: 4.15
Area: 6044
Amount: 0.050794
Amount Units: ppb v/v

Processing Integration Results



RT: 4.19
Area: 2954
Amount: 0.024826
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 22-Jan-2019 16:26:51

Audit Action: Split an Integrated Peak

Audit Reason: Wrong peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT14002.D
 Lims ID: 140-14002-A-1
 Client ID: 11257
 Sample Type: Client
 Inject. Date: 22-Jan-2019 04:16:30 ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010578-018
 Misc. Info.: 11257
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 17:03:14 Calib Date: 07-Jan-2019 21:45:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20181224-10406.b\HA07IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 17:10:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.824	0.005	94	232573	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.010	0.000	95	1264864	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.734	0.000	88	1049085	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.378	17.404	-0.026	94	706692	4.13	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT14002.D

Injection Date: 22-Jan-2019 04:16:30

Instrument ID: MH

Operator ID: AFB

Lims ID: 140-14002-A-1

Lab Sample ID: 140-14002-1

Worklist Smp#: 18

Client ID: 11257

Purge Vol: 500.000 mL

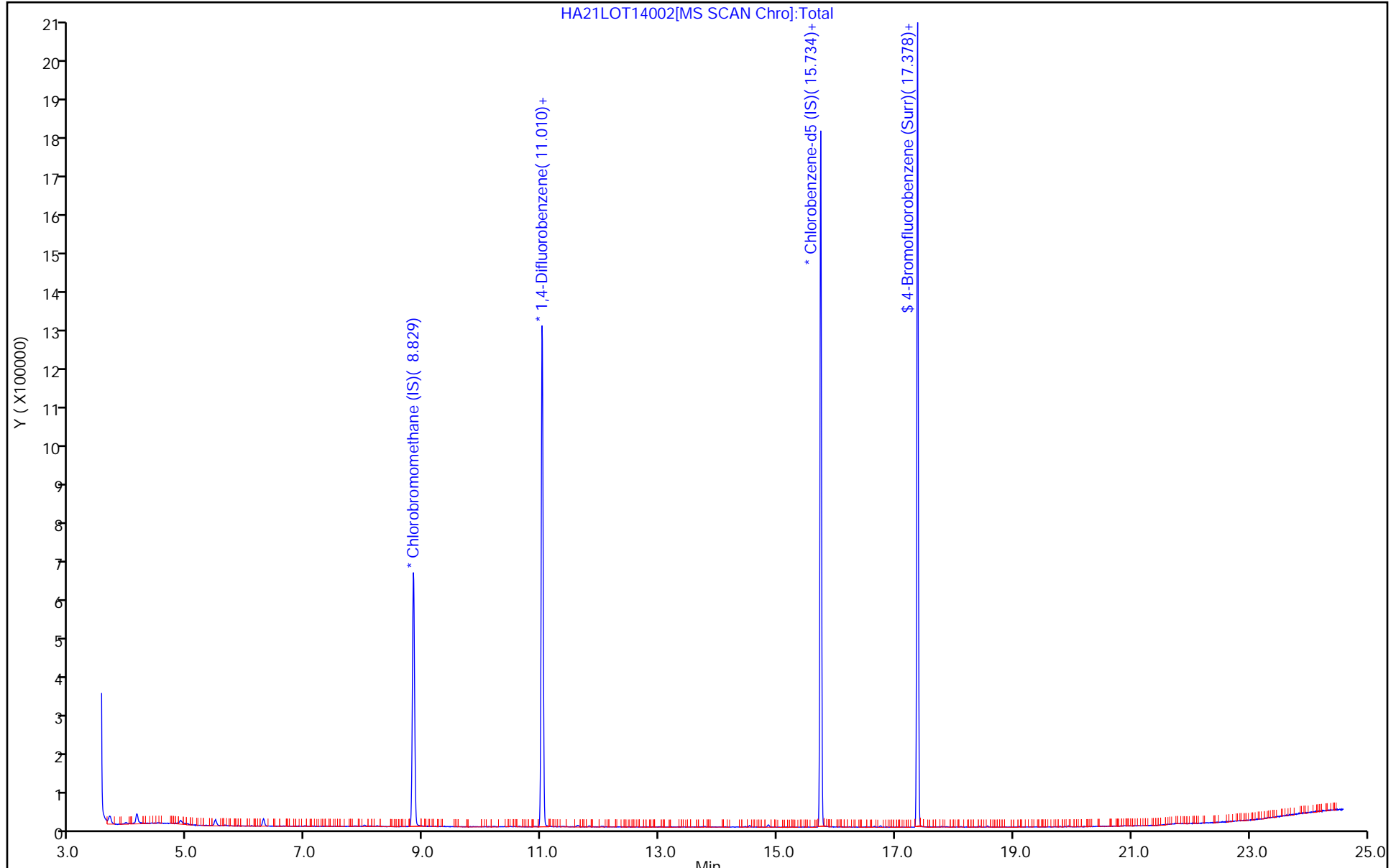
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

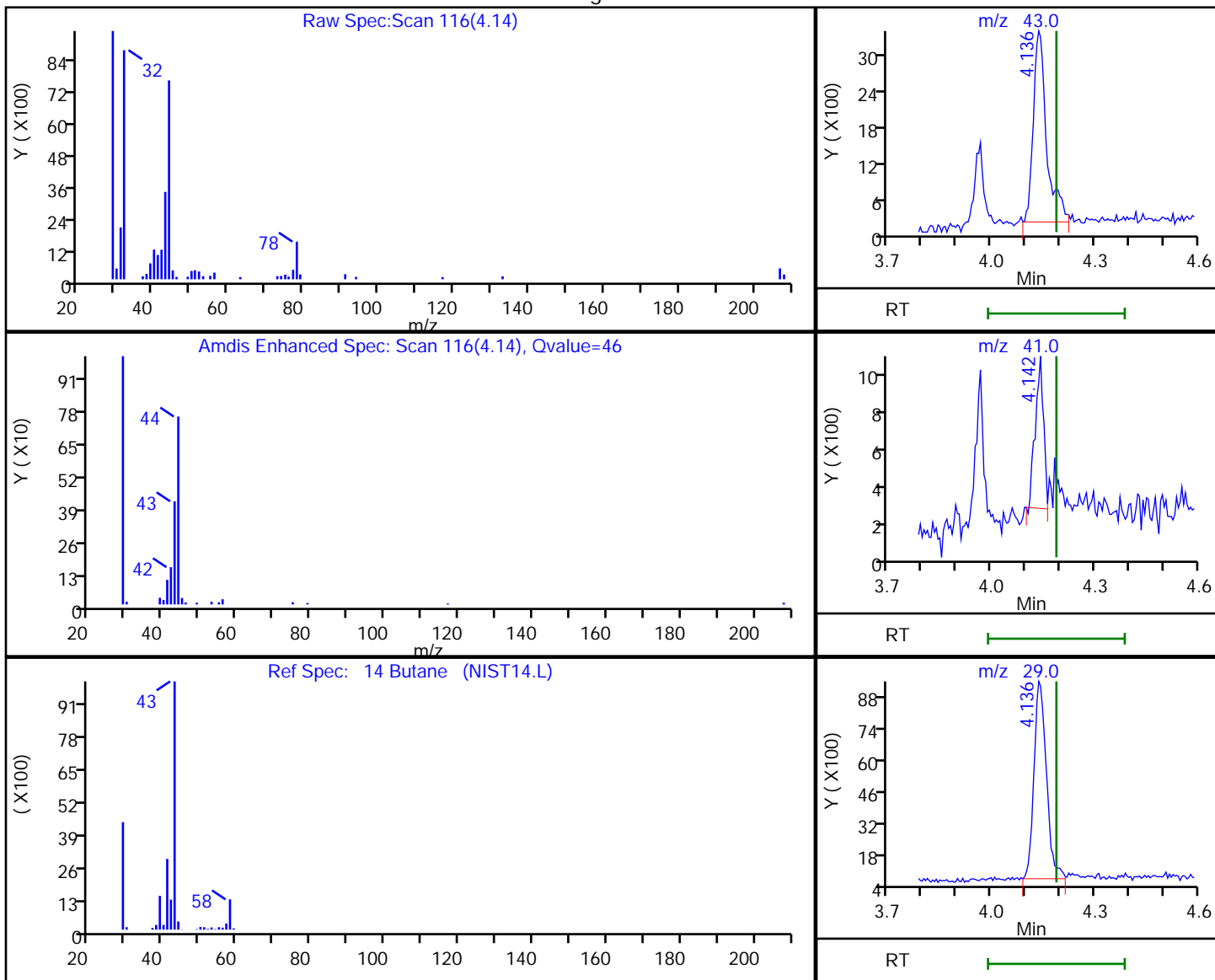


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT14002.D
 Injection Date: 22-Jan-2019 04:16:30 Instrument ID: MH
 Lims ID: 140-14002-A-1 Lab Sample ID: 140-14002-1
 Client ID: 11257
 Operator ID: AFB ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.14	43.00	8576	0.072720
4.14	41.00	1337	
4.14	29.00	22463	

Reviewer: khachitpongpanits, 22-Jan-2019 17:02:48

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200(mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190118-10577.b\A23L14031.D
 Lims ID: 140-14031-A-9
 Client ID: 09788
 Sample Type: Client
 Inject. Date: 23-Jan-2019 22:00:30 ALS Bottle#: 14 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010577-017
 Misc. Info.: 09788
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190118-10577.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 23-Jan-2019 20:35:32 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0318

First Level Reviewer: khachitpongpanits Date: 24-Jan-2019 11:15:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.237	0.006	97	473706	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.416	0.000	96	2660006	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.091	0.000	92	2472220	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.714	0.000	82	1959190	3.87	
9 Chloromethane	52	4.098	4.090	0.010	98	6355	0.1154	
31 Methylene Chloride	84	6.611	6.604	0.011	98	26651	0.1370	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190118-10577.b\A23L14031.D

Injection Date: 23-Jan-2019 22:00:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14031-A-9

Lab Sample ID: 140-14031-9

Worklist Smp#: 17

Client ID: 09788

Purge Vol: 500.000 mL

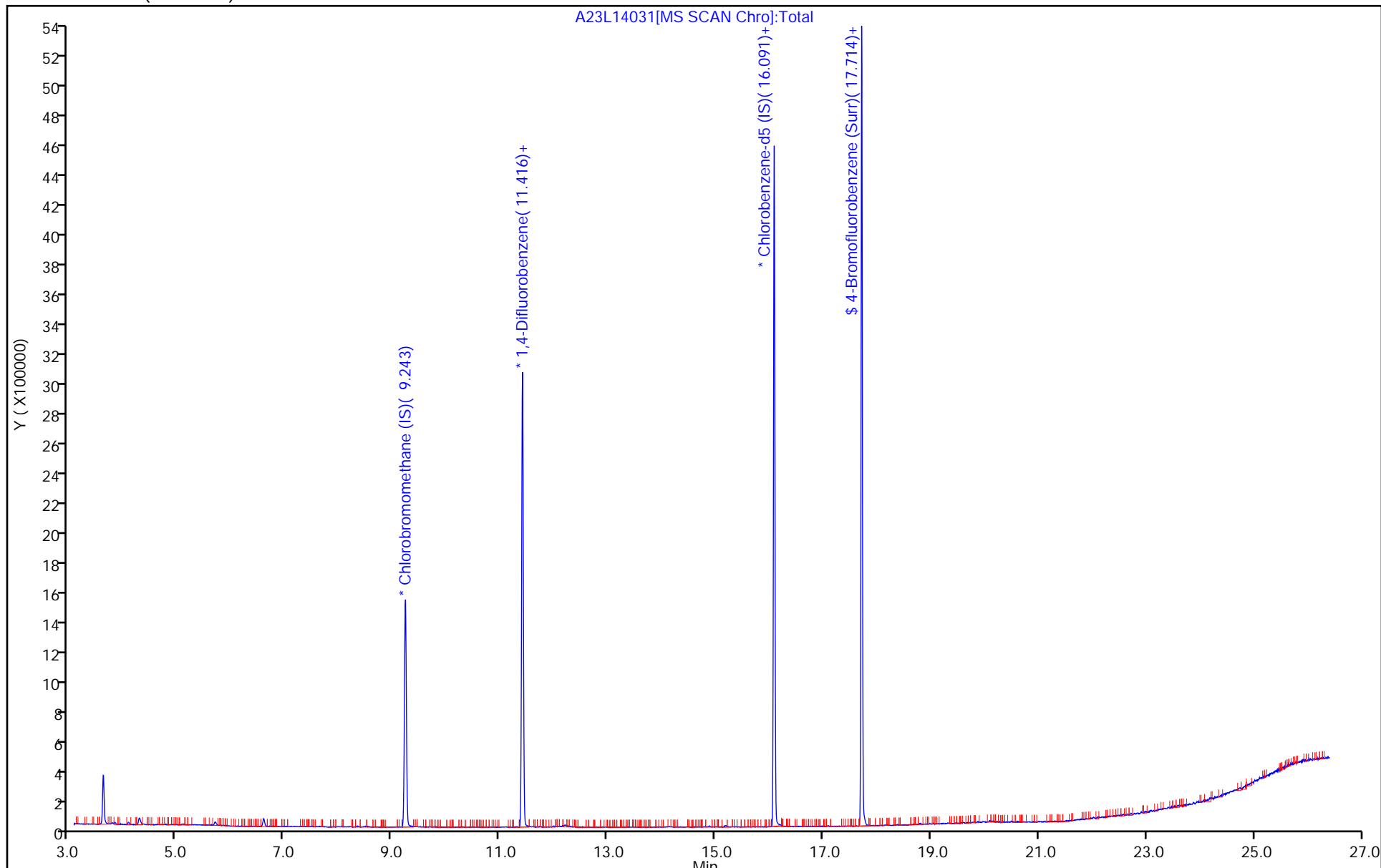
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200(mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200(mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
 Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D
 Lims ID: 140-14044-A-1
 Client ID: 11547
 Sample Type: Client
 Inject. Date: 24-Jan-2019 15:25:30 ALS Bottle#: 14 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010612-010
 Misc. Info.: 11547
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Jan-2019 09:48:51 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 25-Jan-2019 09:53:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.237	9.237	0.000	97	406723	4.00	
* 2 1,4-Difluorobenzene	114	11.410	11.416	-0.006	97	2310796	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.091	0.000	93	2083397	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.714	0.000	81	1731157	4.06	
31 Methylene Chloride	84	6.606	6.600	0.006	98	25162	0.1507	
47 1,1,1-Trichloroethane	97	10.294	10.294	0.000	95	9292	0.0252	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D

Injection Date: 24-Jan-2019 15:25:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14044-A-1

Lab Sample ID: 140-14044-1

Worklist Smp#: 10

Client ID: 11547

Purge Vol: 500.000 mL

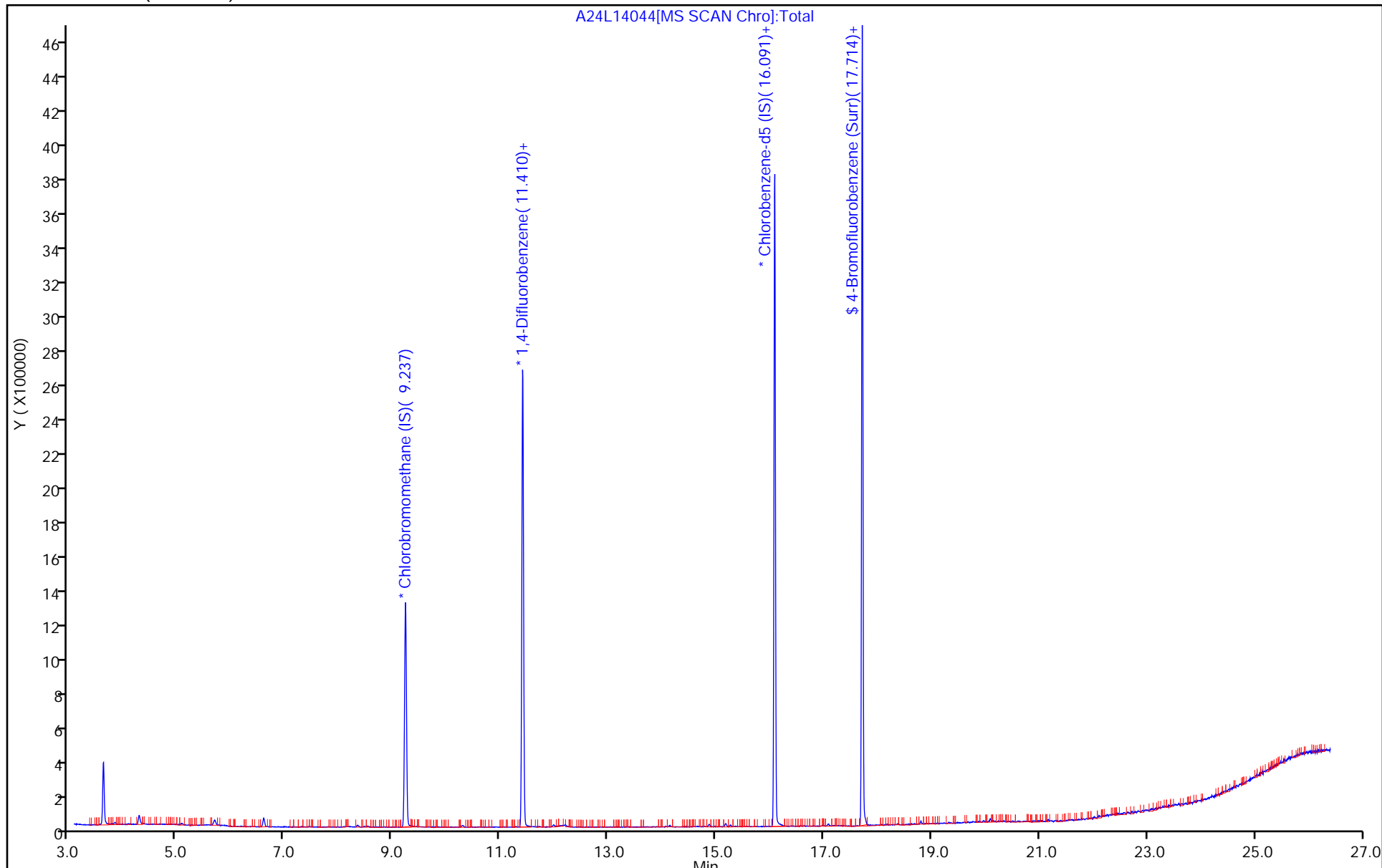
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record
TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
 Company: Tetra Tech
 Address: 20251 Century Blvd #200
 City/State/Zip: Germantown, MD 20874
 Phone: 301-528-5522
 FAX:

Project Name: MZC Indoor Air
 Site/location: MRC
 PO # 1121098328

Project Manager: Tony Apanavage
 Phone: 301-528-3000
 Site Contact: Tony Apanavage
 TAL Contact: Terry Walker Wushmund

Sampled By: Sophia Lawson, Josh Mollis & Walt Pryor

13 of 16 COCs

Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	Analysis Turnaround Time	
							Standard (Specify) <input checked="" type="checkbox"/>	Rush (Specify)
2/19/19	0600	0800	-30	-11	7588	09800		TO-15
2/19/19	0906	1706	-30	-4	11432	09589		TO-15
2/19/19	0908	1708	-30	-4	7162	11542		TO-15
2/19/19	0909	1709	-29	0	7921	09791		TO-15
2/19/19	0911	1711	-30	-7	7674	09660		TO-15
2/19/19	0900	0900	-30	-7	10240	09737		TO-15

Sampled by:
Sophia Lawson, Walt Pryor,
Josh Mollis

Temperature (Fahrenheit)

Start	Interior	
Stop	Ambient	

Pressure (Inches of Hg)

Start	Interior	
Stop	Ambient	

ASTM D-1946
EPA 25C
EPA 3C
TO-14A
TO-15

Landfill Gas
Soil Gas
Ambient Air
Indoor Air

Other (Please specify in notes section)

Other (Please specify in notes section)

Barcode: 140-14391 Chain of Custody

Baltimore #201

240AMS/24FAMS
CUSTOMY SOIL CONTACT
KREIND AMBIENT RT 20.0/CT 20.0 C

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech
 Samples Relinquished by: [Signature]
 Relinquished by: [Signature]

Date/Time: 2/22/19 1900
 Date/Time: 2/22/19 1700
 Date/Time: 2/22/19 1700

Canisters Received by: [Signature]
 Received by: [Signature]
 Received by: [Signature]

14391

Lab Use Only

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

14 of 16 COCs

Project Manager: **Tony Apanavage**
Phone: 301-528-3000
Site Contact: **Tony Apanavage**
City/State/Zip: **Georgetown, MD 20871**
Phone: 301-528-5522
FAX:
Other (Please specify in notes section)

Sampled By: **Sophia Larson, Josh Mullis & Walt Pryor**
Other (Please specify in notes section)

Analysis Turnaround Time
Standard (Specify) **X**
Rush (Specify)

Project Name: **MRC Indoor Air**
Site/location: **MRC**
PO# **1121C08387**

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	Temperature (Fahrenheit)		TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
								Interior	Ambient												
IA-060-C-26	2/19/19	0914	1714	-28	-5	11482	11840			✓											
IA-150-C-26	2/19/19	0916	1716	-36	-5	04551	11865			✓											
IA-145-C-26	2/19/19	0917	1717	-28	-5	8419	11521			✓											
IA-146-C-26	2/19/19	0918	1718	-30	-5	8678	11671			✓											
IA-152-C-26	2/19/19	0919	1719	-36	-4	10435	11857			✓											
IA-144-C-26	2/19/19	0921	1721	-30	-5	0948	10744			✓											

Sampled by: **Sophia Larson, Walt Pryor, Josh Mullis**

Baltimore #201

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: JM 2/22	Date/Time: 2/22/19	Received by:
Relinquished by: JM	Date/Time: 2/22/19 17:00	Received by: Walt Pryor, Josh Mullis, Sophia Larson

TestAmerica
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

15 of 16 COCs

Project Manager: **Tony Apanavage**
Sampled By: **Sophia Larson, Josh Mollis & Walt Pryor**
Phone: 301-528-3000
Site Contact: **Tony Apanavage**
TAL Contact: **Terry Walker Washburne**

Analysis Turnaround Time
Standard (Specify) **X**
Rush (Specify)

Client Contact Information
Company: **Tetra Tech**
Address: **20251 Century Blvd #200**
City/State/Zip: **Georgetown, MD 20877**
Phone: **301-528-5522**
FAX:

Project Name: **MRC Indoor Air**
Site/location: **MRC**
PO # **112108387**

Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	ASTM D-1946										
							TO-15	TO-14A	EPA 3C	EPA 25C	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
2/19/19	0924	1724	-30	-5	11175	11136	✓										
2/19/19	0928	1728	-30	-5	7274	11123	✓										
2/19/19	0929	1729	-30	-1	09846	09644	✓										
2/19/19	0930	1730	-30	-6	7027	11547	✓										
2/19/19	0933	1733	-30	0	5683	09583	✓										
2/19/19	0934	1734	-30	-1	8464	10736	✓										

Temperature (Fahrenheit)	
Start	Ambient
Stop	Ambient
Start	Interior
Stop	Interior
Start	Pressure (Inches of Hg)
Stop	Ambient

Sample Identification

JA-141-C-26
JA-088-C-26
JA-142-C-26
JA-113-C-26
JA-149-C-26
JA-126-C-26

Sampled by: **Sophia Larson, Walt + Pryor, Josh Mollis**

Baltimore #201

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: **Tetra Tech**
Date/Time: **2/22/19**

Samples Relinquished by: **JM 22**
Date/Time: **2/22/19**

Relinquished by: **JM**
Date/Time: **2/22/19 1700**

Canisters Received by: **JM**
Date/Time: **2/22/19**

Received by: **JM**
Date/Time: **2/22/19 1700**

Received by: **JM**
Date/Time: **2/22/19 1700**

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

16 of 16 COCs

Project Manager: Tony Apanavage
Phone: 301-528-3000
Site Contact: Tony Apanavage
TAL Contact: Terry Walker Washburne

Sampled By: Sophia Larson, Josh Mollis & Walt Pryor

Client Contact Information
Company: Tetra Tech
Address: 20251 Century Blvd #200
City/State/Zip: Germantown, MD 20874
Phone: 301-528-552
FAX:

Project Name: MRC Indoor Air
Site/location: MRC
PO # 112108387

Analyses Turnaround Time
Standard (Specify) X
Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)					
													Indoor Air	Ambient Air	Soil Gas	Landfill Gas		
IA-101-B-26	2/19/19	0943	1743	-27	-1	10052	09579	✓										
IA-100-B-26	2/19/19	0944	1744	-25	0	10079	11739	✓										

Sampled by: Sophia Larson, Walt Pryor, Josh Mollis

Baltimore #201

09465
11884
11869
11416

Temperature (Fahrenheit)		Pressure (inches of Hg)	
Interior	Ambient	Interior	Ambient
Start		Start	
Stop		Stop	

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech
Samples Relinquished by: JM
Relinquished by: JM

Date/Time: 2/22/19
Date/Time: 2/22/19
Date/Time: 2/22/19 1700

Canisters Received by:
Received by:
Received by: JM

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID: _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	pH test strip lot number: _____
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____ Date: _____ Time: _____
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/		
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	
Project #: _____				PM Instructions: _____	

Sample Receiving Associate: *[Signature]* Date: 2-25-19 QA026R31.doc, 112618

ANALYTICAL REPORT

Job Number: 140-14391-1
Job Description: MRC Indoor Air, MRC

For:
Tetra Tech, Inc.
20251 Century Blvd
Suite 200
Germantown, MD 20874
Attention: Samantha Brenner



Approved for release.
Terry Walker Wasmund
Project Manager II
3/7/2019 4:28 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
03/07/2019

cc: Amy Thomson

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TestAmerica Laboratories, Inc.

TestAmerica Knoxville 5815 Middlebrook Pike, Knoxville, TN 37921
Tel (865) 291-3000 Fax (865) 584-4315 www.testamericainc.com

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Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-14391-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

Samples IA-131-C-26 (140-14390-18) and IA-113-C-26 (140-14391-16) were received with the canister valve in the open position. The samples were at ambient pressure (approximately 0 psi). The samples' integrity could have been jeopardized due to changes in ambient pressure after the samples were taken (i.e., ambient air not associated with the sampling event could have been introduced into the canister at any point after the sampling was completed).

The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

Air - GC/MS VOA - Method TO-15 LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-DUP01-C-26

Lab Sample ID: 140-14391-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.15	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.29	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.47	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-102-C-26

Lab Sample ID: 140-14391-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.50		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.6	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.74	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.54	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-155-C-26

Lab Sample ID: 140-14391-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.43		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.85	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.80		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.54	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.5		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-133-C-26

Lab Sample ID: 140-14391-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.42		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.80	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.72	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-133-C-26 (Continued)

Lab Sample ID: 140-14391-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.56	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.1	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-153-C-26

Lab Sample ID: 140-14391-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.077	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.8	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.67		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.63	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.53	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.48	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.2	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.5		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.7	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-DUP02-C-26

Lab Sample ID: 140-14391-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.16	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.53	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.60		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.54	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.52	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.2		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-060-C-26

Lab Sample ID: 140-14391-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.66		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.9		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.3		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-060-C-26 (Continued)

Lab Sample ID: 140-14391-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	0.64	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.55	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.3		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	10		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.1		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.8	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-150-C-26

Lab Sample ID: 140-14391-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	5.8	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.6	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.7		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.86		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.57	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	21	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.64	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	10		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.7		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-145-C-26

Lab Sample ID: 140-14391-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.19	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	6.0	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.3		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.6		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.82		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.61	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	21	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.65	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	7.9		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	9.7		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.6		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-146-C-26

Lab Sample ID: 140-14391-10

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-146-C-26 (Continued)

Lab Sample ID: 140-14391-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	5.9	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.14	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.6		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.85		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.55	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	21	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.60	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.1	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	10		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.7		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-152-C-26

Lab Sample ID: 140-14391-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.075	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.2	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.23	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.8		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.3		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.57	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.47	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	11	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.99	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.6	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	6.9		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.67	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	5.4		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-144-C-26

Lab Sample ID: 140-14391-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.7	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.23	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.0		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.5		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.2		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-144-C-26 (Continued)

Lab Sample ID: 140-14391-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.57	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	9.5	CI	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.0	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.8		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.7		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	5.4		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-141-C-26

Lab Sample ID: 140-14391-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.19	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.1	CI	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.17	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.9	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	8.6		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.95		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.59	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	7.4	CI	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.73	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	32		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	4.1		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-088-C-26

Lab Sample ID: 140-14391-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.42		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.55	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.56	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.4	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-142-C-26

Lab Sample ID: 140-14391-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.16	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.47	CI	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.6		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.48	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-142-C-26 (Continued)

Lab Sample ID: 140-14391-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.52	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.7	CI	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	9.2		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.1	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-113-C-26

Lab Sample ID: 140-14391-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.60		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.74		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	3.6		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	1.1		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	14		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.9		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.9		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	3.2		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	13		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	7.2		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	53		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.72	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	13		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-149-C-26

Lab Sample ID: 140-14391-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.29	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.33	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	4.5		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.2		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.22		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.47	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.94	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.6	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	16		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	8.1		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.2		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.0	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-126-C-26

Lab Sample ID: 140-14391-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.32	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-126-C-26 (Continued)

Lab Sample ID: 140-14391-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	5.9		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	4.6		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.27		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.30	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.0	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	21		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	17		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.4		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-101-B-26

Lab Sample ID: 140-14391-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.2		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.13	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.70		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.0		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	24		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	3.3		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.54	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	4.2		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.64	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	3.0		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.9		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	92		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	14		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: IA-100-B-26

Lab Sample ID: 140-14391-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.14	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.11	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	24		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	2.2		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.45	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.55	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-100-B-26 (Continued)

Lab Sample ID: 140-14391-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	2.0		1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	91		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	9.6		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-DUP01-C-26

Lab Sample ID: 140-14391-1

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.15	J	0.40	0.12	ppb v/v			02/26/19 13:41	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 13:41	1
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v			02/26/19 13:41	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 13:41	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 13:41	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 13:41	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 13:41	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 13:41	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 13:41	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 13:41	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/26/19 13:41	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 13:41	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 13:41	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 13:41	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 13:41	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 13:41	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 13:41	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 13:41	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 13:41	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 13:41	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 13:41	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 13:41	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 13:41	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 13:41	1
Xylenes, Total	0.29	J	0.80	0.12	ppb v/v			02/26/19 13:41	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.47	J	1.3	0.37	ug/m3			02/26/19 13:41	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 13:41	1
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3			02/26/19 13:41	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 13:41	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 13:41	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 13:41	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 13:41	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 13:41	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 13:41	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 13:41	1
Methylene Chloride	3.7	J	6.9	2.3	ug/m3			02/26/19 13:41	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 13:41	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 13:41	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 13:41	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 13:41	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 13:41	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 13:41	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 13:41	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 13:41	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 13:41	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 13:41	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 13:41	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-DUP01-C-26

Lab Sample ID: 140-14391-1

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 13:41	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 13:41	1
Xylenes, Total	1.3	J	3.5	0.52	ug/m3			02/26/19 13:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/26/19 13:41	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-102-C-26

Lab Sample ID: 140-14391-2

Date Collected: 02/19/19 17:06

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/26/19 14:30	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 14:30	1
Chlorodifluoromethane	0.50		0.40	0.075	ppb v/v			02/26/19 14:30	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 14:30	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 14:30	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/26/19 14:30	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 14:30	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 14:30	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 14:30	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 14:30	1
Methylene Chloride	1.6	J	2.0	0.65	ppb v/v			02/26/19 14:30	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 14:30	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 14:30	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 14:30	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 14:30	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 14:30	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 14:30	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 14:30	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 14:30	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 14:30	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 14:30	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 14:30	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 14:30	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 14:30	1
Xylenes, Total	0.74	J	0.80	0.12	ppb v/v			02/26/19 14:30	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.54	J	1.3	0.37	ug/m3			02/26/19 14:30	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 14:30	1
Chlorodifluoromethane	1.8		1.4	0.27	ug/m3			02/26/19 14:30	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 14:30	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 14:30	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 14:30	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 14:30	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 14:30	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 14:30	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 14:30	1
Methylene Chloride	5.7	J	6.9	2.3	ug/m3			02/26/19 14:30	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 14:30	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 14:30	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 14:30	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 14:30	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 14:30	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 14:30	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 14:30	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 14:30	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 14:30	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 14:30	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 14:30	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-102-C-26

Lab Sample ID: 140-14391-2

Date Collected: 02/19/19 17:06

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 14:30	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 14:30	1
Xylenes, Total	3.2	J	3.5	0.52	ug/m3			02/26/19 14:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/26/19 14:30	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-155-C-26

Lab Sample ID: 140-14391-3

Date Collected: 02/19/19 17:08

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/26/19 15:31	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 15:31	1
Chlorodifluoromethane	0.43		0.40	0.075	ppb v/v			02/26/19 15:31	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 15:31	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 15:31	1
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v			02/26/19 15:31	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 15:31	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 15:31	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 15:31	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 15:31	1
Methylene Chloride	0.85	J	2.0	0.65	ppb v/v			02/26/19 15:31	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 15:31	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 15:31	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 15:31	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 15:31	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 15:31	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 15:31	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 15:31	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 15:31	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 15:31	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 15:31	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 15:31	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 15:31	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 15:31	1
Xylenes, Total	0.80		0.80	0.12	ppb v/v			02/26/19 15:31	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.54	J	1.3	0.37	ug/m3			02/26/19 15:31	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 15:31	1
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3			02/26/19 15:31	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 15:31	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 15:31	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 15:31	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 15:31	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 15:31	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 15:31	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 15:31	1
Methylene Chloride	3.0	J	6.9	2.3	ug/m3			02/26/19 15:31	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 15:31	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 15:31	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 15:31	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 15:31	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 15:31	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 15:31	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 15:31	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 15:31	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 15:31	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 15:31	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 15:31	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-155-C-26

Lab Sample ID: 140-14391-3

Date Collected: 02/19/19 17:08

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 15:31	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 15:31	1
Xylenes, Total	3.5		3.5	0.52	ug/m3			02/26/19 15:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/26/19 15:31	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-133-C-26

Lab Sample ID: 140-14391-4

Date Collected: 02/19/19 17:09

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18	J	0.40	0.12	ppb v/v			02/26/19 16:20	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 16:20	1
Chlorodifluoromethane	0.42		0.40	0.075	ppb v/v			02/26/19 16:20	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 16:20	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 16:20	1
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v			02/26/19 16:20	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 16:20	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 16:20	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 16:20	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 16:20	1
Methylene Chloride	0.80	J	2.0	0.65	ppb v/v			02/26/19 16:20	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 16:20	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 16:20	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 16:20	1
Toluene	ND		0.60	0.60	ppb v/v			02/26/19 16:20	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 16:20	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 16:20	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 16:20	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 16:20	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 16:20	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 16:20	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 16:20	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 16:20	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 16:20	1
Xylenes, Total	0.72	J	0.80	0.12	ppb v/v			02/26/19 16:20	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.56	J	1.3	0.37	ug/m3			02/26/19 16:20	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 16:20	1
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3			02/26/19 16:20	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 16:20	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 16:20	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/26/19 16:20	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 16:20	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 16:20	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 16:20	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 16:20	1
Methylene Chloride	2.8	J	6.9	2.3	ug/m3			02/26/19 16:20	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 16:20	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 16:20	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 16:20	1
Toluene	ND		2.3	2.3	ug/m3			02/26/19 16:20	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 16:20	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 16:20	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 16:20	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 16:20	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 16:20	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 16:20	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 16:20	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-133-C-26

Lab Sample ID: 140-14391-4

Date Collected: 02/19/19 17:09

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 16:20	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 16:20	1
Xylenes, Total	3.1	J	3.5	0.52	ug/m3			02/26/19 16:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/26/19 16:20	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-153-C-26

Lab Sample ID: 140-14391-5

Date Collected: 02/19/19 17:11

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/26/19 17:09	1
Carbon tetrachloride	0.077	J	0.40	0.075	ppb v/v			02/26/19 17:09	1
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v			02/26/19 17:09	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 17:09	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 17:09	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 17:09	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 17:09	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 17:09	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 17:09	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 17:09	1
Methylene Chloride	1.8	J	2.0	0.65	ppb v/v			02/26/19 17:09	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 17:09	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 17:09	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 17:09	1
Toluene	0.67		0.60	0.60	ppb v/v			02/26/19 17:09	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 17:09	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 17:09	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 17:09	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 17:09	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 17:09	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 17:09	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:09	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:09	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 17:09	1
Xylenes, Total	0.63	J	0.80	0.12	ppb v/v			02/26/19 17:09	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.53	J	1.3	0.37	ug/m3			02/26/19 17:09	1
Carbon tetrachloride	0.48	J	2.5	0.47	ug/m3			02/26/19 17:09	1
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3			02/26/19 17:09	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 17:09	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 17:09	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 17:09	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 17:09	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 17:09	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 17:09	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 17:09	1
Methylene Chloride	6.2	J	6.9	2.3	ug/m3			02/26/19 17:09	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 17:09	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 17:09	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 17:09	1
Toluene	2.5		2.3	2.3	ug/m3			02/26/19 17:09	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 17:09	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 17:09	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 17:09	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 17:09	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 17:09	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 17:09	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 17:09	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-153-C-26

Lab Sample ID: 140-14391-5

Date Collected: 02/19/19 17:11

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 17:09	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 17:09	1
Xylenes, Total	2.7	J	3.5	0.52	ug/m3			02/26/19 17:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/26/19 17:09	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-DUP02-C-26

Lab Sample ID: 140-14391-6

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.16	J	0.40	0.12	ppb v/v			02/26/19 17:58	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 17:58	1
Chlorodifluoromethane	0.53	CI	0.40	0.075	ppb v/v			02/26/19 17:58	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 17:58	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 17:58	1
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v			02/26/19 17:58	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 17:58	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 17:58	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 17:58	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 17:58	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/26/19 17:58	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 17:58	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 17:58	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 17:58	1
Toluene	0.60		0.60	0.60	ppb v/v			02/26/19 17:58	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 17:58	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 17:58	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 17:58	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 17:58	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 17:58	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 17:58	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:58	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:58	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 17:58	1
Xylenes, Total	0.54	J	0.80	0.12	ppb v/v			02/26/19 17:58	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.52	J	1.3	0.37	ug/m3			02/26/19 17:58	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 17:58	1
Chlorodifluoromethane	1.9	CI	1.4	0.27	ug/m3			02/26/19 17:58	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 17:58	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 17:58	1
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3			02/26/19 17:58	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 17:58	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 17:58	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 17:58	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 17:58	1
Methylene Chloride	3.8	J	6.9	2.3	ug/m3			02/26/19 17:58	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 17:58	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 17:58	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 17:58	1
Toluene	2.2		2.3	2.3	ug/m3			02/26/19 17:58	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 17:58	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 17:58	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 17:58	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 17:58	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 17:58	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 17:58	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 17:58	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-DUP02-C-26

Lab Sample ID: 140-14391-6

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 17:58	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 17:58	1
Xylenes, Total	2.3	J	3.5	0.52	ug/m3			02/26/19 17:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/26/19 17:58	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-060-C-26

Lab Sample ID: 140-14391-7

Date Collected: 02/19/19 17:14

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/26/19 18:47	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 18:47	1
Chlorodifluoromethane	0.66		0.40	0.075	ppb v/v			02/26/19 18:47	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 18:47	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 18:47	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/26/19 18:47	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 18:47	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 18:47	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 18:47	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/26/19 18:47	1
Methylene Chloride	2.9		2.0	0.65	ppb v/v			02/26/19 18:47	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 18:47	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 18:47	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 18:47	1
Toluene	1.3		0.60	0.60	ppb v/v			02/26/19 18:47	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 18:47	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 18:47	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 18:47	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 18:47	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 18:47	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 18:47	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 18:47	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 18:47	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 18:47	1
Xylenes, Total	0.64	J	0.80	0.12	ppb v/v			02/26/19 18:47	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.55	J	1.3	0.37	ug/m3			02/26/19 18:47	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 18:47	1
Chlorodifluoromethane	2.3		1.4	0.27	ug/m3			02/26/19 18:47	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 18:47	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 18:47	1
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3			02/26/19 18:47	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 18:47	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 18:47	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 18:47	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/26/19 18:47	1
Methylene Chloride	10		6.9	2.3	ug/m3			02/26/19 18:47	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 18:47	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 18:47	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 18:47	1
Toluene	5.1		2.3	2.3	ug/m3			02/26/19 18:47	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 18:47	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 18:47	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 18:47	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 18:47	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 18:47	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 18:47	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 18:47	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-060-C-26

Lab Sample ID: 140-14391-7

Date Collected: 02/19/19 17:14

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 18:47	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 18:47	1
Xylenes, Total	2.8	J	3.5	0.52	ug/m3			02/26/19 18:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 18:47	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-150-C-26

Lab Sample ID: 140-14391-8

Date Collected: 02/19/19 17:16

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18	J	0.40	0.12	ppb v/v			02/26/19 19:36	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 19:36	1
Chlorodifluoromethane	5.8	CI	0.40	0.075	ppb v/v			02/26/19 19:36	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 19:36	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 19:36	1
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v			02/26/19 19:36	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 19:36	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 19:36	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 19:36	1
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v			02/26/19 19:36	1
Methylene Chloride	1.6	J	2.0	0.65	ppb v/v			02/26/19 19:36	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 19:36	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 19:36	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 19:36	1
Toluene	2.7		0.60	0.60	ppb v/v			02/26/19 19:36	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 19:36	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 19:36	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 19:36	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 19:36	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 19:36	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 19:36	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 19:36	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 19:36	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 19:36	1
Xylenes, Total	0.86		0.80	0.12	ppb v/v			02/26/19 19:36	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.57	J	1.3	0.37	ug/m3			02/26/19 19:36	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 19:36	1
Chlorodifluoromethane	21	CI	1.4	0.27	ug/m3			02/26/19 19:36	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 19:36	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 19:36	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/26/19 19:36	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 19:36	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 19:36	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 19:36	1
Ethylbenzene	0.64	J	1.7	0.59	ug/m3			02/26/19 19:36	1
Methylene Chloride	5.7	J	6.9	2.3	ug/m3			02/26/19 19:36	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 19:36	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 19:36	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 19:36	1
Toluene	10		2.3	2.3	ug/m3			02/26/19 19:36	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 19:36	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 19:36	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 19:36	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 19:36	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 19:36	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 19:36	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 19:36	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-150-C-26

Lab Sample ID: 140-14391-8

Date Collected: 02/19/19 17:16

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 19:36	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 19:36	1
Xylenes, Total	3.7		3.5	0.52	ug/m3			02/26/19 19:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/26/19 19:36	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-145-C-26

Lab Sample ID: 140-14391-9

Date Collected: 02/19/19 17:17

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.19	J	0.40	0.12	ppb v/v			02/26/19 20:25	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 20:25	1
Chlorodifluoromethane	6.0	CI	0.40	0.075	ppb v/v			02/26/19 20:25	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 20:25	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 20:25	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/26/19 20:25	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 20:25	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 20:25	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 20:25	1
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v			02/26/19 20:25	1
Methylene Chloride	2.3		2.0	0.65	ppb v/v			02/26/19 20:25	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 20:25	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 20:25	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 20:25	1
Toluene	2.6		0.60	0.60	ppb v/v			02/26/19 20:25	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 20:25	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 20:25	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 20:25	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 20:25	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 20:25	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 20:25	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 20:25	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 20:25	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 20:25	1
Xylenes, Total	0.82		0.80	0.12	ppb v/v			02/26/19 20:25	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.61	J	1.3	0.37	ug/m3			02/26/19 20:25	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 20:25	1
Chlorodifluoromethane	21	CI	1.4	0.27	ug/m3			02/26/19 20:25	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 20:25	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 20:25	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 20:25	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 20:25	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 20:25	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 20:25	1
Ethylbenzene	0.65	J	1.7	0.59	ug/m3			02/26/19 20:25	1
Methylene Chloride	7.9		6.9	2.3	ug/m3			02/26/19 20:25	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 20:25	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 20:25	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 20:25	1
Toluene	9.7		2.3	2.3	ug/m3			02/26/19 20:25	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 20:25	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 20:25	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 20:25	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 20:25	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 20:25	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 20:25	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 20:25	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-145-C-26

Lab Sample ID: 140-14391-9

Date Collected: 02/19/19 17:17

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 20:25	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 20:25	1
Xylenes, Total	3.6		3.5	0.52	ug/m3			02/26/19 20:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/26/19 20:25	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-146-C-26

Lab Sample ID: 140-14391-10

Date Collected: 02/19/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/26/19 21:14	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 21:14	1
Chlorodifluoromethane	5.9	CI	0.40	0.075	ppb v/v			02/26/19 21:14	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 21:14	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 21:14	1
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v			02/26/19 21:14	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 21:14	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 21:14	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 21:14	1
Ethylbenzene	0.14	J	0.40	0.14	ppb v/v			02/26/19 21:14	1
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v			02/26/19 21:14	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 21:14	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 21:14	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 21:14	1
Toluene	2.6		0.60	0.60	ppb v/v			02/26/19 21:14	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 21:14	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 21:14	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 21:14	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 21:14	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 21:14	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 21:14	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 21:14	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 21:14	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 21:14	1
Xylenes, Total	0.85		0.80	0.12	ppb v/v			02/26/19 21:14	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.55	J	1.3	0.37	ug/m3			02/26/19 21:14	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 21:14	1
Chlorodifluoromethane	21	CI	1.4	0.27	ug/m3			02/26/19 21:14	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 21:14	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 21:14	1
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3			02/26/19 21:14	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 21:14	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 21:14	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 21:14	1
Ethylbenzene	0.60	J	1.7	0.59	ug/m3			02/26/19 21:14	1
Methylene Chloride	4.1	J	6.9	2.3	ug/m3			02/26/19 21:14	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 21:14	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 21:14	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 21:14	1
Toluene	10		2.3	2.3	ug/m3			02/26/19 21:14	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 21:14	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 21:14	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 21:14	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 21:14	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 21:14	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 21:14	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 21:14	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-146-C-26

Lab Sample ID: 140-14391-10

Date Collected: 02/19/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 21:14	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 21:14	1
Xylenes, Total	3.7		3.5	0.52	ug/m3			02/26/19 21:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/26/19 21:14	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-152-C-26

Lab Sample ID: 140-14391-11

Date Collected: 02/19/19 17:19

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18	J	0.40	0.12	ppb v/v			02/26/19 22:03	1
Carbon tetrachloride	0.075	J	0.40	0.075	ppb v/v			02/26/19 22:03	1
Chlorodifluoromethane	3.2	CI	0.40	0.075	ppb v/v			02/26/19 22:03	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 22:03	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 22:03	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 22:03	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 22:03	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 22:03	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 22:03	1
Ethylbenzene	0.23	J	0.40	0.14	ppb v/v			02/26/19 22:03	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			02/26/19 22:03	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 22:03	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 22:03	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 22:03	1
Toluene	1.8		0.60	0.60	ppb v/v			02/26/19 22:03	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 22:03	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 22:03	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 22:03	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 22:03	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 22:03	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 22:03	1
1,2,4-Trimethylbenzene	0.14	J	0.40	0.13	ppb v/v			02/26/19 22:03	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 22:03	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 22:03	1
Xylenes, Total	1.3		0.80	0.12	ppb v/v			02/26/19 22:03	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.57	J	1.3	0.37	ug/m3			02/26/19 22:03	1
Carbon tetrachloride	0.47	J	2.5	0.47	ug/m3			02/26/19 22:03	1
Chlorodifluoromethane	11	CI	1.4	0.27	ug/m3			02/26/19 22:03	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 22:03	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 22:03	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 22:03	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 22:03	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 22:03	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 22:03	1
Ethylbenzene	0.99	J	1.7	0.59	ug/m3			02/26/19 22:03	1
Methylene Chloride	3.6	J	6.9	2.3	ug/m3			02/26/19 22:03	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 22:03	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 22:03	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 22:03	1
Toluene	6.9		2.3	2.3	ug/m3			02/26/19 22:03	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 22:03	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 22:03	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 22:03	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 22:03	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 22:03	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 22:03	1
1,2,4-Trimethylbenzene	0.67	J	2.0	0.61	ug/m3			02/26/19 22:03	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-152-C-26

Lab Sample ID: 140-14391-11

Date Collected: 02/19/19 17:19

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 22:03	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 22:03	1
Xylenes, Total	5.4		3.5	0.52	ug/m3			02/26/19 22:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		60 - 140					02/26/19 22:03	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-144-C-26

Lab Sample ID: 140-14391-12

Date Collected: 02/19/19 17:21

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18	J	0.40	0.12	ppb v/v			02/26/19 22:52	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 22:52	1
Chlorodifluoromethane	2.7	CI	0.40	0.075	ppb v/v			02/26/19 22:52	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 22:52	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 22:52	1
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v			02/26/19 22:52	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 22:52	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 22:52	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 22:52	1
Ethylbenzene	0.23	J	0.40	0.14	ppb v/v			02/26/19 22:52	1
Methylene Chloride	2.0		2.0	0.65	ppb v/v			02/26/19 22:52	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 22:52	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 22:52	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 22:52	1
Toluene	1.5		0.60	0.60	ppb v/v			02/26/19 22:52	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 22:52	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 22:52	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 22:52	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 22:52	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 22:52	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 22:52	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 22:52	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 22:52	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 22:52	1
Xylenes, Total	1.2		0.80	0.12	ppb v/v			02/26/19 22:52	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.57	J	1.3	0.37	ug/m3			02/26/19 22:52	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 22:52	1
Chlorodifluoromethane	9.5	CI	1.4	0.27	ug/m3			02/26/19 22:52	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 22:52	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 22:52	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/26/19 22:52	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 22:52	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 22:52	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 22:52	1
Ethylbenzene	1.0	J	1.7	0.59	ug/m3			02/26/19 22:52	1
Methylene Chloride	6.8		6.9	2.3	ug/m3			02/26/19 22:52	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 22:52	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 22:52	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 22:52	1
Toluene	5.7		2.3	2.3	ug/m3			02/26/19 22:52	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 22:52	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 22:52	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 22:52	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 22:52	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 22:52	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 22:52	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 22:52	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-144-C-26

Lab Sample ID: 140-14391-12

Date Collected: 02/19/19 17:21

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 22:52	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 22:52	1
Xylenes, Total	5.4		3.5	0.52	ug/m3			02/26/19 22:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					02/26/19 22:52	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-141-C-26

Lab Sample ID: 140-14391-13

Date Collected: 02/19/19 17:24

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.19	J	0.40	0.12	ppb v/v			02/26/19 23:41	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 23:41	1
Chlorodifluoromethane	2.1	CI	0.40	0.075	ppb v/v			02/26/19 23:41	1
Chloroform	ND		0.40	0.075	ppb v/v			02/26/19 23:41	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 23:41	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/26/19 23:41	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 23:41	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 23:41	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 23:41	1
Ethylbenzene	0.17	J	0.40	0.14	ppb v/v			02/26/19 23:41	1
Methylene Chloride	1.9	J	2.0	0.65	ppb v/v			02/26/19 23:41	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 23:41	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 23:41	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 23:41	1
Toluene	8.6		0.60	0.60	ppb v/v			02/26/19 23:41	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 23:41	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 23:41	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 23:41	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 23:41	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 23:41	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 23:41	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 23:41	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 23:41	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 23:41	1
Xylenes, Total	0.95		0.80	0.12	ppb v/v			02/26/19 23:41	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.59	J	1.3	0.37	ug/m3			02/26/19 23:41	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 23:41	1
Chlorodifluoromethane	7.4	CI	1.4	0.27	ug/m3			02/26/19 23:41	1
Chloroform	ND		2.0	0.37	ug/m3			02/26/19 23:41	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 23:41	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/26/19 23:41	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 23:41	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 23:41	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 23:41	1
Ethylbenzene	0.73	J	1.7	0.59	ug/m3			02/26/19 23:41	1
Methylene Chloride	6.5	J	6.9	2.3	ug/m3			02/26/19 23:41	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 23:41	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 23:41	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 23:41	1
Toluene	32		2.3	2.3	ug/m3			02/26/19 23:41	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 23:41	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 23:41	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 23:41	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 23:41	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 23:41	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 23:41	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 23:41	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-141-C-26

Lab Sample ID: 140-14391-13

Date Collected: 02/19/19 17:24

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 23:41	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 23:41	1
Xylenes, Total	4.1		3.5	0.52	ug/m3			02/26/19 23:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/26/19 23:41	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-088-C-26

Lab Sample ID: 140-14391-14

Date Collected: 02/19/19 17:28

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18	J	0.40	0.12	ppb v/v			02/27/19 00:30	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 00:30	1
Chlorodifluoromethane	0.42		0.40	0.075	ppb v/v			02/27/19 00:30	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 00:30	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 00:30	1
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v			02/27/19 00:30	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 00:30	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 00:30	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 00:30	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 00:30	1
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v			02/27/19 00:30	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 00:30	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 00:30	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 00:30	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 00:30	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 00:30	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 00:30	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 00:30	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 00:30	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 00:30	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 00:30	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 00:30	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 00:30	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 00:30	1
Xylenes, Total	0.55	J	0.80	0.12	ppb v/v			02/27/19 00:30	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.56	J	1.3	0.37	ug/m3			02/27/19 00:30	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 00:30	1
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3			02/27/19 00:30	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 00:30	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 00:30	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			02/27/19 00:30	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 00:30	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 00:30	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 00:30	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 00:30	1
Methylene Chloride	4.0	J	6.9	2.3	ug/m3			02/27/19 00:30	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 00:30	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 00:30	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 00:30	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 00:30	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 00:30	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 00:30	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 00:30	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 00:30	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 00:30	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 00:30	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 00:30	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-088-C-26

Lab Sample ID: 140-14391-14

Date Collected: 02/19/19 17:28

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 00:30	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 00:30	1
Xylenes, Total	2.4	J	3.5	0.52	ug/m3			02/27/19 00:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/27/19 00:30	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-142-C-26

Lab Sample ID: 140-14391-15

Date Collected: 02/19/19 17:24

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.16	J	0.40	0.12	ppb v/v			02/27/19 01:19	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 01:19	1
Chlorodifluoromethane	0.47	CI	0.40	0.075	ppb v/v			02/27/19 01:19	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 01:19	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 01:19	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/27/19 01:19	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 01:19	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 01:19	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 01:19	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 01:19	1
Methylene Chloride	2.6		2.0	0.65	ppb v/v			02/27/19 01:19	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 01:19	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 01:19	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 01:19	1
Toluene	ND		0.60	0.60	ppb v/v			02/27/19 01:19	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 01:19	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 01:19	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 01:19	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 01:19	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 01:19	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 01:19	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 01:19	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 01:19	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 01:19	1
Xylenes, Total	0.48	J	0.80	0.12	ppb v/v			02/27/19 01:19	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.52	J	1.3	0.37	ug/m3			02/27/19 01:19	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 01:19	1
Chlorodifluoromethane	1.7	CI	1.4	0.27	ug/m3			02/27/19 01:19	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 01:19	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 01:19	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/27/19 01:19	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 01:19	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 01:19	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 01:19	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 01:19	1
Methylene Chloride	9.2		6.9	2.3	ug/m3			02/27/19 01:19	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 01:19	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 01:19	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 01:19	1
Toluene	ND		2.3	2.3	ug/m3			02/27/19 01:19	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 01:19	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 01:19	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 01:19	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 01:19	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 01:19	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 01:19	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 01:19	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-142-C-26

Lab Sample ID: 140-14391-15

Date Collected: 02/19/19 17:24

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 01:19	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 01:19	1
Xylenes, Total	2.1	J	3.5	0.52	ug/m3			02/27/19 01:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					02/27/19 01:19	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-113-C-26

Lab Sample ID: 140-14391-16

Date Collected: 02/19/19 17:30

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.60		0.40	0.12	ppb v/v			02/27/19 02:57	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 02:57	1
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v			02/27/19 02:57	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 02:57	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 02:57	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			02/27/19 02:57	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 02:57	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 02:57	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 02:57	1
Ethylbenzene	0.74		0.40	0.14	ppb v/v			02/27/19 02:57	1
Methylene Chloride	3.6		2.0	0.65	ppb v/v			02/27/19 02:57	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 02:57	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 02:57	1
Tetrachloroethene	1.1		0.40	0.080	ppb v/v			02/27/19 02:57	1
Toluene	14		0.60	0.60	ppb v/v			02/27/19 02:57	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 02:57	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 02:57	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 02:57	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 02:57	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/27/19 02:57	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 02:57	1
1,2,4-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			02/27/19 02:57	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 02:57	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 02:57	1
Xylenes, Total	2.9		0.80	0.12	ppb v/v			02/27/19 02:57	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.9		1.3	0.37	ug/m3			02/27/19 02:57	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 02:57	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			02/27/19 02:57	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 02:57	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 02:57	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/27/19 02:57	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 02:57	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 02:57	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 02:57	1
Ethylbenzene	3.2		1.7	0.59	ug/m3			02/27/19 02:57	1
Methylene Chloride	13		6.9	2.3	ug/m3			02/27/19 02:57	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 02:57	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 02:57	1
Tetrachloroethene	7.2		2.7	0.54	ug/m3			02/27/19 02:57	1
Toluene	53		2.3	2.3	ug/m3			02/27/19 02:57	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 02:57	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 02:57	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 02:57	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 02:57	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/27/19 02:57	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 02:57	1
1,2,4-Trimethylbenzene	0.72	J	2.0	0.61	ug/m3			02/27/19 02:57	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-113-C-26

Lab Sample ID: 140-14391-16

Date Collected: 02/19/19 17:30

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 02:57	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 02:57	1
Xylenes, Total	13		3.5	0.52	ug/m3			02/27/19 02:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/27/19 02:57	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-149-C-26

Lab Sample ID: 140-14391-17

Date Collected: 02/19/19 17:33

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.29	J	0.40	0.12	ppb v/v			02/27/19 03:46	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 03:46	1
Chlorodifluoromethane	ND		0.40	0.075	ppb v/v			02/27/19 03:46	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 03:46	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 03:46	1
Dichlorodifluoromethane	0.33	J	0.40	0.14	ppb v/v			02/27/19 03:46	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 03:46	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 03:46	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 03:46	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 03:46	1
Methylene Chloride	4.5		2.0	0.65	ppb v/v			02/27/19 03:46	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 03:46	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 03:46	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 03:46	1
Toluene	2.2		0.60	0.60	ppb v/v			02/27/19 03:46	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 03:46	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 03:46	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 03:46	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 03:46	1
Trichloroethene	0.22		0.20	0.070	ppb v/v			02/27/19 03:46	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 03:46	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 03:46	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 03:46	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 03:46	1
Xylenes, Total	0.47	J	0.80	0.12	ppb v/v			02/27/19 03:46	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.94	J	1.3	0.37	ug/m3			02/27/19 03:46	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 03:46	1
Chlorodifluoromethane	ND		1.4	0.27	ug/m3			02/27/19 03:46	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 03:46	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 03:46	1
Dichlorodifluoromethane	1.6	J	2.0	0.67	ug/m3			02/27/19 03:46	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 03:46	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 03:46	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 03:46	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 03:46	1
Methylene Chloride	16		6.9	2.3	ug/m3			02/27/19 03:46	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 03:46	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 03:46	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 03:46	1
Toluene	8.1		2.3	2.3	ug/m3			02/27/19 03:46	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 03:46	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 03:46	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 03:46	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 03:46	1
Trichloroethene	1.2		1.1	0.38	ug/m3			02/27/19 03:46	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 03:46	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 03:46	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-149-C-26

Lab Sample ID: 140-14391-17

Date Collected: 02/19/19 17:33

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 03:46	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 03:46	1
Xylenes, Total	2.0	J	3.5	0.52	ug/m3			02/27/19 03:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/27/19 03:46	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-126-C-26

Lab Sample ID: 140-14391-18

Date Collected: 02/19/19 17:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.32	J	0.40	0.12	ppb v/v			02/27/19 04:35	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/27/19 04:35	1
Chlorodifluoromethane	ND		0.40	0.075	ppb v/v			02/27/19 04:35	1
Chloroform	ND		0.40	0.075	ppb v/v			02/27/19 04:35	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/27/19 04:35	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			02/27/19 04:35	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/27/19 04:35	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/27/19 04:35	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/27/19 04:35	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/27/19 04:35	1
Methylene Chloride	5.9		2.0	0.65	ppb v/v			02/27/19 04:35	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/27/19 04:35	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/27/19 04:35	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/27/19 04:35	1
Toluene	4.6		0.60	0.60	ppb v/v			02/27/19 04:35	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/27/19 04:35	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/27/19 04:35	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/27/19 04:35	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/27/19 04:35	1
Trichloroethene	0.27		0.20	0.070	ppb v/v			02/27/19 04:35	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/27/19 04:35	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 04:35	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/27/19 04:35	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/27/19 04:35	1
Xylenes, Total	0.30	J	0.80	0.12	ppb v/v			02/27/19 04:35	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	J	1.3	0.37	ug/m3			02/27/19 04:35	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/27/19 04:35	1
Chlorodifluoromethane	ND		1.4	0.27	ug/m3			02/27/19 04:35	1
Chloroform	ND		2.0	0.37	ug/m3			02/27/19 04:35	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/27/19 04:35	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			02/27/19 04:35	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/27/19 04:35	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/27/19 04:35	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/27/19 04:35	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/27/19 04:35	1
Methylene Chloride	21		6.9	2.3	ug/m3			02/27/19 04:35	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/27/19 04:35	1
Naphthalene	ND		1.0	1.0	ug/m3			02/27/19 04:35	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/27/19 04:35	1
Toluene	17		2.3	2.3	ug/m3			02/27/19 04:35	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/27/19 04:35	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/27/19 04:35	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/27/19 04:35	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/27/19 04:35	1
Trichloroethene	1.4		1.1	0.38	ug/m3			02/27/19 04:35	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/27/19 04:35	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/27/19 04:35	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-126-C-26

Lab Sample ID: 140-14391-18

Date Collected: 02/19/19 17:34

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/27/19 04:35	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/27/19 04:35	1
Xylenes, Total	1.3	J	3.5	0.52	ug/m3			02/27/19 04:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					02/27/19 04:35	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-101-B-26

Lab Sample ID: 140-14391-19

Date Collected: 02/19/19 17:43

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			02/26/19 16:38	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 16:38	1
Chlorodifluoromethane	1.2		0.40	0.075	ppb v/v			02/26/19 16:38	1
Chloroform	0.13	J	0.40	0.075	ppb v/v			02/26/19 16:38	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 16:38	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			02/26/19 16:38	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 16:38	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 16:38	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 16:38	1
Ethylbenzene	0.70		0.40	0.14	ppb v/v			02/26/19 16:38	1
Methylene Chloride	2.0		2.0	0.65	ppb v/v			02/26/19 16:38	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 16:38	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 16:38	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 16:38	1
Toluene	24		0.60	0.60	ppb v/v			02/26/19 16:38	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 16:38	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 16:38	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 16:38	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 16:38	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 16:38	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 16:38	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 16:38	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 16:38	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 16:38	1
Xylenes, Total	3.3		0.80	0.12	ppb v/v			02/26/19 16:38	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.54	J	1.3	0.37	ug/m3			02/26/19 16:38	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 16:38	1
Chlorodifluoromethane	4.2		1.4	0.27	ug/m3			02/26/19 16:38	1
Chloroform	0.64	J	2.0	0.37	ug/m3			02/26/19 16:38	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 16:38	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 16:38	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 16:38	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 16:38	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 16:38	1
Ethylbenzene	3.0		1.7	0.59	ug/m3			02/26/19 16:38	1
Methylene Chloride	6.9		6.9	2.3	ug/m3			02/26/19 16:38	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 16:38	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 16:38	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 16:38	1
Toluene	92		2.3	2.3	ug/m3			02/26/19 16:38	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 16:38	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 16:38	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 16:38	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 16:38	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 16:38	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 16:38	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 16:38	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-101-B-26

Lab Sample ID: 140-14391-19

Date Collected: 02/19/19 17:43

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 16:38	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 16:38	1
Xylenes, Total	14		3.5	0.52	ug/m3			02/26/19 16:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					02/26/19 16:38	1

Client Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-100-B-26

Lab Sample ID: 140-14391-20

Date Collected: 02/19/19 17:44

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.14	J	0.40	0.12	ppb v/v			02/26/19 17:19	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/26/19 17:19	1
Chlorodifluoromethane	1.1		0.40	0.075	ppb v/v			02/26/19 17:19	1
Chloroform	0.11	J	0.40	0.075	ppb v/v			02/26/19 17:19	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			02/26/19 17:19	1
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v			02/26/19 17:19	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			02/26/19 17:19	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/26/19 17:19	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			02/26/19 17:19	1
Ethylbenzene	0.46		0.40	0.14	ppb v/v			02/26/19 17:19	1
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			02/26/19 17:19	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/26/19 17:19	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/26/19 17:19	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/26/19 17:19	1
Toluene	24		0.60	0.60	ppb v/v			02/26/19 17:19	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			02/26/19 17:19	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/26/19 17:19	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			02/26/19 17:19	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/26/19 17:19	1
Trichloroethene	ND		0.20	0.070	ppb v/v			02/26/19 17:19	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/26/19 17:19	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:19	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/26/19 17:19	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/26/19 17:19	1
Xylenes, Total	2.2		0.80	0.12	ppb v/v			02/26/19 17:19	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.45	J	1.3	0.37	ug/m3			02/26/19 17:19	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/26/19 17:19	1
Chlorodifluoromethane	3.8		1.4	0.27	ug/m3			02/26/19 17:19	1
Chloroform	0.55	J	2.0	0.37	ug/m3			02/26/19 17:19	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			02/26/19 17:19	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			02/26/19 17:19	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			02/26/19 17:19	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/26/19 17:19	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			02/26/19 17:19	1
Ethylbenzene	2.0		1.7	0.59	ug/m3			02/26/19 17:19	1
Methylene Chloride	3.5	J	6.9	2.3	ug/m3			02/26/19 17:19	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/26/19 17:19	1
Naphthalene	ND		1.0	1.0	ug/m3			02/26/19 17:19	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/26/19 17:19	1
Toluene	91		2.3	2.3	ug/m3			02/26/19 17:19	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			02/26/19 17:19	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/26/19 17:19	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			02/26/19 17:19	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/26/19 17:19	1
Trichloroethene	ND		1.1	0.38	ug/m3			02/26/19 17:19	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/26/19 17:19	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/26/19 17:19	1

Client Sample Results

Client: Tetra Tech, Inc.
 Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-100-B-26

Lab Sample ID: 140-14391-20

Date Collected: 02/19/19 17:44

Matrix: Air

Date Received: 02/23/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/26/19 17:19	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/26/19 17:19	1
Xylenes, Total	9.6		3.5	0.52	ug/m3			02/26/19 17:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		60 - 140					02/26/19 17:19	1

Default Detection Limits

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-14391-1	IA-DUP01-C-26	102
140-14391-2	IA-102-C-26	102
140-14391-3	IA-155-C-26	99
140-14391-4	IA-133-C-26	99
140-14391-5	IA-153-C-26	102
140-14391-6	IA-DUP02-C-26	99
140-14391-7	IA-060-C-26	101
140-14391-8	IA-150-C-26	101
140-14391-9	IA-145-C-26	102
140-14391-10	IA-146-C-26	99
140-14391-11	IA-152-C-26	104
140-14391-12	IA-144-C-26	102
140-14391-13	IA-141-C-26	100
140-14391-14	IA-088-C-26	100
140-14391-15	IA-142-C-26	99
140-14391-16	IA-113-C-26	101
140-14391-17	IA-149-C-26	101
140-14391-18	IA-126-C-26	100
140-14391-19	IA-101-B-26	96
140-14391-20	IA-100-B-26	94
LCS 140-27909/1002	Lab Control Sample	104
LCS 140-27931/1002	Lab Control Sample	100
MB 140-27909/4	Method Blank	101
MB 140-27931/4	Method Blank	96

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-27909/4
Matrix: Air
Analysis Batch: 27909

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			02/26/19 12:52	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/26/19 12:52	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/26/19 12:52	1
Chloroform	ND		0.080	0.015	ppb v/v			02/26/19 12:52	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/26/19 12:52	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/26/19 12:52	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/26/19 12:52	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/26/19 12:52	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/26/19 12:52	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/26/19 12:52	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/26/19 12:52	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/26/19 12:52	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/26/19 12:52	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/26/19 12:52	1
Toluene	ND		0.12	0.12	ppb v/v			02/26/19 12:52	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/26/19 12:52	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/26/19 12:52	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/26/19 12:52	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/26/19 12:52	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/26/19 12:52	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/26/19 12:52	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/26/19 12:52	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/26/19 12:52	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/26/19 12:52	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/26/19 12:52	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/26/19 12:52	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/26/19 12:52	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/26/19 12:52	1
Chloroform	ND		0.39	0.073	ug/m3			02/26/19 12:52	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/26/19 12:52	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/26/19 12:52	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/26/19 12:52	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/26/19 12:52	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/26/19 12:52	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/26/19 12:52	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/26/19 12:52	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/26/19 12:52	1
Naphthalene	ND		0.21	0.21	ug/m3			02/26/19 12:52	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/26/19 12:52	1
Toluene	ND		0.45	0.45	ug/m3			02/26/19 12:52	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/26/19 12:52	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/26/19 12:52	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/26/19 12:52	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/26/19 12:52	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/26/19 12:52	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/26/19 12:52	1

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27909/4
Matrix: Air
Analysis Batch: 27909

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/26/19 12:52	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/26/19 12:52	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/26/19 12:52	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/26/19 12:52	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	101		60 - 140		02/26/19 12:52	1

Lab Sample ID: LCS 140-27909/1002
Matrix: Air
Analysis Batch: 27909

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.04		ppb v/v		102	70 - 130
Chlorodifluoromethane	2.00	1.75		ppb v/v		87	60 - 140
Chloroform	2.00	1.92		ppb v/v		96	70 - 130
cis-1,2-Dichloroethene	2.00	1.95		ppb v/v		98	70 - 130
Dichlorodifluoromethane	2.00	1.74		ppb v/v		87	60 - 140
1,1-Dichloroethane	2.00	1.90		ppb v/v		95	70 - 130
1,2-Dichloroethane	2.00	1.91		ppb v/v		95	70 - 130
1,1-Dichloroethene	2.00	1.90		ppb v/v		95	70 - 130
Ethylbenzene	2.00	2.12		ppb v/v		106	70 - 130
Methylene Chloride	2.00	1.75		ppb v/v		88	70 - 130
Methyl tert-butyl ether	2.00	2.00		ppb v/v		100	60 - 140
Naphthalene	2.00	1.70		ppb v/v		85	60 - 140
Tetrachloroethene	2.00	2.06		ppb v/v		103	70 - 130
Toluene	2.00	2.11		ppb v/v		105	70 - 130
trans-1,2-Dichloroethene	2.00	1.86		ppb v/v		93	70 - 130
1,2,4-Trichlorobenzene	2.00	1.90		ppb v/v		95	60 - 140
1,1,1-Trichloroethane	2.00	1.94		ppb v/v		97	70 - 130
1,1,2-Trichloroethane	2.00	2.06		ppb v/v		103	70 - 130
Trichloroethene	2.00	2.01		ppb v/v		101	70 - 130
1,2,3-Trimethylbenzene	2.00	2.12		ppb v/v		106	70 - 130
1,2,4-Trimethylbenzene	2.00	2.16		ppb v/v		108	70 - 130
1,3,5-Trimethylbenzene	2.00	2.11		ppb v/v		105	70 - 130
Vinyl chloride	2.00	2.10		ppb v/v		105	70 - 130
Xylenes, Total	6.00	6.63		ppb v/v		111	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	13	12.8		ug/m3		102	70 - 130
Chlorodifluoromethane	7.1	6.17		ug/m3		87	60 - 140
Chloroform	9.8	9.37		ug/m3		96	70 - 130
cis-1,2-Dichloroethene	7.9	7.74		ug/m3		98	70 - 130
Dichlorodifluoromethane	9.9	8.61		ug/m3		87	60 - 140
1,1-Dichloroethane	8.1	7.70		ug/m3		95	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27909/1002
Matrix: Air
Analysis Batch: 27909

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	7.71		ug/m3		95	70 - 130
1,1-Dichloroethene	7.9	7.55		ug/m3		95	70 - 130
Ethylbenzene	8.7	9.21		ug/m3		106	70 - 130
Methylene Chloride	6.9	6.08		ug/m3		88	70 - 130
Methyl tert-butyl ether	7.2	7.19		ug/m3		100	60 - 140
Naphthalene	10	8.92		ug/m3		85	60 - 140
Tetrachloroethene	14	14.0		ug/m3		103	70 - 130
Toluene	7.5	7.93		ug/m3		105	70 - 130
trans-1,2-Dichloroethene	7.9	7.37		ug/m3		93	70 - 130
1,2,4-Trichlorobenzene	15	14.1		ug/m3		95	60 - 140
1,1,1-Trichloroethane	11	10.6		ug/m3		97	70 - 130
1,1,2-Trichloroethane	11	11.3		ug/m3		103	70 - 130
Trichloroethene	11	10.8		ug/m3		101	70 - 130
1,2,3-Trimethylbenzene	9.8	10.4		ug/m3		106	70 - 130
1,2,4-Trimethylbenzene	9.8	10.6		ug/m3		108	70 - 130
1,3,5-Trimethylbenzene	9.8	10.4		ug/m3		105	70 - 130
Vinyl chloride	5.1	5.37		ug/m3		105	70 - 130
Xylenes, Total	26	28.8		ug/m3		111	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		60 - 140

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			02/26/19 12:56	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
Chloroform	ND		0.080	0.015	ppb v/v			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/26/19 12:56	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/26/19 12:56	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/26/19 12:56	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/26/19 12:56	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/26/19 12:56	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/26/19 12:56	1
Toluene	ND		0.12	0.12	ppb v/v			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/26/19 12:56	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/26/19 12:56	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27931/4
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/26/19 12:56	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/26/19 12:56	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/26/19 12:56	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/26/19 12:56	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/26/19 12:56	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/26/19 12:56	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/26/19 12:56	1
Chloroform	ND		0.39	0.073	ug/m3			02/26/19 12:56	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/26/19 12:56	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/26/19 12:56	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/26/19 12:56	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/26/19 12:56	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/26/19 12:56	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/26/19 12:56	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/26/19 12:56	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/26/19 12:56	1
Naphthalene	ND		0.21	0.21	ug/m3			02/26/19 12:56	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/26/19 12:56	1
Toluene	ND		0.45	0.45	ug/m3			02/26/19 12:56	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/26/19 12:56	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/26/19 12:56	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/26/19 12:56	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/26/19 12:56	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/26/19 12:56	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/26/19 12:56	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/26/19 12:56	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/26/19 12:56	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/26/19 12:56	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/26/19 12:56	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	96		60 - 140		02/26/19 12:56	1

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.22		ppb v/v		111	70 - 130
Chlorodifluoromethane	2.00	2.02		ppb v/v		101	60 - 140
Chloroform	2.00	2.00		ppb v/v		100	70 - 130
cis-1,2-Dichloroethene	2.00	2.09		ppb v/v		104	70 - 130
Dichlorodifluoromethane	2.00	2.06		ppb v/v		103	60 - 140

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27931/1002

Matrix: Air

Analysis Batch: 27931

**Client Sample ID: Lab Control Sample
Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
1,1-Dichloroethane	2.00	2.05		ppb v/v		103	70 - 130
1,2-Dichloroethane	2.00	2.00		ppb v/v		100	70 - 130
1,1-Dichloroethene	2.00	2.14		ppb v/v		107	70 - 130
Ethylbenzene	2.00	2.03		ppb v/v		101	70 - 130
Methylene Chloride	2.00	1.81		ppb v/v		90	70 - 130
Methyl tert-butyl ether	2.00	1.97		ppb v/v		99	60 - 140
Naphthalene	2.00	1.94		ppb v/v		97	60 - 140
Tetrachloroethene	2.00	2.06		ppb v/v		103	70 - 130
Toluene	2.00	2.02		ppb v/v		101	70 - 130
trans-1,2-Dichloroethene	2.00	2.15		ppb v/v		108	70 - 130
1,2,4-Trichlorobenzene	2.00	1.83		ppb v/v		92	60 - 140
1,1,1-Trichloroethane	2.00	2.04		ppb v/v		102	70 - 130
1,1,2-Trichloroethane	2.00	2.11		ppb v/v		105	70 - 130
Trichloroethene	2.00	2.09		ppb v/v		105	70 - 130
1,2,3-Trimethylbenzene	2.00	2.22		ppb v/v		111	70 - 130
1,2,4-Trimethylbenzene	2.00	1.99		ppb v/v		99	70 - 130
1,3,5-Trimethylbenzene	2.00	1.97		ppb v/v		98	70 - 130
Vinyl chloride	2.00	1.97		ppb v/v		98	70 - 130
Xylenes, Total	6.00	6.18		ppb v/v		103	70 - 130
Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
Benzene	6.4	6.61		ug/m3		103	70 - 130
Carbon tetrachloride	13	13.9		ug/m3		111	70 - 130
Chlorodifluoromethane	7.1	7.16		ug/m3		101	60 - 140
Chloroform	9.8	9.78		ug/m3		100	70 - 130
cis-1,2-Dichloroethene	7.9	8.28		ug/m3		104	70 - 130
Dichlorodifluoromethane	9.9	10.2		ug/m3		103	60 - 140
1,1-Dichloroethane	8.1	8.31		ug/m3		103	70 - 130
1,2-Dichloroethane	8.1	8.11		ug/m3		100	70 - 130
1,1-Dichloroethene	7.9	8.50		ug/m3		107	70 - 130
Ethylbenzene	8.7	8.79		ug/m3		101	70 - 130
Methylene Chloride	6.9	6.27		ug/m3		90	70 - 130
Methyl tert-butyl ether	7.2	7.12		ug/m3		99	60 - 140
Naphthalene	10	10.2		ug/m3		97	60 - 140
Tetrachloroethene	14	14.0		ug/m3		103	70 - 130
Toluene	7.5	7.63		ug/m3		101	70 - 130
trans-1,2-Dichloroethene	7.9	8.53		ug/m3		108	70 - 130
1,2,4-Trichlorobenzene	15	13.6		ug/m3		92	60 - 140
1,1,1-Trichloroethane	11	11.1		ug/m3		102	70 - 130
1,1,2-Trichloroethane	11	11.5		ug/m3		105	70 - 130
Trichloroethene	11	11.2		ug/m3		105	70 - 130
1,2,3-Trimethylbenzene	9.8	10.9		ug/m3		111	70 - 130
1,2,4-Trimethylbenzene	9.8	9.78		ug/m3		99	70 - 130
1,3,5-Trimethylbenzene	9.8	9.68		ug/m3		98	70 - 130
Vinyl chloride	5.1	5.03		ug/m3		98	70 - 130
Xylenes, Total	26	26.8		ug/m3		103	70 - 130

QC Sample Results

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27931/1002
Matrix: Air
Analysis Batch: 27931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>LCS</i> <i>Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	100		60 - 140

QC Association Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Air - GC/MS VOA

Analysis Batch: 27909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14391-1	IA-DUP01-C-26	Total/NA	Air	TO 15 LL	
140-14391-2	IA-102-C-26	Total/NA	Air	TO 15 LL	
140-14391-3	IA-155-C-26	Total/NA	Air	TO 15 LL	
140-14391-4	IA-133-C-26	Total/NA	Air	TO 15 LL	
140-14391-5	IA-153-C-26	Total/NA	Air	TO 15 LL	
140-14391-6	IA-DUP02-C-26	Total/NA	Air	TO 15 LL	
140-14391-7	IA-060-C-26	Total/NA	Air	TO 15 LL	
140-14391-8	IA-150-C-26	Total/NA	Air	TO 15 LL	
140-14391-9	IA-145-C-26	Total/NA	Air	TO 15 LL	
140-14391-10	IA-146-C-26	Total/NA	Air	TO 15 LL	
140-14391-11	IA-152-C-26	Total/NA	Air	TO 15 LL	
140-14391-12	IA-144-C-26	Total/NA	Air	TO 15 LL	
140-14391-13	IA-141-C-26	Total/NA	Air	TO 15 LL	
140-14391-14	IA-088-C-26	Total/NA	Air	TO 15 LL	
140-14391-15	IA-142-C-26	Total/NA	Air	TO 15 LL	
140-14391-16	IA-113-C-26	Total/NA	Air	TO 15 LL	
140-14391-17	IA-149-C-26	Total/NA	Air	TO 15 LL	
140-14391-18	IA-126-C-26	Total/NA	Air	TO 15 LL	
MB 140-27909/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27909/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 27931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14391-19	IA-101-B-26	Total/NA	Air	TO 15 LL	
140-14391-20	IA-100-B-26	Total/NA	Air	TO 15 LL	
MB 140-27931/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27931/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-DUP01-C-26

Lab Sample ID: 140-14391-1

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 13:41	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-102-C-26

Lab Sample ID: 140-14391-2

Date Collected: 02/19/19 17:06

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 14:30	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-155-C-26

Lab Sample ID: 140-14391-3

Date Collected: 02/19/19 17:08

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 15:31	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-133-C-26

Lab Sample ID: 140-14391-4

Date Collected: 02/19/19 17:09

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 16:20	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-153-C-26

Lab Sample ID: 140-14391-5

Date Collected: 02/19/19 17:11

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 17:09	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-DUP02-C-26

Lab Sample ID: 140-14391-6

Date Collected: 02/19/19 00:00

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 17:58	S1K	TAL KNX
Instrument ID: MR										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-060-C-26

Lab Sample ID: 140-14391-7

Date Collected: 02/19/19 17:14

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 18:47	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-150-C-26

Lab Sample ID: 140-14391-8

Date Collected: 02/19/19 17:16

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 19:36	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-145-C-26

Lab Sample ID: 140-14391-9

Date Collected: 02/19/19 17:17

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 20:25	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-146-C-26

Lab Sample ID: 140-14391-10

Date Collected: 02/19/19 17:18

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 21:14	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-152-C-26

Lab Sample ID: 140-14391-11

Date Collected: 02/19/19 17:19

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 22:03	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-144-C-26

Lab Sample ID: 140-14391-12

Date Collected: 02/19/19 17:21

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 22:52	S1K	TAL KNX
Instrument ID: MR										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-141-C-26

Lab Sample ID: 140-14391-13

Date Collected: 02/19/19 17:24

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/26/19 23:41	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-088-C-26

Lab Sample ID: 140-14391-14

Date Collected: 02/19/19 17:28

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/27/19 00:30	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-142-C-26

Lab Sample ID: 140-14391-15

Date Collected: 02/19/19 17:24

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/27/19 01:19	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-113-C-26

Lab Sample ID: 140-14391-16

Date Collected: 02/19/19 17:30

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/27/19 02:57	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-149-C-26

Lab Sample ID: 140-14391-17

Date Collected: 02/19/19 17:33

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/27/19 03:46	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: IA-126-C-26

Lab Sample ID: 140-14391-18

Date Collected: 02/19/19 17:34

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27909	02/27/19 04:35	S1K	TAL KNX
Instrument ID: MR										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Client Sample ID: IA-101-B-26

Lab Sample ID: 140-14391-19

Date Collected: 02/19/19 17:43

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 16:38	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: IA-100-B-26

Lab Sample ID: 140-14391-20

Date Collected: 02/19/19 17:44

Matrix: Air

Date Received: 02/23/19 10:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27931	02/26/19 17:19	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27909/4

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27909	02/26/19 12:52	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27931/4

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 12:56	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27909/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27909	02/26/19 10:22	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27931/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27931	02/26/19 11:35	S1K	TAL KNX
Instrument ID: MG										

Lab Chronicle

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14391-1	IA-DUP01-C-26	Air	02/19/19 00:00	02/23/19 10:10
140-14391-2	IA-102-C-26	Air	02/19/19 17:06	02/23/19 10:10
140-14391-3	IA-155-C-26	Air	02/19/19 17:08	02/23/19 10:10
140-14391-4	IA-133-C-26	Air	02/19/19 17:09	02/23/19 10:10
140-14391-5	IA-153-C-26	Air	02/19/19 17:11	02/23/19 10:10
140-14391-6	IA-DUP02-C-26	Air	02/19/19 00:00	02/23/19 10:10
140-14391-7	IA-060-C-26	Air	02/19/19 17:14	02/23/19 10:10
140-14391-8	IA-150-C-26	Air	02/19/19 17:16	02/23/19 10:10
140-14391-9	IA-145-C-26	Air	02/19/19 17:17	02/23/19 10:10
140-14391-10	IA-146-C-26	Air	02/19/19 17:18	02/23/19 10:10
140-14391-11	IA-152-C-26	Air	02/19/19 17:19	02/23/19 10:10
140-14391-12	IA-144-C-26	Air	02/19/19 17:21	02/23/19 10:10
140-14391-13	IA-141-C-26	Air	02/19/19 17:24	02/23/19 10:10
140-14391-14	IA-088-C-26	Air	02/19/19 17:28	02/23/19 10:10
140-14391-15	IA-142-C-26	Air	02/19/19 17:24	02/23/19 10:10
140-14391-16	IA-113-C-26	Air	02/19/19 17:30	02/23/19 10:10
140-14391-17	IA-149-C-26	Air	02/19/19 17:33	02/23/19 10:10
140-14391-18	IA-126-C-26	Air	02/19/19 17:34	02/23/19 10:10
140-14391-19	IA-101-B-26	Air	02/19/19 17:43	02/23/19 10:10
140-14391-20	IA-100-B-26	Air	02/19/19 17:44	02/23/19 10:10

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
IA-DUP01-C-26	140-14391-1	102
IA-102-C-26	140-14391-2	102
IA-155-C-26	140-14391-3	99
IA-133-C-26	140-14391-4	99
IA-153-C-26	140-14391-5	102
IA-DUP02-C-26	140-14391-6	99
IA-060-C-26	140-14391-7	101
IA-150-C-26	140-14391-8	101
IA-145-C-26	140-14391-9	102
IA-146-C-26	140-14391-10	99
IA-152-C-26	140-14391-11	104
IA-144-C-26	140-14391-12	102
IA-141-C-26	140-14391-13	100
IA-088-C-26	140-14391-14	100
IA-142-C-26	140-14391-15	99
IA-113-C-26	140-14391-16	101
IA-149-C-26	140-14391-17	101
IA-126-C-26	140-14391-18	100
IA-101-B-26	140-14391-19	96
IA-100-B-26	140-14391-20	94
	MB 140-27909/4	101
	MB 140-27931/4	96
	LCS 140-27909/1002	104
	LCS 140-27931/1002	100

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: RCCVB26-LCS.d
 Lab ID: LCS 140-27909/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.95	97	70-130	
Carbon tetrachloride	2.00	2.04	102	70-130	
Chlorodifluoromethane	2.00	1.75	87	60-140	
Chloroform	2.00	1.92	96	70-130	
cis-1,2-Dichloroethene	2.00	1.95	98	70-130	
Dichlorodifluoromethane	2.00	1.74	87	60-140	
1,1-Dichloroethane	2.00	1.90	95	70-130	
1,2-Dichloroethane	2.00	1.91	95	70-130	
1,1-Dichloroethene	2.00	1.90	95	70-130	
Ethylbenzene	2.00	2.12	106	70-130	
Methylene Chloride	2.00	1.75	88	70-130	
Methyl tert-butyl ether	2.00	2.00	100	60-140	
Naphthalene	2.00	1.70	85	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.11	105	70-130	
trans-1,2-Dichloroethene	2.00	1.86	93	70-130	
1,2,4-Trichlorobenzene	2.00	1.90	95	60-140	
1,1,1-Trichloroethane	2.00	1.94	97	70-130	
1,1,2-Trichloroethane	2.00	2.06	103	70-130	
Trichloroethene	2.00	2.01	101	70-130	
1,2,3-Trimethylbenzene	2.00	2.12	106	70-130	
1,2,4-Trimethylbenzene	2.00	2.16	108	70-130	
1,3,5-Trimethylbenzene	2.00	2.11	105	70-130	
Vinyl chloride	2.00	2.10	105	70-130	
Xylenes, Total	6.00	6.63	111	70-130	

Column to be used to flag recovery and RPD values

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB26-LCS.d
 Lab ID: LCS 140-27931/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.22	111	70-130	
Chlorodifluoromethane	2.00	2.02	101	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	2.09	104	70-130	
Dichlorodifluoromethane	2.00	2.06	103	60-140	
1,1-Dichloroethane	2.00	2.05	103	70-130	
1,2-Dichloroethane	2.00	2.00	100	70-130	
1,1-Dichloroethene	2.00	2.14	107	70-130	
Ethylbenzene	2.00	2.03	101	70-130	
Methylene Chloride	2.00	1.81	90	70-130	
Methyl tert-butyl ether	2.00	1.97	99	60-140	
Naphthalene	2.00	1.94	97	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	2.15	108	70-130	
1,2,4-Trichlorobenzene	2.00	1.83	92	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	2.11	105	70-130	
Trichloroethene	2.00	2.09	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.22	111	70-130	
1,2,4-Trimethylbenzene	2.00	1.99	99	70-130	
1,3,5-Trimethylbenzene	2.00	1.97	98	70-130	
Vinyl chloride	2.00	1.97	98	70-130	
Xylenes, Total	6.00	6.18	103	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: G500BB26.D Lab Sample ID: MB 140-27931/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/26/2019 12:56
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27931/1002	GCCVB26-LCS .d	02/26/2019 11:35
IA-101-B-26	140-14391-19	GB26P102.D	02/26/2019 16:38
IA-100-B-26	140-14391-20	GB26P103.D	02/26/2019 17:19

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: R500BB26.D Lab Sample ID: MB 140-27909/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MR Date Analyzed: 02/26/2019 12:52
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27909/1002	RCCVB26-LCS .d	02/26/2019 10:22
IA-DUP01-C-26	140-14391-1	RB26P101.D	02/26/2019 13:41
IA-102-C-26	140-14391-2	RB26P102Q.D	02/26/2019 14:30
IA-155-C-26	140-14391-3	RB26P103.D	02/26/2019 15:31
IA-133-C-26	140-14391-4	RB26P104.D	02/26/2019 16:20
IA-153-C-26	140-14391-5	RB26P105.D	02/26/2019 17:09
IA-DUP02-C-26	140-14391-6	RB26P106.D	02/26/2019 17:58
IA-060-C-26	140-14391-7	RB26P107.D	02/26/2019 18:47
IA-150-C-26	140-14391-8	RB26P108.D	02/26/2019 19:36
IA-145-C-26	140-14391-9	RB26P109.D	02/26/2019 20:25
IA-146-C-26	140-14391-10	RB26P110.D	02/26/2019 21:14
IA-152-C-26	140-14391-11	RB26P111.D	02/26/2019 22:03
IA-144-C-26	140-14391-12	RB26P112.D	02/26/2019 22:52
IA-141-C-26	140-14391-13	RB26P113.D	02/26/2019 23:41
IA-088-C-26	140-14391-14	RB26P114.D	02/27/2019 00:30
IA-142-C-26	140-14391-15	RB26P115.D	02/27/2019 01:19
IA-113-C-26	140-14391-16	RB26P116.D	02/27/2019 02:57
IA-149-C-26	140-14391-17	RB26P201.D	02/27/2019 03:46
IA-126-C-26	140-14391-18	RB26P202.D	02/27/2019 04:35

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: GA11BLK1.D BFB Injection Date: 01/11/2019
 Instrument ID: MG BFB Injection Time: 12:24
 Analysis Batch No.: 26755

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.2	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	71.2	
175	5.0 - 9.0 % of mass 174	5.1	(7.1) 1
176	95.0 - 101.0 % of mass 174	70.7	(99.3) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-26755/2	GA11IC09.D	01/11/2019	13:08
	IC 140-26755/6	GA11IC10.D	01/11/2019	14:35
	IC 140-26755/9	GA11IC01.D	01/11/2019	16:46
	IC 140-26755/10	GA11IC02.D	01/11/2019	17:29
	IC 140-26755/11	GA11IC03.D	01/11/2019	18:12
	IC 140-26755/12	GA11IC04.D	01/11/2019	18:56
	IC 140-26755/13	GA11IC05.D	01/11/2019	19:40
	IC 140-26755/14	GA11IC06.D	01/11/2019	20:23
	ICIS 140-26755/15	GA11IC07.D	01/11/2019	21:07
	IC 140-26755/16	GA11IC08.D	01/11/2019	21:51
	ICV 140-26755/18	GA11ICV.D	01/11/2019	23:17

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: GBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MG BFB Injection Time: 11:03
 Analysis Batch No.: 27931

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.5
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	73.1
175	5.0 - 9.0 % of mass 174	5.1 (7.0) 1
176	95.0 - 101.0 % of mass 174	71.2 (97.4) 1
177	5.0 - 9.0 % of mass 176	4.6 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27931/2	GCCVB26.D	02/26/2019	11:35
	LCS 140-27931/1002	GCCVB26-LCS. d	02/26/2019	11:35
	MB 140-27931/4	G500BB26.D	02/26/2019	12:56
IA-101-B-26	140-14391-19	GB26P102.D	02/26/2019	16:38
IA-100-B-26	140-14391-20	GB26P103.D	02/26/2019	17:19

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: RFBK16I.D BFB Injection Date: 11/16/2018
 Instrument ID: MR BFB Injection Time: 16:00
 Analysis Batch No.: 25490

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	58.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	91.0	
175	5.0 - 9.0 % of mass 174	6.6	(7.3) 1
176	95.0 - 101.0 % of mass 174	88.8	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-25490/3	RK16IC09.D	11/16/2018	17:23
	IC 140-25490/5	RK16IC10.D	11/16/2018	19:07
	IC 140-25490/8	RK16IC01.D	11/16/2018	21:42
	IC 140-25490/9	RK16IC02.D	11/16/2018	22:34
	IC 140-25490/10	RK16IC03.D	11/16/2018	23:27
	IC 140-25490/11	RK16IC04.D	11/17/2018	00:20
	IC 140-25490/12	RK16IC05.D	11/17/2018	01:12
	IC 140-25490/13	RK16IC06.D	11/17/2018	02:05
	ICIS 140-25490/14	RK16IC07.D	11/17/2018	02:58
	IC 140-25490/15	RK16IC08.D	11/17/2018	03:51
	ICV 140-25490/18	RK16ICV.D	11/17/2018	06:27

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: RBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MR BFB Injection Time: 09:53
 Analysis Batch No.: 27909

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.6	
75	30.0 - 60.0 % of mass 95	58.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	88.4	
175	5.0 - 9.0 % of mass 174	6.4	(7.3) 1
176	95.0 - 101.0 % of mass 174	87.6	(99.1) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.3) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27909/2	RCCVB26.D	02/26/2019	10:22
	LCS 140-27909/1002	RCCVB26-LCS.d	02/26/2019	10:22
	MB 140-27909/4	R500BB26.D	02/26/2019	12:52
IA-DUP01-C-26	140-14391-1	RB26P101.D	02/26/2019	13:41
IA-102-C-26	140-14391-2	RB26P102Q.D	02/26/2019	14:30
IA-155-C-26	140-14391-3	RB26P103.D	02/26/2019	15:31
IA-133-C-26	140-14391-4	RB26P104.D	02/26/2019	16:20
IA-153-C-26	140-14391-5	RB26P105.D	02/26/2019	17:09
IA-DUP02-C-26	140-14391-6	RB26P106.D	02/26/2019	17:58
IA-060-C-26	140-14391-7	RB26P107.D	02/26/2019	18:47
IA-150-C-26	140-14391-8	RB26P108.D	02/26/2019	19:36
IA-145-C-26	140-14391-9	RB26P109.D	02/26/2019	20:25
IA-146-C-26	140-14391-10	RB26P110.D	02/26/2019	21:14
IA-152-C-26	140-14391-11	RB26P111.D	02/26/2019	22:03
IA-144-C-26	140-14391-12	RB26P112.D	02/26/2019	22:52
IA-141-C-26	140-14391-13	RB26P113.D	02/26/2019	23:41
IA-088-C-26	140-14391-14	RB26P114.D	02/27/2019	00:30
IA-142-C-26	140-14391-15	RB26P115.D	02/27/2019	01:19
IA-113-C-26	140-14391-16	RB26P116.D	02/27/2019	02:57
IA-149-C-26	140-14391-17	RB26P201.D	02/27/2019	03:46
IA-126-C-26	140-14391-18	RB26P202.D	02/27/2019	04:35

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Sample No.: ICIS 140-26755/15 Date Analyzed: 01/11/2019 21:07
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GAl1IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	437891	9.25	2708081	11.42	2541912	16.10
UPPER LIMIT	613047	9.58	3791313	11.75	3558677	16.43
LOWER LIMIT	262735	8.92	1624849	11.09	1525147	15.77
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-26755/18	423755	9.24	2327828	11.42	2182908	16.09

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Sample No.: CCVIS 140-27931/2 Date Analyzed: 02/26/2019 11:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	496382	9.23	2758157	11.41	2578216	16.08	
UPPER LIMIT	694935	9.56	3861420	11.74	3609502	16.41	
LOWER LIMIT	297829	8.90	1654894	11.08	1546930	15.75	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27931/1002	496382	9.23	2758157	11.41	2578216	16.08	
MB 140-27931/4	508819	9.23	2920722	11.41	2502760	16.08	
140-14391-19	IA-101-B-26	455853	9.27	2490634	11.42	2381715	16.08
140-14391-20	IA-100-B-26	488432	9.25	2976485	11.41	2650552	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Sample No.: ICIS 140-25490/14 Date Analyzed: 11/17/2018 02:58
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RK16IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	298864	7.40	1677758	9.49	1487799	14.56
UPPER LIMIT	418410	7.73	2348861	9.82	2082919	14.89
LOWER LIMIT	179318	7.07	1006655	9.16	892679	14.23
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-25490/18	299493	7.38	1671036	9.48	1499042	14.55

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Sample No.: CCVIS 140-27909/2 Date Analyzed: 02/26/2019 10:22
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBZd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	225849	7.38	1327690	9.45	1164037	14.50
UPPER LIMIT	316189	7.71	1858766	9.78	1629652	14.83
LOWER LIMIT	135509	7.05	796614	9.12	698422	14.17
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 140-27909/1002	225849	7.38	1327690	9.45	1164037	14.50
MB 140-27909/4	200361	7.39	1182430	9.45	1042401	14.50
140-14391-1	IA-DUP01-C-26	205663	1190969	9.45	1040519	14.50
140-14391-2	IA-102-C-26	208040	1200928	9.45	1044720	14.50
140-14391-3	IA-155-C-26	208708	1228572	9.44	1073711	14.50
140-14391-4	IA-133-C-26	202020	1187994	9.44	1031290	14.50
140-14391-5	IA-153-C-26	199769	1174122	9.44	1016536	14.50
140-14391-6	IA-DUP02-C-26	204618	1201090	9.45	1038008	14.50
140-14391-7	IA-060-C-26	192250	1119769	9.45	987214	14.50
140-14391-8	IA-150-C-26	199155	1158636	9.45	1013298	14.50
140-14391-9	IA-145-C-26	193624	1129234	9.45	998867	14.50
140-14391-10	IA-146-C-26	198030	1151165	9.45	1011578	14.50
140-14391-11	IA-152-C-26	193341	1128620	9.45	990629	14.50
140-14391-12	IA-144-C-26	197269	1155355	9.45	1025834	14.50
140-14391-13	IA-141-C-26	200446	1187004	9.45	1030803	14.50
140-14391-14	IA-088-C-26	205122	1197107	9.44	1049569	14.50
140-14391-15	IA-142-C-26	201844	1182104	9.44	1032728	14.50
140-14391-16	IA-113-C-26	205033	1201066	9.45	1040158	14.50
140-14391-17	IA-149-C-26	196512	1164319	9.45	1009555	14.50
140-14391-18	IA-126-C-26	203305	1197023	9.45	1043940	14.50

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-DUP01-C-26 Lab Sample ID: 140-14391-1
 Matrix: Air Lab File ID: RB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.29	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-DUP01-C-26 Lab Sample ID: 140-14391-1
 Matrix: Air Lab File ID: RB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P101.D
 Lims ID: 140-14391-A-1
 Client ID: IA-DUP01-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 13:41:30 ALS Bottle#: 1 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-005
 Misc. Info.: 140-14391-a-1
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:44:22 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:44:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.384	7.384	0.000	70	205663	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	96	1190969	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.502	0.000	90	1040519	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.228	0.000	89	902614	4.08	
6 Chlorodifluoromethane	51	3.518	3.518	0.005	94	12849	0.1053	M
8 Dichlorodifluoromethane	85	3.561	3.564	0.000	99	12506	0.0559	
31 Methylene Chloride	84	5.330	5.325	0.005	94	14503	0.2108	
47 Benzene	78	8.889	8.889	0.000	69	5734	0.0295	
65 Toluene	91	12.421	12.416	0.005	91	23837	0.0956	
78 m-Xylene & p-Xylene	91	15.063	15.069	-0.006	98	17073	0.0579	
S 121 Xylenes, Total	100				0		0.0579	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P101.D

Injection Date: 26-Feb-2019 13:41:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-1

Lab Sample ID: 140-14391-1

Worklist Smp#: 5

Client ID: IA-DUP01-C-26

Purge Vol: 500.000 mL

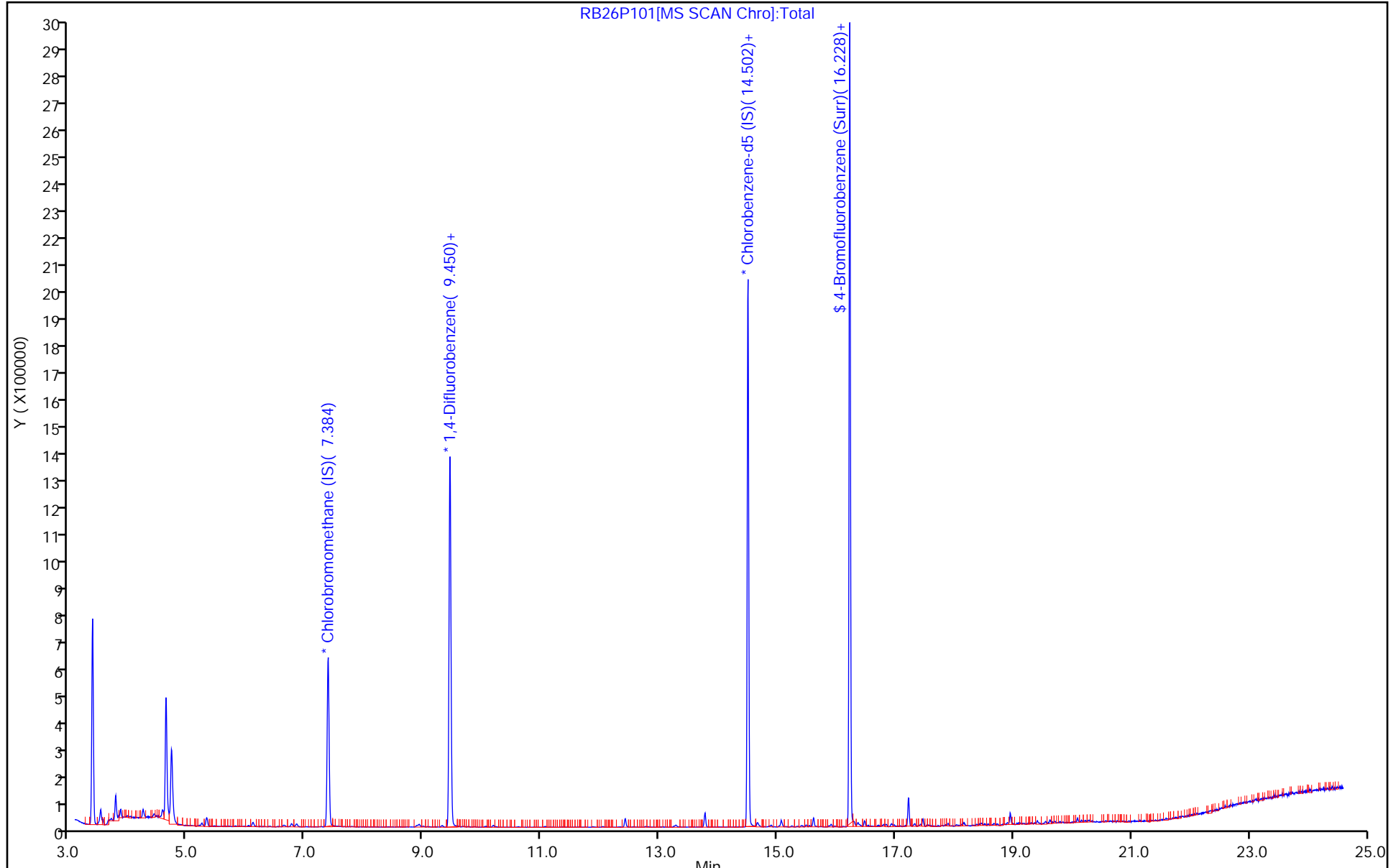
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P101.D
 Lims ID: 140-14391-A-1
 Client ID: IA-DUP01-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 13:41:30 ALS Bottle#: 1 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-005
 Misc. Info.: 140-14391-a-1
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:44:22 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:44:22

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.08	101.98

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P101.D

Injection Date: 26-Feb-2019 13:41:30

Instrument ID: MR

Lims ID: 140-14391-A-1

Lab Sample ID: 140-14391-1

Client ID: IA-DUP01-C-26

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

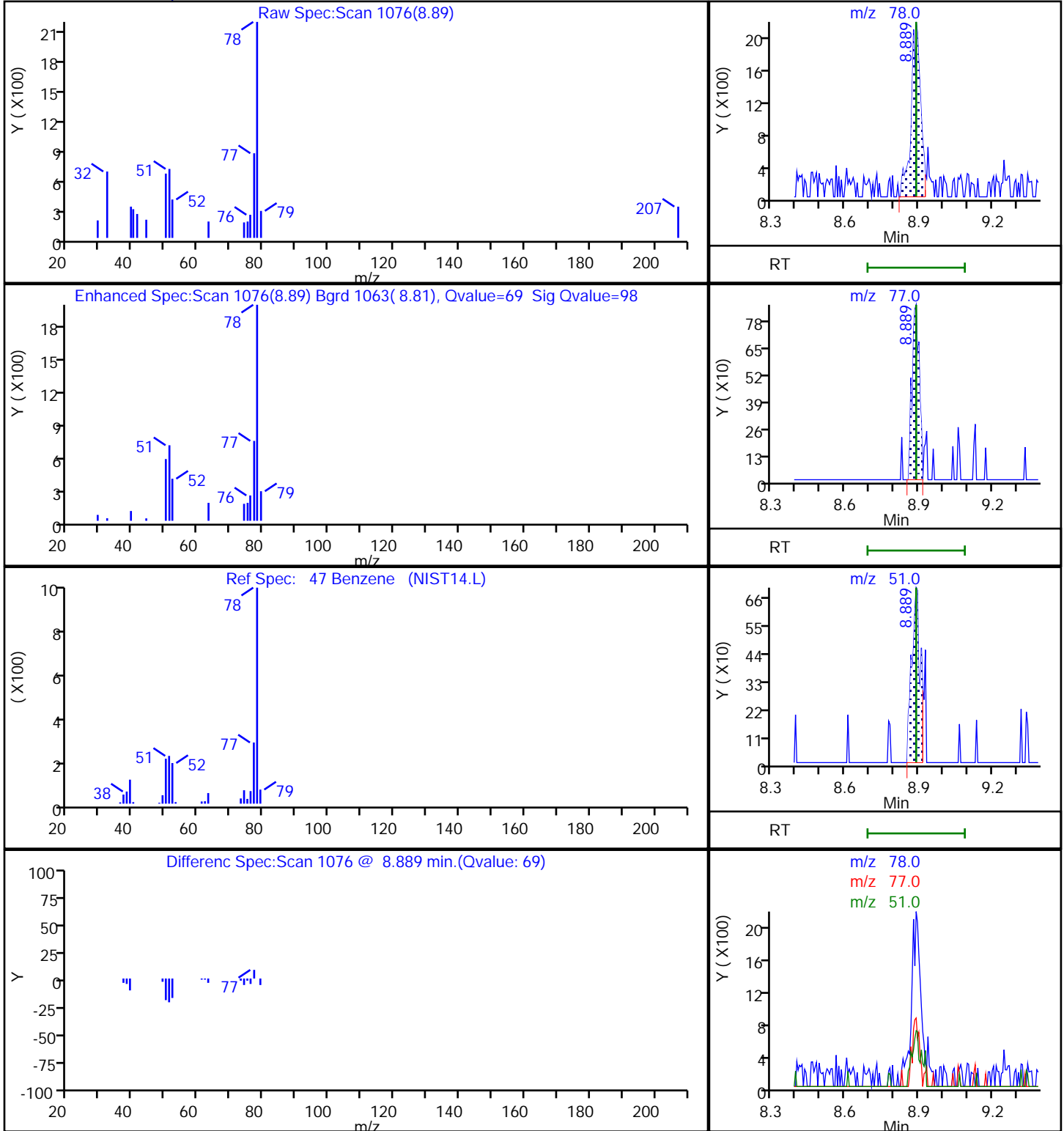
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P101.D

Injection Date: 26-Feb-2019 13:41:30

Instrument ID: MR

Lims ID: 140-14391-A-1

Lab Sample ID: 140-14391-1

Client ID: IA-DUP01-C-26

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

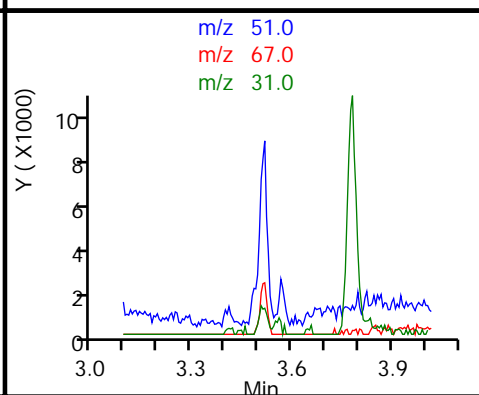
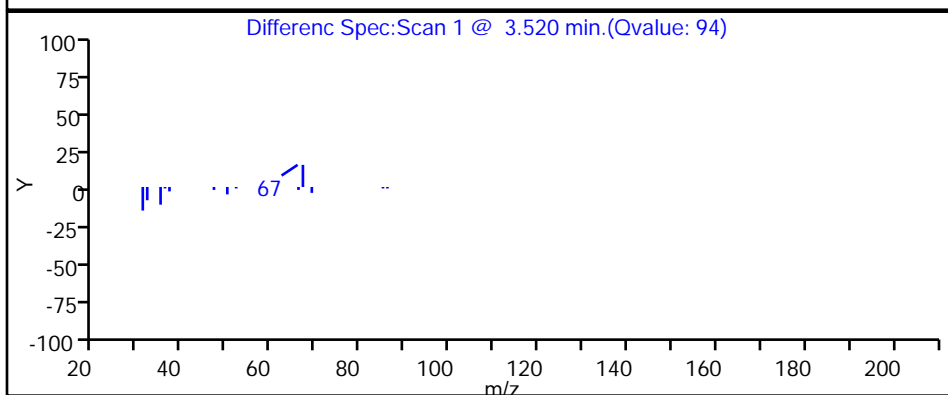
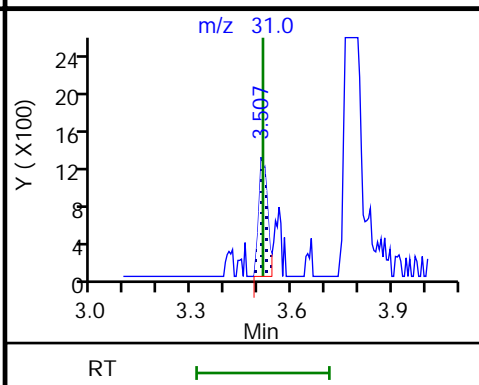
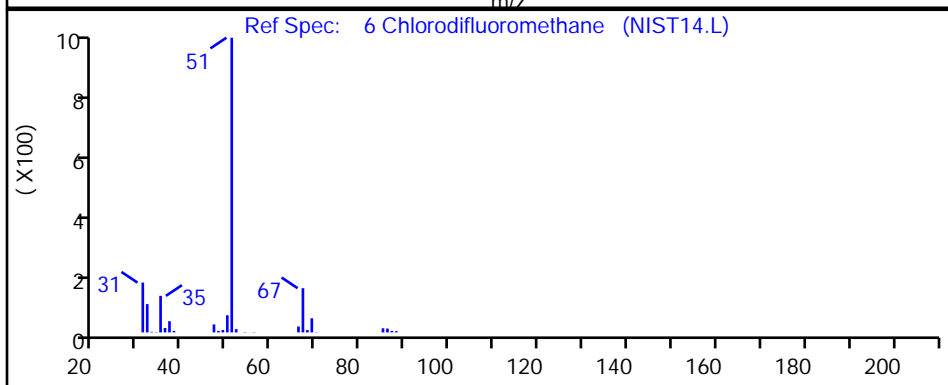
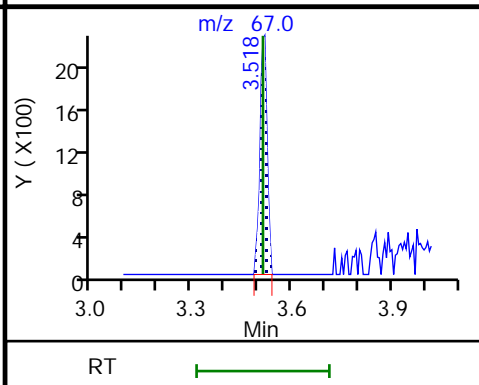
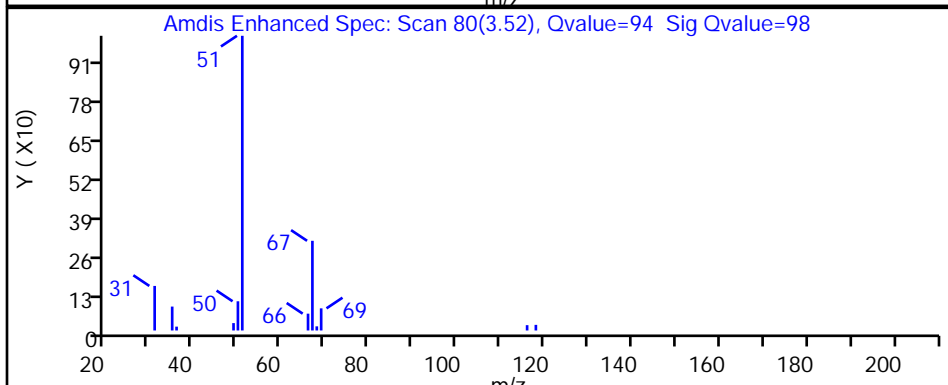
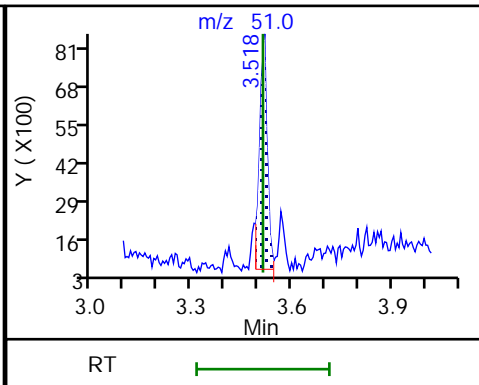
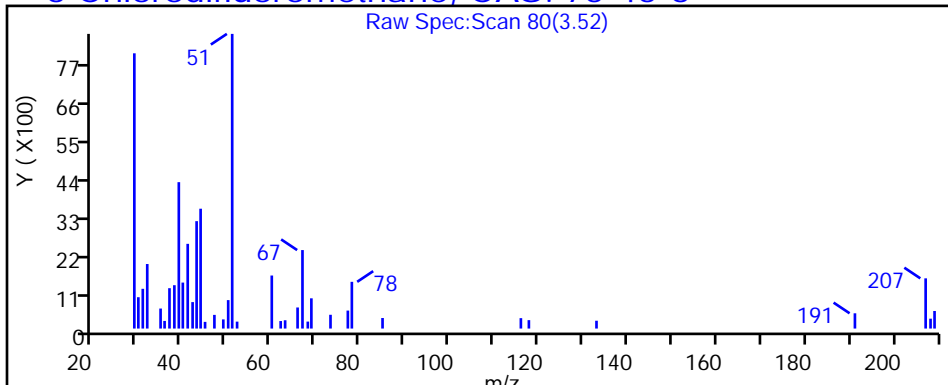
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P101.D

Injection Date: 26-Feb-2019 13:41:30

Instrument ID: MR

Lims ID: 140-14391-A-1

Lab Sample ID: 140-14391-1

Client ID: IA-DUP01-C-26

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

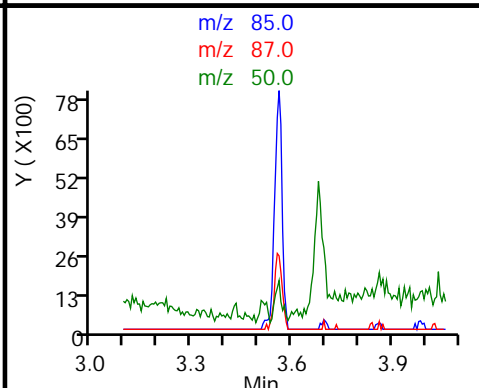
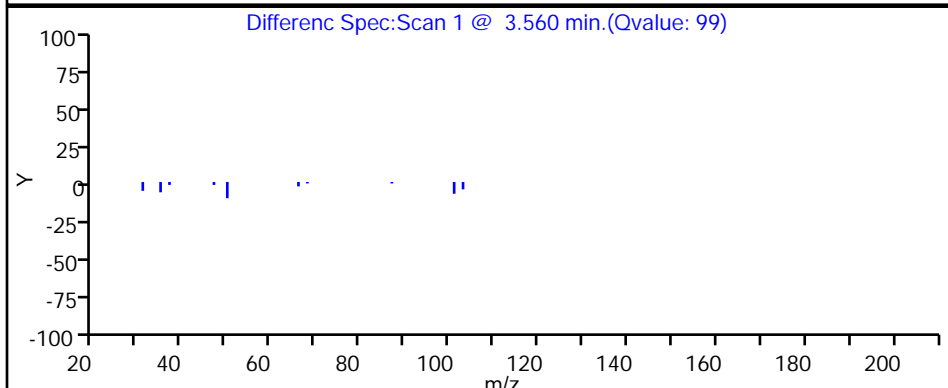
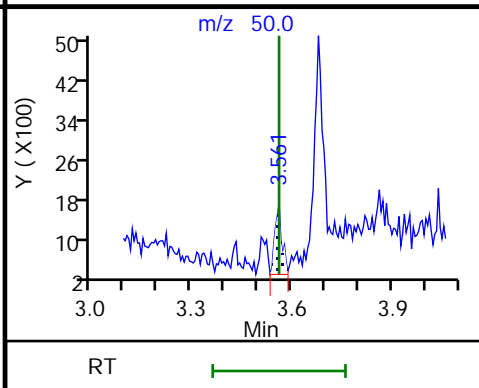
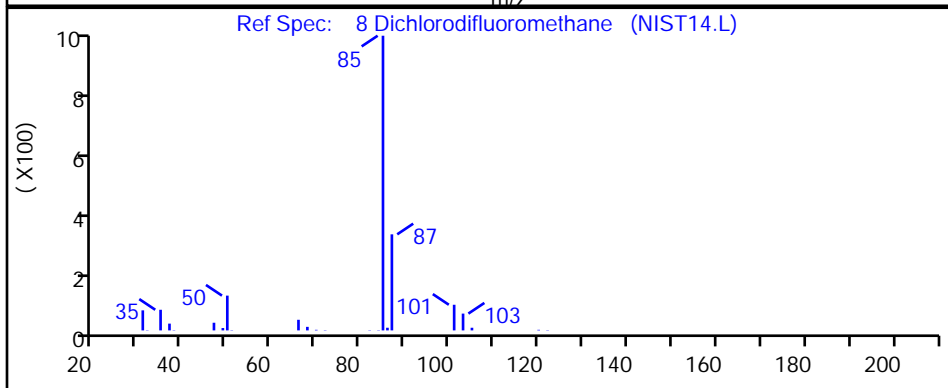
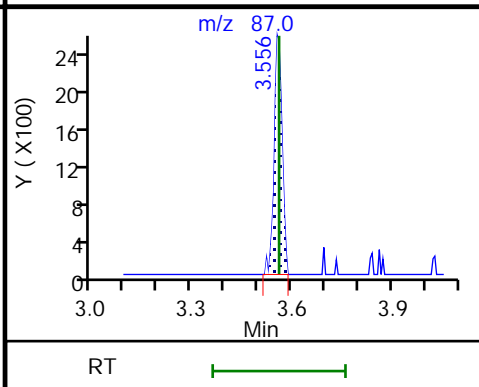
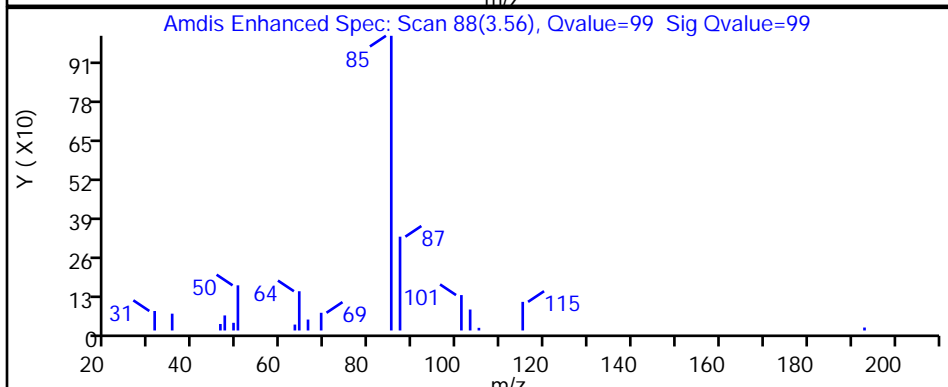
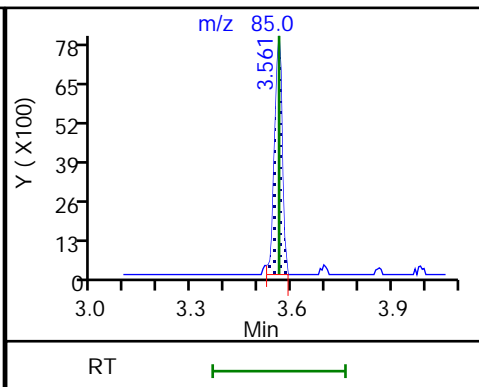
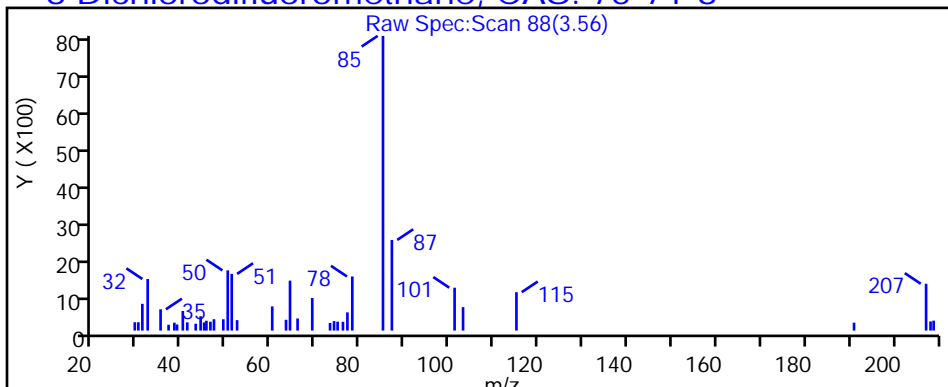
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P101.D

Injection Date: 26-Feb-2019 13:41:30

Instrument ID: MR

Lims ID: 140-14391-A-1

Lab Sample ID: 140-14391-1

Client ID: IA-DUP01-C-26

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

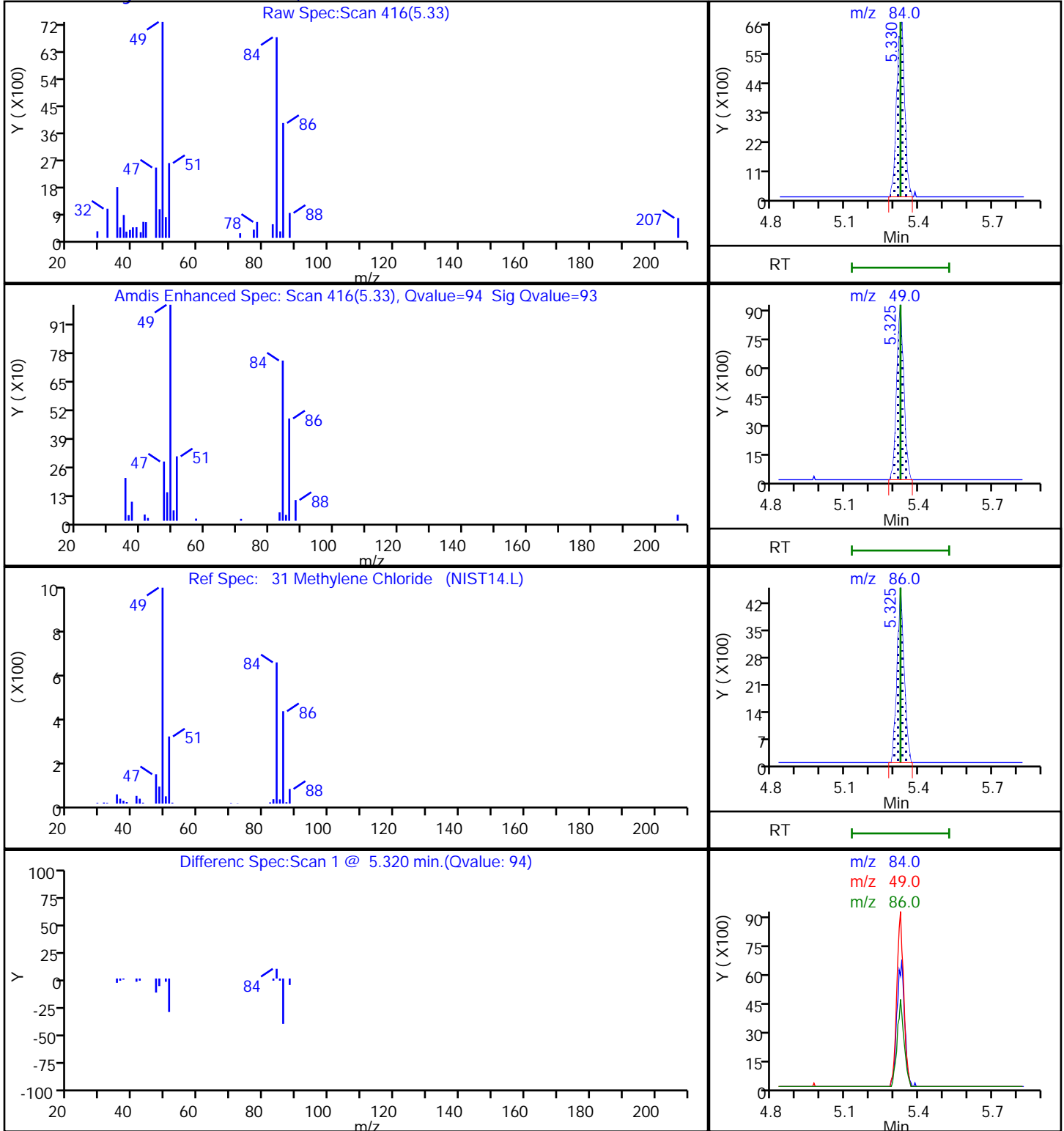
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P101.D

Injection Date: 26-Feb-2019 13:41:30

Instrument ID: MR

Lims ID: 140-14391-A-1

Lab Sample ID: 140-14391-1

Client ID: IA-DUP01-C-26

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

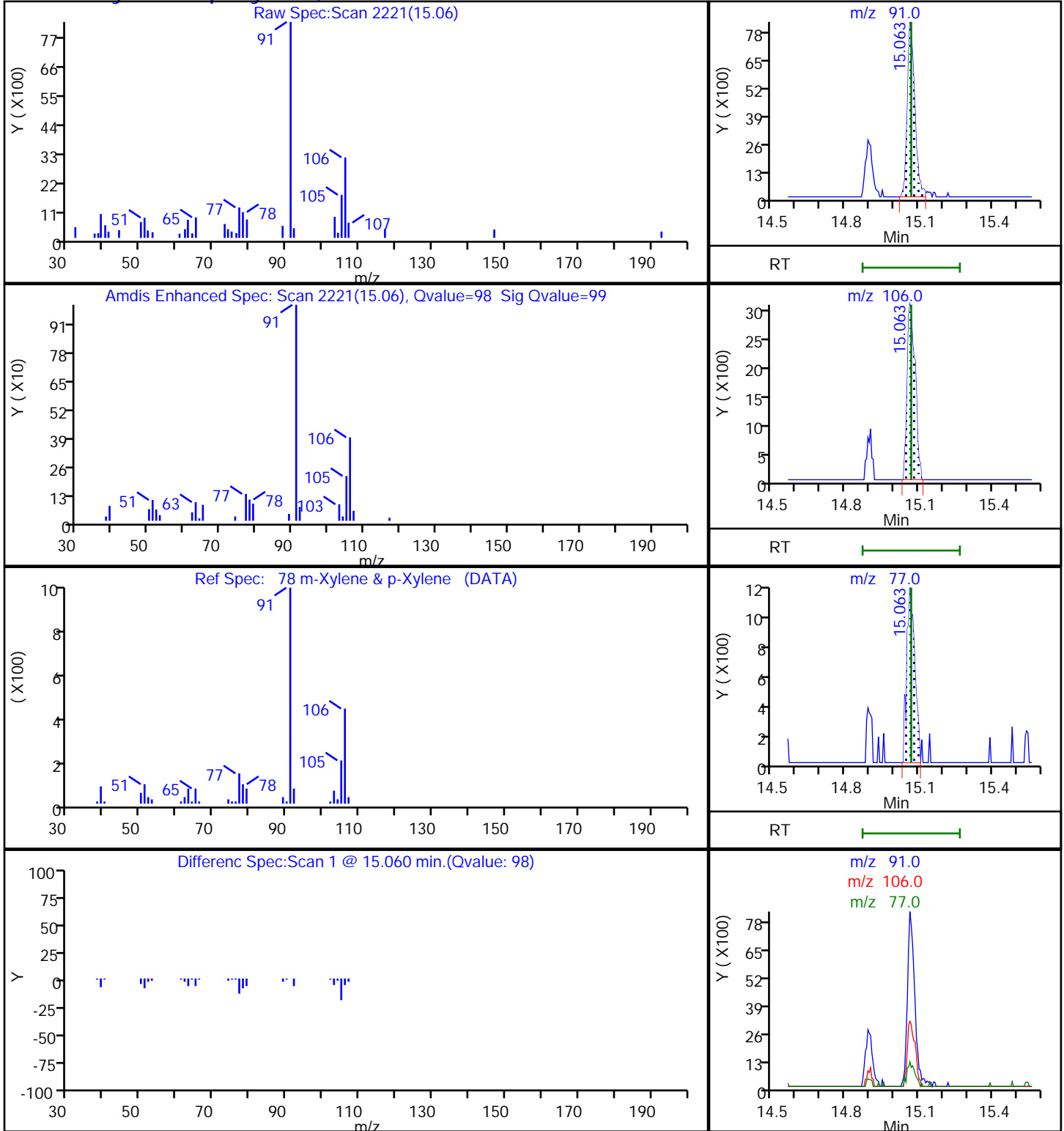
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

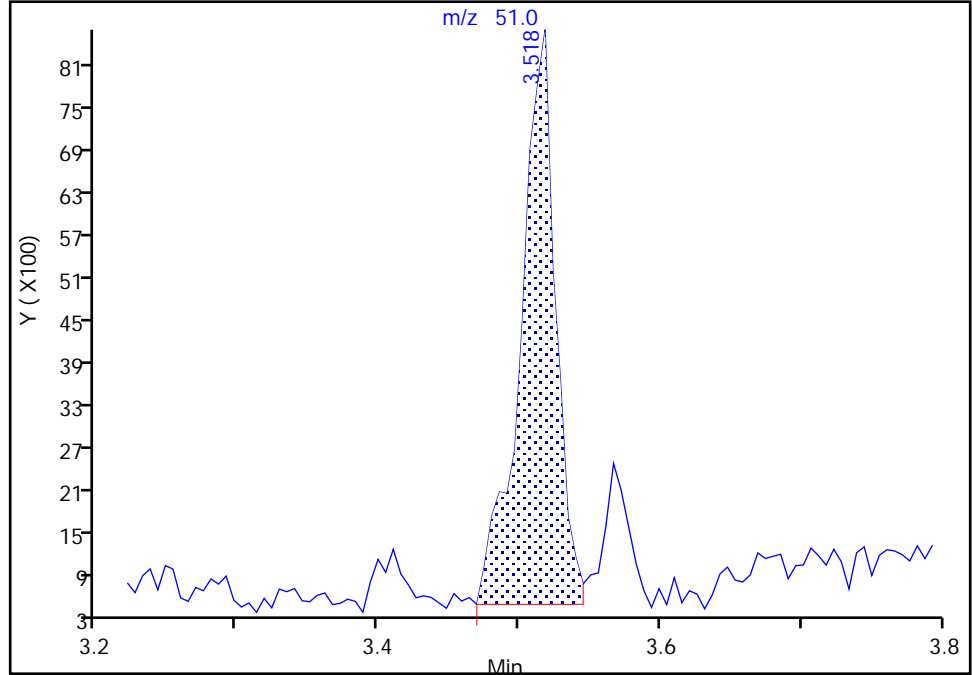
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Injection Date: 26-Feb-2019 13:41:30 Instrument ID: MR
Lims ID: 140-14391-A-1 Lab Sample ID: 140-14391-1
Client ID: IA-DUP01-C-26
Operator ID: ALS Bottle#: 1 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

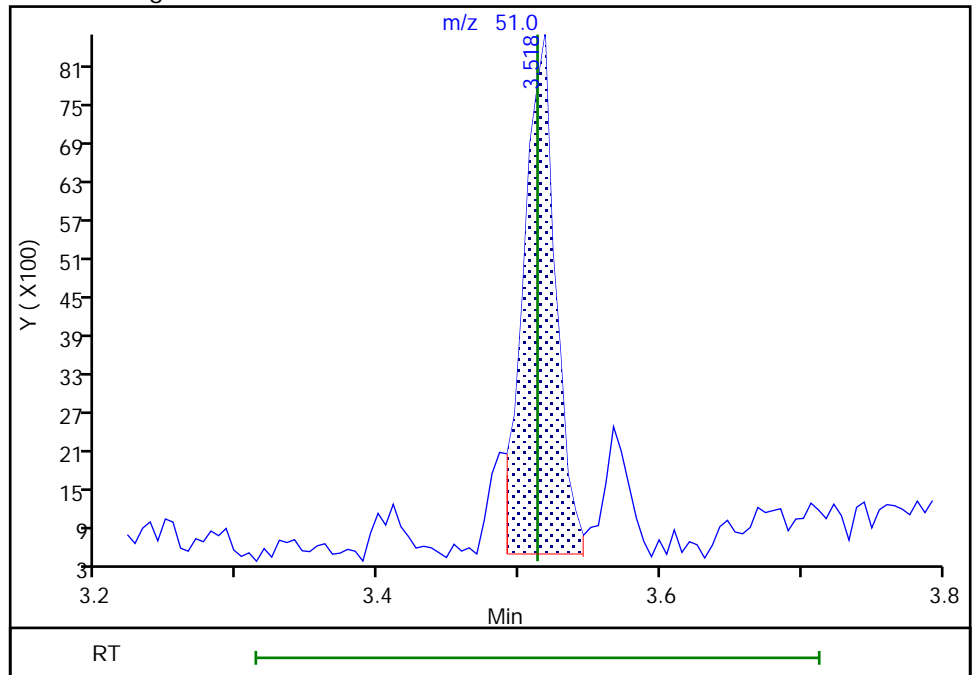
RT: 3.52
Area: 13940
Amount: 0.114234
Amount Units: ppb v/v

Processing Integration Results



RT: 3.52
Area: 12849
Amount: 0.105294
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 16:43:44

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-102-C-26 Lab Sample ID: 140-14391-2
 Matrix: Air Lab File ID: RB26P102Q.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:06
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 14:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.50		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.74	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-102-C-26 Lab Sample ID: 140-14391-2
 Matrix: Air Lab File ID: RB26P102Q.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:06
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 14:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P102Q.D
 Lims ID: 140-14391-A-2
 Client ID: IA-102-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 14:30:30 ALS Bottle#: 2 Worklist Smp#: 6
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-006
 Misc. Info.: 140-14391-a-2
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:45:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.384	0.001	71	208040	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1200928	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.502	0.000	91	1044720	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.228	0.000	95	907390	4.08	
6 Chlorodifluoromethane	51	3.513	3.513	0.000	95	12235	0.0991	M
8 Dichlorodifluoromethane	85	3.556	3.564	-0.005	99	13048	0.0576	
31 Methylene Chloride	84	5.319	5.325	-0.006	91	22774	0.3273	
47 Benzene	78	8.894	8.889	0.005	97	6630	0.0339	
65 Toluene	91	12.421	12.416	0.005	93	28917	0.1155	
78 m-Xylene & p-Xylene	91	15.063	15.069	-0.006	99	32262	0.1090	
82 o-Xylene	91	15.603	15.602	0.001	94	12495	0.0402	
S 121 Xylenes, Total	100				0		0.1492	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P102Q.D

Injection Date: 26-Feb-2019 14:30:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-2

Lab Sample ID: 140-14391-2

Worklist Smp#: 6

Client ID: IA-102-C-26

Purge Vol: 500.000 mL

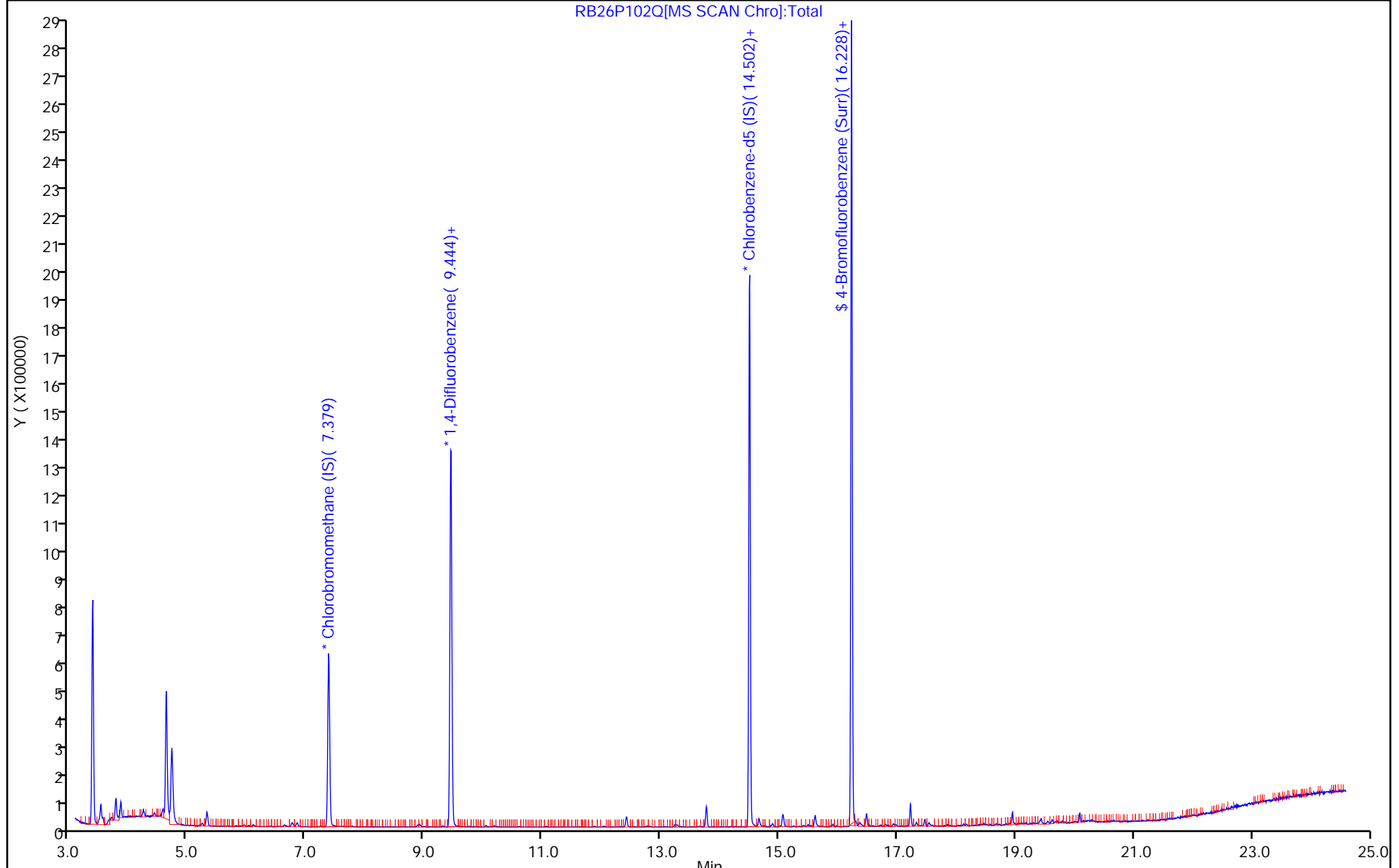
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P102Q.D
 Lims ID: 140-14391-A-2
 Client ID: IA-102-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 14:30:30 ALS Bottle#: 2 Worklist Smp#: 6
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-006
 Misc. Info.: 140-14391-a-2
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:45:08

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.08	102.11

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P102Q.D

Injection Date: 26-Feb-2019 14:30:30

Instrument ID: MR

Lims ID: 140-14391-A-2

Lab Sample ID: 140-14391-2

Client ID: IA-102-C-26

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 6

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

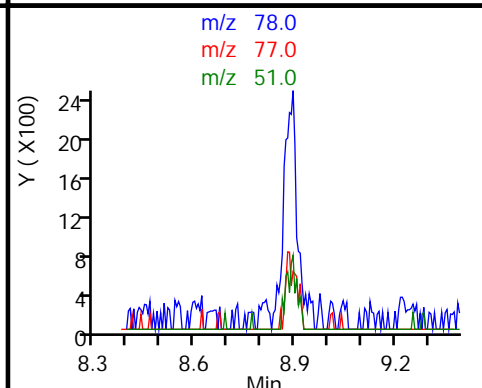
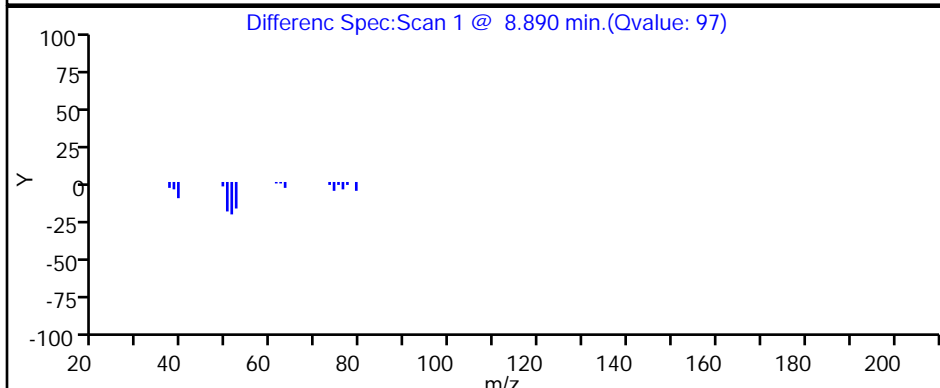
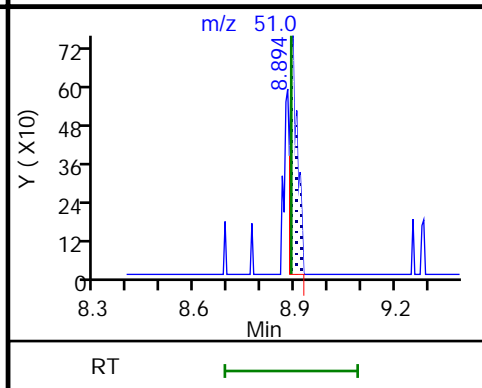
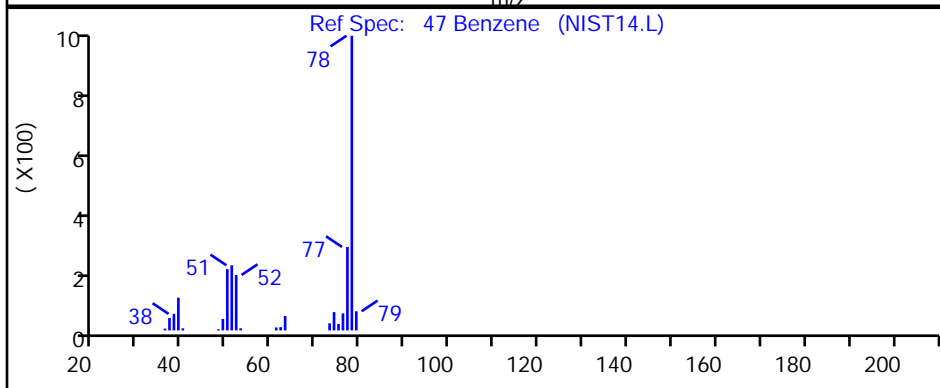
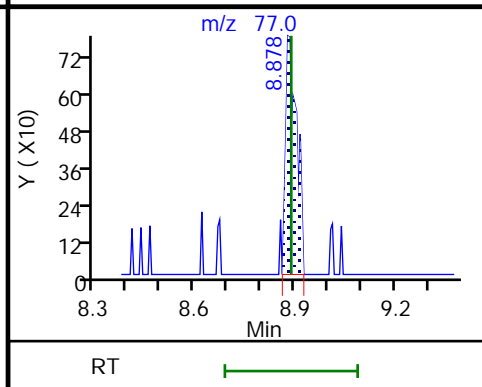
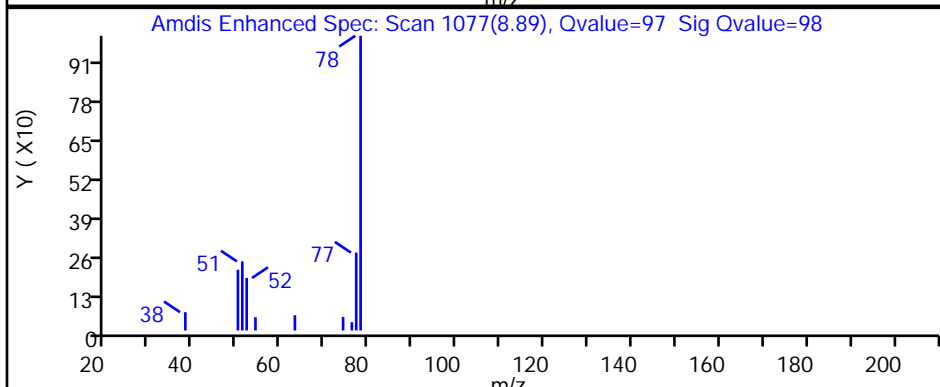
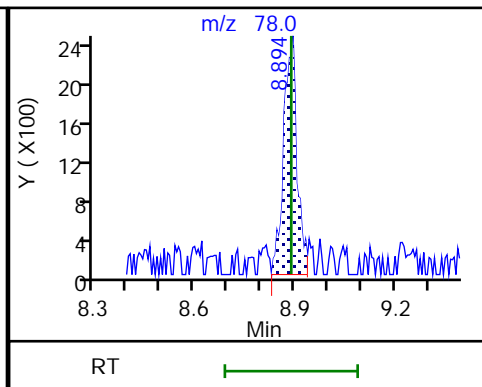
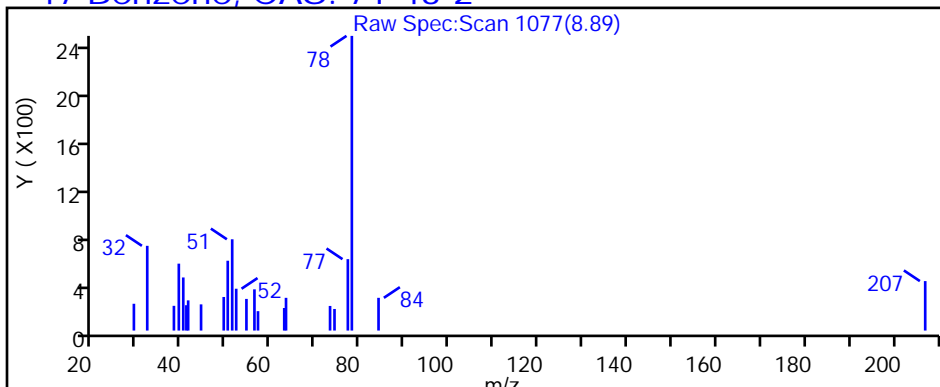
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P102Q.D

Injection Date: 26-Feb-2019 14:30:30

Instrument ID: MR

Lims ID: 140-14391-A-2

Lab Sample ID: 140-14391-2

Client ID: IA-102-C-26

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 6

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

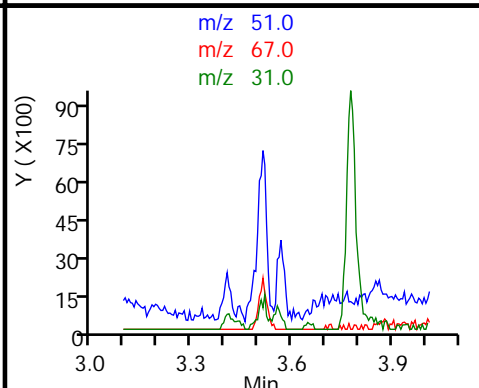
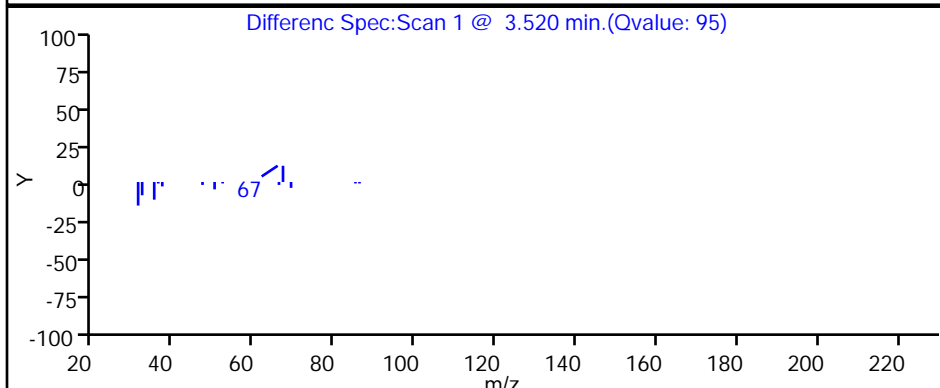
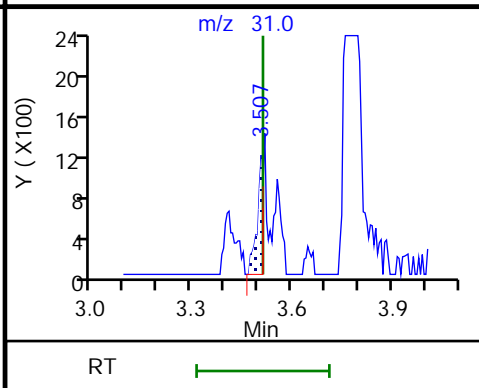
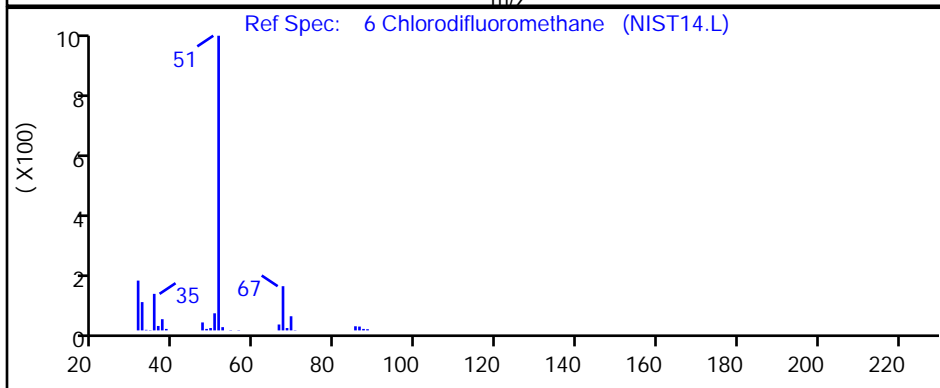
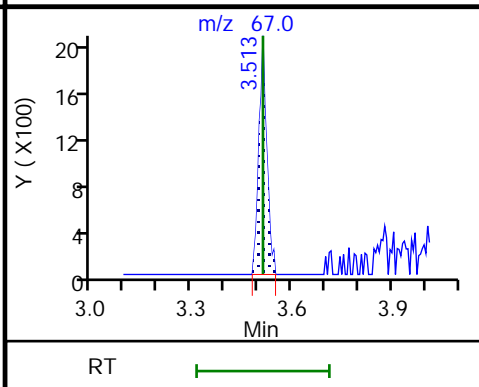
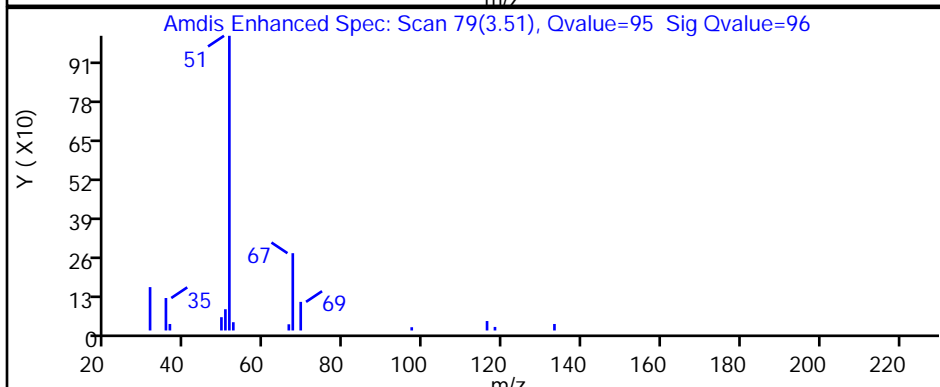
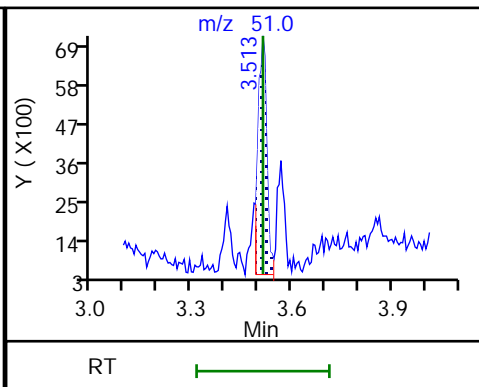
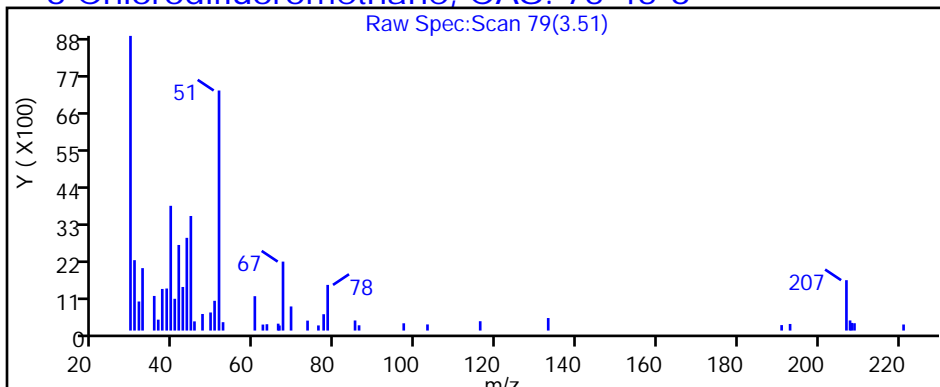
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P102Q.D

Injection Date: 26-Feb-2019 14:30:30

Instrument ID: MR

Lims ID: 140-14391-A-2

Lab Sample ID: 140-14391-2

Client ID: IA-102-C-26

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 6

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

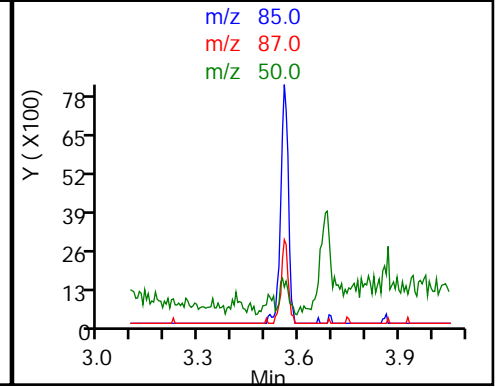
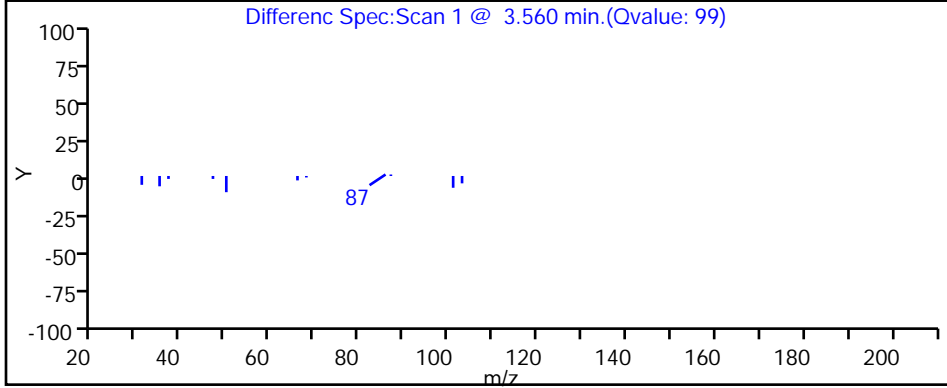
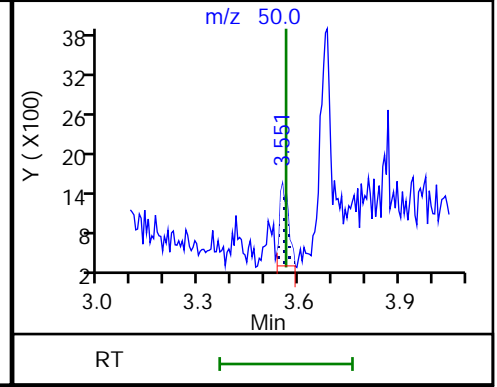
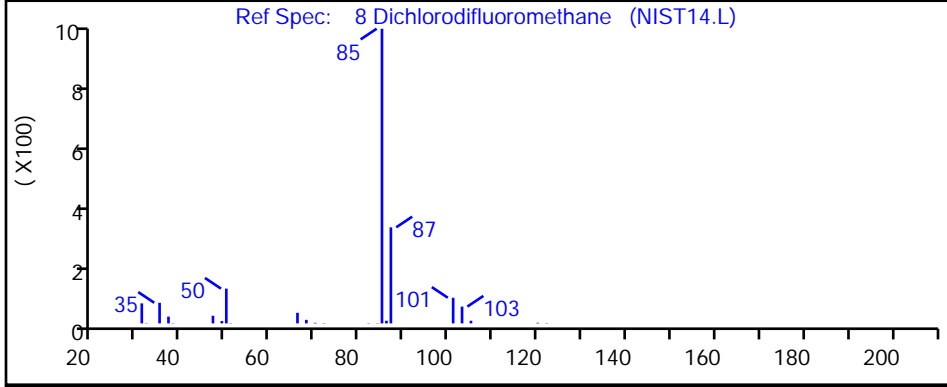
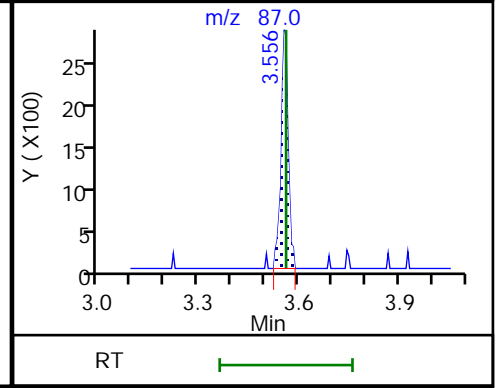
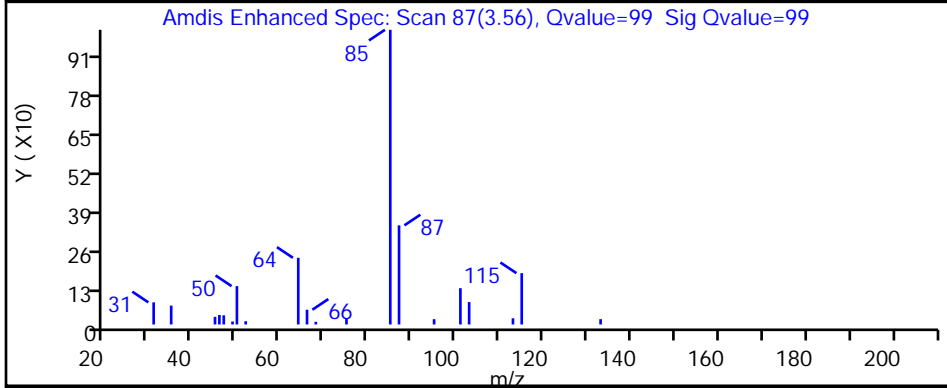
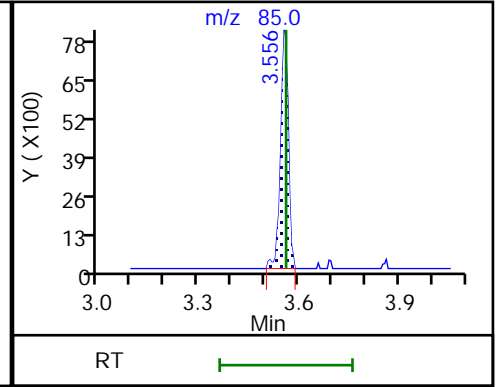
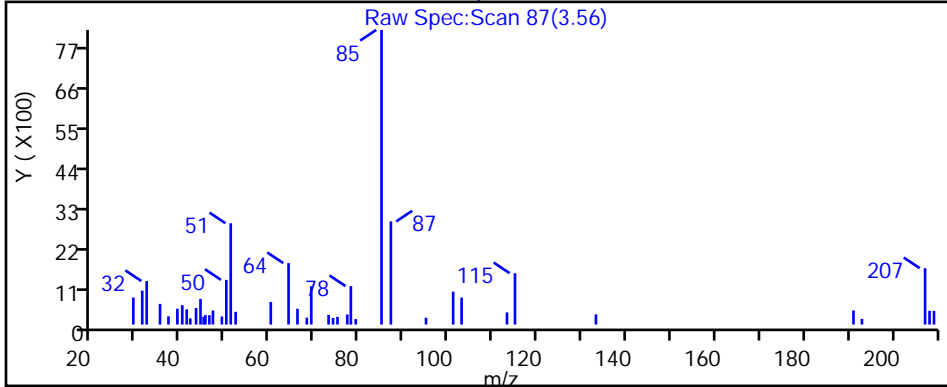
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P102Q.D

Injection Date: 26-Feb-2019 14:30:30

Instrument ID: MR

Lims ID: 140-14391-A-2

Lab Sample ID: 140-14391-2

Client ID: IA-102-C-26

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 6

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

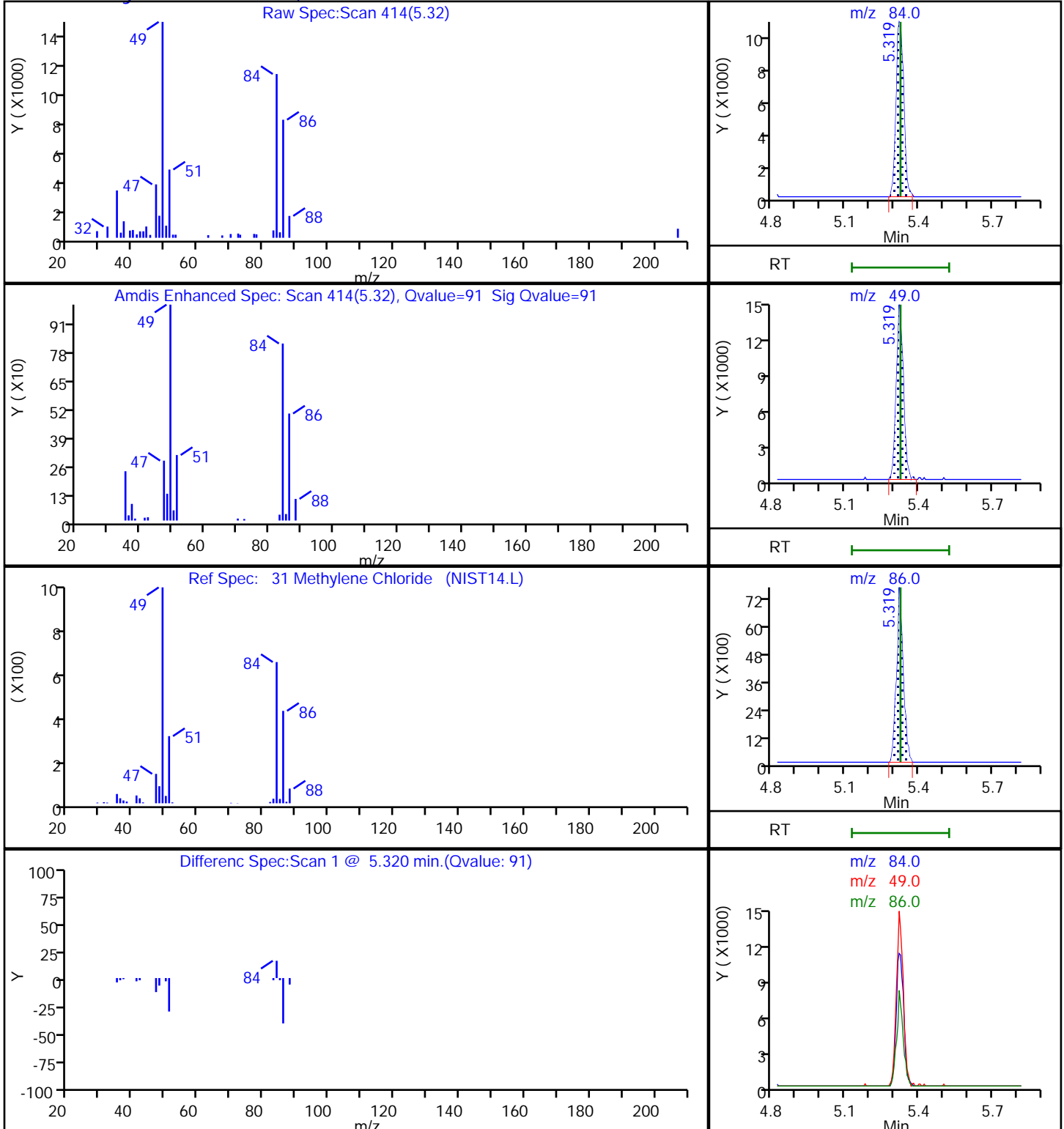
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P102Q.D

Injection Date: 26-Feb-2019 14:30:30

Instrument ID: MR

Lims ID: 140-14391-A-2

Lab Sample ID: 140-14391-2

Client ID: IA-102-C-26

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 6

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

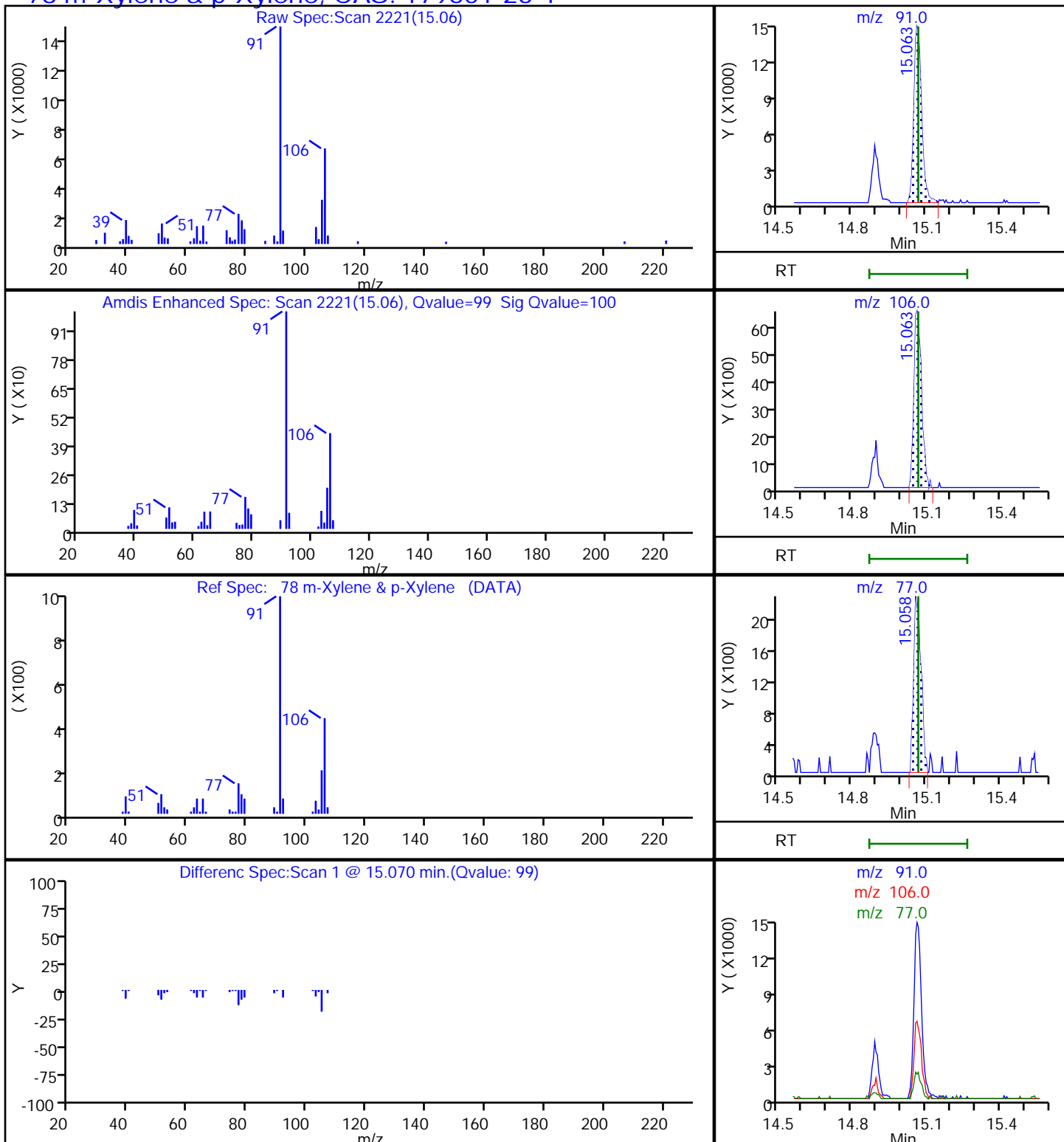
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P102Q.D

Injection Date: 26-Feb-2019 14:30:30

Instrument ID: MR

Lims ID: 140-14391-A-2

Lab Sample ID: 140-14391-2

Client ID: IA-102-C-26

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 6

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

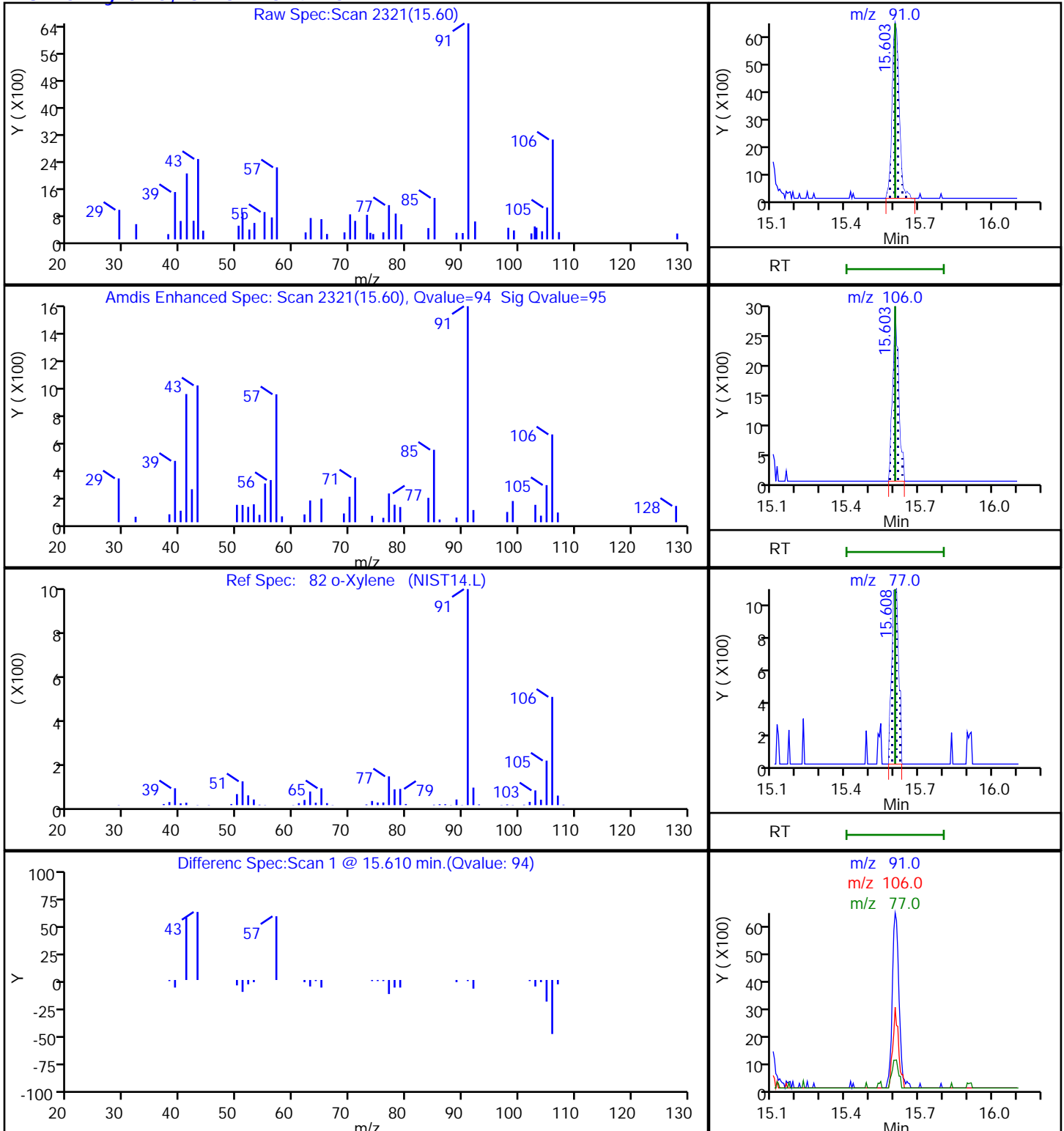
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



TestAmerica Knoxville

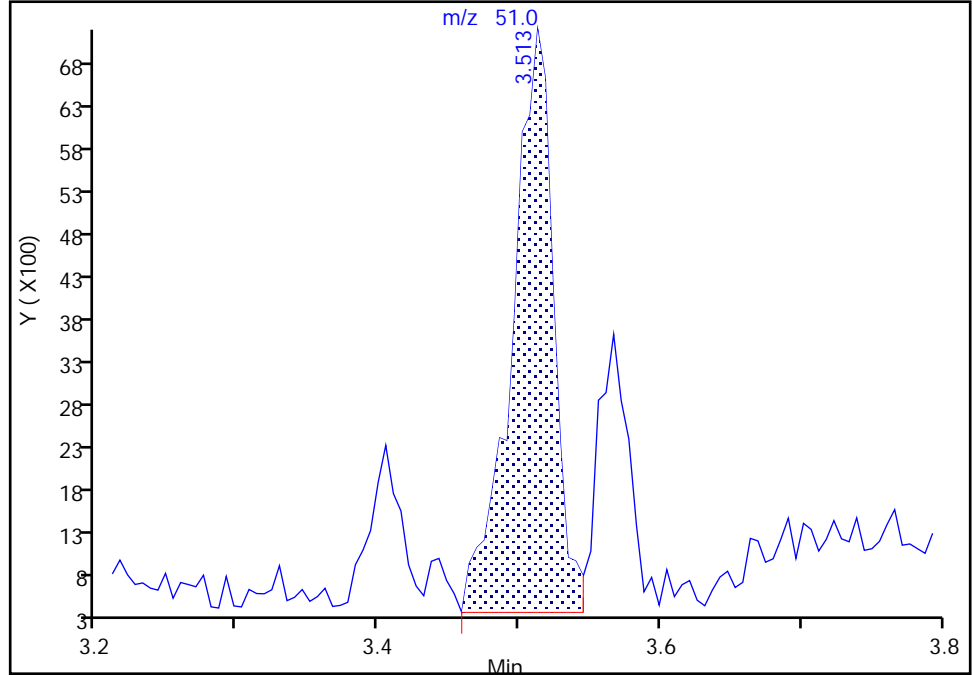
Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P102Q.D
Injection Date: 26-Feb-2019 14:30:30 Instrument ID: MR
Lims ID: 140-14391-A-2 Lab Sample ID: 140-14391-2
Client ID: IA-102-C-26
Operator ID: ALS Bottle#: 2 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

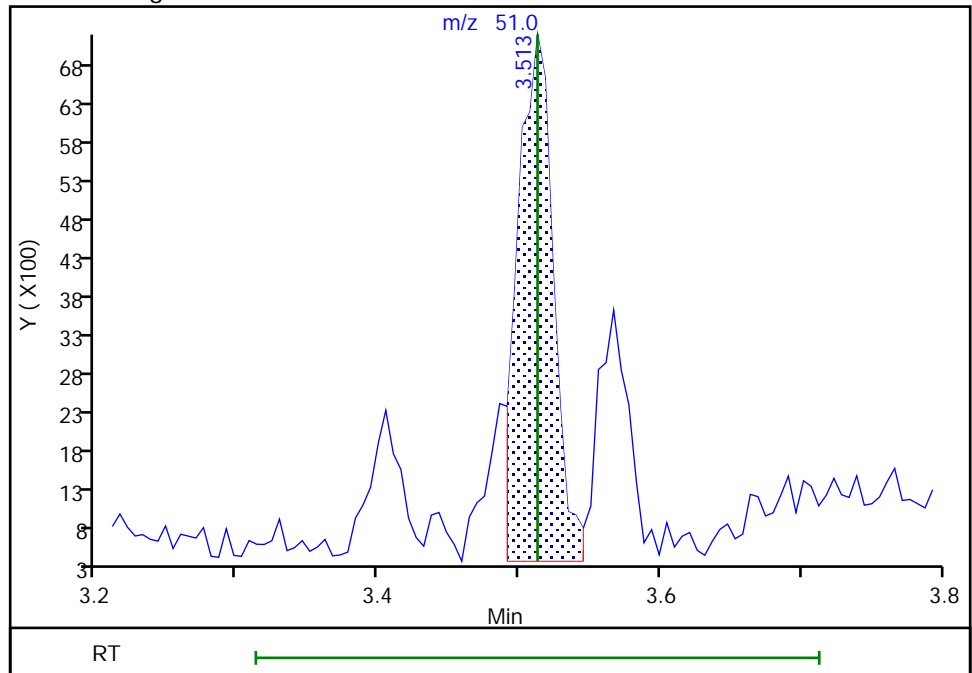
RT: 3.51
Area: 14069
Amount: 0.113974
Amount Units: ppb v/v

Processing Integration Results



RT: 3.51
Area: 12235
Amount: 0.099117
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 16:44:42

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-155-C-26 Lab Sample ID: 140-14391-3
 Matrix: Air Lab File ID: RB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:08
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.43		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.27	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.85	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.80		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-155-C-26 Lab Sample ID: 140-14391-3
 Matrix: Air Lab File ID: RB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:08
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P103.D
 Lims ID: 140-14391-A-3
 Client ID: IA-155-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 15:31:30 ALS Bottle#: 3 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-007
 Misc. Info.: 140-14391-a-3
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:53:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.384	0.001	71	208708	4.00	
* 2 1,4-Difluorobenzene	114	9.444	9.450	-0.006	95	1228572	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.502	0.000	90	1073711	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.228	0.000	95	906068	3.97	
6 Chlorodifluoromethane	51	3.518	3.513	0.005	95	10558	0.0853	
8 Dichlorodifluoromethane	85	3.556	3.564	-0.005	99	12474	0.0549	
31 Methylene Chloride	84	5.325	5.325	0.000	87	11862	0.1699	
47 Benzene	78	8.884	8.889	-0.005	85	6731	0.0336	
65 Toluene	91	12.416	12.416	0.000	91	25173	0.0978	
78 m-Xylene & p-Xylene	91	15.063	15.069	-0.006	97	36202	0.1190	
82 o-Xylene	91	15.603	15.602	0.000	96	13307	0.0416	
S 121 Xylenes, Total	100				0		0.1606	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P103.D

Injection Date: 26-Feb-2019 15:31:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-3

Lab Sample ID: 140-14391-3

Worklist Smp#: 7

Client ID: IA-155-C-26

Purge Vol: 500.000 mL

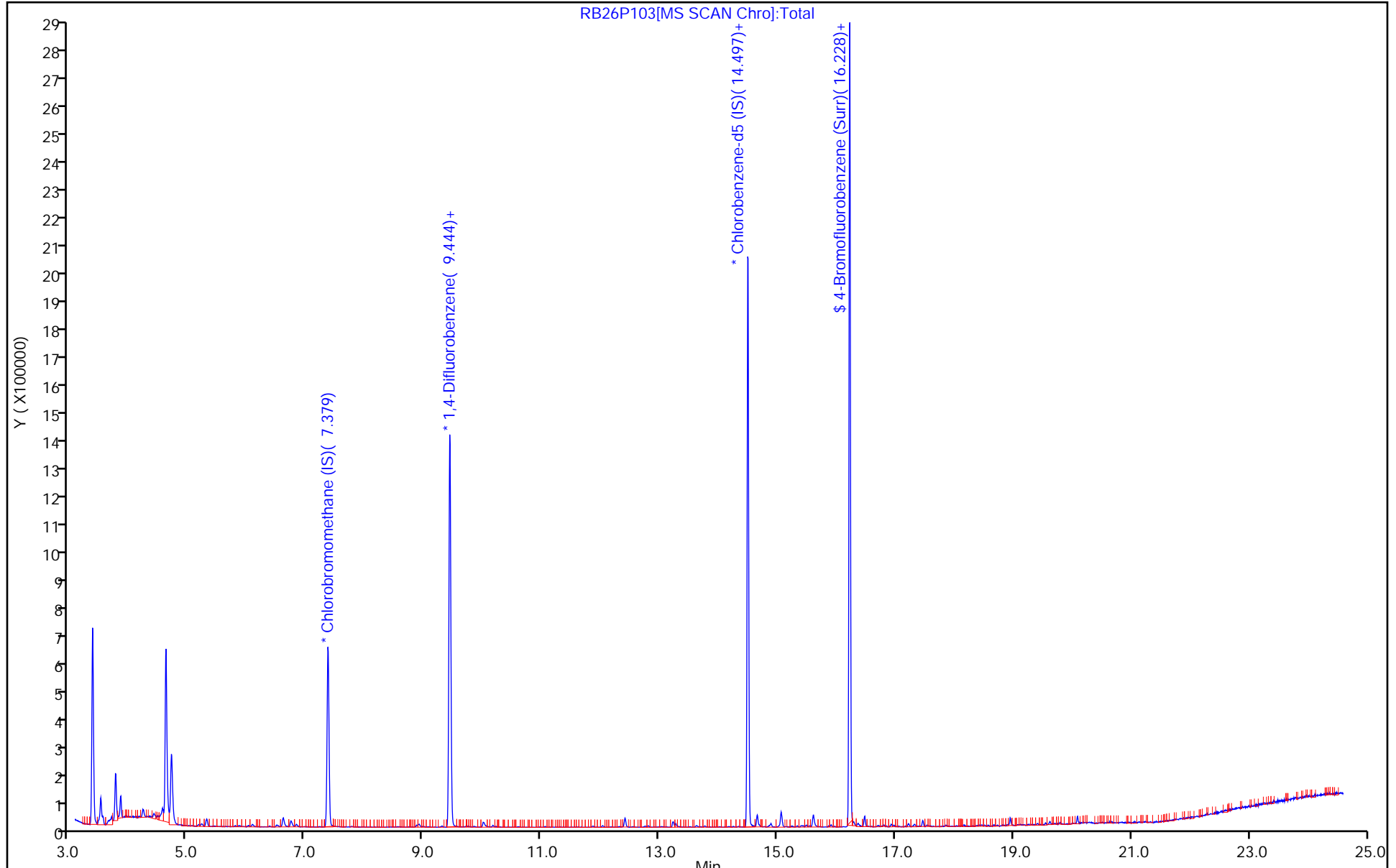
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P103.D
 Lims ID: 140-14391-A-3
 Client ID: IA-155-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 15:31:30 ALS Bottle#: 3 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-007
 Misc. Info.: 140-14391-a-3
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:53:19

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.97	99.21

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P103.D

Injection Date: 26-Feb-2019 15:31:30

Instrument ID: MR

Lims ID: 140-14391-A-3

Lab Sample ID: 140-14391-3

Client ID: IA-155-C-26

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

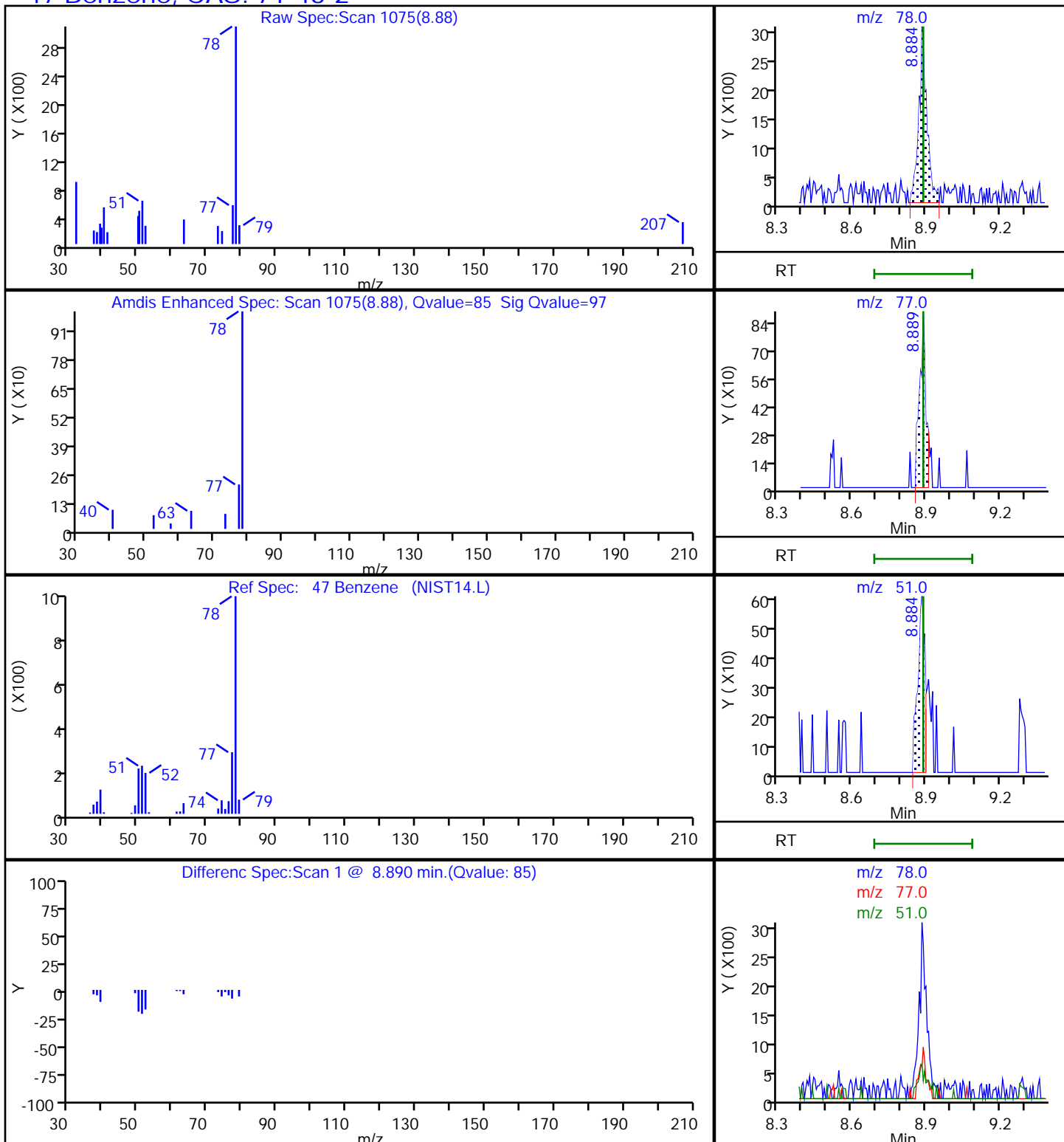
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P103.D

Injection Date: 26-Feb-2019 15:31:30

Instrument ID: MR

Lims ID: 140-14391-A-3

Lab Sample ID: 140-14391-3

Client ID: IA-155-C-26

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

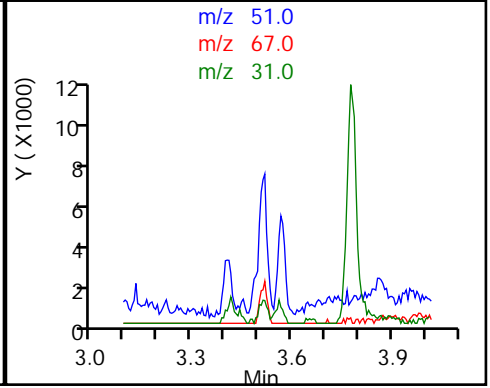
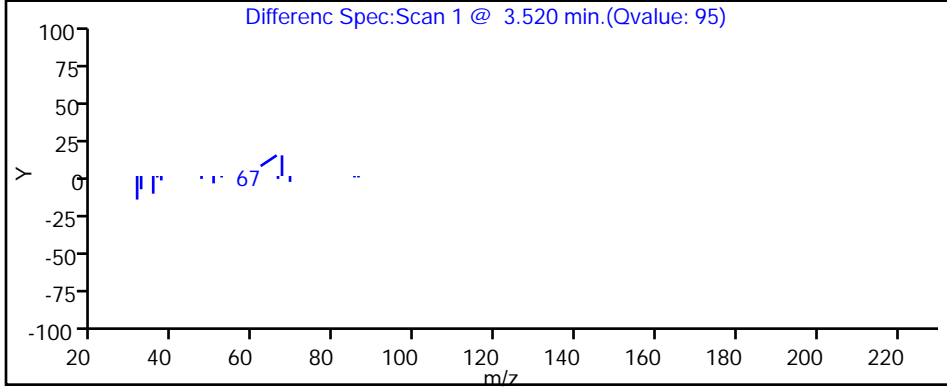
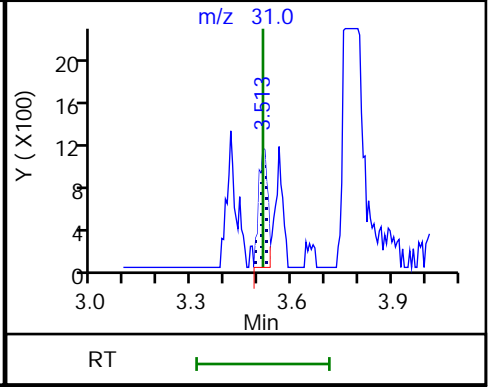
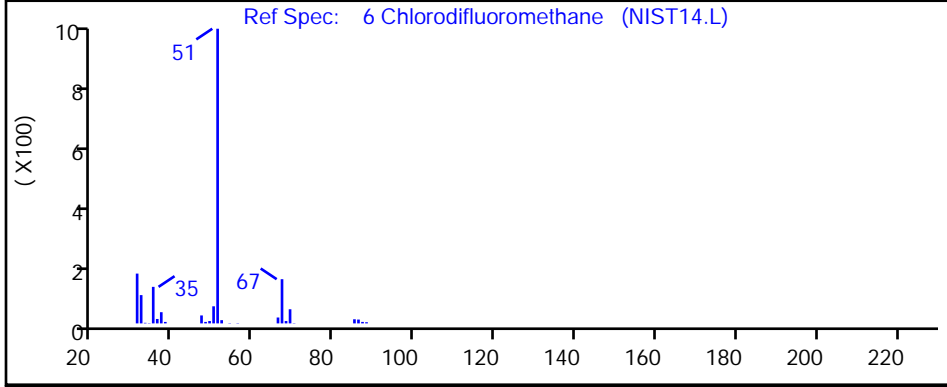
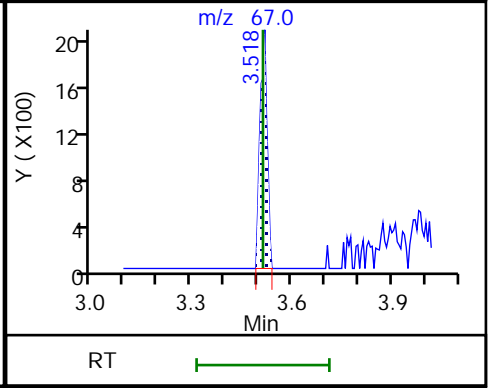
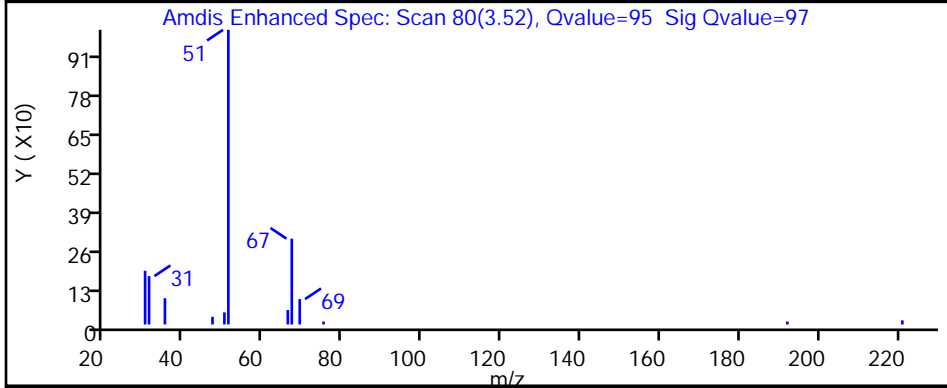
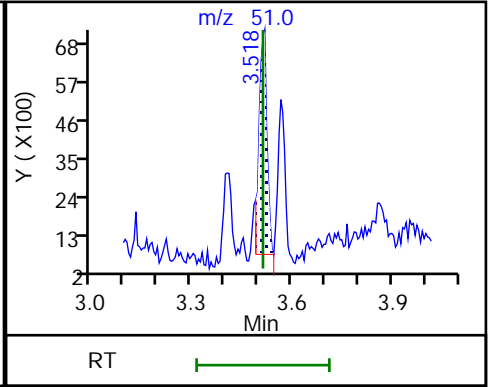
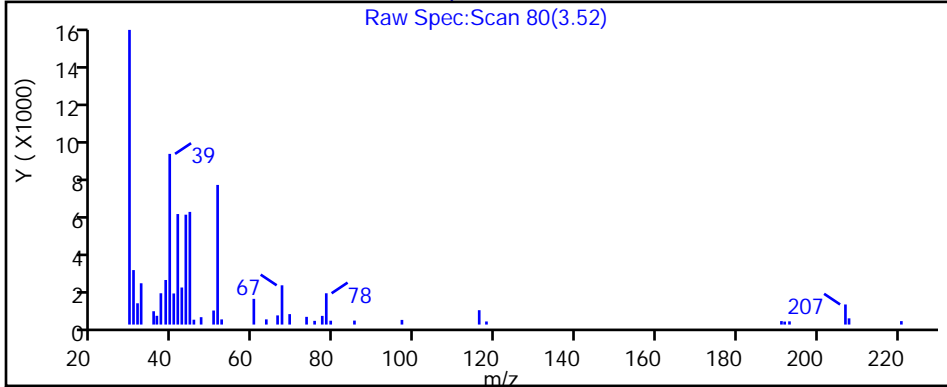
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P103.D

Injection Date: 26-Feb-2019 15:31:30

Instrument ID: MR

Lims ID: 140-14391-A-3

Lab Sample ID: 140-14391-3

Client ID: IA-155-C-26

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

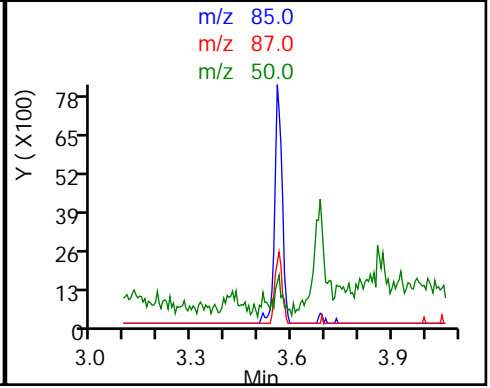
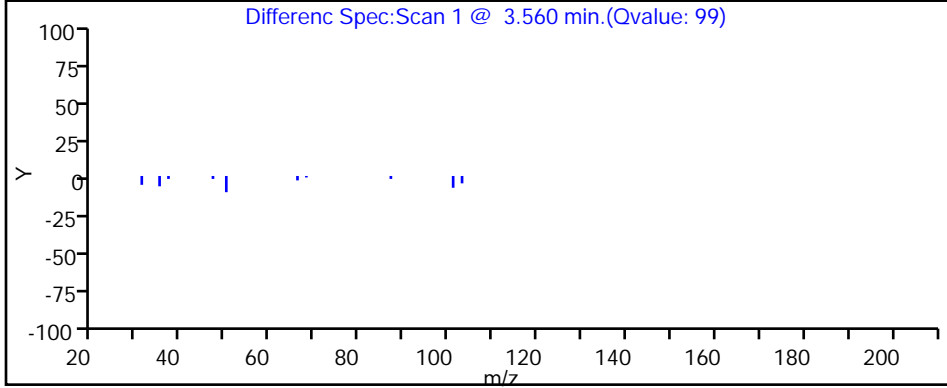
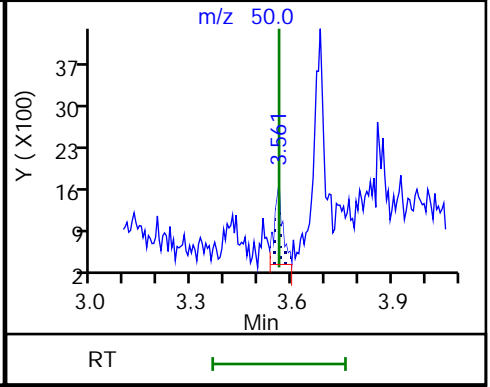
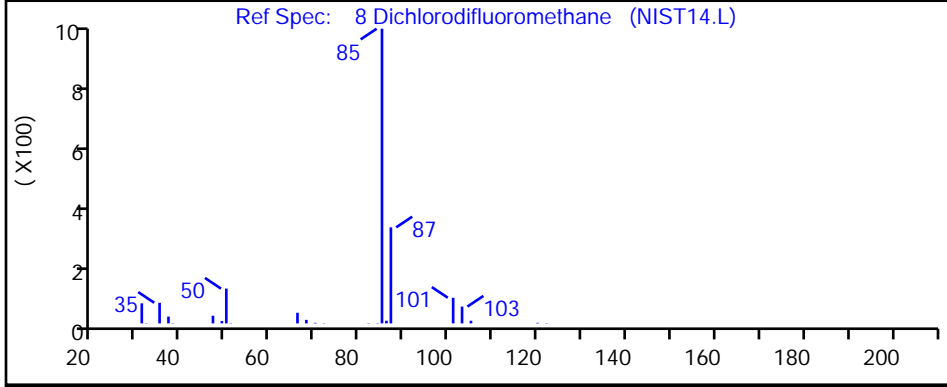
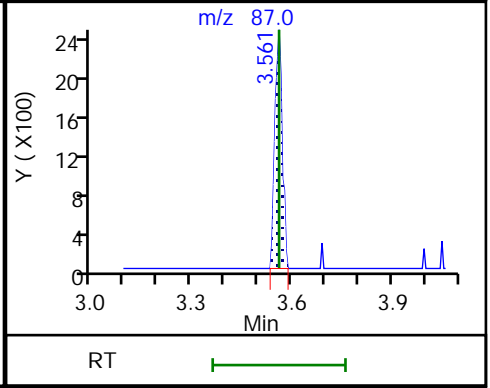
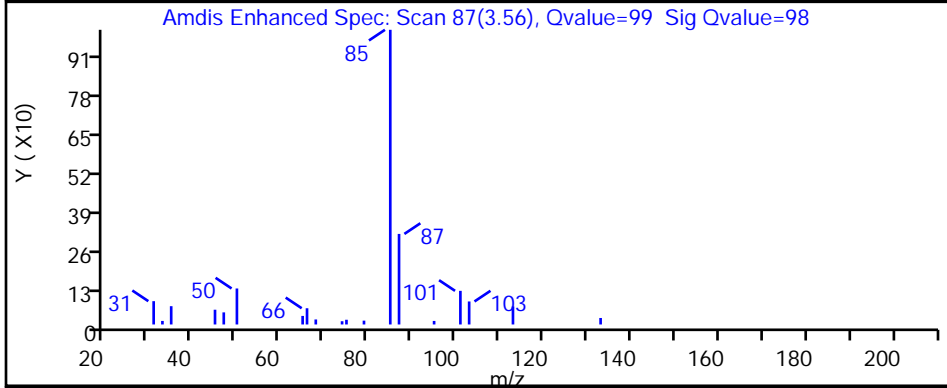
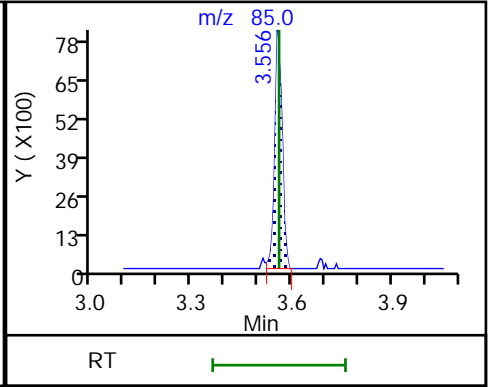
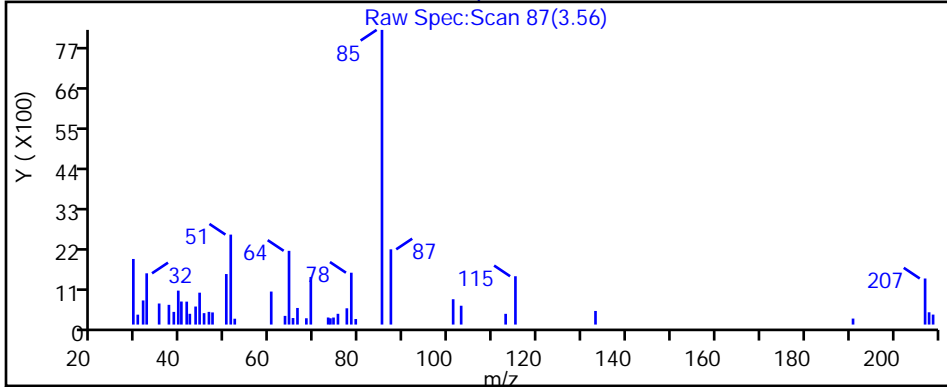
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P103.D

Injection Date: 26-Feb-2019 15:31:30

Instrument ID: MR

Lims ID: 140-14391-A-3

Lab Sample ID: 140-14391-3

Client ID: IA-155-C-26

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

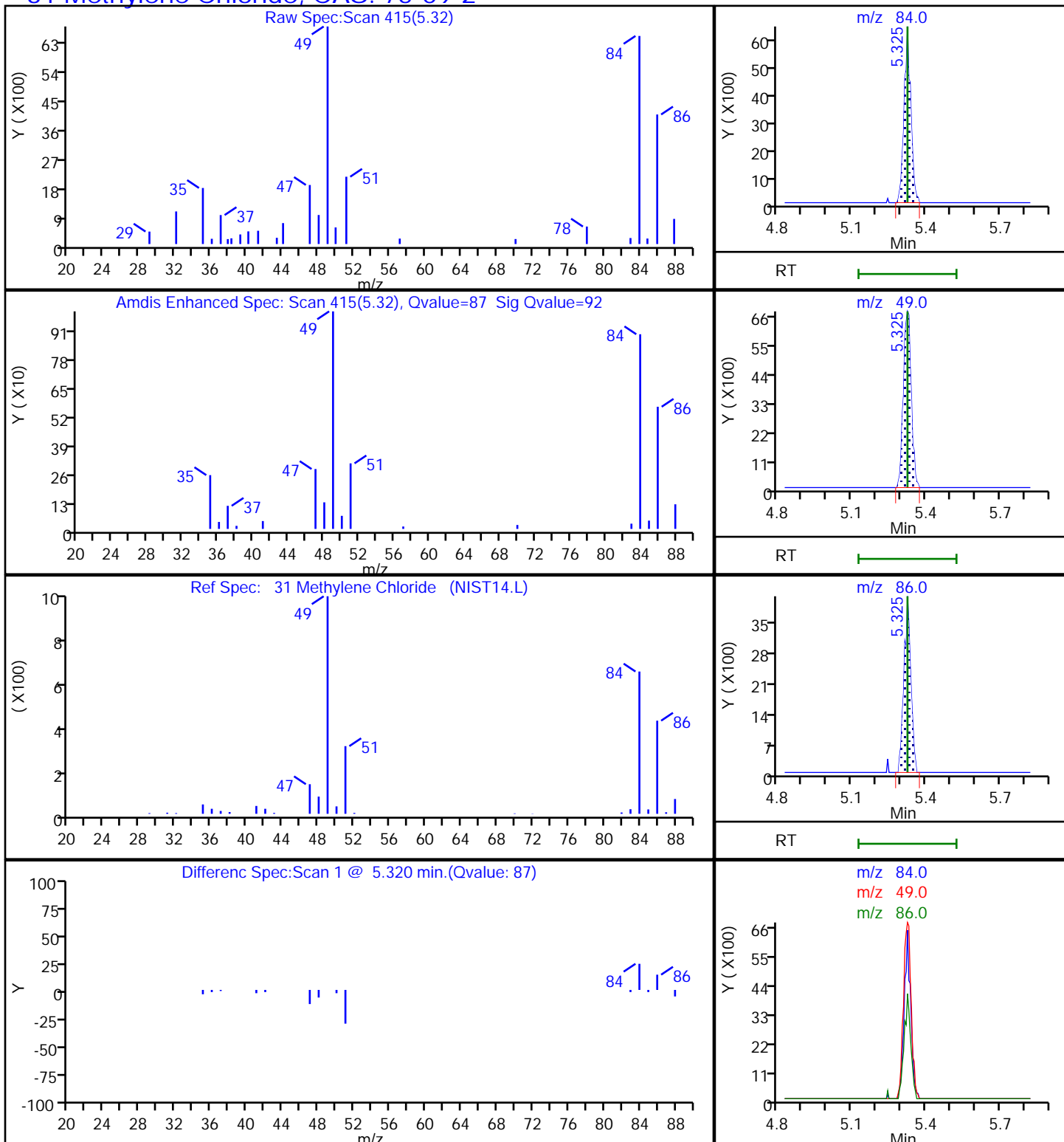
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P103.D

Injection Date: 26-Feb-2019 15:31:30

Instrument ID: MR

Lims ID: 140-14391-A-3

Lab Sample ID: 140-14391-3

Client ID: IA-155-C-26

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

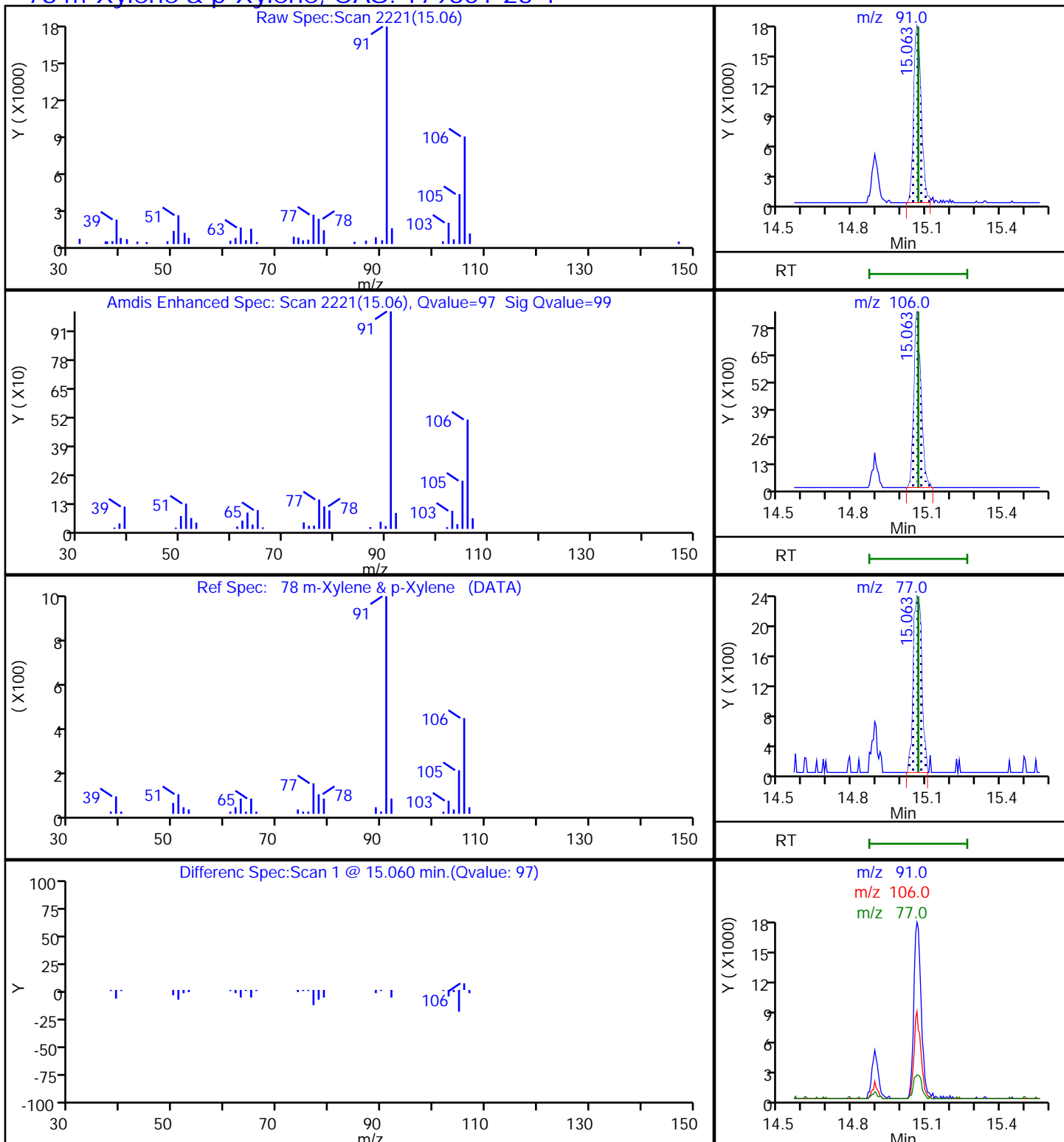
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P103.D

Injection Date: 26-Feb-2019 15:31:30

Instrument ID: MR

Lims ID: 140-14391-A-3

Lab Sample ID: 140-14391-3

Client ID: IA-155-C-26

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

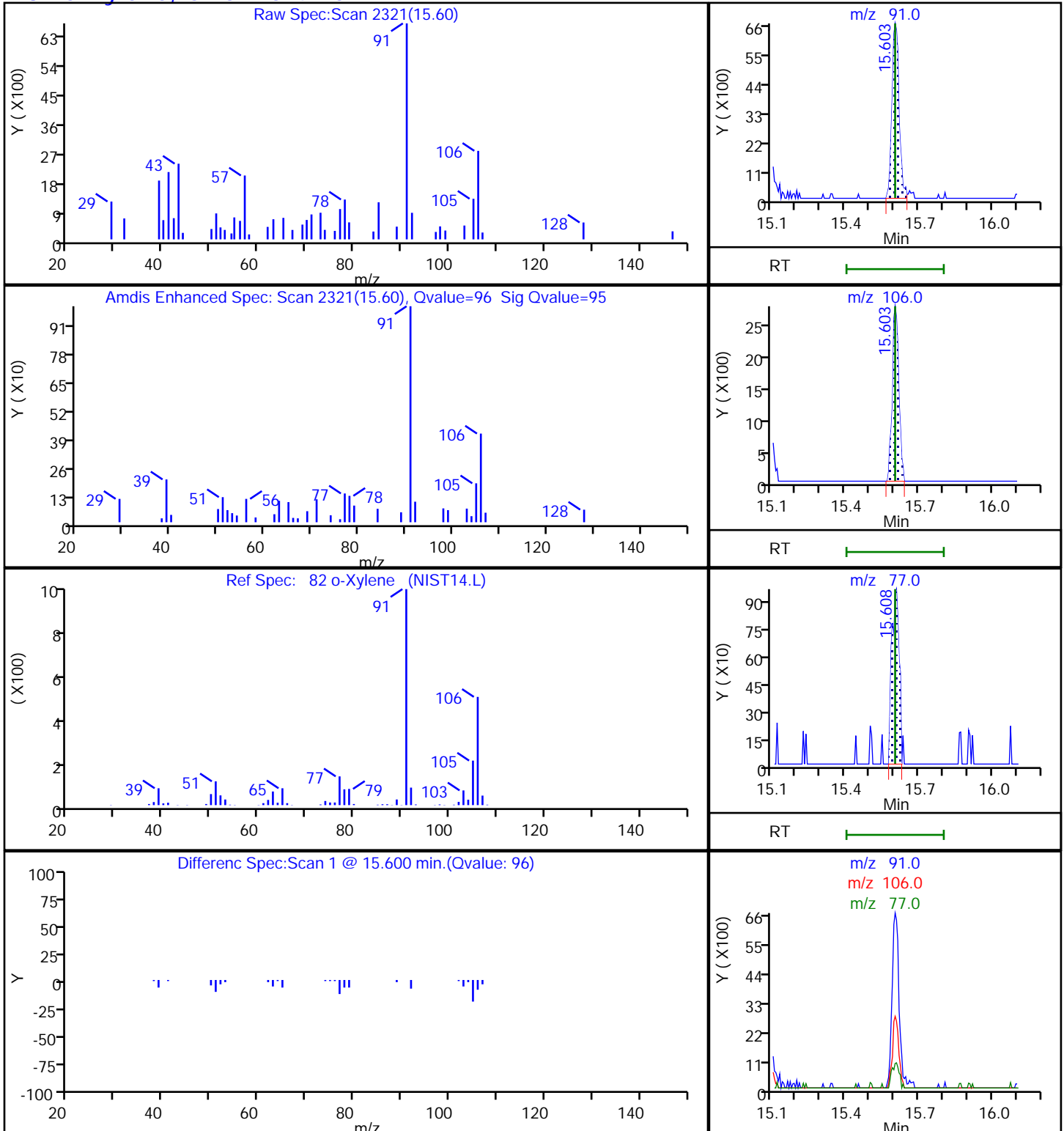
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-133-C-26 Lab Sample ID: 140-14391-4
 Matrix: Air Lab File ID: RB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:09
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.27	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.72	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-133-C-26 Lab Sample ID: 140-14391-4
 Matrix: Air Lab File ID: RB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:09
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P104.D
 Lims ID: 140-14391-A-4
 Client ID: IA-133-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 16:20:30 ALS Bottle#: 4 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-008
 Misc. Info.: 140-14391-a-4
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:06:54 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:54:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.384	-0.005	72	202020	4.00	
* 2 1,4-Difluorobenzene	114	9.444	9.450	-0.006	95	1187994	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.497	14.502	-0.005	90	1031290	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.223	16.222	-0.005	89	869646	3.97	
6 Chlorodifluoromethane	51	3.513	3.513	0.000	95	10100	0.0843	M
8 Dichlorodifluoromethane	85	3.556	3.561	-0.005	99	11929	0.0543	
31 Methylene Chloride	84	5.319	5.325	-0.006	93	10835	0.1603	
47 Benzene	78	8.884	8.889	-0.005	96	6798	0.0351	
65 Toluene	91	12.416	12.411	0.000	93	25298	0.1024	
78 m-Xylene & p-Xylene	91	15.069	15.063	0.000	99	31263	0.1070	
82 o-Xylene	91	15.603	15.597	0.001	93	11819	0.0385	
S 121 Xylenes, Total	100				0		0.1455	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P104.D

Injection Date: 26-Feb-2019 16:20:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-4

Lab Sample ID: 140-14391-4

Worklist Smp#: 8

Client ID: IA-133-C-26

Purge Vol: 500.000 mL

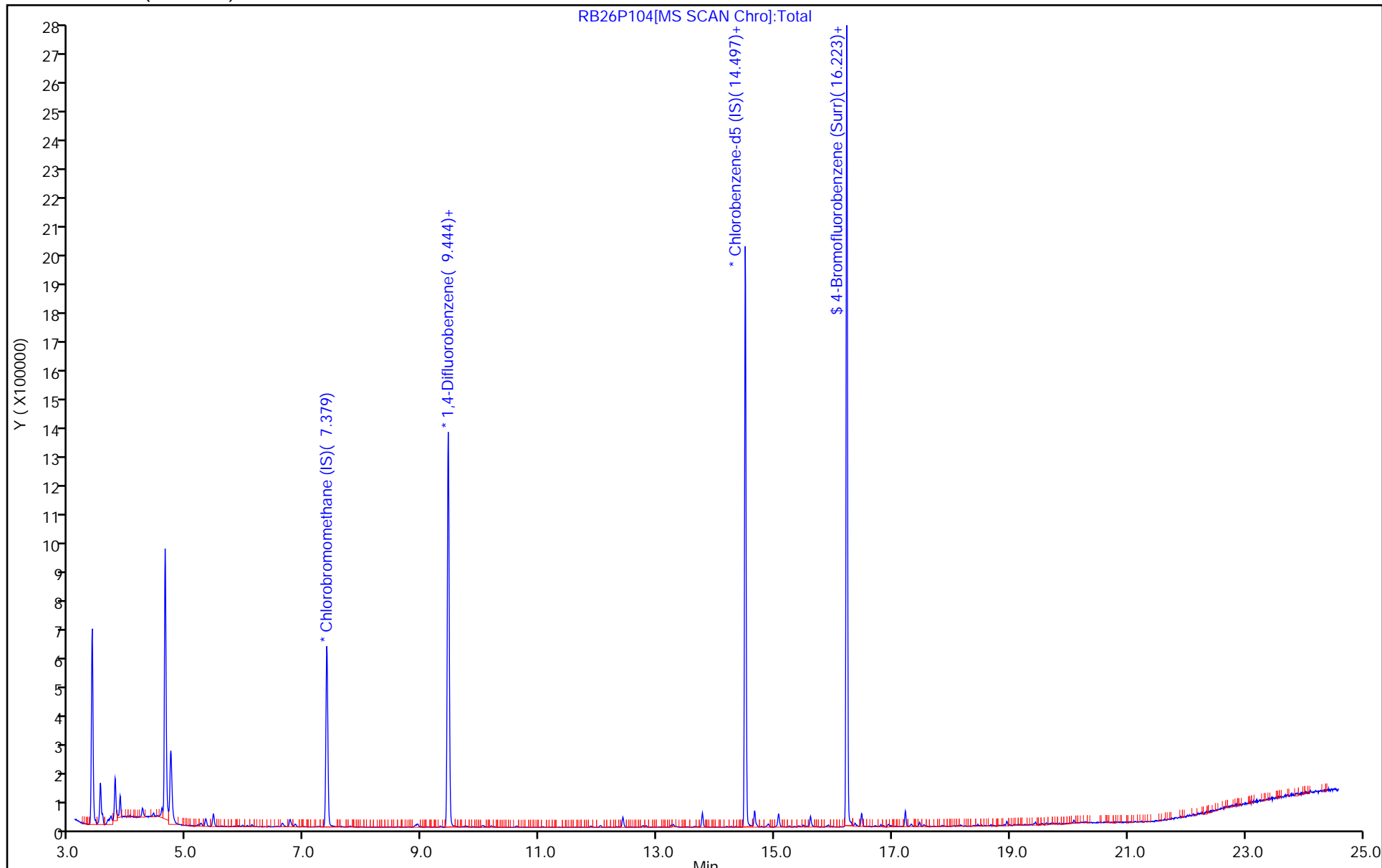
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P104.D
 Lims ID: 140-14391-A-4
 Client ID: IA-133-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 16:20:30 ALS Bottle#: 4 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-008
 Misc. Info.: 140-14391-a-4
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:06:54 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:54:07

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.97	99.14

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P104.D

Injection Date: 26-Feb-2019 16:20:30

Instrument ID: MR

Lims ID: 140-14391-A-4

Lab Sample ID: 140-14391-4

Client ID: IA-133-C-26

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

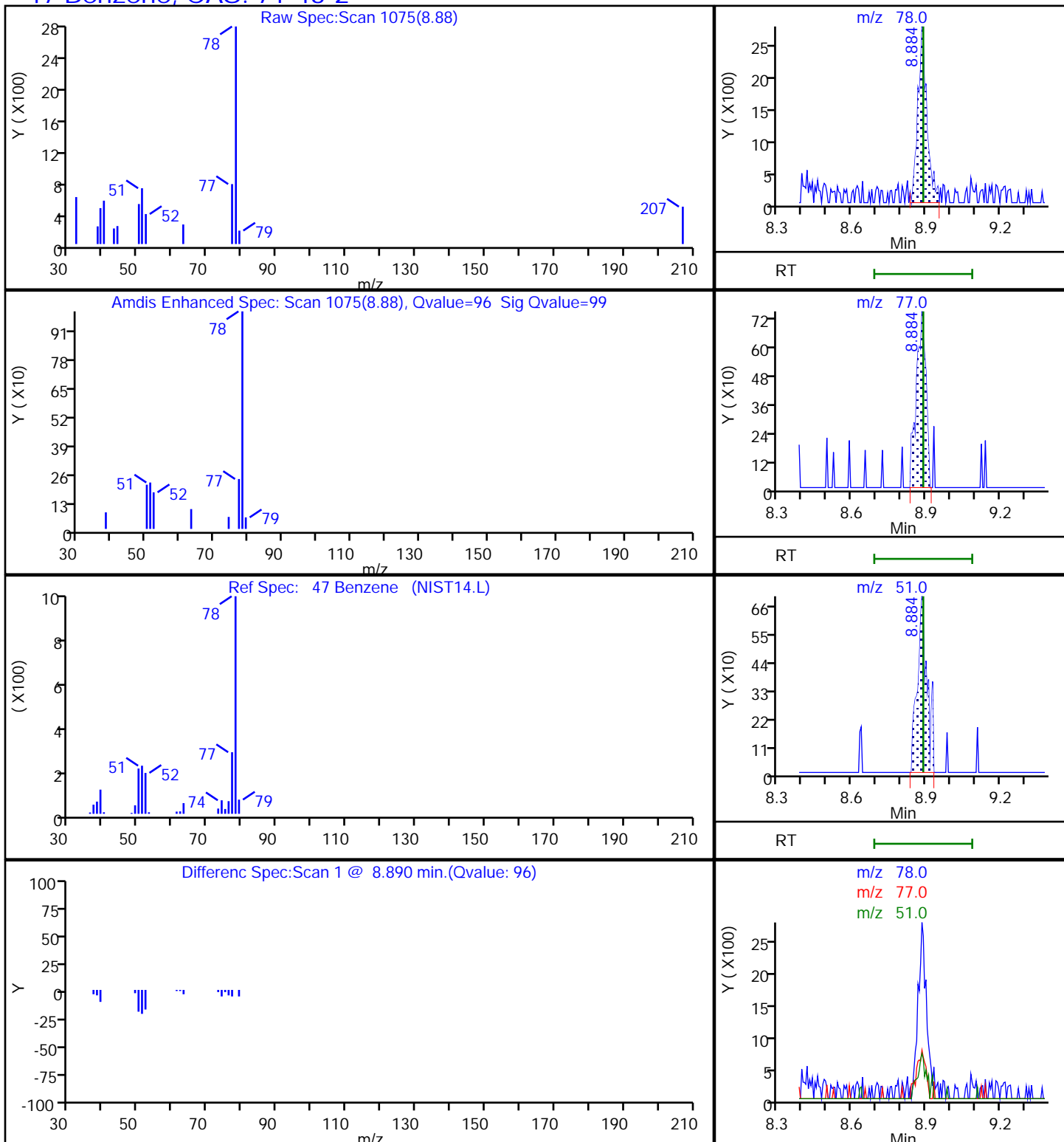
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P104.D

Injection Date: 26-Feb-2019 16:20:30

Instrument ID: MR

Lims ID: 140-14391-A-4

Lab Sample ID: 140-14391-4

Client ID: IA-133-C-26

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

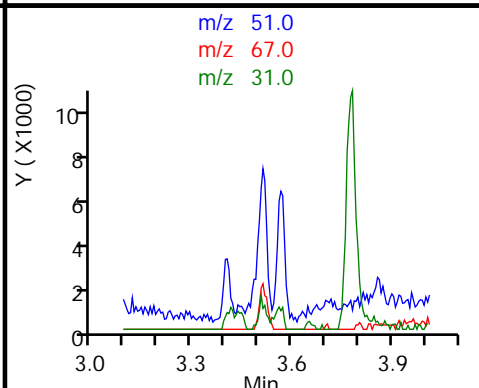
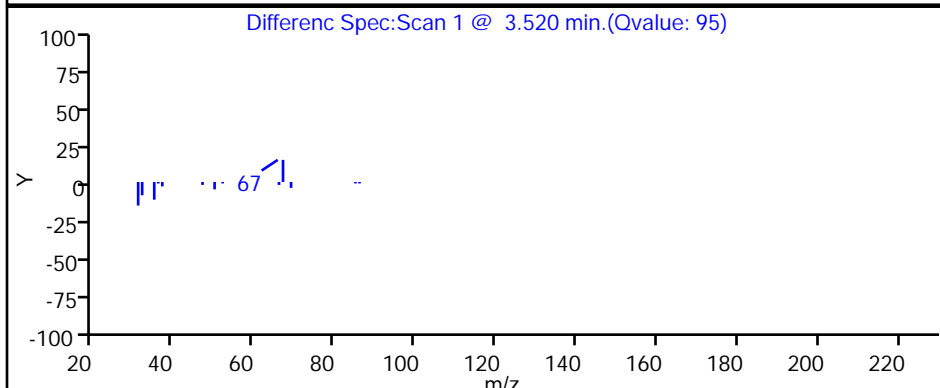
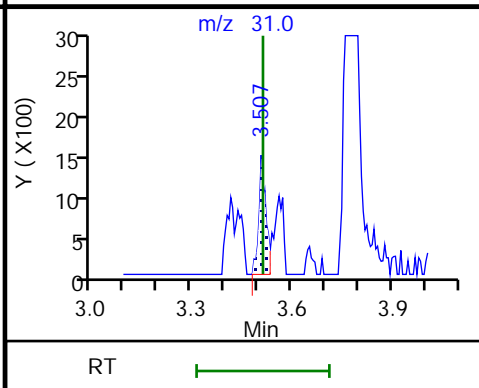
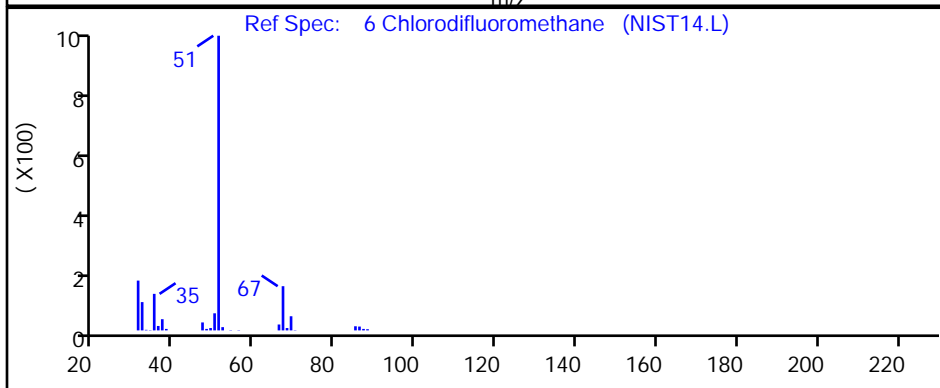
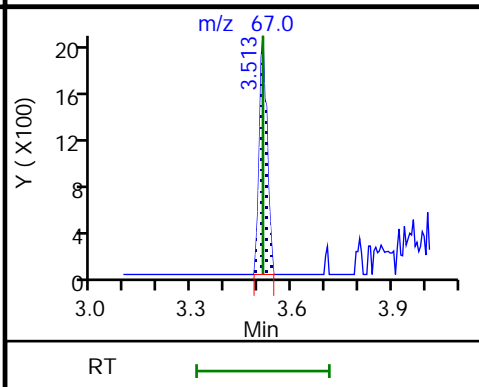
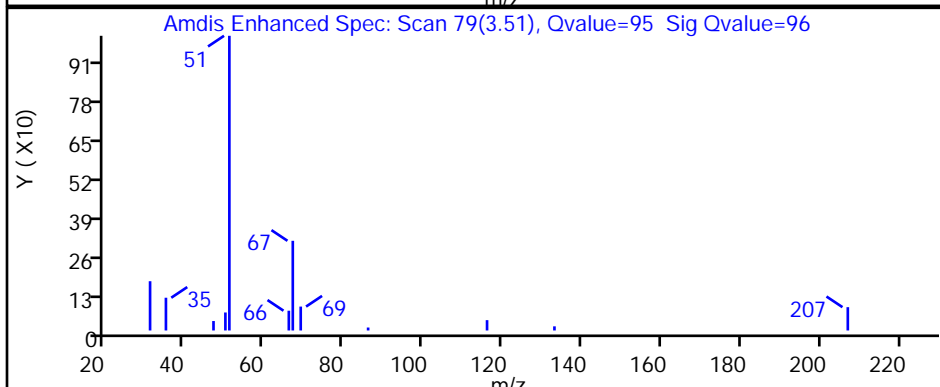
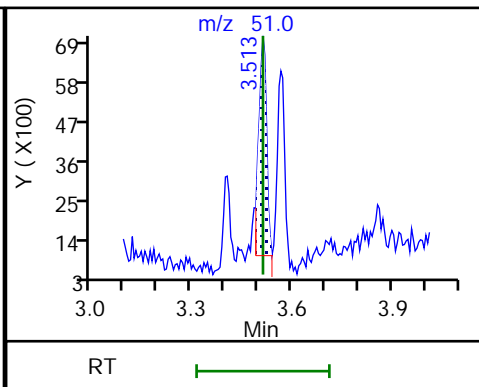
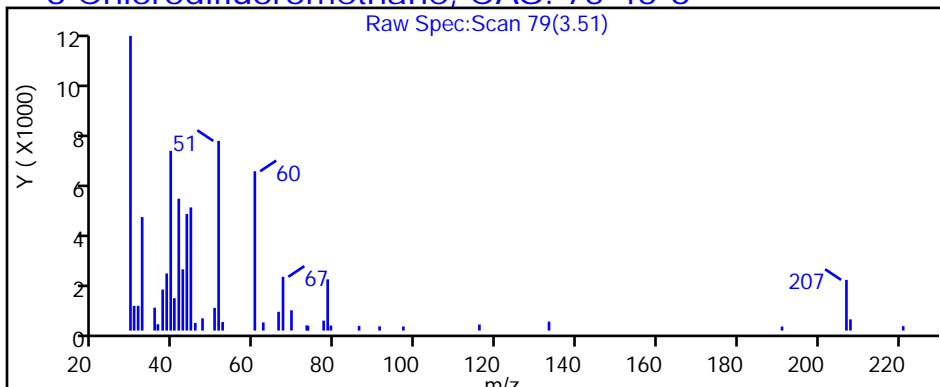
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P104.D

Injection Date: 26-Feb-2019 16:20:30

Instrument ID: MR

Lims ID: 140-14391-A-4

Lab Sample ID: 140-14391-4

Client ID: IA-133-C-26

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

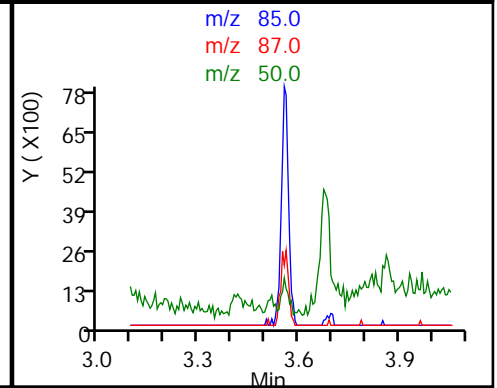
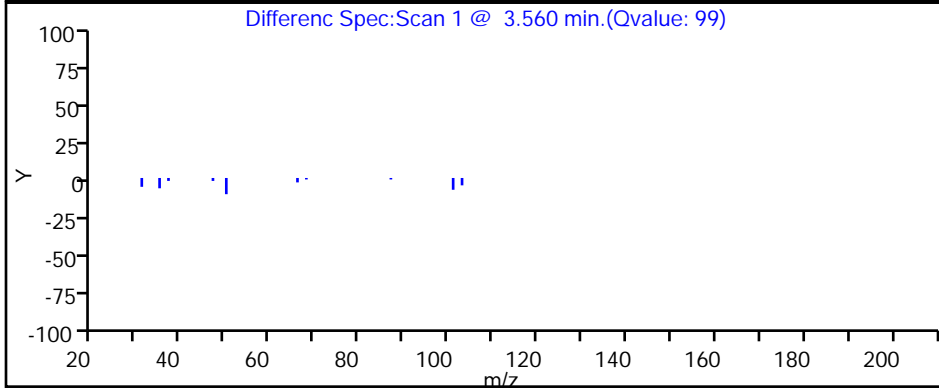
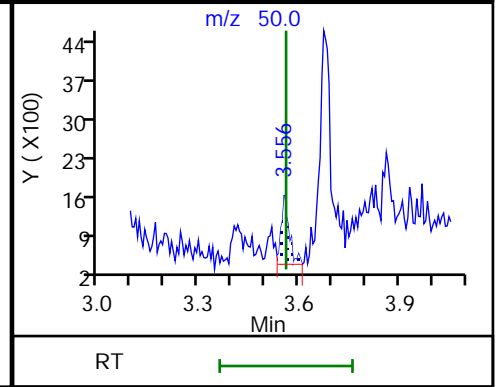
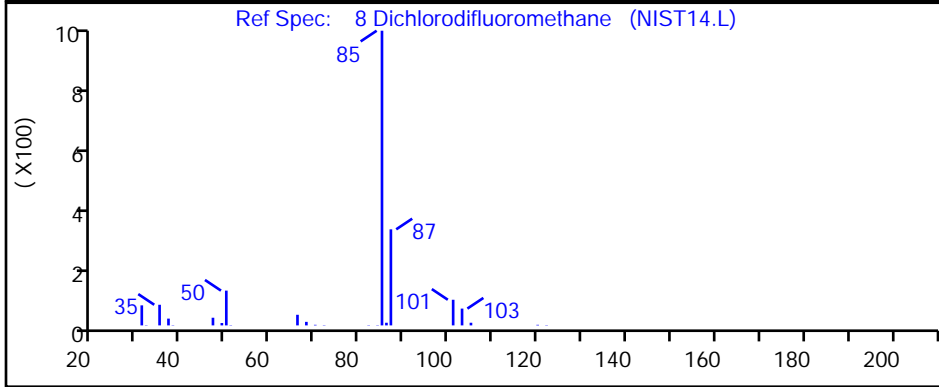
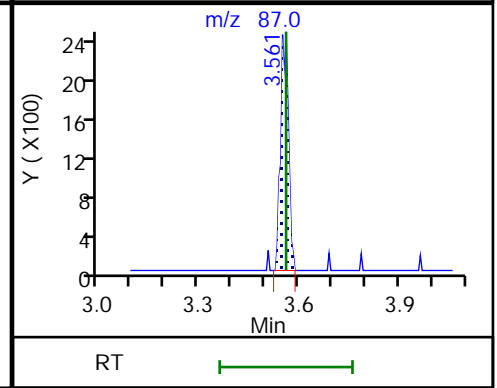
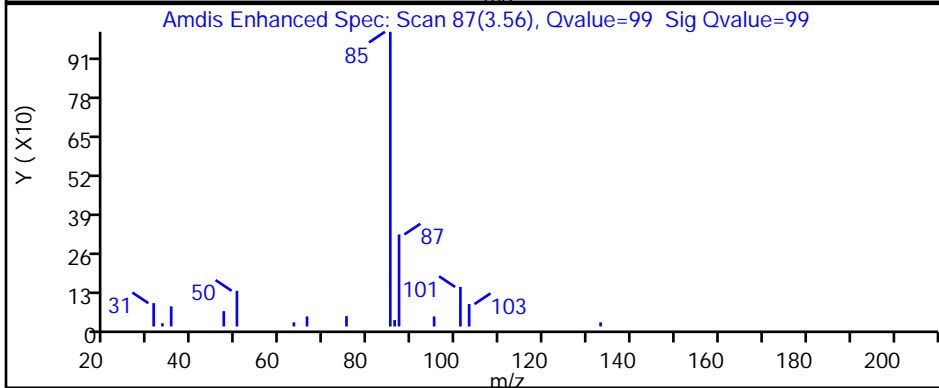
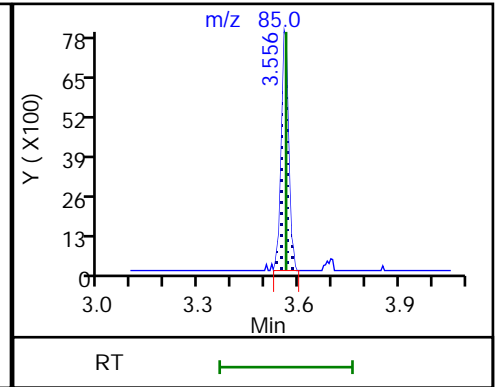
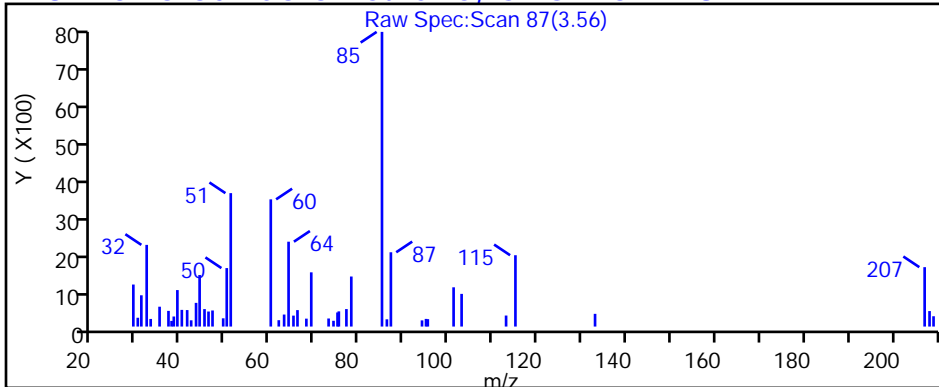
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P104.D

Injection Date: 26-Feb-2019 16:20:30

Instrument ID: MR

Lims ID: 140-14391-A-4

Lab Sample ID: 140-14391-4

Client ID: IA-133-C-26

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

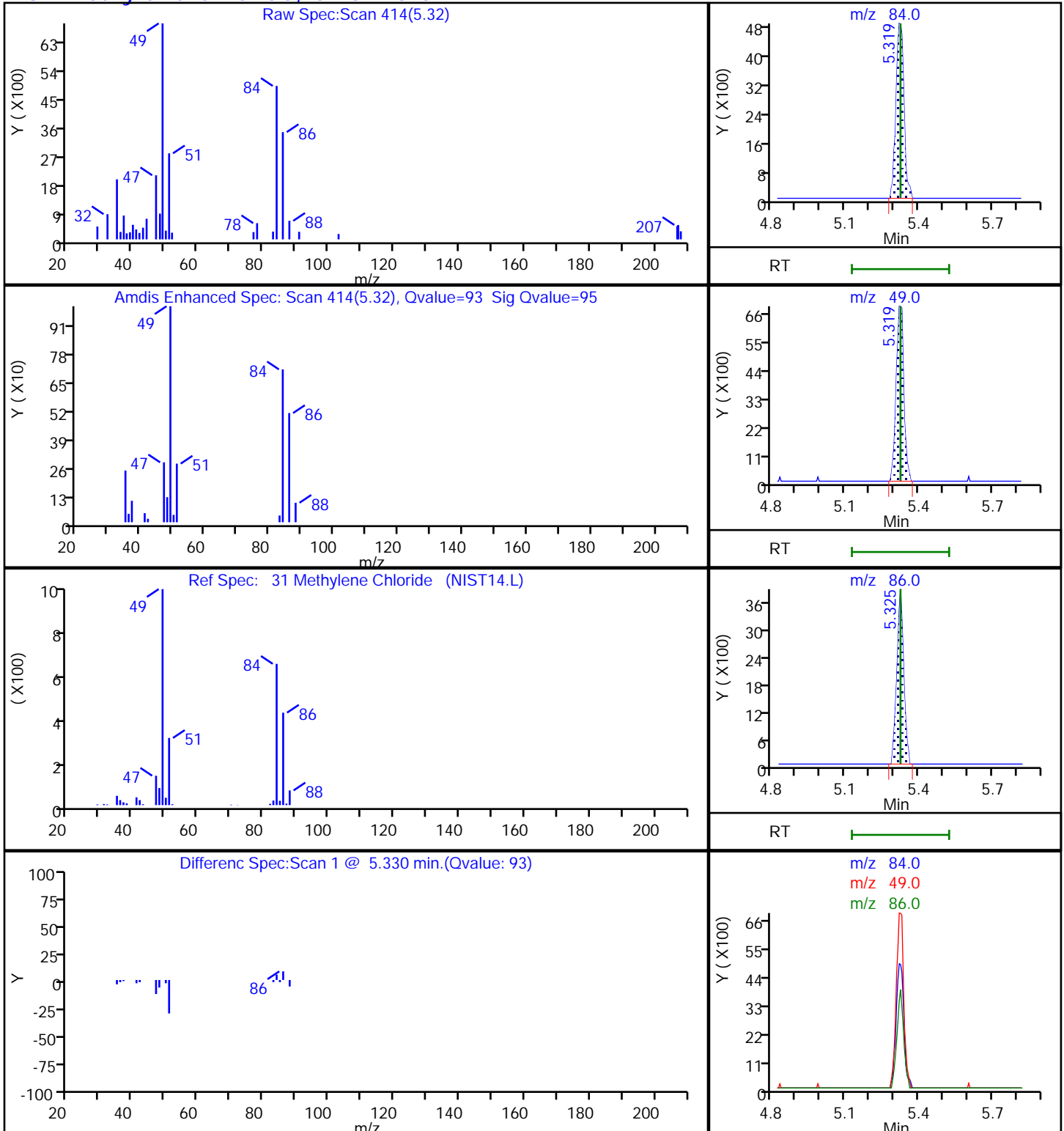
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P104.D

Injection Date: 26-Feb-2019 16:20:30

Instrument ID: MR

Lims ID: 140-14391-A-4

Lab Sample ID: 140-14391-4

Client ID: IA-133-C-26

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

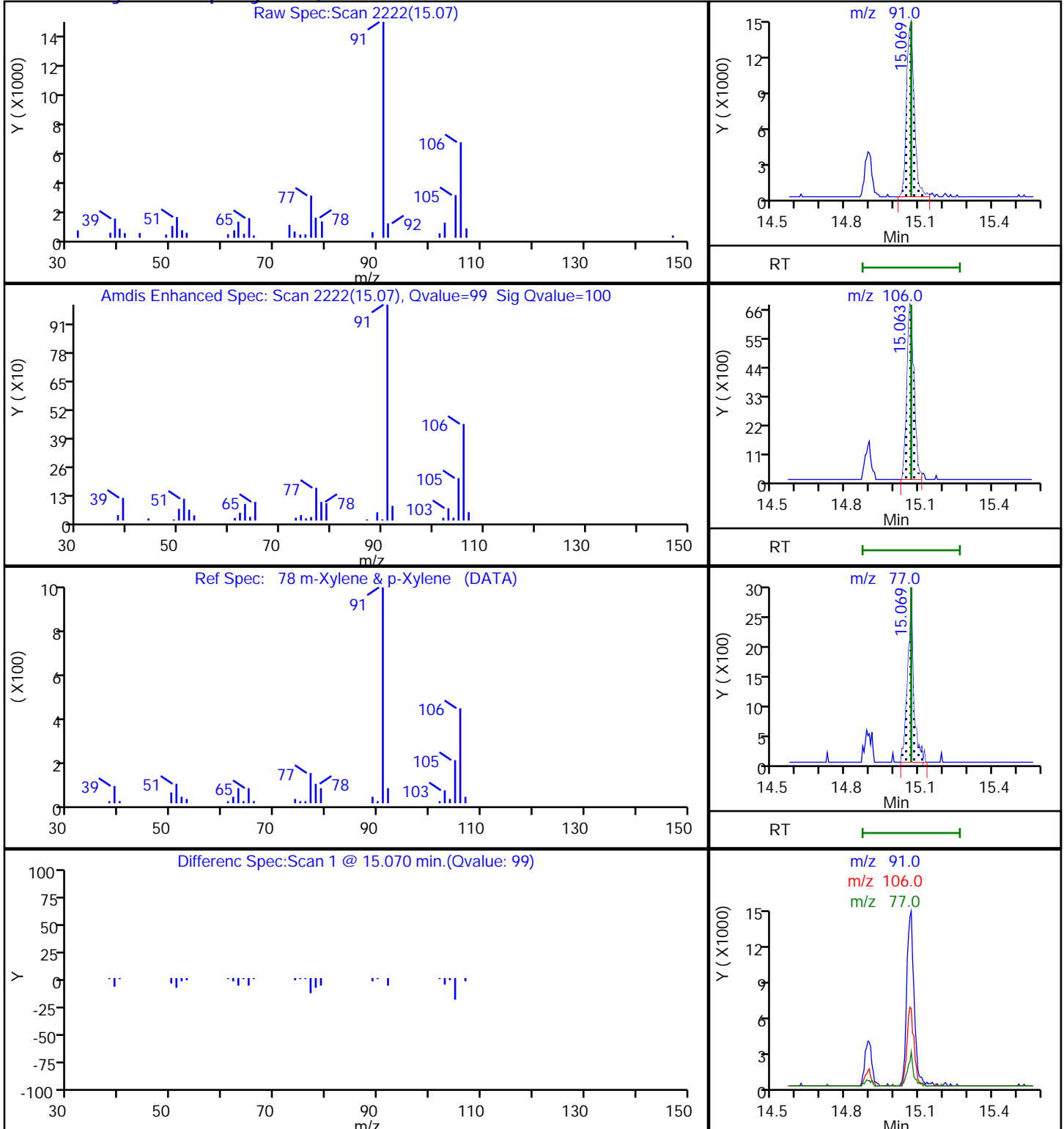
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P104.D

Injection Date: 26-Feb-2019 16:20:30

Instrument ID: MR

Lims ID: 140-14391-A-4

Lab Sample ID: 140-14391-4

Client ID: IA-133-C-26

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

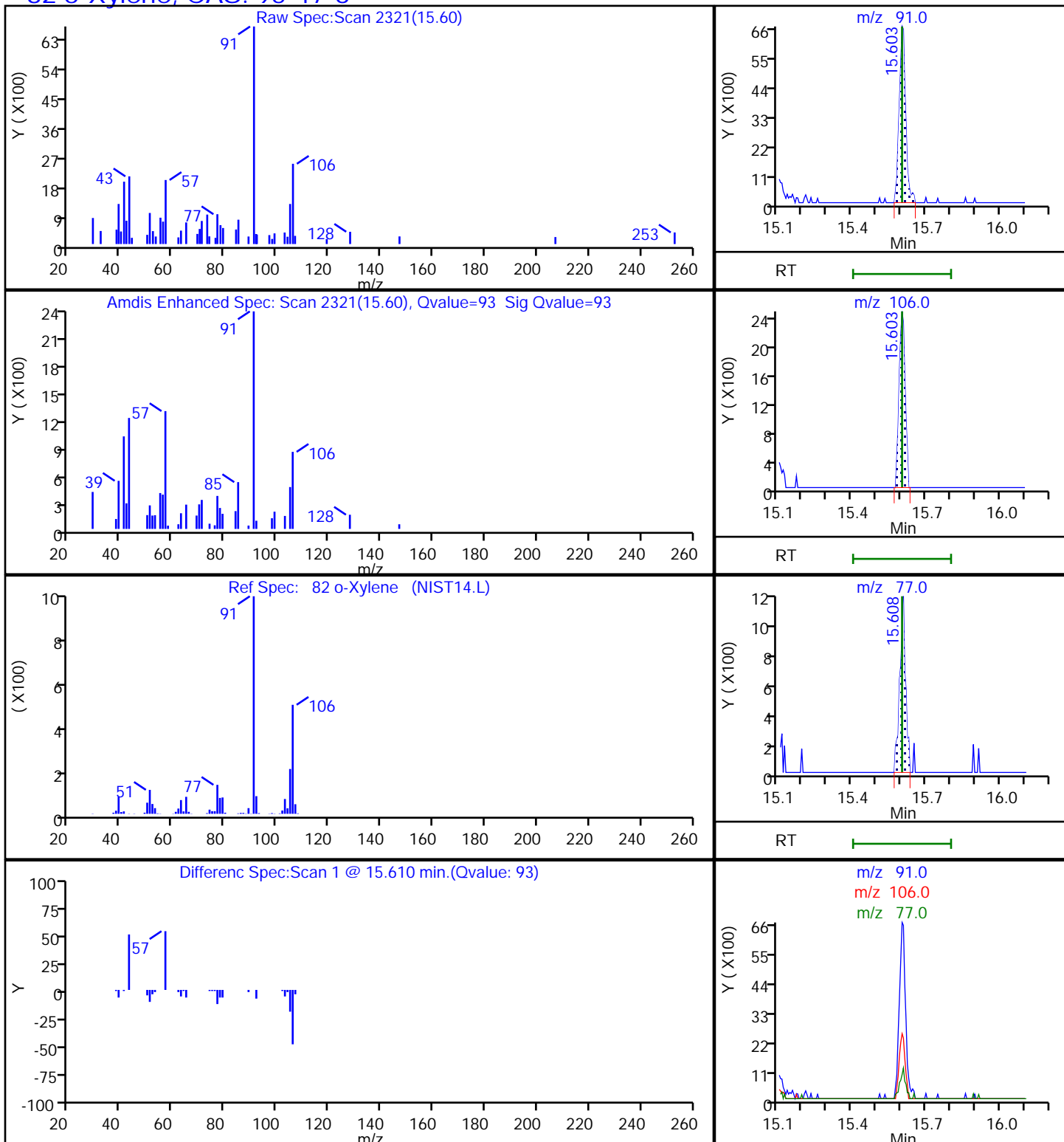
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



TestAmerica Knoxville

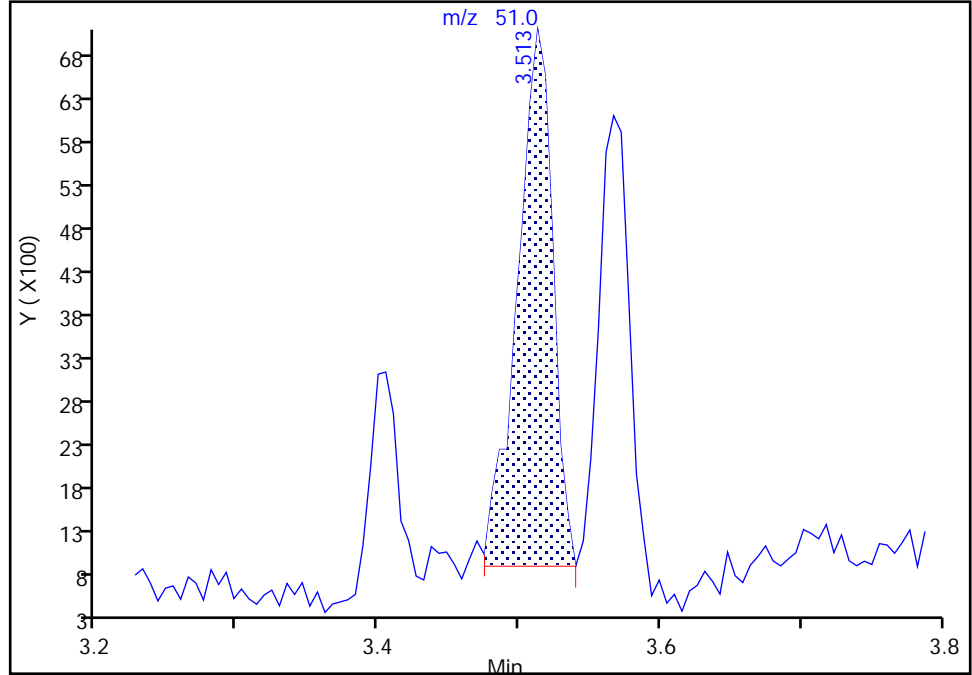
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Injection Date: 26-Feb-2019 16:20:30 Instrument ID: MR
Lims ID: 140-14391-A-4 Lab Sample ID: 140-14391-4
Client ID: IA-133-C-26
Operator ID: ALS Bottle#: 4 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

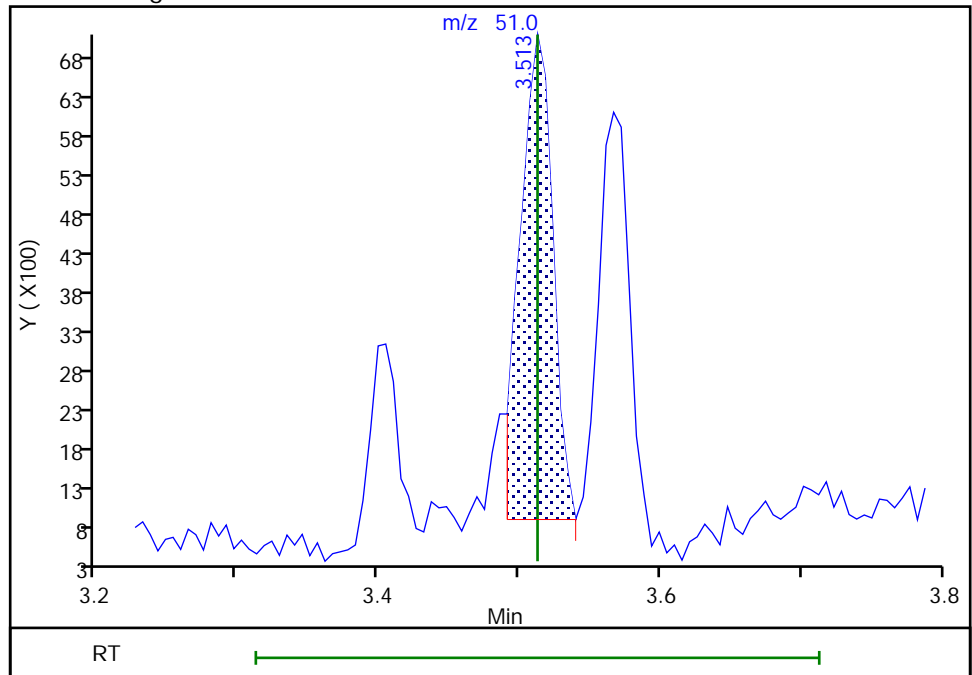
RT: 3.51
Area: 10858
Amount: 0.090583
Amount Units: ppb v/v

Processing Integration Results



RT: 3.51
Area: 10100
Amount: 0.084259
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 18:06:51

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-153-C-26 Lab Sample ID: 140-14391-5
 Matrix: Air Lab File ID: RB26P105.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:11
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.077	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.67		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.63	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-153-C-26 Lab Sample ID: 140-14391-5
 Matrix: Air Lab File ID: RB26P105.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:11
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P105.D
 Lims ID: 140-14391-A-5
 Client ID: IA-153-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 17:09:30 ALS Bottle#: 5 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-009
 Misc. Info.: 140-14391-a-5
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:54:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.384	-0.005	71	199769	4.00	
* 2 1,4-Difluorobenzene	114	9.444	9.450	-0.006	95	1174122	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.502	0.000	91	1016536	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.223	16.228	-0.005	89	881995	4.08	
6 Chlorodifluoromethane	51	3.507	3.513	-0.006	95	12479	0.1053	
8 Dichlorodifluoromethane	85	3.556	3.564	-0.005	90	12158	0.0559	
31 Methylene Chloride	84	5.325	5.325	0.000	93	23715	0.3549	
47 Benzene	78	8.884	8.889	-0.005	96	6344	0.0332	
50 Carbon tetrachloride	117	8.927	8.932	-0.005	78	4132	0.0154	
65 Toluene	91	12.416	12.416	0.000	92	32607	0.1338	
78 m-Xylene & p-Xylene	91	15.063	15.069	-0.006	99	26007	0.0903	
82 o-Xylene	91	15.603	15.602	0.001	95	10705	0.0354	
S 121 Xylenes, Total	100				0		0.1257	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P105.D

Injection Date: 26-Feb-2019 17:09:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-5

Lab Sample ID: 140-14391-5

Worklist Smp#: 9

Client ID: IA-153-C-26

Purge Vol: 500.000 mL

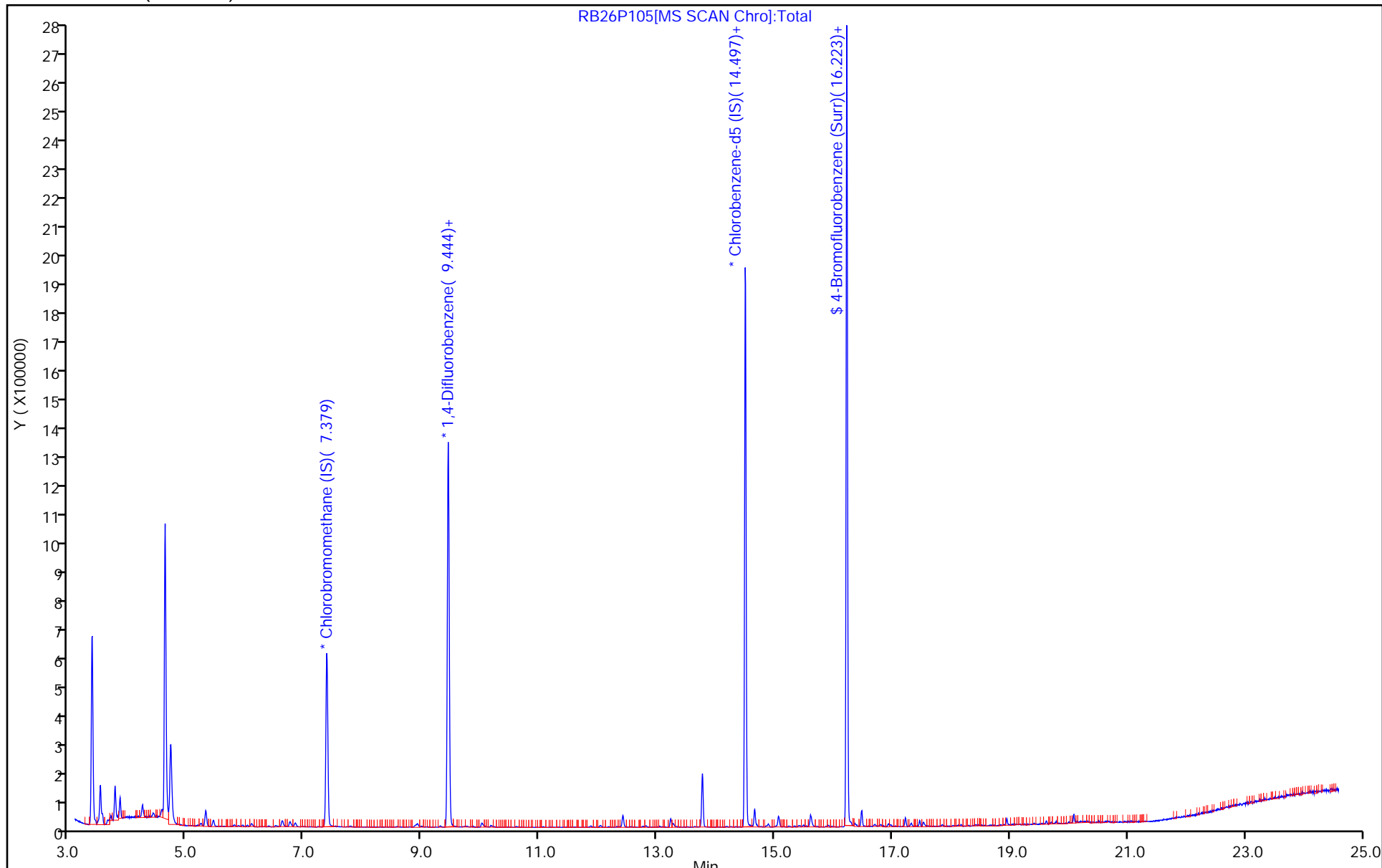
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P105.D
 Lims ID: 140-14391-A-5
 Client ID: IA-153-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 17:09:30 ALS Bottle#: 5 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-009
 Misc. Info.: 140-14391-a-5
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:54:32

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.08	102.00

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P105.D

Injection Date: 26-Feb-2019 17:09:30

Instrument ID: MR

Lims ID: 140-14391-A-5

Lab Sample ID: 140-14391-5

Client ID: IA-153-C-26

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

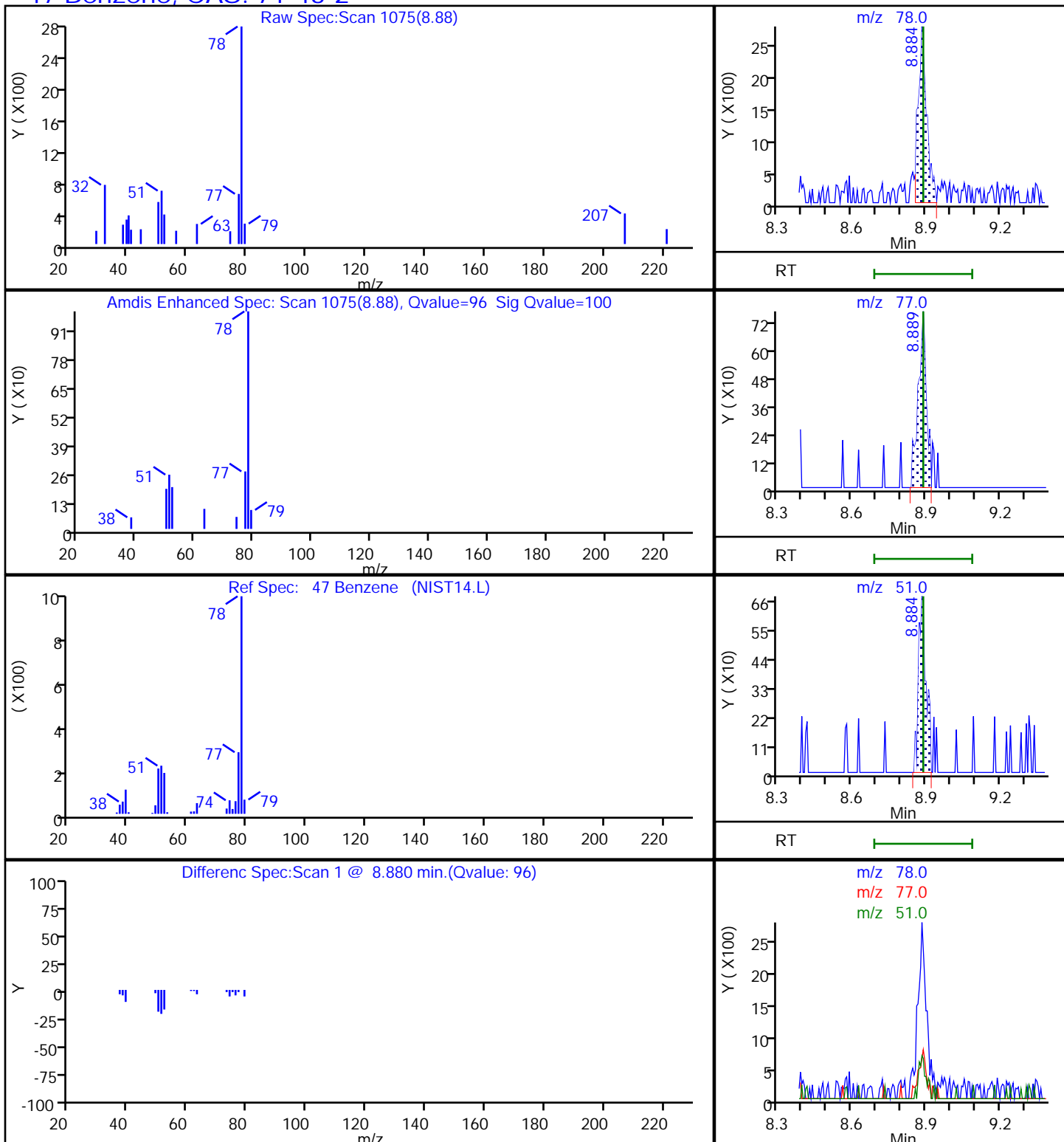
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P105.D

Injection Date: 26-Feb-2019 17:09:30

Instrument ID: MR

Lims ID: 140-14391-A-5

Lab Sample ID: 140-14391-5

Client ID: IA-153-C-26

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

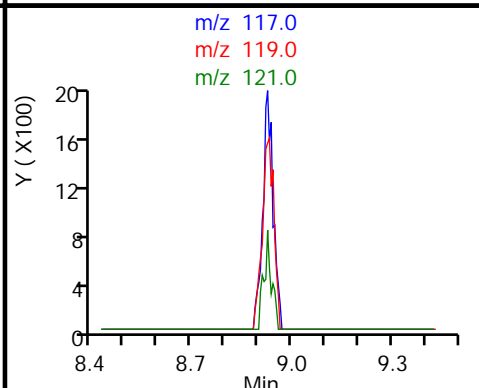
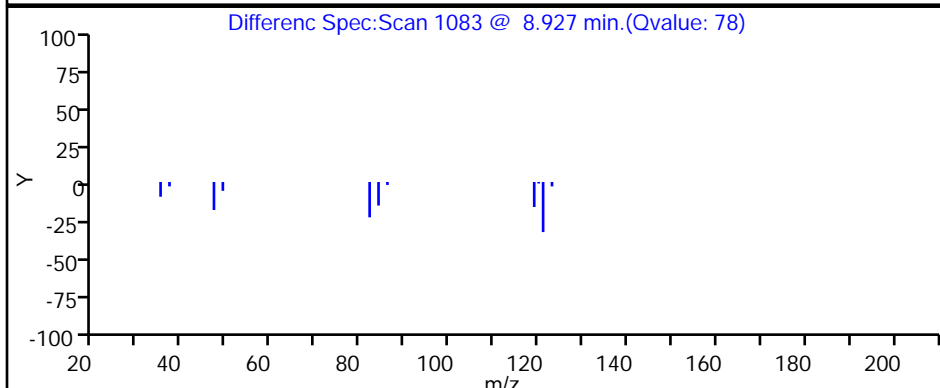
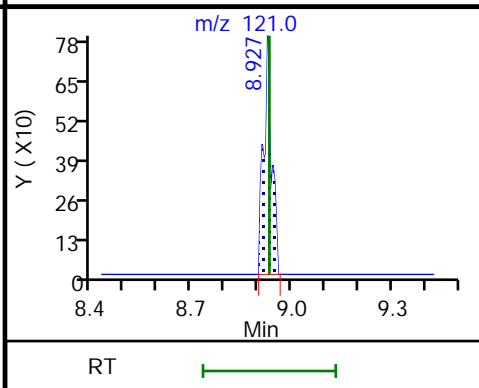
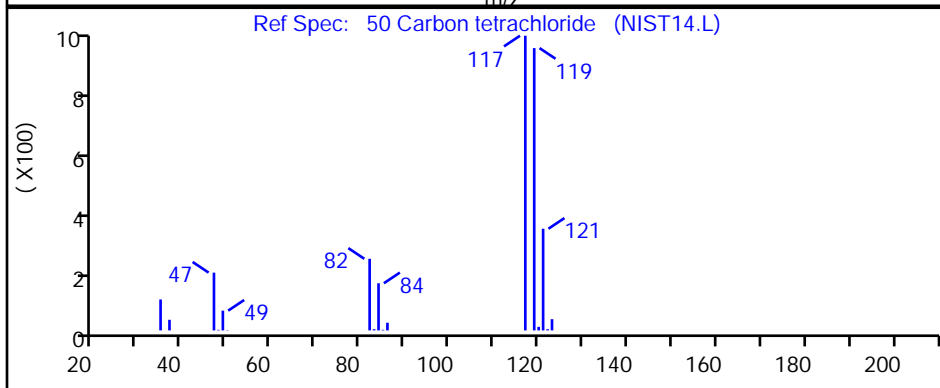
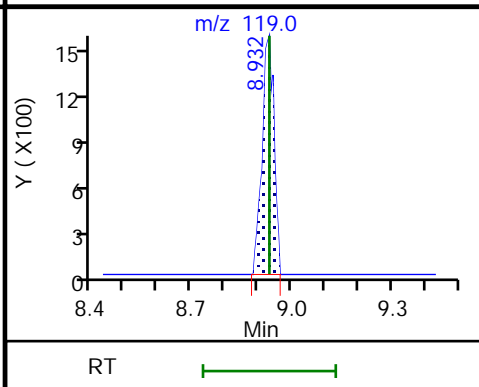
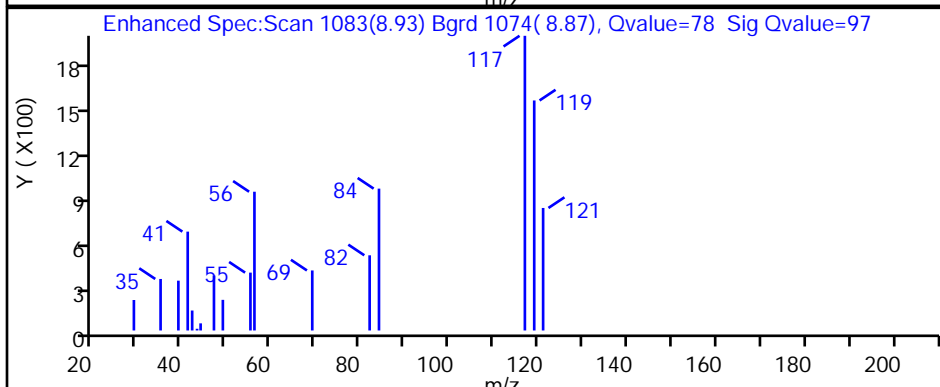
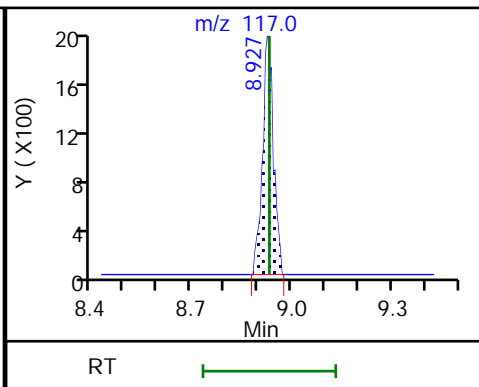
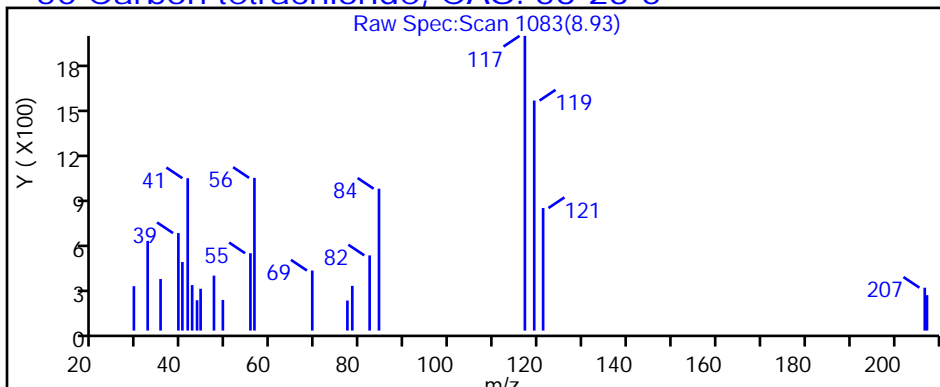
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P105.D

Injection Date: 26-Feb-2019 17:09:30

Instrument ID: MR

Lims ID: 140-14391-A-5

Lab Sample ID: 140-14391-5

Client ID: IA-153-C-26

Operator ID:

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

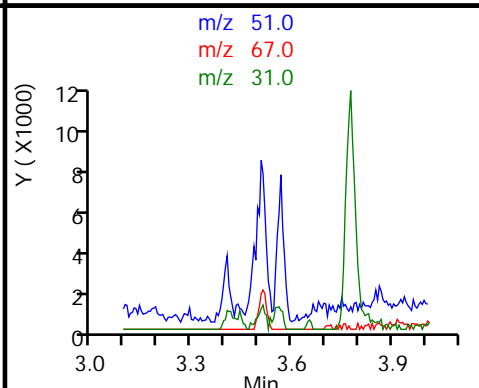
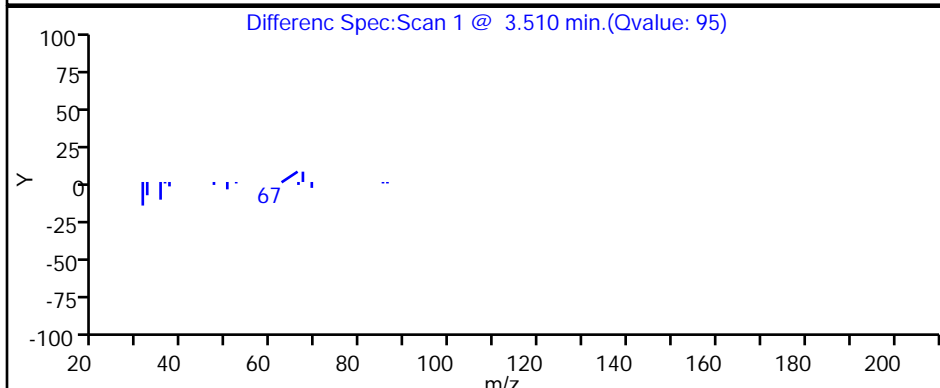
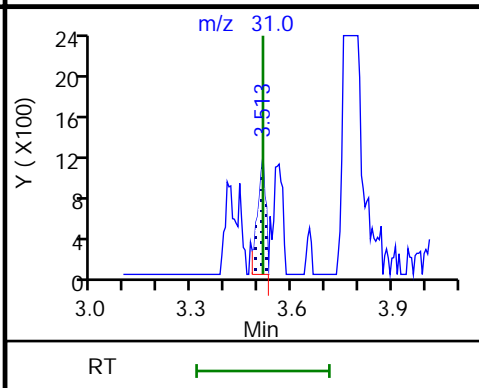
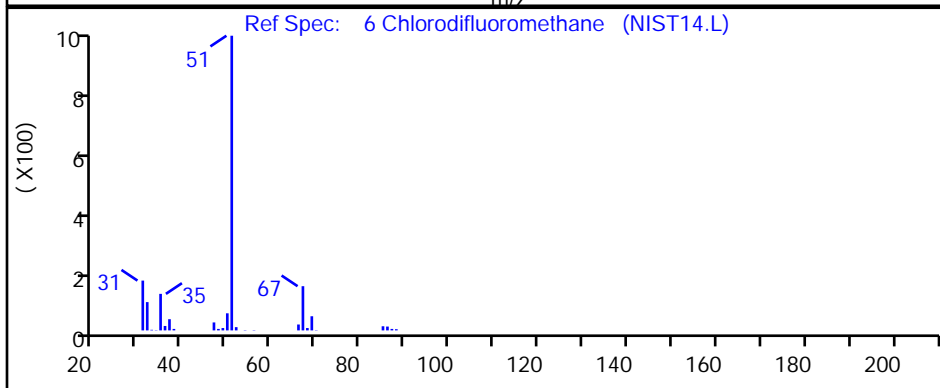
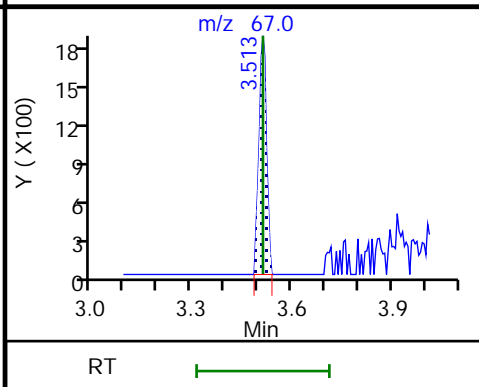
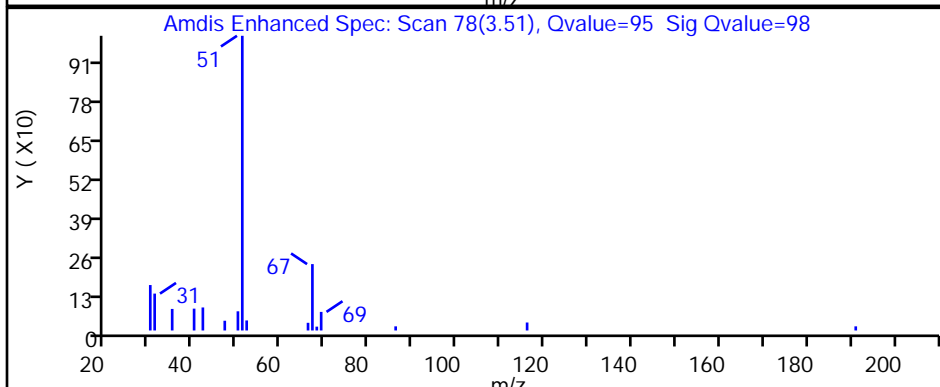
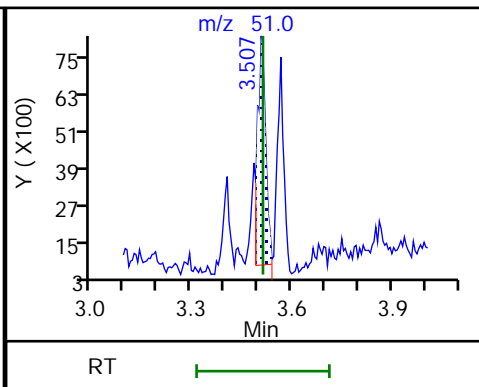
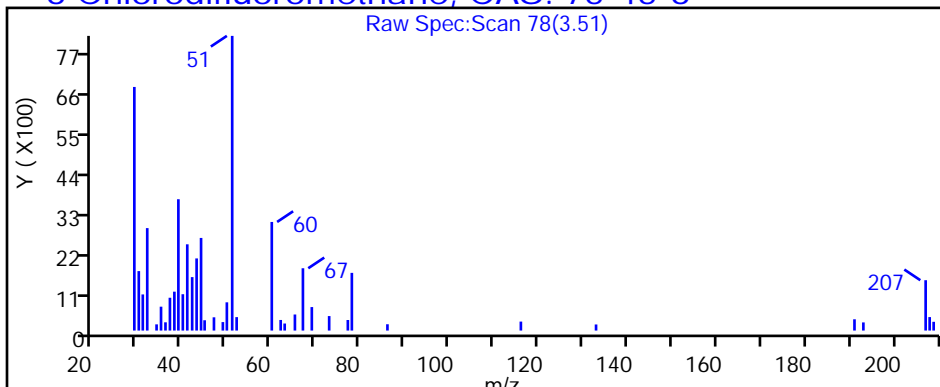
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P105.D

Injection Date: 26-Feb-2019 17:09:30

Instrument ID: MR

Lims ID: 140-14391-A-5

Lab Sample ID: 140-14391-5

Client ID: IA-153-C-26

Operator ID:

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

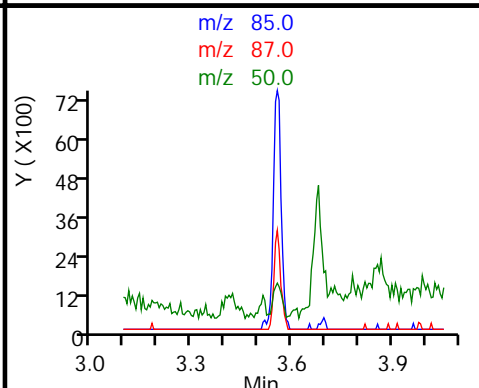
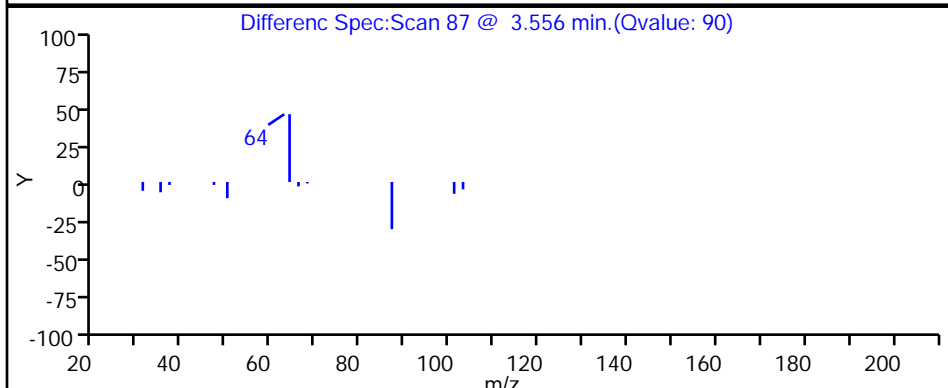
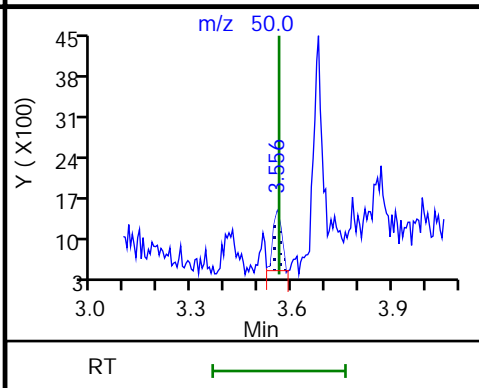
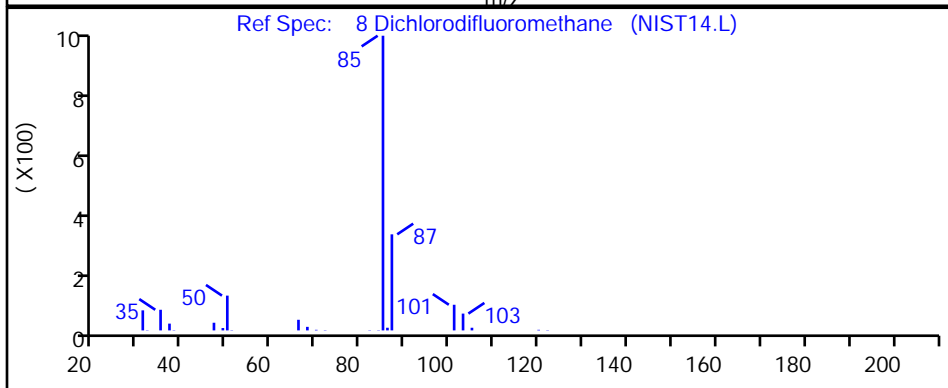
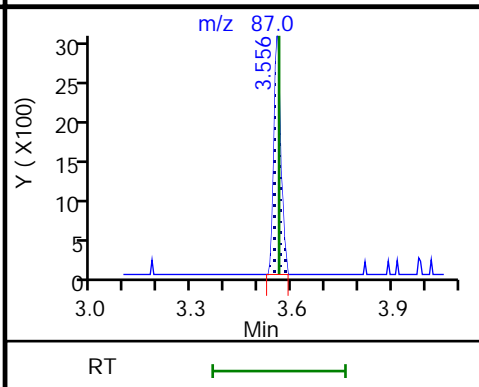
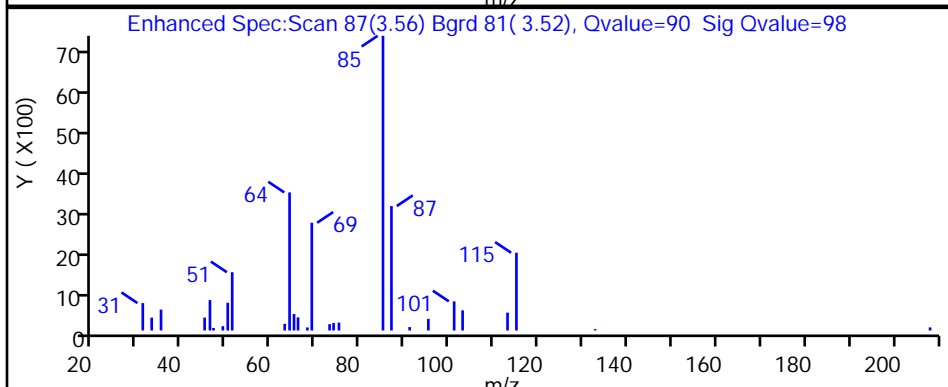
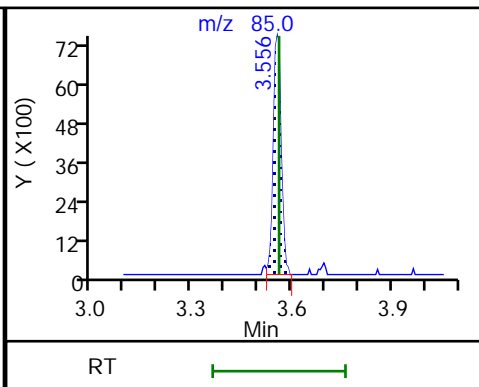
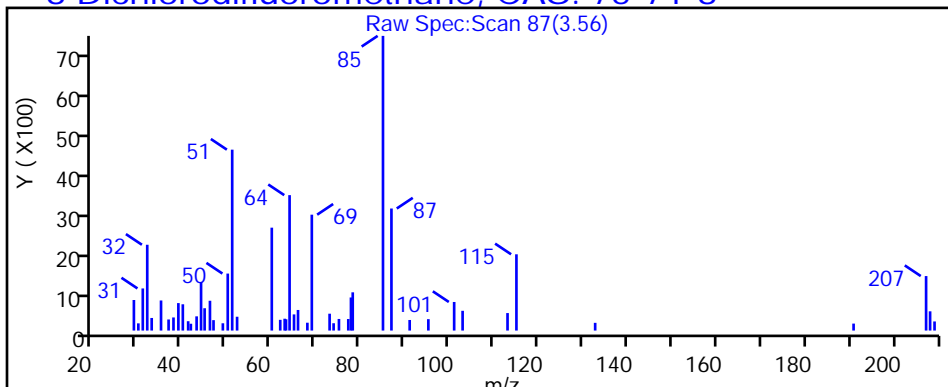
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P105.D

Injection Date: 26-Feb-2019 17:09:30

Instrument ID: MR

Lims ID: 140-14391-A-5

Lab Sample ID: 140-14391-5

Client ID: IA-153-C-26

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

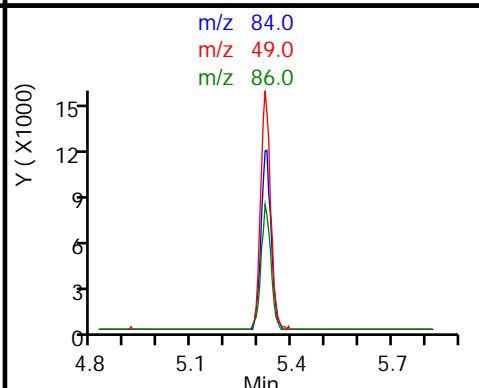
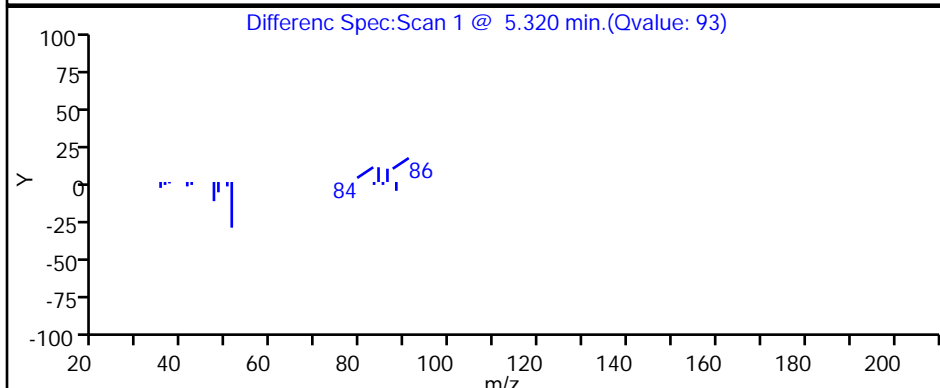
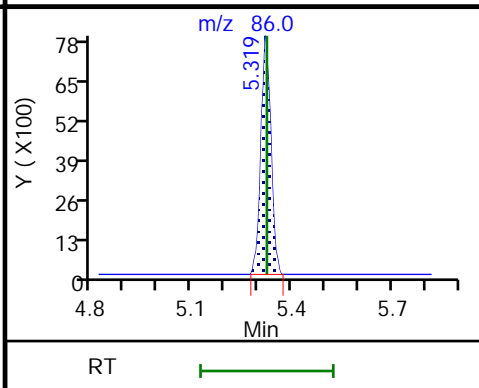
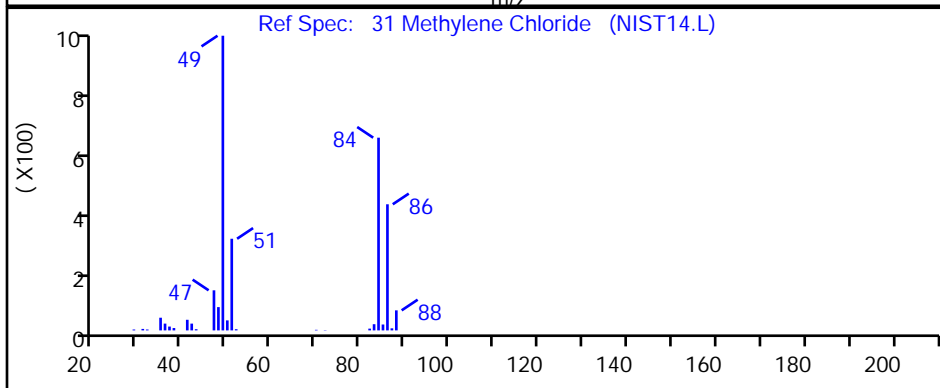
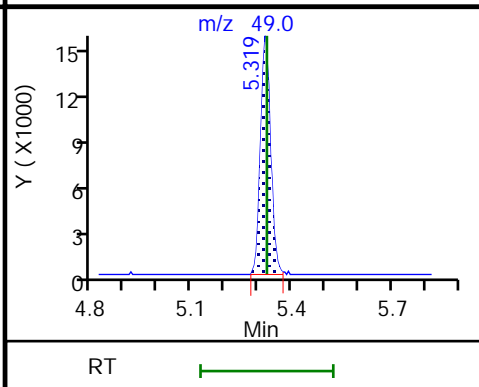
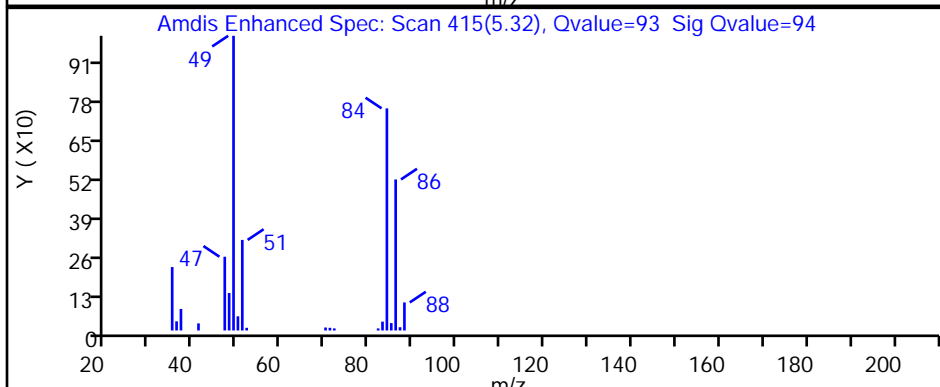
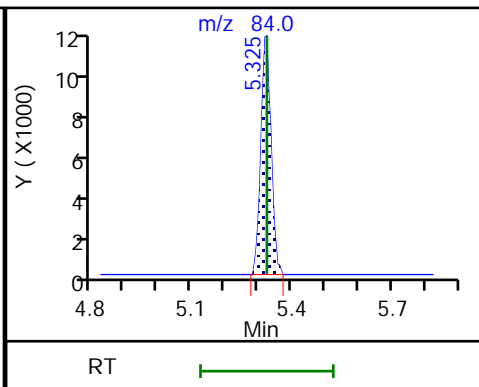
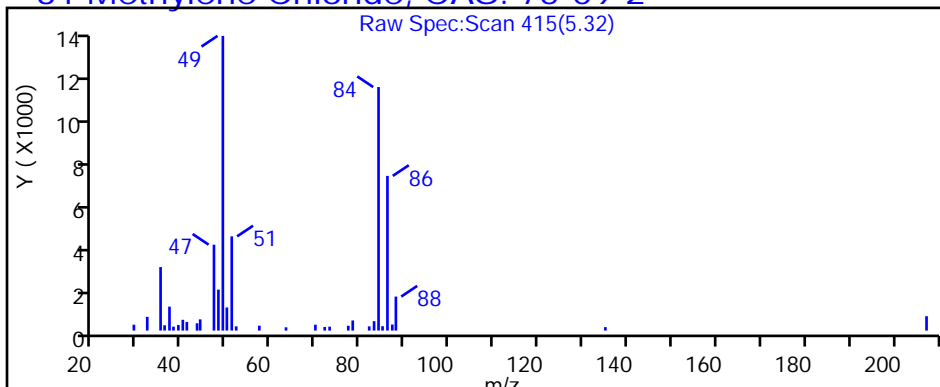
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P105.D

Injection Date: 26-Feb-2019 17:09:30

Instrument ID: MR

Lims ID: 140-14391-A-5

Lab Sample ID: 140-14391-5

Client ID: IA-153-C-26

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

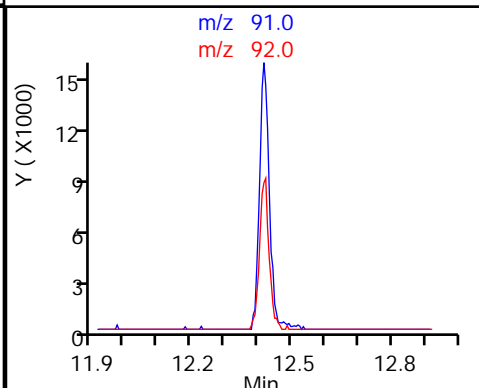
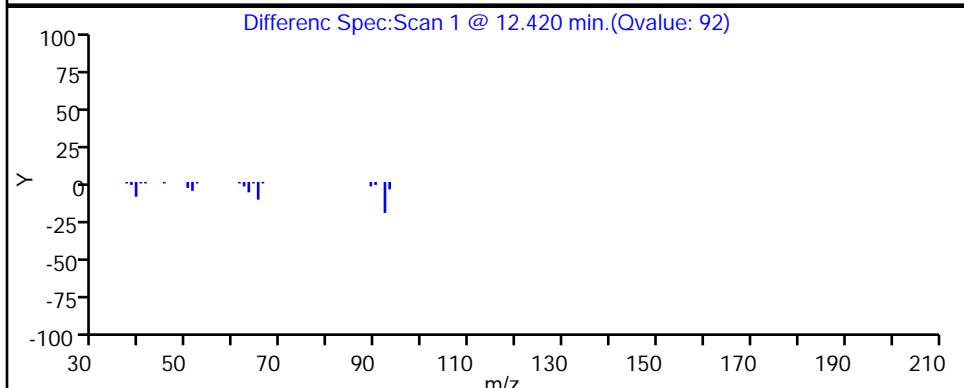
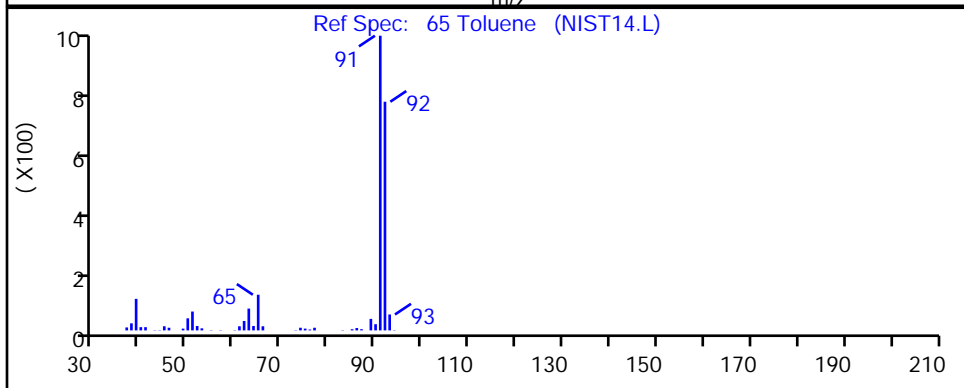
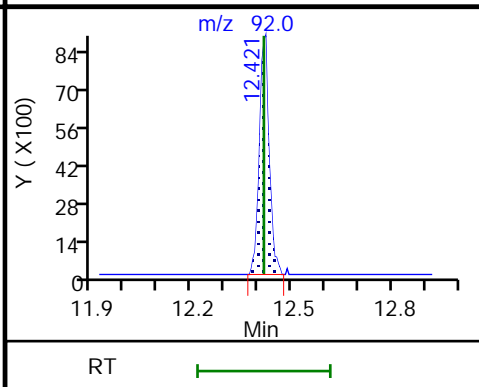
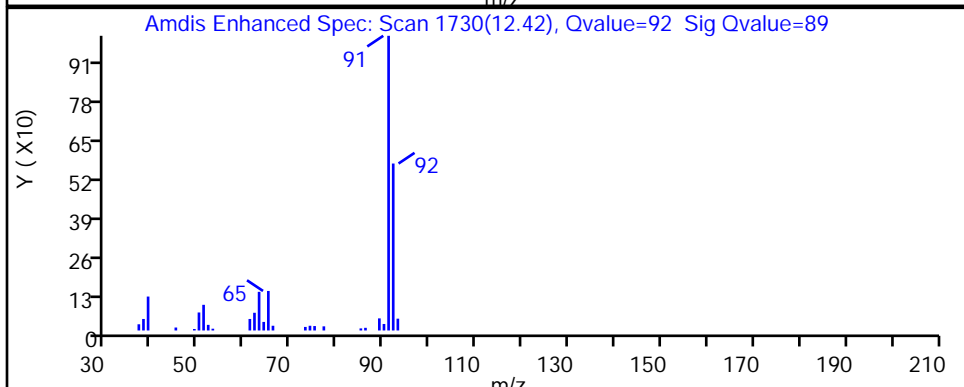
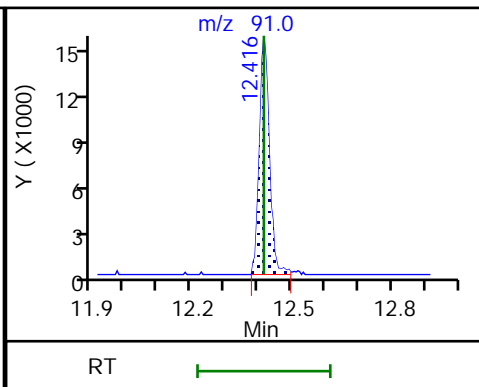
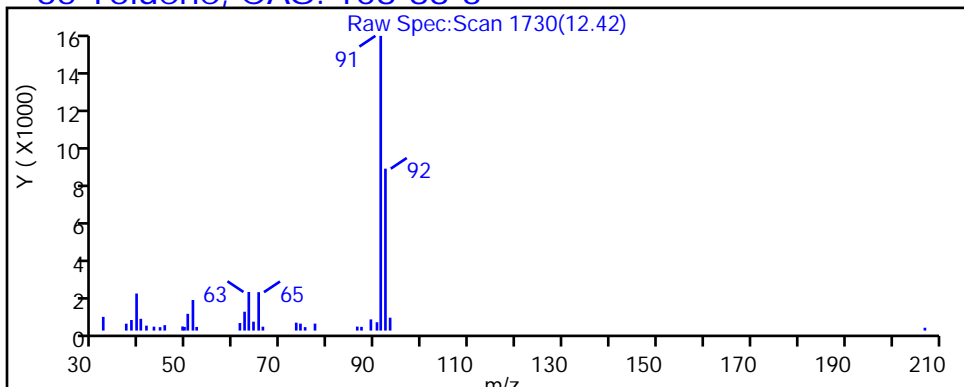
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P105.D

Injection Date: 26-Feb-2019 17:09:30

Instrument ID: MR

Lims ID: 140-14391-A-5

Lab Sample ID: 140-14391-5

Client ID: IA-153-C-26

Operator ID:

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

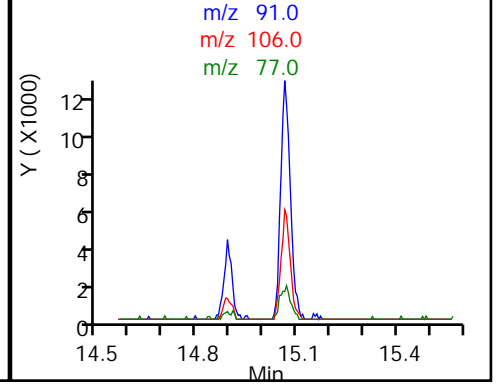
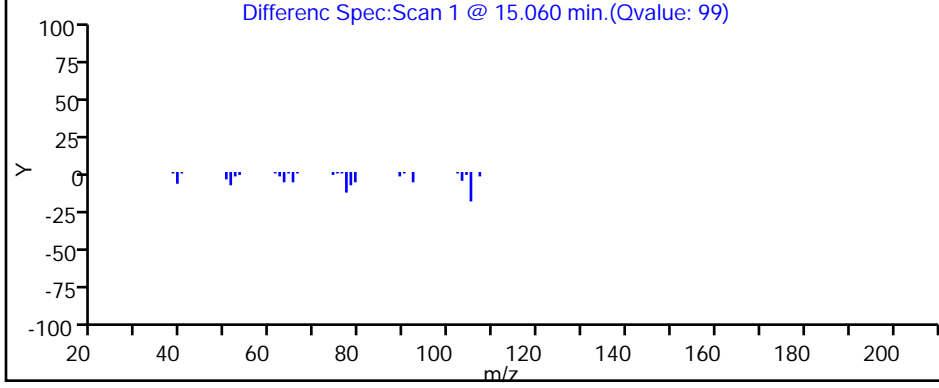
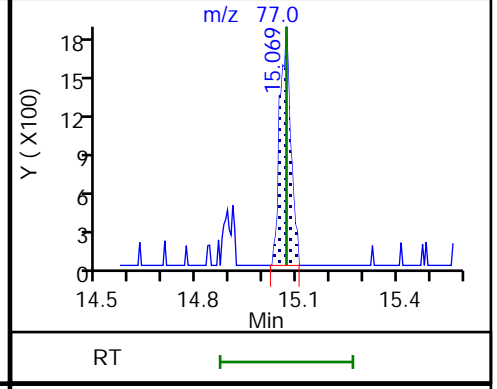
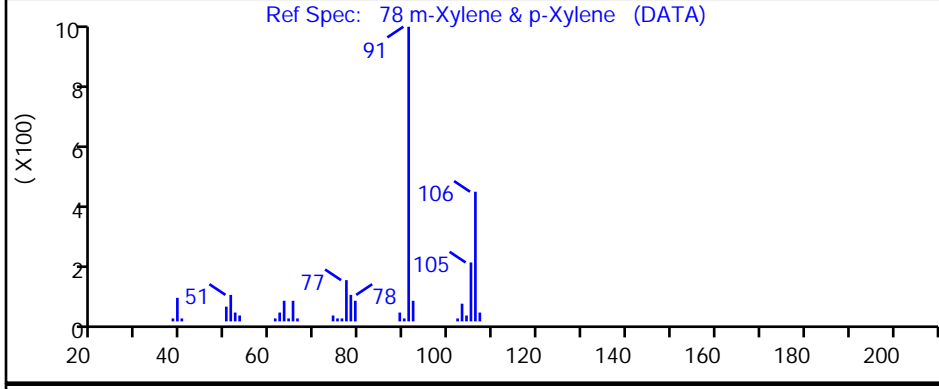
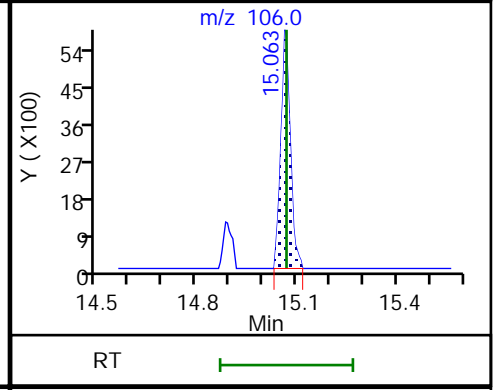
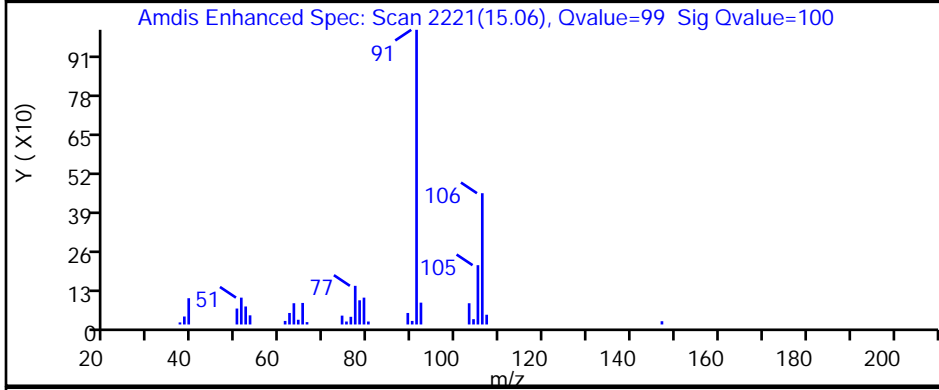
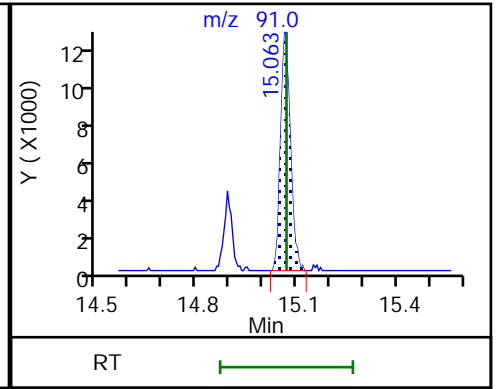
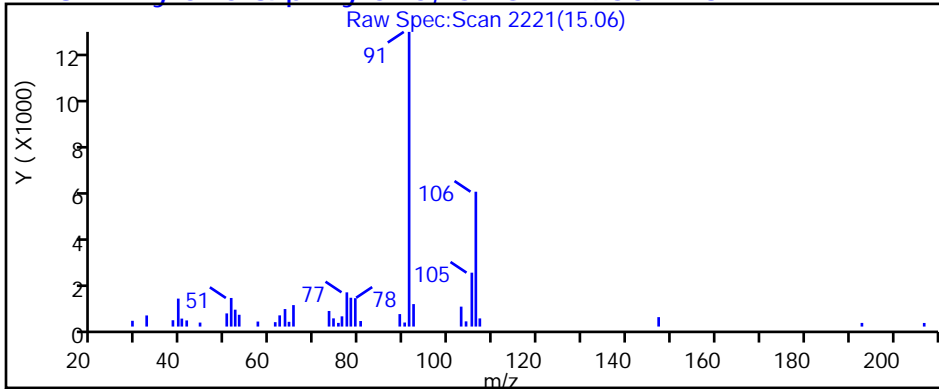
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P105.D

Injection Date: 26-Feb-2019 17:09:30

Instrument ID: MR

Lims ID: 140-14391-A-5

Lab Sample ID: 140-14391-5

Client ID: IA-153-C-26

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

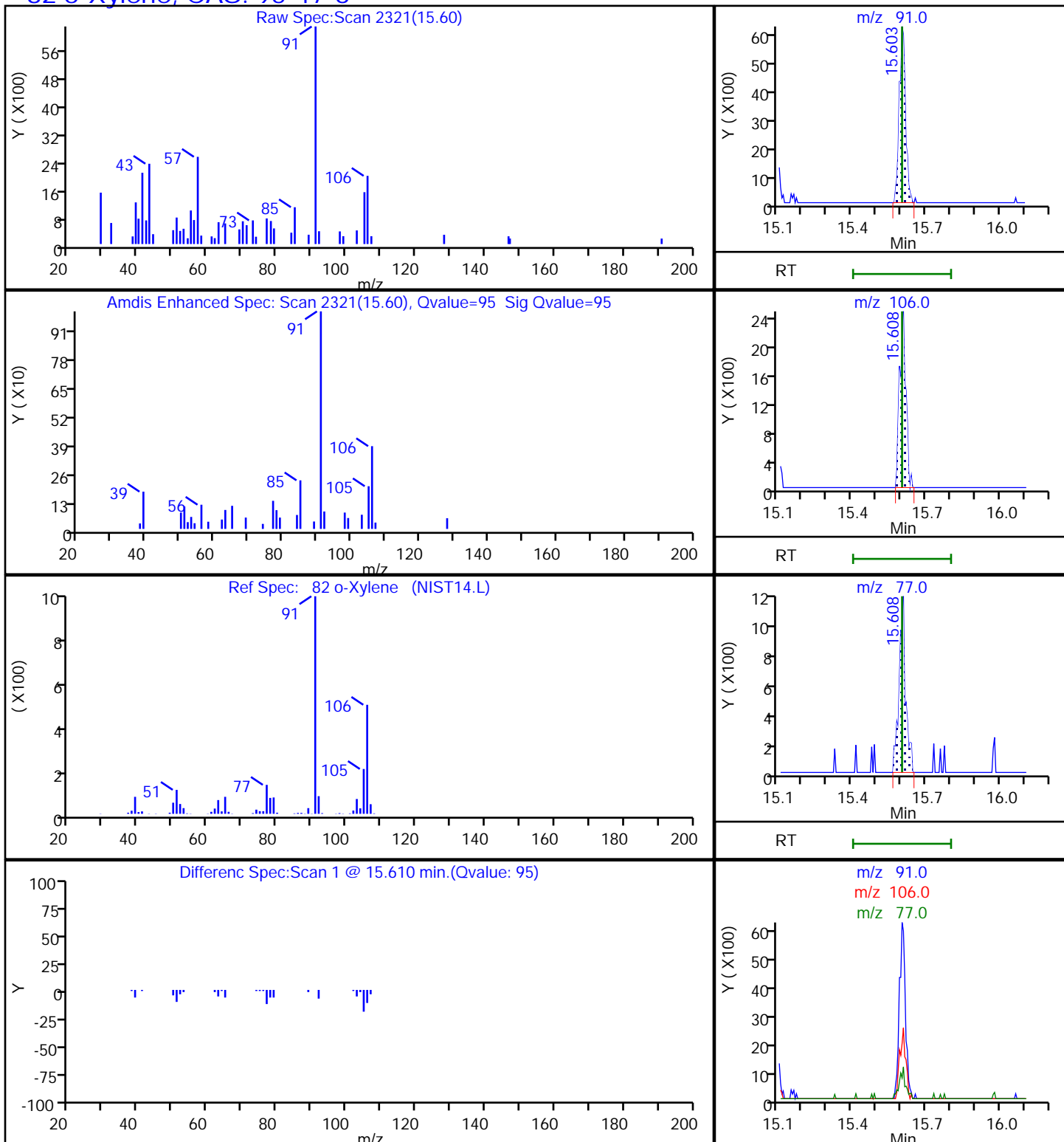
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-DUP02-C-26 Lab Sample ID: 140-14391-6
 Matrix: Air Lab File ID: RB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.30	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.60		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.54	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-DUP02-C-26 Lab Sample ID: 140-14391-6
 Matrix: Air Lab File ID: RB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P106.D
 Lims ID: 140-14391-A-6
 Client ID: IA-DUP02-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 17:58:30 ALS Bottle#: 6 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-010
 Misc. Info.: 140-14391-a-6
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:54:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.384	-0.005	71	204618	4.00	
* 2 1,4-Difluorobenzene	114	9.445	9.450	-0.005	95	1201090	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.497	14.502	-0.005	91	1038008	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.223	16.228	-0.005	89	878370	3.98	
6 Chlorodifluoromethane	51	3.513	3.513	0.000	95	12794	0.1054	
8 Dichlorodifluoromethane	85	3.551	3.564	-0.010	99	13515	0.0607	
31 Methylene Chloride	84	5.319	5.325	-0.006	92	15025	0.2195	
47 Benzene	78	8.878	8.889	-0.011	97	6385	0.0326	
65 Toluene	91	12.416	12.416	0.000	91	29645	0.1192	
78 m-Xylene & p-Xylene	91	15.063	15.069	-0.006	99	23072	0.0784	
82 o-Xylene	91	15.597	15.602	-0.005	90	9540	0.0309	
S 121 Xylenes, Total	100				0		0.1093	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P106.D

Injection Date: 26-Feb-2019 17:58:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-6

Lab Sample ID: 140-14391-6

Worklist Smp#: 10

Client ID: IA-DUP02-C-26

Purge Vol: 500.000 mL

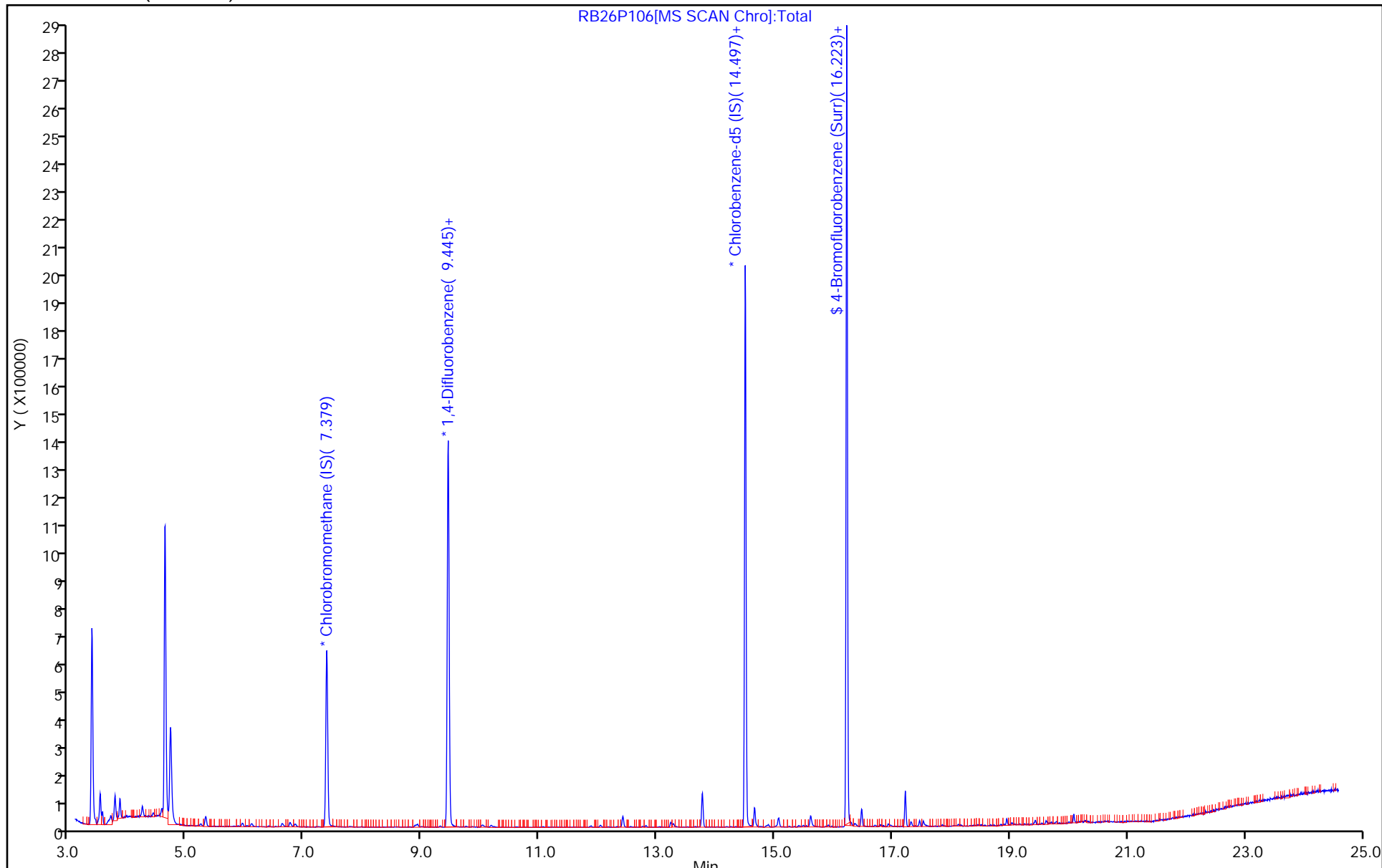
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P106.D
 Lims ID: 140-14391-A-6
 Client ID: IA-DUP02-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 17:58:30 ALS Bottle#: 6 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-010
 Misc. Info.: 140-14391-a-6
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:54:54

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.98	99.48

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P106.D

Injection Date: 26-Feb-2019 17:58:30

Instrument ID: MR

Lims ID: 140-14391-A-6

Lab Sample ID: 140-14391-6

Client ID: IA-DUP02-C-26

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

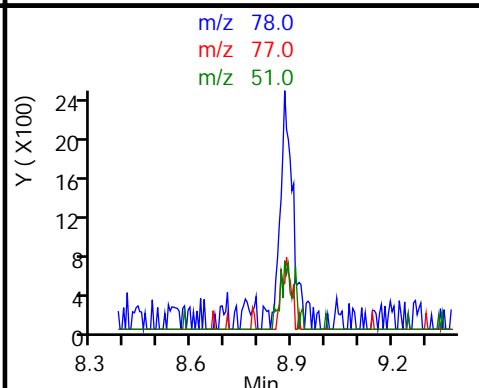
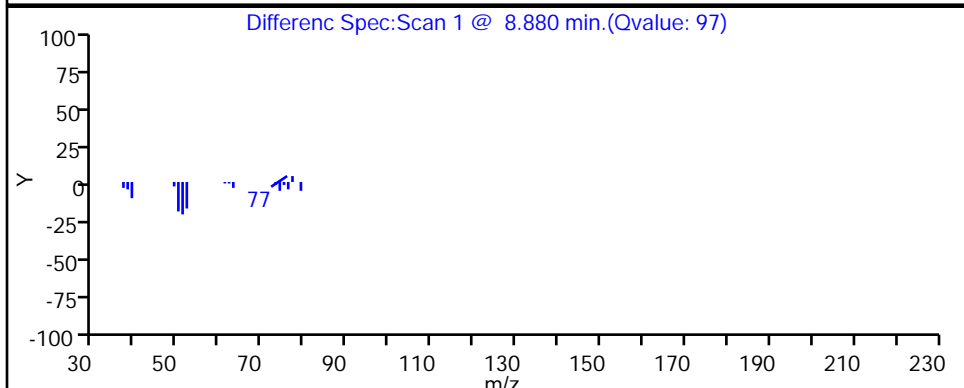
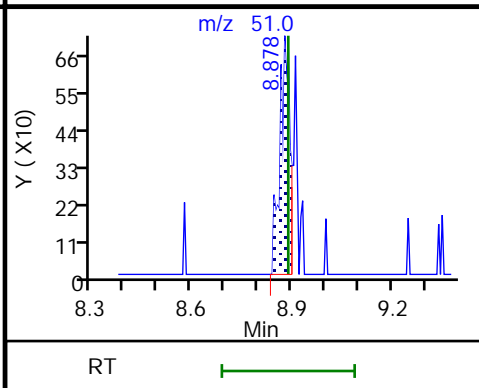
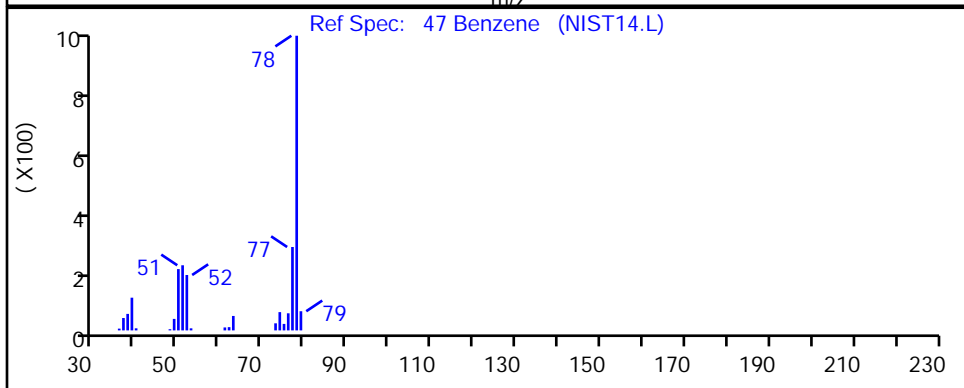
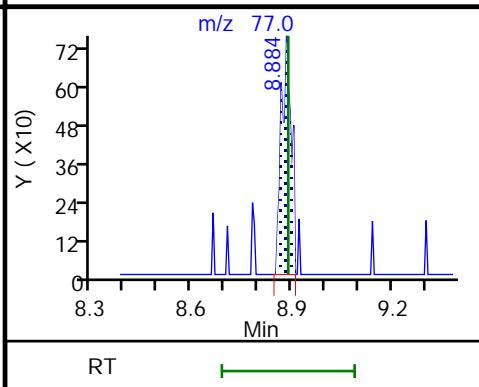
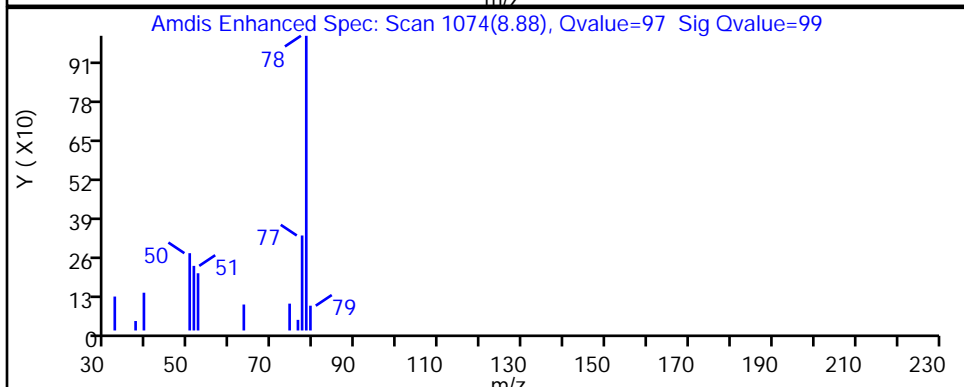
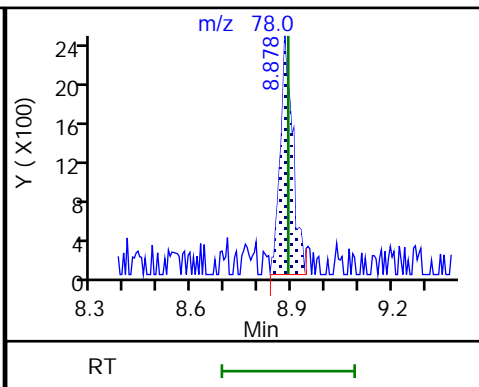
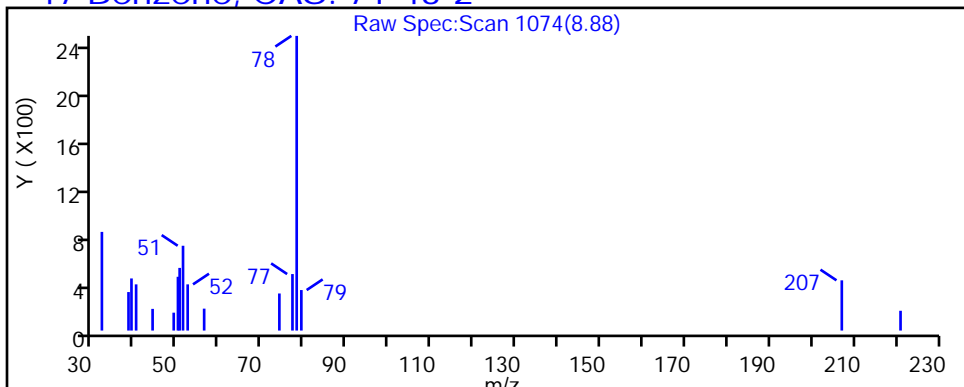
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P106.D

Injection Date: 26-Feb-2019 17:58:30

Instrument ID: MR

Lims ID: 140-14391-A-6

Lab Sample ID: 140-14391-6

Client ID: IA-DUP02-C-26

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

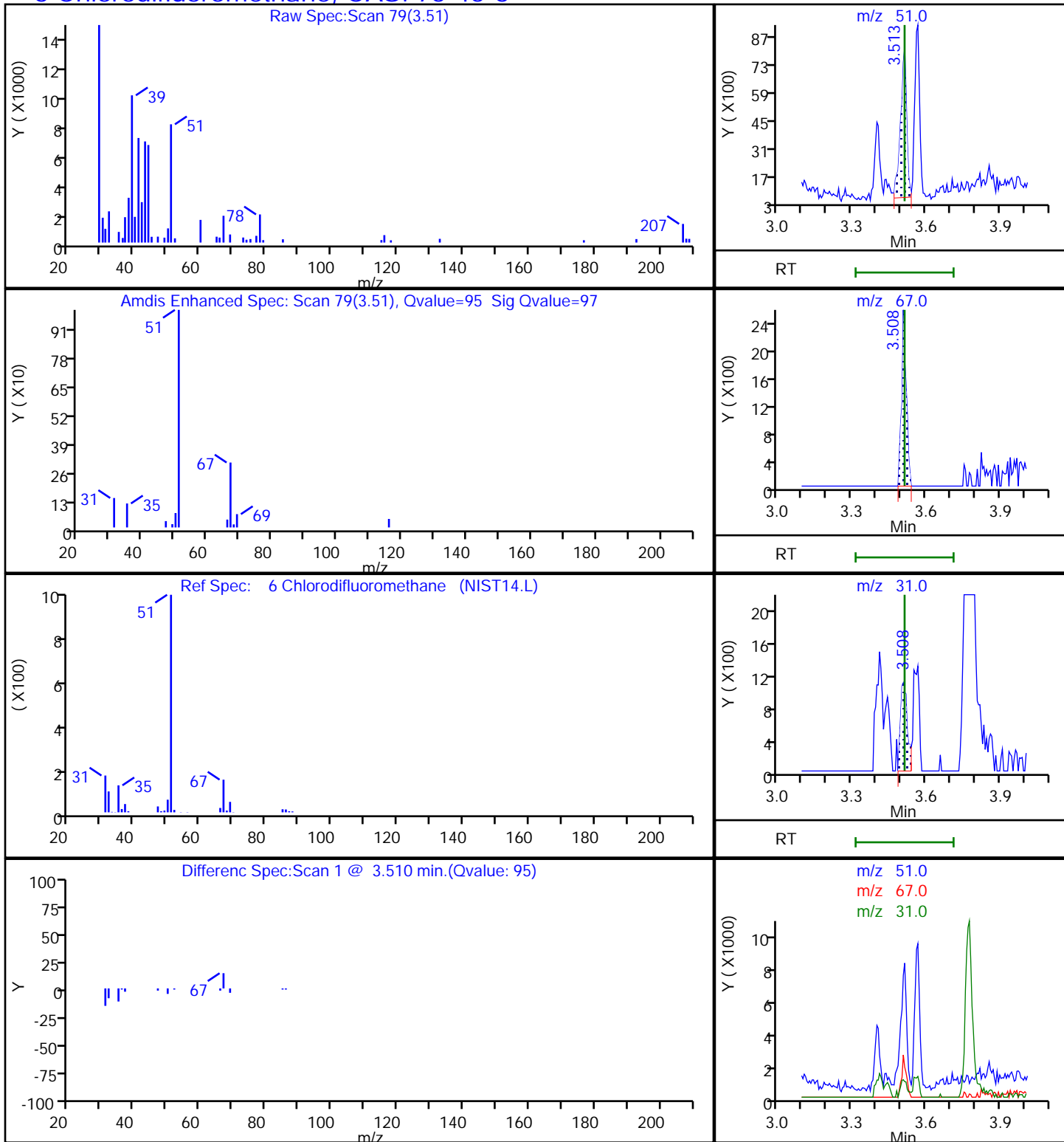
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P106.D

Injection Date: 26-Feb-2019 17:58:30

Instrument ID: MR

Lims ID: 140-14391-A-6

Lab Sample ID: 140-14391-6

Client ID: IA-DUP02-C-26

Operator ID:

ALS Bottle#: 6 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

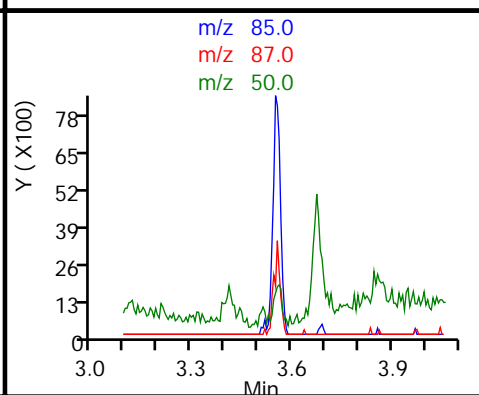
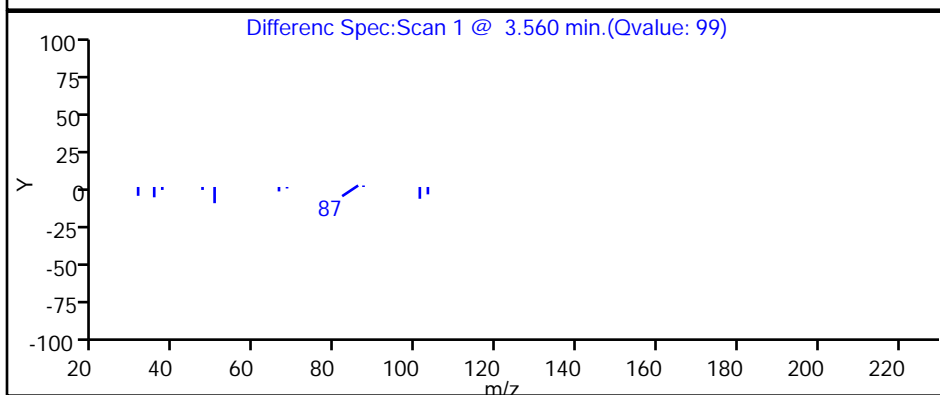
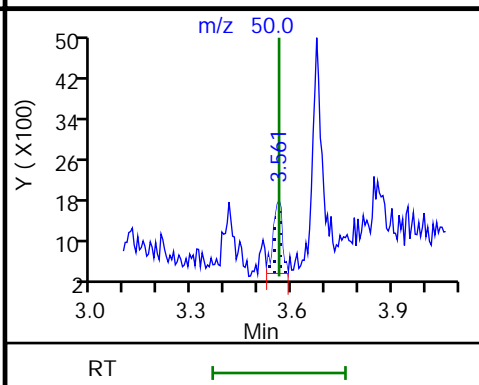
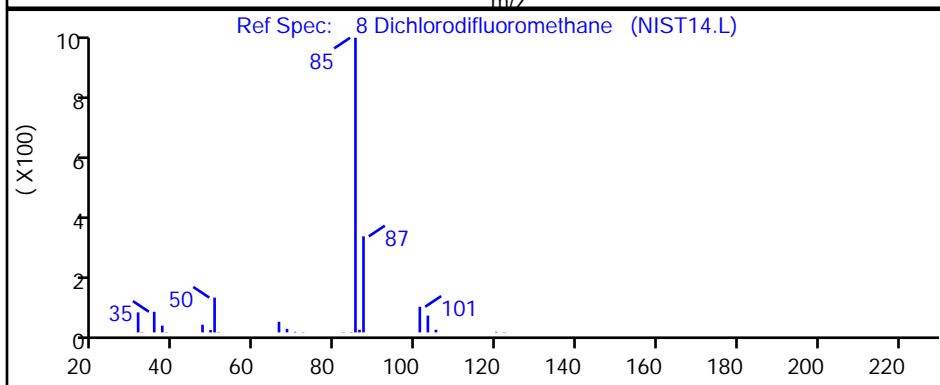
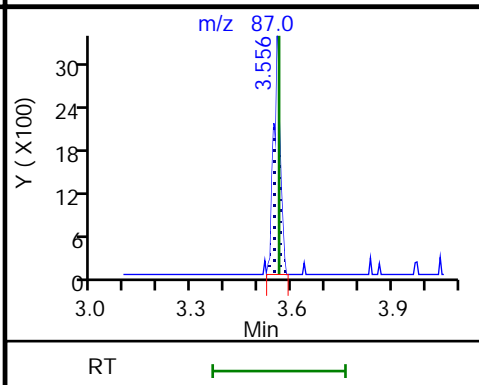
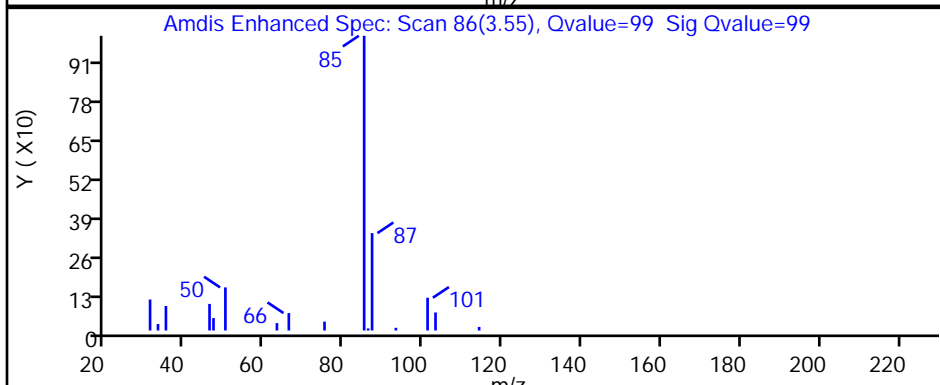
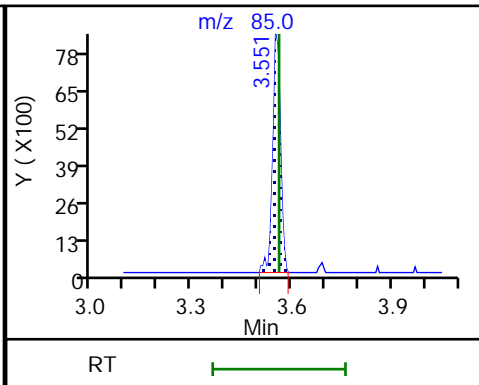
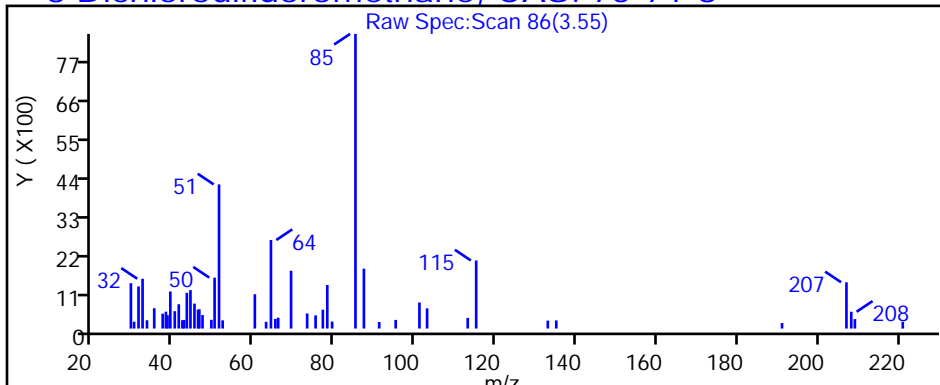
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P106.D

Injection Date: 26-Feb-2019 17:58:30

Instrument ID: MR

Lims ID: 140-14391-A-6

Lab Sample ID: 140-14391-6

Client ID: IA-DUP02-C-26

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

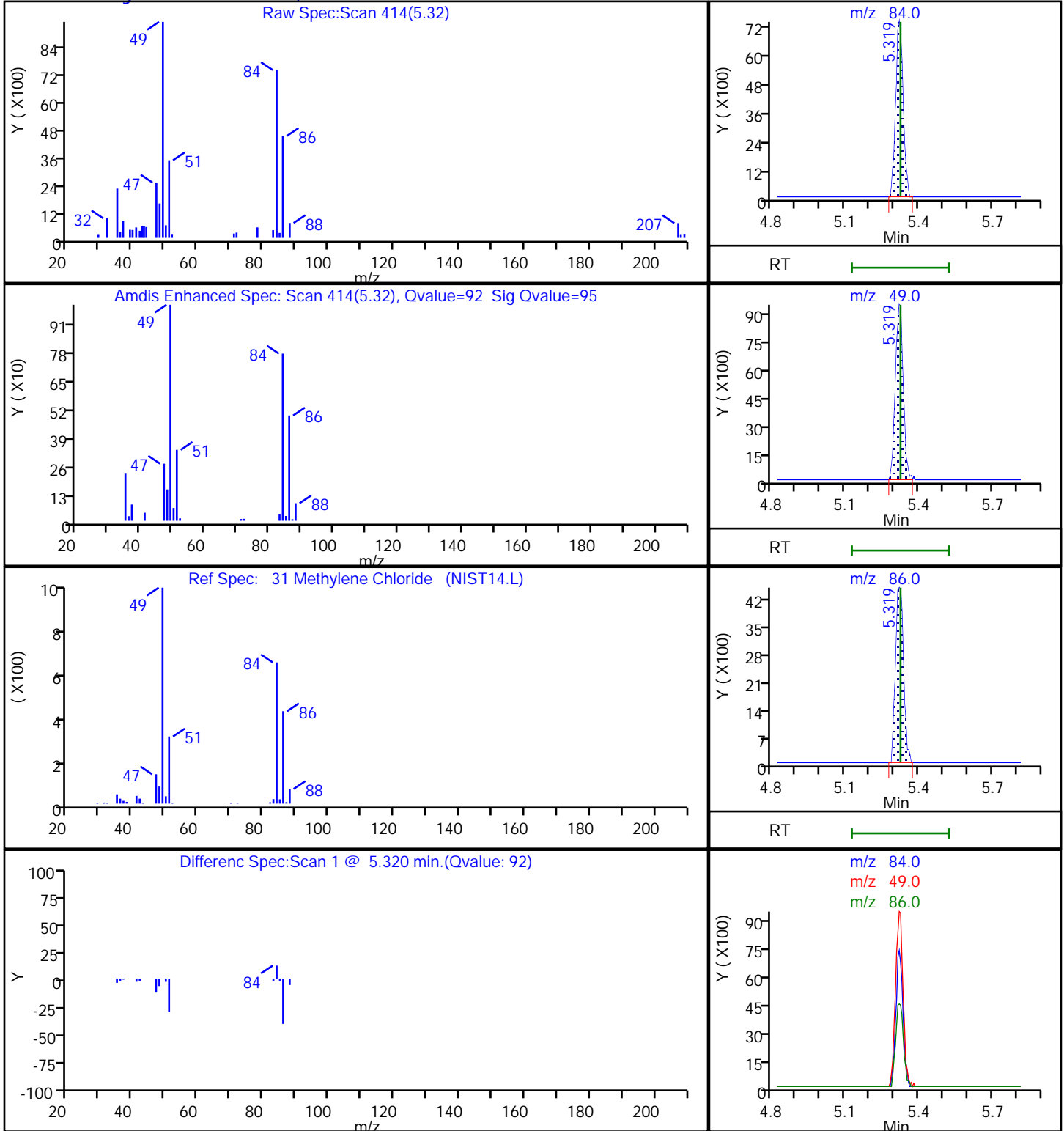
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P106.D

Injection Date: 26-Feb-2019 17:58:30

Instrument ID: MR

Lims ID: 140-14391-A-6

Lab Sample ID: 140-14391-6

Client ID: IA-DUP02-C-26

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

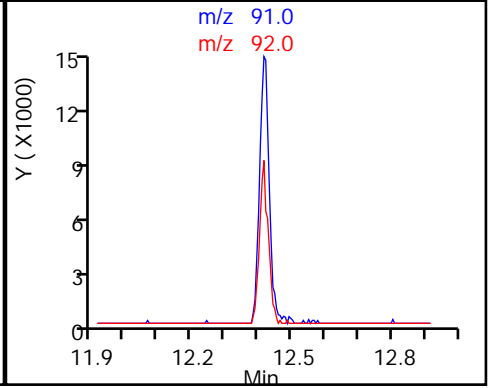
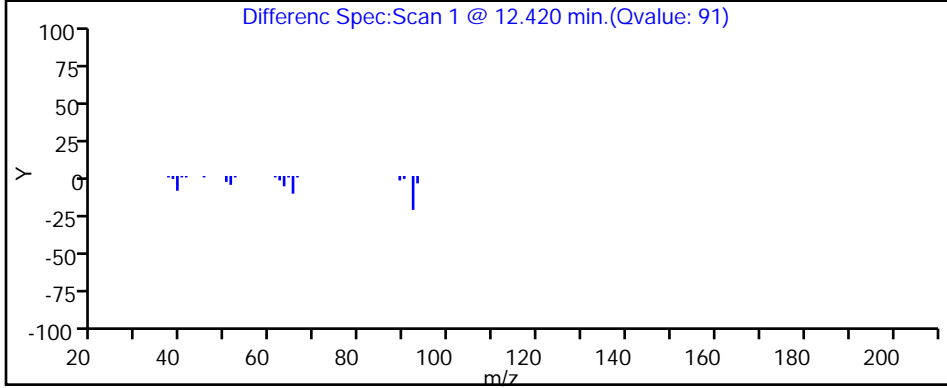
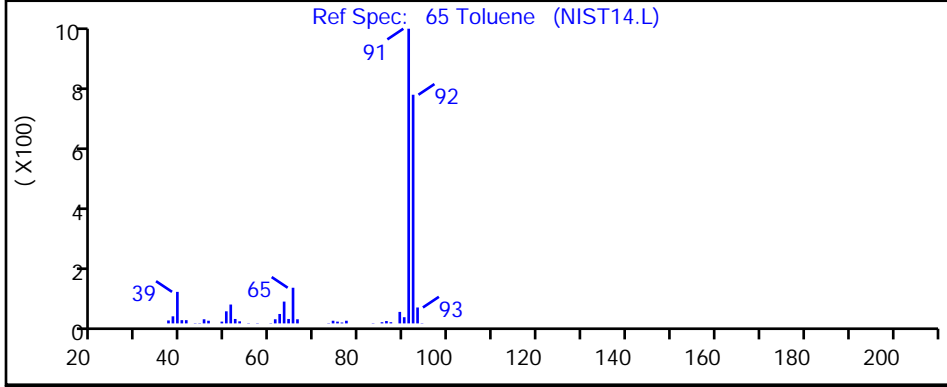
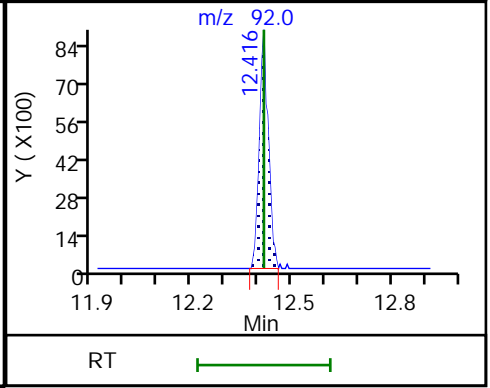
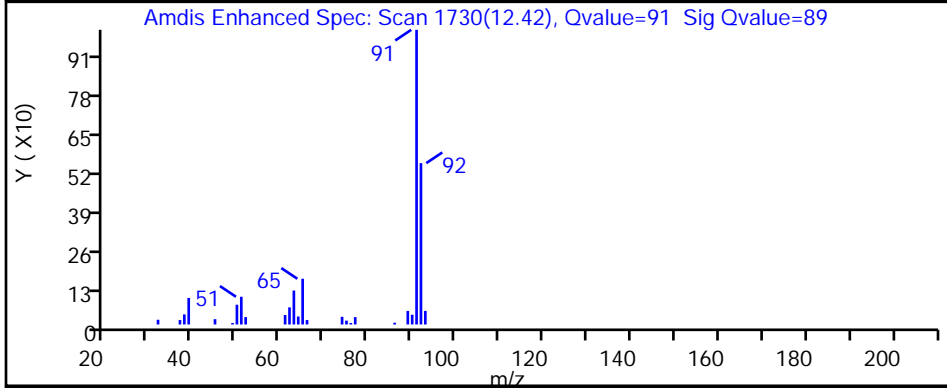
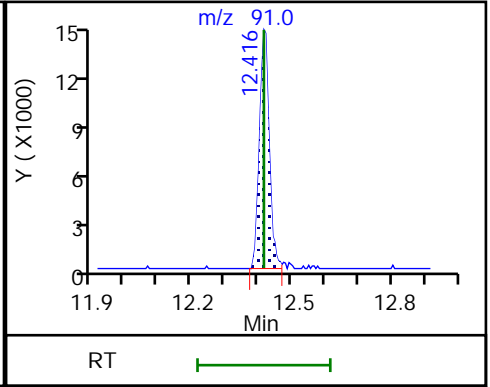
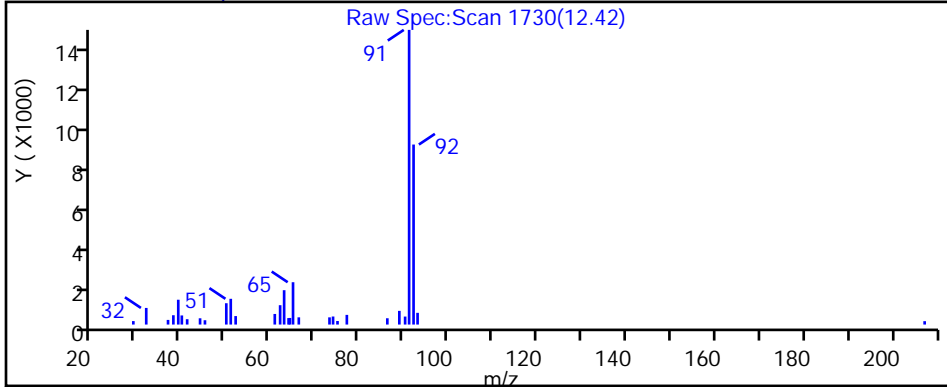
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P106.D

Injection Date: 26-Feb-2019 17:58:30

Instrument ID: MR

Lims ID: 140-14391-A-6

Lab Sample ID: 140-14391-6

Client ID: IA-DUP02-C-26

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

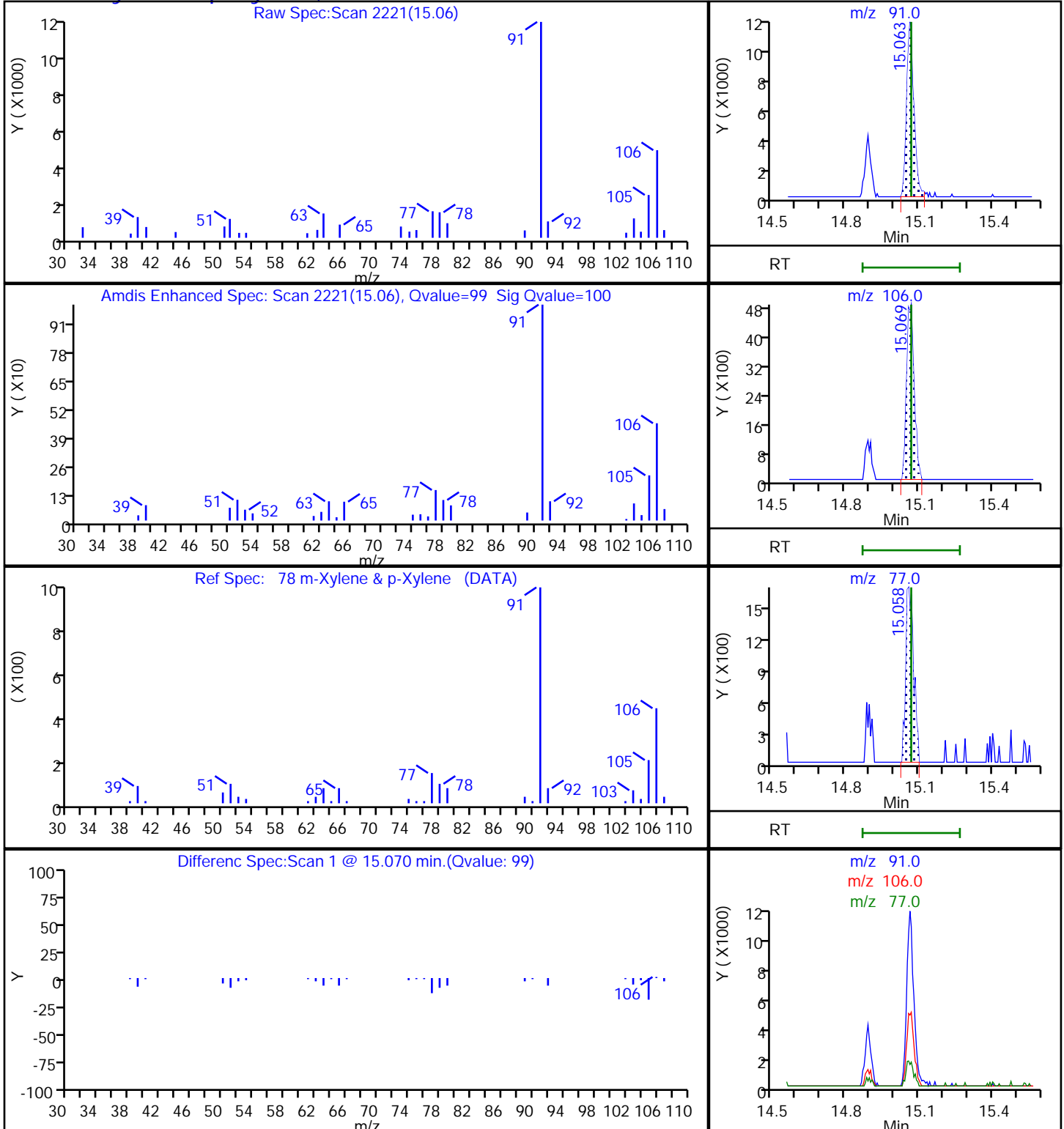
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P106.D

Injection Date: 26-Feb-2019 17:58:30

Instrument ID: MR

Lims ID: 140-14391-A-6

Lab Sample ID: 140-14391-6

Client ID: IA-DUP02-C-26

Operator ID:

ALS Bottle#: 6 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

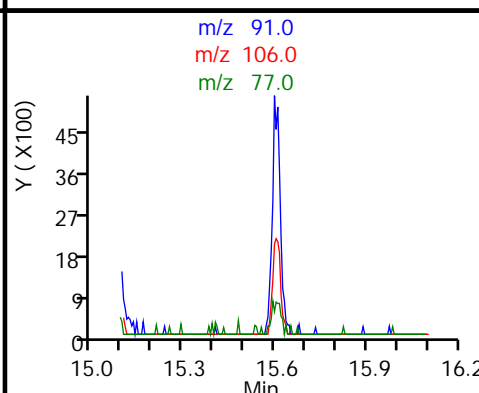
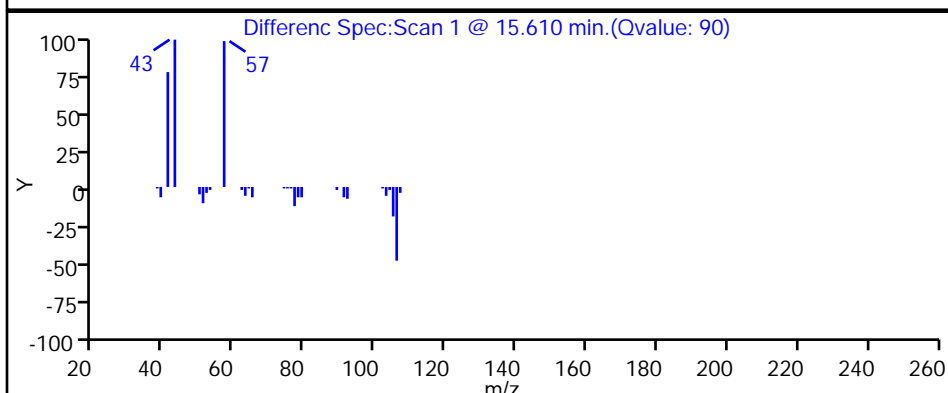
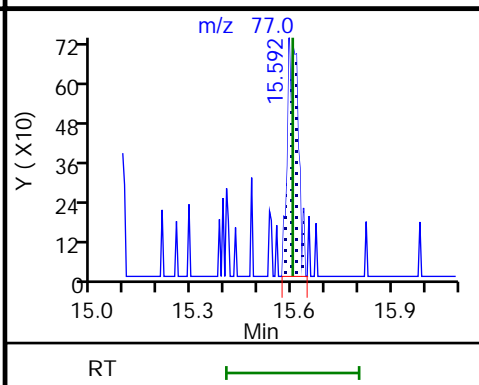
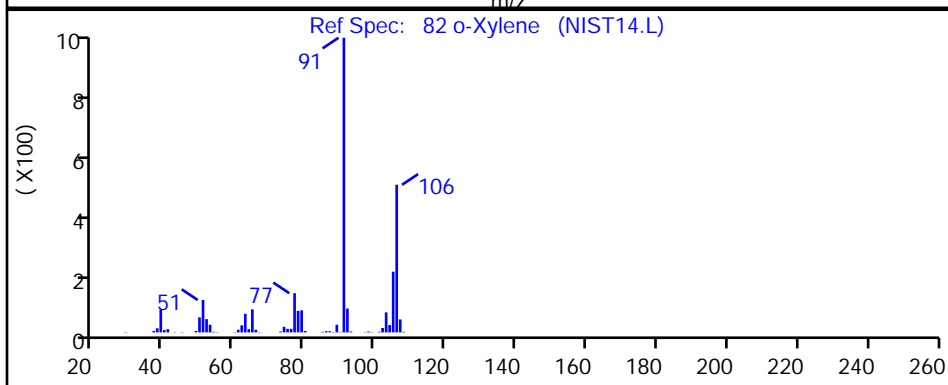
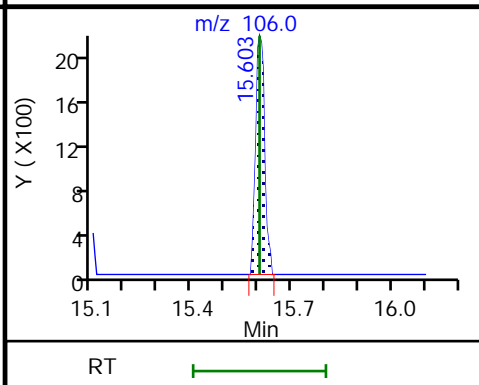
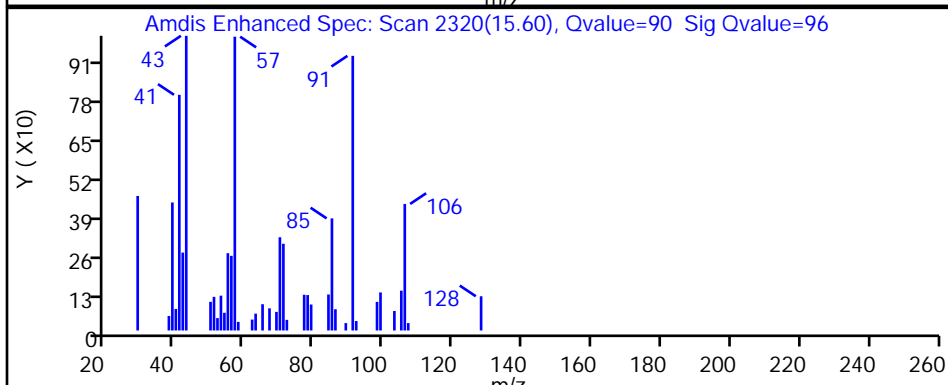
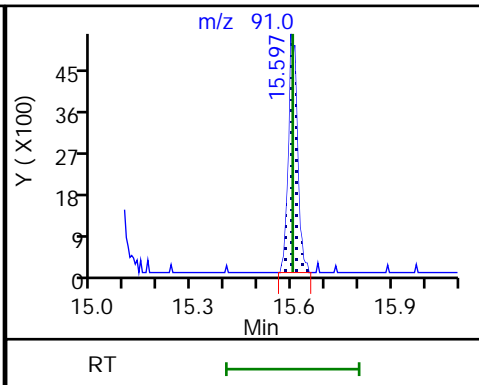
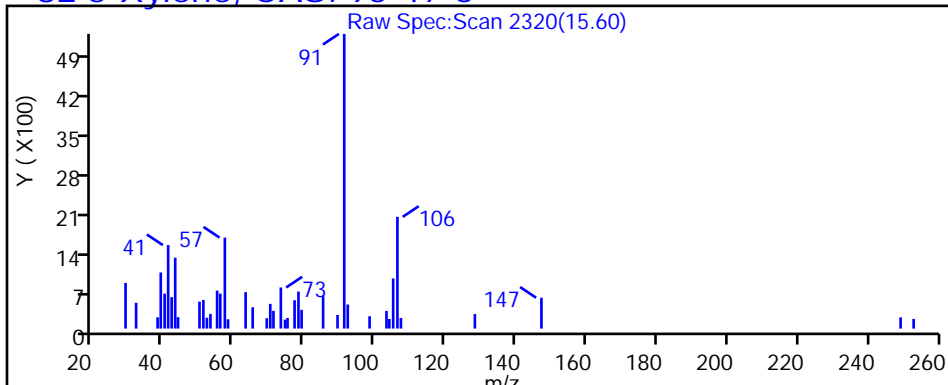
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-060-C-26 Lab Sample ID: 140-14391-7
 Matrix: Air Lab File ID: RB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:14
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 18:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.66		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.9		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.64	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-060-C-26 Lab Sample ID: 140-14391-7
 Matrix: Air Lab File ID: RB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:14
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 18:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	10		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.8	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P107.D
 Lims ID: 140-14391-A-7
 Client ID: IA-060-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 18:47:30 ALS Bottle#: 7 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-011
 Misc. Info.: 140-14391-a-7
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:08:05 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:55:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.384	7.384	0.000	71	192250	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1119769	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.502	0.000	91	987214	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.222	0.000	90	847545	4.04	
6 Chlorodifluoromethane	51	3.513	3.513	0.000	95	15084	0.1322	M
8 Dichlorodifluoromethane	85	3.561	3.561	0.000	100	12326	0.0589	
31 Methylene Chloride	84	5.325	5.325	0.000	90	37296	0.5799	
47 Benzene	78	8.883	8.889	-0.006	66	6228	0.0341	
65 Toluene	91	12.415	12.411	-0.001	92	63625	0.2689	
78 m-Xylene & p-Xylene	91	15.063	15.063	-0.006	98	25601	0.0915	
82 o-Xylene	91	15.608	15.597	0.006	75	10570	0.0360	
S 121 Xylenes, Total	100				0		0.1275	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P107.D

Injection Date: 26-Feb-2019 18:47:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-7

Lab Sample ID: 140-14391-7

Worklist Smp#: 11

Client ID: IA-060-C-26

Purge Vol: 500.000 mL

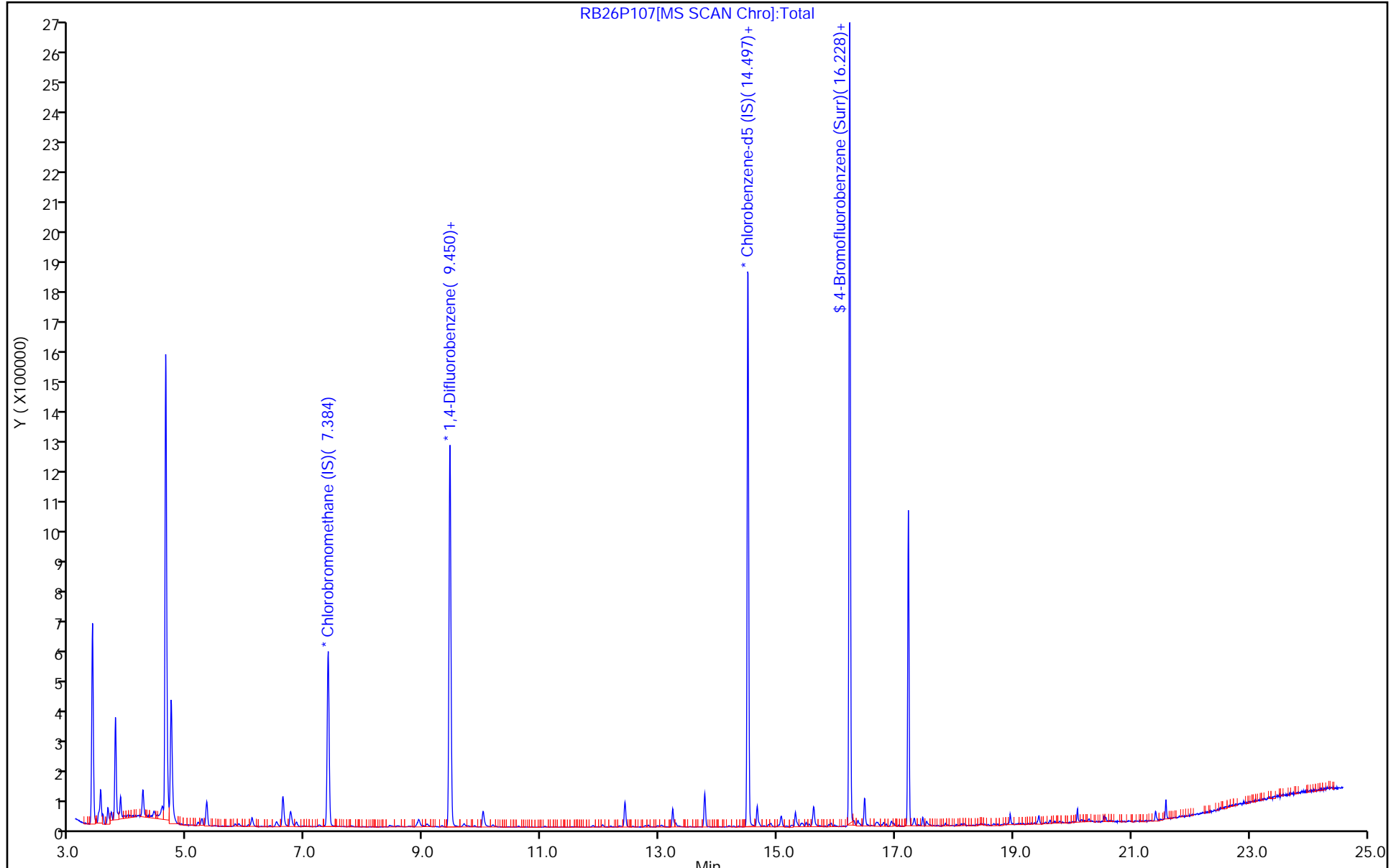
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P107.D
 Lims ID: 140-14391-A-7
 Client ID: IA-060-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 18:47:30 ALS Bottle#: 7 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-011
 Misc. Info.: 140-14391-a-7
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:08:05 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:55:30

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.04	100.93

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P107.D

Injection Date: 26-Feb-2019 18:47:30

Instrument ID: MR

Lims ID: 140-14391-A-7

Lab Sample ID: 140-14391-7

Client ID: IA-060-C-26

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

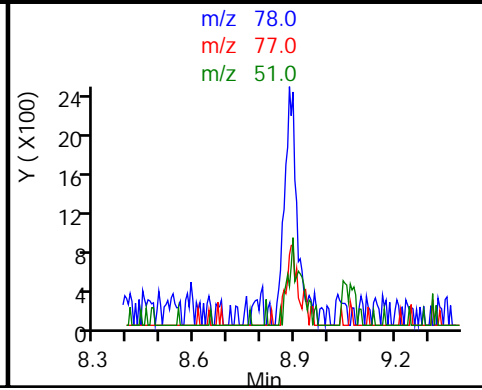
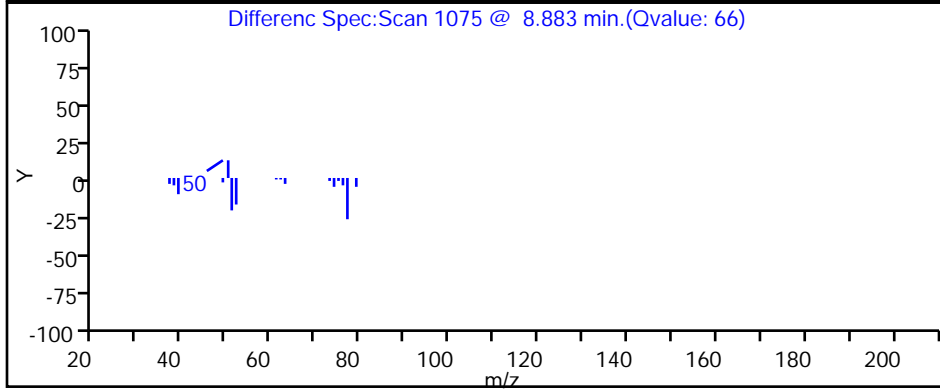
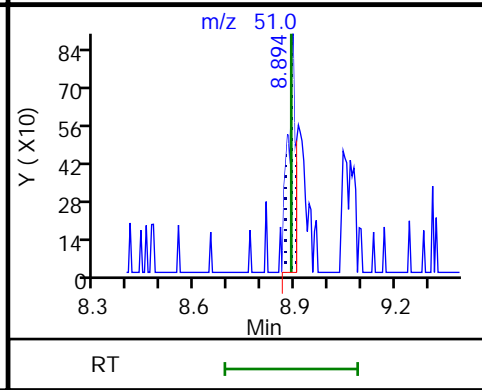
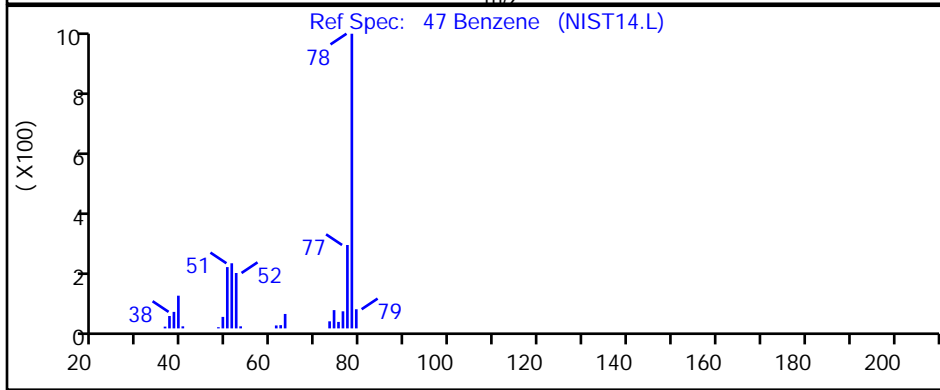
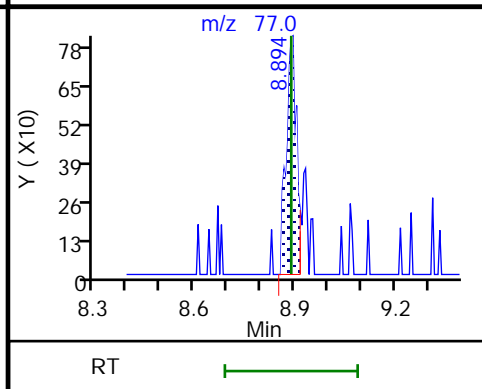
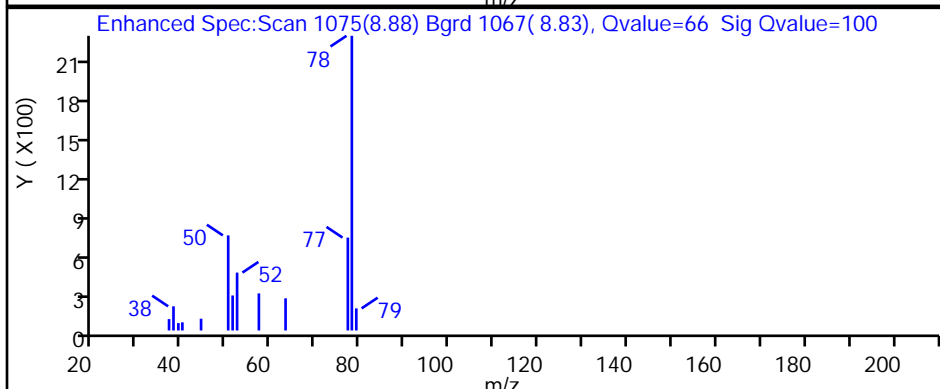
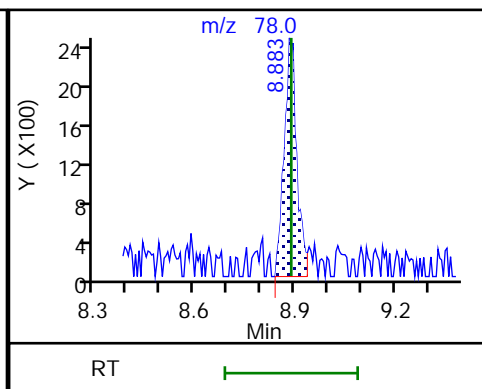
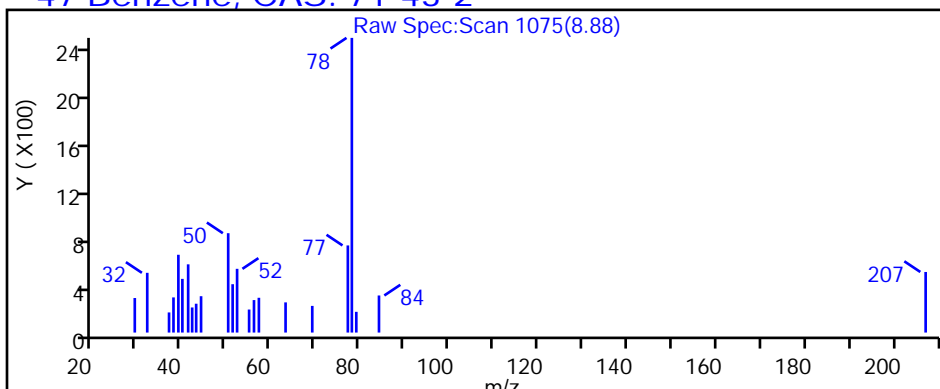
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P107.D

Injection Date: 26-Feb-2019 18:47:30

Instrument ID: MR

Lims ID: 140-14391-A-7

Lab Sample ID: 140-14391-7

Client ID: IA-060-C-26

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

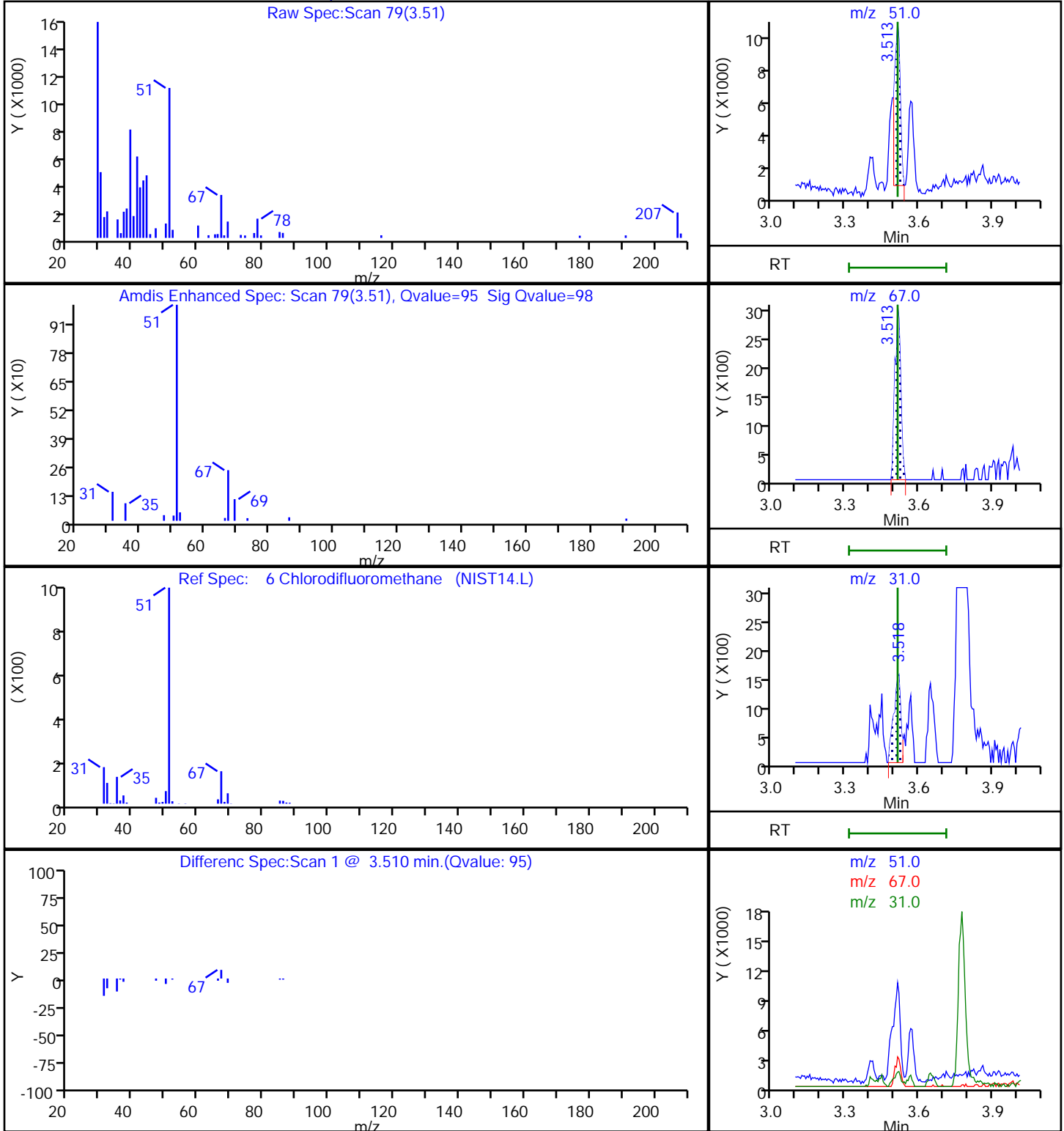
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P107.D

Injection Date: 26-Feb-2019 18:47:30

Instrument ID: MR

Lims ID: 140-14391-A-7

Lab Sample ID: 140-14391-7

Client ID: IA-060-C-26

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

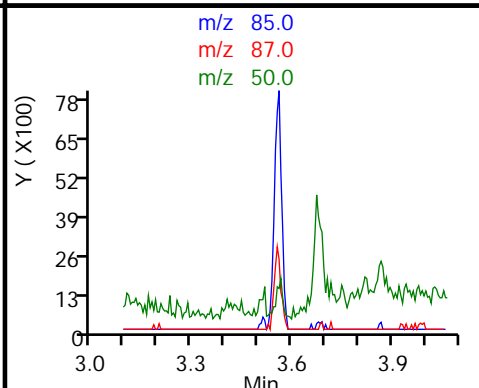
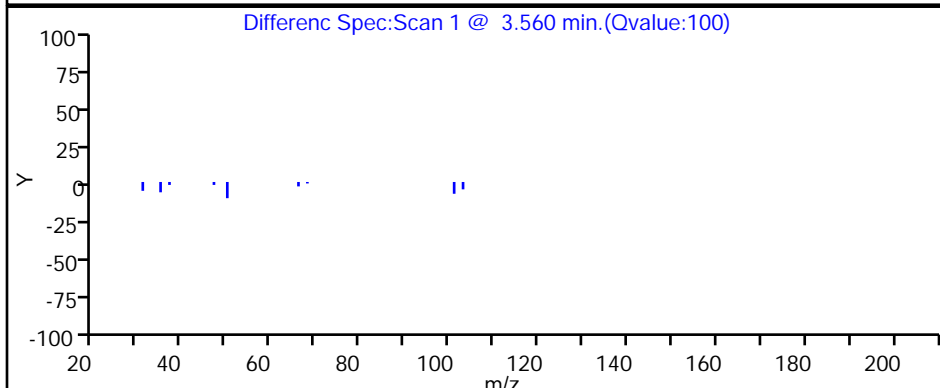
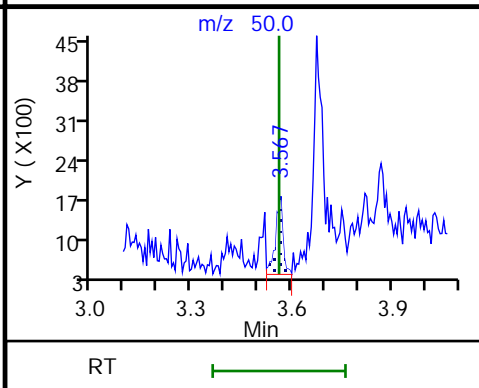
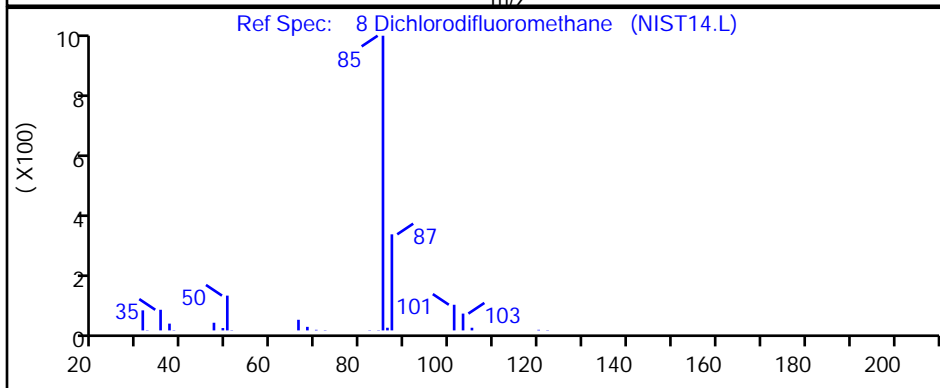
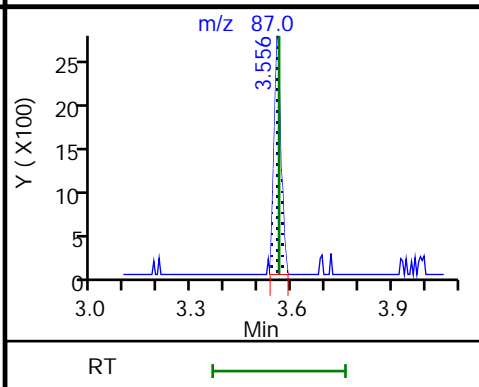
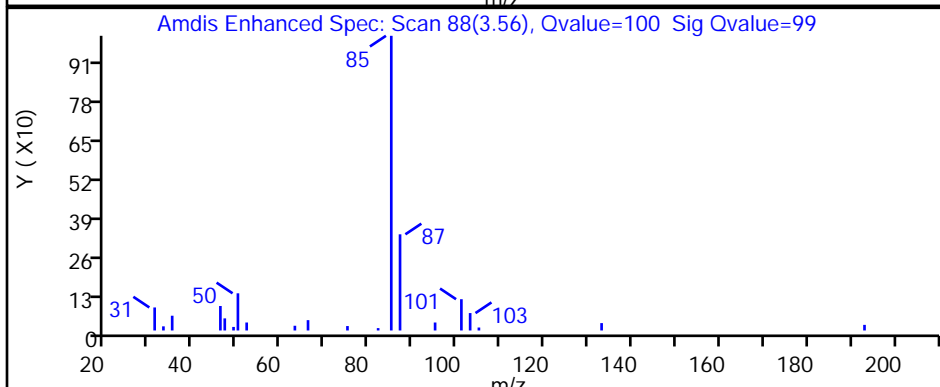
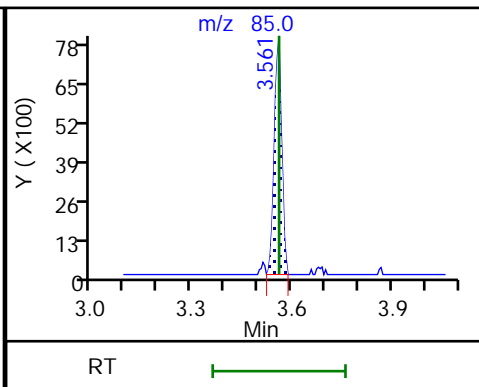
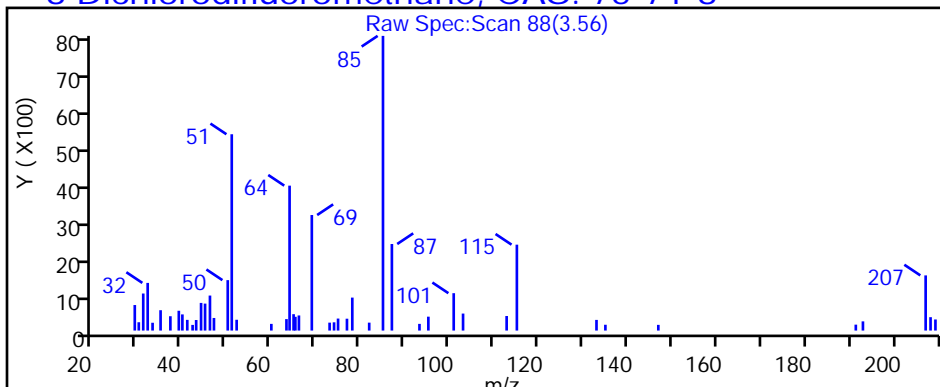
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P107.D

Injection Date: 26-Feb-2019 18:47:30

Instrument ID: MR

Lims ID: 140-14391-A-7

Lab Sample ID: 140-14391-7

Client ID: IA-060-C-26

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

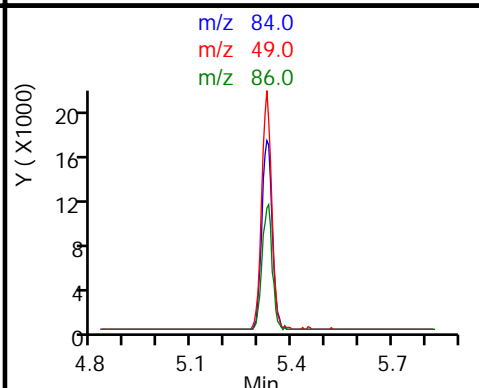
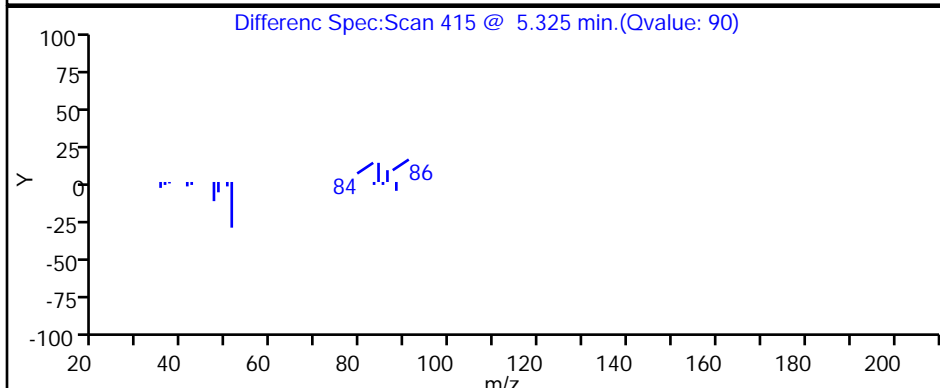
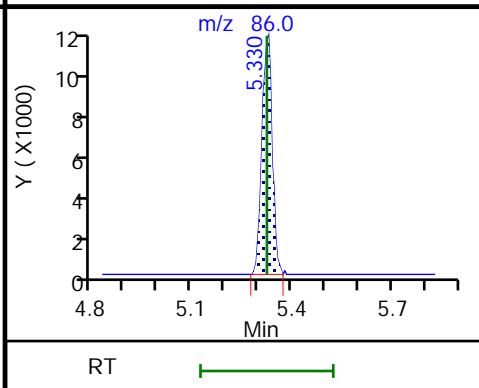
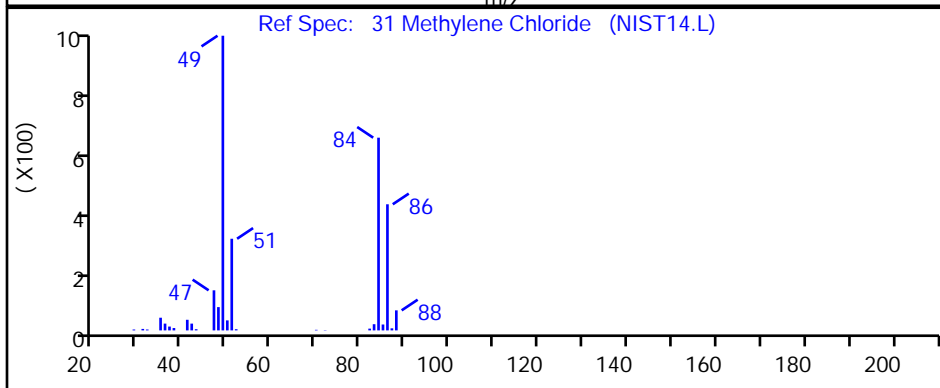
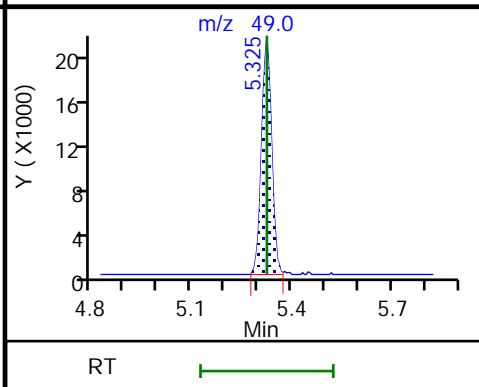
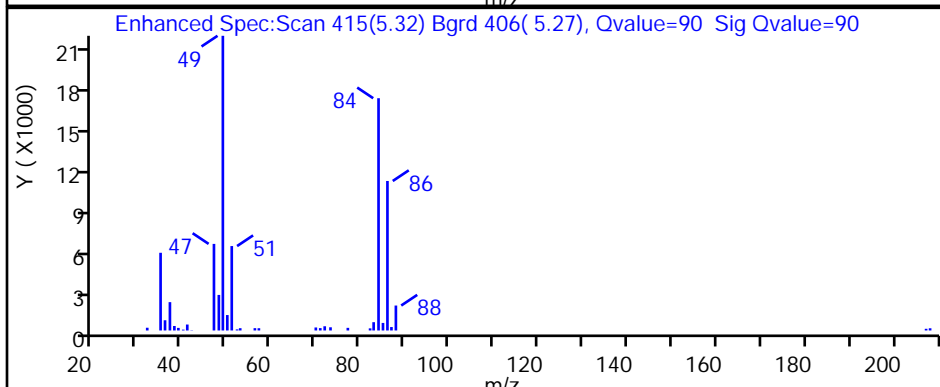
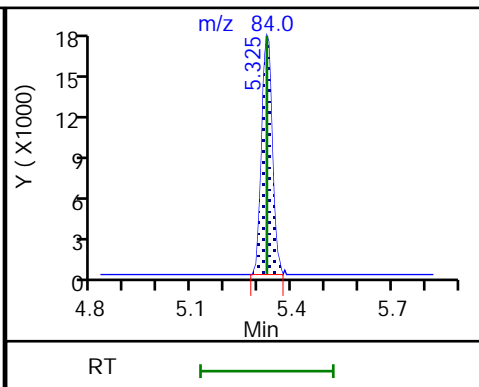
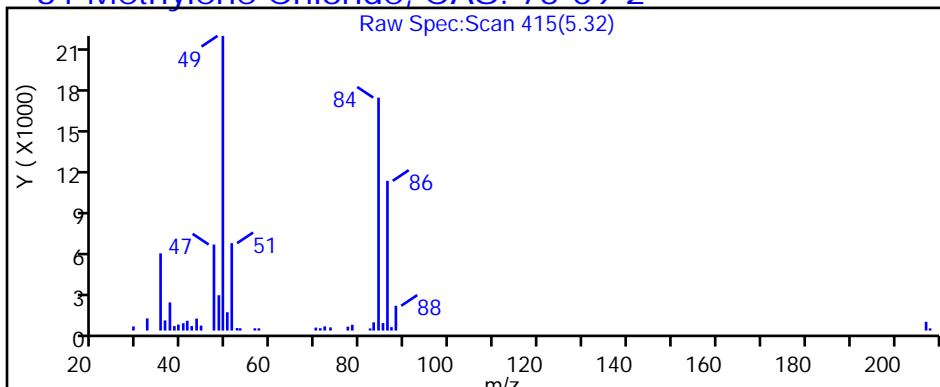
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P107.D

Injection Date: 26-Feb-2019 18:47:30

Instrument ID: MR

Lims ID: 140-14391-A-7

Lab Sample ID: 140-14391-7

Client ID: IA-060-C-26

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

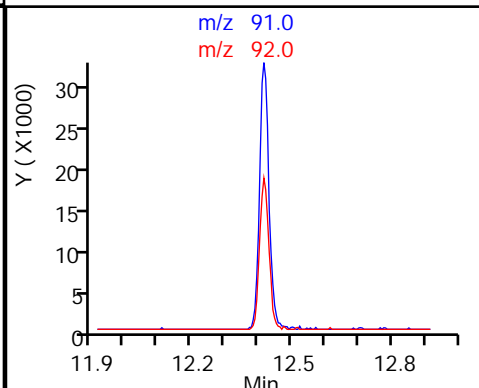
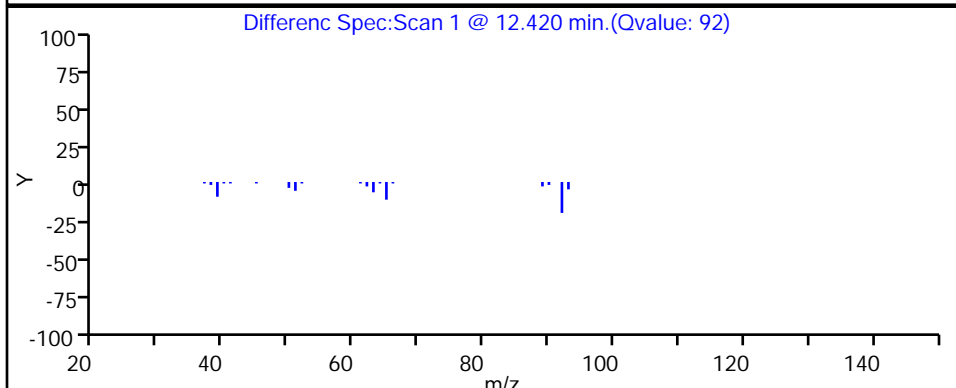
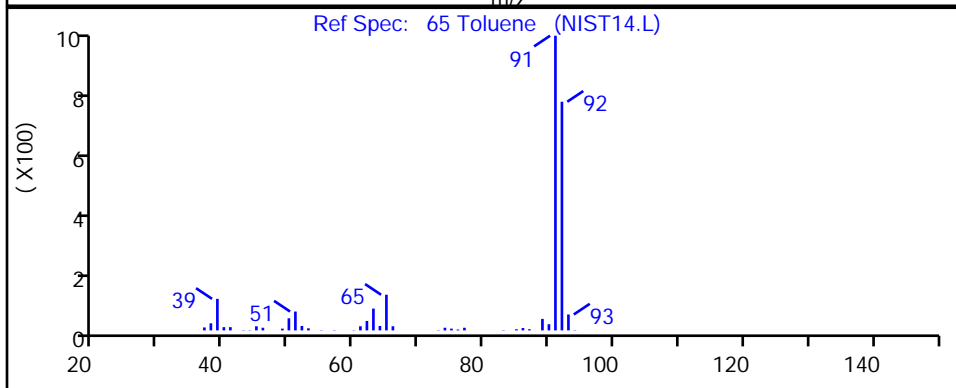
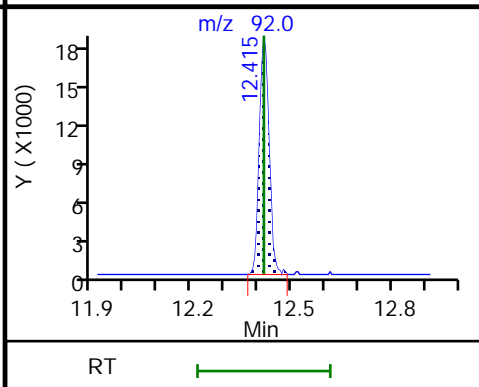
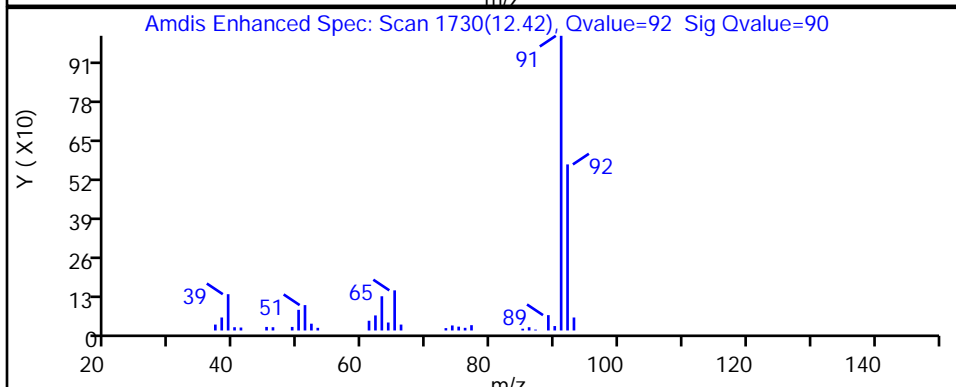
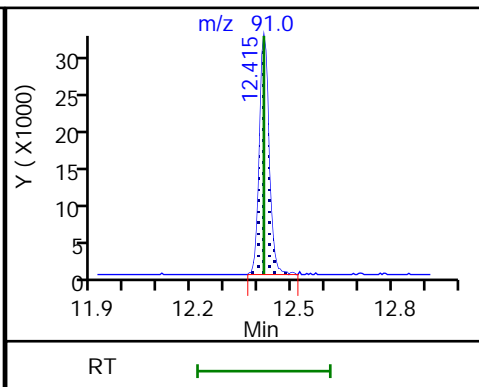
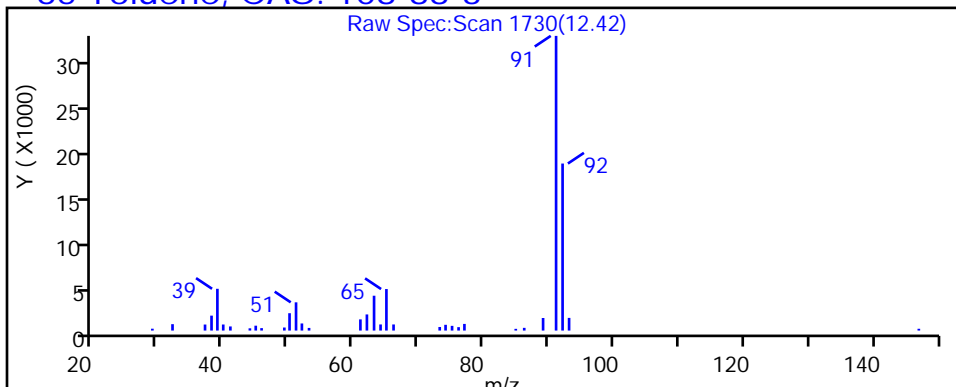
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P107.D

Injection Date: 26-Feb-2019 18:47:30

Instrument ID: MR

Lims ID: 140-14391-A-7

Lab Sample ID: 140-14391-7

Client ID: IA-060-C-26

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

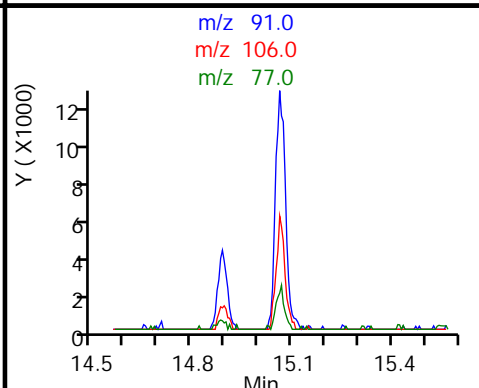
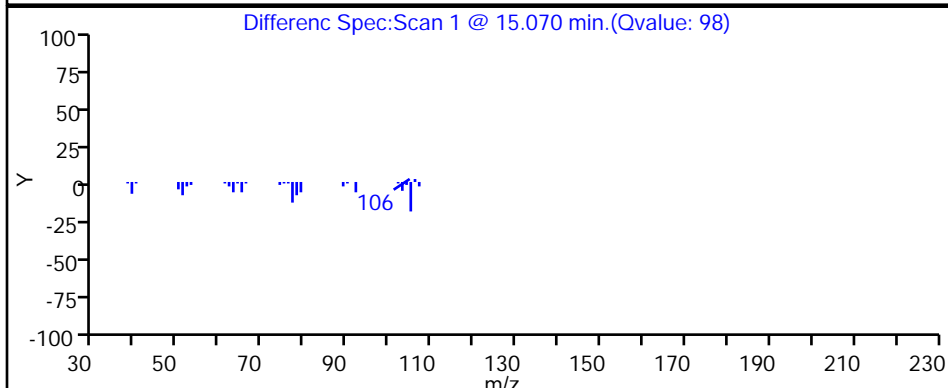
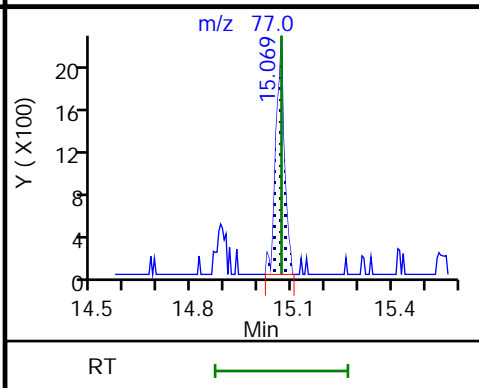
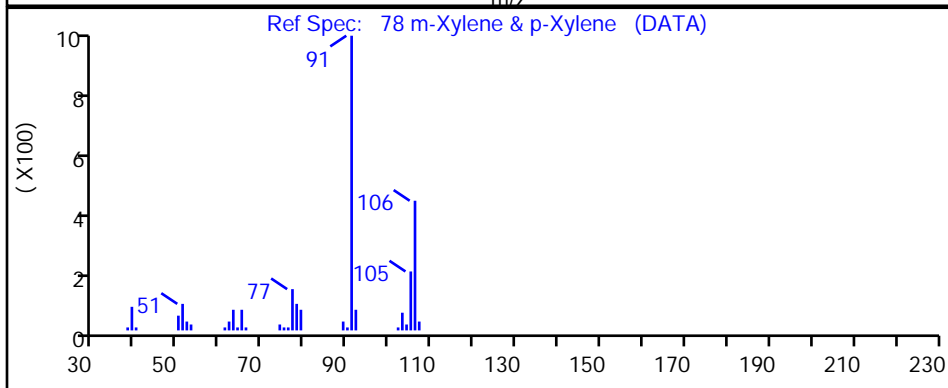
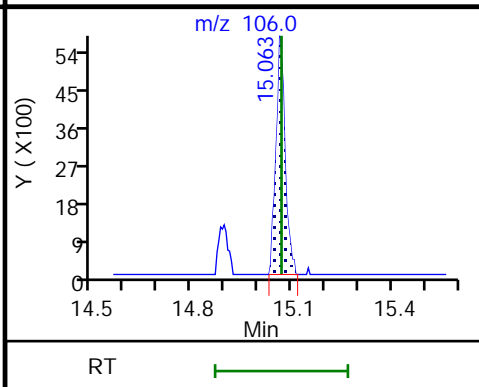
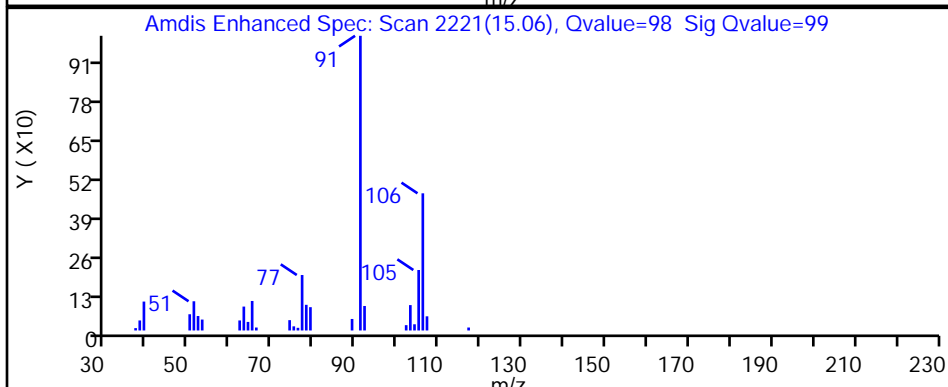
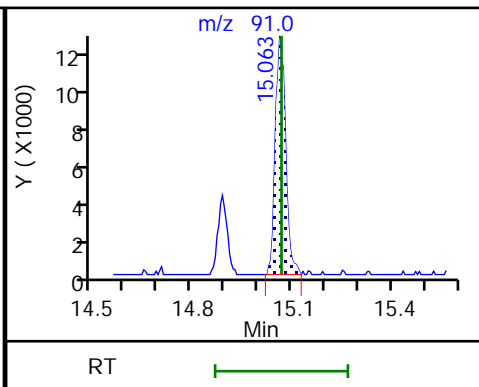
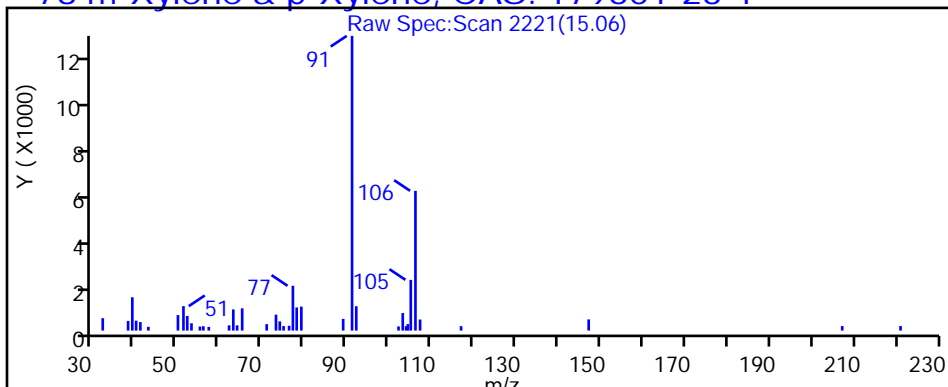
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P107.D

Injection Date: 26-Feb-2019 18:47:30

Instrument ID: MR

Lims ID: 140-14391-A-7

Lab Sample ID: 140-14391-7

Client ID: IA-060-C-26

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

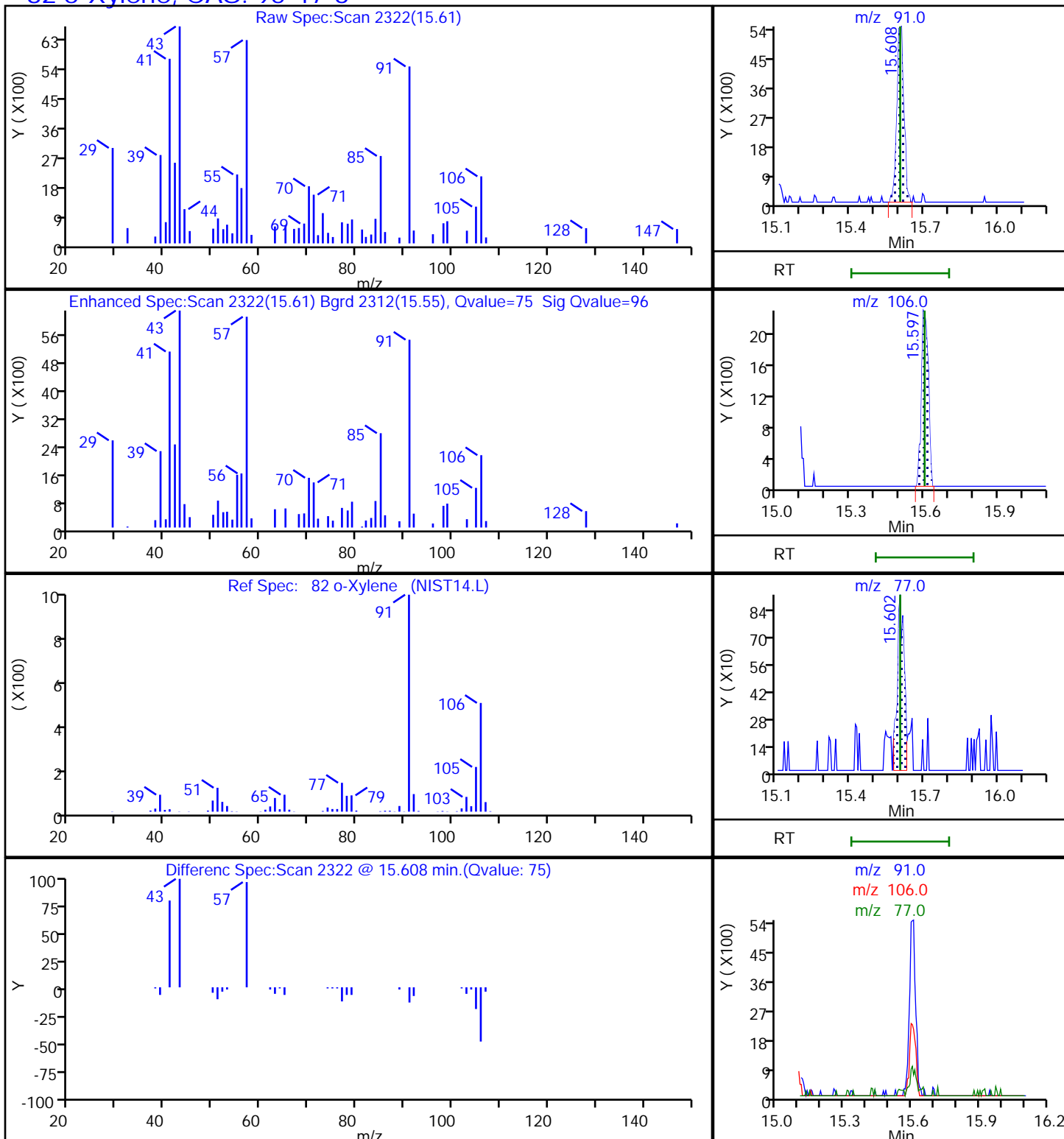
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



TestAmerica Knoxville

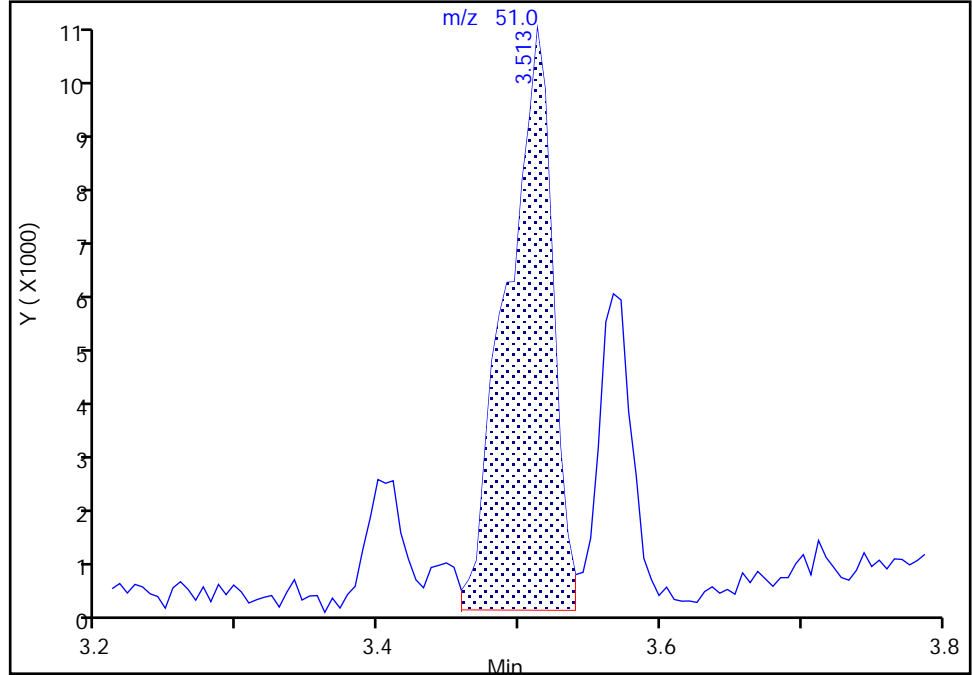
Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P107.D
Injection Date: 26-Feb-2019 18:47:30 Instrument ID: MR
Lims ID: 140-14391-A-7 Lab Sample ID: 140-14391-7
Client ID: IA-060-C-26
Operator ID: ALS Bottle#: 7 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

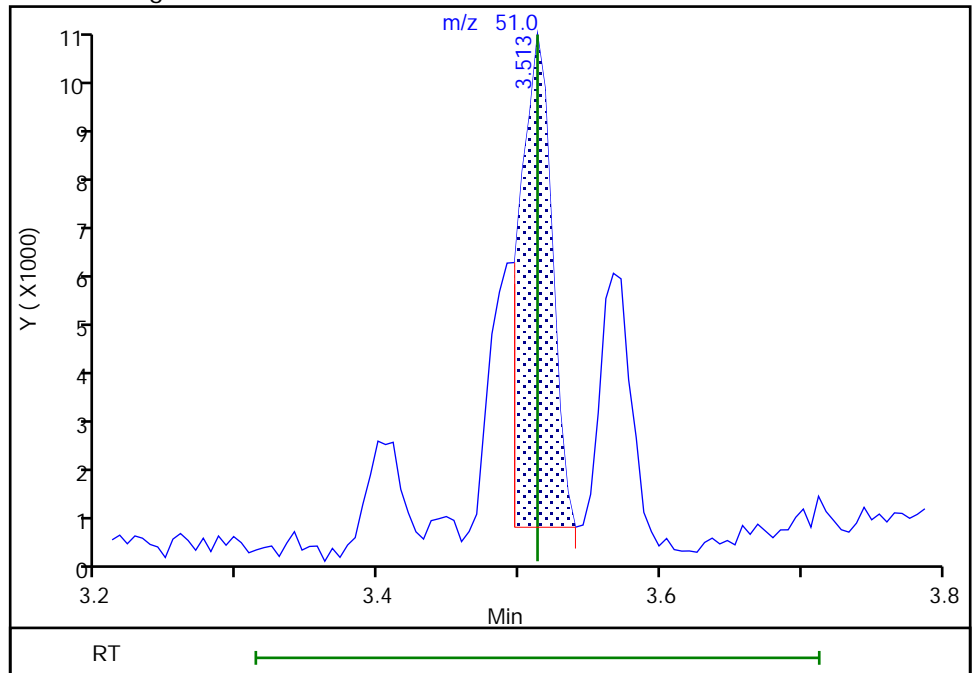
RT: 3.51
Area: 23282
Amount: 0.204101
Amount Units: ppb v/v

Processing Integration Results



RT: 3.51
Area: 15084
Amount: 0.132233
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 18:07:54
Audit Action: Manually Integrated

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-150-C-26 Lab Sample ID: 140-14391-8
 Matrix: Air Lab File ID: RB26P108.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:16
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 19:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.8	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.27	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.86		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-150-C-26 Lab Sample ID: 140-14391-8
 Matrix: Air Lab File ID: RB26P108.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:16
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 19:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	21	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	10		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P108.D
 Lims ID: 140-14391-A-8
 Client ID: IA-150-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 19:36:30 ALS Bottle#: 8 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-012
 Misc. Info.: 140-14391-a-8
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:56:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.384	-0.005	71	199155	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1158636	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.503	14.502	0.000	91	1013298	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.223	16.228	-0.005	89	871207	4.04	
6 Chlorodifluoromethane	51	3.513	3.513	0.000	96	137784	1.17	
8 Dichlorodifluoromethane	85	3.556	3.564	-0.005	97	11658	0.0538	
31 Methylene Chloride	84	5.319	5.325	-0.006	89	21865	0.3282	
47 Benzene	78	8.884	8.889	-0.005	73	6741	0.0357	
65 Toluene	91	12.416	12.416	0.000	93	128915	0.5309	
76 Ethylbenzene	91	14.891	14.891	0.000	98	10309	0.0294	
78 m-Xylene & p-Xylene	91	15.063	15.069	-0.006	99	35882	0.1250	
82 o-Xylene	91	15.597	15.602	-0.005	87	14272	0.0473	
S 121 Xylenes, Total	100				0		0.1723	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P108.D

Injection Date: 26-Feb-2019 19:36:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-8

Lab Sample ID: 140-14391-8

Worklist Smp#: 12

Client ID: IA-150-C-26

Purge Vol: 500.000 mL

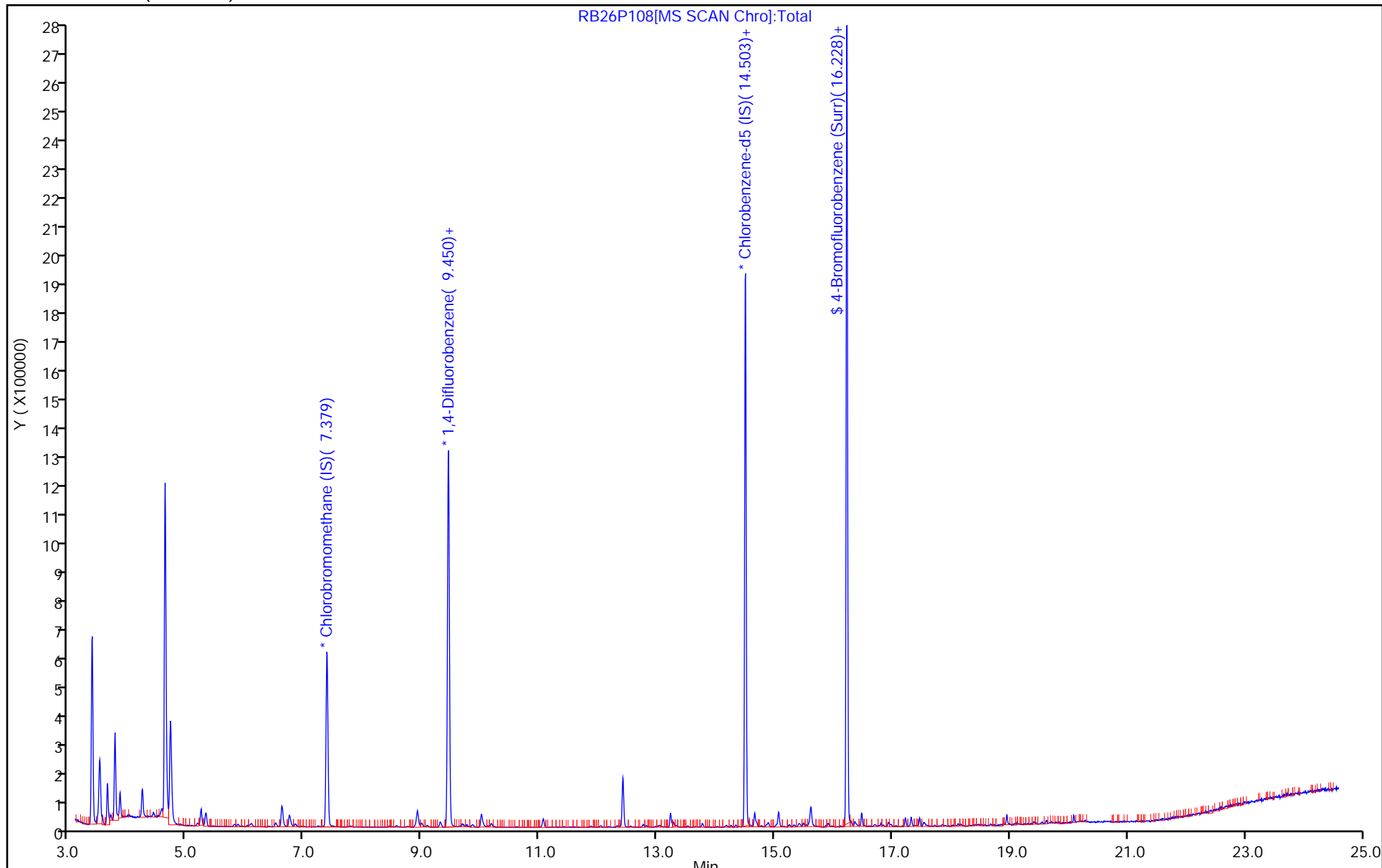
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P108.D
 Lims ID: 140-14391-A-8
 Client ID: IA-150-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 19:36:30 ALS Bottle#: 8 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-012
 Misc. Info.: 140-14391-a-8
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:56:16

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.04	101.08

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P108.D

Injection Date: 26-Feb-2019 19:36:30

Instrument ID: MR

Lims ID: 140-14391-A-8

Lab Sample ID: 140-14391-8

Client ID: IA-150-C-26

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

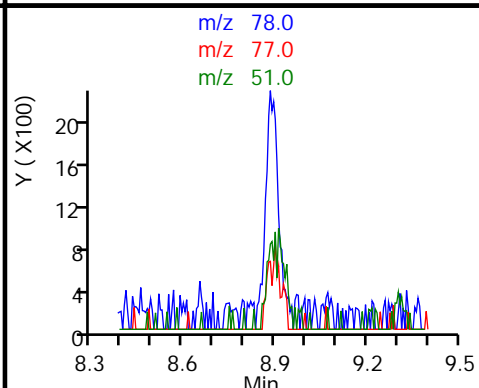
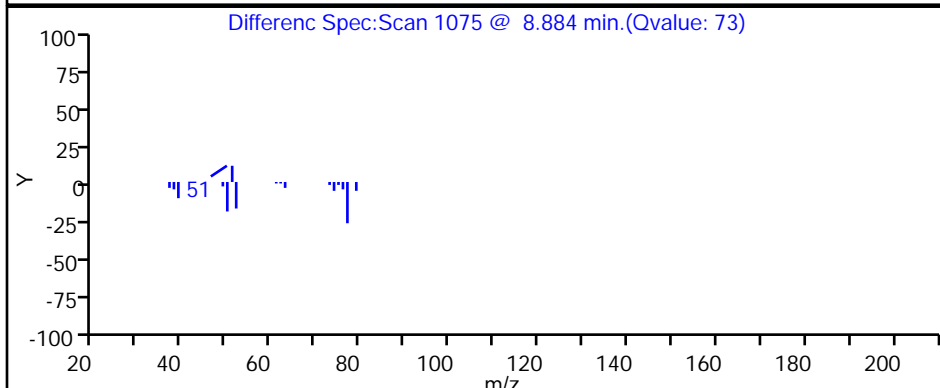
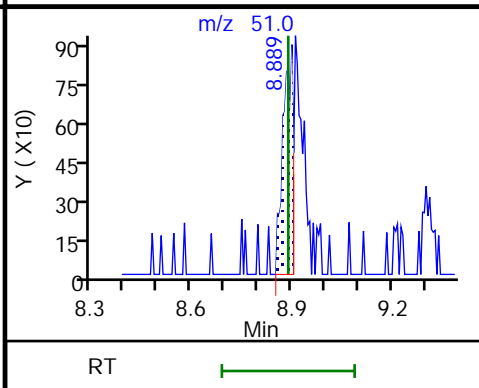
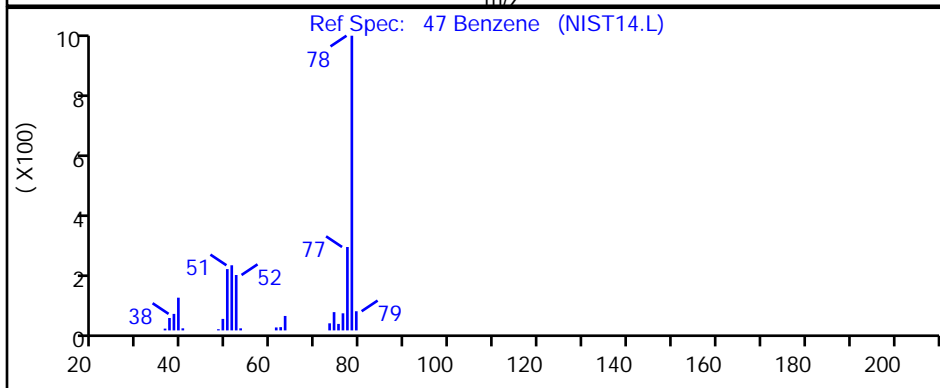
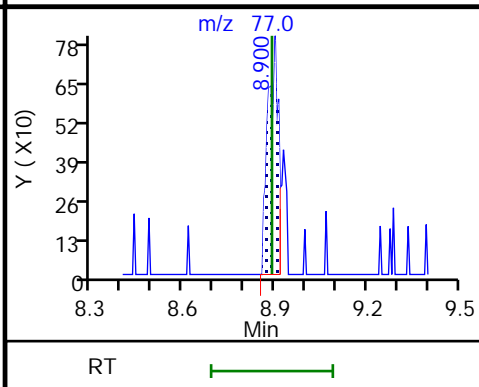
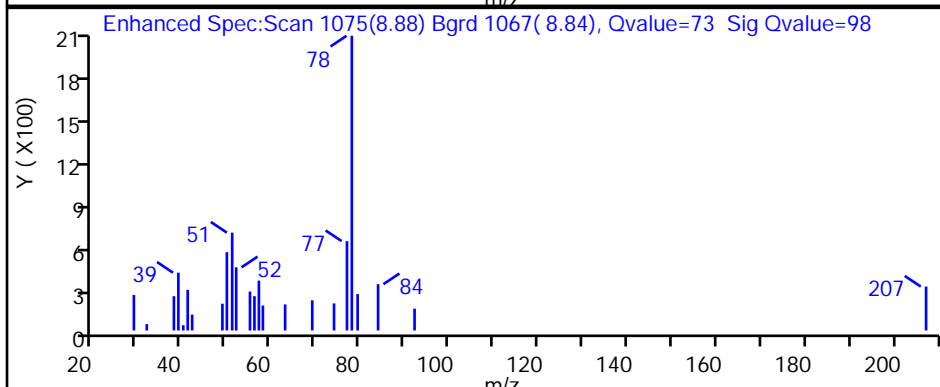
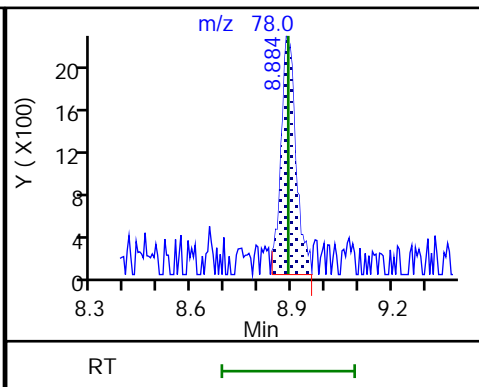
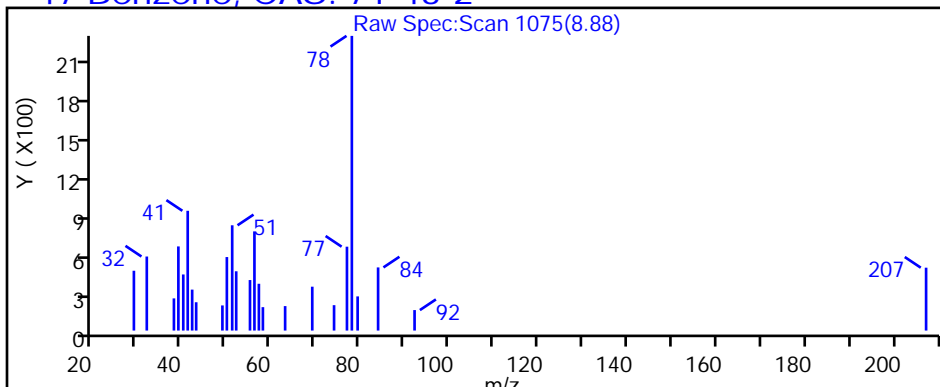
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P108.D

Injection Date: 26-Feb-2019 19:36:30

Instrument ID: MR

Lims ID: 140-14391-A-8

Lab Sample ID: 140-14391-8

Client ID: IA-150-C-26

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

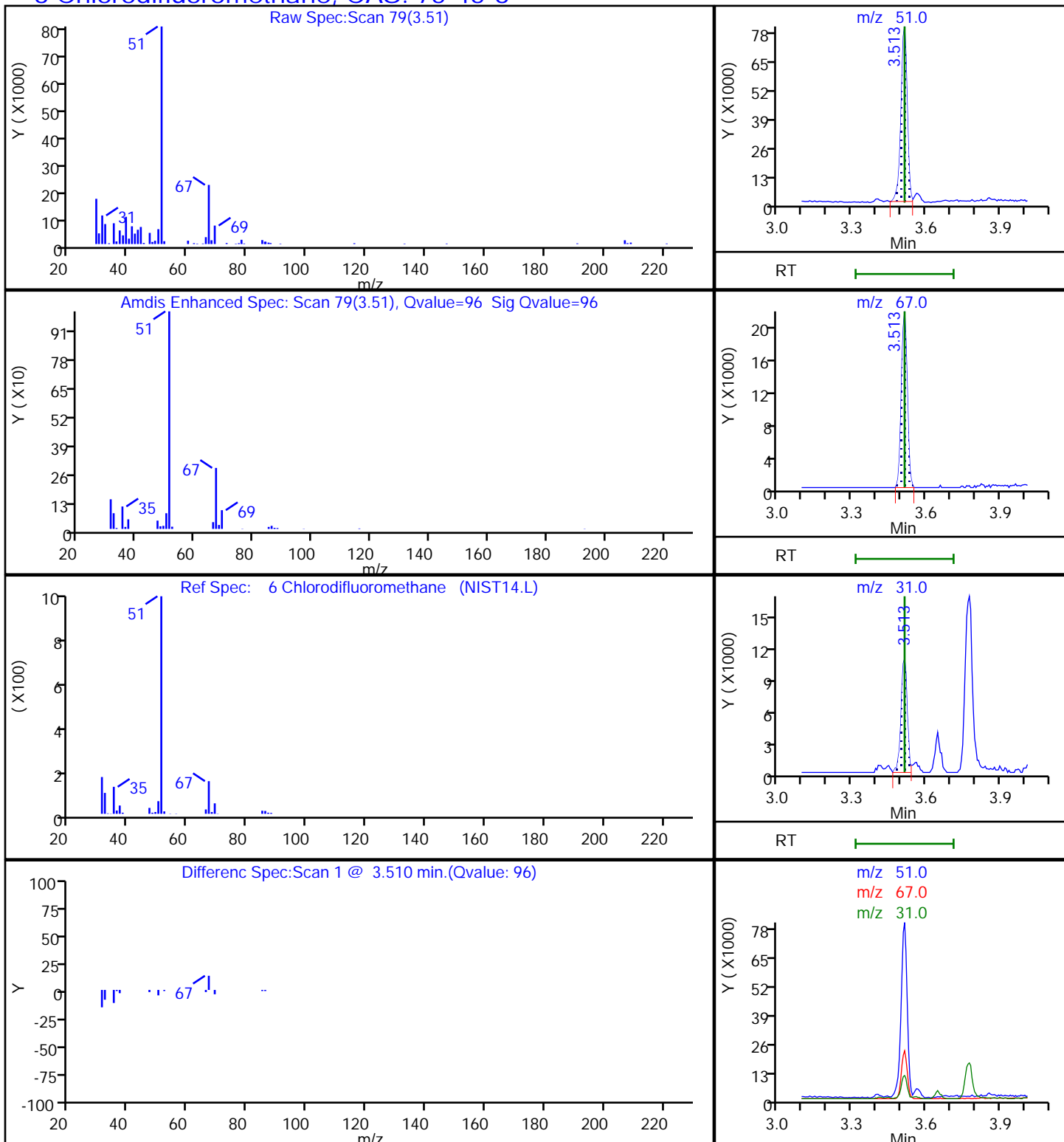
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P108.D

Injection Date: 26-Feb-2019 19:36:30

Instrument ID: MR

Lims ID: 140-14391-A-8

Lab Sample ID: 140-14391-8

Client ID: IA-150-C-26

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

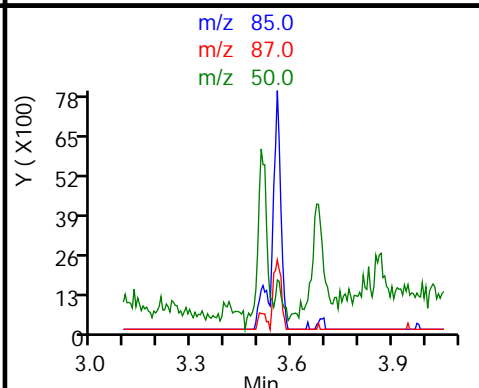
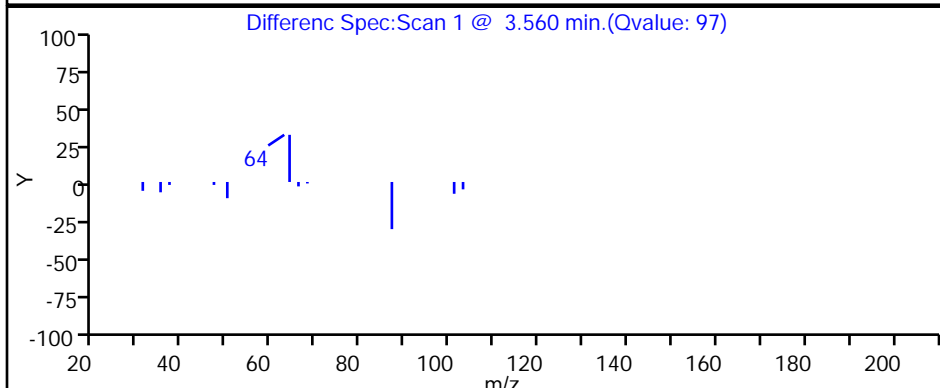
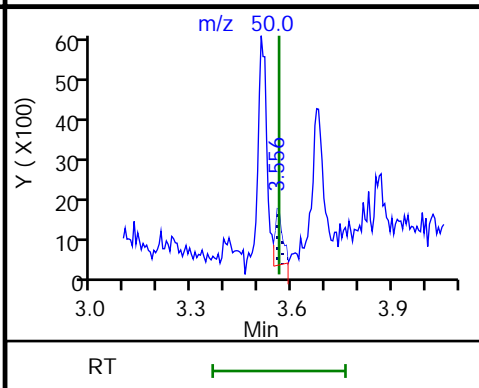
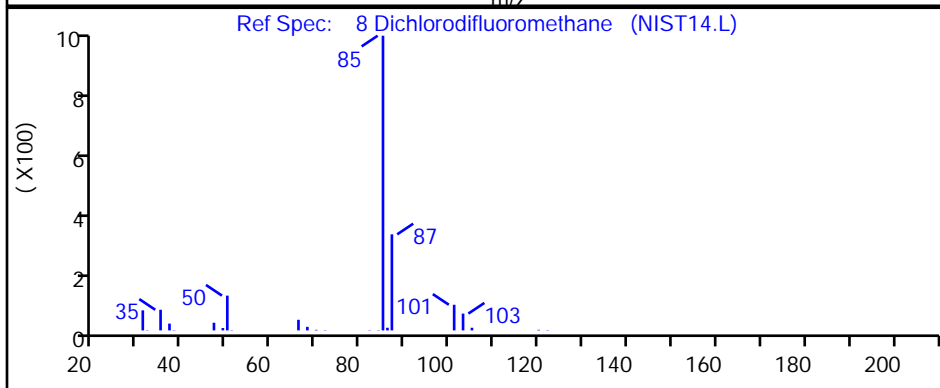
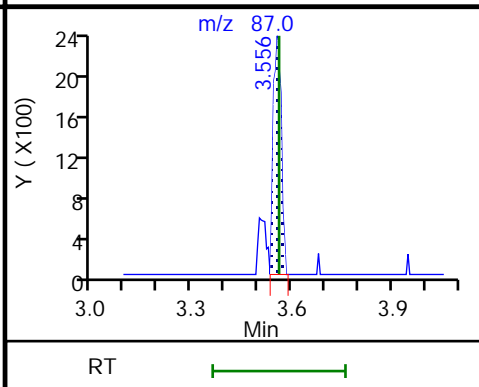
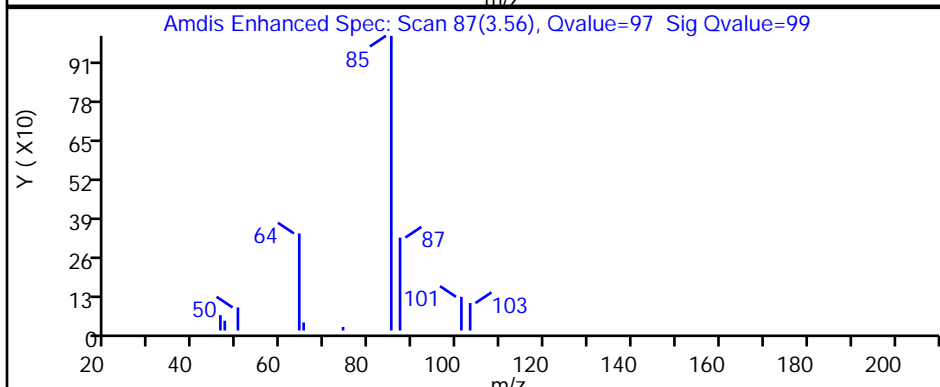
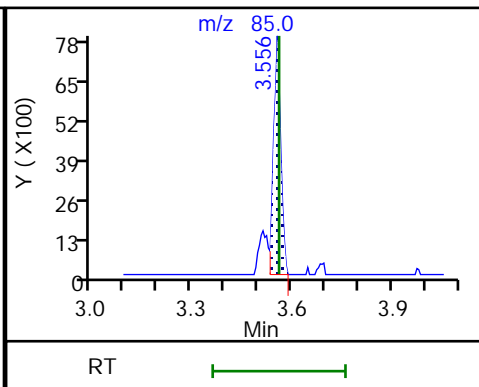
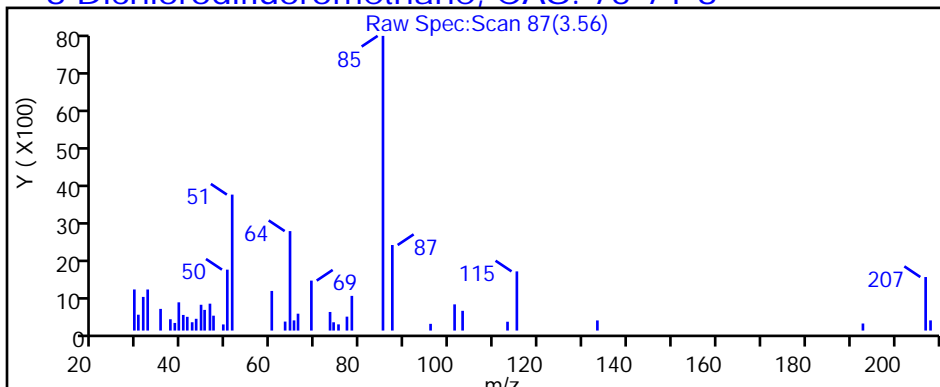
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P108.D

Injection Date: 26-Feb-2019 19:36:30

Instrument ID: MR

Lims ID: 140-14391-A-8

Lab Sample ID: 140-14391-8

Client ID: IA-150-C-26

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

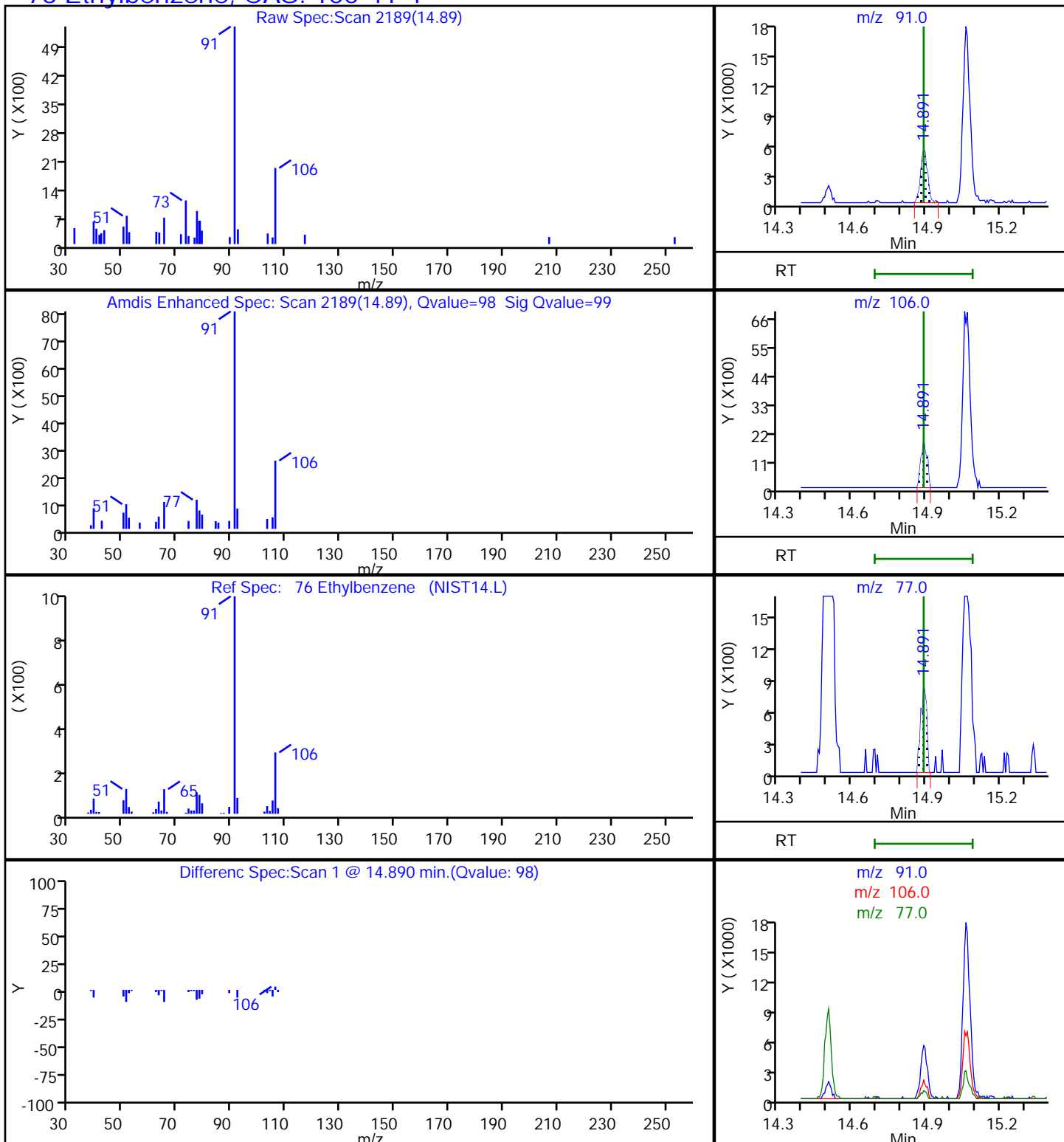
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P108.D

Injection Date: 26-Feb-2019 19:36:30

Instrument ID: MR

Lims ID: 140-14391-A-8

Lab Sample ID: 140-14391-8

Client ID: IA-150-C-26

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

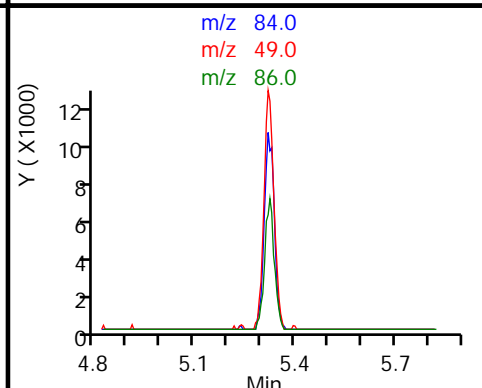
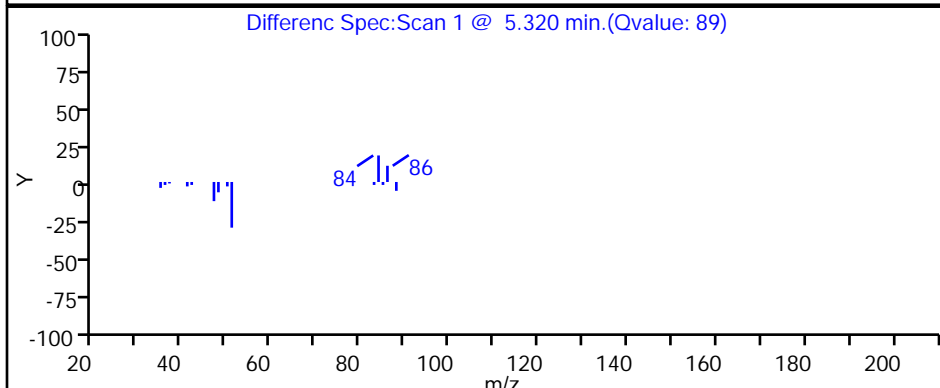
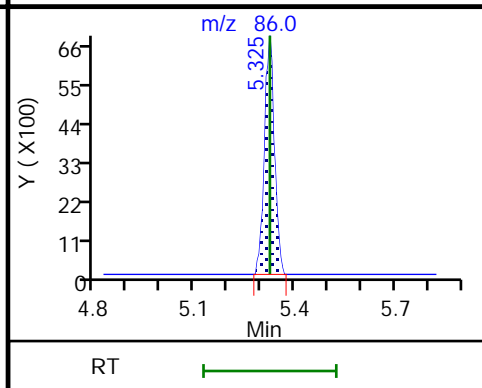
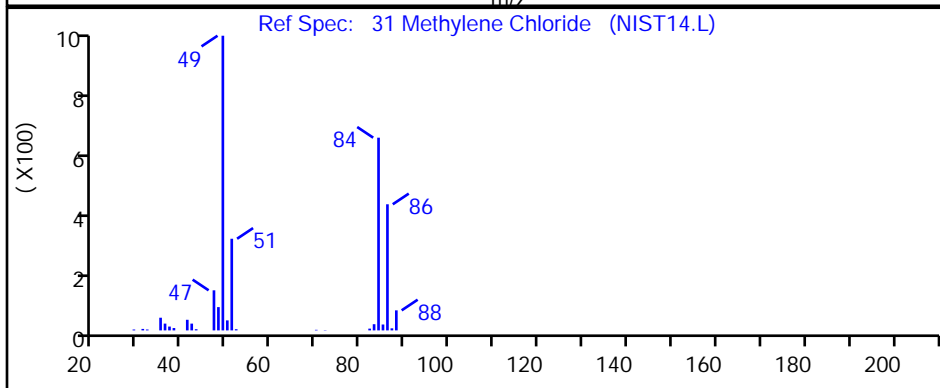
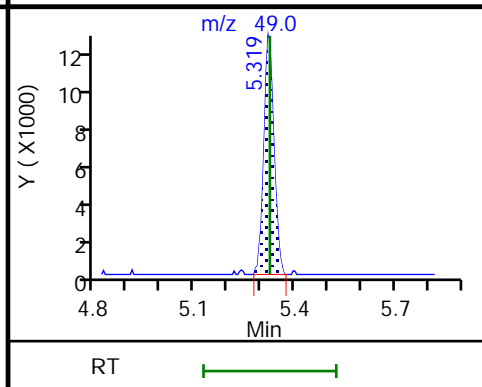
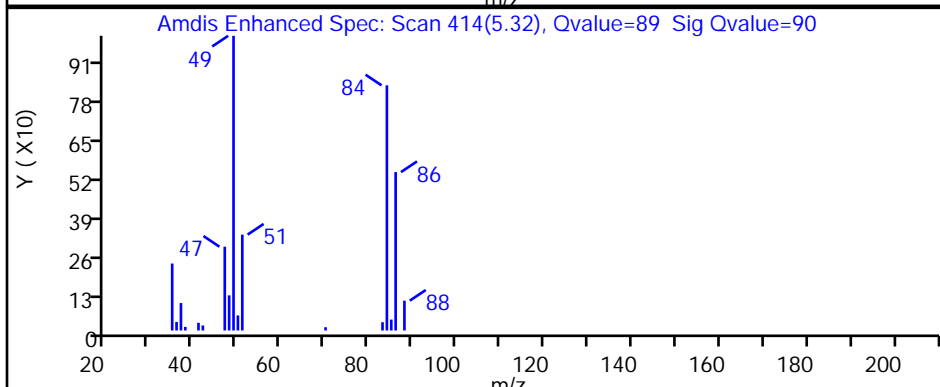
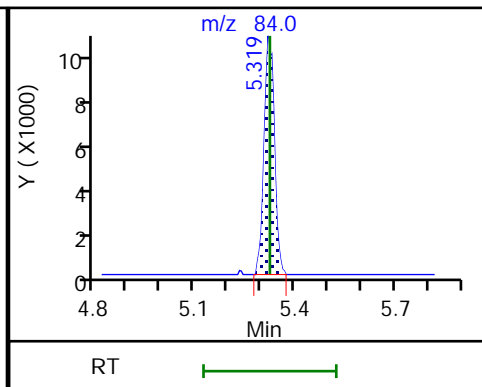
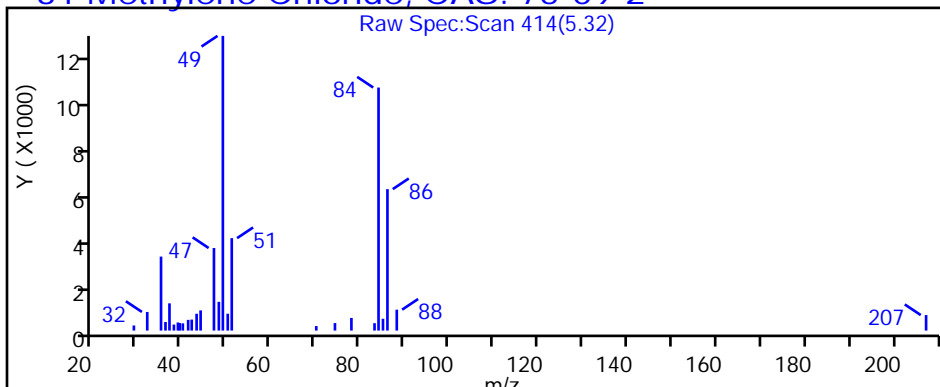
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P108.D

Injection Date: 26-Feb-2019 19:36:30

Instrument ID: MR

Lims ID: 140-14391-A-8

Lab Sample ID: 140-14391-8

Client ID: IA-150-C-26

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

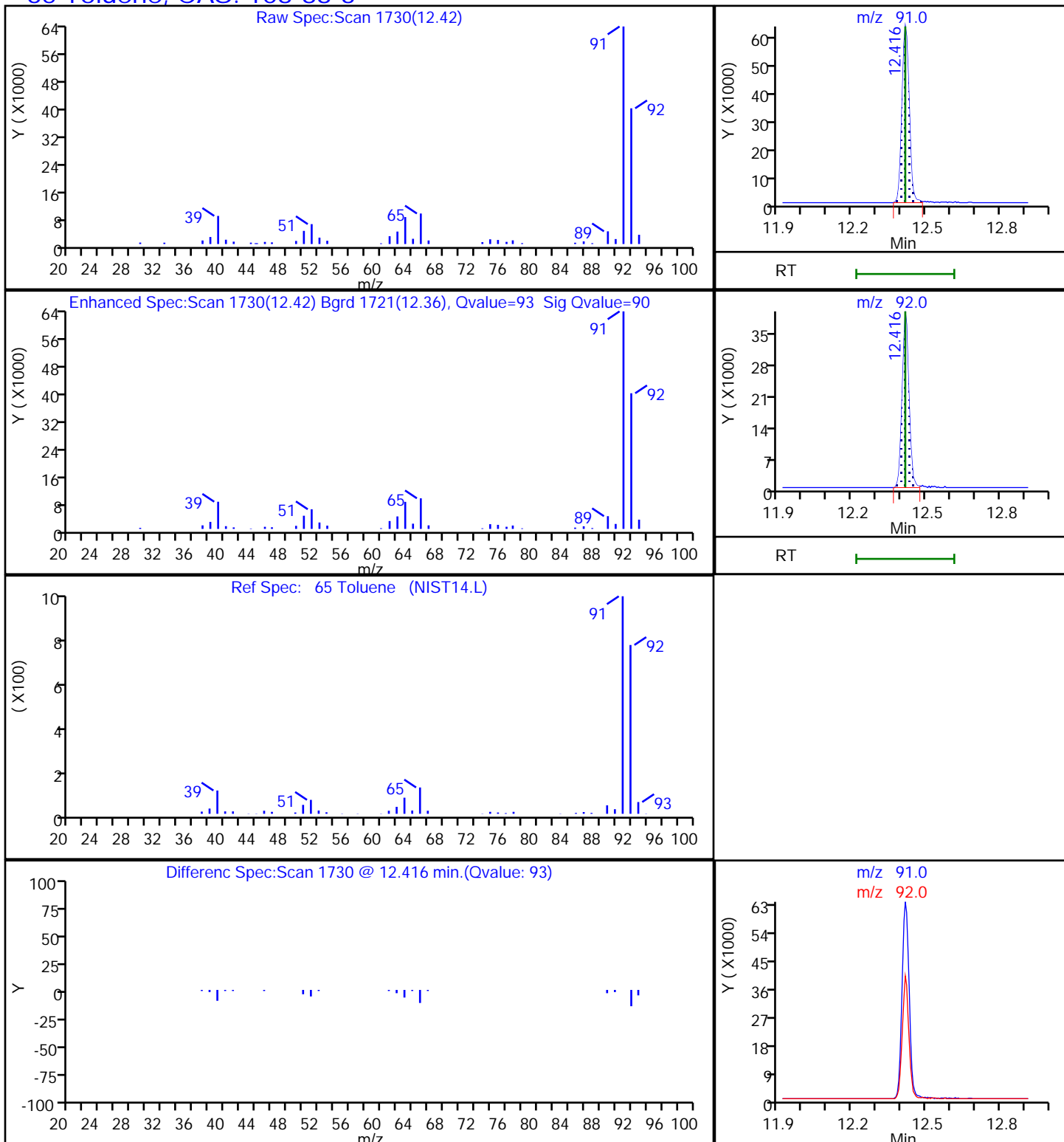
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P108.D

Injection Date: 26-Feb-2019 19:36:30

Instrument ID: MR

Lims ID: 140-14391-A-8

Lab Sample ID: 140-14391-8

Client ID: IA-150-C-26

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

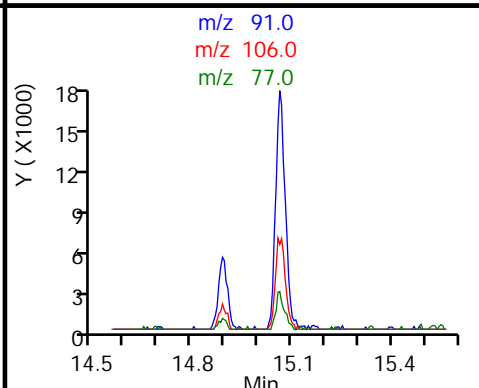
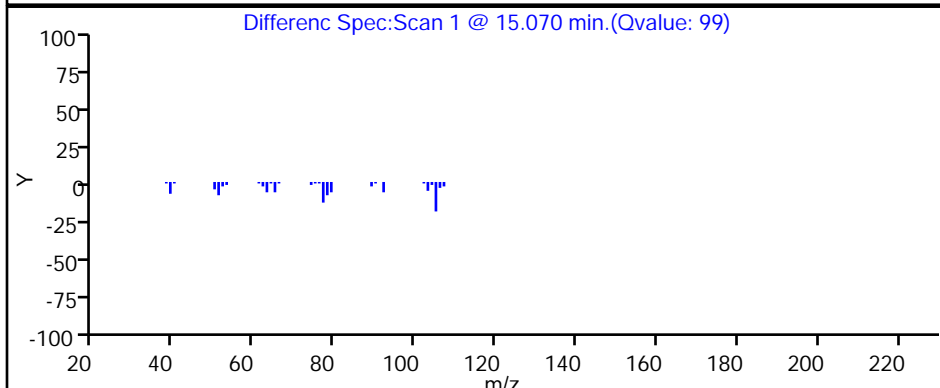
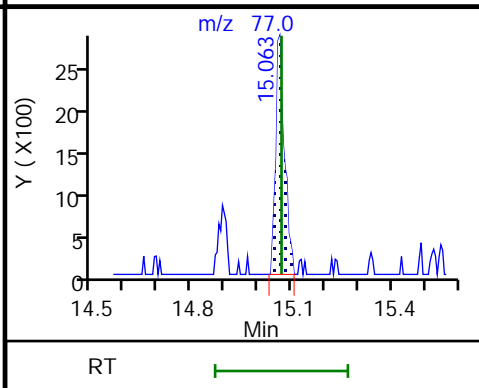
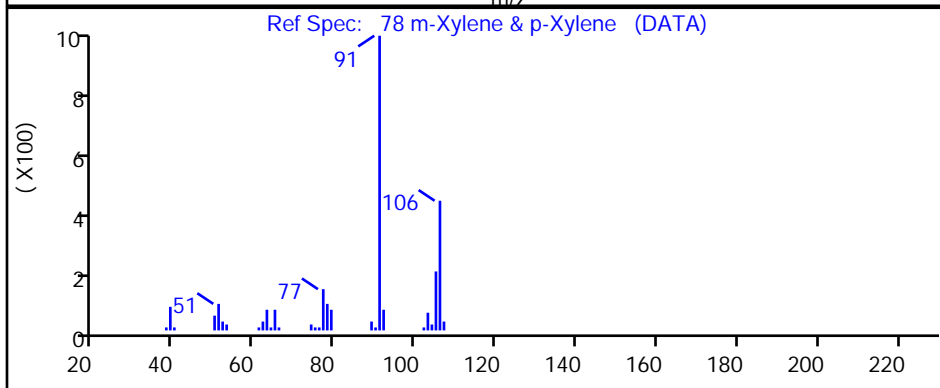
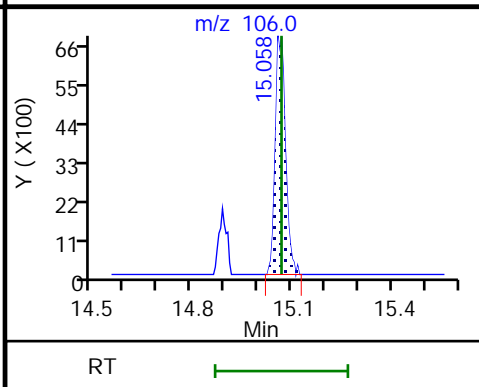
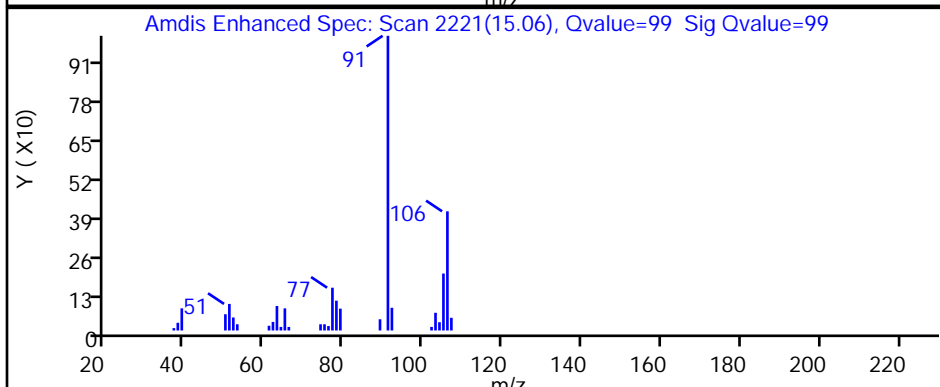
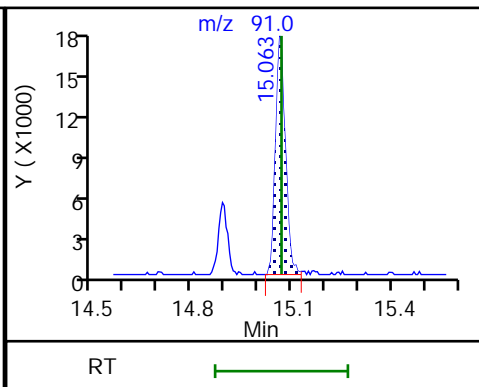
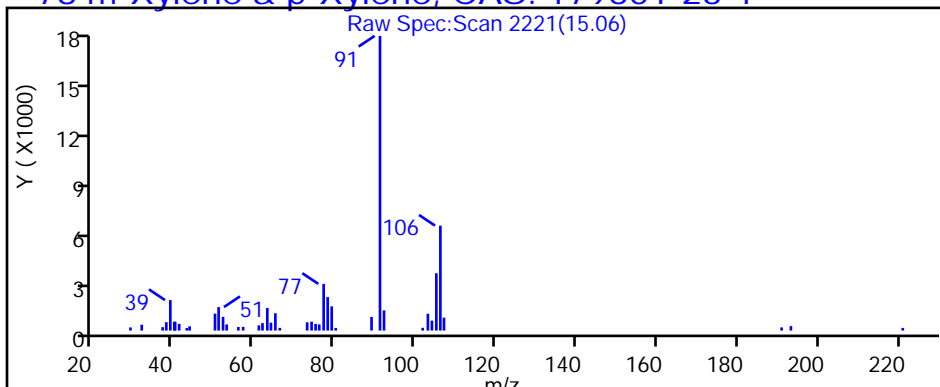
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P108.D

Injection Date: 26-Feb-2019 19:36:30

Instrument ID: MR

Lims ID: 140-14391-A-8

Lab Sample ID: 140-14391-8

Client ID: IA-150-C-26

Operator ID:

ALS Bottle#: 8 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

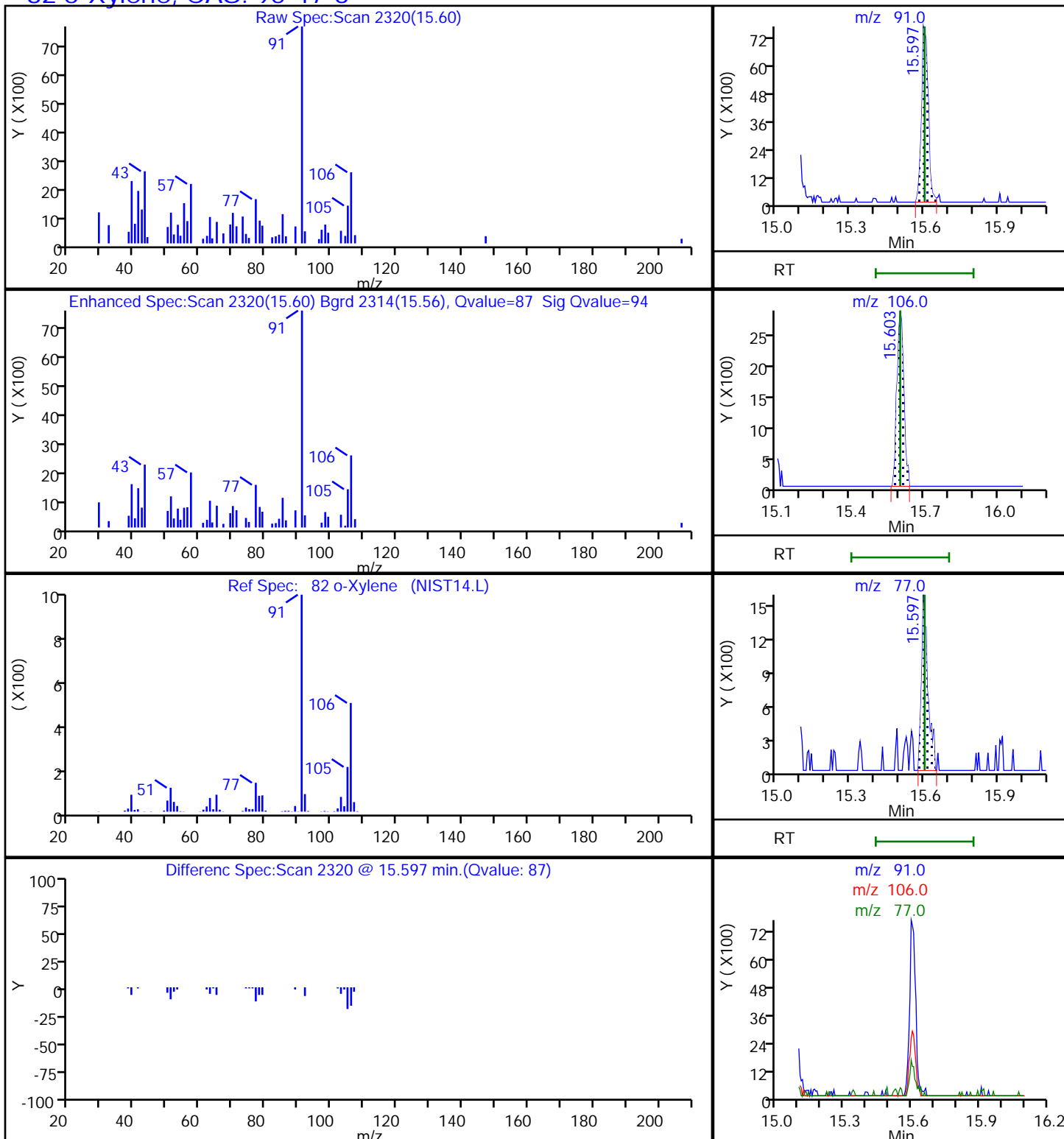
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-145-C-26 Lab Sample ID: 140-14391-9
 Matrix: Air Lab File ID: RB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:17
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 20:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	6.0	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.82		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-145-C-26 Lab Sample ID: 140-14391-9
 Matrix: Air Lab File ID: RB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:17
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 20:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	21	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.65	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.9		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	9.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P109.D
 Lims ID: 140-14391-A-9
 Client ID: IA-145-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 20:25:30 ALS Bottle#: 9 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-013
 Misc. Info.: 140-14391-a-9
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:56:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.384	0.001	71	193624	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1129234	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.503	14.502	0.001	91	998867	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.228	0.000	89	862746	4.06	
6 Chlorodifluoromethane	51	3.513	3.513	0.000	96	137736	1.20	
8 Dichlorodifluoromethane	85	3.556	3.564	-0.005	97	12082	0.0573	
31 Methylene Chloride	84	5.325	5.325	0.000	90	29555	0.4563	
47 Benzene	78	8.889	8.889	0.000	95	6976	0.0379	
65 Toluene	91	12.416	12.416	0.000	93	123624	0.5164	
76 Ethylbenzene	91	14.891	14.891	0.000	99	10263	0.0297	
78 m-Xylene & p-Xylene	91	15.069	15.069	0.000	99	33687	0.1190	
82 o-Xylene	91	15.603	15.602	0.001	95	12803	0.0431	
S 121 Xylenes, Total	100				0		0.1621	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P109.D

Injection Date: 26-Feb-2019 20:25:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-9

Lab Sample ID: 140-14391-9

Worklist Smp#: 13

Client ID: IA-145-C-26

Purge Vol: 500.000 mL

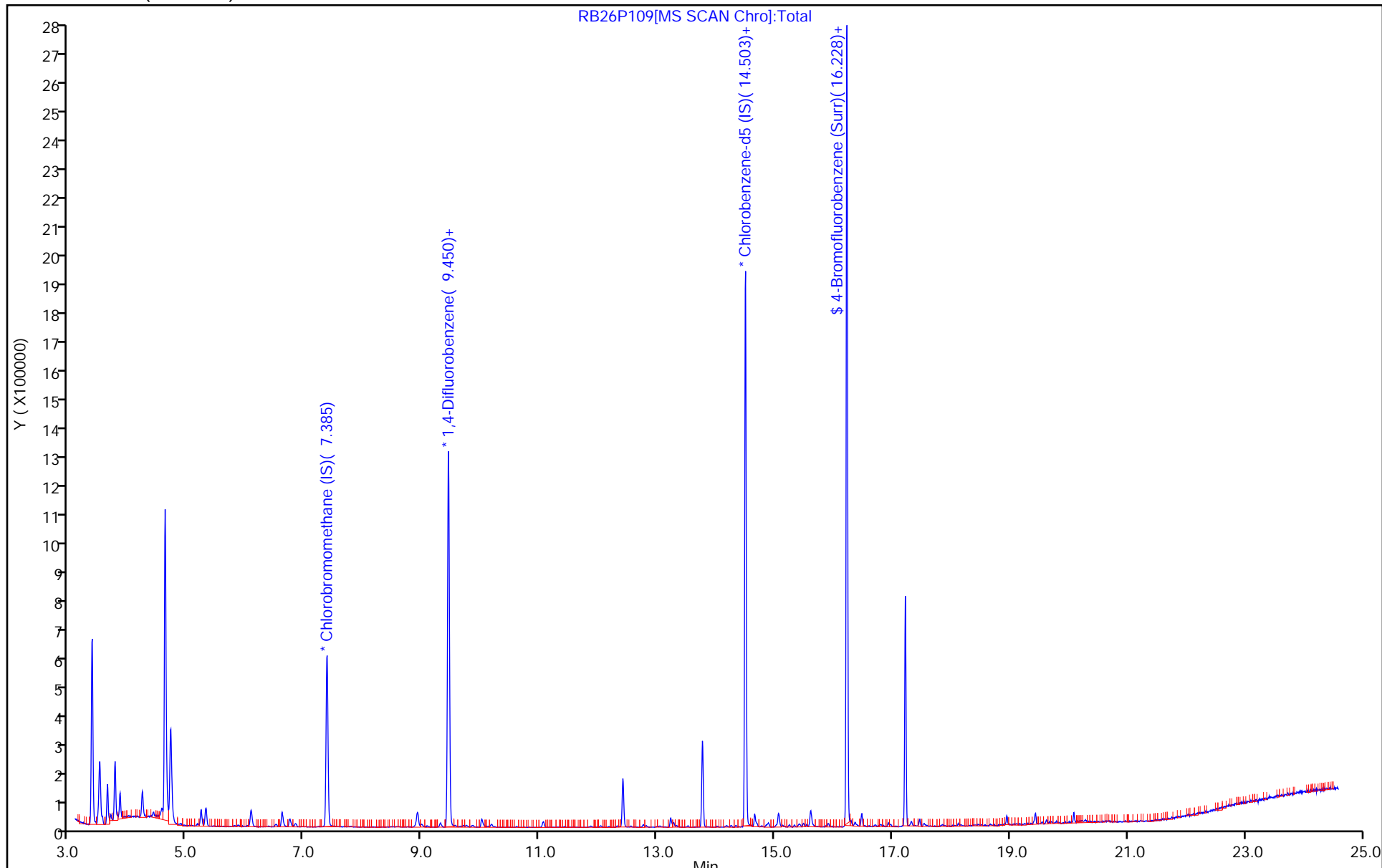
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P109.D
 Lims ID: 140-14391-A-9
 Client ID: IA-145-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 20:25:30 ALS Bottle#: 9 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-013
 Misc. Info.: 140-14391-a-9
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:56:45

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.06	101.54

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P109.D

Injection Date: 26-Feb-2019 20:25:30

Instrument ID: MR

Lims ID: 140-14391-A-9

Lab Sample ID: 140-14391-9

Client ID: IA-145-C-26

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

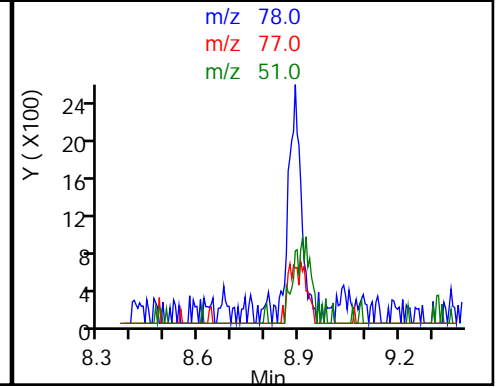
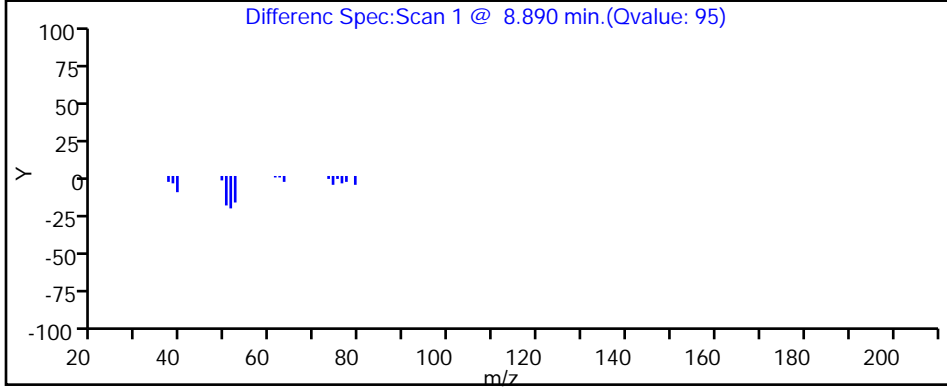
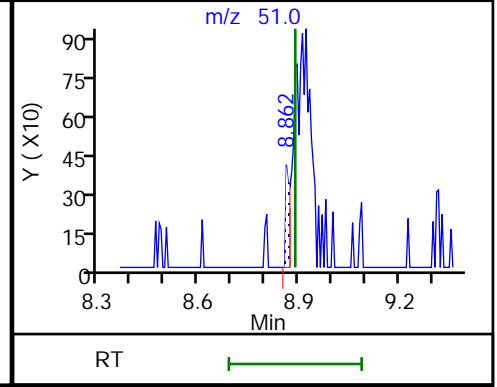
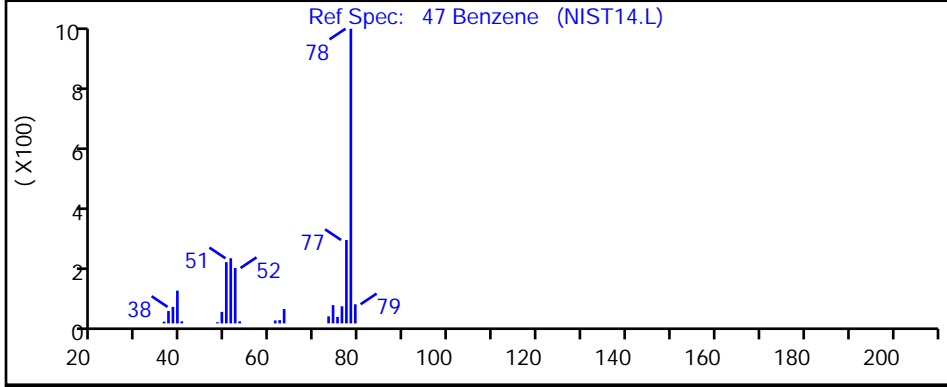
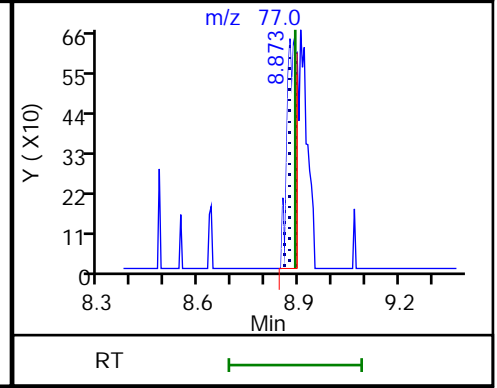
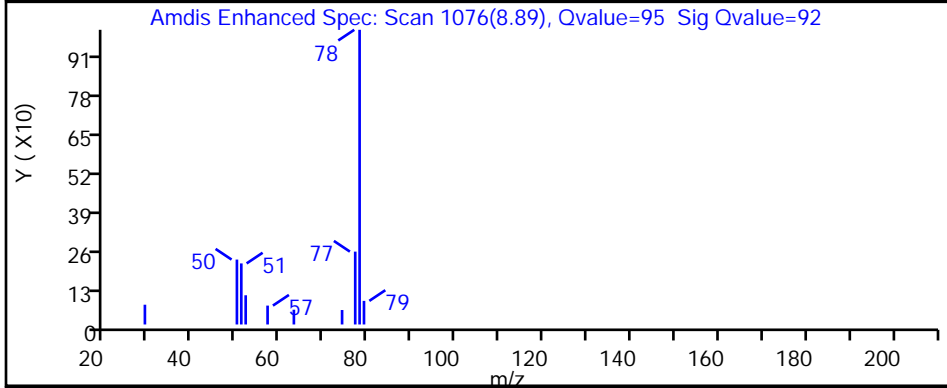
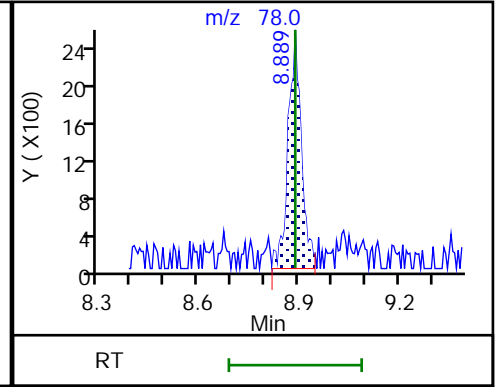
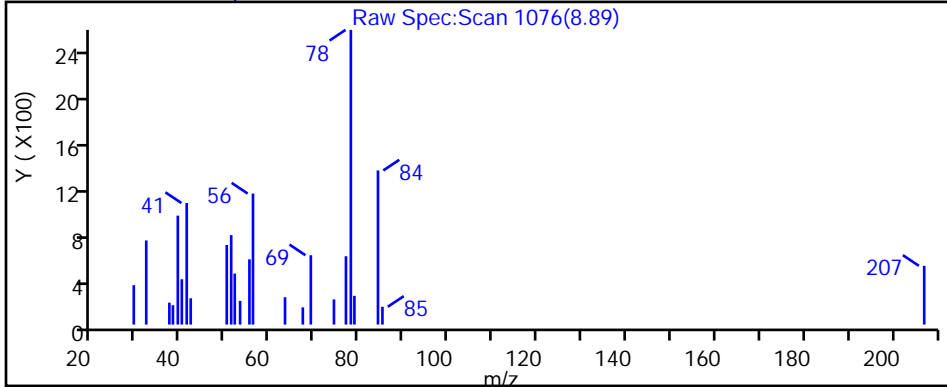
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P109.D

Injection Date: 26-Feb-2019 20:25:30

Instrument ID: MR

Lims ID: 140-14391-A-9

Lab Sample ID: 140-14391-9

Client ID: IA-145-C-26

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

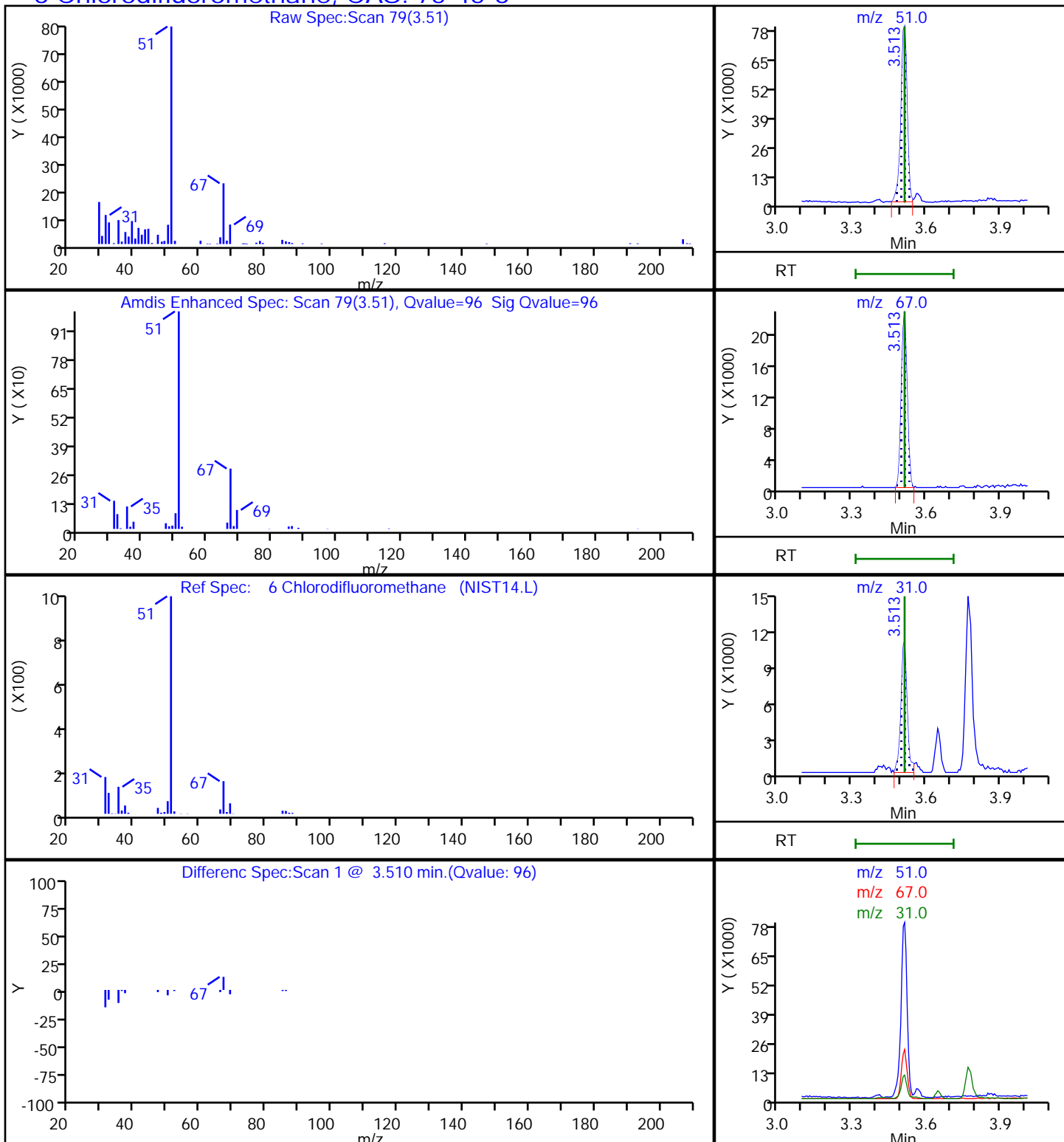
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P109.D

Injection Date: 26-Feb-2019 20:25:30

Instrument ID: MR

Lims ID: 140-14391-A-9

Lab Sample ID: 140-14391-9

Client ID: IA-145-C-26

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

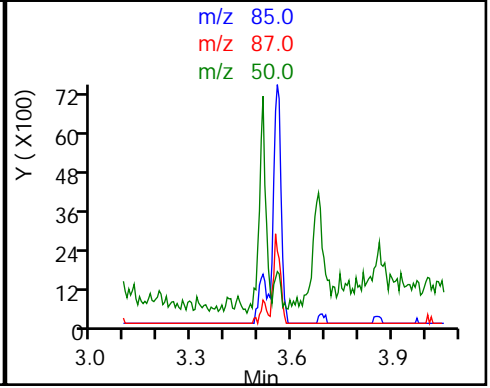
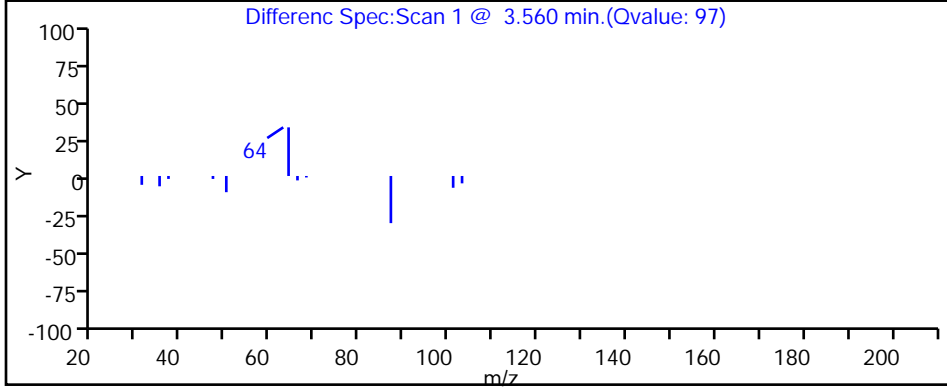
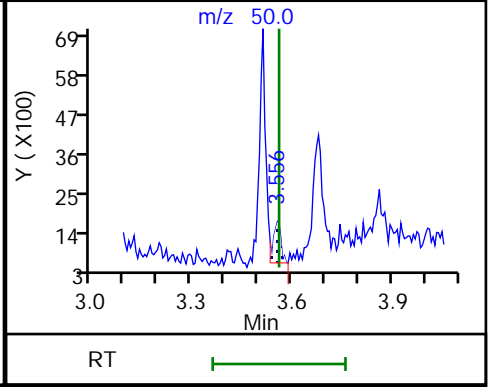
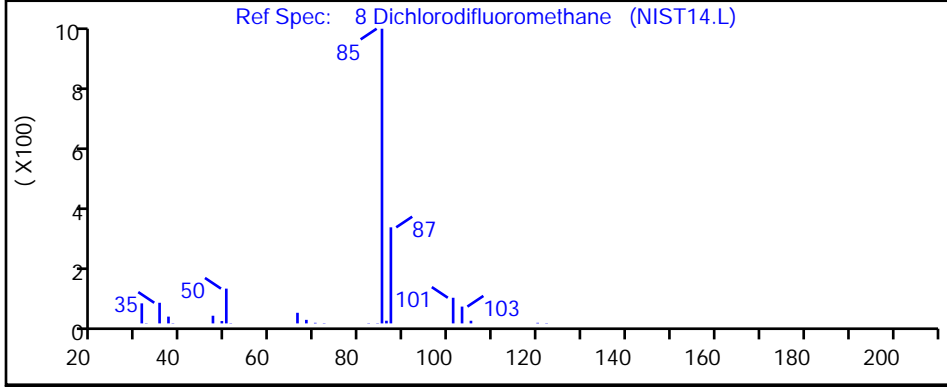
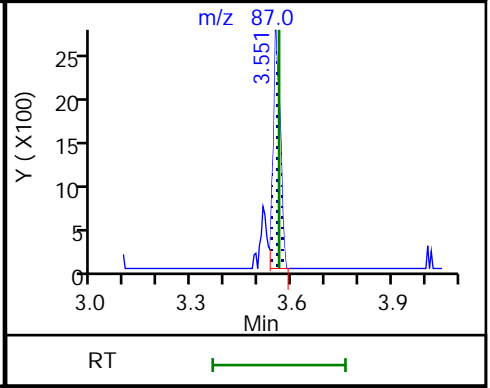
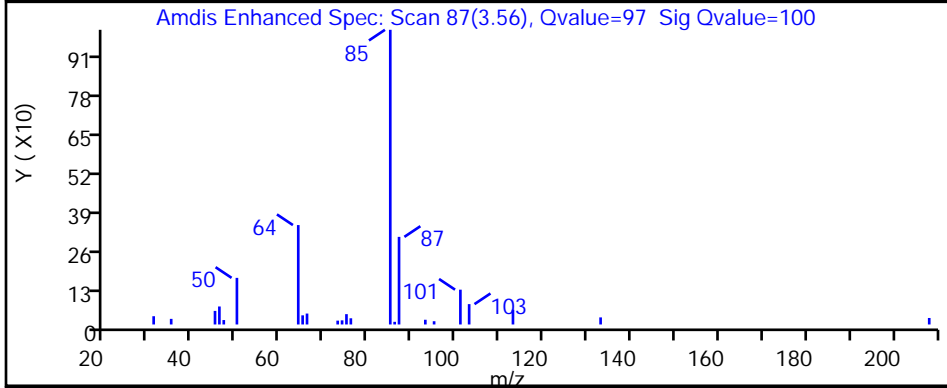
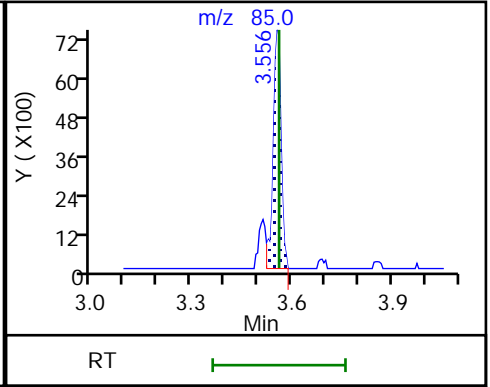
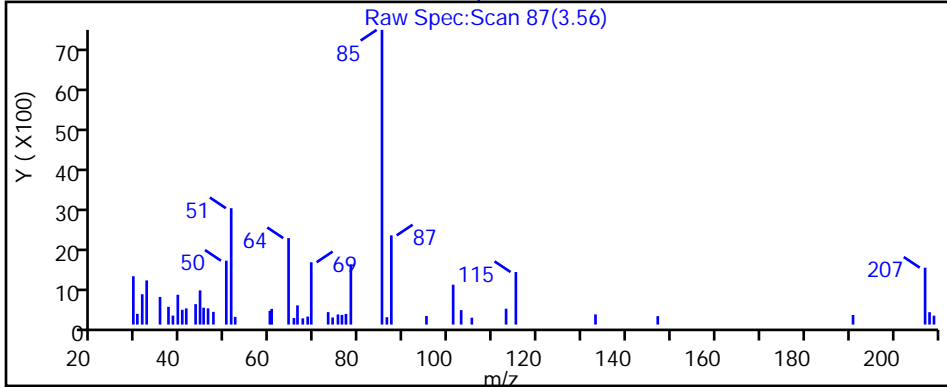
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P109.D

Injection Date: 26-Feb-2019 20:25:30

Instrument ID: MR

Lims ID: 140-14391-A-9

Lab Sample ID: 140-14391-9

Client ID: IA-145-C-26

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

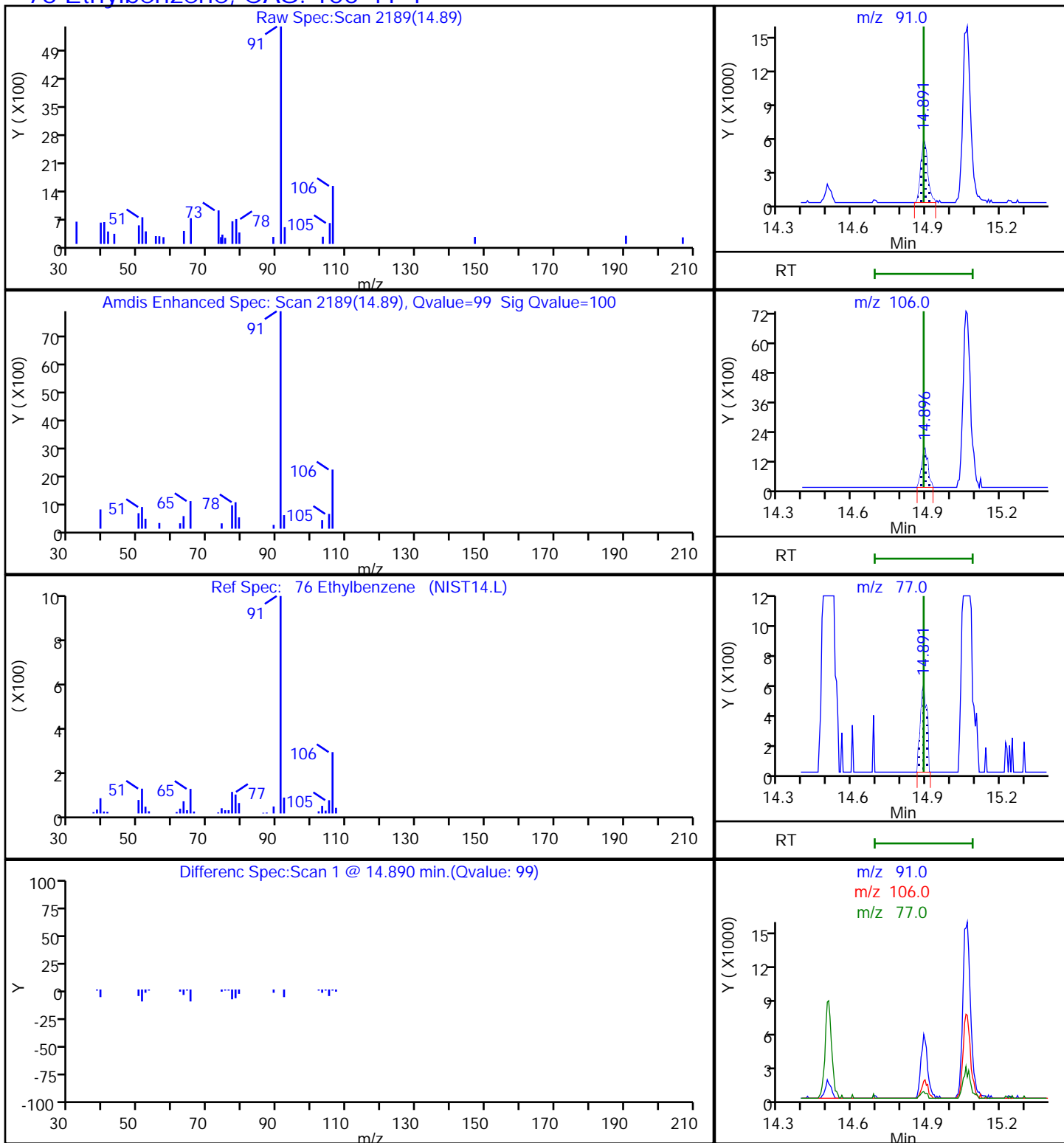
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P109.D

Injection Date: 26-Feb-2019 20:25:30

Instrument ID: MR

Lims ID: 140-14391-A-9

Lab Sample ID: 140-14391-9

Client ID: IA-145-C-26

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

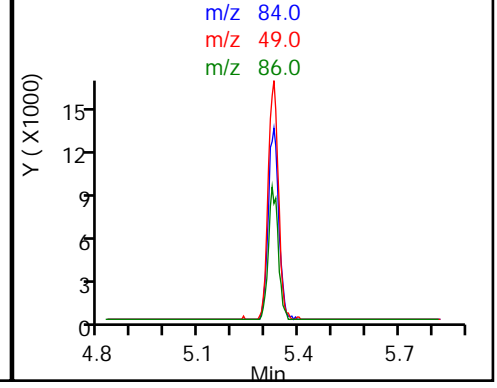
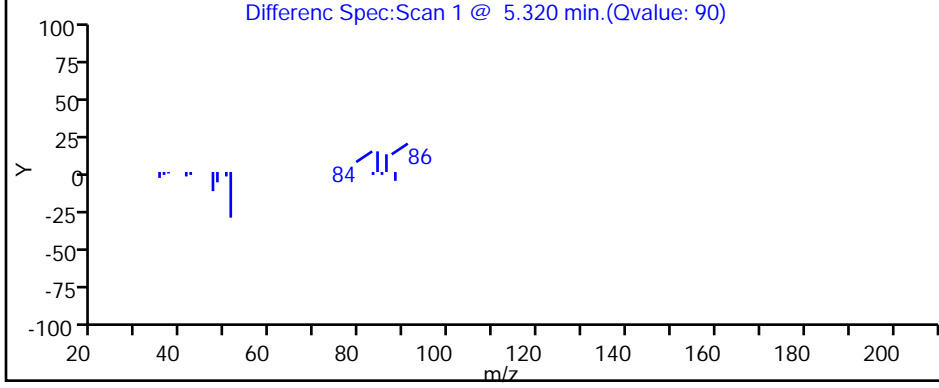
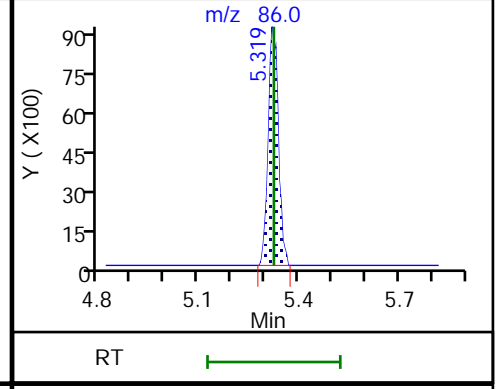
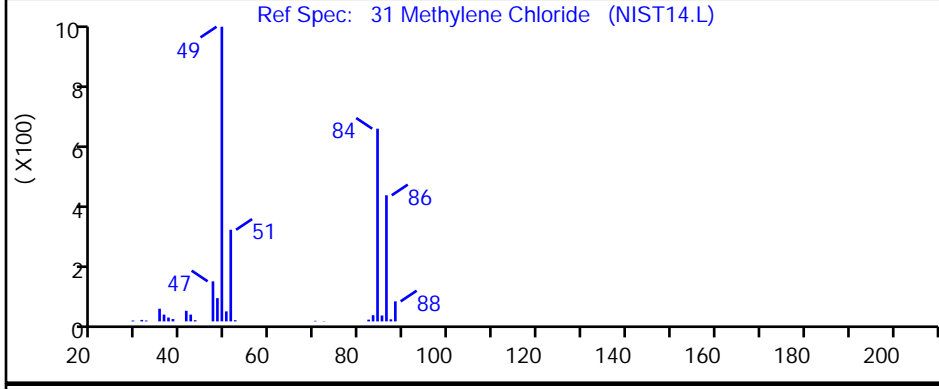
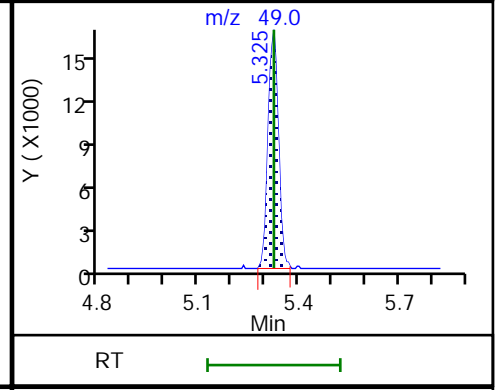
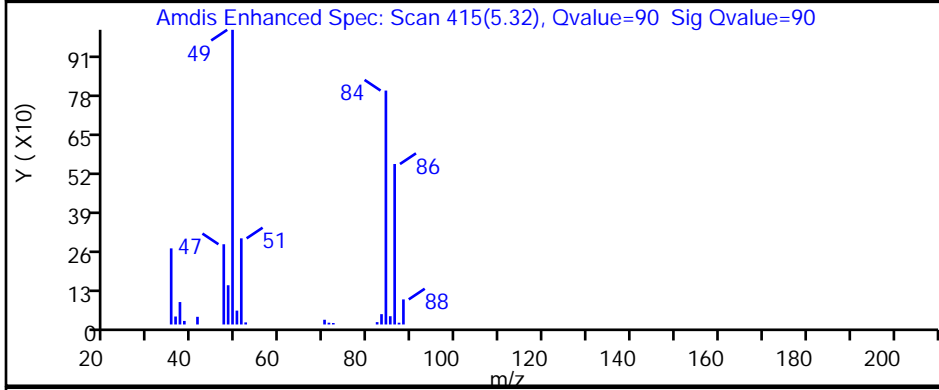
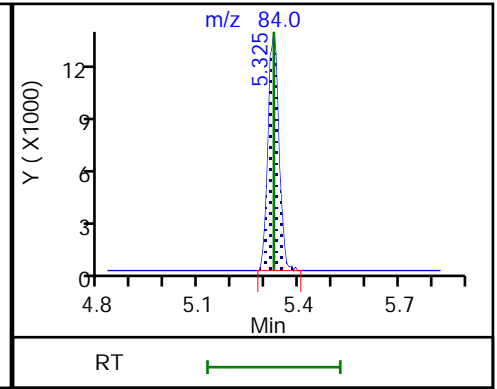
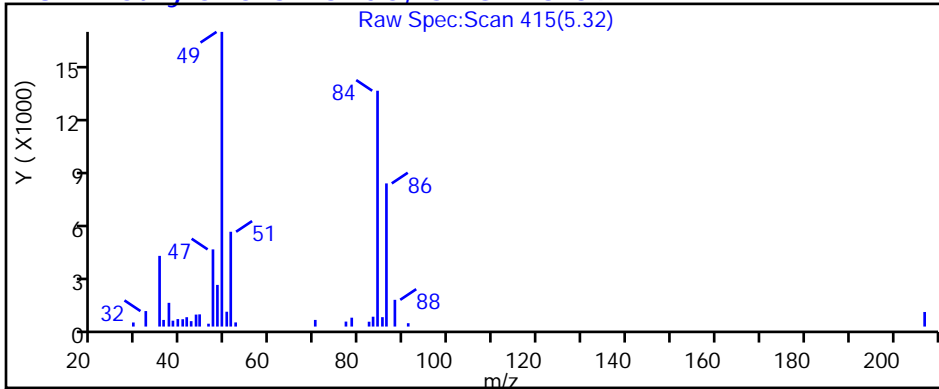
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P109.D

Injection Date: 26-Feb-2019 20:25:30

Instrument ID: MR

Lims ID: 140-14391-A-9

Lab Sample ID: 140-14391-9

Client ID: IA-145-C-26

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

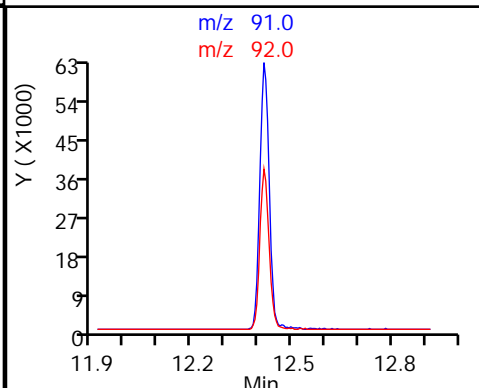
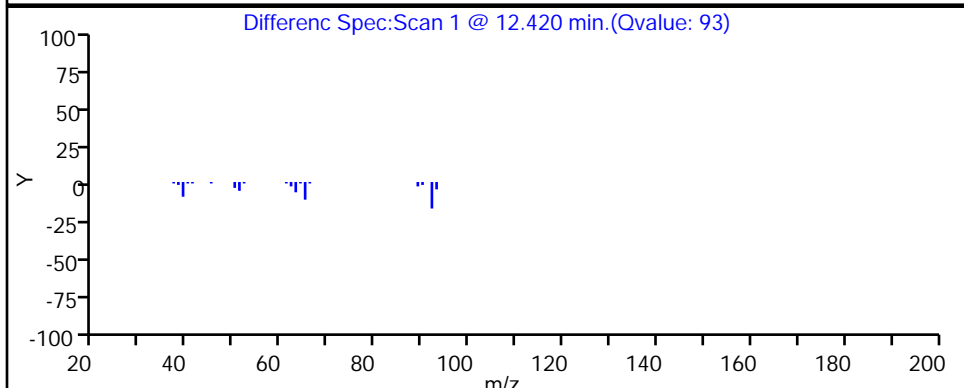
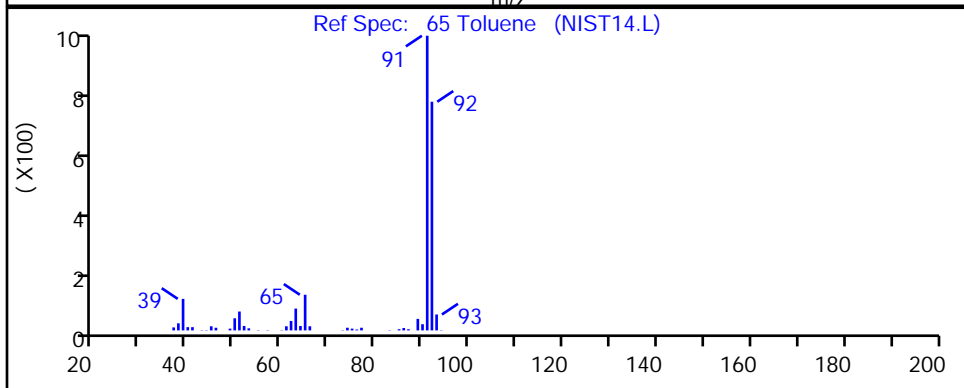
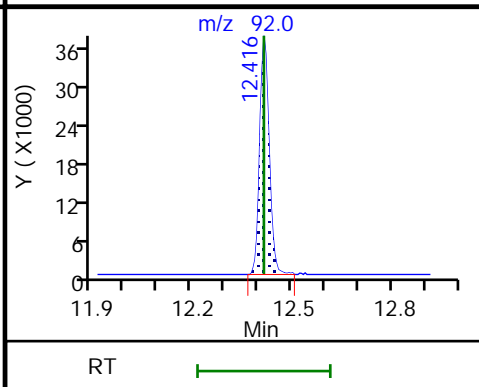
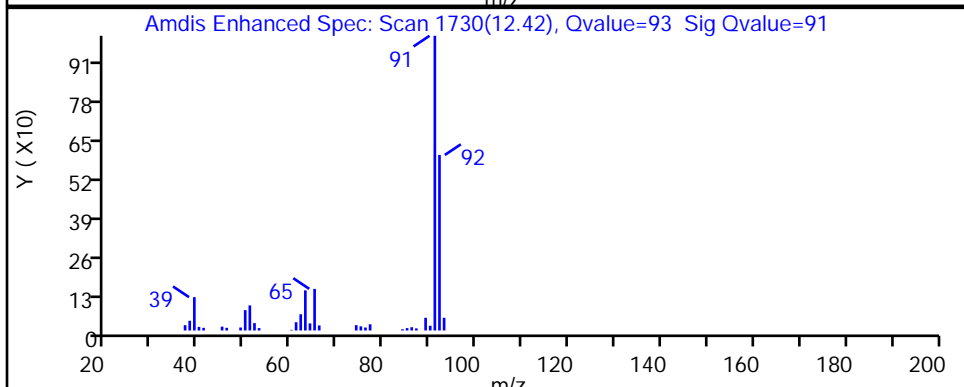
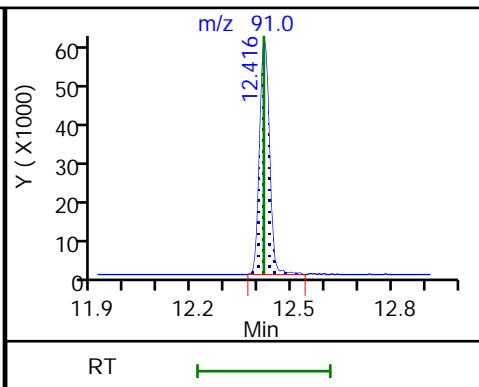
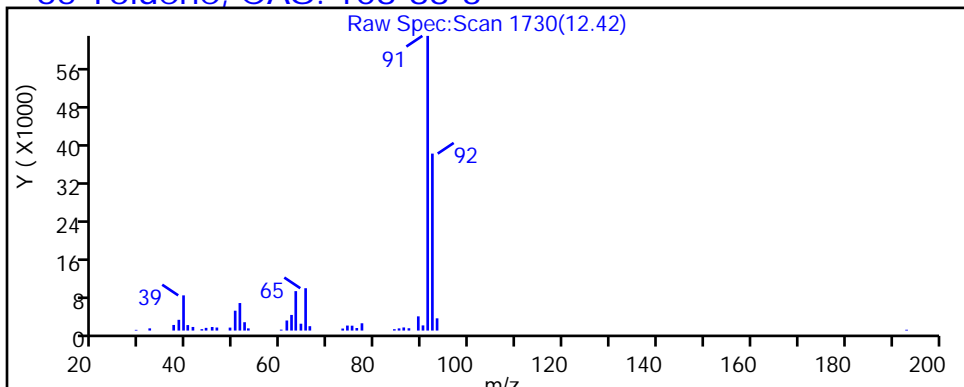
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P109.D

Injection Date: 26-Feb-2019 20:25:30

Instrument ID: MR

Lims ID: 140-14391-A-9

Lab Sample ID: 140-14391-9

Client ID: IA-145-C-26

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

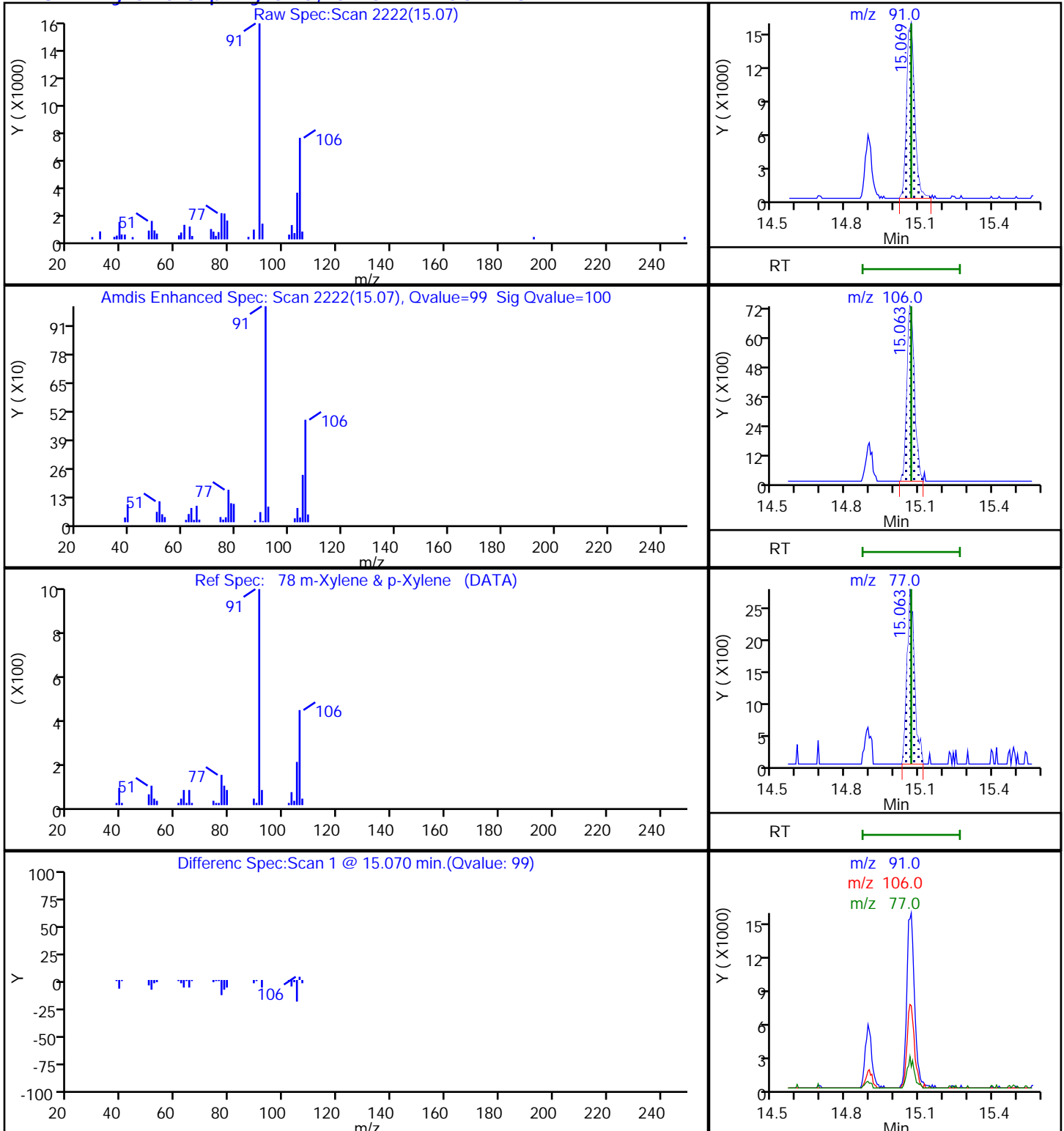
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P109.D

Injection Date: 26-Feb-2019 20:25:30

Instrument ID: MR

Lims ID: 140-14391-A-9

Lab Sample ID: 140-14391-9

Client ID: IA-145-C-26

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

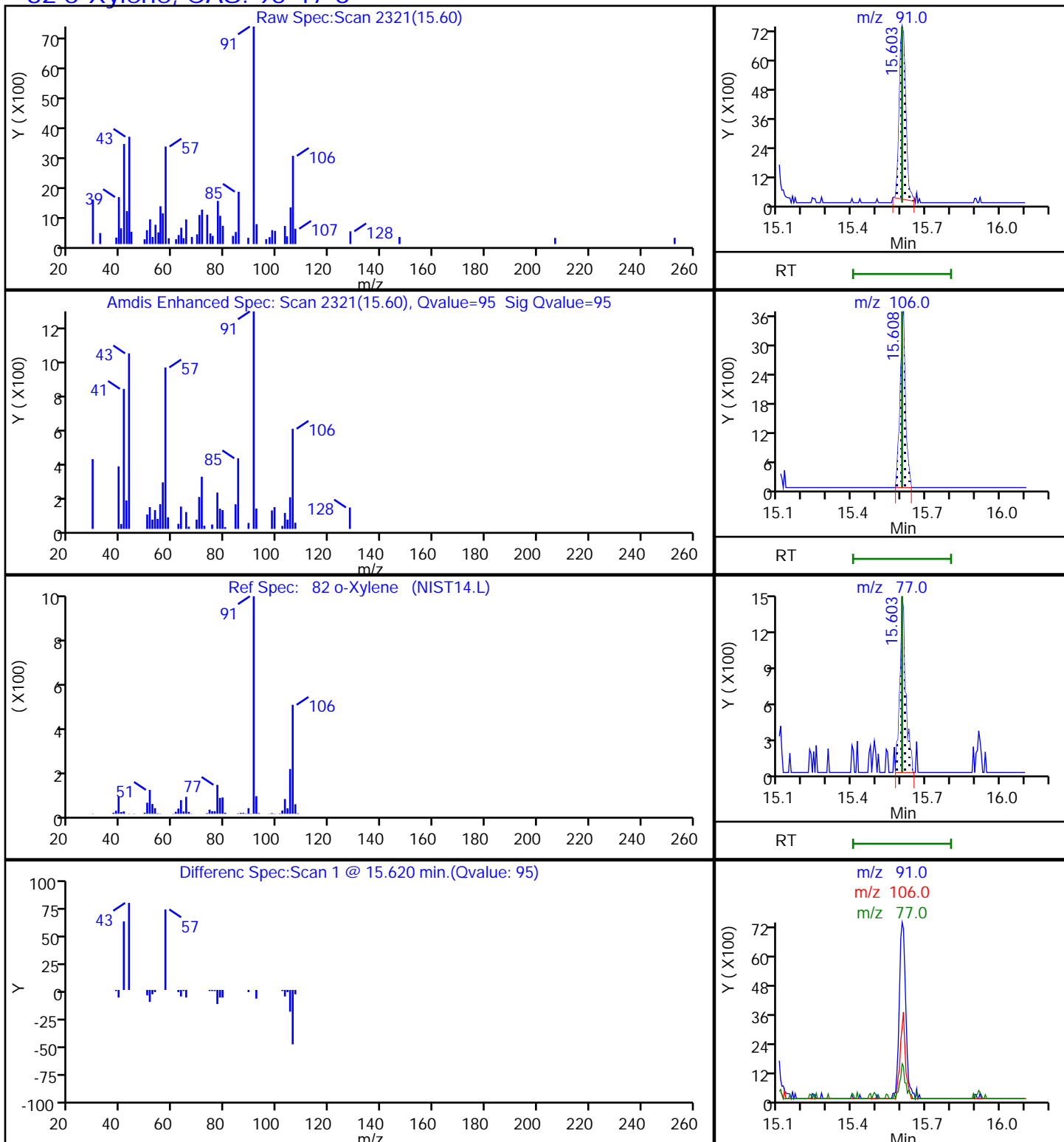
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-146-C-26 Lab Sample ID: 140-14391-10
 Matrix: Air Lab File ID: RB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.9	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.30	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.85		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-146-C-26 Lab Sample ID: 140-14391-10
 Matrix: Air Lab File ID: RB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	21	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.60	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	10		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P110.D
 Lims ID: 140-14391-A-10
 Client ID: IA-146-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 21:14:30 ALS Bottle#: 10 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-014
 Misc. Info.: 140-14391-a-10
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:57:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.384	-0.005	71	198030	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1151165	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.503	14.502	0.001	90	1011578	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.223	16.228	-0.005	93	855548	3.98	
6 Chlorodifluoromethane	51	3.508	3.513	-0.005	96	139343	1.19	
8 Dichlorodifluoromethane	85	3.556	3.564	-0.005	98	12878	0.0598	
31 Methylene Chloride	84	5.319	5.325	-0.006	90	15657	0.2364	
47 Benzene	78	8.884	8.889	-0.005	90	6413	0.0342	
65 Toluene	91	12.416	12.416	0.000	92	128288	0.5292	
76 Ethylbenzene	91	14.891	14.891	0.000	97	9692	0.0277	
78 m-Xylene & p-Xylene	91	15.063	15.069	-0.006	99	34723	0.1211	
82 o-Xylene	91	15.603	15.602	0.001	95	14532	0.0483	
S 121 Xylenes, Total	100				0		0.1694	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P110.D

Injection Date: 26-Feb-2019 21:14:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-10

Lab Sample ID: 140-14391-10

Worklist Smp#: 14

Client ID: IA-146-C-26

Purge Vol: 500.000 mL

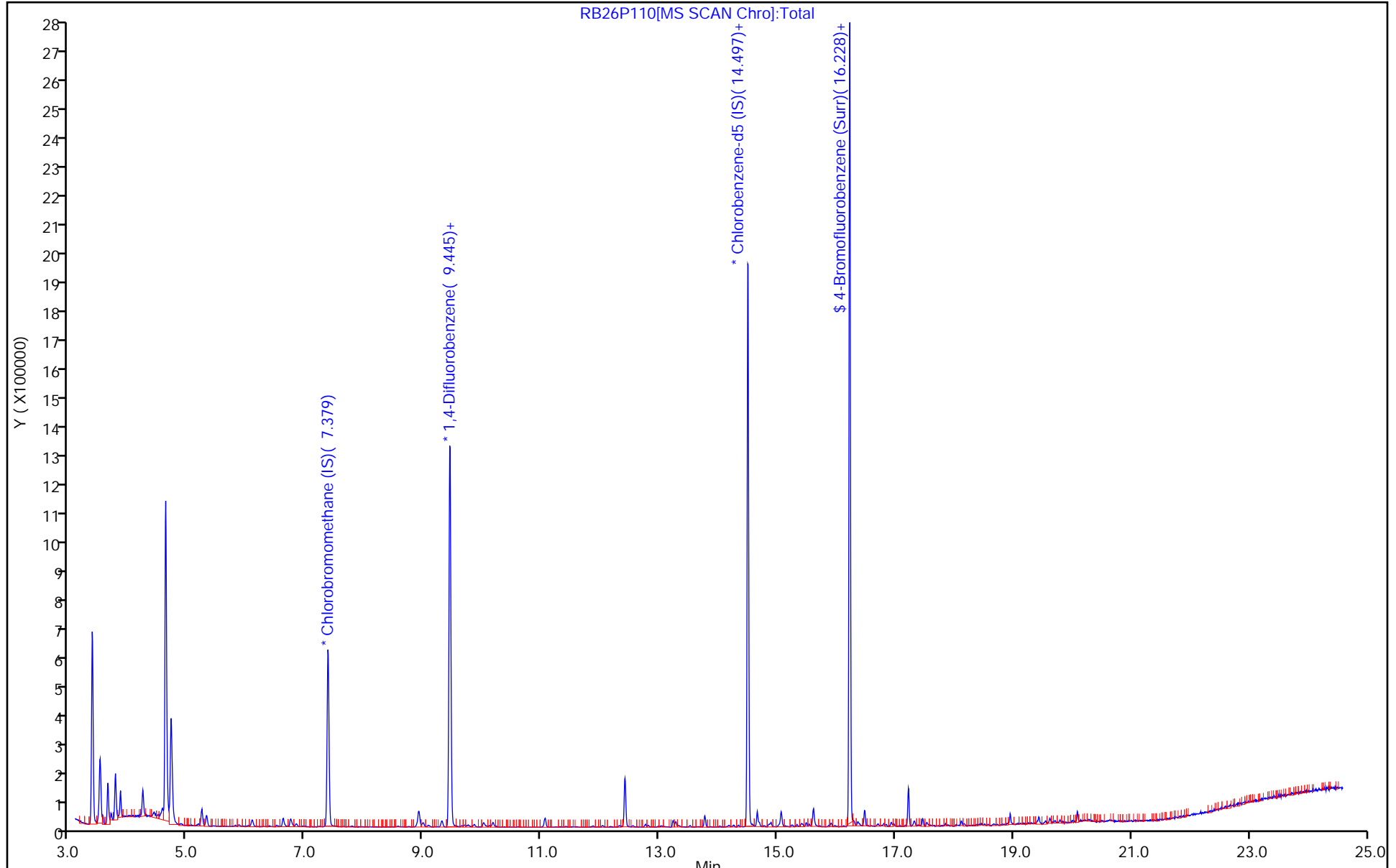
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P110.D
 Lims ID: 140-14391-A-10
 Client ID: IA-146-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 21:14:30 ALS Bottle#: 10 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-014
 Misc. Info.: 140-14391-a-10
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:57:15

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.98	99.43

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P110.D

Injection Date: 26-Feb-2019 21:14:30

Instrument ID: MR

Lims ID: 140-14391-A-10

Lab Sample ID: 140-14391-10

Client ID: IA-146-C-26

Operator ID:

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

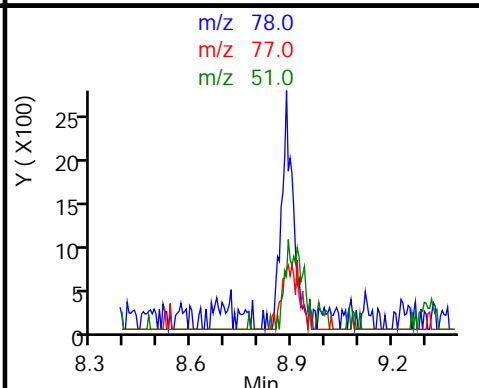
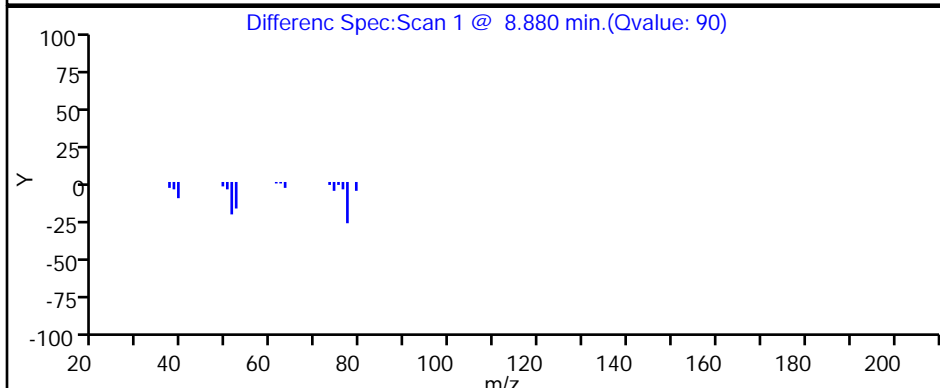
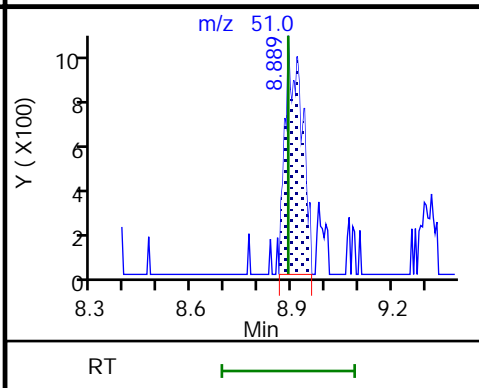
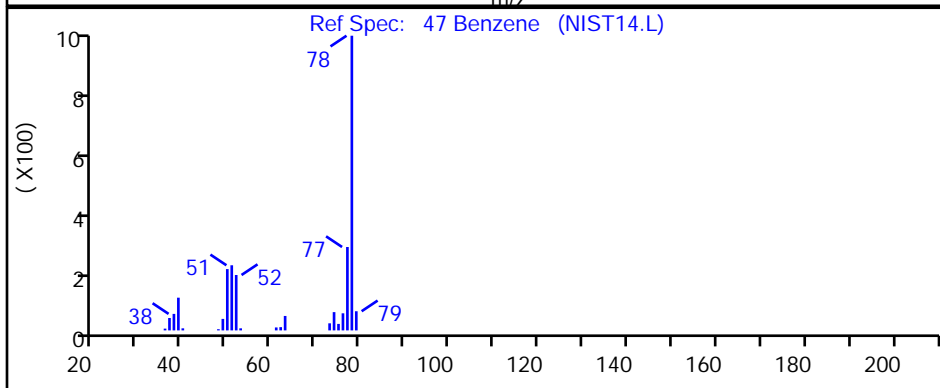
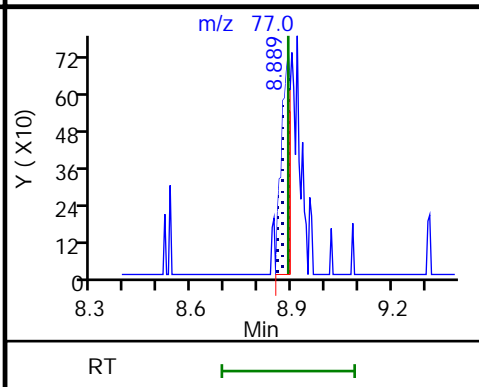
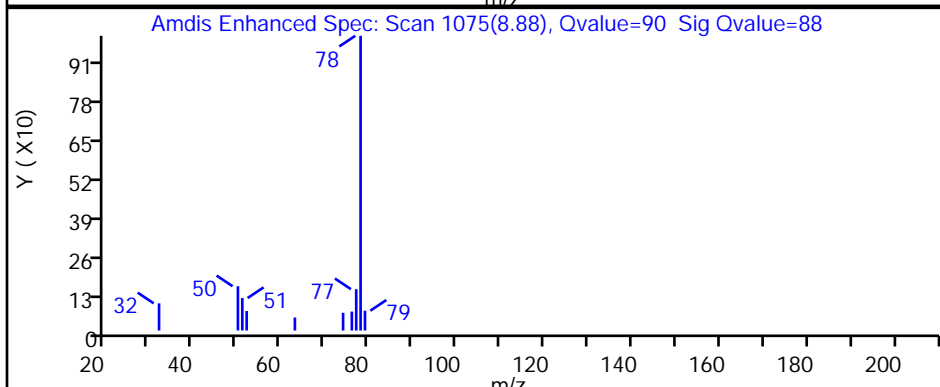
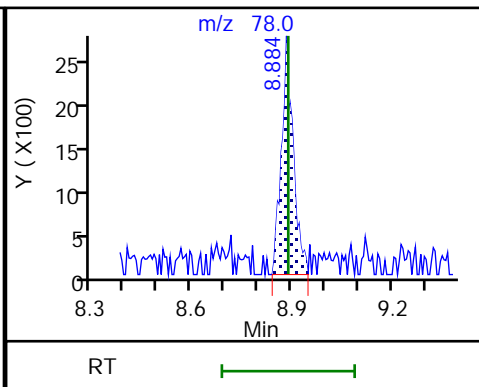
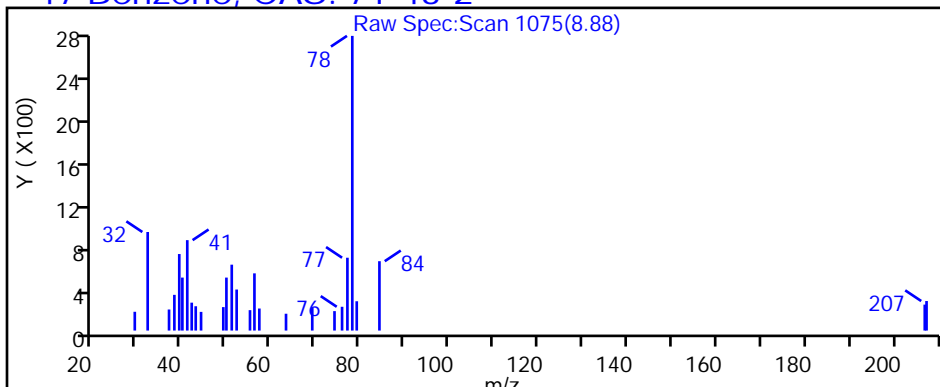
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P110.D

Injection Date: 26-Feb-2019 21:14:30

Instrument ID: MR

Lims ID: 140-14391-A-10

Lab Sample ID: 140-14391-10

Client ID: IA-146-C-26

Operator ID:

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

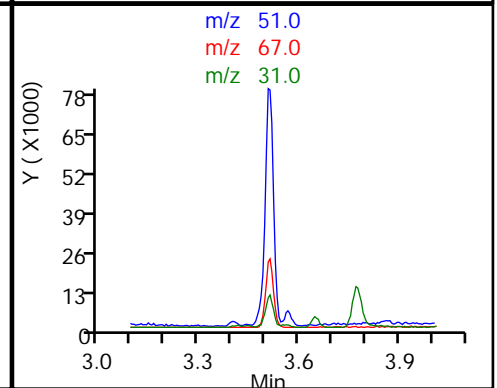
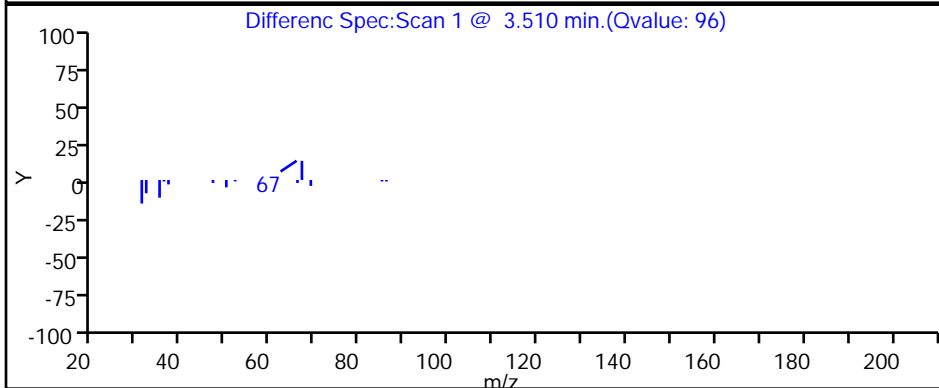
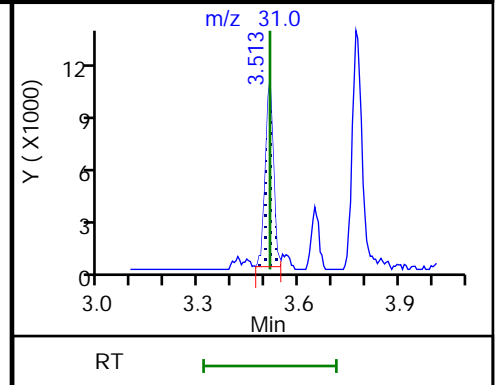
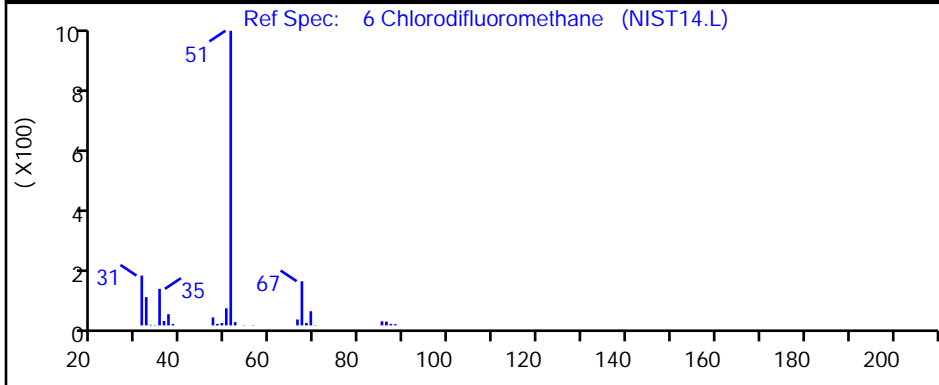
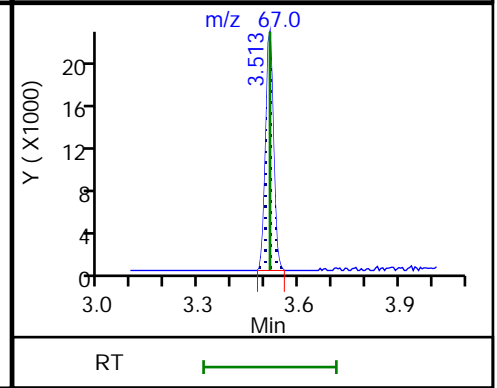
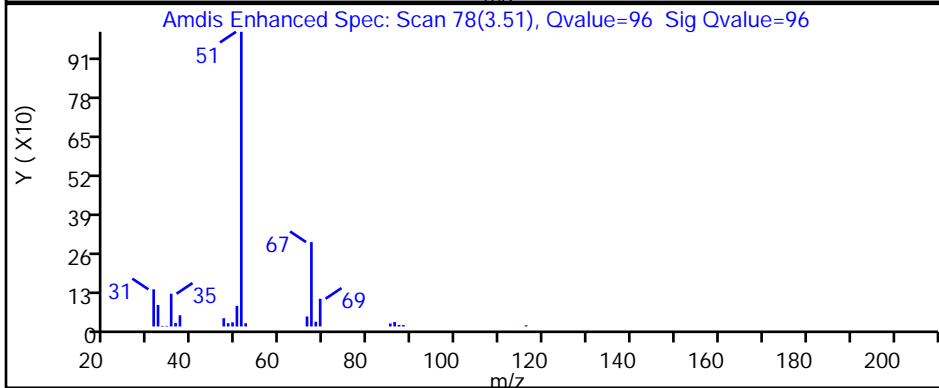
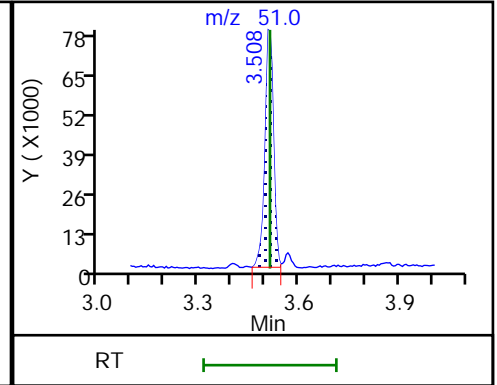
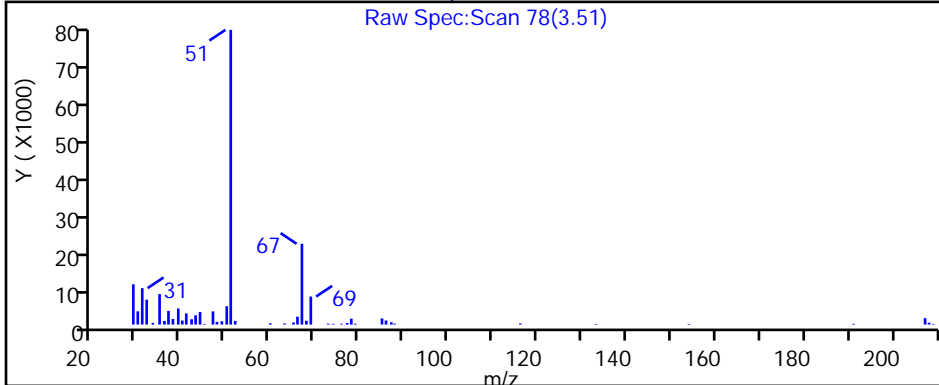
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P110.D

Injection Date: 26-Feb-2019 21:14:30

Instrument ID: MR

Lims ID: 140-14391-A-10

Lab Sample ID: 140-14391-10

Client ID: IA-146-C-26

Operator ID:

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

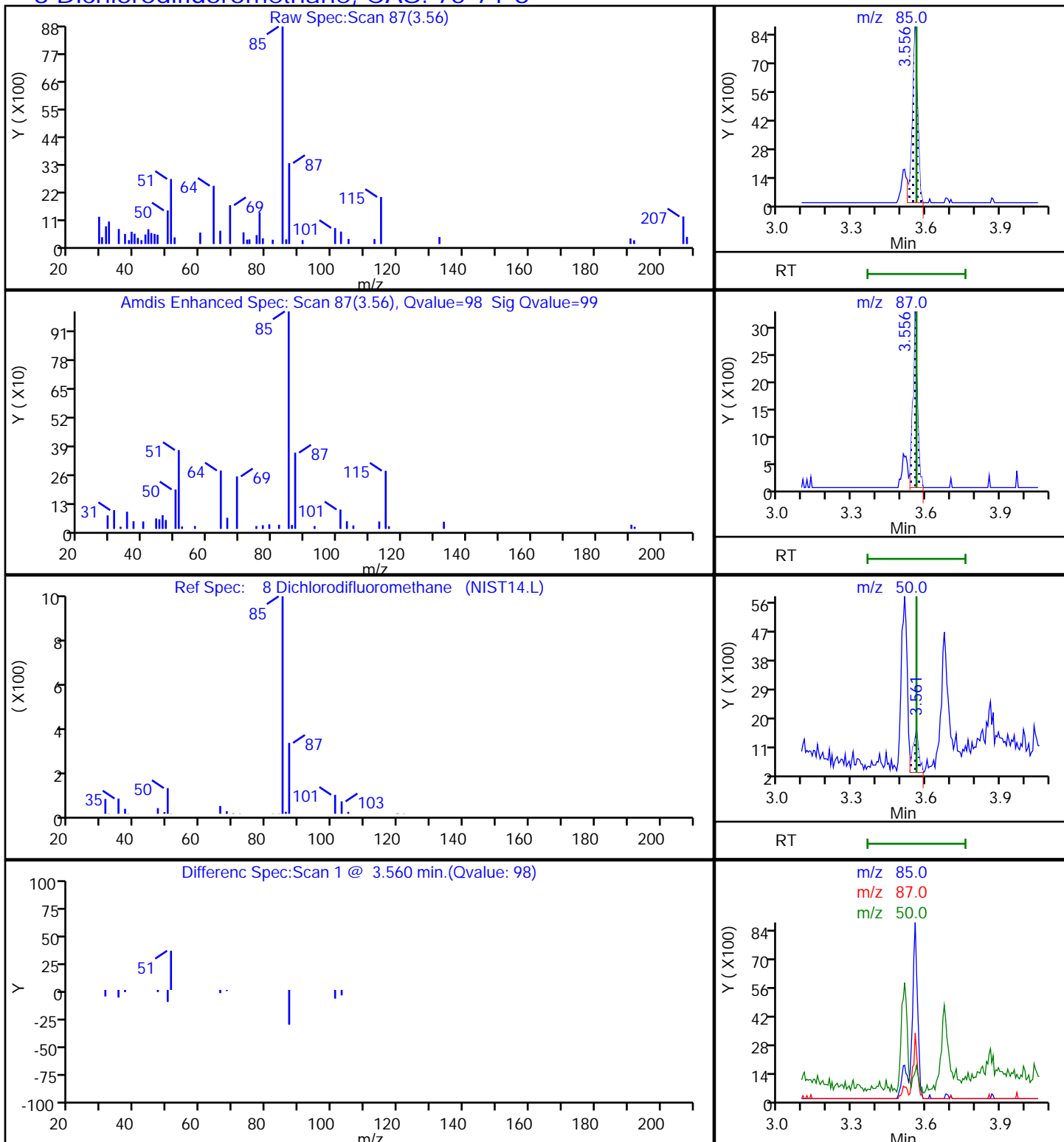
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P110.D

Injection Date: 26-Feb-2019 21:14:30

Instrument ID: MR

Lims ID: 140-14391-A-10

Lab Sample ID: 140-14391-10

Client ID: IA-146-C-26

Operator ID:

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

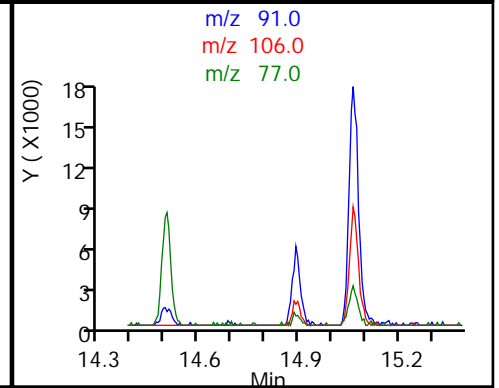
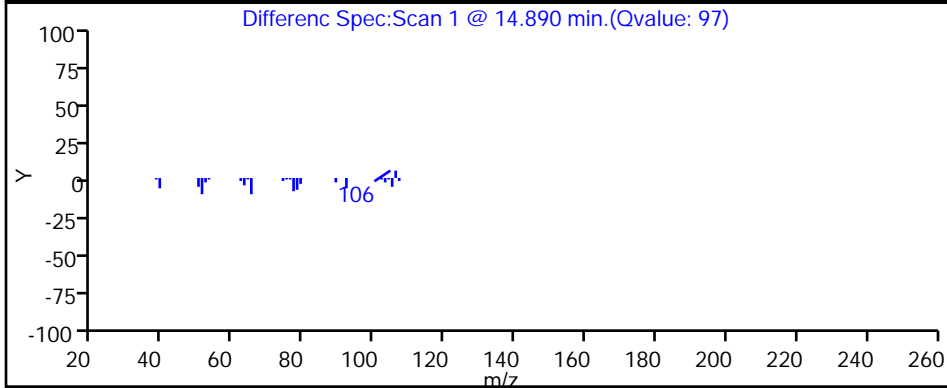
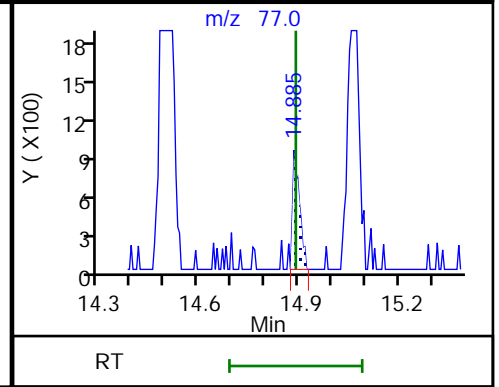
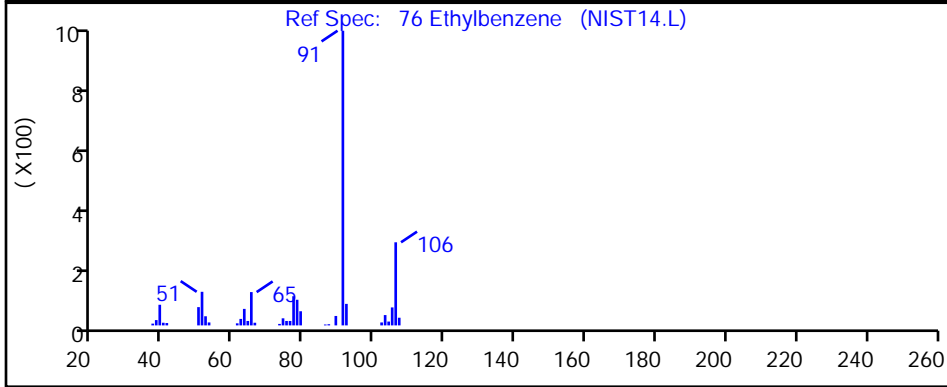
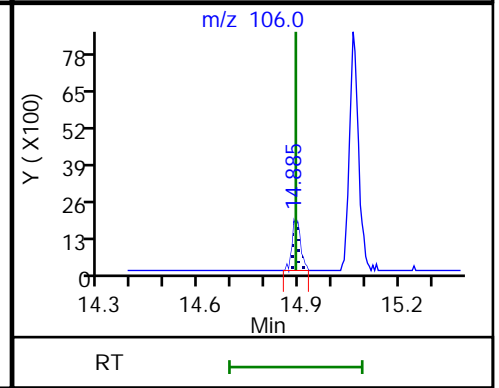
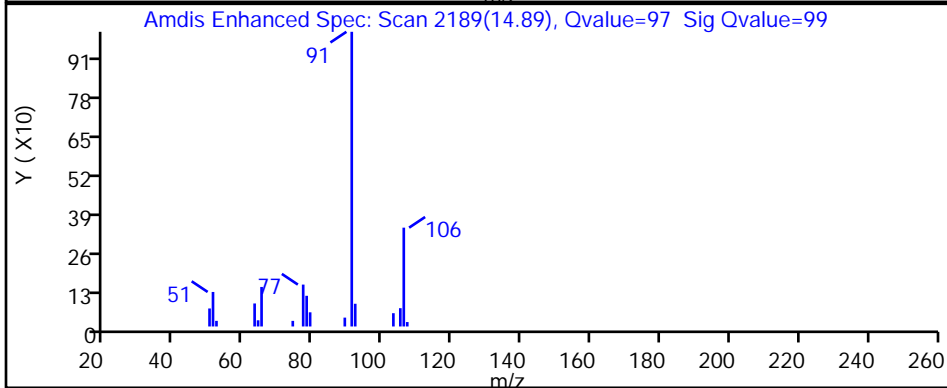
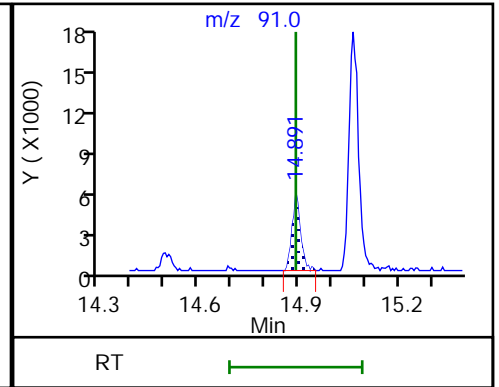
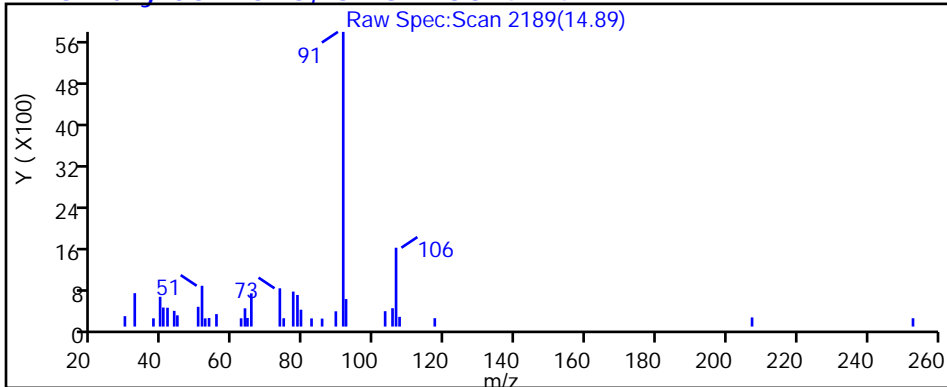
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P110.D

Injection Date: 26-Feb-2019 21:14:30

Instrument ID: MR

Lims ID: 140-14391-A-10

Lab Sample ID: 140-14391-10

Client ID: IA-146-C-26

Operator ID:

ALS Bottle#: 10 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

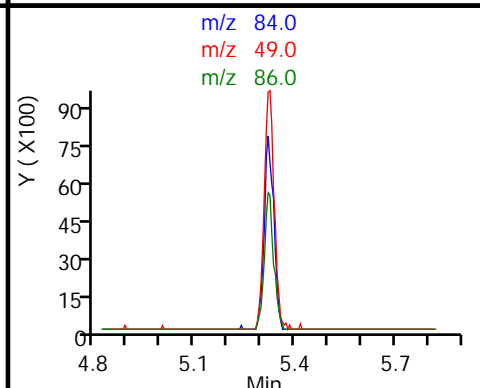
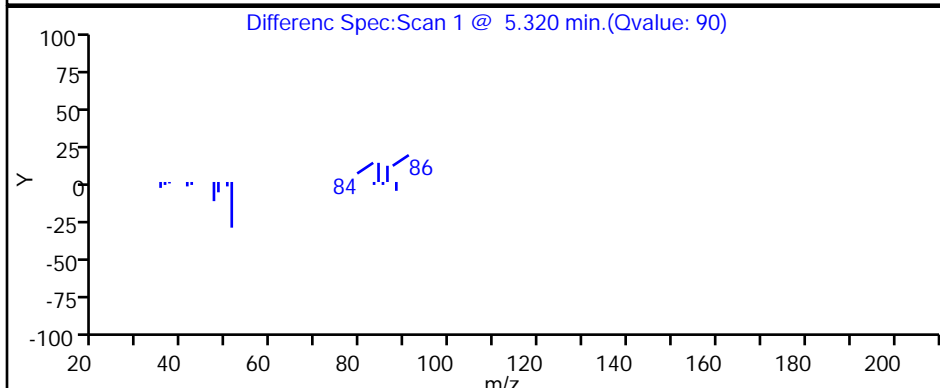
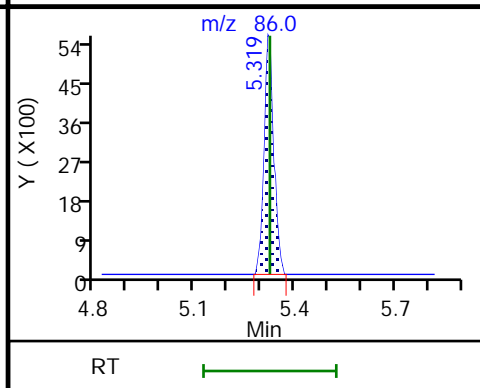
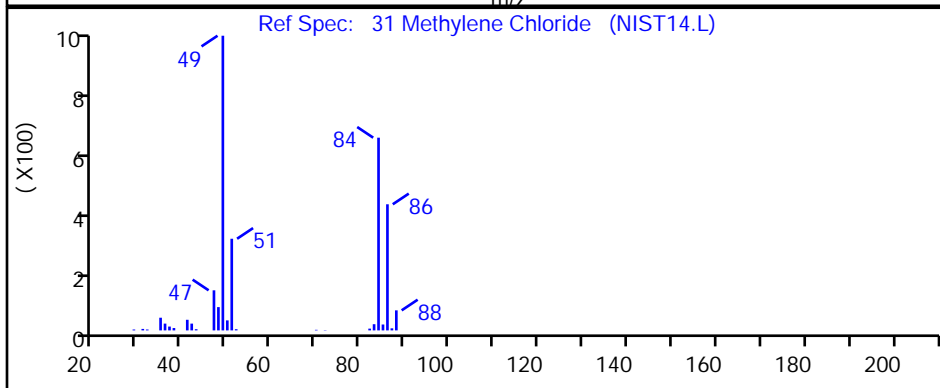
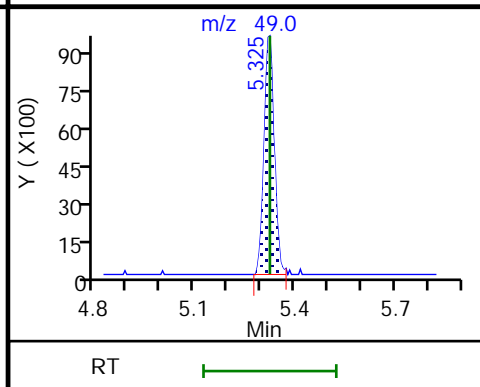
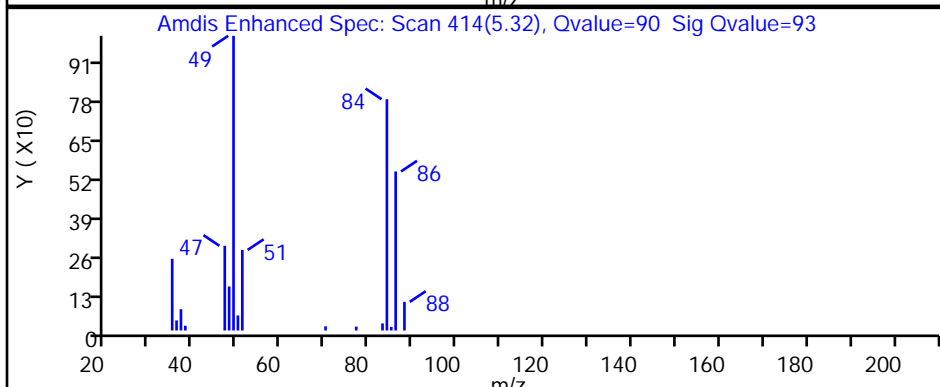
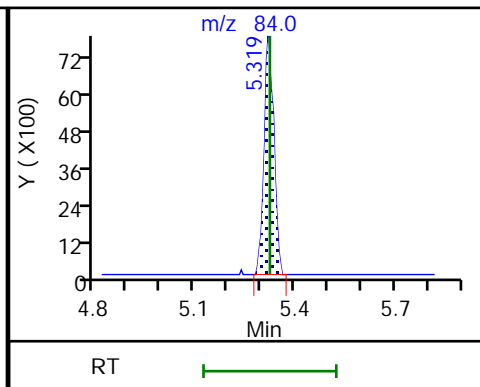
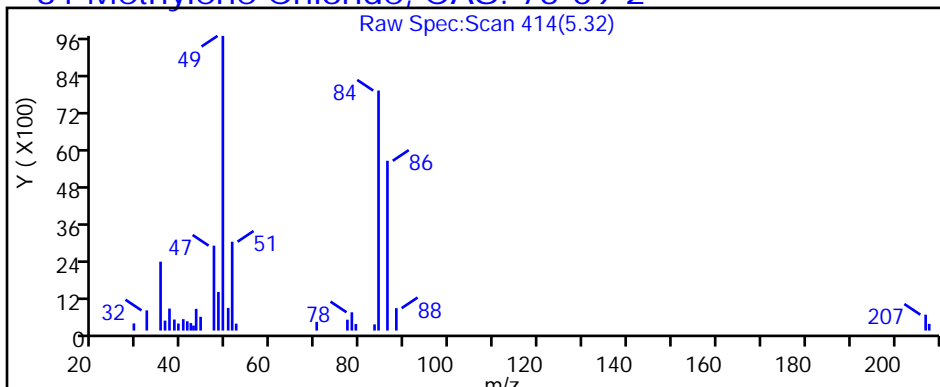
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P110.D

Injection Date: 26-Feb-2019 21:14:30

Instrument ID: MR

Lims ID: 140-14391-A-10

Lab Sample ID: 140-14391-10

Client ID: IA-146-C-26

Operator ID:

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

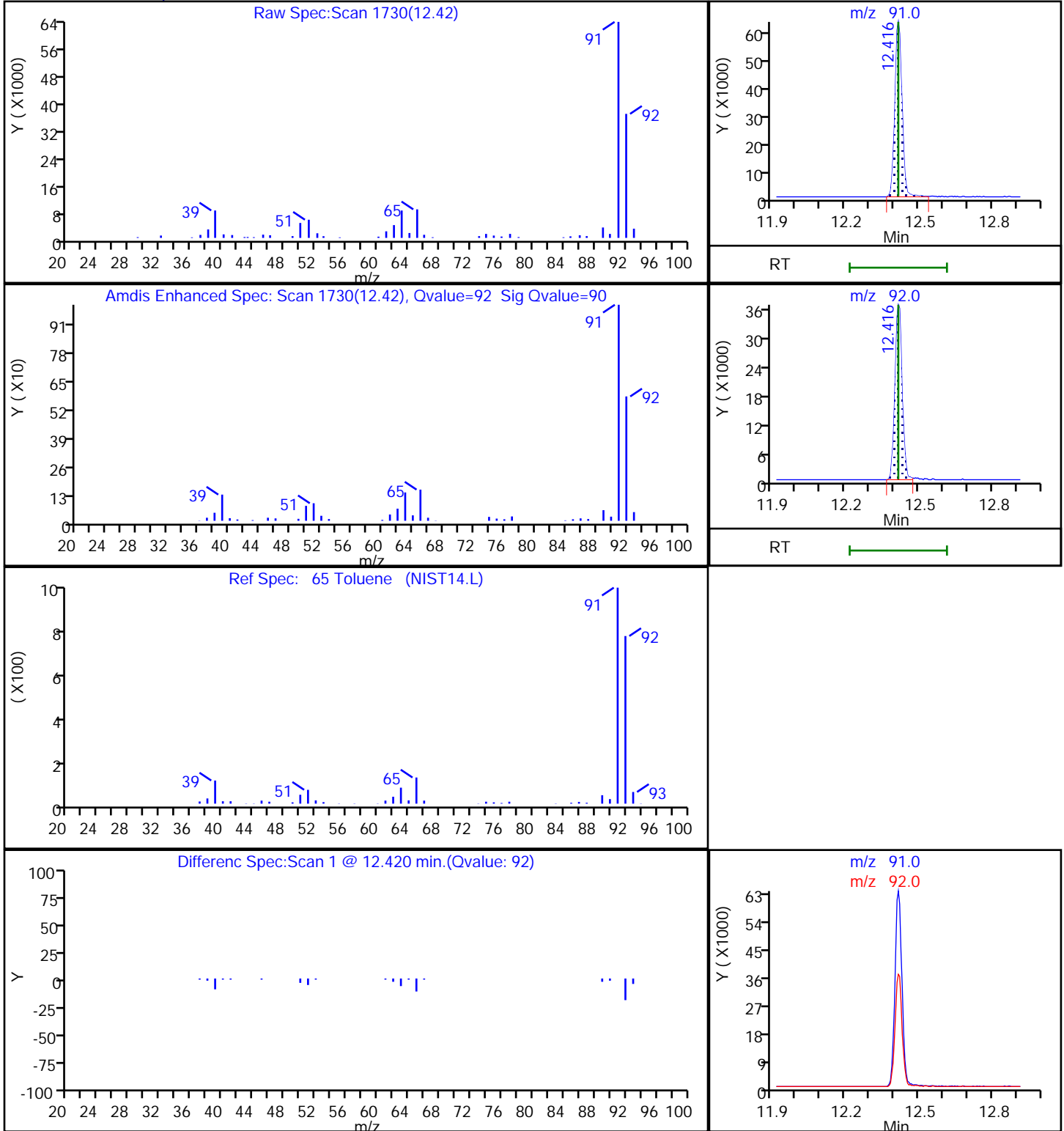
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P110.D

Injection Date: 26-Feb-2019 21:14:30

Instrument ID: MR

Lims ID: 140-14391-A-10

Lab Sample ID: 140-14391-10

Client ID: IA-146-C-26

Operator ID:

ALS Bottle#: 10

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

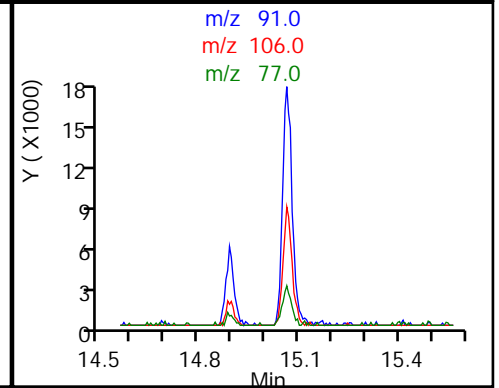
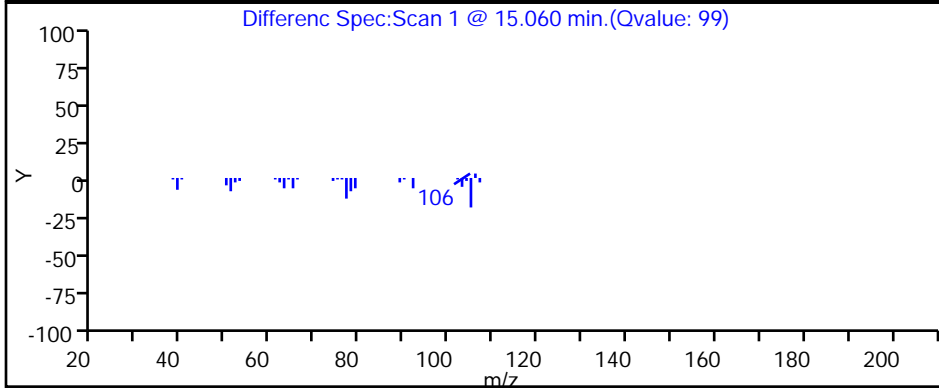
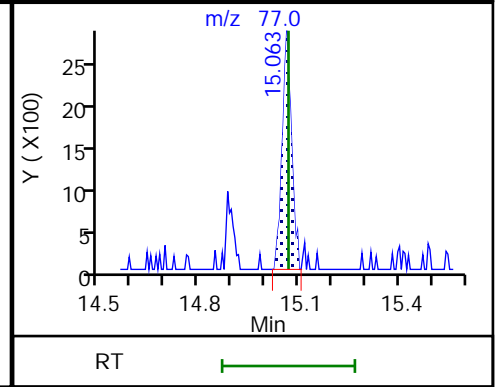
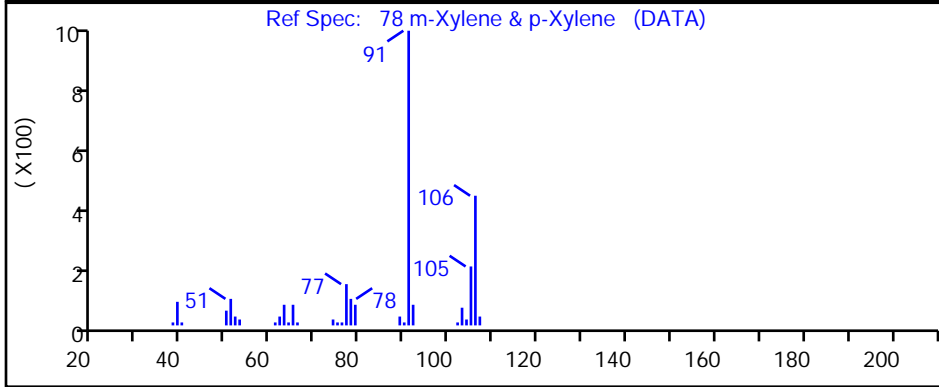
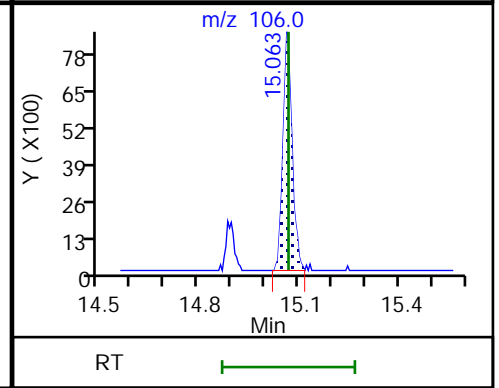
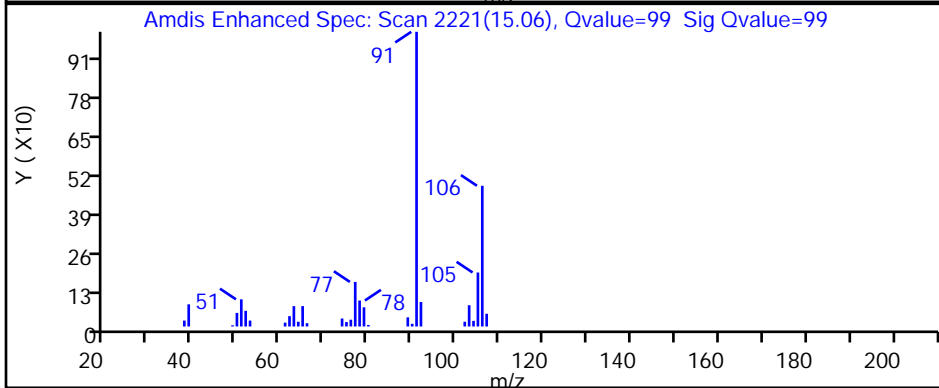
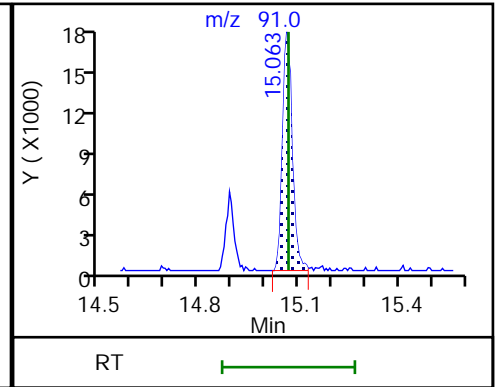
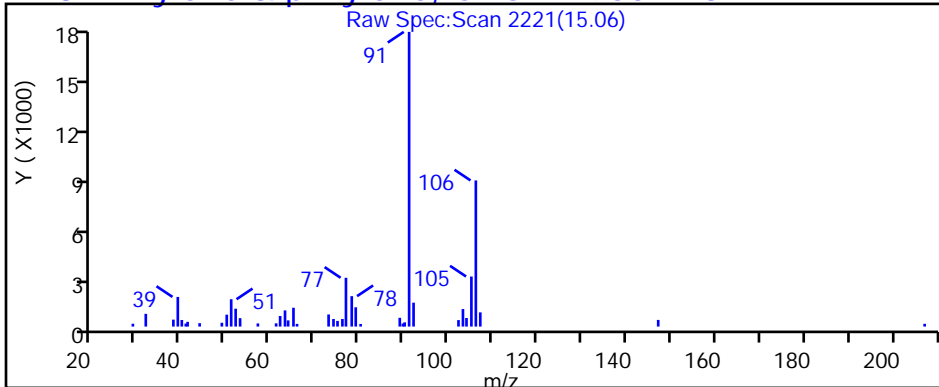
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P110.D

Injection Date: 26-Feb-2019 21:14:30

Instrument ID: MR

Lims ID: 140-14391-A-10

Lab Sample ID: 140-14391-10

Client ID: IA-146-C-26

Operator ID:

ALS Bottle#: 10 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

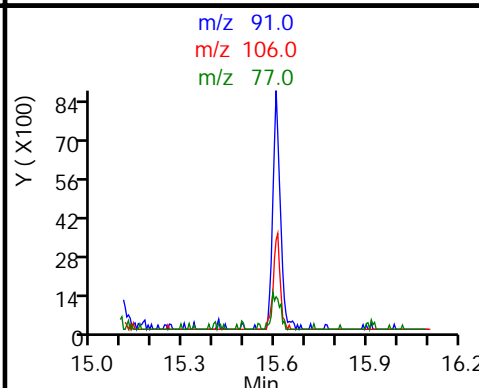
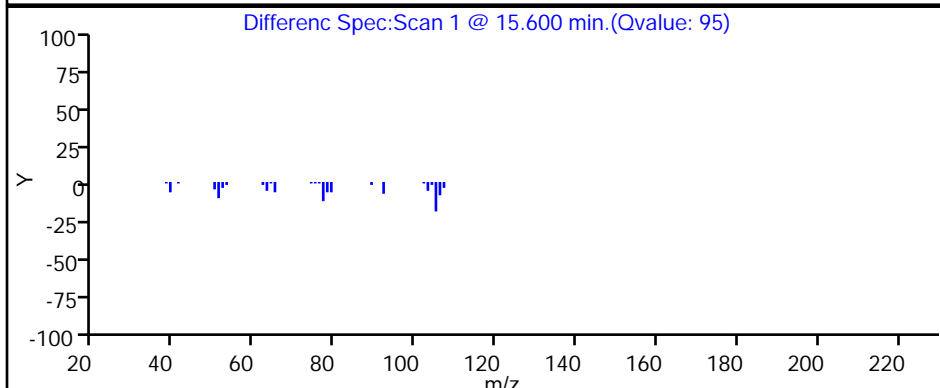
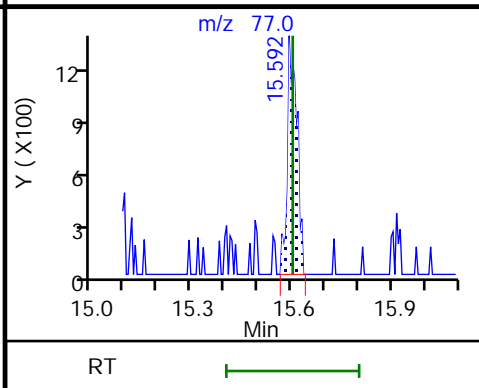
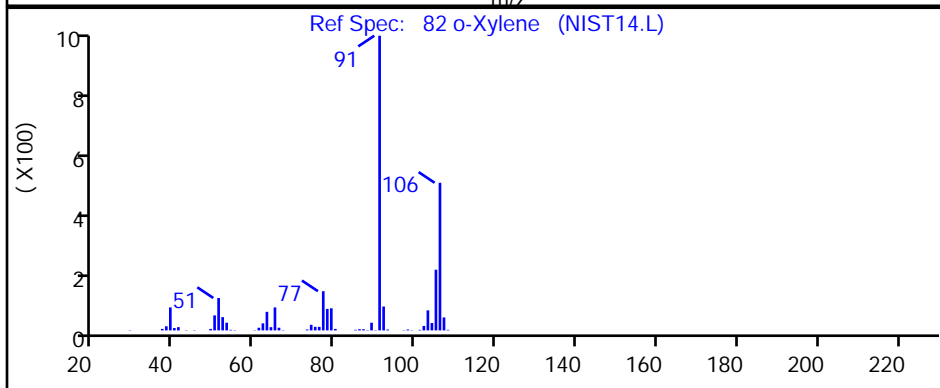
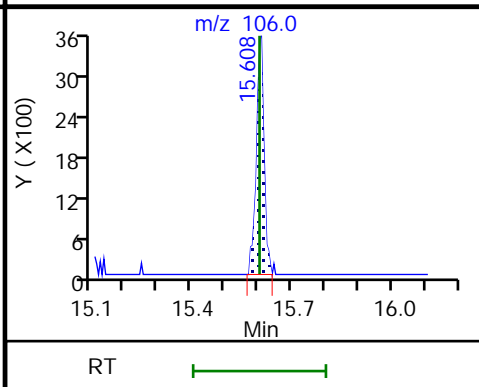
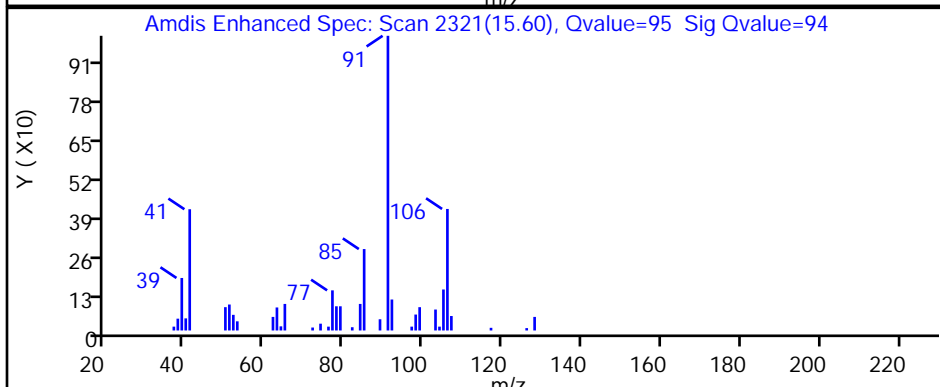
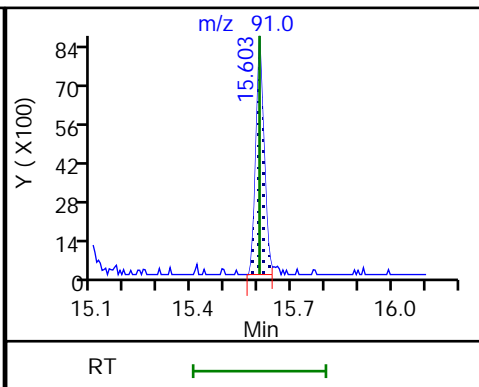
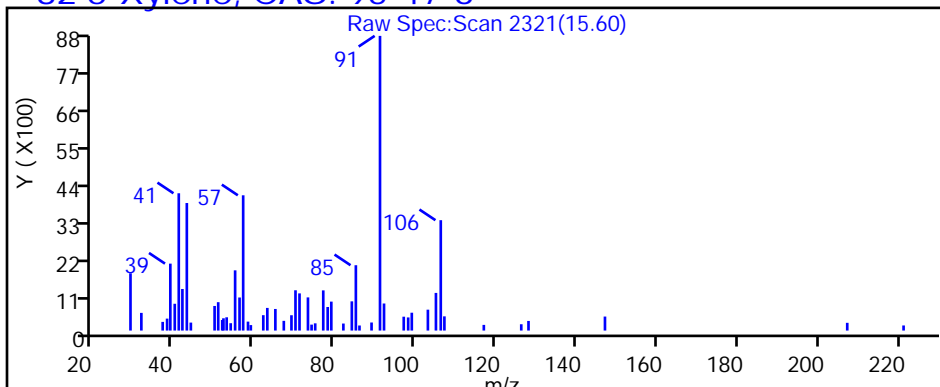
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-152-C-26 Lab Sample ID: 140-14391-11
 Matrix: Air Lab File ID: RB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:19
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.2	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.23	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-152-C-26 Lab Sample ID: 140-14391-11
 Matrix: Air Lab File ID: RB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:19
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	11	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.99	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.67	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P111.D
 Lims ID: 140-14391-A-11
 Client ID: IA-152-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 22:03:30 ALS Bottle#: 11 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-015
 Misc. Info.: 140-14391-a-11
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:58:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.384	0.001	71	193341	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1128620	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.497	14.502	-0.005	91	990629	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.223	16.228	-0.005	89	875556	4.16	
6 Chlorodifluoromethane	51	3.513	3.513	0.000	96	73707	0.6425	
8 Dichlorodifluoromethane	85	3.556	3.564	-0.005	96	11781	0.0560	
31 Methylene Chloride	84	5.319	5.325	-0.006	91	13582	0.2100	
47 Benzene	78	8.884	8.889	-0.005	61	6562	0.0357	
50 Carbon tetrachloride	117	8.927	8.932	-0.005	57	3880	0.0150	
65 Toluene	91	12.416	12.416	0.000	93	87040	0.3666	
76 Ethylbenzene	91	14.891	14.891	0.000	99	15603	0.0456	
78 m-Xylene & p-Xylene	91	15.063	15.069	-0.006	99	51556	0.1837	
82 o-Xylene	91	15.603	15.602	0.001	63	19559	0.0663	
93 1,2,4-Trimethylbenzene	105	17.533	17.549	-0.016	95	10833	0.0272	
S 121 Xylenes, Total	100				0		0.2500	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P111.D

Injection Date: 26-Feb-2019 22:03:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-11

Lab Sample ID: 140-14391-11

Worklist Smp#: 15

Client ID: IA-152-C-26

Purge Vol: 500.000 mL

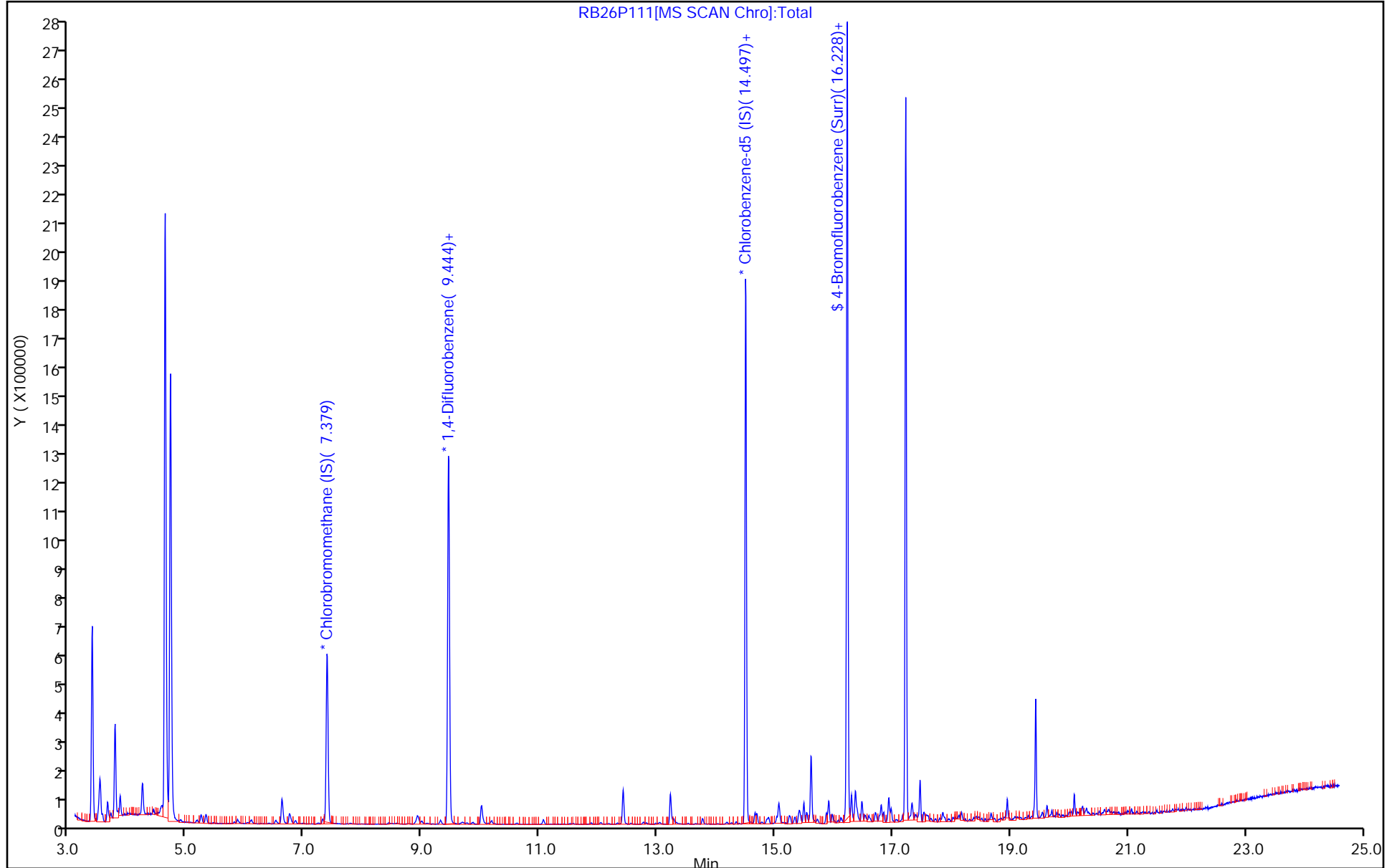
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P111.D
 Lims ID: 140-14391-A-11
 Client ID: IA-152-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 22:03:30 ALS Bottle#: 11 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-015
 Misc. Info.: 140-14391-a-11
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:58:34

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.16	103.91

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P111.D

Injection Date: 26-Feb-2019 22:03:30

Instrument ID: MR

Lims ID: 140-14391-A-11

Lab Sample ID: 140-14391-11

Client ID: IA-152-C-26

Operator ID:

ALS Bottle#: 11

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

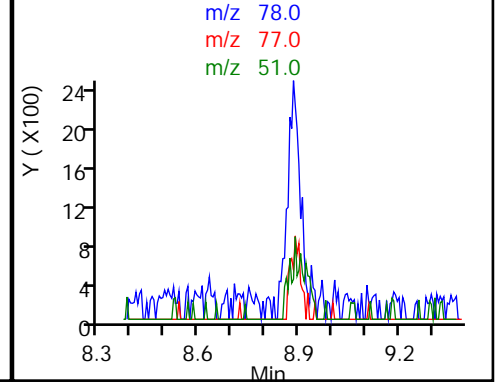
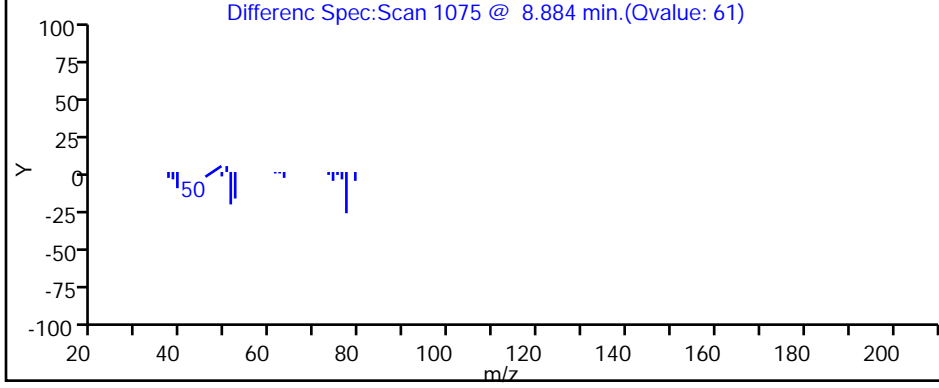
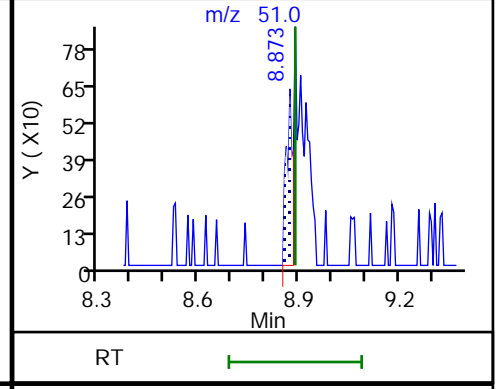
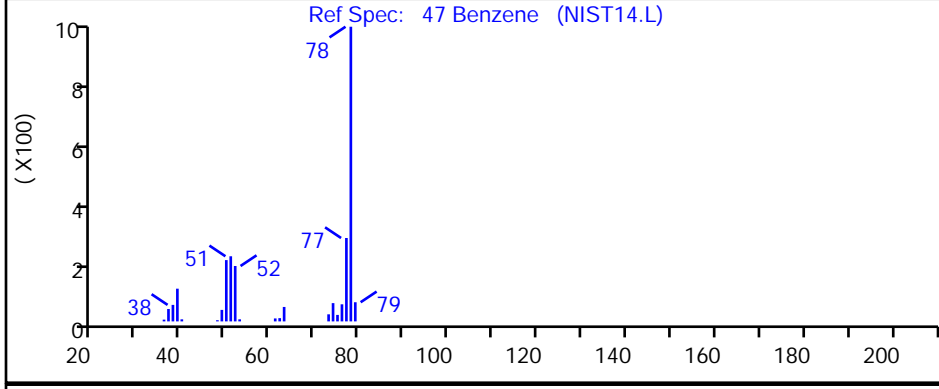
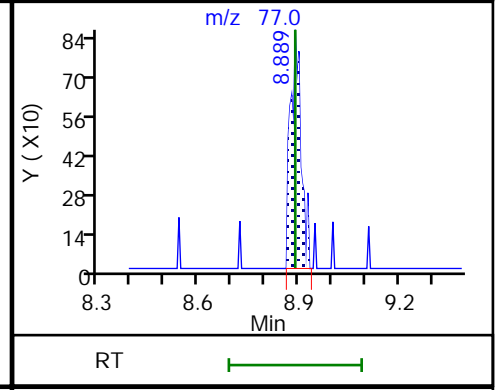
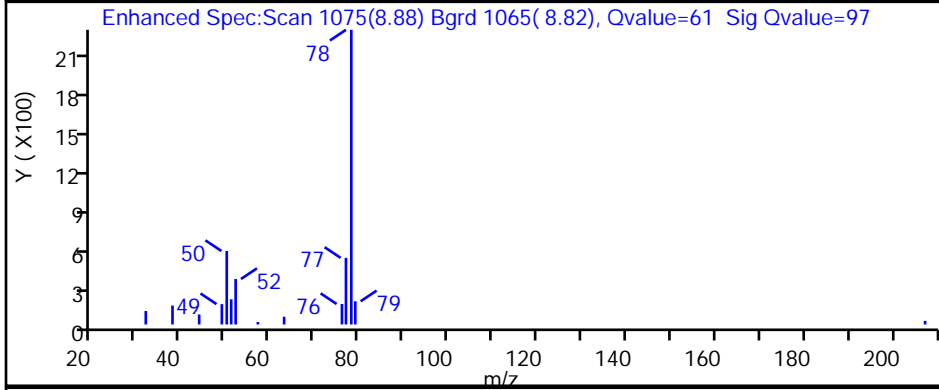
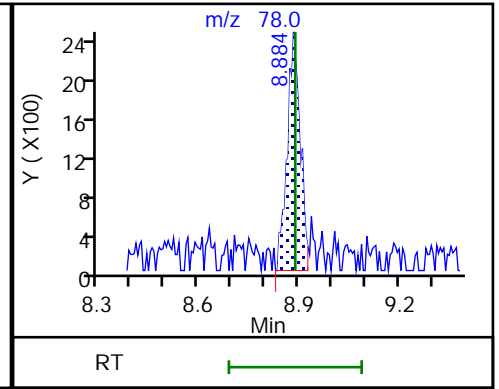
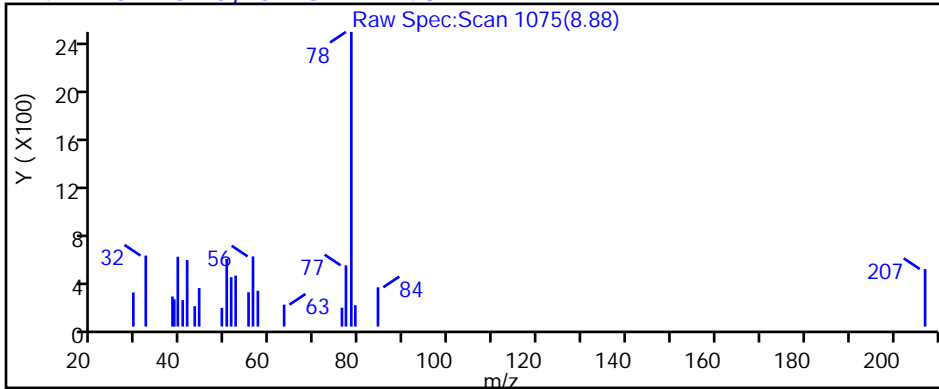
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P111.D

Injection Date: 26-Feb-2019 22:03:30

Instrument ID: MR

Lims ID: 140-14391-A-11

Lab Sample ID: 140-14391-11

Client ID: IA-152-C-26

Operator ID:

ALS Bottle#: 11

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

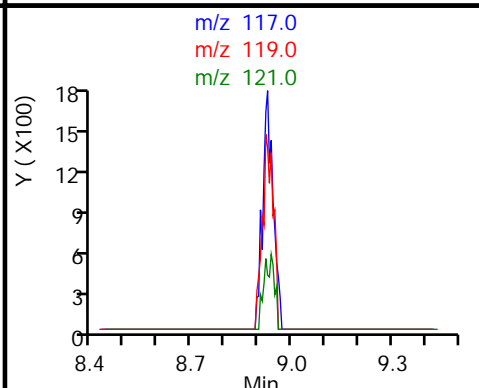
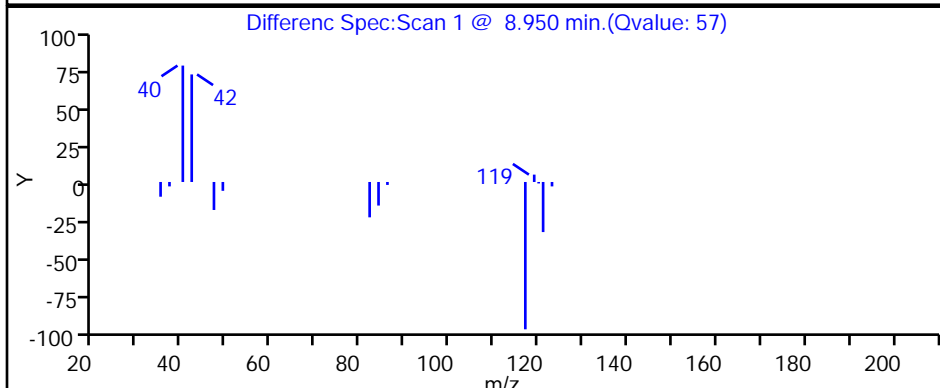
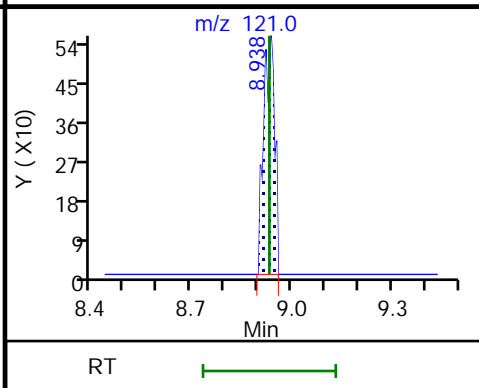
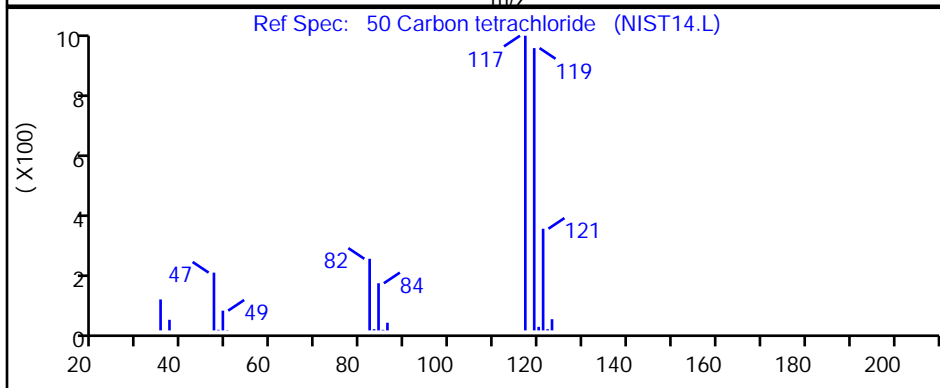
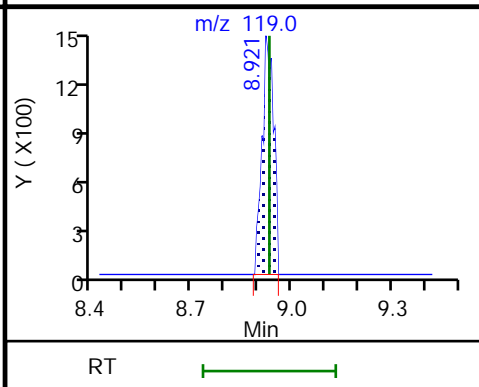
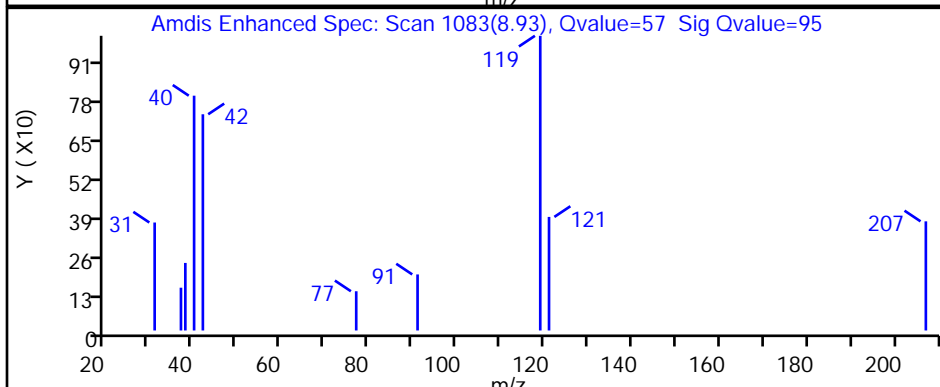
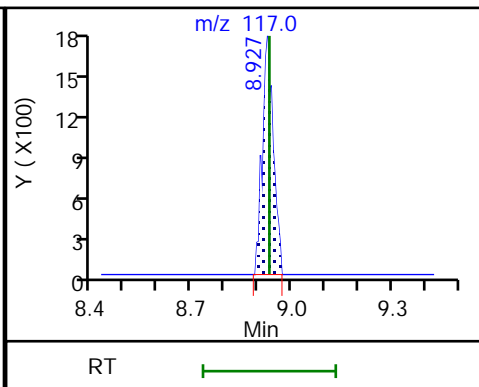
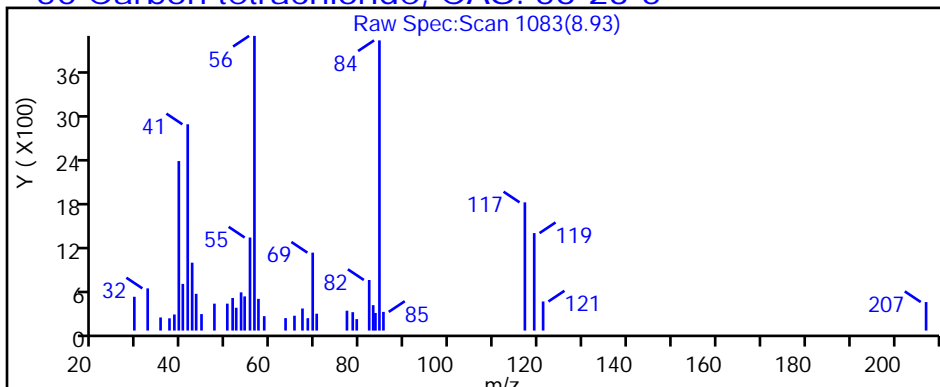
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P111.D

Injection Date: 26-Feb-2019 22:03:30

Instrument ID: MR

Lims ID: 140-14391-A-11

Lab Sample ID: 140-14391-11

Client ID: IA-152-C-26

Operator ID:

ALS Bottle#: 11

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

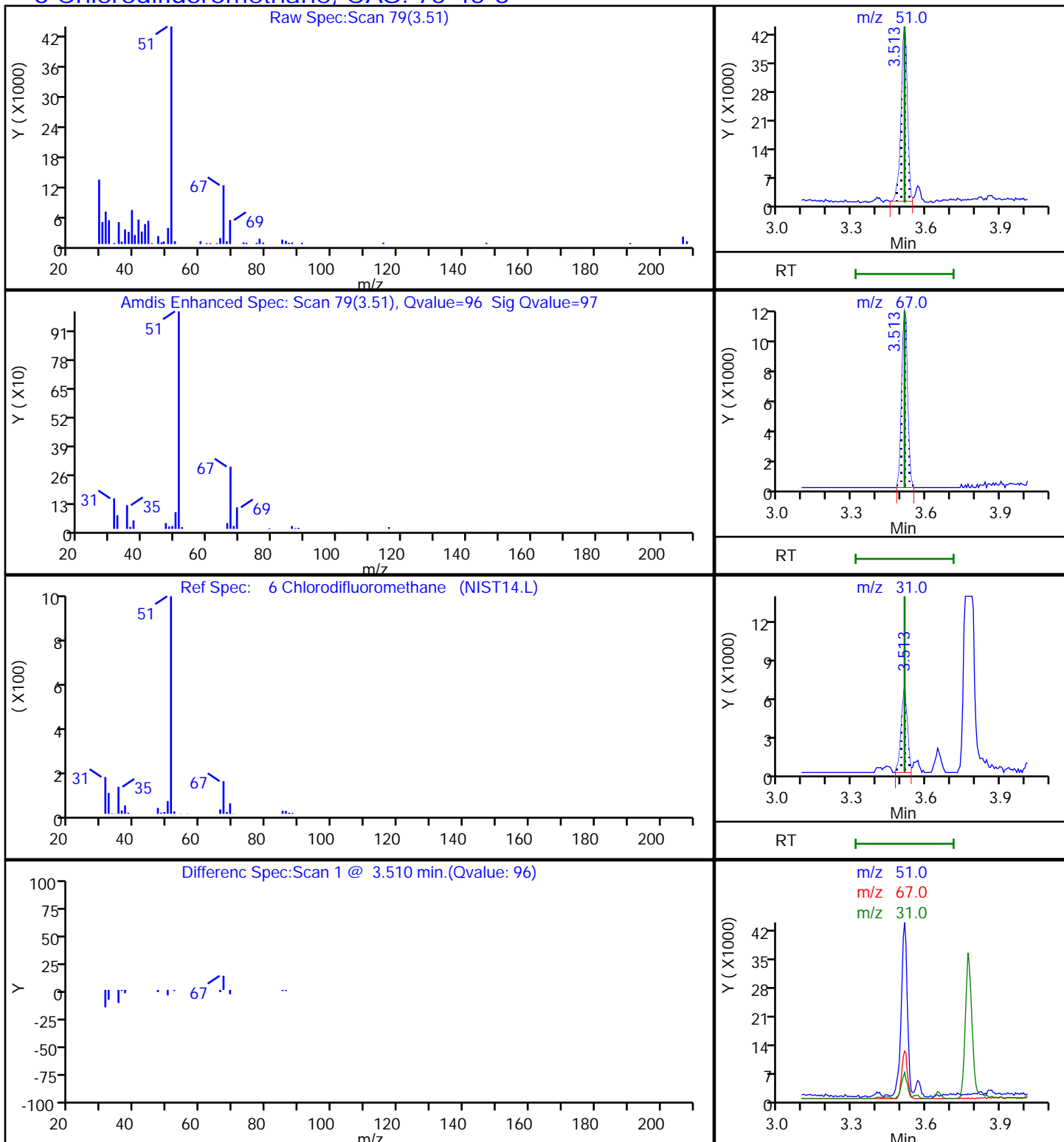
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P111.D

Injection Date: 26-Feb-2019 22:03:30

Instrument ID: MR

Lims ID: 140-14391-A-11

Lab Sample ID: 140-14391-11

Client ID: IA-152-C-26

Operator ID:

ALS Bottle#: 11

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

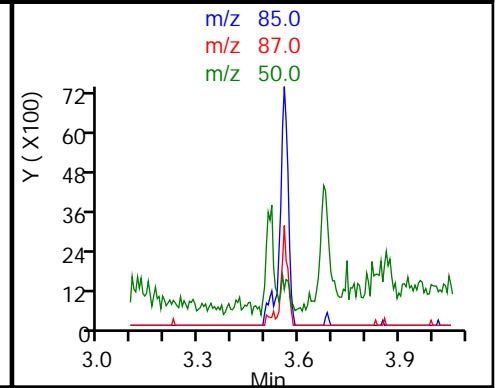
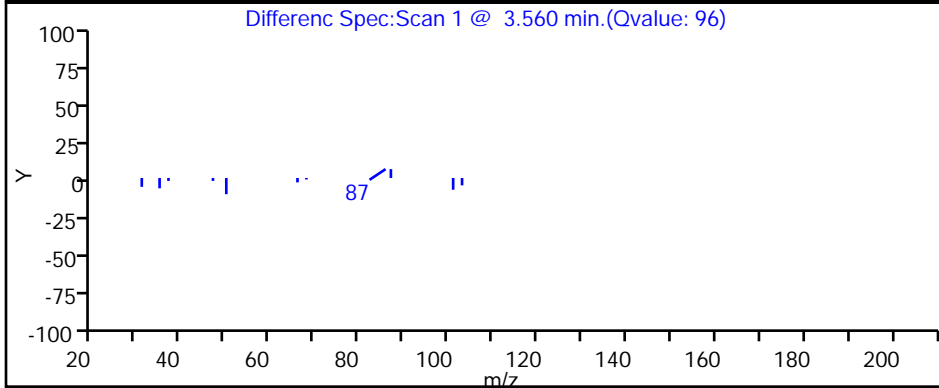
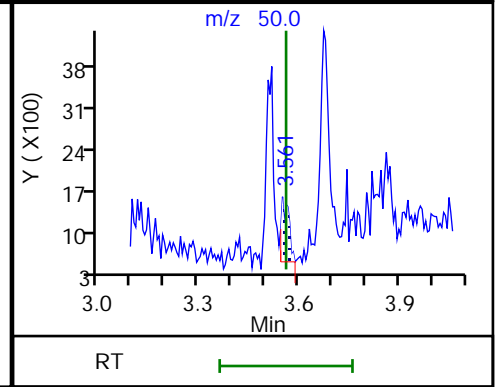
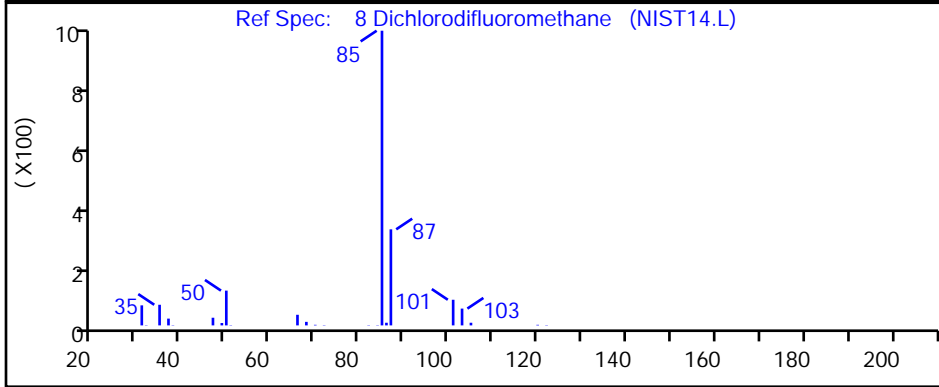
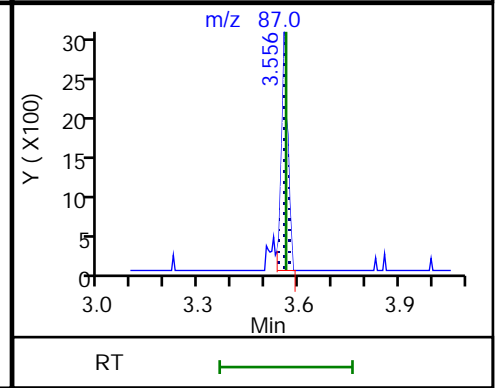
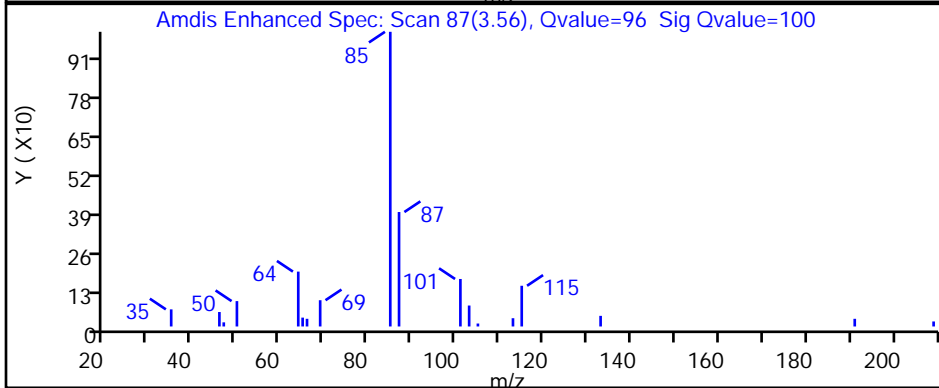
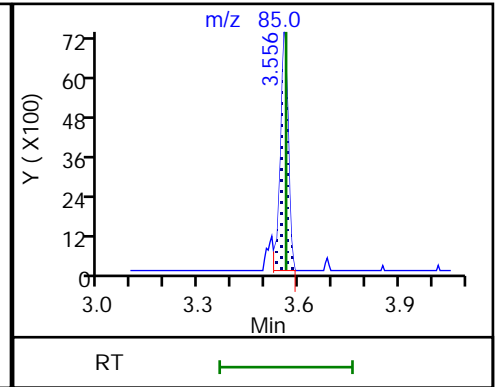
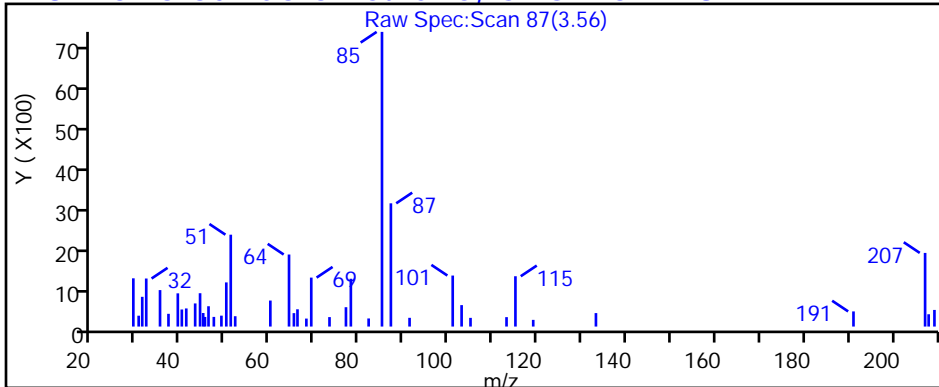
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P111.D

Injection Date: 26-Feb-2019 22:03:30

Instrument ID: MR

Lims ID: 140-14391-A-11

Lab Sample ID: 140-14391-11

Client ID: IA-152-C-26

Operator ID:

ALS Bottle#: 11 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

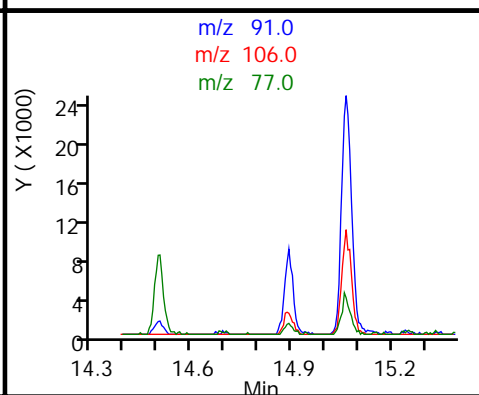
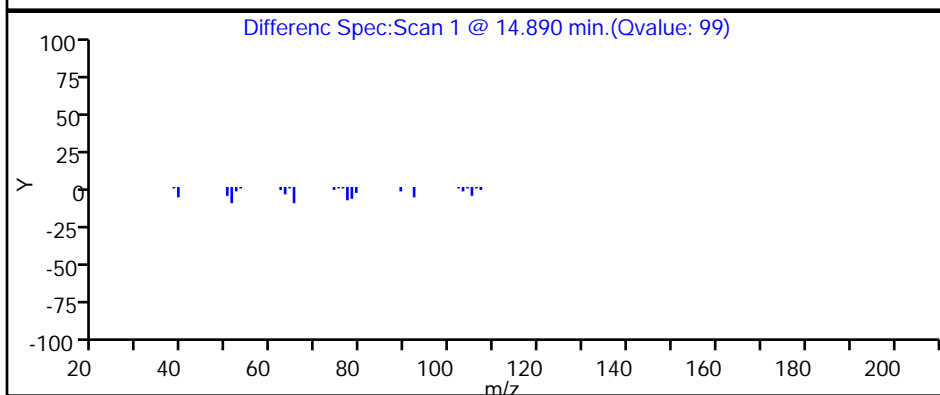
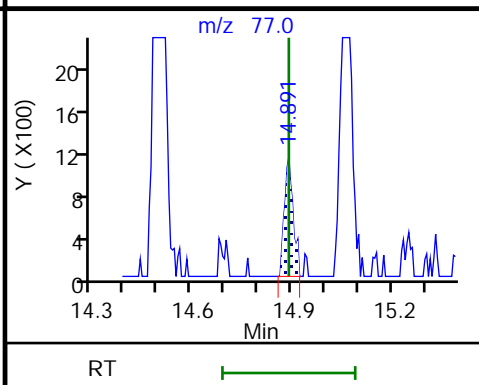
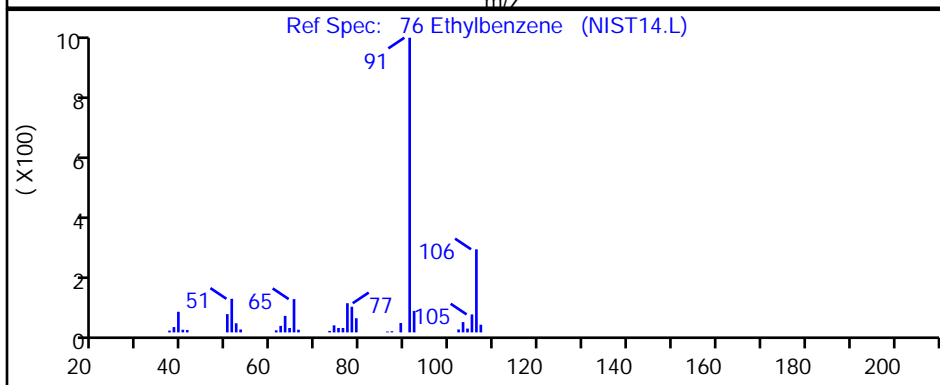
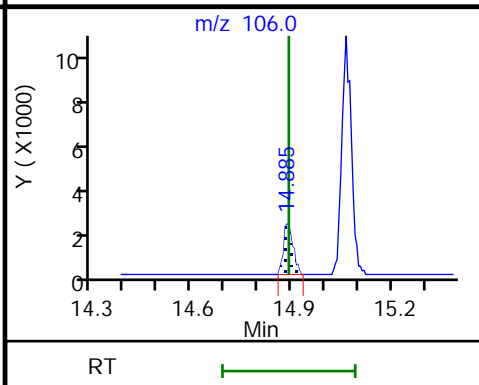
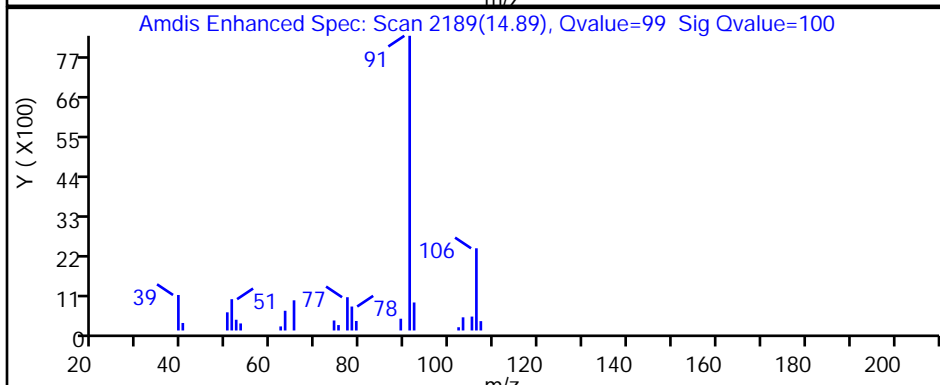
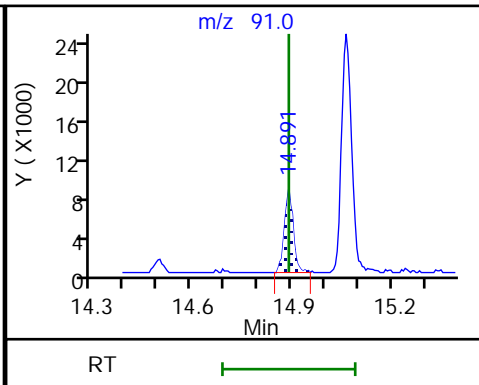
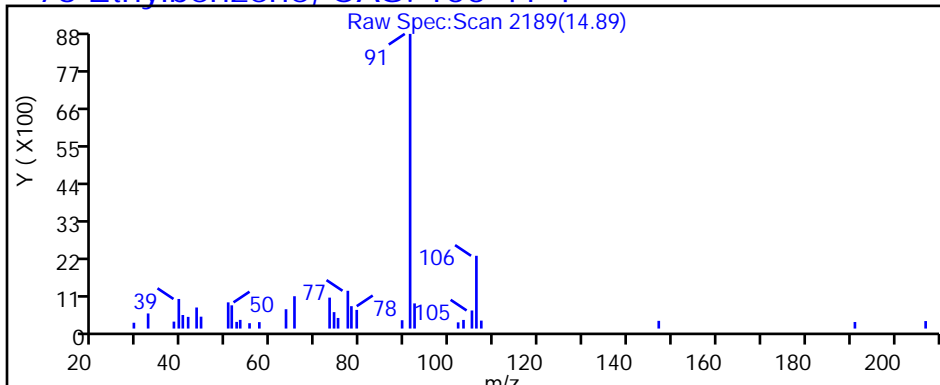
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P111.D

Injection Date: 26-Feb-2019 22:03:30

Instrument ID: MR

Lims ID: 140-14391-A-11

Lab Sample ID: 140-14391-11

Client ID: IA-152-C-26

Operator ID:

ALS Bottle#: 11 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

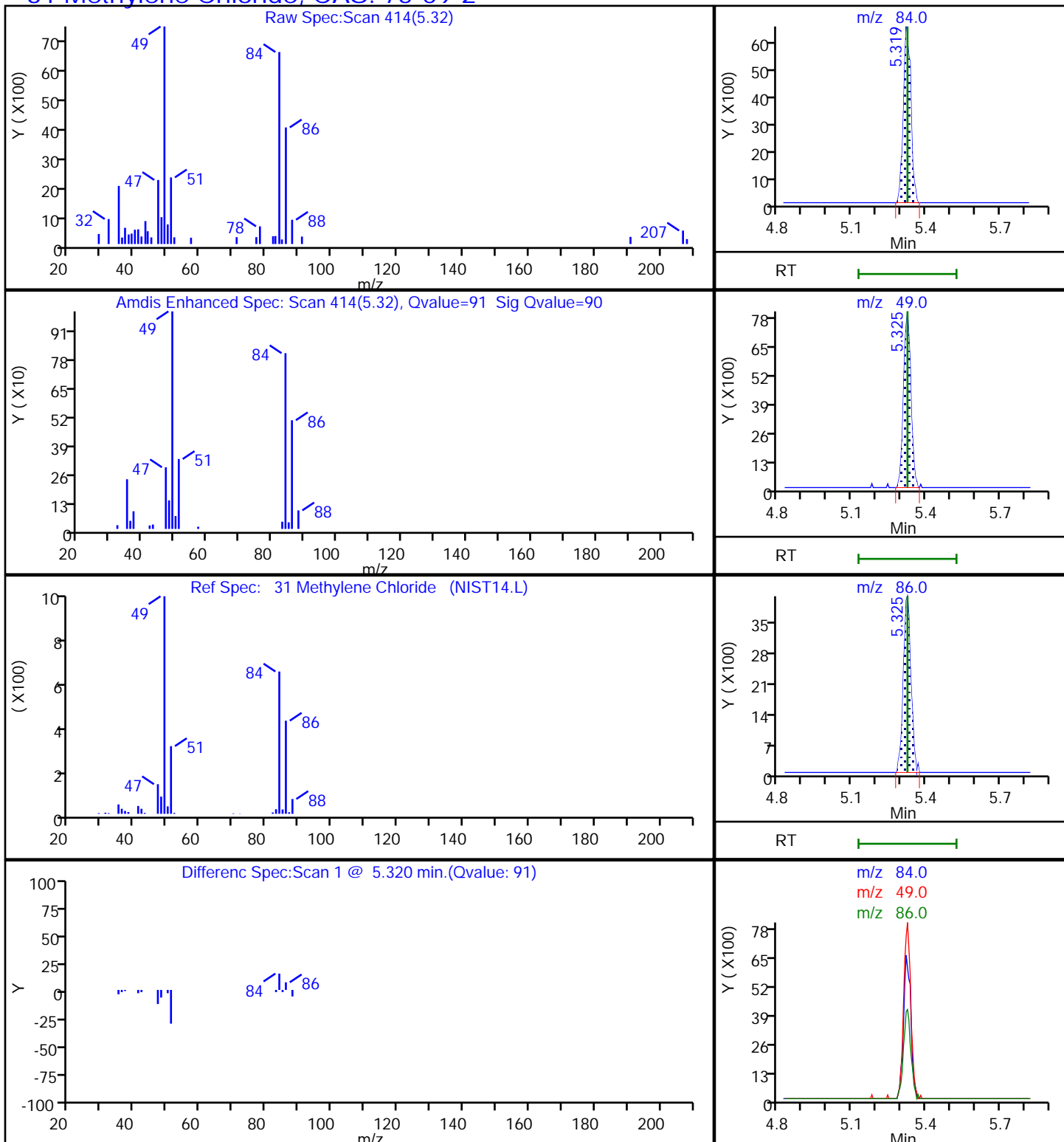
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P111.D

Injection Date: 26-Feb-2019 22:03:30

Instrument ID: MR

Lims ID: 140-14391-A-11

Lab Sample ID: 140-14391-11

Client ID: IA-152-C-26

Operator ID:

ALS Bottle#: 11

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

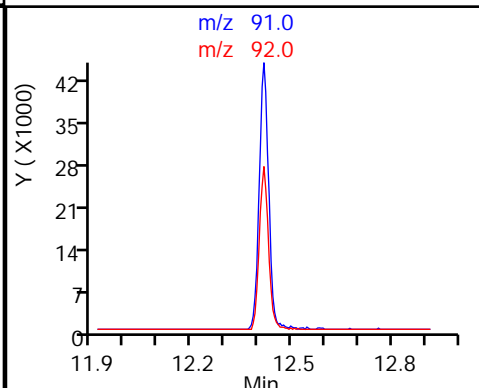
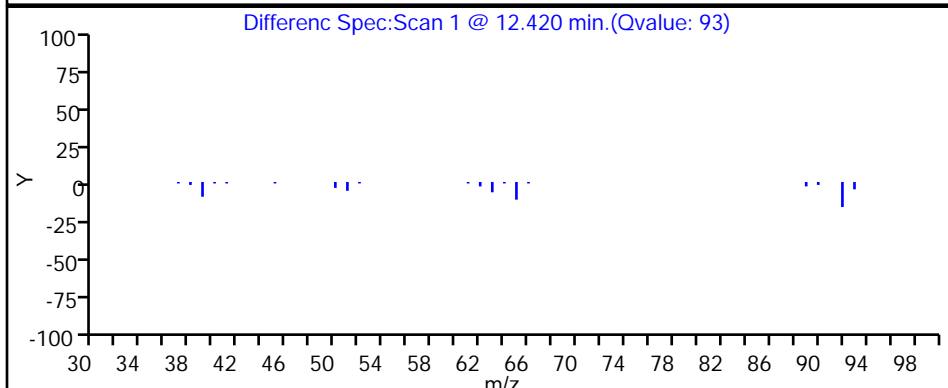
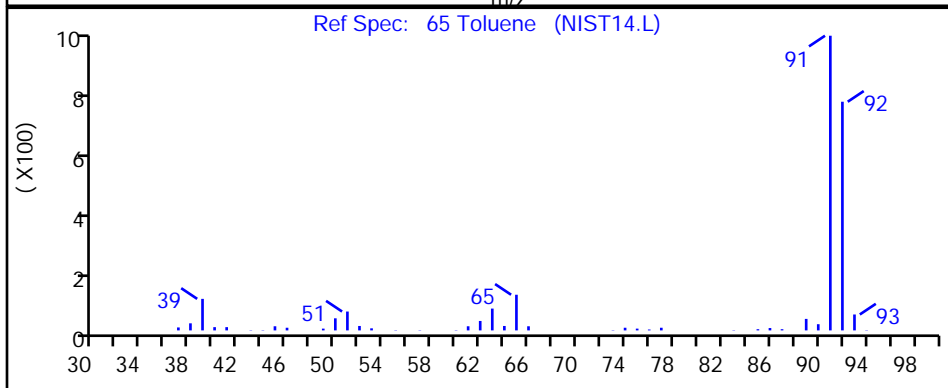
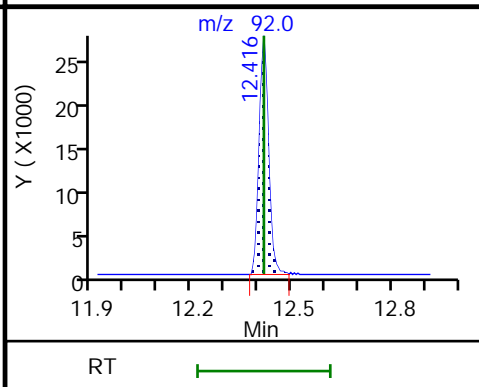
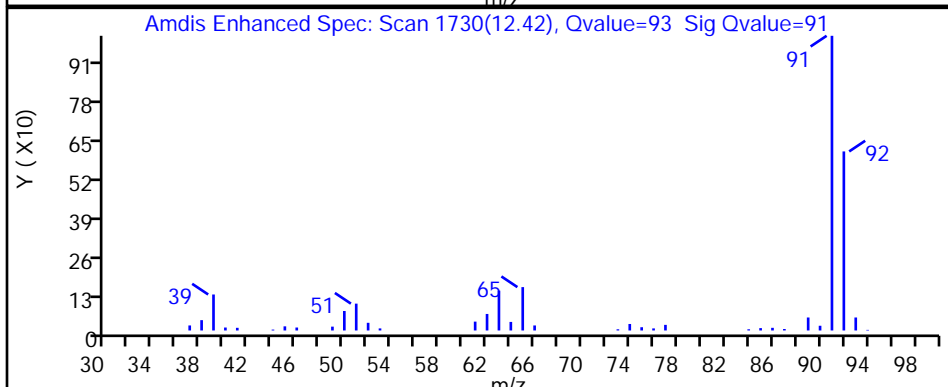
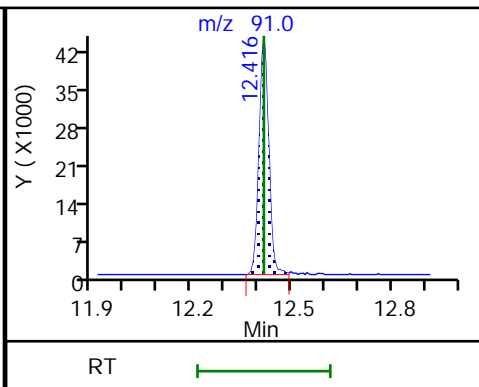
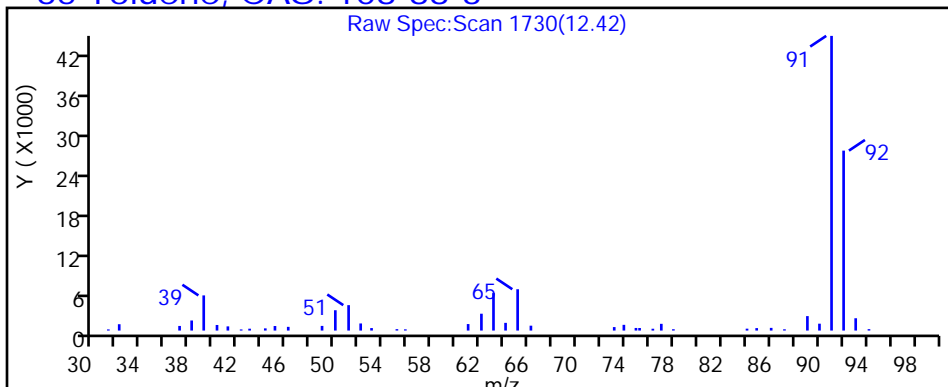
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P111.D

Injection Date: 26-Feb-2019 22:03:30

Instrument ID: MR

Lims ID: 140-14391-A-11

Lab Sample ID: 140-14391-11

Client ID: IA-152-C-26

Operator ID:

ALS Bottle#: 11 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

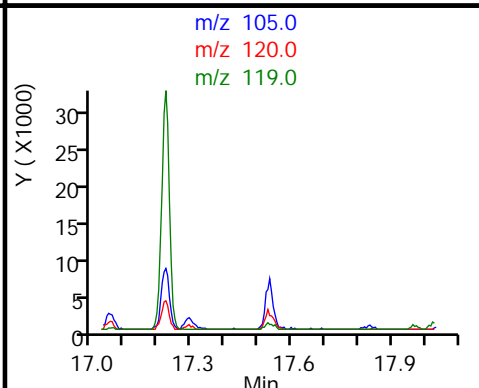
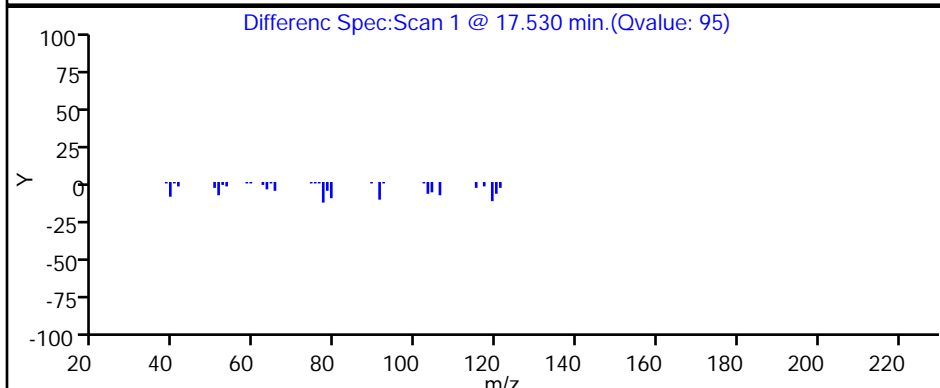
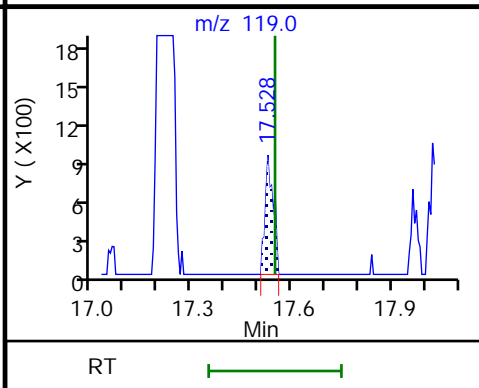
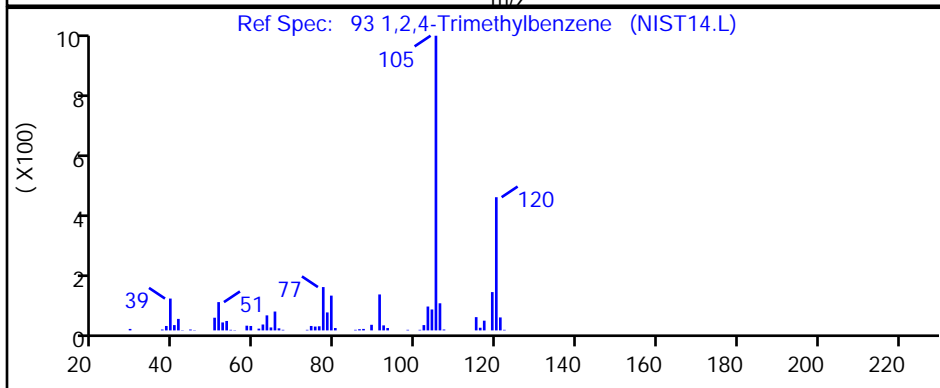
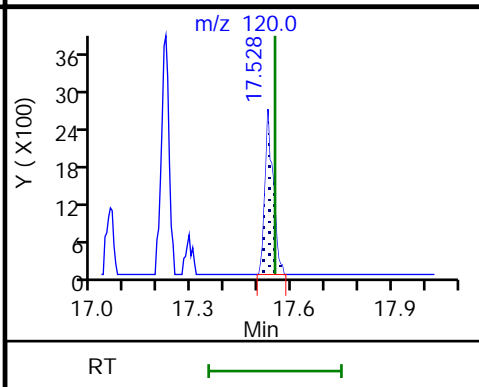
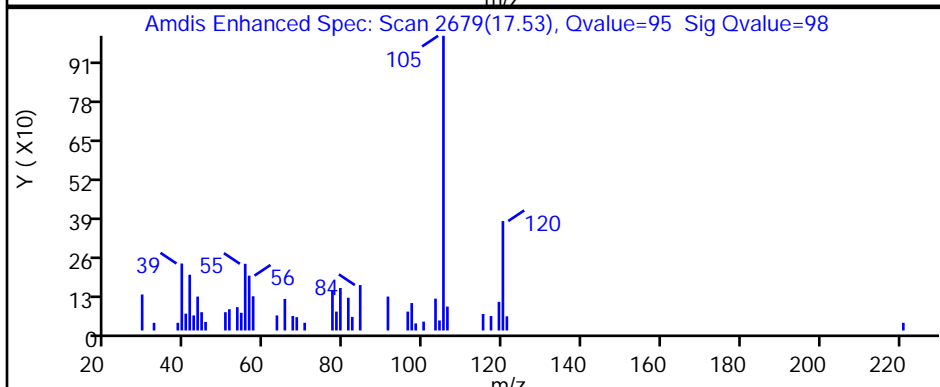
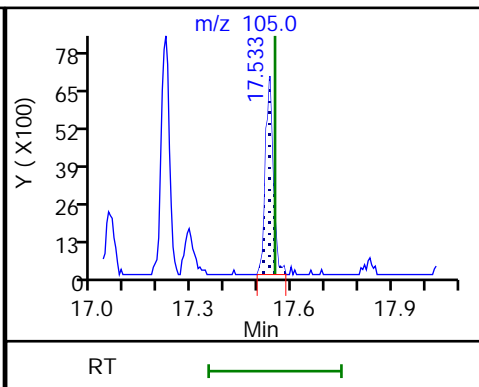
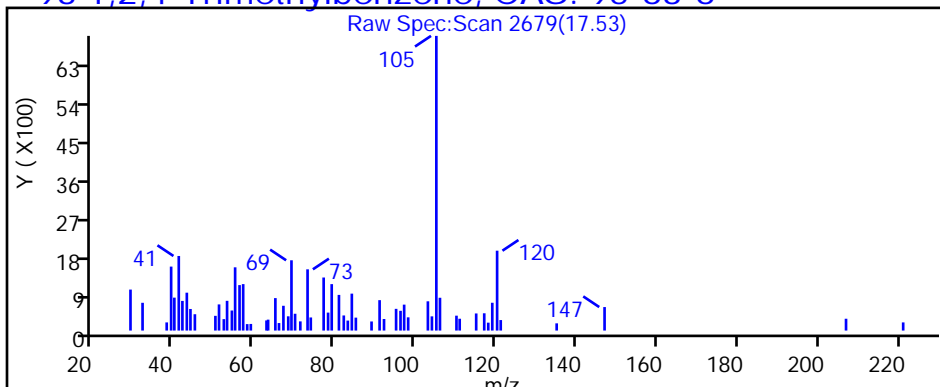
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P111.D

Injection Date: 26-Feb-2019 22:03:30

Instrument ID: MR

Lims ID: 140-14391-A-11

Lab Sample ID: 140-14391-11

Client ID: IA-152-C-26

Operator ID:

ALS Bottle#: 11 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

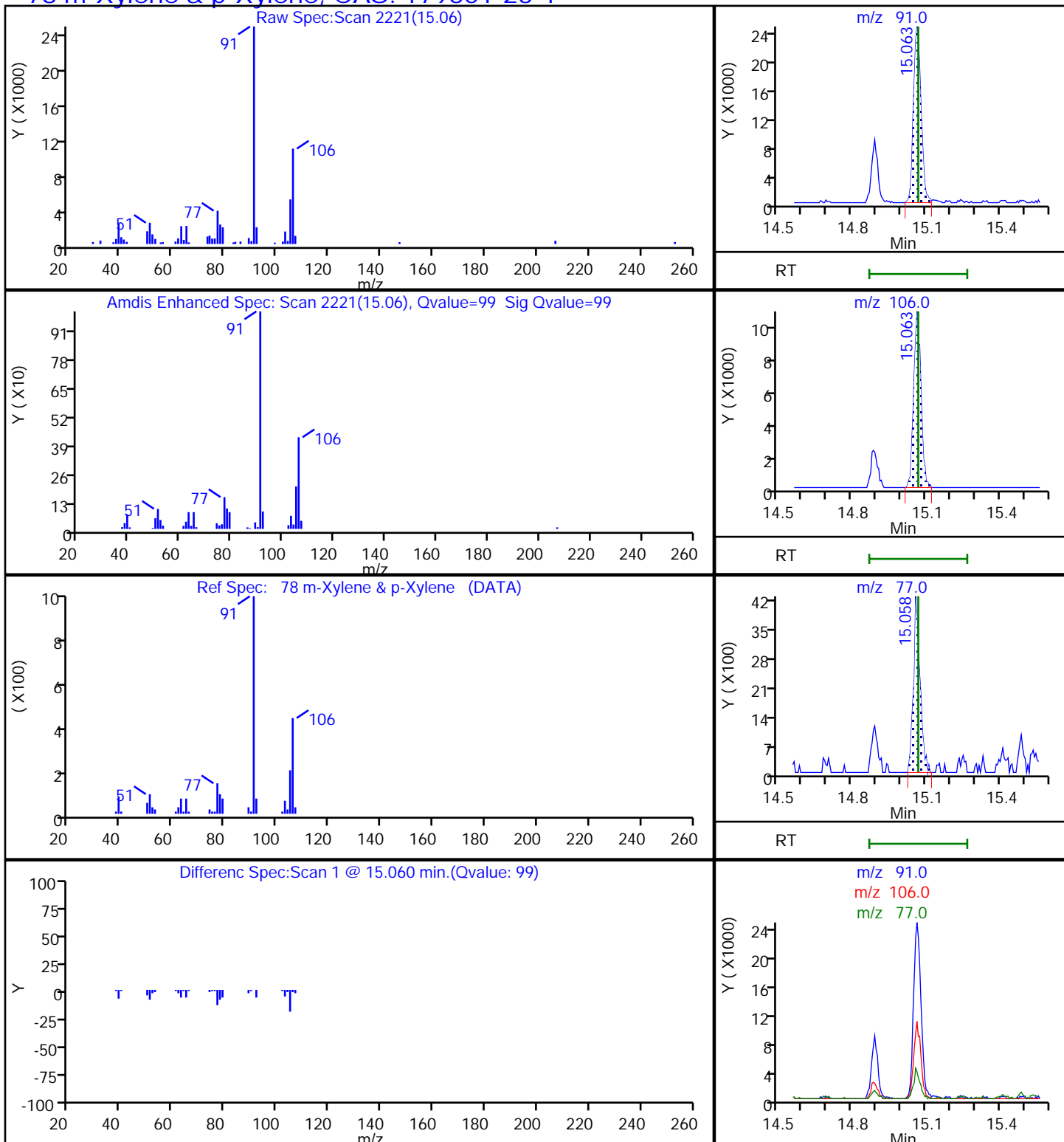
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P111.D

Injection Date: 26-Feb-2019 22:03:30

Instrument ID: MR

Lims ID: 140-14391-A-11

Lab Sample ID: 140-14391-11

Client ID: IA-152-C-26

Operator ID:

ALS Bottle#: 11 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

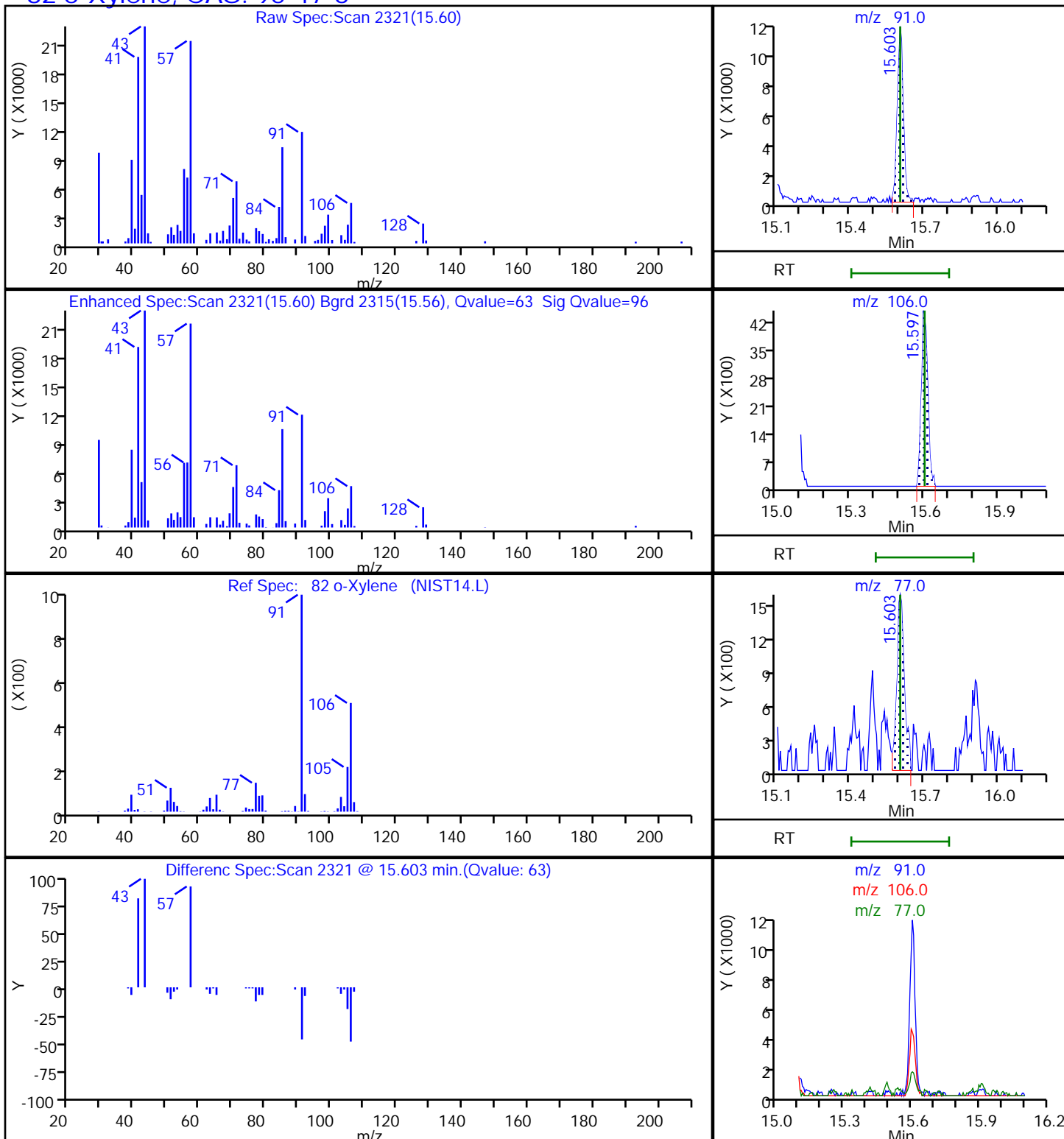
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-144-C-26 Lab Sample ID: 140-14391-12
 Matrix: Air Lab File ID: RB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:21
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.7	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.27	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.23	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-144-C-26 Lab Sample ID: 140-14391-12
 Matrix: Air Lab File ID: RB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:21
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.5	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.0	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.8		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P112.D
 Lims ID: 140-14391-A-12
 Client ID: IA-144-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 22:52:30 ALS Bottle#: 12 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-016
 Misc. Info.: 140-14391-a-12
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:59:03

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.384	7.384	0.000	71	197269	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1155355	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.502	0.000	90	1025834	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.228	0.000	90	893787	4.10	
6 Chlorodifluoromethane	51	3.513	3.513	0.000	96	63038	0.5386	
8 Dichlorodifluoromethane	85	3.556	3.564	-0.005	96	11438	0.0533	
31 Methylene Chloride	84	5.330	5.325	0.005	88	25769	0.3905	
47 Benzene	78	8.894	8.889	0.005	95	6746	0.0358	
65 Toluene	91	12.421	12.416	0.005	93	73939	0.3008	
76 Ethylbenzene	91	14.891	14.891	0.000	97	16330	0.0461	
78 m-Xylene & p-Xylene	91	15.063	15.069	-0.006	99	53180	0.1829	
82 o-Xylene	91	15.602	15.602	0.000	96	20435	0.0669	
S 121 Xylenes, Total	100				0		0.2499	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P112.D

Injection Date: 26-Feb-2019 22:52:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-12

Lab Sample ID: 140-14391-12

Worklist Smp#: 16

Client ID: IA-144-C-26

Purge Vol: 500.000 mL

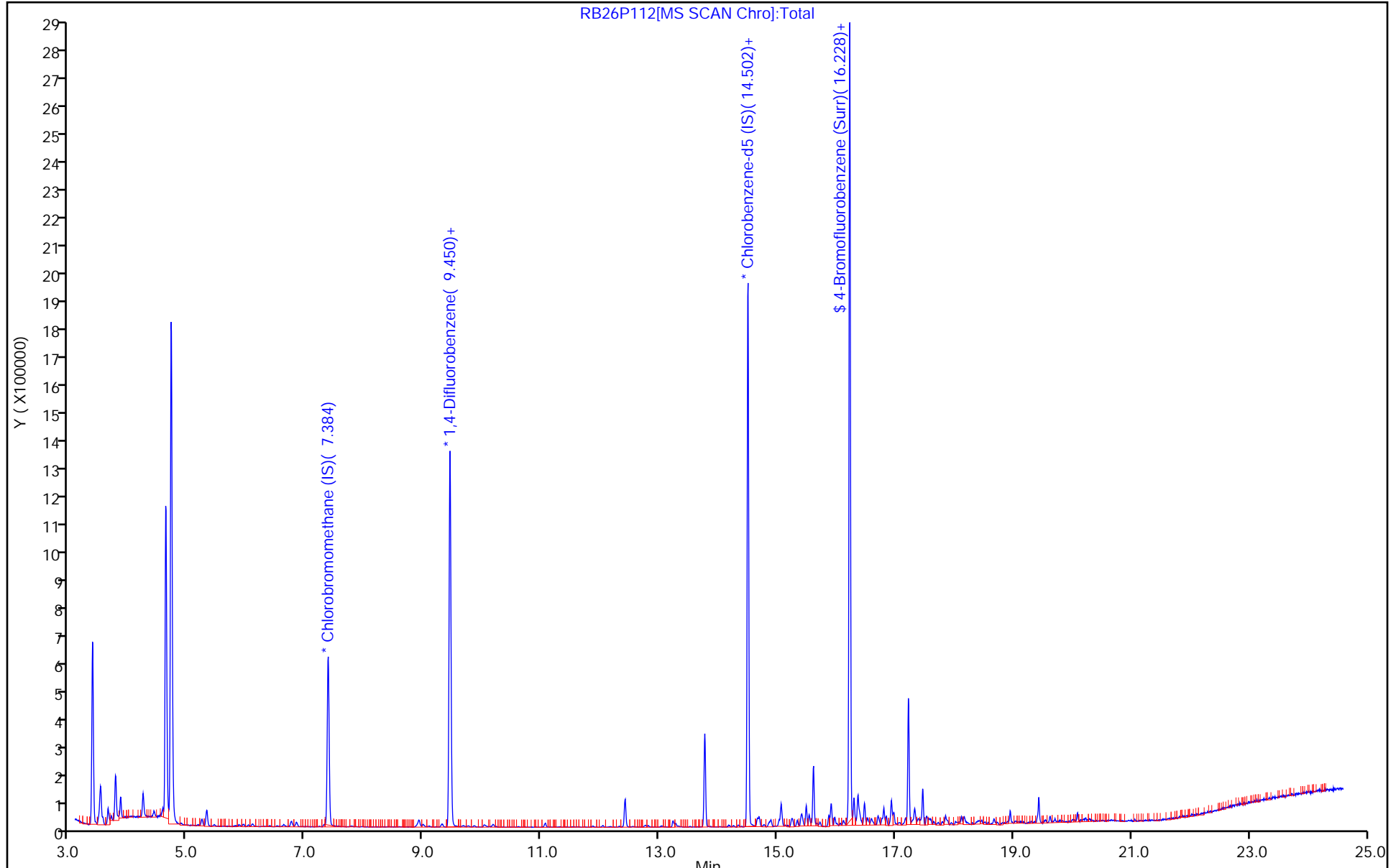
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P112.D
 Lims ID: 140-14391-A-12
 Client ID: IA-144-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 22:52:30 ALS Bottle#: 12 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-016
 Misc. Info.: 140-14391-a-12
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:59:03

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.10	102.43

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P112.D

Injection Date: 26-Feb-2019 22:52:30

Instrument ID: MR

Lims ID: 140-14391-A-12

Lab Sample ID: 140-14391-12

Client ID: IA-144-C-26

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

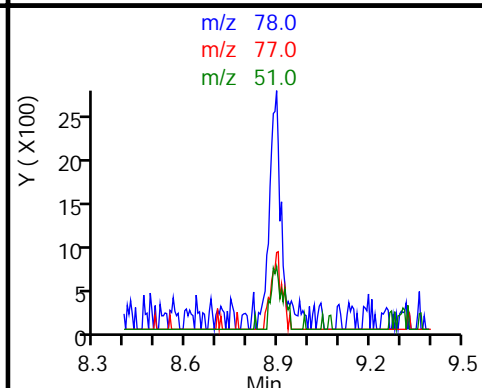
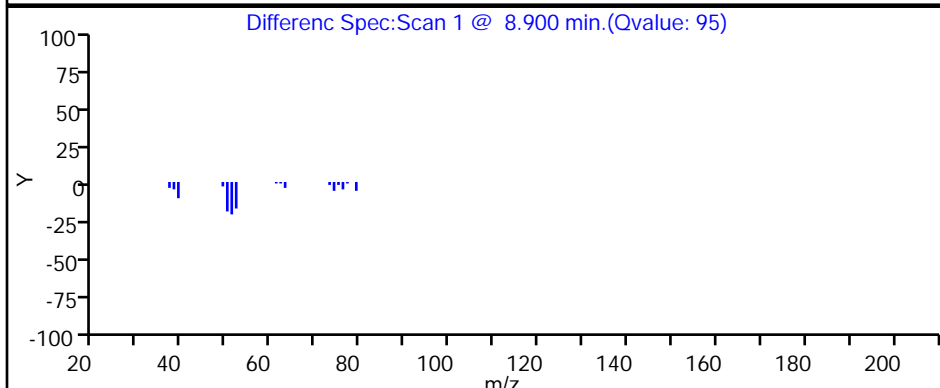
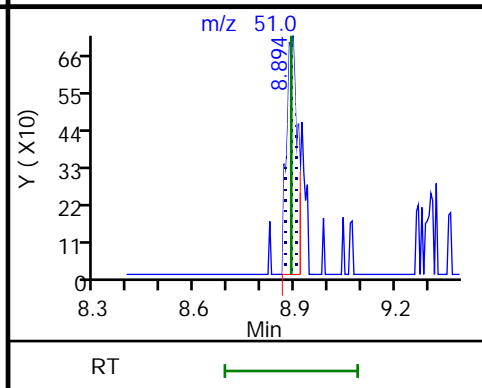
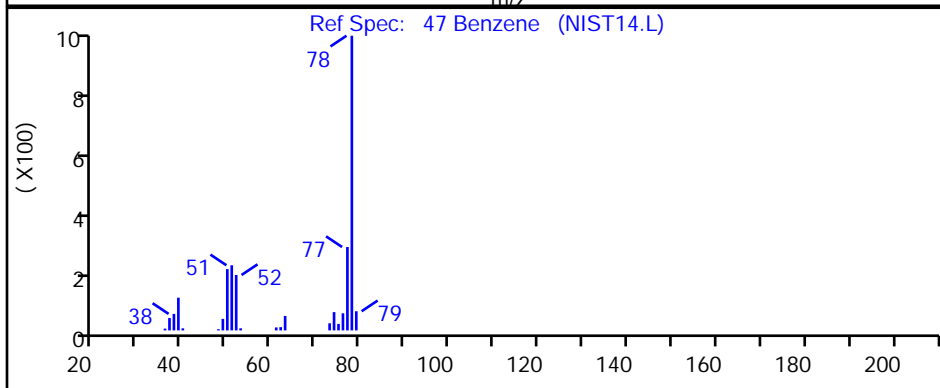
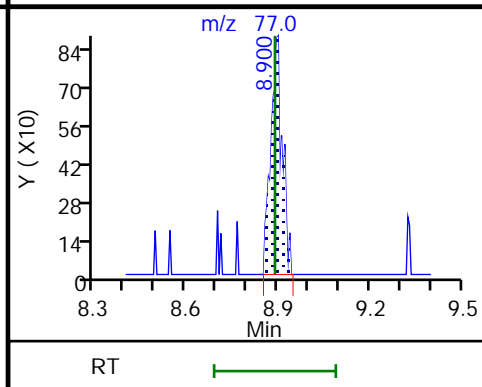
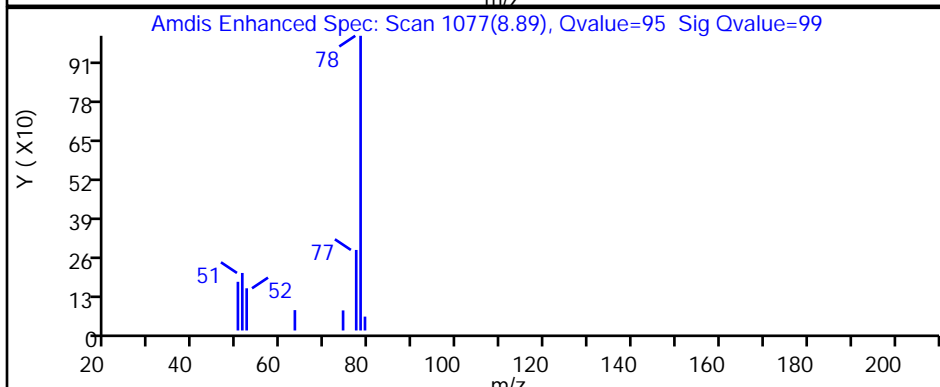
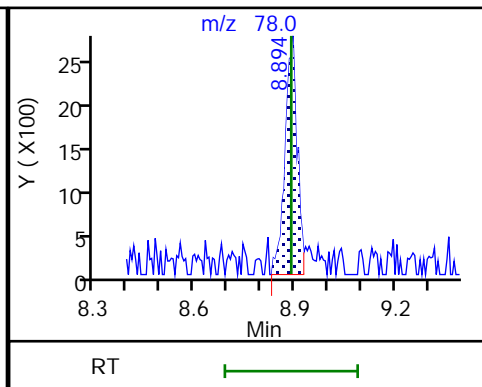
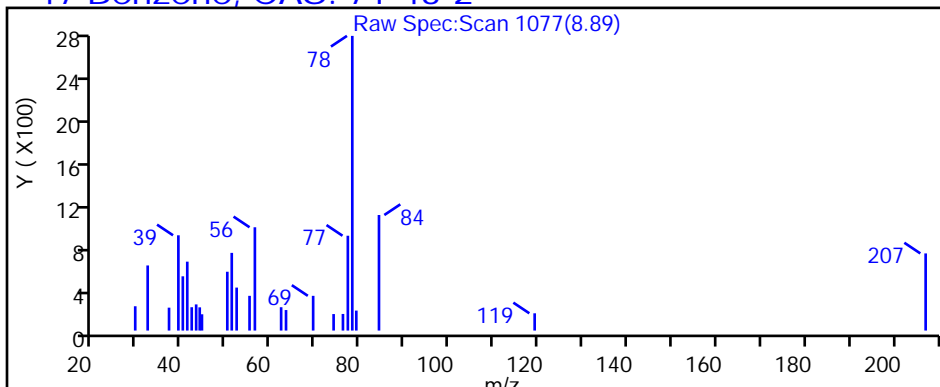
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P112.D

Injection Date: 26-Feb-2019 22:52:30

Instrument ID: MR

Lims ID: 140-14391-A-12

Lab Sample ID: 140-14391-12

Client ID: IA-144-C-26

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

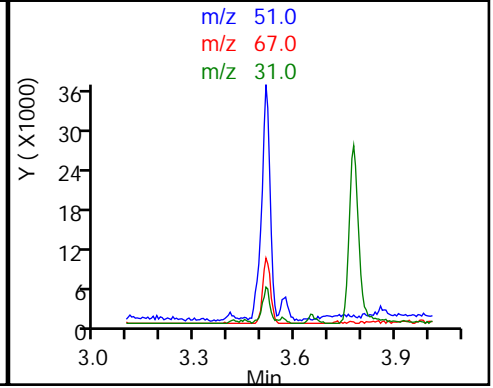
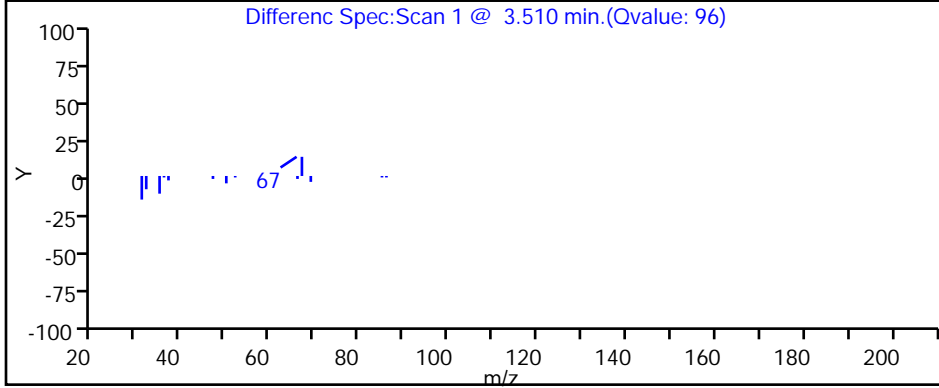
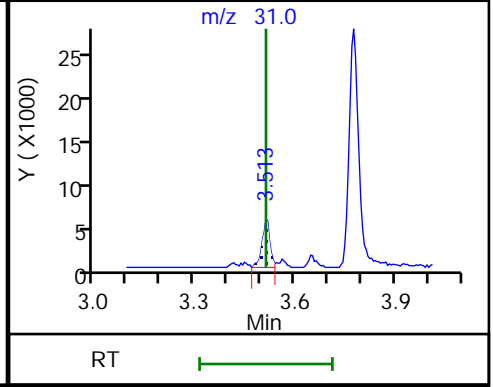
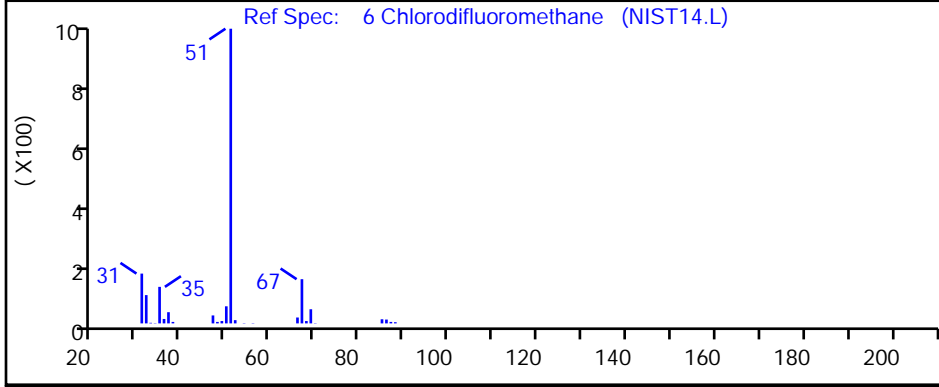
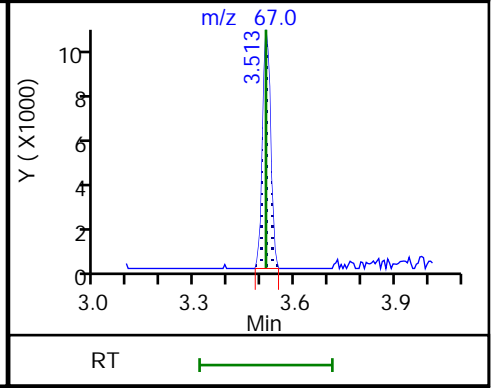
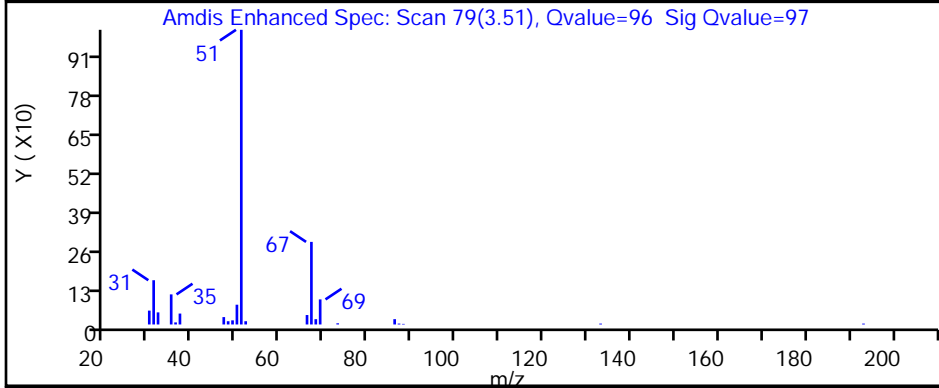
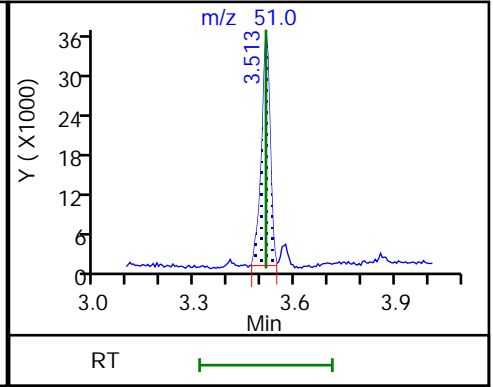
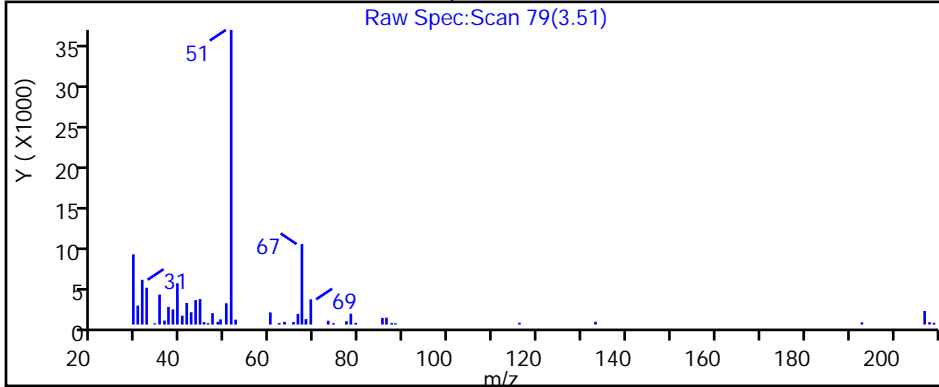
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P112.D

Injection Date: 26-Feb-2019 22:52:30

Instrument ID: MR

Lims ID: 140-14391-A-12

Lab Sample ID: 140-14391-12

Client ID: IA-144-C-26

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

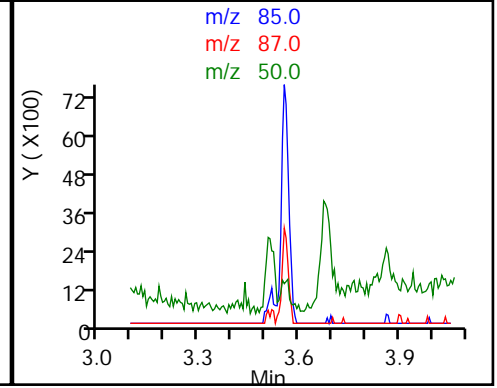
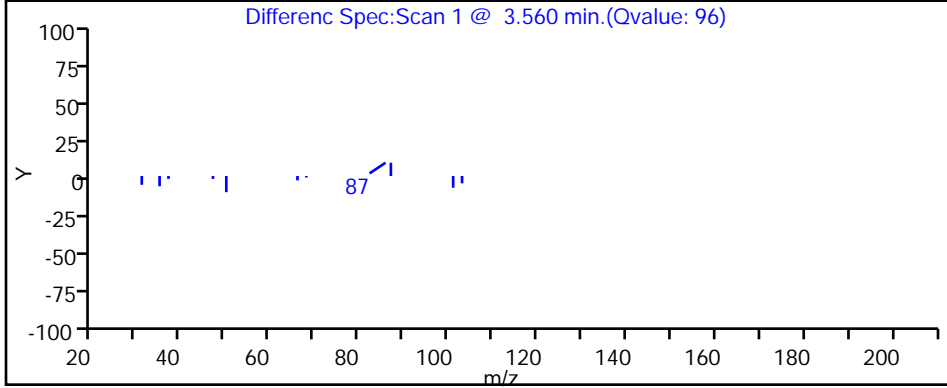
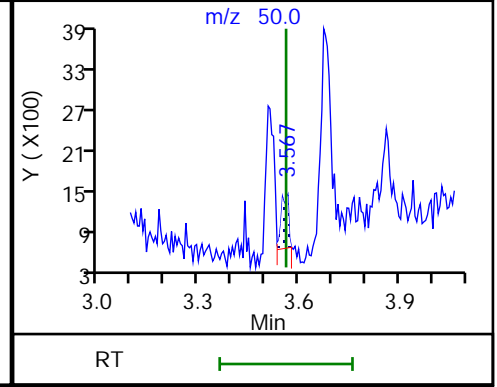
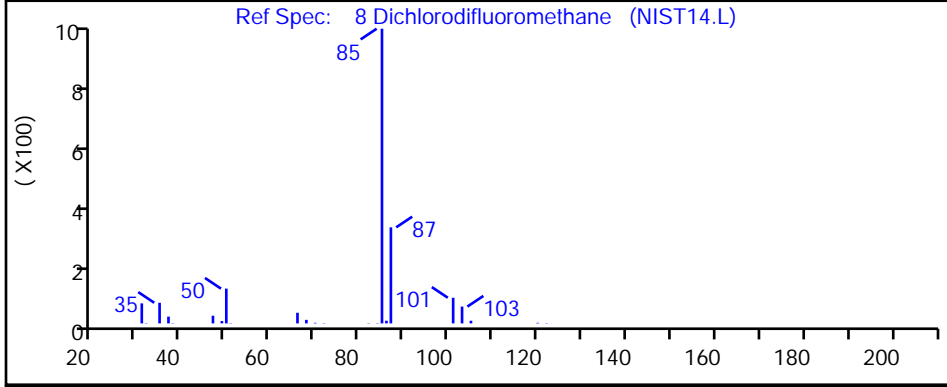
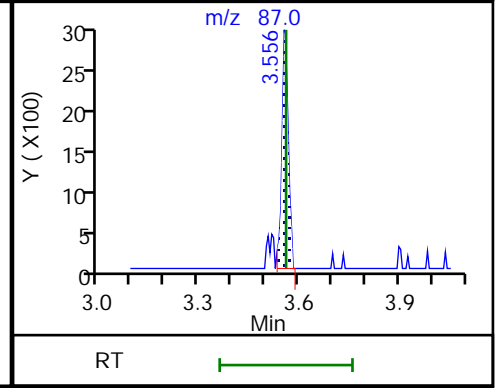
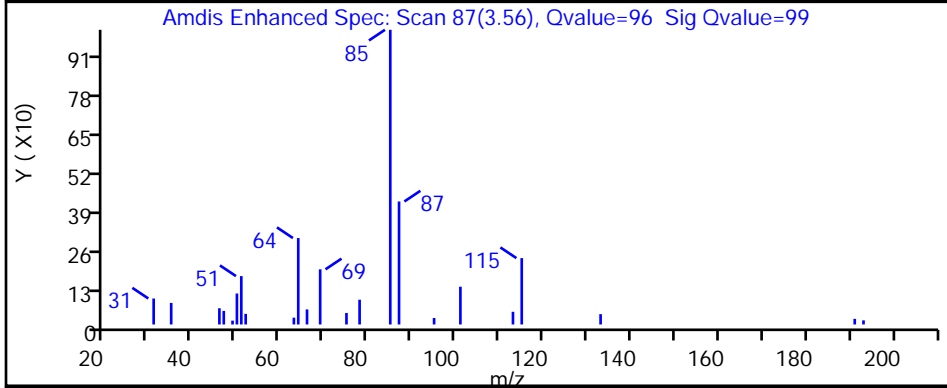
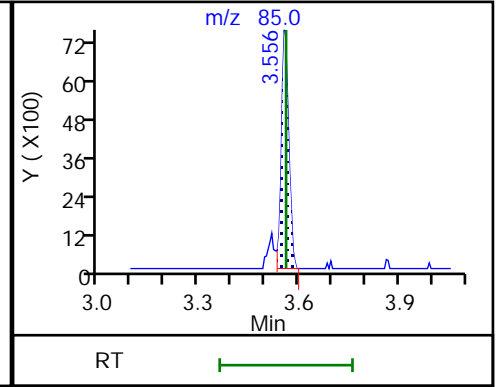
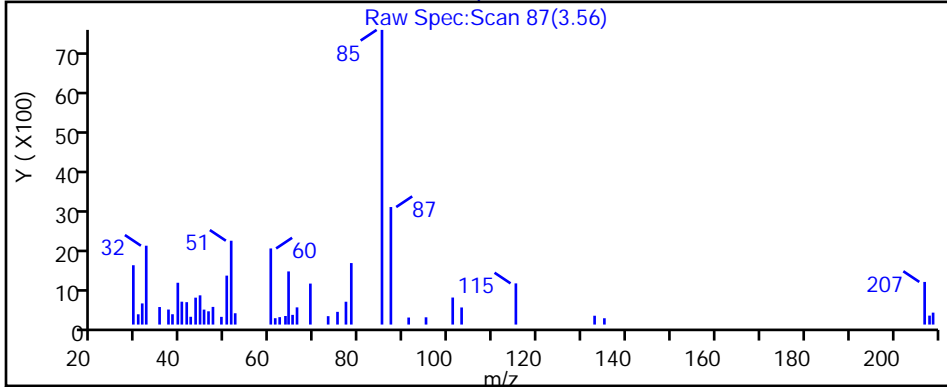
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P112.D

Injection Date: 26-Feb-2019 22:52:30

Instrument ID: MR

Lims ID: 140-14391-A-12

Lab Sample ID: 140-14391-12

Client ID: IA-144-C-26

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

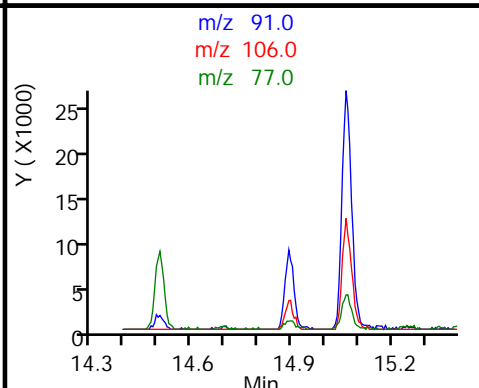
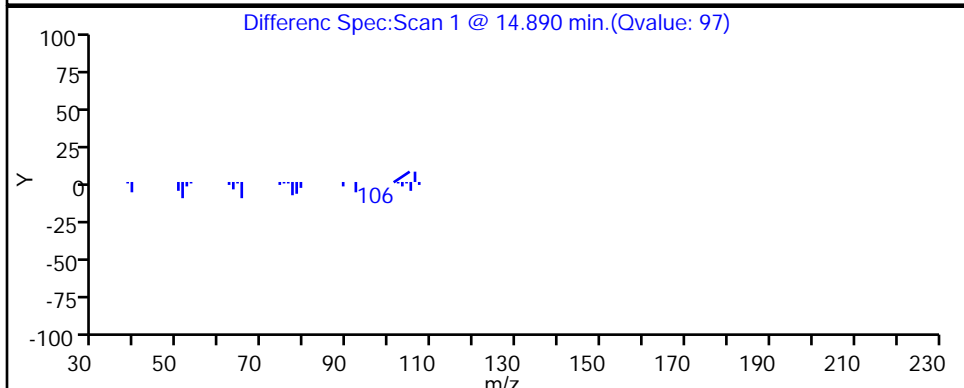
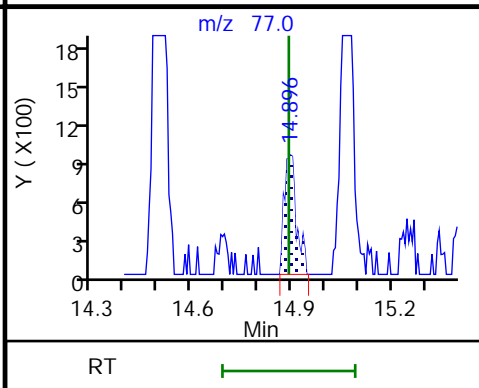
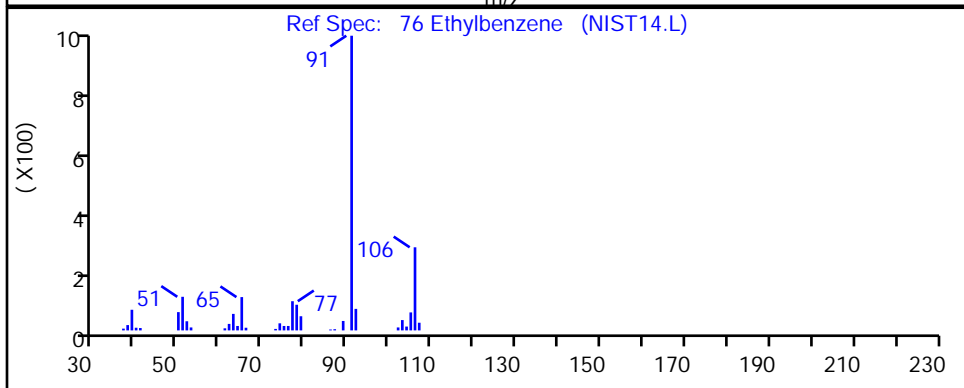
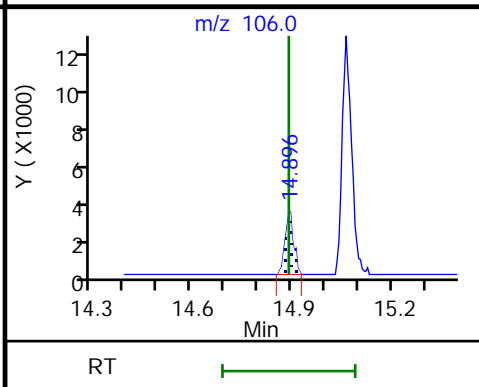
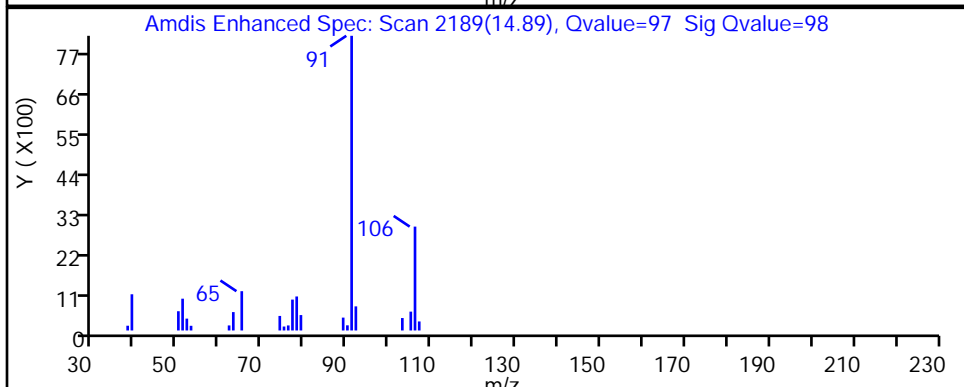
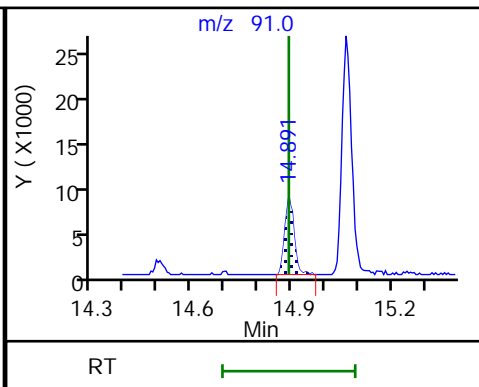
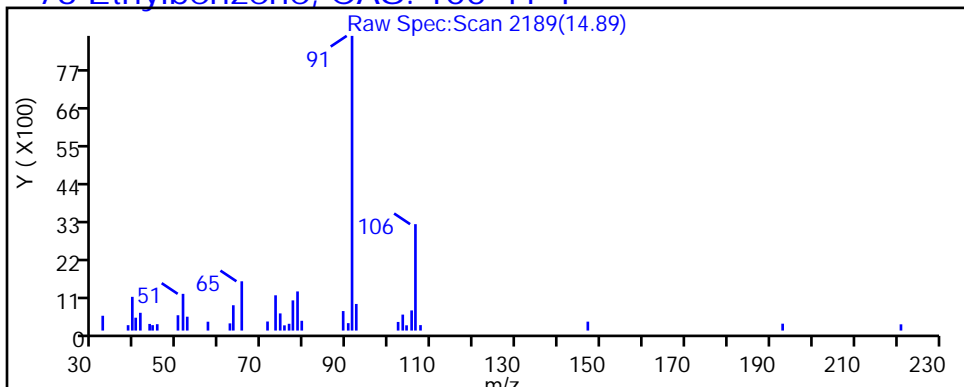
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P112.D

Injection Date: 26-Feb-2019 22:52:30

Instrument ID: MR

Lims ID: 140-14391-A-12

Lab Sample ID: 140-14391-12

Client ID: IA-144-C-26

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

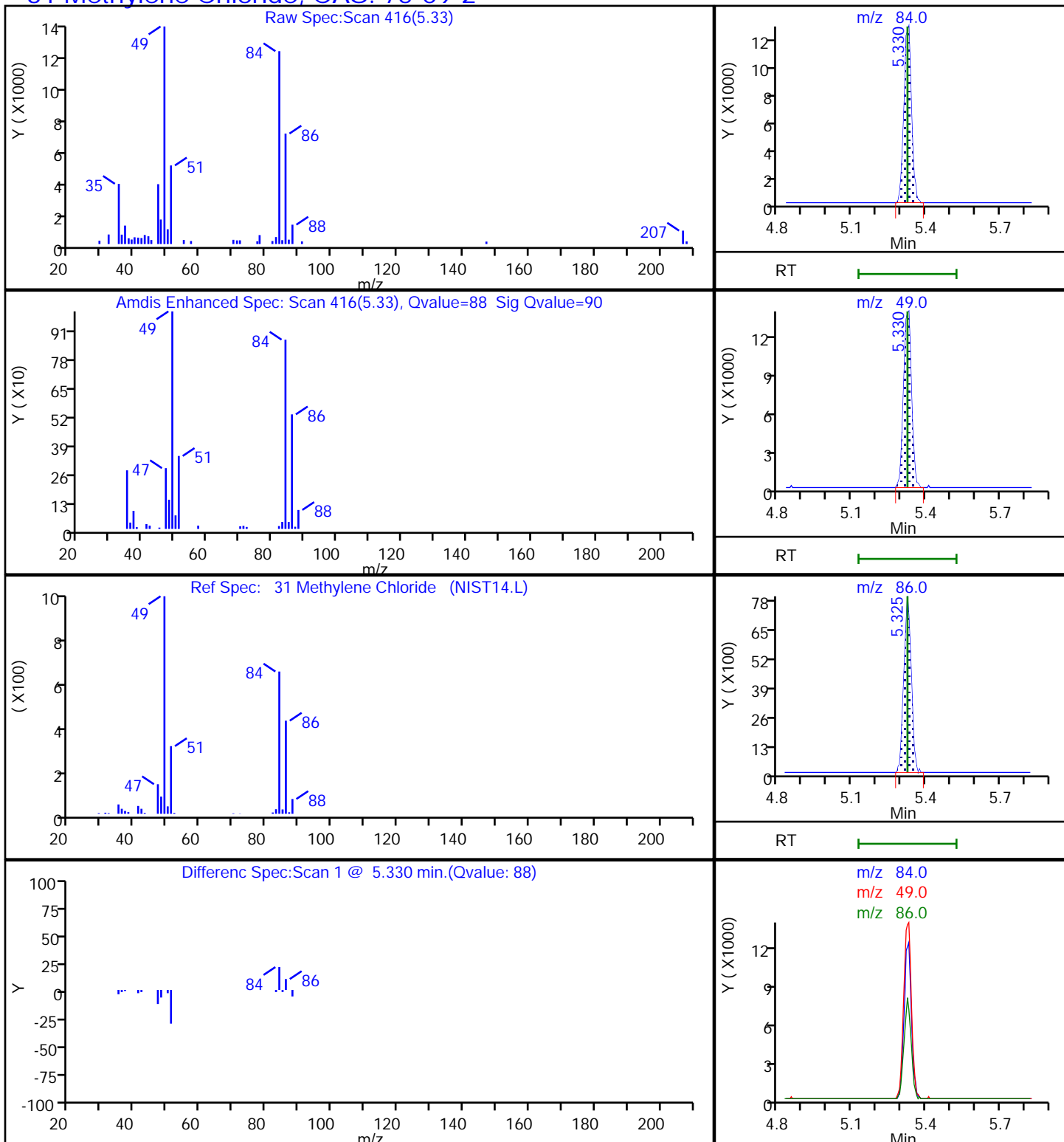
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P112.D

Injection Date: 26-Feb-2019 22:52:30

Instrument ID: MR

Lims ID: 140-14391-A-12

Lab Sample ID: 140-14391-12

Client ID: IA-144-C-26

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

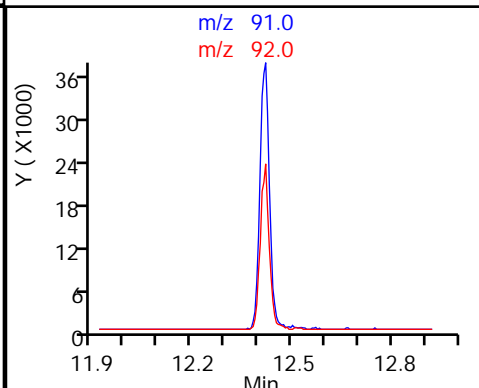
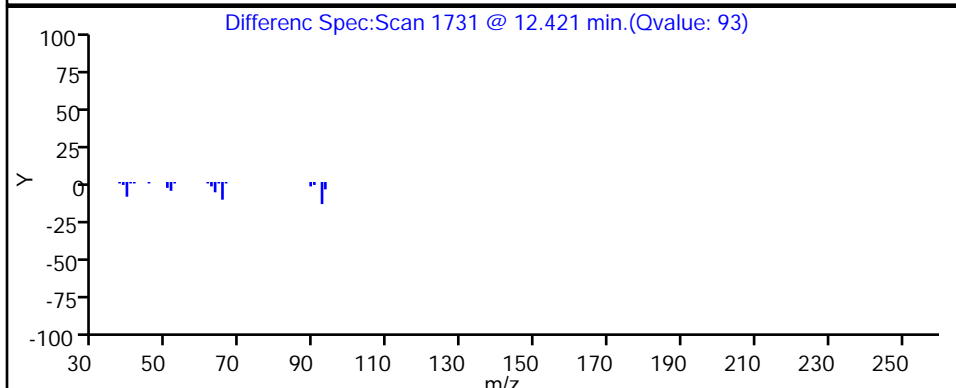
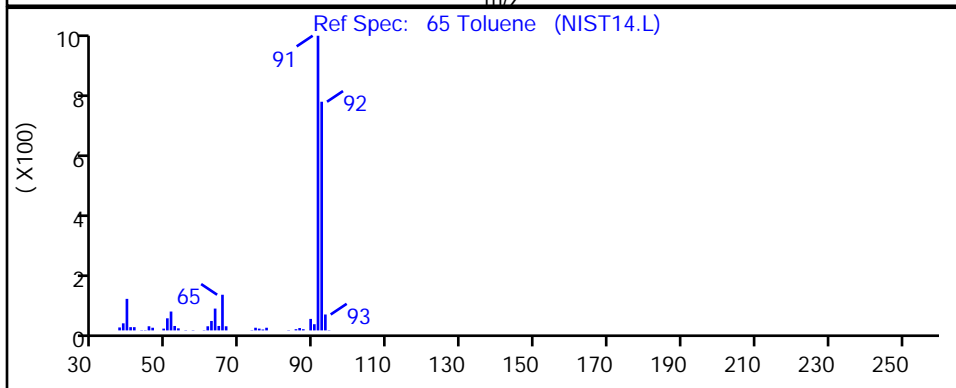
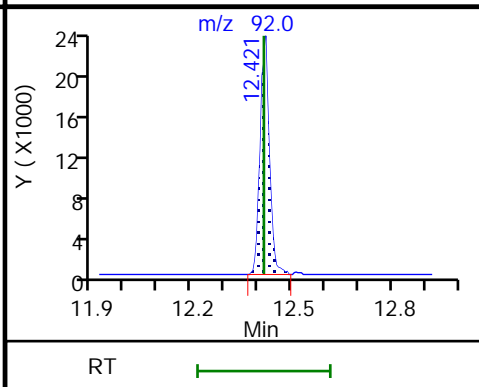
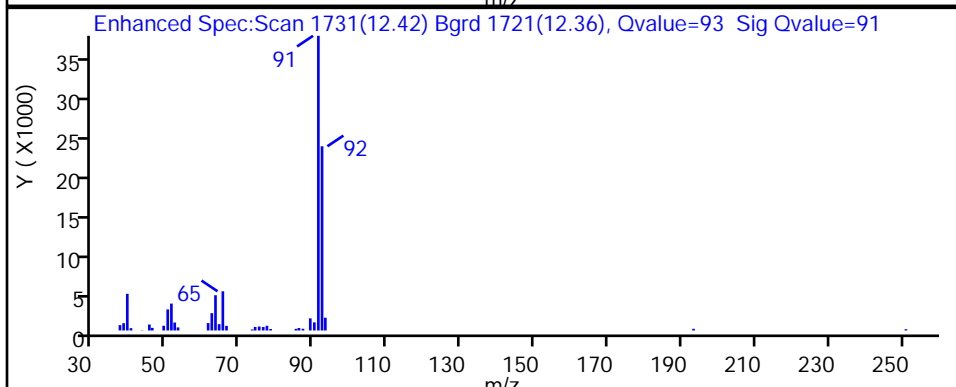
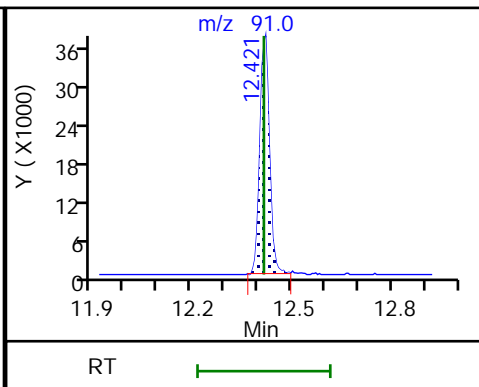
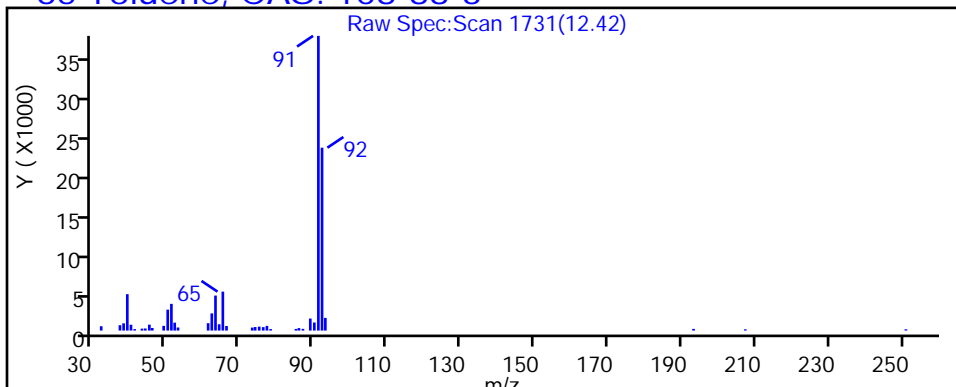
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P112.D

Injection Date: 26-Feb-2019 22:52:30

Instrument ID: MR

Lims ID: 140-14391-A-12

Lab Sample ID: 140-14391-12

Client ID: IA-144-C-26

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

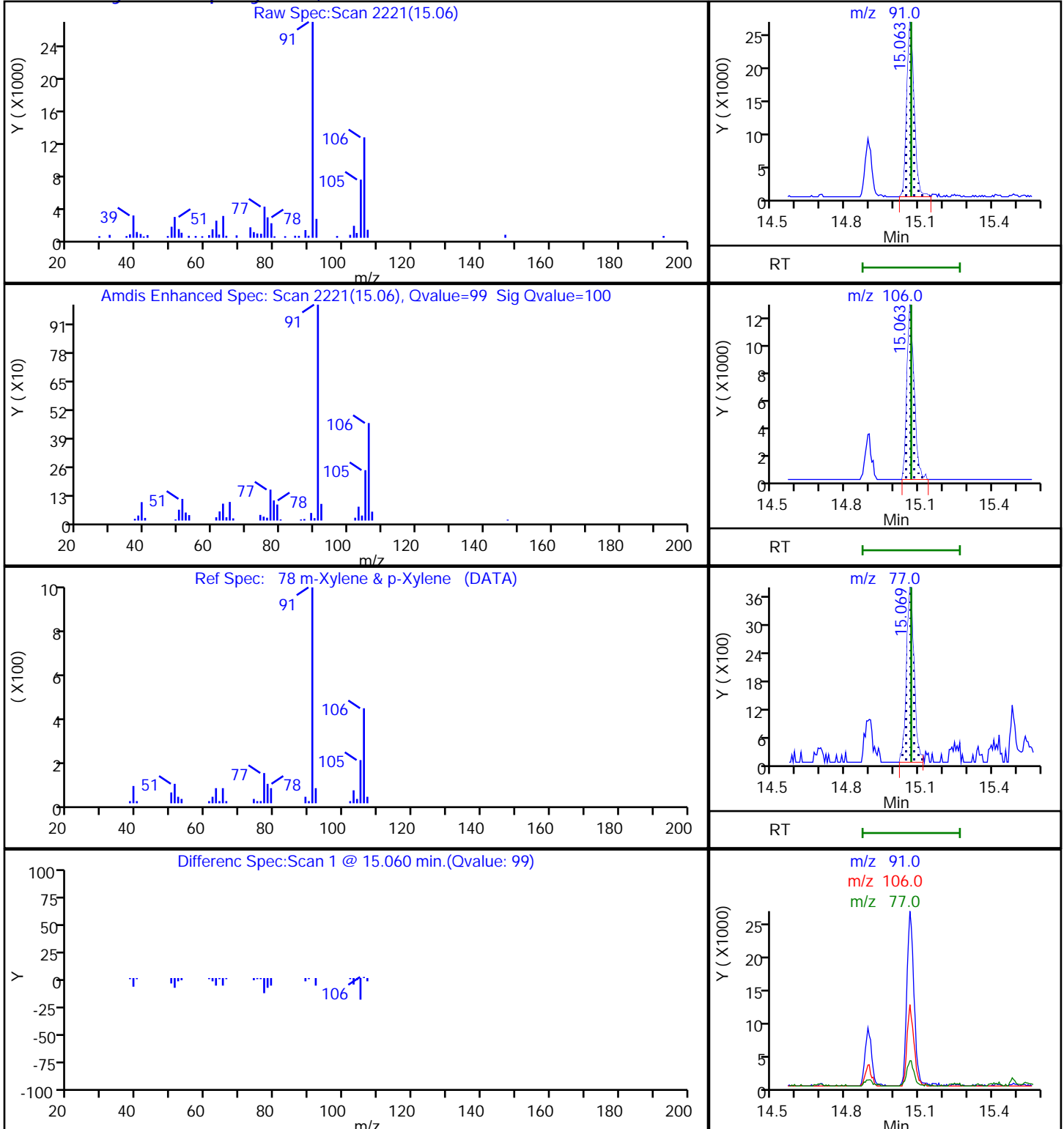
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P112.D

Injection Date: 26-Feb-2019 22:52:30

Instrument ID: MR

Lims ID: 140-14391-A-12

Lab Sample ID: 140-14391-12

Client ID: IA-144-C-26

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

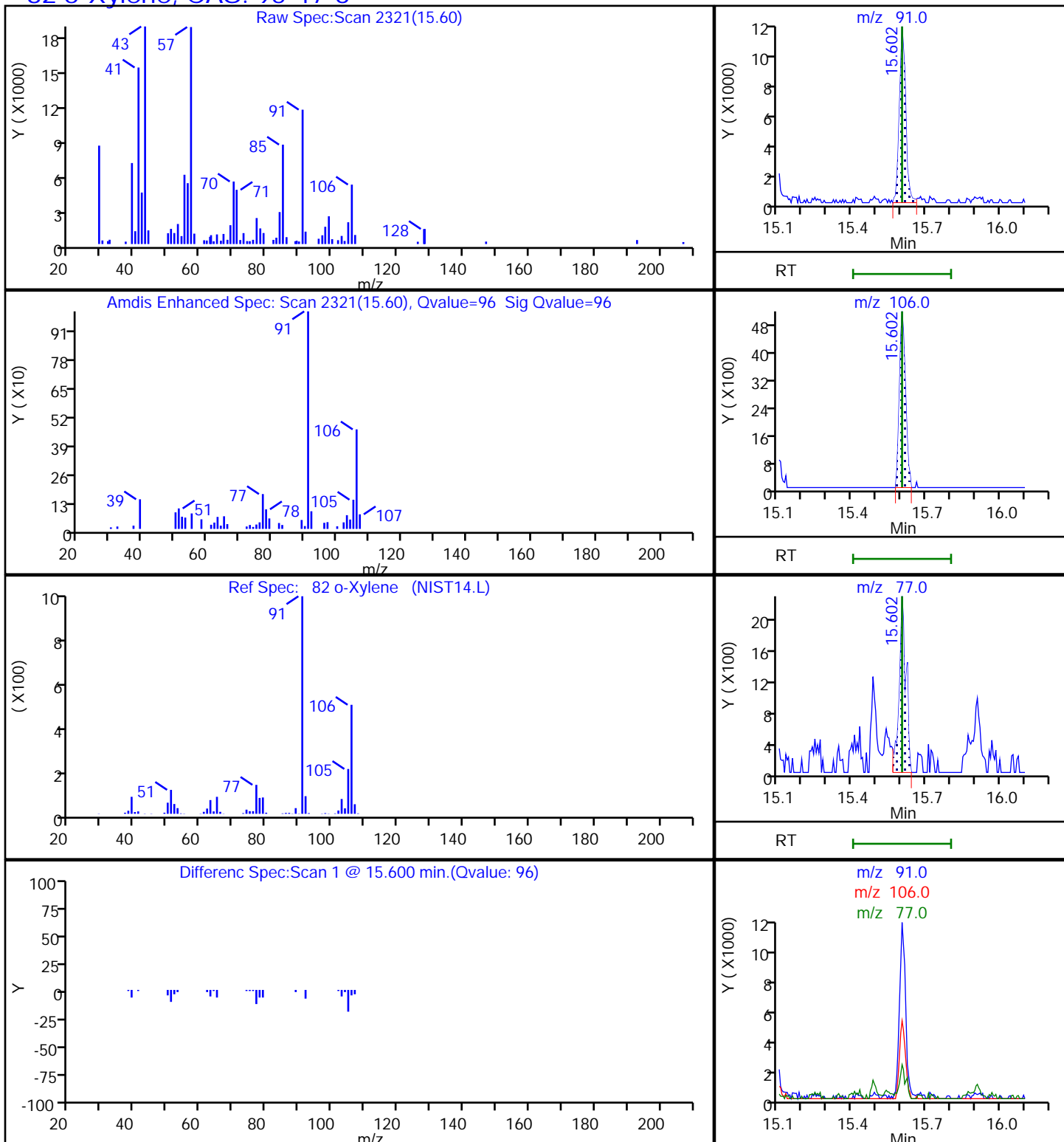
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-141-C-26 Lab Sample ID: 140-14391-13
 Matrix: Air Lab File ID: RB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:24
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 23:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.1	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	8.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.95		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-141-C-26 Lab Sample ID: 140-14391-13
 Matrix: Air Lab File ID: RB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:24
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 23:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.59	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	7.4	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.73	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	32		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P113.D
 Lims ID: 140-14391-A-13
 Client ID: IA-141-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 23:41:30 ALS Bottle#: 13 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-017
 Misc. Info.: 140-14391-a-13
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:59:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.384	-0.005	78	200446	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1187004	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.503	14.502	0.001	91	1030803	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.223	16.228	-0.005	89	881039	4.02	
6 Chlorodifluoromethane	51	3.486	3.513	-0.027	89	49890	0.4195	
8 Dichlorodifluoromethane	85	3.556	3.564	-0.005	99	12218	0.0560	
31 Methylene Chloride	84	5.319	5.325	-0.006	90	24913	0.3716	
47 Benzene	78	8.895	8.889	0.005	93	7184	0.0371	
65 Toluene	91	12.416	12.416	0.000	92	423569	1.71	
76 Ethylbenzene	91	14.891	14.891	0.000	98	11978	0.0336	
78 m-Xylene & p-Xylene	91	15.063	15.069	-0.006	99	42347	0.1450	
82 o-Xylene	91	15.603	15.602	0.001	95	14311	0.0466	
S 121 Xylenes, Total	100				0		0.1916	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P113.D

Injection Date: 26-Feb-2019 23:41:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-13

Lab Sample ID: 140-14391-13

Worklist Smp#: 17

Client ID: IA-141-C-26

Purge Vol: 500.000 mL

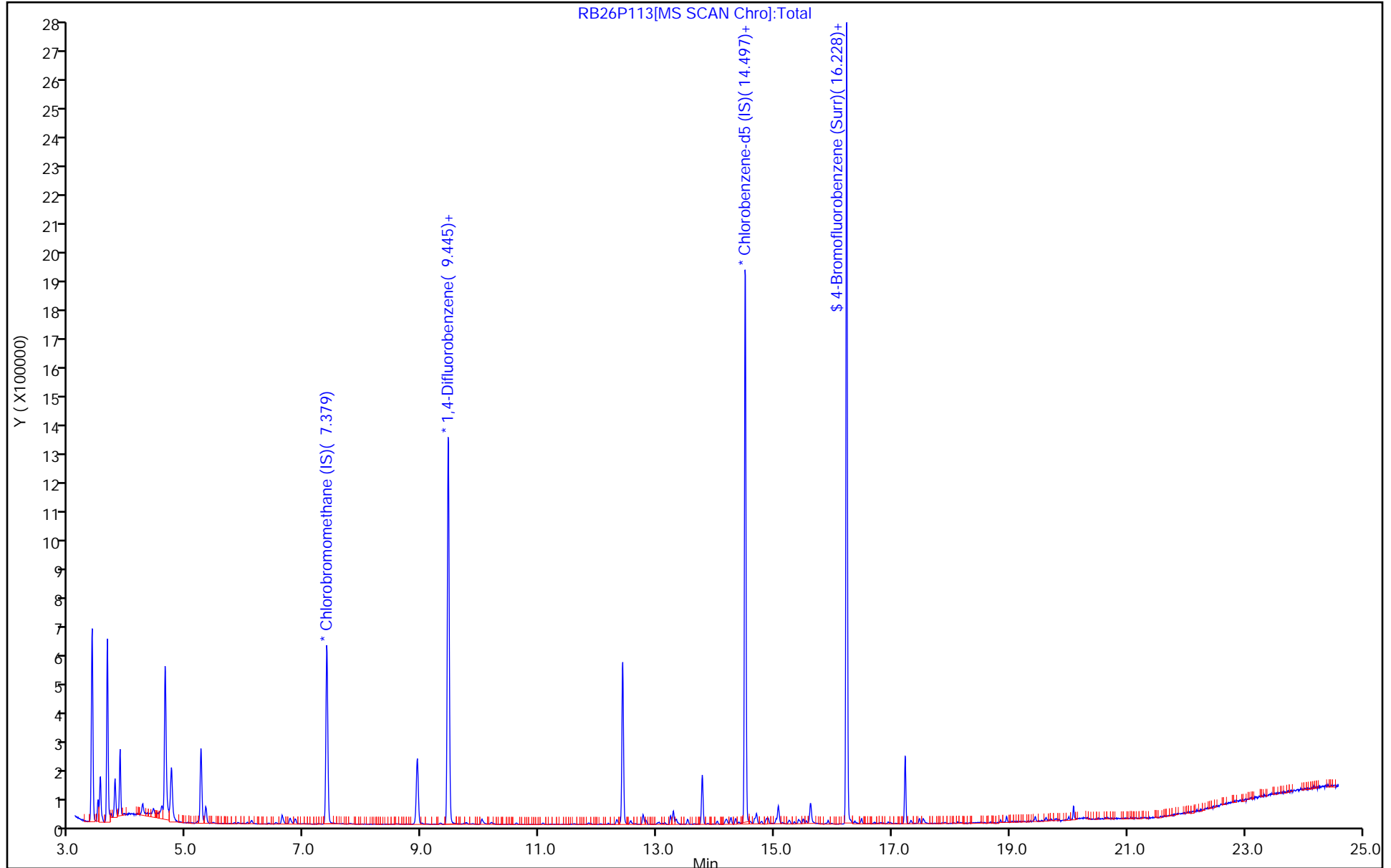
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P113.D
 Lims ID: 140-14391-A-13
 Client ID: IA-141-C-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 23:41:30 ALS Bottle#: 13 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-017
 Misc. Info.: 140-14391-a-13
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:59:39

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.02	100.48

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P113.D

Injection Date: 26-Feb-2019 23:41:30

Instrument ID: MR

Lims ID: 140-14391-A-13

Lab Sample ID: 140-14391-13

Client ID: IA-141-C-26

Operator ID:

ALS Bottle#: 13

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

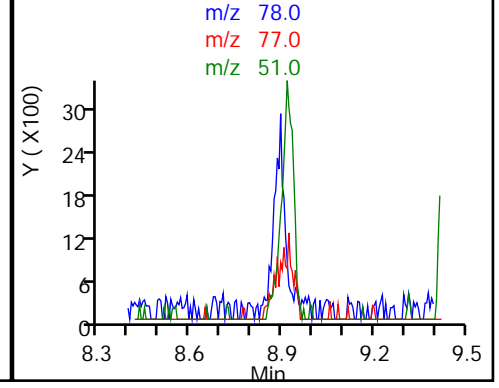
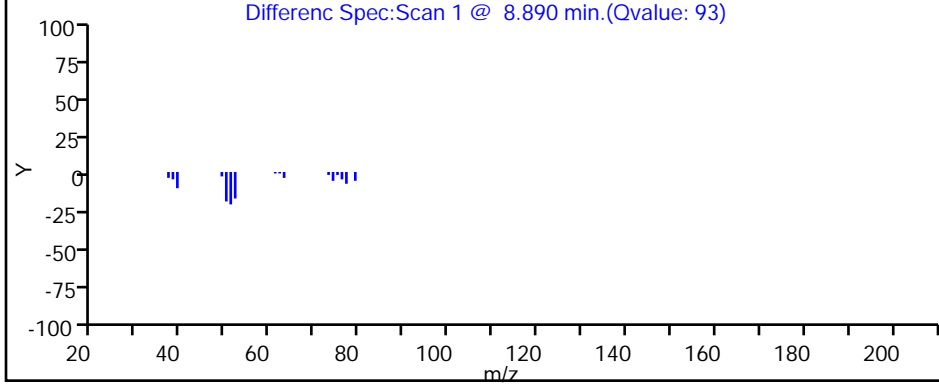
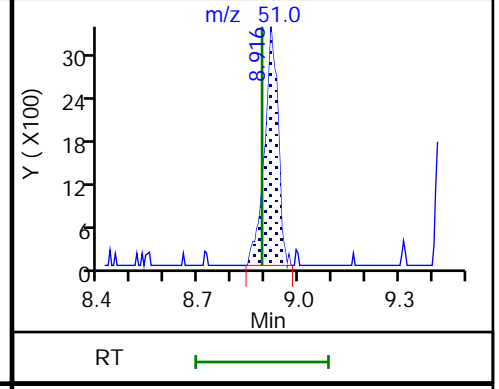
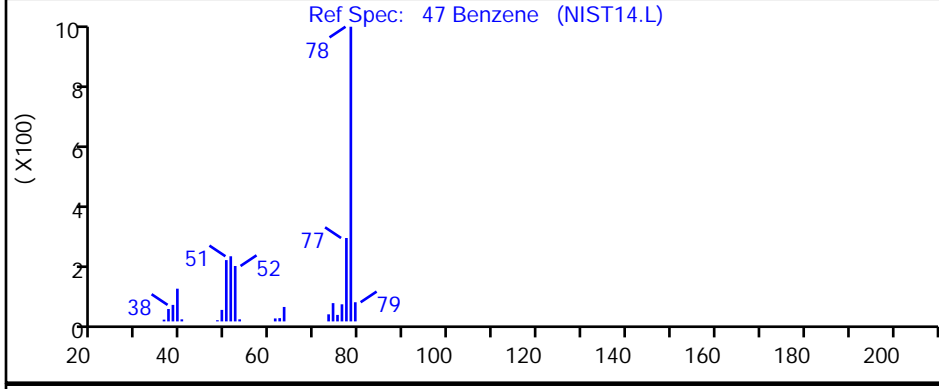
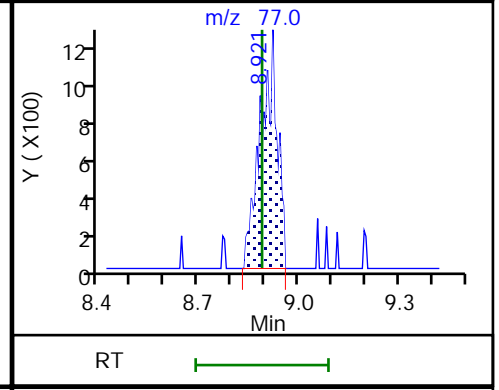
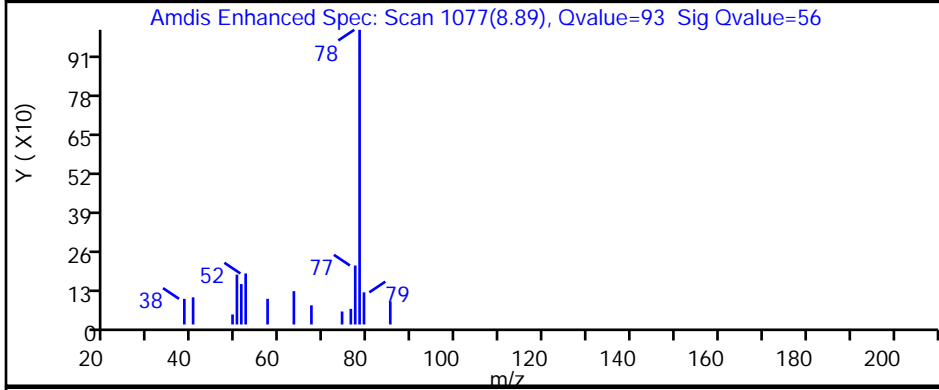
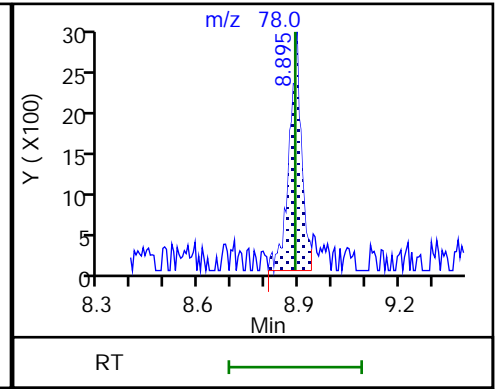
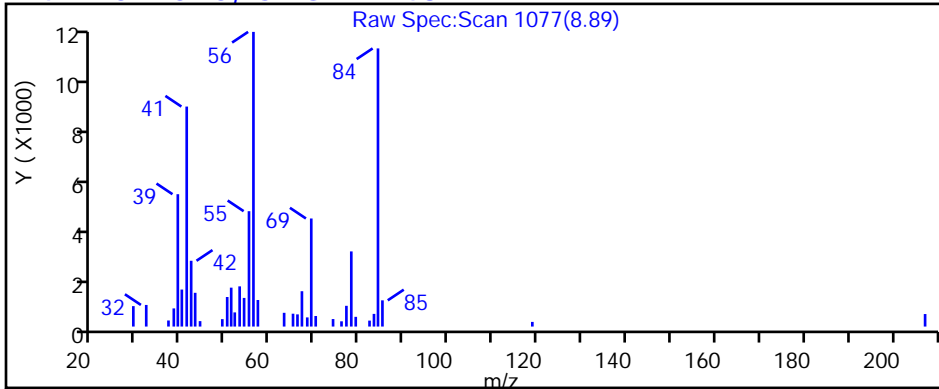
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P113.D

Injection Date: 26-Feb-2019 23:41:30

Instrument ID: MR

Lims ID: 140-14391-A-13

Lab Sample ID: 140-14391-13

Client ID: IA-141-C-26

Operator ID:

ALS Bottle#: 13

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

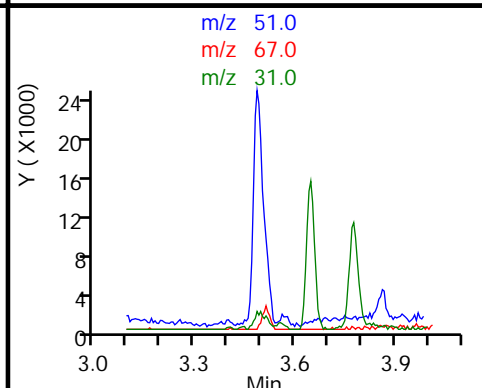
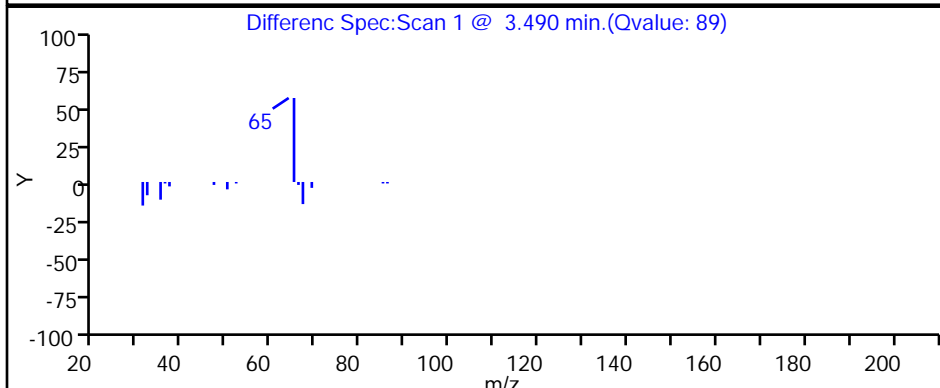
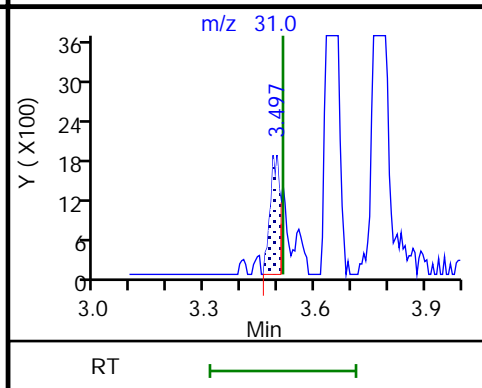
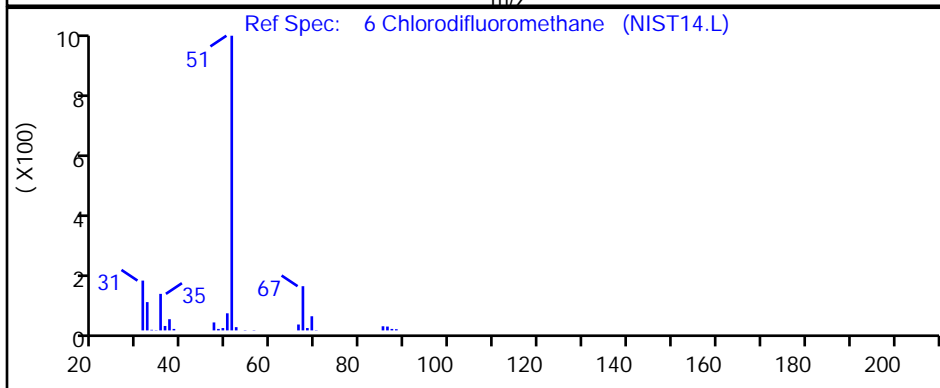
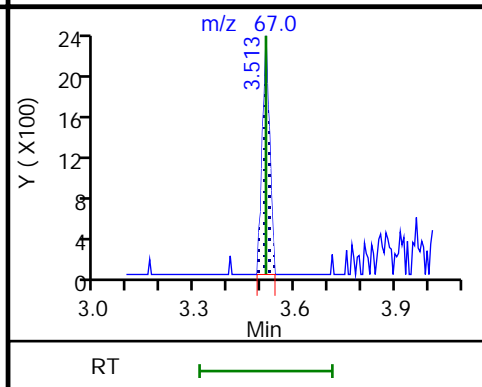
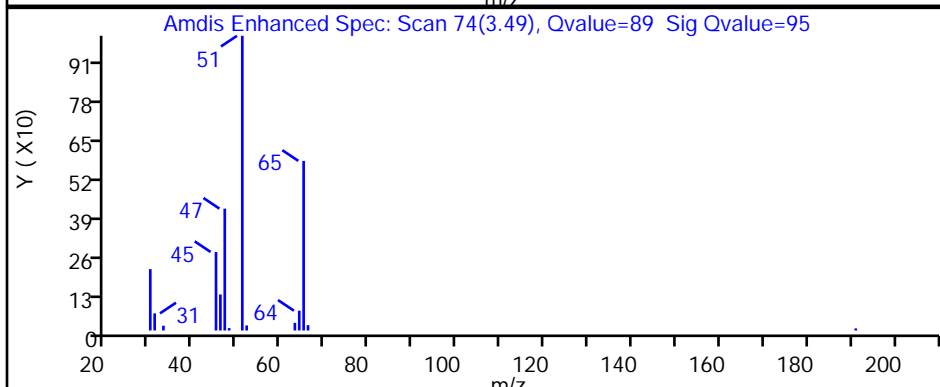
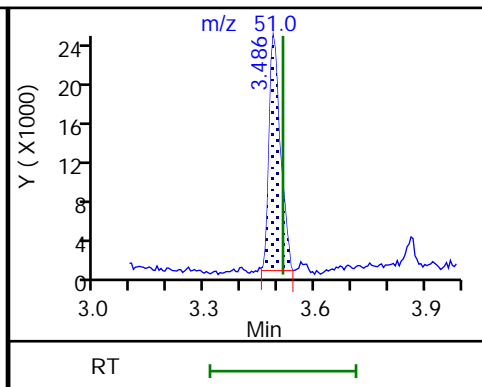
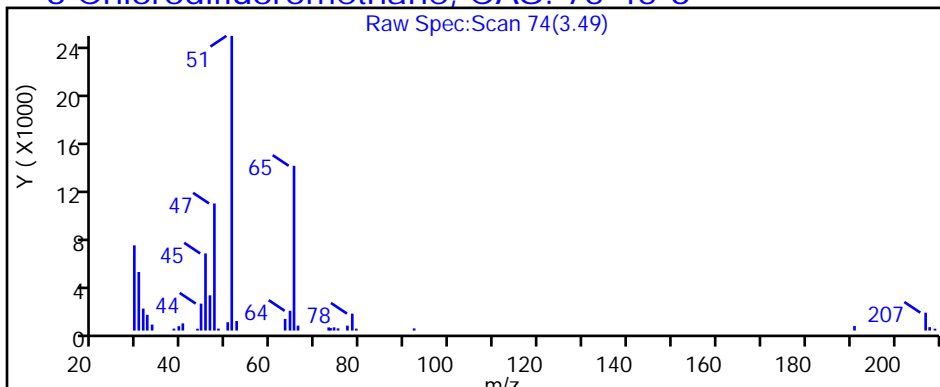
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P113.D

Injection Date: 26-Feb-2019 23:41:30

Instrument ID: MR

Lims ID: 140-14391-A-13

Lab Sample ID: 140-14391-13

Client ID: IA-141-C-26

Operator ID:

ALS Bottle#: 13

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

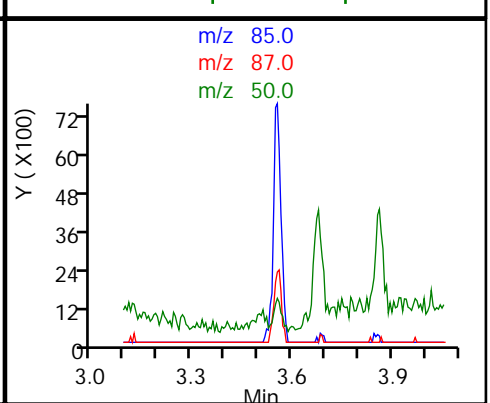
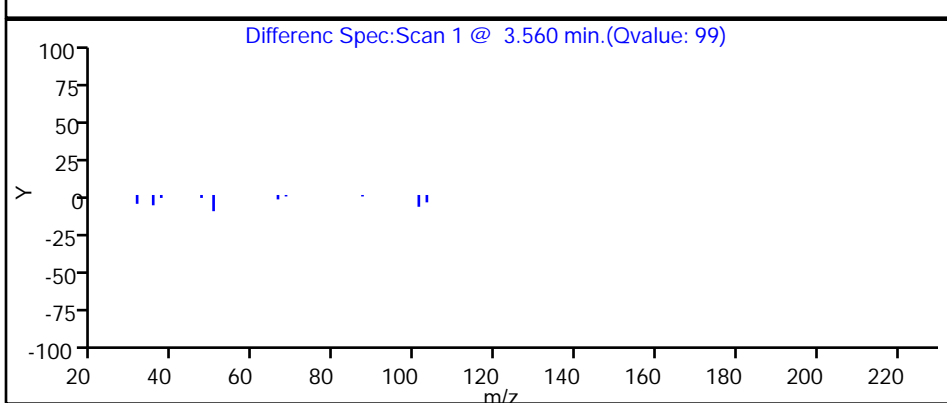
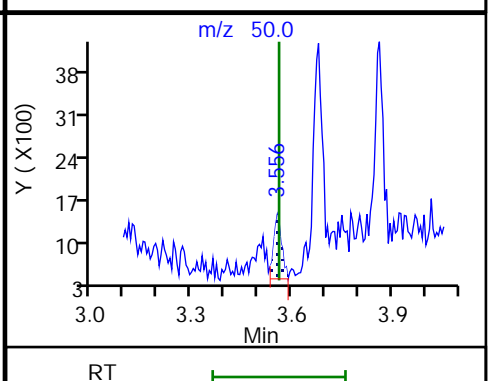
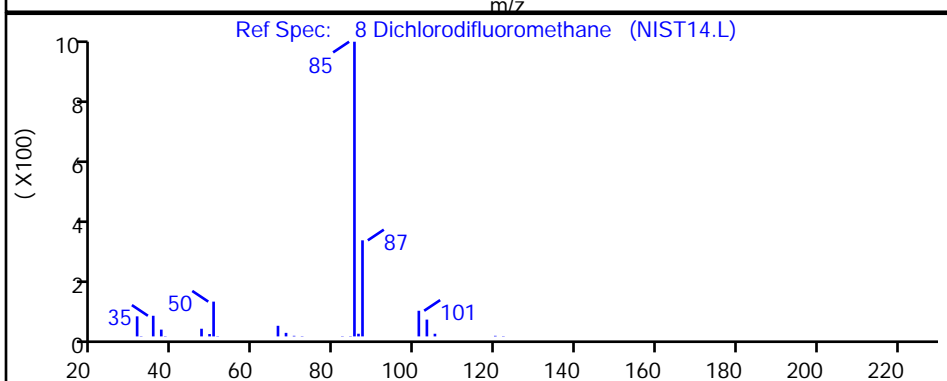
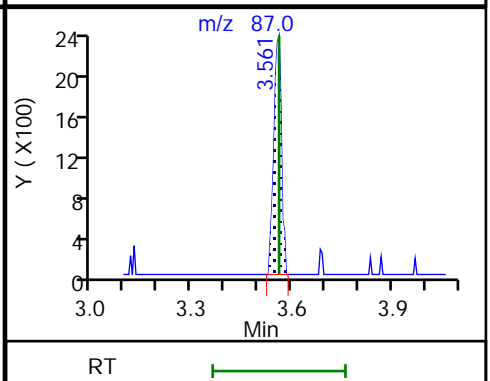
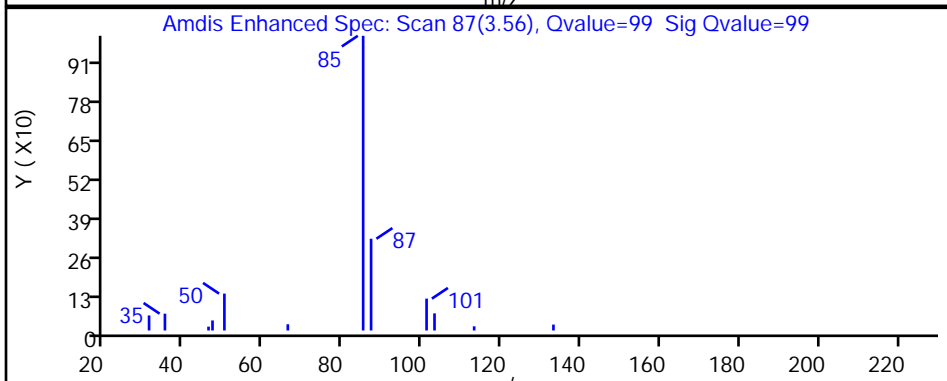
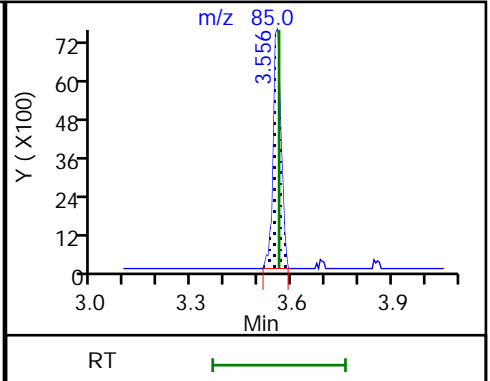
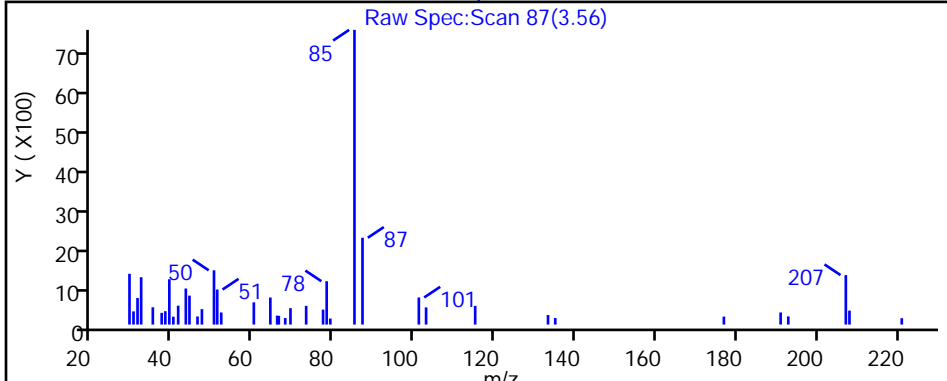
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P113.D

Injection Date: 26-Feb-2019 23:41:30

Instrument ID: MR

Lims ID: 140-14391-A-13

Lab Sample ID: 140-14391-13

Client ID: IA-141-C-26

Operator ID:

ALS Bottle#: 13

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

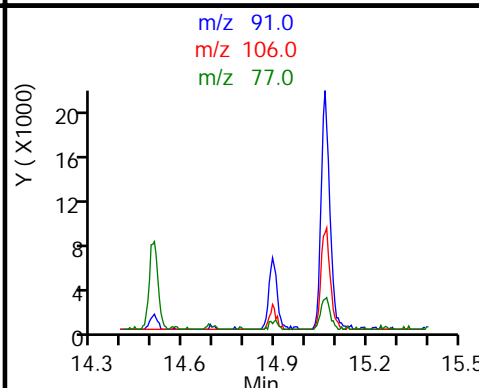
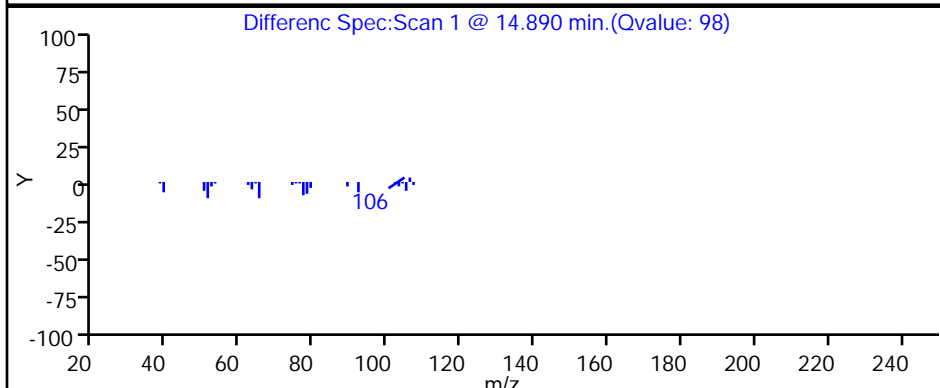
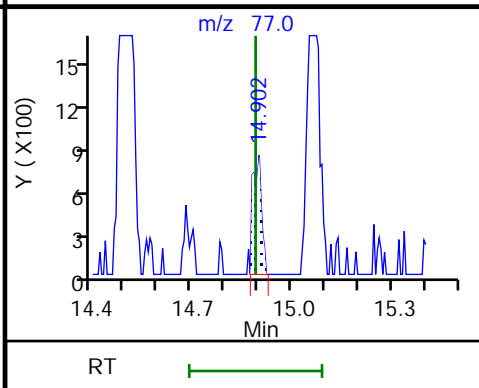
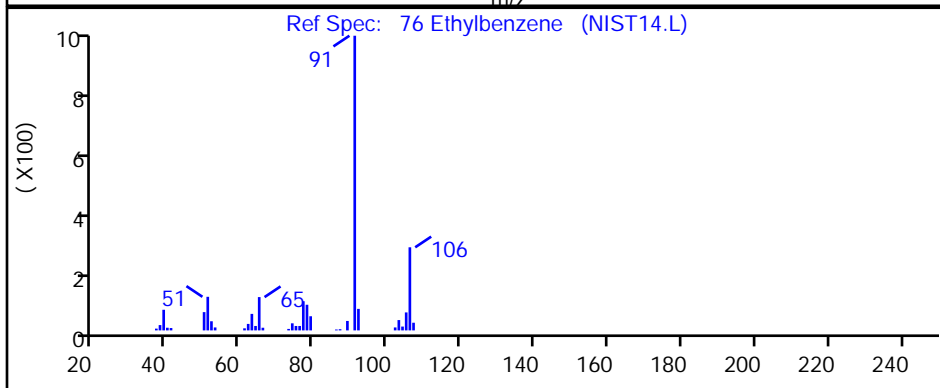
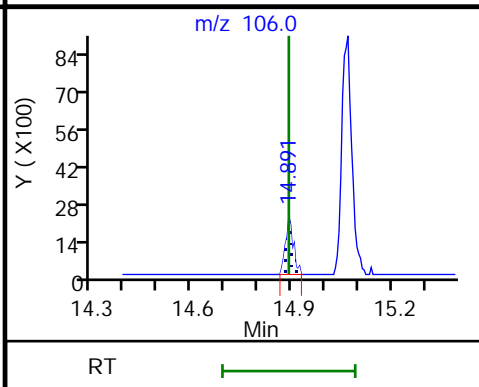
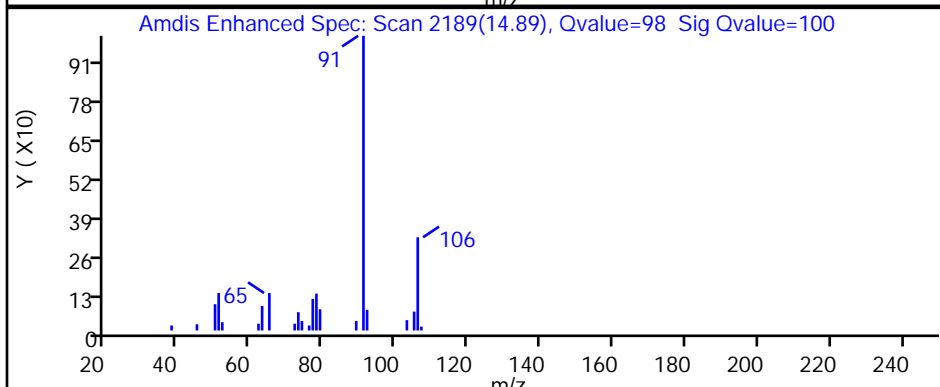
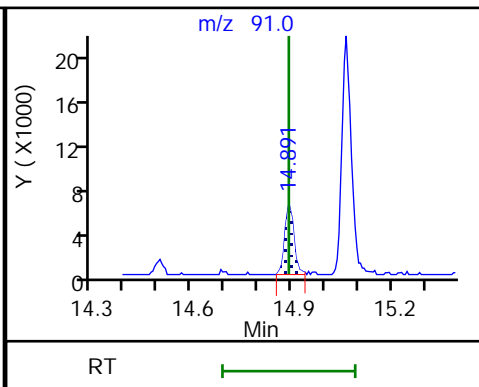
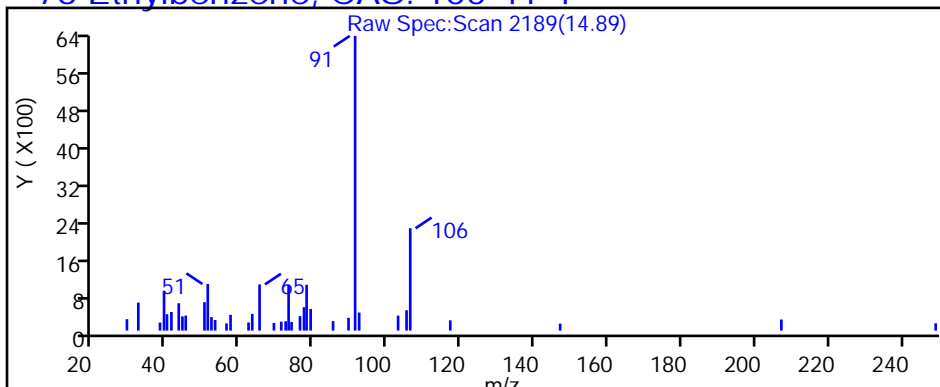
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P113.D

Injection Date: 26-Feb-2019 23:41:30

Instrument ID: MR

Lims ID: 140-14391-A-13

Lab Sample ID: 140-14391-13

Client ID: IA-141-C-26

Operator ID:

ALS Bottle#: 13

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

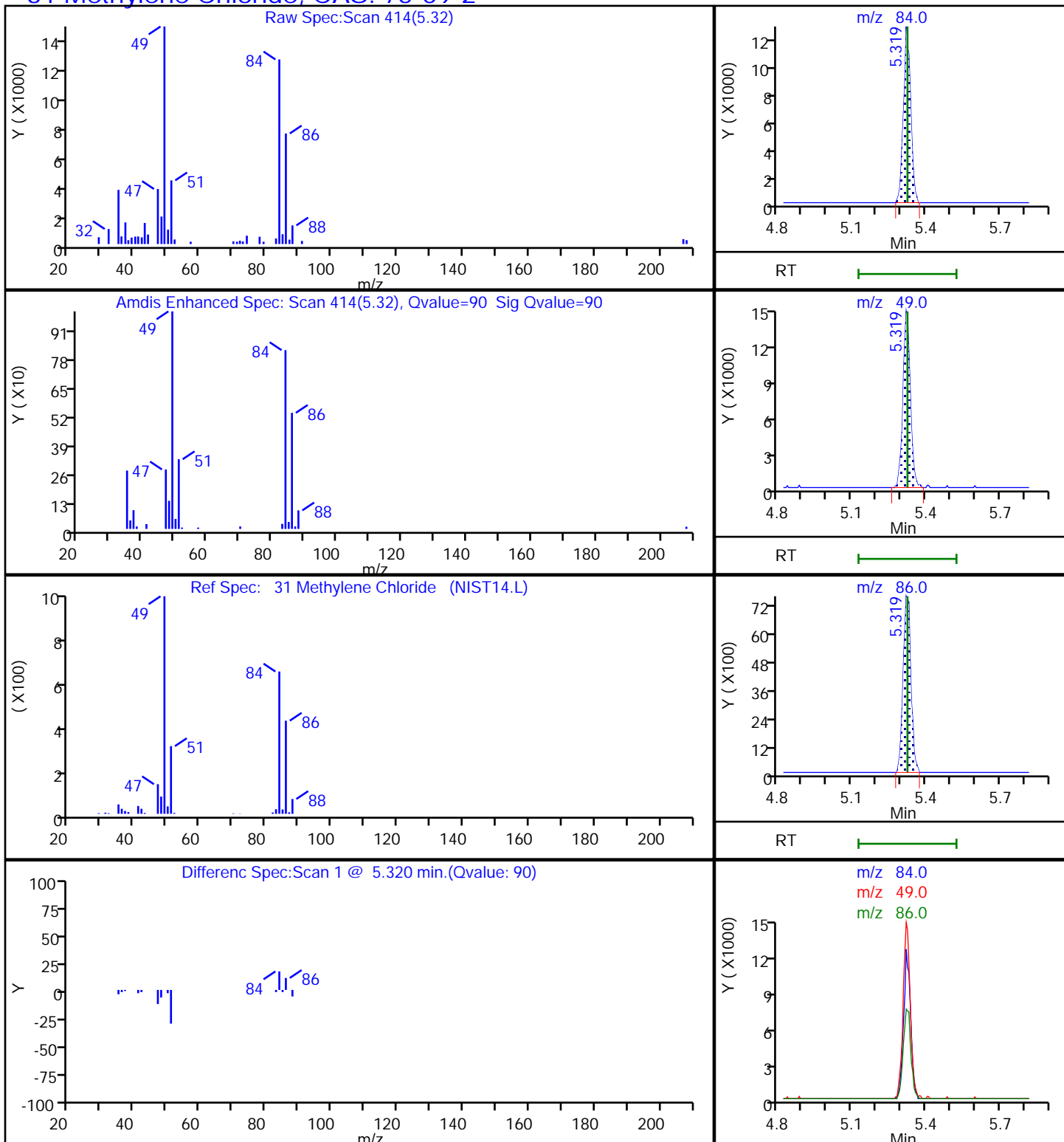
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P113.D

Injection Date: 26-Feb-2019 23:41:30

Instrument ID: MR

Lims ID: 140-14391-A-13

Lab Sample ID: 140-14391-13

Client ID: IA-141-C-26

Operator ID:

ALS Bottle#: 13

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

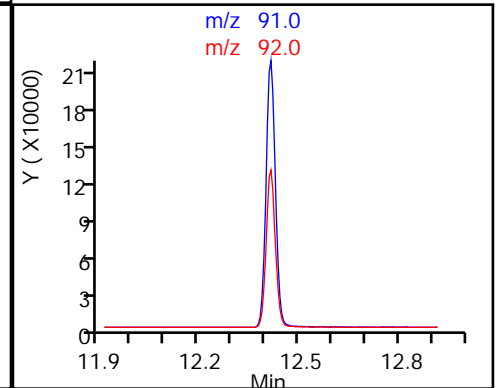
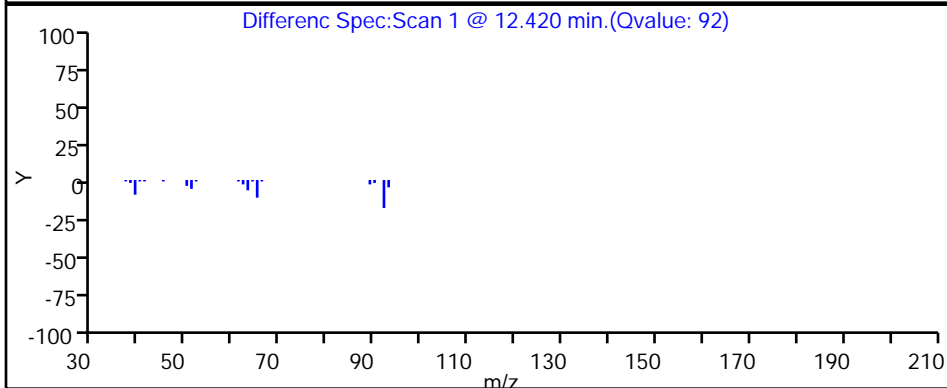
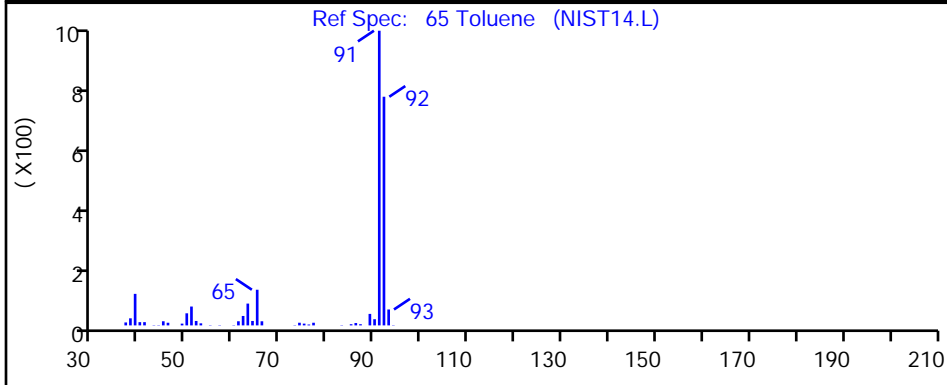
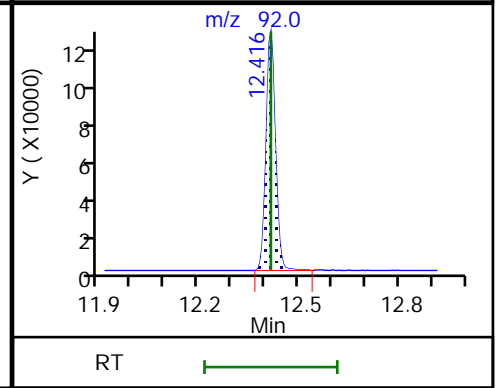
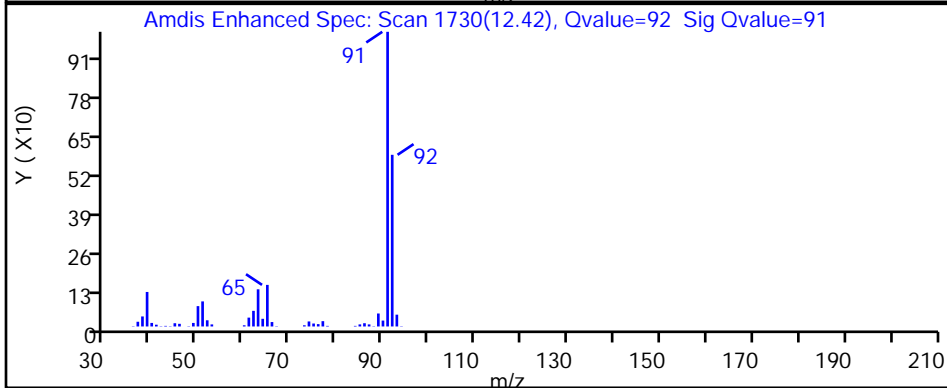
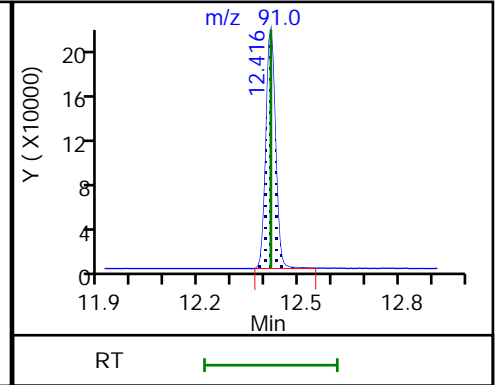
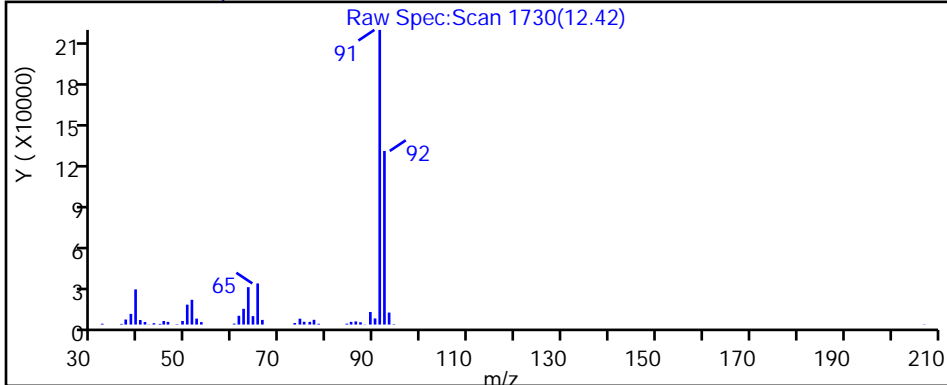
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P113.D

Injection Date: 26-Feb-2019 23:41:30

Instrument ID: MR

Lims ID: 140-14391-A-13

Lab Sample ID: 140-14391-13

Client ID: IA-141-C-26

Operator ID:

ALS Bottle#: 13

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

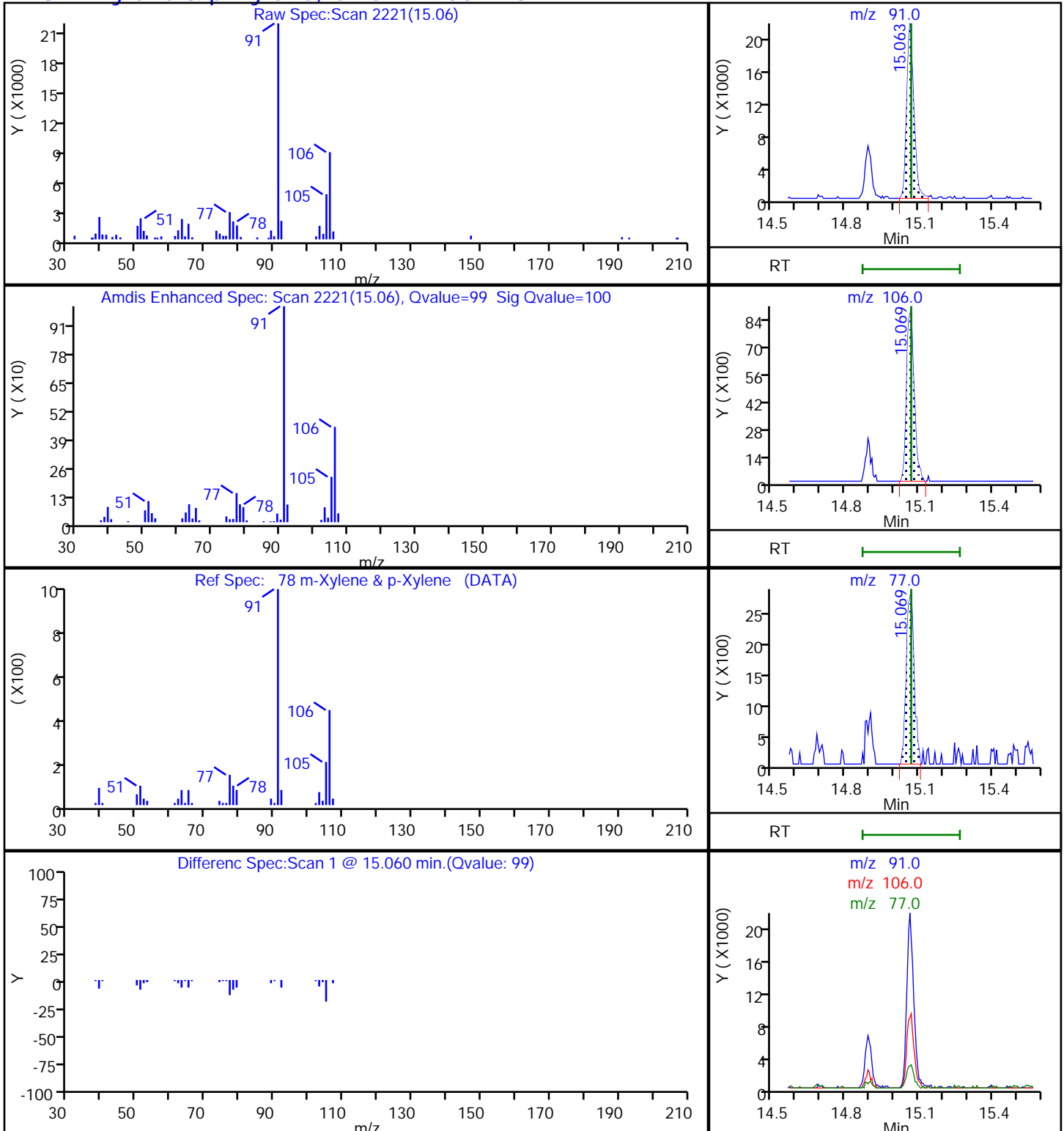
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P113.D

Injection Date: 26-Feb-2019 23:41:30

Instrument ID: MR

Lims ID: 140-14391-A-13

Lab Sample ID: 140-14391-13

Client ID: IA-141-C-26

Operator ID:

ALS Bottle#: 13

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

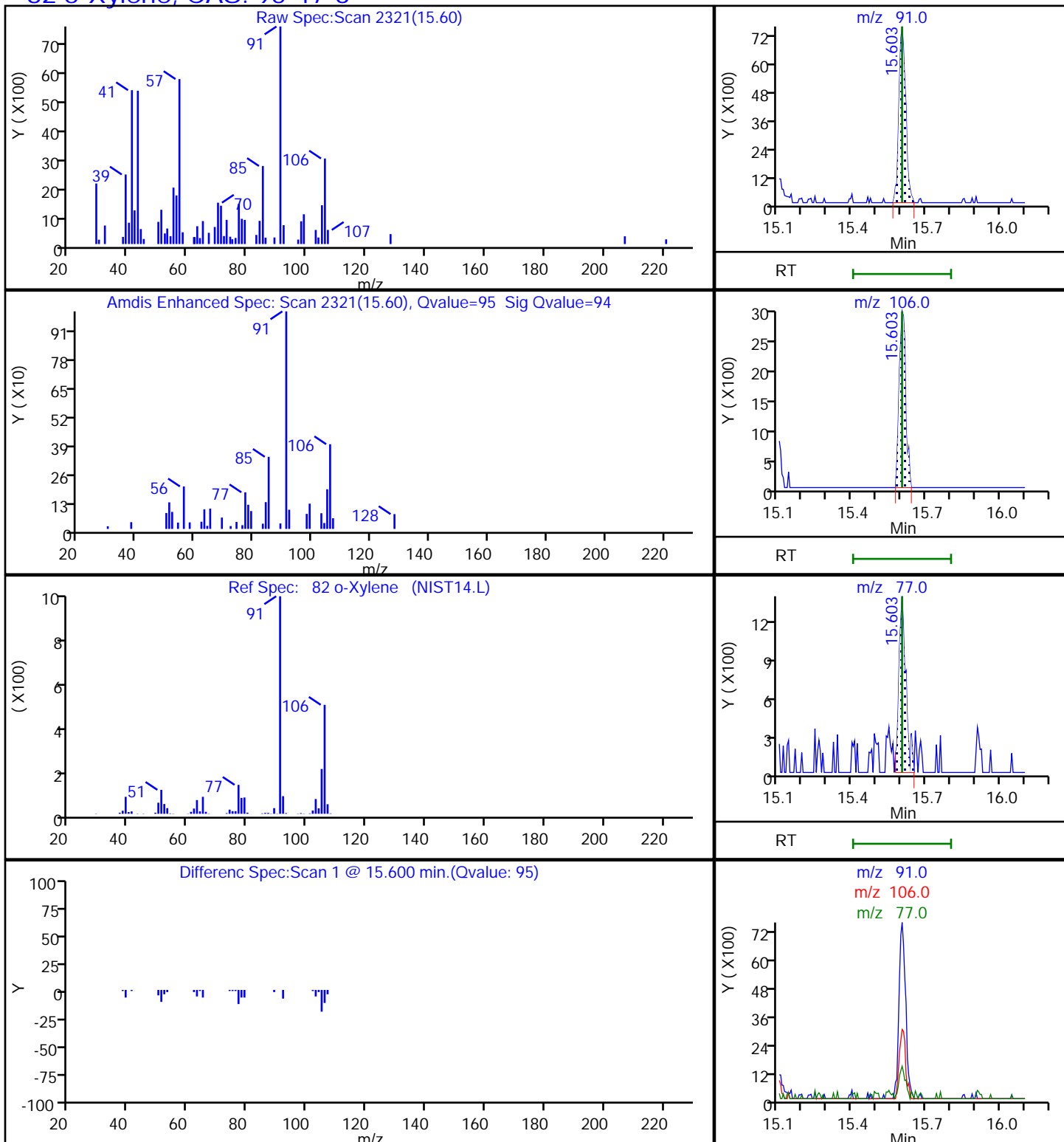
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-088-C-26 Lab Sample ID: 140-14391-14
 Matrix: Air Lab File ID: RB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:28
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.55	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-088-C-26 Lab Sample ID: 140-14391-14
 Matrix: Air Lab File ID: RB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:28
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P114.D
 Lims ID: 140-14391-A-14
 Client ID: IA-088-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 00:30:30 ALS Bottle#: 14 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-018
 Misc. Info.: 140-14391-a-14
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 17:00:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.384	-0.005	71	205122	4.00	
* 2 1,4-Difluorobenzene	114	9.444	9.450	-0.006	95	1197107	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.497	14.502	-0.005	91	1049569	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.223	16.228	-0.005	89	895251	4.01	
6 Chlorodifluoromethane	51	3.513	3.513	0.000	94	10134	0.0833	
8 Dichlorodifluoromethane	85	3.556	3.564	-0.005	99	11472	0.0514	
31 Methylene Chloride	84	5.319	5.325	-0.006	90	15966	0.2327	
47 Benzene	78	8.884	8.889	-0.005	96	6855	0.0351	
65 Toluene	91	12.416	12.416	0.000	92	25828	0.1027	
78 m-Xylene & p-Xylene	91	15.063	15.069	-0.006	97	23889	0.0803	
82 o-Xylene	91	15.602	15.602	0.000	97	9284	0.0297	
S 121 Xylenes, Total	100				0		0.1100	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P114.D

Injection Date: 27-Feb-2019 00:30:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-14

Lab Sample ID: 140-14391-14

Worklist Smp#: 18

Client ID: IA-088-C-26

Purge Vol: 500.000 mL

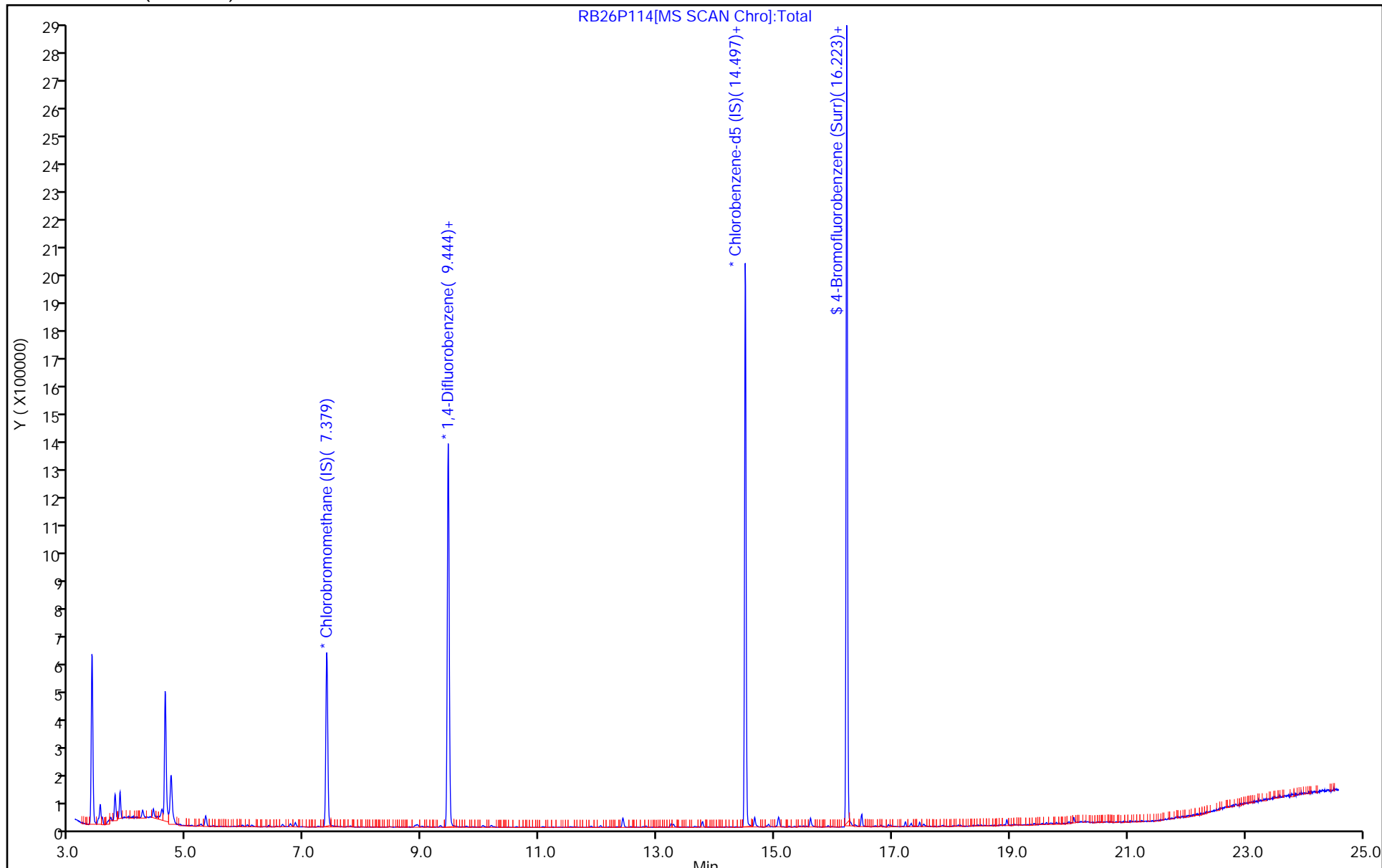
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P114.D
 Lims ID: 140-14391-A-14
 Client ID: IA-088-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 00:30:30 ALS Bottle#: 14 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-018
 Misc. Info.: 140-14391-a-14
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 17:00:07

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.01	100.28

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P114.D

Injection Date: 27-Feb-2019 00:30:30

Instrument ID: MR

Lims ID: 140-14391-A-14

Lab Sample ID: 140-14391-14

Client ID: IA-088-C-26

Operator ID:

ALS Bottle#: 14

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

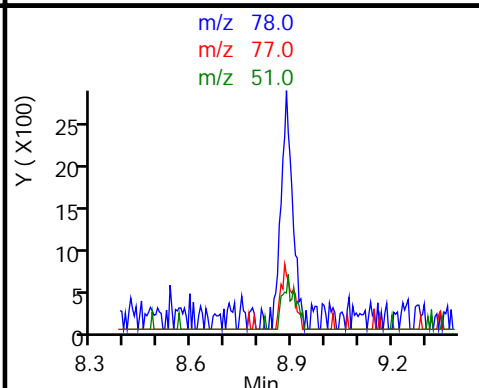
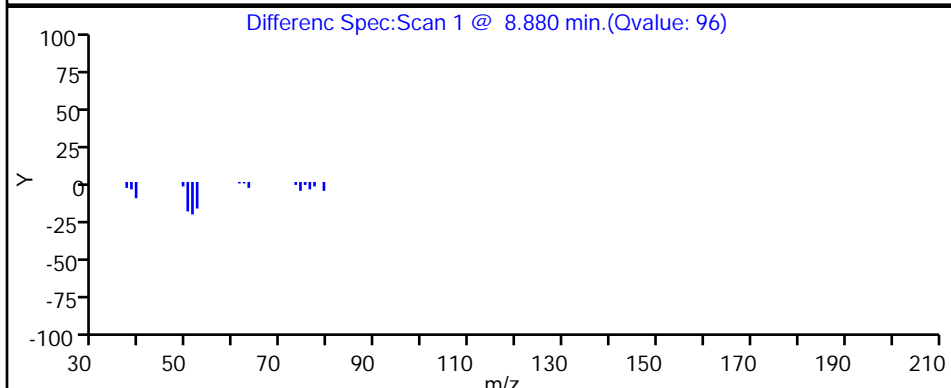
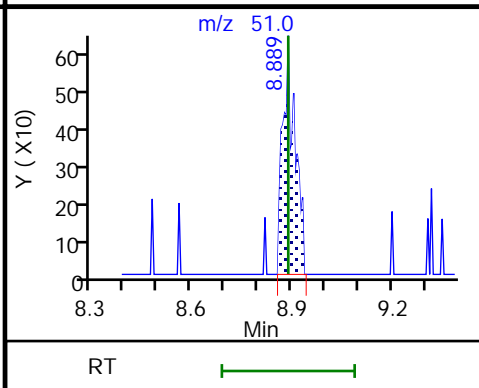
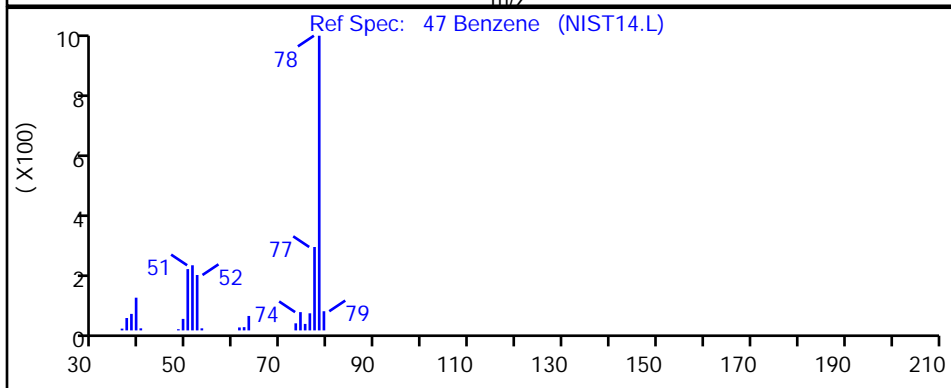
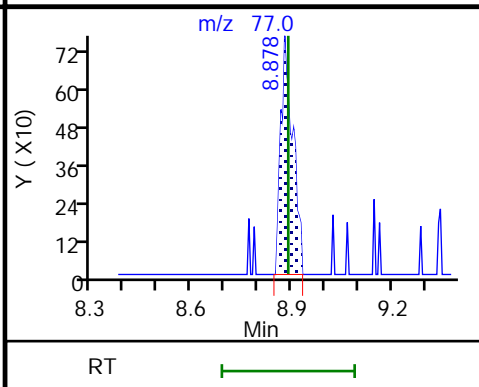
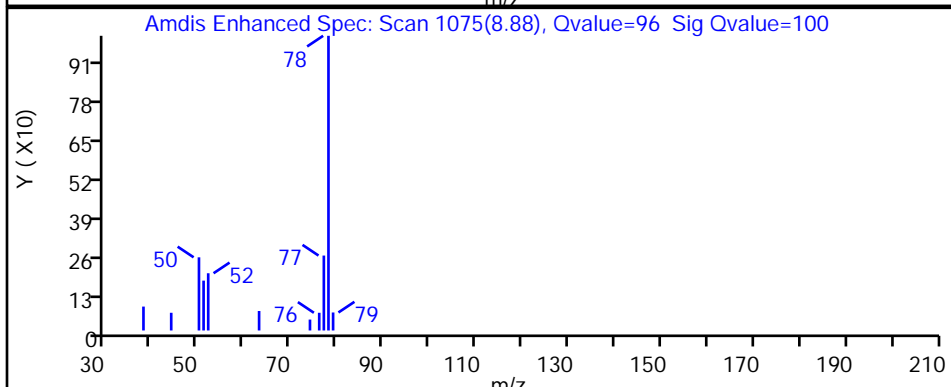
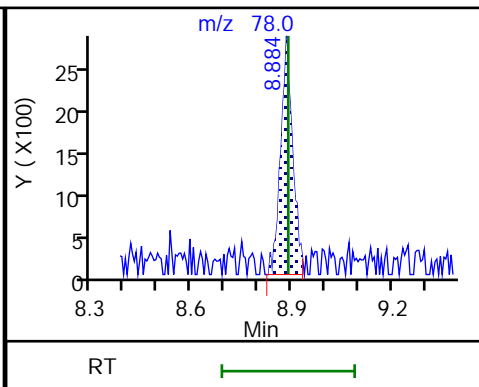
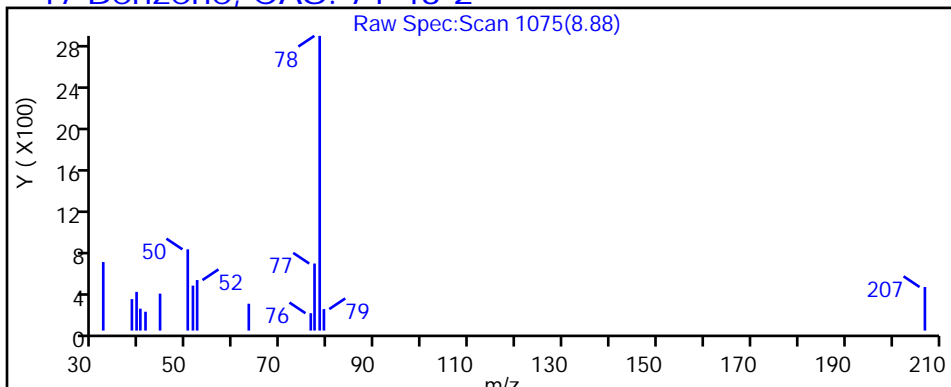
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P114.D

Injection Date: 27-Feb-2019 00:30:30

Instrument ID: MR

Lims ID: 140-14391-A-14

Lab Sample ID: 140-14391-14

Client ID: IA-088-C-26

Operator ID:

ALS Bottle#: 14

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

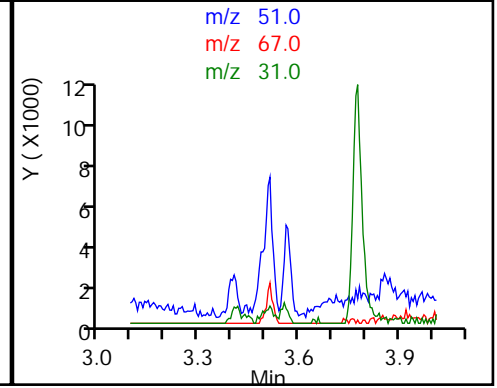
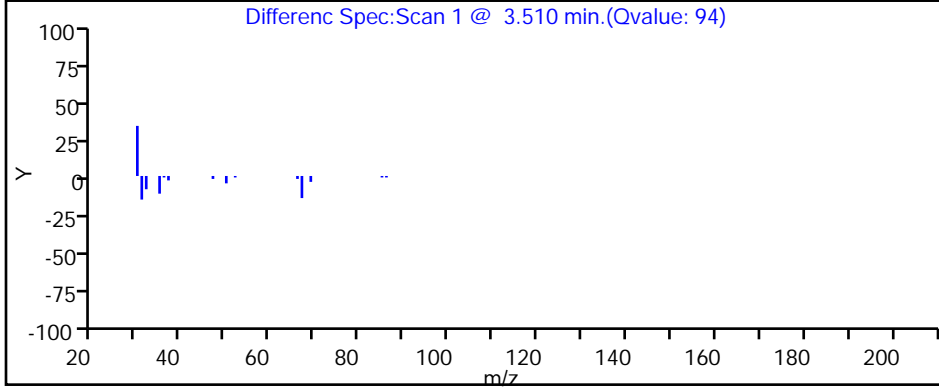
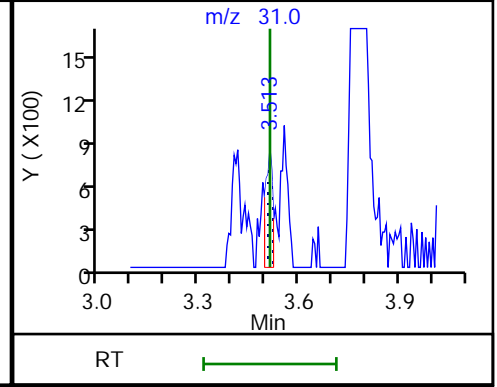
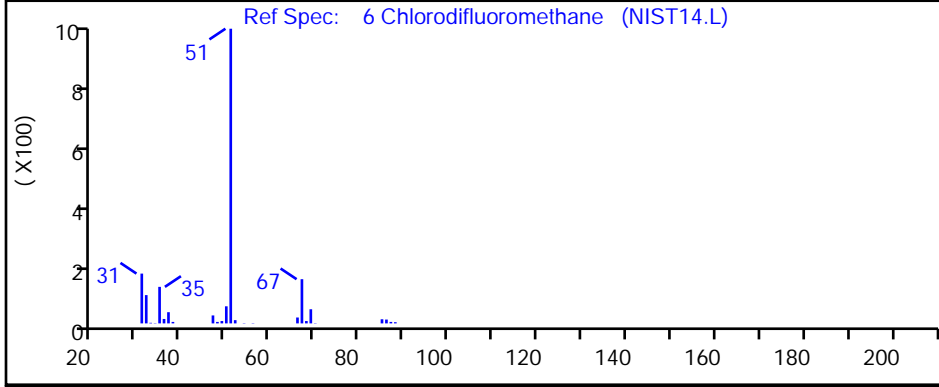
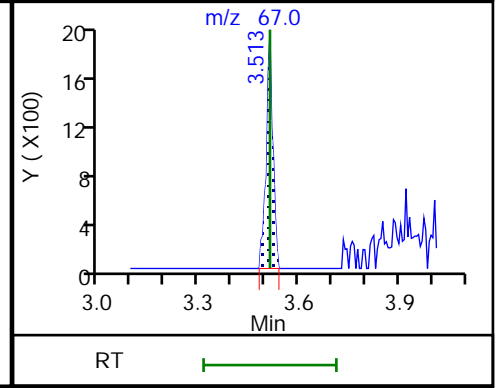
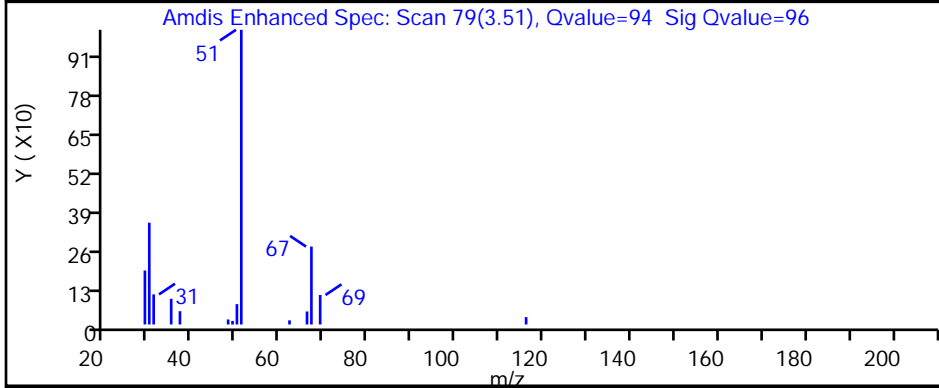
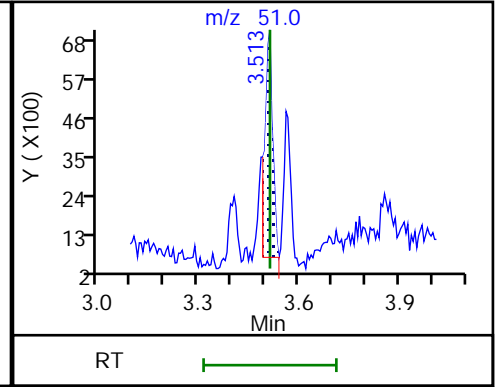
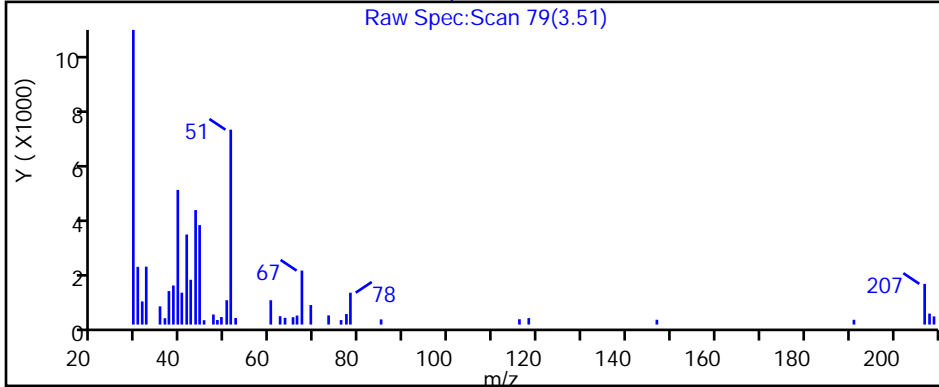
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P114.D

Injection Date: 27-Feb-2019 00:30:30

Instrument ID: MR

Lims ID: 140-14391-A-14

Lab Sample ID: 140-14391-14

Client ID: IA-088-C-26

Operator ID:

ALS Bottle#: 14

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

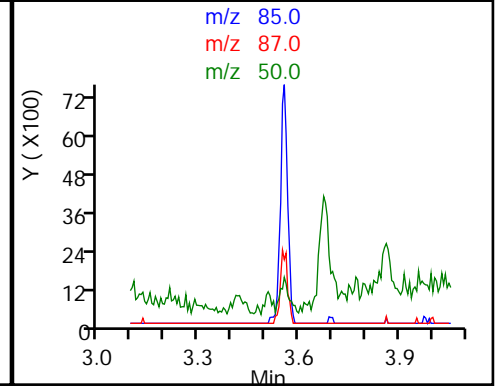
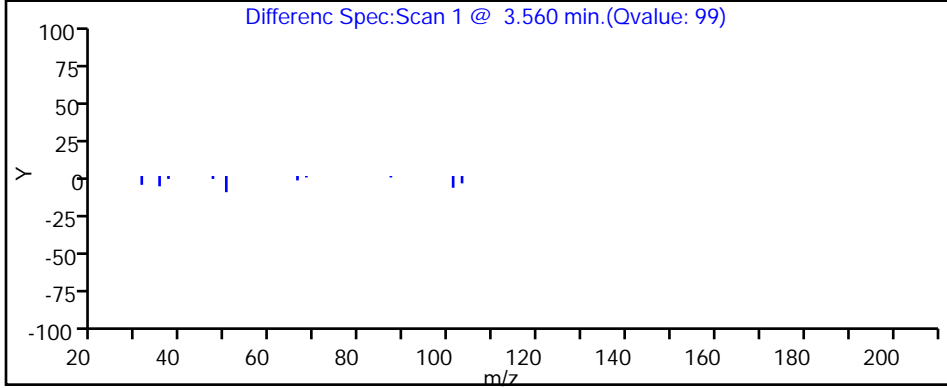
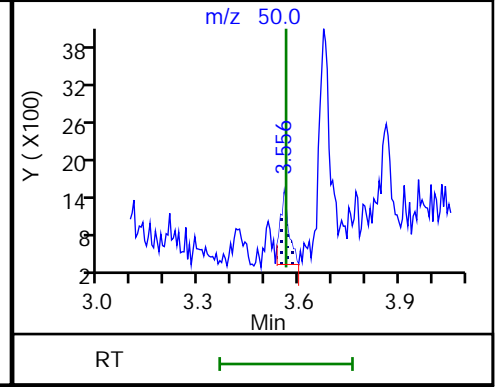
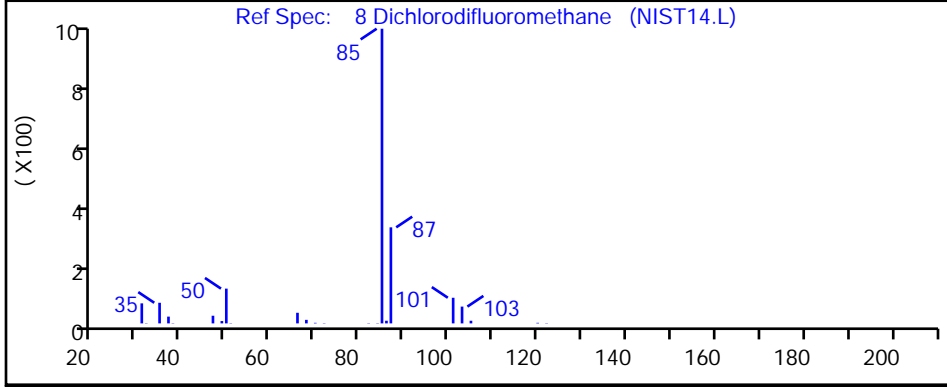
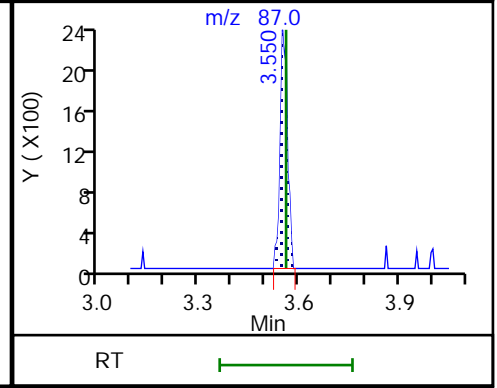
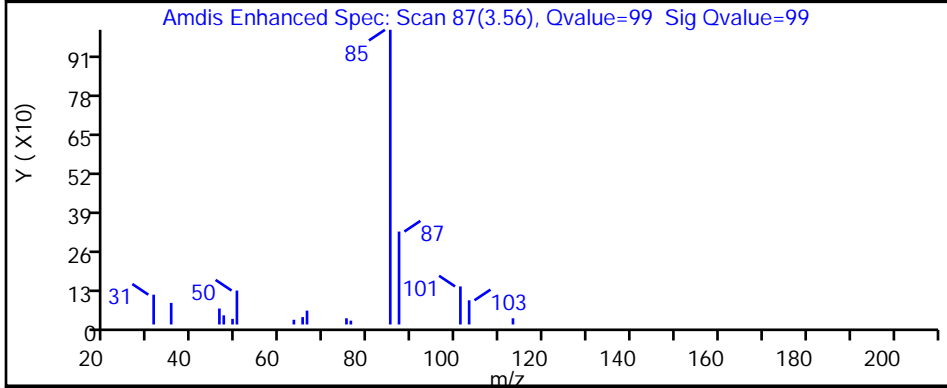
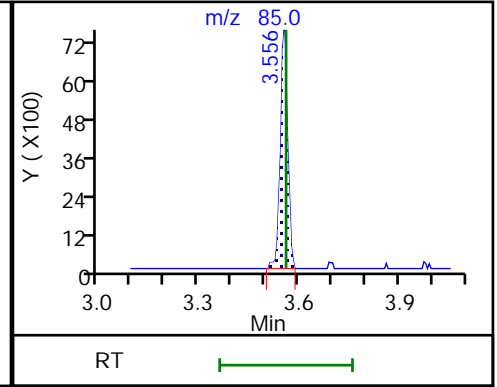
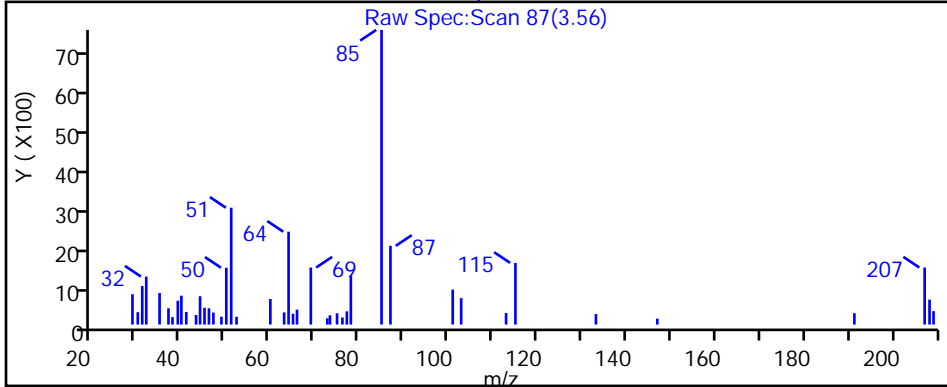
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P114.D

Injection Date: 27-Feb-2019 00:30:30

Instrument ID: MR

Lims ID: 140-14391-A-14

Lab Sample ID: 140-14391-14

Client ID: IA-088-C-26

Operator ID:

ALS Bottle#: 14 Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

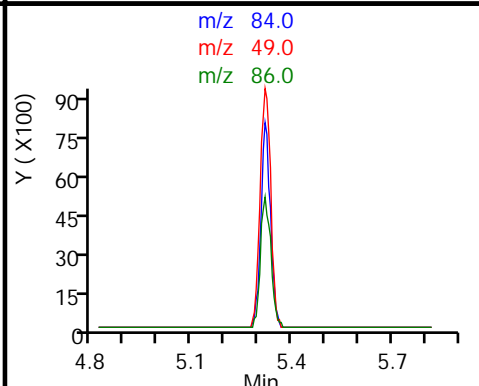
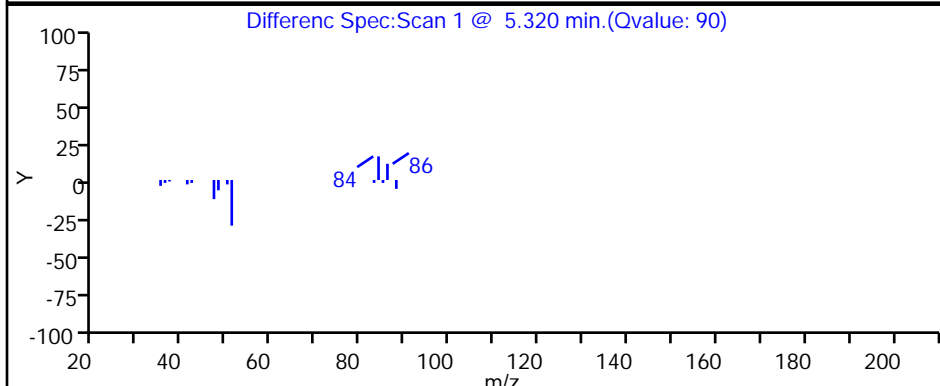
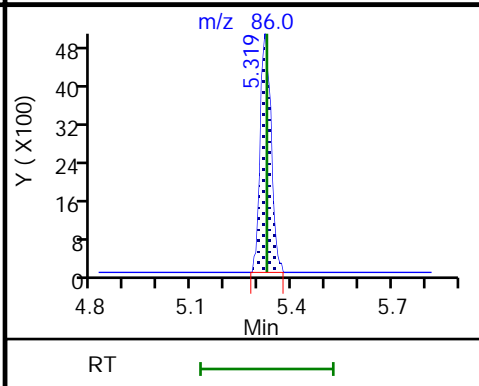
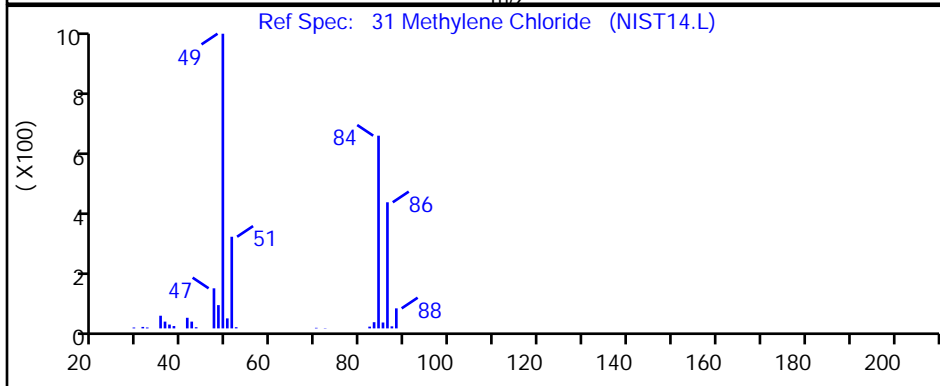
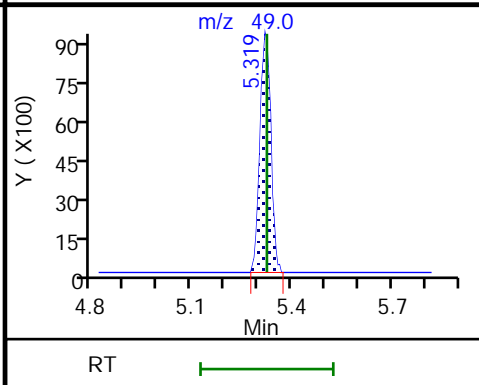
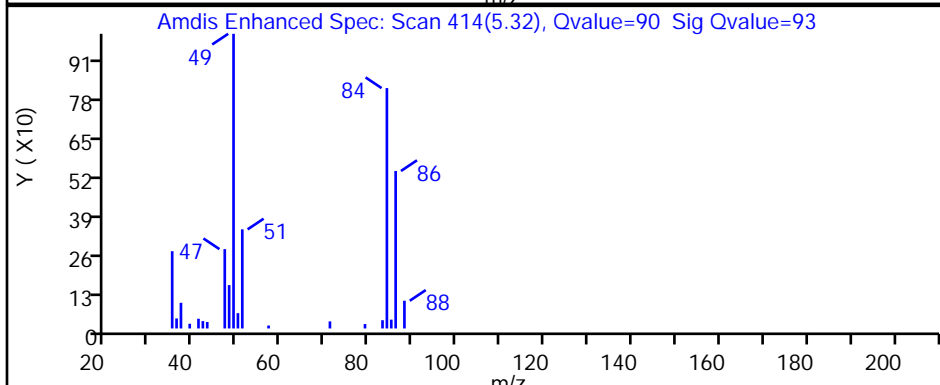
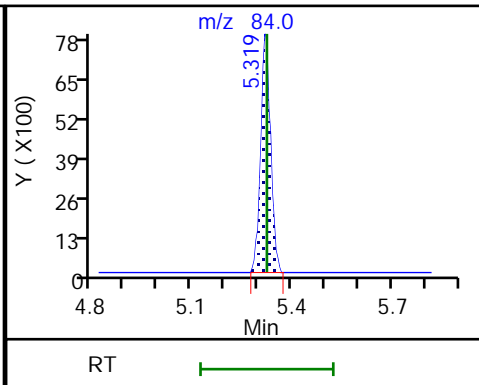
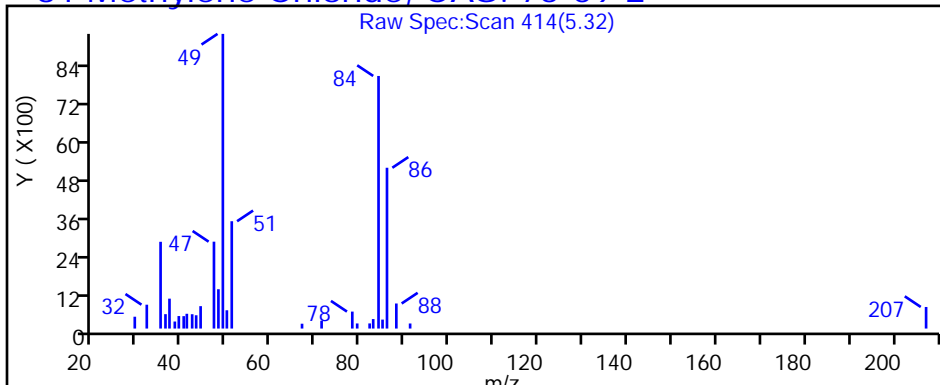
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P114.D

Injection Date: 27-Feb-2019 00:30:30

Instrument ID: MR

Lims ID: 140-14391-A-14

Lab Sample ID: 140-14391-14

Client ID: IA-088-C-26

Operator ID:

ALS Bottle#: 14

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

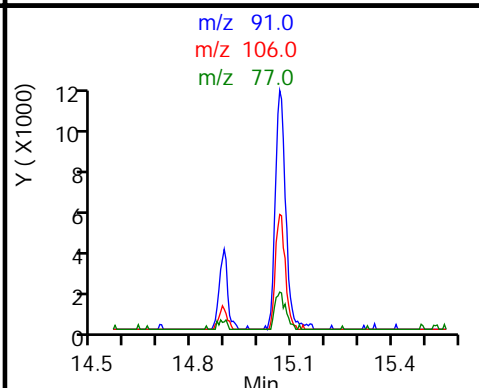
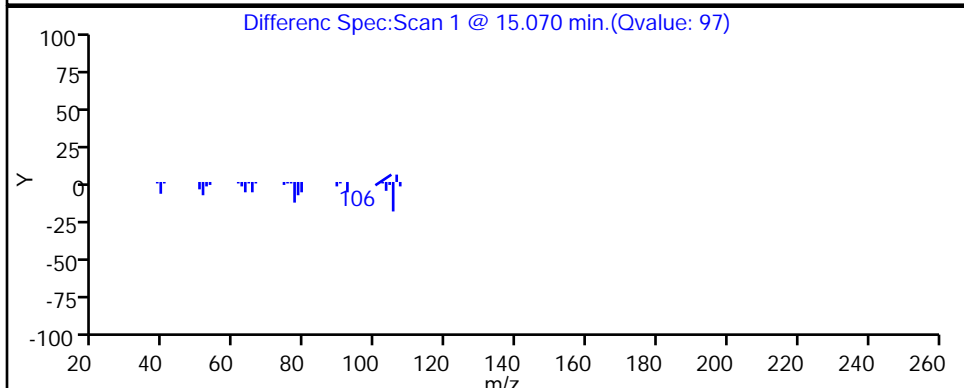
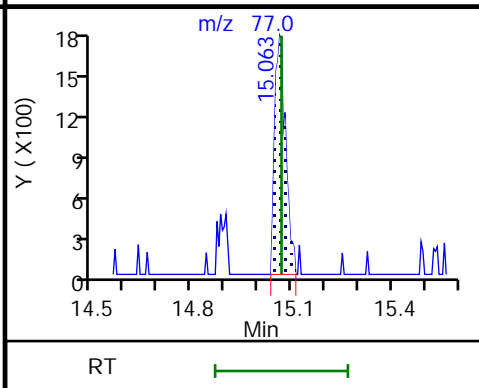
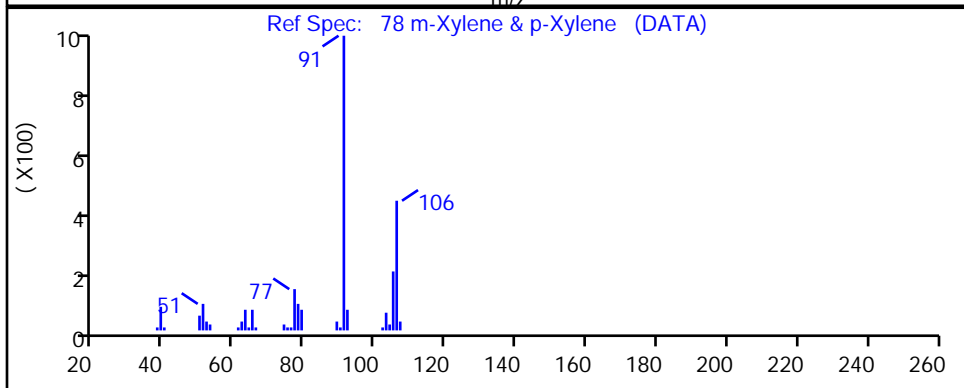
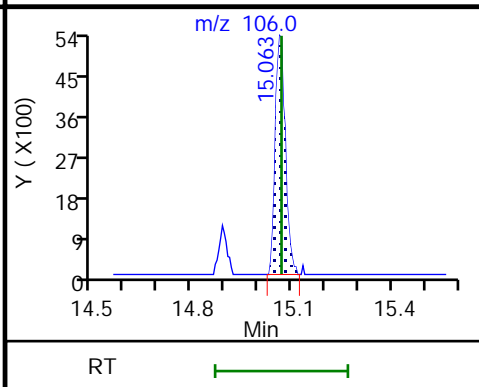
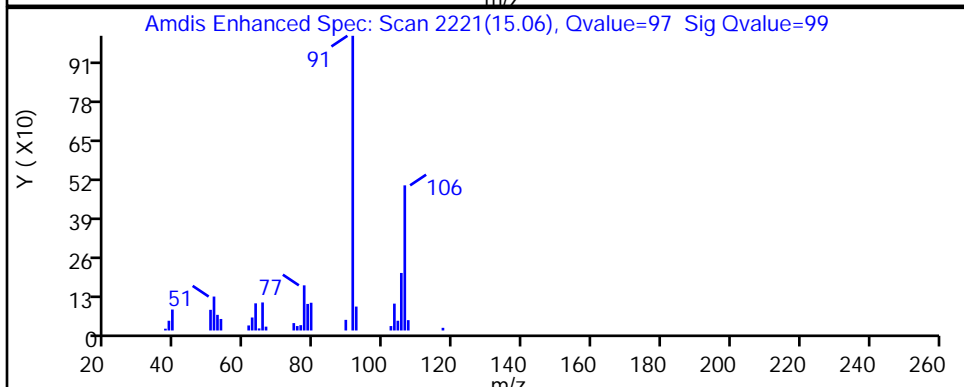
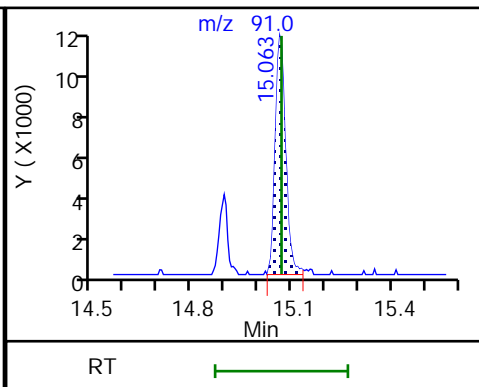
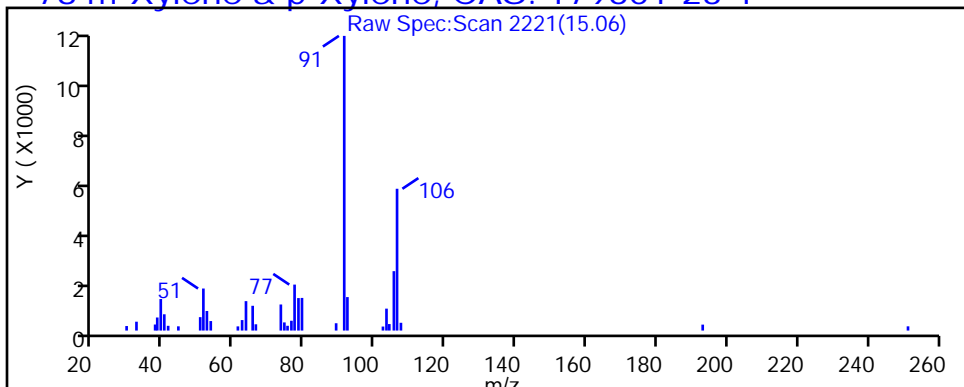
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P114.D

Injection Date: 27-Feb-2019 00:30:30

Instrument ID: MR

Lims ID: 140-14391-A-14

Lab Sample ID: 140-14391-14

Client ID: IA-088-C-26

Operator ID:

ALS Bottle#: 14

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

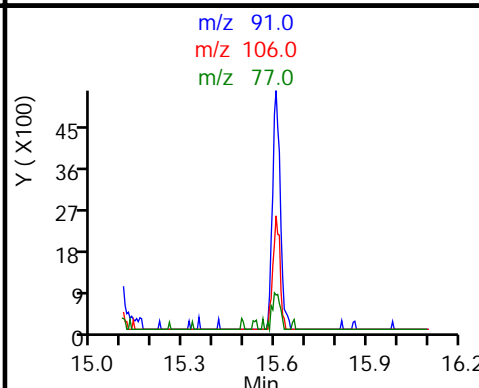
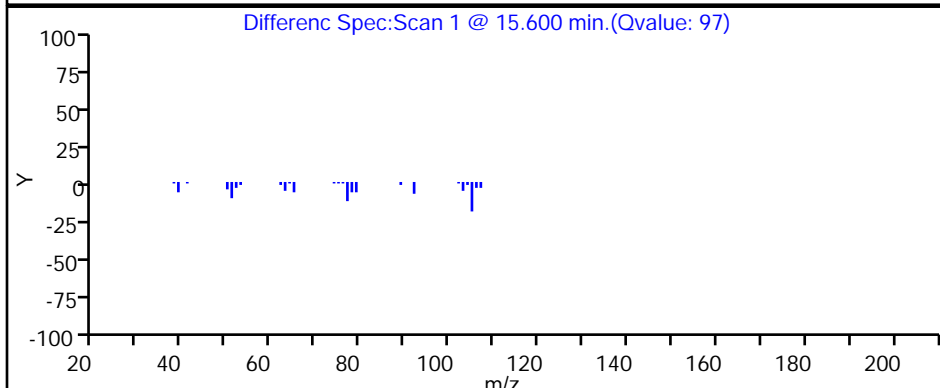
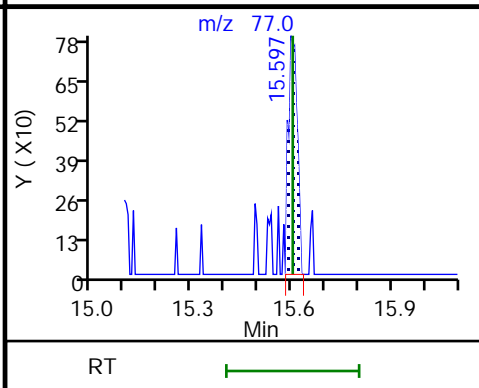
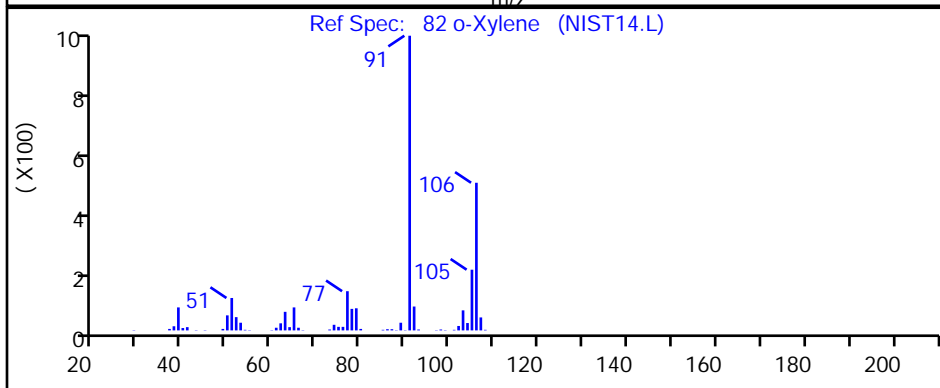
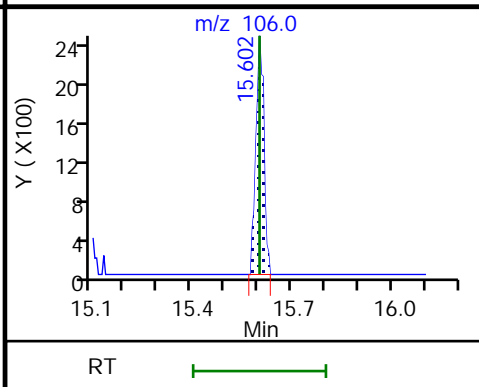
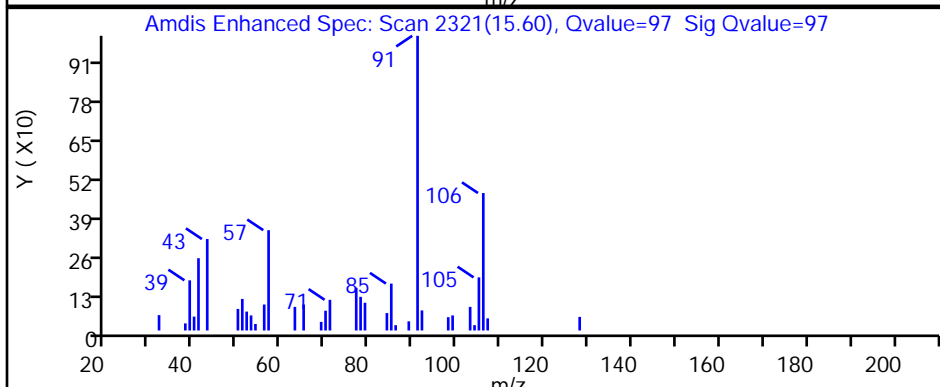
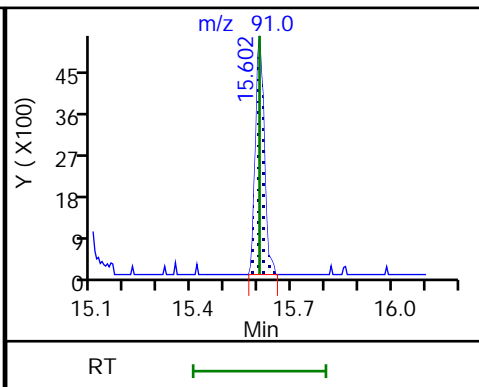
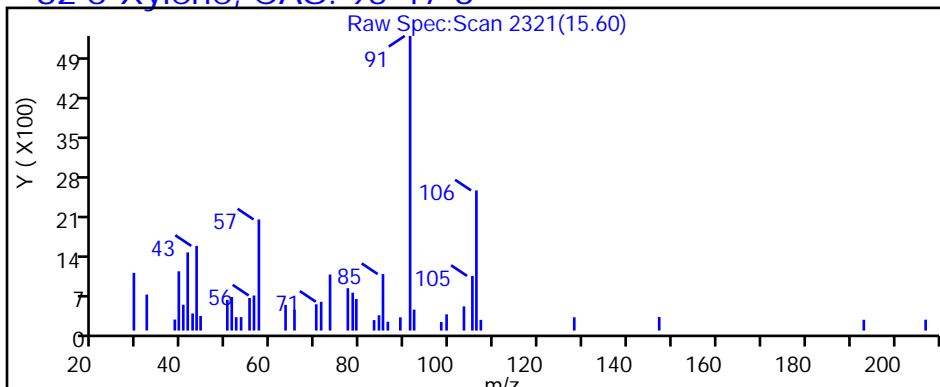
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-142-C-26 Lab Sample ID: 140-14391-15
 Matrix: Air Lab File ID: RB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:24
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.47	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.6		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.48	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-142-C-26 Lab Sample ID: 140-14391-15
 Matrix: Air Lab File ID: RB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:24
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	9.2		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P115.D
 Lims ID: 140-14391-A-15
 Client ID: IA-142-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 01:19:30 ALS Bottle#: 15 Worklist Smp#: 19
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-019
 Misc. Info.: 140-14391-a-15
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 17:00:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.384	-0.005	70	201844	4.00	
* 2 1,4-Difluorobenzene	114	9.444	9.450	-0.006	95	1182104	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.497	14.502	-0.005	90	1032728	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.223	16.228	-0.005	89	870849	3.97	
6 Chlorodifluoromethane	51	3.513	3.513	0.000	96	11299	0.0943	
8 Dichlorodifluoromethane	85	3.556	3.564	-0.005	98	12398	0.0565	
31 Methylene Chloride	84	5.319	5.325	-0.006	91	35650	0.5280	
47 Benzene	78	8.884	8.889	-0.005	95	6309	0.0328	
65 Toluene	91	12.421	12.416	0.005	93	25852	0.1045	
78 m-Xylene & p-Xylene	91	15.069	15.069	0.000	99	20049	0.0685	
82 o-Xylene	91	15.603	15.602	0.001	93	8543	0.0278	
S 121 Xylenes, Total	100				0		0.0963	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P115.D

Injection Date: 27-Feb-2019 01:19:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-15

Lab Sample ID: 140-14391-15

Worklist Smp#: 19

Client ID: IA-142-C-26

Purge Vol: 500.000 mL

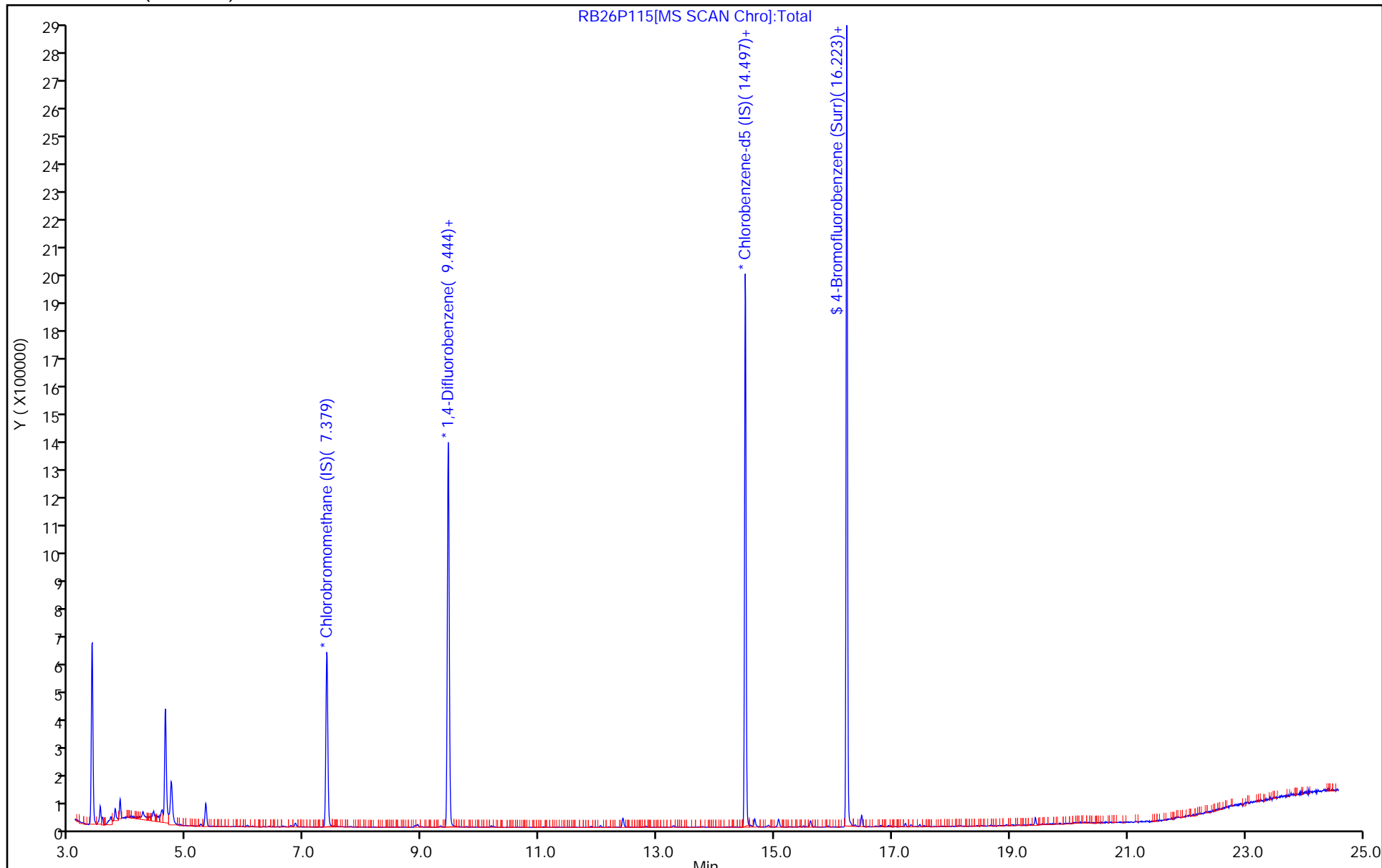
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P115.D
 Lims ID: 140-14391-A-15
 Client ID: IA-142-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 01:19:30 ALS Bottle#: 15 Worklist Smp#: 19
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-019
 Misc. Info.: 140-14391-a-15
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:45:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 17:00:37

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.97	99.14

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P115.D

Injection Date: 27-Feb-2019 01:19:30

Instrument ID: MR

Lims ID: 140-14391-A-15

Lab Sample ID: 140-14391-15

Client ID: IA-142-C-26

Operator ID:

ALS Bottle#: 15

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

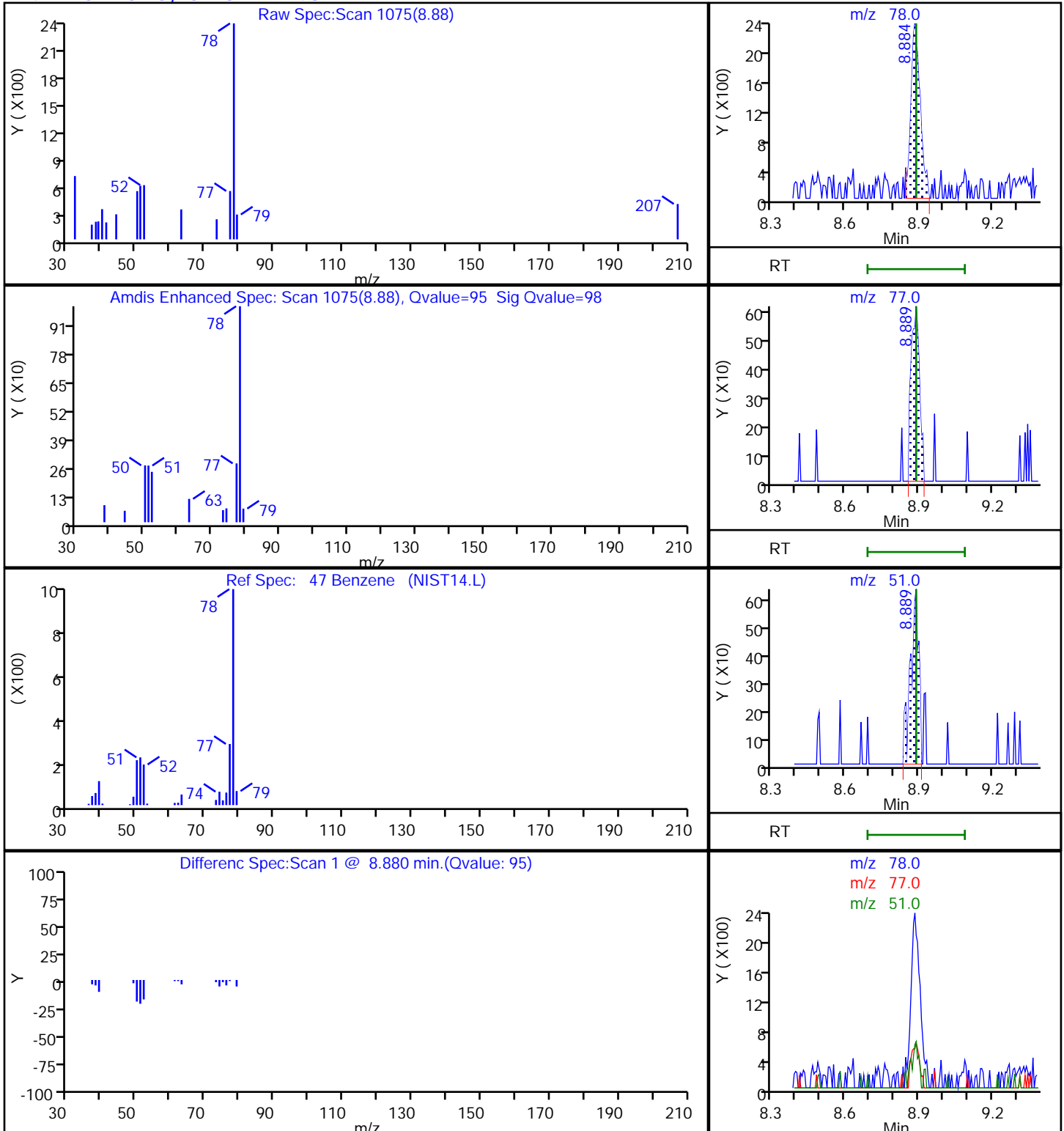
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P115.D

Injection Date: 27-Feb-2019 01:19:30

Instrument ID: MR

Lims ID: 140-14391-A-15

Lab Sample ID: 140-14391-15

Client ID: IA-142-C-26

Operator ID:

ALS Bottle#: 15

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

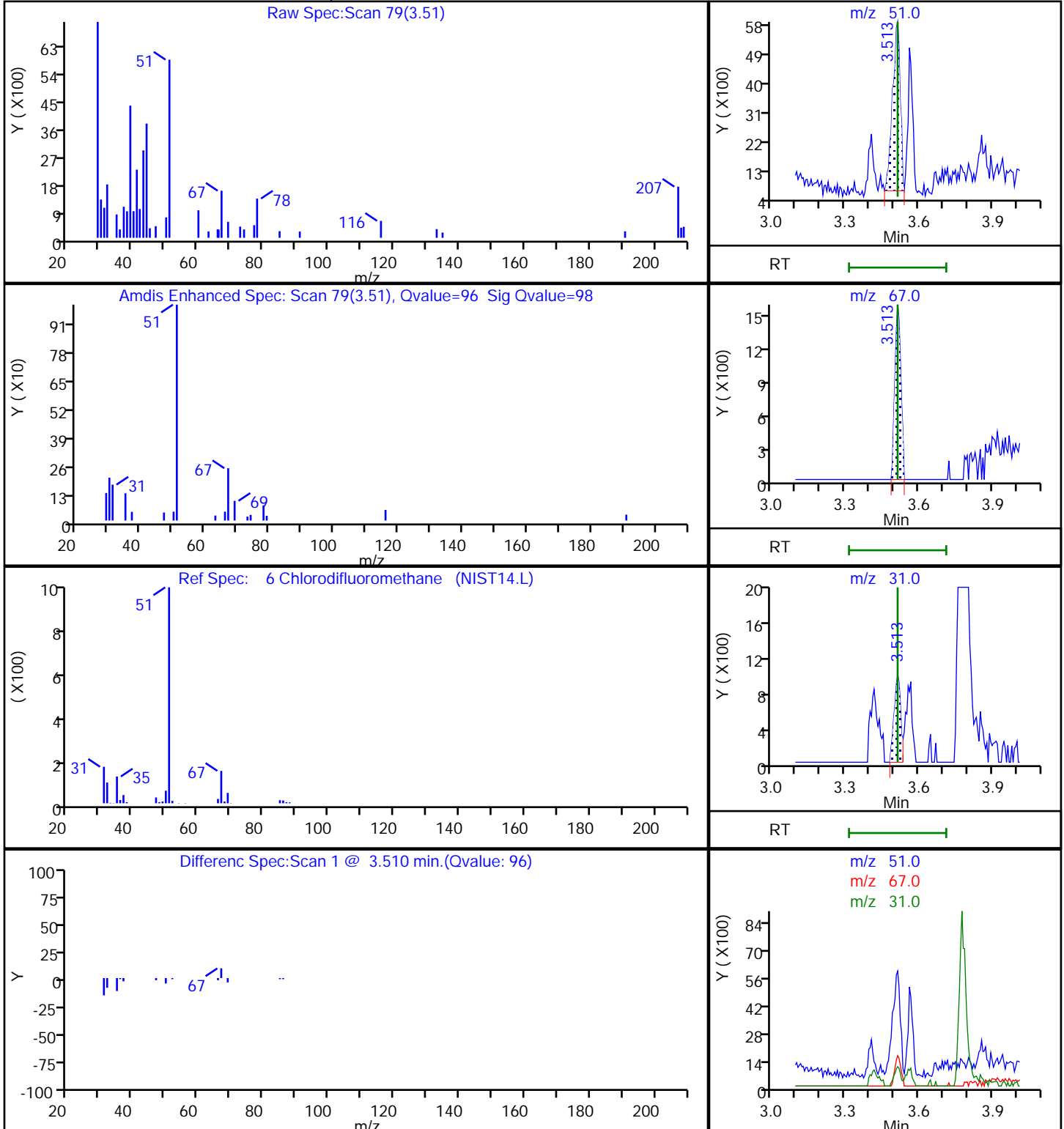
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P115.D

Injection Date: 27-Feb-2019 01:19:30

Instrument ID: MR

Lims ID: 140-14391-A-15

Lab Sample ID: 140-14391-15

Client ID: IA-142-C-26

Operator ID:

ALS Bottle#:

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

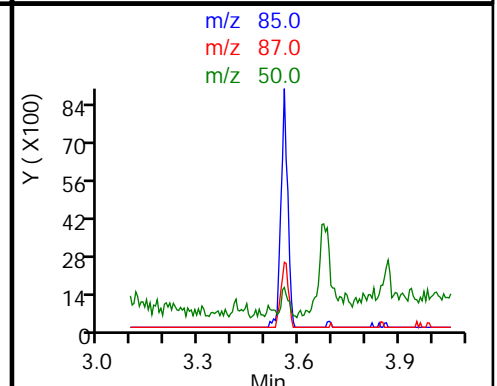
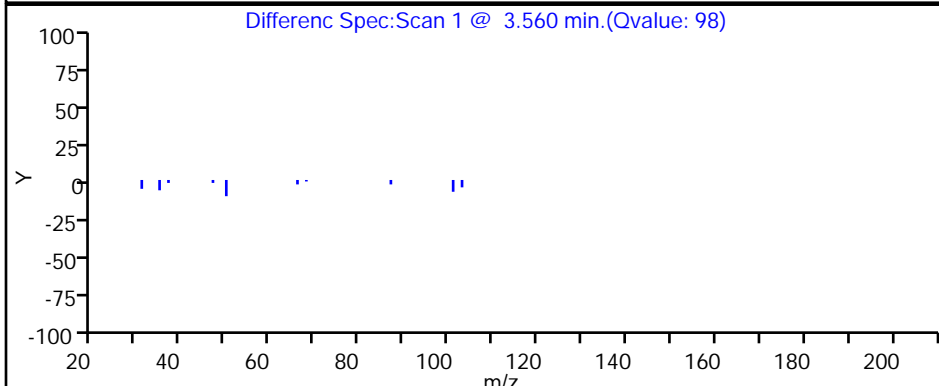
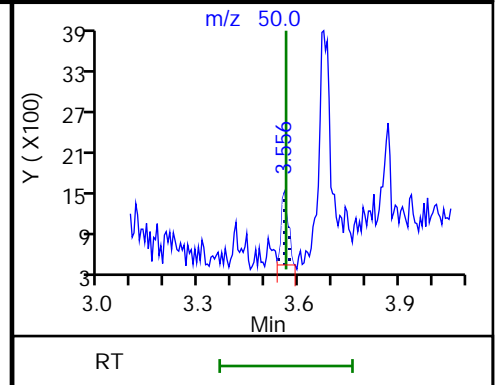
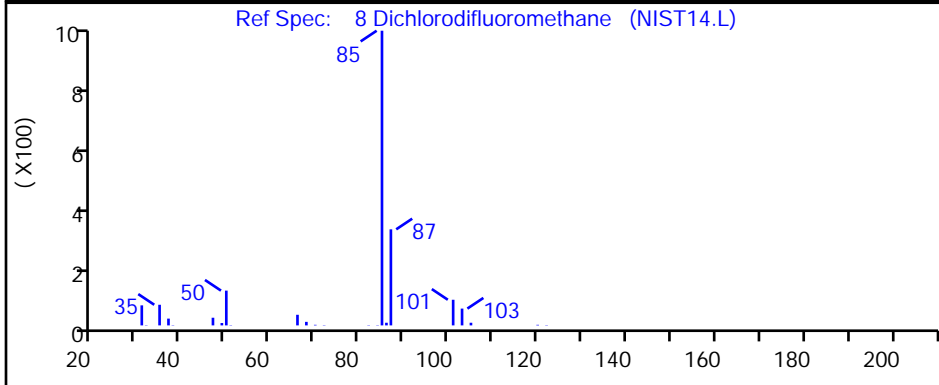
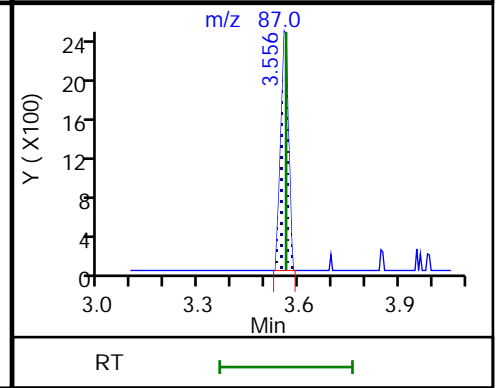
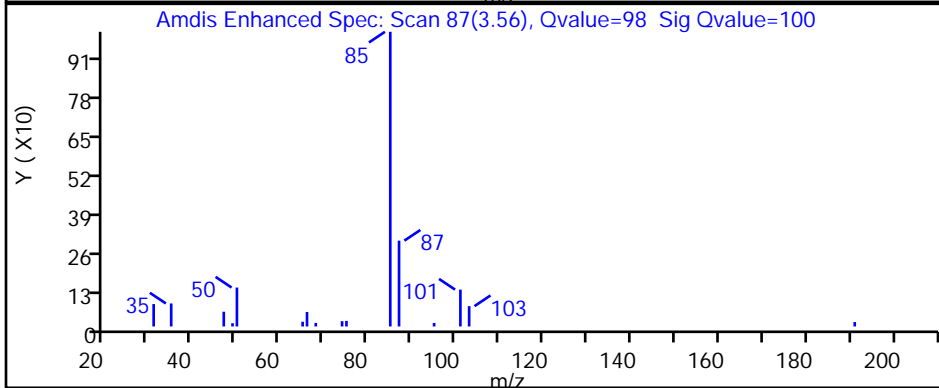
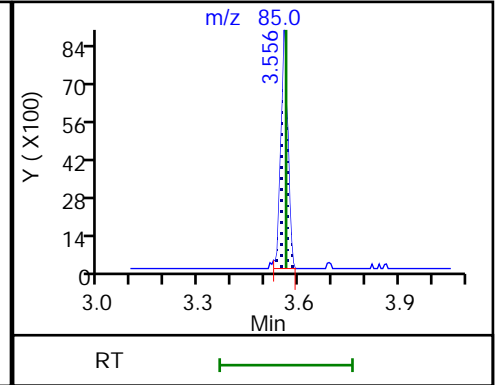
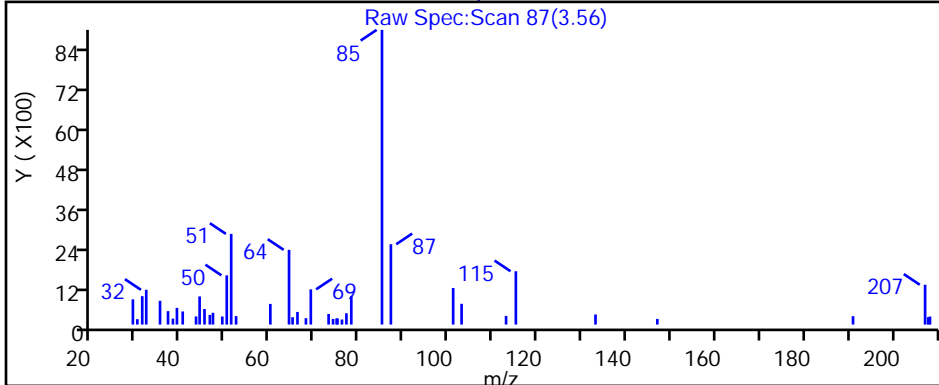
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P115.D

Injection Date: 27-Feb-2019 01:19:30

Instrument ID: MR

Lims ID: 140-14391-A-15

Lab Sample ID: 140-14391-15

Client ID: IA-142-C-26

Operator ID:

ALS Bottle#: 15 Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

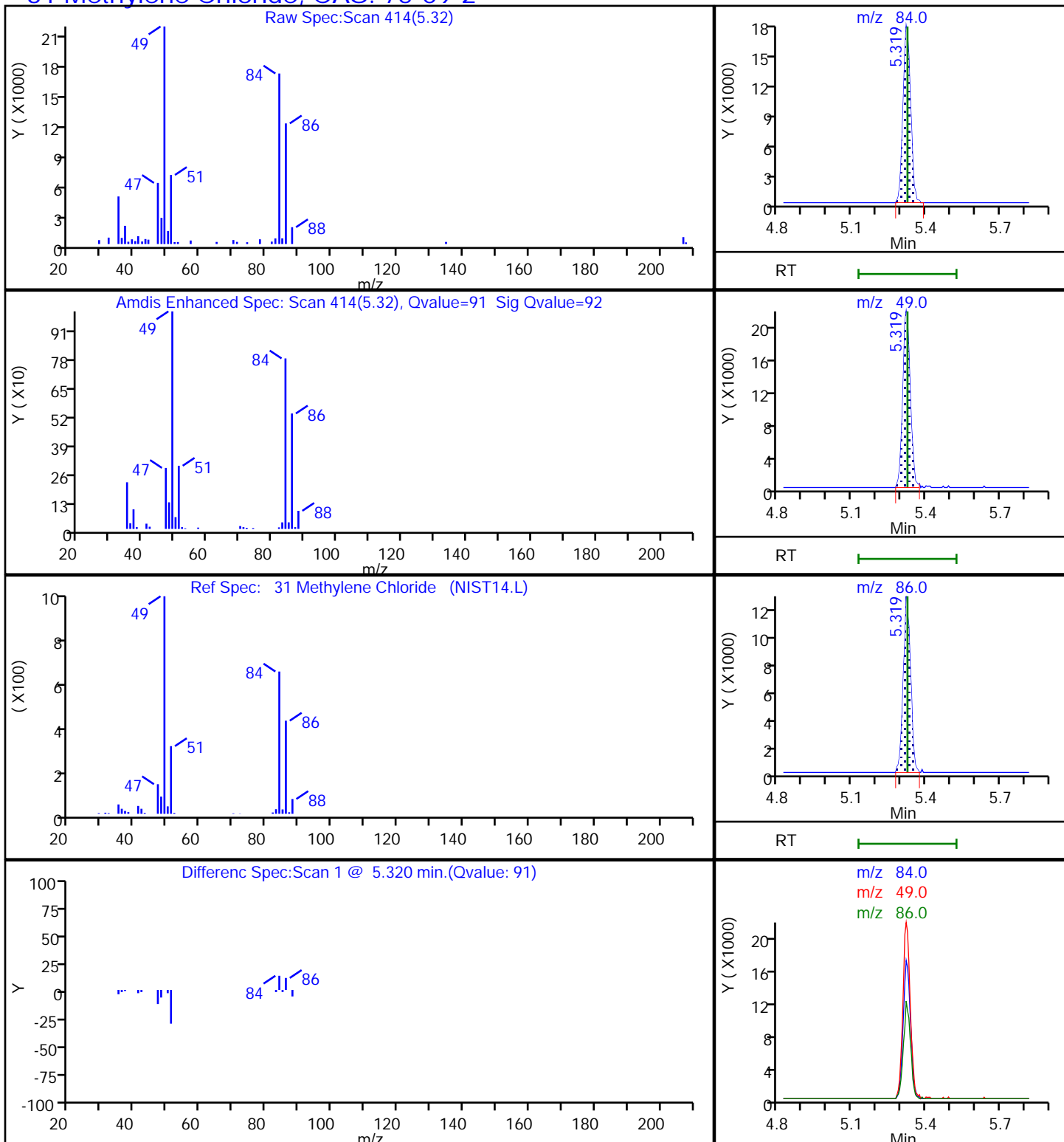
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P115.D

Injection Date: 27-Feb-2019 01:19:30

Instrument ID: MR

Lims ID: 140-14391-A-15

Lab Sample ID: 140-14391-15

Client ID: IA-142-C-26

Operator ID:

ALS Bottle#: 15

Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

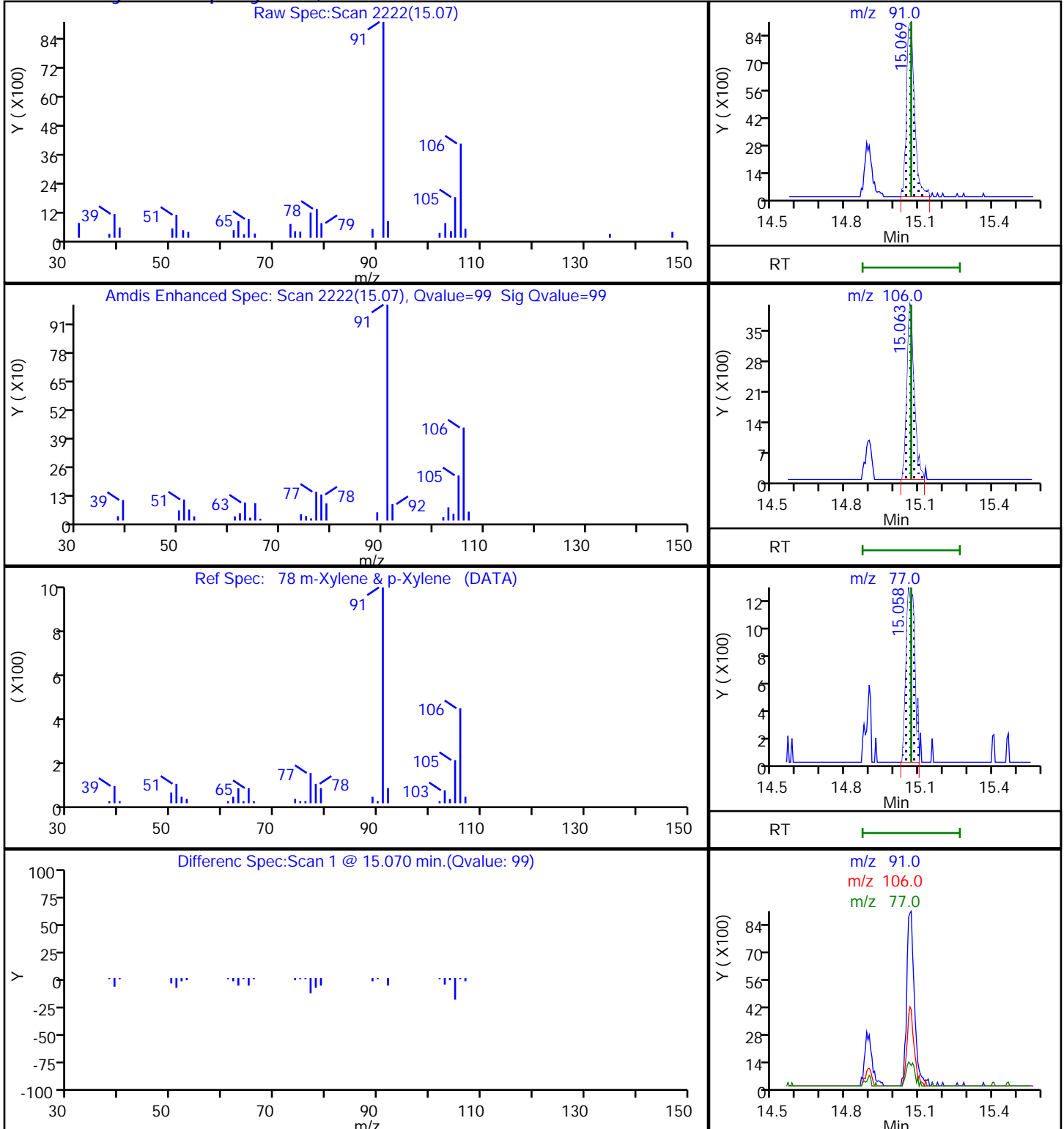
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P115.D

Injection Date: 27-Feb-2019 01:19:30

Instrument ID: MR

Lims ID: 140-14391-A-15

Lab Sample ID: 140-14391-15

Client ID: IA-142-C-26

Operator ID:

ALS Bottle#: 15 Worklist Smp#: 19

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

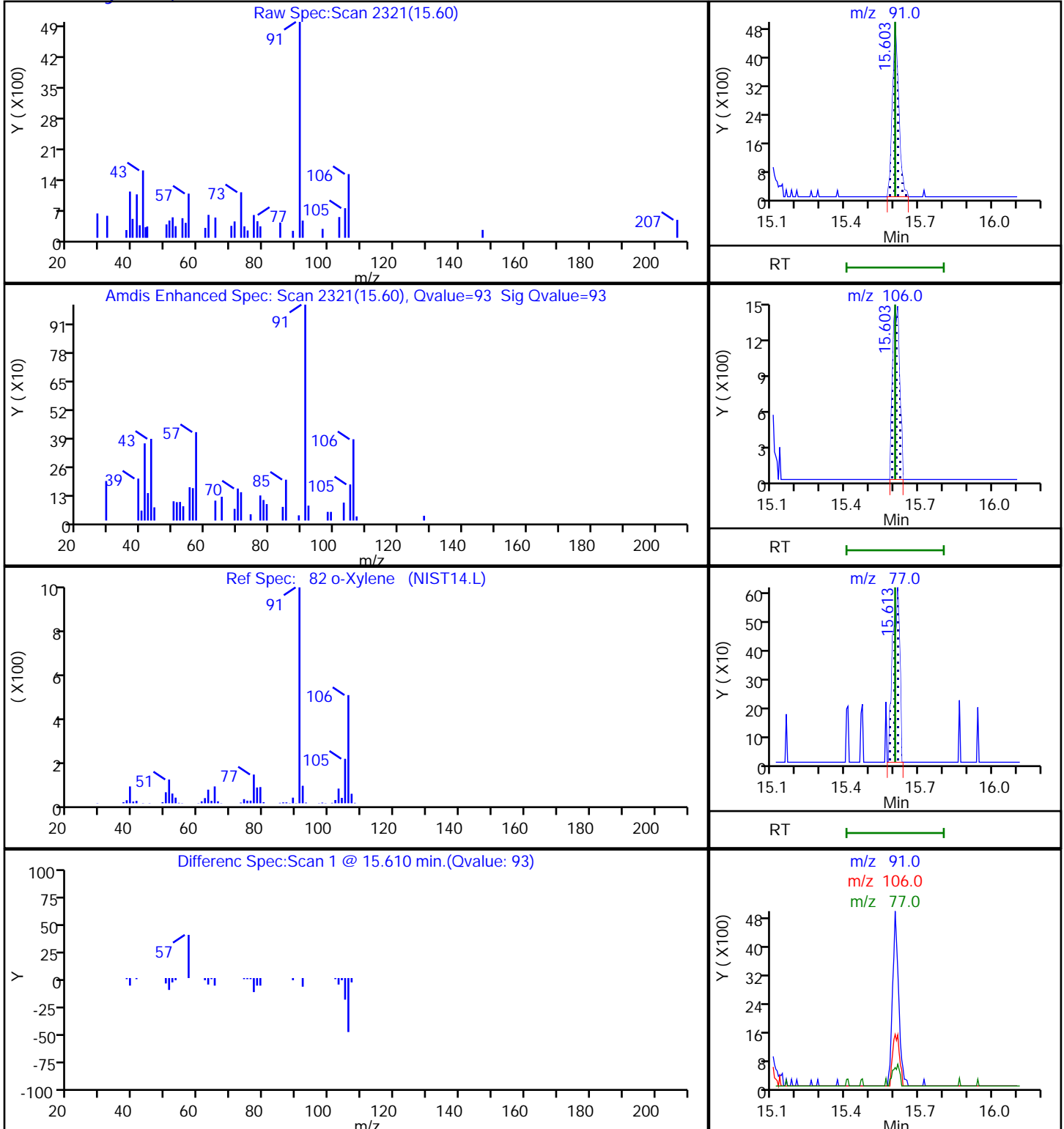
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-113-C-26 Lab Sample ID: 140-14391-16
 Matrix: Air Lab File ID: RB26P116.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:30
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 02:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.74		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.6		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.1		0.40	0.080
108-88-3	Toluene	92.14	14		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-113-C-26 Lab Sample ID: 140-14391-16
 Matrix: Air Lab File ID: RB26P116.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:30
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 02:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.9		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.2		1.7	0.59
75-09-2	Methylene Chloride	84.93	13		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	7.2		2.7	0.54
108-88-3	Toluene	92.14	53		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.72	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	13		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P116.D
 Lims ID: 140-14391-A-16
 Client ID: IA-113-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 02:57:30 ALS Bottle#: 16 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-021
 Misc. Info.: 140-14391-a-16
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 17:02:53 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 17:02:53

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.384	-0.005	72	205033	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1201066	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.503	14.502	0.001	91	1040158	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.223	16.228	-0.005	89	894885	4.05	
6 Chlorodifluoromethane	51	3.508	3.508	-0.005	35	9157	0.0753	M
8 Dichlorodifluoromethane	85	3.556	3.564	-0.005	99	13041	0.0585	
31 Methylene Chloride	84	5.319	5.325	-0.006	92	49780	0.7258	
47 Benzene	78	8.884	8.889	-0.005	95	23298	0.1191	
65 Toluene	91	12.416	12.416	0.000	92	707102	2.84	
73 Tetrachloroethene	129	13.645	13.645	0.000	93	26226	0.2124	
76 Ethylbenzene	91	14.891	14.891	0.000	99	53118	0.1478	
78 m-Xylene & p-Xylene	91	15.063	15.069	-0.006	100	133633	0.4534	
82 o-Xylene	91	15.603	15.602	0.001	97	39907	0.1289	
93 1,2,4-Trimethylbenzene	105	17.533	17.549	-0.016	94	12163	0.0291	
S 121 Xylenes, Total	100				0		0.5823	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P116.D

Injection Date: 27-Feb-2019 02:57:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-16

Lab Sample ID: 140-14391-16

Worklist Smp#: 21

Client ID: IA-113-C-26

Purge Vol: 500.000 mL

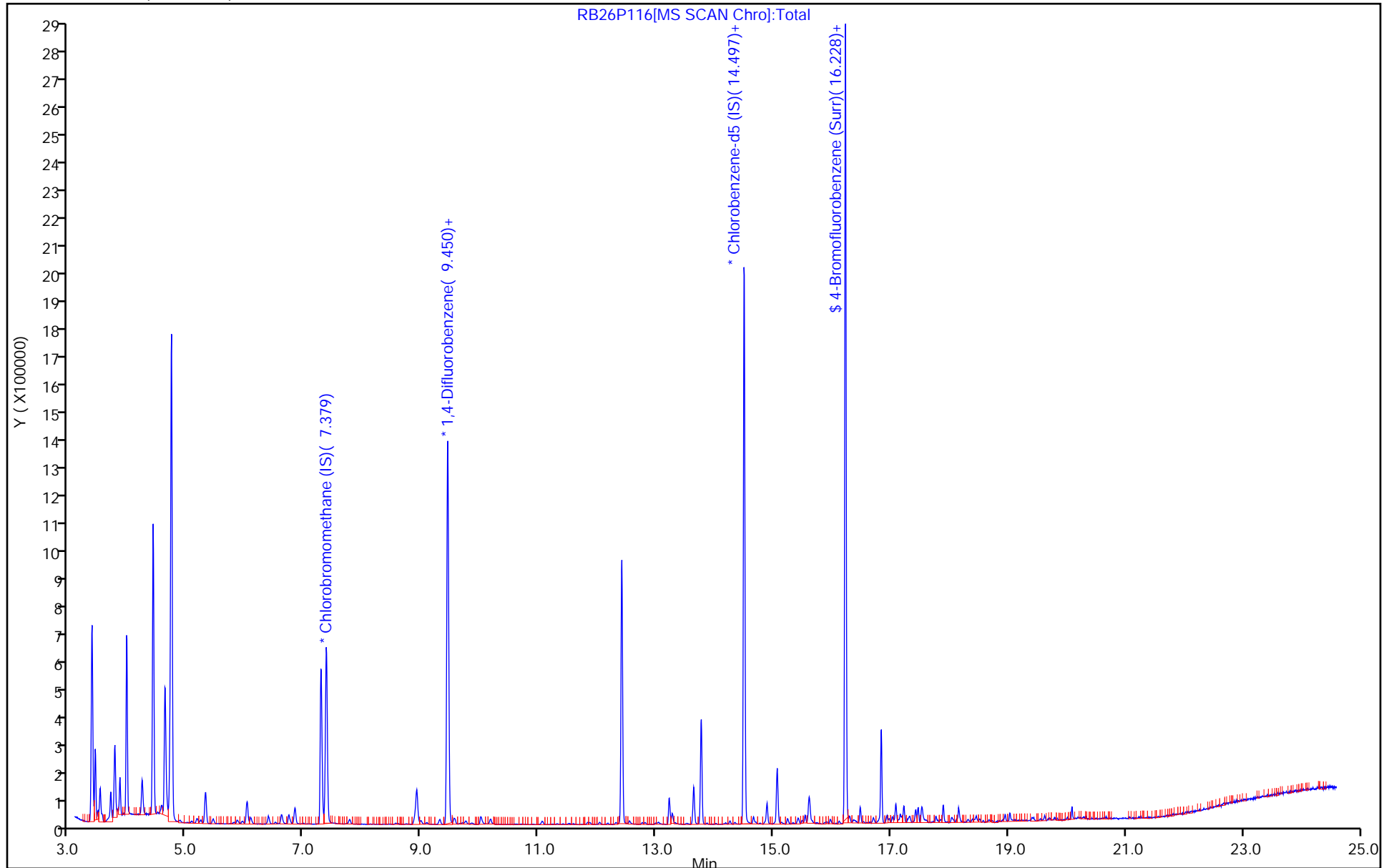
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P116.D
 Lims ID: 140-14391-A-16
 Client ID: IA-113-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 02:57:30 ALS Bottle#: 16 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-021
 Misc. Info.: 140-14391-a-16
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 17:02:53 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 17:02:53

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.05	101.14

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P116.D

Injection Date: 27-Feb-2019 02:57:30

Instrument ID: MR

Lims ID: 140-14391-A-16

Lab Sample ID: 140-14391-16

Client ID: IA-113-C-26

Operator ID:

ALS Bottle#: 16 Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

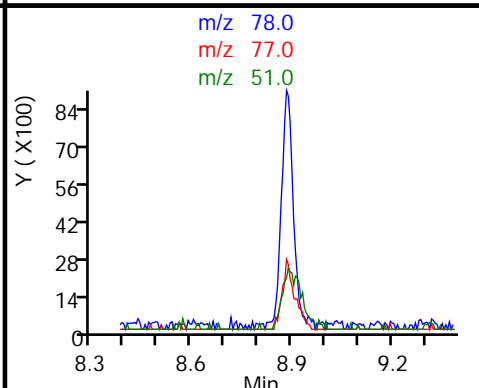
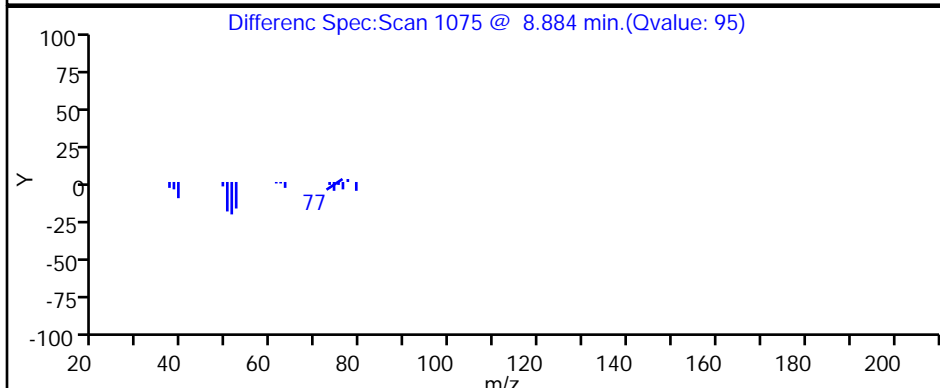
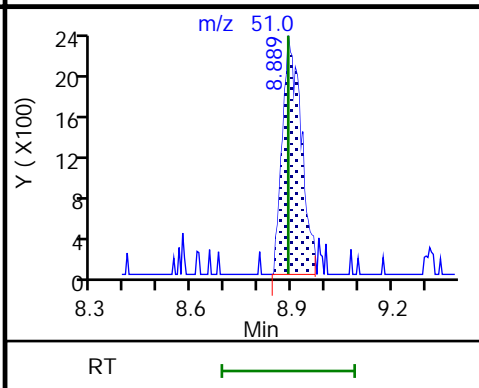
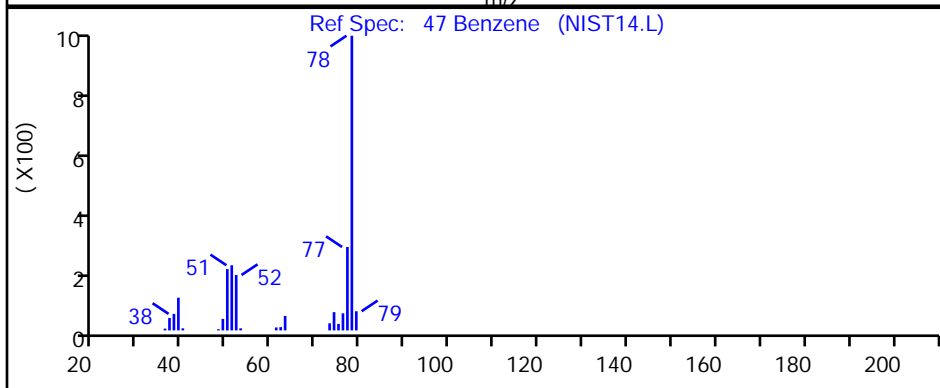
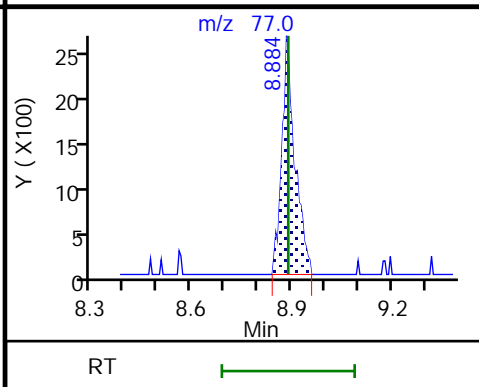
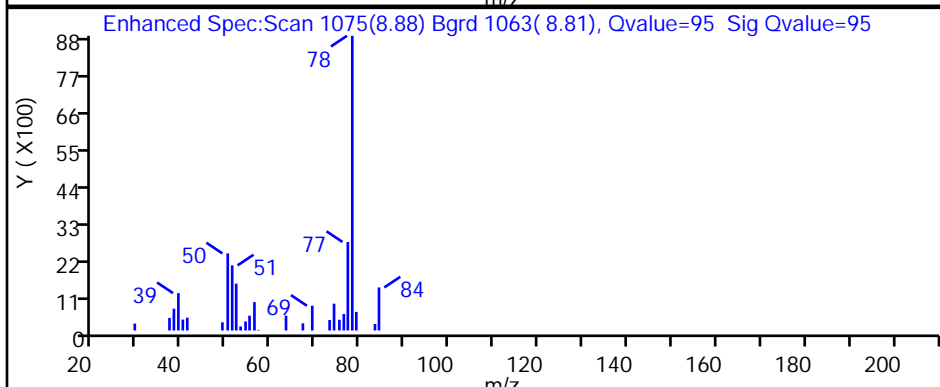
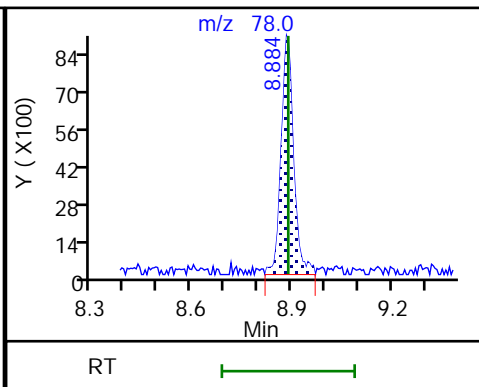
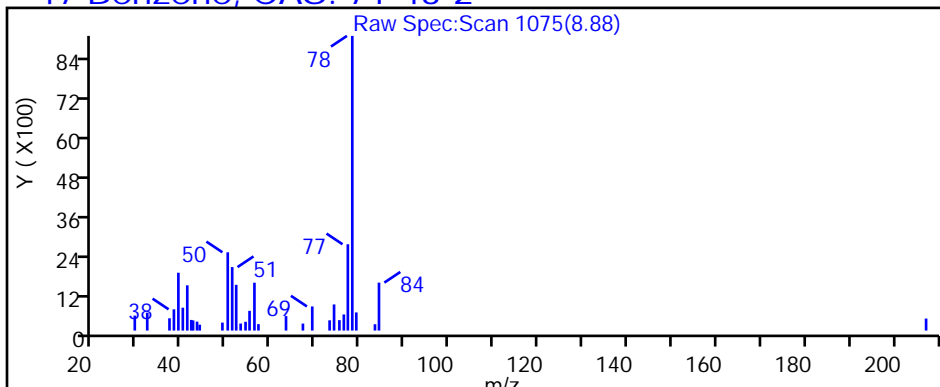
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P116.D

Injection Date: 27-Feb-2019 02:57:30

Instrument ID: MR

Lims ID: 140-14391-A-16

Lab Sample ID: 140-14391-16

Client ID: IA-113-C-26

Operator ID:

ALS Bottle#: 16

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

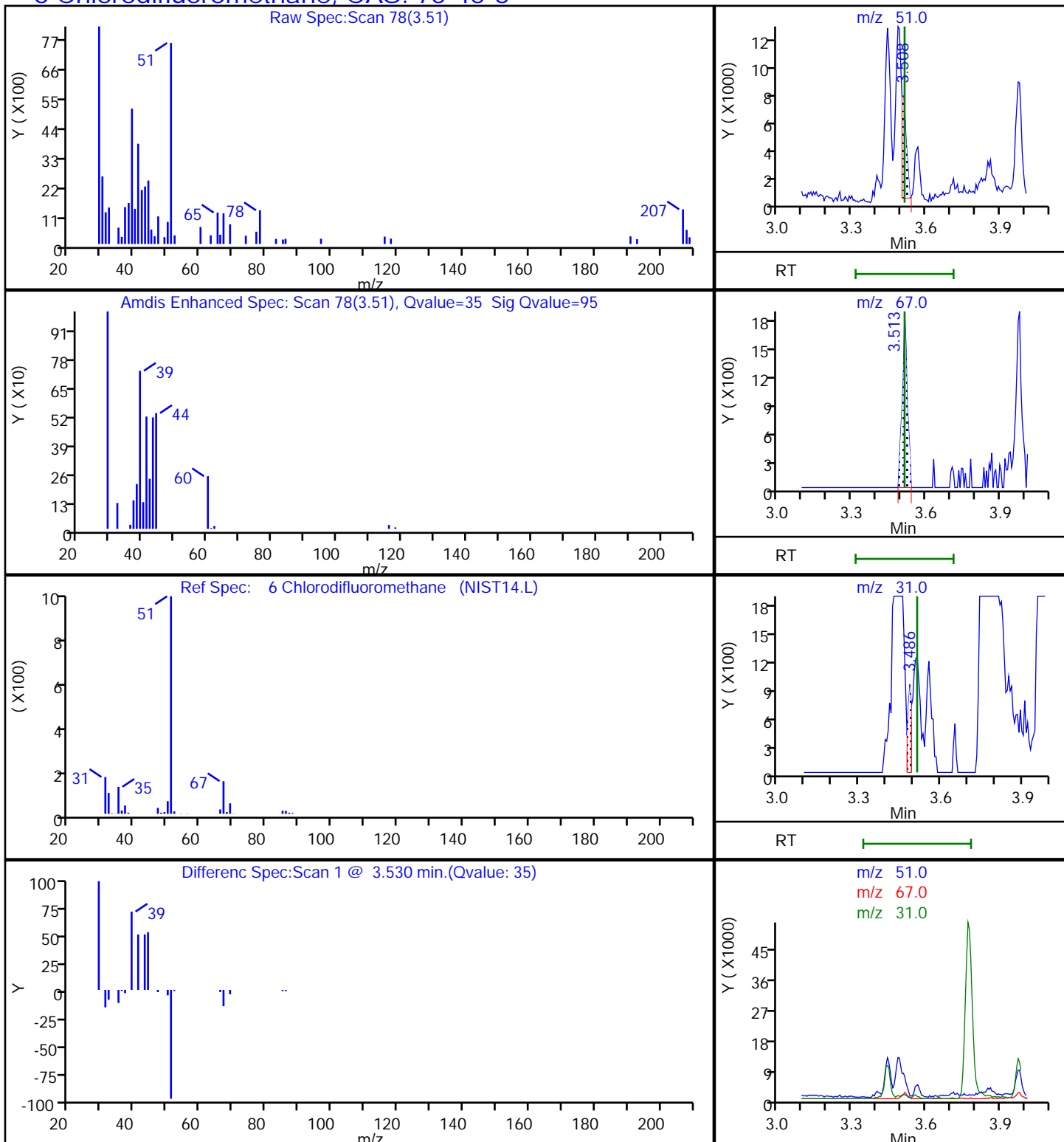
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P116.D

Injection Date: 27-Feb-2019 02:57:30

Instrument ID: MR

Lims ID: 140-14391-A-16

Lab Sample ID: 140-14391-16

Client ID: IA-113-C-26

Operator ID:

ALS Bottle#: 16

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

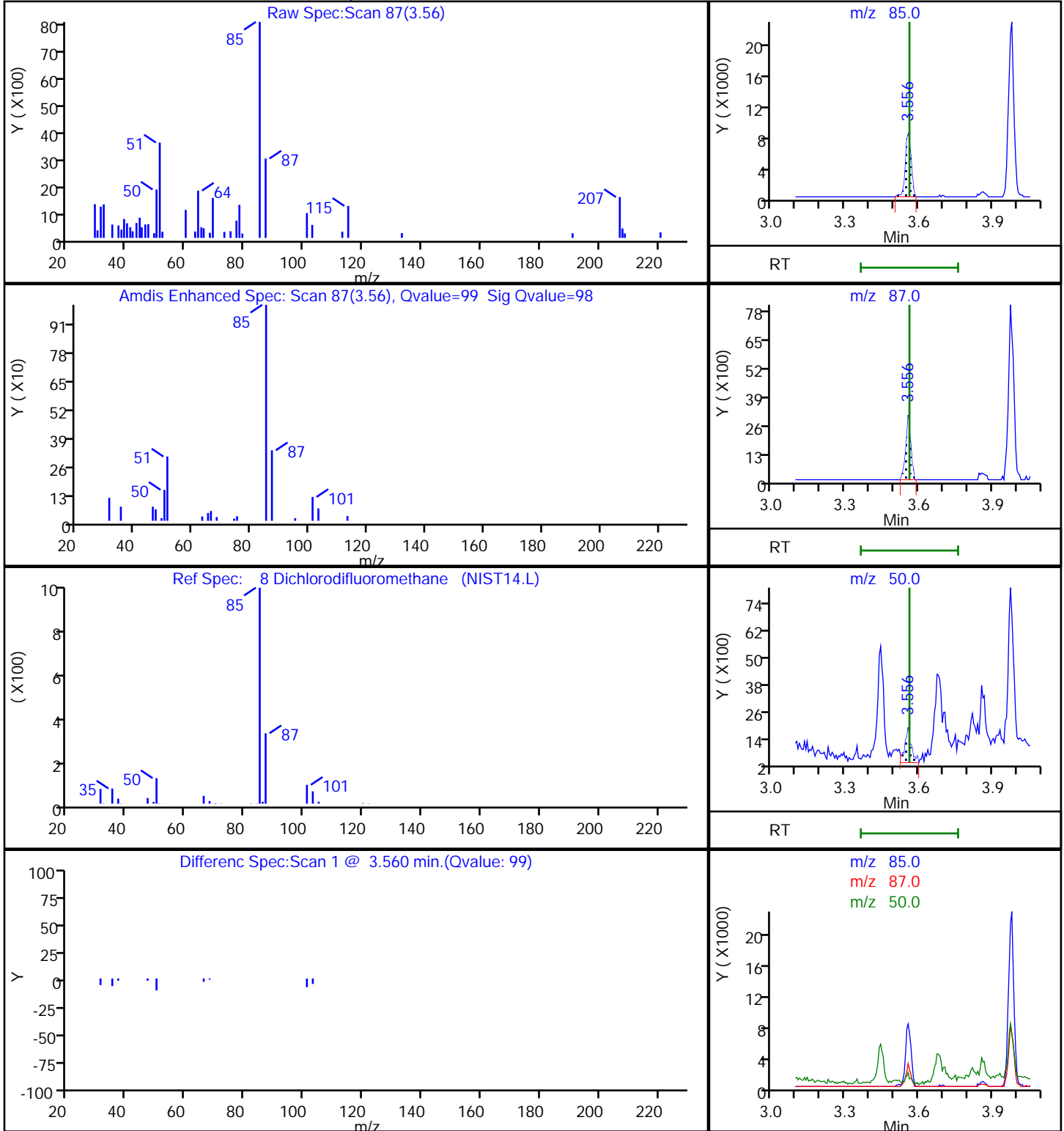
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P116.D

Injection Date: 27-Feb-2019 02:57:30

Instrument ID: MR

Lims ID: 140-14391-A-16

Lab Sample ID: 140-14391-16

Client ID: IA-113-C-26

Operator ID:

ALS Bottle#: 16 Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

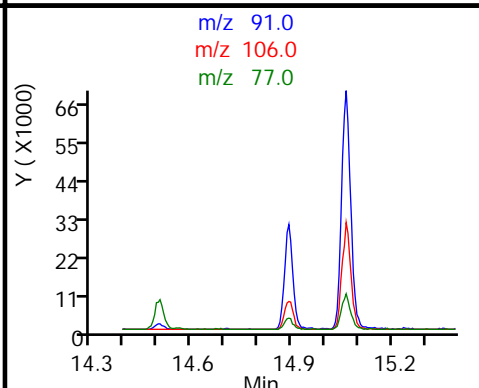
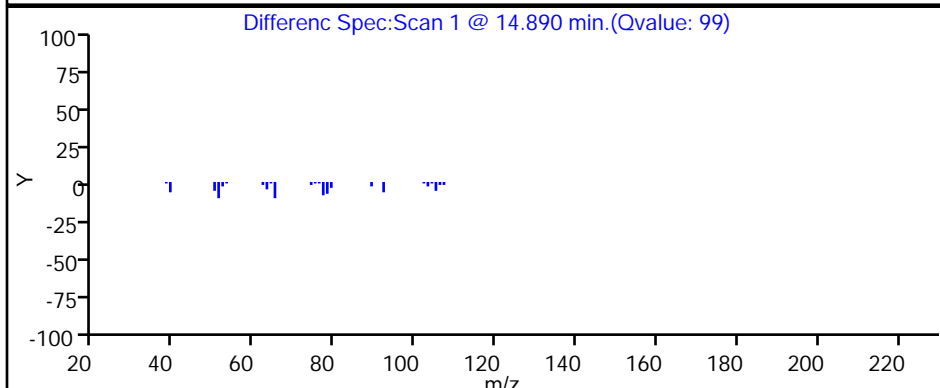
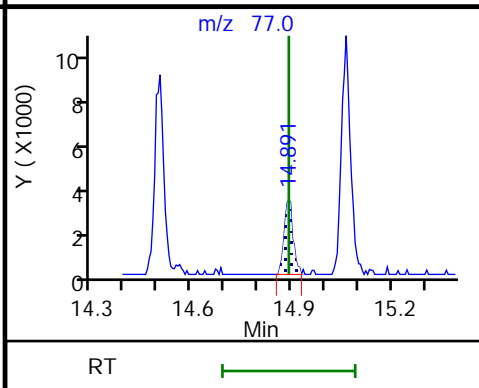
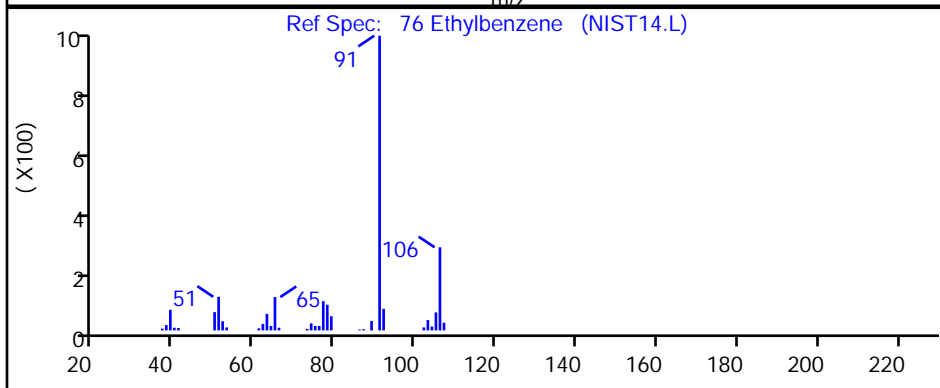
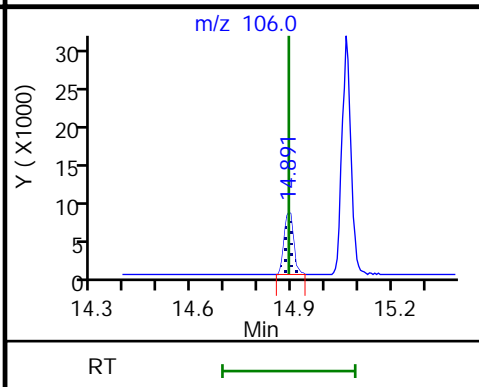
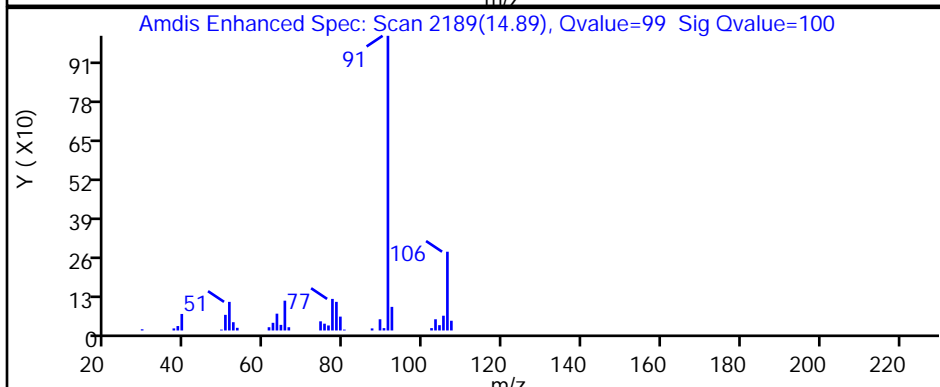
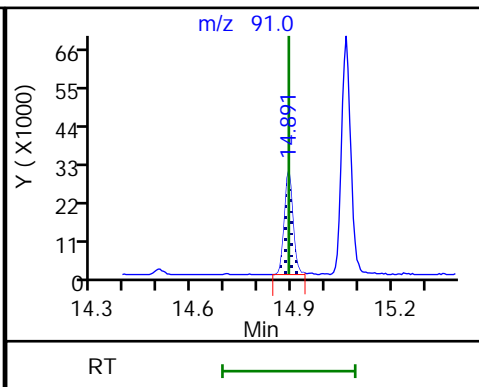
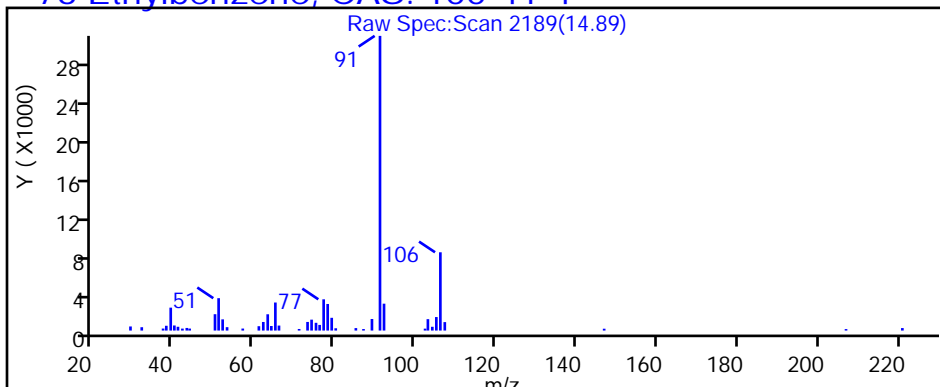
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P116.D

Injection Date: 27-Feb-2019 02:57:30

Instrument ID: MR

Lims ID: 140-14391-A-16

Lab Sample ID: 140-14391-16

Client ID: IA-113-C-26

Operator ID:

ALS Bottle#: 16 Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

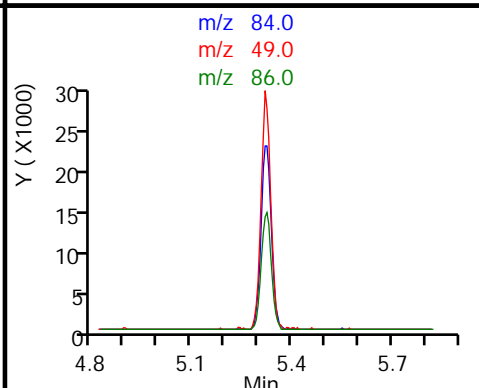
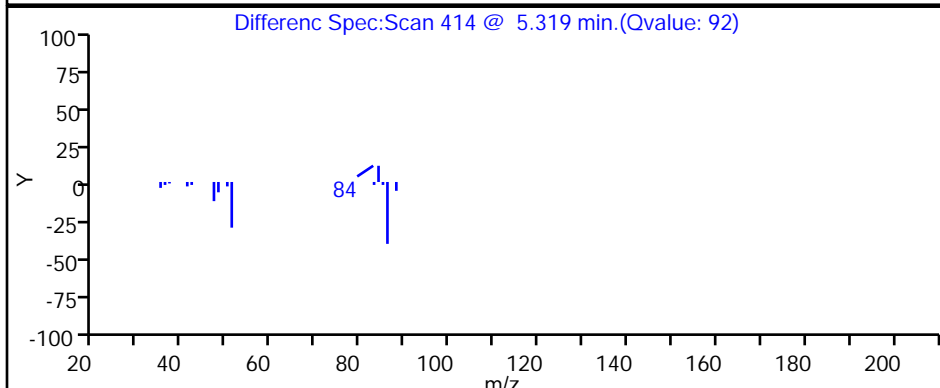
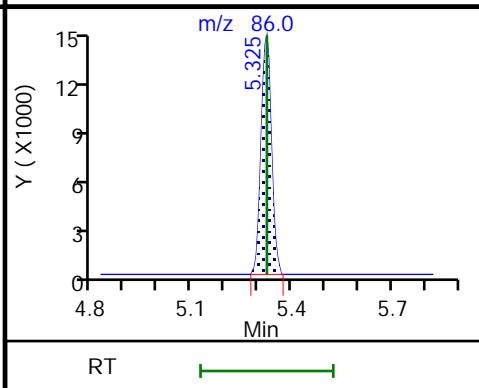
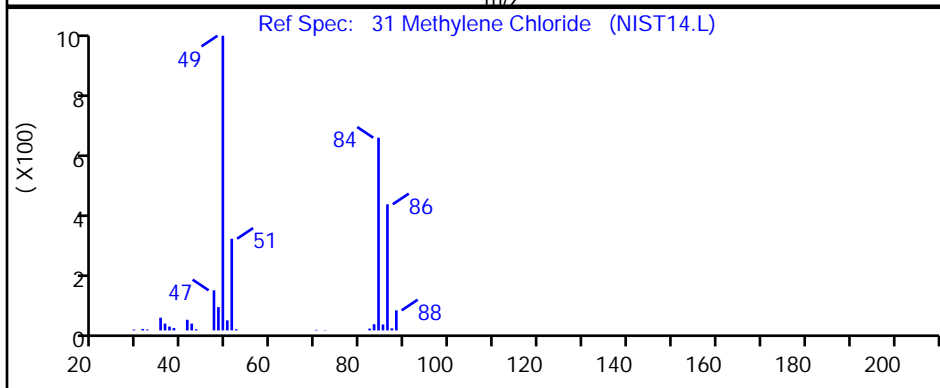
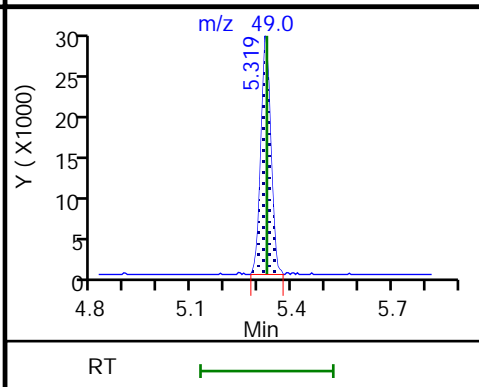
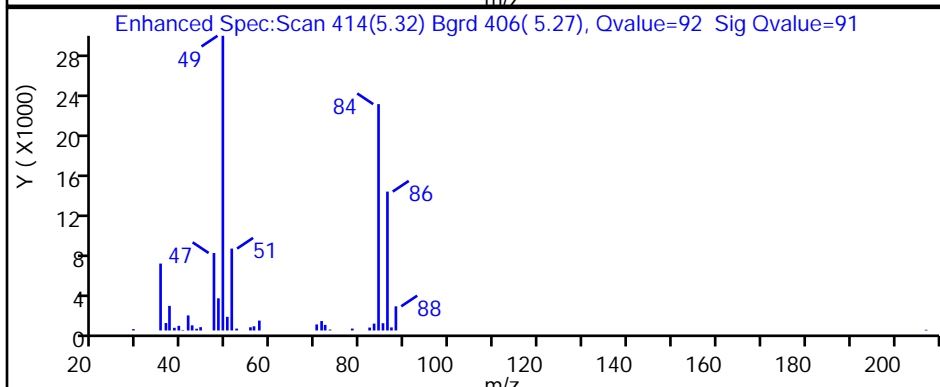
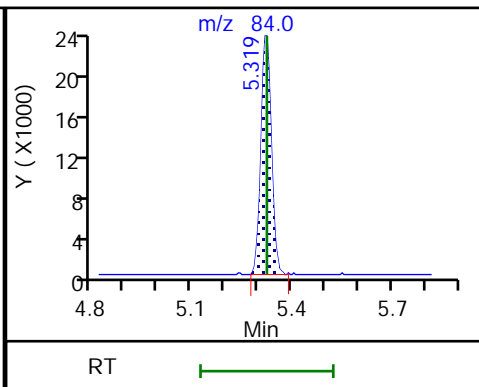
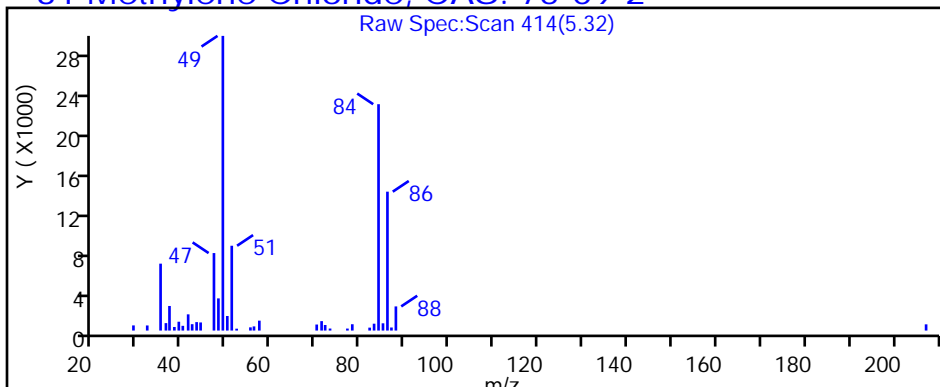
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P116.D

Injection Date: 27-Feb-2019 02:57:30

Instrument ID: MR

Lims ID: 140-14391-A-16

Lab Sample ID: 140-14391-16

Client ID: IA-113-C-26

Operator ID:

ALS Bottle#: 16

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

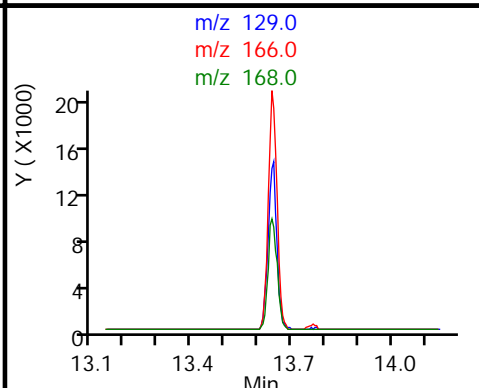
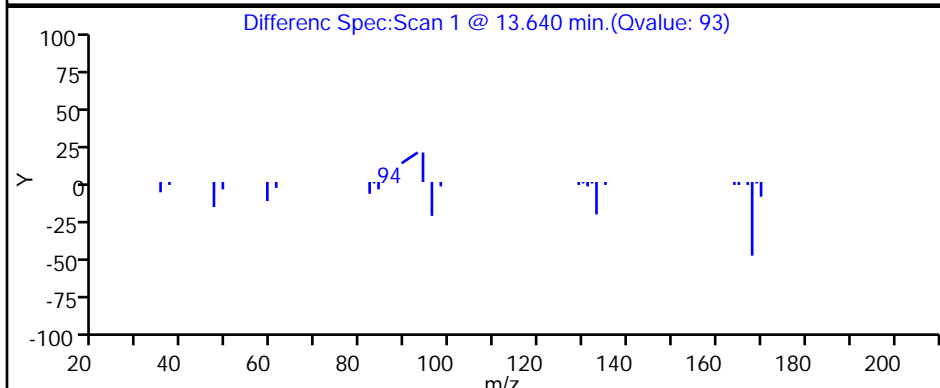
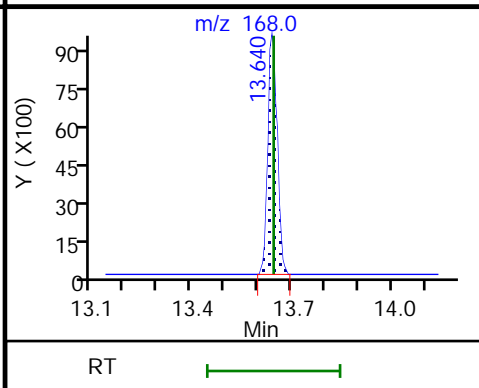
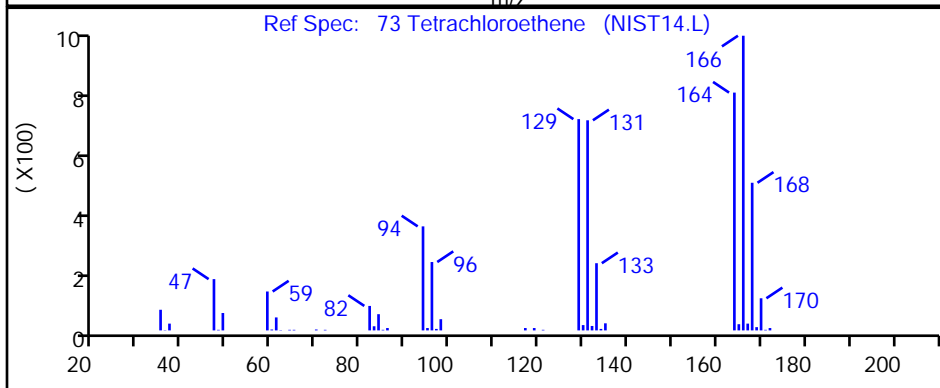
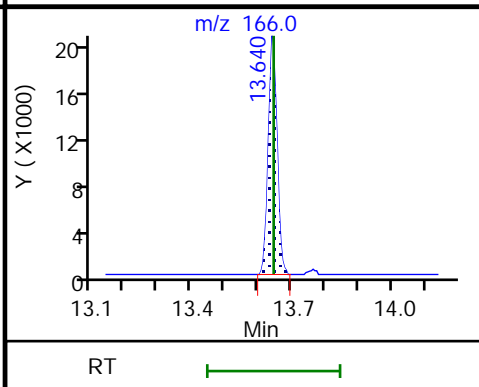
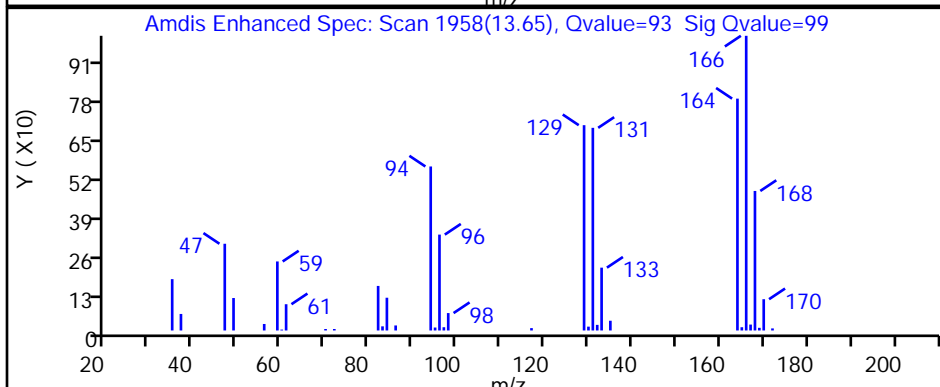
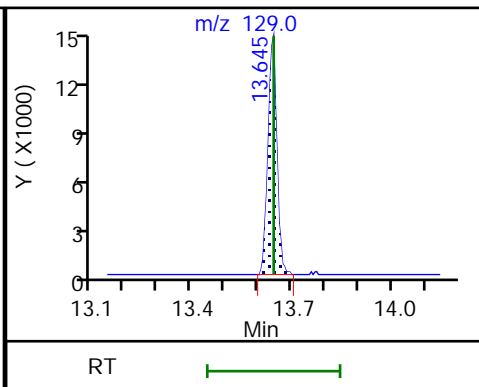
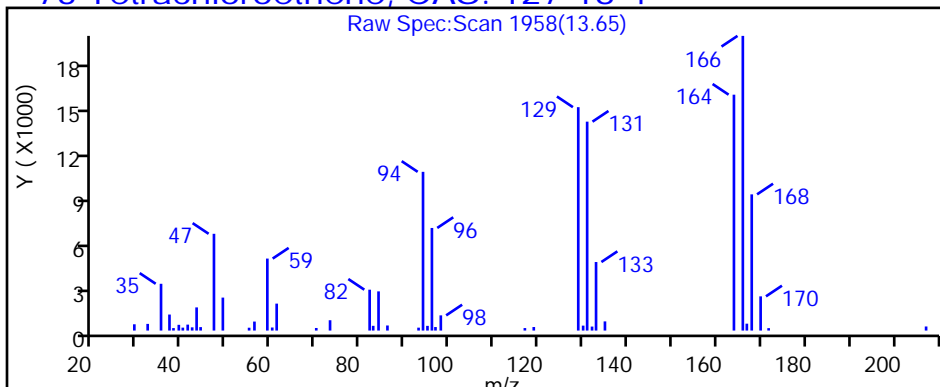
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P116.D

Injection Date: 27-Feb-2019 02:57:30

Instrument ID: MR

Lims ID: 140-14391-A-16

Lab Sample ID: 140-14391-16

Client ID: IA-113-C-26

Operator ID:

ALS Bottle#: 16

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

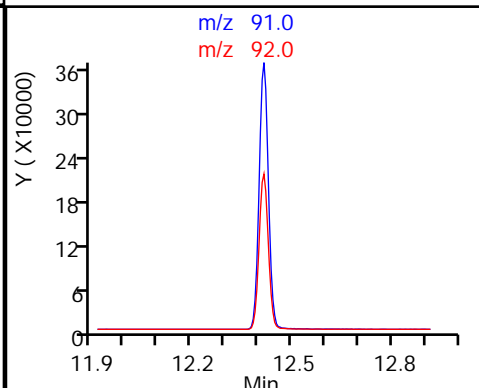
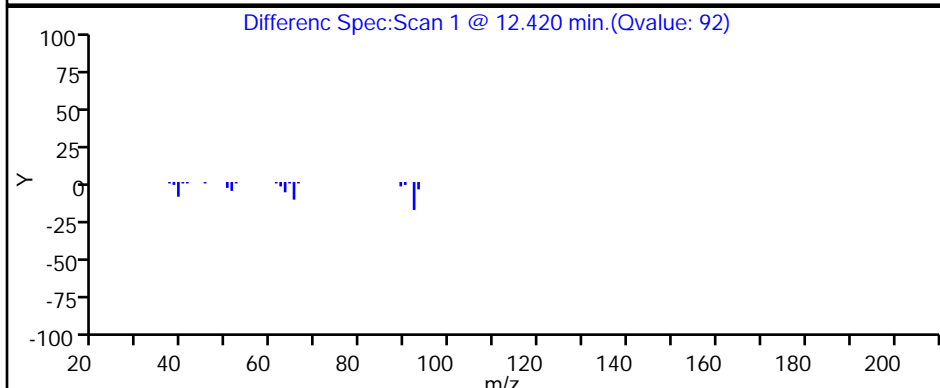
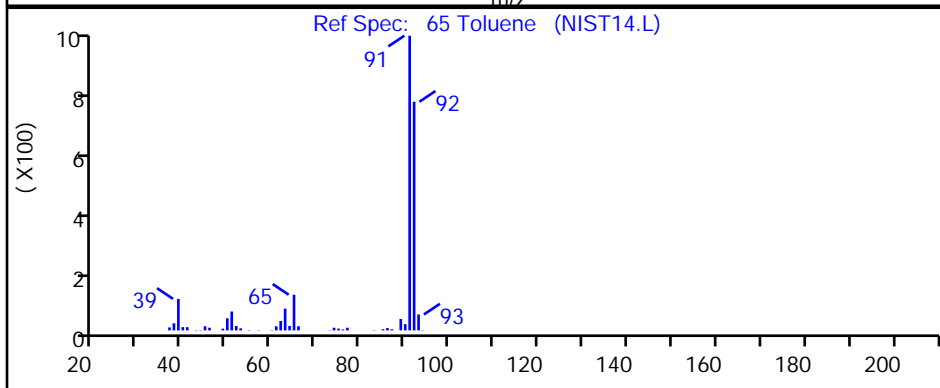
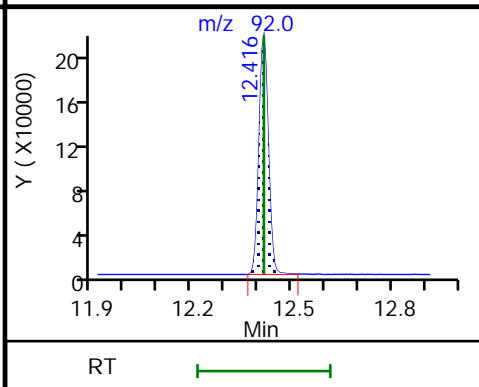
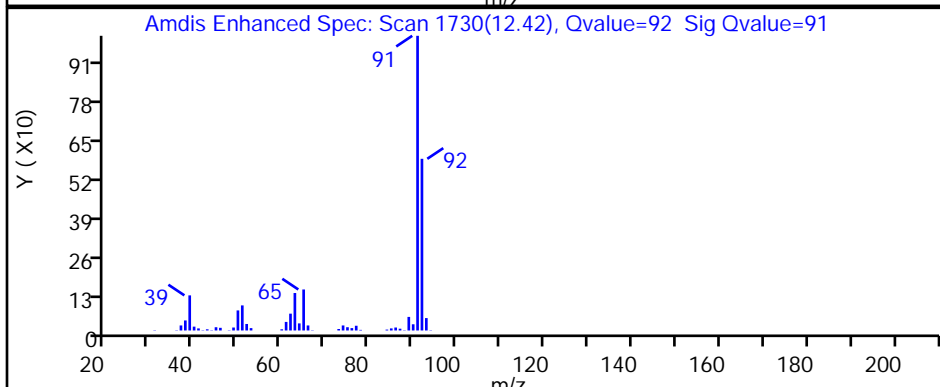
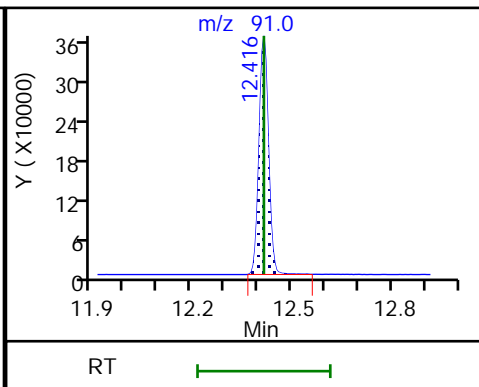
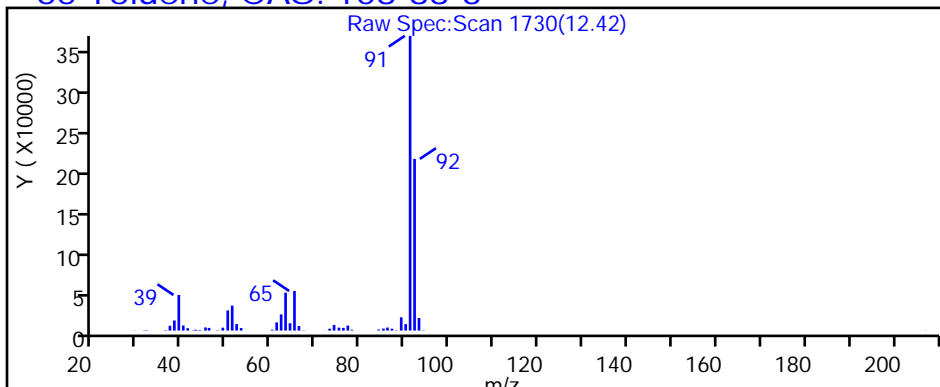
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P116.D

Injection Date: 27-Feb-2019 02:57:30

Instrument ID: MR

Lims ID: 140-14391-A-16

Lab Sample ID: 140-14391-16

Client ID: IA-113-C-26

Operator ID:

ALS Bottle#: 16

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

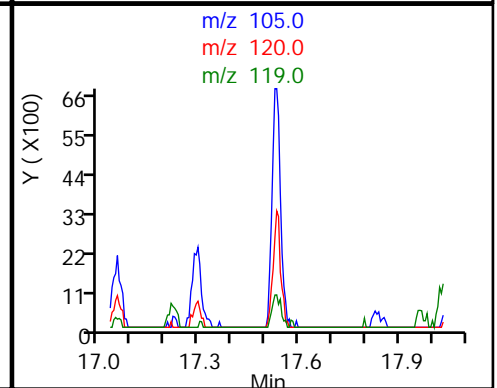
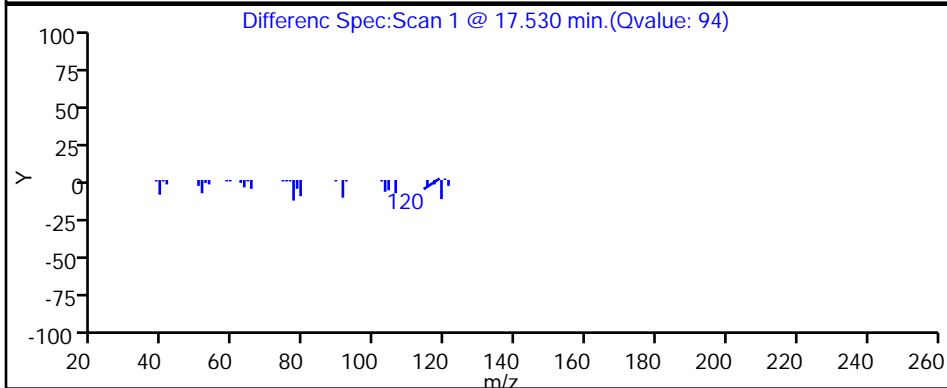
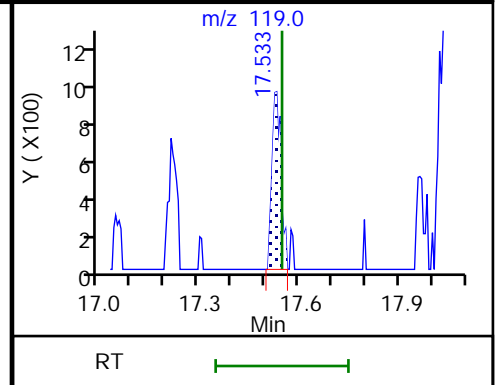
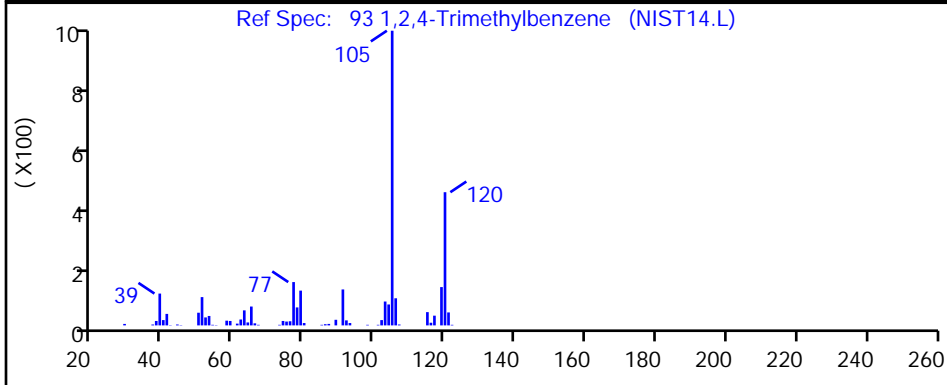
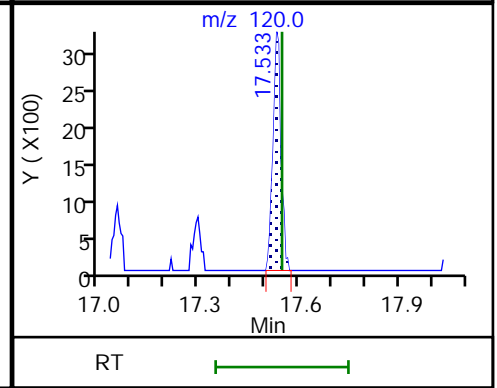
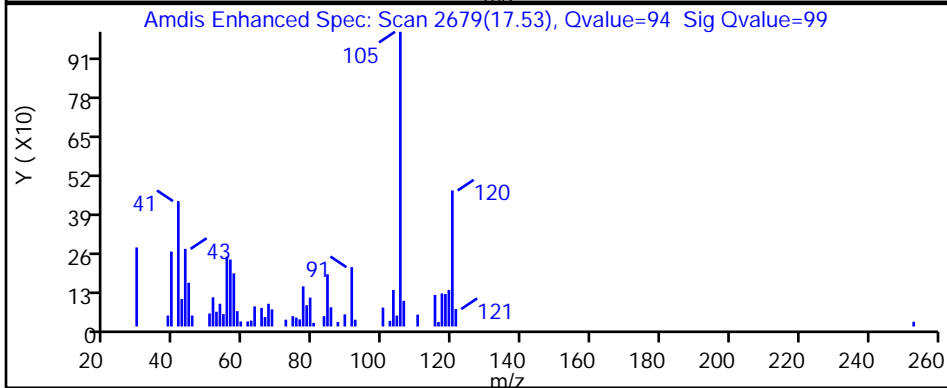
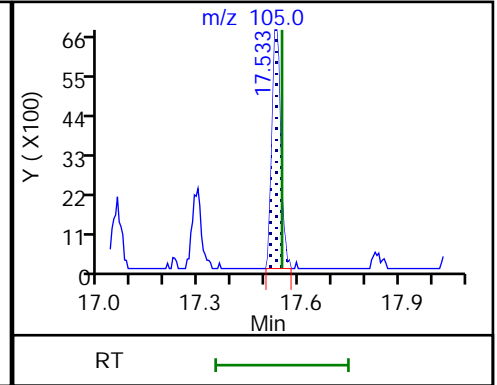
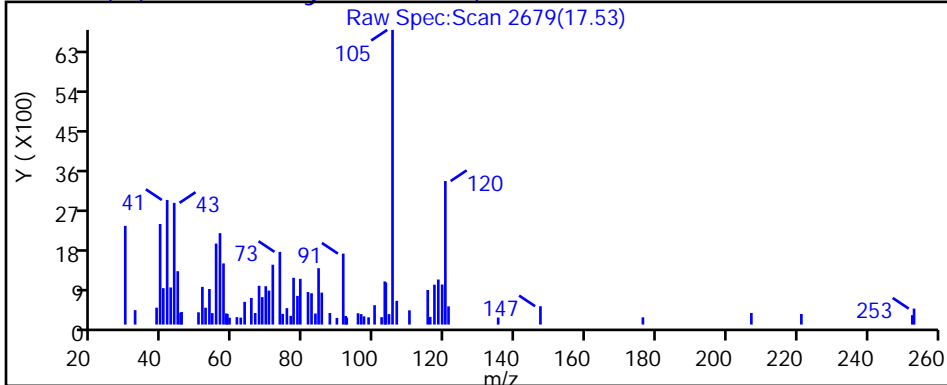
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P116.D

Injection Date: 27-Feb-2019 02:57:30

Instrument ID: MR

Lims ID: 140-14391-A-16

Lab Sample ID: 140-14391-16

Client ID: IA-113-C-26

Operator ID:

ALS Bottle#: 16

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

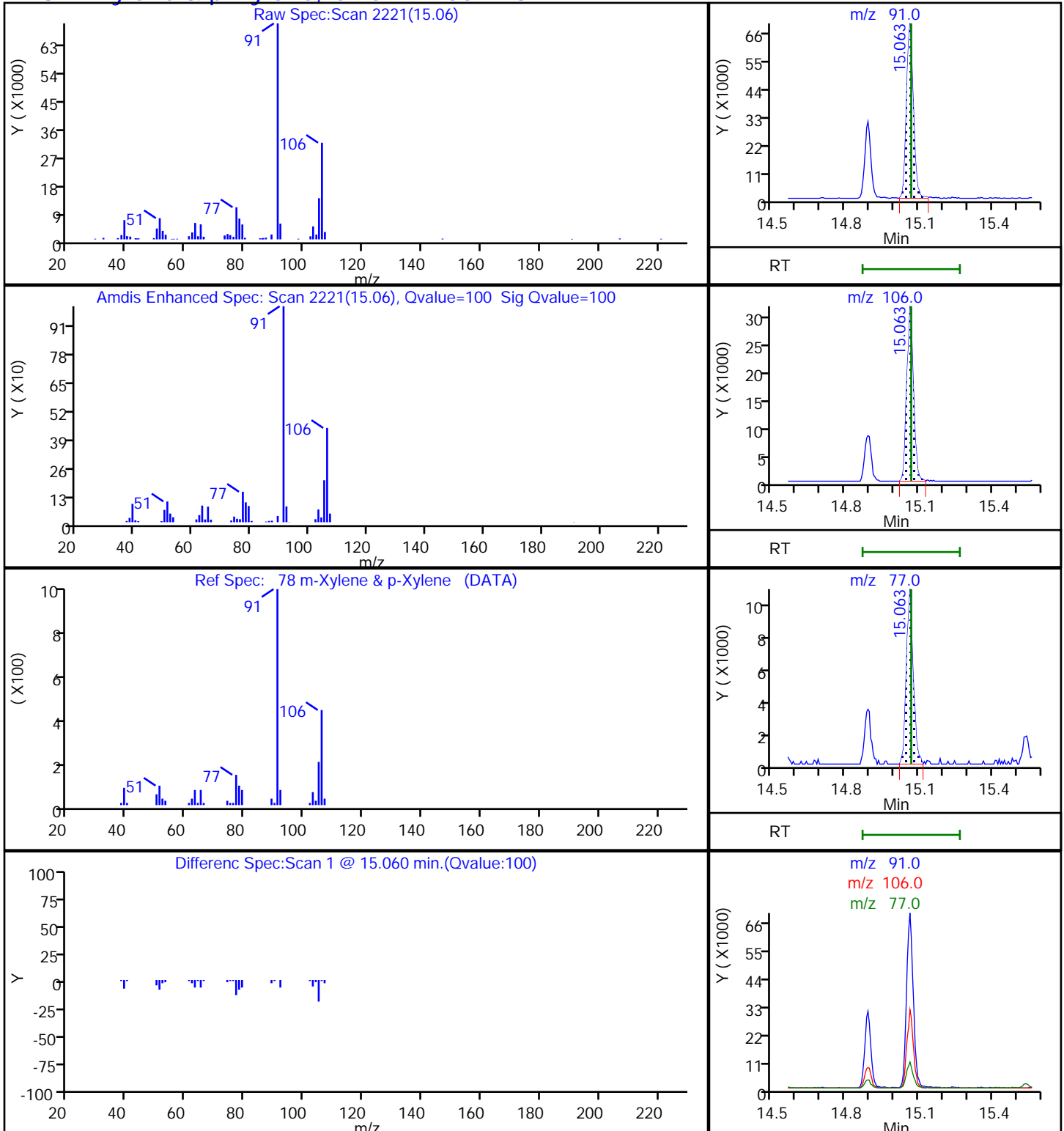
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P116.D

Injection Date: 27-Feb-2019 02:57:30

Instrument ID: MR

Lims ID: 140-14391-A-16

Lab Sample ID: 140-14391-16

Client ID: IA-113-C-26

Operator ID:

ALS Bottle#: 16 Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

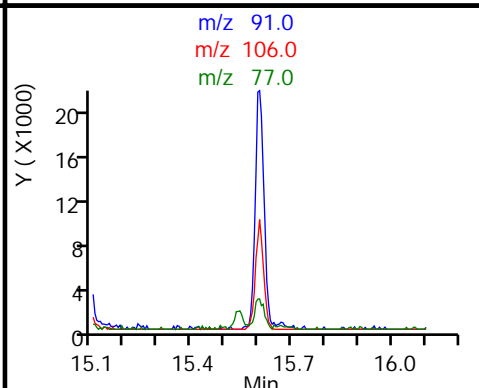
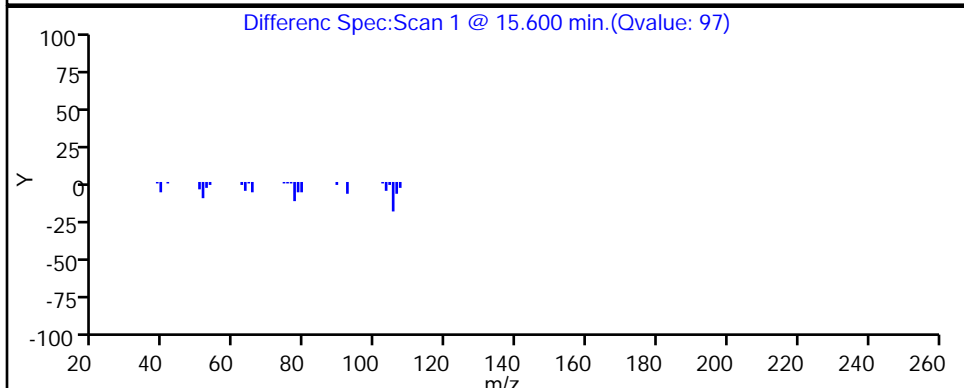
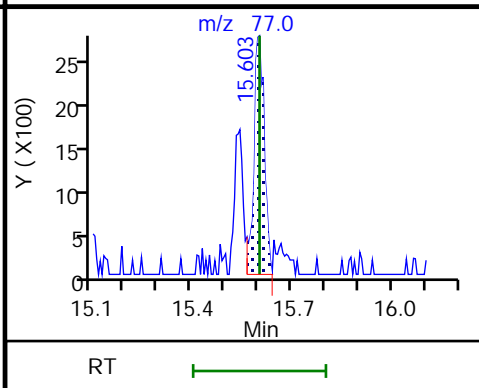
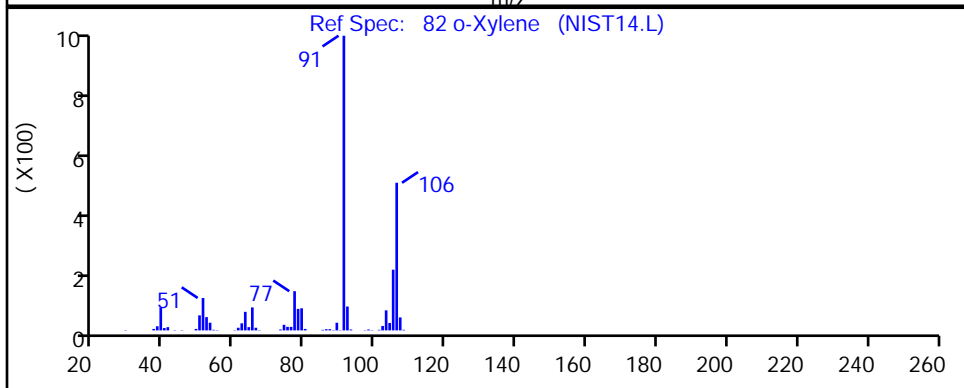
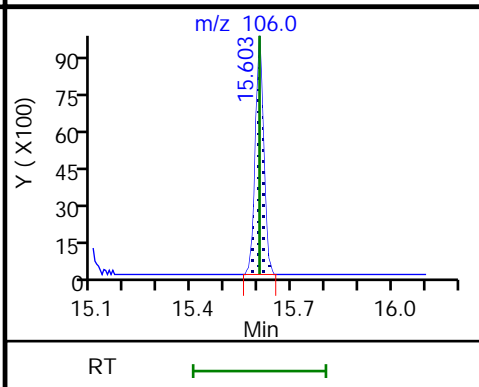
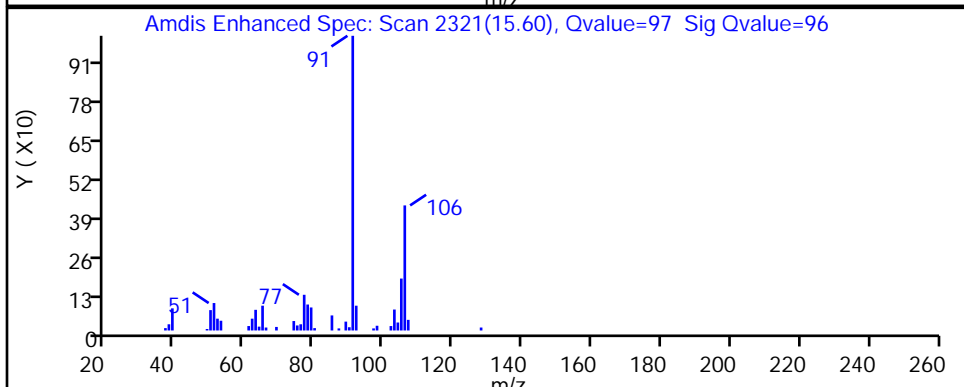
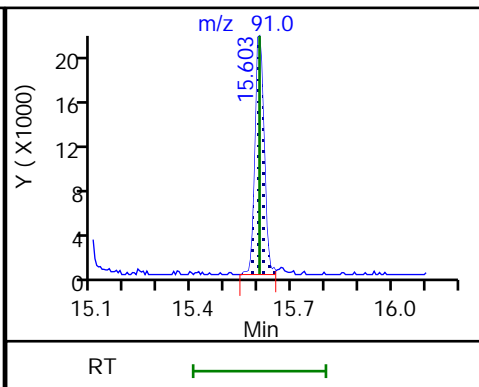
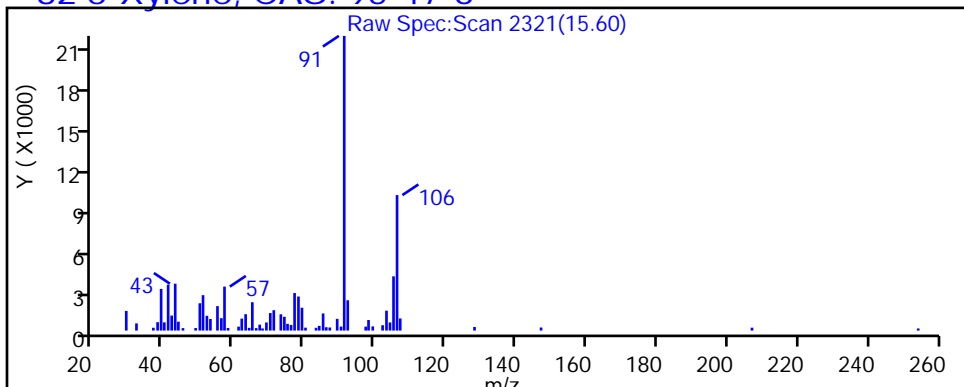
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



TestAmerica Knoxville

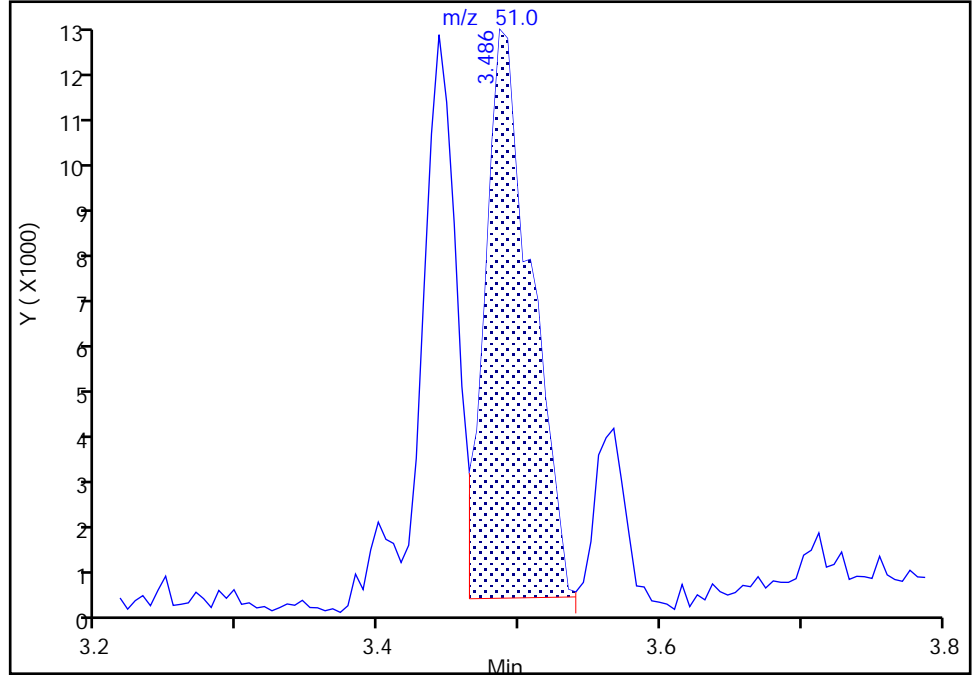
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Injection Date: 27-Feb-2019 02:57:30 Instrument ID: MR
Lims ID: 140-14391-A-16 Lab Sample ID: 140-14391-16
Client ID: IA-113-C-26
Operator ID: ALS Bottle#: 16 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

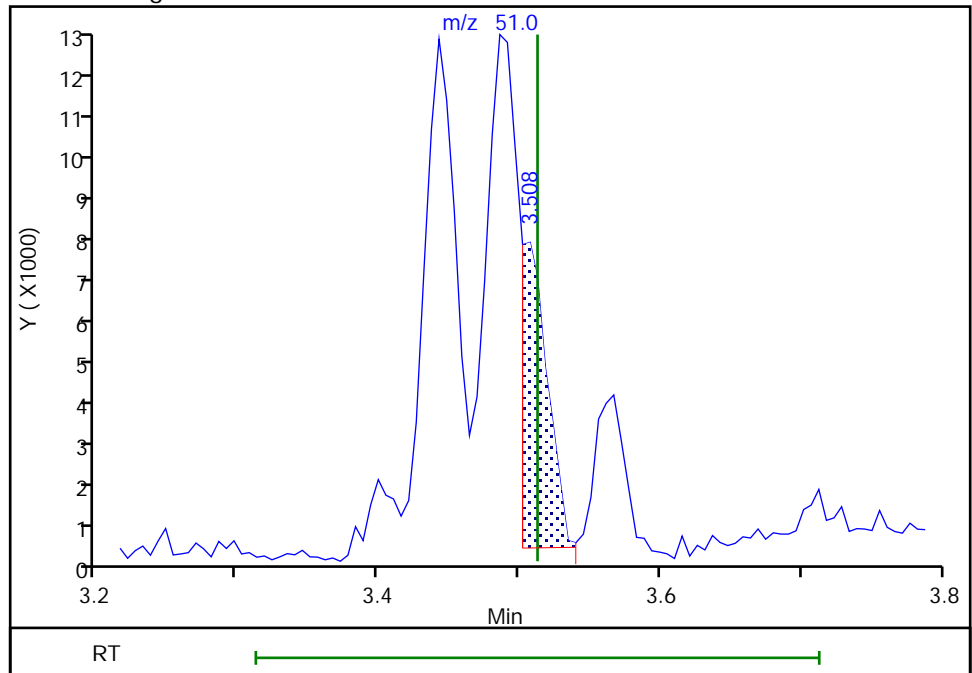
RT: 3.49
Area: 26414
Amount: 0.217121
Amount Units: ppb v/v

Processing Integration Results



RT: 3.51
Area: 9157
Amount: 0.075270
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 17:01:56

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-149-C-26 Lab Sample ID: 140-14391-17
 Matrix: Air Lab File ID: RB26P201.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:33
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.29	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.33	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	4.5		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.22		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.47	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-149-C-26 Lab Sample ID: 140-14391-17
 Matrix: Air Lab File ID: RB26P201.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:33
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.94	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	16		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P201.D
 Lims ID: 140-14391-A-17
 Client ID: IA-149-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 03:46:30 ALS Bottle#: 1 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-022
 Misc. Info.: 140-14391-a-17
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Mar-2019 08:23:55 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 17:07:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.384	0.001	71	196512	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1164319	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.503	14.502	0.001	90	1009555	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.222	0.000	89	868658	4.05	
8 Dichlorodifluoromethane	85	3.556	3.561	-0.005	99	14062	0.0658	
31 Methylene Chloride	84	5.325	5.325	0.000	91	59087	0.8989	
47 Benzene	78	8.894	8.889	0.005	42	11133	0.0587	
56 Trichloroethene	130	10.199	10.199	0.000	92	4944	0.0432	
65 Toluene	91	12.416	12.411	0.000	92	104258	0.4309	
78 m-Xylene & p-Xylene	91	15.069	15.063	0.000	99	19279	0.0674	
82 o-Xylene	91	15.603	15.597	0.001	94	8051	0.0268	
S 121 Xylenes, Total	100				0		0.0942	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P201.D

Injection Date: 27-Feb-2019 03:46:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-17

Lab Sample ID: 140-14391-17

Worklist Smp#: 22

Client ID: IA-149-C-26

Purge Vol: 500.000 mL

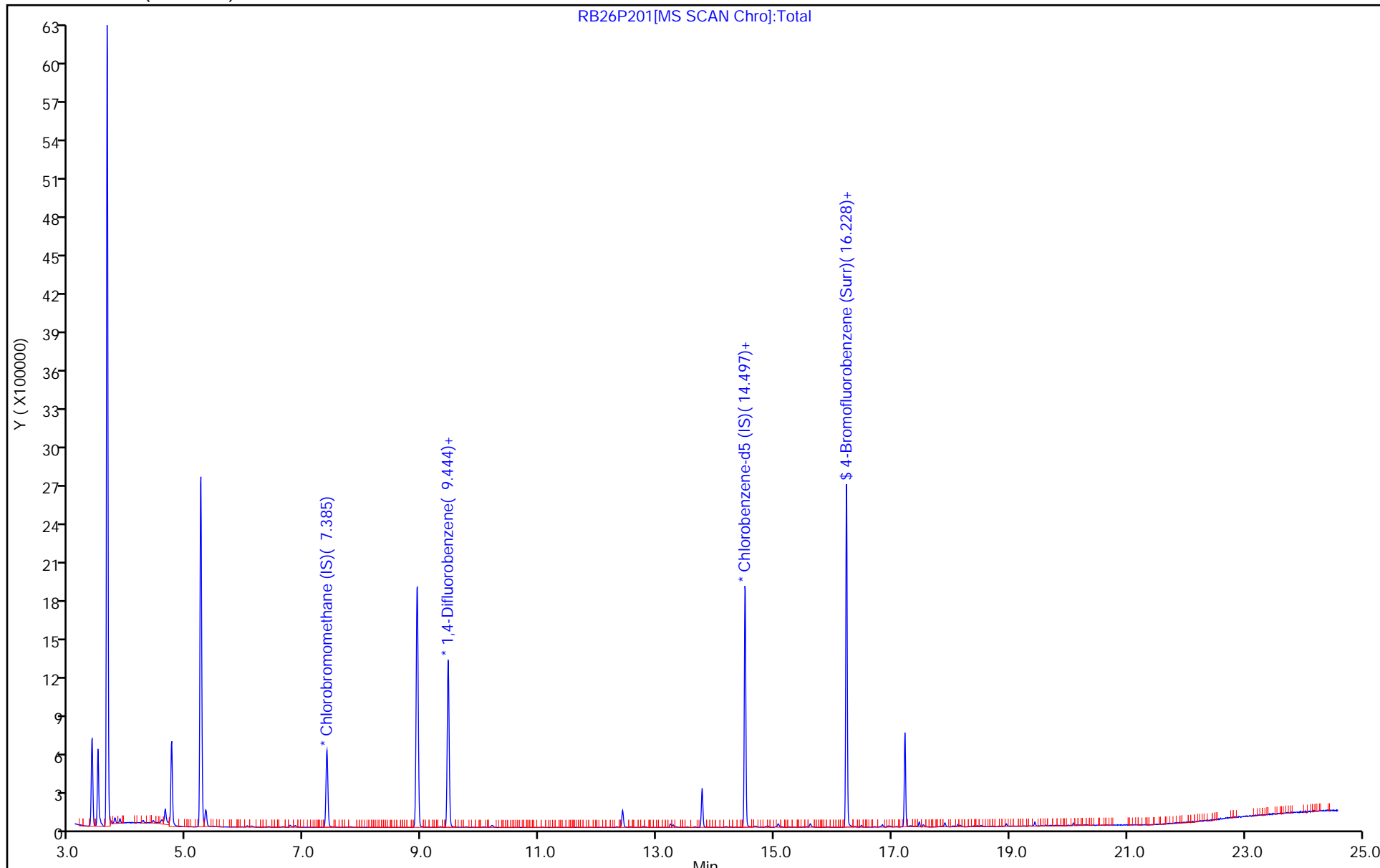
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P201.D
 Lims ID: 140-14391-A-17
 Client ID: IA-149-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 03:46:30 ALS Bottle#: 1 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-022
 Misc. Info.: 140-14391-a-17
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Mar-2019 08:23:55 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 17:07:16

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.05	101.16

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P201.D

Injection Date: 27-Feb-2019 03:46:30

Instrument ID: MR

Lims ID: 140-14391-A-17

Lab Sample ID: 140-14391-17

Client ID: IA-149-C-26

Operator ID:

ALS Bottle#: 1 Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

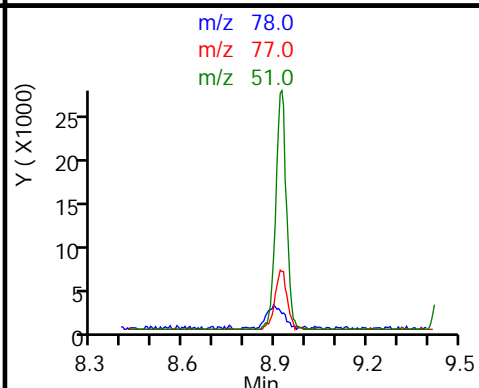
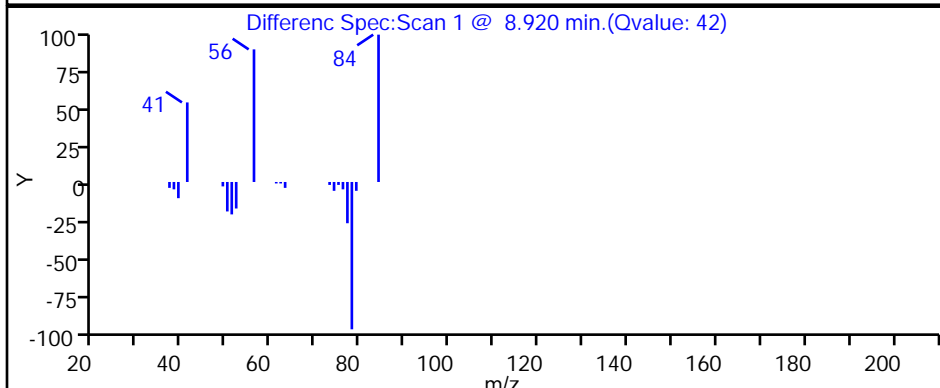
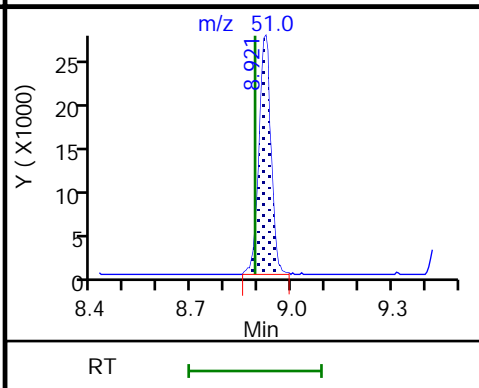
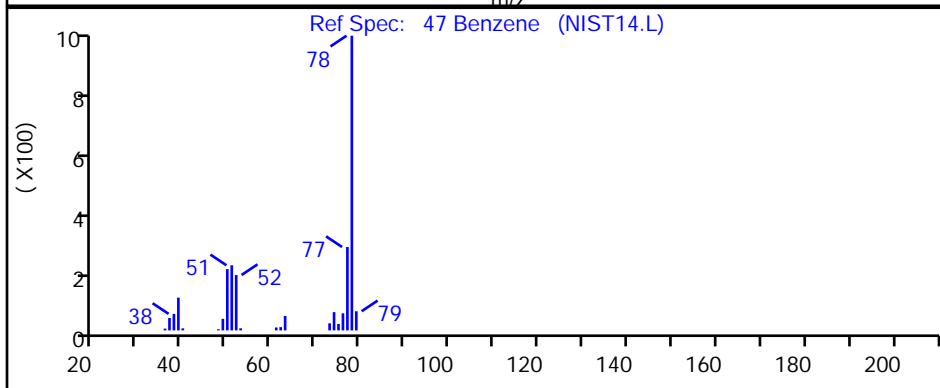
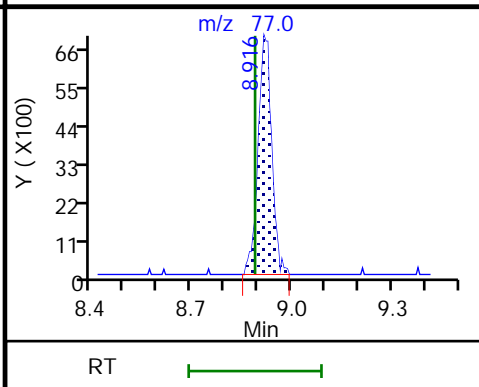
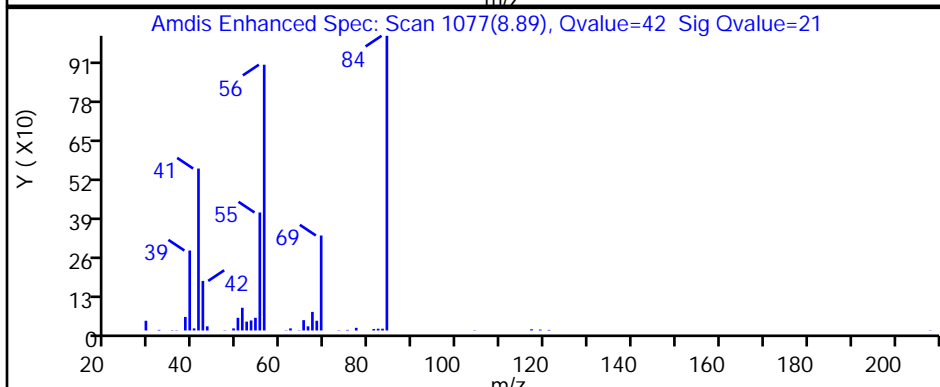
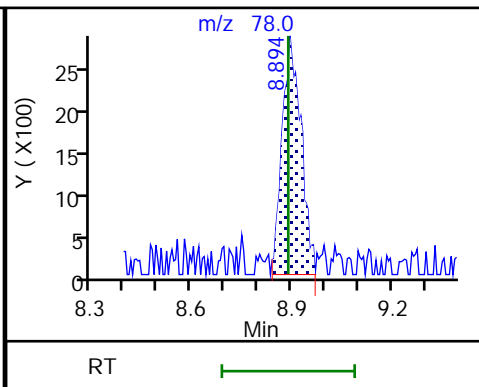
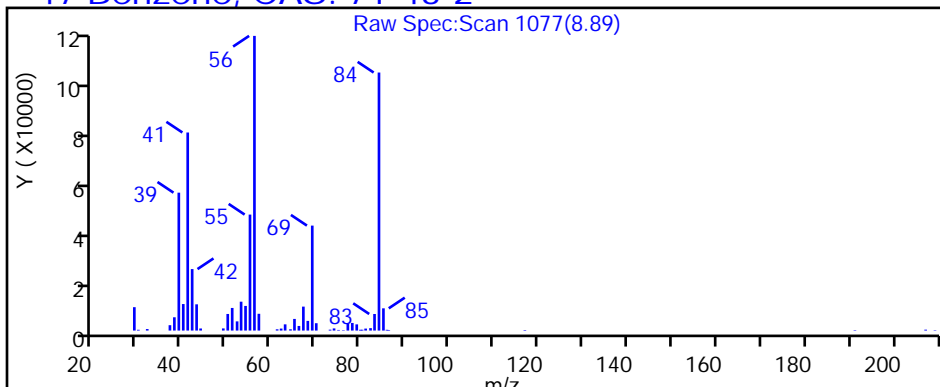
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P201.D

Injection Date: 27-Feb-2019 03:46:30

Instrument ID: MR

Lims ID: 140-14391-A-17

Lab Sample ID: 140-14391-17

Client ID: IA-149-C-26

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

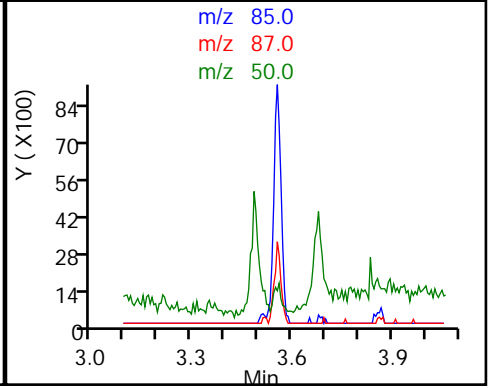
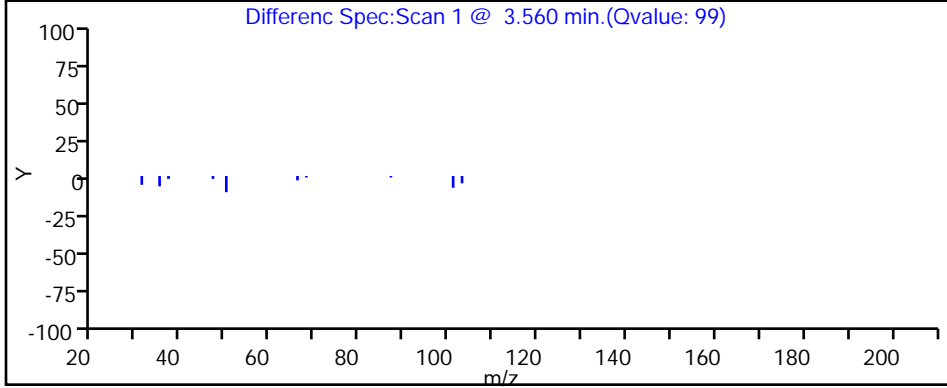
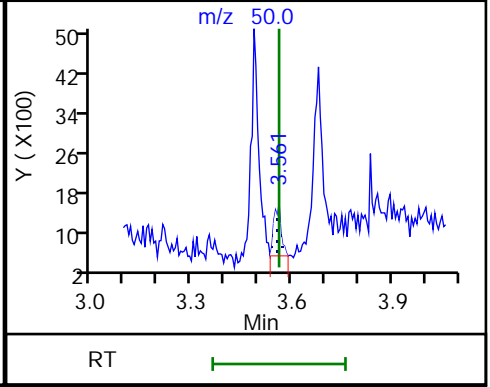
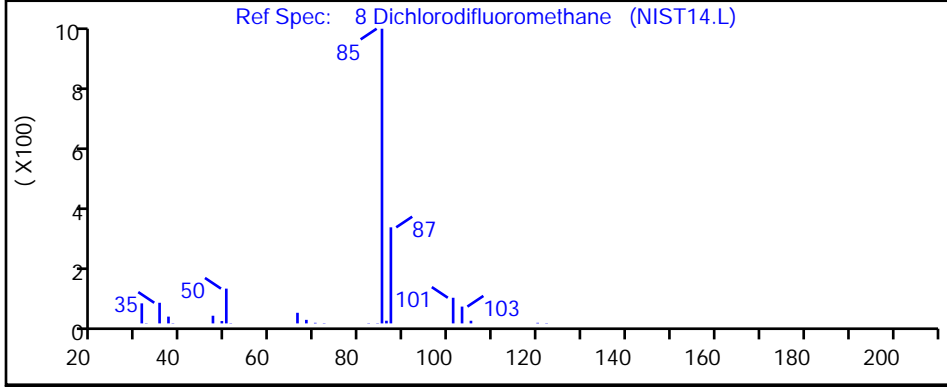
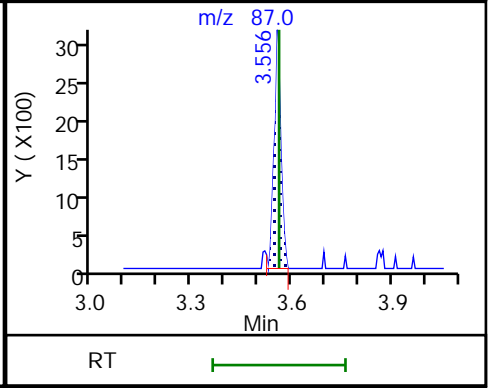
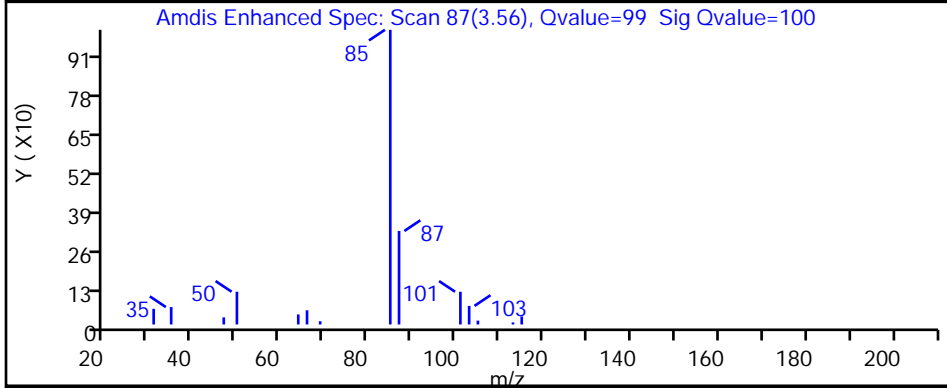
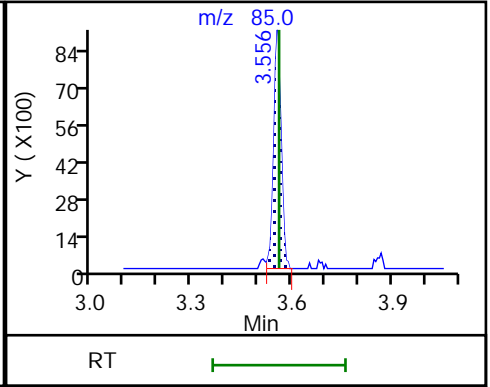
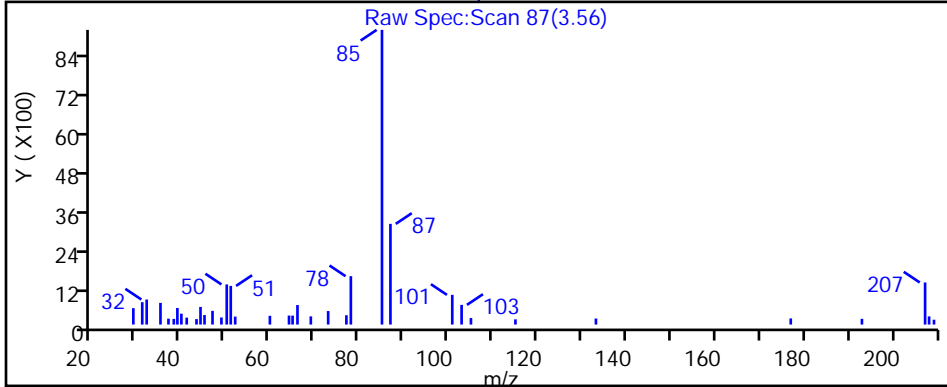
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P201.D

Injection Date: 27-Feb-2019 03:46:30

Instrument ID: MR

Lims ID: 140-14391-A-17

Lab Sample ID: 140-14391-17

Client ID: IA-149-C-26

Operator ID:

ALS Bottle#: 1 Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

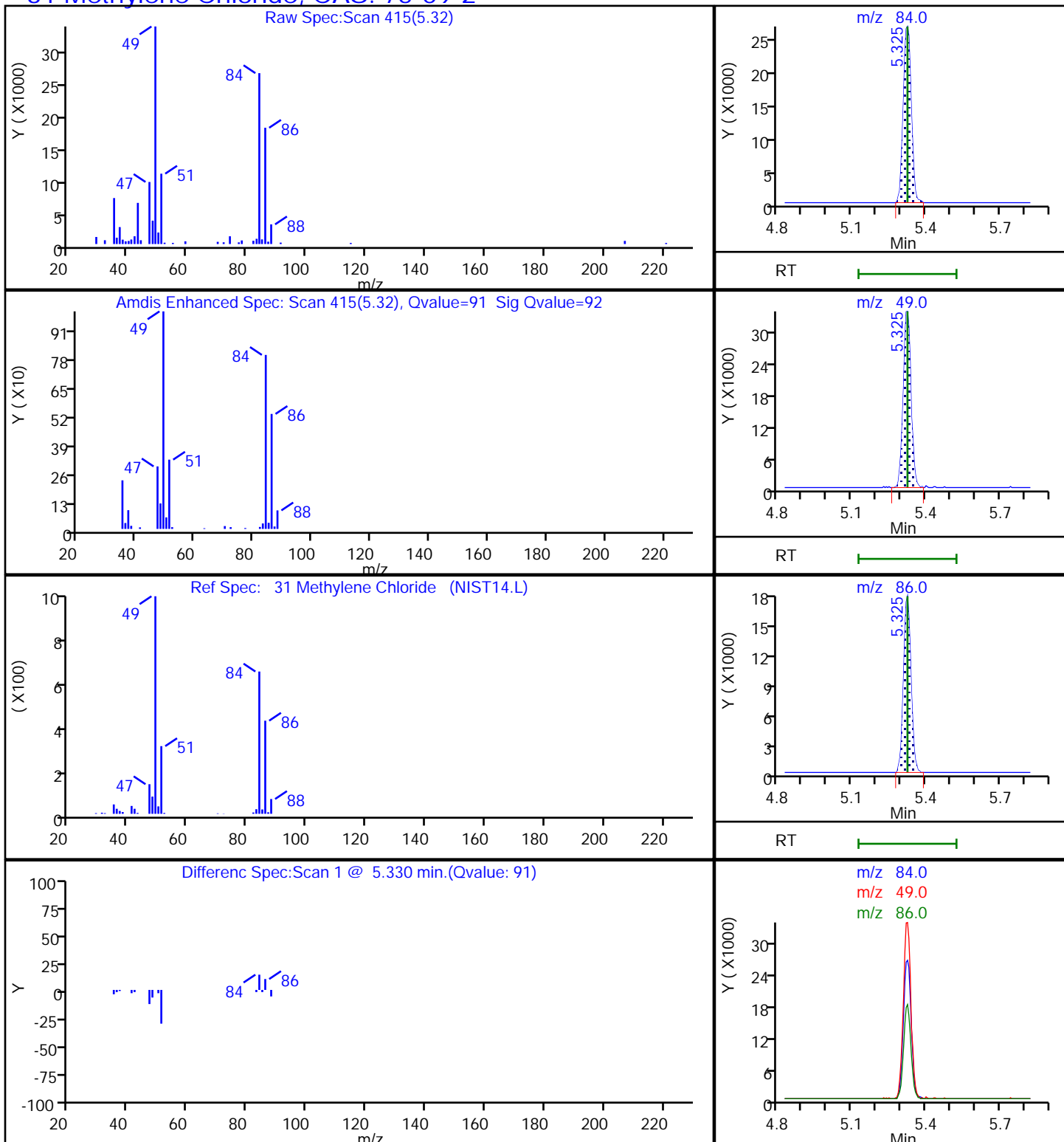
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P201.D

Injection Date: 27-Feb-2019 03:46:30

Instrument ID: MR

Lims ID: 140-14391-A-17

Lab Sample ID: 140-14391-17

Client ID: IA-149-C-26

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

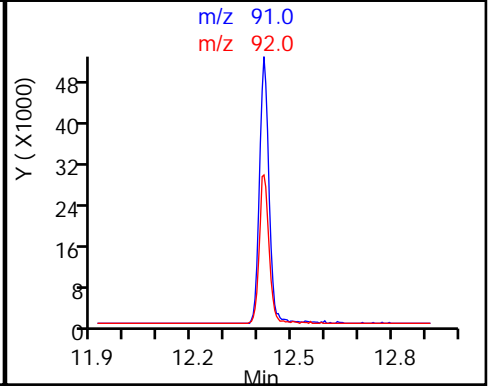
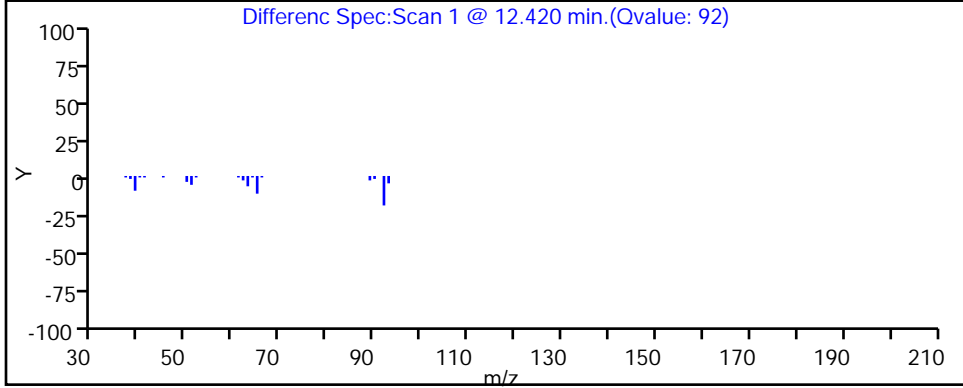
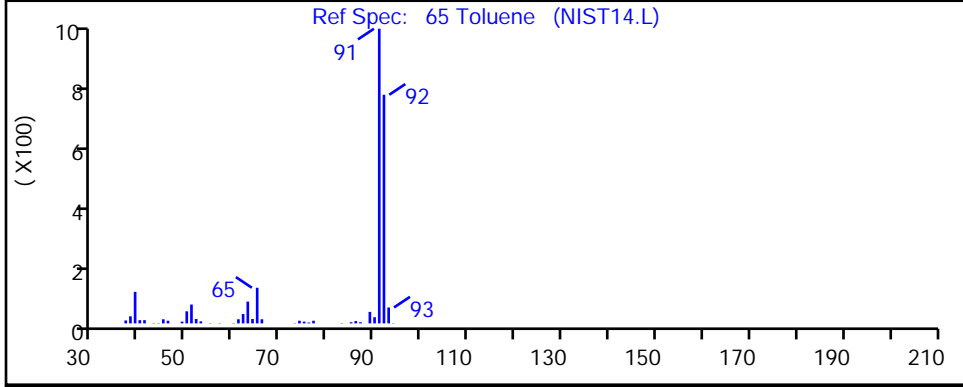
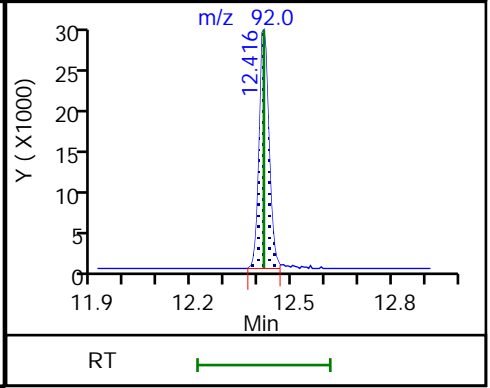
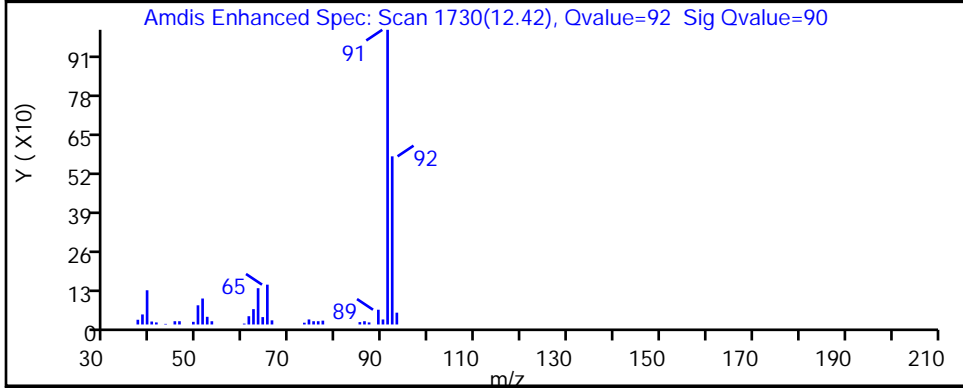
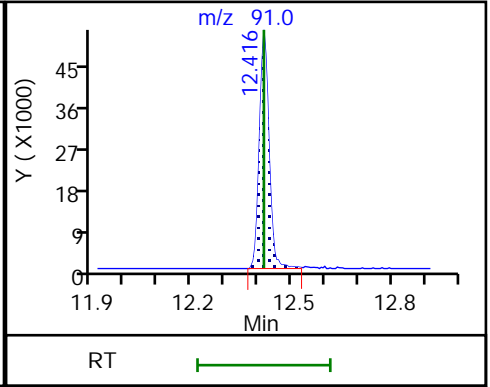
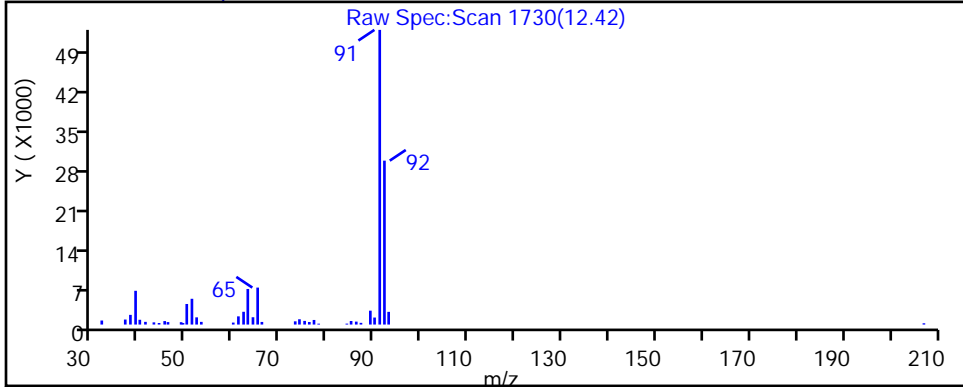
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P201.D

Injection Date: 27-Feb-2019 03:46:30

Instrument ID: MR

Lims ID: 140-14391-A-17

Lab Sample ID: 140-14391-17

Client ID: IA-149-C-26

Operator ID:

ALS Bottle#: 1 Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

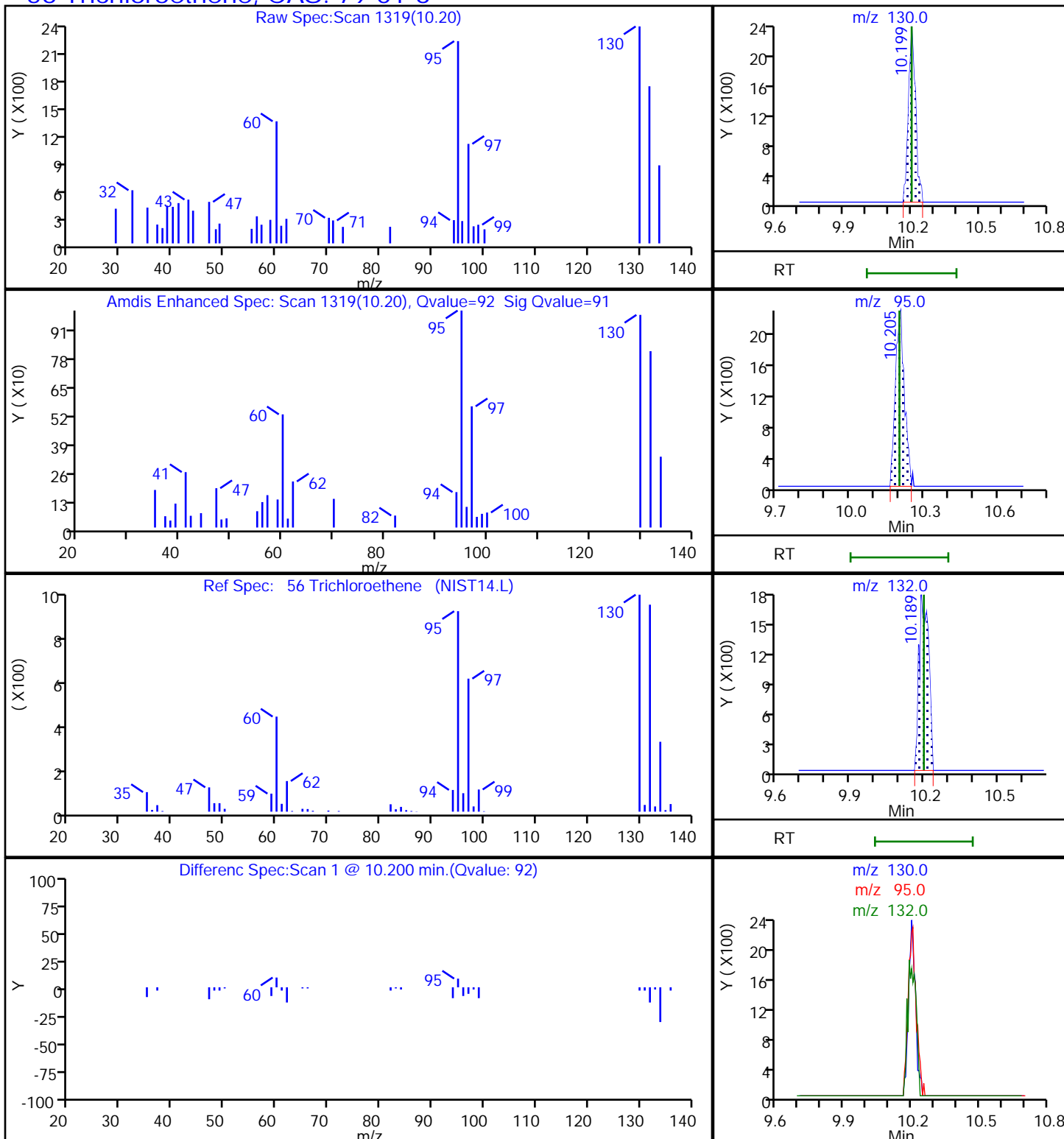
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P201.D

Injection Date: 27-Feb-2019 03:46:30

Instrument ID: MR

Lims ID: 140-14391-A-17

Lab Sample ID: 140-14391-17

Client ID: IA-149-C-26

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

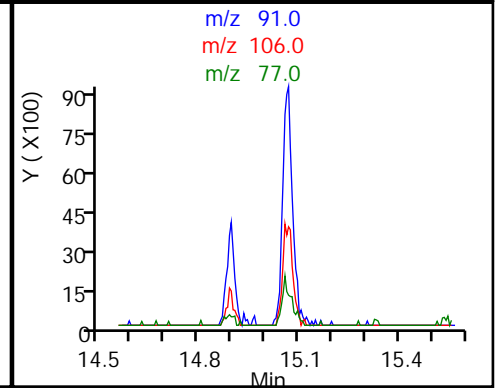
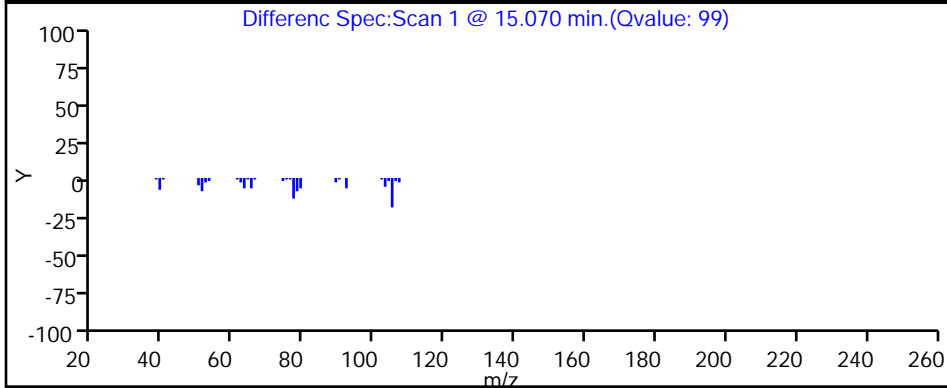
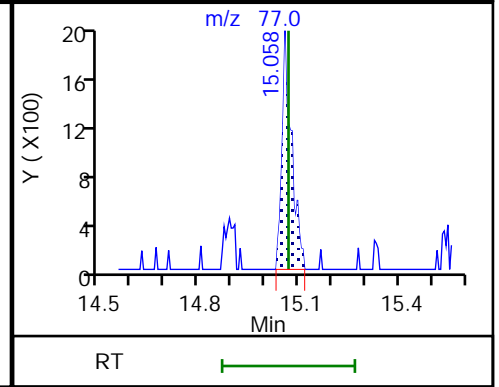
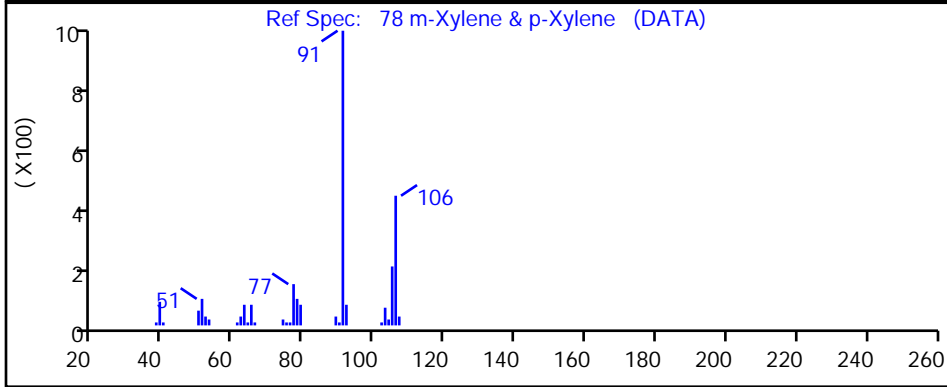
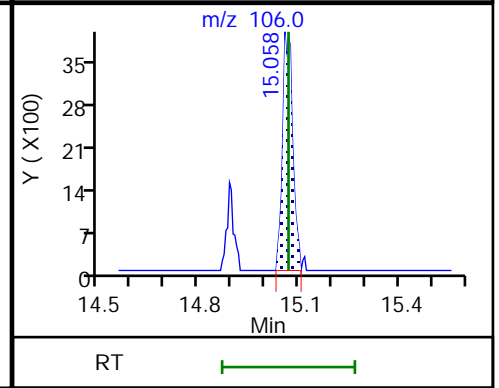
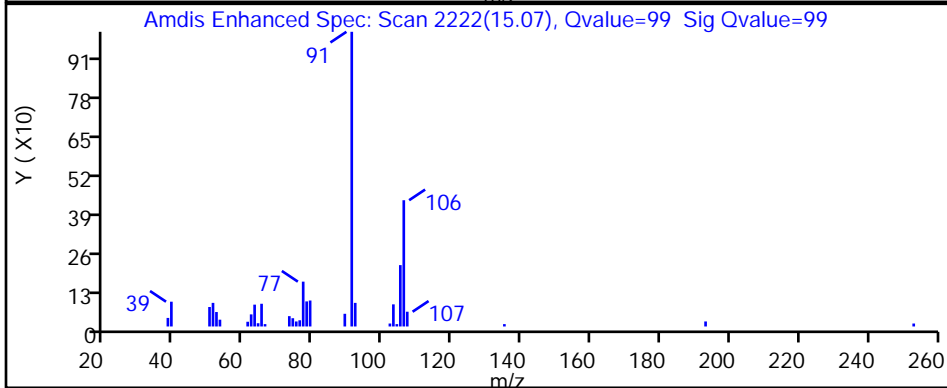
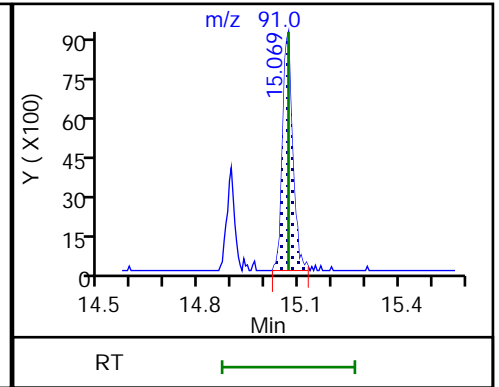
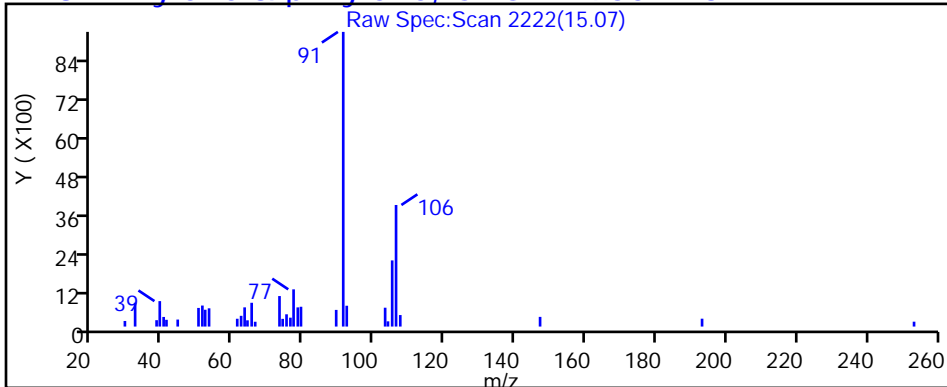
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P201.D

Injection Date: 27-Feb-2019 03:46:30

Instrument ID: MR

Lims ID: 140-14391-A-17

Lab Sample ID: 140-14391-17

Client ID: IA-149-C-26

Operator ID:

ALS Bottle#: 1 Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

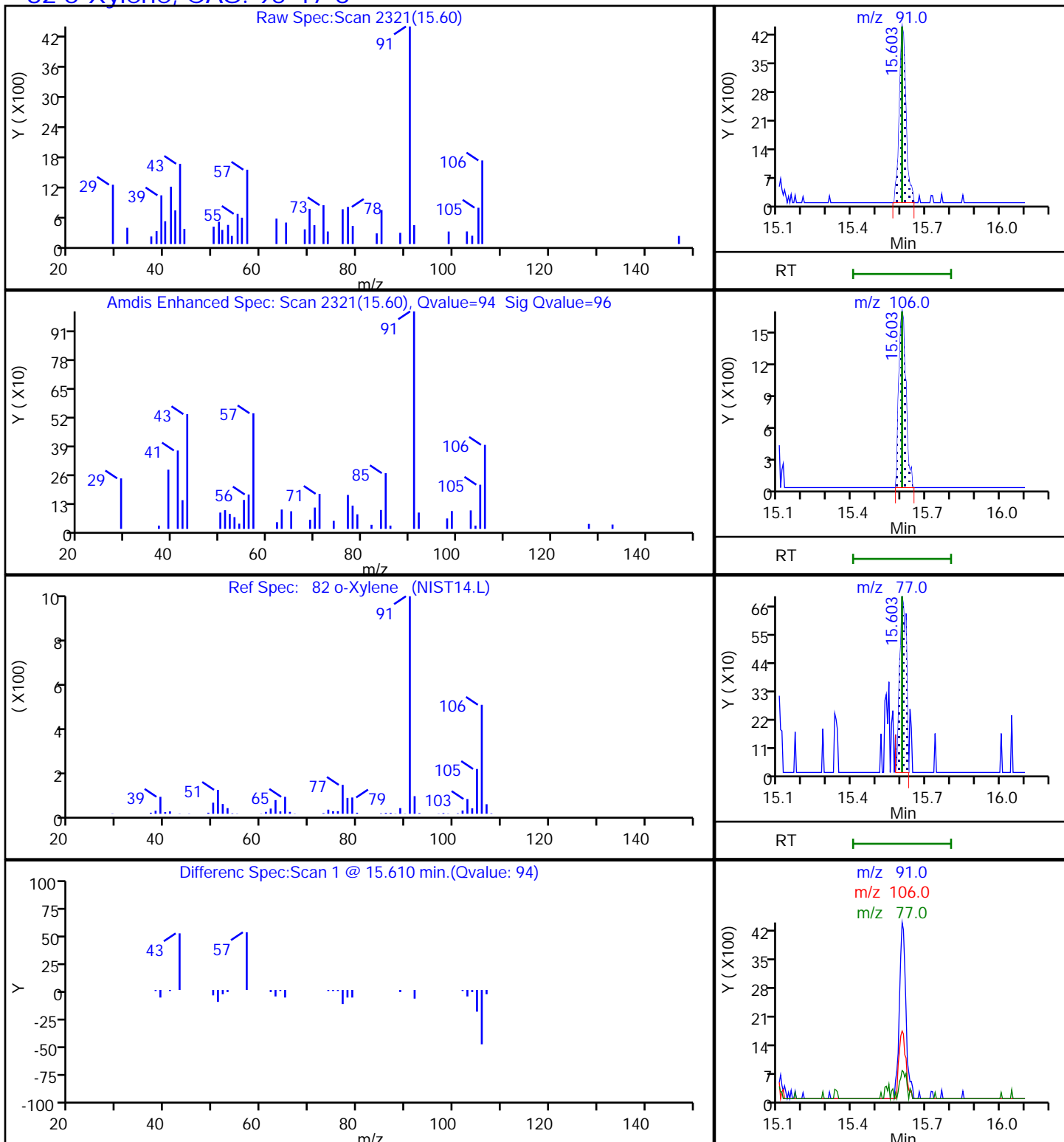
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6

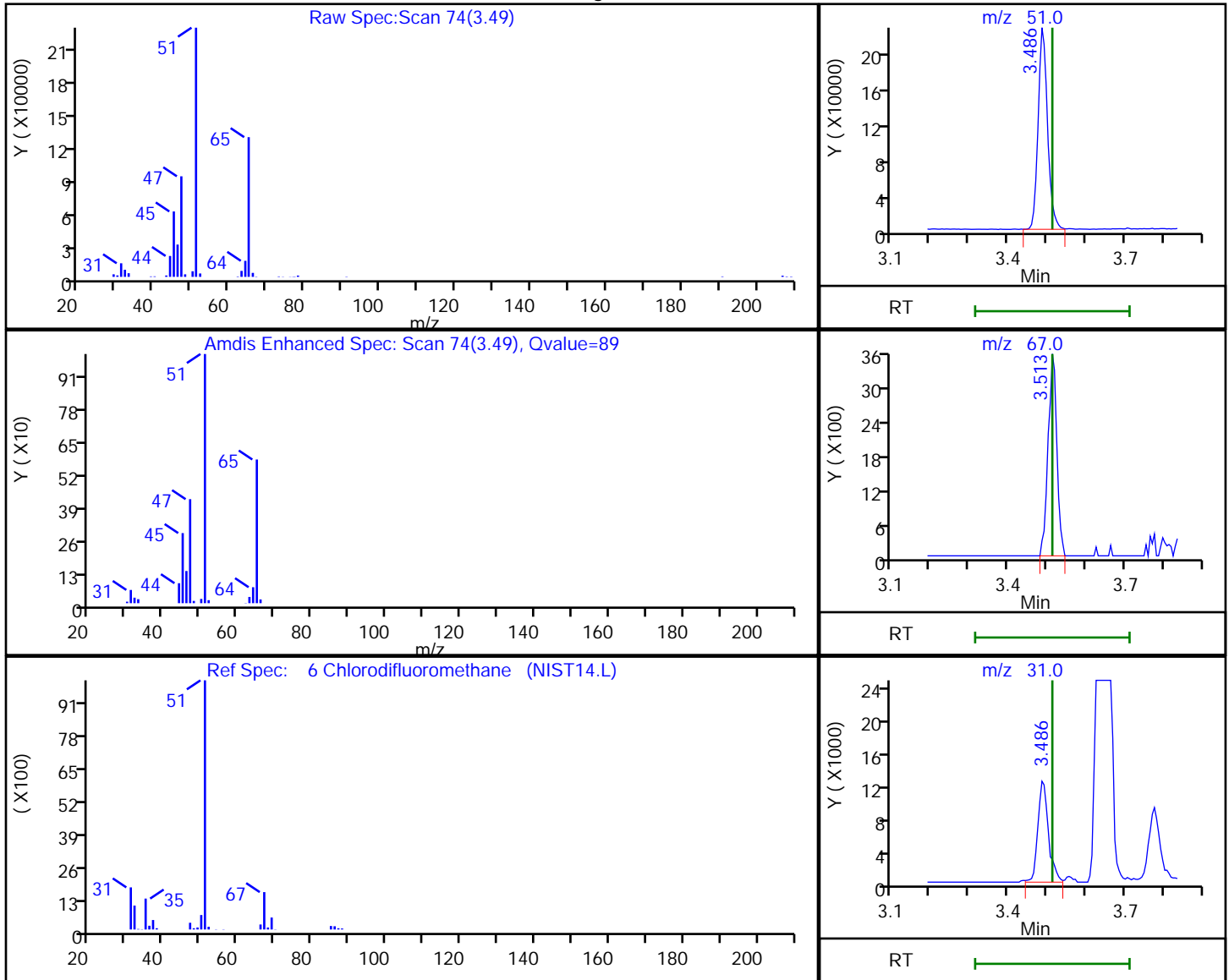


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P201.D
 Injection Date: 27-Feb-2019 03:46:30 Instrument ID: MR
 Lims ID: 140-14391-A-17 Lab Sample ID: 140-14391-17
 Client ID: IA-149-C-26
 Operator ID: ALS Bottle#: 1 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Processing Results



RT	Mass	Response	Amount
3.49	51.00	380228	3.260961
3.51	67.00	5638	
3.49	31.00	23520	

Reviewer: khachitpongpanits, 04-Mar-2019 08:23:52

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-126-C-26 Lab Sample ID: 140-14391-18
 Matrix: Air Lab File ID: RB26P202.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 04:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.32	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	5.9		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	4.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.27		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.30	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-126-C-26 Lab Sample ID: 140-14391-18
 Matrix: Air Lab File ID: RB26P202.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 04:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	21		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	17		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P202.D
 Lims ID: 140-14391-A-18
 Client ID: IA-126-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 04:35:30 ALS Bottle#: 2 Worklist Smp#: 23
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-023
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Mar-2019 08:24:03 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 17:30:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.384	0.001	72	203305	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1197023	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.497	14.502	-0.005	91	1043940	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.223	16.222	-0.005	89	892396	4.02	
8 Dichlorodifluoromethane	85	3.556	3.561	-0.005	97	12369	0.0559	
31 Methylene Chloride	84	5.325	5.325	0.000	91	80512	1.18	
47 Benzene	78	8.889	8.889	0.000	41	12330	0.0632	
56 Trichloroethene	130	10.199	10.199	0.000	94	6332	0.0539	
65 Toluene	91	12.416	12.411	0.000	93	229884	0.9189	
78 m-Xylene & p-Xylene	91	15.063	15.063	-0.006	98	17905	0.0605	
S 121 Xylenes, Total	100				0		0.0605	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P202.D

Injection Date: 27-Feb-2019 04:35:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14391-A-18

Lab Sample ID: 140-14391-18

Worklist Smp#: 23

Client ID: IA-126-C-26

Purge Vol: 500.000 mL

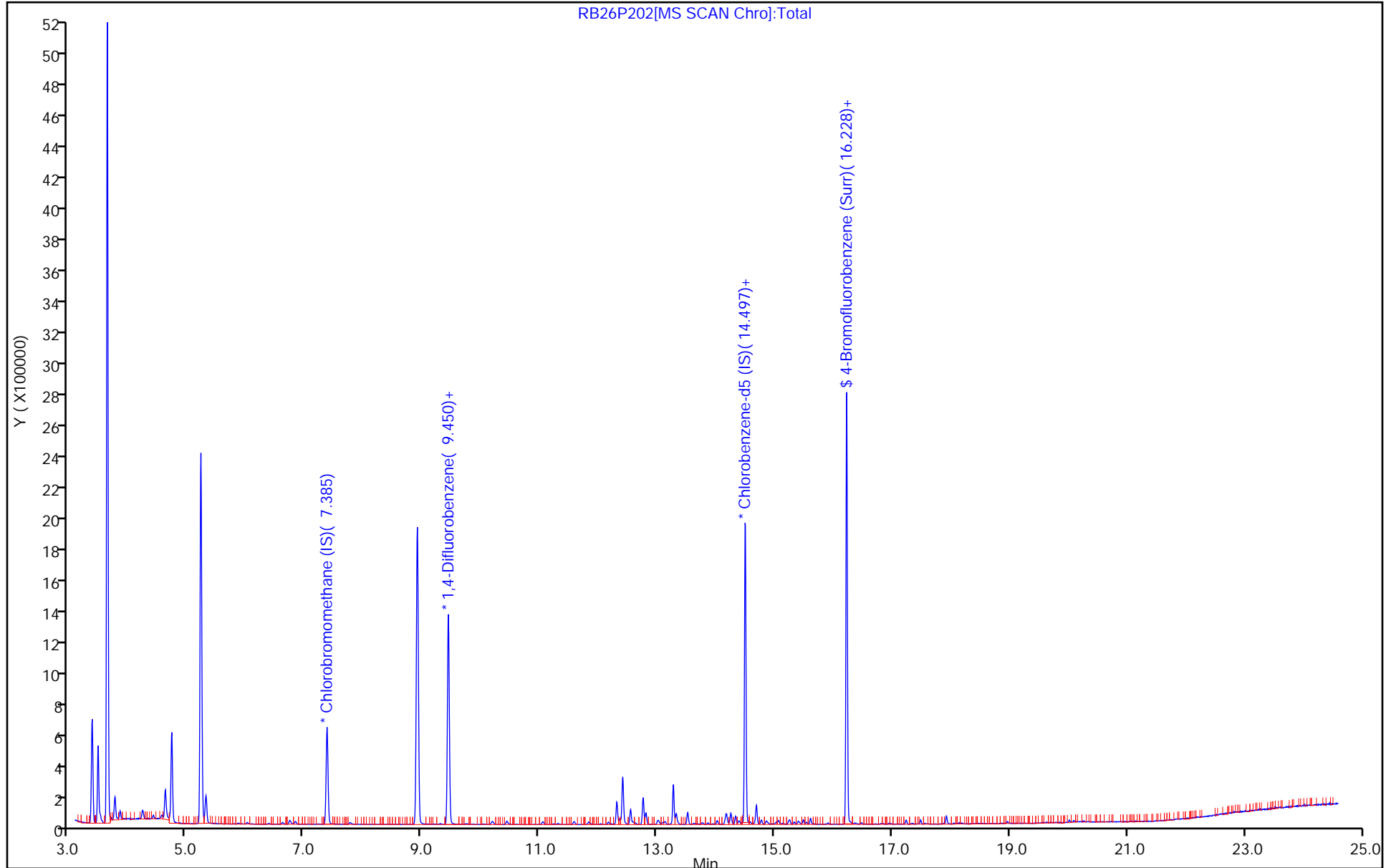
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P202.D
 Lims ID: 140-14391-A-18
 Client ID: IA-126-C-26
 Sample Type: Client
 Inject. Date: 27-Feb-2019 04:35:30 ALS Bottle#: 2 Worklist Smp#: 23
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-023
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Mar-2019 08:24:03 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 17:30:50

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.02	100.50

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P202.D

Injection Date: 27-Feb-2019 04:35:30

Instrument ID: MR

Lims ID: 140-14391-A-18

Lab Sample ID: 140-14391-18

Client ID: IA-126-C-26

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

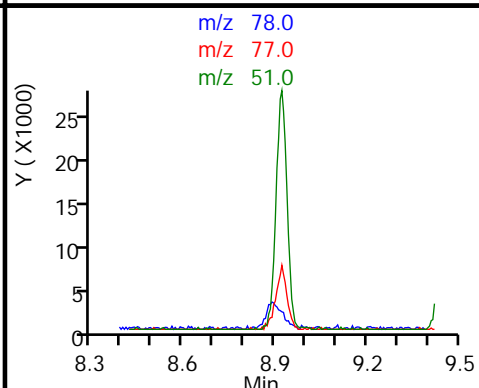
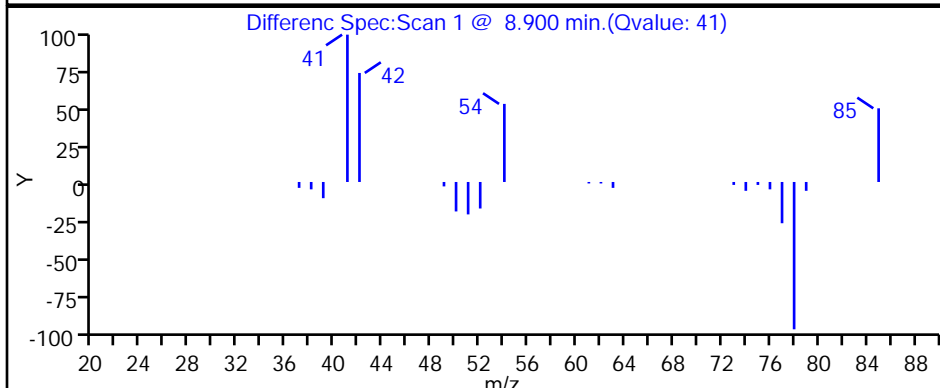
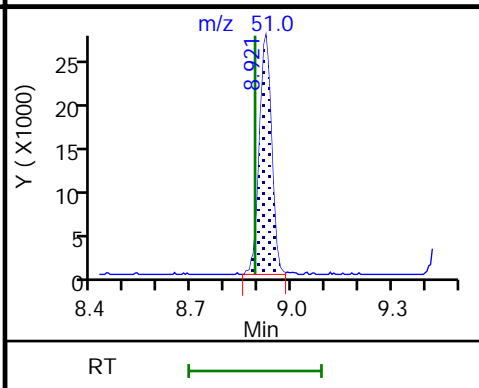
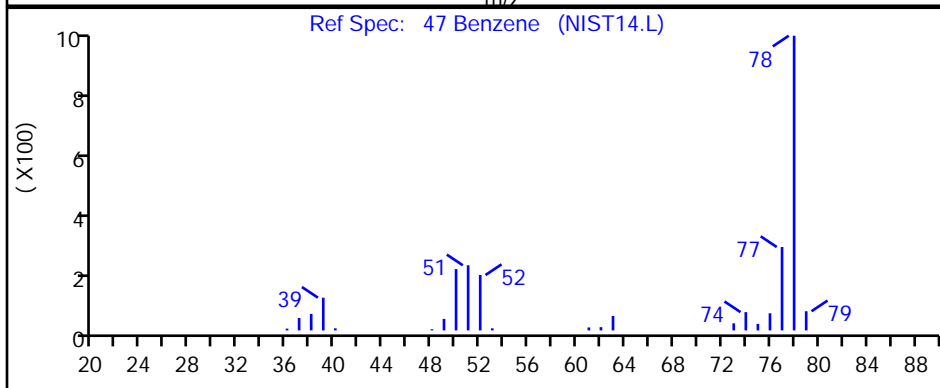
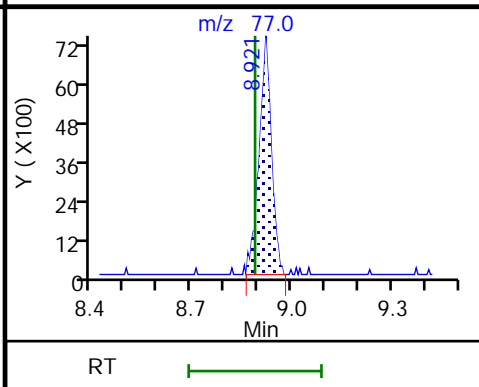
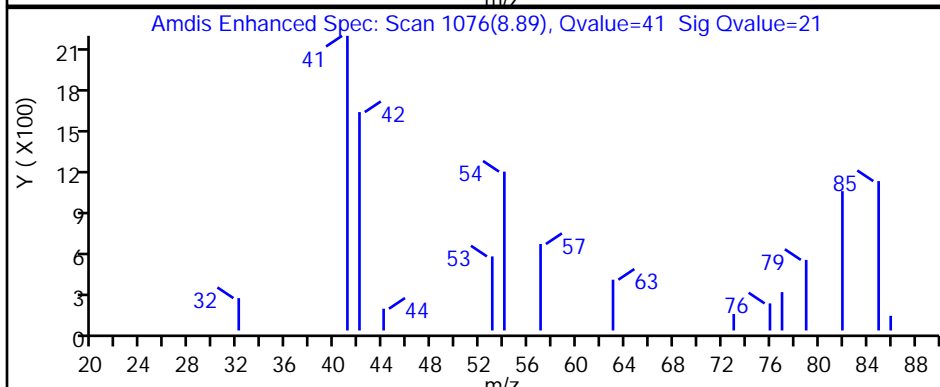
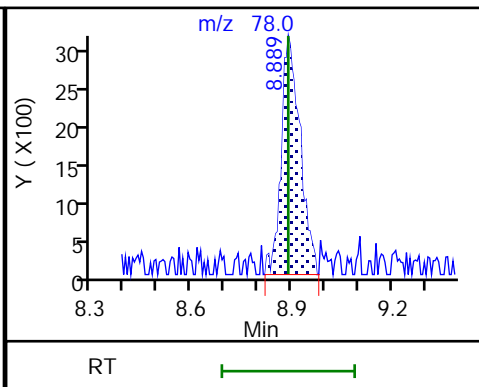
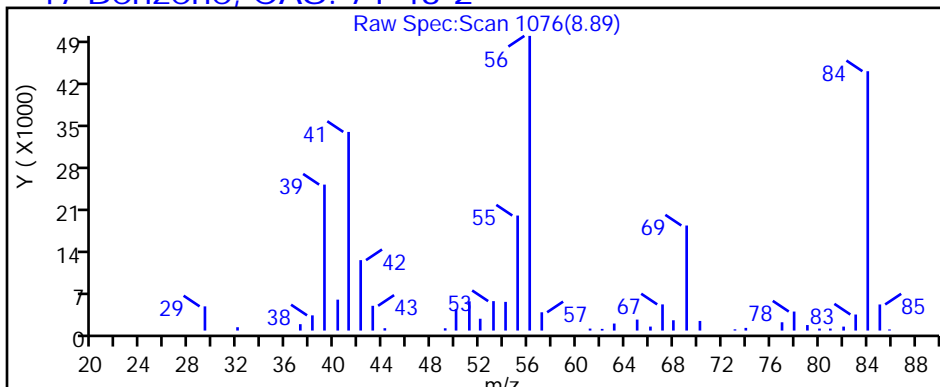
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P202.D

Injection Date: 27-Feb-2019 04:35:30

Instrument ID: MR

Lims ID: 140-14391-A-18

Lab Sample ID: 140-14391-18

Client ID: IA-126-C-26

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

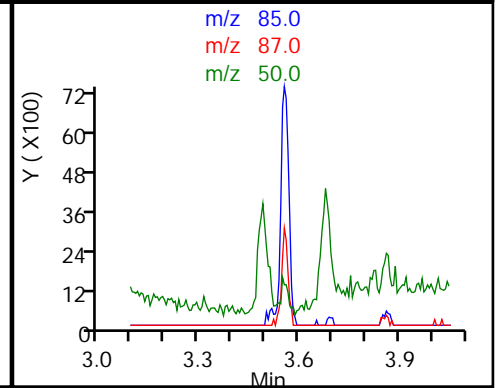
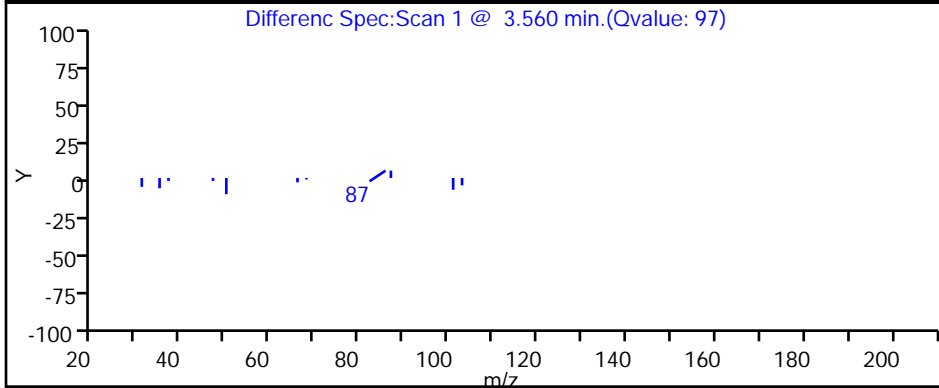
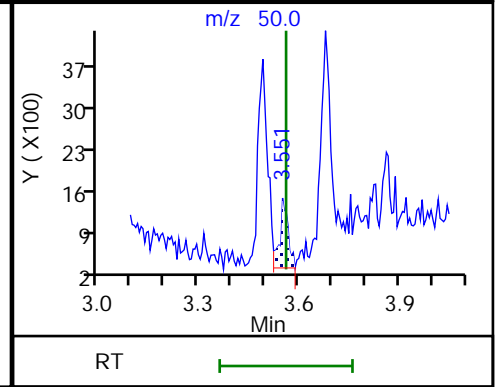
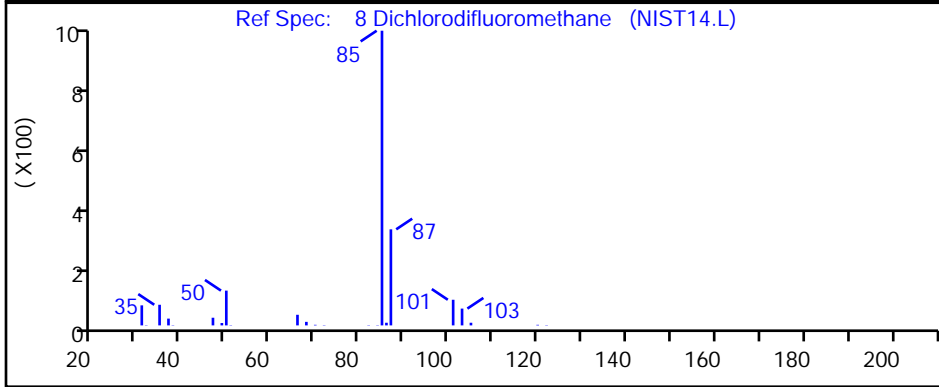
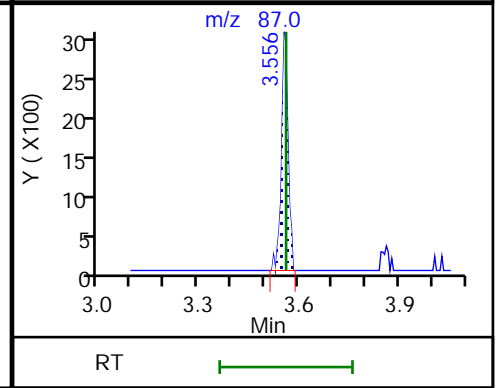
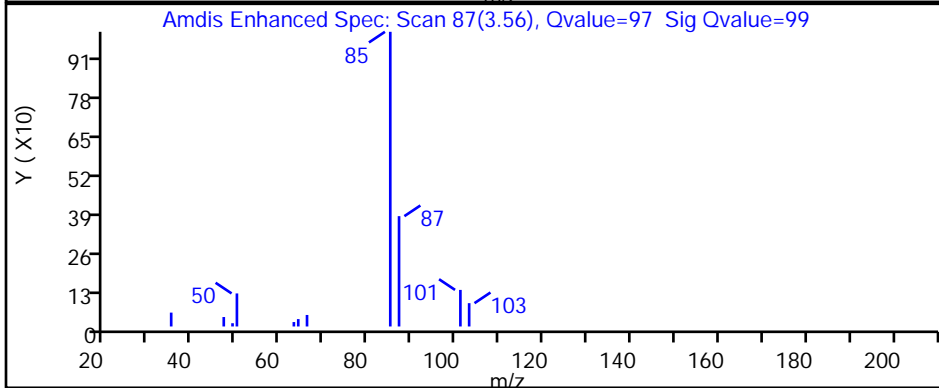
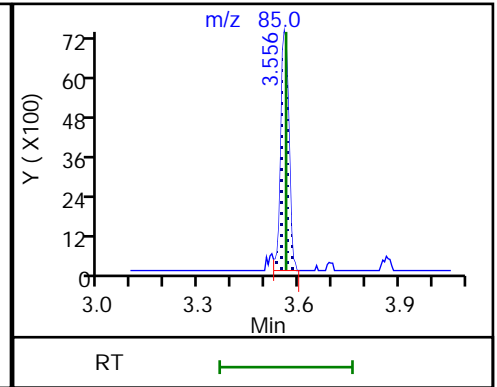
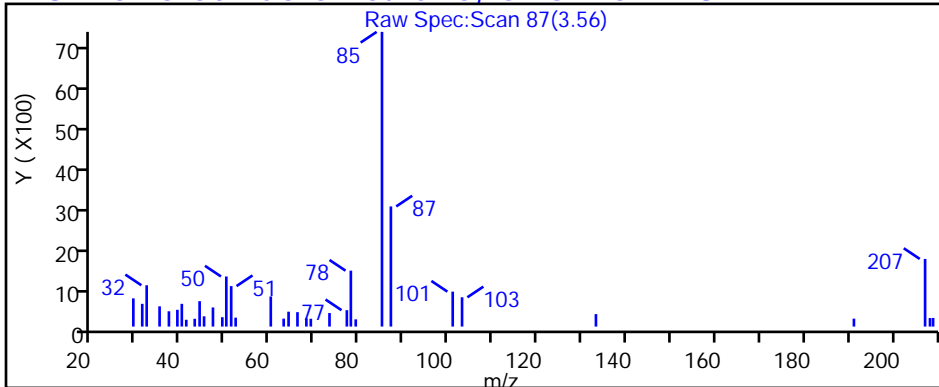
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P202.D

Injection Date: 27-Feb-2019 04:35:30

Instrument ID: MR

Lims ID: 140-14391-A-18

Lab Sample ID: 140-14391-18

Client ID: IA-126-C-26

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

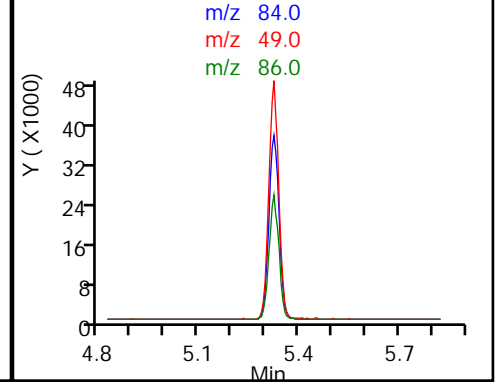
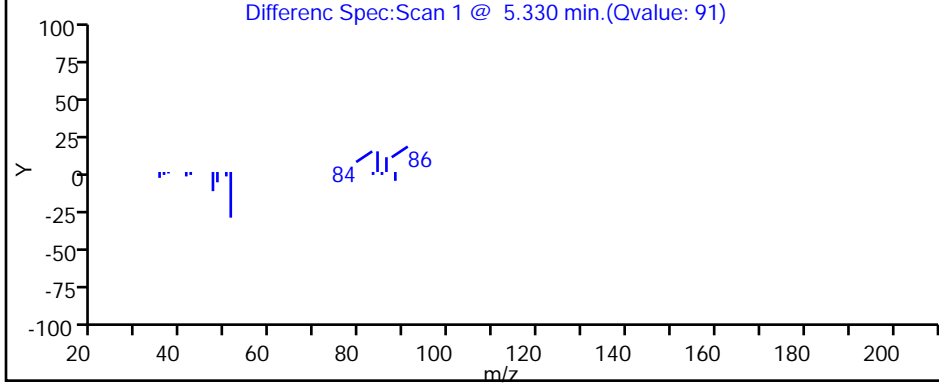
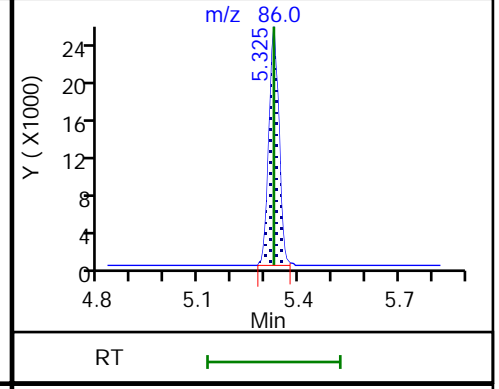
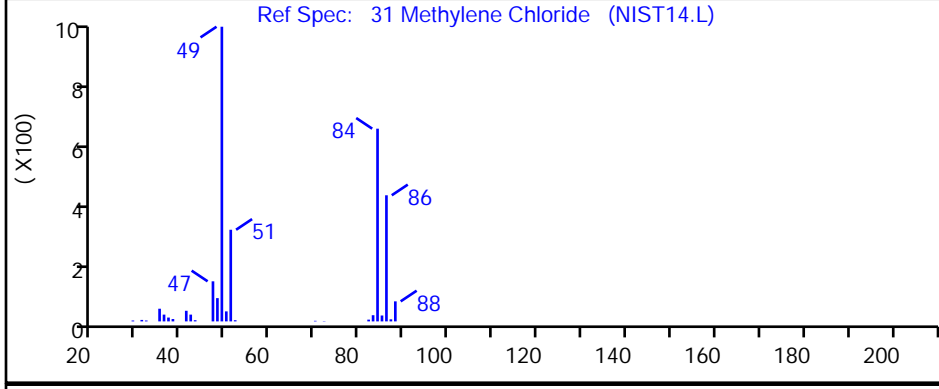
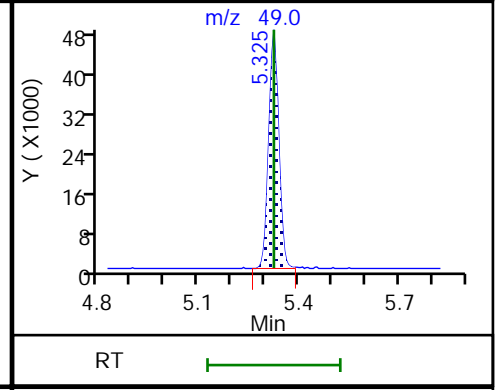
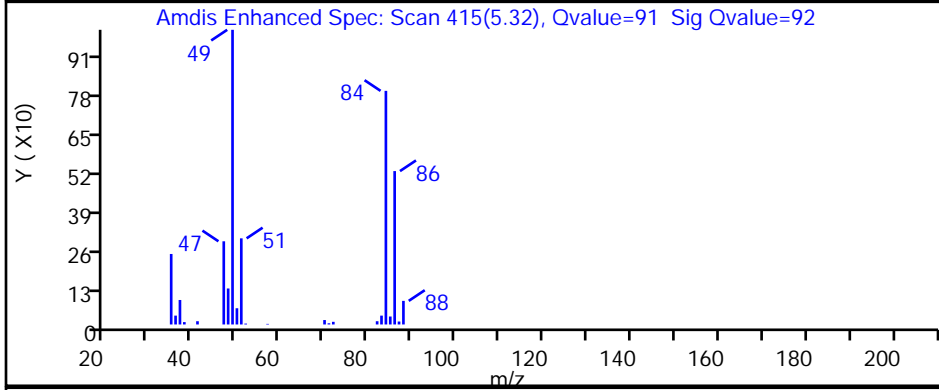
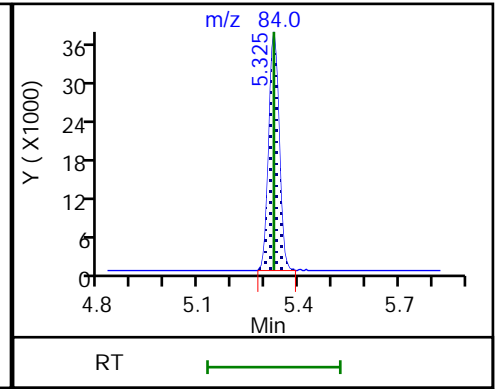
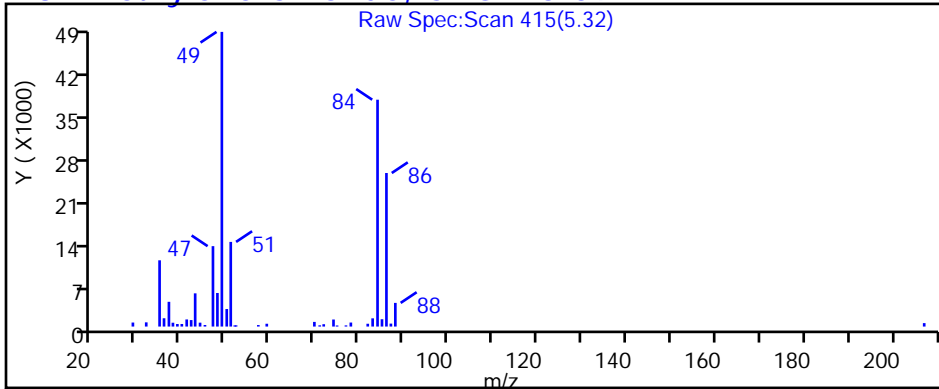
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P202.D

Injection Date: 27-Feb-2019 04:35:30

Instrument ID: MR

Lims ID: 140-14391-A-18

Lab Sample ID: 140-14391-18

Client ID: IA-126-C-26

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

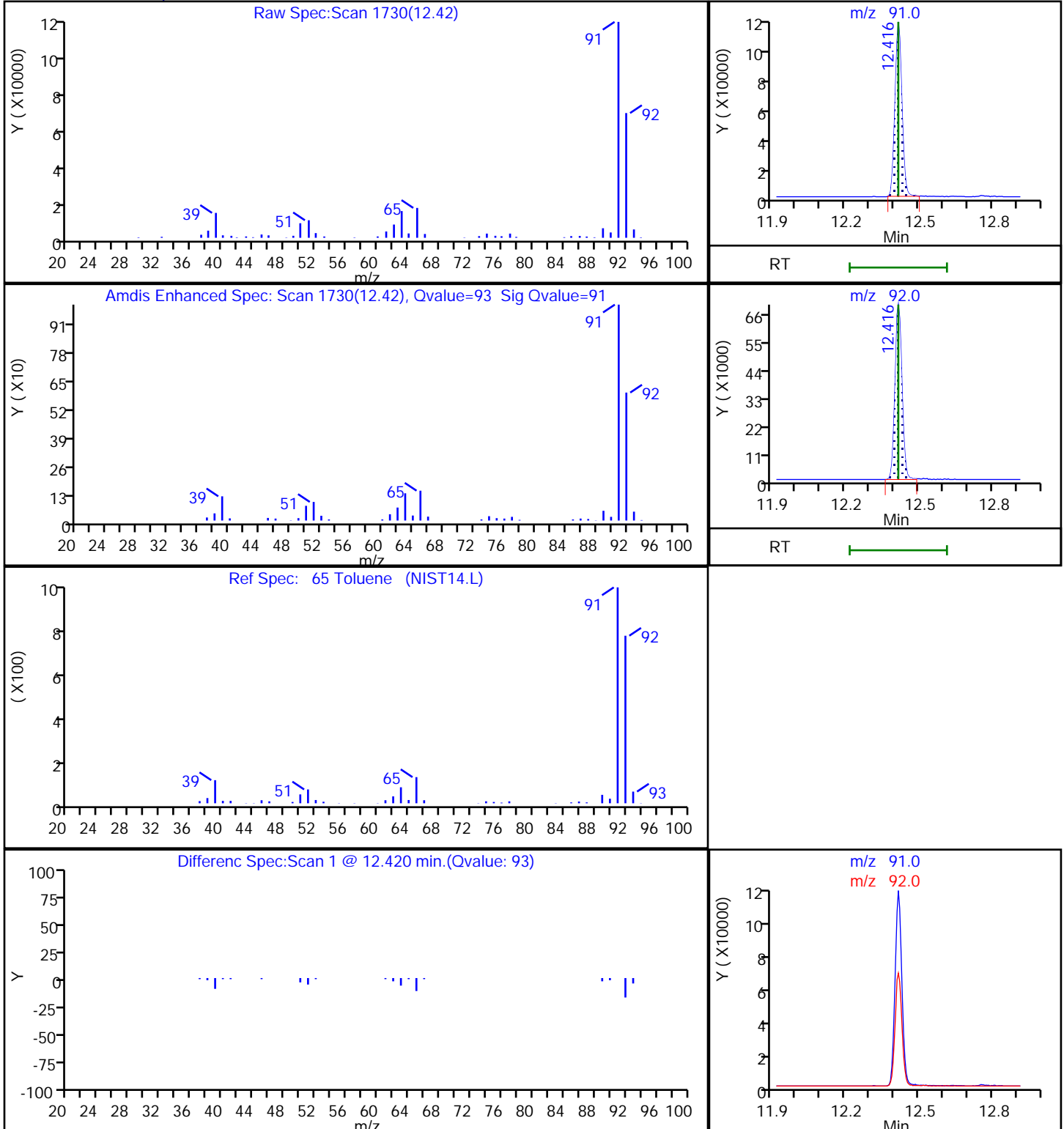
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P202.D

Injection Date: 27-Feb-2019 04:35:30

Instrument ID: MR

Lims ID: 140-14391-A-18

Lab Sample ID: 140-14391-18

Client ID: IA-126-C-26

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

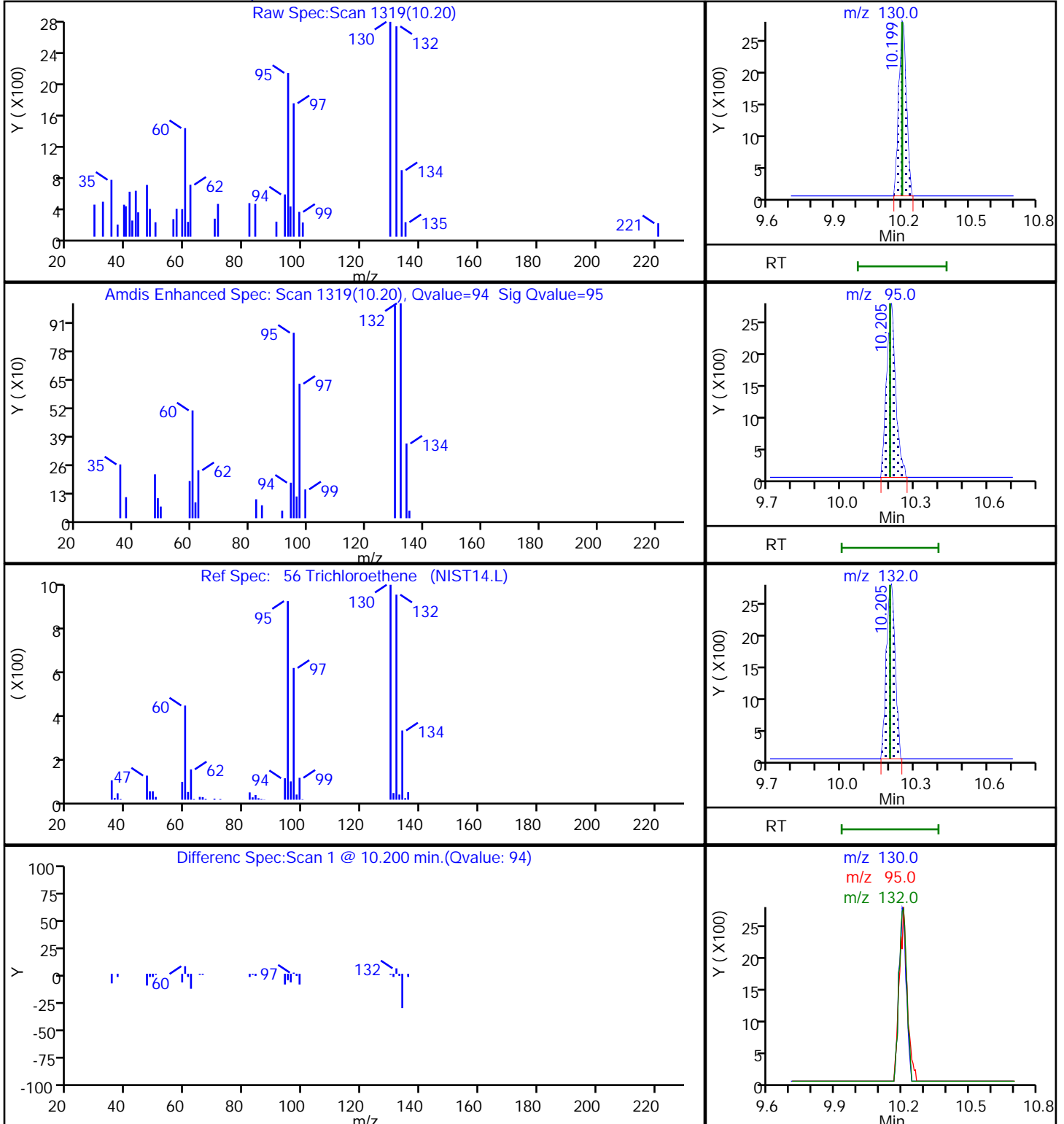
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P202.D

Injection Date: 27-Feb-2019 04:35:30

Instrument ID: MR

Lims ID: 140-14391-A-18

Lab Sample ID: 140-14391-18

Client ID: IA-126-C-26

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

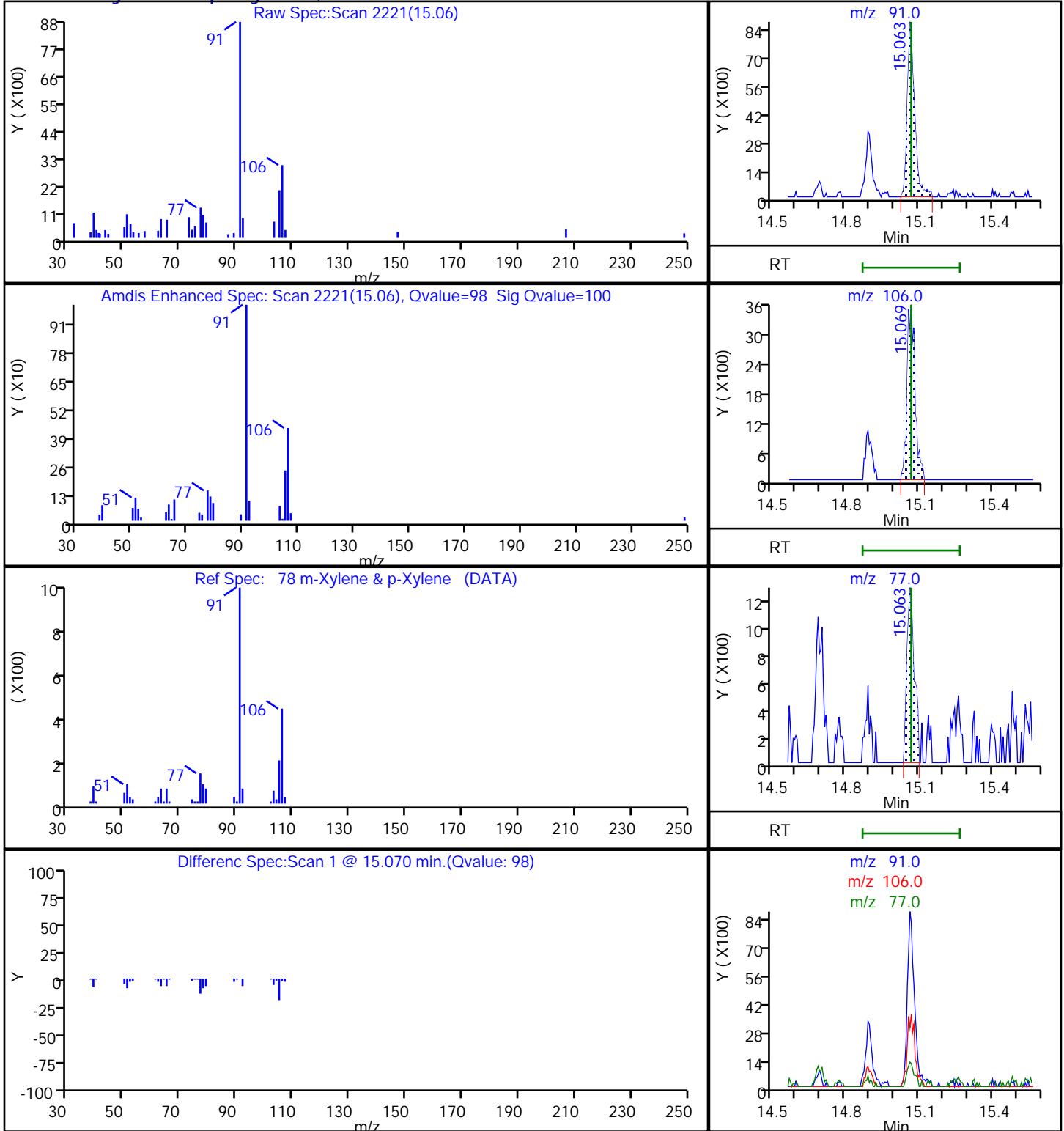
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RB26P202.D

Injection Date: 27-Feb-2019 04:35:30

Instrument ID: MR

Lims ID: 140-14391-A-18

Lab Sample ID: 140-14391-18

Client ID: IA-126-C-26

Operator ID:

ALS Bottle#: 2 Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

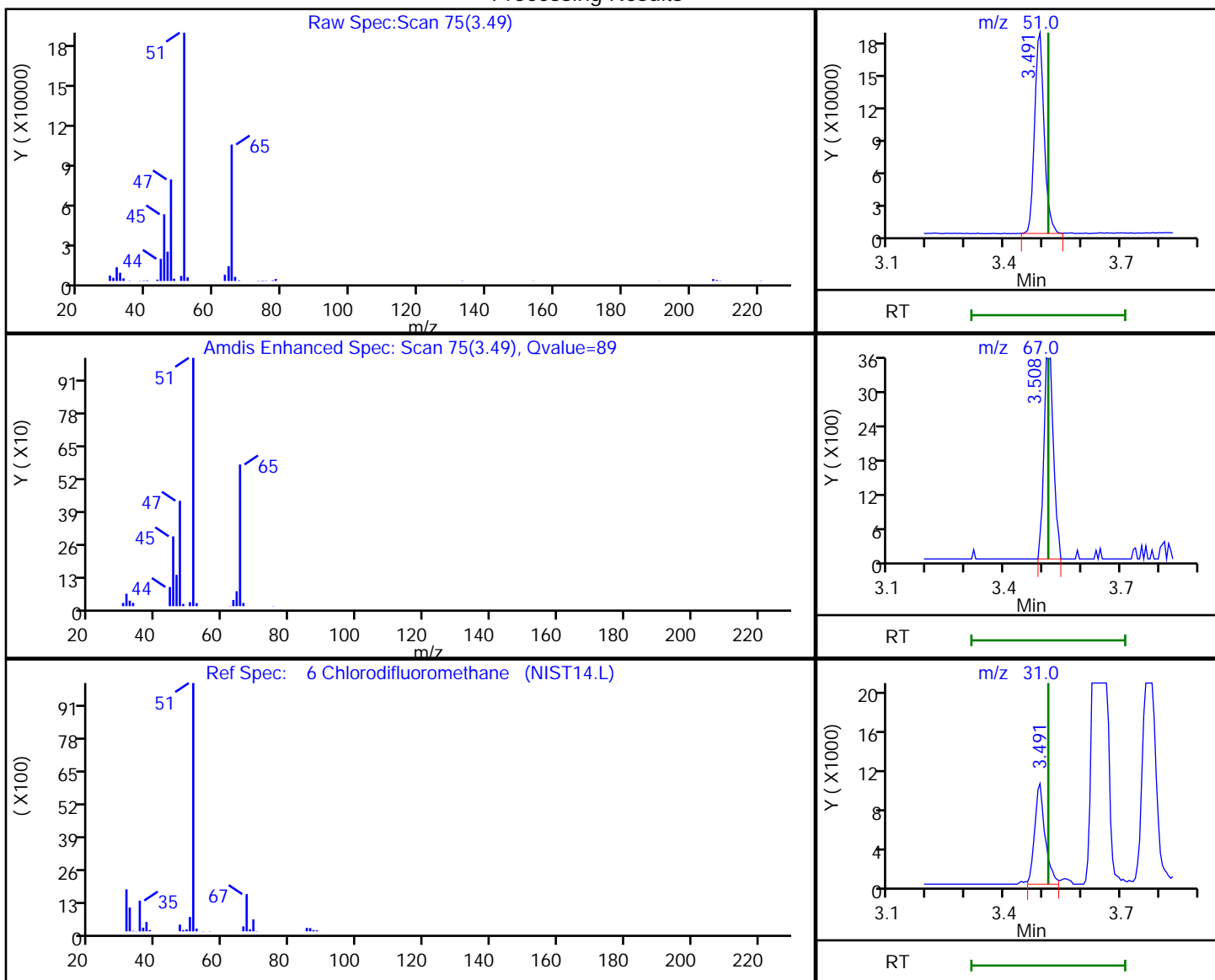
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Processing Results



RT	Mass	Response	Amount
3.49	51.00	318715	2.642075
3.51	67.00	6186	
3.49	31.00	19225	

Reviewer: khachitpongpanits, 04-Mar-2019 08:24:01

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-101-B-26 Lab Sample ID: 140-14391-19
 Matrix: Air Lab File ID: GB26P102.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:43
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.70		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	24		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-101-B-26 Lab Sample ID: 140-14391-19
 Matrix: Air Lab File ID: GB26P102.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:43
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.2		1.4	0.27
67-66-3	Chloroform	119.38	0.64	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.0		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.9		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	92		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	14		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P102.D
 Lims ID: 140-14391-A-19
 Client ID: IA-101-B-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 16:38:30 ALS Bottle#: 2 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-008
 Misc. Info.: 140-14391-a-19
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:19:42 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:28:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.270	9.232	0.038	97	455853	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.405	0.011	96	2490634	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	92	2381715	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	83	1876472	3.84	
6 Chlorodifluoromethane	51	3.834	3.834	0.011	97	70817	0.2371	M
8 Dichlorodifluoromethane	85	3.899	3.886	0.011	100	45191	0.0936	
31 Methylene Chloride	84	6.660	6.591	0.065	99	73917	0.3949	
44 Chloroform	83	9.275	9.237	0.032	27	10053	0.0264	
50 Benzene	78	10.893	10.871	0.016	98	15196	0.0341	
67 Toluene	91	14.128	14.128	0.000	93	2556789	4.88	
78 Ethylbenzene	91	16.404	16.404	0.000	99	99496	0.1397	
79 m-Xylene & p-Xylene	91	16.560	16.565	-0.006	99	273705	0.5025	
83 o-Xylene	91	17.088	17.089	-0.001	97	86546	0.1507	
S 124 Xylenes, Total	100				0		0.6532	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P102.D

Injection Date: 26-Feb-2019 16:38:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14391-A-19

Lab Sample ID: 140-14391-19

Worklist Smp#: 8

Client ID: IA-101-B-26

Purge Vol: 500.000 mL

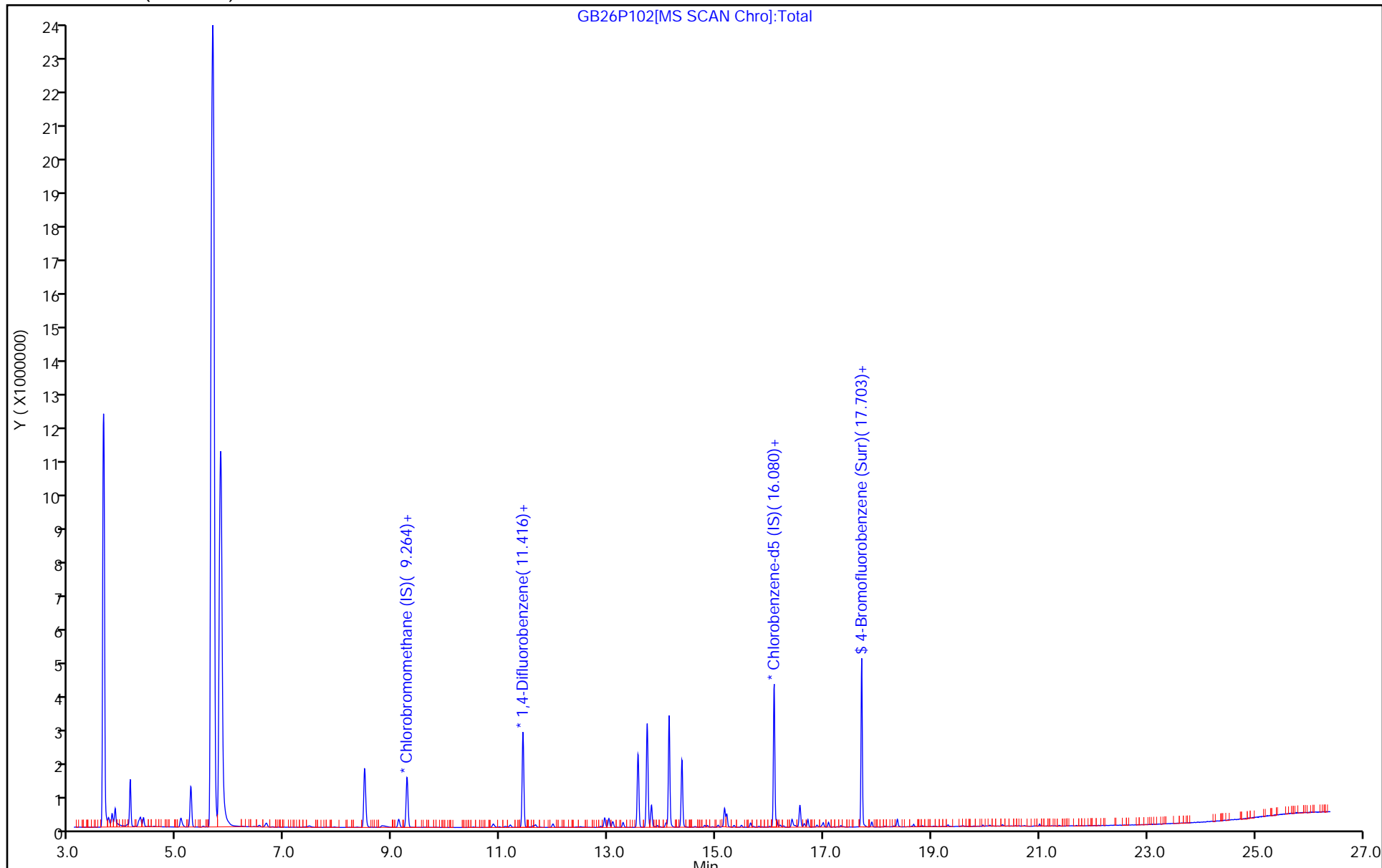
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P102.D
 Lims ID: 140-14391-A-19
 Client ID: IA-101-B-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 16:38:30 ALS Bottle#: 2 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-008
 Misc. Info.: 140-14391-a-19
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:19:42 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:28:10

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.84	96.12

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P102.D

Injection Date: 26-Feb-2019 16:38:30

Instrument ID: MG

Lims ID: 140-14391-A-19

Lab Sample ID: 140-14391-19

Client ID: IA-101-B-26

Operator ID: 7126

ALS Bottle#: 2 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

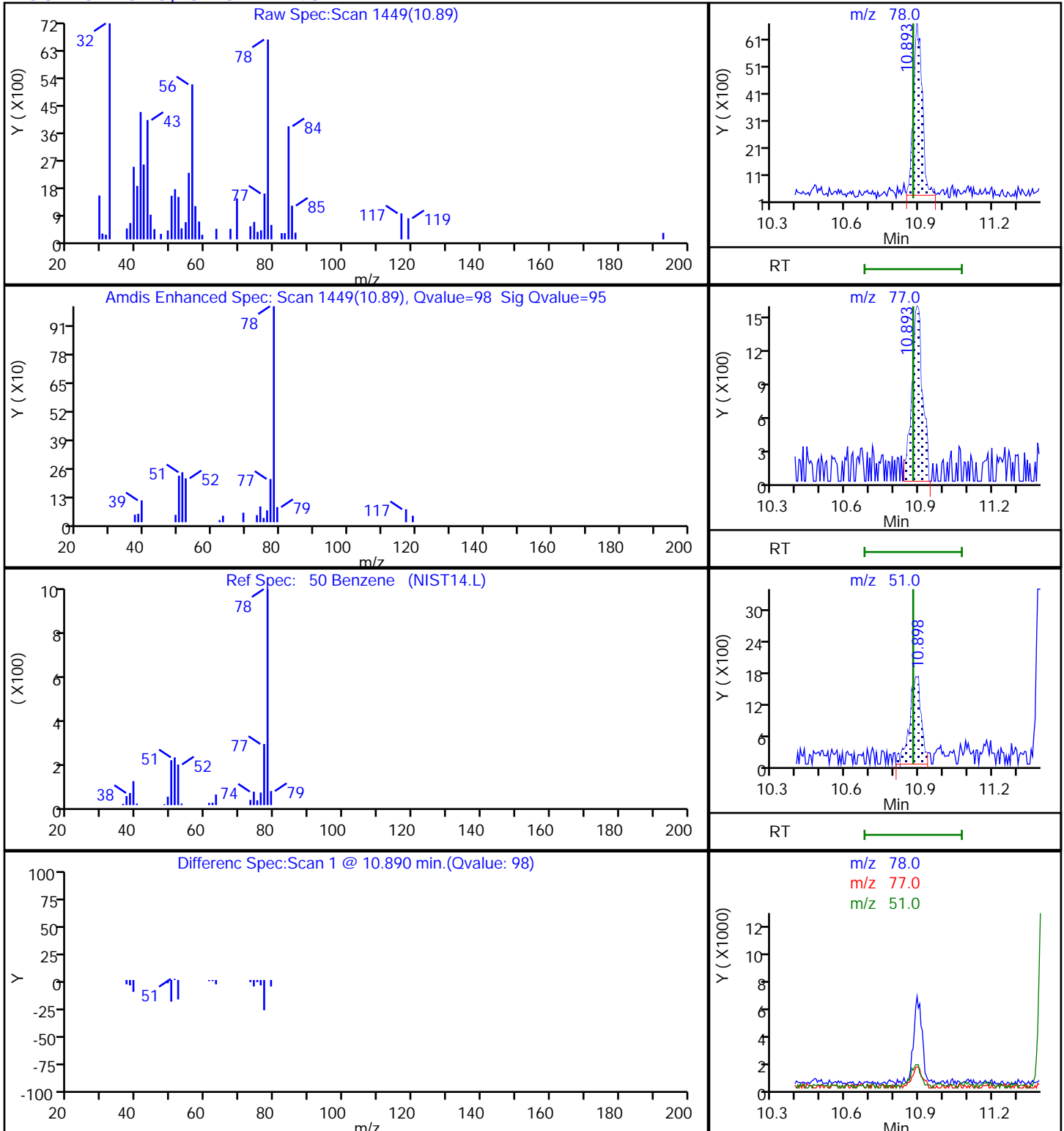
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P102.D

Injection Date: 26-Feb-2019 16:38:30

Instrument ID: MG

Lims ID: 140-14391-A-19

Lab Sample ID: 140-14391-19

Client ID: IA-101-B-26

Operator ID: 7126

ALS Bottle#: 2

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

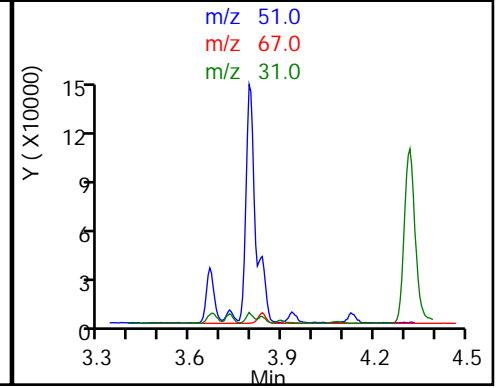
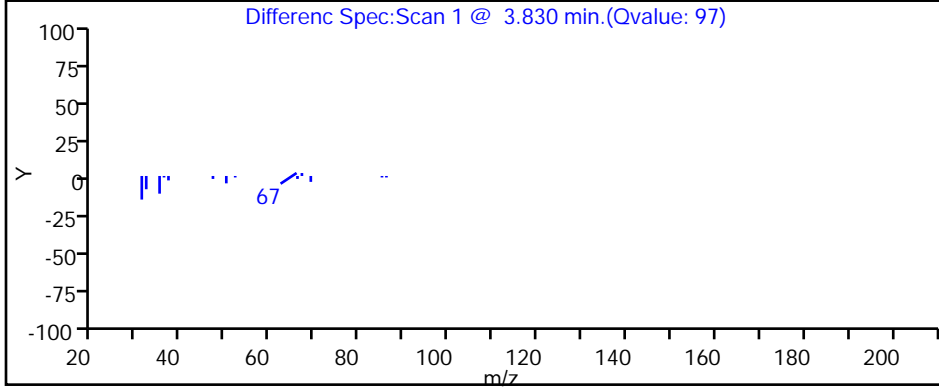
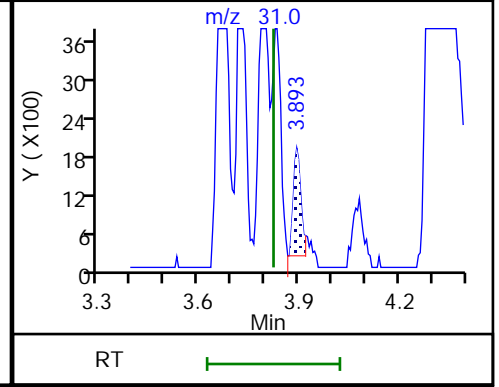
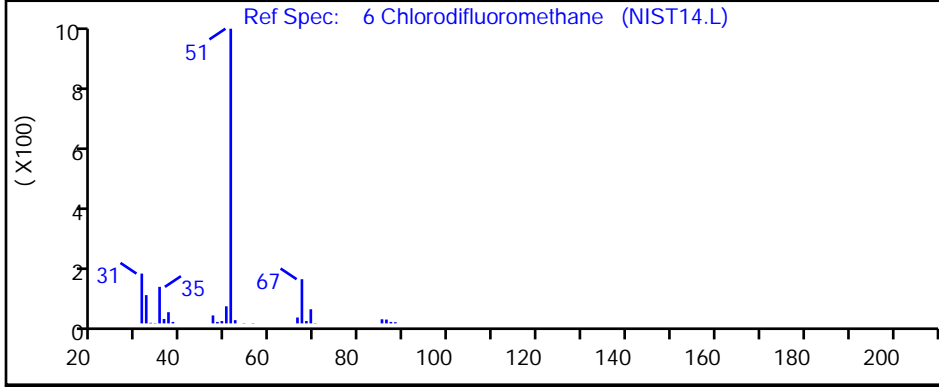
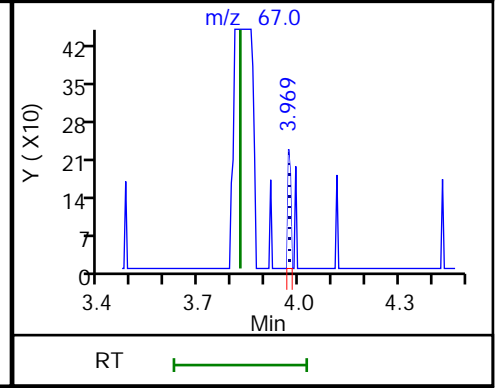
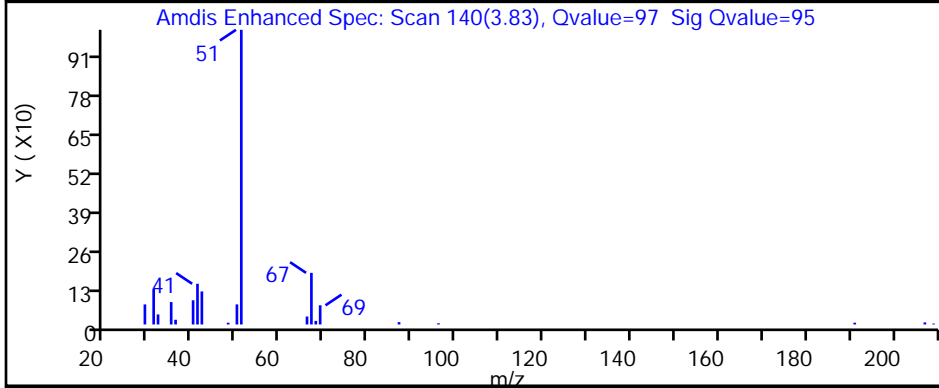
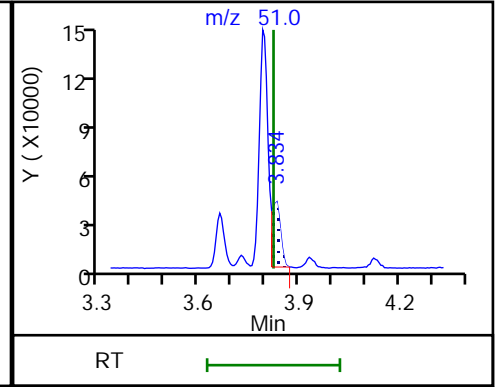
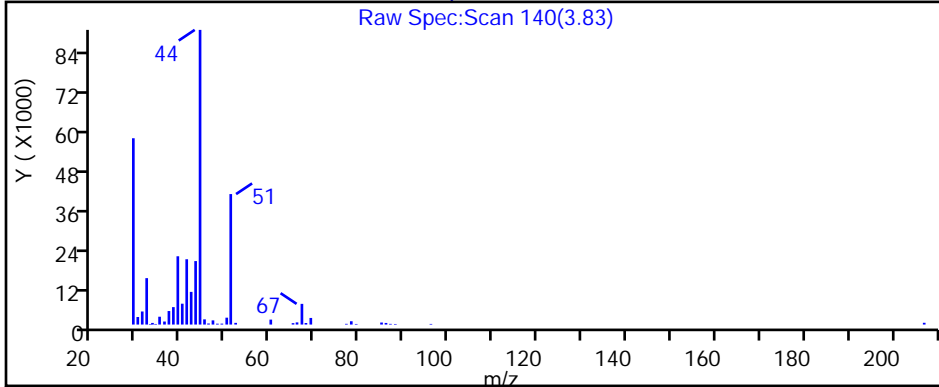
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P102.D

Injection Date: 26-Feb-2019 16:38:30

Instrument ID: MG

Lims ID: 140-14391-A-19

Lab Sample ID: 140-14391-19

Client ID: IA-101-B-26

Operator ID: 7126

ALS Bottle#: 2 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

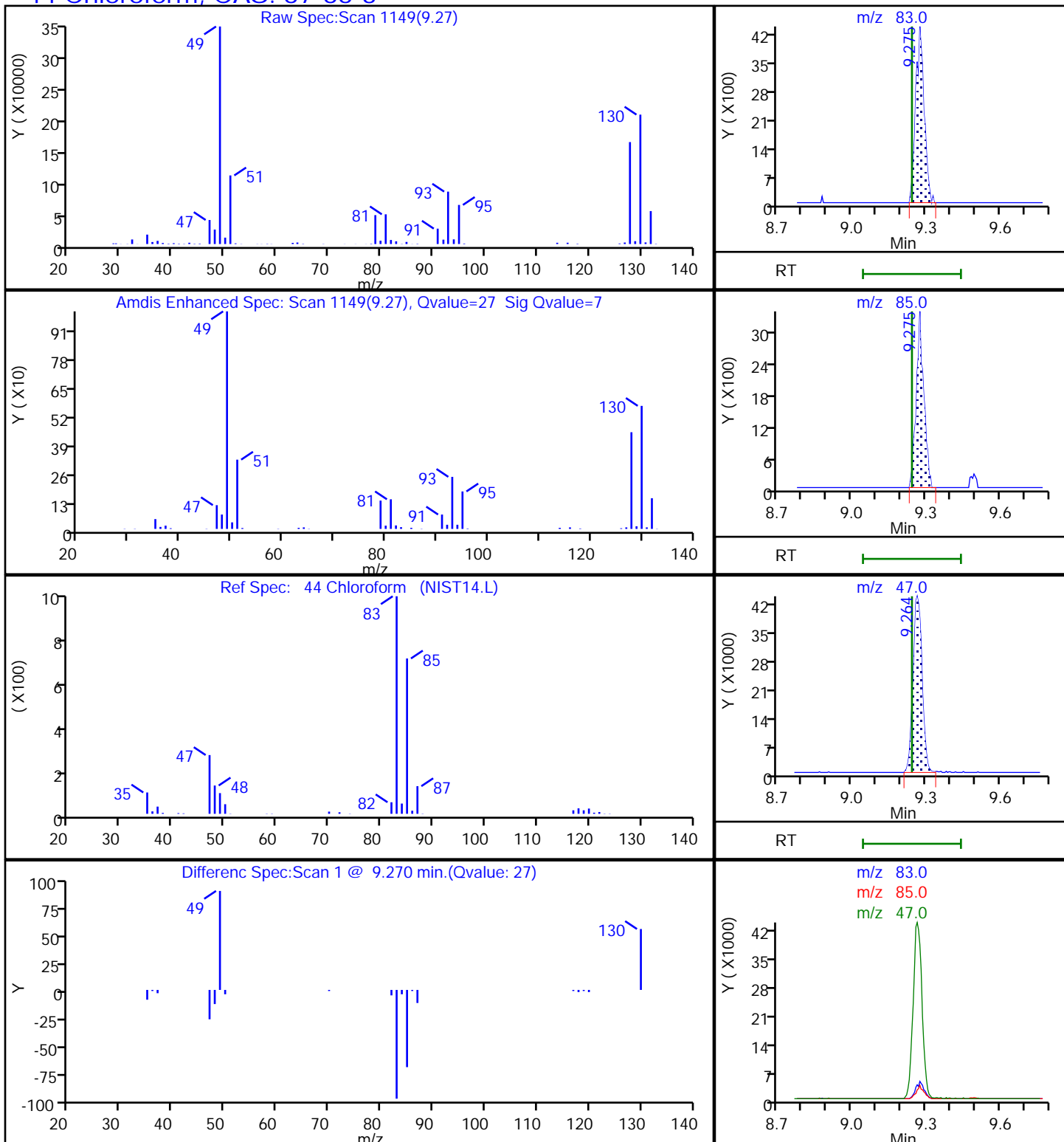
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P102.D

Injection Date: 26-Feb-2019 16:38:30

Instrument ID: MG

Lims ID: 140-14391-A-19

Lab Sample ID: 140-14391-19

Client ID: IA-101-B-26

Operator ID: 7126

ALS Bottle#: 2

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

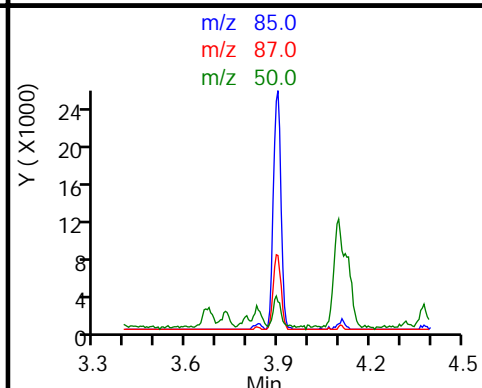
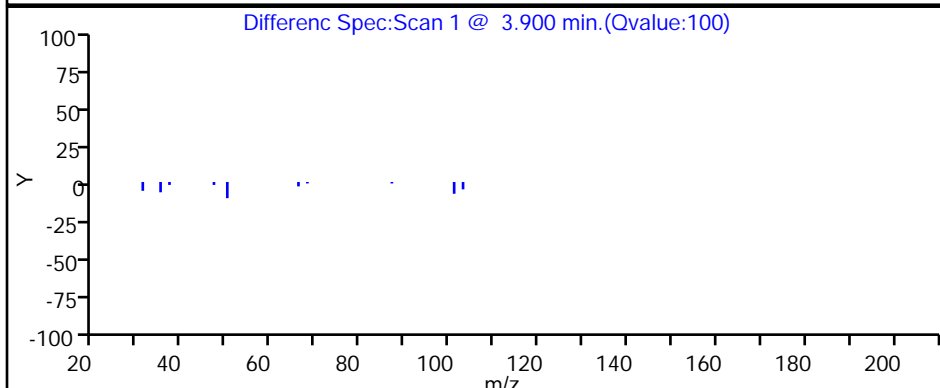
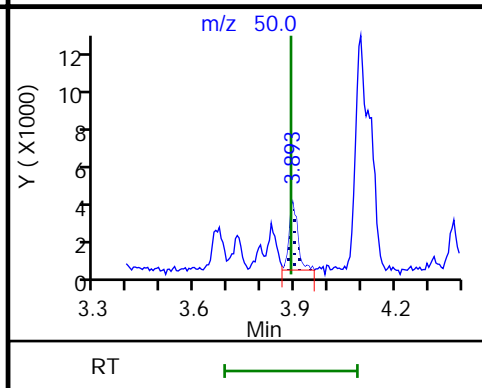
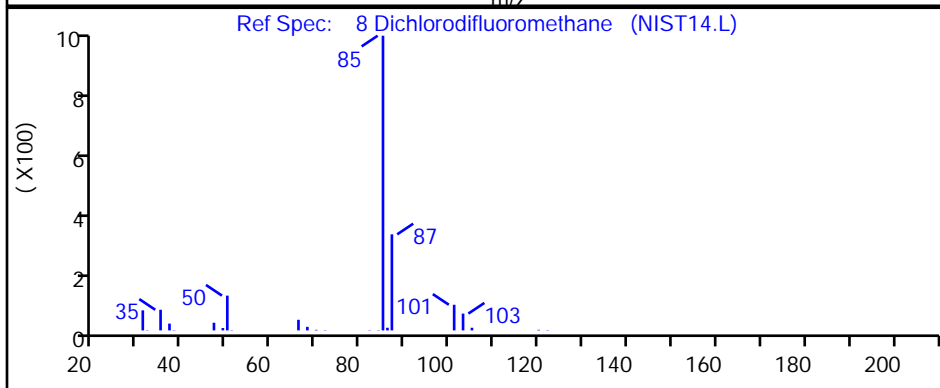
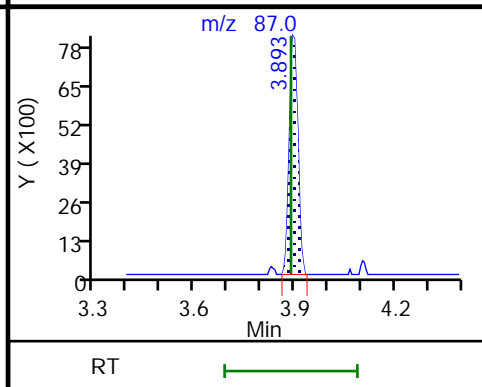
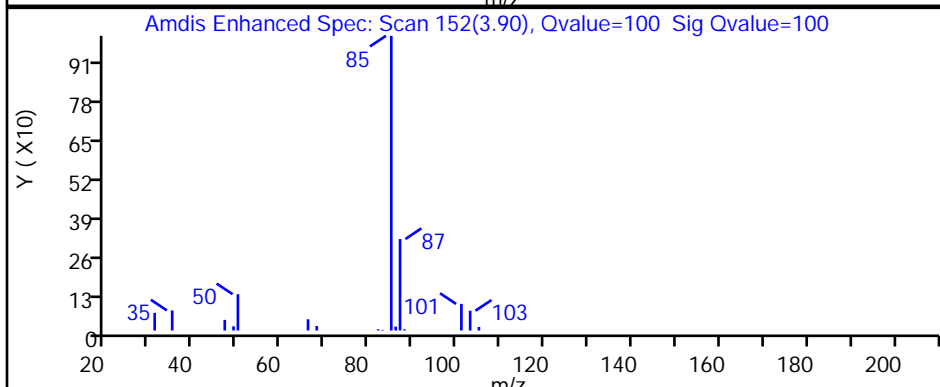
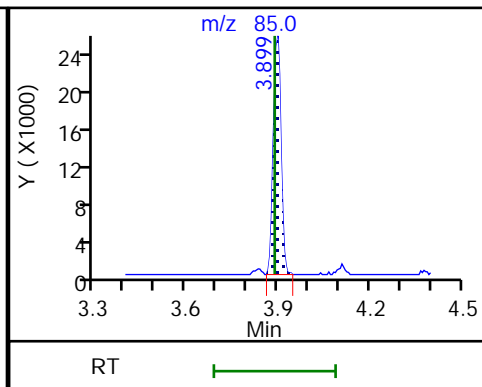
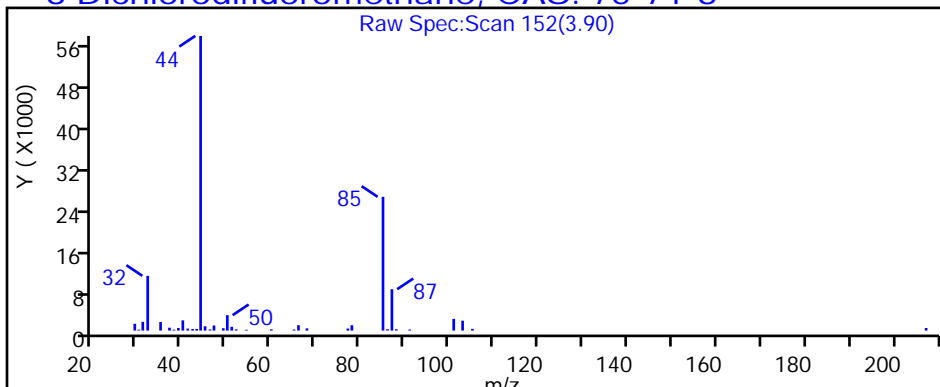
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P102.D

Injection Date: 26-Feb-2019 16:38:30

Instrument ID: MG

Lims ID: 140-14391-A-19

Lab Sample ID: 140-14391-19

Client ID: IA-101-B-26

Operator ID: 7126

ALS Bottle#: 2 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

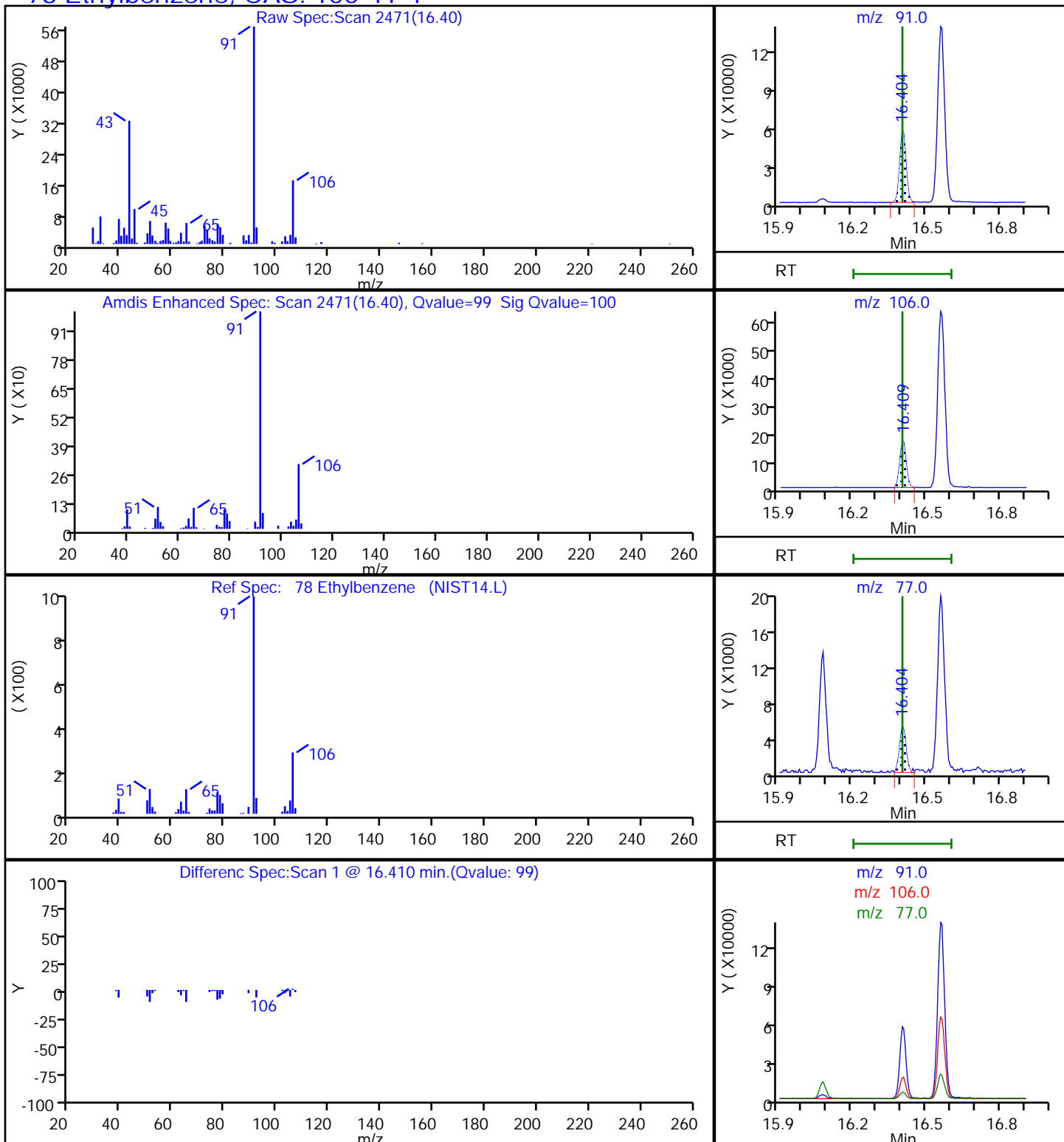
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P102.D

Injection Date: 26-Feb-2019 16:38:30

Instrument ID: MG

Lims ID: 140-14391-A-19

Lab Sample ID: 140-14391-19

Client ID: IA-101-B-26

Operator ID: 7126

ALS Bottle#: 2 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

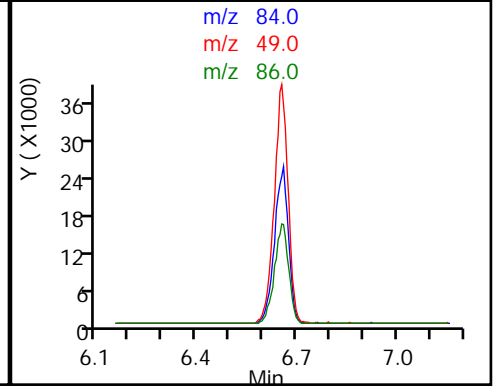
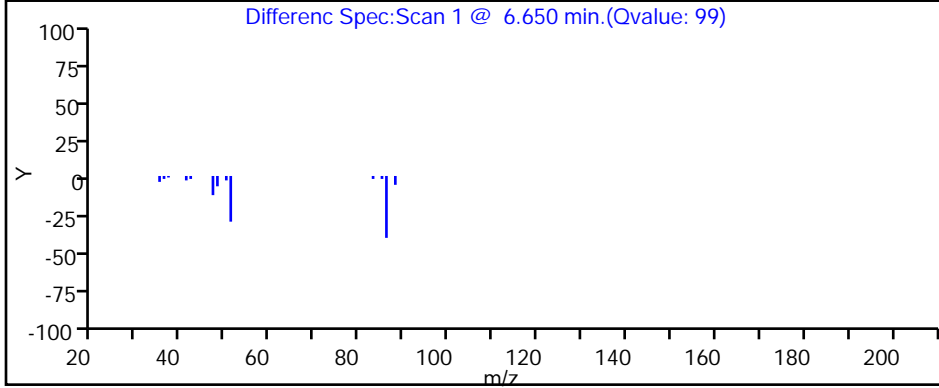
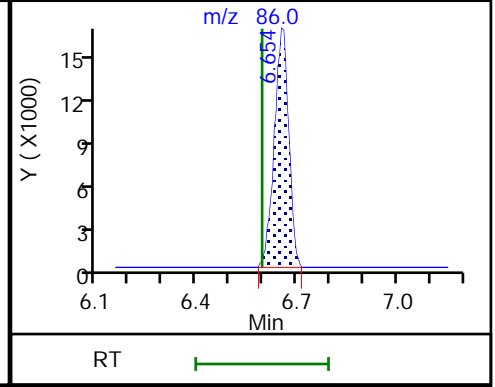
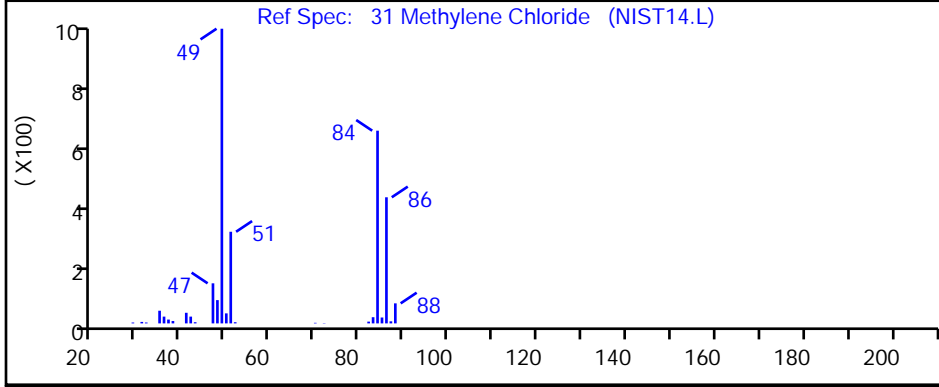
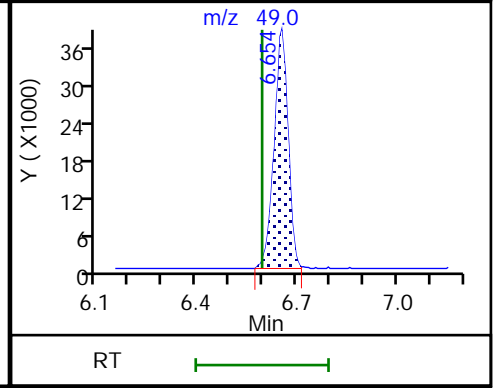
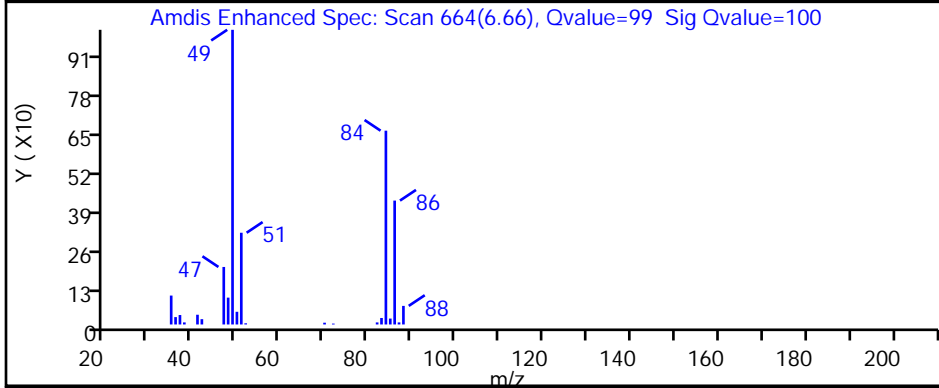
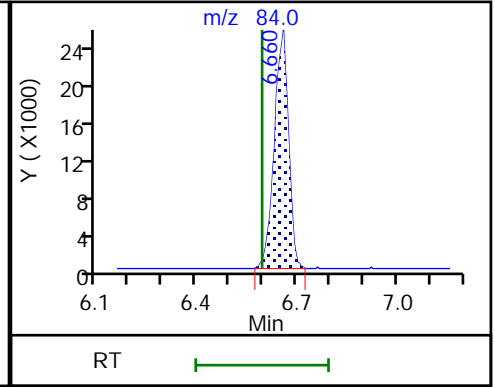
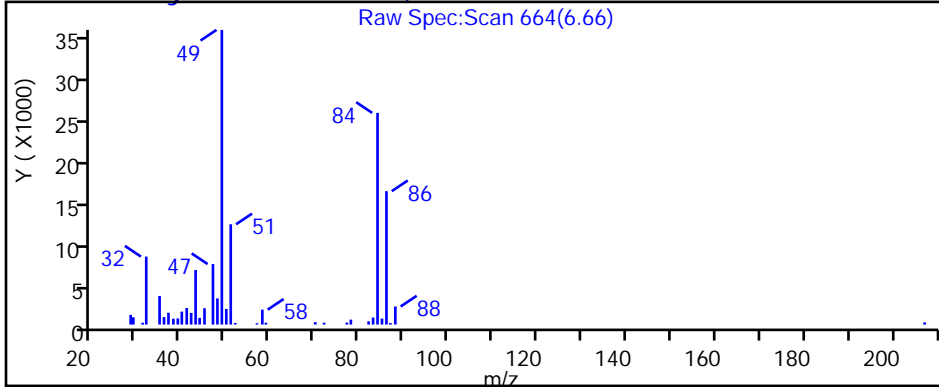
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P102.D

Injection Date: 26-Feb-2019 16:38:30

Instrument ID: MG

Lims ID: 140-14391-A-19

Lab Sample ID: 140-14391-19

Client ID: IA-101-B-26

Operator ID: 7126

ALS Bottle#: 2 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

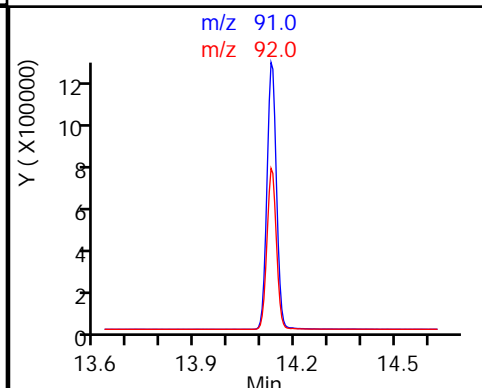
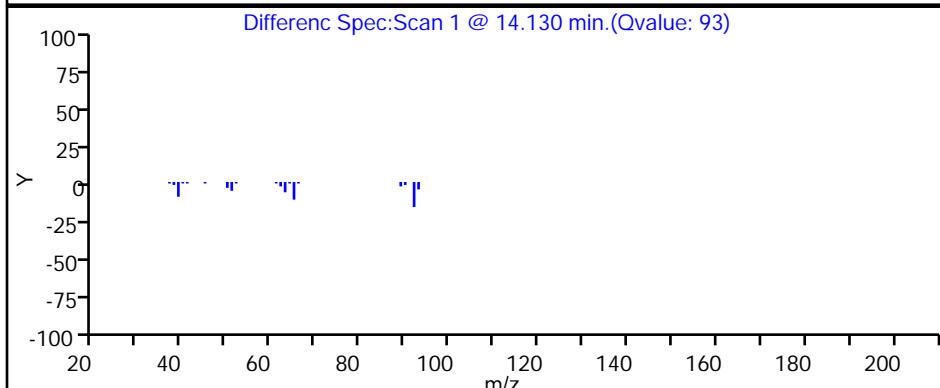
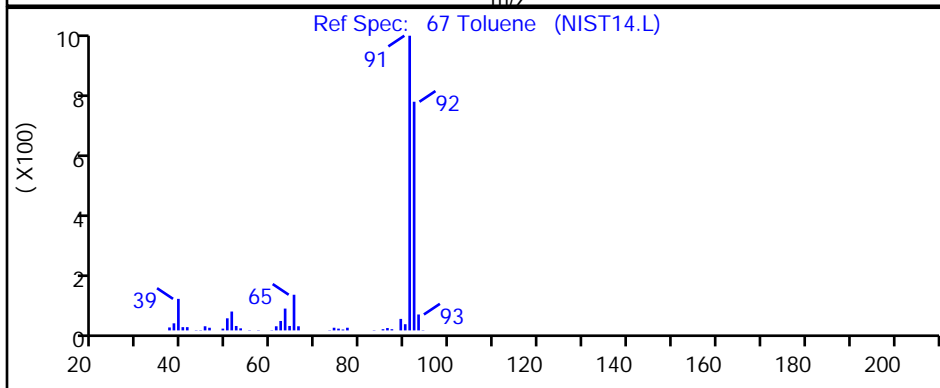
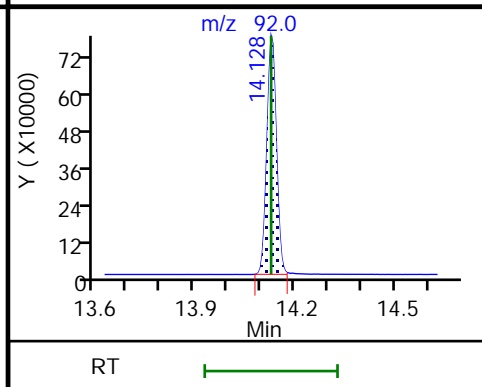
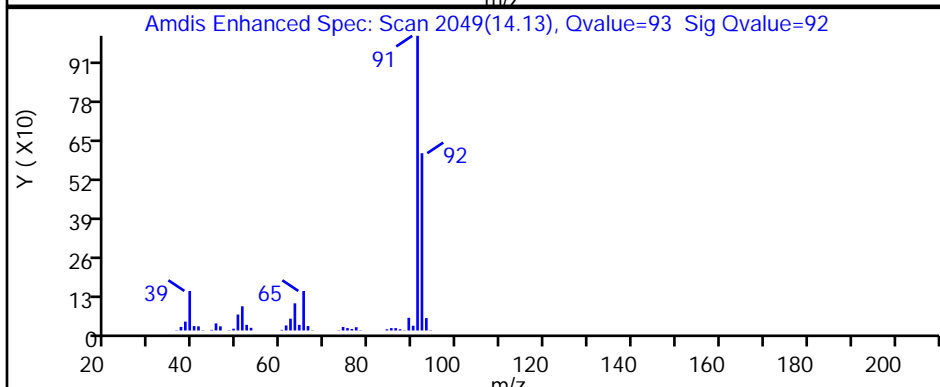
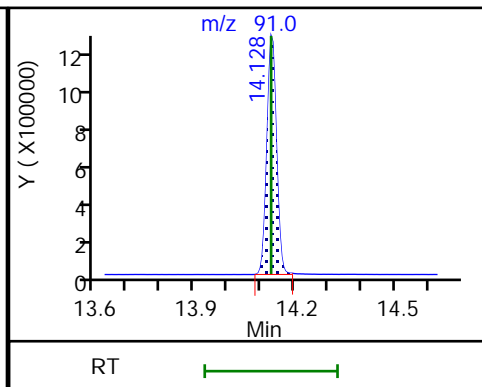
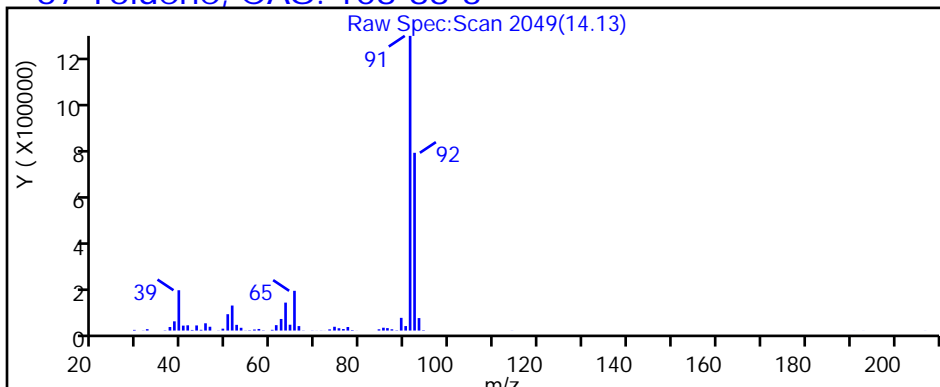
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

67 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P102.D

Injection Date: 26-Feb-2019 16:38:30

Instrument ID: MG

Lims ID: 140-14391-A-19

Lab Sample ID: 140-14391-19

Client ID: IA-101-B-26

Operator ID: 7126

ALS Bottle#: 2 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

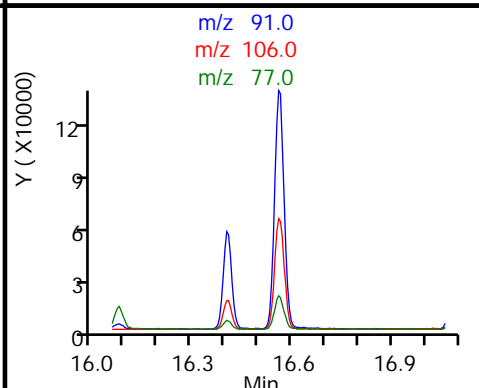
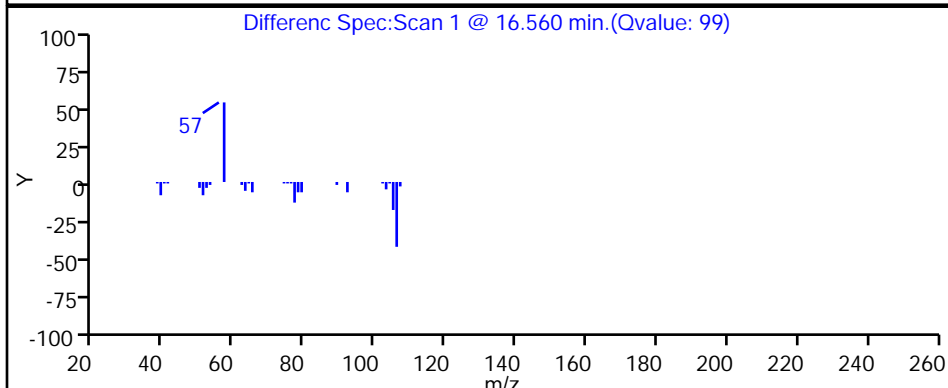
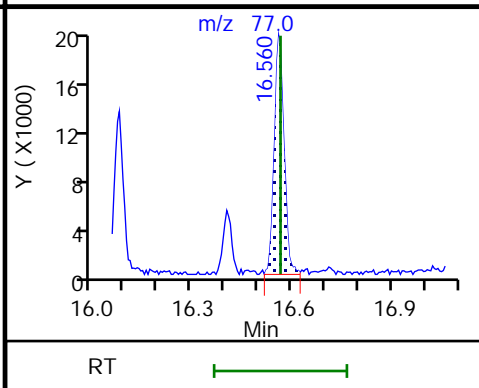
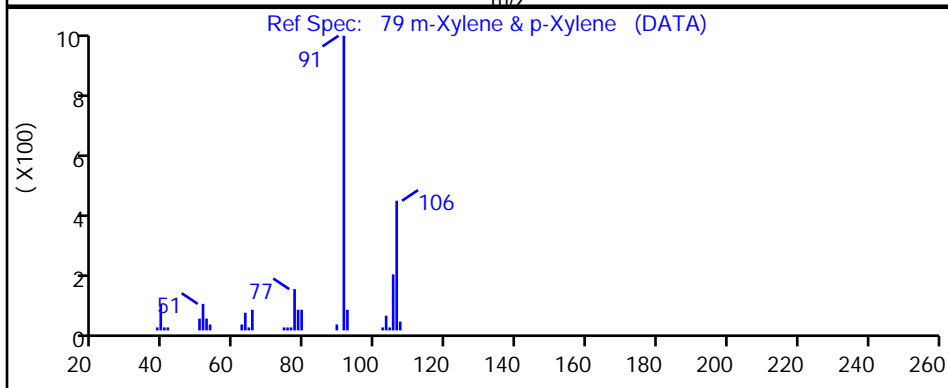
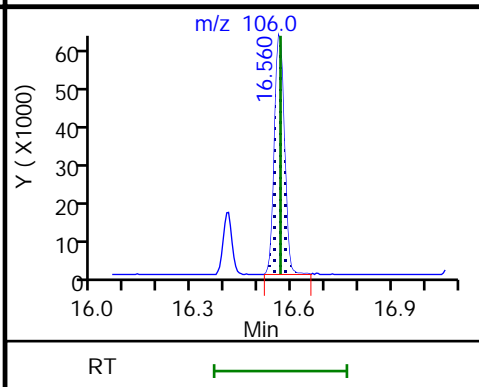
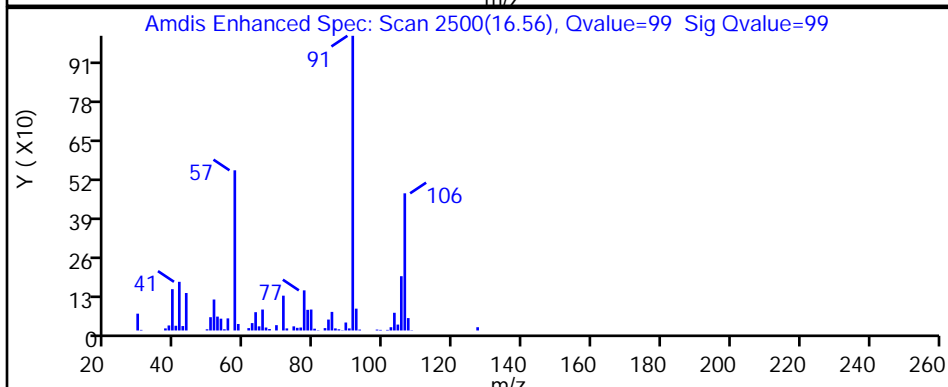
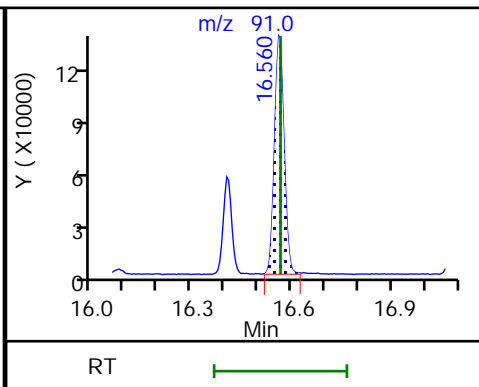
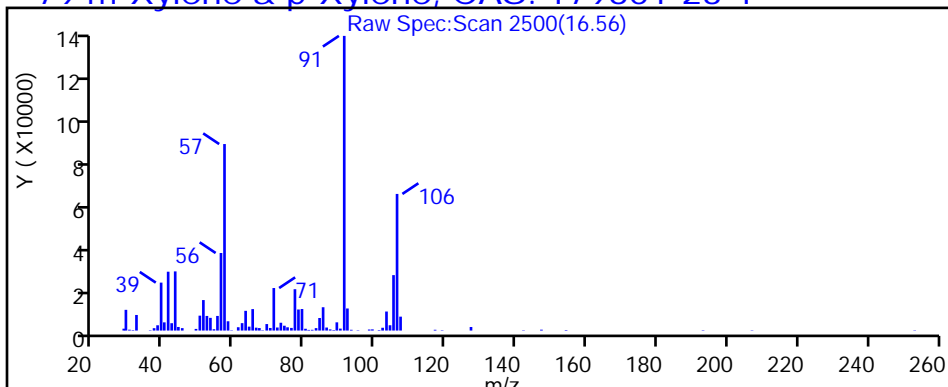
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P102.D

Injection Date: 26-Feb-2019 16:38:30

Instrument ID: MG

Lims ID: 140-14391-A-19

Lab Sample ID: 140-14391-19

Client ID: IA-101-B-26

Operator ID: 7126

ALS Bottle#: 2 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

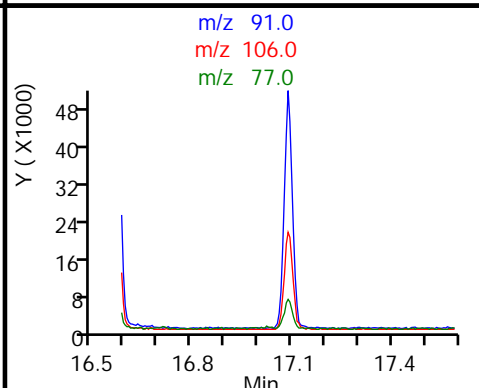
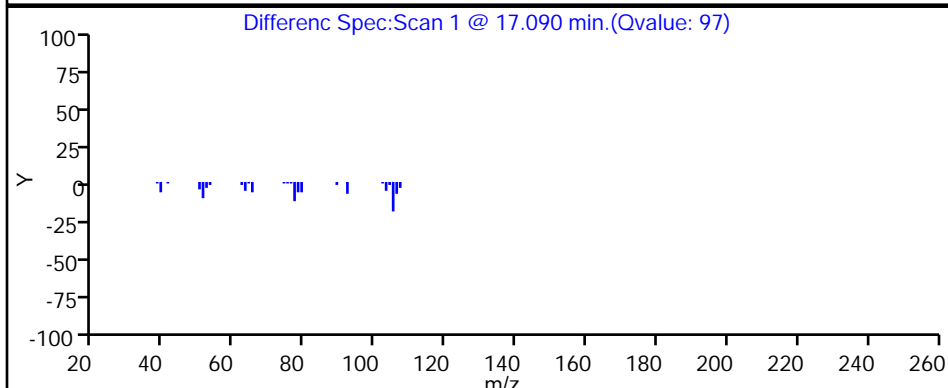
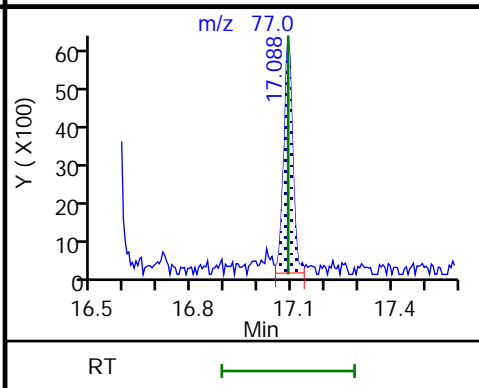
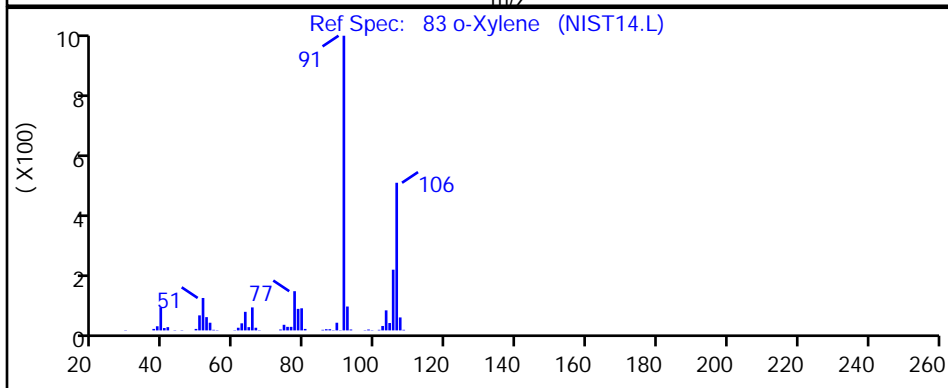
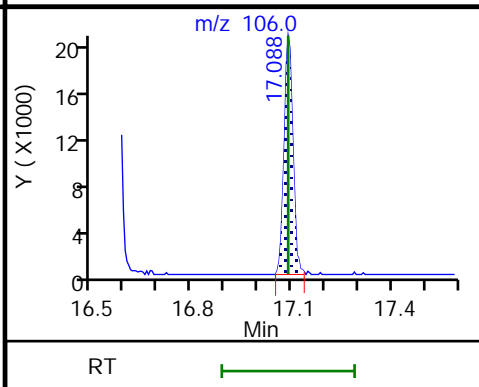
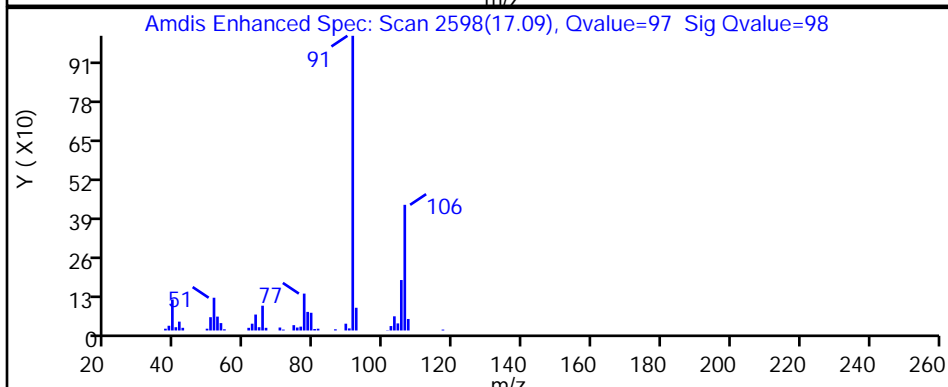
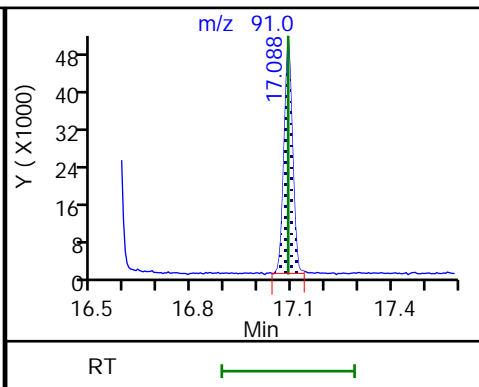
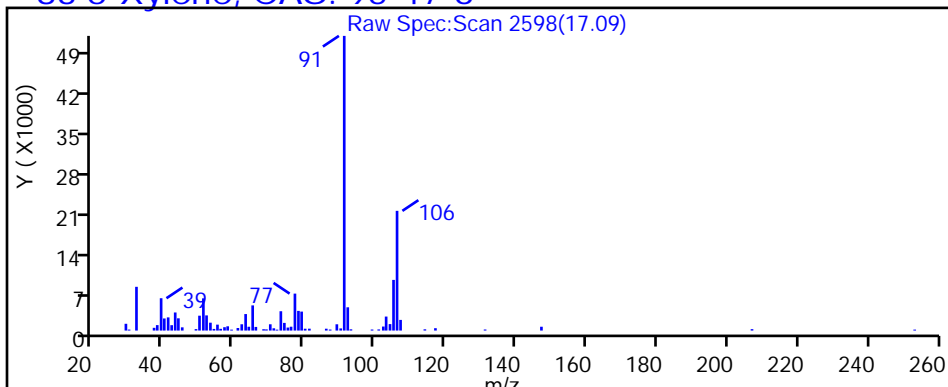
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



TestAmerica Knoxville

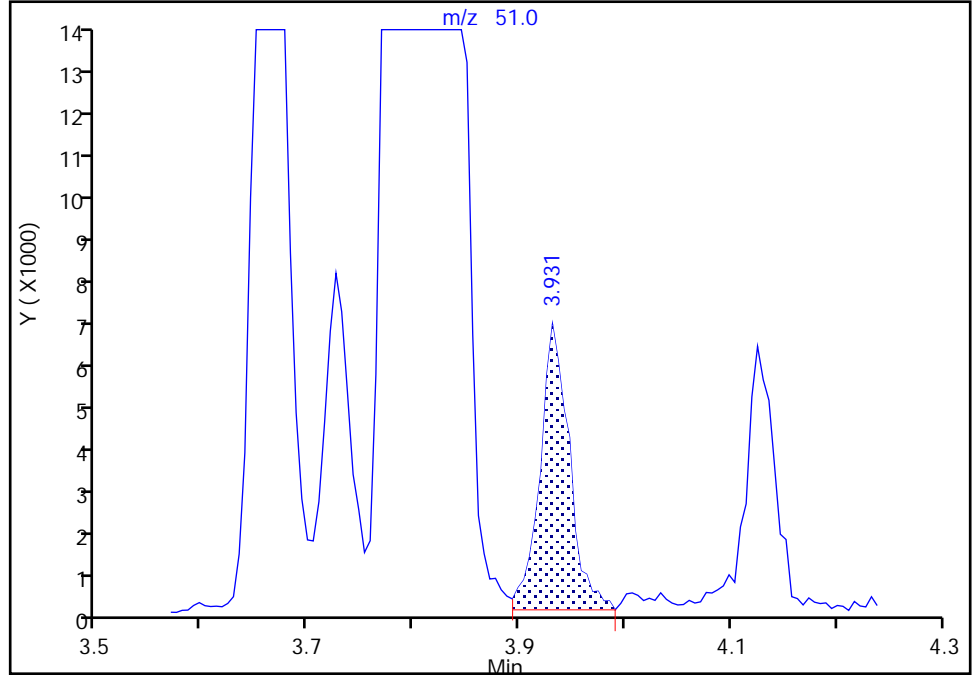
Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P102.D
Injection Date: 26-Feb-2019 16:38:30 Instrument ID: MG
Lims ID: 140-14391-A-19 Lab Sample ID: 140-14391-19
Client ID: IA-101-B-26
Operator ID: 7126 ALS Bottle#: 2 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

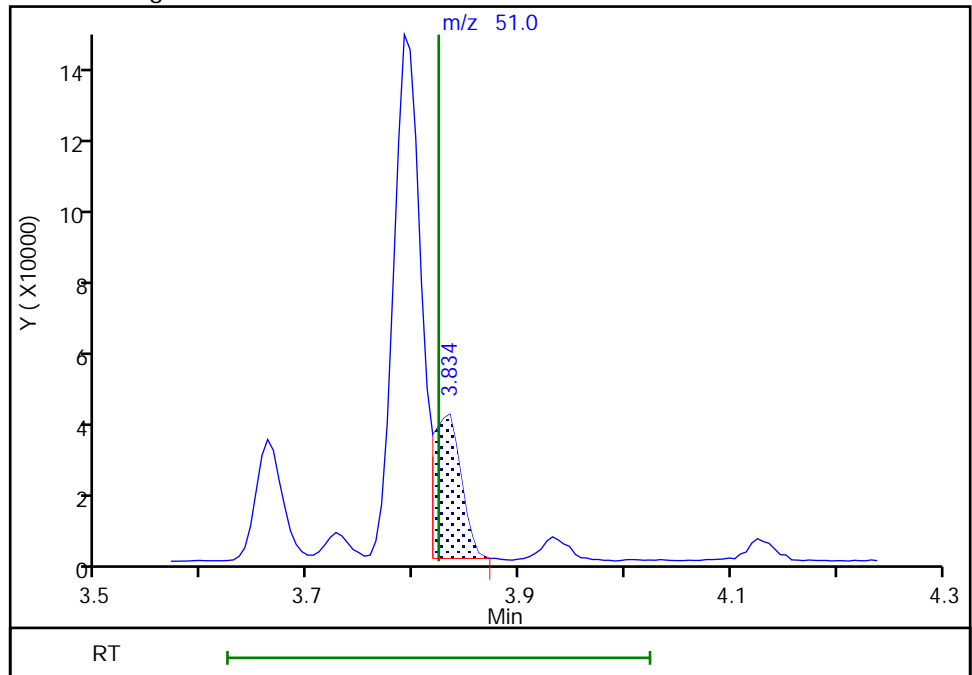
RT: 3.93
Area: 12588
Amount: 0.042153
Amount Units: ppb v/v

Processing Integration Results



RT: 3.83
Area: 70817
Amount: 0.237145
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 27-Feb-2019 18:19:33

Audit Action: Split an Integrated Peak

Audit Reason: Wrong peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-100-B-26 Lab Sample ID: 140-14391-20
 Matrix: Air Lab File ID: GB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:44
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.46		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	24		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-100-B-26 Lab Sample ID: 140-14391-20
 Matrix: Air Lab File ID: GB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:44
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.45	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.8		1.4	0.27
67-66-3	Chloroform	119.38	0.55	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.0		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	91		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P103.D
 Lims ID: 140-14391-A-20
 Client ID: IA-100-B-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 17:19:30 ALS Bottle#: 3 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-009
 Misc. Info.: 140-14391-a-20
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:23:23 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:28:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.232	0.016	97	488432	4.00	
* 2 1,4-Difluorobenzene	114	11.410	11.405	0.005	96	2976485	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2650552	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	84	2035466	3.75	
6 Chlorodifluoromethane	51	3.829	3.823	0.006	96	67955	0.2124	
8 Dichlorodifluoromethane	85	3.888	3.886	0.000	100	47412	0.0917	
31 Methylene Chloride	84	6.633	6.595	0.038	99	40476	0.2018	
44 Chloroform	83	9.248	9.237	0.005	50	9226	0.0226	
50 Benzene	78	10.882	10.877	0.005	97	14848	0.0279	
67 Toluene	91	14.128	14.128	0.000	94	2805660	4.81	
78 Ethylbenzene	91	16.404	16.404	0.000	99	73054	0.0922	
79 m-Xylene & p-Xylene	91	16.560	16.566	-0.006	99	204711	0.3377	
83 o-Xylene	91	17.089	17.089	0.000	98	64045	0.1002	
S 124 Xylenes, Total	100				0		0.4379	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P103.D

Injection Date: 26-Feb-2019 17:19:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14391-A-20

Lab Sample ID: 140-14391-20

Worklist Smp#: 9

Client ID: IA-100-B-26

Purge Vol: 500.000 mL

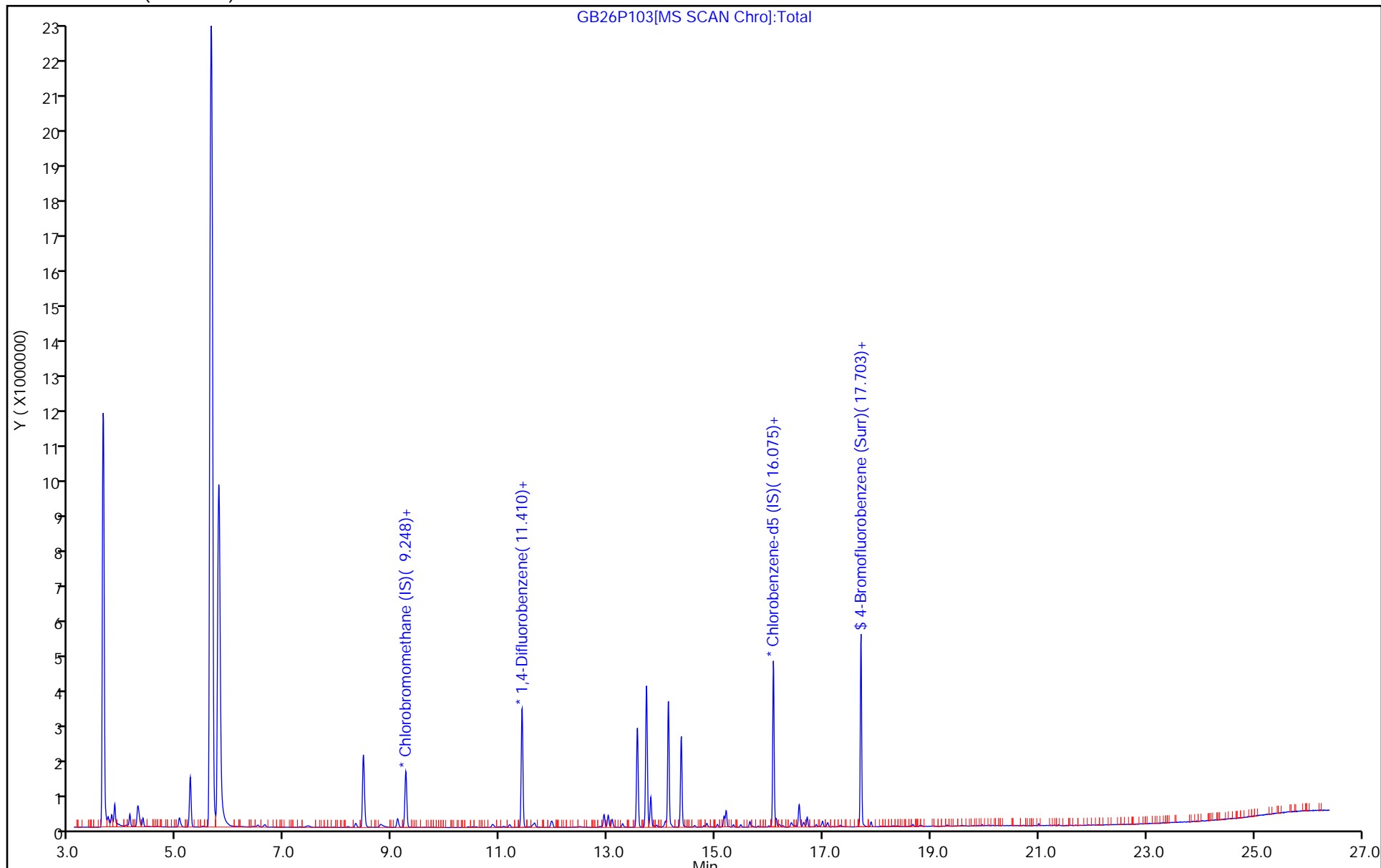
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P103.D
 Lims ID: 140-14391-A-20
 Client ID: IA-100-B-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 17:19:30 ALS Bottle#: 3 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-009
 Misc. Info.: 140-14391-a-20
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:23:23 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:28:50

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.75	93.69

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P103.D

Injection Date: 26-Feb-2019 17:19:30

Instrument ID: MG

Lims ID: 140-14391-A-20

Lab Sample ID: 140-14391-20

Client ID: IA-100-B-26

Operator ID: 7126

ALS Bottle#: 3

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

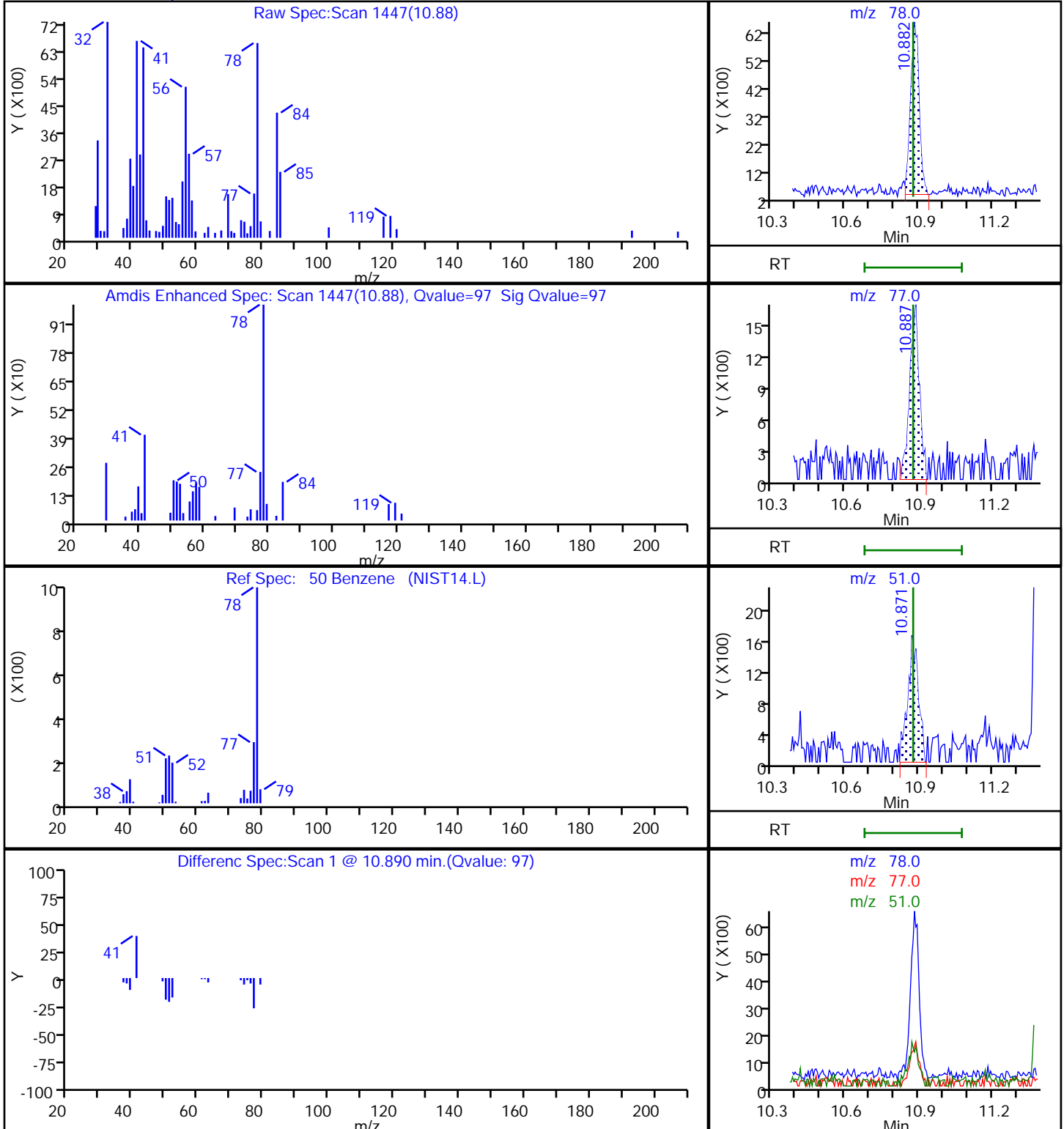
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P103.D

Injection Date: 26-Feb-2019 17:19:30

Instrument ID: MG

Lims ID: 140-14391-A-20

Lab Sample ID: 140-14391-20

Client ID: IA-100-B-26

Operator ID: 7126

ALS Bottle#: 3 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

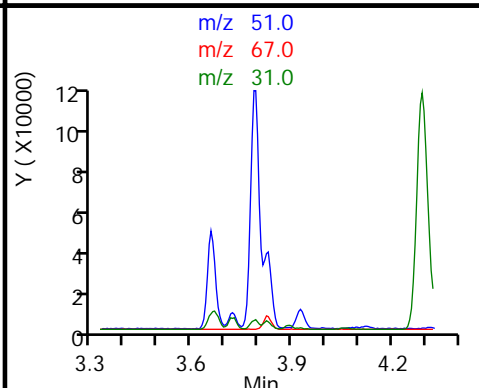
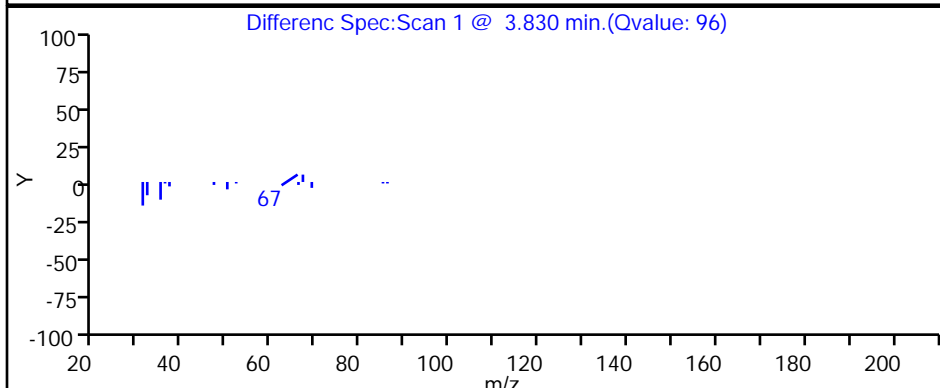
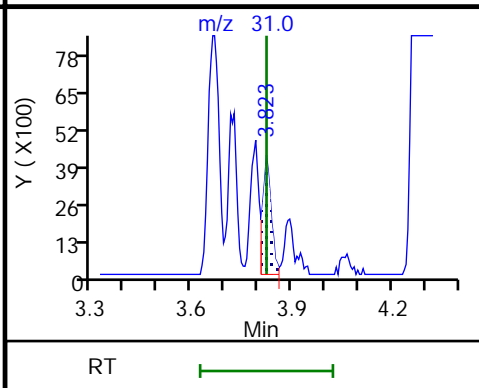
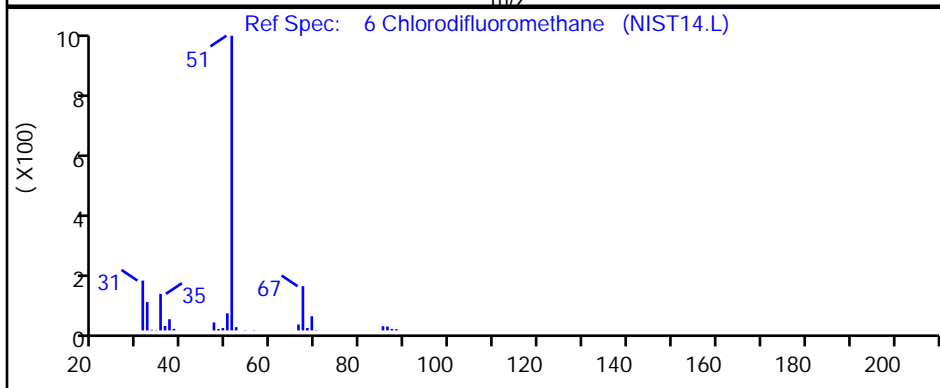
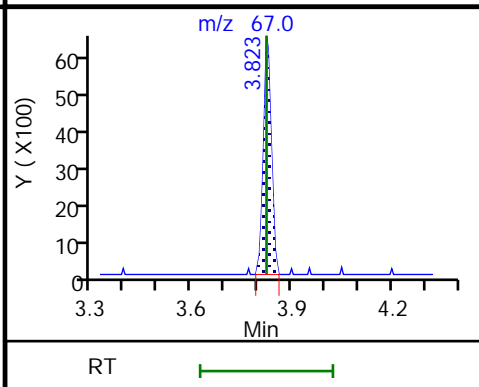
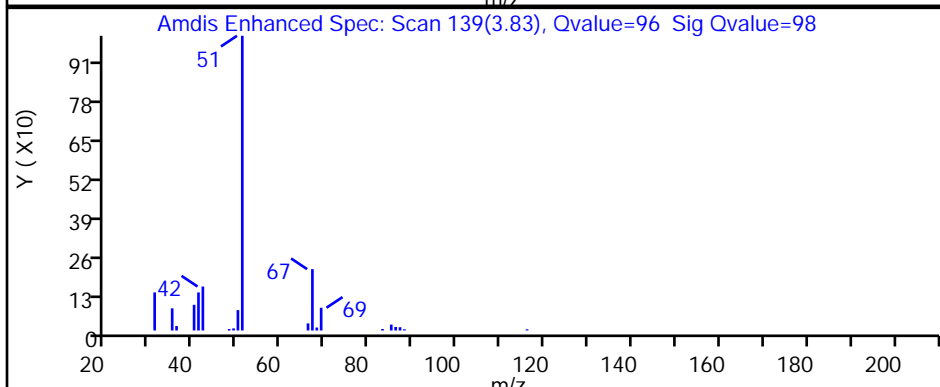
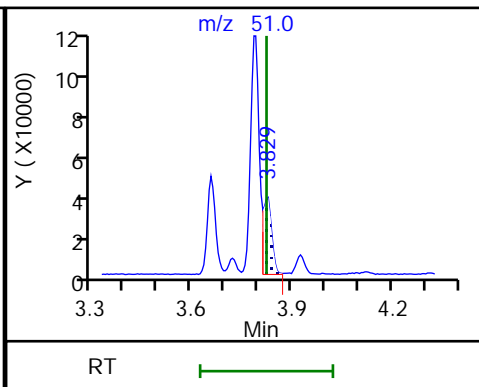
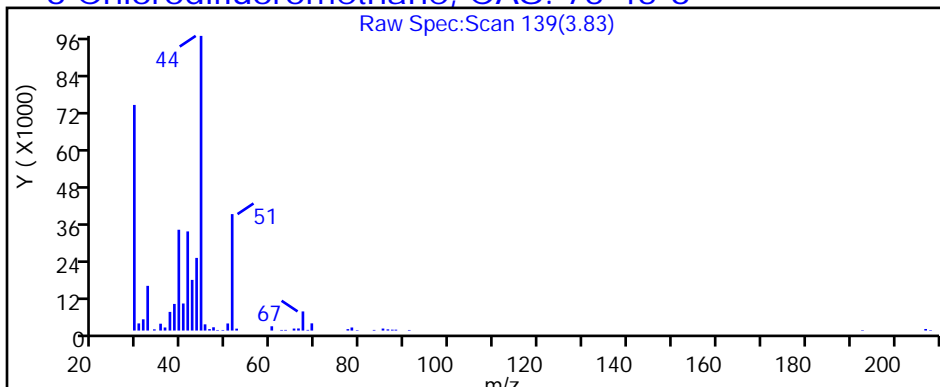
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P103.D

Injection Date: 26-Feb-2019 17:19:30

Instrument ID: MG

Lims ID: 140-14391-A-20

Lab Sample ID: 140-14391-20

Client ID: IA-100-B-26

Operator ID: 7126

ALS Bottle#: 3 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

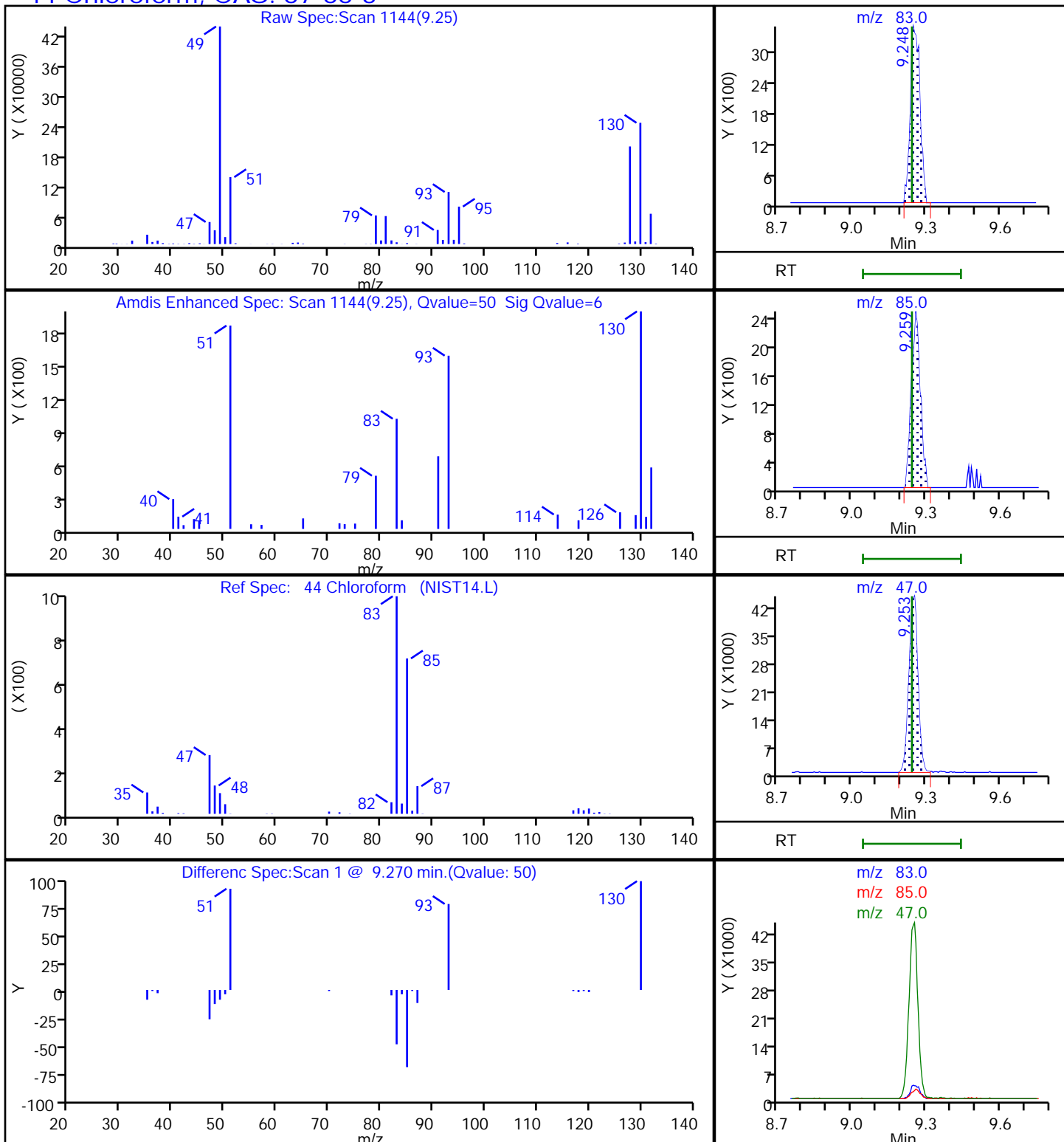
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P103.D

Injection Date: 26-Feb-2019 17:19:30

Instrument ID: MG

Lims ID: 140-14391-A-20

Lab Sample ID: 140-14391-20

Client ID: IA-100-B-26

Operator ID: 7126

ALS Bottle#: 3 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

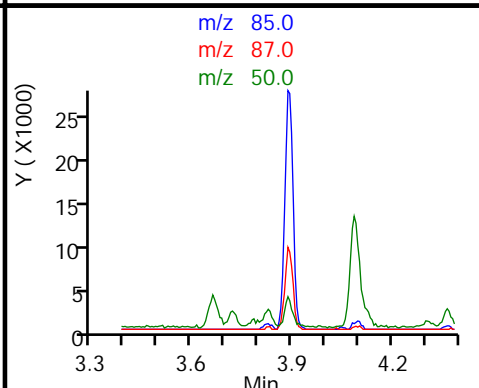
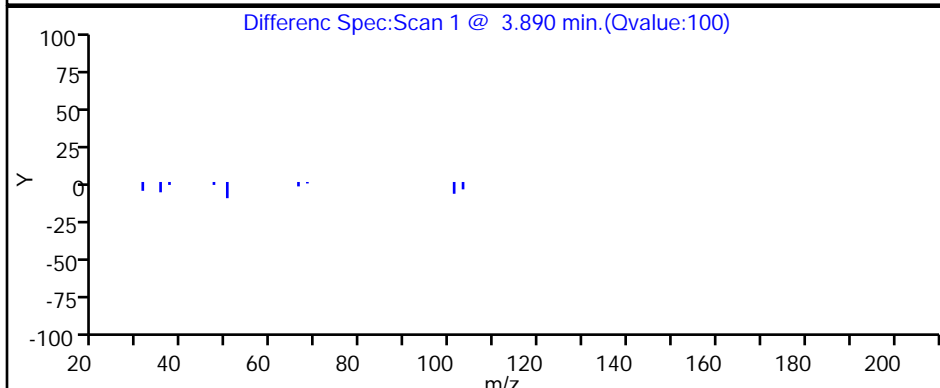
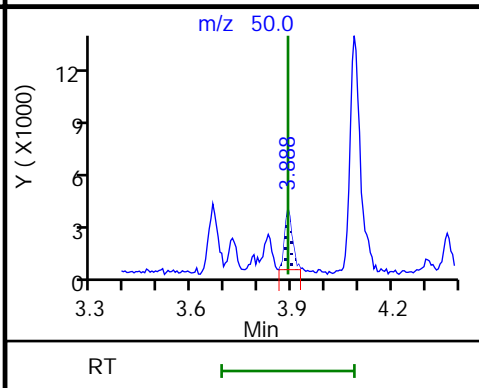
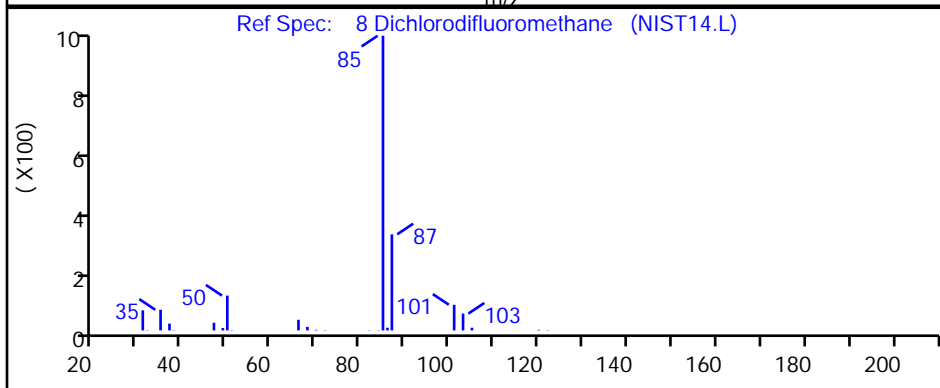
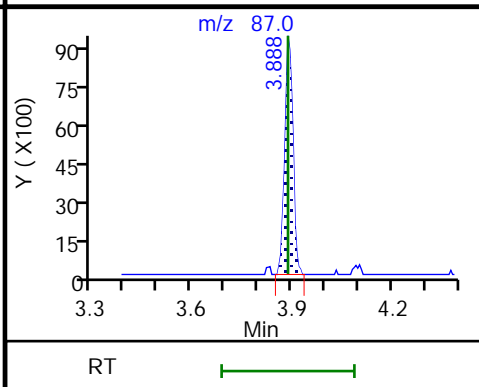
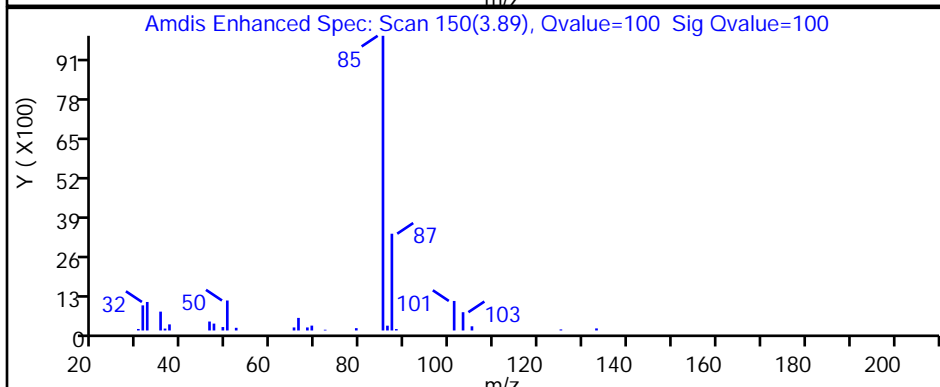
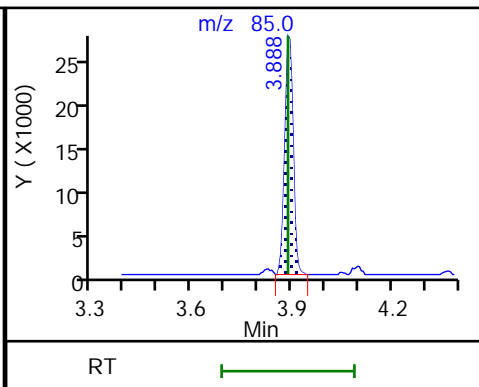
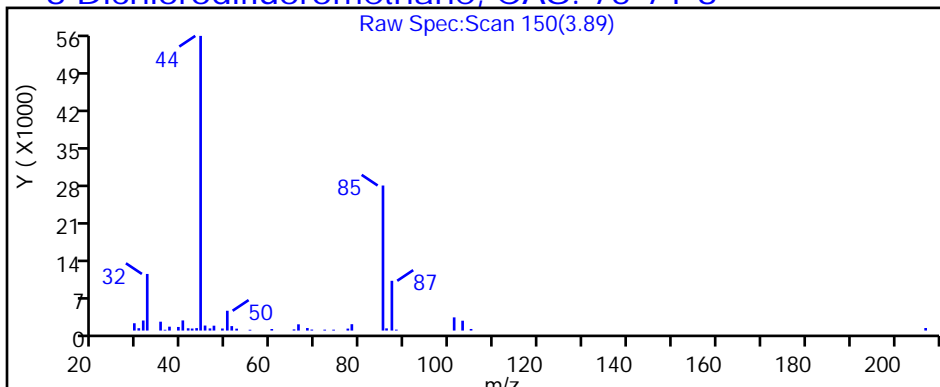
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P103.D

Injection Date: 26-Feb-2019 17:19:30

Instrument ID: MG

Lims ID: 140-14391-A-20

Lab Sample ID: 140-14391-20

Client ID: IA-100-B-26

Operator ID: 7126

ALS Bottle#: 3 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

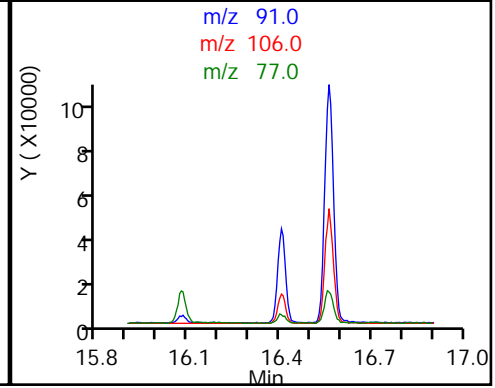
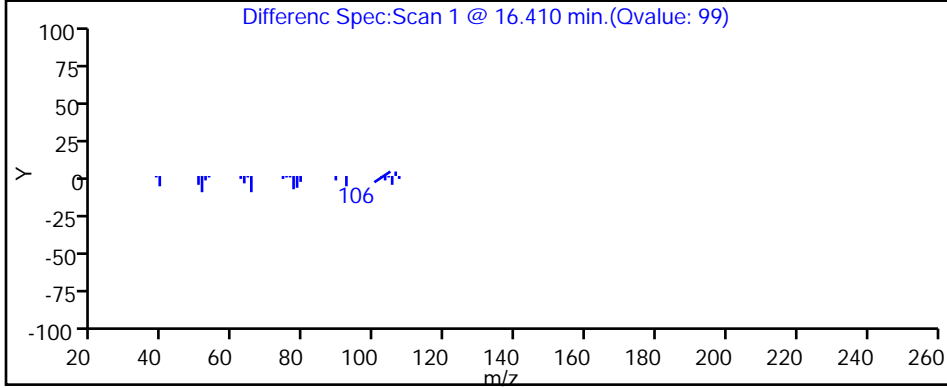
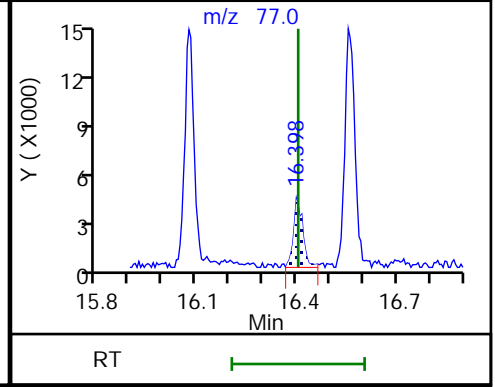
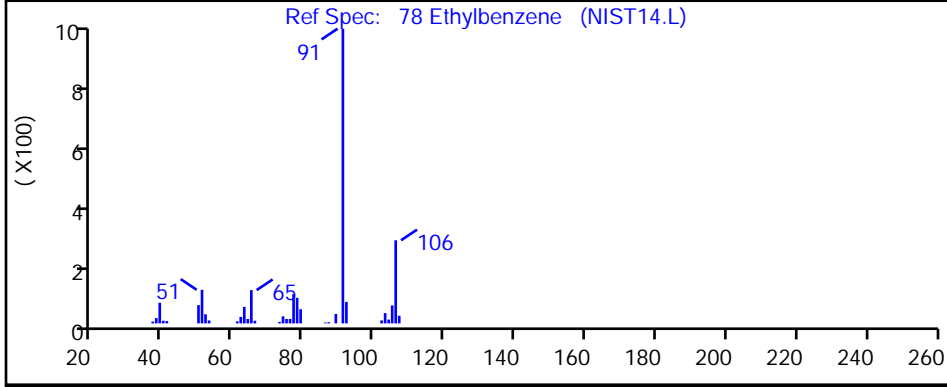
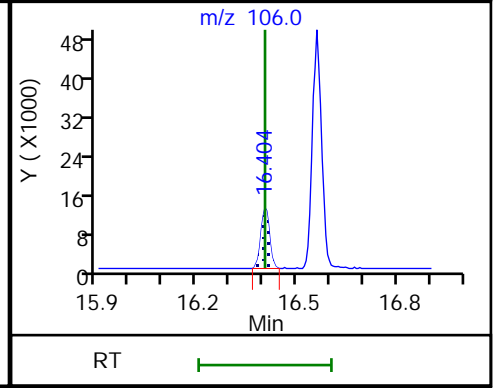
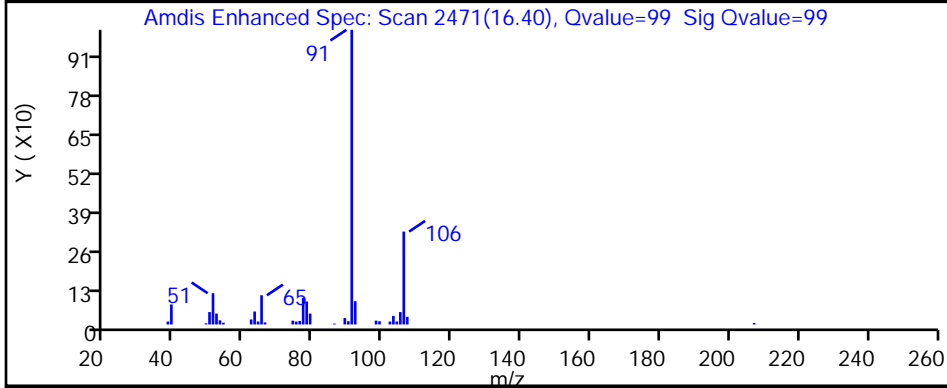
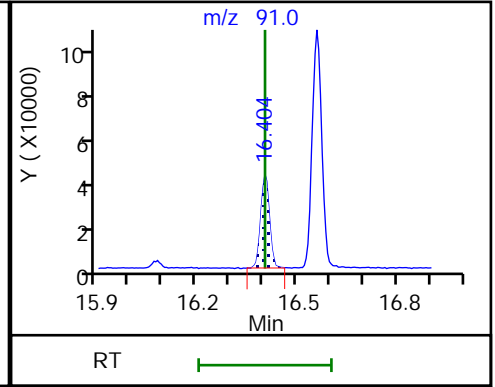
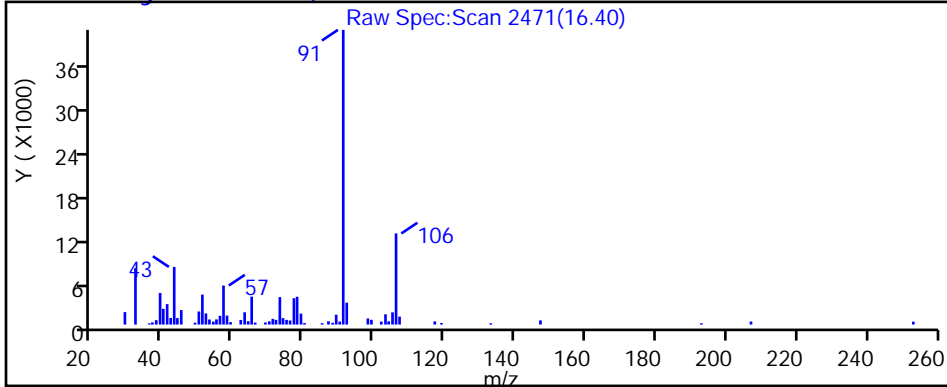
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P103.D

Injection Date: 26-Feb-2019 17:19:30

Instrument ID: MG

Lims ID: 140-14391-A-20

Lab Sample ID: 140-14391-20

Client ID: IA-100-B-26

Operator ID: 7126

ALS Bottle#: 3 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

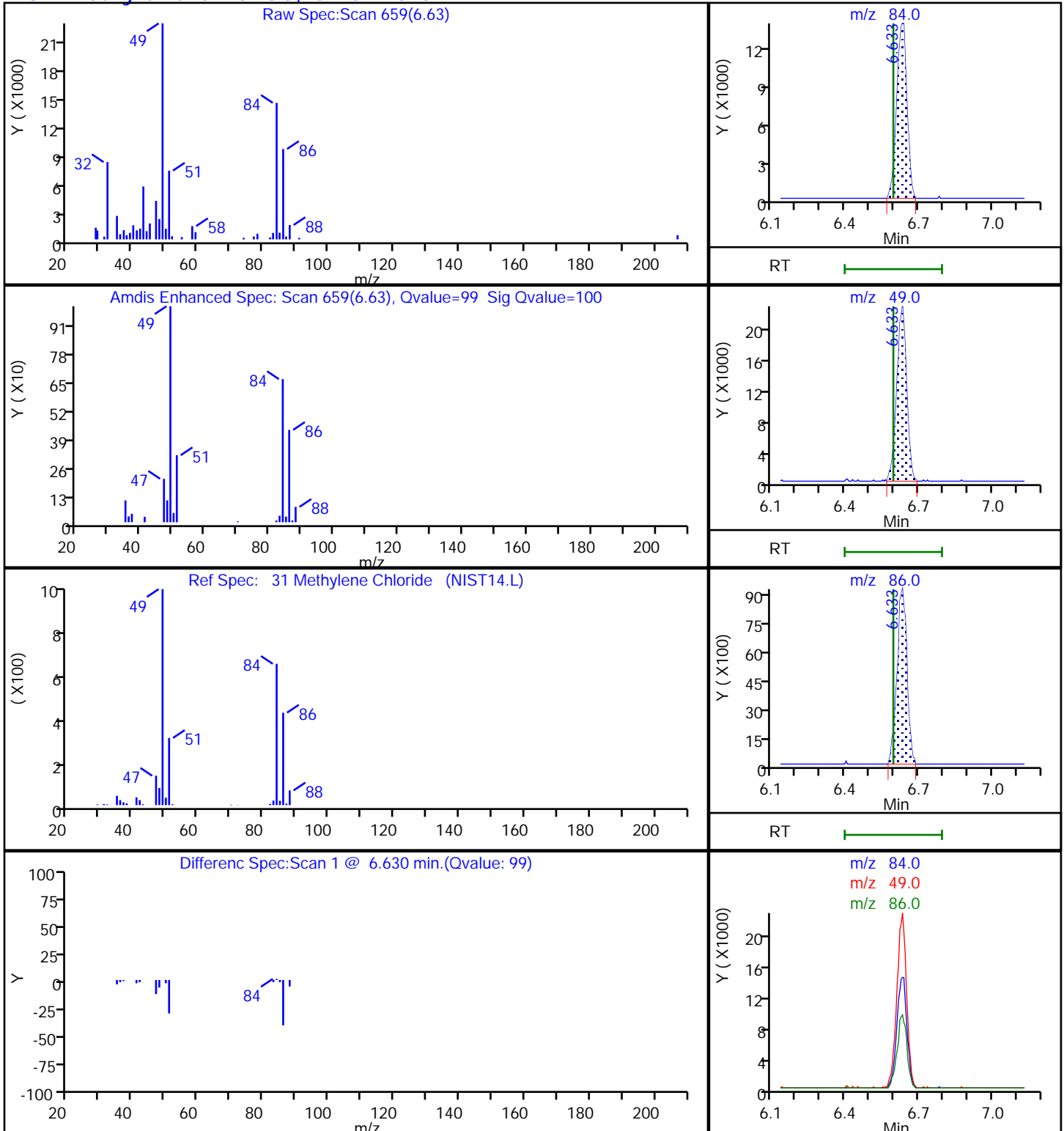
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P103.D

Injection Date: 26-Feb-2019 17:19:30

Instrument ID: MG

Lims ID: 140-14391-A-20

Lab Sample ID: 140-14391-20

Client ID: IA-100-B-26

Operator ID: 7126

ALS Bottle#: 3 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

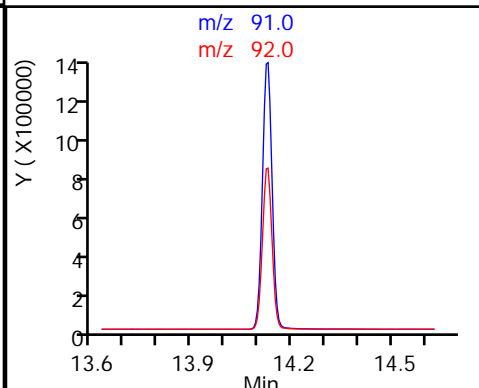
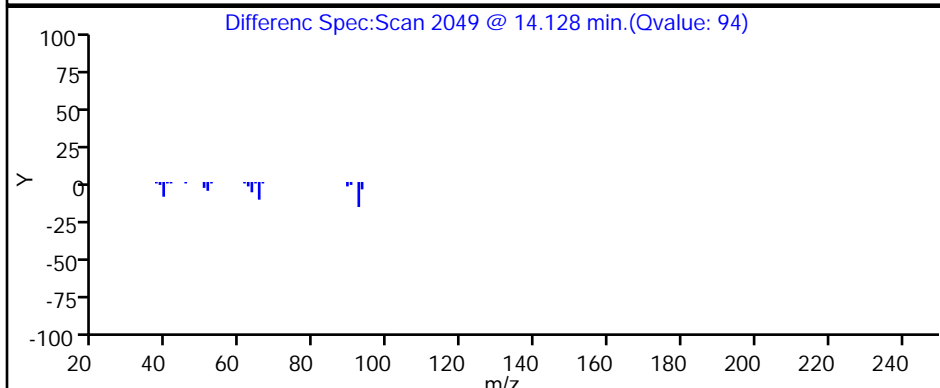
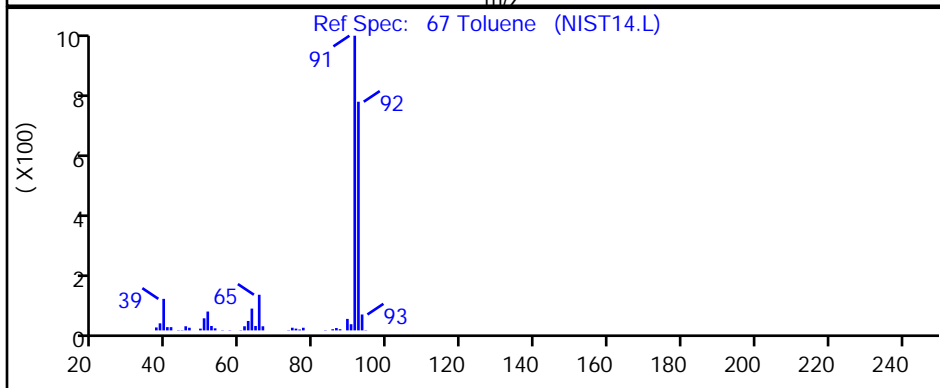
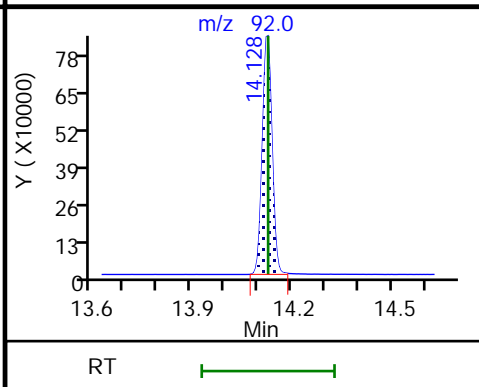
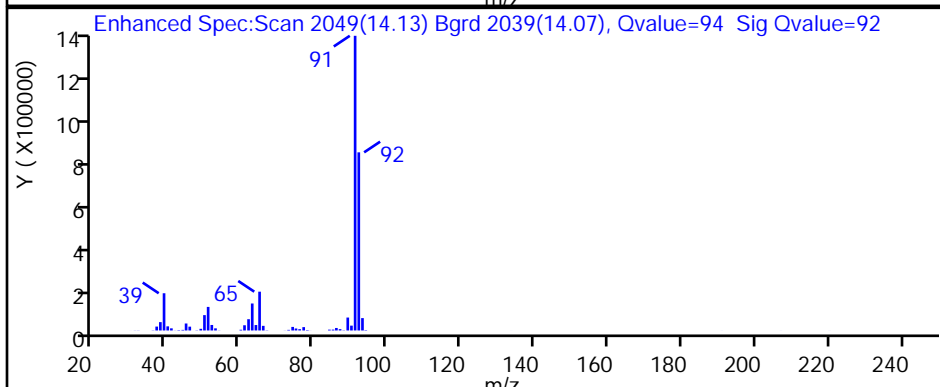
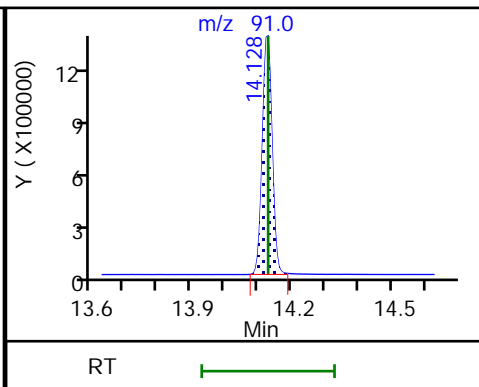
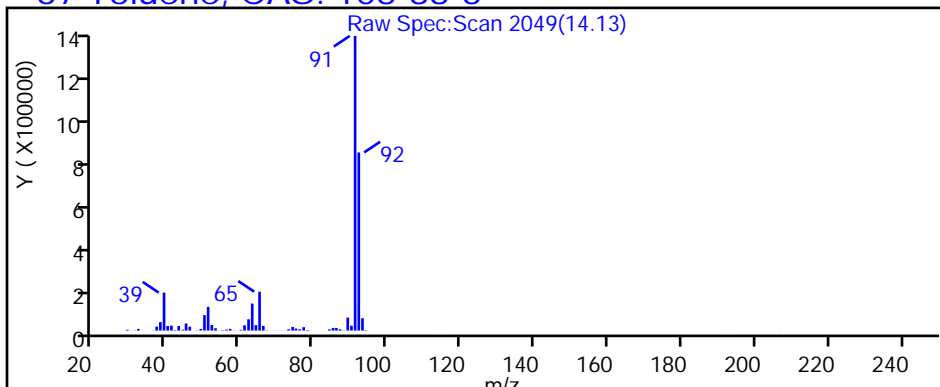
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

67 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P103.D

Injection Date: 26-Feb-2019 17:19:30

Instrument ID: MG

Lims ID: 140-14391-A-20

Lab Sample ID: 140-14391-20

Client ID: IA-100-B-26

Operator ID: 7126

ALS Bottle#: 3

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

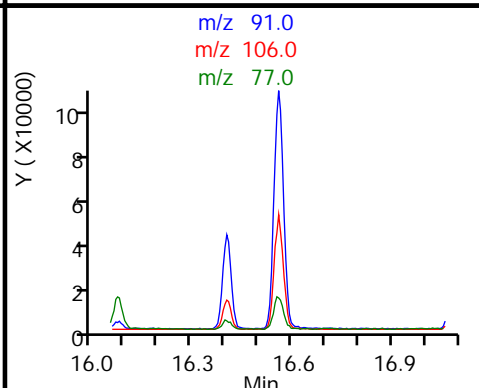
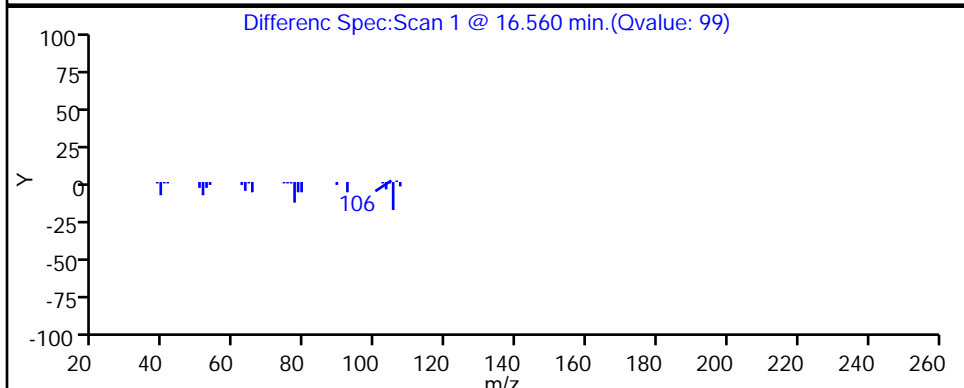
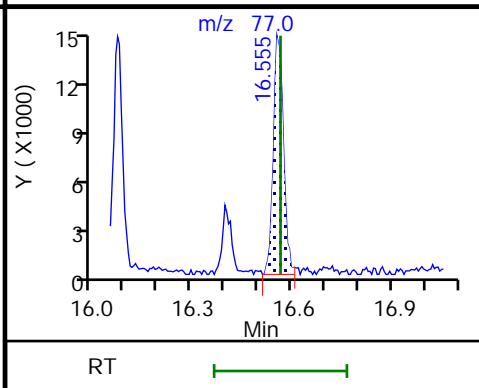
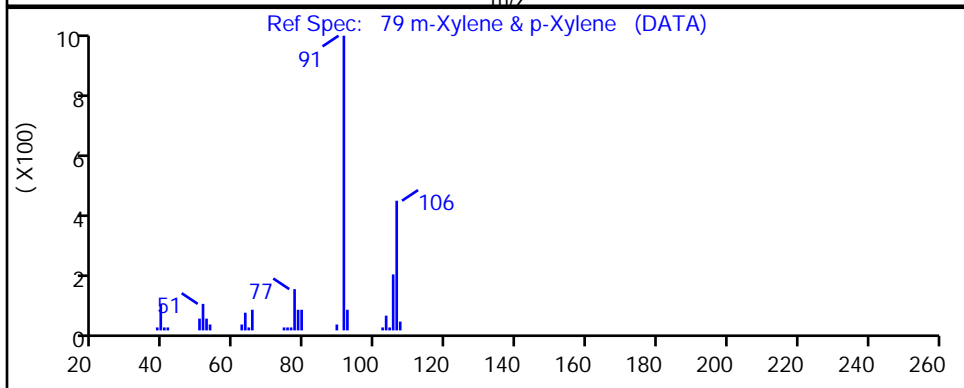
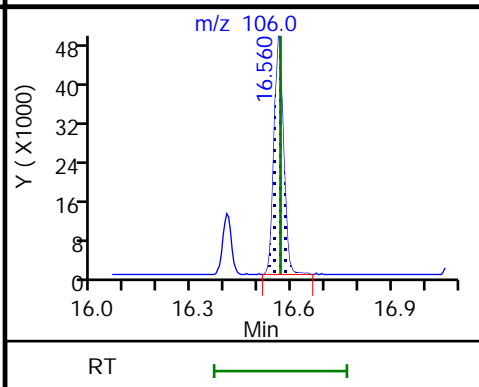
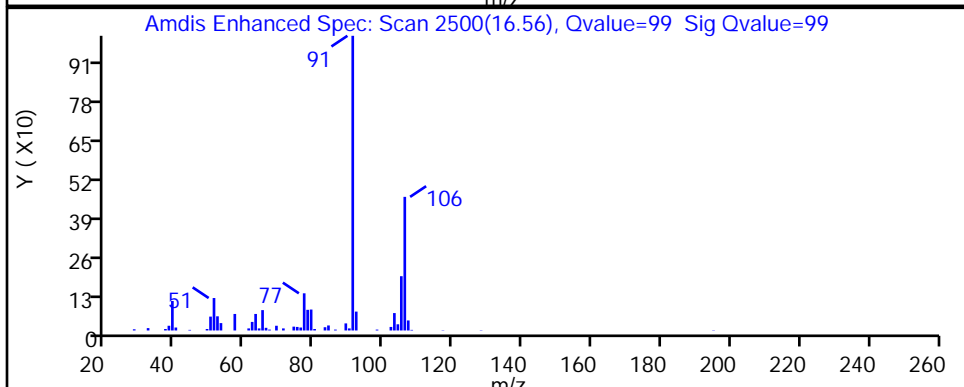
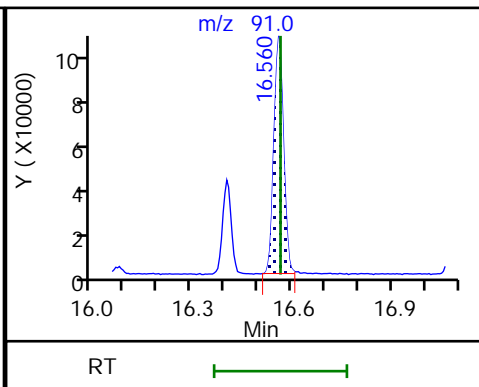
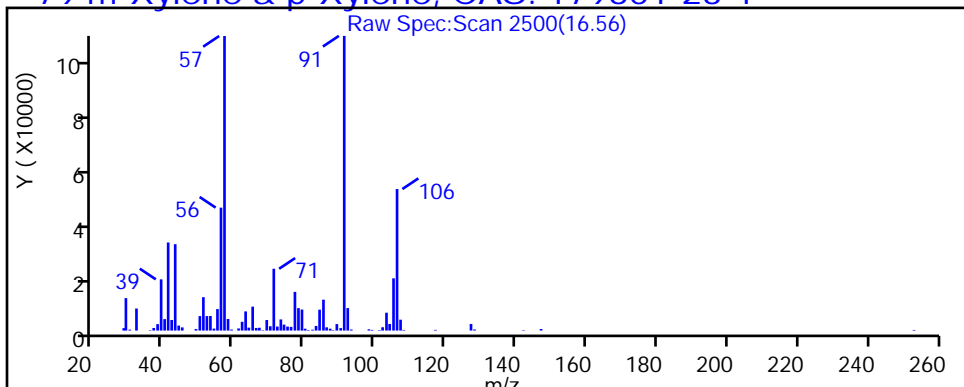
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

79 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P103.D

Injection Date: 26-Feb-2019 17:19:30

Instrument ID: MG

Lims ID: 140-14391-A-20

Lab Sample ID: 140-14391-20

Client ID: IA-100-B-26

Operator ID: 7126

ALS Bottle#: 3 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

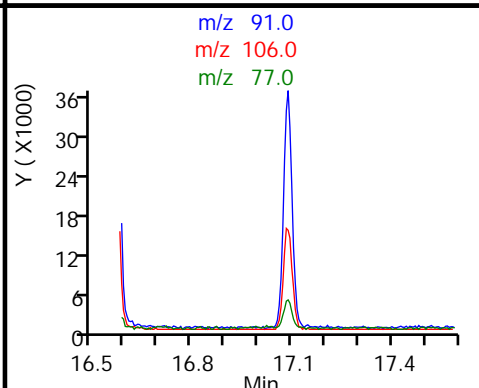
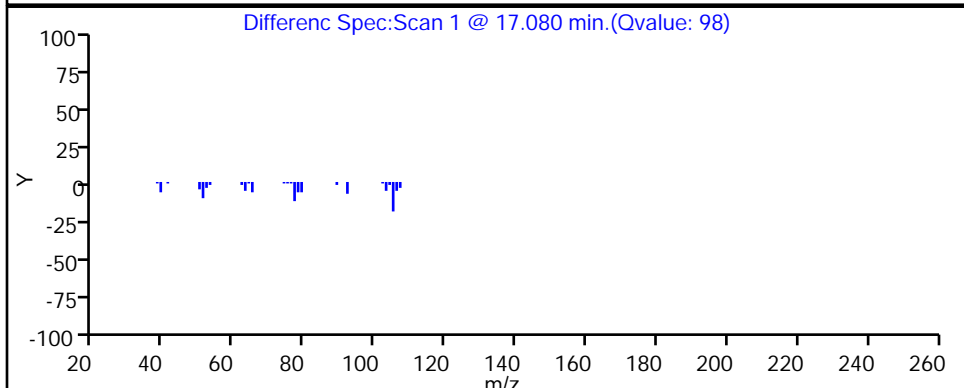
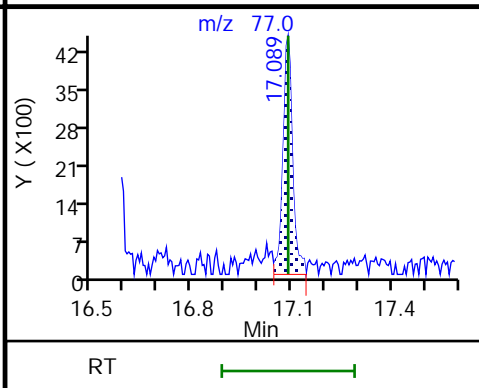
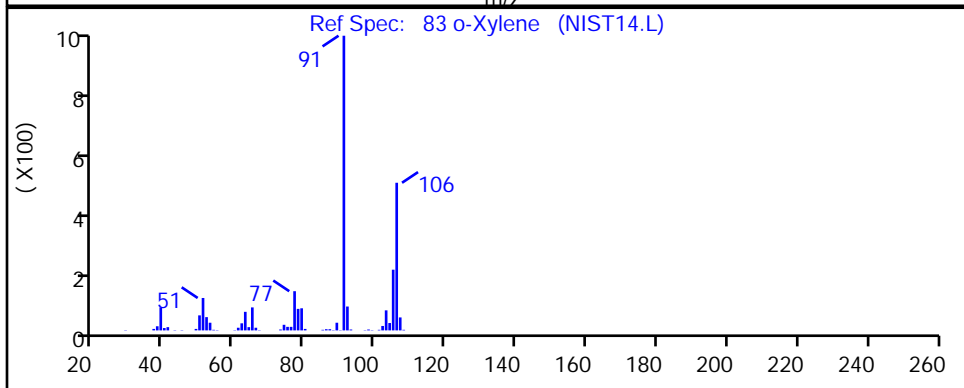
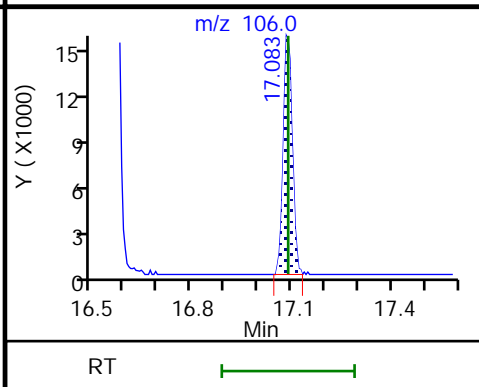
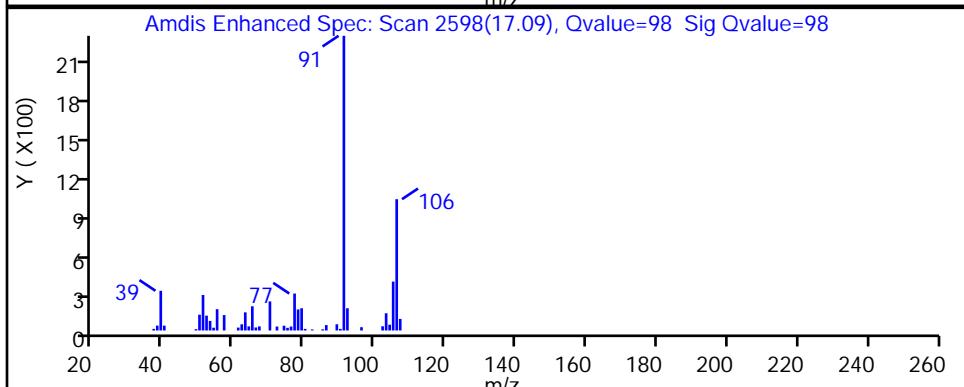
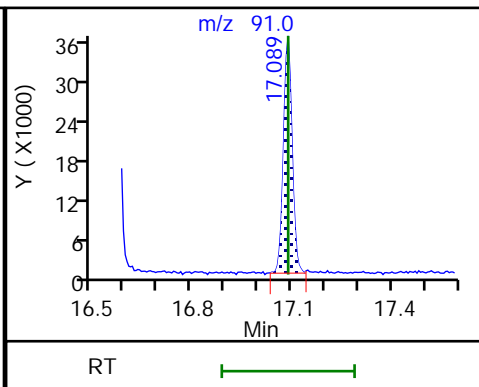
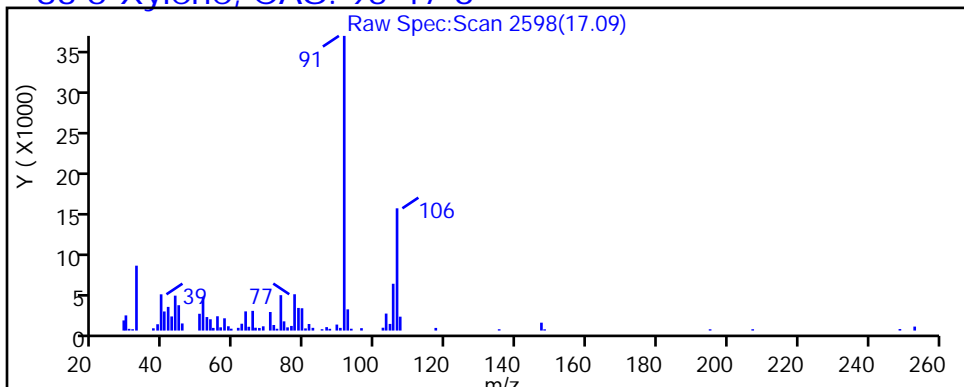
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

83 o-Xylene, CAS: 95-47-6



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++ 2.4796	+++++ 2.3672	2.9523 2.3873	2.7653 2.9026	2.6769 2.4316	Ave		2.6204			9.0		30.0				
Propene	+++++ 1.4104	+++++ 1.3267	+++++ 1.3362	1.8011 1.5897	1.4915 1.2862	Ave		1.4631			12.5		30.0				
Dichlorodifluoromethane	+++++ 4.0515	+++++ 3.9190	+++++ 4.4505 3.9550	4.4326 4.7099	4.2183 4.1407	Ave		4.2347			6.5		30.0				
Chloromethane	+++++ 0.4445	+++++ 0.4230	+++++ 0.4254	0.5625 0.4946	0.4891 0.4152	Ave		0.4649			11.5		30.0				
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 2.3633	+++++ 2.3423	2.6446 2.3822	2.5541 2.5578	2.4472 2.5047	Ave		2.4745			4.4		30.0				
Vinyl chloride	1.9626 1.4785	1.7167 1.4339	1.7320 1.4573	1.6531 1.6387	1.5626 1.4732	Ave		1.6109			10.3		30.0				
Butane	+++++ 2.6258	+++++ 2.4782	+++++ 2.5038	3.0743 2.8679	2.8454 2.5911	Ave		2.7124			8.2		30.0				
1,3-Butadiene	+++++ 1.2041	+++++ 1.1760	+++++ 1.2078	1.2733 1.3654	1.2439 1.2448	Ave		1.2450			5.0		30.0				
Bromomethane	+++++ 1.3078	+++++ 1.2877	1.6548 1.3168	1.3996 1.4117	1.3549 1.3995	Ave		1.3916			8.4		30.0				
Chloroethane	+++++ 0.7377	+++++ 0.7148	0.8627 0.7259	0.8037 0.8118	0.7796 0.7729	Ave		0.7761			6.4		30.0				
Ethanol	+++++ 0.5620	+++++ 0.7386	+++++ 0.5593	0.8657 0.7653	0.7124 0.7259	Ave		0.7042			15.6		30.0				
Vinyl bromide	+++++ 1.2366	+++++ 1.2145	1.3835 1.2610	1.3207 1.2880	1.2830 1.3321	Ave		1.2899			4.2		30.0				
2-Methylbutane	+++++ 1.9302	+++++ 1.8374	+++++ 1.8471	2.0547 1.9762	2.0422 1.9406	Ave		1.9469			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.9949	4.3785 3.8769	4.2718 3.9322	4.1461 4.3687	4.1452 4.2564	Ave		4.1523			4.4		30.0				
Acrolein	++++ 0.3700	++++ 0.3339	++++ 0.3264	++++ 0.4058	0.3535 0.3546	Ave		0.3574			7.9		30.0				
Acetonitrile	++++ 0.5820	++++ 0.5806	++++ 0.5032	0.4860 0.6106	0.5491 0.5907	Ave		0.5574			8.4		30.0				
Acetone	++++ 0.6952	++++ 0.6071	++++ 0.4923	++++ 0.5713	0.7119 0.5299	Ave		0.6013			14.7		30.0				
Pentane	++++ 0.2650	++++ 0.2567	++++ 0.2534	++++ 0.2741	0.2798 0.2630	Ave		0.2653			3.8		30.0				
Isopropyl alcohol	++++ 1.5842	++++ 1.6884	++++ 1.2216	++++ 1.5921	1.7192 1.5978	Ave		1.6033			11.8		30.0				
Ethyl ether	++++ 1.8397	++++ 1.7705	++++ 1.4542	++++ 1.7361	1.9088 1.6409	Ave		1.7250			9.3		30.0				
1,1-Dichloroethene	1.5300 1.3997	1.3691 1.3378	1.5011 1.4037	1.3769 1.3902	1.4054 1.4041	Ave		1.4118			4.2		30.0				
Acrylonitrile	++++ 0.9861	++++ 0.9774	1.0366 0.8664	0.9476 1.0406	0.9217 1.0215	Ave		0.9747			6.2		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.0568	3.1787 2.9429	3.2903 2.9549	3.0618 2.9993	3.1454 2.9101	Ave		3.0600			4.1		30.0				
tert-Butyl alcohol	++++ 2.2526	++++ 2.2071	++++ 1.7152	2.3096 2.1050	2.4776 2.3062	Ave		2.1962			11.0		30.0				
Methylene Chloride	++++ 1.5026	++++ 1.3595	++++ 1.3036	2.5891 1.2966	1.8042 ++++	Ave		1.6426			30.5	*	30.0				
3-Chloropropene	++++ 1.6369	++++ 1.6110	2.0104 1.5866	1.9432 1.7783	1.7193 1.7236	Ave		1.7512			8.8		30.0				
Carbon disulfide	++++ 4.2983	++++ 4.0822	4.5901 4.1194	4.3819 4.1977	4.3526 4.2529	Ave		4.2844			3.8		30.0				
trans-1,2-Dichloroethene	++++ 1.4444	1.3848 1.3913	1.4554 1.4201	1.3845 1.4125	1.4335 1.3979	Ave		1.4138			1.9		30.0				
2-Methylpentane	++++ 4.0309	++++ 3.8853	4.5901 3.8303	4.3761 4.0757	4.2199 3.7514	Ave		4.0450			5.3		30.0				
Methyl tert-butyl ether	++++ 4.1354	3.5946 4.0399	4.2254 3.4444	3.8763 4.0172	4.1168 3.9425	Ave		3.9325			6.6		30.0				
1,1-Dichloroethane	3.1037 2.8577	3.0105 2.8187	3.0470 2.6559	2.9034 2.9155	2.9080 2.8375	Ave		2.9058			4.4		30.0				
Vinyl acetate	++++ 3.9854	++++ 4.2048	4.0675 3.5720	3.8850 4.4145	3.9427 4.2013	Ave		4.0342			6.3		30.0				
Hexane	++++ 1.3242	++++ 1.2816	++++ 1.3713	++++ 1.3526	1.3260 1.2151	Ave		1.3036			4.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++	++++	++++	0.6854	0.6772	Ave		0.6347			8.5		30.0				
	0.6784	0.6294	0.5376	0.6386	0.5958												
cis-1,2-Dichloroethene	1.5310	1.3850	1.4658	1.4361	1.4213	Ave		1.4465			2.9		30.0				
	1.4515	1.4377	1.3972	1.4588	1.4806												
Ethyl acetate	++++	++++	3.4159	3.2335	3.3337	Ave		3.3124			6.9		30.0				
	3.4792	3.3231	2.8120	3.5743	3.3271												
Chloroform	3.5969	3.3560	3.4112	3.4074	3.2824	Ave		3.3444			4.2		30.0				
	3.2821	3.2211	3.0680	3.4218	3.3970												
Tetrahydrofuran	++++	++++	++++	1.7940	1.8215	Ave		1.7724			6.6		30.0				
	1.8641	1.7946	1.5246	1.8635	1.7446												
1,1,1-Trichloroethane	3.8810	3.4765	3.6941	3.5977	3.6119	Ave		3.6203			4.2		30.0				
	3.5723	3.5364	3.3475	3.7388	3.7470												
1,2-Dichloroethane	0.3890	0.3740	0.4205	0.3853	0.3989	Ave		0.3910			6.7		30.0				
	0.3918	0.3624	0.3439	0.4219	0.4228												
Cyclohexane	++++	++++	++++	0.1383	0.1426	Ave		0.1314			6.9		30.0				
	0.1391	0.1224	0.1193	0.1325	0.1258												
Benzene	++++	0.7122	0.8006	0.7160	0.7636	Ave		0.7153			7.0		30.0				
	0.7488	0.6697	0.6393	0.7124	0.6753												
Carbon tetrachloride	0.5647	0.5298	0.5813	0.5547	0.6331	Ave		0.5933			8.0		30.0				
	0.6279	0.5625	0.5603	0.6718	0.6470												
1-Butanol	++++	++++	++++	0.0897	0.1022	Ave		0.0896			13.7		30.0				
	0.1010	0.0823	0.0665	0.0902	0.0950												
2,3-Dimethylpentane	++++	++++	0.2016	0.1866	0.2067	Ave		0.1886			7.0		30.0				
	0.1994	0.1776	0.1681	0.1880	0.1811												
Thiophene	++++	++++	0.4419	0.4095	0.4328	Ave		0.4156			5.4		30.0				
	0.4205	0.3890	0.3765	0.4241	0.4306												
2,2,4-Trimethylpentane	1.4853	1.4111	1.5290	1.4173	1.5323	Ave		1.4009			8.1		30.0				
	1.4628	1.2640	1.1785	1.3863	1.3426												
Heptane	++++	++++	0.3221	0.2848	0.3010	Ave		0.2875			7.7		30.0				
	0.2942	0.2637	0.2507	0.2927	0.2912												
1,2-Dichloropropane	++++	0.2947	0.3066	0.2799	0.2948	Ave		0.2813			7.5		30.0				
	0.2869	0.2617	0.2359	0.2893	0.2819												
Trichloroethene	0.3496	0.3229	0.3354	0.3064	0.3383	Ave		0.3257			5.2		30.0				
	0.3271	0.3039	0.3006	0.3304	0.3426												
Dibromomethane	++++	++++	++++	0.3027	0.3082	Ave		0.2963			7.9		30.0				
	0.2897	0.2688	0.2632	0.3189	0.3227												
Bromodichloromethane	++++	++++	0.5688	0.5299	0.5916	Ave		0.5843			8.8		30.0				
	0.5840	0.5507	0.5314	0.6523	0.6656												
1,4-Dioxane	++++	++++	++++	0.0947	0.0887	Ave		0.0832			17.3		30.0				
	0.0619	0.0891	0.0629	0.0903	0.0946												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3918	++++ 0.3473	++++ 0.2972	0.3014 0.4093	0.3703 0.3989	Ave		0.3595			12.7		30.0				
Methylcyclohexane	0.4845 0.5152	0.4926 0.4533	0.5068 0.4304	0.4870 0.4877	0.5327 0.5063	Ave		0.4896			6.1		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.6350	++++ 0.5092	0.5796 0.3308	0.5597 0.5890	0.6524 0.6484	Ave		0.5630			18.8		30.0				
cis-1,3-Dichloropropene	++++ 0.4479	0.3952 0.4121	0.4552 0.3828	0.4166 0.4613	0.4382 0.4415	Ave		0.4279			6.4		30.0				
trans-1,3-Dichloropropene	++++ 0.4450	0.3978 0.4156	0.4398 0.3772	0.4049 0.4673	0.4521 0.4806	Ave		0.4311			8.0		30.0				
Toluene	0.8893 0.9181	0.8808 0.8443	0.9072 0.7540	0.8795 0.8738	0.9309 0.9230	Ave		0.8801			5.9		30.0				
1,1,2-Trichloroethane	0.2596 0.2870	0.2566 0.2535	0.2815 0.2299	0.2715 0.2735	0.2904 0.2819	Ave		0.2685			7.0		30.0				
2-Hexanone	++++ 0.3129	++++ 0.2311	0.2486 0.1601	0.2653 0.2620	0.3155 0.3172	Ave		0.2641			20.2		30.0				
Octane	++++ 0.3331	++++ 0.2969	0.3166 0.2807	0.3142 0.3116	0.3533 0.3257	Ave		0.3165			7.0		30.0				
C8 Range	++++ 3.2900	++++ 2.9406	++++ 2.7321	3.2543 3.2050	3.4583 3.2302	Ave		3.1586			7.7		30.0				
Dibromochloromethane	++++ 0.5589	++++ 0.5327	0.4753 0.5204	0.4633 0.6101	0.5345 0.6613	Ave		0.5446			12.1		30.0				
1,2-Dibromoethane (EDB)	++++ 0.4879	++++ 0.4537	0.4324 0.4227	0.4409 0.4933	0.4776 0.5168	Ave		0.4656			7.1		30.0				
Tetrachloroethene	0.3340 0.3413	0.3265 0.3106	0.3184 0.2978	0.3299 0.3362	0.3500 0.3575	Ave		0.3302			5.4		30.0				
Chlorobenzene	0.6503 0.7257	0.6533 0.6547	0.7038 0.5918	0.6891 0.6804	0.7584 0.7332	Ave		0.6841			7.2		30.0				
Ethylbenzene	++++ 1.2841	1.1605 1.1457	1.1820 0.9886	1.2041 1.2050	1.3132 1.2806	Ave		1.1960			8.1		30.0				
m-Xylene & p-Xylene	0.7852 1.0069	0.8464 0.8920	0.9631 0.7597	0.9388 0.9364	1.0264 0.9927	Ave		0.9148			10.1		30.0				
Nonane	++++ 0.7074	0.6367 0.6181	0.6731 0.5580	0.6713 0.6403	0.7319 0.6196	Ave		0.6507			8.0		30.0				
Bromoform	++++ 0.5150	++++ 0.5097	0.3874 0.4824	0.3783 0.6069	0.4530 ++++	Ave		0.4761			16.7		30.0				
Styrene	++++ 0.6772	++++ 0.6274	0.5417 0.5521	0.5440 0.6889	0.6499 0.7776	Ave		0.6323			13.2		30.0				
o-Xylene	++++ 1.0316	0.8434 0.9312	0.9762 0.7934	0.9959 0.9762	1.0612 1.0727	Ave		0.9646			9.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++ 0.6943	++++ 0.6225	0.6477 0.5392	0.6105 0.6980	0.7079 0.6623	Ave		0.6478			8.7		30.0				
1,2,3-Trichloropropane	++++ 0.2201	++++ 0.1963	0.2117 0.1718	0.1933 0.2253	0.2181 0.2233	Ave		0.2075			9.0		30.0				
Isopropylbenzene	++++ 1.3750	1.2061 1.2349	1.2881 1.0540	1.2705 1.3875	1.3916 1.3659	Ave		1.2860			8.6		30.0				
Propylbenzene	++++ 0.3714	++++ 0.3352	0.3426 0.2878	0.3159 0.3755	0.3762 0.3762	Ave		0.3476			9.6		30.0				
2-Chlorotoluene	++++ 0.3404	0.3055 0.2960	0.3209 0.2606	0.3117 0.3372	0.3448 0.3406	Ave		0.3175			8.7		30.0				
4-Ethyltoluene	++++ 1.3518	++++ 1.2430	1.2707 1.0593	1.1808 1.3853	1.3899 1.3849	Ave		1.2832			9.3		30.0				
1,3,5-Trimethylbenzene	++++ 0.5322	++++ 0.4840	0.4931 0.4140	0.4624 0.5337	0.5289 0.5468	Ave		0.4994			9.1		30.0				
Alpha Methyl Styrene	++++ 0.5256	++++ 0.4877	++++ 0.4370	++++ 0.6086	0.3906 0.6006	Ave		0.5043			16.0		30.0				
Decane	++++ 0.8778	0.7603 0.7515	0.8322 0.6337	0.8484 0.8180	0.9143 0.7472	Ave		0.7982			10.6		30.0				
tert-Butylbenzene	++++ 1.2040	++++ 1.0655	1.0703 0.8921	1.0556 1.2542	1.1543 1.2176	Ave		1.1142			10.6		30.0				
1,2,4-Trimethylbenzene	++++ 1.1975	++++ 1.0389	1.0671 0.8751	1.0434 1.2267	1.1402 1.1768	Ave		1.0957			10.4		30.0				
sec-Butylbenzene	++++ 1.7209	++++ 1.4915	1.5212 1.2789	1.5236 1.7227	1.6717 1.6181	Ave		1.5686			9.5		30.0				
1,3-Dichlorobenzene	0.6490 0.7671	0.6444 0.6846	0.6738 0.6125	0.6739 0.8458	0.7415 0.8676	Ave		0.7160			12.1		30.0				
Benzyl chloride	++++ 1.0629	++++ 0.9436	0.8534 0.8465	0.8353 1.1447	0.9958 1.1273	Ave		0.9762			13.0		30.0				
1,4-Dichlorobenzene	0.7017 0.7787	0.6870 0.6945	0.6938 0.6166	0.6879 0.8577	0.7429 0.8826	Ave		0.7344			11.3		30.0				
4-Isopropyltoluene	++++ 1.3919	++++ 1.1997	1.1350 1.0411	1.1617 1.4207	1.3168 1.3719	Ave		1.2548			11.1		30.0				
1,2,3-Trimethylbenzene	0.7568 1.1870	0.8539 1.0454	1.0085 0.9035	1.0349 ++++	1.1364 ++++	Ave		0.9908			14.6		30.0				
Indane	++++ 1.0760	++++ 0.9392	0.9630 0.8123	0.9316 1.1012	1.0002 1.0990	Ave		0.9903			10.1		30.0				
1,2-Dichlorobenzene	++++ 0.7440	++++ 0.6621	0.6671 0.5878	0.6607 0.8263	0.7087 0.8754	Ave		0.7165			13.3		30.0				
Butylbenzene	++++ 1.4543	++++ 1.1174	1.2268 1.0412	1.2695 1.4208	1.3939 1.3499	Ave		1.2768			11.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.9217	++++ 0.8188	0.7590 0.7206	0.7567 0.9791	0.8625 0.9878	Ave		0.8508			12.2		30.0				
Undecane	++++ 0.9412	0.7138 0.7639	0.7854 0.6439	0.8623 0.8142	0.9777 0.7859	Ave		0.8098			13.0		30.0				
1,2-Dibromo-3-Chloropropane	0.2667 0.3713	0.2609 0.3380	0.2709 0.2859	0.2620 ++++	0.3145 ++++	Ave		0.2963			13.8		30.0				
1,2,4,5-Tetramethylbenzene	++++ 1.3103	++++ 1.1118	1.0041 0.8463	1.0551 1.2653	1.2570 1.2867	Ave		1.1421			14.5		30.0				
Dodecane	++++ 0.7978	0.6003 0.5688	0.6899 0.3858	0.7041 0.5331	0.8370 ++++	Ave		0.6396			23.1		30.0				
1,2,4-Trichlorobenzene	++++ 0.6436	0.5319 0.5457	0.4906 0.4989	0.4888 0.6587	0.5772 0.6483	Ave		0.5649			12.4		30.0				
Naphthalene	++++ 1.4994	1.1580 1.2044	1.1489 0.9653	1.0861 1.2974	1.4202 1.3257	Ave		1.2339			13.6		30.0				
Hexachlorobutadiene	++++ 0.6448	++++ 0.5763	0.5100 0.5363	0.5070 0.7409	0.5745 0.7482	Ave		0.6047			16.0		30.0				
1,2,3-Trichlorobenzene	++++ 0.6283	0.5060 0.4951	0.4846 0.4151	0.4581 0.5663	0.5627 0.3728	Ave		0.4988			15.9		30.0				
2-Methylnaphthalene	++++ 0.9181	0.6422 0.5284	0.5584 0.3836	0.4778 0.4940	0.8101 ++++	Ave		0.6016			29.9		50.0				
1-Methylnaphthalene	++++ 1.1220	0.8380 0.6213	0.6877 0.4374	0.6391 0.5433	1.0085 ++++	Ave		0.7372			31.8		50.0				
4-Bromofluorobenzene (Surr)	0.7946 0.8130	0.8076 0.7824	0.8238 0.7807	0.8163 0.9039	0.8357 0.8386	Ave		0.8196			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 261958	++++ 518289	21711 1076565	42570 1857884	107824 3550370	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 149007	++++ 290483	++++ 602545	27727 1017511	60077 1877999	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 428033	++++ 858049	32728 1783528	68237 3014742	169908 6045892	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 46960	++++ 92605	++++ 191831	8660 316575	19699 606292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 249678	++++ 512846	19448 1074243	39319 1637176	98572 3657066	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	3911 156203	6583 313945	12737 657162	25449 1048926	62942 2151077	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 277412	++++ 542597	++++ 1129098	47326 1835688	114610 3783292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 127206	++++ 257490	++++ 544660	19602 873952	50104 1817509	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 138169	++++ 281926	12169 593804	21546 903575	54574 2043364	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 77933	++++ 156493	6344 327330	12373 519647	31401 1128580	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 296853	++++ 808553	++++ 1261075	66636 2449308	143467 5299467	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 130640	++++ 265901	10174 568659	20331 824429	51677 1944996	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 203924	++++ 402287	++++ 832948	31631 1264951	82259 2833506	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 422050	16790 848836	31414 1773236	63826 2796331	166966 6214752	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	++++ 39091	++++ 73107	++++ 147180	++++ 259717	14239 517814	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 61491	++++ 127125	++++ 226910	++++ 390809	7481 862471	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Acetone	CBM	Ave	++++ 220327	++++ 398773	++++ 665956	++++ 1097098	86023 2321110	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 28000	++++ 56204	++++ 114279	++++ 175439	11269 384054	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 502108	++++ 1108992	++++ 1652685	++++ 3057291	79400 6999063	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 194355	++++ 387640	++++ 655797	++++ 1111229	76885 2395844	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	3049 147877	5250 292909	11039 633007	21196 889868	56607 2050200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 104178	++++ 213988	++++ 390689	++++ 666078	7623 1491458	++++ 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 322940	++++ 644340	++++ 1332511	++++ 1919761	47135 4249014	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 237979	++++ 483244	++++ 773470	++++ 1347387	35554 3367365	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Methylene Chloride	CBM	Ave	++++ 158748	++++ 297663	++++ 587875	++++ 829908	39858 72672	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 0.400
3-Chloropropene	CBM	Ave	++++ 172933	++++ 352711	++++ 715500	++++ 1138278	29914 2516658	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 454099	++++ 893782	++++ 1857677	++++ 2686894	33755 6209652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 152597	++++ 304618	++++ 640390	++++ 904134	21313 2041028	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 425850	++++ 850675	++++ 1727313	++++ 2608750	32181 5477445	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 436887	++++ 884523	++++ 1553256	++++ 2571313	31073 5756531	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	6185 301902	11544 617142	22407 1197700	44696 1866128	117133 4143029	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 421041	++++ 920626	++++ 1610829	++++ 2825655	59807 6134377	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 139897	++++ 280600	++++ 564091	++++ 836832	10084 1774150	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 71674	++++ 137814	++++ 242448	++++ 408724	10552 870000	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
cis-1,2-Dichloroethene	CBM	Ave	3051 153350	5311 314771	10779 630074	22108 933768	57247 2161860	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 367561	++++ 727588	25120 1268094	49778 2287831	134280 4857969	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	7168 346742	12869 705235	25085 1383523	52455 2190241	132214 4960016	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 196936	++++ 392928	++++ 687510	27618 1192762	73368 2547299	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7734 377403	13331 774289	27166 1509577	55384 2393121	145486 5471084	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4547 232618	8382 490730	17516 952640	35324 1548479	87574 3502141	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 82609	++++ 165738	++++ 330488	12681 486357	31319 1042096	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 444635	15963 906736	33352 1771104	65637 2614755	167643 5593459	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	6601 372817	11874 761689	24215 1552321	50848 2465819	138991 5358444	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 59954	++++ 111445	++++ 184294	8226 331158	22433 786825	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 118426	++++ 240541	8397 465638	17105 690034	45390 1499809	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 249671	++++ 526684	18410 1043094	37543 1556455	95028 3566561	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	17363 868592	31627 1711484	63694 3264805	129920 5087913	336411 11120269	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 174693	++++ 357021	13419 694408	26105 1074435	66081 2411618	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 170338	6605 354326	12771 653599	25661 1061646	64714 2334951	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4087 194217	7238 411429	13973 832705	28091 1212507	74264 2837545	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 172040	++++ 363939	++++ 729198	27744 1170568	67675 2672665	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 346754	++++ 745629	23694 1472126	48577 2394105	129879 5512449	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 36737	++++ 120654	++++ 174155	8684 331358	19464 783489	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 232640	++++ 470252	++++ 823262	27631 1502138	81302 3304265	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	5664 305916	11041 613752	21112 1192238	44641 1790104	116952 4193256	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 377024	++++ 689509	24146 916498	51311 2161661	143236 5370174	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 265941	8857 558061	18964 1060593	38186 1693124	96201 3656415	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 249246	8494 528240	18209 983862	34634 1678819	93722 3876912	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	9759 514273	18809 1073072	37560 1966647	75222 3139180	192974 7445292	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2849 160780	5479 322166	11656 599648	23218 982519	60205 2274200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 175250	++++ 293749	10295 417616	22692 941298	65409 2558380	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 186587	++++ 377410	13108 732239	26877 1119383	73243 2627265	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	CBZd 5	Ave	++++ 1842861	++++ 3737320	++++ 7125919	278341 11514382	716916 26057226	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	++++ 313050	++++ 676985	19680 1357226	39627 2191805	110810 5334244	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 273278	++++ 576579	17903 1102407	37712 1772227	99001 4168790	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3665 191154	6973 394783	13185 776709	28219 1207845	72561 2883889	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	7137 406499	13951 832085	29142 1543553	58935 2444395	157211 5914764	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	++++ 719275	24780 1456098	48941 2578598	102987 4329132	272217 10330192	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	17235 1128063	36147 2267354	79756 3963090	160595 6728239	425545 16015024	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd 5	Ave	++++ 396249	13596 785625	27868 1455379	57416 2300427	151720 4997986	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd 5	Ave	++++ 288479	++++ 647774	16038 1258109	32352 2180538	93899 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Styrene	CBZd 5	Ave	++++ 379313	++++ 797396	22430 1440043	46527 2475003	134724 6272582	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	++++ 577831	18010 1183498	40418 2069274	85176 3507204	219991 8652988	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	++++ 388902	++++ 791220	26816 1406346	52217 2507616	146757 5342402	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 123267	++++ 249431	8767 448013	16530 809328	45222 1801458	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 770189	++++ 1569505	25754 2749199	53331 4984665	108667 11018383	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	++++ 208028	++++ 425975	14187 750579	27021 1348899	77981 3034911	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 190674	6524 376201	13286 679618	26657 1211506	71471 2747919	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	++++ 757218	++++ 1579790	52613 2762937	100995 4977060	288122 11171652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	++++ 298107	++++ 615118	20417 1079746	39553 1917273	109634 4410950	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 294414	++++ 619837	++++ 1139797	33405 2186650	99545 4845121	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 491714	16235 955171	34455 1652838	72566 2938778	189531 6027860	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	++++ 674397	++++ 1354211	44314 2326877	90284 4505713	239278 9821979	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 670745	++++ 1320347	44184 2282446	89238 4407169	236361 9493306	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	++++ 963943	++++ 1895656	62984 3335709	130314 6189211	346547 13052688	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7122 429682	13761 870050	27898 1597433	57634 3038807	153722 6998909	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 595380	++++ 1199239	35336 2207883	71441 4112439	206433 9093386	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7701 436204	14670 882709	28727 1608243	58838 3081288	154004 7120026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	++++ 779650	++++ 1524715	46995 2715440	99360 5104026	272972 11067094	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	8305 664909	18233 1328651	41757 2356435	88511 ++++	235583 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Indane	CBZd 5	Ave	++++ 602700	++++ 1193709	39872 2118687	79681 3956160	207350 8865173	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 416753	++++ 841536	27621 1533100	56506 2968700	146910 7061726	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	++++ 814617	23860 1547638	50796 2715683	108576 5104411	288957 10889558	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 516302	++++ 1040605	31427 1879451	64720 3517487	178805 7968258	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 527231	15243 970873	32520 1679521	73748 2924996	202684 6339976	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2927 207960	5571 429617	11218 745616	22412 ++++	65206 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 733964	++++ 1413004	41572 2207453	90241 4545804	260569 10379759	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 446881	12818 722978	28563 1006221	60222 1915343	173512 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 360521	11357 693552	20313 1301208	41810 2366361	119662 5229906	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 839854	24728 1530726	47569 2517870	92896 4661002	294401 10693857	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 361175	++++ 732431	21118 1398696	43365 2661640	119102 6035243	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 351962	10806 629244	20063 1082671	39185 2034470	116648 3007302	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 514300	13713 671591	23120 1000580	40866 1774929	167946 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 628512	17895 789694	28473 1141032	54667 1951995	209066 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1743947 1821597	1724522 1988683	1705365 2036360	1745466 1623678	1732344 1691157	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	12.7						50			
Propene	+++++	+++++	+++++	23.1						50		
Dichlorodifluoromethane	+++++	+++++	5.1						50			
Chloromethane	+++++	+++++	+++++	21.0						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	6.9						50			
Vinyl chloride	21.8						50					
Butane	+++++	+++++	+++++	13.3						50		
1,3-Butadiene	+++++	+++++	+++++	2.3						50		
Bromomethane	+++++	+++++	18.9						50			
Chloroethane	+++++	+++++	11.2						50			
Ethanol	+++++	+++++	+++++	22.9						50		
Vinyl bromide	+++++	+++++	7.3						50			
2-Methylbutane	+++++	+++++	+++++	5.5						50		
Trichlorofluoromethane	+++++	5.4						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	+++++	-1.1							50
Acetonitrile	+++++	+++++	+++++	-12.8							50	
Acetone	+++++	+++++	+++++	+++++	18.4							80
Pentane	+++++	+++++	+++++	+++++	5.4							50
Isopropyl alcohol	+++++	+++++	+++++	7.2							50	
Ethyl ether	+++++	+++++	+++++	+++++	10.7							50
1,1-Dichloroethene	8.4						50					
Acrylonitrile	+++++	+++++	6.3						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.9						50				
tert-Butyl alcohol	+++++	+++++	+++++	5.2							50	
Methylene Chloride	+++++	+++++	+++++	57.6 +++++							80	
3-Chloropropene	+++++	+++++	14.8						50			
Carbon disulfide	+++++	+++++	7.1						50			
trans-1,2-Dichloroethene	+++++	-2.1						50				
2-Methylpentane	+++++	+++++	8.2						50			
Methyl tert-butyl ether	+++++	-8.6						50				
1,1-Dichloroethane	6.8						50					
Vinyl acetate	+++++	+++++	0.8						50			
Hexane	+++++	+++++	5.2						50			
2-Butanone (MEK)	+++++	+++++	+++++	8.0						50		
cis-1,2-Dichloroethene	5.8						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	3.1						50			
Chloroform	7.6						50					
Tetrahydrofuran	+++++	+++++	+++++	1.2						50		
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	-0.5						50					
Cyclohexane	+++++	+++++	+++++	5.2						50		
Benzene	+++++	-0.4						50				
Carbon tetrachloride	-4.8						50					
1-Butanol	+++++	+++++	+++++	0.2							50	
2,3-Dimethylpentane	+++++	+++++	6.9						50			
Thiophene	+++++	+++++	6.3						50			
2,2,4-Trimethylpentane	6.0						50					
Heptane	+++++	+++++	12.0						50			
1,2-Dichloropropane	+++++	4.8						50				
Trichloroethene	7.3						50					
Dibromomethane	+++++	+++++	+++++	2.1						50		
Bromodichloromethane	+++++	+++++	-2.7						50			
1,4-Dioxane	+++++	+++++	+++++	13.9						50		
Methyl methacrylate	+++++	+++++	+++++	-16.1						50		
Methylcyclohexane	-1.0						50					
4-Methyl-2-pentanone (MIBK)	+++++	+++++	3.0						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.6						50				
trans-1,3-Dichloropropene	+++++	-7.7						50				
Toluene	1.0						50					
1,1,2-Trichloroethane	-3.3						50					
2-Hexanone	+++++	+++++	-5.8						50			
Octane	+++++	+++++	0.0						50			
Dibromochloromethane	+++++	+++++	-12.7						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-7.1						50			
Tetrachloroethene	1.1						50					
Chlorobenzene	-4.9						50					
Ethylbenzene	+++++	-3.0						50				
m-Xylene & p-Xylene	-14.2						50					
Nonane	+++++	-2.2						50				
Bromoform	+++++	+++++	-18.6		+++++				50			
Styrene	+++++	+++++	-14.3						50			
o-Xylene	+++++	-12.6						50				
1,1,2,2-Tetrachloroethane	+++++	+++++	0.0						50			
1,2,3-Trichloropropane	+++++	+++++	2.1						50			
Isopropylbenzene	+++++	-6.2						50				
Propylbenzene	+++++	+++++	-1.4						50			
2-Chlorotoluene	+++++	-3.8						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	+++++	+++++	-1.0						50			
1,3,5-Trimethylbenzene	+++++	+++++	-1.3						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-22.6						50		
Decane	+++++	-4.7						50				
tert-Butylbenzene	+++++	+++++	-3.9						50			
1,2,4-Trimethylbenzene	+++++	+++++	-2.6						50			
sec-Butylbenzene	+++++	+++++	-3.0						50			
1,3-Dichlorobenzene	-9.4						50					
Benzyl chloride	+++++	+++++	-12.6						50			
1,4-Dichlorobenzene	-4.4						50					
4-Isopropyltoluene	+++++	+++++	-9.5						50			
1,2,3-Trimethylbenzene	-23.6		+++++	+++++			50					
Indane	+++++	+++++	-2.8						50			
1,2-Dichlorobenzene	+++++	+++++	-6.9						50			
Butylbenzene	+++++	-12.5							50			
Indene	+++++	+++++	-10.8						50			
Undecane	+++++	-11.9							50			
1,2-Dibromo-3-Chloropropane	-10.0		+++++	+++++			50					
1,2,4,5-Tetramethylbenzene	+++++	+++++	-12.1						50			
Dodecane	+++++	-6.1		+++++					50			
1,2,4-Trichlorobenzene	+++++	-5.8							50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-6.2						80				
Hexachlorobutadiene	+++++	+++++	-15.7						50			
1,2,3-Trichlorobenzene	+++++	1.5						50				
2-Methylnaphthalene	+++++	6.7		+++++				80				
1-Methylnaphthalene	+++++	13.7		+++++				80				

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 11-Jan-2019 13:08:30 ALS Bottle#: 14 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-002
 Misc. Info.: 201651
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:31 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa

Date: 14-Jan-2019 17:22:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.264	9.249	0.015	94	320040	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.432	11.421	0.011	97	1835134	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.096	16.094	0.002	93	1796320	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.725	17.718	0.007	86	1623678	4.00	4.41	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	1857884	8.00	8.86	
7 Propene	41	3.834	3.838	-0.004	98	1017511	8.00	8.69	
8 Dichlorodifluoromethane	85	3.893	3.894	-0.001	100	3014742	8.00	8.90	
9 Chloromethane	52	4.093	4.091	0.002	98	316575	8.00	8.51	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	94	1637176	8.00	8.27	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	1048926	8.00	8.14	
11 Acetaldehyde	44	4.266	4.278	-0.012	91	1999939	40.0	41.8	
13 Butane	43	4.373	4.373	0.000	86	1835688	8.00	8.46	
14 Butadiene	54	4.373	4.375	-0.002	67	873952	8.00	8.77	
15 Bromomethane	94	4.724	4.722	0.002	98	903575	8.00	8.12	
16 Chloroethane	64	4.880	4.879	0.001	86	519647	8.00	8.37	
17 Ethanol	31	5.037	5.064	-0.027	98	2449308	40.0	43.5	
18 Vinyl bromide	106	5.209	5.205	0.004	98	824429	8.00	7.99	
19 2-Methylbutane	43	5.258	5.256	0.002	92	1264951	8.00	8.12	
20 Trichlorofluoromethane	101	5.495	5.492	0.003	99	2796331	8.00	8.42	
21 Acrolein	56	5.517	5.526	-0.009	97	259717	8.00	9.08	
22 Acetonitrile	40	5.597	5.603	-0.006	98	390809	8.00	8.76	
23 Acetone	58	5.641	5.666	-0.025	99	1097098	24.0	22.8	
24 Pentane	72	5.727	5.725	0.002	98	175439	8.00	8.26	
25 Isopropyl alcohol	45	5.781	5.840	-0.059	98	3057291	24.0	23.8	
26 Ethyl ether	31	5.910	5.943	-0.033	90	1111229	8.00	8.05	
27 1,1-Dichloroethene	96	6.245	6.242	0.003	94	889868	8.00	7.88	
28 Acrylonitrile	53	6.379	6.375	0.004	94	666078	8.00	8.54	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	93	1919761	8.00	7.84	
30 2-Methyl-2-propanol	59	6.423	6.534	-0.111	95	1347387	8.00	7.67	
31 Methylene Chloride	84	6.617	6.610	0.007	97	829908	8.00	6.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.627	6.626	0.001	96	1138278	8.00	8.12	
33 Carbon disulfide	76	6.784	6.778	0.006	100	2686894	8.00	7.84	
34 trans-1,2-Dichloroethene	96	7.458	7.450	0.008	94	904134	8.00	7.99	
35 2-Methylpentane	43	7.469	7.468	0.001	95	2608750	8.00	8.06	
36 Methyl tert-butyl ether	73	7.598	7.643	-0.045	97	2571313	8.00	8.17	
37 1,1-Dichloroethane	63	7.905	7.892	0.013	100	1866128	8.00	8.03	
38 Vinyl acetate	43	8.013	8.016	-0.003	100	2825655	8.00	8.75	
40 Hexane	56	8.482	8.480	0.002	74	836832	8.00	8.02	
39 2-Butanone (MEK)	72	8.482	8.499	-0.017	83	408724	8.00	8.05	
41 Isopropyl ether	45	8.655	8.679	-0.024	96	3366299	8.00	8.43	
42 cis-1,2-Dichloroethene	96	8.919	8.906	0.013	98	933768	8.00	8.07	
43 Ethyl acetate	43	9.108	9.131	-0.023	98	2287831	8.00	8.63	
44 Chloroform	83	9.275	9.261	0.014	97	2190241	8.00	8.19	
45 Tert-butyl ethyl ether	59	9.351	9.389	-0.038	97	3058584	8.00	8.30	
46 Tetrahydrofuran	42	9.680	9.725	-0.045	93	1192762	8.00	8.41	
47 1,1,1-Trichloroethane	97	10.310	10.303	0.007	96	2393121	8.00	8.26	
48 1,2-Dichloroethane	62	10.429	10.416	0.013	98	1548479	8.00	8.63	
49 Cyclohexane	69	10.893	10.888	0.005	89	486357	8.00	8.06	
50 Benzene	78	10.904	10.893	0.011	99	2614755	8.00	7.97	
52 Carbon tetrachloride	117	10.920	10.913	0.007	96	2465819	8.00	9.06	
53 2,3-Dimethylpentane	71	11.006	11.000	0.006	92	690034	8.00	7.97	
51 n-Butanol	31	10.904	11.004	-0.100	69	331158	8.00	8.06	
54 Thiophene	84	11.173	11.164	0.009	97	1556455	8.00	8.16	
55 Isooctane	57	11.637	11.632	0.005	98	5087913	8.00	7.92	
56 n-Heptane	71	11.998	11.995	0.003	95	1074435	8.00	8.14	
57 1,2-Dichloropropane	63	12.101	12.093	0.008	84	1061646	8.00	8.23	
58 Trichloroethene	130	12.133	12.124	0.009	92	1212507	8.00	8.11	
59 Dibromomethane	93	12.225	12.216	0.009	92	1170568	8.00	8.61	
60 Dichlorobromomethane	83	12.365	12.354	0.011	98	2394105	8.00	8.93	
61 1,4-Dioxane	88	12.386	12.421	-0.035	98	331358	8.00	8.69	
62 Methyl methacrylate	41	12.446	12.453	-0.007	89	1502138	8.00	9.11	
63 Methylcyclohexane	83	12.883	12.879	0.004	91	1790104	8.00	7.97	
64 4-Methyl-2-pentanone (MIBK)	43	13.292	13.321	-0.029	99	2161661	8.00	8.37	
65 cis-1,3-Dichloropropene	75	13.341	13.336	0.005	98	1693124	8.00	8.63	
66 trans-1,3-Dichloropropene	75	14.026	14.019	0.007	96	1678819	8.00	8.67	
67 Toluene	91	14.150	14.144	0.006	93	3139180	8.00	7.94	
68 1,1,2-Trichloroethane	83	14.225	14.220	0.005	97	982519	8.00	8.15	
69 2-Hexanone	58	14.603	14.631	-0.028	91	941298	8.00	7.94	
70 n-Octane	85	14.808	14.804	0.004	95	1119383	8.00	7.87	
71 Chlorodibromomethane	129	14.926	14.920	0.006	97	2191805	8.00	8.96	
72 Ethylene Dibromide	107	15.212	15.207	0.005	98	1772227	8.00	8.48	
73 Tetrachloroethene	129	15.277	15.272	0.005	93	1207845	8.00	8.14	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	95	3728862	8.00	7.72	
75 Chlorobenzene	112	16.145	16.142	0.003	91	2444395	8.00	7.96	
78 Ethylbenzene	91	16.425	16.422	0.003	99	4329132	8.00	8.06	
79 m-Xylene & p-Xylene	91	16.587	16.582	0.005	99	6728239	16.0	16.4	
80 n-Nonane	57	16.981	16.977	0.004	93	2300427	8.00	7.87	
81 Bromoform	173	17.045	17.041	0.004	95	2180538	8.00	10.2	
82 Styrene	104	17.051	17.047	0.004	99	2475003	8.00	8.72	
83 o-Xylene	91	17.110	17.106	0.004	98	3507204	8.00	8.10	
84 1,1,2,2-Tetrachloroethane	83	17.434	17.430	0.004	99	2507616	8.00	8.62	
85 1,2,3-Trichloropropane	110	17.590	17.587	0.003	96	809328	8.00	8.69	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.687	17.684	0.003	97	4984665	8.00	8.63	
87 N-Propylbenzene	120	18.210	18.205	0.005	98	1348899	8.00	8.64	
88 2-Chlorotoluene	126	18.259	18.254	0.005	97	1211506	8.00	8.50	
89 4-Ethyltoluene	105	18.350	18.347	0.003	98	4977060	8.00	8.64	
90 1,3,5-Trimethylbenzene	120	18.426	18.419	0.007	91	1917273	8.00	8.55	
92 Alpha Methyl Styrene	118	18.647	18.644	0.003	86	2186650	8.00	9.65	
93 n-Decane	57	18.685	18.682	0.003	90	2938778	8.00	8.20	
94 tert-Butylbenzene	119	18.836	18.832	0.004	93	4505713	8.00	9.00	
95 1,2,4-Trimethylbenzene	105	18.852	18.846	0.006	97	4407169	8.00	8.96	
96 sec-Butylbenzene	105	19.100	19.094	0.006	98	6189211	8.00	8.79	
97 1,3-Dichlorobenzene	146	19.122	19.117	0.005	99	3038807	8.00	9.45	
98 Benzyl chloride	91	19.192	19.188	0.004	97	4112439	8.00	9.38	
99 1,4-Dichlorobenzene	146	19.202	19.200	0.002	94	3081288	8.00	9.34	
100 4-Isopropyltoluene	119	19.256	19.251	0.005	96	5104026	8.00	9.06	
101 1,2,3-Trimethylbenzene	105	19.310	19.306	0.004	99	4338994	8.00	9.75	
102 Butylcyclohexane	83	19.359	19.353	0.006	90	3386502	8.00	8.34	
103 2,3-Dihydroindene	117	19.553	19.550	0.003	94	3956160	8.00	8.90	
104 1,2-Dichlorobenzene	146	19.558	19.555	0.003	96	2968700	8.00	9.23	
105 n-Butylbenzene	91	19.677	19.673	0.004	99	5104411	8.00	8.90	
106 Indene	116	19.682	19.679	0.003	96	3517487	8.00	9.21	
107 Undecane	57	19.963	19.963	0.000	93	2924996	8.00	8.04	
108 1,2-Dibromo-3-Chloropropan	157	20.146	20.142	0.004	95	1506673	8.00	11.3	
109 1,2,4,5-Tetramethylbenzene	119	20.421	20.417	0.004	97	4545804	8.00	8.86	
110 Dodecane	57	21.014	21.014	0.000	93	1915343	8.00	6.67	
111 1,2,4-Trichlorobenzene	180	21.241	21.236	0.005	94	2366361	8.00	9.33	
112 Naphthalene	128	21.381	21.377	0.004	99	4661002	8.00	8.41	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	94	2661640	8.00	9.80	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	95	2034470	8.00	9.08	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	1774929	8.00	6.57	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	1951995	8.00	5.90	
A 122 C8 Range	1	14.813	(14.749-14.886)		0	11514382	8.00	8.12	
S 123 1,2-Dichloroethene, Total	1				0		16.0	16.1	
S 124 Xylenes, Total	100				0		24.0	24.5	

Reagents:

40L9DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC09.D

Injection Date: 11-Jan-2019 13:08:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L9

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

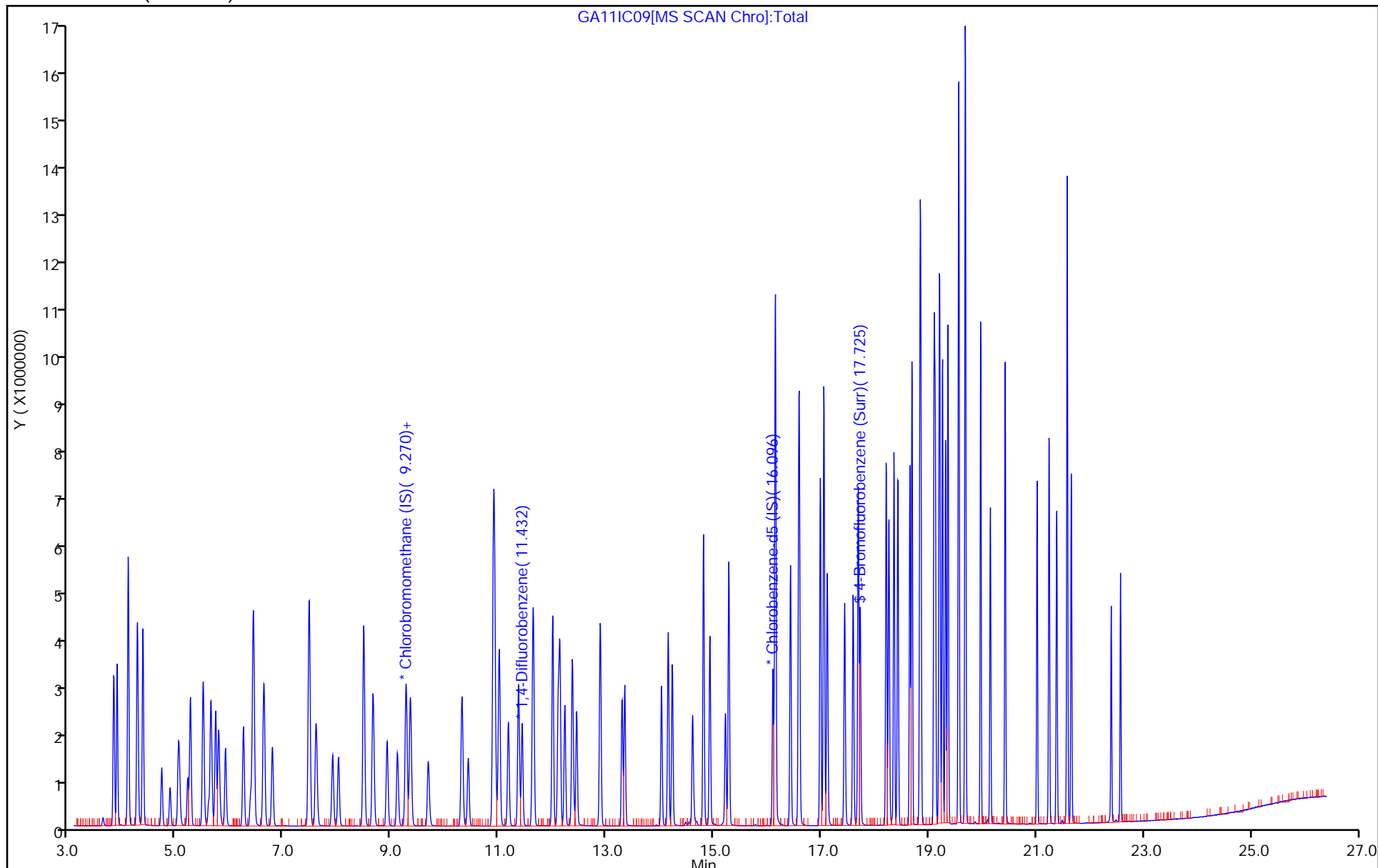
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC09.D

Injection Date: 11-Jan-2019 13:08:30

Instrument ID: MG

Lims ID: IC L9

Client ID:

Operator ID: 007126

ALS Bottle#: 14

Worklist Smp#: 2

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

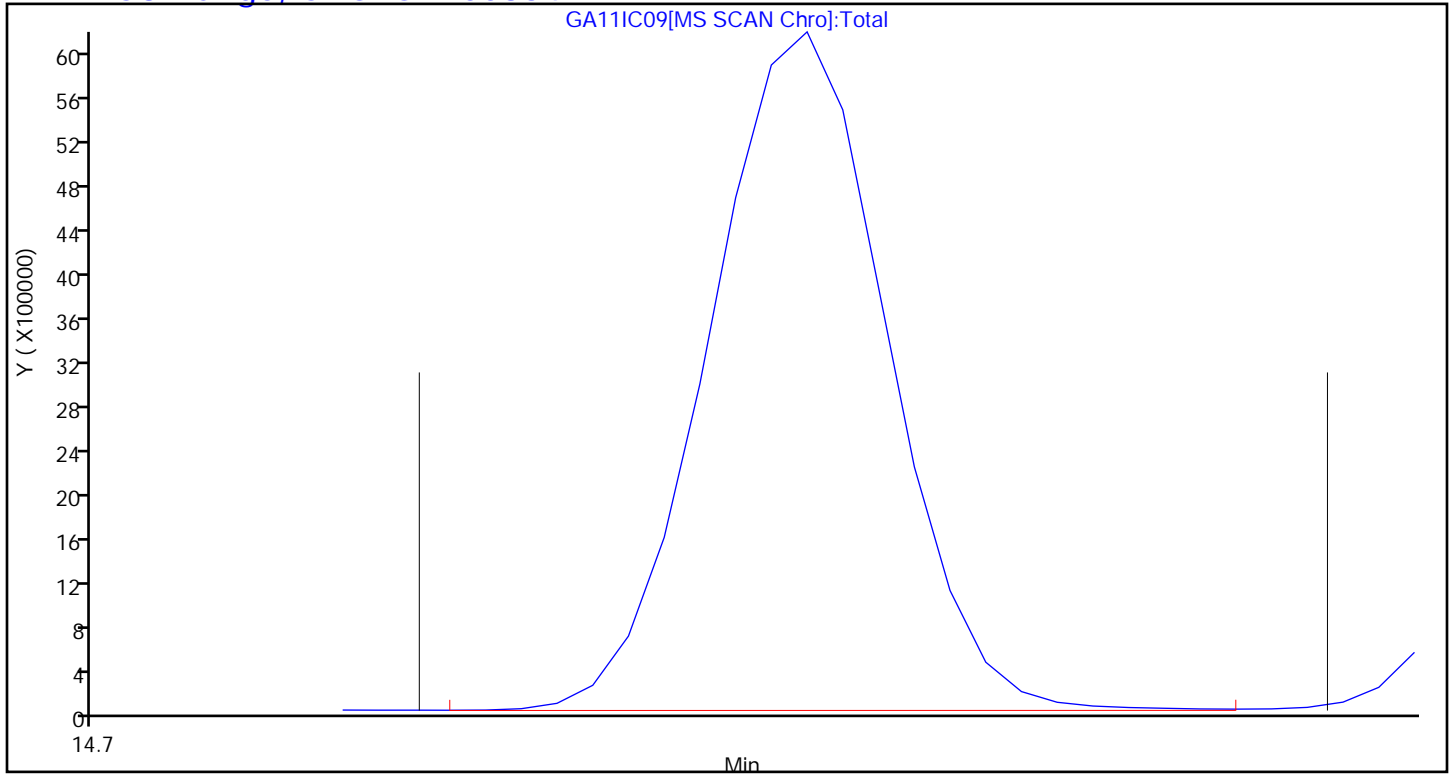
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 11-Jan-2019 14:35:30 ALS Bottle#: 15 Worklist Smp#: 6
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-006
 Misc. Info.: 201650
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17

Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:37 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 11-Jan-2019 15:43:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.270	9.249	0.021	94	365027	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.437	11.421	0.016	96	2070632	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.102	16.094	0.008	91	2016686	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.725	17.718	0.007	88	1691157	4.00	4.09	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	3550370	16.0	14.8	
7 Propene	41	3.834	3.838	-0.004	97	1877999	16.0	14.1	
8 Dichlorodifluoromethane	85	3.894	3.894	0.000	100	6045892	16.0	15.6	
9 Chloromethane	52	4.088	4.091	-0.003	100	606292	16.0	14.3	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	92	3657066	16.0	16.2	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	2151077	16.0	14.6	
11 Acetaldehyde	44	4.271	4.278	-0.007	91	4022222	80.0	73.6	
13 Butane	43	4.373	4.373	0.000	85	3783292	16.0	15.3	
14 Butadiene	54	4.373	4.375	-0.002	69	1817509	16.0	16.0	
15 Bromomethane	94	4.724	4.722	0.002	98	2043364	16.0	16.1	
16 Chloroethane	64	4.880	4.879	0.001	85	1128580	16.0	15.9	
17 Ethanol	31	5.058	5.064	-0.006	98	5299467	80.0	82.5	
18 Vinyl bromide	106	5.209	5.205	0.004	98	1944996	16.0	16.5	
19 2-Methylbutane	43	5.258	5.256	0.002	92	2833506	16.0	15.9	
20 Trichlorofluoromethane	101	5.495	5.492	0.003	99	6214752	16.0	16.4	
21 Acrolein	56	5.522	5.526	-0.004	97	517814	16.0	15.9	
22 Acetonitrile	40	5.608	5.603	0.005	98	862471	16.0	17.0	
23 Acetone	58	5.646	5.666	-0.020	99	2321110	48.0	42.3	
24 Pentane	72	5.727	5.725	0.002	97	384054	16.0	15.9	
25 Isopropyl alcohol	45	5.808	5.840	-0.032	99	6999063	48.0	47.8	
26 Ethyl ether	31	5.910	5.943	-0.033	91	2395844	16.0	15.2	
27 1,1-Dichloroethene	96	6.250	6.242	0.008	95	2050200	16.0	15.9	
28 Acrylonitrile	53	6.390	6.375	0.015	94	1491458	16.0	16.8	
29 1,1,2-Trichloro-1,2,2-trif	101	6.433	6.428	0.005	93	4249014	16.0	15.2	
30 2-Methyl-2-propanol	59	6.439	6.534	-0.095	96	3367365	16.0	16.8	
31 Methylene Chloride	84	6.622	6.610	0.012	98	1840784	16.0	12.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.638	6.626	0.012	97	2516658	16.0	15.7	
33 Carbon disulfide	76	6.784	6.778	0.006	100	6209652	16.0	15.9	
34 trans-1,2-Dichloroethene	96	7.463	7.450	0.013	95	2041028	16.0	15.8	
35 2-Methylpentane	43	7.474	7.468	0.006	94	5477445	16.0	14.8	
36 Methyl tert-butyl ether	73	7.598	7.643	-0.045	97	5756531	16.0	16.0	
37 1,1-Dichloroethane	63	7.911	7.892	0.019	100	4143029	16.0	15.6	
38 Vinyl acetate	43	8.019	8.016	0.003	100	6134377	16.0	16.7	
40 Hexane	56	8.488	8.480	0.008	90	1774150	16.0	14.9	
39 2-Butanone (MEK)	72	8.493	8.499	-0.006	97	870000	16.0	15.0	
41 Isopropyl ether	45	8.660	8.679	-0.019	97	7232215	16.0	15.9	
42 cis-1,2-Dichloroethene	96	8.925	8.906	0.019	97	2161860	16.0	16.4	
43 Ethyl acetate	43	9.119	9.131	-0.012	98	4857969	16.0	16.1	
44 Chloroform	83	9.286	9.261	0.025	96	4960016	16.0	16.3	
45 Tert-butyl ethyl ether	59	9.356	9.389	-0.033	97	6802904	16.0	16.2	
46 Tetrahydrofuran	42	9.685	9.725	-0.040	93	2547299	16.0	15.7	
47 1,1,1-Trichloroethane	97	10.316	10.303	0.013	96	5471084	16.0	16.6	
48 1,2-Dichloroethane	62	10.434	10.416	0.018	98	3502141	16.0	17.3	
49 Cyclohexane	69	10.898	10.888	0.010	89	1042096	16.0	15.3	
50 Benzene	78	10.909	10.893	0.016	99	5593459	16.0	15.1	
52 Carbon tetrachloride	117	10.925	10.913	0.012	98	5358444	16.0	17.4	
53 2,3-Dimethylpentane	71	11.011	11.000	0.011	92	1499809	16.0	15.4	
51 n-Butanol	31	10.904	11.004	-0.100	69	786825	16.0	17.0	
54 Thiophene	84	11.184	11.164	0.020	97	3566561	16.0	16.6	
55 Isooctane	57	11.642	11.632	0.010	97	11120269	16.0	15.3	
56 n-Heptane	71	12.009	11.995	0.014	94	2411618	16.0	16.2	
57 1,2-Dichloropropane	63	12.106	12.093	0.013	83	2334951	16.0	16.0	
58 Trichloroethene	130	12.138	12.124	0.014	93	2837545	16.0	16.8	
59 Dibromomethane	93	12.230	12.216	0.014	96	2672665	16.0	17.4	
60 Dichlorobromomethane	83	12.370	12.354	0.016	99	5512449	16.0	18.2	
61 1,4-Dioxane	88	12.392	12.421	-0.029	98	783489	16.0	18.2	
62 Methyl methacrylate	41	12.451	12.453	-0.002	89	3304265	16.0	17.8	
63 Methylcyclohexane	83	12.888	12.879	0.009	92	4193256	16.0	16.5	
64 4-Methyl-2-pentanone (MIBK)	43	13.292	13.321	-0.029	99	5370174	16.0	18.4	
65 cis-1,3-Dichloropropene	75	13.346	13.336	0.010	98	3656415	16.0	16.5	
66 trans-1,3-Dichloropropene	75	14.031	14.019	0.012	96	3876912	16.0	17.8	
67 Toluene	91	14.155	14.144	0.011	93	7445292	16.0	16.8	
68 1,1,2-Trichloroethane	83	14.231	14.220	0.011	98	2274200	16.0	16.8	
69 2-Hexanone	58	14.608	14.631	-0.023	91	2558380	16.0	19.2	
70 n-Octane	85	14.808	14.804	0.004	94	2627265	16.0	16.5	
71 Chlorodibromomethane	129	14.932	14.920	0.012	98	5334244	16.0	19.4	
72 Ethylene Dibromide	107	15.217	15.207	0.010	98	4168790	16.0	17.8	
73 Tetrachloroethene	129	15.282	15.272	0.010	95	2883889	16.0	17.3	
74 2,3-Dimethylheptane	43	16.145	16.139	0.006	96	7774816	16.0	14.3	
75 Chlorobenzene	112	16.150	16.142	0.008	93	5914764	16.0	17.1	
78 Ethylbenzene	91	16.431	16.422	0.009	99	10330192	16.0	17.1	
79 m-Xylene & p-Xylene	91	16.593	16.582	0.011	98	16015024	32.0	34.7	
80 n-Nonane	57	16.986	16.977	0.009	92	4997986	16.0	15.2	
81 Bromoform	173	17.051	17.041	0.010	98	6148940	16.0	25.6	
82 Styrene	104	17.056	17.047	0.009	98	6272582	16.0	19.7	
83 o-Xylene	91	17.116	17.106	0.010	98	8652988	16.0	17.8	
84 1,1,2,2-Tetrachloroethane	83	17.439	17.430	0.009	99	5342402	16.0	16.4	
85 1,2,3-Trichloropropane	110	17.596	17.587	0.009	95	1801458	16.0	17.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.693	17.684	0.009	97	11018383	16.0	17.0	
87 N-Propylbenzene	120	18.210	18.205	0.005	99	3034911	16.0	17.3	
88 2-Chlorotoluene	126	18.259	18.254	0.005	98	2747919	16.0	17.2	
89 4-Ethyltoluene	105	18.356	18.347	0.009	98	11171652	16.0	17.3	
90 1,3,5-Trimethylbenzene	120	18.426	18.419	0.007	92	4410950	16.0	17.5	
92 Alpha Methyl Styrene	118	18.652	18.644	0.008	90	4845121	16.0	19.1	
93 n-Decane	57	18.690	18.682	0.008	92	6027860	16.0	15.0	
94 tert-Butylbenzene	119	18.841	18.832	0.009	90	9821979	16.0	17.5	
95 1,2,4-Trimethylbenzene	105	18.857	18.846	0.011	96	9493306	16.0	17.2	
96 sec-Butylbenzene	105	19.100	19.094	0.006	97	13052688	16.0	16.5	
97 1,3-Dichlorobenzene	146	19.127	19.117	0.010	99	6998909	16.0	19.4	
98 Benzyl chloride	91	19.197	19.188	0.009	98	9093386	16.0	18.5	
99 1,4-Dichlorobenzene	146	19.208	19.200	0.008	96	7120026	16.0	19.2	
100 4-Isopropyltoluene	119	19.262	19.251	0.011	96	11067094	16.0	17.5	
101 1,2,3-Trimethylbenzene	105	19.316	19.306	0.010	99	9391687	16.0	18.8	
102 Butylcyclohexane	83	19.359	19.353	0.006	91	7086712	16.0	15.6	
103 2,3-Dihydroindene	117	19.558	19.550	0.008	94	8865173	16.0	17.8	
104 1,2-Dichlorobenzene	146	19.564	19.555	0.009	97	7061726	16.0	19.5	
105 n-Butylbenzene	91	19.682	19.673	0.009	99	10889558	16.0	16.9	
106 Indene	116	19.688	19.679	0.009	91	7968258	16.0	18.6	
107 Undecane	57	19.968	19.963	0.005	94	6339976	16.0	15.5	
108 1,2-Dibromo-3-Chloropropan	157	20.146	20.142	0.004	98	3643002	16.0	24.4	
109 1,2,4,5-Tetramethylbenzene	119	20.421	20.417	0.004	98	10379759	16.0	18.0	
110 Dodecane	57	21.014	21.014	0.000	93	2461951	16.0	7.63	
111 1,2,4-Trichlorobenzene	180	21.241	21.236	0.005	94	5229906	16.0	18.4	
112 Naphthalene	128	21.381	21.377	0.004	99	10693857	16.0	17.2	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	92	6035243	16.0	19.8	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	95	3007302	16.0	12.0	
115 2-Methylnaphthalene	142	22.400	22.395	0.005	98	11865	16.0	0.0391	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	95	4161	16.0	0.0112	
A 122 C8 Range	1	14.824	(14.755-14.892)		0	26057226	16.0	16.4	
S 123 1,2-Dichloroethene, Total	1				0		32.0	32.2	
S 124 Xylenes, Total	100				0		48.0	52.5	

Reagents:

40L10DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC10.D

Injection Date: 11-Jan-2019 14:35:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L10

Worklist Smp#: 6

Client ID:

Purge Vol: 500.000 mL

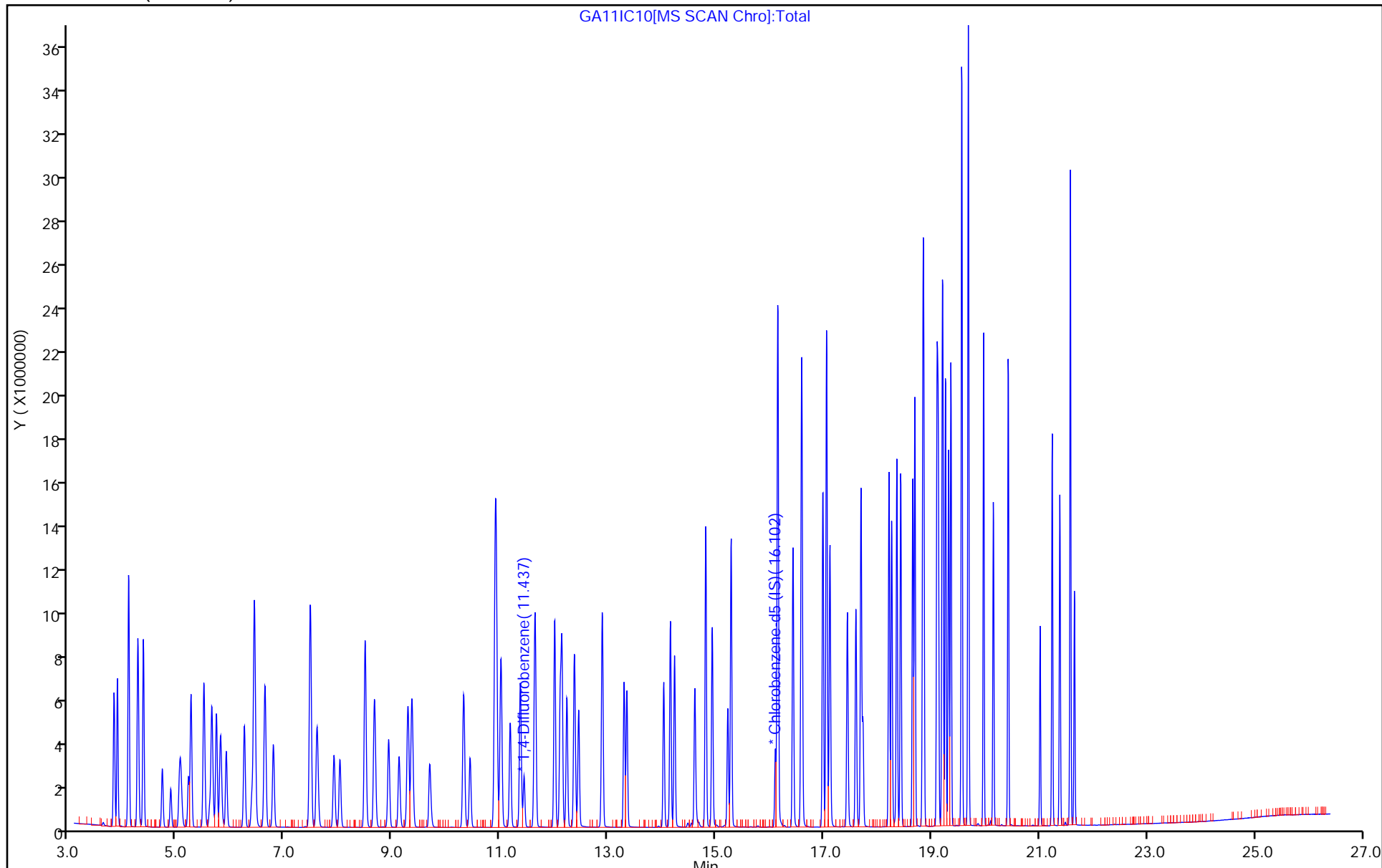
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC10.D

Injection Date: 11-Jan-2019 14:35:30

Instrument ID: MG

Lims ID: IC L10

Client ID:

Operator ID: 007126

ALS Bottle#: 15

Worklist Smp#: 6

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

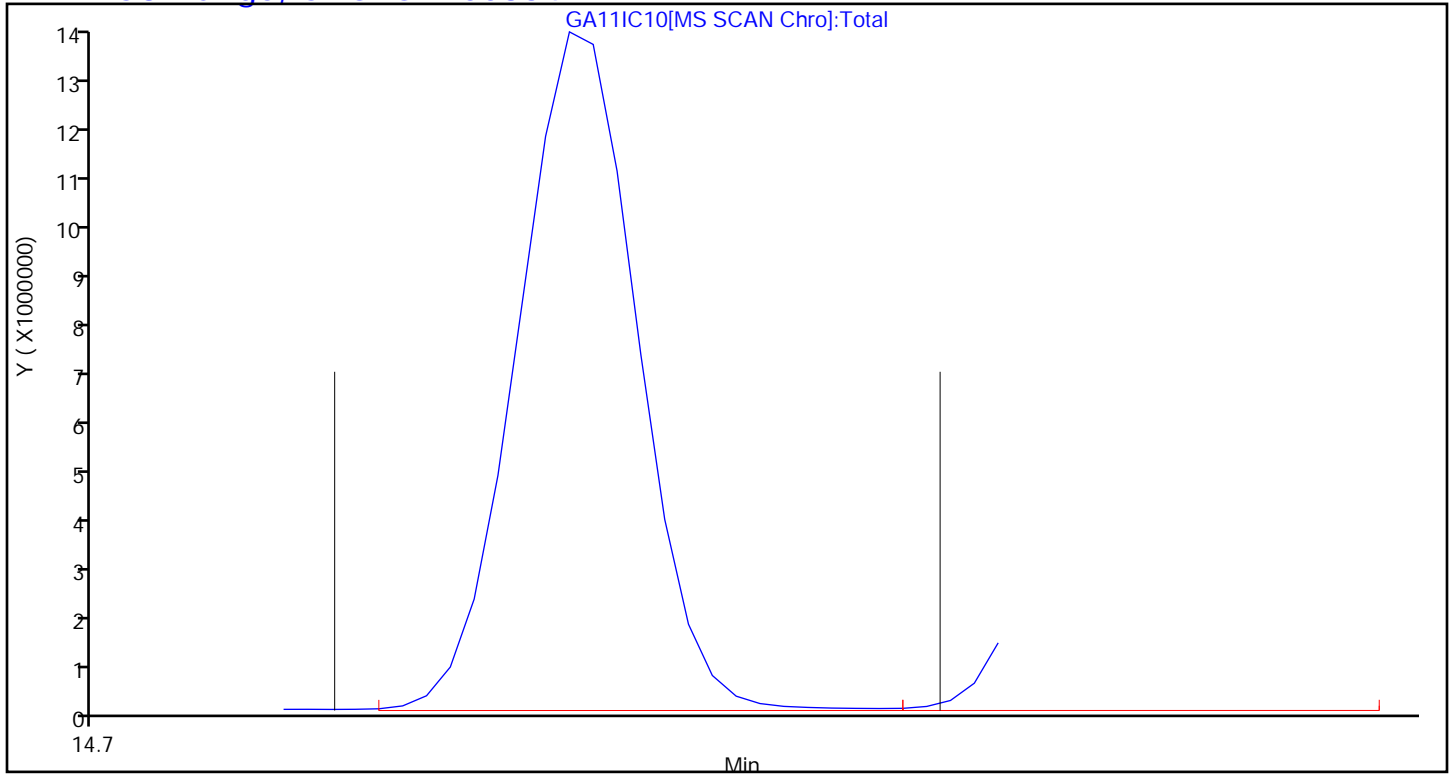
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 11-Jan-2019 16:46:30 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-009
 Misc. Info.: 201657
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:43 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa

Date: 14-Jan-2019 17:21:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	98	398561	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	96	2338002	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	92	2194856	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	84	1743947	4.00	3.88	
6 Chlorodifluoromethane	51	3.840	3.829	0.011	84	6540	0.0200	0.0250	
7 Propene	41	3.840	3.838	0.002	96	7070	0.0200	0.0485	
8 Dichlorodifluoromethane	85	3.894	3.894	0.000	99	9502	0.0200	0.0225	
9 Chloromethane	52	4.088	4.091	-0.003	89	1951	0.0200	0.0421	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	91	5940	0.0200	0.0241	
12 Vinyl chloride	62	4.271	4.277	-0.006	51	3911	0.0200	0.0244	
11 Acetaldehyde	44	4.293	4.278	0.015	95	15130	0.1000	0.2536	
13 Butane	43	4.373	4.373	0.000	88	9641	0.0200	0.0357	
14 Butadiene	54	4.379	4.375	0.004	55	3174	0.0200	0.0256	
15 Bromomethane	94	4.724	4.722	0.002	97	3695	0.0200	0.0266	
16 Chloroethane	64	4.880	4.879	0.001	52	1879	0.0200	0.0243	
17 Ethanol	31	5.107	5.064	0.043	98	7458	0.1000	0.1063	
18 Vinyl bromide	106	5.209	5.205	0.004	98	2938	0.0200	0.0229	
19 2-Methylbutane	43	5.252	5.256	-0.004	90	5353	0.0200	0.0276	
20 Trichlorofluoromethane	101	5.495	5.492	0.003	98	9041	0.0200	0.0219	
21 Acrolein	56	5.549	5.526	0.023	51	1646	0.0200	0.0462	
23 Acetone	58	5.711	5.666	0.045	95	6286	0.0600	0.1049	
24 Pentane	72	5.716	5.725	-0.009	75	537	0.0200	0.0203	
25 Isopropyl alcohol	45	5.937	5.840	0.097	94	10878	0.0600	0.0681	
26 Ethyl ether	31	5.997	5.943	0.054	84	3505	0.0200	0.0204	
27 1,1-Dichloroethene	96	6.250	6.242	0.008	93	3049	0.0200	0.0217	
28 Acrylonitrile	53	6.396	6.375	0.021	76	1686	0.0200	0.0174	
29 1,1,2-Trichloro-1,2,2-trif	101	6.433	6.428	0.005	93	6973	0.0200	0.0229	
30 2-Methyl-2-propanol	59	6.698	6.534	0.164	23	4034	0.0200	0.0184	
31 Methylene Chloride	84	6.611	6.610	0.001	98	21773	0.0200	0.1330	
32 3-Chloro-1-propene	39	6.633	6.626	0.007	89	3831	0.0200	0.0220	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.773	6.778	-0.005	95	9172	0.0200	0.0215	
34 trans-1,2-Dichloroethene	96	7.453	7.450	0.002	95	3112	0.0200	0.0221	
35 2-Methylpentane	43	7.463	7.468	-0.005	94	9490	0.0200	0.0235	
36 Methyl tert-butyl ether	73	7.738	7.643	0.095	72	5606	0.0200	0.0143	
37 1,1-Dichloroethane	63	7.884	7.892	-0.008	98	6185	0.0200	0.0214	
38 Vinyl acetate	43	8.035	8.016	0.019	97	5165	0.0200	0.0128	
40 Hexane	56	8.482	8.480	0.002	85	2997	0.0200	0.0231	
42 cis-1,2-Dichloroethene	96	8.898	8.906	-0.008	95	3051	0.0200	0.0212	
43 Ethyl acetate	43	9.173	9.131	0.042	64	3892	0.0200	0.0118	
44 Chloroform	83	9.248	9.261	-0.013	47	7168	0.0200	0.0215	
45 Tert-butyl ethyl ether	59	9.453	9.389	0.064	94	5828	0.0200	0.0127	
46 Tetrahydrofuran	42	9.804	9.725	0.079	81	2922	0.0200	0.0165	
47 1,1,1-Trichloroethane	97	10.305	10.303	0.002	93	7734	0.0200	0.0214	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	94	4547	0.0200	0.0199	
49 Cyclohexane	69	10.882	10.888	-0.006	73	1534	0.0200	0.0200	
50 Benzene	78	10.882	10.893	-0.011	95	9465	0.0200	0.0226	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	92	6601	0.0200	0.0190	
53 2,3-Dimethylpentane	71	10.990	11.000	-0.010	92	2282	0.0200	0.0207	
51 n-Butanol	31	11.098	11.004	0.094	39	1471	0.0200	0.0281	
54 Thiophene	84	11.157	11.164	-0.007	95	5442	0.0200	0.0224	
55 Isooctane	57	11.632	11.632	0.000	97	17363	0.0200	0.0212	
56 n-Heptane	71	11.993	11.995	-0.002	92	3375	0.0200	0.0201	
57 1,2-Dichloropropane	63	12.085	12.093	-0.008	64	3204	0.0200	0.0195	
58 Trichloroethene	130	12.122	12.124	-0.002	90	4087	0.0200	0.0215	
59 Dibromomethane	93	12.209	12.216	-0.007	89	5771	0.0200	0.0333	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	94	6835	0.0200	0.0200	
62 Methyl methacrylate	41	12.467	12.453	0.014	87	2694	0.0200	0.0128	
63 Methylcyclohexane	83	12.877	12.879	-0.002	87	5664	0.0200	0.0198	
64 4-Methyl-2-pentanone (MIBK)	43	13.368	13.321	0.047	96	4253	0.0200	0.0129	
65 cis-1,3-Dichloropropene	75	13.336	13.336	0.000	95	4540	0.0200	0.0182	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	94	4607	0.0200	0.0195	
67 Toluene	91	14.144	14.144	0.000	92	9759	0.0200	0.0202	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	90	2849	0.0200	0.0193	
69 2-Hexanone	58	14.673	14.631	0.042	90	1948	0.0200	0.0134	
70 n-Octane	85	14.808	14.804	0.004	96	3306	0.0200	0.0190	
71 Chlorodibromomethane	129	14.916	14.920	-0.004	93	4719	0.0200	0.0158	
72 Ethylene Dibromide	107	15.201	15.207	-0.006	94	4392	0.0200	0.0172	
73 Tetrachloroethene	129	15.271	15.272	-0.001	90	3665	0.0200	0.0202	
74 2,3-Dimethylheptane	43	16.134	16.139	-0.005	93	12324	0.0200	0.0209	
75 Chlorobenzene	112	16.140	16.142	-0.002	71	7137	0.0200	0.0190	
78 Ethylbenzene	91	16.420	16.422	-0.002	98	11395	0.0200	0.0174	
79 m-Xylene & p-Xylene	91	16.576	16.582	-0.006	99	17235	0.0400	0.0343	
80 n-Nonane	57	16.975	16.977	-0.002	92	6035	0.0200	0.0169	
81 Bromoform	173	17.035	17.041	-0.006	81	3699	0.0200	0.0142	
82 Styrene	104	17.046	17.047	-0.001	96	5116	0.0200	0.0147	
83 o-Xylene	91	17.105	17.106	-0.001	96	8649	0.0200	0.0163	
84 1,1,2,2-Tetrachloroethane	83	17.434	17.430	0.004	96	4703	0.0200	0.0132	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	93	1596	0.0200	0.0140	
86 Isopropylbenzene	105	17.687	17.684	0.003	91	11142	0.0200	0.0158	
87 N-Propylbenzene	120	18.205	18.205	0.000	97	2584	0.0200	0.0135	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	3051	0.0200	0.0175	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	10441	0.0200	0.0148	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
90 1,3,5-Trimethylbenzene	120	18.421	18.419	0.002	91	3714	0.0200	0.0136	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	86	2842	0.0200	0.0103	
93 n-Decane	57	18.679	18.682	-0.003	87	6640	0.0200	0.0152	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	89	8403	0.0200	0.0137	
95 1,2,4-Trimethylbenzene	105	18.841	18.846	-0.005	94	8194	0.0200	0.0136	
96 sec-Butylbenzene	105	19.095	19.094	0.001	97	12069	0.0200	0.0140	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	97	7122	0.0200	0.0181	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	7056	0.0200	0.0132	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	89	7701	0.0200	0.0191	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	95	9243	0.0200	0.0134	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	97	8305	0.0200	0.0153	
102 Butylcyclohexane	83	19.348	19.353	-0.005	88	9138	0.0200	0.0184	
103 2,3-Dihydroindene	117	19.548	19.550	-0.002	92	8066	0.0200	0.0148	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	80	6474	0.0200	0.0165	
105 n-Butylbenzene	91	19.672	19.673	-0.001	94	9992	0.0200	0.0143	
106 Indene	116	19.677	19.679	-0.002	79	6136	0.0200	0.0131	
107 Undecane	57	19.963	19.963	0.000	90	5997	0.0200	0.0135	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	84	2927	0.0200	0.0180	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	94	8929	0.0200	0.0142	
110 Dodecane	57	21.014	21.014	0.000	87	5086	0.0200	0.0145	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	93	6978	0.0200	0.0225	
112 Naphthalene	128	21.376	21.377	-0.001	99	16242	0.0200	0.0240	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	89	5189	0.0200	0.0156	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	91	7256	0.0200	0.0265	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	98	13967	0.0200	0.0423	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	98	19148	0.0200	0.0473	
A 122 C8 Range	1	14.798	(14.755-14.870)		0	37256	0.0200	0.0215	
S 123 1,2-Dichloroethene, Total	1				0		0.0400	0.0433	
S 124 Xylenes, Total	100				0		0.0600	0.0507	

Reagents:

40L1-3DQP_00011

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D

Injection Date: 11-Jan-2019 16:46:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L1

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

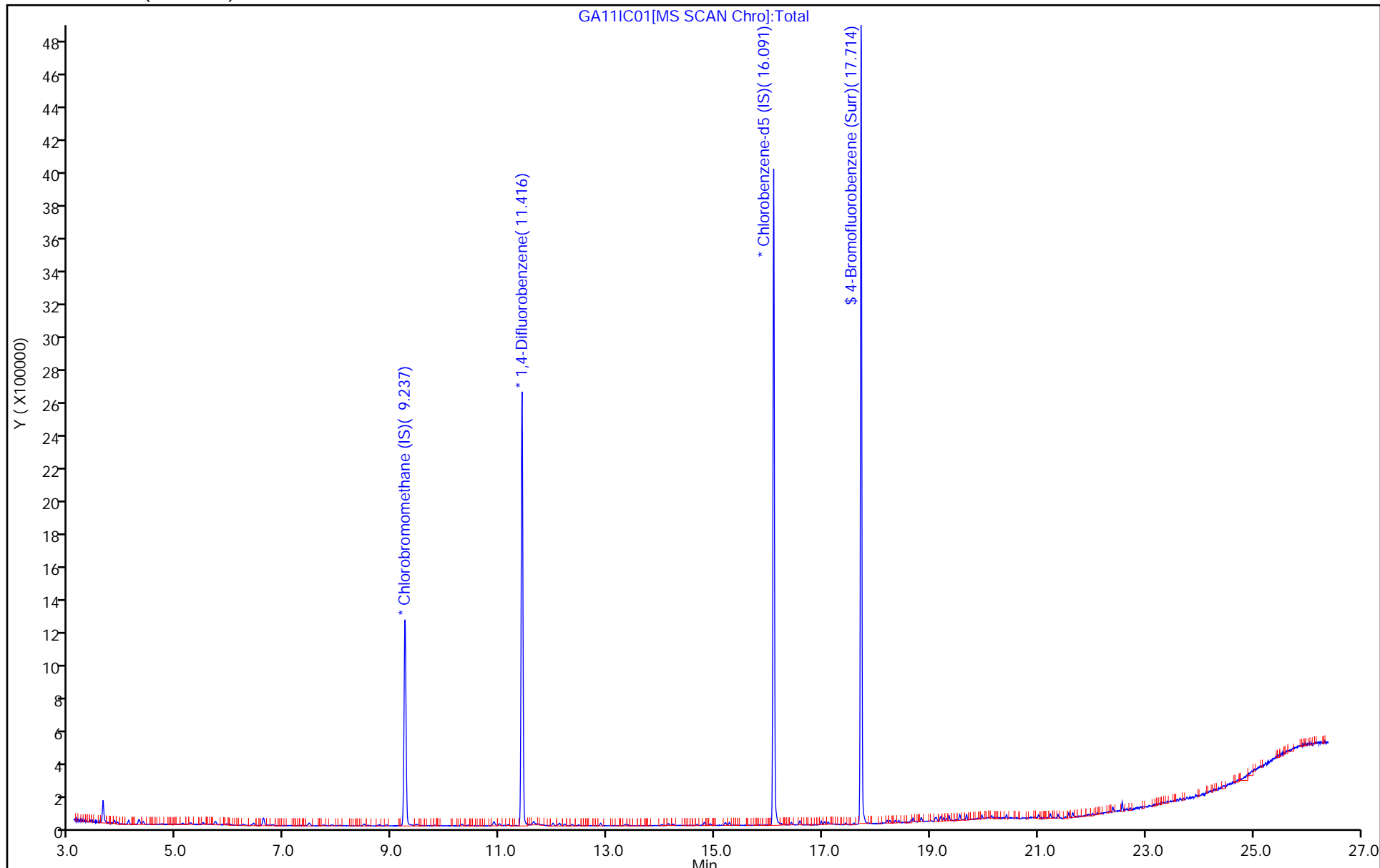
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D

Injection Date: 11-Jan-2019 16:46:30

Instrument ID: MG

Lims ID: IC L1

Client ID:

Operator ID: 007126

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

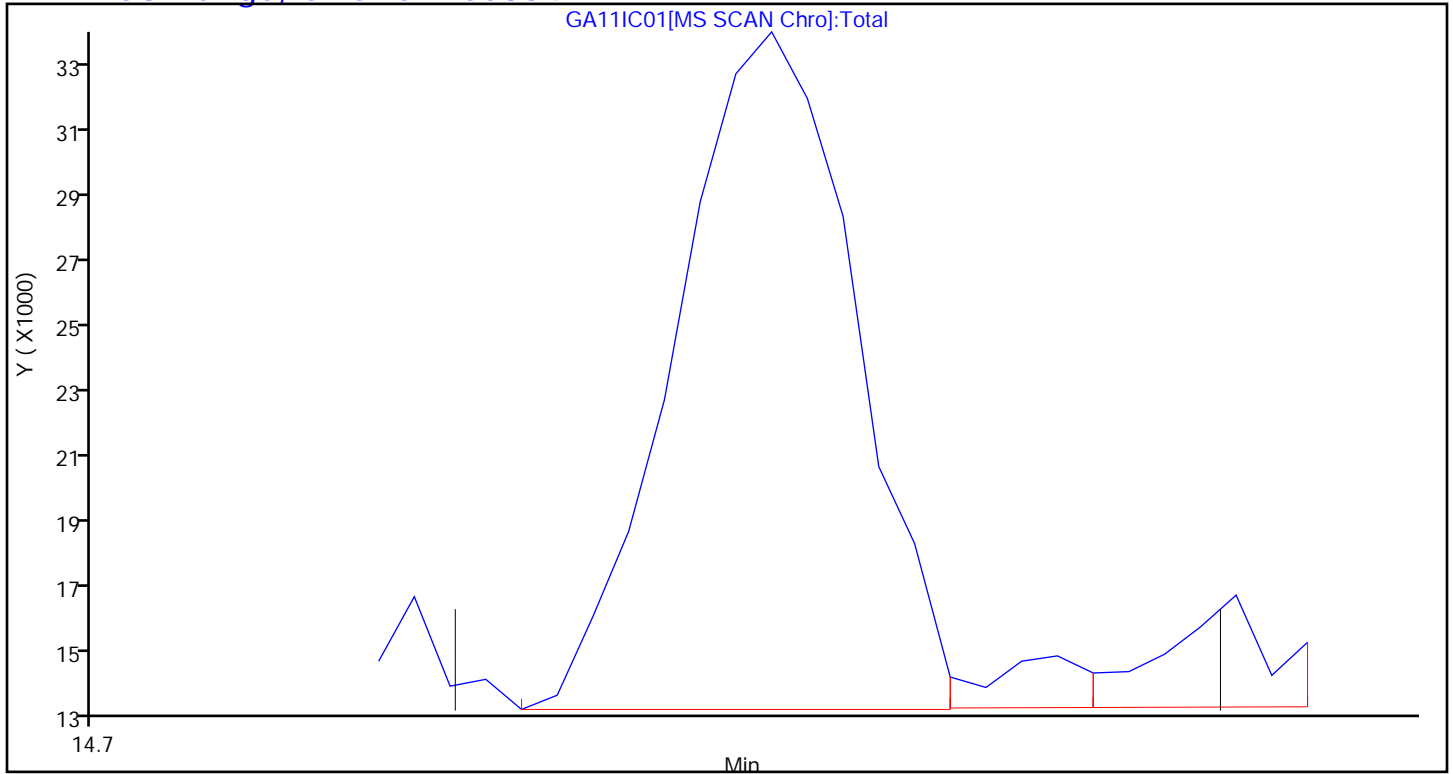
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834

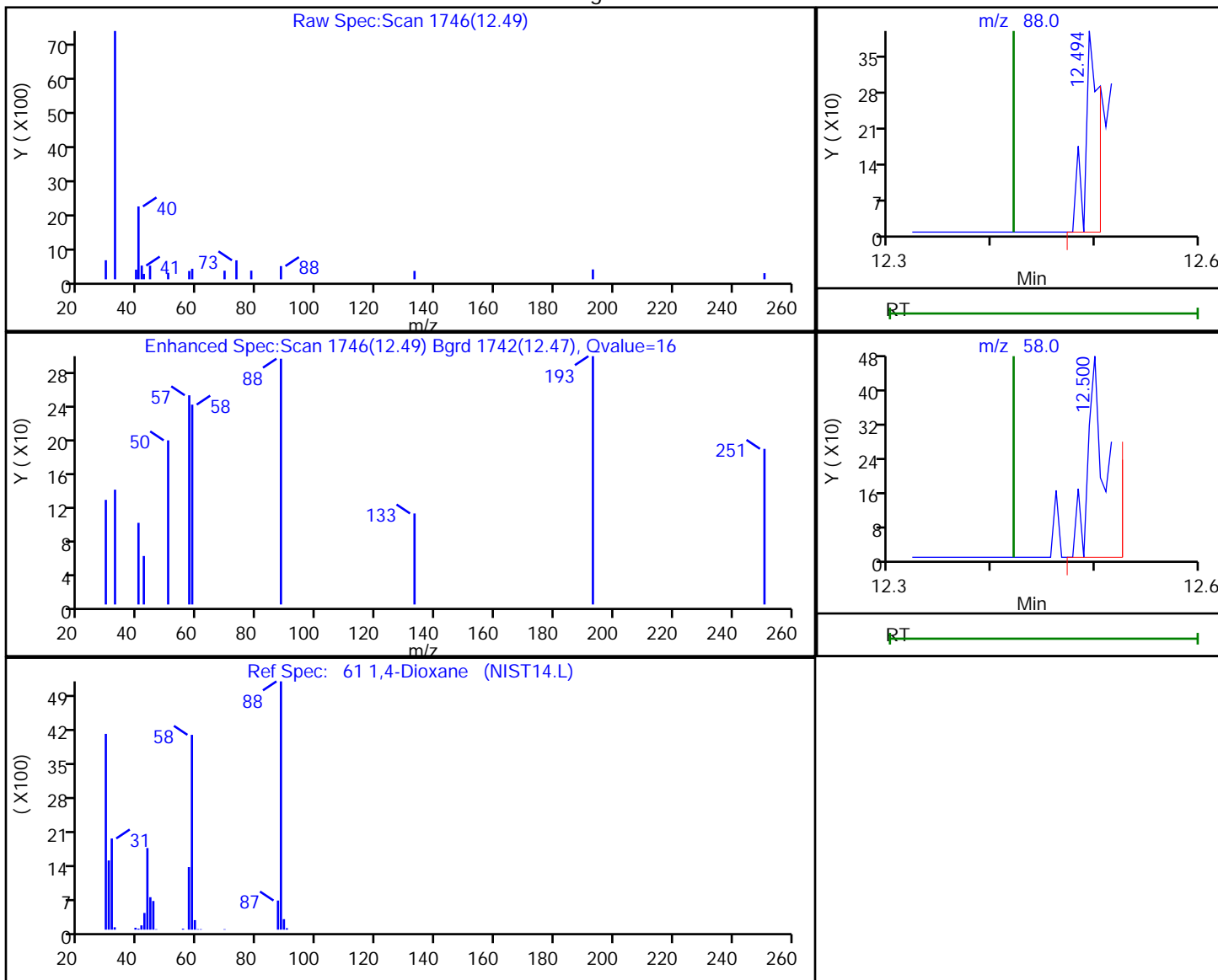


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D
 Injection Date: 11-Jan-2019 16:46:30 Instrument ID: MG
 Lims ID: IC L1
 Client ID:
 Operator ID: 007126 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

61 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
12.49	88.00	361	0.007427
12.50	58.00	563	

Reviewer: barlozhetskayaa, 14-Jan-2019 16:39:43

Audit Action: Marked Compound Undetected

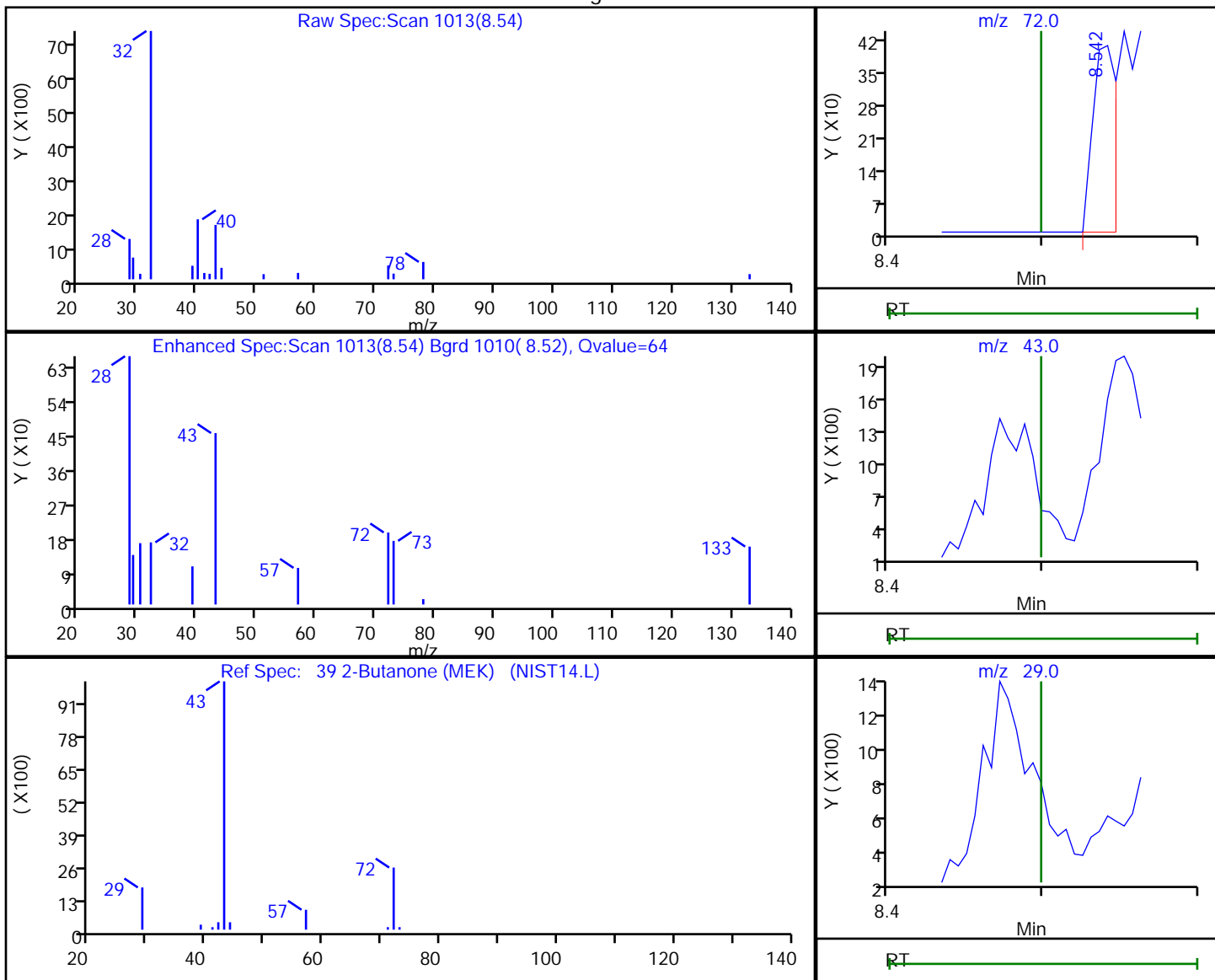
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC01.D
 Injection Date: 11-Jan-2019 16:46:30 Instrument ID: MG
 Lims ID: IC L1
 Client ID:
 Operator ID: 007126 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

39 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
8.54	72.00	434	0.006863
8.50	43.00	0	
8.50	29.00	0	

Reviewer: barlozhetskayaa, 14-Jan-2019 16:39:32

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 11-Jan-2019 17:29:30 ALS Bottle#: 1 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-010
 Misc. Info.: 201657
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:49 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 12:55:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	97	383461	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	96	2241329	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	92	2135368	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	84	1724522	4.00	3.94	
6 Chlorodifluoromethane	51	3.834	3.829	0.005	96	13029	0.0400	0.0519	
7 Propene	41	3.845	3.838	0.007	97	10664	0.0400	0.0760	
8 Dichlorodifluoromethane	85	3.899	3.894	0.005	99	18210	0.0400	0.0449	
9 Chloromethane	52	4.098	4.091	0.007	81	4029	0.0400	0.0904	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	90	10609	0.0400	0.0447	
12 Vinyl chloride	62	4.282	4.277	0.005	39	6583	0.0400	0.0426	
11 Acetaldehyde	44	4.293	4.278	0.015	94	27240	0.2000	0.4746	
13 Butane	43	4.373	4.373	0.000	87	15315	0.0400	0.0589	
14 Butadiene	54	4.379	4.375	0.004	57	4915	0.0400	0.0412	
15 Bromomethane	94	4.724	4.722	0.002	96	6503	0.0400	0.0487	
16 Chloroethane	64	4.875	4.879	-0.004	87	3157	0.0400	0.0424	
17 Ethanol	31	5.101	5.064	0.037	98	16097	0.2000	0.2385	
18 Vinyl bromide	106	5.209	5.205	0.004	96	5557	0.0400	0.0449	
19 2-Methylbutane	43	5.258	5.256	0.002	95	9723	0.0400	0.0521	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	16790	0.0400	0.0422	
21 Acrolein	56	5.538	5.526	0.012	51	2743	0.0400	0.0801	
23 Acetone	58	5.705	5.666	0.039	97	13906	0.1200	0.2412	
24 Pentane	72	5.727	5.725	0.002	80	933	0.0400	0.0367	
25 Isopropyl alcohol	45	5.921	5.840	0.081	98	20121	0.1200	0.1309	
26 Ethyl ether	31	5.986	5.943	0.043	83	7609	0.0400	0.0460	
27 1,1-Dichloroethene	96	6.239	6.242	-0.003	94	5250	0.0400	0.0388	
28 Acrylonitrile	53	6.379	6.375	0.004	88	3780	0.0400	0.0405	
29 1,1,2-Trichloro-1,2,2-trif	101	6.423	6.428	-0.005	94	12189	0.0400	0.0416	
30 2-Methyl-2-propanol	59	6.671	6.534	0.137	88	8632	0.0400	0.0410	
31 Methylene Chloride	84	6.611	6.610	0.001	97	24679	0.0400	0.1567	
32 3-Chloro-1-propene	39	6.627	6.626	0.001	93	7240	0.0400	0.0431	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.778	6.778	0.000	99	17154	0.0400	0.0418	
34 trans-1,2-Dichloroethene	96	7.442	7.450	-0.008	87	5310	0.0400	0.0392	
35 2-Methylpentane	43	7.463	7.468	-0.005	95	17087	0.0400	0.0441	
36 Methyl tert-butyl ether	73	7.706	7.643	0.063	97	13784	0.0400	0.0366	
37 1,1-Dichloroethane	63	7.884	7.892	-0.008	99	11544	0.0400	0.0414	
38 Vinyl acetate	43	8.029	8.016	0.013	100	13405	0.0400	0.0347	
40 Hexane	56	8.477	8.480	-0.003	87	5618	0.0400	0.0450	
39 2-Butanone (MEK)	72	8.536	8.499	0.037	98	2572	0.0400	0.0423	
41 Isopropyl ether	45	8.747	8.679	0.068	96	16803	0.0400	0.0351	
42 cis-1,2-Dichloroethene	96	8.898	8.906	-0.008	95	5311	0.0400	0.0383	
43 Ethyl acetate	43	9.162	9.131	0.031	98	11371	0.0400	0.0358	
44 Chloroform	83	9.248	9.261	-0.013	28	12869	0.0400	0.0401	
45 Tert-butyl ethyl ether	59	9.442	9.389	0.053	97	14659	0.0400	0.0332	
46 Tetrahydrofuran	42	9.793	9.725	0.068	92	6738	0.0400	0.0397	
47 1,1,1-Trichloroethane	97	10.294	10.303	-0.009	96	13331	0.0400	0.0384	
48 1,2-Dichloroethane	62	10.407	10.416	-0.009	97	8382	0.0400	0.0383	
49 Cyclohexane	69	10.882	10.888	-0.006	74	3093	0.0400	0.0420	
50 Benzene	78	10.887	10.893	-0.006	96	15963	0.0400	0.0398	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	97	11874	0.0400	0.0357	
53 2,3-Dimethylpentane	71	11.006	11.000	0.006	90	4248	0.0400	0.0402	
51 n-Butanol	31	11.071	11.004	0.067	54	2052	0.0400	0.0409	
54 Thiophene	84	11.157	11.164	-0.007	96	9203	0.0400	0.0395	
55 Isooctane	57	11.632	11.632	0.000	97	31627	0.0400	0.0403	
56 n-Heptane	71	11.998	11.995	0.003	95	6342	0.0400	0.0394	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	82	6605	0.0400	0.0419	
58 Trichloroethene	130	12.122	12.124	-0.002	92	7238	0.0400	0.0397	
59 Dibromomethane	93	12.203	12.216	-0.013	95	8080	0.0400	0.0487	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	97	11513	0.0400	0.0352	
61 1,4-Dioxane	88	12.489	12.421	0.068	65	2092	0.0400	0.0449	
62 Methyl methacrylate	41	12.473	12.453	0.020	89	6964	0.0400	0.0346	
63 Methylcyclohexane	83	12.877	12.879	-0.002	92	11041	0.0400	0.0402	
64 4-Methyl-2-pentanone (MIBK)	43	13.357	13.321	0.036	98	10902	0.0400	0.0346	
65 cis-1,3-Dichloropropene	75	13.336	13.336	0.000	97	8857	0.0400	0.0369	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	96	8494	0.0400	0.0369	
67 Toluene	91	14.144	14.144	0.000	93	18809	0.0400	0.0400	
68 1,1,2-Trichloroethane	83	14.215	14.220	-0.006	93	5479	0.0400	0.0382	
69 2-Hexanone	58	14.657	14.631	0.026	92	4307	0.0400	0.0305	
70 n-Octane	85	14.808	14.804	0.004	96	6439	0.0400	0.0381	
71 Chlorodibromomethane	129	14.916	14.920	-0.004	96	9202	0.0400	0.0317	
72 Ethylene Dibromide	107	15.201	15.207	-0.006	94	8663	0.0400	0.0348	
73 Tetrachloroethene	129	15.271	15.272	-0.001	87	6973	0.0400	0.0396	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	94	23890	0.0400	0.0416	
75 Chlorobenzene	112	16.140	16.142	-0.002	75	13951	0.0400	0.0382	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	24780	0.0400	0.0388	
79 m-Xylene & p-Xylene	91	16.576	16.582	-0.006	99	36147	0.0800	0.0740	
80 n-Nonane	57	16.975	16.977	-0.002	95	13596	0.0400	0.0391	
81 Bromoform	173	17.040	17.041	-0.001	79	7868	0.0400	0.0310	
82 Styrene	104	17.045	17.047	-0.002	97	10474	0.0400	0.0310	
83 o-Xylene	91	17.099	17.106	-0.007	97	18010	0.0400	0.0350	
84 1,1,1,2-Tetrachloroethane	83	17.423	17.430	-0.007	95	11381	0.0400	0.0329	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	95	3874	0.0400	0.0350	
86 Isopropylbenzene	105	17.682	17.684	-0.002	96	25754	0.0400	0.0375	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 N-Propylbenzene	120	18.205	18.205	0.000	97	6114	0.0400	0.0329	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	96	6524	0.0400	0.0385	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	22914	0.0400	0.0334	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	92	9227	0.0400	0.0346	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	86	7231	0.0400	0.0269	
93 n-Decane	57	18.679	18.682	-0.003	89	16235	0.0400	0.0381	
94 tert-Butylbenzene	119	18.836	18.832	0.004	90	19737	0.0400	0.0332	
95 1,2,4-Trimethylbenzene	105	18.847	18.846	0.001	96	18671	0.0400	0.0319	
96 sec-Butylbenzene	105	19.095	19.094	0.001	98	27915	0.0400	0.0333	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	94	13761	0.0400	0.0360	
98 Benzyl chloride	91	19.186	19.188	-0.002	96	15426	0.0400	0.0296	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	87	14670	0.0400	0.0374	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	21389	0.0400	0.0319	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	98	18233	0.0400	0.0345	
102 Butylcyclohexane	83	19.353	19.353	0.000	90	18731	0.0400	0.0388	
103 2,3-Dihydroindene	117	19.548	19.550	-0.002	92	17941	0.0400	0.0339	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	86	12181	0.0400	0.0318	
105 n-Butylbenzene	91	19.672	19.673	-0.001	95	23860	0.0400	0.0350	
106 Indene	116	19.677	19.679	-0.002	76	14464	0.0400	0.0318	
107 Undecane	57	19.963	19.963	0.000	95	15243	0.0400	0.0353	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	84	5571	0.0400	0.0352	
109 1,2,4,5-Tetramethylbenzene	119	20.421	20.417	0.004	96	18455	0.0400	0.0303	
110 Dodecane	57	21.014	21.014	0.000	94	12818	0.0400	0.0375	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	91	11357	0.0400	0.0377	
112 Naphthalene	128	21.376	21.377	-0.001	98	24728	0.0400	0.0375	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	87	9776	0.0400	0.0303	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	93	10806	0.0400	0.0406	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	99	13713	0.0400	0.0427	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	98	17895	0.0400	0.0455	
A 122 C8 Range	1	14.803	(14.755-14.870)		0	79904	0.0400	0.0474	
S 123 1,2-Dichloroethene, Total	1				0		0.0800	0.0775	
S 124 Xylenes, Total	100				0		0.1200	0.1090	

Reagents:

40L1-3DQP_00011
40MXISSURP_00003

Amount Added: 100.00

Units: mL

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC02.D

Injection Date: 11-Jan-2019 17:29:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L2

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

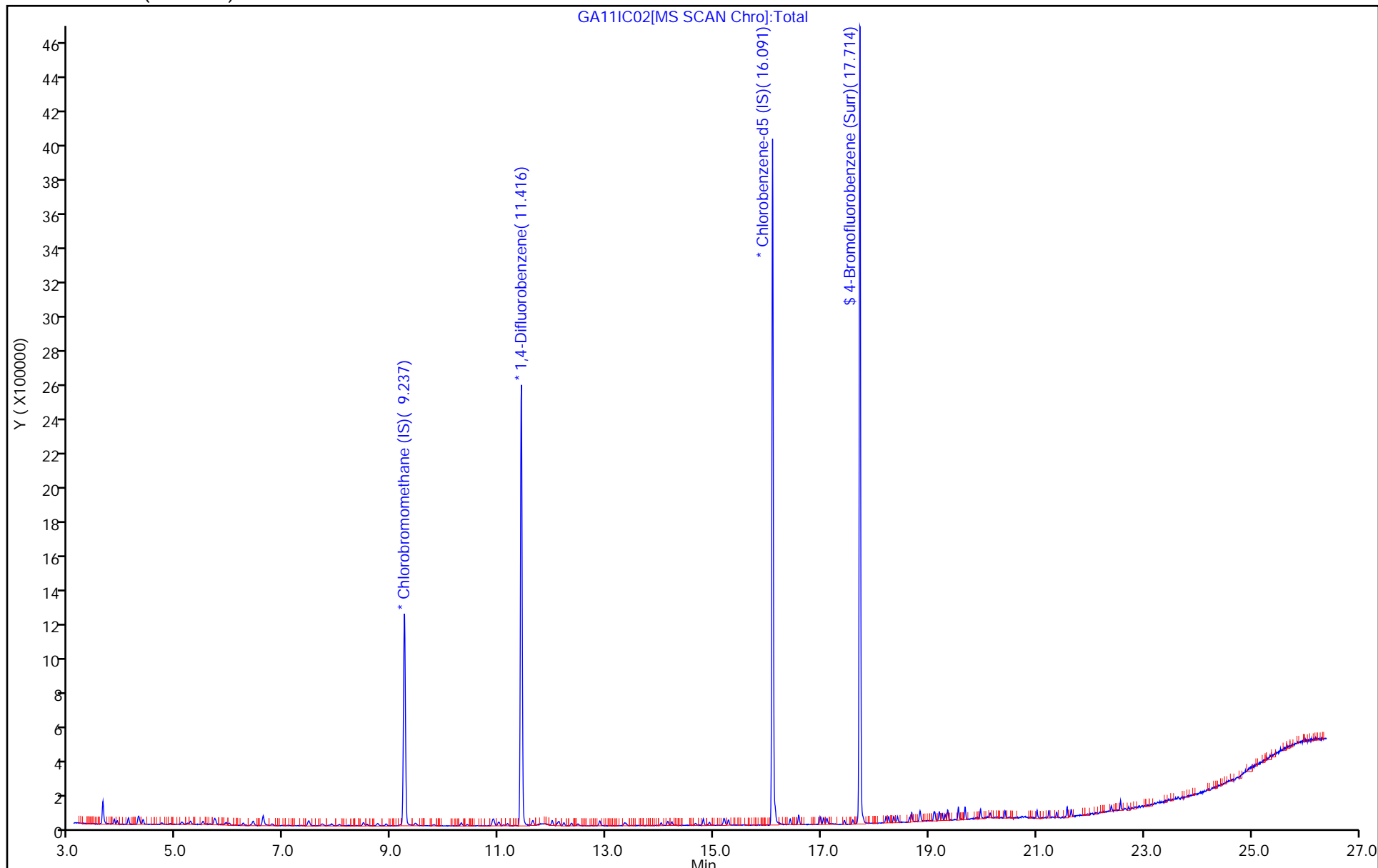
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC02.D

Injection Date: 11-Jan-2019 17:29:30

Instrument ID: MG

Lims ID: IC L2

Client ID:

Operator ID: 007126

ALS Bottle#: 1

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

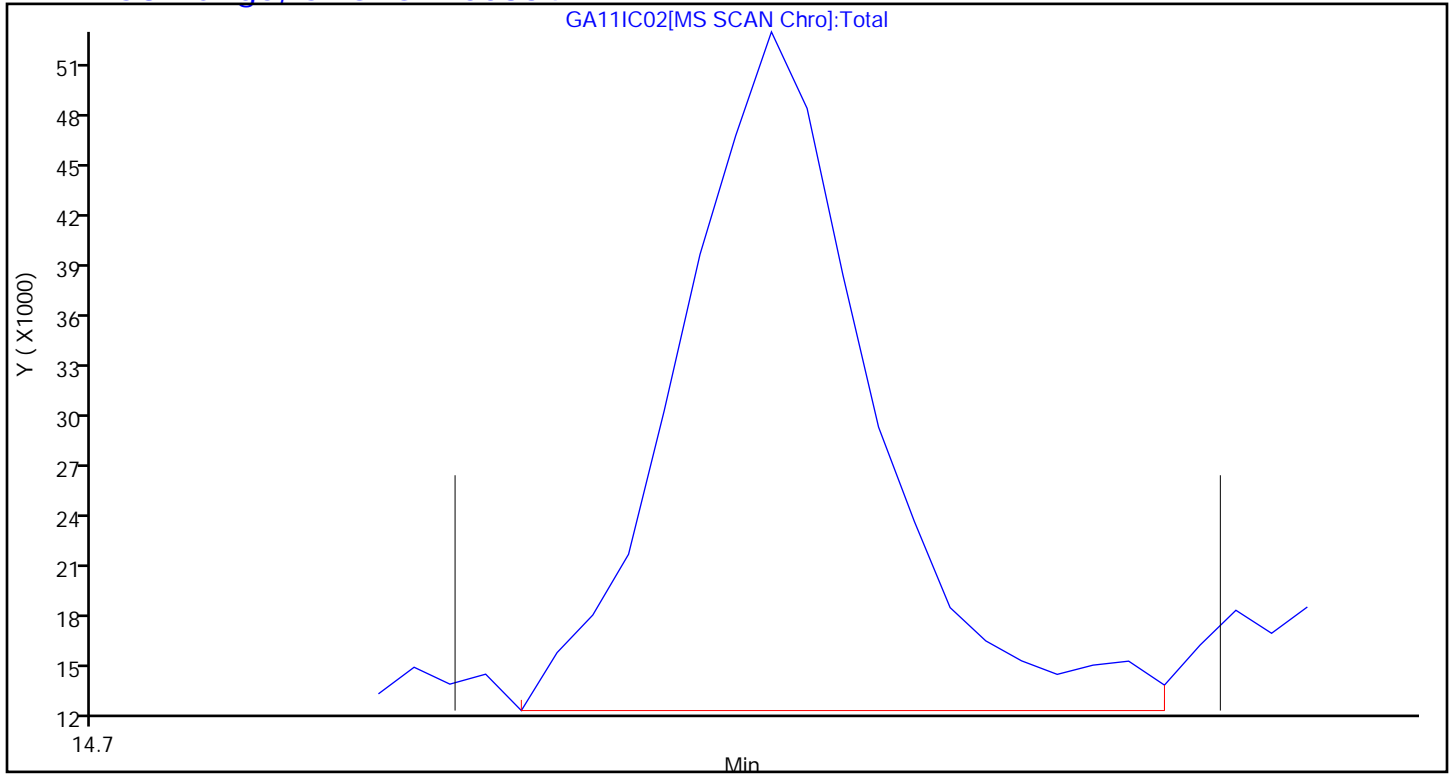
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834

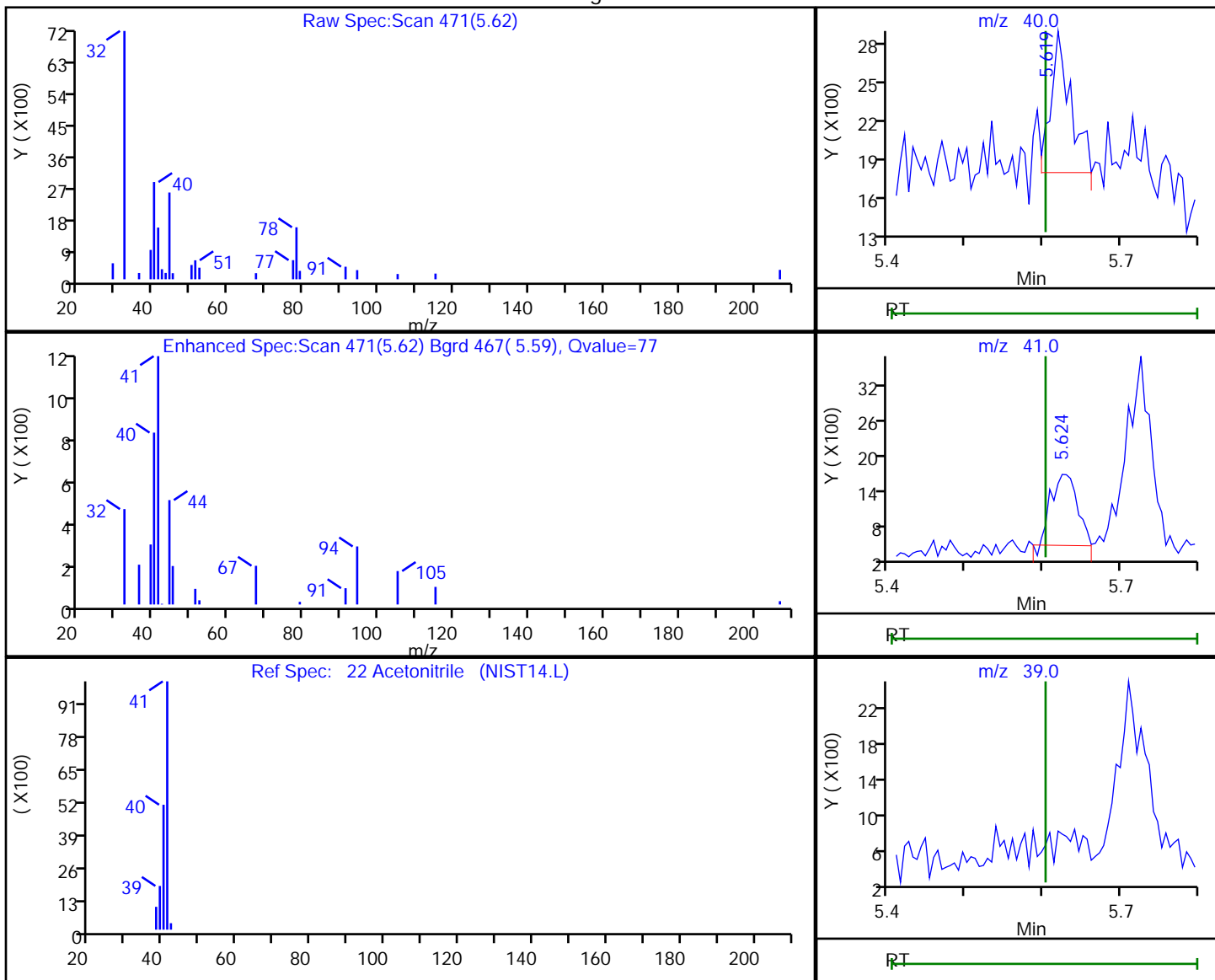


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC02.D
 Injection Date: 11-Jan-2019 17:29:30 Instrument ID: MG
 Lims ID: IC L2
 Client ID:
 Operator ID: 007126 ALS Bottle#: 1 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

22 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
5.62	40.00	1867	0.034937
5.62	41.00	2860	
5.60	39.00	0	

Reviewer: barlozhetskayaa, 14-Jan-2019 16:37:44

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 11-Jan-2019 18:12:30 ALS Bottle#: 1 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-011
 Misc. Info.: 201657
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:25:56 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa

Date: 14-Jan-2019 17:11:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	98	367691	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	96	2082867	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	93	2070201	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	84	1705365	4.00	4.02	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	97	21711	0.0800	0.0901	
7 Propene	41	3.840	3.838	0.002	97	16425	0.0800	0.1221	
8 Dichlorodifluoromethane	85	3.893	3.894	-0.001	99	32728	0.0800	0.0841	
9 Chloromethane	52	4.098	4.091	0.007	67	5382	0.0800	0.1259	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	92	19448	0.0800	0.0855	
12 Vinyl chloride	62	4.282	4.277	0.005	42	12737	0.0800	0.0860	
11 Acetaldehyde	44	4.287	4.278	0.009	92	55698	0.4000	1.01	
13 Butane	43	4.373	4.373	0.000	88	28045	0.0800	0.1125	
14 Butadiene	54	4.379	4.375	0.004	60	10439	0.0800	0.0912	
15 Bromomethane	94	4.729	4.722	0.007	97	12169	0.0800	0.0951	
16 Chloroethane	64	4.880	4.879	0.001	86	6344	0.0800	0.0889	
17 Ethanol	31	5.085	5.064	0.021	98	32740	0.4000	0.5058	
18 Vinyl bromide	106	5.204	5.205	-0.001	98	10174	0.0800	0.0858	
19 2-Methylbutane	43	5.258	5.256	0.002	93	17744	0.0800	0.0991	
20 Trichlorofluoromethane	101	5.495	5.492	0.003	100	31414	0.0800	0.0823	
21 Acrolein	56	5.533	5.526	0.007	91	5061	0.0800	0.1541	
22 Acetonitrile	40	5.614	5.603	0.011	98	4681	0.0800	0.0914	
23 Acetone	58	5.689	5.666	0.023	99	29244	0.2400	0.5291	
24 Pentane	72	5.732	5.725	0.007	67	2263	0.0800	0.0928	
25 Isopropyl alcohol	45	5.878	5.840	0.038	99	39615	0.2400	0.2688	
26 Ethyl ether	31	5.970	5.943	0.027	87	15127	0.0800	0.0954	
27 1,1-Dichloroethene	96	6.245	6.242	0.003	95	11039	0.0800	0.0851	
28 Acrylonitrile	53	6.379	6.375	0.004	95	7623	0.0800	0.0851	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	92	24196	0.0800	0.0860	
30 2-Methyl-2-propanol	59	6.611	6.534	0.077	55	18927	0.0800	0.0938	
31 Methylene Chloride	84	6.606	6.610	-0.004	97	27617	0.0800	0.1829	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.617	6.626	-0.009	55	14784	0.0800	0.0918	
33 Carbon disulfide	76	6.778	6.778	0.000	100	33755	0.0800	0.0857	
34 trans-1,2-Dichloroethene	96	7.442	7.450	-0.008	96	10703	0.0800	0.0824	
35 2-Methylpentane	43	7.469	7.468	0.001	96	32181	0.0800	0.0865	
36 Methyl tert-butyl ether	73	7.679	7.643	0.036	97	31073	0.0800	0.0860	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	99	22407	0.0800	0.0839	
38 Vinyl acetate	43	8.024	8.016	0.008	100	29912	0.0800	0.0807	
40 Hexane	56	8.477	8.480	-0.003	82	10084	0.0800	0.0842	
39 2-Butanone (MEK)	72	8.526	8.499	0.027	98	6283	0.0800	0.1077	
41 Isopropyl ether	45	8.709	8.679	0.030	96	37979	0.0800	0.0828	
42 cis-1,2-Dichloroethene	96	8.892	8.906	-0.014	97	10779	0.0800	0.0811	
43 Ethyl acetate	43	9.151	9.131	0.020	98	25120	0.0800	0.0825	
44 Chloroform	83	9.259	9.261	-0.002	93	25085	0.0800	0.0816	
45 Tert-butyl ethyl ether	59	9.426	9.389	0.037	96	33984	0.0800	0.0803	
46 Tetrahydrofuran	42	9.760	9.725	0.035	93	14658	0.0800	0.0900	
47 1,1,1-Trichloroethane	97	10.294	10.303	-0.009	96	27166	0.0800	0.0816	
48 1,2-Dichloroethane	62	10.407	10.416	-0.009	97	17516	0.0800	0.0860	
49 Cyclohexane	69	10.887	10.888	-0.001	72	5675	0.0800	0.0829	
50 Benzene	78	10.887	10.893	-0.006	97	33352	0.0800	0.0895	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	96	24215	0.0800	0.0784	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	91	8397	0.0800	0.0855	
51 n-Butanol	31	11.060	11.004	0.056	43	4173	0.0800	0.0895	
54 Thiophene	84	11.157	11.164	-0.007	95	18410	0.0800	0.0851	
55 Isooctane	57	11.626	11.632	-0.006	97	63694	0.0800	0.0873	
56 n-Heptane	71	11.993	11.995	-0.002	95	13419	0.0800	0.0896	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	82	12771	0.0800	0.0872	
58 Trichloroethene	130	12.122	12.124	-0.002	91	13973	0.0800	0.0824	
59 Dibromomethane	93	12.214	12.216	-0.002	92	14509	0.0800	0.0940	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	99	23694	0.0800	0.0779	
61 1,4-Dioxane	88	12.462	12.421	0.041	44	4453	0.0800	0.1028	
62 Methyl methacrylate	41	12.457	12.453	0.004	89	14956	0.0800	0.0799	
63 Methylcyclohexane	83	12.877	12.879	-0.002	91	21112	0.0800	0.0828	
64 4-Methyl-2-pentanone (MIBK)	43	13.341	13.321	0.020	90	24146	0.0800	0.0824	
65 cis-1,3-Dichloropropene	75	13.336	13.336	0.000	96	18964	0.0800	0.0851	
66 trans-1,3-Dichloropropene	75	14.010	14.019	-0.009	96	18209	0.0800	0.0816	
67 Toluene	91	14.139	14.144	-0.005	94	37560	0.0800	0.0825	
68 1,1,2-Trichloroethane	83	14.214	14.220	-0.006	95	11656	0.0800	0.0839	
69 2-Hexanone	58	14.651	14.631	0.020	92	10295	0.0800	0.0753	
70 n-Octane	85	14.802	14.804	-0.002	95	13108	0.0800	0.0800	
71 Chlorodibromomethane	129	14.915	14.920	-0.005	97	19680	0.0800	0.0698	
72 Ethylene Dibromide	107	15.201	15.207	-0.006	98	17903	0.0800	0.0743	
73 Tetrachloroethene	129	15.266	15.272	-0.006	91	13185	0.0800	0.0771	
74 2,3-Dimethylheptane	43	16.134	16.139	-0.005	94	47348	0.0800	0.0851	
75 Chlorobenzene	112	16.140	16.142	-0.002	75	29142	0.0800	0.0823	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	48941	0.0800	0.0791	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	79756	0.1600	0.1685	
80 n-Nonane	57	16.975	16.977	-0.002	94	27868	0.0800	0.0827	
81 Bromoform	173	17.035	17.041	-0.006	89	16038	0.0800	0.0651	
82 Styrene	104	17.040	17.047	-0.007	97	22430	0.0800	0.0685	
83 o-Xylene	91	17.105	17.106	-0.001	97	40418	0.0800	0.0810	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	97	26816	0.0800	0.0800	
85 1,2,3-Trichloropropane	110	17.590	17.587	0.003	96	8767	0.0800	0.0816	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	95	53331	0.0800	0.0801	
87 N-Propylbenzene	120	18.199	18.205	-0.006	98	14187	0.0800	0.0789	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	13286	0.0800	0.0808	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	97	52613	0.0800	0.0792	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	93	20417	0.0800	0.0790	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	86	17649	0.0800	0.0676	
93 n-Decane	57	18.679	18.682	-0.003	90	34455	0.0800	0.0834	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	44314	0.0800	0.0768	
95 1,2,4-Trimethylbenzene	105	18.841	18.846	-0.005	96	44184	0.0800	0.0779	
96 sec-Butylbenzene	105	19.089	19.094	-0.005	98	62984	0.0800	0.0776	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	96	27898	0.0800	0.0753	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	35336	0.0800	0.0699	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	90	28727	0.0800	0.0756	
100 4-Isopropyltoluene	119	19.246	19.251	-0.005	96	46995	0.0800	0.0724	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	41757	0.0800	0.0814	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	38846	0.0800	0.0830	
103 2,3-Dihydroindene	117	19.548	19.550	-0.002	92	39872	0.0800	0.0778	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	91	27621	0.0800	0.0745	
105 n-Butylbenzene	91	19.672	19.673	-0.001	96	50796	0.0800	0.0769	
106 Indene	116	19.677	19.679	-0.002	90	31427	0.0800	0.0714	
107 Undecane	57	19.963	19.963	0.000	92	32520	0.0800	0.0776	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	83	11218	0.0800	0.0732	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	96	41572	0.0800	0.0703	
110 Dodecane	57	21.014	21.014	0.000	93	28563	0.0800	0.0863	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	91	20313	0.0800	0.0695	
112 Naphthalene	128	21.376	21.377	-0.001	99	47569	0.0800	0.0745	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	91	21118	0.0800	0.0675	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	94	20063	0.0800	0.0777	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	98	23120	0.0800	0.0743	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	28473	0.0800	0.0746	
A 122 C8 Range	1	14.792	(14.754-14.870)		0	138324	0.0800	0.0846	
S 123 1,2-Dichloroethene, Total	1				0		0.1600	0.1634	
S 124 Xylenes, Total	100				0		0.2400	0.2494	

Reagents:

40L1-3DQP_00011

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC03.D

Injection Date: 11-Jan-2019 18:12:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L3

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

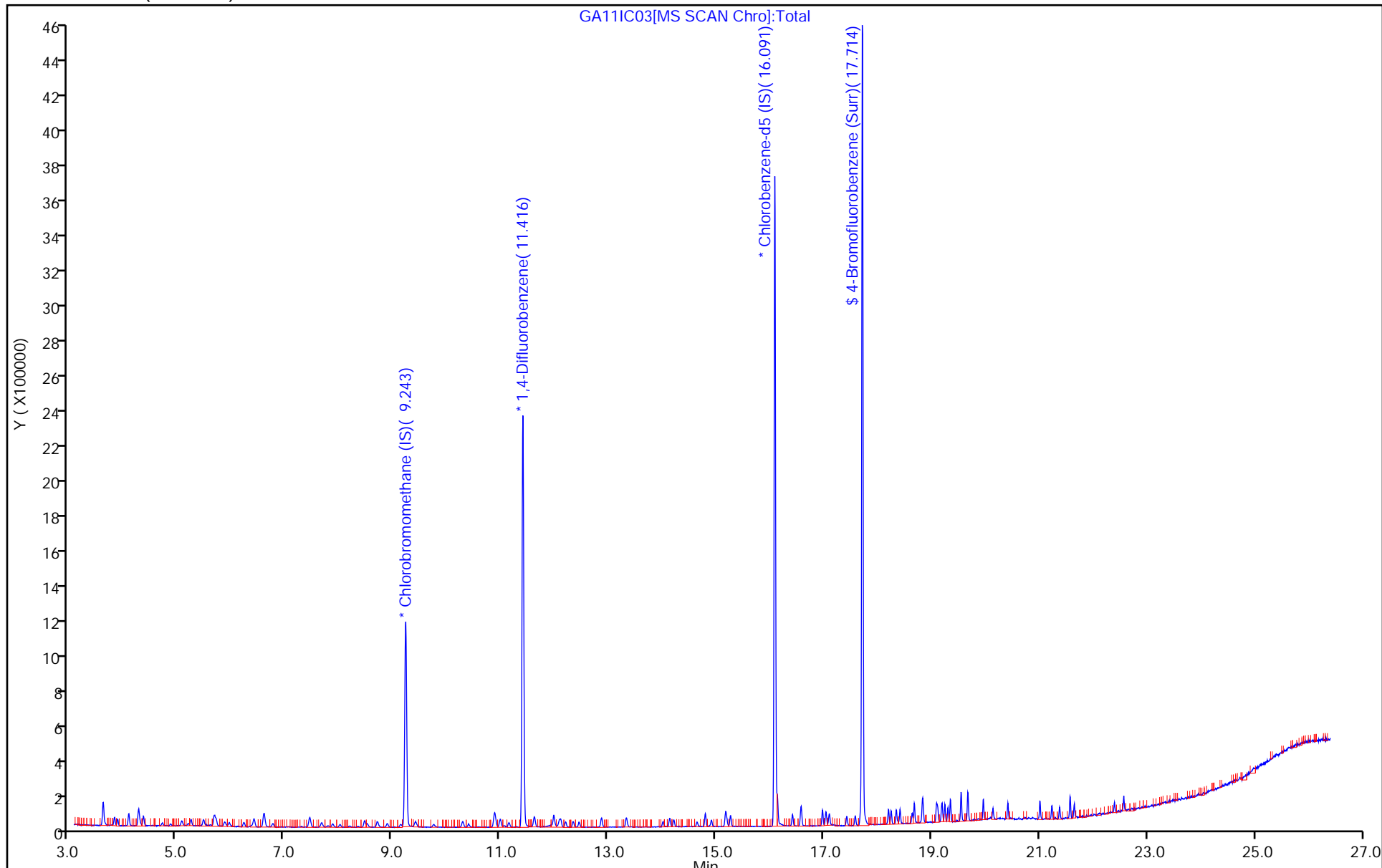
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC03.D

Injection Date: 11-Jan-2019 18:12:30

Instrument ID: MG

Lims ID: IC L3

Client ID:

Operator ID: 007126

ALS Bottle#: 1

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

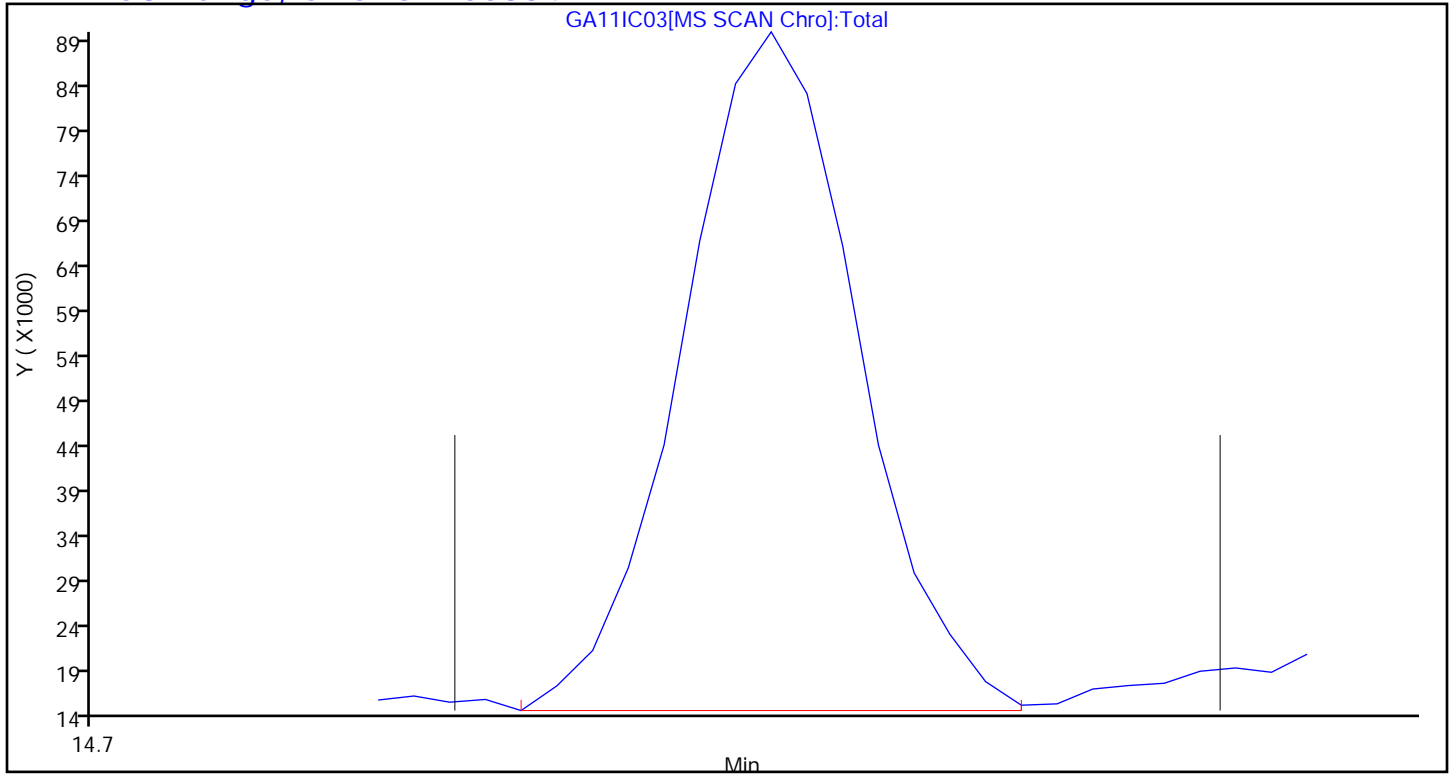
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 11-Jan-2019 18:56:30 ALS Bottle#: 2 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-012
 Misc. Info.: 201656
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:02 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 13:37:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	97	384858	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	97	2291754	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	92	2138235	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	84	1745466	4.00	3.98	
6 Chlorodifluoromethane	51	3.834	3.829	0.005	98	42570	0.1600	0.1689	
7 Propene	41	3.840	3.838	0.002	95	27727	0.1600	0.1970	
8 Dichlorodifluoromethane	85	3.899	3.894	0.005	100	68237	0.1600	0.1675	
9 Chloromethane	52	4.093	4.091	0.002	76	8660	0.1600	0.1936	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.109	4.103	0.006	92	39319	0.1600	0.1651	
12 Vinyl chloride	62	4.282	4.277	0.005	98	25449	0.1600	0.1642	
11 Acetaldehyde	44	4.287	4.278	0.009	95	72390	0.8000	1.26	
13 Butane	43	4.373	4.373	0.000	88	47326	0.1600	0.1813	
14 Butadiene	54	4.379	4.375	0.004	66	19602	0.1600	0.1636	
15 Bromomethane	94	4.724	4.722	0.002	98	21546	0.1600	0.1609	
16 Chloroethane	64	4.886	4.879	0.007	89	12373	0.1600	0.1657	
17 Ethanol	31	5.091	5.064	0.027	97	66636	0.8000	0.9835	
18 Vinyl bromide	106	5.204	5.205	-0.001	97	20331	0.1600	0.1638	
19 2-Methylbutane	43	5.258	5.256	0.002	94	31631	0.1600	0.1689	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	100	63826	0.1600	0.1598	
21 Acrolein	56	5.538	5.526	0.012	78	7324	0.1600	0.2130	
22 Acetonitrile	40	5.619	5.603	0.016	98	7481	0.1600	0.1395	
23 Acetone	58	5.689	5.666	0.023	99	41892	0.4800	0.7241	
24 Pentane	72	5.727	5.725	0.002	78	4701	0.1600	0.1841	
25 Isopropyl alcohol	45	5.889	5.840	0.049	99	79400	0.4800	0.5147	
26 Ethyl ether	31	5.970	5.943	0.027	88	31253	0.1600	0.1883	
27 1,1-Dichloroethene	96	6.245	6.242	0.003	94	21196	0.1600	0.1560	
28 Acrylonitrile	53	6.374	6.375	-0.001	90	14588	0.1600	0.1555	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	93	47135	0.1600	0.1601	
30 2-Methyl-2-propanol	59	6.617	6.534	0.083	49	35554	0.1600	0.1683	
31 Methylene Chloride	84	6.611	6.610	0.001	99	39858	0.1600	0.2522	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.627	6.626	0.001	94	29914	0.1600	0.1775	
33 Carbon disulfide	76	6.778	6.778	0.000	100	67457	0.1600	0.1636	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	21313	0.1600	0.1567	
35 2-Methylpentane	43	7.469	7.468	0.001	96	64503	0.1600	0.1657	
36 Methyl tert-butyl ether	73	7.679	7.643	0.036	97	59673	0.1600	0.1577	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	44696	0.1600	0.1599	
38 Vinyl acetate	43	8.019	8.016	0.003	100	59807	0.1600	0.1541	
40 Hexane	56	8.482	8.480	0.002	88	20822	0.1600	0.1660	
39 2-Butanone (MEK)	72	8.520	8.499	0.021	98	10552	0.1600	0.1728	
41 Isopropyl ether	45	8.709	8.679	0.030	97	77502	0.1600	0.1613	
42 cis-1,2-Dichloroethene	96	8.908	8.906	0.002	97	22108	0.1600	0.1589	
43 Ethyl acetate	43	9.146	9.131	0.015	98	49778	0.1600	0.1562	
44 Chloroform	83	9.253	9.261	-0.008	95	52455	0.1600	0.1630	
45 Tert-butyl ethyl ether	59	9.421	9.389	0.032	98	67993	0.1600	0.1534	
46 Tetrahydrofuran	42	9.755	9.725	0.030	93	27618	0.1600	0.1620	
47 1,1,1-Trichloroethane	97	10.305	10.303	0.002	96	55384	0.1600	0.1590	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	98	35324	0.1600	0.1577	
49 Cyclohexane	69	10.893	10.888	0.005	73	12681	0.1600	0.1684	
50 Benzene	78	10.893	10.893	0.000	97	65637	0.1600	0.1602	
52 Carbon tetrachloride	117	10.914	10.913	0.001	96	50848	0.1600	0.1496	
53 2,3-Dimethylpentane	71	11.001	11.000	0.001	92	17105	0.1600	0.1583	
51 n-Butanol	31	11.081	11.004	0.077	85	8226	0.1600	0.1603	
54 Thiophene	84	11.162	11.164	-0.002	97	37543	0.1600	0.1577	
55 Isooctane	57	11.631	11.632	-0.001	98	129920	0.1600	0.1619	
56 n-Heptane	71	11.993	11.995	-0.002	95	26105	0.1600	0.1585	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	83	25661	0.1600	0.1592	
58 Trichloroethene	130	12.117	12.124	-0.007	91	28091	0.1600	0.1505	
59 Dibromomethane	93	12.214	12.216	-0.002	91	27744	0.1600	0.1634	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	98	48577	0.1600	0.1451	
61 1,4-Dioxane	88	12.446	12.421	0.025	87	8684	0.1600	0.1823	
62 Methyl methacrylate	41	12.462	12.453	0.009	91	27631	0.1600	0.1342	
63 Methylcyclohexane	83	12.877	12.879	-0.002	92	44641	0.1600	0.1591	
64 4-Methyl-2-pentanone (MIBK)	43	13.341	13.321	0.020	98	51311	0.1600	0.1591	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	98	38186	0.1600	0.1558	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	96	34634	0.1600	0.1503	
67 Toluene	91	14.139	14.144	-0.005	93	75222	0.1600	0.1599	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	97	23218	0.1600	0.1617	
69 2-Hexanone	58	14.651	14.631	0.020	92	22692	0.1600	0.1607	
70 n-Octane	85	14.802	14.804	-0.002	97	26877	0.1600	0.1588	
71 Chlorodibromomethane	129	14.921	14.920	0.001	96	39627	0.1600	0.1361	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	37712	0.1600	0.1515	
73 Tetrachloroethene	129	15.271	15.272	-0.001	93	28219	0.1600	0.1599	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	95	96324	0.1600	0.1675	
75 Chlorobenzene	112	16.140	16.142	-0.002	87	58935	0.1600	0.1612	
78 Ethylbenzene	91	16.420	16.422	-0.002	100	102987	0.1600	0.1611	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	160595	0.3200	0.3284	
80 n-Nonane	57	16.975	16.977	-0.002	95	57416	0.1600	0.1651	
81 Bromoform	173	17.040	17.041	-0.001	77	32352	0.1600	0.1271	
82 Styrene	104	17.045	17.047	-0.002	98	46527	0.1600	0.1376	
83 o-Xylene	91	17.105	17.106	-0.001	98	85176	0.1600	0.1652	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	98	52217	0.1600	0.1508	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	16530	0.1600	0.1490	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	96	108667	0.1600	0.1581	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	27021	0.1600	0.1454	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	96	26657	0.1600	0.1571	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	100995	0.1600	0.1472	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	91	39553	0.1600	0.1482	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	33405	0.1600	0.1239	
93 n-Decane	57	18.679	18.682	-0.003	88	72566	0.1600	0.1701	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	89	90284	0.1600	0.1516	
95 1,2,4-Trimethylbenzene	105	18.841	18.846	-0.005	96	89238	0.1600	0.1524	
96 sec-Butylbenzene	105	19.089	19.094	-0.005	98	130314	0.1600	0.1554	
97 1,3-Dichlorobenzene	146	19.111	19.117	-0.006	97	57634	0.1600	0.1506	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	71441	0.1600	0.1369	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	91	58838	0.1600	0.1499	
100 4-Isopropyltoluene	119	19.246	19.251	-0.005	96	99360	0.1600	0.1481	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	88511	0.1600	0.1671	
102 Butylcyclohexane	83	19.348	19.353	-0.005	89	80140	0.1600	0.1659	
103 2,3-Dihydroindene	117	19.547	19.550	-0.003	93	79681	0.1600	0.1505	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	93	56506	0.1600	0.1475	
105 n-Butylbenzene	91	19.672	19.673	-0.001	96	108576	0.1600	0.1591	
106 Indene	116	19.677	19.679	-0.002	96	64720	0.1600	0.1423	
107 Undecane	57	19.963	19.963	0.000	94	73748	0.1600	0.1704	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	86	22412	0.1600	0.1415	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	96	90241	0.1600	0.1478	
110 Dodecane	57	21.014	21.014	0.000	94	60222	0.1600	0.1761	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	92	41810	0.1600	0.1385	
112 Naphthalene	128	21.376	21.377	-0.001	98	92896	0.1600	0.1408	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	92	43365	0.1600	0.1341	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	94	39185	0.1600	0.1470	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	99	40866	0.1600	0.1271	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	98	54667	0.1600	0.1387	
A 122 C8 Range	1	14.798	(14.754-14.881)		0	278341	0.1600	0.1648	
S 123 1,2-Dichloroethene, Total	1				0		0.3200	0.3155	
S 124 Xylenes, Total	100				0		0.4800	0.4936	

Reagents:

40L4DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC04.D

Injection Date: 11-Jan-2019 18:56:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L4

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

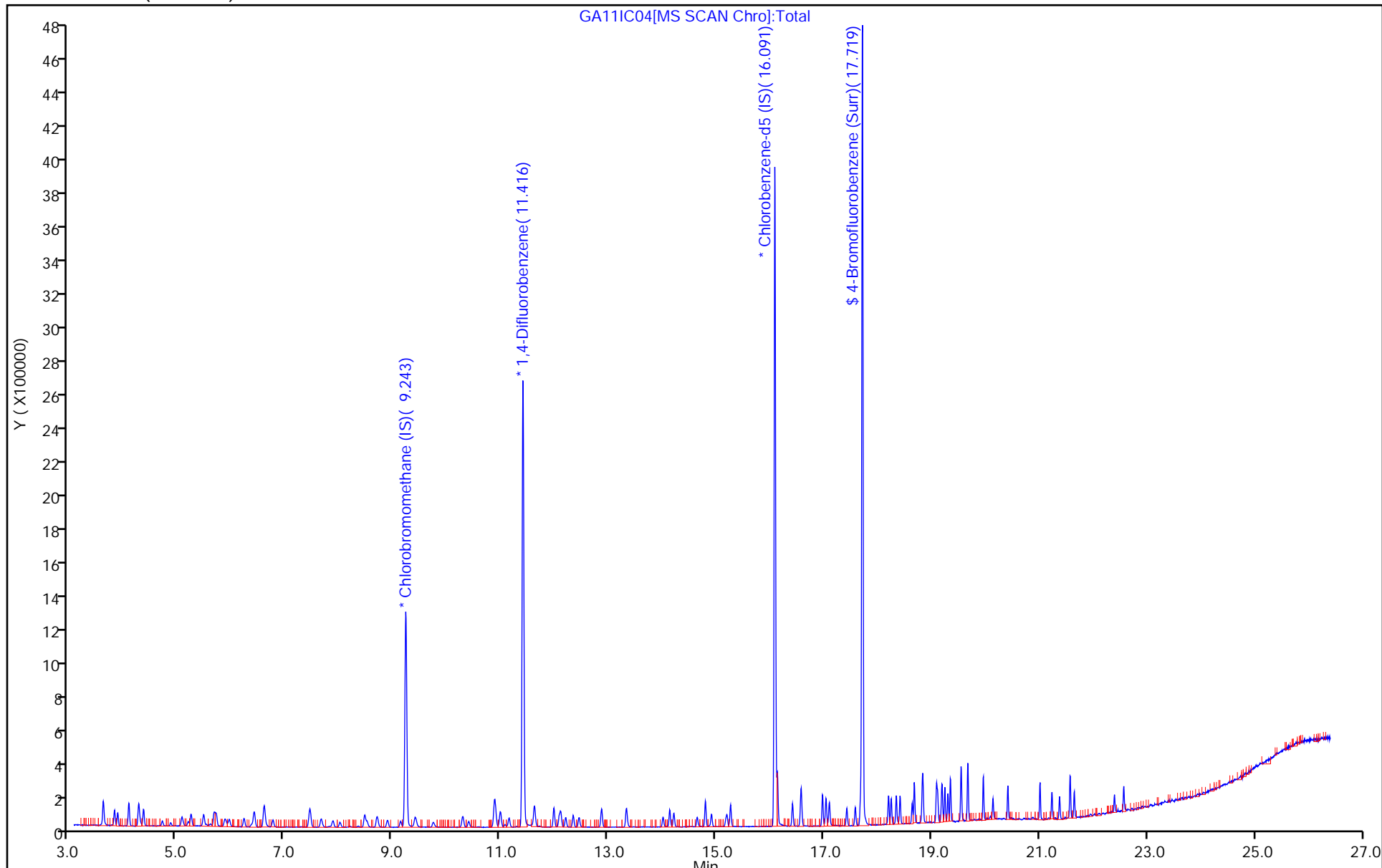
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC04.D

Injection Date: 11-Jan-2019 18:56:30

Instrument ID: MG

Lims ID: IC L4

Client ID:

Operator ID: 007126

ALS Bottle#: 2

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

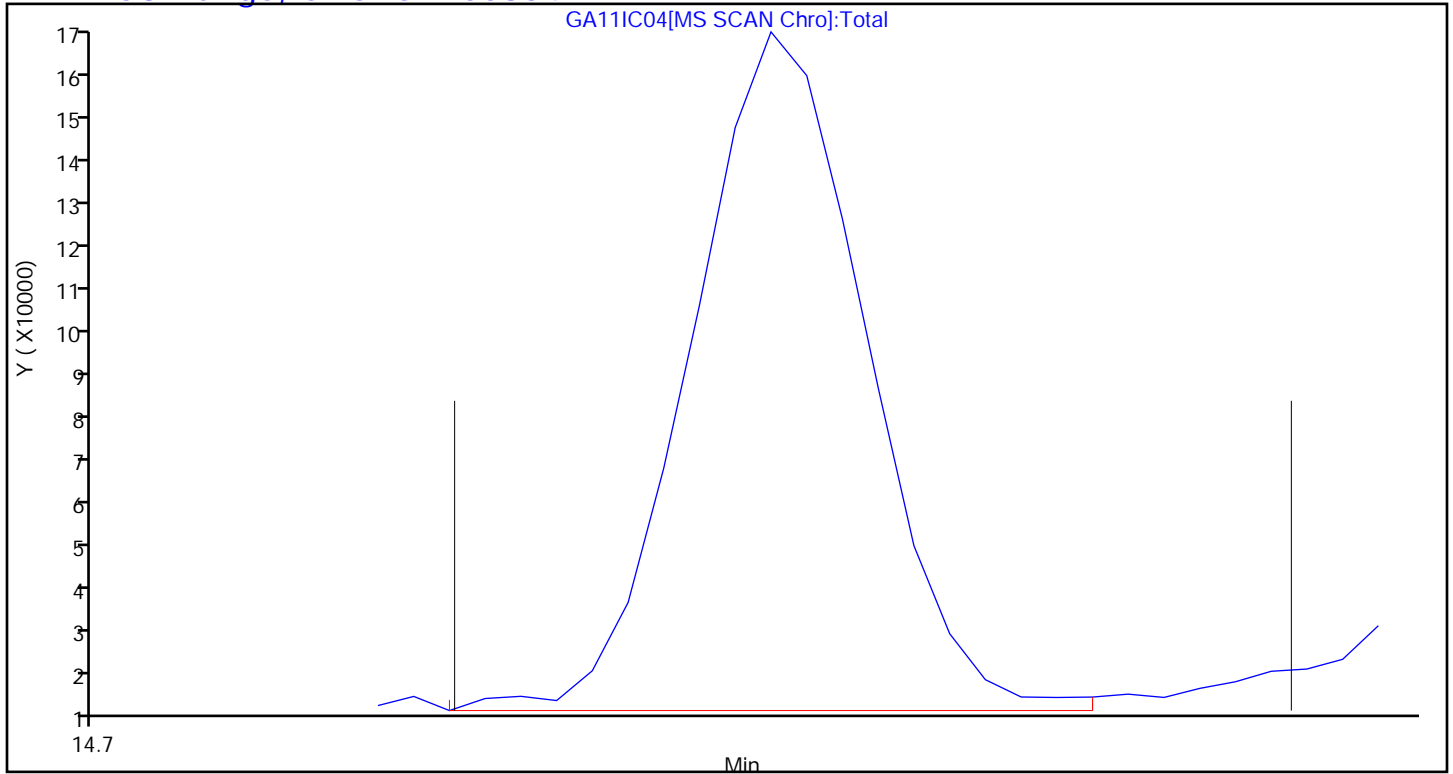
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 11-Jan-2019 19:40:30 ALS Bottle#: 3 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-013
 Misc. Info.: 201655
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:09 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 13:37:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	98	402791	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.421	-0.005	96	2195514	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	92	2073004	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.718	0.001	86	1732344	4.00	4.08	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	97	107824	0.4000	0.4086	
7 Propene	41	3.839	3.838	0.001	97	60077	0.4000	0.4078	
8 Dichlorodifluoromethane	85	3.893	3.894	-0.001	100	169908	0.4000	0.3984	
9 Chloromethane	52	4.093	4.091	0.002	66	19699	0.4000	0.4208	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	93	98572	0.4000	0.3956	
12 Vinyl chloride	62	4.276	4.277	-0.001	64	62942	0.4000	0.3880	
11 Acetaldehyde	44	4.276	4.278	-0.002	93	140654	2.00	2.33	
13 Butane	43	4.373	4.373	0.000	87	114610	0.4000	0.4196	
14 Butadiene	54	4.373	4.375	-0.002	64	50104	0.4000	0.3996	
15 Bromomethane	94	4.718	4.722	-0.004	97	54574	0.4000	0.3895	
16 Chloroethane	64	4.880	4.879	0.001	88	31401	0.4000	0.4018	
17 Ethanol	31	5.058	5.064	-0.006	97	143467	2.00	2.02	
18 Vinyl bromide	106	5.198	5.205	-0.007	98	51677	0.4000	0.3978	
19 2-Methylbutane	43	5.252	5.256	-0.004	93	82259	0.4000	0.4196	
20 Trichlorofluoromethane	101	5.489	5.492	-0.003	99	166966	0.4000	0.3993	
21 Acrolein	56	5.522	5.526	-0.004	96	14239	0.4000	0.3957	
22 Acetonitrile	40	5.597	5.603	-0.006	98	22116	0.4000	0.3940	
23 Acetone	58	5.662	5.666	-0.004	99	86023	1.20	1.42	
24 Pentane	72	5.727	5.725	0.002	90	11269	0.4000	0.4218	
25 Isopropyl alcohol	45	5.824	5.840	-0.016	99	219917	1.20	1.36	
26 Ethyl ether	31	5.937	5.943	-0.006	90	76885	0.4000	0.4426	
27 1,1-Dichloroethene	96	6.234	6.242	-0.008	94	56607	0.4000	0.3982	
28 Acrylonitrile	53	6.363	6.375	-0.012	97	37127	0.4000	0.3783	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	94	126693	0.4000	0.4112	
30 2-Methyl-2-propanol	59	6.519	6.534	-0.015	96	99796	0.4000	0.4513	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	72672	0.4000	0.4394	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	94	69253	0.4000	0.3927	
33 Carbon disulfide	76	6.773	6.778	-0.005	100	175320	0.4000	0.4064	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	57740	0.4000	0.4056	
35 2-Methylpentane	43	7.468	7.468	0.000	96	169974	0.4000	0.4173	
36 Methyl tert-butyl ether	73	7.630	7.643	-0.013	97	165819	0.4000	0.4187	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	117133	0.4000	0.4003	
38 Vinyl acetate	43	8.008	8.016	-0.008	100	158808	0.4000	0.3909	
40 Hexane	56	8.482	8.480	0.002	84	53409	0.4000	0.4069	
39 2-Butanone (MEK)	72	8.498	8.499	-0.001	96	27277	0.4000	0.4268	
41 Isopropyl ether	45	8.671	8.679	-0.008	97	213908	0.4000	0.4255	
42 cis-1,2-Dichloroethene	96	8.903	8.906	-0.003	97	57247	0.4000	0.3930	
43 Ethyl acetate	43	9.124	9.131	-0.007	98	134280	0.4000	0.4026	
44 Chloroform	83	9.253	9.261	-0.008	95	132214	0.4000	0.3926	
45 Tert-butyl ethyl ether	59	9.383	9.389	-0.006	97	193609	0.4000	0.4174	
46 Tetrahydrofuran	42	9.717	9.725	-0.008	95	73368	0.4000	0.4111	
47 1,1,1-Trichloroethane	97	10.299	10.303	-0.004	95	145486	0.4000	0.3991	
48 1,2-Dichloroethane	62	10.407	10.416	-0.009	98	87574	0.4000	0.4080	
49 Cyclohexane	69	10.887	10.888	-0.001	92	31319	0.4000	0.4341	
50 Benzene	78	10.887	10.893	-0.006	98	167643	0.4000	0.4270	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	97	138991	0.4000	0.4268	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	90	45390	0.4000	0.4384	
51 n-Butanol	31	11.017	11.004	0.013	68	22433	0.4000	0.4563	
54 Thiophene	84	11.157	11.164	-0.007	97	95028	0.4000	0.4166	
55 Isooctane	57	11.626	11.632	-0.006	97	336411	0.4000	0.4375	
56 n-Heptane	71	11.987	11.995	-0.008	95	66081	0.4000	0.4187	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	88	64714	0.4000	0.4192	
58 Trichloroethene	130	12.117	12.124	-0.007	94	74264	0.4000	0.4154	
59 Dibromomethane	93	12.214	12.216	-0.002	92	67675	0.4000	0.4161	
60 Dichlorobromomethane	83	12.349	12.354	-0.005	98	129879	0.4000	0.4050	
61 1,4-Dioxane	88	12.419	12.421	-0.002	96	19464	0.4000	0.4264	
62 Methyl methacrylate	41	12.446	12.453	-0.007	90	81302	0.4000	0.4121	
63 Methylcyclohexane	83	12.877	12.879	-0.002	94	116952	0.4000	0.4352	
64 4-Methyl-2-pentanone (MIBK)	43	13.314	13.321	-0.007	99	143236	0.4000	0.4635	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	96	96201	0.4000	0.4096	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	97	93722	0.4000	0.4194	
67 Toluene	91	14.139	14.144	-0.005	93	192974	0.4000	0.4231	
68 1,1,2-Trichloroethane	83	14.214	14.220	-0.006	99	60205	0.4000	0.4326	
69 2-Hexanone	58	14.630	14.631	-0.001	91	65409	0.4000	0.4779	
70 n-Octane	85	14.802	14.804	-0.002	96	73243	0.4000	0.4465	
71 Chlorodibromomethane	129	14.915	14.920	-0.005	98	110810	0.4000	0.3926	
72 Ethylene Dibromide	107	15.207	15.207	0.000	99	99001	0.4000	0.4102	
73 Tetrachloroethene	129	15.271	15.272	-0.001	94	72561	0.4000	0.4240	
74 2,3-Dimethylheptane	43	16.139	16.139	0.000	96	247510	0.4000	0.4440	
75 Chlorobenzene	112	16.139	16.142	-0.003	76	157211	0.4000	0.4434	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	272217	0.4000	0.4392	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	425545	0.8000	0.8976	
80 n-Nonane	57	16.975	16.977	-0.002	95	151720	0.4000	0.4499	
81 Bromoform	173	17.040	17.041	-0.001	91	93899	0.4000	0.3806	
82 Styrene	104	17.045	17.047	-0.002	98	134724	0.4000	0.4111	
83 o-Xylene	91	17.105	17.106	-0.001	97	219991	0.4000	0.4401	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	146757	0.4000	0.4371	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	45222	0.4000	0.4206	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	288484	0.4000	0.4329	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	77981	0.4000	0.4329	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	96	71471	0.4000	0.4343	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	288122	0.4000	0.4332	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	92	109634	0.4000	0.4236	
92 Alpha Methyl Styrene	118	18.641	18.644	-0.003	87	99545	0.4000	0.3809	
93 n-Decane	57	18.679	18.682	-0.003	89	189531	0.4000	0.4582	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	239278	0.4000	0.4144	
95 1,2,4-Trimethylbenzene	105	18.841	18.846	-0.005	97	236361	0.4000	0.4162	
96 sec-Butylbenzene	105	19.089	19.094	-0.005	98	346547	0.4000	0.4263	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	98	153722	0.4000	0.4143	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	206433	0.4000	0.4080	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	91	154004	0.4000	0.4047	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	272972	0.4000	0.4197	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	235583	0.4000	0.4588	
102 Butylcyclohexane	83	19.348	19.353	-0.005	91	211972	0.4000	0.4525	
103 2,3-Dihydroindene	117	19.547	19.550	-0.003	93	207350	0.4000	0.4040	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	92	146910	0.4000	0.3956	
105 n-Butylbenzene	91	19.671	19.673	-0.002	98	288957	0.4000	0.4367	
106 Indene	116	19.677	19.679	-0.002	90	178805	0.4000	0.4055	
107 Undecane	57	19.963	19.963	0.000	95	202684	0.4000	0.4829	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	87	65206	0.4000	0.4247	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	96	260569	0.4000	0.4402	
110 Dodecane	57	21.014	21.014	0.000	93	173512	0.4000	0.5235	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	93	119662	0.4000	0.4088	
112 Naphthalene	128	21.375	21.377	-0.002	99	294401	0.4000	0.4604	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	93	119102	0.4000	0.3800	
114 1,2,3-Trichlorobenzene	180	21.650	21.651	-0.001	95	116648	0.4000	0.4513	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	167946	0.4000	0.5387	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	209066	0.4000	0.5472	
A 122 C8 Range	1	14.792	(14.744-14.881)		0	716916	0.4000	0.4380	
S 123 1,2-Dichloroethene, Total	1				0		0.8000	0.7986	
S 124 Xylenes, Total	100				0		1.20	1.34	

Reagents:

40L5DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC05.D

Injection Date: 11-Jan-2019 19:40:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L5

Worklist Smp#: 13

Client ID:

Purge Vol: 500.000 mL

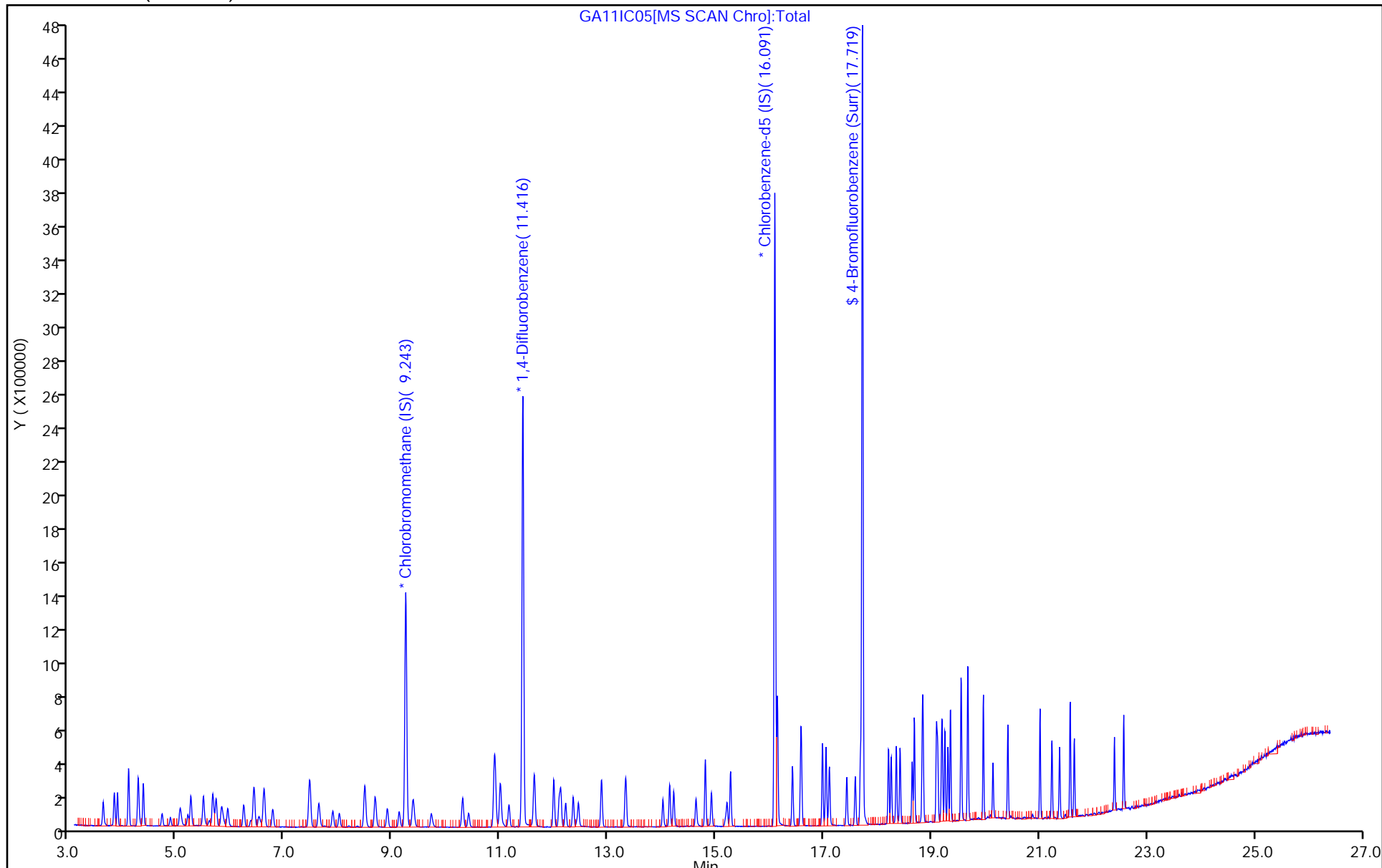
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC05.D

Injection Date: 11-Jan-2019 19:40:30

Instrument ID: MG

Lims ID: IC L5

Client ID:

Operator ID: 007126

ALS Bottle#: 3

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

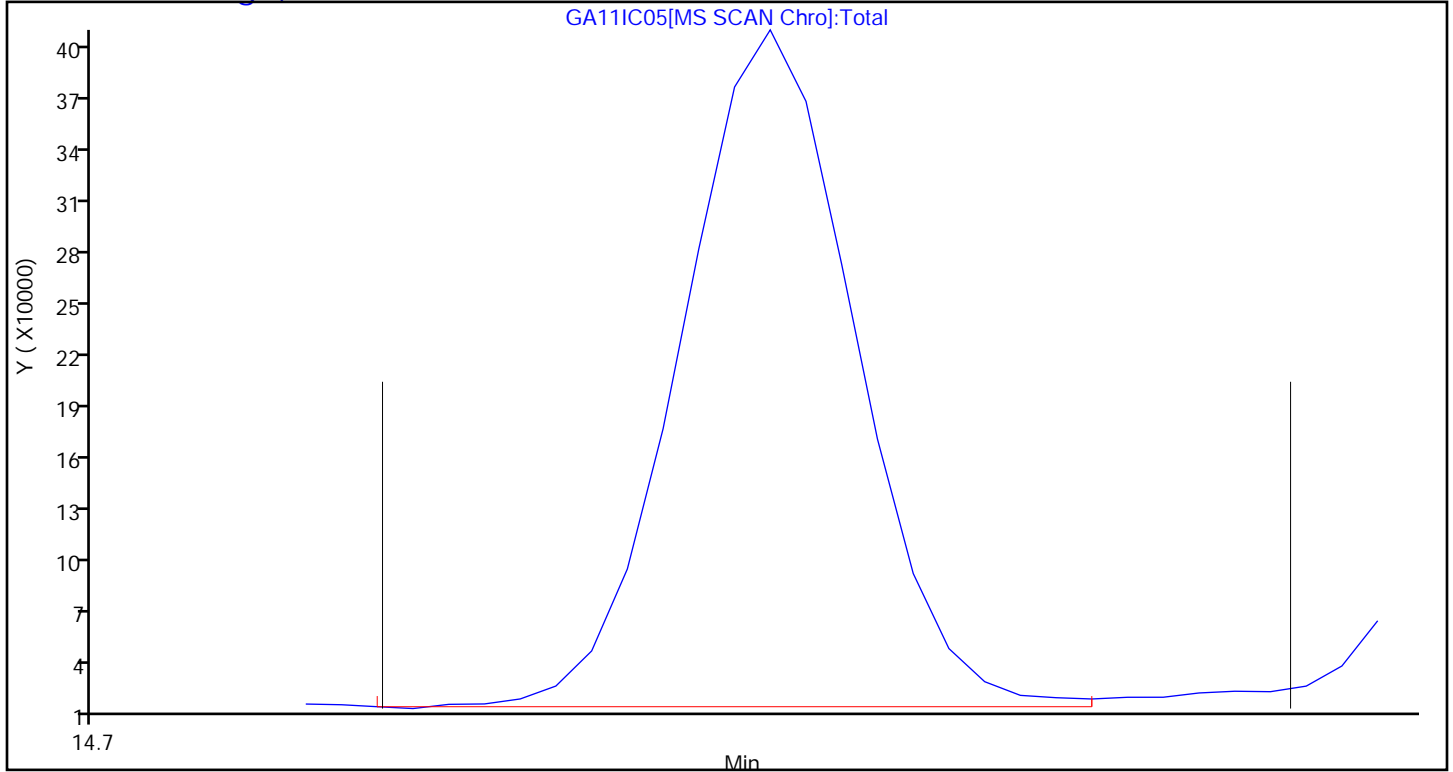
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 11-Jan-2019 20:23:30 ALS Bottle#: 4 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-014
 Misc. Info.: 201654
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:16 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa

Date: 14-Jan-2019 16:59:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.249	-0.001	97	422587	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2375134	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	91	2240571	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.718	-0.004	86	1821597	4.00	3.97	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	97	261958	1.00	0.9463	
7 Propene	41	3.840	3.838	0.002	98	149007	1.00	0.9640	
8 Dichlorodifluoromethane	85	3.894	3.894	0.000	100	428033	1.00	0.9568	
9 Chloromethane	52	4.088	4.091	-0.003	99	46960	1.00	0.9561	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	95	249678	1.00	0.9551	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	156203	1.00	0.9178	
11 Acetaldehyde	44	4.271	4.278	-0.007	93	351718	5.00	5.56	
13 Butane	43	4.373	4.373	0.000	86	277412	1.00	0.9681	
14 Butadiene	54	4.373	4.375	-0.002	67	127206	1.00	0.9671	
15 Bromomethane	94	4.719	4.722	-0.003	99	138169	1.00	0.9398	
16 Chloroethane	64	4.875	4.879	-0.004	88	77933	1.00	0.9504	
17 Ethanol	31	5.042	5.064	-0.022	98	296853	5.00	3.99	
18 Vinyl bromide	106	5.204	5.205	-0.001	98	130640	1.00	0.9586	
19 2-Methylbutane	43	5.252	5.256	-0.004	93	203924	1.00	0.99	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	422050	1.00	0.9621	
21 Acrolein	56	5.517	5.526	-0.009	95	39091	1.00	1.04	
22 Acetonitrile	40	5.592	5.603	-0.011	99	61491	1.00	1.04	
23 Acetone	58	5.651	5.666	-0.015	99	220327	3.00	3.47	
24 Pentane	72	5.722	5.725	-0.003	97	28000	1.00	1.00	
25 Isopropyl alcohol	45	5.808	5.840	-0.032	99	502108	3.00	2.96	
26 Ethyl ether	31	5.926	5.943	-0.017	90	194355	1.00	1.07	
27 1,1-Dichloroethene	96	6.239	6.242	-0.003	94	147877	1.00	0.99	
28 Acrylonitrile	53	6.363	6.375	-0.012	95	104178	1.00	1.01	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	94	322940	1.00	1.00	
30 2-Methyl-2-propanol	59	6.477	6.534	-0.058	95	237979	1.00	1.03	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	158748	1.00	0.9148	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	95	172933	1.00	0.9347	
33 Carbon disulfide	76	6.773	6.778	-0.005	100	454099	1.00	1.00	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	152597	1.00	1.02	
35 2-Methylpentane	43	7.469	7.468	0.001	96	425850	1.00	1.00	
36 Methyl tert-butyl ether	73	7.609	7.643	-0.034	97	436887	1.00	1.05	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	301902	1.00	0.9834	
38 Vinyl acetate	43	8.008	8.016	-0.008	100	421041	1.00	0.9879	
40 Hexane	56	8.477	8.480	-0.003	75	139897	1.00	1.02	
39 2-Butanone (MEK)	72	8.482	8.499	-0.017	94	71674	1.00	1.07	
41 Isopropyl ether	45	8.660	8.679	-0.019	96	564806	1.00	1.07	
42 cis-1,2-Dichloroethene	96	8.903	8.906	-0.003	98	153350	1.00	1.00	
43 Ethyl acetate	43	9.113	9.131	-0.018	98	367561	1.00	1.05	
44 Chloroform	83	9.259	9.261	-0.002	96	346742	1.00	0.9814	
45 Tert-butyl ethyl ether	59	9.361	9.389	-0.028	96	516698	1.00	1.06	
46 Tetrahydrofuran	42	9.696	9.725	-0.029	94	196936	1.00	1.05	
47 1,1,1-Trichloroethane	97	10.300	10.303	-0.003	95	377403	1.00	0.9867	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	98	232618	1.00	1.00	
49 Cyclohexane	69	10.882	10.888	-0.006	88	82609	1.00	1.06	
50 Benzene	78	10.893	10.893	0.000	97	444635	1.00	1.05	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	97	372817	1.00	1.06	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	89	118426	1.00	1.06	
51 n-Butanol	31	11.001	11.004	-0.003	70	59954	1.00	1.13	
54 Thiophene	84	11.162	11.164	-0.002	97	249671	1.00	1.01	
55 Isooctane	57	11.632	11.632	0.000	98	868592	1.00	1.04	
56 n-Heptane	71	11.993	11.995	-0.002	94	174693	1.00	1.02	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	86	170338	1.00	1.02	
58 Trichloroethene	130	12.122	12.124	-0.002	94	194217	1.00	1.00	
59 Dibromomethane	93	12.214	12.216	-0.002	94	172040	1.00	0.9778	
60 Dichlorobromomethane	83	12.354	12.354	0.000	98	346754	1.00	1.00	
61 1,4-Dioxane	88	12.414	12.421	-0.007	97	36737	1.00	0.7440	
62 Methyl methacrylate	41	12.446	12.453	-0.007	90	232640	1.00	1.09	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	305916	1.00	1.05	
64 4-Methyl-2-pentanone (MIBK)	43	13.309	13.321	-0.012	97	377024	1.00	1.13	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	98	265941	1.00	1.05	
66 trans-1,3-Dichloropropene	75	14.020	14.019	0.001	97	249246	1.00	1.03	
67 Toluene	91	14.139	14.144	-0.005	93	514273	1.00	1.04	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	98	160780	1.00	1.07	
69 2-Hexanone	58	14.619	14.631	-0.012	91	175250	1.00	1.18	
70 n-Octane	85	14.802	14.804	-0.002	96	186587	1.00	1.05	
71 Chlorodibromomethane	129	14.916	14.920	-0.004	98	313050	1.00	1.03	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	273278	1.00	1.05	
73 Tetrachloroethene	129	15.271	15.272	-0.001	94	191154	1.00	1.03	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	96	641178	1.00	1.06	
75 Chlorobenzene	112	16.140	16.142	-0.002	92	406499	1.00	1.06	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	719275	1.00	1.07	
79 m-Xylene & p-Xylene	91	16.576	16.582	-0.006	99	1128063	2.00	2.20	
80 n-Nonane	57	16.975	16.977	-0.002	94	396249	1.00	1.09	
81 Bromoform	173	17.040	17.041	-0.001	92	288479	1.00	1.08	
82 Styrene	104	17.046	17.047	-0.001	99	379313	1.00	1.07	
83 o-Xylene	91	17.105	17.106	-0.001	98	577831	1.00	1.07	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	388902	1.00	1.07	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	123267	1.00	1.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	770189	1.00	1.07	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	208028	1.00	1.07	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	190674	1.00	1.07	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	757218	1.00	1.05	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	91	298107	1.00	1.07	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	294414	1.00	1.04	
93 n-Decane	57	18.679	18.682	-0.003	89	491714	1.00	1.10	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	674397	1.00	1.08	
95 1,2,4-Trimethylbenzene	105	18.847	18.846	0.001	97	670745	1.00	1.09	
96 sec-Butylbenzene	105	19.095	19.094	0.001	98	963943	1.00	1.10	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	99	429682	1.00	1.07	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	595380	1.00	1.09	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	92	436204	1.00	1.06	
100 4-Isopropyltoluene	119	19.246	19.251	-0.005	96	779650	1.00	1.11	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	664909	1.00	1.20	
102 Butylcyclohexane	83	19.353	19.353	0.000	90	562871	1.00	1.11	
103 2,3-Dihydroindene	117	19.548	19.550	-0.002	93	602700	1.00	1.09	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	94	416753	1.00	1.04	
105 n-Butylbenzene	91	19.672	19.673	-0.001	98	814617	1.00	1.14	
106 Indene	116	19.677	19.679	-0.002	92	516302	1.00	1.08	
107 Undecane	57	19.963	19.963	0.000	95	527231	1.00	1.16	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	90	207960	1.00	1.25	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	96	733964	1.00	1.15	
110 Dodecane	57	21.014	21.014	0.000	94	446881	1.00	1.25	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	360521	1.00	1.14	
112 Naphthalene	128	21.376	21.377	-0.001	99	839854	1.00	1.22	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	95	361175	1.00	1.07	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	95	351962	1.00	1.26	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	514300	1.00	1.53	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	628512	1.00	1.52	
A 122 C8 Range	1	14.803	(14.744-14.902)		0	1842861	1.00	1.04	
S 123 1,2-Dichloroethene, Total	1				0		2.00	2.03	
S 124 Xylenes, Total	100				0		3.00	3.27	

Reagents:

40L6DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC06.D

Injection Date: 11-Jan-2019 20:23:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L6

Worklist Smp#: 14

Client ID:

Purge Vol: 500.000 mL

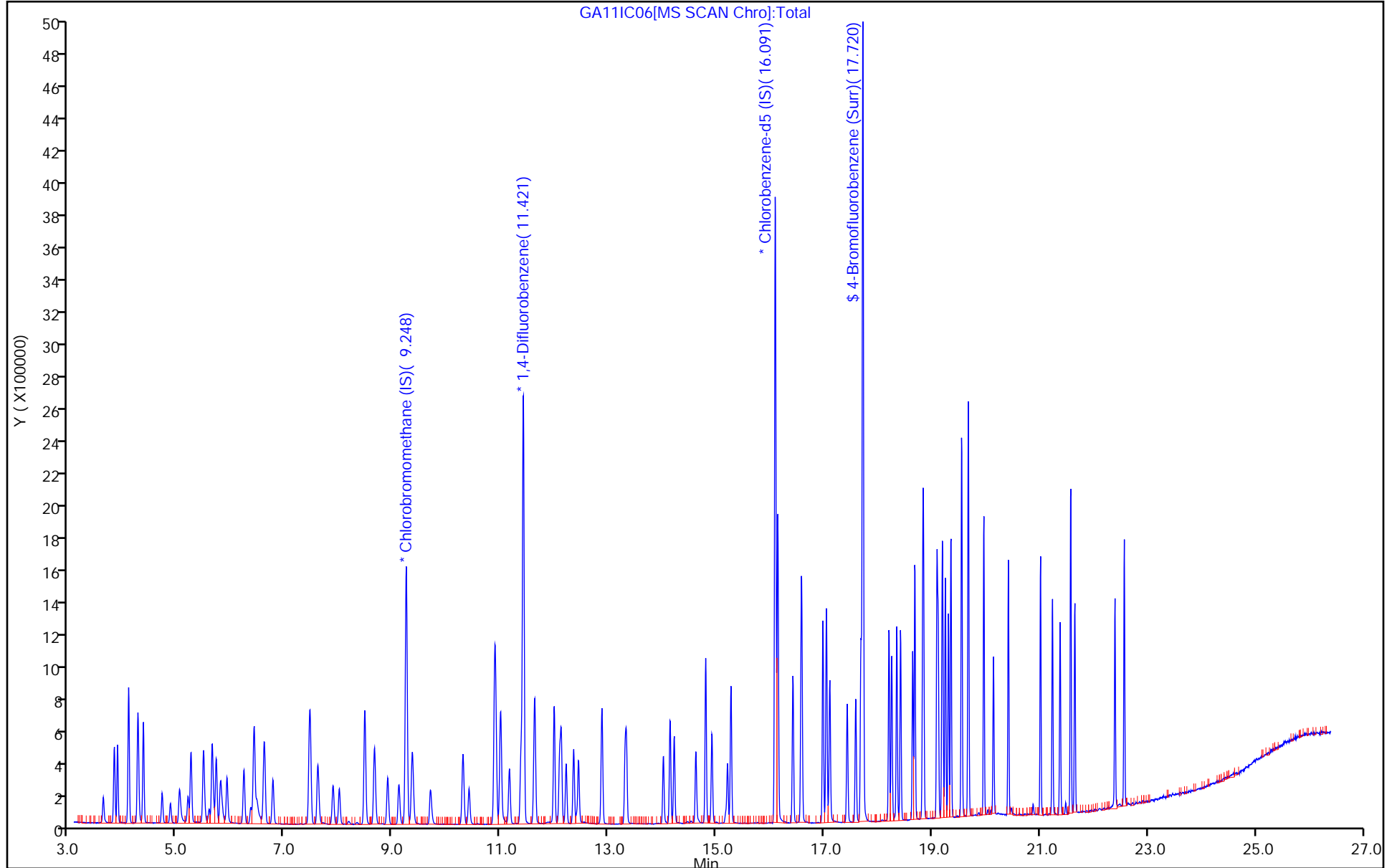
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC06.D

Injection Date: 11-Jan-2019 20:23:30

Instrument ID: MG

Lims ID: IC L6

Client ID:

Operator ID: 007126

ALS Bottle#: 4

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

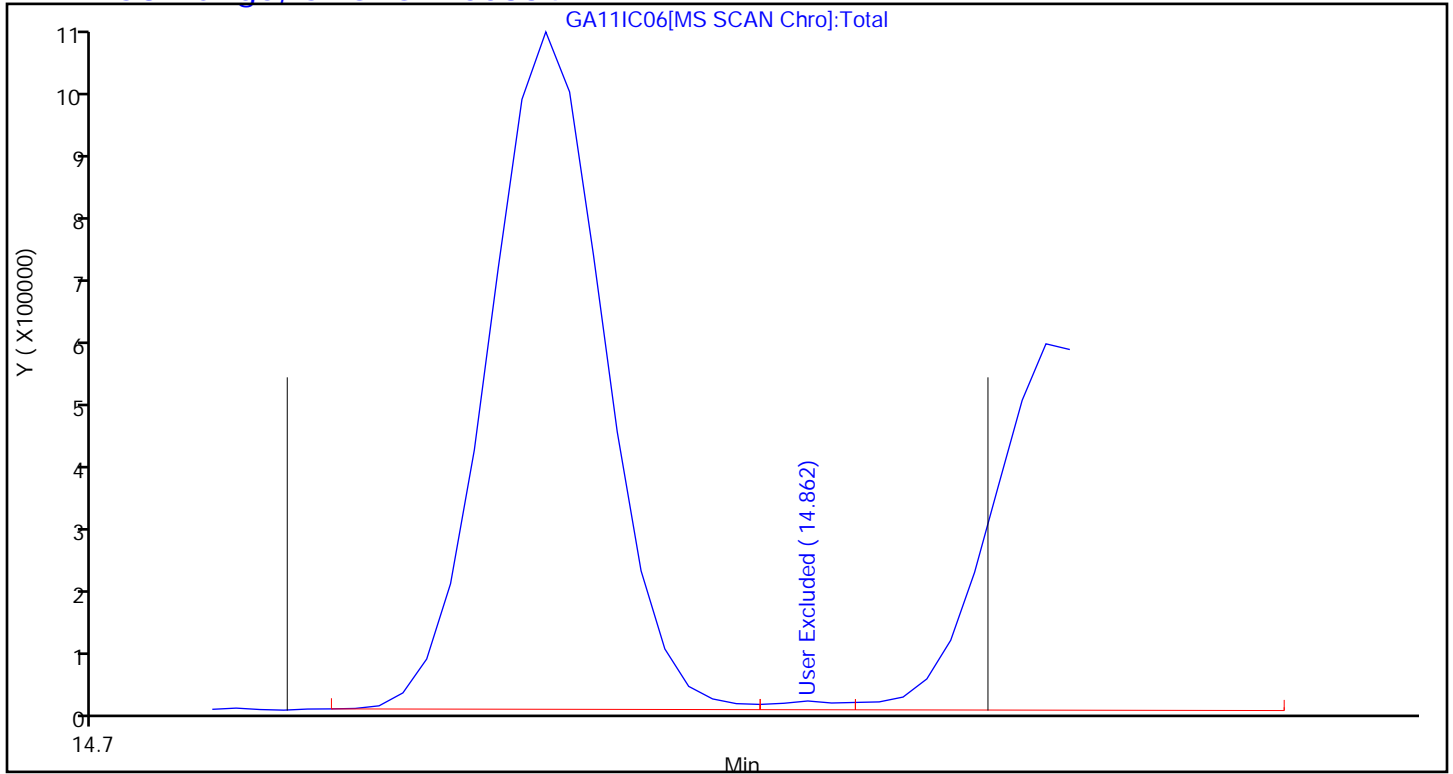
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 11-Jan-2019 21:07:30 ALS Bottle#: 5 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-015
 Misc. Info.: 201653
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:23 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 09:57:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.249	-0.001	97	437891	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2708081	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.096	16.094	0.002	90	2541912	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.720	17.718	0.002	87	1988683	4.00	3.82	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	97	518289	2.00	1.81	
7 Propene	41	3.834	3.838	-0.004	98	290483	2.00	1.81	
8 Dichlorodifluoromethane	85	3.894	3.894	0.000	100	858049	2.00	1.85	
9 Chloromethane	52	4.088	4.091	-0.003	98	92605	2.00	1.82	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	93	512846	2.00	1.89	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	313945	2.00	1.78	
11 Acetaldehyde	44	4.271	4.278	-0.007	93	622934	10.0	9.50	
13 Butane	43	4.373	4.373	0.000	86	542597	2.00	1.83	
14 Butadiene	54	4.373	4.375	-0.002	66	257490	2.00	1.89	
15 Bromomethane	94	4.719	4.722	-0.003	98	281926	2.00	1.85	
16 Chloroethane	64	4.875	4.879	-0.004	89	156493	2.00	1.84	
17 Ethanol	31	5.031	5.064	-0.033	97	808553	10.0	10.5	
18 Vinyl bromide	106	5.198	5.205	-0.007	99	265901	2.00	1.88	
19 2-Methylbutane	43	5.258	5.256	0.002	93	402287	2.00	1.89	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	848836	2.00	1.87	
21 Acrolein	56	5.517	5.526	-0.009	96	73107	2.00	1.87	
22 Acetonitrile	40	5.592	5.603	-0.011	98	127125	2.00	2.08	
23 Acetone	58	5.641	5.666	-0.025	99	398773	6.00	6.06	
24 Pentane	72	5.722	5.725	-0.003	98	56204	2.00	1.93	
25 Isopropyl alcohol	45	5.781	5.840	-0.059	96	1108992	6.00	6.32	
26 Ethyl ether	31	5.916	5.943	-0.027	90	387640	2.00	2.05	
27 1,1-Dichloroethene	96	6.239	6.242	-0.003	95	292909	2.00	1.90	
28 Acrylonitrile	53	6.363	6.375	-0.012	96	213988	2.00	2.01	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	94	644340	2.00	1.92	
30 2-Methyl-2-propanol	59	6.455	6.534	-0.079	95	483244	2.00	2.01	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	297663	2.00	1.66	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	96	352711	2.00	1.84	
33 Carbon disulfide	76	6.778	6.778	0.000	100	893782	2.00	1.91	
34 trans-1,2-Dichloroethene	96	7.452	7.450	0.002	96	304618	2.00	1.97	
35 2-Methylpentane	43	7.469	7.468	0.001	95	850675	2.00	1.92	
36 Methyl tert-butyl ether	73	7.603	7.643	-0.040	97	884523	2.00	2.05	
37 1,1-Dichloroethane	63	7.895	7.892	0.003	100	617142	2.00	1.94	
38 Vinyl acetate	43	8.008	8.016	-0.008	100	920626	2.00	2.08	
40 Hexane	56	8.477	8.480	-0.003	73	280600	2.00	1.97	
39 2-Butanone (MEK)	72	8.477	8.499	-0.022	83	137814	2.00	1.98	
41 Isopropyl ether	45	8.655	8.679	-0.024	97	1119661	2.00	2.05	
42 cis-1,2-Dichloroethene	96	8.908	8.906	0.002	97	314771	2.00	1.99	
43 Ethyl acetate	43	9.108	9.131	-0.023	98	727588	2.00	2.01	
44 Chloroform	83	9.264	9.261	0.003	97	705235	2.00	1.93	
45 Tert-butyl ethyl ether	59	9.351	9.389	-0.038	97	1026205	2.00	2.03	
46 Tetrahydrofuran	42	9.685	9.725	-0.040	94	392928	2.00	2.03	
47 1,1,1-Trichloroethane	97	10.305	10.303	0.002	96	774289	2.00	1.95	
48 1,2-Dichloroethane	62	10.418	10.416	0.002	98	490730	2.00	1.85	
49 Cyclohexane	69	10.887	10.888	-0.001	89	165738	2.00	1.86	
50 Benzene	78	10.893	10.893	0.000	97	906736	2.00	1.87	
52 Carbon tetrachloride	117	10.914	10.913	0.001	99	761689	2.00	1.90	
53 2,3-Dimethylpentane	71	11.001	11.000	0.001	90	240541	2.00	1.88	
51 n-Butanol	31	10.974	11.004	-0.030	74	111445	2.00	1.84	
54 Thiophene	84	11.168	11.164	0.004	97	526684	2.00	1.87	
55 Isooctane	57	11.632	11.632	0.000	98	1711484	2.00	1.80	
56 n-Heptane	71	11.993	11.995	-0.002	94	357021	2.00	1.83	
57 1,2-Dichloropropane	63	12.095	12.093	0.002	86	354326	2.00	1.86	
58 Trichloroethene	130	12.122	12.124	-0.002	95	411429	2.00	1.87	
59 Dibromomethane	93	12.219	12.216	0.003	95	363939	2.00	1.81	
60 Dichlorobromomethane	83	12.354	12.354	0.000	98	745629	2.00	1.88	
61 1,4-Dioxane	88	12.392	12.421	-0.029	98	120654	2.00	2.14	
62 Methyl methacrylate	41	12.440	12.453	-0.013	90	470252	2.00	1.93	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	613752	2.00	1.85	
64 4-Methyl-2-pentanone (MIBK)	43	13.303	13.321	-0.018	99	689509	2.00	1.81	
65 cis-1,3-Dichloropropene	75	13.336	13.336	0.000	98	558061	2.00	1.93	
66 trans-1,3-Dichloropropene	75	14.020	14.019	0.001	97	528240	2.00	1.93	
67 Toluene	91	14.144	14.144	0.000	93	1073072	2.00	1.92	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	99	322166	2.00	1.89	
69 2-Hexanone	58	14.614	14.631	-0.017	91	293749	2.00	1.75	
70 n-Octane	85	14.802	14.804	-0.002	96	377410	2.00	1.88	
71 Chlorodibromomethane	129	14.921	14.920	0.001	98	676985	2.00	1.96	
72 Ethylene Dibromide	107	15.207	15.207	0.000	99	576579	2.00	1.95	
73 Tetrachloroethene	129	15.271	15.272	-0.001	95	394783	2.00	1.88	
74 2,3-Dimethylheptane	43	16.140	16.139	0.001	96	1265823	2.00	1.85	
75 Chlorobenzene	112	16.145	16.142	0.003	94	832085	2.00	1.91	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	1456098	2.00	1.92	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	2267354	4.00	3.90	
80 n-Nonane	57	16.975	16.977	-0.002	94	785625	2.00	1.90	
81 Bromoform	173	17.040	17.041	-0.001	92	647774	2.00	2.14	
82 Styrene	104	17.046	17.047	-0.001	99	797396	2.00	1.98	
83 o-Xylene	91	17.105	17.106	-0.001	98	1183498	2.00	1.93	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	791220	2.00	1.92	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	249431	2.00	1.89	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	1569505	2.00	1.92	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	425975	2.00	1.93	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	376201	2.00	1.86	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	1579790	2.00	1.94	
90 1,3,5-Trimethylbenzene	120	18.421	18.419	0.002	92	615118	2.00	1.94	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	619837	2.00	1.93	
93 n-Decane	57	18.685	18.682	0.003	90	955171	2.00	1.88	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	1354211	2.00	1.91	
95 1,2,4-Trimethylbenzene	105	18.847	18.846	0.001	97	1320347	2.00	1.90	
96 sec-Butylbenzene	105	19.095	19.094	0.001	98	1895656	2.00	1.90	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	99	870050	2.00	1.91	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	1199239	2.00	1.93	
99 1,4-Dichlorobenzene	146	19.202	19.200	0.002	93	882709	2.00	1.89	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	97	1524715	2.00	1.91	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	1328651	2.00	2.11	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	1091130	2.00	1.90	
103 2,3-Dihydroindene	117	19.553	19.550	0.003	94	1193709	2.00	1.90	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	95	841536	2.00	1.85	
105 n-Butylbenzene	91	19.672	19.673	-0.001	98	1547638	2.00	1.91	
106 Indene	116	19.677	19.679	-0.002	92	1040605	2.00	1.92	
107 Undecane	57	19.963	19.963	0.000	96	970873	2.00	1.89	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	92	429617	2.00	2.28	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	97	1413004	2.00	1.95	
110 Dodecane	57	21.014	21.014	0.000	94	722978	2.00	1.78	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	693552	2.00	1.93	
112 Naphthalene	128	21.376	21.377	-0.001	99	1530726	2.00	1.95	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	96	732431	2.00	1.91	
114 1,2,3-Trichlorobenzene	180	21.651	21.651	0.000	95	629244	2.00	1.99	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	671591	2.00	1.76	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	789694	2.00	1.69	
A 122 C8 Range	1	14.813	(14.749-14.886)		0	3737320	2.00	1.86	
S 123 1,2-Dichloroethene, Total	1				0		4.00	3.96	
S 124 Xylenes, Total	100				0		6.00	5.83	

Reagents:

40L7DQP_00008

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC07.D

Injection Date: 11-Jan-2019 21:07:30

Instrument ID: MG

Operator ID: 007126

Lims ID: ICIS L7

Worklist Smp#: 15

Client ID:

Purge Vol: 500.000 mL

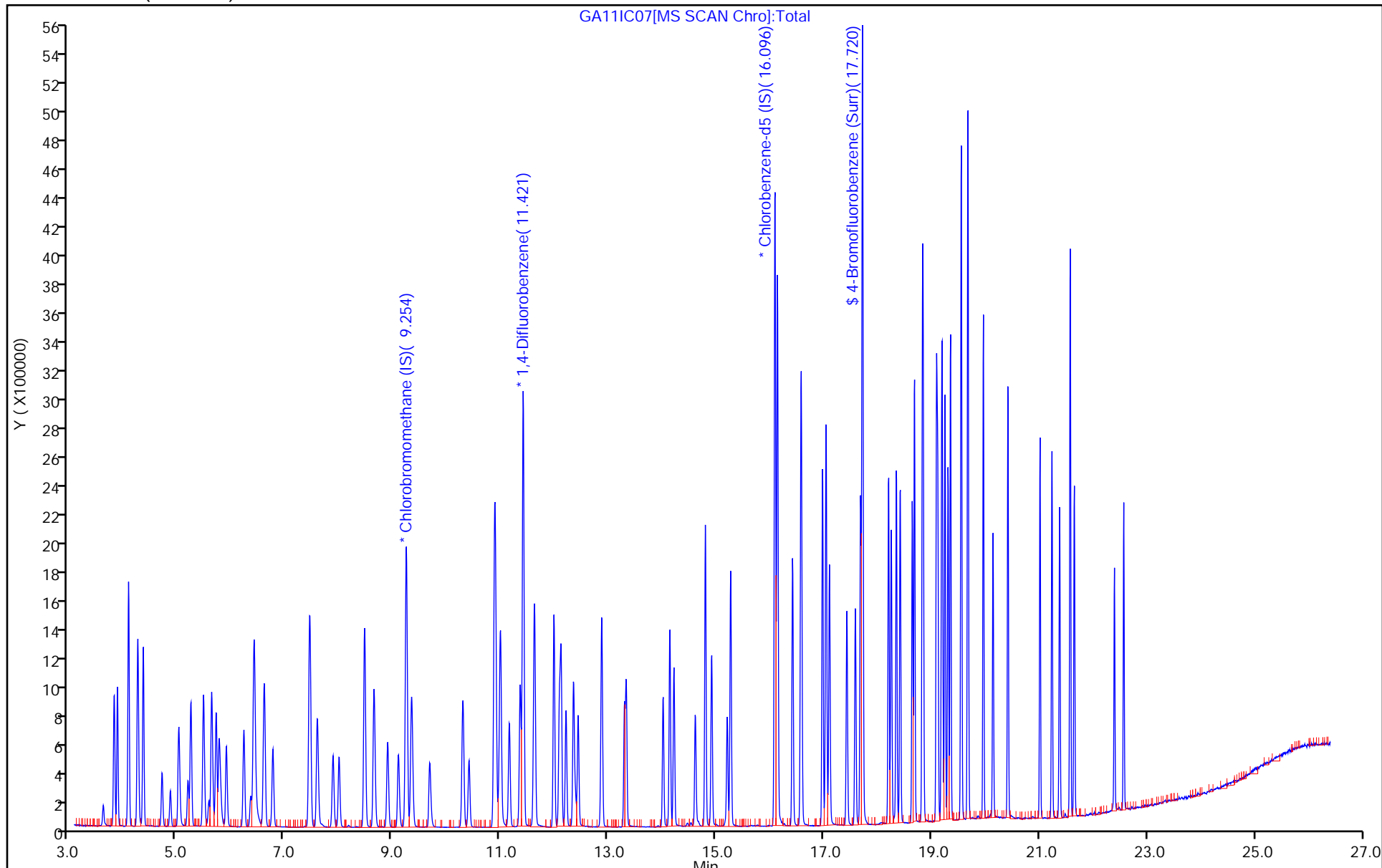
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC07.D

Injection Date: 11-Jan-2019 21:07:30

Instrument ID: MG

Lims ID: ICIS L7

Client ID:

Operator ID: 007126

ALS Bottle#: 5

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

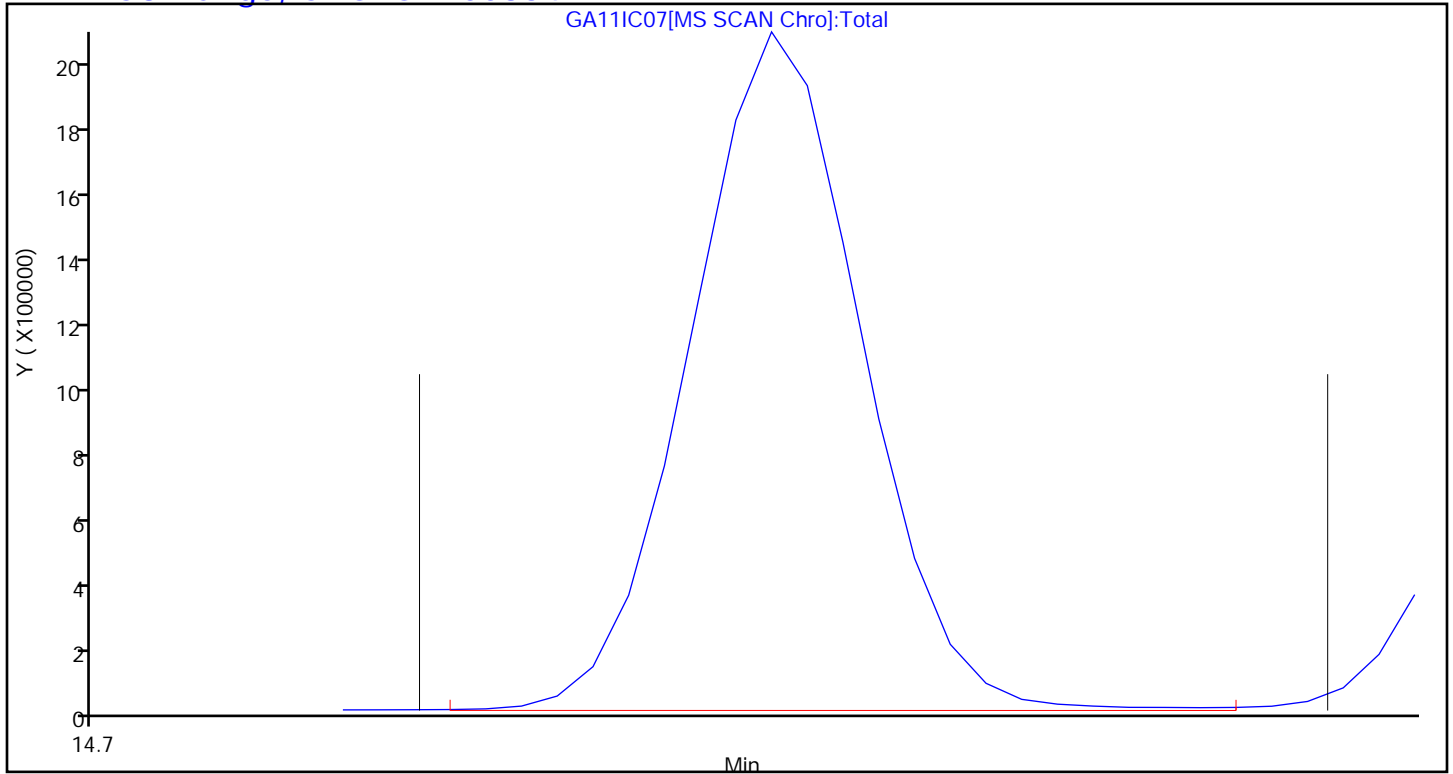
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 11-Jan-2019 21:51:30 ALS Bottle#: 14 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-016
 Misc. Info.: 201651
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:30 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: tajh

Date: 14-Jan-2019 13:40:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.249	-0.001	98	450955	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2770300	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.096	16.094	0.002	90	2608249	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.718	0.001	87	2036360	4.00	3.81	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	1076565	4.00	3.64	
7 Propene	41	3.834	3.838	-0.004	98	602545	4.00	3.65	
8 Dichlorodifluoromethane	85	3.888	3.894	-0.006	100	1783528	4.00	3.74	
9 Chloromethane	52	4.087	4.091	-0.004	98	191831	4.00	3.66	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	96	1074243	4.00	3.85	
12 Vinyl chloride	62	4.276	4.277	-0.001	99	657162	4.00	3.62	
11 Acetaldehyde	44	4.265	4.278	-0.013	92	1089331	20.0	16.1	
13 Butane	43	4.368	4.373	-0.005	86	1129098	4.00	3.69	
14 Butadiene	54	4.368	4.375	-0.007	67	544660	4.00	3.88	
15 Bromomethane	94	4.718	4.722	-0.004	98	593804	4.00	3.78	
16 Chloroethane	64	4.875	4.879	-0.004	89	327330	4.00	3.74	
17 Ethanol	31	5.026	5.064	-0.038	98	1261075	20.0	15.9	
18 Vinyl bromide	106	5.204	5.205	-0.001	99	568659	4.00	3.91	
19 2-Methylbutane	43	5.252	5.256	-0.004	93	832948	4.00	3.79	
20 Trichlorofluoromethane	101	5.489	5.492	-0.003	99	1773236	4.00	3.79	
21 Acrolein	56	5.511	5.526	-0.015	96	147180	4.00	3.65	
22 Acetonitrile	40	5.587	5.603	-0.016	98	226910	4.00	3.61	
23 Acetone	58	5.630	5.666	-0.036	99	665956	12.0	9.82	
24 Pentane	72	5.721	5.725	-0.004	97	114279	4.00	3.82	
25 Isopropyl alcohol	45	5.770	5.840	-0.070	93	1652685	12.0	9.14	
26 Ethyl ether	31	5.905	5.943	-0.038	91	655797	4.00	3.37	
27 1,1-Dichloroethene	96	6.239	6.242	-0.003	95	633007	4.00	3.98	
28 Acrylonitrile	53	6.363	6.375	-0.012	94	390689	4.00	3.56	
29 1,1,2-Trichloro-1,2,2-trif	101	6.422	6.428	-0.006	94	1332511	4.00	3.86	
30 2-Methyl-2-propanol	59	6.433	6.534	-0.101	95	773470	4.00	3.12	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	587875	4.00	3.17	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	96	715500	4.00	3.62	
33 Carbon disulfide	76	6.778	6.778	0.000	100	1857677	4.00	3.85	
34 trans-1,2-Dichloroethene	96	7.452	7.450	0.002	97	640390	4.00	4.02	
35 2-Methylpentane	43	7.463	7.468	-0.005	95	1727313	4.00	3.79	
36 Methyl tert-butyl ether	73	7.593	7.643	-0.050	97	1553256	4.00	3.50	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	1197700	4.00	3.66	
38 Vinyl acetate	43	8.002	8.016	-0.014	100	1610829	4.00	3.54	
40 Hexane	56	8.477	8.480	-0.003	77	564091	4.00	3.84	
39 2-Butanone (MEK)	72	8.471	8.499	-0.028	95	242448	4.00	3.39	
41 Isopropyl ether	45	8.649	8.679	-0.030	97	1969552	4.00	3.50	
42 cis-1,2-Dichloroethene	96	8.908	8.906	0.002	97	630074	4.00	3.86	
43 Ethyl acetate	43	9.102	9.131	-0.029	98	1268094	4.00	3.40	
44 Chloroform	83	9.264	9.261	0.003	97	1383523	4.00	3.67	
45 Tert-butyl ethyl ether	59	9.345	9.389	-0.044	96	1800930	4.00	3.47	
46 Tetrahydrofuran	42	9.679	9.725	-0.046	94	687510	4.00	3.44	
47 1,1,1-Trichloroethane	97	10.305	10.303	0.002	96	1509577	4.00	3.70	
48 1,2-Dichloroethane	62	10.418	10.416	0.002	98	952640	4.00	3.52	
49 Cyclohexane	69	10.887	10.888	-0.001	94	330488	4.00	3.63	
50 Benzene	78	10.893	10.893	0.000	98	1771104	4.00	3.57	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	99	1552321	4.00	3.78	
53 2,3-Dimethylpentane	71	11.000	11.000	0.000	91	465638	4.00	3.56	
51 n-Butanol	31	10.936	11.004	-0.068	68	184294	4.00	2.97	
54 Thiophene	84	11.162	11.164	-0.002	97	1043094	4.00	3.62	
55 Isooctane	57	11.626	11.632	-0.006	97	3264805	4.00	3.36	
56 n-Heptane	71	11.993	11.995	-0.002	94	694408	4.00	3.49	
57 1,2-Dichloropropane	63	12.095	12.093	0.002	86	653599	4.00	3.36	
58 Trichloroethene	130	12.128	12.124	0.004	96	832705	4.00	3.69	
59 Dibromomethane	93	12.214	12.216	-0.002	96	729198	4.00	3.55	
60 Dichlorobromomethane	83	12.354	12.354	0.000	99	1472126	4.00	3.64	
61 1,4-Dioxane	88	12.386	12.421	-0.035	94	174155	4.00	3.02	
62 Methyl methacrylate	41	12.440	12.453	-0.013	90	823262	4.00	3.31	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	1192238	4.00	3.52	
64 4-Methyl-2-pentanone (MIBK)	43	13.292	13.321	-0.029	99	916498	4.00	2.35	
65 cis-1,3-Dichloropropene	75	13.335	13.336	-0.001	98	1060593	4.00	3.58	
66 trans-1,3-Dichloropropene	75	14.020	14.019	0.001	97	983862	4.00	3.50	
67 Toluene	91	14.144	14.144	0.000	94	1966647	4.00	3.43	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	99	599648	4.00	3.42	
69 2-Hexanone	58	14.608	14.631	-0.023	92	417616	4.00	2.43	
70 n-Octane	85	14.802	14.804	-0.002	95	732239	4.00	3.55	
71 Chlorodibromomethane	129	14.921	14.920	0.001	98	1357226	4.00	3.82	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	1102407	4.00	3.63	
73 Tetrachloroethene	129	15.271	15.272	-0.001	96	776709	4.00	3.61	
74 2,3-Dimethylheptane	43	16.139	16.139	0.000	96	2368408	4.00	3.38	
75 Chlorobenzene	112	16.145	16.142	0.003	93	1543553	4.00	3.46	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	2578598	4.00	3.31	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	3963090	8.00	6.64	
80 n-Nonane	57	16.975	16.977	-0.002	94	1455379	4.00	3.43	
81 Bromoform	173	17.040	17.041	-0.001	94	1258109	4.00	4.05	
82 Styrene	104	17.045	17.047	-0.002	99	1440043	4.00	3.49	
83 o-Xylene	91	17.105	17.106	-0.001	98	2069274	4.00	3.29	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	100	1406346	4.00	3.33	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	448013	4.00	3.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.682	17.684	-0.002	96	2749199	4.00	3.28	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	750579	4.00	3.31	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	679618	4.00	3.28	
89 4-Ethyltoluene	105	18.350	18.347	0.003	98	2762937	4.00	3.30	
90 1,3,5-Trimethylbenzene	120	18.420	18.419	0.001	92	1079746	4.00	3.32	
92 Alpha Methyl Styrene	118	18.647	18.644	0.003	87	1139797	4.00	3.47	
93 n-Decane	57	18.685	18.682	0.003	90	1652838	4.00	3.18	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	90	2326877	4.00	3.20	
95 1,2,4-Trimethylbenzene	105	18.846	18.846	0.000	97	2282446	4.00	3.19	
96 sec-Butylbenzene	105	19.094	19.094	0.000	98	3335709	4.00	3.26	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	99	1597433	4.00	3.42	
98 Benzyl chloride	91	19.186	19.188	-0.002	97	2207883	4.00	3.47	
99 1,4-Dichlorobenzene	146	19.202	19.200	0.002	94	1608243	4.00	3.36	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	2715440	4.00	3.32	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	2356435	4.00	3.65	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	1948051	4.00	3.31	
103 2,3-Dihydroindene	117	19.553	19.550	0.003	94	2118687	4.00	3.28	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	95	1533100	4.00	3.28	
105 n-Butylbenzene	91	19.671	19.673	-0.002	98	2715683	4.00	3.26	
106 Indene	116	19.677	19.679	-0.002	92	1879451	4.00	3.39	
107 Undecane	57	19.963	19.963	0.000	95	1679521	4.00	3.18	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	94	745616	4.00	3.86	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	97	2207453	4.00	2.96	
110 Dodecane	57	21.014	21.014	0.000	94	1006221	4.00	2.41	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	1301208	4.00	3.53	
112 Naphthalene	128	21.375	21.377	-0.002	99	2517870	4.00	3.13	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	96	1398696	4.00	3.55	
114 1,2,3-Trichlorobenzene	180	21.650	21.651	-0.001	95	1082671	4.00	3.33	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	1000580	4.00	2.55	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	1141032	4.00	2.37	
A 122 C8 Range	1	14.813	(14.749-14.875)		0	7125919	4.00	3.46	
S 123 1,2-Dichloroethene, Total	1				0		8.00	7.88	
S 124 Xylenes, Total	100				0		12.0	9.93	

Reagents:

40L9DQP_00008

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D

Injection Date: 11-Jan-2019 21:51:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L8

Worklist Smp#: 16

Client ID:

Purge Vol: 500.000 mL

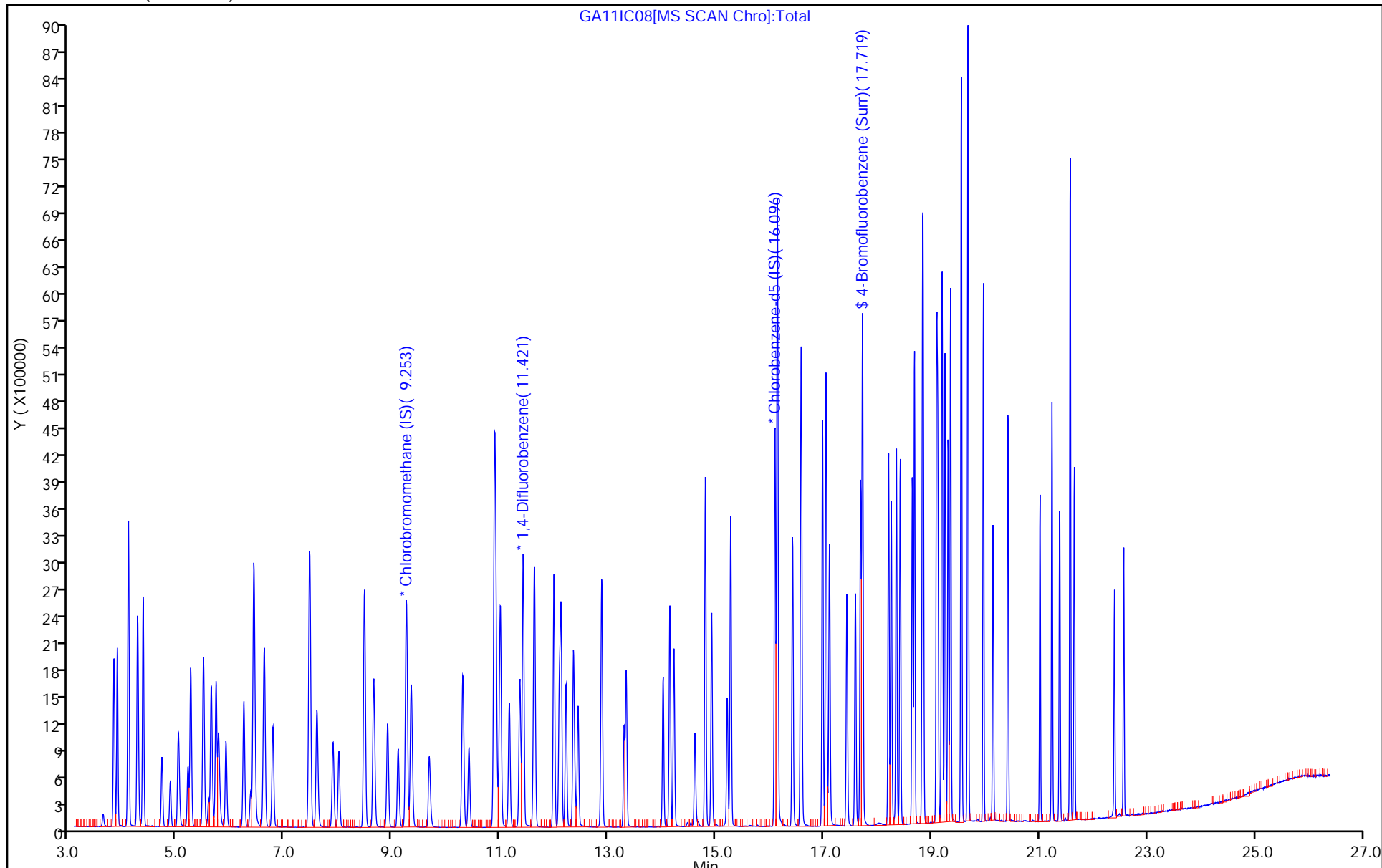
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D

Injection Date: 11-Jan-2019 21:51:30

Instrument ID: MG

Lims ID: IC L8

Client ID:

Operator ID: 007126

ALS Bottle#: 14

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

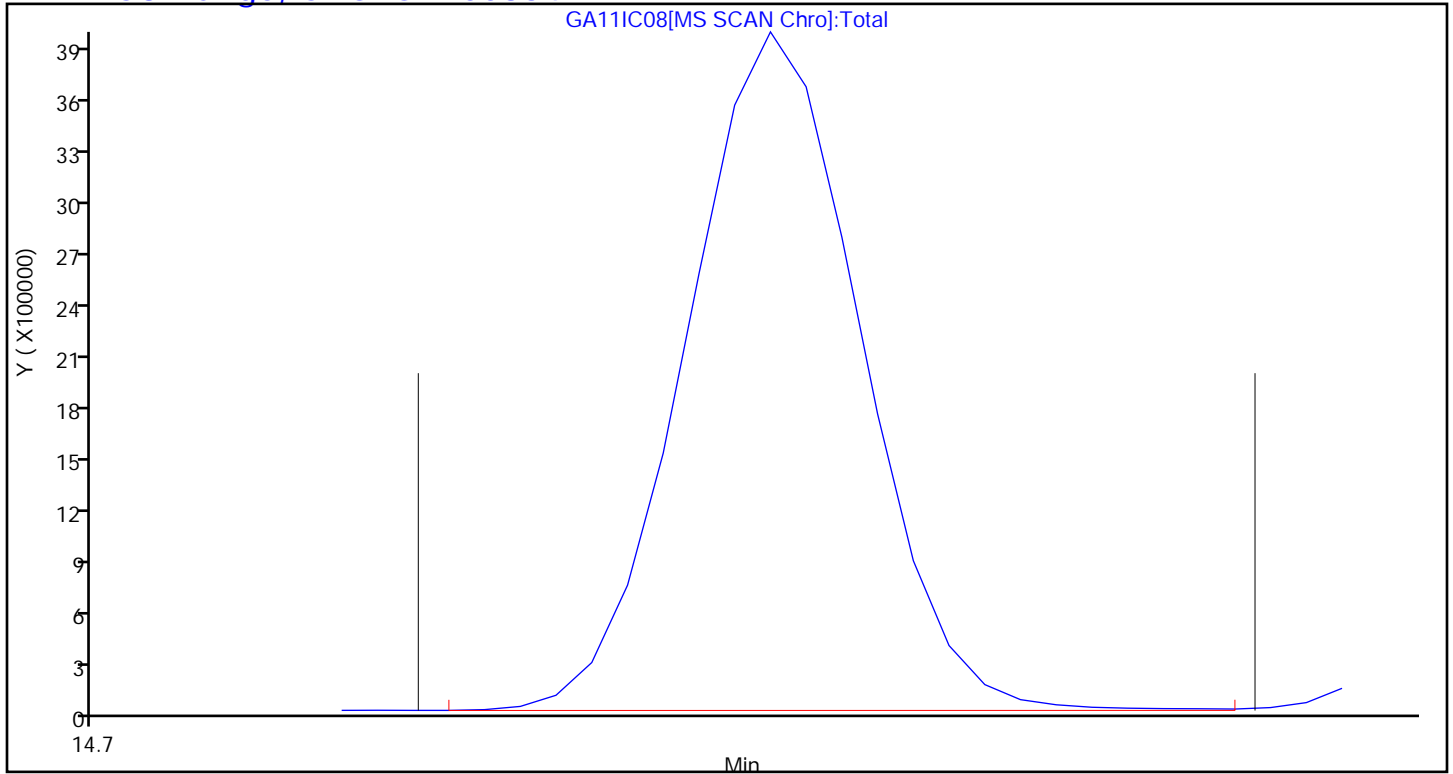
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.6032	2.5523	2.4630	Ave		2.3734			6.7		30.0				
	2.3273	2.2136	2.2367	2.4103	2.1808												
Propene	+++++	+++++	+++++	0.8419	0.7507	Ave		0.7296			8.2		30.0				
	0.7221	0.6895	0.6844	0.7524	0.6660												
Dichlorodifluoromethane	+++++	+++++	4.5412	4.2461	5.3003	Ave		4.3524			11.7		30.0				
	4.1510	3.9686	4.0428	4.8211	3.7479												
Chloromethane	+++++	+++++	0.4314	0.2960	0.3371	Ave		0.3061			18.1		30.0				
	0.2871	0.2733	0.2689	0.2912	0.2638												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.8991	3.2433	3.1843	3.5538	Ave		3.2404			10.6		30.0				
	3.0989	3.0537	3.1101	3.3433	2.6767												
Vinyl chloride	1.3396	1.3354	1.1215	1.1058	1.0442	Ave		1.0731			14.4		30.0				
	0.9887	0.9559	0.9544	0.9748	0.9105												
1,3-Butadiene	+++++	+++++	+++++	0.7017	0.6571	Ave		0.6506			4.0		30.0				
	0.6523	0.6352	0.6377	0.6500	0.6202												
Butane	+++++	+++++	1.3166	1.1752	1.2095	Ave		1.1321			8.5		30.0				
	1.1091	1.0560	1.0795	1.0850	1.0260												
Bromomethane	+++++	+++++	1.4266	1.2696	1.2705	Ave		1.2354			7.2		30.0				
	1.2054	1.1811	1.1809	1.2035	1.1456												
Chloroethane	+++++	+++++	0.6023	0.5518	0.4948	Ave		0.4970			10.7		30.0				
	0.4893	0.4606	0.4673	0.4597	0.4499												
Ethanol	+++++	+++++	+++++	0.3286	0.3153	Ave		0.2997			6.1		30.0				
	0.2949	0.2999	0.2981	0.2885	0.2724												
Vinyl bromide	+++++	+++++	1.4513	1.3532	1.3493	Ave		1.3020			5.9		30.0				
	1.2738	1.2507	1.2699	1.2460	1.2216												
2-Methylbutane	+++++	+++++	0.8639	0.8536	0.8359	Ave		0.7999			5.7		30.0				
	0.7979	0.7734	0.7606	0.7713	0.7425												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Acrolein	++++ 0.2149	++++ 0.2505	++++ 0.2493	0.3397 0.2426	0.2316 0.2411	Ave		0.2528			15.9		30.0				
Trichlorofluoromethane	6.6790 5.8128	6.2714 5.6498	6.2323 5.6579	6.0249 5.5584	5.9679 5.2697	Ave		5.9124			6.9		30.0				
Acetonitrile	++++ 0.2348	++++ 0.2373	++++ 0.2818	0.2630 0.2803	0.2428 0.2703	Ave		0.2586			7.8		30.0				
Acetone	++++ 0.4175	++++ 0.3860	++++ 0.3784	0.5760 0.3627	0.4291 0.3557	Ave		0.4151			18.3		30.0				
Pentane	++++ 0.1987	++++ 0.1907	++++ 0.1944	0.2412 0.1914	0.2034 0.1879	Ave		0.2011			9.2		30.0				
Isopropyl alcohol	++++ 1.1215	++++ 1.1376	++++ 1.1294	1.2584 1.0760	1.1488 1.0492	Ave		1.1316			5.9		30.0				
Ethyl ether	++++ 0.6540	++++ 0.6244	++++ 0.6327	0.7089 0.6995	0.6970 0.6464	Ave		0.6661			5.2		30.0				
1,1-Dichloroethene	1.6400 1.3612	1.4528 1.3523	1.4077 1.3829	1.3842 1.3970	1.3751 1.3233	Ave		1.4076			6.3		30.0				
Acrylonitrile	++++ 0.6195	++++ 0.6124	++++ 0.6202	++++ 0.6572	0.6255 0.6313	Ave		0.6277			2.5		30.0				
tert-Butyl alcohol	++++ 2.6737	++++ 2.7383	++++ 2.6973	2.6805 2.6655	2.7132 2.5593	Ave		2.6773			2.0		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.5282	3.6010 3.4530	3.7397 3.4392	3.5306 3.4042	3.5510 3.1580	Ave		3.4894			4.6		30.0				
Methylene Chloride	++++ 1.2853	++++ 1.1917	++++ 1.1531	2.0228 1.1482	1.5003 1.0647	Ave		1.3380			24.9		30.0				
3-Chloropropene	++++ 1.3439	++++ 1.2944	1.1777 1.2837	1.4302 1.3374	1.3141 1.2919	Ave		1.3092			5.4		30.0				
Carbon disulfide	++++ 3.4096	++++ 3.3395	3.3655 3.3248	3.2471 3.4285	3.3320 3.2774	Ave		3.3406			1.8		30.0				
trans-1,2-Dichloroethene	1.5926 1.4009	1.5829 1.3797	1.4276 1.4044	1.3885 1.4254	1.3834 1.3721	Ave		1.4358			5.7		30.0				
2-Methylpentane	++++ 1.8951	++++ 1.8425	++++ 1.8466	1.9630 1.9346	1.9304 1.8132	Ave		1.8940			2.8		30.0				
Methyl tert-butyl ether	++++ 4.5873	++++ 4.5288	4.7495 4.5802	4.4631 4.6026	4.5963 4.4400	Ave		4.5685			2.1		30.0				
1,1-Dichloroethane	2.6815 2.3300	2.6739 2.2911	2.4729 2.3182	2.3130 2.3408	2.3587 2.2447	Ave		2.4025			6.5		30.0				
Vinyl acetate	++++ 2.2364	++++ 2.3368	++++ 2.4359	2.0297 2.5381	2.1537 2.5129	Ave		2.3205			8.2		30.0				
2-Butanone (MEK)	++++ 0.5380	++++ 0.5309	++++ 0.5519	0.5759 0.5616	0.5098 0.5445	Ave		0.5446			3.9		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	++++ 0.8187	++++ 0.8108	0.9023 0.8291	0.8416 0.8382	0.8376 0.8031	Ave		0.8352			3.6		30.0				
cis-1,2-Dichloroethene	1.6200 1.4112	1.4958 1.4310	1.4342 1.4304	1.4272 1.4418	1.3943 1.3928	Ave		1.4479			4.6		30.0				
Ethyl acetate	++++ 2.0207	++++ 2.0336	1.8097 2.1099	1.9184 2.1701	1.9214 2.1110	Ave		2.0119			6.0		30.0				
Chloroform	4.2334 3.7394	4.0960 3.6835	3.8341 3.7449	3.7602 3.7523	3.7763 3.5872	Ave		3.8207			5.1		30.0				
Tetrahydrofuran	++++ 0.8846	++++ 0.8714	++++ 0.8870	0.8784 0.9150	0.8832 0.8836	Ave		0.8862			1.5		30.0				
1,1,1-Trichloroethane	4.9709 4.7770	4.9939 4.7670	5.0122 4.8476	4.7467 4.8764	4.7402 4.7023	Ave		4.8434			2.4		30.0				
1,2-Dichloroethane	0.5380 0.5057	0.5327 0.4936	0.5166 0.4997	0.4858 0.5068	0.4926 0.4915	Ave		0.5063			3.5		30.0				
Benzene	0.7533 0.6321	0.7075 0.6240	0.7019 0.6266	0.6312 0.6238	0.6214 0.5956	Ave		0.6517			7.8		30.0				
Cyclohexane	++++ 0.1013	++++ 0.0986	++++ 0.1001	0.0959 0.0971	0.0939 0.0911	Ave		0.0968			3.7		30.0				
1-Butanol	++++ 0.0448	++++ 0.0477	++++ 0.0492	++++ 0.0516	0.0330 0.0509	Ave		0.0462			14.9		30.0				
Carbon tetrachloride	0.9231 0.9489	0.9429 0.9372	0.7537 0.9263	0.9038 0.9692	0.9350 0.9273	Ave		0.9167			6.5		30.0				
2,3-Dimethylpentane	++++ 0.1378	++++ 0.1390	++++ 0.1212	0.1277 0.1410	0.1355 0.1365	Ave		0.1349			5.2		30.0				
Thiophene	++++ 0.3778	++++ 0.3718	0.3563 0.3816	0.3607 0.3893	0.3698 0.3754	Ave		0.3728			2.9		30.0				
2,2,4-Trimethylpentane	++++ 0.8423	++++ 0.8248	++++ 0.8652	0.8182 0.8535	0.8128 0.8176	Ave		0.8342			2.3		30.0				
1,2-Dichloropropane	++++ 0.2041	++++ 0.2015	0.2130 0.2054	0.1991 0.2089	0.2024 0.2020	Ave		0.2045			2.2		30.0				
Heptane	++++ 0.2142	++++ 0.2122	++++ 0.1976	0.1979 0.2154	0.2071 0.2066	Ave		0.2083			3.5		30.0				
Trichloroethene	0.4192 0.3857	0.3851 0.3869	0.4007 0.4221	0.3771 0.3913	0.3880 0.3727	Ave		0.3929			4.2		30.0				
Dibromomethane	++++ 0.3459	++++ 0.3374	++++ 0.3725	0.3565 0.3576	0.3464 0.3447	Ave		0.3514			3.1		30.0				
Bromodichloromethane	++++ 0.6680	++++ 0.6726	0.5971 0.7005	0.5918 0.7174	0.6239 0.6980	Ave		0.6587			7.4		30.0				
1,4-Dioxane	++++ 0.0965	++++ 0.1030	++++ 0.1037	0.0992 0.1007	0.0973 0.0954	Ave		0.0994			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.2243	++++ 0.2331	0.2139 0.2468	0.1766 0.2628	0.2044 0.2582	Ave		0.2275			12.8		30.0				
Methylcyclohexane	++++ 0.4067	++++ 0.4050	0.3972 0.4110	0.3842 0.4158	0.3938 0.4053	Ave		0.4024			2.5		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.3577	++++ 0.3715	++++ 0.3933	0.2895 0.4035	0.3277 0.3952	Ave		0.3626			11.5		30.0				
cis-1,3-Dichloropropene	++++ 0.3940	0.3635 0.4127	0.3972 0.4288	0.3514 0.4368	0.3808 0.4249	Ave		0.3948			8.2		30.0				
trans-1,3-Dichloropropene	++++ 0.4780	0.4035 0.4968	0.3959 0.5178	0.4276 0.5209	0.4537 0.5119	Ave		0.4674			10.5		30.0				
Toluene	1.0184 0.9698	0.9133 0.9624	0.9750 0.9710	0.9478 0.9638	0.9541 0.9102	Ave		0.9586			3.2		30.0				
1,1,2-Trichloroethane	0.2339 0.2639	0.2426 0.2594	0.2564 0.2610	0.2580 0.2630	0.2596 0.2452	Ave		0.2543			4.0		30.0				
2-Hexanone	++++ 0.1981	++++ 0.2103	++++ 0.2238	0.1399 0.2293	0.1787 0.2239	Ave		0.2006			16.0		30.0				
Dibromochloromethane	0.6655 0.7840	0.5795 0.8296	0.6334 0.8666	0.6501 0.8735	0.6985 0.8331	Ave		0.7414			14.6		30.0				
Octane	++++ 0.3146	++++ 0.3133	0.2922 0.3156	0.3033 0.3109	0.2998 0.2932	Ave		0.3054			3.1		30.0				
C8 Range	++++ 2.1678	++++ 2.1237	++++ 2.1591	++++ 2.2092	2.0961 2.0601	Ave		2.1360			2.5		30.0				
1,2-Dibromoethane (EDB)	++++ 0.5766	++++ 0.5804	0.5000 0.5952	0.4942 0.5984	0.5448 0.5694	Ave		0.5574			7.3		30.0				
Tetrachloroethene	0.4858 0.4849	0.4864 0.4819	0.4732 0.4752	0.4838 0.4653	0.4706 0.4417	Ave		0.4749			2.9		30.0				
Chlorobenzene	0.8210 0.8508	0.8425 0.8373	0.8551 0.8444	0.8450 0.8430	0.8379 0.7968	Ave		0.8374			2.0		30.0				
Ethylbenzene	1.3703 1.4178	1.3589 1.4128	1.4055 1.4174	1.3343 1.4023	1.4017 1.2986	Ave		1.3820			2.9		30.0				
m-Xylene & p-Xylene	1.1137 1.1838	1.1023 1.1550	1.1618 1.1536	1.1488 1.1251	1.1673 1.0234	Ave		1.1335			4.1		30.0				
Bromoform	++++ 0.7606	++++ 0.8485	0.5893 0.9286	0.6166 0.9279	0.6638 0.8938	Ave		0.7786			18.1		30.0				
Styrene	++++ 0.7750	++++ 0.7975	0.6004 0.8292	0.6182 0.8487	0.6786 0.7961	Ave		0.7430			13.0		30.0				
o-Xylene	1.1430 1.2366	1.1230 1.2060	1.2624 1.1986	1.2290 1.1769	1.2492 1.0804	Ave		1.1905			5.0		30.0				
Nonane	++++ 0.4737	++++ 0.4580	0.4455 0.4538	0.4515 0.4433	0.4801 0.4032	Ave		0.4511			5.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.5797	0.5118	0.5697	0.5802	0.6188	Ave		0.6050			7.5		30.0				
	0.6456	0.6455	0.6181	0.6658	0.6146												
1,2,3-Trichloropropane	++++	++++	0.2911	0.2918	0.2978	Ave		0.3000			2.7		30.0				
	0.3084	0.3034	0.3046	0.3115	0.2914												
Isopropylbenzene	++++	++++	1.8308	1.7528	1.7150	Ave		1.6941			5.0		30.0				
	1.7012	1.6661	1.6871	1.6694	1.5307												
Propylbenzene	0.4435	0.4328	0.4534	0.4640	0.4755	Ave		0.4652			4.5		30.0				
	0.4963	0.4795	0.4859	0.4778	0.4438												
2-Chlorotoluene	++++	0.3991	0.4619	0.4417	0.4398	Ave		0.4306			5.3		30.0				
	0.4524	0.4310	0.4318	0.4245	0.3929												
4-Ethyltoluene	1.5529	1.6047	1.7828	1.7531	1.7972	Ave		1.7594			6.6		30.0				
	1.8829	1.8611	1.8557	1.8469	1.6563												
1,3,5-Trimethylbenzene	0.6792	0.6523	0.7326	0.7228	0.7292	Ave		0.7199			5.1		30.0				
	0.7724	0.7416	0.7410	0.7434	0.6843												
Alpha Methyl Styrene	++++	++++	++++	0.5439	0.5731	Ave		0.6844			13.4		30.0				
	0.6781	0.7295	0.7535	0.7838	0.7289												
Decane	++++	++++	0.6176	0.6408	0.6488	Ave		0.6421			4.6		30.0				
	0.6849	0.6585	0.6522	0.6491	0.5849												
tert-Butylbenzene	1.6566	1.6665	1.8313	1.8740	1.8639	Ave		1.7534			6.6		30.0				
	1.8841	1.7827	1.7468	1.6988	1.5293												
1,2,4-Trimethylbenzene	1.4293	1.4880	1.6887	1.6986	1.7123	Ave		1.6066			7.2		30.0				
	1.7233	1.6671	1.6372	1.5922	1.4293												
1,3-Dichlorobenzene	1.1997	1.0963	1.2442	1.1823	1.1621	Ave		1.1598			4.5		30.0				
	1.1856	1.1603	1.1572	1.1516	1.0583												
sec-Butylbenzene	2.0787	2.1298	2.2743	2.2407	2.2363	Ave		2.1706			5.7		30.0				
	2.3069	2.2195	2.1908	2.1561	1.8732												
Benzyl chloride	++++	++++	1.0998	1.0436	1.1034	Ave		1.2392			11.3		30.0				
	1.2529	1.3231	1.4041	1.3938	1.2924												
1,4-Dichlorobenzene	1.2196	1.1487	1.2267	1.2179	1.1651	Ave		1.1644			5.1		30.0				
	1.2112	1.1594	1.1399	1.1212	1.0340												
4-Isopropyltoluene	2.1095	2.1432	2.2305	2.2370	2.2728	Ave		2.1910			5.2		30.0				
	2.3345	2.2554	2.2238	2.1784	1.9244												
1,2,3-Trimethylbenzene	1.6103	1.5786	1.8623	1.7831	1.7558	Ave		1.7253			6.2		30.0				
	1.8346	1.7874	1.7524	1.7335	1.5556												
1,2-Dichlorobenzene	1.1708	1.2083	1.2580	1.2065	1.1355	Ave		1.1443			6.3		30.0				
	1.1557	1.1157	1.1029	1.0865	1.0034												
Indane	1.4503	1.3817	1.4785	1.4862	1.4419	Ave		1.4233			5.0		30.0				
	1.4994	1.4300	1.4226	1.3893	1.2529												
Indene	++++	++++	1.0339	1.0803	1.0663	Ave		1.1682			8.2		30.0				
	1.2013	1.2223	1.2542	1.2953	1.1920												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.8231 1.8829	1.6985 1.8028	1.8359 1.7871	1.8719 1.7597	1.8266 1.5551	Ave		1.7844			5.4		30.0				
Undecane	++++ 0.8059	++++ 0.7917	++++ 0.7809	++++ 0.7402	0.7701 0.6720	Ave		0.7598			5.8		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.5799	++++ 0.6160	0.4391 0.6515	0.4709 0.6213	0.4861 0.5926	Ave		0.5572			14.3		30.0				
1,2,4,5-Tetramethylbenzene	++++ 2.1235	++++ 2.1635	2.1451 2.1540	2.1430 1.9985	1.9593 1.8488	Ave		2.0670			5.7		30.0				
Dodecane	++++ 0.7733	++++ 0.8936	++++ 0.8877	0.8688 0.7212	0.6803 0.7447	Ave		0.7957			10.9		30.0				
1,2,4-Trichlorobenzene	++++ 1.1894	++++ 1.2694	1.4472 1.2818	1.3888 1.0940	1.0856 1.1269	Ave		1.2354			10.9		30.0				
Naphthalene	++++ 2.0750	3.4525 2.4487	2.8184 2.5087	2.7367 2.1182	1.8255 ++++	Ave		2.4980			20.6		30.0				
Hexachlorobutadiene	++++ 1.4923	++++ 1.4393	1.7181 1.4314	1.5746 1.2072	1.3912 1.2353	Ave		1.4362			11.7		30.0				
1,2,3-Trichlorobenzene	++++ 1.1295	++++ 1.2212	1.4432 1.2323	1.3860 0.9868	1.0237 1.0761	Ave		1.1873			13.9		30.0				
2-Methylnaphthalene	++++ 0.3586	++++ 0.9509	++++ 1.0808	++++ 0.6399	++++ 0.9374	Ave		0.7935			36.8		50.0				
1-Methylnaphthalene	++++ 0.3899	++++ 0.8629	++++ 0.9496	++++ 0.5203	++++ 0.7770	Ave		0.6999			33.7		50.0				
4-Bromofluorobenzene (Surr)	0.8488 0.8636	0.8528 0.8535	0.8654 0.8546	0.8648 0.8319	0.8641 0.8066	Ave		0.8506			2.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Chlorodifluoromethane	CBM	Ave	++++	++++	13488	27178	67965	++++	++++	0.0800	0.160	0.400
			165552	330784	670931	1511149	2786793	1.00	2.00	4.00	8.00	16.0
Propene	CBM	Ave	++++	++++	++++	8965	20715	++++	++++	++++	0.160	0.400
			51364	103039	205301	471697	851034	1.00	2.00	4.00	8.00	16.0
Dichlorodifluoromethane	CBM	Ave	++++	++++	23530	45214	146259	++++	++++	0.0800	0.160	0.400
			295289	593041	1212691	3022572	4789313	1.00	2.00	4.00	8.00	16.0
Chloromethane	CBM	Ave	++++	++++	2235	3152	9302	++++	++++	0.0800	0.160	0.400
			20420	40844	80675	182542	337068	1.00	2.00	4.00	8.00	16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++	10161	16805	33908	98065	++++	0.0400	0.0800	0.160	0.400
			220441	456323	932912	2096072	3420506	1.00	2.00	4.00	8.00	16.0
Vinyl chloride	CBM	Ave	1811	3480	5811	11775	28814	0.0200	0.0400	0.0800	0.160	0.400
			70331	142840	286294	611179	1163551	1.00	2.00	4.00	8.00	16.0
1,3-Butadiene	CBM	Ave	++++	++++	++++	7472	18132	++++	++++	++++	0.160	0.400
			46402	94920	191280	407531	792495	1.00	2.00	4.00	8.00	16.0
Butane	CBM	Ave	++++	++++	6822	12514	33375	++++	++++	0.0800	0.160	0.400
			78896	157806	323819	680235	1311043	1.00	2.00	4.00	8.00	16.0
Bromomethane	CBM	Ave	++++	++++	7392	13519	35058	++++	++++	0.0800	0.160	0.400
			85746	176496	354225	754560	1463890	1.00	2.00	4.00	8.00	16.0
Chloroethane	CBM	Ave	++++	++++	3121	5876	13655	++++	++++	0.0800	0.160	0.400
			34804	68833	140181	288211	574974	1.00	2.00	4.00	8.00	16.0
Ethanol	CBM	Ave	++++	++++	++++	17498	43508	++++	++++	++++	0.800	2.00
			104882	224069	447098	904290	1740692	5.00	10.0	20.0	40.0	80.0
Vinyl bromide	CBM	Ave	++++	++++	7520	14410	37233	++++	++++	0.0800	0.160	0.400
			90610	186899	380924	781185	1560991	1.00	2.00	4.00	8.00	16.0
2-Methylbutane	CBM	Ave	++++	++++	4476	9090	23067	++++	++++	0.0800	0.160	0.400
			56760	115570	228167	483547	948871	1.00	2.00	4.00	8.00	16.0
Acrolein	CBM	Ave	++++	++++	++++	3617	6392	++++	++++	++++	0.160	0.400
			15289	37440	74788	152096	308108	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Trichlorofluoromethane	CBM	Ave	9029 413497	16343 844261	32292 1697186	64156 3484877	164680 6733950	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 16703	++++ 35460	++++ 84531	++++ 175714	++++ 345458	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
Acetone	CBM	Ave	++++ 89101	++++ 173059	++++ 340521	++++ 682117	++++ 1363433	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	++++ 48.0
Pentane	CBM	Ave	++++ 14137	++++ 28499	++++ 58302	++++ 119973	++++ 240067	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
Isopropyl alcohol	CBM	Ave	++++ 239341	++++ 509997	++++ 1016357	++++ 2023732	++++ 4022317	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	++++ 48.0
Ethyl ether	CBM	Ave	++++ 46526	++++ 93310	++++ 189800	++++ 438542	++++ 826066	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1,1-Dichloroethene	CBM	Ave	2217 96830	3786 202076	7294 414812	14740 875865	37945 1690964	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 44072	++++ 91512	++++ 186041	++++ 412056	++++ 806690	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
tert-Butyl alcohol	CBM	Ave	++++ 190196	++++ 409183	13889 809098	28891 1671112	74242 3270376	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 250984	9384 515989	19377 1031649	37596 2134286	97989 4035478	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 91431	++++ 178076	++++ 345898	21540 719893	41401 1360585	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 95603	++++ 193431	++++ 385054	15229 838478	36262 1650820	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 242543	++++ 499031	17438 997332	34577 2149500	91945 4188128	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	2153 99652	4125 206172	7397 421281	14785 893667	38175 1753401	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 134813	++++ 275324	10171 553915	20556 1212878	53163 2316982	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 326320	++++ 676752	++++ 1373906	24609 2885627	126834 5673760	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	3625 165748	6968 342362	12813 695373	24630 1467554	65086 2868475	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 159088	++++ 349189	++++ 730693	++++ 1591261	++++ 3211124	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 38268	++++ 79333	++++ 165553	6132 352107	14067 695780	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 58239	++++ 121155	++++ 248691	4675 525494	8962 1026278	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	2190 100389	3898 213838	7431 429081	15197 903953	38474 1779827	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 143745	++++ 303889	9377 632910	20428 1360573	53019 2697533	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	5723 266010	10674 550434	19866 1123349	40040 2352521	104204 4583947	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 62926	++++ 130211	++++ 266070	9354 573668	24371 1129072	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	6720 339819	13014 712345	25970 1454125	50545 3057281	130803 6008857	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4162 199683	7880 414101	15042 837957	29238 1778626	76773 3480930	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	5827 249589	10465 523482	20437 1050705	37991 2189441	96837 4217712	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 39991	++++ 82675	++++ 167839	5770 340746	14632 645373	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 17690	++++ 40004	++++ 82457	++++ 181076	5146 360622	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7141 374679	13947 786171	21947 1553305	54395 3401707	145724 6567265	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 54415	++++ 116636	3528 235995	7686 494713	21116 966448	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 149183	++++ 311873	10374 639928	21711 1366267	57630 2658371	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 332582	++++ 691902	25192 1407509	49245 2995449	126672 5790015	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 80581	++++ 169011	6201 344383	11982 733246	31548 1430590	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 84592	++++ 178041	5754 361284	11910 756110	32279 1463381	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	3243 152289	5696 324569	11668 707793	22698 1373208	60473 2639630	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 136587	++++ 283066	10846 586890	21454 1255108	53985 2441282	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 263754	++++ 564189	17387 1174659	35620 2518000	97237 4943175	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 38117	++++ 86437	++++ 173912	5968 353467	15165 675333	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 88559	++++ 195505	6227 413937	10629 922467	31857 1828238	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	++++ 160604	++++ 339768	++++ 689164	11565 1459181	23124 2870166	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 141224	++++ 311634	++++ 659470	17423 1416282	51070 2798783	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 155584	5376 346235	10488 719012	21150 1532867	59340 3009068	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 165754	5189 369600	10066 783879	22215 1677181	61443 3381888	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	6779 336279	11744 715966	24790 1469948	49243 3103222	129198 6012505	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	1557 91510	3120 192987	6520 395113	13406 846792	35149 1619482	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 68694	++++ 156406	++++ 338784	7267 738442	24199 1478910	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	4430 271846	7451 617174	16103 1311808	33778 2812660	94584 5503585	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 109095	++++ 233063	7429 477723	15759 1000926	40600 1936591	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	DFBZ	Ave	++++ 855982	++++ 1781529	++++ 3620641	++++ 7753468	++++ 14589114	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 199953	++++ 431756	12712 900939	25676 1926667	73769 3761382	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3234 168145	6255 358488	12031 719415	25138 1498188	63725 2918044	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	5465 295002	10833 622855	21742 1278293	43900 2714425	113462 5263414	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	9121 491615	17474 1050972	35735 2145561	69322 4515180	189812 8578718	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	14827 820994	28347 1718390	59080 3492522	119367 7245395	316153 13520878	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	++++ 263744	++++ 631165	14982 1405685	32037 2987666	89888 5904670	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd 5	Ave	++++ 268745	++++ 593262	15265 1255220	32117 2732738	91899 5258738	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	7608 428791	14440 897122	32097 1814388	63851 3789404	169158 7137002	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Nonane	CBZd 5	Ave	++++ 164273	++++ 340741	11326 686883	23460 1427330	65019 2663319	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	3859 223872	6581 480219	14484 935594	30142 2143813	83793 4060026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 106933	++++ 225670	7400 461156	15160 1003093	40330 1925261	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 589911	++++ 1239416	46548 2553866	91067 5375264	232238 10111819	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	2952 172077	5565 356669	11527 735475	24106 1538516	64393 2931395	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 156859	5132 320641	11745 653681	22951 1366689	59552 2595696	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	10337 652888	20634 1384436	45329 2809081	91082 5946732	243377 10941125	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	4521 267835	8388 551670	18627 1121740	37553 2393487	98748 4520211	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 235120	++++ 542707	++++ 1140621	28257 2523695	77610 4814736	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 237483	++++ 489862	15703 987208	33292 2090024	87862 3864099	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11027 653325	21429 1326146	46562 2644216	97365 5469769	252400 10102100	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	9514 597546	19133 1240172	42935 2478370	88253 5126755	231880 9441765	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7986 411115	14097 863153	31633 1751738	61425 3707873	157370 6991250	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	13837 799929	27386 1651103	57824 3316313	116417 6942238	302828 12374020	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 434461	++++ 984275	27963 2125520	54221 4487660	149421 8537696	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	8118 419983	14770 862511	31188 1725619	63275 3610216	157774 6830228	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	14042 809499	27559 1677824	56711 3366403	116224 7014221	307780 12712650	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	10719 636168	20298 1329610	47349 2652674	92640 5581569	237762 10276226	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	7793 400754	15537 829934	31984 1669523	62682 3498467	153773 6628325	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	9654 519916	17767 1063787	37591 2153540	77218 4473280	195256 8276746	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 416558	++++ 909289	26287 1898638	56129 4170791	144394 7874065	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	12135 652919	21840 1341073	46679 2705337	97253 5666096	247354 10272864	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 279455	++++ 588913	++++ 1182131	40009 2383371	102646 4439100	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 201092	++++ 458234	11163 986255	24464 2000539	65829 3914341	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 736323	++++ 1609444	54539 3260653	111338 6434741	265327 12213199	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 268129	++++ 664765	++++ 1343815	45141 2322024	92125 4919414	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 412431	++++ 944306	36794 1940306	72153 3522363	147015 7444026	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 719521	++++ 1821564	44394 3797602	71658 6820345	142183 247207 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Hexachlorobutadiene	CBZd 5	Ave	++++ 517445	++++ 1070672	43683 2166873	81808 3886960	188387 8160248	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 391665	++++ 908417	36693 1865471	72007 3177370	138621 7108780	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 124366	++++ 707384	++++ 1636134	++++ 2060557	++++ 6192720	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 135206	++++ 641933	++++ 1437560	++++ 1675488	++++ 5133017	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1129964 1197793	1096528 1269845	1100173 1293730	1123241 1339226	1170099 1332053	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	9.7						50			
Propene	+++++	+++++	+++++	15.4						50		
Dichlorodifluoromethane	+++++	+++++	4.3						50			
Chloromethane	+++++	+++++	40.9						50			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	20.3						50				
Vinyl chloride	24.8						50					
1,3-Butadiene	+++++	+++++	+++++	7.9						50		
Butane	+++++	+++++	16.3						50			
Bromomethane	+++++	+++++	15.5						50			
Chloroethane	+++++	+++++	21.2						50			
Ethanol	+++++	+++++	+++++	9.7						50		
Vinyl bromide	+++++	+++++	11.5						50			
2-Methylbutane	+++++	+++++	8.0						50			
Acrolein	+++++	+++++	+++++	34.3						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Trichlorofluoromethane	13.0						50					
Acetonitrile	+++++	+++++	+++++	1.7						50		
Acetone	+++++	+++++	+++++	38.8						80		
Pentane	+++++	+++++	+++++	19.9						50		
Isopropyl alcohol	+++++	+++++	+++++	11.2						50		
Ethyl ether	+++++	+++++	+++++	6.4						50		
1,1-Dichloroethene	16.5						50					
Acrylonitrile	+++++	+++++	+++++	+++++	-0.4						50	
tert-Butyl alcohol	+++++	+++++	0.1						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.2						50				
Methylene Chloride	+++++	+++++	+++++	51.2						80		
3-Chloropropene	+++++	+++++	-10.0						50			
Carbon disulfide	+++++	+++++	0.7						50			
trans-1,2-Dichloroethene	10.9						50					
2-Methylpentane	+++++	+++++	3.6						50			
Methyl tert-butyl ether	+++++	+++++	4.0						50			
1,1-Dichloroethane	11.6						50					
Vinyl acetate	+++++	+++++	+++++	-12.5						50		
2-Butanone (MEK)	+++++	+++++	+++++	5.7						50		
Hexane	+++++	+++++	8.0						50			
cis-1,2-Dichloroethene	11.9						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-10.0						50			
Chloroform	10.8						50					
Tetrahydrofuran	+++++	+++++	+++++	-0.9						50		
1,1,1-Trichloroethane	2.6						50					
1,2-Dichloroethane	6.3						50					
Benzene	15.6						50					
Cyclohexane	+++++	+++++	+++++	-1.0						50		
1-Butanol	+++++	+++++	+++++	+++++	-28.5						50	
Carbon tetrachloride	0.7						50					
2,3-Dimethylpentane	+++++	+++++	-10.2						50			
Thiophene	+++++	+++++	-4.4						50			
2,2,4-Trimethylpentane	+++++	+++++	3.7						50			
1,2-Dichloropropane	+++++	+++++	4.1						50			
Heptane	+++++	+++++	-5.1						50			
Trichloroethene	6.7						50					
Dibromomethane	+++++	+++++	6.0						50			
Bromodichloromethane	+++++	+++++	-9.3						50			
1,4-Dioxane	+++++	+++++	+++++	-0.2						50		
Methyl methacrylate	+++++	+++++	-6.0						50			
Methylcyclohexane	+++++	+++++	-1.3						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	-20.2						50		

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.9						50				
trans-1,3-Dichloropropene	+++++	-13.7						50				
Toluene	6.2						50					
1,1,2-Trichloroethane	-8.0						50					
2-Hexanone	+++++	+++++	+++++	-30.3						50		
Dibromochloromethane	-10.2						50					
Octane	+++++	+++++	-4.3						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-10.3						50			
Tetrachloroethene	2.3						50					
Chlorobenzene	-2.0						50					
Ethylbenzene	-0.8						50					
m-Xylene & p-Xylene	-1.7						50					
Bromoform	+++++	+++++	-24.3						50			
Styrene	+++++	+++++	-19.2						50			
o-Xylene	-4.0						50					
Nonane	+++++	+++++	-1.3						50			
1,1,2,2-Tetrachloroethane	-4.2						50					
1,2,3-Trichloropropane	+++++	+++++	-3.0						50			
Isopropylbenzene	+++++	+++++	8.1						50			
Propylbenzene	-4.7						50					
2-Chlorotoluene	+++++	-7.3						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	-11.7						50					
1,3,5-Trimethylbenzene	-5.7						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-20.5						50		
Decane	+++++	+++++	-3.8						50			
tert-Butylbenzene	-5.5						50					
1,2,4-Trimethylbenzene	-11.0						50					
1,3-Dichlorobenzene	3.4						50					
sec-Butylbenzene	-4.2						50					
Benzyl chloride	+++++	+++++	-11.2						50			
1,4-Dichlorobenzene	4.7						50					
4-Isopropyltoluene	-3.7						50					
1,2,3-Trimethylbenzene	-6.7						50					
1,2-Dichlorobenzene	2.3						50					
Indane	1.9						50					
Indene	+++++	+++++	-11.5						50			
Butylbenzene	2.2						50					
Undecane	+++++	+++++	+++++	1.3						50		
1,2-Dibromo-3-Chloropropane	+++++	+++++	-21.2						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	3.8						50			
Dodecane	+++++	+++++	+++++	9.2						50		
1,2,4-Trichlorobenzene	+++++	+++++	17.1						50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	38.2		+++++				80				
Hexachlorobutadiene	+++++	+++++	19.6						50			
1,2,3-Trichlorobenzene	+++++	+++++	21.5						50			
2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-54.8						80
1-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-44.3						80

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 16-Nov-2018 17:23:30 ALS Bottle#: 15 Worklist Smp#: 3
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-003
 Misc. Info.: 190391
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:32 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 09:42:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.411	7.397	0.014	70	313476	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.504	9.494	0.010	90	1754853	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.555	0.007	62	1609921	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	48	1339226	4.00	3.91	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	95	1511149	8.00	8.12	
7 Propene	41	3.416	3.420	-0.004	49	471697	8.00	8.25	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	3022572	8.00	8.86	
9 Chloromethane	52	3.583	3.586	-0.003	98	182542	8.00	7.61	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	87	2096072	8.00	8.25	
11 Acetaldehyde	44	3.707	3.710	-0.003	92	850959	40.0	38.0	
12 Vinyl chloride	62	3.712	3.711	0.001	71	611179	8.00	7.27	
13 Butadiene	54	3.777	3.780	-0.003	85	407531	8.00	7.99	
14 Butane	43	3.782	3.782	0.000	76	680235	8.00	7.67	
15 Bromomethane	94	3.998	3.995	0.003	93	754560	8.00	7.79	
16 Chloroethane	64	4.106	4.100	0.006	97	288211	8.00	7.40	
17 Ethanol	31	4.230	4.222	0.008	93	904290	40.0	38.5	
18 Vinyl bromide	106	4.322	4.315	0.007	94	781185	8.00	7.66	
19 2-Methylbutane	43	4.370	4.369	0.001	79	483547	8.00	7.71	
20 Acrolein	56	4.516	4.516	0.000	13	152096	8.00	7.68	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	99	3484877	8.00	7.52	
22 Acetonitrile	40	4.564	4.545	0.019	94	175714	8.00	8.67	
23 Acetone	58	4.602	4.605	-0.003	94	682117	24.0	21.0	
24 Pentane	72	4.694	4.693	0.001	89	119973	8.00	7.61	
25 Isopropyl alcohol	45	4.721	4.716	0.005	96	2023732	24.0	22.8	
26 Ethyl ether	31	4.807	4.817	-0.010	72	438542	8.00	8.40	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	875865	8.00	7.94	
28 Acrylonitrile	53	5.109	5.097	0.012	85	412056	8.00	8.38	
29 2-Methyl-2-propanol	59	5.168	5.173	-0.005	86	1671112	8.00	7.96	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	91	2134286	8.00	7.80	
31 Methylene Chloride	84	5.298	5.290	0.008	85	719893	8.00	6.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	79	838478	8.00	8.17	
33 Carbon disulfide	76	5.416	5.410	0.006	99	2149500	8.00	8.21	
34 trans-1,2-Dichloroethene	96	5.961	5.951	0.010	97	893667	8.00	7.94	
35 2-Methylpentane	43	6.015	6.011	0.004	84	1212878	8.00	8.17	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	86	2885627	8.00	8.06	
37 1,1-Dichloroethane	63	6.301	6.283	0.018	98	1467554	8.00	7.79	
38 Vinyl acetate	43	6.409	6.402	0.006	98	1591261	8.00	8.75	
39 2-Butanone (MEK)	72	6.759	6.761	-0.002	66	352107	8.00	8.25	
40 Hexane	56	6.851	6.845	0.006	78	525494	8.00	8.03	
171 Isopropyl ether	45	6.985	6.989	-0.004	86	1854270	8.00	8.23	
41 cis-1,2-Dichloroethene	96	7.142	7.127	0.015	94	903953	8.00	7.97	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	1360573	8.00	8.63	
43 Chloroform	83	7.455	7.439	0.016	97	2352521	8.00	7.86	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	93	2652444	8.00	8.17	
44 Tetrahydrofuran	42	7.784	7.793	-0.009	75	573668	8.00	8.26	
45 1,1,1-Trichloroethane	97	8.377	8.364	0.013	94	3057281	8.00	8.05	
46 1,2-Dichloroethane	62	8.441	8.427	0.014	76	1778626	8.00	8.01	
47 Benzene	78	8.932	8.920	0.012	98	2189441	8.00	7.66	
48 Cyclohexane	69	8.959	8.951	0.008	71	340746	8.00	8.02	
50 Carbon tetrachloride	117	8.975	8.962	0.013	98	3401707	8.00	8.46	
49 n-Butanol	31	8.948	8.969	-0.021	42	181076	8.00	8.93	
51 2,3-Dimethylpentane	71	9.132	9.126	0.006	83	494713	8.00	8.36	
52 Thiophene	84	9.186	9.174	0.012	87	1366267	8.00	8.35	
53 Isooctane	57	9.806	9.798	0.008	95	2995449	8.00	8.18	
54 1,2-Dichloropropane	63	10.183	10.175	0.008	72	733246	8.00	8.17	
55 n-Heptane	71	10.232	10.224	0.008	76	756110	8.00	8.27	
56 Trichloroethene	130	10.259	10.250	0.009	88	1373208	8.00	7.97	
57 Dibromomethane	93	10.291	10.279	0.012	92	1255108	8.00	8.14	
58 Dichlorobromomethane	83	10.474	10.468	0.006	98	2518000	8.00	8.71	
59 1,4-Dioxane	88	10.491	10.497	-0.006	37	353467	8.00	8.11	
60 Methyl methacrylate	41	10.647	10.649	-0.002	90	922467	8.00	9.24	
61 Methylcyclohexane	83	11.116	11.109	0.007	93	1459181	8.00	8.27	
62 4-Methyl-2-pentanone (MIBK)	43	11.542	11.552	-0.010	91	1416282	8.00	8.90	
63 cis-1,3-Dichloropropene	75	11.580	11.577	0.003	95	1532867	8.00	8.85	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	97	1677181	8.00	8.92	
65 Toluene	91	12.475	12.471	0.004	92	3103222	8.00	8.04	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	90	846792	8.00	8.27	
69 2-Hexanone	58	12.993	13.003	-0.010	95	738442	8.00	9.15	
70 Chlorodibromomethane	129	13.262	13.258	0.004	95	2812660	8.00	9.43	
71 n-Octane	85	13.327	13.326	0.001	75	1000926	8.00	8.14	
72 Ethylene Dibromide	107	13.559	13.551	0.008	93	1926667	8.00	8.59	
73 Tetrachloroethene	129	13.699	13.695	0.004	93	1498188	8.00	7.84	
74 Chlorobenzene	112	14.610	14.606	0.004	91	2714425	8.00	8.05	
75 2,3-Dimethylheptane	43	14.751	14.750	0.000	77	1819678	8.00	8.04	
76 Ethylbenzene	91	14.945	14.943	0.002	99	4515180	8.00	8.12	
78 m-Xylene & p-Xylene	91	15.123	15.119	0.004	99	7245395	16.0	15.9	
79 Bromoform	173	15.505	15.507	-0.002	96	2987666	8.00	9.53	
80 Styrene	104	15.597	15.594	0.003	93	2732738	8.00	9.14	
82 o-Xylene	91	15.656	15.655	0.001	77	3789404	8.00	7.91	
81 n-Nonane	57	15.662	15.659	0.003	72	1427330	8.00	7.86	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	93	2143813	8.00	8.80	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	1003093	8.00	8.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.287	16.283	0.004	98	5375264	8.00	7.88	
86 N-Propylbenzene	120	16.859	16.856	0.003	96	1538516	8.00	8.22	
87 2-Chlorotoluene	126	16.870	16.867	0.003	93	1366689	8.00	7.89	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	5946732	8.00	8.40	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	90	2393487	8.00	8.26	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	84	2523695	8.00	9.16	
91 n-Decane	57	17.533	17.532	0.001	95	2090024	8.00	8.09	
92 tert-Butylbenzene	119	17.592	17.590	0.002	64	5469769	8.00	7.75	
93 1,2,4-Trimethylbenzene	105	17.608	17.605	0.003	94	5126755	8.00	7.93	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	3707873	8.00	7.94	
95 sec-Butylbenzene	105	17.905	17.902	0.003	74	6942238	8.00	7.95	
96 Benzyl chloride	91	17.964	17.962	0.002	97	4487660	8.00	9.00	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	92	3610216	8.00	7.70	
98 4-Isopropyltoluene	119	18.099	18.095	0.004	94	7014221	8.00	7.95	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	5581569	8.00	8.04	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	3064197	8.00	8.02	
101 1,2-Dichlorobenzene	146	18.374	18.370	0.004	93	3498467	8.00	7.60	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	88	4473280	8.00	7.81	
103 Indene	116	18.520	18.520	0.000	87	4170791	8.00	8.87	
104 n-Butylbenzene	91	18.579	18.580	-0.001	95	5666096	8.00	7.89	
105 Undecane	57	19.005	19.001	0.004	85	2383371	8.00	7.79	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	97	2000539	8.00	8.92	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.405	0.005	95	6434741	8.00	7.73	
110 Dodecane	57	20.132	20.128	0.004	90	2322024	8.00	7.25	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	3522363	8.00	7.08	
113 Naphthalene	128	20.332	20.329	0.003	98	6820345	8.00	6.78	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	85	3886960	8.00	6.72	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	92	3177370	8.00	6.65	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	2060557	8.00	6.45	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	1675488	8.00	5.95	
A 120 C8 Range	1	13.343	(13.284-13.381)		0	7753468	8.00	8.27	
S 121 Xylenes, Total	100				0		24.0	23.8	
S 122 1,2-Dichloroethene, Total	1				0		16.0	15.9	

Reagents:

40L10DQP_00007

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D

Injection Date: 16-Nov-2018 17:23:30

Instrument ID: MR

Operator ID:

Lims ID: IC L9

Worklist Smp#: 3

Client ID:

Purge Vol: 500.000 mL

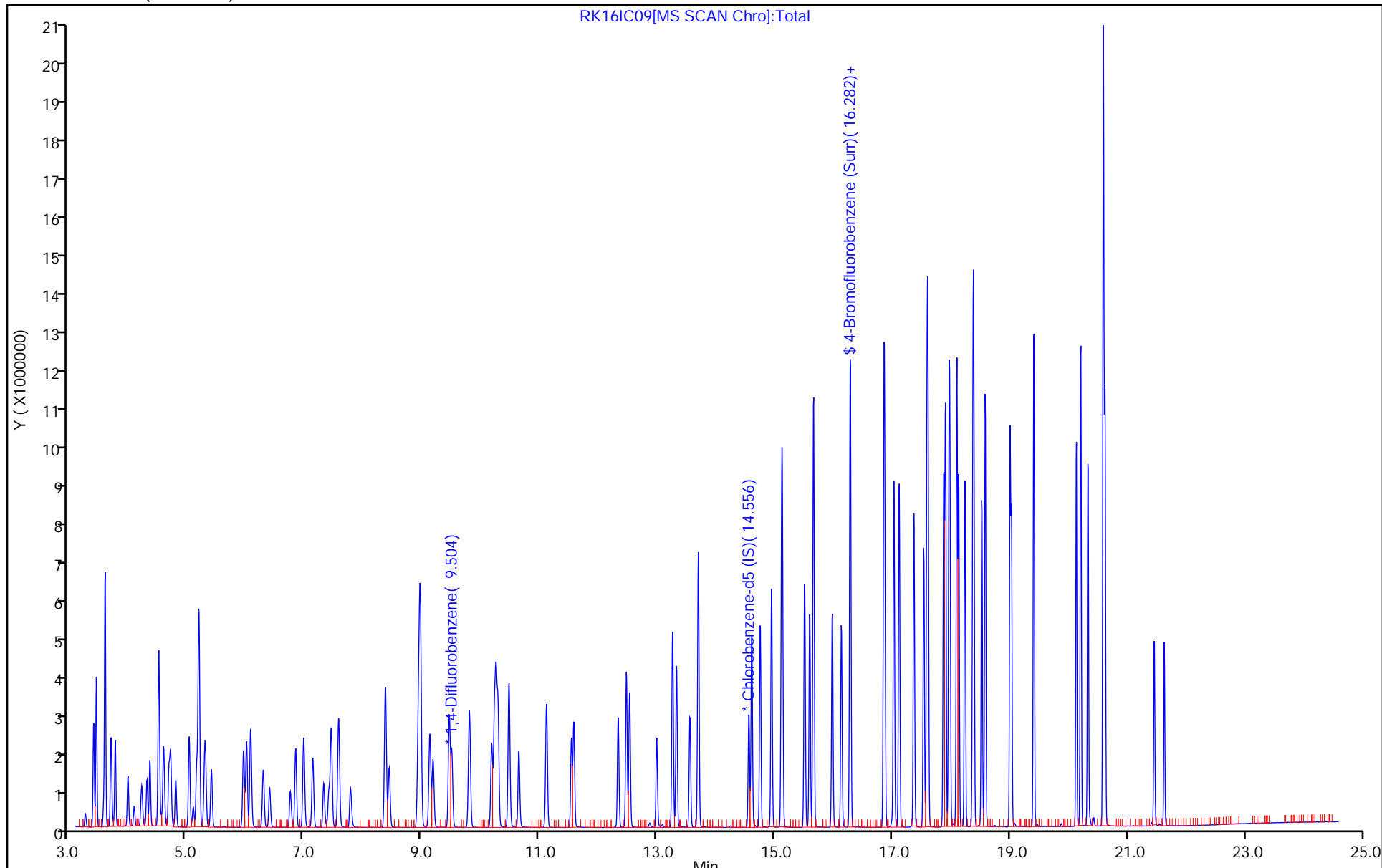
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D

Injection Date: 16-Nov-2018 17:23:30

Instrument ID: MR

Lims ID: IC L9

Client ID:

Operator ID:

ALS Bottle#:

15

Worklist Smp#:

3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

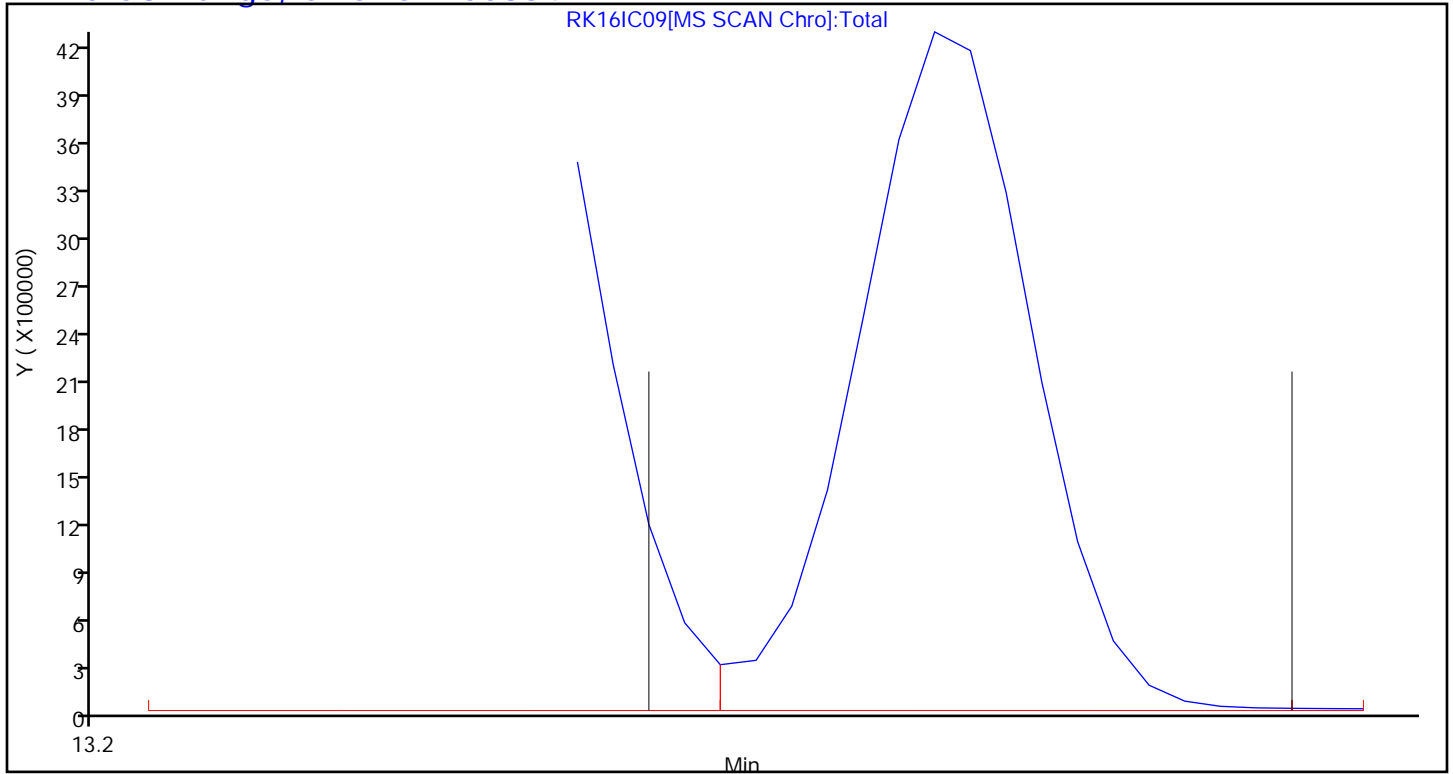
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 16-Nov-2018 19:07:30 ALS Bottle#: 15 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-005
 Misc. Info.: 190391
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:37 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 09:41:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.422	7.397	0.025	70	319466	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.515	9.494	0.020	95	1770477	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.555	0.007	89	1651474	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	84	1332053	4.00	3.79	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	96	2786793	16.0	14.7	
7 Propene	41	3.416	3.420	-0.004	92	851034	16.0	14.6	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	100	4789313	16.0	13.8	
9 Chloromethane	52	3.588	3.586	0.002	98	337068	16.0	13.8	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	89	3420506	16.0	13.2	
11 Acetaldehyde	44	3.718	3.710	0.008	94	1587481	80.0	69.5	
12 Vinyl chloride	62	3.712	3.711	0.001	99	1163551	16.0	13.6	
13 Butadiene	54	3.782	3.780	0.002	89	792495	16.0	15.3	
14 Butane	43	3.782	3.782	0.000	89	1311043	16.0	14.5	
15 Bromomethane	94	4.004	3.995	0.009	97	1463890	16.0	14.8	
16 Chloroethane	64	4.111	4.100	0.011	96	574974	16.0	14.5	
17 Ethanol	31	4.241	4.222	0.019	93	1740692	80.0	72.7	
18 Vinyl bromide	106	4.327	4.315	0.012	97	1560991	16.0	15.0	
19 2-Methylbutane	43	4.376	4.369	0.007	78	948871	16.0	14.9	
20 Acrolein	56	4.527	4.516	0.011	97	308108	16.0	15.3	
21 Trichlorofluoromethane	101	4.532	4.517	0.015	100	6733950	16.0	14.3	
22 Acetonitrile	40	4.575	4.545	0.030	95	345458	16.0	16.7	
23 Acetone	58	4.618	4.605	0.013	100	1363433	48.0	41.1	
24 Pentane	72	4.699	4.693	0.006	93	240067	16.0	14.9	
25 Isopropyl alcohol	45	4.737	4.716	0.021	98	4022317	48.0	44.5	
26 Ethyl ether	31	4.818	4.817	0.001	74	826066	16.0	15.5	
27 1,1-Dichloroethene	96	5.050	5.033	0.017	97	1690964	16.0	15.0	
28 Acrylonitrile	53	5.120	5.097	0.023	90	806690	16.0	16.1	
29 2-Methyl-2-propanol	59	5.179	5.173	0.006	92	3270376	16.0	15.3	
30 1,1,2-Trichloro-1,2,2-trif	101	5.211	5.199	0.012	92	4035478	16.0	14.5	
31 Methylene Chloride	84	5.308	5.290	0.018	89	1360585	16.0	12.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.330	5.309	0.021	85	1650820	16.0	15.8	
33 Carbon disulfide	76	5.427	5.410	0.017	99	4188128	16.0	15.7	
34 trans-1,2-Dichloroethene	96	5.972	5.951	0.021	97	1753401	16.0	15.3	
35 2-Methylpentane	43	6.026	6.011	0.015	84	2316982	16.0	15.3	
36 Methyl tert-butyl ether	73	6.090	6.094	-0.004	93	5673760	16.0	15.6	
37 1,1-Dichloroethane	63	6.311	6.283	0.028	98	2868475	16.0	14.9	
38 Vinyl acetate	43	6.419	6.402	0.017	98	3211124	16.0	17.3	
39 2-Butanone (MEK)	72	6.770	6.761	0.009	97	695780	16.0	16.0	
40 Hexane	56	6.861	6.845	0.016	81	1026278	16.0	15.4	
171 Isopropyl ether	45	6.996	6.989	0.007	86	3587859	16.0	15.6	
41 cis-1,2-Dichloroethene	96	7.153	7.127	0.026	94	1779827	16.0	15.4	
42 Ethyl acetate	43	7.336	7.330	0.006	98	2697533	16.0	16.8	
43 Chloroform	83	7.465	7.439	0.026	98	4583947	16.0	15.0	
173 Tert-butyl ethyl ether	59	7.589	7.580	0.009	92	5236388	16.0	15.8	
44 Tetrahydrofuran	42	7.789	7.793	-0.004	75	1129072	16.0	16.0	
45 1,1,1-Trichloroethane	97	8.382	8.364	0.018	95	6008857	16.0	15.5	
46 1,2-Dichloroethane	62	8.447	8.427	0.020	97	3480930	16.0	15.5	
47 Benzene	78	8.943	8.920	0.023	98	4217712	16.0	14.6	
48 Cyclohexane	69	8.964	8.951	0.013	91	645373	16.0	15.1	
50 Carbon tetrachloride	117	8.981	8.962	0.019	98	6567265	16.0	16.2	
49 n-Butanol	31	8.959	8.969	-0.010	72	360622	16.0	17.6	
51 2,3-Dimethylpentane	71	9.142	9.126	0.016	83	966448	16.0	16.2	
52 Thiophene	84	9.196	9.174	0.022	94	2658371	16.0	16.1	
53 Isooctane	57	9.811	9.798	0.013	95	5790015	16.0	15.7	
54 1,2-Dichloropropane	63	10.194	10.175	0.019	76	1430590	16.0	15.8	
55 n-Heptane	71	10.237	10.224	0.013	82	1463381	16.0	15.9	
56 Trichloroethene	130	10.269	10.250	0.019	95	2639630	16.0	15.2	
57 Dibromomethane	93	10.296	10.279	0.017	93	2441282	16.0	15.7	
58 Dichlorobromomethane	83	10.485	10.468	0.017	98	4943175	16.0	17.0	
59 1,4-Dioxane	88	10.496	10.497	-0.001	86	675333	16.0	15.3	
60 Methyl methacrylate	41	10.652	10.649	0.003	90	1828238	16.0	18.2	
61 Methylcyclohexane	83	11.121	11.109	0.012	92	2870166	16.0	16.1	
62 4-Methyl-2-pentanone (MIBK)	43	11.547	11.552	-0.005	91	2798783	16.0	17.4	
63 cis-1,3-Dichloropropene	75	11.585	11.577	0.008	96	3009068	16.0	17.2	
64 trans-1,3-Dichloropropene	75	12.340	12.332	0.008	97	3381888	16.0	17.5	
65 Toluene	91	12.480	12.471	0.009	93	6012505	16.0	15.2	
66 1,1,2-Trichloroethane	83	12.534	12.527	0.007	93	1619482	16.0	15.4	
69 2-Hexanone	58	12.998	13.003	-0.005	95	1478910	16.0	17.9	
70 Chlorodibromomethane	129	13.268	13.258	0.010	97	5503585	16.0	18.0	
71 n-Octane	85	13.332	13.326	0.006	73	1936591	16.0	15.4	
72 Ethylene Dibromide	107	13.559	13.551	0.008	97	3761382	16.0	16.3	
73 Tetrachloroethene	129	13.704	13.695	0.009	96	2918044	16.0	14.9	
74 Chlorobenzene	112	14.610	14.606	0.004	92	5263414	16.0	15.2	
75 2,3-Dimethylheptane	43	14.756	14.750	0.006	76	3470701	16.0	14.9	
76 Ethylbenzene	91	14.950	14.943	0.007	99	8578718	16.0	15.0	
78 m-Xylene & p-Xylene	91	15.128	15.119	0.009	98	13520878	32.0	28.9	
79 Bromoform	173	15.511	15.507	0.004	96	5904670	16.0	18.4	
80 Styrene	104	15.597	15.594	0.003	97	5258738	16.0	17.1	
82 o-Xylene	91	15.662	15.655	0.007	97	7137002	16.0	14.5	
81 n-Nonane	57	15.662	15.659	0.003	72	2663319	16.0	14.3	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	93	4060026	16.0	16.3	
84 1,2,3-Trichloropropane	110	16.136	16.132	0.004	92	1925261	16.0	15.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.287	16.283	0.004	98	10111819	16.0	14.5	
86 N-Propylbenzene	120	16.859	16.856	0.003	98	2931395	16.0	15.3	
87 2-Chlorotoluene	126	16.870	16.867	0.003	94	2595696	16.0	14.6	
88 4-Ethyltoluene	105	17.031	17.027	0.004	97	10941125	16.0	15.1	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	4520211	16.0	15.2	
90 Alpha Methyl Styrene	118	17.371	17.366	0.005	85	4814736	16.0	17.0	
91 n-Decane	57	17.538	17.532	0.006	96	3864099	16.0	14.6	
92 tert-Butylbenzene	119	17.598	17.590	0.008	89	10102100	16.0	14.0	
93 1,2,4-Trimethylbenzene	105	17.614	17.605	0.009	96	9441765	16.0	14.2	
94 1,3-Dichlorobenzene	146	17.878	17.874	0.004	98	6991250	16.0	14.6	
95 sec-Butylbenzene	105	17.910	17.902	0.008	97	12374020	16.0	13.8	
96 Benzyl chloride	91	17.970	17.962	0.008	97	8537696	16.0	16.7	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	92	6830228	16.0	14.2	
98 4-Isopropyltoluene	119	18.099	18.095	0.004	94	12712650	16.0	14.1	
99 1,2,3-Trimethylbenzene	105	18.132	18.127	0.005	98	10276226	16.0	14.4	
100 Butylcyclohexane	83	18.239	18.232	0.007	90	5583243	16.0	14.3	
101 1,2-Dichlorobenzene	146	18.374	18.370	0.004	95	6628325	16.0	14.0	
102 2,3-Dihydroindene	117	18.390	18.383	0.007	93	8276746	16.0	14.1	
103 Indene	116	18.525	18.520	0.005	90	7874065	16.0	16.3	
104 n-Butylbenzene	91	18.584	18.580	0.004	97	10272864	16.0	13.9	
105 Undecane	57	19.005	19.001	0.004	85	4439100	16.0	14.2	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	98	3914341	16.0	17.0	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.405	0.005	96	12213199	16.0	14.3	
110 Dodecane	57	20.132	20.128	0.004	87	4919414	16.0	15.0	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	7444026	16.0	14.6	
113 Naphthalene	128	20.332	20.329	0.003	97	13677643	16.0	13.3	e
115 Hexachlorobutadiene	225	20.596	20.590	0.006	96	8160248	16.0	13.8	
116 1,2,3-Trichlorobenzene	180	20.623	20.618	0.005	94	7108780	16.0	14.5	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	6192720	16.0	18.9	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	5133017	16.0	17.8	
A 120 C8 Range	1	13.348	(13.284-13.381)		0	14589114	16.0	15.4	
S 121 Xylenes, Total	100				0		48.0	43.4	
S 122 1,2-Dichloroethene, Total	1				0		32.0	30.7	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Reagents:

40L10DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D

Injection Date: 16-Nov-2018 19:07:30

Instrument ID: MR

Operator ID:

Lims ID: IC L10

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

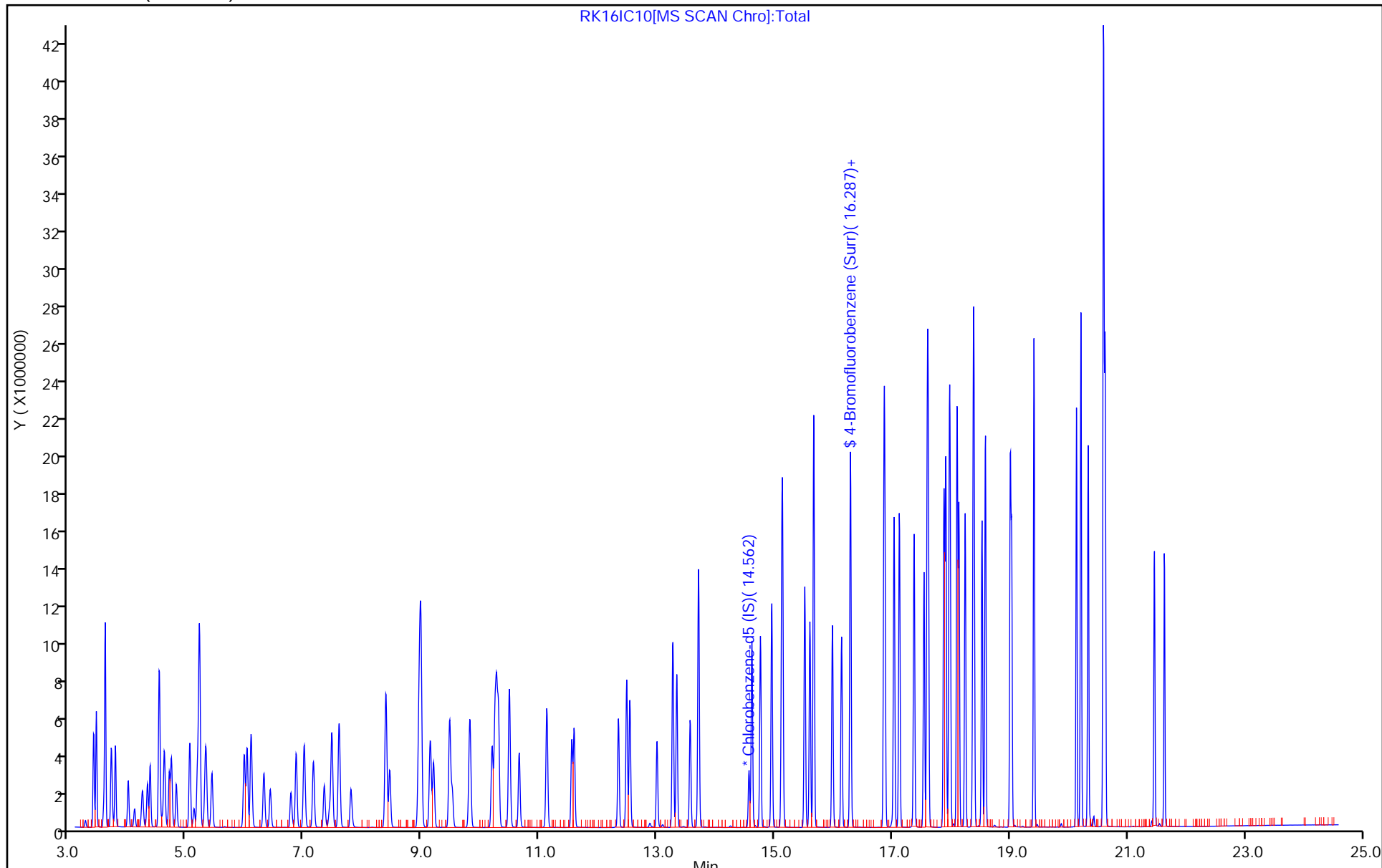
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D

Injection Date: 16-Nov-2018 19:07:30

Instrument ID: MR

Lims ID: IC L10

Client ID:

Operator ID:

ALS Bottle#:

15

Worklist Smp#:

5

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

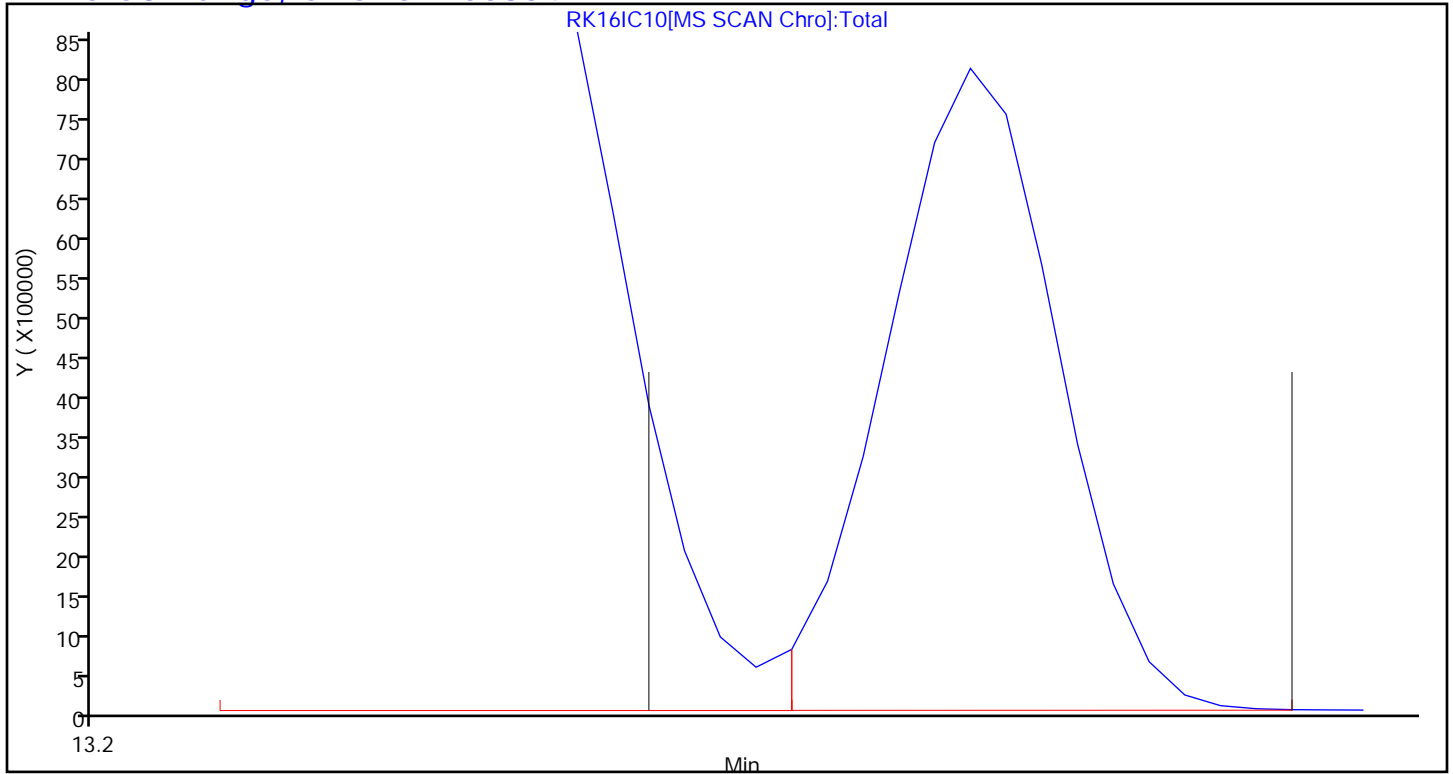
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 16-Nov-2018 21:42:30 ALS Bottle#: 1 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-008
 Misc. Info.: 191045
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:45 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh Date: 19-Nov-2018 10:13:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	270371	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1547161	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1331283	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1129964	4.00	3.99	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	92	4967	0.0200	0.0310	
7 Propene	41	3.416	3.420	-0.004	55	1914	0.0200	0.0388	
8 Dichlorodifluoromethane	85	3.454	3.461	-0.007	99	8536	0.0200	0.0290	
9 Chloromethane	52	3.594	3.586	0.008	56	1365	0.0200	0.0660	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	85	5703	0.0200	0.0260	
11 Acetaldehyde	44	3.712	3.710	0.002	96	5299	0.1000	0.2741	
12 Vinyl chloride	62	3.707	3.711	-0.004	48	1811	0.0200	0.0250	
13 Butadiene	54	3.777	3.780	-0.003	80	1171	0.0200	0.0266	
14 Butane	43	3.777	3.782	-0.005	67	2106	0.0200	0.0275	
15 Bromomethane	94	3.982	3.995	-0.013	91	3340	0.0200	0.0400	
16 Chloroethane	64	4.095	4.100	-0.005	54	1060	0.0200	0.0316	
17 Ethanol	31	4.230	4.222	0.008	85	2602	0.1000	0.1285	
18 Vinyl bromide	106	4.311	4.315	-0.004	93	2112	0.0200	0.0240	
19 2-Methylbutane	43	4.370	4.369	0.001	74	1411	0.0200	0.0261	
20 Acrolein	56	4.527	4.516	0.011	26	1199	0.0200	0.0702	
21 Trichlorofluoromethane	101	4.511	4.517	-0.006	99	9029	0.0200	0.0226	
22 Acetonitrile	40	4.462	4.545	-0.083	58	291	0.0200	0.0166	
23 Acetone	58	4.613	4.605	0.008	99	4528	0.0600	0.1614	
24 Pentane	72	4.694	4.693	0.001	68	224	0.0200	0.0165	
25 Isopropyl alcohol	45	4.732	4.716	0.016	91	7411	0.0600	0.0969	
26 Ethyl ether	31	4.839	4.817	0.022	57	905	0.0200	0.0201	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	96	2217	0.0200	0.0233	
28 Acrylonitrile	53	5.088	5.097	-0.009	49	399	0.0200	0.009404	
29 2-Methyl-2-propanol	59	5.201	5.173	0.028	73	3567	0.0200	0.0197	
30 1,1,2-Trichloro-1,2,2-trif	101	5.190	5.199	-0.009	88	5091	0.0200	0.0216	
31 Methylene Chloride	84	5.282	5.290	-0.008	89	10784	0.0200	0.1192	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	61	1958	0.0200	0.0221	
33 Carbon disulfide	76	5.400	5.410	-0.010	98	5154	0.0200	0.0228	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	89	2153	0.0200	0.0222	
35 2-Methylpentane	43	6.004	6.011	-0.007	85	3091	0.0200	0.0241	
36 Methyl tert-butyl ether	73	6.128	6.094	0.034	91	6785	0.0200	0.0220	
37 1,1-Dichloroethane	63	6.268	6.283	-0.015	96	3625	0.0200	0.0223	
38 Vinyl acetate	43	6.409	6.402	0.007	98	3011	0.0200	0.0192	
40 Hexane	56	6.845	6.845	0.000	79	1159	0.0200	0.0205	
171 Isopropyl ether	45	7.002	6.989	0.013	84	3919	0.0200	0.0202	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	92	2190	0.0200	0.0224	
42 Ethyl acetate	43	7.358	7.330	0.028	33	2159	0.0200	0.0159	
43 Chloroform	83	7.428	7.439	-0.011	90	5723	0.0200	0.0222	
44 Tetrahydrofuran	42	7.821	7.793	0.028	63	1324	0.0200	0.0221	
45 1,1,1-Trichloroethane	97	8.350	8.364	-0.014	95	6720	0.0200	0.0205	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	4162	0.0200	0.0213	
47 Benzene	78	8.911	8.920	-0.009	97	5827	0.0200	0.0231	
48 Cyclohexane	69	8.948	8.951	-0.003	69	709	0.0200	0.0189	
50 Carbon tetrachloride	117	8.959	8.962	-0.003	90	7141	0.0200	0.0201	
51 2,3-Dimethylpentane	71	9.126	9.126	0.000	81	1016	0.0200	0.0195	
52 Thiophene	84	9.164	9.174	-0.010	90	3146	0.0200	0.0218	
53 Isooctane	57	9.790	9.798	-0.008	82	3563	0.0200	0.0110	
54 1,2-Dichloropropane	63	10.167	10.175	-0.008	81	1807	0.0200	0.0228	
55 n-Heptane	71	10.232	10.224	0.008	58	1584	0.0200	0.0197	
56 Trichloroethene	130	10.243	10.250	-0.007	88	3243	0.0200	0.0213	
57 Dibromomethane	93	10.275	10.279	-0.004	93	3779	0.0200	0.0278	
60 Methyl methacrylate	41	10.652	10.649	0.003	1	1037	0.0200	0.0118	
61 Methylcyclohexane	83	11.100	11.109	-0.009	90	2938	0.0200	0.0189	
62 4-Methyl-2-pentanone (MIBK)	43	11.585	11.552	0.033	58	1793	0.0200	0.0128	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	93	2757	0.0200	0.0181	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	93	3115	0.0200	0.0200	
65 Toluene	91	12.470	12.471	-0.001	91	6779	0.0200	0.0212	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	89	1557	0.0200	0.0184	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	93	4430	0.0200	0.0180	
71 n-Octane	85	13.327	13.326	0.001	66	2061	0.0200	0.0203	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	91	3322	0.0200	0.0179	
73 Tetrachloroethene	129	13.699	13.695	0.004	88	3234	0.0200	0.0205	
74 Chlorobenzene	112	14.610	14.606	0.004	84	5465	0.0200	0.0196	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	74	3791	0.0200	0.0202	
76 Ethylbenzene	91	14.945	14.943	0.002	98	9121	0.0200	0.0198	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	99	14827	0.0400	0.0393	
79 Bromoform	173	15.506	15.507	-0.001	93	3956	0.0200	0.0153	
80 Styrene	104	15.603	15.594	0.009	93	3532	0.0200	0.0143	
82 o-Xylene	91	15.657	15.655	0.002	94	7608	0.0200	0.0192	
81 n-Nonane	57	15.657	15.659	-0.002	69	2778	0.0200	0.0185	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	88	3859	0.0200	0.0192	
84 1,2,3-Trichloropropane	110	16.136	16.132	0.004	93	1899	0.0200	0.0190	
85 Isopropylbenzene	105	16.282	16.283	-0.001	46	13150	0.0200	0.0233	
86 N-Propylbenzene	120	16.859	16.856	0.003	96	2952	0.0200	0.0191	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	2686	0.0200	0.0187	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	10337	0.0200	0.0177	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	4521	0.0200	0.0189	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	88	2640	0.0200	0.0116	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
91 n-Decane	57	17.528	17.532	-0.004	92	3562	0.0200	0.0167	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	11027	0.0200	0.0189	
93 1,2,4-Trimethylbenzene	105	17.609	17.605	0.004	96	9514	0.0200	0.0178	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	96	7986	0.0200	0.0207	
95 sec-Butylbenzene	105	17.905	17.902	0.003	96	13837	0.0200	0.0192	
96 Benzyl chloride	91	17.959	17.962	-0.003	96	6895	0.0200	0.0167	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	93	8118	0.0200	0.0209	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	14042	0.0200	0.0193	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	10719	0.0200	0.0187	
100 Butylcyclohexane	83	18.234	18.232	0.002	93	5805	0.0200	0.0184	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	90	7793	0.0200	0.0205	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	93	9654	0.0200	0.0204	
103 Indene	116	18.520	18.520	0.000	89	5834	0.0200	0.0150	
104 n-Butylbenzene	91	18.585	18.580	0.005	95	12135	0.0200	0.0204	
105 Undecane	57	19.005	19.001	0.004	86	5832	0.0200	0.0231	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	93	3364	0.0200	0.0181	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	15662	0.0200	0.0228	
110 Dodecane	57	20.127	20.128	-0.001	89	9191	0.0200	0.0347	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	93	13993	0.0200	0.0340	
113 Naphthalene	128	20.332	20.329	0.003	98	24682	0.0200	0.0297	
115 Hexachlorobutadiene	225	20.585	20.590	-0.005	95	19167	0.0200	0.0401	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	93	17493	0.0200	0.0443	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	96	6762	0.0200	0.0256	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	99	10187	0.0200	0.0437	
A 120 C8 Range	1	13.332	(13.295-13.359)		0	15685	0.0200	0.0190	
S 121 Xylenes, Total	100				0		0.0600	0.0585	
S 122 1,2-Dichloroethene, Total	1				0		0.0400	0.0446	

Reagents:

40L1-3DQP_00010

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D

Injection Date: 16-Nov-2018 21:42:30

Instrument ID: MR

Operator ID:

Lims ID: IC L1

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

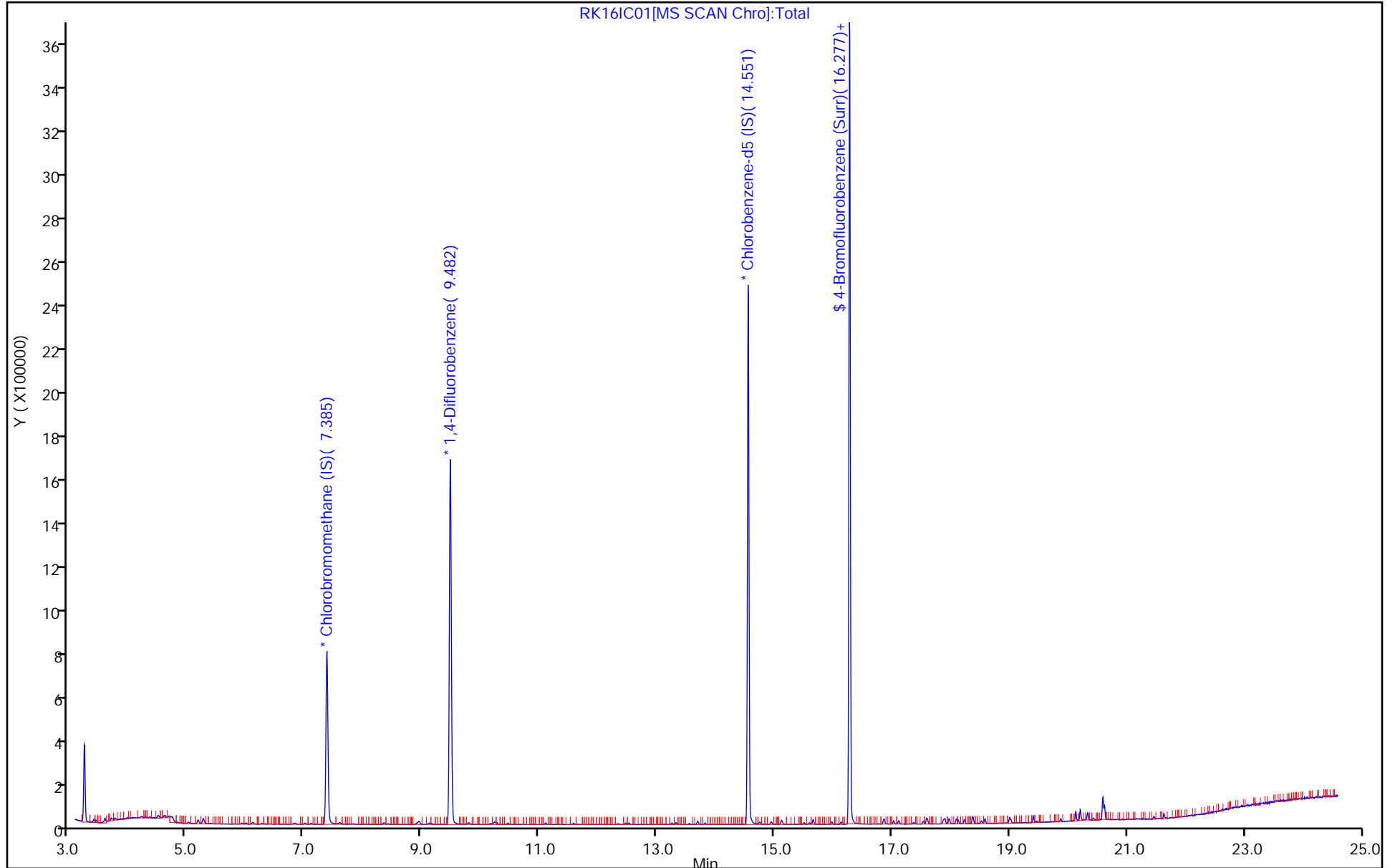
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D

Injection Date: 16-Nov-2018 21:42:30

Instrument ID: MR

Lims ID: IC L1

Client ID:

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

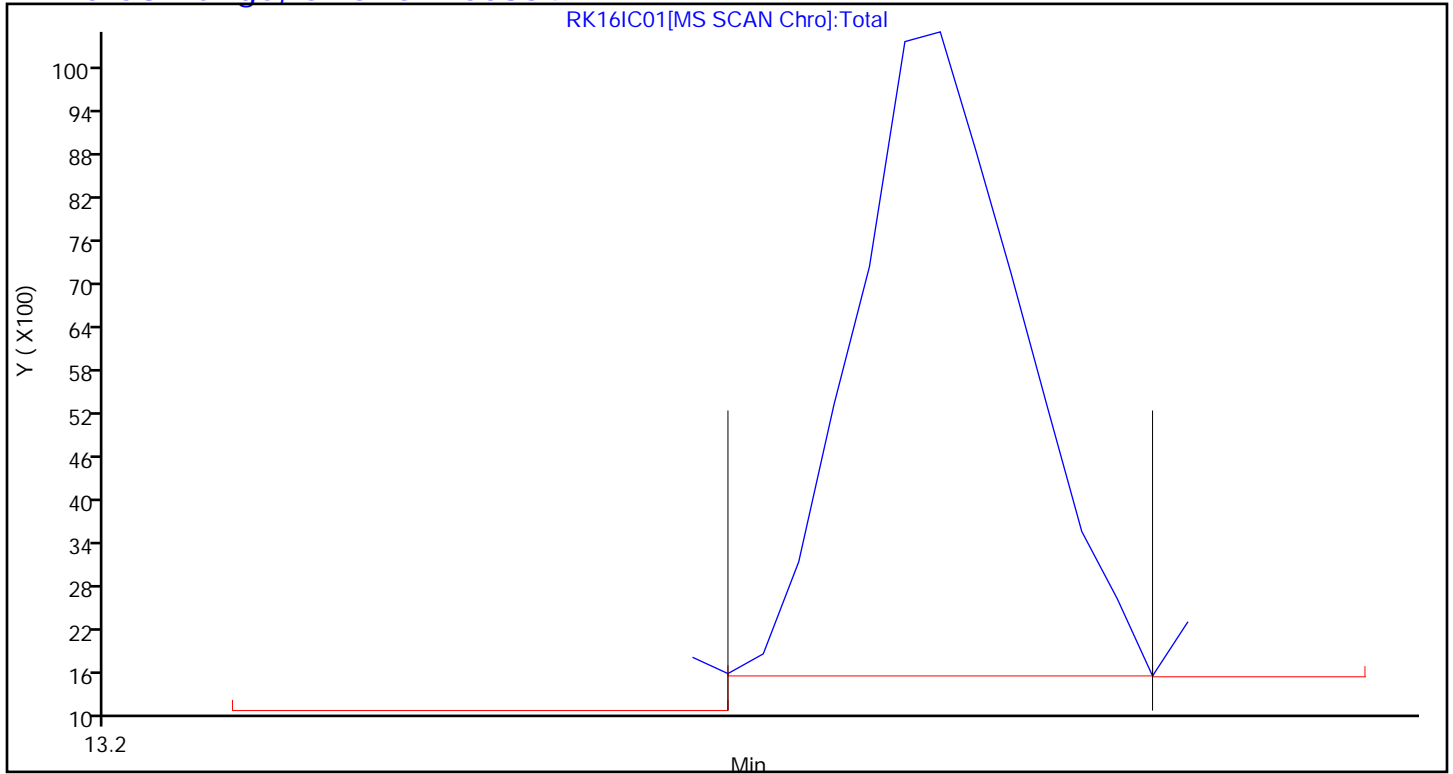
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 16-Nov-2018 22:34:30 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-009
 Misc. Info.: 191045
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:50 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:19:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.397	-0.007	70	260596	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1479125	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1285854	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1096528	4.00	4.01	
6 Chlorodifluoromethane	51	3.432	3.417	0.015	95	7544	0.0400	0.0488	
7 Propene	41	3.427	3.420	0.007	52	2713	0.0400	0.0571	
8 Dichlorodifluoromethane	85	3.470	3.461	0.009	100	14537	0.0400	0.0513	
9 Chloromethane	52	3.594	3.586	0.008	93	1035	0.0400	0.0519	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.615	3.609	0.006	89	10161	0.0400	0.0481	
11 Acetaldehyde	44	3.723	3.710	0.013	97	9143	0.2000	0.4906	
12 Vinyl chloride	62	3.718	3.711	0.007	52	3480	0.0400	0.0498	
13 Butadiene	54	3.788	3.780	0.008	74	1929	0.0400	0.0455	
14 Butane	43	3.788	3.782	0.006	74	3557	0.0400	0.0482	
15 Bromomethane	94	4.004	3.995	0.009	94	4039	0.0400	0.0502	
16 Chloroethane	64	4.106	4.100	0.006	80	1538	0.0400	0.0475	
17 Ethanol	31	4.225	4.222	0.003	91	4623	0.2000	0.2368	
18 Vinyl bromide	106	4.316	4.315	0.001	94	4463	0.0400	0.0526	
19 2-Methylbutane	43	4.370	4.369	0.001	75	2381	0.0400	0.0457	
20 Acrolein	56	4.516	4.516	0.000	28	1003	0.0400	0.0609	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	98	16343	0.0400	0.0424	
22 Acetonitrile	40	4.548	4.545	0.003	68	183	0.0400	0.0109	
23 Acetone	58	4.618	4.605	0.013	99	6843	0.1200	0.2531	
24 Pentane	72	4.694	4.693	0.001	57	764	0.0400	0.0583	
25 Isopropyl alcohol	45	4.721	4.716	0.005	95	10421	0.1200	0.1414	
26 Ethyl ether	31	4.834	4.817	0.017	76	1931	0.0400	0.0445	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	3786	0.0400	0.0413	
28 Acrylonitrile	53	5.098	5.097	0.001	78	1777	0.0400	0.0435	
29 2-Methyl-2-propanol	59	5.190	5.173	0.017	73	6749	0.0400	0.0387	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	92	9384	0.0400	0.0413	
31 Methylene Chloride	84	5.292	5.290	0.002	88	11735	0.0400	0.1346	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.308	5.309	-0.001	61	3483	0.0400	0.0408	
33 Carbon disulfide	76	5.411	5.410	0.001	97	8992	0.0400	0.0413	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	97	4125	0.0400	0.0441	
35 2-Methylpentane	43	6.004	6.011	-0.007	81	5672	0.0400	0.0460	
36 Methyl tert-butyl ether	73	6.112	6.094	0.018	93	12232	0.0400	0.0411	
37 1,1-Dichloroethane	63	6.274	6.283	-0.009	97	6968	0.0400	0.0445	
38 Vinyl acetate	43	6.409	6.402	0.007	97	5742	0.0400	0.0380	
39 2-Butanone (MEK)	72	6.791	6.761	0.030	97	1330	0.0400	0.0375	
40 Hexane	56	6.845	6.845	0.000	80	2274	0.0400	0.0418	
171 Isopropyl ether	45	7.002	6.989	0.013	86	7835	0.0400	0.0419	
41 cis-1,2-Dichloroethene	96	7.115	7.127	-0.012	96	3898	0.0400	0.0413	
42 Ethyl acetate	43	7.347	7.330	0.017	97	5081	0.0400	0.0388	
43 Chloroform	83	7.428	7.439	-0.011	87	10674	0.0400	0.0429	
173 Tert-butyl ethyl ether	59	7.589	7.580	0.009	92	10439	0.0400	0.0387	
44 Tetrahydrofuran	42	7.816	7.793	0.023	76	2575	0.0400	0.0446	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	94	13014	0.0400	0.0412	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	7880	0.0400	0.0421	
47 Benzene	78	8.911	8.920	-0.009	86	10465	0.0400	0.0434	
48 Cyclohexane	69	8.948	8.951	-0.003	60	1344	0.0400	0.0375	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	94	13947	0.0400	0.0411	
51 2,3-Dimethylpentane	71	9.115	9.126	-0.011	81	2179	0.0400	0.0437	
52 Thiophene	84	9.169	9.174	-0.005	90	5500	0.0400	0.0399	
53 Isooctane	57	9.800	9.798	0.002	94	11906	0.0400	0.0386	
54 1,2-Dichloropropane	63	10.178	10.175	0.003	78	2944	0.0400	0.0389	
55 n-Heptane	71	10.216	10.224	-0.008	79	2941	0.0400	0.0382	
56 Trichloroethene	130	10.237	10.250	-0.013	92	5696	0.0400	0.0392	
57 Dibromomethane	93	10.269	10.279	-0.010	87	5842	0.0400	0.0450	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	97	8635	0.0400	0.0355	
59 1,4-Dioxane	88	10.523	10.497	0.026	27	1245	0.0400	0.0339	
60 Methyl methacrylate	41	10.668	10.649	0.019	86	2528	0.0400	0.0300	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	5955	0.0400	0.0400	
62 4-Methyl-2-pentanone (MIBK)	43	11.569	11.552	0.017	61	3006	0.0400	0.0224	
63 cis-1,3-Dichloropropene	75	11.580	11.577	0.003	91	5376	0.0400	0.0368	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	5189	0.0400	0.0345	
65 Toluene	91	12.464	12.471	-0.007	92	11744	0.0400	0.0381	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	90	3120	0.0400	0.0382	
69 2-Hexanone	58	13.036	13.003	0.033	1	1297	0.0400	0.0201	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	93	7451	0.0400	0.0313	
71 n-Octane	85	13.327	13.326	0.001	79	3598	0.0400	0.0367	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	6066	0.0400	0.0339	
73 Tetrachloroethene	129	13.694	13.695	-0.001	89	6255	0.0400	0.0410	
74 Chlorobenzene	112	14.600	14.606	-0.006	96	10833	0.0400	0.0402	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	74	6840	0.0400	0.0378	
76 Ethylbenzene	91	14.945	14.943	0.002	99	17474	0.0400	0.0393	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	28347	0.0800	0.0778	
79 Bromoform	173	15.511	15.507	0.004	92	6657	0.0400	0.0266	
80 Styrene	104	15.592	15.594	-0.002	97	6834	0.0400	0.0286	
82 o-Xylene	91	15.656	15.655	0.001	96	14440	0.0400	0.0377	
81 n-Nonane	57	15.662	15.659	0.003	71	5104	0.0400	0.0352	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	89	6581	0.0400	0.0338	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	91	3252	0.0400	0.0337	
85 Isopropylbenzene	105	16.282	16.283	-0.001	47	23558	0.0400	0.0433	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	16.859	16.856	0.003	96	5565	0.0400	0.0372	
87 2-Chlorotoluene	126	16.870	16.867	0.003	91	5132	0.0400	0.0371	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	20634	0.0400	0.0365	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	89	8388	0.0400	0.0362	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	83	5656	0.0400	0.0257	
91 n-Decane	57	17.533	17.532	0.001	94	7343	0.0400	0.0356	
92 tert-Butylbenzene	119	17.592	17.590	0.002	89	21429	0.0400	0.0380	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	19133	0.0400	0.0370	
94 1,3-Dichlorobenzene	146	17.878	17.874	0.004	97	14097	0.0400	0.0378	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	27386	0.0400	0.0392	
96 Benzyl chloride	91	17.964	17.962	0.002	87	13082	0.0400	0.0328	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	90	14770	0.0400	0.0395	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	27559	0.0400	0.0391	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	20298	0.0400	0.0366	
100 Butylcyclohexane	83	18.234	18.232	0.002	91	12105	0.0400	0.0397	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	15537	0.0400	0.0422	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	91	17767	0.0400	0.0388	
103 Indene	116	18.520	18.520	0.000	89	11379	0.0400	0.0303	
104 n-Butylbenzene	91	18.579	18.580	-0.001	98	21840	0.0400	0.0381	
105 Undecane	57	19.000	19.001	-0.001	85	11356	0.0400	0.0465	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	92	6080	0.0400	0.0339	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	28122	0.0400	0.0423	
110 Dodecane	57	20.132	20.128	0.004	92	20145	0.0400	0.0788	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	93	24325	0.0400	0.0613	
113 Naphthalene	128	20.332	20.329	0.003	98	44394	0.0400	0.0553	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	36463	0.0400	0.0790	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	95	30595	0.0400	0.0802	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	96	7926	0.0400	0.0311	
118 1-Methylnaphthalene	142	21.631	21.626	0.005	97	11502	0.0400	0.0511	
A 120 C8 Range	1	13.332	(13.295-13.359)		0	31729	0.0400	0.0402	
S 121 Xylenes, Total	100				0		0.1200	0.1155	
S 122 1,2-Dichloroethene, Total	1				0		0.0800	0.0854	

Reagents:

40L1-3DQP_00010

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D

Injection Date: 16-Nov-2018 22:34:30

Instrument ID: MR

Operator ID:

Lims ID: IC L2

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

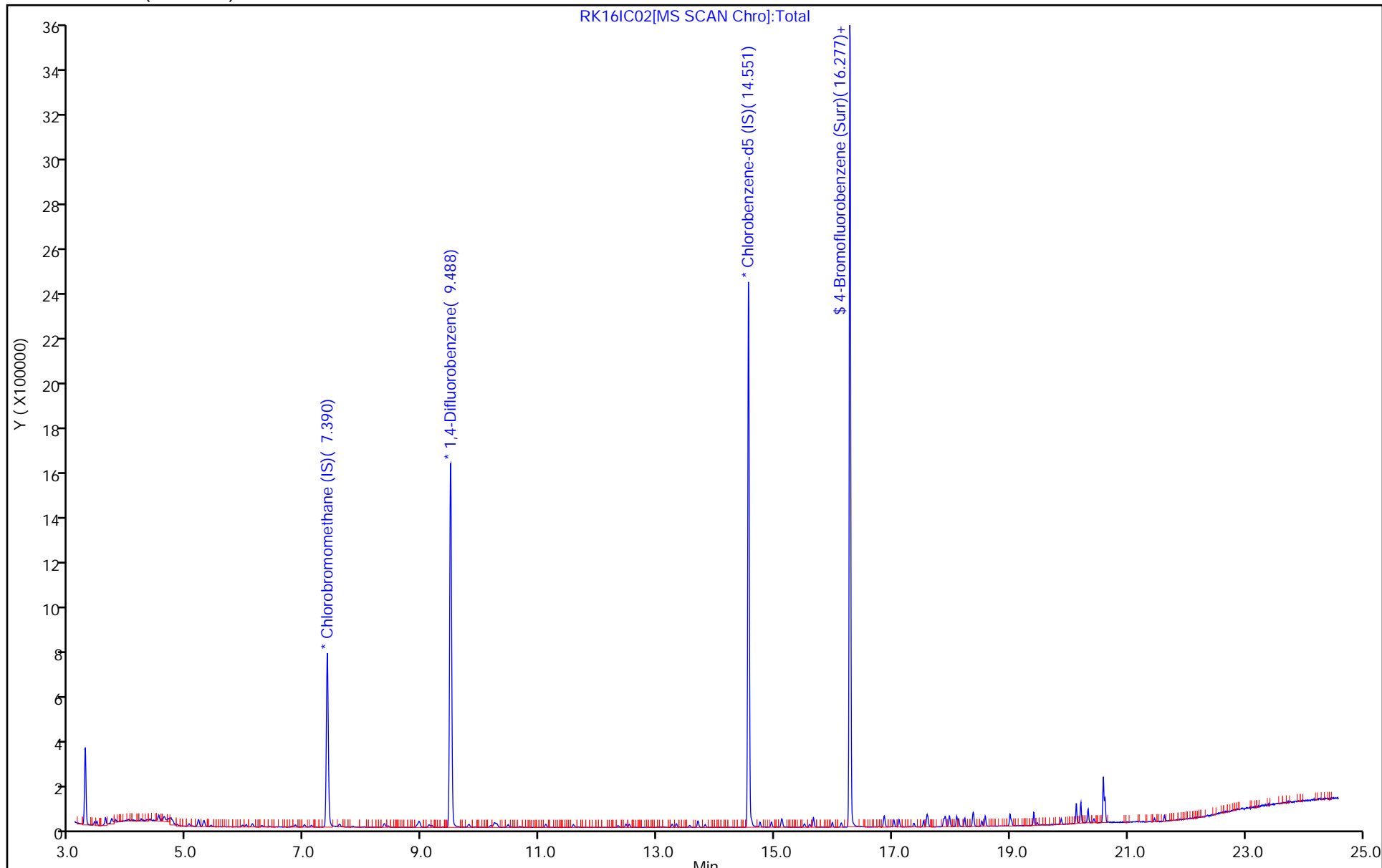
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D

Injection Date: 16-Nov-2018 22:34:30

Instrument ID: MR

Lims ID: IC L2

Client ID:

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

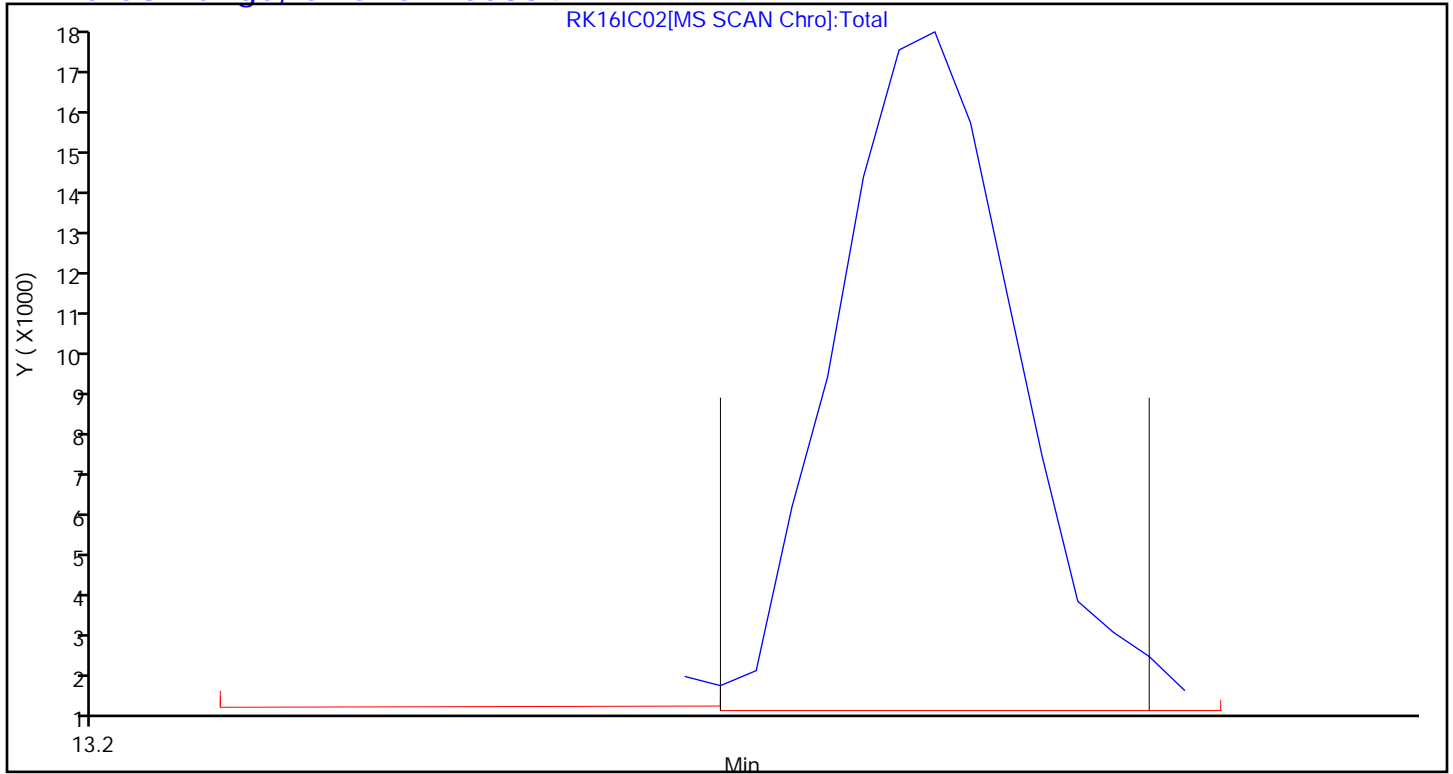
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 16-Nov-2018 23:27:30 ALS Bottle#: 2 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-010
 Misc. Info.: 190398
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:54 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:20:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.395	7.397	-0.002	80	259070	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.494	-0.001	95	1455868	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	90	1271256	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	90	1100173	4.00	4.07	
6 Chlorodifluoromethane	51	3.437	3.417	0.020	94	13488	0.0800	0.0877	
7 Propene	41	3.432	3.420	0.012	55	5125	0.0800	0.1085	
8 Dichlorodifluoromethane	85	3.475	3.461	0.014	99	23530	0.0800	0.0835	
9 Chloromethane	52	3.594	3.586	0.008	98	2235	0.0800	0.1127	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.621	3.609	0.012	88	16805	0.0800	0.0801	
11 Acetaldehyde	44	3.723	3.710	0.013	93	15383	0.4000	0.8304	
12 Vinyl chloride	62	3.723	3.711	0.012	49	5811	0.0800	0.0836	
13 Butadiene	54	3.793	3.780	0.013	81	3945	0.0800	0.0936	
14 Butane	43	3.799	3.782	0.017	77	6822	0.0800	0.0930	
15 Bromomethane	94	4.009	3.995	0.014	94	7392	0.0800	0.0924	
16 Chloroethane	64	4.106	4.100	0.006	95	3121	0.0800	0.0970	
17 Ethanol	31	4.225	4.222	0.003	94	11273	0.4000	0.5808	
18 Vinyl bromide	106	4.327	4.315	0.012	95	7520	0.0800	0.0892	
19 2-Methylbutane	43	4.381	4.369	0.012	80	4476	0.0800	0.0864	
20 Acrolein	56	4.527	4.516	0.011	30	2267	0.0800	0.1384	
21 Trichlorofluoromethane	101	4.527	4.517	0.010	98	32292	0.0800	0.0843	
22 Acetonitrile	40	4.559	4.545	0.014	52	776	0.0800	0.0463	
23 Acetone	58	4.618	4.605	0.013	100	12343	0.2400	0.4592	
24 Pentane	72	4.699	4.693	0.006	91	1155	0.0800	0.0887	
25 Isopropyl alcohol	45	4.721	4.716	0.005	97	22445	0.2400	0.3063	
26 Ethyl ether	31	4.834	4.817	0.017	69	3716	0.0800	0.0861	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	7294	0.0800	0.0800	
28 Acrylonitrile	53	5.098	5.097	0.001	97	3780	0.0800	0.0930	
29 2-Methyl-2-propanol	59	5.190	5.173	0.017	96	13889	0.0800	0.0801	
30 1,1,2-Trichloro-1,2,2-trif	101	5.211	5.199	0.012	93	19377	0.0800	0.0857	
31 Methylene Chloride	84	5.298	5.290	0.008	89	14815	0.0800	0.1710	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	83	6102	0.0800	0.0720	
33 Carbon disulfide	76	5.422	5.410	0.012	99	17438	0.0800	0.0806	
34 trans-1,2-Dichloroethene	96	5.956	5.951	0.005	95	7397	0.0800	0.0795	
35 2-Methylpentane	43	6.020	6.011	0.009	84	10171	0.0800	0.0829	
36 Methyl tert-butyl ether	73	6.112	6.094	0.018	92	24609	0.0800	0.0832	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	96	12813	0.0800	0.0823	
38 Vinyl acetate	43	6.409	6.402	0.007	97	10473	0.0800	0.0697	
39 2-Butanone (MEK)	72	6.775	6.761	0.014	96	2930	0.0800	0.0831	
40 Hexane	56	6.845	6.845	0.000	80	4675	0.0800	0.0864	
171 Isopropyl ether	45	7.002	6.989	0.013	83	15025	0.0800	0.0807	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	94	7431	0.0800	0.0792	
42 Ethyl acetate	43	7.336	7.330	0.006	96	9377	0.0800	0.0720	
43 Chloroform	83	7.439	7.439	0.000	91	19866	0.0800	0.0803	
173 Tert-butyl ethyl ether	59	7.595	7.580	0.015	93	21806	0.0800	0.0813	
44 Tetrahydrofuran	42	7.816	7.793	0.023	77	4556	0.0800	0.0794	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	93	25970	0.0800	0.0828	
46 1,2-Dichloroethane	62	8.431	8.427	0.004	97	15042	0.0800	0.0816	
47 Benzene	78	8.921	8.920	0.001	98	20437	0.0800	0.0862	
48 Cyclohexane	69	8.954	8.951	0.003	70	3013	0.0800	0.0855	
50 Carbon tetrachloride	117	8.965	8.962	0.003	95	21947	0.0800	0.0658	
49 n-Butanol	31	9.008	8.969	0.039	1	1240	0.0800	0.0737	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	80	3528	0.0800	0.0718	
52 Thiophene	84	9.169	9.174	-0.005	94	10374	0.0800	0.0764	
53 Isooctane	57	9.800	9.798	0.002	94	25192	0.0800	0.0830	
54 1,2-Dichloropropane	63	10.172	10.175	-0.003	72	6201	0.0800	0.0833	
55 n-Heptane	71	10.226	10.224	0.002	81	5754	0.0800	0.0759	
56 Trichloroethene	130	10.253	10.250	0.003	92	11668	0.0800	0.0816	
57 Dibromomethane	93	10.275	10.279	-0.004	91	10846	0.0800	0.0848	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	17387	0.0800	0.0725	
59 1,4-Dioxane	88	10.507	10.497	0.010	90	2726	0.0800	0.0753	
60 Methyl methacrylate	41	10.658	10.649	0.009	88	6227	0.0800	0.0752	
61 Methylcyclohexane	83	11.111	11.109	0.002	93	11565	0.0800	0.0790	
62 4-Methyl-2-pentanone (MIBK)	43	11.564	11.552	0.012	79	9056	0.0800	0.0686	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	94	10488	0.0800	0.0730	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	96	10066	0.0800	0.0678	
65 Toluene	91	12.470	12.471	-0.001	93	24790	0.0800	0.0814	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	91	6520	0.0800	0.0807	
69 2-Hexanone	58	13.020	13.003	0.017	93	3236	0.0800	0.0508	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	16103	0.0800	0.0683	
71 n-Octane	85	13.327	13.326	0.001	72	7429	0.0800	0.0766	
72 Ethylene Dibromide	107	13.553	13.551	0.002	97	12712	0.0800	0.0718	
73 Tetrachloroethene	129	13.694	13.695	-0.001	93	12031	0.0800	0.0797	
74 Chlorobenzene	112	14.605	14.606	-0.001	91	21742	0.0800	0.0817	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	76	14645	0.0800	0.0819	
76 Ethylbenzene	91	14.945	14.943	0.002	99	35735	0.0800	0.0814	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	59080	0.1600	0.1640	
79 Bromoform	173	15.506	15.507	-0.001	94	14982	0.0800	0.0605	
80 Styrene	104	15.592	15.594	-0.002	96	15265	0.0800	0.0646	
82 o-Xylene	91	15.656	15.655	0.001	95	32097	0.0800	0.0848	
81 n-Nonane	57	15.662	15.659	0.003	72	11326	0.0800	0.0790	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	88	14484	0.0800	0.0753	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	91	7400	0.0800	0.0776	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	48	46548	0.0800	0.0865	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	11527	0.0800	0.0780	
87 2-Chlorotoluene	126	16.870	16.867	0.003	93	11745	0.0800	0.0858	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	45329	0.0800	0.0811	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	18627	0.0800	0.0814	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	87	12787	0.0800	0.0588	
91 n-Decane	57	17.528	17.532	-0.004	95	15703	0.0800	0.0769	
92 tert-Butylbenzene	119	17.592	17.590	0.002	89	46562	0.0800	0.0836	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	42935	0.0800	0.0841	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	31633	0.0800	0.0858	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	57824	0.0800	0.0838	
96 Benzyl chloride	91	17.964	17.962	0.002	97	27963	0.0800	0.0710	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	91	31188	0.0800	0.0843	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	56711	0.0800	0.0814	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	47349	0.0800	0.0863	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	24822	0.0800	0.0823	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	94	31984	0.0800	0.0879	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	92	37591	0.0800	0.0831	
103 Indene	116	18.520	18.520	0.000	91	26287	0.0800	0.0708	
104 n-Butylbenzene	91	18.579	18.580	-0.001	98	46679	0.0800	0.0823	
105 Undecane	57	19.000	19.001	-0.001	90	20015	0.0800	0.0829	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	95	11163	0.0800	0.0630	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	96	54539	0.0800	0.0830	
110 Dodecane	57	20.127	20.128	-0.001	89	22733	0.0800	0.0899	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	36794	0.0800	0.0937	
113 Naphthalene	128	20.332	20.329	0.003	98	71658	0.0800	0.0903	
115 Hexachlorobutadiene	225	20.591	20.590	0.000	96	43683	0.0800	0.0957	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	36693	0.0800	0.0972	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	22514	0.0800	0.0893	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	96	25106	0.0800	0.1129	
A 120 C8 Range	1	13.335	(13.289-13.365)		0	65978	0.0800	0.0849	
S 121 Xylenes, Total	100				0		0.2400	0.2488	
S 122 1,2-Dichloroethene, Total	1				0		0.1600	0.1588	

Reagents:

40L1-3DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D

Injection Date: 16-Nov-2018 23:27:30

Instrument ID: MR

Operator ID:

Lims ID: IC L3

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

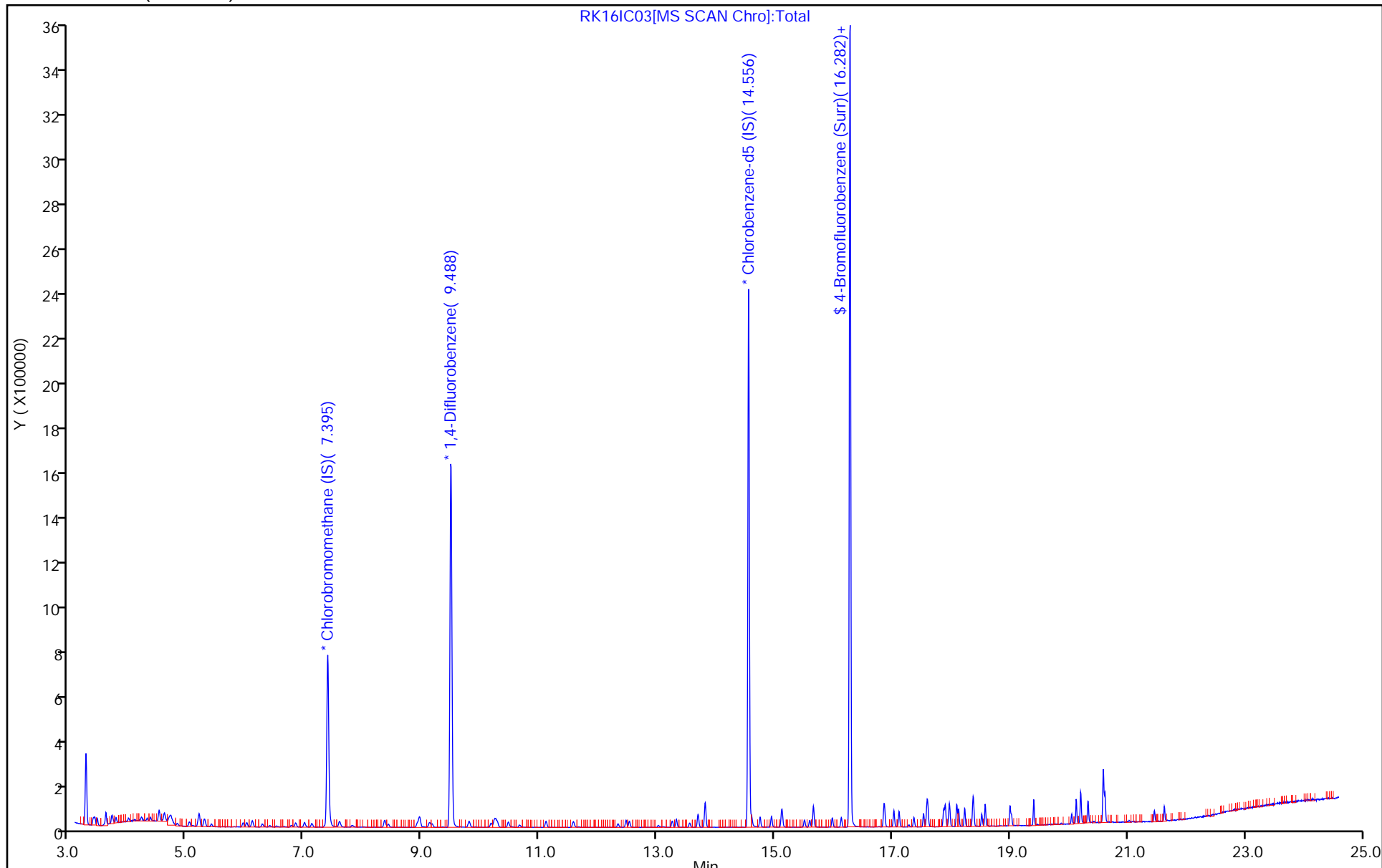
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D

Injection Date: 16-Nov-2018 23:27:30

Instrument ID: MR

Lims ID: IC L3

Client ID:

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

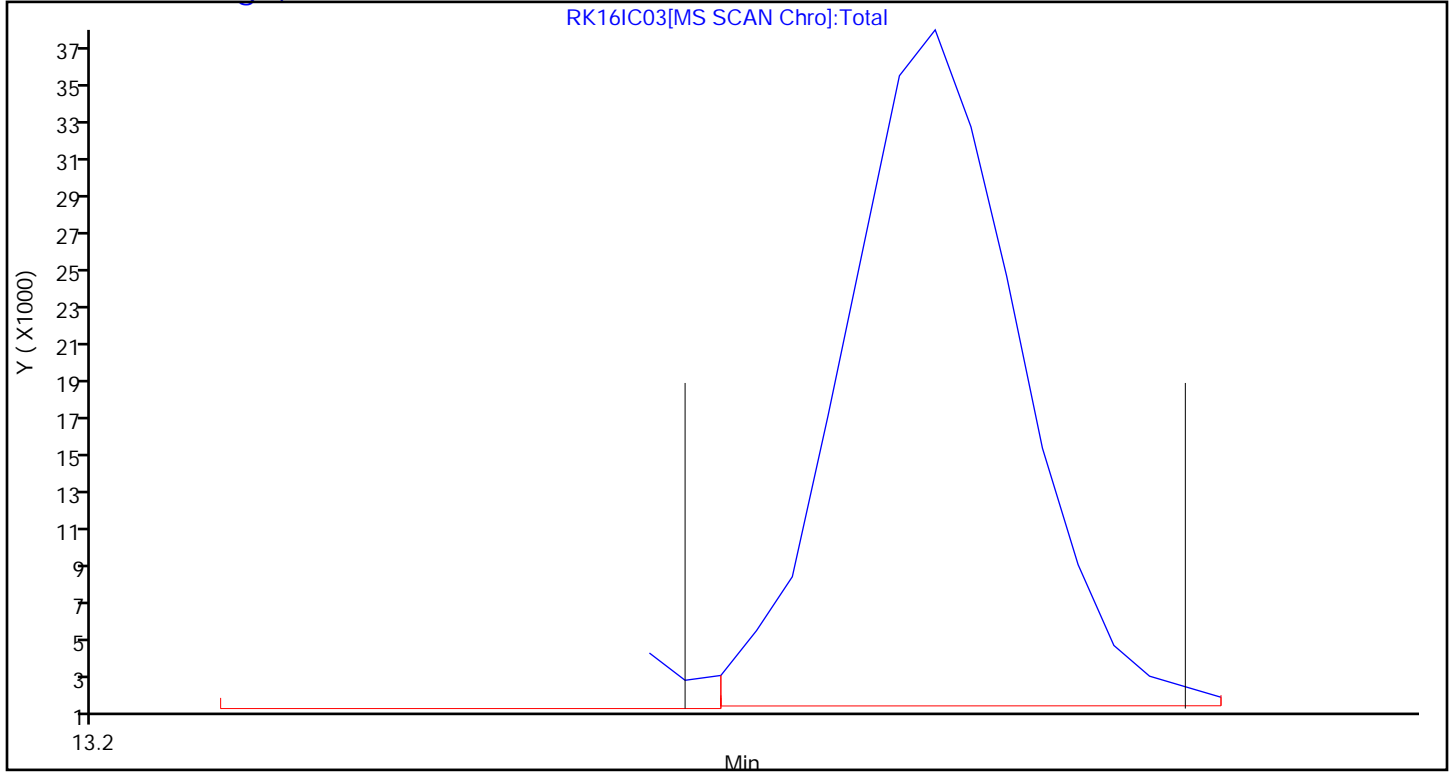
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 17-Nov-2018 00:20:30 ALS Bottle#: 3 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-011
 Misc. Info.: 190397
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:59 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:30:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	266212	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	95	1504650	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1298874	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1123241	4.00	4.07	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	96	27178	0.1600	0.1721	
7 Propene	41	3.421	3.420	0.001	49	8965	0.1600	0.1846	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	45214	0.1600	0.1561	
9 Chloromethane	52	3.583	3.586	-0.003	98	3152	0.1600	0.1547	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.605	3.609	-0.004	89	33908	0.1600	0.1572	
11 Acetaldehyde	44	3.707	3.710	-0.003	91	22123	0.8000	1.16	
12 Vinyl chloride	62	3.707	3.711	-0.004	60	11775	0.1600	0.1649	
13 Butadiene	54	3.777	3.780	-0.003	78	7472	0.1600	0.1726	
14 Butane	43	3.777	3.782	-0.005	77	12514	0.1600	0.1661	
15 Bromomethane	94	3.993	3.995	-0.002	95	13519	0.1600	0.1644	
16 Chloroethane	64	4.095	4.100	-0.005	97	5876	0.1600	0.1777	
17 Ethanol	31	4.209	4.222	-0.013	91	17498	0.8000	0.8773	
18 Vinyl bromide	106	4.306	4.315	-0.009	96	14410	0.1600	0.1663	
19 2-Methylbutane	43	4.365	4.369	-0.004	80	9090	0.1600	0.1708	
20 Acrolein	56	4.516	4.516	0.000	29	3617	0.1600	0.2150	
21 Trichlorofluoromethane	101	4.511	4.517	-0.006	100	64156	0.1600	0.1630	
22 Acetonitrile	40	4.548	4.545	0.003	95	2801	0.1600	0.1627	
23 Acetone	58	4.597	4.605	-0.008	100	18402	0.4800	0.6662	
24 Pentane	72	4.688	4.693	-0.005	90	2568	0.1600	0.1919	
25 Isopropyl alcohol	45	4.705	4.716	-0.011	97	40201	0.4800	0.5338	
26 Ethyl ether	31	4.818	4.817	0.001	78	7549	0.1600	0.1703	
27 1,1-Dichloroethene	96	5.023	5.033	-0.010	96	14740	0.1600	0.1573	
28 Acrylonitrile	53	5.088	5.097	-0.009	93	6563	0.1600	0.1571	
29 2-Methyl-2-propanol	59	5.163	5.173	-0.010	96	28891	0.1600	0.1621	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	91	37596	0.1600	0.1619	
31 Methylene Chloride	84	5.276	5.290	-0.014	88	21540	0.1600	0.2419	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.298	5.309	-0.011	83	15229	0.1600	0.1748	
33 Carbon disulfide	76	5.400	5.410	-0.010	99	34577	0.1600	0.1555	
34 trans-1,2-Dichloroethene	96	5.939	5.951	-0.012	97	14785	0.1600	0.1547	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	20556	0.1600	0.1631	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	47525	0.1600	0.1563	
37 1,1-Dichloroethane	63	6.268	6.283	-0.015	96	24630	0.1600	0.1540	
38 Vinyl acetate	43	6.387	6.402	-0.015	98	21613	0.1600	0.1399	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	97	6132	0.1600	0.1692	
40 Hexane	56	6.840	6.845	-0.005	80	8962	0.1600	0.1612	
171 Isopropyl ether	45	6.986	6.989	-0.003	87	30112	0.1600	0.1575	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	96	15197	0.1600	0.1577	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	20428	0.1600	0.1526	
43 Chloroform	83	7.422	7.439	-0.017	90	40040	0.1600	0.1575	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	93	42934	0.1600	0.1558	
44 Tetrahydrofuran	42	7.794	7.793	0.001	70	9354	0.1600	0.1586	
45 1,1,1-Trichloroethane	97	8.355	8.364	-0.009	94	50545	0.1600	0.1568	
46 1,2-Dichloroethane	62	8.415	8.427	-0.012	98	29238	0.1600	0.1535	
47 Benzene	78	8.911	8.920	-0.009	98	37991	0.1600	0.1550	
48 Cyclohexane	69	8.948	8.951	-0.003	61	5770	0.1600	0.1584	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	95	54395	0.1600	0.1577	
49 n-Butanol	31	8.997	8.969	0.028	35	1642	0.1600	0.0945	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	7686	0.1600	0.1514	
52 Thiophene	84	9.164	9.174	-0.010	94	21711	0.1600	0.1548	
53 Isooctane	57	9.790	9.798	-0.008	95	49245	0.1600	0.1569	
54 1,2-Dichloropropane	63	10.173	10.175	-0.003	75	11982	0.1600	0.1557	
55 n-Heptane	71	10.210	10.224	-0.014	80	11910	0.1600	0.1520	
56 Trichloroethene	130	10.243	10.250	-0.007	91	22698	0.1600	0.1536	
57 Dibromomethane	93	10.270	10.279	-0.009	91	21454	0.1600	0.1623	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	35620	0.1600	0.1438	
59 1,4-Dioxane	88	10.507	10.497	0.010	85	5968	0.1600	0.1596	
60 Methyl methacrylate	41	10.647	10.649	-0.002	88	10629	0.1600	0.1242	
61 Methylcyclohexane	83	11.105	11.109	-0.004	93	23124	0.1600	0.1528	
62 4-Methyl-2-pentanone (MIBK)	43	11.553	11.552	0.001	90	17423	0.1600	0.1277	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	96	21150	0.1600	0.1424	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	22215	0.1600	0.1464	
65 Toluene	91	12.470	12.471	-0.001	93	49243	0.1600	0.1582	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	92	13406	0.1600	0.1623	
69 2-Hexanone	58	13.009	13.003	0.006	93	7267	0.1600	0.1116	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	33778	0.1600	0.1403	
71 n-Octane	85	13.322	13.326	-0.004	72	15759	0.1600	0.1589	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	98	25676	0.1600	0.1419	
73 Tetrachloroethene	129	13.688	13.695	-0.007	93	25138	0.1600	0.1630	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	43900	0.1600	0.1614	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	77	29630	0.1600	0.1622	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	69322	0.1600	0.1545	
78 m-Xylene & p-Xylene	91	15.123	15.119	0.004	100	119367	0.3200	0.3243	
79 Bromoform	173	15.506	15.507	-0.001	95	32037	0.1600	0.1267	
80 Styrene	104	15.592	15.594	-0.002	97	32117	0.1600	0.1331	
82 o-Xylene	91	15.657	15.655	0.002	97	63851	0.1600	0.1652	
81 n-Nonane	57	15.657	15.659	-0.002	76	23460	0.1600	0.1601	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	92	30142	0.1600	0.1534	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	92	15160	0.1600	0.1556	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	50	91067	0.1600	0.1655	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	24106	0.1600	0.1596	
87 2-Chlorotoluene	126	16.870	16.867	0.003	94	22951	0.1600	0.1642	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	91082	0.1600	0.1594	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	90	37553	0.1600	0.1606	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	89	28257	0.1600	0.1271	
91 n-Decane	57	17.533	17.532	0.001	96	33292	0.1600	0.1597	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	90	97365	0.1600	0.1710	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	88253	0.1600	0.1692	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	61425	0.1600	0.1631	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	98	116417	0.1600	0.1652	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	54221	0.1600	0.1348	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	92	63275	0.1600	0.1674	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	116224	0.1600	0.1634	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	98	92640	0.1600	0.1654	
100 Butylcyclohexane	83	18.229	18.232	-0.003	93	50956	0.1600	0.1654	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	62682	0.1600	0.1687	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	92	77218	0.1600	0.1671	
103 Indene	116	18.520	18.520	0.000	90	56129	0.1600	0.1480	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	97253	0.1600	0.1678	
105 Undecane	57	19.000	19.001	-0.001	87	40009	0.1600	0.1622	
106 1,2-Dibromo-3-Chloropropan	157	19.021	19.028	-0.007	94	24464	0.1600	0.1352	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	111338	0.1600	0.1659	
110 Dodecane	57	20.127	20.128	-0.001	90	45141	0.1600	0.1747	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	72153	0.1600	0.1799	
113 Naphthalene	128	20.326	20.329	-0.003	98	142183	0.1600	0.1753	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	96	81808	0.1600	0.1754	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	94	72007	0.1600	0.1868	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	50645	0.1600	0.1965	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	98	54962	0.1600	0.2418	
A 120 C8 Range	1	13.337	(13.284-13.370)		0	123442	0.1600	0.1536	
S 121 Xylenes, Total	100				0		0.4800	0.4895	
S 122 1,2-Dichloroethene, Total	1				0		0.3200	0.3124	

Reagents:

40L4DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D

Injection Date: 17-Nov-2018 00:20:30

Instrument ID: MR

Operator ID:

Lims ID: IC L4

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

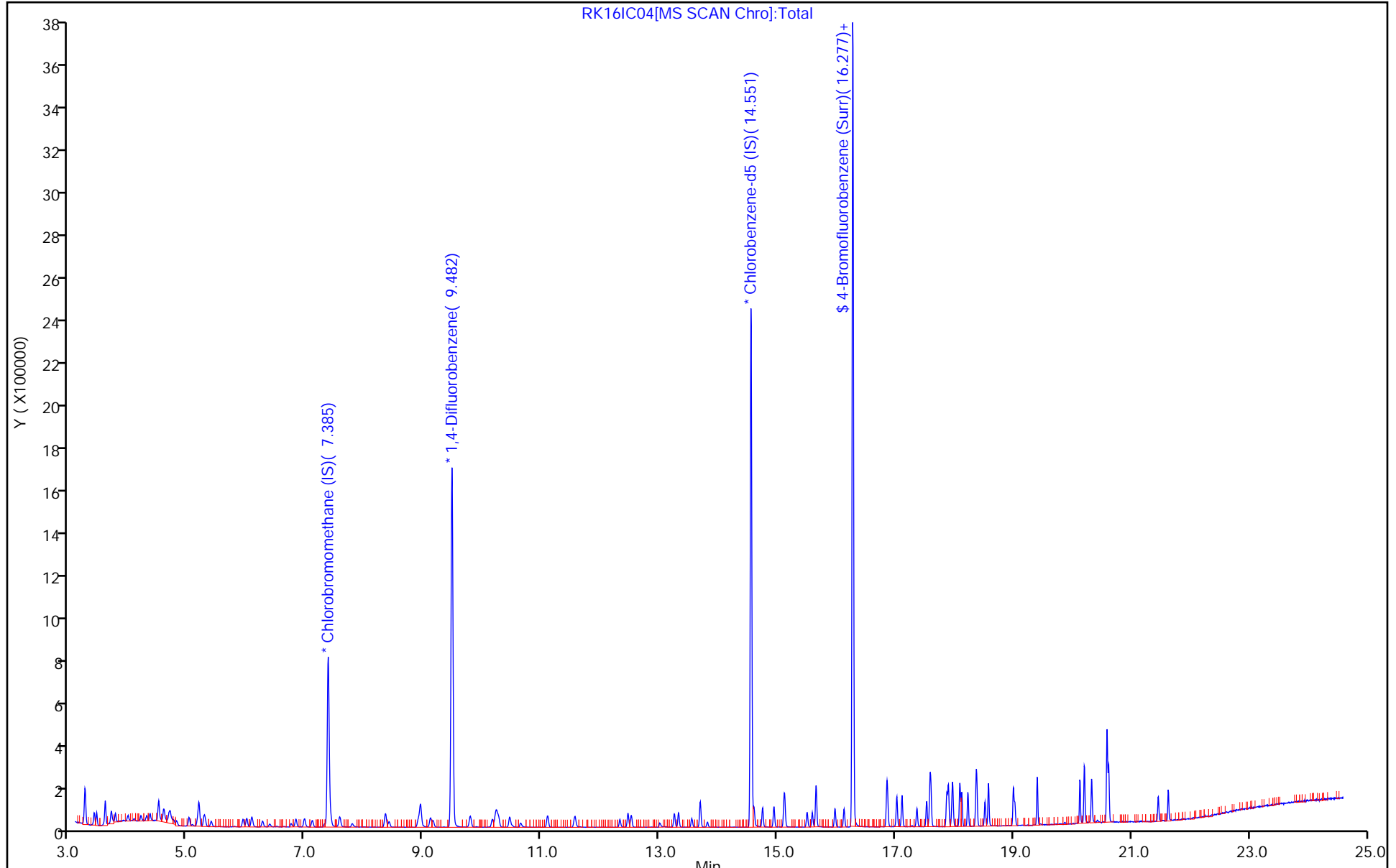
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D

Injection Date: 17-Nov-2018 00:20:30

Instrument ID: MR

Lims ID: IC L4

Client ID:

Operator ID:

ALS Bottle#:

3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

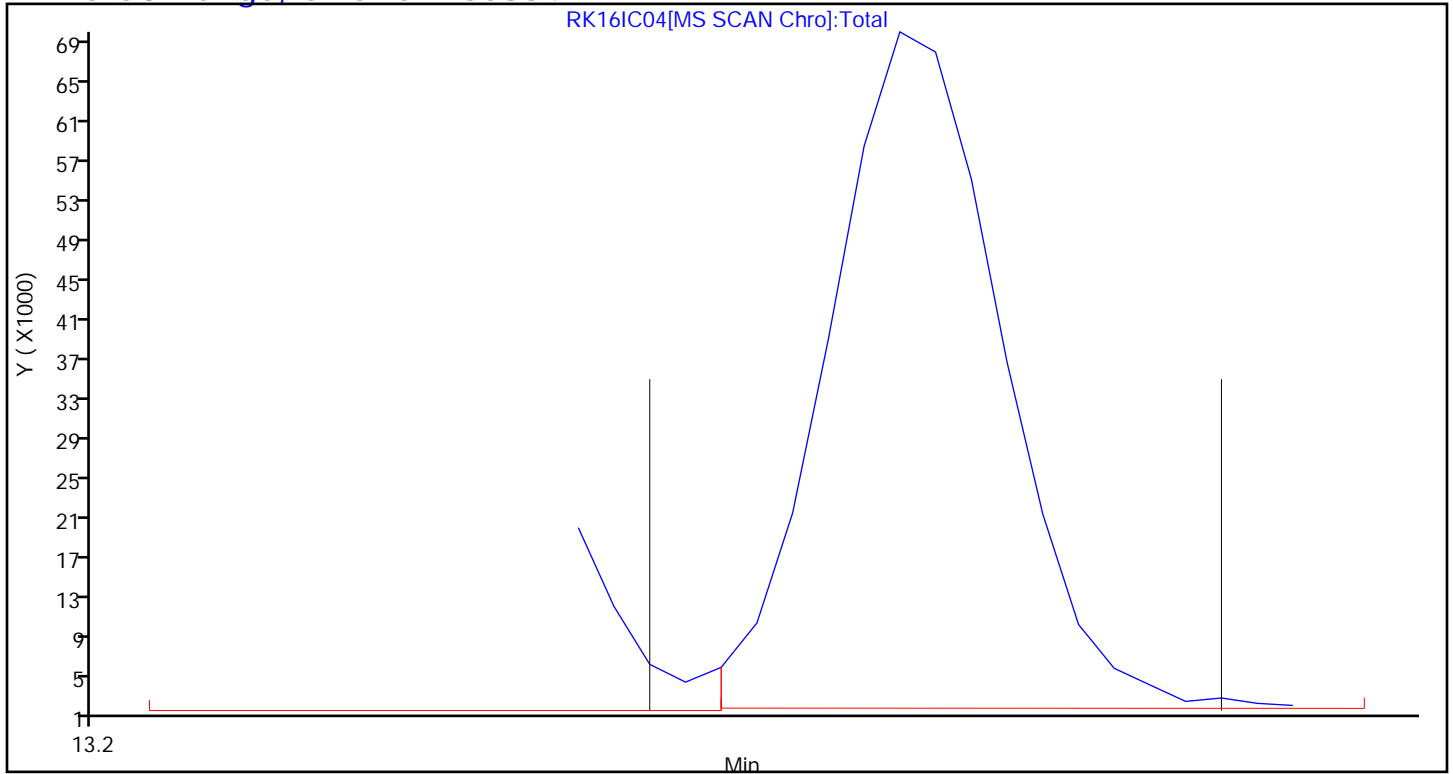
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK161C05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 17-Nov-2018 01:12:30 ALS Bottle#: 4 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-012
 Misc. Info.: 190395
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:05 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK161C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:25:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	275927	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1558367	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1354086	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	90	1170099	4.00	4.06	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	95	67965	0.4000	0.4151	
7 Propene	41	3.410	3.420	-0.010	48	20715	0.4000	0.4116	
8 Dichlorodifluoromethane	85	3.448	3.461	-0.013	100	146259	0.4000	0.4871	
9 Chloromethane	52	3.572	3.586	-0.014	99	9302	0.4000	0.4405	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.599	3.609	-0.010	90	98065	0.4000	0.4387	
11 Acetaldehyde	44	3.696	3.710	-0.014	93	45673	2.00	2.31	
12 Vinyl chloride	62	3.702	3.711	-0.009	85	28814	0.4000	0.3893	
13 Butadiene	54	3.766	3.780	-0.014	83	18132	0.4000	0.4040	
14 Butane	43	3.772	3.782	-0.010	78	33375	0.4000	0.4274	
15 Bromomethane	94	3.982	3.995	-0.013	96	35058	0.4000	0.4114	
16 Chloroethane	64	4.084	4.100	-0.016	95	13655	0.4000	0.3983	
17 Ethanol	31	4.209	4.222	-0.014	92	43508	2.00	2.10	
18 Vinyl bromide	106	4.300	4.315	-0.015	96	37233	0.4000	0.4146	
19 2-Methylbutane	43	4.359	4.369	-0.010	78	23067	0.4000	0.4180	
20 Acrolein	56	4.510	4.516	-0.006	28	6392	0.4000	0.3665	
21 Trichlorofluoromethane	101	4.505	4.517	-0.012	99	164680	0.4000	0.4038	
22 Acetonitrile	40	4.548	4.545	0.003	98	6701	0.4000	0.3756	
23 Acetone	58	4.597	4.605	-0.008	100	35521	1.20	1.24	
24 Pentane	72	4.683	4.693	-0.010	91	5613	0.4000	0.4046	
25 Isopropyl alcohol	45	4.705	4.716	-0.011	97	95103	1.20	1.22	
26 Ethyl ether	31	4.807	4.817	-0.010	72	19232	0.4000	0.4185	
27 1,1-Dichloroethene	96	5.023	5.033	-0.010	98	37945	0.4000	0.3908	
28 Acrylonitrile	53	5.087	5.097	-0.010	95	17259	0.4000	0.3986	
29 2-Methyl-2-propanol	59	5.168	5.173	-0.005	95	74242	0.4000	0.4020	
30 1,1,2-Trichloro-1,2,2-trif	101	5.190	5.199	-0.009	94	97989	0.4000	0.4071	
31 Methylene Chloride	84	5.276	5.290	-0.014	90	41401	0.4000	0.4485	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.298	5.309	-0.011	83	36262	0.4000	0.4015	
33 Carbon disulfide	76	5.395	5.410	-0.015	99	91945	0.4000	0.3990	
34 trans-1,2-Dichloroethene	96	5.939	5.951	-0.012	97	38175	0.4000	0.3854	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	53163	0.4000	0.4069	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	126834	0.4000	0.4025	
37 1,1-Dichloroethane	63	6.274	6.283	-0.009	98	65086	0.4000	0.3927	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	59429	0.4000	0.3713	
39 2-Butanone (MEK)	72	6.754	6.761	-0.007	97	14067	0.4000	0.3744	
40 Hexane	56	6.835	6.845	-0.010	81	23112	0.4000	0.4012	
171 Isopropyl ether	45	6.980	6.989	-0.009	85	80134	0.4000	0.4043	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	95	38474	0.4000	0.3852	
42 Ethyl acetate	43	7.320	7.330	-0.010	98	53019	0.4000	0.3820	
43 Chloroform	83	7.433	7.439	-0.006	89	104204	0.4000	0.3954	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	92	113240	0.4000	0.3965	
44 Tetrahydrofuran	42	7.784	7.793	-0.009	77	24371	0.4000	0.3987	
45 1,1,1-Trichloroethane	97	8.355	8.364	-0.009	94	130803	0.4000	0.3915	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	76773	0.4000	0.3892	
47 Benzene	78	8.911	8.920	-0.009	98	96837	0.4000	0.3814	
48 Cyclohexane	69	8.943	8.951	-0.008	91	14632	0.4000	0.3878	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	98	145724	0.4000	0.4080	
49 n-Butanol	31	8.981	8.969	0.012	66	5146	0.4000	0.2859	
51 2,3-Dimethylpentane	71	9.126	9.126	0.000	80	21116	0.4000	0.4017	
52 Thiophene	84	9.169	9.174	-0.005	92	57630	0.4000	0.3968	
53 Isooctane	57	9.795	9.798	-0.003	94	126672	0.4000	0.3898	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	75	31548	0.4000	0.3959	
55 n-Heptane	71	10.221	10.224	-0.003	82	32279	0.4000	0.3977	
56 Trichloroethene	130	10.243	10.250	-0.007	93	60473	0.4000	0.3951	
57 Dibromomethane	93	10.270	10.279	-0.009	94	53985	0.4000	0.3944	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	98	97237	0.4000	0.3789	
59 1,4-Dioxane	88	10.496	10.497	-0.001	88	15165	0.4000	0.3916	
60 Methyl methacrylate	41	10.642	10.649	-0.007	91	31857	0.4000	0.3594	
61 Methylcyclohexane	83	11.105	11.109	-0.004	92	61375	0.4000	0.3915	
62 4-Methyl-2-pentanone (MIBK)	43	11.548	11.552	-0.004	91	51070	0.4000	0.3615	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	97	59340	0.4000	0.3858	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	61443	0.4000	0.3884	
65 Toluene	91	12.470	12.471	-0.001	93	129198	0.4000	0.3981	
66 1,1,2-Trichloroethane	83	12.524	12.527	-0.003	93	35149	0.4000	0.4083	
69 2-Hexanone	58	13.003	13.003	0.000	95	24199	0.4000	0.3564	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	94584	0.4000	0.3769	
71 n-Octane	85	13.327	13.326	0.001	75	40600	0.4000	0.3928	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	73769	0.4000	0.3910	
73 Tetrachloroethene	129	13.688	13.695	-0.007	93	63725	0.4000	0.3964	
74 Chlorobenzene	112	14.605	14.606	-0.001	93	113462	0.4000	0.4003	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	80	76114	0.4000	0.3997	
76 Ethylbenzene	91	14.939	14.943	-0.004	100	189812	0.4000	0.4057	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	316153	0.8001	0.8239	
79 Bromoform	173	15.506	15.507	-0.001	96	89888	0.4000	0.3410	
80 Styrene	104	15.592	15.594	-0.002	97	91899	0.4000	0.3654	
82 o-Xylene	91	15.651	15.655	-0.004	96	169158	0.4000	0.4197	
81 n-Nonane	57	15.657	15.659	-0.003	73	65019	0.4000	0.4257	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	92	83793	0.4000	0.4091	
84 1,2,3-Trichloropropane	110	16.126	16.132	-0.006	94	40330	0.4000	0.3971	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	95	232238	0.4000	0.4049	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	64393	0.4000	0.4089	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	91	59552	0.4000	0.4086	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	243377	0.4000	0.4086	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	98748	0.4000	0.4052	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	88	77610	0.4000	0.3350	
91 n-Decane	57	17.533	17.532	0.001	97	87862	0.4000	0.4042	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	90	252400	0.4000	0.4252	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	231880	0.4000	0.4264	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	157370	0.4000	0.4008	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	302828	0.4000	0.4121	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	149421	0.4000	0.3562	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	93	157774	0.4000	0.4003	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	307780	0.4000	0.4150	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	98	237762	0.4000	0.4071	
100 Butylcyclohexane	83	18.229	18.232	-0.003	92	134022	0.4000	0.4173	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	153773	0.4000	0.3970	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	93	195256	0.4000	0.4053	
103 Indene	116	18.520	18.520	0.000	90	144394	0.4000	0.3651	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	247354	0.4000	0.4095	
105 Undecane	57	19.000	19.001	-0.001	88	102646	0.4000	0.3991	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	97	65829	0.4000	0.3490	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	96	265327	0.4000	0.3792	
110 Dodecane	57	20.127	20.128	-0.001	89	92125	0.4000	0.3420	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	147015	0.4000	0.3515	
113 Naphthalene	128	20.326	20.329	-0.003	98	247207	0.4000	0.2923	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	96	188387	0.4000	0.3875	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	138621	0.4000	0.3449	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	37139	0.4000	0.1383	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	96	44726	0.4000	0.1888	
A 120 C8 Range	1	13.343	(13.284-13.381)		0	326670	0.4000	0.3926	
S 121 Xylenes, Total	100				0		1.20	1.24	
S 122 1,2-Dichloroethene, Total	1				0		0.8001	0.7707	

Reagents:

40L6DQP_00007

Amount Added: 80.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC05.D

Injection Date: 17-Nov-2018 01:12:30

Instrument ID: MR

Operator ID:

Lims ID: IC L5

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

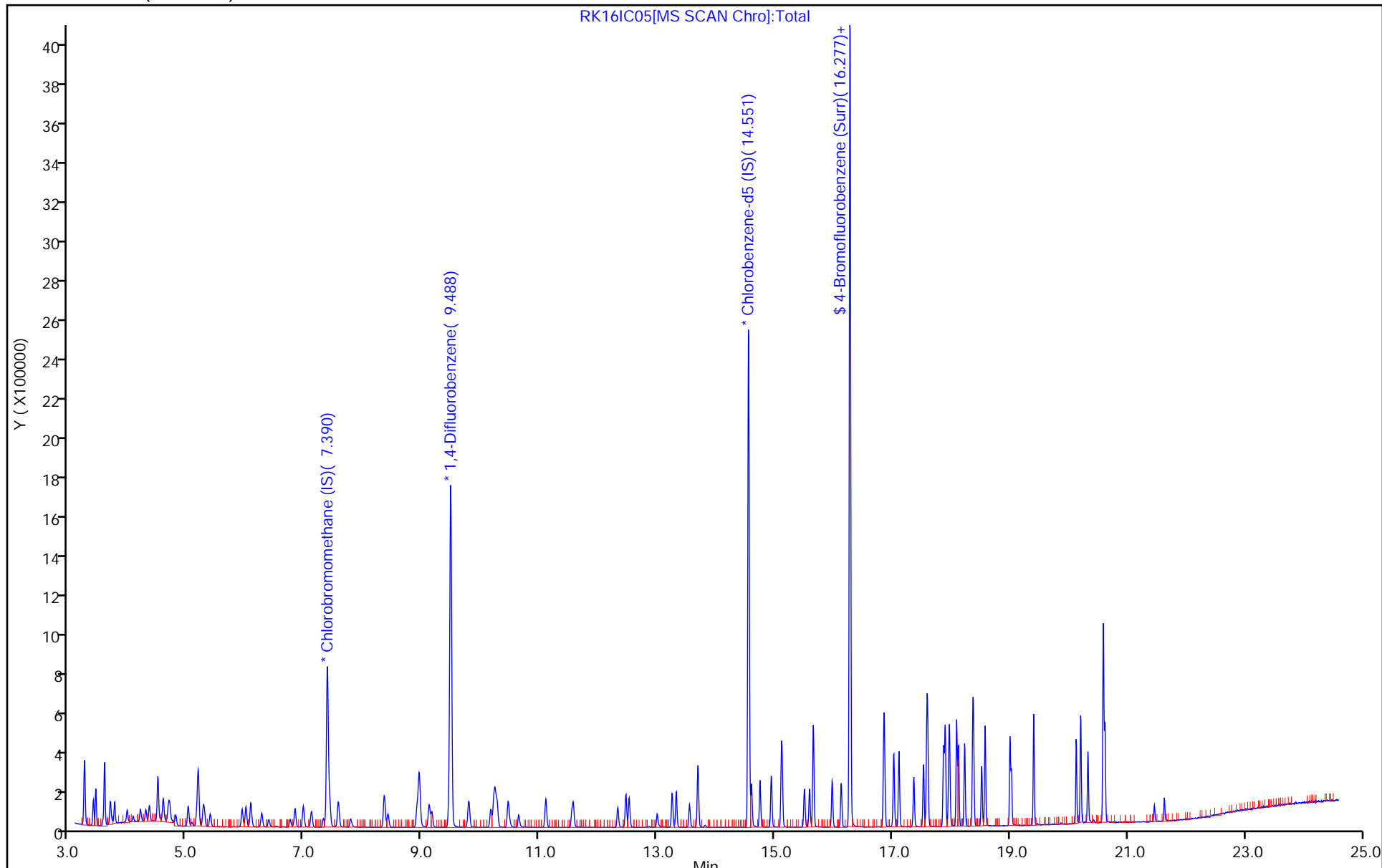
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC05.D

Injection Date: 17-Nov-2018 01:12:30

Instrument ID: MR

Lims ID: IC L5

Client ID:

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

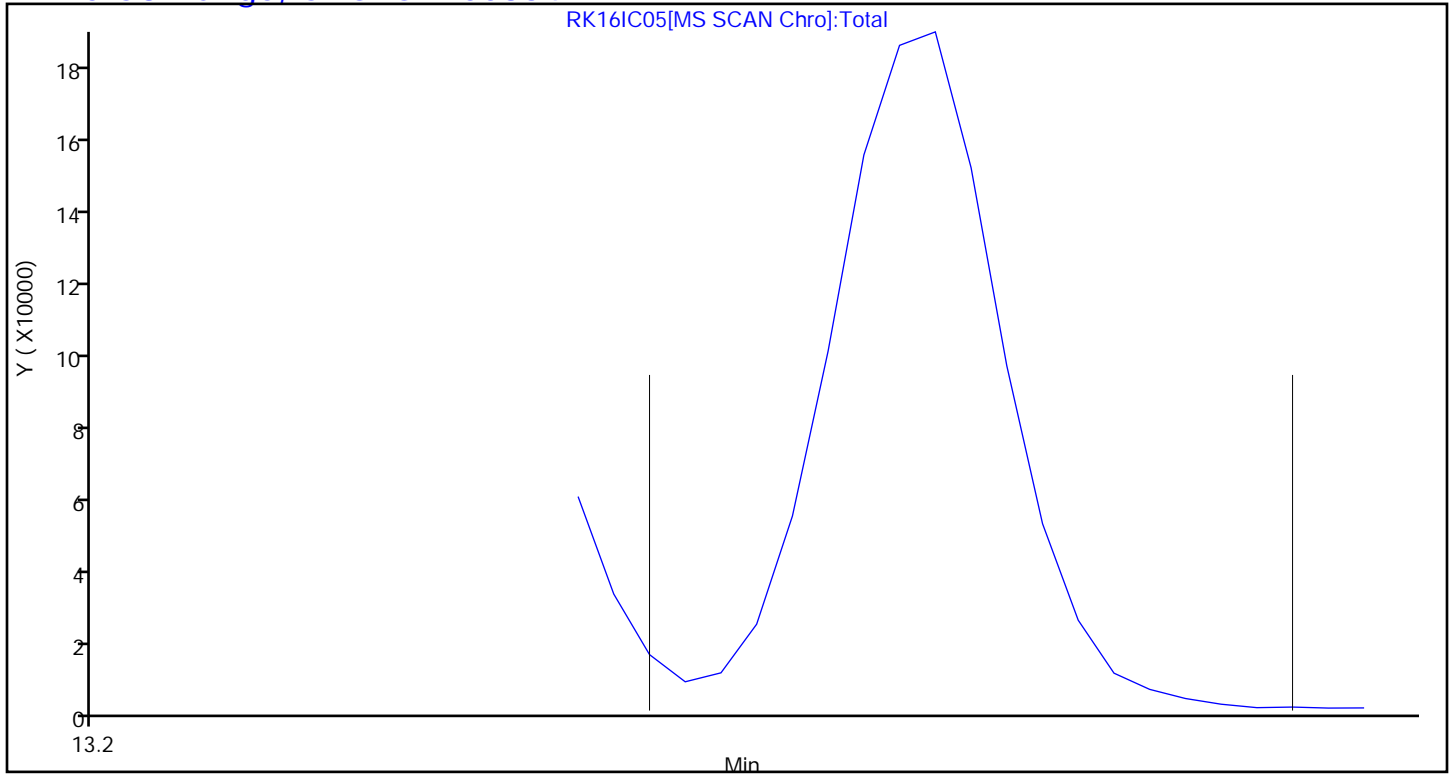
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 17-Nov-2018 02:05:30 ALS Bottle#: 4 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-013
 Misc. Info.: 190395
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:12 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:29:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.397	-0.007	70	284526	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1579313	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	90	1386926	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	90	1197793	4.00	4.06	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	95	165552	1.00	0.9806	
7 Propene	41	3.421	3.420	0.001	94	51364	1.00	0.9898	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	295289	1.00	0.9538	
9 Chloromethane	52	3.583	3.586	-0.003	98	20420	1.00	0.9379	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	89	220441	1.00	0.9564	
11 Acetaldehyde	44	3.702	3.710	-0.008	93	111533	5.00	5.48	
12 Vinyl chloride	62	3.707	3.711	-0.004	100	70331	1.00	0.9214	
13 Butadiene	54	3.777	3.780	-0.003	88	46402	1.00	1.00	
14 Butane	43	3.782	3.782	0.000	90	78896	1.00	0.9797	
15 Bromomethane	94	3.993	3.995	-0.002	95	85746	1.00	0.9758	
16 Chloroethane	64	4.095	4.100	-0.005	94	34804	1.00	0.9845	
17 Ethanol	31	4.208	4.222	-0.014	93	104882	5.00	4.92	
18 Vinyl bromide	106	4.311	4.315	-0.004	97	90610	1.00	0.9784	
19 2-Methylbutane	43	4.365	4.369	-0.004	79	56760	1.00	1.00	
20 Acrolein	56	4.505	4.516	-0.011	27	15289	1.00	0.8501	
21 Trichlorofluoromethane	101	4.510	4.517	-0.007	99	413497	1.00	0.9832	
22 Acetonitrile	40	4.543	4.545	-0.002	93	16703	1.00	0.9079	
23 Acetone	58	4.591	4.605	-0.014	100	89101	3.00	3.02	
24 Pentane	72	4.688	4.693	-0.005	92	14137	1.00	0.9884	
25 Isopropyl alcohol	45	4.699	4.716	-0.017	93	239341	3.00	2.97	
26 Ethyl ether	31	4.802	4.817	-0.015	72	46526	1.00	0.9819	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	97	96830	1.00	0.9671	
28 Acrylonitrile	53	5.082	5.097	-0.015	91	44072	1.00	0.9871	
29 2-Methyl-2-propanol	59	5.152	5.173	-0.021	91	190196	1.00	1.00	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	92	250984	1.00	1.01	
31 Methylene Chloride	84	5.281	5.290	-0.009	88	91431	1.00	0.9606	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	86	95603	1.00	1.03	
33 Carbon disulfide	76	5.406	5.410	-0.004	99	242543	1.00	1.02	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	97	99652	1.00	0.9758	
35 2-Methylpentane	43	6.009	6.011	-0.002	86	134813	1.00	1.00	
36 Methyl tert-butyl ether	73	6.080	6.094	-0.014	93	326320	1.00	1.00	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	98	165748	1.00	0.9699	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	159088	1.00	0.9638	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	98	38268	1.00	0.9878	
40 Hexane	56	6.840	6.845	-0.005	82	58239	1.00	0.9804	
171 Isopropyl ether	45	6.975	6.989	-0.014	86	203305	1.00	0.99	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	94	100389	1.00	0.9748	
42 Ethyl acetate	43	7.314	7.330	-0.016	98	143745	1.00	1.00	
43 Chloroform	83	7.433	7.439	-0.006	94	266010	1.00	0.9788	
173 Tert-butyl ethyl ether	59	7.568	7.580	-0.012	93	291639	1.00	0.99	
44 Tetrahydrofuran	42	7.778	7.793	-0.015	77	62926	1.00	1.00	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	94	339819	1.00	0.9864	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	199683	1.00	1.00	
47 Benzene	78	8.916	8.920	-0.004	98	249589	1.00	0.9699	
48 Cyclohexane	69	8.943	8.951	-0.008	84	39991	1.00	1.05	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	97	374679	1.00	1.04	
49 n-Butanol	31	8.959	8.969	-0.010	73	17690	1.00	0.9698	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	54415	1.00	1.02	
52 Thiophene	84	9.169	9.174	-0.005	94	149183	1.00	1.01	
53 Isooctane	57	9.795	9.798	-0.003	95	332582	1.00	1.01	
54 1,2-Dichloropropane	63	10.167	10.175	-0.008	73	80581	1.00	1.00	
55 n-Heptane	71	10.215	10.224	-0.009	82	84592	1.00	1.03	
56 Trichloroethene	130	10.248	10.250	-0.002	93	152289	1.00	0.9817	
57 Dibromomethane	93	10.275	10.279	-0.004	92	136587	1.00	0.9845	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	98	263754	1.00	1.01	
59 1,4-Dioxane	88	10.485	10.497	-0.012	88	38117	1.00	0.9712	
60 Methyl methacrylate	41	10.641	10.649	-0.008	91	88559	1.00	0.9859	
61 Methylcyclohexane	83	11.105	11.109	-0.004	92	160604	1.00	1.01	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	141224	1.00	0.9864	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	97	155584	1.00	1.00	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	165754	1.00	1.02	
65 Toluene	91	12.470	12.471	-0.001	93	336279	1.00	1.01	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	94	91510	1.00	1.04	
69 2-Hexanone	58	12.993	13.003	-0.010	94	68694	1.00	0.9878	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	271846	1.00	1.06	
71 n-Octane	85	13.322	13.326	-0.004	75	109095	1.00	1.03	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	199953	1.00	1.03	
73 Tetrachloroethene	129	13.694	13.695	-0.001	93	168145	1.00	1.02	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	295002	1.00	1.02	
75 2,3-Dimethylheptane	43	14.750	14.750	0.000	78	202047	1.00	1.04	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	491615	1.00	1.03	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	820994	2.00	2.09	
79 Bromoform	173	15.505	15.507	-0.002	96	263744	1.00	0.9769	
80 Styrene	104	15.592	15.594	-0.002	97	268745	1.00	1.04	
82 o-Xylene	91	15.651	15.655	-0.004	97	428791	1.00	1.04	
81 n-Nonane	57	15.656	15.659	-0.003	75	164273	1.00	1.05	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	93	223872	1.00	1.07	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	106933	1.00	1.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	589911	1.00	1.00	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	172077	1.00	1.07	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	93	156859	1.00	1.05	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	652888	1.00	1.07	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	267835	1.00	1.07	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	235120	1.00	0.99	
91 n-Decane	57	17.528	17.532	-0.004	97	237483	1.00	1.07	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	88	653325	1.00	1.07	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	597546	1.00	1.07	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	411115	1.00	1.02	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	799929	1.00	1.06	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	434461	1.00	1.01	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	95	419983	1.00	1.04	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	809499	1.00	1.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	636168	1.00	1.06	
100 Butylcyclohexane	83	18.229	18.232	-0.003	93	349539	1.00	1.06	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	400754	1.00	1.01	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	93	519916	1.00	1.05	
103 Indene	116	18.520	18.520	0.000	90	416558	1.00	1.03	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	652919	1.00	1.06	
105 Undecane	57	19.000	19.001	-0.001	87	279455	1.00	1.06	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	98	201092	1.00	1.04	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	736323	1.00	1.03	
110 Dodecane	57	20.127	20.128	-0.001	90	268129	1.00	0.9719	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	412431	1.00	0.9629	
113 Naphthalene	128	20.326	20.329	-0.003	98	719521	1.00	0.8307	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	96	517445	1.00	1.04	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	95	391665	1.00	0.9514	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	99	124366	1.00	0.4520	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	135206	1.00	0.5571	
A 120 C8 Range	1	13.340	(13.278-13.375)		0	855982	1.00	1.01	
S 121 Xylenes, Total	100				0		3.00	3.13	
S 122 1,2-Dichloroethene, Total	1				0		2.00	1.95	

Reagents:

40L6DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D

Injection Date: 17-Nov-2018 02:05:30

Instrument ID: MR

Operator ID:

Lims ID: IC L6

Worklist Smp#: 13

Client ID:

Purge Vol: 500.000 mL

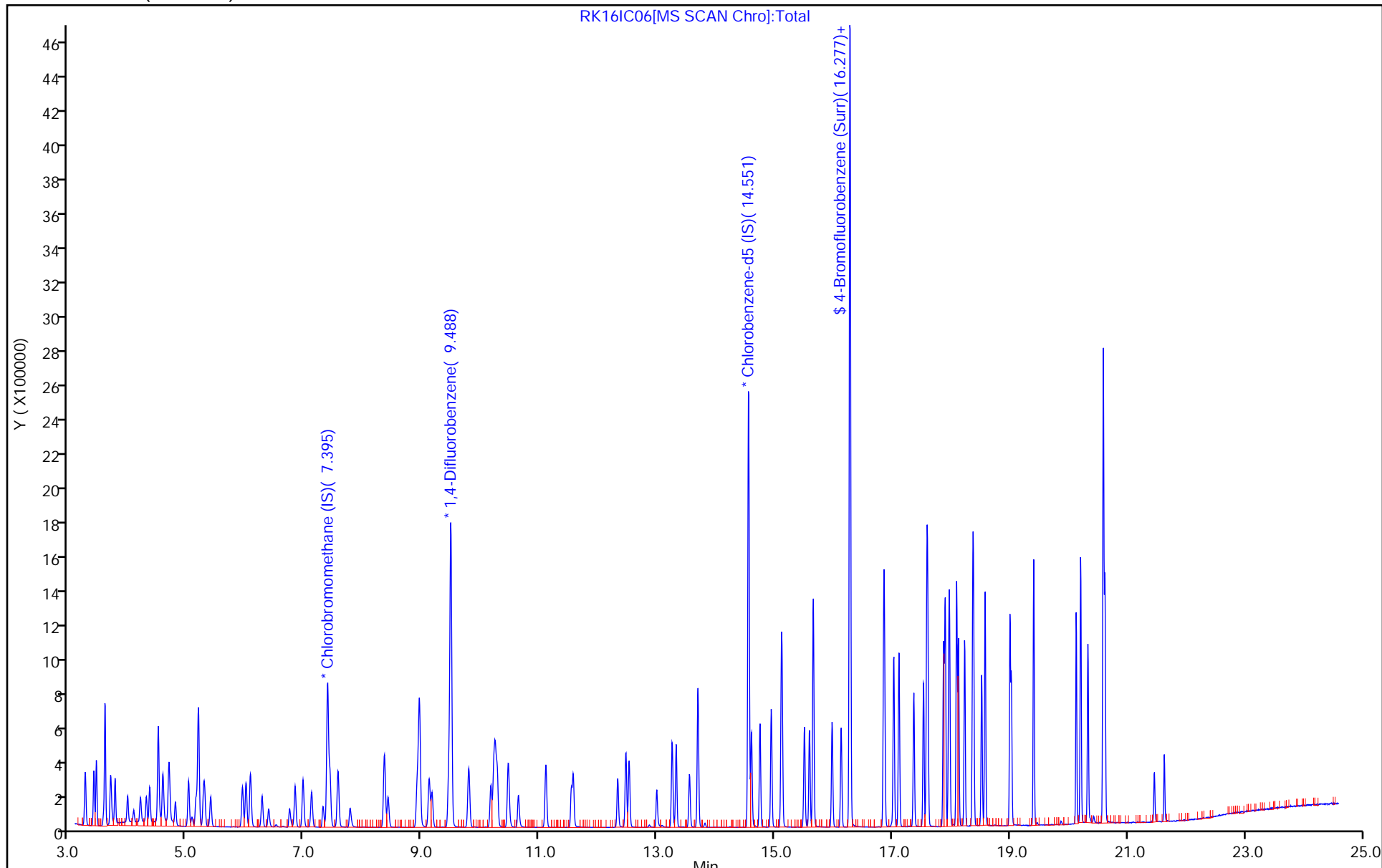
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D

Injection Date: 17-Nov-2018 02:05:30

Instrument ID: MR

Lims ID: IC L6

Client ID:

Operator ID:

ALS Bottle#:

4

Worklist Smp#:

13

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

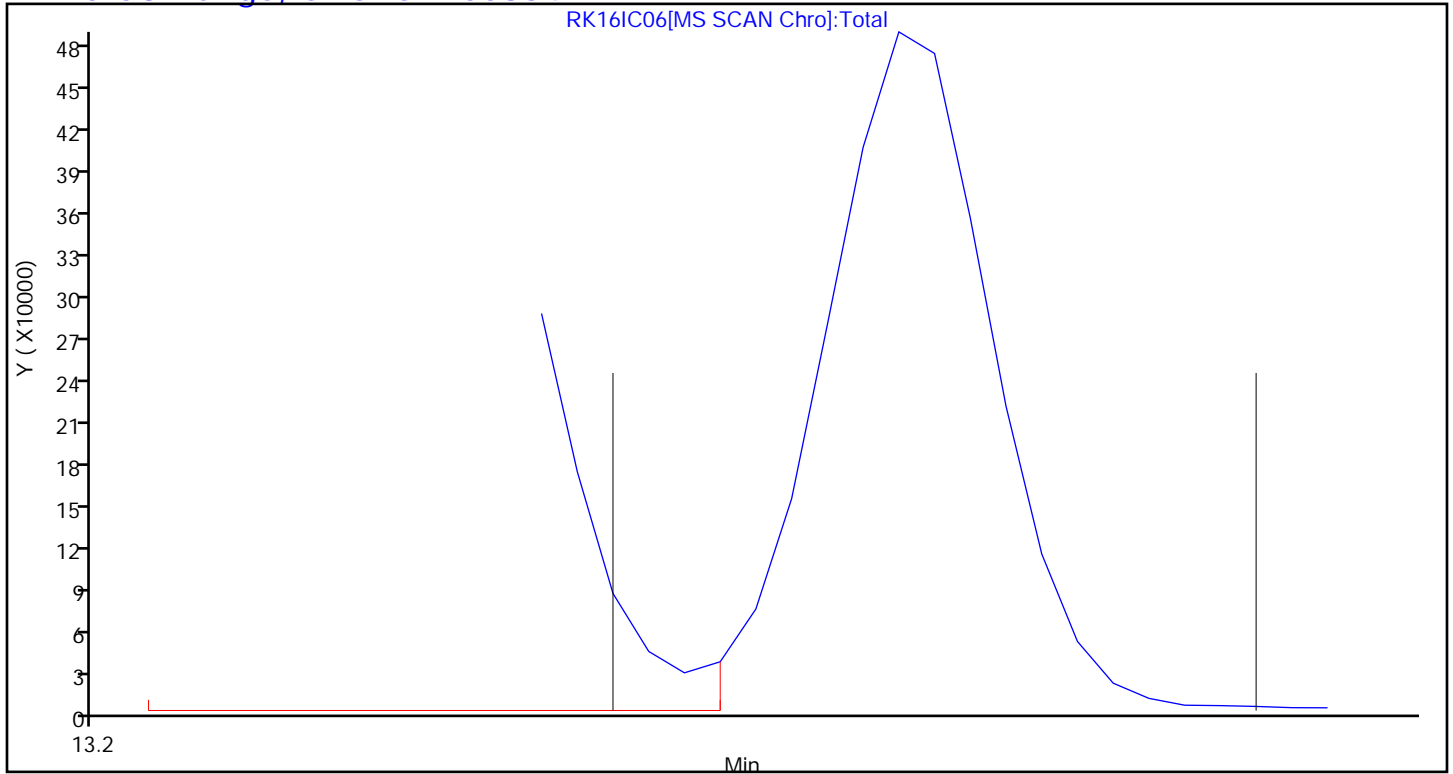
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 17-Nov-2018 02:58:30 ALS Bottle#: 5 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-014
 Misc. Info.: 190394
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:18 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:29:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.397	0.004	69	298864	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.494	-0.001	95	1677758	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	82	1487799	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	87	1269845	4.00	4.01	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	77	330784	2.00	1.87	
7 Propene	41	3.416	3.420	-0.004	49	103039	2.00	1.89	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	95	593041	2.00	1.82	
9 Chloromethane	52	3.583	3.586	-0.003	98	40844	2.00	1.79	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.604	3.609	-0.005	89	456323	2.00	1.88	
11 Acetaldehyde	44	3.701	3.710	-0.009	91	205358	10.0	9.61	
12 Vinyl chloride	62	3.707	3.711	-0.004	71	142840	2.00	1.78	
13 Butadiene	54	3.777	3.780	-0.003	82	94920	2.00	1.95	
14 Butane	43	3.777	3.782	-0.005	74	157806	2.00	1.87	
15 Bromomethane	94	3.993	3.995	-0.002	95	176496	2.00	1.91	
16 Chloroethane	64	4.095	4.100	-0.005	94	68833	2.00	1.85	
17 Ethanol	31	4.214	4.222	-0.008	93	224069	10.0	10.0	
18 Vinyl bromide	106	4.311	4.315	-0.004	95	186899	2.00	1.92	
19 2-Methylbutane	43	4.365	4.369	-0.004	78	115570	2.00	1.93	
20 Acrolein	56	4.505	4.516	-0.011	26	37440	2.00	1.98	
21 Trichlorofluoromethane	101	4.516	4.517	-0.001	99	844261	2.00	1.91	
22 Acetonitrile	40	4.548	4.545	0.003	68	35460	2.00	1.84	
23 Acetone	58	4.591	4.605	-0.014	92	173059	6.00	5.58	
24 Pentane	72	4.688	4.693	-0.005	91	28499	2.00	1.90	
25 Isopropyl alcohol	45	4.704	4.716	-0.012	91	509997	6.00	6.03	
26 Ethyl ether	31	4.802	4.817	-0.015	70	93310	2.00	1.87	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	96	202076	2.00	1.92	
28 Acrylonitrile	53	5.093	5.097	-0.004	84	91512	2.00	1.95	
29 2-Methyl-2-propanol	59	5.152	5.173	-0.021	53	409183	2.00	2.05	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	90	515989	2.00	1.98	
31 Methylene Chloride	84	5.287	5.290	-0.003	86	178076	2.00	1.78	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	82	193431	2.00	1.98	
33 Carbon disulfide	76	5.405	5.410	-0.005	99	499031	2.00	2.00	
34 trans-1,2-Dichloroethene	96	5.950	5.951	-0.001	95	206172	2.00	1.92	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	275324	2.00	1.95	
36 Methyl tert-butyl ether	73	6.080	6.094	-0.014	89	676752	2.00	1.98	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	98	342362	2.00	1.91	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	349189	2.00	2.01	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	66	79333	2.00	1.95	
40 Hexane	56	6.840	6.845	-0.005	80	121155	2.00	1.94	
171 Isopropyl ether	45	6.975	6.989	-0.014	86	426151	2.00	1.99	
41 cis-1,2-Dichloroethene	96	7.126	7.127	-0.001	93	213838	2.00	1.98	
42 Ethyl acetate	43	7.314	7.330	-0.016	98	303889	2.00	2.02	
43 Chloroform	83	7.438	7.439	-0.001	85	550434	2.00	1.93	
173 Tert-butyl ethyl ether	59	7.568	7.580	-0.012	92	613018	2.00	1.98	
44 Tetrahydrofuran	42	7.773	7.793	-0.020	77	130211	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.366	8.364	0.002	95	712345	2.00	1.97	
46 1,2-Dichloroethane	62	8.425	8.427	-0.002	78	414101	2.00	1.95	
47 Benzene	78	8.921	8.920	0.001	98	523482	2.00	1.91	
48 Cyclohexane	69	8.948	8.951	-0.003	71	82675	2.00	2.04	
50 Carbon tetrachloride	117	8.959	8.962	-0.003	96	786171	2.00	2.04	
49 n-Butanol	31	8.948	8.969	-0.021	25	40004	2.00	2.06	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	116636	2.00	2.06	
52 Thiophene	84	9.175	9.174	0.001	89	311873	2.00	1.99	
53 Isooctane	57	9.795	9.798	-0.003	95	691902	2.00	1.98	
54 1,2-Dichloropropane	63	10.172	10.175	-0.003	68	169011	2.00	1.97	
55 n-Heptane	71	10.221	10.224	-0.003	77	178041	2.00	2.04	
56 Trichloroethene	130	10.248	10.250	-0.002	93	324569	2.00	1.97	
57 Dibromomethane	93	10.280	10.279	0.001	91	283066	2.00	1.92	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	564189	2.00	2.04	
59 1,4-Dioxane	88	10.485	10.497	-0.012	40	86437	2.00	2.07	
60 Methyl methacrylate	41	10.641	10.649	-0.008	91	195505	2.00	2.05	
61 Methylcyclohexane	83	11.111	11.109	0.002	92	339768	2.00	2.01	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	311634	2.00	2.05	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	96	346235	2.00	2.09	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	369600	2.00	2.13	
65 Toluene	91	12.469	12.471	-0.002	93	715966	2.00	2.01	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	91	192987	2.00	2.04	
69 2-Hexanone	58	12.987	13.003	-0.016	94	156406	2.00	2.10	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	617174	2.00	2.24	
71 n-Octane	85	13.321	13.326	-0.005	74	233063	2.00	2.05	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	431756	2.00	2.08	
73 Tetrachloroethene	129	13.694	13.695	-0.001	94	358488	2.00	2.03	
74 Chlorobenzene	112	14.605	14.606	-0.001	85	622855	2.00	2.00	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	79	424515	2.00	2.03	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1050972	2.00	2.04	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1718390	4.00	4.08	
79 Bromoform	173	15.505	15.507	-0.002	96	631165	2.00	2.18	
80 Styrene	104	15.592	15.594	-0.002	93	593262	2.00	2.15	
82 o-Xylene	91	15.651	15.655	-0.004	77	897122	2.00	2.03	
81 n-Nonane	57	15.656	15.659	-0.003	72	340741	2.00	2.03	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.002	93	480219	2.00	2.13	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	225670	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1239416	2.00	1.97	
86 N-Propylbenzene	120	16.853	16.856	-0.003	96	356669	2.00	2.06	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	320641	2.00	2.00	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	1384436	2.00	2.12	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	551670	2.00	2.06	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	84	542707	2.00	2.13	
91 n-Decane	57	17.533	17.532	0.001	94	489862	2.00	2.05	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	65	1326146	2.00	2.03	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	93	1240172	2.00	2.08	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	863153	2.00	2.00	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	94	1651103	2.00	2.05	
96 Benzyl chloride	91	17.959	17.962	-0.003	96	984275	2.00	2.14	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	92	862511	2.00	1.99	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	92	1677824	2.00	2.06	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1329610	2.00	2.07	
100 Butylcyclohexane	83	18.229	18.232	-0.003	92	722497	2.00	2.05	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	829934	2.00	1.95	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	88	1063787	2.00	2.01	
103 Indene	116	18.520	18.520	0.000	83	909289	2.00	2.09	
104 n-Butylbenzene	91	18.579	18.580	-0.001	95	1341073	2.00	2.02	
105 Undecane	57	19.000	19.001	-0.001	86	588913	2.00	2.08	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	99	458234	2.00	2.21	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	94	1609444	2.00	2.09	
110 Dodecane	57	20.127	20.128	-0.001	90	664765	2.00	2.25	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	93	944306	2.00	2.06	
113 Naphthalene	128	20.326	20.329	-0.003	98	1821564	2.00	1.96	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	85	1070672	2.00	2.00	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	93	908417	2.00	2.06	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	707384	2.00	2.40	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	641933	2.00	2.47	
A 120 C8 Range	1	13.340	(13.278-13.375)		0	1781529	2.00	1.99	
S 121 Xylenes, Total	100				0		6.00	6.10	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.90	

Reagents:

40L7DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D

Injection Date: 17-Nov-2018 02:58:30

Instrument ID: MR

Operator ID:

Lims ID: ICIS L7

Worklist Smp#: 14

Client ID:

Purge Vol: 500.000 mL

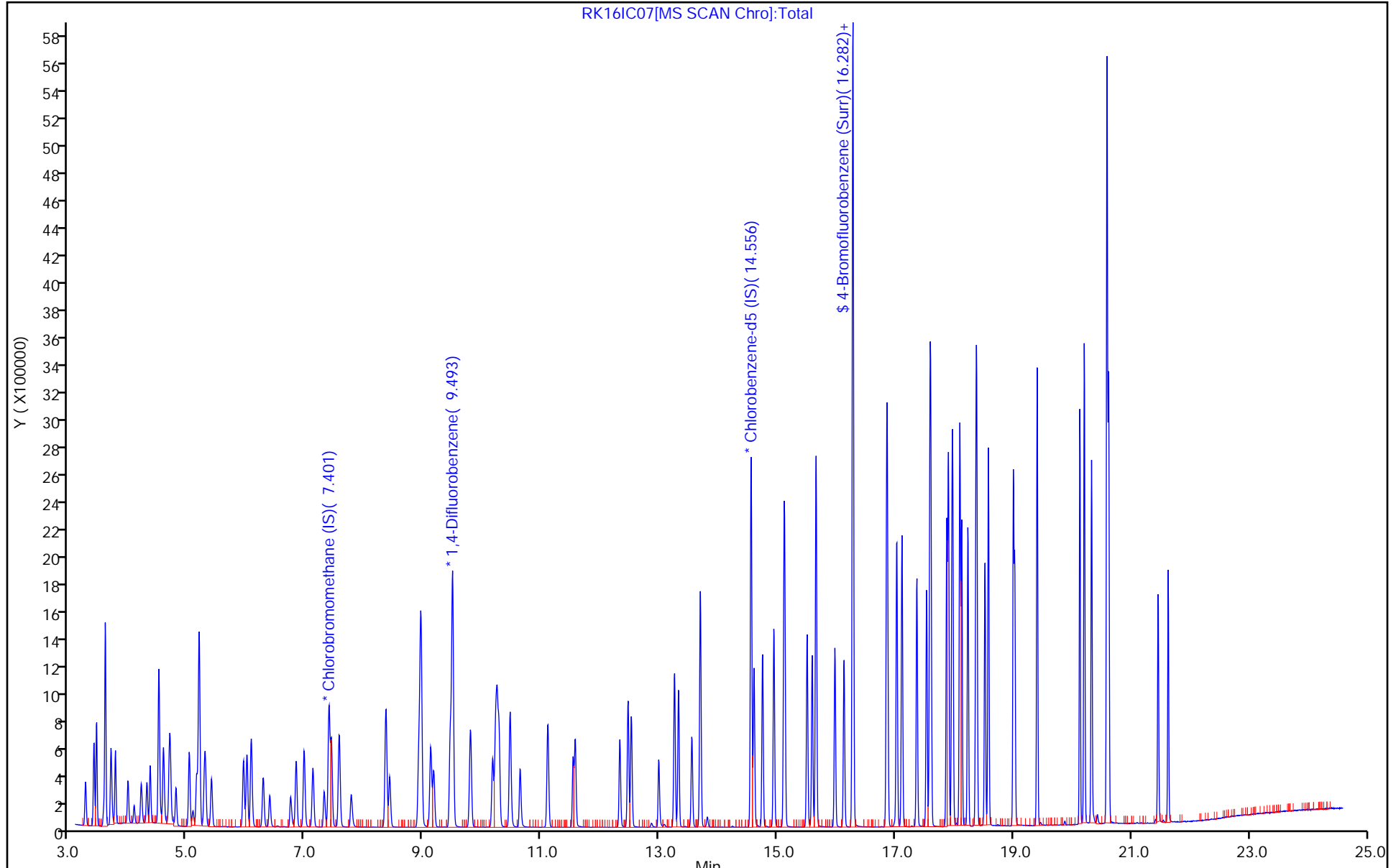
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



RK16IC07[MS SCAN Chro]:Total

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D

Injection Date: 17-Nov-2018 02:58:30

Instrument ID: MR

Lims ID: ICIS L7

Client ID:

Operator ID:

ALS Bottle#: 5

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

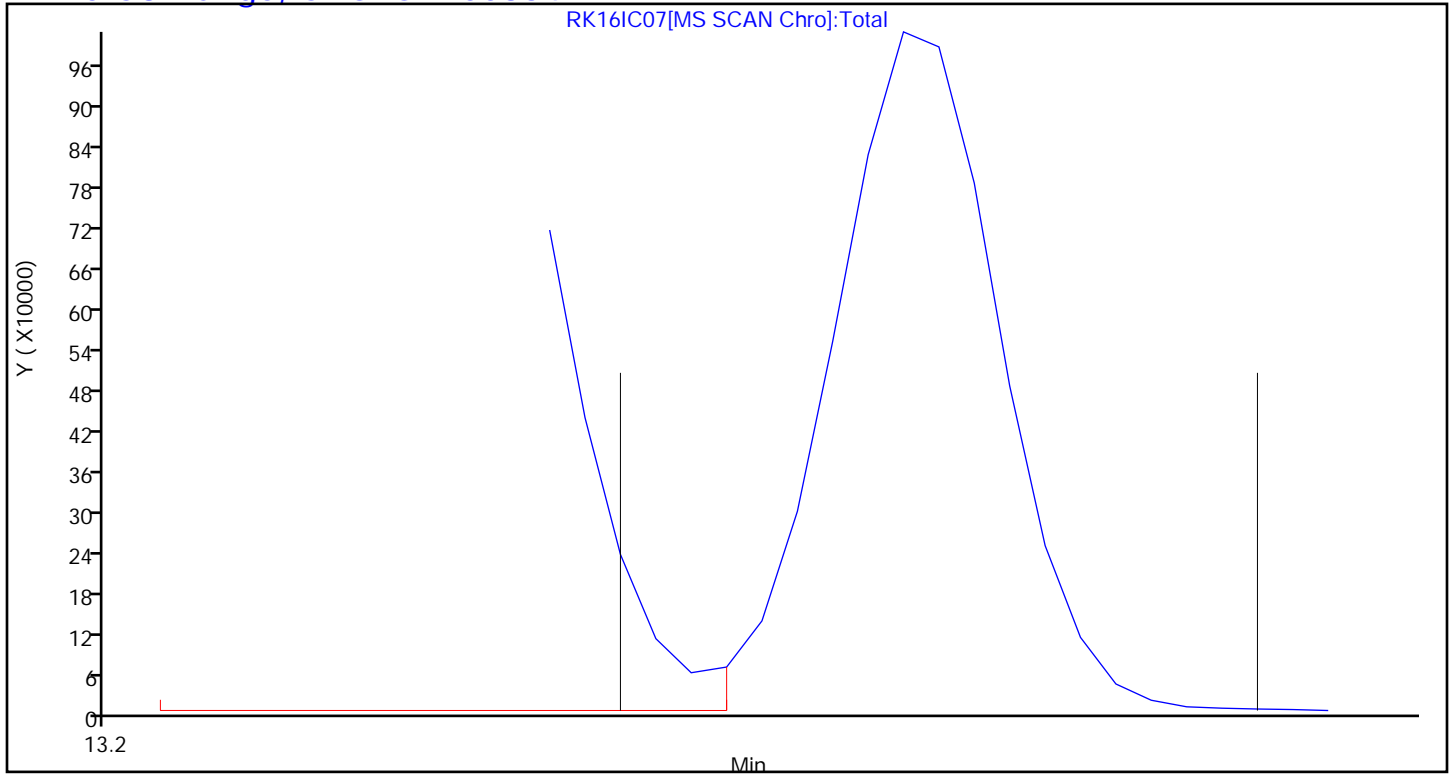
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 17-Nov-2018 03:51:30 ALS Bottle#: 6 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-015
 Misc. Info.: 190393
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:24 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:34:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.397	0.009	81	299965	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.498	9.494	0.004	95	1676956	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.557	14.555	0.001	89	1513773	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	84	1293730	4.00	4.02	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	96	670931	4.00	3.77	
7 Propene	41	3.421	3.420	0.001	91	205301	4.00	3.75	
8 Dichlorodifluoromethane	85	3.464	3.461	0.003	100	1212691	4.00	3.72	
9 Chloromethane	52	3.588	3.586	0.002	98	80675	4.00	3.51	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	97	932912	4.00	3.84	
11 Acetaldehyde	44	3.707	3.710	-0.003	94	415146	20.0	19.4	
12 Vinyl chloride	62	3.712	3.711	0.001	99	286294	4.00	3.56	
13 Butadiene	54	3.783	3.780	0.003	88	191280	4.00	3.92	
14 Butane	43	3.783	3.782	0.001	89	323819	4.00	3.81	
15 Bromomethane	94	3.998	3.995	0.003	96	354225	4.00	3.82	
16 Chloroethane	64	4.106	4.100	0.006	96	140181	4.00	3.76	
17 Ethanol	31	4.230	4.222	0.008	93	447098	20.0	19.9	
18 Vinyl bromide	106	4.322	4.315	0.007	96	380924	4.00	3.90	
19 2-Methylbutane	43	4.370	4.369	0.001	79	228167	4.00	3.80	
20 Acrolein	56	4.516	4.516	0.000	97	74788	4.00	3.94	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	99	1697186	4.00	3.83	
22 Acetonitrile	40	4.559	4.545	0.014	94	84531	4.00	4.36	
23 Acetone	58	4.602	4.605	-0.003	100	340521	12.0	10.9	
24 Pentane	72	4.699	4.693	0.006	92	58302	4.00	3.87	
25 Isopropyl alcohol	45	4.715	4.716	-0.001	93	1016357	12.0	12.0	
26 Ethyl ether	31	4.812	4.817	-0.005	71	189800	4.00	3.80	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	97	414812	4.00	3.93	
28 Acrylonitrile	53	5.104	5.097	0.007	91	186041	4.00	3.95	
29 2-Methyl-2-propanol	59	5.163	5.173	-0.010	92	809098	4.00	4.03	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	93	1031649	4.00	3.94	
31 Methylene Chloride	84	5.298	5.290	0.008	88	345898	4.00	3.45	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	85	385054	4.00	3.92	
33 Carbon disulfide	76	5.416	5.410	0.006	99	997332	4.00	3.98	
34 trans-1,2-Dichloroethene	96	5.961	5.951	0.010	97	421281	4.00	3.91	
35 2-Methylpentane	43	6.015	6.011	0.004	84	553915	4.00	3.90	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	1373906	4.00	4.01	
37 1,1-Dichloroethane	63	6.295	6.283	0.012	98	695373	4.00	3.86	
38 Vinyl acetate	43	6.403	6.402	0.001	98	730693	4.00	4.20	
39 2-Butanone (MEK)	72	6.759	6.761	-0.002	97	165553	4.00	4.05	
40 Hexane	56	6.845	6.845	0.000	81	248691	4.00	3.97	
171 Isopropyl ether	45	6.986	6.989	-0.003	86	863733	4.00	4.01	
41 cis-1,2-Dichloroethene	96	7.137	7.127	0.010	94	429081	4.00	3.95	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	632910	4.00	4.20	
43 Chloroform	83	7.449	7.439	0.010	96	1123349	4.00	3.92	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	92	1274961	4.00	4.11	
44 Tetrahydrofuran	42	7.778	7.793	-0.015	76	266070	4.00	4.00	
45 1,1,1-Trichloroethane	97	8.371	8.364	0.007	95	1454125	4.00	4.00	
46 1,2-Dichloroethane	62	8.436	8.427	0.009	97	837957	4.00	3.95	
47 Benzene	78	8.927	8.920	0.007	98	1050705	4.00	3.85	
48 Cyclohexane	69	8.954	8.951	0.003	91	167839	4.00	4.13	
50 Carbon tetrachloride	117	8.965	8.962	0.003	98	1553305	4.00	4.04	
49 n-Butanol	31	8.948	8.969	-0.021	65	82457	4.00	4.26	
51 2,3-Dimethylpentane	71	9.132	9.126	0.006	83	235995	4.00	4.17	
52 Thiophene	84	9.180	9.174	0.006	94	639928	4.00	4.09	
53 Isooctane	57	9.800	9.798	0.002	94	1407509	4.00	4.02	
54 1,2-Dichloropropane	63	10.178	10.175	0.003	77	344383	4.00	4.02	
55 n-Heptane	71	10.226	10.224	0.002	83	361284	4.00	4.14	
56 Trichloroethene	130	10.253	10.250	0.003	96	707793	4.00	4.30	
57 Dibromomethane	93	10.286	10.279	0.007	91	586890	4.00	3.98	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	1174659	4.00	4.25	
59 1,4-Dioxane	88	10.485	10.497	-0.012	86	173912	4.00	4.17	
60 Methyl methacrylate	41	10.642	10.649	-0.007	91	413937	4.00	4.34	
61 Methylcyclohexane	83	11.111	11.109	0.002	92	689164	4.00	4.09	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	659470	4.00	4.34	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	95	719012	4.00	4.34	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	783879	4.00	4.43	
65 Toluene	91	12.470	12.471	-0.001	93	1469948	4.00	4.05	
66 1,1,2-Trichloroethane	83	12.524	12.527	-0.003	94	395113	4.00	4.11	
69 2-Hexanone	58	12.987	13.003	-0.016	95	338784	4.00	4.46	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	1311808	4.00	4.68	
71 n-Octane	85	13.327	13.326	0.001	74	477723	4.00	4.13	
72 Ethylene Dibromide	107	13.554	13.551	0.003	97	900939	4.00	4.27	
73 Tetrachloroethene	129	13.694	13.695	-0.001	94	719415	4.00	4.00	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	1278293	4.00	4.03	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	77	866249	4.00	4.07	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	2145561	4.00	4.10	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	3492522	8.00	8.14	
79 Bromoform	173	15.506	15.507	-0.001	96	1405685	4.00	4.77	
80 Styrene	104	15.592	15.594	-0.002	98	1255220	4.00	4.46	
82 o-Xylene	91	15.657	15.655	0.002	97	1814388	4.00	4.03	
81 n-Nonane	57	15.657	15.659	-0.002	75	686883	4.00	4.02	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	93	935594	4.00	4.09	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	461156	4.00	4.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	97	2553866	4.00	3.98	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	735475	4.00	4.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	653681	4.00	4.01	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	2809081	4.00	4.22	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	1121740	4.00	4.12	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	1140621	4.00	4.40	
91 n-Decane	57	17.533	17.532	0.001	97	987208	4.00	4.06	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	2644216	4.00	3.98	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	2478370	4.00	4.08	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	1751738	4.00	3.99	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	3316313	4.00	4.04	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	2125520	4.00	4.53	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	95	1725619	4.00	3.92	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	3366403	4.00	4.06	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	2652674	4.00	4.06	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	1440937	4.00	4.01	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	95	1669523	4.00	3.86	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	93	2153540	4.00	4.00	
103 Indene	116	18.520	18.520	0.000	90	1898638	4.00	4.29	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	2705337	4.00	4.01	
105 Undecane	57	19.000	19.001	-0.001	87	1182131	4.00	4.11	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	98	986255	4.00	4.68	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	3260653	4.00	4.17	
110 Dodecane	57	20.127	20.128	-0.001	90	1343815	4.00	4.46	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	1940306	4.00	4.15	
113 Naphthalene	128	20.326	20.329	-0.003	98	3797602	4.00	4.02	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	95	2166873	4.00	3.99	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	94	1865471	4.00	4.15	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	1636134	4.00	5.45	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	1437560	4.00	5.43	
A 120 C8 Range	1	13.340	(13.279-13.376)		0	3620641	4.00	4.04	
S 121 Xylenes, Total	100				0		12.0	12.2	
S 122 1,2-Dichloroethene, Total	1				0		8.00	7.86	

Reagents:

40L8DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Injection Date: 17-Nov-2018 03:51:30

Instrument ID: MR

Operator ID:

Lims ID: IC L8

Worklist Smp#: 15

Client ID:

Purge Vol: 500.000 mL

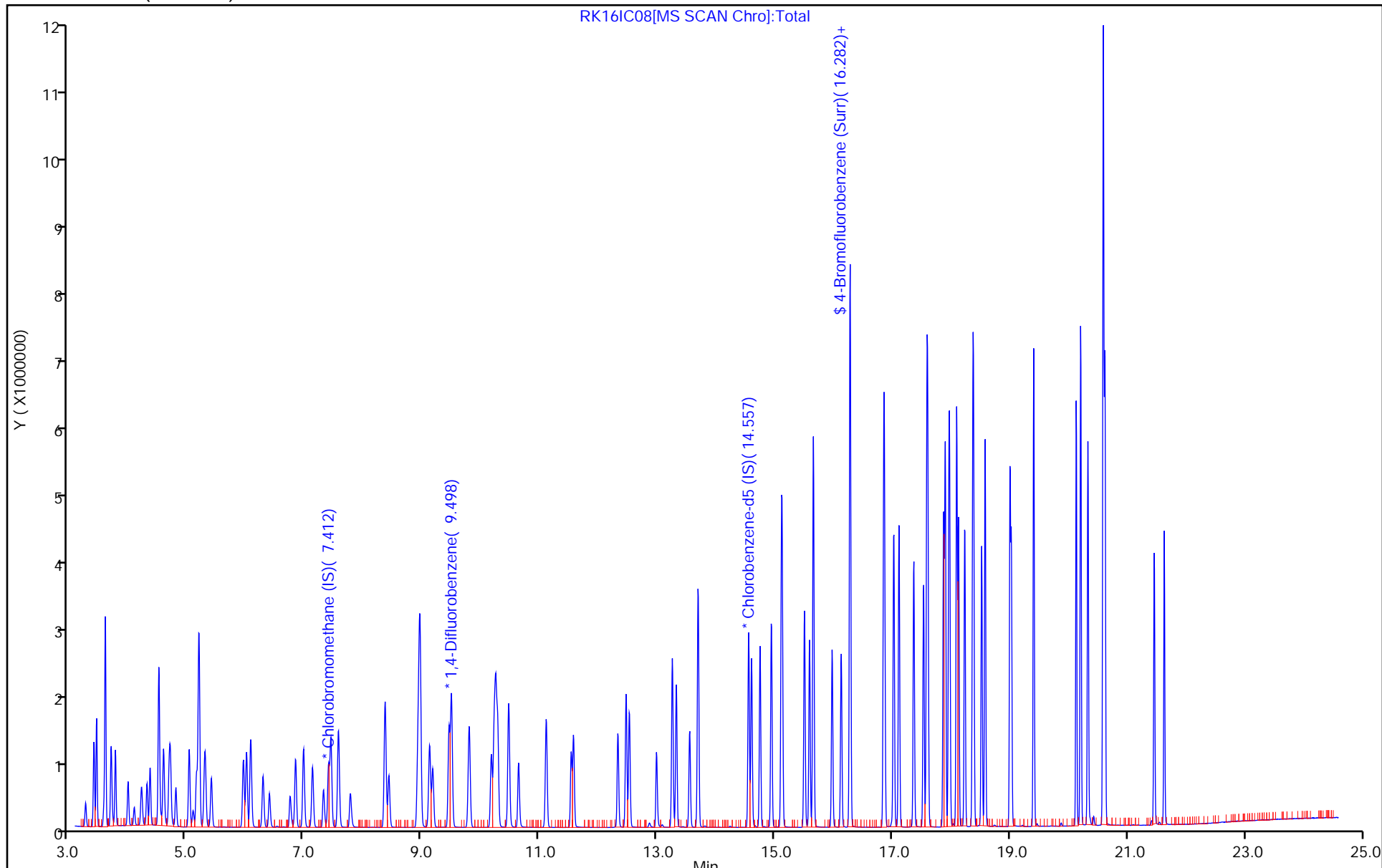
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Injection Date: 17-Nov-2018 03:51:30

Instrument ID: MR

Lims ID: IC L8

Client ID:

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

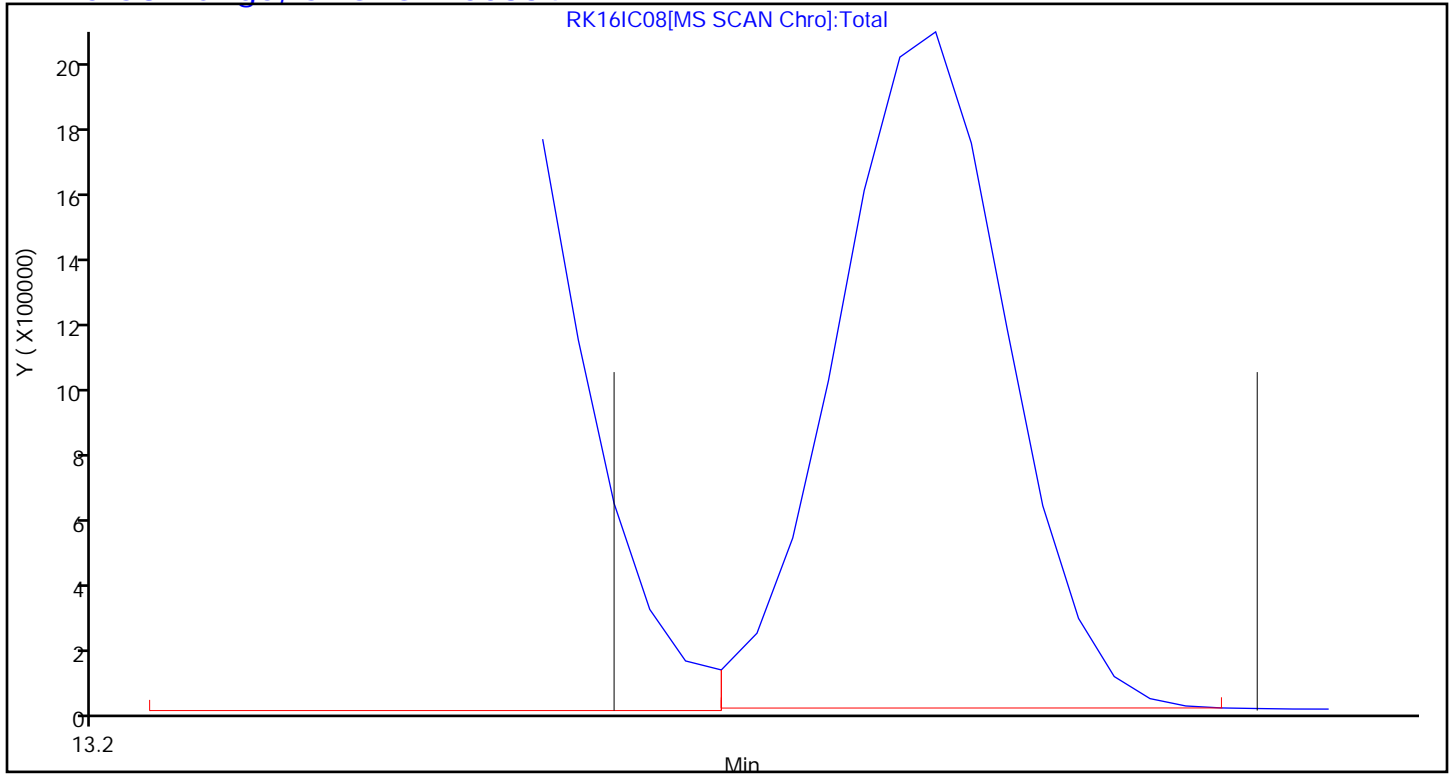
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 06/21/2017 17:00
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/21/2017 22:43
 Lab File ID: GA11ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.7395	0.6739			2.00	-8.9	35.0
3-Methylthiophene	Ave	0.7319	0.6589			2.00	-10.0	35.0
2-Ethylthiophene	Ave	0.9478	0.8011			2.00	-15.5	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.8235			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.8516	0.6095			2.00	-28.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.167	0.8355			2.00	-28.4	35.0
Benzo (b) thiophene	Ave	1.068	0.7208			2.00	-32.5	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11ICV.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 11-Jan-2019 23:17:30 ALS Bottle#: 6 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-018
 Misc. Info.: S83
 Operator ID: 007126 Instrument ID: MG
 Sublist:

Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:47 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa Date: 14-Jan-2019 17:26:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	97	423755	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2327828	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	91	2182908	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.718	0.001	86	1777994	4.00	3.97	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	559021	2.00	2.01	
7 Propene	41	3.834	3.838	-0.004	98	314582	2.00	2.03	
8 Dichlorodifluoromethane	85	3.888	3.894	-0.006	100	919539	2.00	2.05	
9 Chloromethane	52	4.088	4.091	-0.003	99	102368	2.00	2.08	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	93	545988	2.00	2.08	
12 Vinyl chloride	62	4.271	4.277	-0.006	98	347000	2.00	2.03	
11 Acetaldehyde	44	4.265	4.278	-0.013	93	503377	10.0	7.94	
13 Butane	43	4.368	4.373	-0.005	87	595081	2.00	2.07	
14 Butadiene	54	4.368	4.375	-0.007	65	273211	2.00	2.07	
15 Bromomethane	94	4.718	4.722	-0.004	98	291645	2.00	1.98	
16 Chloroethane	64	4.875	4.879	-0.004	91	166315	2.00	2.02	
17 Ethanol	31	5.026	5.064	-0.038	98	540634	10.0	7.25	
18 Vinyl bromide	106	5.198	5.205	-0.007	99	291743	2.00	2.13	
19 2-Methylbutane	43	5.252	5.256	-0.004	92	423451	2.00	2.05	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	871181	2.00	1.98	
21 Acrolein	56	5.511	5.526	-0.015	96	57965	2.00	1.53	
22 Acetonitrile	40	5.581	5.603	-0.022	99	93536	2.00	1.58	
23 Acetone	58	5.651	5.666	-0.015	99	110896	2.00	1.74	
24 Pentane	72	5.721	5.725	-0.004	98	59420	2.00	2.11	
25 Isopropyl alcohol	45	5.786	5.840	-0.054	97	413062	2.00	2.43	
26 Ethyl ether	31	5.921	5.943	-0.022	91	311636	2.00	1.71	
27 1,1-Dichloroethene	96	6.234	6.242	-0.008	95	311458	2.00	2.08	
28 Acrylonitrile	53	6.358	6.375	-0.017	95	182005	2.00	1.76	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	93	655024	2.00	2.02	
30 2-Methyl-2-propanol	59	6.439	6.534	-0.095	96	512083	2.00	2.20	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	298505	2.00	1.72	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	95	335507	2.00	1.81	
33 Carbon disulfide	76	6.773	6.778	-0.005	100	923248	2.00	2.03	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	306868	2.00	2.05	
35 2-Methylpentane	43	7.463	7.468	-0.005	96	797621	2.00	1.86	
36 Methyl tert-butyl ether	73	7.603	7.643	-0.040	97	712180	2.00	1.71	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	597722	2.00	1.94	
38 Vinyl acetate	43	8.002	8.016	-0.014	100	695958	2.00	1.63	
40 Hexane	56	8.477	8.480	-0.003	77	278451	2.00	2.02	
39 2-Butanone (MEK)	72	8.472	8.499	-0.027	96	115958	2.00	1.72	
41 Isopropyl ether	45	8.649	8.679	-0.030	97	961415	2.00	1.82	
42 cis-1,2-Dichloroethene	96	8.903	8.906	-0.003	97	310749	2.00	2.03	
43 Ethyl acetate	43	9.102	9.131	-0.029	98	563610	2.00	1.61	
44 Chloroform	83	9.253	9.261	-0.008	97	672705	2.00	1.90	
45 Tert-butyl ethyl ether	59	9.350	9.389	-0.039	96	809494	2.00	1.66	
46 Tetrahydrofuran	42	9.685	9.725	-0.040	94	314199	2.00	1.67	
47 1,1,1-Trichloroethane	97	10.300	10.303	-0.003	96	734755	2.00	1.92	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	98	445746	2.00	1.96	
49 Cyclohexane	69	10.882	10.888	-0.006	95	166660	2.00	2.18	
50 Benzene	78	10.887	10.893	-0.006	98	889085	2.00	2.14	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	98	749968	2.00	2.17	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	91	227526	2.00	2.07	
51 n-Butanol	31	10.952	11.004	-0.052	78	125495	2.00	2.41	
54 Thiophene	84	11.162	11.164	-0.002	97	483942	2.00	2.00	
55 Isooctane	57	11.626	11.632	-0.006	98	1667827	2.00	2.05	
56 n-Heptane	71	11.993	11.995	-0.002	94	338068	2.00	2.02	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	87	307526	2.00	1.88	
58 Trichloroethene	130	12.122	12.124	-0.002	95	394652	2.00	2.08	
59 Dibromomethane	93	12.214	12.216	-0.002	94	344072	2.00	2.00	
60 Dichlorobromomethane	83	12.354	12.354	0.000	98	685664	2.00	2.02	
61 1,4-Dioxane	88	12.386	12.421	-0.035	98	97309	2.00	2.01	
62 Methyl methacrylate	41	12.440	12.453	-0.013	90	361838	2.00	1.73	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	714807	2.00	2.51	
64 4-Methyl-2-pentanone (MIBK)	43	13.298	13.321	-0.023	99	643830	2.00	1.96	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	98	490279	2.00	1.97	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	97	456019	2.00	1.94	
67 Toluene	91	14.144	14.144	0.000	93	902637	2.00	1.88	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	99	277868	2.00	1.90	
76 2-Methylthiophene	97	14.295	14.295	0.000	98	735484	NC	NC	
77 3-Methylthiophene	97	14.495	14.495	0.000	99	719176	NC	NC	
69 2-Hexanone	58	14.608	14.631	-0.023	91	305613	2.00	2.12	
70 n-Octane	85	14.802	14.804	-0.002	96	361178	2.00	2.09	
71 Chlorodibromomethane	129	14.915	14.920	-0.005	98	628573	2.00	2.12	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	501417	2.00	1.97	
73 Tetrachloroethene	129	15.271	15.272	-0.001	95	370073	2.00	2.05	
74 2,3-Dimethylheptane	43	16.139	16.139	0.000	96	1065455	2.00	1.82	
75 Chlorobenzene	112	16.139	16.142	-0.003	92	752108	2.00	2.01	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	1190399	2.00	1.82	
91 2-Ethylthiophene	97	16.522	16.522	0.000	98	874372	NC	NC	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	1840740	4.00	3.69	
80 n-Nonane	57	16.975	16.977	-0.002	94	721028	2.00	2.03	
81 Bromoform	173	17.040	17.041	-0.001	93	567100	2.00	2.18	
82 Styrene	104	17.045	17.047	-0.002	99	646380	2.00	1.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 o-Xylene	91	17.105	17.106	-0.001	98	939571	2.00	1.78	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	644662	2.00	1.82	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	202004	2.00	1.78	
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	1283692	2.00	1.83	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	347734	2.00	1.83	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	330501	2.00	1.91	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	1189898	2.00	1.70	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	92	543840	2.00	2.00	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	475664	2.00	1.73	
93 n-Decane	57	18.679	18.682	-0.003	90	840779	2.00	1.93	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	91	1089707	2.00	1.79	
95 1,2,4-Trimethylbenzene	105	18.846	18.846	0.000	96	1053331	2.00	1.76	
96 sec-Butylbenzene	105	19.094	19.094	0.000	98	1546183	2.00	1.81	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	98	727360	2.00	1.86	
98 Benzyl chloride	91	19.186	19.188	-0.002	98	972247	2.00	1.83	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	95	730746	2.00	1.82	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	1224528	2.00	1.79	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	783832	2.00	1.45	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	922903	2.00	1.87	
103 2,3-Dihydroindene	117	19.547	19.550	-0.003	94	938000	2.00	1.74	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	94	692280	2.00	1.77	
105 n-Butylbenzene	91	19.671	19.673	-0.002	98	1289575	2.00	1.85	
106 Indene	116	19.677	19.679	-0.002	90	708434	2.00	1.53	
107 Undecane	57	19.963	19.963	0.000	95	845217	2.00	1.91	
117 1,2-Dimethyl-4-Ethylbenzen	119	20.033	20.033	0.000	98	898836	NC	NC	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	92	280496	2.00	1.73	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	97	1105869	2.00	1.77	
118 1,2,3,5-Tetramethylbenzene	119	20.470	20.470	0.000	95	665260	NC	NC	
119 1,2,3,4-Tetramethylbenzene	119	20.874	20.874	0.000	97	911881	NC	NC	
110 Dodecane	57	21.014	21.014	0.000	94	711861	2.00	2.04	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	581479	2.00	1.89	
112 Naphthalene	128	21.375	21.377	-0.002	99	1346876	2.00	2.00	
120 Benzo(b)thiophene	134	21.478	21.478	0.000	99	786705	NC	NC	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	95	590622	2.00	1.79	
114 1,2,3-Trichlorobenzene	180	21.650	21.651	-0.001	95	573612	2.00	2.11	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	763689	2.00	2.33	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	898886	2.00	2.23	
A 122 C8 Range	1	14.813	(14.744-14.902)		0	3557712	2.00	2.06	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.08	
S 124 Xylenes, Total	100				0		6.00	5.47	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00083

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11ICV.D

Injection Date: 11-Jan-2019 23:17:30

Instrument ID: MG

Operator ID: 007126

Lims ID: ICV

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

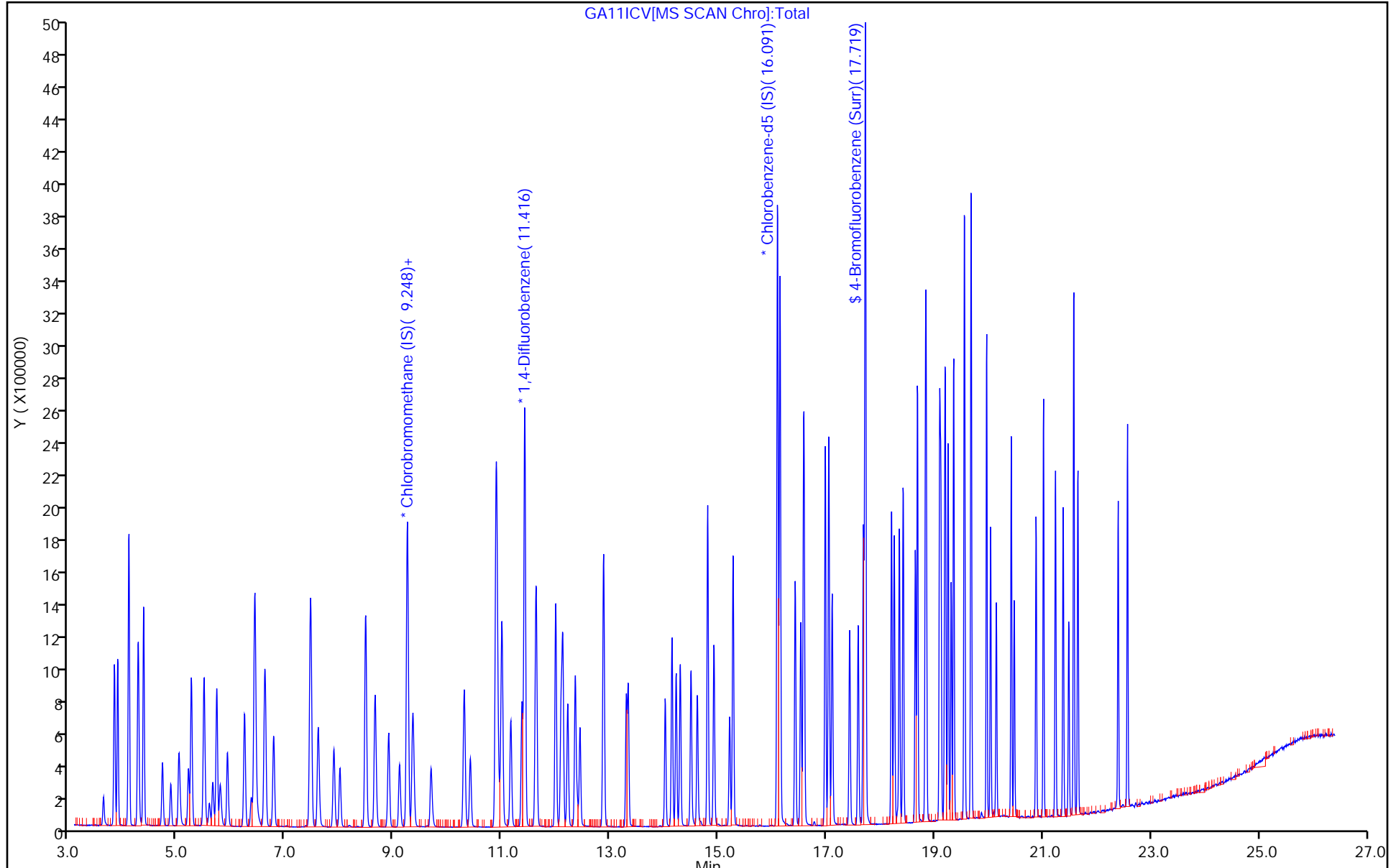
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.638		2.01	2.00	0.7	35.0
Propene	Ave	1.463	1.485		2.03	2.00	1.5	35.0
Dichlorodifluoromethane	Ave	4.235	4.340		2.05	2.00	2.5	35.0
Chloromethane	Ave	0.4649	0.4832		2.08	2.00	3.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.577		2.08	2.00	4.1	35.0
Acetaldehyde	Ave	0.5987	0.4752		7.94	10.0	-20.6	35.0
Vinyl chloride	Ave	1.611	1.638		2.03	2.00	1.7	35.0
1,3-Butadiene	Ave	1.245	1.289		2.07	2.00	3.6	35.0
Butane	Ave	2.712	2.809		2.07	2.00	3.5	35.0
Bromomethane	Ave	1.392	1.376		1.98	2.00	-1.1	35.0
Chloroethane	Ave	0.7761	0.7850		2.02	2.00	1.1	35.0
Ethanol	Ave	0.7042	0.5103		7.25	10.0	-27.5	35.0
Vinyl bromide	Ave	1.290	1.377		2.13	2.00	6.7	35.0
2-Methylbutane	Ave	1.947	1.999		2.05	2.00	2.7	35.0
Trichlorofluoromethane	Ave	4.152	4.112		1.98	2.00	-1.0	35.0
Acrolein	Ave	0.3574	0.2736		1.53	2.00	-23.4	35.0
Acetonitrile	Ave	0.5574	0.4415		1.58	2.00	-20.8	35.0
Acetone	Ave	0.6013	0.5234		1.74	2.00	-13.0	35.0
Pentane	Ave	0.2653	0.2805		2.11	2.00	5.7	35.0
Isopropyl alcohol	Ave	1.603	1.950		2.43	2.00	21.6	35.0
Ethyl ether	Ave	1.725	1.471		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.412	1.470		2.08	2.00	4.1	35.0
Acrylonitrile	Ave	0.9747	0.8590		1.76	2.00	-11.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.092		2.02	2.00	1.0	35.0
tert-Butyl alcohol	Ave	2.196	2.417		2.20	2.00	10.0	35.0
Methylene Chloride	Ave	1.643	1.409		1.72	2.00	-14.2	35.0
3-Chloropropene	Ave	1.751	1.584		1.81	2.00	-9.6	35.0
Carbon disulfide	Ave	4.284	4.357		2.03	2.00	1.7	35.0
trans-1,2-Dichloroethene	Ave	1.414	1.448		2.05	2.00	2.4	35.0
2-Methylpentane	Ave	4.045	3.765		1.86	2.00	-6.9	35.0
Methyl tert-butyl ether	Ave	3.932	3.361		1.71	2.00	-14.5	35.0
1,1-Dichloroethane	Ave	2.906	2.821		1.94	2.00	-2.9	35.0
Vinyl acetate	Ave	4.034	3.285		1.63	2.00	-18.6	35.0
2-Butanone (MEK)	Ave	0.6347	0.5473		1.72	2.00	-13.8	35.0
Hexane	Ave	1.304	1.314		2.02	2.00	0.8	35.0
Isopropyl ether	Ave	4.992	4.538		1.82	2.00	-9.1	35.0
cis-1,2-Dichloroethene	Ave	1.447	1.467		2.03	2.00	1.4	35.0
Ethyl acetate	Ave	3.312	2.660		1.61	2.00	-19.7	35.0
Chloroform	Ave	3.344	3.175		1.90	2.00	-5.1	35.0
Tert-butyl ethyl ether	Ave	4.607	3.821		1.66	2.00	-17.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.483		1.67	2.00	-16.3	35.0
1,1,1-Trichloroethane	Ave	3.620	3.468		1.92	2.00	-4.2	35.0
1,2-Dichloroethane	Ave	0.3910	0.3830		1.96	2.00	-2.1	35.0
Cyclohexane	Ave	0.1314	0.1432		2.18	2.00	8.9	35.0
Benzene	Ave	0.7153	0.7639		2.14	2.00	6.8	35.0
Carbon tetrachloride	Ave	0.5933	0.6444		2.17	2.00	8.6	35.0
1-Butanol	Ave	0.0896	0.1078		2.41	2.00	20.4	35.0
2,3-Dimethylpentane	Ave	0.1886	0.1955		2.07	2.00	3.6	35.0
Thiophene	Ave	0.4156	0.4158		2.00	2.00	0.0	35.0
2,2,4-Trimethylpentane	Ave	1.401	1.433		2.05	2.00	2.3	35.0
Heptane	Ave	0.2875	0.2905		2.02	2.00	1.0	35.0
1,2-Dichloropropane	Ave	0.2813	0.2642		1.88	2.00	-6.1	35.0
Trichloroethene	Ave	0.3257	0.3391		2.08	2.00	4.1	35.0
Dibromomethane	Ave	0.2963	0.2956		2.00	2.00	-0.2	35.0
Bromodichloromethane	Ave	0.5843	0.5891		2.02	2.00	0.8	35.0
1,4-Dioxane	Ave	0.0832	0.0836		2.01	2.00	0.5	35.0
Methyl methacrylate	Ave	0.3595	0.3109		1.73	2.00	-13.5	35.0
Methylcyclohexane	Ave	0.4896	0.6141		2.51	2.00	25.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.5532		1.96	2.00	-1.8	35.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4212		1.97	2.00	-1.5	35.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4178		1.94	2.00	-3.1	35.0
Toluene	Ave	0.8801	0.8270		1.88	2.00	-6.0	35.0
1,1,2-Trichloroethane	Ave	0.2685	0.2546		1.90	2.00	-5.2	35.0
2-Hexanone	Ave	0.2641	0.2800		2.12	2.00	6.0	35.0
Octane	Ave	0.3165	0.3309		2.09	2.00	4.5	35.0
Dibromochloromethane	Ave	0.5446	0.5759		2.12	2.00	5.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4594		1.97	2.00	-1.3	35.0
Tetrachloroethene	Ave	0.3302	0.3391		2.05	2.00	2.7	35.0
2,3-Dimethylheptane	Ave	1.076	0.9762		1.82	2.00	-9.2	35.0
Chlorobenzene	Ave	0.6841	0.6891		2.01	2.00	0.7	35.0
Ethylbenzene	Ave	1.196	1.091		1.82	2.00	-8.8	35.0
m-Xylene & p-Xylene	Ave	0.9148	0.8433		3.69	4.00	-7.8	35.0
Nonane	Ave	0.6507	0.6606		2.03	2.00	1.5	35.0
Bromoform	Ave	0.4761	0.5196		2.18	2.00	9.1	35.0
Styrene	Ave	0.6323	0.5922		1.87	2.00	-6.3	35.0
o-Xylene	Ave	0.9646	0.8608		1.78	2.00	-10.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5907		1.82	2.00	-8.8	35.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	35.0
Isopropylbenzene	Ave	1.286	1.176		1.83	2.00	-8.5	35.0
Propylbenzene	Ave	0.3476	0.3186		1.83	2.00	-8.3	35.0
2-Chlorotoluene	Ave	0.3175	0.3028		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.090		1.70	2.00	-15.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4983		2.00	2.00	-0.2	35.0
Alpha Methyl Styrene	Ave	0.5043	0.4358		1.73	2.00	-13.6	35.0
Decane	Ave	0.7982	0.7703		1.93	2.00	-3.5	35.0
tert-Butylbenzene	Ave	1.114	0.998		1.79	2.00	-10.4	35.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9651		1.76	2.00	-11.9	35.0
sec-Butylbenzene	Ave	1.569	1.417		1.81	2.00	-9.7	35.0
1,3-Dichlorobenzene	Ave	0.7160	0.6664		1.86	2.00	-6.9	35.0
Benzyl chloride	Ave	0.9762	0.8908		1.83	2.00	-8.7	35.0
1,4-Dichlorobenzene	Ave	0.7344	0.6695		1.82	2.00	-8.8	35.0
4-Isopropyltoluene	Ave	1.255	1.122		1.79	2.00	-10.6	35.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.7182		1.45	2.00	-27.5	35.0
Butylcyclohexane	Ave	0.9039	0.8456		1.87	2.00	-6.5	35.0
Indane	Ave	0.9903	0.8594		1.74	2.00	-13.2	35.0
1,2-Dichlorobenzene	Ave	0.7165	0.6343		1.77	2.00	-11.5	35.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	35.0
Indene	Ave	0.8508	0.6491		1.53	2.00	-23.7	35.0
Undecane	Ave	0.8098	0.7744		1.91	2.00	-4.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.2570		1.73	2.00	-13.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.013		1.77	2.00	-11.3	35.0
Dodecane	Ave	0.6396	0.6522		2.04	2.00	2.0	35.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5328		1.89	2.00	-5.7	35.0
Naphthalene	Ave	1.234	1.234		2.00	2.00	0.0	35.0
Hexachlorobutadiene	Ave	0.6047	0.5411		1.79	2.00	-10.5	35.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.5256		2.11	2.00	5.4	35.0
2-Methylnaphthalene	Ave	0.6016	0.6997		2.33	2.00	16.3	50.0
1-Methylnaphthalene	Ave	0.7372	0.8235		2.23	2.00	11.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8145		3.97	4.00	-0.6	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11ICV.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 11-Jan-2019 23:17:30 ALS Bottle#: 6 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-018
 Misc. Info.: S83
 Operator ID: 007126 Instrument ID: MG
 Sublist:

Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:26:47 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa Date: 14-Jan-2019 17:26:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.249	-0.006	97	423755	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.421	0.000	96	2327828	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.094	-0.003	91	2182908	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.718	0.001	86	1777994	4.00	3.97	
6 Chlorodifluoromethane	51	3.823	3.829	-0.006	97	559021	2.00	2.01	
7 Propene	41	3.834	3.838	-0.004	98	314582	2.00	2.03	
8 Dichlorodifluoromethane	85	3.888	3.894	-0.006	100	919539	2.00	2.05	
9 Chloromethane	52	4.088	4.091	-0.003	99	102368	2.00	2.08	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	93	545988	2.00	2.08	
12 Vinyl chloride	62	4.271	4.277	-0.006	98	347000	2.00	2.03	
11 Acetaldehyde	44	4.265	4.278	-0.013	93	503377	10.0	7.94	
13 Butane	43	4.368	4.373	-0.005	87	595081	2.00	2.07	
14 Butadiene	54	4.368	4.375	-0.007	65	273211	2.00	2.07	
15 Bromomethane	94	4.718	4.722	-0.004	98	291645	2.00	1.98	
16 Chloroethane	64	4.875	4.879	-0.004	91	166315	2.00	2.02	
17 Ethanol	31	5.026	5.064	-0.038	98	540634	10.0	7.25	
18 Vinyl bromide	106	5.198	5.205	-0.007	99	291743	2.00	2.13	
19 2-Methylbutane	43	5.252	5.256	-0.004	92	423451	2.00	2.05	
20 Trichlorofluoromethane	101	5.490	5.492	-0.002	99	871181	2.00	1.98	
21 Acrolein	56	5.511	5.526	-0.015	96	57965	2.00	1.53	
22 Acetonitrile	40	5.581	5.603	-0.022	99	93536	2.00	1.58	
23 Acetone	58	5.651	5.666	-0.015	99	110896	2.00	1.74	
24 Pentane	72	5.721	5.725	-0.004	98	59420	2.00	2.11	
25 Isopropyl alcohol	45	5.786	5.840	-0.054	97	413062	2.00	2.43	
26 Ethyl ether	31	5.921	5.943	-0.022	91	311636	2.00	1.71	
27 1,1-Dichloroethene	96	6.234	6.242	-0.008	95	311458	2.00	2.08	
28 Acrylonitrile	53	6.358	6.375	-0.017	95	182005	2.00	1.76	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	93	655024	2.00	2.02	
30 2-Methyl-2-propanol	59	6.439	6.534	-0.095	96	512083	2.00	2.20	
31 Methylene Chloride	84	6.606	6.610	-0.004	98	298505	2.00	1.72	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.622	6.626	-0.004	95	335507	2.00	1.81	
33 Carbon disulfide	76	6.773	6.778	-0.005	100	923248	2.00	2.03	
34 trans-1,2-Dichloroethene	96	7.447	7.450	-0.003	96	306868	2.00	2.05	
35 2-Methylpentane	43	7.463	7.468	-0.005	96	797621	2.00	1.86	
36 Methyl tert-butyl ether	73	7.603	7.643	-0.040	97	712180	2.00	1.71	
37 1,1-Dichloroethane	63	7.889	7.892	-0.003	100	597722	2.00	1.94	
38 Vinyl acetate	43	8.002	8.016	-0.014	100	695958	2.00	1.63	
40 Hexane	56	8.477	8.480	-0.003	77	278451	2.00	2.02	
39 2-Butanone (MEK)	72	8.472	8.499	-0.027	96	115958	2.00	1.72	
41 Isopropyl ether	45	8.649	8.679	-0.030	97	961415	2.00	1.82	
42 cis-1,2-Dichloroethene	96	8.903	8.906	-0.003	97	310749	2.00	2.03	
43 Ethyl acetate	43	9.102	9.131	-0.029	98	563610	2.00	1.61	
44 Chloroform	83	9.253	9.261	-0.008	97	672705	2.00	1.90	
45 Tert-butyl ethyl ether	59	9.350	9.389	-0.039	96	809494	2.00	1.66	
46 Tetrahydrofuran	42	9.685	9.725	-0.040	94	314199	2.00	1.67	
47 1,1,1-Trichloroethane	97	10.300	10.303	-0.003	96	734755	2.00	1.92	
48 1,2-Dichloroethane	62	10.413	10.416	-0.003	98	445746	2.00	1.96	
49 Cyclohexane	69	10.882	10.888	-0.006	95	166660	2.00	2.18	
50 Benzene	78	10.887	10.893	-0.006	98	889085	2.00	2.14	
52 Carbon tetrachloride	117	10.909	10.913	-0.004	98	749968	2.00	2.17	
53 2,3-Dimethylpentane	71	10.995	11.000	-0.005	91	227526	2.00	2.07	
51 n-Butanol	31	10.952	11.004	-0.052	78	125495	2.00	2.41	
54 Thiophene	84	11.162	11.164	-0.002	97	483942	2.00	2.00	
55 Isooctane	57	11.626	11.632	-0.006	98	1667827	2.00	2.05	
56 n-Heptane	71	11.993	11.995	-0.002	94	338068	2.00	2.02	
57 1,2-Dichloropropane	63	12.090	12.093	-0.003	87	307526	2.00	1.88	
58 Trichloroethene	130	12.122	12.124	-0.002	95	394652	2.00	2.08	
59 Dibromomethane	93	12.214	12.216	-0.002	94	344072	2.00	2.00	
60 Dichlorobromomethane	83	12.354	12.354	0.000	98	685664	2.00	2.02	
61 1,4-Dioxane	88	12.386	12.421	-0.035	98	97309	2.00	2.01	
62 Methyl methacrylate	41	12.440	12.453	-0.013	90	361838	2.00	1.73	
63 Methylcyclohexane	83	12.877	12.879	-0.002	93	714807	2.00	2.51	
64 4-Methyl-2-pentanone (MIBK)	43	13.298	13.321	-0.023	99	643830	2.00	1.96	
65 cis-1,3-Dichloropropene	75	13.330	13.336	-0.006	98	490279	2.00	1.97	
66 trans-1,3-Dichloropropene	75	14.015	14.019	-0.004	97	456019	2.00	1.94	
67 Toluene	91	14.144	14.144	0.000	93	902637	2.00	1.88	
68 1,1,2-Trichloroethane	83	14.220	14.220	0.000	99	277868	2.00	1.90	
76 2-Methylthiophene	97	14.295	14.295	0.000	98	735484	NC	NC	
77 3-Methylthiophene	97	14.495	14.495	0.000	99	719176	NC	NC	
69 2-Hexanone	58	14.608	14.631	-0.023	91	305613	2.00	2.12	
70 n-Octane	85	14.802	14.804	-0.002	96	361178	2.00	2.09	
71 Chlorodibromomethane	129	14.915	14.920	-0.005	98	628573	2.00	2.12	
72 Ethylene Dibromide	107	15.207	15.207	0.000	98	501417	2.00	1.97	
73 Tetrachloroethene	129	15.271	15.272	-0.001	95	370073	2.00	2.05	
74 2,3-Dimethylheptane	43	16.139	16.139	0.000	96	1065455	2.00	1.82	
75 Chlorobenzene	112	16.139	16.142	-0.003	92	752108	2.00	2.01	
78 Ethylbenzene	91	16.420	16.422	-0.002	99	1190399	2.00	1.82	
91 2-Ethylthiophene	97	16.522	16.522	0.000	98	874372	NC	NC	
79 m-Xylene & p-Xylene	91	16.582	16.582	0.000	99	1840740	4.00	3.69	
80 n-Nonane	57	16.975	16.977	-0.002	94	721028	2.00	2.03	
81 Bromoform	173	17.040	17.041	-0.001	93	567100	2.00	2.18	
82 Styrene	104	17.045	17.047	-0.002	99	646380	2.00	1.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 o-Xylene	91	17.105	17.106	-0.001	98	939571	2.00	1.78	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.430	-0.002	99	644662	2.00	1.82	
85 1,2,3-Trichloropropane	110	17.585	17.587	-0.002	97	202004	2.00	1.78	
86 Isopropylbenzene	105	17.682	17.684	-0.002	97	1283692	2.00	1.83	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	347734	2.00	1.83	
88 2-Chlorotoluene	126	18.253	18.254	-0.001	97	330501	2.00	1.91	
89 4-Ethyltoluene	105	18.345	18.347	-0.002	98	1189898	2.00	1.70	
90 1,3,5-Trimethylbenzene	120	18.415	18.419	-0.004	92	543840	2.00	2.00	
92 Alpha Methyl Styrene	118	18.642	18.644	-0.002	87	475664	2.00	1.73	
93 n-Decane	57	18.679	18.682	-0.003	90	840779	2.00	1.93	
94 tert-Butylbenzene	119	18.830	18.832	-0.002	91	1089707	2.00	1.79	
95 1,2,4-Trimethylbenzene	105	18.846	18.846	0.000	96	1053331	2.00	1.76	
96 sec-Butylbenzene	105	19.094	19.094	0.000	98	1546183	2.00	1.81	
97 1,3-Dichlorobenzene	146	19.116	19.117	-0.001	98	727360	2.00	1.86	
98 Benzyl chloride	91	19.186	19.188	-0.002	98	972247	2.00	1.83	
99 1,4-Dichlorobenzene	146	19.197	19.200	-0.003	95	730746	2.00	1.82	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	1224528	2.00	1.79	
101 1,2,3-Trimethylbenzene	105	19.305	19.306	-0.001	99	783832	2.00	1.45	
102 Butylcyclohexane	83	19.353	19.353	0.000	91	922903	2.00	1.87	
103 2,3-Dihydroindene	117	19.547	19.550	-0.003	94	938000	2.00	1.74	
104 1,2-Dichlorobenzene	146	19.553	19.555	-0.002	94	692280	2.00	1.77	
105 n-Butylbenzene	91	19.671	19.673	-0.002	98	1289575	2.00	1.85	
106 Indene	116	19.677	19.679	-0.002	90	708434	2.00	1.53	
107 Undecane	57	19.963	19.963	0.000	95	845217	2.00	1.91	
117 1,2-Dimethyl-4-Ethylbenzen	119	20.033	20.033	0.000	98	898836	NC	NC	
108 1,2-Dibromo-3-Chloropropan	157	20.141	20.142	-0.001	92	280496	2.00	1.73	
109 1,2,4,5-Tetramethylbenzene	119	20.416	20.417	-0.001	97	1105869	2.00	1.77	
118 1,2,3,5-Tetramethylbenzene	119	20.470	20.470	0.000	95	665260	NC	NC	
119 1,2,3,4-Tetramethylbenzene	119	20.874	20.874	0.000	97	911881	NC	NC	
110 Dodecane	57	21.014	21.014	0.000	94	711861	2.00	2.04	
111 1,2,4-Trichlorobenzene	180	21.235	21.236	-0.001	94	581479	2.00	1.89	
112 Naphthalene	128	21.375	21.377	-0.002	99	1346876	2.00	2.00	
120 Benzo(b)thiophene	134	21.478	21.478	0.000	99	786705	NC	NC	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	95	590622	2.00	1.79	
114 1,2,3-Trichlorobenzene	180	21.650	21.651	-0.001	95	573612	2.00	2.11	
115 2-Methylnaphthalene	142	22.395	22.395	0.000	100	763689	2.00	2.33	
116 1-Methylnaphthalene	142	22.567	22.567	0.000	100	898886	2.00	2.23	
A 122 C8 Range	1	14.813	(14.744-14.902)		0	3557712	2.00	2.06	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.08	
S 124 Xylenes, Total	100				0		6.00	5.47	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00083

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11ICV.D

Injection Date: 11-Jan-2019 23:17:30

Instrument ID: MG

Operator ID: 007126

Lims ID: ICV

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

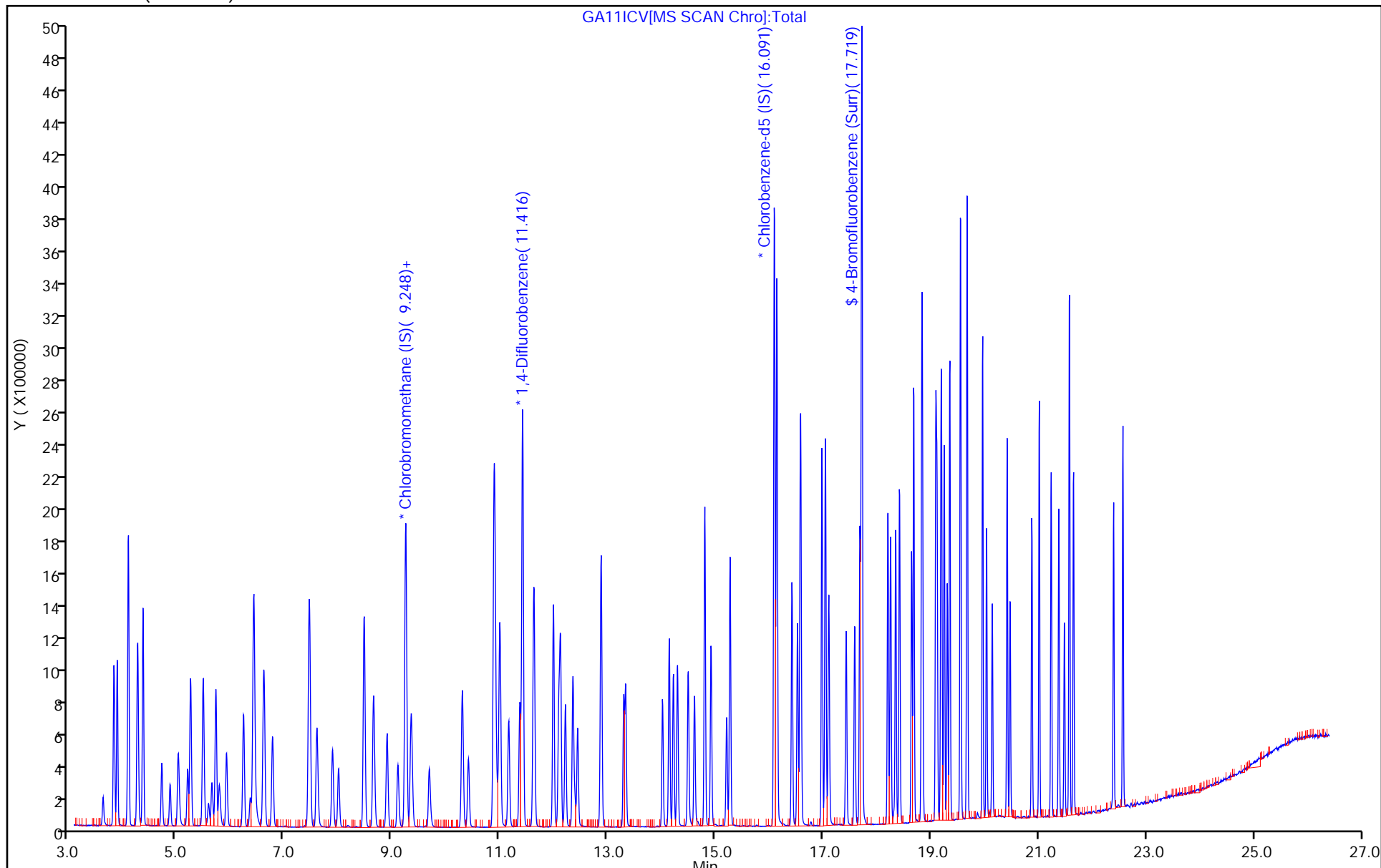
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.652		2.02	2.00	1.2	30.0
Propene	Ave	1.463	1.534		2.10	2.00	4.8	30.0
Dichlorodifluoromethane	Ave	4.235	4.356		2.06	2.00	2.9	30.0
Chloromethane	Ave	0.4649	0.4693		2.02	2.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.404		1.94	2.00	-2.9	30.0
Acetaldehyde	Ave	0.5987	0.5225		8.73	10.0	-12.7	30.0
Vinyl chloride	Ave	1.611	1.586		1.97	2.00	-1.5	30.0
1,3-Butadiene	Ave	1.245	1.283		2.06	2.00	3.0	30.0
Butane	Ave	2.712	2.755		2.03	2.00	1.6	30.0
Bromomethane	Ave	1.392	1.313		1.89	2.00	-5.7	30.0
Chloroethane	Ave	0.7761	0.7469		1.92	2.00	-3.8	30.0
Ethanol	Ave	0.7042	0.7541		10.7	10.0	7.1	30.0
Vinyl bromide	Ave	1.290	1.209		1.87	2.00	-6.3	30.0
2-Methylbutane	Ave	1.947	1.895		1.95	2.00	-2.7	30.0
Trichlorofluoromethane	Ave	4.152	4.042		1.95	2.00	-2.7	30.0
Acrolein	Ave	0.3574	0.3194		1.79	2.00	-10.6	30.0
Acetonitrile	Ave	0.5574	0.5302		1.90	2.00	-4.9	30.0
Acetone	Ave	0.6013	0.4988		4.98	6.00	-17.0	30.0
Pentane	Ave	0.2653	0.2565		1.93	2.00	-3.3	30.0
Isopropyl alcohol	Ave	1.603	1.779		6.66	6.00	10.9	30.0
Ethyl ether	Ave	1.725	1.691		1.96	2.00	-2.0	30.0
1,1-Dichloroethene	Ave	1.412	1.514		2.14	2.00	7.2	30.0
Acrylonitrile	Ave	0.9747	0.9432		1.94	2.00	-3.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.167		2.07	2.00	3.5	30.0
tert-Butyl alcohol	Ave	2.196	2.812		2.56	2.00	28.0	30.0
Methylene Chloride	Ave	1.643	1.484		1.81	2.00	-9.7	30.0
3-Chloropropene	Ave	1.751	1.648		1.88	2.00	-5.9	30.0
Carbon disulfide	Ave	4.284	4.628		2.16	2.00	8.0	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.521		2.15	2.00	7.6	30.0
2-Methylpentane	Ave	4.045	4.401		2.18	2.00	8.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.883		1.97	2.00	-1.3	30.0
1,1-Dichloroethane	Ave	2.906	2.982		2.05	2.00	2.6	30.0
Vinyl acetate	Ave	4.034	3.919		1.94	2.00	-2.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.6318		1.99	2.00	-0.5	30.0
Hexane	Ave	1.304	1.409		2.16	2.00	8.1	30.0
Isopropyl ether	Ave	4.992	5.130		2.06	2.00	2.8	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.511		2.09	2.00	4.4	30.0
Ethyl acetate	Ave	3.312	3.321		2.01	2.00	0.3	30.0
Chloroform	Ave	3.344	3.351		2.00	2.00	0.2	30.0
Tert-butyl ethyl ether	Ave	4.607	4.651		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.780		2.01	2.00	0.4	30.0
1,1,1-Trichloroethane	Ave	3.620	3.686		2.04	2.00	1.8	30.0
1,2-Dichloroethane	Ave	0.3910	0.3917		2.00	2.00	0.2	30.0
Cyclohexane	Ave	0.1314	0.1477		2.25	2.00	12.4	30.0
Benzene	Ave	0.7153	0.7399		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6573		2.22	2.00	10.8	30.0
1-Butanol	Ave	0.0896	0.1263		2.82	2.00	41.0*	30.0
2,3-Dimethylpentane	Ave	0.1886	0.2098		2.22	2.00	11.2	30.0
Thiophene	Ave	0.4156	0.4526		2.18	2.00	8.9	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.515		2.16	2.00	8.2	30.0
Heptane	Ave	0.2875	0.3131		2.18	2.00	8.9	30.0
1,2-Dichloropropane	Ave	0.2813	0.2865		2.04	2.00	1.8	30.0
Trichloroethene	Ave	0.3257	0.3404		2.09	2.00	4.5	30.0
Dibromomethane	Ave	0.2963	0.3076		2.08	2.00	3.8	30.0
Bromodichloromethane	Ave	0.5843	0.6356		2.18	2.00	8.8	30.0
1,4-Dioxane	Ave	0.0832	0.1054		2.53	2.00	26.7	30.0
Methyl methacrylate	Ave	0.3595	0.3845		2.14	2.00	7.0	30.0
Methylcyclohexane	Ave	0.4896	0.5279		2.16	2.00	7.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.6430		2.28	2.00	14.2	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4641		2.17	2.00	8.5	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4612		2.14	2.00	7.0	30.0
Toluene	Ave	0.8801	0.8908		2.02	2.00	1.2	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2829		2.11	2.00	5.3	30.0
2-Hexanone	Ave	0.2641	0.3188		2.41	2.00	20.7	30.0
Octane	Ave	0.3165	0.3439		2.17	2.00	8.7	30.0
Dibromochloromethane	Ave	0.5446	0.5989		2.20	2.00	10.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4929		2.12	2.00	5.8	30.0
Tetrachloroethene	Ave	0.3302	0.3406		2.06	2.00	3.1	30.0
2,3-Dimethylheptane	Ave	1.076	1.161		2.16	2.00	8.0	30.0
Chlorobenzene	Ave	0.6841	0.7203		2.11	2.00	5.3	30.0
Ethylbenzene	Ave	1.196	1.211		2.03	2.00	1.3	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.9437		4.13	4.00	3.2	30.0
Nonane	Ave	0.6507	0.7098		2.18	2.00	9.1	30.0
Bromoform	Ave	0.4761	0.5476		2.30	2.00	15.0	30.0
Styrene	Ave	0.6323	0.6714		2.12	2.00	6.2	30.0
o-Xylene	Ave	0.9646	0.9910		2.05	2.00	2.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.6633		2.05	2.00	2.4	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.2051		1.98	2.00	-1.2	30.0
Isopropylbenzene	Ave	1.286	1.274		1.98	2.00	-1.0	30.0
Propylbenzene	Ave	0.3476	0.3424		1.97	2.00	-1.5	30.0
2-Chlorotoluene	Ave	0.3175	0.3184		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.295		2.02	2.00	0.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4918		1.97	2.00	-1.5	30.0
Alpha Methyl Styrene	Ave	0.5043	0.5202		2.06	2.00	3.1	30.0
Decane	Ave	0.7982	0.8625		2.16	2.00	8.1	30.0
tert-Butylbenzene	Ave	1.114	1.103		1.98	2.00	-1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.096	1.089		1.99	2.00	-0.6	30.0
sec-Butylbenzene	Ave	1.569	1.580		2.01	2.00	0.7	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.7287		2.04	2.00	1.8	30.0
Benzyl chloride	Ave	0.9762	1.033		2.12	2.00	5.8	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.7367		2.01	2.00	0.3	30.0
4-Isopropyltoluene	Ave	1.255	1.277		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	1.101		2.22	2.00	11.1	30.0
Butylcyclohexane	Ave	0.9039	0.9644		2.13	2.00	6.7	30.0
Indane	Ave	0.9903	0.9865		1.99	2.00	-0.4	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.7004		1.95	2.00	-2.3	30.0
Butylbenzene	Ave	1.277	1.325		2.08	2.00	3.8	30.0
Indene	Ave	0.8508	0.8688		2.04	2.00	2.1	30.0
Undecane	Ave	0.8098	0.8597		2.12	2.00	6.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3582		2.42	2.00	20.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.185		2.07	2.00	3.7	30.0
Dodecane	Ave	0.6396	0.6319		1.98	2.00	-1.2	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5181		1.83	2.00	-8.3	30.0
Naphthalene	Ave	1.234	1.197		1.94	2.00	-3.0	30.0
Hexachlorobutadiene	Ave	0.6047	0.5124		1.69	2.00	-15.3	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4625		1.85	2.00	-7.3	30.0
2-Methylnaphthalene	Ave	0.6016	0.4938		1.64	2.00	-17.9	50.0
1-Methylnaphthalene	Ave	0.7372	0.5485		1.49	2.00	-25.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8212		4.01	4.00	0.2	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 26-Feb-2019 11:35:30 ALS Bottle#: 15 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-002
 Misc. Info.: P82
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:22:36 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits

Date: 27-Feb-2019 15:22:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.232	0.000	97	496382	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.405	0.000	96	2758157	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	91	2578216	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2117181	4.00	4.01	
6 Chlorodifluoromethane	51	3.823	3.823	0.000	97	658223	2.00	2.02	
7 Propene	41	3.834	3.834	0.000	99	380649	2.00	2.10	
8 Dichlorodifluoromethane	85	3.888	3.888	0.000	100	1081216	2.00	2.06	
9 Chloromethane	52	4.088	4.088	0.000	99	116472	2.00	2.02	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.098	0.000	96	596628	2.00	1.94	
11 Acetaldehyde	44	4.266	4.266	0.000	95	648347	10.0	8.73	
12 Vinyl chloride	62	4.271	4.271	0.000	99	393694	2.00	1.97	
13 Butane	43	4.368	4.368	0.000	86	683696	2.00	2.03	
14 Butadiene	54	4.368	4.368	0.000	66	318396	2.00	2.06	
15 Bromomethane	94	4.713	4.713	0.000	98	325798	2.00	1.89	
16 Chloroethane	64	4.870	4.870	0.000	90	185377	2.00	1.92	
17 Ethanol	31	5.031	5.031	0.000	97	935746	10.0	10.7	
18 Vinyl bromide	106	5.193	5.193	0.000	98	300038	2.00	1.87	
19 2-Methylbutane	43	5.247	5.247	0.000	92	470238	2.00	1.95	
20 Trichlorofluoromethane	101	5.484	5.484	0.000	99	1003068	2.00	1.95	
21 Acrolein	56	5.506	5.506	0.000	96	79264	2.00	1.79	
22 Acetonitrile	40	5.581	5.581	0.000	99	131601	2.00	1.90	
23 Acetone	58	5.635	5.635	0.000	99	371393	6.00	4.98	
24 Pentane	72	5.716	5.716	0.000	98	63668	2.00	1.93	
25 Isopropyl alcohol	45	5.775	5.775	0.000	97	1324509	6.00	6.66	
26 Ethyl ether	31	5.910	5.910	0.000	90	419601	2.00	1.96	
27 1,1-Dichloroethene	96	6.228	6.228	0.000	94	375675	2.00	2.14	
28 Acrylonitrile	53	6.352	6.352	0.000	95	234090	2.00	1.94	
29 1,1,2-Trichloro-1,2,2-trif	101	6.417	6.417	0.000	94	786133	2.00	2.07	
30 2-Methyl-2-propanol	59	6.455	6.455	0.000	92	697915	2.00	2.56	
31 Methylene Chloride	84	6.595	6.595	0.000	98	368192	2.00	1.81	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.611	6.611	0.000	94	408941	2.00	1.88	
33 Carbon disulfide	76	6.768	6.768	0.000	99	1148654	2.00	2.16	
34 trans-1,2-Dichloroethene	96	7.436	7.436	0.000	95	377435	2.00	2.15	
35 2-Methylpentane	43	7.453	7.453	0.000	96	1092237	2.00	2.18	
36 Methyl tert-butyl ether	73	7.587	7.587	0.000	97	963642	2.00	1.97	
37 1,1-Dichloroethane	63	7.879	7.879	0.000	100	740120	2.00	2.05	
38 Vinyl acetate	43	7.992	7.992	0.000	100	972603	2.00	1.94	
39 2-Butanone (MEK)	72	8.461	8.461	0.000	94	156796	2.00	1.99	
40 Hexane	56	8.466	8.466	0.000	75	349595	2.00	2.16	
41 Isopropyl ether	45	8.639	8.639	0.000	97	1273265	2.00	2.06	
42 cis-1,2-Dichloroethene	96	8.887	8.887	0.000	97	374980	2.00	2.09	
43 Ethyl acetate	43	9.086	9.086	0.000	98	824216	2.00	2.01	
44 Chloroform	83	9.243	9.243	0.000	97	831651	2.00	2.00	
45 Tert-butyl ethyl ether	59	9.340	9.340	0.000	96	1154312	2.00	2.02	
46 Tetrahydrofuran	42	9.669	9.669	0.000	94	441834	2.00	2.01	
47 1,1,1-Trichloroethane	97	10.283	10.283	0.000	95	914802	2.00	2.04	
48 1,2-Dichloroethane	62	10.397	10.397	0.000	98	540157	2.00	2.00	
49 Cyclohexane	69	10.871	10.871	0.000	94	203691	2.00	2.25	
50 Benzene	78	10.877	10.877	0.000	98	1020327	2.00	2.07	
52 Carbon tetrachloride	117	10.898	10.898	0.000	98	906489	2.00	2.22	
51 n-Butanol	31	10.963	10.963	0.000	72	174154	2.00	2.82	
53 2,3-Dimethylpentane	71	10.985	10.985	0.000	90	289271	2.00	2.22	
54 Thiophene	84	11.146	11.146	0.000	98	624101	2.00	2.18	
55 Isooctane	57	11.615	11.615	0.000	98	2089798	2.00	2.16	
56 n-Heptane	71	11.977	11.977	0.000	94	431811	2.00	2.18	
57 1,2-Dichloropropane	63	12.074	12.074	0.000	87	395044	2.00	2.04	
58 Trichloroethene	130	12.106	12.106	0.000	95	469444	2.00	2.09	
59 Dibromomethane	93	12.198	12.198	0.000	92	424190	2.00	2.08	
60 Dichlorobromomethane	83	12.338	12.338	0.000	99	876559	2.00	2.18	
61 1,4-Dioxane	88	12.370	12.370	0.000	98	145314	2.00	2.53	
62 Methyl methacrylate	41	12.424	12.424	0.000	90	530253	2.00	2.14	
63 Methylcyclohexane	83	12.861	12.861	0.000	93	728027	2.00	2.16	
64 4-Methyl-2-pentanone (MIBK)	43	13.287	13.287	0.000	99	886750	2.00	2.28	
65 cis-1,3-Dichloropropene	75	13.319	13.319	0.000	98	639985	2.00	2.17	
66 trans-1,3-Dichloropropene	75	13.999	13.999	0.000	97	594581	2.00	2.14	
67 Toluene	91	14.128	14.128	0.000	94	1148311	2.00	2.02	
68 1,1,2-Trichloroethane	83	14.204	14.204	0.000	99	364646	2.00	2.11	
69 2-Hexanone	58	14.603	14.603	0.000	92	411009	2.00	2.41	
70 n-Octane	85	14.786	14.786	0.000	96	443374	2.00	2.17	
71 Chlorodibromomethane	129	14.905	14.905	0.000	98	772027	2.00	2.20	
72 Ethylene Dibromide	107	15.191	15.191	0.000	99	635364	2.00	2.12	
73 Tetrachloroethene	129	15.255	15.255	0.000	93	439005	2.00	2.06	
74 2,3-Dimethylheptane	43	16.123	16.123	0.000	96	1496933	2.00	2.16	
75 Chlorobenzene	112	16.129	16.129	0.000	77	928511	2.00	2.11	
78 Ethylbenzene	91	16.404	16.404	0.000	99	1561015	2.00	2.03	
79 m-Xylene & p-Xylene	91	16.566	16.566	0.000	99	2433053	4.00	4.13	
80 n-Nonane	57	16.965	16.965	0.000	94	915019	2.00	2.18	
81 Bromoform	173	17.024	17.024	0.000	92	705966	2.00	2.30	
82 Styrene	104	17.029	17.029	0.000	99	865556	2.00	2.12	
83 o-Xylene	91	17.089	17.089	0.000	97	1277486	2.00	2.05	
84 1,1,2,2-Tetrachloroethane	83	17.412	17.412	0.000	99	855020	2.00	2.05	
85 1,2,3-Trichloropropane	110	17.574	17.574	0.000	97	264346	2.00	1.98	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.671	17.671	0.000	97	1641690	2.00	1.98	
87 N-Propylbenzene	120	18.189	18.189	0.000	98	441397	2.00	1.97	
88 2-Chlorotoluene	126	18.237	18.237	0.000	97	410417	2.00	2.01	
89 4-Ethyltoluene	105	18.334	18.334	0.000	98	1669466	2.00	2.02	
90 1,3,5-Trimethylbenzene	120	18.404	18.404	0.000	91	633949	2.00	1.97	
92 Alpha Methyl Styrene	118	18.631	18.631	0.000	87	670603	2.00	2.06	
93 n-Decane	57	18.674	18.674	0.000	90	1111794	2.00	2.16	
94 tert-Butylbenzene	119	18.820	18.820	0.000	94	1422084	2.00	1.98	
95 1,2,4-Trimethylbenzene	105	18.830	18.830	0.000	97	1404437	2.00	1.99	
96 sec-Butylbenzene	105	19.084	19.084	0.000	98	2036393	2.00	2.01	
97 1,3-Dichlorobenzene	146	19.105	19.105	0.000	98	939347	2.00	2.04	
98 Benzyl chloride	91	19.176	19.176	0.000	97	1331508	2.00	2.12	
99 1,4-Dichlorobenzene	146	19.186	19.186	0.000	94	949687	2.00	2.01	
100 4-Isopropyltoluene	119	19.240	19.240	0.000	96	1645625	2.00	2.03	
101 1,2,3-Trimethylbenzene	105	19.294	19.294	0.000	99	1419409	2.00	2.22	
102 Butylcyclohexane	83	19.343	19.343	0.000	91	1243201	2.00	2.13	
103 2,3-Dihydroindene	117	19.537	19.537	0.000	93	1271670	2.00	1.99	
104 1,2-Dichlorobenzene	146	19.542	19.542	0.000	95	902853	2.00	1.95	
105 n-Butylbenzene	91	19.661	19.661	0.000	98	1708583	2.00	2.08	
106 Indene	116	19.666	19.666	0.000	90	1119910	2.00	2.04	
107 Undecane	57	19.952	19.952	0.000	96	1108192	2.00	2.12	
108 1,2-Dibromo-3-Chloropropan	157	20.130	20.130	0.000	96	461711	2.00	2.42	
109 1,2,4,5-Tetramethylbenzene	119	20.405	20.405	0.000	96	1527367	2.00	2.07	
110 Dodecane	57	21.004	21.004	0.000	94	814573	2.00	1.98	
111 1,2,4-Trichlorobenzene	180	21.225	21.225	0.000	94	667891	2.00	1.83	
112 Naphthalene	128	21.365	21.365	0.000	99	1542497	2.00	1.94	
113 Hexachlorobutadiene	225	21.564	21.564	0.000	95	660498	2.00	1.69	
114 1,2,3-Trichlorobenzene	180	21.640	21.640	0.000	95	596206	2.00	1.85	
115 2-Methylnaphthalene	142	22.384	22.384	0.000	100	636621	2.00	1.64	
116 1-Methylnaphthalene	142	22.557	22.557	0.000	99	707065	2.00	1.49	
A 122 C8 Range	1	14.787	(14.733-14.870)		0	4392004	2.00	2.16	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.24	
S 124 Xylenes, Total	100				0		6.00	6.18	

Reagents:

40CV101P_00082

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26.D

Injection Date: 26-Feb-2019 11:35:30

Instrument ID: MG

Operator ID: 007126

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

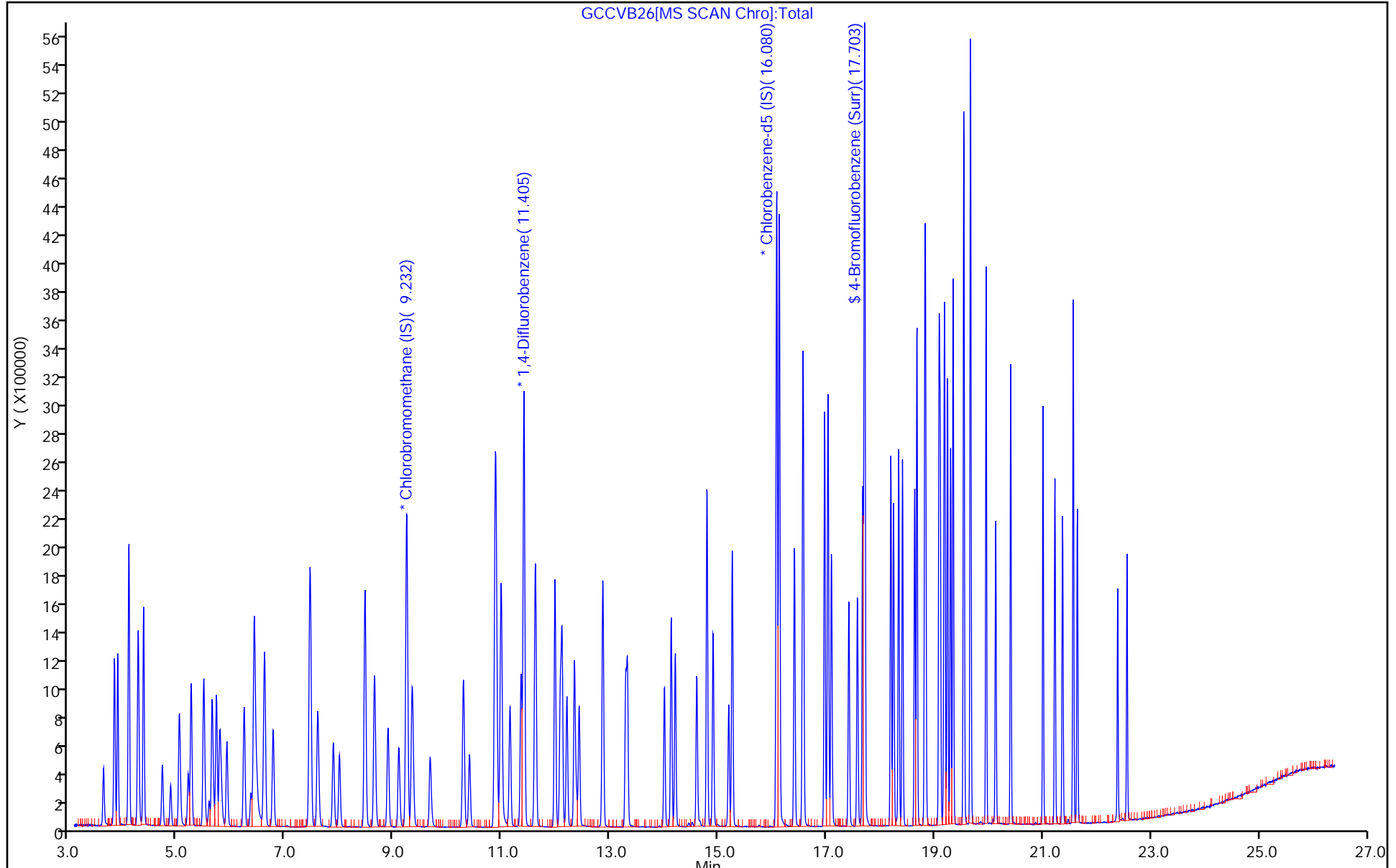
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 06/28/2017 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/28/2017 21:58
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6999	0.3362			2.00	-52.0*	35.0
3-Methylthiophene	Ave	0.6908	0.7960			2.00	15.2	35.0
2-Ethylthiophene	Ave	0.9153	1.134			2.00	23.9	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.640			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.275			2.00	39.5*	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.768			2.00	43.0*	35.0
Benzo (b) thiophene	Ave	0.9147	1.487			2.00	62.6*	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 17-Nov-2018 06:27:30 ALS Bottle#: 8 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-018
 Misc. Info.: S80
 Operator ID: Instrument ID: MR
 Sublist:

Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 16:30:16 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: tajh Date: 19-Nov-2018 10:15:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.397	-0.018	68	299493	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	94	1671036	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	89	1499042	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	89	1270095	4.00	3.98	
6 Chlorodifluoromethane	51	3.383	3.417	-0.034	95	337816	2.00	1.90	
7 Propene	41	3.389	3.420	-0.031	91	101676	2.00	1.86	
8 Dichlorodifluoromethane	85	3.432	3.461	-0.029	100	757267	2.00	2.32	
9 Chloromethane	52	3.550	3.586	-0.036	98	40890	2.00	1.78	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.583	3.609	-0.026	89	519503	2.00	2.14	
11 Acetaldehyde	44	3.674	3.710	-0.036	93	179473	10.0	8.38	
12 Vinyl chloride	62	3.680	3.711	-0.031	99	144783	2.00	1.80	
13 Butadiene	54	3.750	3.780	-0.030	87	93331	2.00	1.92	
14 Butane	43	3.750	3.782	-0.032	89	162697	2.00	1.92	
15 Bromomethane	94	3.966	3.995	-0.029	96	171614	2.00	1.86	
16 Chloroethane	64	4.068	4.100	-0.032	95	69702	2.00	1.87	
17 Ethanol	31	4.198	4.222	-0.024	92	172190	10.0	7.67	
18 Vinyl bromide	106	4.284	4.315	-0.031	97	197656	2.00	2.03	
19 2-Methylbutane	43	4.343	4.369	-0.026	77	117076	2.00	1.95	
20 Acrolein	56	4.483	4.516	-0.033	97	41705	2.00	2.20	
21 Trichlorofluoromethane	101	4.489	4.517	-0.028	99	845437	2.00	1.91	
22 Acetonitrile	40	4.516	4.545	-0.029	96	35597	2.00	1.84	
23 Acetone	58	4.575	4.605	-0.030	100	57219	2.00	1.84	
24 Pentane	72	4.661	4.693	-0.032	91	30029	2.00	1.99	
25 Isopropyl alcohol	45	4.688	4.716	-0.028	95	209729	2.00	2.48	
26 Ethyl ether	31	4.780	4.817	-0.037	69	85111	2.00	1.71	
27 1,1-Dichloroethene	96	5.006	5.033	-0.027	97	198342	2.00	1.88	
28 Acrylonitrile	53	5.066	5.097	-0.031	91	93387	2.00	1.99	
29 2-Methyl-2-propanol	59	5.141	5.173	-0.032	94	405847	2.00	2.02	
30 1,1,2-Trichloro-1,2,2-trif	101	5.174	5.199	-0.025	92	514124	2.00	1.97	
31 Methylene Chloride	84	5.260	5.290	-0.030	88	175058	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.281	5.309	-0.028	85	194281	2.00	1.98	
33 Carbon disulfide	76	5.378	5.410	-0.032	99	488020	2.00	1.95	
34 trans-1,2-Dichloroethene	96	5.929	5.951	-0.023	97	204116	2.00	1.90	
35 2-Methylpentane	43	5.988	6.011	-0.023	84	255391	2.00	1.80	
36 Methyl tert-butyl ether	73	6.058	6.094	-0.036	92	690950	2.00	2.02	
37 1,1-Dichloroethane	63	6.257	6.283	-0.026	98	346185	2.00	1.92	
38 Vinyl acetate	43	6.376	6.402	-0.026	98	366118	2.00	2.11	
39 2-Butanone (MEK)	72	6.732	6.761	-0.029	98	78637	2.00	1.93	
40 Hexane	56	6.824	6.845	-0.021	81	122366	2.00	1.96	
171 Isopropyl ether	45	6.958	6.989	-0.031	86	443358	2.00	2.06	
41 cis-1,2-Dichloroethene	96	7.104	7.127	-0.023	94	212288	2.00	1.96	
42 Ethyl acetate	43	7.298	7.330	-0.032	98	293488	2.00	1.95	
43 Chloroform	83	7.422	7.439	-0.017	96	555199	2.00	1.94	
173 Tert-butyl ethyl ether	59	7.557	7.580	-0.023	92	591267	2.00	1.91	
44 Tetrahydrofuran	42	7.762	7.793	-0.031	76	130960	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.344	8.364	-0.020	94	715022	2.00	1.97	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	419142	2.00	1.98	
47 Benzene	78	8.905	8.920	-0.015	98	541647	2.00	1.99	
48 Cyclohexane	69	8.932	8.951	-0.019	88	85082	2.00	2.10	
50 Carbon tetrachloride	117	8.943	8.962	-0.019	97	823420	2.00	2.15	
49 n-Butanol	31	8.943	8.969	-0.026	54	40428	2.00	2.09	
51 2,3-Dimethylpentane	71	9.110	9.126	-0.016	82	113510	2.00	2.01	
52 Thiophene	84	9.159	9.174	-0.015	95	308039	2.00	1.98	
53 Isooctane	57	9.784	9.798	-0.014	95	705085	2.00	2.02	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	76	170084	2.00	1.99	
55 n-Heptane	71	10.210	10.224	-0.014	83	179014	2.00	2.06	
56 Trichloroethene	130	10.237	10.250	-0.013	93	332896	2.00	2.03	
57 Dibromomethane	93	10.269	10.279	-0.010	92	292459	2.00	1.99	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	572509	2.00	2.08	
59 1,4-Dioxane	88	10.474	10.497	-0.023	86	85996	2.00	2.07	
60 Methyl methacrylate	41	10.631	10.649	-0.018	90	196157	2.00	2.06	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	414520	2.00	2.47	
62 4-Methyl-2-pentanone (MIBK)	43	11.531	11.552	-0.021	91	315480	2.00	2.08	
63 cis-1,3-Dichloropropene	75	11.569	11.577	-0.008	97	358004	2.00	2.17	
64 trans-1,3-Dichloropropene	75	12.324	12.332	-0.008	97	387987	2.00	2.22	
65 Toluene	91	12.464	12.471	-0.007	93	738479	2.00	2.06	
67 2-Methylthiophene	97	12.518	12.524	-0.006	80	252005	NC	NC	
66 1,1,2-Trichloroethane	83	12.518	12.527	-0.009	94	195833	2.00	2.05	
68 3-Methylthiophene	97	12.831	12.836	-0.005	99	596590	NC	NC	
69 2-Hexanone	58	12.987	13.003	-0.016	95	157281	2.00	2.09	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	97	630906	2.00	2.27	
71 n-Octane	85	13.321	13.326	-0.005	74	241345	2.00	2.11	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	440376	2.00	2.11	
73 Tetrachloroethene	129	13.688	13.695	-0.007	94	362784	2.00	2.04	
74 Chlorobenzene	112	14.599	14.606	-0.007	92	644974	2.00	2.06	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	78	387573	2.00	1.84	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1081684	2.00	2.09	
77 2-Ethylthiophene	97	15.036	15.042	-0.006	98	850130	NC	NC	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1797001	4.00	4.23	
79 Bromoform	173	15.505	15.507	-0.002	96	657515	2.00	2.25	
80 Styrene	104	15.592	15.594	-0.002	97	618923	2.00	2.22	
82 o-Xylene	91	15.651	15.655	-0.004	97	908326	2.00	2.04	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.656	15.659	-0.003	81	352264	2.00	2.08	
83 1,1,2,2-Tetrachloroethane	83	15.974	15.976	-0.002	93	486519	2.00	2.15	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	231227	2.00	2.06	
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1305567	2.00	2.06	
86 N-Propylbenzene	120	16.853	16.856	-0.003	98	380100	2.00	2.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	338365	2.00	2.10	
88 4-Ethyltoluene	105	17.021	17.027	-0.006	98	1360898	2.00	2.06	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	643905	2.00	2.39	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	552848	2.00	2.16	
91 n-Decane	57	17.528	17.532	-0.004	97	510052	2.00	2.12	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	1376781	2.00	2.10	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	1269827	2.00	2.11	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	888433	2.00	2.04	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	1714335	2.00	2.11	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	1039012	2.00	2.24	
97 1,4-Dichlorobenzene	146	17.970	17.977	-0.007	94	887663	2.00	2.03	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	1699119	2.00	2.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1037942	2.00	1.61	
100 Butylcyclohexane	83	18.229	18.232	-0.004	92	701115	2.00	1.97	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	96	857489	2.00	2.00	
102 2,3-Dihydroindene	117	18.379	18.383	-0.004	93	1087727	2.00	2.04	
103 Indene	116	18.520	18.520	0.000	90	809464	2.00	1.85	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	1414728	2.00	2.12	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	96	1229369	NC	NC	
105 Undecane	57	19.000	19.001	-0.001	87	616308	2.00	2.16	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	94	386560	2.00	1.85	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	1560478	2.00	2.01	
109 1,2,3,5-Tetramethylbenzene	119	19.463	19.464	-0.001	94	955538	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	96	1325184	NC	NC	
110 Dodecane	57	20.127	20.128	-0.001	90	688062	2.00	2.31	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	999500	2.00	2.16	
113 Naphthalene	128	20.326	20.329	-0.003	98	1949612	2.00	2.08	
114 Benzo(b)thiophene	134	20.423	20.429	-0.006	99	1114636	NC	NC	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	1114590	2.00	2.07	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	970744	2.00	2.18	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	761819	2.00	2.56	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	709921	2.00	2.71	
A 120 C8 Range	1	13.335	(13.279-13.376)		0	1874356	2.00	2.10	
S 121 Xylenes, Total	100				0		6.00	6.27	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.86	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00080

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D

Injection Date: 17-Nov-2018 06:27:30

Instrument ID: MR

Operator ID:

Lims ID: icv

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

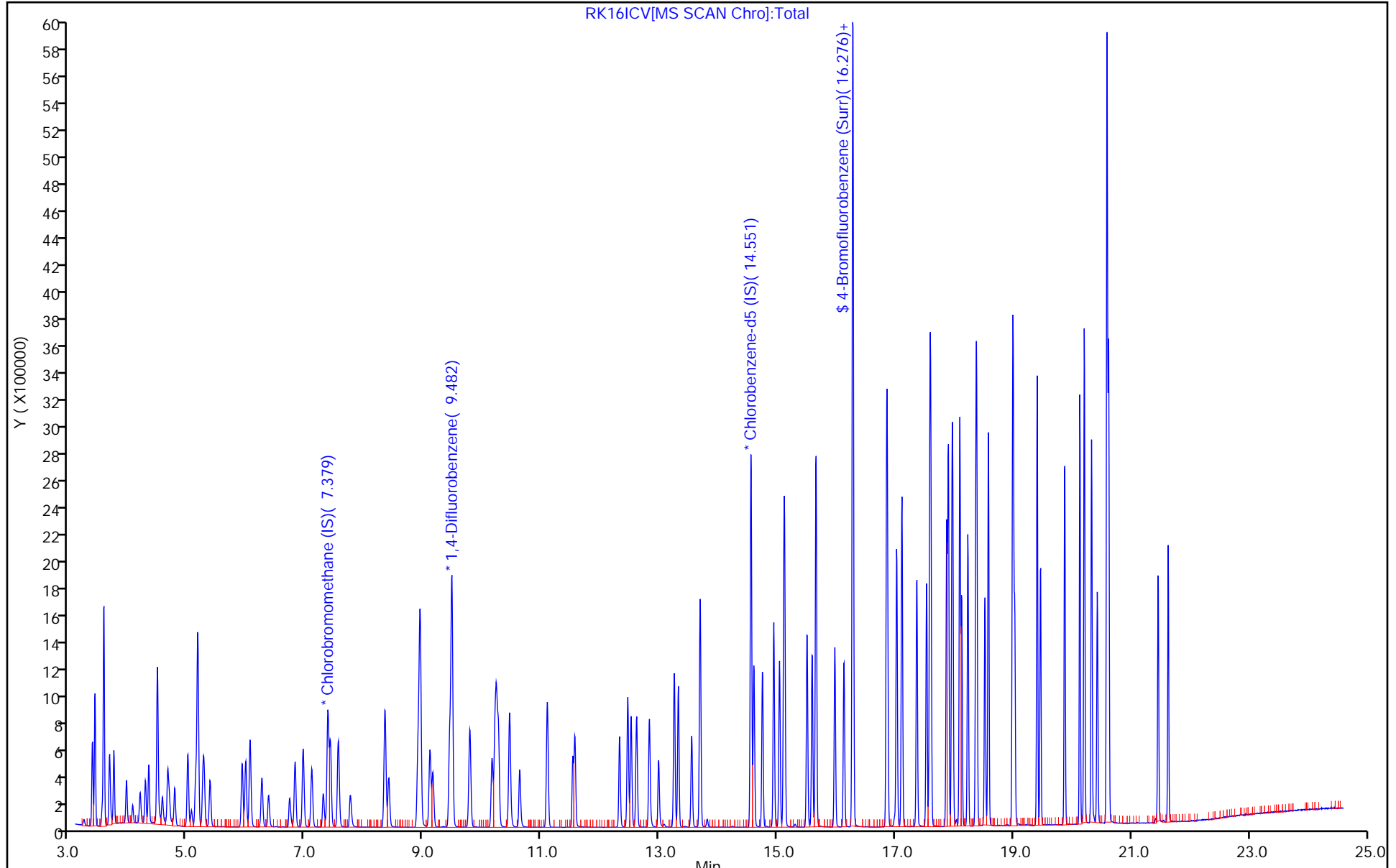
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.256		1.90	2.00	-4.9	35.0
Propene	Ave	0.7296	0.6790		1.86	2.00	-6.9	35.0
Dichlorodifluoromethane	Ave	4.352	5.057		2.32	2.00	16.2	35.0
Chloromethane	Ave	0.3061	0.2731		1.78	2.00	-10.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	3.469		2.14	2.00	7.1	35.0
Acetaldehyde	Ave	0.2860	0.2397		8.38	10.0	-16.2	35.0
Vinyl chloride	Ave	1.073	0.9669		1.80	2.00	-9.9	35.0
1,3-Butadiene	Ave	0.6506	0.6233		1.92	2.00	-4.2	35.0
Butane	Ave	1.132	1.086		1.92	2.00	-4.0	35.0
Bromomethane	Ave	1.235	1.146		1.86	2.00	-7.2	35.0
Chloroethane	Ave	0.4970	0.4655		1.87	2.00	-6.3	35.0
Ethanol	Ave	0.2997	0.2300		7.67	10.0	-23.3	35.0
Vinyl bromide	Ave	1.302	1.320		2.03	2.00	1.4	35.0
2-Methylbutane	Ave	0.7999	0.7818		1.95	2.00	-2.3	35.0
Acrolein	Ave	0.2528	0.2785		2.20	2.00	10.2	35.0
Trichlorofluoromethane	Ave	5.912	5.646		1.91	2.00	-4.5	35.0
Acetonitrile	Ave	0.2586	0.2377		1.84	2.00	-8.1	35.0
Acetone	Ave	0.4151	0.3821		1.84	2.00	-7.9	35.0
Pentane	Ave	0.2011	0.2005		1.99	2.00	-0.3	35.0
Isopropyl alcohol	Ave	1.132	1.401		2.48	2.00	23.8	35.0
Ethyl ether	Ave	0.6661	0.5684		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.408	1.325		1.88	2.00	-5.9	35.0
Acrylonitrile	Ave	0.6277	0.6236		1.99	2.00	-0.6	35.0
tert-Butyl alcohol	Ave	2.677	2.710		2.02	2.00	1.2	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.433		1.97	2.00	-1.6	35.0
Methylene Chloride	Ave	1.338	1.169		1.75	2.00	-12.6	35.0
3-Chloropropene	Ave	1.309	1.297		1.98	2.00	-0.9	35.0
Carbon disulfide	Ave	3.341	3.259		1.95	2.00	-2.4	35.0
trans-1,2-Dichloroethene	Ave	1.436	1.363		1.90	2.00	-5.1	35.0
2-Methylpentane	Ave	1.894	1.705		1.80	2.00	-10.0	35.0
Methyl tert-butyl ether	Ave	4.568	4.614		2.02	2.00	1.0	35.0
1,1-Dichloroethane	Ave	2.402	2.312		1.92	2.00	-3.8	35.0
Vinyl acetate	Ave	2.320	2.445		2.11	2.00	5.4	35.0
2-Butanone (MEK)	Ave	0.5446	0.5251		1.93	2.00	-3.6	35.0
Hexane	Ave	0.8352	0.8172		1.96	2.00	-2.2	35.0
Isopropyl ether	Ave	2.873	2.961		2.06	2.00	3.0	35.0
cis-1,2-Dichloroethene	Ave	1.448	1.418		1.96	2.00	-2.1	35.0
Ethyl acetate	Ave	2.012	1.960		1.95	2.00	-2.6	35.0
Chloroform	Ave	3.821	3.708		1.94	2.00	-3.0	35.0
Tert-butyl ethyl ether	Ave	4.141	3.948		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.8745		1.97	2.00	-1.3	35.0
1,1,1-Trichloroethane	Ave	4.843	4.775		1.97	2.00	-1.4	35.0
1,2-Dichloroethane	Ave	0.5063	0.5017		1.98	2.00	-0.9	35.0
Benzene	Ave	0.6517	0.6483		1.99	2.00	-0.5	35.0
Cyclohexane	Ave	0.0968	0.1018		2.10	2.00	5.2	35.0
1-Butanol	Ave	0.0462	0.0484		2.09	2.00	4.7	35.0
Carbon tetrachloride	Ave	0.9167	0.9855		2.15	2.00	7.5	35.0
2,3-Dimethylpentane	Ave	0.1349	0.1359		2.01	2.00	0.7	35.0
Thiophene	Ave	0.3728	0.3687		1.98	2.00	-1.1	35.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8439		2.02	2.00	1.2	35.0
1,2-Dichloropropane	Ave	0.2045	0.2036		1.99	2.00	-0.5	35.0
Heptane	Ave	0.2083	0.2143		2.06	2.00	2.8	35.0
Trichloroethene	Ave	0.3929	0.3984		2.03	2.00	1.4	35.0
Dibromomethane	Ave	0.3514	0.3500		1.99	2.00	-0.4	35.0
Bromodichloromethane	Ave	0.6587	0.6852		2.08	2.00	4.0	35.0
1,4-Dioxane	Ave	0.0994	0.1029		2.07	2.00	3.5	35.0
Methyl methacrylate	Ave	0.2275	0.2348		2.06	2.00	3.2	35.0
Methylcyclohexane	Ave	0.4024	0.4961		2.47	2.00	23.3	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3776		2.08	2.00	4.1	35.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4285		2.17	2.00	8.5	35.0
trans-1,3-Dichloropropene	Ave	0.4674	0.5177		2.22	2.00	10.8	35.0
Toluene	Ave	0.9586	0.9853		2.06	2.00	2.8	35.0
1,1,2-Trichloroethane	Ave	0.2543	0.2613		2.05	2.00	2.7	35.0
2-Hexanone	Ave	0.2006	0.2098		2.09	2.00	4.6	35.0
Dibromochloromethane	Ave	0.7414	0.8418		2.27	2.00	13.5	35.0
Octane	Ave	0.3054	0.3220		2.11	2.00	5.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5875		2.11	2.00	5.4	35.0
Tetrachloroethene	Ave	0.4749	0.4840		2.04	2.00	1.9	35.0
Chlorobenzene	Ave	0.8374	0.8605		2.06	2.00	2.8	35.0
2,3-Dimethylheptane	Ave	0.5626	0.5171		1.84	2.00	-8.1	35.0
Ethylbenzene	Ave	1.382	1.443		2.09	2.00	4.4	35.0
m-Xylene & p-Xylene	Ave	1.133	1.199		4.23	4.00	5.8	35.0
Bromoform	Ave	0.7786	0.8773		2.25	2.00	12.7	35.0
Styrene	Ave	0.7430	0.8258		2.22	2.00	11.1	35.0
o-Xylene	Ave	1.190	1.212		2.04	2.00	1.8	35.0
Nonane	Ave	0.4511	0.4700		2.08	2.00	4.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6491		2.15	2.00	7.3	35.0
1,2,3-Trichloropropane	Ave	0.3000	0.3085		2.06	2.00	2.8	35.0
Isopropylbenzene	Ave	1.694	1.742		2.06	2.00	2.8	35.0
Propylbenzene	Ave	0.4652	0.5071		2.18	2.00	9.0	35.0
2-Chlorotoluene	Ave	0.4306	0.4514		2.10	2.00	4.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.816		2.06	2.00	3.2	35.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.8591		2.39	2.00	19.3	35.0
Alpha Methyl Styrene	Ave	0.6844	0.7376		2.16	2.00	7.8	35.0
Decane	Ave	0.6421	0.6805		2.12	2.00	6.0	35.0
tert-Butylbenzene	Ave	1.753	1.837		2.10	2.00	4.8	35.0
1,2,4-Trimethylbenzene	Ave	1.607	1.694		2.11	2.00	5.5	35.0
1,3-Dichlorobenzene	Ave	1.160	1.185		2.04	2.00	2.2	35.0
sec-Butylbenzene	Ave	2.171	2.287		2.11	2.00	5.4	35.0
Benzyl chloride	Ave	1.239	1.386		2.24	2.00	11.9	35.0
1,4-Dichlorobenzene	Ave	1.164	1.184		2.03	2.00	1.7	35.0
4-Isopropyltoluene	Ave	2.191	2.267		2.07	2.00	3.5	35.0
1,2,3-Trimethylbenzene	Ave	1.725	1.385		1.61	2.00	-19.7	35.0
Butylcyclohexane	Ave	0.9488	0.9354		1.97	2.00	-1.4	35.0
1,2-Dichlorobenzene	Ave	1.144	1.144		2.00	2.00	-0.0	35.0
Indane	Ave	1.423	1.451		2.04	2.00	2.0	35.0
Indene	Ave	1.168	1.080		1.85	2.00	-7.6	35.0
Butylbenzene	Ave	1.784	1.888		2.12	2.00	5.8	35.0
Undecane	Ave	0.7598	0.8223		2.16	2.00	8.2	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5157		1.85	2.00	-7.4	35.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.082		2.01	2.00	0.7	35.0
Dodecane	Ave	0.7957	0.9180		2.31	2.00	15.4	35.0
1,2,4-Trichlorobenzene	Ave	1.235	1.334		2.16	2.00	7.9	35.0
Naphthalene	Ave	2.498	2.601		2.08	2.00	4.1	35.0
Hexachlorobutadiene	Ave	1.436	1.487		2.07	2.00	3.5	35.0
1,2,3-Trichlorobenzene	Ave	1.187	1.295		2.18	2.00	9.1	35.0
2-Methylnaphthalene	Ave	0.7935	1.016		2.56	2.00	28.1	50.0
1-Methylnaphthalene	Ave	0.6999	0.9471		2.71	2.00	35.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8473		3.98	4.00	-0.4	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 17-Nov-2018 06:27:30 ALS Bottle#: 8 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-018
 Misc. Info.: S80
 Operator ID: Instrument ID: MR
 Sublist:

Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 16:30:16 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: tajh Date: 19-Nov-2018 10:15:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.397	-0.018	68	299493	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	94	1671036	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	89	1499042	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	89	1270095	4.00	3.98	
6 Chlorodifluoromethane	51	3.383	3.417	-0.034	95	337816	2.00	1.90	
7 Propene	41	3.389	3.420	-0.031	91	101676	2.00	1.86	
8 Dichlorodifluoromethane	85	3.432	3.461	-0.029	100	757267	2.00	2.32	
9 Chloromethane	52	3.550	3.586	-0.036	98	40890	2.00	1.78	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.583	3.609	-0.026	89	519503	2.00	2.14	
11 Acetaldehyde	44	3.674	3.710	-0.036	93	179473	10.0	8.38	
12 Vinyl chloride	62	3.680	3.711	-0.031	99	144783	2.00	1.80	
13 Butadiene	54	3.750	3.780	-0.030	87	93331	2.00	1.92	
14 Butane	43	3.750	3.782	-0.032	89	162697	2.00	1.92	
15 Bromomethane	94	3.966	3.995	-0.029	96	171614	2.00	1.86	
16 Chloroethane	64	4.068	4.100	-0.032	95	69702	2.00	1.87	
17 Ethanol	31	4.198	4.222	-0.024	92	172190	10.0	7.67	
18 Vinyl bromide	106	4.284	4.315	-0.031	97	197656	2.00	2.03	
19 2-Methylbutane	43	4.343	4.369	-0.026	77	117076	2.00	1.95	
20 Acrolein	56	4.483	4.516	-0.033	97	41705	2.00	2.20	
21 Trichlorofluoromethane	101	4.489	4.517	-0.028	99	845437	2.00	1.91	
22 Acetonitrile	40	4.516	4.545	-0.029	96	35597	2.00	1.84	
23 Acetone	58	4.575	4.605	-0.030	100	57219	2.00	1.84	
24 Pentane	72	4.661	4.693	-0.032	91	30029	2.00	1.99	
25 Isopropyl alcohol	45	4.688	4.716	-0.028	95	209729	2.00	2.48	
26 Ethyl ether	31	4.780	4.817	-0.037	69	85111	2.00	1.71	
27 1,1-Dichloroethene	96	5.006	5.033	-0.027	97	198342	2.00	1.88	
28 Acrylonitrile	53	5.066	5.097	-0.031	91	93387	2.00	1.99	
29 2-Methyl-2-propanol	59	5.141	5.173	-0.032	94	405847	2.00	2.02	
30 1,1,2-Trichloro-1,2,2-trif	101	5.174	5.199	-0.025	92	514124	2.00	1.97	
31 Methylene Chloride	84	5.260	5.290	-0.030	88	175058	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.281	5.309	-0.028	85	194281	2.00	1.98	
33 Carbon disulfide	76	5.378	5.410	-0.032	99	488020	2.00	1.95	
34 trans-1,2-Dichloroethene	96	5.929	5.951	-0.023	97	204116	2.00	1.90	
35 2-Methylpentane	43	5.988	6.011	-0.023	84	255391	2.00	1.80	
36 Methyl tert-butyl ether	73	6.058	6.094	-0.036	92	690950	2.00	2.02	
37 1,1-Dichloroethane	63	6.257	6.283	-0.026	98	346185	2.00	1.92	
38 Vinyl acetate	43	6.376	6.402	-0.026	98	366118	2.00	2.11	
39 2-Butanone (MEK)	72	6.732	6.761	-0.029	98	78637	2.00	1.93	
40 Hexane	56	6.824	6.845	-0.021	81	122366	2.00	1.96	
171 Isopropyl ether	45	6.958	6.989	-0.031	86	443358	2.00	2.06	
41 cis-1,2-Dichloroethene	96	7.104	7.127	-0.023	94	212288	2.00	1.96	
42 Ethyl acetate	43	7.298	7.330	-0.032	98	293488	2.00	1.95	
43 Chloroform	83	7.422	7.439	-0.017	96	555199	2.00	1.94	
173 Tert-butyl ethyl ether	59	7.557	7.580	-0.023	92	591267	2.00	1.91	
44 Tetrahydrofuran	42	7.762	7.793	-0.031	76	130960	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.344	8.364	-0.020	94	715022	2.00	1.97	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	419142	2.00	1.98	
47 Benzene	78	8.905	8.920	-0.015	98	541647	2.00	1.99	
48 Cyclohexane	69	8.932	8.951	-0.019	88	85082	2.00	2.10	
50 Carbon tetrachloride	117	8.943	8.962	-0.019	97	823420	2.00	2.15	
49 n-Butanol	31	8.943	8.969	-0.026	54	40428	2.00	2.09	
51 2,3-Dimethylpentane	71	9.110	9.126	-0.016	82	113510	2.00	2.01	
52 Thiophene	84	9.159	9.174	-0.015	95	308039	2.00	1.98	
53 Isooctane	57	9.784	9.798	-0.014	95	705085	2.00	2.02	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	76	170084	2.00	1.99	
55 n-Heptane	71	10.210	10.224	-0.014	83	179014	2.00	2.06	
56 Trichloroethene	130	10.237	10.250	-0.013	93	332896	2.00	2.03	
57 Dibromomethane	93	10.269	10.279	-0.010	92	292459	2.00	1.99	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	572509	2.00	2.08	
59 1,4-Dioxane	88	10.474	10.497	-0.023	86	85996	2.00	2.07	
60 Methyl methacrylate	41	10.631	10.649	-0.018	90	196157	2.00	2.06	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	414520	2.00	2.47	
62 4-Methyl-2-pentanone (MIBK)	43	11.531	11.552	-0.021	91	315480	2.00	2.08	
63 cis-1,3-Dichloropropene	75	11.569	11.577	-0.008	97	358004	2.00	2.17	
64 trans-1,3-Dichloropropene	75	12.324	12.332	-0.008	97	387987	2.00	2.22	
65 Toluene	91	12.464	12.471	-0.007	93	738479	2.00	2.06	
67 2-Methylthiophene	97	12.518	12.524	-0.006	80	252005	NC	NC	
66 1,1,2-Trichloroethane	83	12.518	12.527	-0.009	94	195833	2.00	2.05	
68 3-Methylthiophene	97	12.831	12.836	-0.005	99	596590	NC	NC	
69 2-Hexanone	58	12.987	13.003	-0.016	95	157281	2.00	2.09	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	97	630906	2.00	2.27	
71 n-Octane	85	13.321	13.326	-0.005	74	241345	2.00	2.11	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	440376	2.00	2.11	
73 Tetrachloroethene	129	13.688	13.695	-0.007	94	362784	2.00	2.04	
74 Chlorobenzene	112	14.599	14.606	-0.007	92	644974	2.00	2.06	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	78	387573	2.00	1.84	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1081684	2.00	2.09	
77 2-Ethylthiophene	97	15.036	15.042	-0.006	98	850130	NC	NC	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1797001	4.00	4.23	
79 Bromoform	173	15.505	15.507	-0.002	96	657515	2.00	2.25	
80 Styrene	104	15.592	15.594	-0.002	97	618923	2.00	2.22	
82 o-Xylene	91	15.651	15.655	-0.004	97	908326	2.00	2.04	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.656	15.659	-0.003	81	352264	2.00	2.08	
83 1,1,2,2-Tetrachloroethane	83	15.974	15.976	-0.002	93	486519	2.00	2.15	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	231227	2.00	2.06	
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1305567	2.00	2.06	
86 N-Propylbenzene	120	16.853	16.856	-0.003	98	380100	2.00	2.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	338365	2.00	2.10	
88 4-Ethyltoluene	105	17.021	17.027	-0.006	98	1360898	2.00	2.06	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	643905	2.00	2.39	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	552848	2.00	2.16	
91 n-Decane	57	17.528	17.532	-0.004	97	510052	2.00	2.12	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	1376781	2.00	2.10	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	1269827	2.00	2.11	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	888433	2.00	2.04	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	1714335	2.00	2.11	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	1039012	2.00	2.24	
97 1,4-Dichlorobenzene	146	17.970	17.977	-0.007	94	887663	2.00	2.03	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	1699119	2.00	2.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1037942	2.00	1.61	
100 Butylcyclohexane	83	18.229	18.232	-0.004	92	701115	2.00	1.97	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	96	857489	2.00	2.00	
102 2,3-Dihydroindene	117	18.379	18.383	-0.004	93	1087727	2.00	2.04	
103 Indene	116	18.520	18.520	0.000	90	809464	2.00	1.85	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	1414728	2.00	2.12	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	96	1229369	NC	NC	
105 Undecane	57	19.000	19.001	-0.001	87	616308	2.00	2.16	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	94	386560	2.00	1.85	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	1560478	2.00	2.01	
109 1,2,3,5-Tetramethylbenzene	119	19.463	19.464	-0.001	94	955538	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	96	1325184	NC	NC	
110 Dodecane	57	20.127	20.128	-0.001	90	688062	2.00	2.31	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	999500	2.00	2.16	
113 Naphthalene	128	20.326	20.329	-0.003	98	1949612	2.00	2.08	
114 Benzo(b)thiophene	134	20.423	20.429	-0.006	99	1114636	NC	NC	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	1114590	2.00	2.07	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	970744	2.00	2.18	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	761819	2.00	2.56	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	709921	2.00	2.71	
A 120 C8 Range	1	13.335	(13.279-13.376)		0	1874356	2.00	2.10	
S 121 Xylenes, Total	100				0		6.00	6.27	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.86	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00080

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D

Injection Date: 17-Nov-2018 06:27:30

Instrument ID: MR

Operator ID:

Lims ID: icv

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

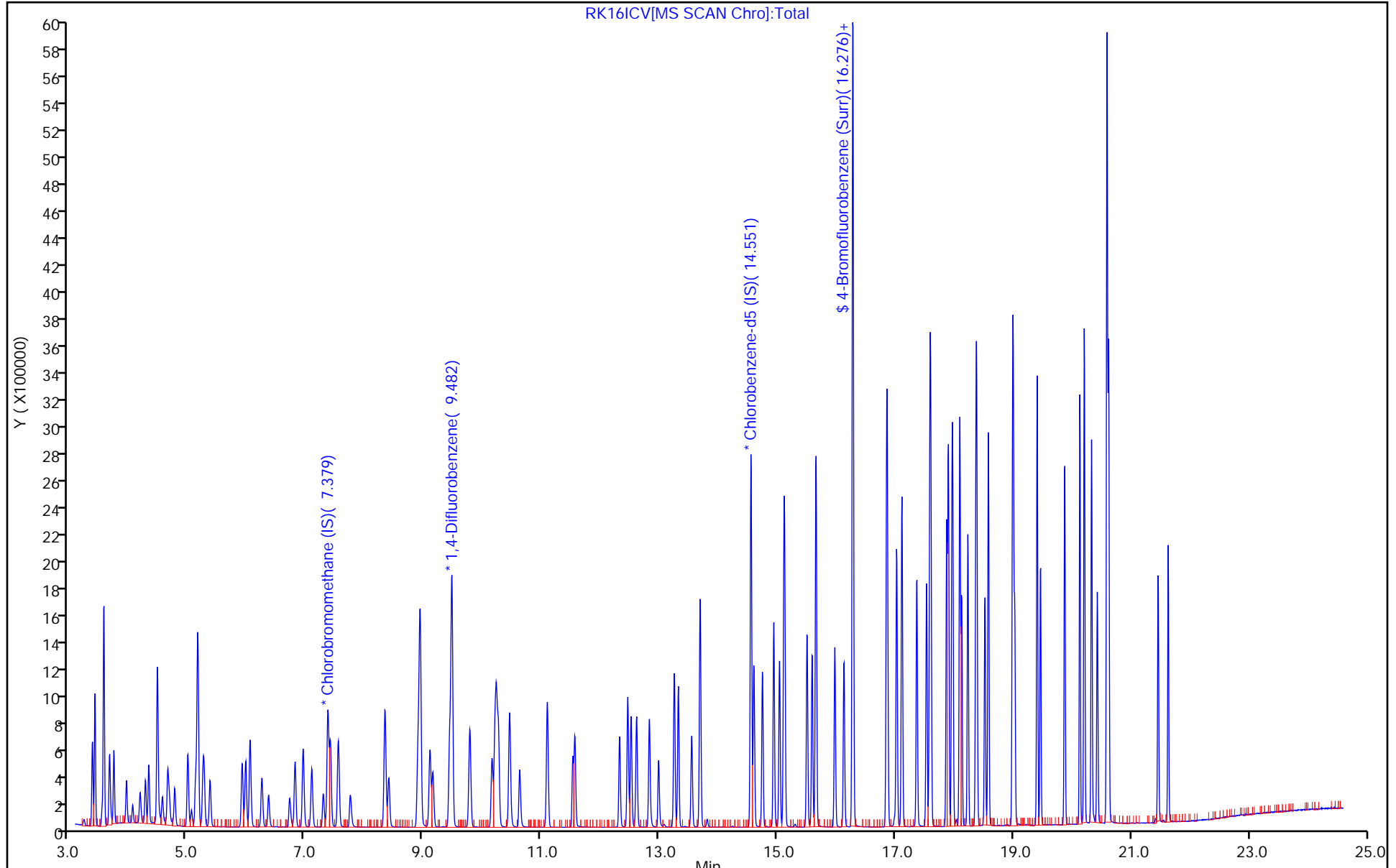
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27909/2 Calibration Date: 02/26/2019 10:22
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.072		1.75	2.00	-12.7	30.0
Propene	Ave	0.7296	0.6284		1.72	2.00	-13.9	30.0
Dichlorodifluoromethane	Ave	4.352	3.788		1.74	2.00	-13.0	30.0
Chloromethane	Ave	0.3061	0.2615		1.71	2.00	-14.6	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	2.650		1.64	2.00	-18.2	30.0
Acetaldehyde	Ave	0.2860	0.3209		11.2	10.0	12.2	30.0
Vinyl chloride	Ave	1.073	1.127		2.10	2.00	5.0	30.0
1,3-Butadiene	Ave	0.6506	0.7849		2.41	2.00	20.6	30.0
Butane	Ave	1.132	1.346		2.38	2.00	18.9	30.0
Bromomethane	Ave	1.235	1.444		2.34	2.00	16.9	30.0
Chloroethane	Ave	0.4970	0.5753		2.32	2.00	15.8	30.0
Ethanol	Ave	0.2997	0.3815		12.7	10.0	27.3	30.0
Vinyl bromide	Ave	1.302	1.515		2.33	2.00	16.3	30.0
2-Methylbutane	Ave	0.7999	1.036		2.59	2.00	29.5	30.0
Acrolein	Ave	0.2528	0.3682		2.91	2.00	45.6*	30.0
Trichlorofluoromethane	Ave	5.912	6.983		2.36	2.00	18.1	30.0
Acetonitrile	Ave	0.2586	0.3307		2.56	2.00	27.9	30.0
Acetone	Ave	0.4151	0.4983		7.20	6.00	20.0	30.0
Isopropyl alcohol	Ave	1.132	1.540		8.16	6.00	36.1*	30.0
Pentane	Ave	0.2011	0.2447		2.43	2.00	21.7	30.0
Ethyl ether	Ave	0.6661	0.8066		2.42	2.00	21.1	30.0
1,1-Dichloroethene	Ave	1.408	1.340		1.90	2.00	-4.8	30.0
Acrylonitrile	Ave	0.6277	0.6856		2.18	2.00	9.2	30.0
tert-Butyl alcohol	Ave	2.677	2.714		2.03	2.00	1.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.489		2.00	2.00	0.0	30.0
Methylene Chloride	Ave	1.338	1.171		1.75	2.00	-12.5	30.0
3-Chloropropene	Ave	1.309	1.436		2.19	2.00	9.7	30.0
Carbon disulfide	Ave	3.341	3.319		1.99	2.00	-0.6	30.0
trans-1,2-Dichloroethene	Ave	1.436	1.334		1.86	2.00	-7.1	30.0
2-Methylpentane	Ave	1.894	2.162		2.28	2.00	14.1	30.0
Methyl tert-butyl ether	Ave	4.568	4.558		2.00	2.00	-0.2	30.0
1,1-Dichloroethane	Ave	2.402	2.284		1.90	2.00	-4.9	30.0
Vinyl acetate	Ave	2.320	2.644		2.28	2.00	13.9	30.0
2-Butanone (MEK)	Ave	0.5446	0.5252		1.93	2.00	-3.6	30.0
Hexane	Ave	0.8352	0.9323		2.23	2.00	11.6	30.0
Isopropyl ether	Ave	2.873	3.088		2.15	2.00	7.5	30.0
cis-1,2-Dichloroethene	Ave	1.448	1.413		1.95	2.00	-2.4	30.0
Ethyl acetate	Ave	2.012	2.222		2.21	2.00	10.4	30.0
Chloroform	Ave	3.821	3.665		1.92	2.00	-4.1	30.0
Tert-butyl ethyl ether	Ave	4.141	4.363		2.11	2.00	5.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27909/2 Calibration Date: 02/26/2019 10:22
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.9694		2.19	2.00	9.4	30.0
1,1,1-Trichloroethane	Ave	4.843	4.707		1.94	2.00	-2.8	30.0
1,2-Dichloroethane	Ave	0.5063	0.4825		1.91	2.00	-4.7	30.0
Benzene	Ave	0.6517	0.6340		1.95	2.00	-2.7	30.0
1-Butanol	Ave	0.0462	0.0531		2.30	2.00	15.0	30.0
Cyclohexane	Ave	0.0968	0.1072		2.21	2.00	10.7	30.0
Carbon tetrachloride	Ave	0.9167	0.9348		2.04	2.00	2.0	30.0
2,3-Dimethylpentane	Ave	0.1349	0.1403		2.08	2.00	4.0	30.0
Thiophene	Ave	0.3728	0.3788		2.03	2.00	1.6	30.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8882		2.13	2.00	6.5	30.0
1,2-Dichloropropane	Ave	0.2045	0.2045		2.00	2.00	-0.0	30.0
Heptane	Ave	0.2083	0.2198		2.11	2.00	5.5	30.0
Trichloroethene	Ave	0.3929	0.3954		2.01	2.00	0.6	30.0
Dibromomethane	Ave	0.3514	0.3412		1.94	2.00	-2.9	30.0
Bromodichloromethane	Ave	0.6587	0.6501		1.97	2.00	-1.3	30.0
1,4-Dioxane	Ave	0.0994	0.1021		2.05	2.00	2.7	30.0
Methyl methacrylate	Ave	0.2275	0.2473		2.17	2.00	8.7	30.0
Methylcyclohexane	Ave	0.4024	0.4151		2.06	2.00	3.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.4099		2.26	2.00	13.0	30.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4179		2.12	2.00	5.9	30.0
trans-1,3-Dichloropropene	Ave	0.4674	0.4842		2.07	2.00	3.6	30.0
Toluene	Ave	0.9586	1.009		2.11	2.00	5.3	30.0
1,1,2-Trichloroethane	Ave	0.2543	0.2624		2.06	2.00	3.2	30.0
2-Hexanone	Ave	0.2006	0.2275		2.27	2.00	13.4	30.0
Dibromochloromethane	Ave	0.7414	0.8263		2.23	2.00	11.5	30.0
Octane	Ave	0.3054	0.3361		2.20	2.00	10.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5709		2.05	2.00	2.4	30.0
Tetrachloroethene	Ave	0.4749	0.4896		2.06	2.00	3.1	30.0
Chlorobenzene	Ave	0.8374	0.8730		2.09	2.00	4.3	30.0
2,3-Dimethylheptane	Ave	0.5626	0.6857		2.44	2.00	21.9	30.0
Ethylbenzene	Ave	1.382	1.466		2.12	2.00	6.1	30.0
m-Xylene & p-Xylene	Ave	1.133	1.261		4.45	4.00	11.2	30.0
Bromoform	Ave	0.7786	0.8760		2.25	2.00	12.5	30.0
Styrene	Ave	0.7430	0.8157		2.20	2.00	9.8	30.0
o-Xylene	Ave	1.190	1.295		2.18	2.00	8.8	30.0
Nonane	Ave	0.4511	0.5582		2.47	2.00	23.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6602		2.18	2.00	9.1	30.0
1,2,3-Trichloropropane	Ave	0.3000	0.2901		1.93	2.00	-3.3	30.0
Isopropylbenzene	Ave	1.694	1.747		2.06	2.00	3.1	30.0
Propylbenzene	Ave	0.4652	0.4827		2.08	2.00	3.8	30.0
2-Chlorotoluene	Ave	0.4306	0.4438		2.06	2.00	3.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27909/2 Calibration Date: 02/26/2019 10:22
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.830		2.08	2.00	4.0	30.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.7586		2.11	2.00	5.4	30.0
Alpha Methyl Styrene	Ave	0.6844	0.7085		2.07	2.00	3.5	30.0
Decane	Ave	0.6421	0.7459		2.32	2.00	16.2	30.0
tert-Butylbenzene	Ave	1.753	1.845		2.10	2.00	5.2	30.0
1,2,4-Trimethylbenzene	Ave	1.607	1.734		2.16	2.00	7.9	30.0
1,3-Dichlorobenzene	Ave	1.160	1.145		1.97	2.00	-1.3	30.0
sec-Butylbenzene	Ave	2.171	2.194		2.02	2.00	1.1	30.0
Benzyl chloride	Ave	1.239	1.347		2.17	2.00	8.7	30.0
1,4-Dichlorobenzene	Ave	1.164	1.170		2.01	2.00	0.5	30.0
4-Isopropyltoluene	Ave	2.191	2.280		2.08	2.00	4.0	30.0
1,2,3-Trimethylbenzene	Ave	1.725	1.832		2.12	2.00	6.2	30.0
Butylcyclohexane	Ave	0.9488	0.9760		2.06	2.00	2.9	30.0
1,2-Dichlorobenzene	Ave	1.144	1.124		1.97	2.00	-1.7	30.0
Indane	Ave	1.423	1.480		2.08	2.00	4.0	30.0
Indene	Ave	1.168	1.207		2.07	2.00	3.4	30.0
Butylbenzene	Ave	1.784	1.813		2.03	2.00	1.6	30.0
Undecane	Ave	0.7598	0.8782		2.31	2.00	15.6	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.6135		2.20	2.00	10.1	30.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.095		2.03	2.00	1.4	30.0
Dodecane	Ave	0.7957	0.8817		2.22	2.00	10.8	30.0
1,2,4-Trichlorobenzene	Ave	1.235	1.172		1.90	2.00	-5.1	30.0
Naphthalene	Ave	2.498	2.125		1.70	2.00	-14.9	30.0
Hexachlorobutadiene	Ave	1.436	1.305		1.82	2.00	-9.2	30.0
1,2,3-Trichlorobenzene	Ave	1.187	1.069		1.80	2.00	-10.0	30.0
2-Methylnaphthalene	Ave	0.7935	0.9577		2.41	2.00	20.7	50.0
1-Methylnaphthalene	Ave	0.6999	1.046		2.99	2.00	49.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8849		4.16	4.00	4.0	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RCCVB26.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 26-Feb-2019 10:22:30 ALS Bottle#: 15 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-002
 Misc. Info.: P83
 Operator ID: HMT Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:34:40 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:34:40

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.384	7.384	0.000	71	225849	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1327690	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.502	0.000	90	1164037	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.228	0.000	89	1029996	4.00	4.16	
6 Chlorodifluoromethane	51	3.513	3.513	0.000	96	233959	2.00	1.75	
7 Propene	41	3.524	3.524	0.000	92	70958	2.00	1.72	
8 Dichlorodifluoromethane	85	3.561	3.561	0.000	100	427735	2.00	1.74	
9 Chloromethane	52	3.680	3.680	0.000	95	29528	2.00	1.71	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.696	3.696	0.000	88	299291	2.00	1.64	
11 Acetaldehyde	44	3.782	3.782	0.000	92	181202	10.0	11.2	
12 Vinyl chloride	62	3.799	3.799	0.000	100	127222	2.00	2.10	
13 Butadiene	54	3.863	3.863	0.000	94	88632	2.00	2.41	
14 Butane	43	3.869	3.869	0.000	89	151957	2.00	2.38	
15 Bromomethane	94	4.074	4.074	0.000	95	163053	2.00	2.34	
16 Chloroethane	64	4.171	4.171	0.000	95	64964	2.00	2.32	
17 Ethanol	31	4.241	4.241	0.000	93	215391	10.0	12.7	
18 Vinyl bromide	106	4.381	4.381	0.000	96	171032	2.00	2.33	
19 2-Methylbutane	43	4.435	4.435	0.000	79	116942	2.00	2.59	
20 Acrolein	56	4.559	4.559	0.000	97	41575	2.00	2.91	
21 Trichlorofluoromethane	101	4.580	4.580	0.000	99	788565	2.00	2.36	
22 Acetonitrile	40	4.586	4.586	0.000	23	37346	2.00	2.56	a
23 Acetone	58	4.634	4.634	0.000	100	168797	6.00	7.20	
25 Isopropyl alcohol	45	4.715	4.715	0.000	99	521613	6.00	8.16	
24 Pentane	72	4.742	4.742	0.000	92	27628	2.00	2.43	
26 Ethyl ether	31	4.850	4.850	0.000	73	91086	2.00	2.42	
27 1,1-Dichloroethene	96	5.082	5.082	0.000	96	151349	2.00	1.90	
28 Acrylonitrile	53	5.120	5.120	0.000	94	77415	2.00	2.18	
29 2-Methyl-2-propanol	59	5.157	5.157	0.000	95	306500	2.00	2.03	
30 1,1,2-Trichloro-1,2,2-trif	101	5.238	5.238	0.000	91	394041	2.00	2.00	
31 Methylene Chloride	84	5.325	5.325	0.000	91	132282	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.346	5.346	0.000	87	162187	2.00	2.19	
33 Carbon disulfide	76	5.454	5.454	0.000	98	374851	2.00	1.99	
34 trans-1,2-Dichloroethene	96	5.977	5.977	0.000	97	150589	2.00	1.86	
35 2-Methylpentane	43	6.031	6.031	0.000	85	244097	2.00	2.28	
36 Methyl tert-butyl ether	73	6.085	6.085	0.000	93	514765	2.00	2.00	
37 1,1-Dichloroethane	63	6.295	6.295	0.000	98	257915	2.00	1.90	
38 Vinyl acetate	43	6.392	6.392	0.000	98	298584	2.00	2.28	
39 2-Butanone (MEK)	72	6.732	6.732	0.000	98	59307	2.00	1.93	
40 Hexane	56	6.851	6.851	0.000	81	105280	2.00	2.23	
171 Isopropyl ether	45	6.969	6.969	0.000	87	348728	2.00	2.15	
41 cis-1,2-Dichloroethene	96	7.120	7.120	0.000	95	159596	2.00	1.95	
42 Ethyl acetate	43	7.293	7.293	0.000	97	250882	2.00	2.21	
43 Chloroform	83	7.422	7.422	0.000	97	413867	2.00	1.92	
173 Tert-butyl ethyl ether	59	7.552	7.552	0.000	94	492735	2.00	2.11	
44 Tetrahydrofuran	42	7.751	7.751	0.000	76	109466	2.00	2.19	
45 1,1,1-Trichloroethane	97	8.339	8.339	0.000	95	531585	2.00	1.94	
46 1,2-Dichloroethane	62	8.398	8.398	0.000	98	320324	2.00	1.91	
47 Benzene	78	8.889	8.889	0.000	98	420906	2.00	1.95	
49 n-Butanol	31	8.905	8.905	0.000	67	35257	2.00	2.30	
48 Cyclohexane	69	8.921	8.921	0.000	89	71178	2.00	2.21	
50 Carbon tetrachloride	117	8.932	8.932	0.000	97	620528	2.00	2.04	
51 2,3-Dimethylpentane	71	9.094	9.094	0.000	84	93123	2.00	2.08	
52 Thiophene	84	9.137	9.137	0.000	95	251479	2.00	2.03	
53 Isooctane	57	9.757	9.757	0.000	94	589635	2.00	2.13	
54 1,2-Dichloropropane	63	10.124	10.124	0.000	73	135739	2.00	2.00	
55 n-Heptane	71	10.183	10.183	0.000	83	145938	2.00	2.11	
56 Trichloroethene	130	10.199	10.199	0.000	95	262497	2.00	2.01	
57 Dibromomethane	93	10.226	10.226	0.000	91	226522	2.00	1.94	
58 Dichlorobromomethane	83	10.415	10.415	0.000	98	431577	2.00	1.97	
59 1,4-Dioxane	88	10.431	10.431	0.000	91	67754	2.00	2.05	
60 Methyl methacrylate	41	10.588	10.588	0.000	89	164152	2.00	2.17	
61 Methylcyclohexane	83	11.062	11.062	0.000	92	275586	2.00	2.06	
62 4-Methyl-2-pentanone (MIBK)	43	11.483	11.483	0.000	92	272122	2.00	2.26	
63 cis-1,3-Dichloropropene	75	11.520	11.520	0.000	97	277404	2.00	2.12	
64 trans-1,3-Dichloropropene	75	12.275	12.275	0.000	95	281785	2.00	2.07	
65 Toluene	91	12.416	12.416	0.000	92	587345	2.00	2.11	
66 1,1,2-Trichloroethane	83	12.469	12.469	0.000	93	152744	2.00	2.06	
69 2-Hexanone	58	12.939	12.939	0.000	94	132386	2.00	2.27	
70 Chlorodibromomethane	129	13.203	13.203	0.000	97	480911	2.00	2.23	
71 n-Octane	85	13.278	13.278	0.000	79	195612	2.00	2.20	
72 Ethylene Dibromide	107	13.494	13.494	0.000	98	332264	2.00	2.05	
73 Tetrachloroethene	129	13.645	13.645	0.000	94	284951	2.00	2.06	
74 Chlorobenzene	112	14.551	14.551	0.000	91	508099	2.00	2.09	
75 2,3-Dimethylheptane	43	14.702	14.702	0.000	82	399069	2.00	2.44	
76 Ethylbenzene	91	14.891	14.891	0.000	99	853198	2.00	2.12	
78 m-Xylene & p-Xylene	91	15.069	15.069	0.000	100	1467568	4.00	4.45	
79 Bromoform	173	15.451	15.451	0.000	96	509867	2.00	2.25	
80 Styrene	104	15.538	15.538	0.000	97	474771	2.00	2.20	
82 o-Xylene	91	15.602	15.602	0.000	97	753909	2.00	2.18	
81 n-Nonane	57	15.613	15.613	0.000	83	324891	2.00	2.47	
83 1,1,2,2-Tetrachloroethane	83	15.921	15.921	0.000	93	384260	2.00	2.18	
84 1,2,3-Trichloropropane	110	16.077	16.077	0.000	93	168823	2.00	1.93	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.233	16.233	0.000	99	1016809	2.00	2.06	
86 N-Propylbenzene	120	16.805	16.805	0.000	97	280959	2.00	2.08	
87 2-Chlorotoluene	126	16.816	16.816	0.000	92	258275	2.00	2.06	
88 4-Ethyltoluene	105	16.972	16.972	0.000	98	1065314	2.00	2.08	
89 1,3,5-Trimethylbenzene	120	17.064	17.064	0.000	91	441511	2.00	2.11	
90 Alpha Methyl Styrene	118	17.312	17.312	0.000	86	412333	2.00	2.07	
91 n-Decane	57	17.484	17.484	0.000	97	434101	2.00	2.32	
92 tert-Butylbenzene	119	17.538	17.538	0.000	89	1073814	2.00	2.10	
93 1,2,4-Trimethylbenzene	105	17.549	17.549	0.000	96	1009335	2.00	2.16	
94 1,3-Dichlorobenzene	146	17.819	17.819	0.000	98	666379	2.00	1.97	
95 sec-Butylbenzene	105	17.851	17.851	0.000	96	1277031	2.00	2.02	
96 Benzyl chloride	91	17.910	17.910	0.000	97	783751	2.00	2.17	
97 1,4-Dichlorobenzene	146	17.921	17.921	0.000	95	680776	2.00	2.01	
98 4-Isopropyltoluene	119	18.045	18.045	0.000	95	1326784	2.00	2.08	
99 1,2,3-Trimethylbenzene	105	18.078	18.078	0.000	99	1066061	2.00	2.12	
100 Butylcyclohexane	83	18.185	18.185	0.000	88	568073	2.00	2.06	
101 1,2-Dichlorobenzene	146	18.320	18.320	0.000	93	654441	2.00	1.97	
102 2,3-Dihydroindene	117	18.331	18.331	0.000	93	861215	2.00	2.08	
103 Indene	116	18.471	18.471	0.000	90	702720	2.00	2.07	
104 n-Butylbenzene	91	18.530	18.530	0.000	97	1055388	2.00	2.03	
105 Undecane	57	18.962	18.962	0.000	90	511112	2.00	2.31	
106 1,2-Dibromo-3-Chloropropan	157	18.978	18.978	0.000	95	357055	2.00	2.20	
107 1,2,4,5-Tetramethylbenzene	119	19.361	19.361	0.000	95	1219580	2.00	2.03	
110 Dodecane	57	20.094	20.094	0.000	90	513185	2.00	2.22	
111 1,2,4-Trichlorobenzene	180	20.164	20.164	0.000	94	682244	2.00	1.90	
113 Naphthalene	128	20.283	20.283	0.000	98	1237046	2.00	1.70	
115 Hexachlorobutadiene	225	20.547	20.547	0.000	95	759319	2.00	1.82	
116 1,2,3-Trichlorobenzene	180	20.574	20.574	0.000	95	622266	2.00	1.80	
117 2-Methylnaphthalene	142	21.410	21.410	0.000	98	557400	2.00	2.41	
118 1-Methylnaphthalene	142	21.588	21.588	0.000	97	608539	2.00	2.99	
A 120 C8 Range	1	13.289	(13.230-13.327)		0	1581244	2.00	2.23	
S 121 Xylenes, Total	100				0		6.00	6.63	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.81	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

40CV101P_00083

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RCCVB26.D

Injection Date: 26-Feb-2019 10:22:30

Instrument ID: MR

Operator ID: HMT

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

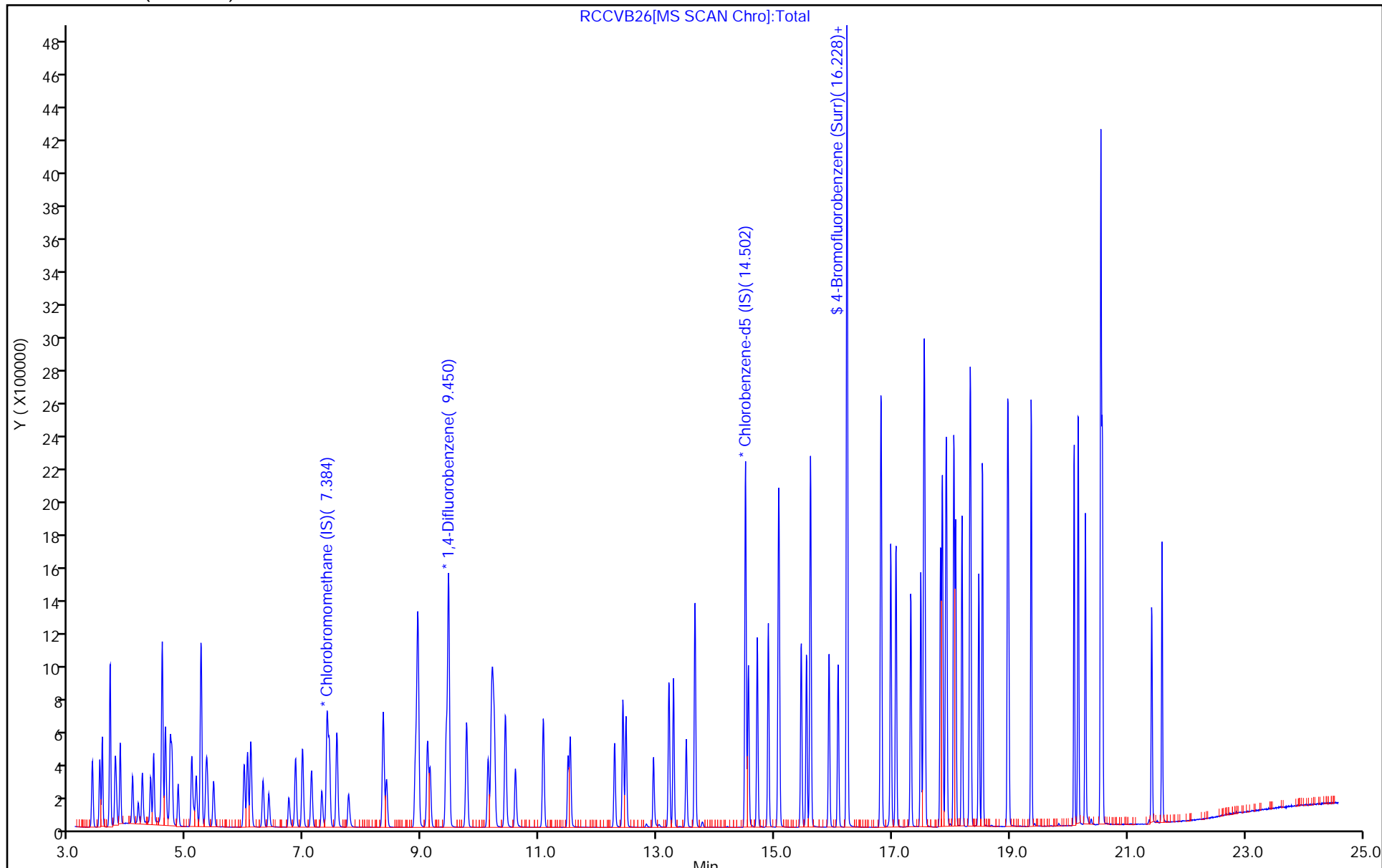
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

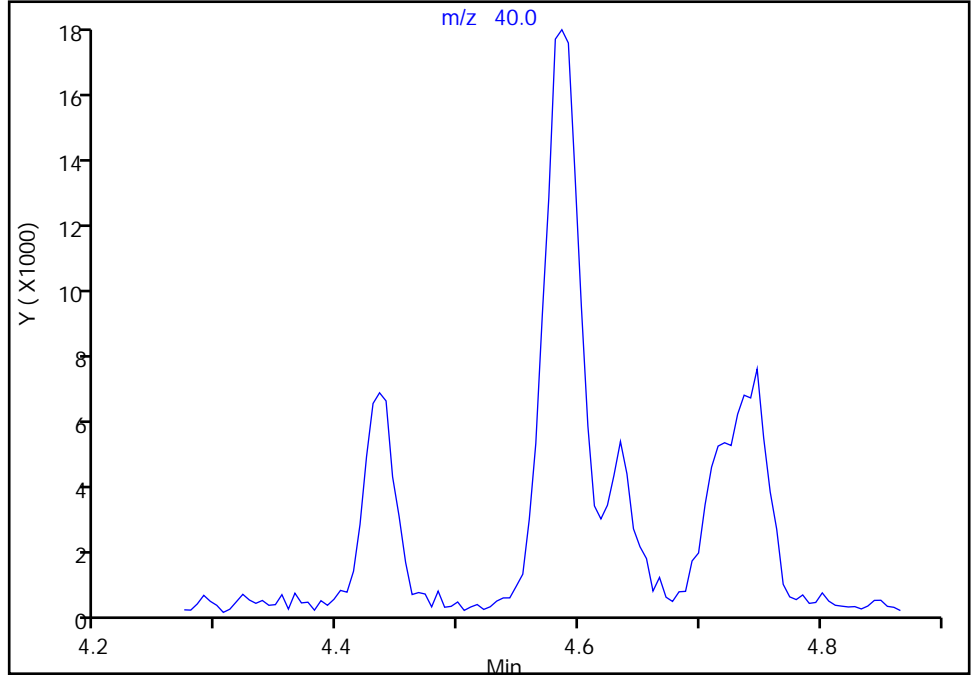
Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RCCVB26.D
Injection Date: 26-Feb-2019 10:22:30 Instrument ID: MR
Lims ID: CCVIS
Client ID:
Operator ID: HMT ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

22 Acetonitrile, CAS: 75-05-8

Signal: 1

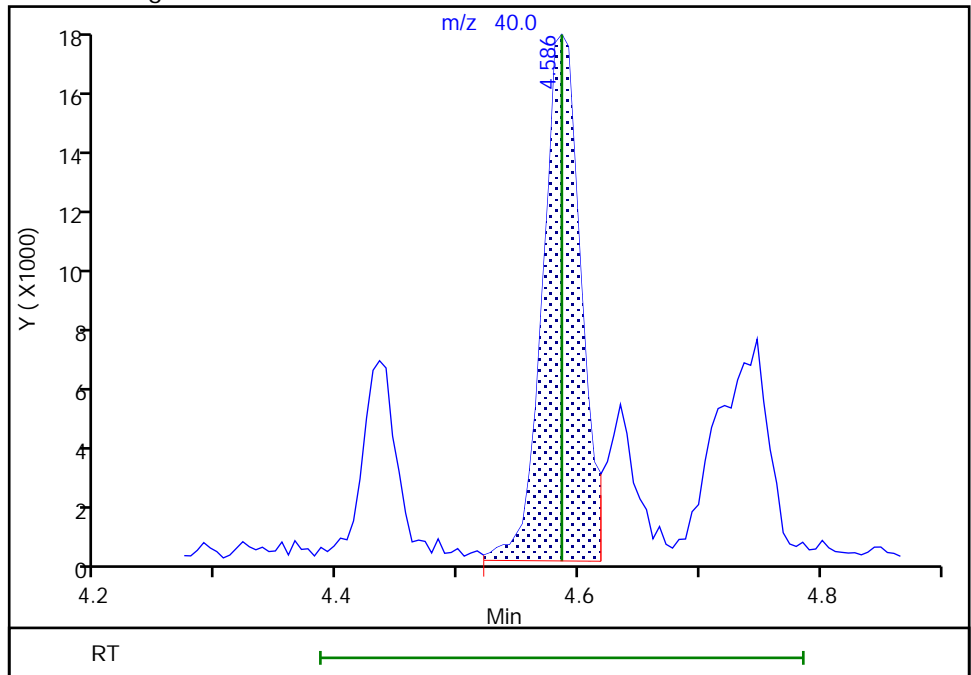
Not Detected
Expected RT: 4.59

Processing Integration Results



Manual Integration Results

RT: 4.59
Area: 37346
Amount: 2.557474
Amount Units: ppb v/v



Reviewer: tajh, 26-Feb-2019 10:58:57
Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11BLK1.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 11-Jan-2019 12:24:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010492-001
 Misc. Info.: TUNE
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Jan-2019 17:27:58 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	17.714	17.714	0.000	0	1529277	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

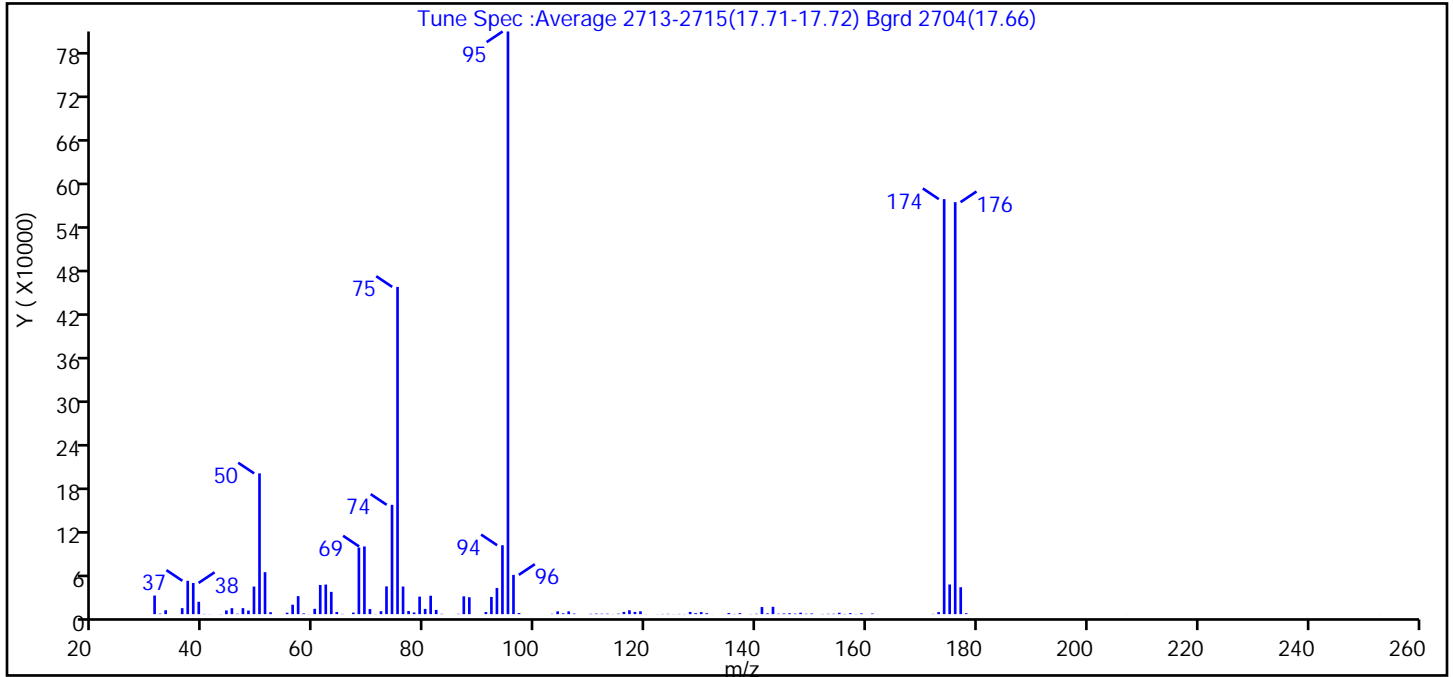
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11BLK1.D
 Injection Date: 11-Jan-2019 12:24:30 Instrument ID: MG
 Lims ID: BFB
 Client ID:
 Operator ID: 007126 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	24.2
75	30 to 60% of m/z 95	56.2
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	71.2
175	5 to 9% of m/z 174	5.1 (7.1)
176	Greater than 95% but less than 101% of m/z 174	70.7 (99.3)
177	5 to 9% of m/z 176	4.6 (6.5)

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11BLK1.D\MG_TO15.rslt\spectra.d
Injection Date: 11-Jan-2019 12:24:30
Spectrum: Tune Spec :Average 2713-2715(17.71-17.72) Bgrd 2704(17.66)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 121

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	40	67.00	2139	107.00	778	143.00	10104
31.00	25632	68.00	91720	110.00	498	144.00	587
32.00	700	69.00	93208	111.00	724	145.00	927
33.00	5381	70.00	7027	112.00	527	146.00	1273
36.00	8248	71.00	202	113.00	608	147.00	708
37.00	45912	72.00	4059	114.00	144	148.00	2025
38.00	42936	73.00	38216	115.00	670	149.00	560
39.00	17016	74.00	150528	116.00	3131	150.00	935
40.00	332	75.00	450624	117.00	5351	152.00	268
41.00	149	76.00	38016	118.00	3117	153.00	484
43.00	197	77.00	4264	119.00	3900	154.00	502
44.00	5113	78.00	2308	120.00	131	155.00	1934
45.00	8252	79.00	24168	122.00	141	156.00	302
46.00	572	80.00	7254	123.00	284	157.00	1307
47.00	8285	81.00	25360	124.00	461	158.00	210
48.00	4923	82.00	5819	125.00	176	159.00	985
49.00	38016	83.00	470	126.00	348	160.00	57
50.00	193792	86.00	468	127.00	225	161.00	843
51.00	57784	87.00	24536	128.00	3031	162.00	53
52.00	2613	88.00	23248	129.00	1392	172.00	318
55.00	1997	91.00	2941	130.00	2824	173.00	2830
56.00	12955	92.00	23664	131.00	1281	174.00	571456
57.00	24800	93.00	36072	132.00	118	175.00	40840
58.00	1003	94.00	94896	134.00	76	176.00	567296
59.00	117	95.00	802304	135.00	1592	177.00	37016
60.00	7338	96.00	54088	136.00	271	178.00	1198
61.00	40160	97.00	1550	137.00	1372	207.00	74
62.00	40712	103.00	429	139.00	267	253.00	65
63.00	30672	104.00	3827	140.00	546		
64.00	2993	105.00	1115	141.00	9796		
65.00	341	106.00	3820	142.00	1128		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11BLK1.D

Injection Date: 11-Jan-2019 12:24:30

Instrument ID: MG

Operator ID: 007126

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

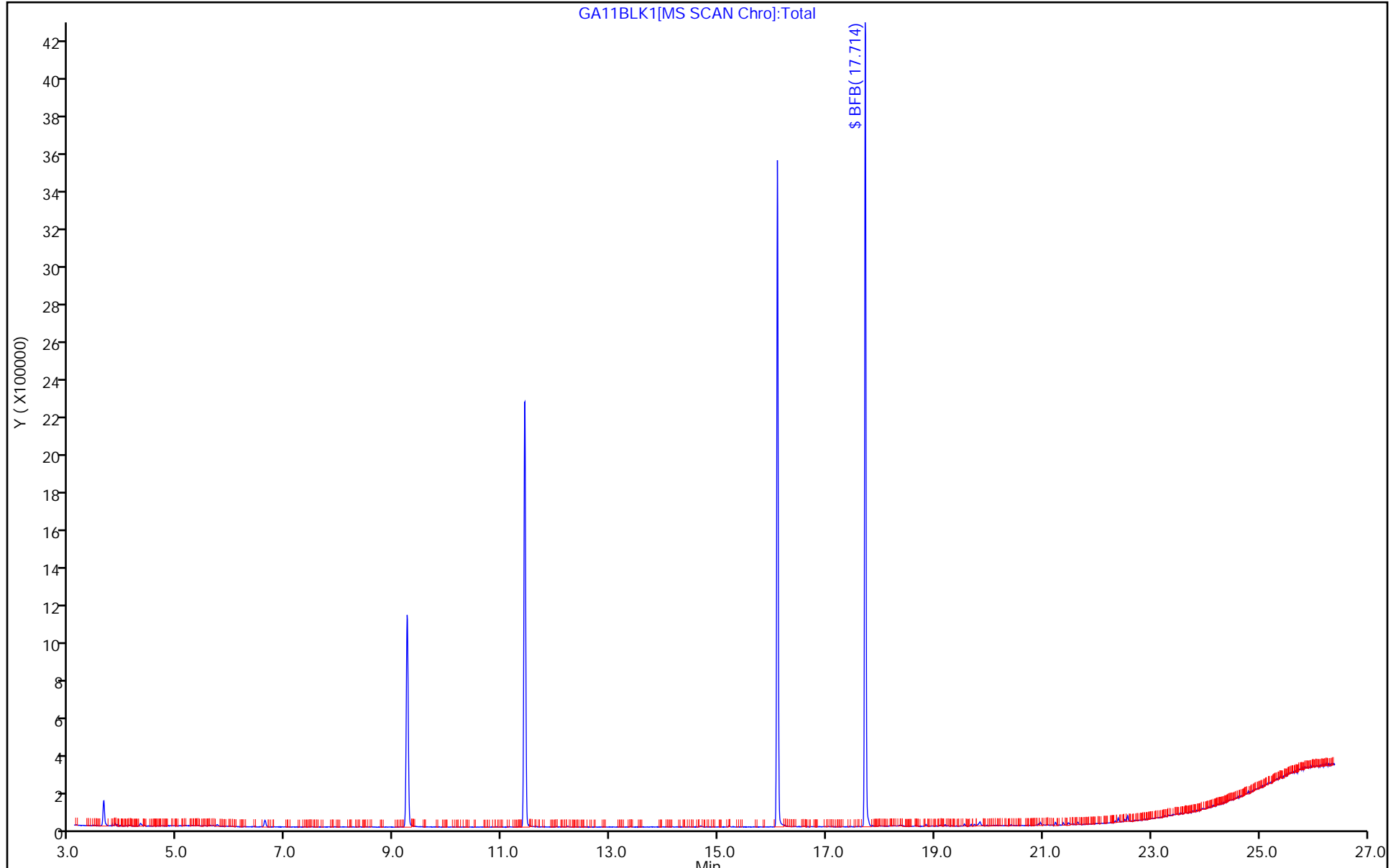
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GBFBB26.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 26-Feb-2019 11:03:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-001
 Misc. Info.: TUNE
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 14:57:11 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 14:57:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.386	5.386	0.000	0	1917303	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

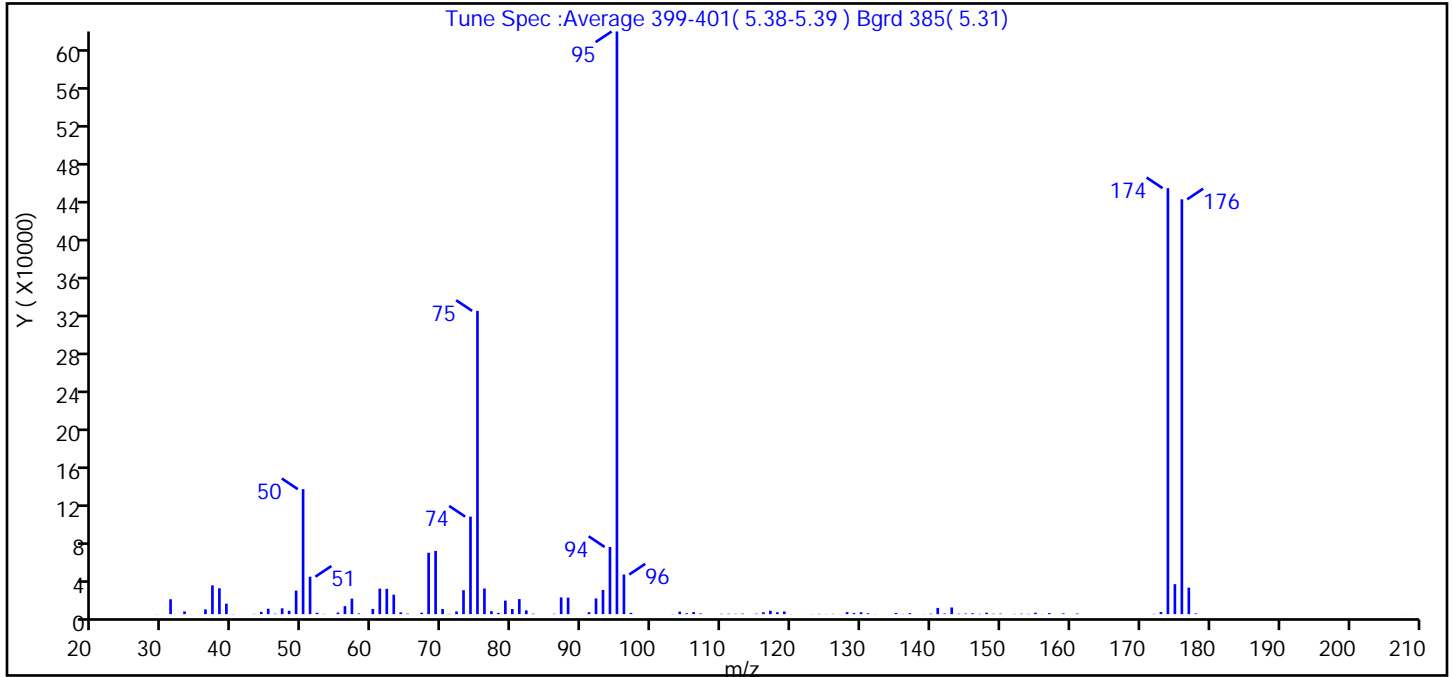
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GBFBB26.D
 Injection Date: 26-Feb-2019 11:03:30 Instrument ID: MG
 Lims ID: BFB
 Client ID:
 Operator ID: 007126 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.5
75	30 to 60% of m/z 95	52.0
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	73.1
175	5 to 9% of m/z 174	5.1 (7.0)
176	Greater than 95% but less than 101% of m/z 174	71.2 (97.4)
177	5 to 9% of m/z 176	4.6 (6.4)

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GBFB26.D\MG_TO15.rslt\spectra.d
 Injection Date: 26-Feb-2019 11:03:30
 Spectrum: Tune Spec :Average 399-401(5.38-5.39) Bgrd 385(5.31)
 Base Peak: 95.00
 Minimum % Base Peak: 0
 Number of Points: 117

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	132	65.00	510	105.00	971	141.00	6573
31.00	15728	67.00	1546	106.00	2220	142.00	670
33.00	2866	68.00	64928	107.00	668	143.00	7017
34.00	61	69.00	66896	110.00	352	144.00	425
36.00	5049	70.00	5384	111.00	471	145.00	587
37.00	30424	71.00	264	112.00	362	146.00	974
38.00	27344	72.00	2840	113.00	522	147.00	346
39.00	11100	73.00	25352	115.00	478	148.00	1521
40.00	153	74.00	103176	116.00	2038	149.00	412
41.00	61	75.00	320768	117.00	3614	150.00	517
43.00	259	76.00	27120	118.00	1978	152.00	285
44.00	2345	77.00	3106	119.00	2791	153.00	489
45.00	5718	78.00	1363	120.00	128	154.00	328
46.00	415	79.00	14325	122.00	60	155.00	1495
47.00	6168	80.00	5420	123.00	177	156.00	152
48.00	3557	81.00	15906	124.00	347	157.00	1112
49.00	24904	82.00	3962	125.00	183	159.00	784
50.00	132224	83.00	478	126.00	292	161.00	650
51.00	39624	86.00	424	127.00	64	172.00	307
52.00	1446	87.00	17712	128.00	2168	173.00	2258
53.00	249	88.00	17456	129.00	1150	174.00	450560
55.00	1664	91.00	2080	130.00	2016	175.00	31696
56.00	8460	92.00	16592	131.00	943	176.00	438784
57.00	16440	93.00	25600	132.00	127	177.00	28048
58.00	710	94.00	71064	135.00	1217	178.00	696
60.00	5487	95.00	616320	136.00	213	208.00	66
61.00	26976	96.00	41920	137.00	1062	209.00	50
62.00	26816	97.00	1352	138.00	52		
63.00	20584	103.00	221	139.00	133		
64.00	1892	104.00	2685	140.00	483		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GBFBB26.D

Injection Date: 26-Feb-2019 11:03:30

Instrument ID: MG

Operator ID: 007126

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

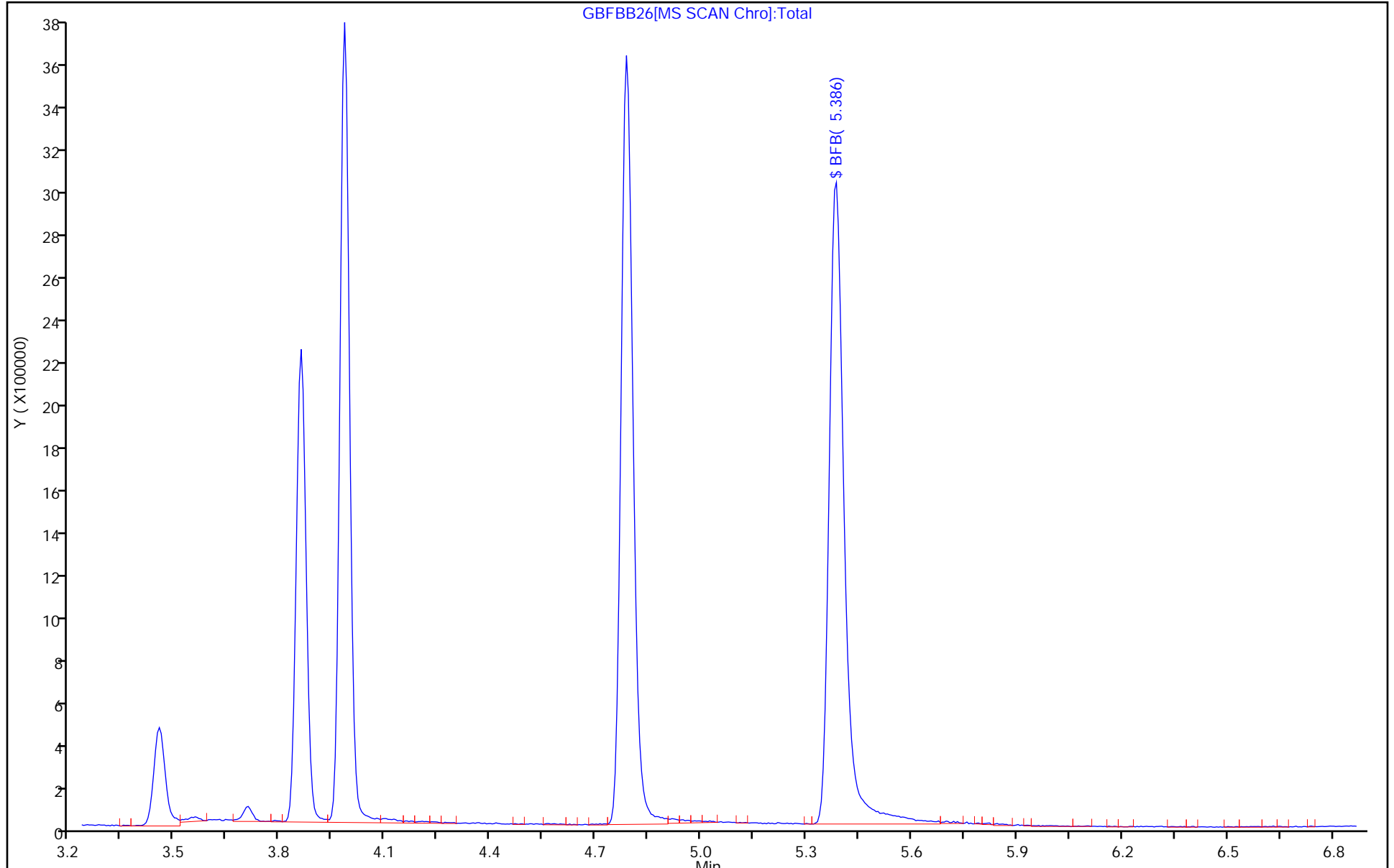
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RBFBK16I.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 16-Nov-2018 16:00:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-001
 Misc. Info.: BFB
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:29 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh Date: 16-Nov-2018 16:19:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.637	5.637	0.000	0	1507667	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

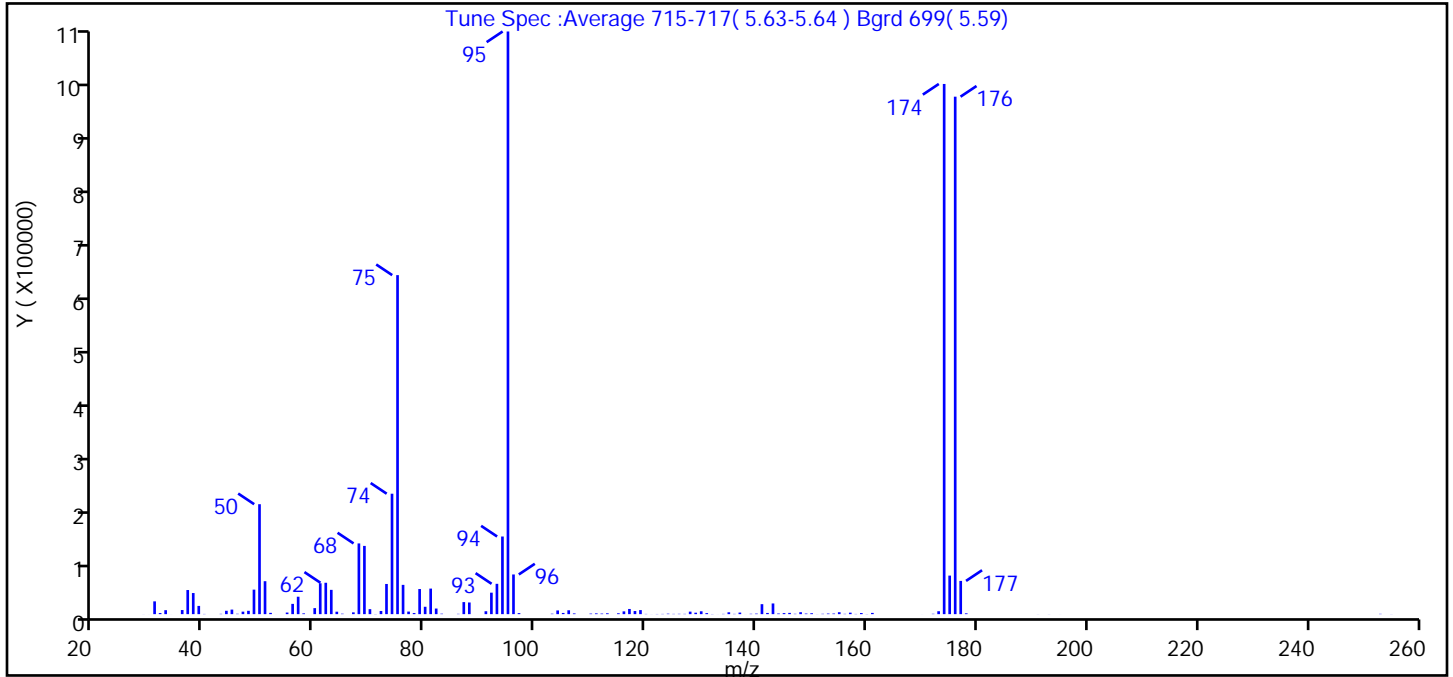
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\BFBK16I.D
 Injection Date: 16-Nov-2018 16:00:30 Instrument ID: MR
 Lims ID: BFB
 Client ID:
 Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.9
75	30 to 60% of m/z 95	58.2
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	91.0
175	5 to 9% of m/z 174	6.6 (7.3)
176	Greater than 95% but less than 101% of m/z 174	88.8 (97.6)
177	5 to 9% of m/z 176	5.7 (6.4)

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RBFBK161.DMR_TO15.rslt\spectra.d
Injection Date: 16-Nov-2018 16:00:30
Spectrum: Tune Spec :Average 715-717(5.63-5.64) Bgrd 699(5.59)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 129

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	82	67.00	3051	111.00	1314	145.00	1799
30.00	42	68.00	121608	112.00	1000	146.00	2167
31.00	21976	69.00	117344	113.00	1472	147.00	587
32.00	1872	70.00	8559	115.00	1498	148.00	3341
33.00	6807	71.00	242	116.00	4788	149.00	1013
34.00	47	72.00	5436	117.00	8901	150.00	1582
36.00	7075	73.00	51896	118.00	5361	151.00	97
37.00	41472	74.00	207104	119.00	6961	152.00	589
38.00	36296	75.00	582976	120.00	382	153.00	1032
39.00	14146	76.00	50352	121.00	80	154.00	1046
40.00	352	77.00	4415	122.00	293	155.00	3329
41.00	12	78.00	1882	123.00	395	156.00	504
43.00	505	79.00	43192	124.00	805	157.00	2542
44.00	5765	80.00	12674	125.00	442	158.00	344
45.00	7821	81.00	43936	126.00	550	159.00	1896
46.00	624	82.00	9626	127.00	471	160.00	211
47.00	4314	83.00	791	128.00	4329	161.00	2127
48.00	5729	86.00	523	129.00	2485	170.00	42
49.00	42160	87.00	20704	130.00	4919	172.00	609
50.00	189056	88.00	20064	131.00	1754	173.00	5015
51.00	56648	91.00	5000	132.00	262	174.00	911744
52.00	2215	92.00	36920	133.00	57	175.00	66280
53.00	37	93.00	52152	134.00	435	176.00	889856
55.00	2753	94.00	133504	135.00	3202	177.00	57168
56.00	17664	95.00	1001984	136.00	443	178.00	1378
57.00	29976	96.00	68240	137.00	2704	191.00	97
58.00	1338	97.00	1768	138.00	52	193.00	111
60.00	10347	103.00	745	139.00	624	195.00	40
61.00	53120	104.00	6342	140.00	916	253.00	525
62.00	53968	105.00	2057	141.00	17160	255.00	125
63.00	41768	106.00	6637	142.00	2048		
64.00	4211	107.00	1249	143.00	18376		
65.00	772	110.00	963	144.00	1092		

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	82	67.00	3051	111.00	1314	145.00	1799
30.00	42	68.00	121608	112.00	1000	146.00	2167
31.00	21976	69.00	117344	113.00	1472	147.00	587
32.00	1872	70.00	8559	115.00	1498	148.00	3341
33.00	6807	71.00	242	116.00	4788	149.00	1013
34.00	47	72.00	5436	117.00	8901	150.00	1582
36.00	7075	73.00	51896	118.00	5361	151.00	97
37.00	41472	74.00	207104	119.00	6961	152.00	589
38.00	36296	75.00	582976	120.00	382	153.00	1032
39.00	14146	76.00	50352	121.00	80	154.00	1046
40.00	352	77.00	4415	122.00	293	155.00	3329
41.00	12	78.00	1882	123.00	395	156.00	504
43.00	505	79.00	43192	124.00	805	157.00	2542
44.00	5765	80.00	12674	125.00	442	158.00	344
45.00	7821	81.00	43936	126.00	550	159.00	1896
46.00	624	82.00	9626	127.00	471	160.00	211
47.00	4314	83.00	791	128.00	4329	161.00	2127
48.00	5729	86.00	523	129.00	2485	170.00	42
49.00	42160	87.00	20704	130.00	4919	172.00	609
50.00	189056	88.00	20064	131.00	1754	173.00	5015
51.00	56648	91.00	5000	132.00	262	174.00	911744
52.00	2215	92.00	36920	133.00	57	175.00	66280
53.00	37	93.00	52152	134.00	435	176.00	889856
55.00	2753	94.00	133504	135.00	3202	177.00	57168
56.00	17664	95.00	1001984	136.00	443	178.00	1378
57.00	29976	96.00	68240	137.00	2704	191.00	97
58.00	1338	97.00	1768	138.00	52	193.00	111
60.00	10347	103.00	745	139.00	624	195.00	40
61.00	53120	104.00	6342	140.00	916	253.00	525
62.00	53968	105.00	2057	141.00	17160	255.00	125
63.00	41768	106.00	6637	142.00	2048		
64.00	4211	107.00	1249	143.00	18376		
65.00	772	110.00	963	144.00	1092		

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RFBFK16I.D

Injection Date: 16-Nov-2018 16:00:30

Instrument ID: MR

Operator ID:

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

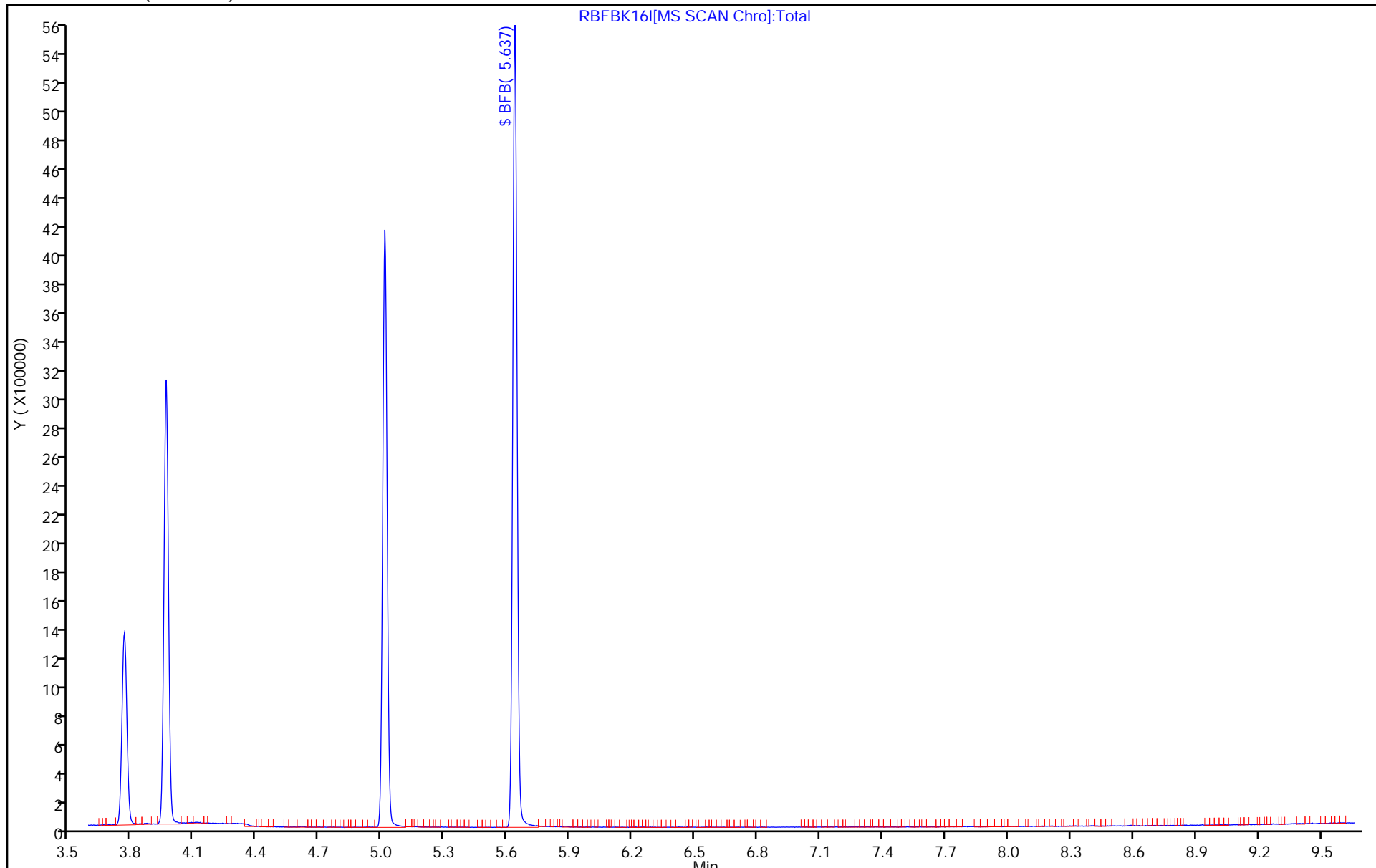
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
 Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\BFB26.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 26-Feb-2019 09:53:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-001
 Misc. Info.: BFB
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:32:52 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:32:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.620	5.620	0.000	0	1060654	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

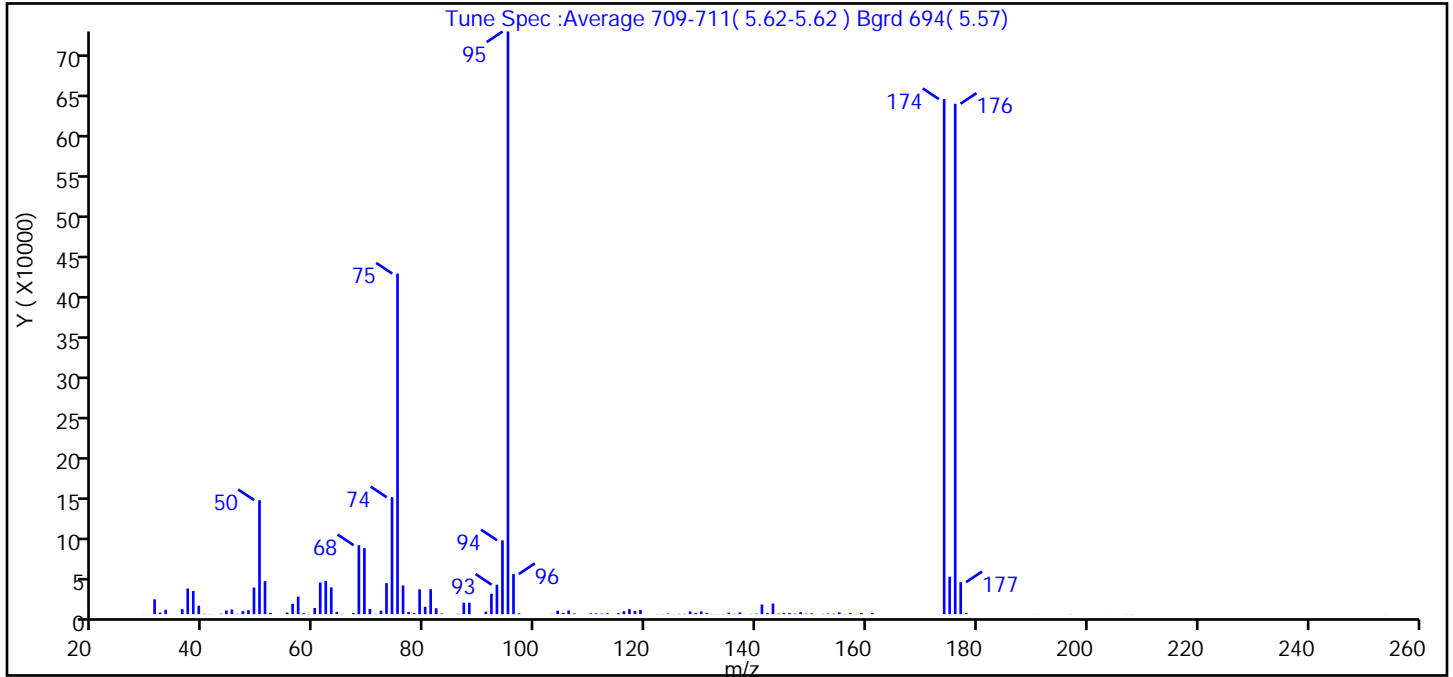
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\BFB26.D
 Injection Date: 26-Feb-2019 09:53:30 Instrument ID: MR
 Lims ID: BFB
 Client ID:
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.6
75	30 to 60% of m/z 95	58.5
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	88.4
175	5 to 9% of m/z 174	6.4 (7.3)
176	Greater than 95% but less than 101% of m/z 174	87.6 (99.1)
177	5 to 9% of m/z 176	5.5 (6.3)

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RBFBB26.D\MR_TO15.rslt\spectra.d
 Injection Date: 26-Feb-2019 09:53:30
 Spectrum: Tune Spec :Average 709-711(5.62-5.62) Bgrd 694(5.57)
 Base Peak: 95.00
 Minimum % Base Peak: 0
 Number of Points: 133

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	108	66.00	58	109.00	43	145.00	1331
30.00	69	67.00	1472	110.00	994	146.00	1504
31.00	18504	68.00	86008	111.00	942	147.00	692
32.00	1902	69.00	82248	112.00	680	148.00	2494
33.00	5478	70.00	6417	113.00	1042	149.00	615
35.00	40	71.00	328	115.00	1295	150.00	1039
36.00	6207	72.00	4409	116.00	3726	151.00	47
37.00	31960	73.00	38656	117.00	6199	152.00	370
38.00	28912	74.00	145792	118.00	3931	153.00	670
39.00	10479	75.00	424768	119.00	5201	154.00	614
40.00	470	76.00	35824	120.00	255	155.00	2257
41.00	226	77.00	2673	122.00	246	156.00	239
42.00	102	78.00	1397	123.00	209	157.00	1627
43.00	580	79.00	30912	124.00	723	158.00	314
44.00	4568	80.00	9194	125.00	226	159.00	1463
45.00	5721	81.00	31048	126.00	371	160.00	75
46.00	382	82.00	7307	127.00	352	161.00	1464
47.00	3683	83.00	791	128.00	3471	162.00	44
48.00	4869	86.00	472	129.00	1623	174.00	642368
49.00	33208	87.00	14288	130.00	3326	175.00	46648
50.00	142144	88.00	14290	131.00	1600	176.00	636544
51.00	41136	90.00	35	132.00	206	177.00	39872
52.00	1599	91.00	3116	133.00	154	178.00	1413
55.00	2011	92.00	25472	134.00	245	191.00	91
56.00	12966	93.00	36712	135.00	1863	193.00	38
57.00	21816	94.00	92056	136.00	435	195.00	35
58.00	1076	95.00	726720	137.00	2131	197.00	115
59.00	274	96.00	49984	138.00	79	203.00	67
60.00	7729	97.00	1106	139.00	279	207.00	108
61.00	39472	103.00	342	140.00	617	208.00	132
62.00	41360	104.00	4300	141.00	12031	254.00	68
63.00	33360	105.00	1622	142.00	1399		
64.00	2833	106.00	4606	143.00	13206		

Report Date: 27-Feb-2019 16:32:52

Chrom Revision: 2.3 11-Feb-2019 16:31:10

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RBFBB26.D\MR_TO15.rslt\spectra.d

Injection Date: 26-Feb-2019 09:53:30

Spectrum: Tune Spec :Average 709-711(5.62-5.62) Bgrd 694(5.57)

Base Peak: 95.00

Minimum % Base Peak: 0

Number of Points: 133

m/z	Y	m/z	Y	m/z	Y	m/z	Y
65.00	384	107.00	899	144.00	639		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RBFB26.D

Injection Date: 26-Feb-2019 09:53:30

Instrument ID: MR

Operator ID: HMT

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

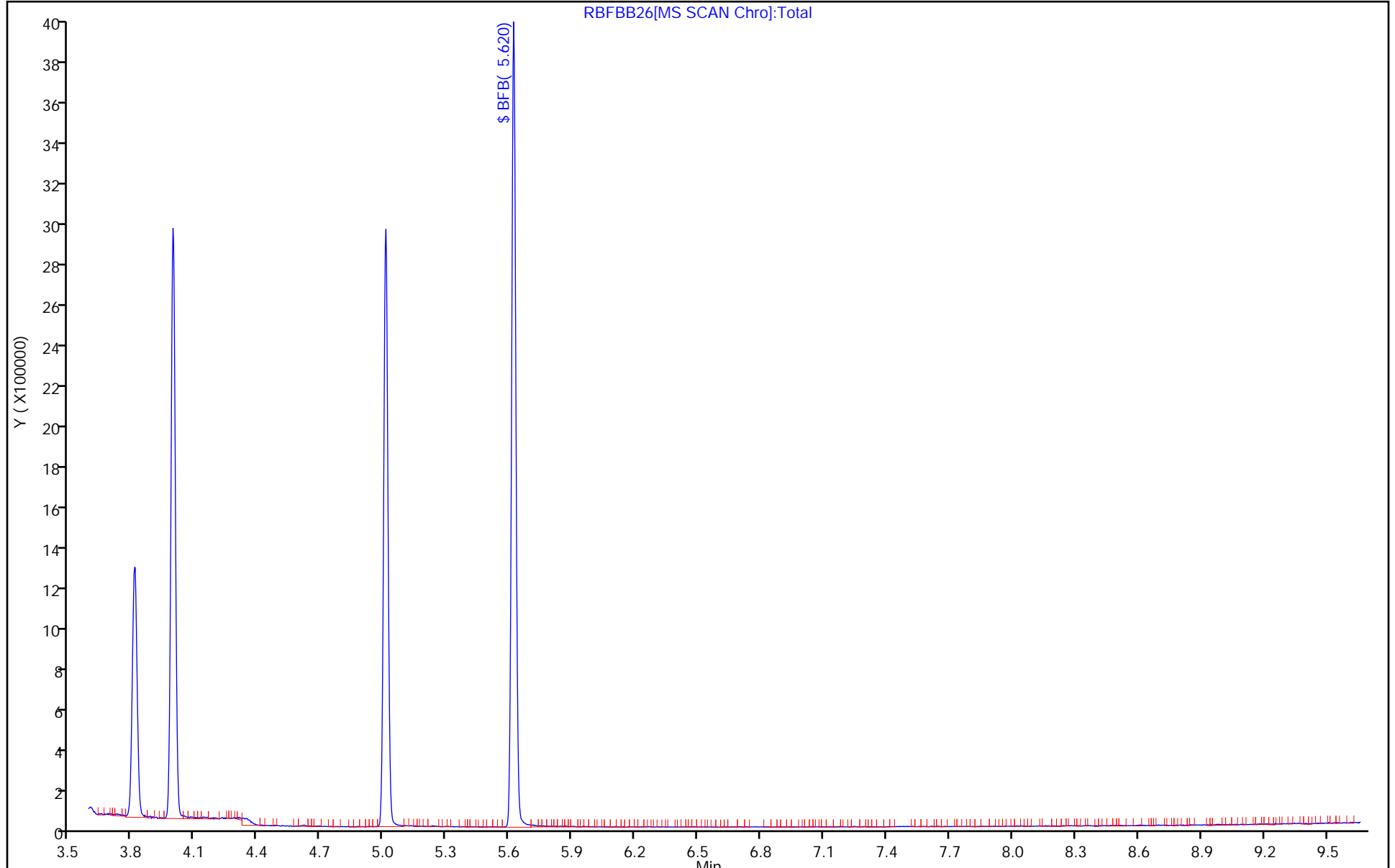
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27909/4
 Matrix: Air Lab File ID: R500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27909/4
 Matrix: Air Lab File ID: R500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\R500BB26.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 26-Feb-2019 12:52:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-004
 Misc. Info.: 500ML BLK
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:36:20 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:36:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.384	0.006	71	200361	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1182430	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.502	0.000	90	1042401	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.228	0.000	89	899725	4.00	4.06	
25 Isopropyl alcohol	45	4.748	4.715	0.033	94	7750		0.1367	
109 1,2,3,5-Tetramethylbenzene	119	19.404	19.426	-0.022	1	52		NC	
112 1,2,3,4-Tetramethylbenzene	119	20.003	19.836	0.167	1	128		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\R500BB26.D

Injection Date: 26-Feb-2019 12:52:30

Instrument ID: MR

Operator ID:

Lims ID: MB

Worklist Smp#: 4

Client ID:

Purge Vol: 500.000 mL

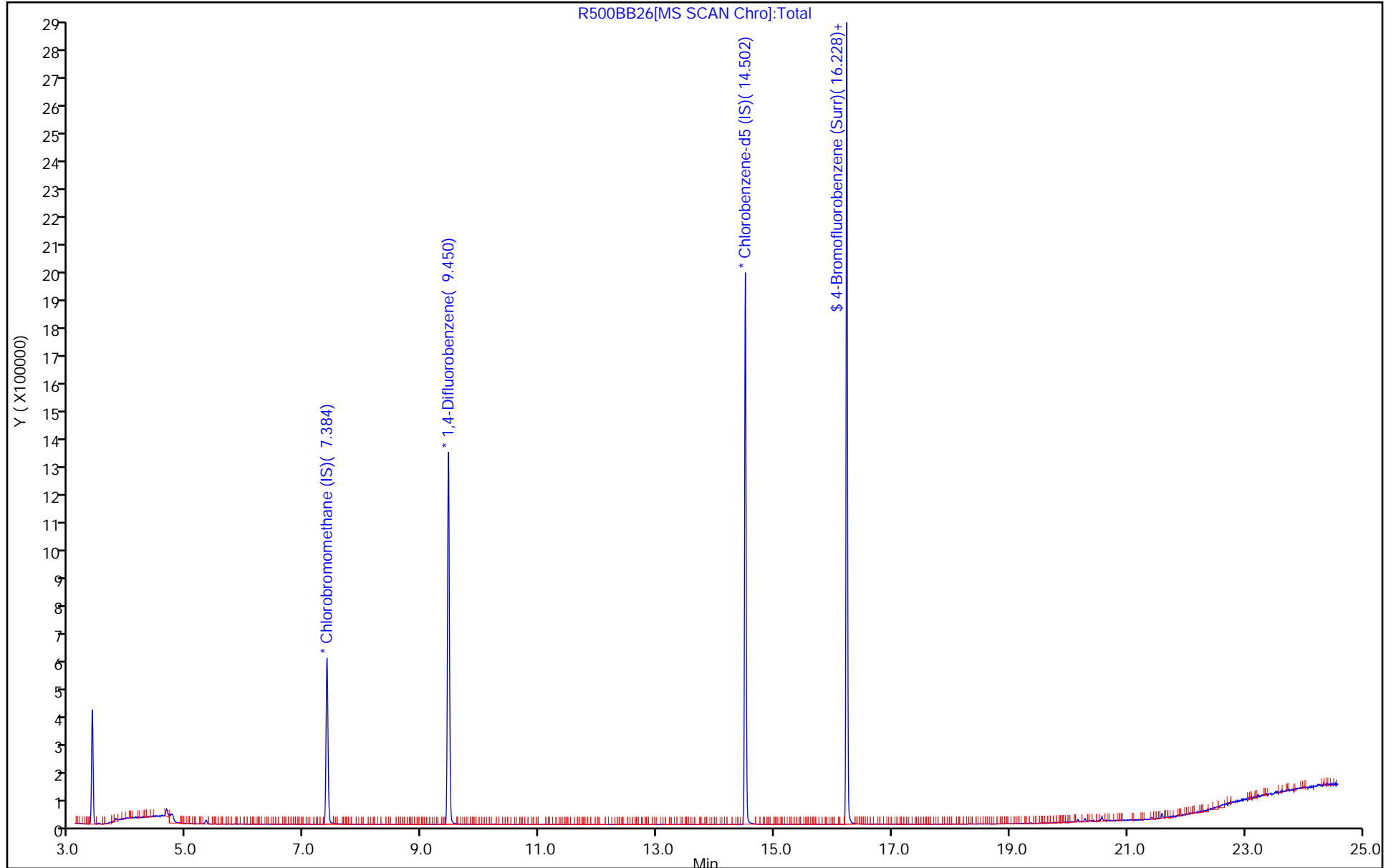
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\R500BB26.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 26-Feb-2019 12:52:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-004
 Misc. Info.: 500ML BLK
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:36:20 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:36:20

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.06	101.47

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\G500BB26.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 26-Feb-2019 12:56:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-004
 Misc. Info.: 500ML BLK
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:23:23 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:23:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.227	9.232	-0.005	98	508819	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.405	0.000	96	2920722	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	91	2502760	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	84	1973540	4.00	3.85	
117 1,2-Dimethyl-4-Ethylbenzen	119	20.022	20.027	-0.005	1	540		NC	
118 1,2,3,5-Tetramethylbenzene	119	20.470	20.464	0.006	1	546		NC	
119 1,2,3,4-Tetramethylbenzene	119	20.863	20.869	-0.006	1	1007		NC	
120 Benzo(b)thiophene	134	21.478	21.473	0.005	1	64		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\G500BB26.D

Injection Date: 26-Feb-2019 12:56:30

Instrument ID: MG

Operator ID: 7126

Lims ID: MB

Worklist Smp#: 4

Client ID:

Purge Vol: 500.000 mL

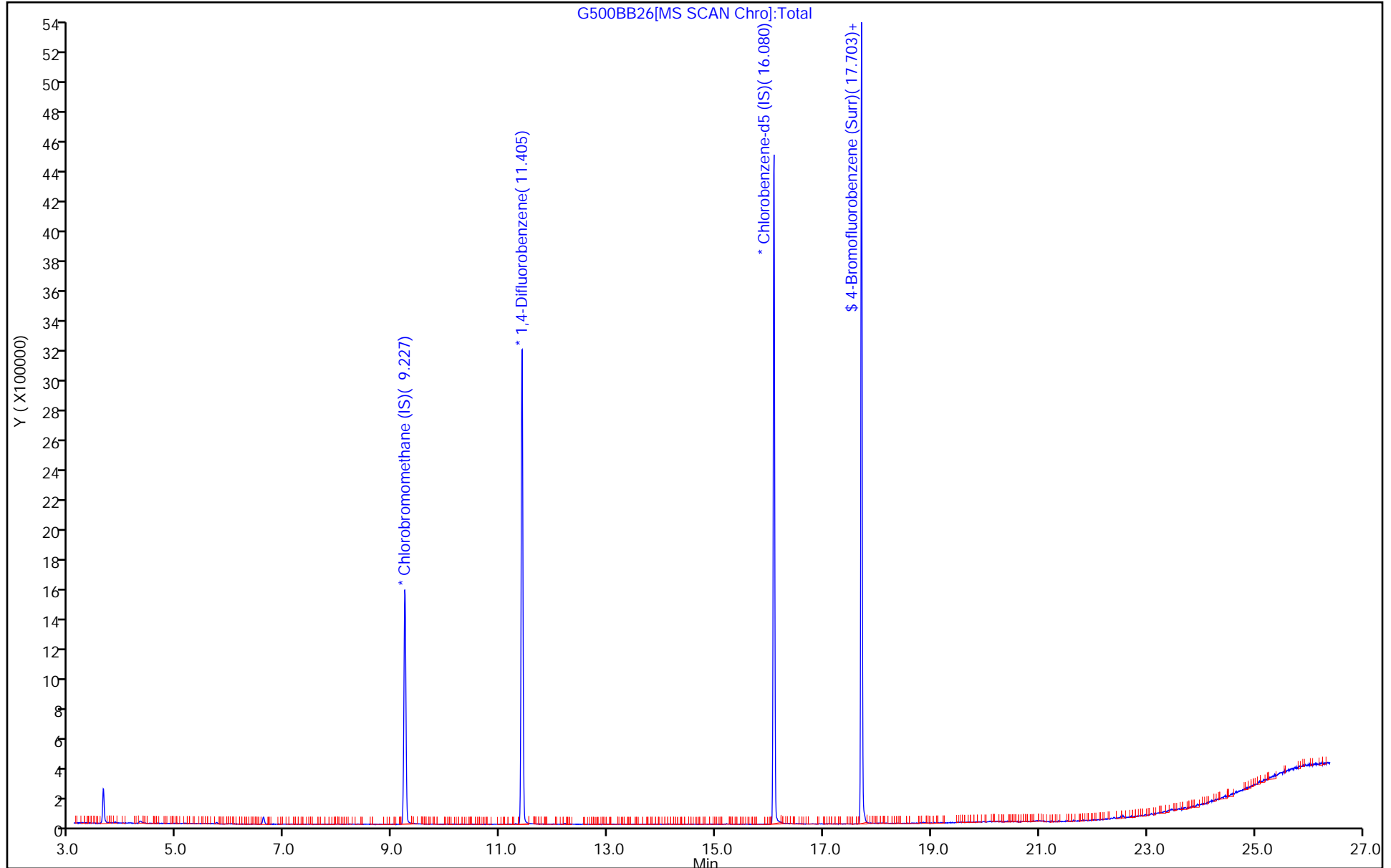
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\G500BB26.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 26-Feb-2019 12:56:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-004
 Misc. Info.: 500ML BLK
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:23:23 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:23:23

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.85	96.21

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27909/1002
 Matrix: Air Lab File ID: RCCVB26-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 10:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.95		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.04		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.75		0.080	0.015
67-66-3	Chloroform	119.38	1.92		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.95		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.74		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.90		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.91		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.90		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.12		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.75		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.00		0.40	0.068
91-20-3	Naphthalene	128.17	1.70		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.06		0.080	0.016
108-88-3	Toluene	92.14	2.11		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.86		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.90		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.94		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.06		0.080	0.021
79-01-6	Trichloroethene	131.39	2.01		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.12		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.16		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.11		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.10		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.63		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RCCVB26-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 26-Feb-2019 10:22:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-002
 Misc. Info.: P83
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:34:40 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:34:40

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.384	7.384	0.000	71	225849	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1327690	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.502	0.000	90	1164037	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.228	0.000	89	1029996	4.00	4.16	
6 Chlorodifluoromethane	51	3.513	3.513	0.000	96	233959	2.00	1.75	
7 Propene	41	3.524	3.524	0.000	92	70958	2.00	1.72	
8 Dichlorodifluoromethane	85	3.561	3.561	0.000	100	427735	2.00	1.74	
9 Chloromethane	52	3.680	3.680	0.000	95	29528	2.00	1.71	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.696	3.696	0.000	88	299291	2.00	1.64	
11 Acetaldehyde	44	3.782	3.782	0.000	92	181202	10.0	11.2	
12 Vinyl chloride	62	3.799	3.799	0.000	100	127222	2.00	2.10	
13 Butadiene	54	3.863	3.863	0.000	94	88632	2.00	2.41	
14 Butane	43	3.869	3.869	0.000	89	151957	2.00	2.38	
15 Bromomethane	94	4.074	4.074	0.000	95	163053	2.00	2.34	
16 Chloroethane	64	4.171	4.171	0.000	95	64964	2.00	2.32	
17 Ethanol	31	4.241	4.241	0.000	93	215391	10.0	12.7	
18 Vinyl bromide	106	4.381	4.381	0.000	96	171032	2.00	2.33	
19 2-Methylbutane	43	4.435	4.435	0.000	79	116942	2.00	2.59	
20 Acrolein	56	4.559	4.559	0.000	97	41575	2.00	2.91	
21 Trichlorofluoromethane	101	4.580	4.580	0.000	99	788565	2.00	2.36	
22 Acetonitrile	40	4.586	4.586	0.000	23	37346	2.00	2.56	a
23 Acetone	58	4.634	4.634	0.000	100	168797	6.00	7.20	
25 Isopropyl alcohol	45	4.715	4.715	0.000	99	521613	6.00	8.16	
24 Pentane	72	4.742	4.742	0.000	92	27628	2.00	2.43	
26 Ethyl ether	31	4.850	4.850	0.000	73	91086	2.00	2.42	
27 1,1-Dichloroethene	96	5.082	5.082	0.000	96	151349	2.00	1.90	
28 Acrylonitrile	53	5.120	5.120	0.000	94	77415	2.00	2.18	
29 2-Methyl-2-propanol	59	5.157	5.157	0.000	95	306500	2.00	2.03	
30 1,1,2-Trichloro-1,2,2-trif	101	5.238	5.238	0.000	91	394041	2.00	2.00	
31 Methylene Chloride	84	5.325	5.325	0.000	91	132282	2.00	1.75	
32 3-Chloro-1-propene	39	5.346	5.346	0.000	87	162187	2.00	2.19	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.454	5.454	0.000	98	374851	2.00	1.99	
34 trans-1,2-Dichloroethene	96	5.977	5.977	0.000	97	150589	2.00	1.86	
35 2-Methylpentane	43	6.031	6.031	0.000	85	244097	2.00	2.28	
36 Methyl tert-butyl ether	73	6.085	6.085	0.000	93	514765	2.00	2.00	
37 1,1-Dichloroethane	63	6.295	6.295	0.000	98	257915	2.00	1.90	
38 Vinyl acetate	43	6.392	6.392	0.000	98	298584	2.00	2.28	
39 2-Butanone (MEK)	72	6.732	6.732	0.000	98	59307	2.00	1.93	
40 Hexane	56	6.851	6.851	0.000	81	105280	2.00	2.23	
171 Isopropyl ether	45	6.969	6.969	0.000	87	348728	2.00	2.15	
41 cis-1,2-Dichloroethene	96	7.120	7.120	0.000	95	159596	2.00	1.95	
42 Ethyl acetate	43	7.293	7.293	0.000	97	250882	2.00	2.21	
43 Chloroform	83	7.422	7.422	0.000	97	413867	2.00	1.92	
173 Tert-butyl ethyl ether	59	7.552	7.552	0.000	94	492735	2.00	2.11	
44 Tetrahydrofuran	42	7.751	7.751	0.000	76	109466	2.00	2.19	
45 1,1,1-Trichloroethane	97	8.339	8.339	0.000	95	531585	2.00	1.94	
46 1,2-Dichloroethane	62	8.398	8.398	0.000	98	320324	2.00	1.91	
47 Benzene	78	8.889	8.889	0.000	98	420906	2.00	1.95	
49 n-Butanol	31	8.905	8.905	0.000	67	35257	2.00	2.30	
48 Cyclohexane	69	8.921	8.921	0.000	89	71178	2.00	2.21	
50 Carbon tetrachloride	117	8.932	8.932	0.000	97	620528	2.00	2.04	
51 2,3-Dimethylpentane	71	9.094	9.094	0.000	84	93123	2.00	2.08	
52 Thiophene	84	9.137	9.137	0.000	95	251479	2.00	2.03	
53 Isooctane	57	9.757	9.757	0.000	94	589635	2.00	2.13	
54 1,2-Dichloropropane	63	10.124	10.124	0.000	73	135739	2.00	2.00	
55 n-Heptane	71	10.183	10.183	0.000	83	145938	2.00	2.11	
56 Trichloroethene	130	10.199	10.199	0.000	95	262497	2.00	2.01	
57 Dibromomethane	93	10.226	10.226	0.000	91	226522	2.00	1.94	
58 Dichlorobromomethane	83	10.415	10.415	0.000	98	431577	2.00	1.97	
59 1,4-Dioxane	88	10.431	10.431	0.000	91	67754	2.00	2.05	
60 Methyl methacrylate	41	10.588	10.588	0.000	89	164152	2.00	2.17	
61 Methylcyclohexane	83	11.062	11.062	0.000	92	275586	2.00	2.06	
62 4-Methyl-2-pentanone (MIBK)	43	11.483	11.483	0.000	92	272122	2.00	2.26	
63 cis-1,3-Dichloropropene	75	11.520	11.520	0.000	97	277404	2.00	2.12	
64 trans-1,3-Dichloropropene	75	12.275	12.275	0.000	95	281785	2.00	2.07	
65 Toluene	91	12.416	12.416	0.000	92	587345	2.00	2.11	
66 1,1,2-Trichloroethane	83	12.469	12.469	0.000	93	152744	2.00	2.06	
69 2-Hexanone	58	12.939	12.939	0.000	94	132386	2.00	2.27	
70 Chlorodibromomethane	129	13.203	13.203	0.000	97	480911	2.00	2.23	
71 n-Octane	85	13.278	13.278	0.000	79	195612	2.00	2.20	
72 Ethylene Dibromide	107	13.494	13.494	0.000	98	332264	2.00	2.05	
73 Tetrachloroethene	129	13.645	13.645	0.000	94	284951	2.00	2.06	
74 Chlorobenzene	112	14.551	14.551	0.000	91	508099	2.00	2.09	
75 2,3-Dimethylheptane	43	14.702	14.702	0.000	82	399069	2.00	2.44	
76 Ethylbenzene	91	14.891	14.891	0.000	99	853198	2.00	2.12	
78 m-Xylene & p-Xylene	91	15.069	15.069	0.000	100	1467568	4.00	4.45	
79 Bromoform	173	15.451	15.451	0.000	96	509867	2.00	2.25	
80 Styrene	104	15.538	15.538	0.000	97	474771	2.00	2.20	
82 o-Xylene	91	15.602	15.602	0.000	97	753909	2.00	2.18	
81 n-Nonane	57	15.613	15.613	0.000	83	324891	2.00	2.47	
83 1,1,2,2-Tetrachloroethane	83	15.921	15.921	0.000	93	384260	2.00	2.18	
84 1,2,3-Trichloropropane	110	16.077	16.077	0.000	93	168823	2.00	1.93	
85 Isopropylbenzene	105	16.233	16.233	0.000	99	1016809	2.00	2.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	16.805	16.805	0.000	97	280959	2.00	2.08	
87 2-Chlorotoluene	126	16.816	16.816	0.000	92	258275	2.00	2.06	
88 4-Ethyltoluene	105	16.972	16.972	0.000	98	1065314	2.00	2.08	
89 1,3,5-Trimethylbenzene	120	17.064	17.064	0.000	91	441511	2.00	2.11	
90 Alpha Methyl Styrene	118	17.312	17.312	0.000	86	412333	2.00	2.07	
91 n-Decane	57	17.484	17.484	0.000	97	434101	2.00	2.32	
92 tert-Butylbenzene	119	17.538	17.538	0.000	89	1073814	2.00	2.10	
93 1,2,4-Trimethylbenzene	105	17.549	17.549	0.000	96	1009335	2.00	2.16	
94 1,3-Dichlorobenzene	146	17.819	17.819	0.000	98	666379	2.00	1.97	
95 sec-Butylbenzene	105	17.851	17.851	0.000	96	1277031	2.00	2.02	
96 Benzyl chloride	91	17.910	17.910	0.000	97	783751	2.00	2.17	
97 1,4-Dichlorobenzene	146	17.921	17.921	0.000	95	680776	2.00	2.01	
98 4-Isopropyltoluene	119	18.045	18.045	0.000	95	1326784	2.00	2.08	
99 1,2,3-Trimethylbenzene	105	18.078	18.078	0.000	99	1066061	2.00	2.12	
100 Butylcyclohexane	83	18.185	18.185	0.000	88	568073	2.00	2.06	
101 1,2-Dichlorobenzene	146	18.320	18.320	0.000	93	654441	2.00	1.97	
102 2,3-Dihydroindene	117	18.331	18.331	0.000	93	861215	2.00	2.08	
103 Indene	116	18.471	18.471	0.000	90	702720	2.00	2.07	
104 n-Butylbenzene	91	18.530	18.530	0.000	97	1055388	2.00	2.03	
105 Undecane	57	18.962	18.962	0.000	90	511112	2.00	2.31	
106 1,2-Dibromo-3-Chloropropan	157	18.978	18.978	0.000	95	357055	2.00	2.20	
107 1,2,4,5-Tetramethylbenzene	119	19.361	19.361	0.000	95	1219580	2.00	2.03	
110 Dodecane	57	20.094	20.094	0.000	90	513185	2.00	2.22	
111 1,2,4-Trichlorobenzene	180	20.164	20.164	0.000	94	682244	2.00	1.90	
113 Naphthalene	128	20.283	20.283	0.000	98	1237046	2.00	1.70	
115 Hexachlorobutadiene	225	20.547	20.547	0.000	95	759319	2.00	1.82	
116 1,2,3-Trichlorobenzene	180	20.574	20.574	0.000	95	622266	2.00	1.80	
117 2-Methylnaphthalene	142	21.410	21.410	0.000	98	557400	2.00	2.41	
118 1-Methylnaphthalene	142	21.588	21.588	0.000	97	608539	2.00	2.99	
A 120 C8 Range	1	13.289	(13.230-13.327)		0	1581244	2.00	2.23	
S 121 Xylenes, Total	100				0		6.00	6.63	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.81	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

40CV101P_00083

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RCCVB26-LCS.d

Injection Date: 26-Feb-2019 10:22:30

Instrument ID: MR

Operator ID: HMT

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

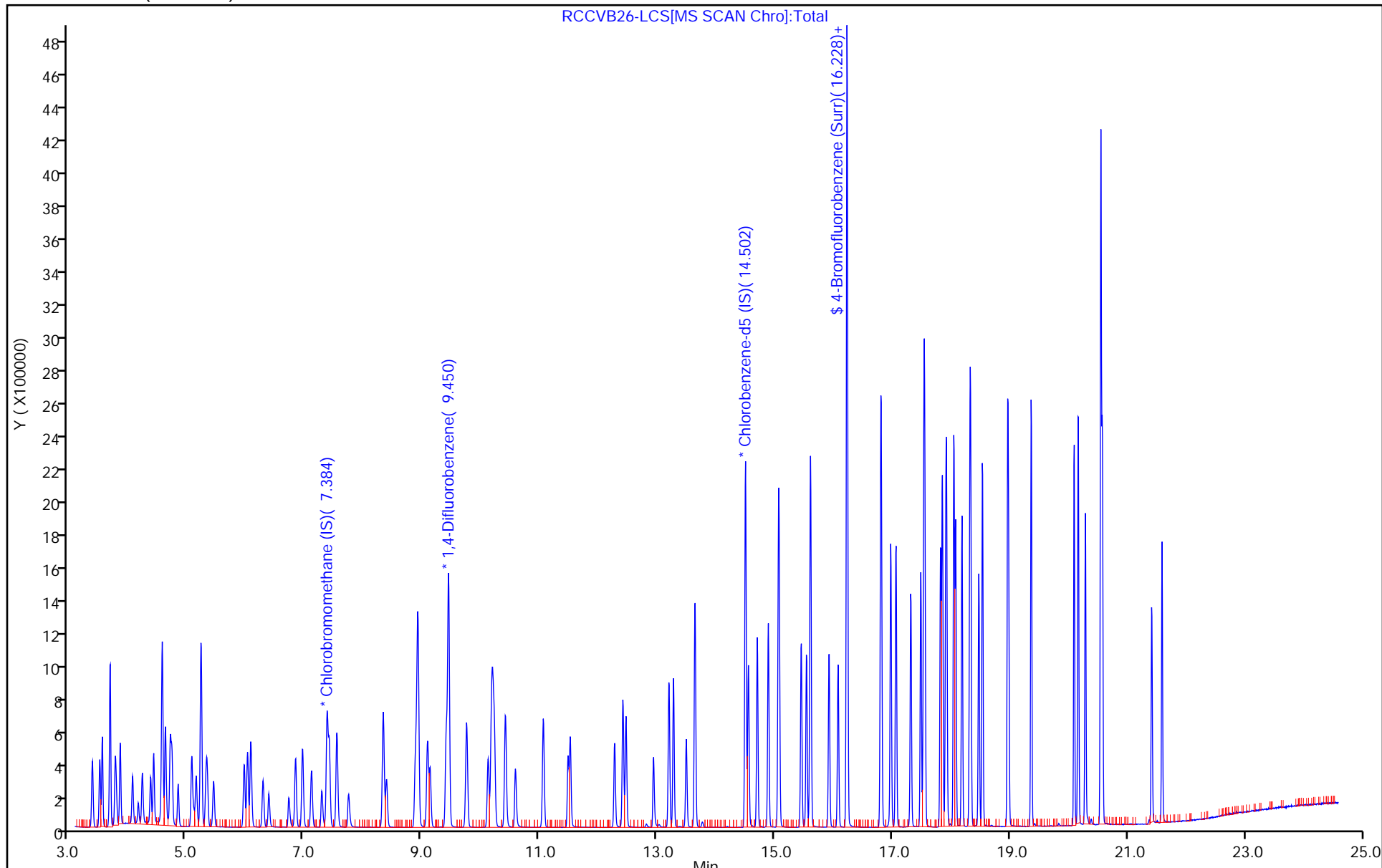
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\RCCVB26-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 26-Feb-2019 10:22:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010924-002
 Misc. Info.: P83
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10924.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 16:34:40 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 16:34:40

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.16	104.03

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27931/1002
 Matrix: Air Lab File ID: GCCVB26-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 11:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.07		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.22		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.02		0.080	0.015
67-66-3	Chloroform	119.38	2.00		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.09		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.06		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.05		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.00		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.14		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.03		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.81		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.97		0.40	0.068
91-20-3	Naphthalene	128.17	1.94		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.06		0.080	0.016
108-88-3	Toluene	92.14	2.02		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.15		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.83		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.04		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.11		0.080	0.021
79-01-6	Trichloroethene	131.39	2.09		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.22		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.99		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.97		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.97		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.18		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 26-Feb-2019 11:35:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-002
 Misc. Info.: P82
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:22:36 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits

Date: 27-Feb-2019 15:22:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.232	9.232	0.000	97	496382	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.405	11.405	0.000	96	2758157	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	91	2578216	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2117181	4.00	4.01	
6 Chlorodifluoromethane	51	3.823	3.823	0.000	97	658223	2.00	2.02	
7 Propene	41	3.834	3.834	0.000	99	380649	2.00	2.10	
8 Dichlorodifluoromethane	85	3.888	3.888	0.000	100	1081216	2.00	2.06	
9 Chloromethane	52	4.088	4.088	0.000	99	116472	2.00	2.02	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.098	0.000	96	596628	2.00	1.94	
11 Acetaldehyde	44	4.266	4.266	0.000	95	648347	10.0	8.73	
12 Vinyl chloride	62	4.271	4.271	0.000	99	393694	2.00	1.97	
13 Butane	43	4.368	4.368	0.000	86	683696	2.00	2.03	
14 Butadiene	54	4.368	4.368	0.000	66	318396	2.00	2.06	
15 Bromomethane	94	4.713	4.713	0.000	98	325798	2.00	1.89	
16 Chloroethane	64	4.870	4.870	0.000	90	185377	2.00	1.92	
17 Ethanol	31	5.031	5.031	0.000	97	935746	10.0	10.7	
18 Vinyl bromide	106	5.193	5.193	0.000	98	300038	2.00	1.87	
19 2-Methylbutane	43	5.247	5.247	0.000	92	470238	2.00	1.95	
20 Trichlorofluoromethane	101	5.484	5.484	0.000	99	1003068	2.00	1.95	
21 Acrolein	56	5.506	5.506	0.000	96	79264	2.00	1.79	
22 Acetonitrile	40	5.581	5.581	0.000	99	131601	2.00	1.90	
23 Acetone	58	5.635	5.635	0.000	99	371393	6.00	4.98	
24 Pentane	72	5.716	5.716	0.000	98	63668	2.00	1.93	
25 Isopropyl alcohol	45	5.775	5.775	0.000	97	1324509	6.00	6.66	
26 Ethyl ether	31	5.910	5.910	0.000	90	419601	2.00	1.96	
27 1,1-Dichloroethene	96	6.228	6.228	0.000	94	375675	2.00	2.14	
28 Acrylonitrile	53	6.352	6.352	0.000	95	234090	2.00	1.94	
29 1,1,2-Trichloro-1,2,2-trif	101	6.417	6.417	0.000	94	786133	2.00	2.07	
30 2-Methyl-2-propanol	59	6.455	6.455	0.000	92	697915	2.00	2.56	
31 Methylene Chloride	84	6.595	6.595	0.000	98	368192	2.00	1.81	
32 3-Chloro-1-propene	39	6.611	6.611	0.000	94	408941	2.00	1.88	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.768	6.768	0.000	99	1148654	2.00	2.16	
34 trans-1,2-Dichloroethene	96	7.436	7.436	0.000	95	377435	2.00	2.15	
35 2-Methylpentane	43	7.453	7.453	0.000	96	1092237	2.00	2.18	
36 Methyl tert-butyl ether	73	7.587	7.587	0.000	97	963642	2.00	1.97	
37 1,1-Dichloroethane	63	7.879	7.879	0.000	100	740120	2.00	2.05	
38 Vinyl acetate	43	7.992	7.992	0.000	100	972603	2.00	1.94	
39 2-Butanone (MEK)	72	8.461	8.461	0.000	94	156796	2.00	1.99	
40 Hexane	56	8.466	8.466	0.000	75	349595	2.00	2.16	
41 Isopropyl ether	45	8.639	8.639	0.000	97	1273265	2.00	2.06	
42 cis-1,2-Dichloroethene	96	8.887	8.887	0.000	97	374980	2.00	2.09	
43 Ethyl acetate	43	9.086	9.086	0.000	98	824216	2.00	2.01	
44 Chloroform	83	9.243	9.243	0.000	97	831651	2.00	2.00	
45 Tert-butyl ethyl ether	59	9.340	9.340	0.000	96	1154312	2.00	2.02	
46 Tetrahydrofuran	42	9.669	9.669	0.000	94	441834	2.00	2.01	
47 1,1,1-Trichloroethane	97	10.283	10.283	0.000	95	914802	2.00	2.04	
48 1,2-Dichloroethane	62	10.397	10.397	0.000	98	540157	2.00	2.00	
49 Cyclohexane	69	10.871	10.871	0.000	94	203691	2.00	2.25	
50 Benzene	78	10.877	10.877	0.000	98	1020327	2.00	2.07	
52 Carbon tetrachloride	117	10.898	10.898	0.000	98	906489	2.00	2.22	
51 n-Butanol	31	10.963	10.963	0.000	72	174154	2.00	2.82	
53 2,3-Dimethylpentane	71	10.985	10.985	0.000	90	289271	2.00	2.22	
54 Thiophene	84	11.146	11.146	0.000	98	624101	2.00	2.18	
55 Isooctane	57	11.615	11.615	0.000	98	2089798	2.00	2.16	
56 n-Heptane	71	11.977	11.977	0.000	94	431811	2.00	2.18	
57 1,2-Dichloropropane	63	12.074	12.074	0.000	87	395044	2.00	2.04	
58 Trichloroethene	130	12.106	12.106	0.000	95	469444	2.00	2.09	
59 Dibromomethane	93	12.198	12.198	0.000	92	424190	2.00	2.08	
60 Dichlorobromomethane	83	12.338	12.338	0.000	99	876559	2.00	2.18	
61 1,4-Dioxane	88	12.370	12.370	0.000	98	145314	2.00	2.53	
62 Methyl methacrylate	41	12.424	12.424	0.000	90	530253	2.00	2.14	
63 Methylcyclohexane	83	12.861	12.861	0.000	93	728027	2.00	2.16	
64 4-Methyl-2-pentanone (MIBK)	43	13.287	13.287	0.000	99	886750	2.00	2.28	
65 cis-1,3-Dichloropropene	75	13.319	13.319	0.000	98	639985	2.00	2.17	
66 trans-1,3-Dichloropropene	75	13.999	13.999	0.000	97	594581	2.00	2.14	
67 Toluene	91	14.128	14.128	0.000	94	1148311	2.00	2.02	
68 1,1,2-Trichloroethane	83	14.204	14.204	0.000	99	364646	2.00	2.11	
69 2-Hexanone	58	14.603	14.603	0.000	92	411009	2.00	2.41	
70 n-Octane	85	14.786	14.786	0.000	96	443374	2.00	2.17	
71 Chlorodibromomethane	129	14.905	14.905	0.000	98	772027	2.00	2.20	
72 Ethylene Dibromide	107	15.191	15.191	0.000	99	635364	2.00	2.12	
73 Tetrachloroethene	129	15.255	15.255	0.000	93	439005	2.00	2.06	
74 2,3-Dimethylheptane	43	16.123	16.123	0.000	96	1496933	2.00	2.16	
75 Chlorobenzene	112	16.129	16.129	0.000	77	928511	2.00	2.11	
78 Ethylbenzene	91	16.404	16.404	0.000	99	1561015	2.00	2.03	
79 m-Xylene & p-Xylene	91	16.566	16.566	0.000	99	2433053	4.00	4.13	
80 n-Nonane	57	16.965	16.965	0.000	94	915019	2.00	2.18	
81 Bromoform	173	17.024	17.024	0.000	92	705966	2.00	2.30	
82 Styrene	104	17.029	17.029	0.000	99	865556	2.00	2.12	
83 o-Xylene	91	17.089	17.089	0.000	97	1277486	2.00	2.05	
84 1,1,1,2,2-Tetrachloroethane	83	17.412	17.412	0.000	99	855020	2.00	2.05	
85 1,2,3-Trichloropropane	110	17.574	17.574	0.000	97	264346	2.00	1.98	
86 Isopropylbenzene	105	17.671	17.671	0.000	97	1641690	2.00	1.98	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 N-Propylbenzene	120	18.189	18.189	0.000	98	441397	2.00	1.97	
88 2-Chlorotoluene	126	18.237	18.237	0.000	97	410417	2.00	2.01	
89 4-Ethyltoluene	105	18.334	18.334	0.000	98	1669466	2.00	2.02	
90 1,3,5-Trimethylbenzene	120	18.404	18.404	0.000	91	633949	2.00	1.97	
92 Alpha Methyl Styrene	118	18.631	18.631	0.000	87	670603	2.00	2.06	
93 n-Decane	57	18.674	18.674	0.000	90	1111794	2.00	2.16	
94 tert-Butylbenzene	119	18.820	18.820	0.000	94	1422084	2.00	1.98	
95 1,2,4-Trimethylbenzene	105	18.830	18.830	0.000	97	1404437	2.00	1.99	
96 sec-Butylbenzene	105	19.084	19.084	0.000	98	2036393	2.00	2.01	
97 1,3-Dichlorobenzene	146	19.105	19.105	0.000	98	939347	2.00	2.04	
98 Benzyl chloride	91	19.176	19.176	0.000	97	1331508	2.00	2.12	
99 1,4-Dichlorobenzene	146	19.186	19.186	0.000	94	949687	2.00	2.01	
100 4-Isopropyltoluene	119	19.240	19.240	0.000	96	1645625	2.00	2.03	
101 1,2,3-Trimethylbenzene	105	19.294	19.294	0.000	99	1419409	2.00	2.22	
102 Butylcyclohexane	83	19.343	19.343	0.000	91	1243201	2.00	2.13	
103 2,3-Dihydroindene	117	19.537	19.537	0.000	93	1271670	2.00	1.99	
104 1,2-Dichlorobenzene	146	19.542	19.542	0.000	95	902853	2.00	1.95	
105 n-Butylbenzene	91	19.661	19.661	0.000	98	1708583	2.00	2.08	
106 Indene	116	19.666	19.666	0.000	90	1119910	2.00	2.04	
107 Undecane	57	19.952	19.952	0.000	96	1108192	2.00	2.12	
108 1,2-Dibromo-3-Chloropropan	157	20.130	20.130	0.000	96	461711	2.00	2.42	
109 1,2,4,5-Tetramethylbenzene	119	20.405	20.405	0.000	96	1527367	2.00	2.07	
110 Dodecane	57	21.004	21.004	0.000	94	814573	2.00	1.98	
111 1,2,4-Trichlorobenzene	180	21.225	21.225	0.000	94	667891	2.00	1.83	
112 Naphthalene	128	21.365	21.365	0.000	99	1542497	2.00	1.94	
113 Hexachlorobutadiene	225	21.564	21.564	0.000	95	660498	2.00	1.69	
114 1,2,3-Trichlorobenzene	180	21.640	21.640	0.000	95	596206	2.00	1.85	
115 2-Methylnaphthalene	142	22.384	22.384	0.000	100	636621	2.00	1.64	
116 1-Methylnaphthalene	142	22.557	22.557	0.000	99	707065	2.00	1.49	
A 122 C8 Range	1	14.787	(14.733-14.870)		0	4392004	2.00	2.16	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.24	
S 124 Xylenes, Total	100				0		6.00	6.18	

Reagents:

40CV101P_00082

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26-LCS.d

Injection Date: 26-Feb-2019 11:35:30

Instrument ID: MG

Operator ID: 007126

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

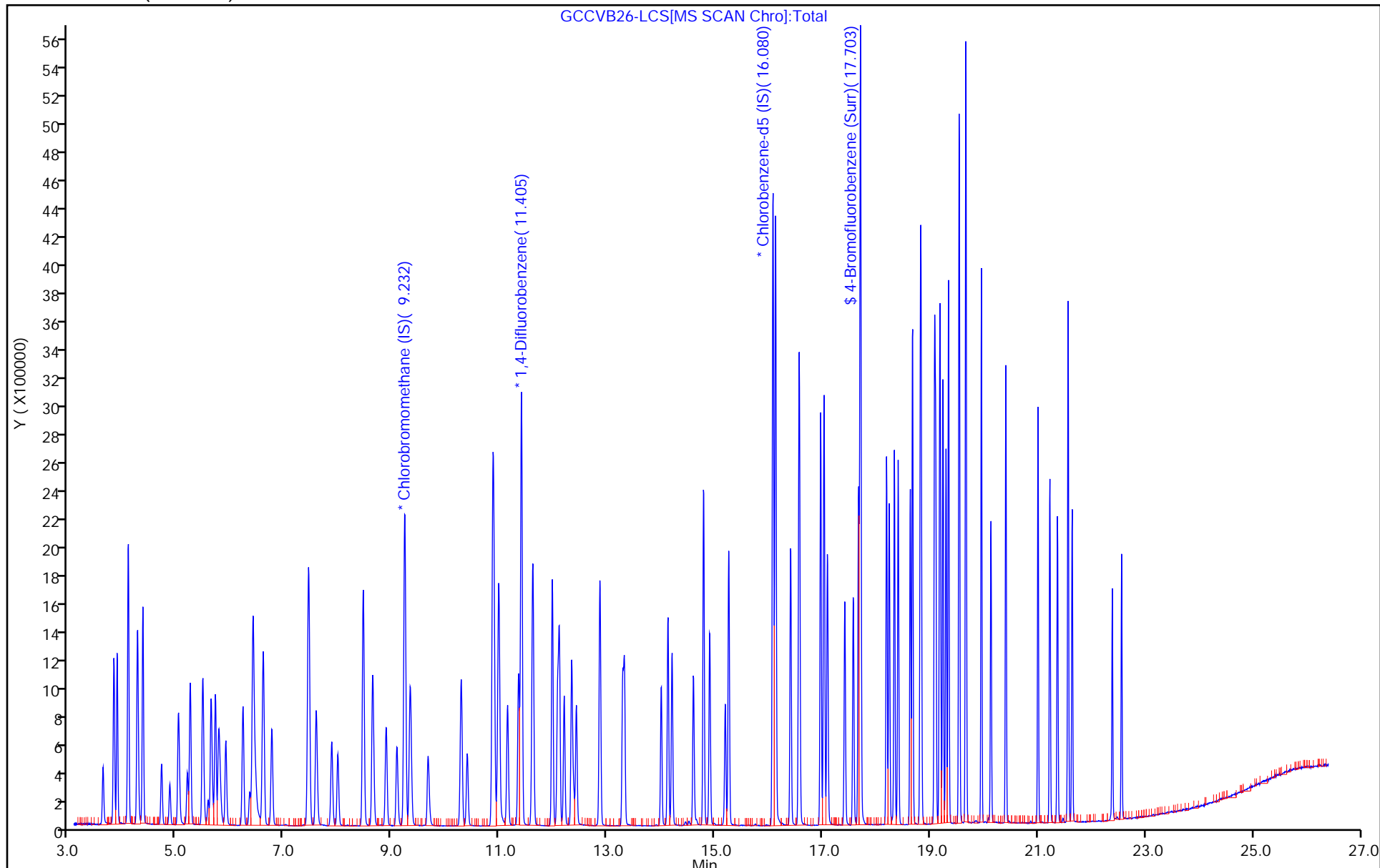
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GCCVB26-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 26-Feb-2019 11:35:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-002
 Misc. Info.: P82
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:22:36 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:22:36

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.01	100.19

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Instrument ID: MR Start Date: 11/16/2018 16:00

Analysis Batch Number: 25490 End Date: 11/17/2018 06:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25490/1		11/16/2018 16:00	1	RBFBK16I.D	RTX-5 0.32 (mm)
IC 140-25490/3		11/16/2018 17:23	1	RK16IC09.D	RTX-5 0.32 (mm)
IC 140-25490/5		11/16/2018 19:07	1	RK16IC10.D	RTX-5 0.32 (mm)
IC 140-25490/8		11/16/2018 21:42	1	RK16IC01.D	RTX-5 0.32 (mm)
IC 140-25490/9		11/16/2018 22:34	1	RK16IC02.D	RTX-5 0.32 (mm)
IC 140-25490/10		11/16/2018 23:27	1	RK16IC03.D	RTX-5 0.32 (mm)
IC 140-25490/11		11/17/2018 00:20	1	RK16IC04.D	RTX-5 0.32 (mm)
IC 140-25490/12		11/17/2018 01:12	1	RK16IC05.D	RTX-5 0.32 (mm)
IC 140-25490/13		11/17/2018 02:05	1	RK16IC06.D	RTX-5 0.32 (mm)
ICIS 140-25490/14		11/17/2018 02:58	1	RK16IC07.D	RTX-5 0.32 (mm)
IC 140-25490/15		11/17/2018 03:51	1	RK16IC08.D	RTX-5 0.32 (mm)
ICV 140-25490/18		11/17/2018 06:27	1	RK16ICV.D	RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date:	11/16/18	Instrument:	MR	Chrom WL #:	10019	TALS Batch & Event #	TO14/15: 1744 25490						
							DOD:	1749 / 25492	OHIO: PMT / 25491				
Chrom/Worklist Review							1 st	Comments			2 nd		
1. Re-read each Limit Group [method editor-limit groups]							✓				na		
2. Verify LODV in Chrom [method editor -> edit -> MDL]							✓				na		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]							✓				/		
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]							✓				/		
5. Did BFB meet tune criteria? [F8]							✓				/		
6. Were all standards injected within 24 hr of BFB? [F7]							✓	Vol ✓ on screen			/		
7. High point checked for saturation and point removed if so? [Chrom]							✓	Naph.			✓		
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]							na				MS		
9. RT for each IS +20 sec avg. RT? [F6 IstdRec]							✓				/		
10. Area for each IS ± 40% avg. area? [F6 IstdRec]							✓				/		
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]							✓				/		
12. Elution order checked on isomeric pairs? [Chrom]											/		
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane							✓				/		
• 2-methyl butane / acrolein							✓				/		
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane							✓				/		
• vinyl acetate / hexane							✓				/		
• cis- and trans- isomers							✓				/		
• ethyl benzene / m/p-xylene / o-xylene							✓				/		
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene							✓				/		
• tert-butylbenzene/4-isopropyltoluene							✓				/		
• 1,3-, 1,4-, and 1,2-dichlorobenzene							✓				/		
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes							na				MS		
• 1,2,4- and 1,2,3-trichlorobenzenes							✓				/		
• 2-, and 1-methylnaphthalene							✓				/		
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?							✓				✓		
MLG Review							TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1 & 2 methylnaphthalene ≤ 50% [F6 Σ]							✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]							✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]							✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]							na	→	→		na	→	→
18. If curves were used, is correlation coefficient ≥ 0.990? [F6]							na	→	→		na	→	→
19. Is the intercept less than the RL for each curve? [F6]							na	→	→		na	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]							na	→	na		na	→	na
21. Is low point RSE ≤ 50%? [F6]							✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits? [F8 - icv]							✓	✓	✓		✓	✓	✓
Analyst/Date:							2nd Level Reviewer/Date:						
[Signature] 11/19/18							[Signature] 11/19/18						
TALS Review							TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL							✓	✓	✓		na	na	na
24. Graphics uploaded? [paperclip]							✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events --'Fix ICAL linkage' if needed]							✓	✓	✓		✓	✓	✓
26. Runs linked to BFB? [QC Links]							✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings [F8]							✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?							na	→	→		na	→	→
29. After review in TALS, approve the method in TALS.							na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>							na	na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?							na	na	na		✓	✓	✓
Analyst/date:							2nd Level Reviewer/date:						
[Signature] 11/19/18							[Signature] 11/19/18						
Comments:							Comments:						
[Handwritten notes]							[Handwritten notes]						

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Instrument ID: MG Start Date: 01/11/2019 12:24

Analysis Batch Number: 26755 End Date: 01/12/2019 04:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-26755/1		01/11/2019 12:24	1	GA11BLK1.D	RTX-5 0.32 (mm)
IC 140-26755/2		01/11/2019 13:08	1	GA11IC09.D	RTX-5 0.32 (mm)
IC 140-26755/6		01/11/2019 14:35	1	GA11IC10.D	RTX-5 0.32 (mm)
IC 140-26755/9		01/11/2019 16:46	1	GA11IC01.D	RTX-5 0.32 (mm)
IC 140-26755/10		01/11/2019 17:29	1	GA11IC02.D	RTX-5 0.32 (mm)
140-13809-A-1 MDLV		01/11/2019 17:29	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 17:29	1		RTX-5 0.32 (mm)
IC 140-26755/11		01/11/2019 18:12	1	GA11IC03.D	RTX-5 0.32 (mm)
140-13809-A-2 MDLV		01/11/2019 18:12	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:12	1		RTX-5 0.32 (mm)
IC 140-26755/12		01/11/2019 18:56	1	GA11IC04.D	RTX-5 0.32 (mm)
140-13809-A-3 MDLV		01/11/2019 18:56	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 18:56	1		RTX-5 0.32 (mm)
IC 140-26755/13		01/11/2019 19:40	1	GA11IC05.D	RTX-5 0.32 (mm)
140-13809-A-4 MDLV		01/11/2019 19:40	1		RTX-5 0.32 (mm)
ZZZZZ		01/11/2019 19:40	1		RTX-5 0.32 (mm)
IC 140-26755/14		01/11/2019 20:23	1	GA11IC06.D	RTX-5 0.32 (mm)
ICIS 140-26755/15		01/11/2019 21:07	1	GA11IC07.D	RTX-5 0.32 (mm)
IC 140-26755/16		01/11/2019 21:51	1	GA11IC08.D	RTX-5 0.32 (mm)
ICV 140-26755/18		01/11/2019 23:17	1	GA11ICV.D	RTX-5 0.32 (mm)
ZZZZZ		01/12/2019 04:26	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date:	1/11/19	Instrument:	UG	Chrom WL #:	10492	TALS Batch & Event #	TO14/15: 1781/26755						
							DOD:	1782/26846	OHIO: 1783/26847				
Chrom/Worklist Review							1 st	Comments		2 nd			
1. Re-read each Limit Group [method editor-limit groups]							✓			na			
2. Verify LODV in Chrom [method editor -> edit -> MDL]							✓			na			
3. Are the reagents and ini/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]							✓			✓			
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]							✓			✓			
5. Did BFB meet tune criteria? [F8]							✓			✓			
6. Were all standards injected within 24 hr of BFB? [F7]							✓			✓			
7. High point checked for saturation and point removed if so? [Chrom]							✓			✓			
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]							✓			NA			
9. RT for each IS +20 sec avg. RT? [F6 IstdRec]							✓			✓			
10. Area for each IS + 40% avg. area? [F6 IstdRec]							✓			✓			
11. Each analyte + 0.06 RRT of avg. RRT? [F6 - RRT]							✓			✓			
12. Elution order checked on isomeric pairs? [Chrom]													
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane							✓			✓			
• 2-methyl butane / acrolein							✓			✓			
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane							✓			✓			
• vinyl acetate / hexane							✓			✓			
• cis- and trans- isomers							✓			✓			
• ethyl benzene / m/p-xylene / o-xylene							✓			✓			
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene							✓			✓			
• tert-butylbenzene/4-isopropyltoluene							✓			✓			
• 1,3-, 1,4-, and 1,2-dichlorobenzene							✓			✓			
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes							✓	mic		✓			
• 1,2,4- and 1,2,3-trichlorobenzenes							✓			✓			
• 2-, and 1-methylnaphthalene							✓			✓			
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?							✓			✓			
MLG Review							TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1 & 2 methylnaphthalene ≤ 50% Mechl 30.5 [F6 Σ]							✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]							✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]							✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]							✓	✓	✓		NA		→
18. If curves were used, is correlation coefficient ≥ 0.990? [F6]							na	→	→		NA		→
19. Is the intercept less than the RL for each curve? [F6]							na	→	→		NA		→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntl-C, details]							na	→	na		NA	→	na
21. Is low point RSE ≤ 50%? Mechl 63% 58% 1/14/19 [F6]							✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits? [F8 - icv]							✓	✓	✓		✓	✓	✓
Analyst/Date:							2nd Level Reviewer/Date:						
H 1/14/19							AS 1/14/19						
TALS Review							TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL							✓	✓	✓		na	na	na
24. Graphics uploaded? [paperclip]							✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events --Fix ICAL linkage' if needed]							✓	✓	✓		✓	✓	✓
26. Runs linked to BFB? [QC Links]							✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings [F8]							✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?							✓	✓	✓		NA		→
29. After review in TALS, approve the method in TALS.							na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>							na	na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?							na	na	na		✓	✓	✓
Analyst/date:							2nd Level Reviewer/date:						
H 1/15/19							AS 1/15/19						
Comments: Mechl UR 5 123tmbz UR-4 1/15/19							Comments:						
dodecane 12db3chloroprop UR 4 1/15/19													
d Bromotorm													

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Instrument ID: MR Start Date: 02/26/2019 09:53

Analysis Batch Number: 27909 End Date: 02/27/2019 04:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27909/1		02/26/2019 09:53	1	RBFB26.D	RTX-5 0.32 (mm)
CCVIS 140-27909/2		02/26/2019 10:22	1	RCCVB26.D	RTX-5 0.32 (mm)
LCS 140-27909/1002		02/26/2019 10:22	1	RCCVB26-LCS.d	RTX-5 0.32 (mm)
MB 140-27909/4		02/26/2019 12:52	1	R500BB26.D	RTX-5 0.32 (mm)
140-14391-1		02/26/2019 13:41	1	RB26P101.D	RTX-5 0.32 (mm)
140-14391-2		02/26/2019 14:30	1	RB26P102Q.D	RTX-5 0.32 (mm)
140-14391-3		02/26/2019 15:31	1	RB26P103.D	RTX-5 0.32 (mm)
140-14391-4		02/26/2019 16:20	1	RB26P104.D	RTX-5 0.32 (mm)
140-14391-5		02/26/2019 17:09	1	RB26P105.D	RTX-5 0.32 (mm)
140-14391-6		02/26/2019 17:58	1	RB26P106.D	RTX-5 0.32 (mm)
140-14391-7		02/26/2019 18:47	1	RB26P107.D	RTX-5 0.32 (mm)
140-14391-8		02/26/2019 19:36	1	RB26P108.D	RTX-5 0.32 (mm)
140-14391-9		02/26/2019 20:25	1	RB26P109.D	RTX-5 0.32 (mm)
140-14391-10		02/26/2019 21:14	1	RB26P110.D	RTX-5 0.32 (mm)
140-14391-11		02/26/2019 22:03	1	RB26P111.D	RTX-5 0.32 (mm)
140-14391-12		02/26/2019 22:52	1	RB26P112.D	RTX-5 0.32 (mm)
140-14391-13		02/26/2019 23:41	1	RB26P113.D	RTX-5 0.32 (mm)
140-14391-14		02/27/2019 00:30	1	RB26P114.D	RTX-5 0.32 (mm)
140-14391-15		02/27/2019 01:19	1	RB26P115.D	RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 02:08	1		RTX-5 0.32 (mm)
140-14391-16		02/27/2019 02:57	1	RB26P116.D	RTX-5 0.32 (mm)
140-14391-17		02/27/2019 03:46	1	RB26P201.D	RTX-5 0.32 (mm)
140-14391-18		02/27/2019 04:35	1	RB26P202.D	RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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Instrument/Date	MR 2/26/2019		Routine	DOD	OHIO VAP
CCAL Chrom WL #	10924	CCAL Batch #	27909		
ICAL Chrom WL #	10019	ICAL Batch # / Event #	25490 / 1746	/	/
Chrom Review			1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]			/		NA
2. Did BFB meet tune criteria? [F8]			/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]			/	List Target analytes outside CCV limits: _____	/
4. Elution order checked on isomeric pairs? [Chrom]					
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane			/		/
• 2-methyl butane / acrolein			/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane			/		/
• vinyl acetate / hexane			/		/
• cis- and trans- isomers			/		/
• ethyl benzene / m/p-xylene / o-xylene			/		/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene			/		/
• tert-butylbenzene/4-isopropyltoluene			/		/
• 1,3-, 1,4-, and 1,2-dichlorobenzene			/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes			NA		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene			/		/
• 2-, and 1-methylnaphthalene			/		/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?			NA		NA
6. Has the RT been updated to the method?			/		/
Analyst/date Guphwar Kh 2/27/2019	2nd Level Reviewer/date ✓ 030119				
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]			/	Volume ✓ on screen 2/27/19	✓
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]			/		/
9. Can dilution history verified? [Mgmt Report]			/		/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:			/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	/
11. All runs - peaks ID'd correctly and false positives removed?			/		/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?			/		/
13. IS/Surr within limits? List samples and reason (e.g. 1 thru 5): [Batch Results IS & SUR Tab]			/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur, Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)	/
Sample Reason Sample Reason					
14. Samples outside calibration range scheduled for dilution?			NA	<input type="checkbox"/> ICAL - Range Exceeded, Minimum Dilution	NA
Chrom Review			1st	If No, why is data reportable?	2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason: Sample Reason Sample Reason			/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.	/
16. RIC inspected for proper integration for TPH?			NA		NA
17. Obvious non-TPH peaks excluded?			/		/
18. Individual TPH peak area < octane high point area?			/		/

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	/														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input type="checkbox"/> CCV - %D - LCS criteria met (NCM# _____) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	/														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr><td>>90</td><td>5</td></tr> <tr><td>71 - 90</td><td>4</td></tr> <tr><td>51 - 70</td><td>3</td></tr> <tr><td>31 - 50</td><td>2</td></tr> <tr><td>11 - 30</td><td>1</td></tr> <tr><td><11</td><td>0</td></tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	<11	0			
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
<11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	NA		/														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		/														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-27909/4 200 mL blank ID: -	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	NA		/														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	na		/														
40. Checklist & Entech report scanned, attached & assigned properly?	na		/														

Analyst: Supriya Ch.	Date: 2/27/2019	2nd Level Reviewer: [Signature]	Date: 03/04/19
Comments: cf line 10, 12-17, 19, 22, 23 for Chlorodifluoromethane		Comments:	
Example Calculation: 140-14291-1 Chlorodifluoromethane			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
0.105294 x 500 x 1.0 = 0.53 100			

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Instrument ID: MG Start Date: 02/26/2019 11:03

Analysis Batch Number: 27931 End Date: 02/27/2019 03:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27931/1		02/26/2019 11:03	1	GBFBB26.D	RTX-5 0.32 (mm)
CCVIS 140-27931/2		02/26/2019 11:35	1	GCCVB26.D	RTX-5 0.32 (mm)
LCS 140-27931/1002		02/26/2019 11:35	1	GCCVB26-LCS.d	RTX-5 0.32 (mm)
MB 140-27931/4		02/26/2019 12:56	1	G500BB26.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 13:42	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 15:56	1		RTX-5 0.32 (mm)
140-14391-19		02/26/2019 16:38	1	GB26P102.D	RTX-5 0.32 (mm)
140-14391-20		02/26/2019 17:19	1	GB26P103.D	RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 18:01	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 19:24	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 20:06	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 21:30	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 22:13	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 22:55	1		RTX-5 0.32 (mm)
ZZZZZ		02/26/2019 23:37	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 00:18	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 01:00	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 01:42	3.7		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 02:23	1		RTX-5 0.32 (mm)
ZZZZZ		02/27/2019 03:05	1		RTX-5 0.32 (mm)

190226.zzz

EUROFINS TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	25.5	2/26/2019	11:03:10 AM
CCV	1 - 101 mL	32.2	2/26/2019	11:35:07 AM
DNU	16 - 21 mL	25.5	2/26/2019	12:21:11 PM
BLK	16 - 500 mL	25.1	2/26/2019	12:56:44 PM
14386-17	1 - 101 mL	6.4	2/26/2019	1:42:01 PM
DNU	1 - 21 mL	11	2/26/2019	3:24:59 PM
14386-18	1 - 101 mL	8.8	2/26/2019	3:56:23 PM
14391-19	2 - 101 mL	7.4	2/26/2019	4:38:04 PM
14391-20	3 - 101 mL	7.1	2/26/2019	5:19:41 PM
14387-04	4 - 11 mL	8	2/26/2019	6:01:19 PM
14387-05	5 - 11 mL	8.2	2/26/2019	6:43:00 PM
14387-14	6 - 11 mL	9.5	2/26/2019	7:24:42 PM
14387-16	7 - 11 mL	9.6	2/26/2019	8:06:22 PM
14387-18	8 - 11 mL	6.3	2/26/2019	8:48:03 PM
14389-01	9 - 101 mL	8.2	2/26/2019	9:30:27 PM
14389-02	10 - 101 mL	8.6	2/26/2019	10:13:31 PM
14389-03	11 - 101 mL	9.6	2/26/2019	10:55:40 PM
14389-04	12 - 101 mL	9.9	2/26/2019	11:37:23 PM
14389-05	13 - 101 mL	9.9	2/27/2019	12:18:55 AM
14389-06	14 - 101 mL	10.1	2/27/2019	1:00:35 AM
14389-07	15 - 11 mL	15.4	2/27/2019	1:42:13 AM
14389-08	16 - 101 mL	9.9	2/27/2019	2:23:49 AM
14389-08	16 - 101 mL	7.9	2/27/2019	3:05:31 AM

MG WL 10931

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 1 of 2

Instrument/Date	MG 2/26/2019		Routine	DOD	OHIO VAP
CCAL Chrom WL #	10931	CCAL Batch #	27931		
ICAL Chrom WL #	10492	ICAL Batch # / Event #	26755 / 1781	/	/
Chrom Review			1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]			/		na
2. Did BFB meet tune criteria? [F8]			/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]			/	List Target analytes outside CCV limits: _____ _____	/
4. Elution order checked on isomeric pairs? [Chrom]					
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane			/		/
• 2-methyl butane / acrolein			/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane			/		/
• vinyl acetate / hexane			/		/
• cis- and trans- isomers			/		/
• ethyl benzene / m/p-xylene / o-xylene			/		/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene			/		/
• tert-butylbenzene/4-isopropyltoluene			/		/
• 1,3-, 1,4-, and 1,2-dichlorobenzene			/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes			NA		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene			/		/
• 2-, and 1-methylnaphthalene			/		/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?			NA		NA
6. Has the RT been updated to the method?			/		/
Analyst/date	Suphawan K 2/27/2019		2nd Level Reviewer/date W 03/01/19		
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]			/		/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]			/		/
9. Can dilution history verified? [Mgmt Report]			/		/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:			/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	/
11. All runs - peaks ID'd correctly and false positives removed?			/		/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?			/		/
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]			/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur, Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)	/
Sample Reason Sample Reason					
14. Samples outside calibration range scheduled for dilution?			NA	<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution	NA
Chrom Review			1st	If No, why is data reportable?	2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:			/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.	/
Sample Reason Sample Reason					
16. RIC inspected for proper integration for TPH?			NA		NA
17. Obvious non-TPH peaks excluded?			/		/
18. Individual TPH peak area < octane high point area?			/		/

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4
 Page 2 of 2

TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	NA														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input type="checkbox"/> CCV - %D - LCS criteria met (NCM# _____) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	NA														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random, Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr><td>>90</td><td>5</td></tr> <tr><td>71 - 90</td><td>4</td></tr> <tr><td>51 - 70</td><td>3</td></tr> <tr><td>31 - 50</td><td>2</td></tr> <tr><td>11 - 30</td><td>1</td></tr> <tr><td><11</td><td>0</td></tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	<11	0			/
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
<11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	/		/														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		NA														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-27931/4 200 mL blank ID: _____	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	NA		NA														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	na		/														
40. Checklist & Entech report scanned, attached & assigned properly?	na		/														

Analyst: Suphawana Kh.	Date: 2/27/2019	2nd Level Reviewer:	Date: 03/04/19
Comments: CS line 16 for Chlorodifluoromethane		Comments:	
Example Calculation: 140-14389-7 1,1-Dichloroethane			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
$7.005013 \times \frac{500}{11} \times 3.7 = 1178.12$			

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Batch Number: 27909 Batch Start Date: 02/26/19 09:53 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00083	40MXISSURP 00003
BFB 140-27909/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27909/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27909/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14391-A-1	IA-DUP01-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-2	IA-102-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-3	IA-155-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-4	IA-133-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-5	IA-153-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-6	IA-DUP02-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-7	IA-060-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-8	IA-150-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-9	IA-145-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-10	IA-146-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-11	IA-152-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-12	IA-144-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-13	IA-141-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-14	IA-088-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-15	IA-142-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-16	IA-113-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-17	IA-149-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-18	IA-126-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27909/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27909/1		TO 15 LL		40 mL					
CCVIS 140-27909/2		TO 15 LL							
MB 140-27909/4		TO 15 LL							
140-14391-A-1	IA-DUP01-C-26	TO 15 LL	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Batch Number: 27909 Batch Start Date: 02/26/19 09:53 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002				
140-14391-A-2	IA-102-C-26	TO 15 LL	T					
140-14391-A-3	IA-155-C-26	TO 15 LL	T					
140-14391-A-4	IA-133-C-26	TO 15 LL	T					
140-14391-A-5	IA-153-C-26	TO 15 LL	T					
140-14391-A-6	IA-DUP02-C-26	TO 15 LL	T					
140-14391-A-7	IA-060-C-26	TO 15 LL	T					
140-14391-A-8	IA-150-C-26	TO 15 LL	T					
140-14391-A-9	IA-145-C-26	TO 15 LL	T					
140-14391-A-10	IA-146-C-26	TO 15 LL	T					
140-14391-A-11	IA-152-C-26	TO 15 LL	T					
140-14391-A-12	IA-144-C-26	TO 15 LL	T					
140-14391-A-13	IA-141-C-26	TO 15 LL	T					
140-14391-A-14	IA-088-C-26	TO 15 LL	T					
140-14391-A-15	IA-142-C-26	TO 15 LL	T					
140-14391-A-16	IA-113-C-26	TO 15 LL	T					
140-14391-A-17	IA-149-C-26	TO 15 LL	T					
140-14391-A-18	IA-126-C-26	TO 15 LL	T					
LCS 140-27909/1002		TO 15 LL						

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Batch Number: 27931 Batch Start Date: 02/26/19 11:03 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00082	40MXISSURP 00003
BFB 140-27931/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27931/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27931/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14391-A-19	IA-101-B-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-20	IA-100-B-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27931/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27931/1		TO 15 LL		40 mL					
CCVIS 140-27931/2		TO 15 LL							
MB 140-27931/4		TO 15 LL							
140-14391-A-19	IA-101-B-26	TO 15 LL	T						
140-14391-A-20	IA-100-B-26	TO 15 LL	T						
LCS 140-27931/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13969-1
 SDG No.: _____
 Client Sample ID: 11644 Lab Sample ID: 140-13969-16
 Matrix: Air Lab File ID: A17L13969.D
 Analysis Method: TO-15 Date Collected: 01/16/2019 15:15
 Sample wt/vol: 200 (mL) Date Analyzed: 01/17/2019 21:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26924 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\A17L13969.D
 Lims ID: 140-13969-A-16
 Client ID: 11644
 Sample Type: Client
 Inject. Date: 17-Jan-2019 21:08:30 ALS Bottle#: 7 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010550-015
 Misc. Info.: 11644
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Jan-2019 14:24:21 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0302

First Level Reviewer: khachitpongpanits Date: 18-Jan-2019 12:50:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.412	7.412	0.000	72	192779	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.482	-0.005	95	1113636	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.529	14.530	-0.001	91	977169	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.244	0.000	88	842571	4.05	
25 Isopropyl alcohol	45	4.764	4.758	0.032	29	2291	0.0420	
40 Hexane	56	6.878	6.867	0.006	81	1852	0.0460	
73 Tetrachloroethene	129	13.672	13.662	0.005	89	4691	0.0404	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\A17L13969.D

Injection Date: 17-Jan-2019 21:08:30

Instrument ID: MR

Operator ID:

Lims ID: 140-13969-A-16

Lab Sample ID: 140-13969-16

Worklist Smp#: 15

Client ID: 11644

Purge Vol: 500.000 mL

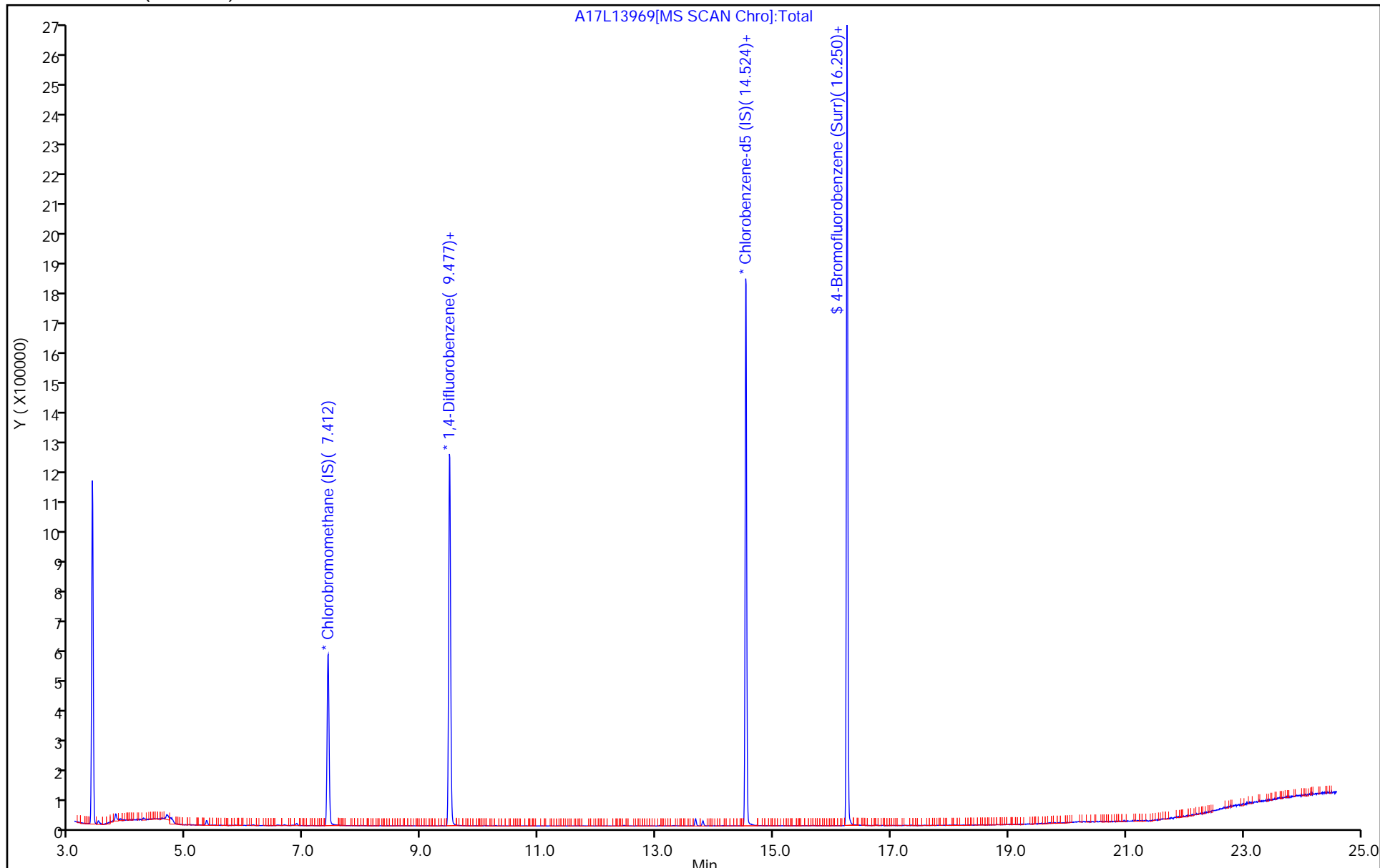
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10550.b\A17L13969.D

Injection Date: 17-Jan-2019 21:08:30

Instrument ID: MR

Lims ID: 140-13969-A-16

Lab Sample ID: 140-13969-16

Client ID: 11644

Operator ID:

ALS Bottle#:

7

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

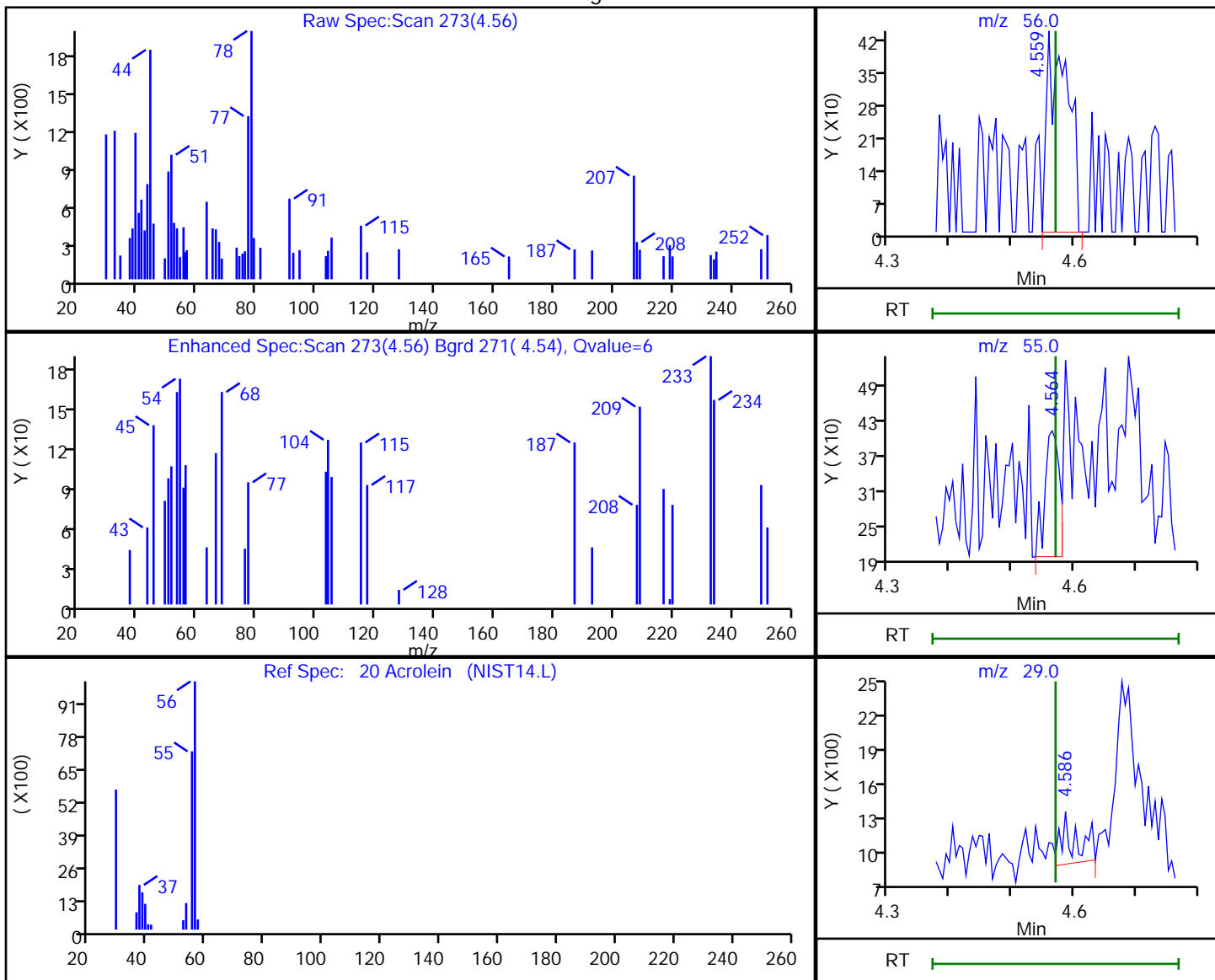
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

20 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
4.56	56.00	1018	0.083544
4.56	55.00	358	
4.59	29.00	740	

Reviewer: khachitpongpanits, 18-Jan-2019 12:49:22

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND	*	2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND	*	0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13978-1
 SDG No.: _____
 Client Sample ID: 11819 Lab Sample ID: 140-13978-1
 Matrix: Air Lab File ID: A18L13972.D
 Analysis Method: TO-15 Date Collected: 01/17/2019 16:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/19/2019 00:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26925 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
 Lims ID: 140-13978-A-1
 Client ID: 11819
 Sample Type: Client
 Inject. Date: 19-Jan-2019 00:52:30 ALS Bottle#: 9 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010551-020
 Misc. Info.: 10560
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 21-Jan-2019 11:02:45 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0310

First Level Reviewer: barlozhetskayaa Date: 21-Jan-2019 11:02:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.406	-0.005	73	181347	4.00	
* 2 1,4-Difluorobenzene	114	9.471	9.482	-0.011	95	1079451	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.529	-0.005	91	948092	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.249	16.243	-0.001	88	823709	4.09	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D

Injection Date: 19-Jan-2019 00:52:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13978-A-1

Lab Sample ID: 140-13978-1

Worklist Smp#: 21

Client ID: 11819

Purge Vol: 500.000 mL

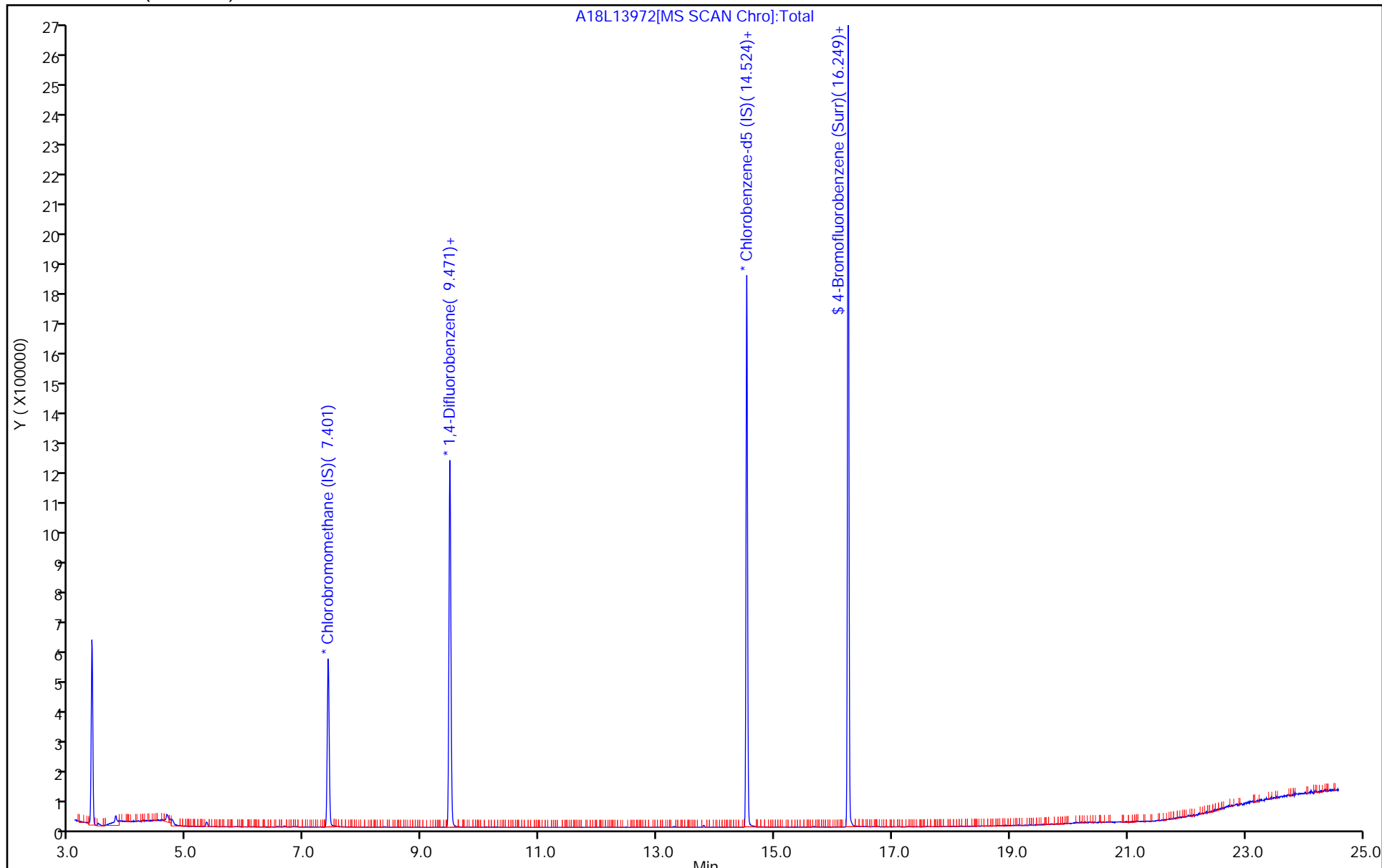
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

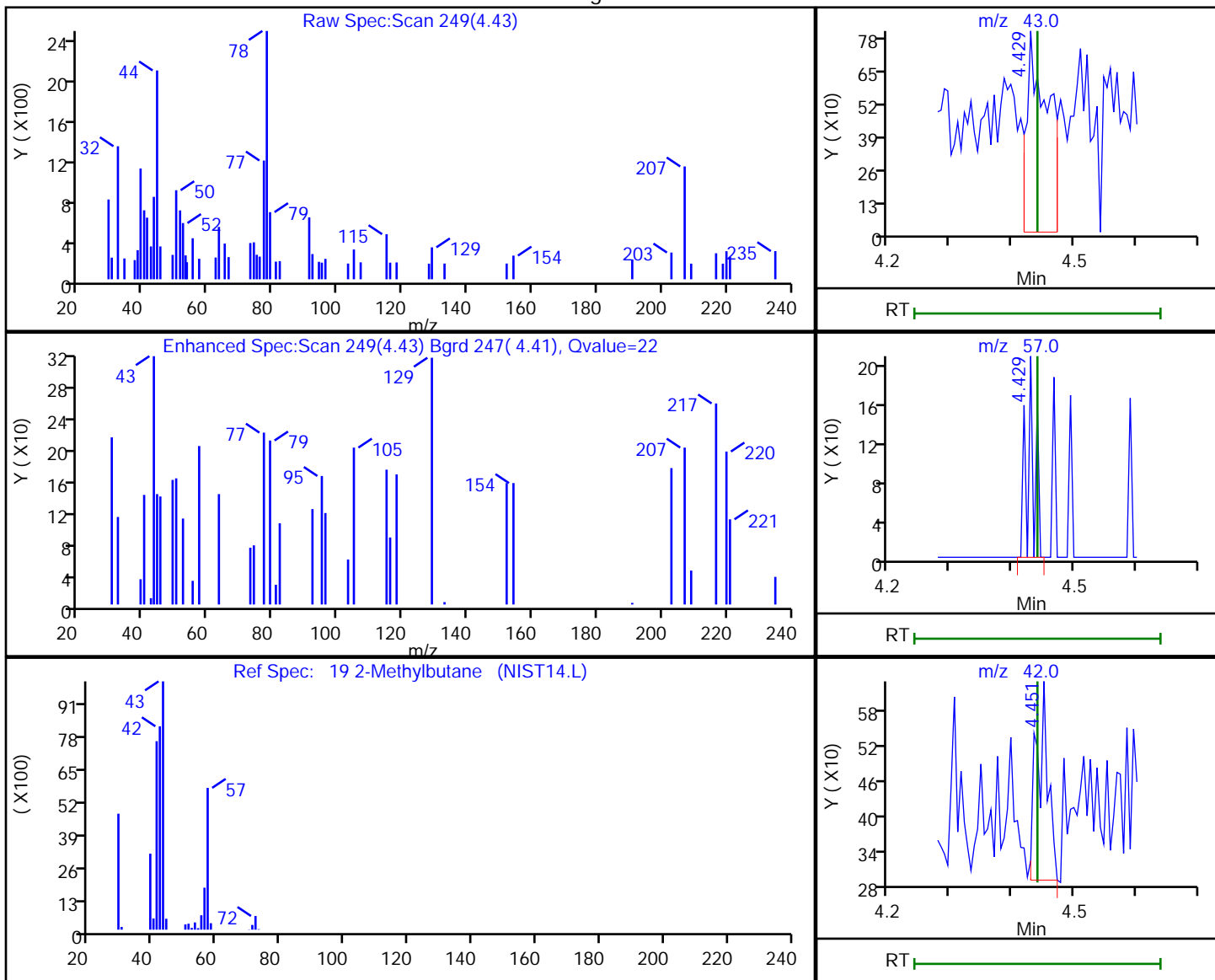


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
Injection Date: 19-Jan-2019 00:52:30 Instrument ID: MR
Lims ID: 140-13978-A-1 Lab Sample ID: 140-13978-1
Client ID: 11819
Operator ID: HMT ALS Bottle#: 9 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.43	43.00	1906	0.052558
4.43	57.00	164	
4.45	42.00	425	

Reviewer: barlozhetskayaa, 21-Jan-2019 11:02:07

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D

Injection Date: 19-Jan-2019 00:52:30

Instrument ID: MR

Lims ID: 140-13978-A-1

Lab Sample ID: 140-13978-1

Client ID: 11819

Operator ID: HMT

ALS Bottle#: 9 Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

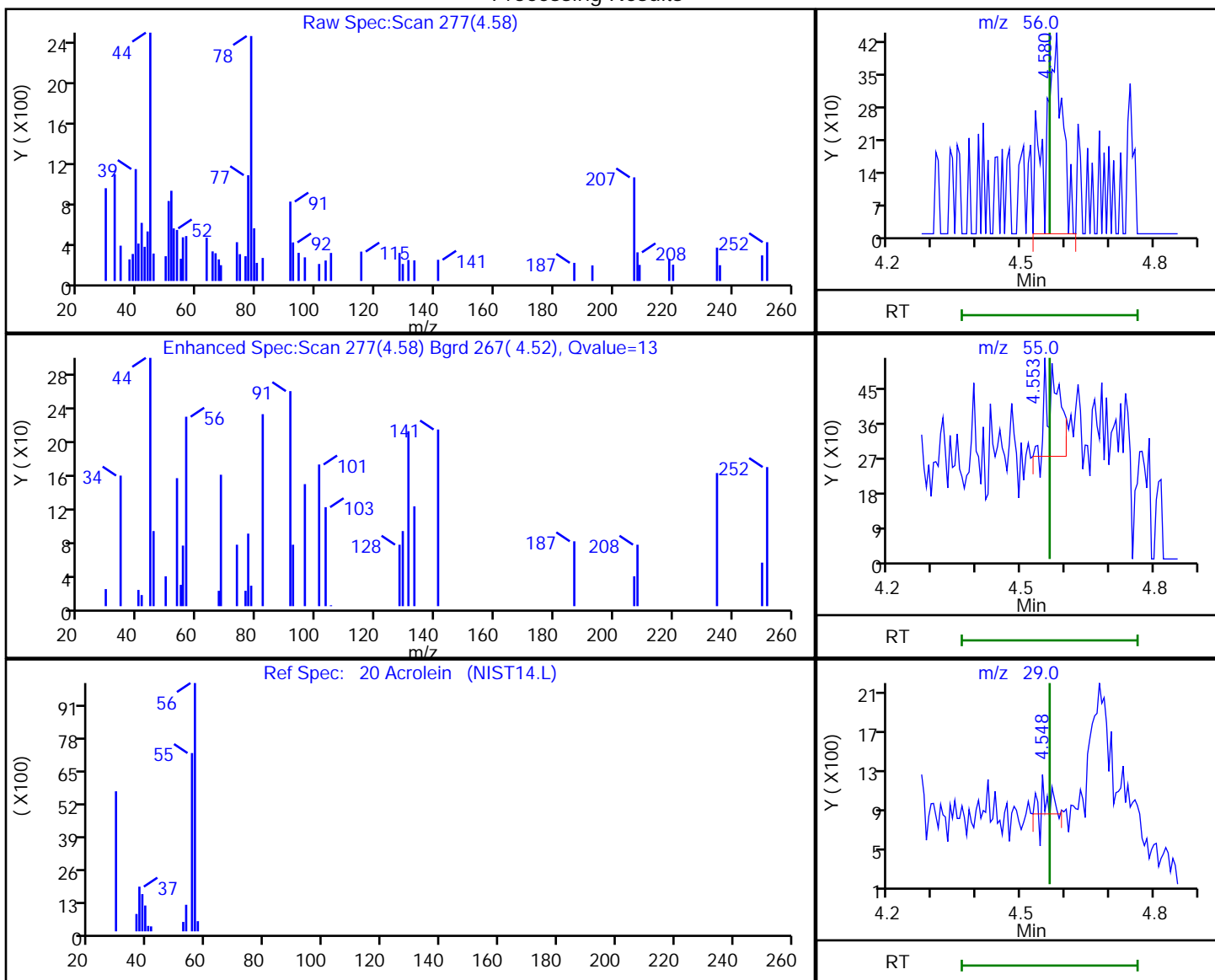
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

20 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
4.58	56.00	1194	0.104165
4.55	55.00	499	
4.55	29.00	323	

Reviewer: barlozhetskayaa, 21-Jan-2019 11:02:03

Audit Action: Marked Compound Undetected

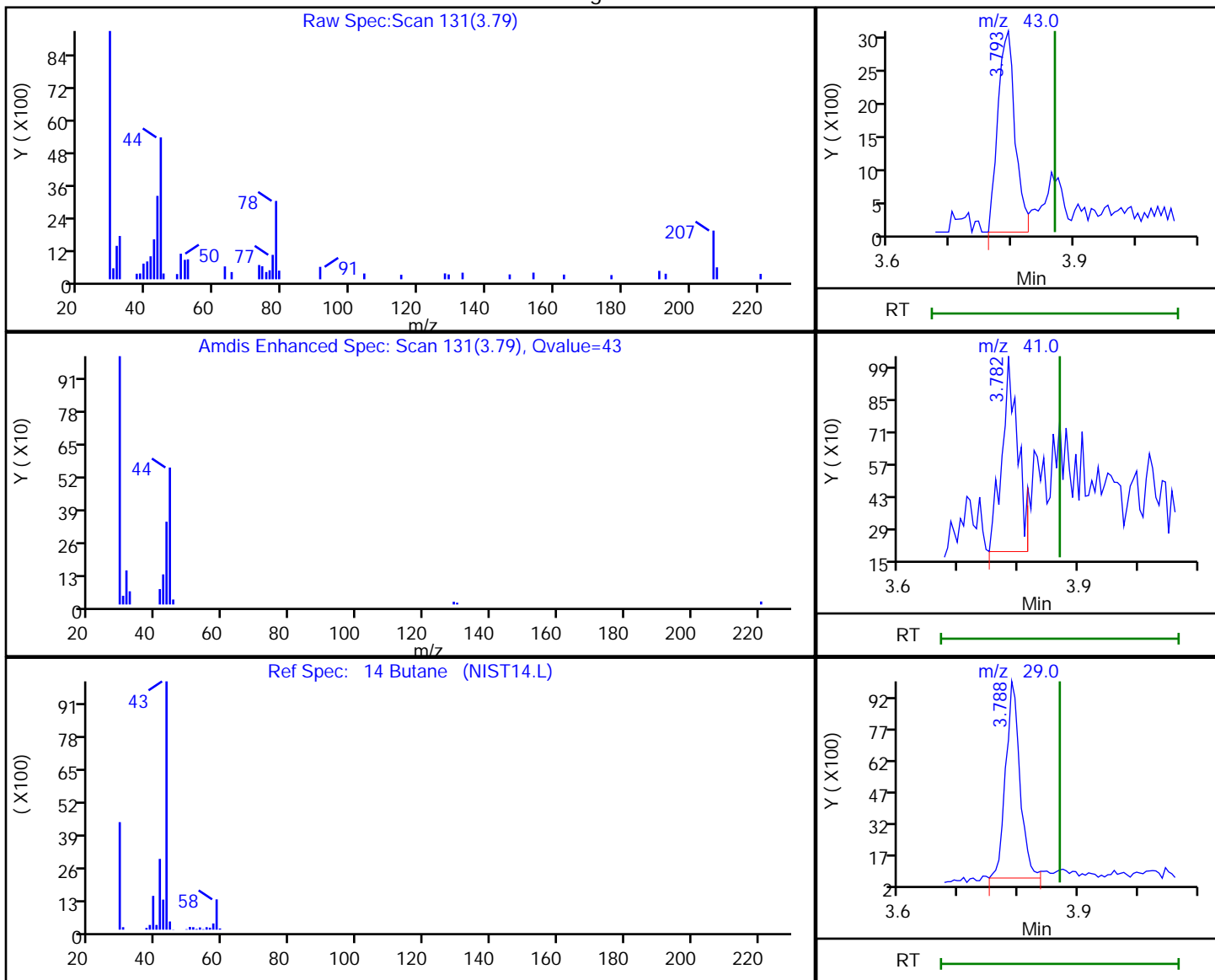
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190115-10551.b\A18L13972.D
 Injection Date: 19-Jan-2019 00:52:30 Instrument ID: MR
 Lims ID: 140-13978-A-1 Lab Sample ID: 140-13978-1
 Client ID: 11819
 Operator ID: HMT ALS Bottle#: 9 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.79	43.00	6012	0.117133
3.78	41.00	1598	
3.79	29.00	15994	

Reviewer: barlozhetskayaa, 21-Jan-2019 11:02:10

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13994-1
 SDG No.: _____
 Client Sample ID: 09583 Lab Sample ID: 140-13994-1
 Matrix: Air Lab File ID: HA21LOT13994.D
 Analysis Method: TO-15 Date Collected: 01/18/2019 00:14
 Sample wt/vol: 200(mL) Date Analyzed: 01/22/2019 03:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13994-1
 SDG No.: _____
 Client Sample ID: 09583 Lab Sample ID: 140-13994-1
 Matrix: Air Lab File ID: HA21LOT13994.D
 Analysis Method: TO-15 Date Collected: 01/18/2019 00:14
 Sample wt/vol: 200(mL) Date Analyzed: 01/22/2019 03:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13994-1
 SDG No.: _____
 Client Sample ID: 09583 Lab Sample ID: 140-13994-1
 Matrix: Air Lab File ID: HA21LOT13994.D
 Analysis Method: TO-15 Date Collected: 01/18/2019 00:14
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 03:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT13994.D
 Lims ID: 140-13994-A-1
 Client ID: 09583
 Sample Type: Client
 Inject. Date: 22-Jan-2019 03:23:30 ALS Bottle#: 11 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010578-017
 Misc. Info.: 09583
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 16:28:14 Calib Date: 07-Jan-2019 21:45:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20181224-10406.b\HA07IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 16:28:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.824	0.005	94	234659	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.010	0.000	95	1285580	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.734	0.000	87	1065808	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.378	17.403	-0.026	95	718551	4.14	
14 Butane	43	4.188	4.188	0.000	80	2954	0.0248	7M
40 Hexane	56	8.090	8.090	0.005	86	1015	0.0153	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT13994.D

Injection Date: 22-Jan-2019 03:23:30

Instrument ID: MH

Operator ID: AFB

Lims ID: 140-13994-A-1

Lab Sample ID: 140-13994-1

Worklist Smp#: 17

Client ID: 09583

Purge Vol: 500.000 mL

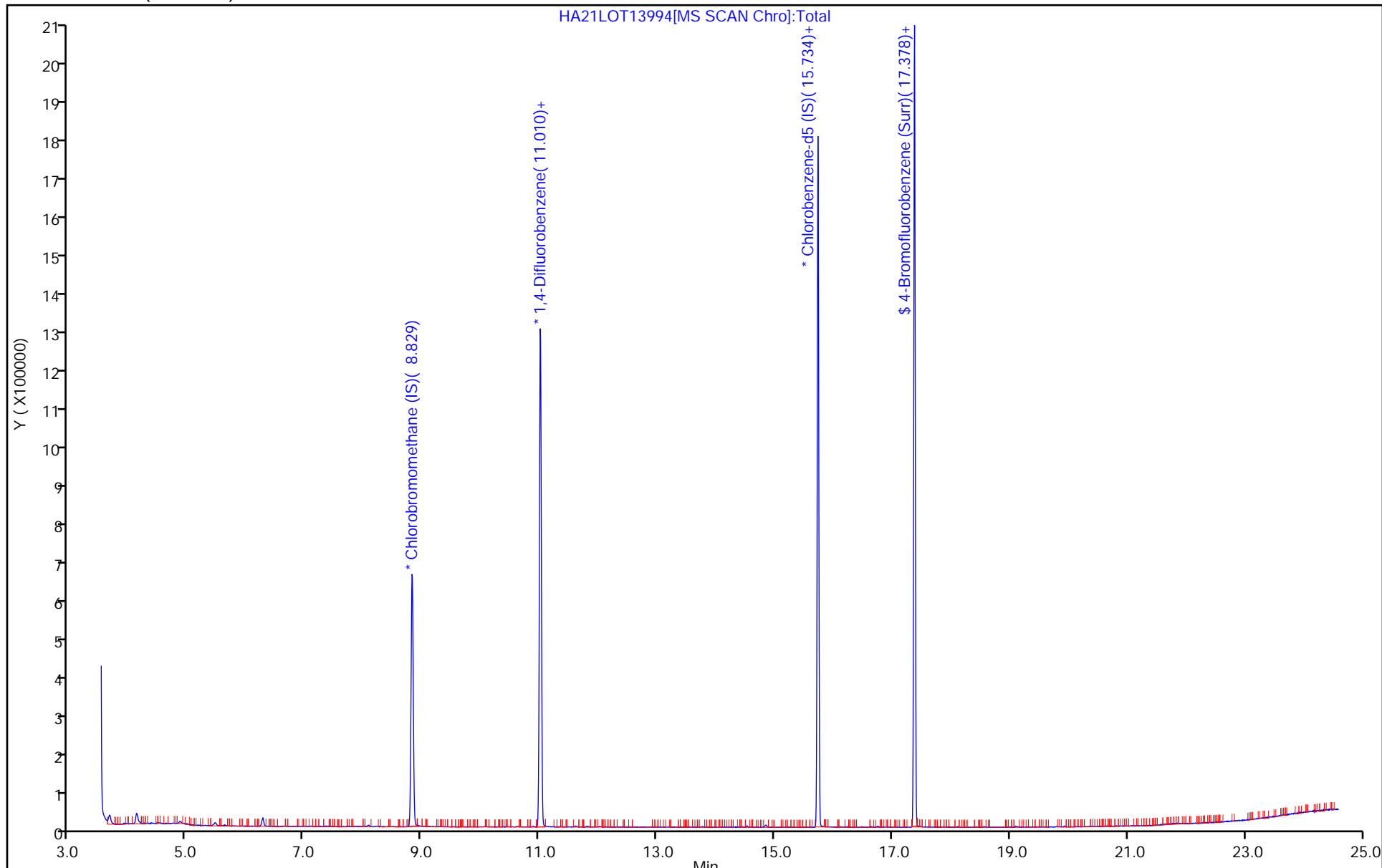
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

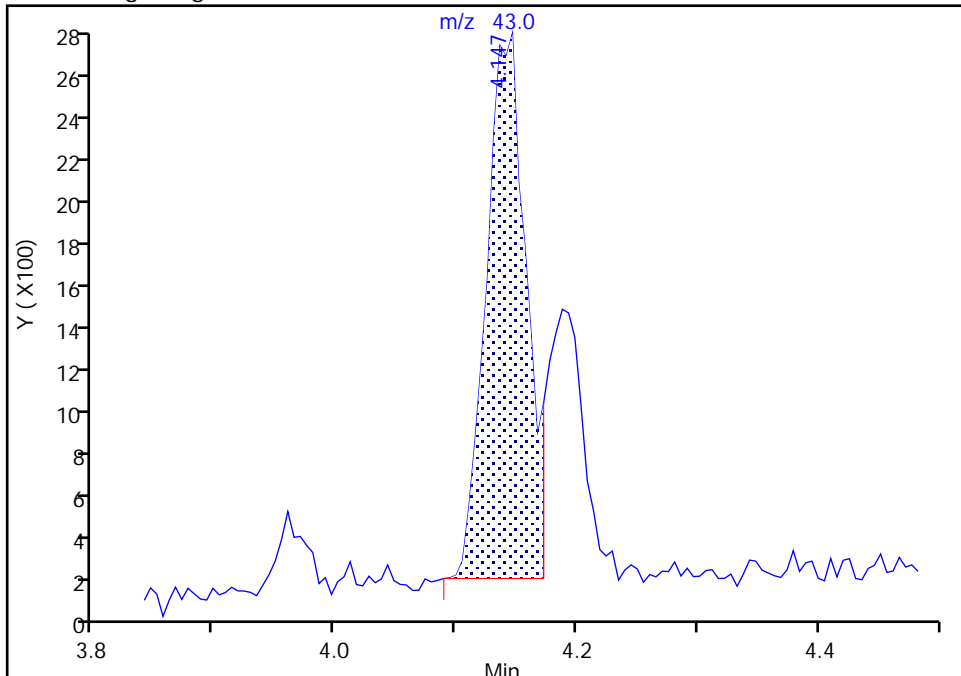
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Injection Date: 22-Jan-2019 03:23:30 Instrument ID: MH
Lims ID: 140-13994-A-1 Lab Sample ID: 140-13994-1
Client ID: 09583
Operator ID: AFB ALS Bottle#: 11 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Signal: 1

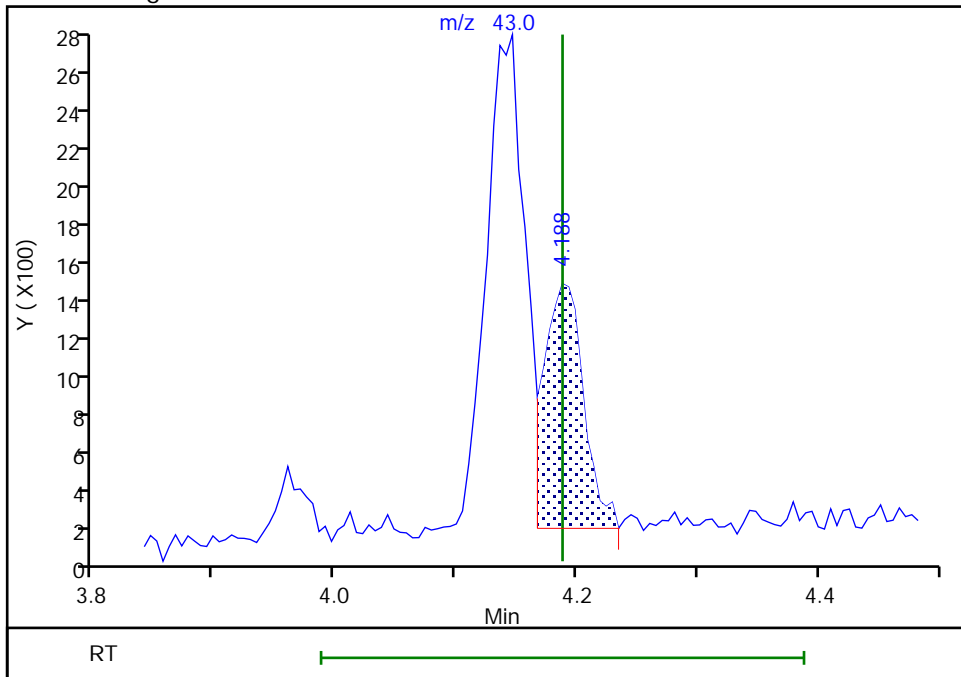
RT: 4.15
Area: 6044
Amount: 0.050794
Amount Units: ppb v/v

Processing Integration Results



RT: 4.19
Area: 2954
Amount: 0.024826
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 22-Jan-2019 16:26:51

Audit Action: Split an Integrated Peak

Audit Reason: Wrong peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14002-1
 SDG No.: _____
 Client Sample ID: 11257 Lab Sample ID: 140-14002-1
 Matrix: Air Lab File ID: HA21LOT14002.D
 Analysis Method: TO-15 Date Collected: 01/19/2019 12:55
 Sample wt/vol: 200 (mL) Date Analyzed: 01/22/2019 04:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27020 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT14002.D
 Lims ID: 140-14002-A-1
 Client ID: 11257
 Sample Type: Client
 Inject. Date: 22-Jan-2019 04:16:30 ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010578-018
 Misc. Info.: 11257
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 17:03:14 Calib Date: 07-Jan-2019 21:45:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20181224-10406.b\HA07IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 17:10:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.829	8.824	0.005	94	232573	4.00	
* 2 1,4-Difluorobenzene	114	11.010	11.010	0.000	95	1264864	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.734	15.734	0.000	88	1049085	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.378	17.404	-0.026	94	706692	4.13	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT14002.D

Injection Date: 22-Jan-2019 04:16:30

Instrument ID: MH

Operator ID: AFB

Lims ID: 140-14002-A-1

Lab Sample ID: 140-14002-1

Worklist Smp#: 18

Client ID: 11257

Purge Vol: 500.000 mL

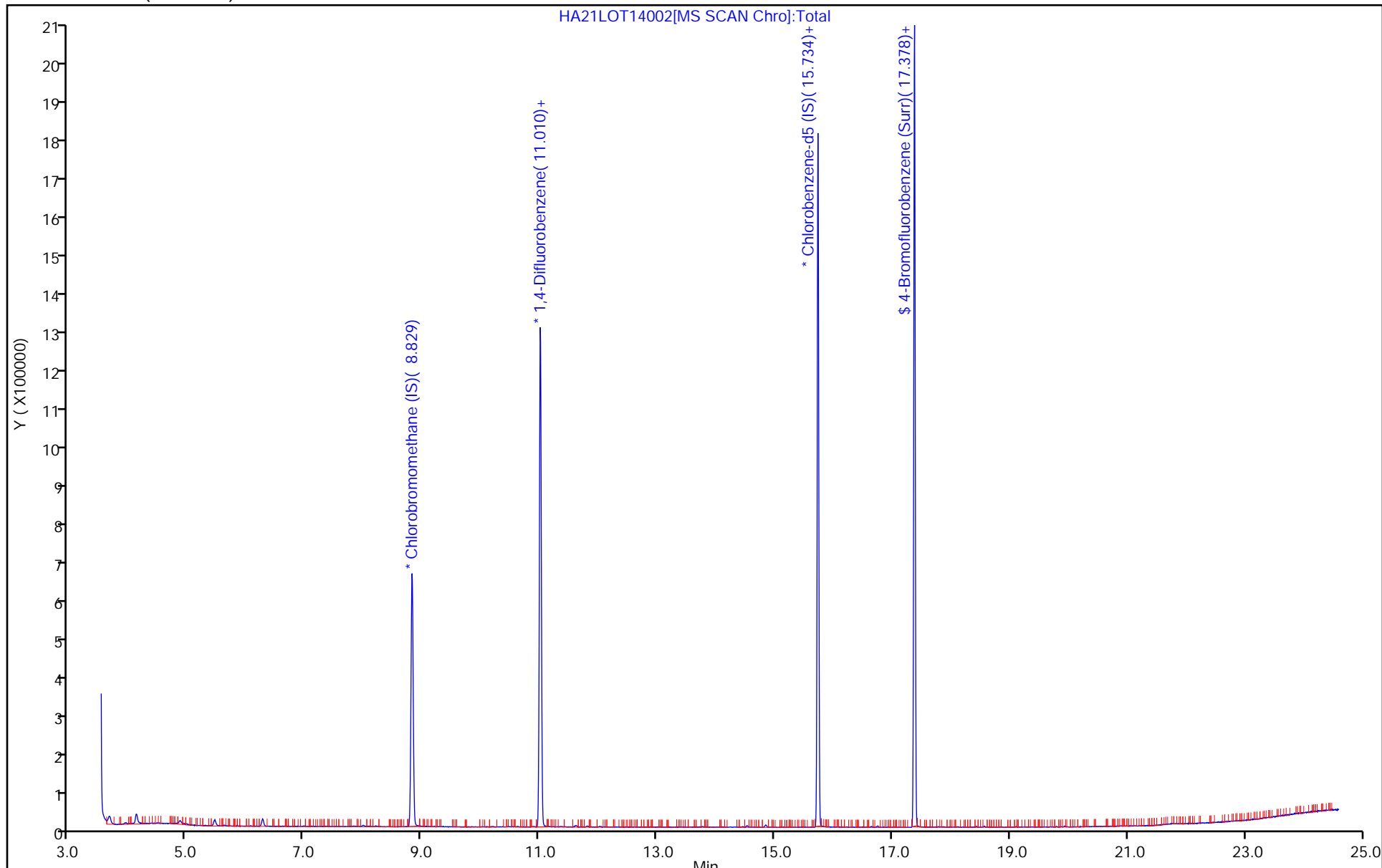
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

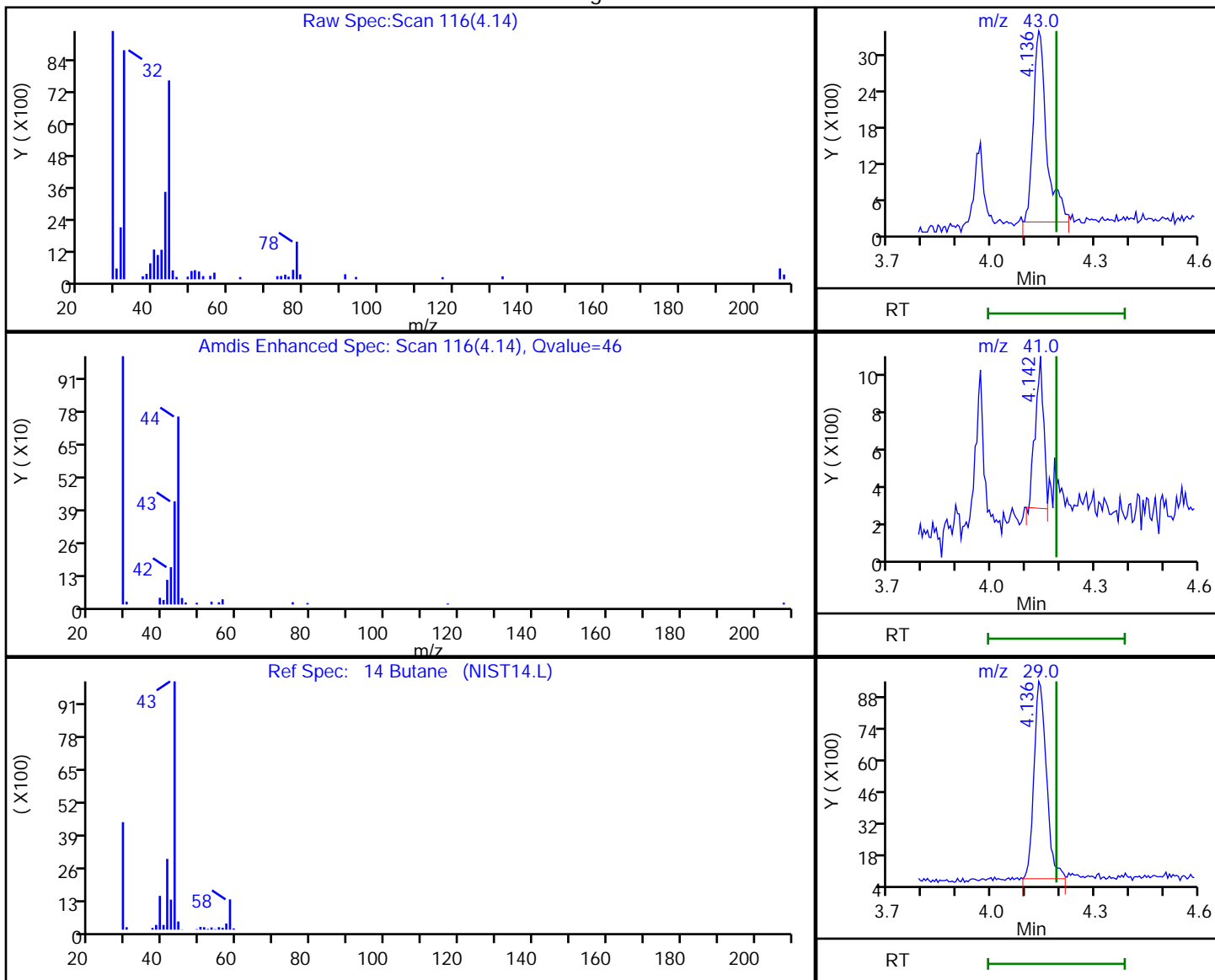


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MH\20190118-10578.b\HA21LOT14002.D
 Injection Date: 22-Jan-2019 04:16:30 Instrument ID: MH
 Lims ID: 140-14002-A-1 Lab Sample ID: 140-14002-1
 Client ID: 11257
 Operator ID: AFB ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.14	43.00	8576	0.072720
4.14	41.00	1337	
4.14	29.00	22463	

Reviewer: khachitpongpanits, 22-Jan-2019 17:02:48

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14031-1
 SDG No.: _____
 Client Sample ID: 09788 Lab Sample ID: 140-14031-9
 Matrix: Air Lab File ID: A23L14031.D
 Analysis Method: TO-15 Date Collected: 01/22/2019 16:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/23/2019 22:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27019 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190118-10577.b\A23L14031.D
 Lims ID: 140-14031-A-9
 Client ID: 09788
 Sample Type: Client
 Inject. Date: 23-Jan-2019 22:00:30 ALS Bottle#: 14 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010577-017
 Misc. Info.: 09788
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190118-10577.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 23-Jan-2019 20:35:32 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0318

First Level Reviewer: khachitpongpanits Date: 24-Jan-2019 11:15:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.243	9.237	0.006	97	473706	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.416	0.000	96	2660006	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.091	0.000	92	2472220	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.714	0.000	82	1959190	3.87	
9 Chloromethane	52	4.098	4.090	0.010	98	6355	0.1154	
31 Methylene Chloride	84	6.611	6.604	0.011	98	26651	0.1370	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190118-10577.b\A23L14031.D

Injection Date: 23-Jan-2019 22:00:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14031-A-9

Lab Sample ID: 140-14031-9

Worklist Smp#: 17

Client ID: 09788

Purge Vol: 500.000 mL

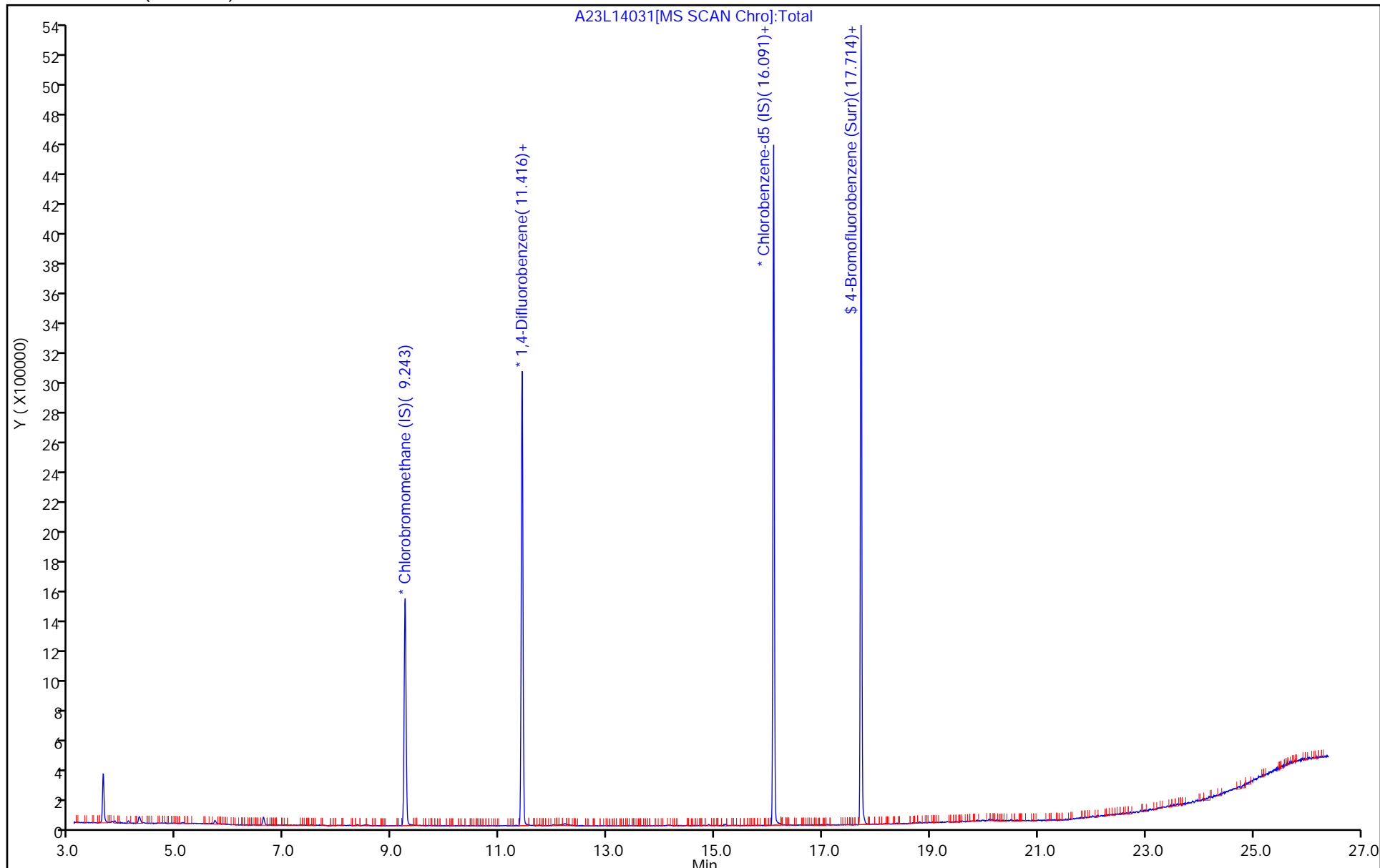
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200(mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14044-1
 SDG No.: _____
 Client Sample ID: 11547 Lab Sample ID: 140-14044-1
 Matrix: Air Lab File ID: A24L14044.D
 Analysis Method: TO-15 Date Collected: 01/23/2019 17:00
 Sample wt/vol: 200 (mL) Date Analyzed: 01/24/2019 15:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27096 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D
 Lims ID: 140-14044-A-1
 Client ID: 11547
 Sample Type: Client
 Inject. Date: 24-Jan-2019 15:25:30 ALS Bottle#: 14 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010612-010
 Misc. Info.: 11547
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 25-Jan-2019 09:48:51 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 25-Jan-2019 09:53:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.237	9.237	0.000	97	406723	4.00	
* 2 1,4-Difluorobenzene	114	11.410	11.416	-0.006	97	2310796	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.091	16.091	0.000	93	2083397	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.714	17.714	0.000	81	1731157	4.06	
31 Methylene Chloride	84	6.606	6.600	0.006	98	25162	0.1507	
47 1,1,1-Trichloroethane	97	10.294	10.294	0.000	95	9292	0.0252	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20190122-10612.b\A24L14044.D

Injection Date: 24-Jan-2019 15:25:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-14044-A-1

Lab Sample ID: 140-14044-1

Worklist Smp#: 10

Client ID: 11547

Purge Vol: 500.000 mL

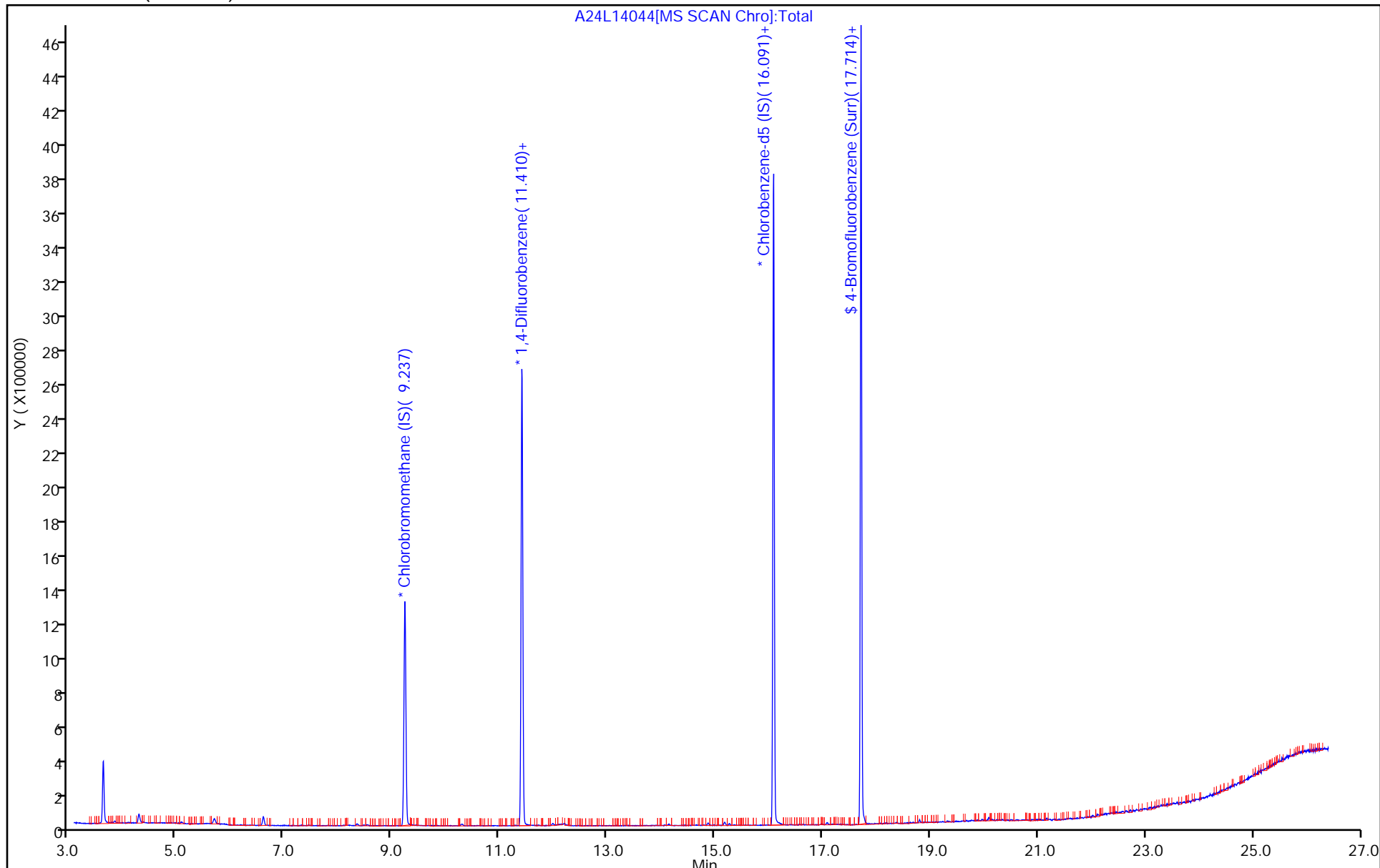
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Project Manager: **Tony Apanavage** Sampled By: **Sophia Lawson, Josh Mollis & Walt Pryor** of **16 COCs**

Phone: 301-528-3000
Site Contact: **Tony Apanavage**
TAL Contact: **Terry Walker Wushmund**

Analysis Turnaround Time

Standard (Specify) **X**
Rush (Specify)

Project Name: **MRC Indoor Air**

Site/location: **MRC**

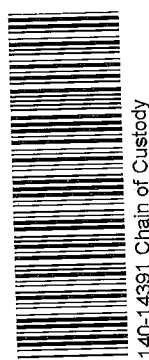
PO # **1121068328**

Sample Identification

IA-DUP01-C-26
IA-102-C-26
IA-155-C-26
IA-133-C-26
IA-153-C-26
IA-DUP02-C-26

Sampled by:
**Sophia Lawson, Walt Pryor,
Josh Mollis**

Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
2/19/19	0600	0000	-30	-11	7588	09800	✓										
2/19/19	0906	1706	-30	-4	11432	09589	✓										
2/19/19	0908	1708	-30	-4	7162	11542	✓										
2/19/19	0909	1709	-29	0	7921	09791	✓										
2/19/19	0911	1711	-30	-7	7674	09660	✓										
2/19/19	0900	0900	-30	-7	10240	09737	✓										



Baltimore #201

240AMS/24 FAMS
CUSTOMY SOIL CONTACT
KREIND AMBIENT RT 20.0/CT 20.0 C

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: [Signature]	Date/Time: 2/22/19	Received by: [Signature]
Relinquished by: [Signature]	Date/Time: 2/22/19 1700	Received by: [Signature]

14391

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

14 of 16 COCs

Project Manager: **Tony Apanavage**
Phone: 301-528-3000
Site Contact: **Tony Apanavage**
City/State/Zip: **Georgetown, MD 20871**
Phone: 301-528-5522
FAX:
Samp. By: **Sophia Larson, Josh Mullis & Walt Pryor**

TAL Contact: **Terry Walker Wushund**

Analysis Turnaround Time
Standard (Specify) **X**
Rush (Specify)

Project Name: **MRC Indoor Air**
Site/location: **MRC**
PO# **1121COB387**

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)		
													Indoor Air	Ambient Air	Soil Gas
IA-060-C-26	2/19/19	0914	1714	-28	-5	11482	11840	✓							
IA-150-C-26	2/19/19	0916	1716	-36	-5	04551	11865	✓							
IA-145-C-26	2/19/19	0917	1717	-28	-5	8419	11521	✓							
IA-146-C-26	2/19/19	0918	1718	-30	-5	8678	11671	✓							
IA-152-C-26	2/19/19	0919	1719	-36	-4	10435	11857	✓							
IA-144-C-26	2/19/19	0921	1721	-30	-5	0948	10744	✓							

Baltimore #201

Temperature (Fahrenheit)	
Interior	
Ambient	
Start	
Stop	
Pressure (inches of Hg)	
Interior	
Ambient	
Start	
Stop	

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: JM 22	Date/Time: 2/22/19	Received by:
Relinquished by: JM	Date/Time: 2/22/19 17:00	Received by: Walt Pryor
		Date/Time: 2-23-19 10:10

Lab Use Only: Sample Name, Sample ID, Date/Time, Location, Operator, Status

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

15 of 16 COCs

Project Manager: **Tony Apanavage**
Sampled By: **Sophia Larson, Josh Mollis & Walt Pryor**
Phone: 301-528-3000
Site Contact: **Tony Apanavage**
TAL Contact: **Terry Walker Washburne**

Analysis Turnaround Time
Standard (Specify) **X**
Rush (Specify)

Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
2/19/19	0924	1724	-30	-5	11175	11136	✓										
2/19/19	0928	1728	-30	-5	7274	11123	✓										
2/19/19	0929	1729	-30	-1	09846	09644	✓										
2/19/19	0930	1730	-30	-6	7027	11547	✓										
2/19/19	0933	1733	-30	0	5683	09583	✓										
2/19/19	0934	1734	-30	-1	8464	10736	✓										

Temperature (Fahrenheit)	
Start	Ambient
Stop	Ambient
Start	Interior
Stop	Interior
Start	Pressure (Inches of Hg)
Stop	Ambient

Baltimore #201

Sampled by: **Sophia Larson, Walt + Pryor, Josh Mollis**

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: **Tetra Tech**
 Samples Relinquished by: **JM 2/22**
 Relinquished by: **JM**
 Date/Time: 2/22/19 1700
 Canisters Received by: **JM**
 Received by: **JM**
 Received by: **JM**

Lab Use Only: **Signature Name**

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

16 of 16 COCs

Project Manager: **Tony Apanavage**
Phone: 301-528-3000
Site Contact: **Tony Apanavage**
TAL Contact: **Terry Walker Washburne**

Sampled By: **Sophia Larson, Josh Mollis & Walt Pryor**

Client Contact Information
Company: **Tetra Tech**
Address: **20251 Century Blvd #200**
City/State/Zip: **Georgetown, MD 20877**
Phone: **301-528-552**
FAX:

Project Name: **MRC Indoor Air**
Site/location: **MRC**
PO # **112108387**

Analyses Turnaround Time
Standard (Specify) **X**
Rush (Specify)

Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15		TO-14A		EPA 3C		EPA 25C		ASTM D-1946		Other (Please specify in notes section)	
							✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8/19/19	0943	1743	-27	-1	10052	09579	✓											
2/10/19	0944	1744	-25	0	10079	11739	✓											

Sample Identification

IA-101-B-26
IA-100-B-26

Sampled by: **Sophia Larson, Walt Pryor, Josh Mollis**

Baltimore #201

09165
11884
11819
11416

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: **Tetra Tech**
Samples Relinquished by: **JM**
Relinquished by: **JM**

Date/Time: 2/22/19
Date/Time: 2/22/19
Date/Time: 2/22/19 1700

Canisters Received by:
Received by:
Received by: **JM**

TestAmerica
Knoxville, TN 37921
5815 Middlebrook Pike
Phone: 865-291-3000 Fax: 865-584-4315

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID: _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	pH test strip lot number: _____
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	Date: _____ Time: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/		
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	
Project #: _____				PM Instructions: _____	

Sample Receiving Associate: *[Signature]* Date: 2-25-19 QA026R31.doc, 112618

APPENDIX D—DATA VALIDATION REPORTS

TO: S. BRENNER
DATE: 5/7/19

PAGE 2
SDG 140-14386-1

NOTES

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

Non-detected results were reported to the MDL.

The following VOC samples/analytes were analyzed at dilution factors greater than 1:

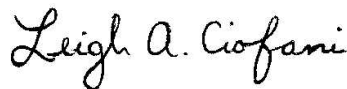
Sample	Dilution Factor
IA-117-A-26	1.66
IA-168-A-26	1.57

EXECUTIVE SUMMARY

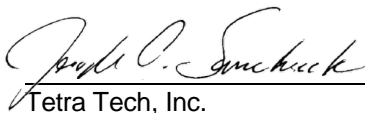
Laboratory Performance: Some VOC results were qualified due to calibration noncompliance. Some results for one analyte were qualified due to chromatographic interference noted by the laboratory.

Other Factors Affecting Data Quality: Results above the MDL but below the RL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017) and USEPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.



Tetra Tech, Inc.
Leigh A. Ciofani
Environmental Scientist/Data Validator



Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:

- Appendix A – Qualified Analytical Results
- Appendix B – Results as Reported by the Laboratory
- Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Qualifier Codes:

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ($< 2 \times$ IDL for inorganics and $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors $>40\%$ for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids $<30\%$
- Z = Uncertainty at 2 standard deviations is greater than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed
- Z3 = Tentatively Identified Compound aldol condensate
- Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
- Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08388 SDG: 140-14386-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	IA-015-A-26			IA-018-A-26			IA-021-A-26			IA-075-A-26		
	LAB_ID	140-14386-6			140-14386-4			140-14386-17			140-14386-16		
	SAMP_DATE	2/21/2019			2/21/2019			2/21/2019			2/21/2019		
	QC_TYPE	NM			FD			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		0.33	U		0.33	U		0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	U		0.2	U		0.2	U		
1,1-DICHLOROETHENE	0.28	U		1.8			0.28	U		0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		0.61	U		1.1	J	P	0.71	J	P	
1,2-DICHLOROETHANE	0.38	U		0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		0.64	U		0.64	U		0.64	U		
BENZENE	1	J	P	0.95	J	P	0.78	J	P	1	J	P	
CARBON TETRACHLORIDE	0.47	U		0.47	U		0.47	U		0.47	U		
CHLORODIFLUOROMETHANE	1.6	J+	Q	1.3	J	P	3.5			2.7			
CHLOROFORM	0.37	U		0.61	J	P	0.52	J	P	0.37	U		
CIS-1,2-DICHLOROETHENE	0.48	U		0.7	J	P	0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	1.4	J	P	1.5	J	P	2.3			1.3	J	P	
ETHYLBENZENE	0.64	J	P	0.6	J	P	7.8			6.3			
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE	3.4	J	P	5.9	J	P	5.9	J	CP	3.8	J	P	
NAPHTHALENE	1	U		1	U		1.1			1	U		
TETRACHLOROETHENE	0.54	U		0.87	J	P	0.54	U		0.54	J	P	
TOLUENE	5			2.3	U		85			80			
TOTAL XYLENES	3.5			2.5	J	P	39			32			
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U		0.4	U		0.4	U		
TRICHLOROETHENE	0.38	U		3.4			0.7	J	P	0.38	U		
VINYL CHLORIDE	0.37	U		0.37	U		0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14386-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	IA-076-A-26			IA-078-A-26			IA-079-A-26			IA-081-A-26		
	LAB_ID	140-14386-15			140-14386-13			140-14386-10			140-14386-9		
	SAMP_DATE	2/21/2019			2/21/2019			2/21/2019			2/21/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		0.33	U		0.33	U		0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	U		0.2	U		0.2	U		
1,1-DICHLOROETHENE	0.28	U		0.28	U		0.28	U		0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	1.6	J	P	0.93	J	P	0.61	U		0.66	J	P	
1,2-DICHLOROETHANE	0.38	U		0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		0.64	U		0.64	U		0.64	U		
BENZENE	1.1	J	P	0.98	J	P	1.1	J	P	1.1	J	P	
CARBON TETRACHLORIDE	0.47	U		0.47	U		0.48	J	P	0.47	U		
CHLORODIFLUOROMETHANE	2.8			2.1			1.9			3	J+	Q	
CHLOROFORM	0.42	J	P	0.49	J	P	0.43	J	P	0.37	U		
CIS-1,2-DICHLOROETHENE	0.48	U		0.48	U		0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	1.3	J	P	1.4	J	P	1.4	J	P	1.3	J	P	
ETHYLBENZENE	9.7			6.6			2.3			2.3			
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE	8.2			5.3	J	P	6.3	J	P	3.6	J	P	
NAPHTHALENE	1	U		1	U		1	U		1	U		
TETRACHLOROETHENE	3.4			0.54	U		2.4	J	P	0.54	U		
TOLUENE	120			86			54			63			
TOTAL XYLENES	49			32			11			11			
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U		0.4	U		0.4	U		
TRICHLOROETHENE	0.58	J	P	0.43	J	P	0.38	U		0.38	U		
VINYL CHLORIDE	0.37	U		0.37	U		0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14386-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	IA-093-A-26			IA-117-A-26			IA-118-A-26			IA-136-A-26		
	LAB_ID	140-14386-2			140-14386-12			140-14386-7			140-14386-14		
	SAMP_DATE	2/21/2019			2/21/2019			2/21/2019			2/21/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		0.33	U		0.81	J	P	0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	U		0.2	U		0.2	U		
1,1-DICHLOROETHENE	0.86	J	P	0.28	U		0.28	U		0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		0.72	J	P	0.61	U		1.5	J	P	
1,2-DICHLOROETHANE	0.38	U		0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		0.64	U		0.64	U		0.64	U		
BENZENE	0.68	J	P	1	J	P	1.2	J	P	1.1	J	P	
CARBON TETRACHLORIDE	0.47	U		0.47	J	P	0.47	U		0.47	U		
CHLORODIFLUOROMETHANE	1.8	J+	Q	1.7			1.9			5.7	J+	Q	
CHLOROFORM	0.37	U		0.45	J	P	0.37	U		1.3	J	P	
CIS-1,2-DICHLOROETHENE	0.48	U		0.48	U		0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	1.4	J	P	1.4	J	P	1.4	J	P	1.4	J	P	
ETHYLBENZENE	0.59	U		3.4			0.89	J	P	13			
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE	3.3	J	P	3.5	J	P	5.5	J	P	7.1			
NAPHTHALENE	1	U		1	U		1	U		1	U		
TETRACHLOROETHENE	0.54	U		0.54	U		0.54	U		0.54	U		
TOLUENE	2.3	U		120			6.6			130			
TOTAL XYLENES	0.52	U		16			4.5			57			
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U		0.4	U		0.4	U		
TRICHLOROETHENE	4			0.38	U		2			0.65	J	P	
VINYL CHLORIDE	0.37	U		0.37	U		0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14386-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	IA-138-A-26			IA-168-A-26			IA-174-A-26			IA-DUP03-A-26		
	LAB_ID	140-14386-1			140-14386-8			140-14386-3			140-14386-5		
	SAMP_DATE	2/21/2019			2/21/2019			2/21/2019			2/21/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF										IA-018-A-26		
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		0.33	U		0.33	J	P	0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	U		0.2	U		0.2	U		
1,1-DICHLOROETHENE	0.65	J	P	0.28	U		1.2	J	P	1.7			
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		1.2	J	P	0.61	U		0.61	U		
1,2-DICHLOROETHANE	0.38	U		0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		0.64	U		0.64	U		0.64	U		
BENZENE	0.69	J	P	1.1	J	P	0.6	J	P	0.83	J	P	
CARBON TETRACHLORIDE	0.47	U		0.47	U		0.47	U		0.47	U		
CHLORODIFLUOROMETHANE	1.5	J+	Q	2.9			1.2	J	P	1.2	J	P	
CHLOROFORM	0.37	U		0.44	J	P	0.37	U		0.62	J	P	
CIS-1,2-DICHLOROETHENE	0.48	U		0.48	U		0.48	U		0.76	J	P	
DICHLORODIFLUOROMETHANE	1.4	J	P	1.3	J	P	1.4	J	P	1.5	J	P	
ETHYLBENZENE	0.59	U		11			0.59	U		0.59	U		
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE	5.2	J	P	4.7	J	P	3.5	J	P	5	J	P	
NAPHTHALENE	1	U		1	U		1	U		1	U		
TETRACHLOROETHENE	0.54	U		0.54	U		0.54	U		0.54	U		
TOLUENE	2.3	U		110			2.3	U		2.3	U		
TOTAL XYLENES	2.6	J	P	53			0.52	U		0.52	U		
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U		0.4	U		0.4	U		
TRICHLOROETHENE	2.9			0.67	J	P	7			3.5			
VINYL CHLORIDE	0.37	U		0.37	U		0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14386-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	IA-DUP04-A-26			SV-178-MB-3		
	LAB_ID	140-14386-11			140-14386-18		
	SAMP_DATE	2/21/2019			2/21/2019		
	QC_TYPE	FD			NM		
	UNITS	UG/M3			UG/M3		
	PCT_SOLIDS						
	DUP_OF	IA-079-A-26					
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		1	J	P	
1,1-DICHLOROETHENE	0.28	U		0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		0.79	J	P	
1,2-DICHLOROETHANE	0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		0.64	U		
BENZENE	1.1	J	P	0.37	U		
CARBON TETRACHLORIDE	0.47	U		0.47	U		
CHLORODIFLUOROMETHANE	2			1.5			
CHLOROFORM	0.37	U		0.37	U		
CIS-1,2-DICHLOROETHENE	0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	1.4	J	P	2.4			
ETHYLBENZENE	2.2			0.59	U		
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		
METHYLENE CHLORIDE	4.4	J	P	4.1	J	CP	
NAPHTHALENE	1	U		1	U		
TETRACHLOROETHENE	0.54	U		0.54	U		
TOLUENE	56			2.4			
TOTAL XYLENES	10			2.4	J	P	
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U		
TRICHLOROETHENE	0.38	U		0.38	U		
VINYL CHLORIDE	0.37	U		0.37	U		

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-015-A-26 Lab Sample ID: 140-14386-6
 Matrix: Air Lab File ID: RB25P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:04
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 21:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.31	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.98	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.81		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-015-A-26 Lab Sample ID: 140-14386-6
 Matrix: Air Lab File ID: RB25P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:04
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 21:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-018-A-26 Lab Sample ID: 140-14386-4
 Matrix: Air Lab File ID: RB25P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 19:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.30	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.18	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.30	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.44		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.13	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.63		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.57	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-018-A-26 Lab Sample ID: 140-14386-4
 Matrix: Air Lab File ID: RB25P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 19:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.95	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.61	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.70	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.8		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.60	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.87	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.5	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-021-A-26 Lab Sample ID: 140-14386-17
 Matrix: Air Lab File ID: GB26P201.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.99		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.8		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.21		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	22		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.13	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.22	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	8.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-021-A-26 Lab Sample ID: 140-14386-17
 Matrix: Air Lab File ID: GB26P201.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.78	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	0.52	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	7.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	85		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.70	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	39		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-075-A-26 Lab Sample ID: 140-14386-16
 Matrix: Air Lab File ID: RB25P116.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:31
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 05:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.32	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.78		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.5		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.080	J	0.40	0.080
108-88-3	Toluene	92.14	21		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	7.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-075-A-26 Lab Sample ID: 140-14386-16
 Matrix: Air Lab File ID: RB25P116.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:31
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 05:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	6.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.54	J	2.7	0.54
108-88-3	Toluene	92.14	80		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.71	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	32		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-076-A-26 Lab Sample ID: 140-14386-15
 Matrix: Air Lab File ID: RB25P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:27
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.79		0.40	0.075
67-66-3	Chloroform	119.38	0.086	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	2.2		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.4		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.50		0.40	0.080
108-88-3	Toluene	92.14	32		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.11	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.33	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	11		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-076-A-26 Lab Sample ID: 140-14386-15
 Matrix: Air Lab File ID: RB25P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:27
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.8		1.4	0.27
67-66-3	Chloroform	119.38	0.42	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	9.7		1.7	0.59
75-09-2	Methylene Chloride	84.93	8.2		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.4		2.7	0.54
108-88-3	Toluene	92.14	120		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.58	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	49		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-078-A-26 Lab Sample ID: 140-14386-13
 Matrix: Air Lab File ID: RB25P113.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:23
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 02:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.31	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.59		0.40	0.075
67-66-3	Chloroform	119.38	0.10	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.5		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	23		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.079	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	7.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-078-A-26 Lab Sample ID: 140-14386-13
 Matrix: Air Lab File ID: RB25P113.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:23
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 02:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.98	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	0.49	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	6.6		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	86		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.43	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.93	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	32		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-079-A-26 Lab Sample ID: 140-14386-10
 Matrix: Air Lab File ID: RB25P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 00:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	0.088	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.52		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.36	J	0.40	0.080
108-88-3	Toluene	92.14	14		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-079-A-26 Lab Sample ID: 140-14386-10
 Matrix: Air Lab File ID: RB25P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 00:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	0.43	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.4	J	2.7	0.54
108-88-3	Toluene	92.14	54		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-081-A-26 Lab Sample ID: 140-14386-9
 Matrix: Air Lab File ID: RB25P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:12
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 23:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.86	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.53		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	17		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.6		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-081-A-26 Lab Sample ID: 140-14386-9
 Matrix: Air Lab File ID: RB25P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:12
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 23:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.0	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	63		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.66	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-093-A-26 Lab Sample ID: 140-14386-2
 Matrix: Air Lab File ID: RB25P102.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:56
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.51	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.22	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.95	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.74		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-093-A-26 Lab Sample ID: 140-14386-2
 Matrix: Air Lab File ID: RB25P102.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:56
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.68	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.86	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-117-A-26 Lab Sample ID: 140-14386-12
 Matrix: Air Lab File ID: RB25P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:20
 Sample wt/vol: 166(mL) Date Analyzed: 02/26/2019 02:09
 Soil Aliquot Vol: _____ Dilution Factor: 1.66
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.33	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	0.091	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.78		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	32		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-117-A-26 Lab Sample ID: 140-14386-12
 Matrix: Air Lab File ID: RB25P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:20
 Sample wt/vol: 166(mL) Date Analyzed: 02/26/2019 02:09
 Soil Aliquot Vol: _____ Dilution Factor: 1.66
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	0.45	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	120		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.72	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	16		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-118-A-26 Lab Sample ID: 140-14386-7
 Matrix: Air Lab File ID: RB25P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:05
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 22:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.36	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.15	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.38		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-118-A-26 Lab Sample ID: 140-14386-7
 Matrix: Air Lab File ID: RB25P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:05
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 22:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.89	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.81	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-136-A-26 Lab Sample ID: 140-14386-14
 Matrix: Air Lab File ID: RB25P114.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:25
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 03:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6	CI	0.40	0.075
67-66-3	Chloroform	119.38	0.27	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	2.9		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	36		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.12	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.31	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	13		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-136-A-26 Lab Sample ID: 140-14386-14
 Matrix: Air Lab File ID: RB25P114.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:25
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 03:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.7	CI	1.4	0.27
67-66-3	Chloroform	119.38	1.3	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	13		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.1		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	130		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.65	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.5	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	57		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-138-A-26 Lab Sample ID: 140-14386-1
 Matrix: Air Lab File ID: RB25P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:54
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.43	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.16	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.54		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.59	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-138-A-26 Lab Sample ID: 140-14386-1
 Matrix: Air Lab File ID: RB25P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:54
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.69	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.65	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-168-A-26 Lab Sample ID: 140-14386-8
 Matrix: Air Lab File ID: RB25P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:28
 Sample wt/vol: 157(mL) Date Analyzed: 02/25/2019 22:53
 Soil Aliquot Vol: _____ Dilution Factor: 1.57
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.83		0.40	0.075
67-66-3	Chloroform	119.38	0.090	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	2.5		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	29		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.12	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.25	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	12		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-168-A-26 Lab Sample ID: 140-14386-8
 Matrix: Air Lab File ID: RB25P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:28
 Sample wt/vol: 157(mL) Date Analyzed: 02/25/2019 22:53
 Soil Aliquot Vol: _____ Dilution Factor: 1.57
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.9		1.4	0.27
67-66-3	Chloroform	119.38	0.44	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	11		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	110		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.67	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.2	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	53		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-174-A-26 Lab Sample ID: 140-14386-3
 Matrix: Air Lab File ID: RB25P103.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 18:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.35	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.31	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.060	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.3		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-174-A-26 Lab Sample ID: 140-14386-3
 Matrix: Air Lab File ID: RB25P103.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 18:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.2	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.33	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	7.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-DUP03-A-26 Lab Sample ID: 140-14386-5
 Matrix: Air Lab File ID: RB25P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:26
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.26	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.19	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.31	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.44		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.65		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-DUP03-A-26 Lab Sample ID: 140-14386-5
 Matrix: Air Lab File ID: RB25P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:26
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.83	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	0.62	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.76	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.7		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-DUP04-A-26 Lab Sample ID: 140-14386-11
 Matrix: Air Lab File ID: RB25P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 01:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.57		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.50		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	15		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-DUP04-A-26 Lab Sample ID: 140-14386-11
 Matrix: Air Lab File ID: RB25P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 01:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.2		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	56		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	10		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: SV-178-MB-3 Lab Sample ID: 140-14386-18
 Matrix: Air Lab File ID: GB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:58
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.25	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.63		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.56	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: SV-178-MB-3 Lab Sample ID: 140-14386-18
 Matrix: Air Lab File ID: GB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:58
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.0	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.79	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

Appendix C

Support Documentation

Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-14386-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC listed canister asset number as 12276, but it should be 11276.

Air - GC/MS VOA - Method TO-15LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air - MRC

TestAmerica Job ID: 140-14386-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14386-1	IA-138-A-26	Air	02/21/19 16:54	02/23/19 10:10
140-14386-2	IA-093-A-26	Air	02/21/19 16:56	02/23/19 10:10
140-14386-3	IA-174-A-26	Air	02/21/19 16:55	02/23/19 10:10
140-14386-4	IA-018-A-26	Air	02/21/19 16:57	02/23/19 10:10
140-14386-5	IA-DUP03-A-26	Air	02/21/19 16:57	02/23/19 10:10
140-14386-6	IA-015-A-26	Air	02/21/19 17:04	02/23/19 10:10
140-14386-7	IA-118-A-26	Air	02/21/19 17:05	02/23/19 10:10
140-14386-8	IA-168-A-26	Air	02/21/19 17:28	02/23/19 10:10
140-14386-9	IA-081-A-26	Air	02/21/19 17:12	02/23/19 10:10
140-14386-10	IA-079-A-26	Air	02/21/19 17:18	02/23/19 10:10
140-14386-11	IA-DUP04-A-26	Air	02/21/19 17:18	02/23/19 10:10
140-14386-12	IA-117-A-26	Air	02/21/19 17:20	02/23/19 10:10
140-14386-13	IA-078-A-26	Air	02/21/19 17:23	02/23/19 10:10
140-14386-14	IA-136-A-26	Air	02/21/19 17:25	02/23/19 10:10
140-14386-15	IA-076-A-26	Air	02/21/19 17:27	02/23/19 10:10
140-14386-16	IA-075-A-26	Air	02/21/19 17:31	02/23/19 10:10
140-14386-17	IA-021-A-26	Air	02/21/19 17:34	02/23/19 10:10
140-14386-18	SV-178-MB-3	Air	02/21/19 10:58	02/23/19 10:10


TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Larson, Josh Mullis & Walt Pryor</u>		1 of 16 COCs													
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																	
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																	
City/State/Zip: <u>Germentown, MD, 20871</u>		TAL Contact: <u>Terry Walker Washmend</u>																	
Phone: <u>301-528-552</u>																			
FAX:																			
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																	
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																	
PO# <u>112FC08388</u>		Rush (Specify)																	
				Baltimore #201															
Sample Identification		Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
<u>IA-138-A-26</u>		<u>2/21/19</u>	<u>0848</u>	<u>1654</u>	<u>-26</u>	<u>0</u>	<u>7299</u>	<u>11835</u>	<input checked="" type="checkbox"/>										
<u>IA-093-A-26</u>		<u>2/21/19</u>	<u>0851</u>	<u>1656</u>	<u>-30</u>	<u>-3</u>	<u>4588</u>	<u>11277</u>	<input checked="" type="checkbox"/>										
<u>IA-174-A-26</u>		<u>2/21/19</u>	<u>0850</u>	<u>1655</u>	<u>-30</u>	<u>-5</u>	<u>10033</u>	<u>09741</u>	<input checked="" type="checkbox"/>										
<u>IA-018-A-26</u>		<u>2/21/19</u>	<u>0856</u>	<u>1657</u>	<u>-30</u>	<u>-2</u>	<u>11261</u>	<u>11669</u>	<input checked="" type="checkbox"/>										
<u>IA-DUP03-A-26</u>		<u>2/21/19</u>	<u>0856</u>	<u>1657</u>	<u>-30</u>	<u>0</u>	<u>11499</u>	<u>10841</u>	<input checked="" type="checkbox"/>										
<u>IA-015-A-26</u>		<u>2/21/19</u>	<u>0904</u>	<u>1704</u>	<u>-29</u>	<u>-4</u>	<u>09846</u>	<u>11657</u>	<input checked="" type="checkbox"/>										
Sampled by: <u>Sophia Larson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)												CUSTODY SEALS INTACT RECEIVED AMBIENT RT 20.0 /GT20.0 BAD 2-23-19 8 DAYS FEEL# 77454111 7893m SP0					
		Interior	Ambient																
		Start																	
		Stop																	
		Ints																	
		Start																	
		Stop																	
<div style="text-align: center;">  140-14386 Chain of Custody </div>																			
Special Instructions/QC Requirements & Comments:																			
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:															
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>															
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19 1700</u>		Received by: <u>[Signature]</u>															
Lab Use Only		Shipper Name:		Opened by:		Conditions:													

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Pryor</u>		2 of 16 COCs													
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																	
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																	
City/State/Zip: <u>Germentown, MD, 20877</u>		TAL Contact: <u>Terry Walker Washburn</u>																	
Phone: <u>301-528-552</u>																			
FAX:																			
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																	
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																	
PO# <u>1121C08388</u>		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
IA-118-A-26	2/21/19	0905	1705	-29	-4	11929	11518	✓											
IA-168-A-26	2/21/19	0928	1728	-30	-7	7605	10796	✓											
IA-081-A-26	2/21/19	0912	1712	-22	0	8730	09823	✓											
IA-079-A-26	2/21/19	0918	1718	-29	-1	10593	11641	✓											
IA-DUPO4-A-26	2/21/19	0918	1718	-30	-5	8727	11107	✓											
IA-117-A-26	2/21/19	0920	1720	NA	-4	8830	09788	✓											
Sampled by: <u>Sophia Lawson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)												Baltimore #201					
		Interior	Ambient																
		Start																	
		Stop																	
		Pressure (Inches of Hg)																	
		Interior	Ambient																
Start																			
Stop																			
Special Instructions/QC Requirements & Comments: <u>Sample IA-117-A-26 regulator cap arrived broken, canister vacuum not able to measure pressure</u>																			
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:															
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>															
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19 1700</u>		Received by: <u>[Signature]</u>															
Lab Use Only		Shipped Name		Opened By		Condition													

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor		3 of 16 COCs	
Company: Tetra Tech		Phone: 301-528-3000					
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage					
City/State/Zip: Germentown, MD, 20877		TAL Contact: Terry Walker Washburn					
Phone: 301-528-552							
FAX:							
Project Name: MRC Indoor Air		Analysis Turnaround Time					
Site/location: MRC		Standard (Specify) X					
PO# 112IC08388		Rush (Specify)					

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
IA-078-A-26	2/21/19	0923	1723	-19	4	8786	10922	✓											
IA-136-A-26	2/21/19	0925	1725	-26	2	11524	11578	✓											
IA-076-A-26	2/21/19	0927	1727	-28	0	10880	09865	✓											
IA-075-A-26	2/21/19	0931	1731	-30	-5	8690	11809	✓											
IA-021-A-26	2/21/19	0934	1734	-30	-5	11568	12276	✓											
SV-178-MB-3	2/21/19	0948	1058	-30	0	11054	11163	✓											

Sampled by: Sophia Lawson, Josh Mullis, Walt Pryor	Temperature (Fahrenheit)	
	Interior	Ambient
	Start	
	Stop	
	Pressure (Inches of Hg)	
	Interior	Ambient
	Start	
	Stop	

Baltimore #201

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: [Signature]	Date/Time: 2/22/19	Received by: [Signature]
Relinquished by: [Signature]	Date/Time: 2/22/19 1700	Received by: [Signature]

Lab Use Only: Shipper Name: _____ Opened by: _____ Condition: _____

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	7. IA-021-A:26. COC HIST CALISTER ASSET AS 12276, SHOULD BE 11276
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID : _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input checked="" type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only)	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/	<input type="checkbox"/> Residual Chlorine	
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	

Labeling Verified by: _____ Date: _____

pH test strip lot number: _____

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative: _____	
Lot Number: _____	
Exp Date: _____	
Analyst: _____	
Date: _____	
Time: _____	

Project #: _____ PM Instructions: _____

Sample Receiving Associate: *[Signature]* Date: 2-25-19

FIELD DUPLICATE PRECISION

ORIGINAL ID	DUP ID	FRACTION	ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >RL	DUPLICATE SAMPLE CONC >RL	DIFFERENCE >2XRL
IA-018-A-26	IA-DUP03-A-26	OV-M3	1,1-DICHLOROETHENE	1.8	1.7	1.6	5.71	FALSE	TRUE	TRUE	FALSE
IA-018-A-26	IA-DUP03-A-26	OV-M3	BENZENE	0.95 J	0.83 J	1.3	13.48	FALSE	FALSE	FALSE	FALSE
IA-018-A-26	IA-DUP03-A-26	OV-M3	CHLORODIFLUOROMETHANE	1.3 J	1.2 J	1.4	8.00	FALSE	FALSE	FALSE	FALSE
IA-018-A-26	IA-DUP03-A-26	OV-M3	CHLOROFORM	0.61 J	0.62 J	2	1.63	FALSE	FALSE	FALSE	FALSE
IA-018-A-26	IA-DUP03-A-26	OV-M3	CIS-1,2-DICHLOROETHENE	0.7 J	0.76 J	1.6	8.22	FALSE	FALSE	FALSE	FALSE
IA-018-A-26	IA-DUP03-A-26	OV-M3	DICHLORODIFLUOROMETHANE	1.5 J	1.5 J	2	0.00	FALSE	FALSE	FALSE	FALSE
IA-018-A-26	IA-DUP03-A-26	OV-M3	ETHYLBENZENE	0.6 J	0.59 U	1.7	1.68	FALSE	FALSE	FALSE	FALSE
IA-018-A-26	IA-DUP03-A-26	OV-M3	METHYLENE CHLORIDE	5.9 J	5 J	6.9	16.51	FALSE	FALSE	FALSE	FALSE
IA-018-A-26	IA-DUP03-A-26	OV-M3	TETRACHLOROETHENE	0.87 J	0.54 U	2.7	46.81	FALSE	FALSE	FALSE	FALSE
IA-018-A-26	IA-DUP03-A-26	OV-M3	TOTAL XYLENES	2.5 J	0.52 U	3.5	131.13	TRUE	FALSE	FALSE	FALSE
IA-018-A-26	IA-DUP03-A-26	OV-M3	TRICHLOROETHENE	3.4	3.5	1.1	2.90	FALSE	TRUE	TRUE	FALSE

FIELD DUPLICATE PRECISION

ORIGINAL ID	DUP ID	FRACTION	ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >RL	DUPLICATE SAMPLE CONC >RL	DIFFERENCE >2XRL
IA-079-A-26	IA-DUP04-A-26	OV-M3	BENZENE	1.1 J	1.1 J	1.3	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-26	IA-DUP04-A-26	OV-M3	CARBON TETRACHLORIDE	0.48 J	0.47 U	2.5	2.11	FALSE	FALSE	FALSE	FALSE
IA-079-A-26	IA-DUP04-A-26	OV-M3	CHLORODIFLUOROMETHANE	1.9	2	1.4	5.13	FALSE	TRUE	TRUE	FALSE
IA-079-A-26	IA-DUP04-A-26	OV-M3	CHLOROFORM	0.43 J	0.37 U	2	15.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-26	IA-DUP04-A-26	OV-M3	DICHLORODIFLUOROMETHANE	1.4 J	1.4 J	2	0.00	FALSE	FALSE	FALSE	FALSE
IA-079-A-26	IA-DUP04-A-26	OV-M3	ETHYLBENZENE	2.3	2.2	1.7	4.44	FALSE	TRUE	TRUE	FALSE
IA-079-A-26	IA-DUP04-A-26	OV-M3	METHYLENE CHLORIDE	6.3 J	4.4 J	6.9	35.51	FALSE	FALSE	FALSE	FALSE
IA-079-A-26	IA-DUP04-A-26	OV-M3	TETRACHLOROETHENE	2.4 J	0.54 U	2.7	126.53	TRUE	FALSE	FALSE	FALSE
IA-079-A-26	IA-DUP04-A-26	OV-M3	TOLUENE	54	56	2.3	3.64	FALSE	TRUE	TRUE	FALSE
IA-079-A-26	IA-DUP04-A-26	OV-M3	TOTAL XYLENES	11	10	3.5	9.52	FALSE	TRUE	TRUE	FALSE

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
IA-138-A-26	140-14386-1	100
IA-093-A-26	140-14386-2	102
IA-174-A-26	140-14386-3	102
IA-018-A-26	140-14386-4	100
IA-DUP03-A-26	140-14386-5	100
IA-015-A-26	140-14386-6	102
IA-118-A-26	140-14386-7	101
IA-168-A-26	140-14386-8	101
IA-081-A-26	140-14386-9	102
IA-079-A-26	140-14386-10	101
IA-DUP04-A-26	140-14386-11	103
IA-117-A-26	140-14386-12	103
IA-078-A-26	140-14386-13	100
IA-136-A-26	140-14386-14	100
IA-076-A-26	140-14386-15	100
IA-075-A-26	140-14386-16	100
IA-021-A-26	140-14386-17	98
SV-178-MB-3	140-14386-18	97
	MB 140-27908/5	103
	MB 140-27931/4	96
	LCS 140-27908/1002	107
	LCS 140-27931/1002	100

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: G500BB26.D Lab Sample ID: MB 140-27931/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/26/2019 12:56
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27931/1002	GCCVB26-LCS .d	02/26/2019 11:35
IA-021-A-26	140-14386-17	GB26P201.D	02/26/2019 13:42
SV-178-MB-3	140-14386-18	GB26P101.D	02/26/2019 15:56

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB26-LCS.d
 Lab ID: LCS 140-27931/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.22	111	70-130	
Chlorodifluoromethane	2.00	2.02	101	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	2.09	104	70-130	
Dichlorodifluoromethane	2.00	2.06	103	60-140	
1,1-Dichloroethane	2.00	2.05	103	70-130	
1,2-Dichloroethane	2.00	2.00	100	70-130	
1,1-Dichloroethene	2.00	2.14	107	70-130	
Ethylbenzene	2.00	2.03	101	70-130	
Methylene Chloride	2.00	1.81	90	70-130	
Methyl tert-butyl ether	2.00	1.97	99	60-140	
Naphthalene	2.00	1.94	97	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	2.15	108	70-130	
1,2,4-Trichlorobenzene	2.00	1.83	92	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	2.11	105	70-130	
Trichloroethene	2.00	2.09	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.22	111	70-130	
1,2,4-Trimethylbenzene	2.00	1.99	99	70-130	
1,3,5-Trimethylbenzene	2.00	1.97	98	70-130	
Vinyl chloride	2.00	1.97	98	70-130	
Xylenes, Total	6.00	6.18	103	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: R500BB25.D Lab Sample ID: MB 140-27908/5
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MR Date Analyzed: 02/25/2019 12:52
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27908/1002	RCCVB25-LCS .d	02/25/2019 10:00
IA-138-A-26	140-14386-1	RB25P101.D	02/25/2019 17:10
IA-093-A-26	140-14386-2	RB25P102.D	02/25/2019 17:59
IA-174-A-26	140-14386-3	RB25P103.D	02/25/2019 18:48
IA-018-A-26	140-14386-4	RB25P104.D	02/25/2019 19:37
IA-DUP03-A-26	140-14386-5	RB25P105.D	02/25/2019 20:26
IA-015-A-26	140-14386-6	RB25P106.D	02/25/2019 21:14
IA-118-A-26	140-14386-7	RB25P107.D	02/25/2019 22:03
IA-168-A-26	140-14386-8	RB25P108.D	02/25/2019 22:53
IA-081-A-26	140-14386-9	RB25P109.D	02/25/2019 23:42
IA-079-A-26	140-14386-10	RB25P110.D	02/26/2019 00:31
IA-DUP04-A-26	140-14386-11	RB25P111.D	02/26/2019 01:20
IA-117-A-26	140-14386-12	RB25P112.D	02/26/2019 02:09
IA-078-A-26	140-14386-13	RB25P113.D	02/26/2019 02:58
IA-136-A-26	140-14386-14	RB25P114.D	02/26/2019 03:47
IA-076-A-26	140-14386-15	RB25P115.D	02/26/2019 04:36
IA-075-A-26	140-14386-16	RB25P116.D	02/26/2019 05:25

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27908/5
 Matrix: Air Lab File ID: R500BB25.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 12:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27908/5
 Matrix: Air Lab File ID: R500BB25.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 12:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: RCCVB25-LCS.d
 Lab ID: LCS 140-27908/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.86	93	70-130	
Carbon tetrachloride	2.00	2.00	100	70-130	
Chlorodifluoromethane	2.00	1.82	91	60-140	
Chloroform	2.00	1.88	94	70-130	
cis-1,2-Dichloroethene	2.00	1.88	94	70-130	
Dichlorodifluoromethane	2.00	1.87	93	60-140	
1,1-Dichloroethane	2.00	1.87	94	70-130	
1,2-Dichloroethane	2.00	1.85	92	70-130	
1,1-Dichloroethene	2.00	1.86	93	70-130	
Ethylbenzene	2.00	2.06	103	70-130	
Methylene Chloride	2.00	1.66	83	70-130	
Methyl tert-butyl ether	2.00	1.93	97	60-140	
Naphthalene	2.00	1.68	84	60-140	
Tetrachloroethene	2.00	2.01	101	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	1.85	92	70-130	
1,2,4-Trichlorobenzene	2.00	1.86	93	60-140	
1,1,1-Trichloroethane	2.00	1.88	94	70-130	
1,1,2-Trichloroethane	2.00	1.99	99	70-130	
Trichloroethene	2.00	1.89	95	70-130	
1,2,3-Trimethylbenzene	2.00	2.08	104	70-130	
1,2,4-Trimethylbenzene	2.00	2.11	105	70-130	
1,3,5-Trimethylbenzene	2.00	2.03	101	70-130	
Vinyl chloride	2.00	2.19	110	70-130	
Xylenes, Total	6.00	6.41	107	70-130	

Column to be used to flag recovery and RPD values

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: GA11BLK1.D BFB Injection Date: 01/11/2019
 Instrument ID: MG BFB Injection Time: 12:24
 Analysis Batch No.: 26755

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.2	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	71.2	
175	5.0 - 9.0 % of mass 174	5.1	(7.1) 1
176	95.0 - 101.0 % of mass 174	70.7	(99.3) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-26755/2	GA11IC09.D	01/11/2019	13:08
	IC 140-26755/6	GA11IC10.D	01/11/2019	14:35
	IC 140-26755/9	GA11IC01.D	01/11/2019	16:46
	IC 140-26755/10	GA11IC02.D	01/11/2019	17:29
	IC 140-26755/11	GA11IC03.D	01/11/2019	18:12
	IC 140-26755/12	GA11IC04.D	01/11/2019	18:56
	IC 140-26755/13	GA11IC05.D	01/11/2019	19:40
	IC 140-26755/14	GA11IC06.D	01/11/2019	20:23
	ICIS 140-26755/15	GA11IC07.D	01/11/2019	21:07
	IC 140-26755/16	GA11IC08.D	01/11/2019	21:51
	ICV 140-26755/18	GA11ICV.D	01/11/2019	23:17

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.9523	2.7653	2.6769	Ave		2.6204			9.0		30.0				
	2.4796	2.3672	2.3873	2.9026	2.4316												
Propene	+++++	+++++	+++++	1.8011	1.4915	Ave		1.4631			12.5		30.0				
	1.4104	1.3267	1.3362	1.5897	1.2862												
Dichlorodifluoromethane	+++++	+++++	4.4505	4.4326	4.2183	Ave		4.2347			6.5		30.0				
	4.0515	3.9190	3.9550	4.7099	4.1407												
Chloromethane	+++++	+++++	+++++	0.5625	0.4891	Ave		0.4649			11.5		30.0				
	0.4445	0.4230	0.4254	0.4946	0.4152												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	2.6446	2.5541	2.4472	Ave		2.4745			4.4		30.0				
	2.3633	2.3423	2.3822	2.5578	2.5047												
Vinyl chloride	1.9626	1.7167	1.7320	1.6531	1.5626	Ave		1.6109			10.3		30.0				
	1.4785	1.4339	1.4573	1.6387	1.4732												
Butane	+++++	+++++	+++++	3.0743	2.8454	Ave		2.7124			8.2		30.0				
	2.6258	2.4782	2.5038	2.8679	2.5911												
1,3-Butadiene	+++++	+++++	+++++	1.2733	1.2439	Ave		1.2450			5.0		30.0				
	1.2041	1.1760	1.2078	1.3654	1.2448												
Bromomethane	+++++	+++++	1.6548	1.3996	1.3549	Ave		1.3916			8.4		30.0				
	1.3078	1.2877	1.3168	1.4117	1.3995												
Chloroethane	+++++	+++++	0.8627	0.8037	0.7796	Ave		0.7761			6.4		30.0				
	0.7377	0.7148	0.7259	0.8118	0.7729												
Ethanol	+++++	+++++	+++++	0.8657	0.7124	Ave		0.7042			15.6		30.0				
	0.5620	0.7386	0.5593	0.7653	0.7259												
Vinyl bromide	+++++	+++++	1.3835	1.3207	1.2830	Ave		1.2899			4.2		30.0				
	1.2366	1.2145	1.2610	1.2880	1.3321												
2-Methylbutane	+++++	+++++	+++++	2.0547	2.0422	Ave		1.9469			4.4		30.0				
	1.9302	1.8374	1.8471	1.9762	1.9406												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.9949	4.3785 3.8769	4.2718 3.9322	4.1461 4.3687	4.1452 4.2564	Ave		4.1523			4.4		30.0				
Acrolein	++++ 0.3700	++++ 0.3339	++++ 0.3264	++++ 0.4058	0.3535 0.3546	Ave		0.3574			7.9		30.0				
Acetonitrile	++++ 0.5820	++++ 0.5806	++++ 0.5032	0.4860 0.6106	0.5491 0.5907	Ave		0.5574			8.4		30.0				
Acetone	++++ 0.6952	++++ 0.6071	++++ 0.4923	++++ 0.5713	0.7119 0.5299	Ave		0.6013			14.7		30.0				
Pentane	++++ 0.2650	++++ 0.2567	++++ 0.2534	++++ 0.2741	0.2798 0.2630	Ave		0.2653			3.8		30.0				
Isopropyl alcohol	++++ 1.5842	++++ 1.6884	++++ 1.2216	++++ 1.5921	1.7192 1.5978	Ave		1.6033			11.8		30.0				
Ethyl ether	++++ 1.8397	++++ 1.7705	++++ 1.4542	++++ 1.7361	1.9088 1.6409	Ave		1.7250			9.3		30.0				
1,1-Dichloroethene	1.5300 1.3997	1.3691 1.3378	1.5011 1.4037	1.3769 1.3902	1.4054 1.4041	Ave		1.4118			4.2		30.0				
Acrylonitrile	++++ 0.9861	++++ 0.9774	1.0366 0.8664	0.9476 1.0406	0.9217 1.0215	Ave		0.9747			6.2		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.0568	3.1787 2.9429	3.2903 2.9549	3.0618 2.9993	3.1454 2.9101	Ave		3.0600			4.1		30.0				
tert-Butyl alcohol	++++ 2.2526	++++ 2.2071	++++ 1.7152	2.3096 2.1050	2.4776 2.3062	Ave		2.1962			11.0		30.0				
Methylene Chloride	++++ 1.5026	++++ 1.3595	++++ 1.3036	2.5891 1.2966	1.8042 ++++	Ave		1.6426			30.5 *		30.0				
3-Chloropropene	++++ 1.6369	++++ 1.6110	2.0104 1.5866	1.9432 1.7783	1.7193 1.7236	Ave		1.7512			8.8		30.0				
Carbon disulfide	++++ 4.2983	++++ 4.0822	4.5901 4.1194	4.3819 4.1977	4.3526 4.2529	Ave		4.2844			3.8		30.0				
trans-1,2-Dichloroethene	++++ 1.4444	1.3848 1.3913	1.4554 1.4201	1.3845 1.4125	1.4335 1.3979	Ave		1.4138			1.9		30.0				
2-Methylpentane	++++ 4.0309	++++ 3.8853	4.3761 3.8303	4.1901 4.0757	4.2199 3.7514	Ave		4.0450			5.3		30.0				
Methyl tert-butyl ether	++++ 4.1354	3.5946 4.0399	4.2254 3.4444	3.8763 4.0172	4.1168 3.9425	Ave		3.9325			6.6		30.0				
1,1-Dichloroethane	3.1037 2.8577	3.0105 2.8187	3.0470 2.6559	2.9034 2.9155	2.9080 2.8375	Ave		2.9058			4.4		30.0				
Vinyl acetate	++++ 3.9854	++++ 4.2048	4.0675 3.5720	3.8850 4.4145	3.9427 4.2013	Ave		4.0342			6.3		30.0				
Hexane	++++ 1.3242	++++ 1.2816	++++ 1.3713	1.3526 1.3074	1.3260 1.2151	Ave		1.3036			4.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++	++++	++++	0.6854	0.6772	Ave		0.6347			8.5	30.0					
	0.6784	0.6294	0.5376	0.6386	0.5958												
cis-1,2-Dichloroethene	1.5310	1.3850	1.4658	1.4361	1.4213	Ave		1.4465			2.9	30.0					
	1.4515	1.4377	1.3972	1.4588	1.4806												
Ethyl acetate	++++	++++	3.4159	3.2335	3.3337	Ave		3.3124			6.9	30.0					
	3.4792	3.3231	2.8120	3.5743	3.3271												
Chloroform	3.5969	3.3560	3.4112	3.4074	3.2824	Ave		3.3444			4.2	30.0					
	3.2821	3.2211	3.0680	3.4218	3.3970												
Tetrahydrofuran	++++	++++	++++	1.7940	1.8215	Ave		1.7724			6.6	30.0					
	1.8641	1.7946	1.5246	1.8635	1.7446												
1,1,1-Trichloroethane	3.8810	3.4765	3.6941	3.5977	3.6119	Ave		3.6203			4.2	30.0					
	3.5723	3.5364	3.3475	3.7388	3.7470												
1,2-Dichloroethane	0.3890	0.3740	0.4205	0.3853	0.3989	Ave		0.3910			6.7	30.0					
	0.3918	0.3624	0.3439	0.4219	0.4228												
Cyclohexane	++++	++++	++++	0.1383	0.1426	Ave		0.1314			6.9	30.0					
	0.1391	0.1224	0.1193	0.1325	0.1258												
Benzene	++++	0.7122	0.8006	0.7160	0.7636	Ave		0.7153			7.0	30.0					
	0.7488	0.6697	0.6393	0.7124	0.6753												
Carbon tetrachloride	0.5647	0.5298	0.5813	0.5547	0.6331	Ave		0.5933			8.0	30.0					
	0.6279	0.5625	0.5603	0.6718	0.6470												
1-Butanol	++++	++++	++++	0.0897	0.1022	Ave		0.0896			13.7	30.0					
	0.1010	0.0823	0.0665	0.0902	0.0950												
2,3-Dimethylpentane	++++	++++	0.2016	0.1866	0.2067	Ave		0.1886			7.0	30.0					
	0.1994	0.1776	0.1681	0.1880	0.1811												
Thiophene	++++	++++	0.4419	0.4095	0.4328	Ave		0.4156			5.4	30.0					
	0.4205	0.3890	0.3765	0.4241	0.4306												
2,2,4-Trimethylpentane	1.4853	1.4111	1.5290	1.4173	1.5323	Ave		1.4009			8.1	30.0					
	1.4628	1.2640	1.1785	1.3863	1.3426												
Heptane	++++	++++	0.3221	0.2848	0.3010	Ave		0.2875			7.7	30.0					
	0.2942	0.2637	0.2507	0.2927	0.2912												
1,2-Dichloropropane	++++	0.2947	0.3066	0.2799	0.2948	Ave		0.2813			7.5	30.0					
	0.2869	0.2617	0.2359	0.2893	0.2819												
Trichloroethene	0.3496	0.3229	0.3354	0.3064	0.3383	Ave		0.3257			5.2	30.0					
	0.3271	0.3039	0.3006	0.3304	0.3426												
Dibromomethane	++++	++++	++++	0.3027	0.3082	Ave		0.2963			7.9	30.0					
	0.2897	0.2688	0.2632	0.3189	0.3227												
Bromodichloromethane	++++	++++	0.5688	0.5299	0.5916	Ave		0.5843			8.8	30.0					
	0.5840	0.5507	0.5314	0.6523	0.6656												
1,4-Dioxane	++++	++++	++++	0.0947	0.0887	Ave		0.0832			17.3	30.0					
	0.0619	0.0891	0.0629	0.0903	0.0946												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3918	++++ 0.3473	++++ 0.2972	0.3014 0.4093	0.3703 0.3989	Ave		0.3595			12.7		30.0				
Methylcyclohexane	0.4845 0.5152	0.4926 0.4533	0.5068 0.4304	0.4870 0.4877	0.5327 0.5063	Ave		0.4896			6.1		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.6350	++++ 0.5092	0.5796 0.3308	0.5597 0.5890	0.6524 0.6484	Ave		0.5630			18.8		30.0				
cis-1,3-Dichloropropene	++++ 0.4479	0.3952 0.4121	0.4552 0.3828	0.4166 0.4613	0.4382 0.4415	Ave		0.4279			6.4		30.0				
trans-1,3-Dichloropropene	++++ 0.4450	0.3978 0.4156	0.4398 0.3772	0.4049 0.4673	0.4521 0.4806	Ave		0.4311			8.0		30.0				
Toluene	0.8893 0.9181	0.8808 0.8443	0.9072 0.7540	0.8795 0.8738	0.9309 0.9230	Ave		0.8801			5.9		30.0				
1,1,2-Trichloroethane	0.2596 0.2870	0.2566 0.2535	0.2815 0.2299	0.2715 0.2735	0.2904 0.2819	Ave		0.2685			7.0		30.0				
2-Hexanone	++++ 0.3129	++++ 0.2311	0.2486 0.1601	0.2653 0.2620	0.3155 0.3172	Ave		0.2641			20.2		30.0				
Octane	++++ 0.3331	++++ 0.2969	0.3166 0.2807	0.3142 0.3116	0.3533 0.3257	Ave		0.3165			7.0		30.0				
C8 Range	++++ 3.2900	++++ 2.9406	++++ 2.7321	3.2543 3.2050	3.4583 3.2302	Ave		3.1586			7.7		30.0				
Dibromochloromethane	++++ 0.5589	++++ 0.5327	0.4753 0.5204	0.4633 0.6101	0.5345 0.6613	Ave		0.5446			12.1		30.0				
1,2-Dibromoethane (EDB)	++++ 0.4879	++++ 0.4537	0.4324 0.4227	0.4409 0.4933	0.4776 0.5168	Ave		0.4656			7.1		30.0				
Tetrachloroethene	0.3340 0.3413	0.3265 0.3106	0.3184 0.2978	0.3299 0.3362	0.3500 0.3575	Ave		0.3302			5.4		30.0				
Chlorobenzene	0.6503 0.7257	0.6533 0.6547	0.7038 0.5918	0.6891 0.6804	0.7584 0.7332	Ave		0.6841			7.2		30.0				
Ethylbenzene	++++ 1.2841	1.1605 1.1457	1.1820 0.9886	1.2041 1.2050	1.3132 1.2806	Ave		1.1960			8.1		30.0				
m-Xylene & p-Xylene	0.7852 1.0069	0.8464 0.8920	0.9631 0.7597	0.9388 0.9364	1.0264 0.9927	Ave		0.9148			10.1		30.0				
Nonane	++++ 0.7074	0.6367 0.6181	0.6731 0.5580	0.6713 0.6403	0.7319 0.6196	Ave		0.6507			8.0		30.0				
Bromoform	++++ 0.5150	++++ 0.5097	0.3874 0.4824	0.3783 0.6069	0.4530 ++++	Ave		0.4761			16.7		30.0				
Styrene	++++ 0.6772	++++ 0.6274	0.5417 0.5521	0.5440 0.6889	0.6499 0.7776	Ave		0.6323			13.2		30.0				
o-Xylene	++++ 1.0316	0.8434 0.9312	0.9762 0.7934	0.9959 0.9762	1.0612 1.0727	Ave		0.9646			9.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++ 0.6943	++++ 0.6225	0.6477 0.5392	0.6105 0.6980	0.7079 0.6623	Ave		0.6478			8.7		30.0				
1,2,3-Trichloropropane	++++ 0.2201	++++ 0.1963	0.2117 0.1718	0.1933 0.2253	0.2181 0.2233	Ave		0.2075			9.0		30.0				
Isopropylbenzene	++++ 1.3750	1.2061 1.2349	1.2881 1.0540	1.2705 1.3875	1.3916 1.3659	Ave		1.2860			8.6		30.0				
Propylbenzene	++++ 0.3714	++++ 0.3352	0.3426 0.2878	0.3159 0.3755	0.3762 0.3762	Ave		0.3476			9.6		30.0				
2-Chlorotoluene	++++ 0.3404	0.3055 0.2960	0.3209 0.2606	0.3117 0.3372	0.3448 0.3406	Ave		0.3175			8.7		30.0				
4-Ethyltoluene	++++ 1.3518	++++ 1.2430	1.2707 1.0593	1.1808 1.3853	1.3899 1.3849	Ave		1.2832			9.3		30.0				
1,3,5-Trimethylbenzene	++++ 0.5322	++++ 0.4840	0.4931 0.4140	0.4624 0.5337	0.5289 0.5468	Ave		0.4994			9.1		30.0				
Alpha Methyl Styrene	++++ 0.5256	++++ 0.4877	++++ 0.4370	++++ 0.6086	0.3906 0.6006	Ave		0.5043			16.0		30.0				
Decane	++++ 0.8778	0.7603 0.7515	0.8322 0.6337	0.8484 0.8180	0.9143 0.7472	Ave		0.7982			10.6		30.0				
tert-Butylbenzene	++++ 1.2040	++++ 1.0655	1.0703 0.8921	1.0556 1.2542	1.1543 1.2176	Ave		1.1142			10.6		30.0				
1,2,4-Trimethylbenzene	++++ 1.1975	++++ 1.0389	1.0671 0.8751	1.0434 1.2267	1.1402 1.1768	Ave		1.0957			10.4		30.0				
sec-Butylbenzene	++++ 1.7209	++++ 1.4915	1.5212 1.2789	1.5236 1.7227	1.6717 1.6181	Ave		1.5686			9.5		30.0				
1,3-Dichlorobenzene	0.6490 0.7671	0.6444 0.6846	0.6738 0.6125	0.6739 0.8458	0.7415 0.8676	Ave		0.7160			12.1		30.0				
Benzyl chloride	++++ 1.0629	++++ 0.9436	0.8534 0.8465	0.8353 1.1447	0.9958 1.1273	Ave		0.9762			13.0		30.0				
1,4-Dichlorobenzene	0.7017 0.7787	0.6870 0.6945	0.6938 0.6166	0.6879 0.8577	0.7429 0.8826	Ave		0.7344			11.3		30.0				
4-Isopropyltoluene	++++ 1.3919	++++ 1.1997	1.1350 1.0411	1.1617 1.4207	1.3168 1.3719	Ave		1.2548			11.1		30.0				
1,2,3-Trimethylbenzene	0.7568 1.1870	0.8539 1.0454	1.0085 0.9035	1.0349 ++++	1.1364 ++++	Ave		0.9908			14.6		30.0				
Indane	++++ 1.0760	++++ 0.9392	0.9630 0.8123	0.9316 1.1012	1.0002 1.0990	Ave		0.9903			10.1		30.0				
1,2-Dichlorobenzene	++++ 0.7440	++++ 0.6621	0.6671 0.5878	0.6607 0.8263	0.7087 0.8754	Ave		0.7165			13.3		30.0				
Butylbenzene	++++ 1.4543	++++ 1.1174	1.2268 1.0412	1.2695 1.4208	1.3939 1.3499	Ave		1.2768			11.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.9217	++++ 0.8188	0.7590 0.7206	0.7567 0.9791	0.8625 0.9878	Ave		0.8508			12.2		30.0				
Undecane	++++ 0.9412	0.7138 0.7639	0.7854 0.6439	0.8623 0.8142	0.9777 0.7859	Ave		0.8098			13.0		30.0				
1,2-Dibromo-3-Chloropropane	0.2667 0.3713	0.2609 0.3380	0.2709 0.2859	0.2620 ++++	0.3145 ++++	Ave		0.2963			13.8		30.0				
1,2,4,5-Tetramethylbenzene	++++ 1.3103	++++ 1.1118	1.0041 0.8463	1.0551 1.2653	1.2570 1.2867	Ave		1.1421			14.5		30.0				
Dodecane	++++ 0.7978	0.6003 0.5688	0.6899 0.3858	0.7041 0.5331	0.8370 ++++	Ave		0.6396			23.1		30.0				
1,2,4-Trichlorobenzene	++++ 0.6436	0.5319 0.5457	0.4906 0.4989	0.4888 0.6587	0.5772 0.6483	Ave		0.5649			12.4		30.0				
Naphthalene	++++ 1.4994	1.1580 1.2044	1.1489 0.9653	1.0861 1.2974	1.4202 1.3257	Ave		1.2339			13.6		30.0				
Hexachlorobutadiene	++++ 0.6448	++++ 0.5763	0.5100 0.5363	0.5070 0.7409	0.5745 0.7482	Ave		0.6047			16.0		30.0				
1,2,3-Trichlorobenzene	++++ 0.6283	0.5060 0.4951	0.4846 0.4151	0.4581 0.5663	0.5627 0.3728	Ave		0.4988			15.9		30.0				
2-Methylnaphthalene	++++ 0.9181	0.6422 0.5284	0.5584 0.3836	0.4778 0.4940	0.8101 ++++	Ave		0.6016			29.9		50.0				
1-Methylnaphthalene	++++ 1.1220	0.8380 0.6213	0.6877 0.4374	0.6391 0.5433	1.0085 ++++	Ave		0.7372			<u>31.8</u>		50.0				
4-Bromofluorobenzene (Surr)	0.7946 0.8130	0.8076 0.7824	0.8238 0.7807	0.8163 0.9039	0.8357 0.8386	Ave		0.8196			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 261958	++++ 518289	21711 1076565	42570 1857884	107824 3550370	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 149007	++++ 290483	++++ 602545	27727 1017511	60077 1877999	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 428033	++++ 858049	32728 1783528	68237 3014742	169908 6045892	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 46960	++++ 92605	++++ 191831	8660 316575	19699 606292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 249678	++++ 512846	19448 1074243	39319 1637176	98572 3657066	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	3911 156203	6583 313945	12737 657162	25449 1048926	62942 2151077	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 277412	++++ 542597	++++ 1129098	47326 1835688	114610 3783292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 127206	++++ 257490	++++ 544660	19602 873952	50104 1817509	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 138169	++++ 281926	12169 593804	21546 903575	54574 2043364	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 77933	++++ 156493	6344 327330	12373 519647	31401 1128580	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 296853	++++ 808553	++++ 1261075	66636 2449308	143467 5299467	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 130640	++++ 265901	10174 568659	20331 824429	51677 1944996	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 203924	++++ 402287	++++ 832948	31631 1264951	82259 2833506	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 422050	16790 848836	31414 1773236	63826 2796331	166966 6214752	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	++++ 39091	++++ 73107	++++ 147180	++++ 259717	14239 517814	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 61491	++++ 127125	++++ 226910	++++ 390809	7481 862471	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetone	CBM	Ave	++++ 220327	++++ 398773	++++ 665956	++++ 1097098	86023 2321110	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 28000	++++ 56204	++++ 114279	++++ 175439	11269 384054	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 502108	++++ 1108992	++++ 1652685	++++ 3057291	79400 6999063	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 194355	++++ 387640	++++ 655797	++++ 1111229	76885 2395844	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	3049 147877	5250 292909	11039 633007	21196 889868	56607 2050200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 104178	++++ 213988	++++ 390689	++++ 666078	7623 1491458	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 322940	++++ 644340	++++ 1332511	++++ 1919761	47135 4249014	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 237979	++++ 483244	++++ 773470	++++ 1347387	35554 3367365	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 158748	++++ 297663	++++ 587875	++++ 829908	39858 72672	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 ++++
3-Chloropropene	CBM	Ave	++++ 172933	++++ 352711	++++ 715500	++++ 1138278	14784 2516658	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 454099	++++ 893782	++++ 1857677	++++ 2686894	33755 6209652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 152597	++++ 304618	++++ 640390	++++ 904134	21313 2041028	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 425850	++++ 850675	++++ 1727313	++++ 2608750	32181 5477445	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 436887	++++ 884523	++++ 1553256	++++ 2571313	31073 5756531	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	6185 301902	11544 617142	22407 1197700	44696 1866128	117133 4143029	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 421041	++++ 920626	++++ 1610829	++++ 2825655	59807 6134377	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 139897	++++ 280600	++++ 564091	++++ 836832	10084 1774150	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 71674	++++ 137814	++++ 242448	++++ 408724	10552 870000	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	3051 153350	5311 314771	10779 630074	22108 933768	57247 2161860	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 367561	++++ 727588	25120 1268094	49778 2287831	134280 4857969	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	7168 346742	12869 705235	25085 1383523	52455 2190241	132214 4960016	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 196936	++++ 392928	++++ 687510	27618 1192762	73368 2547299	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7734 377403	13331 774289	27166 1509577	55384 2393121	145486 5471084	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4547 232618	8382 490730	17516 952640	35324 1548479	87574 3502141	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 82609	++++ 165738	++++ 330488	12681 486357	31319 1042096	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 444635	15963 906736	33352 1771104	65637 2614755	167643 5593459	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	6601 372817	11874 761689	24215 1552321	50848 2465819	138991 5358444	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 59954	++++ 111445	++++ 184294	8226 331158	22433 786825	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 118426	++++ 240541	8397 465638	17105 690034	45390 1499809	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 249671	++++ 526684	18410 1043094	37543 1556455	95028 3566561	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	17363 868592	31627 1711484	63694 3264805	129920 5087913	336411 11120269	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 174693	++++ 357021	13419 694408	26105 1074435	66081 2411618	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 170338	6605 354326	12771 653599	25661 1061646	64714 2334951	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4087 194217	7238 411429	13973 832705	28091 1212507	74264 2837545	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 172040	++++ 363939	++++ 729198	27744 1170568	67675 2672665	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 346754	++++ 745629	23694 1472126	48577 2394105	129879 5512449	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 36737	++++ 120654	++++ 174155	8684 331358	19464 783489	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 232640	++++ 470252	++++ 823262	27631 1502138	81302 3304265	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	5664 305916	11041 613752	21112 1192238	44641 1790104	116952 4193256	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 377024	++++ 689509	24146 916498	51311 2161661	143236 5370174	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 265941	8857 558061	18964 1060593	38186 1693124	96201 3656415	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 249246	8494 528240	18209 983862	34634 1678819	93722 3876912	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	9759 514273	18809 1073072	37560 1966647	75222 3139180	192974 7445292	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2849 160780	5479 322166	11656 599648	23218 982519	60205 2274200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 175250	++++ 293749	10295 417616	22692 941298	65409 2558380	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 186587	++++ 377410	13108 732239	26877 1119383	73243 2627265	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	CBZd 5	Ave	++++ 1842861	++++ 3737320	++++ 7125919	278341 11514382	716916 26057226	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	++++ 313050	++++ 676985	19680 1357226	39627 2191805	110810 5334244	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 273278	++++ 576579	17903 1102407	37712 1772227	99001 4168790	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3665 191154	6973 394783	13185 776709	28219 1207845	72561 2883889	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	7137 406499	13951 832085	29142 1543553	58935 2444395	157211 5914764	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	++++ 719275	24780 1456098	48941 2578598	102987 4329132	272217 10330192	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	17235 1128063	36147 2267354	79756 3963090	160595 6728239	425545 16015024	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd 5	Ave	++++ 396249	13596 785625	27868 1455379	57416 2300427	151720 4997986	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd 5	Ave	++++ 288479	++++ 647774	16038 1258109	32352 2180538	93899 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Styrene	CBZd 5	Ave	++++ 379313	++++ 797396	22430 1440043	46527 2475003	134724 6272582	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	++++ 577831	18010 1183498	40418 2069274	85176 3507204	219991 8652988	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	++++ 388902	++++ 791220	26816 1406346	52217 2507616	146757 5342402	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 123267	++++ 249431	8767 448013	16530 809328	45222 1801458	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 770189	25754 1569505	53331 2749199	108667 4984665	288484 11018383	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	++++ 208028	++++ 425975	14187 750579	27021 1348899	77981 3034911	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 190674	6524 376201	13286 679618	26657 1211506	71471 2747919	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	++++ 757218	++++ 1579790	52613 2762937	100995 4977060	288122 11171652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	++++ 298107	++++ 615118	20417 1079746	39553 1917273	109634 4410950	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 294414	++++ 619837	++++ 1139797	33405 2186650	99545 4845121	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 491714	16235 955171	34455 1652838	72566 2938778	189531 6027860	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	++++ 674397	++++ 1354211	44314 2326877	90284 4505713	239278 9821979	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 670745	++++ 1320347	44184 2282446	89238 4407169	236361 9493306	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	++++ 963943	++++ 1895656	62984 3335709	130314 6189211	346547 13052688	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7122 429682	13761 870050	27898 1597433	57634 3038807	153722 6998909	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 595380	++++ 1199239	35336 2207883	71441 4112439	206433 9093386	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7701 436204	14670 882709	28727 1608243	58838 3081288	154004 7120026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	++++ 779650	++++ 1524715	46995 2715440	99360 5104026	272972 11067094	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	8305 664909	18233 1328651	41757 2356435	88511 ++++	235583 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Indane	CBZd 5	Ave	++++ 602700	++++ 1193709	39872 2118687	79681 3956160	207350 8865173	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 416753	++++ 841536	27621 1533100	56506 2968700	146910 7061726	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	++++ 814617	23860 1547638	50796 2715683	108576 5104411	288957 10889558	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 516302	++++ 1040605	31427 1879451	64720 3517487	178805 7968258	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 527231	15243 970873	32520 1679521	73748 2924996	202684 6339976	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2927 207960	5571 429617	11218 745616	22412 ++++	65206 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 733964	++++ 1413004	41572 2207453	90241 4545804	260569 10379759	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 446881	12818 722978	28563 1006221	60222 1915343	173512 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 360521	11357 693552	20313 1301208	41810 2366361	119662 5229906	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 839854	24728 1530726	47569 2517870	92896 4661002	294401 10693857	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 361175	++++ 732431	21118 1398696	43365 2661640	119102 6035243	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 351962	10806 629244	20063 1082671	39185 2034470	116648 3007302	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 514300	13713 671591	23120 1000580	40866 1774929	167946 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 628512	17895 789694	28473 1141032	54667 1951995	209066 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1743947 1821597	1724522 1988683	1705365 2036360	1745466 1623678	1732344 1691157	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	12.7						50			
Propene	+++++	+++++	+++++	23.1						50		
Dichlorodifluoromethane	+++++	+++++	5.1						50			
Chloromethane	+++++	+++++	+++++	21.0						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	6.9						50			
Vinyl chloride	21.8						50					
Butane	+++++	+++++	+++++	13.3						50		
1,3-Butadiene	+++++	+++++	+++++	2.3						50		
Bromomethane	+++++	+++++	18.9						50			
Chloroethane	+++++	+++++	11.2						50			
Ethanol	+++++	+++++	+++++	22.9						50		
Vinyl bromide	+++++	+++++	7.3						50			
2-Methylbutane	+++++	+++++	+++++	5.5						50		
Trichlorofluoromethane	+++++	5.4						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT						
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10			
Acrolein	+++++	+++++	+++++	+++++	-1.1							50	
Acetonitrile	+++++	+++++	+++++	-12.8							50		
Acetone	+++++	+++++	+++++	+++++	18.4							80	
Pentane	+++++	+++++	+++++	+++++	5.4							50	
Isopropyl alcohol	+++++	+++++	+++++	7.2							50		
Ethyl ether	+++++	+++++	+++++	+++++	10.7							50	
1,1-Dichloroethene	8.4						50						
Acrylonitrile	+++++	+++++	6.3						50				
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.9						50					
tert-Butyl alcohol	+++++	+++++	+++++	5.2							50		
Methylene Chloride	+++++	+++++	+++++	57.6 +++++							80		
3-Chloropropene	+++++	+++++	14.8						50				
Carbon disulfide	+++++	+++++	7.1						50				
trans-1,2-Dichloroethene	+++++	-2.1						50					
2-Methylpentane	+++++	+++++	8.2						50				
Methyl tert-butyl ether	+++++	-8.6						50					
1,1-Dichloroethane	6.8						50						
Vinyl acetate	+++++	+++++	0.8						50				
Hexane	+++++	+++++	5.2						50				
2-Butanone (MEK)	+++++	+++++	+++++	8.0						50			
cis-1,2-Dichloroethene	5.8						50						

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	3.1						50			
Chloroform	7.6						50					
Tetrahydrofuran	+++++	+++++	+++++	1.2						50		
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	-0.5						50					
Cyclohexane	+++++	+++++	+++++	5.2						50		
Benzene	+++++	-0.4						50				
Carbon tetrachloride	-4.8						50					
1-Butanol	+++++	+++++	+++++	0.2							50	
2,3-Dimethylpentane	+++++	+++++	6.9						50			
Thiophene	+++++	+++++	6.3						50			
2,2,4-Trimethylpentane	6.0						50					
Heptane	+++++	+++++	12.0						50			
1,2-Dichloropropane	+++++	4.8						50				
Trichloroethene	7.3						50					
Dibromomethane	+++++	+++++	+++++	2.1						50		
Bromodichloromethane	+++++	+++++	-2.7						50			
1,4-Dioxane	+++++	+++++	+++++	13.9						50		
Methyl methacrylate	+++++	+++++	+++++	-16.1						50		
Methylcyclohexane	-1.0						50					
4-Methyl-2-pentanone (MIBK)	+++++	+++++	3.0						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.6						50				
trans-1,3-Dichloropropene	+++++	-7.7						50				
Toluene	1.0						50					
1,1,2-Trichloroethane	-3.3						50					
2-Hexanone	+++++	+++++	-5.8						50			
Octane	+++++	+++++	0.0						50			
Dibromochloromethane	+++++	+++++	-12.7						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-7.1						50			
Tetrachloroethene	1.1						50					
Chlorobenzene	-4.9						50					
Ethylbenzene	+++++	-3.0						50				
m-Xylene & p-Xylene	-14.2						50					
Nonane	+++++	-2.2						50				
Bromoform	+++++	+++++	-18.6		+++++				50			
Styrene	+++++	+++++	-14.3						50			
o-Xylene	+++++	-12.6						50				
1,1,2,2-Tetrachloroethane	+++++	+++++	0.0						50			
1,2,3-Trichloropropane	+++++	+++++	2.1						50			
Isopropylbenzene	+++++	-6.2						50				
Propylbenzene	+++++	+++++	-1.4						50			
2-Chlorotoluene	+++++	-3.8						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	+++++	+++++	-1.0						50			
1,3,5-Trimethylbenzene	+++++	+++++	-1.3						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-22.6						50		
Decane	+++++	-4.7						50				
tert-Butylbenzene	+++++	+++++	-3.9						50			
1,2,4-Trimethylbenzene	+++++	+++++	-2.6						50			
sec-Butylbenzene	+++++	+++++	-3.0						50			
1,3-Dichlorobenzene	-9.4						50					
Benzyl chloride	+++++	+++++	-12.6						50			
1,4-Dichlorobenzene	-4.4						50					
4-Isopropyltoluene	+++++	+++++	-9.5						50			
1,2,3-Trimethylbenzene	-23.6		+++++	+++++			50					
Indane	+++++	+++++	-2.8						50			
1,2-Dichlorobenzene	+++++	+++++	-6.9						50			
Butylbenzene	+++++	-12.5							50			
Indene	+++++	+++++	-10.8						50			
Undecane	+++++	-11.9							50			
1,2-Dibromo-3-Chloropropane	-10.0		+++++	+++++			50					
1,2,4,5-Tetramethylbenzene	+++++	+++++	-12.1						50			
Dodecane	+++++	-6.1		+++++					50			
1,2,4-Trichlorobenzene	+++++	-5.8							50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-6.2						80				
Hexachlorobutadiene	+++++	+++++	-15.7						50			
1,2,3-Trichlorobenzene	+++++	1.5						50				
2-Methylnaphthalene	+++++	6.7		+++++				80				
1-Methylnaphthalene	+++++	13.7		+++++				80				

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 06/21/2017 17:00
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/21/2017 22:43
 Lab File ID: GA11ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.7395	0.6739			2.00	-8.9	35.0
3-Methylthiophene	Ave	0.7319	0.6589			2.00	-10.0	35.0
2-Ethylthiophene	Ave	0.9478	0.8011			2.00	-15.5	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.8235			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.8516	0.6095			2.00	-28.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.167	0.8355			2.00	-28.4	35.0
Benzo (b) thiophene	Ave	1.068	0.7208			2.00	-32.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.638		2.01	2.00	0.7	35.0
Propene	Ave	1.463	1.485		2.03	2.00	1.5	35.0
Dichlorodifluoromethane	Ave	4.235	4.340		2.05	2.00	2.5	35.0
Chloromethane	Ave	0.4649	0.4832		2.08	2.00	3.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.577		2.08	2.00	4.1	35.0
Acetaldehyde	Ave	0.5987	0.4752		7.94	10.0	-20.6	35.0
Vinyl chloride	Ave	1.611	1.638		2.03	2.00	1.7	35.0
1,3-Butadiene	Ave	1.245	1.289		2.07	2.00	3.6	35.0
Butane	Ave	2.712	2.809		2.07	2.00	3.5	35.0
Bromomethane	Ave	1.392	1.376		1.98	2.00	-1.1	35.0
Chloroethane	Ave	0.7761	0.7850		2.02	2.00	1.1	35.0
Ethanol	Ave	0.7042	0.5103		7.25	10.0	-27.5	35.0
Vinyl bromide	Ave	1.290	1.377		2.13	2.00	6.7	35.0
2-Methylbutane	Ave	1.947	1.999		2.05	2.00	2.7	35.0
Trichlorofluoromethane	Ave	4.152	4.112		1.98	2.00	-1.0	35.0
Acrolein	Ave	0.3574	0.2736		1.53	2.00	-23.4	35.0
Acetonitrile	Ave	0.5574	0.4415		1.58	2.00	-20.8	35.0
Acetone	Ave	0.6013	0.5234		1.74	2.00	-13.0	35.0
Pentane	Ave	0.2653	0.2805		2.11	2.00	5.7	35.0
Isopropyl alcohol	Ave	1.603	1.950		2.43	2.00	21.6	35.0
Ethyl ether	Ave	1.725	1.471		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.412	1.470		2.08	2.00	4.1	35.0
Acrylonitrile	Ave	0.9747	0.8590		1.76	2.00	-11.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.092		2.02	2.00	1.0	35.0
tert-Butyl alcohol	Ave	2.196	2.417		2.20	2.00	10.0	35.0
Methylene Chloride	Ave	1.643	1.409		1.72	2.00	-14.2	35.0
3-Chloropropene	Ave	1.751	1.584		1.81	2.00	-9.6	35.0
Carbon disulfide	Ave	4.284	4.357		2.03	2.00	1.7	35.0
trans-1,2-Dichloroethene	Ave	1.414	1.448		2.05	2.00	2.4	35.0
2-Methylpentane	Ave	4.045	3.765		1.86	2.00	-6.9	35.0
Methyl tert-butyl ether	Ave	3.932	3.361		1.71	2.00	-14.5	35.0
1,1-Dichloroethane	Ave	2.906	2.821		1.94	2.00	-2.9	35.0
Vinyl acetate	Ave	4.034	3.285		1.63	2.00	-18.6	35.0
2-Butanone (MEK)	Ave	0.6347	0.5473		1.72	2.00	-13.8	35.0
Hexane	Ave	1.304	1.314		2.02	2.00	0.8	35.0
Isopropyl ether	Ave	4.992	4.538		1.82	2.00	-9.1	35.0
cis-1,2-Dichloroethene	Ave	1.447	1.467		2.03	2.00	1.4	35.0
Ethyl acetate	Ave	3.312	2.660		1.61	2.00	-19.7	35.0
Chloroform	Ave	3.344	3.175		1.90	2.00	-5.1	35.0
Tert-butyl ethyl ether	Ave	4.607	3.821		1.66	2.00	-17.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.483		1.67	2.00	-16.3	35.0
1,1,1-Trichloroethane	Ave	3.620	3.468		1.92	2.00	-4.2	35.0
1,2-Dichloroethane	Ave	0.3910	0.3830		1.96	2.00	-2.1	35.0
Cyclohexane	Ave	0.1314	0.1432		2.18	2.00	8.9	35.0
Benzene	Ave	0.7153	0.7639		2.14	2.00	6.8	35.0
Carbon tetrachloride	Ave	0.5933	0.6444		2.17	2.00	8.6	35.0
1-Butanol	Ave	0.0896	0.1078		2.41	2.00	20.4	35.0
2,3-Dimethylpentane	Ave	0.1886	0.1955		2.07	2.00	3.6	35.0
Thiophene	Ave	0.4156	0.4158		2.00	2.00	0.0	35.0
2,2,4-Trimethylpentane	Ave	1.401	1.433		2.05	2.00	2.3	35.0
Heptane	Ave	0.2875	0.2905		2.02	2.00	1.0	35.0
1,2-Dichloropropane	Ave	0.2813	0.2642		1.88	2.00	-6.1	35.0
Trichloroethene	Ave	0.3257	0.3391		2.08	2.00	4.1	35.0
Dibromomethane	Ave	0.2963	0.2956		2.00	2.00	-0.2	35.0
Bromodichloromethane	Ave	0.5843	0.5891		2.02	2.00	0.8	35.0
1,4-Dioxane	Ave	0.0832	0.0836		2.01	2.00	0.5	35.0
Methyl methacrylate	Ave	0.3595	0.3109		1.73	2.00	-13.5	35.0
Methylcyclohexane	Ave	0.4896	0.6141		2.51	2.00	25.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.5532		1.96	2.00	-1.8	35.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4212		1.97	2.00	-1.5	35.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4178		1.94	2.00	-3.1	35.0
Toluene	Ave	0.8801	0.8270		1.88	2.00	-6.0	35.0
1,1,2-Trichloroethane	Ave	0.2685	0.2546		1.90	2.00	-5.2	35.0
2-Hexanone	Ave	0.2641	0.2800		2.12	2.00	6.0	35.0
Octane	Ave	0.3165	0.3309		2.09	2.00	4.5	35.0
Dibromochloromethane	Ave	0.5446	0.5759		2.12	2.00	5.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4594		1.97	2.00	-1.3	35.0
Tetrachloroethene	Ave	0.3302	0.3391		2.05	2.00	2.7	35.0
2,3-Dimethylheptane	Ave	1.076	0.9762		1.82	2.00	-9.2	35.0
Chlorobenzene	Ave	0.6841	0.6891		2.01	2.00	0.7	35.0
Ethylbenzene	Ave	1.196	1.091		1.82	2.00	-8.8	35.0
m-Xylene & p-Xylene	Ave	0.9148	0.8433		3.69	4.00	-7.8	35.0
Nonane	Ave	0.6507	0.6606		2.03	2.00	1.5	35.0
Bromoform	Ave	0.4761	0.5196		2.18	2.00	9.1	35.0
Styrene	Ave	0.6323	0.5922		1.87	2.00	-6.3	35.0
o-Xylene	Ave	0.9646	0.8608		1.78	2.00	-10.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5907		1.82	2.00	-8.8	35.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	35.0
Isopropylbenzene	Ave	1.286	1.176		1.83	2.00	-8.5	35.0
Propylbenzene	Ave	0.3476	0.3186		1.83	2.00	-8.3	35.0
2-Chlorotoluene	Ave	0.3175	0.3028		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.090		1.70	2.00	-15.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4983		2.00	2.00	-0.2	35.0
Alpha Methyl Styrene	Ave	0.5043	0.4358		1.73	2.00	-13.6	35.0
Decane	Ave	0.7982	0.7703		1.93	2.00	-3.5	35.0
tert-Butylbenzene	Ave	1.114	0.998		1.79	2.00	-10.4	35.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9651		1.76	2.00	-11.9	35.0
sec-Butylbenzene	Ave	1.569	1.417		1.81	2.00	-9.7	35.0
1,3-Dichlorobenzene	Ave	0.7160	0.6664		1.86	2.00	-6.9	35.0
Benzyl chloride	Ave	0.9762	0.8908		1.83	2.00	-8.7	35.0
1,4-Dichlorobenzene	Ave	0.7344	0.6695		1.82	2.00	-8.8	35.0
4-Isopropyltoluene	Ave	1.255	1.122		1.79	2.00	-10.6	35.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.7182		1.45	2.00	-27.5	35.0
Butylcyclohexane	Ave	0.9039	0.8456		1.87	2.00	-6.5	35.0
Indane	Ave	0.9903	0.8594		1.74	2.00	-13.2	35.0
1,2-Dichlorobenzene	Ave	0.7165	0.6343		1.77	2.00	-11.5	35.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	35.0
Indene	Ave	0.8508	0.6491		1.53	2.00	-23.7	35.0
Undecane	Ave	0.8098	0.7744		1.91	2.00	-4.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.2570		1.73	2.00	-13.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.013		1.77	2.00	-11.3	35.0
Dodecane	Ave	0.6396	0.6522		2.04	2.00	2.0	35.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5328		1.89	2.00	-5.7	35.0
Naphthalene	Ave	1.234	1.234		2.00	2.00	0.0	35.0
Hexachlorobutadiene	Ave	0.6047	0.5411		1.79	2.00	-10.5	35.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.5256		2.11	2.00	5.4	35.0
2-Methylnaphthalene	Ave	0.6016	0.6997		2.33	2.00	16.3	50.0
1-Methylnaphthalene	Ave	0.7372	0.8235		2.23	2.00	11.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8145		3.97	4.00	-0.6	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: GBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MG BFB Injection Time: 11:03
 Analysis Batch No.: 27931

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.5
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	73.1
175	5.0 - 9.0 % of mass 174	5.1 (7.0) 1
176	95.0 - 101.0 % of mass 174	71.2 (97.4) 1
177	5.0 - 9.0 % of mass 176	4.6 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27931/2	GCCVB26.D	02/26/2019	11:35
	LCS 140-27931/1002	GCCVB26-LCS. d	02/26/2019	11:35
	MB 140-27931/4	G500BB26.D	02/26/2019	12:56
IA-021-A-26	140-14386-17	GB26P201.D	02/26/2019	13:42
SV-178-MB-3	140-14386-18	GB26P101.D	02/26/2019	15:56

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.652		2.02	2.00	1.2	30.0
Propene	Ave	1.463	1.534		2.10	2.00	4.8	30.0
Dichlorodifluoromethane	Ave	4.235	4.356		2.06	2.00	2.9	30.0
Chloromethane	Ave	0.4649	0.4693		2.02	2.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.404		1.94	2.00	-2.9	30.0
Acetaldehyde	Ave	0.5987	0.5225		8.73	10.0	-12.7	30.0
Vinyl chloride	Ave	1.611	1.586		1.97	2.00	-1.5	30.0
1,3-Butadiene	Ave	1.245	1.283		2.06	2.00	3.0	30.0
Butane	Ave	2.712	2.755		2.03	2.00	1.6	30.0
Bromomethane	Ave	1.392	1.313		1.89	2.00	-5.7	30.0
Chloroethane	Ave	0.7761	0.7469		1.92	2.00	-3.8	30.0
Ethanol	Ave	0.7042	0.7541		10.7	10.0	7.1	30.0
Vinyl bromide	Ave	1.290	1.209		1.87	2.00	-6.3	30.0
2-Methylbutane	Ave	1.947	1.895		1.95	2.00	-2.7	30.0
Trichlorofluoromethane	Ave	4.152	4.042		1.95	2.00	-2.7	30.0
Acrolein	Ave	0.3574	0.3194		1.79	2.00	-10.6	30.0
Acetonitrile	Ave	0.5574	0.5302		1.90	2.00	-4.9	30.0
Acetone	Ave	0.6013	0.4988		4.98	6.00	-17.0	30.0
Pentane	Ave	0.2653	0.2565		1.93	2.00	-3.3	30.0
Isopropyl alcohol	Ave	1.603	1.779		6.66	6.00	10.9	30.0
Ethyl ether	Ave	1.725	1.691		1.96	2.00	-2.0	30.0
1,1-Dichloroethene	Ave	1.412	1.514		2.14	2.00	7.2	30.0
Acrylonitrile	Ave	0.9747	0.9432		1.94	2.00	-3.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.167		2.07	2.00	3.5	30.0
tert-Butyl alcohol	Ave	2.196	2.812		2.56	2.00	28.0	30.0
Methylene Chloride	Ave	1.643	1.484		1.81	2.00	-9.7	30.0
3-Chloropropene	Ave	1.751	1.648		1.88	2.00	-5.9	30.0
Carbon disulfide	Ave	4.284	4.628		2.16	2.00	8.0	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.521		2.15	2.00	7.6	30.0
2-Methylpentane	Ave	4.045	4.401		2.18	2.00	8.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.883		1.97	2.00	-1.3	30.0
1,1-Dichloroethane	Ave	2.906	2.982		2.05	2.00	2.6	30.0
Vinyl acetate	Ave	4.034	3.919		1.94	2.00	-2.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.6318		1.99	2.00	-0.5	30.0
Hexane	Ave	1.304	1.409		2.16	2.00	8.1	30.0
Isopropyl ether	Ave	4.992	5.130		2.06	2.00	2.8	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.511		2.09	2.00	4.4	30.0
Ethyl acetate	Ave	3.312	3.321		2.01	2.00	0.3	30.0
Chloroform	Ave	3.344	3.351		2.00	2.00	0.2	30.0
Tert-butyl ethyl ether	Ave	4.607	4.651		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.780		2.01	2.00	0.4	30.0
1,1,1-Trichloroethane	Ave	3.620	3.686		2.04	2.00	1.8	30.0
1,2-Dichloroethane	Ave	0.3910	0.3917		2.00	2.00	0.2	30.0
Cyclohexane	Ave	0.1314	0.1477		2.25	2.00	12.4	30.0
Benzene	Ave	0.7153	0.7399		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6573		2.22	2.00	10.8	30.0
1-Butanol	Ave	0.0896	0.1263		2.82	2.00	41.0*	30.0
2,3-Dimethylpentane	Ave	0.1886	0.2098		2.22	2.00	11.2	30.0
Thiophene	Ave	0.4156	0.4526		2.18	2.00	8.9	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.515		2.16	2.00	8.2	30.0
Heptane	Ave	0.2875	0.3131		2.18	2.00	8.9	30.0
1,2-Dichloropropane	Ave	0.2813	0.2865		2.04	2.00	1.8	30.0
Trichloroethene	Ave	0.3257	0.3404		2.09	2.00	4.5	30.0
Dibromomethane	Ave	0.2963	0.3076		2.08	2.00	3.8	30.0
Bromodichloromethane	Ave	0.5843	0.6356		2.18	2.00	8.8	30.0
1,4-Dioxane	Ave	0.0832	0.1054		2.53	2.00	26.7	30.0
Methyl methacrylate	Ave	0.3595	0.3845		2.14	2.00	7.0	30.0
Methylcyclohexane	Ave	0.4896	0.5279		2.16	2.00	7.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.6430		2.28	2.00	14.2	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4641		2.17	2.00	8.5	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4612		2.14	2.00	7.0	30.0
Toluene	Ave	0.8801	0.8908		2.02	2.00	1.2	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2829		2.11	2.00	5.3	30.0
2-Hexanone	Ave	0.2641	0.3188		2.41	2.00	20.7	30.0
Octane	Ave	0.3165	0.3439		2.17	2.00	8.7	30.0
Dibromochloromethane	Ave	0.5446	0.5989		2.20	2.00	10.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4929		2.12	2.00	5.8	30.0
Tetrachloroethene	Ave	0.3302	0.3406		2.06	2.00	3.1	30.0
2,3-Dimethylheptane	Ave	1.076	1.161		2.16	2.00	8.0	30.0
Chlorobenzene	Ave	0.6841	0.7203		2.11	2.00	5.3	30.0
Ethylbenzene	Ave	1.196	1.211		2.03	2.00	1.3	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.9437		4.13	4.00	3.2	30.0
Nonane	Ave	0.6507	0.7098		2.18	2.00	9.1	30.0
Bromoform	Ave	0.4761	0.5476		2.30	2.00	15.0	30.0
Styrene	Ave	0.6323	0.6714		2.12	2.00	6.2	30.0
o-Xylene	Ave	0.9646	0.9910		2.05	2.00	2.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.6633		2.05	2.00	2.4	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.2051		1.98	2.00	-1.2	30.0
Isopropylbenzene	Ave	1.286	1.274		1.98	2.00	-1.0	30.0
Propylbenzene	Ave	0.3476	0.3424		1.97	2.00	-1.5	30.0
2-Chlorotoluene	Ave	0.3175	0.3184		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.295		2.02	2.00	0.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4918		1.97	2.00	-1.5	30.0
Alpha Methyl Styrene	Ave	0.5043	0.5202		2.06	2.00	3.1	30.0
Decane	Ave	0.7982	0.8625		2.16	2.00	8.1	30.0
tert-Butylbenzene	Ave	1.114	1.103		1.98	2.00	-1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.096	1.089		1.99	2.00	-0.6	30.0
sec-Butylbenzene	Ave	1.569	1.580		2.01	2.00	0.7	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.7287		2.04	2.00	1.8	30.0
Benzyl chloride	Ave	0.9762	1.033		2.12	2.00	5.8	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.7367		2.01	2.00	0.3	30.0
4-Isopropyltoluene	Ave	1.255	1.277		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	1.101		2.22	2.00	11.1	30.0
Butylcyclohexane	Ave	0.9039	0.9644		2.13	2.00	6.7	30.0
Indane	Ave	0.9903	0.9865		1.99	2.00	-0.4	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.7004		1.95	2.00	-2.3	30.0
Butylbenzene	Ave	1.277	1.325		2.08	2.00	3.8	30.0
Indene	Ave	0.8508	0.8688		2.04	2.00	2.1	30.0
Undecane	Ave	0.8098	0.8597		2.12	2.00	6.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3582		2.42	2.00	20.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.185		2.07	2.00	3.7	30.0
Dodecane	Ave	0.6396	0.6319		1.98	2.00	-1.2	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5181		1.83	2.00	-8.3	30.0
Naphthalene	Ave	1.234	1.197		1.94	2.00	-3.0	30.0
Hexachlorobutadiene	Ave	0.6047	0.5124		1.69	2.00	-15.3	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4625		1.85	2.00	-7.3	30.0
2-Methylnaphthalene	Ave	0.6016	0.4938		1.64	2.00	-17.9	50.0
1-Methylnaphthalene	Ave	0.7372	0.5485		1.49	2.00	-25.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8212		4.01	4.00	0.2	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: RFBK16I.D BFB Injection Date: 11/16/2018
 Instrument ID: MR BFB Injection Time: 16:00
 Analysis Batch No.: 25490

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	58.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	91.0	
175	5.0 - 9.0 % of mass 174	6.6	(7.3) 1
176	95.0 - 101.0 % of mass 174	88.8	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-25490/3	RK16IC09.D	11/16/2018	17:23
	IC 140-25490/5	RK16IC10.D	11/16/2018	19:07
	IC 140-25490/8	RK16IC01.D	11/16/2018	21:42
	IC 140-25490/9	RK16IC02.D	11/16/2018	22:34
	IC 140-25490/10	RK16IC03.D	11/16/2018	23:27
	IC 140-25490/11	RK16IC04.D	11/17/2018	00:20
	IC 140-25490/12	RK16IC05.D	11/17/2018	01:12
	IC 140-25490/13	RK16IC06.D	11/17/2018	02:05
	ICIS 140-25490/14	RK16IC07.D	11/17/2018	02:58
	IC 140-25490/15	RK16IC08.D	11/17/2018	03:51
	ICV 140-25490/18	RK16ICV.D	11/17/2018	06:27

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.6032	2.5523	2.4630	Ave		2.3734			6.7		30.0				
	2.3273	2.2136	2.2367	2.4103	2.1808												
Propene	+++++	+++++	+++++	0.8419	0.7507	Ave		0.7296			8.2		30.0				
	0.7221	0.6895	0.6844	0.7524	0.6660												
Dichlorodifluoromethane	+++++	+++++	4.5412	4.2461	5.3003	Ave		4.3524			11.7		30.0				
	4.1510	3.9686	4.0428	4.8211	3.7479												
Chloromethane	+++++	+++++	0.4314	0.2960	0.3371	Ave		0.3061			18.1		30.0				
	0.2871	0.2733	0.2689	0.2912	0.2638												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.8991	3.2433	3.1843	3.5538	Ave		3.2404			10.6		30.0				
	3.0989	3.0537	3.1101	3.3433	2.6767												
Vinyl chloride	1.3396	1.3354	1.1215	1.1058	1.0442	Ave		1.0731			14.4		30.0				
	0.9887	0.9559	0.9544	0.9748	0.9105												
1,3-Butadiene	+++++	+++++	+++++	0.7017	0.6571	Ave		0.6506			4.0		30.0				
	0.6523	0.6352	0.6377	0.6500	0.6202												
Butane	+++++	+++++	1.3166	1.1752	1.2095	Ave		1.1321			8.5		30.0				
	1.1091	1.0560	1.0795	1.0850	1.0260												
Bromomethane	+++++	+++++	1.4266	1.2696	1.2705	Ave		1.2354			7.2		30.0				
	1.2054	1.1811	1.1809	1.2035	1.1456												
Chloroethane	+++++	+++++	0.6023	0.5518	0.4948	Ave		0.4970			10.7		30.0				
	0.4893	0.4606	0.4673	0.4597	0.4499												
Ethanol	+++++	+++++	+++++	0.3286	0.3153	Ave		0.2997			6.1		30.0				
	0.2949	0.2999	0.2981	0.2885	0.2724												
Vinyl bromide	+++++	+++++	1.4513	1.3532	1.3493	Ave		1.3020			5.9		30.0				
	1.2738	1.2507	1.2699	1.2460	1.2216												
2-Methylbutane	+++++	+++++	0.8639	0.8536	0.8359	Ave		0.7999			5.7		30.0				
	0.7979	0.7734	0.7606	0.7713	0.7425												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Acrolein	++++ 0.2149	++++ 0.2505	++++ 0.2493	0.3397 0.2426	0.2316 0.2411	Ave		0.2528			15.9		30.0				
Trichlorofluoromethane	6.6790 5.8128	6.2714 5.6498	6.2323 5.6579	6.0249 5.5584	5.9679 5.2697	Ave		5.9124			6.9		30.0				
Acetonitrile	++++ 0.2348	++++ 0.2373	++++ 0.2818	0.2630 0.2803	0.2428 0.2703	Ave		0.2586			7.8		30.0				
Acetone	++++ 0.4175	++++ 0.3860	++++ 0.3784	0.5760 0.3627	0.4291 0.3557	Ave		0.4151			18.3		30.0				
Pentane	++++ 0.1987	++++ 0.1907	++++ 0.1944	0.2412 0.1914	0.2034 0.1879	Ave		0.2011			9.2		30.0				
Isopropyl alcohol	++++ 1.1215	++++ 1.1376	++++ 1.1294	1.2584 1.0760	1.1488 1.0492	Ave		1.1316			5.9		30.0				
Ethyl ether	++++ 0.6540	++++ 0.6244	++++ 0.6327	0.7089 0.6995	0.6970 0.6464	Ave		0.6661			5.2		30.0				
1,1-Dichloroethene	1.6400 1.3612	1.4528 1.3523	1.4077 1.3829	1.3842 1.3970	1.3751 1.3233	Ave		1.4076			6.3		30.0				
Acrylonitrile	++++ 0.6195	++++ 0.6124	++++ 0.6202	++++ 0.6572	0.6255 0.6313	Ave		0.6277			2.5		30.0				
tert-Butyl alcohol	++++ 2.6737	++++ 2.7383	++++ 2.6973	2.6805 2.6655	2.7132 2.5593	Ave		2.6773			2.0		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.5282	3.6010 3.4530	3.7397 3.4392	3.5306 3.4042	3.5510 3.1580	Ave		3.4894			4.6		30.0				
Methylene Chloride	++++ 1.2853	++++ 1.1917	++++ 1.1531	2.0228 1.1482	1.5003 1.0647	Ave		1.3380			24.9		30.0				
3-Chloropropene	++++ 1.3439	++++ 1.2944	1.1777 1.2837	1.4302 1.3374	1.3141 1.2919	Ave		1.3092			5.4		30.0				
Carbon disulfide	++++ 3.4096	++++ 3.3395	3.3655 3.3248	3.2471 3.4285	3.3320 3.2774	Ave		3.3406			1.8		30.0				
trans-1,2-Dichloroethene	1.5926 1.4009	1.5829 1.3797	1.4276 1.4044	1.3885 1.4254	1.3834 1.3721	Ave		1.4358			5.7		30.0				
2-Methylpentane	++++ 1.8951	++++ 1.8425	++++ 1.8466	1.9630 1.9346	1.9304 1.8132	Ave		1.8940			2.8		30.0				
Methyl tert-butyl ether	++++ 4.5873	++++ 4.5288	4.7495 4.5802	4.4631 4.6026	4.5963 4.4400	Ave		4.5685			2.1		30.0				
1,1-Dichloroethane	2.6815 2.3300	2.6739 2.2911	2.4729 2.3182	2.3130 2.3408	2.3587 2.2447	Ave		2.4025			6.5		30.0				
Vinyl acetate	++++ 2.2364	++++ 2.3368	++++ 2.4359	2.0297 2.5381	2.1537 2.5129	Ave		2.3205			8.2		30.0				
2-Butanone (MEK)	++++ 0.5380	++++ 0.5309	++++ 0.5519	0.5759 0.5616	0.5098 0.5445	Ave		0.5446			3.9		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	++++	++++	0.9023	0.8416	0.8376	Ave		0.8352			3.6		30.0				
	0.8187	0.8108	0.8291	0.8382	0.8031												
cis-1,2-Dichloroethene	1.6200	1.4958	1.4342	1.4272	1.3943	Ave		1.4479			4.6		30.0				
	1.4112	1.4310	1.4304	1.4418	1.3928												
Ethyl acetate	++++	++++	1.8097	1.9184	1.9214	Ave		2.0119			6.0		30.0				
	2.0207	2.0336	2.1099	2.1701	2.1110												
Chloroform	4.2334	4.0960	3.8341	3.7602	3.7763	Ave		3.8207			5.1		30.0				
	3.7394	3.6835	3.7449	3.7523	3.5872												
Tetrahydrofuran	++++	++++	++++	0.8784	0.8832	Ave		0.8862			1.5		30.0				
	0.8846	0.8714	0.8870	0.9150	0.8836												
1,1,1-Trichloroethane	4.9709	4.9939	5.0122	4.7467	4.7402	Ave		4.8434			2.4		30.0				
	4.7770	4.7670	4.8476	4.8764	4.7023												
1,2-Dichloroethane	0.5380	0.5327	0.5166	0.4858	0.4926	Ave		0.5063			3.5		30.0				
	0.5057	0.4936	0.4997	0.5068	0.4915												
Benzene	0.7533	0.7075	0.7019	0.6312	0.6214	Ave		0.6517			7.8		30.0				
	0.6321	0.6240	0.6266	0.6238	0.5956												
Cyclohexane	++++	++++	++++	0.0959	0.0939	Ave		0.0968			3.7		30.0				
	0.1013	0.0986	0.1001	0.0971	0.0911												
1-Butanol	++++	++++	++++	++++	0.0330	Ave		0.0462			14.9		30.0				
	0.0448	0.0477	0.0492	0.0516	0.0509												
Carbon tetrachloride	0.9231	0.9429	0.7537	0.9038	0.9350	Ave		0.9167			6.5		30.0				
	0.9489	0.9372	0.9263	0.9692	0.9273												
2,3-Dimethylpentane	++++	++++	0.1212	0.1277	0.1355	Ave		0.1349			5.2		30.0				
	0.1378	0.1390	0.1407	0.1410	0.1365												
Thiophene	++++	++++	0.3563	0.3607	0.3698	Ave		0.3728			2.9		30.0				
	0.3778	0.3718	0.3816	0.3893	0.3754												
2,2,4-Trimethylpentane	++++	++++	0.8652	0.8182	0.8128	Ave		0.8342			2.3		30.0				
	0.8423	0.8248	0.8393	0.8535	0.8176												
1,2-Dichloropropane	++++	++++	0.2130	0.1991	0.2024	Ave		0.2045			2.2		30.0				
	0.2041	0.2015	0.2054	0.2089	0.2020												
Heptane	++++	++++	0.1976	0.1979	0.2071	Ave		0.2083			3.5		30.0				
	0.2142	0.2122	0.2154	0.2154	0.2066												
Trichloroethene	0.4192	0.3851	0.4007	0.3771	0.3880	Ave		0.3929			4.2		30.0				
	0.3857	0.3869	0.4221	0.3913	0.3727												
Dibromomethane	++++	++++	0.3725	0.3565	0.3464	Ave		0.3514			3.1		30.0				
	0.3459	0.3374	0.3500	0.3576	0.3447												
Bromodichloromethane	++++	++++	0.5971	0.5918	0.6239	Ave		0.6587			7.4		30.0				
	0.6680	0.6726	0.7005	0.7174	0.6980												
1,4-Dioxane	++++	++++	++++	0.0992	0.0973	Ave		0.0994			3.2		30.0				
	0.0965	0.1030	0.1037	0.1007	0.0954												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.2243	++++ 0.2331	0.2139 0.2468	0.1766 0.2628	0.2044 0.2582	Ave		0.2275			12.8		30.0				
Methylcyclohexane	++++ 0.4067	++++ 0.4050	0.3972 0.4110	0.3842 0.4158	0.3938 0.4053	Ave		0.4024			2.5		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.3577	++++ 0.3715	++++ 0.3933	0.2895 0.4035	0.3277 0.3952	Ave		0.3626			11.5		30.0				
cis-1,3-Dichloropropene	++++ 0.3940	0.3635 0.4127	0.3972 0.4288	0.3514 0.4368	0.3808 0.4249	Ave		0.3948			8.2		30.0				
trans-1,3-Dichloropropene	++++ 0.4780	0.4035 0.4968	0.3959 0.5178	0.4276 0.5209	0.4537 0.5119	Ave		0.4674			10.5		30.0				
Toluene	1.0184 0.9698	0.9133 0.9624	0.9750 0.9710	0.9478 0.9638	0.9541 0.9102	Ave		0.9586			3.2		30.0				
1,1,2-Trichloroethane	0.2339 0.2639	0.2426 0.2594	0.2564 0.2610	0.2580 0.2630	0.2596 0.2452	Ave		0.2543			4.0		30.0				
2-Hexanone	++++ 0.1981	++++ 0.2103	++++ 0.2238	0.1399 0.2293	0.1787 0.2239	Ave		0.2006			16.0		30.0				
Dibromochloromethane	0.6655 0.7840	0.5795 0.8296	0.6334 0.8666	0.6501 0.8735	0.6985 0.8331	Ave		0.7414			14.6		30.0				
Octane	++++ 0.3146	++++ 0.3133	0.2922 0.3156	0.3033 0.3109	0.2998 0.2932	Ave		0.3054			3.1		30.0				
C8 Range	++++ 2.1678	++++ 2.1237	++++ 2.1591	++++ 2.2092	2.0961 2.0601	Ave		2.1360			2.5		30.0				
1,2-Dibromoethane (EDB)	++++ 0.5766	++++ 0.5804	0.5000 0.5952	0.4942 0.5984	0.5448 0.5694	Ave		0.5574			7.3		30.0				
Tetrachloroethene	0.4858 0.4849	0.4864 0.4819	0.4732 0.4752	0.4838 0.4653	0.4706 0.4417	Ave		0.4749			2.9		30.0				
Chlorobenzene	0.8210 0.8508	0.8425 0.8373	0.8551 0.8444	0.8450 0.8430	0.8379 0.7968	Ave		0.8374			2.0		30.0				
Ethylbenzene	1.3703 1.4178	1.3589 1.4128	1.4055 1.4174	1.3343 1.4023	1.4017 1.2986	Ave		1.3820			2.9		30.0				
m-Xylene & p-Xylene	1.1137 1.1838	1.1023 1.1550	1.1618 1.1536	1.1488 1.1251	1.1673 1.0234	Ave		1.1335			4.1		30.0				
Bromoform	++++ 0.7606	++++ 0.8485	0.5893 0.9286	0.6166 0.9279	0.6638 0.8938	Ave		0.7786			18.1		30.0				
Styrene	++++ 0.7750	++++ 0.7975	0.6004 0.8292	0.6182 0.8487	0.6786 0.7961	Ave		0.7430			13.0		30.0				
o-Xylene	1.1430 1.2366	1.1230 1.2060	1.2624 1.1986	1.2290 1.1769	1.2492 1.0804	Ave		1.1905			5.0		30.0				
Nonane	++++ 0.4737	++++ 0.4580	0.4455 0.4538	0.4515 0.4433	0.4801 0.4032	Ave		0.4511			5.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.5797	0.5118	0.5697	0.5802	0.6188	Ave		0.6050			7.5		30.0				
	0.6456	0.6455	0.6181	0.6658	0.6146												
1,2,3-Trichloropropane	++++	++++	0.2911	0.2918	0.2978	Ave		0.3000			2.7		30.0				
	0.3084	0.3034	0.3046	0.3115	0.2914												
Isopropylbenzene	++++	++++	1.8308	1.7528	1.7150	Ave		1.6941			5.0		30.0				
	1.7012	1.6661	1.6871	1.6694	1.5307												
Propylbenzene	0.4435	0.4328	0.4534	0.4640	0.4755	Ave		0.4652			4.5		30.0				
	0.4963	0.4795	0.4859	0.4778	0.4438												
2-Chlorotoluene	++++	0.3991	0.4619	0.4417	0.4398	Ave		0.4306			5.3		30.0				
	0.4524	0.4310	0.4318	0.4245	0.3929												
4-Ethyltoluene	1.5529	1.6047	1.7828	1.7531	1.7972	Ave		1.7594			6.6		30.0				
	1.8829	1.8611	1.8557	1.8469	1.6563												
1,3,5-Trimethylbenzene	0.6792	0.6523	0.7326	0.7228	0.7292	Ave		0.7199			5.1		30.0				
	0.7724	0.7416	0.7410	0.7434	0.6843												
Alpha Methyl Styrene	++++	++++	++++	0.5439	0.5731	Ave		0.6844			13.4		30.0				
	0.6781	0.7295	0.7535	0.7838	0.7289												
Decane	++++	++++	0.6176	0.6408	0.6488	Ave		0.6421			4.6		30.0				
	0.6849	0.6585	0.6522	0.6491	0.5849												
tert-Butylbenzene	1.6566	1.6665	1.8313	1.8740	1.8639	Ave		1.7534			6.6		30.0				
	1.8841	1.7827	1.7468	1.6988	1.5293												
1,2,4-Trimethylbenzene	1.4293	1.4880	1.6887	1.6986	1.7123	Ave		1.6066			7.2		30.0				
	1.7233	1.6671	1.6372	1.5922	1.4293												
1,3-Dichlorobenzene	1.1997	1.0963	1.2442	1.1823	1.1621	Ave		1.1598			4.5		30.0				
	1.1856	1.1603	1.1572	1.1516	1.0583												
sec-Butylbenzene	2.0787	2.1298	2.2743	2.2407	2.2363	Ave		2.1706			5.7		30.0				
	2.3069	2.2195	2.1908	2.1561	1.8732												
Benzyl chloride	++++	++++	1.0998	1.0436	1.1034	Ave		1.2392			11.3		30.0				
	1.2529	1.3231	1.4041	1.3938	1.2924												
1,4-Dichlorobenzene	1.2196	1.1487	1.2267	1.2179	1.1651	Ave		1.1644			5.1		30.0				
	1.2112	1.1594	1.1399	1.1212	1.0340												
4-Isopropyltoluene	2.1095	2.1432	2.2305	2.2370	2.2728	Ave		2.1910			5.2		30.0				
	2.3345	2.2554	2.2238	2.1784	1.9244												
1,2,3-Trimethylbenzene	1.6103	1.5786	1.8623	1.7831	1.7558	Ave		1.7253			6.2		30.0				
	1.8346	1.7874	1.7524	1.7335	1.5556												
1,2-Dichlorobenzene	1.1708	1.2083	1.2580	1.2065	1.1355	Ave		1.1443			6.3		30.0				
	1.1557	1.1157	1.1029	1.0865	1.0034												
Indane	1.4503	1.3817	1.4785	1.4862	1.4419	Ave		1.4233			5.0		30.0				
	1.4994	1.4300	1.4226	1.3893	1.2529												
Indene	++++	++++	1.0339	1.0803	1.0663	Ave		1.1682			8.2		30.0				
	1.2013	1.2223	1.2542	1.2953	1.1920												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.8231 1.8829	1.6985 1.8028	1.8359 1.7871	1.8719 1.7597	1.8266 1.5551	Ave		1.7844			5.4		30.0				
Undecane	++++ 0.8059	++++ 0.7917	++++ 0.7809	++++ 0.7402	0.7701 0.6720	Ave		0.7598			5.8		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.5799	++++ 0.6160	0.4391 0.6515	0.4709 0.6213	0.4861 0.5926	Ave		0.5572			14.3		30.0				
1,2,4,5-Tetramethylbenzene	++++ 2.1235	++++ 2.1635	2.1451 2.1540	2.1430 1.9985	1.9593 1.8488	Ave		2.0670			5.7		30.0				
Dodecane	++++ 0.7733	++++ 0.8936	++++ 0.8877	0.8688 0.7212	0.6803 0.7447	Ave		0.7957			10.9		30.0				
1,2,4-Trichlorobenzene	++++ 1.1894	++++ 1.2694	1.4472 1.2818	1.3888 1.0940	1.0856 1.1269	Ave		1.2354			10.9		30.0				
Naphthalene	++++ 2.0750	3.4525 2.4487	2.8184 2.5087	2.7367 2.1182	1.8255 ++++	Ave		2.4980			20.6		30.0				
Hexachlorobutadiene	++++ 1.4923	++++ 1.4393	1.7181 1.4314	1.5746 1.2072	1.3912 1.2353	Ave		1.4362			11.7		30.0				
1,2,3-Trichlorobenzene	++++ 1.1295	++++ 1.2212	1.4432 1.2323	1.3860 0.9868	1.0237 1.0761	Ave		1.1873			13.9		30.0				
2-Methylnaphthalene	++++ 0.3586	++++ 0.9509	++++ 1.0808	++++ 0.6399	++++ 0.9374	Ave		0.7935			<u>36.8</u>		50.0				
1-Methylnaphthalene	++++ 0.3899	++++ 0.8629	++++ 0.9496	++++ 0.5203	++++ 0.7770	Ave		0.6999			<u>33.7</u>		50.0				
4-Bromofluorobenzene (Surr)	0.8488 0.8636	0.8528 0.8535	0.8654 0.8546	0.8648 0.8319	0.8641 0.8066	Ave		0.8506			2.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 165552	++++ 330784	13488 670931	27178 1511149	67965 2786793	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 51364	++++ 103039	++++ 205301	8965 471697	20715 851034	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 295289	++++ 593041	23530 1212691	45214 3022572	146259 4789313	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 20420	++++ 40844	2235 80675	3152 182542	9302 337068	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 220441	10161 456323	16805 932912	33908 2096072	98065 3420506	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	1811 70331	3480 142840	5811 286294	11775 611179	28814 1163551	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 46402	++++ 94920	++++ 191280	7472 407531	18132 792495	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 78896	++++ 157806	6822 323819	12514 680235	33375 1311043	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 85746	++++ 176496	7392 354225	13519 754560	35058 1463890	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 34804	++++ 68833	3121 140181	5876 288211	13655 574974	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 104882	++++ 224069	++++ 447098	17498 904290	43508 1740692	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 90610	++++ 186899	7520 380924	14410 781185	37233 1560991	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 56760	++++ 115570	4476 228167	9090 483547	23067 948871	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrolein	CBM	Ave	++++ 15289	++++ 37440	++++ 74788	3617 152096	6392 308108	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	9029 413497	16343 844261	32292 1697186	64156 3484877	164680 6733950	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 16703	++++ 35460	++++ 84531	++++ 175714	++++ 345458	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
Acetone	CBM	Ave	++++ 89101	++++ 173059	++++ 340521	++++ 682117	++++ 1363433	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	++++ 48.0
Pentane	CBM	Ave	++++ 14137	++++ 28499	++++ 58302	++++ 119973	++++ 240067	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
Isopropyl alcohol	CBM	Ave	++++ 239341	++++ 509997	++++ 1016357	++++ 2023732	++++ 4022317	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	++++ 48.0
Ethyl ether	CBM	Ave	++++ 46526	++++ 93310	++++ 189800	++++ 438542	++++ 826066	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1,1-Dichloroethene	CBM	Ave	2217 96830	3786 202076	7294 414812	14740 875865	37945 1690964	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 44072	++++ 91512	++++ 186041	++++ 412056	++++ 806690	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
tert-Butyl alcohol	CBM	Ave	++++ 190196	++++ 409183	13889 809098	28891 1671112	74242 3270376	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 250984	9384 515989	19377 1031649	37596 2134286	97989 4035478	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 91431	++++ 178076	++++ 345898	21540 719893	41401 1360585	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 95603	++++ 193431	++++ 385054	15229 838478	36262 1650820	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 242543	++++ 499031	17438 997332	34577 2149500	91945 4188128	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	2153 99652	4125 206172	7397 421281	14785 893667	38175 1753401	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 134813	++++ 275324	10171 553915	20556 1212878	53163 2316982	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 326320	++++ 676752	++++ 1373906	++++ 2885627	++++ 5673760	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	3625 165748	6968 342362	12813 695373	24630 1467554	65086 2868475	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 159088	++++ 349189	++++ 730693	++++ 1591261	++++ 3211124	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 38268	++++ 79333	++++ 165553	6132 352107	14067 695780	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 58239	++++ 121155	++++ 248691	4675 525494	8962 1026278	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	2190 100389	3898 213838	7431 429081	15197 903953	38474 1779827	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 143745	++++ 303889	9377 632910	20428 1360573	53019 2697533	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	5723 266010	10674 550434	19866 1123349	40040 2352521	104204 4583947	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 62926	++++ 130211	++++ 266070	9354 573668	24371 1129072	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	6720 339819	13014 712345	25970 1454125	50545 3057281	130803 6008857	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4162 199683	7880 414101	15042 837957	29238 1778626	76773 3480930	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	5827 249589	10465 523482	20437 1050705	37991 2189441	96837 4217712	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 39991	++++ 82675	++++ 167839	5770 340746	14632 645373	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 17690	++++ 40004	++++ 82457	++++ 181076	5146 360622	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7141 374679	13947 786171	21947 1553305	54395 3401707	145724 6567265	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 54415	++++ 116636	++++ 235995	3528 494713	7686 966448	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 149183	++++ 311873	++++ 639928	10374 1366267	57630 2658371	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 332582	++++ 691902	++++ 1407509	25192 2995449	49245 5790015	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 80581	++++ 169011	++++ 344383	6201 733246	11982 1430590	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 84592	++++ 178041	++++ 361284	5754 756110	32279 1463381	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	3243 152289	5696 324569	11668 707793	22698 1373208	60473 2639630	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 136587	++++ 283066	++++ 586890	10846 1255108	53985 2441282	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 263754	++++ 564189	++++ 1174659	17387 2518000	97237 4943175	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 38117	++++ 86437	++++ 173912	5968 353467	15165 675333	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 88559	++++ 195505	++++ 413937	6227 922467	10629 1828238	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	++++ 160604	++++ 339768	++++ 689164	11565 1459181	23124 2870166	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 141224	++++ 311634	++++ 659470	17423 1416282	51070 2798783	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 155584	5376 346235	10488 719012	21150 1532867	59340 3009068	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 165754	5189 369600	10066 783879	22215 1677181	61443 3381888	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	6779 336279	11744 715966	24790 1469948	49243 3103222	129198 6012505	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	1557 91510	3120 192987	6520 395113	13406 846792	35149 1619482	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 68694	++++ 156406	++++ 338784	7267 738442	24199 1478910	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	4430 271846	7451 617174	16103 1311808	33778 2812660	94584 5503585	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 109095	++++ 233063	7429 477723	15759 1000926	40600 1936591	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	DFBZ	Ave	++++ 855982	++++ 1781529	++++ 3620641	++++ 7753468	++++ 14589114	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 199953	++++ 431756	12712 900939	25676 1926667	73769 3761382	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3234 168145	6255 358488	12031 719415	25138 1498188	63725 2918044	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	5465 295002	10833 622855	21742 1278293	43900 2714425	113462 5263414	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	9121 491615	17474 1050972	35735 2145561	69322 4515180	189812 8578718	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	14827 820994	28347 1718390	59080 3492522	119367 7245395	316153 13520878	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	++++ 263744	++++ 631165	14982 1405685	32037 2987666	89888 5904670	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd 5	Ave	++++ 268745	++++ 593262	15265 1255220	32117 2732738	91899 5258738	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	7608 428791	14440 897122	32097 1814388	63851 3789404	169158 7137002	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Nonane	CBZd 5	Ave	++++ 164273	++++ 340741	11326 686883	23460 1427330	65019 2663319	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	3859 223872	6581 480219	14484 935594	30142 2143813	83793 4060026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 106933	++++ 225670	7400 461156	15160 1003093	40330 1925261	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 589911	++++ 1239416	46548 2553866	91067 5375264	232238 10111819	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	2952 172077	5565 356669	11527 735475	24106 1538516	64393 2931395	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 156859	5132 320641	11745 653681	22951 1366689	59552 2595696	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	10337 652888	20634 1384436	45329 2809081	91082 5946732	243377 10941125	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	4521 267835	8388 551670	18627 1121740	37553 2393487	98748 4520211	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 235120	++++ 542707	++++ 1140621	28257 2523695	77610 4814736	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 237483	++++ 489862	15703 987208	33292 2090024	87862 3864099	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11027 653325	21429 1326146	46562 2644216	97365 5469769	252400 10102100	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	9514 597546	19133 1240172	42935 2478370	88253 5126755	231880 9441765	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7986 411115	14097 863153	31633 1751738	61425 3707873	157370 6991250	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	13837 799929	27386 1651103	57824 3316313	116417 6942238	302828 12374020	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 434461	++++ 984275	27963 2125520	54221 4487660	149421 8537696	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	8118 419983	14770 862511	31188 1725619	63275 3610216	157774 6830228	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	14042 809499	27559 1677824	56711 3366403	116224 7014221	307780 12712650	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	10719 636168	20298 1329610	47349 2652674	92640 5581569	237762 10276226	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	7793 400754	15537 829934	31984 1669523	62682 3498467	153773 6628325	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	9654 519916	17767 1063787	37591 2153540	77218 4473280	195256 8276746	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 416558	++++ 909289	26287 1898638	56129 4170791	144394 7874065	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	12135 652919	21840 1341073	46679 2705337	97253 5666096	247354 10272864	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 279455	++++ 588913	++++ 1182131	40009 2383371	102646 4439100	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 201092	++++ 458234	11163 986255	24464 2000539	65829 3914341	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 736323	++++ 1609444	54539 3260653	111338 6434741	265327 12213199	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 268129	++++ 664765	++++ 1343815	45141 2322024	92125 4919414	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 412431	++++ 944306	36794 1940306	72153 3522363	147015 7444026	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 719521	++++ 1821564	44394 3797602	71658 6820345	142183 247207 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Hexachlorobutadiene	CBZd 5	Ave	++++ 517445	++++ 1070672	43683 2166873	81808 3886960	188387 8160248	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 391665	++++ 908417	36693 1865471	72007 3177370	138621 7108780	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 124366	++++ 707384	++++ 1636134	++++ 2060557	++++ 6192720	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 135206	++++ 641933	++++ 1437560	++++ 1675488	++++ 5133017	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1129964 1197793	1096528 1269845	1100173 1293730	1123241 1339226	1170099 1332053	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	9.7						50			
Propene	+++++	+++++	+++++	15.4						50		
Dichlorodifluoromethane	+++++	+++++	4.3						50			
Chloromethane	+++++	+++++	40.9						50			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	20.3						50				
Vinyl chloride	24.8						50					
1,3-Butadiene	+++++	+++++	+++++	7.9						50		
Butane	+++++	+++++	16.3						50			
Bromomethane	+++++	+++++	15.5						50			
Chloroethane	+++++	+++++	21.2						50			
Ethanol	+++++	+++++	+++++	9.7						50		
Vinyl bromide	+++++	+++++	11.5						50			
2-Methylbutane	+++++	+++++	8.0						50			
Acrolein	+++++	+++++	+++++	34.3						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Trichlorofluoromethane	13.0						50					
Acetonitrile	+++++	+++++	+++++	1.7						50		
Acetone	+++++	+++++	+++++	38.8						80		
Pentane	+++++	+++++	+++++	19.9						50		
Isopropyl alcohol	+++++	+++++	+++++	11.2						50		
Ethyl ether	+++++	+++++	+++++	6.4						50		
1,1-Dichloroethene	16.5						50					
Acrylonitrile	+++++	+++++	+++++	+++++	-0.4						50	
tert-Butyl alcohol	+++++	+++++	0.1						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.2						50				
Methylene Chloride	+++++	+++++	+++++	51.2						80		
3-Chloropropene	+++++	+++++	-10.0						50			
Carbon disulfide	+++++	+++++	0.7						50			
trans-1,2-Dichloroethene	10.9						50					
2-Methylpentane	+++++	+++++	3.6						50			
Methyl tert-butyl ether	+++++	+++++	4.0						50			
1,1-Dichloroethane	11.6						50					
Vinyl acetate	+++++	+++++	+++++	-12.5						50		
2-Butanone (MEK)	+++++	+++++	+++++	5.7						50		
Hexane	+++++	+++++	8.0						50			
cis-1,2-Dichloroethene	11.9						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-10.0						50			
Chloroform	10.8						50					
Tetrahydrofuran	+++++	+++++	+++++	-0.9						50		
1,1,1-Trichloroethane	2.6						50					
1,2-Dichloroethane	6.3						50					
Benzene	15.6						50					
Cyclohexane	+++++	+++++	+++++	-1.0						50		
1-Butanol	+++++	+++++	+++++	+++++	-28.5						50	
Carbon tetrachloride	0.7						50					
2,3-Dimethylpentane	+++++	+++++	-10.2						50			
Thiophene	+++++	+++++	-4.4						50			
2,2,4-Trimethylpentane	+++++	+++++	3.7						50			
1,2-Dichloropropane	+++++	+++++	4.1						50			
Heptane	+++++	+++++	-5.1						50			
Trichloroethene	6.7						50					
Dibromomethane	+++++	+++++	6.0						50			
Bromodichloromethane	+++++	+++++	-9.3						50			
1,4-Dioxane	+++++	+++++	+++++	-0.2						50		
Methyl methacrylate	+++++	+++++	-6.0						50			
Methylcyclohexane	+++++	+++++	-1.3						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	-20.2						50		

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.9						50				
trans-1,3-Dichloropropene	+++++	-13.7						50				
Toluene	6.2						50					
1,1,2-Trichloroethane	-8.0						50					
2-Hexanone	+++++	+++++	+++++	-30.3						50		
Dibromochloromethane	-10.2						50					
Octane	+++++	+++++	-4.3						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-10.3						50			
Tetrachloroethene	2.3						50					
Chlorobenzene	-2.0						50					
Ethylbenzene	-0.8						50					
m-Xylene & p-Xylene	-1.7						50					
Bromoform	+++++	+++++	-24.3						50			
Styrene	+++++	+++++	-19.2						50			
o-Xylene	-4.0						50					
Nonane	+++++	+++++	-1.3						50			
1,1,2,2-Tetrachloroethane	-4.2						50					
1,2,3-Trichloropropane	+++++	+++++	-3.0						50			
Isopropylbenzene	+++++	+++++	8.1						50			
Propylbenzene	-4.7						50					
2-Chlorotoluene	+++++	-7.3						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	-11.7						50					
1,3,5-Trimethylbenzene	-5.7						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-20.5						50		
Decane	+++++	+++++	-3.8						50			
tert-Butylbenzene	-5.5						50					
1,2,4-Trimethylbenzene	-11.0						50					
1,3-Dichlorobenzene	3.4						50					
sec-Butylbenzene	-4.2						50					
Benzyl chloride	+++++	+++++	-11.2						50			
1,4-Dichlorobenzene	4.7						50					
4-Isopropyltoluene	-3.7						50					
1,2,3-Trimethylbenzene	-6.7						50					
1,2-Dichlorobenzene	2.3						50					
Indane	1.9						50					
Indene	+++++	+++++	-11.5						50			
Butylbenzene	2.2						50					
Undecane	+++++	+++++	+++++	1.3						50		
1,2-Dibromo-3-Chloropropane	+++++	+++++	-21.2						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	3.8						50			
Dodecane	+++++	+++++	+++++	9.2						50		
1,2,4-Trichlorobenzene	+++++	+++++	17.1						50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	38.2		+++++				80				
Hexachlorobutadiene	+++++	+++++	19.6						50			
1,2,3-Trichlorobenzene	+++++	+++++	21.5						50			
2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-54.8						80
1-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-44.3						80

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 06/28/2017 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/28/2017 21:58
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6999	0.3362			2.00	<u>-52.0*</u>	35.0
3-Methylthiophene	Ave	0.6908	0.7960			2.00	15.2	35.0
2-Ethylthiophene	Ave	0.9153	1.134			2.00	23.9	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.640			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.275			2.00	<u>39.5*</u>	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.768			2.00	<u>43.0*</u>	35.0
Benzo (b) thiophene	Ave	0.9147	1.487			2.00	<u>62.6*</u>	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.256		1.90	2.00	-4.9	35.0
Propene	Ave	0.7296	0.6790		1.86	2.00	-6.9	35.0
Dichlorodifluoromethane	Ave	4.352	5.057		2.32	2.00	16.2	35.0
Chloromethane	Ave	0.3061	0.2731		1.78	2.00	-10.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	3.469		2.14	2.00	7.1	35.0
Acetaldehyde	Ave	0.2860	0.2397		8.38	10.0	-16.2	35.0
Vinyl chloride	Ave	1.073	0.9669		1.80	2.00	-9.9	35.0
1,3-Butadiene	Ave	0.6506	0.6233		1.92	2.00	-4.2	35.0
Butane	Ave	1.132	1.086		1.92	2.00	-4.0	35.0
Bromomethane	Ave	1.235	1.146		1.86	2.00	-7.2	35.0
Chloroethane	Ave	0.4970	0.4655		1.87	2.00	-6.3	35.0
Ethanol	Ave	0.2997	0.2300		7.67	10.0	-23.3	35.0
Vinyl bromide	Ave	1.302	1.320		2.03	2.00	1.4	35.0
2-Methylbutane	Ave	0.7999	0.7818		1.95	2.00	-2.3	35.0
Acrolein	Ave	0.2528	0.2785		2.20	2.00	10.2	35.0
Trichlorofluoromethane	Ave	5.912	5.646		1.91	2.00	-4.5	35.0
Acetonitrile	Ave	0.2586	0.2377		1.84	2.00	-8.1	35.0
Acetone	Ave	0.4151	0.3821		1.84	2.00	-7.9	35.0
Pentane	Ave	0.2011	0.2005		1.99	2.00	-0.3	35.0
Isopropyl alcohol	Ave	1.132	1.401		2.48	2.00	23.8	35.0
Ethyl ether	Ave	0.6661	0.5684		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.408	1.325		1.88	2.00	-5.9	35.0
Acrylonitrile	Ave	0.6277	0.6236		1.99	2.00	-0.6	35.0
tert-Butyl alcohol	Ave	2.677	2.710		2.02	2.00	1.2	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.433		1.97	2.00	-1.6	35.0
Methylene Chloride	Ave	1.338	1.169		1.75	2.00	-12.6	35.0
3-Chloropropene	Ave	1.309	1.297		1.98	2.00	-0.9	35.0
Carbon disulfide	Ave	3.341	3.259		1.95	2.00	-2.4	35.0
trans-1,2-Dichloroethene	Ave	1.436	1.363		1.90	2.00	-5.1	35.0
2-Methylpentane	Ave	1.894	1.705		1.80	2.00	-10.0	35.0
Methyl tert-butyl ether	Ave	4.568	4.614		2.02	2.00	1.0	35.0
1,1-Dichloroethane	Ave	2.402	2.312		1.92	2.00	-3.8	35.0
Vinyl acetate	Ave	2.320	2.445		2.11	2.00	5.4	35.0
2-Butanone (MEK)	Ave	0.5446	0.5251		1.93	2.00	-3.6	35.0
Hexane	Ave	0.8352	0.8172		1.96	2.00	-2.2	35.0
Isopropyl ether	Ave	2.873	2.961		2.06	2.00	3.0	35.0
cis-1,2-Dichloroethene	Ave	1.448	1.418		1.96	2.00	-2.1	35.0
Ethyl acetate	Ave	2.012	1.960		1.95	2.00	-2.6	35.0
Chloroform	Ave	3.821	3.708		1.94	2.00	-3.0	35.0
Tert-butyl ethyl ether	Ave	4.141	3.948		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.8745		1.97	2.00	-1.3	35.0
1,1,1-Trichloroethane	Ave	4.843	4.775		1.97	2.00	-1.4	35.0
1,2-Dichloroethane	Ave	0.5063	0.5017		1.98	2.00	-0.9	35.0
Benzene	Ave	0.6517	0.6483		1.99	2.00	-0.5	35.0
Cyclohexane	Ave	0.0968	0.1018		2.10	2.00	5.2	35.0
1-Butanol	Ave	0.0462	0.0484		2.09	2.00	4.7	35.0
Carbon tetrachloride	Ave	0.9167	0.9855		2.15	2.00	7.5	35.0
2,3-Dimethylpentane	Ave	0.1349	0.1359		2.01	2.00	0.7	35.0
Thiophene	Ave	0.3728	0.3687		1.98	2.00	-1.1	35.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8439		2.02	2.00	1.2	35.0
1,2-Dichloropropane	Ave	0.2045	0.2036		1.99	2.00	-0.5	35.0
Heptane	Ave	0.2083	0.2143		2.06	2.00	2.8	35.0
Trichloroethene	Ave	0.3929	0.3984		2.03	2.00	1.4	35.0
Dibromomethane	Ave	0.3514	0.3500		1.99	2.00	-0.4	35.0
Bromodichloromethane	Ave	0.6587	0.6852		2.08	2.00	4.0	35.0
1,4-Dioxane	Ave	0.0994	0.1029		2.07	2.00	3.5	35.0
Methyl methacrylate	Ave	0.2275	0.2348		2.06	2.00	3.2	35.0
Methylcyclohexane	Ave	0.4024	0.4961		2.47	2.00	23.3	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3776		2.08	2.00	4.1	35.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4285		2.17	2.00	8.5	35.0
trans-1,3-Dichloropropene	Ave	0.4674	0.5177		2.22	2.00	10.8	35.0
Toluene	Ave	0.9586	0.9853		2.06	2.00	2.8	35.0
1,1,2-Trichloroethane	Ave	0.2543	0.2613		2.05	2.00	2.7	35.0
2-Hexanone	Ave	0.2006	0.2098		2.09	2.00	4.6	35.0
Dibromochloromethane	Ave	0.7414	0.8418		2.27	2.00	13.5	35.0
Octane	Ave	0.3054	0.3220		2.11	2.00	5.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5875		2.11	2.00	5.4	35.0
Tetrachloroethene	Ave	0.4749	0.4840		2.04	2.00	1.9	35.0
Chlorobenzene	Ave	0.8374	0.8605		2.06	2.00	2.8	35.0
2,3-Dimethylheptane	Ave	0.5626	0.5171		1.84	2.00	-8.1	35.0
Ethylbenzene	Ave	1.382	1.443		2.09	2.00	4.4	35.0
m-Xylene & p-Xylene	Ave	1.133	1.199		4.23	4.00	5.8	35.0
Bromoform	Ave	0.7786	0.8773		2.25	2.00	12.7	35.0
Styrene	Ave	0.7430	0.8258		2.22	2.00	11.1	35.0
o-Xylene	Ave	1.190	1.212		2.04	2.00	1.8	35.0
Nonane	Ave	0.4511	0.4700		2.08	2.00	4.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6491		2.15	2.00	7.3	35.0
1,2,3-Trichloropropane	Ave	0.3000	0.3085		2.06	2.00	2.8	35.0
Isopropylbenzene	Ave	1.694	1.742		2.06	2.00	2.8	35.0
Propylbenzene	Ave	0.4652	0.5071		2.18	2.00	9.0	35.0
2-Chlorotoluene	Ave	0.4306	0.4514		2.10	2.00	4.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.816		2.06	2.00	3.2	35.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.8591		2.39	2.00	19.3	35.0
Alpha Methyl Styrene	Ave	0.6844	0.7376		2.16	2.00	7.8	35.0
Decane	Ave	0.6421	0.6805		2.12	2.00	6.0	35.0
tert-Butylbenzene	Ave	1.753	1.837		2.10	2.00	4.8	35.0
1,2,4-Trimethylbenzene	Ave	1.607	1.694		2.11	2.00	5.5	35.0
1,3-Dichlorobenzene	Ave	1.160	1.185		2.04	2.00	2.2	35.0
sec-Butylbenzene	Ave	2.171	2.287		2.11	2.00	5.4	35.0
Benzyl chloride	Ave	1.239	1.386		2.24	2.00	11.9	35.0
1,4-Dichlorobenzene	Ave	1.164	1.184		2.03	2.00	1.7	35.0
4-Isopropyltoluene	Ave	2.191	2.267		2.07	2.00	3.5	35.0
1,2,3-Trimethylbenzene	Ave	1.725	1.385		1.61	2.00	-19.7	35.0
Butylcyclohexane	Ave	0.9488	0.9354		1.97	2.00	-1.4	35.0
1,2-Dichlorobenzene	Ave	1.144	1.144		2.00	2.00	-0.0	35.0
Indane	Ave	1.423	1.451		2.04	2.00	2.0	35.0
Indene	Ave	1.168	1.080		1.85	2.00	-7.6	35.0
Butylbenzene	Ave	1.784	1.888		2.12	2.00	5.8	35.0
Undecane	Ave	0.7598	0.8223		2.16	2.00	8.2	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5157		1.85	2.00	-7.4	35.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.082		2.01	2.00	0.7	35.0
Dodecane	Ave	0.7957	0.9180		2.31	2.00	15.4	35.0
1,2,4-Trichlorobenzene	Ave	1.235	1.334		2.16	2.00	7.9	35.0
Naphthalene	Ave	2.498	2.601		2.08	2.00	4.1	35.0
Hexachlorobutadiene	Ave	1.436	1.487		2.07	2.00	3.5	35.0
1,2,3-Trichlorobenzene	Ave	1.187	1.295		2.18	2.00	9.1	35.0
2-Methylnaphthalene	Ave	0.7935	1.016		2.56	2.00	28.1	50.0
1-Methylnaphthalene	Ave	0.6999	0.9471		2.71	2.00	<u>35.3</u>	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8473		3.98	4.00	-0.4	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab File ID: RBFBB25.D BFB Injection Date: 02/25/2019
 Instrument ID: MR BFB Injection Time: 09:32
 Analysis Batch No.: 27908

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.3	
75	30.0 - 60.0 % of mass 95	59.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	88.3	
175	5.0 - 9.0 % of mass 174	6.6	(7.5) 1
176	95.0 - 101.0 % of mass 174	85.5	(96.9) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27908/2	RCCVB25.D	02/25/2019	10:00
	LCS 140-27908/1002	RCCVB25-LCS. d	02/25/2019	10:00
	MB 140-27908/5	R500BB25.D	02/25/2019	12:52
IA-138-A-26	140-14386-1	RB25P101.D	02/25/2019	17:10
IA-093-A-26	140-14386-2	RB25P102.D	02/25/2019	17:59
IA-174-A-26	140-14386-3	RB25P103.D	02/25/2019	18:48
IA-018-A-26	140-14386-4	RB25P104.D	02/25/2019	19:37
IA-DUP03-A-26	140-14386-5	RB25P105.D	02/25/2019	20:26
IA-015-A-26	140-14386-6	RB25P106.D	02/25/2019	21:14
IA-118-A-26	140-14386-7	RB25P107.D	02/25/2019	22:03
IA-168-A-26	140-14386-8	RB25P108.D	02/25/2019	22:53
IA-081-A-26	140-14386-9	RB25P109.D	02/25/2019	23:42
IA-079-A-26	140-14386-10	RB25P110.D	02/26/2019	00:31
IA-DUP04-A-26	140-14386-11	RB25P111.D	02/26/2019	01:20
IA-117-A-26	140-14386-12	RB25P112.D	02/26/2019	02:09
IA-078-A-26	140-14386-13	RB25P113.D	02/26/2019	02:58
IA-136-A-26	140-14386-14	RB25P114.D	02/26/2019	03:47
IA-076-A-26	140-14386-15	RB25P115.D	02/26/2019	04:36
IA-075-A-26	140-14386-16	RB25P116.D	02/26/2019	05:25

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27908/2 Calibration Date: 02/25/2019 10:00
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.162		1.82	2.00	-8.9	30.0
Propene	Ave	0.7296	0.6455		1.77	2.00	-11.5	30.0
Dichlorodifluoromethane	Ave	4.352	4.061		1.87	2.00	-6.7	30.0
Chloromethane	Ave	0.3061	0.2865		1.87	2.00	-6.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	2.764		1.71	2.00	-14.7	30.0
Acetaldehyde	Ave	0.2860	0.3294		11.5	10.0	15.2	30.0
Vinyl chloride	Ave	1.073	1.175		2.19	2.00	9.5	30.0
1,3-Butadiene	Ave	0.6506	0.8129		2.50	2.00	24.9	30.0
Butane	Ave	1.132	1.382		2.44	2.00	22.1	30.0
Bromomethane	Ave	1.235	1.454		2.35	2.00	17.7	30.0
Chloroethane	Ave	0.4970	0.5842		2.35	2.00	17.5	30.0
Ethanol	Ave	0.2997	0.3902		13.0	10.0	30.2*	30.0
Vinyl bromide	Ave	1.302	1.551		2.38	2.00	19.2	30.0
2-Methylbutane	Ave	0.7999	1.034		2.59	2.00	29.3	30.0
Acrolein	Ave	0.2528	0.3437		2.72	2.00	35.9*	30.0
Trichlorofluoromethane	Ave	5.912	7.050		2.38	2.00	19.2	30.0
Acetonitrile	Ave	0.2586	0.3421		2.65	2.00	32.3*	30.0
Acetone	Ave	0.4151	0.4842		7.00	6.00	16.7	30.0
Isopropyl alcohol	Ave	1.132	1.506		7.98	6.00	33.1*	30.0
Pentane	Ave	0.2011	0.2437		2.42	2.00	21.2	30.0
Ethyl ether	Ave	0.6661	0.7939		2.38	2.00	19.2	30.0
1,1-Dichloroethene	Ave	1.408	1.311		1.86	2.00	-6.9	30.0
Acrylonitrile	Ave	0.6277	0.6611		2.11	2.00	5.3	30.0
tert-Butyl alcohol	Ave	2.677	2.599		1.94	2.00	-2.9	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.471		1.99	2.00	-0.5	30.0
Methylene Chloride	Ave	1.338	1.113		1.66	2.00	-16.8	30.0
3-Chloropropene	Ave	1.309	1.405		2.15	2.00	7.3	30.0
Carbon disulfide	Ave	3.341	3.268		1.96	2.00	-2.2	30.0
trans-1,2-Dichloroethene	Ave	1.436	1.325		1.85	2.00	-7.7	30.0
2-Methylpentane	Ave	1.894	2.190		2.31	2.00	15.6	30.0
Methyl tert-butyl ether	Ave	4.568	4.416		1.93	2.00	-3.3	30.0
1,1-Dichloroethane	Ave	2.402	2.252		1.87	2.00	-6.3	30.0
Vinyl acetate	Ave	2.320	2.626		2.26	2.00	13.2	30.0
2-Butanone (MEK)	Ave	0.5446	0.5037		1.85	2.00	-7.5	30.0
Hexane	Ave	0.8352	0.8820		2.11	2.00	5.6	30.0
Isopropyl ether	Ave	2.873	2.990		2.08	2.00	4.1	30.0
cis-1,2-Dichloroethene	Ave	1.448	1.362		1.88	2.00	-5.9	30.0
Ethyl acetate	Ave	2.012	2.137		2.12	2.00	6.2	30.0
Chloroform	Ave	3.821	3.589		1.88	2.00	-6.1	30.0
Tert-butyl ethyl ether	Ave	4.141	4.182		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27908/2 Calibration Date: 02/25/2019 10:00
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.9460		2.14	2.00	6.8	30.0
1,1,1-Trichloroethane	Ave	4.843	4.554		1.88	2.00	-6.0	30.0
1,2-Dichloroethane	Ave	0.5063	0.4676		1.85	2.00	-7.6	30.0
Benzene	Ave	0.6517	0.6058		1.86	2.00	-7.1	30.0
1-Butanol	Ave	0.0462	0.0514		2.22	2.00	11.2	30.0
Cyclohexane	Ave	0.0968	0.1052		2.17	2.00	8.6	30.0
Carbon tetrachloride	Ave	0.9167	0.9170		2.00	2.00	0.0	30.0
2,3-Dimethylpentane	Ave	0.1349	0.1357		2.01	2.00	0.6	30.0
Thiophene	Ave	0.3728	0.3638		1.95	2.00	-2.4	30.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8478		2.03	2.00	1.6	30.0
1,2-Dichloropropane	Ave	0.2045	0.1983		1.94	2.00	-3.1	30.0
Heptane	Ave	0.2083	0.2084		2.00	2.00	0.0	30.0
Trichloroethene	Ave	0.3929	0.3715		1.89	2.00	-5.4	30.0
Dibromomethane	Ave	0.3514	0.3324		1.89	2.00	-5.4	30.0
Bromodichloromethane	Ave	0.6587	0.6299		1.91	2.00	-4.4	30.0
1,4-Dioxane	Ave	0.0994	0.0936		1.88	2.00	-5.8	30.0
Methyl methacrylate	Ave	0.2275	0.2356		2.07	2.00	3.5	30.0
Methylcyclohexane	Ave	0.4024	0.3863		1.92	2.00	-4.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3965		2.19	2.00	9.3	30.0
cis-1,3-Dichloropropene	Ave	0.3948	0.3969		2.01	2.00	0.5	30.0
trans-1,3-Dichloropropene	Ave	0.4674	0.4706		2.01	2.00	0.7	30.0
Toluene	Ave	0.9586	0.9694		2.02	2.00	1.1	30.0
1,1,2-Trichloroethane	Ave	0.2543	0.2526		1.99	2.00	-0.7	30.0
2-Hexanone	Ave	0.2006	0.2079		2.07	2.00	3.7	30.0
Dibromochloromethane	Ave	0.7414	0.8071		2.18	2.00	8.9	30.0
Octane	Ave	0.3054	0.3278		2.15	2.00	7.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5591		2.01	2.00	0.3	30.0
Tetrachloroethene	Ave	0.4749	0.4778		2.01	2.00	0.6	30.0
Chlorobenzene	Ave	0.8374	0.8419		2.01	2.00	0.5	30.0
2,3-Dimethylheptane	Ave	0.5626	0.6802		2.42	2.00	20.9	30.0
Ethylbenzene	Ave	1.382	1.422		2.06	2.00	2.9	30.0
m-Xylene & p-Xylene	Ave	1.133	1.217		4.30	4.00	7.4	30.0
Bromoform	Ave	0.7786	0.8569		2.20	2.00	10.1	30.0
Styrene	Ave	0.7430	0.7974		2.15	2.00	7.3	30.0
o-Xylene	Ave	1.190	1.257		2.11	2.00	5.6	30.0
Nonane	Ave	0.4511	0.5478		2.43	2.00	21.4	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6407		2.12	2.00	5.9	30.0
1,2,3-Trichloropropane	Ave	0.3000	0.2866		1.91	2.00	-4.5	30.0
Isopropylbenzene	Ave	1.694	1.699		2.01	2.00	0.3	30.0
Propylbenzene	Ave	0.4652	0.4653		2.00	2.00	0.0	30.0
2-Chlorotoluene	Ave	0.4306	0.4320		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27908/2 Calibration Date: 02/25/2019 10:00
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.764		2.01	2.00	0.3	30.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.7290		2.03	2.00	1.3	30.0
Alpha Methyl Styrene	Ave	0.6844	0.6787		1.98	2.00	-0.8	30.0
Decane	Ave	0.6421	0.7332		2.28	2.00	14.2	30.0
tert-Butylbenzene	Ave	1.753	1.770		2.02	2.00	1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.607	1.692		2.11	2.00	5.3	30.0
1,3-Dichlorobenzene	Ave	1.160	1.112		1.92	2.00	-4.1	30.0
sec-Butylbenzene	Ave	2.171	2.140		1.97	2.00	-1.4	30.0
Benzyl chloride	Ave	1.239	1.296		2.09	2.00	4.6	30.0
1,4-Dichlorobenzene	Ave	1.164	1.146		1.97	2.00	-1.6	30.0
4-Isopropyltoluene	Ave	2.191	2.229		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	1.725	1.791		2.08	2.00	3.8	30.0
Butylcyclohexane	Ave	0.9488	0.9563		2.02	2.00	0.8	30.0
1,2-Dichlorobenzene	Ave	1.144	1.079		1.89	2.00	-5.7	30.0
Indane	Ave	1.423	1.422		2.00	2.00	-0.0	30.0
Indene	Ave	1.168	1.178		2.02	2.00	0.8	30.0
Butylbenzene	Ave	1.784	1.774		1.99	2.00	-0.6	30.0
Undecane	Ave	0.7598	0.8651		2.28	2.00	13.9	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5992		2.15	2.00	7.5	30.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.039		1.97	2.00	-1.3	30.0
Dodecane	Ave	0.7957	0.8800		2.21	2.00	10.6	30.0
1,2,4-Trichlorobenzene	Ave	1.235	1.150		1.86	2.00	-6.9	30.0
Naphthalene	Ave	2.498	2.097		1.68	2.00	-16.0	30.0
Hexachlorobutadiene	Ave	1.436	1.299		1.81	2.00	-9.6	30.0
1,2,3-Trichlorobenzene	Ave	1.187	1.065		1.79	2.00	-10.3	30.0
2-Methylnaphthalene	Ave	0.7935	0.9775		2.46	2.00	23.2	50.0
1-Methylnaphthalene	Ave	0.6999	1.087		3.11	2.00	<u>55.3*</u>	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.9066		4.26	4.00	6.6	30.0

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Sample No.: ICIS 140-26755/15 Date Analyzed: 01/11/2019 21:07
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GAl1IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	437891	9.25	2708081	11.42	2541912	16.10
UPPER LIMIT	613047	9.58	3791313	11.75	3558677	16.43
LOWER LIMIT	262735	8.92	1624849	11.09	1525147	15.77
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-26755/18	423755	9.24	2327828	11.42	2182908	16.09

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Sample No.: CCVIS 140-27931/2 Date Analyzed: 02/26/2019 11:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	496382	9.23	2758157	11.41	2578216	16.08	
UPPER LIMIT	694935	9.56	3861420	11.74	3609502	16.41	
LOWER LIMIT	297829	8.90	1654894	11.08	1546930	15.75	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27931/1002	496382	9.23	2758157	11.41	2578216	16.08	
MB 140-27931/4	508819	9.23	2920722	11.41	2502760	16.08	
140-14386-17	IA-021-A-26	472126	9.28	2779341	11.42	2424108	16.08
140-14386-18	SV-178-MB-3	467181	9.23	2830006	11.40	2459421	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Sample No.: ICIS 140-25490/14 Date Analyzed: 11/17/2018 02:58
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RK16IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	298864	7.40	1677758	9.49	1487799	14.56
UPPER LIMIT	418410	7.73	2348861	9.82	2082919	14.89
LOWER LIMIT	179318	7.07	1006655	9.16	892679	14.23
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-25490/18	299493	7.38	1671036	9.48	1499042	14.55

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Sample No.: CCVIS 140-27908/2 Date Analyzed: 02/25/2019 10:00
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RCCVB25.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	212957	7.39	1252120	9.45	1073297	14.50	
UPPER LIMIT	298140	7.72	1752968	9.78	1502616	14.83	
LOWER LIMIT	127774	7.06	751272	9.12	643978	14.17	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27908/1002	212957	7.39	1252120	9.45	1073297	14.50	
MB 140-27908/5	194923	7.39	1132283	9.45	994580	14.50	
140-14386-1	IA-138-A-26	199740	7.38	1149358	9.44	1000642	14.50
140-14386-2	IA-093-A-26	185844	7.38	1121771	9.44	980973	14.50
140-14386-3	IA-174-A-26	192317	7.38	1128796	9.44	981084	14.50
140-14386-4	IA-018-A-26	196545	7.38	1163087	9.45	1010502	14.50
140-14386-5	IA-DUP03-A-26	195628	7.38	1146962	9.44	1007644	14.50
140-14386-6	IA-015-A-26	194942	7.40	1150441	9.46	1002804	14.50
140-14386-7	IA-118-A-26	197063	7.39	1129359	9.46	1003724	14.50
140-14386-8	IA-168-A-26	206642	7.41	1211742	9.46	1068296	14.50
140-14386-9	IA-081-A-26	198942	7.39	1157802	9.45	1032178	14.50
140-14386-10	IA-079-A-26	197950	7.40	1152660	9.46	1034179	14.50
140-14386-11	IA-DUP04-A-26	191537	7.40	1146530	9.46	1017138	14.50
140-14386-12	IA-117-A-26	207494	7.40	1213292	9.46	1072962	14.50
140-14386-13	IA-078-A-26	209949	7.41	1254500	9.46	1098725	14.50
140-14386-14	IA-136-A-26	212893	7.41	1257934	9.47	1117228	14.50
140-14386-15	IA-076-A-26	218083	7.41	1273185	9.47	1123585	14.50
140-14386-16	IA-075-A-26	211063	7.42	1248854	9.47	1112726	14.50

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

LOCKHEED MARTIN CORPORATION (LMC) - MIDDLE RIVER COMPLEX (MRC)
SDG 140-14386-1

SAMPLE IDENTIFICATION

IA-138-A-26

COMPOUND

TRICHLOROETHENE

MW = 131.39

GAS CONSTANT = 24.45

COMPOUND AREA

12134

INTERNAL STANDARD AMOUNT (ppbv)

4

CALIBRATION VOLUME (mL)

500

DILUTION FACTOR

1

INTERNAL STANDARD AREA

1149358

AVERAGE RRF

0.3929

SAMPLE VOLUME (mL)

100

0.54 ppbv

2.89 $\mu\text{g}/\text{m}^3$

FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-138-A-26 Lab Sample ID: 140-14386-1
 Matrix: Air Lab File ID: RB25P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:54
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.43	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.16	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.54		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.59	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14386-1
 SDG No.: _____
 Client Sample ID: IA-138-A-26 Lab Sample ID: 140-14386-1
 Matrix: Air Lab File ID: RB25P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 16:54
 Sample wt/vol: 100 (mL) Date Analyzed: 02/25/2019 17:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27908 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.69	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.65	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190222-10923.b\RB25P101.D
 Lims ID: 140-14386-A-1
 Client ID: IA-138-A-26
 Sample Type: Client
 Inject. Date: 25-Feb-2019 17:10:30 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010923-009
 Misc. Info.: 140-14386-a-1
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190222-10923.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 18:57:10 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 19:04:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.385	-0.006	71	199740	4.00	
* 2 1,4-Difluorobenzene	114	9.444	9.450	-0.006	95	1149358	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.502	14.503	-0.001	91	1000642	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.228	16.228	0.000	89	849453	3.99	
6 Chlorodifluoromethane	51	3.518	3.513	0.005	52	10237	0.0864	
8 Dichlorodifluoromethane	85	3.561	3.556	0.005	98	12718	0.0585	
27 1,1-Dichloroethene	96	5.082	5.082	0.000	95	2299	0.0327	
31 Methylene Chloride	84	5.319	5.325	-0.006	93	20006	0.2994	
47 Benzene	78	8.884	8.889	-0.005	94	8110	0.0433	
56 Trichloroethene	130	10.199	10.199	0.000	95	12134	0.1075	
65 Toluene	91	12.416	12.416	0.000	93	28025	0.1169	
78 m-Xylene & p-Xylene	91	15.063	15.069	-0.006	99	22973	0.0810	
82 o-Xylene	91	15.602	15.603	-0.001	96	10732	0.0360	
S 121 Xylenes, Total	100				0		0.1171	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Sample Calculation - Page 5

Lab Name: TestAmerica Knoxville

Job No.: 140-14386-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	++++	++++	0.9023	0.8416	0.8376	Ave		0.8352			3.6		30.0				
	0.8187	0.8108	0.8291	0.8382	0.8031												
cis-1,2-Dichloroethene	1.6200	1.4958	1.4342	1.4272	1.3943	Ave		1.4479			4.6		30.0				
	1.4112	1.4310	1.4304	1.4418	1.3928												
Ethyl acetate	++++	++++	1.8097	1.9184	1.9214	Ave		2.0119			6.0		30.0				
	2.0207	2.0336	2.1099	2.1701	2.1110												
Chloroform	4.2334	4.0960	3.8341	3.7602	3.7763	Ave		3.8207			5.1		30.0				
	3.7394	3.6835	3.7449	3.7523	3.5872												
Tetrahydrofuran	++++	++++	++++	0.8784	0.8832	Ave		0.8862			1.5		30.0				
	0.8846	0.8714	0.8870	0.9150	0.8836												
1,1,1-Trichloroethane	4.9709	4.9939	5.0122	4.7467	4.7402	Ave		4.8434			2.4		30.0				
	4.7770	4.7670	4.8476	4.8764	4.7023												
1,2-Dichloroethane	0.5380	0.5327	0.5166	0.4858	0.4926	Ave		0.5063			3.5		30.0				
	0.5057	0.4936	0.4997	0.5068	0.4915												
Benzene	0.7533	0.7075	0.7019	0.6312	0.6214	Ave		0.6517			7.8		30.0				
	0.6321	0.6240	0.6266	0.6238	0.5956												
Cyclohexane	++++	++++	++++	0.0959	0.0939	Ave		0.0968			3.7		30.0				
	0.1013	0.0986	0.1001	0.0971	0.0911												
1-Butanol	++++	++++	++++	++++	0.0330	Ave		0.0462			14.9		30.0				
	0.0448	0.0477	0.0492	0.0516	0.0509												
Carbon tetrachloride	0.9231	0.9429	0.7537	0.9038	0.9350	Ave		0.9167			6.5		30.0				
	0.9489	0.9372	0.9263	0.9692	0.9273												
2,3-Dimethylpentane	++++	++++	0.1212	0.1277	0.1355	Ave		0.1349			5.2		30.0				
	0.1378	0.1390	0.1407	0.1410	0.1365												
Thiophene	++++	++++	0.3563	0.3607	0.3698	Ave		0.3728			2.9		30.0				
	0.3778	0.3718	0.3816	0.3893	0.3754												
2,2,4-Trimethylpentane	++++	++++	0.8652	0.8182	0.8128	Ave		0.8342			2.3		30.0				
	0.8423	0.8248	0.8393	0.8535	0.8176												
1,2-Dichloropropane	++++	++++	0.2130	0.1991	0.2024	Ave		0.2045			2.2		30.0				
	0.2041	0.2015	0.2054	0.2089	0.2020												
Heptane	++++	++++	0.1976	0.1979	0.2071	Ave		0.2083			3.5		30.0				
	0.2142	0.2122	0.2154	0.2154	0.2066												
Trichloroethene	0.4192	0.3851	0.4007	0.3771	0.3880	Ave		0.3929			4.2		30.0				
	0.3857	0.3869	0.4221	0.3913	0.3727												
Dibromomethane	++++	++++	0.3725	0.3565	0.3464	Ave		0.3514			3.1		30.0				
	0.3459	0.3374	0.3500	0.3576	0.3447												
Bromodichloromethane	++++	++++	0.5971	0.5918	0.6239	Ave		0.6587			7.4		30.0				
	0.6680	0.6726	0.7005	0.7174	0.6980												
1,4-Dioxane	++++	++++	++++	0.0992	0.0973	Ave		0.0994			3.2		30.0				
	0.0965	0.1030	0.1037	0.1007	0.0954												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.



TO: S. BRENNER **DATE:** APRIL 19, 2019

FROM: LEIGH A. CIOFANI **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION – VOC
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
SAMPLE DELIVERY GROUP (SDG) 140-14387-1

SAMPLES: 16 / Air / VOC

SV-081-A-26	SV-093-A-26	SV-116-A-26
SV-138-A-26	SV-171-A-26	SV-173-A-26
SV-174-A-26	SV-179-MB-3	SV-180-MB-3
SV-181-MB-3	SV-182-MB-3	SV-183-MB-3
SV-184-MB-3	SV-185-MB-3	SV-186-MB-3
SV-DUP03-A-26		

OVERVIEW

The sample set for LMC – MRC, SDG 140-14387-1, consists of sixteen (16) soil vapor (SV) environmental samples. All samples were analyzed for select volatile organic compounds (VOCs). One (1) field duplicate pair is included in this SDG: SV-116-A-26 / SV-DUP03-A-26.

The samples were collected by Tetra Tech on February 21, 2019, and analyzed by TestAmerica. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, laboratory control sample results, internal standard areas, field duplicate precision, chromatographic resolution, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

MAJOR PROBLEMS

- None.

MINOR PROBLEMS

- The continuing calibration performed on 02/25/19 at 09:47 on instrument MH had percent differences (%Ds) for 1,2,4-trichlorobenzene and naphthalene that were greater than the 20% quality control limit. Samples SV-180-MB-3, SV-179-MB-3, SV-181-MB-3, SV-182-MB-3, SV-183-MB-3, SV-184-MB-3, SV-185-MB-3, SV-186-MB-3, SV-116-A-26, SV-DUP03-A-26, SV-138-A-26, SV-093-A-26, SV-173-A-26, SV-174-A-26, SV-171-A-26, and SV-081-A-26 were affected. Detected and non-detected results for these analytes were qualified as estimated (J and UJ, respectively) in the affected samples.
- The laboratory control sample (LCS) associated with preparation batch 140-27935 had a percent recovery (%R) for naphthalene that was less than the laboratory quality control limits. The following samples were affected: SV-180-MB-3, SV-179-MB-3, SV-181-MB-3, SV-182-MB-3, SV-183-MB-3, SV-184-MB-3, SV-185-MB-3, SV-186-MB-3, SV-116-A-26, SV-DUP03-A-26, SV-138-A-26, SV-093-A-26, SV-173-A-26, SV-174-A-26, SV-171-A-26, and SV-081-A-26. The non-detected naphthalene results were qualified as estimated (UJ) in the affected samples.

TO: S. BRENNER
DATE: 04/19/19

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SDG 140-14387-1

- The laboratory qualified the results for 1,3,5-trimethylbenzene in sample SV-185-MB-3 with a "C1" qualifier. According to the laboratory report, this qualifier indicates that the peak identified by the data system exhibited chromatographic interference that could not be resolved, and there is reason to suspect there may be a high bias. This result was qualified as estimated (J+) with a high bias on this basis.
- Detected results reported below the RL but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

Non-detected results were reported to the MDL.

The chain of custody includes a sample SV-187-MB-3 but notes that this sample was not collected due to issue opening vapor canister.

The chain of custody includes a sample SV-170-A-26. The laboratory case narrative notes that this sample was not received.

The result for 1,2,3-trimethylbenzene in sample SV-081-A-26 exceeded the instrument calibration range during the initial analysis. The result was reported from the reanalysis.

The result for trichloroethene in sample SV-171-A-26 exceeded the instrument calibration range during the initial analysis. The result was reported from the reanalysis.

The results for 1,1-dichloroethene and trichloroethene in sample SV-173-A-26 exceeded the instrument calibration range during the initial analysis. The results were reported from the reanalysis.

The results for 1,1-dichloroethane in samples SV-182-MB-3 and SV-183-MB-3 exceeded the instrument calibration range during the initial analysis. The results were reported from the reanalyses.

The initial calibration performed on 01/11/19 on instrument MG had a percent relative standard deviation (%RSD) that was greater than the 30% quality control limit for methylene chloride. The reanalyses of samples SV-182-MB-3, SV-173-A-26, and SV-171-A-26 were affected. No qualification was necessary because no methylene chloride results were reported from these analyses.

The following analyte was detected in the method blanks at the following concentrations:

<u>Analyte</u>	<u>Maximum Concentration</u>	<u>< or > RL</u>
1,2,4-Trichlorobenzene	0.513 ug/m ³⁽¹⁾	< RL
1,2,4-Trichlorobenzene	0.505 ug/m ³⁽²⁾	< RL

1 - Concentration detected in method blank associated with preparation batch 140-27980 affecting the reanalysis of sample SV-081-A-26 DL.

2 - Concentration detected in method blank associated with preparation batch 140-27981 affecting the reanalysis of SV-183-MB-3.

No qualification was necessary because no results for 1,2,4-trichlorobenzene were reported from these reanalyses.

TO: S. BRENNER
DATE: 04/19/19

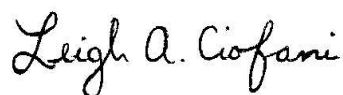
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EXECUTIVE SUMMARY


Laboratory Performance: Some results were qualified due to calibration noncompliance. Some VOC results were qualified due to LCS noncompliance. One result for one analyte was qualified due to chromatographic interference noted by the laboratory.

Other Factors Affecting Data Quality: Results above the MDL but below the RL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017) and USEPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.



Tetra Tech, Inc.
Leigh A. Ciofani
Environmental Scientist/Data Validator



Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:

- Appendix A – Qualified Analytical Results
- Appendix B – Results as Reported by the Laboratory
- Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Qualifier Codes:

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ($< 2 \times$ IDL for inorganics and $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors $>40\%$ for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids $<30\%$
- Z = Uncertainty at 2 standard deviations is greater than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed
- Z3 = Tentatively Identified Compound aldol condensate
- Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
- Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08388 SDG: 140-14387-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-081-A-26			SV-081-A-26-DL			SV-093-A-26			SV-116-A-26		
	LAB_ID	140-14387-18			140-14387-18			140-14387-13			140-14387-10		
	SAMP_DATE	2/21/2019			2/21/2019			2/21/2019			2/21/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	3.7						0.37	J	P	0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U					0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U					0.97	J	P	0.2	U		
1,1-DICHLOROETHENE	0.4	J	P				1.3	J	P	0.28	J	P	
1,2,3-TRIMETHYLBENZENE				550			0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	UJ	C				1.4	UJ	C	1.4	UJ	C	
1,2,4-TRIMETHYLBENZENE	50						0.61	U		0.61	U		
1,2-DICHLOROETHANE	0.38	U					0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	29						0.72	J	P	0.64	U		
BENZENE	0.37	U					0.65	J	P	0.81	J	P	
CARBON TETRACHLORIDE	0.47	U					0.47	U		0.47	U		
CHLORODIFLUOROMETHANE	1.7						1.2	J	P	1.2	J	P	
CHLOROFORM	1.6	J	P				0.37	U		1.7	J	P	
CIS-1,2-DICHLOROETHENE	0.48	U					0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	2.2						2.3			2.4			
ETHYLBENZENE	1.4	J	P				0.59	U		0.59	U		
METHYL TERT-BUTYL ETHER	1.2	U					1.2	U		1.2	U		
METHYLENE CHLORIDE	3.1	J	P				3.8	J	P	3.2	J	P	
NAPHTHALENE	1	UJ	CE				1	UJ	CE	1	UJ	CE	
TETRACHLOROETHENE	1.3	J	P				0.54	U		0.54	U		
TOLUENE	5.4						2.3	U		2.3	U		
TOTAL XYLENES	15						0.52	U		0.52	U		
TRANS-1,2-DICHLOROETHENE	0.4	U					0.4	U		0.4	U		
TRICHLOROETHENE	2.5						6.3			4.4			
VINYL CHLORIDE	0.37	U					0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14387-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-138-A-26			SV-171-A-26			SV-171-A-26-DL			SV-173-A-26		
	LAB_ID	140-14387-12			140-14387-16			140-14387-16			140-14387-14		
	SAMP_DATE	2/21/2019			2/21/2019			2/21/2019			2/21/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.36	J	P	0.99	J	P				2.4			
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U					0.57	U		
1,1-DICHLOROETHANE	3.1			8.7						21			
1,1-DICHLOROETHENE	13			250									
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U					0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	UJ	C	1.4	UJ	C				1.4	UJ	C	
1,2,4-TRIMETHYLBENZENE	0.61	U		0.61	U					0.61	U		
1,2-DICHLOROETHANE	0.38	U		0.38	U					0.5	J	P	
1,3,5-TRIMETHYLBENZENE	0.67	J	P	1.1	J	P				0.73	J	P	
BENZENE	0.6	J	P	0.62	J	P				0.68	J	P	
CARBON TETRACHLORIDE	0.47	U		0.47	U					0.47	U		
CHLORODIFLUOROMETHANE	1.4			1.1	J	P				1.1	J	P	
CHLOROFORM	0.41	J	P	4.4						5.4			
CIS-1,2-DICHLOROETHENE	8.2			37						94			
DICHLORODIFLUOROMETHANE	2.3			2.2						2.3			
ETHYLBENZENE	0.59	U		0.59	U					0.59	U		
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U					1.2	U		
METHYLENE CHLORIDE	3.1	J	P	4.8	J	P				2.6	J	P	
NAPHTHALENE	1	UJ	CE	1	UJ	CE				1	UJ	CE	
TETRACHLOROETHENE	0.89	J	P	0.54	U					0.54	U		
TOLUENE	2.3	U		2.4						2.4			
TOTAL XYLENES	0.52	U		1.2	J	P				1.2	J	P	
TRANS-1,2-DICHLOROETHENE	0.4	U		1.8						3.3			
TRICHLOROETHENE	110								1000				
VINYL CHLORIDE	0.37	U		0.37	U					0.37	U		

PROJ_NO: 08388 SDG: 140-14387-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-173-A-26-DL			SV-174-A-26			SV-179-MB-3			SV-180-MB-3		
	LAB_ID	140-14387-14			140-14387-15			140-14387-2			140-14387-1		
	SAMP_DATE	2/21/2019			2/21/2019			2/21/2019			2/21/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE				45			0.33	U		1.1	J	P	
1,1,2-TRICHLOROETHANE				0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE				9.1			8.5			0.94	J	P	
1,1-DICHLOROETHENE	260			18			0.29	J	P	0.28	U		
1,2,3-TRIMETHYLBENZENE				0.84	U		0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE				1.4	UJ	C	1.4	UJ	C	2.5	J	CP	
1,2,4-TRIMETHYLBENZENE				0.61	U		0.61	U		0.61	U		
1,2-DICHLOROETHANE				0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE				0.77	J	P	0.84	J	P	0.94	J	P	
BENZENE				0.44	J	P	0.37	U		0.4	J	P	
CARBON TETRACHLORIDE				0.47	U		0.47	U		0.47	U		
CHLORODIFLUOROMETHANE				1.4	J	P	1.3	J	P	1.2	J	P	
CHLOROFORM				5.9			0.37	U		0.37	U		
CIS-1,2-DICHLOROETHENE				4.7			0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE				2.2			2.3			2.1			
ETHYLBENZENE				0.59	U		0.59	U		0.59	U		
METHYL TERT-BUTYL ETHER				1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE				2.7	J	P	3.4	J	P	2.7	J	P	
NAPHTHALENE				1	UJ	CE	1	UJ	CE	1	UJ	CE	
TETRACHLOROETHENE				0.59	J	P	0.54	U		0.54	U		
TOLUENE				2.3	U		2.3	U		6.8			
TOTAL XYLENES				0.52	U		0.65	J	P	2.3	J	P	
TRANS-1,2-DICHLOROETHENE				0.4	U		0.4	U		0.4	U		
TRICHLOROETHENE	1700			110			2.5			0.38	U		
VINYL CHLORIDE				0.37	U		0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14387-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-181-MB-3			SV-182-MB-3			SV-182-MB-3-DL			SV-183-MB-3		
	LAB_ID	140-14387-3			140-14387-4			140-14387-4			140-14387-5		
	SAMP_DATE	2/21/2019			2/21/2019			2/21/2019			2/21/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.64	J	P	87						46			
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U					0.57	U		
1,1-DICHLOROETHANE	210						690						
1,1-DICHLOROETHENE	8.7			130						89			
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U					0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	UJ	C	1.4	UJ	C				1.4	UJ	C	
1,2,4-TRIMETHYLBENZENE	0.61	U		0.61	U					0.61	U		
1,2-DICHLOROETHANE	0.38	U		0.38	U					0.38	U		
1,3,5-TRIMETHYLBENZENE	0.85	J	P	0.93	J	P				0.95	J	P	
BENZENE	0.37	J	P	0.54	J	P				0.52	J	P	
CARBON TETRACHLORIDE	0.47	U		0.47	U					0.47	U		
CHLORODIFLUOROMETHANE	0.98	J	P	1.2	J	P				1.2	J	P	
CHLOROFORM	0.37	U		0.37	U					0.37	U		
CIS-1,2-DICHLOROETHENE	0.48	U		0.48	U					0.48	U		
DICHLORODIFLUOROMETHANE	2.3			2.3						2.4			
ETHYLBENZENE	0.59	U		0.59	U					0.59	U		
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U					1.2	U		
METHYLENE CHLORIDE	2.6	J	P	2.7	J	P				2.8	J	P	
NAPHTHALENE	1	UJ	CE	1	UJ	CE				1	UJ	CE	
TETRACHLOROETHENE	0.54	U		0.54	U					0.54	U		
TOLUENE	2.3	U		2.4						2.3	U		
TOTAL XYLENES	0.52	U		1.2	J	P				0.52	U		
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U					0.4	U		
TRICHLOROETHENE	0.38	U		0.5	J	P				0.44	J	P	
VINYL CHLORIDE	0.37	U		0.37	U					0.37	U		

PROJ_NO: 08388 SDG: 140-14387-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-183-MB-3-DL			SV-184-MB-3			SV-185-MB-3			SV-186-MB-3		
	LAB_ID	140-14387-5			140-14387-6			140-14387-7			140-14387-8		
	SAMP_DATE	2/21/2019			2/21/2019			2/21/2019			2/21/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE				0.33	U		1	J	P	0.33	U		
1,1,2-TRICHLOROETHANE				0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE	540			1.1	J	P	17			0.74	J	P	
1,1-DICHLOROETHENE				0.28	U		3.3			0.28	U		
1,2,3-TRIMETHYLBENZENE				0.84	U		0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE				1.4	UJ	C	1.4	UJ	C	1.4	UJ	C	
1,2,4-TRIMETHYLBENZENE				0.68	J	P	1.3	J	P	0.78	J	P	
1,2-DICHLOROETHANE				0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE				1	J	P	4.2	J+	Q	1.2	J	P	
BENZENE				0.37	U		0.89	J	P	0.88	J	P	
CARBON TETRACHLORIDE				0.47	U		0.47	U		0.47	U		
CHLORODIFLUOROMETHANE				1.3	J	P	1.2	J	P	1.3	J	P	
CHLOROFORM				0.37	U		0.37	U		0.37	U		
CIS-1,2-DICHLOROETHENE				0.48	U		0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE				2.5			2.4			2.4			
ETHYLBENZENE				0.66	J	P	1.2	J	P	0.64	J	P	
METHYL TERT-BUTYL ETHER				1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE				2.6	J	P	3	J	P	4	J	P	
NAPHTHALENE				1	UJ	CE	1	UJ	CE	1	UJ	CE	
TETRACHLOROETHENE				0.54	U		0.54	U		0.54	U		
TOLUENE				3			6.4			4.3			
TOTAL XYLENES				4.6			6			3	J	P	
TRANS-1,2-DICHLOROETHENE				0.4	U		0.4	U		0.4	U		
TRICHLOROETHENE				0.38	U		0.38	U		0.38	U		
VINYL CHLORIDE				0.37	U		0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14387-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-DUP03-A-26		
	LAB_ID	140-14387-11		
	SAMP_DATE	2/21/2019		
	QC_TYPE	FD		
	UNITS	UG/M3		
	PCT_SOLIDS			
	DUP_OF	SV-116-A-26		
PARAMETER	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U		
1,1-DICHLOROETHANE	0.2	U		
1,1-DICHLOROETHENE	0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		
1,2,4-TRICHLOROENZENE	1.4	UJ	C	
1,2,4-TRIMETHYLBENZENE	0.61	U		
1,2-DICHLOROETHANE	0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		
BENZENE	0.75	J	P	
CARBON TETRACHLORIDE	0.47	U		
CHLORODIFLUOROMETHANE	1.2	J	P	
CHLOROFORM	1.7	J	P	
CIS-1,2-DICHLOROETHENE	0.48	U		
DICHLORODIFLUOROMETHANE	2.3			
ETHYLBENZENE	0.59	U		
METHYL TERT-BUTYL ETHER	1.2	U		
METHYLENE CHLORIDE	4.8	J	P	
NAPHTHALENE	1	UJ	CE	
TETRACHLOROETHENE	0.54	U		
TOLUENE	2.3	U		
TOTAL XYLENES	0.52	U		
TRANS-1,2-DICHLOROETHENE	0.4	U		
TRICHLOROETHENE	3.2			
VINYL CHLORIDE	0.37	U		

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-081-A-26 Lab Sample ID: 140-14387-18
 Matrix: Air Lab File ID: HB25P116.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 06:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.47		0.40	0.075
67-66-3	Chloroform	119.38	0.33	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.10	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.32	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.90	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.19	J	0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.67		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.46		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	200	E *	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	10		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	5.9		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-081-A-26 Lab Sample ID: 140-14387-18
 Matrix: Air Lab File ID: HB25P116.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 06:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	1.6	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.40	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.3	J	2.7	0.54
108-88-3	Toluene	92.14	5.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.7		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1000	E *	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	50		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	29		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	15		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-081-A-26 DL Lab Sample ID: 140-14387-18 DL
 Matrix: Air Lab File ID: HB27P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:34
 Sample wt/vol: 10 (mL) Date Analyzed: 02/28/2019 06:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	120.19	110		4.0	1.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-081-A-26 DL Lab Sample ID: 140-14387-18 DL
 Matrix: Air Lab File ID: HB27P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:34
 Sample wt/vol: 10 (mL) Date Analyzed: 02/28/2019 06:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
526-73-8	1,2,3-Trimethylbenzene	120.19	550		20	8.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-093-A-26 Lab Sample ID: 140-14387-13
 Matrix: Air Lab File ID: HB25P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:21
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 03:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.33	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.24	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.32	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.069	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.15	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-093-A-26 Lab Sample ID: 140-14387-13
 Matrix: Air Lab File ID: HB25P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:21
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 03:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.65	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.97	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.3	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.37	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.72	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-116-A-26 Lab Sample ID: 140-14387-10
 Matrix: Air Lab File ID: HB25P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:15
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 00:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.35	J	0.40	0.075
67-66-3	Chloroform	119.38	0.34	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.072	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.92	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.82		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-116-A-26 Lab Sample ID: 140-14387-10
 Matrix: Air Lab File ID: HB25P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:15
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 00:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.81	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	1.7	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.28	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-138-A-26 Lab Sample ID: 140-14387-12
 Matrix: Air Lab File ID: HB25P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:32
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 02:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.40		0.40	0.075
67-66-3	Chloroform	119.38	0.085	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.77		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	3.3		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.88	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.13	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.065	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	21		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-138-A-26 Lab Sample ID: 140-14387-12
 Matrix: Air Lab File ID: HB25P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:32
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 02:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	0.41	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	8.2		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	3.1		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	13		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.89	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.36	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	110		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.67	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-171-A-26 Lab Sample ID: 140-14387-16
 Matrix: Air Lab File ID: HB25P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:22
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 05:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	0.90		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	9.3		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.2		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	63		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.64		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.46		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.18	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	310	E	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.22	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.28	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-171-A-26 Lab Sample ID: 140-14387-16
 Matrix: Air Lab File ID: HB25P115.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:22
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 05:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.62	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	4.4		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	37		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	8.7		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	250		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.8		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.99	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1700	E	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-171-A-26 DL Lab Sample ID: 140-14387-16 DL
 Matrix: Air Lab File ID: GB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:22
 Sample wt/vol: 11 (mL) Date Analyzed: 02/26/2019 20:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	190		1.8	0.64

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	90		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-171-A-26 DL Lab Sample ID: 140-14387-16 DL
 Matrix: Air Lab File ID: GB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:22
 Sample wt/vol: 11 (mL) Date Analyzed: 02/26/2019 20:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	1000		9.8	3.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	90		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-173-A-26 Lab Sample ID: 140-14387-14
 Matrix: Air Lab File ID: HB25P113.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:23
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.30	J	0.40	0.075
67-66-3	Chloroform	119.38	1.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	24		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	5.1		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.12	J	0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	84	E	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.76	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.63		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.84		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.44		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	480	E	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.15	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.27	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-173-A-26 Lab Sample ID: 140-14387-14
 Matrix: Air Lab File ID: HB25P113.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:23
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.68	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	5.4		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	94		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	21		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	0.50	J	1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	330	E	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	3.3		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.4		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2600	E	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.73	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-173-A-26 DL Lab Sample ID: 140-14387-14 DL
 Matrix: Air Lab File ID: GB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:23
 Sample wt/vol: 11(mL) Date Analyzed: 02/26/2019 19:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	66		3.6	0.64
79-01-6	Trichloroethene	131.39	310		1.8	0.64

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	89		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-173-A-26 DL Lab Sample ID: 140-14387-14 DL
 Matrix: Air Lab File ID: GB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:23
 Sample wt/vol: 11(mL) Date Analyzed: 02/26/2019 19:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	260		14	2.5
79-01-6	Trichloroethene	131.39	1700		9.8	3.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	89		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-174-A-26 Lab Sample ID: 140-14387-15
 Matrix: Air Lab File ID: HB25P114.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:20
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	1.2		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.2		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.3		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	4.6		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.77	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.087	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	8.2		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	20		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.16	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-174-A-26 Lab Sample ID: 140-14387-15
 Matrix: Air Lab File ID: HB25P114.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:20
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 04:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	5.9		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	4.7		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	9.1		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	18		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.59	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	45		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	110		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.77	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-179-MB-3 Lab Sample ID: 140-14387-2
 Matrix: Air Lab File ID: HB25P102.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:50
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 18:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.1		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.072	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.98	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.46		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.17	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.15	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-179-MB-3 Lab Sample ID: 140-14387-2
 Matrix: Air Lab File ID: HB25P102.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:50
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 18:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	8.5		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.29	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.84	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	0.65	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-180-MB-3 Lab Sample ID: 140-14387-1
 Matrix: Air Lab File ID: HB25P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:49
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.42		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.23	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.79	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	0.34	J	0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.20	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.19	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.54	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-180-MB-3 Lab Sample ID: 140-14387-1
 Matrix: Air Lab File ID: HB25P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:49
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 17:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.94	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	2.5	J	3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.1	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.94	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-181-MB-3 Lab Sample ID: 140-14387-3
 Matrix: Air Lab File ID: HB25P103.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:53
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 19:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.28	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	51		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	2.2		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.75	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.12	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.17	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-181-MB-3 Lab Sample ID: 140-14387-3
 Matrix: Air Lab File ID: HB25P103.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:53
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 19:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.98	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	210		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	8.7		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.64	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.85	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-182-MB-3 Lab Sample ID: 140-14387-4
 Matrix: Air Lab File ID: HB25P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	250	E	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethane	96.94	34		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.78	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.63		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	16		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.093	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.19	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.27	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-182-MB-3 Lab Sample ID: 140-14387-4
 Matrix: Air Lab File ID: HB25P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1000	E	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	130		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	87		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.50	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.93	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-182-MB-3 DL Lab Sample ID: 140-14387-4 DL
 Matrix: Air Lab File ID: GB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:55
 Sample wt/vol: 11 (mL) Date Analyzed: 02/26/2019 18:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	170		3.6	0.45

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-182-MB-3 DL Lab Sample ID: 140-14387-4 DL
 Matrix: Air Lab File ID: GB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:55
 Sample wt/vol: 11 (mL) Date Analyzed: 02/26/2019 18:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	690		15	1.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-183-MB-3 Lab Sample ID: 140-14387-5
 Matrix: Air Lab File ID: HB25P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:58
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.35	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	170	E	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	22		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	8.5		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.082	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.19	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-183-MB-3 Lab Sample ID: 140-14387-5
 Matrix: Air Lab File ID: HB25P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:58
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 20:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	690	E	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	89		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	46		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.44	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.95	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-183-MB-3 DL Lab Sample ID: 140-14387-5 DL
 Matrix: Air Lab File ID: HB28P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:58
 Sample wt/vol: 20 (mL) Date Analyzed: 02/28/2019 17:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27981 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	130		2.0	0.25

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-183-MB-3 DL Lab Sample ID: 140-14387-5 DL
 Matrix: Air Lab File ID: HB28P101.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 09:58
 Sample wt/vol: 20 (mL) Date Analyzed: 02/28/2019 17:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27981 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-34-3	1,1-Dichloroethane	98.96	540		8.1	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-184-MB-3 Lab Sample ID: 140-14387-6
 Matrix: Air Lab File ID: HB25P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:01
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 21:53
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.36	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.26	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.74	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.80		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.21	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-184-MB-3 Lab Sample ID: 140-14387-6
 Matrix: Air Lab File ID: HB25P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 10:01
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 21:53
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.1	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.66	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.68	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.0	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-185-MB-3 Lab Sample ID: 140-14387-7
 Matrix: Air Lab File ID: HB25P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 11:14
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 22:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.28	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	4.3		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.84		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.28	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.19	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.27	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.86	CI	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-185-MB-3 Lab Sample ID: 140-14387-7
 Matrix: Air Lab File ID: HB25P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 11:14
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 22:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.89	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	17		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	3.3		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.0	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.3	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	4.2	CI	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-186-MB-3 Lab Sample ID: 140-14387-8
 Matrix: Air Lab File ID: HB25P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 11:15
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 23:39
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.28	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.36	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.18	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.24	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.70	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-186-MB-3 Lab Sample ID: 140-14387-8
 Matrix: Air Lab File ID: HB25P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 11:15
 Sample wt/vol: 100(mL) Date Analyzed: 02/25/2019 23:39
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.88	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.74	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.78	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.2	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-DUP03-A-26 Lab Sample ID: 140-14387-11
 Matrix: Air Lab File ID: HB25P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 01:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.34	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.60		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-DUP03-A-26 Lab Sample ID: 140-14387-11
 Matrix: Air Lab File ID: HB25P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 01:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.75	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	1.7	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

Appendix C

Support Documentation

Job Narrative
140-14387-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

Sample SV-170-A-26 (140-14387-17) was listed on the Chain of Custody (COC); however, no sample was received.

Per note on the Chain of Custody, sample SV-187-MB-3 was not logged for analysis.

Air - GC/MS VOA - Method TO-15 LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

The continuing calibration verification (CCV) associated with batch 140-27935 exhibited % difference of > 30% for the following analytes 1,2,4-Trichlorobenzene and Naphthalene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

Naphthalene recovered outside control limits for the LCS associated with analytical batch 140-27935. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
E	Result exceeded calibration range.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14387-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14387-1	SV-180-MB-3	Air	02/21/19 09:49	02/23/19 10:10
140-14387-2	SV-179-MB-3	Air	02/21/19 09:50	02/23/19 10:10
140-14387-3	SV-181-MB-3	Air	02/21/19 09:53	02/23/19 10:10
140-14387-4	SV-182-MB-3	Air	02/21/19 09:55	02/23/19 10:10
140-14387-5	SV-183-MB-3	Air	02/21/19 09:58	02/23/19 10:10
140-14387-6	SV-184-MB-3	Air	02/21/19 10:01	02/23/19 10:10
140-14387-7	SV-185-MB-3	Air	02/21/19 11:14	02/23/19 10:10
140-14387-8	SV-186-MB-3	Air	02/21/19 11:15	02/23/19 10:10
140-14387-10	SV-116-A-26	Air	02/21/19 12:15	02/23/19 10:10
140-14387-11	SV-DUP03-A-26	Air	02/21/19 00:00	02/23/19 10:10
140-14387-12	SV-138-A-26	Air	02/21/19 10:32	02/23/19 10:10
140-14387-13	SV-093-A-26	Air	02/21/19 12:21	02/23/19 10:10
140-14387-14	SV-173-A-26	Air	02/21/19 12:23	02/23/19 10:10
140-14387-15	SV-174-A-26	Air	02/21/19 12:20	02/23/19 10:10
140-14387-16	SV-171-A-26	Air	02/21/19 12:22	02/23/19 10:10
140-14387-18	SV-081-A-26	Air	02/21/19 12:34	02/23/19 10:10

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.


TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor		4 of 16 COCs	
Company: Tetra Tech		Phone: 301-528-3000					
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage					
City/State/Zip: Germentown, MD, 20871		TAL Contact: Terry Walker Washmund					
Phone: 301-528-552							
FAX:							
Project Name: MRC Indoor Air		Analysis Turnaround Time					
Site/location: MRC		Standard (Specify) X					
PO # 112108388		Rush (Specify)					

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-16	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-180-MB-3	2/21/19	0944		-30	0	10653	11855	✓										
SV-179-MB-3	2/21/19	0950		-30	0	10454	11823	✓										
SV-181-MB-3	2/21/19	0953		-29	0	11512	11807	✓										
SV-182-MB-3	2/21/19	0955		-29	0	11898	11858	✓										
SV-183-MB-3	2/21/19	0958		-30	-2.5	11273	11558	✓										
SV-184-MB-3	2/21/19	1001		-30	-5	10621	11753	✓										

Sampled by: Sophia Lawson, Walt Pryor, Josh Mullis	Temperature (Fahrenheit)	
	Interior	Ambient
	Start	Stop
	Pressure (Inches of Hg)	
	Interior	Ambient
	Start	Stop



140-14387 Chain of Custody

Baltimore
#201

17 CANS / 17 FLOWS
 CUSTODY SEAL INTACT
 AMBIENT AIR AT 20.0 / 20.0 °C
 SKN 2-23-19

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: [Signature]	Date/Time: 2/22/19	Received by: [Signature]
Relinquished by: [Signature]	Date/Time: 2/22/19 1700	Received by: [Signature] TAL 2-23-19 10:10

Lab Use Only: Shipper Name: _____ Opened by: _____ Conditions: _____

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.



Client Contact Information	Project Manager: Tony Apanavage	Sampled By: Sophia Lawson, Josh Mullis & Walt Puyar	5 of 16 COCs
Company: Tetra Tech	Phone: 301-528-3000		
Address: 20251 Century Blvd #200	Site Contact: Tony Apanavage		
City/State/Zip: Germantown, MD, 20871	TAL Contact: terry walker washmund		
Phone: 301-528-552			
FAX:			
Project Name: MRC Indoor Air	Analysis Turnaround Time		
Site/location: MRC	Standard (Specify) X		
PO# 1125 C08338	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-185-MB-3	2/21/19	1008	1114	-30	-1	11423	11778	✓										
SV-186-MB-3	2/21/19	1009	1115	-26	0	10432	11859	✓										
SV-187-MB-3	2/21/19	NA	NA	NA	NA	11925	11820	✓										
SV-116-A-26	2/21/19	1030	1215	-25	2	11582	09634	✓										
SV-DUPO3-A-26	2/21/19	0000	0000	-28	1	10953	11615	✓										
SV-138-A-26	2/21/19	1032	0	-29	0	11895	11607	✓										

Sampled by: Sophia Lawson, Walt Puyar, Josh Mullis

Temperature (Fahrenheit)	
interior	Ambient
Start	
Stop	
Pressure (inches of Hg)	
interior	Ambient
Start	
Stop	

Baltimore #201

Special Instructions/OC Requirements & Comments:
 Sample SV-187-MB-3 was not sampled due to issue opening vapor canister.

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: [Signature]	Date/Time: 2/22/19	Received by: [Signature]
Relinquished by: [Signature]	Date/Time: 2/22/19 1700	Received by: [Signature] TA KUX 2-23-19 10:10

Lab Use Only | **Shipped Name:** | **Opened by:** | **Condition:**

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03/07/2019

TAL Knoxville

5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor		6 of 16 COCs	
Company: Tetra Tech		Phone: 301-528-3000					
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage					
City/State/Zip: Germantown, MD, 20871		TAL Contact: Terry Walker Washburn					
Phone: 301-528-552							
FAX:							
Project Name: MRC Indoor Air		Analysis Turnaround Time					
Site/location: MRC		Standard (Specify) X					
PO# 112508388		Rush (Specify)					

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
SV-093-A-26	2/21/19	1034	1221	-30	0	04703	11608	✓											
SV-173-A-26	2/21/19	1038	1223	-29	1	04654	10735	✓											
SV-174-A-26	2/21/19	1040	1220	-30	0	10635	09635	✓											
SV-171-A-26	2/21/19	1049	1222	-29	2	10302	11750	✓											
SV-170-A-26	2/21/19	1054	1224	-26	0	11925	11120	✓											
SV-081-A-26	2/21/19	1127	1234	-24	0	11310	10518	✓											

Sampled by: Sophia Lawson Walt Pryor, Josh Mullis	Temperature (Fahrenheit)	
	Interior	Ambient
	Start	
	Stop	
	Pressure (Inches of Hg)	
	Interior	Ambient
Start		
Stop		

Baltimore #201

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: Tetra Tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: [Signature]	Date/Time: 2/22/19	Received by: [Signature]
Relinquished by: [Signature]	Date/Time: 2/22/19 1700	Received by: [Signature] TAL KNOX 2-23-19 10:10

Lab Use Only: Shipper Name: Created by: Condition:

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03/07/2019

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

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03/07/2019

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/		/	<input type="checkbox"/> Containers, Broken	8, SV-170-A-26
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID : _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/	/		<input type="checkbox"/> Sample Received, Not on COC <input checked="" type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only)	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/	<input type="checkbox"/> Residual Chlorine	
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	

Labeling Verified by: _____		Date: _____	
pH test strip lot number: _____			
Box 16A: pH Preservation		Box 18A: Residual Chlorine	
Preservative: _____		Lot Number: _____	
Exp Date: _____		Analyst: _____	
Date: _____		Time: _____	

Project #: _____	PM Instructions: _____
------------------	------------------------

Sample Receiving Associate: *[Signature]* Date: 2-23-19

FIELD DUPLICATE PRECISION

ORIGINAL ID	DUP ID	FRACTION	ANALYTE	ORIGINAL	DUPLICATE	RL	RL1	RL2	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >RL	DUPLICATE SAMPLE CONC >RL	DIFFERENCE >2XRL
SV-116-A-26	SV-DUP03-A-26	OV-M3	1,1-DICHLOROETHENE	0.28 J	0.28 U	1.6	1.6	1.6	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-26	SV-DUP03-A-26	OV-M3	BENZENE	0.81 J	0.75 J	1.3	1.3	1.3	7.69	FALSE	FALSE	FALSE	FALSE
SV-116-A-26	SV-DUP03-A-26	OV-M3	CHLORODIFLUOROMETHANE	1.2 J	1.2 J	1.4	1.4	1.4	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-26	SV-DUP03-A-26	OV-M3	CHLOROFORM	1.7 J	1.7 J	2	2	2	0.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-26	SV-DUP03-A-26	OV-M3	DICHLORODIFLUOROMETHANE	2.4	2.3	2	2	2	4.26	FALSE	TRUE	TRUE	FALSE
SV-116-A-26	SV-DUP03-A-26	OV-M3	METHYLENE CHLORIDE	3.2 J	4.8 J	6.9	6.9	6.9	40.00	FALSE	FALSE	FALSE	FALSE
SV-116-A-26	SV-DUP03-A-26	OV-M3	TRICHLOROETHENE	4.4	3.2	1.1	1.1	1.1	31.58	FALSE	TRUE	TRUE	FALSE

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
SV-180-MB-3	140-14387-1	101
SV-179-MB-3	140-14387-2	101
SV-181-MB-3	140-14387-3	102
SV-182-MB-3	140-14387-4	101
SV-182-MB-3 DL	140-14387-4 DL	96
SV-183-MB-3	140-14387-5	101
SV-183-MB-3 DL	140-14387-5 DL	99
SV-184-MB-3	140-14387-6	103
SV-185-MB-3	140-14387-7	101
SV-186-MB-3	140-14387-8	101
SV-116-A-26	140-14387-10	101
SV-DUP03-A-26	140-14387-11	100
SV-138-A-26	140-14387-12	100
SV-093-A-26	140-14387-13	98
SV-173-A-26	140-14387-14	100
SV-173-A-26 DL	140-14387-14 DL	89
SV-174-A-26	140-14387-15	98
SV-171-A-26	140-14387-16	99
SV-171-A-26 DL	140-14387-16 DL	90
SV-081-A-26	140-14387-18	102
SV-081-A-26 DL	140-14387-18 DL	98
	MB 140-27931/4	96
	MB 140-27935/7	96
	MB 140-27980/5	96
	MB 140-27981/4	98
	LCS 140-27931/1002	100
	LCS 140-27935/1002	103
	LCS 140-27980/1002	103
	LCS 140-27981/1002	102

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: G500BB26.D Lab Sample ID: MB 140-27931/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/26/2019 12:56
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27931/1002	GCCVB26-LCS .d	02/26/2019 11:35
SV-182-MB-3 DL	140-14387-4 DL	GB26P104.D	02/26/2019 18:01
SV-173-A-26 DL	140-14387-14 DL	GB26P106.D	02/26/2019 19:24
SV-171-A-26 DL	140-14387-16 DL	GB26P107.D	02/26/2019 20:06

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB26-LCS.d
 Lab ID: LCS 140-27931/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.22	111	70-130	
Chlorodifluoromethane	2.00	2.02	101	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	2.09	104	70-130	
Dichlorodifluoromethane	2.00	2.06	103	60-140	
1,1-Dichloroethane	2.00	2.05	103	70-130	
1,2-Dichloroethane	2.00	2.00	100	70-130	
1,1-Dichloroethene	2.00	2.14	107	70-130	
Ethylbenzene	2.00	2.03	101	70-130	
Methylene Chloride	2.00	1.81	90	70-130	
Methyl tert-butyl ether	2.00	1.97	99	60-140	
Naphthalene	2.00	1.94	97	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	2.15	108	70-130	
1,2,4-Trichlorobenzene	2.00	1.83	92	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	2.11	105	70-130	
Trichloroethene	2.00	2.09	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.22	111	70-130	
1,2,4-Trimethylbenzene	2.00	1.99	99	70-130	
1,3,5-Trimethylbenzene	2.00	1.97	98	70-130	
Vinyl chloride	2.00	1.97	98	70-130	
Xylenes, Total	6.00	6.18	103	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: H500BB25.D Lab Sample ID: MB 140-27935/7
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/25/2019 14:47
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27935/1002	HCCVB25-LCS .d	02/25/2019 09:47
SV-180-MB-3	140-14387-1	HB25P101.D	02/25/2019 17:27
SV-179-MB-3	140-14387-2	HB25P102.D	02/25/2019 18:20
SV-181-MB-3	140-14387-3	HB25P103.D	02/25/2019 19:13
SV-182-MB-3	140-14387-4	HB25P104.D	02/25/2019 20:06
SV-183-MB-3	140-14387-5	HB25P105.D	02/25/2019 20:59
SV-184-MB-3	140-14387-6	HB25P106.D	02/25/2019 21:53
SV-185-MB-3	140-14387-7	HB25P107.D	02/25/2019 22:46
SV-186-MB-3	140-14387-8	HB25P108.D	02/25/2019 23:39
SV-116-A-26	140-14387-10	HB25P109.D	02/26/2019 00:32
SV-DUP03-A-26	140-14387-11	HB25P110.D	02/26/2019 01:24
SV-138-A-26	140-14387-12	HB25P111.D	02/26/2019 02:17
SV-093-A-26	140-14387-13	HB25P112.D	02/26/2019 03:10
SV-173-A-26	140-14387-14	HB25P113.D	02/26/2019 04:03
SV-174-A-26	140-14387-15	HB25P114.D	02/26/2019 04:56
SV-171-A-26	140-14387-16	HB25P115.D	02/26/2019 05:49
SV-081-A-26	140-14387-18	HB25P116.D	02/26/2019 06:43

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27935/7
 Matrix: Air Lab File ID: H500BB25.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 14:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27935/7
 Matrix: Air Lab File ID: H500BB25.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/25/2019 14:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB25-LCS.d
 Lab ID: LCS 140-27935/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	0.929	93	70-130	
Carbon tetrachloride	1.00	0.929	93	70-130	
Chlorodifluoromethane	1.00	0.930	93	60-140	
Chloroform	1.00	0.962	96	70-130	
cis-1,2-Dichloroethene	1.00	0.946	95	70-130	
Dichlorodifluoromethane	1.00	0.922	92	60-140	
1,1-Dichloroethane	1.00	0.944	94	70-130	
1,2-Dichloroethane	1.00	0.906	91	70-130	
1,1-Dichloroethene	1.00	0.928	93	70-130	
Ethylbenzene	1.00	0.927	93	70-130	
Methylene Chloride	1.00	0.918	92	70-130	
Methyl tert-butyl ether	1.00	0.929	93	60-140	
Naphthalene	1.00	0.586	59	60-140	*
Tetrachloroethene	1.00	0.927	93	70-130	
Toluene	1.00	0.943	94	70-130	
trans-1,2-Dichloroethene	1.00	0.907	91	70-130	
1,2,4-Trichlorobenzene	1.00	0.642	64	60-140	
1,1,1-Trichloroethane	1.00	0.932	93	70-130	
1,1,2-Trichloroethane	1.00	0.963	96	70-130	
Trichloroethene	1.00	0.898	90	70-130	
1,2,3-Trimethylbenzene	1.00	0.701	70	70-130	
1,2,4-Trimethylbenzene	1.00	0.973	97	70-130	
1,3,5-Trimethylbenzene	1.00	1.02	102	70-130	
Vinyl chloride	1.00	0.950	95	70-130	
Xylenes, Total	3.00	2.91	97	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HB27LOT14399MB.D Lab Sample ID: MB 140-27980/5
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/27/2019 13:42
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27980/1002	HCCVB27-LCS .d	02/27/2019 11:50
SV-081-A-26 DL	140-14387-18 DL	HB27P115.D	02/28/2019 06:06

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27980/5
 Matrix: Air Lab File ID: HB27LOT14399MB.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.0691	J	0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27980/5
 Matrix: Air Lab File ID: HB27LOT14399MB.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 02/27/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	0.513	J	0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB27-LCS.d
 Lab ID: LCS 140-27980/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	1.08	108	70-130	
Carbon tetrachloride	1.00	1.09	109	70-130	
Chlorodifluoromethane	1.00	1.09	109	60-140	
Chloroform	1.00	1.15	115	70-130	
cis-1,2-Dichloroethene	1.00	1.09	109	70-130	
Dichlorodifluoromethane	1.00	1.06	106	60-140	
1,1-Dichloroethane	1.00	1.11	111	70-130	
1,2-Dichloroethane	1.00	1.09	109	70-130	
1,1-Dichloroethene	1.00	1.06	106	70-130	
Ethylbenzene	1.00	1.09	109	70-130	
Methylene Chloride	1.00	1.06	106	70-130	
Methyl tert-butyl ether	1.00	1.08	108	60-140	
Naphthalene	1.00	1.16	116	60-140	
Tetrachloroethene	1.00	1.06	106	70-130	
Toluene	1.00	1.10	110	70-130	
trans-1,2-Dichloroethene	1.00	1.04	104	70-130	
1,2,4-Trichlorobenzene	1.00	0.910	91	60-140	
1,1,1-Trichloroethane	1.00	1.09	109	70-130	
1,1,2-Trichloroethane	1.00	1.12	112	70-130	
Trichloroethene	1.00	1.04	104	70-130	
1,2,3-Trimethylbenzene	1.00	0.835	83	70-130	
1,2,4-Trimethylbenzene	1.00	1.15	115	70-130	
1,3,5-Trimethylbenzene	1.00	1.18	118	70-130	
Vinyl chloride	1.00	1.11	111	70-130	
Xylenes, Total	3.00	3.43	114	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: H500BB28.D Lab Sample ID: MB 140-27981/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/28/2019 14:24
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27981/1002	HCCVB28-LCS .d	02/28/2019 13:02
SV-183-MB-3 DL	140-14387-5 DL	HB28P101.D	02/28/2019 17:11

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27981/4
 Matrix: Air Lab File ID: H500BB28.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/28/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27981 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.0681	J	0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27981/4
 Matrix: Air Lab File ID: H500BB28.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/28/2019 14:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27981 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	0.505 J		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB28-LCS.d
 Lab ID: LCS 140-27981/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	1.10	110	70-130	
Carbon tetrachloride	1.00	1.11	111	70-130	
Chlorodifluoromethane	1.00	1.09	109	60-140	
Chloroform	1.00	1.14	114	70-130	
cis-1,2-Dichloroethene	1.00	1.11	111	70-130	
Dichlorodifluoromethane	1.00	1.07	107	60-140	
1,1-Dichloroethane	1.00	1.11	111	70-130	
1,2-Dichloroethane	1.00	1.09	109	70-130	
1,1-Dichloroethene	1.00	1.07	107	70-130	
Ethylbenzene	1.00	1.11	111	70-130	
Methylene Chloride	1.00	1.05	105	70-130	
Methyl tert-butyl ether	1.00	1.12	112	60-140	
Naphthalene	1.00	1.08	108	60-140	
Tetrachloroethene	1.00	1.09	109	70-130	
Toluene	1.00	1.12	112	70-130	
trans-1,2-Dichloroethene	1.00	1.07	107	70-130	
1,2,4-Trichlorobenzene	1.00	0.901	90	60-140	
1,1,1-Trichloroethane	1.00	1.12	112	70-130	
1,1,2-Trichloroethane	1.00	1.13	113	70-130	
Trichloroethene	1.00	1.09	109	70-130	
1,2,3-Trimethylbenzene	1.00	0.811	81	70-130	
1,2,4-Trimethylbenzene	1.00	1.12	112	70-130	
1,3,5-Trimethylbenzene	1.00	1.18	118	70-130	
Vinyl chloride	1.00	1.12	112	70-130	
Xylenes, Total	3.00	3.41	114	70-130	

Column to be used to flag recovery and RPD values

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: GA11BLK1.D BFB Injection Date: 01/11/2019
 Instrument ID: MG BFB Injection Time: 12:24
 Analysis Batch No.: 26755

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.2	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	71.2	
175	5.0 - 9.0 % of mass 174	5.1	(7.1) 1
176	95.0 - 101.0 % of mass 174	70.7	(99.3) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-26755/2	GA11IC09.D	01/11/2019	13:08
	IC 140-26755/6	GA11IC10.D	01/11/2019	14:35
	IC 140-26755/9	GA11IC01.D	01/11/2019	16:46
	IC 140-26755/10	GA11IC02.D	01/11/2019	17:29
	IC 140-26755/11	GA11IC03.D	01/11/2019	18:12
	IC 140-26755/12	GA11IC04.D	01/11/2019	18:56
	IC 140-26755/13	GA11IC05.D	01/11/2019	19:40
	IC 140-26755/14	GA11IC06.D	01/11/2019	20:23
	ICIS 140-26755/15	GA11IC07.D	01/11/2019	21:07
	IC 140-26755/16	GA11IC08.D	01/11/2019	21:51
	ICV 140-26755/18	GA11ICV.D	01/11/2019	23:17

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	++++ 2.4796	++++ 2.3672	2.9523 2.3873	2.7653 2.9026	2.6769 2.4316	Ave		2.6204			9.0		30.0				
Propene	++++ 1.4104	++++ 1.3267	++++ 1.3362	1.8011 1.5897	1.4915 1.2862	Ave		1.4631			12.5		30.0				
Dichlorodifluoromethane	++++ 4.0515	++++ 3.9190	++++ 4.4505 3.9550	4.4326 4.7099	4.2183 4.1407	Ave		4.2347			6.5		30.0				
Chloromethane	++++ 0.4445	++++ 0.4230	++++ 0.4254	0.5625 0.4946	0.4891 0.4152	Ave		0.4649			11.5		30.0				
1,2-Dichloro-1,1,2,2-tetrafluoroethane	++++ 2.3633	++++ 2.3423	2.6446 2.3822	2.5541 2.5578	2.4472 2.5047	Ave		2.4745			4.4		30.0				
Vinyl chloride	1.9626 1.4785	1.7167 1.4339	1.7320 1.4573	1.6531 1.6387	1.5626 1.4732	Ave		1.6109			10.3		30.0				
Butane	++++ 2.6258	++++ 2.4782	++++ 2.5038	3.0743 2.8679	2.8454 2.5911	Ave		2.7124			8.2		30.0				
1,3-Butadiene	++++ 1.2041	++++ 1.1760	++++ 1.2078	1.2733 1.3654	1.2439 1.2448	Ave		1.2450			5.0		30.0				
Bromomethane	++++ 1.3078	++++ 1.2877	1.6548 1.3168	1.3996 1.4117	1.3549 1.3995	Ave		1.3916			8.4		30.0				
Chloroethane	++++ 0.7377	++++ 0.7148	0.8627 0.7259	0.8037 0.8118	0.7796 0.7729	Ave		0.7761			6.4		30.0				
Ethanol	++++ 0.5620	++++ 0.7386	++++ 0.5593	0.8657 0.7653	0.7124 0.7259	Ave		0.7042			15.6		30.0				
Vinyl bromide	++++ 1.2366	++++ 1.2145	1.3835 1.2610	1.3207 1.2880	1.2830 1.3321	Ave		1.2899			4.2		30.0				
2-Methylbutane	++++ 1.9302	++++ 1.8374	++++ 1.8471	2.0547 1.9762	2.0422 1.9406	Ave		1.9469			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.9949	4.3785 3.8769	4.2718 3.9322	4.1461 4.3687	4.1452 4.2564	Ave		4.1523			4.4		30.0				
Acrolein	++++ 0.3700	++++ 0.3339	++++ 0.3264	++++ 0.4058	0.3535 0.3546	Ave		0.3574			7.9		30.0				
Acetonitrile	++++ 0.5820	++++ 0.5806	++++ 0.5032	0.4860 0.6106	0.5491 0.5907	Ave		0.5574			8.4		30.0				
Acetone	++++ 0.6952	++++ 0.6071	++++ 0.4923	++++ 0.5713	0.7119 0.5299	Ave		0.6013			14.7		30.0				
Pentane	++++ 0.2650	++++ 0.2567	++++ 0.2534	++++ 0.2741	0.2798 0.2630	Ave		0.2653			3.8		30.0				
Isopropyl alcohol	++++ 1.5842	++++ 1.6884	++++ 1.2216	++++ 1.5921	1.7192 1.5978	Ave		1.6033			11.8		30.0				
Ethyl ether	++++ 1.8397	++++ 1.7705	++++ 1.4542	++++ 1.7361	1.9088 1.6409	Ave		1.7250			9.3		30.0				
1,1-Dichloroethene	1.5300 1.3997	1.3691 1.3378	1.5011 1.4037	1.3769 1.3902	1.4054 1.4041	Ave		1.4118			4.2		30.0				
Acrylonitrile	++++ 0.9861	++++ 0.9774	1.0366 0.8664	0.9476 1.0406	0.9217 1.0215	Ave		0.9747			6.2		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.0568	3.1787 2.9429	3.2903 2.9549	3.0618 2.9993	3.1454 2.9101	Ave		3.0600			4.1		30.0				
tert-Butyl alcohol	++++ 2.2526	++++ 2.2071	++++ 1.7152	2.3096 2.1050	2.4776 2.3062	Ave		2.1962			11.0		30.0				
Methylene Chloride	++++ 1.5026	++++ 1.3595	++++ 1.3036	2.5891 1.2966	1.8042 ++++	Ave		1.6426			30.5 *		30.0				
3-Chloropropene	++++ 1.6369	++++ 1.6110	2.0104 1.5866	1.9432 1.7783	1.7193 1.7236	Ave		1.7512			8.8		30.0				
Carbon disulfide	++++ 4.2983	++++ 4.0822	4.5901 4.1194	4.3819 4.1977	4.3526 4.2529	Ave		4.2844			3.8		30.0				
trans-1,2-Dichloroethene	++++ 1.4444	1.3848 1.3913	1.4554 1.4201	1.3845 1.4125	1.4335 1.3979	Ave		1.4138			1.9		30.0				
2-Methylpentane	++++ 4.0309	++++ 3.8853	4.3761 3.8303	4.1901 4.0757	4.2199 3.7514	Ave		4.0450			5.3		30.0				
Methyl tert-butyl ether	++++ 4.1354	3.5946 4.0399	4.2254 3.4444	3.8763 4.0172	4.1168 3.9425	Ave		3.9325			6.6		30.0				
1,1-Dichloroethane	3.1037 2.8577	3.0105 2.8187	3.0470 2.6559	2.9034 2.9155	2.9080 2.8375	Ave		2.9058			4.4		30.0				
Vinyl acetate	++++ 3.9854	++++ 4.2048	4.0675 3.5720	3.8850 4.4145	3.9427 4.2013	Ave		4.0342			6.3		30.0				
Hexane	++++ 1.3242	++++ 1.2816	++++ 1.3713	1.3526 1.3074	1.3260 1.2151	Ave		1.3036			4.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++	++++	++++	0.6854	0.6772	Ave		0.6347			8.5		30.0				
	0.6784	0.6294	0.5376	0.6386	0.5958												
cis-1,2-Dichloroethene	1.5310	1.3850	1.4658	1.4361	1.4213	Ave		1.4465			2.9		30.0				
	1.4515	1.4377	1.3972	1.4588	1.4806												
Ethyl acetate	++++	++++	3.4159	3.2335	3.3337	Ave		3.3124			6.9		30.0				
	3.4792	3.3231	2.8120	3.5743	3.3271												
Chloroform	3.5969	3.3560	3.4112	3.4074	3.2824	Ave		3.3444			4.2		30.0				
	3.2821	3.2211	3.0680	3.4218	3.3970												
Tetrahydrofuran	++++	++++	++++	1.7940	1.8215	Ave		1.7724			6.6		30.0				
	1.8641	1.7946	1.5246	1.8635	1.7446												
1,1,1-Trichloroethane	3.8810	3.4765	3.6941	3.5977	3.6119	Ave		3.6203			4.2		30.0				
	3.5723	3.5364	3.3475	3.7388	3.7470												
1,2-Dichloroethane	0.3890	0.3740	0.4205	0.3853	0.3989	Ave		0.3910			6.7		30.0				
	0.3918	0.3624	0.3439	0.4219	0.4228												
Cyclohexane	++++	++++	++++	0.1383	0.1426	Ave		0.1314			6.9		30.0				
	0.1391	0.1224	0.1193	0.1325	0.1258												
Benzene	++++	0.7122	0.8006	0.7160	0.7636	Ave		0.7153			7.0		30.0				
	0.7488	0.6697	0.6393	0.7124	0.6753												
Carbon tetrachloride	0.5647	0.5298	0.5813	0.5547	0.6331	Ave		0.5933			8.0		30.0				
	0.6279	0.5625	0.5603	0.6718	0.6470												
1-Butanol	++++	++++	++++	0.0897	0.1022	Ave		0.0896			13.7		30.0				
	0.1010	0.0823	0.0665	0.0902	0.0950												
2,3-Dimethylpentane	++++	++++	0.2016	0.1866	0.2067	Ave		0.1886			7.0		30.0				
	0.1994	0.1776	0.1681	0.1880	0.1811												
Thiophene	++++	++++	0.4419	0.4095	0.4328	Ave		0.4156			5.4		30.0				
	0.4205	0.3890	0.3765	0.4241	0.4306												
2,2,4-Trimethylpentane	1.4853	1.4111	1.5290	1.4173	1.5323	Ave		1.4009			8.1		30.0				
	1.4628	1.2640	1.1785	1.3863	1.3426												
Heptane	++++	++++	0.3221	0.2848	0.3010	Ave		0.2875			7.7		30.0				
	0.2942	0.2637	0.2507	0.2927	0.2912												
1,2-Dichloropropane	++++	0.2947	0.3066	0.2799	0.2948	Ave		0.2813			7.5		30.0				
	0.2869	0.2617	0.2359	0.2893	0.2819												
Trichloroethene	0.3496	0.3229	0.3354	0.3064	0.3383	Ave		0.3257			5.2		30.0				
	0.3271	0.3039	0.3006	0.3304	0.3426												
Dibromomethane	++++	++++	++++	0.3027	0.3082	Ave		0.2963			7.9		30.0				
	0.2897	0.2688	0.2632	0.3189	0.3227												
Bromodichloromethane	++++	++++	0.5688	0.5299	0.5916	Ave		0.5843			8.8		30.0				
	0.5840	0.5507	0.5314	0.6523	0.6656												
1,4-Dioxane	++++	++++	++++	0.0947	0.0887	Ave		0.0832			17.3		30.0				
	0.0619	0.0891	0.0629	0.0903	0.0946												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3918	++++ 0.3473	++++ 0.2972	0.3014 0.4093	0.3703 0.3989	Ave		0.3595			12.7		30.0				
Methylcyclohexane	0.4845 0.5152	0.4926 0.4533	0.5068 0.4304	0.4870 0.4877	0.5327 0.5063	Ave		0.4896			6.1		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.6350	++++ 0.5092	0.5796 0.3308	0.5597 0.5890	0.6524 0.6484	Ave		0.5630			18.8		30.0				
cis-1,3-Dichloropropene	++++ 0.4479	0.3952 0.4121	0.4552 0.3828	0.4166 0.4613	0.4382 0.4415	Ave		0.4279			6.4		30.0				
trans-1,3-Dichloropropene	++++ 0.4450	0.3978 0.4156	0.4398 0.3772	0.4049 0.4673	0.4521 0.4806	Ave		0.4311			8.0		30.0				
Toluene	0.8893 0.9181	0.8808 0.8443	0.9072 0.7540	0.8795 0.8738	0.9309 0.9230	Ave		0.8801			5.9		30.0				
1,1,2-Trichloroethane	0.2596 0.2870	0.2566 0.2535	0.2815 0.2299	0.2715 0.2735	0.2904 0.2819	Ave		0.2685			7.0		30.0				
2-Hexanone	++++ 0.3129	++++ 0.2311	0.2486 0.1601	0.2653 0.2620	0.3155 0.3172	Ave		0.2641			20.2		30.0				
Octane	++++ 0.3331	++++ 0.2969	0.3166 0.2807	0.3142 0.3116	0.3533 0.3257	Ave		0.3165			7.0		30.0				
C8 Range	++++ 3.2900	++++ 2.9406	++++ 2.7321	3.2543 3.2050	3.4583 3.2302	Ave		3.1586			7.7		30.0				
Dibromochloromethane	++++ 0.5589	++++ 0.5327	0.4753 0.5204	0.4633 0.6101	0.5345 0.6613	Ave		0.5446			12.1		30.0				
1,2-Dibromoethane (EDB)	++++ 0.4879	++++ 0.4537	0.4324 0.4227	0.4409 0.4933	0.4776 0.5168	Ave		0.4656			7.1		30.0				
Tetrachloroethene	0.3340 0.3413	0.3265 0.3106	0.3184 0.2978	0.3299 0.3362	0.3500 0.3575	Ave		0.3302			5.4		30.0				
Chlorobenzene	0.6503 0.7257	0.6533 0.6547	0.7038 0.5918	0.6891 0.6804	0.7584 0.7332	Ave		0.6841			7.2		30.0				
Ethylbenzene	++++ 1.2841	1.1605 1.1457	1.1820 0.9886	1.2041 1.2050	1.3132 1.2806	Ave		1.1960			8.1		30.0				
m-Xylene & p-Xylene	0.7852 1.0069	0.8464 0.8920	0.9631 0.7597	0.9388 0.9364	1.0264 0.9927	Ave		0.9148			10.1		30.0				
Nonane	++++ 0.7074	0.6367 0.6181	0.6731 0.5580	0.6713 0.6403	0.7319 0.6196	Ave		0.6507			8.0		30.0				
Bromoform	++++ 0.5150	++++ 0.5097	0.3874 0.4824	0.3783 0.6069	0.4530 ++++	Ave		0.4761			16.7		30.0				
Styrene	++++ 0.6772	++++ 0.6274	0.5417 0.5521	0.5440 0.6889	0.6499 0.7776	Ave		0.6323			13.2		30.0				
o-Xylene	++++ 1.0316	0.8434 0.9312	0.9762 0.7934	0.9959 0.9762	1.0612 1.0727	Ave		0.9646			9.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++ 0.6943	++++ 0.6225	0.6477 0.5392	0.6105 0.6980	0.7079 0.6623	Ave		0.6478			8.7		30.0				
1,2,3-Trichloropropane	++++ 0.2201	++++ 0.1963	0.2117 0.1718	0.1933 0.2253	0.2181 0.2233	Ave		0.2075			9.0		30.0				
Isopropylbenzene	++++ 1.3750	1.2061 1.2349	1.2881 1.0540	1.2705 1.3875	1.3916 1.3659	Ave		1.2860			8.6		30.0				
Propylbenzene	++++ 0.3714	++++ 0.3352	0.3426 0.2878	0.3159 0.3755	0.3762 0.3762	Ave		0.3476			9.6		30.0				
2-Chlorotoluene	++++ 0.3404	0.3055 0.2960	0.3209 0.2606	0.3117 0.3372	0.3448 0.3406	Ave		0.3175			8.7		30.0				
4-Ethyltoluene	++++ 1.3518	++++ 1.2430	1.2707 1.0593	1.1808 1.3853	1.3899 1.3849	Ave		1.2832			9.3		30.0				
1,3,5-Trimethylbenzene	++++ 0.5322	++++ 0.4840	0.4931 0.4140	0.4624 0.5337	0.5289 0.5468	Ave		0.4994			9.1		30.0				
Alpha Methyl Styrene	++++ 0.5256	++++ 0.4877	++++ 0.4370	0.3906 0.6086	0.4802 0.6006	Ave		0.5043			16.0		30.0				
Decane	++++ 0.8778	0.7603 0.7515	0.8322 0.6337	0.8484 0.8180	0.9143 0.7472	Ave		0.7982			10.6		30.0				
tert-Butylbenzene	++++ 1.2040	++++ 1.0655	1.0703 0.8921	1.0556 1.2542	1.1543 1.2176	Ave		1.1142			10.6		30.0				
1,2,4-Trimethylbenzene	++++ 1.1975	++++ 1.0389	1.0671 0.8751	1.0434 1.2267	1.1402 1.1768	Ave		1.0957			10.4		30.0				
sec-Butylbenzene	++++ 1.7209	++++ 1.4915	1.5212 1.2789	1.5236 1.7227	1.6717 1.6181	Ave		1.5686			9.5		30.0				
1,3-Dichlorobenzene	0.6490 0.7671	0.6444 0.6846	0.6738 0.6125	0.6739 0.8458	0.7415 0.8676	Ave		0.7160			12.1		30.0				
Benzyl chloride	++++ 1.0629	++++ 0.9436	0.8534 0.8465	0.8353 1.1447	0.9958 1.1273	Ave		0.9762			13.0		30.0				
1,4-Dichlorobenzene	0.7017 0.7787	0.6870 0.6945	0.6938 0.6166	0.6879 0.8577	0.7429 0.8826	Ave		0.7344			11.3		30.0				
4-Isopropyltoluene	++++ 1.3919	++++ 1.1997	1.1350 1.0411	1.1617 1.4207	1.3168 1.3719	Ave		1.2548			11.1		30.0				
1,2,3-Trimethylbenzene	0.7568 1.1870	0.8539 1.0454	1.0085 0.9035	1.0349 ++++	1.1364 ++++	Ave		0.9908			14.6		30.0				
Indane	++++ 1.0760	++++ 0.9392	0.9630 0.8123	0.9316 1.1012	1.0002 1.0990	Ave		0.9903			10.1		30.0				
1,2-Dichlorobenzene	++++ 0.7440	++++ 0.6621	0.6671 0.5878	0.6607 0.8263	0.7087 0.8754	Ave		0.7165			13.3		30.0				
Butylbenzene	++++ 1.4543	++++ 1.1174	1.2268 1.0412	1.2695 1.4208	1.3939 1.3499	Ave		1.2768			11.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.9217	++++ 0.8188	0.7590 0.7206	0.7567 0.9791	0.8625 0.9878	Ave		0.8508			12.2		30.0				
Undecane	++++ 0.9412	0.7138 0.7639	0.7854 0.6439	0.8623 0.8142	0.9777 0.7859	Ave		0.8098			13.0		30.0				
1,2-Dibromo-3-Chloropropane	0.2667 0.3713	0.2609 0.3380	0.2709 0.2859	0.2620 ++++	0.3145 ++++	Ave		0.2963			13.8		30.0				
1,2,4,5-Tetramethylbenzene	++++ 1.3103	++++ 1.1118	1.0041 0.8463	1.0551 1.2653	1.2570 1.2867	Ave		1.1421			14.5		30.0				
Dodecane	++++ 0.7978	0.6003 0.5688	0.6899 0.3858	0.7041 0.5331	0.8370 ++++	Ave		0.6396			23.1		30.0				
1,2,4-Trichlorobenzene	++++ 0.6436	0.5319 0.5457	0.4906 0.4989	0.4888 0.6587	0.5772 0.6483	Ave		0.5649			12.4		30.0				
Naphthalene	++++ 1.4994	1.1580 1.2044	1.1489 0.9653	1.0861 1.2974	1.4202 1.3257	Ave		1.2339			13.6		30.0				
Hexachlorobutadiene	++++ 0.6448	++++ 0.5763	0.5100 0.5363	0.5070 0.7409	0.5745 0.7482	Ave		0.6047			16.0		30.0				
1,2,3-Trichlorobenzene	++++ 0.6283	0.5060 0.4951	0.4846 0.4151	0.4581 0.5663	0.5627 0.3728	Ave		0.4988			15.9		30.0				
2-Methylnaphthalene	++++ 0.9181	0.6422 0.5284	0.5584 0.3836	0.4778 0.4940	0.8101 ++++	Ave		0.6016			29.9		50.0				
1-Methylnaphthalene	++++ 1.1220	0.8380 0.6213	0.6877 0.4374	0.6391 0.5433	1.0085 ++++	Ave		0.7372			<u>31.8</u>		50.0				
4-Bromofluorobenzene (Surr)	0.7946 0.8130	0.8076 0.7824	0.8238 0.7807	0.8163 0.9039	0.8357 0.8386	Ave		0.8196			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 261958	++++ 518289	21711 1076565	42570 1857884	107824 3550370	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 149007	++++ 290483	++++ 602545	27727 1017511	60077 1877999	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 428033	++++ 858049	32728 1783528	68237 3014742	169908 6045892	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 46960	++++ 92605	++++ 191831	8660 316575	19699 606292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 249678	++++ 512846	19448 1074243	39319 1637176	98572 3657066	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	3911 156203	6583 313945	12737 657162	25449 1048926	62942 2151077	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 277412	++++ 542597	++++ 1129098	47326 1835688	114610 3783292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 127206	++++ 257490	++++ 544660	19602 873952	50104 1817509	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 138169	++++ 281926	12169 593804	21546 903575	54574 2043364	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 77933	++++ 156493	6344 327330	12373 519647	31401 1128580	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 296853	++++ 808553	++++ 1261075	66636 2449308	143467 5299467	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 130640	++++ 265901	10174 568659	20331 824429	51677 1944996	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 203924	++++ 402287	++++ 832948	31631 1264951	82259 2833506	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 422050	16790 848836	31414 1773236	63826 2796331	166966 6214752	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)					
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	
Acrolein	CBM	Ave	++++ 39091	++++ 73107	++++ 147180	++++ 259717	14239 517814	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0	
Acetonitrile	CBM	Ave	++++ 61491	++++ 127125	++++ 226910	++++ 390809	7481 862471	22116 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0	
Acetone	CBM	Ave	++++ 220327	++++ 398773	++++ 665956	++++ 1097098	86023 2321110	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0	
Pentane	CBM	Ave	++++ 28000	++++ 56204	++++ 114279	++++ 175439	11269 384054	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0	
Isopropyl alcohol	CBM	Ave	++++ 502108	++++ 1108992	++++ 1652685	++++ 3057291	79400 6999063	219917 3.00	++++ 6.00	++++ 12.0	++++ 24.0	0.480 48.0	
Ethyl ether	CBM	Ave	++++ 194355	++++ 387640	++++ 655797	++++ 1111229	76885 2395844	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0	
1,1-Dichloroethene	CBM	Ave	3049 147877	5250 292909	11039 633007	21196 889868	56607 2050200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Acrylonitrile	CBM	Ave	++++ 104178	++++ 213988	++++ 390689	++++ 666078	7623 1491458	14588 37127	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 322940	12189 644340	24196 1332511	47135 1919761	126693 4249014	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
tert-Butyl alcohol	CBM	Ave	++++ 237979	++++ 483244	++++ 773470	++++ 1347387	35554 3367365	99796 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0	
Methylene Chloride	CBM	Ave	++++ 158748	++++ 297663	++++ 587875	39858 829908	72672 ++++	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 ++++	
3-Chloropropene	CBM	Ave	++++ 172933	++++ 352711	++++ 715500	++++ 1138278	14784 2516658	29914 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Carbon disulfide	CBM	Ave	++++ 454099	++++ 893782	33755 1857677	67457 2686894	175320 6209652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
trans-1,2-Dichloroethene	CBM	Ave	++++ 152597	5310 304618	10703 640390	21313 904134	57740 2041028	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
2-Methylpentane	CBM	Ave	++++ 425850	++++ 850675	32181 1727313	64503 2608750	169974 5477445	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Methyl tert-butyl ether	CBM	Ave	++++ 436887	13784 884523	31073 1553256	59673 2571313	165819 5756531	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
1,1-Dichloroethane	CBM	Ave	6185 301902	11544 617142	22407 1197700	44696 1866128	117133 4143029	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Vinyl acetate	CBM	Ave	++++ 421041	++++ 920626	++++ 1610829	++++ 2825655	59807 6134377	158808 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Hexane	CBM	Ave	++++ 139897	++++ 280600	10084 564091	20822 836832	53409 1774150	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
2-Butanone (MEK)	CBM	Ave	++++ 71674	++++ 137814	++++ 242448	++++ 408724	10552 870000	27277 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0	
cis-1,2-Dichloroethene	CBM	Ave	3051 153350	5311 314771	10779 630074	22108 933768	57247 2161860	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 367561	++++ 727588	25120 1268094	49778 2287831	134280 4857969	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	7168 346742	12869 705235	25085 1383523	52455 2190241	132214 4960016	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 196936	++++ 392928	++++ 687510	27618 1192762	73368 2547299	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7734 377403	13331 774289	27166 1509577	55384 2393121	145486 5471084	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4547 232618	8382 490730	17516 952640	35324 1548479	87574 3502141	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 82609	++++ 165738	++++ 330488	12681 486357	31319 1042096	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 444635	15963 906736	33352 1771104	65637 2614755	167643 5593459	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	6601 372817	11874 761689	24215 1552321	50848 2465819	138991 5358444	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 59954	++++ 111445	++++ 184294	8226 331158	22433 786825	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 118426	++++ 240541	8397 465638	17105 690034	45390 1499809	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 249671	++++ 526684	18410 1043094	37543 1556455	95028 3566561	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	17363 868592	31627 1711484	63694 3264805	129920 5087913	336411 11120269	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 174693	++++ 357021	13419 694408	26105 1074435	66081 2411618	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 170338	6605 354326	12771 653599	25661 1061646	64714 2334951	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4087 194217	7238 411429	13973 832705	28091 1212507	74264 2837545	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 172040	++++ 363939	++++ 729198	27744 1170568	67675 2672665	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 346754	++++ 745629	23694 1472126	48577 2394105	129879 5512449	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 36737	++++ 120654	++++ 174155	8684 331358	19464 783489	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 232640	++++ 470252	++++ 823262	27631 1502138	81302 3304265	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	5664 305916	11041 613752	21112 1192238	44641 1790104	116952 4193256	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 377024	++++ 689509	24146 916498	51311 2161661	143236 5370174	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 265941	8857 558061	18964 1060593	38186 1693124	96201 3656415	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 249246	8494 528240	18209 983862	34634 1678819	93722 3876912	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	9759 514273	18809 1073072	37560 1966647	75222 3139180	192974 7445292	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2849 160780	5479 322166	11656 599648	23218 982519	60205 2274200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 175250	++++ 293749	10295 417616	22692 941298	65409 2558380	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 186587	++++ 377410	13108 732239	26877 1119383	73243 2627265	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	CBZd 5	Ave	++++ 1842861	++++ 3737320	++++ 7125919	278341 11514382	716916 26057226	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	++++ 313050	++++ 676985	19680 1357226	39627 2191805	110810 5334244	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 273278	++++ 576579	17903 1102407	37712 1772227	99001 4168790	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3665 191154	6973 394783	13185 776709	28219 1207845	72561 2883889	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	7137 406499	13951 832085	29142 1543553	58935 2444395	157211 5914764	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	++++ 719275	24780 1456098	48941 2578598	102987 4329132	272217 10330192	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	17235 1128063	36147 2267354	79756 3963090	160595 6728239	425545 16015024	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd 5	Ave	++++ 396249	13596 785625	27868 1455379	57416 2300427	151720 4997986	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd 5	Ave	++++ 288479	++++ 647774	16038 1258109	32352 2180538	93899 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Styrene	CBZd 5	Ave	++++ 379313	++++ 797396	22430 1440043	46527 2475003	134724 6272582	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	++++ 577831	18010 1183498	40418 2069274	85176 3507204	219991 8652988	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	++++ 388902	++++ 791220	26816 1406346	52217 2507616	146757 5342402	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 123267	++++ 249431	8767 448013	16530 809328	45222 1801458	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 770189	++++ 1569505	25754 2749199	53331 4984665	108667 11018383	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	++++ 208028	++++ 425975	14187 750579	27021 1348899	77981 3034911	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 190674	6524 376201	13286 679618	26657 1211506	71471 2747919	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	++++ 757218	++++ 1579790	52613 2762937	100995 4977060	288122 11171652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	++++ 298107	++++ 615118	20417 1079746	39553 1917273	109634 4410950	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 294414	++++ 619837	++++ 1139797	33405 2186650	99545 4845121	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 491714	16235 955171	34455 1652838	72566 2938778	189531 6027860	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	++++ 674397	++++ 1354211	44314 2326877	100985 4505713	288122 9821979	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 670745	++++ 1320347	44184 2282446	89238 4407169	236361 9493306	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	++++ 963943	++++ 1895656	62984 3335709	130314 6189211	346547 13052688	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7122 429682	13761 870050	27898 1597433	57634 3038807	153722 6998909	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 595380	++++ 1199239	35336 2207883	71441 4112439	206433 9093386	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7701 436204	14670 882709	28727 1608243	58838 3081288	154004 7120026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	++++ 779650	++++ 1524715	46995 2715440	99360 5104026	272972 11067094	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	8305 664909	18233 1328651	41757 2356435	88511 ++++	235583 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Indane	CBZd 5	Ave	++++ 602700	++++ 1193709	39872 2118687	79681 3956160	207350 8865173	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 416753	++++ 841536	27621 1533100	56506 2968700	146910 7061726	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	++++ 814617	23860 1547638	50796 2715683	108576 5104411	288957 10889558	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 516302	++++ 1040605	31427 1879451	64720 3517487	178805 7968258	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 527231	15243 970873	32520 1679521	73748 2924996	202684 6339976	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2927 207960	5571 429617	11218 745616	22412 ++++	65206 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 733964	++++ 1413004	41572 2207453	90241 4545804	260569 10379759	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 446881	12818 722978	28563 1006221	60222 1915343	173512 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 360521	11357 693552	20313 1301208	41810 2366361	119662 5229906	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 839854	24728 1530726	47569 2517870	92896 4661002	294401 10693857	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 361175	++++ 732431	21118 1398696	43365 2661640	119102 6035243	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 351962	10806 629244	20063 1082671	39185 2034470	116648 3007302	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 514300	13713 671591	23120 1000580	40866 1774929	167946 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 628512	17895 789694	28473 1141032	54667 1951995	209066 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1743947 1821597	1724522 1988683	1705365 2036360	1745466 1623678	1732344 1691157	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	12.7						50			
Propene	+++++	+++++	+++++	23.1						50		
Dichlorodifluoromethane	+++++	+++++	5.1						50			
Chloromethane	+++++	+++++	+++++	21.0						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	6.9						50			
Vinyl chloride	21.8						50					
Butane	+++++	+++++	+++++	13.3						50		
1,3-Butadiene	+++++	+++++	+++++	2.3						50		
Bromomethane	+++++	+++++	18.9						50			
Chloroethane	+++++	+++++	11.2						50			
Ethanol	+++++	+++++	+++++	22.9						50		
Vinyl bromide	+++++	+++++	7.3						50			
2-Methylbutane	+++++	+++++	+++++	5.5						50		
Trichlorofluoromethane	+++++	5.4						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	+++++	-1.1							50
Acetonitrile	+++++	+++++	+++++	-12.8							50	
Acetone	+++++	+++++	+++++	+++++	18.4							80
Pentane	+++++	+++++	+++++	+++++	5.4							50
Isopropyl alcohol	+++++	+++++	+++++	7.2							50	
Ethyl ether	+++++	+++++	+++++	+++++	10.7							50
1,1-Dichloroethene	8.4						50					
Acrylonitrile	+++++	+++++	6.3						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.9						50				
tert-Butyl alcohol	+++++	+++++	+++++	5.2							50	
Methylene Chloride	+++++	+++++	+++++	57.6 +++++							80	
3-Chloropropene	+++++	+++++	14.8						50			
Carbon disulfide	+++++	+++++	7.1						50			
trans-1,2-Dichloroethene	+++++	-2.1						50				
2-Methylpentane	+++++	+++++	8.2						50			
Methyl tert-butyl ether	+++++	-8.6						50				
1,1-Dichloroethane	6.8						50					
Vinyl acetate	+++++	+++++	0.8						50			
Hexane	+++++	+++++	5.2						50			
2-Butanone (MEK)	+++++	+++++	+++++	8.0						50		
cis-1,2-Dichloroethene	5.8						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	3.1						50			
Chloroform	7.6						50					
Tetrahydrofuran	+++++	+++++	+++++	1.2						50		
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	-0.5						50					
Cyclohexane	+++++	+++++	+++++	5.2						50		
Benzene	+++++	-0.4						50				
Carbon tetrachloride	-4.8						50					
1-Butanol	+++++	+++++	+++++	0.2							50	
2,3-Dimethylpentane	+++++	+++++	6.9						50			
Thiophene	+++++	+++++	6.3						50			
2,2,4-Trimethylpentane	6.0						50					
Heptane	+++++	+++++	12.0						50			
1,2-Dichloropropane	+++++	4.8						50				
Trichloroethene	7.3						50					
Dibromomethane	+++++	+++++	+++++	2.1						50		
Bromodichloromethane	+++++	+++++	-2.7						50			
1,4-Dioxane	+++++	+++++	+++++	13.9						50		
Methyl methacrylate	+++++	+++++	+++++	-16.1						50		
Methylcyclohexane	-1.0						50					
4-Methyl-2-pentanone (MIBK)	+++++	+++++	3.0						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.6						50				
trans-1,3-Dichloropropene	+++++	-7.7						50				
Toluene	1.0						50					
1,1,2-Trichloroethane	-3.3						50					
2-Hexanone	+++++	+++++	-5.8						50			
Octane	+++++	+++++	0.0						50			
Dibromochloromethane	+++++	+++++	-12.7						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-7.1						50			
Tetrachloroethene	1.1						50					
Chlorobenzene	-4.9						50					
Ethylbenzene	+++++	-3.0						50				
m-Xylene & p-Xylene	-14.2						50					
Nonane	+++++	-2.2						50				
Bromoform	+++++	+++++	-18.6		+++++				50			
Styrene	+++++	+++++	-14.3						50			
o-Xylene	+++++	-12.6						50				
1,1,2,2-Tetrachloroethane	+++++	+++++	0.0						50			
1,2,3-Trichloropropane	+++++	+++++	2.1						50			
Isopropylbenzene	+++++	-6.2						50				
Propylbenzene	+++++	+++++	-1.4						50			
2-Chlorotoluene	+++++	-3.8						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	+++++	+++++	-1.0						50			
1,3,5-Trimethylbenzene	+++++	+++++	-1.3						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-22.6						50		
Decane	+++++	-4.7						50				
tert-Butylbenzene	+++++	+++++	-3.9						50			
1,2,4-Trimethylbenzene	+++++	+++++	-2.6						50			
sec-Butylbenzene	+++++	+++++	-3.0						50			
1,3-Dichlorobenzene	-9.4						50					
Benzyl chloride	+++++	+++++	-12.6						50			
1,4-Dichlorobenzene	-4.4						50					
4-Isopropyltoluene	+++++	+++++	-9.5						50			
1,2,3-Trimethylbenzene	-23.6		+++++	+++++			50					
Indane	+++++	+++++	-2.8						50			
1,2-Dichlorobenzene	+++++	+++++	-6.9						50			
Butylbenzene	+++++	-12.5						50				
Indene	+++++	+++++	-10.8						50			
Undecane	+++++	-11.9						50				
1,2-Dibromo-3-Chloropropane	-10.0		+++++	+++++			50					
1,2,4,5-Tetramethylbenzene	+++++	+++++	-12.1						50			
Dodecane	+++++	-6.1		+++++				50				
1,2,4-Trichlorobenzene	+++++	-5.8						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-6.2						80				
Hexachlorobutadiene	+++++	+++++	-15.7						50			
1,2,3-Trichlorobenzene	+++++	1.5						50				
2-Methylnaphthalene	+++++	6.7		+++++				80				
1-Methylnaphthalene	+++++	13.7		+++++				80				

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.090		1.70	2.00	-15.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4983		2.00	2.00	-0.2	35.0
Alpha Methyl Styrene	Ave	0.5043	0.4358		1.73	2.00	-13.6	35.0
Decane	Ave	0.7982	0.7703		1.93	2.00	-3.5	35.0
tert-Butylbenzene	Ave	1.114	0.998		1.79	2.00	-10.4	35.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9651		1.76	2.00	-11.9	35.0
sec-Butylbenzene	Ave	1.569	1.417		1.81	2.00	-9.7	35.0
1,3-Dichlorobenzene	Ave	0.7160	0.6664		1.86	2.00	-6.9	35.0
Benzyl chloride	Ave	0.9762	0.8908		1.83	2.00	-8.7	35.0
1,4-Dichlorobenzene	Ave	0.7344	0.6695		1.82	2.00	-8.8	35.0
4-Isopropyltoluene	Ave	1.255	1.122		1.79	2.00	-10.6	35.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.7182		1.45	2.00	-27.5	35.0
Butylcyclohexane	Ave	0.9039	0.8456		1.87	2.00	-6.5	35.0
Indane	Ave	0.9903	0.8594		1.74	2.00	-13.2	35.0
1,2-Dichlorobenzene	Ave	0.7165	0.6343		1.77	2.00	-11.5	35.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	35.0
Indene	Ave	0.8508	0.6491		1.53	2.00	-23.7	35.0
Undecane	Ave	0.8098	0.7744		1.91	2.00	-4.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.2570		1.73	2.00	-13.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.013		1.77	2.00	-11.3	35.0
Dodecane	Ave	0.6396	0.6522		2.04	2.00	2.0	35.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5328		1.89	2.00	-5.7	35.0
Naphthalene	Ave	1.234	1.234		2.00	2.00	0.0	35.0
Hexachlorobutadiene	Ave	0.6047	0.5411		1.79	2.00	-10.5	35.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.5256		2.11	2.00	5.4	35.0
2-Methylnaphthalene	Ave	0.6016	0.6997		2.33	2.00	16.3	50.0
1-Methylnaphthalene	Ave	0.7372	0.8235		2.23	2.00	11.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8145		3.97	4.00	-0.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 06/21/2017 17:00
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/21/2017 22:43
 Lab File ID: GA11ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.7395	0.6739			2.00	-8.9	35.0
3-Methylthiophene	Ave	0.7319	0.6589			2.00	-10.0	35.0
2-Ethylthiophene	Ave	0.9478	0.8011			2.00	-15.5	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.8235			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.8516	0.6095			2.00	-28.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.167	0.8355			2.00	-28.4	35.0
Benzo (b) thiophene	Ave	1.068	0.7208			2.00	-32.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.638		2.01	2.00	0.7	35.0
Propene	Ave	1.463	1.485		2.03	2.00	1.5	35.0
Dichlorodifluoromethane	Ave	4.235	4.340		2.05	2.00	2.5	35.0
Chloromethane	Ave	0.4649	0.4832		2.08	2.00	3.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.577		2.08	2.00	4.1	35.0
Acetaldehyde	Ave	0.5987	0.4752		7.94	10.0	-20.6	35.0
Vinyl chloride	Ave	1.611	1.638		2.03	2.00	1.7	35.0
1,3-Butadiene	Ave	1.245	1.289		2.07	2.00	3.6	35.0
Butane	Ave	2.712	2.809		2.07	2.00	3.5	35.0
Bromomethane	Ave	1.392	1.376		1.98	2.00	-1.1	35.0
Chloroethane	Ave	0.7761	0.7850		2.02	2.00	1.1	35.0
Ethanol	Ave	0.7042	0.5103		7.25	10.0	-27.5	35.0
Vinyl bromide	Ave	1.290	1.377		2.13	2.00	6.7	35.0
2-Methylbutane	Ave	1.947	1.999		2.05	2.00	2.7	35.0
Trichlorofluoromethane	Ave	4.152	4.112		1.98	2.00	-1.0	35.0
Acrolein	Ave	0.3574	0.2736		1.53	2.00	-23.4	35.0
Acetonitrile	Ave	0.5574	0.4415		1.58	2.00	-20.8	35.0
Acetone	Ave	0.6013	0.5234		1.74	2.00	-13.0	35.0
Pentane	Ave	0.2653	0.2805		2.11	2.00	5.7	35.0
Isopropyl alcohol	Ave	1.603	1.950		2.43	2.00	21.6	35.0
Ethyl ether	Ave	1.725	1.471		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.412	1.470		2.08	2.00	4.1	35.0
Acrylonitrile	Ave	0.9747	0.8590		1.76	2.00	-11.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.092		2.02	2.00	1.0	35.0
tert-Butyl alcohol	Ave	2.196	2.417		2.20	2.00	10.0	35.0
Methylene Chloride	Ave	1.643	1.409		1.72	2.00	-14.2	35.0
3-Chloropropene	Ave	1.751	1.584		1.81	2.00	-9.6	35.0
Carbon disulfide	Ave	4.284	4.357		2.03	2.00	1.7	35.0
trans-1,2-Dichloroethene	Ave	1.414	1.448		2.05	2.00	2.4	35.0
2-Methylpentane	Ave	4.045	3.765		1.86	2.00	-6.9	35.0
Methyl tert-butyl ether	Ave	3.932	3.361		1.71	2.00	-14.5	35.0
1,1-Dichloroethane	Ave	2.906	2.821		1.94	2.00	-2.9	35.0
Vinyl acetate	Ave	4.034	3.285		1.63	2.00	-18.6	35.0
2-Butanone (MEK)	Ave	0.6347	0.5473		1.72	2.00	-13.8	35.0
Hexane	Ave	1.304	1.314		2.02	2.00	0.8	35.0
Isopropyl ether	Ave	4.992	4.538		1.82	2.00	-9.1	35.0
cis-1,2-Dichloroethene	Ave	1.447	1.467		2.03	2.00	1.4	35.0
Ethyl acetate	Ave	3.312	2.660		1.61	2.00	-19.7	35.0
Chloroform	Ave	3.344	3.175		1.90	2.00	-5.1	35.0
Tert-butyl ethyl ether	Ave	4.607	3.821		1.66	2.00	-17.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.483		1.67	2.00	-16.3	35.0
1,1,1-Trichloroethane	Ave	3.620	3.468		1.92	2.00	-4.2	35.0
1,2-Dichloroethane	Ave	0.3910	0.3830		1.96	2.00	-2.1	35.0
Cyclohexane	Ave	0.1314	0.1432		2.18	2.00	8.9	35.0
Benzene	Ave	0.7153	0.7639		2.14	2.00	6.8	35.0
Carbon tetrachloride	Ave	0.5933	0.6444		2.17	2.00	8.6	35.0
1-Butanol	Ave	0.0896	0.1078		2.41	2.00	20.4	35.0
2,3-Dimethylpentane	Ave	0.1886	0.1955		2.07	2.00	3.6	35.0
Thiophene	Ave	0.4156	0.4158		2.00	2.00	0.0	35.0
2,2,4-Trimethylpentane	Ave	1.401	1.433		2.05	2.00	2.3	35.0
Heptane	Ave	0.2875	0.2905		2.02	2.00	1.0	35.0
1,2-Dichloropropane	Ave	0.2813	0.2642		1.88	2.00	-6.1	35.0
Trichloroethene	Ave	0.3257	0.3391		2.08	2.00	4.1	35.0
Dibromomethane	Ave	0.2963	0.2956		2.00	2.00	-0.2	35.0
Bromodichloromethane	Ave	0.5843	0.5891		2.02	2.00	0.8	35.0
1,4-Dioxane	Ave	0.0832	0.0836		2.01	2.00	0.5	35.0
Methyl methacrylate	Ave	0.3595	0.3109		1.73	2.00	-13.5	35.0
Methylcyclohexane	Ave	0.4896	0.6141		2.51	2.00	25.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.5532		1.96	2.00	-1.8	35.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4212		1.97	2.00	-1.5	35.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4178		1.94	2.00	-3.1	35.0
Toluene	Ave	0.8801	0.8270		1.88	2.00	-6.0	35.0
1,1,2-Trichloroethane	Ave	0.2685	0.2546		1.90	2.00	-5.2	35.0
2-Hexanone	Ave	0.2641	0.2800		2.12	2.00	6.0	35.0
Octane	Ave	0.3165	0.3309		2.09	2.00	4.5	35.0
Dibromochloromethane	Ave	0.5446	0.5759		2.12	2.00	5.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4594		1.97	2.00	-1.3	35.0
Tetrachloroethene	Ave	0.3302	0.3391		2.05	2.00	2.7	35.0
2,3-Dimethylheptane	Ave	1.076	0.9762		1.82	2.00	-9.2	35.0
Chlorobenzene	Ave	0.6841	0.6891		2.01	2.00	0.7	35.0
Ethylbenzene	Ave	1.196	1.091		1.82	2.00	-8.8	35.0
m-Xylene & p-Xylene	Ave	0.9148	0.8433		3.69	4.00	-7.8	35.0
Nonane	Ave	0.6507	0.6606		2.03	2.00	1.5	35.0
Bromoform	Ave	0.4761	0.5196		2.18	2.00	9.1	35.0
Styrene	Ave	0.6323	0.5922		1.87	2.00	-6.3	35.0
o-Xylene	Ave	0.9646	0.8608		1.78	2.00	-10.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5907		1.82	2.00	-8.8	35.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	35.0
Isopropylbenzene	Ave	1.286	1.176		1.83	2.00	-8.5	35.0
Propylbenzene	Ave	0.3476	0.3186		1.83	2.00	-8.3	35.0
2-Chlorotoluene	Ave	0.3175	0.3028		1.91	2.00	-4.6	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: GBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MG BFB Injection Time: 11:03
 Analysis Batch No.: 27931

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.5
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	73.1
175	5.0 - 9.0 % of mass 174	5.1 (7.0) 1
176	95.0 - 101.0 % of mass 174	71.2 (97.4) 1
177	5.0 - 9.0 % of mass 176	4.6 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27931/2	GCCVB26.D	02/26/2019	11:35
	LCS 140-27931/1002	GCCVB26-LCS. d	02/26/2019	11:35
	MB 140-27931/4	G500BB26.D	02/26/2019	12:56
SV-182-MB-3 DL	140-14387-4 DL	GB26P104.D	02/26/2019	18:01
SV-173-A-26 DL	140-14387-14 DL	GB26P106.D	02/26/2019	19:24
SV-171-A-26 DL	140-14387-16 DL	GB26P107.D	02/26/2019	20:06

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.652		2.02	2.00	1.2	30.0
Propene	Ave	1.463	1.534		2.10	2.00	4.8	30.0
Dichlorodifluoromethane	Ave	4.235	4.356		2.06	2.00	2.9	30.0
Chloromethane	Ave	0.4649	0.4693		2.02	2.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.404		1.94	2.00	-2.9	30.0
Acetaldehyde	Ave	0.5987	0.5225		8.73	10.0	-12.7	30.0
Vinyl chloride	Ave	1.611	1.586		1.97	2.00	-1.5	30.0
1,3-Butadiene	Ave	1.245	1.283		2.06	2.00	3.0	30.0
Butane	Ave	2.712	2.755		2.03	2.00	1.6	30.0
Bromomethane	Ave	1.392	1.313		1.89	2.00	-5.7	30.0
Chloroethane	Ave	0.7761	0.7469		1.92	2.00	-3.8	30.0
Ethanol	Ave	0.7042	0.7541		10.7	10.0	7.1	30.0
Vinyl bromide	Ave	1.290	1.209		1.87	2.00	-6.3	30.0
2-Methylbutane	Ave	1.947	1.895		1.95	2.00	-2.7	30.0
Trichlorofluoromethane	Ave	4.152	4.042		1.95	2.00	-2.7	30.0
Acrolein	Ave	0.3574	0.3194		1.79	2.00	-10.6	30.0
Acetonitrile	Ave	0.5574	0.5302		1.90	2.00	-4.9	30.0
Acetone	Ave	0.6013	0.4988		4.98	6.00	-17.0	30.0
Pentane	Ave	0.2653	0.2565		1.93	2.00	-3.3	30.0
Isopropyl alcohol	Ave	1.603	1.779		6.66	6.00	10.9	30.0
Ethyl ether	Ave	1.725	1.691		1.96	2.00	-2.0	30.0
1,1-Dichloroethene	Ave	1.412	1.514		2.14	2.00	7.2	30.0
Acrylonitrile	Ave	0.9747	0.9432		1.94	2.00	-3.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.167		2.07	2.00	3.5	30.0
tert-Butyl alcohol	Ave	2.196	2.812		2.56	2.00	28.0	30.0
Methylene Chloride	Ave	1.643	1.484		1.81	2.00	-9.7	30.0
3-Chloropropene	Ave	1.751	1.648		1.88	2.00	-5.9	30.0
Carbon disulfide	Ave	4.284	4.628		2.16	2.00	8.0	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.521		2.15	2.00	7.6	30.0
2-Methylpentane	Ave	4.045	4.401		2.18	2.00	8.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.883		1.97	2.00	-1.3	30.0
1,1-Dichloroethane	Ave	2.906	2.982		2.05	2.00	2.6	30.0
Vinyl acetate	Ave	4.034	3.919		1.94	2.00	-2.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.6318		1.99	2.00	-0.5	30.0
Hexane	Ave	1.304	1.409		2.16	2.00	8.1	30.0
Isopropyl ether	Ave	4.992	5.130		2.06	2.00	2.8	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.511		2.09	2.00	4.4	30.0
Ethyl acetate	Ave	3.312	3.321		2.01	2.00	0.3	30.0
Chloroform	Ave	3.344	3.351		2.00	2.00	0.2	30.0
Tert-butyl ethyl ether	Ave	4.607	4.651		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.780		2.01	2.00	0.4	30.0
1,1,1-Trichloroethane	Ave	3.620	3.686		2.04	2.00	1.8	30.0
1,2-Dichloroethane	Ave	0.3910	0.3917		2.00	2.00	0.2	30.0
Cyclohexane	Ave	0.1314	0.1477		2.25	2.00	12.4	30.0
Benzene	Ave	0.7153	0.7399		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6573		2.22	2.00	10.8	30.0
1-Butanol	Ave	0.0896	0.1263		2.82	2.00	41.0*	30.0
2,3-Dimethylpentane	Ave	0.1886	0.2098		2.22	2.00	11.2	30.0
Thiophene	Ave	0.4156	0.4526		2.18	2.00	8.9	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.515		2.16	2.00	8.2	30.0
Heptane	Ave	0.2875	0.3131		2.18	2.00	8.9	30.0
1,2-Dichloropropane	Ave	0.2813	0.2865		2.04	2.00	1.8	30.0
Trichloroethene	Ave	0.3257	0.3404		2.09	2.00	4.5	30.0
Dibromomethane	Ave	0.2963	0.3076		2.08	2.00	3.8	30.0
Bromodichloromethane	Ave	0.5843	0.6356		2.18	2.00	8.8	30.0
1,4-Dioxane	Ave	0.0832	0.1054		2.53	2.00	26.7	30.0
Methyl methacrylate	Ave	0.3595	0.3845		2.14	2.00	7.0	30.0
Methylcyclohexane	Ave	0.4896	0.5279		2.16	2.00	7.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.6430		2.28	2.00	14.2	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4641		2.17	2.00	8.5	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4612		2.14	2.00	7.0	30.0
Toluene	Ave	0.8801	0.8908		2.02	2.00	1.2	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2829		2.11	2.00	5.3	30.0
2-Hexanone	Ave	0.2641	0.3188		2.41	2.00	20.7	30.0
Octane	Ave	0.3165	0.3439		2.17	2.00	8.7	30.0
Dibromochloromethane	Ave	0.5446	0.5989		2.20	2.00	10.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4929		2.12	2.00	5.8	30.0
Tetrachloroethene	Ave	0.3302	0.3406		2.06	2.00	3.1	30.0
2,3-Dimethylheptane	Ave	1.076	1.161		2.16	2.00	8.0	30.0
Chlorobenzene	Ave	0.6841	0.7203		2.11	2.00	5.3	30.0
Ethylbenzene	Ave	1.196	1.211		2.03	2.00	1.3	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.9437		4.13	4.00	3.2	30.0
Nonane	Ave	0.6507	0.7098		2.18	2.00	9.1	30.0
Bromoform	Ave	0.4761	0.5476		2.30	2.00	15.0	30.0
Styrene	Ave	0.6323	0.6714		2.12	2.00	6.2	30.0
o-Xylene	Ave	0.9646	0.9910		2.05	2.00	2.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.6633		2.05	2.00	2.4	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.2051		1.98	2.00	-1.2	30.0
Isopropylbenzene	Ave	1.286	1.274		1.98	2.00	-1.0	30.0
Propylbenzene	Ave	0.3476	0.3424		1.97	2.00	-1.5	30.0
2-Chlorotoluene	Ave	0.3175	0.3184		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.295		2.02	2.00	0.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4918		1.97	2.00	-1.5	30.0
Alpha Methyl Styrene	Ave	0.5043	0.5202		2.06	2.00	3.1	30.0
Decane	Ave	0.7982	0.8625		2.16	2.00	8.1	30.0
tert-Butylbenzene	Ave	1.114	1.103		1.98	2.00	-1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.096	1.089		1.99	2.00	-0.6	30.0
sec-Butylbenzene	Ave	1.569	1.580		2.01	2.00	0.7	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.7287		2.04	2.00	1.8	30.0
Benzyl chloride	Ave	0.9762	1.033		2.12	2.00	5.8	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.7367		2.01	2.00	0.3	30.0
4-Isopropyltoluene	Ave	1.255	1.277		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	1.101		2.22	2.00	11.1	30.0
Butylcyclohexane	Ave	0.9039	0.9644		2.13	2.00	6.7	30.0
Indane	Ave	0.9903	0.9865		1.99	2.00	-0.4	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.7004		1.95	2.00	-2.3	30.0
Butylbenzene	Ave	1.277	1.325		2.08	2.00	3.8	30.0
Indene	Ave	0.8508	0.8688		2.04	2.00	2.1	30.0
Undecane	Ave	0.8098	0.8597		2.12	2.00	6.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3582		2.42	2.00	20.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.185		2.07	2.00	3.7	30.0
Dodecane	Ave	0.6396	0.6319		1.98	2.00	-1.2	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5181		1.83	2.00	-8.3	30.0
Naphthalene	Ave	1.234	1.197		1.94	2.00	-3.0	30.0
Hexachlorobutadiene	Ave	0.6047	0.5124		1.69	2.00	-15.3	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4625		1.85	2.00	-7.3	30.0
2-Methylnaphthalene	Ave	0.6016	0.4938		1.64	2.00	-17.9	50.0
1-Methylnaphthalene	Ave	0.7372	0.5485		1.49	2.00	-25.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8212		4.01	4.00	0.2	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HBFB20IC.D BFB Injection Date: 02/20/2019
 Instrument ID: MH BFB Injection Time: 13:11
 Analysis Batch No.: 27843

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.2	
75	30.0 - 60.0 % of mass 95	48.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	93.5	
175	5.0 - 9.0 % of mass 174	6.7	(7.1) 1
176	95.0 - 101.0 % of mass 174	91.9	(98.2) 1
177	5.0 - 9.0 % of mass 176	6.0	(6.6) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-27843/3	HB20IC09.D	02/20/2019	15:12
	IC 140-27843/5	HB20IC10.D	02/20/2019	16:59
	IC 140-27843/8	HB20IC01.D	02/20/2019	19:38
	IC 140-27843/9	HB20IC02.D	02/20/2019	20:31
	IC 140-27843/10	HB20IC03.D	02/20/2019	21:26
	IC 140-27843/11	HB20IC04.D	02/20/2019	22:20
	IC 140-27843/12	HB20IC05.D	02/20/2019	23:14
	IC 140-27843/13	HB20IC06.D	02/21/2019	00:08
	ICIS 140-27843/14	HB20IC07.D	02/21/2019	01:03
	IC 140-27843/15	HB20IC08.D	02/21/2019	01:57
	ICV 140-27843/17	HB20ICV.D	02/21/2019	03:43

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	3.4653	3.1705	3.1944	3.1500	Ave		3.2799			4.2		30.0				
	3.1939	3.2579	3.1981	3.5227	3.3659												
Propene	+++++	+++++	1.7587	1.4845	1.4290	Ave		1.4914			7.7		30.0				
	1.4326	1.4362	1.4091	1.5280	1.4530												
Dichlorodifluoromethane	5.8144	5.0640	4.8366	4.9504	4.8580	Ave		5.0379			6.0		30.0				
	4.8876	5.0248	4.8446	5.2377	4.8608												
Chloromethane	+++++	+++++	+++++	0.6715	0.5966	Ave		0.5876			7.4		30.0				
	0.5872	0.5848	0.5550	0.5865	0.5318												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.7320	3.4028	3.3465	3.4027	Ave		3.4749			3.3		30.0				
	3.4272	3.5307	3.4425	3.5488	3.4411												
Vinyl chloride	+++++	2.0465	1.8423	1.8473	1.8163	Ave		1.8271			5.6		30.0				
	1.8203	1.8334	1.7435	1.8315	1.6623												
Butane	+++++	+++++	2.7879	2.8437	2.7009	Ave		2.6143			7.2		30.0				
	2.6844	2.6215	2.4361	2.5669	2.2728												
1,3-Butadiene	+++++	+++++	1.3389	1.3779	1.3208	Ave		1.3198			4.0		30.0				
	1.3288	1.3568	1.2722	1.3471	1.2155												
Bromomethane	+++++	+++++	1.8623	1.9344	1.8572	Ave		1.8480			3.2		30.0				
	1.8498	1.8745	1.7805	1.8774	1.7481												
Chloroethane	+++++	+++++	0.8855	0.8409	0.8547	Ave		0.8331			3.9		30.0				
	0.8383	0.8323	0.8039	0.8312	0.7778												
Ethanol	+++++	+++++	0.8934	0.8231	0.8080	Ave		0.8189			6.1		30.0				
	0.8037	0.8564	0.8028	0.8429	0.7211												
Vinyl bromide	+++++	1.9018	1.7722	1.7366	1.7418	Ave		1.7583			3.6		30.0				
	1.7437	1.7838	1.7019	1.7701	1.6732												
2-Methylbutane	+++++	+++++	2.0515	1.9633	1.9838	Ave		1.9393			4.2		30.0				
	1.9590	1.9816	1.8753	1.9172	1.7822												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 4.5968	4.8919 4.5966	4.5963 4.4102	4.6432 4.6616	4.6819 4.3585	Ave		4.6041			3.4		30.0				
Acrolein	++++ 0.5846	++++ 0.5959	++++ 0.5782	++++ 0.6012	0.6004 0.5473	Ave		0.5850			3.2		30.0				
Acetonitrile	++++ 0.7177	++++ 0.7681	++++ 0.7379	0.7408 0.7567	0.7405 0.6910	Ave		0.7361			3.4		30.0				
Acetone	++++ 0.7514	++++ 0.7610	++++ 0.7228	0.8447 0.7183	0.7906 0.6754	Ave		0.7520			7.3		30.0				
Pentane	++++ 0.2123	++++ 0.2170	++++ 0.2070	0.2190 0.2038	0.2202 0.1943	Ave		0.2105			4.5		30.0				
Isopropyl alcohol	2.7418 2.1881	2.3188 2.2924	2.2272 2.1969	2.1770 2.2190	1.6999 1.9893	QuaF		2.3689	-0.007836					1.0000		0.9900	
Ethyl ether	++++ 1.8837	2.0347 1.9038	1.8861 1.7817	1.8427 1.8377	1.9152 1.6737	Ave		1.8621			5.3		30.0				
1,1-Dichloroethene	++++ 1.5290	1.7340 1.5543	1.5403 1.5141	1.5633 1.5140	1.5440 1.4908	Ave		1.5537			4.6		30.0				
Acrylonitrile	++++ 1.1815	++++ 1.2218	1.1258 1.2125	1.1965 1.2550	1.1794 1.1889	Ave		1.1952			3.1		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.6645	4.0846 3.6642	3.7625 3.5412	3.7405 3.6163	3.7204 3.4760	Ave		3.6967			4.7		30.0				
tert-Butyl alcohol	++++ 2.5653	++++ 2.7860	2.5284 2.7619	2.5014 2.8005	2.5277 2.6087	Ave		2.6350			4.8		30.0				
Methylene Chloride	++++ 1.5650	++++ 1.4959	++++ 1.3885	2.4719 1.3565	1.8784 1.2927	Ave		1.6355			25.4		30.0				
3-Chloropropene	++++ 1.4263	++++ 1.4402	1.7866 1.3797	1.5003 1.4158	1.4252 1.3047	Ave		1.4598			9.8		30.0				
Carbon disulfide	++++ 4.5267	++++ 4.6305	4.5536 4.4426	4.5843 4.4448	4.5189 4.2681	Ave		4.4962			2.5		30.0				
trans-1,2-Dichloroethene	++++ 1.5549	1.7812 1.5959	1.5579 1.5626	1.5474 1.5716	1.5873 1.5791	Ave		1.5931			4.5		30.0				
2-Methylpentane	++++ 3.6495	3.8413 3.7329	3.6302 3.5934	3.6663 3.6789	3.6726 3.4794	Ave		3.6605			2.7		30.0				
Methyl tert-butyl ether	++++ 3.8063	++++ 3.9290	3.6249 3.8501	3.6903 3.7951	3.7667 3.7289	Ave		3.7739			2.5		30.0				
1,1-Dichloroethane	++++ 3.0039	3.2165 3.0616	3.0410 2.9531	3.0857 3.0007	3.0099 2.9039	Ave		3.0307			2.9		30.0				
Vinyl acetate	++++ 4.3714	++++ 4.6452	3.6694 4.6119	3.8279 4.8234	4.0421 4.6436	Ave		4.3293			9.9		30.0				
Hexane	++++ 1.2057	1.3026 1.2192	1.1775 1.1910	1.1729 1.2227	1.1991 1.2068	Ave		1.2108			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++ 0.6760	++++ 0.7192	++++ 0.7039	0.6508 0.6996	0.6769 0.6879	Ave		0.6878			3.3		30.0				
cis-1,2-Dichloroethene	++++ 1.5744	1.7468 1.6363	1.5933 1.5970	1.6008 1.5970	1.5882 1.5988	Ave		1.6147			3.2		30.0				
Ethyl acetate	++++ 3.8330	++++ 3.9793	3.7437 3.9131	3.7153 4.0646	3.7356 3.8788	Ave		3.8579			3.2		30.0				
Chloroform	++++ 3.4568	3.6507 3.5041	3.4694 3.4001	3.5102 3.4590	3.4542 3.3756	Ave		3.4756			2.3		30.0				
Tetrahydrofuran	++++ 1.8356	2.0384 1.8762	1.8755 1.8441	1.8215 1.9023	1.7999 1.8263	Ave		1.8689			3.8		30.0				
1,1,1-Trichloroethane	++++ 3.2539	3.3591 3.4003	3.1133 3.3660	3.1042 3.4402	3.2027 3.5047	Ave		3.3049			4.3		30.0				
1,2-Dichloroethane	0.4792 0.4208	0.4342 0.4309	0.4004 0.4260	0.4094 0.4468	0.4128 0.4496	Ave		0.4310			5.4		30.0				
Cyclohexane	++++ 0.1234	++++ 0.1282	++++ 0.1287	0.1130 0.1363	0.1144 0.1399	Ave		0.1257			7.6		30.0				
Benzene	++++ 0.8262	0.8954 0.8466	0.8112 0.8440	0.7881 0.8945	0.8065 0.8990	Ave		0.8457			5.0		30.0				
Carbon tetrachloride	0.7487 0.6708	0.6490 0.7010	0.6034 0.7125	0.5747 0.7615	0.6367 0.7873	Ave		0.6846			10.2		30.0				
1-Butanol	++++ 0.1071	++++ 0.1245	++++ 0.1248	0.0965 0.1330	0.0979 0.1172	Ave		0.1144			12.4		30.0				
2,3-Dimethylpentane	++++ 0.1796	0.1766 0.1801	0.1665 0.1766	0.1668 0.1780	0.1769 0.1774	Ave		0.1754			2.9		30.0				
Thiophene	++++ 0.4824	0.4876 0.4945	0.4639 0.4890	0.4560 0.4969	0.4750 0.5094	Ave		0.4839			3.4		30.0				
2,2,4-Trimethylpentane	++++ 1.3660	1.4676 1.4074	1.3177 1.3906	1.3230 1.4688	1.3297 1.4871	Ave		1.3953			4.8		30.0				
Heptane	++++ 0.2663	0.2712 0.2737	0.2506 0.2749	0.2452 0.2881	0.2558 0.2989	Ave		0.2694			6.4		30.0				
1,2-Dichloropropane	++++ 0.3549	0.3683 0.3641	0.3346 0.3586	0.3506 0.3775	0.3450 0.3847	Ave		0.3598			4.4		30.0				
Trichloroethene	0.4632 0.3841	0.4095 0.3944	0.3655 0.3956	0.3672 0.4073	0.3757 0.4285	Ave		0.3991			7.5		30.0				
Dibromomethane	++++ 0.3974	0.4765 0.4115	0.4099 0.4077	0.4084 0.4323	0.3933 0.4360	Ave		0.4192			6.1		30.0				
Bromodichloromethane	0.6604 0.6222	0.5793 0.6529	0.5629 0.6534	0.5714 0.6923	0.5879 0.7149	Ave		0.6298			8.4		30.0				
1,4-Dioxane	++++ 0.1219	0.1357 0.1302	0.1276 0.1307	0.1218 0.1288	0.1227 0.1236	Ave		0.1270			3.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	0.4034	0.3437	0.2975	0.3269	0.3551	Ave		0.3781			12.1		30.0				
	0.3789	0.4060	0.4068	0.4343	0.4280												
Methylcyclohexane	++++	++++	0.4245	0.4287	0.4498	LinF		0.5272						0.9990		0.9900	
	0.4648	0.4877	0.4844	0.5074	0.5357												
4-Methyl-2-pentanone (MIBK)	++++	++++	0.7143	0.6509	0.6822	Ave		0.7577			10.3		30.0				
	0.7301	0.7728	0.7841	0.8611	0.8658												
cis-1,3-Dichloropropene	0.4871	0.3999	0.3931	0.4158	0.4395	Ave		0.4735			12.4		30.0				
	0.4778	0.5104	0.5121	0.5406	0.5587												
trans-1,3-Dichloropropene	0.4944	0.4260	0.4038	0.4133	0.4518	Ave		0.4856			12.2		30.0				
	0.4884	0.5211	0.5365	0.5532	0.5670												
Toluene	++++	1.1979	1.0972	1.0779	1.1122	Ave		1.1386			3.2		30.0				
	1.1442	1.1566	1.1486	1.1597	1.1532												
1,1,2-Trichloroethane	0.4133	0.3819	0.3518	0.3774	0.3800	Ave		0.3780			4.2		30.0				
	0.3813	0.3829	0.3732	0.3756	0.3625												
2-Hexanone	++++	++++	++++	0.2822	0.3272	Ave		0.3734			14.2		30.0				
	0.3617	0.3952	0.4022	0.4230	0.4226												
Octane	0.3431	0.2979	0.2983	0.3057	0.3158	Ave		0.3251			5.7		30.0				
	0.3345	0.3387	0.3351	0.3409	0.3405												
C8 Range	++++	++++	++++	2.6905	2.7814	Ave		2.9596			6.7		30.0				
	2.8847	2.9768	2.9653	3.2221	3.1962												
Dibromochloromethane	0.7111	0.6553	0.6167	0.6360	0.7095	Ave		0.7610			14.5		30.0				
	0.7798	0.8336	0.8540	0.8994	0.9146												
1,2-Dibromoethane (EDB)	0.7556	0.6517	0.5952	0.6231	0.6489	Ave		0.6894			8.3		30.0				
	0.6861	0.7166	0.7185	0.7452	0.7529												
Tetrachloroethene	0.5382	0.4943	0.4320	0.4547	0.4475	Ave		0.4638			6.6		30.0				
	0.4481	0.4549	0.4479	0.4602	0.4599												
Chlorobenzene	1.0921	0.9609	0.8656	0.8563	0.8903	Ave		0.9365			7.5		30.0				
	0.8958	0.9195	0.9278	0.9856	0.9706												
Ethylbenzene	1.6135	1.4227	1.3082	1.3322	1.3865	Ave		1.4498			6.5		30.0				
	1.4269	1.4796	1.4755	1.5346	1.5189												
m-Xylene & p-Xylene	1.2072	1.0640	0.9982	1.0439	1.0836	Ave		1.1179			6.4		30.0				
	1.1213	1.1561	1.1505	1.2259	1.1287												
Nonane	0.7214	0.6646	0.6269	0.6551	0.7128	Ave		0.7205			7.7		30.0				
	0.7434	0.7638	0.7531	0.8016	0.7620												
Bromoform	++++	++++	0.5650	0.5843	0.6966	Ave		0.8550			26.6		30.0				
	0.8072	0.9326	0.9922	1.1394	1.1231												
Styrene	0.7205	0.5902	0.6127	0.6375	0.7228	Ave		0.7534			15.1		30.0				
	0.7904	0.8466	0.8542	0.9160	0.8426												
o-Xylene	1.2934	1.1325	1.0847	1.1027	1.1495	Ave		1.1384			5.3		30.0				
	1.1502	1.1572	1.1094	1.1237	1.0809												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.9096	0.8625	0.8260	0.8361	0.9096	Ave		0.9221			7.0		30.0				
	0.9401	0.9755	0.9610	1.0114	0.9889												
1,2,3-Trichloropropane	0.2447	0.2178	0.2113	0.2130	0.2227	Ave		0.2272			5.1		30.0				
	0.2256	0.2303	0.2271	0.2361	0.2431												
Isopropylbenzene	1.7967	1.5351	1.4440	1.4632	1.5279	Ave		1.5707			6.3		30.0				
	1.5633	1.5715	1.5587	1.6321	1.6144												
Propylbenzene	0.4012	0.3808	0.3409	0.3592	0.3891	Ave		0.4111			11.6		30.0				
	0.4107	0.4308	0.4332	0.4685	0.4967												
2-Chlorotoluene	0.4669	0.3905	0.3655	0.3667	0.3951	Ave		0.4027			7.3		30.0				
	0.3964	0.4055	0.3991	0.4165	0.4244												
4-Ethyltoluene	1.4351	1.3019	1.3077	1.3685	1.4589	Ave		1.4935			9.5		30.0				
	1.5278	1.5863	1.5805	1.6912	1.6776												
1,3,5-Trimethylbenzene	++++	++++	0.5413	0.5786	0.6024	Lin1	-0.018	0.6744						0.9990		0.9900	
	0.6176	0.6376	0.6340	0.6743	0.6871												
Alpha Methyl Styrene	++++	++++	++++	0.4208	0.4981	Ave		0.6224			21.8		30.0				
	0.5685	0.6414	0.6778	0.7497	0.8004												
Decane	0.8670	0.8318	0.8501	0.8994	0.9689	Ave		0.9226			6.4		30.0				
	0.9743	0.9881	0.9374	0.9947	0.9138												
tert-Butylbenzene	1.3232	1.2918	1.2707	1.3008	1.3524	Ave		1.3980			8.3		30.0				
	1.3873	1.4399	1.4507	1.6252	1.5376												
1,2,4-Trimethylbenzene	1.2112	1.1922	1.2018	1.2261	1.2756	Ave		1.3033			7.8		30.0				
	1.3135	1.3589	1.3540	1.5084	1.3912												
sec-Butylbenzene	1.9008	1.7647	1.7019	1.7864	1.8764	Ave		1.9482			9.3		30.0				
	1.9575	2.0412	2.0527	2.3032	2.0968												
1,3-Dichlorobenzene	0.9710	0.9136	0.8392	0.8456	0.8596	Ave		0.9455			10.4		30.0				
	0.8871	0.9433	0.9831	1.1213	1.0913												
Benzyl chloride	++++	++++	++++	0.5869	0.7162	Ave		0.9648			27.2		30.0				
	0.8511	0.9916	1.0755	1.2636	1.2685												
1,4-Dichlorobenzene	0.8993	0.8397	0.7743	0.7878	0.8054	Ave		0.8947			11.9		30.0				
	0.8484	0.9077	0.9477	1.0688	1.0683												
4-Isopropyltoluene	1.3948	1.3577	1.3402	1.4210	1.5104	Ave		1.5120			8.5		30.0				
	1.5570	1.5989	1.5830	1.7130	1.6444												
1,2,3-Trimethylbenzene	1.2663	1.2149	1.1671	1.2381	1.2887	Ave		1.2797			4.8		30.0				
	1.2982	1.3173	1.2872	1.3672	1.3515												
Indane	1.2186	1.1243	1.0675	1.0961	1.1826	Ave		1.2519			11.7		30.0				
	1.2431	1.3163	1.3515	1.5395	1.3790												
1,2-Dichlorobenzene	0.9498	0.8850	0.8350	0.8518	0.8698	Ave		0.9417			10.4		30.0				
	0.8906	0.9443	0.9892	1.1350	1.0670												
Indene	++++	++++	++++	0.8141	0.9137	Ave		1.0768			17.1		30.0				
	0.9935	1.0962	1.1520	1.3505	1.2176												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.3790 1.6516	1.3189 1.6880	1.3874 1.6768	1.4670 1.8898	1.5846 1.5798	Ave		1.5623			11.2		30.0				
Undecane	++++ 1.1148	++++ 1.1251	++++ 1.0648	++++ 1.1605	0.9201 1.0623	Ave		1.0667			7.5		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.4502	0.2917 0.5017	0.2809 0.5356	0.3021 ++++	0.3712 ++++	Ave		0.3905			27.0		30.0				
1,2,4,5-Tetramethylbenzene	1.1786 1.4737	1.0742 1.5594	1.1053 1.5930	1.2141 1.8040	1.3311 1.7554	Ave		1.4089			18.9		30.0				
Dodecane	++++ 1.0804	++++ 1.1437	++++ 1.1280	0.7863 1.2231	0.8699 ++++	Ave		1.0386			16.5		30.0				
1,2,4-Trichlorobenzene	++++ 0.6454	++++ 0.7369	0.3966 0.8248	0.4284 ++++	0.4829 ++++	Lin1	-0.053	0.7893						0.9900		0.9900	
Naphthalene	++++ 1.4915	0.9793 1.6065	0.9607 1.6241	1.0249 1.8355	1.1613 1.9378	Ave		1.4024			27.0		30.0				
Hexachlorobutadiene	1.0176 0.8427	0.8796 0.9000	0.8143 0.9493	0.7902 1.0467	0.7652 0.8828	Ave		0.8888			10.5		30.0				
1,2,3-Trichlorobenzene	0.8505 0.7703	0.6300 0.8209	0.5889 0.8468	0.6086 0.9455	0.6198 0.8106	Ave		0.7492			16.9		30.0				
2-Methylnaphthalene	++++ 0.5646	++++ 0.6759	++++ 0.7544	0.3700 ++++	0.3309 ++++	Ave		0.5392			<u>34.4</u>		50.0				
1-Methylnaphthalene	++++ 0.8761	++++ 0.9590	0.6260 0.9457	0.6372 ++++	0.5405 ++++	Ave		0.7641			24.0		50.0				
4-Bromofluorobenzene (Surr)	0.6541 0.6669	0.6584 0.6518	0.6640 0.6390	0.6638 0.6459	0.6727 0.6015	Ave		0.6518			3.1		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 276110	13216 568429	23324 1166346	44738 2080315	110343 4483179	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 123848	++++ 250579	12938 513903	20791 902358	50058 1935361	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	11347 422528	19313 876701	35581 1766802	69332 3093057	170173 6474307	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 50767	++++ 102040	++++ 202413	9404 346372	20898 708335	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 296279	14233 616018	25033 1255454	46869 2095695	119194 4583276	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	++++ 157361	7805 319887	13553 635845	25872 1081563	63624 2214114	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 232065	++++ 457383	20509 888442	39827 1515853	94610 3027220	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 114876	++++ 236733	9850 463965	19298 795542	46266 1618919	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 159914	++++ 327044	13700 649354	27091 1108697	65057 2328401	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 72470	++++ 145223	6514 293162	11777 490862	29938 1035993	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 347389	++++ 747094	32861 1463846	57636 2488750	141512 4802553	++++ 5.00	++++ 10.0	0.400 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 150739	7253 311230	13037 620663	24322 1045304	61012 2228635	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 169357	++++ 345741	15092 683911	27497 1132183	69491 2373804	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 397394	18657 801987	33813 1608364	65029 2752862	164002 5805275	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Acrolein	CBM	Ave	++++ 50534	++++ 103966	++++ 210875	8409 355043	20576 728953	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 62042	++++ 134006	++++ 269093	10375 446888	25939 920347	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Acetone	CBM	Ave	++++ 194862	++++ 398344	++++ 790789	35492 1272613	83084 2698817	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 18350	++++ 37863	++++ 75489	3067 120364	7712 258741	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Isopropyl alcohol	CBM	QuaF	16052 567468	26530 1199879	49153 2403555	91466 3931291	228028 7948950	0.0600 3.00	0.120 6.00	0.240 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 162847	7760 332157	13875 649774	25807 1085214	67088 2229204	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	++++ 132183	6613 271177	11331 552199	21894 894072	54085 1985588	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 102139	++++ 213181	++++ 442205	8282 741130	16757 1583584	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 316796	15578 639315	27679 1291447	52386 2135574	130321 4629798	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 221767	++++ 486078	++++ 1007263	18600 1653787	35033 3474636	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 135290	++++ 260991	++++ 506389	34620 801053	65799 1721729	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 123300	++++ 251273	++++ 503167	13143 836069	21012 1737749	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 391326	++++ 807906	++++ 1620181	33499 2624808	64204 5684871	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 134418	6793 278440	11461 569867	21671 928087	55602 2103238	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 315498	14650 651289	26706 1310496	51347 2172520	128649 4634316	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 329050	++++ 685507	++++ 1404124	26667 2241171	51683 4966677	131945 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
1,1-Dichloroethane	CBM	Ave	++++ 259689	12267 534165	22371 1076990	43216 1772013	105434 3867799	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 377904	++++ 810467	++++ 1681929	26994 2848393	53610 6184921	141592 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
Hexane	CBM	Ave	++++ 104228	4968 212722	8662 434352	16426 722047	42005 1607432	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 58444	++++ 125474	++++ 256700	++++ 413154	9115 916246	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	++++ 136108	6662 285498	11721 582417	22419 943075	55633 2129500	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 331359	++++ 694293	27541 1427087	52034 2400330	130856 5166288	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	++++ 298839	13923 611378	25523 1239987	49161 2042657	120999 4496097	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 158683	7774 327341	13797 672532	25511 1123394	63048 2432538	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	++++ 281296	12811 593273	22903 1227570	43475 2031546	112189 4668064	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	5129 196209	9022 404925	16131 824860	31582 1368173	79080 2983220	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 57530	++++ 120448	4554 249183	8824 417405	23383 928409	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 385270	18606 795627	32682 1634406	60789 2739521	154496 5964977	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	8013 312823	13486 658731	24310 1379762	44327 2331942	121964 5223763	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 49965	++++ 117031	++++ 241678	7444 407327	18761 777405	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 83728	3670 169285	6708 341915	12865 545270	33896 1177164	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 224938	10131 464737	18692 946920	35178 1521788	90994 3380138	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 636999	30494 1322559	53089 2692898	102056 4498015	254726 9866899	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 124160	5635 257254	10096 532315	18913 882284	49010 1982995	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 165502	7652 342173	13479 694484	27042 1156069	66097 2552409	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4957 179106	8508 370632	14725 766083	28328 1247479	71975 2842892	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 185331	9901 386676	16515 789473	31506 1323802	75334 2892720	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	7068 290134	12036 613591	22677 1265402	44079 2120110	112623 4743566	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 56823	2819 122358	5140 253088	9393 394321	23501 819819	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	4317 176703	7141 381574	11987 787734	25219 1330076	68030 2839739	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	LinF	++++ 216746	++++ 458293	17104 937963	33070 1553838	86171 3554415	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 340468	++++ 726276	28778 1518450	50210 2637007	130687 5744756	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	5213	8310	15836	32071	84191	0.0200	0.0400	0.0800	0.160	0.400
			222810	479642	991696	1655482	3706962	1.00	2.00	4.00	8.00	16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	4369	7302	13490	26441	71850	0.0200	0.0400	0.0800	0.160	0.400
			193590	428343	930378	1585219	3716627	1.00	2.00	4.00	8.00	16.0
Toluene	CBZd 5	Ave	++++	20535	36650	68961	176860	++++	0.0400	0.0800	0.160	0.400
			453543	950794	1991754	3322999	7558388	1.00	2.00	4.00	8.00	16.0
1,1,2-Trichloroethane	CBZd 5	Ave	3652	6546	11751	24147	60427	0.0200	0.0400	0.0800	0.160	0.400
			151135	314780	647099	1076123	2376053	1.00	2.00	4.00	8.00	16.0
2-Hexanone	CBZd 5	Ave	++++	++++	++++	18055	52036	++++	++++	++++	0.160	0.400
			143357	324836	697429	1212184	2770142	1.00	2.00	4.00	8.00	16.0
Octane	CBZd 5	Ave	3032	5107	9965	19559	50220	0.0200	0.0400	0.0800	0.160	0.400
			132598	278400	581056	976945	2231497	1.00	2.00	4.00	8.00	16.0
C8 Range	DFBZ	Ave	++++	++++	++++	207536	532812	++++	++++	++++	0.160	0.400
			1345188	2797431	5742340	9867518	21206896	1.00	2.00	4.00	8.00	16.0
Dibromochloromethane	CBZd 5	Ave	6284	11234	20599	40693	112826	0.0200	0.0400	0.0800	0.160	0.400
			309096	685217	1481007	2576992	5994726	1.00	2.00	4.00	8.00	16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	6677	11172	19884	39867	103182	0.0200	0.0400	0.0800	0.160	0.400
			271955	589031	1245997	2135184	4934830	1.00	2.00	4.00	8.00	16.0
Tetrachloroethene	CBZd 5	Ave	4756	8474	14431	29094	71154	0.0200	0.0400	0.0800	0.160	0.400
			177605	373916	776667	1318629	3014432	1.00	2.00	4.00	8.00	16.0
Chlorobenzene	CBZd 5	Ave	9651	16472	28914	54785	141575	0.0200	0.0400	0.0800	0.160	0.400
			355092	755892	1608983	2824132	6361822	1.00	2.00	4.00	8.00	16.0
Ethylbenzene	CBZd 5	Ave	14258	24388	43699	85231	220476	0.0200	0.0400	0.0800	0.160	0.400
			565594	1216288	2558634	4397072	9955892	1.00	2.00	4.00	8.00	16.0
m-Xylene & p-Xylene	CBZd 5	Ave	21336	36478	66686	133574	344621	0.0400	0.0800	0.160	0.320	0.800
			888953	1900753	3990112	7025357	14796297	2.00	4.00	8.00	16.0	32.0
Nonane	CBZd 5	Ave	6375	11392	20941	41910	113340	0.0200	0.0400	0.0800	0.160	0.400
			294667	627904	1305941	2296867	4994379	1.00	2.00	4.00	8.00	16.0
Bromoform	CBZd 5	Ave	++++	++++	18872	37380	110767	++++	++++	0.0800	0.160	0.400
			319968	766620	1720677	3264688	7361436	1.00	2.00	4.00	8.00	16.0
Styrene	CBZd 5	Ave	6367	10118	20466	40788	114936	0.0200	0.0400	0.0800	0.160	0.400
			313291	695917	1481246	2624790	5523081	1.00	2.00	4.00	8.00	16.0
o-Xylene	CBZd 5	Ave	11430	19414	36234	70551	182797	0.0200	0.0400	0.0800	0.160	0.400
			455942	951287	1923859	3219909	7084529	1.00	2.00	4.00	8.00	16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	8038	14785	27592	53490	144640	0.0200	0.0400	0.0800	0.160	0.400
			372659	801869	1666518	2898094	6482057	1.00	2.00	4.00	8.00	16.0
1,2,3-Trichloropropane	CBZd 5	Ave	2162	3733	7060	13629	35414	0.0200	0.0400	0.0800	0.160	0.400
			89428	189343	393840	676648	1593385	1.00	2.00	4.00	8.00	16.0
Isopropylbenzene	CBZd 5	Ave	15877	26315	48237	93612	242959	0.0200	0.0400	0.0800	0.160	0.400
			619680	1291872	2702973	4676667	10581270	1.00	2.00	4.00	8.00	16.0
Propylbenzene	CBZd 5	Ave	3545	6527	11389	22978	61876	0.0200	0.0400	0.0800	0.160	0.400
			162793	354102	751306	1342310	3255751	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14387-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	4126 157132	6694 333374	12209 692051	23459 1193527	62820 2781675	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	12682 605609	22317 1303962	43683 2740797	87555 4845851	231995 10995513	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Lin1	++++ 244828	++++ 524101	18083 1099439	37017 1932203	95792 4503336	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 225351	++++ 527224	++++ 1175360	26923 2148167	79203 5246512	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	7662 386206	14259 812284	28397 1625532	57543 2850078	154065 5989503	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11693 549927	22144 1183628	42446 2515614	83223 4656890	215060 10078350	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	10703 520658	20437 1117062	40145 2348070	78441 4322006	202848 9118755	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	16797 775934	30251 1677953	56852 3559589	114293 6599605	298383 13743682	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	8581 351654	15661 775428	28033 1704781	54101 3212950	136687 7153027	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 337367	++++ 815150	++++ 1864979	++++ 3620768	37546 8314062	113885 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7947 336295	14394 746169	25865 1643413	50401 3062438	128080 7002419	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	12326 617168	23274 1314396	44768 2745113	90912 4908356	240183 10778521	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	11190 514577	20826 1082845	38988 2232197	79211 3917469	204927 8858717	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	10769 492757	19273 1082048	35661 2343708	70126 4411376	188062 9038955	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	8393 353004	15171 776291	27892 1715395	54498 3252238	138306 6993755	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 393793	++++ 901129	++++ 1997698	++++ 3869631	52088 7980555	145299 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	12186 654668	22609 1387617	46347 2907810	93855 5414943	251979 10355110	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 441877	++++ 924853	++++ 1846517	++++ 3325148	58868 6962530	162146 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 178449	5000 412385	9382 928720	19327 ++++	59034 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	10415 584141	18414 1281919	36923 2762451	77678 5169036	211664 11505782	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 428247	++++ 940184	++++ 1956105	50308 3504521	138324 ++++	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 ++++

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Lin1	++++ 255822	++++ 605730	13247 1430337	27410 ++++	76796 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Naphthalene	CBZd 5	Ave	++++ 591214	16787 1320630	32092 2816456	65571 5259311	184664 12701015	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	8992 334056	15078 739806	27202 1646161	50558 2999218	121678 5786078	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	7516 305351	10800 674773	19673 1468485	38937 2709115	98554 5313205	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 223829	++++ 555653	++++ 1308281	23671 ++++	52618 ++++	++++ 1.00	++++ 2.00	++++ 4.00	0.160 ++++	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 347276	++++ 788345	20912 1640040	40771 ++++	85954 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1156116 1057465	1128690 1071605	1108968 1108097	1061718 925381	1069670 985627	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD
 Lin1 = Linear 1/conc ISTD
 LinF = Linear ISTD forced zero
 QuaF = Quadratic ISTD forced zero

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	5.7						50				
Propene	+++++	+++++	17.9						50			
Dichlorodifluoromethane	15.4						50					
Chloromethane	+++++	+++++	+++++	14.3						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	7.4						50				
Vinyl chloride	+++++	12.0						50				
Butane	+++++	+++++	6.6						50			
1,3-Butadiene	+++++	+++++	1.5						50			
Bromomethane	+++++	+++++	0.8						50			
Chloroethane	+++++	+++++	6.3						50			
Ethanol	+++++	+++++	9.1						50			
Vinyl bromide	+++++	8.2						50				
2-Methylbutane	+++++	+++++	5.8						50			
Trichlorofluoromethane	+++++	6.3						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	2.6						50		
Acetonitrile	+++++	+++++	+++++	0.6						50		
Acetone	+++++	+++++	+++++	12.3						80		
Pentane	+++++	+++++	+++++	4.0						50		
Isopropyl alcohol	15.8						50					
Ethyl ether	+++++	9.3						50				
1,1-Dichloroethene	+++++	11.6						50				
Acrylonitrile	+++++	+++++	-5.8						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	10.5						50				
tert-Butyl alcohol	+++++	+++++	-4.0						50			
Methylene Chloride	+++++	+++++	+++++	51.1						80		
3-Chloropropene	+++++	+++++	22.4						50			
Carbon disulfide	+++++	+++++	1.3						50			
trans-1,2-Dichloroethene	+++++	11.8						50				
2-Methylpentane	+++++	4.9						50				
Methyl tert-butyl ether	+++++	+++++	-3.9						50			
1,1-Dichloroethane	+++++	6.1						50				
Vinyl acetate	+++++	+++++	-15.2						50			
Hexane	+++++	7.6						50				
2-Butanone (MEK)	+++++	+++++	+++++	-5.4						50		
cis-1,2-Dichloroethene	+++++	8.2						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-3.0						50			
Chloroform	+++++	5.0						50				
Tetrahydrofuran	+++++	9.1						50				
1,1,1-Trichloroethane	+++++	1.6						50				
1,2-Dichloroethane	11.2						50					
Cyclohexane	+++++	+++++	-10.1						50			
Benzene	+++++	5.9						50				
Carbon tetrachloride	9.4						50					
1-Butanol	+++++	+++++	+++++	-15.7							50	
2,3-Dimethylpentane	+++++	0.7						50				
Thiophene	+++++	0.8						50				
2,2,4-Trimethylpentane	+++++	5.2						50				
Heptane	+++++	0.7						50				
1,2-Dichloropropane	+++++	2.4						50				
Trichloroethene	16.1						50					
Dibromomethane	+++++	13.7						50				
Bromodichloromethane	4.9						50					
1,4-Dioxane	+++++	6.8						50				
Methyl methacrylate	6.7						50					
Methylcyclohexane	+++++	+++++	-19.5						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	-5.7						50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	2.9						50					
trans-1,3-Dichloropropene	1.8						50					
Toluene	+++++	5.2						50				
1,1,2-Trichloroethane	9.3						50					
2-Hexanone	+++++	+++++	+++++	-24.4						50		
Octane	5.6						50					
Dibromochloromethane	-6.6						50					
1,2-Dibromoethane (EDB)	9.6						50					
Tetrachloroethene	16.0						50					
Chlorobenzene	16.6						50					
Ethylbenzene	11.3						50					
m-Xylene & p-Xylene	8.0						50					
Nonane	0.1						50					
Bromoform	+++++	+++++	-33.9						50			
Styrene	-4.4						50					
o-Xylene	13.6						50					
1,1,2,2-Tetrachloroethane	-1.4						50					
1,2,3-Trichloropropane	7.7						50					
Isopropylbenzene	14.4						50					
Propylbenzene	-2.4						50					
2-Chlorotoluene	16.0						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	-3.9						50					
1,3,5-Trimethylbenzene	+++++	+++++	14.0						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-32.4						50		
Decane	-6.0						50					
tert-Butylbenzene	-5.3						50					
1,2,4-Trimethylbenzene	-7.1						50					
sec-Butylbenzene	-2.4						50					
1,3-Dichlorobenzene	2.7						50					
Benzyl chloride	+++++	+++++	+++++	-39.2						50		
1,4-Dichlorobenzene	0.5						50					
4-Isopropyltoluene	-7.8						50					
1,2,3-Trimethylbenzene	-1.0						50					
Indane	-2.7						50					
1,2-Dichlorobenzene	0.9						50					
Indene	+++++	+++++	+++++	-24.4						50		
Butylbenzene	-11.7						50					
Undecane	+++++	+++++	+++++	-13.7						50		
1,2-Dibromo-3-Chloropropane	+++++	-25.3	+++++	+++++					50			
1,2,4,5-Tetramethylbenzene	-16.3						50					
Dodecane	+++++	+++++	+++++	-24.3	+++++					50		
1,2,4-Trichlorobenzene	+++++	+++++	34.3	+++++	+++++				50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-30.2						80				
Hexachlorobutadiene	14.5						50					
1,2,3-Trichlorobenzene	13.5						50					
2-Methylnaphthalene	+++++	+++++	+++++	-31.4						80		
1-Methylnaphthalene	+++++	+++++	-18.1	+++++					80			
			+++++	+++++								

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.231		1.97	2.00	-1.5	35.0
Propene	Ave	1.491	1.400		1.88	2.00	-6.1	35.0
Dichlorodifluoromethane	Ave	5.038	4.975		1.97	2.00	-1.3	35.0
Chloromethane	Ave	0.5876	0.5516		1.88	2.00	-6.1	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.543		2.04	2.00	2.0	35.0
Vinyl chloride	Ave	1.827	1.812		1.98	2.00	-0.8	35.0
Acetaldehyde	Ave	0.7017	0.6186		8.81	10.0	-11.9	35.0
1,3-Butadiene	Ave	1.320	1.310		1.98	2.00	-0.8	35.0
Butane	Ave	2.614	2.580		1.97	2.00	-1.3	35.0
Bromomethane	Ave	1.848	1.784		1.93	2.00	-3.4	35.0
Chloroethane	Ave	0.8331	0.8331		2.00	2.00	0.0	35.0
Ethanol	Ave	0.8189	0.6091		7.44	10.0	-25.6	35.0
Vinyl bromide	Ave	1.758	1.854		2.11	2.00	5.4	35.0
2-Methylbutane	Ave	1.939	1.998		2.06	2.00	3.0	35.0
Trichlorofluoromethane	Ave	4.604	4.525		1.97	2.00	-1.7	35.0
Acrolein	Ave	0.5850	0.6530		2.23	2.00	11.6	35.0
Acetonitrile	Ave	0.7361	0.7152		1.94	2.00	-2.8	35.0
Acetone	Ave	0.7520	0.7484		1.99	2.00	-0.5	35.0
Pentane	Ave	0.2105	0.2264		2.15	2.00	7.5	35.0
Isopropyl alcohol	QuaF		2.642		2.25	2.00	12.4	35.0
Ethyl ether	Ave	1.862	1.936		2.08	2.00	4.0	35.0
1,1-Dichloroethene	Ave	1.554	1.575		2.03	2.00	1.4	35.0
Acrylonitrile	Ave	1.195	1.264		2.12	2.00	5.8	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	3.681		1.99	2.00	-0.4	35.0
tert-Butyl alcohol	Ave	2.635	2.747		2.08	2.00	4.2	35.0
Methylene Chloride	Ave	1.636	1.497		1.83	2.00	-8.5	35.0
3-Chloropropene	Ave	1.460	1.308		1.79	2.00	-10.4	35.0
Carbon disulfide	Ave	4.496	4.585		2.04	2.00	2.0	35.0
trans-1,2-Dichloroethene	Ave	1.593	1.590		2.00	2.00	-0.2	35.0
2-Methylpentane	Ave	3.661	3.368		1.84	2.00	-8.0	35.0
Methyl tert-butyl ether	Ave	3.774	3.976		2.11	2.00	5.3	35.0
1,1-Dichloroethane	Ave	3.031	3.103		2.05	2.00	2.4	35.0
Vinyl acetate	Ave	4.329	4.787		2.21	2.00	10.6	35.0
Hexane	Ave	1.211	1.222		2.02	2.00	0.9	35.0
2-Butanone (MEK)	Ave	0.6878	0.7069		2.06	2.00	2.8	35.0
Isopropyl ether	Ave	5.664	5.931		2.09	2.00	4.7	35.0
cis-1,2-Dichloroethene	Ave	1.615	1.679		2.08	2.00	4.0	35.0
Ethyl acetate	Ave	3.858	3.811		1.98	2.00	-1.2	35.0
Chloroform	Ave	3.476	3.526		2.03	2.00	1.5	35.0
Tert-butyl ethyl ether	Ave	4.715	4.645		1.97	2.00	-1.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	1.886		2.02	2.00	0.9	35.0
1,1,1-Trichloroethane	Ave	3.305	3.421		2.07	2.00	3.5	35.0
1,2-Dichloroethane	Ave	0.4310	0.4324		2.01	2.00	0.3	35.0
Cyclohexane	Ave	0.1257	0.1289		2.05	2.00	2.5	35.0
Benzene	Ave	0.8457	0.8700		2.06	2.00	2.9	35.0
Carbon tetrachloride	Ave	0.6846	0.7122		2.08	2.00	4.0	35.0
1-Butanol	Ave	0.1144	0.1208		2.11	2.00	5.6	35.0
2,3-Dimethylpentane	Ave	0.1754	0.1733		1.98	2.00	-1.2	35.0
Thiophene	Ave	0.4839	0.4800		1.98	2.00	-0.8	35.0
2,2,4-Trimethylpentane	Ave	1.395	1.420		2.04	2.00	1.8	35.0
Heptane	Ave	0.2694	0.2742		2.04	2.00	1.8	35.0
1,2-Dichloropropane	Ave	0.3598	0.3655		2.03	2.00	1.6	35.0
Trichloroethene	Ave	0.3991	0.4065		2.04	2.00	1.8	35.0
Dibromomethane	Ave	0.4192	0.4231		2.02	2.00	0.9	35.0
Bromodichloromethane	Ave	0.6298	0.6609		2.10	2.00	4.9	35.0
1,4-Dioxane	Ave	0.1270	0.1217		1.92	2.00	-4.2	35.0
Methyl methacrylate	Ave	0.3781	0.4011		2.12	2.00	6.1	35.0
Methylcyclohexane	LinF		0.5855		2.22	2.00	11.1	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.7683		2.03	2.00	1.4	35.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5252		2.22	2.00	10.9	35.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5421		2.23	2.00	11.6	35.0
Toluene	Ave	1.139	1.196		2.10	2.00	5.0	35.0
1,1,2-Trichloroethane	Ave	0.3780	0.3876		2.05	2.00	2.5	35.0
2-Hexanone	Ave	0.3734	0.3927		2.10	2.00	5.2	35.0
Octane	Ave	0.3251	0.3451		2.12	2.00	6.2	35.0
Dibromochloromethane	Ave	0.7610	0.8504		2.24	2.00	11.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7285		2.11	2.00	5.7	35.0
Tetrachloroethene	Ave	0.4638	0.4651		2.01	2.00	0.3	35.0
Chlorobenzene	Ave	0.9365	0.9565		2.04	2.00	2.1	35.0
2,3-Dimethylheptane	Ave	1.197	1.077		1.80	2.00	-10.0	35.0
Ethylbenzene	Ave	1.450	1.522		2.10	2.00	5.0	35.0
m-Xylene & p-Xylene	Ave	1.118	1.189		4.25	4.00	6.3	35.0
Nonane	Ave	0.7205	0.7824		2.17	2.00	8.6	35.0
Bromoform	Ave	0.8550	0.9411		2.20	2.00	10.1	35.0
Styrene	Ave	0.7534	0.8717		2.31	2.00	15.7	35.0
o-Xylene	Ave	1.138	1.168		2.05	2.00	2.6	35.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	0.9802		2.13	2.00	6.3	35.0
1,2,3-Trichloropropane	Ave	0.2272	0.2354		2.07	2.00	3.6	35.0
Isopropylbenzene	Ave	1.571	1.652		2.10	2.00	5.2	35.0
Propylbenzene	Ave	0.4111	0.4566		2.22	2.00	11.1	35.0
2-Chlorotoluene	Ave	0.4027	0.4284		2.13	2.00	6.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.553		2.08	2.00	4.0	35.0
1,3,5-Trimethylbenzene	Lin1		0.7424		2.23	2.00	11.4	35.0
Alpha Methyl Styrene	Ave	0.6224	0.6616		2.13	2.00	6.3	35.0
Decane	Ave	0.9226	1.006		2.18	2.00	9.0	35.0
tert-Butylbenzene	Ave	1.398	1.493		2.14	2.00	6.8	35.0
1,2,4-Trimethylbenzene	Ave	1.303	1.389		2.13	2.00	6.6	35.0
sec-Butylbenzene	Ave	1.948	2.098		2.15	2.00	7.7	35.0
1,3-Dichlorobenzene	Ave	0.9455	0.9755		2.06	2.00	3.2	35.0
Benzyl chloride	Ave	0.9648	1.027		2.13	2.00	6.4	35.0
1,4-Dichlorobenzene	Ave	0.8947	0.9383		2.10	2.00	4.9	35.0
4-Isopropyltoluene	Ave	1.512	1.631		2.16	2.00	7.9	35.0
1,2,3-Trimethylbenzene	Ave	1.280	0.9816		1.53	2.00	-23.3	35.0
Butylcyclohexane	Ave	1.039	1.012		1.95	2.00	-2.6	35.0
1,2-Dichlorobenzene	Ave	0.9417	0.9787		2.08	2.00	3.9	35.0
Indane	Ave	1.252	1.300		2.08	2.00	3.9	35.0
Indene	Ave	1.077	0.9377		1.74	2.00	-12.9	35.0
Butylbenzene	Ave	1.562	1.735		2.22	2.00	11.0	35.0
Undecane	Ave	1.067	1.128		2.11	2.00	5.7	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.4026		2.06	2.00	3.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.478		2.10	2.00	4.9	35.0
Dodecane	Ave	1.039	1.175		2.26	2.00	13.1	35.0
1,2,4-Trichlorobenzene	Lin1		0.7912		2.07	2.00	3.6	35.0
Naphthalene	Ave	1.402	1.687		2.41	2.00	20.3	35.0
Hexachlorobutadiene	Ave	0.8888	0.9262		2.08	2.00	4.2	35.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.8815		2.35	2.00	17.7	35.0
2-Methylnaphthalene	Ave	0.5392	0.5260		1.95	2.00	-2.4	50.0
1-Methylnaphthalene	Ave	0.7641	0.6284		1.65	2.00	-17.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6484		3.98	4.00	-0.5	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HBFB25.D BFB Injection Date: 02/25/2019
 Instrument ID: MH BFB Injection Time: 09:19
 Analysis Batch No.: 27935

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.0
75	30.0 - 60.0 % of mass 95	47.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	91.1
175	5.0 - 9.0 % of mass 174	6.5 (7.2) 1
176	95.0 - 101.0 % of mass 174	88.7 (97.4) 1
177	5.0 - 9.0 % of mass 176	5.8 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27935/2	HCCVB25.D	02/25/2019	09:47
	LCS 140-27935/1002	HCCVB25-LCS.d	02/25/2019	09:47
	MB 140-27935/7	H500BB25.D	02/25/2019	14:47
SV-180-MB-3	140-14387-1	HB25P101.D	02/25/2019	17:27
SV-179-MB-3	140-14387-2	HB25P102.D	02/25/2019	18:20
SV-181-MB-3	140-14387-3	HB25P103.D	02/25/2019	19:13
SV-182-MB-3	140-14387-4	HB25P104.D	02/25/2019	20:06
SV-183-MB-3	140-14387-5	HB25P105.D	02/25/2019	20:59
SV-184-MB-3	140-14387-6	HB25P106.D	02/25/2019	21:53
SV-185-MB-3	140-14387-7	HB25P107.D	02/25/2019	22:46
SV-186-MB-3	140-14387-8	HB25P108.D	02/25/2019	23:39
SV-116-A-26	140-14387-10	HB25P109.D	02/26/2019	00:32
SV-DUP03-A-26	140-14387-11	HB25P110.D	02/26/2019	01:24
SV-138-A-26	140-14387-12	HB25P111.D	02/26/2019	02:17
SV-093-A-26	140-14387-13	HB25P112.D	02/26/2019	03:10
SV-173-A-26	140-14387-14	HB25P113.D	02/26/2019	04:03
SV-174-A-26	140-14387-15	HB25P114.D	02/26/2019	04:56
SV-171-A-26	140-14387-16	HB25P115.D	02/26/2019	05:49
SV-081-A-26	140-14387-18	HB25P116.D	02/26/2019	06:43

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27935/2 Calibration Date: 02/25/2019 09:47
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.052		0.930	1.00	-7.0	30.0
Propene	Ave	1.491	1.278		0.857	1.00	-14.3	30.0
Dichlorodifluoromethane	Ave	5.038	4.646		0.922	1.00	-7.8	30.0
Chloromethane	Ave	0.5876	0.5314		0.904	1.00	-9.6	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.214		0.925	1.00	-7.5	30.0
Vinyl chloride	Ave	1.827	1.736		0.950	1.00	-5.0	30.0
Acetaldehyde	Ave	0.7017	0.6122		4.36	5.00	-12.8	30.0
Butane	Ave	2.614	2.496		0.955	1.00	-4.5	30.0
1,3-Butadiene	Ave	1.320	1.226		0.929	1.00	-7.1	30.0
Bromomethane	Ave	1.848	1.773		0.959	1.00	-4.1	30.0
Chloroethane	Ave	0.8331	0.7885		0.947	1.00	-5.3	30.0
Ethanol	Ave	0.8189	0.6238		3.81	5.00	-23.8	30.0
Vinyl bromide	Ave	1.758	1.779		1.01	1.00	1.2	30.0
2-Methylbutane	Ave	1.939	1.858		0.958	1.00	-4.2	30.0
Trichlorofluoromethane	Ave	4.604	4.296		0.933	1.00	-6.7	30.0
Acrolein	Ave	0.5850	0.5626		0.962	1.00	-3.8	30.0
Acetonitrile	Ave	0.7361	0.6933		0.942	1.00	-5.8	30.0
Acetone	Ave	0.7520	0.7397		0.984	1.00	-1.6	30.0
Pentane	Ave	0.2105	0.2035		0.967	1.00	-3.3	30.0
Isopropyl alcohol	QuaF		2.488		1.05	1.00	5.4	30.0
Ethyl ether	Ave	1.862	1.809		0.971	1.00	-2.9	30.0
1,1-Dichloroethene	Ave	1.554	1.442		0.928	1.00	-7.2	30.0
Acrylonitrile	Ave	1.195	1.155		0.967	1.00	-3.3	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	3.494		0.945	1.00	-5.5	30.0
tert-Butyl alcohol	Ave	2.635	2.410		0.915	1.00	-8.5	30.0
Methylene Chloride	Ave	1.636	1.501		0.918	1.00	-8.2	30.0
3-Chloropropene	Ave	1.460	1.369		0.938	1.00	-6.2	30.0
Carbon disulfide	Ave	4.496	4.330		0.963	1.00	-3.7	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.445		0.907	1.00	-9.3	30.0
2-Methylpentane	Ave	3.661	3.098		0.846	1.00	-15.4	30.0
Methyl tert-butyl ether	Ave	3.774	3.507		0.929	1.00	-7.1	30.0
1,1-Dichloroethane	Ave	3.031	2.861		0.944	1.00	-5.6	30.0
Vinyl acetate	Ave	4.329	4.194		0.969	1.00	-3.1	30.0
Hexane	Ave	1.211	1.109		0.916	1.00	-8.4	30.0
2-Butanone (MEK)	Ave	0.6878	0.6353		0.924	1.00	-7.6	30.0
Isopropyl ether	Ave	5.664	5.353		0.945	1.00	-5.5	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.528		0.946	1.00	-5.4	30.0
Ethyl acetate	Ave	3.858	3.466		0.898	1.00	-10.2	30.0
Chloroform	Ave	3.476	3.342		0.962	1.00	-3.8	30.0
Tert-butyl ethyl ether	Ave	4.715	4.085		0.866	1.00	-13.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27935/2 Calibration Date: 02/25/2019 09:47
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	1.709		0.914	1.00	-8.6	30.0
1,1,1-Trichloroethane	Ave	3.305	3.079		0.932	1.00	-6.8	30.0
1,2-Dichloroethane	Ave	0.4310	0.3903		0.906	1.00	-9.4	30.0
Cyclohexane	Ave	0.1257	0.1089		0.866	1.00	-13.4	30.0
Benzene	Ave	0.8457	0.7858		0.929	1.00	-7.1	30.0
Carbon tetrachloride	Ave	0.6846	0.6360		0.929	1.00	-7.1	30.0
1-Butanol	Ave	0.1144	0.1021		0.892	1.00	-10.8	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1580		0.901	1.00	-9.9	30.0
Thiophene	Ave	0.4839	0.4321		0.893	1.00	-10.7	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.261		0.904	1.00	-9.6	30.0
Heptane	Ave	0.2694	0.2374		0.881	1.00	-11.9	30.0
1,2-Dichloropropane	Ave	0.3598	0.3324		0.924	1.00	-7.6	30.0
Trichloroethene	Ave	0.3991	0.3582		0.898	1.00	-10.2	30.0
Dibromomethane	Ave	0.4192	0.3905		0.931	1.00	-6.9	30.0
Bromodichloromethane	Ave	0.6298	0.5961		0.947	1.00	-5.3	30.0
1,4-Dioxane	Ave	0.1270	0.1127		0.888	1.00	-11.2	30.0
Methyl methacrylate	Ave	0.3781	0.3458		0.915	1.00	-8.5	30.0
Methylcyclohexane	LinF		0.5101		0.968	1.00	-3.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.6753		0.891	1.00	-10.9	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.4591		0.970	1.00	-3.0	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.4683		0.964	1.00	-3.6	30.0
Toluene	Ave	1.139	1.073		0.943	1.00	-5.7	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.3641		0.963	1.00	-3.7	30.0
2-Hexanone	Ave	0.3734	0.3396		0.909	1.00	-9.1	30.0
Octane	Ave	0.3251	0.3093		0.951	1.00	-4.9	30.0
Dibromochloromethane	Ave	0.7610	0.7516		0.988	1.00	-1.2	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.6547		0.950	1.00	-5.0	30.0
Tetrachloroethene	Ave	0.4638	0.4299		0.927	1.00	-7.3	30.0
Chlorobenzene	Ave	0.9365	0.8664		0.925	1.00	-7.5	30.0
2,3-Dimethylheptane	Ave	1.197	1.016		0.849	1.00	-15.1	30.0
Ethylbenzene	Ave	1.450	1.345		0.927	1.00	-7.3	30.0
m-Xylene & p-Xylene	Ave	1.118	1.087		1.95	2.00	-2.7	30.0
Nonane	Ave	0.7205	0.7005		0.972	1.00	-2.8	30.0
Bromoform	Ave	0.8550	0.7719		0.903	1.00	-9.7	30.0
Styrene	Ave	0.7534	0.7526		0.999	1.00	-0.1	30.0
o-Xylene	Ave	1.138	1.089		0.957	1.00	-4.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	0.9178		0.995	1.00	-0.5	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2123		0.934	1.00	-6.6	30.0
Isopropylbenzene	Ave	1.571	1.509		0.961	1.00	-3.9	30.0
Propylbenzene	Ave	0.4111	0.3943		0.959	1.00	-4.1	30.0
2-Chlorotoluene	Ave	0.4027	0.3889		0.966	1.00	-3.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27935/2 Calibration Date: 02/25/2019 09:47
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.382		0.925	1.00	-7.5	30.0
1,3,5-Trimethylbenzene	Lin1		0.6694		1.02	1.00	2.0	30.0
Alpha Methyl Styrene	Ave	0.6224	0.5299		0.851	1.00	-14.9	30.0
Decane	Ave	0.9226	0.9368		1.02	1.00	1.5	30.0
tert-Butylbenzene	Ave	1.398	1.352		0.967	1.00	-3.3	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.268		0.973	1.00	-2.7	30.0
sec-Butylbenzene	Ave	1.948	1.908		0.979	1.00	-2.1	30.0
1,3-Dichlorobenzene	Ave	0.9455	0.8424		0.891	1.00	-10.9	30.0
Benzyl chloride	Ave	0.9648	0.8377		0.868	1.00	-13.2	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.7880		0.881	1.00	-11.9	30.0
4-Isopropyltoluene	Ave	1.512	1.497		0.990	1.00	-1.0	30.0
1,2,3-Trimethylbenzene	Ave	1.280	0.8970		0.701	1.00	-29.9	30.0
Butylcyclohexane	Ave	1.039	0.9808		0.944	1.00	-5.6	30.0
1,2-Dichlorobenzene	Ave	0.9417	0.8415		0.894	1.00	-10.6	30.0
Indane	Ave	1.252	1.169		0.934	1.00	-6.6	30.0
Butylbenzene	Ave	1.562	1.622		1.04	1.00	3.8	30.0
Indene	Ave	1.077	0.7733		0.718	1.00	-28.2	30.0
Undecane	Ave	1.067	1.019		0.955	1.00	-4.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3430		0.878	1.00	-12.2	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.176		0.835	1.00	-16.5	30.0
Dodecane	Ave	1.039	0.8937		0.861	1.00	-13.9	30.0
1,2,4-Trichlorobenzene	Lin1		0.4540		0.642	1.00	-35.8*	30.0
Naphthalene	Ave	1.402	0.8222		0.586	1.00	-41.4*	30.0
Hexachlorobutadiene	Ave	0.8888	0.7763		0.873	1.00	-12.7	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.5453		0.728	1.00	-27.2	30.0
2-Methylnaphthalene	Ave	0.5392	0.0719			1.00	-86.7*	50.0
1-Methylnaphthalene	Ave	0.7641	0.1143			1.00	-85.0*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6697		4.11	4.00	2.7	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HBFB27.D BFB Injection Date: 02/27/2019
 Instrument ID: MH BFB Injection Time: 11:22
 Analysis Batch No.: 27980

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.7
75	30.0 - 60.0 % of mass 95	48.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.4) 1
174	50.0 - 120.00 % of mass 95	91.8
175	5.0 - 9.0 % of mass 174	6.5 (7.0) 1
176	95.0 - 101.0 % of mass 174	88.9 (96.8) 1
177	5.0 - 9.0 % of mass 176	5.8 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27980/2	HCCVB27.D	02/27/2019	11:50
	LCS 140-27980/1002	HCCVB27-LCS. d	02/27/2019	11:50
	MB 140-27980/5	HB27LOT14399 MB.D	02/27/2019	13:42
SV-081-A-26 DL	140-14387-18 DL	HB27P115.D	02/28/2019	06:06

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.582		1.09	1.00	9.2	30.0
Propene	Ave	1.491	1.525		1.02	1.00	2.3	30.0
Dichlorodifluoromethane	Ave	5.038	5.333		1.06	1.00	5.9	30.0
Chloromethane	Ave	0.5876	0.6486		1.10	1.00	10.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.636		1.05	1.00	4.6	30.0
Vinyl chloride	Ave	1.827	2.022		1.11	1.00	10.7	30.0
Acetaldehyde	Ave	0.7017	0.7335		5.23	5.00	4.5	30.0
1,3-Butadiene	Ave	1.320	1.465		1.11	1.00	11.0	30.0
Butane	Ave	2.614	3.037		1.16	1.00	16.2	30.0
Bromomethane	Ave	1.848	2.013		1.09	1.00	8.9	30.0
Chloroethane	Ave	0.8331	0.9136		1.10	1.00	9.7	30.0
Ethanol	Ave	0.8189	0.7398		4.52	5.00	-9.7	30.0
Vinyl bromide	Ave	1.758	2.069		1.18	1.00	17.6	30.0
2-Methylbutane	Ave	1.939	2.241		1.16	1.00	15.6	30.0
Trichlorofluoromethane	Ave	4.604	5.060		1.10	1.00	9.9	30.0
Acrolein	Ave	0.5850	0.6401		1.09	1.00	9.4	30.0
Acetonitrile	Ave	0.7361	0.8155		1.11	1.00	10.8	30.0
Acetone	Ave	0.7520	0.8565		1.14	1.00	13.9	30.0
Pentane	Ave	0.2105	0.2364		1.12	1.00	12.3	30.0
Isopropyl alcohol	QuaF		2.815		1.19	1.00	19.3	30.0
Ethyl ether	Ave	1.862	2.216		1.19	1.00	19.0	30.0
1,1-Dichloroethene	Ave	1.554	1.640		1.06	1.00	5.6	30.0
Acrylonitrile	Ave	1.195	1.332		1.11	1.00	11.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	4.086		1.11	1.00	10.5	30.0
tert-Butyl alcohol	Ave	2.635	2.774		1.05	1.00	5.3	30.0
Methylene Chloride	Ave	1.636	1.731		1.06	1.00	5.9	30.0
3-Chloropropene	Ave	1.460	1.651		1.13	1.00	13.1	30.0
Carbon disulfide	Ave	4.496	5.037		1.12	1.00	12.0	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.661		1.04	1.00	4.2	30.0
2-Methylpentane	Ave	3.661	3.712		1.01	1.00	1.4	30.0
Methyl tert-butyl ether	Ave	3.774	4.086		1.08	1.00	8.3	30.0
1,1-Dichloroethane	Ave	3.031	3.376		1.11	1.00	11.4	30.0
Vinyl acetate	Ave	4.329	4.892		1.13	1.00	13.0	30.0
Hexane	Ave	1.211	1.291		1.07	1.00	6.6	30.0
2-Butanone (MEK)	Ave	0.6878	0.7365		1.07	1.00	7.1	30.0
Isopropyl ether	Ave	5.664	6.416		1.13	1.00	13.3	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.767		1.09	1.00	9.4	30.0
Ethyl acetate	Ave	3.858	4.156		1.08	1.00	7.7	30.0
Chloroform	Ave	3.476	3.989		1.15	1.00	14.8	30.0
Tert-butyl ethyl ether	Ave	4.715	4.863		1.03	1.00	3.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	2.014		1.08	1.00	7.7	30.0
1,1,1-Trichloroethane	Ave	3.305	3.602		1.09	1.00	9.0	30.0
1,2-Dichloroethane	Ave	0.4310	0.4711		1.09	1.00	9.3	30.0
Benzene	Ave	0.8457	0.9162		1.08	1.00	8.3	30.0
Cyclohexane	Ave	0.1257	0.1264		1.00	1.00	0.5	30.0
Carbon tetrachloride	Ave	0.6846	0.7453		1.09	1.00	8.9	30.0
1-Butanol	Ave	0.1144	0.1225		1.07	1.00	7.1	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1843		1.05	1.00	5.1	30.0
Thiophene	Ave	0.4839	0.5031		1.04	1.00	4.0	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.506		1.08	1.00	7.9	30.0
Heptane	Ave	0.2694	0.2772		1.03	1.00	2.9	30.0
1,2-Dichloropropane	Ave	0.3598	0.3965		1.10	1.00	10.2	30.0
Trichloroethene	Ave	0.3991	0.4146		1.04	1.00	3.9	30.0
Dibromomethane	Ave	0.4192	0.4613		1.10	1.00	10.0	30.0
Bromodichloromethane	Ave	0.6298	0.7064		1.12	1.00	12.2	30.0
1,4-Dioxane	Ave	0.1270	0.1235		0.973	1.00	-2.7	30.0
Methyl methacrylate	Ave	0.3781	0.4271		1.13	1.00	13.0	30.0
Methylcyclohexane	LinF		0.5957		1.13	1.00	13.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.8028		1.06	1.00	6.0	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5430		1.15	1.00	14.7	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5432		1.12	1.00	11.9	30.0
Toluene	Ave	1.139	1.249		1.10	1.00	9.7	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.4227		1.12	1.00	11.8	30.0
2-Hexanone	Ave	0.3734	0.3986		1.07	1.00	6.7	30.0
Octane	Ave	0.3251	0.3570		1.10	1.00	9.8	30.0
Dibromochloromethane	Ave	0.7610	0.8783		1.15	1.00	15.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7564		1.10	1.00	9.7	30.0
Tetrachloroethene	Ave	0.4638	0.4906		1.06	1.00	5.8	30.0
Chlorobenzene	Ave	0.9365	1.016		1.08	1.00	8.5	30.0
2,3-Dimethylheptane	Ave	1.197	1.242		1.04	1.00	3.8	30.0
Ethylbenzene	Ave	1.450	1.579		1.09	1.00	8.9	30.0
m-Xylene & p-Xylene	Ave	1.118	1.285		2.30	2.00	14.9	30.0
Nonane	Ave	0.7205	0.8189		1.14	1.00	13.7	30.0
Bromoform	Ave	0.8550	0.8677		1.01	1.00	1.5	30.0
Styrene	Ave	0.7534	0.8913		1.18	1.00	18.3	30.0
o-Xylene	Ave	1.138	1.284		1.13	1.00	12.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	1.065		1.15	1.00	15.5	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2451		1.08	1.00	7.9	30.0
Isopropylbenzene	Ave	1.571	1.737		1.11	1.00	10.6	30.0
Propylbenzene	Ave	0.4111	0.4533		1.10	1.00	10.3	30.0
2-Chlorotoluene	Ave	0.4027	0.4454		1.11	1.00	10.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.617		1.08	1.00	8.2	30.0
1,3,5-Trimethylbenzene	Lin1		0.7773		1.18	1.00	17.9	30.0
Alpha Methyl Styrene	Ave	0.6224	0.6345		1.02	1.00	2.0	30.0
Decane	Ave	0.9226	1.120		1.21	1.00	21.4	30.0
tert-Butylbenzene	Ave	1.398	1.570		1.12	1.00	12.3	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.500		1.15	1.00	15.1	30.0
sec-Butylbenzene	Ave	1.948	2.219		1.14	1.00	13.9	30.0
1,3-Dichlorobenzene	Ave	0.9455	1.004		1.06	1.00	6.1	30.0
Benzyl chloride	Ave	0.9648	1.031		1.07	1.00	6.9	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.9350		1.05	1.00	4.5	30.0
4-Isopropyltoluene	Ave	1.512	1.756		1.16	1.00	16.2	30.0
1,2,3-Trimethylbenzene	Ave	1.280	1.068		0.835	1.00	-16.5	30.0
Butylcyclohexane	Ave	1.039	1.173		1.13	1.00	13.0	30.0
Indane	Ave	1.252	1.365		1.09	1.00	9.0	30.0
1,2-Dichlorobenzene	Ave	0.9417	1.007		1.07	1.00	7.0	30.0
Indene	Ave	1.077	0.9492		0.882	1.00	-11.8	30.0
Butylbenzene	Ave	1.562	1.974		1.26	1.00	26.3	30.0
Undecane	Ave	1.067	1.264		1.18	1.00	18.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3904		1.00	1.00	-0.0	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.500		1.06	1.00	6.4	30.0
Dodecane	Ave	1.039	1.259		1.21	1.00	21.3	30.0
1,2,4-Trichlorobenzene	Lin1		0.6653		0.910	1.00	-9.0	30.0
Naphthalene	Ave	1.402	1.620		1.16	1.00	15.5	30.0
Hexachlorobutadiene	Ave	0.8888	0.9313		1.05	1.00	4.8	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.8521		1.14	1.00	13.7	30.0
2-Methylnaphthalene	Ave	0.5392	0.4269		0.792	1.00	-20.8	50.0
1-Methylnaphthalene	Ave	0.7641	0.5441		0.712	1.00	-28.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6727		4.13	4.00	3.2	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab File ID: HBFB28.D BFB Injection Date: 02/28/2019
 Instrument ID: MH BFB Injection Time: 12:34
 Analysis Batch No.: 27981

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	20.7
75	30.0 - 60.0 % of mass 95	47.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.5 (0.5) 1
174	50.0 - 120.00 % of mass 95	93.3
175	5.0 - 9.0 % of mass 174	6.7 (7.2) 1
176	95.0 - 101.0 % of mass 174	91.3 (97.9) 1
177	5.0 - 9.0 % of mass 176	5.9 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27981/2	HCCVB28.D	02/28/2019	13:02
	LCS 140-27981/1002	HCCVB28-LCS. d	02/28/2019	13:02
	MB 140-27981/4	H500BB28.D	02/28/2019	14:24
SV-183-MB-3 DL	140-14387-5 DL	HB28P101.D	02/28/2019	17:11

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27981/2 Calibration Date: 02/28/2019 13:02
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.574		1.09	1.00	9.0	30.0
Propene	Ave	1.491	1.540		1.03	1.00	3.3	30.0
Dichlorodifluoromethane	Ave	5.038	5.387		1.07	1.00	6.9	30.0
Chloromethane	Ave	0.5876	0.6291		1.07	1.00	7.1	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.765		1.08	1.00	8.4	30.0
Vinyl chloride	Ave	1.827	2.041		1.12	1.00	11.7	30.0
Acetaldehyde	Ave	0.7017	0.7245		5.16	5.00	3.3	30.0
1,3-Butadiene	Ave	1.320	1.440		1.09	1.00	9.1	30.0
Butane	Ave	2.614	2.977		1.14	1.00	13.9	30.0
Bromomethane	Ave	1.848	1.991		1.08	1.00	7.7	30.0
Chloroethane	Ave	0.8331	0.9274		1.11	1.00	11.3	30.0
Ethanol	Ave	0.8189	0.7228		4.41	5.00	-11.7	30.0
Vinyl bromide	Ave	1.758	1.991		1.13	1.00	13.2	30.0
2-Methylbutane	Ave	1.939	2.203		1.14	1.00	13.6	30.0
Trichlorofluoromethane	Ave	4.604	5.063		1.10	1.00	10.0	30.0
Acrolein	Ave	0.5850	0.6523		1.12	1.00	11.5	30.0
Acetonitrile	Ave	0.7361	0.7915		1.08	1.00	7.5	30.0
Acetone	Ave	0.7520	0.8543		1.14	1.00	13.6	30.0
Pentane	Ave	0.2105	0.2430		1.15	1.00	15.4	30.0
Isopropyl alcohol	QuaF		2.890		1.23	1.00	22.5	30.0
Ethyl ether	Ave	1.862	2.173		1.17	1.00	16.7	30.0
1,1-Dichloroethene	Ave	1.554	1.659		1.07	1.00	6.8	30.0
Acrylonitrile	Ave	1.195	1.353		1.13	1.00	13.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	4.083		1.10	1.00	10.5	30.0
tert-Butyl alcohol	Ave	2.635	2.848		1.08	1.00	8.1	30.0
Methylene Chloride	Ave	1.636	1.714		1.05	1.00	4.8	30.0
3-Chloropropene	Ave	1.460	1.638		1.12	1.00	12.2	30.0
Carbon disulfide	Ave	4.496	5.050		1.12	1.00	12.3	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.706		1.07	1.00	7.1	30.0
2-Methylpentane	Ave	3.661	3.715		1.01	1.00	1.5	30.0
Methyl tert-butyl ether	Ave	3.774	4.233		1.12	1.00	12.2	30.0
1,1-Dichloroethane	Ave	3.031	3.373		1.11	1.00	11.3	30.0
Vinyl acetate	Ave	4.329	5.025		1.16	1.00	16.1	30.0
Hexane	Ave	1.211	1.329		1.10	1.00	9.8	30.0
2-Butanone (MEK)	Ave	0.6878	0.7536		1.10	1.00	9.6	30.0
Isopropyl ether	Ave	5.664	6.464		1.14	1.00	14.1	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.798		1.11	1.00	11.4	30.0
Ethyl acetate	Ave	3.858	4.140		1.07	1.00	7.3	30.0
Chloroform	Ave	3.476	3.949		1.14	1.00	13.6	30.0
Tert-butyl ethyl ether	Ave	4.715	4.960		1.05	1.00	5.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27981/2 Calibration Date: 02/28/2019 13:02
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	2.027		1.08	1.00	8.5	30.0
1,1,1-Trichloroethane	Ave	3.305	3.686		1.12	1.00	11.5	30.0
1,2-Dichloroethane	Ave	0.4310	0.4697		1.09	1.00	9.0	30.0
Cyclohexane	Ave	0.1257	0.1361		1.08	1.00	8.2	30.0
Benzene	Ave	0.8457	0.9328		1.10	1.00	10.3	30.0
Carbon tetrachloride	Ave	0.6846	0.7610		1.11	1.00	11.2	30.0
1-Butanol	Ave	0.1144	0.1258		1.10	1.00	9.9	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1905		1.09	1.00	8.6	30.0
Thiophene	Ave	0.4839	0.5174		1.07	1.00	6.9	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.525		1.09	1.00	9.3	30.0
Heptane	Ave	0.2694	0.2871		1.07	1.00	6.6	30.0
1,2-Dichloropropane	Ave	0.3598	0.3994		1.11	1.00	11.0	30.0
Trichloroethene	Ave	0.3991	0.4352		1.09	1.00	9.0	30.0
Dibromomethane	Ave	0.4192	0.4546		1.08	1.00	8.5	30.0
Bromodichloromethane	Ave	0.6298	0.7086		1.13	1.00	12.5	30.0
1,4-Dioxane	Ave	0.1270	0.1288		1.01	1.00	1.4	30.0
Methyl methacrylate	Ave	0.3781	0.4243		1.12	1.00	12.2	30.0
Methylcyclohexane	LinF		0.6170		1.17	1.00	17.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.8163		1.08	1.00	7.7	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5512		1.16	1.00	16.4	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5595		1.15	1.00	15.2	30.0
Toluene	Ave	1.139	1.276		1.12	1.00	12.1	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.4259		1.13	1.00	12.7	30.0
2-Hexanone	Ave	0.3734	0.4079		1.09	1.00	9.2	30.0
Octane	Ave	0.3251	0.3675		1.13	1.00	13.0	30.0
Dibromochloromethane	Ave	0.7610	0.8735		1.15	1.00	14.8	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7620		1.11	1.00	10.5	30.0
Tetrachloroethene	Ave	0.4638	0.5065		1.09	1.00	9.2	30.0
Chlorobenzene	Ave	0.9365	1.021		1.09	1.00	9.0	30.0
2,3-Dimethylheptane	Ave	1.197	1.204		1.01	1.00	0.6	30.0
Ethylbenzene	Ave	1.450	1.602		1.11	1.00	10.5	30.0
m-Xylene & p-Xylene	Ave	1.118	1.283		2.29	2.00	14.7	30.0
Nonane	Ave	0.7205	0.8186		1.14	1.00	13.6	30.0
Bromoform	Ave	0.8550	0.8784		1.03	1.00	2.7	30.0
Styrene	Ave	0.7534	0.8894		1.18	1.00	18.1	30.0
o-Xylene	Ave	1.138	1.272		1.12	1.00	11.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	1.042		1.13	1.00	13.0	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2446		1.08	1.00	7.7	30.0
Isopropylbenzene	Ave	1.571	1.741		1.11	1.00	10.8	30.0
Propylbenzene	Ave	0.4111	0.4599		1.12	1.00	11.9	30.0
2-Chlorotoluene	Ave	0.4027	0.4527		1.12	1.00	12.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27981/2 Calibration Date: 02/28/2019 13:02
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.607		1.08	1.00	7.6	30.0
1,3,5-Trimethylbenzene	Lin1		0.7745		1.18	1.00	17.5	30.0
Alpha Methyl Styrene	Ave	0.6224	0.6334		1.02	1.00	1.8	30.0
Decane	Ave	0.9226	1.090		1.18	1.00	18.2	30.0
tert-Butylbenzene	Ave	1.398	1.550		1.11	1.00	10.9	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.458		1.12	1.00	11.8	30.0
sec-Butylbenzene	Ave	1.948	2.192		1.12	1.00	12.5	30.0
1,3-Dichlorobenzene	Ave	0.9455	0.9928		1.05	1.00	5.0	30.0
Benzyl chloride	Ave	0.9648	1.020		1.06	1.00	5.7	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.9363		1.05	1.00	4.6	30.0
4-Isopropyltoluene	Ave	1.512	1.727		1.14	1.00	14.2	30.0
1,2,3-Trimethylbenzene	Ave	1.280	1.038		0.811	1.00	-18.9	30.0
Butylcyclohexane	Ave	1.039	1.122		1.08	1.00	8.0	30.0
Indane	Ave	1.252	1.345		1.07	1.00	7.4	30.0
1,2-Dichlorobenzene	Ave	0.9417	0.9891		1.05	1.00	5.0	30.0
Indene	Ave	1.077	0.9199		0.854	1.00	-14.6	30.0
Butylbenzene	Ave	1.562	1.868		1.20	1.00	19.6	30.0
Undecane	Ave	1.067	1.214		1.14	1.00	13.8	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3916		1.00	1.00	0.3	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.468		1.04	1.00	4.2	30.0
Dodecane	Ave	1.039	1.120		1.08	1.00	7.8	30.0
1,2,4-Trichlorobenzene	Lin1		0.6578		0.901	1.00	-9.9	30.0
Naphthalene	Ave	1.402	1.510		1.08	1.00	7.7	30.0
Hexachlorobutadiene	Ave	0.8888	0.9004		1.01	1.00	1.3	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.7823		1.04	1.00	4.4	30.0
2-Methylnaphthalene	Ave	0.5392	0.2978		0.552	1.00	<u>-44.8</u>	50.0
1-Methylnaphthalene	Ave	0.7641	0.3755		0.491	1.00	<u>-50.9*</u>	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6632		4.07	4.00	1.7	30.0

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: ICIS 140-26755/15 Date Analyzed: 01/11/2019 21:07
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GAl1IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	437891	9.25	2708081	11.42	2541912	16.10
UPPER LIMIT	613047	9.58	3791313	11.75	3558677	16.43
LOWER LIMIT	262735	8.92	1624849	11.09	1525147	15.77
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-26755/18	423755	9.24	2327828	11.42	2182908	16.09

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: CCVIS 140-27931/2 Date Analyzed: 02/26/2019 11:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	496382	9.23	2758157	11.41	2578216	16.08	
UPPER LIMIT	694935	9.56	3861420	11.74	3609502	16.41	
LOWER LIMIT	297829	8.90	1654894	11.08	1546930	15.75	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27931/1002	496382	9.23	2758157	11.41	2578216	16.08	
MB 140-27931/4	508819	9.23	2920722	11.41	2502760	16.08	
140-14387-4 DL	SV-182-MB-3 DL	441997	9.23	2423864	11.40	2177859	16.08
140-14387-14 DL	SV-173-A-26 DL	478998	9.22	2962288	11.40	2673094	16.08
140-14387-16 DL	SV-171-A-26 DL	452797	9.23	2861121	11.40	2641514	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: ICIS 140-27843/14 Date Analyzed: 02/21/2019 01:03
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HB20IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBZd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	348949	8.83	1879497	11.01	1644075	15.73
UPPER LIMIT	488529	9.16	2631296	11.34	2301705	16.06
LOWER LIMIT	209369	8.50	1127698	10.68	986445	15.40
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-27843/17	382438	8.83	2064078	11.01	1803849	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: CCVIS 140-27935/2 Date Analyzed: 02/25/2019 09:47
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB25.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	315308	8.81	1742536	11.00	1476074	15.72	
UPPER LIMIT	441431	9.14	2439550	11.33	2066504	16.05	
LOWER LIMIT	189185	8.48	1045522	10.67	885644	15.39	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27935/1002	315308	8.81	1742536	11.00	1476074	15.72	
MB 140-27935/7	287415	8.82	1579066	11.01	1304589	15.73	
140-14387-1	SV-180-MB-3	281456	8.81	1535292	11.00	1326846	15.72
140-14387-2	SV-179-MB-3	268524	8.82	1449633	11.00	1228351	15.73
140-14387-3	SV-181-MB-3	269386	8.83	1455854	11.01	1235221	15.73
140-14387-4	SV-182-MB-3	265807	8.83	1439853	11.01	1233899	15.73
140-14387-5	SV-183-MB-3	261667	8.83	1424772	11.01	1221074	15.73
140-14387-6	SV-184-MB-3	268482	8.82	1416402	11.01	1183656	15.73
140-14387-7	SV-185-MB-3	272937	8.82	1451084	11.01	1258817	15.73
140-14387-8	SV-186-MB-3	293163	8.82	1583887	11.01	1361840	15.73
140-14387-10	SV-116-A-26	278110	8.82	1479230	11.01	1235939	15.73
140-14387-11	SV-DUP03-A-26	280978	8.82	1513051	11.01	1271379	15.73
140-14387-12	SV-138-A-26	274052	8.82	1481817	11.01	1237546	15.73
140-14387-13	SV-093-A-26	282597	8.82	1531175	11.01	1277807	15.73
140-14387-14	SV-173-A-26	279120	8.82	1506709	11.01	1234999	15.73
140-14387-15	SV-174-A-26	286242	8.82	1547205	11.01	1293580	15.73
140-14387-16	SV-171-A-26	281192	8.82	1525931	11.01	1255482	15.73
140-14387-18	SV-081-A-26	276557	8.82	1486236	11.00	1262786	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: CCVIS 140-27980/2 Date Analyzed: 02/27/2019 11:50
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB27.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	226060	8.81	1253478	11.00	1073197	15.72
UPPER LIMIT	316484	9.14	1754869	11.33	1502476	16.05
LOWER LIMIT	135636	8.48	752087	10.67	643918	15.39
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 140-27980/1002	226060	8.81	1253478	11.00	1073197	15.72
MB 140-27980/5	264467	8.81	1438660	11.00	1193009	15.72
140-14387-18 DL	285504	8.82	1527887	11.01	1270622	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Sample No.: CCVIS 140-27981/2 Date Analyzed: 02/28/2019 13:02
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB28.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	308099	8.82	1679334	11.00	1441526	15.73
UPPER LIMIT	431339	9.15	2351068	11.33	2018136	16.06
LOWER LIMIT	184859	8.49	1007600	10.67	864916	15.40
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 140-27981/1002	308099	8.82	1679334	11.00	1441526	15.73
MB 140-27981/4	313051	8.82	1721127	11.00	1440804	15.73
140-14387-5 DL	272703	8.81	1473988	11.00	1251229	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

LOCKHEED MARTIN CORPORATION (LMC) - MIDDLE RIVER COMPLEX (MRC)
SDG 140-14387-1

SAMPLE IDENTIFICATION

IA-180-MB-3

COMPOUND

TRICHLOROETHENE

MW =

131.39

GAS CONSTANT =

24.45

COMPOUND AREA

24062

INTERNAL STANDARD AMOUNT (ppbv)

4

CALIBRATION VOLUME (mL)

500

DILUTION FACTOR

1

INTERNAL STANDARD AREA

1479230

AVERAGE RRF

0.3991

SAMPLE VOLUME (mL)

100

0.82 ppbv

4.38 $\mu\text{g}/\text{m}^3$

FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-116-A-26 Lab Sample ID: 140-14387-10
 Matrix: Air Lab File ID: HB25P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:15
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 00:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.35	J	0.40	0.075
67-66-3	Chloroform	119.38	0.34	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.072	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.92	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND	*	0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.82		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1
 SDG No.: _____
 Client Sample ID: SV-116-A-26 Lab Sample ID: 140-14387-10
 Matrix: Air Lab File ID: HB25P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:15
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 00:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27935 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.81	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	1.7	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.28	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND	*	1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND	*	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\HB25P109.D
 Lims ID: 140-14387-A-10
 Client ID: SV-116-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 00:32:30 ALS Bottle#: 9 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010935-017
 Misc. Info.: 140-14387-a-10
 Operator ID: HMT Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190225-10935.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 26-Feb-2019 20:11:01 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 26-Feb-2019 20:11:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.824	8.814	0.010	96	278110	4.00	
* 2 1,4-Difluorobenzene	114	11.005	11.000	0.005	95	1479230	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	98	1235939	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.393	-0.026	93	811196	4.03	
6 Chlorodifluoromethane	51	3.687	3.682	0.005	95	15765	0.0691	
8 Dichlorodifluoromethane	85	3.744	3.738	0.006	100	34462	0.0984	
27 1,1-Dichloroethene	96	5.935	5.919	0.016	94	1551	0.0144	
31 Methylene Chloride	84	6.286	6.271	0.015	98	20998	0.1847	
43 Chloroform	83	8.834	8.824	0.010	39	16448	0.0681	
47 Benzene	78	10.462	10.452	0.010	97	15763	0.0504	
56 Trichloroethene	130	11.718	11.708	0.010	97	24062	0.1630	
65 Toluene	91	13.765	13.760	0.005	92	20857	0.0593	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Sample Calculation - Page 5

Lab Name: TestAmerica Knoxville Job No.: 140-14387-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++ 0.6760	++++ 0.7192	++++ 0.7039	0.6508 0.6996	0.6769 0.6879	Ave		0.6878			3.3		30.0				
cis-1,2-Dichloroethene	++++ 1.5744	1.7468 1.6363	1.5933 1.5970	1.6008 1.5970	1.5882 1.5988	Ave		1.6147			3.2		30.0				
Ethyl acetate	++++ 3.8330	++++ 3.9793	3.7437 3.9131	3.7153 4.0646	3.7356 3.8788	Ave		3.8579			3.2		30.0				
Chloroform	++++ 3.4568	3.6507 3.5041	3.4694 3.4001	3.5102 3.4590	3.4542 3.3756	Ave		3.4756			2.3		30.0				
Tetrahydrofuran	++++ 1.8356	2.0384 1.8762	1.8755 1.8441	1.8215 1.9023	1.7999 1.8263	Ave		1.8689			3.8		30.0				
1,1,1-Trichloroethane	++++ 3.2539	3.3591 3.4003	3.1133 3.3660	3.1042 3.4402	3.2027 3.5047	Ave		3.3049			4.3		30.0				
1,2-Dichloroethane	0.4792 0.4208	0.4342 0.4309	0.4004 0.4260	0.4094 0.4468	0.4128 0.4496	Ave		0.4310			5.4		30.0				
Cyclohexane	++++ 0.1234	++++ 0.1282	++++ 0.1287	0.1130 0.1363	0.1144 0.1399	Ave		0.1257			7.6		30.0				
Benzene	++++ 0.8262	0.8954 0.8466	0.8112 0.8440	0.7881 0.8945	0.8065 0.8990	Ave		0.8457			5.0		30.0				
Carbon tetrachloride	0.7487 0.6708	0.6490 0.7010	0.6034 0.7125	0.5747 0.7615	0.6367 0.7873	Ave		0.6846			10.2		30.0				
1-Butanol	++++ 0.1071	++++ 0.1245	++++ 0.1248	0.0965 0.1330	0.0979 0.1172	Ave		0.1144			12.4		30.0				
2,3-Dimethylpentane	++++ 0.1796	0.1766 0.1801	0.1665 0.1766	0.1668 0.1780	0.1769 0.1774	Ave		0.1754			2.9		30.0				
Thiophene	++++ 0.4824	0.4876 0.4945	0.4639 0.4890	0.4560 0.4969	0.4750 0.5094	Ave		0.4839			3.4		30.0				
2,2,4-Trimethylpentane	++++ 1.3660	1.4676 1.4074	1.3177 1.3906	1.3230 1.4688	1.3297 1.4871	Ave		1.3953			4.8		30.0				
Heptane	++++ 0.2663	0.2712 0.2737	0.2506 0.2749	0.2452 0.2881	0.2558 0.2989	Ave		0.2694			6.4		30.0				
1,2-Dichloropropane	++++ 0.3549	0.3683 0.3641	0.3346 0.3586	0.3506 0.3775	0.3450 0.3847	Ave		0.3598			4.4		30.0				
Trichloroethene	0.4632 0.3841	0.4095 0.3944	0.3655 0.3956	0.3672 0.4073	0.3757 0.4285	Ave		0.3991			7.5		30.0				
Dibromomethane	++++ 0.3974	0.4765 0.4115	0.4099 0.4077	0.4084 0.4323	0.3933 0.4360	Ave		0.4192			6.1		30.0				
Bromodichloromethane	0.6604 0.6222	0.5793 0.6529	0.5629 0.6534	0.5714 0.6923	0.5879 0.7149	Ave		0.6298			8.4		30.0				
1,4-Dioxane	++++ 0.1219	0.1357 0.1302	0.1276 0.1307	0.1218 0.1288	0.1227 0.1236	Ave		0.1270			3.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.



TO: S. BRENNER **DATE:** APRIL 19, 2019

FROM: LEIGH A. CIOFANI **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION – VOC
 LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
 SAMPLE DELIVERY GROUP (SDG) 140-14389-1

SAMPLES: 18 / Air / VOC

- | | | |
|---------------|---------------|---------------|
| SV-001-C-26 | SV-004-C-26 | SV-079-A-26 |
| SV-088-C-26 | SV-102-C-26 | SV-113-C-26 |
| SV-131-C-26 | SV-133-C-26 | SV-141-C-26 |
| SV-142-C-26 | SV-149-C-26 | SV-150-C-26 |
| SV-152-C-26 | SV-153-C-26 | SV-155-C-26 |
| SV-DUP01-C-26 | SV-DUP02-C-26 | SV-DUP04-A-26 |

OVERVIEW

The sample set for LMC – MRC, SDG 140-14389-1, consists of eighteen (18) soil vapor (SV) environmental samples. All samples were analyzed for select volatile organic compounds (VOCs). Three (3) field duplicate pairs are included in this SDG: SV-131-C-26 / SV-DUP01-C-26, SV-153-C-26 / SV-DUP02-C-26, and SV-079-A-26 / SV-DUP04-A-26.

The samples were collected by Tetra Tech on February 19 and 21, 2019, and analyzed by TestAmerica. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, laboratory control sample results, internal standard areas, field duplicate precision, chromatographic resolution, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

MAJOR PROBLEMS

- None.

MINOR PROBLEMS

- The initial calibration performed on 01/11/19 on instrument MG had a percent relative standard deviation (%RSD) that was greater than the 30% quality control limit for methylene chloride. Samples SV-079-A-26, SV-DUP04-A-26, SV-131-C-26, SV-DUP01-C-26, SV-001-C-26, SV-004-C-26, SV-102-C-26, and SV-155-C-26 were affected. Detected and non-detected methylene chloride results were qualified as estimated (J and UJ, respectively) in the affected samples.
- The laboratory qualified the results for chlorodifluoromethane in samples SV-152-C-26 and SV-DUP04-A-26 with a “CI” qualifier. According to the laboratory report, this qualifier indicates that the peak identified by the data system exhibited chromatographic interference that could not be resolved, and there is reason to suspect there may be a high bias. These results were qualified as estimated (J+) with a high bias on this basis.
- Detected results reported below the RL but above the method detection limit (MDL) were qualified as estimated (J).

TO: S. BRENNER
DATE: 04/19/19

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SDG 140-14389-1

NOTES

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

Non-detected results were reported to the MDL.

The laboratory case narrative notes that the chain of custody The COC listed a canister asset number as 11785, but it should be 11745 and listed a canister asset number as 11745, but it should be 11721.

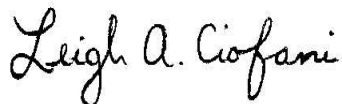
Sample SV-102-C-26 was analyzed at a dilution factor of 3.7.

EXECUTIVE SUMMARY

Laboratory Performance: Some results were qualified due to calibration noncompliance. Two results for one analyte were qualified due to chromatographic interference noted by the laboratory.

Other Factors Affecting Data Quality: Results above the MDL but below the RL were qualified as estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Organic Superfund Methods Data Review" (January 2017) and USEPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.



Tetra Tech, Inc.
Leigh A. Ciofani
Environmental Scientist/Data Validator



Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:

- Appendix A – Qualified Analytical Results
- Appendix B – Results as Reported by the Laboratory
- Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Qualifier Codes:

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ($< 2 \times$ IDL for inorganics and $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors $>40\%$ for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids $<30\%$
- Z = Uncertainty at 2 standard deviations is greater than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed
- Z3 = Tentatively Identified Compound aldol condensate
- Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
- Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08388 SDG: 140-14389-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-001-C-26			SV-004-C-26			SV-079-A-26			SV-088-C-26		
	LAB_ID	140-14389-5			140-14389-6			140-14389-1			140-14389-15		
	SAMP_DATE	2/19/2019			2/19/2019			2/21/2019			2/19/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		1.3	J	P	0.72	J	P	0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		2.6			0.2	U		0.2	U		
1,1-DICHLOROETHENE	0.28	U		1.3	J	P	0.28	U		0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		0.61	U		0.61	U		0.61	U		
1,2-DICHLOROETHANE	0.38	U		0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		0.64	U		0.64	U		0.64	U		
BENZENE	0.37	U		1.9			0.37	U		0.37	U		
CARBON TETRACHLORIDE	0.47	U		0.47	U		0.47	U		0.47	U		
CHLORODIFLUOROMETHANE	1.2	J	P	1.1	J	P	1.7			1.2	J	P	
CHLOROFORM	0.52	J	P	0.37	U		0.37	U		0.39	J	P	
CIS-1,2-DICHLOROETHENE	8.3			0.48	U		0.48	U		9.6			
DICHLORODIFLUOROMETHANE	2.3			2.3			2.4			2.2			
ETHYLBENZENE	0.59	U		2.6			0.59	U		0.59	U		
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE	3.9	J	CP	8.2	J	C	4.4	J	CP	4.9	J	P	
NAPHTHALENE	1.2			1	U		1	U		1	U		
TETRACHLOROETHENE	0.54	U		0.91	J	P	8.7			0.54	U		
TOLUENE	2.3	U		7.8			2.3	U		2.3	U		
TOTAL XYLENES	0.52	U		19			2.5	J	P	3.3	J	P	
TRANS-1,2-DICHLOROETHENE	1.9			0.4	U		0.4	U		0.4	U		
TRICHLOROETHENE	25			0.55	J	P	57			46			
VINYL CHLORIDE	0.37	U		0.37	U		0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14389-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-102-C-26			SV-113-C-26			SV-131-C-26			SV-133-C-26		
	LAB_ID	140-14389-7			140-14389-17			140-14389-3			140-14389-9		
	SAMP_DATE	2/19/2019			2/19/2019			2/19/2019			2/19/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	2600			0.33	U		0.61	J	P	0.82	U		
1,1,2-TRICHLOROETHANE	19	U		0.57	U		0.57	U		1.4	U		
1,1-DICHLOROETHANE	4800			0.2	U		0.25	J	P	0.51	U		
1,1-DICHLOROETHENE	2600			0.28	U		0.28	U		0.69	U		
1,2,3-TRIMETHYLBENZENE	28	U		0.84	U		2.1			2.1	U		
1,2,4-TRICHLOROBENZENE	49	U		1.4	U		1.4	U		3.6	U		
1,2,4-TRIMETHYLBENZENE	29	J	P	0.61	U		0.71	J	P	1.5	U		
1,2-DICHLOROETHANE	13	U		0.38	U		0.38	U		0.96	U		
1,3,5-TRIMETHYLBENZENE	21	U		0.64	U		1.2	J	P	1.6	U		
BENZENE	12	U		0.37	U		0.37	U		0.92	U		
CARBON TETRACHLORIDE	16	U		0.47	U		0.47	U		1.2	U		
CHLORODIFLUOROMETHANE	8.9	U		1.3	J	P	1.7			2.8	J	P	
CHLOROFORM	43	J	P	1.6	J	P	1.3	J	P	13			
CIS-1,2-DICHLOROETHENE	52			29			0.48	U		1.2	U		
DICHLORODIFLUOROMETHANE	22	U		2.4			2.3			2.6	J	P	
ETHYLBENZENE	560			0.59	U		0.59	U		1.5	U		
METHYL TERT-BUTYL ETHER	41	U		1.2	U		1.2	U		3.1	U		
METHYLENE CHLORIDE	76	UJ	C	3	J	P	2.9	J	CP	7.1	J	P	
NAPHTHALENE	210			1	U		1	U		2.6	U		
TETRACHLOROETHENE	18	U		0.54	U		0.54	U		16			
TOLUENE	76	U		2.3	U		2.3	U		5.7	U		
TOTAL XYLENES	4600			2	J	P	3.8			1.3	U		
TRANS-1,2-DICHLOROETHENE	13	U		0.4	U		0.4	U		0.99	U		
TRICHLOROETHENE	1100			180			0.38	U		760			
VINYL CHLORIDE	12	U		0.37	U		0.37	U		0.93	U		

PROJ_NO: 08388 SDG: 140-14389-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-141-C-26			SV-142-C-26			SV-149-C-26			SV-150-C-26		
	LAB_ID	140-14389-14			140-14389-16			140-14389-18			140-14389-12		
	SAMP_DATE	2/19/2019			2/19/2019			2/19/2019			2/19/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		0.33	U		0.33	U		0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	U		0.2	U		0.2	U		
1,1-DICHLOROETHENE	1.9			0.28	U		0.28	U		0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		0.61	U		0.91	J	P	0.7	J	P	
1,2-DICHLOROETHANE	0.38	U		0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		0.64	U		0.64	U		0.64	U		
BENZENE	1.4			0.37	U		0.86	J	P	1.2	J	P	
CARBON TETRACHLORIDE	0.47	U		0.53	J	P	0.47	U		0.47	U		
CHLORODIFLUOROMETHANE	4.2			1.3	J	P	1.6			13			
CHLOROFORM	0.49	J	P	6.7			0.37	U		0.37	U		
CIS-1,2-DICHLOROETHENE	11			0.48	U		0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	2.3			2.3			2.3			2.3			
ETHYLBENZENE	0.85	J	P	0.59	U		0.76	J	P	15			
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE	3.3	J	P	3.9	J	P	7.7			3.6	J	P	
NAPHTHALENE	1	U		1.1			1	U		1	U		
TETRACHLOROETHENE	9			0.58	J	P	0.97	J	P	0.54	U		
TOLUENE	2.3	U		2.3	U		44			5.1			
TOTAL XYLENES	5.9			2.6	J	P	3.2	J	P	84			
TRANS-1,2-DICHLOROETHENE	3			0.4	U		0.4	U		0.4	U		
TRICHLOROETHENE	340			6.7			0.42	J	P	0.38	U		
VINYL CHLORIDE	0.37	U		0.37	U		0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14389-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-152-C-26			SV-153-C-26			SV-155-C-26			SV-DUP01-C-26		
	LAB_ID	140-14389-13			140-14389-10			140-14389-8			140-14389-4		
	SAMP_DATE	2/19/2019			2/19/2019			2/19/2019			2/19/2019		
	QC_TYPE	NM			NM			NM			FD		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF										SV-131-C-26		
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.54	J	P	0.33	U		0.54	J	P	0.73	J	P	
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	U		1.1	J	P	0.3	J	P	
1,1-DICHLOROETHENE	0.28	U		0.28	U		0.56	J	P	0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		0.84	U		2.5			
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		0.61	U		0.61	U		0.85	J	P	
1,2-DICHLOROETHANE	0.38	U		0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		0.64	U		0.64	U		1.4	J	P	
BENZENE	1.1	J	P	0.37	U		0.46	J	P	0.37	U		
CARBON TETRACHLORIDE	0.47	U		0.47	U		0.51	J	P	0.47	U		
CHLORODIFLUOROMETHANE	11	J+	Q	2.1			1.8			1.9			
CHLOROFORM	0.48	J	P	0.37	U		0.37	U		1.5	J	P	
CIS-1,2-DICHLOROETHENE	2.9			0.48	U		0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	2.3			2.4			2.4			2.5			
ETHYLBENZENE	0.59	U		0.59	U		0.59	U		0.59	U		
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE	4.2	J	P	3.7	J	P	3.1	J	CP	3.5	J	CP	
NAPHTHALENE	1	U		1	U		1	U		1	U		
TETRACHLOROETHENE	0.54	U		0.54	U		0.54	U		0.54	U		
TOLUENE	2.3	U		2.3	U		2.3	U		2.3	U		
TOTAL XYLENES	2.2	J	P	0.65	J	P	2.3	J	P	4.6			
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U		0.4	U		0.4	U		
TRICHLOROETHENE	49			5.5			0.38	U		0.38	U		
VINYL CHLORIDE	0.37	U		0.37	U		0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14389-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-DUP02-C-26			SV-DUP04-A-26		
	LAB_ID	140-14389-11			140-14389-2		
	SAMP_DATE	2/19/2019			2/21/2019		
	QC_TYPE	NM			FD		
	UNITS	UG/M3			UG/M3		
	PCT_SOLIDS						
	DUP_OF	SV-153-C-26			SV-079-A-26		
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		0.71	J	P	
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	U		
1,1-DICHLOROETHENE	0.28	U		0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		0.71	J	P	
1,2-DICHLOROETHANE	0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		0.64	U		
BENZENE	0.37	U		0.37	U		
CARBON TETRACHLORIDE	0.47	U		0.47	U		
CHLORODIFLUOROMETHANE	2.1			1.6	J+	Q	
CHLOROFORM	0.37	U		0.37	U		
CIS-1,2-DICHLOROETHENE	0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	2.5			2.2			
ETHYLBENZENE	0.59	U		0.59	U		
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		
METHYLENE CHLORIDE	3.4	J	P	2.9	J	CP	
NAPHTHALENE	1	U		1	U		
TETRACHLOROETHENE	0.57	J	P	8.3			
TOLUENE	2.3	U		2.3	U		
TOTAL XYLENES	0.56	J	P	2.7	J	P	
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U		
TRICHLOROETHENE	5.1			56			
VINYL CHLORIDE	0.37	U		0.37	U		

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-001-C-26 Lab Sample ID: 140-14389-5
 Matrix: Air Lab File ID: GB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:36
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.23		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.49		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	4.6		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-001-C-26 Lab Sample ID: 140-14389-5
 Matrix: Air Lab File ID: GB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:36
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	0.52	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	8.3		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.2		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.9		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	25		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-004-C-26 Lab Sample ID: 140-14389-6
 Matrix: Air Lab File ID: GB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:40
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.59		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.31	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.64		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.32	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.60		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.4		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.13	J	0.40	0.080
108-88-3	Toluene	92.14	2.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.24	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.10	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	4.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-004-C-26 Lab Sample ID: 140-14389-6
 Matrix: Air Lab File ID: GB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:40
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.9		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	2.6		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.3	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	2.6		1.7	0.59
75-09-2	Methylene Chloride	84.93	8.2		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.91	J	2.7	0.54
108-88-3	Toluene	92.14	7.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.3	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.55	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	19		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-079-A-26 Lab Sample ID: 140-14389-1
 Matrix: Air Lab File ID: GB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:37
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.3		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	11		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.57	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-079-A-26 Lab Sample ID: 140-14389-1
 Matrix: Air Lab File ID: GB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:37
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	8.7		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.72	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	57		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.5	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-088-C-26 Lab Sample ID: 140-14389-15
 Matrix: Air Lab File ID: GB27p107.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:26
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 22:15
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.35	J	0.40	0.075
67-66-3	Chloroform	119.38	0.080	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.4		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	8.5		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.75	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-088-C-26 Lab Sample ID: 140-14389-15
 Matrix: Air Lab File ID: GB27p107.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:26
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 22:15
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	0.39	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	9.6		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	46		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-102-C-26 Lab Sample ID: 140-14389-7
 Matrix: Air Lab File ID: GB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:45
 Sample wt/vol: 11 (mL) Date Analyzed: 02/27/2019 01:42
 Soil Aliquot Vol: _____ Dilution Factor: 3.7
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		13	3.9
56-23-5	Carbon tetrachloride	153.81	ND		13	2.5
75-45-6	Chlorodifluoromethane	86.47	ND		13	2.5
67-66-3	Chloroform	119.38	8.8	J	13	2.5
156-59-2	cis-1,2-Dichloroethene	96.94	13		13	4.0
75-71-8	Dichlorodifluoromethane	120.91	ND		13	4.5
75-34-3	1,1-Dichloroethane	98.96	1200		13	1.7
107-06-2	1,2-Dichloroethane	98.96	ND		13	3.2
75-35-4	1,1-Dichloroethene	96.94	650		13	2.4
100-41-4	Ethylbenzene	106.17	130		13	4.5
75-09-2	Methylene Chloride	84.93	ND		67	22
1634-04-4	Methyl tert-butyl ether	88.15	ND		67	11
91-20-3	Naphthalene	128.17	39		6.7	6.7
127-18-4	Tetrachloroethene	165.83	ND		13	2.7
108-88-3	Toluene	92.14	ND		20	20
156-60-5	trans-1,2-Dichloroethene	96.94	ND		13	3.4
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		13	6.6
71-55-6	1,1,1-Trichloroethane	133.41	470		13	2.0
79-00-5	1,1,2-Trichloroethane	133.41	ND		13	3.5
79-01-6	Trichloroethene	131.39	200		6.7	2.4
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		13	5.7
95-63-6	1,2,4-Trimethylbenzene	120.20	5.9	J	13	4.2
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		13	4.4
75-01-4	Vinyl chloride	62.50	ND		6.7	4.9
1330-20-7	Xylenes, Total	106.17	1100		27	4.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-102-C-26 Lab Sample ID: 140-14389-7
 Matrix: Air Lab File ID: GB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:45
 Sample wt/vol: 11 (mL) Date Analyzed: 02/27/2019 01:42
 Soil Aliquot Vol: _____ Dilution Factor: 3.7
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		43	12
56-23-5	Carbon tetrachloride	153.81	ND		85	16
75-45-6	Chlorodifluoromethane	86.47	ND		48	8.9
67-66-3	Chloroform	119.38	43	J	66	12
156-59-2	cis-1,2-Dichloroethene	96.94	52		53	16
75-71-8	Dichlorodifluoromethane	120.91	ND		67	22
75-34-3	1,1-Dichloroethane	98.96	4800		54	6.8
107-06-2	1,2-Dichloroethane	98.96	ND		54	13
75-35-4	1,1-Dichloroethene	96.94	2600		53	9.3
100-41-4	Ethylbenzene	106.17	560		58	20
75-09-2	Methylene Chloride	84.93	ND		230	76
1634-04-4	Methyl tert-butyl ether	88.15	ND		240	41
91-20-3	Naphthalene	128.17	210		35	35
127-18-4	Tetrachloroethene	165.83	ND		91	18
108-88-3	Toluene	92.14	ND		76	76
156-60-5	trans-1,2-Dichloroethene	96.94	ND		53	13
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		100	49
71-55-6	1,1,1-Trichloroethane	133.41	2600		73	11
79-00-5	1,1,2-Trichloroethane	133.41	ND		73	19
79-01-6	Trichloroethene	131.39	1100		36	13
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		66	28
95-63-6	1,2,4-Trimethylbenzene	120.20	29	J	66	21
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		66	21
75-01-4	Vinyl chloride	62.50	ND		17	12
1330-20-7	Xylenes, Total	106.17	4600		120	18

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-113-C-26 Lab Sample ID: 140-14389-17
 Matrix: Air Lab File ID: GB27p109.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:17
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 23:39
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.32	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	7.2		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	33		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.47	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-113-C-26 Lab Sample ID: 140-14389-17
 Matrix: Air Lab File ID: GB27p109.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:17
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 23:39
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	1.6	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	29		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	180		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-131-C-26 Lab Sample ID: 140-14389-3
 Matrix: Air Lab File ID: GB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:29
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	0.26	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.063	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.83	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.43		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.25	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.88		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-131-C-26 Lab Sample ID: 140-14389-3
 Matrix: Air Lab File ID: GB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:29
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	1.3	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.25	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.61	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	2.1		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.71	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.2	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-133-C-26 Lab Sample ID: 140-14389-9
 Matrix: Air Lab File ID: GB27p101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:52
 Sample wt/vol: 40 (mL) Date Analyzed: 02/27/2019 17:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.0	0.29
56-23-5	Carbon tetrachloride	153.81	ND		1.0	0.19
75-45-6	Chlorodifluoromethane	86.47	0.79	J	1.0	0.19
67-66-3	Chloroform	119.38	2.7		1.0	0.19
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.0	0.30
75-71-8	Dichlorodifluoromethane	120.91	0.52	J	1.0	0.34
75-34-3	1,1-Dichloroethane	98.96	ND		1.0	0.13
107-06-2	1,2-Dichloroethane	98.96	ND		1.0	0.24
75-35-4	1,1-Dichloroethene	96.94	ND		1.0	0.18
100-41-4	Ethylbenzene	106.17	ND		1.0	0.34
75-09-2	Methylene Chloride	84.93	2.1	J	5.0	1.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		5.0	0.85
91-20-3	Naphthalene	128.17	ND		0.50	0.50
127-18-4	Tetrachloroethene	165.83	2.4		1.0	0.20
108-88-3	Toluene	92.14	ND		1.5	1.5
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.0	0.25
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1.0	0.49
71-55-6	1,1,1-Trichloroethane	133.41	ND		1.0	0.15
79-00-5	1,1,2-Trichloroethane	133.41	ND		1.0	0.26
79-01-6	Trichloroethene	131.39	140		0.50	0.18
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		1.0	0.43
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		1.0	0.31
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		1.0	0.33
75-01-4	Vinyl chloride	62.50	ND		0.50	0.36
1330-20-7	Xylenes, Total	106.17	ND		2.0	0.30

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-133-C-26 Lab Sample ID: 140-14389-9
 Matrix: Air Lab File ID: GB27p101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:52
 Sample wt/vol: 40 (mL) Date Analyzed: 02/27/2019 17:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		3.2	0.92
56-23-5	Carbon tetrachloride	153.81	ND		6.3	1.2
75-45-6	Chlorodifluoromethane	86.47	2.8	J	3.5	0.66
67-66-3	Chloroform	119.38	13		4.9	0.92
156-59-2	cis-1,2-Dichloroethene	96.94	ND		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	2.6	J	4.9	1.7
75-34-3	1,1-Dichloroethane	98.96	ND		4.0	0.51
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.96
75-35-4	1,1-Dichloroethene	96.94	ND		4.0	0.69
100-41-4	Ethylbenzene	106.17	ND		4.3	1.5
75-09-2	Methylene Chloride	84.93	7.1	J	17	5.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		18	3.1
91-20-3	Naphthalene	128.17	ND		2.6	2.6
127-18-4	Tetrachloroethene	165.83	16		6.8	1.4
108-88-3	Toluene	92.14	ND		5.7	5.7
156-60-5	trans-1,2-Dichloroethene	96.94	ND		4.0	0.99
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		7.4	3.6
71-55-6	1,1,1-Trichloroethane	133.41	ND		5.5	0.82
79-00-5	1,1,2-Trichloroethane	133.41	ND		5.5	1.4
79-01-6	Trichloroethene	131.39	760		2.7	0.94
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.9	2.1
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.9	1.5
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.9	1.6
75-01-4	Vinyl chloride	62.50	ND		1.3	0.93
1330-20-7	Xylenes, Total	106.17	ND		8.7	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-141-C-26 Lab Sample ID: 140-14389-14
 Matrix: Air Lab File ID: GB27p106R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:10
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 05:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	0.10	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.8		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.48		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.95	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.3		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.75		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	63		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-141-C-26 Lab Sample ID: 140-14389-14
 Matrix: Air Lab File ID: GB27p106R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:10
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 05:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.4		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.2		1.4	0.27
67-66-3	Chloroform	119.38	0.49	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	11		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.9		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.85	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	9.0		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	3.0		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	340		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-142-C-26 Lab Sample ID: 140-14389-16
 Matrix: Air Lab File ID: GB27p108.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:20
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 22:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.084	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	1.4		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.21		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.086	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.61	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-142-C-26 Lab Sample ID: 140-14389-16
 Matrix: Air Lab File ID: GB27p108.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:20
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 22:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	6.7		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.58	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-149-C-26 Lab Sample ID: 140-14389-18
 Matrix: Air Lab File ID: GB27p110.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:32
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 00:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.27	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.2		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.14	J	0.40	0.080
108-88-3	Toluene	92.14	12		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.077	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.74	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-149-C-26 Lab Sample ID: 140-14389-18
 Matrix: Air Lab File ID: GB27p110.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:32
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 00:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.86	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.76	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.7		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.97	J	2.7	0.54
108-88-3	Toluene	92.14	44		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.42	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.91	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-150-C-26 Lab Sample ID: 140-14389-12
 Matrix: Air Lab File ID: GB27p104R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:05
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 04:34
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	3.4		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	19		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-150-C-26 Lab Sample ID: 140-14389-12
 Matrix: Air Lab File ID: GB27p104R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:05
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 04:34
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	13		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	15		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.70	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	84		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-152-C-26 Lab Sample ID: 140-14389-13
 Matrix: Air Lab File ID: GB27p105.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:06
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 20:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.33	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.1	CI	0.40	0.075
67-66-3	Chloroform	119.38	0.098	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.74		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.099	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	9.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.50	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-152-C-26 Lab Sample ID: 140-14389-13
 Matrix: Air Lab File ID: GB27p105.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:06
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 20:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	11	CI	1.4	0.27
67-66-3	Chloroform	119.38	0.48	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	2.9		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.54	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	49		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-153-C-26 Lab Sample ID: 140-14389-10
 Matrix: Air Lab File ID: GB27p102.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 18:04
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.58		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.0		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.15	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-153-C-26 Lab Sample ID: 140-14389-10
 Matrix: Air Lab File ID: GB27p102.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:55
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 18:04
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	0.65	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-155-C-26 Lab Sample ID: 140-14389-8
 Matrix: Air Lab File ID: GB26P116D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:48
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:05
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.52		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.27	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.14	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.89	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.099	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.53	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-155-C-26 Lab Sample ID: 140-14389-8
 Matrix: Air Lab File ID: GB26P116D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 11:48
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:05
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.1	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.56	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.54	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP01-C-26 Lab Sample ID: 140-14389-4
 Matrix: Air Lab File ID: GB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 23:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.54		0.40	0.075
67-66-3	Chloroform	119.38	0.31	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.074	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.99	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.51		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.17	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.29	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP01-C-26 Lab Sample ID: 140-14389-4
 Matrix: Air Lab File ID: GB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 23:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	1.5	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.30	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.73	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	2.5		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.85	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.4	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP02-C-26 Lab Sample ID: 140-14389-11
 Matrix: Air Lab File ID: GB27p103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 18:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.61		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.98	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.084	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.94		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.13	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP02-C-26 Lab Sample ID: 140-14389-11
 Matrix: Air Lab File ID: GB27p103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 18:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.57	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	0.56	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP04-A-26 Lab Sample ID: 140-14389-2
 Matrix: Air Lab File ID: GB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.83	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.2		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	10		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.63	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-DUP04-A-26 Lab Sample ID: 140-14389-2
 Matrix: Air Lab File ID: GB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	8.3		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.71	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	56		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.71	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

Appendix C

Support Documentation

Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-14389-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC listed a canister asset number as 11785, but it should be 11745.

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC listed a canister asset number as 11745, but it should be 11721.

Air - GC/MS VOA - Method TO-15 LL

Method(s) TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14389-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14389-1	SV-079-A-26	Air	02/21/19 12:37	02/23/19 10:10
140-14389-2	SV-DUP04-A-26	Air	02/21/19 00:00	02/23/19 10:10
140-14389-3	SV-131-C-26	Air	02/19/19 11:29	02/23/19 10:10
140-14389-4	SV-DUP01-C-26	Air	02/19/19 00:00	02/23/19 10:10
140-14389-5	SV-001-C-26	Air	02/19/19 11:36	02/23/19 10:10
140-14389-6	SV-004-C-26	Air	02/19/19 11:40	02/23/19 10:10
140-14389-7	SV-102-C-26	Air	02/19/19 11:45	02/23/19 10:10
140-14389-8	SV-155-C-26	Air	02/19/19 11:48	02/23/19 10:10
140-14389-9	SV-133-C-26	Air	02/19/19 11:52	02/23/19 10:10
140-14389-10	SV-153-C-26	Air	02/19/19 11:55	02/23/19 10:10
140-14389-11	SV-DUP02-C-26	Air	02/19/19 00:00	02/23/19 10:10
140-14389-12	SV-150-C-26	Air	02/19/19 12:05	02/23/19 10:10
140-14389-13	SV-152-C-26	Air	02/19/19 12:06	02/23/19 10:10
140-14389-14	SV-141-C-26	Air	02/19/19 12:10	02/23/19 10:10
140-14389-15	SV-088-C-26	Air	02/19/19 12:26	02/23/19 10:10
140-14389-16	SV-142-C-26	Air	02/19/19 12:20	02/23/19 10:10
140-14389-17	SV-113-C-26	Air	02/19/19 12:17	02/23/19 10:10
140-14389-18	SV-149-C-26	Air	02/19/19 12:32	02/23/19 10:10

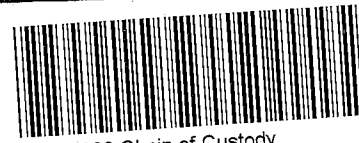
TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Pryor</u>		7 of 16 COCs														
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																		
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																		
City/State/Zip: <u>Germantown, MD, 20871</u>		TAL Contact: <u>Terry Walker Washmont</u>																		
Phone: <u>301-528-552</u>																				
FAX:																				
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																		
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																		
PO # <u>112IC08388</u>		Rush (Specify)																		
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)		
<u>SV-079-A-26</u>	<u>2/21/19</u>	<u>1130</u>	<u>1237</u>	<u>-30</u>	<u>-1</u>	<u>09717</u>	<u>09645</u>	<input checked="" type="checkbox"/>												
<u>SV-DUP04-A-26</u>	<u>2/21/19</u>	<u>0000</u>	<u>0000</u>	<u>-21</u>	<u>4</u>	<u>11733</u>	<u>11728</u>	<input checked="" type="checkbox"/>												
<u>SV-131-C-26</u>	<u>2/19/19</u>	<u>1029</u>	<u>1129</u>	<u>-29</u>	<u>0</u>	<u>11422</u>	<u>11813</u>	<input checked="" type="checkbox"/>												
<u>SV-DUP01-C-26</u>	<u>2/19/19</u>	<u>0000</u>	<u>0000</u>	<u>-29</u>	<u>0</u>	<u>10162</u>	<u>11554</u>	<input checked="" type="checkbox"/>												
<u>SV-001-C-26</u>	<u>2/19/19</u>	<u>1036</u>	<u>1136</u>	<u>-28</u>	<u>-1</u>	<u>11536</u>	<u>10941</u>	<input checked="" type="checkbox"/>												
<u>SV-004-C-26</u>	<u>2/19/19</u>	<u>1040</u>	<u>1140</u>	<u>0</u>	<u>0</u>	<u>11977</u>	<u>11872</u>	<input checked="" type="checkbox"/>												
Sampled by: <u>Sophia Lawson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)																		
		Interior		Ambient																
		Start																		
		Interior																		
		Start																		
		Stop																		
Special Instructions/QC Requirements & Comments:																				
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:																
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>																
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19 1700</u>		Received by: <u>[Signature]</u>																
Lab Use Only		Shipped Date		Opened by		Condition														



140-14389 Chain of Custody

Baltimore #201

18 COCs / 18 Flows

CUSTODY SEAL INTACT
 RECEIVED AMBIENT AT 2:00 / CT 2:00

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Pryor</u>		8 of 16 COCs													
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																	
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																	
City/State/Zip: <u>Germanstown, MD, 20871</u>		TAL Contact: <u>Terry Walker Washburn</u>																	
Phone: <u>301-528-552</u>																			
FAX:																			
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																	
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																	
PO# <u>112 FC08388</u>		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
<u>SV-102-C-26</u>	<u>2/19/19</u>	<u>1045</u>	<u>1145</u>	<u>-29</u>	<u>-1</u>	<u>11759</u>	<u>11269</u>	<input checked="" type="checkbox"/>											
<u>SV-155-C-26</u>	<u>2/19/19</u>	<u>1048</u>	<u>1148</u>	<u>-30</u>	<u>0</u>	<u>11490</u>	<u>11785</u>	<input checked="" type="checkbox"/>											
<u>SV-133-C-26</u>	<u>2/19/19</u>	<u>1052</u>	<u>1152</u>	<u>-30</u>	<u>0</u>	<u>10572</u>	<u>11162</u>	<input checked="" type="checkbox"/>											
<u>SV-153-C-26</u>	<u>2/19/19</u>	<u>1055</u>	<u>1155</u>	<u>-30</u>	<u>0</u>	<u>10158</u>	<u>10493</u>	<input checked="" type="checkbox"/>											
<u>SV-DUP00-C-26</u>	<u>2/19/19</u>	<u>0000</u>	<u>0000</u>	<u>-30</u>	<u>-2</u>	<u>11497</u>	<u>11658</u>	<input checked="" type="checkbox"/>											
<u>SV-150-C-26</u>	<u>2/19/19</u>	<u>1105</u>	<u>1205</u>	<u>-28</u>	<u>0</u>	<u>11931</u>	<u>11841</u>	<input checked="" type="checkbox"/>											
Sampled by: <u>Sophia Lawson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)				<h2>Baltimore #201</h2>													
		Interior		Ambient															
		Start																	
		Stop																	
		Pressure (Inches of Hg)																	
		Interior		Ambient															
Start																			
Stop																			
Special Instructions/QC Requirements & Comments:																			
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:															
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>															
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19 1700</u>		Received by: <u>[Signature]</u> <u>TAL KX 2-23-19 10:10</u>															
Lab Use Only		Shipper/Time		Opened by		Conditions													

1175

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Pryor</u>		9 of 16 COCs													
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																	
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																	
City/State/Zip: <u>Georgetown, MD, 20871</u>		TAL Contact: <u>Terry Walker Washburn</u>																	
Phone: <u>301-528-552</u>																			
FAX:																			
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																	
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																	
PO # <u>112FC08388</u>		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
<u>SV-152-C-26</u>	<u>2/19/19</u>	<u>1106</u>	<u>1206</u>	<u>-29</u>	<u>-1</u>	<u>11732</u>	<u>10745</u>	<input checked="" type="checkbox"/>											
<u>SV-141-C-26</u>	<u>2/19/19</u>	<u>1110</u>	<u>1210</u>	<u>-30</u>	<u>-1</u>	<u>11595</u>	<u>09831</u>	<input checked="" type="checkbox"/>											
<u>SV-088-C-26</u>	<u>2/19/19</u>	<u>1126</u>	<u>1226</u>	<u>-30</u>	<u>-1</u>	<u>09553</u>	<u>11713</u>	<input checked="" type="checkbox"/>											
<u>SV-142-C-26</u>	<u>2/19/19</u>	<u>1120</u>	<u>1220</u>	<u>-28</u>	<u>0</u>	<u>10242</u>	<u>11541</u>	<input checked="" type="checkbox"/>											
<u>SV-113-C-26</u>	<u>2/19/19</u>	<u>1117</u>	<u>1217</u>	<u>-30</u>	<u>0</u>	<u>10629</u>	<u>11745</u>	<input checked="" type="checkbox"/>											
<u>SV-149-C-26</u>	<u>2/19/19</u>	<u>1132</u>	<u>1232</u>	<u>-30</u>	<u>0</u>	<u>11921</u>	<u>11620</u>	<input checked="" type="checkbox"/>											
Sampled by: <u>Sophia Carson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)				<h2>Baltimore #201</h2>													
		Interior		Ambient															
		Start																	
		Stop																	
		Pressure (Inches of Hg)																	
		Interior		Ambient															
Start																			
Stop																			
Special instructions/QC Requirements & Comments:																			
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:															
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>															
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u> TAL KX 223-19 10:10															
Lab Use Only		Shipper Name		Opened by		Condition:													

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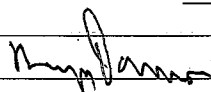
03/07/2019

11721

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	7, SV-155-C-26, COC LIST CANISTER ASSET NUMBER AS 11785, SHOULD BE 11745
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	7, SV-113-C-26, COC LIST CANISTER ASSET NUMBER AS 11745, SHOULD BE 11721 2-25-19
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID : _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input checked="" type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	Labeling Verified by: _____ Date: _____
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	pH test strip lot number: _____
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only)	Exp Date: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/	<input type="checkbox"/> Residual Chlorine	Analyst: _____
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	Date: _____
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	Time: _____
Project #: _____ PM Instructions: _____					

Sample Receiving Associate:  Date: 2-25-19

QA026R31.doc, 112618

FIELD DUPLICATE PRECISION

ORIGINAL ID	DUP ID	FRACTION	ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >RL	DUPLICATE SAMPLE CONC >RL	DIFFERENCE >2XRL
SV-131-C-26	SV-DUP01-C-26	OV-M3	1,1,1-TRICHLOROETHANE	0.61 J	0.73 J	2.2	17.91	FALSE	FALSE	FALSE	FALSE
SV-131-C-26	SV-DUP01-C-26	OV-M3	1,1-DICHLOROETHANE	0.25 J	0.3 J	1.6	18.18	FALSE	FALSE	FALSE	FALSE
SV-131-C-26	SV-DUP01-C-26	OV-M3	1,2,3-TRIMETHYLBENZENE	2.1	2.5	2	17.39	FALSE	TRUE	TRUE	FALSE
SV-131-C-26	SV-DUP01-C-26	OV-M3	1,2,4-TRIMETHYLBENZENE	0.71 J	0.85 J	2	17.95	FALSE	FALSE	FALSE	FALSE
SV-131-C-26	SV-DUP01-C-26	OV-M3	1,3,5-TRIMETHYLBENZENE	1.2 J	1.4 J	2	15.38	FALSE	FALSE	FALSE	FALSE
SV-131-C-26	SV-DUP01-C-26	OV-M3	CHLORODIFLUOROMETHANE	1.7	1.9	1.4	11.11	FALSE	TRUE	TRUE	FALSE
SV-131-C-26	SV-DUP01-C-26	OV-M3	CHLOROFORM	1.3 J	1.5 J	2	14.29	FALSE	FALSE	FALSE	FALSE
SV-131-C-26	SV-DUP01-C-26	OV-M3	DICHLORODIFLUOROMETHANE	2.3	2.5	2	8.33	FALSE	TRUE	TRUE	FALSE
SV-131-C-26	SV-DUP01-C-26	OV-M3	METHYLENE CHLORIDE	2.9 J	3.5 J	6.9	18.75	FALSE	FALSE	FALSE	FALSE
SV-131-C-26	SV-DUP01-C-26	OV-M3	TOTAL XYLENES	3.8	4.6	3.5	19.05	FALSE	TRUE	TRUE	FALSE

FIELD DUPLICATE PRECISION

ORIGINAL ID	DUP ID	FRACTION	ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >RL	DUPLICATE SAMPLE CONC >RL	DIFFERENCE >2XRL
SV-153-C-26	SV-DUP02-C-26	OV-M3	CHLORODIFLUOROMETHANE	2.1	2.1	1.4	0.00	FALSE	TRUE	TRUE	FALSE
SV-153-C-26	SV-DUP02-C-26	OV-M3	DICHLORODIFLUOROMETHANE	2.4	2.5	2	4.08	FALSE	TRUE	TRUE	FALSE
SV-153-C-26	SV-DUP02-C-26	OV-M3	METHYLENE CHLORIDE	3.7 J	3.4 J	6.9	8.45	FALSE	FALSE	FALSE	FALSE
SV-153-C-26	SV-DUP02-C-26	OV-M3	TETRACHLOROETHENE	0.54 U	0.57 J	2.7	5.41	FALSE	FALSE	FALSE	FALSE
SV-153-C-26	SV-DUP02-C-26	OV-M3	TOTAL XYLENES	0.65 J	0.56 J	3.5	14.88	FALSE	FALSE	FALSE	FALSE
SV-153-C-26	SV-DUP02-C-26	OV-M3	TRICHLOROETHENE	5.5	5.1	1.1	7.55	FALSE	TRUE	TRUE	FALSE

FIELD DUPLICATE PRECISION

ORIGINAL ID	DUP ID	FRACTION	ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >RL	DUPLICATE SAMPLE CONC >RL	DIFFERENCE >2XRL
SV-079-A-26	SV-DUP04-A-26	OV-M3	1,1,1-TRICHLOROETHANE	0.72 J	0.71 J	2.2	1.40	FALSE	FALSE	FALSE	FALSE
SV-079-A-26	SV-DUP04-A-26	OV-M3	1,2,4-TRIMETHYLBENZENE	0.61 U	0.71 J	2	15.15	FALSE	FALSE	FALSE	FALSE
SV-079-A-26	SV-DUP04-A-26	OV-M3	CHLORODIFLUOROMETHANE	1.7	1.6 J	1.4	6.06	FALSE	TRUE	TRUE	FALSE
SV-079-A-26	SV-DUP04-A-26	OV-M3	DICHLORODIFLUOROMETHANE	2.4	2.2	2	8.70	FALSE	TRUE	TRUE	FALSE
SV-079-A-26	SV-DUP04-A-26	OV-M3	METHYLENE CHLORIDE	4.4 J	2.9 J	6.9	41.10	FALSE	FALSE	FALSE	FALSE
SV-079-A-26	SV-DUP04-A-26	OV-M3	TETRACHLOROETHENE	8.7	8.3	2.7	4.71	FALSE	TRUE	TRUE	FALSE
SV-079-A-26	SV-DUP04-A-26	OV-M3	TOTAL XYLENES	2.5 J	2.7 J	3.5	7.69	FALSE	FALSE	FALSE	FALSE
SV-079-A-26	SV-DUP04-A-26	OV-M3	TRICHLOROETHENE	57	56	1.1	1.77	FALSE	TRUE	TRUE	FALSE

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
SV-079-A-26	140-14389-1	98
SV-DUP04-A-26	140-14389-2	95
SV-131-C-26	140-14389-3	95
SV-DUP01-C-26	140-14389-4	98
SV-001-C-26	140-14389-5	96
SV-004-C-26	140-14389-6	94
SV-102-C-26	140-14389-7	93
SV-155-C-26	140-14389-8	94
SV-133-C-26	140-14389-9	96
SV-153-C-26	140-14389-10	100
SV-DUP02-C-26	140-14389-11	100
SV-150-C-26	140-14389-12	96
SV-152-C-26	140-14389-13	94
SV-141-C-26	140-14389-14	94
SV-088-C-26	140-14389-15	94
SV-142-C-26	140-14389-16	97
SV-113-C-26	140-14389-17	98
SV-149-C-26	140-14389-18	96
	MB 140-27931/4	96
	MB 140-27932/7	96
	LCS 140-27931/1002	100
	LCS 140-27932/1002	95

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: G500BB26.D Lab Sample ID: MB 140-27931/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/26/2019 12:56
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27931/1002	GCCVB26-LCS .d	02/26/2019 11:35
SV-079-A-26	140-14389-1	GB26P109.D	02/26/2019 21:30
SV-DUP04-A-26	140-14389-2	GB26P110.D	02/26/2019 22:13
SV-131-C-26	140-14389-3	GB26P111.D	02/26/2019 22:55
SV-DUP01-C-26	140-14389-4	GB26P112.D	02/26/2019 23:37
SV-001-C-26	140-14389-5	GB26P113.D	02/27/2019 00:18
SV-004-C-26	140-14389-6	GB26P114.D	02/27/2019 01:00
SV-102-C-26	140-14389-7	GB26P115.D	02/27/2019 01:42
SV-155-C-26	140-14389-8	GB26P116D.D	02/27/2019 03:05

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB26-LCS.d
 Lab ID: LCS 140-27931/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.22	111	70-130	
Chlorodifluoromethane	2.00	2.02	101	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	2.09	104	70-130	
Dichlorodifluoromethane	2.00	2.06	103	60-140	
1,1-Dichloroethane	2.00	2.05	103	70-130	
1,2-Dichloroethane	2.00	2.00	100	70-130	
1,1-Dichloroethene	2.00	2.14	107	70-130	
Ethylbenzene	2.00	2.03	101	70-130	
Methylene Chloride	2.00	1.81	90	70-130	
Methyl tert-butyl ether	2.00	1.97	99	60-140	
Naphthalene	2.00	1.94	97	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	2.15	108	70-130	
1,2,4-Trichlorobenzene	2.00	1.83	92	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	2.11	105	70-130	
Trichloroethene	2.00	2.09	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.22	111	70-130	
1,2,4-Trimethylbenzene	2.00	1.99	99	70-130	
1,3,5-Trimethylbenzene	2.00	1.97	98	70-130	
Vinyl chloride	2.00	1.97	98	70-130	
Xylenes, Total	6.00	6.18	103	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: GB27mb500.D Lab Sample ID: MB 140-27932/7
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/27/2019 16:40
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
SV-133-C-26	140-14389-9	GB27p101.D	02/27/2019 17:22
SV-153-C-26	140-14389-10	GB27p102.D	02/27/2019 18:04
SV-DUP02-C-26	140-14389-11	GB27p103.D	02/27/2019 18:46
SV-152-C-26	140-14389-13	GB27p105.D	02/27/2019 20:10
SV-088-C-26	140-14389-15	GB27p107.D	02/27/2019 22:15
SV-142-C-26	140-14389-16	GB27p108.D	02/27/2019 22:57
SV-113-C-26	140-14389-17	GB27p109.D	02/27/2019 23:39
SV-149-C-26	140-14389-18	GB27p110.D	02/28/2019 00:20
SV-150-C-26	140-14389-12	GB27p104R.D	02/28/2019 04:34
SV-141-C-26	140-14389-14	GB27p106R.D	02/28/2019 05:16

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27932/7
 Matrix: Air Lab File ID: GB27mb500.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 16:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27932/7
 Matrix: Air Lab File ID: GB27mb500.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/27/2019 16:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27932 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB27a-LCS.d
 Lab ID: LCS 140-27932/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.14	107	70-130	
Chlorodifluoromethane	2.00	1.79	89	60-140	
Chloroform	2.00	2.01	100	70-130	
cis-1,2-Dichloroethene	2.00	2.11	105	70-130	
Dichlorodifluoromethane	2.00	1.89	94	60-140	
1,1-Dichloroethane	2.00	2.04	102	70-130	
1,2-Dichloroethane	2.00	1.98	99	70-130	
1,1-Dichloroethene	2.00	2.03	102	70-130	
Ethylbenzene	2.00	1.88	94	70-130	
Methylene Chloride	2.00	1.73	87	70-130	
Methyl tert-butyl ether	2.00	1.80	90	60-140	
Naphthalene	2.00	1.84	92	60-140	
Tetrachloroethene	2.00	2.00	100	70-130	
Toluene	2.00	1.94	97	70-130	
trans-1,2-Dichloroethene	2.00	2.08	104	70-130	
1,2,4-Trichlorobenzene	2.00	1.78	89	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	1.95	98	70-130	
Trichloroethene	2.00	2.06	103	70-130	
1,2,3-Trimethylbenzene	2.00	1.99	100	70-130	
1,2,4-Trimethylbenzene	2.00	1.77	88	70-130	
1,3,5-Trimethylbenzene	2.00	1.78	89	70-130	
Vinyl chloride	2.00	1.76	88	70-130	
Xylenes, Total	6.00	5.64	94	70-130	

Column to be used to flag recovery and RPD values

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: GA11BLK1.D BFB Injection Date: 01/11/2019
 Instrument ID: MG BFB Injection Time: 12:24
 Analysis Batch No.: 26755

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.2	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	71.2	
175	5.0 - 9.0 % of mass 174	5.1	(7.1) 1
176	95.0 - 101.0 % of mass 174	70.7	(99.3) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-26755/2	GA11IC09.D	01/11/2019	13:08
	IC 140-26755/6	GA11IC10.D	01/11/2019	14:35
	IC 140-26755/9	GA11IC01.D	01/11/2019	16:46
	IC 140-26755/10	GA11IC02.D	01/11/2019	17:29
	IC 140-26755/11	GA11IC03.D	01/11/2019	18:12
	IC 140-26755/12	GA11IC04.D	01/11/2019	18:56
	IC 140-26755/13	GA11IC05.D	01/11/2019	19:40
	IC 140-26755/14	GA11IC06.D	01/11/2019	20:23
	ICIS 140-26755/15	GA11IC07.D	01/11/2019	21:07
	IC 140-26755/16	GA11IC08.D	01/11/2019	21:51
	ICV 140-26755/18	GA11ICV.D	01/11/2019	23:17

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.9523	2.7653	2.6769	Ave		2.6204			9.0		30.0				
	2.4796	2.3672	2.3873	2.9026	2.4316												
Propene	+++++	+++++	+++++	1.8011	1.4915	Ave		1.4631			12.5		30.0				
	1.4104	1.3267	1.3362	1.5897	1.2862												
Dichlorodifluoromethane	+++++	+++++	4.4505	4.4326	4.2183	Ave		4.2347			6.5		30.0				
	4.0515	3.9190	3.9550	4.7099	4.1407												
Chloromethane	+++++	+++++	+++++	0.5625	0.4891	Ave		0.4649			11.5		30.0				
	0.4445	0.4230	0.4254	0.4946	0.4152												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	2.6446	2.5541	2.4472	Ave		2.4745			4.4		30.0				
	2.3633	2.3423	2.3822	2.5578	2.5047												
Vinyl chloride	1.9626	1.7167	1.7320	1.6531	1.5626	Ave		1.6109			10.3		30.0				
	1.4785	1.4339	1.4573	1.6387	1.4732												
Butane	+++++	+++++	+++++	3.0743	2.8454	Ave		2.7124			8.2		30.0				
	2.6258	2.4782	2.5038	2.8679	2.5911												
1,3-Butadiene	+++++	+++++	+++++	1.2733	1.2439	Ave		1.2450			5.0		30.0				
	1.2041	1.1760	1.2078	1.3654	1.2448												
Bromomethane	+++++	+++++	1.6548	1.3996	1.3549	Ave		1.3916			8.4		30.0				
	1.3078	1.2877	1.3168	1.4117	1.3995												
Chloroethane	+++++	+++++	0.8627	0.8037	0.7796	Ave		0.7761			6.4		30.0				
	0.7377	0.7148	0.7259	0.8118	0.7729												
Ethanol	+++++	+++++	+++++	0.8657	0.7124	Ave		0.7042			15.6		30.0				
	0.5620	0.7386	0.5593	0.7653	0.7259												
Vinyl bromide	+++++	+++++	1.3835	1.3207	1.2830	Ave		1.2899			4.2		30.0				
	1.2366	1.2145	1.2610	1.2880	1.3321												
2-Methylbutane	+++++	+++++	+++++	2.0547	2.0422	Ave		1.9469			4.4		30.0				
	1.9302	1.8374	1.8471	1.9762	1.9406												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.9949	4.3785 3.8769	4.2718 3.9322	4.1461 4.3687	4.1452 4.2564	Ave		4.1523			4.4		30.0				
Acrolein	++++ 0.3700	++++ 0.3339	++++ 0.3264	++++ 0.4058	0.3535 0.3546	Ave		0.3574			7.9		30.0				
Acetonitrile	++++ 0.5820	++++ 0.5806	++++ 0.5032	0.4860 0.6106	0.5491 0.5907	Ave		0.5574			8.4		30.0				
Acetone	++++ 0.6952	++++ 0.6071	++++ 0.4923	++++ 0.5713	0.7119 0.5299	Ave		0.6013			14.7		30.0				
Pentane	++++ 0.2650	++++ 0.2567	++++ 0.2534	++++ 0.2741	0.2798 0.2630	Ave		0.2653			3.8		30.0				
Isopropyl alcohol	++++ 1.5842	++++ 1.6884	++++ 1.2216	++++ 1.5921	1.7192 1.5978	Ave		1.6033			11.8		30.0				
Ethyl ether	++++ 1.8397	++++ 1.7705	++++ 1.4542	++++ 1.7361	1.9088 1.6409	Ave		1.7250			9.3		30.0				
1,1-Dichloroethene	1.5300 1.3997	1.3691 1.3378	1.5011 1.4037	1.3769 1.3902	1.4054 1.4041	Ave		1.4118			4.2		30.0				
Acrylonitrile	++++ 0.9861	++++ 0.9774	1.0366 0.8664	0.9476 1.0406	0.9217 1.0215	Ave		0.9747			6.2		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.0568	3.1787 2.9429	3.2903 2.9549	3.0618 2.9993	3.1454 2.9101	Ave		3.0600			4.1		30.0				
tert-Butyl alcohol	++++ 2.2526	++++ 2.2071	++++ 1.7152	2.3096 2.1050	2.4776 2.3062	Ave		2.1962			11.0		30.0				
Methylene Chloride	++++ 1.5026	++++ 1.3595	++++ 1.3036	2.5891 1.2966	1.8042 ++++	Ave		1.6426			30.5 *		30.0				
3-Chloropropene	++++ 1.6369	++++ 1.6110	2.0104 1.5866	1.9432 1.7783	1.7193 1.7236	Ave		1.7512			8.8		30.0				
Carbon disulfide	++++ 4.2983	++++ 4.0822	4.5901 4.1194	4.3819 4.1977	4.3526 4.2529	Ave		4.2844			3.8		30.0				
trans-1,2-Dichloroethene	++++ 1.4444	1.3848 1.3913	1.4554 1.4201	1.3845 1.4125	1.4335 1.3979	Ave		1.4138			1.9		30.0				
2-Methylpentane	++++ 4.0309	++++ 3.8853	4.5901 3.8303	4.1901 4.0757	4.2199 3.7514	Ave		4.0450			5.3		30.0				
Methyl tert-butyl ether	++++ 4.1354	3.5946 4.0399	4.2254 3.4444	3.8763 4.0172	4.1168 3.9425	Ave		3.9325			6.6		30.0				
1,1-Dichloroethane	3.1037 2.8577	3.0105 2.8187	3.0470 2.6559	2.9034 2.9155	2.9080 2.8375	Ave		2.9058			4.4		30.0				
Vinyl acetate	++++ 3.9854	++++ 4.2048	4.0675 3.5720	3.8850 4.4145	3.9427 4.2013	Ave		4.0342			6.3		30.0				
Hexane	++++ 1.3242	++++ 1.2816	++++ 1.3713	1.3526 1.3074	1.3260 1.2151	Ave		1.3036			4.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++	++++	++++	0.6854	0.6772	Ave		0.6347			8.5		30.0				
	0.6784	0.6294	0.5376	0.6386	0.5958												
cis-1,2-Dichloroethene	1.5310	1.3850	1.4658	1.4361	1.4213	Ave		1.4465			2.9		30.0				
	1.4515	1.4377	1.3972	1.4588	1.4806												
Ethyl acetate	++++	++++	3.4159	3.2335	3.3337	Ave		3.3124			6.9		30.0				
	3.4792	3.3231	2.8120	3.5743	3.3271												
Chloroform	3.5969	3.3560	3.4112	3.4074	3.2824	Ave		3.3444			4.2		30.0				
	3.2821	3.2211	3.0680	3.4218	3.3970												
Tetrahydrofuran	++++	++++	++++	1.7940	1.8215	Ave		1.7724			6.6		30.0				
	1.8641	1.7946	1.5246	1.8635	1.7446												
1,1,1-Trichloroethane	3.8810	3.4765	3.6941	3.5977	3.6119	Ave		3.6203			4.2		30.0				
	3.5723	3.5364	3.3475	3.7388	3.7470												
1,2-Dichloroethane	0.3890	0.3740	0.4205	0.3853	0.3989	Ave		0.3910			6.7		30.0				
	0.3918	0.3624	0.3439	0.4219	0.4228												
Cyclohexane	++++	++++	++++	0.1383	0.1426	Ave		0.1314			6.9		30.0				
	0.1391	0.1224	0.1193	0.1325	0.1258												
Benzene	++++	0.7122	0.8006	0.7160	0.7636	Ave		0.7153			7.0		30.0				
	0.7488	0.6697	0.6393	0.7124	0.6753												
Carbon tetrachloride	0.5647	0.5298	0.5813	0.5547	0.6331	Ave		0.5933			8.0		30.0				
	0.6279	0.5625	0.5603	0.6718	0.6470												
1-Butanol	++++	++++	++++	0.0897	0.1022	Ave		0.0896			13.7		30.0				
	0.1010	0.0823	0.0665	0.0902	0.0950												
2,3-Dimethylpentane	++++	++++	0.2016	0.1866	0.2067	Ave		0.1886			7.0		30.0				
	0.1994	0.1776	0.1681	0.1880	0.1811												
Thiophene	++++	++++	0.4419	0.4095	0.4328	Ave		0.4156			5.4		30.0				
	0.4205	0.3890	0.3765	0.4241	0.4306												
2,2,4-Trimethylpentane	1.4853	1.4111	1.5290	1.4173	1.5323	Ave		1.4009			8.1		30.0				
	1.4628	1.2640	1.1785	1.3863	1.3426												
Heptane	++++	++++	0.3221	0.2848	0.3010	Ave		0.2875			7.7		30.0				
	0.2942	0.2637	0.2507	0.2927	0.2912												
1,2-Dichloropropane	++++	0.2947	0.3066	0.2799	0.2948	Ave		0.2813			7.5		30.0				
	0.2869	0.2617	0.2359	0.2893	0.2819												
Trichloroethene	0.3496	0.3229	0.3354	0.3064	0.3383	Ave		0.3257			5.2		30.0				
	0.3271	0.3039	0.3006	0.3304	0.3426												
Dibromomethane	++++	++++	++++	0.3027	0.3082	Ave		0.2963			7.9		30.0				
	0.2897	0.2688	0.2632	0.3189	0.3227												
Bromodichloromethane	++++	++++	0.5688	0.5299	0.5916	Ave		0.5843			8.8		30.0				
	0.5840	0.5507	0.5314	0.6523	0.6656												
1,4-Dioxane	++++	++++	++++	0.0947	0.0887	Ave		0.0832			17.3		30.0				
	0.0619	0.0891	0.0629	0.0903	0.0946												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3918	++++ 0.3473	++++ 0.2972	0.3014 0.4093	0.3703 0.3989	Ave		0.3595			12.7		30.0				
Methylcyclohexane	0.4845 0.5152	0.4926 0.4533	0.5068 0.4304	0.4870 0.4877	0.5327 0.5063	Ave		0.4896			6.1		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.6350	++++ 0.5092	0.5796 0.3308	0.5597 0.5890	0.6524 0.6484	Ave		0.5630			18.8		30.0				
cis-1,3-Dichloropropene	++++ 0.4479	0.3952 0.4121	0.4552 0.3828	0.4166 0.4613	0.4382 0.4415	Ave		0.4279			6.4		30.0				
trans-1,3-Dichloropropene	++++ 0.4450	0.3978 0.4156	0.4398 0.3772	0.4049 0.4673	0.4521 0.4806	Ave		0.4311			8.0		30.0				
Toluene	0.8893 0.9181	0.8808 0.8443	0.9072 0.7540	0.8795 0.8738	0.9309 0.9230	Ave		0.8801			5.9		30.0				
1,1,2-Trichloroethane	0.2596 0.2870	0.2566 0.2535	0.2815 0.2299	0.2715 0.2735	0.2904 0.2819	Ave		0.2685			7.0		30.0				
2-Hexanone	++++ 0.3129	++++ 0.2311	0.2486 0.1601	0.2653 0.2620	0.3155 0.3172	Ave		0.2641			20.2		30.0				
Octane	++++ 0.3331	++++ 0.2969	0.3166 0.2807	0.3142 0.3116	0.3533 0.3257	Ave		0.3165			7.0		30.0				
C8 Range	++++ 3.2900	++++ 2.9406	++++ 2.7321	3.2543 3.2050	3.4583 3.2302	Ave		3.1586			7.7		30.0				
Dibromochloromethane	++++ 0.5589	++++ 0.5327	0.4753 0.5204	0.4633 0.6101	0.5345 0.6613	Ave		0.5446			12.1		30.0				
1,2-Dibromoethane (EDB)	++++ 0.4879	++++ 0.4537	0.4324 0.4227	0.4409 0.4933	0.4776 0.5168	Ave		0.4656			7.1		30.0				
Tetrachloroethene	0.3340 0.3413	0.3265 0.3106	0.3184 0.2978	0.3299 0.3362	0.3500 0.3575	Ave		0.3302			5.4		30.0				
Chlorobenzene	0.6503 0.7257	0.6533 0.6547	0.7038 0.5918	0.6891 0.6804	0.7584 0.7332	Ave		0.6841			7.2		30.0				
Ethylbenzene	++++ 1.2841	1.1605 1.1457	1.1820 0.9886	1.2041 1.2050	1.3132 1.2806	Ave		1.1960			8.1		30.0				
m-Xylene & p-Xylene	0.7852 1.0069	0.8464 0.8920	0.9631 0.7597	0.9388 0.9364	1.0264 0.9927	Ave		0.9148			10.1		30.0				
Nonane	++++ 0.7074	0.6367 0.6181	0.6731 0.5580	0.6713 0.6403	0.7319 0.6196	Ave		0.6507			8.0		30.0				
Bromoform	++++ 0.5150	++++ 0.5097	0.3874 0.4824	0.3783 0.6069	0.4530 ++++	Ave		0.4761			16.7		30.0				
Styrene	++++ 0.6772	++++ 0.6274	0.5417 0.5521	0.5440 0.6889	0.6499 0.7776	Ave		0.6323			13.2		30.0				
o-Xylene	++++ 1.0316	0.8434 0.9312	0.9762 0.7934	0.9959 0.9762	1.0612 1.0727	Ave		0.9646			9.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++ 0.6943	++++ 0.6225	0.6477 0.5392	0.6105 0.6980	0.7079 0.6623	Ave		0.6478			8.7		30.0				
1,2,3-Trichloropropane	++++ 0.2201	++++ 0.1963	0.2117 0.1718	0.1933 0.2253	0.2181 0.2233	Ave		0.2075			9.0		30.0				
Isopropylbenzene	++++ 1.3750	1.2061 1.2349	1.2881 1.0540	1.2705 1.3875	1.3916 1.3659	Ave		1.2860			8.6		30.0				
Propylbenzene	++++ 0.3714	++++ 0.3352	0.3426 0.2878	0.3159 0.3755	0.3762 0.3762	Ave		0.3476			9.6		30.0				
2-Chlorotoluene	++++ 0.3404	0.3055 0.2960	0.3209 0.2606	0.3117 0.3372	0.3448 0.3406	Ave		0.3175			8.7		30.0				
4-Ethyltoluene	++++ 1.3518	++++ 1.2430	1.2707 1.0593	1.1808 1.3853	1.3899 1.3849	Ave		1.2832			9.3		30.0				
1,3,5-Trimethylbenzene	++++ 0.5322	++++ 0.4840	0.4931 0.4140	0.4624 0.5337	0.5289 0.5468	Ave		0.4994			9.1		30.0				
Alpha Methyl Styrene	++++ 0.5256	++++ 0.4877	++++ 0.4370	0.3906 0.6086	0.4802 0.6006	Ave		0.5043			16.0		30.0				
Decane	++++ 0.8778	0.7603 0.7515	0.8322 0.6337	0.8484 0.8180	0.9143 0.7472	Ave		0.7982			10.6		30.0				
tert-Butylbenzene	++++ 1.2040	++++ 1.0655	1.0703 0.8921	1.0556 1.2542	1.1543 1.2176	Ave		1.1142			10.6		30.0				
1,2,4-Trimethylbenzene	++++ 1.1975	++++ 1.0389	1.0671 0.8751	1.0434 1.2267	1.1402 1.1768	Ave		1.0957			10.4		30.0				
sec-Butylbenzene	++++ 1.7209	++++ 1.4915	1.5212 1.2789	1.5236 1.7227	1.6717 1.6181	Ave		1.5686			9.5		30.0				
1,3-Dichlorobenzene	0.6490 0.7671	0.6444 0.6846	0.6738 0.6125	0.6739 0.8458	0.7415 0.8676	Ave		0.7160			12.1		30.0				
Benzyl chloride	++++ 1.0629	++++ 0.9436	0.8534 0.8465	0.8353 1.1447	0.9958 1.1273	Ave		0.9762			13.0		30.0				
1,4-Dichlorobenzene	0.7017 0.7787	0.6870 0.6945	0.6938 0.6166	0.6879 0.8577	0.7429 0.8826	Ave		0.7344			11.3		30.0				
4-Isopropyltoluene	++++ 1.3919	++++ 1.1997	1.1350 1.0411	1.1617 1.4207	1.3168 1.3719	Ave		1.2548			11.1		30.0				
1,2,3-Trimethylbenzene	0.7568 1.1870	0.8539 1.0454	1.0085 0.9035	1.0349 ++++	1.1364 ++++	Ave		0.9908			14.6		30.0				
Indane	++++ 1.0760	++++ 0.9392	0.9630 0.8123	0.9316 1.1012	1.0002 1.0990	Ave		0.9903			10.1		30.0				
1,2-Dichlorobenzene	++++ 0.7440	++++ 0.6621	0.6671 0.5878	0.6607 0.8263	0.7087 0.8754	Ave		0.7165			13.3		30.0				
Butylbenzene	++++ 1.4543	++++ 1.1174	1.2268 1.0412	1.2695 1.4208	1.3939 1.3499	Ave		1.2768			11.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.9217	++++ 0.8188	0.7590 0.7206	0.7567 0.9791	0.8625 0.9878	Ave		0.8508			12.2		30.0				
Undecane	++++ 0.9412	0.7138 0.7639	0.7854 0.6439	0.8623 0.8142	0.9777 0.7859	Ave		0.8098			13.0		30.0				
1,2-Dibromo-3-Chloropropane	0.2667 0.3713	0.2609 0.3380	0.2709 0.2859	0.2620 ++++	0.3145 ++++	Ave		0.2963			13.8		30.0				
1,2,4,5-Tetramethylbenzene	++++ 1.3103	++++ 1.1118	1.0041 0.8463	1.0551 1.2653	1.2570 1.2867	Ave		1.1421			14.5		30.0				
Dodecane	++++ 0.7978	0.6003 0.5688	0.6899 0.3858	0.7041 0.5331	0.8370 ++++	Ave		0.6396			23.1		30.0				
1,2,4-Trichlorobenzene	++++ 0.6436	0.5319 0.5457	0.4906 0.4989	0.4888 0.6587	0.5772 0.6483	Ave		0.5649			12.4		30.0				
Naphthalene	++++ 1.4994	1.1580 1.2044	1.1489 0.9653	1.0861 1.2974	1.4202 1.3257	Ave		1.2339			13.6		30.0				
Hexachlorobutadiene	++++ 0.6448	++++ 0.5763	0.5100 0.5363	0.5070 0.7409	0.5745 0.7482	Ave		0.6047			16.0		30.0				
1,2,3-Trichlorobenzene	++++ 0.6283	0.5060 0.4951	0.4846 0.4151	0.4581 0.5663	0.5627 0.3728	Ave		0.4988			15.9		30.0				
2-Methylnaphthalene	++++ 0.9181	0.6422 0.5284	0.5584 0.3836	0.4778 0.4940	0.8101 ++++	Ave		0.6016			29.9		50.0				
1-Methylnaphthalene	++++ 1.1220	0.8380 0.6213	0.6877 0.4374	0.6391 0.5433	1.0085 ++++	Ave		0.7372			<u>31.8</u>		50.0				
4-Bromofluorobenzene (Surr)	0.7946 0.8130	0.8076 0.7824	0.8238 0.7807	0.8163 0.9039	0.8357 0.8386	Ave		0.8196			4.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 261958	++++ 518289	21711 1076565	42570 1857884	107824 3550370	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 149007	++++ 290483	++++ 602545	27727 1017511	60077 1877999	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 428033	++++ 858049	32728 1783528	68237 3014742	169908 6045892	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 46960	++++ 92605	++++ 191831	8660 316575	19699 606292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 249678	++++ 512846	19448 1074243	39319 1637176	98572 3657066	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	3911 156203	6583 313945	12737 657162	25449 1048926	62942 2151077	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 277412	++++ 542597	++++ 1129098	47326 1835688	114610 3783292	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 127206	++++ 257490	++++ 544660	19602 873952	50104 1817509	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 138169	++++ 281926	12169 593804	21546 903575	54574 2043364	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 77933	++++ 156493	6344 327330	12373 519647	31401 1128580	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 296853	++++ 808553	++++ 1261075	66636 2449308	143467 5299467	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 130640	++++ 265901	10174 568659	20331 824429	51677 1944996	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 203924	++++ 402287	++++ 832948	31631 1264951	82259 2833506	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 422050	16790 848836	31414 1773236	63826 2796331	166966 6214752	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)					
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	
Acrolein	CBM	Ave	++++ 39091	++++ 73107	++++ 147180	++++ 259717	14239 517814	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0	
Acetonitrile	CBM	Ave	++++ 61491	++++ 127125	++++ 226910	++++ 390809	7481 862471	22116 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0	
Acetone	CBM	Ave	++++ 220327	++++ 398773	++++ 665956	++++ 1097098	86023 2321110	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0	
Pentane	CBM	Ave	++++ 28000	++++ 56204	++++ 114279	++++ 175439	11269 384054	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0	
Isopropyl alcohol	CBM	Ave	++++ 502108	++++ 1108992	++++ 1652685	++++ 3057291	79400 6999063	219917 3.00	++++ 6.00	++++ 12.0	++++ 24.0	0.480 48.0	
Ethyl ether	CBM	Ave	++++ 194355	++++ 387640	++++ 655797	++++ 1111229	76885 2395844	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0	
1,1-Dichloroethene	CBM	Ave	3049 147877	5250 292909	11039 633007	21196 889868	56607 2050200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Acrylonitrile	CBM	Ave	++++ 104178	++++ 213988	++++ 390689	++++ 666078	7623 1491458	14588 37127	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 322940	++++ 644340	++++ 1332511	++++ 1919761	47135 4249014	126693 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
tert-Butyl alcohol	CBM	Ave	++++ 237979	++++ 483244	++++ 773470	++++ 1347387	35554 3367365	99796 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0	
Methylene Chloride	CBM	Ave	++++ 158748	++++ 297663	++++ 587875	++++ 829908	39858 72672	72672 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 0.400	
3-Chloropropene	CBM	Ave	++++ 172933	++++ 352711	++++ 715500	++++ 1138278	29914 2516658	69253 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Carbon disulfide	CBM	Ave	++++ 454099	++++ 893782	++++ 1857677	++++ 2686894	33755 6209652	67457 1.00	175320 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
trans-1,2-Dichloroethene	CBM	Ave	++++ 152597	++++ 304618	++++ 640390	++++ 904134	21313 2041028	57740 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
2-Methylpentane	CBM	Ave	++++ 425850	++++ 850675	++++ 1727313	++++ 2608750	32181 5477445	64503 1.00	169974 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Methyl tert-butyl ether	CBM	Ave	++++ 436887	++++ 884523	++++ 1553256	++++ 2571313	31073 5756531	59673 1.00	165819 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
1,1-Dichloroethane	CBM	Ave	6185 301902	11544 617142	22407 1197700	44696 1866128	117133 4143029	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Vinyl acetate	CBM	Ave	++++ 421041	++++ 920626	++++ 1610829	++++ 2825655	59807 6134377	158808 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Hexane	CBM	Ave	++++ 139897	++++ 280600	++++ 564091	++++ 836832	10084 1774150	20822 1.00	53409 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
2-Butanone (MEK)	CBM	Ave	++++ 71674	++++ 137814	++++ 242448	++++ 408724	10552 870000	27277 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0	
cis-1,2-Dichloroethene	CBM	Ave	3051 153350	5311 314771	10779 630074	22108 933768	57247 2161860	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 367561	++++ 727588	25120 1268094	49778 2287831	134280 4857969	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	7168 346742	12869 705235	25085 1383523	52455 2190241	132214 4960016	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 196936	++++ 392928	++++ 687510	27618 1192762	73368 2547299	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7734 377403	13331 774289	27166 1509577	55384 2393121	145486 5471084	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4547 232618	8382 490730	17516 952640	35324 1548479	87574 3502141	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 82609	++++ 165738	++++ 330488	12681 486357	31319 1042096	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 444635	15963 906736	33352 1771104	65637 2614755	167643 5593459	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	6601 372817	11874 761689	24215 1552321	50848 2465819	138991 5358444	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 59954	++++ 111445	++++ 184294	8226 331158	22433 786825	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 118426	++++ 240541	8397 465638	17105 690034	45390 1499809	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 249671	++++ 526684	18410 1043094	37543 1556455	95028 3566561	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	17363 868592	31627 1711484	63694 3264805	129920 5087913	336411 11120269	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 174693	++++ 357021	13419 694408	26105 1074435	66081 2411618	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 170338	6605 354326	12771 653599	25661 1061646	64714 2334951	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4087 194217	7238 411429	13973 832705	28091 1212507	74264 2837545	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 172040	++++ 363939	++++ 729198	27744 1170568	67675 2672665	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 346754	++++ 745629	23694 1472126	48577 2394105	129879 5512449	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 36737	++++ 120654	++++ 174155	8684 331358	19464 783489	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 232640	++++ 470252	++++ 823262	27631 1502138	81302 3304265	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	5664 305916	11041 613752	21112 1192238	44641 1790104	116952 4193256	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 377024	++++ 689509	24146 916498	51311 2161661	143236 5370174	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 265941	8857 558061	18964 1060593	38186 1693124	96201 3656415	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 249246	8494 528240	18209 983862	34634 1678819	93722 3876912	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	9759 514273	18809 1073072	37560 1966647	75222 3139180	192974 7445292	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2849 160780	5479 322166	11656 599648	23218 982519	60205 2274200	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 175250	++++ 293749	10295 417616	22692 941298	65409 2558380	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 186587	++++ 377410	13108 732239	26877 1119383	73243 2627265	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	CBZd 5	Ave	++++ 1842861	++++ 3737320	++++ 7125919	278341 11514382	716916 26057226	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	++++ 313050	++++ 676985	19680 1357226	39627 2191805	110810 5334244	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 273278	++++ 576579	17903 1102407	37712 1772227	99001 4168790	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3665 191154	6973 394783	13185 776709	28219 1207845	72561 2883889	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	7137 406499	13951 832085	29142 1543553	58935 2444395	157211 5914764	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	++++ 719275	24780 1456098	48941 2578598	102987 4329132	272217 10330192	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	17235 1128063	36147 2267354	79756 3963090	160595 6728239	425545 16015024	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd 5	Ave	++++ 396249	13596 785625	27868 1455379	57416 2300427	151720 4997986	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd 5	Ave	++++ 288479	++++ 647774	16038 1258109	32352 2180538	93899 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Styrene	CBZd 5	Ave	++++ 379313	++++ 797396	22430 1440043	46527 2475003	134724 6272582	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	++++ 577831	18010 1183498	40418 2069274	85176 3507204	219991 8652988	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	++++ 388902	++++ 791220	26816 1406346	52217 2507616	146757 5342402	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 123267	++++ 249431	8767 448013	16530 809328	45222 1801458	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 770189	++++ 1569505	25754 2749199	53331 4984665	108667 11018383	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	++++ 208028	++++ 425975	14187 750579	27021 1348899	77981 3034911	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14389-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 190674	6524 376201	13286 679618	26657 1211506	71471 2747919	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	++++ 757218	++++ 1579790	52613 2762937	100995 4977060	288122 11171652	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	++++ 298107	++++ 615118	20417 1079746	39553 1917273	109634 4410950	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 294414	++++ 619837	++++ 1139797	33405 2186650	99545 4845121	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 491714	16235 955171	34455 1652838	72566 2938778	189531 6027860	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	++++ 674397	++++ 1354211	44314 2326877	100985 4505713	288122 9821979	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 670745	++++ 1320347	44184 2282446	89238 4407169	236361 9493306	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	++++ 963943	++++ 1895656	62984 3335709	130314 6189211	346547 13052688	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7122 429682	13761 870050	27898 1597433	57634 3038807	153722 6998909	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 595380	++++ 1199239	35336 2207883	71441 4112439	206433 9093386	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	7701 436204	14670 882709	28727 1608243	58838 3081288	154004 7120026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	++++ 779650	++++ 1524715	46995 2715440	99360 5104026	272972 11067094	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	8305 664909	18233 1328651	41757 2356435	88511 ++++	235583 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Indane	CBZd 5	Ave	++++ 602700	++++ 1193709	39872 2118687	79681 3956160	207350 8865173	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 416753	++++ 841536	27621 1533100	56506 2968700	146910 7061726	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	++++ 814617	23860 1547638	50796 2715683	108576 5104411	288957 10889558	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 516302	++++ 1040605	31427 1879451	64720 3517487	178805 7968258	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 527231	15243 970873	32520 1679521	73748 2924996	202684 6339976	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2927 207960	5571 429617	11218 745616	22412 ++++	65206 ++++	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 733964	++++ 1413004	41572 2207453	90241 4545804	260569 10379759	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 446881	12818 722978	28563 1006221	60222 1915343	173512 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 360521	11357 693552	20313 1301208	41810 2366361	119662 5229906	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 839854	24728 1530726	47569 2517870	92896 4661002	294401 10693857	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 361175	++++ 732431	21118 1398696	43365 2661640	119102 6035243	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 351962	10806 629244	20063 1082671	39185 2034470	116648 3007302	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 514300	13713 671591	23120 1000580	40866 1774929	167946 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 628512	17895 789694	28473 1141032	54667 1951995	209066 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1743947 1821597	1724522 1988683	1705365 2036360	1745466 1623678	1732344 1691157	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	12.7						50			
Propene	+++++	+++++	+++++	23.1						50		
Dichlorodifluoromethane	+++++	+++++	5.1						50			
Chloromethane	+++++	+++++	+++++	21.0						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	6.9						50			
Vinyl chloride	21.8						50					
Butane	+++++	+++++	+++++	13.3						50		
1,3-Butadiene	+++++	+++++	+++++	2.3						50		
Bromomethane	+++++	+++++	18.9						50			
Chloroethane	+++++	+++++	11.2						50			
Ethanol	+++++	+++++	+++++	22.9						50		
Vinyl bromide	+++++	+++++	7.3						50			
2-Methylbutane	+++++	+++++	+++++	5.5						50		
Trichlorofluoromethane	+++++	5.4						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	+++++	-1.1							50
Acetonitrile	+++++	+++++	+++++	-12.8							50	
Acetone	+++++	+++++	+++++	+++++	18.4							80
Pentane	+++++	+++++	+++++	+++++	5.4							50
Isopropyl alcohol	+++++	+++++	+++++	7.2							50	
Ethyl ether	+++++	+++++	+++++	+++++	10.7							50
1,1-Dichloroethene	8.4						50					
Acrylonitrile	+++++	+++++	6.3						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.9							50			
tert-Butyl alcohol	+++++	+++++	+++++	5.2							50	
Methylene Chloride	+++++	+++++	+++++	57.6 +++++							80	
3-Chloropropene	+++++	+++++	14.8						50			
Carbon disulfide	+++++	+++++	7.1						50			
trans-1,2-Dichloroethene	+++++	-2.1							50			
2-Methylpentane	+++++	+++++	8.2						50			
Methyl tert-butyl ether	+++++	-8.6							50			
1,1-Dichloroethane	6.8						50					
Vinyl acetate	+++++	+++++	0.8						50			
Hexane	+++++	+++++	5.2						50			
2-Butanone (MEK)	+++++	+++++	+++++	8.0							50	
cis-1,2-Dichloroethene	5.8						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	3.1						50			
Chloroform	7.6						50					
Tetrahydrofuran	+++++	+++++	+++++	1.2						50		
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	-0.5						50					
Cyclohexane	+++++	+++++	+++++	5.2						50		
Benzene	+++++	-0.4						50				
Carbon tetrachloride	-4.8						50					
1-Butanol	+++++	+++++	+++++	0.2							50	
2,3-Dimethylpentane	+++++	+++++	6.9						50			
Thiophene	+++++	+++++	6.3						50			
2,2,4-Trimethylpentane	6.0						50					
Heptane	+++++	+++++	12.0						50			
1,2-Dichloropropane	+++++	4.8						50				
Trichloroethene	7.3						50					
Dibromomethane	+++++	+++++	+++++	2.1						50		
Bromodichloromethane	+++++	+++++	-2.7						50			
1,4-Dioxane	+++++	+++++	+++++	13.9						50		
Methyl methacrylate	+++++	+++++	+++++	-16.1						50		
Methylcyclohexane	-1.0						50					
4-Methyl-2-pentanone (MIBK)	+++++	+++++	3.0						50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.6						50				
trans-1,3-Dichloropropene	+++++	-7.7						50				
Toluene	1.0						50					
1,1,2-Trichloroethane	-3.3						50					
2-Hexanone	+++++	+++++	-5.8						50			
Octane	+++++	+++++	0.0						50			
Dibromochloromethane	+++++	+++++	-12.7						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-7.1						50			
Tetrachloroethene	1.1						50					
Chlorobenzene	-4.9						50					
Ethylbenzene	+++++	-3.0						50				
m-Xylene & p-Xylene	-14.2						50					
Nonane	+++++	-2.2						50				
Bromoform	+++++	+++++	-18.6	+++++					50			
Styrene	+++++	+++++	-14.3						50			
o-Xylene	+++++	-12.6						50				
1,1,2,2-Tetrachloroethane	+++++	+++++	0.0						50			
1,2,3-Trichloropropane	+++++	+++++	2.1						50			
Isopropylbenzene	+++++	-6.2						50				
Propylbenzene	+++++	+++++	-1.4						50			
2-Chlorotoluene	+++++	-3.8						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	+++++	+++++	-1.0						50			
1,3,5-Trimethylbenzene	+++++	+++++	-1.3						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-22.6						50		
Decane	+++++	-4.7						50				
tert-Butylbenzene	+++++	+++++	-3.9						50			
1,2,4-Trimethylbenzene	+++++	+++++	-2.6						50			
sec-Butylbenzene	+++++	+++++	-3.0						50			
1,3-Dichlorobenzene	-9.4						50					
Benzyl chloride	+++++	+++++	-12.6						50			
1,4-Dichlorobenzene	-4.4						50					
4-Isopropyltoluene	+++++	+++++	-9.5						50			
1,2,3-Trimethylbenzene	-23.6		+++++	+++++			50					
Indane	+++++	+++++	-2.8						50			
1,2-Dichlorobenzene	+++++	+++++	-6.9						50			
Butylbenzene	+++++	-12.5							50			
Indene	+++++	+++++	-10.8						50			
Undecane	+++++	-11.9							50			
1,2-Dibromo-3-Chloropropane	-10.0		+++++	+++++			50					
1,2,4,5-Tetramethylbenzene	+++++	+++++	-12.1						50			
Dodecane	+++++	-6.1		+++++					50			
1,2,4-Trichlorobenzene	+++++	-5.8							50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-6.2						80				
Hexachlorobutadiene	+++++	+++++	-15.7						50			
1,2,3-Trichlorobenzene	+++++	1.5						50				
2-Methylnaphthalene	+++++	6.7		+++++				80				
1-Methylnaphthalene	+++++	13.7		+++++				80				

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 06/21/2017 17:00
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/21/2017 22:43
 Lab File ID: GA11ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.7395	0.6739			2.00	-8.9	35.0
3-Methylthiophene	Ave	0.7319	0.6589			2.00	-10.0	35.0
2-Ethylthiophene	Ave	0.9478	0.8011			2.00	-15.5	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.8235			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.8516	0.6095			2.00	-28.4	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.167	0.8355			2.00	-28.4	35.0
Benzo (b) thiophene	Ave	1.068	0.7208			2.00	-32.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.638		2.01	2.00	0.7	35.0
Propene	Ave	1.463	1.485		2.03	2.00	1.5	35.0
Dichlorodifluoromethane	Ave	4.235	4.340		2.05	2.00	2.5	35.0
Chloromethane	Ave	0.4649	0.4832		2.08	2.00	3.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.577		2.08	2.00	4.1	35.0
Acetaldehyde	Ave	0.5987	0.4752		7.94	10.0	-20.6	35.0
Vinyl chloride	Ave	1.611	1.638		2.03	2.00	1.7	35.0
1,3-Butadiene	Ave	1.245	1.289		2.07	2.00	3.6	35.0
Butane	Ave	2.712	2.809		2.07	2.00	3.5	35.0
Bromomethane	Ave	1.392	1.376		1.98	2.00	-1.1	35.0
Chloroethane	Ave	0.7761	0.7850		2.02	2.00	1.1	35.0
Ethanol	Ave	0.7042	0.5103		7.25	10.0	-27.5	35.0
Vinyl bromide	Ave	1.290	1.377		2.13	2.00	6.7	35.0
2-Methylbutane	Ave	1.947	1.999		2.05	2.00	2.7	35.0
Trichlorofluoromethane	Ave	4.152	4.112		1.98	2.00	-1.0	35.0
Acrolein	Ave	0.3574	0.2736		1.53	2.00	-23.4	35.0
Acetonitrile	Ave	0.5574	0.4415		1.58	2.00	-20.8	35.0
Acetone	Ave	0.6013	0.5234		1.74	2.00	-13.0	35.0
Pentane	Ave	0.2653	0.2805		2.11	2.00	5.7	35.0
Isopropyl alcohol	Ave	1.603	1.950		2.43	2.00	21.6	35.0
Ethyl ether	Ave	1.725	1.471		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.412	1.470		2.08	2.00	4.1	35.0
Acrylonitrile	Ave	0.9747	0.8590		1.76	2.00	-11.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.092		2.02	2.00	1.0	35.0
tert-Butyl alcohol	Ave	2.196	2.417		2.20	2.00	10.0	35.0
Methylene Chloride	Ave	1.643	1.409		1.72	2.00	-14.2	35.0
3-Chloropropene	Ave	1.751	1.584		1.81	2.00	-9.6	35.0
Carbon disulfide	Ave	4.284	4.357		2.03	2.00	1.7	35.0
trans-1,2-Dichloroethene	Ave	1.414	1.448		2.05	2.00	2.4	35.0
2-Methylpentane	Ave	4.045	3.765		1.86	2.00	-6.9	35.0
Methyl tert-butyl ether	Ave	3.932	3.361		1.71	2.00	-14.5	35.0
1,1-Dichloroethane	Ave	2.906	2.821		1.94	2.00	-2.9	35.0
Vinyl acetate	Ave	4.034	3.285		1.63	2.00	-18.6	35.0
2-Butanone (MEK)	Ave	0.6347	0.5473		1.72	2.00	-13.8	35.0
Hexane	Ave	1.304	1.314		2.02	2.00	0.8	35.0
Isopropyl ether	Ave	4.992	4.538		1.82	2.00	-9.1	35.0
cis-1,2-Dichloroethene	Ave	1.447	1.467		2.03	2.00	1.4	35.0
Ethyl acetate	Ave	3.312	2.660		1.61	2.00	-19.7	35.0
Chloroform	Ave	3.344	3.175		1.90	2.00	-5.1	35.0
Tert-butyl ethyl ether	Ave	4.607	3.821		1.66	2.00	-17.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.483		1.67	2.00	-16.3	35.0
1,1,1-Trichloroethane	Ave	3.620	3.468		1.92	2.00	-4.2	35.0
1,2-Dichloroethane	Ave	0.3910	0.3830		1.96	2.00	-2.1	35.0
Cyclohexane	Ave	0.1314	0.1432		2.18	2.00	8.9	35.0
Benzene	Ave	0.7153	0.7639		2.14	2.00	6.8	35.0
Carbon tetrachloride	Ave	0.5933	0.6444		2.17	2.00	8.6	35.0
1-Butanol	Ave	0.0896	0.1078		2.41	2.00	20.4	35.0
2,3-Dimethylpentane	Ave	0.1886	0.1955		2.07	2.00	3.6	35.0
Thiophene	Ave	0.4156	0.4158		2.00	2.00	0.0	35.0
2,2,4-Trimethylpentane	Ave	1.401	1.433		2.05	2.00	2.3	35.0
Heptane	Ave	0.2875	0.2905		2.02	2.00	1.0	35.0
1,2-Dichloropropane	Ave	0.2813	0.2642		1.88	2.00	-6.1	35.0
Trichloroethene	Ave	0.3257	0.3391		2.08	2.00	4.1	35.0
Dibromomethane	Ave	0.2963	0.2956		2.00	2.00	-0.2	35.0
Bromodichloromethane	Ave	0.5843	0.5891		2.02	2.00	0.8	35.0
1,4-Dioxane	Ave	0.0832	0.0836		2.01	2.00	0.5	35.0
Methyl methacrylate	Ave	0.3595	0.3109		1.73	2.00	-13.5	35.0
Methylcyclohexane	Ave	0.4896	0.6141		2.51	2.00	25.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.5532		1.96	2.00	-1.8	35.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4212		1.97	2.00	-1.5	35.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4178		1.94	2.00	-3.1	35.0
Toluene	Ave	0.8801	0.8270		1.88	2.00	-6.0	35.0
1,1,2-Trichloroethane	Ave	0.2685	0.2546		1.90	2.00	-5.2	35.0
2-Hexanone	Ave	0.2641	0.2800		2.12	2.00	6.0	35.0
Octane	Ave	0.3165	0.3309		2.09	2.00	4.5	35.0
Dibromochloromethane	Ave	0.5446	0.5759		2.12	2.00	5.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4594		1.97	2.00	-1.3	35.0
Tetrachloroethene	Ave	0.3302	0.3391		2.05	2.00	2.7	35.0
2,3-Dimethylheptane	Ave	1.076	0.9762		1.82	2.00	-9.2	35.0
Chlorobenzene	Ave	0.6841	0.6891		2.01	2.00	0.7	35.0
Ethylbenzene	Ave	1.196	1.091		1.82	2.00	-8.8	35.0
m-Xylene & p-Xylene	Ave	0.9148	0.8433		3.69	4.00	-7.8	35.0
Nonane	Ave	0.6507	0.6606		2.03	2.00	1.5	35.0
Bromoform	Ave	0.4761	0.5196		2.18	2.00	9.1	35.0
Styrene	Ave	0.6323	0.5922		1.87	2.00	-6.3	35.0
o-Xylene	Ave	0.9646	0.8608		1.78	2.00	-10.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5907		1.82	2.00	-8.8	35.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	35.0
Isopropylbenzene	Ave	1.286	1.176		1.83	2.00	-8.5	35.0
Propylbenzene	Ave	0.3476	0.3186		1.83	2.00	-8.3	35.0
2-Chlorotoluene	Ave	0.3175	0.3028		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.090		1.70	2.00	-15.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4983		2.00	2.00	-0.2	35.0
Alpha Methyl Styrene	Ave	0.5043	0.4358		1.73	2.00	-13.6	35.0
Decane	Ave	0.7982	0.7703		1.93	2.00	-3.5	35.0
tert-Butylbenzene	Ave	1.114	0.998		1.79	2.00	-10.4	35.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9651		1.76	2.00	-11.9	35.0
sec-Butylbenzene	Ave	1.569	1.417		1.81	2.00	-9.7	35.0
1,3-Dichlorobenzene	Ave	0.7160	0.6664		1.86	2.00	-6.9	35.0
Benzyl chloride	Ave	0.9762	0.8908		1.83	2.00	-8.7	35.0
1,4-Dichlorobenzene	Ave	0.7344	0.6695		1.82	2.00	-8.8	35.0
4-Isopropyltoluene	Ave	1.255	1.122		1.79	2.00	-10.6	35.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.7182		1.45	2.00	-27.5	35.0
Butylcyclohexane	Ave	0.9039	0.8456		1.87	2.00	-6.5	35.0
Indane	Ave	0.9903	0.8594		1.74	2.00	-13.2	35.0
1,2-Dichlorobenzene	Ave	0.7165	0.6343		1.77	2.00	-11.5	35.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	35.0
Indene	Ave	0.8508	0.6491		1.53	2.00	-23.7	35.0
Undecane	Ave	0.8098	0.7744		1.91	2.00	-4.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.2570		1.73	2.00	-13.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.013		1.77	2.00	-11.3	35.0
Dodecane	Ave	0.6396	0.6522		2.04	2.00	2.0	35.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5328		1.89	2.00	-5.7	35.0
Naphthalene	Ave	1.234	1.234		2.00	2.00	0.0	35.0
Hexachlorobutadiene	Ave	0.6047	0.5411		1.79	2.00	-10.5	35.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.5256		2.11	2.00	5.4	35.0
2-Methylnaphthalene	Ave	0.6016	0.6997		2.33	2.00	16.3	50.0
1-Methylnaphthalene	Ave	0.7372	0.8235		2.23	2.00	11.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8145		3.97	4.00	-0.6	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: GBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MG BFB Injection Time: 11:03
 Analysis Batch No.: 27931

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.5
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	73.1
175	5.0 - 9.0 % of mass 174	5.1 (7.0) 1
176	95.0 - 101.0 % of mass 174	71.2 (97.4) 1
177	5.0 - 9.0 % of mass 176	4.6 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27931/2	GCCVB26.D	02/26/2019	11:35
	LCS 140-27931/1002	GCCVB26-LCS. d	02/26/2019	11:35
	MB 140-27931/4	G500BB26.D	02/26/2019	12:56
SV-079-A-26	140-14389-1	GB26P109.D	02/26/2019	21:30
SV-DUP04-A-26	140-14389-2	GB26P110.D	02/26/2019	22:13
SV-131-C-26	140-14389-3	GB26P111.D	02/26/2019	22:55
SV-DUP01-C-26	140-14389-4	GB26P112.D	02/26/2019	23:37
SV-001-C-26	140-14389-5	GB26P113.D	02/27/2019	00:18
SV-004-C-26	140-14389-6	GB26P114.D	02/27/2019	01:00
SV-102-C-26	140-14389-7	GB26P115.D	02/27/2019	01:42
SV-155-C-26	140-14389-8	GB26P116D.D	02/27/2019	03:05

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.652		2.02	2.00	1.2	30.0
Propene	Ave	1.463	1.534		2.10	2.00	4.8	30.0
Dichlorodifluoromethane	Ave	4.235	4.356		2.06	2.00	2.9	30.0
Chloromethane	Ave	0.4649	0.4693		2.02	2.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.404		1.94	2.00	-2.9	30.0
Acetaldehyde	Ave	0.5987	0.5225		8.73	10.0	-12.7	30.0
Vinyl chloride	Ave	1.611	1.586		1.97	2.00	-1.5	30.0
1,3-Butadiene	Ave	1.245	1.283		2.06	2.00	3.0	30.0
Butane	Ave	2.712	2.755		2.03	2.00	1.6	30.0
Bromomethane	Ave	1.392	1.313		1.89	2.00	-5.7	30.0
Chloroethane	Ave	0.7761	0.7469		1.92	2.00	-3.8	30.0
Ethanol	Ave	0.7042	0.7541		10.7	10.0	7.1	30.0
Vinyl bromide	Ave	1.290	1.209		1.87	2.00	-6.3	30.0
2-Methylbutane	Ave	1.947	1.895		1.95	2.00	-2.7	30.0
Trichlorofluoromethane	Ave	4.152	4.042		1.95	2.00	-2.7	30.0
Acrolein	Ave	0.3574	0.3194		1.79	2.00	-10.6	30.0
Acetonitrile	Ave	0.5574	0.5302		1.90	2.00	-4.9	30.0
Acetone	Ave	0.6013	0.4988		4.98	6.00	-17.0	30.0
Pentane	Ave	0.2653	0.2565		1.93	2.00	-3.3	30.0
Isopropyl alcohol	Ave	1.603	1.779		6.66	6.00	10.9	30.0
Ethyl ether	Ave	1.725	1.691		1.96	2.00	-2.0	30.0
1,1-Dichloroethene	Ave	1.412	1.514		2.14	2.00	7.2	30.0
Acrylonitrile	Ave	0.9747	0.9432		1.94	2.00	-3.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.167		2.07	2.00	3.5	30.0
tert-Butyl alcohol	Ave	2.196	2.812		2.56	2.00	28.0	30.0
Methylene Chloride	Ave	1.643	1.484		1.81	2.00	-9.7	30.0
3-Chloropropene	Ave	1.751	1.648		1.88	2.00	-5.9	30.0
Carbon disulfide	Ave	4.284	4.628		2.16	2.00	8.0	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.521		2.15	2.00	7.6	30.0
2-Methylpentane	Ave	4.045	4.401		2.18	2.00	8.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.883		1.97	2.00	-1.3	30.0
1,1-Dichloroethane	Ave	2.906	2.982		2.05	2.00	2.6	30.0
Vinyl acetate	Ave	4.034	3.919		1.94	2.00	-2.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.6318		1.99	2.00	-0.5	30.0
Hexane	Ave	1.304	1.409		2.16	2.00	8.1	30.0
Isopropyl ether	Ave	4.992	5.130		2.06	2.00	2.8	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.511		2.09	2.00	4.4	30.0
Ethyl acetate	Ave	3.312	3.321		2.01	2.00	0.3	30.0
Chloroform	Ave	3.344	3.351		2.00	2.00	0.2	30.0
Tert-butyl ethyl ether	Ave	4.607	4.651		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.780		2.01	2.00	0.4	30.0
1,1,1-Trichloroethane	Ave	3.620	3.686		2.04	2.00	1.8	30.0
1,2-Dichloroethane	Ave	0.3910	0.3917		2.00	2.00	0.2	30.0
Cyclohexane	Ave	0.1314	0.1477		2.25	2.00	12.4	30.0
Benzene	Ave	0.7153	0.7399		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6573		2.22	2.00	10.8	30.0
1-Butanol	Ave	0.0896	0.1263		2.82	2.00	41.0*	30.0
2,3-Dimethylpentane	Ave	0.1886	0.2098		2.22	2.00	11.2	30.0
Thiophene	Ave	0.4156	0.4526		2.18	2.00	8.9	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.515		2.16	2.00	8.2	30.0
Heptane	Ave	0.2875	0.3131		2.18	2.00	8.9	30.0
1,2-Dichloropropane	Ave	0.2813	0.2865		2.04	2.00	1.8	30.0
Trichloroethene	Ave	0.3257	0.3404		2.09	2.00	4.5	30.0
Dibromomethane	Ave	0.2963	0.3076		2.08	2.00	3.8	30.0
Bromodichloromethane	Ave	0.5843	0.6356		2.18	2.00	8.8	30.0
1,4-Dioxane	Ave	0.0832	0.1054		2.53	2.00	26.7	30.0
Methyl methacrylate	Ave	0.3595	0.3845		2.14	2.00	7.0	30.0
Methylcyclohexane	Ave	0.4896	0.5279		2.16	2.00	7.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.6430		2.28	2.00	14.2	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4641		2.17	2.00	8.5	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4612		2.14	2.00	7.0	30.0
Toluene	Ave	0.8801	0.8908		2.02	2.00	1.2	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2829		2.11	2.00	5.3	30.0
2-Hexanone	Ave	0.2641	0.3188		2.41	2.00	20.7	30.0
Octane	Ave	0.3165	0.3439		2.17	2.00	8.7	30.0
Dibromochloromethane	Ave	0.5446	0.5989		2.20	2.00	10.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4929		2.12	2.00	5.8	30.0
Tetrachloroethene	Ave	0.3302	0.3406		2.06	2.00	3.1	30.0
2,3-Dimethylheptane	Ave	1.076	1.161		2.16	2.00	8.0	30.0
Chlorobenzene	Ave	0.6841	0.7203		2.11	2.00	5.3	30.0
Ethylbenzene	Ave	1.196	1.211		2.03	2.00	1.3	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.9437		4.13	4.00	3.2	30.0
Nonane	Ave	0.6507	0.7098		2.18	2.00	9.1	30.0
Bromoform	Ave	0.4761	0.5476		2.30	2.00	15.0	30.0
Styrene	Ave	0.6323	0.6714		2.12	2.00	6.2	30.0
o-Xylene	Ave	0.9646	0.9910		2.05	2.00	2.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.6633		2.05	2.00	2.4	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.2051		1.98	2.00	-1.2	30.0
Isopropylbenzene	Ave	1.286	1.274		1.98	2.00	-1.0	30.0
Propylbenzene	Ave	0.3476	0.3424		1.97	2.00	-1.5	30.0
2-Chlorotoluene	Ave	0.3175	0.3184		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.295		2.02	2.00	0.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4918		1.97	2.00	-1.5	30.0
Alpha Methyl Styrene	Ave	0.5043	0.5202		2.06	2.00	3.1	30.0
Decane	Ave	0.7982	0.8625		2.16	2.00	8.1	30.0
tert-Butylbenzene	Ave	1.114	1.103		1.98	2.00	-1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.096	1.089		1.99	2.00	-0.6	30.0
sec-Butylbenzene	Ave	1.569	1.580		2.01	2.00	0.7	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.7287		2.04	2.00	1.8	30.0
Benzyl chloride	Ave	0.9762	1.033		2.12	2.00	5.8	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.7367		2.01	2.00	0.3	30.0
4-Isopropyltoluene	Ave	1.255	1.277		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	1.101		2.22	2.00	11.1	30.0
Butylcyclohexane	Ave	0.9039	0.9644		2.13	2.00	6.7	30.0
Indane	Ave	0.9903	0.9865		1.99	2.00	-0.4	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.7004		1.95	2.00	-2.3	30.0
Butylbenzene	Ave	1.277	1.325		2.08	2.00	3.8	30.0
Indene	Ave	0.8508	0.8688		2.04	2.00	2.1	30.0
Undecane	Ave	0.8098	0.8597		2.12	2.00	6.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3582		2.42	2.00	20.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.185		2.07	2.00	3.7	30.0
Dodecane	Ave	0.6396	0.6319		1.98	2.00	-1.2	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5181		1.83	2.00	-8.3	30.0
Naphthalene	Ave	1.234	1.197		1.94	2.00	-3.0	30.0
Hexachlorobutadiene	Ave	0.6047	0.5124		1.69	2.00	-15.3	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4625		1.85	2.00	-7.3	30.0
2-Methylnaphthalene	Ave	0.6016	0.4938		1.64	2.00	-17.9	50.0
1-Methylnaphthalene	Ave	0.7372	0.5485		1.49	2.00	-25.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8212		4.01	4.00	0.2	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab File ID: GBFBB27a.D BFB Injection Date: 02/27/2019
 Instrument ID: MG BFB Injection Time: 13:04
 Analysis Batch No.: 27932

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.2
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.9
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	76.9
175	5.0 - 9.0 % of mass 174	5.5 (7.1) 1
176	95.0 - 101.0 % of mass 174	77.0 (100.2) 1
177	5.0 - 9.0 % of mass 176	4.9 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27932/2	GCCVB27a.D	02/27/2019	13:35
	LCS 140-27932/1002	GCCVB27a-LCS .d	02/27/2019	13:35
	MB 140-27932/7	GB27mb500.D	02/27/2019	16:40
SV-133-C-26	140-14389-9	GB27p101.D	02/27/2019	17:22
SV-153-C-26	140-14389-10	GB27p102.D	02/27/2019	18:04
SV-DUP02-C-26	140-14389-11	GB27p103.D	02/27/2019	18:46
SV-152-C-26	140-14389-13	GB27p105.D	02/27/2019	20:10
SV-088-C-26	140-14389-15	GB27p107.D	02/27/2019	22:15
SV-142-C-26	140-14389-16	GB27p108.D	02/27/2019	22:57
SV-113-C-26	140-14389-17	GB27p109.D	02/27/2019	23:39
SV-149-C-26	140-14389-18	GB27p110.D	02/28/2019	00:20
SV-150-C-26	140-14389-12	GB27p104R.D	02/28/2019	04:34
SV-141-C-26	140-14389-14	GB27p106R.D	02/28/2019	05:16

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27932/2 Calibration Date: 02/27/2019 13:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB27a.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.343		1.79	2.00	-10.6	30.0
Propene	Ave	1.463	1.318		1.80	2.00	-9.9	30.0
Dichlorodifluoromethane	Ave	4.235	4.000		1.89	2.00	-5.5	30.0
Chloromethane	Ave	0.4649	0.4249		1.83	2.00	-8.6	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.345		1.90	2.00	-5.2	30.0
Acetaldehyde	Ave	0.5987	0.5000		8.35	10.0	-16.5	30.0
Vinyl chloride	Ave	1.611	1.421		1.76	2.00	-11.8	30.0
1,3-Butadiene	Ave	1.245	1.150		1.85	2.00	-7.6	30.0
Butane	Ave	2.712	2.416		1.78	2.00	-10.9	30.0
Bromomethane	Ave	1.392	1.237		1.78	2.00	-11.1	30.0
Chloroethane	Ave	0.7761	0.6871		1.77	2.00	-11.5	30.0
Ethanol	Ave	0.7042	0.6514		9.25	10.0	-7.5	30.0
Vinyl bromide	Ave	1.290	1.177		1.82	2.00	-8.8	30.0
2-Methylbutane	Ave	1.947	1.713		1.76	2.00	-12.0	30.0
Trichlorofluoromethane	Ave	4.152	3.892		1.87	2.00	-6.3	30.0
Acrolein	Ave	0.3574	0.3013		1.69	2.00	-15.7	30.0
Acetonitrile	Ave	0.5574	0.4750		1.70	2.00	-14.8	30.0
Acetone	Ave	0.6013	0.4639		4.63	6.00	-22.8	30.0
Pentane	Ave	0.2653	0.2431		1.83	2.00	-8.4	30.0
Isopropyl alcohol	Ave	1.603	1.541		5.77	6.00	-3.9	30.0
Ethyl ether	Ave	1.725	1.461		1.69	2.00	-15.3	30.0
1,1-Dichloroethene	Ave	1.412	1.436		2.03	2.00	1.7	30.0
Acrylonitrile	Ave	0.9747	0.8816		1.81	2.00	-9.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.101		2.03	2.00	1.3	30.0
tert-Butyl alcohol	Ave	2.196	2.381		2.17	2.00	8.4	30.0
Methylene Chloride	Ave	1.643	1.422		1.73	2.00	-13.4	30.0
3-Chloropropene	Ave	1.751	1.640		1.87	2.00	-6.3	30.0
Carbon disulfide	Ave	4.284	4.332		2.02	2.00	1.1	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.473		2.08	2.00	4.2	30.0
2-Methylpentane	Ave	4.045	4.117		2.04	2.00	1.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.532		1.80	2.00	-10.2	30.0
1,1-Dichloroethane	Ave	2.906	2.958		2.04	2.00	1.8	30.0
Vinyl acetate	Ave	4.034	3.636		1.80	2.00	-9.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.5868		1.85	2.00	-7.5	30.0
Hexane	Ave	1.304	1.351		2.07	2.00	3.6	30.0
Isopropyl ether	Ave	4.992	4.608		1.85	2.00	-7.7	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.522		2.11	2.00	5.3	30.0
Ethyl acetate	Ave	3.312	2.968		1.79	2.00	-10.4	30.0
Chloroform	Ave	3.344	3.357		2.01	2.00	0.4	30.0
Tert-butyl ethyl ether	Ave	4.607	4.184		1.82	2.00	-9.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27932/2 Calibration Date: 02/27/2019 13:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB27a.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.592		1.80	2.00	-10.2	30.0
1,1,1-Trichloroethane	Ave	3.620	3.695		2.04	2.00	2.1	30.0
1,2-Dichloroethane	Ave	0.3910	0.3874		1.98	2.00	-0.9	30.0
Cyclohexane	Ave	0.1314	0.1357		2.06	2.00	3.2	30.0
Benzene	Ave	0.7153	0.7400		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6334		2.14	2.00	6.8	30.0
1-Butanol	Ave	0.0896	0.1016		2.27	2.00	13.5	30.0
2,3-Dimethylpentane	Ave	0.1886	0.1975		2.09	2.00	4.7	30.0
Thiophene	Ave	0.4156	0.4425		2.13	2.00	6.5	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.412		2.02	2.00	0.8	30.0
Heptane	Ave	0.2875	0.2935		2.04	2.00	2.1	30.0
1,2-Dichloropropane	Ave	0.2813	0.2678		1.90	2.00	-4.8	30.0
Trichloroethene	Ave	0.3257	0.3360		2.06	2.00	3.1	30.0
Dibromomethane	Ave	0.2963	0.2999		2.02	2.00	1.2	30.0
Bromodichloromethane	Ave	0.5843	0.6016		2.06	2.00	3.0	30.0
1,4-Dioxane	Ave	0.0832	0.0945		2.27	2.00	13.7	30.0
Methyl methacrylate	Ave	0.3595	0.3261		1.81	2.00	-9.3	30.0
Methylcyclohexane	Ave	0.4896	0.5068		2.07	2.00	3.5	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.4971		1.77	2.00	-11.7	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4333		2.03	2.00	1.3	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4311		2.00	2.00	0.0	30.0
Toluene	Ave	0.8801	0.8538		1.94	2.00	-3.0	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2622		1.95	2.00	-2.3	30.0
2-Hexanone	Ave	0.2641	0.2523		1.91	2.00	-4.5	30.0
Octane	Ave	0.3165	0.3167		2.00	2.00	0.0	30.0
Dibromochloromethane	Ave	0.5446	0.5739		2.11	2.00	5.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4756		2.04	2.00	2.1	30.0
Tetrachloroethene	Ave	0.3302	0.3300		2.00	2.00	-0.0	30.0
2,3-Dimethylheptane	Ave	1.076	1.057		1.97	2.00	-1.7	30.0
Chlorobenzene	Ave	0.6841	0.6719		1.96	2.00	-1.8	30.0
Ethylbenzene	Ave	1.196	1.124		1.88	2.00	-6.0	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.8615		3.77	4.00	-5.8	30.0
Nonane	Ave	0.6507	0.6447		1.98	2.00	-0.9	30.0
Bromoform	Ave	0.4761	0.5205		2.19	2.00	9.3	30.0
Styrene	Ave	0.6323	0.6158		1.95	2.00	-2.6	30.0
o-Xylene	Ave	0.9646	0.9002		1.87	2.00	-6.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5939		1.83	2.00	-8.3	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	30.0
Isopropylbenzene	Ave	1.286	1.146		1.78	2.00	-10.9	30.0
Propylbenzene	Ave	0.3476	0.3083		1.77	2.00	-11.3	30.0
2-Chlorotoluene	Ave	0.3175	0.2967		1.87	2.00	-6.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27932/2 Calibration Date: 02/27/2019 13:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB27a.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.151		1.79	2.00	-10.3	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4446		1.78	2.00	-11.0	30.0
Alpha Methyl Styrene	Ave	0.5043	0.4618		1.83	2.00	-8.4	30.0
Decane	Ave	0.7982	0.7610		1.91	2.00	-4.7	30.0
tert-Butylbenzene	Ave	1.114	0.9896		1.78	2.00	-11.2	30.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9684		1.77	2.00	-11.6	30.0
sec-Butylbenzene	Ave	1.569	1.412		1.80	2.00	-10.0	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.6715		1.88	2.00	-6.2	30.0
Benzyl chloride	Ave	0.9762	0.9129		1.87	2.00	-6.5	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.6831		1.86	2.00	-7.0	30.0
4-Isopropyltoluene	Ave	1.255	1.146		1.83	2.00	-8.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.9859		1.99	2.00	-0.5	30.0
Butylcyclohexane	Ave	0.9039	0.8816		1.95	2.00	-2.5	30.0
Indane	Ave	0.9903	0.8909		1.80	2.00	-10.0	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.6395		1.79	2.00	-10.7	30.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	30.0
Indene	Ave	0.8508	0.7789		1.83	2.00	-8.4	30.0
Undecane	Ave	0.8098	0.7716		1.91	2.00	-4.7	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3190		2.15	2.00	7.7	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.063		1.86	2.00	-6.9	30.0
Dodecane	Ave	0.6396	0.5967		1.87	2.00	-6.7	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5036		1.78	2.00	-10.9	30.0
Naphthalene	Ave	1.234	1.133		1.84	2.00	-8.2	30.0
Hexachlorobutadiene	Ave	0.6047	0.5154		1.70	2.00	-14.8	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4541		1.82	2.00	-9.0	30.0
2-Methylnaphthalene	Ave	0.6016	0.5475		1.82	2.00	-9.0	50.0
1-Methylnaphthalene	Ave	0.7372	0.6256		1.70	2.00	-15.1	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.7809		3.81	4.00	-4.7	30.0

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Sample No.: ICIS 140-26755/15 Date Analyzed: 01/11/2019 21:07
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GAl1IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	437891	9.25	2708081	11.42	2541912	16.10
UPPER LIMIT	613047	9.58	3791313	11.75	3558677	16.43
LOWER LIMIT	262735	8.92	1624849	11.09	1525147	15.77
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-26755/18	423755	9.24	2327828	11.42	2182908	16.09

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Sample No.: CCVIS 140-27931/2 Date Analyzed: 02/26/2019 11:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	496382	9.23	2758157	11.41	2578216	16.08	
UPPER LIMIT	694935	9.56	3861420	11.74	3609502	16.41	
LOWER LIMIT	297829	8.90	1654894	11.08	1546930	15.75	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27931/1002	496382	9.23	2758157	11.41	2578216	16.08	
MB 140-27931/4	508819	9.23	2920722	11.41	2502760	16.08	
140-14389-1	SV-079-A-26	460405	9.22	2922859	11.40	2688571	16.08
140-14389-2	SV-DUP04-A-26	489843	9.23	2906982	11.40	2724517	16.08
140-14389-3	SV-131-C-26	483743	9.23	2991373	11.40	2811933	16.08
140-14389-4	SV-DUP01-C-26	437107	9.22	2665935	11.40	2551551	16.08
140-14389-5	SV-001-C-26	471643	9.23	2836179	11.40	2626133	16.08
140-14389-6	SV-004-C-26	479473	9.23	2624991	11.40	2596426	16.08
140-14389-7	SV-102-C-26	457608	9.23	2569647	11.40	2367991	16.08
140-14389-8	SV-155-C-26	459815	9.23	2680947	11.40	2507992	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Sample No.: CCVIS 140-27932/2 Date Analyzed: 02/27/2019 13:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB27a.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	507272	9.24	2957187	11.41	2771430	16.08	
UPPER LIMIT	710181	9.57	4140062	11.74	3880002	16.41	
LOWER LIMIT	304363	8.91	1774312	11.08	1662858	15.75	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27932/1002	507272	9.24	2957187	11.41	2771430	16.08	
MB 140-27932/7	450057	9.23	2814179	11.40	2588422	16.08	
140-14389-9	SV-133-C-26	439243	9.23	2502675	11.40	2291491	16.08
140-14389-10	SV-153-C-26	443609	9.22	2572234	11.40	2373427	16.08
140-14389-11	SV-DUP02-C-26	448090	9.23	2630175	11.40	2394397	16.08
140-14389-13	SV-152-C-26	495405	9.23	3052420	11.40	2868489	16.08
140-14389-15	SV-088-C-26	497394	9.23	3117508	11.40	2902566	16.08
140-14389-16	SV-142-C-26	469571	9.23	2857201	11.40	2606400	16.08
140-14389-17	SV-113-C-26	471775	9.23	2659937	11.40	2435487	16.08
140-14389-18	SV-149-C-26	479671	9.23	2857167	11.40	2693946	16.08
140-14389-12	SV-150-C-26	479004	9.23	2944153	11.40	2703053	16.08
140-14389-14	SV-141-C-26	479558	9.23	3005696	11.40	2816785	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

LOCKHEED MARTIN CORPORATION (LMC) - MIDDLE RIVER COMPLEX (MRC)
SDG 140-14389-1

SAMPLE IDENTIFICATION

SV-079-A-26

COMPOUND

TRICHLOROETHENE

MW = 131.39

GAS CONSTANT = 24.45

COMPOUND AREA

507734

INTERNAL STANDARD AMOUNT (ppbv)

4

CALIBRATION VOLUME (mL)

500

DILUTION FACTOR

1

INTERNAL STANDARD AREA

2922859

AVERAGE RRF

0.3257

SAMPLE VOLUME (mL)

100

10.67 ppbv

57.32 $\mu\text{g}/\text{m}^3$

FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-079-A-26 Lab Sample ID: 140-14389-1
 Matrix: Air Lab File ID: GB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:37
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.3		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	11		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.57	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I

AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1
 SDG No.: _____
 Client Sample ID: SV-079-A-26 Lab Sample ID: 140-14389-1
 Matrix: Air Lab File ID: GB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:37
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	8.7		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.72	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	57		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.5	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P109.D
 Lims ID: 140-14389-A-1
 Client ID: SV-079-A-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 21:30:30 ALS Bottle#: 9 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-015
 Misc. Info.: 140-14389-a-1
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 15:41:46 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:41:46

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.221	9.232	-0.011	98	460405	4.00	
* 2 1,4-Difluorobenzene	114	11.400	11.405	-0.005	96	2922859	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.075	16.080	-0.005	91	2688571	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	85	2155750	3.91	
6 Chlorodifluoromethane	51	3.829	3.829	0.006	95	29451	0.0976	M
8 Dichlorodifluoromethane	85	3.893	3.886	0.005	100	46893	0.0962	
31 Methylene Chloride	84	6.595	6.591	0.000	99	48256	0.2552	
47 1,1,1-Trichloroethane	97	10.278	10.277	-0.005	95	10999	0.0264	
58 Trichloroethene	130	12.101	12.100	-0.005	94	507734	2.13	
67 Toluene	91	14.123	14.128	-0.005	93	37017	0.0626	
73 Tetrachloroethene	129	15.250	15.255	-0.005	91	56924	0.2565	
79 m-Xylene & p-Xylene	91	16.560	16.565	-0.006	98	36102	0.0587	
83 o-Xylene	91	17.089	17.089	0.000	98	36406	0.0561	
S 124 Xylenes, Total	100				0		0.1149	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Sample Calculation - Page 5

Lab Name: TestAmerica Knoxville Job No.: 140-14389-1 Analy Batch No.: 26755
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++	++++	++++	0.6854	0.6772	Ave		0.6347			8.5		30.0				
	0.6784	0.6294	0.5376	0.6386	0.5958												
cis-1,2-Dichloroethene	1.5310	1.3850	1.4658	1.4361	1.4213	Ave		1.4465			2.9		30.0				
	1.4515	1.4377	1.3972	1.4588	1.4806												
Ethyl acetate	++++	++++	3.4159	3.2335	3.3337	Ave		3.3124			6.9		30.0				
	3.4792	3.3231	2.8120	3.5743	3.3271												
Chloroform	3.5969	3.3560	3.4112	3.4074	3.2824	Ave		3.3444			4.2		30.0				
	3.2821	3.2211	3.0680	3.4218	3.3970												
Tetrahydrofuran	++++	++++	++++	1.7940	1.8215	Ave		1.7724			6.6		30.0				
	1.8641	1.7946	1.5246	1.8635	1.7446												
1,1,1-Trichloroethane	3.8810	3.4765	3.4691	3.5977	3.6119	Ave		3.6203			4.2		30.0				
	3.5723	3.5364	3.3475	3.7388	3.7470												
1,2-Dichloroethane	0.3890	0.3740	0.4205	0.3853	0.3989	Ave		0.3910			6.7		30.0				
	0.3918	0.3624	0.3439	0.4219	0.4228												
Cyclohexane	++++	++++	++++	0.1383	0.1426	Ave		0.1314			6.9		30.0				
	0.1391	0.1224	0.1193	0.1325	0.1258												
Benzene	++++	0.7122	0.8006	0.7160	0.7636	Ave		0.7153			7.0		30.0				
	0.7488	0.6697	0.6393	0.7124	0.6753												
Carbon tetrachloride	0.5647	0.5298	0.5813	0.5547	0.6331	Ave		0.5933			8.0		30.0				
	0.6279	0.5625	0.5603	0.6718	0.6470												
1-Butanol	++++	++++	++++	0.0897	0.1022	Ave		0.0896			13.7		30.0				
	0.1010	0.0823	0.0665	0.0902	0.0950												
2,3-Dimethylpentane	++++	++++	0.2016	0.1866	0.2067	Ave		0.1886			7.0		30.0				
	0.1994	0.1776	0.1681	0.1880	0.1811												
Thiophene	++++	++++	0.4419	0.4095	0.4328	Ave		0.4156			5.4		30.0				
	0.4205	0.3890	0.3765	0.4241	0.4306												
2,2,4-Trimethylpentane	1.4853	1.4111	1.5290	1.4173	1.5323	Ave		1.4009			8.1		30.0				
	1.4628	1.2640	1.1785	1.3863	1.3426												
Heptane	++++	++++	0.3221	0.2848	0.3010	Ave		0.2875			7.7		30.0				
	0.2942	0.2637	0.2507	0.2927	0.2912												
1,2-Dichloropropane	++++	0.2947	0.3066	0.2799	0.2948	Ave		0.2813			7.5		30.0				
	0.2869	0.2617	0.2359	0.2893	0.2819												
Trichloroethene	0.3496	0.3229	0.3354	0.3064	0.3383	Ave		0.3257			5.2		30.0				
	0.3271	0.3039	0.3006	0.3304	0.3426												
Dibromomethane	++++	++++	++++	0.3027	0.3082	Ave		0.2963			7.9		30.0				
	0.2897	0.2688	0.2632	0.3189	0.3227												
Bromodichloromethane	++++	++++	0.5688	0.5299	0.5916	Ave		0.5843			8.8		30.0				
	0.5840	0.5507	0.5314	0.6523	0.6656												
1,4-Dioxane	++++	++++	++++	0.0947	0.0887	Ave		0.0832			17.3		30.0				
	0.0619	0.0891	0.0629	0.0903	0.0946												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.



TO: S. BRENNER **DATE: MAY 22, 2019**
FROM: MICHELLE L. WOEBER **COPIES: DV FILE**
SUBJECT: ORGANIC DATA VALIDATION – VOC
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER CENTER (MRC)
SDG 140-14390-1

SAMPLES: 4/Background Air/VOC

BCK-1-26 BCK-2-26 BCK-3-26
BCK-4-26

3/Indoor Air/VOC

IA-001-C-26 IA-004-C-26 IA-131-C-26

11/Soil Vapor/VOC

SV-015-A-26 SV-060-C-26 SV-075-A-26
SV-076-A-26 SV-078-A-26 SV-100-B-26
SV-101-B-26 SV-118-A-26 SV-126-C-26
SV-136-A-26 SV-168-A-26

Overview

The sample set for LMC – MRC, SDG 140-14390-1 consisted of four (4) background air, three (3) indoor air, and eleven (11) soil vapor samples. All eighteen (18) samples were analyzed for select Volatile Organic Compounds (VOC). One field duplicate sample pair was included in this SDG: IA-DUP01-C-26 (SDG 140-14391-1)/IA-131-C-26.

The samples were collected by Tetra Tech, Inc. on February 19 & 21, 2018 and analyzed by TestAmerica. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times/sample preservation, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike results, laboratory control sample results, internal standard areas, field duplicate precision, chromatographic resolution, compound identification, and detection limits. Areas of concern are listed below.

Major

- Sample IA-131-C-26 was received with the canister valve in the open position. The samples were at ambient pressure (approximately 0 psi). As stated in the laboratory case narrative, the integrity of the samples could have been jeopardized due to changes in ambient pressure after the sample was taken. The client was contacted and told the laboratory to proceed with the analyses. The detected results were qualified as estimated, (J). The non-detected results were qualified as rejected, (R). It should be noted that a field duplicate (IA-DUP01-C-26) was collected at this location.

Minor

- The differences between the detected and/or non-detected results for toluene and total xylenes exceeded 2X the Reporting Limit (RL) in the field duplicate pair IA-DUP01-C-26/IA-131-C-26. The detected and non-detected results reported for these compounds in the field duplicate pair were qualified as estimated, (J) and (UJ), respectively. Comparability of results for this field pair is limited because the original sample arrived at the laboratory with the valve on the canister open.
- The laboratory indicated that the peaks for chlorodifluoromethane in sample SV-101-B-26 and 1,3,5-trimethylbenzene in sample SV-168-A-26 identified by the data system exhibited chromatographic interference that could not be resolved. The detected results reported for these compounds in the associated samples were qualified as estimated with a high bias, (J+).
- Detected results reported below the RL limit but above the Method Detection Limit (MDL) were qualified as estimated, (J).

Notes

The compound, 1,2,4-trichlorobenzene, was detected in the laboratory method blank, MB 140-27980/5. No action was necessary because this compound was not detected in the associated sample.

All initial and continuing calibration criteria were acceptable.

All internal standard areas were within $\pm 40\%$ of the standard.

The surrogate spike compound and Laboratory Control Sample (LCS) had Percent Recoveries (%Rs) within the quality control limits.

The following compounds exceeded the calibration range of the instrument and were reported from dilutions:

<u>Sample</u>	<u>Compound</u>
SV-060-C-26	Trichloroethene
SV-118-A-26	1,1-Dichloroethene
	Trichloroethene
SV-126-C-26	1,1-Dichloroethene
	Vinyl Chloride

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

All sample canisters opened to approximately -30 psig (-26 to -30 psig) and finished at between -6 to -0 psig.

Non-detected results were reported to the MDL. Sample IDs for SV-100-B-26 and SV-101-B-26 were incorrectly identified with a "C" on the chain of custody records.

Executive Summary

Laboratory Performance: 1,2,4-Trichlorobenzene was detected in a laboratory method blank. Two compound results were biased high because chromatographic interference could not be resolved.

Other Factors Affecting Data Quality: The sample integrity of one sample was compromised because the valve was open upon sample receipt. Field duplicate imprecision was noted for two compounds. Some samples were further diluted. Results below the RL were estimated.

TO: S. BRENNER
SDG: 140-14390-1

PAGE 3

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Review" (January 2017) and EPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.



Tetra Tech, Inc.
Michelle L. Allen
Chemist/Data Validator



Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Appendix A

Qualified Analytical Results

Qualifier Codes:

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ($< 2 \times$ IDL for inorganics and $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors $>40\%$ for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids $<30\%$
- Z = Uncertainty at 2 standard deviations is greater than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed
- Z3 = Tentatively Identified Compound aldol condensate
- Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
- Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08388 SDG: 140-14390-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	BCK-1-26			BCK-2-26			BCK-3-26			BCK-4-26		
	LAB_ID	140-14390-12			140-14390-13			140-14390-14			140-14390-15		
	SAMP_DATE	2/19/2019			2/19/2019			2/19/2019			2/19/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		0.33	U		0.33	U		0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	U		0.2	U		0.2	U		
1,1-DICHLOROETHENE	0.28	U		0.28	U		0.28	U		0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		0.61	U		0.61	U		0.61	U		
1,2-DICHLOROETHANE	0.38	U		0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.72	J	P	0.71	J	P	0.64	U		0.64	U		
BENZENE	0.47	J	P	0.45	J	P	0.44	J	P	0.44	J	P	
CARBON TETRACHLORIDE	0.47	U		0.47	U		0.47	U		0.47	U		
CHLORODIFLUOROMETHANE	1.1	J	P	1.1	J	P	1	J	P	0.94	J	P	
CHLOROFORM	0.37	U		0.37	U		0.37	U		0.37	U		
CIS-1,2-DICHLOROETHENE	0.48	U		0.48	U		0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	2.2			2.2			2.3			2.2			
ETHYLBENZENE	0.59	U		0.59	U		0.59	U		0.59	U		
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE	3.2	J	P	4.1	J	P	3.5	J	P	2.5	J	P	
NAPHTHALENE	1	U		1	U		1	U		1	U		
TETRACHLOROETHENE	0.54	U		0.54	U		0.54	U		0.54	U		
TOLUENE	2.3	U		2.3	U		2.3	U		2.3	U		
TOTAL XYLENES	0.52	U		0.52	U		0.52	U		0.52	U		
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U		0.4	U		0.4	U		
TRICHLOROETHENE	0.38	U		0.38	U		0.38	U		0.38	U		
VINYL CHLORIDE	0.37	U		0.37	U		0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14390-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	IA-001-C-26			IA-004-C-26			IA-131-C-26			SV-015-A-26		
	LAB_ID	140-14390-16			140-14390-17			140-14390-18			140-14390-6		
	SAMP_DATE	2/19/2019			2/19/2019			2/19/2019			2/21/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		0.33	U		0.33	UR	M	0.56	J	P	
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		0.57	UR	M	0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	U		0.2	UR	M	4.5			
1,1-DICHLOROETHENE	0.28	U		0.28	U		0.32	J	M	1.2	J		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		0.84	UR	M	0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		1.4	UR	M	1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		0.61	U		0.92	J	MP	0.61	U		
1,2-DICHLOROETHANE	0.38	U		0.38	U		0.38	UR	M	0.38	U		
1,3,5-TRIMETHYLBENZENE	0.71	J	P	0.68	J	P	0.88	J	MP	0.64	U		
BENZENE	0.53	J	P	0.46	J	P	1.3	J	M	1.2	J	P	
CARBON TETRACHLORIDE	0.47	U		0.47	U		0.47	UR	M	0.47	U		
CHLORODIFLUOROMETHANE	0.91	J	P	1.4	J	P	0.27	UR	M	1.6			
CHLOROFORM	0.37	U		0.37	U		0.37	UR	M	0.37	U		
CIS-1,2-DICHLOROETHENE	0.48	U		0.48	U		0.48	UR	M	0.48	U		
DICHLORODIFLUOROMETHANE	2.3			2.2			2.2	J	M	2.5			
ETHYLBENZENE	0.59	U		0.59	U		2.8	J	M	0.68	J	P	
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		1.2	UR	M	1.2	U		
METHYLENE CHLORIDE	11			3.3	J	P	12	J	M	4.3	J	P	
NAPHTHALENE	1	U		1	U		1	UR	M	1	U		
TETRACHLOROETHENE	0.54	U		0.54	U		3.6	J	M	0.54	U		
TOLUENE	2.3	U		2.3	U		41	J	M	5.4			
TOTAL XYLENES	0.52	U		0.52	U		11	J	M	3.5			
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U		0.4	UR	M	0.4	U		
TRICHLOROETHENE	0.38	U		0.38	U		1.5	J	M	4			
VINYL CHLORIDE	0.37	U		0.37	U		0.37	UR	M	0.37	U		

PROJ_NO: 08388 SDG: 140-14390-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-060-C-26			SV-060-C-26-DL			SV-075-A-26			SV-076-A-26		
	LAB_ID	140-14390-4			140-14390-4			140-14390-11			140-14390-9		
	SAMP_DATE	2/19/2019			2/19/2019			2/21/2019			2/21/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	33						0.33	U		1.7	J	P	
1,1,2-TRICHLOROETHANE	0.57	U					0.57	U		0.57	U		
1,1-DICHLOROETHANE	18						0.2	U		0.2	U		
1,1-DICHLOROETHENE	5.1						0.28	U		0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U					15			3			
1,2,4-TRICHLOROBENZENE	1.4	U					1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U					48			2.2			
1,2-DICHLOROETHANE	0.38	U					0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.93	J	P				24			4.6			
BENZENE	0.62	J	P				0.37	U		0.37	U		
CARBON TETRACHLORIDE	0.47	U					0.47	U		0.47	U		
CHLORODIFLUOROMETHANE	5.5						1.2	J	P	1.2	J	P	
CHLOROFORM	11						0.37	U		0.37	U		
CIS-1,2-DICHLOROETHENE	16						0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	2.2						2.1			2.2			
ETHYLBENZENE	4.9						1.5	J	P	0.61	J	P	
METHYL TERT-BUTYL ETHER	1.2	U					1.2	U		1.2	U		
METHYLENE CHLORIDE	3.3	J	P				3.1	J	P	2.6	J	P	
NAPHTHALENE	1	U					25			1	U		
TETRACHLOROETHENE	0.72	J	P				0.54	U		0.54	U		
TOLUENE	2.3	U					25			2.3			
TOTAL XYLENES	46						13			5.7			
TRANS-1,2-DICHLOROETHENE	1	J	P				0.4	U		0.4	U		
TRICHLOROETHENE				600			2.3			5.7			
VINYL CHLORIDE	0.37	U					0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14390-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-078-A-26			SV-100-B-26			SV-101-B-26			SV-118-A-26		
	LAB_ID	140-14390-7			140-14390-3			140-14390-2			140-14390-5		
	SAMP_DATE	2/21/2019			2/19/2019			2/19/2019			2/21/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.58	J	P	0.43	J	P	180			32			
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	U		0.2	U		46			
1,1-DICHLOROETHENE	0.28	U		0.28	U		1.4	J	P				
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		1.1	J	P	2.9			
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		1.4	U		2.5	J	P	
1,2,4-TRIMETHYLBENZENE	1	J	P	0.61	U		1.9			7			
1,2-DICHLOROETHANE	0.38	U		0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	1.1	J	P	0.74	J	P	1.5	J	P	4.6			
BENZENE	0.58	J	P	0.37	U		0.64	J	P	0.97	J	P	
CARBON TETRACHLORIDE	0.47	U		2.2	J	P	2.5			0.47	U		
CHLORODIFLUOROMETHANE	1	J	P	1.2	J	P	2.5	J+	Q	1.1	J	P	
CHLOROFORM	0.37	U		2			0.54	J	P	1.7	J	P	
CIS-1,2-DICHLOROETHENE	0.48	U		0.48	U		0.59	J	P	180			
DICHLORODIFLUOROMETHANE	2.3			2.2			4.2			2.3			
ETHYLBENZENE	0.75	J	P	0.59	U		0.95	J	P	7.7			
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE	3	J	P	2.9	J	P	4.4	J	P	7.4			
NAPHTHALENE	1	U		1	U		1.4			1	U		
TETRACHLOROETHENE	0.54	U		0.93	J	P	42			0.99	J	P	
TOLUENE	4.3			2.3	U		21			4.2			
TOTAL XYLENES	3.9			0.52	U		5.2			72			
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U		0.4	U		12			
TRICHLOROETHENE	9.5			6.3			92						
VINYL CHLORIDE	0.37	U		0.37	U		6.9			2.1			

PROJ_NO: 08388 SDG: 140-14390-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-118-A-26-DL			SV-126-C-26			SV-126-C-26-DL			SV-136-A-26		
	LAB_ID	140-14390-5			140-14390-1			140-14390-1			140-14390-8		
	SAMP_DATE	2/21/2019			2/19/2019			2/19/2019			2/21/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE				0.33	U					0.33	U		
1,1,2-TRICHLOROETHANE				0.57	U					0.57	U		
1,1-DICHLOROETHANE				0.76	J	P				0.2	U		
1,1-DICHLOROETHENE	300						230			0.34	J	P	
1,2,3-TRIMETHYLBENZENE				0.84	U					0.84	U		
1,2,4-TRICHLOROBENZENE				3						1.4	U		
1,2,4-TRIMETHYLBENZENE				0.86	J	P				0.98	J	P	
1,2-DICHLOROETHANE				0.38	U					0.38	U		
1,3,5-TRIMETHYLBENZENE				1.1	J	P				1.1	J	P	
BENZENE				130						2			
CARBON TETRACHLORIDE				0.48	J					0.47	U		
CHLORODIFLUOROMETHANE				0.56	J	P				2.6			
CHLOROFORM				0.37	U					8.8			
CIS-1,2-DICHLOROETHENE				160						1.3	J	P	
DICHLORODIFLUOROMETHANE				1.6	J	P				2			
ETHYLBENZENE				2.3						5.1			
METHYL TERT-BUTYL ETHER				1.2	U					1.2	U		
METHYLENE CHLORIDE				2.5	J	P				3.6	J	P	
NAPHTHALENE				1.2						1	U		
TETRACHLOROETHENE				2.6	J	P				0.54	U		
TOLUENE				39						200			
TOTAL XYLENES				4.1						23			
TRANS-1,2-DICHLOROETHENE				9.7						0.4	U		
TRICHLOROETHENE	1800			400						270			
VINYL CHLORIDE							1100			0.37	U		

PROJ_NO: 08388 SDG: 140-14390-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	SV-168-A-26		
	LAB_ID	140-14390-10		
	SAMP_DATE	2/21/2019		
	QC_TYPE	NM		
	UNITS	UG/M3		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	4.8			
1,1,2-TRICHLOROETHANE	0.57	U		
1,1-DICHLOROETHANE	1.3	J	P	
1,1-DICHLOROETHENE	50			
1,2,3-TRIMETHYLBENZENE	0.88	J	P	
1,2,4-TRICHLOROBENZENE	1.4	U		
1,2,4-TRIMETHYLBENZENE	3.8			
1,2-DICHLOROETHANE	0.38	U		
1,3,5-TRIMETHYLBENZENE	2.4	J+	Q	
BENZENE	0.77	J	P	
CARBON TETRACHLORIDE	0.51	J	P	
CHLORODIFLUOROMETHANE	1.3	J	P	
CHLOROFORM	1.2	J	P	
CIS-1,2-DICHLOROETHENE	0.68	J	P	
DICHLORODIFLUOROMETHANE	2.4			
ETHYLBENZENE	1.5	J	P	
METHYL TERT-BUTYL ETHER	1.2	U		
METHYLENE CHLORIDE	6.5	J	P	
NAPHTHALENE	1	U		
TETRACHLOROETHENE	0.54	U		
TOLUENE	11			
TOTAL XYLENES	7.5			
TRANS-1,2-DICHLOROETHENE	0.4	U		
TRICHLOROETHENE	180			
VINYL CHLORIDE	0.37	U		

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-126-C-26 Lab Sample ID: 140-14390-1
 Matrix: Air Lab File ID: HB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	41		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.16	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	41		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.32	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.19	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	100	E	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.53		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.73	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.23		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.38	J	0.40	0.080
108-88-3	Toluene	92.14	10		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	2.4		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	0.41		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	74		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.18	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.22	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	560	E	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.95		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-126-C-26 Lab Sample ID: 140-14390-1
 Matrix: Air Lab File ID: HB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	130		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.56	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	160		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.76	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	400	E	1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.2		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.6	J	2.7	0.54
108-88-3	Toluene	92.14	39		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	9.7		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	3.0		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	400		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.86	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	1400	E	0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-126-C-26 DL Lab Sample ID: 140-14390-1 DL
 Matrix: Air Lab File ID: HB26P101D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:34
 Sample wt/vol: 10 (mL) Date Analyzed: 02/27/2019 05:28
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	58		4.0	0.70
75-01-4	Vinyl chloride	62.50	450		2.0	1.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-126-C-26 DL Lab Sample ID: 140-14390-1 DL
 Matrix: Air Lab File ID: HB26P101D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:34
 Sample wt/vol: 10 (mL) Date Analyzed: 02/27/2019 05:28
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	230		16	2.8
75-01-4	Vinyl chloride	62.50	1100		5.1	3.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-101-B-26 Lab Sample ID: 140-14390-2
 Matrix: Air Lab File ID: HB26P102R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:41
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 06:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.20	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.40		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.72	CI	0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.15	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.85		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.36	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.22	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.3	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.27		0.20	0.20
127-18-4	Tetrachloroethene	165.83	6.2		0.40	0.080
108-88-3	Toluene	92.14	5.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	34		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	17		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.22	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.40		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.31	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	2.7		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-101-B-26 Lab Sample ID: 140-14390-2
 Matrix: Air Lab File ID: HB26P102R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:41
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 06:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.64	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	2.5		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.5	CI	1.4	0.27
67-66-3	Chloroform	119.38	0.54	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.59	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	4.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.4	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	0.95	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.4		1.0	1.0
127-18-4	Tetrachloroethene	165.83	42		2.7	0.54
108-88-3	Toluene	92.14	21		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	180		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	92		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.1	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.9		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.5	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	6.9		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-100-B-26 Lab Sample ID: 140-14390-3
 Matrix: Air Lab File ID: HB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:43
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.35	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.33	J	0.40	0.075
67-66-3	Chloroform	119.38	0.42		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.83	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.14	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.078	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.15	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-100-B-26 Lab Sample ID: 140-14390-3
 Matrix: Air Lab File ID: HB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:43
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	2.2	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	2.0		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.9	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.93	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.43	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.74	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-060-C-26 Lab Sample ID: 140-14390-4
 Matrix: Air Lab File ID: HB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6		0.40	0.075
67-66-3	Chloroform	119.38	2.2		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	4.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	4.6		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	1.3		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.1		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.96	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.11	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.26	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	6.1		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	120	E	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.19	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	11		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-060-C-26 Lab Sample ID: 140-14390-4
 Matrix: Air Lab File ID: HB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.62	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.5		1.4	0.27
67-66-3	Chloroform	119.38	11		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	16		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	18		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	5.1		1.6	0.28
100-41-4	Ethylbenzene	106.17	4.9		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.72	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.0	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	33		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	670	E	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.93	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	46		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-060-C-26 DL Lab Sample ID: 140-14390-4 DL
 Matrix: Air Lab File ID: HB26P104DL.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:57
 Sample wt/vol: 40 (mL) Date Analyzed: 02/27/2019 08:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	110		0.50	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-060-C-26 DL Lab Sample ID: 140-14390-4 DL
 Matrix: Air Lab File ID: HB26P104DL.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 12:57
 Sample wt/vol: 40 (mL) Date Analyzed: 02/27/2019 08:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	600		2.7	0.94

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-118-A-26 Lab Sample ID: 140-14390-5
 Matrix: Air Lab File ID: HB26P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:42
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.30	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	0.35	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	46		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	11		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	120	E	0.40	0.070
100-41-4	Ethylbenzene	106.17	1.8		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.1		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.15	J	0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	3.0		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	0.34	J	0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	5.9		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	450	E	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.59		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.4		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.93		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.82		0.20	0.15
1330-20-7	Xylenes, Total	106.17	17		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-118-A-26 Lab Sample ID: 140-14390-5
 Matrix: Air Lab File ID: HB26P105.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:42
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.97	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	1.7	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	180		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	46		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	<i>1,1-Dichloroethene</i>	<i>96.94</i>	<i>470</i>	<i>E</i>	<i>1.6</i>	<i>0.28</i>
100-41-4	Ethylbenzene	106.17	7.7		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.4		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.99	J	2.7	0.54
108-88-3	Toluene	92.14	4.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	12		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	2.5	J	3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	32		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	<i>Trichloroethene</i>	<i>131.39</i>	<i>2400</i>	<i>E</i>	<i>1.1</i>	<i>0.38</i>
526-73-8	1,2,3-Trimethylbenzene	120.19	2.9		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	7.0		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	4.6		2.0	0.64
75-01-4	Vinyl chloride	62.50	2.1		0.51	0.37
1330-20-7	Xylenes, Total	106.17	72		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-118-A-26 DL Lab Sample ID: 140-14390-5 DL
 Matrix: Air Lab File ID: HB27P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:42
 Sample wt/vol: 10 (mL) Date Analyzed: 02/28/2019 03:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	77		4.0	0.70
79-01-6	Trichloroethene	131.39	330		2.0	0.70

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-118-A-26 DL Lab Sample ID: 140-14390-5 DL
 Matrix: Air Lab File ID: HB27P112.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:42
 Sample wt/vol: 10 (mL) Date Analyzed: 02/28/2019 03:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	96.94	300		16	2.8
79-01-6	Trichloroethene	131.39	1800		11	3.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-015-A-26 Lab Sample ID: 140-14390-6
 Matrix: Air Lab File ID: HB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:45
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.1		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.30	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.10	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.74		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.81		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-015-A-26 Lab Sample ID: 140-14390-6
 Matrix: Air Lab File ID: HB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:45
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	4.5		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.2	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	0.68	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.56	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	4.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-078-A-26 Lab Sample ID: 140-14390-7
 Matrix: Air Lab File ID: HB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:49
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 18:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.8		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.23	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.90		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-078-A-26 Lab Sample ID: 140-14390-7
 Matrix: Air Lab File ID: HB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:49
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 18:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.58	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.75	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.58	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	9.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-136-A-26 Lab Sample ID: 140-14390-8
 Matrix: Air Lab File ID: HB26P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:53
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 19:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.74		0.40	0.075
67-66-3	Chloroform	119.38	1.8		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.33	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.086	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	1.2		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	54		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	50		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.20	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.22	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	5.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-136-A-26 Lab Sample ID: 140-14390-8
 Matrix: Air Lab File ID: HB26P108.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:53
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 19:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.0		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.6		1.4	0.27
67-66-3	Chloroform	119.38	8.8		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.3	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.34	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	5.1		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	200		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	270		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.98	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	23		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-076-A-26 Lab Sample ID: 140-14390-9
 Matrix: Air Lab File ID: HB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 20:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.75	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.60		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.30	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.62		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.46		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.93		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-076-A-26 Lab Sample ID: 140-14390-9
 Matrix: Air Lab File ID: HB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 12:57
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 20:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.61	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.7	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	3.0		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	4.6		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-168-A-26 Lab Sample ID: 140-14390-10
 Matrix: Air Lab File ID: HB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 13:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:29
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	0.24	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.17	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.32	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	13		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.33	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.87		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	34		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.18	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.76		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.49	CI	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-168-A-26 Lab Sample ID: 140-14390-10
 Matrix: Air Lab File ID: HB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 13:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:29
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.77	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	1.2	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.68	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.3	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	50		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	11		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	4.8		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	180		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	0.88	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	3.8		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	2.4	CI	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-075-A-26 Lab Sample ID: 140-14390-11
 Matrix: Air Lab File ID: HB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 13:06
 Sample wt/vol: 167(mL) Date Analyzed: 02/26/2019 22:23
 Soil Aliquot Vol: _____ Dilution Factor: 1.67
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.34	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.34	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.90	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	4.7		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	6.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.43		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	3.1		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	9.7		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	4.9		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: SV-075-A-26 Lab Sample ID: 140-14390-11
 Matrix: Air Lab File ID: HB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/21/2019 13:06
 Sample wt/vol: 167(mL) Date Analyzed: 02/26/2019 22:23
 Soil Aliquot Vol: _____ Dilution Factor: 1.67
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	25		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	25		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	15		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	48		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	24		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	13		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-1-26 Lab Sample ID: 140-14390-12
 Matrix: Air Lab File ID: HB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:09
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.31	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.91	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.15	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-1-26 Lab Sample ID: 140-14390-12
 Matrix: Air Lab File ID: HB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:09
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.72	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-2-26 Lab Sample ID: 140-14390-13
 Matrix: Air Lab File ID: HB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:19
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.32	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-2-26 Lab Sample ID: 140-14390-13
 Matrix: Air Lab File ID: HB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:19
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.45	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.1	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.71	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-3-26 Lab Sample ID: 140-14390-14
 Matrix: Air Lab File ID: HB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:28
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.29	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-3-26 Lab Sample ID: 140-14390-14
 Matrix: Air Lab File ID: HB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:28
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.0	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-4-26 Lab Sample ID: 140-14390-15
 Matrix: Air Lab File ID: HB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:35
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 02:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.27	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: BCK-4-26 Lab Sample ID: 140-14390-15
 Matrix: Air Lab File ID: HB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:35
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 02:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.94	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-001-C-26 Lab Sample ID: 140-14390-16
 Matrix: Air Lab File ID: HB26P116D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:51
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.26	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.1		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-001-C-26 Lab Sample ID: 140-14390-16
 Matrix: Air Lab File ID: HB26P116D.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:51
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.91	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	11		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.71	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-004-C-26 Lab Sample ID: 140-14390-17
 Matrix: Air Lab File ID: HB26P203R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:54
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 07:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.95	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-004-C-26 Lab Sample ID: 140-14390-17
 Matrix: Air Lab File ID: HB26P203R.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 16:54
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 07:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.68	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-131-C-26 Lab Sample ID: 140-14390-18
 Matrix: Air Lab File ID: HB27P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:02
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 04:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.081	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.63		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.4		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.53		0.40	0.080
108-88-3	Toluene	92.14	11		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.29		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.18	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: IA-131-C-26 Lab Sample ID: 140-14390-18
 Matrix: Air Lab File ID: HB27P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:02
 Sample wt/vol: 100(mL) Date Analyzed: 02/28/2019 04:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.3		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.32	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	2.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	12		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.6		2.7	0.54
108-88-3	Toluene	92.14	41		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.92	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.88	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

Appendix C

Support Documentation

ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >2XRL	DUPLICATE SAMPLE CONC >2XRL	DIFFERENCE >2RL
1,1-DICHLOROETHENE	0.32	0.28	1.6	13.33	FALSE	FALSE	FALSE	FALSE
1,2,4-TRIMETHYLBENZENE	0.92	0.61	2	40.52	FALSE	FALSE	FALSE	FALSE
1,3,5-TRIMETHYLBENZENE	0.88	0.64	2	31.58	FALSE	FALSE	FALSE	FALSE
BENZENE	1.3	0.47	1.3	93.79	TRUE	FALSE	FALSE	FALSE
CHLORODIFLUOROMETHANE	0.27	1.9	1.4	150.23	TRUE	FALSE	FALSE	FALSE
DICHLORODIFLUOROMETHANE	2.2	1.4	2	44.44	FALSE	FALSE	FALSE	FALSE
ETHYLBENZENE	2.8	0.59	1.7	130.38	TRUE	FALSE	FALSE	FALSE
METHYLENE CHLORIDE	12	3.7	6.9	105.73	TRUE	FALSE	FALSE	FALSE
TETRACHLOROETHENE	3.6	0.54	2.7	147.83	TRUE	FALSE	FALSE	FALSE
TOLUENE	41	2.3	2.3	178.75	TRUE	TRUE	FALSE	TRUE
TOTAL XYLENES	11	1.3	3.5	157.72	TRUE	TRUE	FALSE	TRUE
TRICHLOROETHENE	1.5	0.38	1.1	119.15	TRUE	FALSE	FALSE	FALSE

SDG 140-14391-1

IA-DUP01-C-26/IA-131-C-26

LMC - MRC
SDG 140-14390-1

SAMPLE IDENTIFICATION

SV-118-A-26

COMPOUND

TRICHLOROETHENE

MW= 131.388

GAS CONSTANT = 24.45

COMPOUND AREA

1077374

INTERNAL STANDARD AMOUNT (ppbv)

4

CALIBRATION VOLUME (ppbv)

500

DILUTION FACTOR

1

INTERNAL STANDARD AREA

1657088

AVERAGE RRF

0.3991

SAMPLE VOLUME (ppbv)

10

325.8136 ppbv

1750.84 $\mu\text{g}/\text{m}^3$

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\HB27P112.D
 Lims ID: 140-14390-A-5
 Client ID: SV-118-A-26
 Sample Type: Client
 Inject. Date: 28-Feb-2019 03:30:30 ALS Bottle#: 12 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010949-020
 Misc. Info.: 140-14390-a-5
 Operator ID: AFB Instrument ID: MH
 Method: \\chromna\Knoxville\ChromData\MH\20190226-10949.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 28-Feb-2019 19:01:51 Calib Date: 21-Feb-2019 01:57:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MH\20190220-10894.b\HB20IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0322

First Level Reviewer: khachitpongpanits Date: 28-Feb-2019 19:11:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.819	8.814	0.005	95	308902	4.00	
* 2 1,4-Difluorobenzene	114	11.000	11.000	0.000	95	1657088	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.729	15.724	0.005	88	1400401	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.367	17.404	-0.031	94	904258	3.96	
27 1,1-Dichloroethene	96	5.920	5.926	0.000	96	184014	1.53	
34 trans-1,2-Dichloroethene	96	7.082	7.086	0.005	98	5452	0.0443	
37 1,1-Dichloroethane	63	7.506	7.510	0.005	100	35182	0.1503	
41 cis-1,2-Dichloroethene	96	8.488	8.493	0.005	96	73814	0.5919	
45 1,1,1-Trichloroethane	97	9.858	9.864	0.005	97	19622	0.0769	
56 Trichloroethene	130	11.713	11.714	0.005	96	1077374	6.52	
78 m-Xylene & p-Xylene	91	16.220	16.225	0.000	98	41445	0.1059	
82 o-Xylene	91	16.752	16.758	0.000	98	15165	0.0380	
89 1,3,5-Trimethylbenzene	120	18.132	18.127	-0.026	91	1386	0.0329	
S 121 Xylenes, Total	100				0		0.1439	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor		10 of 16 COCs													
Company: Tetra Tech		Phone: 301-528-3000																	
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage																	
City/State/Zip: Germantown, MD, 20871		TAL Contact: terry walker washmond																	
Phone: 301-528-552																			
FAX:																			
Project Name: MRC Indoor Air		Analysis Turnaround Time																	
Site/location: MRC		Standard (Specify) X																	
PO# 112FC08388		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
SV-126-C-26	2/19/19	1134	1234	-36	0	11476	09886	✓											
SV-101-E ^B -26	2/19/19	1141	1241	-26	0	10874	11140	✓											
SV-100-E ^B -26	2/19/19	1143	1243	-30	0	11503	11710	✓											
SV-060-C-26	2/19/19	1157	1257	-30	0	10448	11492	✓											
SV-118-A-26	2/21/19	1135	1242	-24	0	11314	11832	✓											
SV-015-A-26	2/21/19	1142	1248	-30	0	11991	09748	✓											
Sampled by: Sophia Lawson, Josh Mullis, Walt Pryor		Temperature (Fahrenheit)																	
		Interior	Ambient																
		Start																	
		Stop																	
		Pressure (Inches of Hg)																	
		Interior	Ambient																
		Start																	
		Stop																	
Special Instructions/QC Requirements & Comments:																			
Canisters Shipped by: Tetra Tech		Date/Time: 2/22/19		Canisters Received by:															
Samples Relinquished by: <i>[Signature]</i>		Date/Time: 2/22/19		Received by: <i>[Signature]</i>															
Relinquished by: <i>[Signature]</i>		Date/Time: 2/22/19 1700		Received by: TA KWX 2-23-19 10:10															
Lab Use Only		Shipped Name		Opened by		Condition													

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140-14390 Chain of Custody

Baltimore #201

18 cans / 18 flows
 CUSTODY SEAL INTACT
 RECEIVED AMBIENT RT 20.0 / CT 20.0 C

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Larson, Josh Mullis & Walt Pryor</u>		11 of 16 COCs													
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																	
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																	
City/State/Zip: <u>Germentown, MD, 20871</u>		TAL Contact: <u>terry walker washund</u>																	
Phone: <u>301-528-552</u>																			
FAX:																			
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																	
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																	
PO# <u>112108388</u>		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
SV-078-A-26	2/21/19	1147	1249	-25	-5	10175	1177a	✓											
SV-136-A-26	2/21/19	1150	1253	-30	-3	11513	11861	✓											
SV-076-A-26	2/21/19	1157	1257	-30	-4	09842	11848	✓											
SV-168-A-26	2/21/19	1200	1300	-30	-4	7605	10796	✓											
SV-075-A-26	2/21/19	1206	1306	-27	-6	11500	11138	✓											
BCK-1-26	2/19/19	0609	1609	-28	-2	10492	11132	✓											
Sampled by: <u>Sophia Larson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)												<h2>Baltimore #201</h2>					
		Interior		Ambient															
		Start																	
		Stop																	
		Pressure (Inches of Hg)																	
		Interior		Ambient															
Start																			
Stop																			
Special Instructions/QC Requirements & Comments:																			
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:															
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>															
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19 1700</u>		Received by: <u>[Signature]</u>															
Lab Use Only																			

10960

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: <u>Tony Apanavage</u>		Sampled By: <u>Sophia Lawson, Josh Mullis & Walt Pryor</u>		12 of 16 COCs												
Company: <u>Tetra Tech</u>		Phone: <u>301-528-3000</u>																
Address: <u>20251 Century Blvd #200</u>		Site Contact: <u>Tony Apanavage</u>																
City/State/Zip: <u>Germentown, MD, 20871</u>		TAL Contact: <u>Terry Walker Washburn</u>																
Phone: <u>301-528-552</u>																		
FAX:																		
Project Name: <u>MRC Indoor Air</u>		Analysis Turnaround Time																
Site/location: <u>MRC</u>		Standard (Specify) <u>X</u>																
PO# <u>112108388</u>		Rush (Specify)																
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BCK-2-26	2/19/19	0819	1619	-30	-5	11601	10492	✓										
BCK-3-26	2/19/19	0828	1628	-25	-1	8815	09798	✓										
BCK-4-26	2/19/19	0835	1635	-30	-3	10149	11764	✓										
IA-001-C-26	2/19/19	0851	1651	-30	-4	11437	10919	✓										
IA-004-C-26	2/19/19	0854	1654	-18	0	7283	10759	✓										
IA-131-C-26	2/19/19	0902	1702	-30	0	7461	11604	✓										
Sampled by: <u>Sophia Lawson, Walt Pryor, Josh Mullis</u>		Temperature (Fahrenheit)				<h2>Baltimore #201</h2>												
		Interior		Ambient														
		Start																
		Stop																
		Pressure (Inches of Hg)																
		Interior		Ambient														
Start																		
Stop																		
Special Instructions/QC Requirements & Comments:																		
Canisters Shipped by: <u>Tetra Tech</u>		Date/Time: <u>2/22/19</u>		Canisters Received by:														
Samples Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19</u>		Received by: <u>[Signature]</u>														
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/22/19 1700</u>		Received by: <u>Mullis JA KX 2-23-19 10:10</u>														
Lab Use Only		Shipper Name		Canned by		Condition												

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TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/		/	<input type="checkbox"/> Containers, Broken	7, SV-168-A-26, COC WST CANISTER ASSET NUMBER AS 10796, SHOULD BE 10960
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID : _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input checked="" type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only)	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/	<input type="checkbox"/> Residual Chlorine	
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	

Labeling Verified by: _____ Date: _____	
pH test strip lot number: _____	
Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative: _____	
Lot Number: _____	
Exp Date: _____	
Analyst: _____	
Date: _____	
Time: _____	

Project #: _____ PM Instructions: _____

Sample Receiving Associate: [Signature] Date: 2-25-19

Job Narrative
140-14390-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The COC listed a canister asset number as 10796, but it should be 10960.

Samples IA-131-C-26 (140-14390-18) and IA-113-C-26 (140-14391-16) were received with the canister valve in the open position. The samples were at ambient pressure (approximately 0 psi). The samples' integrity could have been jeopardized due to changes in ambient pressure after the sample was taken (i.e., ambient air not associated with the sampling event could have been introduced into the canisters at any point after the sampling was completed).

The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

Air - GC/MS VOA - Method TO-15 LL

Method(s) TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14390-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14390-1	SV-126-C-26	Air	02/19/19 12:34	02/23/19 10:10
140-14390-2	SV-101-C-26	Air	02/19/19 12:41	02/23/19 10:10
140-14390-3	SV-100-C-26	Air	02/19/19 12:43	02/23/19 10:10
140-14390-4	SV-060-C-26	Air	02/19/19 12:57	02/23/19 10:10
140-14390-5	SV-118-A-26	Air	02/21/19 12:42	02/23/19 10:10
140-14390-6	SV-015-A-26	Air	02/21/19 12:45	02/23/19 10:10
140-14390-7	SV-078-A-26	Air	02/21/19 12:49	02/23/19 10:10
140-14390-8	SV-136-A-26	Air	02/21/19 12:53	02/23/19 10:10
140-14390-9	SV-076-A-26	Air	02/21/19 12:57	02/23/19 10:10
140-14390-10	SV-168-A-26	Air	02/21/19 13:00	02/23/19 10:10
140-14390-11	SV-075-A-26	Air	02/21/19 13:06	02/23/19 10:10
140-14390-12	BCK-1-26	Air	02/19/19 16:09	02/23/19 10:10
140-14390-13	BCK-2-26	Air	02/19/19 16:19	02/23/19 10:10
140-14390-14	BCK-3-26	Air	02/19/19 16:28	02/23/19 10:10
140-14390-15	BCK-4-26	Air	02/19/19 16:35	02/23/19 10:10
140-14390-16	IA-001-C-26	Air	02/19/19 16:51	02/23/19 10:10
140-14390-17	IA-004-C-26	Air	02/19/19 16:54	02/23/19 10:10
140-14390-18	IA-131-C-26	Air	02/19/19 17:02	02/23/19 10:10

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14390-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
SV-126-C-26	140-14390-1	101
SV-126-C-26 DL	140-14390-1 DL	98
SV-101-C-26	140-14390-2	99
SV-100-C-26	140-14390-3	98
SV-060-C-26	140-14390-4	98
SV-060-C-26 DL	140-14390-4 DL	100
SV-118-A-26	140-14390-5	101
SV-118-A-26 DL	140-14390-5 DL	99
SV-015-A-26	140-14390-6	97
SV-078-A-26	140-14390-7	101
SV-136-A-26	140-14390-8	100
SV-076-A-26	140-14390-9	99
SV-168-A-26	140-14390-10	101
SV-075-A-26	140-14390-11	100
BCK-1-26	140-14390-12	99
BCK-2-26	140-14390-13	97
BCK-3-26	140-14390-14	97
BCK-4-26	140-14390-15	97
IA-001-C-26	140-14390-16	99
IA-004-C-26	140-14390-17	98
IA-131-C-26	140-14390-18	98
	MB 140-27936/4	97
	MB 140-27980/5	96
	LCS 140-27936/1002	99
	LCS 140-27980/1002	103

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Sample No.: ICIS 140-27843/14 Date Analyzed: 02/21/2019 01:03
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HB20IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	348949	8.83	1879497	11.01	1644075	15.73
UPPER LIMIT	488529	9.16	2631296	11.34	2301705	16.06
LOWER LIMIT	209369	8.50	1127698	10.68	986445	15.40
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-27843/17	382438	8.83	2064078	11.01	1803849	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Sample No.: CCVIS 140-27936/2 Date Analyzed: 02/26/2019 10:24
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB20.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	342352	8.82	1857782	11.00	1578748	15.73	
UPPER LIMIT	479293	9.15	2600895	11.33	2210247	16.06	
LOWER LIMIT	205411	8.49	1114669	10.67	947249	15.40	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27936/1002	342352	8.82	1857782	11.00	1578748	15.73	
MB 140-27936/4	328212	8.82	1777677	11.00	1496441	15.73	
140-14390-1	SV-126-C-26	295256	8.83	1628772	11.01	1445440	15.73
140-14390-3	SV-100-C-26	321718	8.82	1742188	11.01	1463732	15.73
140-14390-4	SV-060-C-26	306344	8.82	1657033	11.01	1388582	15.73
140-14390-5	SV-118-A-26	296259	8.82	1615475	11.01	1362515	15.73
140-14390-6	SV-015-A-26	280411	8.84	1524680	11.01	1263585	15.73
140-14390-7	SV-078-A-26	293368	8.83	1591119	11.01	1358343	15.73
140-14390-8	SV-136-A-26	290143	8.86	1608111	11.02	1411221	15.73
140-14390-9	SV-076-A-26	320518	8.83	1732928	11.01	1534202	15.73
140-14390-10	SV-168-A-26	300597	8.86	1666175	11.02	1440458	15.73
140-14390-11	SV-075-A-26	334101	8.83	1835120	11.01	1535193	15.73
140-14390-12	BCK-1-26	305965	8.82	1633864	11.01	1349634	15.73
140-14390-13	BCK-2-26	304769	8.82	1668266	11.01	1397553	15.73
140-14390-14	BCK-3-26	288397	8.82	1563358	11.00	1284217	15.73
140-14390-15	BCK-4-26	292070	8.82	1594766	11.01	1318806	15.73
140-14390-16	IA-001-C-26	282998	8.82	1535197	11.01	1298941	15.73
140-14390-1 DL	SV-126-C-26 DL	270028	8.82	1457588	11.01	1214881	15.73
140-14390-2	SV-101-C-26	259365	8.82	1401170	11.01	1231013	15.73
140-14390-17	IA-004-C-26	272850	8.82	1484861	11.01	1264664	15.73
140-14390-4 DL	SV-060-C-26 DL	260606	8.82	1404632	11.01	1209563	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Sample No.: CCVIS 140-27980/2 Date Analyzed: 02/27/2019 11:50
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVB27.D Heated Purge: (Y/N) N
 Calibration ID: 1829

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	226060	8.81	1253478	11.00	1073197	15.72
UPPER LIMIT	316484	9.14	1754869	11.33	1502476	16.05
LOWER LIMIT	135636	8.48	752087	10.67	643918	15.39
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 140-27980/1002	226060	8.81	1253478	11.00	1073197	15.72
MB 140-27980/5	264467	8.81	1438660	11.00	1193009	15.72
140-14390-5 DL	308902	8.82	1657088	11.00	1400401	15.73
140-14390-18	303298	8.82	1660254	11.01	1406034	15.73

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: H500BB22.D Lab Sample ID: MB 140-27936/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/26/2019 12:38
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27936/1002	HCCVB20-LCS .d	02/26/2019 10:24
SV-126-C-26	140-14390-1	HB26P101.D	02/26/2019 13:31
SV-100-C-26	140-14390-3	HB26P103.D	02/26/2019 15:17
SV-060-C-26	140-14390-4	HB26P104.D	02/26/2019 16:10
SV-118-A-26	140-14390-5	HB26P105.D	02/26/2019 17:03
SV-015-A-26	140-14390-6	HB26P106.D	02/26/2019 17:56
SV-078-A-26	140-14390-7	HB26P107.D	02/26/2019 18:49
SV-136-A-26	140-14390-8	HB26P108.D	02/26/2019 19:43
SV-076-A-26	140-14390-9	HB26P109.D	02/26/2019 20:36
SV-168-A-26	140-14390-10	HB26P110.D	02/26/2019 21:29
SV-075-A-26	140-14390-11	HB26P111.D	02/26/2019 22:23
BCK-1-26	140-14390-12	HB26P112.D	02/27/2019 00:09
BCK-2-26	140-14390-13	HB26P113.D	02/27/2019 01:02
BCK-3-26	140-14390-14	HB26P114.D	02/27/2019 01:55
BCK-4-26	140-14390-15	HB26P115.D	02/27/2019 02:48
IA-001-C-26	140-14390-16	HB26P116D.D	02/27/2019 03:41
SV-126-C-26 DL	140-14390-1 DL	HB26P101D.D	02/27/2019 05:28
SV-101-C-26	140-14390-2	HB26P102R.D	02/27/2019 06:22
IA-004-C-26	140-14390-17	HB26P203R.D	02/27/2019 07:16
SV-060-C-26 DL	140-14390-4 DL	HB26P104DL. D	02/27/2019 08:09

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27936/4
 Matrix: Air Lab File ID: H500BB22.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27936/4
 Matrix: Air Lab File ID: H500BB22.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27936 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB20-LCS.d
 Lab ID: LCS 140-27936/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	1.03	103	70-130	
Carbon tetrachloride	1.00	1.02	102	70-130	
Chlorodifluoromethane	1.00	1.01	101	60-140	
Chloroform	1.00	1.04	104	70-130	
cis-1,2-Dichloroethene	1.00	1.03	103	70-130	
Dichlorodifluoromethane	1.00	0.997	100	60-140	
1,1-Dichloroethane	1.00	1.03	103	70-130	
1,2-Dichloroethane	1.00	1.01	101	70-130	
1,1-Dichloroethene	1.00	1.01	101	70-130	
Ethylbenzene	1.00	1.03	103	70-130	
Methylene Chloride	1.00	0.996	100	70-130	
Methyl tert-butyl ether	1.00	1.05	105	60-140	
Naphthalene	1.00	0.944	94	60-140	
Tetrachloroethene	1.00	1.01	101	70-130	
Toluene	1.00	1.04	104	70-130	
trans-1,2-Dichloroethene	1.00	1.01	101	70-130	
1,2,4-Trichlorobenzene	1.00	0.789	79	60-140	
1,1,1-Trichloroethane	1.00	1.02	102	70-130	
1,1,2-Trichloroethane	1.00	1.04	104	70-130	
Trichloroethene	1.00	0.998	100	70-130	
1,2,3-Trimethylbenzene	1.00	0.759	76	70-130	
1,2,4-Trimethylbenzene	1.00	1.03	103	70-130	
1,3,5-Trimethylbenzene	1.00	1.08	108	70-130	
Vinyl chloride	1.00	1.06	106	70-130	
Xylenes, Total	3.00	3.15	105	70-130	

Column to be used to flag recovery and RPD values
 FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: HB27LOT14399MB.D Lab Sample ID: MB 140-27980/5
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 02/27/2019 13:42
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27980/1002	HCCVB27-LCS .d	02/27/2019 11:50
SV-118-A-26 DL	140-14390-5 DL	HB27P112.D	02/28/2019 03:30
IA-131-C-26	140-14390-18	HB27P113.D	02/28/2019 04:23

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27980/5
 Matrix: Air Lab File ID: HB27LOT14399MB.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 02/27/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.0691	J	0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27980/5
 Matrix: Air Lab File ID: HB27LOT14399MB.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 02/27/2019 13:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27980 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	0.513	J	0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVB27-LCS.d
 Lab ID: LCS 140-27980/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	1.08	108	70-130	
Carbon tetrachloride	1.00	1.09	109	70-130	
Chlorodifluoromethane	1.00	1.09	109	60-140	
Chloroform	1.00	1.15	115	70-130	
cis-1,2-Dichloroethene	1.00	1.09	109	70-130	
Dichlorodifluoromethane	1.00	1.06	106	60-140	
1,1-Dichloroethane	1.00	1.11	111	70-130	
1,2-Dichloroethane	1.00	1.09	109	70-130	
1,1-Dichloroethene	1.00	1.06	106	70-130	
Ethylbenzene	1.00	1.09	109	70-130	
Methylene Chloride	1.00	1.06	106	70-130	
Methyl tert-butyl ether	1.00	1.08	108	60-140	
Naphthalene	1.00	1.16	116	60-140	
Tetrachloroethene	1.00	1.06	106	70-130	
Toluene	1.00	1.10	110	70-130	
trans-1,2-Dichloroethene	1.00	1.04	104	70-130	
1,2,4-Trichlorobenzene	1.00	0.910	91	60-140	
1,1,1-Trichloroethane	1.00	1.09	109	70-130	
1,1,2-Trichloroethane	1.00	1.12	112	70-130	
Trichloroethene	1.00	1.04	104	70-130	
1,2,3-Trimethylbenzene	1.00	0.835	83	70-130	
1,2,4-Trimethylbenzene	1.00	1.15	115	70-130	
1,3,5-Trimethylbenzene	1.00	1.18	118	70-130	
Vinyl chloride	1.00	1.11	111	70-130	
Xylenes, Total	3.00	3.43	114	70-130	

Column to be used to flag recovery and RPD values

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: HBFB20IC.D BFB Injection Date: 02/20/2019
 Instrument ID: MH BFB Injection Time: 13:11
 Analysis Batch No.: 27843

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.2
75	30.0 - 60.0 % of mass 95	48.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	7.0
173	Less than 2.0 % of mass 174	0.5 (0.5) 1
174	50.0 - 120.00 % of mass 95	93.5
175	5.0 - 9.0 % of mass 174	6.7 (7.1) 1
176	95.0 - 101.0 % of mass 174	91.9 (98.2) 1
177	5.0 - 9.0 % of mass 176	6.0 (6.6) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-27843/3	HB20IC09.D	02/20/2019	15:12
	IC 140-27843/5	HB20IC10.D	02/20/2019	16:59
	IC 140-27843/8	HB20IC01.D	02/20/2019	19:38
	IC 140-27843/9	HB20IC02.D	02/20/2019	20:31
	IC 140-27843/10	HB20IC03.D	02/20/2019	21:26
	IC 140-27843/11	HB20IC04.D	02/20/2019	22:20
	IC 140-27843/12	HB20IC05.D	02/20/2019	23:14
	IC 140-27843/13	HB20IC06.D	02/21/2019	00:08
	ICIS 140-27843/14	HB20IC07.D	02/21/2019	01:03
	IC 140-27843/15	HB20IC08.D	02/21/2019	01:57
	ICV 140-27843/17	HB20ICV.D	02/21/2019	03:43

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-27843/8	HB20IC01.D
Level 2	IC 140-27843/9	HB20IC02.D
Level 3	IC 140-27843/10	HB20IC03.D
Level 4	IC 140-27843/11	HB20IC04.D
Level 5	IC 140-27843/12	HB20IC05.D
Level 6	IC 140-27843/13	HB20IC06.D
Level 7	ICIS 140-27843/14	HB20IC07.D
Level 8	IC 140-27843/15	HB20IC08.D
Level 9	IC 140-27843/3	HB20IC09.D
Level 10	IC 140-27843/5	HB20IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	3.4653	3.1705	3.1944	3.1500	Ave		3.2799			4.2		30.0				
	3.1939	3.2579	3.1981	3.5227	3.3659												
Propene	+++++	+++++	1.7587	1.4845	1.4290	Ave		1.4914			7.7		30.0				
	1.4326	1.4362	1.4091	1.5280	1.4530												
Dichlorodifluoromethane	5.8144	5.0640	4.8366	4.9504	4.8580	Ave		5.0379			6.0		30.0				
	4.8876	5.0248	4.8446	5.2377	4.8608												
Chloromethane	+++++	+++++	+++++	0.6715	0.5966	Ave		0.5876			7.4		30.0				
	0.5872	0.5848	0.5550	0.5865	0.5318												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.7320	3.4028	3.3465	3.4027	Ave		3.4749			3.3		30.0				
	3.4272	3.5307	3.4425	3.5488	3.4411												
Vinyl chloride	+++++	2.0465	1.8423	1.8473	1.8163	Ave		1.8271			5.6		30.0				
	1.8203	1.8334	1.7435	1.8315	1.6623												
Butane	+++++	+++++	2.7879	2.8437	2.7009	Ave		2.6143			7.2		30.0				
	2.6844	2.6215	2.4361	2.5669	2.2728												
1,3-Butadiene	+++++	+++++	1.3389	1.3779	1.3208	Ave		1.3198			4.0		30.0				
	1.3288	1.3568	1.2722	1.3471	1.2155												
Bromomethane	+++++	+++++	1.8623	1.9344	1.8572	Ave		1.8480			3.2		30.0				
	1.8498	1.8745	1.7805	1.8774	1.7481												
Chloroethane	+++++	+++++	0.8855	0.8409	0.8547	Ave		0.8331			3.9		30.0				
	0.8383	0.8323	0.8039	0.8312	0.7778												
Ethanol	+++++	+++++	0.8934	0.8231	0.8080	Ave		0.8189			6.1		30.0				
	0.8037	0.8564	0.8028	0.8429	0.7211												
Vinyl bromide	+++++	1.9018	1.7722	1.7366	1.7418	Ave		1.7583			3.6		30.0				
	1.7437	1.7838	1.7019	1.7701	1.6732												
2-Methylbutane	+++++	+++++	2.0515	1.9633	1.9838	Ave		1.9393			4.2		30.0				
	1.9590	1.9816	1.8753	1.9172	1.7822												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 4.5968	4.8919 4.5966	4.5963 4.4102	4.6432 4.6616	4.6819 4.3585	Ave		4.6041			3.4		30.0				
Acrolein	++++ 0.5846	++++ 0.5959	++++ 0.5782	0.6004 0.6012	0.5874 0.5473	Ave		0.5850			3.2		30.0				
Acetonitrile	++++ 0.7177	++++ 0.7681	++++ 0.7379	0.7408 0.7567	0.7405 0.6910	Ave		0.7361			3.4		30.0				
Acetone	++++ 0.7514	++++ 0.7610	++++ 0.7228	0.8447 0.7183	0.7906 0.6754	Ave		0.7520			7.3		30.0				
Pentane	++++ 0.2123	++++ 0.2170	++++ 0.2070	0.2190 0.2038	0.2202 0.1943	Ave		0.2105			4.5		30.0				
Isopropyl alcohol	2.7418 2.1881	2.3188 2.2924	2.2272 2.1969	2.1770 2.2190	1.6999 1.9893	QuaF		2.3689	-0.007836					1.0000		0.9900	
Ethyl ether	++++ 1.8837	2.0347 1.9038	1.8861 1.7817	1.8427 1.8377	1.9152 1.6737	Ave		1.8621			5.3		30.0				
1,1-Dichloroethene	++++ 1.5290	1.7340 1.5543	1.5403 1.5141	1.5633 1.5140	1.5440 1.4908	Ave		1.5537			4.6		30.0				
Acrylonitrile	++++ 1.1815	++++ 1.2218	1.1258 1.2125	1.1965 1.2550	1.1794 1.1889	Ave		1.1952			3.1		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.6645	4.0846 3.6642	3.7625 3.5412	3.7405 3.6163	3.7204 3.4760	Ave		3.6967			4.7		30.0				
tert-Butyl alcohol	++++ 2.5653	++++ 2.7860	2.5284 2.7619	2.5014 2.8005	2.5277 2.6087	Ave		2.6350			4.8		30.0				
Methylene Chloride	++++ 1.5650	++++ 1.4959	++++ 1.3885	2.4719 1.3565	1.8784 1.2927	Ave		1.6355			25.4		30.0				
3-Chloropropene	++++ 1.4263	++++ 1.4402	1.7866 1.3797	1.5003 1.4158	1.4252 1.3047	Ave		1.4598			9.8		30.0				
Carbon disulfide	++++ 4.5267	++++ 4.6305	4.5536 4.4426	4.5843 4.4448	4.5189 4.2681	Ave		4.4962			2.5		30.0				
trans-1,2-Dichloroethene	++++ 1.5549	1.7812 1.5959	1.5579 1.5626	1.5474 1.5716	1.5873 1.5791	Ave		1.5931			4.5		30.0				
2-Methylpentane	++++ 3.6495	3.8413 3.7329	3.6302 3.5934	3.6663 3.6789	3.6726 3.4794	Ave		3.6605			2.7		30.0				
Methyl tert-butyl ether	++++ 3.8063	++++ 3.9290	3.6249 3.8501	3.6903 3.7951	3.7667 3.7289	Ave		3.7739			2.5		30.0				
1,1-Dichloroethane	++++ 3.0039	3.2165 3.0616	3.0410 2.9531	3.0857 3.0007	3.0099 2.9039	Ave		3.0307			2.9		30.0				
Vinyl acetate	++++ 4.3714	++++ 4.6452	3.6694 4.6119	3.8279 4.8234	4.0421 4.6436	Ave		4.3293			9.9		30.0				
Hexane	++++ 1.2057	1.3026 1.2192	1.1775 1.1910	1.1729 1.2227	1.1991 1.2068	Ave		1.2108			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14390-1

Analy Batch No.: 27843

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 02/20/2019 15:12

Calibration End Date: 02/21/2019 01:57

Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++ 0.6760	++++ 0.7192	++++ 0.7039	0.6508 0.6996	0.6769 0.6879	Ave		0.6878			3.3		30.0				
cis-1,2-Dichloroethene	++++ 1.5744	1.7468 1.6363	1.5933 1.5970	1.6008 1.5970	1.5882 1.5988	Ave		1.6147			3.2		30.0				
Ethyl acetate	++++ 3.8330	++++ 3.9793	3.7437 3.9131	3.7153 4.0646	3.7356 3.8788	Ave		3.8579			3.2		30.0				
Chloroform	++++ 3.4568	3.6507 3.5041	3.4694 3.4001	3.5102 3.4590	3.4542 3.3756	Ave		3.4756			2.3		30.0				
Tetrahydrofuran	++++ 1.8356	2.0384 1.8762	1.8755 1.8441	1.8215 1.9023	1.7999 1.8263	Ave		1.8689			3.8		30.0				
1,1,1-Trichloroethane	++++ 3.2539	3.3591 3.4003	3.1133 3.3660	3.1042 3.4402	3.2027 3.5047	Ave		3.3049			4.3		30.0				
1,2-Dichloroethane	0.4792 0.4208	0.4342 0.4309	0.4004 0.4260	0.4094 0.4468	0.4128 0.4496	Ave		0.4310			5.4		30.0				
Cyclohexane	++++ 0.1234	++++ 0.1282	++++ 0.1287	0.1130 0.1363	0.1144 0.1399	Ave		0.1257			7.6		30.0				
Benzene	++++ 0.8262	0.8954 0.8466	0.8112 0.8440	0.7881 0.8945	0.8065 0.8990	Ave		0.8457			5.0		30.0				
Carbon tetrachloride	0.7487 0.6708	0.6490 0.7010	0.6034 0.7125	0.5747 0.7615	0.6367 0.7873	Ave		0.6846			10.2		30.0				
1-Butanol	++++ 0.1071	++++ 0.1245	++++ 0.1248	0.0965 0.1330	0.0979 0.1172	Ave		0.1144			12.4		30.0				
2,3-Dimethylpentane	++++ 0.1796	0.1766 0.1801	0.1665 0.1766	0.1668 0.1780	0.1769 0.1774	Ave		0.1754			2.9		30.0				
Thiophene	++++ 0.4824	0.4876 0.4945	0.4639 0.4890	0.4560 0.4969	0.4750 0.5094	Ave		0.4839			3.4		30.0				
2,2,4-Trimethylpentane	++++ 1.3660	1.4676 1.4074	1.3177 1.3906	1.3230 1.4688	1.3297 1.4871	Ave		1.3953			4.8		30.0				
Heptane	++++ 0.2663	0.2712 0.2737	0.2506 0.2749	0.2452 0.2881	0.2558 0.2989	Ave		0.2694			6.4		30.0				
1,2-Dichloropropane	++++ 0.3549	0.3683 0.3641	0.3346 0.3586	0.3506 0.3775	0.3450 0.3847	Ave		0.3598			4.4		30.0				
Trichloroethene	0.4632 0.3841	0.4095 0.3944	0.3655 0.3956	0.3672 0.4073	0.3757 0.4285	Ave		0.3991			7.5		30.0				
Dibromomethane	++++ 0.3974	0.4765 0.4115	0.4099 0.4077	0.4084 0.4323	0.3933 0.4360	Ave		0.4192			6.1		30.0				
Bromodichloromethane	0.6604 0.6222	0.5793 0.6529	0.5629 0.6534	0.5714 0.6923	0.5879 0.7149	Ave		0.6298			8.4		30.0				
1,4-Dioxane	++++ 0.1219	0.1357 0.1302	0.1276 0.1307	0.1218 0.1288	0.1227 0.1236	Ave		0.1270			3.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	0.4034	0.3437	0.2975	0.3269	0.3551	Ave		0.3781			12.1		30.0				
	0.3789	0.4060	0.4068	0.4343	0.4280												
Methylcyclohexane	++++	++++	0.4245	0.4287	0.4498	LinF		0.5272						0.9990		0.9900	
	0.4648	0.4877	0.4844	0.5074	0.5357												
4-Methyl-2-pentanone (MIBK)	++++	++++	0.7143	0.6509	0.6822	Ave		0.7577			10.3		30.0				
	0.7301	0.7728	0.7841	0.8611	0.8658												
cis-1,3-Dichloropropene	0.4871	0.3999	0.3931	0.4158	0.4395	Ave		0.4735			12.4		30.0				
	0.4778	0.5104	0.5121	0.5406	0.5587												
trans-1,3-Dichloropropene	0.4944	0.4260	0.4038	0.4133	0.4518	Ave		0.4856			12.2		30.0				
	0.4884	0.5211	0.5365	0.5532	0.5670												
Toluene	++++	1.1979	1.0972	1.0779	1.1122	Ave		1.1386			3.2		30.0				
	1.1442	1.1566	1.1486	1.1597	1.1532												
1,1,2-Trichloroethane	0.4133	0.3819	0.3518	0.3774	0.3800	Ave		0.3780			4.2		30.0				
	0.3813	0.3829	0.3732	0.3756	0.3625												
2-Hexanone	++++	++++	++++	0.2822	0.3272	Ave		0.3734			14.2		30.0				
	0.3617	0.3952	0.4022	0.4230	0.4226												
Octane	0.3431	0.2979	0.2983	0.3057	0.3158	Ave		0.3251			5.7		30.0				
	0.3345	0.3387	0.3351	0.3409	0.3405												
C8 Range	++++	++++	++++	2.6905	2.7814	Ave		2.9596			6.7		30.0				
	2.8847	2.9768	2.9653	3.2221	3.1962												
Dibromochloromethane	0.7111	0.6553	0.6167	0.6360	0.7095	Ave		0.7610			14.5		30.0				
	0.7798	0.8336	0.8540	0.8994	0.9146												
1,2-Dibromoethane (EDB)	0.7556	0.6517	0.5952	0.6231	0.6489	Ave		0.6894			8.3		30.0				
	0.6861	0.7166	0.7185	0.7452	0.7529												
Tetrachloroethene	0.5382	0.4943	0.4320	0.4547	0.4475	Ave		0.4638			6.6		30.0				
	0.4481	0.4549	0.4479	0.4602	0.4599												
Chlorobenzene	1.0921	0.9609	0.8656	0.8563	0.8903	Ave		0.9365			7.5		30.0				
	0.8958	0.9195	0.9278	0.9856	0.9706												
Ethylbenzene	1.6135	1.4227	1.3082	1.3322	1.3865	Ave		1.4498			6.5		30.0				
	1.4269	1.4796	1.4755	1.5346	1.5189												
m-Xylene & p-Xylene	1.2072	1.0640	0.9982	1.0439	1.0836	Ave		1.1179			6.4		30.0				
	1.1213	1.1561	1.1505	1.2259	1.1287												
Nonane	0.7214	0.6646	0.6269	0.6551	0.7128	Ave		0.7205			7.7		30.0				
	0.7434	0.7638	0.7531	0.8016	0.7620												
Bromoform	++++	++++	0.5650	0.5843	0.6966	Ave		0.8550			26.6		30.0				
	0.8072	0.9326	0.9922	1.1394	1.1231												
Styrene	0.7205	0.5902	0.6127	0.6375	0.7228	Ave		0.7534			15.1		30.0				
	0.7904	0.8466	0.8542	0.9160	0.8426												
o-Xylene	1.2934	1.1325	1.0847	1.1027	1.1495	Ave		1.1384			5.3		30.0				
	1.1502	1.1572	1.1094	1.1237	1.0809												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1 Analy Batch No.: 27843
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 02/20/2019 15:12 Calibration End Date: 02/21/2019 01:57 Calibration ID: 1829

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.9096	0.8625	0.8260	0.8361	0.9096	Ave		0.9221			7.0	30.0					
	0.9401	0.9755	0.9610	1.0114	0.9889												
1,2,3-Trichloropropane	0.2447	0.2178	0.2113	0.2130	0.2227	Ave		0.2272			5.1	30.0					
	0.2256	0.2303	0.2271	0.2361	0.2431												
Isopropylbenzene	1.7967	1.5351	1.4440	1.4632	1.5279	Ave		1.5707			6.3	30.0					
	1.5633	1.5715	1.5587	1.6321	1.6144												
Propylbenzene	0.4012	0.3808	0.3409	0.3592	0.3891	Ave		0.4111			11.6	30.0					
	0.4107	0.4308	0.4332	0.4685	0.4967												
2-Chlorotoluene	0.4669	0.3905	0.3655	0.3667	0.3951	Ave		0.4027			7.3	30.0					
	0.3964	0.4055	0.3991	0.4165	0.4244												
4-Ethyltoluene	1.4351	1.3019	1.3077	1.3685	1.4589	Ave		1.4935			9.5	30.0					
	1.5278	1.5863	1.5805	1.6912	1.6776												
1,3,5-Trimethylbenzene	++++	++++	0.5413	0.5786	0.6024	Lin1	-0.018	0.6744						0.9990		0.9900	
	0.6176	0.6376	0.6340	0.6743	0.6871												
Alpha Methyl Styrene	++++	++++	++++	0.4208	0.4981	Ave		0.6224			21.8	30.0					
	0.5685	0.6414	0.6778	0.7497	0.8004												
Decane	0.8670	0.8318	0.8501	0.8994	0.9689	Ave		0.9226			6.4	30.0					
	0.9743	0.9881	0.9374	0.9947	0.9138												
tert-Butylbenzene	1.3232	1.2918	1.2707	1.3008	1.3524	Ave		1.3980			8.3	30.0					
	1.3873	1.4399	1.4507	1.6252	1.5376												
1,2,4-Trimethylbenzene	1.2112	1.1922	1.2018	1.2261	1.2756	Ave		1.3033			7.8	30.0					
	1.3135	1.3589	1.3540	1.5084	1.3912												
sec-Butylbenzene	1.9008	1.7647	1.7019	1.7864	1.8764	Ave		1.9482			9.3	30.0					
	1.9575	2.0412	2.0527	2.3032	2.0968												
1,3-Dichlorobenzene	0.9710	0.9136	0.8392	0.8456	0.8596	Ave		0.9455			10.4	30.0					
	0.8871	0.9433	0.9831	1.1213	1.0913												
Benzyl chloride	++++	++++	++++	0.5869	0.7162	Ave		0.9648			27.2	30.0					
	0.8511	0.9916	1.0755	1.2636	1.2685												
1,4-Dichlorobenzene	0.8993	0.8397	0.7743	0.7878	0.8054	Ave		0.8947			11.9	30.0					
	0.8484	0.9077	0.9477	1.0688	1.0683												
4-Isopropyltoluene	1.3948	1.3577	1.3402	1.4210	1.5104	Ave		1.5120			8.5	30.0					
	1.5570	1.5989	1.5830	1.7130	1.6444												
1,2,3-Trimethylbenzene	1.2663	1.2149	1.1671	1.2381	1.2887	Ave		1.2797			4.8	30.0					
	1.2982	1.3173	1.2872	1.3672	1.3515												
Indane	1.2186	1.1243	1.0675	1.0961	1.1826	Ave		1.2519			11.7	30.0					
	1.2431	1.3163	1.3515	1.5395	1.3790												
1,2-Dichlorobenzene	0.9498	0.8850	0.8350	0.8518	0.8698	Ave		0.9417			10.4	30.0					
	0.8906	0.9443	0.9892	1.1350	1.0670												
Indene	++++	++++	++++	0.8141	0.9137	Ave		1.0768			17.1	30.0					
	0.9935	1.0962	1.1520	1.3505	1.2176												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.231		1.97	2.00	-1.5	35.0
Propene	Ave	1.491	1.400		1.88	2.00	-6.1	35.0
Dichlorodifluoromethane	Ave	5.038	4.975		1.97	2.00	-1.3	35.0
Chloromethane	Ave	0.5876	0.5516		1.88	2.00	-6.1	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.543		2.04	2.00	2.0	35.0
Vinyl chloride	Ave	1.827	1.812		1.98	2.00	-0.8	35.0
Acetaldehyde	Ave	0.7017	0.6186		8.81	10.0	-11.9	35.0
1,3-Butadiene	Ave	1.320	1.310		1.98	2.00	-0.8	35.0
Butane	Ave	2.614	2.580		1.97	2.00	-1.3	35.0
Bromomethane	Ave	1.848	1.784		1.93	2.00	-3.4	35.0
Chloroethane	Ave	0.8331	0.8331		2.00	2.00	0.0	35.0
Ethanol	Ave	0.8189	0.6091		7.44	10.0	-25.6	35.0
Vinyl bromide	Ave	1.758	1.854		2.11	2.00	5.4	35.0
2-Methylbutane	Ave	1.939	1.998		2.06	2.00	3.0	35.0
Trichlorofluoromethane	Ave	4.604	4.525		1.97	2.00	-1.7	35.0
Acrolein	Ave	0.5850	0.6530		2.23	2.00	11.6	35.0
Acetonitrile	Ave	0.7361	0.7152		1.94	2.00	-2.8	35.0
Acetone	Ave	0.7520	0.7484		1.99	2.00	-0.5	35.0
Pentane	Ave	0.2105	0.2264		2.15	2.00	7.5	35.0
Isopropyl alcohol	QuaF		2.642		2.25	2.00	12.4	35.0
Ethyl ether	Ave	1.862	1.936		2.08	2.00	4.0	35.0
1,1-Dichloroethene	Ave	1.554	1.575		2.03	2.00	1.4	35.0
Acrylonitrile	Ave	1.195	1.264		2.12	2.00	5.8	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	3.681		1.99	2.00	-0.4	35.0
tert-Butyl alcohol	Ave	2.635	2.747		2.08	2.00	4.2	35.0
Methylene Chloride	Ave	1.636	1.497		1.83	2.00	-8.5	35.0
3-Chloropropene	Ave	1.460	1.308		1.79	2.00	-10.4	35.0
Carbon disulfide	Ave	4.496	4.585		2.04	2.00	2.0	35.0
trans-1,2-Dichloroethene	Ave	1.593	1.590		2.00	2.00	-0.2	35.0
2-Methylpentane	Ave	3.661	3.368		1.84	2.00	-8.0	35.0
Methyl tert-butyl ether	Ave	3.774	3.976		2.11	2.00	5.3	35.0
1,1-Dichloroethane	Ave	3.031	3.103		2.05	2.00	2.4	35.0
Vinyl acetate	Ave	4.329	4.787		2.21	2.00	10.6	35.0
Hexane	Ave	1.211	1.222		2.02	2.00	0.9	35.0
2-Butanone (MEK)	Ave	0.6878	0.7069		2.06	2.00	2.8	35.0
Isopropyl ether	Ave	5.664	5.931		2.09	2.00	4.7	35.0
cis-1,2-Dichloroethene	Ave	1.615	1.679		2.08	2.00	4.0	35.0
Ethyl acetate	Ave	3.858	3.811		1.98	2.00	-1.2	35.0
Chloroform	Ave	3.476	3.526		2.03	2.00	1.5	35.0
Tert-butyl ethyl ether	Ave	4.715	4.645		1.97	2.00	-1.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	1.886		2.02	2.00	0.9	35.0
1,1,1-Trichloroethane	Ave	3.305	3.421		2.07	2.00	3.5	35.0
1,2-Dichloroethane	Ave	0.4310	0.4324		2.01	2.00	0.3	35.0
Cyclohexane	Ave	0.1257	0.1289		2.05	2.00	2.5	35.0
Benzene	Ave	0.8457	0.8700		2.06	2.00	2.9	35.0
Carbon tetrachloride	Ave	0.6846	0.7122		2.08	2.00	4.0	35.0
1-Butanol	Ave	0.1144	0.1208		2.11	2.00	5.6	35.0
2,3-Dimethylpentane	Ave	0.1754	0.1733		1.98	2.00	-1.2	35.0
Thiophene	Ave	0.4839	0.4800		1.98	2.00	-0.8	35.0
2,2,4-Trimethylpentane	Ave	1.395	1.420		2.04	2.00	1.8	35.0
Heptane	Ave	0.2694	0.2742		2.04	2.00	1.8	35.0
1,2-Dichloropropane	Ave	0.3598	0.3655		2.03	2.00	1.6	35.0
Trichloroethene	Ave	0.3991	0.4065		2.04	2.00	1.8	35.0
Dibromomethane	Ave	0.4192	0.4231		2.02	2.00	0.9	35.0
Bromodichloromethane	Ave	0.6298	0.6609		2.10	2.00	4.9	35.0
1,4-Dioxane	Ave	0.1270	0.1217		1.92	2.00	-4.2	35.0
Methyl methacrylate	Ave	0.3781	0.4011		2.12	2.00	6.1	35.0
Methylcyclohexane	LinF		0.5855		2.22	2.00	11.1	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.7683		2.03	2.00	1.4	35.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5252		2.22	2.00	10.9	35.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5421		2.23	2.00	11.6	35.0
Toluene	Ave	1.139	1.196		2.10	2.00	5.0	35.0
1,1,2-Trichloroethane	Ave	0.3780	0.3876		2.05	2.00	2.5	35.0
2-Hexanone	Ave	0.3734	0.3927		2.10	2.00	5.2	35.0
Octane	Ave	0.3251	0.3451		2.12	2.00	6.2	35.0
Dibromochloromethane	Ave	0.7610	0.8504		2.24	2.00	11.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7285		2.11	2.00	5.7	35.0
Tetrachloroethene	Ave	0.4638	0.4651		2.01	2.00	0.3	35.0
Chlorobenzene	Ave	0.9365	0.9565		2.04	2.00	2.1	35.0
2,3-Dimethylheptane	Ave	1.197	1.077		1.80	2.00	-10.0	35.0
Ethylbenzene	Ave	1.450	1.522		2.10	2.00	5.0	35.0
m-Xylene & p-Xylene	Ave	1.118	1.189		4.25	4.00	6.3	35.0
Nonane	Ave	0.7205	0.7824		2.17	2.00	8.6	35.0
Bromoform	Ave	0.8550	0.9411		2.20	2.00	10.1	35.0
Styrene	Ave	0.7534	0.8717		2.31	2.00	15.7	35.0
o-Xylene	Ave	1.138	1.168		2.05	2.00	2.6	35.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	0.9802		2.13	2.00	6.3	35.0
1,2,3-Trichloropropane	Ave	0.2272	0.2354		2.07	2.00	3.6	35.0
Isopropylbenzene	Ave	1.571	1.652		2.10	2.00	5.2	35.0
Propylbenzene	Ave	0.4111	0.4566		2.22	2.00	11.1	35.0
2-Chlorotoluene	Ave	0.4027	0.4284		2.13	2.00	6.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: ICV 140-27843/17 Calibration Date: 02/21/2019 03:43
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HB20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.553		2.08	2.00	4.0	35.0
1,3,5-Trimethylbenzene	Lin1		0.7424		2.23	2.00	11.4	35.0
Alpha Methyl Styrene	Ave	0.6224	0.6616		2.13	2.00	6.3	35.0
Decane	Ave	0.9226	1.006		2.18	2.00	9.0	35.0
tert-Butylbenzene	Ave	1.398	1.493		2.14	2.00	6.8	35.0
1,2,4-Trimethylbenzene	Ave	1.303	1.389		2.13	2.00	6.6	35.0
sec-Butylbenzene	Ave	1.948	2.098		2.15	2.00	7.7	35.0
1,3-Dichlorobenzene	Ave	0.9455	0.9755		2.06	2.00	3.2	35.0
Benzyl chloride	Ave	0.9648	1.027		2.13	2.00	6.4	35.0
1,4-Dichlorobenzene	Ave	0.8947	0.9383		2.10	2.00	4.9	35.0
4-Isopropyltoluene	Ave	1.512	1.631		2.16	2.00	7.9	35.0
1,2,3-Trimethylbenzene	Ave	1.280	0.9816		1.53	2.00	-23.3	35.0
Butylcyclohexane	Ave	1.039	1.012		1.95	2.00	-2.6	35.0
1,2-Dichlorobenzene	Ave	0.9417	0.9787		2.08	2.00	3.9	35.0
Indane	Ave	1.252	1.300		2.08	2.00	3.9	35.0
Indene	Ave	1.077	0.9377		1.74	2.00	-12.9	35.0
Butylbenzene	Ave	1.562	1.735		2.22	2.00	11.0	35.0
Undecane	Ave	1.067	1.128		2.11	2.00	5.7	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.4026		2.06	2.00	3.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.478		2.10	2.00	4.9	35.0
Dodecane	Ave	1.039	1.175		2.26	2.00	13.1	35.0
1,2,4-Trichlorobenzene	Lin1		0.7912		2.07	2.00	3.6	35.0
Naphthalene	Ave	1.402	1.687		2.41	2.00	20.3	35.0
Hexachlorobutadiene	Ave	0.8888	0.9262		2.08	2.00	4.2	35.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.8815		2.35	2.00	17.7	35.0
2-Methylnaphthalene	Ave	0.5392	0.5260		1.95	2.00	-2.4	50.0
1-Methylnaphthalene	Ave	0.7641	0.6284		1.65	2.00	-17.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6484		3.98	4.00	-0.5	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: HBFB20.D BFB Injection Date: 02/26/2019
 Instrument ID: MH BFB Injection Time: 09:56
 Analysis Batch No.: 27936

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	19.8
75	30.0 - 60.0 % of mass 95	46.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.9
173	Less than 2.0 % of mass 174	0.5 (0.5) 1
174	50.0 - 120.00 % of mass 95	98.0
175	5.0 - 9.0 % of mass 174	6.8 (7.0) 1
176	95.0 - 101.0 % of mass 174	94.9 (96.9) 1
177	5.0 - 9.0 % of mass 176	6.1 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27936/2	HCCVB20.D	02/26/2019	10:24
	LCS 140-27936/1002	HCCVB20-LCS.d	02/26/2019	10:24
	MB 140-27936/4	H500BB22.D	02/26/2019	12:38
SV-126-C-26	140-14390-1	HB26P101.D	02/26/2019	13:31
SV-100-C-26	140-14390-3	HB26P103.D	02/26/2019	15:17
SV-060-C-26	140-14390-4	HB26P104.D	02/26/2019	16:10
SV-118-A-26	140-14390-5	HB26P105.D	02/26/2019	17:03
SV-015-A-26	140-14390-6	HB26P106.D	02/26/2019	17:56
SV-078-A-26	140-14390-7	HB26P107.D	02/26/2019	18:49
SV-136-A-26	140-14390-8	HB26P108.D	02/26/2019	19:43
SV-076-A-26	140-14390-9	HB26P109.D	02/26/2019	20:36
SV-168-A-26	140-14390-10	HB26P110.D	02/26/2019	21:29
SV-075-A-26	140-14390-11	HB26P111.D	02/26/2019	22:23
BCK-1-26	140-14390-12	HB26P112.D	02/27/2019	00:09
BCK-2-26	140-14390-13	HB26P113.D	02/27/2019	01:02
BCK-3-26	140-14390-14	HB26P114.D	02/27/2019	01:55
BCK-4-26	140-14390-15	HB26P115.D	02/27/2019	02:48
IA-001-C-26	140-14390-16	HB26P116D.D	02/27/2019	03:41
SV-126-C-26 DL	140-14390-1 DL	HB26P101D.D	02/27/2019	05:28
SV-101-C-26	140-14390-2	HB26P102R.D	02/27/2019	06:22
IA-004-C-26	140-14390-17	HB26P203R.D	02/27/2019	07:16
SV-060-C-26 DL	140-14390-4 DL	HB26P104DL.D	02/27/2019	08:09

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27936/2 Calibration Date: 02/26/2019 10:24
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB20.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.316		1.01	1.00	1.1	30.0
Propene	Ave	1.491	1.449		0.971	1.00	-2.9	30.0
Dichlorodifluoromethane	Ave	5.038	5.024		0.997	1.00	-0.3	30.0
Chloromethane	Ave	0.5876	0.5928		1.01	1.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.602		1.04	1.00	3.7	30.0
Vinyl chloride	Ave	1.827	1.941		1.06	1.00	6.2	30.0
Acetaldehyde	Ave	0.7017	0.6786		4.84	5.00	-3.3	30.0
1,3-Butadiene	Ave	1.320	1.386		1.05	1.00	5.0	30.0
Butane	Ave	2.614	2.867		1.10	1.00	9.7	30.0
Bromomethane	Ave	1.848	1.891		1.02	1.00	2.3	30.0
Chloroethane	Ave	0.8331	0.8788		1.05	1.00	5.5	30.0
Ethanol	Ave	0.8189	0.6709		4.10	5.00	-18.1	30.0
Vinyl bromide	Ave	1.758	1.931		1.10	1.00	9.8	30.0
2-Methylbutane	Ave	1.939	2.073		1.07	1.00	6.9	30.0
Trichlorofluoromethane	Ave	4.604	4.705		1.02	1.00	2.2	30.0
Acrolein	Ave	0.5850	0.6123		1.05	1.00	4.7	30.0
Acetonitrile	Ave	0.7361	0.7478		1.02	1.00	1.6	30.0
Acetone	Ave	0.7520	0.8069		1.07	1.00	7.3	30.0
Pentane	Ave	0.2105	0.2289		1.09	1.00	8.8	30.0
Isopropyl alcohol	QuaF		2.687		1.14	1.00	13.8	30.0
Ethyl ether	Ave	1.862	2.011		1.08	1.00	8.0	30.0
1,1-Dichloroethene	Ave	1.554	1.566		1.01	1.00	0.8	30.0
Acrylonitrile	Ave	1.195	1.264		1.06	1.00	5.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	3.776		1.02	1.00	2.2	30.0
tert-Butyl alcohol	Ave	2.635	2.689		1.02	1.00	2.0	30.0
Methylene Chloride	Ave	1.636	1.629		0.996	1.00	-0.4	30.0
3-Chloropropene	Ave	1.460	1.526		1.05	1.00	4.5	30.0
Carbon disulfide	Ave	4.496	4.677		1.04	1.00	4.0	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.607		1.01	1.00	0.9	30.0
2-Methylpentane	Ave	3.661	3.447		0.942	1.00	-5.8	30.0
Methyl tert-butyl ether	Ave	3.774	3.956		1.05	1.00	4.8	30.0
1,1-Dichloroethane	Ave	3.031	3.136		1.03	1.00	3.5	30.0
Vinyl acetate	Ave	4.329	4.623		1.07	1.00	6.8	30.0
Hexane	Ave	1.211	1.226		1.01	1.00	1.2	30.0
2-Butanone (MEK)	Ave	0.6878	0.6996		1.02	1.00	1.7	30.0
Isopropyl ether	Ave	5.664	5.960		1.05	1.00	5.2	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.662		1.03	1.00	2.9	30.0
Ethyl acetate	Ave	3.858	3.837		0.995	1.00	-0.5	30.0
Chloroform	Ave	3.476	3.608		1.04	1.00	3.8	30.0
Tert-butyl ethyl ether	Ave	4.715	4.610		0.978	1.00	-2.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27936/2 Calibration Date: 02/26/2019 10:24
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB20.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	1.901		1.02	1.00	1.7	30.0
1,1,1-Trichloroethane	Ave	3.305	3.372		1.02	1.00	2.0	30.0
1,2-Dichloroethane	Ave	0.4310	0.4365		1.01	1.00	1.3	30.0
Cyclohexane	Ave	0.1257	0.1245		0.990	1.00	-1.0	30.0
Benzene	Ave	0.8457	0.8690		1.03	1.00	2.8	30.0
Carbon tetrachloride	Ave	0.6846	0.6978		1.02	1.00	1.9	30.0
1-Butanol	Ave	0.1144	0.1135		0.992	1.00	-0.8	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1772		1.01	1.00	1.0	30.0
Thiophene	Ave	0.4839	0.4812		0.995	1.00	-0.5	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.415		1.01	1.00	1.4	30.0
Heptane	Ave	0.2694	0.2673		0.992	1.00	-0.8	30.0
1,2-Dichloropropane	Ave	0.3598	0.3680		1.02	1.00	2.3	30.0
Trichloroethene	Ave	0.3991	0.3983		0.998	1.00	-0.2	30.0
Dibromomethane	Ave	0.4192	0.4221		1.01	1.00	0.7	30.0
Bromodichloromethane	Ave	0.6298	0.6505		1.03	1.00	3.3	30.0
1,4-Dioxane	Ave	0.1270	0.1221		0.961	1.00	-3.9	30.0
Methyl methacrylate	Ave	0.3781	0.3880		1.03	1.00	2.6	30.0
Methylcyclohexane	LinF		0.5744		1.09	1.00	9.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.7558		0.997	1.00	-0.3	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5127		1.08	1.00	8.3	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5249		1.08	1.00	8.1	30.0
Toluene	Ave	1.139	1.187		1.04	1.00	4.3	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.3949		1.04	1.00	4.5	30.0
2-Hexanone	Ave	0.3734	0.3804		1.02	1.00	1.9	30.0
Octane	Ave	0.3251	0.3428		1.05	1.00	5.5	30.0
Dibromochloromethane	Ave	0.7610	0.8224		1.08	1.00	8.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7180		1.04	1.00	4.1	30.0
Tetrachloroethene	Ave	0.4638	0.4683		1.01	1.00	1.0	30.0
Chlorobenzene	Ave	0.9365	0.9443		1.01	1.00	0.8	30.0
2,3-Dimethylheptane	Ave	1.197	1.102		0.921	1.00	-7.9	30.0
Ethylbenzene	Ave	1.450	1.490		1.03	1.00	2.8	30.0
m-Xylene & p-Xylene	Ave	1.118	1.185		2.12	2.00	6.0	30.0
Nonane	Ave	0.7205	0.7611		1.06	1.00	5.6	30.0
Bromoform	Ave	0.8550	0.8200		0.959	1.00	-4.1	30.0
Styrene	Ave	0.7534	0.8226		1.09	1.00	9.2	30.0
o-Xylene	Ave	1.138	1.170		1.03	1.00	2.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	0.9693		1.05	1.00	5.1	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2290		1.01	1.00	0.8	30.0
Isopropylbenzene	Ave	1.571	1.625		1.03	1.00	3.5	30.0
Propylbenzene	Ave	0.4111	0.4243		1.03	1.00	3.2	30.0
2-Chlorotoluene	Ave	0.4027	0.4135		1.03	1.00	2.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27936/2 Calibration Date: 02/26/2019 10:24
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB20.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.476		0.988	1.00	-1.2	30.0
1,3,5-Trimethylbenzene	Lin1		0.7128		1.08	1.00	8.4	30.0
Alpha Methyl Styrene	Ave	0.6224	0.5801		0.932	1.00	-6.8	30.0
Decane	Ave	0.9226	0.9868		1.07	1.00	7.0	30.0
tert-Butylbenzene	Ave	1.398	1.428		1.02	1.00	2.2	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.339		1.03	1.00	2.7	30.0
sec-Butylbenzene	Ave	1.948	2.002		1.03	1.00	2.8	30.0
1,3-Dichlorobenzene	Ave	0.9455	0.8984		0.950	1.00	-5.0	30.0
Benzyl chloride	Ave	0.9648	0.9208		0.954	1.00	-4.6	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.8455		0.945	1.00	-5.5	30.0
4-Isopropyltoluene	Ave	1.512	1.580		1.05	1.00	4.5	30.0
1,2,3-Trimethylbenzene	Ave	1.280	0.9713		0.759	1.00	-24.1	30.0
Butylcyclohexane	Ave	1.039	1.018		0.980	1.00	-2.0	30.0
1,2-Dichlorobenzene	Ave	0.9417	0.8992		0.955	1.00	-4.5	30.0
Indane	Ave	1.252	1.217		0.972	1.00	-2.8	30.0
Indene	Ave	1.077	0.8337		0.774	1.00	-22.6	30.0
Butylbenzene	Ave	1.562	1.697		1.09	1.00	8.6	30.0
Undecane	Ave	1.067	1.082		1.01	1.00	1.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3539		0.906	1.00	-9.4	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.314		0.933	1.00	-6.7	30.0
Dodecane	Ave	1.039	0.9684		0.932	1.00	-6.8	30.0
1,2,4-Trichlorobenzene	Lin1		0.5696		0.789	1.00	-21.1	30.0
Naphthalene	Ave	1.402	1.323		0.944	1.00	-5.6	30.0
Hexachlorobutadiene	Ave	0.8888	0.8093		0.911	1.00	-8.9	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.6973		0.931	1.00	-6.9	30.0
2-Methylnaphthalene	Ave	0.5392	0.2757		0.511	1.00	-48.9	50.0
1-Methylnaphthalene	Ave	0.7641	0.3387		0.443	1.00	-55.7*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6429		3.95	4.00	-1.4	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab File ID: HBFB27.D BFB Injection Date: 02/27/2019
 Instrument ID: MH BFB Injection Time: 11:22
 Analysis Batch No.: 27980

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.7
75	30.0 - 60.0 % of mass 95	48.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.4) 1
174	50.0 - 120.00 % of mass 95	91.8
175	5.0 - 9.0 % of mass 174	6.5 (7.0) 1
176	95.0 - 101.0 % of mass 174	88.9 (96.8) 1
177	5.0 - 9.0 % of mass 176	5.8 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27980/2	HCCVB27.D	02/27/2019	11:50
	LCS 140-27980/1002	HCCVB27-LCS. d	02/27/2019	11:50
	MB 140-27980/5	HB27LOT14399 MB.D	02/27/2019	13:42
SV-118-A-26 DL	140-14390-5 DL	HB27P112.D	02/28/2019	03:30
IA-131-C-26	140-14390-18	HB27P113.D	02/28/2019	04:23

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.280	3.582		1.09	1.00	9.2	30.0
Propene	Ave	1.491	1.525		1.02	1.00	2.3	30.0
Dichlorodifluoromethane	Ave	5.038	5.333		1.06	1.00	5.9	30.0
Chloromethane	Ave	0.5876	0.6486		1.10	1.00	10.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.475	3.636		1.05	1.00	4.6	30.0
Vinyl chloride	Ave	1.827	2.022		1.11	1.00	10.7	30.0
Acetaldehyde	Ave	0.7017	0.7335		5.23	5.00	4.5	30.0
1,3-Butadiene	Ave	1.320	1.465		1.11	1.00	11.0	30.0
Butane	Ave	2.614	3.037		1.16	1.00	16.2	30.0
Bromomethane	Ave	1.848	2.013		1.09	1.00	8.9	30.0
Chloroethane	Ave	0.8331	0.9136		1.10	1.00	9.7	30.0
Ethanol	Ave	0.8189	0.7398		4.52	5.00	-9.7	30.0
Vinyl bromide	Ave	1.758	2.069		1.18	1.00	17.6	30.0
2-Methylbutane	Ave	1.939	2.241		1.16	1.00	15.6	30.0
Trichlorofluoromethane	Ave	4.604	5.060		1.10	1.00	9.9	30.0
Acrolein	Ave	0.5850	0.6401		1.09	1.00	9.4	30.0
Acetonitrile	Ave	0.7361	0.8155		1.11	1.00	10.8	30.0
Acetone	Ave	0.7520	0.8565		1.14	1.00	13.9	30.0
Pentane	Ave	0.2105	0.2364		1.12	1.00	12.3	30.0
Isopropyl alcohol	QuaF		2.815		1.19	1.00	19.3	30.0
Ethyl ether	Ave	1.862	2.216		1.19	1.00	19.0	30.0
1,1-Dichloroethene	Ave	1.554	1.640		1.06	1.00	5.6	30.0
Acrylonitrile	Ave	1.195	1.332		1.11	1.00	11.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.697	4.086		1.11	1.00	10.5	30.0
tert-Butyl alcohol	Ave	2.635	2.774		1.05	1.00	5.3	30.0
Methylene Chloride	Ave	1.636	1.731		1.06	1.00	5.9	30.0
3-Chloropropene	Ave	1.460	1.651		1.13	1.00	13.1	30.0
Carbon disulfide	Ave	4.496	5.037		1.12	1.00	12.0	30.0
trans-1,2-Dichloroethene	Ave	1.593	1.661		1.04	1.00	4.2	30.0
2-Methylpentane	Ave	3.661	3.712		1.01	1.00	1.4	30.0
Methyl tert-butyl ether	Ave	3.774	4.086		1.08	1.00	8.3	30.0
1,1-Dichloroethane	Ave	3.031	3.376		1.11	1.00	11.4	30.0
Vinyl acetate	Ave	4.329	4.892		1.13	1.00	13.0	30.0
Hexane	Ave	1.211	1.291		1.07	1.00	6.6	30.0
2-Butanone (MEK)	Ave	0.6878	0.7365		1.07	1.00	7.1	30.0
Isopropyl ether	Ave	5.664	6.416		1.13	1.00	13.3	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.767		1.09	1.00	9.4	30.0
Ethyl acetate	Ave	3.858	4.156		1.08	1.00	7.7	30.0
Chloroform	Ave	3.476	3.989		1.15	1.00	14.8	30.0
Tert-butyl ethyl ether	Ave	4.715	4.863		1.03	1.00	3.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.869	2.014		1.08	1.00	7.7	30.0
1,1,1-Trichloroethane	Ave	3.305	3.602		1.09	1.00	9.0	30.0
1,2-Dichloroethane	Ave	0.4310	0.4711		1.09	1.00	9.3	30.0
Benzene	Ave	0.8457	0.9162		1.08	1.00	8.3	30.0
Cyclohexane	Ave	0.1257	0.1264		1.00	1.00	0.5	30.0
Carbon tetrachloride	Ave	0.6846	0.7453		1.09	1.00	8.9	30.0
1-Butanol	Ave	0.1144	0.1225		1.07	1.00	7.1	30.0
2,3-Dimethylpentane	Ave	0.1754	0.1843		1.05	1.00	5.1	30.0
Thiophene	Ave	0.4839	0.5031		1.04	1.00	4.0	30.0
2,2,4-Trimethylpentane	Ave	1.395	1.506		1.08	1.00	7.9	30.0
Heptane	Ave	0.2694	0.2772		1.03	1.00	2.9	30.0
1,2-Dichloropropane	Ave	0.3598	0.3965		1.10	1.00	10.2	30.0
Trichloroethene	Ave	0.3991	0.4146		1.04	1.00	3.9	30.0
Dibromomethane	Ave	0.4192	0.4613		1.10	1.00	10.0	30.0
Bromodichloromethane	Ave	0.6298	0.7064		1.12	1.00	12.2	30.0
1,4-Dioxane	Ave	0.1270	0.1235		0.973	1.00	-2.7	30.0
Methyl methacrylate	Ave	0.3781	0.4271		1.13	1.00	13.0	30.0
Methylcyclohexane	LinF		0.5957		1.13	1.00	13.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7577	0.8028		1.06	1.00	6.0	30.0
cis-1,3-Dichloropropene	Ave	0.4735	0.5430		1.15	1.00	14.7	30.0
trans-1,3-Dichloropropene	Ave	0.4856	0.5432		1.12	1.00	11.9	30.0
Toluene	Ave	1.139	1.249		1.10	1.00	9.7	30.0
1,1,2-Trichloroethane	Ave	0.3780	0.4227		1.12	1.00	11.8	30.0
2-Hexanone	Ave	0.3734	0.3986		1.07	1.00	6.7	30.0
Octane	Ave	0.3251	0.3570		1.10	1.00	9.8	30.0
Dibromochloromethane	Ave	0.7610	0.8783		1.15	1.00	15.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.6894	0.7564		1.10	1.00	9.7	30.0
Tetrachloroethene	Ave	0.4638	0.4906		1.06	1.00	5.8	30.0
Chlorobenzene	Ave	0.9365	1.016		1.08	1.00	8.5	30.0
2,3-Dimethylheptane	Ave	1.197	1.242		1.04	1.00	3.8	30.0
Ethylbenzene	Ave	1.450	1.579		1.09	1.00	8.9	30.0
m-Xylene & p-Xylene	Ave	1.118	1.285		2.30	2.00	14.9	30.0
Nonane	Ave	0.7205	0.8189		1.14	1.00	13.7	30.0
Bromoform	Ave	0.8550	0.8677		1.01	1.00	1.5	30.0
Styrene	Ave	0.7534	0.8913		1.18	1.00	18.3	30.0
o-Xylene	Ave	1.138	1.284		1.13	1.00	12.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9221	1.065		1.15	1.00	15.5	30.0
1,2,3-Trichloropropane	Ave	0.2272	0.2451		1.08	1.00	7.9	30.0
Isopropylbenzene	Ave	1.571	1.737		1.11	1.00	10.6	30.0
Propylbenzene	Ave	0.4111	0.4533		1.10	1.00	10.3	30.0
2-Chlorotoluene	Ave	0.4027	0.4454		1.11	1.00	10.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27980/2 Calibration Date: 02/27/2019 11:50
 Instrument ID: MH Calib Start Date: 02/20/2019 15:12
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/21/2019 01:57
 Lab File ID: HCCVB27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.494	1.617		1.08	1.00	8.2	30.0
1,3,5-Trimethylbenzene	Lin1		0.7773		1.18	1.00	17.9	30.0
Alpha Methyl Styrene	Ave	0.6224	0.6345		1.02	1.00	2.0	30.0
Decane	Ave	0.9226	1.120		1.21	1.00	21.4	30.0
tert-Butylbenzene	Ave	1.398	1.570		1.12	1.00	12.3	30.0
1,2,4-Trimethylbenzene	Ave	1.303	1.500		1.15	1.00	15.1	30.0
sec-Butylbenzene	Ave	1.948	2.219		1.14	1.00	13.9	30.0
1,3-Dichlorobenzene	Ave	0.9455	1.004		1.06	1.00	6.1	30.0
Benzyl chloride	Ave	0.9648	1.031		1.07	1.00	6.9	30.0
1,4-Dichlorobenzene	Ave	0.8947	0.9350		1.05	1.00	4.5	30.0
4-Isopropyltoluene	Ave	1.512	1.756		1.16	1.00	16.2	30.0
1,2,3-Trimethylbenzene	Ave	1.280	1.068		0.835	1.00	-16.5	30.0
Butylcyclohexane	Ave	1.039	1.173		1.13	1.00	13.0	30.0
Indane	Ave	1.252	1.365		1.09	1.00	9.0	30.0
1,2-Dichlorobenzene	Ave	0.9417	1.007		1.07	1.00	7.0	30.0
Indene	Ave	1.077	0.9492		0.882	1.00	-11.8	30.0
Butylbenzene	Ave	1.562	1.974		1.26	1.00	26.3	30.0
Undecane	Ave	1.067	1.264		1.18	1.00	18.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3905	0.3904		1.00	1.00	-0.0	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.409	1.500		1.06	1.00	6.4	30.0
Dodecane	Ave	1.039	1.259		1.21	1.00	21.3	30.0
1,2,4-Trichlorobenzene	Lin1		0.6653		0.910	1.00	-9.0	30.0
Naphthalene	Ave	1.402	1.620		1.16	1.00	15.5	30.0
Hexachlorobutadiene	Ave	0.8888	0.9313		1.05	1.00	4.8	30.0
1,2,3-Trichlorobenzene	Ave	0.7492	0.8521		1.14	1.00	13.7	30.0
2-Methylnaphthalene	Ave	0.5392	0.4269		0.792	1.00	-20.8	50.0
1-Methylnaphthalene	Ave	0.7641	0.5441		0.712	1.00	-28.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6518	0.6727		4.13	4.00	3.2	30.0

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Batch Number: 27936 Batch Start Date: 02/26/19 09:56 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101S 00087	40MXISSURP 00003
BFB 140-27936/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27936/2		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL
MB 140-27936/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14390-A-1	SV-126-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-3	SV-100-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-4	SV-060-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-5	SV-118-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-6	SV-015-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-7	SV-078-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-8	SV-136-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-9	SV-076-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-10	SV-168-A-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-11	SV-075-A-26	TO 15 LL	T	167 mL	500 mL	1	1		40 mL
140-14390-A-12	BCK-1-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-13	BCK-2-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-14	BCK-3-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-15	BCK-4-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-16	IA-001-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-1	SV-126-C-26	TO 15 LL	T	10 mL	500 mL	1	1		40 mL
140-14390-A-2	SV-101-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-17	IA-004-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14390-A-4	SV-060-C-26	TO 15 LL	T	40 mL	500 mL	1	1		40 mL
LCS 140-27936/1002		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27936/1		TO 15 LL		40 mL					
CCVIS 140-27936/2		TO 15 LL							
MB 140-27936/4		TO 15 LL							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Batch Number: 27936 Batch Start Date: 02/26/19 09:56 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MSUR 00002				
140-14390-A-1	SV-126-C-26	TO 15 LL	T					
140-14390-A-3	SV-100-C-26	TO 15 LL	T					
140-14390-A-4	SV-060-C-26	TO 15 LL	T					
140-14390-A-5	SV-118-A-26	TO 15 LL	T					
140-14390-A-6	SV-015-A-26	TO 15 LL	T					
140-14390-A-7	SV-078-A-26	TO 15 LL	T					
140-14390-A-8	SV-136-A-26	TO 15 LL	T					
140-14390-A-9	SV-076-A-26	TO 15 LL	T					
140-14390-A-10	SV-168-A-26	TO 15 LL	T					
140-14390-A-11	SV-075-A-26	TO 15 LL	T					
140-14390-A-12	BCK-1-26	TO 15 LL	T					
140-14390-A-13	BCK-2-26	TO 15 LL	T					
140-14390-A-14	BCK-3-26	TO 15 LL	T					
140-14390-A-15	BCK-4-26	TO 15 LL	T					
140-14390-A-16	IA-001-C-26	TO 15 LL	T					
140-14390-A-1	SV-126-C-26	TO 15 LL	T					
140-14390-A-2	SV-101-C-26	TO 15 LL	T					
140-14390-A-17	IA-004-C-26	TO 15 LL	T					
140-14390-A-4	SV-060-C-26	TO 15 LL	T					
LCS 140-27936/1002		TO 15 LL						

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14390-1

SDG No.: _____

Batch Number: 27980 Batch Start Date: 02/27/19 11:22 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101S 00087	40MXISSURP 00003
BFB 140-27980/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27980/2		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL
MB 140-27980/5		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14390-A-5	SV-118-A-26	TO 15 LL	T	10 mL	500 mL	1	1		40 mL
140-14390-A-18	IA-131-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27980/1002		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27980/1		TO 15 LL		40 mL					
CCVIS 140-27980/2		TO 15 LL							
MB 140-27980/5		TO 15 LL							
140-14390-A-5	SV-118-A-26	TO 15 LL	T						
140-14390-A-18	IA-131-C-26	TO 15 LL	T						
LCS 140-27980/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Summa Canister Dilution Worksheet

Client: Tetra Tech, Inc.

Job No.: 140-14390-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Date	Time	Analyst
140-14390-11	1	-8.6	0.71	0.71	2.8	1.19	1.19		1.67	1.67	02/25/19	16:43	Barlozhetskaya, Anna F

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg

Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig

Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury ("Hg)

14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)



TO: S. BRENNER **DATE:** APRIL 16, 2019

FROM: MICHELLE L. WOEBER **COPIES:** DV FILE

SUBJECT: ORGANIC DATA VALIDATION – VOC
 LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER CENTER (MRC)
 SDG 140-14391-1

SAMPLES: 20/Indoor Air/VOC

IA-060-C-26	IA-088-C-26	IA-100-B-26
IA-101-B-26	IA-102-C-26	IA-113-C-26
IA-126-C-26	IA-133-C-26	IA-141-C-26
IA-142-C-26	IA-144-C-26	IA-145-C-26
IA-146-C-26	IA-149-C-26	IA-150-C-26
IA-152-C-26	IA-153-C-26	IA-155-C-26
IA-DUP01-C-26	IA-DUP02-C-26	

Overview

The sample set for LMC - MRC, SDG 140-14391-1 consisted of twenty (20) indoor air samples. All twenty (20) samples were analyzed for select Volatile Organic Compounds (VOC). Two field duplicate sample pairs were included in this SDG: IA-DUP01-C-26/IA-131-C-26 (SDG 240-14390-1) and IA-DUP02-C-26/IA-153-C-26.

The samples were collected by Tetra Tech, Inc. on February 19, 2018 and analyzed by TestAmerica. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times/sample preservation, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike results, laboratory control sample results, internal standard areas, field duplicate precision, chromatographic resolution, compound identification, and detection limits. Areas of concern are listed below.

Major

- Sample IA-113-C-26 was received with the canister valve in the open position. The samples were at ambient pressure (approximately 0 psi). As stated in the laboratory case narrative, the integrity of the samples could have been jeopardized due to changes in ambient pressure after the sample was taken. The client was contacted and told the laboratory to proceed with the analyses. The detected results were qualified as estimated, (J). The non-detected results were qualified as rejected, (R).

Minor

- The initial calibration performed on instrument MG on 01/11/2019 had a Percent Relative Standard Deviation (%RSD) for methylene chloride which exceeded the 30% quality control limit. The detected results reported for this compound in the affected samples, IA-100-B-26 and IA-101-B-26, were qualified as estimated, (J).
- The differences between the detected and/or non-detected results for toluene and total xylenes exceeded 2X the Reporting Limit (RL) in the field duplicate pair IA-DUP01-C-26/IA-131-C-26. The

TO: S. BRENNER
SDG: 140-14391-1

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detected and non-detected results reported for these compounds in the field duplicate pair were qualified as estimated, (J) and (UJ), respectively. Comparability of results for this field pair is limited because the original sample arrived at the laboratory with the valve on the canister open.

- The laboratory indicated that the peak for chlorodifluoromethane identified by the data system exhibited chromatographic interference that could not be resolved in samples IA-141-C-26, IA-142-C-26, IA-144-C-26, IA-145-C-26, IA-146-C-26, IA-150-C-26, IA-152-C-26, and IA-DUP02-C-26. The detected results reported for this compound in the associated samples were qualified as estimated with a high bias, (J+).
- Detected results reported below the RL limit but above the Method Detection Limit (MDL) were qualified as estimated, (J).

Notes

The compound, 1,2,4-trichlorobenzene, was detected in the laboratory method blank, MB 140-27980/5. No action was necessary because this compound was not detected in the associated sample.

All continuing calibration criteria were acceptable.

All internal standard areas were within $\pm 40\%$ of the standard.

The surrogate spike compound and Laboratory Control Sample (LCS) had Percent Recoveries (%Rs) within the quality control limits.

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

All sample canisters opened to approximately -30 psig (-25 to -30 psig) and finished at between -11 to -0 psig.

Non-detected results were reported to the MDL.

Executive Summary

Laboratory Performance: Some detected results for chlorodifluoromethane were biased high because chromatographic interference could not be resolved.

Other Factors Affecting Data Quality: The sample integrity of one sample was compromised because the valve was open upon sample receipt. Field duplicate imprecision was noted in one field duplicate pair. Results below the RL were estimated.

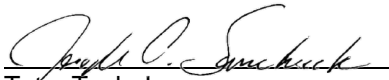
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The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Review" (January 2017) and EPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.



Tetra Tech, Inc.
Michelle L. Woeber
Chemist/Data Validator



Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted detection limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team, but exclusion of the data is recommended.

Appendix A

Qualified Analytical Results

Qualifier Codes:

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (i.e., base-time drifting)
- P = Uncertainty near detection limit ($< 2 \times$ IDL for inorganics and $<$ CRQL for organics)
- Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = RPD between columns/detectors $>40\%$ for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids $<30\%$
- Z = Uncertainty at 2 standard deviations is greater than sample activity
- Z1 = Tentatively Identified Compound considered presumptively present
- Z2 = Tentatively Identified Compound column bleed
- Z3 = Tentatively Identified Compound aldol condensate
- Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
- Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 08388 SDG: 140-14391-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	IA-060-C-26			IA-088-C-26			IA-100-B-26			IA-101-B-26		
	LAB_ID	140-14391-7			140-14391-14			140-14391-20			140-14391-19		
	SAMP_DATE	2/19/2019			2/19/2019			2/19/2019			2/19/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		0.33	U		0.33	U		0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	U		0.2	U		0.2	U		
1,1-DICHLOROETHENE	0.28	U		0.28	U		0.28	U		0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		0.61	U		0.61	U		0.61	U		
1,2-DICHLOROETHANE	0.38	U		0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		0.64	U		0.64	U		0.64	U		
BENZENE	0.55	J	P	0.56	J	P	0.45	J	P	0.54	J	P	
CARBON TETRACHLORIDE	0.47	U		0.47	U		0.47	U		0.47	U		
CHLORODIFLUOROMETHANE	2.3			1.5			3.8			4.2			
CHLOROFORM	0.37	U		0.37	U		0.55	J	P	0.64	J	P	
CIS-1,2-DICHLOROETHENE	0.48	U		0.48	U		0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	1.5	J	P	1.3	J	P	2.3			2.3			
ETHYLBENZENE	0.59	U		0.59	U		2			3			
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE	10			4	J	P	3.5	J	CP	6.9	J	C	
NAPHTHALENE	1	U		1	U		1	U		1	U		
TETRACHLOROETHENE	0.54	U		0.54	U		0.54	U		0.54	U		
TOLUENE	5.1			2.3	U		91			92			
TOTAL XYLENES	2.8	J	P	2.4	J	P	9.6			14			
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U		0.4	U		0.4	U		
TRICHLOROETHENE	0.38	U		0.38	U		0.38	U		0.38	U		
VINYL CHLORIDE	0.37	U		0.37	U		0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14391-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	IA-102-C-26			IA-113-C-26			IA-126-C-26			IA-133-C-26		
	LAB_ID	140-14391-2			140-14391-16			140-14391-18			140-14391-4		
	SAMP_DATE	2/19/2019			2/19/2019			2/19/2019			2/19/2019		
	QC_TYPE	FD			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		0.33	UR	M	0.33	U		0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U		0.57	UR	M	0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	UR	M	0.2	U		0.2	U		
1,1-DICHLOROETHENE	0.28	U		0.28	UR	M	0.28	U		0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	UR	M	0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	UR	M	1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		0.72	J	MP	0.61	U		0.61	U		
1,2-DICHLOROETHANE	0.38	U		0.38	UR	M	0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		0.64	UR	M	0.64	U		0.64	U		
BENZENE	0.54	J	P	1.9	J	M	1	J	P	0.56	J	P	
CARBON TETRACHLORIDE	0.47	U		0.47	UR	M	0.47	U		0.47	U		
CHLORODIFLUOROMETHANE	1.8			1.3	J	MP	0.27	U		1.5			
CHLOROFORM	0.37	U		0.37	UR	M	0.37	U		0.37	U		
CIS-1,2-DICHLOROETHENE	0.48	U		0.48	UR	M	0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	1.4	J	P	1.4	J	MP	1.4	J	P	1.3	J	P	
ETHYLBENZENE	0.59	U		3.2	J	M	0.59	U		0.59	U		
METHYL TERT-BUTYL ETHER	1.2	U		1.2	UR	M	1.2	U		1.2	U		
METHYLENE CHLORIDE	5.7	J	P	13	J	M	21			2.8	J	P	
NAPHTHALENE	1	U		1	UR	M	1	U		1	U		
TETRACHLOROETHENE	0.54	U		7.2	J	M	0.54	U		0.54	U		
TOLUENE	2.3	U		53	J	M	17			2.3	U		
TOTAL XYLENES	3.2	J	P	13	J	M	1.3	J	P	3.1	J	P	
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	UR	M	0.4	U		0.4	U		
TRICHLOROETHENE	0.38	U		0.38	UR	M	1.4			0.38	U		
VINYL CHLORIDE	0.37	U		0.37	UR	M	0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14391-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	IA-141-C-26			IA-142-C-26			IA-144-C-26			IA-145-C-26		
	LAB_ID	140-14391-13			140-14391-15			140-14391-12			140-14391-9		
	SAMP_DATE	2/19/2019			2/19/2019			2/19/2019			2/19/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		0.33	U		0.33	U		0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	U		0.2	U		0.2	U		
1,1-DICHLOROETHENE	0.28	U		0.28	U		0.28	U		0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		0.61	U		0.61	U		0.61	U		
1,2-DICHLOROETHANE	0.38	U		0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		0.64	U		0.64	U		0.64	U		
BENZENE	0.59	J	P	0.52	J	P	0.57	J	P	0.61	J	P	
CARBON TETRACHLORIDE	0.47	U		0.47	U		0.47	U		0.47	U		
CHLORODIFLUOROMETHANE	7.4	J+	Q	1.7	J+	Q	9.5	J+	Q	21	J+	Q	
CHLOROFORM	0.37	U		0.37	U		0.37	U		0.37	U		
CIS-1,2-DICHLOROETHENE	0.48	U		0.48	U		0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	1.4	J	P	1.4	J	P	1.3	J	P	1.4	J	P	
ETHYLBENZENE	0.73	J	P	0.59	U		1	J	P	0.65	J	P	
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE	6.5	J	P	9.2			6.8			7.9			
NAPHTHALENE	1	U		1	U		1	U		1	U		
TETRACHLOROETHENE	0.54	U		0.54	U		0.54	U		0.54	U		
TOLUENE	32			2.3	U		5.7			9.7			
TOTAL XYLENES	4.1			2.1	J	P	5.4			3.6			
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U		0.4	U		0.4	U		
TRICHLOROETHENE	0.38	U		0.38	U		0.38	U		0.38	U		
VINYL CHLORIDE	0.37	U		0.37	U		0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14391-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	IA-146-C-26			IA-149-C-26			IA-150-C-26			IA-152-C-26		
	LAB_ID	140-14391-10			140-14391-17			140-14391-8			140-14391-11		
	SAMP_DATE	2/19/2019			2/19/2019			2/19/2019			2/19/2019		
	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		0.33	U		0.33	U		0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	U		0.2	U		0.2	U		
1,1-DICHLOROETHENE	0.28	U		0.28	U		0.28	U		0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		0.61	U		0.61	U		0.67	J	P	
1,2-DICHLOROETHANE	0.38	U		0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		0.64	U		0.64	U		0.64	U		
BENZENE	0.55	J	P	0.94	J	P	0.57	J	P	0.57	J	P	
CARBON TETRACHLORIDE	0.47	U		0.47	U		0.47	U		0.47	J	P	
CHLORODIFLUOROMETHANE	21	J+	Q	0.27	U		21	J+	Q	11	J+	Q	
CHLOROFORM	0.37	U		0.37	U		0.37	U		0.37	U		
CIS-1,2-DICHLOROETHENE	0.48	U		0.48	U		0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	1.5	J	P	1.6	J	P	1.3	J	P	1.4	J	P	
ETHYLBENZENE	0.6	J	P	0.59	U		0.64	J	P	0.99	J	P	
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE	4.1	J	P	16			5.7	J	P	3.6	J	P	
NAPHTHALENE	1	U		1	U		1	U		1	U		
TETRACHLOROETHENE	0.54	U		0.54	U		0.54	U		0.54	U		
TOLUENE	10			8.1			10			6.9			
TOTAL XYLENES	3.7			2	J	P	3.7			5.4			
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U		0.4	U		0.4	U		
TRICHLOROETHENE	0.38	U		1.2			0.38	U		0.38	U		
VINYL CHLORIDE	0.37	U		0.37	U		0.37	U		0.37	U		

PROJ_NO: 08388 SDG: 140-14391-1 FRACTION: OV-M3 MEDIA: AIR	NSAMPLE	IA-153-C-26			IA-155-C-26			IA-DUP01-C-26			IA-DUP02-C-26		
	LAB_ID	140-14391-5			140-14391-3			140-14391-1			140-14391-6		
	SAMP_DATE	2/19/2019			2/19/2019			2/19/2019			2/19/2019		
	QC_TYPE	NM			NM			NM			FD		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF							IA-131-C-26			IA-153-C-26		
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	
1,1,1-TRICHLOROETHANE	0.33	U		0.33	U		0.33	U		0.33	U		
1,1,2-TRICHLOROETHANE	0.57	U		0.57	U		0.57	U		0.57	U		
1,1-DICHLOROETHANE	0.2	U		0.2	U		0.2	U		0.2	U		
1,1-DICHLOROETHENE	0.28	U		0.28	U		0.28	U		0.28	U		
1,2,3-TRIMETHYLBENZENE	0.84	U		0.84	U		0.84	U		0.84	U		
1,2,4-TRICHLOROBENZENE	1.4	U		1.4	U		1.4	U		1.4	U		
1,2,4-TRIMETHYLBENZENE	0.61	U		0.61	U		0.61	U		0.61	U		
1,2-DICHLOROETHANE	0.38	U		0.38	U		0.38	U		0.38	U		
1,3,5-TRIMETHYLBENZENE	0.64	U		0.64	U		0.64	U		0.64	U		
BENZENE	0.53	J	P	0.54	J	P	0.47	J	P	0.52	J	P	
CARBON TETRACHLORIDE	0.48	J	P	0.47	U		0.47	U		0.47	U		
CHLORODIFLUOROMETHANE	1.9			1.5			1.9			1.9	J+	Q	
CHLOROFORM	0.37	U		0.37	U		0.37	U		0.37	U		
CIS-1,2-DICHLOROETHENE	0.48	U		0.48	U		0.48	U		0.48	U		
DICHLORODIFLUOROMETHANE	1.4	J	P	1.4	J	P	1.4	J	P	1.5	J	P	
ETHYLBENZENE	0.59	U		0.59	U		0.59	U		0.59	U		
METHYL TERT-BUTYL ETHER	1.2	U		1.2	U		1.2	U		1.2	U		
METHYLENE CHLORIDE	6.2	J	P	3	J	P	3.7	J	P	3.8	J	P	
NAPHTHALENE	1	U		1	U		1	U		1	U		
TETRACHLOROETHENE	0.54	U		0.54	U		0.54	U		0.54	U		
TOLUENE	2.5			2.3	U		2.3	U		2.2			
TOTAL XYLENES	2.7	J	P	3.5			1.3	J	P	2.3	J	P	
TRANS-1,2-DICHLOROETHENE	0.4	U		0.4	U		0.4	U		0.4	U		
TRICHLOROETHENE	0.38	U		0.38	U		0.38	U		0.38	U		
VINYL CHLORIDE	0.37	U		0.37	U		0.37	U		0.37	U		

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-DUP01-C-26 Lab Sample ID: 140-14391-1
 Matrix: Air Lab File ID: RB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.29	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-DUP01-C-26 Lab Sample ID: 140-14391-1
 Matrix: Air Lab File ID: RB26P101.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 13:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-102-C-26 Lab Sample ID: 140-14391-2
 Matrix: Air Lab File ID: RB26P102Q.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:06
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 14:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.50		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.74	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-102-C-26 Lab Sample ID: 140-14391-2
 Matrix: Air Lab File ID: RB26P102Q.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:06
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 14:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-155-C-26 Lab Sample ID: 140-14391-3
 Matrix: Air Lab File ID: RB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:08
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.43		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.27	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.85	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.80		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-155-C-26 Lab Sample ID: 140-14391-3
 Matrix: Air Lab File ID: RB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:08
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 15:31
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-133-C-26 Lab Sample ID: 140-14391-4
 Matrix: Air Lab File ID: RB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:09
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.27	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.72	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-133-C-26 Lab Sample ID: 140-14391-4
 Matrix: Air Lab File ID: RB26P104.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:09
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-153-C-26 Lab Sample ID: 140-14391-5
 Matrix: Air Lab File ID: RB26P105.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:11
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.077	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.67		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.63	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-153-C-26 Lab Sample ID: 140-14391-5
 Matrix: Air Lab File ID: RB26P105.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:11
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.53	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-DUP02-C-26 Lab Sample ID: 140-14391-6
 Matrix: Air Lab File ID: RB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.30	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.60		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.54	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-DUP02-C-26 Lab Sample ID: 140-14391-6
 Matrix: Air Lab File ID: RB26P106.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 00:00
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-060-C-26 Lab Sample ID: 140-14391-7
 Matrix: Air Lab File ID: RB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:14
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 18:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.66		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.9		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.64	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-060-C-26 Lab Sample ID: 140-14391-7
 Matrix: Air Lab File ID: RB26P107.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:14
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 18:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	10		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.8	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-150-C-26 Lab Sample ID: 140-14391-8
 Matrix: Air Lab File ID: RB26P108.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:16
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 19:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.8	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.27	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.86		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-150-C-26 Lab Sample ID: 140-14391-8
 Matrix: Air Lab File ID: RB26P108.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:16
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 19:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	21	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.64	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	10		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-145-C-26 Lab Sample ID: 140-14391-9
 Matrix: Air Lab File ID: RB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:17
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 20:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	6.0	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.82		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-145-C-26 Lab Sample ID: 140-14391-9
 Matrix: Air Lab File ID: RB26P109.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:17
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 20:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	21	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.65	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.9		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	9.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-146-C-26 Lab Sample ID: 140-14391-10
 Matrix: Air Lab File ID: RB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	5.9	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.30	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.85		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-146-C-26 Lab Sample ID: 140-14391-10
 Matrix: Air Lab File ID: RB26P110.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 21:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	21	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.60	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	10		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-152-C-26 Lab Sample ID: 140-14391-11
 Matrix: Air Lab File ID: RB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:19
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.2	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.23	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-152-C-26 Lab Sample ID: 140-14391-11
 Matrix: Air Lab File ID: RB26P111.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:19
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	11	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.99	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.67	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-144-C-26 Lab Sample ID: 140-14391-12
 Matrix: Air Lab File ID: RB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:21
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.7	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.27	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.23	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-144-C-26 Lab Sample ID: 140-14391-12
 Matrix: Air Lab File ID: RB26P112.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:21
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 22:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.5	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.0	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.8		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-141-C-26 Lab Sample ID: 140-14391-13
 Matrix: Air Lab File ID: RB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:24
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 23:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.1	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	8.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.95		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-141-C-26 Lab Sample ID: 140-14391-13
 Matrix: Air Lab File ID: RB26P113.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:24
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 23:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.59	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	7.4	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.73	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	32		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.1		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-088-C-26 Lab Sample ID: 140-14391-14
 Matrix: Air Lab File ID: RB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:28
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.55	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-088-C-26 Lab Sample ID: 140-14391-14
 Matrix: Air Lab File ID: RB26P114.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:28
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 00:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-142-C-26 Lab Sample ID: 140-14391-15
 Matrix: Air Lab File ID: RB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:24
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.47	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.6		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.48	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-142-C-26 Lab Sample ID: 140-14391-15
 Matrix: Air Lab File ID: RB26P115.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:24
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 01:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	9.2		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.1	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-113-C-26 Lab Sample ID: 140-14391-16
 Matrix: Air Lab File ID: RB26P116.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:30
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 02:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.74		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.6		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.1		0.40	0.080
108-88-3	Toluene	92.14	14		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-113-C-26 Lab Sample ID: 140-14391-16
 Matrix: Air Lab File ID: RB26P116.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:30
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 02:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.9		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.2		1.7	0.59
75-09-2	Methylene Chloride	84.93	13		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	7.2		2.7	0.54
108-88-3	Toluene	92.14	53		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.72	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	13		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-149-C-26 Lab Sample ID: 140-14391-17
 Matrix: Air Lab File ID: RB26P201.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:33
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.29	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.33	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	4.5		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.22		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.47	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-149-C-26 Lab Sample ID: 140-14391-17
 Matrix: Air Lab File ID: RB26P201.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:33
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 03:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.94	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	16		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-126-C-26 Lab Sample ID: 140-14391-18
 Matrix: Air Lab File ID: RB26P202.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 04:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.32	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	5.9		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	4.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.27		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.30	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-126-C-26 Lab Sample ID: 140-14391-18
 Matrix: Air Lab File ID: RB26P202.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:34
 Sample wt/vol: 100(mL) Date Analyzed: 02/27/2019 04:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	21		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	17		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-101-B-26 Lab Sample ID: 140-14391-19
 Matrix: Air Lab File ID: GB26P102.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:43
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.70		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	24		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-101-B-26 Lab Sample ID: 140-14391-19
 Matrix: Air Lab File ID: GB26P102.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:43
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 16:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.2		1.4	0.27
67-66-3	Chloroform	119.38	0.64	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.0		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.9		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	92		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	14		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-100-B-26 Lab Sample ID: 140-14391-20
 Matrix: Air Lab File ID: GB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:44
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.46		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	24		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: IA-100-B-26 Lab Sample ID: 140-14391-20
 Matrix: Air Lab File ID: GB26P103.D
 Analysis Method: TO 15 LL Date Collected: 02/19/2019 17:44
 Sample wt/vol: 100(mL) Date Analyzed: 02/26/2019 17:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.45	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.8		1.4	0.27
67-66-3	Chloroform	119.38	0.55	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.0		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	91		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

Appendix C

Support Documentation

ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >2XRL	DUPLICATE SAMPLE CONC >2XRL	DIFFERENCE >2RL
1,1-DICHLOROETHENE	0.32	0.28	1.6	13.33	FALSE	FALSE	FALSE	FALSE
1,2,4-TRIMETHYLBENZENE	0.92	0.61	2	40.52	FALSE	FALSE	FALSE	FALSE
1,3,5-TRIMETHYLBENZENE	0.88	0.64	2	31.58	FALSE	FALSE	FALSE	FALSE
BENZENE	1.3	0.47	1.3	93.79	TRUE	FALSE	FALSE	FALSE
CHLORODIFLUOROMETHANE	0.27	1.9	1.4	150.23	TRUE	FALSE	FALSE	FALSE
DICHLORODIFLUOROMETHANE	2.2	1.4	2	44.44	FALSE	FALSE	FALSE	FALSE
ETHYLBENZENE	2.8	0.59	1.7	130.38	TRUE	FALSE	FALSE	FALSE
METHYLENE CHLORIDE	12	3.7	6.9	105.73	TRUE	FALSE	FALSE	FALSE
TETRACHLOROETHENE	3.6	0.54	2.7	147.83	TRUE	FALSE	FALSE	FALSE
TOLUENE	41	2.3	2.3	178.75	TRUE	TRUE	FALSE	FALSE
TOTAL XYLENES	11	1.3	3.5	157.72	TRUE	TRUE	FALSE	TRUE
TRICHLOROETHENE	1.5	0.38	1.1	119.15	TRUE	FALSE	FALSE	FALSE

SDG 140-14391-1

IA-DUP01-C-26/IA-131-C-26

ANALYTE	ORIGINAL	DUPLICATE	RL	RPD	RPD > 50%	ORIGINAL SAMPLE CONC >2XRL	DUPLICATE SAMPLE CONC >2XRL	DIFFERENCE >2RL
BENZENE	0.53	0.52	1.3	1.90	FALSE	FALSE	FALSE	FALSE
CARBON TETRACHLORIDE	0.48	0.47	2.5	2.11	FALSE	FALSE	FALSE	FALSE
CHLORODIFLUOROMETHANE	1.9	1.9	1.4	0.00	FALSE	FALSE	FALSE	FALSE
DICHLORODIFLUOROMETHANE	1.4	1.5	2	6.90	FALSE	FALSE	FALSE	FALSE
METHYLENE CHLORIDE	6.2	3.8	6.9	48.00	FALSE	FALSE	FALSE	FALSE
TOLUENE	2.5	2.2	2.3	12.77	FALSE	FALSE	FALSE	FALSE
TOTAL XYLENES	2.7	2.3	3.5	16.00	FALSE	FALSE	FALSE	FALSE

SDG 140-14391-1

IA-DUP02-C-26/IA-153-C-26

LMC - MRC
SDG 140-14391-1

SAMPLE IDENTIFICATION

IA-101-B-26

COMPOUND

TOLUENE

MW=

92.1384

GAS CONSTANT =

24.45

COMPOUND AREA

2556789

INTERNAL STANDARD AMOUNT (ppbv)

4

CALIBRATION VOLUME (ppbv)

500

DILUTION FACTOR

1

INTERNAL STANDARD AREA

2381715

AVERAGE RRF

0.8801

SAMPLE VOLUME (ppbv)

100

24.3951 ppbv

91.93 $\mu\text{g}/\text{m}^3$

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\GB26P102.D
 Lims ID: 140-14391-A-19
 Client ID: IA-101-B-26
 Sample Type: Client
 Inject. Date: 26-Feb-2019 16:38:30 ALS Bottle#: 2 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010931-008
 Misc. Info.: 140-14391-a-19
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20190225-10931.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 27-Feb-2019 18:19:42 Calib Date: 11-Jan-2019 21:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Knoxville\ChromData\MG\20190109-10492.b\GA11IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0320

First Level Reviewer: khachitpongpanits Date: 27-Feb-2019 15:28:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.270	9.232	0.038	97	455853	4.00	
* 2 1,4-Difluorobenzene	114	11.416	11.405	0.011	96	2490634	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.080	16.080	0.000	92	2381715	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.703	17.703	0.000	83	1876472	3.84	
6 Chlorodifluoromethane	51	3.834	3.834	0.011	97	70817	0.2371	M
8 Dichlorodifluoromethane	85	3.899	3.886	0.011	100	45191	0.0936	
31 Methylene Chloride	84	6.660	6.591	0.065	99	73917	0.3949	
44 Chloroform	83	9.275	9.237	0.032	27	10053	0.0264	
50 Benzene	78	10.893	10.871	0.016	98	15196	0.0341	
67 Toluene	91	14.128	14.128	0.000	93	2556789	4.88	
78 Ethylbenzene	91	16.404	16.404	0.000	99	99496	0.1397	
79 m-Xylene & p-Xylene	91	16.560	16.565	-0.006	99	273705	0.5025	
83 o-Xylene	91	17.088	17.089	-0.001	97	86546	0.1507	
S 124 Xylenes, Total	100				0		0.6532	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Lawson, Josh Mullis & Walt Pryor		13 of 16 COCs	
Company: Tetra Tech		Phone: 301-528-3000					
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage					
City/State/Zip: Georgetown, MD, 20877		TAL Contact: terry walker washmund					
Phone: 301-528-552							
FAX:							
Project Name: MRC Indoor Air		Analysis Turnaround Time					
Site/location: MRC		Standard (Specify) X					
PO # 1121CG8388		Rush (Specify)					

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-DUP01-C-26	2/19/19	0600	0600	-30	-11	7588	09806	✓										
IA-102-C-26	2/19/19	0906	1706	-30	-4	11932	09589	✓										
IA-155-C-26	2/19/19	0908	1708	-30	-4	7162	11592	✓										
IA-133-C-26	2/19/19	0909	1709	-29	0	7921	09791	✓										
IA-153-C-26	2/19/19	0911	1711	-30	-7	7674	09660	✓										
IA-DUP02-C-26	2/19/19	0600	0600	-30	-7	10240	09731	✓										



140-14391 Chain of Custody

Sampled by: Sophia Lawson, Walt Pryor, Josh Mullis	Temperature (Fahrenheit)	
	Interior	Ambient
	Start	
	Stop	
	Pressure (Inches of Hg)	
	Interior	Ambient
	Start	
	Stop	

Baltimore #201

24 COCS / 24 FLOWS
 CUSTODY SEAL INTACT
 RECEIVED AMBIENT RT 20.0 / CT 20.0 C

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: tetra tech	Date/Time: 2/22/19	Canisters Received by:
Samples Relinquished by: <i>[Signature]</i>	Date/Time: 2/22/19	Received by: <i>[Signature]</i>
Relinquished by: <i>[Signature]</i>	Date/Time: 2/22/19 1700	Received by: NUMERICAL TALK 2-23-19 10:10

14391

Lab Use Only	Shipped Name	Opened by	Condition
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03/07/2019

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Tony Apanavage		Sampled By: Sophia Larson, Josh Mullis & Walt Pryor		14 of 16 COCs												
Company: Tetra Tech		Phone: 301-528-3000																
Address: 20251 Century Blvd #200		Site Contact: Tony Apanavage																
City/State/Zip: Georgetown, MD, 20877		TAL Contact: Terry Walker Washmund																
Phone: 301-528-552																		
FAX:																		
Project Name: MRC Indoor Air		Analysis Turnaround Time																
Site/location: MRC		Standard (Specify) X																
PO# 112108388		Rush (Specify)																
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum In Field, "Hg (Start)	Canister Vacuum In Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-060-C-26	2/19/19	0914	1714	-28	-5	11482	11840	✓										
IA-150-C-26	2/19/19	0916	1716	-36	-5	09551	11865	✓										
IA-145-C-26	2/19/19	0917	1717	-28	-5	8918	11521	✓										
IA-146-C-26	2/19/19	0918	1718	-30	-5	8678	11671	✓										
IA-152-C-26	2/19/19	0919	1719	-36	-4	10435	11857	✓										
IA-144-C-26	2/19/19	0921	1721	-30	-5	0948	10744	✓										
Sampled by: Sophia Larson, Walt Pryor, Josh Mullis		Temperature (Fahrenheit)				Baltimore #201												
		Interior		Ambient														
		Start																
		Stop																
		Pressure (Inches of Hg)																
		Interior		Ambient														
Start																		
Stop																		
Special Instructions/QC Requirements & Comments:																		
Canisters Shipped by: Tetra Tech		Date/Time: 2/22/19		Canisters Received by:														
Samples Relinquished by: <i>[Signature]</i>		Date/Time: 2/22/19		Received by: <i>[Signature]</i>														
Relinquished by: <i>[Signature]</i>		Date/Time: 2/22/19 1700		Received by: Ammonia TAKVX 2-23-19 10:10														
Lab Use Only		Shipper Name:		Operator:		Conditions:												

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03/07/2019

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information				Project Manager: <u>Tony Apanavage</u>				Sampled By: <u>Sophia Larson, Josh Mollis & Walt Pryor</u>				15 of 16 COCs									
Company: <u>Tetra Tech</u>				Phone: <u>301-528-3000</u>																	
Address: <u>20251 Century Blvd #200</u>				Site Contact: <u>Tony Apanavage</u>																	
City/State/Zip: <u>Georgetown, MD, 20877</u>				TAL Contact: <u>Terry Walker Washburn</u>																	
Phone: <u>301-528-552</u>																					
FAX:																					
Project Name: <u>MRC Indoor Air</u>				Analysis Turnaround Time																	
Site/location: <u>MRC</u>				Standard (Specify) <u>X</u>																	
PO# <u>112108388</u>				Rush (Specify)																	
Sample Identification				Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
<u>IA-141-C-26</u>				<u>2/19/19</u>	<u>0924</u>	<u>1724</u>	<u>-30</u>	<u>-5</u>	<u>11175</u>	<u>11136</u>	<input checked="" type="checkbox"/>										
<u>IA-088-C-26</u>				<u>2/19/19</u>	<u>0928</u>	<u>1728</u>	<u>-30</u>	<u>-5</u>	<u>7274</u>	<u>11123</u>	<input checked="" type="checkbox"/>										
<u>IA-142-C-26</u>				<u>2/19/19</u>	<u>0929</u>	<u>1724</u>	<u>-30</u>	<u>-1</u>	<u>09846</u>	<u>09644</u>	<input checked="" type="checkbox"/>										
<u>IA-113-C-26</u>				<u>2/19/19</u>	<u>0930</u>	<u>1730</u>	<u>-30</u>	<u>-6</u>	<u>7027</u>	<u>11547</u>	<input checked="" type="checkbox"/>										
<u>IA-149-C-26</u>				<u>2/19/19</u>	<u>0933</u>	<u>1733</u>	<u>-30</u>	<u>0</u>	<u>8683</u>	<u>09589</u>	<input checked="" type="checkbox"/>										
<u>IA-126-C-26</u>				<u>2/19/19</u>	<u>0934</u>	<u>1734</u>	<u>-30</u>	<u>-1</u>	<u>8464</u>	<u>10736</u>	<input checked="" type="checkbox"/>										
Sampled by: <u>Sophia Larson, Walt Pryor, Josh Mollis</u>				Temperature (Fahrenheit)								<h2>Baltimore #201</h2>									
				Interior		Ambient															
				Start																	
				Stop																	
				Pressure (Inches of Hg)																	
				Interior		Ambient															
				Start																	
				Stop																	
Special Instructions/QC Requirements & Comments:																					
Canisters Shipped by: <u>Tetra Tech</u>				Date/Time: <u>2/22/19</u>				Canisters Received by:													
Samples Relinquished by: <u>[Signature]</u>				Date/Time: <u>2/22/19</u>				Received by: <u>[Signature]</u>													
Relinquished by: <u>[Signature]</u>				Date/Time: <u>2/22/19 1700</u>				Received by: <u>[Signature]</u>				<u>582-2319 2/23/19 10:00</u>									
Lab Use Only - Shipper Name: _____ Operator: _____ Condition: _____																					

TAL Knoxville
 5815 Middlebrook Pike
 Knoxville, TN 37921
 phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information Company: Tetra Tech Address: 20251 Century Blvd #200 City/State/Zip Germantown, MD, 20877 Phone: 301-528-5522 FAX:		Project Manager: Tony Apanavage Phone: 301-528-3000 Site Contact: Tony Apanavage TAL Contact: terry walker wushmund		Sampled By: Sophia Larson, Josh Mollis & Walt Pryor		16 of 16 COCs													
Project Name: MRC Indoor Air Site/location: MRC PO# 112108387		Analysis Turnaround Time Standard (Specify) X Rush (Specify)																	
Sample Identification		Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-101-B-26		2/14/19	0943	1743	-27	-1	10052	09579	✓										
IA-100-B-26		2/14/19	0944	1744	-25	0	10079	11739	✓										
Sampled by: Sophia Larson, Walt Pryor, Josh Mollis		Temperature (Fahrenheit)				<h2>Baltimore #201</h2> <p>09665 11884 11869 11646</p>													
		Interior		Ambient															
		Start																	
		Stop																	
		Pressure (Inches of Hg)																	
		Interior		Ambient															
		Start																	
		Stop																	
Special Instructions/QC Requirements & Comments:																			
Canisters Shipped by: Tetra Tech				Date/Time: 2/22/19				Canisters Received by:											
Samples Relinquished by: <i>[Signature]</i>				Date/Time: 2/22/19				Received by: <i>[Signature]</i>											
Relinquished by: <i>[Signature]</i>				Date/Time: 2/22/19 1700				Received by: <i>[Signature]</i> 2-23-19 10:30											
Lab Use Only Shipper Use Operator Condition																			

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID : _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	pH test strip lot number: _____
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____ Lot Number: _____ Exp Date: _____ Analyst: _____ Date: _____ Time: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only)	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/	<input type="checkbox"/> Residual Chlorine	
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	
Project #: _____ PM Instructions: _____					

Sample Receiving Associate: *[Signature]* Date: 2-25-19

Job Narrative
140-14391-1

Receipt

The samples were received on 2/23/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions

Samples IA-131-C-26 (140-14390-18) and IA-113-C-26 (140-14391-16) were received with the canister valve in the open position. The samples were at ambient pressure (approximately 0 psi). The samples' integrity could have been jeopardized due to changes in ambient pressure after the samples were taken (i.e., ambient air not associated with the sampling event could have been introduced into the canister at any point after the sampling was completed).

The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

Air - GC/MS VOA - Method TO-15 LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Definitions/Glossary

Client: Tetra Tech, Inc.
Project/Site: MRC Indoor Air, MRC

TestAmerica Job ID: 140-14391-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
IA-DUP01-C-26	140-14391-1	102
IA-102-C-26	140-14391-2	102
IA-155-C-26	140-14391-3	99
IA-133-C-26	140-14391-4	99
IA-153-C-26	140-14391-5	102
IA-DUP02-C-26	140-14391-6	99
IA-060-C-26	140-14391-7	101
IA-150-C-26	140-14391-8	101
IA-145-C-26	140-14391-9	102
IA-146-C-26	140-14391-10	99
IA-152-C-26	140-14391-11	104
IA-144-C-26	140-14391-12	102
IA-141-C-26	140-14391-13	100
IA-088-C-26	140-14391-14	100
IA-142-C-26	140-14391-15	99
IA-113-C-26	140-14391-16	101
IA-149-C-26	140-14391-17	101
IA-126-C-26	140-14391-18	100
IA-101-B-26	140-14391-19	96
IA-100-B-26	140-14391-20	94
	MB 140-27909/4	101
	MB 140-27931/4	96
	LCS 140-27909/1002	104
	LCS 140-27931/1002	100

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Sample No.: ICIS 140-26755/15 Date Analyzed: 01/11/2019 21:07
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GAl1IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	437891	9.25	2708081	11.42	2541912	16.10
UPPER LIMIT	613047	9.58	3791313	11.75	3558677	16.43
LOWER LIMIT	262735	8.92	1624849	11.09	1525147	15.77
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-26755/18	423755	9.24	2327828	11.42	2182908	16.09

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Sample No.: CCVIS 140-27931/2 Date Analyzed: 02/26/2019 11:35
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1781

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	496382	9.23	2758157	11.41	2578216	16.08	
UPPER LIMIT	694935	9.56	3861420	11.74	3609502	16.41	
LOWER LIMIT	297829	8.90	1654894	11.08	1546930	15.75	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27931/1002	496382	9.23	2758157	11.41	2578216	16.08	
MB 140-27931/4	508819	9.23	2920722	11.41	2502760	16.08	
140-14391-19	IA-101-B-26	455853	9.27	2490634	11.42	2381715	16.08
140-14391-20	IA-100-B-26	488432	9.25	2976485	11.41	2650552	16.08

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Sample No.: ICIS 140-25490/14 Date Analyzed: 11/17/2018 02:58
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RK16IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	298864	7.40	1677758	9.49	1487799	14.56
UPPER LIMIT	418410	7.73	2348861	9.82	2082919	14.89
LOWER LIMIT	179318	7.07	1006655	9.16	892679	14.23
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-25490/18	299493	7.38	1671036	9.48	1499042	14.55

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Sample No.: CCVIS 140-27909/2 Date Analyzed: 02/26/2019 10:22
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RCCVB26.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBZd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	225849	7.38	1327690	9.45	1164037	14.50
UPPER LIMIT	316189	7.71	1858766	9.78	1629652	14.83
LOWER LIMIT	135509	7.05	796614	9.12	698422	14.17
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 140-27909/1002	225849	7.38	1327690	9.45	1164037	14.50
MB 140-27909/4	200361	7.39	1182430	9.45	1042401	14.50
140-14391-1	IA-DUP01-C-26	205663	1190969	9.45	1040519	14.50
140-14391-2	IA-102-C-26	208040	1200928	9.45	1044720	14.50
140-14391-3	IA-155-C-26	208708	1228572	9.44	1073711	14.50
140-14391-4	IA-133-C-26	202020	1187994	9.44	1031290	14.50
140-14391-5	IA-153-C-26	199769	1174122	9.44	1016536	14.50
140-14391-6	IA-DUP02-C-26	204618	1201090	9.45	1038008	14.50
140-14391-7	IA-060-C-26	192250	1119769	9.45	987214	14.50
140-14391-8	IA-150-C-26	199155	1158636	9.45	1013298	14.50
140-14391-9	IA-145-C-26	193624	1129234	9.45	998867	14.50
140-14391-10	IA-146-C-26	198030	1151165	9.45	1011578	14.50
140-14391-11	IA-152-C-26	193341	1128620	9.45	990629	14.50
140-14391-12	IA-144-C-26	197269	1155355	9.45	1025834	14.50
140-14391-13	IA-141-C-26	200446	1187004	9.45	1030803	14.50
140-14391-14	IA-088-C-26	205122	1197107	9.44	1049569	14.50
140-14391-15	IA-142-C-26	201844	1182104	9.44	1032728	14.50
140-14391-16	IA-113-C-26	205033	1201066	9.45	1040158	14.50
140-14391-17	IA-149-C-26	196512	1164319	9.45	1009555	14.50
140-14391-18	IA-126-C-26	203305	1197023	9.45	1043940	14.50

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: R500BB26.D Lab Sample ID: MB 140-27909/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MR Date Analyzed: 02/26/2019 12:52
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27909/1002	RCCVB26-LCS .d	02/26/2019 10:22
IA-DUP01-C-26	140-14391-1	RB26P101.D	02/26/2019 13:41
IA-102-C-26	140-14391-2	RB26P102Q.D	02/26/2019 14:30
IA-155-C-26	140-14391-3	RB26P103.D	02/26/2019 15:31
IA-133-C-26	140-14391-4	RB26P104.D	02/26/2019 16:20
IA-153-C-26	140-14391-5	RB26P105.D	02/26/2019 17:09
IA-DUP02-C-26	140-14391-6	RB26P106.D	02/26/2019 17:58
IA-060-C-26	140-14391-7	RB26P107.D	02/26/2019 18:47
IA-150-C-26	140-14391-8	RB26P108.D	02/26/2019 19:36
IA-145-C-26	140-14391-9	RB26P109.D	02/26/2019 20:25
IA-146-C-26	140-14391-10	RB26P110.D	02/26/2019 21:14
IA-152-C-26	140-14391-11	RB26P111.D	02/26/2019 22:03
IA-144-C-26	140-14391-12	RB26P112.D	02/26/2019 22:52
IA-141-C-26	140-14391-13	RB26P113.D	02/26/2019 23:41
IA-088-C-26	140-14391-14	RB26P114.D	02/27/2019 00:30
IA-142-C-26	140-14391-15	RB26P115.D	02/27/2019 01:19
IA-113-C-26	140-14391-16	RB26P116.D	02/27/2019 02:57
IA-149-C-26	140-14391-17	RB26P201.D	02/27/2019 03:46
IA-126-C-26	140-14391-18	RB26P202.D	02/27/2019 04:35

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27909/4
 Matrix: Air Lab File ID: R500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27909/4
 Matrix: Air Lab File ID: R500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27909 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: RCCVB26-LCS.d
 Lab ID: LCS 140-27909/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.95	97	70-130	
Carbon tetrachloride	2.00	2.04	102	70-130	
Chlorodifluoromethane	2.00	1.75	87	60-140	
Chloroform	2.00	1.92	96	70-130	
cis-1,2-Dichloroethene	2.00	1.95	98	70-130	
Dichlorodifluoromethane	2.00	1.74	87	60-140	
1,1-Dichloroethane	2.00	1.90	95	70-130	
1,2-Dichloroethane	2.00	1.91	95	70-130	
1,1-Dichloroethene	2.00	1.90	95	70-130	
Ethylbenzene	2.00	2.12	106	70-130	
Methylene Chloride	2.00	1.75	88	70-130	
Methyl tert-butyl ether	2.00	2.00	100	60-140	
Naphthalene	2.00	1.70	85	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.11	105	70-130	
trans-1,2-Dichloroethene	2.00	1.86	93	70-130	
1,2,4-Trichlorobenzene	2.00	1.90	95	60-140	
1,1,1-Trichloroethane	2.00	1.94	97	70-130	
1,1,2-Trichloroethane	2.00	2.06	103	70-130	
Trichloroethene	2.00	2.01	101	70-130	
1,2,3-Trimethylbenzene	2.00	2.12	106	70-130	
1,2,4-Trimethylbenzene	2.00	2.16	108	70-130	
1,3,5-Trimethylbenzene	2.00	2.11	105	70-130	
Vinyl chloride	2.00	2.10	105	70-130	
Xylenes, Total	6.00	6.63	111	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: G500BB26.D Lab Sample ID: MB 140-27931/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 02/26/2019 12:56
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27931/1002	GCCVB26-LCS .d	02/26/2019 11:35
IA-101-B-26	140-14391-19	GB26P102.D	02/26/2019 16:38
IA-100-B-26	140-14391-20	GB26P103.D	02/26/2019 17:19

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27931/4
 Matrix: Air Lab File ID: G500BB26.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/26/2019 12:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27931 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVB26-LCS.d
 Lab ID: LCS 140-27931/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	103	70-130	
Carbon tetrachloride	2.00	2.22	111	70-130	
Chlorodifluoromethane	2.00	2.02	101	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	2.09	104	70-130	
Dichlorodifluoromethane	2.00	2.06	103	60-140	
1,1-Dichloroethane	2.00	2.05	103	70-130	
1,2-Dichloroethane	2.00	2.00	100	70-130	
1,1-Dichloroethene	2.00	2.14	107	70-130	
Ethylbenzene	2.00	2.03	101	70-130	
Methylene Chloride	2.00	1.81	90	70-130	
Methyl tert-butyl ether	2.00	1.97	99	60-140	
Naphthalene	2.00	1.94	97	60-140	
Tetrachloroethene	2.00	2.06	103	70-130	
Toluene	2.00	2.02	101	70-130	
trans-1,2-Dichloroethene	2.00	2.15	108	70-130	
1,2,4-Trichlorobenzene	2.00	1.83	92	60-140	
1,1,1-Trichloroethane	2.00	2.04	102	70-130	
1,1,2-Trichloroethane	2.00	2.11	105	70-130	
Trichloroethene	2.00	2.09	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.22	111	70-130	
1,2,4-Trimethylbenzene	2.00	1.99	99	70-130	
1,3,5-Trimethylbenzene	2.00	1.97	98	70-130	
Vinyl chloride	2.00	1.97	98	70-130	
Xylenes, Total	6.00	6.18	103	70-130	

Column to be used to flag recovery and RPD values

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: GA11BLK1.D BFB Injection Date: 01/11/2019
 Instrument ID: MG BFB Injection Time: 12:24
 Analysis Batch No.: 26755

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.2	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	71.2	
175	5.0 - 9.0 % of mass 174	5.1	(7.1) 1
176	95.0 - 101.0 % of mass 174	70.7	(99.3) 1
177	5.0 - 9.0 % of mass 176	4.6	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-26755/2	GA11IC09.D	01/11/2019	13:08
	IC 140-26755/6	GA11IC10.D	01/11/2019	14:35
	IC 140-26755/9	GA11IC01.D	01/11/2019	16:46
	IC 140-26755/10	GA11IC02.D	01/11/2019	17:29
	IC 140-26755/11	GA11IC03.D	01/11/2019	18:12
	IC 140-26755/12	GA11IC04.D	01/11/2019	18:56
	IC 140-26755/13	GA11IC05.D	01/11/2019	19:40
	IC 140-26755/14	GA11IC06.D	01/11/2019	20:23
	ICIS 140-26755/15	GA11IC07.D	01/11/2019	21:07
	IC 140-26755/16	GA11IC08.D	01/11/2019	21:51
	ICV 140-26755/18	GA11ICV.D	01/11/2019	23:17

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08 Calibration End Date: 01/11/2019 21:51 Calibration ID: 1781

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-26755/9	GA11IC01.D
Level 2	IC 140-26755/10	GA11IC02.D
Level 3	IC 140-26755/11	GA11IC03.D
Level 4	IC 140-26755/12	GA11IC04.D
Level 5	IC 140-26755/13	GA11IC05.D
Level 6	IC 140-26755/14	GA11IC06.D
Level 7	ICIS 140-26755/15	GA11IC07.D
Level 8	IC 140-26755/16	GA11IC08.D
Level 9	IC 140-26755/2	GA11IC09.D
Level 10	IC 140-26755/6	GA11IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.9523	2.7653	2.6769	Ave		2.6204			9.0		30.0				
	2.4796	2.3672	2.3873	2.9026	2.4316												
Propene	+++++	+++++	+++++	1.8011	1.4915	Ave		1.4631			12.5		30.0				
	1.4104	1.3267	1.3362	1.5897	1.2862												
Dichlorodifluoromethane	+++++	+++++	4.4505	4.4326	4.2183	Ave		4.2347			6.5		30.0				
	4.0515	3.9190	3.9550	4.7099	4.1407												
Chloromethane	+++++	+++++	+++++	0.5625	0.4891	Ave		0.4649			11.5		30.0				
	0.4445	0.4230	0.4254	0.4946	0.4152												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	+++++	2.6446	2.5541	2.4472	Ave		2.4745			4.4		30.0				
	2.3633	2.3423	2.3822	2.5578	2.5047												
Vinyl chloride	1.9626	1.7167	1.7320	1.6531	1.5626	Ave		1.6109			10.3		30.0				
	1.4785	1.4339	1.4573	1.6387	1.4732												
Butane	+++++	+++++	+++++	3.0743	2.8454	Ave		2.7124			8.2		30.0				
	2.6258	2.4782	2.5038	2.8679	2.5911												
1,3-Butadiene	+++++	+++++	+++++	1.2733	1.2439	Ave		1.2450			5.0		30.0				
	1.2041	1.1760	1.2078	1.3654	1.2448												
Bromomethane	+++++	+++++	1.6548	1.3996	1.3549	Ave		1.3916			8.4		30.0				
	1.3078	1.2877	1.3168	1.4117	1.3995												
Chloroethane	+++++	+++++	0.8627	0.8037	0.7796	Ave		0.7761			6.4		30.0				
	0.7377	0.7148	0.7259	0.8118	0.7729												
Ethanol	+++++	+++++	+++++	0.8657	0.7124	Ave		0.7042			15.6		30.0				
	0.5620	0.7386	0.5593	0.7653	0.7259												
Vinyl bromide	+++++	+++++	1.3835	1.3207	1.2830	Ave		1.2899			4.2		30.0				
	1.2366	1.2145	1.2610	1.2880	1.3321												
2-Methylbutane	+++++	+++++	+++++	2.0547	2.0422	Ave		1.9469			4.4		30.0				
	1.9302	1.8374	1.8471	1.9762	1.9406												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.9949	4.3785 3.8769	4.2718 3.9322	4.1461 4.3687	4.1452 4.2564	Ave		4.1523			4.4		30.0				
Acrolein	++++ 0.3700	++++ 0.3339	++++ 0.3264	++++ 0.4058	0.3535 0.3546	Ave		0.3574			7.9		30.0				
Acetonitrile	++++ 0.5820	++++ 0.5806	++++ 0.5032	0.4860 0.6106	0.5491 0.5907	Ave		0.5574			8.4		30.0				
Acetone	++++ 0.6952	++++ 0.6071	++++ 0.4923	++++ 0.5713	0.7119 0.5299	Ave		0.6013			14.7		30.0				
Pentane	++++ 0.2650	++++ 0.2567	++++ 0.2534	++++ 0.2741	0.2798 0.2630	Ave		0.2653			3.8		30.0				
Isopropyl alcohol	++++ 1.5842	++++ 1.6884	++++ 1.2216	++++ 1.5921	1.7192 1.5978	Ave		1.6033			11.8		30.0				
Ethyl ether	++++ 1.8397	++++ 1.7705	++++ 1.4542	++++ 1.7361	1.9088 1.6409	Ave		1.7250			9.3		30.0				
1,1-Dichloroethene	1.5300 1.3997	1.3691 1.3378	1.5011 1.4037	1.3769 1.3902	1.4054 1.4041	Ave		1.4118			4.2		30.0				
Acrylonitrile	++++ 0.9861	++++ 0.9774	1.0366 0.8664	0.9476 1.0406	0.9217 1.0215	Ave		0.9747			6.2		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.0568	3.1787 2.9429	3.2903 2.9549	3.0618 2.9993	3.1454 2.9101	Ave		3.0600			4.1		30.0				
tert-Butyl alcohol	++++ 2.2526	++++ 2.2071	++++ 1.7152	2.3096 2.1050	2.4776 2.3062	Ave		2.1962			11.0		30.0				
Methylene Chloride	++++ 1.5026	++++ 1.3595	++++ 1.3036	2.5891 1.2966	1.8042 ++++	Ave		1.6426			30.5 *		30.0				
3-Chloropropene	++++ 1.6369	++++ 1.6110	2.0104 1.5866	1.9432 1.7783	1.7193 1.7236	Ave		1.7512			8.8		30.0				
Carbon disulfide	++++ 4.2983	++++ 4.0822	4.5901 4.1194	4.3819 4.1977	4.3526 4.2529	Ave		4.2844			3.8		30.0				
trans-1,2-Dichloroethene	++++ 1.4444	1.3848 1.3913	1.4554 1.4201	1.3845 1.4125	1.4335 1.3979	Ave		1.4138			1.9		30.0				
2-Methylpentane	++++ 4.0309	++++ 3.8853	4.3761 3.8303	4.1901 4.0757	4.2199 3.7514	Ave		4.0450			5.3		30.0				
Methyl tert-butyl ether	++++ 4.1354	3.5946 4.0399	4.2254 3.4444	3.8763 4.0172	4.1168 3.9425	Ave		3.9325			6.6		30.0				
1,1-Dichloroethane	3.1037 2.8577	3.0105 2.8187	3.0470 2.6559	2.9034 2.9155	2.9080 2.8375	Ave		2.9058			4.4		30.0				
Vinyl acetate	++++ 3.9854	++++ 4.2048	4.0675 3.5720	3.8850 4.4145	3.9427 4.2013	Ave		4.0342			6.3		30.0				
Hexane	++++ 1.3242	++++ 1.2816	++++ 1.3713	++++ 1.3526	1.3260 1.2151	Ave		1.3036			4.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++	++++	++++	0.6854	0.6772	Ave		0.6347			8.5		30.0				
	0.6784	0.6294	0.5376	0.6386	0.5958												
cis-1,2-Dichloroethene	1.5310	1.3850	1.4658	1.4361	1.4213	Ave		1.4465			2.9		30.0				
	1.4515	1.4377	1.3972	1.4588	1.4806												
Ethyl acetate	++++	++++	3.4159	3.2335	3.3337	Ave		3.3124			6.9		30.0				
	3.4792	3.3231	2.8120	3.5743	3.3271												
Chloroform	3.5969	3.3560	3.4112	3.4074	3.2824	Ave		3.3444			4.2		30.0				
	3.2821	3.2211	3.0680	3.4218	3.3970												
Tetrahydrofuran	++++	++++	++++	1.7940	1.8215	Ave		1.7724			6.6		30.0				
	1.8641	1.7946	1.5246	1.8635	1.7446												
1,1,1-Trichloroethane	3.8810	3.4765	3.6941	3.5977	3.6119	Ave		3.6203			4.2		30.0				
	3.5723	3.5364	3.3475	3.7388	3.7470												
1,2-Dichloroethane	0.3890	0.3740	0.4205	0.3853	0.3989	Ave		0.3910			6.7		30.0				
	0.3918	0.3624	0.3439	0.4219	0.4228												
Cyclohexane	++++	++++	++++	0.1383	0.1426	Ave		0.1314			6.9		30.0				
	0.1391	0.1224	0.1193	0.1325	0.1258												
Benzene	++++	0.7122	0.8006	0.7160	0.7636	Ave		0.7153			7.0		30.0				
	0.7488	0.6697	0.6393	0.7124	0.6753												
Carbon tetrachloride	0.5647	0.5298	0.5813	0.5547	0.6331	Ave		0.5933			8.0		30.0				
	0.6279	0.5625	0.5603	0.6718	0.6470												
1-Butanol	++++	++++	++++	0.0897	0.1022	Ave		0.0896			13.7		30.0				
	0.1010	0.0823	0.0665	0.0902	0.0950												
2,3-Dimethylpentane	++++	++++	0.2016	0.1866	0.2067	Ave		0.1886			7.0		30.0				
	0.1994	0.1776	0.1681	0.1880	0.1811												
Thiophene	++++	++++	0.4419	0.4095	0.4328	Ave		0.4156			5.4		30.0				
	0.4205	0.3890	0.3765	0.4241	0.4306												
2,2,4-Trimethylpentane	1.4853	1.4111	1.5290	1.4173	1.5323	Ave		1.4009			8.1		30.0				
	1.4628	1.2640	1.1785	1.3863	1.3426												
Heptane	++++	++++	0.3221	0.2848	0.3010	Ave		0.2875			7.7		30.0				
	0.2942	0.2637	0.2507	0.2927	0.2912												
1,2-Dichloropropane	++++	0.2947	0.3066	0.2799	0.2948	Ave		0.2813			7.5		30.0				
	0.2869	0.2617	0.2359	0.2893	0.2819												
Trichloroethene	0.3496	0.3229	0.3354	0.3064	0.3383	Ave		0.3257			5.2		30.0				
	0.3271	0.3039	0.3006	0.3304	0.3426												
Dibromomethane	++++	++++	++++	0.3027	0.3082	Ave		0.2963			7.9		30.0				
	0.2897	0.2688	0.2632	0.3189	0.3227												
Bromodichloromethane	++++	++++	0.5688	0.5299	0.5916	Ave		0.5843			8.8		30.0				
	0.5840	0.5507	0.5314	0.6523	0.6656												
1,4-Dioxane	++++	++++	++++	0.0947	0.0887	Ave		0.0832			17.3		30.0				
	0.0619	0.0891	0.0629	0.0903	0.0946												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3918	++++ 0.3473	++++ 0.2972	0.3014 0.4093	0.3703 0.3989	Ave		0.3595			12.7		30.0				
Methylcyclohexane	0.4845 0.5152	0.4926 0.4533	0.5068 0.4304	0.4870 0.4877	0.5327 0.5063	Ave		0.4896			6.1		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.6350	++++ 0.5092	0.5796 0.3308	0.5597 0.5890	0.6524 0.6484	Ave		0.5630			18.8		30.0				
cis-1,3-Dichloropropene	++++ 0.4479	0.3952 0.4121	0.4552 0.3828	0.4166 0.4613	0.4382 0.4415	Ave		0.4279			6.4		30.0				
trans-1,3-Dichloropropene	++++ 0.4450	0.3978 0.4156	0.4398 0.3772	0.4049 0.4673	0.4521 0.4806	Ave		0.4311			8.0		30.0				
Toluene	0.8893 0.9181	0.8808 0.8443	0.9072 0.7540	0.8795 0.8738	0.9309 0.9230	Ave		0.8801			5.9		30.0				
1,1,2-Trichloroethane	0.2596 0.2870	0.2566 0.2535	0.2815 0.2299	0.2715 0.2735	0.2904 0.2819	Ave		0.2685			7.0		30.0				
2-Hexanone	++++ 0.3129	++++ 0.2311	0.2486 0.1601	0.2653 0.2620	0.3155 0.3172	Ave		0.2641			20.2		30.0				
Octane	++++ 0.3331	++++ 0.2969	0.3166 0.2807	0.3142 0.3116	0.3533 0.3257	Ave		0.3165			7.0		30.0				
C8 Range	++++ 3.2900	++++ 2.9406	++++ 2.7321	3.2543 3.2050	3.4583 3.2302	Ave		3.1586			7.7		30.0				
Dibromochloromethane	++++ 0.5589	++++ 0.5327	0.4753 0.5204	0.4633 0.6101	0.5345 0.6613	Ave		0.5446			12.1		30.0				
1,2-Dibromoethane (EDB)	++++ 0.4879	++++ 0.4537	0.4324 0.4227	0.4409 0.4933	0.4776 0.5168	Ave		0.4656			7.1		30.0				
Tetrachloroethene	0.3340 0.3413	0.3265 0.3106	0.3184 0.2978	0.3299 0.3362	0.3500 0.3575	Ave		0.3302			5.4		30.0				
Chlorobenzene	0.6503 0.7257	0.6533 0.6547	0.7038 0.5918	0.6891 0.6804	0.7584 0.7332	Ave		0.6841			7.2		30.0				
Ethylbenzene	++++ 1.2841	1.1605 1.1457	1.1820 0.9886	1.2041 1.2050	1.3132 1.2806	Ave		1.1960			8.1		30.0				
m-Xylene & p-Xylene	0.7852 1.0069	0.8464 0.8920	0.9631 0.7597	0.9388 0.9364	1.0264 0.9927	Ave		0.9148			10.1		30.0				
Nonane	++++ 0.7074	0.6367 0.6181	0.6731 0.5580	0.6713 0.6403	0.7319 0.6196	Ave		0.6507			8.0		30.0				
Bromoform	++++ 0.5150	++++ 0.5097	0.3874 0.4824	0.3783 0.6069	0.4530 ++++	Ave		0.4761			16.7		30.0				
Styrene	++++ 0.6772	++++ 0.6274	0.5417 0.5521	0.5440 0.6889	0.6499 0.7776	Ave		0.6323			13.2		30.0				
o-Xylene	++++ 1.0316	0.8434 0.9312	0.9762 0.7934	0.9959 0.9762	1.0612 1.0727	Ave		0.9646			9.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 26755

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 01/11/2019 13:08

Calibration End Date: 01/11/2019 21:51

Calibration ID: 1781

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++ 0.6943	++++ 0.6225	0.6477 0.5392	0.6105 0.6980	0.7079 0.6623	Ave		0.6478			8.7		30.0				
1,2,3-Trichloropropane	++++ 0.2201	++++ 0.1963	0.2117 0.1718	0.1933 0.2253	0.2181 0.2233	Ave		0.2075			9.0		30.0				
Isopropylbenzene	++++ 1.3750	1.2061 1.2349	1.2881 1.0540	1.2705 1.3875	1.3916 1.3659	Ave		1.2860			8.6		30.0				
Propylbenzene	++++ 0.3714	++++ 0.3352	0.3426 0.2878	0.3159 0.3755	0.3762 0.3762	Ave		0.3476			9.6		30.0				
2-Chlorotoluene	++++ 0.3404	0.3055 0.2960	0.3209 0.2606	0.3117 0.3372	0.3448 0.3406	Ave		0.3175			8.7		30.0				
4-Ethyltoluene	++++ 1.3518	++++ 1.2430	1.2707 1.0593	1.1808 1.3853	1.3899 1.3849	Ave		1.2832			9.3		30.0				
1,3,5-Trimethylbenzene	++++ 0.5322	++++ 0.4840	0.4931 0.4140	0.4624 0.5337	0.5289 0.5468	Ave		0.4994			9.1		30.0				
Alpha Methyl Styrene	++++ 0.5256	++++ 0.4877	++++ 0.4370	++++ 0.6086	0.3906 0.6006	Ave		0.5043			16.0		30.0				
Decane	++++ 0.8778	0.7603 0.7515	0.8322 0.6337	0.8484 0.8180	0.9143 0.7472	Ave		0.7982			10.6		30.0				
tert-Butylbenzene	++++ 1.2040	++++ 1.0655	1.0703 0.8921	1.0556 1.2542	1.1543 1.2176	Ave		1.1142			10.6		30.0				
1,2,4-Trimethylbenzene	++++ 1.1975	++++ 1.0389	1.0671 0.8751	1.0434 1.2267	1.1402 1.1768	Ave		1.0957			10.4		30.0				
sec-Butylbenzene	++++ 1.7209	++++ 1.4915	1.5212 1.2789	1.5236 1.7227	1.6717 1.6181	Ave		1.5686			9.5		30.0				
1,3-Dichlorobenzene	0.6490 0.7671	0.6444 0.6846	0.6738 0.6125	0.6739 0.8458	0.7415 0.8676	Ave		0.7160			12.1		30.0				
Benzyl chloride	++++ 1.0629	++++ 0.9436	0.8534 0.8465	0.8353 1.1447	0.9958 1.1273	Ave		0.9762			13.0		30.0				
1,4-Dichlorobenzene	0.7017 0.7787	0.6870 0.6945	0.6938 0.6166	0.6879 0.8577	0.7429 0.8826	Ave		0.7344			11.3		30.0				
4-Isopropyltoluene	++++ 1.3919	++++ 1.1997	1.1350 1.0411	1.1617 1.4207	1.3168 1.3719	Ave		1.2548			11.1		30.0				
1,2,3-Trimethylbenzene	0.7568 1.1870	0.8539 1.0454	1.0085 0.9035	1.0349 ++++	1.1364 ++++	Ave		0.9908			14.6		30.0				
Indane	++++ 1.0760	++++ 0.9392	0.9630 0.8123	0.9316 1.1012	1.0002 1.0990	Ave		0.9903			10.1		30.0				
1,2-Dichlorobenzene	++++ 0.7440	++++ 0.6621	0.6671 0.5878	0.6607 0.8263	0.7087 0.8754	Ave		0.7165			13.3		30.0				
Butylbenzene	++++ 1.4543	++++ 1.1174	1.2268 1.0412	1.2695 1.4208	1.3939 1.3499	Ave		1.2768			11.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.638		2.01	2.00	0.7	35.0
Propene	Ave	1.463	1.485		2.03	2.00	1.5	35.0
Dichlorodifluoromethane	Ave	4.235	4.340		2.05	2.00	2.5	35.0
Chloromethane	Ave	0.4649	0.4832		2.08	2.00	3.9	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.577		2.08	2.00	4.1	35.0
Acetaldehyde	Ave	0.5987	0.4752		7.94	10.0	-20.6	35.0
Vinyl chloride	Ave	1.611	1.638		2.03	2.00	1.7	35.0
1,3-Butadiene	Ave	1.245	1.289		2.07	2.00	3.6	35.0
Butane	Ave	2.712	2.809		2.07	2.00	3.5	35.0
Bromomethane	Ave	1.392	1.376		1.98	2.00	-1.1	35.0
Chloroethane	Ave	0.7761	0.7850		2.02	2.00	1.1	35.0
Ethanol	Ave	0.7042	0.5103		7.25	10.0	-27.5	35.0
Vinyl bromide	Ave	1.290	1.377		2.13	2.00	6.7	35.0
2-Methylbutane	Ave	1.947	1.999		2.05	2.00	2.7	35.0
Trichlorofluoromethane	Ave	4.152	4.112		1.98	2.00	-1.0	35.0
Acrolein	Ave	0.3574	0.2736		1.53	2.00	-23.4	35.0
Acetonitrile	Ave	0.5574	0.4415		1.58	2.00	-20.8	35.0
Acetone	Ave	0.6013	0.5234		1.74	2.00	-13.0	35.0
Pentane	Ave	0.2653	0.2805		2.11	2.00	5.7	35.0
Isopropyl alcohol	Ave	1.603	1.950		2.43	2.00	21.6	35.0
Ethyl ether	Ave	1.725	1.471		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.412	1.470		2.08	2.00	4.1	35.0
Acrylonitrile	Ave	0.9747	0.8590		1.76	2.00	-11.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.092		2.02	2.00	1.0	35.0
tert-Butyl alcohol	Ave	2.196	2.417		2.20	2.00	10.0	35.0
Methylene Chloride	Ave	1.643	1.409		1.72	2.00	-14.2	35.0
3-Chloropropene	Ave	1.751	1.584		1.81	2.00	-9.6	35.0
Carbon disulfide	Ave	4.284	4.357		2.03	2.00	1.7	35.0
trans-1,2-Dichloroethene	Ave	1.414	1.448		2.05	2.00	2.4	35.0
2-Methylpentane	Ave	4.045	3.765		1.86	2.00	-6.9	35.0
Methyl tert-butyl ether	Ave	3.932	3.361		1.71	2.00	-14.5	35.0
1,1-Dichloroethane	Ave	2.906	2.821		1.94	2.00	-2.9	35.0
Vinyl acetate	Ave	4.034	3.285		1.63	2.00	-18.6	35.0
2-Butanone (MEK)	Ave	0.6347	0.5473		1.72	2.00	-13.8	35.0
Hexane	Ave	1.304	1.314		2.02	2.00	0.8	35.0
Isopropyl ether	Ave	4.992	4.538		1.82	2.00	-9.1	35.0
cis-1,2-Dichloroethene	Ave	1.447	1.467		2.03	2.00	1.4	35.0
Ethyl acetate	Ave	3.312	2.660		1.61	2.00	-19.7	35.0
Chloroform	Ave	3.344	3.175		1.90	2.00	-5.1	35.0
Tert-butyl ethyl ether	Ave	4.607	3.821		1.66	2.00	-17.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.483		1.67	2.00	-16.3	35.0
1,1,1-Trichloroethane	Ave	3.620	3.468		1.92	2.00	-4.2	35.0
1,2-Dichloroethane	Ave	0.3910	0.3830		1.96	2.00	-2.1	35.0
Cyclohexane	Ave	0.1314	0.1432		2.18	2.00	8.9	35.0
Benzene	Ave	0.7153	0.7639		2.14	2.00	6.8	35.0
Carbon tetrachloride	Ave	0.5933	0.6444		2.17	2.00	8.6	35.0
1-Butanol	Ave	0.0896	0.1078		2.41	2.00	20.4	35.0
2,3-Dimethylpentane	Ave	0.1886	0.1955		2.07	2.00	3.6	35.0
Thiophene	Ave	0.4156	0.4158		2.00	2.00	0.0	35.0
2,2,4-Trimethylpentane	Ave	1.401	1.433		2.05	2.00	2.3	35.0
Heptane	Ave	0.2875	0.2905		2.02	2.00	1.0	35.0
1,2-Dichloropropane	Ave	0.2813	0.2642		1.88	2.00	-6.1	35.0
Trichloroethene	Ave	0.3257	0.3391		2.08	2.00	4.1	35.0
Dibromomethane	Ave	0.2963	0.2956		2.00	2.00	-0.2	35.0
Bromodichloromethane	Ave	0.5843	0.5891		2.02	2.00	0.8	35.0
1,4-Dioxane	Ave	0.0832	0.0836		2.01	2.00	0.5	35.0
Methyl methacrylate	Ave	0.3595	0.3109		1.73	2.00	-13.5	35.0
Methylcyclohexane	Ave	0.4896	0.6141		2.51	2.00	25.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.5532		1.96	2.00	-1.8	35.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4212		1.97	2.00	-1.5	35.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4178		1.94	2.00	-3.1	35.0
Toluene	Ave	0.8801	0.8270		1.88	2.00	-6.0	35.0
1,1,2-Trichloroethane	Ave	0.2685	0.2546		1.90	2.00	-5.2	35.0
2-Hexanone	Ave	0.2641	0.2800		2.12	2.00	6.0	35.0
Octane	Ave	0.3165	0.3309		2.09	2.00	4.5	35.0
Dibromochloromethane	Ave	0.5446	0.5759		2.12	2.00	5.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4594		1.97	2.00	-1.3	35.0
Tetrachloroethene	Ave	0.3302	0.3391		2.05	2.00	2.7	35.0
2,3-Dimethylheptane	Ave	1.076	0.9762		1.82	2.00	-9.2	35.0
Chlorobenzene	Ave	0.6841	0.6891		2.01	2.00	0.7	35.0
Ethylbenzene	Ave	1.196	1.091		1.82	2.00	-8.8	35.0
m-Xylene & p-Xylene	Ave	0.9148	0.8433		3.69	4.00	-7.8	35.0
Nonane	Ave	0.6507	0.6606		2.03	2.00	1.5	35.0
Bromoform	Ave	0.4761	0.5196		2.18	2.00	9.1	35.0
Styrene	Ave	0.6323	0.5922		1.87	2.00	-6.3	35.0
o-Xylene	Ave	0.9646	0.8608		1.78	2.00	-10.8	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.5907		1.82	2.00	-8.8	35.0
1,2,3-Trichloropropane	Ave	0.2075	0.1851		1.78	2.00	-10.8	35.0
Isopropylbenzene	Ave	1.286	1.176		1.83	2.00	-8.5	35.0
Propylbenzene	Ave	0.3476	0.3186		1.83	2.00	-8.3	35.0
2-Chlorotoluene	Ave	0.3175	0.3028		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-26755/18 Calibration Date: 01/11/2019 23:17
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GAllICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.090		1.70	2.00	-15.0	35.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4983		2.00	2.00	-0.2	35.0
Alpha Methyl Styrene	Ave	0.5043	0.4358		1.73	2.00	-13.6	35.0
Decane	Ave	0.7982	0.7703		1.93	2.00	-3.5	35.0
tert-Butylbenzene	Ave	1.114	0.998		1.79	2.00	-10.4	35.0
1,2,4-Trimethylbenzene	Ave	1.096	0.9651		1.76	2.00	-11.9	35.0
sec-Butylbenzene	Ave	1.569	1.417		1.81	2.00	-9.7	35.0
1,3-Dichlorobenzene	Ave	0.7160	0.6664		1.86	2.00	-6.9	35.0
Benzyl chloride	Ave	0.9762	0.8908		1.83	2.00	-8.7	35.0
1,4-Dichlorobenzene	Ave	0.7344	0.6695		1.82	2.00	-8.8	35.0
4-Isopropyltoluene	Ave	1.255	1.122		1.79	2.00	-10.6	35.0
1,2,3-Trimethylbenzene	Ave	0.9908	0.7182		1.45	2.00	-27.5	35.0
Butylcyclohexane	Ave	0.9039	0.8456		1.87	2.00	-6.5	35.0
Indane	Ave	0.9903	0.8594		1.74	2.00	-13.2	35.0
1,2-Dichlorobenzene	Ave	0.7165	0.6343		1.77	2.00	-11.5	35.0
Butylbenzene	Ave	1.277	1.182		1.85	2.00	-7.5	35.0
Indene	Ave	0.8508	0.6491		1.53	2.00	-23.7	35.0
Undecane	Ave	0.8098	0.7744		1.91	2.00	-4.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.2570		1.73	2.00	-13.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.013		1.77	2.00	-11.3	35.0
Dodecane	Ave	0.6396	0.6522		2.04	2.00	2.0	35.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5328		1.89	2.00	-5.7	35.0
Naphthalene	Ave	1.234	1.234		2.00	2.00	0.0	35.0
Hexachlorobutadiene	Ave	0.6047	0.5411		1.79	2.00	-10.5	35.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.5256		2.11	2.00	5.4	35.0
2-Methylnaphthalene	Ave	0.6016	0.6997		2.33	2.00	16.3	50.0
1-Methylnaphthalene	Ave	0.7372	0.8235		2.23	2.00	11.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8145		3.97	4.00	-0.6	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: GBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MG BFB Injection Time: 11:03
 Analysis Batch No.: 27931

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.5
75	30.0 - 60.0 % of mass 95	52.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.4 (0.5) 1
174	50.0 - 120.00 % of mass 95	73.1
175	5.0 - 9.0 % of mass 174	5.1 (7.0) 1
176	95.0 - 101.0 % of mass 174	71.2 (97.4) 1
177	5.0 - 9.0 % of mass 176	4.6 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27931/2	GCCVB26.D	02/26/2019	11:35
	LCS 140-27931/1002	GCCVB26-LCS. d	02/26/2019	11:35
	MB 140-27931/4	G500BB26.D	02/26/2019	12:56
IA-101-B-26	140-14391-19	GB26P102.D	02/26/2019	16:38
IA-100-B-26	140-14391-20	GB26P103.D	02/26/2019	17:19

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.620	2.652		2.02	2.00	1.2	30.0
Propene	Ave	1.463	1.534		2.10	2.00	4.8	30.0
Dichlorodifluoromethane	Ave	4.235	4.356		2.06	2.00	2.9	30.0
Chloromethane	Ave	0.4649	0.4693		2.02	2.00	0.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.475	2.404		1.94	2.00	-2.9	30.0
Acetaldehyde	Ave	0.5987	0.5225		8.73	10.0	-12.7	30.0
Vinyl chloride	Ave	1.611	1.586		1.97	2.00	-1.5	30.0
1,3-Butadiene	Ave	1.245	1.283		2.06	2.00	3.0	30.0
Butane	Ave	2.712	2.755		2.03	2.00	1.6	30.0
Bromomethane	Ave	1.392	1.313		1.89	2.00	-5.7	30.0
Chloroethane	Ave	0.7761	0.7469		1.92	2.00	-3.8	30.0
Ethanol	Ave	0.7042	0.7541		10.7	10.0	7.1	30.0
Vinyl bromide	Ave	1.290	1.209		1.87	2.00	-6.3	30.0
2-Methylbutane	Ave	1.947	1.895		1.95	2.00	-2.7	30.0
Trichlorofluoromethane	Ave	4.152	4.042		1.95	2.00	-2.7	30.0
Acrolein	Ave	0.3574	0.3194		1.79	2.00	-10.6	30.0
Acetonitrile	Ave	0.5574	0.5302		1.90	2.00	-4.9	30.0
Acetone	Ave	0.6013	0.4988		4.98	6.00	-17.0	30.0
Pentane	Ave	0.2653	0.2565		1.93	2.00	-3.3	30.0
Isopropyl alcohol	Ave	1.603	1.779		6.66	6.00	10.9	30.0
Ethyl ether	Ave	1.725	1.691		1.96	2.00	-2.0	30.0
1,1-Dichloroethene	Ave	1.412	1.514		2.14	2.00	7.2	30.0
Acrylonitrile	Ave	0.9747	0.9432		1.94	2.00	-3.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.060	3.167		2.07	2.00	3.5	30.0
tert-Butyl alcohol	Ave	2.196	2.812		2.56	2.00	28.0	30.0
Methylene Chloride	Ave	1.643	1.484		1.81	2.00	-9.7	30.0
3-Chloropropene	Ave	1.751	1.648		1.88	2.00	-5.9	30.0
Carbon disulfide	Ave	4.284	4.628		2.16	2.00	8.0	30.0
trans-1,2-Dichloroethene	Ave	1.414	1.521		2.15	2.00	7.6	30.0
2-Methylpentane	Ave	4.045	4.401		2.18	2.00	8.8	30.0
Methyl tert-butyl ether	Ave	3.932	3.883		1.97	2.00	-1.3	30.0
1,1-Dichloroethane	Ave	2.906	2.982		2.05	2.00	2.6	30.0
Vinyl acetate	Ave	4.034	3.919		1.94	2.00	-2.9	30.0
2-Butanone (MEK)	Ave	0.6347	0.6318		1.99	2.00	-0.5	30.0
Hexane	Ave	1.304	1.409		2.16	2.00	8.1	30.0
Isopropyl ether	Ave	4.992	5.130		2.06	2.00	2.8	30.0
cis-1,2-Dichloroethene	Ave	1.447	1.511		2.09	2.00	4.4	30.0
Ethyl acetate	Ave	3.312	3.321		2.01	2.00	0.3	30.0
Chloroform	Ave	3.344	3.351		2.00	2.00	0.2	30.0
Tert-butyl ethyl ether	Ave	4.607	4.651		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.772	1.780		2.01	2.00	0.4	30.0
1,1,1-Trichloroethane	Ave	3.620	3.686		2.04	2.00	1.8	30.0
1,2-Dichloroethane	Ave	0.3910	0.3917		2.00	2.00	0.2	30.0
Cyclohexane	Ave	0.1314	0.1477		2.25	2.00	12.4	30.0
Benzene	Ave	0.7153	0.7399		2.07	2.00	3.4	30.0
Carbon tetrachloride	Ave	0.5933	0.6573		2.22	2.00	10.8	30.0
1-Butanol	Ave	0.0896	0.1263		2.82	2.00	41.0*	30.0
2,3-Dimethylpentane	Ave	0.1886	0.2098		2.22	2.00	11.2	30.0
Thiophene	Ave	0.4156	0.4526		2.18	2.00	8.9	30.0
2,2,4-Trimethylpentane	Ave	1.401	1.515		2.16	2.00	8.2	30.0
Heptane	Ave	0.2875	0.3131		2.18	2.00	8.9	30.0
1,2-Dichloropropane	Ave	0.2813	0.2865		2.04	2.00	1.8	30.0
Trichloroethene	Ave	0.3257	0.3404		2.09	2.00	4.5	30.0
Dibromomethane	Ave	0.2963	0.3076		2.08	2.00	3.8	30.0
Bromodichloromethane	Ave	0.5843	0.6356		2.18	2.00	8.8	30.0
1,4-Dioxane	Ave	0.0832	0.1054		2.53	2.00	26.7	30.0
Methyl methacrylate	Ave	0.3595	0.3845		2.14	2.00	7.0	30.0
Methylcyclohexane	Ave	0.4896	0.5279		2.16	2.00	7.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5630	0.6430		2.28	2.00	14.2	30.0
cis-1,3-Dichloropropene	Ave	0.4279	0.4641		2.17	2.00	8.5	30.0
trans-1,3-Dichloropropene	Ave	0.4311	0.4612		2.14	2.00	7.0	30.0
Toluene	Ave	0.8801	0.8908		2.02	2.00	1.2	30.0
1,1,2-Trichloroethane	Ave	0.2685	0.2829		2.11	2.00	5.3	30.0
2-Hexanone	Ave	0.2641	0.3188		2.41	2.00	20.7	30.0
Octane	Ave	0.3165	0.3439		2.17	2.00	8.7	30.0
Dibromochloromethane	Ave	0.5446	0.5989		2.20	2.00	10.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.4656	0.4929		2.12	2.00	5.8	30.0
Tetrachloroethene	Ave	0.3302	0.3406		2.06	2.00	3.1	30.0
2,3-Dimethylheptane	Ave	1.076	1.161		2.16	2.00	8.0	30.0
Chlorobenzene	Ave	0.6841	0.7203		2.11	2.00	5.3	30.0
Ethylbenzene	Ave	1.196	1.211		2.03	2.00	1.3	30.0
m-Xylene & p-Xylene	Ave	0.9148	0.9437		4.13	4.00	3.2	30.0
Nonane	Ave	0.6507	0.7098		2.18	2.00	9.1	30.0
Bromoform	Ave	0.4761	0.5476		2.30	2.00	15.0	30.0
Styrene	Ave	0.6323	0.6714		2.12	2.00	6.2	30.0
o-Xylene	Ave	0.9646	0.9910		2.05	2.00	2.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6478	0.6633		2.05	2.00	2.4	30.0
1,2,3-Trichloropropane	Ave	0.2075	0.2051		1.98	2.00	-1.2	30.0
Isopropylbenzene	Ave	1.286	1.274		1.98	2.00	-1.0	30.0
Propylbenzene	Ave	0.3476	0.3424		1.97	2.00	-1.5	30.0
2-Chlorotoluene	Ave	0.3175	0.3184		2.01	2.00	0.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27931/2 Calibration Date: 02/26/2019 11:35
 Instrument ID: MG Calib Start Date: 01/11/2019 13:08
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/11/2019 21:51
 Lab File ID: GCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.283	1.295		2.02	2.00	0.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4994	0.4918		1.97	2.00	-1.5	30.0
Alpha Methyl Styrene	Ave	0.5043	0.5202		2.06	2.00	3.1	30.0
Decane	Ave	0.7982	0.8625		2.16	2.00	8.1	30.0
tert-Butylbenzene	Ave	1.114	1.103		1.98	2.00	-1.0	30.0
1,2,4-Trimethylbenzene	Ave	1.096	1.089		1.99	2.00	-0.6	30.0
sec-Butylbenzene	Ave	1.569	1.580		2.01	2.00	0.7	30.0
1,3-Dichlorobenzene	Ave	0.7160	0.7287		2.04	2.00	1.8	30.0
Benzyl chloride	Ave	0.9762	1.033		2.12	2.00	5.8	30.0
1,4-Dichlorobenzene	Ave	0.7344	0.7367		2.01	2.00	0.3	30.0
4-Isopropyltoluene	Ave	1.255	1.277		2.03	2.00	1.7	30.0
1,2,3-Trimethylbenzene	Ave	0.9908	1.101		2.22	2.00	11.1	30.0
Butylcyclohexane	Ave	0.9039	0.9644		2.13	2.00	6.7	30.0
Indane	Ave	0.9903	0.9865		1.99	2.00	-0.4	30.0
1,2-Dichlorobenzene	Ave	0.7165	0.7004		1.95	2.00	-2.3	30.0
Butylbenzene	Ave	1.277	1.325		2.08	2.00	3.8	30.0
Indene	Ave	0.8508	0.8688		2.04	2.00	2.1	30.0
Undecane	Ave	0.8098	0.8597		2.12	2.00	6.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2963	0.3582		2.42	2.00	20.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.142	1.185		2.07	2.00	3.7	30.0
Dodecane	Ave	0.6396	0.6319		1.98	2.00	-1.2	30.0
1,2,4-Trichlorobenzene	Ave	0.5649	0.5181		1.83	2.00	-8.3	30.0
Naphthalene	Ave	1.234	1.197		1.94	2.00	-3.0	30.0
Hexachlorobutadiene	Ave	0.6047	0.5124		1.69	2.00	-15.3	30.0
1,2,3-Trichlorobenzene	Ave	0.4988	0.4625		1.85	2.00	-7.3	30.0
2-Methylnaphthalene	Ave	0.6016	0.4938		1.64	2.00	-17.9	50.0
1-Methylnaphthalene	Ave	0.7372	0.5485		1.49	2.00	-25.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8196	0.8212		4.01	4.00	0.2	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: RFBK16I.D BFB Injection Date: 11/16/2018
 Instrument ID: MR BFB Injection Time: 16:00
 Analysis Batch No.: 25490

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	58.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	91.0	
175	5.0 - 9.0 % of mass 174	6.6	(7.3) 1
176	95.0 - 101.0 % of mass 174	88.8	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-25490/3	RK16IC09.D	11/16/2018	17:23
	IC 140-25490/5	RK16IC10.D	11/16/2018	19:07
	IC 140-25490/8	RK16IC01.D	11/16/2018	21:42
	IC 140-25490/9	RK16IC02.D	11/16/2018	22:34
	IC 140-25490/10	RK16IC03.D	11/16/2018	23:27
	IC 140-25490/11	RK16IC04.D	11/17/2018	00:20
	IC 140-25490/12	RK16IC05.D	11/17/2018	01:12
	IC 140-25490/13	RK16IC06.D	11/17/2018	02:05
	ICIS 140-25490/14	RK16IC07.D	11/17/2018	02:58
	IC 140-25490/15	RK16IC08.D	11/17/2018	03:51
	ICV 140-25490/18	RK16ICV.D	11/17/2018	06:27

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.6032	2.5523	2.4630	Ave		2.3734			6.7		30.0				
	2.3273	2.2136	2.2367	2.4103	2.1808												
Propene	+++++	+++++	+++++	0.8419	0.7507	Ave		0.7296			8.2		30.0				
	0.7221	0.6895	0.6844	0.7524	0.6660												
Dichlorodifluoromethane	+++++	+++++	4.5412	4.2461	5.3003	Ave		4.3524			11.7		30.0				
	4.1510	3.9686	4.0428	4.8211	3.7479												
Chloromethane	+++++	+++++	0.4314	0.2960	0.3371	Ave		0.3061			18.1		30.0				
	0.2871	0.2733	0.2689	0.2912	0.2638												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.8991	3.2433	3.1843	3.5538	Ave		3.2404			10.6		30.0				
	3.0989	3.0537	3.1101	3.3433	2.6767												
Vinyl chloride	1.3396	1.3354	1.1215	1.1058	1.0442	Ave		1.0731			14.4		30.0				
	0.9887	0.9559	0.9544	0.9748	0.9105												
1,3-Butadiene	+++++	+++++	+++++	0.7017	0.6571	Ave		0.6506			4.0		30.0				
	0.6523	0.6352	0.6377	0.6500	0.6202												
Butane	+++++	+++++	1.3166	1.1752	1.2095	Ave		1.1321			8.5		30.0				
	1.1091	1.0560	1.0795	1.0850	1.0260												
Bromomethane	+++++	+++++	1.4266	1.2696	1.2705	Ave		1.2354			7.2		30.0				
	1.2054	1.1811	1.1809	1.2035	1.1456												
Chloroethane	+++++	+++++	0.6023	0.5518	0.4948	Ave		0.4970			10.7		30.0				
	0.4893	0.4606	0.4673	0.4597	0.4499												
Ethanol	+++++	+++++	+++++	0.3286	0.3153	Ave		0.2997			6.1		30.0				
	0.2949	0.2999	0.2981	0.2885	0.2724												
Vinyl bromide	+++++	+++++	1.4513	1.3532	1.3493	Ave		1.3020			5.9		30.0				
	1.2738	1.2507	1.2699	1.2460	1.2216												
2-Methylbutane	+++++	+++++	0.8639	0.8536	0.8359	Ave		0.7999			5.7		30.0				
	0.7979	0.7734	0.7606	0.7713	0.7425												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Acrolein	++++ 0.2149	++++ 0.2505	++++ 0.2493	0.3397 0.2426	0.2316 0.2411	Ave		0.2528			15.9		30.0				
Trichlorofluoromethane	6.6790 5.8128	6.2714 5.6498	6.2323 5.6579	6.0249 5.5584	5.9679 5.2697	Ave		5.9124			6.9		30.0				
Acetonitrile	++++ 0.2348	++++ 0.2373	++++ 0.2818	0.2630 0.2803	0.2428 0.2703	Ave		0.2586			7.8		30.0				
Acetone	++++ 0.4175	++++ 0.3860	++++ 0.3784	0.5760 0.3627	0.4291 0.3557	Ave		0.4151			18.3		30.0				
Pentane	++++ 0.1987	++++ 0.1907	++++ 0.1944	0.2412 0.1914	0.2034 0.1879	Ave		0.2011			9.2		30.0				
Isopropyl alcohol	++++ 1.1215	++++ 1.1376	++++ 1.1294	1.2584 1.0760	1.1488 1.0492	Ave		1.1316			5.9		30.0				
Ethyl ether	++++ 0.6540	++++ 0.6244	++++ 0.6327	0.7089 0.6995	0.6970 0.6464	Ave		0.6661			5.2		30.0				
1,1-Dichloroethene	1.6400 1.3612	1.4528 1.3523	1.4077 1.3829	1.3842 1.3970	1.3751 1.3233	Ave		1.4076			6.3		30.0				
Acrylonitrile	++++ 0.6195	++++ 0.6124	++++ 0.6202	++++ 0.6572	0.6255 0.6313	Ave		0.6277			2.5		30.0				
tert-Butyl alcohol	++++ 2.6737	++++ 2.7383	++++ 2.6973	2.6805 2.6655	2.7132 2.5593	Ave		2.6773			2.0		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.5282	3.6010 3.4530	3.7397 3.4392	3.5306 3.4042	3.5510 3.1580	Ave		3.4894			4.6		30.0				
Methylene Chloride	++++ 1.2853	++++ 1.1917	++++ 1.1531	2.0228 1.1482	1.5003 1.0647	Ave		1.3380			24.9		30.0				
3-Chloropropene	++++ 1.3439	++++ 1.2944	1.1777 1.2837	1.4302 1.3374	1.3141 1.2919	Ave		1.3092			5.4		30.0				
Carbon disulfide	++++ 3.4096	++++ 3.3395	3.3655 3.3248	3.2471 3.4285	3.3320 3.2774	Ave		3.3406			1.8		30.0				
trans-1,2-Dichloroethene	1.5926 1.4009	1.5829 1.3797	1.4276 1.4044	1.3885 1.4254	1.3834 1.3721	Ave		1.4358			5.7		30.0				
2-Methylpentane	++++ 1.8951	++++ 1.8425	++++ 1.8466	1.9630 1.9346	1.9304 1.8132	Ave		1.8940			2.8		30.0				
Methyl tert-butyl ether	++++ 4.5873	++++ 4.5288	4.7495 4.5802	4.4631 4.6026	4.5963 4.4400	Ave		4.5685			2.1		30.0				
1,1-Dichloroethane	2.6815 2.3300	2.6739 2.2911	2.4729 2.3182	2.3130 2.3408	2.3587 2.2447	Ave		2.4025			6.5		30.0				
Vinyl acetate	++++ 2.2364	++++ 2.3368	++++ 2.4359	2.0297 2.5381	2.1537 2.5129	Ave		2.3205			8.2		30.0				
2-Butanone (MEK)	++++ 0.5380	++++ 0.5309	++++ 0.5519	0.5759 0.5616	0.5098 0.5445	Ave		0.5446			3.9		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	++++	++++	0.9023	0.8416	0.8376	Ave		0.8352			3.6		30.0				
	0.8187	0.8108	0.8291	0.8382	0.8031												
cis-1,2-Dichloroethene	1.6200	1.4958	1.4342	1.4272	1.3943	Ave		1.4479			4.6		30.0				
	1.4112	1.4310	1.4304	1.4418	1.3928												
Ethyl acetate	++++	++++	1.8097	1.9184	1.9214	Ave		2.0119			6.0		30.0				
	2.0207	2.0336	2.1099	2.1701	2.1110												
Chloroform	4.2334	4.0960	3.8341	3.7602	3.7763	Ave		3.8207			5.1		30.0				
	3.7394	3.6835	3.7449	3.7523	3.5872												
Tetrahydrofuran	++++	++++	++++	0.8784	0.8832	Ave		0.8862			1.5		30.0				
	0.8846	0.8714	0.8870	0.9150	0.8836												
1,1,1-Trichloroethane	4.9709	4.9939	5.0122	4.7467	4.7402	Ave		4.8434			2.4		30.0				
	4.7770	4.7670	4.8476	4.8764	4.7023												
1,2-Dichloroethane	0.5380	0.5327	0.5166	0.4858	0.4926	Ave		0.5063			3.5		30.0				
	0.5057	0.4936	0.4997	0.5068	0.4915												
Benzene	0.7533	0.7075	0.7019	0.6312	0.6214	Ave		0.6517			7.8		30.0				
	0.6321	0.6240	0.6266	0.6238	0.5956												
Cyclohexane	++++	++++	++++	0.0959	0.0939	Ave		0.0968			3.7		30.0				
	0.1013	0.0986	0.1001	0.0971	0.0911												
1-Butanol	++++	++++	++++	++++	0.0330	Ave		0.0462			14.9		30.0				
	0.0448	0.0477	0.0492	0.0516	0.0509												
Carbon tetrachloride	0.9231	0.9429	0.7537	0.9038	0.9350	Ave		0.9167			6.5		30.0				
	0.9489	0.9372	0.9263	0.9692	0.9273												
2,3-Dimethylpentane	++++	++++	0.1212	0.1277	0.1355	Ave		0.1349			5.2		30.0				
	0.1378	0.1390	0.1407	0.1410	0.1365												
Thiophene	++++	++++	0.3563	0.3607	0.3698	Ave		0.3728			2.9		30.0				
	0.3778	0.3718	0.3816	0.3893	0.3754												
2,2,4-Trimethylpentane	++++	++++	0.8652	0.8182	0.8128	Ave		0.8342			2.3		30.0				
	0.8423	0.8248	0.8393	0.8535	0.8176												
1,2-Dichloropropane	++++	++++	0.2130	0.1991	0.2024	Ave		0.2045			2.2		30.0				
	0.2041	0.2015	0.2054	0.2089	0.2020												
Heptane	++++	++++	0.1976	0.1979	0.2071	Ave		0.2083			3.5		30.0				
	0.2142	0.2122	0.2154	0.2154	0.2066												
Trichloroethene	0.4192	0.3851	0.4007	0.3771	0.3880	Ave		0.3929			4.2		30.0				
	0.3857	0.3869	0.4221	0.3913	0.3727												
Dibromomethane	++++	++++	0.3725	0.3565	0.3464	Ave		0.3514			3.1		30.0				
	0.3459	0.3374	0.3500	0.3576	0.3447												
Bromodichloromethane	++++	++++	0.5971	0.5918	0.6239	Ave		0.6587			7.4		30.0				
	0.6680	0.6726	0.7005	0.7174	0.6980												
1,4-Dioxane	++++	++++	++++	0.0992	0.0973	Ave		0.0994			3.2		30.0				
	0.0965	0.1030	0.1037	0.1007	0.0954												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++	++++	0.2139	0.1766	0.2044	Ave		0.2275			12.8		30.0				
	0.2243	0.2331	0.2468	0.2628	0.2582												
Methylcyclohexane	++++	++++	0.3972	0.3842	0.3938	Ave		0.4024			2.5		30.0				
	0.4067	0.4050	0.4110	0.4158	0.4053												
4-Methyl-2-pentanone (MIBK)	++++	++++	++++	0.2895	0.3277	Ave		0.3626			11.5		30.0				
	0.3577	0.3715	0.3933	0.4035	0.3952												
cis-1,3-Dichloropropene	++++	0.3635	0.3602	0.3514	0.3808	Ave		0.3948			8.2		30.0				
	0.3940	0.4127	0.4288	0.4368	0.4249												
trans-1,3-Dichloropropene	++++	0.4035	0.3959	0.4276	0.4537	Ave		0.4674			10.5		30.0				
	0.4780	0.4968	0.5178	0.5209	0.5119												
Toluene	1.0184	0.9133	0.9750	0.9478	0.9541	Ave		0.9586			3.2		30.0				
	0.9698	0.9624	0.9710	0.9638	0.9102												
1,1,2-Trichloroethane	0.2339	0.2426	0.2564	0.2580	0.2596	Ave		0.2543			4.0		30.0				
	0.2639	0.2594	0.2610	0.2630	0.2452												
2-Hexanone	++++	++++	++++	0.1399	0.1787	Ave		0.2006			16.0		30.0				
	0.1981	0.2103	0.2238	0.2293	0.2239												
Dibromochloromethane	0.6655	0.5795	0.6334	0.6501	0.6985	Ave		0.7414			14.6		30.0				
	0.7840	0.8296	0.8666	0.8735	0.8331												
Octane	++++	++++	0.2922	0.3033	0.2998	Ave		0.3054			3.1		30.0				
	0.3146	0.3133	0.3156	0.3109	0.2932												
C8 Range	++++	++++	++++	++++	2.0961	Ave		2.1360			2.5		30.0				
	2.1678	2.1237	2.1591	2.2092	2.0601												
1,2-Dibromoethane (EDB)	++++	++++	0.5000	0.4942	0.5448	Ave		0.5574			7.3		30.0				
	0.5766	0.5804	0.5952	0.5984	0.5694												
Tetrachloroethene	0.4858	0.4864	0.4732	0.4838	0.4706	Ave		0.4749			2.9		30.0				
	0.4849	0.4819	0.4752	0.4653	0.4417												
Chlorobenzene	0.8210	0.8425	0.8551	0.8450	0.8379	Ave		0.8374			2.0		30.0				
	0.8508	0.8373	0.8444	0.8430	0.7968												
Ethylbenzene	1.3703	1.3589	1.4055	1.3343	1.4017	Ave		1.3820			2.9		30.0				
	1.4178	1.4128	1.4174	1.4023	1.2986												
m-Xylene & p-Xylene	1.1137	1.1023	1.1618	1.1488	1.1673	Ave		1.1335			4.1		30.0				
	1.1838	1.1550	1.1536	1.1251	1.0234												
Bromoform	++++	++++	0.5893	0.6166	0.6638	Ave		0.7786			18.1		30.0				
	0.7606	0.8485	0.9286	0.9279	0.8938												
Styrene	++++	++++	0.6004	0.6182	0.6786	Ave		0.7430			13.0		30.0				
	0.7750	0.7975	0.8292	0.8487	0.7961												
o-Xylene	1.1430	1.1230	1.2624	1.2290	1.2492	Ave		1.1905			5.0		30.0				
	1.2366	1.2060	1.1986	1.1769	1.0804												
Nonane	++++	++++	0.4455	0.4515	0.4801	Ave		0.4511			5.2		30.0				
	0.4737	0.4580	0.4538	0.4433	0.4032												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14391-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.5797 0.6456	0.5118 0.6455	0.5697 0.6181	0.5802 0.6658	0.6188 0.6146	Ave		0.6050			7.5		30.0				
1,2,3-Trichloropropane	++++ 0.3084	++++ 0.3034	0.2911 0.3046	0.2918 0.3115	0.2978 0.2914	Ave		0.3000			2.7		30.0				
Isopropylbenzene	++++ 1.7012	++++ 1.6661	1.8308 1.6871	1.7528 1.6694	1.7150 1.5307	Ave		1.6941			5.0		30.0				
Propylbenzene	0.4435 0.4963	0.4328 0.4795	0.4534 0.4859	0.4640 0.4778	0.4755 0.4438	Ave		0.4652			4.5		30.0				
2-Chlorotoluene	++++ 0.4524	0.3991 0.4310	0.4619 0.4318	0.4417 0.4245	0.4398 0.3929	Ave		0.4306			5.3		30.0				
4-Ethyltoluene	1.5529 1.8829	1.6047 1.8611	1.7828 1.8557	1.7531 1.8469	1.7972 1.6563	Ave		1.7594			6.6		30.0				
1,3,5-Trimethylbenzene	0.6792 0.7724	0.6523 0.7416	0.7326 0.7410	0.7228 0.7434	0.7292 0.6843	Ave		0.7199			5.1		30.0				
Alpha Methyl Styrene	++++ 0.6781	++++ 0.7295	++++ 0.7535	++++ 0.7838	0.5439 0.7289	Ave		0.6844			13.4		30.0				
Decane	++++ 0.6849	++++ 0.6585	0.6176 0.6522	0.6408 0.6491	0.6488 0.5849	Ave		0.6421			4.6		30.0				
tert-Butylbenzene	1.6566 1.8841	1.6665 1.7827	1.8313 1.7468	1.8740 1.6988	1.8639 1.5293	Ave		1.7534			6.6		30.0				
1,2,4-Trimethylbenzene	1.4293 1.7233	1.4880 1.6671	1.6887 1.6372	1.6986 1.5922	1.7123 1.4293	Ave		1.6066			7.2		30.0				
1,3-Dichlorobenzene	1.1997 1.1856	1.0963 1.1603	1.2442 1.1572	1.1823 1.1516	1.1621 1.0583	Ave		1.1598			4.5		30.0				
sec-Butylbenzene	2.0787 2.3069	2.1298 2.2195	2.2743 2.1908	2.2407 2.1561	2.2363 1.8732	Ave		2.1706			5.7		30.0				
Benzyl chloride	++++ 1.2529	++++ 1.3231	1.0998 1.4041	1.0436 1.3938	1.1034 1.2924	Ave		1.2392			11.3		30.0				
1,4-Dichlorobenzene	1.2196 1.2112	1.1487 1.1594	1.2267 1.1399	1.2179 1.1212	1.1651 1.0340	Ave		1.1644			5.1		30.0				
4-Isopropyltoluene	2.1095 2.3345	2.1432 2.2554	2.2305 2.2238	2.2370 2.1784	2.2728 1.9244	Ave		2.1910			5.2		30.0				
1,2,3-Trimethylbenzene	1.6103 1.8346	1.5786 1.7874	1.8623 1.7524	1.7831 1.7335	1.7558 1.5556	Ave		1.7253			6.2		30.0				
1,2-Dichlorobenzene	1.1708 1.1557	1.2083 1.1157	1.2580 1.1029	1.2065 1.0865	1.1355 1.0034	Ave		1.1443			6.3		30.0				
Indane	1.4503 1.4994	1.3817 1.4300	1.4785 1.4226	1.4862 1.3893	1.4419 1.2529	Ave		1.4233			5.0		30.0				
Indene	++++ 1.2013	++++ 1.2223	1.0339 1.2542	1.0803 1.2953	1.0663 1.1920	Ave		1.1682			8.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.8231 1.8829	1.6985 1.8028	1.8359 1.7871	1.8719 1.7597	1.8266 1.5551	Ave		1.7844			5.4		30.0				
Undecane	++++ 0.8059	++++ 0.7917	++++ 0.7809	++++ 0.7402	0.7701 0.6720	Ave		0.7598			5.8		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.5799	++++ 0.6160	0.4391 0.6515	0.4709 0.6213	0.4861 0.5926	Ave		0.5572			14.3		30.0				
1,2,4,5-Tetramethylbenzene	++++ 2.1235	++++ 2.1635	2.1451 2.1540	2.1430 1.9985	1.9593 1.8488	Ave		2.0670			5.7		30.0				
Dodecane	++++ 0.7733	++++ 0.8936	++++ 0.8877	0.8688 0.7212	0.6803 0.7447	Ave		0.7957			10.9		30.0				
1,2,4-Trichlorobenzene	++++ 1.1894	++++ 1.2694	1.4472 1.2818	1.3888 1.0940	1.0856 1.1269	Ave		1.2354			10.9		30.0				
Naphthalene	++++ 2.0750	3.4525 2.4487	2.8184 2.5087	2.7367 2.1182	1.8255 ++++	Ave		2.4980			20.6		30.0				
Hexachlorobutadiene	++++ 1.4923	++++ 1.4393	1.7181 1.4314	1.5746 1.2072	1.3912 1.2353	Ave		1.4362			11.7		30.0				
1,2,3-Trichlorobenzene	++++ 1.1295	++++ 1.2212	1.4432 1.2323	1.3860 0.9868	1.0237 1.0761	Ave		1.1873			13.9		30.0				
2-Methylnaphthalene	++++ 0.3586	++++ 0.9509	++++ 1.0808	++++ 0.6399	++++ 0.9374	Ave		0.7935			36.8		50.0				
1-Methylnaphthalene	++++ 0.3899	++++ 0.8629	++++ 0.9496	++++ 0.5203	++++ 0.7770	Ave		0.6999			33.7		50.0				
4-Bromofluorobenzene (Surr)	0.8488 0.8636	0.8528 0.8535	0.8654 0.8546	0.8648 0.8319	0.8641 0.8066	Ave		0.8506			2.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 06/28/2017 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/28/2017 21:58
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6999	0.3362			2.00	-52.0*	35.0
3-Methylthiophene	Ave	0.6908	0.7960			2.00	15.2	35.0
2-Ethylthiophene	Ave	0.9153	1.134			2.00	23.9	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.640			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.275			2.00	39.5*	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.768			2.00	43.0*	35.0
Benzo (b) thiophene	Ave	0.9147	1.487			2.00	62.6*	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.256		1.90	2.00	-4.9	35.0
Propene	Ave	0.7296	0.6790		1.86	2.00	-6.9	35.0
Dichlorodifluoromethane	Ave	4.352	5.057		2.32	2.00	16.2	35.0
Chloromethane	Ave	0.3061	0.2731		1.78	2.00	-10.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	3.469		2.14	2.00	7.1	35.0
Acetaldehyde	Ave	0.2860	0.2397		8.38	10.0	-16.2	35.0
Vinyl chloride	Ave	1.073	0.9669		1.80	2.00	-9.9	35.0
1,3-Butadiene	Ave	0.6506	0.6233		1.92	2.00	-4.2	35.0
Butane	Ave	1.132	1.086		1.92	2.00	-4.0	35.0
Bromomethane	Ave	1.235	1.146		1.86	2.00	-7.2	35.0
Chloroethane	Ave	0.4970	0.4655		1.87	2.00	-6.3	35.0
Ethanol	Ave	0.2997	0.2300		7.67	10.0	-23.3	35.0
Vinyl bromide	Ave	1.302	1.320		2.03	2.00	1.4	35.0
2-Methylbutane	Ave	0.7999	0.7818		1.95	2.00	-2.3	35.0
Acrolein	Ave	0.2528	0.2785		2.20	2.00	10.2	35.0
Trichlorofluoromethane	Ave	5.912	5.646		1.91	2.00	-4.5	35.0
Acetonitrile	Ave	0.2586	0.2377		1.84	2.00	-8.1	35.0
Acetone	Ave	0.4151	0.3821		1.84	2.00	-7.9	35.0
Pentane	Ave	0.2011	0.2005		1.99	2.00	-0.3	35.0
Isopropyl alcohol	Ave	1.132	1.401		2.48	2.00	23.8	35.0
Ethyl ether	Ave	0.6661	0.5684		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.408	1.325		1.88	2.00	-5.9	35.0
Acrylonitrile	Ave	0.6277	0.6236		1.99	2.00	-0.6	35.0
tert-Butyl alcohol	Ave	2.677	2.710		2.02	2.00	1.2	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.433		1.97	2.00	-1.6	35.0
Methylene Chloride	Ave	1.338	1.169		1.75	2.00	-12.6	35.0
3-Chloropropene	Ave	1.309	1.297		1.98	2.00	-0.9	35.0
Carbon disulfide	Ave	3.341	3.259		1.95	2.00	-2.4	35.0
trans-1,2-Dichloroethene	Ave	1.436	1.363		1.90	2.00	-5.1	35.0
2-Methylpentane	Ave	1.894	1.705		1.80	2.00	-10.0	35.0
Methyl tert-butyl ether	Ave	4.568	4.614		2.02	2.00	1.0	35.0
1,1-Dichloroethane	Ave	2.402	2.312		1.92	2.00	-3.8	35.0
Vinyl acetate	Ave	2.320	2.445		2.11	2.00	5.4	35.0
2-Butanone (MEK)	Ave	0.5446	0.5251		1.93	2.00	-3.6	35.0
Hexane	Ave	0.8352	0.8172		1.96	2.00	-2.2	35.0
Isopropyl ether	Ave	2.873	2.961		2.06	2.00	3.0	35.0
cis-1,2-Dichloroethene	Ave	1.448	1.418		1.96	2.00	-2.1	35.0
Ethyl acetate	Ave	2.012	1.960		1.95	2.00	-2.6	35.0
Chloroform	Ave	3.821	3.708		1.94	2.00	-3.0	35.0
Tert-butyl ethyl ether	Ave	4.141	3.948		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.8745		1.97	2.00	-1.3	35.0
1,1,1-Trichloroethane	Ave	4.843	4.775		1.97	2.00	-1.4	35.0
1,2-Dichloroethane	Ave	0.5063	0.5017		1.98	2.00	-0.9	35.0
Benzene	Ave	0.6517	0.6483		1.99	2.00	-0.5	35.0
Cyclohexane	Ave	0.0968	0.1018		2.10	2.00	5.2	35.0
1-Butanol	Ave	0.0462	0.0484		2.09	2.00	4.7	35.0
Carbon tetrachloride	Ave	0.9167	0.9855		2.15	2.00	7.5	35.0
2,3-Dimethylpentane	Ave	0.1349	0.1359		2.01	2.00	0.7	35.0
Thiophene	Ave	0.3728	0.3687		1.98	2.00	-1.1	35.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8439		2.02	2.00	1.2	35.0
1,2-Dichloropropane	Ave	0.2045	0.2036		1.99	2.00	-0.5	35.0
Heptane	Ave	0.2083	0.2143		2.06	2.00	2.8	35.0
Trichloroethene	Ave	0.3929	0.3984		2.03	2.00	1.4	35.0
Dibromomethane	Ave	0.3514	0.3500		1.99	2.00	-0.4	35.0
Bromodichloromethane	Ave	0.6587	0.6852		2.08	2.00	4.0	35.0
1,4-Dioxane	Ave	0.0994	0.1029		2.07	2.00	3.5	35.0
Methyl methacrylate	Ave	0.2275	0.2348		2.06	2.00	3.2	35.0
Methylcyclohexane	Ave	0.4024	0.4961		2.47	2.00	23.3	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3776		2.08	2.00	4.1	35.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4285		2.17	2.00	8.5	35.0
trans-1,3-Dichloropropene	Ave	0.4674	0.5177		2.22	2.00	10.8	35.0
Toluene	Ave	0.9586	0.9853		2.06	2.00	2.8	35.0
1,1,2-Trichloroethane	Ave	0.2543	0.2613		2.05	2.00	2.7	35.0
2-Hexanone	Ave	0.2006	0.2098		2.09	2.00	4.6	35.0
Dibromochloromethane	Ave	0.7414	0.8418		2.27	2.00	13.5	35.0
Octane	Ave	0.3054	0.3220		2.11	2.00	5.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5875		2.11	2.00	5.4	35.0
Tetrachloroethene	Ave	0.4749	0.4840		2.04	2.00	1.9	35.0
Chlorobenzene	Ave	0.8374	0.8605		2.06	2.00	2.8	35.0
2,3-Dimethylheptane	Ave	0.5626	0.5171		1.84	2.00	-8.1	35.0
Ethylbenzene	Ave	1.382	1.443		2.09	2.00	4.4	35.0
m-Xylene & p-Xylene	Ave	1.133	1.199		4.23	4.00	5.8	35.0
Bromoform	Ave	0.7786	0.8773		2.25	2.00	12.7	35.0
Styrene	Ave	0.7430	0.8258		2.22	2.00	11.1	35.0
o-Xylene	Ave	1.190	1.212		2.04	2.00	1.8	35.0
Nonane	Ave	0.4511	0.4700		2.08	2.00	4.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6491		2.15	2.00	7.3	35.0
1,2,3-Trichloropropane	Ave	0.3000	0.3085		2.06	2.00	2.8	35.0
Isopropylbenzene	Ave	1.694	1.742		2.06	2.00	2.8	35.0
Propylbenzene	Ave	0.4652	0.5071		2.18	2.00	9.0	35.0
2-Chlorotoluene	Ave	0.4306	0.4514		2.10	2.00	4.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.816		2.06	2.00	3.2	35.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.8591		2.39	2.00	19.3	35.0
Alpha Methyl Styrene	Ave	0.6844	0.7376		2.16	2.00	7.8	35.0
Decane	Ave	0.6421	0.6805		2.12	2.00	6.0	35.0
tert-Butylbenzene	Ave	1.753	1.837		2.10	2.00	4.8	35.0
1,2,4-Trimethylbenzene	Ave	1.607	1.694		2.11	2.00	5.5	35.0
1,3-Dichlorobenzene	Ave	1.160	1.185		2.04	2.00	2.2	35.0
sec-Butylbenzene	Ave	2.171	2.287		2.11	2.00	5.4	35.0
Benzyl chloride	Ave	1.239	1.386		2.24	2.00	11.9	35.0
1,4-Dichlorobenzene	Ave	1.164	1.184		2.03	2.00	1.7	35.0
4-Isopropyltoluene	Ave	2.191	2.267		2.07	2.00	3.5	35.0
1,2,3-Trimethylbenzene	Ave	1.725	1.385		1.61	2.00	-19.7	35.0
Butylcyclohexane	Ave	0.9488	0.9354		1.97	2.00	-1.4	35.0
1,2-Dichlorobenzene	Ave	1.144	1.144		2.00	2.00	-0.0	35.0
Indane	Ave	1.423	1.451		2.04	2.00	2.0	35.0
Indene	Ave	1.168	1.080		1.85	2.00	-7.6	35.0
Butylbenzene	Ave	1.784	1.888		2.12	2.00	5.8	35.0
Undecane	Ave	0.7598	0.8223		2.16	2.00	8.2	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5157		1.85	2.00	-7.4	35.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.082		2.01	2.00	0.7	35.0
Dodecane	Ave	0.7957	0.9180		2.31	2.00	15.4	35.0
1,2,4-Trichlorobenzene	Ave	1.235	1.334		2.16	2.00	7.9	35.0
Naphthalene	Ave	2.498	2.601		2.08	2.00	4.1	35.0
Hexachlorobutadiene	Ave	1.436	1.487		2.07	2.00	3.5	35.0
1,2,3-Trichlorobenzene	Ave	1.187	1.295		2.18	2.00	9.1	35.0
2-Methylnaphthalene	Ave	0.7935	1.016		2.56	2.00	28.1	50.0
1-Methylnaphthalene	Ave	0.6999	0.9471		2.71	2.00	35.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8473		3.98	4.00	-0.4	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab File ID: RBFBB26.D BFB Injection Date: 02/26/2019
 Instrument ID: MR BFB Injection Time: 09:53
 Analysis Batch No.: 27909

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.6	
75	30.0 - 60.0 % of mass 95	58.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	88.4	
175	5.0 - 9.0 % of mass 174	6.4	(7.3) 1
176	95.0 - 101.0 % of mass 174	87.6	(99.1) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.3) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27909/2	RCCVB26.D	02/26/2019	10:22
	LCS 140-27909/1002	RCCVB26-LCS.d	02/26/2019	10:22
	MB 140-27909/4	R500BB26.D	02/26/2019	12:52
IA-DUP01-C-26	140-14391-1	RB26P101.D	02/26/2019	13:41
IA-102-C-26	140-14391-2	RB26P102Q.D	02/26/2019	14:30
IA-155-C-26	140-14391-3	RB26P103.D	02/26/2019	15:31
IA-133-C-26	140-14391-4	RB26P104.D	02/26/2019	16:20
IA-153-C-26	140-14391-5	RB26P105.D	02/26/2019	17:09
IA-DUP02-C-26	140-14391-6	RB26P106.D	02/26/2019	17:58
IA-060-C-26	140-14391-7	RB26P107.D	02/26/2019	18:47
IA-150-C-26	140-14391-8	RB26P108.D	02/26/2019	19:36
IA-145-C-26	140-14391-9	RB26P109.D	02/26/2019	20:25
IA-146-C-26	140-14391-10	RB26P110.D	02/26/2019	21:14
IA-152-C-26	140-14391-11	RB26P111.D	02/26/2019	22:03
IA-144-C-26	140-14391-12	RB26P112.D	02/26/2019	22:52
IA-141-C-26	140-14391-13	RB26P113.D	02/26/2019	23:41
IA-088-C-26	140-14391-14	RB26P114.D	02/27/2019	00:30
IA-142-C-26	140-14391-15	RB26P115.D	02/27/2019	01:19
IA-113-C-26	140-14391-16	RB26P116.D	02/27/2019	02:57
IA-149-C-26	140-14391-17	RB26P201.D	02/27/2019	03:46
IA-126-C-26	140-14391-18	RB26P202.D	02/27/2019	04:35

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27909/2 Calibration Date: 02/26/2019 10:22
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.072		1.75	2.00	-12.7	30.0
Propene	Ave	0.7296	0.6284		1.72	2.00	-13.9	30.0
Dichlorodifluoromethane	Ave	4.352	3.788		1.74	2.00	-13.0	30.0
Chloromethane	Ave	0.3061	0.2615		1.71	2.00	-14.6	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	2.650		1.64	2.00	-18.2	30.0
Acetaldehyde	Ave	0.2860	0.3209		11.2	10.0	12.2	30.0
Vinyl chloride	Ave	1.073	1.127		2.10	2.00	5.0	30.0
1,3-Butadiene	Ave	0.6506	0.7849		2.41	2.00	20.6	30.0
Butane	Ave	1.132	1.346		2.38	2.00	18.9	30.0
Bromomethane	Ave	1.235	1.444		2.34	2.00	16.9	30.0
Chloroethane	Ave	0.4970	0.5753		2.32	2.00	15.8	30.0
Ethanol	Ave	0.2997	0.3815		12.7	10.0	27.3	30.0
Vinyl bromide	Ave	1.302	1.515		2.33	2.00	16.3	30.0
2-Methylbutane	Ave	0.7999	1.036		2.59	2.00	29.5	30.0
Acrolein	Ave	0.2528	0.3682		2.91	2.00	45.6*	30.0
Trichlorofluoromethane	Ave	5.912	6.983		2.36	2.00	18.1	30.0
Acetonitrile	Ave	0.2586	0.3307		2.56	2.00	27.9	30.0
Acetone	Ave	0.4151	0.4983		7.20	6.00	20.0	30.0
Isopropyl alcohol	Ave	1.132	1.540		8.16	6.00	36.1*	30.0
Pentane	Ave	0.2011	0.2447		2.43	2.00	21.7	30.0
Ethyl ether	Ave	0.6661	0.8066		2.42	2.00	21.1	30.0
1,1-Dichloroethene	Ave	1.408	1.340		1.90	2.00	-4.8	30.0
Acrylonitrile	Ave	0.6277	0.6856		2.18	2.00	9.2	30.0
tert-Butyl alcohol	Ave	2.677	2.714		2.03	2.00	1.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.489		2.00	2.00	0.0	30.0
Methylene Chloride	Ave	1.338	1.171		1.75	2.00	-12.5	30.0
3-Chloropropene	Ave	1.309	1.436		2.19	2.00	9.7	30.0
Carbon disulfide	Ave	3.341	3.319		1.99	2.00	-0.6	30.0
trans-1,2-Dichloroethene	Ave	1.436	1.334		1.86	2.00	-7.1	30.0
2-Methylpentane	Ave	1.894	2.162		2.28	2.00	14.1	30.0
Methyl tert-butyl ether	Ave	4.568	4.558		2.00	2.00	-0.2	30.0
1,1-Dichloroethane	Ave	2.402	2.284		1.90	2.00	-4.9	30.0
Vinyl acetate	Ave	2.320	2.644		2.28	2.00	13.9	30.0
2-Butanone (MEK)	Ave	0.5446	0.5252		1.93	2.00	-3.6	30.0
Hexane	Ave	0.8352	0.9323		2.23	2.00	11.6	30.0
Isopropyl ether	Ave	2.873	3.088		2.15	2.00	7.5	30.0
cis-1,2-Dichloroethene	Ave	1.448	1.413		1.95	2.00	-2.4	30.0
Ethyl acetate	Ave	2.012	2.222		2.21	2.00	10.4	30.0
Chloroform	Ave	3.821	3.665		1.92	2.00	-4.1	30.0
Tert-butyl ethyl ether	Ave	4.141	4.363		2.11	2.00	5.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27909/2 Calibration Date: 02/26/2019 10:22
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.9694		2.19	2.00	9.4	30.0
1,1,1-Trichloroethane	Ave	4.843	4.707		1.94	2.00	-2.8	30.0
1,2-Dichloroethane	Ave	0.5063	0.4825		1.91	2.00	-4.7	30.0
Benzene	Ave	0.6517	0.6340		1.95	2.00	-2.7	30.0
1-Butanol	Ave	0.0462	0.0531		2.30	2.00	15.0	30.0
Cyclohexane	Ave	0.0968	0.1072		2.21	2.00	10.7	30.0
Carbon tetrachloride	Ave	0.9167	0.9348		2.04	2.00	2.0	30.0
2,3-Dimethylpentane	Ave	0.1349	0.1403		2.08	2.00	4.0	30.0
Thiophene	Ave	0.3728	0.3788		2.03	2.00	1.6	30.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8882		2.13	2.00	6.5	30.0
1,2-Dichloropropane	Ave	0.2045	0.2045		2.00	2.00	-0.0	30.0
Heptane	Ave	0.2083	0.2198		2.11	2.00	5.5	30.0
Trichloroethene	Ave	0.3929	0.3954		2.01	2.00	0.6	30.0
Dibromomethane	Ave	0.3514	0.3412		1.94	2.00	-2.9	30.0
Bromodichloromethane	Ave	0.6587	0.6501		1.97	2.00	-1.3	30.0
1,4-Dioxane	Ave	0.0994	0.1021		2.05	2.00	2.7	30.0
Methyl methacrylate	Ave	0.2275	0.2473		2.17	2.00	8.7	30.0
Methylcyclohexane	Ave	0.4024	0.4151		2.06	2.00	3.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.4099		2.26	2.00	13.0	30.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4179		2.12	2.00	5.9	30.0
trans-1,3-Dichloropropene	Ave	0.4674	0.4842		2.07	2.00	3.6	30.0
Toluene	Ave	0.9586	1.009		2.11	2.00	5.3	30.0
1,1,2-Trichloroethane	Ave	0.2543	0.2624		2.06	2.00	3.2	30.0
2-Hexanone	Ave	0.2006	0.2275		2.27	2.00	13.4	30.0
Dibromochloromethane	Ave	0.7414	0.8263		2.23	2.00	11.5	30.0
Octane	Ave	0.3054	0.3361		2.20	2.00	10.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5709		2.05	2.00	2.4	30.0
Tetrachloroethene	Ave	0.4749	0.4896		2.06	2.00	3.1	30.0
Chlorobenzene	Ave	0.8374	0.8730		2.09	2.00	4.3	30.0
2,3-Dimethylheptane	Ave	0.5626	0.6857		2.44	2.00	21.9	30.0
Ethylbenzene	Ave	1.382	1.466		2.12	2.00	6.1	30.0
m-Xylene & p-Xylene	Ave	1.133	1.261		4.45	4.00	11.2	30.0
Bromoform	Ave	0.7786	0.8760		2.25	2.00	12.5	30.0
Styrene	Ave	0.7430	0.8157		2.20	2.00	9.8	30.0
o-Xylene	Ave	1.190	1.295		2.18	2.00	8.8	30.0
Nonane	Ave	0.4511	0.5582		2.47	2.00	23.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6602		2.18	2.00	9.1	30.0
1,2,3-Trichloropropane	Ave	0.3000	0.2901		1.93	2.00	-3.3	30.0
Isopropylbenzene	Ave	1.694	1.747		2.06	2.00	3.1	30.0
Propylbenzene	Ave	0.4652	0.4827		2.08	2.00	3.8	30.0
2-Chlorotoluene	Ave	0.4306	0.4438		2.06	2.00	3.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27909/2 Calibration Date: 02/26/2019 10:22
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB26.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.830		2.08	2.00	4.0	30.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.7586		2.11	2.00	5.4	30.0
Alpha Methyl Styrene	Ave	0.6844	0.7085		2.07	2.00	3.5	30.0
Decane	Ave	0.6421	0.7459		2.32	2.00	16.2	30.0
tert-Butylbenzene	Ave	1.753	1.845		2.10	2.00	5.2	30.0
1,2,4-Trimethylbenzene	Ave	1.607	1.734		2.16	2.00	7.9	30.0
1,3-Dichlorobenzene	Ave	1.160	1.145		1.97	2.00	-1.3	30.0
sec-Butylbenzene	Ave	2.171	2.194		2.02	2.00	1.1	30.0
Benzyl chloride	Ave	1.239	1.347		2.17	2.00	8.7	30.0
1,4-Dichlorobenzene	Ave	1.164	1.170		2.01	2.00	0.5	30.0
4-Isopropyltoluene	Ave	2.191	2.280		2.08	2.00	4.0	30.0
1,2,3-Trimethylbenzene	Ave	1.725	1.832		2.12	2.00	6.2	30.0
Butylcyclohexane	Ave	0.9488	0.9760		2.06	2.00	2.9	30.0
1,2-Dichlorobenzene	Ave	1.144	1.124		1.97	2.00	-1.7	30.0
Indane	Ave	1.423	1.480		2.08	2.00	4.0	30.0
Indene	Ave	1.168	1.207		2.07	2.00	3.4	30.0
Butylbenzene	Ave	1.784	1.813		2.03	2.00	1.6	30.0
Undecane	Ave	0.7598	0.8782		2.31	2.00	15.6	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.6135		2.20	2.00	10.1	30.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.095		2.03	2.00	1.4	30.0
Dodecane	Ave	0.7957	0.8817		2.22	2.00	10.8	30.0
1,2,4-Trichlorobenzene	Ave	1.235	1.172		1.90	2.00	-5.1	30.0
Naphthalene	Ave	2.498	2.125		1.70	2.00	-14.9	30.0
Hexachlorobutadiene	Ave	1.436	1.305		1.82	2.00	-9.2	30.0
1,2,3-Trichlorobenzene	Ave	1.187	1.069		1.80	2.00	-10.0	30.0
2-Methylnaphthalene	Ave	0.7935	0.9577		2.41	2.00	20.7	50.0
1-Methylnaphthalene	Ave	0.6999	1.046		2.99	2.00	49.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8849		4.16	4.00	4.0	30.0

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Batch Number: 27909 Batch Start Date: 02/26/19 09:53 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00083	40MXISSURP 00003
BFB 140-27909/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27909/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27909/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14391-A-1	IA-DUP01-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-2	IA-102-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-3	IA-155-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-4	IA-133-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-5	IA-153-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-6	IA-DUP02-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-7	IA-060-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-8	IA-150-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-9	IA-145-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-10	IA-146-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-11	IA-152-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-12	IA-144-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-13	IA-141-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-14	IA-088-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-15	IA-142-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-16	IA-113-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-17	IA-149-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-18	IA-126-C-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27909/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27909/1		TO 15 LL		40 mL					
CCVIS 140-27909/2		TO 15 LL							
MB 140-27909/4		TO 15 LL							
140-14391-A-1	IA-DUP01-C-26	TO 15 LL	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Batch Number: 27909 Batch Start Date: 02/26/19 09:53 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002				
140-14391-A-2	IA-102-C-26	TO 15 LL	T					
140-14391-A-3	IA-155-C-26	TO 15 LL	T					
140-14391-A-4	IA-133-C-26	TO 15 LL	T					
140-14391-A-5	IA-153-C-26	TO 15 LL	T					
140-14391-A-6	IA-DUP02-C-26	TO 15 LL	T					
140-14391-A-7	IA-060-C-26	TO 15 LL	T					
140-14391-A-8	IA-150-C-26	TO 15 LL	T					
140-14391-A-9	IA-145-C-26	TO 15 LL	T					
140-14391-A-10	IA-146-C-26	TO 15 LL	T					
140-14391-A-11	IA-152-C-26	TO 15 LL	T					
140-14391-A-12	IA-144-C-26	TO 15 LL	T					
140-14391-A-13	IA-141-C-26	TO 15 LL	T					
140-14391-A-14	IA-088-C-26	TO 15 LL	T					
140-14391-A-15	IA-142-C-26	TO 15 LL	T					
140-14391-A-16	IA-113-C-26	TO 15 LL	T					
140-14391-A-17	IA-149-C-26	TO 15 LL	T					
140-14391-A-18	IA-126-C-26	TO 15 LL	T					
LCS 140-27909/1002		TO 15 LL						

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14391-1

SDG No.: _____

Batch Number: 27931 Batch Start Date: 02/26/19 11:03 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00082	40MXISSURP 00003
BFB 140-27931/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27931/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27931/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14391-A-19	IA-101-B-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14391-A-20	IA-100-B-26	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27931/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27931/1		TO 15 LL		40 mL					
CCVIS 140-27931/2		TO 15 LL							
MB 140-27931/4		TO 15 LL							
140-14391-A-19	IA-101-B-26	TO 15 LL	T						
140-14391-A-20	IA-100-B-26	TO 15 LL	T						
LCS 140-27931/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

**APPENDIX E—REMEDIAL ACTION PROGRESS REPORT #33:
OCTOBER 1, 2018 THROUGH MARCH 31, 2019,
SUB-SLAB-DEPRESSURIZATION SYSTEMS, BUILDINGS A
AND C, LOCKHEED MARTIN MIDDLE RIVER COMPLEX**

**REMEDIAL ACTION PROGRESS REPORT #33
OCTOBER 1, 2018—MARCH 31, 2019
SUB-SLAB DEPRESSURIZATION SYSTEMS
BUILDINGS A AND C
LOCKHEED MARTIN MIDDLE RIVER COMPLEX
2323 EASTERN BOULEVARD
MIDDLE RIVER, MARYLAND**

Prepared for:
Lockheed Martin Corporation

Prepared by:
Tetra Tech, Inc.

April 22, 2019

Revision: _____



Michael Martin, P.G.
Regional Manager



Peter Rich, P.E.
Project Manager

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ACRONYMS

%	percent
°F	degrees Fahrenheit
µg/m ³	micrograms per cubic meter
GAC	granular activated-carbon
HEPA	high-efficiency particulate air
lbs/day	pounds per day
MDE	Maryland Department of the Environment
OM&M	operation, maintenance, and monitoring
PVC	polyvinyl chloride
PPZ	potassium permanganate-impregnated zeolite
SCFM	standard cubic feet per minute
S&S	S&S Technologies, Inc.
SSD	sub-slab depressurization
TestAmerica	TestAmerica Laboratories, Inc.
TO-15	Toxic Organic Method 15
TCE	trichloroethene
VMP	vapor monitoring point
VOC	volatile organic compound
WC	water column

SECTION 1 INTRODUCTION

1.1 SITE LOCATION AND BACKGROUND INFORMATION

This report documents the monitoring activities completed from October 1, 2018 to March 31, 2019 [the 43rd and 44th quarters of operation] for the sub-slab depressurization systems operating in the Building A lay-up room (former plating shop), eastern area, and basement, and the Building C basement of the Lockheed Martin Corporation Middle River Complex in Middle River, Maryland. The locations of the systems' influence are shown on Figure 1. These remedial systems control (by creating a vacuum) and remove volatile organic compounds from sub-slab vapor, thus preventing their migration into indoor air. The systems are operated in accordance with the operation, maintenance, and monitoring manuals for the Building A and Building C systems (Tetra Tech, Inc., 2019a and 2019b, respectively).

1.2 DESCRIPTION OF SUB-SLAB DEPRESSURIZATION SYSTEMS

1.2.1 Building A System

The sub-slab depressurization system in Building A includes the following soil vapor extraction points (see Figure 2):

- Two (2) horizontal soil vapor extraction laterals in the lay-up room (North and South)
- Two (2) laterals in the basement (Basement North and Basement South)
- Six (6) vertical soil vapor extraction points (SSD-34-A, SSD-35-A, SSD-36-A, SSD-37-A, SSD-38-A, and SSD-39-A)
- Extraction piping connected to basement sump HRS-5

The soil vapor extraction points serve as conduits for drawing vapor from beneath the building slab and from a covered sump in the basement, thus mitigating vapor intrusion into indoor air. Sub-slab vapors are pulled through the extraction points, vapor-extraction manifold, and “pre-blower” moisture separator using a single 10-horsepower regenerative blower. The blower is

mounted on a skid along with the pre-blower moisture separator, a heat exchanger, filters, and vacuum, pressure, temperature, and flow gauges (collectively referred to as the “blower skid”). The extracted vapors are cooled as they are pushed through the heat exchanger. Following the heat exchanger, the vapors enter the post-blower moisture separator where entrained condensate droplets are removed to reduce saturation and pressure buildup in the vapor-phase carbon drums. The extracted vapors are then filtered to remove volatile organic compounds (VOCs) using four 400-pound granular activated-carbon (GAC) drums, in two-by-two configuration (two parallel trains of two drums in series)¹. Vapors are discharged to the atmosphere via an exhaust stack that extends above the roof of the building. Figure 3 shows the process and instrumentation diagram for the Building A sub-slab depressurization system.

The Building A system is also equipped with one drain for each of the granular activated-carbon drums, three pipe sumps (PS-1-A [near SSD-37-A], PS-2-A [near SSD-34-A], and PS-3-A [in the basement]), and one exhaust stack sump. The pipe sumps are installed at low points to allow accumulation and manual drainage of condensation in the pipe. In addition, two freestanding drain stacks adjacent to the south side of the system’s equipment skid are available for use in winter months to drain condensate in the vapor entering the two trains of granular activated-carbon drums.

Six IQAir® GC™ Series-GC VOC indoor-air filters also operate in the basement of Building A near vapor monitoring points (VMPs) 093-A, 093-A-X, and 138-A, in response to elevated trichloroethene (TCE) concentrations in the indoor air. The filters were installed south of the sub-slab depressurization system extraction laterals in January 2015 (designated AF-N, AF-M, and AF-S) and May 2017 (designated AF-NX, AF-MX, and AF-SX), and are continuously operated to filter 300 standard cubic feet per minute (SCFM) of air. Each filter consists of a high-efficiency particulate air pre-filter, a granular activated-carbon filter, and a post-filter sleeve (collectively referred to as “filter elements”). The pre-filter (GC™ HyperHEPA® Pre-Filter H11 [S]) weighs three pounds; it removes coarse, fine, and ultra-fine dust particles and protects

¹ Originally, vapor treatment consisted of one train of two 400-pound carbon drums; the two-by-two configuration was completed in February 2017 to decrease pressure, increase flow of the system, and better capture VOCs; details are in Section 2.4.

subsequent filters. The granular activated-carbon filter (GC VOC filter cartridge set) removes volatile organic compounds from indoor air; it is comprised of four granular activated-carbon cartridges, collectively weighing nine pounds. The post-filter sleeve (GC™ post-filter sleeve set) is placed over the granular activated-carbon cartridges, and removes any remaining fine and ultra-fine particulate matter.

1.2.2 Building C System

The sub-slab depressurization system in the Building C basement consists of 11 vertical soil vapor extraction points: two in the southern-basement area (SSD-21-C and SSD-23-C) and nine in the mid-basement area (SSD-26-C, SSD-27-C, SSD-28-C, SSD-29-C, SSD-30-C, SSD-31-C, SSD-32-C, SSD-33-C, and SSD-34-C); see Figure 4. These extraction points serve as conduits for drawing vapor from beneath the building slab, thus creating a vacuum under the floor slab preventing vapor intrusion into indoor air. The vapors are pulled through the extraction points using a single 7.5-horsepower regenerative blower that is mounted on a skid along with a moisture separator, heat exchanger, filters, and vacuum, pressure, temperature, and flow gauges (collectively referred to as the “blower skid”). Following extraction, the vapors enter the first moisture separator (MS-1) where entrained condensate droplets are removed to reduce fouling of the vapor lines and saturation of the granular activated-carbon. The extracted vapors are cooled as they are pushed through the heat exchanger; any remaining extracted condensate droplets are removed via a second moisture separator (MS-2) [separate from the blower skid] before being treated. The vapors are treated by passing through two 400-pound granular activated-carbon drums and one 600-pound potassium permanganate-impregnated zeolite drum (to remove residual vinyl chloride), in-series, before being discharged to the atmosphere via an exhaust stack that extends above the roof of the building (Figure 5).

The Building C system is also equipped with one drain for each granular activated-carbon and potassium permanganate-impregnated zeolite drum, five pipe sumps (PS-1 [near SSD-25-C and column N35, PS-2 [near SSD-30-C and column N26], PS-3 [near SSD-27-C and column O20], PS-4 [near SSD-32-C and column R19], and PS-5 [near SSD-29-C and column V12]), and one exhaust stack sump. The sumps are installed at low points to allow drainage of condensation in the pipe.

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SECTION 2 SITE ACTIVITIES

2.1 BIWEEKLY SYSTEM CHECKS

Biweekly system checks were conducted to monitor the performance of the sub-slab depressurization (SSD) systems and to make necessary adjustments to optimize effectiveness. System checks were conducted between October 1, 2018 through March 31, 2019 (the 43rd and 44th quarters of operation) on the dates listed below.

- October 12, 2018
- October 23, 2018
- November 9, 2018
- November 19, 2018
- December 5, 2018
- December 19, 2018
- January 3, 2019
- January 16, 2019
- January 30, 2019
- February 14, 2019
- March 1, 2019
- March 13, 2019
- March 28, 2019

Biweekly system checks were conducted in accordance with the latest operation, maintenance, and monitoring (OM&M) manuals (Tetra Tech, Inc. [Tetra Tech], 2019a and 2019b), and included general system monitoring, vacuum influence monitoring, and any necessary adjustments to extraction laterals and wells. Biweekly system checks forms are in Appendix A.

Ten additional site visits were made from November 2018 through March 2019 to drain condensate from the Building A SSD system moisture separators and sumps to prevent high water levels (see Section 2.4.1).

2.1.1 General System Monitoring

Gauge readings on the blower skid were checked, and the vacuum and velocity at each extraction lateral/well were measured. The condition of system components was also checked, and moisture separators/sumps were emptied as necessary. The following specific tasks were performed:

1. Recorded:
 - a. vacuum at pre-air filter
 - b. vacuum at post-air filter
 - c. pressure at post-blower
 - d. temperature at post-blower
 - e. temperature at post-heat exchanger
 - f. system flow
 - g. time counter display
 - h. vacuum from each extraction lateral/well
 - i. velocity from each extraction lateral/well
 - j. vacuum from each vapor monitoring point (VMP)
2. Checked the following for damage, leaks, and/or signs of heat stress:
 - a. system components
 - b. granular activated-carbon (GAC) drums
 - c. potassium permanganate-impregnated zeolite (PPZ) drum (Building C only)
 - d. GAC and PPZ fittings and flexible hoses
3. Checked the following for condensate, and drained, as necessary:
 - a. moisture separators
 - b. pipe sumps
 - c. exhaust stack sumps
 - d. GAC and PPZ drains
4. Confirmed that zip-ties on the GAC- and PPZ-drum cam locks were present and secure
5. Confirmed that the ambient air valve was closed
6. Confirmed that the vacuum relief valve was closed
7. Noted any adjustments to extraction laterals/wells
8. Checked that flow, pressure, and vacuum gauges fell to zero, and that temperature gauges fell, when systems were turned off

-
9. Checked each of the Building A basement IQAir® GC™ Series-GC indoor air filters to:
 - a. verify filter was on
 - b. verify fan was running
 - c. check control panel for filter-life status
 - d. document any signs of tampering

2.1.2 Vacuum Influence Monitoring

The objective for the SSD systems is to maintain a vacuum of at least 0.01 inches water column (WC) in the targeted areas. The vacuum influence (differential sub-slab vapor vacuum versus indoor air) at sub-slab VMPs was monitored using a dual²-port manometer (Fieldpiece Instruments, Inc. model SDMN5). This instrument was used to identify sub-slab-air short-circuiting or other problems (indicated by a significant drop in vacuum at one or more VMPs), and to determine each system's area of influence. Short-circuiting was not identified at the Building A or Building C SSD systems during this reporting period. Figures 6 through 9 show induced vacuum over time; Figures 10 through 13 show induced vacuum influence contours on plan views using induced vacuum readings from March 28, 2019.

Vacuum influence in the Building A target areas consistently³ exceeded the vacuum influence objective (0.01 inches WC) during the reporting period at the following monitoring points:

- At seven of eight VMPs in the layup room (SSD-12-A-X, SSD-11-A-X, SSD-13-A-X, SSD-2-A-X, 15-A-X, SSD-16-A-X, and SSD-3-A-X) with vacuums ranging from 0.16 to 4.39 inches WC (see Figure 10)
- At all four of the VMPs in the Building A basement (SSD-19-A, SSD-20-A, SSD-21-A, and SSD-22-A) with vacuums ranging from 0.01 to 3.03 inches WC (see Figure 10)
- At one of two VMPs in the western area of Building A (168-A) with vacuums ranging from 0.06 to 2.66 inches WC (see Figure 10)
- At nine of 15 VMPs in the eastern area of Building A (165-A, 166-A, 167-A, 117-A, 164-A, 136-A-S, 136-A, 161-A, and 160-A) with vacuums ranging from 0.01 to

² Only one port is used for monitoring vacuum influence; the second port is used to measure static pressure.

³ Exceeded vacuum monitoring objective of 0.01 inches water column at more than half of the biweekly system checks completed.

2.14 inches WC (see Figure 11)

Negative vacuum⁴ (pressure) readings were measured at VMP 163-A in the eastern area of Building A during most biweekly system checks, indicating higher pressure in the sub-slab than in the indoor air. Induced vacuum has not been observed at 79-A, 119-A, 121-B, 162-A, 136-A-N, or 188-A. The lack of induced vacuum at 119-A and 121-B might possibly be due to the greater distance to the nearest extraction point. The reason for the lack of vacuum influence at the remaining locations (79-A, 162-A, 136-A-N, 163-A, and 188-A) is not clear, but could be related to subsurface preferential pathways and heterogeneity.

Vacuum influence in the Building C target areas consistently exceeded the vacuum influence objective (0.01 inches WC) during the reporting period in the following monitoring points:

- At six of seven VMPs in the southern-basement area (001-C, SSD-2-C, SSD-3-C, SSD-22-C, SSD-24-C, and SSD-25-C) with vacuums ranging from 0.01 to 1.55 inches WC (see Figure 12)
- At 14 of 20 VMPs in the mid-basement area (135-C, 113-C, 156-C, 151-C, 126-C, 149-C, 127-C, 150-C, 152-C, 111-C, 155-C, 133-C, 154-C, and 153-C) with vacuums ranging from 0.01 to 2.99 inches WC (see Figure 13)

VMPs SSD-4-C, SSD-60-C, SSD-141-C, and 157-C could not be accessed for monitoring for most or all of the monitoring period as they were covered by equipment moved to those areas. The reason for the lack of vacuum influence at 050-C, 158-C, and 159-C is not clear but could be related to subsurface preferential pathways and heterogeneity.

Vacuum Summary

Induced vacuum measurements indicate that the systems are performing as designed, except near extraction point SSD-36-A in the eastern area of Building A. The sub-slab vapor extraction laterals in the Building A lay-up room induce a vacuum influence over an approximately 5,900-square foot area, and consistently encompass the five VMPs that had elevated volatile organic

⁴ Negative vacuum readings indicate higher pressure in the sub-slab than in the indoor air, which may be related to subsurface heterogeneity or preferential pathways.

compound (VOC) concentrations before system start-up. The extraction laterals in the Building A basement induce a vacuum influence over an approximately 1,900-square foot area, and consistently encompass all four VMPs that measure the system's induced vacuum in the basement (Figure 10). The vertical extraction points in the eastern area of Building A induce a vacuum influence over an approximately 6,100-square foot area, and consistently encompass nine of 15 VMPs (Figure 11). Extraction point SSD-39A in the western area of Building A is inducing vacuum at one of two nearby VMPs; the area of induced vacuum is approximately 1,100-square feet (Figure 11).

In Building C, the sub-slab vapor extraction points in the southern-basement area induce a vacuum influence over an approximately 4,200-square foot area, with six of six accessible VMPs showing consistent influence (Figure 12). Extraction points in the mid-basement area induce a vacuum influence over an approximately 36,800-square foot area, with 14 of 17 accessible VMPs showing consistent influence (Figure 13).

2.1.3 Adjustments to Extraction Points

There were no adjustments made to the extraction points during the reporting period.

2.2 VAPOR SAMPLING

Grab vapor samples were collected monthly at Building A and every other month at Building C during the reporting period. Samples were collected from each SSD system at the influent, mid-GAC (between lead and lag vessels), and effluent positions of the treatment drums. Samples were collected from the Building A SSD system on October 18, November 9 and 14, and December 28, 2018, and January 16, February 6, and March 13, 2019. The November 14, 2018 sample was taken from the Building A SDD system mid-GAC stream due to problems with the November 9, 2018 sampling canister. Samples were collected from the Building C SSD system on November 9, 2018, and January 16 and March 13, 2019. Samples were collected directly from each sampling port using the following steps:

- A piece of Teflon[®] tubing was connected to the sampling port.
- A clean, one-liter Summa[®] canister under vacuum was connected to the tubing, and the canister valve was opened until the canister gauge reached zero or stopped falling

(approximately one minute).

- For the Building A mid-GAC samples, the two sample ports were connected using Teflon[®] tubing with a “T” fitting to connect to the canister.

Samples were labeled A-INFLUENT, A-MID-GAC, A-EFFLUENT, C-INFLUENT, C-MID-GAC, and C-EFFLUENT and shipped to TestAmerica Laboratories, Inc. (TestAmerica) in Knoxville, Tennessee. TestAmerica is accredited through the National Environmental Laboratory Accreditation Program and United States Department of Defense Environmental Laboratory Accreditation Program for VOC analysis by United States Environmental Protection Agency Toxic Organic Method 15 (TO-15).

Laboratory results are summarized in Tables 1 through 6; analytical reports are in Appendix B. During this reporting period, total influent VOC concentrations in Building A ranged from 1,161 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) (March 2019) to 2,025 $\mu\text{g}/\text{m}^3$ (December 2018), while VOC influent concentrations in Building C ranged from 47 $\mu\text{g}/\text{m}^3$ (January 2019) to 50 $\mu\text{g}/\text{m}^3$ (November 2018). Average influent VOC concentrations in Building A were approximately 29% lower than those observed during the previous reporting period (April 1 to September 30, 2018); average influent concentrations for the Building C system were approximately 56% lower.

2.3 QUARTERLY SYSTEM CHECKS

Quarterly system checks were completed on December 19, 2018 and March 13, 2019. Quarterly system checks included the following tasks:

1. Inspected the condition of the:
 - a. system components
 - b. system piping
 - c. pre-blower air filter and intake (ambient) air filter; replacing filter(s) as necessary
 - d. GAC and PPZ drums
 - e. GAC and PPZ drum sample ports
 - f. VMP well lids, bolts, and sample tubing
2. Checked that the Building A system shuts down, the control panel alarm lights illuminate, and the auto-dialer activates upon alarms for:
 - a. high temperature – post-blower

-
- b. high temperature – post-heat exchanger
 - c. high-water level – moisture separator
 - d. high pressure
 - e. low vacuum
3. Checked that the Building C system shuts down, the control panel alarm lights illuminate, and the auto-dialer activates upon alarms for:
 - a. high temperature – post-blower
 - b. high temperature – post-heat exchanger
 - c. high-water level – MS-1
 - d. high-water level – MS-2
 - e. high pressure
 - f. low vacuum
 4. Checked vacuum relief valves for proper operation
 5. Recorded amperage draw on blowers
 6. Checked that auto-dialers activate when power is turned off
 7. Checked auto-dialer batteries and replaced, as necessary
 8. Confirmed that a fire extinguisher is next to each system
 9. Vacuumed the underside of the heat exchanger
 10. Cleaned the systems and areas around the systems

No issues were identified for Building A or Building C SSD systems during the quarterly system checks, except those indicated in Section 2.4. Both systems are running within the normal operating parameters. Quarterly system checks forms are in Appendix A.

2.4 NON-ROUTINE SYSTEM MAINTENANCE

2.4.1 Non-Routine Maintenance

The following non-routine system maintenance was completed during the reporting period:

- November 27, 2018: Installed an access point on sump HRS-5 through the sump's vapor barrier to allow for water accumulation pumping for proper off-site disposal. A monitoring point was also installed through the vapor barrier to near the sump bottom to gauge the level of water accumulation in the sump. Both the access and monitoring points were constructed with polyvinyl chloride (PVC) pipe, sealed with epoxy and stego tape; caps were placed on these pipes.
- GAC hoses in Building C SSDS were replaced on March 13, 2019 as a preventative maintenance step.

-
- Site visits were conducted on the following days to drain water accumulated in the Building A SSD system moisture separators and pipe sumps:
 - November 27, 2018: approximately 31 gallons were drained
 - December 12, 2018: approximately 40 gallons were drained
 - December 28, 2018: approximately 33 gallons were drained
 - January 8, 2019: approximately 26 gallons were drained
 - January 25, 2019: approximately 40 gallons were drained
 - February 6, 2019: approximately 35 gallons were drained
 - February 21, 2019: approximately 15 gallons were drained
 - March 1, 2019: approximately 22 gallons were drained
 - March 13, 2019: approximately 6 gallons were drained
 - March 28, 2019: approximately 9 gallons were drained

The combined volume of condensate drained from the Building A SSD system during the reporting period was 442 gallons. The water was transferred to 55-gallon drums temporarily staged in the in the designated drum storage area at the Building C SSD system pending proper off-site disposal. There was no condensate accumulation that required draining at the Building C SSD system.

2.5 GAC AND PPZ CHANGE-OUTS

The two lead GAC drums of the Building A SSD system were changed out on October 18, 2018. The Building C GAC drums and PPZ drum were not changed out during the reporting period.

2.6 SYSTEM SHUTDOWNS

2.6.1 Operator-Controlled Shutdowns

Both systems were briefly turned off during each biweekly system check to: (1) confirm that flow, pressure, temperature, and vacuum gauges fall to zero (thereby indicating proper operation), and (2) check and drain (as necessary) condensate accumulation in the moisture separators and sumps. Both systems were also briefly turned off during the quarterly system checks to test proper operation of the fail-safe alarms. In addition, the Building A and Building C SSD systems were shut down on the following days for semi-annual sub-slab vapor and indoor air sampling events:

-
- February 19-21, 2019: The Building A system was shut down for an estimated 51 hours for the semi-annual sub-slab vapor and indoor air sampling event.
 - February 18-19, 2019: The Building C system was shut down for an estimated 35 hours for a sub-slab and indoor air sampling event.

2.6.2 Alarms and Other Shutdowns

The following alarms and other shutdowns occurred during the reporting period:

- The Building A SSD system was down for approximately 15 hours due to high temperature 2 (post-blower) alarm on December 14, 2018.
- The Building C SSD system operated with no alarms or unplanned shutdowns during this reporting period.

2.6.3 System Uptime

During this reporting period, the Building A and Building C SSD systems were operational for approximately 4,278 hours (98.5%) and 4,309 hours (99%), respectively. Downtime does not include the brief shutdown periods for biweekly and quarterly system checks.

2.7 REMEDIATION SUMMARY

2.7.1 Building A System

Continuous operation of the SSD system in the Building A lay-up room (former plating shop) began on March 31, 2008; the SSD system was expanded on October 22, 2010 to include the basement, and on April 13, 2016 to include select areas on the eastern side of the building. A third-phase expansion was completed on July 6, 2017 to address areas along the western side of Building A (near VMP 168-A) and basement sump HRS-5 near column D26. On February 7, 2017 the GAC drums were modified to add a second parallel treatment train (with two 400-pound GAC drums in series) to increase flow and decrease pressure on the new blower. Building A extraction points are open to allow a combined airflow rate of approximately 360 SCFM. Each extraction point operates at an airflow rate of 7–85 SCFM; the system vacuum and flows are adjusted to maintain a vacuum of 0.01 inches water column (WC) or greater at each vapor monitoring point within areas where elevated concentrations of VOCs are in sub-slab soil.

Since system startup on March 31, 2008 to March 13, 2019, total influent VOC concentrations have decreased more than 98%, from 94,310 $\mu\text{g}/\text{m}^3$ to 1,173 $\mu\text{g}/\text{m}^3$. The addition of the basement extraction laterals in October 2010 did not appear to change influent concentrations. The system expansion in April 2016 including a higher-flow blower and five new vertical extraction points resulted in an increase in Building A influent system concentration for approximately one month. The system expansion in July 2017 resulted in a slight increase in the result for the sample collected on July 6, 2017 immediately following the expansion. The two main chemicals of concern in Building A are 1,1,1-trichloroethane and trichloroethene (see Table 1). VOC trends for the Building A system are shown in Tables 1 through 3 and on Figure 14.

VOC mass removal rates (based on influent concentrations) in Building A ranged from 0.04 to 0.07 pounds per day (lbs/day) during this reporting period. The total VOC mass removed was approximately 8 pounds; total VOC removal since system startup in March 2008 is approximately 190 pounds. VOC mass removal rates are lower than the levels (20 lbs/day VOCs) that require Maryland Department of Environment (MDE) permitting.

2.7.2 Building C System

Continuous operation of the SSD system in the southern-basement area of Building C began on March 31, 2008; the system was expanded to the mid-basement area in May 2013. Extraction points were installed at locations that maximized vacuum influence (based on startup tests). The total flow rate of the Building C system is approximately 180 SCFM. Extraction well SSD-23-C in the southern-basement area was shut off after the expansion to promote higher flow rates from the new wells installed in the mid-basement area. Vacuum influence in the southern-basement area was maintained by the operation of well SSD-21-C only until February 21, 2017, when SSD-23-C was re-opened and SSD-21-C was closed. Vacuum influence and flow rates in the mid-basement area have increased and stabilized since system expansion. On November 7, 2013, mid-basement wells SSD-27-C and SSD-32-C flow rates were reduced to promote higher flow rates from other extraction wells in the mid-basement area. In April 2016, flows at mid-basement extraction points SSD-26-C and SSD-30-C were also reduced to promote high flows from other extraction points. These efforts have been performed to attempt to improve vacuum influence and VOC mass removal in the northern extraction points.

From system startup on March 31, 2008 to April 8, 2013, and before the system expansion, total influent VOCs had decreased by 99%, from 31,170 $\mu\text{g}/\text{m}^3$ to 117 $\mu\text{g}/\text{m}^3$. VOC concentrations increased to 3,100 $\mu\text{g}/\text{m}^3$ after the system was expanded but have since decreased to 49 $\mu\text{g}/\text{m}^3$ (a 98% decrease). Trichloroethene is the primary chemical of concern in Building C (see Table 4). VOC trends for the Building C system are shown in Tables 4 through 6 and on Figure 15.

Mass removal rates for VOCs in Building C during this reporting period were around 0.0006 pounds per day, for a total mass of approximately 0.12 pounds. Total VOC removal since system startup in March 2008 is approximately 12.2 pounds. Building C VOC removal rates are lower than levels requiring MDE permitting (20 lbs/day VOCs, 20 pounds per year vinyl chloride).

2.7.3 Indoor Air Filters in Building A

Six IQAir® GC™ Series-GC indoor air filters operate in the basement of Building A near VMPs 093-A, 093-A-X, and 138-A (south of the SSD system extraction trenches). These filters were inspected every two weeks. The high-efficiency particulate air (HEPA) pre-filters, GAC cartridges, and post-filter sleeves were replaced on December 19, 2018 and March 13, 2019. The spent filter elements were placed in a dedicated 55-gallon drum in the designated drum storage area at the Building C SSD system pending proper off-site disposal. This waste drum was inspected during the biweekly system checks to ensure it was properly labeled and in good condition.

SECTION 3

CONCLUSIONS AND RECOMMENDATIONS

3.1 SYSTEM PERFORMANCE

Induced vacuum measurements indicate that the sub-slab depressurization systems are performing as designed, except near extraction point SSD-36-A in the eastern area of Building A. Soil vapor extraction points in the Building A lay-up room induce a vacuum influence over an approximately 5,900-square foot area, and consistently encompass all five vapor monitoring points that had elevated volatile organic compound concentrations before system startup. In the Building A basement, the soil vapor extraction points induce a vacuum influence over an approximately 1,900-square foot area that encompasses all four vapor monitoring points installed to measure the system-induced vacuum in the basement (Figure 10). The soil vapor extraction points in the eastern area of Building A induce a vacuum influence over an approximately 6,100-square foot area, and consistently encompass nine of 15 VMPs used to measure the system-induced vacuum in that area (Figure 11). Extraction point SSD-39A in the western area of Building A is inducing vacuum at one of two nearby VMPs; the area of induced vacuum is approximately 1,100-square feet (Figure 10). In the southern-basement area of Building C, the soil vapor extraction points induce a vacuum influence over an approximately 4,200-square foot area, with all six accessible vapor monitoring points showing influence (Figure 12). The soil vapor extraction points in the mid-basement area of Building C induce a vacuum influence over an estimated 36,800-square foot area, with 14 of the 17 accessible vapor monitoring points showing influence (Figure 13).

The sub-slab depressurization systems have removed volatile organic compound mass and have treated emissions with granular activated-carbon (both buildings) and potassium permanganate-impregnated zeolite (Building C only). A summary of the granular activated-carbon drums used during the lifespan of each system follows:

	Number of granular-activated-carbon drums used	
	<u>200-pound drums</u>	<u>400-pound drums</u>
Building A	23	18
Building C	17	5

The 600-pound potassium permanganate-impregnated zeolite drum in Building C has not been changed out since its installation in April 2013. The drum counts listed above do not include the granular activated-carbon drums currently attached to each system, or the potassium permanganate-impregnated zeolite drum currently attached to the Building C system.

The Building A system has used approximately 62 pounds of granular activated-carbon per pound of volatiles removed, while the Building C system has used approximately 443 pounds of granular activated-carbon per pound of volatiles removed. Note that the removal efficiency of granular activated-carbon is reduced as vapor concentrations decrease. Although influent concentrations of volatile organic compounds for both systems have decreased significantly since startup (March 31, 2008), concentration fluctuations have occurred over time (see Figures 14 and 15).

3.2 CONTINUED MONITORING

The Building A and Building C systems will continue to operate during the next semi-annual reporting period (April 1 through September 30, 2019) so that the vapor migration barrier in both buildings is maintained. Operation, maintenance, and monitoring activities conducted during the next reporting period will include biweekly system checks, quarterly system checks, system maintenance, monthly vapor sampling in Building A, and bimonthly (every other month) vapor sampling in Building C. Granular activated-carbon change-outs will occur when the concentration of the sample collected following the lead granular activated-carbon vessel(s) reaches 50% of the influent concentration, or as determined based on change-out history and laboratory result trends (especially trichloroethene adsorption effectiveness trends). Change-out of the potassium permanganate-impregnated zeolite drum is not expected during the next reporting period. The next remedial action progress report will be issued in October 2019.

3.3 FUTURE PLANS

We will continue to analyze vacuum influence and concentrations to optimize operation of the Building A and Building C sub-slab depressurization systems. The Building A SSD extraction piping connected to basement sump HRS-5 is anticipated to be removed during the planned abandonment of the this sump. We are not planning on additional changes to the systems for the remainder of 2019. We may potentially add extraction of vapor from another sump (e.g. SP-1) or extraction point in the Building A basement, depending upon the results of additional indoor air monitoring and studies.

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SECTION 4 REFERENCES

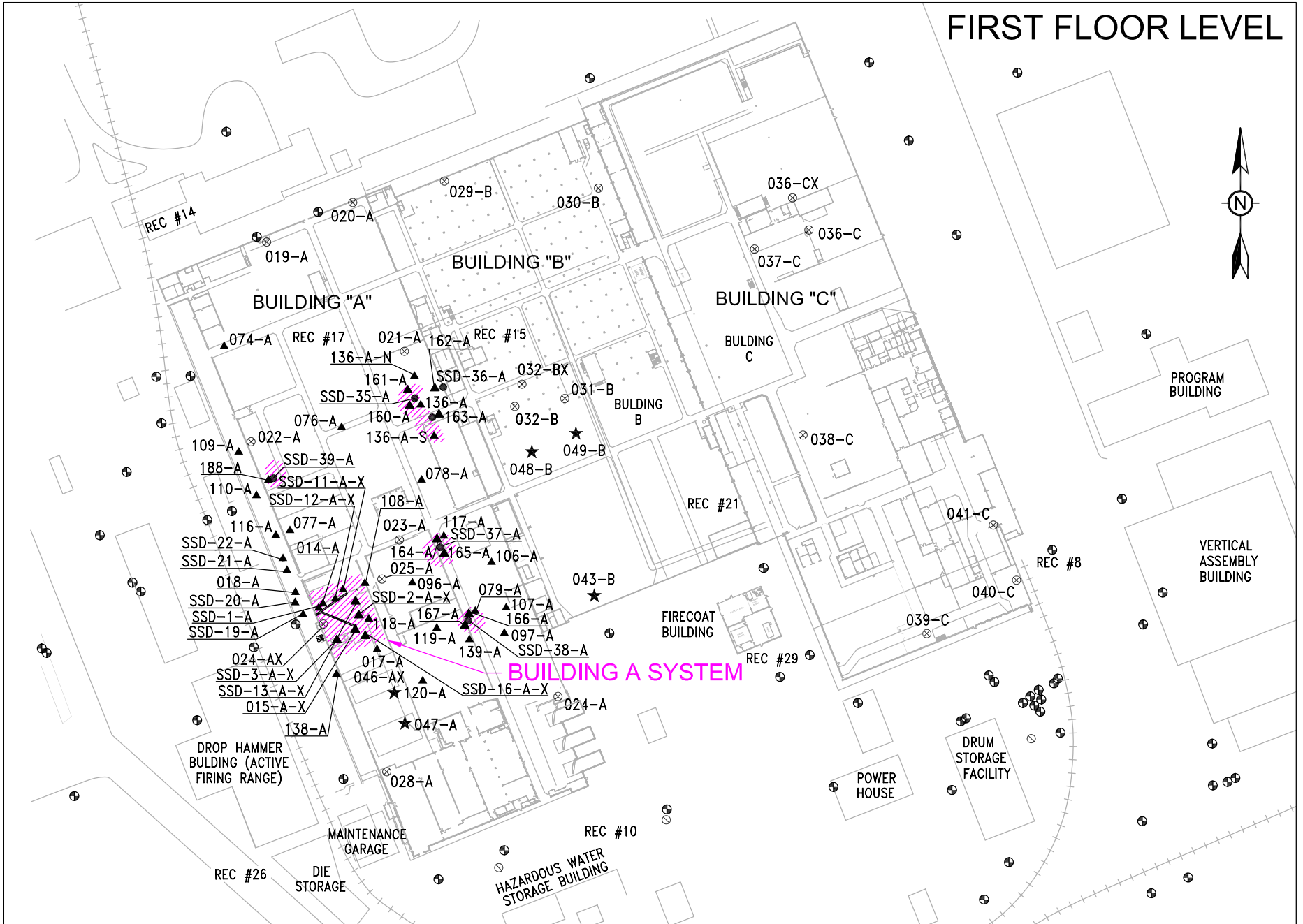
- Tetra Tech, Inc. (Tetra Tech), 2017. *Construction Report Sub-Slab Depressurization-System Third-Phase Expansion—Building A, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland*. August.
- Tetra Tech, Inc. (Tetra Tech), 2019a. *Operation, Maintenance, and Monitoring Manual, Sub-Slab-Depressurization System Building A, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland*. March. Draft.
- Tetra Tech, Inc. (Tetra Tech), 2019b. *Operation and Maintenance Manual: Sub-Slab Depressurization System—Building C, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland*. March. Draft.

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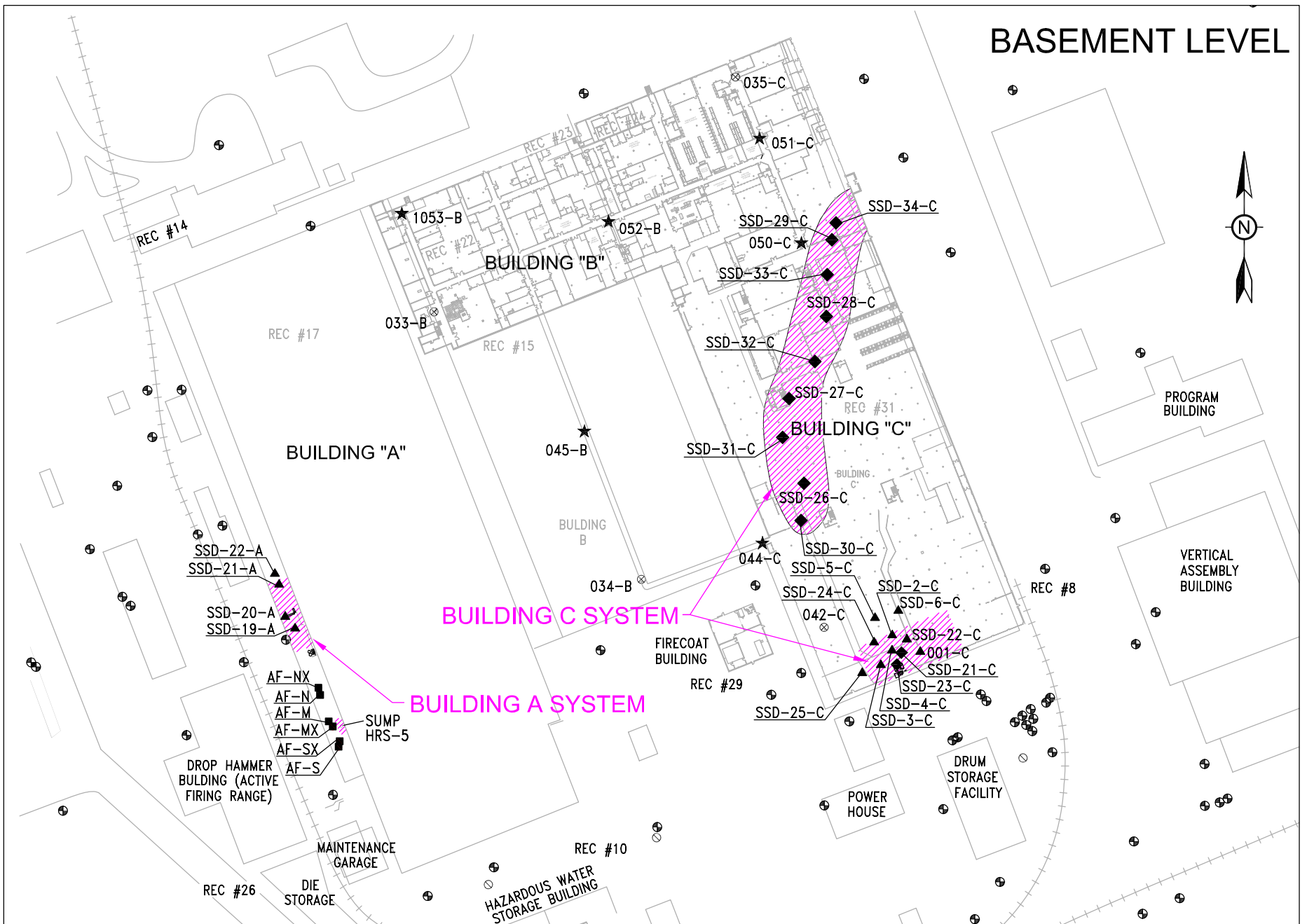
FIGURES

-
- Figure 1 SSD System Locations**
- Figure 2 Building A SSD System Layout**
- Figure 3 Building A SSD System Process and Instrumentation Diagram**
- Figure 4 Building C SSD System Layout**
- Figure 5 Building C SSD System Process and Instrumentation Diagram**
- Figure 6 Induced Vacuum–March 2017 to March 2019–Building A SSD System– Lay-up Room and Basement**
- Figure 7 Induced Vacuum– March 2017 to March 2019–Building A SSD System– Eastern Area**
- Figure 8 Induced Vacuum– March 2017 to March 2019–Building C SSD System– Southern-Basement Area**
- Figure 9 Induced Vacuum– March 2017 to March 2019–Building C SSD System– Mid-Basement Area**
- Figure 10 Influence of Soil Vapor Extraction Points–Building A Lay-up Room and Basement**
- Figure 11 Influence of Soil Vapor Extraction Points–Building A Eastern Area**
- Figure 12 Influence of Soil Vapor Extraction Points–Building C Southern-Basement Area**
- Figure 13 Influence of Soil Vapor Extraction Points–Building C Mid-Basement Area**
- Figure 14 Building A Influent VOC Concentrations**
- Figure 15 Building C Influent VOC Concentrations**

FIRST FLOOR LEVEL

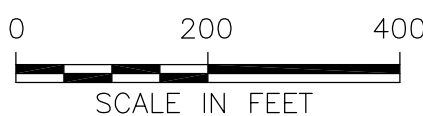


BASEMENT LEVEL

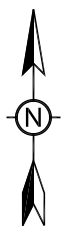
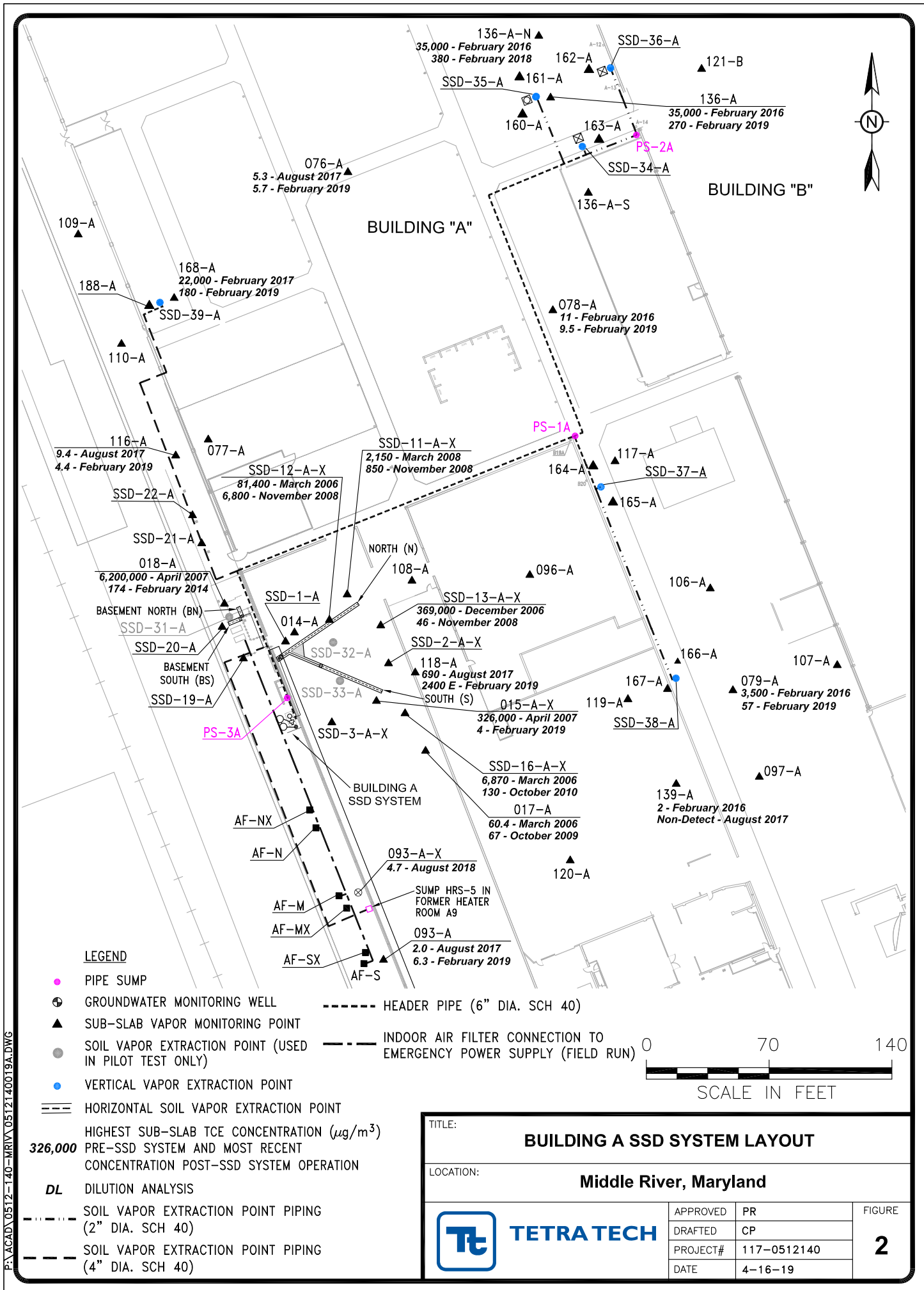


LEGEND

- ⊕ GROUNDWATER MONITORING WELL
- ▲ SUB-SLAB VAPOR MONITORING POINT
- ★ TARGET OF OPPORTUNITY
- ⊗ INDOOR AIR SAMPLE
- ⊖ ABANDONED WELL BORING
- ◆ SUB-SLAB VAPOR EXTRACTION POINT
- PROPOSED SUB-SLAB VAPOR EXTRACTION POINT
- INDOOR AIR FILTER
- SSD SUB-SLAB DEPRESSURIZATION
- ▨ APPROXIMATE AREA OF SSD SYSTEM INFLUENCE



TITLE: SSD SYSTEM LOCATIONS										
LOCATION: LMC Middle River Complex Middle River, Maryland										
TETRA TECH	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>APPROVED</td> <td>PR</td> <td rowspan="4" style="text-align: center; vertical-align: middle;">FIGURE 1</td> </tr> <tr> <td>DRAFTED</td> <td>CP</td> </tr> <tr> <td>PROJECT#</td> <td>117-0512124</td> </tr> <tr> <td>DATE</td> <td>10-31-17</td> </tr> </table>	APPROVED	PR	FIGURE 1	DRAFTED	CP	PROJECT#	117-0512124	DATE	10-31-17
APPROVED	PR	FIGURE 1								
DRAFTED	CP									
PROJECT#	117-0512124									
DATE	10-31-17									



LEGEND

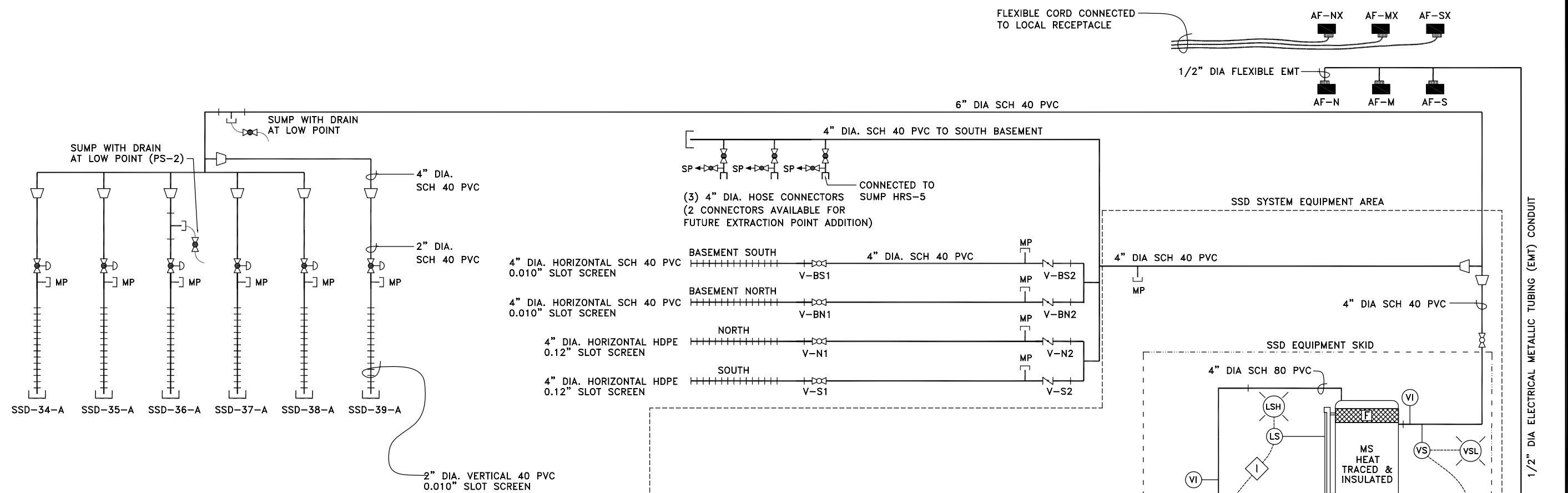
- PIPE SUMP
- ⊕ GROUNDWATER MONITORING WELL
- ▲ SUB-SLAB VAPOR MONITORING POINT
- SOIL VAPOR EXTRACTION POINT (USED IN PILOT TEST ONLY)
- VERTICAL VAPOR EXTRACTION POINT
- === HORIZONTAL SOIL VAPOR EXTRACTION POINT
- 326,000 HIGHEST SUB-SLAB TCE CONCENTRATION ($\mu\text{g}/\text{m}^3$) PRE-SSD SYSTEM AND MOST RECENT CONCENTRATION POST-SSD SYSTEM OPERATION
- DL DILUTION ANALYSIS
- SOIL VAPOR EXTRACTION POINT PIPING (2" DIA. SCH 40)
- SOIL VAPOR EXTRACTION POINT PIPING (4" DIA. SCH 40)

- HEADER PIPE (6" DIA. SCH 40)
- INDOOR AIR FILTER CONNECTION TO EMERGENCY POWER SUPPLY (FIELD RUN)



TITLE: BUILDING A SSD SYSTEM LAYOUT			
LOCATION: Middle River, Maryland			
	APPROVED	PR	FIGURE 2
	DRAFTED	CP	
	PROJECT#	117-0512140	
	DATE	4-16-19	

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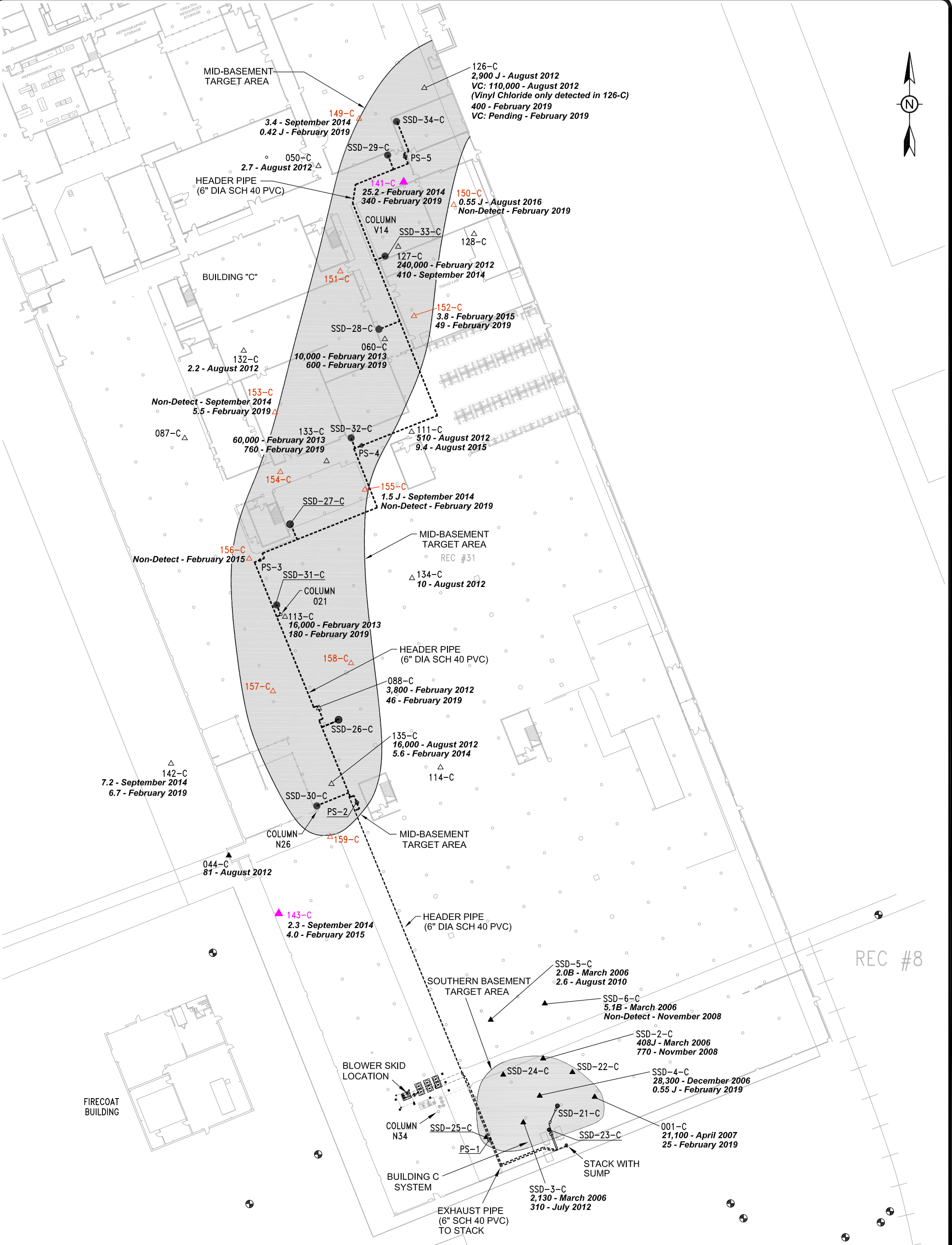
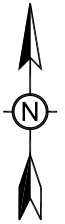
PROCESS AND INSTRUMENTATION DIAGRAM NOTES

- AF-N, AF-M, AF-S NORTH, MID, AND SOUTH INDOOR AIR FILTERS INSTALLED IN JANUARY 2016
- AF-NX, AF-MX, AF-SX NORTH, MID, AND SOUTH INDOOR AIR FILTERS INSTALLED IN MAY 2017
- VI VACUUM INDICATOR - 0-160" H₂O
- MP MEASURING POINT 1/4" MALE CONNECTOR WITH PLUG THREAD WITH TEFLON TAPE. FITTING MAY BE REMOVED FOR ANEMOMETER AND VACUUM READINGS PROVIDE 20" SOLID PIPE BOTH SIDES.
- REDUCER
- BUTTERFLY VALVE
- BALL VALVE
- BALL VALVE - NORMALLY CLOSED
- DIAPHRAGM VALVE
- FI FLOW INDICATOR (DIRECT 90-450 SCFM READING)
- F INLET AIR FILTER
- HE HEAT EXCHANGER (XCHANGER AA-400)
- MS MOISTURE SEPARATOR (GASHO GX-100DL) WITH 40 GALLON CAPACITY, SLIGHT TUBE, REMOVABLE TOP, DRAIN VALVE
- LS LEVEL SWITCH
- LSH LEVEL SWITCH HIGH
- VRV VACUUM RELIEF VALVE - 2" (SET AT 81.6" WC)
- SP SAMPLE PORT 1/4" DIAMETER
- BL AMETEK®, ROTRON® 909BB72W 10 HP MOTOR, 300 SCFM @ 75" H₂O
- PI PRESSURE INDICATOR 0-160" H₂O
- TS TEMPERATURE SWITCH (ASHCROFT P/N T424-T05-030-XFS-150-260; TSH-1 SET AT 220° F AND TSH-2 SET AT 115° F)
- GAC GRANULAR ACTIVATED CARBON VAPOR TREATMENT (SIEMENS VENT SCRUB®, VSC400, VOCARB® 48C)

- INDOOR AIR FILTER (IQAir® GC™ VOC)
- TI TEMPERATURE INDICATOR 0-250° F
- DISCONNECT SWITCH
- PS PRESSURE SWITCH (HIGH) (DWYER P/N 1950P-8-2F SET AT 80" WC)
- VS VACUUM SWITCH (LOW) (DWYER P/N 1950P-2-2F SET AT 3" WC)
- V-N1 PROCESS VALVE LABELS
- HOA PANEL MOUNTED HAND/OFF/AUTO SWITCH FOR BLOWER
- INTERLOCK BLOWER SHUTDOWN
- LOCALLY MOUNTED INSTRUMENT
- PANEL ALARM LIGHT
- H HIGH
- L LOW
- SSD SUB-SLAB DEPRESSUIZATION
- M MOTOR
- EMT ELECTRICAL METALLIC TUBING

TITLE:		BUILDING A SSD SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM	
LOCATION:		LMC Middle River Complex Middle River, Maryland	
	APPROVED	PR	FIGURE 3
	DRAFTED	CP	
	PROJECT#	117-0512124	
DATE	10-24-17		

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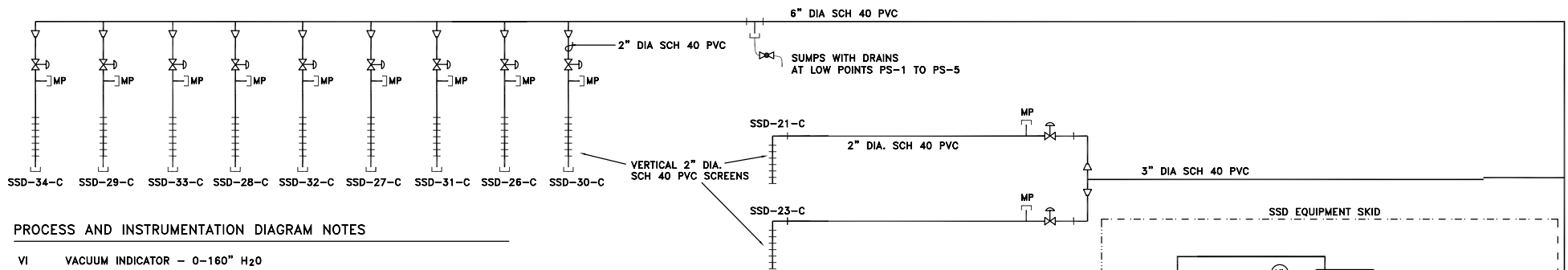
LEGEND

- ⊕ GROUNDWATER MONITORING WELL
- ▲ SUB-SLAB VAPOR MONITORING POINT
- △ SUB-SLAB VAPOR MONITORING POINT INSTALLED JANUARY 2010
- ▲ SUB-SLAB VAPOR MONITORING POINT INSTALLED FEBRUARY 2013
- △ SUB-SLAB VAPOR MONITORING POINT INSTALLED AUGUST 2014
- SOIL VAPOR EXTRACTION POINT
- SUMP

- 21,100 HIGHEST SUB-SLAB TCE CONCENTRATION ($\mu\text{g}/\text{m}^3$)
- J PRE-SSD SYSTEM AND MOST RECENT TCE CONCENTRATION POST-SSD SYSTEM OPERATION
- HEADER PIPE (2", 3" OR 6" DIA. SCH 40)
- SSD SUB-SLAB DEPRESSURIZATION
- J ESTIMATED CONCENTRATION
- B DETECTED IN LAB BLANK
- TCE TRICHLOROETHENE
- VC VINYL CHLORIDE
- DL DILUTION ANALYSIS

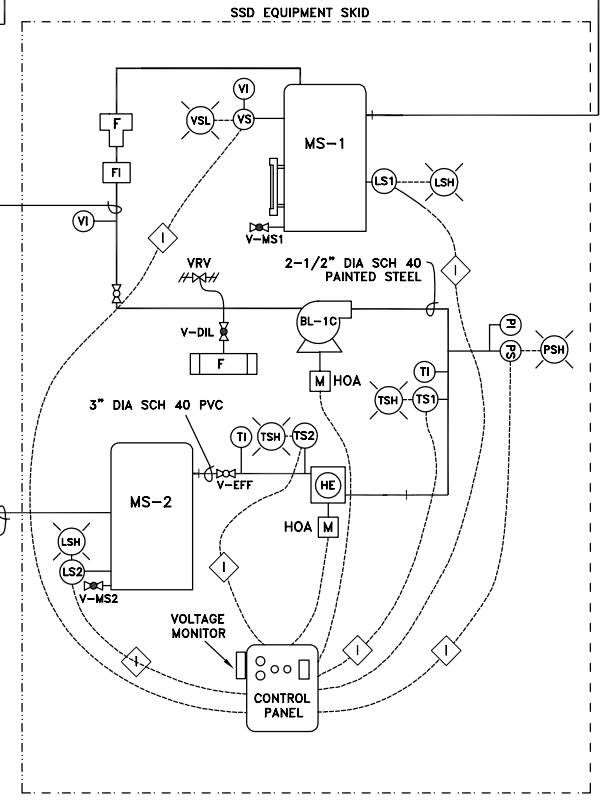
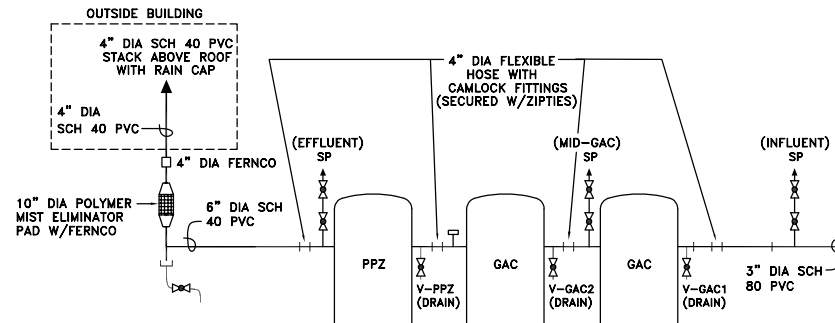


TITLE:			
BUILDING C SSD SYSTEM LAYOUT			
LOCATION:			
Middle River, Maryland			
	APPROVED	PR	FIGURE
	DRAFTED	CP	
	PROJECT#	117-0512140	
	DATE	4-16-19	
			4



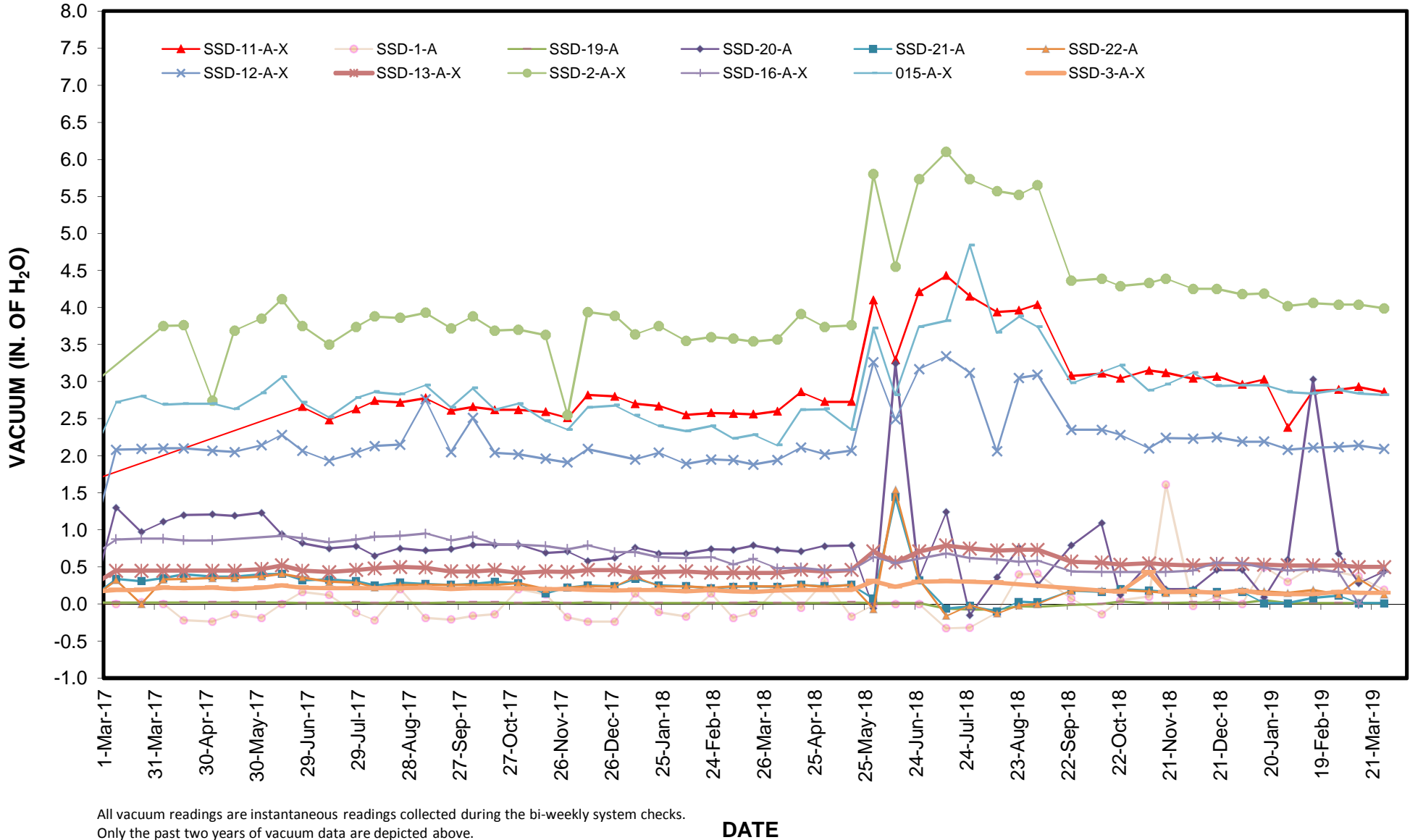
PROCESS AND INSTRUMENTATION DIAGRAM NOTES

- VI VACUUM INDICATOR - 0-160" H₂O
- MP MEASURING POINT 1/4" MALE CONNECTOR WITH PLUG THREAD WITH TEFLON TAPE. FITTING MAY BE REMOVED FOR ANEMOMETER AND VACUUM READINGS PROVIDE 20" SOLID PIPE BOTH SIDES.
- ▽ REDUCER
- BALL VALVE - NORMALLY OPEN
- BALL VALVE - NORMALLY CLOSED
- ⊗ DIAPHRAGM VALVE (LOCKABLE)
- ∇ CHECK VALVE
- FI FLOW INDICATOR (DIRECT 70-350 SCFM READING, ROTRON FM30C350Q)
- F INLET AIR FILTER
- HE HEAT EXCHANGER (XCHANGER AA-250)
- MS MOISTURE SEPARATOR WITH 30 GALLON CAPACITY, SIGHT TUBE, REMOVABLE TOP, DRAIN VALVE
- LS LEVEL SWITCH
- VRV VACUUM RELIEF VALVE, 85" H₂O SETTING
- SP SAMPLE PORT 1/4" DIAMETER
- BL ROTRON DR858, 7.5 HP MOTOR, 220 SCFM @ 55" H₂O
- PI PRESSURE INDICATOR 0-160" H₂O
- TS1 TEMPERATURE SWITCH, 215° F SETTING
- TS2 TEMPERATURE SWITCH, 140° F SETTING
- GAC GRANULAR ACTIVATED CARBON VAPOR TREATMENT (SIEMENS VENT-SCRUB® VSC400, VOCARB® 48C) OPERATED IN UPFLOW MODE
- PPZ POTASSIUM PERMANGANATE ZEOLITE MEDIA (SIEMENS VENT-SCRUB® VSC400, KMN2000) OPERATED IN UPFLOW MODE
- TI TEMPERATURE INDICATOR 0-250° F
- PS PRESSURE SWITCH (HIGH)
- VS VACUUM SWITCH (LOW)
- V-MS1 PROCESS VALVE LABELS
- HOA PANEL MOUNTED HAND/OFF/AUTO SWITCH
- ◇ INTERLOCK BLOWER SHUTDOWN
- LOCALLY MOUNTED INSTRUMENT
- ⊗ PANEL ALARM LIGHT
- H HIGH
- L LOW
- M MOTOR
- T TAP PLUG
- SSD SUB-SLAB DEPRESSURIZATION



TITLE:			
BUILDING C SSD SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM			
LOCATION:			
Middle River, Maryland			
TETRA TECH	APPROVED	PR	FIGURE 5
	DRAFTED	CP	
	PROJECT#	117-0507533	
	DATE	8-9-18	

**FIGURE 6
INDUCED VACUUM
MARCH 2017 TO MARCH 2019
BUILDING A SSD SYSTEM - LAY-UP ROOM AND BASEMENT**

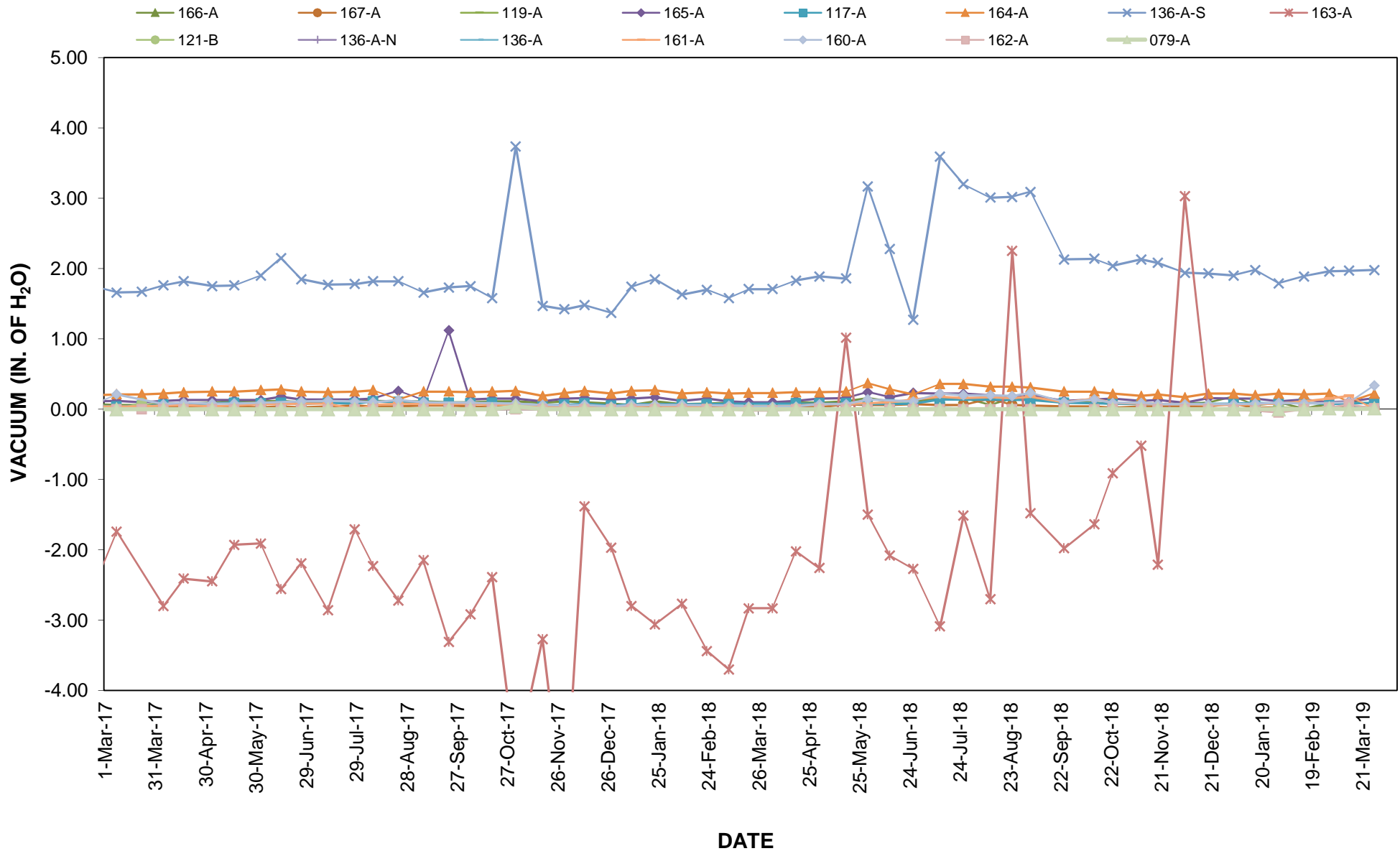


All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
Only the past two years of vacuum data are depicted above.

Increase in vacuum influence beginning April 4, 2016 a result of the installation and operation of the larger blower skid associated with the second-phase expansion.

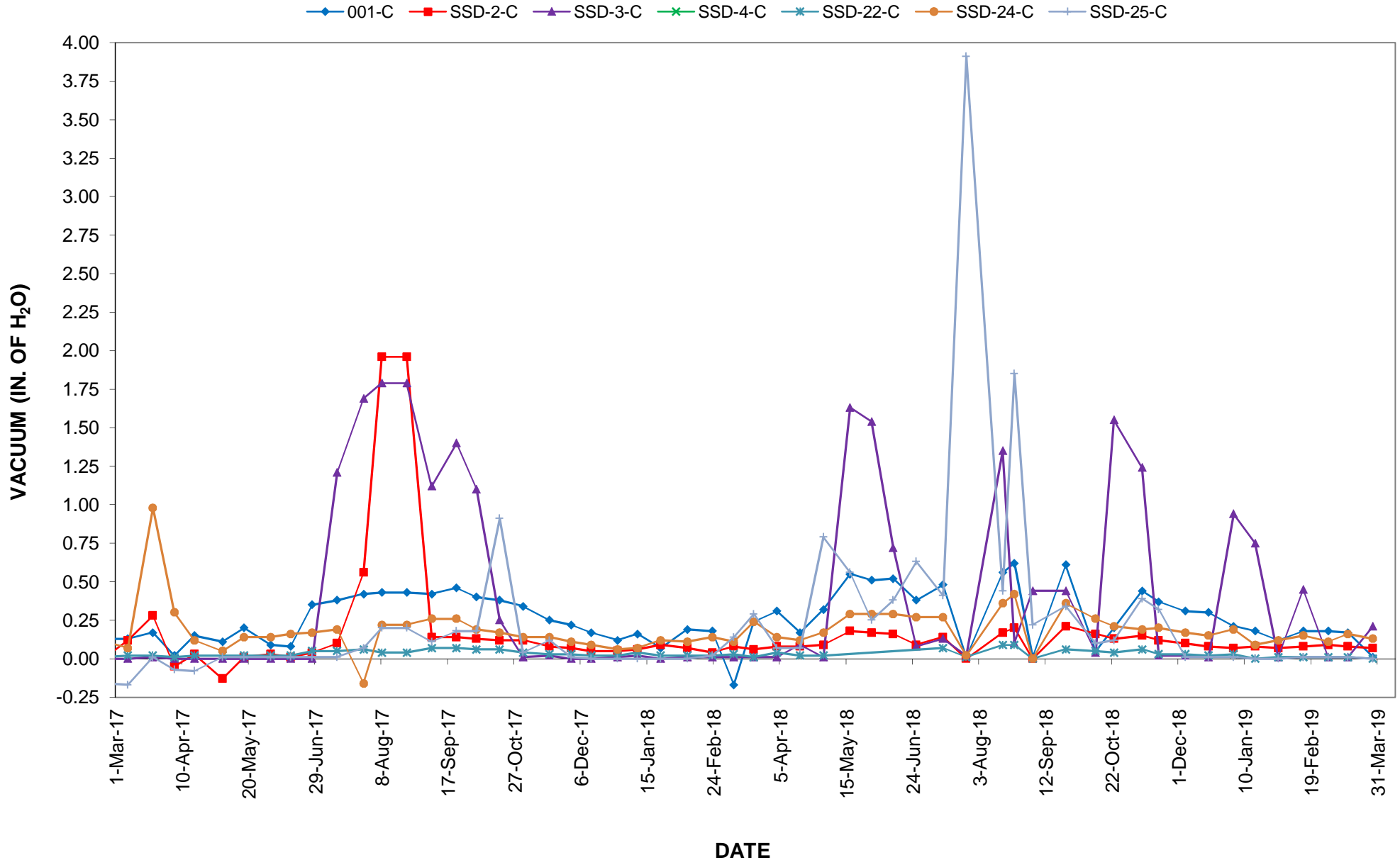
** NOTE: As of May 18, 2015, all vacuum readings for SSD-11-A, SSD-12-A, SSD-13-A, 015-A, SSD-16-A, SSD-2-A, and SSD-3-A were taken from the SSD-11-A-X, SSD-12-A-X, SSD-13-A-X, 015-A-X, SSD-16-A-X, SSD-2-A-X, and SSD-3-A-X VMPs respectively. **

**FIGURE 7
INDUCED VACUUM
MARCH 2017 TO MARCH 2019
BUILDING A SSD SYSTEM - EASTERN AREA**



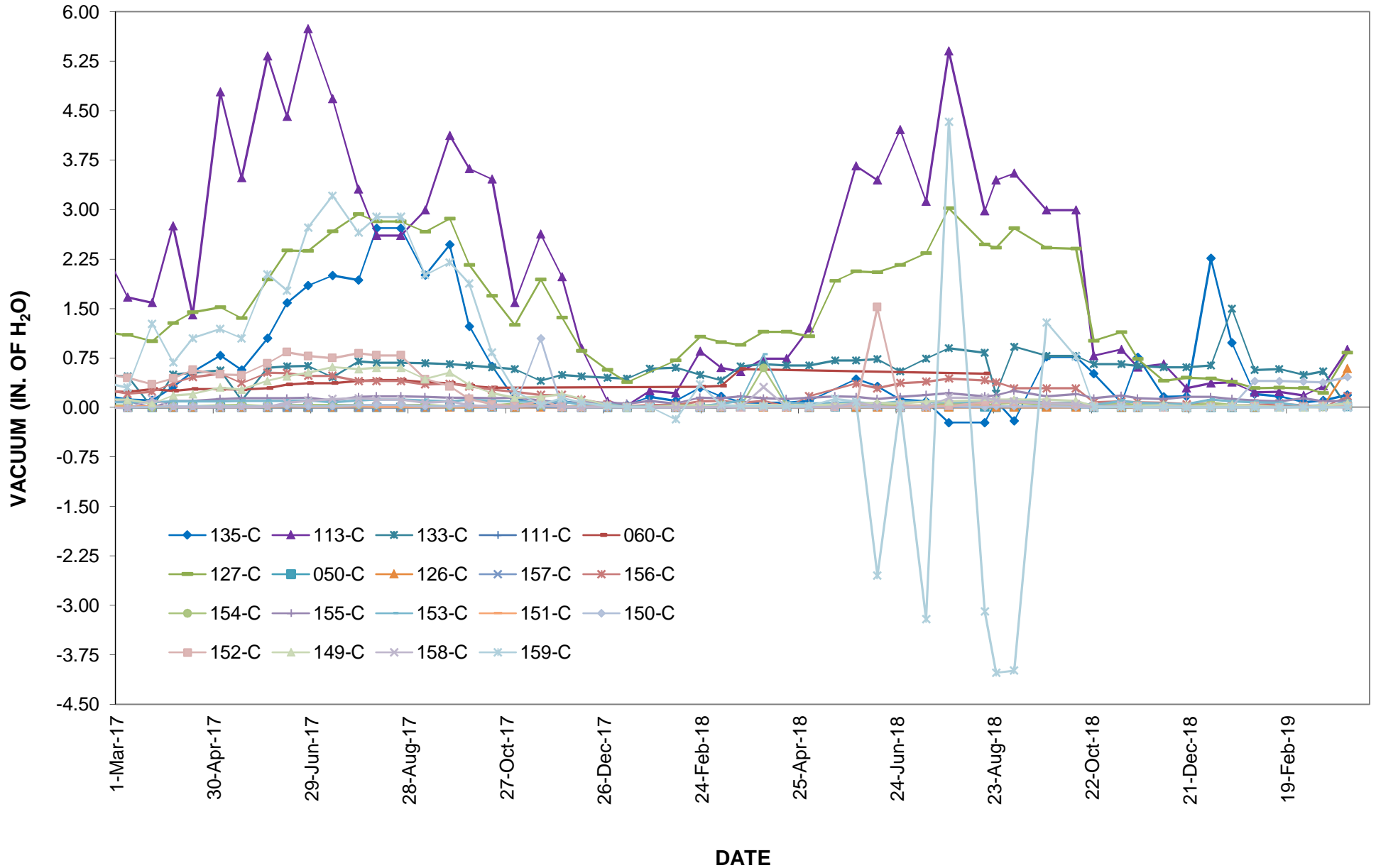
All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
VMPs we included in bi-weekly system checks upon start-up of the second-phase expansion on April 13, 2016.

**FIGURE 8
INDUCED VACUUM
MARCH 2017 TO MARCH 2019
BUILDING C SSD SYSTEM - SOUTHERN BASEMENT AREA**

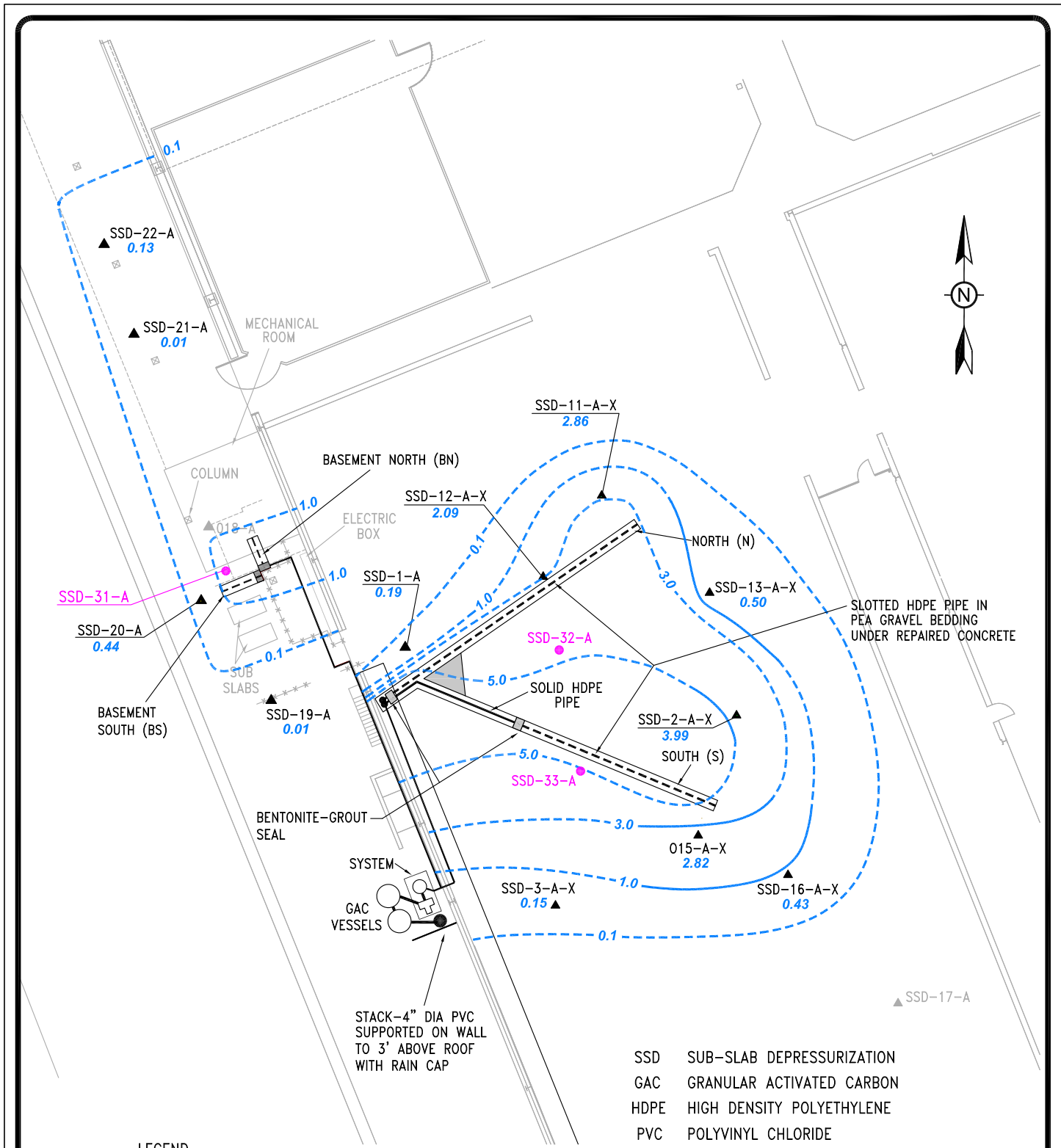


All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
Only the past two years of vacuum data are depicted above.

**FIGURE 9
INDUCED VACUUM
MARCH 2017 TO MARCH 2019
BUILDING C SSD SYSTEM - MID-BASEMENT AREA**



All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
Sub-slab vapor monitoring points routinely monitored beginning May 1, 2013 following second-phase system expansion in the middle basement area of Building C.



LEGEND

- GROUNDWATER MONITORING WELL
- ▲ SUB-SLAB VAPOR MONITORING POINT
- SOIL VAPOR EXTRACTION POINT (USED IN PILOT TEST ONLY)
- 0.06 INCHES OF H₂O INDUCED VACUUM MEASURED ON 3/28/2019
- INFERRED EQUAL VACUUM INFLUENCE
- == HORIZONTAL SOIL VAPOR EXTRACTION POINT

SSD SUB-SLAB DEPRESSURIZATION
 GAC GRANULAR ACTIVATED CARBON
 HDPE HIGH DENSITY POLYETHYLENE
 PVC POLYVINYL CHLORIDE



TITLE: **INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING A LAY-UP ROOM AND BASEMENT**

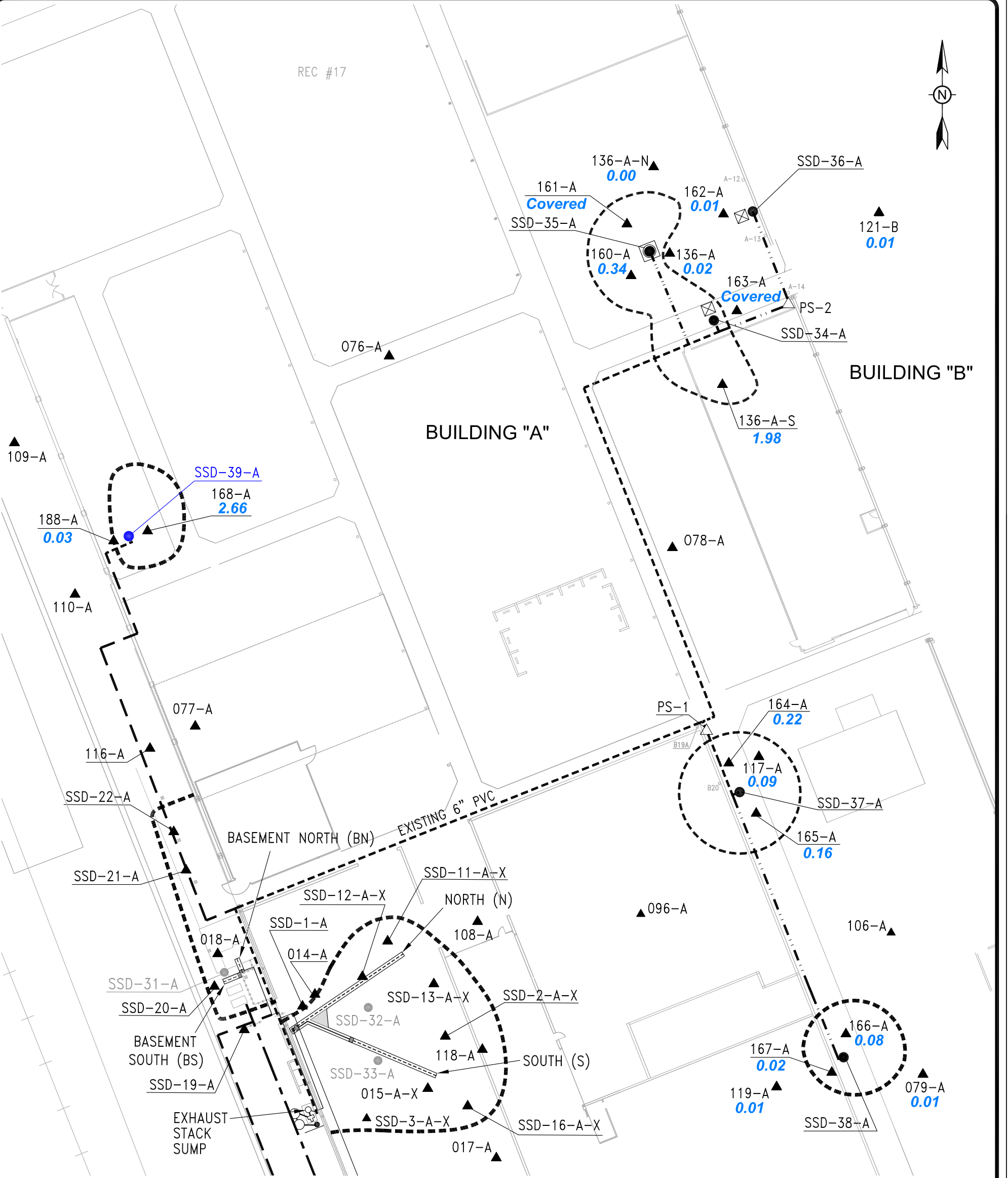
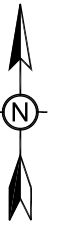
LOCATION: **Middle River, Maryland**

	APPROVED	PR	FIGURE
	DRAFTED	CP	
	PROJECT#	117-0512140	
	DATE	4-9-19	

10

P:\ACAD\0512-140-MRIV\0512140018A.DWG

REC #17



LEGEND

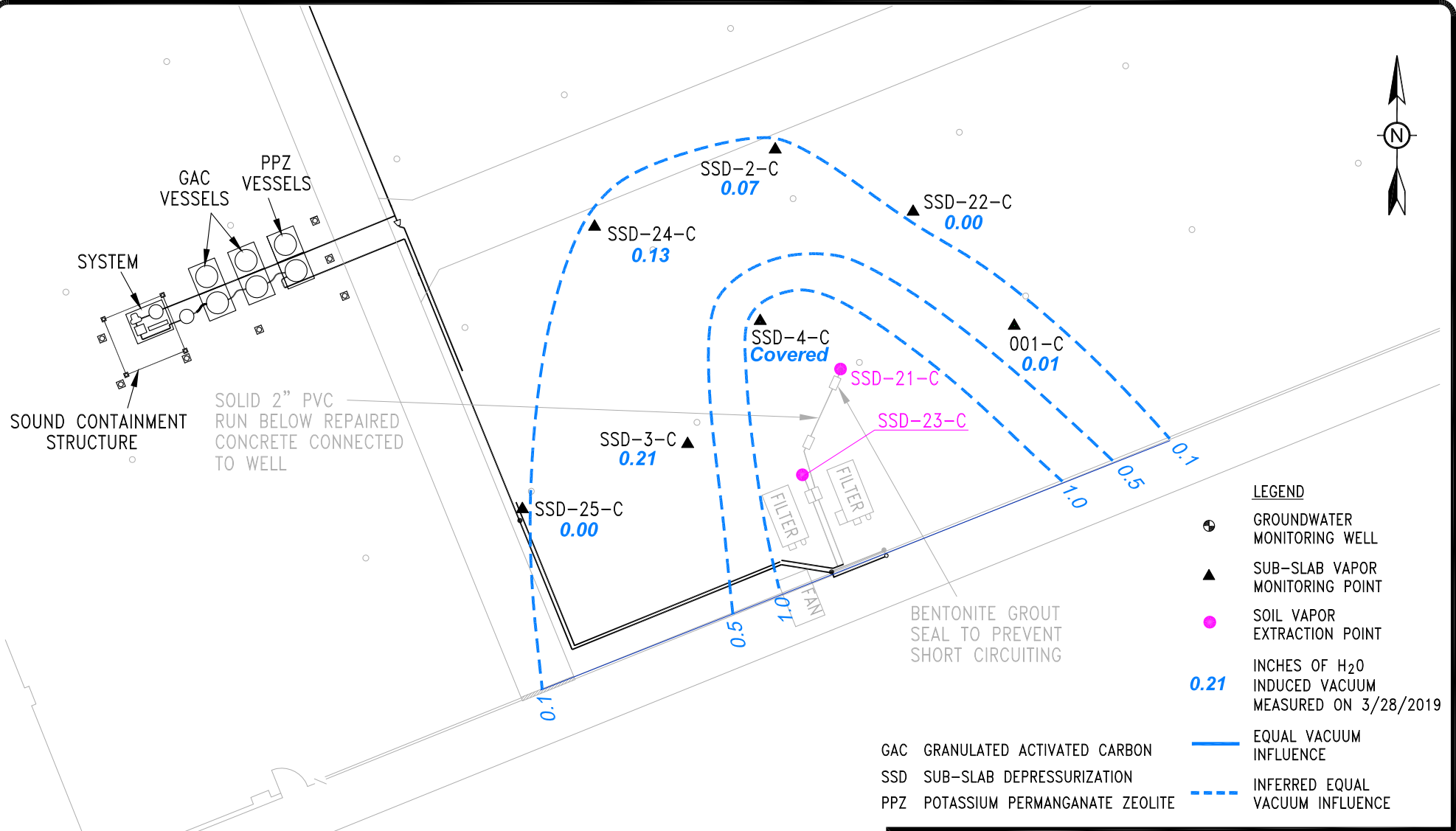
- ▲ SUB-SLAB VAPOR MONITORING POINT
- VERTICAL SOIL VAPOR EXTRACTION POINT
- NEW SUB-SLAB VAPOR EXTRACTION POINT
- SUB-SLAB VAPOR EXTRACTION POINT (USED IN PREVIOUS PILOT TEST)
- ⊗ INDOOR AIR SAMPLING POINT
- APPROXIMATE EXISTING INFLUENCE AREA
- INDOOR AIR FILTER
- ⊕ SSD SYSTEM BLOWER SKID
- SOIL VAPOR EXTRACTION POINT PIPING (2" DIA. SCH 40)
- SOIL VAPOR EXTRACTION POINT PIPING (4" DIA. SCH 40)
- HEADER PIPE (6" DIA. SCH 40)
- INDOOR AIR FILTER CONNECTION TO EMERGENCY POWER SUPPLY (FIELD RUN)
- △ PIPE SUMP
- STEEL PIPE SLEEVE (4" DIA.)
- ⊗ PIPE BOLLARD (2" DIA.)
- SSD SUB-SLAB DEPRESSURIZATION
- EXISTING HORIZONTAL SOIL VAPOR EXTRACTION POINT
- 0.69 INCHES OF H₂O INDUCED VACUUM MEASURED ON 3/28/2019
- N/A NOT ACCESSIBLE

NOTE:

PIPE HANGERS PLACED NEXT TO EXISTING SUPPORT BRACKETS FOR STEEL PIPING IN CEILING APPROX. 6-12 FT APART.



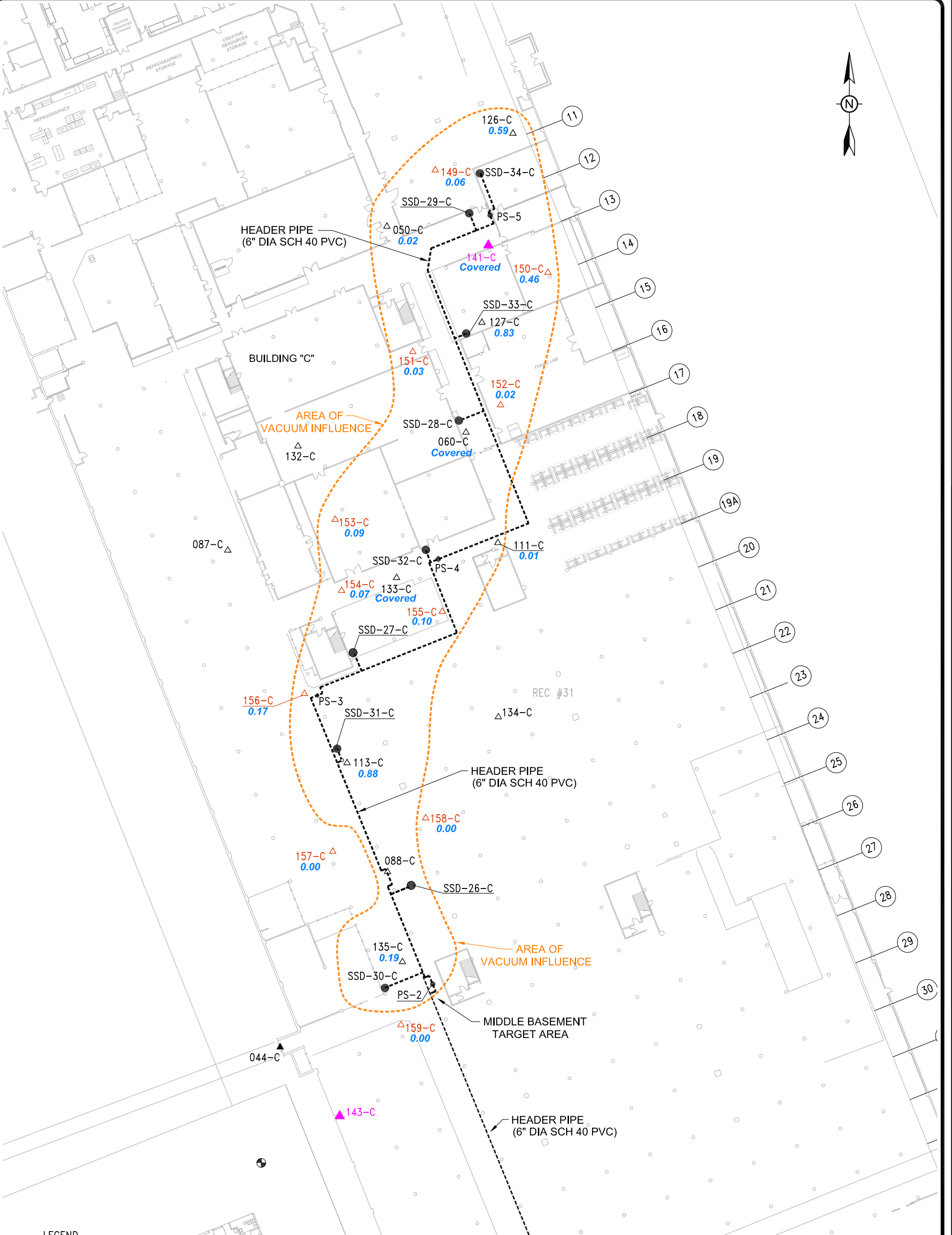
TITLE: INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING A EASTERN AREA			
LOCATION: Middle River, Maryland			
	APPROVED	PR	FIGURE 11
	DRAFTED	CP	
	PROJECT#	117-0512140	
	DATE	4-8-19	



TITLE: INFLUENCE OF SOIL VAPOR EXTRACTION POINTS
 BUILDING C - SOUTHERN BASEMENT AREA

LOCATION: Middle River, Maryland

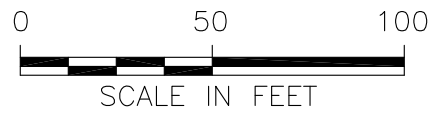
	APPROVED	PR	FIGURE 12
	DRAFTED	CP	
	PROJECT#	117-0512140	
	DATE	4-16-19	



LEGEND

- GROUNDWATER MONITORING WELL
- ▲ SUB-SLAB VAPOR MONITORING POINT
- △ SUB-SLAB VAPOR MONITORING POINT INSTALLED JANUARY 2010
- ▲ SUB-SLAB VAPOR MONITORING POINT INSTALLED FEBRUARY 2013
- △ SUB-SLAB VAPOR MONITORING POINT INSTALLED AUGUST 2014
- SOIL VAPOR EXTRACTION POINT
- SUMP

- NOTE:**
088-C HAS BEEN REMOVED FROM MONITORING.
- AREA OF VACUUM INFLUENCE (> 0.01 INCHES OF H₂O)
 - HEADER PIPE (2", 3" OR 6" DIA. SCH 40)
 - SSD SUB-SLAB DEPRESSURIZATION
 - 0.11 INCHES OF H₂O INDUCED VACUUM MEASURED ON 3/28/2019



TITLE: INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING C MID-BASEMENT AREA			
LOCATION: Middle River, Maryland			
	APPROVED	PR	FIGURE 13
	DRAFTED	CP	
	PROJECT#	117-0512140	
	DATE	4-16-19	

FIGURE 14
BUILDING A INFLUENT VOC CONCENTRATIONS
 SSD System, Middle River Complex, Middle River, Maryland

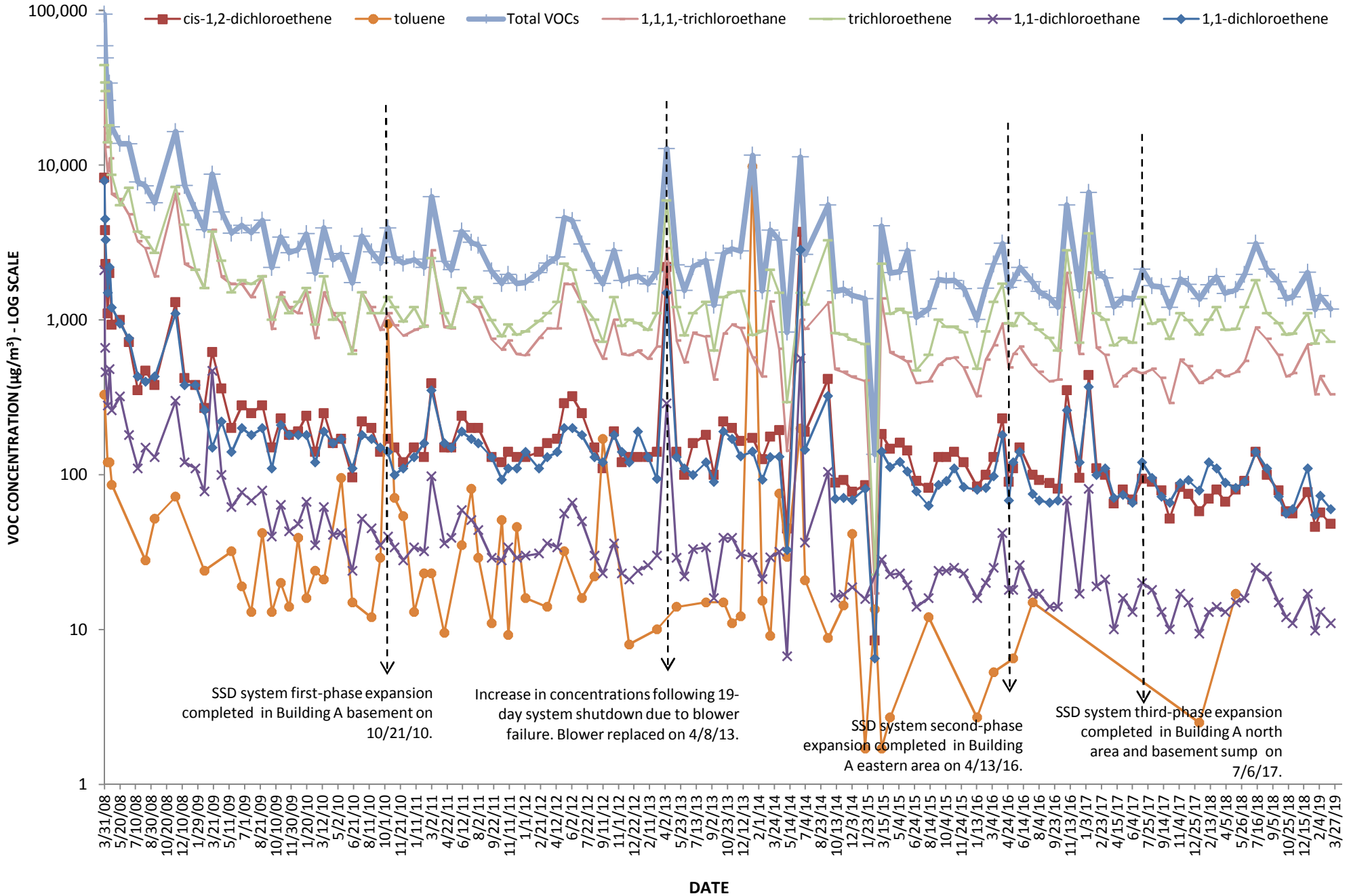
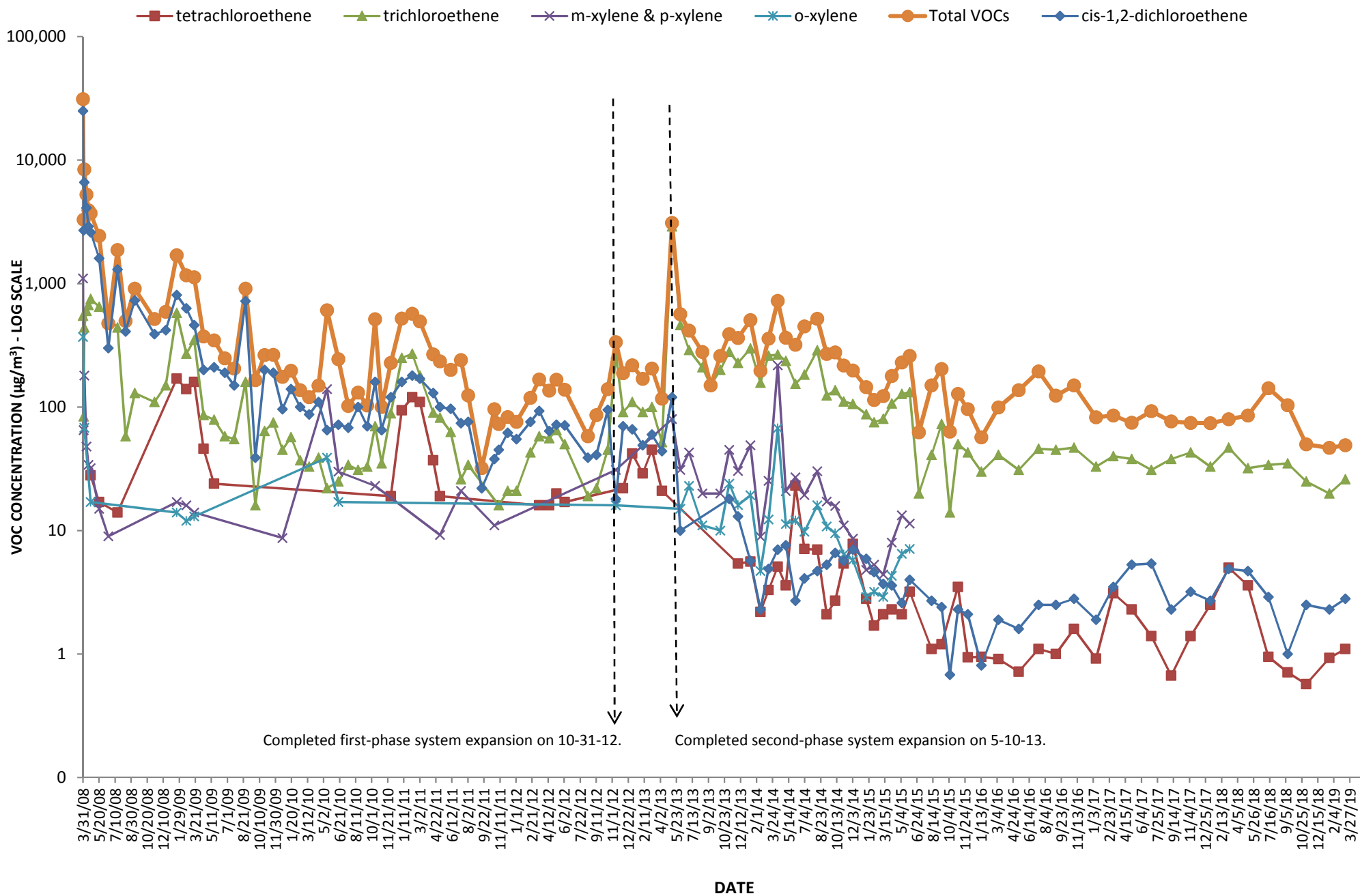


FIGURE 15
BUILDING C INFLUENT VOC CONCENTRATIONS
 SSD System, Middle River Complex, Middle River, Maryland



TABLES

-
- Table 1 Building A Influent Concentrations ($\mu\text{g}/\text{m}^3$)**
- Table 2 Building A Mid-GAC Concentrations ($\mu\text{g}/\text{m}^3$)**
- Table 3 Building A Effluent Concentrations ($\mu\text{g}/\text{m}^3$)**
- Table 4 Building C Influent Concentrations ($\mu\text{g}/\text{m}^3$)**
- Table 5 Building C Mid-GAC Concentrations ($\mu\text{g}/\text{m}^3$)**
- Table 6 Building C Effluent Concentrations ($\mu\text{g}/\text{m}^3$)**

Table 1. Parcel A-10 Pump-and-Treat System Operational Data

Period	Total System Flow (Gallons)						Average Flow Rate (GPM) ^a						Effective Flow Rate (GPM) ^b	Critical System Performance Monitoring						
	B-1	B-2	B-3	B-4	B-6	System	B-1	B-2	B-3	B-4	B-6	System		System	Air Stripper Sump Pressure (in H ₂ O)		Air Stripper Influent Flow (GPM)		Air Stripper Airflow Rate (SCFM)	
															LSL=10.5 in. USL=14 in.		LSL ^c =3gpm USL ^d =40gpm		LSL=900 USL=1400	
Range	Average	Range	Average	Range	Average	Range	Average													
01/01/18 - 01/04/18	664	7,363	0	1,950	11,636	21,613	1.8	1.5	0.0	1.8	2.0	7.0		11.03 - 13.99	13.1	6.86 - 10.51	9.0	1118 - 1341	1174	
01/05/18 - 01/12/18	378	13,502	0	3,660	21,944	39,484	1.8	1.5	0.0	1.8	2.0	7.0		10.74 - 13.73	13.0	6.65 - 10.56	8.8	1104 - 1215	1158	
01/13/18 - 01/18/18	72	2,800	0	2,690	16,738	22,300	1.8	1.5	0.0	1.8	2.0	7.0		12.07 - 13.46	13.0	7.88 - 10.56	9.2	1104 - 1201	1151	
01/19/18 - 01/26/18	80	11,887	0	3,381	21,346	36,694	1.8	1.5	0.0	1.8	2.0	7.0		10.69 - 13.61	13.0	6.40 - 12.68	8.5	1090 - 1285	1147	
01/27/18 - 01/31/18	690	9,463	0	4,089	16,240	30,482	1.8	1.5	0.0	1.8	2.0	7.0		11.85 - 12.51	12.2	10.71 - 12.81	12.0	1132 - 1229	1182	
January 2018	1,884	45,015	0	15,770	87,904	150,573	1.8	1.5	0.0	1.8	2.0	7.0	3.6	10.69 - 13.99	12.9	6.40 - 12.81	9.5	1090 - 1341	1162	
02/01/18 - 02/07/18	61	9,392	0	3,693	15,752	28,898	1.8	1.5	0.0	1.8	2.0	7.0		10.88 - 12.66	12.3	9.82 - 12.85	11.4	1118 - 1257	1172	
02/08/18 - 02/15/18	966	12,475	0	4,777	20,493	38,711	1.8	1.5	0.0	1.8	2.0	7.0		11.10 - 12.95	12.4	8.25 - 11.18	9.8	1132 - 1257	1192	
02/16/18 - 02/23/18	1,313	7,823	0	2,880	12,339	24,355	1.8	1.5	0.0	1.8	2.0	7.0		10.57 - 12.85	12.4	8.93 - 13.06	10.3	1118 - 1271	1176	
02/24/18 - 02/28/18	570	11,920	0	4,420	19,174	36,084	1.8	1.5	0.0	1.8	2.0	7.0		12.18 - 12.85	12.5	8.38 - 11.47	9.9	1118 - 1229	1176	
February 2018	2,910	41,610	0	15,770	67,758	128,048	1.8	1.5	0.0	1.8	2.0	7.0	3.6	10.57 - 12.95	12.4	8.25 - 13.06	10.4	1118 - 1271	1179	
03/01/18 - 03/09/18	447	10,950	0	4,254	16,664	32,315	1.8	1.5	0.0	1.8	2.0	7.0		10.63 - 12.95	12.5	4.99 - 10.41	9.0	1090 - 1243	1156	
03/10/18 - 03/15/18	953	11,290	0	4,006	16,434	32,683	1.8	1.5	0.0	1.8	2.0	7.0		11.42 - 12.76	12.4	5.71 - 9.84	8.1	1104 - 1215	1157	
03/16/18 - 03/22/18	560	7,800	0	4,370	20,035	32,765	1.8	1.5	0.0	1.8	2.0	7.0		12.16 - 12.84	12.4	7.03 - 10.03	8.8	1104 - 1215	1149	
03/23/18 - 03/31/18	1,960	4,360	0	2,880	5,244	14,444	1.8	1.5	0.0	1.8	2.0	7.0		10.92 - 13.10	12.8	6.91 - 10.12	9.0	1104 - 1243	1163	
March 2018	3,920	34,400	0	15,510	58,376	112,206	1.8	1.5	0.0	1.8	2.0	7.0	3.2	10.63 - 13.10	12.5	4.99 - 10.41	8.7	1090 - 1243	1156	
04/01/18 - 04/06/18	2,335	11,835	0	3,261	20,448	37,879	1.8	1.5	0.0	1.8	2.0	7.0		10.73 - 13.21	12.8	4.86 - 10.10	8.0	1090 - 1229	1153	
04/07/18 - 04/12/18	1,805	11,035	0	49	17,289	30,178	1.8	1.5	0.0	1.8	2.0	7.0		11.92 - 12.98	12.5	5.67 - 10.44	8.3	1104 - 1215	1156	
04/13/18 - 04/19/18	84	13,187	0	4,846	23,878	41,995	1.8	1.5	0.0	1.8	2.3	7.3		12.22 - 13.08	12.7	6.54 - 10.26	8.8	1090 - 1229	1150	
04/20/18 - 04/30/18	126	11,653	0	6,914	35,579	54,272	1.8	1.5	0.0	1.8	2.3	7.3		11.72 - 13.31	12.8	5.62 - 9.79	7.9	1090 - 1215	1163	
April 2018	4,350	47,710	0	15,070	97,193	164,323	1.8	1.5	0.0	1.8	2.1	7.1	3.9	10.73 - 13.31	12.7	4.86 - 10.44	8.2	1090 - 1229	1156	
05/01/18 - 05/04/18	30	7,430	0	2,280	12,384	22,124	1.8	1.5	0.0	1.8	2.3	7.3		11.78 - 13.18	12.7	3.53 - 8.36	6.5	1076 - 1187	1131	
05/05/18 - 05/11/18	350	1,140	0	3,940	22,388	27,818	1.8	1.5	0.0	1.8	2.3	7.3		11.63 - 13.26	12.9	7.05 - 19.16	8.4	1076 - 1215	1142	
05/12/18 - 05/18/18	80	11,560	0	3,710	22,652	38,002	1.8	1.5	0.0	1.8	2.3	7.3		11.69 - 13.05	12.7	6.21 - 12.71	10.2	1062 - 1187	1136	
05/19/18 - 05/23/18	11	8,502	0	2,646	17,151	28,310	1.8	1.5	0.0	1.8	2.3	7.3		11.32 - 13.05	12.7	7.08 - 12.61	10.2	1076 - 1187	1125	
05/24/18 - 05/31/18	39	10,648	60	3,354	22,192	36,293	1.8	1.5	0.0	1.8	2.3	7.3		10.77 - 12.95	12.6	5.25 - 12.27	9.6	1062 - 1215	1117	
May 2018	510	39,280	60	15,930	96,767	152,547	1.8	1.5	0.0	1.8	2.3	7.3	3.5	10.77 - 13.26	12.7	3.53 - 19.16	9.0	1062 - 1215	1130	
06/01/18 - 06/07/18	80	10,680	0	3,610	20,404	34,774	1.8	1.5	0.0	1.8	2.3	7.3		11.40 - 13.03	12.6	6.36 - 11.89	9.5	1006 - 1160	1093	
06/08/18 - 06/14/18	0	10,200	0	3,400	21,118	34,718	1.8	1.5	0.0	1.8	2.3	7.3		11.12 - 13.19	12.8	5.60 - 11.65	9.4	1048 - 1146	1100	
06/15/18 - 06/20/18	0	7,780	0	2,290	15,974	26,044	1.8	1.5	0.0	1.8	2.3	7.3		6.75 - 13.14	12.7	4.42 - 11.50	10.3	978 - 1243	1063	
06/21/18 - 06/30/18	70	13,600	0	2,460	26,333	42,463	1.8	1.5	0.0	1.8	2.3	7.3		11.01 - 13.16	12.7	5.58 - 11.34	9.4	978 - 1146	1046	
June 2018	150	42,260	0	11,760	83,829	137,999	1.8	1.5	0.0	1.8	2.3	7.3	3.3	6.75 - 13.19	12.7	4.42 - 11.89	9.7	978 - 1243	1076	

Table 1. Parcel A-10 Pump-and-Treat System Operational Data

Period	Total System Flow (Gallons)						Average Flow Rate (GPM) ^a						Effective Flow Rate (GPM) ^b	Critical System Performance Monitoring						
	B-1	B-2	B-3	B-4	B-6	System	B-1	B-2	B-3	B-4	B-6	System		System	Air Stripper Sump Pressure (in H ₂ O)		Air Stripper Influent Flow (GPM)		Air Stripper Airflow Rate (SCFM)	
															Range	Average	Range	Average	Range	Average
07/01/18 - 07/05/18	12	10,140	0	1,901	22,195	34,248	1.8	1.5	0.0	1.8	2.5	7.5		10.77 - 13.08	12.8	5.21 - 10.76	8.3	992 - 1132	1043	
07/06/18 - 07/13/18	28	10,600	0	2,149	23,001	35,778	1.8	1.5	0.0	1.8	2.5	7.5		10.92 - 13.51	13.0	6.34 - 14.69	8.9	922 - 1118	1059	
07/14/18 - 07/19/18	0	8,680	0	1,880	18,084	28,644	1.8	1.5	0.0	1.8	2.5	7.5		10.56 - 13.43	13.1	6.97 - 16.30	9.4	992 - 1146	1041	
07/20/18 - 07/26/18	0	9,686	0	2,198	20,992	32,876	1.8	1.5	0.0	1.8	2.5	7.5		11.25 - 13.45	13.1	5.39 - 10.37	8.3	1006 - 1146	1061	
07/27/18 - 07/31/18	40	9,534	0	2,262	20,558	32,394	1.8	1.5	0.0	1.8	2.5	7.5		13.08 - 13.65	13.4	7.62 - 10.32	9.1	1020 - 1104	1061	
July 2018	80	48,640	0	10,390	104,830	163,940	1.8	1.5	0.0	1.8	2.5	7.5	3.8	10.56 - 13.65	13.1	5.21 - 16.30	8.8	922 - 1146	1053	
08/01/18 - 08/10/18	1,980	10,300	0	2,560	23,235	38,075	1.8	1.5	0.0	1.8	2.5	7.5		10.61 - 13.63	13.4	6.06 - 13.60	9.6	1006 - 1187	1054	
08/11/18 - 08/16/18	1,580	7,590	0	1,970	17,749	28,889	1.8	1.5	0.0	1.8	2.5	7.5		11.12 - 13.79	13.6	7.45 - 12.98	10.0	1006 - 1187	1043	
08/17/18 - 08/24/18	1,910	9,214	0	2,480	21,978	35,582	1.8	1.5	0.0	1.8	2.5	7.5		10.51 - 13.99	13.5	6.27 - 14.38	9.6	992 - 1355	1187	
08/25/18 - 08/31/18	2,371	18	0	1,165	13,045	16,599	1.8	1.5	0.0	1.8	2.5	7.5		10.60 - 12.23	11.9	10.54 - 13.56	11.8	1187 - 1285	1230	
August 2018	7,841	27,122	0	8,175	76,007	119,145	1.8	1.5	0.0	1.8	2.5	7.5	2.9	10.51 - 13.99	13.1	6.06 - 14.38	10.2	992 - 1355	1129	
09/01/18 - 09/07/18	4,506	0	106	2,635	26,245	33,492	1.8	0.0	0.0	1.0	2.5	5.3		10.87 - 12.18	11.8	9.80 - 12.34	11.5	1187 - 1285	1231	
09/08/18 - 09/13/18	21,638	5,290	0	1,325	10,115	38,368	1.8	1.3	0.0	1.0	2.5	6.5		10.69 - 12.56	12.2	8.77 - 11.84	10.5	1187 - 1313	1252	
09/14/18 - 09/20/18	2,135	9,178	0	2,765	21,192	35,270	1.8	1.3	0.0	1.0	2.5	6.5		11.01 - 12.33	12.0	5.71 - 11.74	9.5	1187 - 1285	1243	
09/21/18 - 09/30/18	3,240	13,690	0	1,070	29,751	47,751	1.8	1.3	0.0	1.0	2.5	6.5		11.46 - 12.52	12.1	4.40 - 11.30	8.6	1173 - 1285	1231	
September 2018	31,519	28,158	106	7,795	87,303	154,881	1.8	0.9	0.0	1.0	2.5	6.2	3.6	10.69 - 12.56	12.0	4.440 - 12.34	10.0	1173 - 1313	1239	
10/01/18 - 10/03/18	720	3,640	0	450	6,231	11,041	1.8	1.0	0.0	0.8	2.5	6.0		11.13 - 12.36	12.0	3.77 - 11.77	6.9	1160 - 1271	1217	
10/04/18 - 10/11/18	1,730	6,390	0	1,070	13,978	23,168	1.8	1.0	0.0	1.8	2.5	7.0		10.93 - 12.42	12.1	7.34 - 10.57	8.9	1173 - 1285	1236	
10/12/18 - 10/18/18	4,000	10,330	0	3,300	24,730	42,360	1.8	1.0	0.0	1.8	2.5	7.0		12.07 - 13.31	12.7	5.44 - 9.97	8.6	1201 - 1285	1241	
10/19/18 - 10/31/18	5,180	14,790	0	4,700	33,144	57,814	1.8	1.0	0.0	1.8	2.5	7.0		10.61 - 13.48	12.7	6.40 - 24.93	9.3	1173 - 1341	1233	
October 2018	11,630	35,150	0	9,520	78,083	134,383	1.8	1.0	0.0	1.5	2.5	6.8	4.5	10.61 - 13.48	12.4	3.77 - 24.93	8.4	1160 - 1341	1232	
11/01/18 - 11/09/18	3,070	15,420	0	3,170	23,086	44,746	1.8	1.3	0.0	0.8	2.5	6.3		10.51 - 13.42	12.8	4.11 - 21.30	9.0	1173 - 1313	1230	
11/10/18 - 11/16/18	1,660	11,400	0	1,950	13,310	28,320	1.8	1.3	0.0	1.8	2.5	7.3		10.74 - 13.45	12.9	7.91 - 14.53	10.1	1160 - 1341	1215	
11/17/18 - 11/30/18	0	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0		System temporarily down; see note 8.						
November 2018	4,730	26,820	0	5,120	36,396	73,066	1.2	0.8	0.0	0.8	1.7	4.5	3.9	10.51 - 13.45	12.9	4.11 - 21.30	9.6	1160 - 1341	1223	
12/01/18 - 12/06/18	350	740	0	300	284	1,674	1.8	1.0	0.0	0.8	2.5	6.0		10.88 - 13.12	12.7	4.78 - 14.73	13.1	1132 - 1243	1171	
12/07/18 - 12/14/18	9,120	15,750	0	6,850	23,531	55,251	1.8	1.0	0.0	1.8	2.5	7.0		12.32 - 13.58	13.0	4.49 - 13.78	11.1	1118 - 1243	1173	
12/15/18 - 12/20/18	5,420	13,940	0	5,980	19,815	45,155	1.8	1.0	0.0	1.8	2.5	7.0		11.25 - 13.03	12.5	6.41 - 13.33	10.0	1118 - 1243	1165	
12/21/18 - 12/27/18	4,810	13,250	0	6,910	20,291	45,261	1.8	1.0	0.0	1.8	2.5	7.0		10.82 - 13.09	12.5	4.75 - 11.60	7.2	1104 - 1257	1168	
12/28/18 - 12/31/18	2,700	9,800	0	5,800	15,800	34,100	1.8	1.0	0.0	1.8	2.5	7.0		12.10 - 13.04	12.6	7.61 - 11.31	9.6	1104 - 1215	1159	
December 2018	22,400	53,480	0	25,840	79,720	181,440	1.8	1.0	0.0	1.6	2.5	6.8	4.3	10.88 - 13.58	12.6	4.49 - 14.73	10.2	1132 - 1257	1167	

Table 1. Parcel A-10 Pump-and-Treat System Operational Data

Period	Total System Flow (Gallons)						Average Flow Rate (GPM) ^a						Effective Flow Rate (GPM) ^b	Critical System Performance Monitoring						
	B-1	B-2	B-3	B-4	B-6	System	B-1	B-2	B-3	B-4	B-6	System		System	Air Stripper Sump Pressure (in H ₂ O)		Air Stripper Influent Flow (GPM)		Air Stripper Airflow Rate (SCFM)	
															Range	Average	Range	Average	Range	Average
01/01/19 - 01/04/19	1,290	4,910	0	2,850	7,970	17,020	1.8	1.0	0.0	0.8	2.5	6.0		11.45 - 13.05	12.6	6.78 - 13.88	8.2	1118 - 1215	1170	
01/05/19 - 01/12/19	3,210	15,890	0	11,440	25,454	55,994	1.8	1.0	0.0	1.8	2.5	7.0		11.64 - 13.39	12.5	5.15 - 12.29	9.5	1118 - 1243	1180	
01/13/19 - 01/19/19	2,140	13,280	0	7,450	24,811	47,681	1.8	1.0	0.0	1.8	2.5	7.0		8.91 - 13.55	13.1	5.39 - 11.07	8.7	1034 - 1341	1195	
01/19/19 - 01/24/19	1,580	9,940	0	0	19,862	31,382	1.8	1.0	0.0	0.0	2.5	5.3		11.72 - 13.45	12.7	8.12 - 10.96	9.8	1076 - 1215	1163	
01/25/19 - 01/31/19	1,790	12,390	0	90	26,108	40,378	1.8	1.0	0.0	1.8	2.5	7.0		12.30 - 13.63	12.9	5.79 - 10.49	8.8	1104 - 1215	1158	
January 2019	10,010	56,410	0	21,830	104,205	192,455	1.8	1.0	0.0	1.2	2.5	6.5	4.3	8.91 - 13.63	12.7	5.15 - 13.88	9.0	1034 - 1341	1173	
02/01/19 - 02/07/19	1,060	6,420	0	3,680	13,075	24,235	1.8	1.5	0.0	1.8	2.5	7.5		10.74 - 13.50	11.3	5.30 - 18.12	10.0	1104 - 1229	1174	
02/08/19 - 02/14/19	2,920	12,020	0	6,670	23,522	45,132	1.8	1.5	0.0	1.8	2.5	7.5		10.51 - 12.22	11.5	6.75 - 10.08	8.6	992 - 1271	1188	
02/15/19 - 02/21/19	1,860	10,860	0	7,850	23,112	43,682	1.8	1.5	0.0	1.8	2.5	7.5		10.55 - 11.64	11.1	6.62 - 16.07	8.1	1118 - 1229	1169	
02/22/19 - 02/28/19	1,640	9,110	0	8,340	22,047	41,137	1.8	1.3	0.0	1.8	2.0	6.8		10.79 - 11.73	11.1	4.34 - 11.40	10.2	1104 - 1229	1168	
February 2019	7,480	38,410	0	26,540	81,755	154,185	1.8	1.4	0.0	1.6	2.4	7.1	4.2	10.51 - 13.50	11.3	4.34 - 18.12	9.2	992 - 1271	1175	
03/01/19 - 03/07/19	2,360	9,810	0	9,300	21,248	42,718	1.8	1.5	0.0	1.8	2.5	7.5		10.69 - 12.41	11.7	9.70 - 11.22	10.6	1118 - 1243	1183	
03/08/19 - 03/14/19	1,800	9,800	0	10,280	21,407	43,287	1.8	1.5	0.0	1.8	2.5	7.5		10.92 - 12.22	11.7	7.21 - 13.24	9.2	1104 - 1243	1176	
03/15/19 - 03/21/19	1,580	8,800	0	430	21,363	32,173	1.8	1.5	0.0	1.8	2.5	7.5		10.68 - 11.78	11.4	8.48 - 11.21	10.0	1104 - 1215	1162	
03/22/19 - 03/31/19	2,580	13,950	0	8,745	31,131	56,406	1.8	1.3	0.0	1.8	2.0	6.8		10.51 - 11.92	11.5	6.06 - 10.99	9.7	1090 - 1215	1152	
March 2019	8,320	42,360	0	28,755	95,149	174,584	1.8	1.4	0.0	1.7	2.4	7.3	4.2	10.51 - 12.41	11.6	6.06 - 13.24	9.9	1090 - 1243	1168	
TOTAL	2,349,549	20,432,689	3,796,356	4,119,854	6,730,516	37,429,577														

NOTES:

a = Average flow rate when operating

c = Lower specification limit

b = Total gallons pumped from ground per total minutes system operational in the month

d = Upper specification limit

1. Recovery pump in well B-3 was turned off on 04/04/14 per test approved by EPA on 03/26/14. Pump will continue to remain off per EPA approval on 10/23/14.

2. Table shows data from January 2018 to present.

3. System shut down on 04/7/16 due to manhole leak on GAC unit. System restarted on 04/27/16 and switched to recycle mode to monitor pH after replacement of GAC unit. Normal system operation resumed on 04/28/16.

4. Recovery well B-4 did not operate from 6/9/17 to 7/14/17 due to a broken pump impeller; the pump was replaced on 7/14/17.

5. System did not operate from 3/22/18 to 3/27/18 due to replacement of inline pH meter.

6. Recovery well B-4 did not operate from 4/6/18 to 4/12/18 due to a pump overload alarm that did not reset properly.

7. Recovery well B-2 did not operate from 8/31/18 to 9/6/18 due to worn out components; the pump was replaced on 9/7/18.

8. System did not operate from 11/16/18 to 12/06/18 due to replacement of air stripper effluent transfer pump and recovery well B-6 pump.

TABLE 1
Building A Influent Concentrations ($\mu\text{g}/\text{m}^3$)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland
Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethane	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethane	1,1,1-trichloroethane	1,1,2-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
3/31/08	NA	ND	ND	N/A	ND	8,300	ND	2,100	ND	7,900	300	ND	ND	ND	ND	30,000	44,000	ND	ND	ND	ND	ND	ND	N/A	1,100	280	94,310	1.190	3.570	
4/2/08	140	ND	ND	N/A	ND	3,800	ND	660	ND	4,500	ND	ND	ND	ND	ND	16,000	34,000	ND	ND	ND	ND	ND	ND	N/A	ND	ND	58,960	0.740	1.480	
4/4/08	140	ND	ND	N/A	ND	2,300	ND	460	ND	3,300	ND	ND	ND	ND	ND	13,000	30,000	ND	ND	ND	ND	ND	ND	N/A	ND	ND	49,060	0.620	4.340	
4/11/08	140	ND	ND	N/A	ND	1,100	ND	280	ND	1,500	ND	ND	ND	ND	120	9,100	14,000	ND	ND	ND	ND	ND	ND	N/A	ND	ND	26,100	0.330	1.980	
4/17/08	112	ND	ND	N/A	ND	2,000	ND	480	ND	2,200	ND	ND	ND	ND	120	11,000	18,000	ND	ND	ND	ND	ND	ND	N/A	110	ND	33,910	0.340	2.380	
4/24/08	84	ND	ND	N/A	ND	930	ND	260	ND	1,200	ND	ND	ND	ND	86	6,500	8,600	ND	ND	ND	ND	ND	ND	N/A	ND	ND	17,576	0.130	3.510	
5/21/08	84	ND	ND	N/A	ND	1,000	ND	320	ND	950	ND	ND	ND	ND	ND	6,000	5,500	ND	ND	ND	ND	ND	ND	N/A	ND	ND	13,770	0.100	3.100	
6/19/08	70	180	ND	N/A	ND	720	ND	180	ND	760	ND	ND	ND	ND	ND	4,800	7,100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	13,740	0.090	2.700	
7/18/08	84	ND	ND	N/A	ND	350	ND	110	ND	430	ND	ND	ND	ND	ND	3,200	3,700	ND	ND	ND	ND	ND	ND	N/A	ND	ND	7,790	0.060	1.860	
8/12/08	56	ND	ND	N/A	ND	470	ND	150	ND	400	ND	ND	ND	ND	28	2,900	3,400	ND	ND	ND	ND	ND	ND	N/A	ND	ND	7,348	0.040	1.240	
9/11/08	80	ND	ND	N/A	ND	380	ND	130	ND	430	ND	17	ND	70	52	1,900	2,700	32	ND	ND	ND	ND	ND	N/A	ND	ND	5,711	0.040	2.440	
11/18/08	84	ND	ND	N/A	ND	1,300	ND	300	ND	1,100	ND	ND	ND	ND	72	6,500	7,200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	16,472	0.105	3.142	
12/18/08	84	ND	ND	N/A	ND	420	ND	120	ND	380	ND	ND	ND	ND	ND	2,300	4,100	ND	ND	ND	ND	ND	ND	N/A	53	ND	7,373	0.056	1.724	
1/22/09	84	ND	ND	N/A	ND	380	ND	110	ND	380	ND	ND	ND	ND	ND	2,100	2,100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5,070	0.038	1.185	
2/20/09	84	ND	ND	N/A	ND	270	ND	78	ND	260	ND	ND	ND	ND	24	1,600	1,600	ND	ND	ND	ND	ND	ND	N/A	ND	ND	3,832	0.029	0.809	
3/18/09	28	ND	ND	N/A	ND	620	ND	470	ND	150	ND	ND	ND	ND	ND	3,800	3,700	ND	ND	ND	ND	ND	ND	N/A	ND	ND	8,740	0.063	1.946	
4/17/09	56	ND	ND	N/A	ND	360	ND	100	ND	220	ND	ND	ND	ND	ND	1,900	2,400	ND	ND	ND	ND	ND	ND	N/A	ND	ND	4,980	0.056	1.677	
5/20/09	NA	ND	ND	N/A	ND	200	ND	62	ND	140	ND	ND	ND	ND	32	1,700	1,500	ND	ND	ND	ND	ND	ND	N/A	ND	ND	3,634	0.041	1.264	
6/23/09	134	ND	ND	N/A	ND	280	ND	77	ND	200	ND	ND	ND	ND	19	1,700	1,800	ND	ND	ND	ND	ND	ND	N/A	ND	ND	4,076	0.049	1.471	
7/23/09	129	ND	ND	N/A	ND	250	ND	68	ND	180	ND	27	ND	ND	13	1,400	1,700	14	ND	ND	ND	ND	ND	N/A	ND	ND	3,652	0.044	1.352	
8/28/09	NA	ND	ND	N/A	ND	280	ND	79	ND	200	ND	ND	ND	ND	42	1,900	1,900	ND	ND	ND	ND	ND	ND	N/A	ND	ND	4,401	0.051	1.568	
9/28/09	125	ND	ND	N/A	ND	150	ND	40	ND	110	ND	ND	ND	ND	13	870	1,000	ND	ND	ND	ND	ND	ND	N/A	ND	ND	2,183	0.025	0.735	
10/27/09	NA	ND	ND	N/A	ND	230	ND	64	ND	210	ND	ND	ND	ND	20	1,500	1,400	ND	ND	ND	ND	ND	ND	N/A	9.7	ND	3,434	0.026	0.803	
11/24/09	130	ND	ND	N/A	ND	180	ND	43	ND	180	ND	ND	ND	ND	14	1,200	1,100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	2,717	0.032	0.960	
12/23/09	132	ND	ND	N/A	ND	190	ND	48	ND	180	ND	ND	ND	ND	39	1,100	1,300	ND	ND	ND	ND	ND	ND	N/A	ND	ND	2,857	0.035	1.074	
1/19/10	130	ND	ND	N/A	ND	240	ND	67	ND	180	ND	ND	ND	ND	16	1,500	1,600	ND	ND	ND	ND	ND	ND	N/A	ND	ND	3,603	0.042	1.304	
2/17/10	130	ND	ND	N/A	ND	140	ND	35	ND	120	ND	ND	ND	ND	24	760	930	ND	ND	ND	ND	ND	ND	N/A	ND	ND	2,009	0.023	0.657	
3/17/10	120	ND	ND	N/A	ND	250	ND	62	ND	190	ND	ND	ND	ND	21	1,500	1,900	ND	ND	ND	ND	ND	ND	N/A	ND	ND	3,923	0.042	1.302	
4/16/10	120	ND	ND	N/A	ND	160	ND	41	ND	160	ND	ND	ND	ND	ND	1,100	1,000	ND	ND	ND	ND	ND	ND	N/A	ND	ND	2,461	0.027	0.796	
5/13/10	119	ND	ND	N/A	ND	170	ND	42	ND	170	19	ND	ND	ND	95	960	1,100	ND	ND	18	ND	ND	ND	N/A	75	23	2,672	0.029	0.886	
6/18/10	110	ND	ND	N/A	ND	96	ND	24	ND	110	12	ND	ND	ND	15	630	600	12	ND	130	28	ND	ND	N/A	50	26	1,733	0.017	0.514	
7/19/10	110	ND	ND	N/A	ND	220	ND	52	ND	180	ND	ND	ND	ND	ND	1,500	1,500	ND	ND	24	ND	ND	ND	N/A	ND	ND	3,476	0.034	1.066	
8/19/10	110	ND	ND	N/A	ND	200	ND	45	ND	170	ND	ND	ND	ND	12	1,200	1,100	16	ND	ND	ND	ND	ND	N/A	ND	ND	2,743	0.027	0.841	
9/17/10	108	ND	ND	N/A	ND	140	ND	35	ND	150	ND	ND	ND	ND	29	860	1,100	20	ND	ND	ND	ND	ND	N/A	ND	ND	2,334	0.023	0.680	
10/12/10	100	ND	ND	N/A	ND	170	ND	40	ND	140	ND	ND	ND	ND	940	1,100	1,400	20	ND	ND	ND	ND	ND	N/A	89	33	3,932	0.035	1.060	
11/2/10	138	ND	ND	N/A	ND	150	ND	34	ND	100	ND	ND	ND	ND	71	920	1,200	53	ND	ND	ND	ND	ND	N/A	14	ND	2,542	0.032	0.946	
12/1/10	138	ND	ND	N/A	ND	120	ND	28	ND	110	42	ND	ND	ND	54	790	970	13	ND	ND	ND	ND	ND	N/A	170	31	2,328	0.029	0.866	
1/5/11	133	ND	ND	N/A	ND	150	ND	34	ND	130	14	ND	ND	ND	13	860	1,200	ND	ND	ND	ND	ND	ND	N/A	47	10	2,458	0.029	0.882	
2/7/11	130	ND	ND	N/A	ND	130	ND	32	ND	160	ND	ND	ND	ND	23	910	900	ND	ND	ND	ND	ND	ND	N/A	29	ND	2,184	0.026	0.766	
3/3/11	130	ND	ND	N/A	ND	390	ND	98	ND	350	19	ND	ND	ND	23	2,800	2,500	ND	ND	ND	ND	ND	ND	N/A	61	ND	6,241	0.073	2.188	
4/14/11	125	ND	ND	N/A	ND	150	ND	36	ND	160	ND	30	ND	ND	10	900	1,100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	2,386	0.027	0.804	
5/6/11	130	ND	ND	N/A	ND	150	ND	39	ND	150	ND	ND	ND	ND	ND	880	890	ND	ND	ND	ND	ND	ND	N/A	ND	ND	2,109	0.025	0.764	
6/9/11	150	ND	ND	N/A	ND	240	ND	59	ND	190	ND	ND	ND	ND	35	1,600	1,600	20	ND	ND	ND	ND	ND	N/A	ND	ND	3,744	0.050	1.515	
7/11/11	128	ND	ND	N/A	ND	200	ND	51	ND	170	ND	40	ND	ND	81	1,300	1,300	ND	ND	ND	ND	ND	ND	N/A	26	ND	3,168	0.036	1.094	
8/3/11	160	ND	ND	N/A	ND	200	ND	44	ND	160	ND	ND	ND	ND	29	1,200	1,400	ND	ND	ND	ND	ND	ND	N/A	ND	ND	3,033	0.044	1.309	
9/15/11	160	12	ND	N/A	ND	130	ND	29	ND	130	ND	ND	ND	ND	11	750	990	12	ND	ND	ND	ND	ND	N/A	ND	ND	2,064	0.030	0.891	
10/18/11	160	8.3	ND	N/A	ND	120	ND	28	ND	93	ND	ND	ND	ND	51	640	780	ND	ND	ND	ND	ND	ND	N/A	ND	ND	1,720	0.025	0.767	
11/8/11	165	10	ND	N/A	ND	140	ND	34	ND	110	ND	ND	ND	ND	9.2	730	930	ND	ND	ND	ND	ND	ND	N/A	ND	ND	1,963	0.029	0.874	
12/6/11	160	7.3	ND	N/A	ND	130	ND	29	ND	110	ND	ND	ND	ND	46	600	800	ND	ND	ND	ND	ND	ND	N/A	ND	ND	1,722	0.025	0.768	
1/3/12	165	ND	ND	N/A	ND	130	ND	30	ND	140	ND	ND	ND	ND	16	590	840	ND	ND	ND	ND	ND	ND	N/A	ND	ND	1,746	0.026	0.803	
2/16/12	160	ND	ND	N/A	ND	140	ND	31	ND	110	ND	ND	ND	ND	ND	760	980	ND	ND	ND	ND	ND	ND	N/A	ND	ND	2,021	0.029	0.843	
3/15/12	160	ND	ND	N/A	ND	160	ND	36	ND	130	ND	ND	ND	ND	14	880	1,100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	2,320	0.033	1.034	
4/16/12	158	ND	ND	N/A	ND	170	ND	34	ND	140	ND	ND	ND	ND	ND	880	1,300	ND	ND	ND	ND	ND	ND	N/A	20	ND	2,544	0.036	1.084	
5/9/12	159	ND	ND	N/A	ND	290	ND	56	ND	200	ND	ND	ND	ND																

TABLE 1

Building A Influent Concentrations ($\mu\text{g}/\text{m}^3$)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	Flow (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	1,1,1-trichloroethene	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)			
8/15/12	164	ND	ND	N/A	ND	150	ND	30	ND	130	ND	ND	ND	ND	22	ND	730	1,000	17	ND	ND	ND	ND	ND	N/A	ND	ND	2,079	0.031	0.950			
9/12/12	165	ND	ND	N/A	ND	110	ND	23	ND	120	ND	ND	ND	ND	170	ND	560	720	ND	ND	ND	ND	ND	ND	N/A	11	ND	1,714	0.025	0.763			
10/18/12	160	ND	ND	N/A	ND	190	ND	36	ND	180	ND	ND	ND	ND	ND	ND	1,000	1,400	ND	ND	ND	ND	ND	ND	N/A	ND	ND	2,806	0.040	1.251			
11/13/12	161	ND	ND	N/A	ND	120	ND	23	ND	140	ND	ND	ND	ND	ND	ND	600	910	ND	ND	ND	ND	ND	ND	N/A	ND	ND	1,793	0.026	0.779			
12/6/12	160	ND	ND	N/A	ND	130	ND	21	ND	120	ND	ND	ND	ND	8	ND	590	1,000	ND	ND	ND	ND	ND	ND	N/A	ND	ND	1,869	0.027	0.833			
1/4/13	160	ND	ND	N/A	ND	130	ND	24	ND	190	ND	ND	ND	ND	ND	ND	630	950	ND	ND	ND	ND	ND	ND	N/A	ND	ND	1,924	0.028	0.858			
2/6/13	160	ND	ND	N/A	ND	130	ND	26	ND	130	ND	ND	ND	ND	ND	ND	560	860	ND	ND	ND	ND	ND	ND	N/A	ND	ND	1,706	0.025	0.687			
3/7/13	160	ND	ND	N/A	ND	140	ND	30	ND	94	ND	ND	ND	ND	10	ND	670	1,100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	2,044	0.029	0.911			
4/8/13	150	ND	ND	N/A	ND	2,200	ND	290	ND	1,500	ND	ND	ND	ND	ND	ND	2,900	5,900	ND	ND	ND	ND	ND	ND	N/A	ND	ND	12,790	0.172	5.174			
5/10/13	150	ND	ND	N/A	ND	140	11	29	ND	130	ND	ND	ND	ND	14	ND	730	1,200	17	ND	ND	ND	ND	N/A	ND	ND	2,271	0.031	0.949				
6/5/13	155	ND	ND	N/A	ND	100	ND	22	ND	110	ND	ND	ND	ND	ND	ND	530	790	ND	ND	ND	ND	ND	ND	N/A	ND	ND	1,552	0.022	0.649			
7/3/13	159	ND	ND	N/A	ND	160	ND	33	ND	100	ND	ND	ND	ND	ND	ND	820	1,100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	2,213	0.032	0.981			
8/14/13	160	ND	ND	N/A	ND	180	ND	34	ND	120	ND	ND	ND	ND	15	ND	780	1,300	ND	ND	ND	ND	ND	ND	N/A	ND	ND	2,429	0.035	1.083			
9/9/13	160	ND	ND	N/A	ND	100	ND	16	ND	90	ND	ND	ND	ND	ND	ND	410	630	ND	ND	ND	ND	ND	ND	N/A	ND	ND	1,246	0.018	0.538			
10/10/13	160	ND	ND	N/A	ND	220	ND	39	ND	190	ND	ND	ND	ND	15	ND	810	1,400	16	ND	ND	ND	ND	ND	N/A	ND	ND	2,690	0.039	1.199			
11/7/13	160	ND	ND	N/A	ND	200	ND	39	ND	170	ND	ND	ND	ND	11	ND	930	1,500	41	ND	ND	ND	ND	ND	N/A	ND	ND	2,891	0.042	1.247			
12/5/13	160	0.94	ND	ND	21.2	165	ND	30.7	ND	132	ND	4.4	ND	ND	12.2	2.5	883	1,530	N/A	ND	ND	ND	ND	ND	N/A	ND	ND	2,782	0.040	1.240			
1/13/14	160	ND	ND	6.5	11.6	173	2.2	29.3	ND	141	1.8	3.3	4.9	ND	9,820	ND	570	795	N/A	ND	1.9	ND	ND	N/A	4.3	1.7	11,567	0.166	5.157				
2/14/14	153	ND	ND	2.4	7.4	126	ND	21.2	ND	92.7	ND	2.1	ND	ND	15.3	ND	429	843	N/A	ND	ND	ND	ND	ND	N/A	ND	ND	1,539	0.021	0.593			
3/12/14	160	ND	ND	2.4	ND	176	2.0	29.3	36.4	130	ND	ND	ND	3.6	9.1	ND	1,310	2,100	N/A	ND	ND	ND	ND	ND	N/A	3.0	ND	3,802	0.055	1.695			
4/10/14	160	81.7	ND	ND	ND	194	ND	31.8	ND	131	120	ND	ND	ND	75.7	ND	646	1,490	N/A	ND	ND	ND	ND	ND	N/A	387	109	3,266	0.047	1.361			
5/5/14	150	4.8	ND	8.8	3.9	44.7	4.1	6.7	ND	32.6	6.5	202	2.3	J	1.2	29.5	ND	142	292	N/A	2.8	11.5	3.0	ND	N/A	24.3	9.3	832	0.011	0.280			
6/18/14	155	1,040	ND	30.3	136	3,710	ND	565	ND	2,840	ND	138	34.9	J	ND	199	51.7	1,000	J	1,490	N/A	ND	17.6	J	ND	N/A	25.6	J	11,278	0.157	6.907		
7/3/14	158	45.1	ND	ND	8.4	J	189	ND	36.5	81.2	145	ND	ND	ND	20.8	J	ND	871	1,250	N/A	ND	ND	ND	ND	N/A	ND	ND	2,647	0.038	0.563			
9/16/14	150	51.1	1.1	1.0	J	54.0	416	4.7	104	ND	323	ND	0.67	J	ND	2.3	8.8	8.1	1,290	3,250	N/A	ND	2.3	0.83	J	1.5	J	5,522	0.074	5.578			
10/9/14	152	46.6	ND	ND	ND	89.0	ND	16.1	ND	69.8	ND	17.3	J	ND	ND	ND	480	819	N/A	ND	ND	ND	ND	ND	N/A	ND	ND	1,538	0.021	0.483			
11/6/14	135	38.2	ND	ND	ND	92.4	ND	16.8	J	ND	71.0	ND	23.9	J	ND	59.4	14.3	J	ND	459	803	N/A	ND	ND	ND	N/A	ND	1,578	0.019	0.536			
12/4/14	120	34.3	ND	ND	11.8	77.6	ND	18.8	ND	68.6	ND	19.4	J	ND	ND	41.5	J	ND	428	741	N/A	ND	ND	ND	ND	N/A	ND	1,441	0.016	0.435			
1/15/15	50	64.8	ND	ND	6.8	85.6	4.4	15.7	ND	81.0	ND	2.0	J	ND	2.0	1.7	1.3	404	695	N/A	ND	ND	ND	ND	N/A	0.90	J	1,365	0.006	0.257			
2/16/15	50	1.5	ND	3.7	ND	8.5	ND	ND	ND	6.5	1.9	J	46.9	4.1	J	ND	13.5	ND	17.0	22.4	N/A	ND	ND	ND	ND	N/A	6.5	2.7	J	135	0.001	0.019	
3/10/15	110	0.54	2.9	1.4	2.4	183	1.6	28.3	ND	141	1.1	J	1.4	J	1.2	J	ND	1.7	ND	1,370	2,300	N/A	ND	ND	ND	ND	N/A	4.1	1.3	J	4,042	0.040	0.878
4/6/15	115	0.73	0.78	J	2.1	7.1	147	2.2	22.7	ND	112	ND	3.5	J	2.7	J	0.87	J	2.7	ND	617	1,090	N/A	ND	1.3	J	ND	ND	2,016	0.021	0.562		
5/8/15	110	ND	ND	ND	ND	161	ND	23.0	J	ND	121	ND	ND	ND	ND	ND	ND	573	1,170	N/A	ND	ND	ND	ND	N/A	ND	ND	2,048	0.020	0.647			
6/2/15	125	ND	ND	ND	ND	143	ND	19.4	J	33.4	105	133	ND	ND	ND	ND	ND	536	1,110	N/A	ND	ND	ND	ND	N/A	582	142	2,804	0.031	0.787			
7/1/15	80	ND	ND	ND	ND	91	ND	14.0	ND	78	ND	ND	ND	ND	ND	ND	ND	390	470	N/A	ND	ND	ND	ND	N/A	N/A	N/A	1,043	0.007	0.217			
8/10/15	140	12.0	ND	1.3	J	2.4	J	82	2.9	J	16.0	ND	63	ND	ND	ND	ND	12.0	1.4	J	400	590	N/A	ND	ND	ND	ND	N/A	N/A	1,183	0.015	0.595	
9/11/15	140	72	ND	2.7	J	1.8	J	130	ND	24	ND	86	ND	ND	ND	ND	1.9	J	510	1,000	N/A	ND	ND	ND	ND	N/A	N/A	1,828	0.023	0.736			
10/7/15	145	78	ND	1.5	J	ND	130	ND	24	ND	91	ND	ND	ND	ND	2.0	J	560	900	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,787	0.023	0.605			
11/2/15	145	43	ND	3.2	J	1.9	J	140	3.6	J	25	ND	110	ND	ND	ND	2.5	J	570	900	N/A	ND	ND	ND	ND	N/A	N/A	1,799	0.023	0.609			
12/3/15	145	34	ND	3.2	J	1.4	J	120	3.2	J	23	ND	83	ND	ND	ND	ND	1.8	J	490	830	N/A	ND	ND	ND	ND	N/A	N/A	1,590	0.021	0.642		
1/15/16	140	9.2	ND	1.1	J	2.0	J	84	2.1	16	ND	80	ND	3.0	J	ND	2.7	1.5	J	320	480	DL	N/A	ND	ND	ND	ND	N/A	N/A	1,002	0.013	0.541	
2/12/16	140	2.6	ND	1.0	J	1.0	J	100	2.4	20	0.60	J	82	ND	ND	ND	ND	1.6	550	EB	840	E	N/A	ND	ND	ND	ND	N/A	N/A	1,601	0.020	0.564	
3/9/16	130	36	0.49	J	7.9	1.5	J	130	2.4	25	0.70	J	98	ND	2.8	J	ND	0.64	J	5.3	2.0	680	E	N/A	ND	ND	ND	0.42	J	2,293	0.027	0.696	
4/7/16	288	28	ND	ND	ND	230	ND	42	ND	180	ND	ND	ND	ND	ND	ND	940	1,700	N/A	ND	ND	ND	ND	ND	N/A	N/A	3,120	0.081	2.340				
4/27/16	250	ND	ND	ND	ND	90	ND	18	ND	68	ND	ND	ND	ND	ND	ND	490	950	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,616	0.036	0.726				
5/12/16	248	ND	ND	19	2.0	J	110	3.5	J	18	ND	120	ND	9.0	ND	ND	6.5	ND	600	B	910	N/A	ND	ND	ND	ND	N/A	N/A	1,798	0.040	0.601		
6/2/16	259	31	ND	63	ND	150	ND	26	ND	140	ND	ND	ND	ND	ND	3.6	J	670	1,100	N/A	ND	ND	ND	ND	ND	N/A	N/A	2,184	0.051	1.066			
7/14/16	252	65	ND	ND	ND	100	ND	17	ND	75	ND	36	ND	ND	15	ND	510	940	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,758	0.040	1.671			
8/4/16	260	20	ND	ND	ND	92	ND	17	ND	68	ND	ND	ND	ND	ND	ND	460	860	N/A	ND	8.2	J	ND	ND	ND	N/A	N/A	1,525	0.036	0.748			
9/7/16	260	38	ND	1.5	J	1.2	J	88	2.3	J	14	ND	66	ND	15	ND	ND	1.8	J	400	760	N/A	ND	ND	ND	ND	N/A	N/A	1,388	0.032	1.102		
10/5/16	270	ND	ND	1.7	ND	81	ND	14	ND	68	ND	ND	ND	ND	ND	ND	410	630	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,205</						

TABLE 1
Building A Influent Concentrations (µg/m³)
LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland
 Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	1,1,1,1-tetrachloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
1/13/17	195	17	ND	ND	8.4 J	440	ND	81	ND	370	ND	130	ND	ND	ND	9.3 J	2,000	3,600	N/A	ND	ND	ND	ND	ND	5.9 J	N/A	N/A	6,656	0.117	3.496
2/8/17	200	33	ND	ND	6	110	3.7 J	19	ND	100	ND	ND	ND	ND	2.1 J	660	1,100 E	N/A	ND	ND	ND	ND	ND	ND	5.9 J	N/A	N/A	2,040	0.037	0.952
3/8/17	360	21	ND	ND	2 J	100	3.3 J	21	ND	110	ND	ND	ND	8.5 J	2.2 J	590	1,000	N/A	ND	ND	ND	ND	ND	ND	6.9 J	N/A	N/A	1,865	0.060	1.688
4/5/17	355	15	ND	ND	1.3 J	65	ND	10	ND	71	ND	ND	ND	ND	ND	370	680	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,212	0.039	1.082	
5/5/17	360	31	ND	1.6 J	ND	80	ND	16	ND	74	ND	ND	ND	ND	ND	430	760	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,393	0.045	1.351	
6/5/17	355	10	ND	ND	3.4 J	69	ND	13	ND	66	ND	13 JE	ND	ND	ND	480	710	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,364	0.043	1.348	
7/6/17	345	25	ND	7.2 J	ND	94	ND	20	ND	120	ND	ND	ND	ND	4.6 J	450	1,400	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	2,121	0.066	2.037	
8/8/17	350	5 J	ND	4.9 J	ND	90	ND	18	ND	95	ND	28 JE	ND	ND	ND	480	940	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,661	0.052	1.723	
9/7/17	345	35	ND	ND	2	79	ND	13	ND	72	ND	16 J	ND	ND	ND	420	1,000	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,637	0.051	1.521	
10/4/17	350	22	ND	2.5 J	ND	52	ND	10	ND	66	ND	14 J	ND	ND	ND	290	750	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,207	0.038	1.024	
11/8/17	355	4 J	ND	ND	ND	83	ND	17	ND	88	ND	ND	ND	ND	ND	550	1,100	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,842	0.059	2.055	
12/4/17	360	16	ND	1.5 J	ND	75	3.4 J	15	ND	92	ND	ND	ND	ND	ND	500 B	990	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,693	0.055	1.423	
1/9/18	360	16	0.50 J	1.7	1.2 J	58	2.0	9	ND	79	0.59 J	ND	ND	0.55 J	2.5	1.1 J	390	800 E	N/A	ND	ND	ND	ND	4.1	N/A	N/A	1,367	0.044	1.590	
2/9/18	360	16	ND	3.2	ND	70	3.6 J	13	ND	120	ND	14 J	ND	ND	ND	420	1,000	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,689	0.055	1.692	
3/6/18	360	22	ND	2.1 J	ND	80	3.6 J	14	ND	110	ND	ND	ND	ND	ND	470	1,200	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,902	0.061	1.537	
4/3/18	360	10	ND	ND	ND	67	ND	13	ND	89	ND	12 J	ND	ND	ND	430	860	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,481	0.048	1.340	
5/8/18	350	12	ND	15	1.8 J	80	3.1 J	15	ND	82	ND	7.6 JE	ND	2.90 J	17.00	1.5 J	460	870	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,568	0.049	1.725	
6/5/18	320	12	ND	1.8 J	9.4	91	3.5 J	16	ND	90	ND	ND	ND	ND	1.8 J	540	1,200	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,966	0.056	1.581	
7/12/18	290	66	ND	4 J	19 J	140	ND	25	ND	140	ND	40	ND	ND	ND	890 B	1,800	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	3,124	0.081	3.010	
8/17/18	300	35	ND	3.6 J	8.2 J	100	ND	22	ND	110	ND	ND	ND	ND	ND	750	1,100	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	2,129	0.057	2.064	
9/24/18	345	14	ND	3.5 J	18	79	ND	15	ND	72	ND	13 JE	ND	ND	ND	590 B	950	N/A	ND	5.80 J	ND	ND	ND	ND	N/A	N/A	1,760	0.055	2.072	
10/19/18	340	6 J	ND	ND	3.9 J	58	ND	12	ND	56	ND	12 J	ND	ND	ND	430 B	800	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,378	0.042	1.052	
11/9/18	355	11	ND	ND	3.7 J	56	4.10	11	ND	60	ND	ND	ND	ND	ND	450	810	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,406	0.045	0.941	
12/28/18	360	6.3	ND	2.7 J	3.7 J	77	ND	17	ND	110	ND	18 JE	ND	ND	ND	690	1,100	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	2,025	0.065	3.207	
1/22/19	330	11	ND	ND	2.1 J	46	ND	10	ND	55	ND	12 J	ND	ND	ND	330	700	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,166	0.035	0.864	
2/7/19	325	3.0 J	ND	ND	2.3 J	57	ND	13	ND	73	ND	ND	ND	ND	ND	430	850	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	1,428	0.042	0.667	
3/13/19	360	4.4 J	ND	ND	ND	48	ND	11	ND	60	ND	ND	ND	ND	ND	330	720	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,173	0.038	1.290	

Notes:

µg/m³ - micrograms per cubic meter
 B - compound was found in the blank and sample
 DL - dilution analysis
 E - results exceeded calibration range
 EPA - United States Environmental Protection Agency
 GAC - granular activated-carbon

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
 lbs./day - pounds per day
 N/A - not applicable (samples not analyzed for compound)
 ND - non-detect (below detection limit)
 OM&M - operation, maintenance, and monitoring
 scfm - standard cubic feet per minute

SSD - sub-slab depressurization
 TO-15 - Toxic Organic Method 15
 VOCs - volatile organic compounds

Completed first-phase system expansion (to Building A basement) on October 22, 2010.
 Completed second-phase system expansion (to eastern area) on April 13, 2016.
 Increase in concentrations following 19-day system shutdown due to blower failure. Blower was replaced on 4/8/13.
 Samples not collected in May 2014 and August 2014 as system was shut down due to firewater line break.
 Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.
 Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 2

Building A Mid-GAC Concentrations (µg/m³)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	Cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
4/2/08	6.9	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	6.9	0.0000	
4/24/08	ND	ND	N/A	ND	810	ND	240	ND	2,200	ND	ND	ND	ND	ND	2,100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5,350	0.0400	
5/21/08	ND	ND	N/A	ND	280	ND	100	ND	740	ND	ND	ND	ND	ND	410	11	ND	ND	ND	ND	ND	N/A	ND	ND	1,541	0.0100	
6/19/08	110	ND	N/A	ND	2,300	ND	830	ND	2,200	ND	53	ND	ND	ND	1,200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	6,693	0.0400	
7/18/08	ND	ND	N/A	ND	60	ND	27	ND	270	ND	ND	ND	ND	ND	100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	457	0.0030	
8/12/08	ND	ND	N/A	15	60	ND	130	ND	400	ND	ND	ND	ND	ND	1,500	30	16	ND	ND	ND	ND	N/A	ND	ND	2,151	0.0100	
9/11/08	ND	ND	N/A	15	ND	ND	170	ND	520	ND	ND	ND	ND	ND	890	53	30	ND	ND	ND	ND	N/A	ND	ND	1,678	0.0100	
11/18/08	ND	ND	N/A	ND	ND	ND	60	ND	97	ND	ND	ND	ND	ND	150	180	ND	ND	ND	ND	ND	N/A	ND	ND	487	0.0031	
12/18/08	ND	ND	N/A	ND	98	ND	38	ND	330	ND	ND	ND	ND	ND	51	18	ND	ND	ND	ND	ND	N/A	ND	ND	535	0.0040	
1/22/09	ND	ND	N/A	ND	42	ND	19	ND	490	ND	ND	ND	ND	ND	25	12	11	ND	ND	ND	ND	N/A	ND	ND	599	0.0045	
2/20/09	ND	ND	N/A	ND	220	ND	91	ND	310	ND	ND	ND	ND	ND	380	68	ND	ND	ND	ND	ND	N/A	ND	ND	1,069	0.0081	
3/18/09	ND	ND	N/A	ND	210	ND	69	ND	280	ND	ND	ND	ND	ND	1,900	190	ND	ND	ND	ND	ND	N/A	ND	ND	2,649	0.0067	
4/17/09	ND	ND	N/A	ND	ND	ND	ND	ND	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	140	0.0016	
5/20/09	ND	ND	N/A	ND	110	ND	42	ND	140	ND	ND	ND	ND	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	492	0.0055	
6/23/09	ND	ND	N/A	ND	66	ND	130	ND	320	ND	ND	ND	ND	ND	82	ND	18	ND	ND	ND	ND	N/A	ND	ND	616	0.0074	
7/23/09	ND	ND	N/A	ND	250	ND	88	ND	210	ND	ND	ND	ND	ND	890	ND	12	ND	ND	ND	ND	N/A	ND	ND	1,450	0.0173	
8/28/09	ND	ND	N/A	ND	330	ND	130	ND	290	ND	ND	ND	ND	ND	1,100	ND	14	ND	ND	ND	ND	N/A	ND	ND	1,864	0.0214	
9/28/09	ND	ND	N/A	ND	130	ND	38	ND	110	ND	ND	ND	ND	ND	580	ND	ND	ND	ND	ND	ND	N/A	ND	ND	858	0.0096	
10/27/09	ND	ND	N/A	ND	170	ND	94	ND	260	ND	ND	ND	ND	ND	180	35	ND	ND	ND	ND	ND	N/A	ND	ND	739	0.0086	
11/24/09	ND	ND	N/A	ND	250	ND	84	ND	210	ND	ND	ND	ND	ND	710	ND	ND	ND	ND	ND	ND	N/A	ND	ND	1,254	0.0150	
12/23/09	ND	ND	N/A	ND	28	ND	30	ND	180	ND	ND	ND	ND	ND	19	29	ND	ND	ND	ND	ND	N/A	ND	ND	286	0.0035	
1/19/10	ND	ND	N/A	ND	190	ND	100	ND	260	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	N/A	ND	ND	566	0.0066	
2/17/10	ND	ND	N/A	ND	ND	ND	100	ND	110	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	N/A	ND	ND	226	0.0026	
3/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.0000	
4/16/10	ND	ND	N/A	ND	260	ND	89	ND	200	ND	ND	ND	ND	ND	600	14	ND	ND	ND	ND	ND	N/A	ND	ND	1,163	0.0125	
5/13/10	13	ND	N/A	ND	260	ND	61	ND	180	15	ND	ND	ND	67	1,300	ND	13	ND	12	ND	ND	N/A	55	16	1,992	0.0213	
6/18/10	ND	ND	N/A	ND	20	ND	ND	ND	19	ND	ND	ND	ND	ND	18	ND	ND	ND	76	16	ND	N/A	25	14	188	0.0019	
7/19/10	ND	ND	N/A	ND	74	ND	24	ND	89	ND	ND	ND	ND	ND	87	ND	ND	ND	11	ND	ND	N/A	ND	ND	285	0.0028	
8/19/10	ND	ND	N/A	ND	210	ND	55	ND	210	ND	ND	ND	ND	ND	720	ND	13	ND	ND	ND	ND	N/A	ND	ND	1,208	0.0120	
9/17/10	ND	ND	N/A	ND	330	ND	110	ND	310	ND	ND	ND	ND	ND	430	ND	24	ND	ND	ND	ND	N/A	ND	ND	1,204	0.0117	
10/12/10	ND	ND	N/A	ND	400	ND	81	ND	170	ND	ND	ND	ND	32	1,000	49	17	ND	ND	ND	ND	N/A	ND	ND	1,749	0.0157	
11/2/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.0000	
12/1/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	N/A	ND	ND	14	0.0002	
1/5/11	ND	ND	N/A	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	ND	20	11	ND	ND	ND	ND	ND	N/A	ND	ND	55	0.0007	
2/7/11	ND	ND	N/A	ND	13	ND	9	ND	95	ND	ND	ND	ND	ND	53	12	20	ND	ND	ND	ND	N/A	ND	ND	202	0.0024	
3/3/11	ND	ND	N/A	ND	15	ND	8	ND	120	ND	ND	ND	ND	66	ND	44	16	13	ND	ND	ND	N/A	18	ND	300	0.0035	
4/14/11	ND	ND	N/A	ND	110	ND	40	ND	310	ND	25	ND	ND	ND	48	ND	13	ND	ND	ND	ND	N/A	ND	ND	546	0.0061	
5/6/11	ND	ND	N/A	ND	150	ND	51	ND	240	ND	ND	ND	ND	ND	70	34	ND	ND	ND	ND	ND	N/A	ND	ND	545	0.0064	
6/9/11	14	ND	N/A	23	760	ND	190	ND	340	ND	ND	ND	ND	26	ND	440	51	20	ND	ND	ND	N/A	ND	ND	1,864	0.0251	
7/11/11	11	ND	N/A	ND	320	ND	92	ND	220	ND	21	ND	ND	67	ND	320	16	ND	ND	ND	ND	N/A	29	10	1,106	0.0127	
8/3/11	ND	ND	N/A	ND	320	ND	60	ND	170	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	ND	ND	N/A	ND	ND	660	0.0095	
9/15/11	ND	ND	N/A	ND	170	ND	35	ND	140	ND	ND	ND	ND	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	545	0.0078	
10/18/11	ND	ND	N/A	ND	110	ND	27	ND	80	ND	ND	ND	ND	22	ND	200	ND	ND	ND	ND	ND	N/A	ND	ND	439	0.0063	
11/8/11	ND	ND	N/A	ND	130	ND	33	ND	110	ND	ND	ND	ND	ND	330	ND	ND	ND	ND	ND	ND	N/A	ND	ND	603	0.0089	
12/6/11	ND	ND	N/A	ND	140	ND	36	ND	140	ND	ND	ND	ND	ND	310	ND	ND	ND	ND	ND	ND	N/A	ND	ND	626	0.0090	
1/3/12	ND	ND	N/A	ND	71	ND	19	ND	82	ND	ND	ND	ND	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	372	0.0055	
2/16/12	ND	ND	N/A	ND	120	ND	26	ND	130	ND	ND	ND	ND	ND	430	11	ND	ND	ND	ND	ND	N/A	ND	ND	717	0.0103	
3/15/12	ND	ND	N/A	ND	190	ND	37	ND	210	ND	ND	ND	ND	ND	480	38	ND	ND	ND	ND	ND	N/A	ND	ND	955	0.0137	
4/16/12	ND	ND	N/A	ND	260	ND	48	ND	200	ND	ND	ND	ND	ND	640	34	ND	ND	ND	ND	ND	N/A	ND	ND	1,182	0.0168	
5/9/12	ND	ND	N/A	ND	140	ND	26	ND	140	ND	ND	ND	ND	ND	76	14	ND	ND	ND	ND	ND	N/A	ND	ND	396	0.0057	
6/4/12	ND	ND	N/A	ND	170	ND	35	ND	170	ND	ND	ND	ND	ND	120	63	ND	ND	ND	ND	ND	N/A	ND	ND	558	0.0080	

TABLE 2

Building A Mid-GAC Concentrations ($\mu\text{g}/\text{m}^3$)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	Cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
7/5/12	ND	ND	N/A	ND	320	ND	74	ND	260	ND	19	ND	ND	ND	210	26	12	ND	ND	ND	ND	N/A	ND	ND	921	0.0134	
8/15/12	ND	ND	N/A	ND	240	ND	40	ND	130	ND	ND	ND	ND	10	ND	20	13	ND	ND	ND	ND	N/A	ND	ND	873	0.0129	
9/12/12	ND	ND	N/A	ND	180	ND	43	ND	140	ND	ND	ND	ND	14	ND	34	13	ND	ND	ND	ND	N/A	ND	ND	437	0.0065	
10/18/12	ND	ND	N/A	ND	160	ND	29	ND	95	ND	ND	ND	ND	ND	25	28	ND	ND	ND	ND	ND	N/A	ND	ND	337	0.0048	
11/13/12	ND	ND	N/A	ND	89	ND	16	ND	94	ND	ND	ND	ND	ND	20	21	ND	ND	ND	ND	ND	N/A	ND	ND	240	0.0035	
12/6/12	ND	ND	N/A	ND	86	ND	14	ND	92	ND	ND	ND	ND	ND	26	20	ND	ND	ND	ND	ND	N/A	ND	ND	238	0.0034	
1/4/13	ND	ND	N/A	ND	97	ND	21	ND	130	ND	ND	ND	ND	ND	88	15	ND	ND	ND	ND	ND	N/A	ND	ND	351	0.0050	
2/6/13	ND	ND	N/A	ND	120	ND	32	ND	120	ND	ND	ND	ND	ND	180	19	ND	ND	ND	ND	ND	N/A	ND	ND	471	0.0068	
3/7/13	ND	ND	N/A	ND	180	ND	46	ND	150	ND	ND	ND	ND	ND	150	37	ND	ND	ND	ND	ND	N/A	ND	ND	563	0.0081	
4/8/13	ND	ND	N/A	ND	66	ND	15	ND	46	ND	ND	ND	ND	ND	43	92	ND	ND	ND	ND	ND	N/A	ND	ND	262	0.0035	
5/10/13	ND	ND	N/A	ND	380	ND	73	ND	210	ND	ND	ND	ND	ND	170	31	16	ND	ND	ND	ND	N/A	ND	ND	880	0.0119	
6/5/13	ND	ND	N/A	ND	210	ND	33	ND	160	ND	ND	ND	23	ND	460	15	ND	ND	ND	ND	ND	N/A	ND	ND	901	0.0126	
7/3/13	21	ND	N/A	ND	330	ND	78	ND	200	ND	ND	ND	ND	ND	38	42	ND	ND	ND	ND	ND	N/A	ND	ND	709	0.0101	
8/14/13	50	ND	N/A	ND	390	ND	59	ND	120	ND	20	ND	ND	7.3	ND	63	66	11	ND	ND	ND	N/A	ND	ND	786	0.0113	
9/9/13	17	ND	N/A	ND	180	ND	23	ND	110	ND	ND	ND	ND	ND	50	21	ND	ND	ND	ND	ND	N/A	ND	ND	401	0.0058	
10/10/13	29	ND	N/A	ND	190	ND	33	ND	120	ND	ND	ND	ND	9.9	ND	170	32	ND	ND	ND	ND	N/A	ND	ND	584	0.0084	
11/7/13	38	ND	N/A	ND	260	ND	48	ND	95	ND	ND	ND	ND	ND	38	39	ND	ND	ND	ND	ND	N/A	ND	ND	518	0.0075	
12/5/13	31.8	ND	ND	ND	107	2.9	18.8	ND	51.6	ND	6.0	5.9	ND	4.7	ND	34.1	43.5	N/A	ND	3.2	ND	ND	N/A	ND	310	0.0045	
1/13/14	ND	ND	3.9	1.6	162	2.2	22.4	ND	113.0	1.9	2.3	4.7	42.1	64.0	ND	19.3	4.9	N/A	ND	3.7	1.7	ND	N/A	7.4	2.5	460	0.0066
2/14/14	55.1	ND	3.1	3.1	189	2.8	31.0	ND	166	ND	ND	ND	ND	2.5	64.8	54.9	N/A	ND	ND	ND	ND	N/A	ND	ND	572	0.0079	
3/12/14	24.5	ND	4.5	ND	154	2.2	24.5	ND	134	ND	28.1	ND	ND	3.4	ND	38.5	47.5	N/A	ND	ND	ND	N/A	ND	ND	461	0.0066	
4/10/14	40.8	ND	ND	ND	270	ND	51.4	ND	267	66.2	ND	ND	ND	45.2	ND	65.6	74.8	N/A	ND	ND	ND	N/A	215	59.5	1,156	0.0166	
5/5/14	53.4	ND	1.4	10.5	406	3.1	63.8	ND	253	ND	0.96 J	3.6 J	ND	3.0	5.7	47.8	48.9	N/A	ND	ND	ND	N/A	0.94 J	ND	902	0.0122	
6/5/14	2.3	ND	9.6	ND	113	3.0	14.3	ND	165	ND	167	1.8 J	23.1	60.4	ND	63.5	24.5	N/A	ND	1.9	ND	N/A	1.8 J	1.9	653	0.0091	
7/3/14	7.6 J	ND	ND	ND	286	ND	47.4	16.8	344	ND	ND	ND	ND	11.7 J	ND	178	25.4	N/A	ND	ND	ND	N/A	ND	ND	917	0.0130	
9/16/14	ND	ND	1.9	3.6	294	3.0	53.9	ND	179	0.40 J	ND	ND	0.88 J	4.6	ND	76	43.6	N/A	ND	2.4	0.71 J	ND	N/A	1.2 J	665	0.0090	
10/9/14	ND	ND	ND	ND	10.4	361	ND	57.5	ND	157	ND	ND	ND	4.4 J	4.7 J	130	17.9	N/A	ND	ND	ND	N/A	ND	ND	743	0.0102	
11/6/14	ND	ND	ND	ND	172	ND	25.7	ND	62.2	ND	9.7 J	ND	16.7	6.1 J	3.7 J	98.6	26.2	N/A	ND	ND	ND	ND	N/A	ND	421	0.0051	
12/4/14	1.0	ND	ND	7.0	111	3.0	17.3	ND	45.7	ND	3.5 J	4.0 J	5.8	3.1	2.2 J	109.0	25.2	N/A	ND	ND	ND	N/A	ND	ND	338	0.0036	
1/15/15	5.9	ND	ND	ND	7.7 J	30.6	ND	ND	5.2 J	ND	ND	ND	10.4	10.9	ND	54.3	49.0	N/A	ND	8.2 J	ND	N/A	6.8 J	7.5 J	197	0.0009	
2/9/15	6.5	ND	ND	1.5	18.7	ND	3.1	ND	15.9	ND	ND	ND	ND	0.70 J	ND	17.1	2.6	N/A	ND	ND	ND	N/A	ND	ND	66	0.0003	
3/10/15	21.5	ND	2.8	6.9	73.5	2.3	13.1	ND	70.1	ND	ND	3.1 J	ND	2.0	0.79 J	97.3	87.9	N/A	ND	ND	ND	N/A	1.8 J	ND	383	0.0038	
4/6/15	29.7	ND	3.1	14.1	173	3.0	27.5	ND	194	ND	ND	3.3 J	ND	4.6	ND	133	102	N/A	ND	1.3 J	ND	0.41 J	N/A	ND	689	0.0071	
5/8/15	13.4	ND	ND	17.0	216	ND	37.5	ND	193	ND	ND	ND	ND	ND	96.2	63.3	N/A	ND	ND	ND	ND	N/A	ND	ND	636	0.0063	
6/2/15	44.7	ND	3.0	15.9	238	ND	36.1	10.4	128	7.4	3.9 J	4.6	ND	2.7	3.9	179	74.1	N/A	ND	0.99 J	ND	ND	N/A	32.9	8.5	794	0.0089
7/1/15	3.9	ND	1.5	7.7	140	ND	21.0	ND	74	ND	ND	ND	ND	3.0	2.1	260	43.0	N/A	ND	ND	ND	ND	N/A	N/A	556	0.0040	
8/10/15	3.7	ND	ND	7.3	150	2.4	28.0	ND	90	ND	ND	ND	ND	8.4	2.8	180	54.0	N/A	ND	ND	ND	ND	N/A	N/A	527	0.0066	
9/11/15	2.2	ND	1.9	10	300	2.8	41	0.66 J	140	ND	5.2	ND	ND	3.3	5.1	390	120	N/A	ND	1.3 J	ND	0.48 J	1.3 J	N/A	N/A	1,025	0.0129
10/7/15	1.5	ND	1.8	8.6	220	2.0	33	ND	98	ND	2.8 J	ND	ND	3.6	3.5	310	71	N/A	ND	ND	3.3	ND	ND	N/A	N/A	759	0.0099
11/2/15	0.58 J	ND	3.0	8.4	210	3.3	33	ND	98	ND	2.9 J	ND	ND	ND	3.0	330	30	N/A	ND	ND	ND	0.45 J	ND	N/A	N/A	723	0.0094
12/3/15	ND	ND	1.5	4.8	110	2.2	20	ND	65	ND	2.3 J	ND	ND	ND	1.4 J	97	4.5	N/A	ND	ND	ND	ND	N/A	N/A	309	0.0040	
1/15/16	0.58 J	ND	1.9	4.1	110	2.1	25	ND	95	ND	4.0	ND	ND	3.8	1.6	180	31	N/A	ND	ND	ND	ND	N/A	N/A	459	0.0058	
2/12/16	ND	ND	2.5	2.2	62	2.6	15	ND	58	ND	3.6	ND	ND	ND	1.0 J	160	28	N/A	ND	ND	ND	ND	N/A	N/A	335	0.0042	
3/9/16	0.61 J	ND	6.5	3.0	130	2.0	25	ND	100	ND	2.5 J	ND	ND	4.0	1.9	120	3.8	N/A	ND	ND	ND	ND	N/A	N/A	399	0.0047	
4/7/16	ND	ND	ND	ND	650	ND	90	ND	290	ND	ND	ND	ND	ND	2,700	530	N/A	ND	ND	ND	ND	ND	N/A	N/A	4,260	0.1103	
4/27/16	14	ND	1.8	4.2	210	2.8	17	0.64 J	71	ND	ND	ND	ND	4.9	2.8	250	17	N/A	ND	ND	ND	0.50 J	ND	N/A	N/A	597	0.0134
5/12/16	13	ND	13	4.4 J	190	ND	17	ND	130	ND	17 J	ND	ND	ND	3.8 J	690	20	N/A	ND	ND	ND	ND	N/A	N/A	1,098	0.0245	
6/2/16	2.6	ND	85	1.1 J	64	2.4	5.6	ND	29	ND	2.2 J	ND	ND	3.1	1.0 J	34	1.6	N/A	ND	ND	ND	0.39 J	1.8 J	N/A	N/A	234	0.0054

TABLE 2

Building A Mid-GAC Concentrations (µg/m³)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
7/14/16	3.5	ND	2.5	2.6	170	2.7	18	0.41 J	88	ND	47	ND	ND	5.1	2.8	170	1.7	N/A	ND	1.4 J	ND	2.5 J	N/A	N/A	518	0.0117	
8/4/16	2.1	ND	1.5	2.6	160	2.3	25	0.65 J	96	ND	2.3 J	ND	ND	ND	2.6	240	14	N/A	1.7 J	7.5	1.7 J	ND	1.8 J	N/A	N/A	562	0.0131
9/7/16	5.8	0.58 J	1.6	2.8	160	2.8	22	1.1 J	77	ND	3.6	ND	1.7 J	ND	2.9	480 DL	1.1	N/A	ND	1.2 J	ND	0.40 J	1.8 J	N/A	N/A	766	0.0179
10/5/16	11	0.69 J	1.6	4.1	220	2.2	30	1.5 J	100	ND	2.8 J	ND	ND	3	3.5	890 DL	67	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,337	0.0325
11/3/16	42	3.1	3.5	12.0	510 DL	2.9	390	6.3 J	350 E	1 J	13 J	ND	ND	5.6	7.8	4,300 DL	84	N/A	ND	0.8 J	ND	1.2	3.6	N/A	N/A	5,737	0.1114
12/14/16	ND	0.65 J	ND	1.6 J	170	2.6	26	1.0 J	140	ND	6.7	ND	ND	ND	2.8	850 E	110	N/A	ND	ND	ND	0.5 J	ND	N/A	N/A	1,312	0.0265
1/13/17	ND	ND	1.2 J	1.5 J	120	2.5	30	ND	160	ND	8.5	ND	ND	6.3	1.8	610 E	6	N/A	ND	ND	ND	1.2	1.2 J	N/A	N/A	950	0.0166
2/8/17	140	ND	1.1 J	0.7 J	36	1.0 J	9	ND	41	5.6	ND	ND	ND	13.0	0.7 J	190	3	N/A	2.9	6.8	2.4	ND	28	N/A	N/A	481	0.0086
3/8/17	ND	ND	1.3 J	0.7 J	37	2.7	11	ND	61	1.2 J	2.4 J	ND	ND	2.5	0.8 J	160	1 J	N/A	ND	2.3	ND	ND	7.5	N/A	N/A	291	0.0094
4/5/17	1.9	ND	1.0 J	0.5 J	27	2.1	5	ND	47	1.1 J	2.5 J	ND	ND	3.5	0.6 J	43	1 J	N/A	ND	1.7 J	0.8 J	ND	7.5	N/A	N/A	146	0.0046
5/5/17	2.2	ND	1.4 J	0.4 J	38	2.7	6	ND	47	0.7 J	2.6 J	ND	ND	3.2	0.9 J	22	0 J	N/A	ND	0.8 J	ND	ND	3.6	N/A	N/A	132	0.0043
6/5/17	1.2 J	ND	2.4	1.4 J	74	2.6	14	ND	63	ND	4.0 B	ND	ND	ND	1.4 J	100	2	N/A	ND	ND	ND	ND	1.8	N/A	N/A	267	0.0085
7/6/17	ND	ND	3.8	1.1 J	67	2.4	10	ND	76	1.1 B	3.3 J	ND	ND	4.8	1.3 J	57 B	1 J	N/A	ND	ND	ND	ND	3.4 J	N/A	N/A	232	0.0072
8/8/17	ND	ND	2.1	2.8	100	2.1	22	0.42 J	130	ND	9.2 B	ND	ND	ND	1.9	120	1	N/A	ND	ND	ND	0.39 J	ND	N/A	N/A	392	0.0123
9/7/17	1.9	ND	1.3 J	2.6	89	2.1	16	0.40 J	72	ND	13.0	ND	ND	2.9	1.8	180	1 J	N/A	ND	ND	ND	ND	ND	N/A	N/A	384	0.0119
10/4/17	0.89 J	ND	2.4 J	2.3 J	75	2.5 J	14	ND	77	ND	8.3	ND	ND	ND	1.7 J	280	1 J	N/A	ND	ND	ND	ND	ND	N/A	N/A	465	0.0146
11/8/17	1.2 J	ND	1.6	2.6	70	3.2	18	ND	59	ND	3.3 J	ND	ND	ND	1.3 J	310	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	470	0.0150
12/4/17	46	ND	1.4	3.9	95	1.8 J	28	0.57 J	100	0.89 J	2.7 J	ND	ND	4	1.6	740 EB	ND	N/A	ND	ND	ND	2.2 J	N/A	N/A	1,028	0.0333	
1/9/18	51	ND	1.6	1.9 J	61	2.0 J	13	ND	84	0.64 J	2.3 J	ND	ND	ND	1.2 J	320	ND	N/A	ND	ND	ND	ND	3.4 J	N/A	N/A	542	0.0175
2/9/18	ND	ND	45	3.0 J	110	3.5 J	26	ND	190	ND	14 J	ND	ND	ND	2.4 J	750	ND	N/A	ND	ND	ND	ND	11 J	N/A	N/A	1,155	0.0374
3/8/18	0.48 J	ND	1.2 J	1.3 J	77	2.5	12	ND	98	ND	3.1 J	ND	32	ND	1.5 J	230	ND	N/A	ND	ND	ND	ND	12 J	N/A	N/A	471	0.0152
4/3/18	0.40 J	0.7 J	1.2 J	2.4	130	2.5	21	1.1 J	120	ND	2.8 J	ND	ND	ND	2.4 J	700	0.6 J	N/A	ND	ND	ND	ND	13 J	N/A	N/A	998	0.0323
5/8/18	0.93 J	ND	2.1	0.9 J	77	2.9	6	0.44 J	59	ND	3.0 J	ND	1 J	9	1.6 J	90	1.5 J	N/A	ND	ND	ND	ND	0.6 J	N/A	N/A	256	0.0081
6/5/18	0.53 J	ND	1.9	2.6	130	2.4	23	ND	150	ND	2.8 J	ND	ND	ND	2.5	320	9.7	N/A	ND	ND	ND	0.48 J	1.6 J	N/A	N/A	647	0.0186
7/12/18	0.43 J	ND	3.4	2.6	74	1.9 J	10	ND	80	ND	39.0	ND	ND	3	1.8	85 B	4.7	N/A	ND	ND	ND	0.39 J	0.6 J	N/A	N/A	307	0.0080
8/17/18	0.45 J	ND	2.9	10.0	120	3.2	26	0.94 J	120	ND	2.7 J	ND	ND	ND	2.6	180	8.6	N/A	ND	ND	ND	ND	2.0 J	N/A	N/A	479	0.0129
9/11/18	0.45 J	ND	3.3	24.0	160	2.8	45	1.3 J	150	ND	3.9 B	ND	ND	3	3.1	500 EB	28	N/A	ND	ND	ND	ND	1.2 J	N/A	N/A	926	0.0287
10/19/18	0.56 J	ND	1.5	5.8	100	2.7	26	ND	86	ND	5.3	ND	ND	ND	2.1	160 B	1.0	N/A	ND	ND	ND	ND	ND	N/A	N/A	391	0.0119
11/14/18	ND	ND	1.2 J	5.5	65	2.2	14	ND	49	ND	2.5 J	ND	ND	ND	1.3 J	130	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	271	0.0086
12/28/18	0.7 J	ND	1.4 J	7.4	73	2.6	16	0.48 J	84	ND	5.8 JB	ND	ND	ND	1.4 J	170	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	363	0.0117
1/22/19	ND	ND	1.8 Cl	5.7	60	1.6 J	14	ND	77	ND	2.6 J	ND	ND	ND	1.2 J	200	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	364	0.0108
2/7/19	ND	ND	1.5	3.2	40	1.2 J	8.2	ND	54	ND	4.1 J	ND	ND	ND	0.9 J	91	1.6	N/A	ND	ND	ND	ND	ND	N/A	N/A	206	0.0000
3/13/19	0.54 J	ND	2.2 Cl	2.6	43	1.5 J	8.1	ND	63	ND	2.4 J	ND	ND	ND	1.1 J	80	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	204	0.0000

Notes:

µg/m³ - micrograms per cubic meter

B - compound was found in the blank and sample

DL - dilution analysis

E - results exceeded calibration range

EPA - United States Environmental Protection Agency

GAC - granular activated-carbon

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

lbs./day - pounds per day

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

CL - result suspected to be biased high due to chromatographic interference

scfm - standard cubic feet per minute

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

Samples not collected in May 2014 and August 2014 as system was shut down due to firewater line break.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 3
Building A Effluent Concentrations (µg/m³)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland
Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
3/31/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000	
4/2/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000	
4/4/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	110	N/A	ND	110	0.001	
4/11/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000	
4/17/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000	
4/24/08	ND	ND	N/A	ND	30	ND	13	ND	470	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	513	0.004	
5/21/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.00	0.000	
6/19/08	76	ND	N/A	ND	67	ND	65	ND	2,200	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	2,408	0.015	
8/1/08	ND	ND	N/A	ND	14	ND	15	ND	300	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	329	0.005	
8/12/08	ND	ND	N/A	ND	55	ND	42	ND	310	ND	19	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	426	0.005	
9/11/08	ND	ND	N/A	ND	ND	ND	ND	ND	46	ND	18	ND	ND	ND	ND	11	ND	N/A	ND	ND	ND	N/A	ND	ND	75	0.001	
11/18/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	61	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	61	0.000	
12/18/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000	
1/22/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000	
2/20/09	ND	ND	N/A	ND	10	ND	ND	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	120	0.000	
3/18/09	ND	ND	N/A	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	14	0.000	
4/17/09	ND	ND	N/A	ND	64	ND	20	ND	53	ND	ND	ND	ND	ND	26	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	163	0.001	
5/20/09	ND	ND	N/A	ND	9.9	ND	ND	ND	46	ND	ND	ND	ND	ND	38	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	94	0.000	
6/23/09	ND	ND	N/A	ND	11.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	44	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	55	0.000	
7/23/09	ND	ND	N/A	ND	ND	ND	21	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	211	0.002	
8/28/09	ND	ND	N/A	ND	52	ND	29	ND	46	ND	ND	ND	7.7	ND	250	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	385	0.003	
9/28/09	ND	ND	N/A	ND	27	ND	19	ND	100	ND	ND	ND	ND	ND	93	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	239	0.002	
10/27/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	40	ND	24	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	64	0.001	
11/24/09	ND	ND	N/A	ND	ND	ND	ND	ND	53	ND	ND	ND	ND	ND	21	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	74	0.001	
12/23/09	ND	ND	N/A	ND	21	ND	10	ND	11	ND	ND	ND	8.8	ND	190	16	ND	N/A	ND	ND	ND	N/A	ND	ND	257	0.003	
1/19/10	ND	ND	N/A	ND	27	ND	10	ND	18	ND	ND	ND	ND	ND	200	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	255	0.003	
2/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000	
3/17/10	ND	ND	N/A	ND	11	ND	ND	ND	20	ND	ND	ND	ND	ND	17	11	ND	N/A	ND	ND	ND	N/A	ND	ND	59	0.001	
4/16/10	ND	ND	N/A	ND	12	ND	9.4	ND	330	ND	ND	ND	ND	ND	27	31	ND	N/A	ND	ND	ND	N/A	ND	ND	409	0.004	
5/13/10	7.2	ND	N/A	ND	250	ND	57.0	ND	160	19	ND	ND	58	ND	1,100	24	12	N/A	33	ND	ND	N/A	77	24	1,821	0.019	
6/18/10	ND	ND	N/A	ND	ND	ND	ND	ND	90	ND	ND	ND	ND	ND	ND	ND	ND	N/A	62	13	ND	N/A	16	9.3	190	0.002	
7/19/10	ND	ND	N/A	ND	8.7	ND	ND	ND	100	ND	ND	ND	ND	ND	40	16	ND	N/A	ND	ND	ND	N/A	ND	ND	165	0.002	
8/19/10	ND	ND	N/A	ND	90	ND	47	ND	270	ND	ND	ND	ND	ND	41	ND	15	N/A	ND	ND	ND	N/A	ND	ND	463	0.005	
9/17/10	ND	ND	N/A	ND	88	ND	39	ND	260	ND	ND	ND	ND	ND	120	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	507	0.000	
10/12/10	ND	ND	N/A	ND	81	ND	10	ND	58	ND	ND	ND	16	ND	360	30	17	N/A	ND	ND	ND	N/A	ND	ND	572	0.010	
11/2/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000	
12/1/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.0	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	14	0.000	
1/5/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000	
2/7/11	ND	ND	N/A	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	ND	14	21	N/A	ND	ND	ND	N/A	ND	ND	59	0.000	
3/3/11	120	ND	N/A	ND	ND	ND	ND	ND	25	ND	ND	ND	58	ND	ND	ND	19	N/A	ND	ND	ND	N/A	23	ND	245	0.000	
4/14/11	ND	ND	N/A	ND	ND	ND	ND	ND	110	ND	23	ND	ND	ND	55	ND	ND	N/A	ND	ND	ND	N/A	11	ND	199	0.000	
5/6/11	ND	ND	N/A	ND	8.8	ND	ND	ND	170	ND	ND	ND	ND	ND	21	19	ND	N/A	ND	ND	ND	N/A	ND	ND	219	0.000	
6/9/11	ND	ND	N/A	ND	59.0	ND	91	ND	580	ND	ND	ND	30	ND	34	ND	19	N/A	ND	ND	ND	N/A	ND	ND	813	0.010	
7/11/11	ND	ND	N/A	ND	ND	ND	ND	ND	13	21	ND	ND	100	ND	26	ND	ND	N/A	ND	ND	ND	N/A	43	17	220	0.000	
8/3/11	ND	ND	N/A	ND	ND	ND	ND	ND	19	ND	ND	ND	11	ND	20	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	50	0.000	
9/15/11	ND	ND	N/A	ND	100	ND	41	ND	150	ND	ND	ND	ND	ND	12	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	303	0.000	
10/18/11	ND	ND	N/A	ND	130	ND	35	ND	77	ND	ND	ND	25	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	267	0.000	
11/8/11	ND	ND	N/A	ND	150	ND	39	ND	95	ND	ND	ND	ND	ND	15	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	299	0.004	
12/6/11	ND	ND	N/A	ND	150	ND	37	ND	110	ND	ND	ND	ND	ND	16	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	313	0.005	

TABLE 3

Building A Effluent Concentrations ($\mu\text{g}/\text{m}^3$)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
1/3/12	ND	ND	N/A	ND	56	ND	15	ND	67	ND	ND	ND	ND	ND	20	11	ND	N/A	ND	ND	ND	N/A	ND	ND	169	0.003	
2/16/12	ND	ND	N/A	ND	85	ND	24	ND	100	ND	ND	ND	ND	ND	52	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	261	0.004	
3/15/12	ND	ND	N/A	ND	82	ND	19	ND	100	ND	ND	ND	ND	ND	45	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	246	0.004	
4/16/12	ND	ND	N/A	ND	180	ND	44	ND	240	ND	ND	ND	ND	ND	140	12	ND	N/A	ND	ND	ND	N/A	ND	ND	616	0.009	
5/9/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000	
6/4/12	ND	ND	N/A	ND	ND	ND	ND	ND	12	9.6	ND	ND	ND	9.1	ND	ND	18	ND	N/A	ND	ND	N/A	42	12	103	0.001	
7/5/12	ND	ND	N/A	ND	ND	ND	ND	ND	87	ND	ND	ND	ND	26	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	113	0.002	
8/15/12	ND	ND	N/A	ND	130	ND	38	ND	210	ND	ND	ND	ND	8.7	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	387	0.006	
9/12/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	13	0.000	
10/18/12	ND	ND	N/A	ND	ND	ND	ND	ND	9.8	ND	ND	ND	ND	ND	ND	13	ND	N/A	ND	ND	ND	N/A	ND	ND	23	0.000	
11/13/12	ND	ND	N/A	ND	ND	ND	ND	ND	48	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	48	0.001	
12/6/12	ND	ND	N/A	ND	8.8	ND	ND	ND	63	ND	ND	ND	ND	ND	ND	13	ND	N/A	ND	ND	ND	N/A	ND	ND	85	0.001	
1/4/13	ND	ND	N/A	ND	33	ND	12	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	145	0.002	
2/6/13	ND	ND	N/A	ND	77	ND	28	ND	150	ND	ND	ND	ND	ND	11	ND	N/A	ND	ND	ND	ND	N/A	ND	ND	266	0.004	
3/7/13	ND	ND	N/A	ND	130	ND	40	ND	140	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	310	0.004	
4/8/13	ND	ND	N/A	ND	56	ND	16	ND	55	ND	ND	ND	ND	ND	42	ND	N/A	ND	ND	ND	N/A	ND	ND	ND	169	0.002	
5/10/13	ND	ND	N/A	ND	180	ND	38	ND	190	ND	ND	ND	ND	ND	12	16	ND	N/A	ND	ND	ND	N/A	ND	ND	436	0.006	
6/5/13	ND	ND	N/A	ND	86	ND	21	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	217	0.003	
7/3/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000	
8/14/13	ND	ND	N/A	ND	8.2	ND	ND	ND	52	ND	17	ND	ND	ND	ND	16	ND	N/A	ND	ND	ND	N/A	ND	ND	93	0.001	
9/9/13	ND	ND	N/A	ND	15	ND	ND	ND	180	ND	ND	ND	ND	ND	ND	12	N/A	ND	ND	ND	ND	N/A	ND	ND	207	0.003	
10/10/13	ND	ND	N/A	ND	270	ND	66	ND	190	ND	ND	ND	ND	11	ND	ND	13	15	N/A	ND	ND	N/A	ND	ND	565	0.008	
11/7/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000	
12/5/13	0.97	ND	856	ND	1.9	ND	3.0	ND	14.8	ND	105	ND	1.6	3.0	ND	ND	1.8	N/A	12	ND	ND	N/A	ND	ND	1,000	0.014	
1/13/14	1.7	ND	12.5	ND	6.4	2.3	5.9	ND	31.3	1.9	1.8	5.7	ND	22.2	ND	ND	ND	N/A	1.4	4.0	ND	ND	N/A	5.8	2.2	105	0.002
2/14/14	0.65	ND	1.7	ND	42.6	2.1	26	ND	111	ND	ND	ND	ND	4.0	ND	2.4	10	N/A	ND	ND	ND	N/A	ND	ND	200	0.003	
3/12/14	2.0	ND	13.3	ND	ND	2.3	ND	ND	ND	3.5	35.2	ND	2.6	36.5	ND	ND	1.2	N/A	ND	3.0	ND	ND	N/A	7.7	2.9	110	0.002
4/10/14	2.8	ND	ND	ND	82.9	ND	15.1	ND	97	49.4	48.3	ND	ND	64.9	ND	ND	62.1	N/A	ND	7.2	ND	ND	N/A	154	45.1	629	0.009
5/5/14	0.9	ND	1.4	ND	98.7	2.8	16.8	ND	139	ND	0.88 J	3.1 J	ND	2.5	1.8	1.4	J	ND	N/A	ND	ND	ND	N/A	1.4 J	ND	271	0.004
6/5/14	2.3	ND	3.2	ND	2.9	3.4	ND	ND	ND	19.6	2.6 J	21.9	3.1	ND	6.1	7.1	N/A	ND	2.0	ND	ND	N/A	1.7 J	1.9	78	0.001	
7/3/14	5.0 J	ND J	3.5 J	ND	4.1 J	ND	ND	ND	8.6	6.8 J	ND	6.8 J	ND	7.2	ND	ND	ND	N/A	ND	7.3 J	6.5 J	ND	N/A	8.8 J	7.4 J	72	0.001
9/16/14	0.42 J	ND	ND	ND	6.5	3.3	3.5	ND	209	ND	1.4 J	4.5	0.89 J	58.2	ND	8.7	19.4	N/A	0.79 J	2.0	0.75 J	ND	N/A	1.2 J	0.86 J	321	0.004
10/9/14	1.7	ND	4.2	ND	75.9	ND	37.2	ND	409	ND	2.5 J	7.1 J	ND	4.4	2.6 J	8.5	7.2	N/A	ND	ND	ND	N/A	ND	ND	560	0.008	
11/6/14	1.3	ND	ND	ND	177	2.0	44.2	ND	151	ND	6.0	5.7	4.1	3.4	3.7	6.3	7.8	N/A	ND	ND	ND	0.5	N/A	5.3 J	3.2 J	422	0.005
12/4/14	1.2	ND	ND	ND	147	3.4	33.9	ND	71.1	ND	2.4 J	4.0 J	5.3 J	3.0	3.3	6.0	8.2	N/A	ND	ND	ND	N/A	ND	ND	3.5	292	0.003
1/15/15	1.9	ND	ND	3.9	161	7.4	30.1	ND	55.3	ND	1.9 J	1.2 J	1.7	2.2	2.1	10.0	10.0	N/A	ND	0.91 J	ND	ND	N/A	1.5 J	ND	291	0.001
2/9/15	1.0 J	ND	ND	3.8	123	ND	19.1	ND	47.8	ND	ND	ND	ND	0.93 J	1.8	5.9	ND	N/A	ND	ND	ND	N/A	ND	ND	203	0.001	
3/10/15	0.59	ND	2.1	8.0	195	1.6 J	27.9	ND	79.2	ND	0.59 J	ND	ND	0.74 J	ND	31.6	11.4	N/A	ND	ND	ND	N/A	ND	ND	359	0.004	
4/6/15	2.0	0.75 J	6.9	1.6	44.3	3.1	4.4	0.43 J	18.5	ND	161	ND	ND	19.5	ND	3.9	3.1	N/A	ND	1.2 J	ND	ND	N/A	2.1 J	0.96 J	274	0.003
5/8/15	1.4	ND	2.5	4.3	139	2.7 J	12.6	ND	87.6	4.6 J	4.6 J	4.2 J	13.3	12.3	ND	9.9	10.3	N/A	11.3	16.3	5.9 J	ND	N/A	9.2 J	4.00 J	356	0.004
6/2/15	4.5	ND	3.9	4.3	120	ND	12.6	0.77	130	3.7	5.1 J	4.4	ND	2.6	1.7	12.6	12.3	N/A	ND	1.0 J	ND	ND	N/A	16.1	4.40	340	0.004
7/1/15	ND	ND	1.6	5.4	94	2.0	17.0	ND	120	ND	ND	ND	ND	1.7	14.0	7.7	N/A	ND	ND	ND	ND	N/A	N/A	N/A	263	0.002	
8/24/15	4.6	ND	2.0	ND	1.3 J	2.3	ND	ND	0.61 J	0.61 J	7.5	ND	0.66 J	3.7	ND	3.7	0.60 J	N/A	ND	0.80 J	ND	ND	2.8 J	N/A	N/A	31	0.000
9/11/15	3.8	ND	2.0	0.40 J	11	2.3	1.1 J	ND	4.7	ND	4.3	ND	ND	ND	21	19	N/A	ND	0.95 J	ND	ND	N/A	N/A	N/A	71	0.001	
10/7/15	4.6	ND	2.1	ND	9.1	2.1	1.2 J	ND	30	ND	3.0 J	ND	ND	4.3	ND	18	16	N/A	ND	ND	3.7	ND	1.7 J	N/A	N/A	96	0.001
11/2/15	2.2	ND	3.2	ND	2.3	3.2	3.0	ND	80	0.60 J	3.9	ND	ND	ND	1.9 J	1.1	N/A	ND	ND	ND	0.38 J	2.3 J	N/A	N/A	104	0.001	
12/3/15	1.7	ND	4.9	0.43 J	12	2.3	6.2	ND	76	ND	5.0	ND	ND	2.6	ND	0.75 J	ND	N/A	ND	ND	ND	ND	N/A	N/A	112	0.001	

TABLE 3

Building A Effluent Concentrations ($\mu\text{g}/\text{m}^3$)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)							
1/15/16	2.2	ND	2.0	1.5	J	37	2.3	14	ND	73	ND	2.4	J	ND	ND	2.9	0.96	J	6.3	8.4	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	153	0.002
2/12/16	0.4	J	ND	1.6	3.5	J	74	3.9	24	ND	81	ND	ND	ND	ND	1.8	10	B	15	N/A	ND	ND	ND	1.0	J	ND	ND	ND	N/A	N/A	216	0.003		
3/9/16	1.8	ND	5.1	8.9	200	2.0	45	ND	130	ND	2.6	J	ND	ND	4.4	3.3	2.5	0.50	J	N/A	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	406	0.005			
4/7/16	ND	ND	ND	41	J	670	ND	230	ND	530	ND	ND	ND	ND	ND	ND	ND	4,000	ND	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	5,471	0.142				
4/27/16	1.5	ND	1.9	ND	ND	2.5	0.40	J	ND	3.4	ND	ND	ND	0.64	J	ND	ND	ND	3.7	0.45	J	N/A	ND	ND	ND	ND	ND	N/A	N/A	14	0.000			
5/12/16	1.5	J	ND	18	7.5	140	3.7	J	44	ND	210	ND	17	ND	ND	6.3	ND	780	B	ND	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,228	0.027			
6/2/16	0.47	J	ND	13	0.61	J	46	ND	4.0	ND	8.1	0.66	J	ND	ND	3.8	0.63	J	110	18	N/A	ND	ND	ND	ND	1.9	J	N/A	N/A	207	0.005			
7/14/16	1.1	J	ND	2.3	1.1	J	73	3.1	12	ND	120	0.59	J	37	ND	ND	6.4	1.4	J	110	18	N/A	ND	1.5	J	ND	0.44	J	2.3	J	N/A	N/A	390	0.009
8/4/16	0.77	J	ND	1.8	2.3	150	3.4	23	ND	120	0.85	J	3.3	J	ND	3.2	2.9	2.7	95	22	N/A	4.1	18	3.8	ND	3	J	N/A	N/A	460	0.011			
9/7/16	0.68	J	ND	1.6	3.5	200	2.6	35	ND	110	ND	4.8	ND	ND	ND	3.5	100	9.1	N/A	ND	1.1	J	ND	ND	ND	N/A	N/A	472	0.011					
10/5/16	4.0	ND	1.7	3.4	77	2.1	40	ND	110	ND	110	ND	3.5	ND	ND	1.5	J	850	9.8	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	1,103	0.027				
11/3/16	ND	1.2	J	3.3	4.5	51	3.1	68	ND	120	ND	11	ND	ND	ND	ND	ND	1600	DL	ND	N/A	ND	ND	ND	1.3	ND	N/A	N/A	1,863	0.036				
12/14/16	ND	ND	1.4	J	1.4	J	89	2.7	25	ND	120	ND	4.1	ND	ND	ND	1.5	J	660	E	1.8	N/A	ND	ND	ND	0.46	J	ND	N/A	N/A	907	0.018		
1/13/17	ND	ND	N/A	N/A	N/A	N/A	N/A	N/A	ND	N/A	ND	5.2	ND	1	J	7.4	N/A	0.97	J	N/A	N/A	ND	ND	ND	N/A	2.3	J	N/A	N/A	17	0.000			
2/8/17	0.39	J	ND	1.4	0.42	37	N/A	7	ND	N/A	0.67	J	2.3	J	ND	ND	2.5	N/A	75	18	N/A	ND	1.0	J	ND	N/A	3.2	J	N/A	N/A	149	0.003		
3/8/17	ND	ND	1.3	J	0.84	J	33	N/A	15	ND	71	0.80	J	2.4	J	ND	ND	3.7	0.58	J	260	4.6	N/A	ND	ND	ND	0.42	J	4.8	N/A	N/A	398	0.013	
4/5/17	ND	ND	1.3	J	0.96	J	63	N/A	5.5	ND	33	0.79	J	ND	ND	ND	3.0	0.88	J	150	27	N/A	ND	ND	ND	ND	ND	4.8	N/A	N/A	290	0.009		
5/5/17	0.37	J	ND	1.5	1.0	J	83	2.5	8.7	ND	49	1.00	J	2.4	J	ND	ND	2.9	1.2	J	180	36	N/A	ND	0.64	J	ND	ND	5.5	N/A	N/A	376	0.012	
6/5/17	ND	ND	3.5	1.2	J	67	2.8	13	ND	90	0.66	J	2.9	JB	ND	ND	ND	1.3	J	150	26	N/A	ND	ND	ND	ND	2.1	J	N/A	N/A	360	0.012		
7/6/17	0.44	J	ND	3.5	1.2	J	96	2.3	14	ND	78	1.3	J	3.7	JB	ND	0.79	J	5.3	1.9	180	B	150	N/A	ND	ND	ND	0.89	4.1	N/A	N/A	543	0.017	
8/8/17	ND	ND	1.9	1.1	J	84	2.1	14	ND	95	ND	4.5	B	ND	ND	ND	1.7	110	16	N/A	ND	ND	ND	ND	0.48	J	ND	N/A	N/A	331	0.010			
9/7/17	0.93	J	ND	1.4	1.8	J	130	2.1	19	ND	110	0.81	J	15	ND	1.0	J	6.8	2.5	200	34	N/A	ND	1.0	J	ND	0.45	J	2.6	N/A	N/A	529	0.016	
10/4/17	ND	ND	1.8	2.2	120	2.6	22	ND	100	ND	100	ND	3.3	J	ND	ND	4.0	2.2	190	25	N/A	ND	0.71	J	ND	ND	2.9	N/A	N/A	477	0.015			
11/8/17	22	ND	0.78	J	ND	23	ND	2.4	ND	8.1	ND	3.2	J	ND	ND	ND	ND	75	10	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	144	0.005				
12/4/17	11	ND	1.9	1.1	J	42	2.5	6.6	ND	25	0.85	J	2.5	J	ND	ND	ND	0.65	J	140	B	29	N/A	ND	ND	ND	0.38	J	1.2	J	N/A	N/A	265	0.009
1/9/18	2.1	1.0	J	1.8	1.9	25	2.4	15	ND	79	ND	3.0	J	ND	ND	ND	0.54	J	300	7.6	N/A	ND	ND	ND	ND	ND	2.4	J	N/A	N/A	442	0.014		
2/9/18	9.4	0.83	J	46	1.8	J	27	4.2	18	ND	110	1.4	J	5.2	ND	ND	8.1	0.65	J	220	1.4	N/A	ND	ND	ND	0.40	J	7.2	N/A	N/A	462	0.015		
3/8/18	5.0	0.49	J	1.2	1.3	J	33	2.2	10	ND	81	ND	2.5	J	ND	3.3	ND	0.78	J	120	8.5	N/A	ND	ND	ND	ND	ND	N/A	N/A	269	0.009			
4/3/18	5.2	1.2	J	1.3	J	2.6	73	2.9	25	ND	140	ND	3.0	J	ND	ND	3	1.50	J	470	E	1.6	N/A	ND	ND	ND	ND	ND	N/A	N/A	730	0.024		
5/8/18	11	ND	1.6	J	1.2	63	2.9	8	ND	59	1.0	J	2.5	J	ND	1	J	25	1.40	J	89	12.0	N/A	ND	1.0	J	ND	ND	6.0	N/A	N/A	285	0.009	
6/5/18	0.7	J	ND	ND	1.5	J	81	2.6	11	ND	85	ND	4.7	ND	3	ND	1.60	140	13.0	N/A	ND	ND	ND	0.44	J	ND	N/A	N/A	344	0.010				
7/12/18	11	ND	5.1	1.6	J	120	1.6	J	10	ND	82	ND	8.7	ND	ND	5.3	2.40	150	B	71.0	N/A	ND	2.2	ND	0.43	J	3.0	N/A	N/A	474	0.012			
8/17/18	11	ND	3.0	2.1	150	3.5	17	0.5	J	130	1.4	J	3.2	J	ND	ND	12	2.80	200	62.0	N/A	ND	ND	ND	ND	6.6	N/A	N/A	605	0.016				
9/11/18	5.3	ND	3.9	2.9	150	3.2	25	0.7	J	150	1.3	J	3.5	B	ND	ND	6.8	2.90	190	B	40.0	N/A	0.93	J	8.8	2.3	ND	3.2	N/A	N/A	601	0.019		
10/19/18	1.1	J	ND	0.56	J	ND	11	ND	1.0	J	ND	3.6	ND	6.5	ND	ND	ND	ND	25	B	12.0	N/A	ND	0.77	J	ND	ND	ND	N/A	N/A	62	0.002		
11/9/18	1.1	J	ND	1.3	J	ND	8.1	2.7	0.8	J	ND	4.4	ND	11.0	ND	ND	3.2	ND	16	9.5	N/A	ND	1.5	J	ND	ND	ND	N/A	N/A	60	0.002			
12/28/18	1.5	ND	1.3	J	2.5	18	2.3	11	ND	58	ND	4.9	JB	ND	1.9	J	ND	0.47	J	54	15.0	N/A	ND	ND	ND	ND	ND	N/A	N/A	171	0.006			
1/21/19	1.1	J	ND	1.8	CL	3.8	23	1.6	J	14	ND	64	ND	3.2	J	ND	ND	0.72	J	110	5.5	N/A	ND	ND	ND	ND	ND	N/A	N/A	229	0.007			
2/7/19	1.0	J	ND	1.9	3.7	31	1.2	J	13	ND	64	ND	5.2	J	ND	ND	ND	0.83	J	110	5.2	N/A	ND	ND	ND	ND	ND	N/A	N/A	237	0.000			
3/13/19	0.78	J	ND	1.8	2.0	23	1.3	J	6.0	ND	39	ND	2.3	J	ND	ND	ND	0.63	J	39	1.3	N/A	ND	ND	ND	ND	ND	N/A	N/A	117	0.000			

Notes:

$\mu\text{g}/\text{m}^3$ - micrograms per cubic meter
 B - compound was found in the blank and sample
 E - results exceeded calibration range
 EPA - United States Environmental Protection Agency
 CL - result suspected to be biased high due to chromatographic interference

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
 lbs./day - pounds per day
 N/A - not applicable (samples not analyzed for compound)
 ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring
 SSD - sub-slab depressurization
 TO-15 - Toxic Organic Method 15
 VOCs - volatile organic compounds

The chlorodifluoromethane and 1,2,3-trimethylbenzene concentrations reported in the 12/5/2013 sample were reported as tentatively identified compounds and were converted from 238 ppbv and 2.3 ppbv, respectively.

Samples not collected in May 2014 and August 2014 as system was shut down due to firewater line break.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 4

Building C Influent Concentrations ($\mu\text{g}/\text{m}^3$)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	Cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-Dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
3/31/08	55	ND	ND	N/A	ND	ND	25,000	ND	ND	ND	ND	320	ND	ND	ND	ND	ND	ND	550	ND	N/A	990	740	2,100	N/A	1,100	370	31,170	0.1500	0.450
4/2/08	57	ND	ND	N/A	ND	ND	2,700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	84	ND	N/A	63	56	320	N/A	65	ND	3,288	0.0200	0.040
4/4/08	60	ND	ND	N/A	ND	ND	6,600	ND	ND	ND	32	44	ND	ND	ND	ND	ND	ND	440	ND	N/A	180	170	690	N/A	180	68	8,404	0.0500	0.350
4/11/08	65	ND	ND	N/A	ND	ND	4,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	600	ND	N/A	73	61	370	N/A	48	ND	5,252	0.0300	0.180
4/17/08	60	ND	ND	N/A	ND	ND	2,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	670	ND	N/A	69	55	190	N/A	34	ND	3,918	0.0200	0.140
4/24/08	63	ND	ND	N/A	ND	ND	2,600	ND	ND	ND	ND	ND	ND	28	ND	ND	ND	ND	750	ND	N/A	85	70	130	N/A	32	17	3,712	0.0200	0.540
5/21/08	60	ND	ND	N/A	ND	ND	1,600	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	650	ND	N/A	65	51	41	N/A	15	ND	2,439	0.0100	0.310
6/19/08	60	7.4	ND	N/A	ND	ND	300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	N/A	23	19	8	N/A	9	ND	476	0.0030	0.090
7/18/08	54	ND	ND	N/A	ND	ND	1,300	ND	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	440	ND	N/A	45	36	35	N/A	ND	ND	1,870	0.0090	0.279
8/13/08	60	ND	ND	N/A	16	ND	410	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	58	ND	N/A	ND	ND	13	N/A	ND	ND	497	0.0030	0.093
9/11/08	60	ND	ND	N/A	ND	ND	730	ND	ND	ND	ND	ND	18	ND	ND	ND	ND	13	130	ND	N/A	ND	ND	20	N/A	ND	ND	911	0.0050	0.305
11/12/08	62	ND	ND	N/A	ND	ND	390	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	N/A	ND	ND	17	N/A	ND	ND	517	0.0029	0.086
12/18/08	66	ND	ND	N/A	ND	ND	420	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	150	ND	N/A	ND	ND	22	N/A	ND	ND	592	0.0035	0.105
1/22/09	67	ND	ND	N/A	ND	ND	810	ND	ND	ND	ND	ND	ND	170	ND	ND	ND	ND	580	ND	N/A	37	29	38	N/A	17	14	1,695	0.0102	0.306
2/21/09	65	ND	ND	N/A	ND	ND	630	ND	ND	ND	ND	ND	ND	140	ND	ND	ND	ND	270	ND	N/A	39	34	25	N/A	16	12	1,166	0.0068	0.204
3/18/09	66	ND	ND	N/A	ND	ND	460	ND	ND	ND	ND	ND	ND	160	ND	ND	ND	ND	350	ND	N/A	62	51	16	N/A	14	13	1,126	0.0067	0.200
4/17/09	66	ND	ND	N/A	ND	ND	200	ND	ND	ND	ND	ND	ND	46	ND	ND	ND	ND	86	ND	N/A	19	16	6.1	N/A	ND	ND	373	0.0022	0.066
5/20/09	64	ND	ND	N/A	ND	ND	210	ND	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	79	ND	N/A	14	14	5.7	N/A	ND	ND	347	0.0020	0.060
6/23/09	56	ND	ND	N/A	ND	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	58	ND	N/A	ND	ND	ND	N/A	ND	ND	248	0.0012	0.037
7/23/09	60	ND	ND	N/A	ND	ND	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	55	ND	N/A	ND	ND	ND	N/A	ND	ND	205	0.0011	0.033
8/28/09	NA	ND	ND	N/A	ND	ND	720	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	160	ND	N/A	ND	ND	13	N/A	ND	ND	910	0.0049	0.147
9/28/09	NA	ND	ND	N/A	ND	ND	39	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	ND	16	ND	N/A	ND	ND	ND	N/A	ND	ND	165	0.0009	0.027
10/27/09	60	ND	ND	N/A	ND	ND	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	64	ND	N/A	ND	ND	ND	N/A	ND	ND	264	0.0014	0.043
11/24/09	60	ND	ND	N/A	ND	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	75	ND	N/A	ND	ND	ND	N/A	ND	ND	265	0.0000	0.000
12/23/09	65	ND	ND	N/A	ND	ND	96	ND	ND	ND	ND	ND	ND	26	ND	ND	ND	ND	45	ND	N/A	ND	ND	ND	N/A	8.7	ND	176	0.0010	0.031
1/19/10	65	ND	ND	N/A	ND	ND	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	57	ND	N/A	ND	ND	ND	N/A	ND	ND	197	0.0012	0.035
2/17/10	68	ND	ND	N/A	ND	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	37	ND	N/A	ND	ND	ND	N/A	ND	ND	137	0.0008	0.025
3/17/10	65	ND	ND	N/A	ND	ND	87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	ND	N/A	ND	ND	ND	N/A	ND	ND	120	0.0007	0.021
4/16/10	65	ND	ND	N/A	ND	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	39	ND	N/A	ND	ND	ND	N/A	ND	ND	149	0.0009	0.026
5/13/10	68	58	ND	N/A	ND	ND	65	ND	ND	ND	ND	38	ND	ND	ND	ND	ND	220	ND	N/A	25	ND	ND	N/A	140	39	607	0.0037	0.111	
6/18/10	66	ND	ND	N/A	ND	ND	72	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	ND	N/A	83	17	ND	N/A	30	17	244	0.0014	0.043
7/19/10	60	ND	ND	N/A	ND	ND	68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34	ND	N/A	ND	ND	ND	N/A	ND	ND	102	0.0006	0.017
8/19/10	61	ND	ND	N/A	ND	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31	ND	N/A	ND	ND	ND	N/A	ND	ND	131	0.0007	0.022
9/17/10	63	ND	ND	N/A	ND	ND	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	ND	N/A	ND	ND	ND	N/A	ND	ND	103	0.0006	0.018
10/12/10	60	10	ND	N/A	ND	ND	160	ND	ND	ND	ND	11	ND	ND	ND	130	ND	110.0	70	ND	N/A	ND	ND	ND	N/A	23	ND	514	0.0028	0.083
11/2/10	65	ND	ND	N/A	ND	ND	65	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	35	ND	N/A	ND	ND	ND	N/A	ND	ND	100	0.0006	0.018
12/1/10	65	ND	ND	N/A	ND	ND	120	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	89	ND	N/A	ND	ND	ND	N/A	ND	ND	228	0.0013	0.040
1/5/11	68	ND	ND	N/A	ND	ND	160	ND	ND	ND	ND	ND	ND	94	7.7	ND	ND	250	ND	N/A	ND	ND	9	N/A	ND	ND	520	0.0032	0.095	
2/7/11	70	ND	ND	N/A	ND	ND	180	ND	ND	ND	ND	ND	ND	120	ND	ND	ND	270	ND	N/A	ND	ND	ND	N/A	ND	ND	570	0.0036	0.108	
3/3/11	69	ND	ND	N/A	ND	ND	170	ND	ND	ND	ND	ND	ND	110	34	ND	ND	180	ND	N/A	ND	ND	ND	N/A	ND	ND	494	0.0031	0.092	
4/14/11	65	ND	ND	N/A	ND	ND	130	ND	ND	ND	ND	ND	ND	37	10	ND	ND	90	ND	N/A	ND	ND	ND	N/A	ND	ND	267	0.0016	0.047	
5/6/11	70	8	ND	N/A	ND	ND	100	ND	ND	ND	ND	16	ND	ND	19	ND	ND	82	ND	N/A	ND	ND	ND	N/A	9	ND	234	0.0015	0.046	
6/9/11	55	26	ND	N/A	ND	ND	97	ND	ND	ND	ND	ND	ND	14	ND	ND	ND	63	ND	N/A	ND	ND	ND	N/A	ND	ND	200	0.0010	0.030	
7/11/11	51	20	ND	N/A	ND	ND	74	ND	ND	ND	ND	ND	37	ND	ND	62	ND	ND	26	ND	N/A	ND	ND	ND	N/A	21	ND	240	0.0011	0.033
8/3/11	50	14	ND	N/A	ND	ND	76	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34	ND	N/A	ND	ND	ND	N/A	ND	ND	124	0.0006	0.017	
9/15/11	48	10	ND	N/A	ND	ND	22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	32	0.0001	0.004
10/25/11	55	ND	ND	N/A	ND	ND	38	ND	ND	ND	ND	27	ND	ND	20	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	11	ND	96	0.0005	0.015
11/8/11	55	12	ND	N/A	ND	ND	45	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16	ND	N/A	ND	ND	ND	N/A	ND	ND	73	0.0004	0.011	
12/6/11	55	ND	ND	N/A	ND	ND	62	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	N/A	ND	ND	ND	N/A	ND	ND	83	0.0004	0.013	

TABLE 4

Building C Influent Concentrations ($\mu\text{g}/\text{m}^3$)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	LOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	Cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-Dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)									
1/3/12	50	ND	ND	N/A	ND	ND	55	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	N/A	ND	ND	ND	ND	N/A	ND	ND	76	0.0003	0.011										
2/16/12	54	ND	ND	N/A	ND	ND	76	ND	ND	ND	ND	ND	ND	ND	ND	ND	43	ND	N/A	ND	ND	ND	ND	N/A	ND	ND	119	0.0006	0.017										
3/15/12	55	ND	ND	N/A	ND	ND	93	ND	ND	ND	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	N/A	ND	ND	167	0.0008	0.026										
4/16/12	54	ND	ND	N/A	ND	ND	64	ND	ND	ND	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	N/A	ND	ND	136	0.0007	0.020										
5/9/12	51	ND	ND	N/A	ND	ND	72	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	9.8	ND	ND	65	ND	N/A	ND	ND	N/A	ND	167	0.0008	0.024									
6/4/12	52	ND	ND	N/A	ND	ND	71	ND	ND	ND	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	50	ND	N/A	ND	ND	N/A	ND	138	0.0006	0.003									
8/16/12	49	ND	ND	N/A	ND	ND	39	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	N/A	ND	ND	ND	ND	N/A	ND	ND	58	0.0003	0.008										
9/12/12	30	ND	ND	N/A	ND	ND	41	ND	ND	ND	ND	ND	ND	ND	ND	ND	23	ND	ND	ND	22	ND	N/A	ND	ND	N/A	ND	86	0.0002	0.007									
10/18/12	65	ND	ND	N/A	ND	ND	95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	45	ND	N/A	ND	ND	N/A	ND	140	0.0008	0.025										
11/13/12	61	ND	ND	N/A	ND	ND	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	270	ND	N/A	ND	ND	ND	N/A	31	16	335	0.0018	0.055								
12/6/12	62	ND	ND	N/A	ND	ND	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	22	ND	ND	ND	91	ND	N/A	ND	ND	5.3	N/A	ND	188	0.0010	0.033								
1/4/13	56	ND	ND	N/A	ND	ND	66	ND	ND	ND	ND	ND	ND	ND	ND	ND	42	ND	ND	ND	110	ND	N/A	ND	ND	ND	N/A	ND	218	0.0011	0.034								
2/6/13	60	ND	ND	N/A	ND	ND	49	ND	ND	ND	ND	ND	ND	ND	ND	ND	29	ND	ND	ND	91	ND	N/A	ND	ND	ND	N/A	ND	169	0.0009	0.026								
3/7/13	57	ND	ND	N/A	ND	ND	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	45	ND	ND	ND	100	ND	N/A	ND	ND	ND	N/A	ND	205	0.0011	0.033								
4/8/13	57	ND	ND	N/A	ND	ND	44	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	52	ND	N/A	ND	ND	ND	N/A	ND	117	0.0006	0.018								
5/10/13	112	ND	ND	N/A	ND	ND	120	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,900	ND	N/A	ND	ND	ND	N/A	80	ND	3,100	0.0312	0.968								
6/5/13	161	ND	ND	N/A	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	460	50	N/A	ND	ND	ND	N/A	31	15	566	0.0082	0.246								
7/3/13	182	12	ND	N/A	ND	12	ND	ND	ND	ND	9.4	ND	ND	ND	ND	ND	ND	ND	ND	290	16	N/A	11	ND	ND	N/A	43	23	416	0.0068	0.211								
8/14/13	180	ND	ND	N/A	ND	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	20	ND	ND	ND	210	18	N/A	ND	ND	ND	N/A	20	11	279	0.0045	0.140							
9/9/13	182	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	150	ND	N/A	ND	ND	ND	N/A	ND	ND	150	0.0025	0.074								
10/10/13	190	14	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	16	N/A	ND	ND	ND	N/A	20	10	260	0.0044	0.138								
11/7/13	160	13	ND	N/A	ND	ND	18	ND	ND	ND	9.8	ND	ND	ND	ND	ND	ND	ND	ND	280	ND	N/A	ND	ND	ND	N/A	45	24	390	0.0056	0.168								
12/5/13	154	6.3	ND	ND	N/A	13	6.6	ND	ND	ND	7.3	4.1	33.9	5.4	4.0	ND	ND	ND	ND	228	N/A	ND	4.8	2.4	ND	N/A	30.4	16.1	362	0.0050	0.155								
1/13/14	175	13.7	ND	4.7	ND	N/A	5.7	ND	ND	ND	10.3	3.4	22.6	5.6	49.6	ND	ND	ND	ND	298	N/A	5.5	17.8	ND	ND	N/A	49.1	19.3	505	0.0079	0.246								
2/14/14	168	1.8	ND	4.5	ND	N/A	2.3	2.2	ND	ND	2.1	ND	5.3	2.2	2.7	ND	ND	ND	ND	157	N/A	ND	2.8	ND	ND	N/A	8.9	4.7	197	0.0030	0.083								
3/12/14	175	9.1	ND	3.0	3.2	N/A	4.9	2.2	ND	ND	5.9	ND	11.5	3.3	6.0	ND	ND	ND	ND	261.0	N/A	1.6	6.0	3.0	ND	N/A	25.3	12.3	358	0.0056	0.175								
4/10/14	168	10	ND	7.1	ND	N/A	7.0	ND	ND	ND	67	ND	12.1	5.1	50.7	ND	6.6	ND	ND	266	N/A	ND	6.9	ND	ND	N/A	218	67.4	724	0.0109	0.317								
5/5/14	182	11.8	1.2	5.8	1.5	J	N/A	7.6	2.9	ND	ND	4.7	1.2	J	12.7	3.6	30.6	ND	ND	236	N/A	2.1	6.8	3.5	ND	N/A	20.9	11.3	364	0.0060	0.149								
6/5/14	180	12.8	ND	ND	2.7	N/A	2.7	2.1	ND	ND	ND	4.1	24.5	13.1	23.1	11.6	ND	ND	ND	154	N/A	6.1	18	6.1	ND	N/A	27	12.1	320	0.0052	0.160								
7/3/14	182	14.4	0.77	J	11.2	5.6	N/A	4.1	1.4	J	ND	ND	0.88	J	6.3	147	16.9	7.1	5.7	0.81	J	ND	ND	ND	ND	N/A	19.4	9.8	449	0.0073	0.206								
8/13/14	166	10.8	1.7	N/A	66.2	1.5	4.7	ND	7.6	ND	4.8	7.5	ND	20.6	7.0	5.0	ND	ND	ND	33.6	289	N/A	N/A	7.8	3.9	ND	N/A	30.2	16.0	518	0.0077	0.317							
9/12/14	175	8.0	1.1	5.6	ND	N/A	5.3	2.9	7.0	ND	ND	2.9	0.76	J	31.2	2.1	3.4	ND	ND	37.9	124	N/A	2.1	5.4	2.1	ND	N/A	17.2	10.8	270	0.0042	0.127							
10/9/14	174	6.6	1.2	10.1	0.98	N/A	6.6	2.0	6.1	2.7	3.0	3.2	2.1	J	13.3	2.7	5.1	0.71	J	38.6	137	N/A	2.6	4.7	2.0	ND	N/A	15.8	9.5	277	0.0043	0.117							
11/5/14	175	5.2	ND	7.5	ND	N/A	5.7	2.3	3.5	ND	ND	3.2	J	6.0	10.5	5.4	4.3	ND	ND	22.6	111	N/A	3.5	J	5.4	3.2	J	ND	N/A	11.0	J	6.4	217	0.0034	0.092				
12/4/14	168	5.3	ND	8.1	1.3	N/A	7.0	2.8	1.9	ND	ND	3.2	J	3.3	J	8.7	7.8	5.0	1.6	J	9.1	106	N/A	3.6	J	4.7	3.7	J	ND	N/A	8.6	5.8	198	0.0030	0.086				
1/15/15	175	6.2	ND	8.3	1.7	N/A	5.9	3.1	ND	ND	ND	1.2	J	2.5	J	3.1	J	2.8	3.1	ND	3.0	87.5	N/A	1.2	J	5.5	2.0	ND	N/A	4.8	2.9	145	0.0023	0.096					
2/9/15	170	5.6	ND	3.8	0.94	N/A	4.6	ND	ND	ND	1.3	J	0.61	J	2.3	J	1.7	3.7	ND	ND	75.3	N/A	ND	3.8	1.7	ND	N/A	5.3	3.2	114	0.0017	0.043							
3/10/15	182	5.0	2.8	4.0	0.82	N/A	3.7	1.5	J	ND	ND	ND	1.3	J	0.62	J	3.0	J	2.1	2.5	ND	0.94	J	80.5	N/A	0.97	J	4.0	1.7	ND	N/A	4.4	2.9	123	0.0020	0.058			
4/6/15	175	6.5	1.1	4.6	1.2	N/A	3.6	1.8	2.0	ND	1.1	J	2.0	ND	6.1	2.3	2.3	ND	ND	14.6	107	N/A	1.5	J	5.8	2.4	ND	N/A	8.0	4.3	178	0.0028	0.076						
5/8/15	175	6.1	ND	10.4	ND	N/A	2.6	2.3	J	1.7	J	ND	5.3	J	4.0	J	7.8	J	2.1	J	5.2	ND	14	128	N/A	5.1	J	10	5.3	J	ND	N/A	13.3	J	6.5	J	230	0.0036	0.116
6/2/15	170	7.4	1.2	8.3	1.0	N/A	4.0	ND	ND	ND	2.5	6.3	14.4	3.2	4.3	ND	32.1	132	N/A	3.7	11.1	4.9	ND	ND	N/A	N/A	11.4	7.1	260	0.0040	0.099								
7/1/15	175	3.2	ND	6.6	4.9	N/A	ND	ND	3.2	ND	ND	ND	ND	ND	ND	2.5	ND	22	20	N/A	ND	ND	ND	ND	ND	N/A	N/A	N/A	62	0.0010	0.028								
8/10/15	175	5.1	2.1	J	15	0.74	J	N/A	2.7	2.4	5.9	ND	2.0	1.3	J	ND	ND	1.1	J	15.0	ND	45	41	N/A	ND	2.0	0.84	J	ND	7.5	N/A	N/A	150	0.0024	0.094				
9/11/15	175	8.0	1.3	J	12	1.1	J	N/A	2.4	2.3	7.7	ND	2.8	2.0	8.7	ND	1.2	J	6.2	ND	58	73	N/A	1.1	J	3.5	1.3	J	ND	11	N/A	N/A	204	0.0032	0.102				
10/7/15	175	5.5	ND	3.3	ND	N/A	0.68	J	2.1	2.0	ND	1.0	J	0.60	J	3.4	J	ND	ND	8.7	ND	18	14	N/A	ND	1.2	J	ND	2.6	J	N/A	N/A	63	0.0010	0.026				
11/2/15	182	5.1	0.73	J	8.6	0.93	J	N/A	2.3	3.2	3.7	ND	1.4	J	1.2	J	3.4	J	ND	3.5	3.0	ND	32	50	N/A	ND	2.1	0.94	J	ND	5.6	N/A	N/A	128	0.0021	0.054			
12/3/15	182	4.5	0.59	J	14	0.51	J	N/A	2.1	2.4	1.5	J	0.54	J	0.61	J	2.4	J	ND	0.94	J	3.9	ND	14	43	N/A	ND	1.9	J	ND	ND	3.2	J	N/A	N/A	96	0.0016	0.049	

TABLE 4

Building C Influent Concentrations (µg/m³)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	LOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-Dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)		
11/15/16	188	4.4	ND	4.8	0.43 J	N/A	0.81 J	2.0	0.27 J	ND	ND	ND	2.4 J	ND	0.95 J	5.0	ND	2.4	30	N/A	ND	1.3 J	ND	ND	2.1 J	N/A	N/A	57	0.0010	0.041		
3/9/16	182	6.4	0.64 J	12	0.88 J	N/A	1.9	2.3	0.69 J	ND	0.31 J	0.80 J	3.3 J	ND	0.91 J	10	ND	11	41	N/A	ND	2.6	0.86 J	ND	3.8	N/A	N/A	99	0.0016	0.088		
5/12/16	182	2.9	0.50 J	6.6	1.0 J	N/A	1.6	2.9	0.44 J	ND	0.48 J	1.1 J	2.8 J	ND	0.72 J	73	ND	5.4	B	31	N/A	ND	1.6 J	ND	5.2	N/A	N/A	137	0.0022	0.144		
7/14/16	180	8.0	1.2 J	13	2.4	N/A	2.5	2.7	11	ND	5.5	1.3 J	4.2	ND	1.1 J	6.2	ND	76	B	46	N/A	1.2 J	4.4	1.5 J	ND	6.5	N/A	N/A	195	0.0031	0.198	
9/7/16	182	8.6	0.52 J	4.0	2.5	N/A	2.5	2.4	4.2	ND	1.9	1.4 J	5.3	ND	1.0 J	3.2	ND	29	45	N/A	0.93 J	3.5	1.5 J	ND	6.2	N/A	N/A	124	0.0020	0.111		
11/13/16	185	9.8	0.80 J	22.0	2.7	N/A	2.8	3.0	1.7	ND	0.76 J	1.9	13.0	ND	1.6 J	14	ND	13	47	N/A	1.2 J	4.3 J	1.4 J	ND	9.1	N/A	N/A	150	0.0025	0.142		
11/12/17	185	2.0	ND	6.3	0.78 J	N/A	1.9	1.9 J	ND	ND	ND	0.90 J	6.2	ND	0.92 J	20	ND	1.4	J	33	N/A	ND	2.0	0.91 J	ND	4.5	N/A	N/A	83	0.0014	0.096	
3/8/17	185	3.1	0.58 J	4.8	0.59 J	N/A	3.5	2.7	0.31 J	ND	ND	2.2	3.3 J	ND	3.1	6.2	ND	1.3	J	40	N/A	ND	1.8 J	ND	12	N/A	N/A	85	0.0014	0.078		
5/5/17	185	4.9	0.59 J	1.6	1.1 J	N/A	5.3	2.1	0.36 J	ND	ND	0.90 J	2.6 J	ND	2.3 J	4.1	0.41 J	1.4	J	38	N/A	ND	2.7	1.0 J	ND	5.3	N/A	N/A	75	0.0012	0.072	
7/6/17	180	6.1	0.76 J	15	2.9	N/A	5.4	1.9 J	0.42 J	ND	ND	1.9	5.4	2.0	1.4 J	7.1	ND	1.1	JB	31	N/A	ND	2.5	0.91 J	ND	7.0	N/A	N/A	93	0.0015	0.093	
9/7/17	175	6.5	0.90 J	2.7	1.5 J	N/A	2.3	1.8 J	ND	ND	ND	0.91 J	5.9	ND	0.7 J	5.6	ND	1.1	J	38	N/A	ND	3.5	1.5 J	ND	3.7	N/A	N/A	77	0.0012	0.076	
11/8/17	185	4.8	0.55 J	4.1	1.0 J	N/A	3.2	2.2	ND	ND	ND	ND	5.0	ND	1.4 J	2.8	ND	0.66	J	43	N/A	ND	2.2	0.9 J	ND	2.5	J	N/A	N/A	74	0.0012	0.076
1/9/18	180	6.4	0.60 J	11	ND	N/A	2.7	2.2	ND	ND	ND	0.74 J	ND	ND	2.5 J	4.2	ND	1.7	J	33	N/A	ND	2.6	1.0 J	0.54	4.8	J	N/A	N/A	74	0.0012	0.074
3/8/18	180	1.1 J	0.57 J	4.5	0.63 J	N/A	4.9	2.0	ND	ND	ND	0.70 J	2.5 J	ND	5.0 J	2.8	ND	0.44	J	47	N/A	ND	2.6	1.0 J	0.54	3.3	J	N/A	N/A	80	0.0013	0.075
5/8/18	170	3.5 J	0.56 J	3.4	2.4	N/A	4.7	2.5	ND	ND	ND	1.0 J	2.8 J	ND	3.6	17.0	ND	0.49	J	32	N/A	ND	4.0	1.6 J	ND	5.9	J	N/A	N/A	85	0.0013	0.080
7/12/18	150	4.9	0.68 J	6.4	5.5	N/A	2.9	1.7 J	ND	ND	ND	0.79 J	65	ND	1.0 J	8.3	ND	1.5	JB	34	N/A	ND	3.8	1.4 J	ND	4.1	N/A	N/A	142	0.0019	0.124	
9/11/18	155	3.2	0.55 J	7.8	1.1 J	N/A	1.0 J	2.9	ND	ND	ND	23	3.2 JB	ND	0.7 J	6.2	ND	0.47	JB	35	N/A	1.2 J	9.3	2.4 J	ND	5.2	N/A	N/A	103	0.0014	0.088	
11/9/18	155	2.0	ND	3.8	ND	N/A	2.5	2.5	ND	ND	ND	0.86 J	2.8 J	ND	0.6 J	2.7	ND	ND	25	N/A	ND	3.9	1.3 J	ND	1.9	J	N/A	N/A	50	0.0007	0.041	
1/21/19	155	1.6	ND	3.0	CI	ND	N/A	2.3	1.5 J	ND	ND	ND	0.88 J	3.2 J	ND	0.9 J	5.0	ND	ND	20	N/A	ND	2.7	0.9 J	ND	4.7	N/A	N/A	47	0.0006	0.047	
3/13/19	140	4.9	0.48 J	2.3	CI	ND	N/A	2.8	1.5 J	ND	ND	ND	2.7 J	ND	1.1 J	2.7	ND	0.68	J	26	N/A	ND	1.9 J	0.75 J	ND	1.2	J	N/A	N/A	49	0.0006	0.031

Notes:

µg/m³ - micrograms per cubic meter

B - compound was found in the blank and sample

EPA - United States Environmental Protection Agency

lbs. - pounds

lbs./day - pounds per day

CL - result suspected to be biased high due to chromatographic interference

Sampling not conducted in July 2012 due to system shutdown test.

Completed first-phase system expansion on October 31, 2012.

Completed second-phase system expansion on May 10, 2013.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

scfm - standard cubic feet per minute

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

TABLE 5 Building C Mid-GAC Concentrations ($\mu\text{g}/\text{m}^3$)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-Trichlorobenzene	1,1,1-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	
4/2/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	720	N/A	ND	ND	720	0.004	
4/24/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	230	N/A	ND	ND	230	0.001	
5/21/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	N/A	ND	ND	50	0.000	
6/19/08	28	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	51	N/A	ND	ND	79	0.000	
7/18/08	ND	ND	N/A	ND	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40	N/A	ND	ND	190	0.001	
8/13/08	ND	ND	N/A	ND	750	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	N/A	ND	ND	765	0.004	
9/11/08	ND	ND	N/A	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	N/A	ND	ND	23	0.000	
11/12/08	ND	ND	N/A	ND	160	ND	ND	ND	ND	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	17	N/A	ND	ND	227	0.001	
12/18/08	ND	ND	N/A	ND	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	N/A	ND	ND	205	0.001	
1/22/09	ND	ND	N/A	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	35	N/A	ND	ND	48	0.000	
2/20/09	ND	ND	N/A	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	N/A	ND	ND	29	0.000	
3/18/09	ND	ND	N/A	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	N/A	ND	ND	119	0.001	
4/17/09	ND	ND	N/A	ND	340	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.1	N/A	ND	ND	347	0.002	
5/20/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000	
6/23/09	ND	ND	N/A	ND	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.2	N/A	ND	ND	75	0.000	
7/23/09	ND	ND	N/A	ND	360	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	381	0.002	
8/28/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	20	0.000	
9/28/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000	
10/27/09	ND	ND	N/A	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	13	0.000	
11/24/09	ND	ND	N/A	ND	23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	23	0.000	
12/23/09	ND	ND	N/A	ND	23	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	36	0.000	
1/19/10	ND	ND	N/A	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	21	0.000	
2/17/10	ND	ND	N/A	ND	23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	23	0.000	
3/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000	
4/16/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000	
5/13/10	15	ND	N/A	ND	9.6	ND	ND	ND	ND	9.8	ND	ND	ND	51	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	36	10	131	0.001	
6/18/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	79	16	ND	26	15	136	0.001
7/19/10	11	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	11	0.000	
8/19/10	ND	ND	N/A	ND	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	15	0.000	
9/17/10	35	ND	N/A	ND	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	61	0.000	
10/12/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND	ND	24	ND	ND	ND	ND	ND	ND	N/A	ND	ND	36	0.000	
11/2/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND	N/A	ND	ND	12	0.000
12/1/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000	
1/5/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9	N/A	ND	ND	9.0	0.000	
2/7/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000	
3/3/11	ND	ND	N/A	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	20	0.000	
4/14/11	ND	ND	N/A	ND	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	180	0.000	
5/6/11	ND	ND	N/A	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	11	0.000	
6/9/11	32	ND	N/A	ND	17	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	62	0.000	
7/11/11	29	ND	N/A	ND	160	ND	ND	ND	ND	28	ND	ND	74	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	24	8.9	324	0.000	
8/3/11	25	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	25	0.000	
9/15/11	22	ND	N/A	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	34	0.000	
10/25/11	16	ND	N/A	ND	19	ND	ND	ND	ND	24	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	13	ND	92	0.000	
11/8/11	16	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	16	0.000	
12/6/11	8.4	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	8.4	0.000	
1/3/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000	
2/16/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000	

TABLE 5 Building C Mid-GAC Concentrations (µg/m³)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-Trichlorobenzene	1,1,1-trichloroethene	trichloroethene	1,1,2-trichloro-1,2,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)								
3/15/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000									
4/16/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000									
5/9/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000									
6/4/12	ND	ND	N/A	ND	ND	ND	ND	ND	8.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	8.7	0.000									
8/15/12	ND	ND	N/A	ND	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	28	0.000									
9/12/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.000									
10/18/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000									
11/13/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000									
12/6/12	ND	ND	N/A	ND	9.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	57	ND	ND	ND	ND	ND	N/A	ND	ND	66	0.000									
1/4/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	N/A	ND	ND	21	0.000									
2/6/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	N/A	ND	ND	24	0.000									
3/7/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.000									
4/8/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.000									
5/10/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	87	ND	ND	ND	ND	ND	N/A	ND	ND	87	0.001									
6/5/13	ND	ND	N/A	ND	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	N/A	ND	ND	47	0.001									
7/3/13	ND	ND	N/A	ND	34	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	N/A	ND	ND	69	0.001									
8/14/13	9.9	ND	N/A	ND	17	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	N/A	ND	ND	56	0.001									
9/9/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000									
10/10/13	11	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	11	0.000									
11/7/13	11	ND	N/A	ND	9.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	N/A	ND	ND	31	0.000									
12/5/13	10.9	ND	N/A	ND	7.4	8.6	ND	ND	ND	ND	6.4	ND	ND	2.5	ND	ND	10.7	N/A	ND	ND	ND	ND	N/A	ND	ND	47	0.001									
1/13/14	8.3	ND	4.2	ND	11.0	2.2	ND	ND	ND	1.7	2.4	4.8	ND	21.3	ND	ND	3.0	124	N/A	ND	2.7	ND	N/A	5.8	2.4	194	0.003									
2/14/14	5.8	ND	6.1	ND	5.7	2.0	ND	ND	ND	ND	2.5	ND	ND	ND	ND	ND	256	N/A	ND	ND	ND	ND	N/A	ND	ND	278	0.004									
3/12/14	13.5	ND	3.7	ND	10.5	2.4	ND	ND	ND	3.7	ND	ND	18.2	12.5	ND	ND	5.6	N/A	5.9	15.3	4.4	ND	N/A	17.1	7.6	120	0.002									
4/10/14	7.8	ND	8.2	ND	14.6	ND	ND	ND	84.3	ND	ND	ND	64.8	ND	ND	9.6	18.6	N/A	ND	ND	ND	ND	N/A	263	73.6	545	0.008									
5/5/14	9.6	ND	6.1	1.3	11.7	2.9	ND	ND	ND	ND	1.4	J	3.4	J	ND	1.6	0.90	J	ND	ND	0.86	J	N/A	ND	0.88	J	ND	41	0.001							
6/5/14	8.5	ND	2.6	ND	5.9	2.6	ND	ND	ND	ND	20.6	2.3	J	9.6	1.3	J	ND	ND	ND	ND	N/A	2.0	2.6	ND	N/A	1.9	J	2.2	62	0.001						
7/3/14	10.2	0.64	J	12.3	5.1	5.8	1.8	ND	ND	1.4	J	9.7	4.1	J	ND	1.4	0.79	J	ND	ND	3.4	N/A	ND	1.6	J	1.5	J	ND	N/A	1.9	J	1.6	63	0.001		
8/13/14	11.4	1.8	N/A	60.1	5.8	1.6	J	5.1	0.69	J	ND	6.0	1.3	J	5.0	J	2.6	10.8	ND	5.4	4.4	20.1	N/A	N/A	14.4	6.3	ND	N/A	18.7	6.4	188	0.003				
9/12/14	7.4	2.1	5.9	31.4	5.4	2.4	9.4	ND	ND	0.41	J	1.1	J	ND	0.62	J	1.3	ND	ND	25.3	50.2	N/A	ND	ND	ND	ND	N/A	0.96	J	ND	144	0.002				
10/9/14	10.8	ND	11.9	0.90	ND	2.2	1.2	J	ND	ND	ND	1.4	J	4.0	J	ND	1.5	ND	ND	ND	2.2	N/A	ND	ND	ND	ND	N/A	0.87	J	ND	37	0.001				
11/5/14	4.9	1.1	8.5	7.3	6.0	2.3	4.7	ND	ND	ND	5.9	5.4	4.2	1.3	ND	ND	15.7	2.8	N/A	ND	ND	ND	ND	N/A	ND	ND	N/A	ND	ND	70	0.001					
12/4/14	4.9	1.2	7.4	4.9	6.2	3.0	2.9	ND	ND	ND	4.4	J	4.0	J	6.0	2.9	J	ND	ND	19.3	ND	N/A	ND	3.1	J	ND	ND	N/A	ND	ND	66	0.001				
1/15/15	8.1	ND	8.4	1.8	5.9	3.8	ND	ND	ND	0.74	J	1.7	J	1.0	J	1.7	2.2	ND	ND	9.4	2.9	N/A	ND	0.95	J	ND	N/A	2.4	J	0.80	J	52	0.001			
2/9/15	5.9	ND	3.8	1.1	5.7	ND	ND	ND	ND	ND	ND	ND	ND	1.0	J	ND	ND	ND	5.5	6.5	N/A	ND	0.87	J	ND	ND	N/A	1.1	J	ND	31	0.000				
3/10/15	1.9	2.7	4.2	ND	3.9	1.9	ND	ND	ND	ND	ND	1.1	J	ND	0.84	J	ND	ND	3.1	4.6	N/A	ND	0.80	J	ND	ND	N/A	0.71	J	ND	26	0.000				
4/6/15	2.0	1.1	4.6	1.5	6.0	2.3	1.8	0.71	0.95	J	0.70	J	4.7	J	2.1	J	ND	3.8	ND	ND	9.8	10.6	N/A	ND	1.4	J	0.60	J	ND	N/A	2.6	J	1.2	J	58	0.001
5/8/15	4.2	ND	11.3	ND	3.8	1.7	J	1.5	J	ND	ND	ND	2.1	J	1.8	J	ND	0.79	J	ND	ND	9.2	12.5	N/A	ND	1.4	J	ND	ND	N/A	ND	ND	50	0.001		
6/2/15	5.8	ND	6.8	0.82	2.8	2.8	1.6	ND	ND	0.76	J	4.2	J	5.6	ND	1.9	ND	ND	6.0	10.6	N/A	1.1	J	2.5	1.1	J	ND	N/A	2.1	J	1.1	J	58	0.001		
7/1/15	ND	ND	7.9	7.9	2.1	ND	9.2	ND	3.5	ND	5.5	ND	ND	ND	ND	ND	13.0	7.4	N/A	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	N/A	57	0.001					
8/10/15	5.2	ND	17	2.4	1.7	2.8	3.9	ND	1.6	ND	8.2	ND	ND	9.1	ND	ND	5.2	2.9	N/A	ND	ND	ND	ND	1.2	J	N/A	N/A	N/A	61	0.001						
9/11/15	10	0.74	J	11	3.6	3.9	2.5	8.6	ND	3.2	0.62	J	11	ND	ND	ND	2.8	ND	ND	16	5.9	N/A	ND	1.5	J	ND	ND	3.0	J	N/A	N/A	84	0.001			
10/7/15	9.5	1.2	J	5.0	1.9	J	2.3	2.2	7.1	ND	2.7	ND	5.1	ND	ND	3.5	ND	ND	33	0.79	J	N/A	ND	ND	ND	1.8	J	ND	ND	N/A	N/A	76	0.001			
11/2/15	5.2	2.2	J	8.5	1.9	3.1	3.1	7.5	ND	2.6	0.83	J	3.8	ND	ND	ND	ND	69	ND	N/A	ND	ND	ND	2.7	J	N/A	N/A	N/A	110	0.002						
12/3/15	5.8	0.50	J	18	0.71	J	1.6	2.6	2.0	ND	0.76	J	ND	3.0	J	ND	ND	ND	18	ND	N/A	ND	ND	ND	ND	ND	ND	N/A	N/A	N/A	53	0.001				
1/15/16	2.0	ND	5.4	ND	1.0	J	2.1	0.60	J	ND	0.32	J	ND	2.4	J	ND	ND	ND	ND	7.7	1.0	J	N/A	ND	ND	0.83	J	ND	ND	N/A	N/A	23	0.000			
3/9/16	4.8	ND	11	0.38	J	1.2	J	2.4	0.46	J	ND	ND	ND	3.5	J	ND	ND	ND	3.8	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	N/A	35	0.001					

TABLE 5
Building C Mid-GAC Concentrations ($\mu\text{g}/\text{m}^3$)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-Trichlorobenzene	1,1,1-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
5/12/16	3.6	ND	6.8	0.44 J	1.2 J	3.5	0.46 J	ND	0.51 J	ND	ND	0.54 J	3.9	ND	ND	6.0 B	ND	N/A	ND	0.81 J	ND	ND	ND	N/A	N/A	28	0.000	
7/14/16	9.3	0.55 J	9.9	1.4 J	3.4	2.7	3.3	ND	2.7	ND	6.3	ND	1.4 J	ND	ND	11 B	ND	N/A	ND	1.6 J	ND	ND	0.52 J	N/A	N/A	54	0.001	
9/7/16	12	0.65 J	3.5	1.5 J	2.7	2.0	7.0	ND	2.7	ND	4.7	ND	1.1 J	ND	ND	16	3.2	N/A	ND	1.1 J	ND	ND	ND	N/A	N/A	58	0.001	
11/3/16	11	0.58 J	20.0	1.9	3.1	3.3	6.2	ND	1.9	0.8 J	13.0	ND	ND	9.1	ND	ND	17	0.7 J	N/A	ND	1.1 J	ND	ND	4.0	N/A	N/A	94	0.002
1/12/17	5.8	ND	5.8	0.56 J	1.2 J	2.0	0.8 J	ND	ND	ND	5.5	ND	ND	11	ND	ND	4.4	ND	N/A	ND	ND	ND	2.7 J	N/A	N/A	40	0.001	
3/8/17	5.3	ND	4.4	0.66 J	1.7	2.6	0.69 J	ND	ND	0.66 J	2.4 J	ND	70	4.4	ND	ND	5.3	0.55 J	N/A	ND	ND	ND	3.8	N/A	N/A	102	0.002	
5/5/17	6.3	ND	1.7	0.68 J	2.3	1.7 J	0.46 J	ND	ND	0.71 J	3.2 J	ND	ND	ND	ND	4.6	ND	N/A	ND	0.69 J	ND	ND	3.9	N/A	N/A	26	0.000	
7/6/17	8.4	ND	18	1.0 J	5.7	2.3	0.49 J	ND	ND	1.60 J	5.9	ND	2.2 J	6.2	0.47 B	ND	5.6	0.68	N/A	ND	0.79 J	ND	ND	4.3	N/A	N/A	64	0.001
9/7/17	11	ND	3.1	1.5 J	6.9	2.0	0.38 J	ND	0.31 J	0.64 J	9.2	ND	ND	5.0	0.43 J	ND	5.8	4.2	N/A	ND	1.0 J	ND	ND	ND	N/A	N/A	51	0.001
11/8/17	17	ND	3.5	0.84 J	1.7	2.0	ND	ND	ND	ND	3.3 J	ND	ND	ND	ND	3.4	3.9	N/A	ND	2.0 J	ND	ND	ND	N/A	N/A	38	0.001	
1/9/18	4.2	ND	9.6	ND	ND	2.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.71 J	3.9	N/A	ND	ND	ND	ND	3.0 J	N/A	N/A	24	0.000	
3/8/18	8.9	ND	4.7	ND	ND	2.2	ND	ND	ND	ND	3.0 J	ND	ND	2.7	ND	ND	1.5 J	1.9	N/A	ND	1.1 J	ND	ND	2.0 J	N/A	N/A	28	0.000
5/8/18	0.6	ND	4.2	1.1 J	5.1	2.8	ND	ND	ND	0.73 J	3.7 J	ND	1.0 J	17.0	ND	ND	3.1	N/A	N/A	ND	0.9 J	ND	ND	4.3	N/A	N/A	45	0.001
7/12/18	13	ND	7.0	1.1 J	7.0	1.6 J	ND	ND	ND	ND	8.0	ND	1.2 J	4.0	0.50 J	ND	4.0 B	N/A	N/A	ND	1.7 J	ND	ND	2.6 J	N/A	N/A	52	0.001
9/11/18	13	ND	6.2	ND	6.5	2.9	ND	ND	0.30 J	0.62 J	3.6 B	ND	ND	4.9	0.44 J	ND	7.2 B	N/A	N/A	0.87 J	7.3	1.8 J	ND	2.2 J	N/A	N/A	58	0.001
11/9/18	10	ND	2.9	3.5	1.7	2.6	ND	ND	ND	ND	3.5 J	ND	ND	ND	ND	ND	2.6	N/A	N/A	ND	2.4	ND	ND	ND	N/A	N/A	29	0.000
1/21/19	7.8	ND	3.3 CI	1.6 J	0.92 J	1.4 J	ND	ND	ND	ND	3.8 J	ND	ND	ND	ND	ND	1.5 J	ND	N/A	ND	1.2 J	ND	ND	ND	N/A	N/A	22	0.000
3/13/19	7.3	ND	3.1 CI	1.0 J	0.83 J	1.3 J	ND	ND	ND	ND	3.0 J	ND	ND	ND	ND	ND	1.0 J	N/A	N/A	ND	ND	ND	ND	ND	N/A	N/A	18	0.000

Notes:

$\mu\text{g}/\text{m}^3$ - micrograms per cubic meter

B - compound was found in the blank and sample

EPA - United States Environmental Protection Agency

GAC - granular activated carbon

CL - result suspected to be biased high due to chromatographic interference

Sampling not conducted in July 2012 due to shutdown test.

November 2012 sample collected while four new extraction wells installed in October 2012 were operating (November 5-26, 2012). Wells temporarily closed until May 16, 2013.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

lbs./day - pounds per day

N/A - not applicable (samples not analyzed for compound)

ND - non-detect (below detection limit)

OM&M - operation, maintenance, and monitoring

SSD - sub-slab depressurization

TO-15 - Toxic Organic Method 15

VOCs - volatile organic compounds

TABLE 6

Building C Effluent Concentrations ($\mu\text{g}/\text{m}^3$)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland
 Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	methyl-tert-butyl ether	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-trichlorobenzene	1,1,1-trichlorobenzene	1,1,2-trichloroethane	trichloroethene	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOC's	Mass (lbs./day)
3/31/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	ND	ND	ND	0	0.000
4/2/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	170	N/A	ND	ND	170	0.001	
4/4/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	360	N/A	ND	ND	360	0.002		
4/11/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	N/A	ND	ND	550	N/A	ND	ND	575	0.003
4/17/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	100	N/A	ND	ND	100	0.001
4/24/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	260	N/A	ND	ND	260	0.001
5/23/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	52	N/A	ND	ND	52	0.000
6/19/08	51	ND	N/A	ND	ND	ND	ND	ND	ND	ND	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	54	N/A	ND	ND	155	0.001
7/18/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	29	N/A	ND	ND	29	0.000
8/13/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	10	ND	16	N/A	ND	ND	26	0.000
9/11/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	63	ND	ND	ND	28	ND	ND	ND	ND	ND	N/A	ND	ND	6.1	N/A	ND	ND	97	0.001
11/12/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	47	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	16	N/A	ND	ND	63	0.000
12/18/08	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	31	N/A	ND	ND	31	0.000
2/4/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	29	N/A	ND	ND	29	0.000
2/20/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	6.8	N/A	ND	ND	6.8	0.000
3/18/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	26	N/A	ND	ND	26	0.000
4/17/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	8.9	N/A	ND	ND	8.9	0.000
5/20/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
6/23/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5.5	N/A	9.4	ND	15	0.000
7/23/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	29	0.000
8/28/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
9/28/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/27/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
11/24/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/23/09	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	10	0.000
1/19/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
3/17/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/16/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
5/13/10	36	ND	N/A	ND	ND	ND	ND	ND	ND	24	31	ND	ND	ND	140	ND	ND	ND	ND	ND	N/A	17	ND	ND	N/A	89	25	362	0.002
6/18/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	68	16	ND	N/A	28	16	128	0.001
7/19/10	10	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	10	0.000
8/19/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
9/17/10	13	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	13	0.000
10/12/10	ND	ND	N/A	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	42	ND	ND	110	ND	25	N/A	ND	ND	ND	N/A	ND	ND	198	0.001
11/2/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/1/10	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	24	0.000
1/5/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	12	N/A	ND	ND	12	0.000
2/7/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5	N/A	ND	ND	5.3	0.000
3/3/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/14/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	13	0.000
5/6/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	15	N/A	ND	ND	ND	N/A	ND	ND	26	0.000
6/9/11	8.4	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.9	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	17	0.000
7/11/11	9.5	ND	N/A	ND	ND	ND	ND	ND	ND	ND	75	ND	ND	ND	61	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	21	ND	167	0.001
8/3/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	21	0.000
9/15/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/25/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	23	ND	ND	ND	21	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	11	ND	55	0.000

TABLE 6

Building C Effluent Concentrations (µg/m³)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	methyl-tert-butyl ether	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-trichlorobenzene	1,1,1-trichlorobenzene	1,1,2-trichloroethane	trichloroethene	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)						
11/8/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	ND	ND	ND	0.0	0.000						
12/6/11	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	ND	ND	ND	0.0	0.000						
1/3/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000						
2/16/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000						
3/15/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000						
4/16/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000						
5/9/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000						
6/4/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	8.4	ND	23	0.000						
8/15/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000						
9/12/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	22	0.000						
10/18/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000						
11/13/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000						
12/6/12	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000						
1/4/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000						
2/6/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5.3	N/A	ND	ND	5.3	0.000						
3/7/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000						
4/8/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000						
5/10/13	9.9	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34	N/A	ND	ND	ND	N/A	ND	ND	44	0.000						
6/5/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000						
7/3/13	6.4	ND	N/A	ND	ND	ND	ND	ND	ND	ND	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	35	0.001						
8/14/13	5.8	ND	N/A	ND	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	23	0.000						
9/9/13	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000						
10/10/13	11	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	11	0.000						
11/7/13	10	ND	N/A	ND	ND	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	30	0.000						
12/5/13	9.3	ND	ND	ND	2.1	9.2	ND	ND	ND	ND	13.9	ND	ND	ND	3.5	ND	ND	ND	ND	3.7	ND	4.9	2.3	ND	N/A	ND	ND	49	0.001						
1/13/14	4.8	ND	4.3	1.6	8.2	ND	ND	ND	ND	ND	2.3	ND	4.8	ND	26.3	ND	ND	ND	ND	3.8	1.7	7.3	ND	ND	N/A	3.6	ND	69	0.001						
2/14/14	6.6	3.3	10.6	3.8	7.0	4.5	2.5	2.4	2.4	2.9	1.3	2.1	3.0	4.5	4.0	2.3	3.3	3.6	3.1	5.7	8.7	6.1	4.3	ND	N/A	3.4	2.8	104	0.002						
3/12/14	6.9	ND	2.5	ND	ND	2.2	ND	ND	ND	ND	13.7	ND	ND	ND	3.2	ND	ND	ND	ND	1.9	0.94	5.1	2.3	ND	N/A	ND	ND	39	0.001						
4/10/14	6.2	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	95.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	91.7	633	0.010						
5/5/14	6.0	ND	6.8	ND	2.3	3.2	ND	ND	ND	ND	1.4	J	ND	4.0	J	ND	3.4	ND	ND	ND	ND	1.4	J	7.2	3.5	ND	N/A	1.2	J	ND	40	0.001			
6/5/14	5.7	ND	2.9	ND	2.5	2.9	ND	ND	ND	ND	20	ND	2.3	J	21.1	2.3	ND	ND	ND	ND	ND	3.1	7.5	3.5	ND	N/A	1.5	J	1.8	77	0.001				
7/3/14	10.6	ND	10.6	1.6	4.2	1.1	J	ND	ND	ND	4.3	5.8	J	ND	2.4	J	20.5	4.2	ND	ND	ND	1.6	1.9	9.7	5.4	ND	N/A	7.4	1.8	93	0.002				
8/13/14	6.1	ND	N/A	31.1	4.5	ND	2.1	J	ND	ND	ND	ND	1.8	J	ND	3.0	ND	ND	ND	ND	ND	N/A	8.3	4.4	ND	N/A	3.4	J	2.0	J	67	0.001			
9/12/14	4.0	0.89	J	5.9	59.4	3.8	3.6	7.3	ND	3.9	ND	0.80	J	ND	1.6	J	0.62	J	2.2	ND	ND	3.9	ND	6.7	1.4	J	8.0	ND	ND	N/A	0.95	J	ND	115	0.002
10/9/14	6.2	ND	10.9	2.1	ND	ND	2.0	ND	ND	ND	2.3	J	ND	4.0	J	ND	2.3	ND	ND	ND	ND	2.1	6.3	2.9	ND	N/A	ND	ND	41	0.001					
11/5/14	4.2	ND	9.0	9.0	2.2	2.6	4.7	ND	ND	ND	6.4	ND	5.9	4.5	2.2	ND	ND	2.1	ND	1.9	3.6	J	6.1	3.9	J	ND	N/A	ND	ND	3.2	J	72	0.001		
12/4/14	3.8	ND	7.8	8.0	3.0	J	3.1	3.7	ND	ND	5.9	ND	4.3	5.7	3.3	ND	ND	7.3	ND	ND	3.7	J	5.8	4.2	ND	N/A	ND	ND	70	0.001					
1/15/15	11.5	ND	8.4	4.3	4.2	2.9	1.2	J	ND	ND	4.2	J	ND	1.0	J	1.9	4.0	ND	ND	13.0	ND	0.93	1.5	J	8.4	4.0	ND	N/A	1.5	J	ND	73	0.001		
2/9/15	7.4	ND	3.2	1.8	2.0	J	ND	ND	ND	ND	ND	ND	ND	ND	2.1	ND	ND	6.3	ND	ND	1.1	J	6.7	3.0	ND	N/A	ND	ND	34	0.001					
3/10/15	2.9	2.8	3.7	0.86	1.1	J	1.7	J	ND	ND	ND	ND	ND	0.99	J	ND	2.1	ND	ND	2.8	ND	ND	1.0	J	4.5	2.1	ND	N/A	0.94	J	ND	27	0.000		
4/6/15	10.7	0.79	J	5.1	2.10	3.6	2.7	1.0	J	ND	ND	0.79	J	8.1	ND	ND	ND	2.8	ND	ND	7.8	ND	0.87	J	1.8	8.2	3.9	ND	N/A	1.6	J	ND	62	0.001	
5/8/15	5.4	ND	17.9	ND	1.4	J	ND	0.68	J	ND	ND	ND	ND	ND	1.4	J	ND	3.4	ND	ND	J	ND	5.2	2.4	J	ND	N/A	ND	ND	38	0.001				
6/2/15	13.6	ND	6.1	0.99	1.7	ND	1.1	J	ND	ND	ND	6.4	ND	5.4	ND	3.5	ND	ND	4.4	ND	1.10	2.2	10.2	5.9	ND	N/A	ND	ND	63	0.001					
7/1/15	ND	ND	9.7	ND	ND	ND	2.0	ND	2.0	ND	ND	ND	ND	2.5	ND	ND	5.2	ND	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	21	0.000						
8/10/15	7.2	ND	15.0	ND	2.4	ND	ND	ND	ND	ND	8.1	ND	ND	15.0	ND	ND	1.4	J	ND	2.4	ND	3.0	1.3	J	ND	ND	N/A	N/A	56	0.001					
9/11/15	11	ND	9.0	ND	2.6	0.98	J	ND	1.4	J	ND	6.4	ND	ND	4.1	ND	ND	1.5	J	ND	2.6	1.6	J	5.9	2.5	ND	2.0	J	N/A	N/A	52	0.001			
10/7/15	11	ND	3.8	0.90	J	ND	2.1	3.9	ND	1.1	J	ND	4.2	ND	ND	ND	6.2	ND	ND	1.2	J	ND	1.4	ND	2.4	1.1	J	ND	1.2	J	N/A	N/A	41	0.001	
11/2/15	9.7	0.48	J	10	4.0	1.5	J	3.6	12	ND	3.2	0.63	J	3.8	ND	ND	2.2	J	2.9	ND	ND	15	ND	ND	ND	2.7	1.3	J	ND	ND	N/A	N/A	73	0.001	
12/3/15	5.9	ND	19	1.4	J	0.68	J	2.5	3.3	ND	0.88	J	ND	2.5	J	ND	ND	ND	3.2	ND	ND	3.0	1.0	J	ND	ND	N/A	N/A	53	0.001					

TABLE 6

Building C Effluent Concentrations (µg/m³)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland
 Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	methyl-tert-butyl ether	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-trichlorobenzene	1,1,1-trichloroethane	1,1,2-trichloroethane	trichloroethene	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOC's	Mass (lbs./day)
1/15/16	9.4	ND	5.5	0.54 J	ND	2.3	1.2 J	ND	0.48 J	ND	2.7 J	ND	ND	5.0	ND	ND	6.7	ND	ND	1.1 J	4.3	1.7 J	ND	ND	N/A	N/A	41	0.001	
3/9/16	5.6	ND	11	0.57 J	0.59 J	2.1	0.97 J	ND	ND	ND	5.4	ND	ND	6.1	ND	ND	7.3	ND	ND	ND	3.3	1.2 J	ND	ND	N/A	N/A	44	0.001	
5/12/16	3.9	ND	6.8	0.46 J	0.49 J	3.5	0.51 J	ND	ND	ND	4.0	ND	ND	8.3	ND	ND	7.2 B	ND	ND	ND	2.9	1.1 J	ND	ND	N/A	N/A	39	0.001	
7/14/16	10	ND	11	1.1 J	1.2 J	3.3	1.4 J	ND	1.0 J	0.90 J	7.4	ND	ND	5.8	ND	ND	13 B	ND	ND	1.7 J	6.7	2.4	ND	2.4 J	N/A	N/A	69	0.001	
9/7/16	7.5	ND	3.5	1.2 J	2.3	2.1	6.1	ND	2.5	ND	4.3	ND	ND	2.7	ND	ND	13	ND	6.9	1.2 J	4.7	1.8 J	ND	ND	N/A	N/A	60	0.001	
11/3/16	8.1	ND	17	ND	ND	3.3	1.4	ND	1.3	1.2	23	ND	ND	15	ND	ND	ND	ND	ND	1.3 J	5.2	1.8 J	ND	5.5	N/A	N/A	84	0.001	
1/12/17	5.2	ND	5.9	0.50 J	ND	2.0	2.0	ND	0.5 J	1.0 J	12	ND	ND	21	ND	ND	ND	ND	ND	0.9 J	3.2	1.4 J	ND	4.8	N/A	N/A	60	0.001	
3/8/17	5.0	ND	4.4	0.61 J	0.5 J	2.8	1.7	ND	0.36 J	1.1 J	2.9 J	ND	ND	7.9	ND	ND	0.72 J	ND	ND	ND	2.7	1.0 J	ND	1.4	N/A	N/A	33	0.001	
5/5/17	5.5	ND	1.7	0.67 J	0.6 J	2.0	1.0 J	ND	0.30 J	0.72 J	2.5 J	ND	ND	3.4	ND	ND	1.1 J	ND	ND	0.94 J	3.8	1.5 J	ND	3.6	N/A	N/A	29	0.000	
7/6/17	6.3	ND	14	0.92 J	0.9 J	2.1	0.75 J	ND	ND	1.2 J	4.6	ND	ND	0.64 J	6.4	ND	ND	2.0 JB	ND	0.4 J	0.84 J	3.7	1.4 J	ND	3.5	N/A	N/A	50	0.001
9/7/17	6.8	ND	3.2	0.83 J	2.3	2.1	0.49 J	ND	0.40 J	0.76 J	6.3	ND	ND	7.2	ND	ND	3.8	ND	8.1	1.8 J	4.3	1.9 J	ND	1.3 J	N/A	N/A	52	0.001	
11/8/17	6.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.1 J	ND	ND	2.6	ND	ND	0.89 J	ND	6.4	ND	3.0	1.3 J	ND	ND	N/A	N/A	24	0.000	
1/9/18	5.4	ND	9.8	ND	ND	2.7	ND	ND	0.76 J	4.1 J	J	ND	ND	3.6	ND	ND	1.9 J	ND	7.4	ND	3.0	1.3 J	ND	ND	N/A	N/A	40	0.001	
3/8/18	5.1	ND	4.6	ND	ND	2.0	ND	ND	0.70 J	3.3 J	J	ND	ND	4.5	ND	ND	0.39 J	ND	3.3	ND	4.8	2.1	ND	2.6 J	N/A	N/A	33	0.001	
5/8/18	6.2	ND	3.7	2.2	0.8 J	2.7	0.3 J	ND	ND	1.10 J	ND	ND	ND	23.0	ND	ND	ND	ND	ND	1.0 J	5.4	2.4	ND	5.9	N/A	N/A	55	0.001	
7/12/18	9.4	ND	6.7	1.2 J	2.0	1.5 J	0.3 J	ND	ND	0.72 J	8.5	ND	ND	1.3 J	7.8	ND	ND	ND	ND	1.1 J	7.1	2.8	ND	3.1 J	N/A	N/A	53	0.001	
9/11/18	8.5	ND	5.6	2.0	3.1	3.1	0.3 J	ND	ND	0.93 J	3.4 JB	ND	ND	8.2	ND	ND	0.6 JB	ND	ND	1.7 J	14.0	4.7	ND	2.6 J	N/A	N/A	59	0.001	
11/9/18	6.5	ND	3.0	2.7	1.8	2.7	ND	ND	ND	3.1 J	J	ND	ND	3.3	ND	ND	1.0 J	ND	ND	0.9 J	5.7	2.1	ND	ND	N/A	N/A	33	0.000	
1/21/19	5.7	ND	2.7	1.7 J	0.8 J	1.4 J	ND	ND	ND	3.5 J	J	ND	ND	ND	ND	ND	0.6 J	ND	ND	ND	3.8	1.4 J	ND	ND	N/A	N/A	22	0.000	
3/13/19	5.3	ND	3.6 CL	1.5 J	0.7 J	1.4 J	ND	ND	ND	ND	2.8 J	ND	ND	2.4	ND	ND	0.65 J	ND	0.83 J	ND	3.2	1.3 J	ND	ND	N/A	N/A	24	0.000	

Notes:

- µg/m³ - micrograms per cubic meter
- B - compound was found in the blank and sample
- EPA - United States Environmental Protection Agency
- lbs./day - pounds per day
- CL - result suspected to be biased high due to chromatographic interference
- Sampling not conducted in July 2012 due to system shutdown test.
- November 2012 sample collected after the potassium permanganate zeolite (PPZ) unit. PPZ unit was taken offline prior to the December 2012 sample.
- Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.
- Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.
- J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
- N/A - not applicable (samples not analyzed for compound)
- ND - non-detect (below detection limit)
- OM&M - operation, maintenance, and monitoring
- SSD - sub-slab depressurization
- TO-15 - Toxic Organic Method 15
- VOCs - volatile organic compounds

APPENDICES

Appendix A—Biweekly and Quarterly System Check Forms

Appendix B—Analytical Reports for System Samples

APPENDIX A—BIWEEKLY AND QUARTERLY SYSTEM CHECK FORMS

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 10/12/18 Time: 1210 Personnel: OMW

- | | |
|--|---|
| <p>1. Was the system running upon arrival?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>2. Were there any alarm conditions upon arrival?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>Comment: _____</p> <p>3. Is the blower vacuum relief valve open?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>4. Is the dilution valve open?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO % Open: _____</p> <p>5. Are there any leaks or damage to system hoses?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>6. Is there any damage to system components?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>7. Are all locks and zip-ties secure?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> | <p>8. Was there a GAC change out?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>9. How many GAC units are at this location?
NEW <u>0</u> SPENT <u>0</u></p> <p>10. Do these fall to zero when system is turned off?
Flow Gauge <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Pressure Gauge <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Vacuum Gauges <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>11. Do the temp. gauges fall when system is turned off?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>12. Does the heat-exchanger have dust on the underside?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>13. Was the underside of the heat-exchanger vacuumed?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>13. Was the system running upon departure?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> |
|--|---|

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
23	35	12	138	110	43	340	20865.1

* Clean or change filter if differential pressure increases by 10 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
North	4.13	1896	878	X	-	
South	5.86	786	686	X	-	
Basement North	2.12	341	298	X	-	
Basement South	1.55	1600	139.7	X	-	
Basement HRS5	0.87	772	23.7	X	-	
SSD-34-A	23.1	1064	23.2	X	-	
SSD-35-A	23.0	362	7.9	X	-	
SSD-36-A	0.75	707	15.4	X	-	
SSD-37-A	3.12	815	17.0	X	-	
SSD-38-A	14.38	23.66	51.6	X	-	
SSD-39-A	23.2	430	9.4	X	-	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.09		160-A	0.14	
079-A	0.00		SSD-1-A	-0.14	
167-A	0.04		SSD-12-A-X	2.35	
119-A	0.00		SSD-11-A-X	3.11	
165-A	0.14		SSD-13-A-X	0.56	
117-A	NA	HVY EQP	SSD-2-A-X	4.39	
164-A	0.25		015-A-X	NA	HVY EQP
136-A-S	2.14		SSD-16-A-X	0.43	
163-A	-1.64		SSD-3-A-X	NA	CAPTURED
121-B	0.00		SSD-22-A	0.18	
162-A	0.00		SSD-21-A	0.16	
136-A-N	0.00		SSD-20-A	0.109	
136-A	0.01		SSD-19-A	0.00	
161-A	0.15		168-A	1.04	
			188-A	0.00	

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	NA	NA	NA	After GAC swap
Summa Canister ID	↓	↓	↓	
Flow Contr. ID				
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING							
Location	Contains Water?		Water Drained?		Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	Yes	No	Yes	No	-	Yes No	
Moisture Separator 2	Yes	No	Yes	No	-	Yes No	
Exhaust Stack Sump	Yes	No	Yes	No	-	Yes No	
PS-1-A	Yes	No	Yes	No	-	Yes No	
PS-2-A	Yes	No	Yes	No	-	Yes No	
PS-3-A	Yes	No	Yes	No	-	Yes No	
PS-4-A	Yes	No	Yes	No	-	Yes No	
PS-5-A	Yes	No	Yes	No	-	Yes No	
Drain stacks	Yes	No	Yes	No	-	Yes No	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	Yes No	Yes No	Yes No	
Was the fan running upon arrival?	Yes No	Yes No	Yes No	
Fan speed/airflow setting (#/cfm)	6/300	6/300	4/300	
Is there damage to unit or signs of tampering?	Yes No	Yes No	Yes No	
Is the "do not turn off filter" warning sign in place?	Yes No	Yes No	Yes No	
Life status color of the Pre-Filter (F-1)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the GAC Filter (F-2)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the Post-Filter (F-3)?	GN OR RD	GN OR RD	GN OR RD	
Was the Pre-Filter (F-1) replaced?	Yes No	Yes No	Yes No	
Was the GAC Filter (F-2) replaced?	Yes No	Yes No	Yes No	
Was the Post-Filter (F-3) replaced?	Yes No	Yes No	Yes No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____
[Signature]

DATE: 10/12/18
[Signature]

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 10-23-18 Time: 1215 Personnel: OWW

- | | |
|--|---|
| <p>1. Was the system running upon arrival?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>2. Were there any alarm conditions upon arrival?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>Comment: _____</p> <p>3. Is the blower vacuum relief valve open?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>4. Is the dilution valve open?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO % Open: _____</p> <p>5. Are there any leaks or damage to system hoses?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>6. Is there any damage to system components?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>7. Are all locks and zip-ties secure?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> | <p>8. Was there a GAC change out?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>9. How many GAC units are at this location?
NEW <u>0</u> SPENT <u>0</u></p> <p>10. Do these fall to zero when system is turned off?
Flow Gauge <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Pressure Gauge <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Vacuum Gauges <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>11. Do the temp. gauges fall when system is turned off?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>12. Does the heat-exchanger have dust on the underside?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>13. Was the underside of the heat-exchanger vacuumed?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>13. Was the system running upon departure?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> |
|--|---|

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
23	35	12	132	108	41	350	2117.0

* Clean or change filter if differential pressure increases by 10 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
North	4.06	983	85.8	X	-	
South	5.79	826	72.1	✓	-	
Basement North	20.9	154	13.4	X	-	
Basement South	1.58	1833	162.0	X	-	
Basement HRS5	0.86	267	23.3	X	-	
SSD-34-A	22.9	251	5.5	X	-	
SSD-35-A	20.3	378	1618.2	X	-	
SSD-36-A	0.73	784	17.1	X	-	
SSD-37-A	3.03	884	19.3	X	-	
SSD-38-A	13.95	2392	52.1	X	-	
SSD-39-A	23.1	713	15.5	X	-	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.02		160-A	0.09	
079-A	0.00		SSD-1-A	0.05	
167-A	0.02		SSD-12-A-X	2.28	
119-A	0.00		SSD-11-A-X	3.04	
165-A	0.15		SSD-13-A-X	0.53	
117-A	1.08	HWY EAST	SSD-2-A-X	4.29	
164-A	0.22		015-A-X	3.22	
136-A-S	2.04		SSD-16-A-X	0.42	
163-A	-0.91		SSD-3-A-X	0.16	
121-B	0.00		SSD-22-A	0.19	
162-A	0.00		SSD-21-A	0.20	
136-A-N	0.00		SSD-20-A	0.12	
136-A	0.01		SSD-19-A	0.03	
161-A	0.04		168-A	0.93	
			188-A	0.00	

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	Yes No	Yes No	<i>0.1 gal</i>	Yes No	
Moisture Separator 2	Yes No	Yes No		Yes No	
Exhaust Stack Sump	Yes No	Yes No		Yes No	
PS-1-A	Yes No	Yes No		Yes No	
PS-2-A	Yes No	Yes No		Yes No	
PS-3-A	Yes No	Yes No		Yes No	
PS-4-A	Yes No	Yes No		Yes No	
PS-5-A	Yes No	Yes No		Yes No	
Drain stacks	Yes No	Yes No		Yes No	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	Yes No	Yes No	Yes No	
Was the fan running upon arrival?	Yes No	Yes No	Yes No	
Fan speed/airflow setting (#/cfm)	<i>6/300</i>	<i>6/300</i>	<i>6/300</i>	
Is there damage to unit or signs of tampering?	Yes No	Yes No	Yes No	
Is the "do not turn off filter" warning sign in place?	Yes No	Yes No	Yes No	
Life status color of the Pre-Filter (F-1)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the GAC Filter (F-2)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the Post-Filter (F-3)?	GN OR RD	GN OR RD	GN OR RD	
Was the Pre-Filter (F-1) replaced?	Yes No	Yes No	Yes No	
Was the GAC Filter (F-2) replaced?	Yes No	Yes No	Yes No	
Was the Post-Filter (F-3) replaced?	Yes No	Yes No	Yes No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: *J. Walker*

DATE: *10/23/18*

Boel

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 11-9-18 Time: 1200 Personnel: OMV

- | | |
|--|---|
| <p>1. Was the system running upon arrival?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>2. Were there any alarm conditions upon arrival?
YES <input checked="" type="radio"/> NO</p> <p>Comment: _____</p> <p>3. Is the blower vacuum relief valve open?
YES <input checked="" type="radio"/> NO</p> <p>4. Is the dilution valve open?
YES <input checked="" type="radio"/> NO % Open: _____</p> <p>5. Are there any leaks or damage to system hoses?
YES <input checked="" type="radio"/> NO</p> <p>6. Is there any damage to system components?
YES <input checked="" type="radio"/> NO</p> <p>7. Are all locks and zip-ties secure?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> | <p>8. Was there a GAC change out?
YES <input checked="" type="radio"/> NO</p> <p>9. How many GAC units are at this location?
NEW <u>0</u> SPENT <u>0</u></p> <p>10. Do these fall to zero when system is turned off?
Flow Gauge <input checked="" type="radio"/> YES <input type="radio"/> NO
Pressure Gauge <input checked="" type="radio"/> YES <input type="radio"/> NO
Vacuum Gauges <input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>11. Do the temp. gauges fall when system is turned off?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>12. Does the heat-exchanger have dust on the underside?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>13. Was the underside of the heat-exchanger vacuumed?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>13. Was the system running upon departure?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> |
|--|---|

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
22	34	12	130	100	40	355	215250

* Clean or change filter if differential pressure increases by 10 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
North	481	1003	87.6	X	-	
South	610	863	75.3	X	-	
Basement North	22.6	270	23.6	X	-	
Basement South	167	1710	154.5	X	-	
Basement HRS5	187	287	25.9	X	-	
SSD-34-A	25.1	283	6.2	X	-	
SSD-35-A	24.8	387	8.4	X	-	
SSD-36-A	1.18	1791	17.2	X	-	
SSD-37-A	3.29	863	18.8	X	-	
SSD-38-A	19.38	1830	39.9	X	-	
SSD-39-A	24.8	482	10.5	X	-	Repairs at bench

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.09		160-A	16.19	
079-A	0.90		SSD-1-A	0.10	
167-A	0.14		SSD-12-A-X	2.10	
119-A	0.90		SSD-11-A-X	3.15	
165-A	0.12		SSD-13-A-X	0.55	
117-A	0.07		SSD-2-A-X	4.33	
164-A	0.14		015-A-X	2.82	
136-A-S	2.13		SSD-16-A-X	0.43	
163-A	-0.52		SSD-3-A-X	0.16	
121-B	0.10		SSD-22-A	0.17	
162-A	0.00		SSD-21-A	0.18	
136-A-N	0.00		SSD-20-A	0.55	
136-A	0.01		SSD-19-A	0.07	
161-A	0.08		168-A	0.43	
			188-A	0.01	

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	1344/1345	1340/1341	1336/1337	
Summa Canister ID	11727	11269	11606	
Flow Contr. ID	09958	10104	10011	
Start Vacuum (in. Hg)	30	30	28.5	
Stop Vacuum (in. Hg)	4	4	4	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.5 gal	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Moisture Separator 2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Exhaust Stack Sump	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	0.05 gal	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
PS-1-A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
PS-2-A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
PS-3-A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
PS-4-A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
PS-5-A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1 gal	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Drain stacks	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Was the fan running upon arrival?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Fan speed/airflow setting (#/cfm)	6300	6300	6300	
Is there damage to unit or signs of tampering?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Is the "do not turn off filter" warning sign in place?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Life status color of the Pre-Filter (F-1)?	<input checked="" type="checkbox"/> GN <input type="checkbox"/> OR <input type="checkbox"/> RD	<input checked="" type="checkbox"/> GN <input type="checkbox"/> OR <input type="checkbox"/> RD	<input checked="" type="checkbox"/> GN <input type="checkbox"/> OR <input type="checkbox"/> RD	
Life status color of the GAC Filter (F-2)?	<input checked="" type="checkbox"/> GN <input type="checkbox"/> OR <input type="checkbox"/> RD	<input checked="" type="checkbox"/> GN <input type="checkbox"/> OR <input type="checkbox"/> RD	<input checked="" type="checkbox"/> GN <input type="checkbox"/> OR <input type="checkbox"/> RD	
Life status color of the Post-Filter (F-3)?	<input checked="" type="checkbox"/> GN <input type="checkbox"/> OR <input type="checkbox"/> RD	<input checked="" type="checkbox"/> GN <input type="checkbox"/> OR <input type="checkbox"/> RD	<input checked="" type="checkbox"/> GN <input type="checkbox"/> OR <input type="checkbox"/> RD	
Was the Pre-Filter (F-1) replaced?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Was the GAC Filter (F-2) replaced?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Was the Post-Filter (F-3) replaced?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

Facility activities damaged concrete at SSD-38-A trench; system piping believed intact

Facility was repairing the concrete in that floor area - NO damage to SSDs piping/extraction points. *pro*

PERSONNEL SIGNATURE: *M. Wilks*

DATE: 11/9/18 *pro*

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 11-19-18 Time: 12:05 Personnel: JMW

- | | |
|--|---|
| <p>1. Was the system running upon arrival?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>2. Were there any alarm conditions upon arrival?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>Comment: _____</p> <p>3. Is the blower vacuum relief valve open?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>4. Is the dilution valve open?
<input type="radio"/> YES <input checked="" type="radio"/> NO % Open: _____</p> <p>5. Are there any leaks or damage to system hoses?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>6. Is there any damage to system components?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>7. Are all locks and zip-ties secure?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> | <p>8. Was there a GAC change out?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>9. How many GAC units are at this location?
NEW <u>0</u> SPENT <u>0</u></p> <p>10. Do these fall to zero when system is turned off?
Flow Gauge <input checked="" type="radio"/> YES <input type="radio"/> NO
Pressure Gauge <input checked="" type="radio"/> YES <input type="radio"/> NO
Vacuum Gauges <input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>11. Do the temp. gauges fall when system is turned off?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>12. Does the heat-exchanger have dust on the underside?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>13. Was the underside of the heat-exchanger vacuumed?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>13. Was the system running upon departure?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> |
|--|---|

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
23	35	12	124	98	42	350	21765.5

* Clean or change filter if differential pressure increases by 10 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
North	4.15	970	84.7	X	-	
South	5.93	811	70.8	X	-	
Basement North	22.0	125	10.9	X	-	
Basement South	1.57	1721	150.2	X	-	
Basement HRS5	0.83	305	26.6	✓	-	
SSD-34-A	24.1	218	4.8	X	-	
SSD-35-A	24.0	376	8.2	X	-	
SSD-36-A	9.75	764	16.7	X	-	
SSD-37-A	3.16	804	17.5	X	-	
SSD-38-A	16.80	2075	45.2	X	-	
SSD-39-A	24.1	560	12.2	X	-	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.07		160-A	0.07	
079-A	0.00		SSD-1-A	1.61	
167-A	0.04		SSD-12-A-X	2.29	
119-A	0.00		SSD-11-A-X	3.12	
165-A	0.13		SSD-13-A-X	0.53	
117-A	N/A	LID JAMMED	SSD-2-A-X	4.39	
164-A	0.21		015-A-X	2.46	
136-A-S	2.08		SSD-16-A-X	0.43	
163-A	2.21		SSD-3-A-X	0.16	
121-B	0.10		SSD-22-A	0.15	
162-A	0.00		SSD-21-A	0.16	
136-A-N	0.00		SSD-20-A	0.20	
136-A	0.01		SSD-19-A	0.01	
161-A	0.07		168-A	0.63	
			188-A	0.02	

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	NA	NA	NA	December
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	Yes No	Yes No	32 gal	Yes No	
Moisture Separator 2	Yes No	Yes No		Yes No	
Exhaust Stack Sump	Yes No	Yes No	0.2	Yes No	
PS-1-A	Yes No	Yes No	-	Yes No	
PS-2-A	Yes No	Yes No	-	Yes No	
PS-3-A	Yes No	Yes No	-	Yes No	
PS-4-A	Yes No	Yes No	-	Yes No	
PS-5-A	Yes No	Yes No	3.5	Yes No	
Drain stacks	Yes No	Yes No	-	Yes No	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	Yes No	Yes No	Yes No	
Was the fan running upon arrival?	Yes No	Yes No	Yes No	
Fan speed/airflow setting (#/cfm)	61300	61300	61300	
Is there damage to unit or signs of tampering?	Yes No	Yes No	Yes No	
Is the "do not turn off filter" warning sign in place?	Yes No	Yes No	Yes No	
Life status color of the Pre-Filter (F-1)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the GAC Filter (F-2)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the Post-Filter (F-3)?	GN OR RD	GN OR RD	GN OR RD	
Was the Pre-Filter (F-1) replaced?	Yes No	Yes No	Yes No	
Was the GAC Filter (F-2) replaced?	Yes No	Yes No	Yes No	
Was the Post-Filter (F-3) replaced?	Yes No	Yes No	Yes No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: *J. Wilber*

DATE: *11/19/13*

DAILY ACTIVITY LOG

PROJECT: Sub-Slab Depressurization System O&M	CLIENT: Lockheed Martin Corporation
LOCATION: Middle River Complex- Middle River, Maryland	PROJECT NO.: 117-0512140 - 17
TASK: System O&M	DATE: 11/27/18 PAGE: 1 of 1

TIME START	TIME STOP	DESCRIPTION OF ACTIVITIES / NOTES
1200		- Installed water ^{pumping/} vacuum access point on HR55 vapor barrier cutout. Sealed 6" PVC fitting with adhesive, stego tape, and foam. Capped PVC.
		- Installed water monitoring point through vapor barrier to underlying particle board. 2" PVC pipe installed to ~2" near sump bottom. Sealed w/ epoxy and stego tape. PVC capped
1400		Emptied BLDG-A M5-1 of ~25 gallons H ₂ O. ~4 gal P3-4, 1.5 gal exhaust stack, ~30 Inhal.
		- Drained water transferred to 55-gal drums in and containment area next to Building C SSD5. (gel)

Contractors on Site: *NA*

Field Rep. Signature: *[Signature]*

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 12-5-18 Time: 1230 Personnel: JMW

- | | |
|--|---|
| <p>1. Was the system running upon arrival?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>2. Were there any alarm conditions upon arrival?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>Comment: _____</p> <p>3. Is the blower vacuum relief valve open?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>4. Is the dilution valve open?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO % Open: _____</p> <p>5. Are there any leaks or damage to system hoses?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>6. Is there any damage to system components?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>7. Are all locks and zip-ties secure?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> | <p>8. Was there a GAC change out?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>9. How many GAC units are at this location?
NEW <input checked="" type="checkbox"/> SPENT <input checked="" type="checkbox"/></p> <p>10. Do these fall to zero when system is turned off?
Flow Gauge <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Pressure Gauge <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Vacuum Gauges <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>11. Do the temp. gauges fall when system is turned off?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>12. Does the heat-exchanger have dust on the underside?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>13. Was the underside of the heat-exchanger vacuumed?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>13. Was the system running upon departure?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> |
|--|---|

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
22	34	12	118	92	41	355	22145.3

* Clean or change filter if differential pressure increases by 10 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
North	4.10	907	79.2	X	-	
South	5.85	746	63.7	X	-	
Basement North	2.18	125	10.1	X	-	
Basement South	1.43	1170.5	118.8	X	-	
Basement HRS5	6.10	300	26.2	X	-	
SSD-34-A	23.9	214	4.7	X	-	
SSD-35-A	23.8	331	47.2	X	-	
SSD-36-A	0.74	748	16.3	X	-	
SSD-37-A	3.13	163	16.6	X	-	
SSD-38-A	15.09	2088	45.5	X	-	
SSD-39-A	23.8	523	11.4	X	-	

* Flow = Velocity x 0.0873; ** Flow = Velocity₂ x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.18		160-A	0.07	
079-A	0.00		SSD-1-A	-0.03	
167-A	0.04		SSD-12-A-X	2.23	
119-A	0.01		SSD-11-A-X	3.04	
165-A	0.09		SSD-13-A-X	0.52	
117-A	NA	LID STUCK	SSD-2-A-X	4.25	
164-A	0.17		015-A-X	3.12	
136-A-S	1.94		SSD-16-A-X	0.45	
163-A	3.03		SSD-3-A-X	0.17	
121-B	0.00		SSD-22-A	0.15	
162-A	0.00		SSD-21-A	0.17	
136-A-N	0.00		SSD-20-A	0.20	
136-A	0.01		SSD-19-A	0.02	
161-A	0.07		168-A	0.87	
			188-A	0.00	

8"

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID				
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	Yes No	Yes No	2.4 gal	Yes No	
Moisture Separator 2	Yes No	Yes No	-	Yes No	
Exhaust Stack Sump	Yes No	Yes No	0.1 gal	Yes No	
PS-1-A	Yes No	Yes No	-	Yes No	
PS-2-A	Yes No	Yes No	-	Yes No	
PS-3-A	Yes No	Yes No	-	Yes No	
PS-4-A	Yes No	Yes No	-	Yes No	
PS-5-A	Yes No	Yes No	1.5 gal	Yes No	
Drain stacks	Yes No	Yes No	-	Yes No	

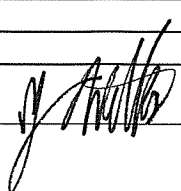
INDOOR AIR FILTER MONITORING						
	AF-N/NX	AF-M/MX	AF-S/SX	Comments		
Was the power on upon arrival?	Yes No	Yes No	Yes No			
Was the fan running upon arrival?	Yes No	Yes No	Yes No			
Fan speed/airflow setting (#/cfm)	6130	6130	6130			
Is there damage to unit or signs of tampering?	Yes No	Yes No	Yes No			
Is the "do not turn off filter" warning sign in place?	Yes No	Yes No	Yes No			
Life status color of the Pre-Filter (F-1)?	GN OR RD	GN OR RD	GN OR RD			
Life status color of the GAC Filter (F-2)?	GN OR RD	GN OR RD	GN OR RD			
Life status color of the Post-Filter (F-3)?	GN OR RD	GN OR RD	GN OR RD			
Was the Pre-Filter (F-1) replaced?	Yes No	Yes No	Yes No			
Was the GAC Filter (F-2) replaced?	Yes No	Yes No	Yes No			
Was the Post-Filter (F-3) replaced?	Yes No	Yes No	Yes No			

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

- Filled G23 (condensate drums - Building C waste drums area)
- Changed air filters
- Total sump depth ~13" from ground surface, ~4" from plastic liner
- H2O2 water depth 16.5"

PERSONNEL SIGNATURE: _____



DATE: 12/15/98

DAILY ACTIVITY LOG

PROJECT:
Sub-Slab Depressurization System O&M

CLIENT:
Lockheed Martin Corporation

LOCATION:
Middle River Complex- Middle River, Maryland

PROJECT NO.
117-0512140 - 17

TASK:
System O&M

DATE: 12-12-18 **PAGE:** 1 of 1

TIME START	TIME STOP	DESCRIPTION OF ACTIVITIES / NOTES
1145		Bldg A SSDS Sound HR55 - DTW ^{Depth} - 12.5", informed Tony
		Removed water from system (A), ~40 gal, ~ 37 MSI / 3 PSS
		- started B drum G23, filled G22*
		* Condensate drums in Bldg C
		Waste drum containment area
		Next to Bldg C SSDS. (psl)

Contractors on Site:

Field Rep. Signature: *g. Willey*

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 12-19-18 Time: 1635 Personnel: JMW

- | | |
|--|--|
| <p>1. Was the system running upon arrival?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>2. Were there any alarm conditions upon arrival?
YES <input checked="" type="checkbox"/> NO</p> <p>Comment: _____</p> <p>3. Is the blower vacuum relief valve open?
YES <input checked="" type="checkbox"/> NO</p> <p>4. Is the dilution valve open?
YES <input checked="" type="checkbox"/> NO % Open: _____</p> <p>5. Are there any leaks or damage to system hoses?
YES <input checked="" type="checkbox"/> NO</p> <p>6. Is there any damage to system components?
YES <input checked="" type="checkbox"/> NO</p> <p>7. Are all locks and zip-ties secure?
<input checked="" type="checkbox"/> YES NO</p> | <p>8. Was there a GAC change out?
YES <input checked="" type="checkbox"/> NO</p> <p>9. How many GAC units are at this location?
NEW <input checked="" type="checkbox"/> SPENT <input type="checkbox"/></p> <p>10. Do these fall to zero when system is turned off?
Flow Gauge <input checked="" type="checkbox"/> YES NO
Pressure Gauge <input checked="" type="checkbox"/> YES NO
Vacuum Gauges <input checked="" type="checkbox"/> YES NO</p> <p>11. Do the temp. gauges fall when system is turned off?
YES <input checked="" type="checkbox"/> NO</p> <p>12. Does the heat-exchanger have dust on the underside?
<input checked="" type="checkbox"/> YES NO</p> <p>13. Was the underside of the heat-exchanger vacuumed?
<input checked="" type="checkbox"/> YES NO</p> <p>13. Was the system running upon departure?
<input checked="" type="checkbox"/> YES NO</p> |
|--|--|

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
22	36	14	92	64	40	360	22465.9

* Clean or change filter if differential pressure increases by 10 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
North	4.13	944	82.4	X	-	
South	5.76	825	72.0	✓	-	
Basement North	2.13	230	20.1	X	-	
Basement South	1.54	1790	156.3	X	-	
Basement HRS5	1.09	256	22.3	X	-	
SSD-34-A	23.5	187	164.1	X	-	
SSD-35-A	23.4	402	8.8	X	-	
SSD-36-A	20.7	151	16.4	X	-	
SSD-37-A	30.7	814	17.7	X	-	
SSD-38-A	13.62	2463	53.7	X	-	
SSD-39-A	23.4	550	13.5	X	-	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.09		160-A	0.07	
079-A	0.00		SSD-1-A	0.10	
167-A	0.04		SSD-12-A-X	2.25	
119-A	0.0		SSD-11-A-X	3.07	
165-A	0.16		SSD-13-A-X	0.54	
117-A	NA		SSD-2-A-X	4.25	
164-A	0.22		015-A-X	2.94	
136-A-S	1.93		SSD-16-A-X	0.56	
163-A	0.00	COVERED	SSD-3-A-X	0.15	
121-B	0.00		SSD-22-A	0.15	
162-A	0.00		SSD-21-A	0.16	
136-A-N	0.00		SSD-20-A	0.46	
136-A	0.01		SSD-19-A	0.02	
161-A	0.06		168-A	0.07	
			188-A	0.00	

SSD SYSTEM CHECK - BUILDING A
 LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID				
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	Yes No	Yes No	~ 13 gal	Yes No	
Moisture Separator 2	Yes No	Yes No	-	Yes No	
Exhaust Stack Sump	Yes No	Yes No	Trace	Yes No	
PS-1-A	Yes No	Yes No	-	Yes No	
PS-2-A	Yes No	Yes No	-	Yes No	
PS-3-A	Yes No	Yes No	-	Yes No	
PS-4-A	Yes No	Yes No	2 gal	Yes No	
PS-5-A	Yes No	Yes No	-	Yes No	
Drain stacks	Yes No	Yes No	-	Yes No	

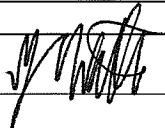
INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	Yes No	Yes No	Yes No	
Was the fan running upon arrival?	Yes No	Yes No	Yes No	
Fan speed/airflow setting (#/cfm)	61300	61300	61300	
Is there damage to unit or signs of tampering?	Yes No	Yes No	Yes No	
Is the "do not turn off filter" warning sign in place?	Yes No	Yes No	Yes No	
Life status color of the Pre-Filter (F-1)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the GAC Filter (F-2)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the Post-Filter (F-3)?	GN OR RD	GN OR RD	GN OR RD	
Was the Pre-Filter (F-1) replaced?	Yes No	Yes No	Yes No	
Was the GAC Filter (F-2) replaced?	Yes No	Yes No	Yes No	
Was the Post-Filter (F-3) replaced?	Yes No	Yes No	Yes No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

Filters replaced

PERSONNEL SIGNATURE: _____



DATE: _____

12/19/18

DAILY ACTIVITY LOG

Project:	Client:
SSD System O&M	Lockheed Martin Corporation
Location:	Date:
Middle River Complex, Middle River, Maryland	12/26/18

Time	Description of Activities
1230	Arrive on-site
1240	start site work of building C for L. Lucas
1320	Move filters from cardboard to drums. Mark with non-hazardous waste labels
1350	Move to building A and purge water from system into 20-gallon bucket, make water back to building C.
1415	Move back to building A. Finish purging water
1425	All water purged. approx. 30 gallons total
1430	Purge water from PS-4 into 5-gallon bucket. ~3 gallon total
1445	- Restart system
1500	- Begin site work of building A

EFR	JWF	MJD
D: 12:28	12:28	12:28
P: 24.5/4	31/4	29/4
L: 10963	10918	11281
E: 10797	10930	09899
T: 1558/1559	1549/1550	1554/1555

Personnel On Site:	Description of Activities:
L. Lucas	
M. Wilkes	

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 1/8/17

Time: 12:30

Personnel: L. Lucas / M. Wilks

1. Was the system running upon arrival?

YES NO

2. Were there any alarm conditions upon arrival?

YES NO

Comment: _____

3. Is the blower vacuum relief valve open?

YES NO

4. Is the dilution valve open?

YES NO % Open: _____

5. Are there any leaks or damage to system hoses?

YES NO

6. Is there any damage to system components?

YES NO

7. Are all locks and zip-ties secure?

YES NO

8. Was there a GAC change out?

YES NO

9. How many GAC units are at this location?

NEW SPENT

10. Do these fall to zero when system is turned off?

Flow Gauge YES NO

Pressure Gauge YES NO

Vacuum Gauges YES NO

11. Do the temp. gauges fall when system is turned off?

YES NO

12. Does the heat-exchanger have dust on the underside?

YES NO

13. Was the underside of the heat-exchanger vacuumed?

YES NO

13. Was the system running upon departure?

YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
<u>N 21</u>	<u>35</u>	<u>14</u>	<u>126</u>	<u>100</u>	<u>40</u>	<u>360</u>	<u>228020.8</u>

* Clean or change filter if differential pressure increases by 10 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
North	<u>4.06</u>	<u>981</u>	<u>85.6</u>	<u>X</u>	<u>NA</u>	
South	<u>5.77</u>	<u>762</u>	<u>66.5</u>	<u>X</u>	<u>NA</u>	
Basement North	<u>21.6</u>	<u>389</u>	<u>34.0</u>	<u>X</u>		
Basement South	<u>1.47</u>	<u>1670</u>	<u>145.8</u>	<u>X</u>		
Basement HRS5	<u>-0.02</u>	<u>275</u>	<u>24.0</u>	<u>X</u>		
SSD-34-A	<u>23.4</u>	<u>1044</u>	<u>22.8</u>	<u>X</u>		
SSD-35-A	<u>28.2</u>	<u>757</u>	<u>16.5</u>	<u>X</u>		
SSD-36-A	<u>0.70</u>	<u>759</u>	<u>16.5</u>	<u>X</u>		
SSD-37-A	<u>3.06</u>	<u>101</u>	<u>2.2</u>	<u>X</u>		
SSD-38-A	<u>14.83</u>	<u>473</u>	<u>10.3</u>	<u>X</u>		
SSD-39-A	<u>23.3</u>	<u>620</u>	<u>13.5</u>	<u>X</u>		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	<u>0.18</u>		160-A	<u>0.07</u>	
079-A	<u>0.00</u>		SSD-1-A	<u>2.00</u>	
167-A	<u>0.08</u>		SSD-12-A-X	<u>2.19</u>	
119-A	<u>NA</u>	<u>HEAVY Eqp</u>	SSD-11-A-X	<u>2.96</u>	
165-A	<u>0.15</u>		SSD-13-A-X	<u>0.54</u>	
117-A	<u>0.08</u>		SSD-2-A-X	<u>4.18</u>	
164-A	<u>0.22</u>		015-A-X	<u>2.95</u>	
136-A-S	<u>1.90</u>		SSD-16-A-X	<u>0.55</u>	
163-A	<u>NA</u>	<u>HEAVY Eqp</u>	SSD-3-A-X	<u>0.18</u>	
121-B	<u>0.00</u>		SSD-22-A	<u>0.18</u>	
162-A	<u>-0.01</u>		SSD-21-A	<u>0.16</u>	
136-A-N	<u>0.0</u>		SSD-20-A	<u>0.46</u>	
136-A	<u>0.01</u>		SSD-19-A	<u>0.01</u>	
161-A	<u>0.06</u>		168-A	<u>0.00</u>	
			188-A	<u>0.01</u>	

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

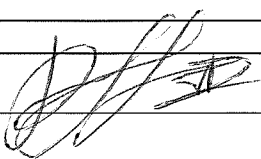
SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	~ 5 gal	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Moisture Separator 2	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Exhaust Stack Sump	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	trace	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
PS-1-A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
PS-2-A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
PS-3-A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
PS-4-A	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
PS-5-A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	~ 1.5 gal	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Drain stacks	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	-	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Was the fan running upon arrival?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Is the "do not turn off filter" warning sign in place?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Life status color of the Pre-Filter (F-1)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the GAC Filter (F-2)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the Post-Filter (F-3)?	GN OR RD	GN OR RD	GN OR RD	
Was the Pre-Filter (F-1) replaced?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Was the GAC Filter (F-2) replaced?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Was the Post-Filter (F-3) replaced?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

MRSS depth of water 22.5 in.

PERSONNEL SIGNATURE: 

DATE: 1/3/19

DAILY ACTIVITY LOG

PROJECT: Sub-Slab Depressurization System O&M	CLIENT: Lockheed Martin Corporation
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LOCATION: Middle River Complex- Middle River, Maryland	PROJECT NO.: 117-0512140 - 17
--	---

TASK: System O&M	DATE: 1-8-19	PAGE: 1 of 2
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TIME START	TIME STOP	Bldg A SSDS DESCRIPTION OF ACTIVITIES / NOTES
		- Remanded ~25 gallons from MS-1, ~1 gal from PS-25 ^{stand}
		- indoor air filter changeout 12-19-18

Contractors on Site:

Field Rep. Signature:

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 1-16-19

Time: 13:30

Personnel: L. Lucas, M. Williams

1. Was the system running upon arrival?

YES NO

2. Were there any alarm conditions upon arrival?

YES NO

Comment: _____

3. Is the blower vacuum relief valve open?

YES NO

4. Is the dilution valve open?

YES NO % Open: _____

5. Are there any leaks or damage to system hoses?

YES NO

6. Is there any damage to system components?

YES NO

7. Are all locks and zip-ties secure?

YES NO ALL

8. Was there a GAC change out?

YES NO

9. How many GAC units are at this location?

NEW 0 SPENT 0

10. Do these fall to zero when system is turned off?

Flow Gauge YES NO

Pressure Gauge YES NO

Vacuum Gauges YES NO

11. Do the temp. gauges fall when system is turned off?

YES NO

12. Does the heat-exchanger have dust on the underside?

YES NO

13. Was the underside of the heat-exchanger vacuumed?

YES NO

13. Was the system running upon departure?

YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
<u>X 21</u>	<u>36</u>	<u>15</u>	<u>120</u>	<u>96</u>	<u>40</u>	<u>360</u>	<u>231328</u>

* Clean or change filter if differential pressure increases by 10 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
North	<u>2.4</u>	<u>1030</u>	<u>89.9</u>	<u>No</u>		
South	<u>5.79</u>	<u>817</u>	<u>71.3</u>	<u>No</u>		
Basement North	<u>2.2</u>	<u>141</u>	<u>14.9</u>	<u>No</u>		
Basement South	<u>1.57</u>	<u>296.6</u>	<u>145.4</u>	<u>No</u>		
Basement HRS5	<u>0.86</u>	<u>280</u>	<u>24.4</u>	<u>No</u>		<u>Dist 26.5"</u>
SSD-34-A	<u>24.2</u>	<u>405</u>	<u>8.8</u>	<u>No</u>		
SSD-35-A	<u>23.5</u>	<u>498</u>	<u>10.9</u>	<u>No</u>		
SSD-36-A	<u>0.72</u>	<u>155</u>	<u>16.5</u>	<u>No</u>		
SSD-37-A	<u>3.20</u>	<u>807</u>	<u>17.6</u>	<u>No</u>		
SSD-38-A	<u>15.81</u>	<u>2394</u>	<u>52.2</u>	<u>No</u>		
SSD-39-A	<u>23.6</u>	<u>796</u>	<u>17.2</u>	<u>No</u>		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	<u>0.06</u>		160-A	<u>0.08</u>	
079-A	<u>0.00</u>		SSD-1-A	<u>0.5</u>	
167-A	<u>0.02</u>		SSD-12-A-X	<u>2.19</u>	
119-A	<u>Lo</u>	<u>jammed</u>	SSD-11-A-X	<u>3.05</u>	
165-A	<u>0.15</u>		SSD-13-A-X	<u>0.53</u>	
117-A	<u>0.09</u>		SSD-2-A-X	<u>4.19</u>	
164-A	<u>0.20</u>		015-A-X	<u>2.95</u>	
136-A-S	<u>1.98</u>		SSD-16-A-X	<u>0.49</u>	
163-A	<u>NA</u>	<u>COVERED</u>	SSD-3-A-X	<u>0.14</u>	
121-B	<u>0.00</u>		SSD-22-A	<u>0.17</u>	
162-A	<u>-0.02</u>		SSD-21-A	<u>0.01</u>	
136-A-N	<u>0.00</u>		SSD-20-A	<u>0.05</u>	
136-A	<u>0.01</u>		SSD-19-A	<u>0.09</u>	
161-A	<u>0.07</u>		168-A	<u>0.89</u>	
			188-A	<u>-0.02</u>	

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

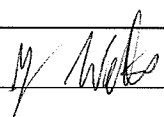
MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	1523	1519	1516	
Summa Canister ID	11575	11358	11442	
Flow Contr. ID	10901	10614	10104	
Start Vacuum (in. Hg)	-29	-29	-39	
Stop Vacuum (in. Hg)	-4	-4	-4	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	35	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Moisture Separator 2	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Exhaust Stack Sump	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
PS-1-A	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
PS-2-A	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
PS-3-A	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
PS-4-A	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
PS-5-A	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.5	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Drain stacks	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

INDOOR AIR FILTER MONITORING					Comments
	AF-N/NX	AF-M/MX	AF-S/SX		
Was the power on upon arrival?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Was the fan running upon arrival?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300		
Is there damage to unit or signs of tampering?	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No		
Is the "do not turn off filter" warning sign in place?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Life status color of the Pre-Filter (F-1)?	GN <input checked="" type="checkbox"/> OR RD	GN <input checked="" type="checkbox"/> OR RD	GN <input checked="" type="checkbox"/> OR RD		
Life status color of the GAC Filter (F-2)?	GN <input checked="" type="checkbox"/> OR RD	GN <input checked="" type="checkbox"/> OR RD	GN <input checked="" type="checkbox"/> OR RD		
Life status color of the Post-Filter (F-3)?	GN <input checked="" type="checkbox"/> OR RD	GN <input checked="" type="checkbox"/> OR RD	GN <input checked="" type="checkbox"/> OR RD		
Was the Pre-Filter (F-1) replaced?	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No		January
Was the GAC Filter (F-2) replaced?	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No		January
Was the Post-Filter (F-3) replaced?	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No		January

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: 

DATE: 1-16-19

DAILY ACTIVITY LOG

PROJECT: Sub-Slab Depressurization System O&M	CLIENT: Lockheed Martin Corporation
LOCATION: Middle River Complex- Middle River, Maryland	PROJECT NO. 117-0512140 - 17
TASK: System O&M	DATE: 1-25-19 PAGE: 1 of 1

TIME START	TIME STOP	Blkgs A SS DS DESCRIPTION OF ACTIVITIES / NOTES
~1245		Shutdown system.
	1:	Removed ~36 gallons from MS-1, 3 gallons P3-5
	1200	system restarted

Contractors on Site:

Field Rep. Signature: 

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 1-30-19

Time: 1230

Personnel: OMW, DLL

1. Was the system running upon arrival?

YES NO

2. Were there any alarm conditions upon arrival?

YES NO

Comment: _____

3. Is the blower vacuum relief valve open?

YES NO

4. Is the dilution valve open?

YES NO % Open: _____

5. Are there any leaks or damage to system hoses?

YES NO

6. Is there any damage to system components?

YES NO

7. Are all locks and zip-ties secure?

YES NO

8. Was there a GAC change out?

YES NO

9. How many GAC units are at this location?

NEW 0 SPENT 0

10. Do these fall to zero when system is turned off?

Flow Gauge YES NO

Pressure Gauge YES NO

Vacuum Gauges YES NO

11. Do the temp. gauges fall when system is turned off?

YES NO

12. Does the heat-exchanger have dust on the underside?

YES NO

13. Was the underside of the heat-exchanger vacuumed?

YES NO

13. Was the system running upon departure?

YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O) _{in} **	Flow (scfm)	Time Counter Display (hours)
20	31	7	118	90	40	300	23466.1

* Clean or change filter if differential pressure increases by 10 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
North	3.92	984	85.9	✓	NA	
South	5.37	857	74.3	✓		
Basement North	2.19	150	13.1	X		
Basement South	1.51	1660	144.9	X		
Basement HRS5	0.76	247	25.9	X		
SSD-34-A	23.5	435	9.5	X		
SSD-35-A	23.4	381	8.3	X		
SSD-36-A	0.68	722	15.7	X		
SSD-37-A	3.12	857	18.7	X		
SSD-38-A	14.58	2504	54.6	X		
SSD-39-A	23.6	515	11.2	X		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.04		160-A	0.09	
079-A	0.00		SSD-1-A	0.30	
167-A	0.03		SSD-12-A-X	2.08	
119-A	0.01		SSD-11-A-X	2.38	
165-A	0.11		SSD-13-A-X	0.52	
117-A	0.08		SSD-2-A-X	4.02	
164-A	0.22		015-A-X	2.86	
136-A-S	1.79		SSD-16-A-X	0.45	
163-A	N/A	covered	SSD-3-A-X	0.13	
121-B	0.03		SSD-22-A	0.15	
162-A	-0.05		SSD-21-A	0.01	
136-A-N	0.00		SSD-20-A	0.60	
136-A	0.01		SSD-19-A	0.61	
161-A	0.08		168-A	0.86	
			188-A	-0.02	

SSD SYSTEM CHECK - BUILDING A
 LMC Middle River Complex, Middle River, Maryland

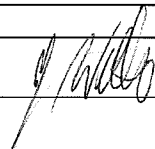
MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	Yes No	Yes No	1.5	Yes No	
Moisture Separator 2	Yes No	Yes No	-	Yes No	
Exhaust Stack Sump	Yes No	Yes No	trace	Yes No	
PS-1-A	Yes No	Yes No	-	Yes No	
PS-2-A	Yes No	Yes No	-	Yes No	
PS-3-A	Yes No	Yes No	-	Yes No	
PS-4-A	Yes No	Yes No	-	Yes No	
PS-5-A	Yes No	Yes No	1.5	Yes No	
Drain stacks	Yes No	Yes No	-	Yes No	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	Yes No	Yes No	Yes No	
Was the fan running upon arrival?	Yes No	Yes No	Yes No	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	Yes No	Yes No	Yes No	
Is the "do not turn off filter" warning sign in place?	Yes No	Yes No	Yes No	
Life status color of the Pre-Filter (F-1)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the GAC Filter (F-2)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the Post-Filter (F-3)?	GN OR RD	GN OR RD	GN OR RD	
Was the Pre-Filter (F-1) replaced?	Yes No	Yes No	Yes No	
Was the GAC Filter (F-2) replaced?	Yes No	Yes No	Yes No	
Was the Post-Filter (F-3) replaced?	Yes No	Yes No	Yes No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: 

DATE: 10-30-19

DAILY ACTIVITY LOG

PROJECT: Sub-Slab Depressurization System O&M	CLIENT: Lockheed Martin Corporation
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LOCATION: Middle River Complex- Middle River, Maryland	PROJECT NO.: 117-0512140 - 17
--	---

TASK: System O&M	DATE: 2-6-19	PAGE: 1 of 1
----------------------------	---------------------	---------------------

TIME START	TIME STOP	DESCRIPTION OF ACTIVITIES / NOTES															
		Bldg A SSDS															
		- Removed 32 gallons from MS-1, 3 gal from PS-5 PS-4 still empty															
		- sampled at A → Bldg A SSDS (see)															
		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">INFLUENT</th> <th style="width: 33%;">MID</th> <th style="width: 33%;">EFFLUENT</th> </tr> </thead> <tbody> <tr> <td>Time</td> <td>1122/1123</td> <td>1126/1127</td> </tr> <tr> <td>can</td> <td>11828</td> <td>11812</td> </tr> <tr> <td>Flow</td> <td>099.58</td> <td>10901</td> </tr> <tr> <td>pressure</td> <td>-30/4</td> <td>-29/4</td> </tr> </tbody> </table>	INFLUENT	MID	EFFLUENT	Time	1122/1123	1126/1127	can	11828	11812	Flow	099.58	10901	pressure	-30/4	-29/4
INFLUENT	MID	EFFLUENT															
Time	1122/1123	1126/1127															
can	11828	11812															
Flow	099.58	10901															
pressure	-30/4	-29/4															

Contractors on Site:

Field Rep. Signature: 

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 2-14-19

Time: 1305

Personnel: JMW, LL

1. Was the system running upon arrival?

YES NO

2. Were there any alarm conditions upon arrival?

YES NO

Comment: _____

3. Is the blower vacuum relief valve open?

YES NO

4. Is the dilution valve open?

YES NO % Open: _____

5. Are there any leaks or damage to system hoses?

YES NO

6. Is there any damage to system components?

YES NO

7. Are all locks and zip-ties secure?

YES NO

8. Was there a GAC change out?

YES NO

9. How many GAC units are at this location?

NEW 0 SPENT 0

10. Do these fall to zero when system is turned off?

Flow Gauge YES NO

Pressure Gauge YES NO

Vacuum Gauges YES NO

11. Do the temp. gauges fall when system is turned off?

YES NO

12. Does the heat-exchanger have dust on the underside?

YES NO

13. Was the underside of the heat-exchanger vacuumed?

YES NO

13. Was the system running upon departure?

YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
21	34	13	120	100	40	355	23825.6

* Clean or change filter if differential pressure increases by 10 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
North	3.96	1125	48.7	X	NA	
South	5.68	845	73.8	✓		
Basement North	2.15	1101.5	14.7	X		
Basement South	1.50	1685	149.0	X		
Basement HRS5	1.75	216	25.8	X		
SSD-34-A	23.2	252	5.6	X		
SSD-35-A	23.1	507	11.1	X		
SSD-36-A	0.67	730	15.9	X		
SSD-37-A	3.09	826	18.0	X		
SSD-38-A	14.67	2290	49.9	X		
SSD-39-A	23.2	619	13.4	X		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.01		160-A	0.08	
079-A	6.00		SSD-1-A	0.51	Stick-up - Vacuumed to remove debris still needs to be lowe reel
167-A	0.01		SSD-12-A-X	2.11	
119-A	0.00		SSD-11-A-X	2.88	
165-A	0.14		SSD-13-A-X	0.52	
117-A	0.69		SSD-2-A-X	4.010	
164-A	0.21		015-A-X	2.84	
136-A-S	1.87		SSD-16-A-X	0.47	
163-A	covered		SSD-3-A-X	0.13	
121-B	covered		SSD-22-A	0.19	
162-A	0.00		SSD-21-A	0.08	
136-A-N	0.01		SSD-20-A	3.03	
136-A	0.01		SSD-19-A	0.01	
161-A	0.01		168-A	0.04	
			188-A	NA	WATER FROM WASH

SSD SYSTEM CHECK - BUILDING A
 LMC Middle River Complex, Middle River, Maryland

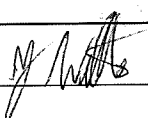
MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING							
Location	Contains Water?		Water Drained?		Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	Yes	No	Yes	No	28 gal	Yes	No
Moisture Separator 2	Yes	No	Yes	No		Yes	No
Exhaust Stack Sump	Yes	No	Yes	No	0.5 gal	Yes	No
PS-1-A	Yes	No	Yes	No	-	Yes	No
PS-2-A	Yes	No	Yes	No	-	Yes	No
PS-3-A	Yes	No	Yes	No	-	Yes	No
PS-4-A	Yes	No	Yes	No	-	Yes	No
PS-5-A	Yes	No	Yes	No	1.5 gal	Yes	No
Drain stacks	Yes	No	Yes	No	-	Yes	No

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	Yes	No	Yes	No
Was the fan running upon arrival?	Yes	No	Yes	No
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	Yes	No	Yes	No
Is the "do not turn off filter" warning sign in place?	Yes	No	Yes	No
Life status color of the Pre-Filter (F-1)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the GAC Filter (F-2)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the Post-Filter (F-3)?	GN OR RD	GN OR RD	GN OR RD	
Was the Pre-Filter (F-1) replaced?	Yes	No	Yes	No
Was the GAC Filter (F-2) replaced?	Yes	No	Yes	No
Was the Post-Filter (F-3) replaced?	Yes	No	Yes	No

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: 

DATE: 2-14-19

DAILY ACTIVITY LOG

PROJECT:
Sub-Slab Depressurization System O&M

CLIENT:
 Lockheed Martin Corporation

LOCATION:
 Middle River Complex- Middle River, Maryland

PROJECT NO.
 117-0512140 – 17

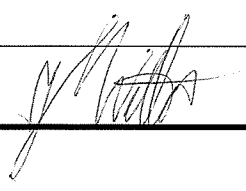
TASK:
 System O&M

DATE: 2-21-19 | **PAGE:** 1 of 1

TIME START	TIME STOP	Bldg A SSOS DESCRIPTION OF ACTIVITIES / NOTES
13:15		Shutdown system, remove ~15 gal from MS-1, 0.2 at
14	1445	Set PS-5, Restart system

Contractors on Site:

Field Rep. Signature:



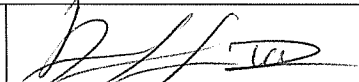
DAILY ACTIVITY LOG

PROJECT: Sub-Slab Depressurization System O&M		CLIENT: Lockheed Martin Corporation	
LOCATION: Middle River Complex- Middle River, Maryland		PROJECT NO. 117-0512140 - 17	
TASK: System O&M		DATE: 3-1-19	PAGE: 1 of 1

TIME START	TIME STOP	DESCRIPTION OF ACTIVITIES / NOTES
10:15	10:25	Arrive on site, get keys
10:30	11:50	Perform pressure & vacuum readings of Building C
12:00	13:30	Perform pressure & vacuum reading of building A
13:30	14:00	Drain water from Building A system ~ 22 gal., restart system
14:00	14:45	Take water back to Building C, put in drums/secondary containment, off site after return of keys

Contractors on Site:

	Lee Lucas

Field Rep. Signature: 

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 3-19 Time: 1252 Personnel: Leeducas

- | | |
|--|--|
| <p>1. Was the system running upon arrival?
YES <input checked="" type="checkbox"/> NO <input type="checkbox"/></p> <p>2. Were there any alarm conditions upon arrival?
YES <input type="checkbox"/> NO <input checked="" type="checkbox"/></p> <p>Comment: _____</p> <p>3. Is the blower vacuum relief valve open?
YES <input type="checkbox"/> NO <input checked="" type="checkbox"/></p> <p>4. Is the dilution valve open?
YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> % Open: _____</p> <p>5. Are there any leaks or damage to system hoses?
YES <input type="checkbox"/> NO <input checked="" type="checkbox"/></p> <p>6. Is there any damage to system components?
YES <input type="checkbox"/> NO <input checked="" type="checkbox"/></p> <p>7. Are all locks and zip-ties secure?
YES <input checked="" type="checkbox"/> NO <input type="checkbox"/></p> | <p>8. Was there a GAC change out?
YES <input type="checkbox"/> NO <input checked="" type="checkbox"/></p> <p>9. How many GAC units are at this location?
NEW <u>0</u> SPENT <u>0</u></p> <p>10. Do these fall to zero when system is turned off?
Flow Gauge YES <input type="checkbox"/> NO <input type="checkbox"/>
Pressure Gauge YES <input type="checkbox"/> NO <input type="checkbox"/>
Vacuum Gauges YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>11. Do the temp. gauges fall when system is turned off?
YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>12. Does the heat-exchanger have dust on the underside?
YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>13. Was the underside of the heat-exchanger vacuumed?
YES <input type="checkbox"/> NO <input type="checkbox"/></p> <p>13. Was the system running upon departure?
YES <input type="checkbox"/> NO <input type="checkbox"/></p> |
|--|--|

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
20	36	16	120	102	40	360	24134.5

* Clean or change filter if differential pressure increases by 10 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
North	3.72	909	79.4	x		
South	5.44	751	105.6	✓		
Basement North	21.7	331	x28.9	x		
Basement South	1.52	1579	x137.8	x		
Basement HRS5	0.74	360	x26.2	x		
SSD-34-A	22.2	293	4.4	x		
SSD-35-A	22.8	575	12.5	x		
SSD-36-A	0.68	749	16.3	x		
SSD-37-A	3.08	847	18.5	x		
SSD-38-A	14.62	2422	52.8	x		
SSD-39-A	23.0	203.573	12.5	>		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.08		160-A	covered	
079-A	0.01		SSD-1-A	covered box	
167-A	0.03		SSD-12-A-X	2.12	
119-A	0.00		SSD-11-A-X	2.89	
165-A	0.04	0.10	SSD-13-A-X	0.52	
117-A	0.07		SSD-2-A-X	4.04	
164-A	0.22		015-A-X	2.89	
136-A-S	1.96		SSD-16-A-X	0.43	
163-A	covered		SSD-3-A-X	0.16	
121-B	0.00		SSD-22-A	0.13	
162-A	0.02		SSD-21-A	0.11	
136-A-N	0.01	0.01	SSD-20-A	0.68	
136-A	0.01		SSD-19-A	0.01	
161-A	0.15		168-A	0.97	
			188-A	0.01	Rilled with H ₂ O

SSD SYSTEM CHECK - BUILDING A
 LMC Middle River Complex, Middle River, Maryland

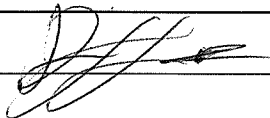
MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID	NA	NA	NA	
Flow Contr. ID	NA	NA	NA	
Start Vacuum (in. Hg)	NA	NA	NA	
Stop Vacuum (in. Hg)	NA	NA	NA	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	Yes No	Yes No	21.0	Yes No	
Moisture Separator 2	Yes No	Yes No		Yes No	
Exhaust Stack Sump	Yes No	Yes No		Yes No	
PS-1-A	Yes No	Yes No		Yes No	
PS-2-A	Yes No	Yes No		Yes No	
PS-3-A	Yes No	Yes No		Yes No	
PS-4-A	Yes No	Yes No		Yes No	
PS-5-A	Yes No	Yes No	1.0	Yes No	
Drain stacks	Yes No	Yes No		Yes No	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	Yes No	Yes No	Yes No	
Was the fan running upon arrival?	Yes No	Yes No	Yes No	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	Yes No	Yes No	Yes No	
Is the "do not turn off filter" warning sign in place?	Yes No	Yes No	Yes No	
Life status color of the Pre-Filter (F-1)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the GAC Filter (F-2)?	GN OR RD	GN OR RD	GN OR RD	
Life status color of the Post-Filter (F-3)?	GN OR RD	GN OR RD	GN OR RD	
Was the Pre-Filter (F-1) replaced?	Yes No	Yes No	Yes No	
Was the GAC Filter (F-2) replaced?	Yes No	Yes No	Yes No	
Was the Post-Filter (F-3) replaced?	Yes No	Yes No	Yes No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: 

DATE: 3-1-19

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 8-13-19

Time: 08:30

Personnel: D. Lucas A. Smith

1. Was the system running upon arrival?

YES NO

2. Were there any alarm conditions upon arrival?

YES NO

Comment: _____

3. Is the blower vacuum relief valve open?

YES NO

4. Is the dilution valve open?

YES NO % Open: _____

5. Are there any leaks or damage to system hoses?

YES NO

6. Is there any damage to system components?

YES NO

7. Are all locks and zip-ties secure?

YES NO

8. Was there a GAC change out?

YES NO

9. How many GAC units are at this location?

NEW _____ SPENT _____

10. Do these fall to zero when system is turned off?

Flow Gauge YES NO

Pressure Gauge YES NO

Vacuum Gauges YES NO

11. Do the temp. gauges fall when system is turned off?

YES NO

12. Does the heat-exchanger have dust on the underside?

YES NO

13. Was the underside of the heat-exchanger vacuumed?

YES NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
34	22	12	120	94	40	360	24915.2

* Clean or change filter if differential pressure increases by 10 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
North	4.01	988	86.3	N/A		
South	5.44	755	65.9	Moisture		
Basement North	21.40	253	22.1	N/A		
Basement South	1.49	1776	155.0	N/A		
Basement HRS5	0.68	283	24.7	None		
SSD-34-A	400.30	23.3	8.7	moisture		32.5" water level
SSD-35-A	23.1	708	15.4	N/A		
SSD-36-A	0.67	748	16.3	N/A		
SSD-37-A	3.19	852	18.6	N/A		
SSD-38-A	15.70	2358	51.4	N/A		
SSD-39-A	23.30	657	14.3	N/A		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.10		160-A	0.10	
079-A	0.0		SSD-1-A	2.14 2.14 ^{0.37}	0.37
167-A	0.04		SSD-12-A-X	2.14	
119-A	0.0		SSD-11-A-X	2.93	
165-A	0.11		SSD-13-A-X	0.50	
117-A	Covered		SSD-2-A-X	4.04	
164-A	0.11		015-A-X	2.84	
136-A-S	1.97		SSD-16-A-X	Covered	
163-A	Covered		SSD-3-A-X	0.15	
121-B	0.01		SSD-22-A	0.34	
162-A	0.07		SSD-21-A	0.01	
136-A-N	0.00		SSD-20-A	0.28	
136-A	0.02		SSD-19-A	0.01	
161-A	0.19		168-A	1.01	
			188-A	0.01	

Bis -

Bis -

Bis -

Point w/ tape 0.01

SSD SYSTEM CHECK - BUILDING A
 LMC Middle River Complex, Middle River, Maryland


MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	1023-1034	1030-1031	1026-1027	
Summa Canister ID	10749	10909	11849	
Flow Contr. ID	10614	10930	10911	
Start Vacuum (in. Hg)	-30	-30	-29	
Stop Vacuum (in. Hg)	-4	-4	-4	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	✓	5 gal	5 gal	✓	
Moisture Separator 2	✗	✗	✗	✓	
Exhaust Stack Sump	✗	✗	✗	✓	
PS-1-A	✗	✗	✗	✓	
PS-2-A	✗	✗	✗	✓	
PS-3-A	✗	✗	✗	✓	
PS-4-A	✗	✗	✗	✓	
PS-5-A	✓	1 gal	1 gal	✓	
Drain stacks	✗	✗	✗	✓	

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	✓	✓	✓	
Was the fan running upon arrival?	✓	✓	✓	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	✗	✗	✗	
Is the "do not turn off filter" warning sign in place?	✓	✓	✓	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	Green	Green	Green	
Life status color of the Post-Filter (F-3)?	Green	Green	Green	
Was the Pre-Filter (F-1) replaced?	✓	✓	✓	
Was the GAC Filter (F-2) replaced?	✓	✓	✓	
Was the Post-Filter (F-3) replaced?	✓	✓	✓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: 

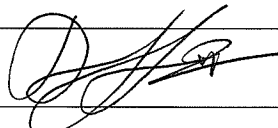
TIME: 3-13-19

DAILY ACTIVITY LOG

PROJECT: SSDS Systems	CLIENT: Lockheed Martin Corporation
LOCATION: Middle River Complex Building A and Building C	PROJECT NO.: 117-0512140
TASK: Change autodialer # number to myself, Andrew, Peter Replace batteries in both autodialers, flush water	DATE: 3/19/19 PAGE: 1 of 1

TIME START	TIME STOP	DESCRIPTION OF ACTIVITIES
10:15		Arrive on-site
		Change autodialer batteries to new "C" batteries, at in both Bldg C & Bldg A
		Bring in new 55-gal drum, write Haz waste label (non-haz)
		Bring 4 5-gal buckets to Bldg A, turn off system, collect water - ~ 6 gal water collected
		Insert my number into autodialer, ensure Andrew's name is in too
		Empty 6-gal water into storage in Bldg C
13:00		Off-site
		* Band-its needed 14" long, order since Grainger has none in stock. Band-its app. will be applied to Bldg C hoses in GAC system


CONTRACTORS ON-SITE:	
Tetra Tech	Lee Lucas

FIELD REP. SIGNATURE 	DATE: 3-19-19
---	----------------------

DAILY ACTIVITY LOG

PROJECT: SSDS Systems	CLIENT: Lockheed Martin Corporation
LOCATION: Middle River Complex Building A and Building C	PROJECT NO.: 117-0512140
TASK: SSDS checks, vacuum/flow monitoring, water flush	DATE: 5/28/19 PAGE: 1 of 1

TIME START	TIME STOP	DESCRIPTION OF ACTIVITIES
0940	1000	Arrive at main building (badging office) with Peter Rich to make sure his badge has not expired
1015	12:08	Start system checks of Building A, flush water (8.5-gal)
1215	1220	Get keys from Safety office
1230	14:05	Start system checks of Building C
14:15	14:20	Return keys
14:25	14:35	Collect water from PS-5-A (PS-5-A) → 0.25-gal
14:55		Offsite
		* All Building A & C water drained was stored in 55-gal drums in Building C secondary containment
		* No water was drained from the Building C system. <i>pre</i>

CONTRACTORS ON-SITE:	
TetraTech	Lee Lucas
TetraTech	Peter Rich
FIELD REP. SIGNATURE	
	DATE: 3/28/19

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 5/20/19

Time: 10:15

Personnel: Lee Lucas

1. Was the system running upon arrival?

YES NO

2. Were there any alarm conditions upon arrival?

YES NO

Comment: _____

3. Is the blower vacuum relief valve open?

YES NO

4. Is the dilution valve open?

YES NO % Open: _____

5. Are there any leaks or damage to system hoses?

YES NO

6. Is there any damage to system components?

YES NO

7. Are all locks and zip-ties secure?

YES NO

8. Was there a GAC change out?

YES NO

9. How many GAC units are at this location?

NEW SPENT

10. Do these fall to zero when system is turned off?

Flow Gauge YES NO

Pressure Gauge YES NO

Vacuum Gauges YES NO

11. Do the temp. gauges fall when system is turned off?

YES NO

12. Does the heat-exchanger have dust on the underside?

YES NO

→ 13. Was the underside of the heat-exchanger vacuumed?

YES NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
20	36	16	122	102	40	360	24776.8

* Clean or change filter if differential pressure increases by 10 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
North	3.94	951	83.0	X		
South	5.28	730	63.7	✓		
Basement North	2.14	736	64.3	X		
Basement South	1.67	1572	137.2	X		
Basement HRS5	0.60	276	24.1	X		32.0" wt HRS5
SSD-34-A	22.9	357	7.8	X		
SSD-35-A	54.5	734	16.0	X		
SSD-36-A	0.64	691	15.1	X		
SSD-37-A	3.09	823	17.9	X		
SSD-38-A	15.22	23.17	50.5	X		
SSD-39-A	56.1	611	14.0	X		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.08		160-A	0.34	
079-A	0.01		SSD-1-A	0.19	
167-A	0.02		SSD-12-A-X	2.09	
119-A	0.01		SSD-11-A-X	2.86	
165-A	0.16		SSD-13-A-X	0.50	
117-A	0.09		SSD-2-A-X	3.99	
164-A	0.22		015-A-X	2.02	
136-A-S	1.98		SSD-16-A-X	0.43	
163-A	Covered		SSD-3-A-X	0.15	
121-B	0.01		SSD-22-A	0.13	
162-A	0.01		SSD-21-A	0.9	
136-A-N	0.00		SSD-20-A	0.44	
136-A	0.02		SSD-19-A	0.01	
161-A	Covered		168-A	2.66	
			188-A	0.03	

SSD SYSTEM CHECK - BUILDING A
 LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator 1	✓	8.5 gal	8.5 gal	✓	
Moisture Separator 2	x	x			
Exhaust Stack Sump	x	x			
PS-1-A	x	x			
PS-2-A	x	x			
PS-3-A	x	x			
PS-4-A	x	x			
PS-5-A	✓	0.25			
Drain stacks	x	x			

INDOOR AIR FILTER MONITORING				
	AF-N/NX	AF-M/MX	AF-S/SX	Comments
Was the power on upon arrival?	✓	✓	✓	
Was the fan running upon arrival?	✓	✓	✓	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	x	x	x	
Is the "do not turn off filter" warning sign in place?	✓	✓	✓	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	Green	Green	Green	
Life status color of the Post-Filter (F-3)?	Green	Green	Green	
Was the Pre-Filter (F-1) replaced?	✓	✓	✓	
Was the GAC Filter (F-2) replaced?	✓	✓	✓	
Was the Post-Filter (F-3) replaced?	✓	✓	✓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: 

TIME: 3-28-19

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

Date: 10/12/18 Time: 1015 Personnel: JMW

- | | |
|---|---|
| <p>1. Was the system running upon arrival?
 <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>2. Were there any alarm conditions upon arrival?
 <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>Comment: _____</p> <p>3. Is the blower vacuum relief valve open?
 <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>4. Is the dilution valve open?
 <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO % Open: _____</p> <p>5. Are there any leaks or damage to system hoses?
 <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>6. Is there any damage to system components?
 <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>7. Are all locks and zip-ties secure?
 <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> | <p>8. Was there a GAC or PPZ change out?
 <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Comment: _____</p> <p>9. How many GAC and PPZ units are at this location?
 GAC: NEW <u>23</u> SPENT <u>0</u>
 PPZ: NEW <u>1</u> SPENT <u>0</u></p> <p>11. Do these fall to zero when system is turned off?
 Flow Gauge <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
 Pressure Gauge <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
 Vacuum Gauges <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>12. Do the temp. gauges fall when system is turned off?
 <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>13. Was the system running upon departure?
 <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> |
|---|---|

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
44	50	6	175	125	30	155	45108.1

* Replace filter if >25 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow* (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			CLOSED			
SSD-23-C	33.7	2 MAX	NA	✓	-	
SSD-30-C	24.9	384	2.4	✓	-	
SSD-26-C	12.54	163	3.6	X	-	
SSD-31-C	11.40	655	1.4.3	X	-	
SSD-27-C	1.32	1186	25.9	X	-	
SSD-32-C	2.85	1250	27.3	X	-	
SSD-28-C	6.78	1714	37.4	✓	-	
SSD-33-C	10.08	1405	30.6	✓	-	
SSD-29-C	3.15	944	20.6	X	-	
SSD-34-C	39.2	318	6.9	X	-	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.77		111-C	0.00	
135-C	0.22		155-C	0.20	
157-C	NA	(COVERED)	133-C	0.78	
113-C	1.88		154-C	0.73	
156-C	0.31		153-C	0.07	
151-C	NA	NO ACCESS	158-C	0.05	
126-C	0.00		001-C	0.05	
149-C	0.00		SSD-22-C	0.05	
050-C	0.01		SSD-2-C	0.16	
141-C	0.61		SSD-4-C	NA	MWRP
127-C	2.01		SSD-24-C	0.26	
150-C	0.01		SSD-3-C	0.04	
152-C	0.05		SSD-25-C	0.10	
060-C	NA	(COVERED)			

SSD SYSTEM CHECK - BUILDING C
 LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	NA	NA	NA	NAV.
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING								
Location	Contains Water?		Water Drained?		Volume Drained	Drain Valve Closed?		Comments
Moisture Separators								
MS-1	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
MS-2	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Pipe Sumps								
PS-1	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
PS-2	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
PS-3	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
PS-4	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
PS-5	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
System Sumps								
Exhaust Stack	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
GAC and PPZ Drains								
Lead GAC	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Lag GAC	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
PPZ	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 0

17. Are waste drums labeled and in good condition?
 YES NO Comment: _____

18. Is the secondary containment pad in good condition?
 YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: [Signature]

DATE: 10/12/18
[Signature]

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

Date: 10-23-18 Time: 1015 Personnel: JMW

- | | |
|--|--|
| <p>1. Was the system running upon arrival?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>2. Were there any alarm conditions upon arrival?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>Comment: _____</p> <p>3. Is the blower vacuum relief valve open?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>4. Is the dilution valve open?
<input type="radio"/> YES <input checked="" type="radio"/> NO % Open: _____</p> <p>5. Are there any leaks or damage to system hoses?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>6. Is there any damage to system components?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>7. Are all locks and zip-ties secure?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> | <p>8. Was there a GAC or PPZ change out?
<input type="radio"/> YES <input checked="" type="radio"/> NO Comment: _____</p> <p>9. How many GAC and PPZ units are at this location?
GAC: NEW <u>3</u> SPENT <u>0</u>
PPZ: NEW <u>1</u> SPENT <u>0</u></p> <p>11. Do these fall to zero when system is turned off?
Flow Gauge <input checked="" type="radio"/> YES <input type="radio"/> NO
Pressure Gauge <input checked="" type="radio"/> YES <input type="radio"/> NO
Vacuum Gauges <input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>12. Do the temp. gauges fall when system is turned off?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>13. Was the system running upon departure?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> |
|--|--|

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
48	52	4	170	126	30	155	45372.1

* Replace filter if >25 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow* (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	30.3	2062	45.0	X	-	
SSD-23-C	NA	NA	COVERED	-	-	
SSD-30-C	15.24	104	2.3	X	-	
SSD-26-C	3.69	200	4.4	X	-	
SSD-31-C	4.53	776	16.8	X	-	
SSD-27-C	1.48	1128	24.6	X	-	
SSD-32-C	4.49	1222	26.6	✓	-	
SSD-28-C	2.77	1896	41.3	✓	-	
SSD-33-C	19.13	1255	27.4	✓	-	
SSD-29-C	3.19	1115	24.3	X	-	
SSD-34-C	41.5	290	6.3	X	-	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.01		111-C	0.00	
135-C	0.51		155-C	0.14	
157-C	NA	COVERED	133-C	0.66	
113-C	0.78		154-C	0.03	
156-C	0.08		153-C	0.04	
151-C	0.01		158-C	0.00	
126-C	0.01		001-C	0.20	
149-C	0.02		SSD-22-C	0.04	
050-C	0.00		SSD-2-C	0.13	
141-C	0.89		SSD-4-C	NA	COVERED
127-C	1.01		SSD-24-C	0.21	
150-C	0.00		SSD-3-C	1.55	
152-C	0.02		SSD-25-C	0.12	
060-C	NA	COVERED			

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	NA	NA	NA	Nov.
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING						
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments	
Moisture Separators						
MS-1	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes No		
MS-2	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes No		
Pipe Sumps						
PS-1	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes No		
PS-2	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes No		
PS-3	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes No		
PS-4	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes No		
PS-5	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes No		
System Sumps						
Exhaust Stack	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes No		
GAC and PPZ Drains						
Lead GAC	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes No		
Lag GAC	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes No		
PPZ	Yes <input checked="" type="checkbox"/> No	Yes <input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes No		

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site?

PART FULL 1

FULL 0

15. How many Bldg. C water drums are on-site?

PART FULL 1

FULL 0

16. How many filter drums are on-site?

PART FULL 0

FULL 0

17. Are waste drums labeled and in good condition?

YES

NO

Comment: _____

18. Is the secondary containment pad in good condition?

YES

NO

Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____

[Handwritten Signature]

DATE: 10/23/18

[Handwritten Initials]

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

Date: 11-9-18 Time: 0950 Personnel: JLW

- | | |
|--|---|
| <p>1. Was the system running upon arrival?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>2. Were there any alarm conditions upon arrival?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>Comment: _____</p> <p>3. Is the blower vacuum relief valve open?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>4. Is the dilution valve open?
<input type="radio"/> YES <input checked="" type="radio"/> NO % Open: _____</p> <p>5. Are there any leaks or damage to system hoses?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>6. Is there any damage to system components?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>7. Are all locks and zip-ties secure?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> | <p>8. Was there a GAC or PPZ change out?
<input type="radio"/> YES <input checked="" type="radio"/> NO Comment: _____</p> <p>9. How many GAC and PPZ units are at this location?
GAC: NEW <u>3</u> SPENT <u>0</u>
PPZ: NEW <u>1</u> SPENT <u>0</u></p> <p>11. Do these fall to zero when system is turned off?
Flow Gauge <input checked="" type="radio"/> YES <input type="radio"/> NO
Pressure Gauge <input checked="" type="radio"/> YES <input type="radio"/> NO
Vacuum Gauges <input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>12. Do the temp. gauges fall when system is turned off?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>13. Was the system running upon departure?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> |
|--|---|

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
47	51	4	170	133	31	155	45780.4

* Replace filter if >25 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow* (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	29.24	2084	45.4	X	-	
SSD-23-C	8.30	128	2.8	X	-	
SSD-30-C	8.30	128	2.8	X	-	
SSD-26-C	4.77	190	4.1	X	-	
SSD-31-C	4.17	748	16.3	X	-	
SSD-27-C	1.46	246	2.6	X	-	
SSD-32-C	2.80	175	27.8	✓	-	
SSD-28-C	2.80	180	39.4	✓	-	
SSD-33-C	1.63	407	30.7	✓	-	
SSD-29-C	3.09	1015	22.1	✓	-	
SSD-34-C	40.5	253	5.5	X	-	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.01		111-C	0.00	
135-C	0.07		155-C	0.18	
157-C	0.08		133-C	0.66	
113-C	0.08		154-C	0.06	
156-C	0.09		153-C	0.10	
151-C	0.07		158-C	0.04	
126-C	0.00		001-C	0.44	
149-C	0.08		SSD-22-C	0.06	
050-C	0.08		SSD-2-C	0.15	
141-C	0.96		SSD-4-C	0.74	
127-C	1.14		SSD-24-C	0.19	
150-C	0.01		SSD-3-C	1.24	
152-C	0.02		SSD-25-C	0.39	
060-C	NA				

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	1147/1148	1143/1144	1140/1141	
Summa Canister ID	10603	11972	11778	
Flow Contr. ID	10930	09890	10797	
Start Vacuum (in. Hg)	28.5	30	38	
Stop Vacuum (in. Hg)	4	4	4	

SYSTEM CONDENSATE MONITORING								
Location	Contains Water?		Water Drained?		Volume Drained	Drain Valve Closed?		Comments
Moisture Separators								
MS-1	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
MS-2	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Pipe Sumps								
PS-1	Yes	<input checked="" type="checkbox"/> No	Yes	<input type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
PS-2	Yes	<input checked="" type="checkbox"/> No	Yes	<input type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
PS-3	Yes	<input checked="" type="checkbox"/> No	Yes	<input type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
PS-4	Yes	<input checked="" type="checkbox"/> No	Yes	<input type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
PS-5	Yes	<input checked="" type="checkbox"/> No	Yes	<input type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
System Sumps								
Exhaust Stack	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Trace	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
GAC and PPZ Drains								
Lead GAC	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Lag GAC	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
PPZ	Yes	<input checked="" type="checkbox"/> No	Yes	<input checked="" type="checkbox"/> No	-	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

13. How many empty drums are on-site? 0
14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 0
15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0
16. How many filter drums are on-site? PART FULL 0 FULL 0
17. Are waste drums labeled and in good condition?
 YES NO Comment: _____
18. Is the secondary containment pad in good condition?
 YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: [Signature]

DATE: 11/9/18
[Signature]

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

Date: 11-19-18 Time: 1015 Personnel: JMW

- | | |
|--|---|
| <p>1. Was the system running upon arrival?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>2. Were there any alarm conditions upon arrival?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>Comment: _____</p> <p>3. Is the blower vacuum relief valve open?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>4. Is the dilution valve open?
<input type="radio"/> YES <input checked="" type="radio"/> NO % Open: _____</p> <p>5. Are there any leaks or damage to system hoses?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>6. Is there any damage to system components?
<input type="radio"/> YES <input checked="" type="radio"/> NO</p> <p>7. Are all locks and zip-ties secure?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> | <p>8. Was there a GAC or PPZ change out?
<input type="radio"/> YES <input checked="" type="radio"/> NO Comment: _____</p> <p>9. How many GAC and PPZ units are at this location?
GAC: NEW <u>3</u> SPENT <u>0</u>
PPZ: NEW <u>1</u> SPENT <u>0</u></p> <p>11. Do these fall to zero when system is turned off?
Flow Gauge <input checked="" type="radio"/> YES <input type="radio"/> NO
Pressure Gauge <input checked="" type="radio"/> YES <input type="radio"/> NO
Vacuum Gauges <input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>12. Do the temp. gauges fall when system is turned off?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>13. Was the system running upon departure?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> |
|--|---|

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
47	51	4	168	124	32	155	46020.7

* Replace filter if >25 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow* (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	28.2	2293	50.0			
SSD-23-C			CLOSED			
SSD-30-C	11.24	98	2.1	✓		
SSD-26-C	4.08	183	4.0			
SSD-31-C	3.31	768	16.7			
SSD-27-C	1.67	7200	26.2			
SSD-32-C	2.81	1269	27.7			
SSD-28-C	2.88	1798	39.2	✓		
SSD-33-C	12.76	1257	27.4	✓		
SSD-29-C	3.08	1060	23.1			
SSD-34-C	40.5	509	10.1			

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.00		111-C	0.00	
135-C	0.76		155-C	0.14	
157-C	N/A		133-C	0.63	
113-C	0.61		154-C	0.04	
156-C	0.09		153-C	0.07	
151-C	0.09		158-C	-0.01	
126-C	0.00		001-C	0.37	
149-C	0.02		SSD-22-C	0.03	
050-C	0.00		SSD-2-C	0.12	
141-C	N/A	WVY ERIP	SSD-4-C	N/A	COVERED
127-C	0.73		SSD-24-C	0.20	
150-C	0.01		SSD-3-C	0.02	
152-C	0.02		SSD-25-C	0.32	
060-C	N/A	COVERED			

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	NA	NA	NA	December
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING								
Location	Contains Water?		Water Drained?		Volume Drained	Drain Valve Closed?		Comments
Moisture Separators								
MS-1	Yes	No	Yes	No	-	Yes	No	
MS-2	Yes	No	Yes	No	-	Yes	No	
Pipe Sumps								
PS-1	Yes	No	Yes	No	-	Yes	No	
PS-2	Yes	No	Yes	No	-	Yes	No	
PS-3	Yes	No	Yes	No	-	Yes	No	
PS-4	Yes	No	Yes	No	-	Yes	No	
PS-5	Yes	No	Yes	No	-	Yes	No	
System Sumps								
Exhaust Stack	Yes	No	Yes	No	~ 1 gal	Yes	No	
GAC and PPZ Drains								
Lead GAC	Yes	No	Yes	No	-	Yes	No	
Lag GAC	Yes	No	Yes	No	-	Yes	No	
PPZ	Yes	No	Yes	No	-	Yes	No	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site?

PART FULL 1

FULL 0

15. How many Bldg. C water drums are on-site?

PART FULL 1

FULL 0

16. How many filter drums are on-site?

PART FULL 0

FULL 0

17. Are waste drums labeled and in good condition?

YES

NO

Comment: _____

18. Is the secondary containment pad in good condition?

YES

NO

Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____

[Handwritten Signature]

DATE: _____

11/19/13
[Handwritten Signature]

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

Date: 12-5-18 Time: 1045 Personnel: JMW

1. Was the system running upon arrival?
 YES NO
2. Were there any alarm conditions upon arrival?
 YES NO
Comment: _____
3. Is the blower vacuum relief valve open?
 YES NO
4. Is the dilution valve open?
 YES NO % Open: _____
5. Are there any leaks or damage to system hoses?
 YES NO
6. Is there any damage to system components?
 YES NO
7. Are all locks and zip-ties secure?
 YES NO
8. Was there a GAC or PPZ change out?
 YES NO Comment: _____
9. How many GAC and PPZ units are at this location?
GAC: NEW 3 SPENT 0
PPZ: NEW 1 SPENT 0
11. Do these fall to zero when system is turned off?
Flow Gauge YES NO
Pressure Gauge YES NO
Vacuum Gauges YES NO
12. Do the temp. gauges fall when system is turned off?
 YES NO
13. Was the system running upon departure?
 YES NO

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
44	50	6	166	110	32	155	46405.2

* Replace filter if >25 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow* (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	23.13	26.5	50.4			
SSD-23-C			(23.13)			
SSD-30-C	13.28	22.4	4.9			
SSD-26-C	3.80	2.73	6.0			
SSD-31-C	3.46	8.09	17.6			
SSD-27-C	1.76	12.56	27.4			
SSD-32-C	2.60	13.05	28.4			
SSD-28-C	2.26	18.57	40.5	✓		
SSD-33-C	4.03	7.12	15.7			
SSD-29-C	3.03	10.32	22.9			
SSD-34-C	39.1	23.9	5.2			

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.00		111-C	0.00	
135-C	0.16		155-C	0.13	
157-C	N/A	COVERED	133-C	0.61	
113-C	0.66		154-C	0.03	
156-C	0.07		153-C	0.06	
151-C	0.01		158-C	2.01	
126-C	0.09		001-C	0.31	
149-C	0.04		SSD-22-C	0.03	
050-C	0.01		SSD-2-C	0.10	
141-C	N/A	HVY EOP	SSD-4-C	0.04	COVERED
127-C	0.40		SSD-24-C	0.17	
150-C	0.00		SSD-3-C	0.02	
152-C	0.00		SSD-25-C	0.01	
060-C	N/A	COVERED			

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING								
Location	Contains Water?		Water Drained?		Volume Drained	Drain Valve Closed?		Comments
Moisture Separators								
MS-1	Yes	No	Yes	No	-	Yes	No	
MS-2	Yes	No	Yes	No	-	Yes	No	
Pipe Sumps								
PS-1	Yes	No	Yes	No	-	Yes	No	
PS-2	Yes	No	Yes	No	-	Yes	No	
PS-3	Yes	No	Yes	No	-	Yes	No	
PS-4	Yes	No	Yes	No	-	Yes	No	
PS-5	Yes	No	Yes	No	-	Yes	No	
System Sumps								
Exhaust Stack	Yes	No	Yes	No	Trace	Yes	No	
GAC and PPZ Drains								
Lead GAC	Yes	No	Yes	No	-	Yes	No	
Lag GAC	Yes	No	Yes	No	-	Yes	No	
PPZ	Yes	No	Yes	No	-	Yes	No	

13. How many empty drums are on-site? 0
14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 1
15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0
16. How many filter drums are on-site? PART FULL 0 FULL 0
17. Are waste drums labeled and in good condition?
 YES NO Comment: _____
18. Is the secondary containment pad in good condition?
 YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: [Signature] DATE: 9/2/18

SSD SYSTEM CHECK - BUILDING C
 LMC Middle River Complex, Middle River, Maryland

Date: 12-19-18 Time: 0945 Personnel: JMW

- | | |
|---|--|
| <p>1. Was the system running upon arrival?
 <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>2. Were there any alarm conditions upon arrival?
 <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
 Comment: _____</p> <p>3. Is the blower vacuum relief valve open?
 <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>4. Is the dilution valve open?
 <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO % Open: _____</p> <p>5. Are there any leaks or damage to system hoses?
 <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>6. Is there any damage to system components?
 <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>7. Are all locks and zip-ties secure?
 <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> | <p>8. Was there a GAC or PPZ change out?
 <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Comment: _____</p> <p>9. How many GAC and PPZ units are at this location?
 GAC: NEW <u>3</u> SPENT <u>0</u>
 PPZ: NEW <u>1</u> SPENT <u>0</u></p> <p>11. Do these fall to zero when system is turned off?
 Flow Gauge <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
 Pressure Gauge <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
 Vacuum Gauges <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>12. Do the temp. gauges fall when system is turned off?
 <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>13. Was the system running upon departure?
 <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> |
|---|--|

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
45	50	5	166	110	33	155	46740.5

* Replace filter if >25 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow* (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
SSD-21-C			CLOSED			
SSD-23-C	27.2	2231	48.6			
SSD-30-C	10.24	352	7.7			
SSD-26-C	3.65	184	4.0			
SSD-31-C	3.55	747	16.3			
SSD-27-C	1.63	1239	27.0			
SSD-32-C	2.61	1401	30.5			
SSD-28-C	2.50	1850	40.3	✓		
SSD-33-C	3.62	750	16.4			
SSD-29-C	3.04	1145	22.8			
SSD-34-C	39.6	153	3.3			

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.00		111-C	0.00	
135-C	0.17		155-C	0.16	
157-C	NA	AWAY	133-C	0.61	
113-C	0.29		154-C	0.02	
156-C	0.03		153-C	0.05	
151-C	0.01		158-C	0.01	
126-C	0.00		001-C	0.30	
149-C	0.02		SSD-22-C	0.02	
050-C	0.00		SSD-2-C	0.08	
141-C	NA	HVV LEAK	SSD-4-C	NA	
127-C	0.45		SSD-24-C	0.05	
150-C	0.00		SSD-3-C	0.01	
152-C	0.01		SSD-25-C	0.01	
060-C	NA	COVERED			

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING						
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments	
Moisture Separators						
MS-1	Yes No	Yes No	-	Yes No		
MS-2	Yes No	Yes No	-	Yes No		
Pipe Sumps						
PS-1	Yes No	Yes No	-	Yes No		
PS-2	Yes No	Yes No	-	Yes No		
PS-3	Yes No	Yes No	-	Yes No		
PS-4	Yes No	Yes No	-	Yes No		
PS-5	Yes No	Yes No	-	Yes No		
System Sumps						
Exhaust Stack	Yes No	Yes No	TRACE	Yes No		
GAC and PPZ Drains						
Lead GAC	Yes No	Yes No	-	Yes No		
Lag GAC	Yes No	Yes No	-	Yes No		
PPZ	Yes No	Yes No	-	Yes No		

13. How many empty drums are on-site? 3
14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 2
15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0
16. How many filter drums are on-site? PART FULL 0 FULL 1
17. Are waste drums labeled and in good condition?
 YES NO Comment: _____
18. Is the secondary containment pad in good condition?
 YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: [Signature] DATE: 12/19/18

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

Date: 1/3/19 Time: 0930 Personnel: L. Lucas/M. Wilks

- | | |
|--|---|
| <p>1. Was the system running upon arrival?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>2. Were there any alarm conditions upon arrival?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>Comment: _____</p> <p>3. Is the blower vacuum relief valve open?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>4. Is the dilution valve open?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO % Open: _____</p> <p>5. Are there any leaks or damage to system hoses?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>6. Is there any damage to system components?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>7. Are all locks and zip-ties secure?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> | <p>8. Was there a GAC or PPZ change out?
<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Comment: _____</p> <p>9. How many GAC and PPZ units are at this location?
GAC: NEW <u>3</u> SPENT <u>0</u>
PPZ: NEW <u>1</u> SPENT <u>0</u></p> <p>11. Do these fall to zero when system is turned off?
Flow Gauge <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Pressure Gauge <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Vacuum Gauges <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>12. Do the temp. gauges fall when system is turned off?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>13. Was the system running upon departure?
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> |
|--|---|

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
<u>48</u>	<u>51</u>	<u>PRE 3</u>	<u>150</u>	<u>98</u>	<u>29</u>	<u>157</u>	<u>47096.6</u>

* Replace filter if >25 in. H₂O

pre - post

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow* (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	<u>28.4</u>	<u>2136</u>	<u>0.5</u>			
SSD-23-C			<u>CLOSED</u>			
SSD-30-C	<u>12.18</u>	<u>344</u>	<u>0.7</u>	<input checked="" type="checkbox"/>		
SSD-26-C	<u>4.74</u>	<u>229</u>	<u>5.0</u>	<input checked="" type="checkbox"/>		
SSD-31-C	<u>3.70</u>	<u>738</u>	<u>10.1</u>	<input checked="" type="checkbox"/>		
SSD-27-C	<u>6.56</u>	<u>1300</u>	<u>28.3</u>	<input checked="" type="checkbox"/>		
SSD-32-C	<u>2.66</u>	<u>1330</u>	<u>29.0</u>	<input checked="" type="checkbox"/>		
SSD-28-C	<u>2.51</u>	<u>1822</u>	<u>39.7</u>	<input checked="" type="checkbox"/>		
SSD-33-C	<u>3.91</u>	<u>778</u>	<u>17.0</u>	<input checked="" type="checkbox"/>		
SSD-29-C	<u>3.09</u>	<u>1011</u>	<u>22.0</u>	<input checked="" type="checkbox"/>		
SSD-34-C	<u>40.9</u>	<u>1020</u>	<u>22.2</u>	<input checked="" type="checkbox"/>		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	<u>0.00</u>		111-C	<u>0.01</u>	
135-C	<u>2.26</u>		155-C	<u>0.16</u>	
157-C	<u>NA</u>	<u>COVERED</u>	133-C	<u>0.64</u>	
113-C	<u>0.37</u>		154-C	<u>0.07</u>	
156-C	<u>0.06</u>		153-C	<u>0.12</u>	
151-C	<u>0.00</u>		158-C	<u>0.00</u>	
126-C	<u>0.01</u>		001-C	<u>0.21</u>	
149-C	<u>0.02</u>		SSD-22-C	<u>0.02</u>	
050-C	<u>0.02</u>		SSD-2-C	<u>0.07</u>	
141-C	<u>NA</u>	<u>W/ZIP TIE</u>	SSD-4-C		
127-C	<u>0.44</u>		SSD-24-C	<u>0.19</u>	
150-C	<u>0.01</u>		SSD-3-C	<u>0.94</u>	
152-C	<u>0.01</u>		SSD-25-C	<u>0.01</u>	
060-C	<u>NA</u>	<u>COVERED</u>			

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
MS-2	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
Pipe Sumps					
PS-1	Yes No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
PS-2	Yes No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
PS-3	Yes No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
PS-4	Yes No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
PS-5	Yes No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
System Sumps					
Exhaust Stack	Yes No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
GAC and PPZ Drains					
Lead GAC	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
Lag GAC	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
PPZ	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	

13. How many empty drums are on-site? 3

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 1

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 1

17. Are waste drums labeled and in good condition?
 YES NO Comment: _____

18. Is the secondary containment pad in good condition?
 YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: [Signature]

DATE: 11/3/19

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

Date: 1-16-19

Time: 10:40

Personnel: L. Lucas, M. Wilks

1. Was the system running upon arrival?

YES NO

2. Were there any alarm conditions upon arrival?

YES NO

Comment: _____

3. Is the blower vacuum relief valve open?

YES NO

4. Is the dilution valve open?

YES NO % Open: _____

5. Are there any leaks or damage to system hoses?

YES NO

6. Is there any damage to system components?

YES NO

7. Are all locks and zip-ties secure?

YES NO

8. Was there a GAC or PPZ change out?

YES NO Comment: _____

9. How many GAC and PPZ units are at this location?

GAC: NEW 3 SPENT 0

PPZ: NEW 1 SPENT 0

11. Do these fall to zero when system is turned off?

Flow Gauge YES NO

Pressure Gauge YES NO

Vacuum Gauges YES NO

12. Do the temp. gauges fall when system is turned off?

YES NO

13. Was the system running upon departure?

YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
<u>49</u>	<u>51</u>	<u>2</u>	<u>104</u>	<u>110</u>	<u>27</u>	<u>155</u>	<u>47408.5</u>

* Replace filter if >25 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow* (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
SSD-21-C <u>30</u>	<u>14.05</u>	<u>325</u>	<u>7.1</u>	<u>NO</u>	<u>NA</u>	
SSD-23-C			<u>CLOSED</u>			
SSD-30-C <u>21</u>	<u>26.5</u>	<u>2420</u>	<u>52.8</u>	<u>NO</u>		
SSD-26-C	<u>2.49</u>	<u>183</u>	<u>4.0</u>	<u>NO</u>		
SSD-31-C	<u>3.09</u>	<u>742</u>	<u>16.2</u>	<u>NO</u>		
SSD-27-C	<u>3.75</u>	<u>1290</u>	<u>20.1</u>	<u>YES</u>		
SSD-32-C	<u>2.72</u>	<u>1305</u>	<u>28.4</u>	<u>NO</u>		
SSD-28-C	<u>2.82</u>	<u>1840</u>	<u>40.1</u>	<u>YES</u>		
SSD-33-C	<u>3.82</u>	<u>703</u>	<u>15.4</u>	<u>NO</u>		
SSD-29-C	<u>3.05</u>	<u>1007</u>	<u>22.0</u>	<u>NO</u>		
SSD-34-C	<u>40.1</u>	<u>142320</u>	<u>7.0</u>	<u>NO</u>		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	<u>0.0</u>		111-C	<u>0.01</u>	
135-C	<u>0.98</u>		155-C	<u>0.13</u>	
157-C	<u>NA</u>	<u>COVERED</u>	133-C	<u>1.50</u>	
113-C	<u>0.38</u>		154-C	<u>0.04</u>	
156-C	<u>0.03</u>		153-C	<u>0.04</u>	
151-C	<u>0.00</u>		158-C	<u>0.00</u>	
126-C	<u>0.01</u>		001-C	<u>0.19</u>	
149-C	<u>0.04</u>		SSD-22-C	<u>0.00</u>	
050-C	<u>0.00</u> <u>0.03</u>		SSD-2-C	<u>0.08</u>	
141-C	<u>NA</u>	<u>covered</u>	SSD-4-C	<u>NA</u>	<u>COVERED</u>
127-C	<u>0.39</u>		SSD-24-C	<u>0.04</u>	
150-C	<u>0.02</u>		SSD-3-C	<u>0.75</u>	
152-C	<u>0.01</u>		SSD-25-C	<u>0.00</u>	
060-C	<u>NA</u>	<u>COVERED</u>			

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	1252	1247	1242	
Summa Canister ID	W872	W710	11347	
Flow Contr. ID	09988	10911	113924	
Start Vacuum (in. Hg)	30	30	30	
Stop Vacuum (in. Hg)	4	4	4	

SYSTEM CONDENSATE MONITORING							
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments		
Moisture Separators							
MS-1	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No	-	<input checked="" type="radio"/> Yes No			
MS-2	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No	-	<input checked="" type="radio"/> Yes No			
Pipe Sumps							
PS-1	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No	-	<input checked="" type="radio"/> Yes No			
PS-2	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No	-	<input checked="" type="radio"/> Yes No			
PS-3	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No	-	<input checked="" type="radio"/> Yes No			
PS-4	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No	-	<input checked="" type="radio"/> Yes No			
PS-5	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No	-	<input checked="" type="radio"/> Yes No			
System Sumps							
Exhaust Stack	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No	-	<input checked="" type="radio"/> Yes No			
GAC and PPZ Drains							
Lead GAC	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No	-	<input checked="" type="radio"/> Yes No			
Lag GAC	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No	-	<input checked="" type="radio"/> Yes No			
PPZ	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No	-	<input checked="" type="radio"/> Yes No			

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 4

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 4

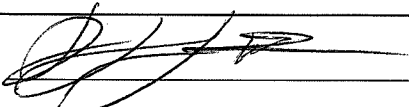
16. How many filter drums are on-site? PART FULL 0 FULL 3

17. Are waste drums labeled and in good condition?
 YES NO Comment: _____

18. Is the secondary containment pad in good condition?
 YES NO Comment: _____

MAINTENANCE RECORD			
Issue Requiring Maintenance	Maintenance Conducted	Issue Status	
		OPEN	CLOSED
		OPEN	CLOSED
		OPEN	CLOSED
		OPEN	CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: 

DATE: 1-16-19

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

Date: 1-30-19

Time: 10:20

Personnel: L. Lucas / M. Wilkes

1. Was the system running upon arrival?

YES NO

2. Were there any alarm conditions upon arrival?

YES NO

Comment: _____

3. Is the blower vacuum relief valve open?

YES NO

4. Is the dilution valve open?

YES NO % Open: _____

5. Are there any leaks or damage to system hoses?

YES NO

6. Is there any damage to system components?

YES NO

7. Are all locks and zip-ties secure?

YES NO

8. Was there a GAC or PPZ change out?

YES NO Comment: _____

9. How many GAC and PPZ units are at this location?

GAC: NEW 3 SPENT 0

PPZ: NEW 1 SPENT 0

11. Do these fall to zero when system is turned off?

Flow Gauge YES NO

Pressure Gauge YES NO

Vacuum Gauges YES NO

12. Do the temp. gauges fall when system is turned off?

YES NO

13. Was the system running upon departure?

YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
48	51	3	160	110	25	155	4774.2

* Replace filter if >25 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow* (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	25.2	2430	53.0	X	N/A	
SSD-23-C	25.2	2430	53.0	X		
SSD-30-C	10.33	140	3.1	X		
SSD-26-C	2.00	176	3.8	X		
SSD-31-C	2.83	661	14.4	X		
SSD-27-C	1.62	1221	26.6	X		
SSD-32-C	2.68	1298	28.3	X		
SSD-28-C	2.77	1822	39.7	Yes		
SSD-33-C	3.60	765	16.7	X		
SSD-29-C	3.03	991	21.6	X		
SSD-34-C	40.5	475	10.4	X		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.00		111-C	0.01	
135-C	0.20		155-C	0.11	
157-C	NA	covered	133-C	0.57	
113-C	0.23		154-C	0.01	
156-C	0.01	covered	153-C	0.01	
151-C	0.01		158-C	0.01	
126-C	0.00		001-C	0.12	
149-C	0.03		SSD-22-C	0.01	
050-C	0.00		SSD-2-C	0.07	
141-C	NA	covered	SSD-4-C	NA	covered
127-C	0.29		SSD-24-C	0.12	
150-C	0.40		SSD-3-C	0.01	
152-C	0.02		SSD-25-C	0.00	
060-C	NA				

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	Yes No	Yes No	10.5 gal	Yes No	
MS-2	Yes No	Yes No	-	Yes No	
Pipe Sumps					
PS-1	Yes No	Yes No	-	Yes No	
PS-2	Yes No	Yes No	-	Yes No	
PS-3	Yes No	Yes No	-	Yes No	
PS-4	Yes No	Yes No	-	Yes No	
PS-5	Yes No	Yes No	1.5 gal	Yes No	
System Sumps					
Exhaust Stack	Yes No	Yes No	-	Yes No	
GAC and PPZ Drains					
Lead GAC	Yes No	Yes No	-	Yes No	
Lag GAC	Yes No	Yes No	-	Yes No	
PPZ	Yes No	Yes No	-	Yes No	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 5

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 2 FULL 3

17. Are waste drums labeled and in good condition?

YES

NO

Comment: _____

18. Is the secondary containment pad in good condition?

YES

NO

Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____

[Handwritten Signature]

DATE: 1-30-19

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

Date: 2-14-19

Time: 10:30

Personnel: JMW, LL

1. Was the system running upon arrival?

YES NO

2. Were there any alarm conditions upon arrival?

YES NO

Comment: _____

3. Is the blower vacuum relief valve open?

YES NO

4. Is the dilution valve open?

YES NO % Open: _____

5. Are there any leaks or damage to system hoses?

YES NO

6. Is there any damage to system components?

YES NO

7. Are all locks and zip-ties secure?

YES NO

8. Was there a GAC or PPZ change out?

YES NO Comment: _____

9. How many GAC and PPZ units are at this location?

GAC: NEW 3 SPENT 0

PPZ: NEW 1 SPENT 0

11. Do these fall to zero when system is turned off?

Flow Gauge YES NO

Pressure Gauge YES NO

Vacuum Gauges YES NO

12. Do the temp. gauges fall when system is turned off?

YES NO

13. Was the system running upon departure?

YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
4.8	23.51	3	168	110	23	150	4804.1

* Replace filter if >25 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow* (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	26.4	2378	51.8	X	N/A	
SSD-23-C						
SSD-30-C	10.58	164	3.5	X	↓	
SSD-26-C	2.36	364	7.9	X		
SSD-31-C	2.95	768	16.7	X		
SSD-27-C	1.70	1280	27.3	X		
SSD-32-C	2.73	1333	29.1	X		
SSD-28-C	2.51	1873	40.8	✓		
SSD-33-C	3.63	102	15.3	X		
SSD-29-C	3.10	940	21.4	X		
SSD-34-C	41.7	115	2.5	X		Water in pipe

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.00		111-C	0.00	
135-C	0.17		155-C	0.09	
157-C	covered		133-C	0.58	
113-C	0.24		154-C	0.01	
156-C	covered	0.06	153-C	0.07	
151-C	0.01		158-C	1.00	
126-C	0.02		001-C	0.18	
149-C	0.00		SSD-22-C	0.01	
050-C	0.01		SSD-2-C	0.00	
141-C	covered		SSD-4-C	covered	
127-C	0.30		SSD-24-C	0.15	
150-C	0.40		SSD-3-C	0.45	
152-C	0.00		SSD-25-C	0.61	
060-C	N/A				

SSD SYSTEM CHECK - BUILDING C
 LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID				
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING								
Location	Contains Water?		Water Drained?		Volume Drained	Drain Valve Closed?		Comments
Moisture Separators								
MS-1	Yes	No	Yes	No	-	Yes	No	
MS-2	Yes	No	Yes	No	-	Yes	No	
Pipe Sumps								
PS-1	Yes	No	Yes	No	-	Yes	No	
PS-2	Yes	No	Yes	No	-	Yes	No	
PS-3	Yes	No	Yes	No	-	Yes	No	
PS-4	Yes	No	Yes	No	-	Yes	No	
PS-5	Yes	No	Yes	No	-	Yes	No	
System Sumps								
Exhaust Stack	Yes	No	Yes	No	Full	Yes	No	
GAC and PPZ Drains								
Lead GAC	Yes	No	Yes	No	-	Yes	No	
Lag GAC	Yes	No	Yes	No	-	Yes	No	
PPZ	Yes	No	Yes	No	-	Yes	No	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 2

15. How many Bldg. C water drums are on-site? PART FULL 0 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 0

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: [Signature]

DATE: 2-14-19

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

Date: 1045 3-1-19 Time: 1045 Personnel: Lee Lucas

- | | |
|---|--|
| <p>1. Was the system running upon arrival?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> <p>2. Were there any alarm conditions upon arrival?
YES <input checked="" type="radio"/> NO</p> <p>Comment: _____</p> <p>3. Is the blower vacuum relief valve open?
YES <input type="radio"/> NO</p> <p>4. Is the dilution valve open?
YES <input checked="" type="radio"/> NO % Open: _____</p> <p>5. Are there any leaks or damage to system hoses?
YES <input checked="" type="radio"/> NO</p> <p>6. Is there any damage to system components?
YES <input checked="" type="radio"/> NO</p> <p>7. Are all locks and zip-ties secure?
<input checked="" type="radio"/> YES <input type="radio"/> NO</p> | <p>8. Was there a GAC or PPZ change out?
YES <input checked="" type="radio"/> NO Comment: _____</p> <p>9. How many GAC and PPZ units are at this location?
GAC: NEW <u>3</u> SPENT <u>0</u>
PPZ: NEW <u>1</u> SPENT <u>0</u></p> <p>11. Do these fall to zero when system is turned off?
Flow Gauge YES NO
Pressure Gauge YES NO
Vacuum Gauges YES NO</p> <p>12. Do the temp. gauges fall when system is turned off?
YES NO</p> <p>13. Was the system running upon departure?
YES NO</p> |
|---|--|

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
14.8	51	3	168	110	20	150	48430.1

* Replace filter if >25 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow* (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	27.1	2443	53.3			
SSD-23-C		covered				
SSD-30-C	6.73	132	2.4			
SSD-26-C	3.04	163	3.6			
SSD-31-C	3.09	755	16.5			
SSD-27-C	1.59	1323	23.8			
SSD-32-C	2.74	1264	27.6			
SSD-28-C	2.07	1968	42.5	✓		
SSD-33-C	3.48	768	16.7			
SSD-29-C	3.16	1030	22.5			
SSD-34-C	41.7	492	10.7			

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.00		111-C	0.01	
135-C	0.08		155-C	0.44	
157-C	covered		133-C	0.49	
113-C	0.18		154-C	0.00	
156-C	covered	0.03	153-C	0.02	
151-C	0.01		158-C	0.01	
126-C	0.01		001-C	0.18	
149-C	0.00		SSD-22-C	0.01	
050-C	0.01		SSD-2-C	0.09	
141-C	covered		SSD-4-C	covered	
127-C	0.29		SSD-24-C	0.11	
150-C	0.39		SSD-3-C	0.01	
152-C	0.01		SSD-25-C	0.01	
060-C	NA				

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID	NA	NA	NA	
Flow Contr. ID	NA	NA	NA	
Start Vacuum (in. Hg)	NA	NA	NA	
Stop Vacuum (in. Hg)	NA	NA	NA	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
MS-2	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
Pipe Sumps					
PS-1	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
PS-2	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
PS-3	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
PS-4	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
PS-5	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
System Sumps					
Exhaust Stack	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
GAC and PPZ Drains					
Lead GAC	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
Lag GAC	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	
PPZ	Yes <input checked="" type="radio"/> No	Yes <input checked="" type="radio"/> No		<input checked="" type="radio"/> Yes No	

13. How many empty drums are on-site? 0

14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 4

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 0 FULL 3

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: 

DATE: 3-1-19

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 3/13/19

Time: 12:15

Personnel: D Lee Lucas
Andrew Smith

1. Was the system running upon arrival?
 YES NO
2. Were there any alarm conditions upon arrival?
YES NO
- Comment: _____
3. Is the blower vacuum relief valve open?
YES NO
4. Is the dilution valve open?
YES NO % Open: _____
5. Are there any leaks or damage to system hoses?
YES NO
6. Is there any damage to system components?
YES NO

7. Are all locks and zip-ties secure?
 YES NO
8. Was there a GAC or PPZ change out?
YES NO Comment: _____
9. How many GAC and PPZ units are at this location?
GAC: NEW 3 SPENT 0
PPZ: NEW 1 SPENT 0
11. Do these fall to zero when system is turned off?
Flow Gauge YES NO
Pressure Gauge YES NO
Vacuum Gauges YES NO
12. Do the temp. gauges fall when system is turned off?
 YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
52	48	4	168	94	17	190	4877.3

* Replace filter if >25 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow* (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	28.6	2370	51.7	No		
SSD-23-C	~	Covered		~		
SSD-30-C	8.14	104	3.6	No		
SSD-26-C	3.37	192	4.2	No		
SSD-31-C	3.22	807	17.6	No		
SSD-27-C	1.57	1350	29.4	NO		
SSD-32-C	2.74	1498	32.7	NO		
SSD-28-C	2.04	2013	44.5	NO		
SSD-33-C	3.48	755	16.5	No		
SSD-29-C	3.23	1090	23.8	No		
SSD-34-C	42.2	916	20.0	No		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	0.00		111-C	0.02	
135-C	0.11		155-C	0.09	
157-C	0.02		133-C	0.55	
113-C	0.33		154-C	0.01	
156-C	0.00		153-C	0.03	
151-C	0.60		158-C	0.00	
126-C	0.02		001-C	0.017	
149-C	0.03		SSD-22-C	0.01	
050-C	0.04		SSD-2-C	0.08	
141-C	0.45		SSD-4-C	Covered	
127-C	0.22		SSD-24-C	0.16	
150-C	0.38		SSD-3-C	0.01	
152-C	0.02		SSD-25-C	0.01	
060-C	Covered				

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland


MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	1210-1211	1206-1206	1159-1200	
Summa Canister ID	1137022954208 ²	11645	11666	
Flow Contr. ID	11594 11594208 ²	10901	09958	
Start Vacuum (in. Hg)	-30	-29	-30	
Stop Vacuum (in. Hg)	-4	-4	-4	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	X	X	-	✓	
MS-2	X	X	-	✓	
Pipe Sumps					
PS-1	X	X	-	✓	
PS-2	X	X	-	✓	
PS-3	X	X	-	✓	
PS-4	X	X	-	✓	
PS-5	X	X	-	✓	
System Sumps					
Exhaust Stack	X	X	-	✓	
GAC and PPZ Drains					
Lead GAC	X	X	-	✓	
Lag GAC	X	X	-	✓	
PPZ	X	X	-	✓	

13. How many empty drums are on-site? 0
14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 1
15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0
16. How many filter drums are on-site? PART FULL 0 FULL 0
17. Are waste drums labeled and in good condition? YES NO Comment: Filters stored in cardboard boxes
18. Is the secondary containment pad in good condition? YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE:  TIME: 3-13-19

SSD SYSTEM CHECK - BUILDING C
LMC Middle River Complex, Middle River, Maryland

Date: 3/28/19 Time: 12:30 Personnel: Lee Lucas

1. Was the system running upon arrival?
 YES NO
2. Were there any alarm conditions upon arrival?
YES NO
Comment: _____
3. Is the blower vacuum relief valve open?
YES NO
4. Is the dilution valve open?
YES NO % Open: _____
5. Are there any leaks or damage to system hoses?
YES NO
6. Is there any damage to system components?
YES NO

7. Are all locks and zip-ties secure?
 YES NO
8. Was there a GAC or PPZ change out?
YES NO Comment: _____
9. How many GAC and PPZ units are at this location?
GAC: NEW 3 SPENT 0
PPZ: NEW 1 SPENT 6
11. Do these fall to zero when system is turned off?
Flow Gauge YES NO
Pressure Gauge YES NO
Vacuum Gauges YES NO
12. Do the temp. gauges fall when system is turned off?
 YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H ₂ O)	Vacuum post-Filter (in. H ₂ O)	Diff Pressure of Filter* (in. H ₂ O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H ₂ O)	Flow (scfm)	Time Counter Display (hours)
<u>50</u>	<u>53</u>	<u>3</u>	<u>170</u>	<u>100</u>	<u>15</u>	<u>145</u> <u>140</u>	<u>49076.6</u>

* Replace filter if >25 in. H₂O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H ₂ O)	Velocity (ft/min)	Flow* (scfm)	Contains H ₂ O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	<u>30.9</u>	<u>2127</u>	<u>K 46.4</u>	<u>X</u>		
SSD-23-C	<u>—</u>	<u>—</u>	<u>X —</u>	<u>X</u>		
SSD-30-C	<u>16.84</u>	<u>167</u>	<u>X 3.6</u>	<u>X</u>		
SSD-26-C	<u>11.48</u>	<u>177</u>	<u>mv X 3.9</u>	<u>X</u>		
SSD-31-C	<u>9.10</u>	<u>769</u>	<u>X 16.7</u>	<u>X</u>		
SSD-27-C	<u>1.53</u>	<u>1317</u>	<u>X 29.4</u>	<u>X</u>		
SSD-32-C	<u>2.82</u>	<u>1349</u>	<u>X 29.4</u>	<u>X</u>		
SSD-28-C	<u>2.06</u>	<u>1993</u>	<u>X 43.4</u>	<u>X</u>		
SSD-33-C	<u>8.91</u>	<u>926</u>	<u>X 20.2</u>	<u>X</u>		
SSD-29-C	<u>14.21</u>	<u>984</u>	<u>X 21.5</u>	<u>X</u>		
SSD-34-C	<u>105.3</u>	<u>629</u>	<u>X 13.7</u>	<u>✓</u>		

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	<u>0.00</u>		111-C	<u>0.01</u>	
135-C	<u>0.19</u>		155-C	<u>0.10</u>	
157-C	<u>0.00</u>		133-C	<u>Covered</u>	
113-C	<u>0.88</u>		154-C	<u>0.07</u>	
156-C	<u>0.17</u>		153-C	<u>0.09</u>	
151-C	<u>0.03</u>		158-C	<u>0.00</u>	
126-C	<u>0.59</u>		001-C	<u>0.01</u>	
149-C	<u>0.06</u>		SSD-22-C	<u>0.00</u>	
050-C	<u>0.02</u>		SSD-2-C	<u>0.07</u>	
141-C	<u>covered</u>		SSD-4-C	<u>Covered</u>	
127-C	<u>covered 0.83</u>		SSD-24-C	<u>0.13</u>	
150-C	<u>0.46</u>		SSD-3-C	<u>0.21</u>	
152-C	<u>0.02</u>		SSD-25-C	<u>0.00</u>	
060-C	<u>Covered</u>				

SSD SYSTEM CHECK - BUILDING C
 LMC Middle River Complex, Middle River, Maryland

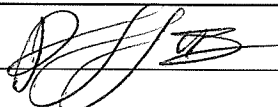
MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	X	X	-	✓	
MS-2	X	X	-	✓	
Pipe Sumps					
PS-1	X	X	-	✓	
PS-2	X	X	-	✓	
PS-3	X	X	-	✓	
PS-4	X	X	-	✓	
PS-5	X	X	-	✓	
System Sumps					
Exhaust Stack	X	X	-	✓	
GAC and PPZ Drains					
Lead GAC	X	X	-	✓	
Lag GAC	X	X	-	✓	
PPZ	X	X	-	✓	

13. How many empty drums are on-site? _____
14. How many Bldg. A water drums are on-site? PART FULL 1 FULL 3
15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0
16. How many filter drums are on-site? PART FULL _____ FULL _____
17. Are waste drums labeled and in good condition?
 YES NO Comment: _____
18. Is the secondary containment pad in good condition?
 YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE:  TIME: 3-28-19

QUARTERLY SSD SYSTEM CHECK - BUILDING A
 LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 12/19/18 Time: 1:40 Quarter: 4th Personnel: JMW, C. Dierp

GENERAL SYSTEM MONITORING

1. Are all system components in good condition?
 YES NO Comments: _____

2. Are there any leaks in the system pipes?
 YES NO Comments: _____

3. Does the demister media need cleaned or replaced?
 YES NO Comments: _____

4. Does the dilution valve air filter need replaced?
 YES NO Comments: _____

5. Does the vacuum relief valve activate upon high vacuum?
 YES NO Comments: _____

6. What is the amperage draw on the blower?
 Comments: _____

Wire Color	Amperage
Red	17.66
White	18.98
Black	16.37

7. Is the fire extinguisher located near the system?
 YES NO Comments: _____

8. Was the area around the system cleaned?
 YES NO Comments: _____

AUTO-DIALER AND ALARM SWITCH MONITORING

Zone	Alarm	Limit	Switch Functioning Properly		Auto-Dialer Call-Out Triggered		Comments
Zone 1	High Liquid Level	50 gal Full	<input checked="" type="radio"/> YES	<input type="radio"/> NO	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
Zone 2	High Pressure	55" WC	<input checked="" type="radio"/> YES	<input type="radio"/> NO	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
Zone 3	High Temperature 1	220 °F	<input checked="" type="radio"/> YES	<input type="radio"/> NO	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
Zone 4	High Temperature 2	140 °F	<input checked="" type="radio"/> YES	<input type="radio"/> NO	<input checked="" type="radio"/> YES	<input type="radio"/> NO	
Zone 7	Low Vacuum	3" WC	<input checked="" type="radio"/> YES	<input type="radio"/> NO	<input checked="" type="radio"/> YES	<input type="radio"/> NO	

Do the Auto-Dialer Batteries Need Replaced? YES NO

QUARTERLY SSD SYSTEM CHECK - BUILDING A
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

GAC UNIT MONITORING

1. Are there any signs of corrosion and/or leaks in any of the GAC units?

YES NO Comments: _____

2. Are the sample ports in good condition?

YES NO Comments: _____

3. Are there any warn spots or holes in the flexible hoses?

YES NO Comments: _____

VMP MONITORING

Vapor Pins

1. Are all secure covers in good condition?

YES NO Comments: _____

2. Are all secure covers flush with the ground?

YES NO Comments: _____

3. Are all vapor pins firmly installed in the concrete slab with little wiggle room?

YES NO Comments: _____

4. Are all VMPs properly labeled?

YES NO Comments: _____

Classic Vapor Monitoring Points

5. Are all well lids in good condition?

YES NO Comments: _____

6. Do all well lids have the proper number of bolts?

YES NO Comments: _____

7. Is the tubing inside the point in good condition?

YES NO Comments: _____

8. Is the tubing capped?

YES NO Comments: _____

QUARTERLY SSD SYSTEM CHECK - BUILDING A
 LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 3/13/19 Time: 0800 Quarter: 1 Personnel: D. Lee Lucas

GENERAL SYSTEM MONITORING

1. Are all system components in good condition?
 YES NO Comments: _____

2. Are there any leaks in the system pipes?
 YES NO Comments: _____

3. Does the demister media need cleaned or replaced?
 YES NO Comments: _____

4. Does the dilution valve air filter need replaced?
 YES NO Comments: _____

5. Does the vacuum relief valve activate upon high vacuum?
 YES NO Comments: _____

6. What is the amperage draw on the blower?
 Comments: _____

Wire Color	Amperage
Black	18.26
Red	18.65
White	14.78

7. Is the fire extinguisher located near the system?
 YES NO Comments: _____

8. Was the area around the system cleaned?
 YES NO Comments: _____

AUTO-DIALER AND ALARM SWITCH MONITORING

Zone	Alarm	Limit	Switch Functioning Properly		Auto-Dialer Call-Out Triggered		Comments
Zone 1	High Liquid Level	Full	<input checked="" type="radio"/> YES	NO	<input checked="" type="radio"/> YES	NO	
Zone 2	High Pressure	55" WC	<input checked="" type="radio"/> YES	NO	<input checked="" type="radio"/> YES	NO	
Zone 3	High Temperature 1	220 °F	<input checked="" type="radio"/> YES	NO	<input checked="" type="radio"/> YES	NO	
Zone 4	High Temperature 2	140 °F	<input checked="" type="radio"/> YES	NO	<input checked="" type="radio"/> YES	NO	
Zone 7	Low Vacuum	3" WC	<input checked="" type="radio"/> YES	NO	<input checked="" type="radio"/> YES	NO	

Do the Auto-Dialer Batteries Need Replaced? YES NO

QUARTERLY SSD SYSTEM CHECK - BUILDING A
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

GAC UNIT MONITORING

1. Are there any signs of corrosion and/or leaks in any of the GAC units?

YES

NO

Comments: _____

2. Are the sample ports in good condition?

YES

NO

Comments: _____

3. Are there any warn spots or holes in the flexible hoses?

YES

NO

Comments: _____

VMP MONITORING

Vapor Pins

1. Are all secure covers in good condition?

YES

NO

Comments: _____

2. Are all secure covers flush with the ground?

YES

NO

Comments: _____

3. Are all vapor pins firmly installed in the concrete slab with little wiggle room?

YES

NO

Comments: _____

4. Are all VMPs properly labeled?

YES

NO

Comments: _____

Classic Vapor Monitoring Points

5. Are all well lids in good condition?

YES

NO

Comments: _____

6. Do all well lids have the proper number of bolts?

YES

NO

Comments: *Buying bolts*

7. Is the tubing inside the point in good condition?

YES

NO

Comments: _____

8. Is the tubing capped?

YES

NO

Comments: _____

QUARTERLY SSD SYSTEM CHECK - BUILDING A
LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

INDOOR AIR FILTER MONITORING

AF-N

Date of quarterly HEPA filter change: 3-13-19
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? YES NO

AF-NX

Date of quarterly HEPA filter change: 3-13-19
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? YES NO

AF-M

Date of quarterly HEPA filter change: 3-13-19
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? YES NO

AF-MX

Date of quarterly HEPA filter change: 3-13-19
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? YES NO

AF-S

Date of quarterly HEPA filter change: 3-13-19
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? YES NO

AF-SX

Date of quarterly HEPA filter change: 3-13-19
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? YES NO

Personnel's Signature: 

Date: 3-13-19

QUARTERLY SSD SYSTEM CHECK - BUILDING C
 LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 12-19-18 Time: 1215 Quarter: 4th Personnel: JMW, C. Drevo

GENERAL SYSTEM

Checked System Components? YES NO Comments: _____

Checked System Pipes for Leaks? YES NO Comments: _____

Visually Inspected Air Filter? YES NO Need Replaced? YES NO → replaced 11/27/18
 (replace filter when AP = 2-3 in. Hg)

Visually Inspected Intake Air Filter? YES NO Need Replaced? YES NO

Checked Vacuum Relief Valve? YES NO Comments: _____

Measured and Recorded Amperage Draw on Blower? Yellow = 12.93 Orange = 12.53 Brown = 14.02

Are all components returned to system operating position? YES NO

Vacuumed dirt/dust from Heat Exchanger vent YES NO

Cleaned System and Area Around System? YES NO Comments: _____

Checked that Fire Extinguisher Near System? YES NO

SYSTEM ALARM SWITCHES AND AUTO-DIALER

Checked Post-Blower Temp Switch? YES NO Did Auto-Dialer Indicate Zone 1 Alarm? YES NO
 Limit: 215 °F

Checked Post-HEX Temp Switch? YES NO Did Auto-Dialer Indicate Zone 2 Alarm? YES NO
 Limit: 140 °F

Checked MS-1 Water Level Switch? YES NO Did Auto-Dialer Indicate Zone 3 Alarm? YES NO

Checked MS-2 Water Level Switch? YES NO Did Auto-Dialer Indicate Zone 4 Alarm? YES NO

Checked High-Pressure Switch? YES NO Did Auto-Dialer Indicate Zone 5 Alarm? YES NO
 Limit: 60" WC

Checked Low-Vacuum Switch? YES NO Did Auto-Dialer Indicate Zone 6 Alarm? YES NO
 Limit: 10" WC

Do the Auto-Dialer Batteries Need Replaced? YES NO

GRANULAR ACTIVATED-CARBON (GAC) & POTASSIUM PERMANGANATE ZEOLITE (PPZ) UNITS

Checked GAC Units for Corrosion and Leaks? YES NO Comments: _____

Checked Condition of Sample Ports? YES NO Comments: _____

Number of used GAC/PPZ Units On-site: 0 / 0 Contain Non-Haz Waste Labels? YES NO N/A

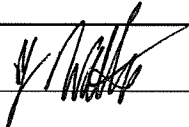
Number of Unused GAC/PPZ Units On-site: 3 / 1

VAPOR MONITORING POINTS (VMPs)

Checked Condition of Well Lids and Bolts? YES NO Comments: _____

Checked Condition of Tubing and Seal? YES NO Comments: Replaced tubing at SSD-3-C

ADDITIONAL COMMENTS

Personnel's Signature:  Date: 12/19/18

QUARTERLY SSD SYSTEM CHECK - BUILDING C
 LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 3-13-19 Time: 11:50 Quarter: 1 Personnel: D. Lee Lucas

GENERAL SYSTEM

Checked System Components? YES NO Comments: _____

Checked System Pipes for Leaks? YES NO Comments: _____

Visually Inspected Air Filter? YES NO Need Replaced? YES NO
 (replace filter when AP = 2-3 in. Hg)

Visually Inspected Intake Air Filter? YES NO Need Replaced? YES NO

Checked Vacuum Relief Valve? YES NO Comments: _____

Measured and Recorded Amperage Draw on Blower? Yellow = 15.05 Orange = 14.72 Brown = 16.20
DLL
Red 54.72

Are all components returned to system operating position? YES NO

Vacuumed dirt/dust from Heat Exchanger vent? YES NO

Cleaned System and Area Around System? YES NO Comments: _____

Checked that Fire Extinguisher Near System? YES NO

SYSTEM ALARM SWITCHES AND AUTO-DIALER

Checked Post-Blower Temp Switch? YES NO Did Auto-Dialer Indicate Zone 1 Alarm? YES NO
 Limit: 215 °F

Checked Post-HEX Temp Switch? YES NO Did Auto-Dialer Indicate Zone 2 Alarm? YES NO
 Limit: 140 °F

Checked MS-1 Water Level Switch? YES NO Did Auto-Dialer Indicate Zone 3 Alarm? YES NO

Checked MS-2 Water Level Switch? YES NO Did Auto-Dialer Indicate Zone 4 Alarm? YES NO

Checked High-Pressure Switch? YES NO Did Auto-Dialer Indicate Zone 5 Alarm? YES NO
 Limit: 60" WC

Checked Low-Vacuum Switch? YES NO Did Auto-Dialer Indicate Zone 6 Alarm? YES NO
 Limit: 10" WC

Do the Auto-Dialer Batteries Need Replaced? YES NO

GRANULAR ACTIVATED-CARBON (GAC) & POTASSIUM PERMANGANATE ZEOLITE (PPZ) UNITS

Checked GAC Units for Corrosion and Leaks? YES NO Comments: _____

Checked Condition of Sample Ports? YES NO Comments: _____

Number of used GAC/PPZ Units On-site: 3 / 1 Contain Non-Haz Waste Labels? ^{N/A} YES NO

Number of Unused GAC/PPZ Units On-site: 3 / 1

VAPOR MONITORING POINTS (VMPs)

Checked Condition of Well Lids and Bolts? YES NO Comments: _____

Checked Condition of Tubing and Seal? YES NO Comments: _____

ADDITIONAL COMMENTS

*Replaced all GAC flex piping (per
(5-year task))*

Personnel's Signature: *[Signature]*

Date: 3-13-19

APPENDIX B—ANALYTICAL REPORTS FOR SYSTEM SAMPLES

ANALYTICAL REPORT

Job Number: 140-13100-1

Job Description: LMC MRC/ MRAS/BUILDING A

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401
Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
10/25/2018 5:18 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
10/25/2018

cc: Belssi Chang
Amy Thomson
Michael Wilks

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TestAmerica Laboratories, Inc.

TestAmerica Knoxville 5815 Middlebrook Pike, Knoxville, TN 37921
Tel (865) 291-3000 Fax (865) 584-4315 www.testamericainc.com

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Definitions/Glossary

Client: Tetra Tech GEO
Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-13100-1

Receipt

The samples were received on 10/19/2018 at 9:40 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-13100-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.9	J	2.0	0.58	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.80	J	2.0	0.38	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	15		2.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.0		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	14		2.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	5.0	3.3	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	78	B	2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	150		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.9	J	6.4	1.8	ug/m3	1		TO 15 LL	Total/NA
Chloroform	3.9	J	9.8	1.8	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	58		7.9	2.4	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	12		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	56		7.9	1.4	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	12	J	17	11	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	430	B	11	1.6	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	800		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A MID GAC

Lab Sample ID: 140-13100-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.41		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.2		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	26		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.54		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	6.5		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	22		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.5		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.54		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	29	B	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.18	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.56	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	5.8		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	100		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	26		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	86		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.3		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.1		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	160	B	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.99	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-13100-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.33	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.16	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech GEO
 Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Client Sample ID: BLDG-A EFFLUENT (Continued)

Lab Sample ID: 140-13100-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.7		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.26	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.90		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.9		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	4.6	B	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	2.2		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.56	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	11		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.0	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	3.6		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.5		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	25	B	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	12		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.77	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-13100-1

Date Collected: 10/18/18 10:15

Matrix: Air

Date Received: 10/19/18 09:40

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.9	J	2.0	0.58	ppb v/v			10/24/18 00:11	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			10/24/18 00:11	1
Chlorodifluoromethane	ND		2.0	0.38	ppb v/v			10/24/18 00:11	1
Chloroform	0.80	J	2.0	0.38	ppb v/v			10/24/18 00:11	1
cis-1,2-Dichloroethene	15		2.0	0.60	ppb v/v			10/24/18 00:11	1
Dichlorodifluoromethane	ND		2.0	0.68	ppb v/v			10/24/18 00:11	1
1,1-Dichloroethane	3.0		2.0	0.25	ppb v/v			10/24/18 00:11	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			10/24/18 00:11	1
1,1-Dichloroethene	14		2.0	0.35	ppb v/v			10/24/18 00:11	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			10/24/18 00:11	1
Methylene Chloride	3.3	J	5.0	3.3	ppb v/v			10/24/18 00:11	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			10/24/18 00:11	1
Naphthalene	ND		1.0	1.0	ppb v/v			10/24/18 00:11	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			10/24/18 00:11	1
Toluene	ND		3.0	3.0	ppb v/v			10/24/18 00:11	1
trans-1,2-Dichloroethene	ND		2.0	0.50	ppb v/v			10/24/18 00:11	1
1,2,4-Trichlorobenzene	ND		2.0	0.98	ppb v/v			10/24/18 00:11	1
1,1,1-Trichloroethane	78	B	2.0	0.30	ppb v/v			10/24/18 00:11	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			10/24/18 00:11	1
Trichloroethene	150		1.0	0.35	ppb v/v			10/24/18 00:11	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			10/24/18 00:11	1
1,2,4-Trimethylbenzene	ND		2.0	0.63	ppb v/v			10/24/18 00:11	1
1,3,5-Trimethylbenzene	ND		2.0	0.65	ppb v/v			10/24/18 00:11	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			10/24/18 00:11	1
Xylenes, Total	ND		4.0	0.60	ppb v/v			10/24/18 00:11	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.9	J	6.4	1.8	ug/m3			10/24/18 00:11	1
Carbon tetrachloride	ND		13	2.4	ug/m3			10/24/18 00:11	1
Chlorodifluoromethane	ND		7.1	1.3	ug/m3			10/24/18 00:11	1
Chloroform	3.9	J	9.8	1.8	ug/m3			10/24/18 00:11	1
cis-1,2-Dichloroethene	58		7.9	2.4	ug/m3			10/24/18 00:11	1
Dichlorodifluoromethane	ND		9.9	3.3	ug/m3			10/24/18 00:11	1
1,1-Dichloroethane	12		8.1	1.0	ug/m3			10/24/18 00:11	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			10/24/18 00:11	1
1,1-Dichloroethene	56		7.9	1.4	ug/m3			10/24/18 00:11	1
Ethylbenzene	ND		8.7	2.9	ug/m3			10/24/18 00:11	1
Methylene Chloride	12	J	17	11	ug/m3			10/24/18 00:11	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			10/24/18 00:11	1
Naphthalene	ND		5.2	5.2	ug/m3			10/24/18 00:11	1
Tetrachloroethene	ND		14	2.7	ug/m3			10/24/18 00:11	1
Toluene	ND		11	11	ug/m3			10/24/18 00:11	1
trans-1,2-Dichloroethene	ND		7.9	2.0	ug/m3			10/24/18 00:11	1
1,2,4-Trichlorobenzene	ND		15	7.2	ug/m3			10/24/18 00:11	1
1,1,1-Trichloroethane	430	B	11	1.6	ug/m3			10/24/18 00:11	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			10/24/18 00:11	1
Trichloroethene	800		5.4	1.9	ug/m3			10/24/18 00:11	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			10/24/18 00:11	1
1,2,4-Trimethylbenzene	ND		9.8	3.1	ug/m3			10/24/18 00:11	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-13100-1

Date Collected: 10/18/18 10:15

Matrix: Air

Date Received: 10/19/18 09:40

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		9.8	3.2	ug/m3			10/24/18 00:11	1
Vinyl chloride	ND		2.6	1.9	ug/m3			10/24/18 00:11	1
Xylenes, Total	ND		17	2.6	ug/m3			10/24/18 00:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		60 - 140					10/24/18 00:11	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Client Sample ID: BLDG-A MID GAC

Lab Sample ID: 140-13100-2

Date Collected: 10/18/18 10:11

Matrix: Air

Date Received: 10/19/18 09:40

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18	J	0.40	0.12	ppb v/v			10/24/18 00:55	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			10/24/18 00:55	1
Chlorodifluoromethane	0.41		0.40	0.075	ppb v/v			10/24/18 00:55	1
Chloroform	1.2		0.40	0.075	ppb v/v			10/24/18 00:55	1
cis-1,2-Dichloroethene	26		0.40	0.12	ppb v/v			10/24/18 00:55	1
Dichlorodifluoromethane	0.54		0.40	0.14	ppb v/v			10/24/18 00:55	1
1,1-Dichloroethane	6.5		0.40	0.050	ppb v/v			10/24/18 00:55	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			10/24/18 00:55	1
1,1-Dichloroethene	22		0.40	0.070	ppb v/v			10/24/18 00:55	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			10/24/18 00:55	1
Methylene Chloride	1.5		1.0	0.65	ppb v/v			10/24/18 00:55	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			10/24/18 00:55	1
Naphthalene	ND		0.20	0.20	ppb v/v			10/24/18 00:55	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			10/24/18 00:55	1
Toluene	ND		0.60	0.60	ppb v/v			10/24/18 00:55	1
trans-1,2-Dichloroethene	0.54		0.40	0.10	ppb v/v			10/24/18 00:55	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			10/24/18 00:55	1
1,1,1-Trichloroethane	29	B	0.40	0.060	ppb v/v			10/24/18 00:55	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			10/24/18 00:55	1
Trichloroethene	0.18	J	0.20	0.070	ppb v/v			10/24/18 00:55	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			10/24/18 00:55	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			10/24/18 00:55	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			10/24/18 00:55	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			10/24/18 00:55	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			10/24/18 00:55	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.56	J	1.3	0.37	ug/m3			10/24/18 00:55	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			10/24/18 00:55	1
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3			10/24/18 00:55	1
Chloroform	5.8		2.0	0.37	ug/m3			10/24/18 00:55	1
cis-1,2-Dichloroethene	100		1.6	0.48	ug/m3			10/24/18 00:55	1
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3			10/24/18 00:55	1
1,1-Dichloroethane	26		1.6	0.20	ug/m3			10/24/18 00:55	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			10/24/18 00:55	1
1,1-Dichloroethene	86		1.6	0.28	ug/m3			10/24/18 00:55	1
Ethylbenzene	ND		1.7	0.59	ug/m3			10/24/18 00:55	1
Methylene Chloride	5.3		3.5	2.3	ug/m3			10/24/18 00:55	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			10/24/18 00:55	1
Naphthalene	ND		1.0	1.0	ug/m3			10/24/18 00:55	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			10/24/18 00:55	1
Toluene	ND		2.3	2.3	ug/m3			10/24/18 00:55	1
trans-1,2-Dichloroethene	2.1		1.6	0.40	ug/m3			10/24/18 00:55	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			10/24/18 00:55	1
1,1,1-Trichloroethane	160	B	2.2	0.33	ug/m3			10/24/18 00:55	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			10/24/18 00:55	1
Trichloroethene	0.99	J	1.1	0.38	ug/m3			10/24/18 00:55	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			10/24/18 00:55	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			10/24/18 00:55	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Client Sample ID: BLDG-A MID GAC

Lab Sample ID: 140-13100-2

Date Collected: 10/18/18 10:11

Matrix: Air

Date Received: 10/19/18 09:40

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			10/24/18 00:55	1
Vinyl chloride	ND		0.51	0.37	ug/m3			10/24/18 00:55	1
Xylenes, Total	ND		3.5	0.52	ug/m3			10/24/18 00:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					10/24/18 00:55	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-13100-3

Date Collected: 10/18/18 10:08

Matrix: Air

Date Received: 10/19/18 09:40

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.33	J	0.40	0.12	ppb v/v			10/24/18 01:39	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			10/24/18 01:39	1
Chlorodifluoromethane	0.16	J	0.40	0.075	ppb v/v			10/24/18 01:39	1
Chloroform	ND		0.40	0.075	ppb v/v			10/24/18 01:39	1
cis-1,2-Dichloroethene	2.7		0.40	0.12	ppb v/v			10/24/18 01:39	1
Dichlorodifluoromethane	ND		0.40	0.14	ppb v/v			10/24/18 01:39	1
1,1-Dichloroethane	0.26	J	0.40	0.050	ppb v/v			10/24/18 01:39	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			10/24/18 01:39	1
1,1-Dichloroethene	0.90		0.40	0.070	ppb v/v			10/24/18 01:39	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			10/24/18 01:39	1
Methylene Chloride	1.9		1.0	0.65	ppb v/v			10/24/18 01:39	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			10/24/18 01:39	1
Naphthalene	ND		0.20	0.20	ppb v/v			10/24/18 01:39	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			10/24/18 01:39	1
Toluene	ND		0.60	0.60	ppb v/v			10/24/18 01:39	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			10/24/18 01:39	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			10/24/18 01:39	1
1,1,1-Trichloroethane	4.6	B	0.40	0.060	ppb v/v			10/24/18 01:39	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			10/24/18 01:39	1
Trichloroethene	2.2		0.20	0.070	ppb v/v			10/24/18 01:39	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			10/24/18 01:39	1
1,2,4-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v			10/24/18 01:39	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			10/24/18 01:39	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			10/24/18 01:39	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			10/24/18 01:39	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			10/24/18 01:39	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			10/24/18 01:39	1
Chlorodifluoromethane	0.56	J	1.4	0.27	ug/m3			10/24/18 01:39	1
Chloroform	ND		2.0	0.37	ug/m3			10/24/18 01:39	1
cis-1,2-Dichloroethene	11		1.6	0.48	ug/m3			10/24/18 01:39	1
Dichlorodifluoromethane	ND		2.0	0.67	ug/m3			10/24/18 01:39	1
1,1-Dichloroethane	1.0	J	1.6	0.20	ug/m3			10/24/18 01:39	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			10/24/18 01:39	1
1,1-Dichloroethene	3.6		1.6	0.28	ug/m3			10/24/18 01:39	1
Ethylbenzene	ND		1.7	0.59	ug/m3			10/24/18 01:39	1
Methylene Chloride	6.5		3.5	2.3	ug/m3			10/24/18 01:39	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			10/24/18 01:39	1
Naphthalene	ND		1.0	1.0	ug/m3			10/24/18 01:39	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			10/24/18 01:39	1
Toluene	ND		2.3	2.3	ug/m3			10/24/18 01:39	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			10/24/18 01:39	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			10/24/18 01:39	1
1,1,1-Trichloroethane	25	B	2.2	0.33	ug/m3			10/24/18 01:39	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			10/24/18 01:39	1
Trichloroethene	12		1.1	0.38	ug/m3			10/24/18 01:39	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			10/24/18 01:39	1
1,2,4-Trimethylbenzene	0.77	J	2.0	0.61	ug/m3			10/24/18 01:39	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-13100-3

Date Collected: 10/18/18 10:08

Matrix: Air

Date Received: 10/19/18 09:40

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			10/24/18 01:39	1
Vinyl chloride	ND		0.51	0.37	ug/m3			10/24/18 01:39	1
Xylenes, Total	ND		3.5	0.52	ug/m3			10/24/18 01:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					10/24/18 01:39	1

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-13100-1	BLDG-A INFLUENT	95
140-13100-2	BLDG-A MID GAC	96
140-13100-3	BLDG-A EFFLUENT	96
LCS 140-24681/1006	Lab Control Sample	102
MB 140-24681/8	Method Blank	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-24681/8
Matrix: Air
Analysis Batch: 24681

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			10/23/18 14:47	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			10/23/18 14:47	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			10/23/18 14:47	1
Chloroform	ND		0.080	0.015	ppb v/v			10/23/18 14:47	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			10/23/18 14:47	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			10/23/18 14:47	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			10/23/18 14:47	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			10/23/18 14:47	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			10/23/18 14:47	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			10/23/18 14:47	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			10/23/18 14:47	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			10/23/18 14:47	1
Naphthalene	ND		0.040	0.040	ppb v/v			10/23/18 14:47	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			10/23/18 14:47	1
Toluene	ND		0.12	0.12	ppb v/v			10/23/18 14:47	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			10/23/18 14:47	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			10/23/18 14:47	1
1,1,1-Trichloroethane	0.0269	J	0.080	0.012	ppb v/v			10/23/18 14:47	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			10/23/18 14:47	1
Trichloroethene	ND		0.040	0.014	ppb v/v			10/23/18 14:47	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			10/23/18 14:47	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			10/23/18 14:47	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			10/23/18 14:47	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			10/23/18 14:47	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			10/23/18 14:47	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			10/23/18 14:47	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			10/23/18 14:47	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			10/23/18 14:47	1
Chloroform	ND		0.39	0.073	ug/m3			10/23/18 14:47	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			10/23/18 14:47	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			10/23/18 14:47	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			10/23/18 14:47	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			10/23/18 14:47	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			10/23/18 14:47	1
Ethylbenzene	ND		0.35	0.12	ug/m3			10/23/18 14:47	1
Methylene Chloride	ND		0.69	0.45	ug/m3			10/23/18 14:47	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			10/23/18 14:47	1
Naphthalene	ND		0.21	0.21	ug/m3			10/23/18 14:47	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			10/23/18 14:47	1
Toluene	ND		0.45	0.45	ug/m3			10/23/18 14:47	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			10/23/18 14:47	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			10/23/18 14:47	1
1,1,1-Trichloroethane	0.147	J	0.44	0.065	ug/m3			10/23/18 14:47	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			10/23/18 14:47	1
Trichloroethene	ND		0.21	0.075	ug/m3			10/23/18 14:47	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			10/23/18 14:47	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-24681/8
Matrix: Air
Analysis Batch: 24681

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			10/23/18 14:47	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			10/23/18 14:47	1
Vinyl chloride	ND		0.10	0.074	ug/m3			10/23/18 14:47	1
Xylenes, Total	ND		0.69	0.10	ug/m3			10/23/18 14:47	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	94		60 - 140		10/23/18 14:47	1

Lab Sample ID: LCS 140-24681/1006
Matrix: Air
Analysis Batch: 24681

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.16		ppb v/v		108	70 - 130
Chlorodifluoromethane	2.00	2.09		ppb v/v		105	60 - 140
Chloroform	2.00	2.21		ppb v/v		111	70 - 130
cis-1,2-Dichloroethene	2.00	2.26		ppb v/v		113	70 - 130
Dichlorodifluoromethane	2.00	2.43		ppb v/v		122	60 - 140
1,1-Dichloroethane	2.00	2.25		ppb v/v		113	70 - 130
1,2-Dichloroethane	2.00	2.30		ppb v/v		115	70 - 130
1,1-Dichloroethene	2.00	2.25		ppb v/v		112	70 - 130
Ethylbenzene	2.00	2.39		ppb v/v		120	70 - 130
Methylene Chloride	2.00	1.97		ppb v/v		98	70 - 130
Methyl tert-butyl ether	2.00	2.29		ppb v/v		115	60 - 140
Naphthalene	2.00	2.19		ppb v/v		110	60 - 140
Tetrachloroethene	2.00	2.31		ppb v/v		116	70 - 130
Toluene	2.00	2.37		ppb v/v		119	70 - 130
trans-1,2-Dichloroethene	2.00	2.25		ppb v/v		112	70 - 130
1,2,4-Trichlorobenzene	2.00	2.26		ppb v/v		113	60 - 140
1,1,1-Trichloroethane	2.00	2.25		ppb v/v		112	70 - 130
1,1,2-Trichloroethane	2.00	2.28		ppb v/v		114	70 - 130
Trichloroethene	2.00	2.28		ppb v/v		114	70 - 130
1,2,3-Trimethylbenzene	2.00	2.38		ppb v/v		119	70 - 130
1,2,4-Trimethylbenzene	2.00	2.29		ppb v/v		115	70 - 130
1,3,5-Trimethylbenzene	2.00	2.34		ppb v/v		117	70 - 130
Vinyl chloride	2.00	2.19		ppb v/v		109	70 - 130
Xylenes, Total	6.00	7.32		ppb v/v		122	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	13	13.6		ug/m3		108	70 - 130
Chlorodifluoromethane	7.1	7.40		ug/m3		105	60 - 140
Chloroform	9.8	10.8		ug/m3		111	70 - 130
cis-1,2-Dichloroethene	7.9	8.95		ug/m3		113	70 - 130
Dichlorodifluoromethane	9.9	12.0		ug/m3		122	60 - 140
1,1-Dichloroethane	8.1	9.13		ug/m3		113	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-24681/1006
Matrix: Air
Analysis Batch: 24681

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
1,2-Dichloroethane	8.1	9.32		ug/m3		115	70 - 130
1,1-Dichloroethene	7.9	8.90		ug/m3		112	70 - 130
Ethylbenzene	8.7	10.4		ug/m3		120	70 - 130
Methylene Chloride	6.9	6.83		ug/m3		98	70 - 130
Methyl tert-butyl ether	7.2	8.26		ug/m3		115	60 - 140
Naphthalene	10	11.5		ug/m3		110	60 - 140
Tetrachloroethene	14	15.7		ug/m3		116	70 - 130
Toluene	7.5	8.94		ug/m3		119	70 - 130
trans-1,2-Dichloroethene	7.9	8.92		ug/m3		112	70 - 130
1,2,4-Trichlorobenzene	15	16.8		ug/m3		113	60 - 140
1,1,1-Trichloroethane	11	12.3		ug/m3		112	70 - 130
1,1,2-Trichloroethane	11	12.4		ug/m3		114	70 - 130
Trichloroethene	11	12.3		ug/m3		114	70 - 130
1,2,3-Trimethylbenzene	9.8	11.7		ug/m3		119	70 - 130
1,2,4-Trimethylbenzene	9.8	11.3		ug/m3		115	70 - 130
1,3,5-Trimethylbenzene	9.8	11.5		ug/m3		117	70 - 130
Vinyl chloride	5.1	5.59		ug/m3		109	70 - 130
Xylenes, Total	26	31.8		ug/m3		122	70 - 130
LCS LCS							
Surrogate	%Recovery	Qualifier	Limits				
4-Bromofluorobenzene (Surr)	102		60 - 140				

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Air - GC/MS VOA

Analysis Batch: 24681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-13100-1	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
140-13100-2	BLDG-A MID GAC	Total/NA	Air	TO 15 LL	
140-13100-3	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
MB 140-24681/8	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-24681/1006	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Client Sample ID: BLDG-A INFLUENT

Date Collected: 10/18/18 10:15

Date Received: 10/19/18 09:40

Lab Sample ID: 140-13100-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	24681	10/24/18 00:11	PS	TAL KNX
Instrument ID: MH										

Client Sample ID: BLDG-A MID GAC

Date Collected: 10/18/18 10:11

Date Received: 10/19/18 09:40

Lab Sample ID: 140-13100-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	24681	10/24/18 00:55	PS	TAL KNX
Instrument ID: MH										

Client Sample ID: BLDG-A EFFLUENT

Date Collected: 10/18/18 10:08

Date Received: 10/19/18 09:40

Lab Sample ID: 140-13100-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	24681	10/24/18 01:39	PS	TAL KNX
Instrument ID: MH										

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-24681/8

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	24681	10/23/18 14:47	PS	TAL KNX
Instrument ID: MH										

Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

Lab Sample ID: LCS 140-24681/1006

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	24681	10/23/18 12:19	PS	TAL KNX
Instrument ID: MH										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC/ MRAS/BUILDING A

TestAmerica Job ID: 140-13100-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-13100-1	BLDG-A INFLUENT	Air	10/18/18 10:15	10/19/18 09:40
140-13100-2	BLDG-A MID GAC	Air	10/18/18 10:11	10/19/18 09:40
140-13100-3	BLDG-A EFFLUENT	Air	10/18/18 10:08	10/19/18 09:40

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
SDG No.: _____
Matrix: Air Level: Low
GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-A INFLUENT	140-13100-1	95
BLDG-A MID GAC	140-13100-2	96
BLDG-A EFFLUENT	140-13100-3	96
	MB 140-24681/8	94
	LCS 140-24681/1006	102

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: HCCVJ23A-LCS.d
 Lab ID: LCS 140-24681/1006 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.23	111	70-130	
Carbon tetrachloride	2.00	2.16	108	70-130	
Chlorodifluoromethane	2.00	2.09	105	60-140	
Chloroform	2.00	2.21	111	70-130	
cis-1,2-Dichloroethene	2.00	2.26	113	70-130	
Dichlorodifluoromethane	2.00	2.43	122	60-140	
1,1-Dichloroethane	2.00	2.25	113	70-130	
1,2-Dichloroethane	2.00	2.30	115	70-130	
1,1-Dichloroethene	2.00	2.25	112	70-130	
Ethylbenzene	2.00	2.39	120	70-130	
Methylene Chloride	2.00	1.97	98	70-130	
Methyl tert-butyl ether	2.00	2.29	115	60-140	
Naphthalene	2.00	2.19	110	60-140	
Tetrachloroethene	2.00	2.31	116	70-130	
Toluene	2.00	2.37	119	70-130	
trans-1,2-Dichloroethene	2.00	2.25	112	70-130	
1,2,4-Trichlorobenzene	2.00	2.26	113	60-140	
1,1,1-Trichloroethane	2.00	2.25	112	70-130	
1,1,2-Trichloroethane	2.00	2.28	114	70-130	
Trichloroethene	2.00	2.28	114	70-130	
1,2,3-Trimethylbenzene	2.00	2.38	119	70-130	
1,2,4-Trimethylbenzene	2.00	2.29	115	70-130	
1,3,5-Trimethylbenzene	2.00	2.34	117	70-130	
Vinyl chloride	2.00	2.19	109	70-130	
Xylenes, Total	6.00	7.32	122	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Lab File ID: H500BJ23.D Lab Sample ID: MB 140-24681/8
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MH Date Analyzed: 10/23/2018 14:47
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-24681/1006	HCCVJ23A-LC S.d	10/23/2018 12:19
BLDG-A INFLUENT	140-13100-1	HJ23P113.D	10/24/2018 00:11
BLDG-A MID GAC	140-13100-2	HJ23P114.D	10/24/2018 00:55
BLDG-A EFFLUENT	140-13100-3	HJ23P115.D	10/24/2018 01:39

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Lab File ID: HJ17BFB.D BFB Injection Date: 10/17/2018
 Instrument ID: MH BFB Injection Time: 18:22
 Analysis Batch No.: 24544

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	17.0
75	30.0 - 60.0 % of mass 95	45.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.7
173	Less than 2.0 % of mass 174	0.6 (0.5) 1
174	50.0 - 120.00 % of mass 95	105.2
175	5.0 - 9.0 % of mass 174	7.3 (7.0) 1
176	95.0 - 101.0 % of mass 174	102.5 (97.4) 1
177	5.0 - 9.0 % of mass 176	6.7 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-24544/2	HJ17IC09.D	10/17/2018	18:52
	IC 140-24544/4	HJ17IC10.D	10/17/2018	20:25
	IC 140-24544/7	HJ17IC01.D	10/17/2018	22:43
	IC 140-24544/8	HJ17IC02.D	10/17/2018	23:26
	IC 140-24544/9	HJ17IC03.D	10/18/2018	00:11
	IC 140-24544/10	HJ17IC04.D	10/18/2018	00:55
	IC 140-24544/11	HJ17IC05.D	10/18/2018	01:39
	IC 140-24544/12	HJ17IC06.D	10/18/2018	02:24
	ICIS 140-24544/13	HJ17IC07.D	10/18/2018	03:08
	IC 140-24544/14	HJ17IC08.D	10/18/2018	03:53
	ICV 140-24544/16	HJ17ICV.D	10/18/2018	05:24

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Lab File ID: HBFBJ23A.D BFB Injection Date: 10/23/2018
 Instrument ID: MH BFB Injection Time: 11:50
 Analysis Batch No.: 24681

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	17.1
75	30.0 - 60.0 % of mass 95	46.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.7
173	Less than 2.0 % of mass 174	0.6 (0.5) 1
174	50.0 - 120.00 % of mass 95	105.3
175	5.0 - 9.0 % of mass 174	7.5 (7.1) 1
176	95.0 - 101.0 % of mass 174	102.3 (97.2) 1
177	5.0 - 9.0 % of mass 176	6.8 (6.6) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-24681/6	HCCVJ23A.D	10/23/2018	12:19
	LCS 140-24681/1006	HCCVJ23A-LCS .d	10/23/2018	12:19
	MB 140-24681/8	H500BJ23.D	10/23/2018	14:47
BLDG-A INFLUENT	140-13100-1	HJ23P113.D	10/24/2018	00:11
BLDG-A MID GAC	140-13100-2	HJ23P114.D	10/24/2018	00:55
BLDG-A EFFLUENT	140-13100-3	HJ23P115.D	10/24/2018	01:39

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Sample No.: ICIS 140-24544/13 Date Analyzed: 10/18/2018 03:08
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HJ17IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1711

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	226134	8.38	1237056	10.58	1050936	15.39
UPPER LIMIT	316588	8.71	1731878	10.91	1471310	15.72
LOWER LIMIT	135680	8.05	742234	10.25	630562	15.06
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-24544/16	241148	8.38	1311261	10.58	1119016	15.39

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Sample No.: CCVIS 140-24681/6 Date Analyzed: 10/23/2018 12:19
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): HCCVJ23A.D Heated Purge: (Y/N) N
 Calibration ID: 1711

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	211350	8.38	1127501	10.58	949585	15.39	
UPPER LIMIT	295890	8.71	1578501	10.91	1329419	15.72	
LOWER LIMIT	126810	8.05	676501	10.25	569751	15.06	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-24681/1006	211350	8.38	1127501	10.58	949585	15.39	
MB 140-24681/8	212485	8.38	1150138	10.58	953514	15.39	
140-13100-1	BLDG-A INFLUENT	172719	8.38	919672	10.58	763595	15.39
140-13100-2	BLDG-A MID GAC	170182	8.38	908023	10.58	782559	15.39
140-13100-3	BLDG-A EFFLUENT	174433	8.38	923188	10.58	770043	15.39

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-13100-1
 Matrix: Air Lab File ID: HJ23P113.D
 Analysis Method: TO 15 LL Date Collected: 10/18/2018 10:15
 Sample wt/vol: 20 (mL) Date Analyzed: 10/24/2018 00:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24681 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.9	J	2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	ND		2.0	0.38
67-66-3	Chloroform	119.38	0.80	J	2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	15		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	3.0		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	14		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	3.3	J	5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	78	B	2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	150		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-13100-1
 Matrix: Air Lab File ID: HJ23P113.D
 Analysis Method: TO 15 LL Date Collected: 10/18/2018 10:15
 Sample wt/vol: 20 (mL) Date Analyzed: 10/24/2018 00:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24681 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.9	J	6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	ND		7.1	1.3
67-66-3	Chloroform	119.38	3.9	J	9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	58		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	12		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	56		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	12	J	17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	430	B	11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	800		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P113.D
 Lims ID: 140-13100-A-1
 Client ID: BLDG-A INFLUENT
 Sample Type: Client
 Inject. Date: 24-Oct-2018 00:11:30 ALS Bottle#: 13 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009735-021
 Misc. Info.: 140-13100-a-1
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 24-Oct-2018 11:13:56 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh Date: 24-Oct-2018 11:09:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.384	8.379	0.005	85	172719	4.00	
* 2 1,4-Difluorobenzene	114	10.581	10.581	0.000	94	919672	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.001	86	763595	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.062	-0.020	97	485084	3.80	
6 Chlorodifluoromethane	51	3.475	3.480	-0.004	41	1477	0.0136	7M
27 1,1-Dichloroethene	96	5.573	5.564	0.006	99	32525	0.5612	
31 Methylene Chloride	84	5.909	5.900	0.006	94	8484	0.1336	
37 1,1-Dichloroethane	63	7.098	7.088	0.006	99	12315	0.1198	
41 cis-1,2-Dichloroethene	96	8.054	8.049	0.001	93	35720	0.5804	
43 Chloroform	83	8.390	8.390	-0.005	28	4329	0.0321	
45 1,1,1-Trichloroethane	97	9.408	9.402	0.000	96	395095	3.12	
47 Benzene	78	10.013	10.002	0.005	95	12492	0.0745	
56 Trichloroethene	130	11.305	11.299	0.001	96	485352	5.97	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P113.D

Injection Date: 24-Oct-2018 00:11:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13100-A-1

Lab Sample ID: 140-13100-1

Worklist Smp#: 21

Client ID: BLDG-A INFLUENT

Purge Vol: 500.000 mL

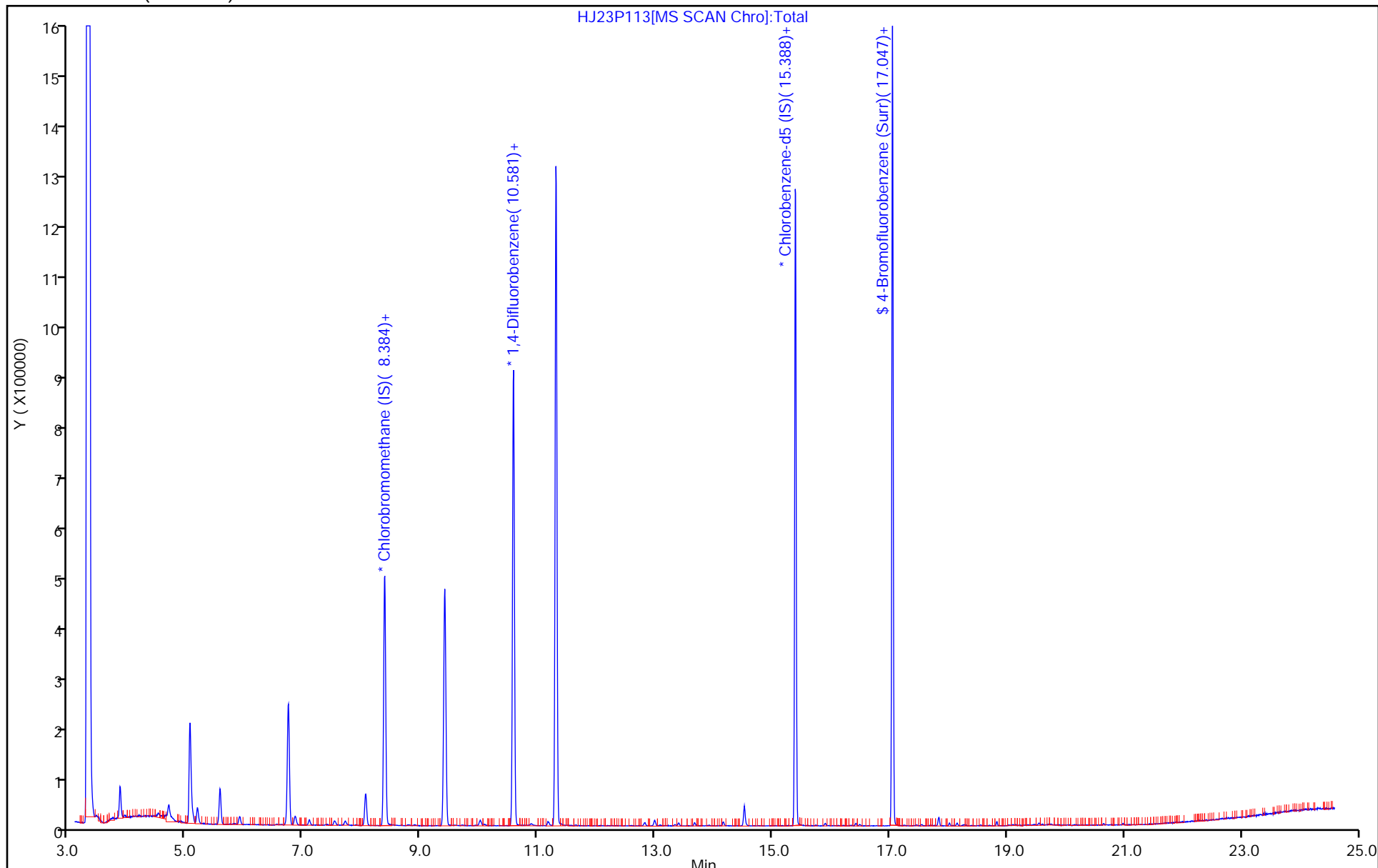
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P113.D
 Lims ID: 140-13100-A-1
 Client ID: BLDG-A INFLUENT
 Sample Type: Client
 Inject. Date: 24-Oct-2018 00:11:30 ALS Bottle#: 13 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009735-021
 Misc. Info.: 140-13100-a-1
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 24-Oct-2018 11:13:56 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh Date: 24-Oct-2018 11:09:54

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.80	94.94

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P113.D

Injection Date: 24-Oct-2018 00:11:30

Instrument ID: MH

Lims ID: 140-13100-A-1

Lab Sample ID: 140-13100-1

Client ID: BLDG-A INFLUENT

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

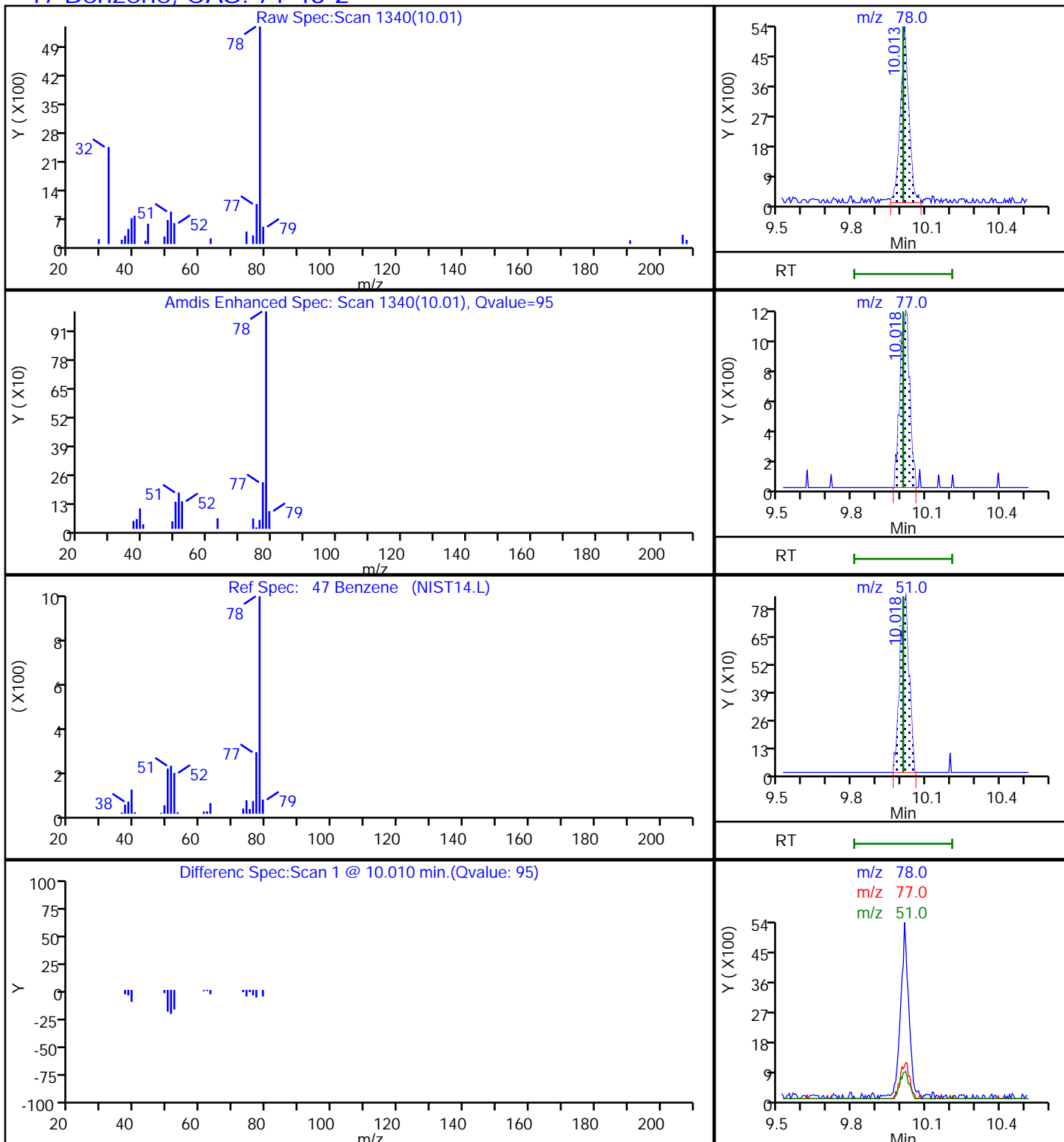
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P113.D

Injection Date: 24-Oct-2018 00:11:30

Instrument ID: MH

Lims ID: 140-13100-A-1

Lab Sample ID: 140-13100-1

Client ID: BLDG-A INFLUENT

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

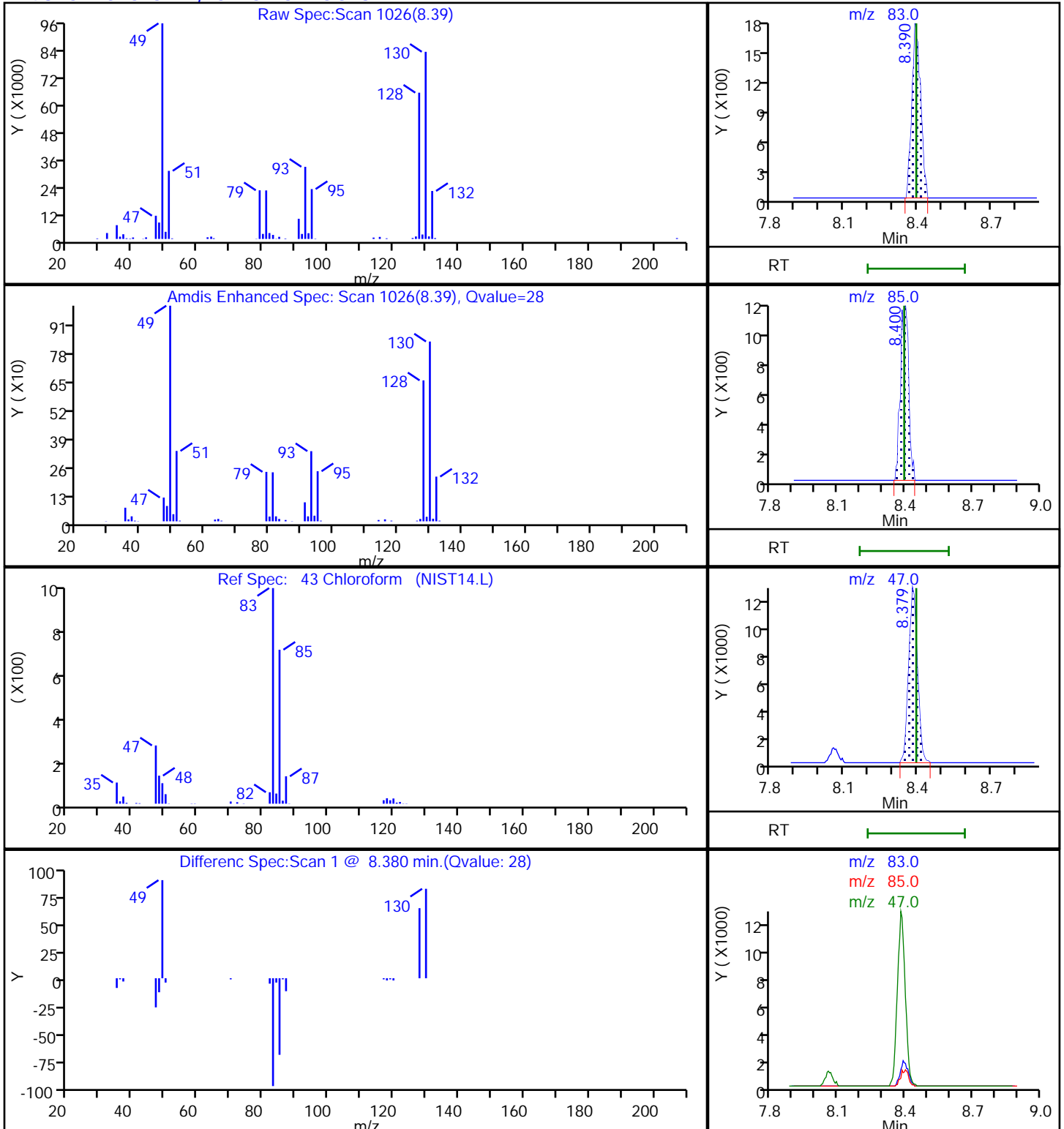
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P113.D

Injection Date: 24-Oct-2018 00:11:30

Instrument ID: MH

Lims ID: 140-13100-A-1

Lab Sample ID: 140-13100-1

Client ID: BLDG-A INFLUENT

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

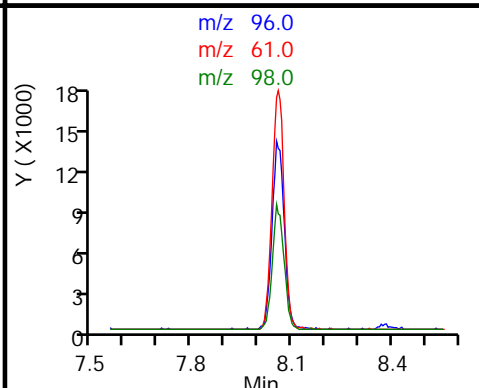
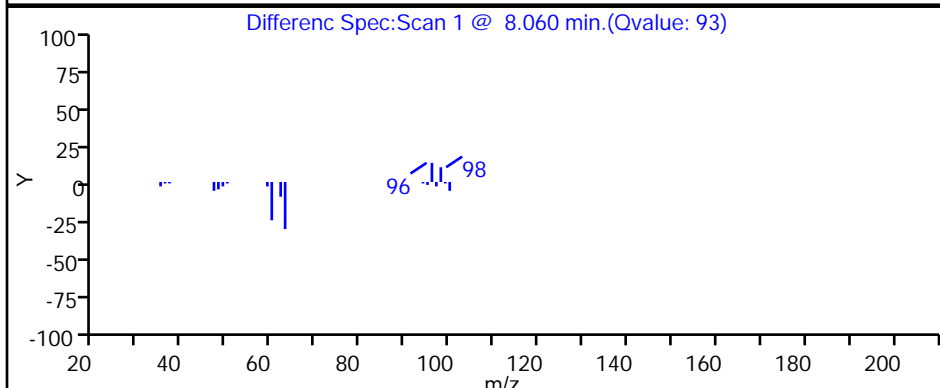
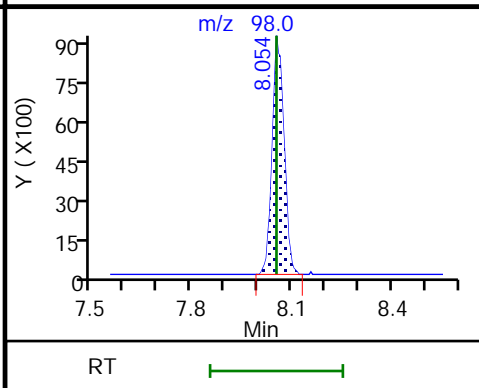
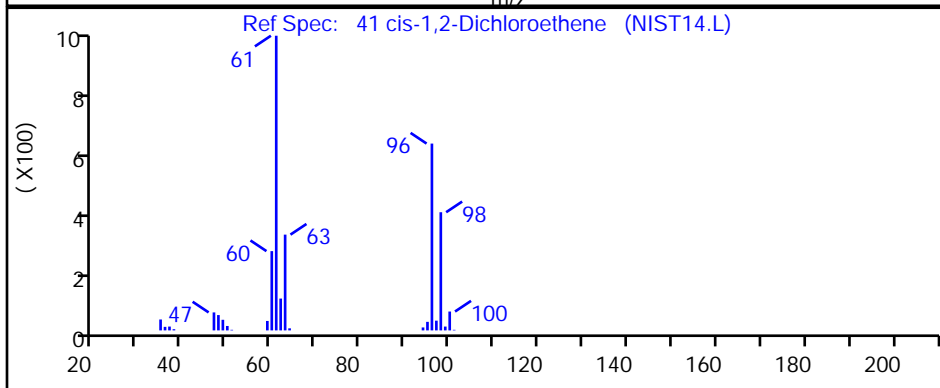
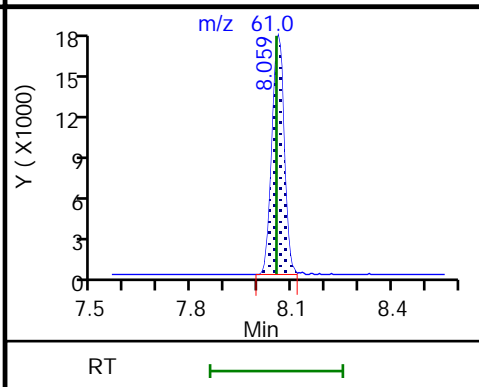
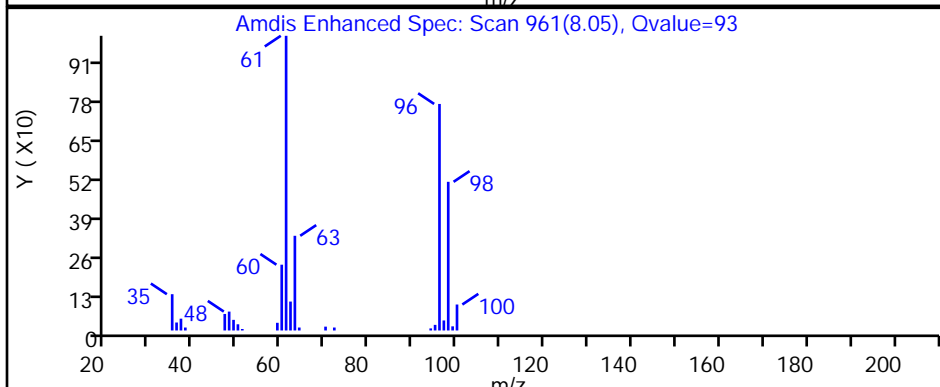
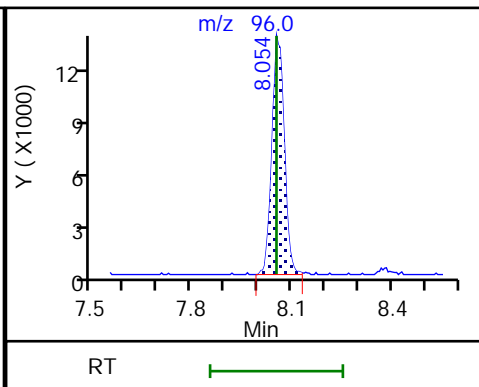
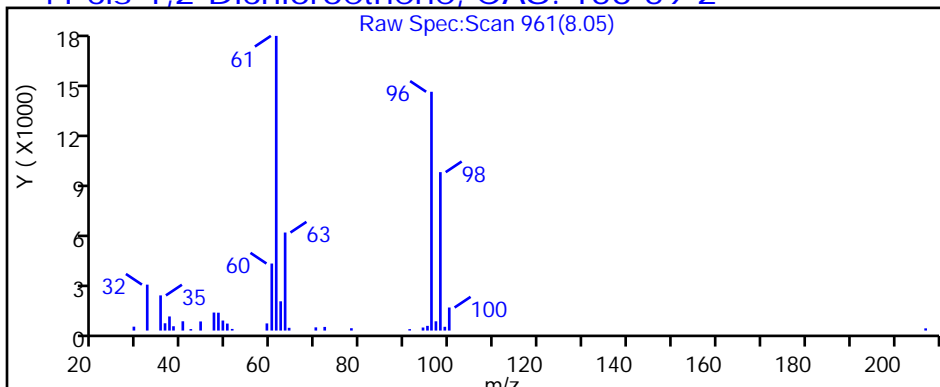
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P113.D

Injection Date: 24-Oct-2018 00:11:30

Instrument ID: MH

Lims ID: 140-13100-A-1

Lab Sample ID: 140-13100-1

Client ID: BLDG-A INFLUENT

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

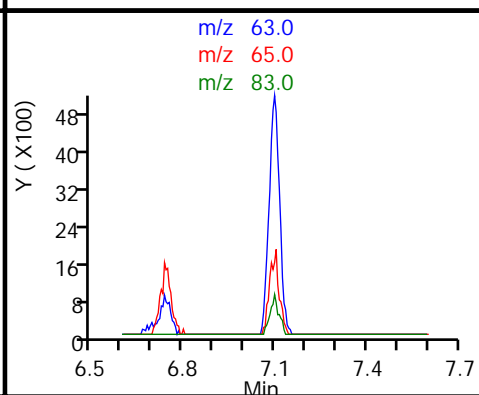
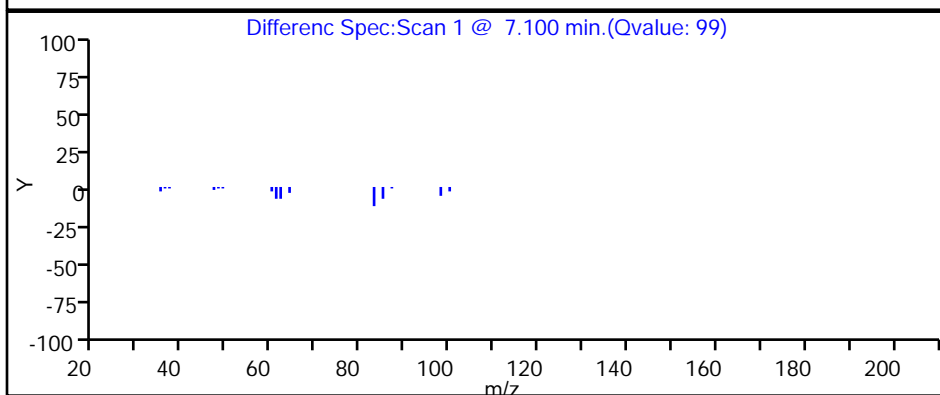
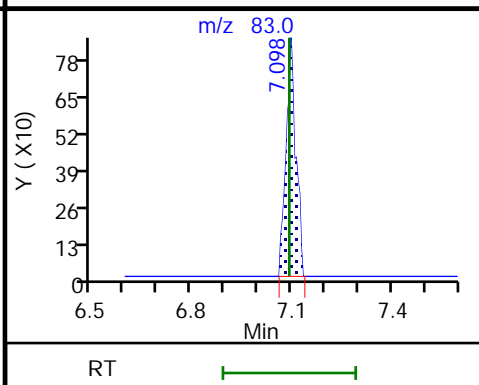
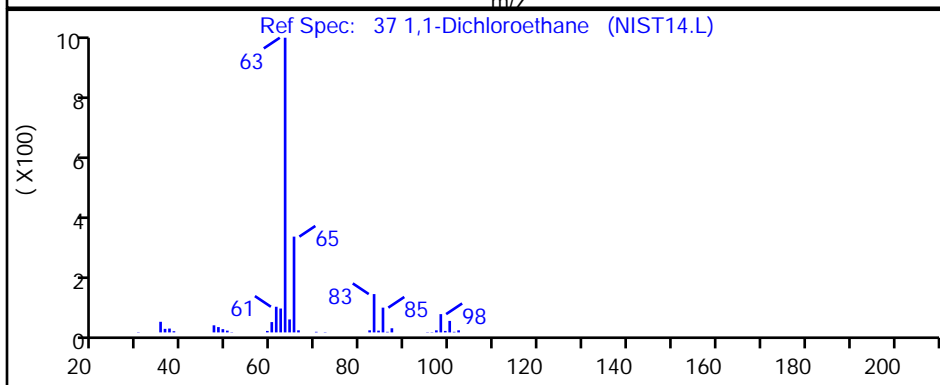
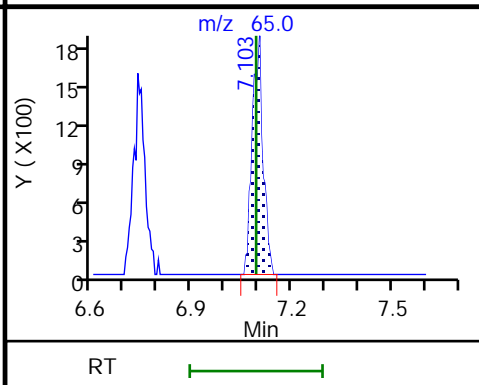
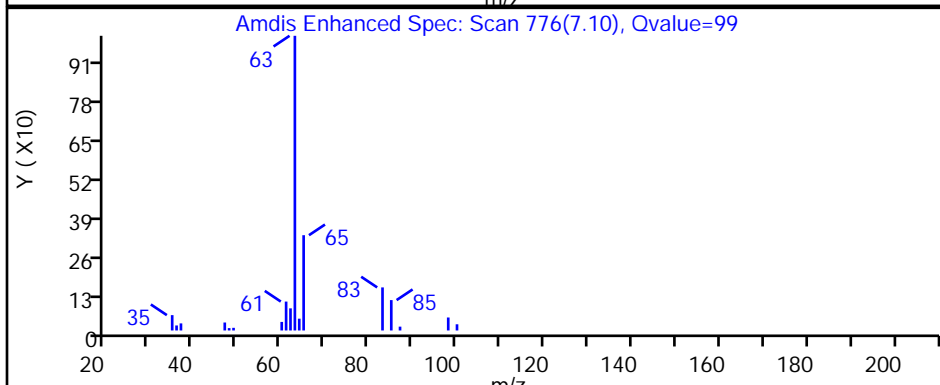
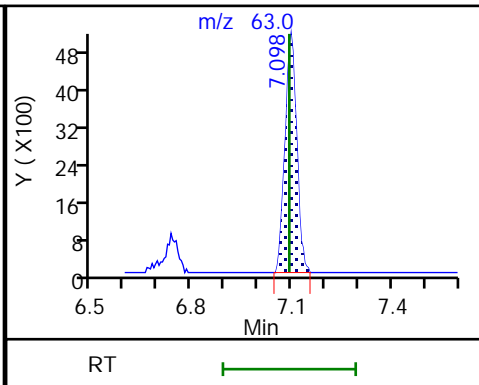
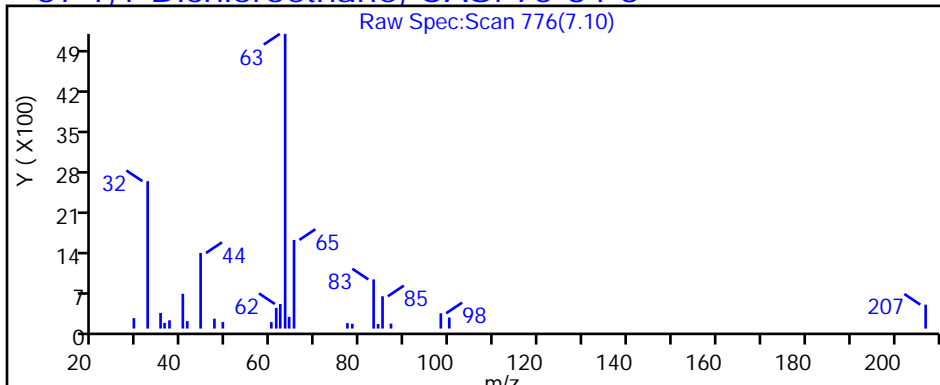
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P113.D

Injection Date: 24-Oct-2018 00:11:30

Instrument ID: MH

Lims ID: 140-13100-A-1

Lab Sample ID: 140-13100-1

Client ID: BLDG-A INFLUENT

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

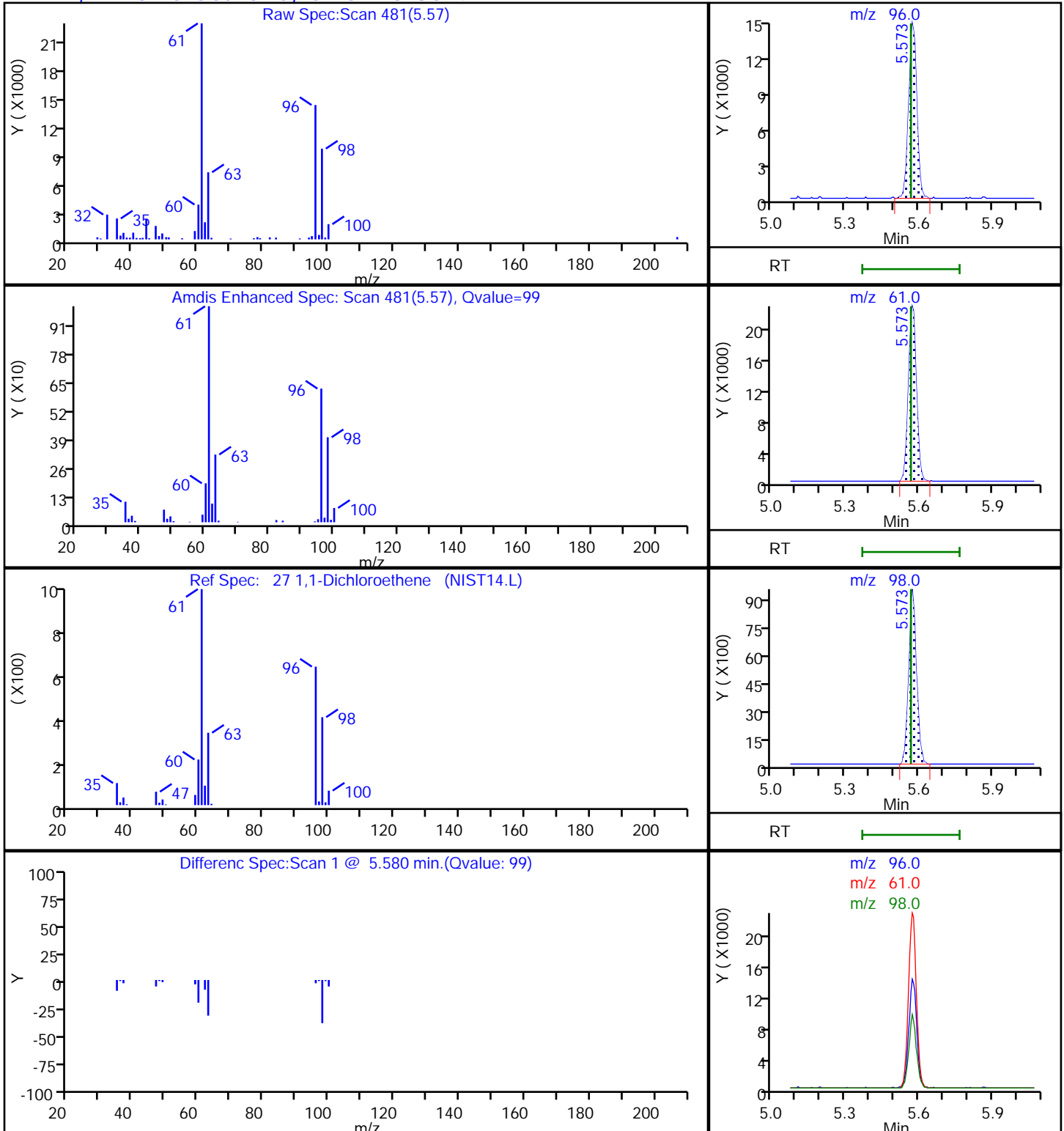
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P113.D

Injection Date: 24-Oct-2018 00:11:30

Instrument ID: MH

Lims ID: 140-13100-A-1

Lab Sample ID: 140-13100-1

Client ID: BLDG-A INFLUENT

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

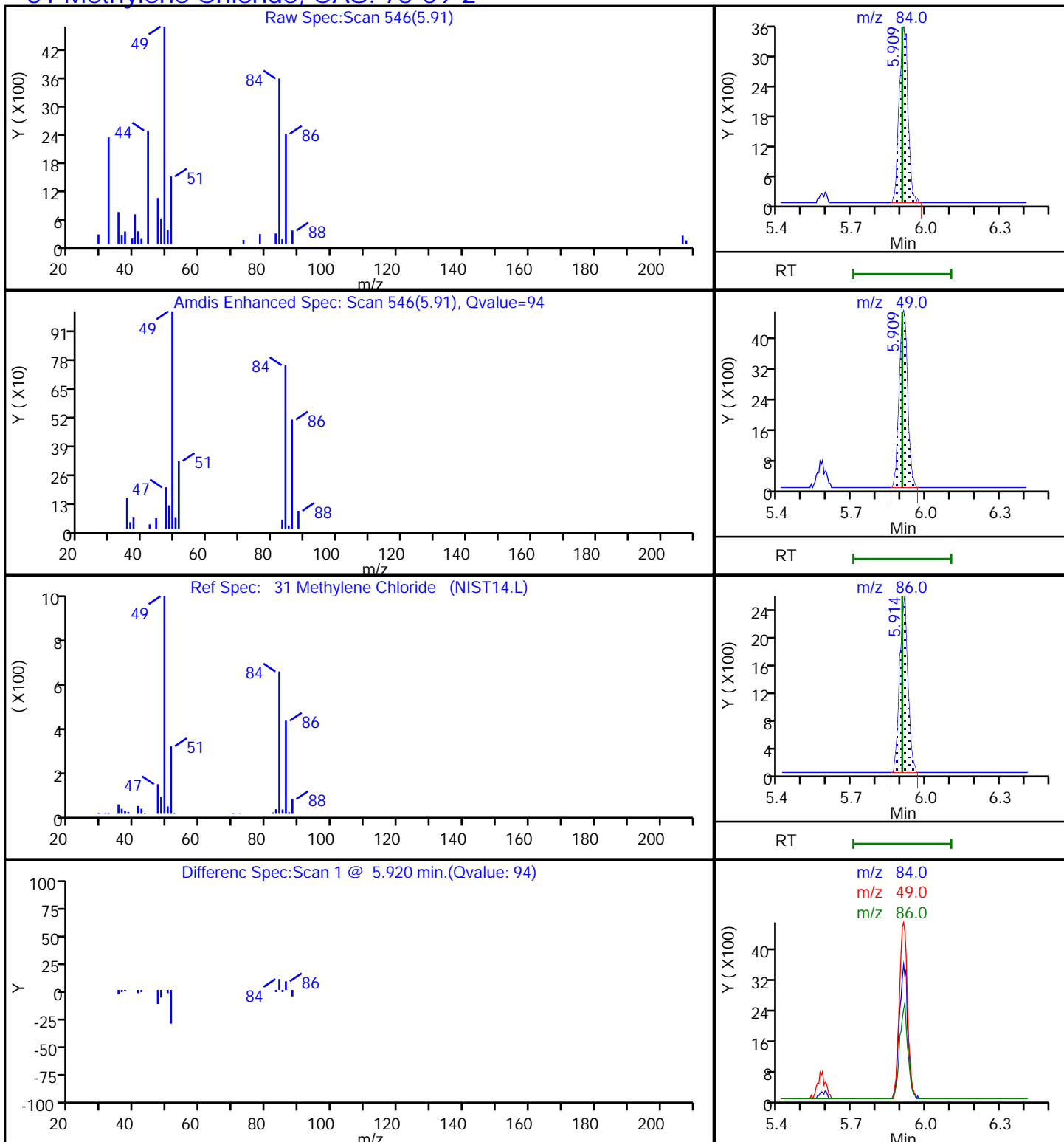
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P113.D

Injection Date: 24-Oct-2018 00:11:30

Instrument ID: MH

Lims ID: 140-13100-A-1

Lab Sample ID: 140-13100-1

Client ID: BLDG-A INFLUENT

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

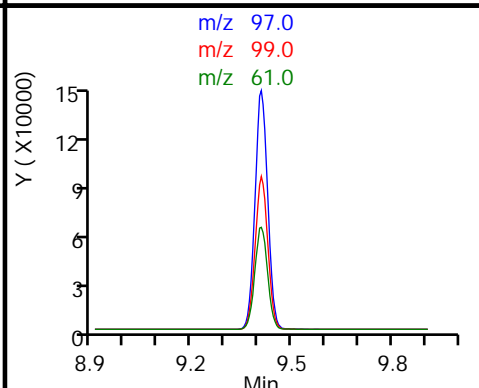
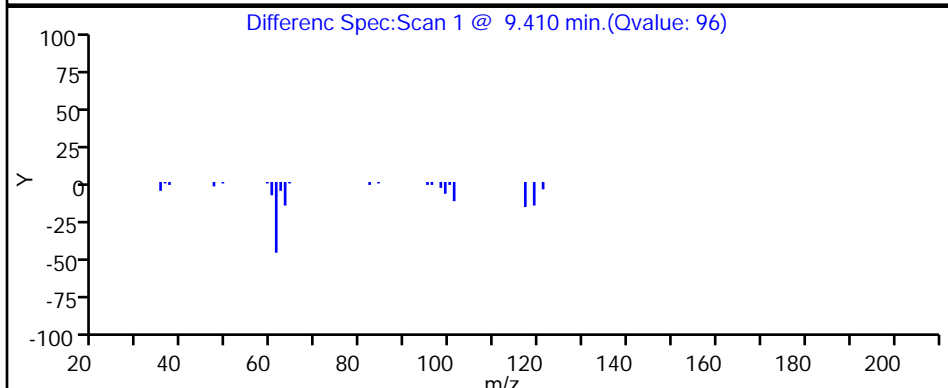
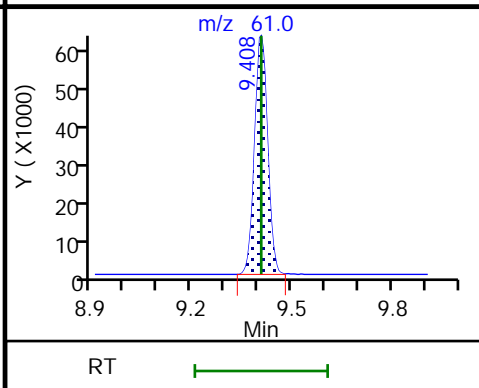
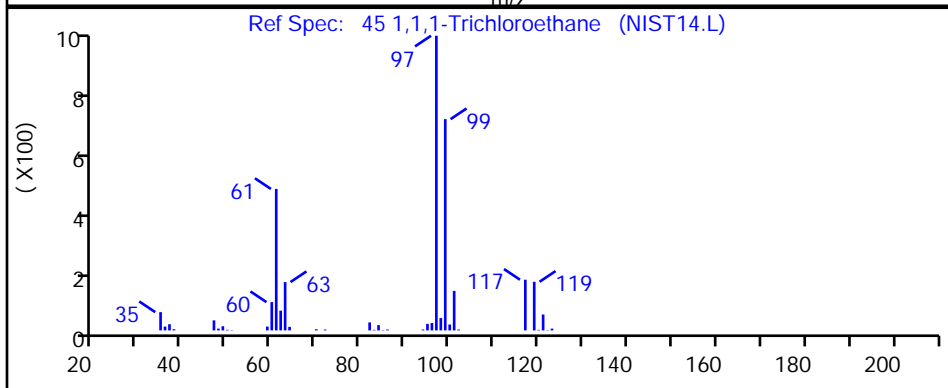
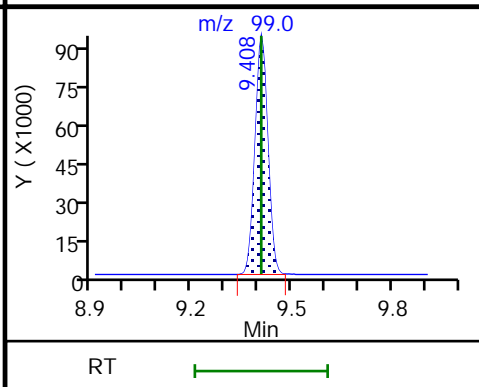
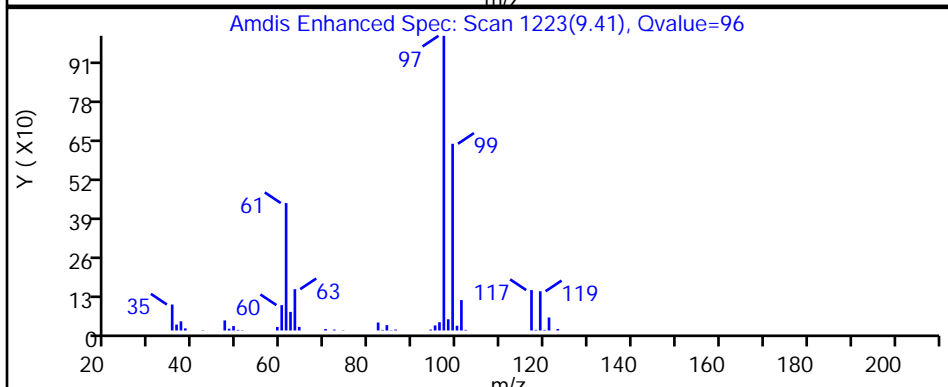
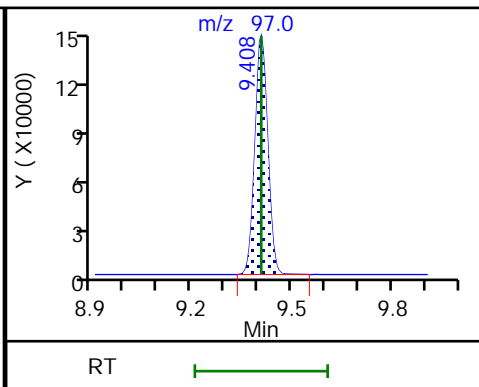
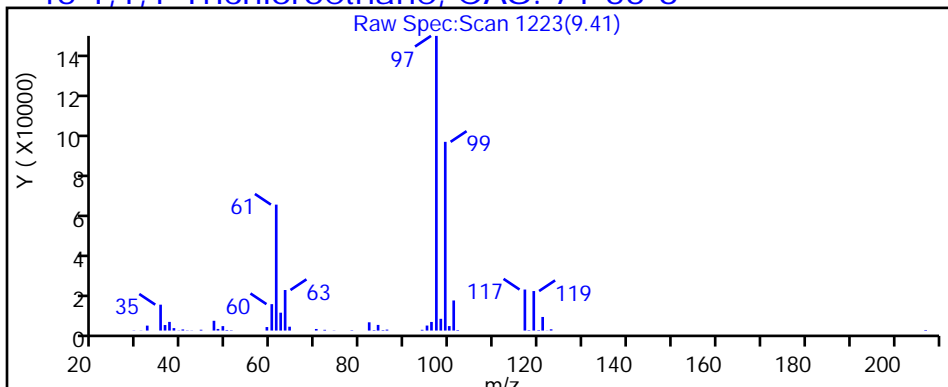
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P113.D

Injection Date: 24-Oct-2018 00:11:30

Instrument ID: MH

Lims ID: 140-13100-A-1

Lab Sample ID: 140-13100-1

Client ID: BLDG-A INFLUENT

Operator ID: HMT

ALS Bottle#: 13

Worklist Smp#: 21

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

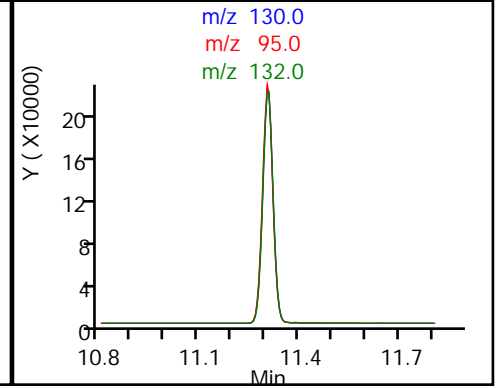
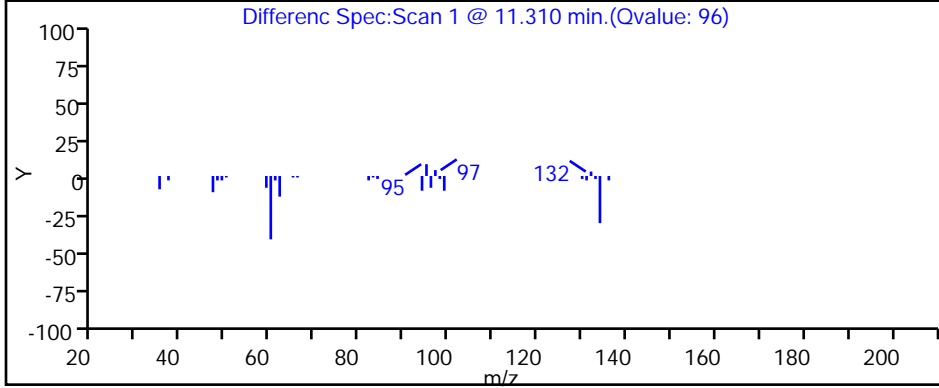
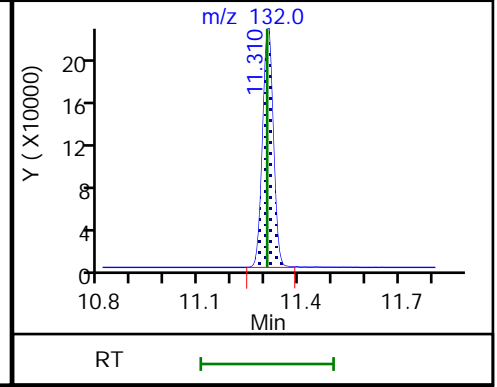
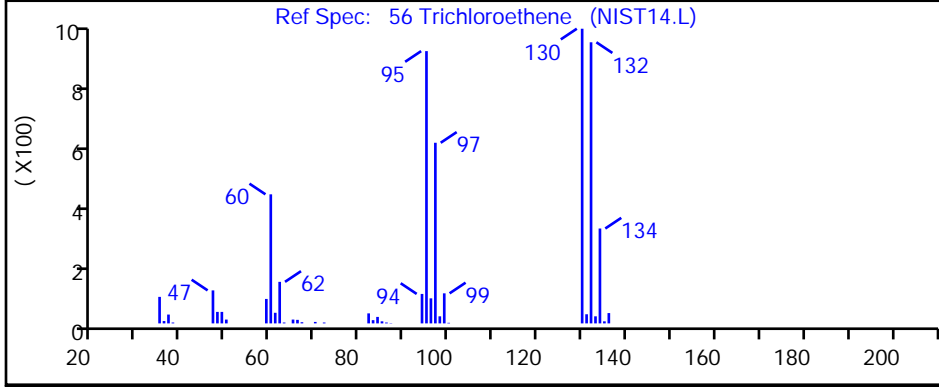
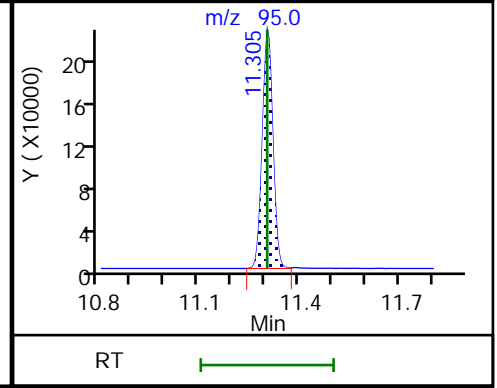
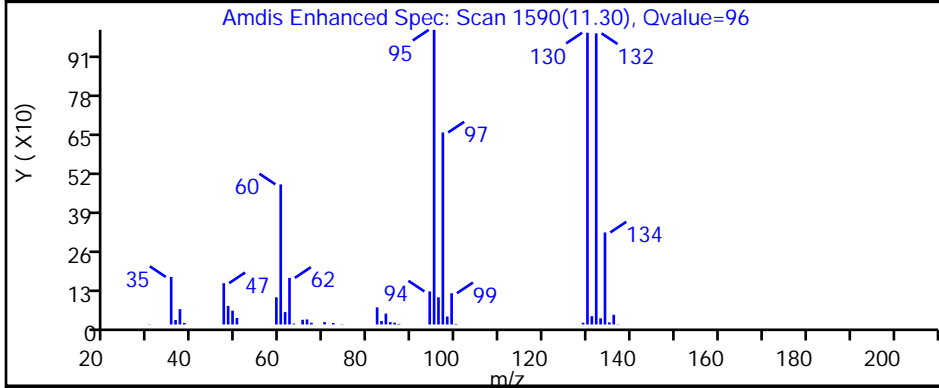
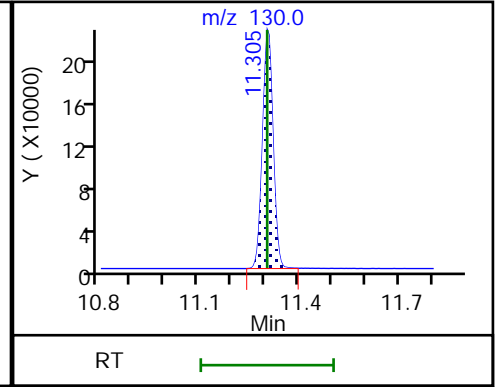
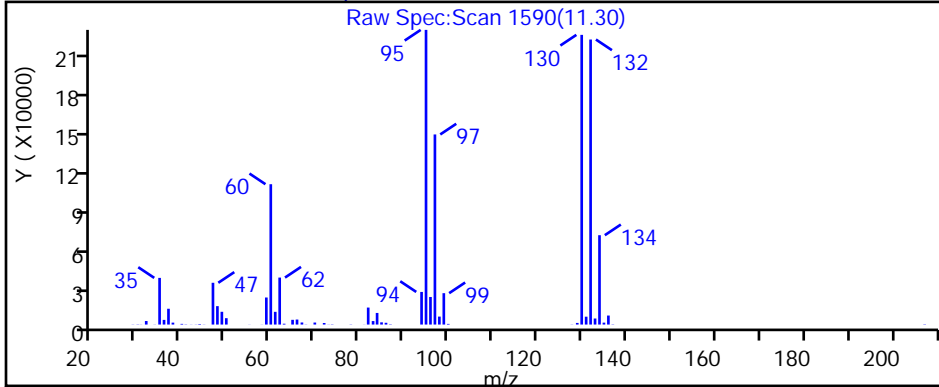
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

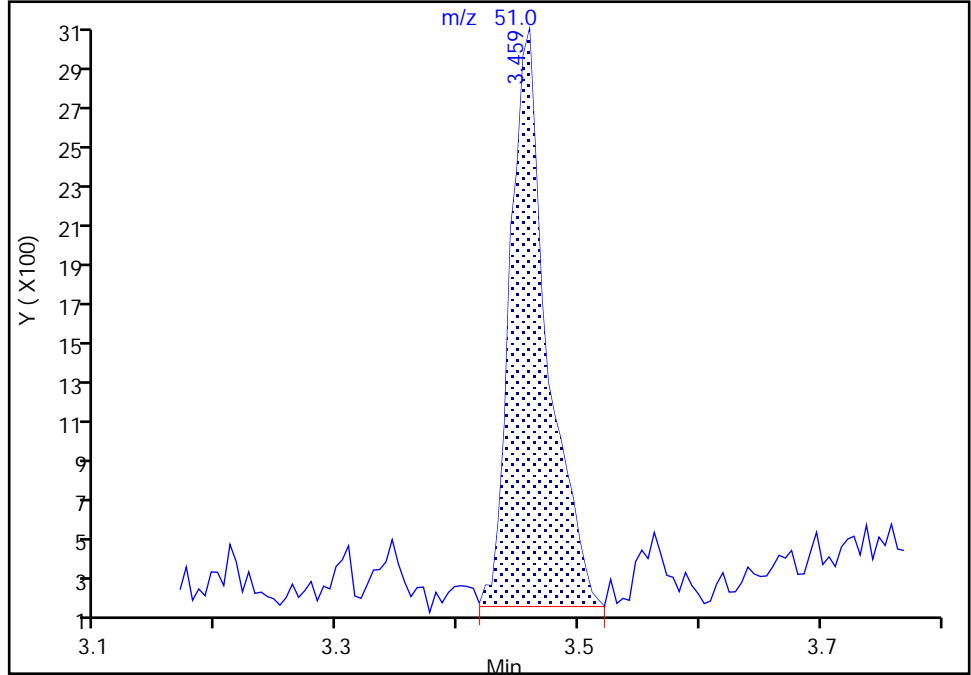
Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P113.D
Injection Date: 24-Oct-2018 00:11:30 Instrument ID: MH
Lims ID: 140-13100-A-1 Lab Sample ID: 140-13100-1
Client ID: BLDG-A INFLUENT
Operator ID: HMT ALS Bottle#: 13 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

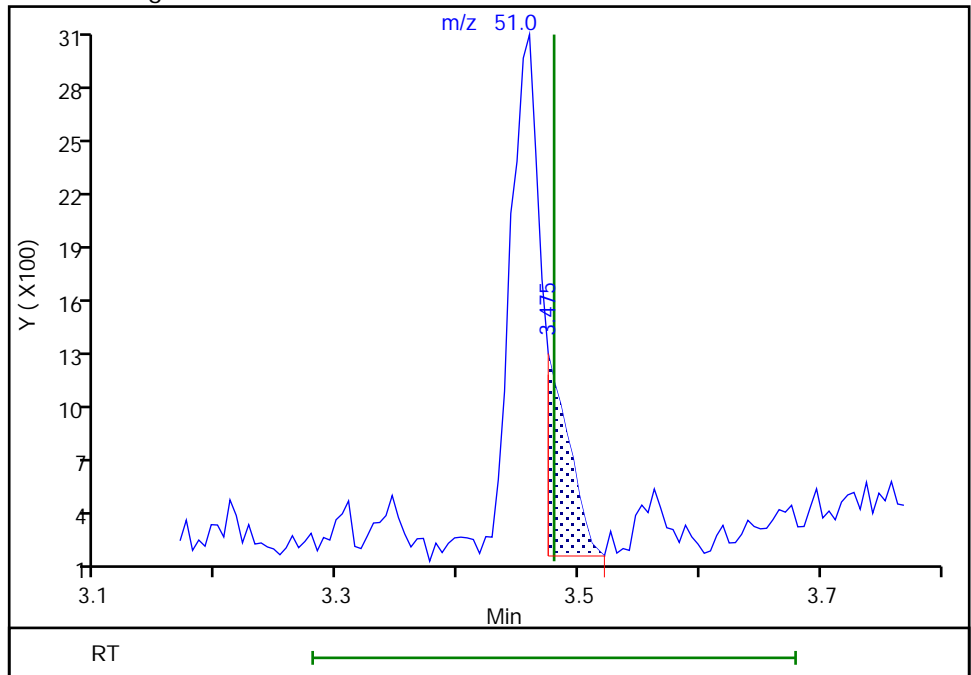
RT: 3.46
Area: 6133
Amount: 0.056305
Amount Units: ppb v/v

Processing Integration Results



RT: 3.47
Area: 1477
Amount: 0.013560
Amount Units: ppb v/v

Manual Integration Results



Reviewer: tajh, 24-Oct-2018 11:09:27
Audit Action: Split an Integrated Peak

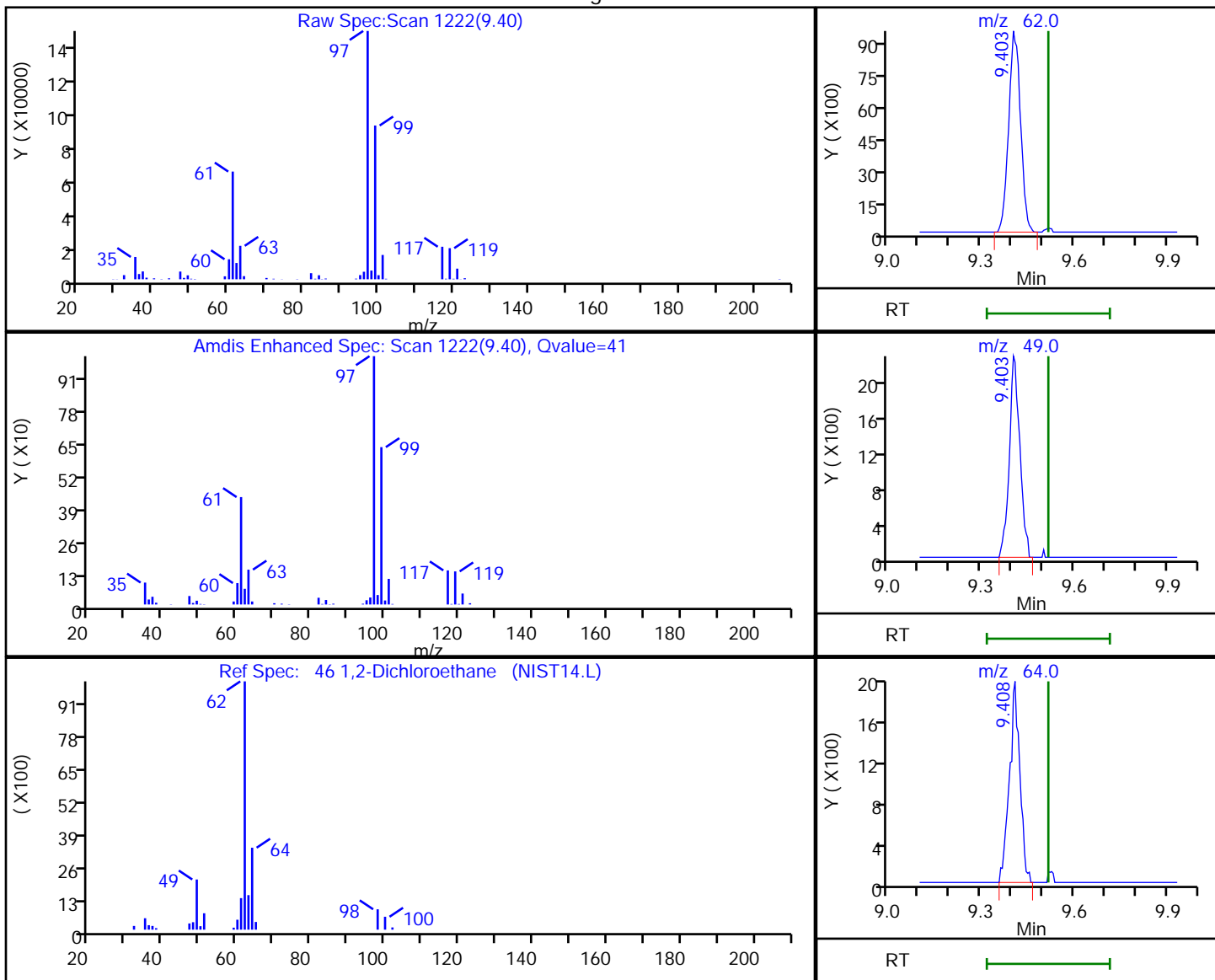
Audit Reason: Split Peak

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P113.D
 Injection Date: 24-Oct-2018 00:11:30 Instrument ID: MH
 Lims ID: 140-13100-A-1 Lab Sample ID: 140-13100-1
 Client ID: BLDG-A INFLUENT
 Operator ID: HMT ALS Bottle#: 13 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
9.40	62.00	25451	0.328512
9.40	49.00	5452	
9.41	64.00	4572	

Reviewer: tajh, 24-Oct-2018 11:09:45

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Client Sample ID: BLDG-A MID GAC Lab Sample ID: 140-13100-2
 Matrix: Air Lab File ID: HJ23P114.D
 Analysis Method: TO 15 LL Date Collected: 10/18/2018 10:11
 Sample wt/vol: 100(mL) Date Analyzed: 10/24/2018 00:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24681 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.41		0.40	0.075
67-66-3	Chloroform	119.38	1.2		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	26		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	6.5		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	22		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.54		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	29	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.18	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Client Sample ID: BLDG-A MID GAC Lab Sample ID: 140-13100-2
 Matrix: Air Lab File ID: HJ23P114.D
 Analysis Method: TO 15 LL Date Collected: 10/18/2018 10:11
 Sample wt/vol: 100(mL) Date Analyzed: 10/24/2018 00:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24681 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.56	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	5.8		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	100		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	26		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	86		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.3		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	2.1		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	160	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.99	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
 Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D
 Lims ID: 140-13100-A-2
 Client ID: BLDG-A MID GAC
 Sample Type: Client
 Inject. Date: 24-Oct-2018 00:55:30 ALS Bottle#: 14 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009735-022
 Misc. Info.: 140-13100-a-2
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 24-Oct-2018 11:13:56 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh Date: 24-Oct-2018 11:10:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.384	8.379	0.005	86	170182	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.581	-0.005	94	908023	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.388	15.393	-0.004	86	782559	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.062	-0.020	96	501147	3.83	
6 Chlorodifluoromethane	51	3.485	3.480	0.006	95	8897	0.0829	
8 Dichlorodifluoromethane	85	3.542	3.534	0.006	99	17365	0.1084	
27 1,1-Dichloroethene	96	5.573	5.564	0.006	99	247386	4.33	
31 Methylene Chloride	84	5.909	5.900	0.006	94	19212	0.3071	
34 trans-1,2-Dichloroethene	96	6.694	6.680	0.010	89	6284	0.1084	
37 1,1-Dichloroethane	63	7.098	7.088	0.006	100	131466	1.30	
41 cis-1,2-Dichloroethene	96	8.059	8.049	0.006	93	310469	5.12	
43 Chloroform	83	8.395	8.390	0.000	95	31413	0.2362	
45 1,1,1-Trichloroethane	97	9.408	9.402	0.000	96	732456	5.87	
47 Benzene	78	10.012	10.002	0.005	95	5846	0.0353	
56 Trichloroethene	130	11.310	11.299	0.006	94	2951	0.0368	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D

Injection Date: 24-Oct-2018 00:55:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13100-A-2

Lab Sample ID: 140-13100-2

Worklist Smp#: 22

Client ID: BLDG-A MID GAC

Purge Vol: 500.000 mL

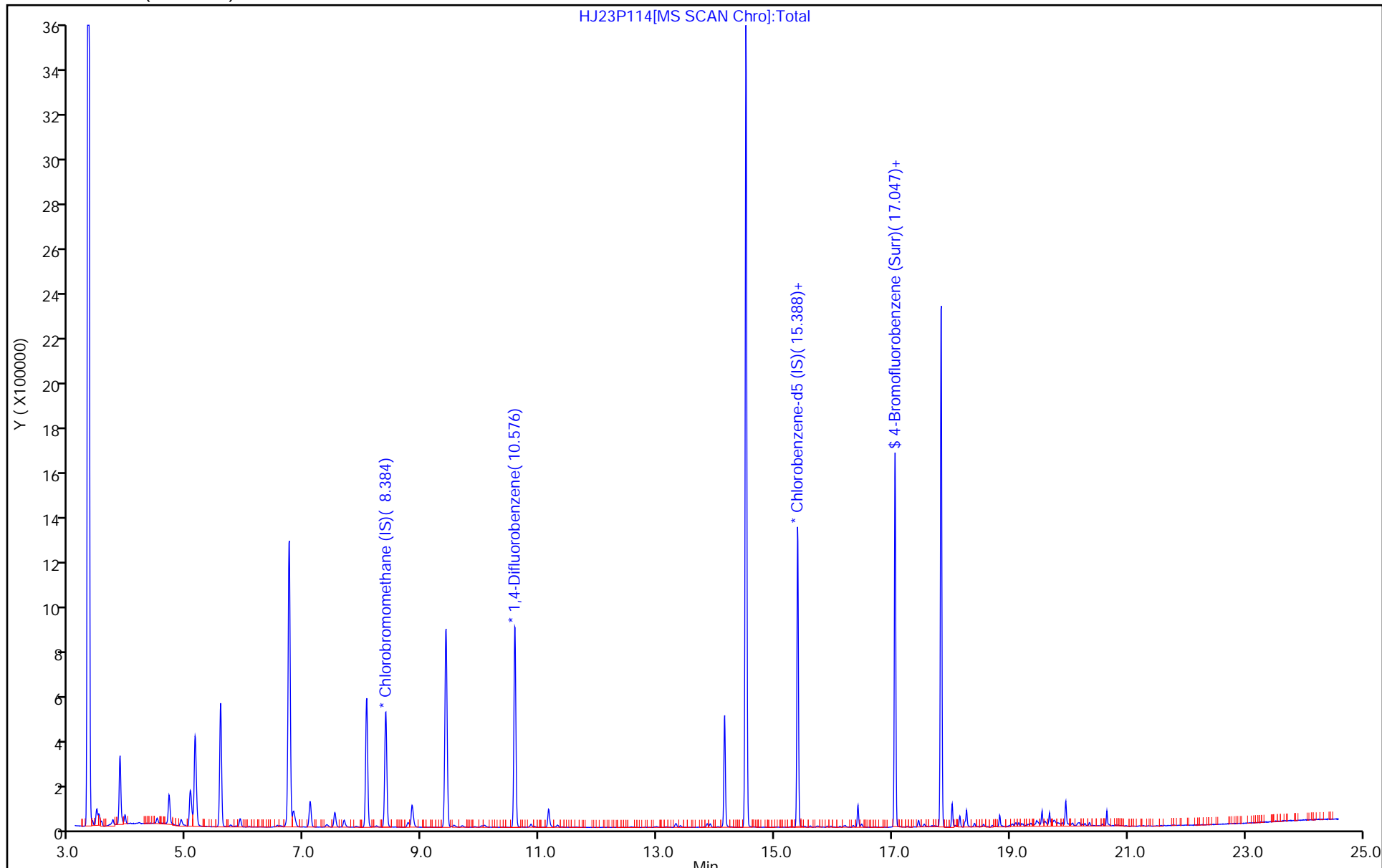
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D
 Lims ID: 140-13100-A-2
 Client ID: BLDG-A MID GAC
 Sample Type: Client
 Inject. Date: 24-Oct-2018 00:55:30 ALS Bottle#: 14 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009735-022
 Misc. Info.: 140-13100-a-2
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 24-Oct-2018 11:13:56 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh Date: 24-Oct-2018 11:10:35

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.83	95.70

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D

Injection Date: 24-Oct-2018 00:55:30

Instrument ID: MH

Lims ID: 140-13100-A-2

Lab Sample ID: 140-13100-2

Client ID: BLDG-A MID GAC

Operator ID: HMT

ALS Bottle#: 14 Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

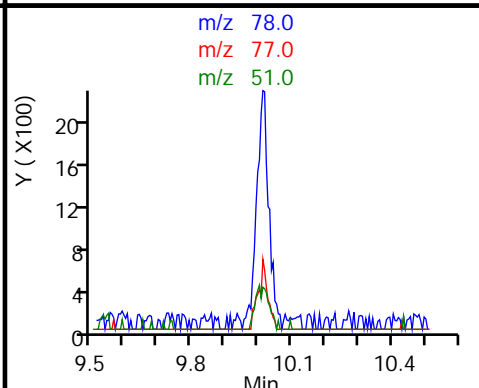
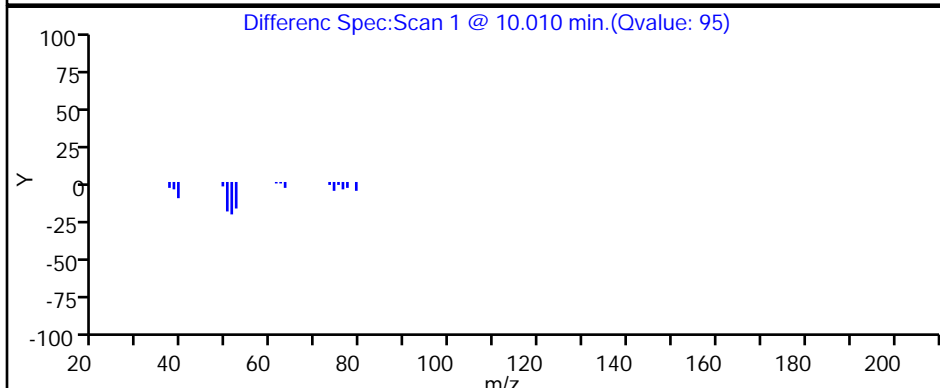
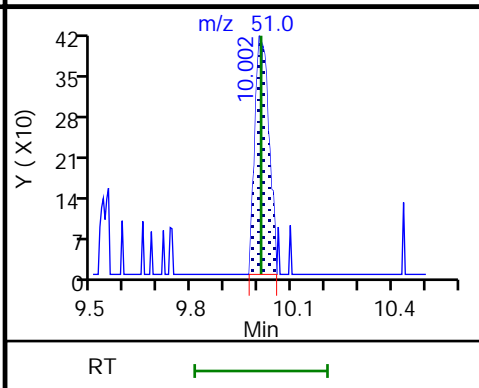
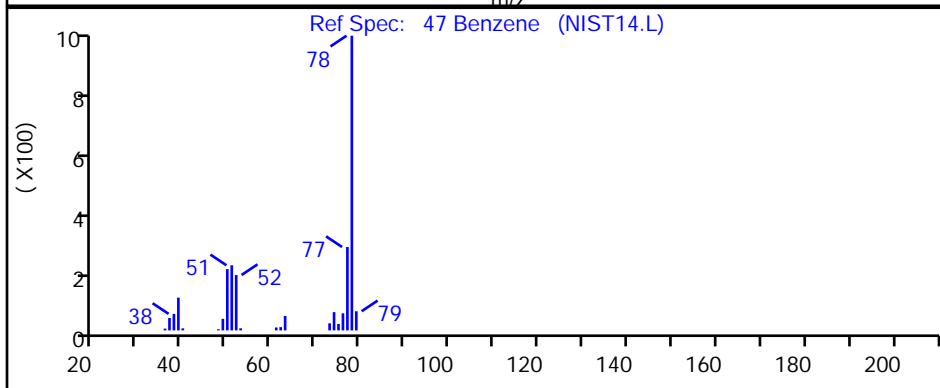
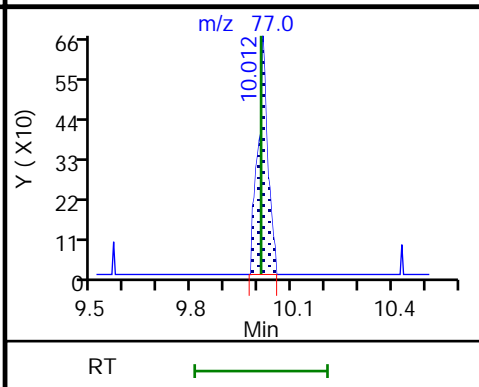
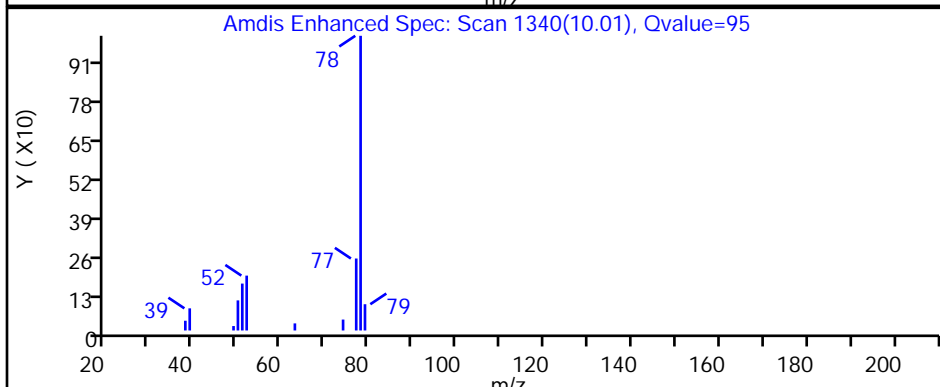
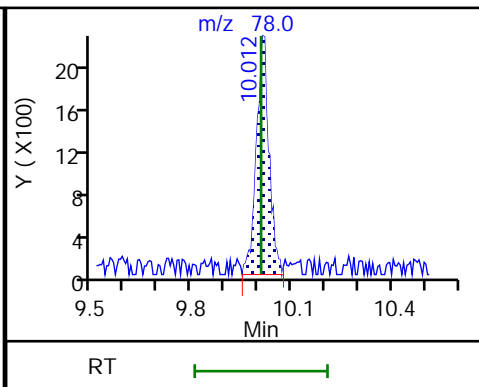
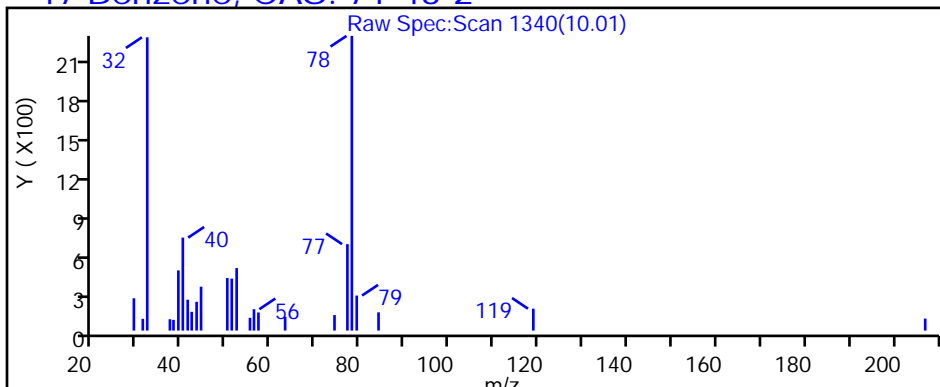
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D

Injection Date: 24-Oct-2018 00:55:30

Instrument ID: MH

Lims ID: 140-13100-A-2

Lab Sample ID: 140-13100-2

Client ID: BLDG-A MID GAC

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

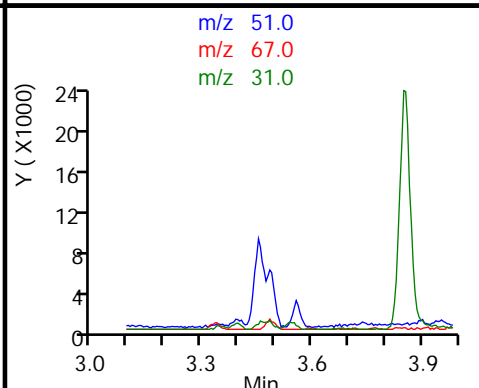
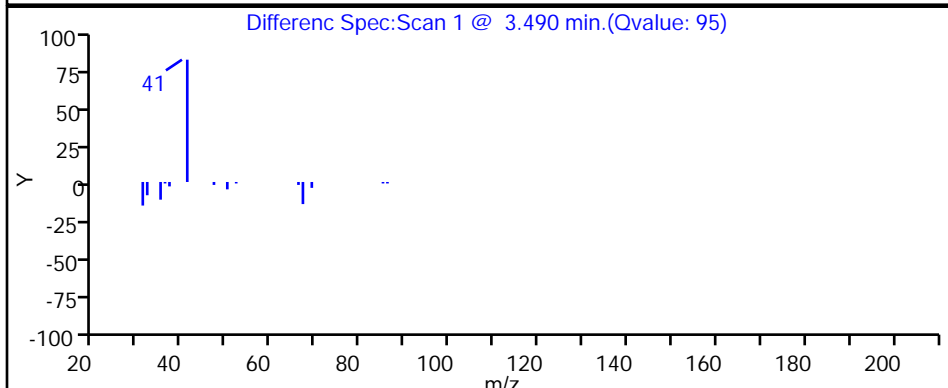
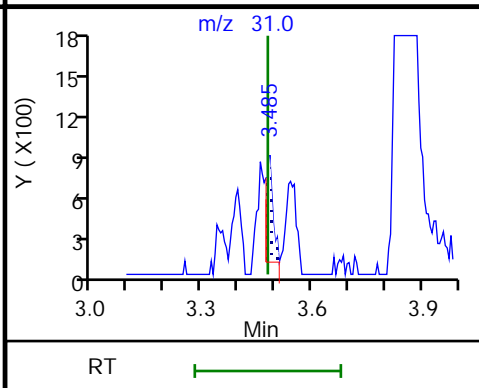
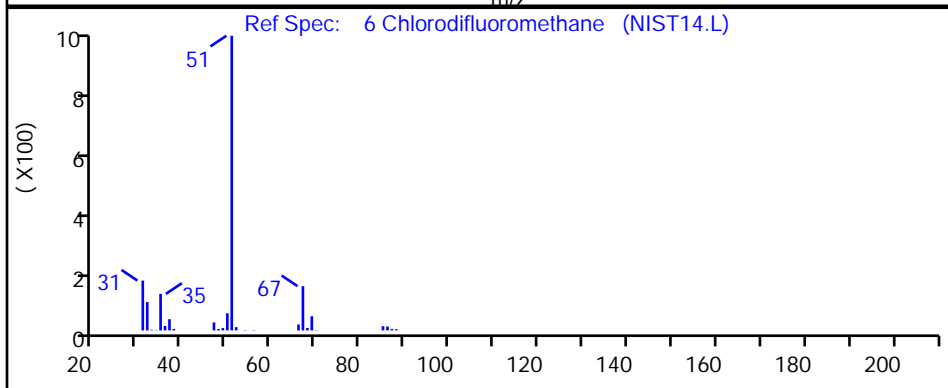
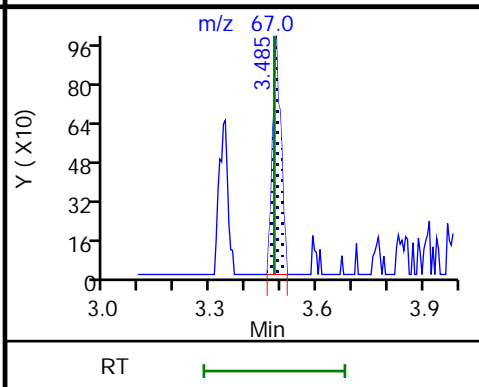
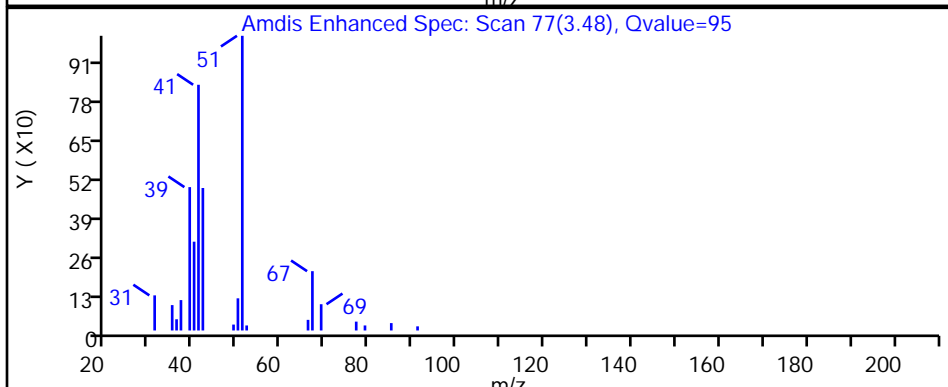
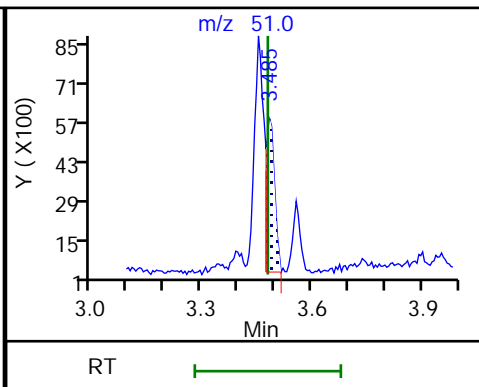
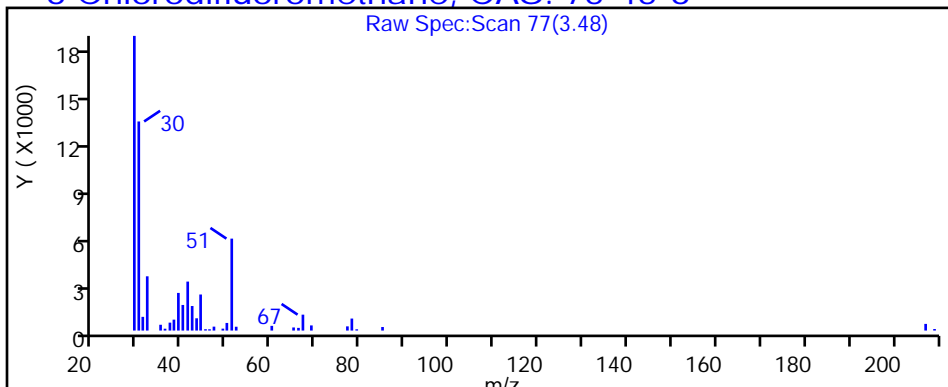
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D

Injection Date: 24-Oct-2018 00:55:30

Instrument ID: MH

Lims ID: 140-13100-A-2

Lab Sample ID: 140-13100-2

Client ID: BLDG-A MID GAC

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

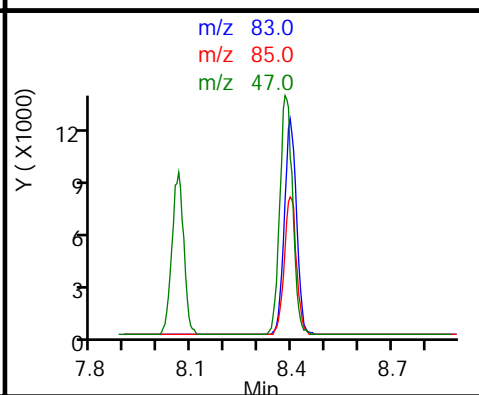
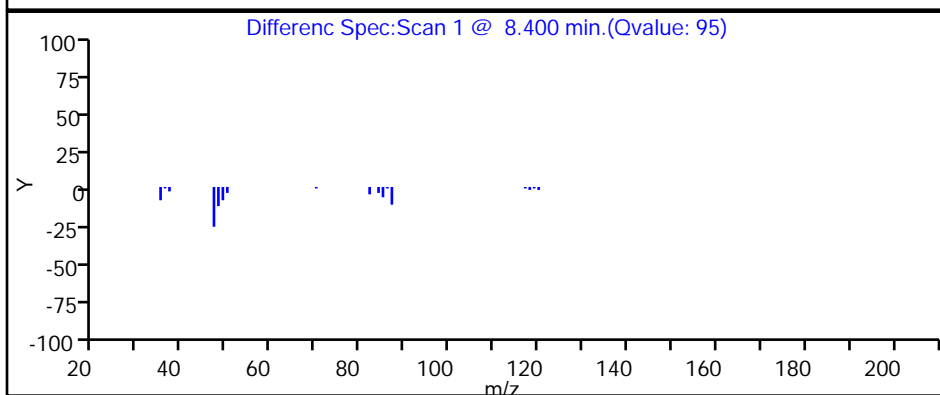
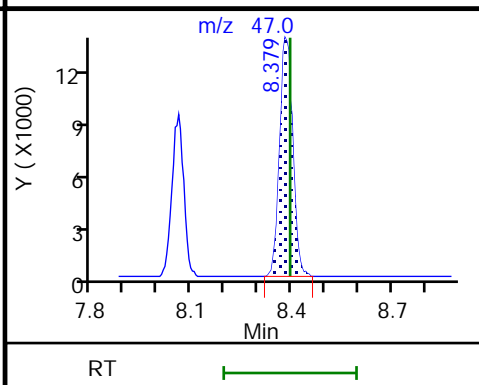
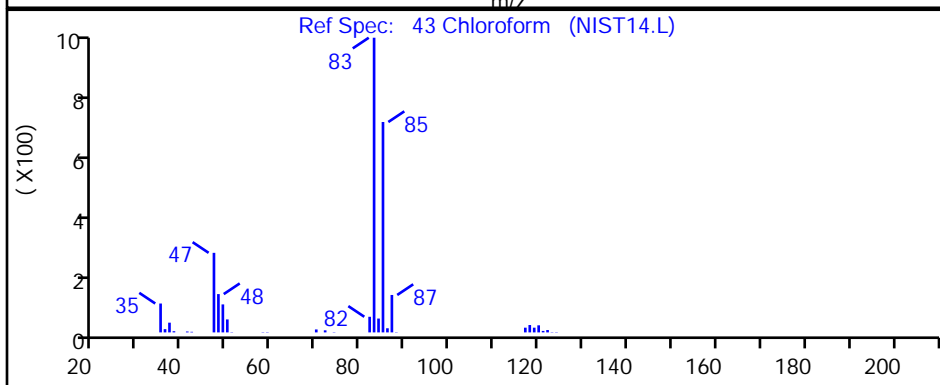
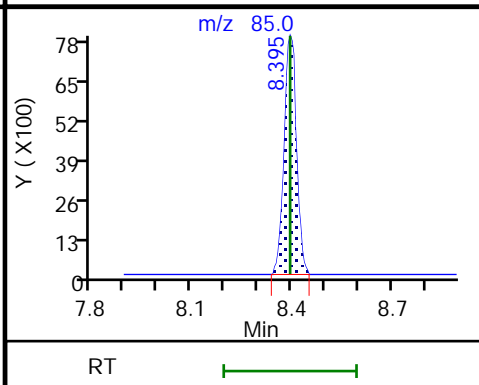
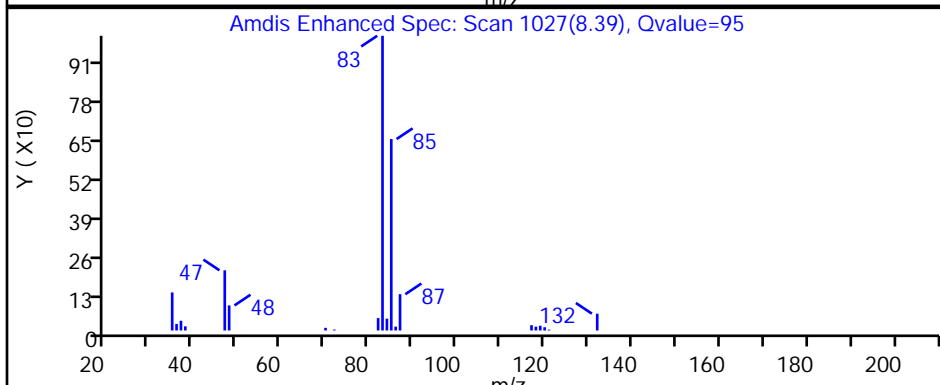
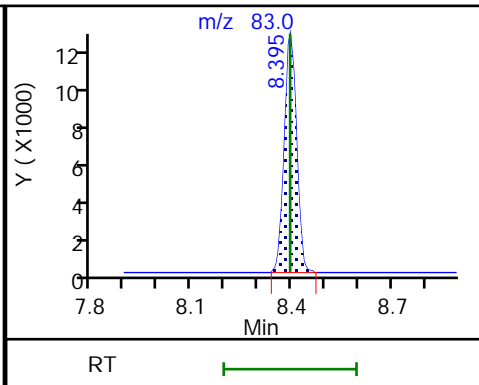
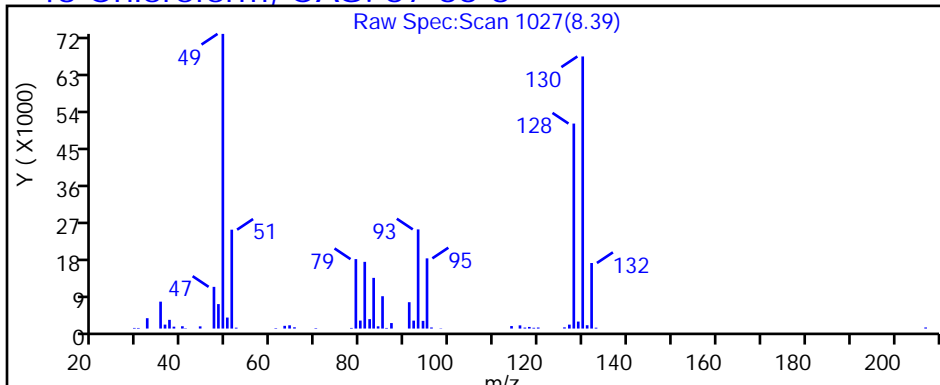
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D

Injection Date: 24-Oct-2018 00:55:30

Instrument ID: MH

Lims ID: 140-13100-A-2

Lab Sample ID: 140-13100-2

Client ID: BLDG-A MID GAC

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

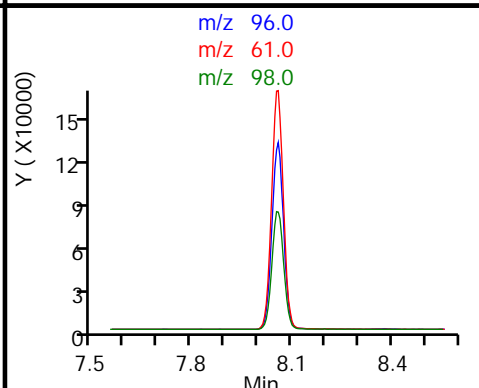
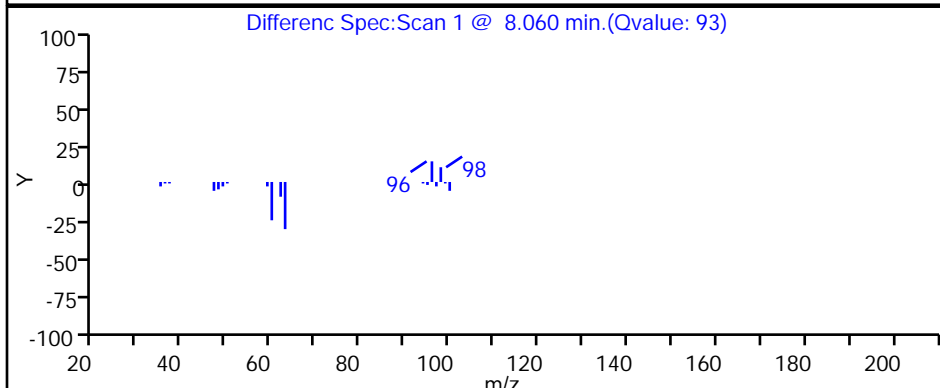
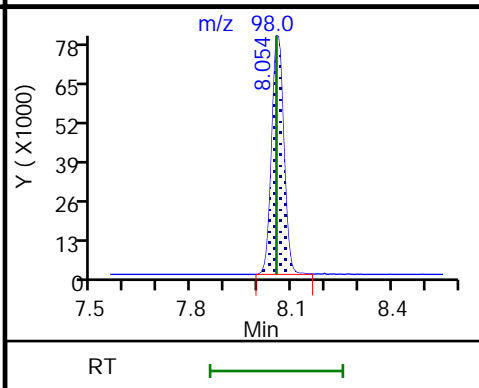
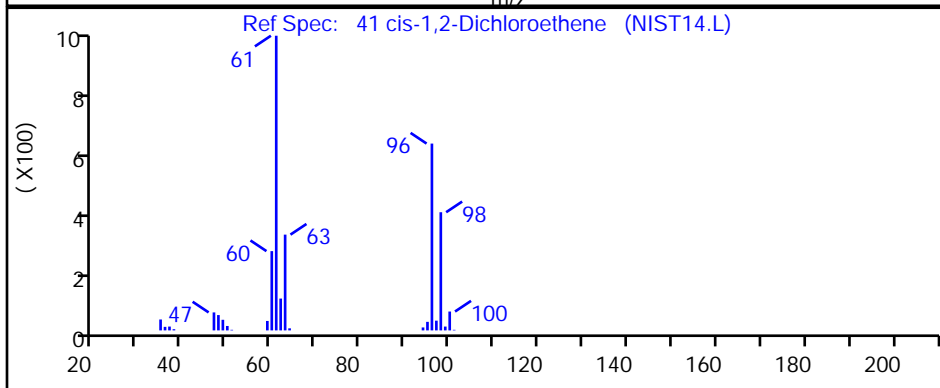
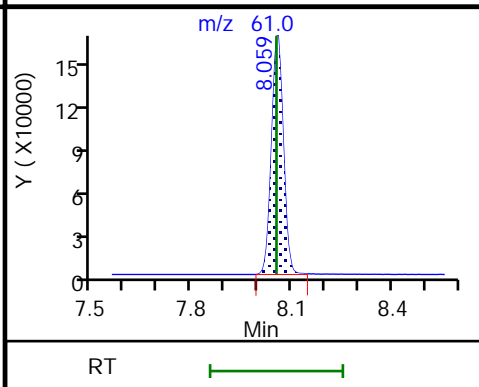
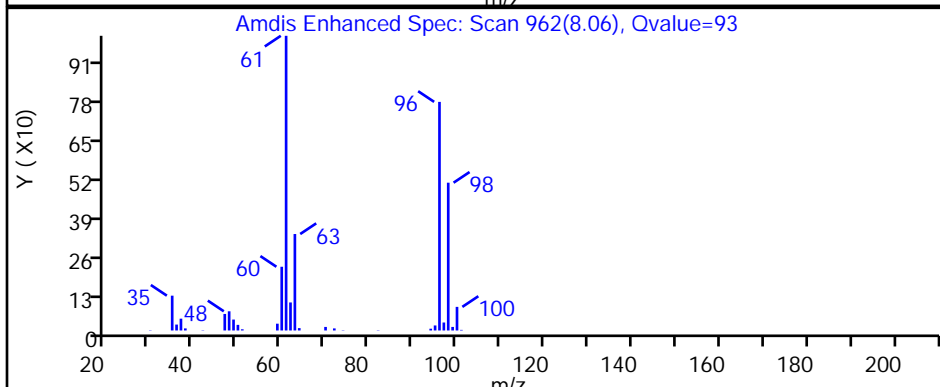
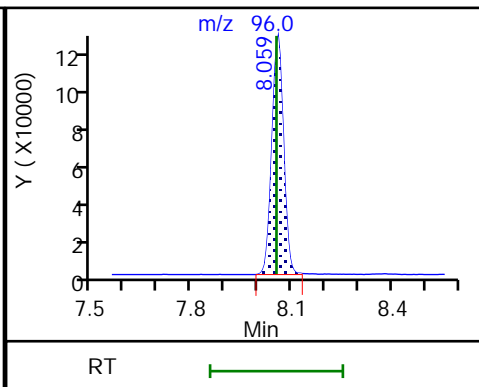
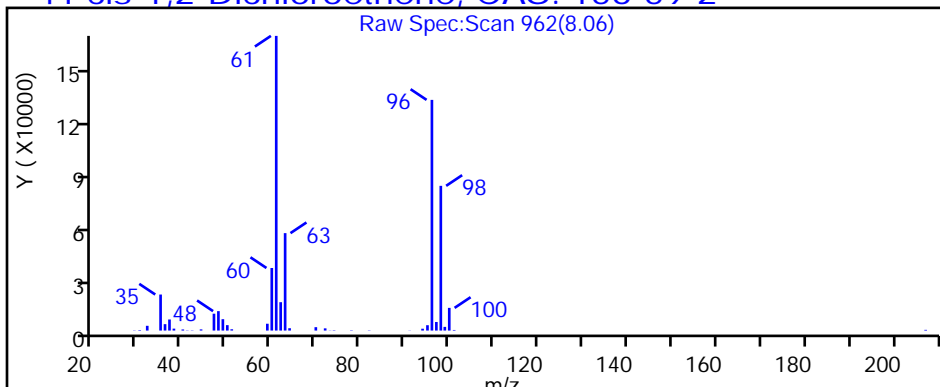
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D

Injection Date: 24-Oct-2018 00:55:30

Instrument ID: MH

Lims ID: 140-13100-A-2

Lab Sample ID: 140-13100-2

Client ID: BLDG-A MID GAC

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

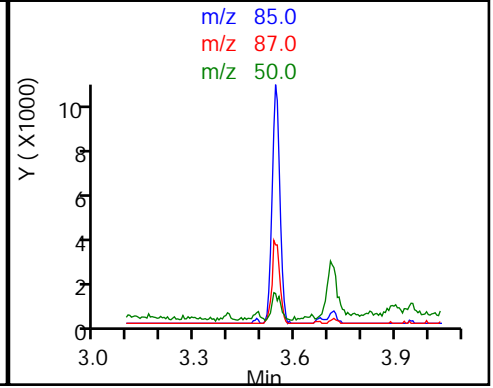
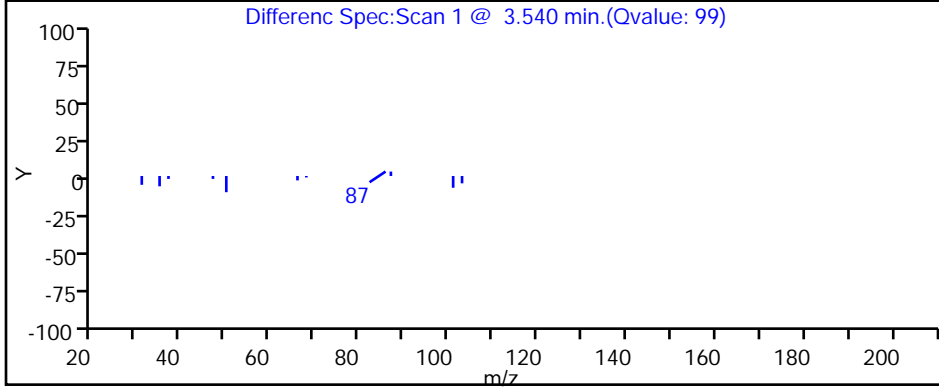
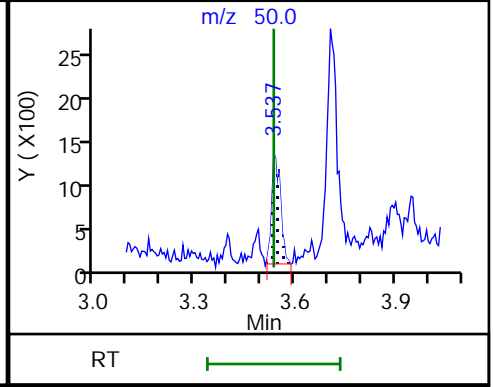
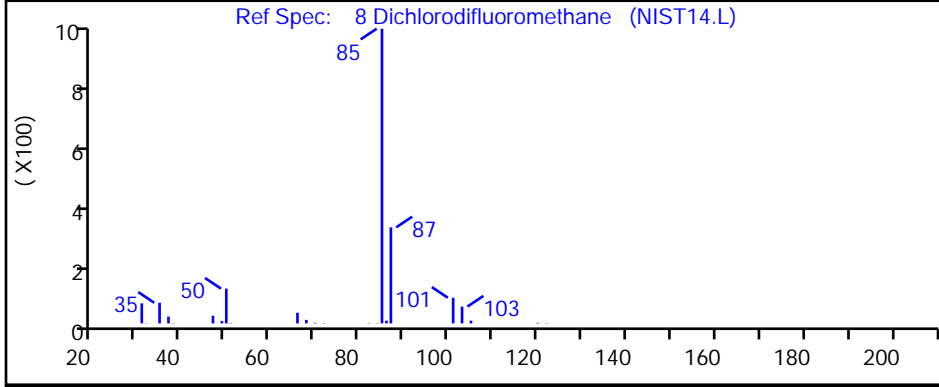
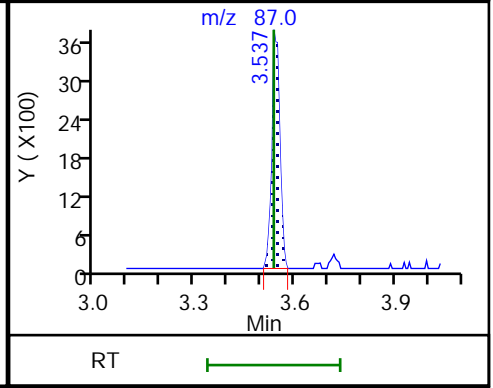
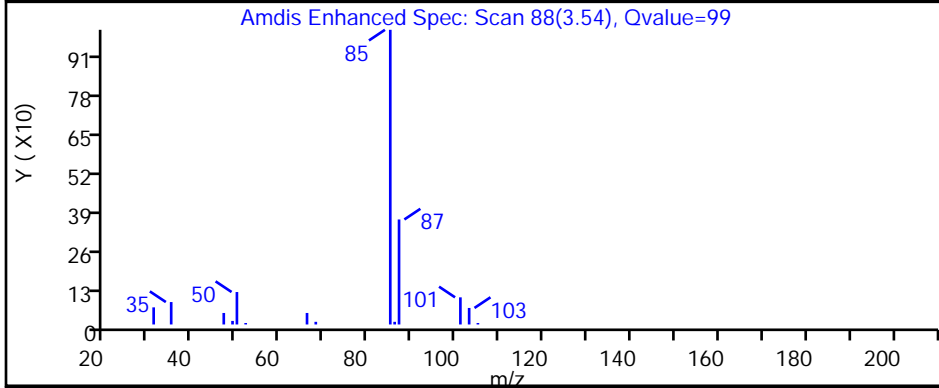
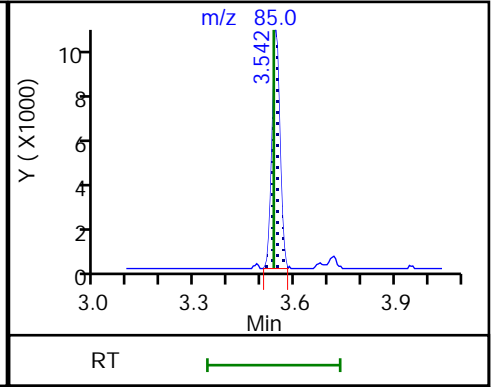
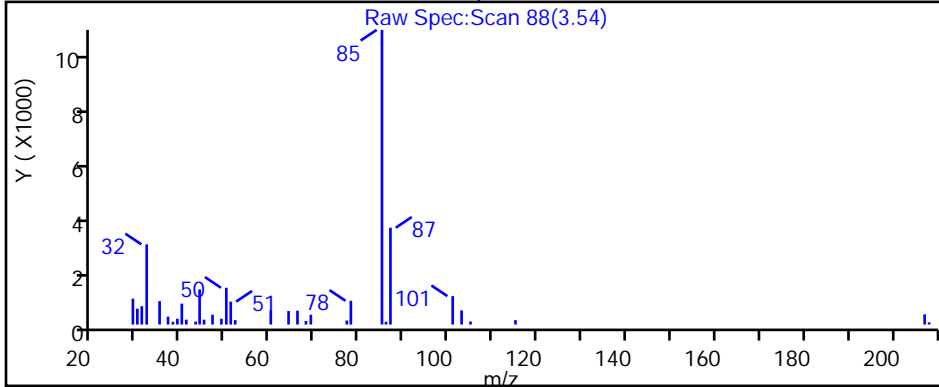
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D

Injection Date: 24-Oct-2018 00:55:30

Instrument ID: MH

Lims ID: 140-13100-A-2

Lab Sample ID: 140-13100-2

Client ID: BLDG-A MID GAC

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

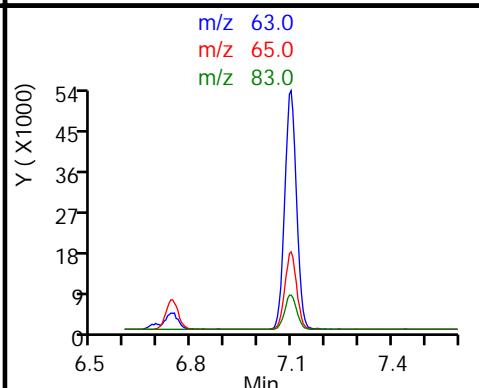
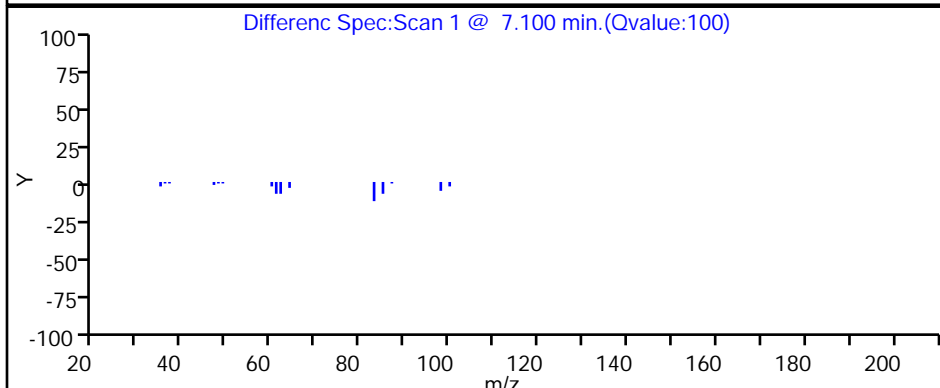
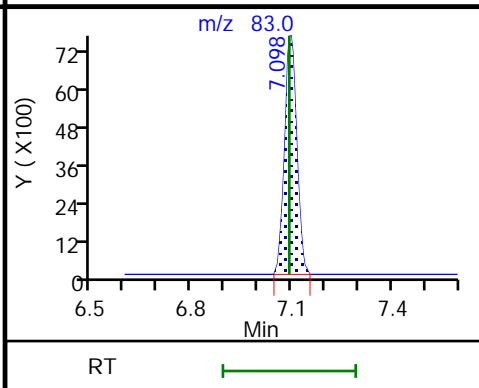
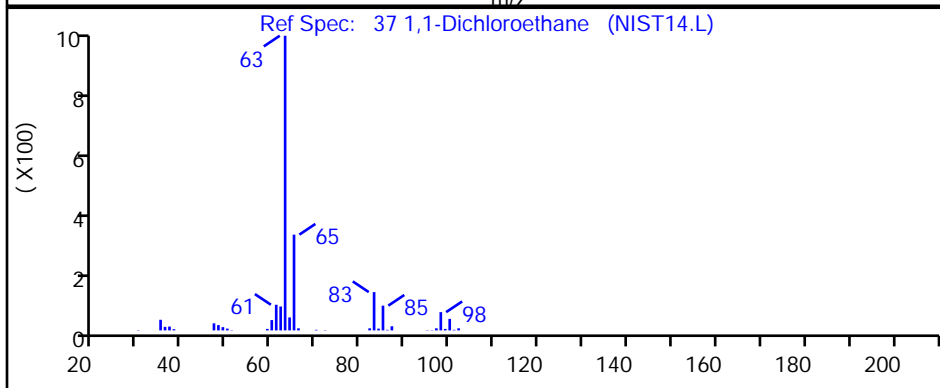
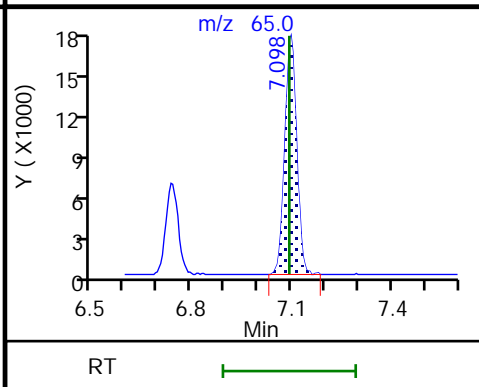
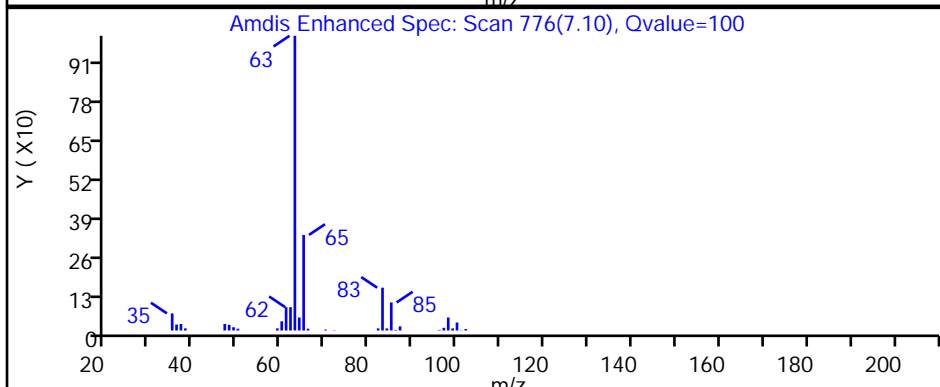
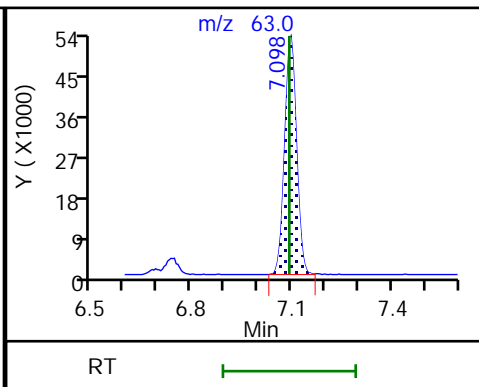
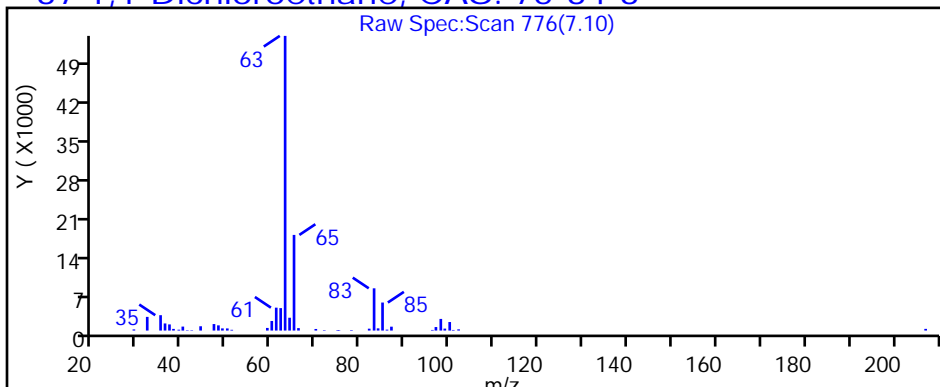
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D

Injection Date: 24-Oct-2018 00:55:30

Instrument ID: MH

Lims ID: 140-13100-A-2

Lab Sample ID: 140-13100-2

Client ID: BLDG-A MID GAC

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

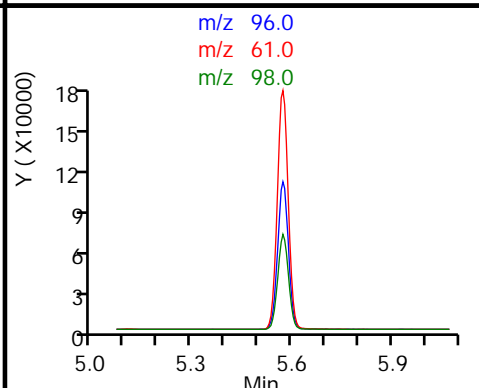
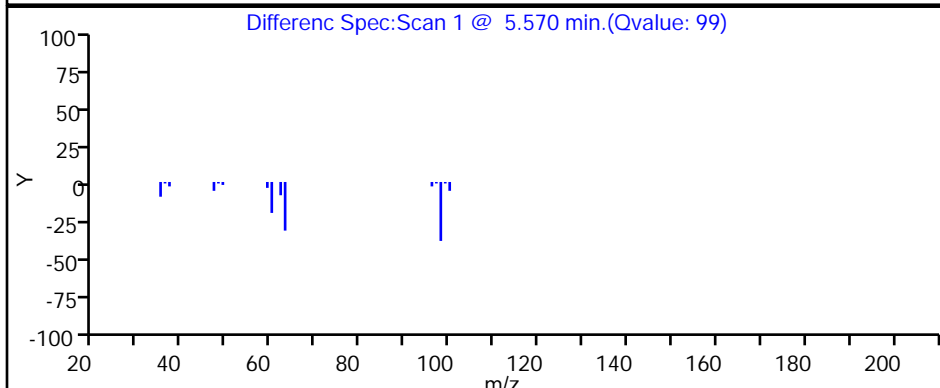
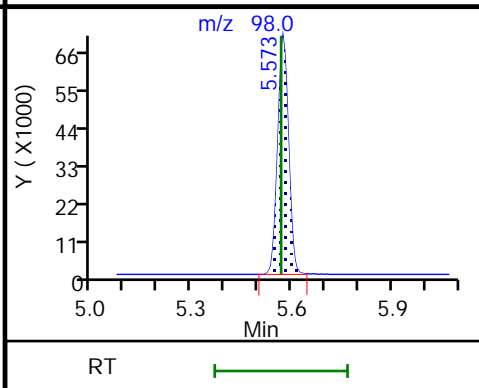
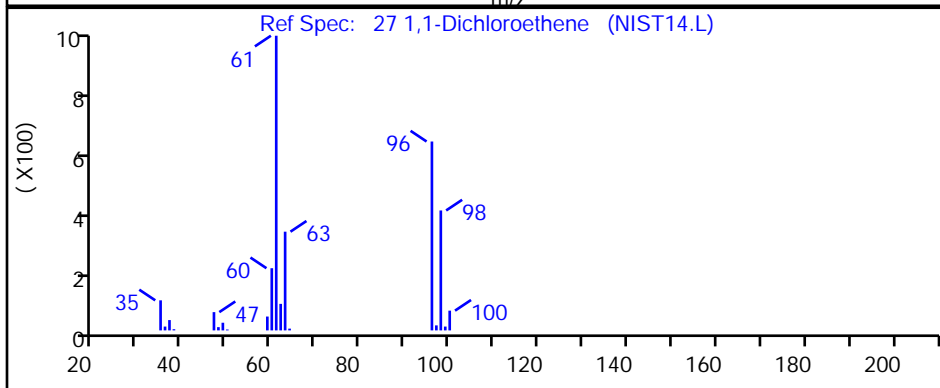
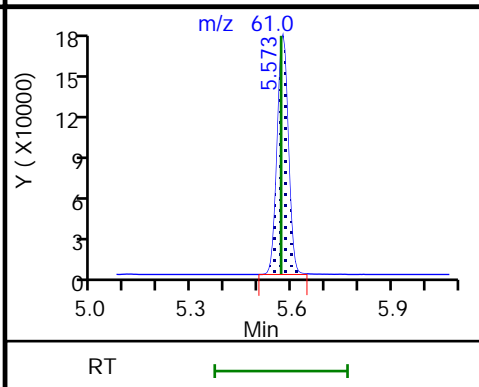
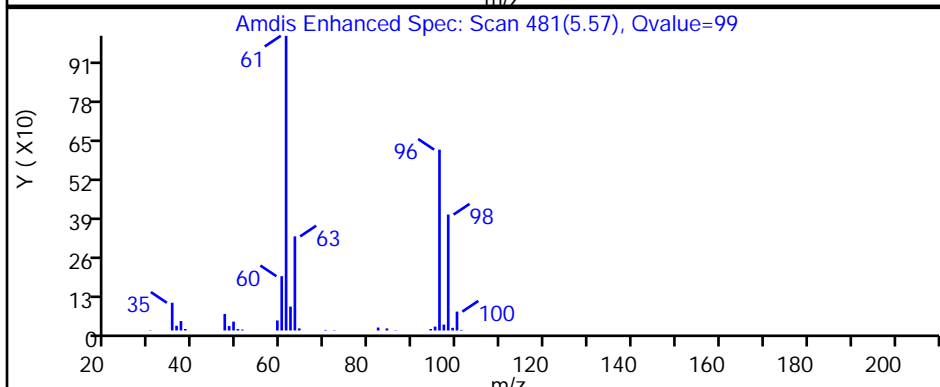
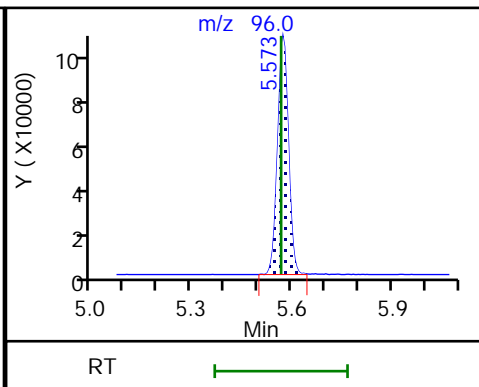
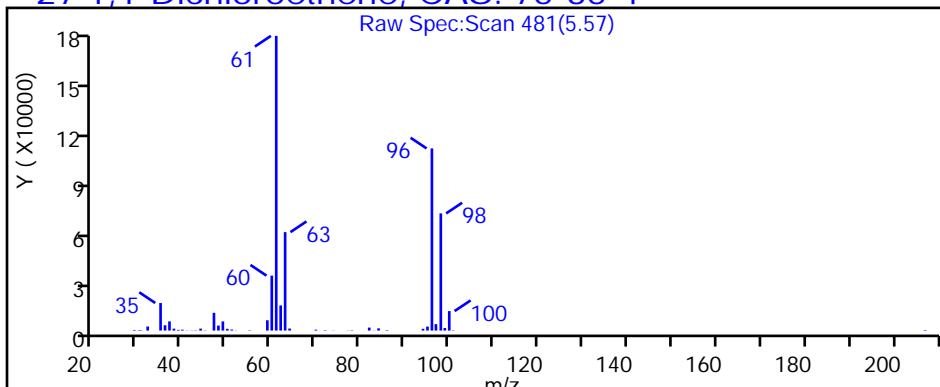
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D

Injection Date: 24-Oct-2018 00:55:30

Instrument ID: MH

Lims ID: 140-13100-A-2

Lab Sample ID: 140-13100-2

Client ID: BLDG-A MID GAC

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

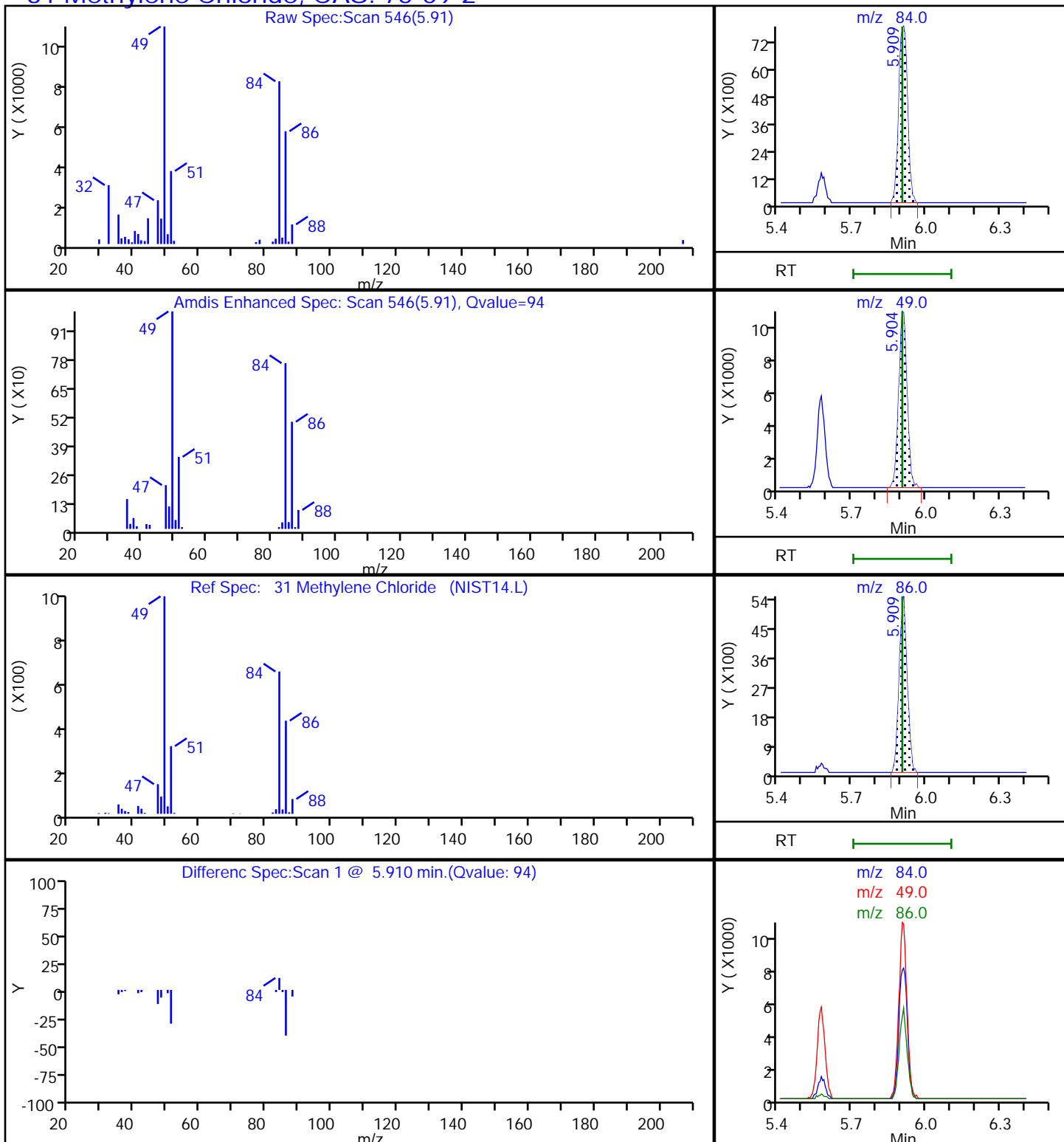
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D

Injection Date: 24-Oct-2018 00:55:30

Instrument ID: MH

Lims ID: 140-13100-A-2

Lab Sample ID: 140-13100-2

Client ID: BLDG-A MID GAC

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

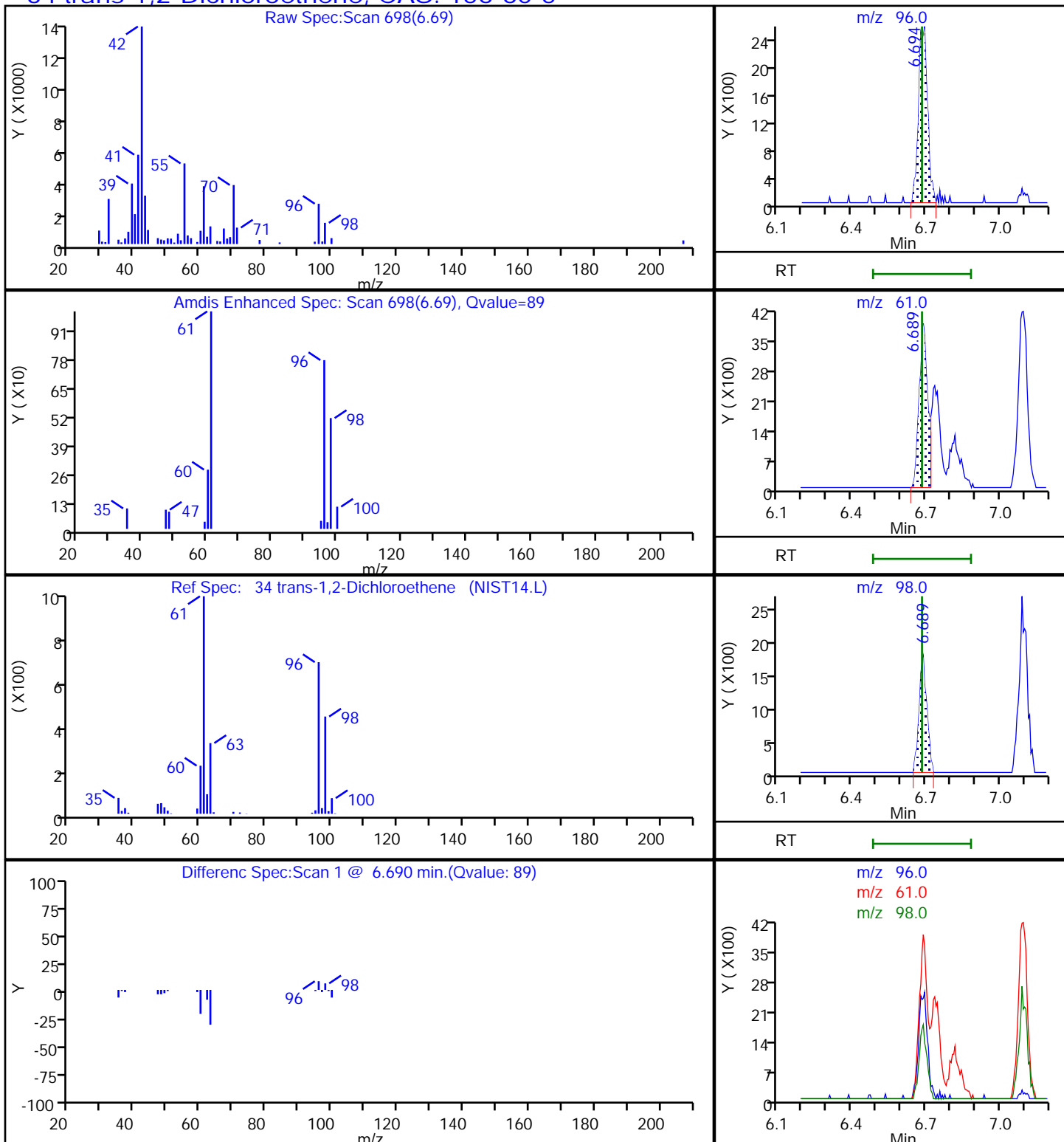
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D

Injection Date: 24-Oct-2018 00:55:30

Instrument ID: MH

Lims ID: 140-13100-A-2

Lab Sample ID: 140-13100-2

Client ID: BLDG-A MID GAC

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

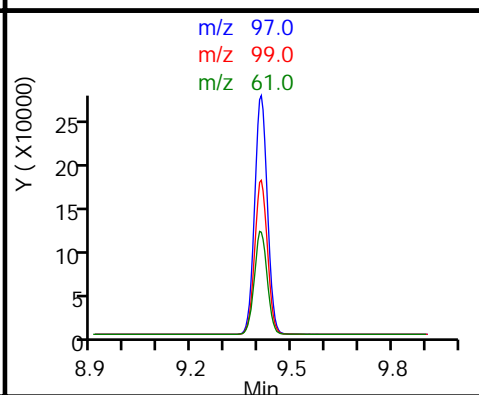
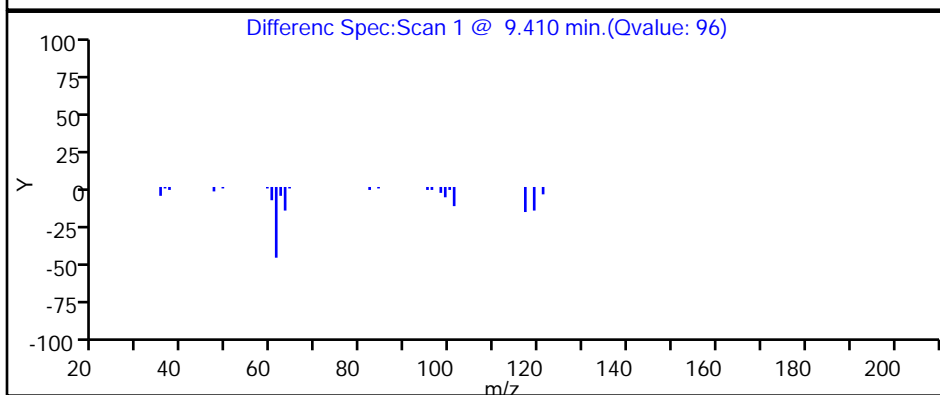
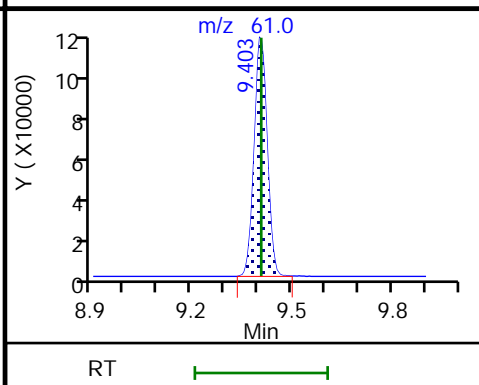
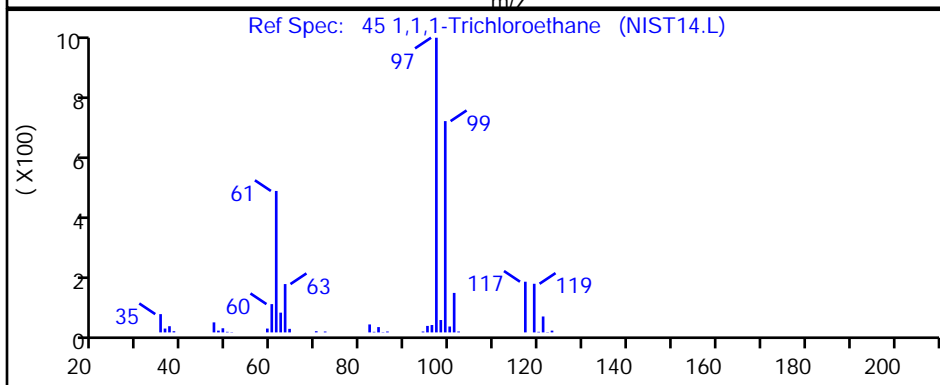
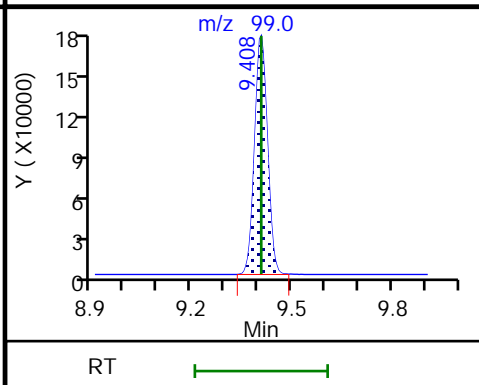
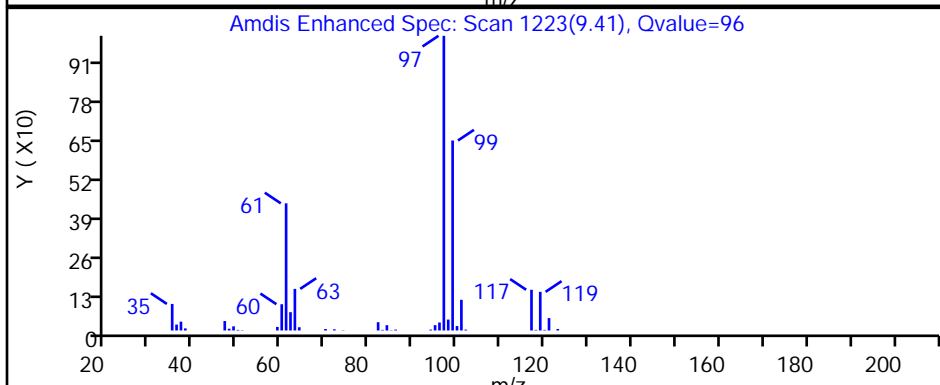
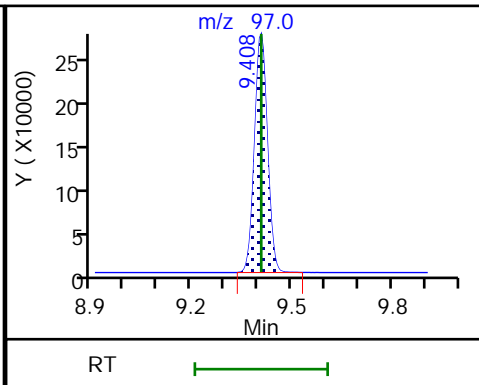
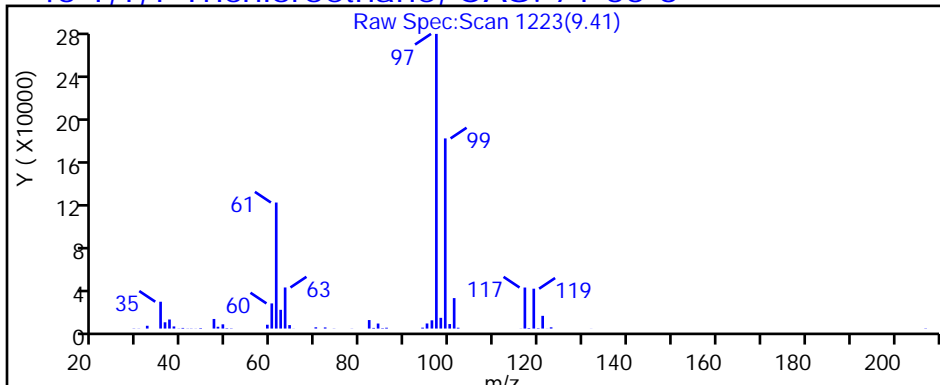
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D

Injection Date: 24-Oct-2018 00:55:30

Instrument ID: MH

Lims ID: 140-13100-A-2

Lab Sample ID: 140-13100-2

Client ID: BLDG-A MID GAC

Operator ID: HMT

ALS Bottle#: 14

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

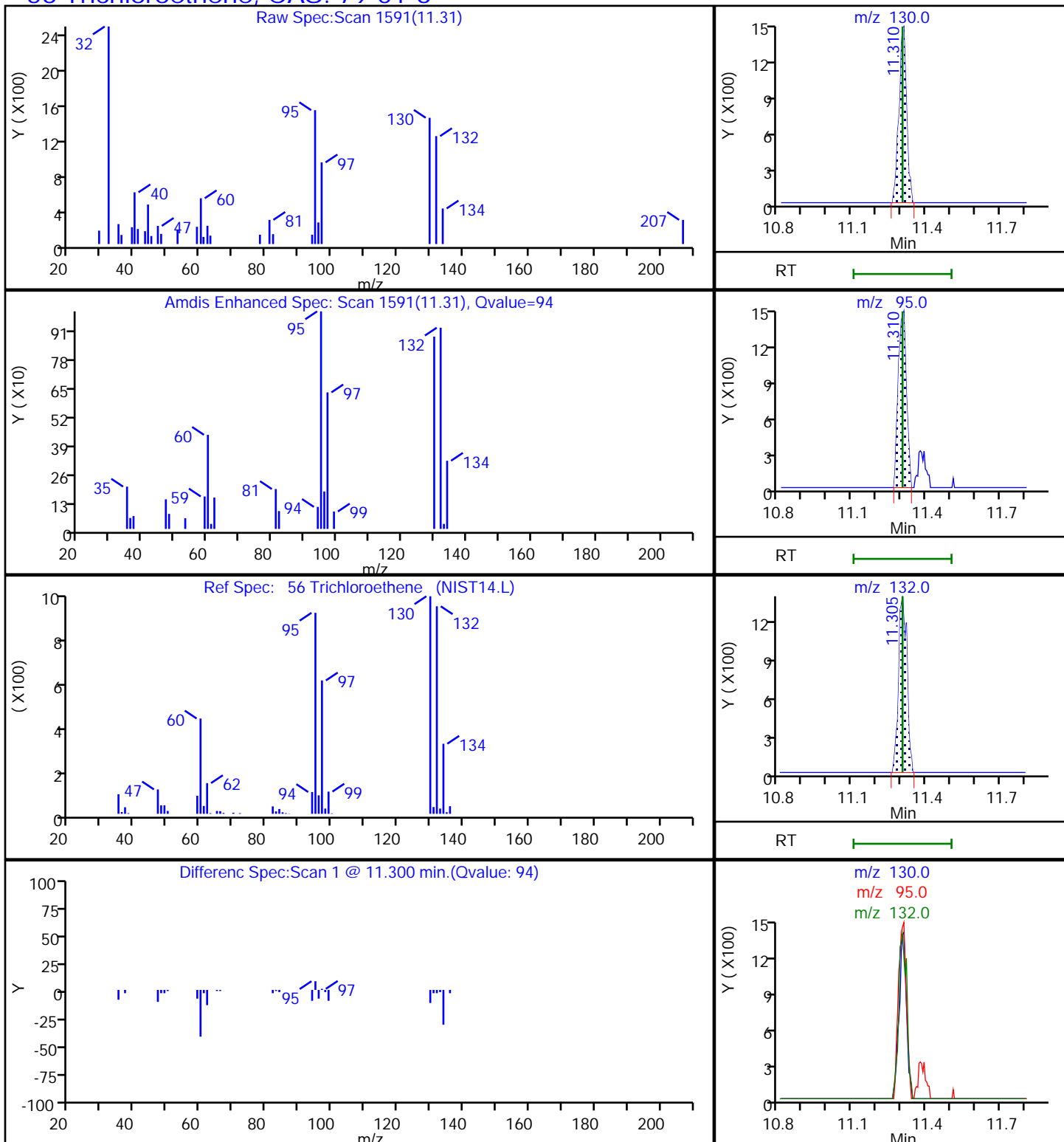
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6

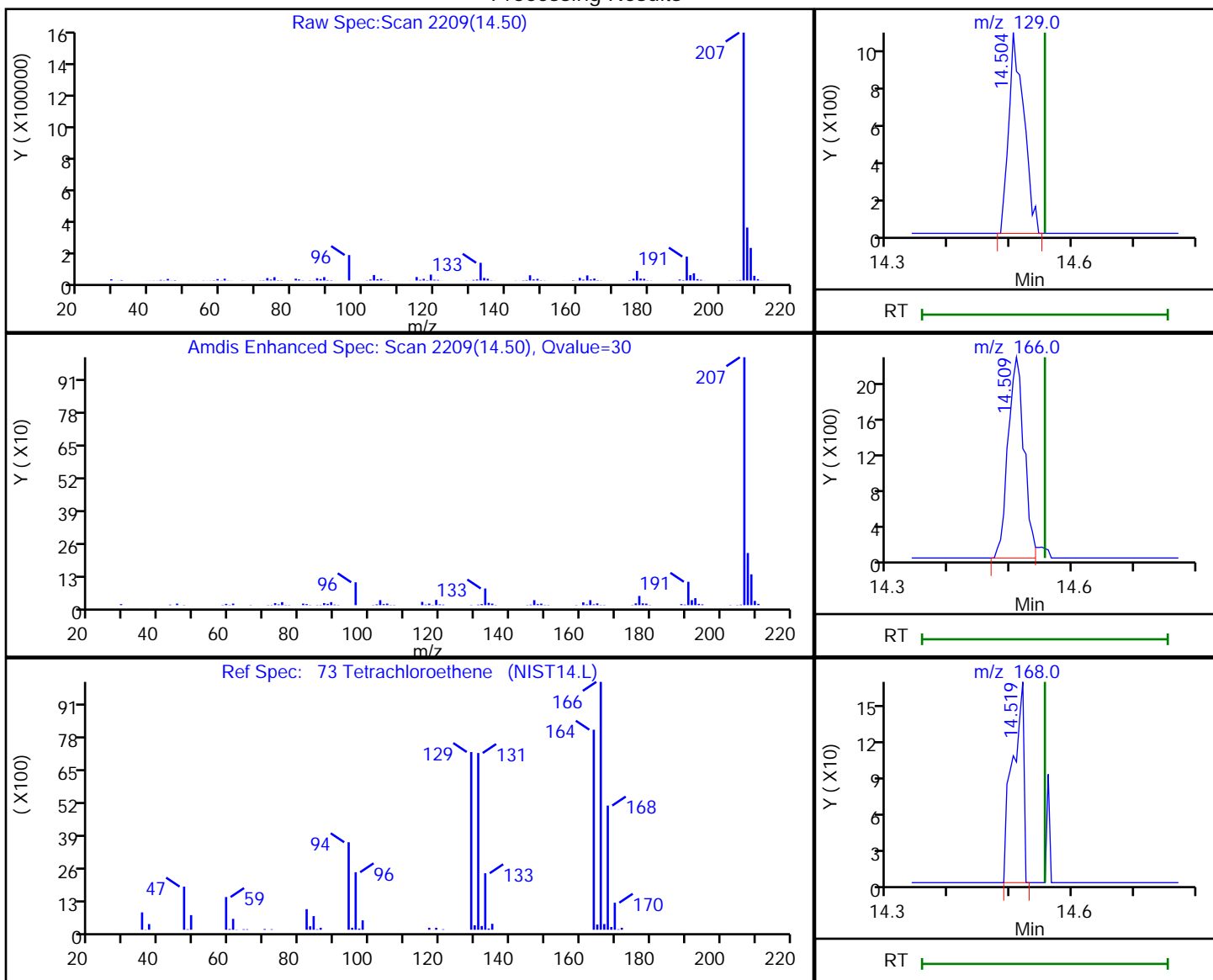


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D
 Injection Date: 24-Oct-2018 00:55:30 Instrument ID: MH
 Lims ID: 140-13100-A-2 Lab Sample ID: 140-13100-2
 Client ID: BLDG-A MID GAC
 Operator ID: HMT ALS Bottle#: 14 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4

Processing Results



RT	Mass	Response	Amount
14.50	129.00	1735	0.021477
14.51	166.00	4077	
14.52	168.00	207	

Reviewer: tajh, 24-Oct-2018 11:10:26

Audit Action: Marked Compound Undetected

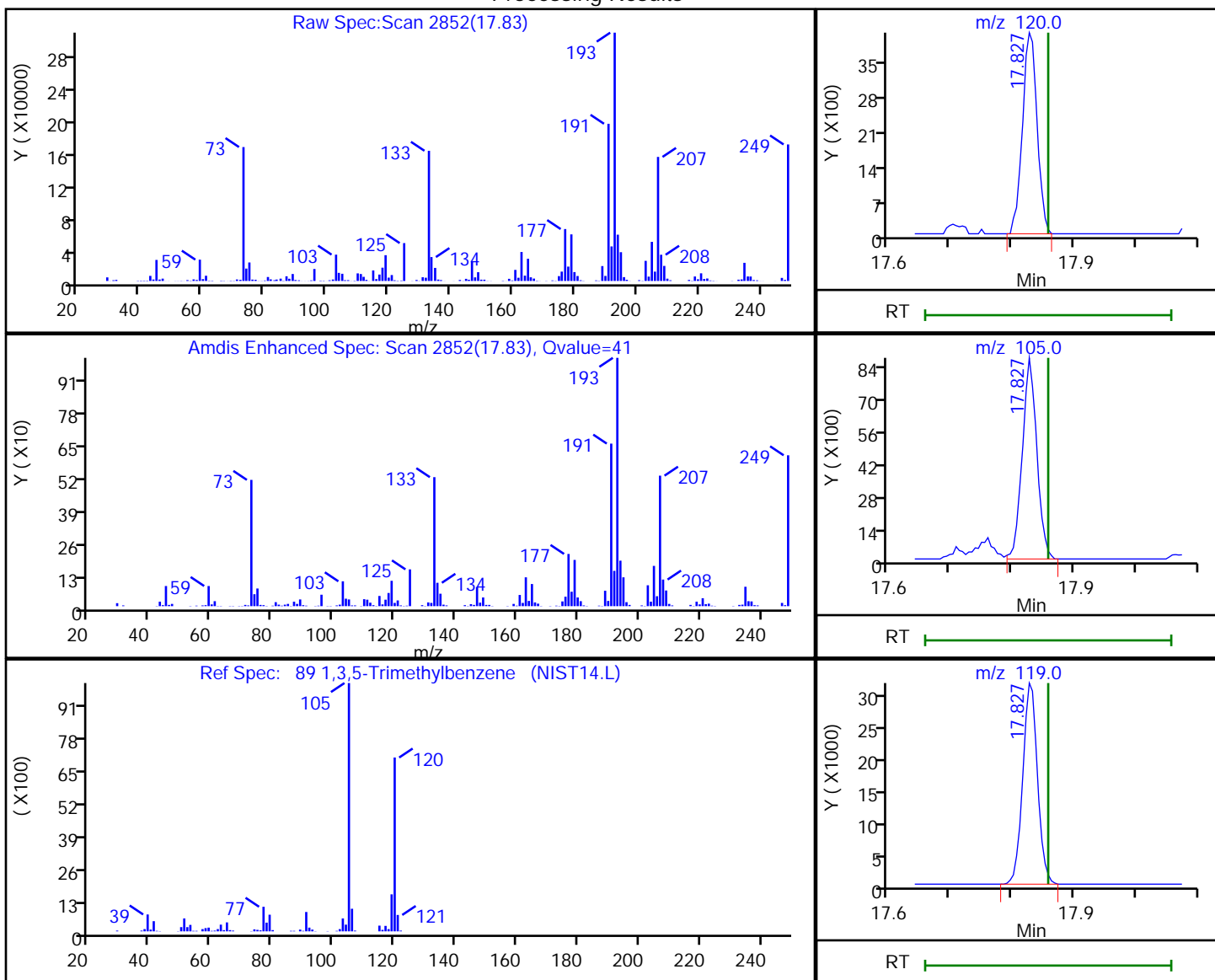
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P114.D
 Injection Date: 24-Oct-2018 00:55:30 Instrument ID: MH
 Lims ID: 140-13100-A-2 Lab Sample ID: 140-13100-2
 Client ID: BLDG-A MID GAC
 Operator ID: HMT ALS Bottle#: 14 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8

Processing Results



RT	Mass	Response	Amount
17.83	120.00	6701	0.057175
17.83	105.00	14389	
17.83	119.00	52299	

Reviewer: tajh, 24-Oct-2018 11:11:56

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Client Sample ID: BLDG-A EFFLUENT Lab Sample ID: 140-13100-3
 Matrix: Air Lab File ID: HJ23P115.D
 Analysis Method: TO 15 LL Date Collected: 10/18/2018 10:08
 Sample wt/vol: 100(mL) Date Analyzed: 10/24/2018 01:39
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24681 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.33	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.16	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.7		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.26	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.90		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	4.6	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Client Sample ID: BLDG-A EFFLUENT Lab Sample ID: 140-13100-3
 Matrix: Air Lab File ID: HJ23P115.D
 Analysis Method: TO 15 LL Date Collected: 10/18/2018 10:08
 Sample wt/vol: 100(mL) Date Analyzed: 10/24/2018 01:39
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24681 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	0.56	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	11		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.0	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	3.6		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	25	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	12		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.77	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P115.D
 Lims ID: 140-13100-A-3
 Client ID: BLDG-A EFFLUENT
 Sample Type: Client
 Inject. Date: 24-Oct-2018 01:39:30 ALS Bottle#: 15 Worklist Smp#: 23
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009735-023
 Misc. Info.: 140-13100-a-3
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 24-Oct-2018 11:13:56 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh Date: 24-Oct-2018 11:11:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.379	0.000	86	174433	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.581	-0.005	94	923188	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.001	86	770043	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.062	-0.020	97	493963	3.83	
6 Chlorodifluoromethane	51	3.480	3.480	0.001	36	3476	0.0316	M
27 1,1-Dichloroethene	96	5.568	5.564	0.001	98	10489	0.1792	
31 Methylene Chloride	84	5.909	5.900	0.006	93	23920	0.3730	
37 1,1-Dichloroethane	63	7.097	7.088	0.005	97	5301	0.0510	
41 cis-1,2-Dichloroethene	96	8.054	8.049	0.001	92	34115	0.5488	
45 1,1,1-Trichloroethane	97	9.408	9.402	0.000	96	117339	0.9180	
47 Benzene	78	10.012	10.002	0.005	95	11089	0.0658	
56 Trichloroethene	130	11.305	11.299	0.001	97	35483	0.4347	
65 Toluene	91	13.398	13.393	0.000	94	16846	0.0878	
93 1,2,4-Trimethylbenzene	105	18.292	18.317	-0.031	97	7859	0.0313	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P115.D

Injection Date: 24-Oct-2018 01:39:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13100-A-3

Lab Sample ID: 140-13100-3

Worklist Smp#: 23

Client ID: BLDG-A EFFLUENT

Purge Vol: 500.000 mL

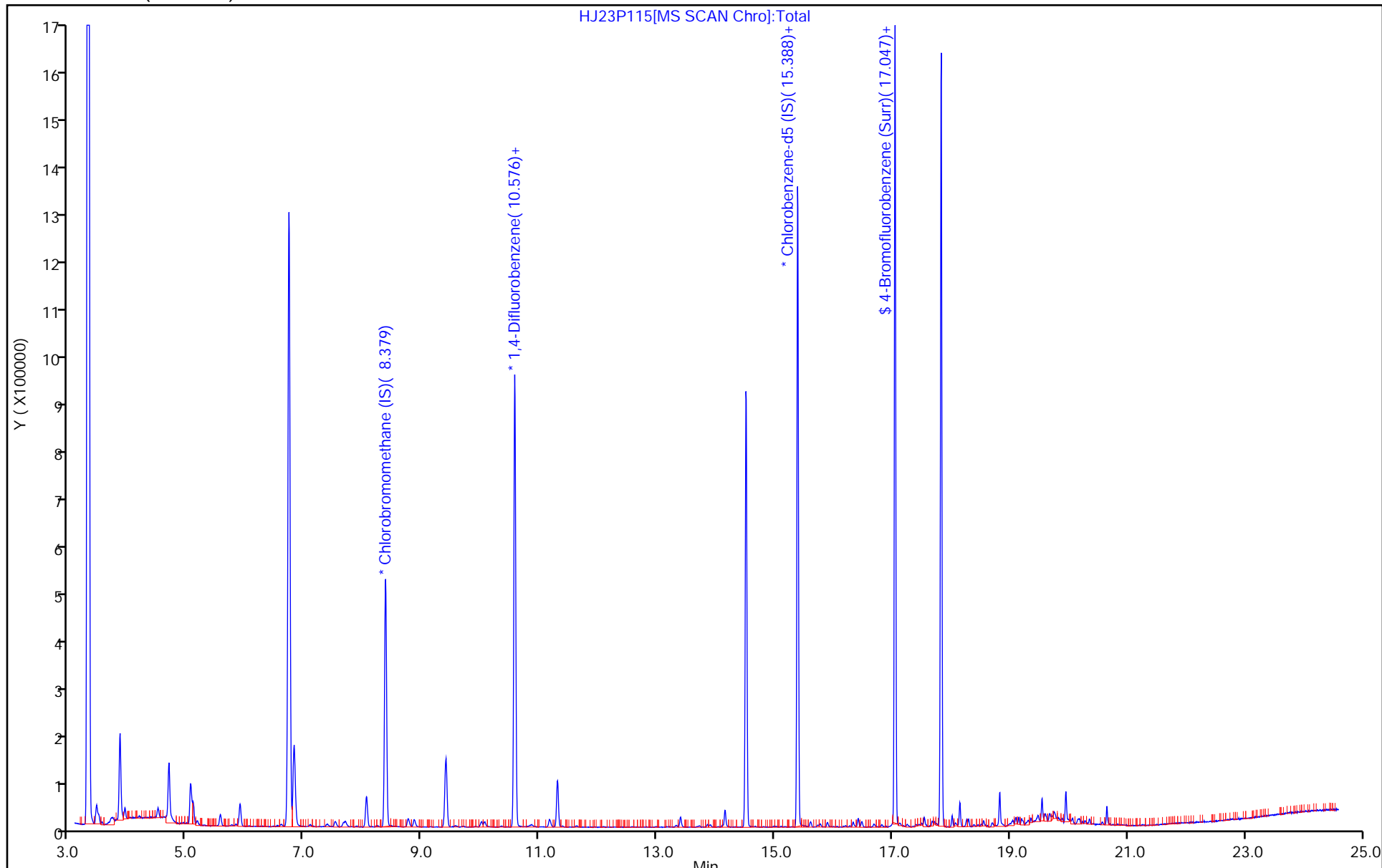
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P115.D
 Lims ID: 140-13100-A-3
 Client ID: BLDG-A EFFLUENT
 Sample Type: Client
 Inject. Date: 24-Oct-2018 01:39:30 ALS Bottle#: 15 Worklist Smp#: 23
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009735-023
 Misc. Info.: 140-13100-a-3
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 24-Oct-2018 11:13:56 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh Date: 24-Oct-2018 11:11:45

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.83	95.87

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P115.D

Injection Date: 24-Oct-2018 01:39:30

Instrument ID: MH

Lims ID: 140-13100-A-3

Lab Sample ID: 140-13100-3

Client ID: BLDG-A EFFLUENT

Operator ID: HMT

ALS Bottle#: 15 Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

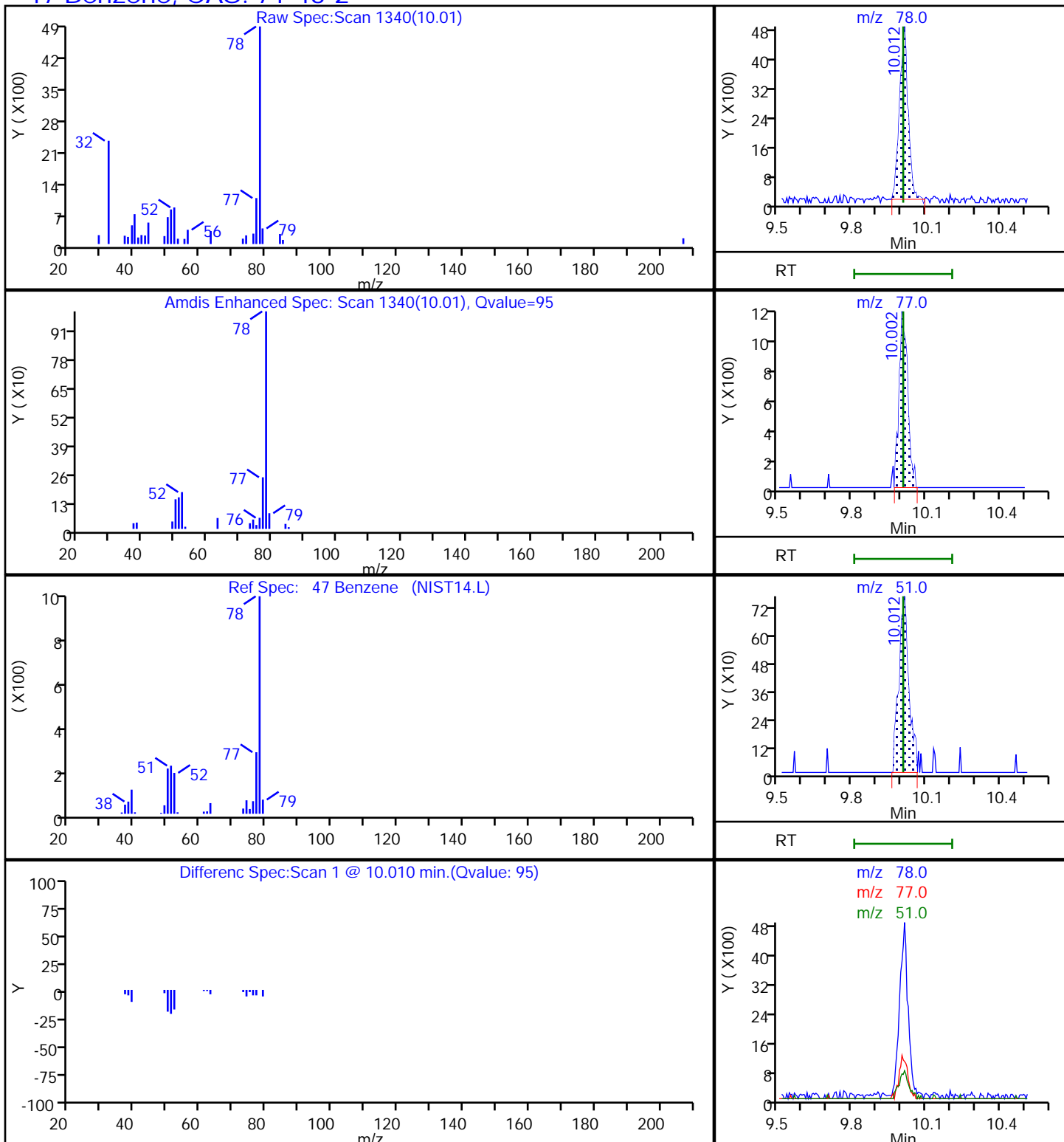
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P115.D

Injection Date: 24-Oct-2018 01:39:30

Instrument ID: MH

Lims ID: 140-13100-A-3

Lab Sample ID: 140-13100-3

Client ID: BLDG-A EFFLUENT

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

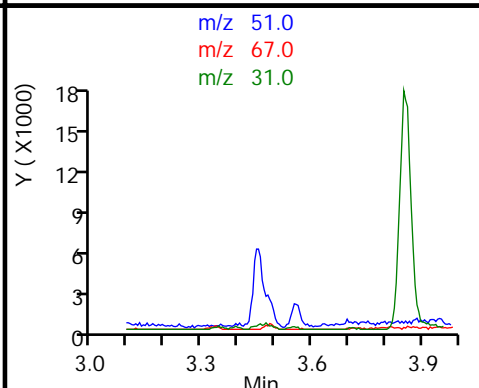
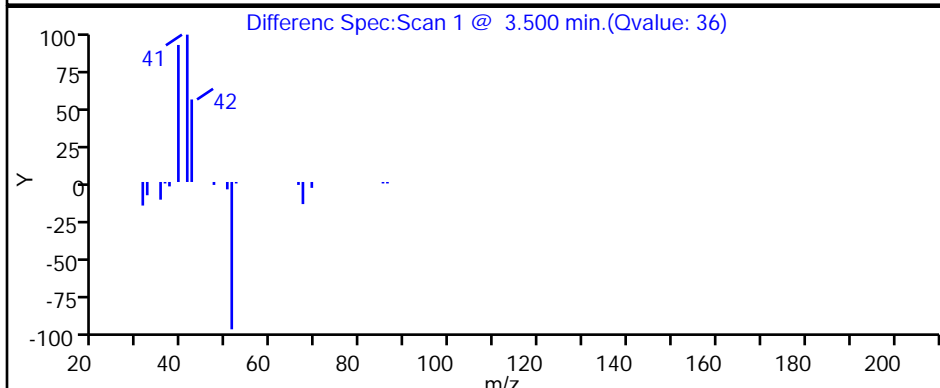
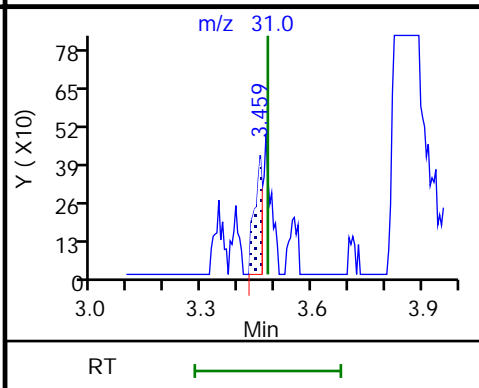
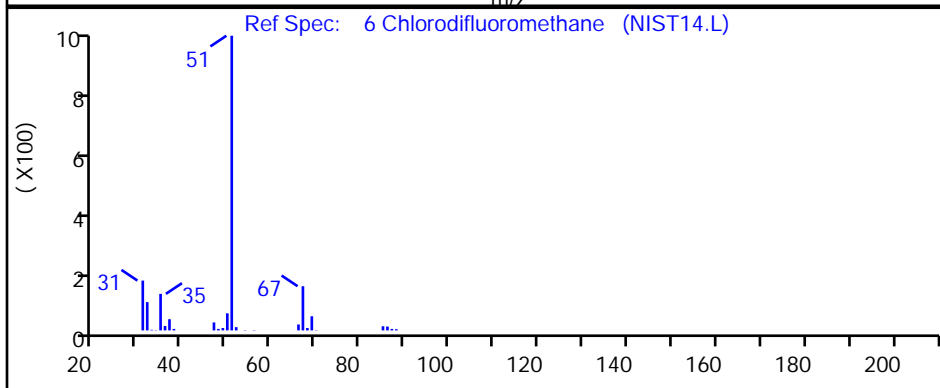
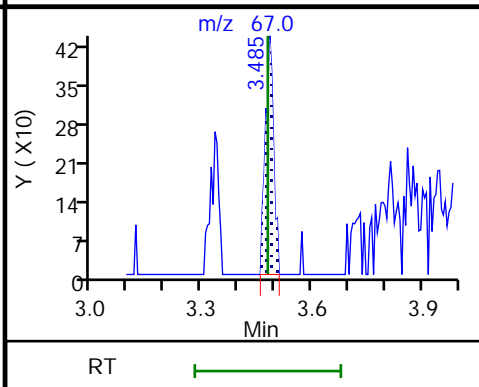
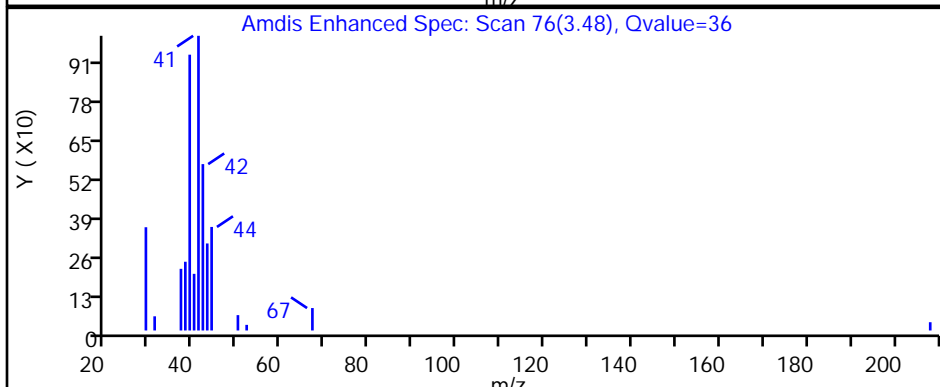
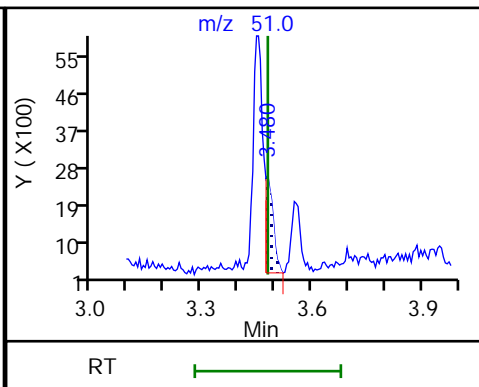
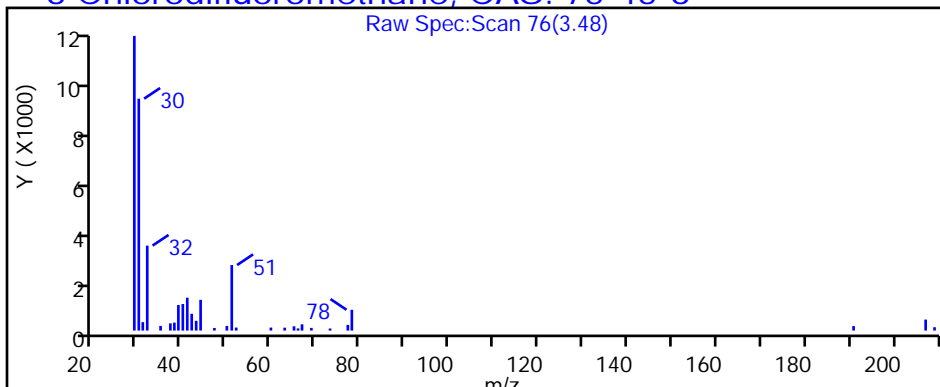
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P115.D

Injection Date: 24-Oct-2018 01:39:30

Instrument ID: MH

Lims ID: 140-13100-A-3

Lab Sample ID: 140-13100-3

Client ID: BLDG-A EFFLUENT

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

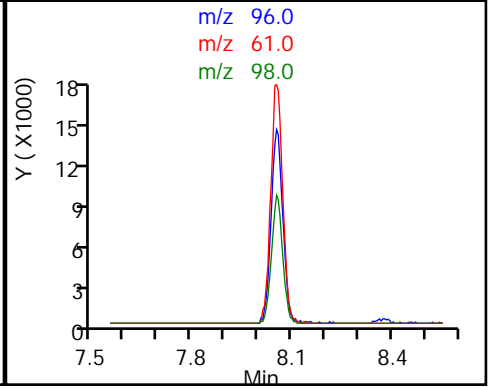
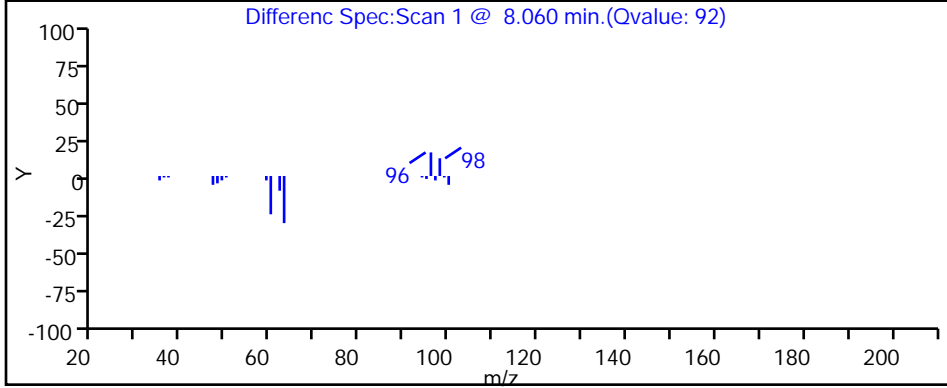
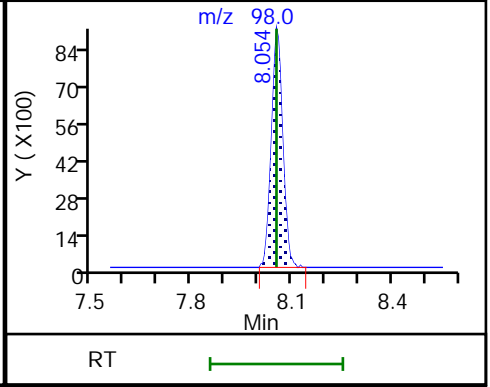
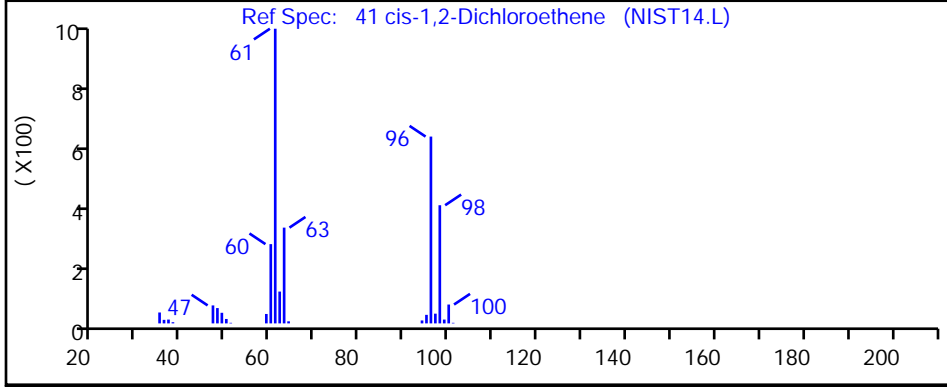
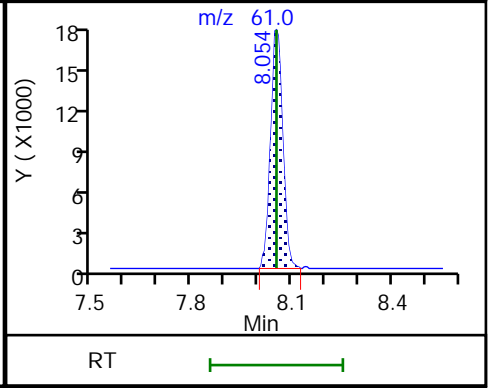
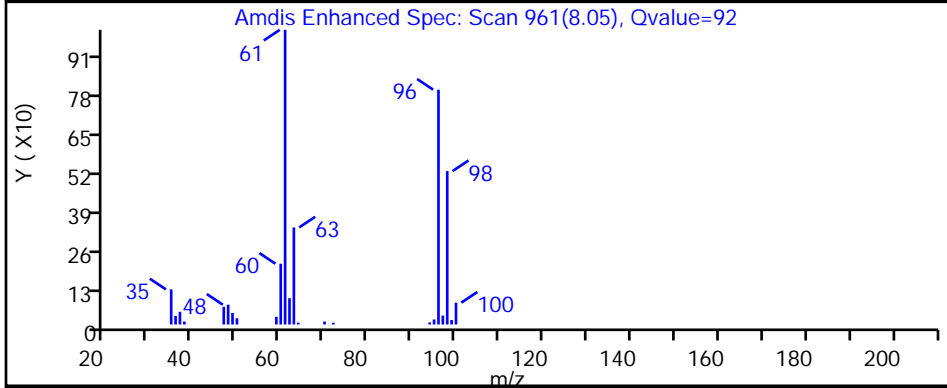
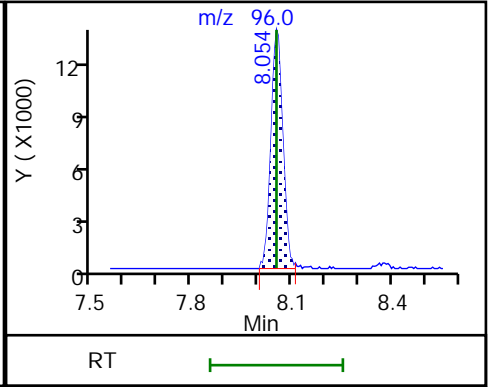
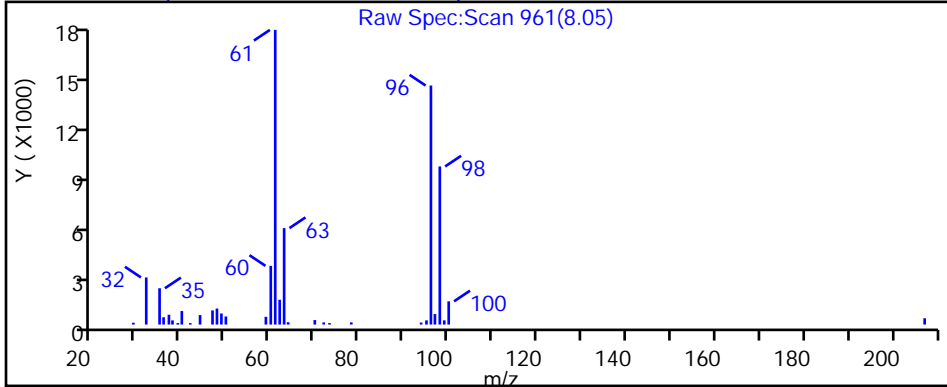
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P115.D

Injection Date: 24-Oct-2018 01:39:30

Instrument ID: MH

Lims ID: 140-13100-A-3

Lab Sample ID: 140-13100-3

Client ID: BLDG-A EFFLUENT

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

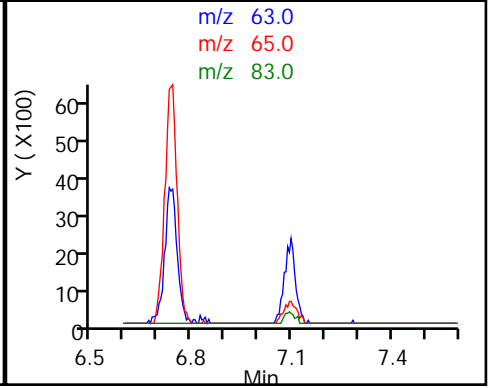
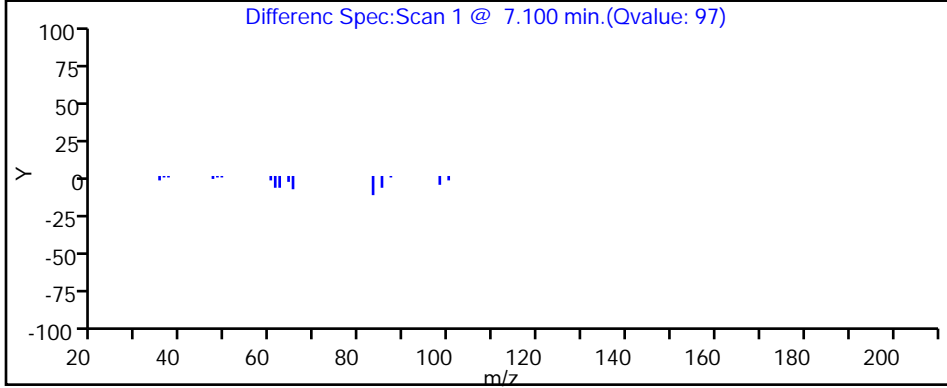
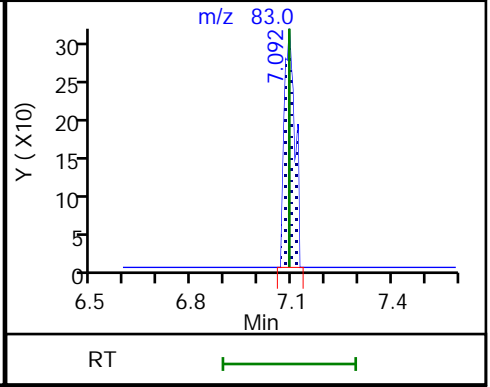
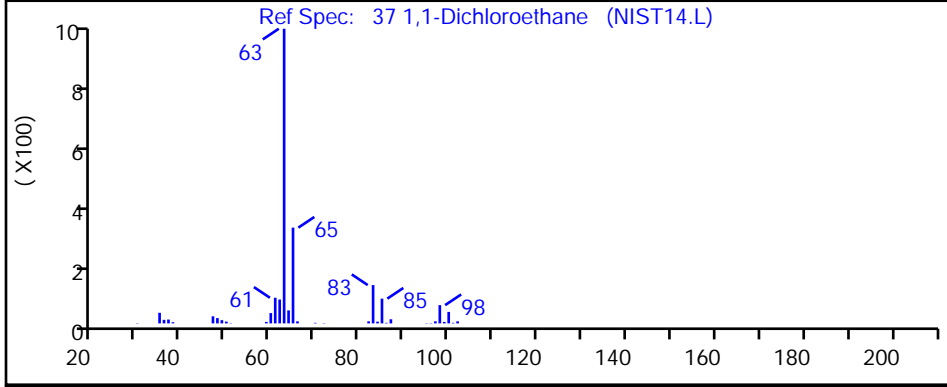
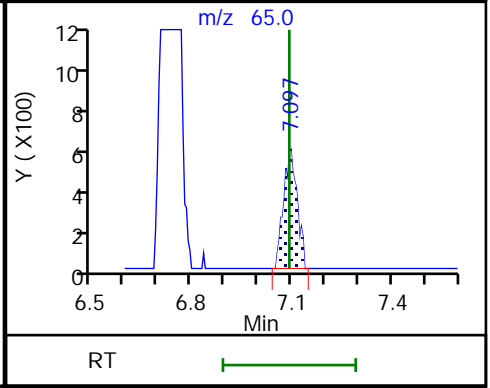
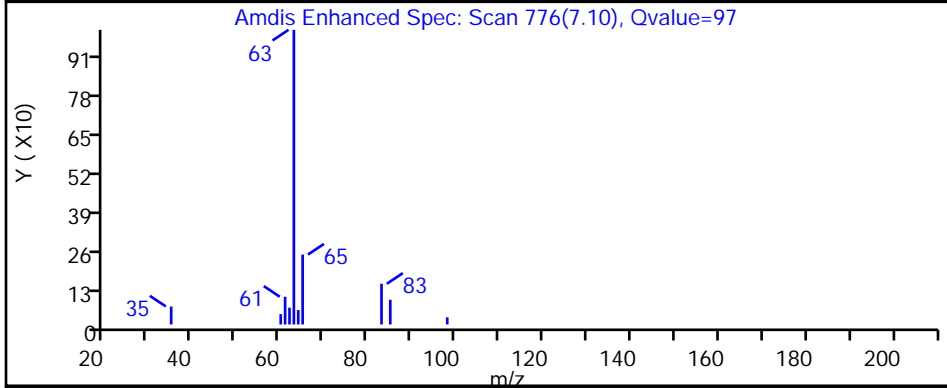
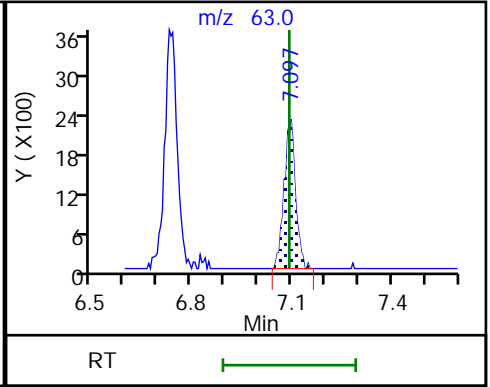
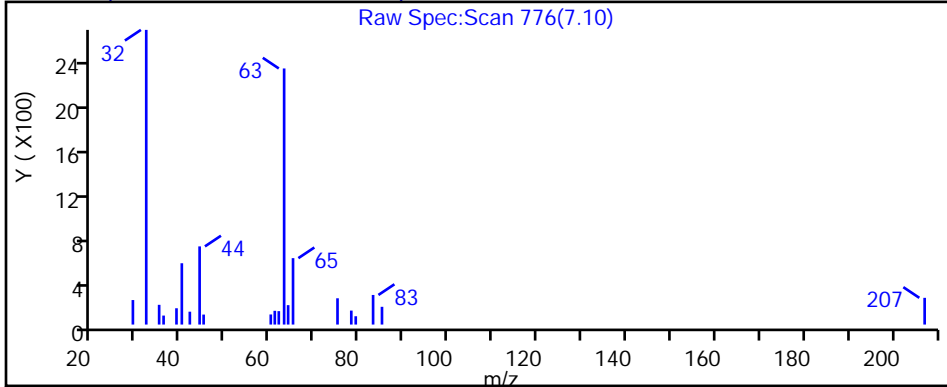
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P115.D

Injection Date: 24-Oct-2018 01:39:30

Instrument ID: MH

Lims ID: 140-13100-A-3

Lab Sample ID: 140-13100-3

Client ID: BLDG-A EFFLUENT

Operator ID: HMT

ALS Bottle#: 15 Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

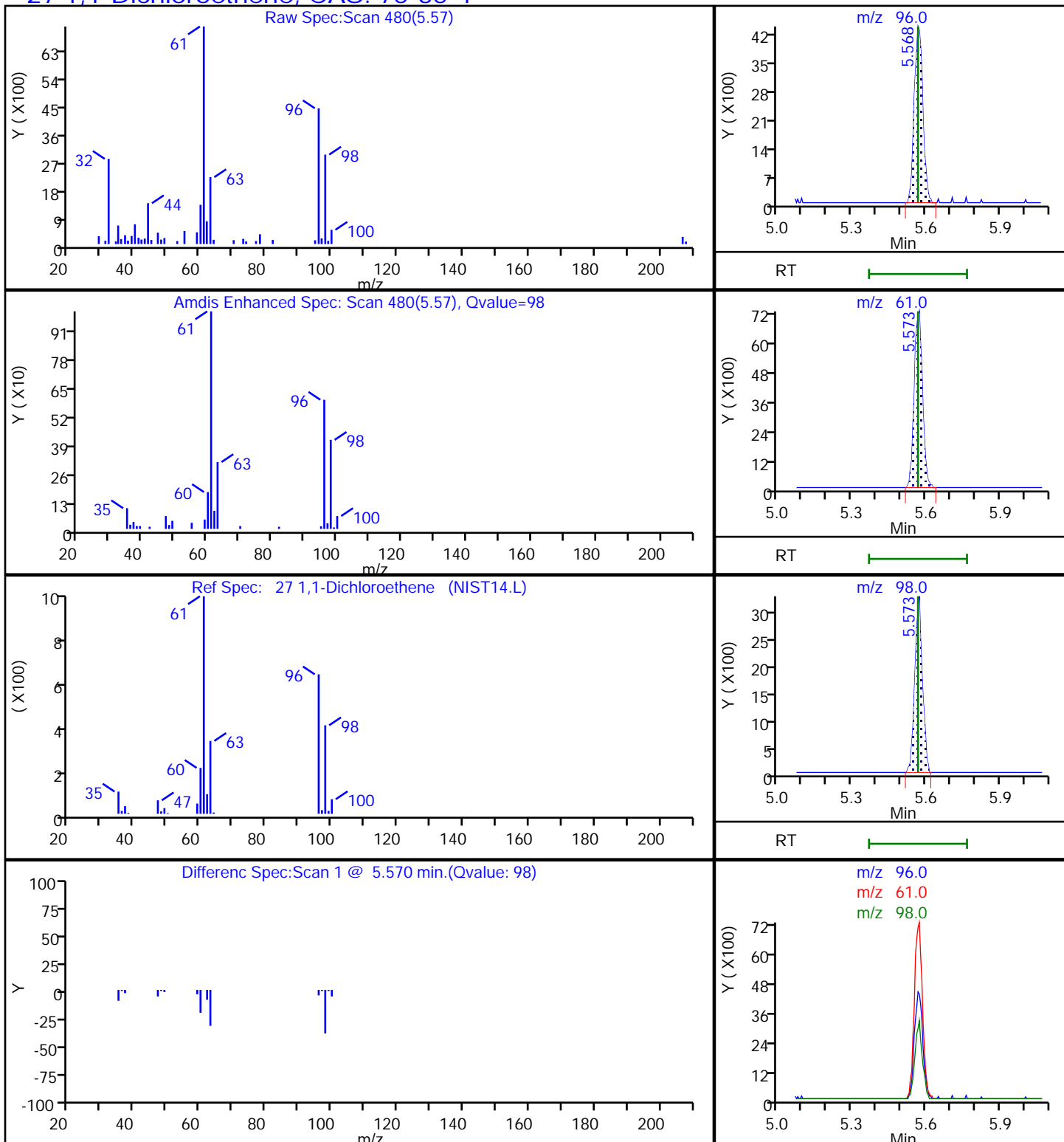
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P115.D

Injection Date: 24-Oct-2018 01:39:30

Instrument ID: MH

Lims ID: 140-13100-A-3

Lab Sample ID: 140-13100-3

Client ID: BLDG-A EFFLUENT

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

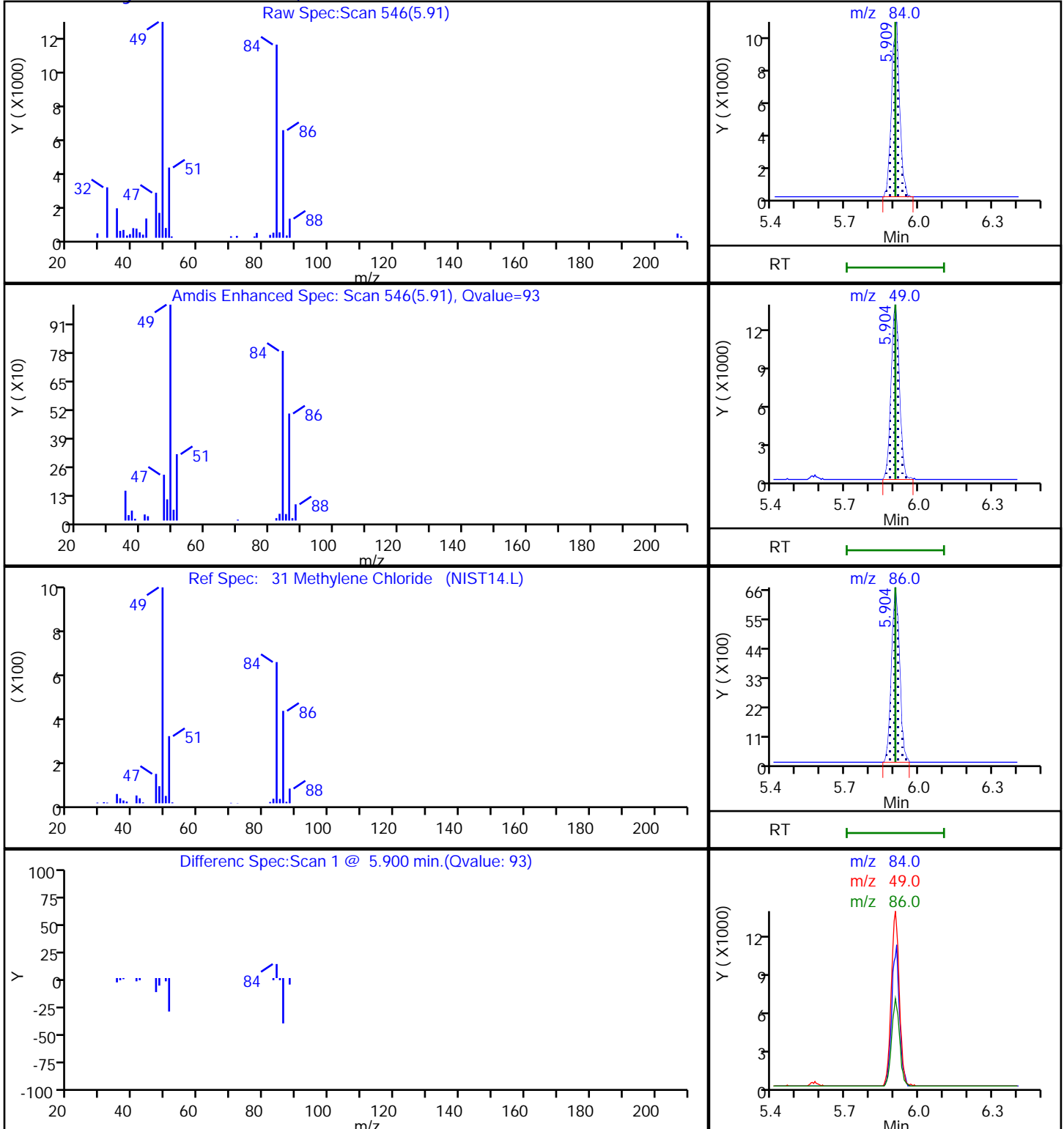
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

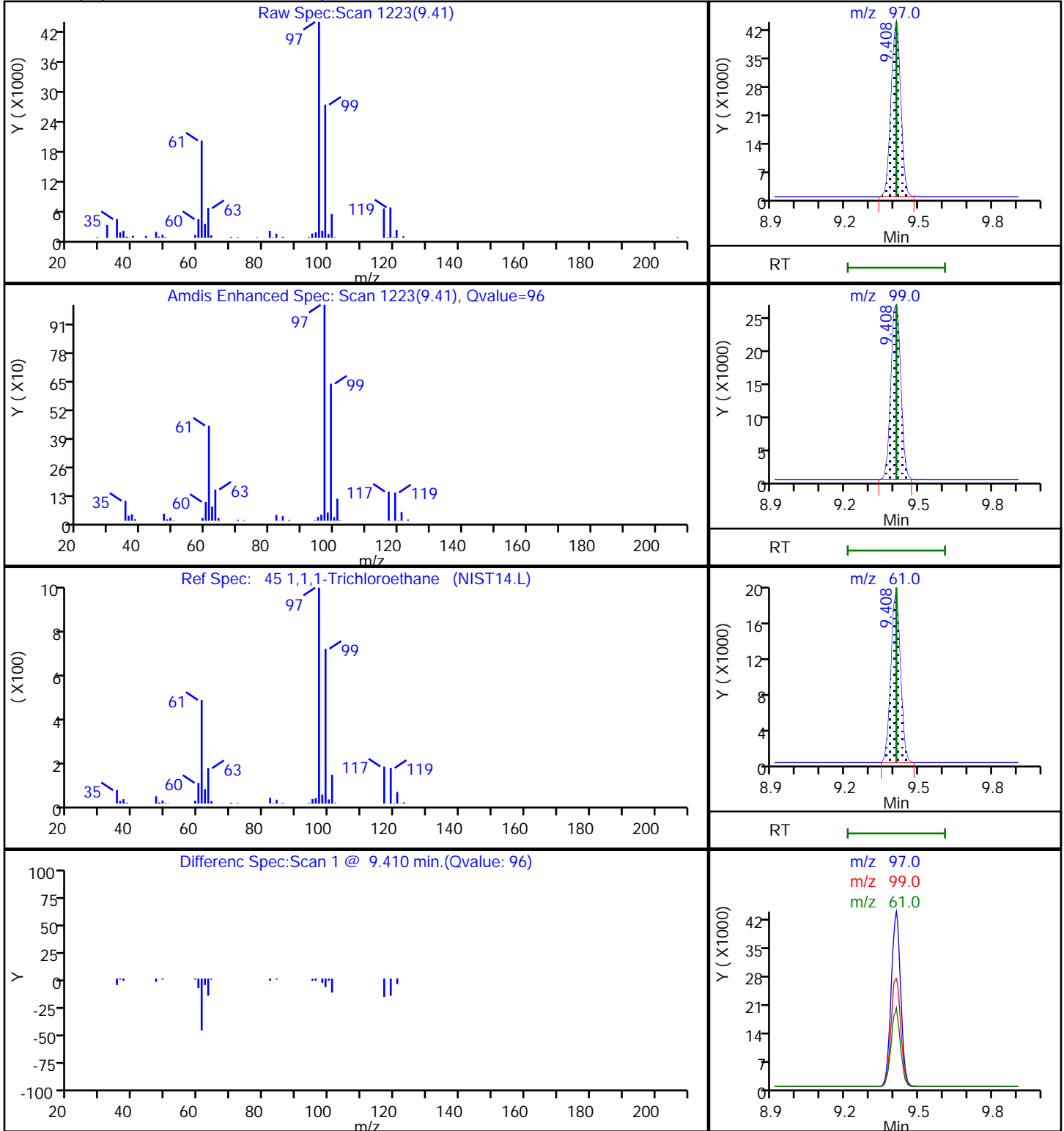
31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P115.D
Injection Date: 24-Oct-2018 01:39:30 Instrument ID: MH
Lims ID: 140-13100-A-3 Lab Sample ID: 140-13100-3
Client ID: BLDG-A EFFLUENT
Operator ID: HMT ALS Bottle#: 15 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

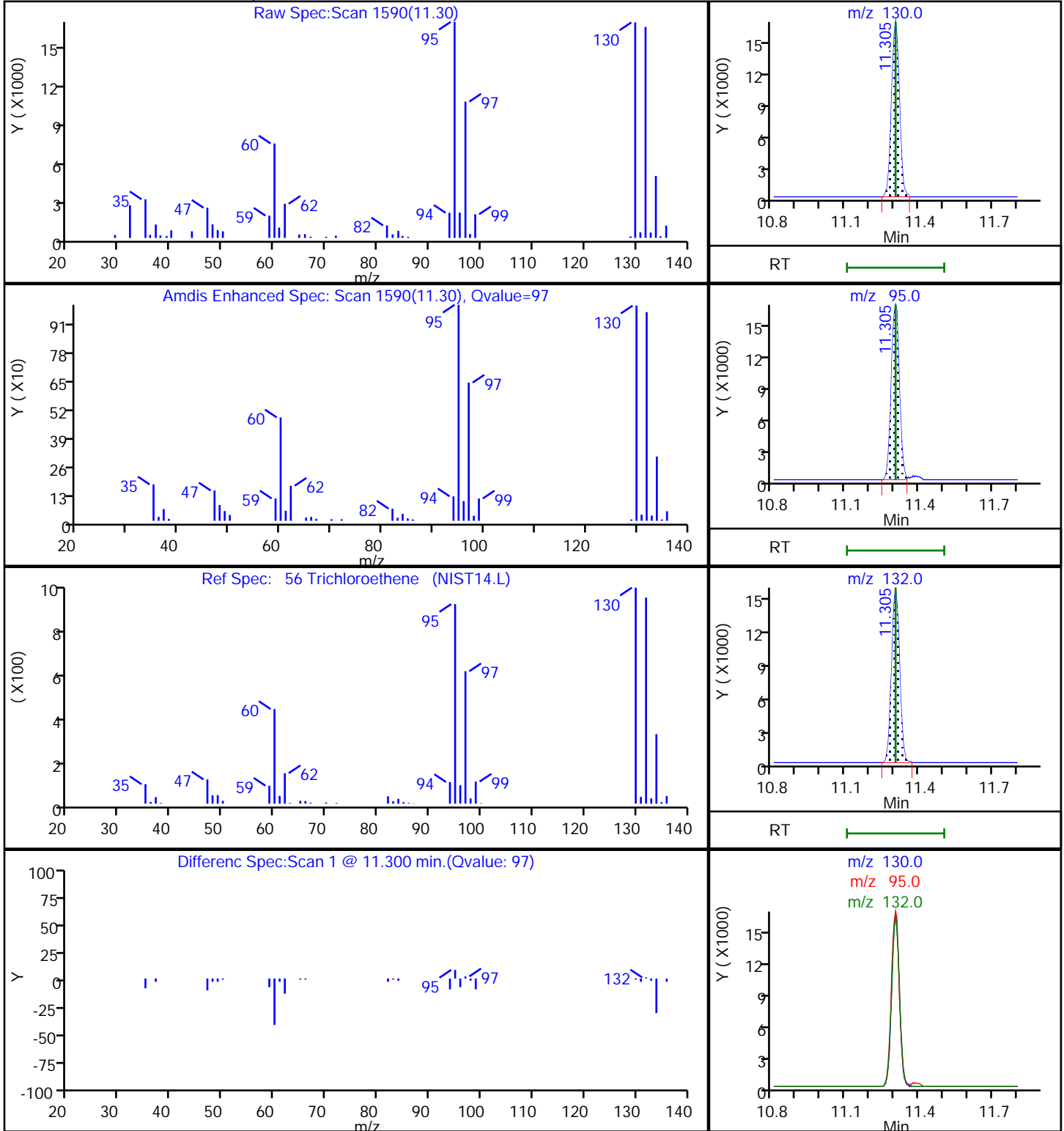
45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P115.D
Injection Date: 24-Oct-2018 01:39:30 Instrument ID: MH
Lims ID: 140-13100-A-3 Lab Sample ID: 140-13100-3
Client ID: BLDG-A EFFLUENT
Operator ID: HMT ALS Bottle#: 15 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P115.D

Injection Date: 24-Oct-2018 01:39:30

Instrument ID: MH

Lims ID: 140-13100-A-3

Lab Sample ID: 140-13100-3

Client ID: BLDG-A EFFLUENT

Operator ID: HMT

ALS Bottle#: 15

Worklist Smp#: 23

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

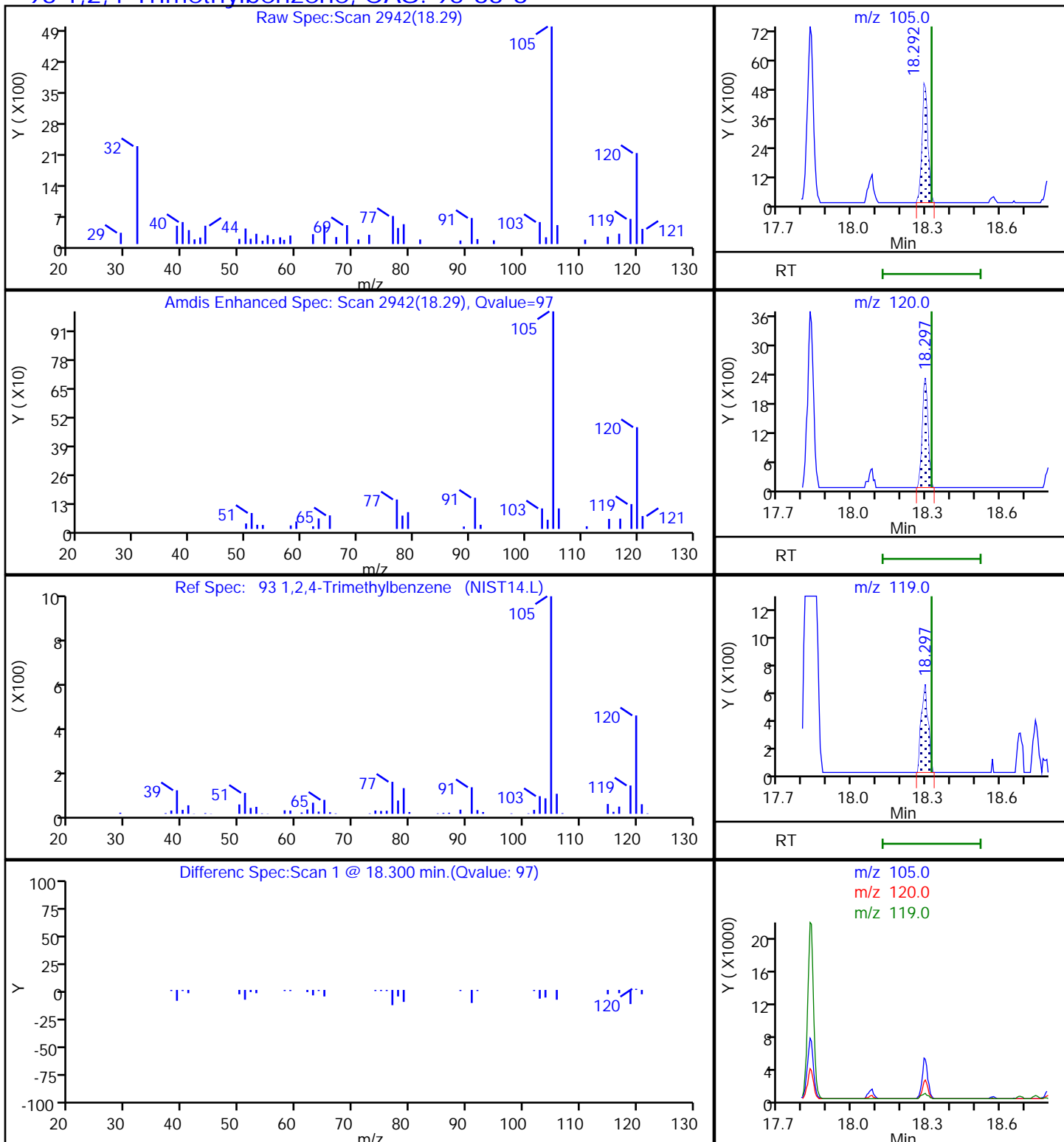
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

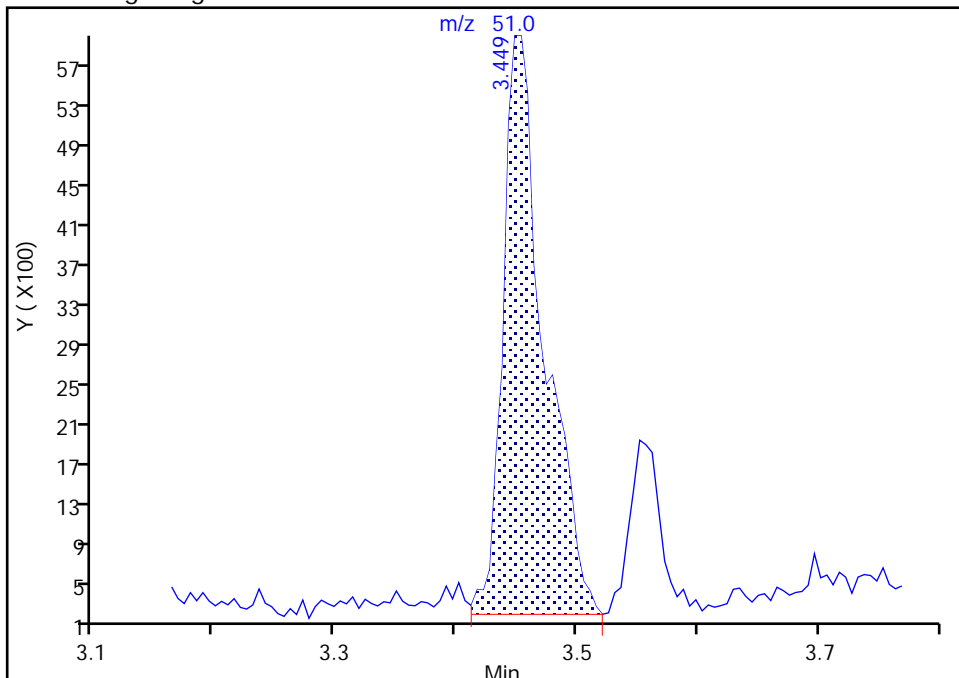
Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P115.D
Injection Date: 24-Oct-2018 01:39:30 Instrument ID: MH
Lims ID: 140-13100-A-3 Lab Sample ID: 140-13100-3
Client ID: BLDG-A EFFLUENT
Operator ID: HMT ALS Bottle#: 15 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

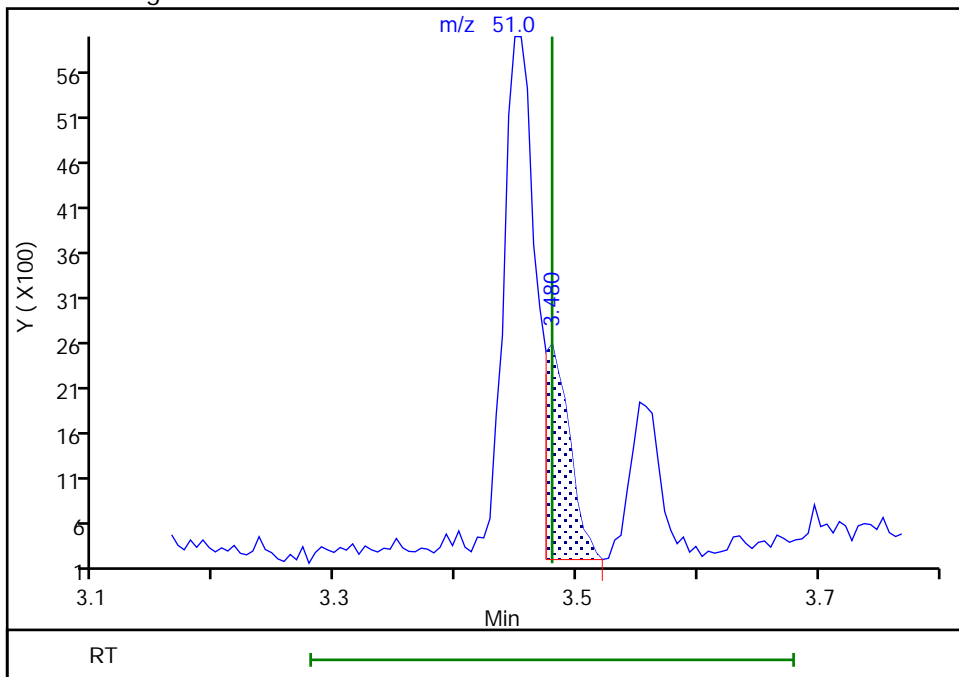
RT: 3.45
Area: 13846
Amount: 0.125867
Amount Units: ppb v/v

Processing Integration Results



RT: 3.48
Area: 3476
Amount: 0.031599
Amount Units: ppb v/v

Manual Integration Results



Reviewer: tajh, 24-Oct-2018 11:11:05
Audit Action: Split an Integrated Peak

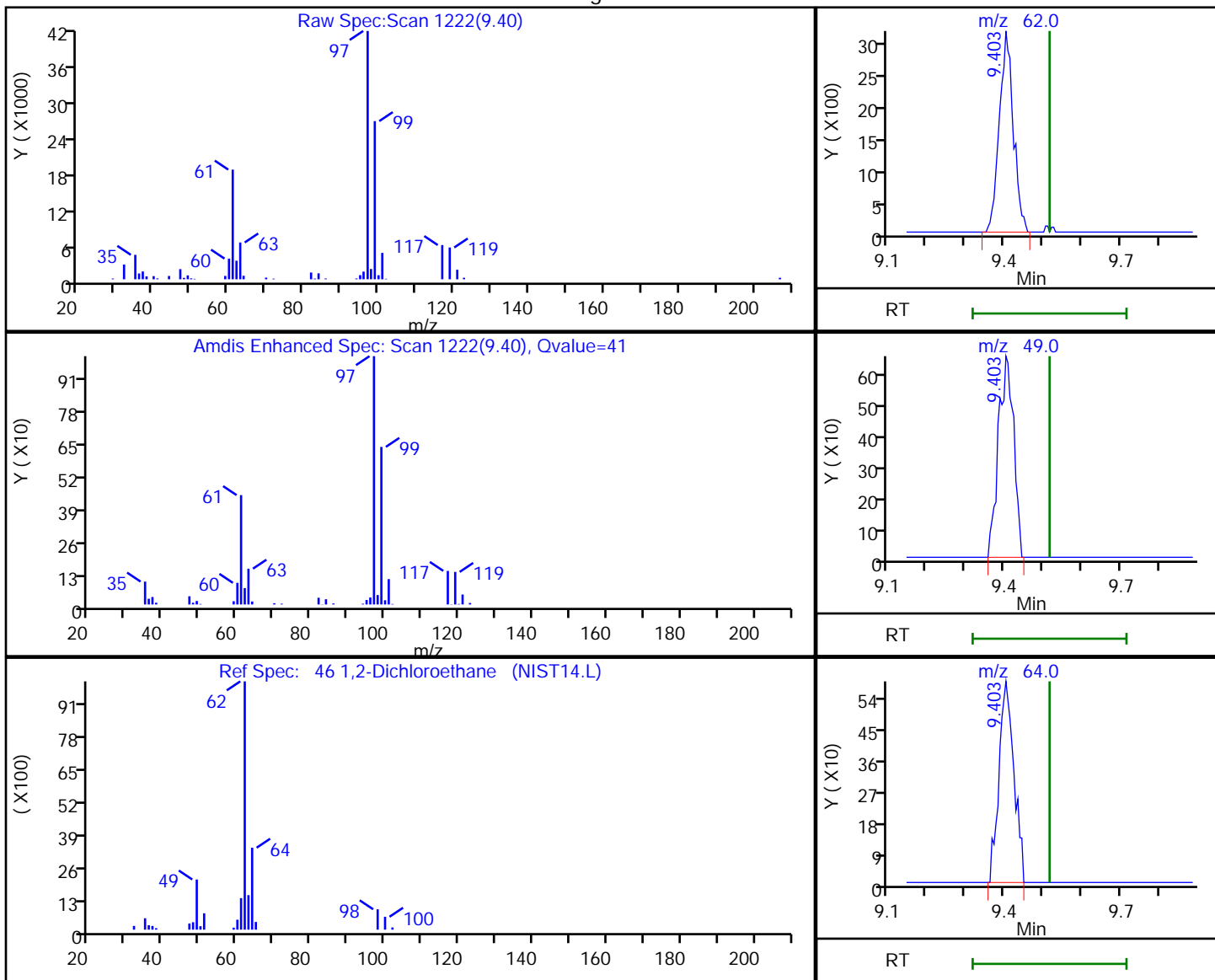
Audit Reason: Split Peak

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HJ23P115.D
 Injection Date: 24-Oct-2018 01:39:30 Instrument ID: MH
 Lims ID: 140-13100-A-3 Lab Sample ID: 140-13100-3
 Client ID: BLDG-A EFFLUENT
 Operator ID: HMT ALS Bottle#: 15 Worklist Smp#: 23
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
9.40	62.00	7829	0.100669
9.40	49.00	1784	
9.40	64.00	1569	

Reviewer: tajh, 24-Oct-2018 11:11:16

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1 Analy Batch No.: 24544

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/17/2018 18:52 Calibration End Date: 10/18/2018 03:53 Calibration ID: 1711

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-24544/7	HJ17IC01.D
Level 2	IC 140-24544/8	HJ17IC02.D
Level 3	IC 140-24544/9	HJ17IC03.D
Level 4	IC 140-24544/10	HJ17IC04.D
Level 5	IC 140-24544/11	HJ17IC05.D
Level 6	IC 140-24544/12	HJ17IC06.D
Level 7	ICIS 140-24544/13	HJ17IC07.D
Level 8	IC 140-24544/14	HJ17IC08.D
Level 9	IC 140-24544/2	HJ17IC09.D
Level 10	IC 140-24544/4	HJ17IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++ 2.5518	+++++ 2.5106	2.7234 2.5326	2.5297 2.2925	2.6137 2.4262	Ave		2.5226			5.0		30.0				
Propene	+++++ 0.9978	+++++ 1.0009	+++++ 1.0138	1.1199 0.9069	0.9789 0.9584	Ave		0.9967			6.5		30.0				
Dichlorodifluoromethane	+++++ 3.9203	4.0099 4.1101	3.7739 3.6866	3.8301 3.3091	3.7861 3.4583	Ave		3.7649			6.7		30.0				
Chloromethane	+++++ 0.4456	+++++ 0.4267	+++++ 0.4131	0.4897 0.3676	0.4376 0.3750	Ave		0.4222			10.0		30.0				
1,2-Dichloro-1,1,2,2-tetrafluoroethane	3.9523 3.9199	3.3548 3.9363	3.4324 3.9076	3.6427 3.5429	3.7410 3.5240	Ave		3.6954			6.1		30.0				
Vinyl chloride	1.7124 1.4297	1.4552 1.3821	1.4595 1.3541	1.4650 1.2437	1.3894 1.1703	Ave		1.4061			10.3		30.0				
1,3-Butadiene	+++++ 0.8996	+++++ 0.8751	0.8849 0.8566	0.9662 0.7955	0.9231 0.7527	Ave		0.8692			7.9		30.0				
Butane	+++++ 1.5978	+++++ 1.5165	1.4893 1.4654	1.7205 1.3730	1.5903 1.2735	Ave		1.5033			9.2		30.0				
Bromomethane	+++++ 1.7483	+++++ 1.7110	1.9631 1.6872	1.9427 1.5889	1.7648 1.4974	Ave		1.7379			9.1		30.0				
Chloroethane	+++++ 0.6091	+++++ 0.5764	0.6907 0.5672	0.6911 0.5379	0.6052 0.5025	Ave		0.5975			11.2		30.0				
Ethanol	+++++ 0.4799	+++++ 0.4836	+++++ 0.4618	0.5401 0.4363	0.4876 0.3860	Ave		0.4679			10.2		30.0				
Vinyl bromide	+++++ 1.6820	1.8719 1.6754	1.7069 1.6562	1.7454 1.5580	1.6713 1.4670	Ave		1.6705			6.8		30.0				
2-Methylbutane	+++++ 1.0744	+++++ 1.0582	+++++ 1.0467	1.0809 0.9896	1.1224 0.8946	Ave		1.0381			7.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1 Analy Batch No.: 24544
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 10/17/2018 18:52 Calibration End Date: 10/18/2018 03:53 Calibration ID: 1711

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	4.7314 4.6074	4.2314 4.5163	4.1347 4.6095	4.3696 4.3000	4.5626 4.4069	Ave	4.4470				4.3	30.0					
Acrolein	++++ 0.3694	++++ 0.2911	++++ 0.4163	++++ 0.3731	++++ 0.3517 0.3645	Ave	0.3610				11.3	30.0					
Acetonitrile	++++ 0.4382	++++ 0.4530	++++ 0.5159	0.5694 0.4696	0.4827 0.4555	Ave	0.4835				9.4	30.0					
Acetone	++++ 0.6730	++++ 0.5589	++++ 0.5683	++++ 0.5146	0.7377 0.5003	Ave	0.5921				15.8	30.0					
Pentane	++++ 0.1688	++++ 0.1699	++++ 0.1819	0.1701 0.1662	0.1738 0.1654	Ave	0.1709				3.3	30.0					
Isopropyl alcohol	++++ 1.5746	++++ 1.5995	++++ 1.6389	1.6916 1.4903	1.5376 1.4580	Ave	1.5701				5.2	30.0					
Ethyl ether	++++ 1.1834	++++ 1.1833	1.1514 1.2168	1.1403 1.1013	1.1826 1.0970	Ave	1.1570				3.7	30.0					
1,1-Dichloroethene	++++ 1.3305	++++ 1.3487 1.3248	1.3765 1.3982	1.3769 1.2942	1.3148 1.3149	Ave	1.3422				2.6	30.0					
Acrylonitrile	++++ 0.8856	++++ 0.8517	0.7987 0.9012	0.8663 0.8360	0.8328 0.8412	Ave	0.8517				3.8	30.0					
tert-Butyl alcohol	++++ 2.1072	++++ 2.1804	++++ 2.0954 2.2456	2.1718 2.1200	2.0299 2.1510	Ave	2.1377				3.0	30.0					
1,1,2-Trichloro-1,2,2-trifluoroethane	3.2875 3.1417	3.0137 3.1237	3.0977 3.2179	3.1960 3.0204	3.1216 3.1111	Ave	3.1331				2.7	30.0					
Methylene Chloride	++++ 1.4032	++++ 1.3082	++++ 1.2962	++++ 2.3149 1.1877	1.6175 1.1667	Ave	1.4706				27.3	30.0					
3-Chloropropene	++++ 0.9896	++++ 0.9867	1.0568 1.0261	1.1433 0.9687	0.9667 0.9315	Ave	1.0087				6.6	30.0					
Carbon disulfide	++++ 4.0176	++++ 3.9640	++++ 4.0747	++++ 3.7719	3.9723 3.7846	Ave	3.9234				2.9	30.0					
trans-1,2-Dichloroethene	++++ 1.3561	1.4045 1.3658	1.3042 1.4232	1.3109 1.3476	1.3543 1.3963	Ave	1.3626				3.0	30.0					
2-Methylpentane	++++ 2.3467	++++ 2.3990	++++ 2.3096 2.4535	2.2954 2.2741	2.2610 2.2930	Ave	2.3290				2.9	30.0					
Methyl tert-butyl ether	++++ 3.1772	++++ 3.1571	2.9535 3.3430	2.9847 3.1534	2.9938 3.1960	Ave	3.1198				4.3	30.0					
1,1-Dichloroethane	++++ 2.4195	2.3797 2.4013	2.2778 2.4712	2.4370 2.2922	2.4363 2.3198	Ave	2.3817				2.9	30.0					
Vinyl acetate	++++ 3.0504	++++ 3.0907	++++ 3.2878	2.7209 3.1246	2.7625 3.1782	Ave	3.0307				7.0	30.0					
2-Butanone (MEK)	++++ 0.6145	++++ 0.5913	++++ 0.6195	++++ 0.5802	0.5994 0.5931	Ave	0.6067				3.8	30.0					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1 Analy Batch No.: 24544
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 10/17/2018 18:52 Calibration End Date: 10/18/2018 03:53 Calibration ID: 1711

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	++++ 0.8661	++++ 0.8859	0.8474 0.9055	0.8709 0.8434	0.8493 0.8721	Ave		0.8676			2.4		30.0				
cis-1,2-Dichloroethene	++++ 1.4247	1.4482 1.4293	1.4486 1.4828	1.3598 1.4084	1.3816 1.4451	Ave		1.4254			2.6		30.0				
Ethyl acetate	++++ 2.6616	++++ 2.6302	2.4754 2.7831	2.6168 2.5984	2.5983 2.6360	Ave		2.6250			3.2		30.0				
Chloroform	3.3420 3.1186	3.1540 3.0980	3.1081 3.1552	3.1692 2.9854	3.0629 3.0639	Ave		3.1257			3.0		30.0				
Tetrahydrofuran	++++ 1.2080	++++ 1.2264	1.1869 1.2936	1.2107 1.2006	1.1927 1.2226	Ave		1.2177			2.8		30.0				
1,1,1-Trichloroethane	++++ 2.9102	1.4482 2.9300	1.4486 3.0451	1.3598 2.9607	1.3816 3.1179	Ave		2.9312			3.5		30.0				
1,2-Dichloroethane	0.3696 0.3398	0.3201 0.3334	0.3065 0.3487	0.3308 0.3387	0.3328 0.3492	Ave		0.3370			5.1		30.0				
Benzene	++++ 0.7194	0.7376 0.7200	0.7000 0.7560	0.7177 0.7322	0.7005 0.7834	Ave		0.7296			3.7		30.0				
Cyclohexane	++++ 0.0981	++++ 0.0991	0.0848 0.1059	0.0857 0.1050	0.0898 0.1123	Ave		0.0976			10.3		30.0				
1-Butanol	++++ 0.0774	++++ 0.0852	++++ 0.0914	++++ 0.0893	0.0757 0.0926	Ave		0.0836			9.6		30.0				
Carbon tetrachloride	0.5783 0.5984	0.5332 0.6109	0.5450 0.6492	0.5601 0.6545	0.5542 0.7556	Ave		0.6039			11.2		30.0				
2,3-Dimethylpentane	++++ 0.1454	++++ 0.1474	++++ 0.1531	0.1153 0.1448	0.1255 0.1478	Ave		0.1398			9.2		30.0				
Thiophene	++++ 0.4182	++++ 0.4263	0.3788 0.4457	0.3998 0.4314	0.4128 0.4398	Ave		0.4191			5.2		30.0				
2,2,4-Trimethylpentane	1.0865 1.0151	0.9434 1.0294	0.9387 1.0828	0.9752 1.0425	0.9682 1.1012	Ave		1.0183			5.9		30.0				
Heptane	++++ 0.2120	++++ 0.2185	++++ 0.2343	0.2006 0.2273	0.1984 0.2413	Ave		0.2189			7.5		30.0				
1,2-Dichloropropane	++++ 0.2927	0.2592 0.2905	0.2726 0.3045	0.2791 0.2939	0.2859 0.3062	Ave		0.2872			5.2		30.0				
Trichloroethene	0.3834 0.3468	0.3319 0.3495	0.3153 0.3733	0.3458 0.3643	0.3348 0.3915	Ave		0.3537			6.8		30.0				
Dibromomethane	++++ 0.3763	0.4276 0.3750	0.3915 0.3998	0.3938 0.3899	0.3673 0.4144	Ave		0.3928			4.9		30.0				
Bromodichloromethane	++++ 0.5564	++++ 0.5730	0.4689 0.6130	0.5062 0.6043	0.5250 0.6524	Ave		0.5624			10.8		30.0				
1,4-Dioxane	++++ 0.1054	++++ 0.1098	0.0965 0.1164	0.0973 0.1099	0.1009 0.1127	Ave		0.1061			6.9		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1 Analy Batch No.: 24544

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/17/2018 18:52 Calibration End Date: 10/18/2018 03:53 Calibration ID: 1711

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++	++++	++++	0.2521	0.2397	Ave		0.2708			7.7		30.0				
	0.2619	0.2718	0.2923	0.2833	0.2945												
Methylcyclohexane	++++	++++	0.3313	0.3543	0.3537	Ave		0.3896			10.6		30.0				
	0.3837	0.3972	0.4280	0.4194	0.4492												
4-Methyl-2-pentanone (MIBK)	++++	++++	++++	0.4682	0.4710	Ave		0.5242			8.6		30.0				
	0.5067	0.5255	0.5618	0.5517	0.5847												
cis-1,3-Dichloropropene	0.4235	0.3488	0.3462	0.3605	0.3838	Ave		0.4141			12.7		30.0				
	0.4172	0.4369	0.4666	0.4637	0.4940												
trans-1,3-Dichloropropene	++++	++++	0.3658	0.3915	0.4043	Ave		0.4398			11.5		30.0				
	0.4296	0.4520	0.4858	0.4816	0.5074												
Toluene	++++	0.9254	0.9139	0.9573	0.9567	Ave		0.9968			6.3		30.0				
	0.9990	1.0220	1.0719	1.0357	1.0891												
1,1,2-Trichloroethane	0.3789	0.3257	0.3469	0.3426	0.3454	Ave		0.3494			3.9		30.0				
	0.3459	0.3525	0.3603	0.3446	0.3517												
2-Hexanone	++++	++++	++++	0.2402	0.2677	Ave		0.2985			11.6		30.0				
	0.2909	0.3065	0.3267	0.3229	0.3348												
C8 Range	++++	++++	++++	1.9798	2.0305	Ave		2.1850			7.3		30.0				
	2.1342	2.1525	2.2883	2.2748	2.4347												
Octane	++++	++++	++++	0.2177	0.2414	Ave		0.2658			10.7		30.0				
	0.2611	0.2724	0.2866	0.2807	0.3008												
Dibromochloromethane	++++	++++	0.5472	0.5797	0.6576	Ave		0.7324			18.3		30.0				
	0.7090	0.7687	0.8192	0.8427	0.9354												
1,2-Dibromoethane (EDB)	++++	++++	0.5616	0.5644	0.6039	Ave		0.6395			9.6		30.0				
	0.6272	0.6523	0.6912	0.6859	0.7296												
Tetrachloroethene	0.4277	0.3983	0.3872	0.3806	0.3953	Ave		0.4129			6.4		30.0				
	0.4043	0.4070	0.4308	0.4279	0.4702												
Chlorobenzene	0.9255	0.8206	0.7959	0.8325	0.8383	Ave		0.8687			6.0		30.0				
	0.8562	0.8602	0.9020	0.8879	0.9683												
Ethylbenzene	1.3129	1.1069	1.1097	1.1827	1.2090	Ave		1.2843			10.1		30.0				
	1.2911	1.3314	1.4083	1.4011	1.4895												
m-Xylene & p-Xylene	0.9346	0.8026	0.8148	0.9080	0.9331	Ave		0.9906			13.4		30.0				
	1.0186	1.0562	1.1131	1.1443	1.1804												
Nonane	++++	++++	++++	0.4618	0.5007	Ave		0.5516			10.2		30.0				
	0.5612	0.5838	0.6153	0.6056	0.5327												
Bromoform	++++	++++	0.5585	0.5380	0.6751	Ave		0.7419			26.0		30.0				
	0.7521	0.9005	1.0270	++++	++++												
Styrene	0.5946	0.4966	0.5223	0.5716	0.6599	Ave		0.6799			18.7		30.0				
	0.7362	0.7709	0.8124	0.8038	0.8313												
o-Xylene	0.9967	0.8742	0.8699	0.9357	1.0045	Ave		1.0111			9.0		30.0				
	1.0650	1.0796	1.1036	1.0678	1.1136												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1 Analy Batch No.: 24544
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 10/17/2018 18:52 Calibration End Date: 10/18/2018 03:53 Calibration ID: 1711

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.9338	0.7734	0.7917	0.8079	0.8597	Ave		0.8903			8.7		30.0				
	0.9036	0.9293	0.9613	0.9471	0.9950												
1,2,3-Trichloropropane	++++	++++	0.1898	0.2012	0.2000	Ave		0.2130			7.5		30.0				
	0.2136	0.2132	0.2237	0.2220	0.2403												
Isopropylbenzene	++++	++++	++++	1.2347	1.2853	Ave		1.4401			9.8		30.0				
	1.4103	1.4641	1.5227	1.5279	1.6359												
Propylbenzene	++++	++++	++++	0.3146	0.3456	Ave		0.3996			14.4		30.0				
	0.3851	0.4012	0.4303	0.4370	0.4837												
2-Chlorotoluene	++++	++++	++++	0.3521	0.3642	Ave		0.3985			8.0		30.0				
	0.3938	0.4010	0.4171	0.4187	0.4430												
4-Ethyltoluene	++++	++++	++++	1.1834	1.3145	Ave		1.4899			12.6		30.0				
	1.4688	1.5111	1.6006	1.6202	1.7309												
1,3,5-Trimethylbenzene	++++	++++	0.4830	0.5116	0.5488	Ave		0.5991			13.1		30.0				
	0.6047	0.6227	0.6519	0.6573	0.7125												
Alpha Methyl Styrene	++++	++++	++++	0.3928	0.4491	Ave		0.6062			24.5		30.0				
	0.5623	0.6220	0.6896	0.7252	0.8023												
Decane	++++	++++	++++	++++	0.7060	Ave		0.7900			5.8		30.0				
	0.7735	0.7964	0.8340	0.8108	0.8193												
tert-Butylbenzene	++++	++++	++++	1.1594	1.2283	Ave		1.4247			13.3		30.0				
	1.3829	1.4136	1.5150	1.5831	1.6904												
1,2,4-Trimethylbenzene	++++	++++	1.0389	1.0929	1.1995	Ave		1.3023			13.7		30.0				
	1.3128	1.3427	1.4238	1.4783	1.5291												
sec-Butylbenzene	++++	++++	++++	1.5547	1.6911	Ave		1.9654			13.4		30.0				
	1.9187	1.9988	2.1267	2.2544	2.2134												
1,3-Dichlorobenzene	++++	++++	0.8414	0.8551	0.8958	Ave		1.0138			15.0		30.0				
	0.9733	1.0149	1.0916	1.1912	1.2472												
Benzyl chloride	++++	++++	++++	0.6590	0.7553	Ave		1.0330			26.6		30.0				
	0.9106	1.0350	1.1761	1.3186	1.3765												
1,4-Dichlorobenzene	0.8695	0.8030	0.7885	0.8282	0.8667	Ave		0.9424			14.9		30.0				
	0.9356	0.9643	1.0526	1.1067	1.2086												
4-Isopropyltoluene	++++	++++	1.1678	1.2891	1.4185	Ave		1.5475			15.2		30.0				
	1.5860	1.6180	1.7079	1.7461	1.8463												
1,2,3-Trimethylbenzene	++++	++++	1.0096	1.0681	1.1738	Ave		1.2406			11.5		30.0				
	1.2934	1.2920	1.3282	1.3420	1.4177												
1,2-Dichlorobenzene	0.9152	0.8449	0.8705	0.8853	0.8950	Ave		0.9909			13.7		30.0				
	0.9910	1.0059	1.0860	1.1777	1.2378												
Indane	++++	++++	0.9289	1.0064	1.1238	Ave		1.2586			17.4		30.0				
	1.2857	1.3094	1.4179	1.4913	1.5057												
Indene	++++	++++	++++	0.7707	0.8710	Ave		1.0945			20.2		30.0				
	1.0363	1.0977	1.2103	1.2964	1.3787												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1 Analy Batch No.: 24544

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/17/2018 18:52 Calibration End Date: 10/18/2018 03:53 Calibration ID: 1711

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	+++++	+++++	+++++	1.4413	1.5709	Ave		1.7223			9.3		30.0				
	1.7425	1.7528	1.8472	1.8888	1.8127												
Undecane	+++++	+++++	+++++	+++++	0.8010	Ave		0.9349			7.4		30.0				
	0.9271	0.9561	0.9926	0.9686	0.9644												
1,2-Dibromo-3-Chloropropane	+++++	+++++	0.3550	0.3445	0.4438	Ave		0.4855			23.8		30.0				
	0.4821	0.5355	0.5787	0.6586	+++++												
1,2,4,5-Tetramethylbenzene	+++++	+++++	1.0135	1.0929	1.2697	Ave		1.3992			20.1		30.0				
	1.4794	1.5325	1.6394	1.7665	+++++												
Dodecane	+++++	+++++	+++++	+++++	0.7471	Ave		0.9500			12.0		30.0				
	0.9072	0.9462	1.0183	1.0254	1.0558												
1,2,4-Trichlorobenzene	+++++	0.6877	0.6818	0.7201	0.7731	Ave		0.8523			19.9		30.0				
	0.8929	0.8952	1.0082	1.1590	+++++												
Naphthalene	+++++	1.3571	1.4168	1.5200	1.5502	Ave		1.7111			17.2		30.0				
	1.7645	1.6943	1.8090	2.0159	2.2720												
Hexachlorobutadiene	+++++	0.8774	0.8388	0.8523	0.8883	Ave		0.9923			15.7		30.0				
	0.9766	0.9597	1.0676	1.1969	1.2731												
1,2,3-Trichlorobenzene	+++++	0.7618	0.7835	0.8081	0.8105	Ave		0.8929			13.8		30.0				
	0.9390	0.8810	0.9216	0.9737	1.1566												
2-Methylnaphthalene	+++++	+++++	+++++	+++++	0.5246	Ave		0.8165			23.2		50.0				
	0.7602	0.7413	0.8289	1.0322	1.0119												
1-Methylnaphthalene	+++++	+++++	+++++	0.7734	0.7282	Ave		0.8782			11.6		50.0				
	0.9640	0.8414	0.8990	1.0024	0.9388												
4-Bromofluorobenzene (Surr)	0.6331	0.6440	0.6512	0.6591	0.6762	Ave		0.6691			3.1		30.0				
	0.6912	0.6924	0.6875	0.6820	0.6747												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1 Analy Batch No.: 24544

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/17/2018 18:52 Calibration End Date: 10/18/2018 03:53 Calibration ID: 1711

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-24544/7	HJ17IC01.D
Level 2	IC 140-24544/8	HJ17IC02.D
Level 3	IC 140-24544/9	HJ17IC03.D
Level 4	IC 140-24544/10	HJ17IC04.D
Level 5	IC 140-24544/11	HJ17IC05.D
Level 6	IC 140-24544/12	HJ17IC06.D
Level 7	ICIS 140-24544/13	HJ17IC07.D
Level 8	IC 140-24544/14	HJ17IC08.D
Level 9	IC 140-24544/2	HJ17IC09.D
Level 10	IC 140-24544/4	HJ17IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 135458	++++ 283864	11978 585250	21417 1104610	56590 2454603	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 52965	++++ 113170	++++ 234285	9481 436973	21195 969571	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 208107	8545 464714	16598 851927	32426 1594454	81972 3498699	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 23654	++++ 48245	++++ 95453	4146 177122	9474 379355	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	4637 208082	7149 445066	15096 903009	30839 1707135	80996 3565206	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	2009 75892	3101 156272	6419 312925	12403 599263	30081 1183945	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 47756	++++ 98946	3892 197952	8180 383304	19987 761505	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 84817	++++ 171464	6550 338641	14566 661555	34432 1288437	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 92809	++++ 193463	8634 389891	16447 765599	38209 1514919	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 32336	++++ 65176	3038 131079	5851 259202	13104 508329	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 127366	++++ 273371	++++ 533602	22861 1051020	52784 1952618	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 89288	3989 189437	7507 382727	14777 750721	36185 1484151	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 57035	++++ 119651	++++ 241874	9151 476844	24302 905105	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	5551 244578	9017 510643	18185 1065201	36993 2071936	98784 4458456	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13100-1

Analy Batch No.: 24544

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 10/17/2018 18:52

Calibration End Date: 10/18/2018 03:53

Calibration ID: 1711

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	++++ 19611	++++ 32914	++++ 96192	++++ 179778	7614 368757	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 23262	++++ 51223	++++ 119223	++++ 226283	4821 460857	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Acetone	CBM	Ave	++++ 107172	++++ 189591	++++ 393962	++++ 743912	47917 1518308	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 8963	++++ 19209	++++ 42044	++++ 80061	1440 167286	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Isopropyl alcohol	CBM	Ave	++++ 250765	++++ 542568	++++ 1136225	++++ 2154201	42964 4425289	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 62821	++++ 133787	++++ 281181	++++ 530674	5064 1109865	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	++++ 70626	++++ 149787	++++ 323106	++++ 623623	6054 1330255	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 47009	++++ 96297	++++ 208252	++++ 402844	3513 851031	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 111856	++++ 246534	++++ 518946	++++ 1021501	9216 2176189	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 166774	++++ 353192	++++ 743634	++++ 1455333	3857 3147482	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 74489	++++ 147911	++++ 299547	++++ 572285	19598 1180311	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 52531	++++ 111560	++++ 237114	++++ 466773	4648 942347	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 213270	++++ 448202	++++ 941617	++++ 1817467	33630 3828812	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 71989	++++ 154431	++++ 328893	++++ 649327	5736 1412647	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 124570	++++ 271249	++++ 566983	++++ 1095778	10158 2319829	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 168660	++++ 356964	++++ 772531	++++ 1519448	12990 3233406	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	++++ 128437	++++ 271511	++++ 571074	++++ 1104478	5071 2346930	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 161928	++++ 349456	++++ 759769	++++ 1505546	23035 3215352	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 32620	++++ 66854	++++ 143154	++++ 279577	5494 600017	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 45977	++++ 100164	++++ 209262	++++ 406384	3727 882318	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	++++ 75628	++++ 161607	++++ 342654	++++ 678637	6371 1461985	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13100-1

Analy Batch No.: 24544

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 10/17/2018 18:52

Calibration End Date: 10/18/2018 03:53

Calibration ID: 1711

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 141288	++++ 297385	10887 643140	22154 1252010	56255 2666811	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	3921 165548	6721 350279	13670 729136	26831 1438473	66314 3099762	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 64127	++++ 138662	5220 298944	10250 578478	25824 1236937	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	++++ 154487	5950 331283	12552 703701	24819 1426597	61478 3154402	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	2381 98431	3747 206217	7301 432913	15257 862565	39254 1832120	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 208381	8636 445364	16672 938685	33103 1864526	82627 4109749	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 28410	++++ 61315	2019 131539	3955 267264	10596 589094	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 22411	++++ 52685	++++ 113471	++++ 227431	3491 486059	8654 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Carbon tetrachloride	DFBZ	Ave	3725 173348	6242 377888	12982 806085	25834 1666734	65370 3963930	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 42119	++++ 91174	2747 190112	5788 368716	16359 775365	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 121131	++++ 263669	9022 553399	18441 1098550	48687 2307234	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	6999 294056	11045 636694	22357 1344345	44984 2654833	114203 5777053	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 61417	++++ 135167	++++ 290928	9251 578690	23398 1265896	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 84799	3035 179688	6492 378065	12873 748452	33719 1606262	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	2470 100466	3886 216192	7510 463451	15950 927699	39484 2053691	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 109017	5006 231958	9324 496446	18166 992751	43318 2174162	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 161170	++++ 354393	11169 761067	23350 1538909	61922 3422464	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 30519	++++ 67912	++++ 144558	2299 279769	4487 591213	11905 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
Methyl methacrylate	DFBZ	Ave	++++ 75858	++++ 168129	++++ 362862	11630 721535	28267 1545020	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	++++ 111144	++++ 245653	++++ 531359	7891 1067893	16343 2356767	41724 1.00	++++ 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 146768	++++ 325053	++++ 697556	21598 1404767	55550 3067554	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13100-1

Analy Batch No.: 24544

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 10/17/2018 18:52

Calibration End Date: 10/18/2018 03:53

Calibration ID: 1711

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	2728 120859	4083 270244	8245 579344	16627 1180751	45273 2591823	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 105533	++++ 237537	++++ 528873	++++ 1105250	++++ 2476631	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	++++ 245399	9116 537042	18234 1167016	37054 2376712	94110 5315490	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2023 84975	3208 185226	6920 392241	13261 790720	33976 1716755	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 71456	++++ 161080	++++ 355684	9299 741044	26330 1634279	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
C8 Range	DFBZ	Ave	++++ 618206	++++ 1331364	++++ 2841158	++++ 5792857	++++ 12772788	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 64133	++++ 143156	++++ 312001	8425 644085	23747 1468043	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	++++ 174167	++++ 403925	++++ 891897	++++ 1933775	++++ 4565185	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 154079	++++ 342752	++++ 752542	++++ 1574024	++++ 3561069	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	2283 99311	3924 213862	7725 469073	14733 981893	38886 2294765	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	4941 210333	8084 452009	15879 982063	32223 2037479	82459 4725918	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	7009 317163	10904 699591	22140 1533287	45779 3215179	118926 7269923	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	9979 500456	15812 1110035	32511 2423687	70289 5251581	183566 11522460	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd 5	Ave	++++ 137855	++++ 306793	++++ 669865	++++ 1389576	++++ 2600053	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd 5	Ave	++++ 184746	++++ 473178	++++ 1118188	++++ ++++	++++ ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Styrene	CBZd 5	Ave	3174 180853	4892 405093	10421 884469	22126 1844426	64907 4057142	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	5321 261630	8612 567309	17355 1201490	36219 2450277	98812 5435377	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	4985 221972	7619 488308	15796 1046645	31270 2173230	84562 4856452	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 52471	++++ 112040	++++ 243601	++++ 509537	++++ 1172723	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 346446	++++ 769360	++++ 1657857	++++ 3506188	++++ 7984229	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	++++ 94610	++++ 210803	++++ 468496	++++ 1002888	++++ 2360688	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13100-1

Analy Batch No.: 24544

SDG No.: _____

Instrument ID: MH

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 10/17/2018 18:52

Calibration End Date: 10/18/2018 03:53

Calibration ID: 1711

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 96740	++++ 210729	++++ 454091	13629 960742	35823 2161962	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	++++ 360825	++++ 794055	++++ 1742615	45808 3717848	129306 8448028	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	++++ 148537	++++ 327222	9636 709728	19804 1508317	53985 3477591	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 138126	++++ 326862	++++ 750754	15205 1664113	44174 3915618	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 190006	++++ 418496	++++ 908034	++++ 1860456	69450 3998768	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	++++ 339718	++++ 742799	++++ 1649493	44879 3632788	120827 8250307	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 322493	++++ 705560	20726 1550099	42305 3392345	117990 7463222	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	++++ 471321	++++ 1050330	++++ 2315481	60179 5173163	166351 10802758	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	++++ 239096	++++ 533314	16787 1188472	33099 2733459	88113 6086981	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 223687	++++ 543852	++++ 1280428	25508 3025903	74295 6718382	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	4642 229844	7910 506713	15732 1146027	32059 2539469	85253 5899002	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	++++ 389612	++++ 850197	++++ 1859435	49896 4006843	139535 9011444	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	++++ 317715	++++ 678913	20143 1446101	41345 3079547	115467 6919539	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	4886 243449	8323 528561	17367 1182407	34269 2702538	88040 6041563	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	++++ 315833	++++ 688034	18532 1543740	38957 3422060	110541 7348837	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 254577	++++ 576828	++++ 1317723	29830 2974938	85675 6729138	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	++++ 428038	++++ 921027	++++ 2011121	55788 4334268	154526 8847069	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 227733	++++ 502400	++++ 1080640	++++ 2222612	78793 4706910	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 118436	++++ 281362	7082 630090	13336 1511341	43654 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 363416	++++ 805299	++++ 1784914	42304 4053710	124900 ++++	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Dodecane	CBZd 5	Ave	++++ 222847	++++ 497220	++++ 1108632	++++ 2353086	73486 5153167	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1 Analy Batch No.: 24544

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/17/2018 18:52 Calibration End Date: 10/18/2018 03:53 Calibration ID: 1711

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 219348	6775 470402	13603 1097716	27873 2659534	76042 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Naphthalene	CBZd 5	Ave	++++ 433455	13369 890319	28266 1969515	58837 4625923	152490 11089060	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 239900	8643 504308	16735 1162309	32991 2746538	87378 6213576	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 230660	7504 462944	15632 1003400	31280 2234420	79721 5645191	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 186744	++++ 389546	++++ 902491	++++ 2368674	51606 4938958	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 236812	++++ 442171	++++ 978841	29936 2300404	71635 4582434	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	675998 679161	634435 727663	649557 748517	637756 782558	665112 823284	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1 Analy Batch No.: 24544

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/17/2018 18:52 Calibration End Date: 10/18/2018 03:53 Calibration ID: 1711

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-24544/7	HJ17IC01.D
Level 2	IC 140-24544/8	HJ17IC02.D
Level 3	IC 140-24544/9	HJ17IC03.D
Level 4	IC 140-24544/10	HJ17IC04.D
Level 5	IC 140-24544/11	HJ17IC05.D
Level 6	IC 140-24544/12	HJ17IC06.D
Level 7	ICIS 140-24544/13	HJ17IC07.D
Level 8	IC 140-24544/14	HJ17IC08.D
Level 9	IC 140-24544/2	HJ17IC09.D
Level 10	IC 140-24544/4	HJ17IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	8.0						50			
Propene	+++++	+++++	+++++	12.4						50		
Dichlorodifluoromethane	+++++	6.5						50				
Chloromethane	+++++	+++++	+++++	16.0						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	7.0						50					
Vinyl chloride	21.8						50					
1,3-Butadiene	+++++	+++++	1.8						50			
Butane	+++++	+++++	-0.9						50			
Bromomethane	+++++	+++++	13.0						50			
Chloroethane	+++++	+++++	15.6						50			
Ethanol	+++++	+++++	+++++	15.4						50		
Vinyl bromide	+++++	12.1						50				
2-Methylbutane	+++++	+++++	+++++	4.1						50		
Trichlorofluoromethane	6.4						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1 Analy Batch No.: 24544
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 10/17/2018 18:52 Calibration End Date: 10/18/2018 03:53 Calibration ID: 1711

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	+++++	-2.6						50	
Acetonitrile	+++++	+++++	+++++	17.8						50		
Acetone	+++++	+++++	+++++	+++++	24.6						80	
Pentane	+++++	+++++	+++++	-0.5						50		
Isopropyl alcohol	+++++	+++++	+++++	7.7						50		
Ethyl ether	+++++	+++++	-0.5						50			
1,1-Dichloroethene	+++++	0.5						50				
Acrylonitrile	+++++	+++++	-6.2						50			
tert-Butyl alcohol	+++++	+++++	-2.0						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	4.9						50					
Methylene Chloride	+++++	+++++	+++++	57.4						80		
3-Chloropropene	+++++	+++++	4.8						50			
Carbon disulfide	+++++	+++++	+++++	1.2						50		
trans-1,2-Dichloroethene	+++++	3.1						50				
2-Methylpentane	+++++	+++++	-0.8						50			
Methyl tert-butyl ether	+++++	+++++	-5.3						50			
1,1-Dichloroethane	+++++	-0.1						50				
Vinyl acetate	+++++	+++++	+++++	-10.2						50		
2-Butanone (MEK)	+++++	+++++	+++++	7.0						50		
Hexane	+++++	+++++	-2.3						50			
cis-1,2-Dichloroethene	+++++	1.6						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1 Analy Batch No.: 24544
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 10/17/2018 18:52 Calibration End Date: 10/18/2018 03:53 Calibration ID: 1711

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-5.7						50			
Chloroform	6.9						50					
Tetrahydrofuran	+++++	+++++	-2.5						50			
1,1,1-Trichloroethane	+++++	-4.7						50				
1,2-Dichloroethane	9.7						50					
Benzene	+++++	1.1						50				
Cyclohexane	+++++	+++++	-13.1						50			
1-Butanol	+++++	+++++	+++++	-9.4						50		
Carbon tetrachloride	-4.3						50					
2,3-Dimethylpentane	+++++	+++++	-17.5						50			
Thiophene	+++++	+++++	-9.6						50			
2,2,4-Trimethylpentane	6.7						50					
Heptane	+++++	+++++	+++++	-8.4						50		
1,2-Dichloropropane	+++++	-9.7						50				
Trichloroethene	8.4						50					
Dibromomethane	+++++	8.8						50				
Bromodichloromethane	+++++	+++++	-16.6						50			
1,4-Dioxane	+++++	+++++	-9.0						50			
Methyl methacrylate	+++++	+++++	+++++	-6.9						50		
Methylcyclohexane	+++++	+++++	-15.0						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	-10.7						50		

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1 Analy Batch No.: 24544
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 10/17/2018 18:52 Calibration End Date: 10/18/2018 03:53 Calibration ID: 1711

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	2.3						50					
trans-1,3-Dichloropropene	+++++	+++++	-16.8						50			
Toluene	+++++	-7.2						50				
1,1,2-Trichloroethane	8.4						50					
2-Hexanone	+++++	+++++	+++++	-19.5						50		
Octane	+++++	+++++	+++++	-18.1						50		
Dibromochloromethane	+++++	+++++	-25.3						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-12.2						50			
Tetrachloroethene	3.6						50					
Chlorobenzene	6.5						50					
Ethylbenzene	2.2						50					
m-Xylene & p-Xylene	-5.6						50					
Nonane	+++++	+++++	+++++	-16.3						50		
Bromoform	+++++	+++++	-24.7	+++++	+++++				50			
Styrene	-12.6						50					
o-Xylene	-1.4						50					
1,1,2,2-Tetrachloroethane	4.9						50					
1,2,3-Trichloropropane	+++++	+++++	-10.9						50			
Isopropylbenzene	+++++	+++++	+++++	-14.3						50		
Propylbenzene	+++++	+++++	+++++	-21.3						50		
2-Chlorotoluene	+++++	+++++	+++++	-11.7						50		

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1 Analy Batch No.: 24544
 SDG No.: _____
 Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 10/17/2018 18:52 Calibration End Date: 10/18/2018 03:53 Calibration ID: 1711

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	+++++	+++++	+++++	-20.6						50		
1,3,5-Trimethylbenzene	+++++	+++++	-19.4						50			
Alpha Methyl Styrene	+++++	+++++	+++++	-35.2						50		
Decane	+++++	+++++	+++++	+++++	-10.6						50	
tert-Butylbenzene	+++++	+++++	+++++	-18.6						50		
1,2,4-Trimethylbenzene	+++++	+++++	-20.2						50			
sec-Butylbenzene	+++++	+++++	+++++	-20.9						50		
1,3-Dichlorobenzene	+++++	+++++	-17.0						50			
Benzyl chloride	+++++	+++++	+++++	-36.2						50		
1,4-Dichlorobenzene	-7.7						50					
4-Isopropyltoluene	+++++	+++++	-24.5						50			
1,2,3-Trimethylbenzene	+++++	+++++	-18.6						50			
1,2-Dichlorobenzene	-7.6						50					
Indane	+++++	+++++	-26.2						50			
Indene	+++++	+++++	+++++	-29.6						50		
Butylbenzene	+++++	+++++	+++++	-16.3						50		
Undecane	+++++	+++++	+++++	+++++	-14.3						50	
1,2-Dibromo-3-Chloropropane	+++++	+++++	-26.9	+++++					50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	-27.6	+++++					50			
Dodecane	+++++	+++++	+++++	+++++	-21.4						50	
1,2,4-Trichlorobenzene	+++++	-19.3		+++++				50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1 Analy Batch No.: 24544

SDG No.: _____

Instrument ID: MH GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/17/2018 18:52 Calibration End Date: 10/18/2018 03:53 Calibration ID: 1711

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	-20.7						80				
Hexachlorobutadiene	+++++	-11.6						50				
1,2,3-Trichlorobenzene	+++++	-14.7						50				
2-Methylnaphthalene	+++++	+++++	+++++	+++++	-35.7						80	
1-Methylnaphthalene	+++++	+++++	+++++	-11.9						80		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 17-Oct-2018 18:52:30 ALS Bottle#: 14 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009689-002
 Misc. Info.: 180295
 Operator ID: AFB Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Oct-2018 12:38:39 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh

Date: 18-Oct-2018 11:07:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.384	8.380	0.004	89	240921	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.581	10.578	0.003	93	1273241	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.000	85	1147365	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.047	0.000	97	782558	4.00	4.08	
6 Chlorodifluoromethane	51	3.480	3.478	0.002	97	1104610	8.00	7.27	
7 Propene	41	3.490	3.490	0.000	98	436973	8.00	7.28	
8 Dichlorodifluoromethane	85	3.536	3.537	-0.001	100	1594454	8.00	7.03	
9 Chloromethane	52	3.702	3.705	-0.003	97	177122	8.00	6.97	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.711	0.001	89	1707135	8.00	7.67	
11 Acetaldehyde	44	3.847	3.856	-0.009	96	902716	40.0	32.9	
12 Vinyl chloride	62	3.862	3.861	0.001	99	599263	8.00	7.08	
13 Butadiene	54	3.940	3.942	-0.002	76	383304	8.00	7.32	
14 Butane	43	3.940	3.942	-0.002	81	661555	8.00	7.31	
15 Bromomethane	94	4.239	4.237	0.002	98	765599	8.00	7.31	
16 Chloroethane	64	4.369	4.368	0.001	97	259202	8.00	7.20	
17 Ethanol	31	4.472	4.488	-0.016	97	1051020	40.0	37.3	
18 Vinyl bromide	106	4.648	4.645	0.003	97	750721	8.00	7.46	
19 2-Methylbutane	43	4.689	4.691	-0.002	87	476844	8.00	7.63	
21 Trichlorofluoromethane	101	4.896	4.895	0.001	100	2071936	8.00	7.74	
20 Acrolein	56	4.911	4.924	-0.013	94	179778	8.00	8.27	
22 Acetonitrile	40	4.973	4.984	-0.011	98	226283	8.00	7.77	
23 Acetone	58	5.025	5.047	-0.022	98	743912	24.0	20.9	
24 Pentane	72	5.108	5.106	0.002	99	80061	8.00	7.78	
25 Isopropyl alcohol	45	5.118	5.153	-0.035	94	2154201	24.0	22.8	
26 Ethyl ether	31	5.273	5.297	-0.024	96	530674	8.00	7.62	
27 1,1-Dichloroethene	96	5.568	5.567	0.001	99	623623	8.00	7.71	
28 Acrylonitrile	53	5.671	5.680	-0.009	94	402844	8.00	7.85	
30 1,1,2-Trichloro-1,2,2-trif	101	5.738	5.736	0.002	97	1455333	8.00	7.71	
29 2-Methyl-2-propanol	59	5.692	5.744	-0.052	94	1021501	8.00	7.93	
31 Methylene Chloride	84	5.904	5.902	0.002	94	572285	8.00	6.46	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.914	5.917	-0.003	98	466773	8.00	7.68	
33 Carbon disulfide	76	6.053	6.054	-0.001	99	1817467	8.00	7.69	
34 trans-1,2-Dichloroethene	96	6.684	6.682	0.002	99	649327	8.00	7.91	
35 2-Methylpentane	43	6.699	6.701	-0.002	93	1095778	8.00	7.81	
36 Methyl tert-butyl ether	73	6.818	6.858	-0.040	96	1519448	8.00	8.09	
37 1,1-Dichloroethane	63	7.092	7.093	-0.001	100	1104478	8.00	7.70	
38 Vinyl acetate	43	7.201	7.211	-0.010	100	1505546	8.00	8.25	
40 Hexane	56	7.661	7.661	0.000	86	406384	8.00	7.78	
39 2-Butanone (MEK)	72	7.640	7.672	-0.032	97	279577	8.00	7.65	
171 Isopropyl ether	45	7.826	7.858	-0.032	97	1790918	8.00	8.01	
41 cis-1,2-Dichloroethene	96	8.059	8.054	0.005	92	678637	8.00	7.90	
42 Ethyl acetate	43	8.250	8.275	-0.025	99	1252010	8.00	7.92	
43 Chloroform	83	8.400	8.393	0.007	96	1438473	8.00	7.64	
173 Tert-butyl ethyl ether	59	8.493	8.526	-0.033	95	1721564	8.00	8.20	
44 Tetrahydrofuran	42	8.798	8.843	-0.045	90	578478	8.00	7.89	
45 1,1,1-Trichloroethane	97	9.408	9.407	0.001	96	1426597	8.00	8.08	
46 1,2-Dichloroethane	62	9.516	9.515	0.001	98	862565	8.00	8.04	
47 Benzene	78	10.012	10.010	0.002	97	1864526	8.00	8.03	
48 Cyclohexane	69	10.012	10.012	0.000	89	267264	8.00	8.60	
50 Carbon tetrachloride	117	10.033	10.034	-0.001	97	1666734	8.00	8.67	
49 n-Butanol	31	10.002	10.043	-0.041	82	227431	8.00	8.55	
51 2,3-Dimethylpentane	71	10.147	10.145	0.002	90	368716	8.00	8.29	
52 Thiophene	84	10.297	10.292	0.005	93	1098550	8.00	8.23	
53 Isooctane	57	10.803	10.804	-0.001	98	2654833	8.00	8.19	
55 n-Heptane	71	11.196	11.196	0.000	90	578690	8.00	8.30	
54 1,2-Dichloropropane	63	11.268	11.268	0.000	94	748452	8.00	8.19	
56 Trichloroethene	130	11.310	11.308	0.002	97	927699	8.00	8.24	
57 Dibromomethane	93	11.392	11.388	0.004	93	992751	8.00	7.94	
58 Dichlorobromomethane	83	11.542	11.541	0.001	98	1538909	8.00	8.60	
59 1,4-Dioxane	88	11.568	11.603	-0.035	86	279769	8.00	8.28	
60 Methyl methacrylate	41	11.656	11.665	-0.009	97	721535	8.00	8.37	
61 Methylcyclohexane	83	12.095	12.092	0.003	96	1067893	8.00	8.61	
62 4-Methyl-2-pentanone (MIBK)	43	12.524	12.547	-0.023	97	1404767	8.00	8.42	
63 cis-1,3-Dichloropropene	75	12.571	12.568	0.003	91	1180751	8.00	8.96	
64 trans-1,3-Dichloropropene	75	13.279	13.278	0.001	96	1105250	8.00	8.76	
65 Toluene	91	13.403	13.400	0.003	93	2376712	8.00	8.31	
66 1,1,2-Trichloroethane	83	13.475	13.477	-0.002	96	790720	8.00	7.89	
69 2-Hexanone	58	13.883	13.901	-0.018	93	741044	8.00	8.65	
71 n-Octane	85	14.111	14.112	-0.001	92	644085	8.00	8.45	
70 Chlorodibromomethane	129	14.183	14.183	0.000	97	1933775	8.00	9.20	
72 Ethylene Dibromide	107	14.478	14.476	0.002	98	1574024	8.00	8.58	
73 Tetrachloroethene	129	14.555	14.556	-0.001	95	981893	8.00	8.29	
74 Chlorobenzene	112	15.439	15.440	-0.001	96	2037479	8.00	8.18	
75 2,3-Dimethylheptane	43	15.475	15.474	0.001	94	1859820	8.00	8.11	
76 Ethylbenzene	91	15.739	15.735	0.004	98	3215179	8.00	8.73	
78 m-Xylene & p-Xylene	91	15.899	15.900	-0.001	99	5251581	16.0	18.5	
81 n-Nonane	57	16.338	16.335	0.003	88	1389576	8.00	8.78	
79 Bromoform	173	16.344	16.343	0.001	96	2759593	8.00	13.0	
80 Styrene	104	16.369	16.366	0.003	98	1844426	8.00	9.46	
82 o-Xylene	91	16.432	16.428	0.004	98	2450277	8.00	8.45	
83 1,1,2,2-Tetrachloroethane	83	16.757	16.754	0.003	99	2173230	8.00	8.51	
84 1,2,3-Trichloropropane	110	16.917	16.914	0.003	99	509537	8.00	8.34	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.021	17.021	0.000	96	3506188	8.00	8.49	
86 N-Propylbenzene	120	17.584	17.585	-0.001	99	1002888	8.00	8.75	
87 2-Chlorotoluene	126	17.631	17.628	0.003	96	960742	8.00	8.40	
88 4-Ethyltoluene	105	17.749	17.749	0.000	99	3717848	8.00	8.70	
89 1,3,5-Trimethylbenzene	120	17.832	17.828	0.004	93	1508317	8.00	8.78	
90 Alpha Methyl Styrene	118	18.075	18.075	0.000	89	1664113	8.00	9.57	
91 n-Decane	57	18.153	18.149	0.004	91	1860456	8.00	8.21	
92 tert-Butylbenzene	119	18.287	18.282	0.005	91	3632788	8.00	8.89	
93 1,2,4-Trimethylbenzene	105	18.297	18.298	-0.001	95	3392345	8.00	9.08	
95 sec-Butylbenzene	105	18.576	18.572	0.004	99	5173163	8.00	9.18	
94 1,3-Dichlorobenzene	146	18.582	18.582	0.000	97	2733459	8.00	9.40	
96 Benzyl chloride	91	18.669	18.665	0.004	98	3025903	8.00	10.2	
97 1,4-Dichlorobenzene	146	18.680	18.675	0.005	97	2539469	8.00	9.39	
98 4-Isopropyltoluene	119	18.752	18.748	0.004	97	4006843	8.00	9.03	
99 1,2,3-Trimethylbenzene	105	18.804	18.800	0.004	98	3079547	8.00	8.65	
100 Butylcyclohexane	83	18.866	18.862	0.004	98	2472228	8.00	8.62	
101 1,2-Dichlorobenzene	146	19.062	19.058	0.004	95	2702538	8.00	9.51	
102 2,3-Dihydroindene	117	19.062	19.058	0.004	93	3422060	8.00	9.48	
103 Indene	116	19.197	19.196	0.001	90	2974938	8.00	9.48	
104 n-Butylbenzene	91	19.207	19.207	0.000	98	4334268	8.00	8.77	
105 Undecane	57	19.548	19.548	0.000	94	2222612	8.00	8.29	
106 1,2-Dibromo-3-Chloropropan	157	19.698	19.694	0.004	93	1511341	8.00	10.9	
107 1,2,4,5-Tetramethylbenzene	119	20.003	20.003	0.000	97	4053710	8.00	10.1	
110 Dodecane	57	20.649	20.648	0.001	97	2353086	8.00	8.64	
111 1,2,4-Trichlorobenzene	180	20.835	20.835	0.000	93	2659534	8.00	10.9	
113 Naphthalene	128	20.980	20.980	0.000	99	4625923	8.00	9.42	
115 Hexachlorobutadiene	225	21.212	21.209	0.003	90	2746538	8.00	9.65	
116 1,2,3-Trichlorobenzene	180	21.279	21.279	0.000	95	2234420	8.00	8.72	
117 2-Methylnaphthalene	142	21.977	21.977	0.000	99	2368674	8.00	10.1	
118 1-Methylnaphthalene	142	22.112	22.107	0.005	99	2300404	8.00	9.13	
A 120 C8 Range	1	14.111	(14.064-14.157)		0	5792857	8.00	8.33	
S 121 Xylenes, Total	100				0		24.0	26.9	
S 122 1,2-Dichloroethene, Total	1				0		16.0	15.8	

Reagents:

40L9DQP_00006

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C09.D

Injection Date: 17-Oct-2018 18:52:30

Instrument ID: MH

Operator ID: AFB

Lims ID: IC L9

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

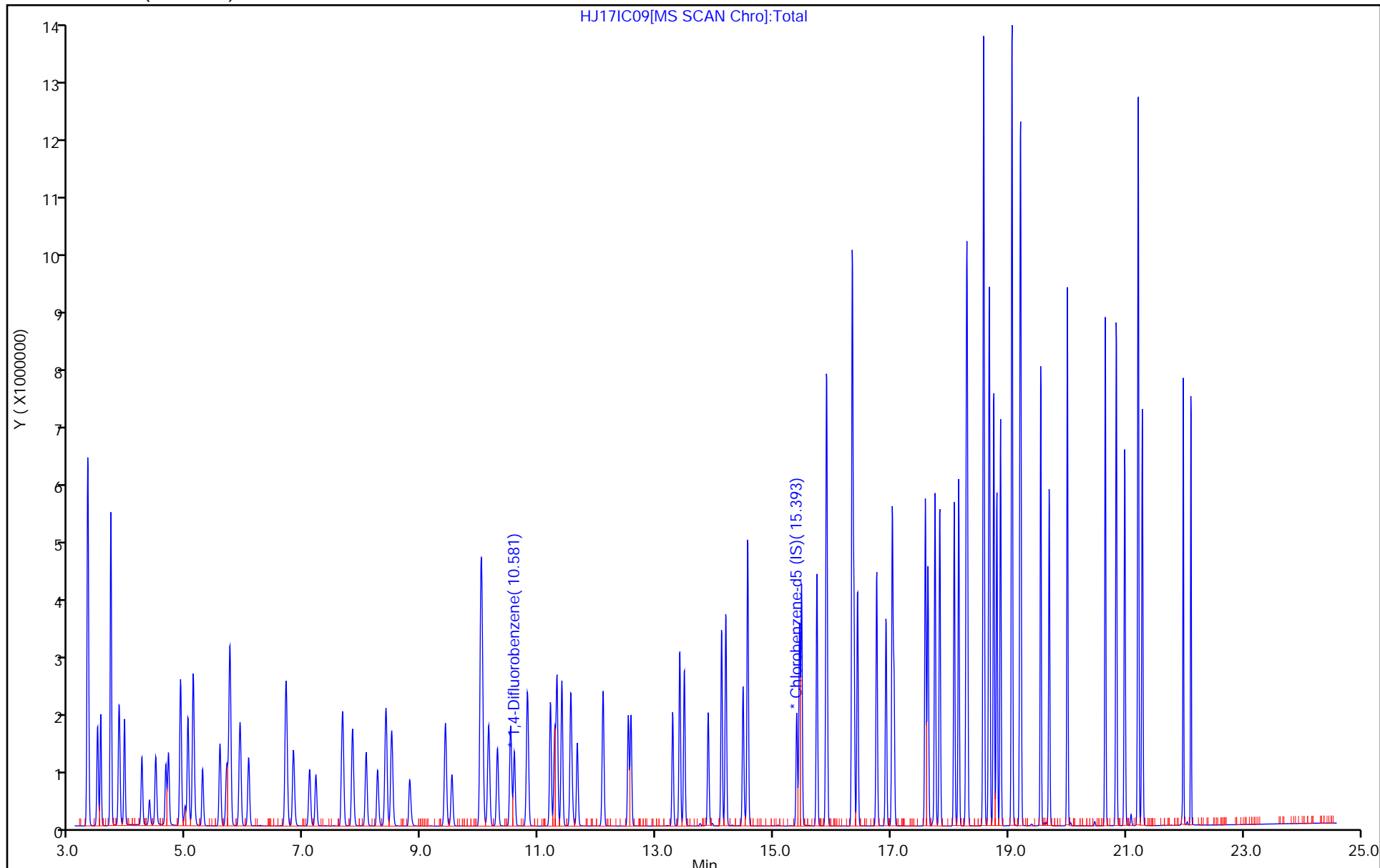
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC09.D

Injection Date: 17-Oct-2018 18:52:30

Instrument ID: MH

Lims ID: IC L9

Client ID:

Operator ID: AFB

ALS Bottle#: 14

Worklist Smp#: 2

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

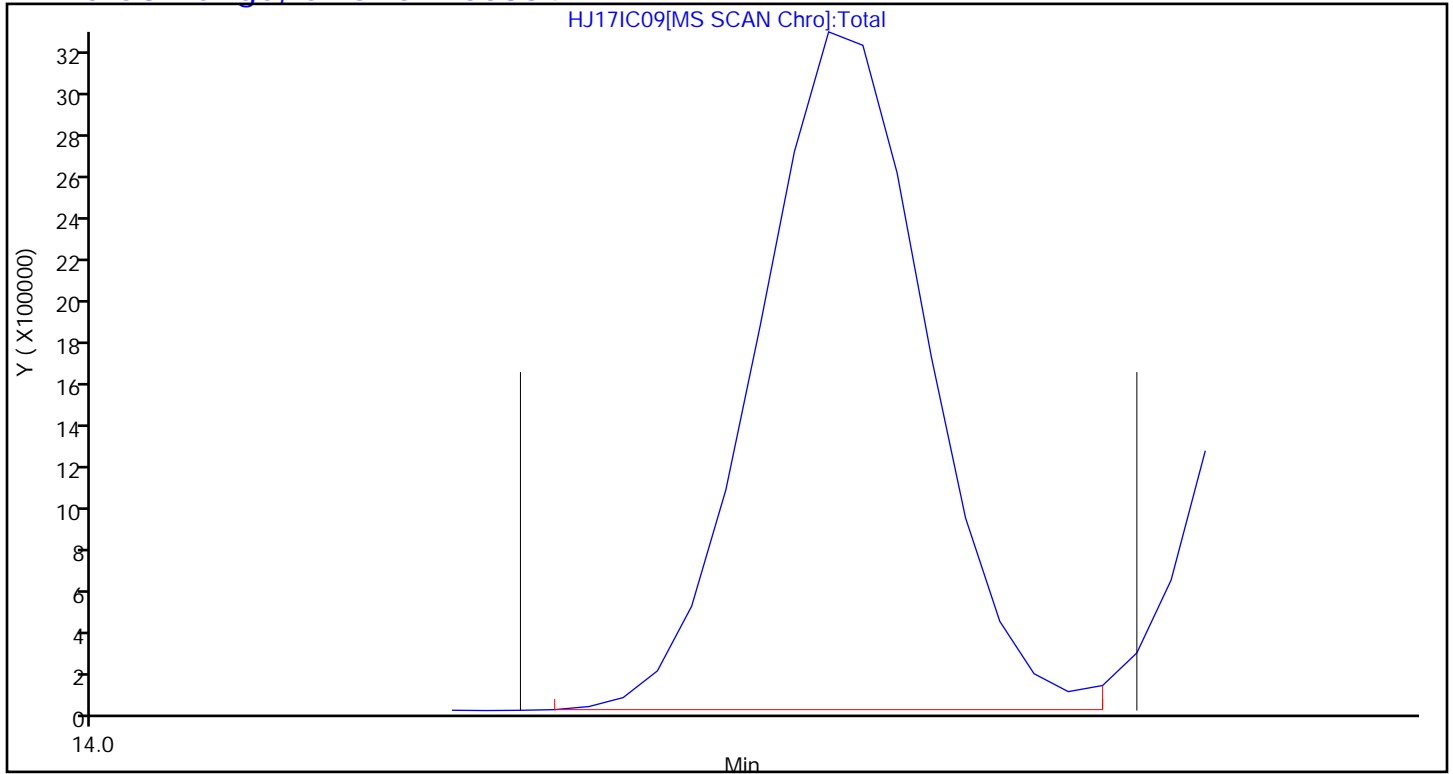
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 17-Oct-2018 20:25:30 ALS Bottle#: 15 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009689-004
 Misc. Info.: 180294
 Operator ID: AFB Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Oct-2018 12:38:46 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh

Date: 18-Oct-2018 10:48:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.395	8.380	0.015	95	252923	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.591	10.578	0.013	93	1311550	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.000	84	1220175	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.052	17.047	0.005	96	823284	4.00	4.03	
6 Chlorodifluoromethane	51	3.480	3.478	0.002	96	2454603	16.0	15.4	
7 Propene	41	3.490	3.490	0.000	98	969571	16.0	15.4	
8 Dichlorodifluoromethane	85	3.537	3.537	-0.001	100	3498699	16.0	14.7	
9 Chloromethane	52	3.707	3.705	0.002	100	379355	16.0	14.2	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.711	0.001	89	3565206	16.0	15.3	
11 Acetaldehyde	44	3.847	3.856	-0.009	98	1754916	80.0	60.9	
12 Vinyl chloride	62	3.862	3.861	0.001	99	1183945	16.0	13.3	
13 Butadiene	54	3.945	3.942	0.003	76	761505	16.0	13.9	
14 Butane	43	3.945	3.942	0.003	82	1288437	16.0	13.6	
15 Bromomethane	94	4.239	4.237	0.002	98	1514919	16.0	13.8	
16 Chloroethane	64	4.369	4.368	0.001	98	508329	16.0	13.5	
17 Ethanol	31	4.482	4.488	-0.006	97	1952618	80.0	66.0	
18 Vinyl bromide	106	4.648	4.645	0.003	97	1484151	16.0	14.1	
19 2-Methylbutane	43	4.694	4.691	0.003	86	905105	16.0	13.8	
21 Trichlorofluoromethane	101	4.901	4.895	0.006	99	4458456	16.0	15.9	
20 Acrolein	56	4.916	4.924	-0.008	94	368757	16.0	16.2	
22 Acetonitrile	40	4.984	4.984	0.000	98	460857	16.0	15.1	
23 Acetone	58	5.030	5.047	-0.017	98	1518308	48.0	40.6	
24 Pentane	72	5.113	5.106	0.007	99	167286	16.0	15.5	
25 Isopropyl alcohol	45	5.134	5.153	-0.019	97	4425289	48.0	44.6	
26 Ethyl ether	31	5.273	5.297	-0.024	96	1109865	16.0	15.2	
27 1,1-Dichloroethene	96	5.573	5.567	0.006	99	1330255	16.0	15.7	
28 Acrylonitrile	53	5.687	5.680	0.007	94	851031	16.0	15.8	
30 1,1,2-Trichloro-1,2,2-trif	101	5.743	5.736	0.007	97	3147482	16.0	15.9	
29 2-Methyl-2-propanol	59	5.697	5.744	-0.047	93	2176189	16.0	16.1	
31 Methylene Chloride	84	5.909	5.902	0.007	94	1180311	16.0	12.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.924	5.917	0.007	98	942347	16.0	14.8	
33 Carbon disulfide	76	6.064	6.054	0.010	99	3828812	16.0	15.4	
34 trans-1,2-Dichloroethene	96	6.694	6.682	0.012	99	1412647	16.0	16.4	
35 2-Methylpentane	43	6.710	6.701	0.009	93	2319829	16.0	15.8	
36 Methyl tert-butyl ether	73	6.824	6.858	-0.034	96	3233406	16.0	16.4	
37 1,1-Dichloroethane	63	7.103	7.093	0.010	100	2346930	16.0	15.6	
38 Vinyl acetate	43	7.211	7.211	0.000	100	3215352	16.0	16.8	
40 Hexane	56	7.666	7.661	0.005	83	882318	16.0	16.1	
39 2-Butanone (MEK)	72	7.651	7.672	-0.021	97	600017	16.0	15.6	
171 Isopropyl ether	45	7.831	7.858	-0.027	97	3838107	16.0	16.4	
41 cis-1,2-Dichloroethene	96	8.069	8.054	0.015	92	1461985	16.0	16.2	
42 Ethyl acetate	43	8.260	8.275	-0.015	99	2666811	16.0	16.1	
43 Chloroform	83	8.410	8.393	0.017	97	3099762	16.0	15.7	
173 Tert-butyl ethyl ether	59	8.498	8.526	-0.028	95	3700640	16.0	16.8	
44 Tetrahydrofuran	42	8.803	8.843	-0.040	91	1236937	16.0	16.1	
45 1,1,1-Trichloroethane	97	9.413	9.407	0.006	95	3154402	16.0	17.0	
46 1,2-Dichloroethane	62	9.527	9.515	0.012	98	1832120	16.0	16.6	
47 Benzene	78	10.023	10.010	0.013	96	4109749	16.0	17.2	
48 Cyclohexane	69	10.018	10.012	0.006	93	589094	16.0	18.4	
50 Carbon tetrachloride	117	10.043	10.034	0.009	99	3963930	16.0	20.0	
49 n-Butanol	31	10.002	10.043	-0.041	75	486059	16.0	17.7	
51 2,3-Dimethylpentane	71	10.152	10.145	0.007	90	775365	16.0	16.9	
52 Thiophene	84	10.302	10.292	0.010	94	2307234	16.0	16.8	
53 Isooctane	57	10.814	10.804	0.010	98	5777053	16.0	17.3	
55 n-Heptane	71	11.206	11.196	0.010	89	1265896	16.0	17.6	
54 1,2-Dichloropropane	63	11.279	11.268	0.011	93	1606262	16.0	17.1	
56 Trichloroethene	130	11.315	11.308	0.007	98	2053691	16.0	17.7	
57 Dibromomethane	93	11.398	11.388	0.010	92	2174162	16.0	16.9	
58 Dichlorobromomethane	83	11.547	11.541	0.006	98	3422464	16.0	18.6	
59 1,4-Dioxane	88	11.568	11.603	-0.035	85	591213	16.0	17.0	
60 Methyl methacrylate	41	11.661	11.665	-0.004	97	1545020	16.0	17.4	
61 Methylcyclohexane	83	12.100	12.092	0.008	96	2356767	16.0	18.4	
62 4-Methyl-2-pentanone (MIBK)	43	12.524	12.547	-0.023	97	3067554	16.0	17.8	
63 cis-1,3-Dichloropropene	75	12.571	12.568	0.003	91	2591823	16.0	19.1	
64 trans-1,3-Dichloropropene	75	13.284	13.278	0.006	96	2476631	16.0	18.5	
65 Toluene	91	13.403	13.400	0.003	93	5315490	16.0	17.5	
66 1,1,2-Trichloroethane	83	13.480	13.477	0.003	97	1716755	16.0	16.1	
69 2-Hexanone	58	13.889	13.901	-0.012	94	1634279	16.0	17.9	
71 n-Octane	85	14.116	14.112	0.004	90	1468043	16.0	18.1	
70 Chlorodibromomethane	129	14.189	14.183	0.006	97	4565185	16.0	20.4	
72 Ethylene Dibromide	107	14.483	14.476	0.007	98	3561069	16.0	18.3	
73 Tetrachloroethene	129	14.561	14.556	0.005	95	2294765	16.0	18.2	
74 Chlorobenzene	112	15.444	15.440	0.004	96	4725918	16.0	17.8	
75 2,3-Dimethylheptane	43	15.475	15.474	0.001	92	3943713	16.0	16.2	
76 Ethylbenzene	91	15.739	15.735	0.004	98	7269923	16.0	18.6	
78 m-Xylene & p-Xylene	91	15.904	15.900	0.004	98	11522460	32.0	38.1	
81 n-Nonane	57	16.339	16.335	0.004	88	2600053	16.0	15.5	
79 Bromoform	173	16.344	16.343	0.001	96	6339904	16.0	28.0	
80 Styrene	104	16.370	16.366	0.004	98	4057142	16.0	19.6	
82 o-Xylene	91	16.432	16.428	0.004	98	5435377	16.0	17.6	
83 1,1,2,2-Tetrachloroethane	83	16.757	16.754	0.003	99	4856452	16.0	17.9	
84 1,2,3-Trichloropropane	110	16.917	16.914	0.003	99	1172723	16.0	18.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.026	17.021	0.005	96	7984229	16.0	18.2	
86 N-Propylbenzene	120	17.589	17.585	0.004	99	2360688	16.0	19.4	
87 2-Chlorotoluene	126	17.631	17.628	0.003	96	2161962	16.0	17.8	
88 4-Ethyltoluene	105	17.750	17.749	0.001	99	8448028	16.0	18.6	
89 1,3,5-Trimethylbenzene	120	17.832	17.828	0.004	93	3477591	16.0	19.0	
90 Alpha Methyl Styrene	118	18.080	18.075	0.005	90	3915618	16.0	21.2	
91 n-Decane	57	18.153	18.149	0.004	92	3998768	16.0	16.6	
92 tert-Butylbenzene	119	18.287	18.282	0.005	93	8250307	16.0	19.0	
93 1,2,4-Trimethylbenzene	105	18.303	18.298	0.005	95	7463222	16.0	18.8	
95 sec-Butylbenzene	105	18.576	18.572	0.004	98	10802758	16.0	18.0	
94 1,3-Dichlorobenzene	146	18.587	18.582	0.005	96	6086981	16.0	19.7	
96 Benzyl chloride	91	18.669	18.665	0.004	99	6718382	16.0	21.3	
97 1,4-Dichlorobenzene	146	18.680	18.675	0.005	96	5899002	16.0	20.5	
98 4-Isopropyltoluene	119	18.752	18.748	0.004	97	9011444	16.0	19.1	
99 1,2,3-Trimethylbenzene	105	18.804	18.800	0.004	98	6919539	16.0	18.3	
100 Butylcyclohexane	83	18.866	18.862	0.004	98	5321415	16.0	17.5	
101 1,2-Dichlorobenzene	146	19.062	19.058	0.004	95	6041563	16.0	20.0	
102 2,3-Dihydroindene	117	19.062	19.058	0.004	94	7348837	16.0	19.1	
103 Indene	116	19.197	19.196	0.001	91	6729138	16.0	20.2	
104 n-Butylbenzene	91	19.212	19.207	0.005	98	8847069	16.0	16.8	
105 Undecane	57	19.548	19.548	0.000	93	4706910	16.0	16.5	
106 1,2-Dibromo-3-Chloropropan	157	19.698	19.694	0.004	92	3782702	16.0	25.5	
107 1,2,4,5-Tetramethylbenzene	119	20.003	20.003	0.000	97	9404993	16.0	22.0	
110 Dodecane	57	20.649	20.648	0.001	98	5153167	16.0	17.8	
111 1,2,4-Trichlorobenzene	180	20.840	20.835	0.005	93	6875220	16.0	26.4	
113 Naphthalene	128	20.980	20.980	0.000	99	11089060	16.0	21.2	
115 Hexachlorobutadiene	225	21.212	21.209	0.003	89	6213576	16.0	20.5	
116 1,2,3-Trichlorobenzene	180	21.280	21.279	0.001	95	5645191	16.0	20.7	
117 2-Methylnaphthalene	142	21.977	21.977	0.000	99	4938958	16.0	19.8	
118 1-Methylnaphthalene	142	22.106	22.107	-0.001	99	4582434	16.0	17.1	
A 120 C8 Range	1	14.111	(14.064-14.168)		0	12772788	16.0	17.8	
S 121 Xylenes, Total	100				0		48.0	55.8	
S 122 1,2-Dichloroethene, Total	1				0		32.0	32.6	

Reagents:

40L10DQP_00006

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C10.D

Injection Date: 17-Oct-2018 20:25:30

Instrument ID: MH

Operator ID: AFB

Lims ID: IC L10

Worklist Smp#: 4

Client ID:

Purge Vol: 500.000 mL

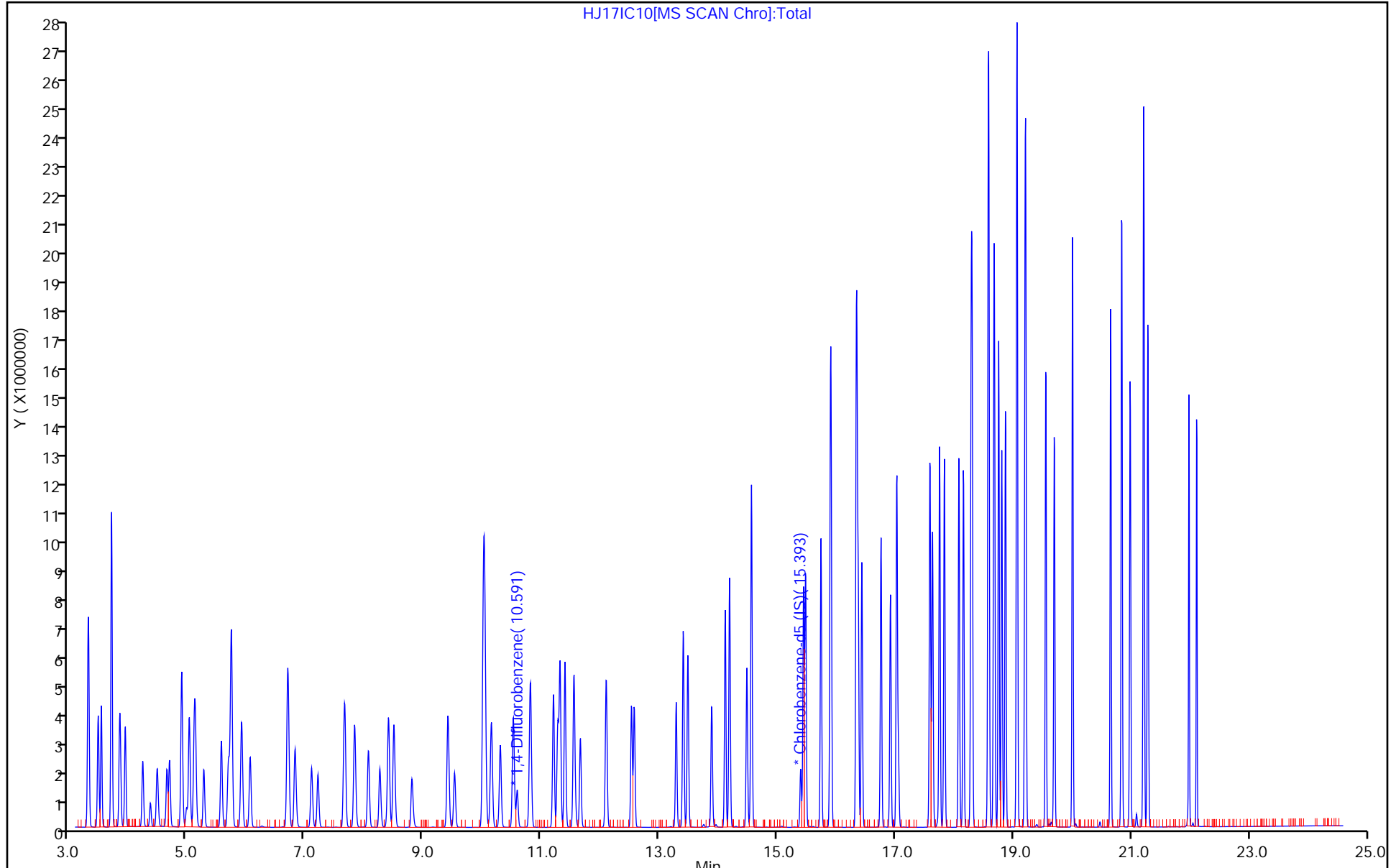
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC10.D

Injection Date: 17-Oct-2018 20:25:30

Instrument ID: MH

Lims ID: IC L10

Client ID:

Operator ID: AFB

ALS Bottle#: 15

Worklist Smp#: 4

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

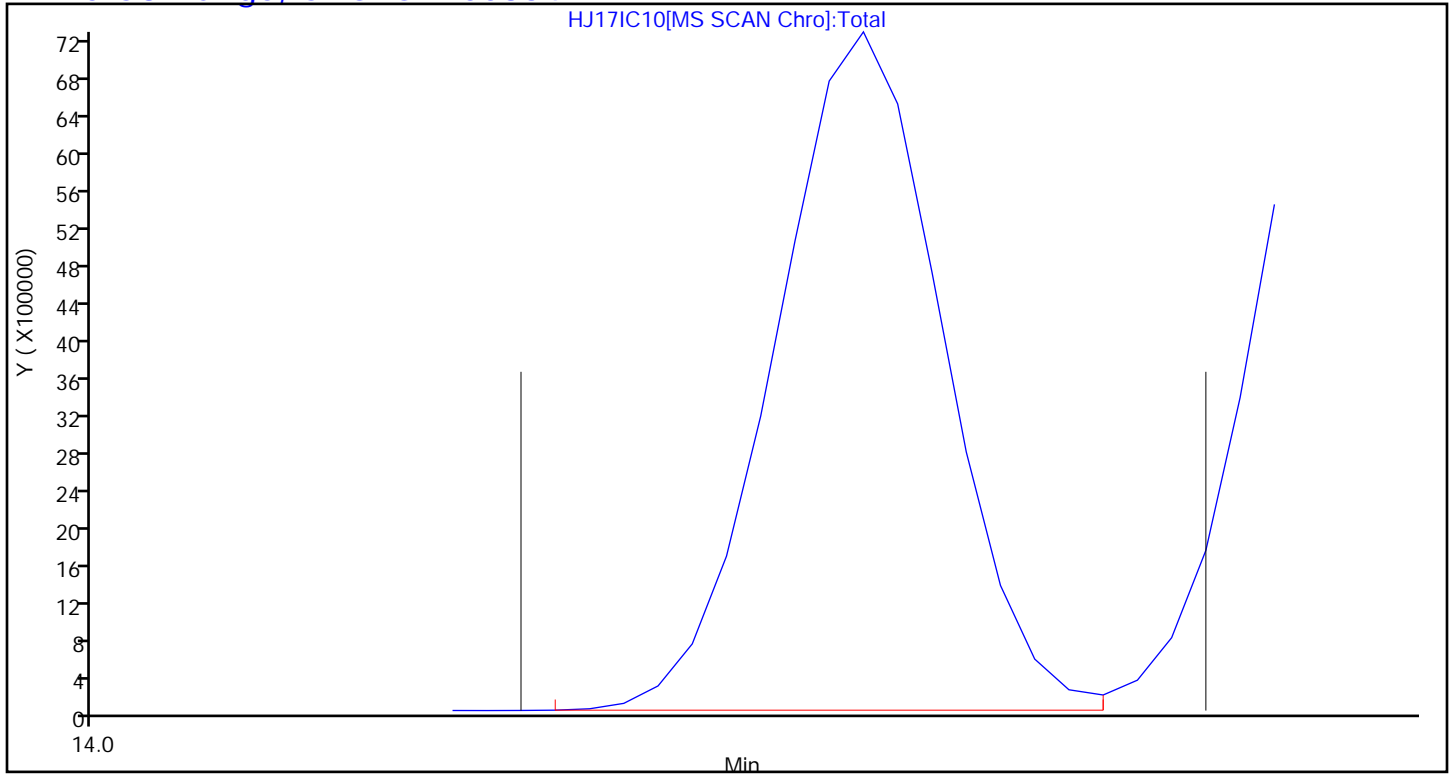
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 17-Oct-2018 22:43:30 ALS Bottle#: 1 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009689-007
 Misc. Info.: 185563
 Operator ID: AFB Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Oct-2018 14:26:16 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: barlozhetskayaa

Date: 18-Oct-2018 14:26:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.380	-0.001	85	234647	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.578	-0.002	94	1288333	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.000	86	1067694	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.047	0.000	96	675998	4.00	3.78	
6 Chlorodifluoromethane	51	3.474	3.478	-0.004	90	2774	0.0200	0.0187	
7 Propene	41	3.495	3.490	0.005	94	1608	0.0200	0.0275	
8 Dichlorodifluoromethane	85	3.542	3.537	0.005	99	5359	0.0200	0.0243	
9 Chloromethane	52	3.702	3.705	-0.003	73	1234	0.0200	0.0498	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.711	0.001	87	4637	0.0200	0.0214	
11 Acetaldehyde	44	3.867	3.856	0.011	88	14376	0.1000	0.5380	
12 Vinyl chloride	62	3.862	3.861	0.001	37	2009	0.0200	0.0244	
13 Butadiene	54	3.945	3.942	0.003	71	1699	0.0200	0.0333	
14 Butane	43	3.950	3.942	0.008	86	2554	0.0200	0.0290	
15 Bromomethane	94	4.239	4.237	0.002	94	2871	0.0200	0.0282	
16 Chloroethane	64	4.374	4.368	0.006	60	1407	0.0200	0.0401	
17 Ethanol	31	4.508	4.488	0.020	91	4009	0.1000	0.1461	
18 Vinyl bromide	106	4.643	4.645	-0.003	89	2704	0.0200	0.0276	
19 2-Methylbutane	43	4.694	4.691	0.003	74	3122	0.0200	0.0513	
21 Trichlorofluoromethane	101	4.896	4.895	0.001	98	5551	0.0200	0.0213	
20 Acrolein	56	4.937	4.924	0.013	58	1582	0.0200	0.0747	
23 Acetone	58	5.071	5.047	0.024	96	5855	0.0600	0.1686	
24 Pentane	72	5.097	5.106	-0.009	66	232	0.0200	0.0231	
25 Isopropyl alcohol	45	5.190	5.153	0.037	99	9885	0.0600	0.1073	
26 Ethyl ether	31	5.325	5.297	0.028	91	1475	0.0200	0.0217	
27 1,1-Dichloroethene	96	5.568	5.567	0.001	96	2141	0.0200	0.0272	
28 Acrylonitrile	53	5.687	5.680	0.007	94	1144	0.0200	0.0229	
30 1,1,2-Trichloro-1,2,2-trif	101	5.738	5.736	0.002	94	3857	0.0200	0.0210	
29 2-Methyl-2-propanol	59	5.805	5.744	0.061	87	2732	0.0200	0.0218	
31 Methylene Chloride	84	5.898	5.902	-0.004	93	10353	0.0200	0.1200	
32 3-Chloro-1-propene	39	5.914	5.917	-0.003	35	1813	0.0200	0.0306	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.048	6.054	-0.006	96	5017	0.0200	0.0218	
34 trans-1,2-Dichloroethene	96	6.679	6.682	-0.003	92	2024	0.0200	0.0253	
35 2-Methylpentane	43	6.700	6.701	-0.001	89	3416	0.0200	0.0250	
36 Methyl tert-butyl ether	73	6.917	6.858	0.059	63	4415	0.0200	0.0241	
37 1,1-Dichloroethane	63	7.097	7.093	0.004	96	3232	0.0200	0.0231	
38 Vinyl acetate	43	7.227	7.211	0.016	99	3427	0.0200	0.0193	
40 Hexane	56	7.661	7.661	0.000	82	1328	0.0200	0.0261	
39 2-Butanone (MEK)	72	7.707	7.672	0.035	98	1131	0.0200	0.0318	
171 Isopropyl ether	45	7.909	7.858	0.051	96	4959	0.0200	0.0228	
41 cis-1,2-Dichloroethene	96	8.054	8.054	0.000	92	2061	0.0200	0.0246	
42 Ethyl acetate	43	8.302	8.275	0.027	97	4015	0.0200	0.0261	
43 Chloroform	83	8.384	8.393	-0.009	82	3921	0.0200	0.0214	
173 Tert-butyl ethyl ether	59	8.570	8.526	0.044	96	4145	0.0200	0.0203	
44 Tetrahydrofuran	42	8.896	8.843	0.053	72	1973	0.0200	0.0276	
45 1,1,1-Trichloroethane	97	9.403	9.407	-0.004	95	4030	0.0200	0.0234	
46 1,2-Dichloroethane	62	9.516	9.515	0.001	96	2381	0.0200	0.0219	
47 Benzene	78	10.012	10.010	0.002	96	6616	0.0200	0.0282	
48 Cyclohexane	69	10.007	10.012	-0.005	58	743	0.0200	0.0236	
50 Carbon tetrachloride	117	10.033	10.034	-0.001	91	3725	0.0200	0.0191	
49 n-Butanol	31	10.085	10.043	0.042	20	529	0.0200	0.0197	
51 2,3-Dimethylpentane	71	10.147	10.145	0.002	83	793	0.0200	0.0176	
52 Thiophene	84	10.297	10.292	0.005	92	2651	0.0200	0.0196	
53 Isooctane	57	10.808	10.804	0.004	98	6999	0.0200	0.0213	
55 n-Heptane	71	11.201	11.196	0.005	91	1423	0.0200	0.0202	
54 1,2-Dichloropropane	63	11.274	11.268	0.006	58	1983	0.0200	0.0214	
56 Trichloroethene	130	11.315	11.308	0.007	95	2470	0.0200	0.0217	
57 Dibromomethane	93	11.382	11.388	-0.006	94	3682	0.0200	0.0291	
58 Dichlorobromomethane	83	11.542	11.541	0.001	98	3466	0.0200	0.0191	
59 1,4-Dioxane	88	11.651	11.603	0.048	35	869	0.0200	0.0254	
60 Methyl methacrylate	41	11.682	11.665	0.017	92	1820	0.0200	0.0209	
61 Methylcyclohexane	83	12.085	12.092	-0.007	87	2495	0.0200	0.0199	
62 4-Methyl-2-pentanone (MIBK)	43	12.571	12.547	0.024	90	3458	0.0200	0.0205	
63 cis-1,3-Dichloropropene	75	12.571	12.568	0.003	96	2728	0.0200	0.0205	
64 trans-1,3-Dichloropropene	75	13.274	13.278	-0.004	96	2200	0.0200	0.0187	
65 Toluene	91	13.403	13.400	0.003	92	6182	0.0200	0.0232	
66 1,1,2-Trichloroethane	83	13.480	13.477	0.003	93	2023	0.0200	0.0217	
69 2-Hexanone	58	13.920	13.901	0.019	87	1347	0.0200	0.0169	
71 n-Octane	85	14.106	14.112	-0.006	88	1260	0.0200	0.0178	
70 Chlorodibromomethane	129	14.173	14.183	-0.010	94	2901	0.0200	0.0148	
72 Ethylene Dibromide	107	14.478	14.476	0.002	99	3516	0.0200	0.0206	
73 Tetrachloroethene	129	14.555	14.556	-0.001	94	2283	0.0200	0.0207	
74 Chlorobenzene	112	15.439	15.440	-0.001	97	4941	0.0200	0.0213	
75 2,3-Dimethylheptane	43	15.470	15.474	-0.004	93	4270	0.0200	0.0200	
76 Ethylbenzene	91	15.739	15.735	0.004	99	7009	0.0200	0.0204	
78 m-Xylene & p-Xylene	91	15.894	15.900	-0.006	97	9979	0.0400	0.0377	
81 n-Nonane	57	16.333	16.335	-0.002	90	2633	0.0200	0.0179	
79 Bromoform	173	16.344	16.343	0.001	75	2126	0.0200	0.0107	
80 Styrene	104	16.364	16.366	-0.002	96	3174	0.0200	0.0175	
82 o-Xylene	91	16.426	16.428	-0.002	99	5321	0.0200	0.0197	
83 1,1,2,2-Tetrachloroethane	83	16.757	16.754	0.003	96	4985	0.0200	0.0210	
84 1,2,3-Trichloropropane	110	16.912	16.914	-0.002	96	1211	0.0200	0.0213	
85 Isopropylbenzene	105	17.021	17.021	0.000	92	7986	0.0200	0.0208	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	17.584	17.585	-0.001	100	2060	0.0200	0.0193	
87 2-Chlorotoluene	126	17.631	17.628	0.003	95	1874	0.0200	0.0176	
88 4-Ethyltoluene	105	17.749	17.749	0.000	98	6562	0.0200	0.0165	
89 1,3,5-Trimethylbenzene	120	17.827	17.828	-0.001	93	2925	0.0200	0.0183	
90 Alpha Methyl Styrene	118	18.075	18.075	0.000	91	2821	0.0200	0.0174	
91 n-Decane	57	18.147	18.149	-0.002	94	3010	0.0200	0.0143	
92 tert-Butylbenzene	119	18.282	18.282	0.000	89	5440	0.0200	0.0143	
93 1,2,4-Trimethylbenzene	105	18.297	18.298	-0.001	94	5241	0.0200	0.0151	
95 sec-Butylbenzene	105	18.571	18.572	-0.001	97	7557	0.0200	0.0144	
94 1,3-Dichlorobenzene	146	18.582	18.582	0.000	97	4675	0.0200	0.0173	
96 Benzyl chloride	91	18.664	18.665	-0.001	81	4289	0.0200	0.0156	
97 1,4-Dichlorobenzene	146	18.669	18.675	-0.006	93	4642	0.0200	0.0185	
98 4-Isopropyltoluene	119	18.747	18.748	-0.001	96	6103	0.0200	0.0148	
99 1,2,3-Trimethylbenzene	105	18.799	18.800	-0.001	97	5130	0.0200	0.0155	
100 Butylcyclohexane	83	18.866	18.862	0.004	95	3925	0.0200	0.0147	
101 1,2-Dichlorobenzene	146	19.057	19.058	-0.001	92	4886	0.0200	0.0185	
102 2,3-Dihydroindene	117	19.057	19.058	-0.001	92	5238	0.0200	0.0156	
103 Indene	116	19.191	19.196	-0.005	87	4095	0.0200	0.0140	
104 n-Butylbenzene	91	19.207	19.207	0.000	95	7172	0.0200	0.0156	
105 Undecane	57	19.548	19.548	0.000	92	2878	0.0200	0.0115	
106 1,2-Dibromo-3-Chloropropan	157	19.693	19.694	-0.001	96	1475	0.0200	0.0114	
107 1,2,4,5-Tetramethylbenzene	119	20.003	20.003	0.000	96	4893	0.0200	0.0131	
110 Dodecane	57	20.649	20.648	0.001	85	1872	0.0200	0.007382	
111 1,2,4-Trichlorobenzene	180	20.835	20.835	0.000	92	3928	0.0200	0.0173	
113 Naphthalene	128	20.980	20.980	0.000	99	6933	0.0200	0.0152	
115 Hexachlorobutadiene	225	21.212	21.209	0.003	91	4242	0.0200	0.0160	
116 1,2,3-Trichlorobenzene	180	21.279	21.279	0.000	94	4455	0.0200	0.0187	
117 2-Methylnaphthalene	142	21.977	21.977	0.000	93	3101	0.0200	0.0142	
118 1-Methylnaphthalene	142	22.106	22.107	-0.001	97	2832	0.0200	0.0121	
A 120 C8 Range	1	14.103	(14.075-14.147)		0	14608	0.0200	0.0208	
S 121 Xylenes, Total	100				0		0.0600	0.0575	
S 122 1,2-Dichloroethene, Total	1				0		0.0400	0.0500	

Reagents:

40L1-3DQP_00008

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC01.D

Injection Date: 17-Oct-2018 22:43:30

Instrument ID: MH

Operator ID: AFB

Lims ID: IC L1

Worklist Smp#: 7

Client ID:

Purge Vol: 500.000 mL

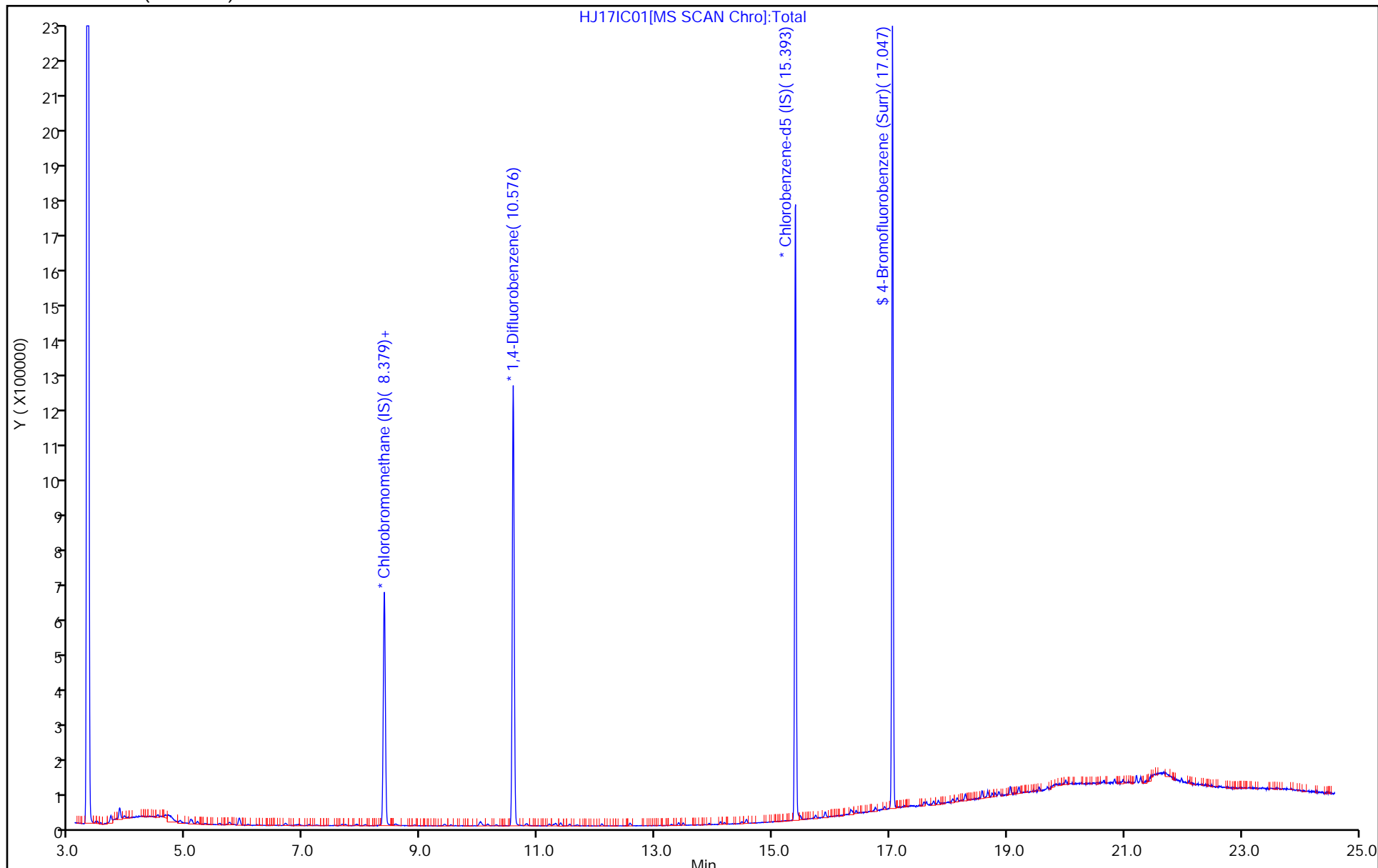
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC01.D

Injection Date: 17-Oct-2018 22:43:30

Instrument ID: MH

Lims ID: IC L1

Client ID:

Operator ID: AFB

ALS Bottle#: 1

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

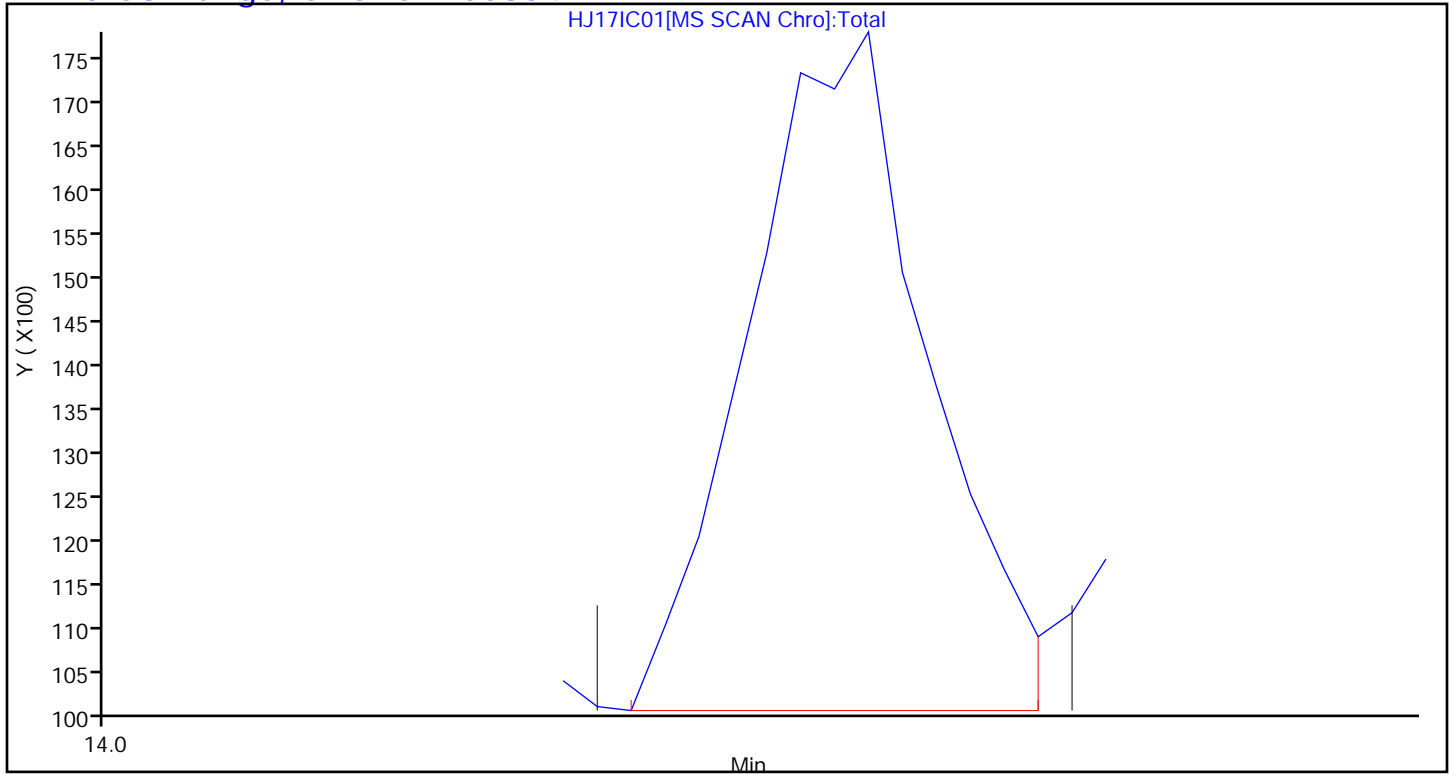
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834

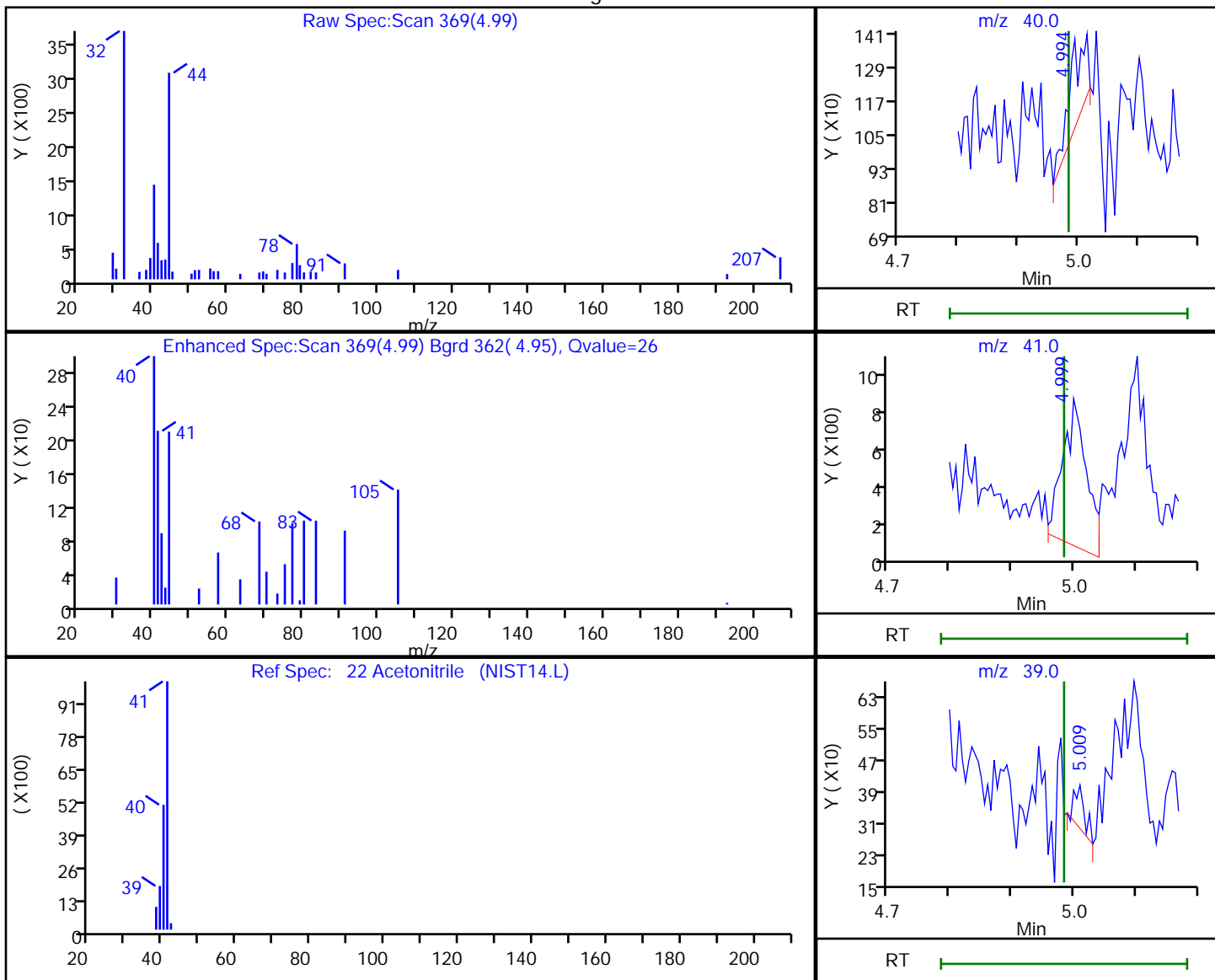


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C01.D
 Injection Date: 17-Oct-2018 22:43:30 Instrument ID: MH
 Lims ID: IC L1
 Client ID:
 Operator ID: AFB ALS Bottle#: 1 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

22 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
4.99	40.00	552	0.019497
5.00	41.00	2023	
5.01	39.00	119	

Reviewer: barlozhetskayaa, 18-Oct-2018 11:48:23

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 17-Oct-2018 23:26:30 ALS Bottle#: 2 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009689-008
 Misc. Info.: 180307
 Operator ID: AFB Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Oct-2018 12:37:51 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh

Date: 18-Oct-2018 10:49:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.380	-0.001	86	213095	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.578	-0.002	94	1170752	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.000	86	985099	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.047	0.000	97	634435	4.00	3.85	
6 Chlorodifluoromethane	51	3.480	3.478	0.002	96	5131	0.0400	0.0382	
7 Propene	41	3.490	3.490	0.000	97	3000	0.0400	0.0565	
8 Dichlorodifluoromethane	85	3.542	3.537	0.005	100	8545	0.0400	0.0426	
9 Chloromethane	52	3.712	3.705	0.007	64	1692	0.0400	0.0752	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.711	0.001	87	7149	0.0400	0.0363	
11 Acetaldehyde	44	3.867	3.856	0.011	87	15998	0.2000	0.6592	
12 Vinyl chloride	62	3.867	3.861	0.006	38	3101	0.0400	0.0414	
13 Butadiene	54	3.945	3.942	0.003	81	2185	0.0400	0.0472	
14 Butane	43	3.945	3.942	0.003	76	3969	0.0400	0.0496	
15 Bromomethane	94	4.234	4.237	-0.003	95	4486	0.0400	0.0485	
16 Chloroethane	64	4.369	4.368	0.001	88	1930	0.0400	0.0606	
17 Ethanol	31	4.508	4.488	0.020	96	6120	0.2000	0.2455	
18 Vinyl bromide	106	4.648	4.645	0.003	95	3989	0.0400	0.0448	
19 2-Methylbutane	43	4.689	4.691	-0.002	87	3317	0.0400	0.0600	
21 Trichlorofluoromethane	101	4.901	4.895	0.006	99	9017	0.0400	0.0381	
20 Acrolein	56	4.937	4.924	0.013	81	1808	0.0400	0.0940	
23 Acetone	58	5.071	5.047	0.024	95	10585	0.1200	0.3356	
24 Pentane	72	5.108	5.106	0.002	66	356	0.0400	0.0391	
25 Isopropyl alcohol	45	5.196	5.153	0.043	97	12293	0.1200	0.1470	
26 Ethyl ether	31	5.325	5.297	0.028	90	2537	0.0400	0.0412	
27 1,1-Dichloroethene	96	5.568	5.567	0.001	98	2874	0.0400	0.0402	
28 Acrylonitrile	53	5.692	5.680	0.012	86	2098	0.0400	0.0462	
30 1,1,2-Trichloro-1,2,2-trif	101	5.733	5.736	-0.003	92	6422	0.0400	0.0385	
29 2-Methyl-2-propanol	59	5.795	5.744	0.051	93	4705	0.0400	0.0413	
31 Methylene Chloride	84	5.904	5.902	0.002	92	10671	0.0400	0.1362	
32 3-Chloro-1-propene	39	5.919	5.917	0.002	41	2051	0.0400	0.0382	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.048	6.054	-0.006	99	9494	0.0400	0.0454	
34 trans-1,2-Dichloroethene	96	6.684	6.682	0.002	97	2993	0.0400	0.0412	
35 2-Methylpentane	43	6.694	6.701	-0.007	93	5133	0.0400	0.0414	
36 Methyl tert-butyl ether	73	6.906	6.858	0.048	96	6513	0.0400	0.0392	
37 1,1-Dichloroethane	63	7.092	7.093	-0.001	98	5071	0.0400	0.0400	
38 Vinyl acetate	43	7.222	7.211	0.011	99	5889	0.0400	0.0365	
40 Hexane	56	7.661	7.661	0.000	81	1981	0.0400	0.0429	
39 2-Butanone (MEK)	72	7.713	7.672	0.041	97	1675	0.0400	0.0518	
171 Isopropyl ether	45	7.904	7.858	0.046	96	7792	0.0400	0.0394	
41 cis-1,2-Dichloroethene	96	8.043	8.054	-0.011	91	3086	0.0400	0.0406	
42 Ethyl acetate	43	8.307	8.275	0.032	80	5701	0.0400	0.0408	
43 Chloroform	83	8.390	8.393	-0.003	28	6721	0.0400	0.0404	
173 Tert-butyl ethyl ether	59	8.570	8.526	0.044	96	6663	0.0400	0.0359	
44 Tetrahydrofuran	42	8.891	8.843	0.048	91	2742	0.0400	0.0423	
45 1,1,1-Trichloroethane	97	9.408	9.407	0.001	97	5950	0.0400	0.0381	
46 1,2-Dichloroethane	62	9.516	9.515	0.001	94	3747	0.0400	0.0380	
47 Benzene	78	10.007	10.010	-0.003	97	8636	0.0400	0.0404	
48 Cyclohexane	69	10.012	10.012	0.000	62	1136	0.0400	0.0398	
50 Carbon tetrachloride	117	10.028	10.034	-0.006	86	6242	0.0400	0.0353	
49 n-Butanol	31	10.085	10.043	0.042	69	902	0.0400	0.0369	
51 2,3-Dimethylpentane	71	10.137	10.145	-0.009	89	1433	0.0400	0.0350	
52 Thiophene	84	10.286	10.292	-0.006	93	4232	0.0400	0.0345	
53 Isooctane	57	10.803	10.804	-0.001	98	11045	0.0400	0.0371	
55 n-Heptane	71	11.196	11.196	0.000	85	2125	0.0400	0.0332	
54 1,2-Dichloropropane	63	11.263	11.268	-0.005	90	3035	0.0400	0.0361	
56 Trichloroethene	130	11.310	11.308	0.002	93	3886	0.0400	0.0375	
57 Dibromomethane	93	11.382	11.388	-0.006	94	5006	0.0400	0.0435	
58 Dichlorobromomethane	83	11.542	11.541	0.001	97	5703	0.0400	0.0346	
59 1,4-Dioxane	88	11.640	11.603	0.037	55	1235	0.0400	0.0398	
60 Methyl methacrylate	41	11.677	11.665	0.012	94	3330	0.0400	0.0420	
61 Methylcyclohexane	83	12.090	12.092	-0.002	96	3876	0.0400	0.0340	
62 4-Methyl-2-pentanone (MIBK)	43	12.571	12.547	0.024	92	5989	0.0400	0.0390	
63 cis-1,3-Dichloropropene	75	12.571	12.568	0.003	83	4083	0.0400	0.0337	
64 trans-1,3-Dichloropropene	75	13.279	13.278	0.001	93	3505	0.0400	0.0324	
65 Toluene	91	13.398	13.400	-0.002	90	9116	0.0400	0.0371	
66 1,1,2-Trichloroethane	83	13.475	13.477	-0.002	96	3208	0.0400	0.0373	
69 2-Hexanone	58	13.915	13.901	0.014	91	2201	0.0400	0.0299	
71 n-Octane	85	14.111	14.112	-0.001	89	2100	0.0400	0.0321	
70 Chlorodibromomethane	129	14.183	14.183	0.000	96	5325	0.0400	0.0295	
72 Ethylene Dibromide	107	14.473	14.476	-0.003	95	4986	0.0400	0.0317	
73 Tetrachloroethene	129	14.555	14.556	-0.001	93	3924	0.0400	0.0386	
74 Chlorobenzene	112	15.439	15.440	-0.001	95	8084	0.0400	0.0378	
75 2,3-Dimethylheptane	43	15.475	15.474	0.001	93	7349	0.0400	0.0373	
76 Ethylbenzene	91	15.734	15.735	-0.001	98	10904	0.0400	0.0345	
78 m-Xylene & p-Xylene	91	15.904	15.900	0.004	98	15812	0.0800	0.0648	
81 n-Nonane	57	16.333	16.335	-0.002	89	3784	0.0400	0.0279	
79 Bromoform	173	16.339	16.343	-0.004	91	5283	0.0400	0.0289	
80 Styrene	104	16.364	16.366	-0.002	98	4892	0.0400	0.0292	
82 o-Xylene	91	16.432	16.428	0.004	98	8612	0.0400	0.0346	
83 1,1,2,2-Tetrachloroethane	83	16.752	16.754	-0.002	96	7619	0.0400	0.0347	
84 1,2,3-Trichloropropane	110	16.917	16.914	0.003	98	1760	0.0400	0.0336	
85 Isopropylbenzene	105	17.021	17.021	0.000	94	11792	0.0400	0.0332	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	17.584	17.585	-0.001	98	2918	0.0400	0.0296	
87 2-Chlorotoluene	126	17.625	17.628	-0.003	94	3246	0.0400	0.0331	
88 4-Ethyltoluene	105	17.750	17.749	0.001	97	10701	0.0400	0.0292	
89 1,3,5-Trimethylbenzene	120	17.827	17.828	-0.001	92	4408	0.0400	0.0299	
90 Alpha Methyl Styrene	118	18.070	18.075	-0.005	77	3454	0.0400	0.0231	
91 n-Decane	57	18.147	18.149	-0.002	93	5466	0.0400	0.0281	
92 tert-Butylbenzene	119	18.282	18.282	0.000	90	9896	0.0400	0.0282	
93 1,2,4-Trimethylbenzene	105	18.297	18.298	-0.001	95	9159	0.0400	0.0286	
95 sec-Butylbenzene	105	18.571	18.572	-0.001	98	13692	0.0400	0.0283	
94 1,3-Dichlorobenzene	146	18.582	18.582	0.000	97	8341	0.0400	0.0334	
96 Benzyl chloride	91	18.664	18.665	-0.001	83	6156	0.0400	0.0242	
97 1,4-Dichlorobenzene	146	18.675	18.675	0.000	92	7910	0.0400	0.0341	
98 4-Isopropyltoluene	119	18.747	18.748	-0.001	96	10804	0.0400	0.0283	
99 1,2,3-Trimethylbenzene	105	18.799	18.800	-0.001	98	8719	0.0400	0.0285	
100 Butylcyclohexane	83	18.861	18.862	-0.001	90	7031	0.0400	0.0286	
101 1,2-Dichlorobenzene	146	19.052	19.058	-0.006	89	8323	0.0400	0.0341	
102 2,3-Dihydroindene	117	19.057	19.058	-0.001	90	9398	0.0400	0.0303	
103 Indene	116	19.197	19.196	0.001	92	6528	0.0400	0.0242	
104 n-Butylbenzene	91	19.207	19.207	0.000	96	12075	0.0400	0.0285	
105 Undecane	57	19.548	19.548	0.000	89	5290	0.0400	0.0230	
106 1,2-Dibromo-3-Chloropropan	157	19.693	19.694	-0.001	89	3391	0.0400	0.0284	
107 1,2,4,5-Tetramethylbenzene	119	20.003	20.003	0.000	95	9336	0.0400	0.0271	
110 Dodecane	57	20.649	20.648	0.001	92	4317	0.0400	0.0185	
111 1,2,4-Trichlorobenzene	180	20.835	20.835	0.000	91	6775	0.0400	0.0323	
113 Naphthalene	128	20.980	20.980	0.000	99	13369	0.0400	0.0317	
115 Hexachlorobutadiene	225	21.207	21.209	-0.002	89	8643	0.0400	0.0354	
116 1,2,3-Trichlorobenzene	180	21.280	21.279	0.001	94	7504	0.0400	0.0341	
117 2-Methylnaphthalene	142	21.977	21.977	0.000	97	4942	0.0400	0.0246	
118 1-Methylnaphthalene	142	22.106	22.107	-0.001	98	5727	0.0400	0.0265	
A 120 C8 Range	1	14.103	(14.075-14.147)		0	22949	0.0400	0.0359	
S 121 Xylenes, Total	100				0		0.1200	0.0994	
S 122 1,2-Dichloroethene, Total	1				0		0.0800	0.0819	

Reagents:

40L1-3DQP_00006

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC02.D

Injection Date: 17-Oct-2018 23:26:30

Instrument ID: MH

Operator ID: AFB

Lims ID: IC L2

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

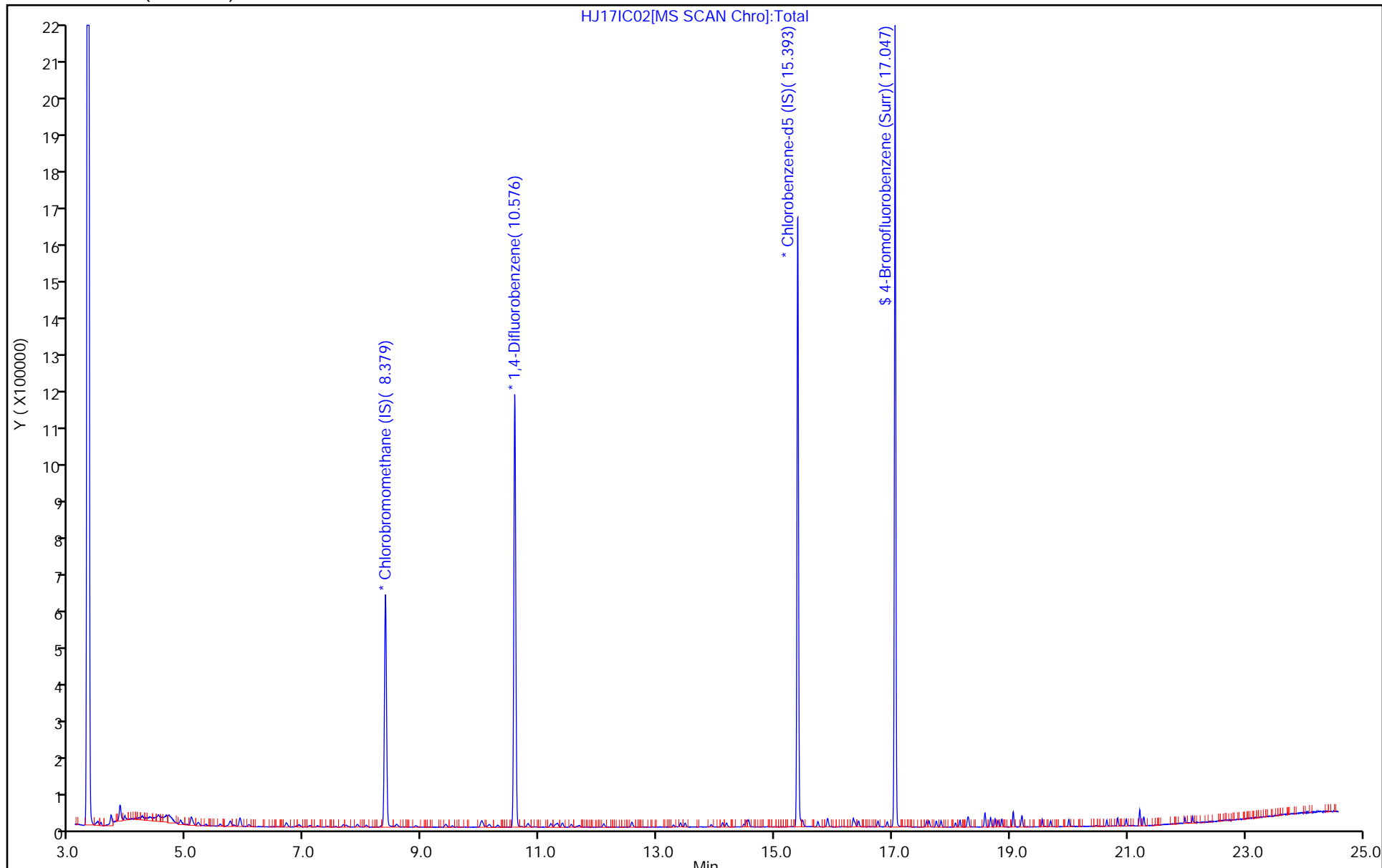
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC02.D

Injection Date: 17-Oct-2018 23:26:30

Instrument ID: MH

Lims ID: IC L2

Client ID:

Operator ID: AFB

ALS Bottle#: 2

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

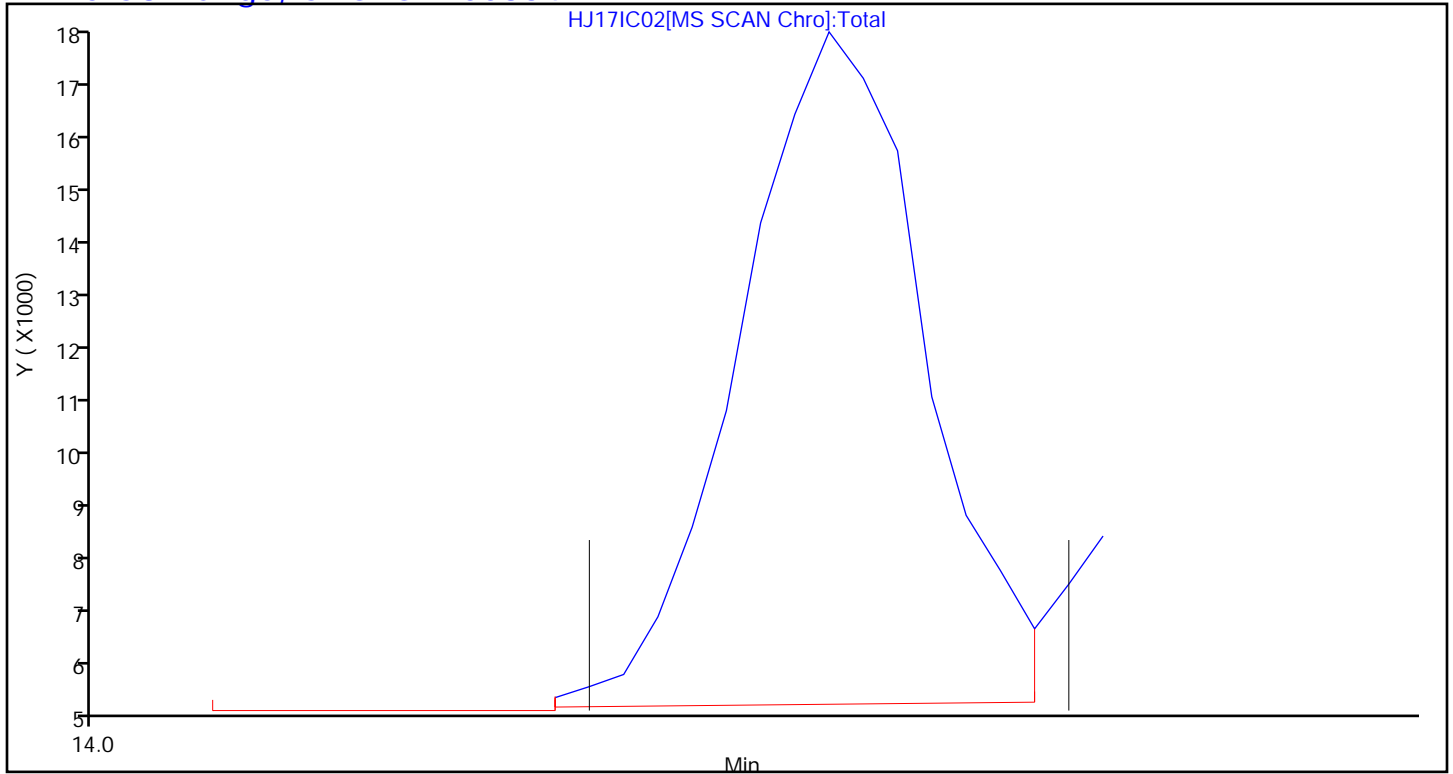
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834

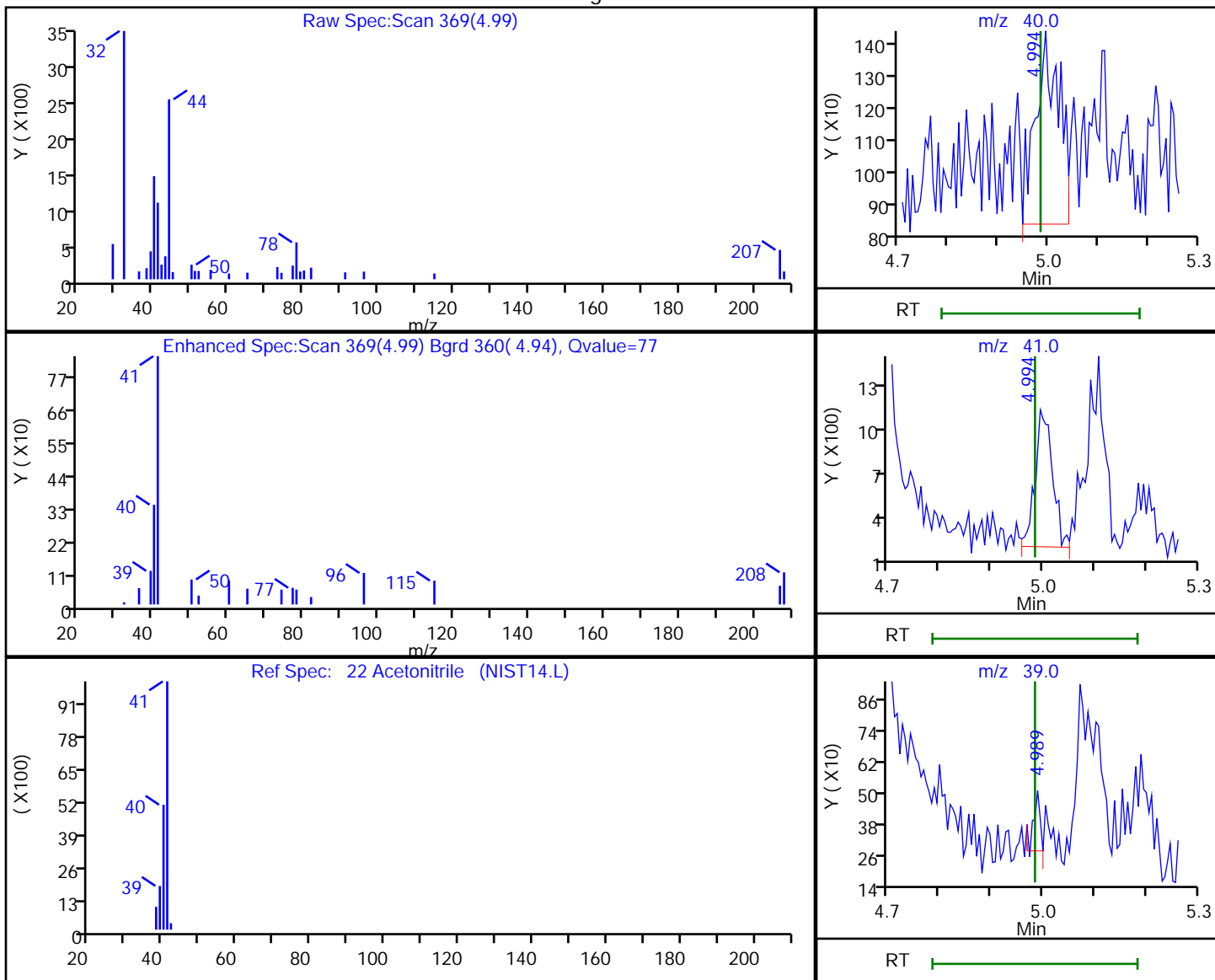


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C02.D
 Injection Date: 17-Oct-2018 23:26:30 Instrument ID: MH
 Lims ID: IC L2
 Client ID:
 Operator ID: AFB ALS Bottle#: 2 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

22 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
4.99	40.00	2022	0.078643
4.99	41.00	2065	
4.99	39.00	209	

Reviewer: barlozhetskayaa, 18-Oct-2018 11:50:17

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 18-Oct-2018 00:11:30 ALS Bottle#: 3 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009689-009
 Misc. Info.: 180645
 Operator ID: AFB Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Oct-2018 12:37:57 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh

Date: 18-Oct-2018 10:50:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.380	-0.001	86	219907	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.578	-0.002	94	1190901	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.000	86	997539	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.047	0.000	97	649557	4.00	3.89	
6 Chlorodifluoromethane	51	3.485	3.478	0.007	96	11978	0.0800	0.0864	
7 Propene	41	3.495	3.490	0.005	94	5600	0.0800	0.1022	
8 Dichlorodifluoromethane	85	3.542	3.537	0.005	100	16598	0.0800	0.0802	
9 Chloromethane	52	3.702	3.705	-0.003	64	2327	0.0800	0.1003	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.717	3.711	0.006	90	15096	0.0800	0.0743	
11 Acetaldehyde	44	3.862	3.856	0.006	90	34464	0.4000	1.38	
12 Vinyl chloride	62	3.862	3.861	0.001	39	6419	0.0800	0.0830	
13 Butadiene	54	3.945	3.942	0.003	73	3892	0.0800	0.0814	
14 Butane	43	3.945	3.942	0.003	82	6550	0.0800	0.0793	
15 Bromomethane	94	4.239	4.237	0.002	97	8634	0.0800	0.0904	
16 Chloroethane	64	4.369	4.368	0.001	96	3038	0.0800	0.0925	
17 Ethanol	31	4.508	4.488	0.020	98	13506	0.4000	0.5251	
18 Vinyl bromide	106	4.648	4.645	0.003	97	7507	0.0800	0.0817	
19 2-Methylbutane	43	4.689	4.691	-0.002	90	6427	0.0800	0.1126	
21 Trichlorofluoromethane	101	4.896	4.895	0.001	99	18185	0.0800	0.0744	
20 Acrolein	56	4.937	4.924	0.013	63	2566	0.0800	0.1293	
22 Acetonitrile	40	5.009	4.984	0.025	99	1848	0.0800	0.0695	
23 Acetone	58	5.071	5.047	0.024	95	24579	0.2400	0.7550	
24 Pentane	72	5.102	5.106	-0.004	65	727	0.0800	0.0774	
25 Isopropyl alcohol	45	5.180	5.153	0.027	97	24980	0.2400	0.2894	
26 Ethyl ether	31	5.325	5.297	0.028	94	5064	0.0800	0.0796	
27 1,1-Dichloroethene	96	5.568	5.567	0.001	98	6054	0.0800	0.0820	
28 Acrylonitrile	53	5.692	5.680	0.012	85	3513	0.0800	0.0750	
30 1,1,2-Trichloro-1,2,2-trif	101	5.738	5.736	0.002	98	13624	0.0800	0.0791	
29 2-Methyl-2-propanol	59	5.790	5.744	0.046	93	9216	0.0800	0.0784	
31 Methylene Chloride	84	5.909	5.902	0.007	96	13928	0.0800	0.1723	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.919	5.917	0.002	97	4648	0.0800	0.0838	
33 Carbon disulfide	76	6.053	6.054	-0.001	98	18714	0.0800	0.0868	
34 trans-1,2-Dichloroethene	96	6.684	6.682	0.002	98	5736	0.0800	0.0766	
35 2-Methylpentane	43	6.705	6.701	0.004	92	10158	0.0800	0.0793	
36 Methyl tert-butyl ether	73	6.896	6.858	0.038	96	12990	0.0800	0.0757	
37 1,1-Dichloroethane	63	7.092	7.093	-0.001	99	10018	0.0800	0.0765	
38 Vinyl acetate	43	7.227	7.211	0.016	99	11510	0.0800	0.0691	
40 Hexane	56	7.666	7.661	0.005	92	3727	0.0800	0.0781	
39 2-Butanone (MEK)	72	7.702	7.672	0.030	99	4075	0.0800	0.1222	
171 Isopropyl ether	45	7.888	7.858	0.030	96	15284	0.0800	0.0749	
41 cis-1,2-Dichloroethene	96	8.054	8.054	0.000	91	6371	0.0800	0.0813	
42 Ethyl acetate	43	8.297	8.275	0.021	98	10887	0.0800	0.0754	
43 Chloroform	83	8.390	8.393	-0.003	28	13670	0.0800	0.0795	
173 Tert-butyl ethyl ether	59	8.560	8.526	0.034	96	13277	0.0800	0.0693	
44 Tetrahydrofuran	42	8.881	8.843	0.038	89	5220	0.0800	0.0780	
45 1,1,1-Trichloroethane	97	9.408	9.407	0.001	96	12552	0.0800	0.0779	
46 1,2-Dichloroethane	62	9.511	9.515	-0.004	96	7301	0.0800	0.0728	
47 Benzene	78	10.012	10.010	0.002	97	16672	0.0800	0.0767	
48 Cyclohexane	69	10.018	10.012	0.006	61	2019	0.0800	0.0695	
50 Carbon tetrachloride	117	10.033	10.034	-0.001	96	12982	0.0800	0.0722	
49 n-Butanol	31	10.069	10.043	0.026	20	1639	0.0800	0.0659	
51 2,3-Dimethylpentane	71	10.152	10.145	0.007	91	2747	0.0800	0.0660	
52 Thiophene	84	10.286	10.292	-0.006	95	9022	0.0800	0.0723	
53 Isooctane	57	10.803	10.804	-0.001	97	22357	0.0800	0.0737	
55 n-Heptane	71	11.196	11.196	0.000	90	4290	0.0800	0.0658	
54 1,2-Dichloropropane	63	11.268	11.268	0.000	91	6492	0.0800	0.0759	
56 Trichloroethene	130	11.304	11.308	-0.004	95	7510	0.0800	0.0713	
57 Dibromomethane	93	11.387	11.388	-0.001	96	9324	0.0800	0.0797	
58 Dichlorobromomethane	83	11.542	11.541	0.001	98	11169	0.0800	0.0667	
59 1,4-Dioxane	88	11.640	11.603	0.037	85	2299	0.0800	0.0728	
60 Methyl methacrylate	41	11.671	11.665	0.006	95	5542	0.0800	0.0687	
61 Methylcyclohexane	83	12.095	12.092	0.003	93	7891	0.0800	0.0680	
62 4-Methyl-2-pentanone (MIBK)	43	12.571	12.547	0.024	92	10868	0.0800	0.0696	
63 cis-1,3-Dichloropropene	75	12.566	12.568	-0.002	90	8245	0.0800	0.0669	
64 trans-1,3-Dichloropropene	75	13.279	13.278	0.001	95	7298	0.0800	0.0665	
65 Toluene	91	13.403	13.400	0.003	93	18234	0.0800	0.0734	
66 1,1,2-Trichloroethane	83	13.480	13.477	0.003	94	6920	0.0800	0.0794	
69 2-Hexanone	58	13.920	13.901	0.019	92	4626	0.0800	0.0621	
71 n-Octane	85	14.116	14.112	0.004	91	4272	0.0800	0.0644	
70 Chlorodibromomethane	129	14.183	14.183	0.000	97	10917	0.0800	0.0598	
72 Ethylene Dibromide	107	14.473	14.476	-0.003	94	11205	0.0800	0.0703	
73 Tetrachloroethene	129	14.555	14.556	-0.001	95	7725	0.0800	0.0750	
74 Chlorobenzene	112	15.439	15.440	-0.001	97	15879	0.0800	0.0733	
75 2,3-Dimethylheptane	43	15.470	15.474	-0.004	95	14976	0.0800	0.0751	
76 Ethylbenzene	91	15.734	15.735	-0.001	99	22140	0.0800	0.0691	
78 m-Xylene & p-Xylene	91	15.899	15.900	-0.001	98	32511	0.1600	0.1316	
81 n-Nonane	57	16.333	16.335	-0.002	91	8459	0.0800	0.0615	
79 Bromoform	173	16.344	16.343	0.001	92	11143	0.0800	0.0602	
80 Styrene	104	16.364	16.366	-0.002	97	10421	0.0800	0.0615	
82 o-Xylene	91	16.426	16.428	-0.002	99	17355	0.0800	0.0688	
83 1,1,2,2-Tetrachloroethane	83	16.757	16.754	0.003	98	15796	0.0800	0.0711	
84 1,2,3-Trichloropropane	110	16.917	16.914	0.003	98	3787	0.0800	0.0713	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.021	17.021	0.000	97	24162	0.0800	0.0673	
86 N-Propylbenzene	120	17.584	17.585	-0.001	98	5785	0.0800	0.0580	
87 2-Chlorotoluene	126	17.631	17.628	0.003	98	6696	0.0800	0.0674	
88 4-Ethyltoluene	105	17.749	17.749	0.000	98	22261	0.0800	0.0599	
89 1,3,5-Trimethylbenzene	120	17.827	17.828	-0.001	92	9636	0.0800	0.0645	
90 Alpha Methyl Styrene	118	18.075	18.075	0.000	86	6832	0.0800	0.0452	
91 n-Decane	57	18.153	18.149	0.004	95	11097	0.0800	0.0563	
92 tert-Butylbenzene	119	18.277	18.282	-0.005	90	21200	0.0800	0.0597	
93 1,2,4-Trimethylbenzene	105	18.297	18.298	-0.001	96	20726	0.0800	0.0638	
95 sec-Butylbenzene	105	18.571	18.572	-0.001	98	27874	0.0800	0.0569	
94 1,3-Dichlorobenzene	146	18.582	18.582	0.000	98	16787	0.0800	0.0664	
96 Benzyl chloride	91	18.659	18.665	-0.006	97	12877	0.0800	0.0500	
97 1,4-Dichlorobenzene	146	18.675	18.675	0.000	94	15732	0.0800	0.0669	
98 4-Isopropyltoluene	119	18.747	18.748	-0.001	97	23299	0.0800	0.0604	
99 1,2,3-Trimethylbenzene	105	18.799	18.800	-0.001	99	20143	0.0800	0.0651	
100 Butylcyclohexane	83	18.861	18.862	-0.001	95	15339	0.0800	0.0615	
101 1,2-Dichlorobenzene	146	19.057	19.058	-0.001	94	17367	0.0800	0.0703	
102 2,3-Dihydroindene	117	19.057	19.058	-0.001	95	18532	0.0800	0.0590	
103 Indene	116	19.197	19.196	0.001	86	13804	0.0800	0.0506	
104 n-Butylbenzene	91	19.207	19.207	0.000	97	26888	0.0800	0.0626	
105 Undecane	57	19.548	19.548	0.000	92	12397	0.0800	0.0532	
106 1,2-Dibromo-3-Chloropropan	157	19.693	19.694	-0.001	93	7082	0.0800	0.0585	
107 1,2,4,5-Tetramethylbenzene	119	20.003	20.003	0.000	96	20221	0.0800	0.0580	
110 Dodecane	57	20.644	20.648	-0.004	91	9491	0.0800	0.0401	
111 1,2,4-Trichlorobenzene	180	20.835	20.835	0.000	93	13603	0.0800	0.0640	
113 Naphthalene	128	20.980	20.980	0.000	99	28266	0.0800	0.0662	
115 Hexachlorobutadiene	225	21.207	21.209	-0.002	91	16735	0.0800	0.0676	
116 1,2,3-Trichlorobenzene	180	21.274	21.279	-0.005	94	15632	0.0800	0.0702	
117 2-Methylnaphthalene	142	21.977	21.977	0.000	99	7403	0.0800	0.0364	
118 1-Methylnaphthalene	142	22.106	22.107	-0.001	98	10440	0.0800	0.0477	
A 120 C8 Range	1	14.111	(14.075-14.147)		0	45897	0.0800	0.0706	
S 121 Xylenes, Total	100				0		0.2400	0.2004	
S 122 1,2-Dichloroethene, Total	1				0		0.1600	0.1579	

Reagents:

40L1-3DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC03.D

Injection Date: 18-Oct-2018 00:11:30

Instrument ID: MH

Operator ID: AFB

Lims ID: IC L3

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

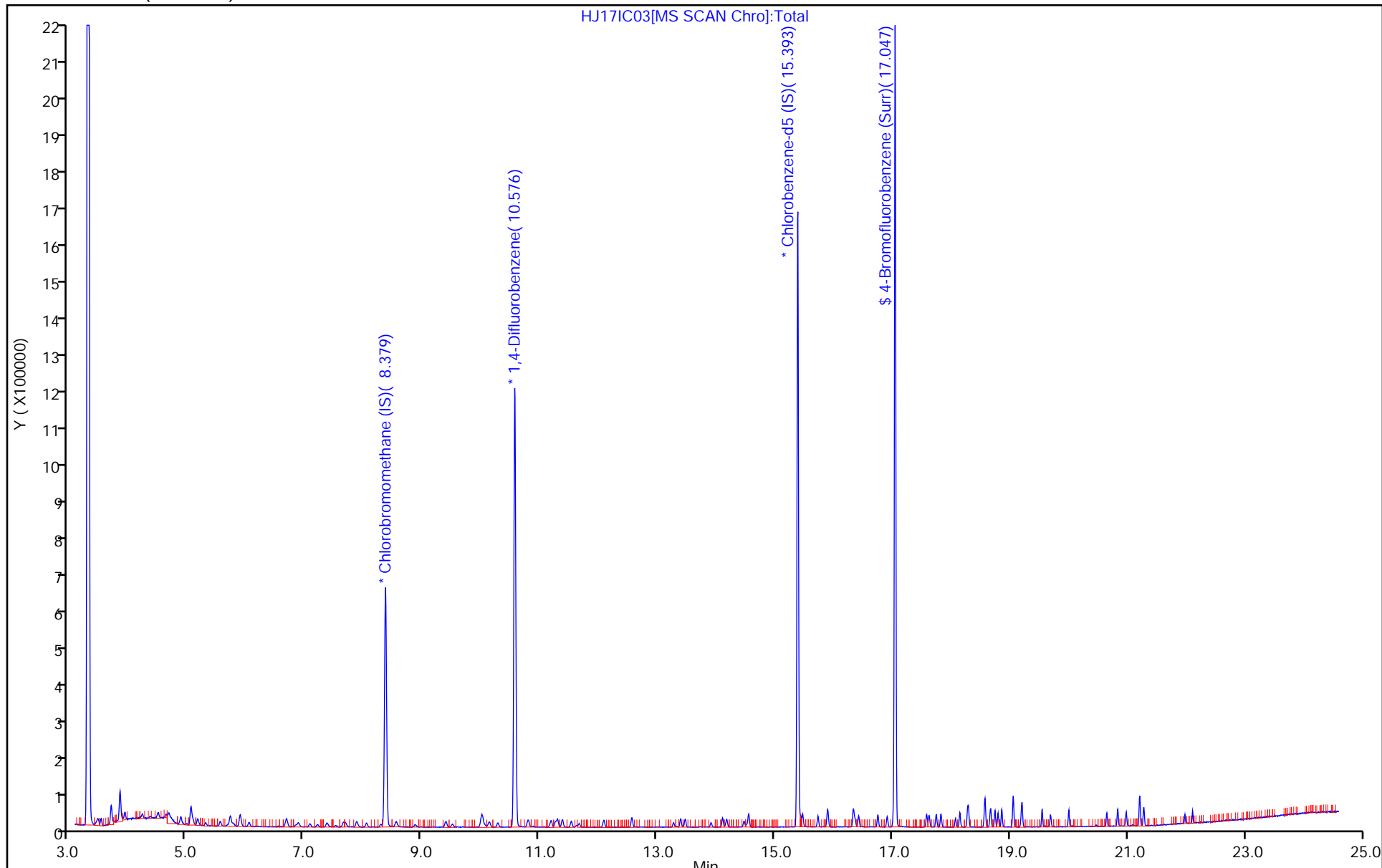
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC03.D

Injection Date: 18-Oct-2018 00:11:30

Instrument ID: MH

Lims ID: IC L3

Client ID:

Operator ID: AFB

ALS Bottle#: 3

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

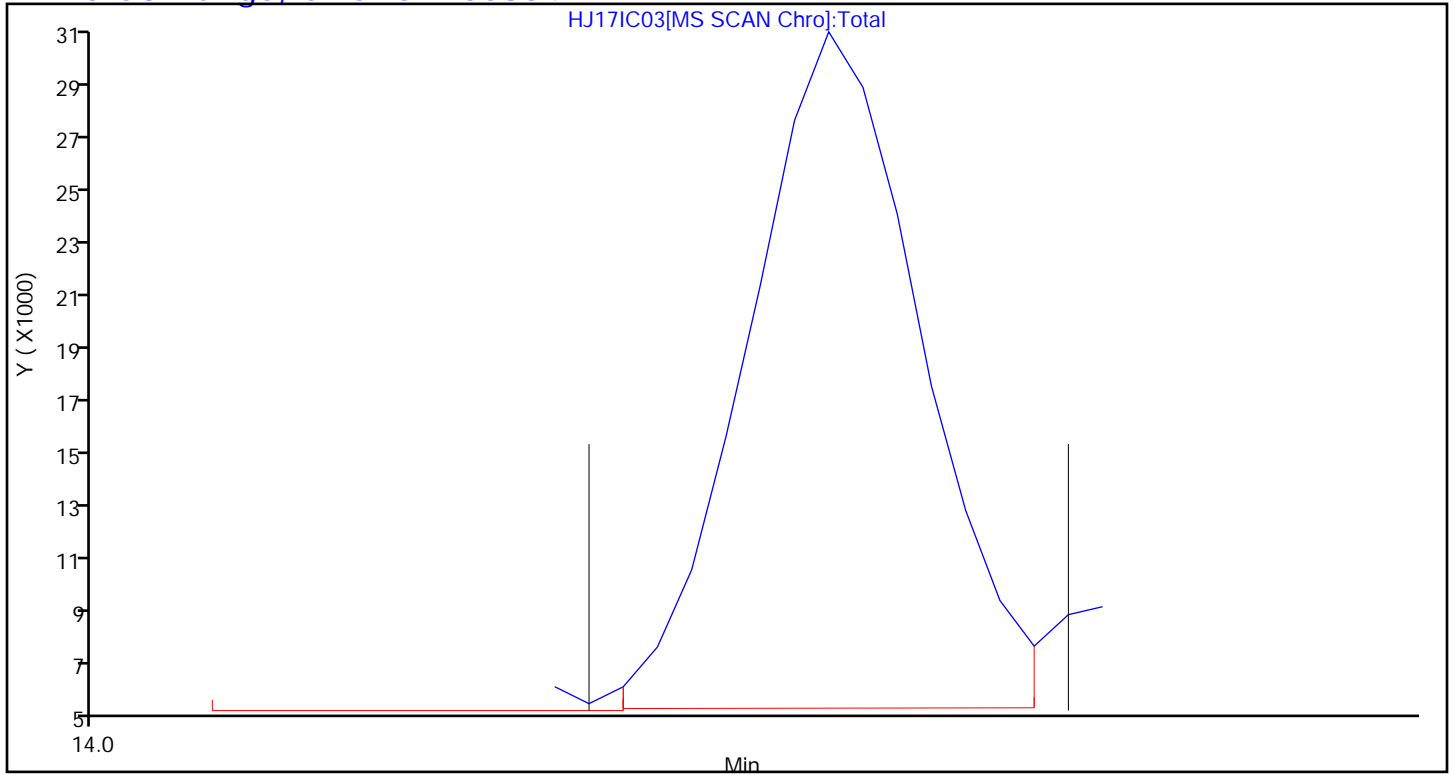
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 18-Oct-2018 00:55:30 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009689-010
 Misc. Info.: 180306
 Operator ID: AFB Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Oct-2018 12:38:03 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh

Date: 18-Oct-2018 10:57:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.380	-0.001	86	211652	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.578	-0.002	94	1153150	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.000	86	967686	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.047	0.000	97	637756	4.00	3.94	
6 Chlorodifluoromethane	51	3.480	3.478	0.002	97	21417	0.1600	0.1605	
7 Propene	41	3.490	3.490	0.000	97	9481	0.1600	0.1798	
8 Dichlorodifluoromethane	85	3.537	3.537	0.000	100	32426	0.1600	0.1628	
9 Chloromethane	52	3.712	3.705	0.007	58	4146	0.1600	0.1856	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.711	0.001	90	30839	0.1600	0.1577	
11 Acetaldehyde	44	3.862	3.856	0.006	89	35541	0.8000	1.47	
12 Vinyl chloride	62	3.862	3.861	0.001	46	12403	0.1600	0.1667	
13 Butadiene	54	3.940	3.942	-0.002	77	8180	0.1600	0.1779	
14 Butane	43	3.940	3.942	-0.002	83	14566	0.1600	0.1831	
15 Bromomethane	94	4.239	4.237	0.002	98	16447	0.1600	0.1789	
16 Chloroethane	64	4.369	4.368	0.001	99	5851	0.1600	0.1851	
17 Ethanol	31	4.498	4.488	0.010	98	22861	0.8000	0.9234	
18 Vinyl bromide	106	4.643	4.645	-0.002	97	14777	0.1600	0.1672	
19 2-Methylbutane	43	4.694	4.691	0.003	87	9151	0.1600	0.1666	
21 Trichlorofluoromethane	101	4.896	4.895	0.001	100	36993	0.1600	0.1572	
20 Acrolein	56	4.932	4.924	0.008	93	4444	0.1600	0.2326	
22 Acetonitrile	40	4.999	4.984	0.015	98	4821	0.1600	0.1884	
23 Acetone	58	5.066	5.047	0.019	95	25341	0.4800	0.8088	
24 Pentane	72	5.103	5.106	-0.003	59	1440	0.1600	0.1593	
25 Isopropyl alcohol	45	5.175	5.153	0.022	99	42964	0.4800	0.5172	
26 Ethyl ether	31	5.314	5.297	0.017	94	9654	0.1600	0.1577	
27 1,1-Dichloroethene	96	5.568	5.567	0.001	98	11657	0.1600	0.1641	
28 Acrylonitrile	53	5.681	5.680	0.001	93	7334	0.1600	0.1627	
30 1,1,2-Trichloro-1,2,2-trif	101	5.738	5.736	0.002	97	27058	0.1600	0.1632	
29 2-Methyl-2-propanol	59	5.769	5.744	0.025	95	18387	0.1600	0.1626	
31 Methylene Chloride	84	5.904	5.902	0.002	93	19598	0.1600	0.2519	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.919	5.917	0.002	98	9679	0.1600	0.1814	
33 Carbon disulfide	76	6.059	6.054	0.005	99	33630	0.1600	0.1620	
34 trans-1,2-Dichloroethene	96	6.679	6.682	-0.003	98	11098	0.1600	0.1539	
35 2-Methylpentane	43	6.700	6.701	-0.001	92	19433	0.1600	0.1577	
36 Methyl tert-butyl ether	73	6.881	6.858	0.022	97	25269	0.1600	0.1531	
37 1,1-Dichloroethane	63	7.098	7.093	0.005	100	20632	0.1600	0.1637	
38 Vinyl acetate	43	7.216	7.211	0.005	99	23035	0.1600	0.1436	
40 Hexane	56	7.666	7.661	0.005	92	7373	0.1600	0.1606	
39 2-Butanone (MEK)	72	7.692	7.672	0.020	98	5494	0.1600	0.1711	
171 Isopropyl ether	45	7.873	7.858	0.015	97	30073	0.1600	0.1532	
41 cis-1,2-Dichloroethene	96	8.054	8.054	0.000	93	11512	0.1600	0.1526	
42 Ethyl acetate	43	8.291	8.275	0.016	99	22154	0.1600	0.1595	
43 Chloroform	83	8.390	8.393	-0.003	94	26831	0.1600	0.1622	
173 Tert-butyl ethyl ether	59	8.545	8.526	0.019	96	28437	0.1600	0.1541	
44 Tetrahydrofuran	42	8.870	8.843	0.027	90	10250	0.1600	0.1591	
45 1,1,1-Trichloroethane	97	9.408	9.407	0.001	95	24819	0.1600	0.1600	
46 1,2-Dichloroethane	62	9.511	9.515	-0.004	97	15257	0.1600	0.1571	
47 Benzene	78	10.002	10.010	-0.008	97	33103	0.1600	0.1574	
48 Cyclohexane	69	10.018	10.012	0.006	62	3955	0.1600	0.1406	
50 Carbon tetrachloride	117	10.038	10.034	0.004	97	25834	0.1600	0.1484	
49 n-Butanol	31	10.069	10.043	0.026	87	3491	0.1600	0.1449	
51 2,3-Dimethylpentane	71	10.152	10.145	0.007	88	5788	0.1600	0.1437	
52 Thiophene	84	10.292	10.292	0.000	94	18441	0.1600	0.1526	
53 Isooctane	57	10.803	10.804	-0.001	98	44984	0.1600	0.1532	
55 n-Heptane	71	11.196	11.196	0.000	88	9251	0.1600	0.1466	
54 1,2-Dichloropropane	63	11.263	11.268	-0.005	93	12873	0.1600	0.1555	
56 Trichloroethene	130	11.305	11.308	-0.003	97	15950	0.1600	0.1564	
57 Dibromomethane	93	11.387	11.388	-0.001	96	18166	0.1600	0.1604	
58 Dichlorobromomethane	83	11.537	11.541	-0.004	98	23350	0.1600	0.1440	
59 1,4-Dioxane	88	11.625	11.603	0.022	88	4487	0.1600	0.1467	
60 Methyl methacrylate	41	11.672	11.665	0.007	97	11630	0.1600	0.1490	
61 Methylcyclohexane	83	12.090	12.092	-0.002	95	16343	0.1600	0.1455	
62 4-Methyl-2-pentanone (MIBK)	43	12.561	12.547	0.014	96	21598	0.1600	0.1429	
63 cis-1,3-Dichloropropene	75	12.571	12.568	0.003	96	16627	0.1600	0.1393	
64 trans-1,3-Dichloropropene	75	13.274	13.278	-0.004	97	15154	0.1600	0.1424	
65 Toluene	91	13.398	13.400	-0.002	93	37054	0.1600	0.1537	
66 1,1,2-Trichloroethane	83	13.481	13.477	0.003	96	13261	0.1600	0.1569	
69 2-Hexanone	58	13.909	13.901	0.008	91	9299	0.1600	0.1288	
71 n-Octane	85	14.116	14.112	0.004	92	8425	0.1600	0.1310	
70 Chlorodibromomethane	129	14.183	14.183	0.000	97	22438	0.1600	0.1266	
72 Ethylene Dibromide	107	14.473	14.476	-0.003	99	21847	0.1600	0.1412	
73 Tetrachloroethene	129	14.556	14.556	0.000	95	14733	0.1600	0.1475	
74 Chlorobenzene	112	15.439	15.440	-0.001	96	32223	0.1600	0.1533	
75 2,3-Dimethylheptane	43	15.476	15.474	0.002	94	29269	0.1600	0.1513	
76 Ethylbenzene	91	15.734	15.735	-0.001	99	45779	0.1600	0.1473	
78 m-Xylene & p-Xylene	91	15.899	15.900	-0.001	98	70289	0.3200	0.2933	
81 n-Nonane	57	16.339	16.335	0.004	89	17876	0.1600	0.1340	
79 Bromoform	173	16.339	16.343	-0.004	92	20825	0.1600	0.1160	
80 Styrene	104	16.370	16.366	0.004	98	22126	0.1600	0.1345	
82 o-Xylene	91	16.426	16.428	-0.002	99	36219	0.1600	0.1481	
83 1,1,2,2-Tetrachloroethane	83	16.752	16.754	-0.002	98	31270	0.1600	0.1452	
84 1,2,3-Trichloropropane	110	16.912	16.914	-0.002	98	7788	0.1600	0.1511	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.021	17.021	0.000	97	47791	0.1600	0.1372	
86 N-Propylbenzene	120	17.584	17.585	-0.001	98	12176	0.1600	0.1259	
87 2-Chlorotoluene	126	17.626	17.628	-0.002	97	13629	0.1600	0.1414	
88 4-Ethyltoluene	105	17.750	17.749	0.001	99	45808	0.1600	0.1271	
89 1,3,5-Trimethylbenzene	120	17.827	17.828	-0.001	93	19804	0.1600	0.1366	
90 Alpha Methyl Styrene	118	18.075	18.075	0.000	86	15205	0.1600	0.1037	
91 n-Decane	57	18.148	18.149	-0.001	91	24616	0.1600	0.1288	
92 tert-Butylbenzene	119	18.282	18.282	0.000	92	44879	0.1600	0.1302	
93 1,2,4-Trimethylbenzene	105	18.297	18.298	-0.001	96	42305	0.1600	0.1343	
95 sec-Butylbenzene	105	18.571	18.572	-0.001	98	60179	0.1600	0.1266	
94 1,3-Dichlorobenzene	146	18.582	18.582	0.000	97	33099	0.1600	0.1350	
96 Benzyl chloride	91	18.664	18.665	-0.001	97	25508	0.1600	0.1021	
97 1,4-Dichlorobenzene	146	18.675	18.675	0.000	95	32059	0.1600	0.1406	
98 4-Isopropyltoluene	119	18.747	18.748	-0.001	97	49896	0.1600	0.1333	
99 1,2,3-Trimethylbenzene	105	18.799	18.800	-0.001	99	41345	0.1600	0.1378	
100 Butylcyclohexane	83	18.861	18.862	-0.001	95	33068	0.1600	0.1368	
101 1,2-Dichlorobenzene	146	19.057	19.058	-0.001	94	34269	0.1600	0.1429	
102 2,3-Dihydroindene	117	19.057	19.058	-0.001	92	38957	0.1600	0.1279	
103 Indene	116	19.197	19.196	0.001	88	29830	0.1600	0.1127	
104 n-Butylbenzene	91	19.207	19.207	0.000	97	55788	0.1600	0.1339	
105 Undecane	57	19.548	19.548	0.000	94	26276	0.1600	0.1162	
106 1,2-Dibromo-3-Chloropropan	157	19.693	19.694	-0.001	93	13336	0.1600	0.1136	
107 1,2,4,5-Tetramethylbenzene	119	20.003	20.003	0.000	97	42304	0.1600	0.1250	
110 Dodecane	57	20.649	20.648	0.001	93	22633	0.1600	0.0985	
111 1,2,4-Trichlorobenzene	180	20.835	20.835	0.000	93	27873	0.1600	0.1352	
113 Naphthalene	128	20.980	20.980	0.000	99	58837	0.1600	0.1421	
115 Hexachlorobutadiene	225	21.207	21.209	-0.002	92	32991	0.1600	0.1374	
116 1,2,3-Trichlorobenzene	180	21.280	21.279	0.001	94	31280	0.1600	0.1448	
117 2-Methylnaphthalene	142	21.977	21.977	0.000	99	20413	0.1600	0.1033	
118 1-Methylnaphthalene	142	22.107	22.107	0.000	99	29936	0.1600	0.1409	
A 120 C8 Range	1	14.103	(14.070-14.152)		0	91322	0.1600	0.1450	
S 121 Xylenes, Total	100				0		0.4800	0.4414	
S 122 1,2-Dichloroethene, Total	1				0		0.3200	0.3066	

Reagents:

40L4DQP_00006

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC04.D

Injection Date: 18-Oct-2018 00:55:30

Instrument ID: MH

Operator ID: AFB

Lims ID: IC L4

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

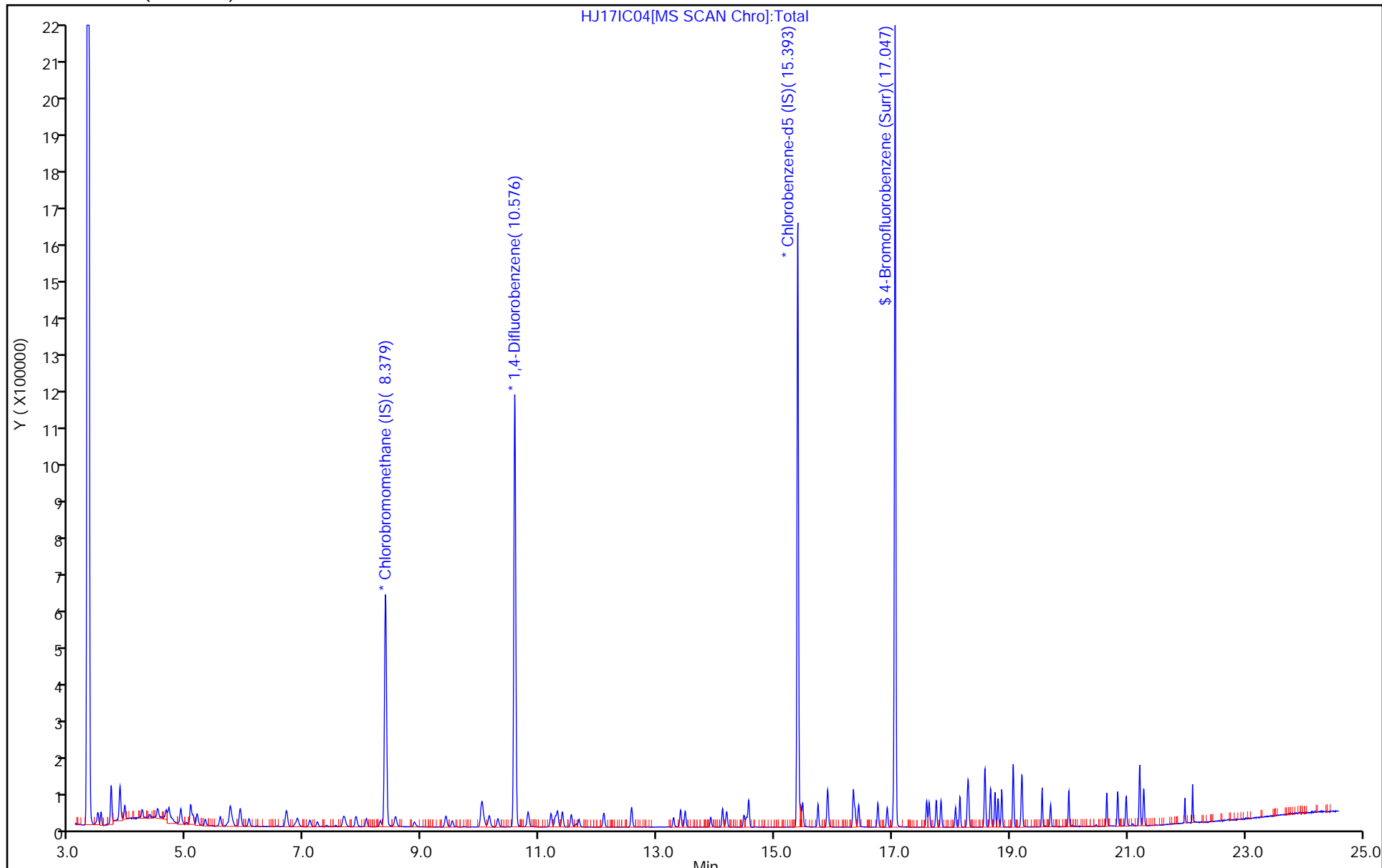
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC04.D

Injection Date: 18-Oct-2018 00:55:30

Instrument ID: MH

Lims ID: IC L4

Client ID:

Operator ID: AFB

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

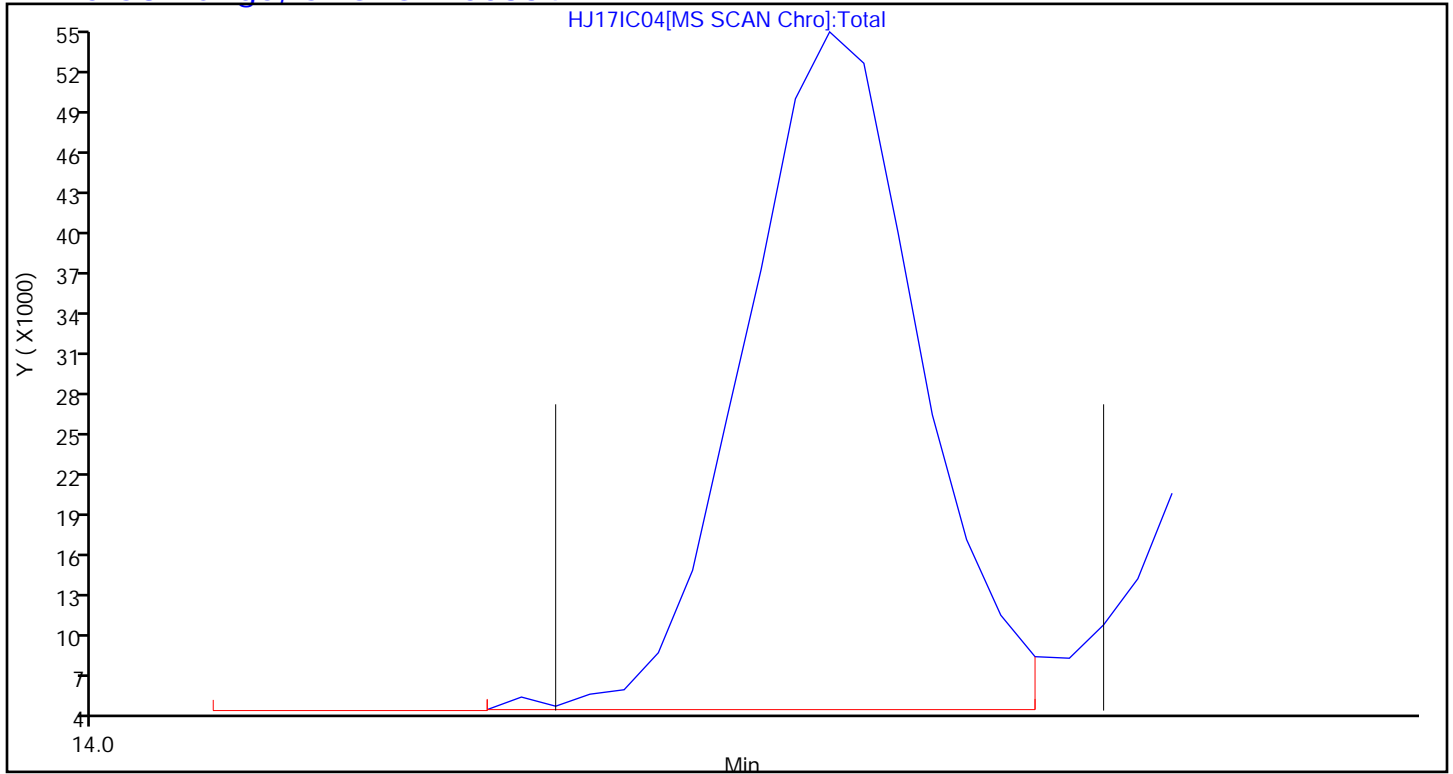
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 18-Oct-2018 01:39:30 ALS Bottle#: 5 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009689-011
 Misc. Info.: 180299
 Operator ID: AFB Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Oct-2018 12:38:10 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh

Date: 18-Oct-2018 08:49:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.374	8.380	-0.006	90	216510	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.578	-0.002	94	1179504	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.000	86	983662	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.046	17.047	-0.001	97	665112	4.00	4.04	
6 Chlorodifluoromethane	51	3.480	3.478	0.002	97	56590	0.4000	0.4145	
7 Propene	41	3.490	3.490	0.000	98	21195	0.4000	0.3929	
8 Dichlorodifluoromethane	85	3.536	3.537	-0.001	100	81972	0.4000	0.4022	
9 Chloromethane	52	3.707	3.705	0.002	97	9474	0.4000	0.4146	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.711	0.001	89	80996	0.4000	0.4049	
11 Acetaldehyde	44	3.857	3.856	0.001	92	67374	2.00	2.73	
12 Vinyl chloride	62	3.862	3.861	0.001	99	30081	0.4000	0.3952	
13 Butadiene	54	3.940	3.942	-0.002	77	19987	0.4000	0.4248	
14 Butane	43	3.940	3.942	-0.002	81	34432	0.4000	0.4232	
15 Bromomethane	94	4.234	4.237	-0.003	98	38209	0.4000	0.4062	
16 Chloroethane	64	4.363	4.368	-0.005	93	13104	0.4000	0.4052	
17 Ethanol	31	4.487	4.488	-0.001	97	52784	2.00	2.08	
18 Vinyl bromide	106	4.648	4.645	0.003	97	36185	0.4000	0.4002	
19 2-Methylbutane	43	4.689	4.691	-0.002	88	24302	0.4000	0.4325	
21 Trichlorofluoromethane	101	4.890	4.895	-0.005	100	98784	0.4000	0.4104	
20 Acrolein	56	4.927	4.924	0.003	97	7614	0.4000	0.3897	
22 Acetonitrile	40	4.978	4.984	-0.006	96	10450	0.4000	0.3993	
23 Acetone	58	5.046	5.047	-0.001	98	47917	1.20	1.50	
24 Pentane	72	5.108	5.106	0.002	86	3762	0.4000	0.4068	
25 Isopropyl alcohol	45	5.154	5.153	0.001	98	99870	1.20	1.18	
26 Ethyl ether	31	5.299	5.297	0.002	96	25604	0.4000	0.4088	
27 1,1-Dichloroethene	96	5.562	5.567	-0.005	98	28466	0.4000	0.3918	
28 Acrylonitrile	53	5.676	5.680	-0.004	97	18030	0.4000	0.3911	
30 1,1,2-Trichloro-1,2,2-trif	101	5.733	5.736	-0.003	96	67586	0.4000	0.3985	
29 2-Methyl-2-propanol	59	5.754	5.744	0.010	96	43949	0.4000	0.3798	
31 Methylene Chloride	84	5.898	5.902	-0.004	95	35020	0.4000	0.4399	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.919	5.917	0.002	99	20931	0.4000	0.3834	
33 Carbon disulfide	76	6.053	6.054	-0.001	99	83983	0.4000	0.3955	
34 trans-1,2-Dichloroethene	96	6.679	6.682	-0.003	98	29321	0.4000	0.3976	
35 2-Methylpentane	43	6.699	6.701	-0.002	92	48952	0.4000	0.3883	
36 Methyl tert-butyl ether	73	6.854	6.858	-0.004	96	64818	0.4000	0.3838	
37 1,1-Dichloroethane	63	7.092	7.093	-0.001	100	52749	0.4000	0.4092	
38 Vinyl acetate	43	7.206	7.211	-0.005	100	59811	0.4000	0.3646	
40 Hexane	56	7.661	7.661	0.000	75	18389	0.4000	0.3916	
39 2-Butanone (MEK)	72	7.671	7.672	-0.001	98	12978	0.4000	0.3952	
171 Isopropyl ether	45	7.857	7.858	-0.001	96	77380	0.4000	0.3852	
41 cis-1,2-Dichloroethene	96	8.054	8.054	0.000	91	29913	0.4000	0.3877	
42 Ethyl acetate	43	8.276	8.275	0.001	99	56255	0.4000	0.3959	
43 Chloroform	83	8.389	8.393	-0.004	97	66314	0.4000	0.3920	
173 Tert-butyl ethyl ether	59	8.524	8.526	-0.002	96	73036	0.4000	0.3869	
44 Tetrahydrofuran	42	8.849	8.843	0.006	90	25824	0.4000	0.3918	
45 1,1,1-Trichloroethane	97	9.402	9.407	-0.005	97	61478	0.4000	0.3875	
46 1,2-Dichloroethane	62	9.511	9.515	-0.004	97	39254	0.4000	0.3951	
47 Benzene	78	10.007	10.010	-0.003	96	82627	0.4000	0.3840	
48 Cyclohexane	69	10.007	10.012	-0.005	65	10596	0.4000	0.3682	
50 Carbon tetrachloride	117	10.028	10.034	-0.006	96	65370	0.4000	0.3671	
49 n-Butanol	31	10.049	10.043	0.006	68	8654	0.4000	0.3512	
51 2,3-Dimethylpentane	71	10.142	10.145	-0.003	88	16359	0.4000	0.3970	
52 Thiophene	84	10.291	10.292	-0.001	94	48687	0.4000	0.3940	
53 Isooctane	57	10.798	10.804	-0.006	98	114203	0.4000	0.3803	
55 n-Heptane	71	11.196	11.196	0.000	90	23398	0.4000	0.3625	
54 1,2-Dichloropropane	63	11.263	11.268	-0.005	93	33719	0.4000	0.3982	
56 Trichloroethene	130	11.304	11.308	-0.004	97	39484	0.4000	0.3786	
57 Dibromomethane	93	11.387	11.388	-0.001	95	43318	0.4000	0.3739	
58 Dichlorobromomethane	83	11.537	11.541	-0.004	99	61922	0.4000	0.3734	
59 1,4-Dioxane	88	11.599	11.603	-0.004	90	11905	0.4000	0.3805	
60 Methyl methacrylate	41	11.666	11.665	0.001	96	28267	0.4000	0.3540	
61 Methylcyclohexane	83	12.090	12.092	-0.002	95	41724	0.4000	0.3632	
62 4-Methyl-2-pentanone (MIBK)	43	12.550	12.547	0.003	97	55550	0.4000	0.3594	
63 cis-1,3-Dichloropropene	75	12.560	12.568	-0.008	96	45273	0.4000	0.3707	
64 trans-1,3-Dichloropropene	75	13.279	13.278	0.001	96	39773	0.4000	0.3678	
65 Toluene	91	13.398	13.400	-0.002	93	94110	0.4000	0.3839	
66 1,1,2-Trichloroethane	83	13.475	13.477	-0.002	96	33976	0.4000	0.3954	
69 2-Hexanone	58	13.904	13.901	0.003	92	26330	0.4000	0.3586	
71 n-Octane	85	14.111	14.112	-0.001	92	23747	0.4000	0.3633	
70 Chlorodibromomethane	129	14.183	14.183	0.000	96	64688	0.4000	0.3591	
72 Ethylene Dibromide	107	14.478	14.476	0.002	97	59407	0.4000	0.3777	
73 Tetrachloroethene	129	14.555	14.556	-0.001	95	38886	0.4000	0.3829	
74 Chlorobenzene	112	15.439	15.440	-0.001	95	82459	0.4000	0.3860	
75 2,3-Dimethylheptane	43	15.475	15.474	0.001	95	79201	0.4000	0.4028	
76 Ethylbenzene	91	15.734	15.735	-0.001	99	118926	0.4000	0.3766	
78 m-Xylene & p-Xylene	91	15.899	15.900	-0.001	98	183566	0.8000	0.7536	
81 n-Nonane	57	16.333	16.335	-0.002	92	49250	0.4000	0.3631	
79 Bromoform	173	16.344	16.343	0.001	94	66411	0.4000	0.3640	
80 Styrene	104	16.364	16.366	-0.002	98	64907	0.4000	0.3882	
82 o-Xylene	91	16.426	16.428	-0.002	98	98812	0.4000	0.3974	
83 1,1,2,2-Tetrachloroethane	83	16.752	16.754	-0.002	99	84562	0.4000	0.3862	
84 1,2,3-Trichloropropane	110	16.912	16.914	-0.002	98	19672	0.4000	0.3756	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.021	17.021	0.000	97	126429	0.4000	0.3570	
86 N-Propylbenzene	120	17.584	17.585	-0.001	98	33994	0.4000	0.3459	
87 2-Chlorotoluene	126	17.625	17.628	-0.003	97	35823	0.4000	0.3655	
88 4-Ethyltoluene	105	17.749	17.749	0.000	98	129306	0.4000	0.3529	
89 1,3,5-Trimethylbenzene	120	17.827	17.828	-0.001	92	53985	0.4000	0.3664	
90 Alpha Methyl Styrene	118	18.075	18.075	0.000	87	44174	0.4000	0.2963	
91 n-Decane	57	18.147	18.149	-0.002	92	69450	0.4000	0.3575	
92 tert-Butylbenzene	119	18.282	18.282	0.000	90	120827	0.4000	0.3449	
93 1,2,4-Trimethylbenzene	105	18.297	18.298	-0.001	96	117990	0.4000	0.3684	
95 sec-Butylbenzene	105	18.571	18.572	-0.001	98	166351	0.4000	0.3442	
94 1,3-Dichlorobenzene	146	18.582	18.582	0.000	98	88113	0.4000	0.3534	
96 Benzyl chloride	91	18.664	18.665	-0.001	98	74295	0.4000	0.2925	
97 1,4-Dichlorobenzene	146	18.675	18.675	0.000	95	85253	0.4000	0.3679	
98 4-Isopropyltoluene	119	18.747	18.748	-0.001	97	139535	0.4000	0.3667	
99 1,2,3-Trimethylbenzene	105	18.799	18.800	-0.001	98	115467	0.4000	0.3785	
100 Butylcyclohexane	83	18.861	18.862	-0.001	95	94347	0.4000	0.3839	
101 1,2-Dichlorobenzene	146	19.057	19.058	-0.001	94	88040	0.4000	0.3613	
102 2,3-Dihydroindene	117	19.057	19.058	-0.001	92	110541	0.4000	0.3571	
103 Indene	116	19.197	19.196	0.001	93	85675	0.4000	0.3183	
104 n-Butylbenzene	91	19.207	19.207	0.000	97	154526	0.4000	0.3648	
105 Undecane	57	19.548	19.548	0.000	95	78793	0.4000	0.3427	
106 1,2-Dibromo-3-Chloropropan	157	19.693	19.694	-0.001	95	43654	0.4000	0.3657	
107 1,2,4,5-Tetramethylbenzene	119	20.003	20.003	0.000	97	124900	0.4000	0.3630	
110 Dodecane	57	20.649	20.648	0.001	94	73486	0.4000	0.3146	
111 1,2,4-Trichlorobenzene	180	20.835	20.835	0.000	93	76042	0.4000	0.3628	
113 Naphthalene	128	20.980	20.980	0.000	99	152490	0.4000	0.3624	
115 Hexachlorobutadiene	225	21.207	21.209	-0.002	92	87378	0.4000	0.3581	
116 1,2,3-Trichlorobenzene	180	21.279	21.279	0.000	92	79721	0.4000	0.3631	
117 2-Methylnaphthalene	142	21.977	21.977	0.000	98	51606	0.4000	0.2570	
118 1-Methylnaphthalene	142	22.106	22.107	-0.001	99	71635	0.4000	0.3317	
A 120 C8 Range	1	14.098	(14.070-14.163)		0	239498	0.4000	0.3717	
S 121 Xylenes, Total	100				0		1.20	1.15	
S 122 1,2-Dichloroethene, Total	1				0		0.8000	0.7853	

Reagents:

40L5DQP_00006

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C05.D

Injection Date: 18-Oct-2018 01:39:30

Instrument ID: MH

Operator ID: AFB

Lims ID: IC L5

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

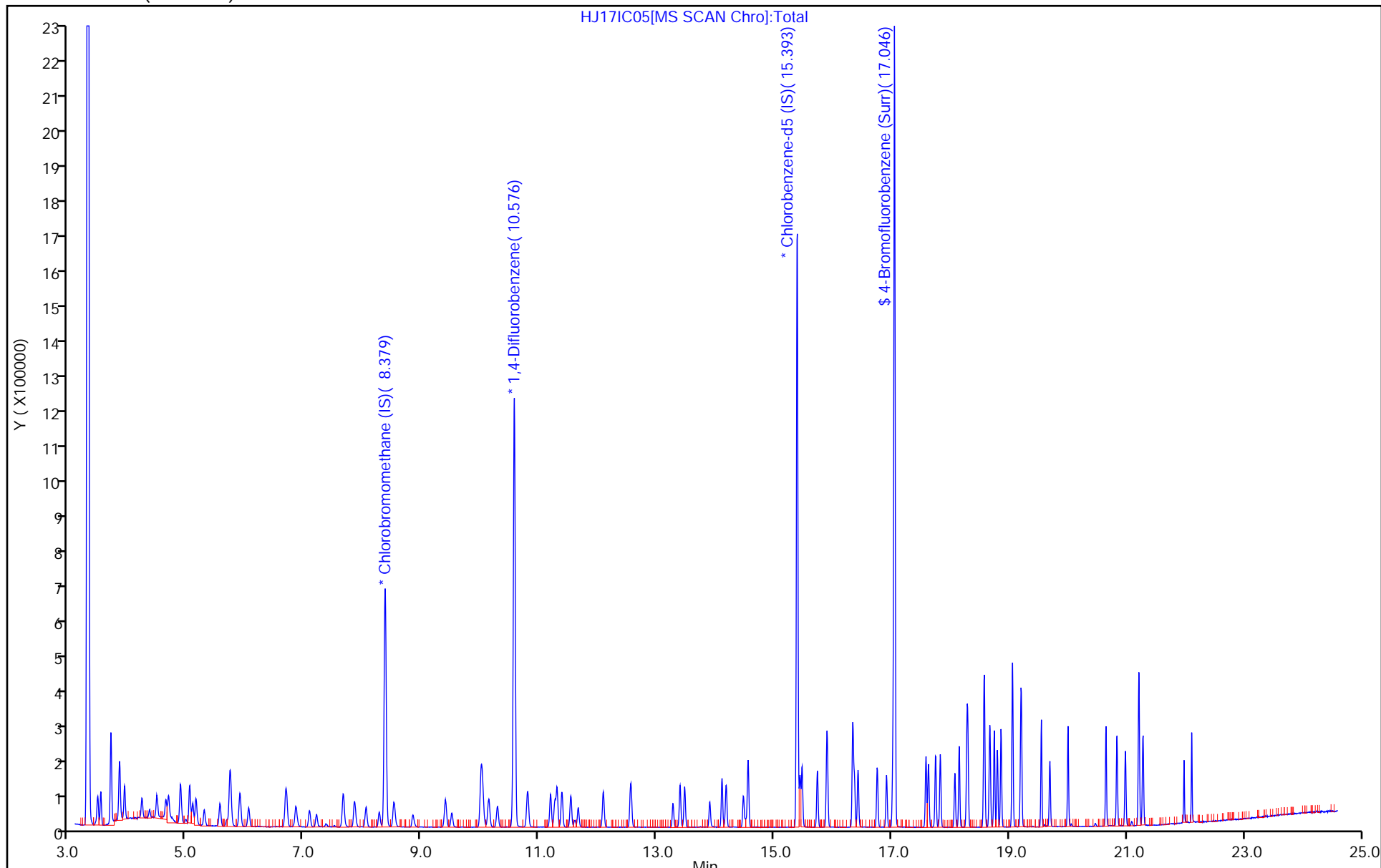
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC05.D

Injection Date: 18-Oct-2018 01:39:30

Instrument ID: MH

Lims ID: IC L5

Client ID:

Operator ID: AFB

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

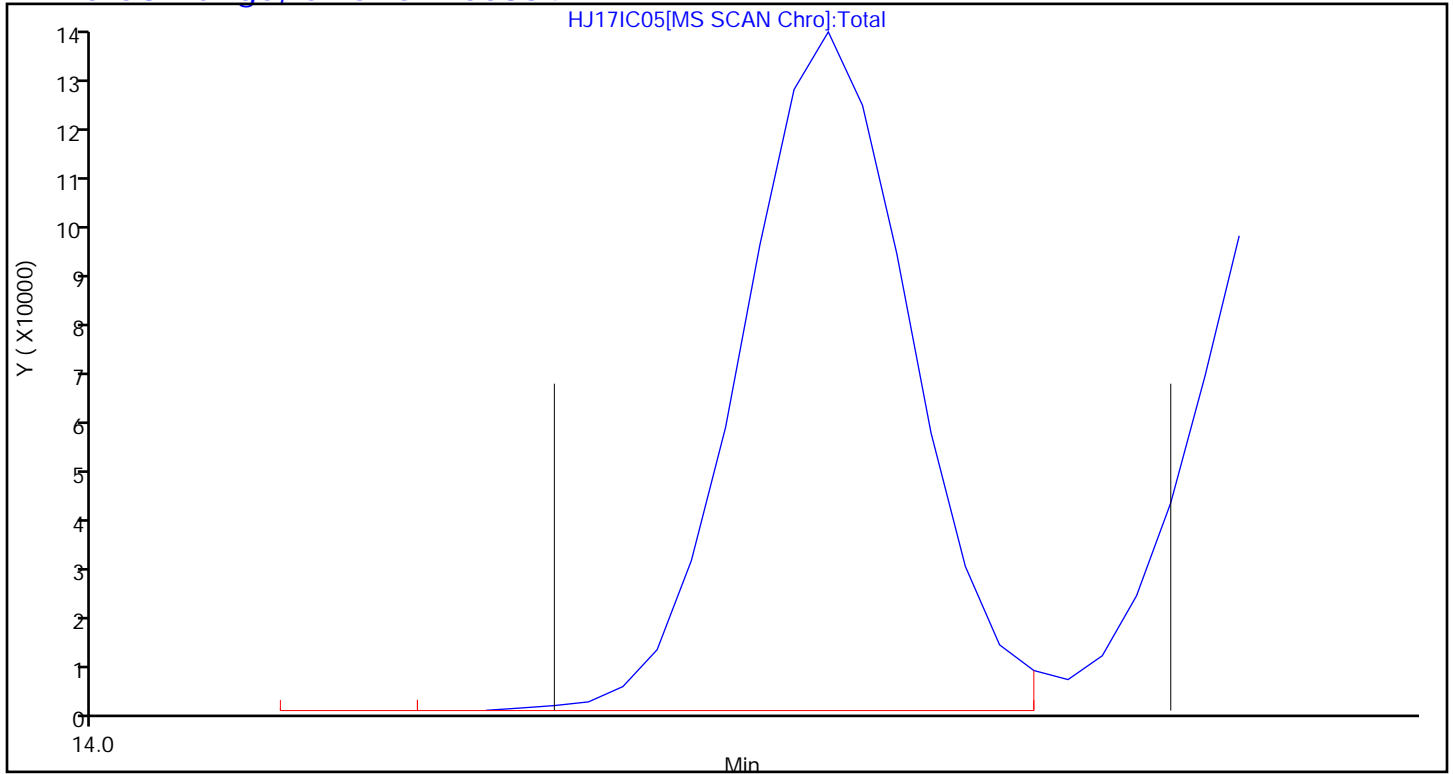
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 18-Oct-2018 02:24:30 ALS Bottle#: 6 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009689-012
 Misc. Info.: 180298
 Operator ID: AFB Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Oct-2018 12:38:16 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh

Date: 18-Oct-2018 08:50:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.374	8.380	-0.006	92	212336	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.578	-0.002	94	1158678	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.000	85	982609	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.046	17.047	-0.001	97	679161	4.00	4.13	
6 Chlorodifluoromethane	51	3.474	3.478	-0.004	97	135458	1.00	1.01	
7 Propene	41	3.490	3.490	0.000	98	52965	1.00	1.00	
8 Dichlorodifluoromethane	85	3.531	3.537	-0.006	100	208107	1.00	1.04	
9 Chloromethane	52	3.702	3.705	-0.003	51	23654	1.00	1.06	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.707	3.711	-0.004	94	208082	1.00	1.06	
11 Acetaldehyde	44	3.852	3.856	-0.004	95	142172	5.00	5.88	
12 Vinyl chloride	62	3.857	3.861	-0.004	98	75892	1.00	1.02	
13 Butadiene	54	3.939	3.942	-0.003	74	47756	1.00	1.03	
14 Butane	43	3.939	3.942	-0.003	82	84817	1.00	1.06	
15 Bromomethane	94	4.234	4.237	-0.003	97	92809	1.00	1.01	
16 Chloroethane	64	4.368	4.368	0.000	97	32336	1.00	1.02	
17 Ethanol	31	4.477	4.488	-0.011	98	127366	5.00	5.13	
18 Vinyl bromide	106	4.642	4.645	-0.003	97	89288	1.00	1.01	
19 2-Methylbutane	43	4.689	4.691	-0.002	86	57035	1.00	1.03	
21 Trichlorofluoromethane	101	4.890	4.895	-0.005	99	244578	1.00	1.04	
20 Acrolein	56	4.916	4.924	-0.008	93	19611	1.00	1.02	
22 Acetonitrile	40	4.973	4.984	-0.011	99	23262	1.00	0.9064	
23 Acetone	58	5.035	5.047	-0.012	98	107172	3.00	3.41	
24 Pentane	72	5.108	5.106	0.002	95	8963	1.00	0.9882	
25 Isopropyl alcohol	45	5.139	5.153	-0.014	96	250765	3.00	3.01	
26 Ethyl ether	31	5.283	5.297	-0.014	96	62821	1.00	1.02	
27 1,1-Dichloroethene	96	5.562	5.567	-0.005	99	70626	1.00	0.99	
28 Acrylonitrile	53	5.671	5.680	-0.009	97	47009	1.00	1.04	
30 1,1,2-Trichloro-1,2,2-trif	101	5.733	5.736	-0.003	96	166774	1.00	1.00	
29 2-Methyl-2-propanol	59	5.728	5.744	-0.016	97	111856	1.00	0.9857	
31 Methylene Chloride	84	5.898	5.902	-0.004	94	74489	1.00	0.9542	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.914	5.917	-0.003	97	52531	1.00	0.9811	
33 Carbon disulfide	76	6.053	6.054	-0.001	99	213270	1.00	1.02	
34 trans-1,2-Dichloroethene	96	6.679	6.682	-0.003	99	71989	1.00	1.00	
35 2-Methylpentane	43	6.699	6.701	-0.002	93	124570	1.00	1.01	
36 Methyl tert-butyl ether	73	6.834	6.858	-0.024	96	168660	1.00	1.02	
37 1,1-Dichloroethane	63	7.087	7.093	-0.006	100	128437	1.00	1.02	
38 Vinyl acetate	43	7.201	7.211	-0.010	100	161928	1.00	1.01	
40 Hexane	56	7.656	7.661	-0.005	68	45977	1.00	1.00	
39 2-Butanone (MEK)	72	7.656	7.672	-0.016	88	32620	1.00	1.01	
171 Isopropyl ether	45	7.836	7.858	-0.022	96	201238	1.00	1.02	
41 cis-1,2-Dichloroethene	96	8.048	8.054	-0.006	93	75628	1.00	1.00	
42 Ethyl acetate	43	8.260	8.275	-0.015	99	141288	1.00	1.01	
43 Chloroform	83	8.389	8.393	-0.004	95	165548	1.00	1.00	
173 Tert-butyl ethyl ether	59	8.508	8.526	-0.018	96	188697	1.00	1.02	
44 Tetrahydrofuran	42	8.824	8.843	-0.019	90	64127	1.00	0.99	
45 1,1,1-Trichloroethane	97	9.408	9.407	0.001	96	154487	1.00	0.99	
46 1,2-Dichloroethane	62	9.511	9.515	-0.004	97	98431	1.00	1.01	
47 Benzene	78	10.007	10.010	-0.003	96	208381	1.00	0.9859	
48 Cyclohexane	69	10.007	10.012	-0.005	89	28410	1.00	1.00	
50 Carbon tetrachloride	117	10.033	10.034	-0.001	98	173348	1.00	0.99	
49 n-Butanol	31	10.033	10.043	-0.010	67	22411	1.00	0.9258	
51 2,3-Dimethylpentane	71	10.142	10.145	-0.003	92	42119	1.00	1.04	
52 Thiophene	84	10.286	10.292	-0.006	94	121131	1.00	1.00	
53 Isooctane	57	10.803	10.804	-0.001	98	294056	1.00	1.00	
55 n-Heptane	71	11.191	11.196	-0.005	91	61417	1.00	0.9686	
54 1,2-Dichloropropane	63	11.268	11.268	0.000	93	84799	1.00	1.02	
56 Trichloroethene	130	11.304	11.308	-0.004	96	100466	1.00	0.9807	
57 Dibromomethane	93	11.387	11.388	-0.001	96	109017	1.00	0.9580	
58 Dichlorobromomethane	83	11.537	11.541	-0.004	98	161170	1.00	0.9893	
59 1,4-Dioxane	88	11.583	11.603	-0.020	87	30519	1.00	0.99	
60 Methyl methacrylate	41	11.656	11.665	-0.009	96	75858	1.00	0.9671	
61 Methylcyclohexane	83	12.090	12.092	-0.002	97	111144	1.00	0.9848	
62 4-Methyl-2-pentanone (MIBK)	43	12.540	12.547	-0.007	97	146768	1.00	0.9665	
63 cis-1,3-Dichloropropene	75	12.565	12.568	-0.003	97	120859	1.00	1.01	
64 trans-1,3-Dichloropropene	75	13.279	13.278	0.001	97	105533	1.00	0.9769	
65 Toluene	91	13.398	13.400	-0.002	93	245399	1.00	1.00	
66 1,1,2-Trichloroethane	83	13.475	13.477	-0.002	96	84975	1.00	0.9899	
69 2-Hexanone	58	13.894	13.901	-0.007	93	71456	1.00	0.9743	
71 n-Octane	85	14.111	14.112	-0.001	92	64133	1.00	0.9822	
70 Chlorodibromomethane	129	14.183	14.183	0.000	97	174167	1.00	0.9680	
72 Ethylene Dibromide	107	14.473	14.476	-0.003	98	154079	1.00	0.9808	
73 Tetrachloroethene	129	14.555	14.556	-0.001	94	99311	1.00	0.9790	
74 Chlorobenzene	112	15.439	15.440	-0.001	96	210333	1.00	0.9856	
75 2,3-Dimethylheptane	43	15.475	15.474	0.001	95	203333	1.00	1.04	
76 Ethylbenzene	91	15.734	15.735	-0.001	99	317163	1.00	1.01	
78 m-Xylene & p-Xylene	91	15.899	15.900	-0.001	98	500456	2.00	2.06	
81 n-Nonane	57	16.333	16.335	-0.002	92	137855	1.00	1.02	
79 Bromoform	173	16.344	16.343	0.001	95	184746	1.00	1.01	
80 Styrene	104	16.364	16.366	-0.002	98	180853	1.00	1.08	
82 o-Xylene	91	16.426	16.428	-0.002	99	261630	1.00	1.05	
83 1,1,2,2-Tetrachloroethane	83	16.752	16.754	-0.002	99	221972	1.00	1.01	
84 1,2,3-Trichloropropane	110	16.912	16.914	-0.002	98	52471	1.00	1.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.021	17.021	0.000	97	346446	1.00	0.9793	
86 N-Propylbenzene	120	17.584	17.585	-0.001	99	94610	1.00	0.9637	
87 2-Chlorotoluene	126	17.630	17.628	0.002	97	96740	1.00	0.9881	
88 4-Ethyltoluene	105	17.749	17.749	0.000	99	360825	1.00	0.9858	
89 1,3,5-Trimethylbenzene	120	17.827	17.828	-0.001	93	148537	1.00	1.01	
90 Alpha Methyl Styrene	118	18.075	18.075	0.000	87	138126	1.00	0.9276	
91 n-Decane	57	18.147	18.149	-0.002	92	190006	1.00	0.9791	
92 tert-Butylbenzene	119	18.282	18.282	0.000	91	339718	1.00	0.9707	
93 1,2,4-Trimethylbenzene	105	18.297	18.298	-0.001	96	322493	1.00	1.01	
95 sec-Butylbenzene	105	18.571	18.572	-0.001	98	471321	1.00	0.9762	
94 1,3-Dichlorobenzene	146	18.581	18.582	-0.001	97	239096	1.00	0.9601	
96 Benzyl chloride	91	18.664	18.665	-0.001	98	223687	1.00	0.8815	
97 1,4-Dichlorobenzene	146	18.674	18.675	-0.001	96	229844	1.00	0.99	
98 4-Isopropyltoluene	119	18.747	18.748	-0.001	97	389612	1.00	1.02	
99 1,2,3-Trimethylbenzene	105	18.799	18.800	-0.001	98	317715	1.00	1.04	
100 Butylcyclohexane	83	18.861	18.862	-0.001	96	262399	1.00	1.07	
101 1,2-Dichlorobenzene	146	19.057	19.058	-0.001	86	243449	1.00	1.00	
102 2,3-Dihydroindene	117	19.057	19.058	-0.001	93	315833	1.00	1.02	
103 Indene	116	19.196	19.196	0.000	94	254577	1.00	0.9469	
104 n-Butylbenzene	91	19.207	19.207	0.000	97	428038	1.00	1.01	
105 Undecane	57	19.548	19.548	0.000	95	227733	1.00	0.99	
106 1,2-Dibromo-3-Chloropropan	157	19.693	19.694	-0.001	98	118436	1.00	0.99	
107 1,2,4,5-Tetramethylbenzene	119	20.003	20.003	0.000	97	363416	1.00	1.06	
110 Dodecane	57	20.649	20.648	0.001	96	222847	1.00	0.9549	
111 1,2,4-Trichlorobenzene	180	20.835	20.835	0.000	93	219348	1.00	1.05	
113 Naphthalene	128	20.980	20.980	0.000	99	433455	1.00	1.03	
115 Hexachlorobutadiene	225	21.207	21.209	-0.002	92	239900	1.00	0.9842	
116 1,2,3-Trichlorobenzene	180	21.279	21.279	0.000	95	230660	1.00	1.05	
117 2-Methylnaphthalene	142	21.977	21.977	0.000	99	186744	1.00	0.9310	
118 1-Methylnaphthalene	142	22.106	22.107	-0.001	99	236812	1.00	1.10	
A 120 C8 Range	1	14.098	(14.059-14.173)		0	618206	1.00	0.9768	
S 121 Xylenes, Total	100				0		3.00	3.11	
S 122 1,2-Dichloroethene, Total	1				0		2.00	1.99	

Reagents:

40L6DQP_00006

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C06.D

Injection Date: 18-Oct-2018 02:24:30

Instrument ID: MH

Operator ID: AFB

Lims ID: IC L6

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

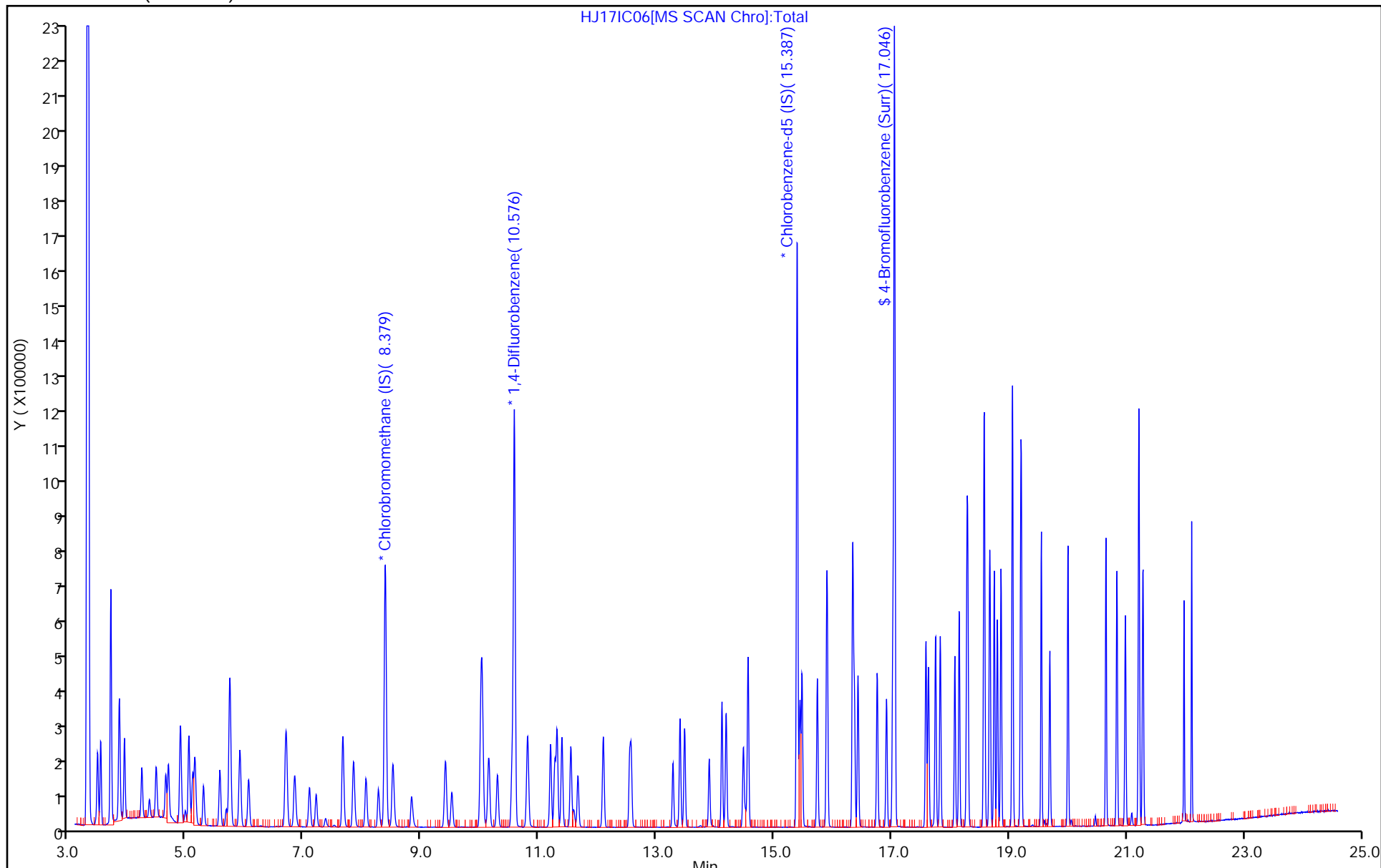
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC06.D

Injection Date: 18-Oct-2018 02:24:30

Instrument ID: MH

Lims ID: IC L6

Client ID:

Operator ID: AFB

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

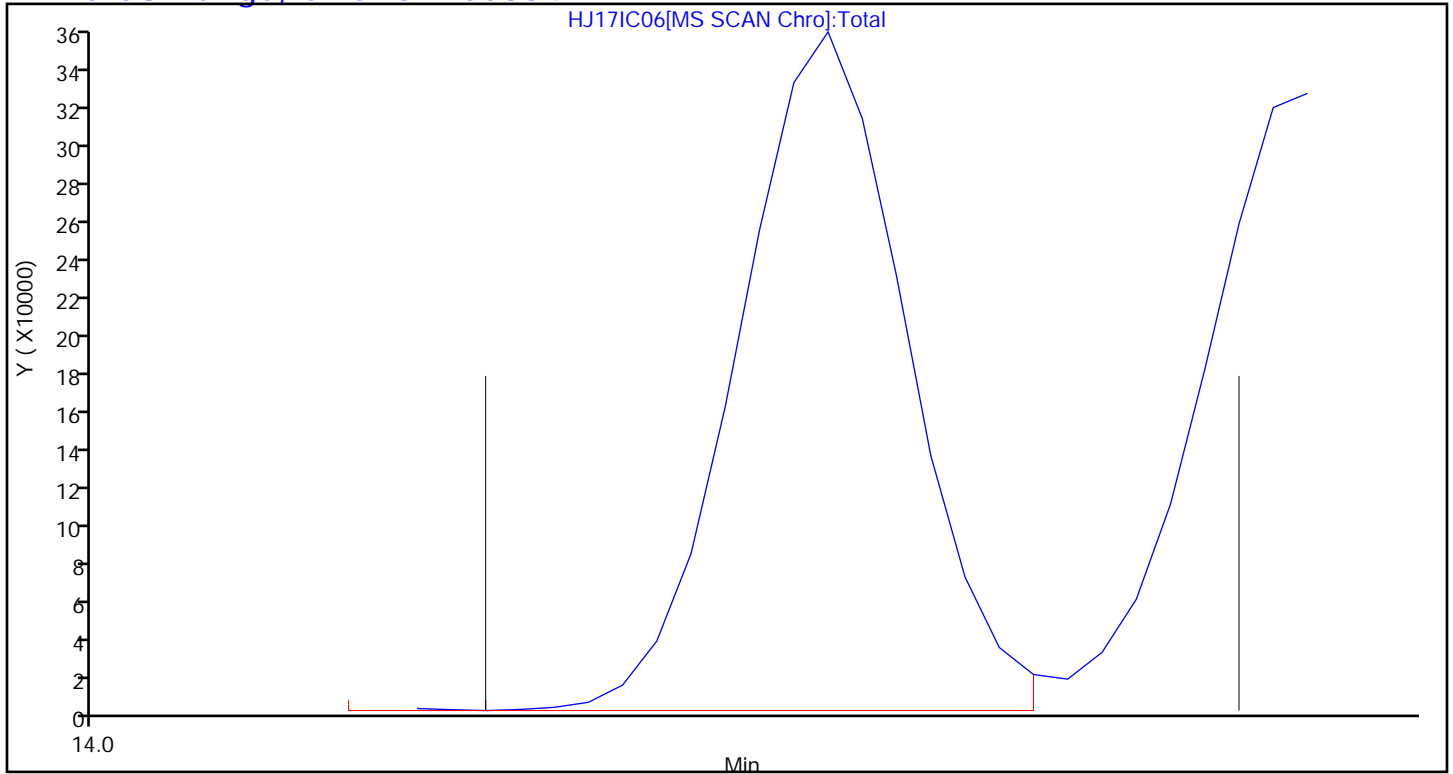
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 18-Oct-2018 03:08:30 ALS Bottle#: 7 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009689-013
 Misc. Info.: 180297
 Operator ID: AFB Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Oct-2018 12:38:24 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh

Date: 18-Oct-2018 08:56:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.380	-0.001	86	226134	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.578	-0.002	93	1237056	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.000	85	1050936	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.047	0.000	97	727663	4.00	4.14	
6 Chlorodifluoromethane	51	3.474	3.478	-0.004	97	283864	2.00	1.99	
7 Propene	41	3.490	3.490	0.000	99	113170	2.00	2.01	
8 Dichlorodifluoromethane	85	3.536	3.537	-0.001	100	464714	2.00	2.18	
9 Chloromethane	52	3.702	3.705	-0.003	97	48245	2.00	2.02	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.707	3.711	-0.004	89	445066	2.00	2.13	
11 Acetaldehyde	44	3.852	3.856	-0.004	98	246866	10.0	9.59	
12 Vinyl chloride	62	3.857	3.861	-0.004	99	156272	2.00	1.97	
13 Butadiene	54	3.940	3.942	-0.002	75	98946	2.00	2.01	
14 Butane	43	3.940	3.942	-0.002	82	171464	2.00	2.02	
15 Bromomethane	94	4.234	4.237	-0.003	98	193463	2.00	1.97	
16 Chloroethane	64	4.363	4.368	-0.005	97	65176	2.00	1.93	
17 Ethanol	31	4.472	4.488	-0.016	97	273371	10.0	10.3	
18 Vinyl bromide	106	4.642	4.645	-0.003	98	189437	2.00	2.01	
19 2-Methylbutane	43	4.689	4.691	-0.002	86	119651	2.00	2.04	
21 Trichlorofluoromethane	101	4.891	4.895	-0.004	99	510643	2.00	2.03	
20 Acrolein	56	4.916	4.924	-0.008	94	32914	2.00	1.61	
22 Acetonitrile	40	4.973	4.984	-0.011	99	51223	2.00	1.87	
23 Acetone	58	5.030	5.047	-0.017	98	189591	6.00	5.66	
24 Pentane	72	5.108	5.106	0.002	99	19209	2.00	1.99	
25 Isopropyl alcohol	45	5.123	5.153	-0.030	95	542568	6.00	6.11	
26 Ethyl ether	31	5.278	5.297	-0.019	96	133787	2.00	2.05	
27 1,1-Dichloroethene	96	5.568	5.567	0.001	99	149787	2.00	1.97	
28 Acrylonitrile	53	5.671	5.680	-0.009	94	96297	2.00	2.00	
30 1,1,2-Trichloro-1,2,2-trif	101	5.733	5.736	-0.003	97	353192	2.00	1.99	
29 2-Methyl-2-propanol	59	5.712	5.744	-0.032	95	246534	2.00	2.04	
31 Methylene Chloride	84	5.898	5.902	-0.004	94	147911	2.00	1.78	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.914	5.917	-0.003	98	111560	2.00	1.96	
33 Carbon disulfide	76	6.053	6.054	-0.001	99	448202	2.00	2.02	
34 trans-1,2-Dichloroethene	96	6.679	6.682	-0.003	98	154431	2.00	2.00	
35 2-Methylpentane	43	6.699	6.701	-0.002	93	271249	2.00	2.06	
36 Methyl tert-butyl ether	73	6.829	6.858	-0.029	97	356964	2.00	2.02	
37 1,1-Dichloroethane	63	7.092	7.093	-0.001	100	271511	2.00	2.02	
38 Vinyl acetate	43	7.201	7.211	-0.010	100	349456	2.00	2.04	
40 Hexane	56	7.656	7.661	-0.005	74	100164	2.00	2.04	
39 2-Butanone (MEK)	72	7.645	7.672	-0.027	96	66854	2.00	1.95	
171 Isopropyl ether	45	7.831	7.858	-0.027	97	431264	2.00	2.06	
41 cis-1,2-Dichloroethene	96	8.048	8.054	-0.006	93	161607	2.00	2.01	
42 Ethyl acetate	43	8.255	8.275	-0.020	99	297385	2.00	2.00	
43 Chloroform	83	8.395	8.393	0.002	96	350279	2.00	1.98	
173 Tert-butyl ethyl ether	59	8.498	8.526	-0.028	95	406640	2.00	2.06	
44 Tetrahydrofuran	42	8.813	8.843	-0.030	90	138662	2.00	2.01	
45 1,1,1-Trichloroethane	97	9.403	9.407	-0.004	96	331283	2.00	2.00	
46 1,2-Dichloroethane	62	9.516	9.515	0.001	97	206217	2.00	1.98	
47 Benzene	78	10.007	10.010	-0.003	96	445364	2.00	1.97	
48 Cyclohexane	69	10.007	10.012	-0.005	89	61315	2.00	2.03	
50 Carbon tetrachloride	117	10.033	10.034	-0.001	98	377888	2.00	2.02	
49 n-Butanol	31	10.023	10.043	-0.020	68	52685	2.00	2.04	
51 2,3-Dimethylpentane	71	10.142	10.145	-0.003	91	91174	2.00	2.11	
52 Thiophene	84	10.291	10.292	-0.001	94	263669	2.00	2.03	
53 Isooctane	57	10.803	10.804	-0.001	98	636694	2.00	2.02	
55 n-Heptane	71	11.191	11.196	-0.005	91	135167	2.00	2.00	
54 1,2-Dichloropropane	63	11.263	11.268	-0.005	94	179688	2.00	2.02	
56 Trichloroethene	130	11.304	11.308	-0.004	97	216192	2.00	1.98	
57 Dibromomethane	93	11.387	11.388	-0.001	95	231958	2.00	1.91	
58 Dichlorobromomethane	83	11.537	11.541	-0.004	98	354393	2.00	2.04	
59 1,4-Dioxane	88	11.578	11.603	-0.025	87	67912	2.00	2.07	
60 Methyl methacrylate	41	11.656	11.665	-0.009	97	168129	2.00	2.01	
61 Methylcyclohexane	83	12.090	12.092	-0.002	97	245653	2.00	2.04	
62 4-Methyl-2-pentanone (MIBK)	43	12.535	12.547	-0.012	97	325053	2.00	2.00	
63 cis-1,3-Dichloropropene	75	12.566	12.568	-0.002	93	270244	2.00	2.11	
64 trans-1,3-Dichloropropene	75	13.279	13.278	0.001	98	237537	2.00	2.06	
65 Toluene	91	13.398	13.400	-0.002	93	537042	2.00	2.05	
66 1,1,2-Trichloroethane	83	13.475	13.477	-0.002	96	185226	2.00	2.02	
69 2-Hexanone	58	13.889	13.901	-0.012	93	161080	2.00	2.05	
71 n-Octane	85	14.111	14.112	-0.001	92	143156	2.00	2.05	
70 Chlorodibromomethane	129	14.183	14.183	0.000	97	403925	2.00	2.10	
72 Ethylene Dibromide	107	14.473	14.476	-0.003	98	342752	2.00	2.04	
73 Tetrachloroethene	129	14.555	14.556	-0.001	94	213862	2.00	1.97	
74 Chlorobenzene	112	15.439	15.440	-0.001	96	452009	2.00	1.98	
75 2,3-Dimethylheptane	43	15.475	15.474	0.001	95	439179	2.00	2.09	
76 Ethylbenzene	91	15.734	15.735	-0.001	98	699591	2.00	2.07	
78 m-Xylene & p-Xylene	91	15.899	15.900	-0.001	98	1110035	4.00	4.27	
81 n-Nonane	57	16.333	16.335	-0.002	92	306793	2.00	2.12	
79 Bromoform	173	16.344	16.343	0.001	95	473178	2.00	2.43	
80 Styrene	104	16.364	16.366	-0.002	98	405093	2.00	2.27	
82 o-Xylene	91	16.426	16.428	-0.002	99	567309	2.00	2.14	
83 1,1,2,2-Tetrachloroethane	83	16.752	16.754	-0.002	99	488308	2.00	2.09	
84 1,2,3-Trichloropropane	110	16.912	16.914	-0.002	98	112040	2.00	2.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.021	17.021	0.000	96	769360	2.00	2.03	
86 N-Propylbenzene	120	17.584	17.585	-0.001	99	210803	2.00	2.01	
87 2-Chlorotoluene	126	17.625	17.628	-0.003	97	210729	2.00	2.01	
88 4-Ethyltoluene	105	17.744	17.749	-0.005	99	794055	2.00	2.03	
89 1,3,5-Trimethylbenzene	120	17.827	17.828	-0.001	93	327222	2.00	2.08	
90 Alpha Methyl Styrene	118	18.075	18.075	0.000	89	326862	2.00	2.05	
91 n-Decane	57	18.147	18.149	-0.002	91	418496	2.00	2.02	
92 tert-Butylbenzene	119	18.282	18.282	0.000	91	742799	2.00	1.98	
93 1,2,4-Trimethylbenzene	105	18.297	18.298	-0.001	96	705560	2.00	2.06	
95 sec-Butylbenzene	105	18.571	18.572	-0.001	99	1050330	2.00	2.03	
94 1,3-Dichlorobenzene	146	18.582	18.582	0.000	98	533314	2.00	2.00	
96 Benzyl chloride	91	18.664	18.665	-0.001	98	543852	2.00	2.00	
97 1,4-Dichlorobenzene	146	18.675	18.675	0.000	95	506713	2.00	2.05	
98 4-Isopropyltoluene	119	18.747	18.748	-0.001	97	850197	2.00	2.09	
99 1,2,3-Trimethylbenzene	105	18.799	18.800	-0.001	98	678913	2.00	2.08	
100 Butylcyclohexane	83	18.861	18.862	-0.001	97	565812	2.00	2.15	
101 1,2-Dichlorobenzene	146	19.057	19.058	-0.001	93	528561	2.00	2.03	
102 2,3-Dihydroindene	117	19.057	19.058	-0.001	94	688034	2.00	2.08	
103 Indene	116	19.197	19.196	0.001	90	576828	2.00	2.01	
104 n-Butylbenzene	91	19.207	19.207	0.000	97	921027	2.00	2.04	
105 Undecane	57	19.548	19.548	0.000	95	502400	2.00	2.05	
106 1,2-Dibromo-3-Chloropropan	157	19.693	19.694	-0.001	96	281362	2.00	2.21	
107 1,2,4,5-Tetramethylbenzene	119	20.003	20.003	0.000	97	805299	2.00	2.19	
110 Dodecane	57	20.649	20.648	0.001	96	497220	2.00	1.99	
111 1,2,4-Trichlorobenzene	180	20.835	20.835	0.000	93	470402	2.00	2.10	
113 Naphthalene	128	20.980	20.980	0.000	99	890319	2.00	1.98	
115 Hexachlorobutadiene	225	21.207	21.209	-0.002	93	504308	2.00	1.93	
116 1,2,3-Trichlorobenzene	180	21.279	21.279	0.000	95	462944	2.00	1.97	
117 2-Methylnaphthalene	142	21.977	21.977	0.000	99	389546	2.00	1.82	
118 1-Methylnaphthalene	142	22.106	22.107	-0.001	100	442171	2.00	1.92	
A 120 C8 Range	1	14.101	(14.059-14.173)		0	1331364	2.00	1.97	
S 121 Xylenes, Total	100				0		6.00	6.40	
S 122 1,2-Dichloroethene, Total	1				0		4.00	4.01	

Reagents:

40L7DQP_00006

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C07.D

Injection Date: 18-Oct-2018 03:08:30

Instrument ID: MH

Operator ID: AFB

Lims ID: ICIS L7

Worklist Smp#: 13

Client ID:

Purge Vol: 500.000 mL

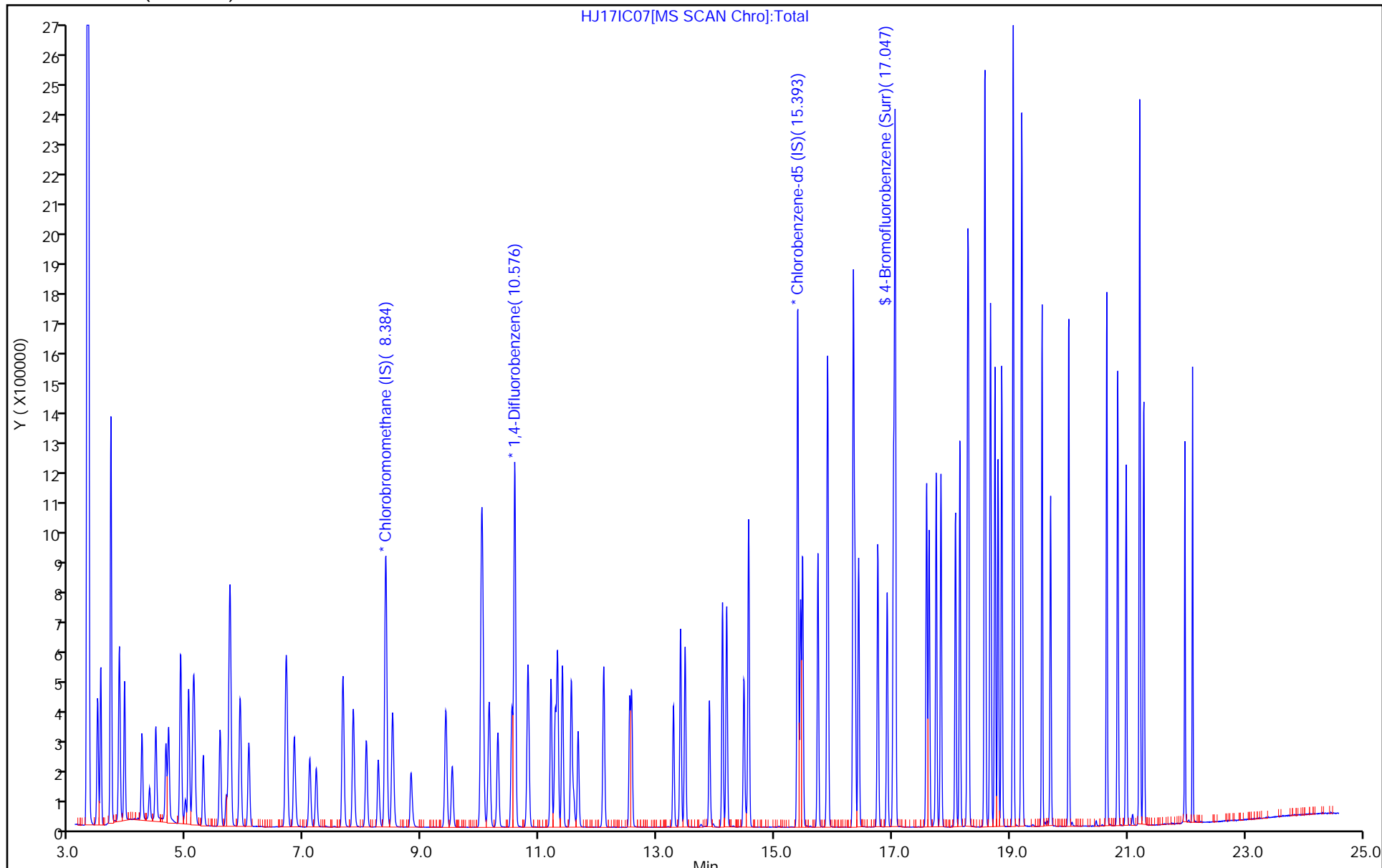
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC07.D

Injection Date: 18-Oct-2018 03:08:30

Instrument ID: MH

Lims ID: ICIS L7

Client ID:

Operator ID: AFB

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

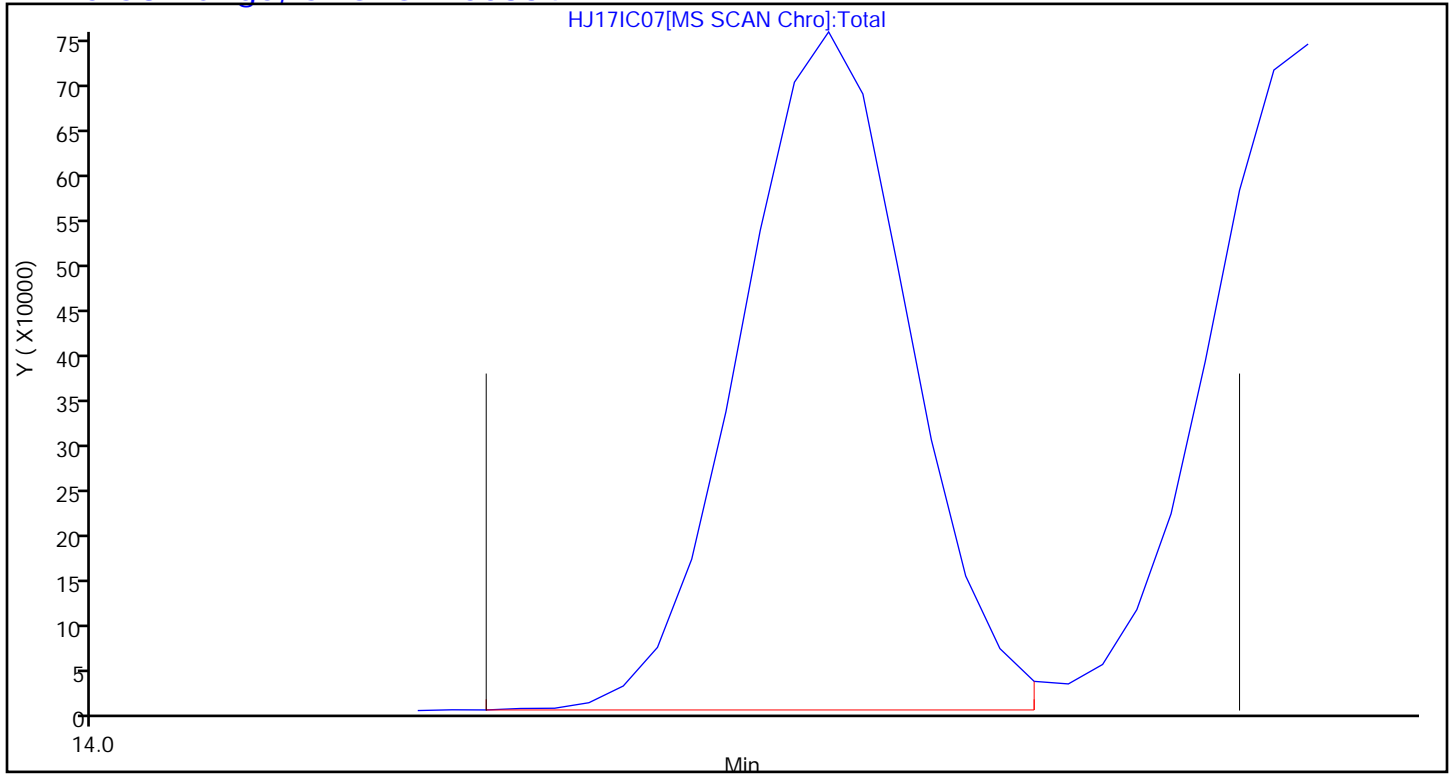
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 18-Oct-2018 03:53:30 ALS Bottle#: 8 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009689-014
 Misc. Info.: 180296
 Operator ID: AFB Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Oct-2018 12:38:30 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: barlozhetskayaa

Date: 18-Oct-2018 11:43:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.380	-0.001	92	231090	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.581	10.578	0.003	93	1241593	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.000	85	1088742	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.047	0.000	97	748517	4.00	4.11	
6 Chlorodifluoromethane	51	3.474	3.478	-0.004	97	585250	4.00	4.02	
7 Propene	41	3.485	3.490	-0.005	99	234285	4.00	4.07	
8 Dichlorodifluoromethane	85	3.531	3.537	-0.006	100	851927	4.00	3.92	
9 Chloromethane	52	3.702	3.705	-0.003	97	95453	4.00	3.91	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.707	3.711	-0.004	94	903009	4.00	4.23	
11 Acetaldehyde	44	3.847	3.856	-0.009	96	481710	20.0	18.3	
12 Vinyl chloride	62	3.857	3.861	-0.004	99	312925	4.00	3.85	
13 Butadiene	54	3.940	3.942	-0.002	75	197952	4.00	3.94	
14 Butane	43	3.940	3.942	-0.002	82	338641	4.00	3.90	
15 Bromomethane	94	4.234	4.237	-0.003	98	389891	4.00	3.88	
16 Chloroethane	64	4.363	4.368	-0.005	98	131079	4.00	3.80	
17 Ethanol	31	4.472	4.488	-0.016	97	533602	20.0	19.7	
18 Vinyl bromide	106	4.642	4.645	-0.003	98	382727	4.00	3.97	
19 2-Methylbutane	43	4.689	4.691	-0.002	87	241874	4.00	4.03	
21 Trichlorofluoromethane	101	4.891	4.895	-0.004	100	1065201	4.00	4.15	
20 Acrolein	56	4.911	4.924	-0.013	94	96192	4.00	4.61	
22 Acetonitrile	40	4.968	4.984	-0.016	99	119223	4.00	4.27	
23 Acetone	58	5.025	5.047	-0.022	98	393962	12.0	11.5	
24 Pentane	72	5.102	5.106	-0.004	98	42044	4.00	4.26	
25 Isopropyl alcohol	45	5.118	5.153	-0.035	97	1136225	12.0	12.5	
26 Ethyl ether	31	5.273	5.297	-0.024	96	281181	4.00	4.21	
27 1,1-Dichloroethene	96	5.562	5.567	-0.005	99	323106	4.00	4.17	
28 Acrylonitrile	53	5.671	5.680	-0.009	94	208252	4.00	4.23	
30 1,1,2-Trichloro-1,2,2-trif	101	5.733	5.736	-0.003	98	743634	4.00	4.11	
29 2-Methyl-2-propanol	59	5.697	5.744	-0.047	94	518946	4.00	4.20	
31 Methylene Chloride	84	5.898	5.902	-0.004	94	299547	4.00	3.53	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.914	5.917	-0.003	97	237114	4.00	4.07	
33 Carbon disulfide	76	6.053	6.054	-0.001	99	941617	4.00	4.15	
34 trans-1,2-Dichloroethene	96	6.684	6.682	0.002	98	328893	4.00	4.18	
35 2-Methylpentane	43	6.699	6.701	-0.002	93	566983	4.00	4.21	
36 Methyl tert-butyl ether	73	6.824	6.858	-0.034	96	772531	4.00	4.29	
37 1,1-Dichloroethane	63	7.087	7.093	-0.006	100	571074	4.00	4.15	
38 Vinyl acetate	43	7.201	7.211	-0.010	100	759769	4.00	4.34	
40 Hexane	56	7.661	7.661	0.000	80	209262	4.00	4.18	
39 2-Butanone (MEK)	72	7.640	7.672	-0.032	97	143154	4.00	4.08	
171 Isopropyl ether	45	7.826	7.858	-0.032	97	917345	4.00	4.28	
41 cis-1,2-Dichloroethene	96	8.054	8.054	0.000	92	342654	4.00	4.16	
42 Ethyl acetate	43	8.250	8.275	-0.025	99	643140	4.00	4.24	
43 Chloroform	83	8.395	8.393	0.002	98	729136	4.00	4.04	
173 Tert-butyl ethyl ether	59	8.493	8.526	-0.033	95	870113	4.00	4.32	
44 Tetrahydrofuran	42	8.803	8.843	-0.040	91	298944	4.00	4.25	
45 1,1,1-Trichloroethane	97	9.408	9.407	0.001	96	703701	4.00	4.16	
46 1,2-Dichloroethane	62	9.516	9.515	0.001	98	432913	4.00	4.14	
47 Benzene	78	10.012	10.010	0.002	96	938685	4.00	4.14	
48 Cyclohexane	69	10.012	10.012	0.000	74	131539	4.00	4.34	
50 Carbon tetrachloride	117	10.038	10.034	0.004	97	806085	4.00	4.30	
49 n-Butanol	31	10.012	10.043	-0.031	67	113471	4.00	4.37	
51 2,3-Dimethylpentane	71	10.142	10.145	-0.003	90	190112	4.00	4.38	
52 Thiophene	84	10.292	10.292	0.000	94	553399	4.00	4.25	
53 Isooctane	57	10.803	10.804	-0.001	98	1344345	4.00	4.25	
55 n-Heptane	71	11.196	11.196	0.000	90	290928	4.00	4.28	
54 1,2-Dichloropropane	63	11.268	11.268	0.000	94	378065	4.00	4.24	
56 Trichloroethene	130	11.305	11.308	-0.004	96	463451	4.00	4.22	
57 Dibromomethane	93	11.387	11.388	-0.001	94	496446	4.00	4.07	
58 Dichlorobromomethane	83	11.542	11.541	0.001	98	761067	4.00	4.36	
59 1,4-Dioxane	88	11.573	11.603	-0.030	88	144558	4.00	4.39	
60 Methyl methacrylate	41	11.656	11.665	-0.009	97	362862	4.00	4.32	
61 Methylcyclohexane	83	12.095	12.092	0.003	97	531359	4.00	4.39	
62 4-Methyl-2-pentanone (MIBK)	43	12.529	12.547	-0.018	97	697556	4.00	4.29	
63 cis-1,3-Dichloropropene	75	12.566	12.568	-0.002	92	579344	4.00	4.51	
64 trans-1,3-Dichloropropene	75	13.279	13.278	0.001	96	528873	4.00	4.42	
65 Toluene	91	13.398	13.400	-0.002	93	1167016	4.00	4.30	
66 1,1,2-Trichloroethane	83	13.475	13.477	-0.002	96	392241	4.00	4.12	
69 2-Hexanone	58	13.889	13.901	-0.012	93	355684	4.00	4.38	
71 n-Octane	85	14.111	14.112	-0.001	92	312001	4.00	4.31	
70 Chlorodibromomethane	129	14.183	14.183	0.000	97	891897	4.00	4.47	
72 Ethylene Dibromide	107	14.478	14.476	0.002	98	752542	4.00	4.32	
73 Tetrachloroethene	129	14.555	14.556	-0.001	95	469073	4.00	4.17	
74 Chlorobenzene	112	15.439	15.440	-0.001	96	982063	4.00	4.15	
75 2,3-Dimethylheptane	43	15.475	15.474	0.001	95	932585	4.00	4.28	
76 Ethylbenzene	91	15.734	15.735	-0.001	98	1533287	4.00	4.39	
78 m-Xylene & p-Xylene	91	15.899	15.900	-0.001	98	2423687	8.00	8.99	
81 n-Nonane	57	16.333	16.335	-0.002	92	669865	4.00	4.46	
79 Bromoform	173	16.344	16.343	0.001	96	1118188	4.00	5.54	
80 Styrene	104	16.370	16.366	0.003	98	884469	4.00	4.78	
82 o-Xylene	91	16.426	16.428	-0.002	98	1201490	4.00	4.37	
83 1,1,2,2-Tetrachloroethane	83	16.752	16.754	-0.002	99	1046645	4.00	4.32	
84 1,2,3-Trichloropropane	110	16.912	16.914	-0.002	98	243601	4.00	4.20	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.021	17.021	0.000	96	1657857	4.00	4.23	
86 N-Propylbenzene	120	17.584	17.585	-0.001	99	468496	4.00	4.31	
87 2-Chlorotoluene	126	17.625	17.628	-0.003	97	454091	4.00	4.19	
88 4-Ethyltoluene	105	17.749	17.749	0.000	99	1742615	4.00	4.30	
89 1,3,5-Trimethylbenzene	120	17.827	17.828	-0.001	93	709728	4.00	4.35	
90 Alpha Methyl Styrene	118	18.075	18.075	0.000	89	750754	4.00	4.55	
91 n-Decane	57	18.153	18.149	0.004	91	908034	4.00	4.22	
92 tert-Butylbenzene	119	18.282	18.282	0.000	91	1649493	4.00	4.25	
93 1,2,4-Trimethylbenzene	105	18.297	18.298	-0.001	96	1550099	4.00	4.37	
95 sec-Butylbenzene	105	18.571	18.572	-0.001	99	2315481	4.00	4.33	
94 1,3-Dichlorobenzene	146	18.582	18.582	0.000	97	1188472	4.00	4.31	
96 Benzyl chloride	91	18.664	18.665	-0.001	98	1280428	4.00	4.55	
97 1,4-Dichlorobenzene	146	18.675	18.675	0.000	96	1146027	4.00	4.47	
98 4-Isopropyltoluene	119	18.747	18.748	-0.001	97	1859435	4.00	4.41	
99 1,2,3-Trimethylbenzene	105	18.799	18.800	-0.001	98	1446101	4.00	4.28	
100 Butylcyclohexane	83	18.861	18.862	-0.001	98	1198312	4.00	4.41	
101 1,2-Dichlorobenzene	146	19.057	19.058	-0.001	94	1182407	4.00	4.38	
102 2,3-Dihydroindene	117	19.057	19.058	-0.001	93	1543740	4.00	4.51	
103 Indene	116	19.197	19.196	0.001	90	1317723	4.00	4.42	
104 n-Butylbenzene	91	19.207	19.207	0.000	97	2011121	4.00	4.29	
105 Undecane	57	19.548	19.548	0.000	95	1080640	4.00	4.25	
106 1,2-Dibromo-3-Chloropropan	157	19.693	19.694	-0.001	95	630090	4.00	4.77	
107 1,2,4,5-Tetramethylbenzene	119	20.003	20.003	0.000	97	1784914	4.00	4.69	
110 Dodecane	57	20.649	20.648	0.001	97	1108632	4.00	4.29	
111 1,2,4-Trichlorobenzene	180	20.835	20.835	0.000	93	1097716	4.00	4.73	
113 Naphthalene	128	20.980	20.980	0.000	99	1969515	4.00	4.23	
115 Hexachlorobutadiene	225	21.212	21.209	0.003	92	1162309	4.00	4.30	
116 1,2,3-Trichlorobenzene	180	21.279	21.279	0.000	95	1003400	4.00	4.13	
117 2-Methylnaphthalene	142	21.977	21.977	0.000	100	902491	4.00	4.06	
118 1-Methylnaphthalene	142	22.106	22.107	-0.001	100	978841	4.00	4.10	
A 120 C8 Range	1	14.098	(14.064-14.157)		0	2841158	4.00	4.19	
S 121 Xylenes, Total	100				0		12.0	13.4	
S 122 1,2-Dichloroethene, Total	1				0		8.00	8.34	

Reagents:

40L8DQP_00006

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC08.D

Injection Date: 18-Oct-2018 03:53:30

Instrument ID: MH

Operator ID: AFB

Lims ID: IC L8

Worklist Smp#: 14

Client ID:

Purge Vol: 500.000 mL

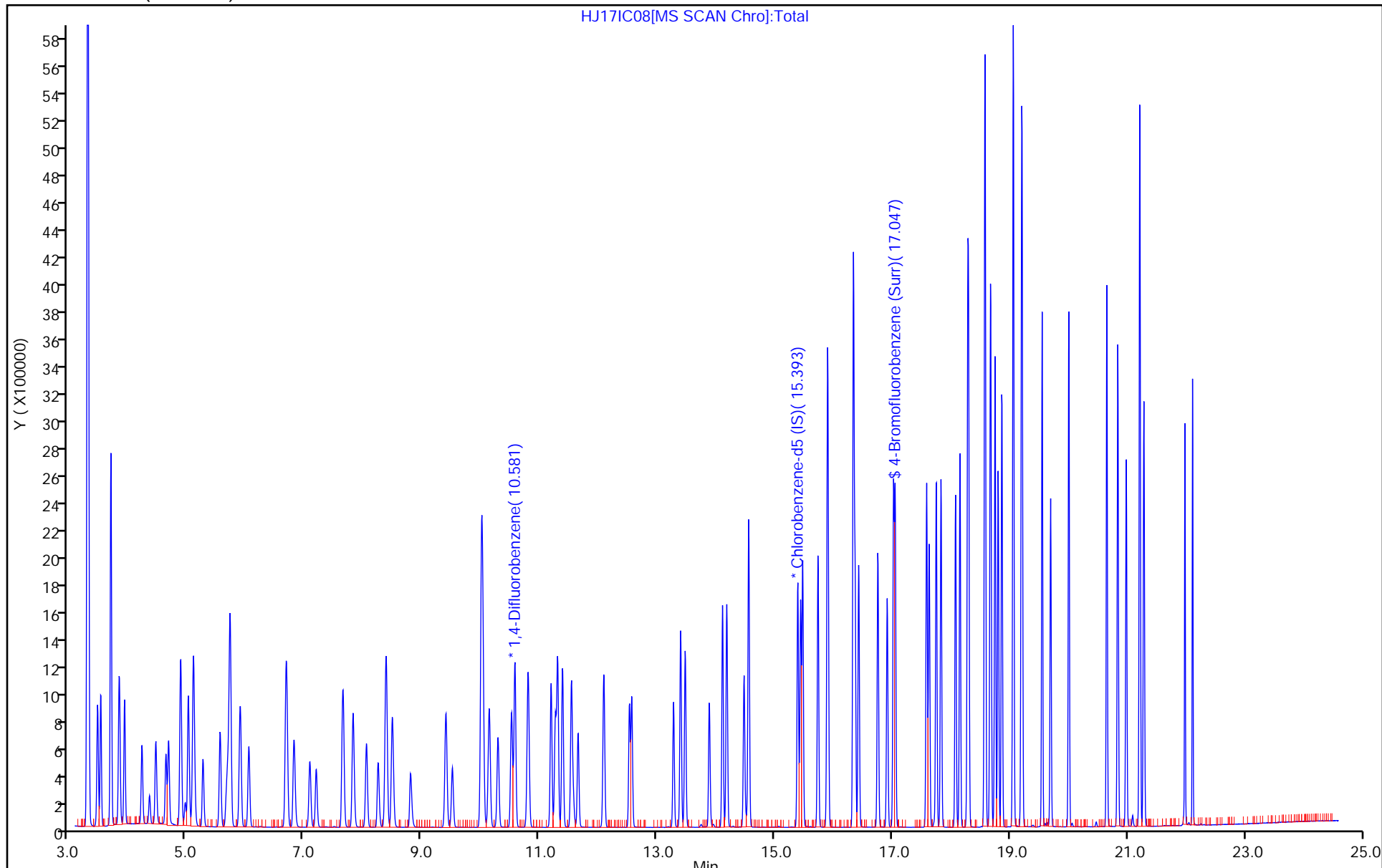
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC08.D

Injection Date: 18-Oct-2018 03:53:30

Instrument ID: MH

Lims ID: IC L8

Client ID:

Operator ID: AFB

ALS Bottle#: 8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

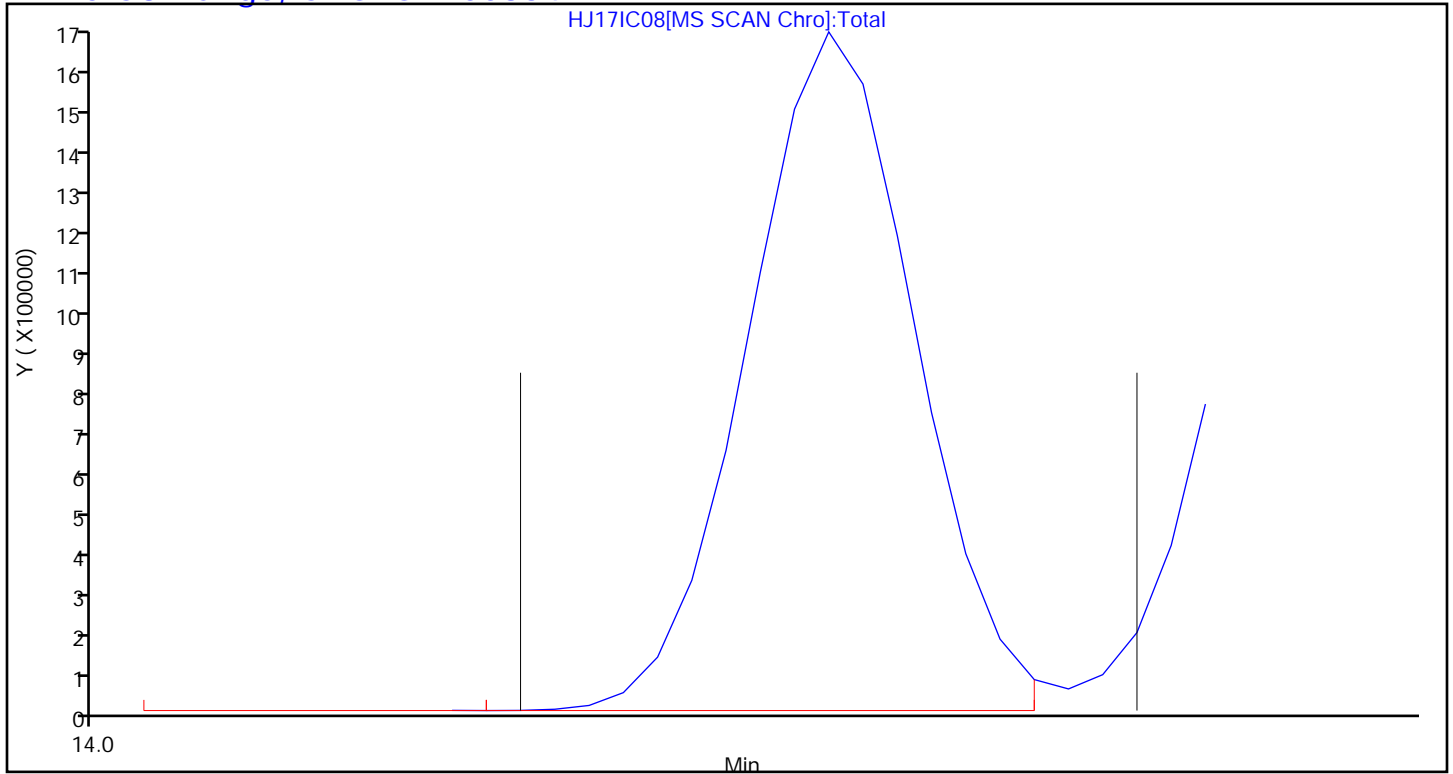
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Lab Sample ID: ICV 140-24544/16 Calibration Date: 10/18/2018 05:24
 Instrument ID: MH Calib Start Date: 10/17/2018 18:52
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 10/18/2018 03:53
 Lab File ID: HJ17ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.523	2.433		1.93	2.00	-3.6	35.0
Propene	Ave	0.997	0.9480		1.90	2.00	-4.9	35.0
Dichlorodifluoromethane	Ave	3.765	4.095		2.18	2.00	8.8	35.0
Chloromethane	Ave	0.4222	0.4149		1.97	2.00	-1.7	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.695	3.679		1.99	2.00	-0.4	35.0
Acetaldehyde	Ave	0.4555	0.3694		8.11	10.0	-18.9	35.0
Vinyl chloride	Ave	1.406	1.340		1.91	2.00	-4.7	35.0
1,3-Butadiene	Ave	0.8692	0.8229		1.89	2.00	-5.3	35.0
Butane	Ave	1.503	1.463		1.95	2.00	-2.7	35.0
Bromomethane	Ave	1.738	1.581		1.82	2.00	-9.0	35.0
Chloroethane	Ave	0.5975	0.5396		1.81	2.00	-9.7	35.0
Ethanol	Ave	0.4679	0.3440		7.35	10.0	-26.5	35.0
Vinyl bromide	Ave	1.670	1.632		1.95	2.00	-2.3	35.0
2-Methylbutane	Ave	1.038	1.008		1.94	2.00	-2.9	35.0
Trichlorofluoromethane	Ave	4.447	4.222		1.90	2.00	-5.1	35.0
Acrolein	Ave	0.3610	0.4422		2.45	2.00	22.5	35.0
Acetonitrile	Ave	0.4835	0.4747		1.96	2.00	-1.8	35.0
Acetone	Ave	0.5921	0.5720		1.93	2.00	-3.4	35.0
Pentane	Ave	0.1709	0.1729		2.02	2.00	1.2	35.0
Isopropyl alcohol	Ave	1.570	1.850		2.36	2.00	17.8	35.0
Ethyl ether	Ave	1.157	1.201		2.08	2.00	3.8	35.0
1,1-Dichloroethene	Ave	1.342	1.322		1.97	2.00	-1.5	35.0
Acrylonitrile	Ave	0.8517	0.8904		2.09	2.00	4.5	35.0
tert-Butyl alcohol	Ave	2.138	2.097		1.96	2.00	-1.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.133	3.061		1.95	2.00	-2.3	35.0
Methylene Chloride	Ave	1.471	1.288		1.75	2.00	-12.4	35.0
3-Chloropropene	Ave	1.009	0.9713		1.93	2.00	-3.7	35.0
Carbon disulfide	Ave	3.923	3.819		1.95	2.00	-2.7	35.0
trans-1,2-Dichloroethene	Ave	1.363	1.357		1.99	2.00	-0.4	35.0
2-Methylpentane	Ave	2.329	2.186		1.88	2.00	-6.1	35.0
Methyl tert-butyl ether	Ave	3.120	3.184		2.04	2.00	2.1	35.0
1,1-Dichloroethane	Ave	2.382	2.395		2.01	2.00	0.6	35.0
Vinyl acetate	Ave	3.031	3.207		2.12	2.00	5.8	35.0
2-Butanone (MEK)	Ave	0.6067	0.5839		1.92	2.00	-3.8	35.0
Hexane	Ave	0.8676	0.8780		2.02	2.00	1.2	35.0
Isopropyl ether	Ave	3.711	3.913		2.11	2.00	5.4	35.0
cis-1,2-Dichloroethene	Ave	1.425	1.442		2.02	2.00	1.2	35.0
Ethyl acetate	Ave	2.625	2.546		1.94	2.00	-3.0	35.0
Chloroform	Ave	3.126	3.058		1.96	2.00	-2.2	35.0
Tert-butyl ethyl ether	Ave	3.487	3.376		1.94	2.00	-3.2	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Lab Sample ID: ICV 140-24544/16 Calibration Date: 10/18/2018 05:24
 Instrument ID: MH Calib Start Date: 10/17/2018 18:52
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 10/18/2018 03:53
 Lab File ID: HJ17ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.218	1.226		2.01	2.00	0.6	35.0
1,1,1-Trichloroethane	Ave	2.931	2.878		1.96	2.00	-1.8	35.0
1,2-Dichloroethane	Ave	0.3370	0.3366		2.00	2.00	-0.1	35.0
Benzene	Ave	0.7296	0.7310		2.00	2.00	0.2	35.0
Cyclohexane	Ave	0.0976	0.1005		2.06	2.00	3.0	35.0
1-Butanol	Ave	0.0836	0.0838		2.01	2.00	0.3	35.0
Carbon tetrachloride	Ave	0.6039	0.6092		2.02	2.00	0.9	35.0
2,3-Dimethylpentane	Ave	0.1398	0.1415		2.02	2.00	1.2	35.0
Thiophene	Ave	0.4191	0.4178		1.99	2.00	-0.3	35.0
2,2,4-Trimethylpentane	Ave	1.018	1.046		2.05	2.00	2.7	35.0
Heptane	Ave	0.2189	0.2191		2.00	2.00	0.1	35.0
1,2-Dichloropropane	Ave	0.2872	0.2882		2.01	2.00	0.4	35.0
Trichloroethene	Ave	0.3537	0.3522		1.99	2.00	-0.4	35.0
Dibromomethane	Ave	0.3928	0.3972		2.02	2.00	1.1	35.0
Bromodichloromethane	Ave	0.5624	0.5649		2.01	2.00	0.5	35.0
1,4-Dioxane	Ave	0.1061	0.1024		1.93	2.00	-3.5	35.0
Methyl methacrylate	Ave	0.2708	0.2656		1.96	2.00	-1.9	35.0
Methylcyclohexane	Ave	0.3896	0.4924		2.53	2.00	26.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5242	0.5191		1.98	2.00	-1.0	35.0
cis-1,3-Dichloropropene	Ave	0.4141	0.4433		2.14	2.00	7.0	35.0
trans-1,3-Dichloropropene	Ave	0.4398	0.4611		2.10	2.00	4.8	35.0
Toluene	Ave	0.997	1.040		2.09	2.00	4.3	35.0
1,1,2-Trichloroethane	Ave	0.3494	0.3477		1.99	2.00	-0.5	35.0
2-Hexanone	Ave	0.2985	0.3037		2.03	2.00	1.7	35.0
Octane	Ave	0.2658	0.2837		2.13	2.00	6.7	35.0
Dibromochloromethane	Ave	0.7324	0.7373		2.01	2.00	0.7	35.0
1,2-Dibromoethane (EDB)	Ave	0.6395	0.6617		2.07	2.00	3.5	35.0
Tetrachloroethene	Ave	0.4129	0.4115		1.99	2.00	-0.4	35.0
Chlorobenzene	Ave	0.8687	0.8790		2.02	2.00	1.2	35.0
2,3-Dimethylheptane	Ave	0.7996	0.7519		1.88	2.00	-6.0	35.0
Ethylbenzene	Ave	1.284	1.352		2.11	2.00	5.3	35.0
m-Xylene & p-Xylene	Ave	0.9906	1.085		4.38	4.00	9.5	35.0
Nonane	Ave	0.5516	0.6024		2.18	2.00	9.2	35.0
Bromoform	Ave	0.7419	0.7579		2.04	2.00	2.2	35.0
Styrene	Ave	0.6799	0.7905		2.33	2.00	16.3	35.0
o-Xylene	Ave	1.011	1.077		2.13	2.00	6.6	35.0
1,1,2,2-Tetrachloroethane	Ave	0.8903	0.9396		2.11	2.00	5.5	35.0
1,2,3-Trichloropropane	Ave	0.2130	0.2179		2.05	2.00	2.3	35.0
Isopropylbenzene	Ave	1.440	1.522		2.11	2.00	5.7	35.0
Propylbenzene	Ave	0.3996	0.4257		2.13	2.00	6.5	35.0
2-Chlorotoluene	Ave	0.3985	0.4231		2.12	2.00	6.2	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Lab Sample ID: ICV 140-24544/16 Calibration Date: 10/18/2018 05:24
 Instrument ID: MH Calib Start Date: 10/17/2018 18:52
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 10/18/2018 03:53
 Lab File ID: HJ17ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.490	1.470		1.97	2.00	-1.3	35.0
1,3,5-Trimethylbenzene	Ave	0.5991	0.7234		2.42	2.00	20.8	35.0
Alpha Methyl Styrene	Ave	0.6062	0.6274		2.07	2.00	3.5	35.0
Decane	Ave	0.7900	0.8360		2.12	2.00	5.8	35.0
tert-Butylbenzene	Ave	1.425	1.460		2.05	2.00	2.4	35.0
1,2,4-Trimethylbenzene	Ave	1.302	1.359		2.09	2.00	4.3	35.0
sec-Butylbenzene	Ave	1.965	2.060		2.10	2.00	4.8	35.0
1,3-Dichlorobenzene	Ave	1.014	1.018		2.01	2.00	0.4	35.0
Benzyl chloride	Ave	1.033	1.079		2.09	2.00	4.5	35.0
1,4-Dichlorobenzene	Ave	0.9424	0.9700		2.06	2.00	2.9	35.0
4-Isopropyltoluene	Ave	1.547	1.656		2.14	2.00	7.0	35.0
1,2,3-Trimethylbenzene	Ave	1.241	0.9633		1.55	2.00	-22.4	35.0
Butylcyclohexane	Ave	0.999	1.035		2.07	2.00	3.5	35.0
1,2-Dichlorobenzene	Ave	0.9909	1.016		2.05	2.00	2.5	35.0
Indane	Ave	1.259	1.325		2.11	2.00	5.3	35.0
Indene	Ave	1.094	0.9673		1.77	2.00	-11.6	35.0
Butylbenzene	Ave	1.722	1.807		2.10	2.00	4.9	35.0
Undecane	Ave	0.9349	0.9882		2.11	2.00	5.7	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.4855	0.4090		1.69	2.00	-15.7	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.399	1.466		2.10	2.00	4.8	35.0
Dodecane	Ave	0.9500	0.9696		2.04	2.00	2.1	35.0
1,2,4-Trichlorobenzene	Ave	0.8523	0.9533		2.24	2.00	11.9	35.0
Naphthalene	Ave	1.711	1.836		2.15	2.00	7.3	35.0
Hexachlorobutadiene	Ave	0.9923	1.011		2.04	2.00	1.9	35.0
1,2,3-Trichlorobenzene	Ave	0.8929	0.9771		2.19	2.00	9.4	35.0
2-Methylnaphthalene	Ave	0.8165	0.4994		1.22	2.00	-38.8	50.0
1-Methylnaphthalene	Ave	0.8782	0.5930		1.35	2.00	-32.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6691	0.6950		4.15	4.00	3.9	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171CV.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 18-Oct-2018 05:24:30 ALS Bottle#: 9 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009689-016
 Misc. Info.: 180291
 Operator ID: AFB Instrument ID: MH
 Sublist:

Method: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Oct-2018 12:38:46 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: tajh Date: 18-Oct-2018 08:54:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.380	-0.001	85	241148	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.578	-0.002	93	1311261	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.000	85	1119016	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.047	0.000	97	777700	4.00	4.15	
6 Chlorodifluoromethane	51	3.480	3.478	0.002	97	293340	2.00	1.93	
7 Propene	41	3.490	3.490	0.000	99	114298	2.00	1.90	
8 Dichlorodifluoromethane	85	3.537	3.537	0.000	100	493755	2.00	2.18	
9 Chloromethane	52	3.707	3.705	0.002	98	50031	2.00	1.97	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.711	0.001	90	443602	2.00	1.99	
11 Acetaldehyde	44	3.852	3.856	-0.004	96	222718	10.0	8.11	
12 Vinyl chloride	62	3.862	3.861	0.001	99	161628	2.00	1.91	
13 Butadiene	54	3.940	3.942	-0.002	74	99220	2.00	1.89	
14 Butane	43	3.945	3.942	0.003	82	176366	2.00	1.95	
15 Bromomethane	94	4.239	4.237	0.002	98	190657	2.00	1.82	
16 Chloroethane	64	4.369	4.368	0.001	97	65066	2.00	1.81	
17 Ethanol	31	4.472	4.488	-0.016	97	207373	10.0	7.35	
18 Vinyl bromide	106	4.648	4.645	0.003	98	196810	2.00	1.95	
19 2-Methylbutane	43	4.689	4.691	-0.002	87	121570	2.00	1.94	
21 Trichlorofluoromethane	101	4.896	4.895	0.001	100	509085	2.00	1.90	
20 Acrolein	56	4.916	4.924	-0.008	95	53322	2.00	2.45	
22 Acetonitrile	40	4.978	4.984	-0.006	98	57237	2.00	1.96	
23 Acetone	58	5.035	5.047	-0.012	97	68965	2.00	1.93	
24 Pentane	72	5.103	5.106	-0.003	99	20852	2.00	2.02	
25 Isopropyl alcohol	45	5.134	5.153	-0.019	98	223074	2.00	2.36	
26 Ethyl ether	31	5.283	5.297	-0.014	96	144757	2.00	2.08	
27 1,1-Dichloroethene	96	5.568	5.567	0.001	99	159434	2.00	1.97	
28 Acrylonitrile	53	5.671	5.680	-0.009	94	107362	2.00	2.09	
30 1,1,2-Trichloro-1,2,2-trif	101	5.733	5.736	-0.003	97	369107	2.00	1.95	
29 2-Methyl-2-propanol	59	5.718	5.744	-0.026	94	252817	2.00	1.96	
31 Methylene Chloride	84	5.904	5.902	0.002	94	155327	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.919	5.917	0.002	98	117107	2.00	1.93	
33 Carbon disulfide	76	6.054	6.054	0.000	99	460506	2.00	1.95	
34 trans-1,2-Dichloroethene	96	6.679	6.682	-0.003	99	163673	2.00	1.99	
35 2-Methylpentane	43	6.700	6.701	-0.001	94	263601	2.00	1.88	
36 Methyl tert-butyl ether	73	6.829	6.858	-0.029	96	383895	2.00	2.04	
37 1,1-Dichloroethane	63	7.092	7.093	-0.001	100	288834	2.00	2.01	
38 Vinyl acetate	43	7.201	7.211	-0.010	100	386666	2.00	2.12	
40 Hexane	56	7.661	7.661	0.000	75	105862	2.00	2.02	
39 2-Butanone (MEK)	72	7.651	7.672	-0.021	96	70400	2.00	1.92	
171 Isopropyl ether	45	7.831	7.858	-0.027	97	471768	2.00	2.11	
41 cis-1,2-Dichloroethene	96	8.054	8.054	0.000	93	173898	2.00	2.02	
42 Ethyl acetate	43	8.260	8.275	-0.015	99	306944	2.00	1.94	
43 Chloroform	83	8.390	8.393	-0.003	96	368771	2.00	1.96	
173 Tert-butyl ethyl ether	59	8.503	8.526	-0.023	95	407038	2.00	1.94	
44 Tetrahydrofuran	42	8.819	8.843	-0.024	91	147774	2.00	2.01	
45 1,1,1-Trichloroethane	97	9.403	9.407	-0.004	96	346985	2.00	1.96	
46 1,2-Dichloroethane	62	9.511	9.515	-0.004	97	220712	2.00	2.00	
47 Benzene	78	10.007	10.010	-0.003	96	479246	2.00	2.00	
48 Cyclohexane	69	10.012	10.012	0.000	91	65896	2.00	2.06	
50 Carbon tetrachloride	117	10.033	10.034	-0.001	98	399401	2.00	2.02	
49 n-Butanol	31	10.023	10.043	-0.020	66	54956	2.00	2.01	
51 2,3-Dimethylpentane	71	10.137	10.145	-0.008	91	92750	2.00	2.02	
52 Thiophene	84	10.292	10.292	0.000	94	273947	2.00	1.99	
53 Isooctane	57	10.803	10.804	-0.001	99	685720	2.00	2.05	
55 n-Heptane	71	11.196	11.196	0.000	90	143670	2.00	2.00	
54 1,2-Dichloropropane	63	11.268	11.268	0.000	94	188961	2.00	2.01	
56 Trichloroethene	130	11.305	11.308	-0.003	96	230910	2.00	1.99	
57 Dibromomethane	93	11.387	11.388	-0.001	95	260428	2.00	2.02	
58 Dichlorobromomethane	83	11.537	11.541	-0.004	98	370388	2.00	2.01	
59 1,4-Dioxane	88	11.579	11.603	-0.025	87	67112	2.00	1.93	
60 Methyl methacrylate	41	11.656	11.665	-0.009	97	174121	2.00	1.96	
61 Methylcyclohexane	83	12.090	12.092	-0.002	97	322826	2.00	2.53	
62 4-Methyl-2-pentanone (MIBK)	43	12.535	12.547	-0.012	97	340359	2.00	1.98	
63 cis-1,3-Dichloropropene	75	12.566	12.568	-0.002	93	290638	2.00	2.14	
64 trans-1,3-Dichloropropene	75	13.279	13.278	0.001	97	257963	2.00	2.10	
65 Toluene	91	13.398	13.400	-0.002	93	581949	2.00	2.09	
66 1,1,2-Trichloroethane	83	13.475	13.477	-0.002	96	194558	2.00	1.99	
67 2-Methylthiophene	97	13.553	13.553	0.000	97	482177	NC	NC	
68 3-Methylthiophene	97	13.754	13.754	0.000	99	471116	NC	NC	
69 2-Hexanone	58	13.889	13.901	-0.012	93	169936	2.00	2.03	
71 n-Octane	85	14.111	14.112	-0.001	92	158736	2.00	2.13	
70 Chlorodibromomethane	129	14.183	14.183	0.000	97	412502	2.00	2.01	
72 Ethylene Dibromide	107	14.478	14.476	0.002	98	370201	2.00	2.07	
73 Tetrachloroethene	129	14.555	14.556	-0.001	95	230228	2.00	1.99	
74 Chlorobenzene	112	15.439	15.440	-0.001	96	491830	2.00	2.02	
75 2,3-Dimethylheptane	43	15.475	15.474	0.001	95	420691	2.00	1.88	
76 Ethylbenzene	91	15.734	15.735	-0.001	98	756404	2.00	2.11	
77 2-Ethylthiophene	97	15.837	15.837	0.000	97	580620	NC	NC	
78 m-Xylene & p-Xylene	91	15.899	15.900	-0.001	98	1213994	4.00	4.38	
81 n-Nonane	57	16.333	16.335	-0.002	92	337066	2.00	2.18	
79 Bromoform	173	16.344	16.343	0.001	95	424070	2.00	2.04	
80 Styrene	104	16.364	16.366	-0.002	98	442270	2.00	2.33	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
82 o-Xylene	91	16.426	16.428	-0.002	98	602785	2.00	2.13	
83 1,1,2,2-Tetrachloroethane	83	16.752	16.754	-0.002	99	525694	2.00	2.11	
84 1,2,3-Trichloropropane	110	16.912	16.914	-0.002	99	121911	2.00	2.05	
85 Isopropylbenzene	105	17.021	17.021	0.000	96	851631	2.00	2.11	
86 N-Propylbenzene	120	17.584	17.585	-0.001	99	238167	2.00	2.13	
87 2-Chlorotoluene	126	17.626	17.628	-0.002	97	236710	2.00	2.12	
88 4-Ethyltoluene	105	17.744	17.749	-0.005	99	822484	2.00	1.97	
89 1,3,5-Trimethylbenzene	120	17.827	17.828	-0.001	93	404756	2.00	2.42	
90 Alpha Methyl Styrene	118	18.075	18.075	0.000	88	351013	2.00	2.07	
91 n-Decane	57	18.148	18.149	-0.001	91	467767	2.00	2.12	
92 tert-Butylbenzene	119	18.282	18.282	0.000	94	816624	2.00	2.05	
93 1,2,4-Trimethylbenzene	105	18.297	18.298	-0.001	95	760154	2.00	2.09	
95 sec-Butylbenzene	105	18.571	18.572	-0.001	99	1152569	2.00	2.10	
94 1,3-Dichlorobenzene	146	18.582	18.582	0.000	98	569497	2.00	2.01	
96 Benzyl chloride	91	18.659	18.665	-0.006	98	603738	2.00	2.09	
97 1,4-Dichlorobenzene	146	18.675	18.675	0.000	96	542723	2.00	2.06	
98 4-Isopropyltoluene	119	18.747	18.748	-0.001	97	926296	2.00	2.14	
99 1,2,3-Trimethylbenzene	105	18.799	18.800	-0.001	98	538975	2.00	1.55	
100 Butylcyclohexane	83	18.861	18.862	-0.001	97	579010	2.00	2.07	
101 1,2-Dichlorobenzene	146	19.057	19.058	-0.001	94	568451	2.00	2.05	
102 2,3-Dihydroindene	117	19.057	19.058	-0.001	93	741226	2.00	2.11	
103 Indene	116	19.192	19.196	-0.004	90	541197	2.00	1.77	
104 n-Butylbenzene	91	19.207	19.207	0.000	97	1011295	2.00	2.10	
105 Undecane	57	19.548	19.548	0.000	95	552895	2.00	2.11	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.600	19.600	0.000	98	681450	NC	NC	
106 1,2-Dibromo-3-Chloropropan	157	19.693	19.694	-0.001	96	228856	2.00	1.69	
107 1,2,4,5-Tetramethylbenzene	119	19.998	20.003	-0.005	97	820263	2.00	2.10	
109 1,2,3,5-Tetramethylbenzene	119	20.055	20.055	0.000	95	492323	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	20.468	20.468	0.000	97	676390	NC	NC	
110 Dodecane	57	20.644	20.648	-0.004	96	542516	2.00	2.04	
111 1,2,4-Trichlorobenzene	180	20.835	20.835	0.000	93	533389	2.00	2.24	
113 Naphthalene	128	20.975	20.980	-0.005	99	1027503	2.00	2.15	
114 Benzo(b)thiophene	134	21.088	21.088	0.000	100	547415	NC	NC	
115 Hexachlorobutadiene	225	21.207	21.209	-0.002	92	565794	2.00	2.04	
116 1,2,3-Trichlorobenzene	180	21.274	21.279	-0.005	95	546674	2.00	2.19	
117 2-Methylnaphthalene	142	21.977	21.977	0.000	100	279446	2.00	1.22	
118 1-Methylnaphthalene	142	22.106	22.107	-0.001	100	331825	2.00	1.35	
A 120 C8 Range	1	14.098	(14.064-14.168)		0	1447580	2.00	2.02	
S 121 Xylenes, Total	100				0		6.00	6.51	
S 122 1,2-Dichloroethene, Total	1				0		4.00	4.02	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00075

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17ICV.D

Injection Date: 18-Oct-2018 05:24:30

Instrument ID: MH

Operator ID: AFB

Lims ID: ICV

Worklist Smp#: 16

Client ID:

Purge Vol: 500.000 mL

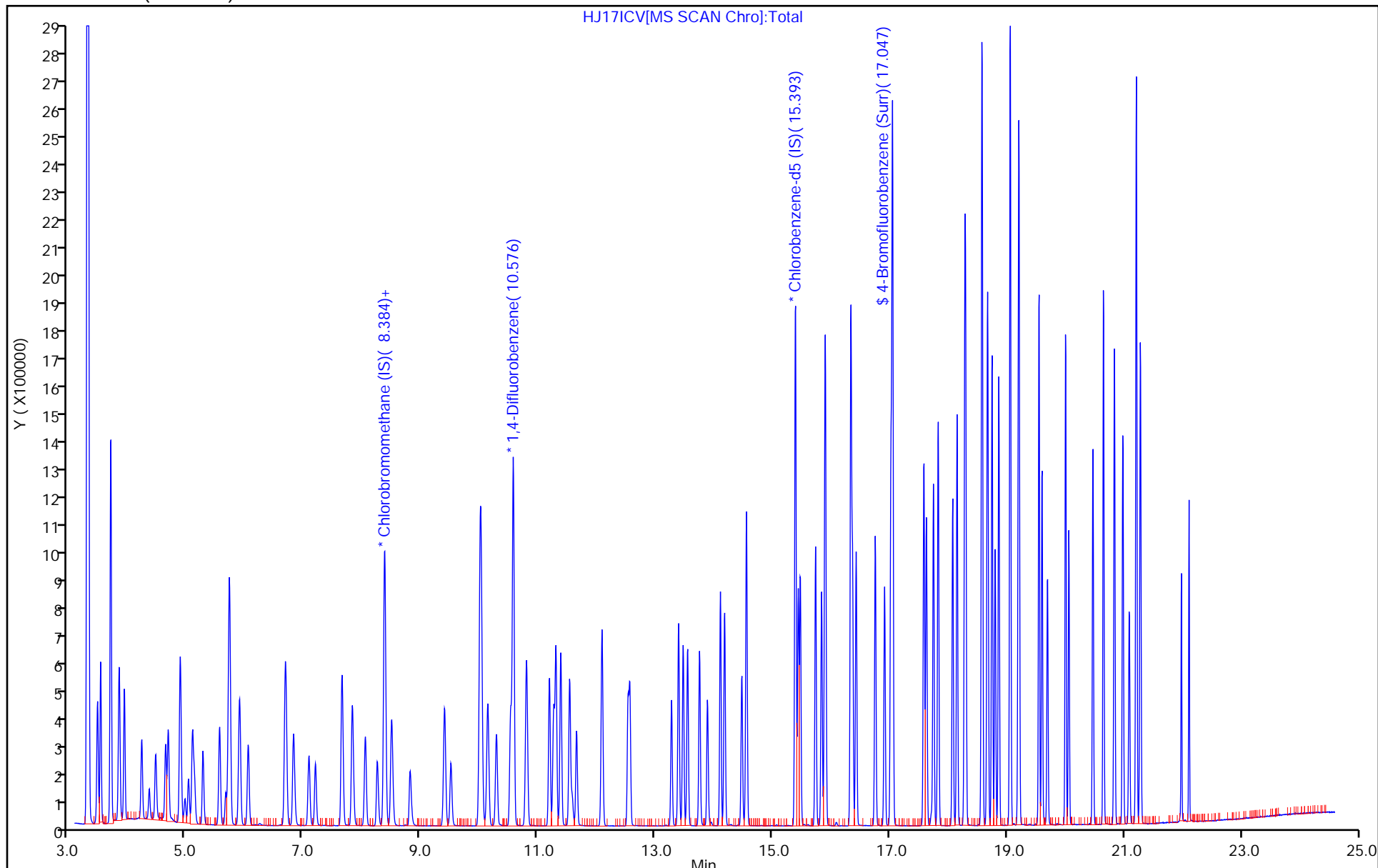
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-24681/6 Calibration Date: 10/23/2018 12:19
 Instrument ID: MH Calib Start Date: 10/17/2018 18:52
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 10/18/2018 03:53
 Lab File ID: HCCVJ23A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.523	2.638		2.09	2.00	4.6	30.0
Propene	Ave	0.997	1.063		2.13	2.00	6.6	30.0
Dichlorodifluoromethane	Ave	3.765	4.575		2.43	2.00	21.5	30.0
Chloromethane	Ave	0.4222	0.4492		2.13	2.00	6.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.695	4.148		2.24	2.00	12.2	30.0
Acetaldehyde	Ave	0.4555	0.4654		10.2	10.0	2.2	30.0
Vinyl chloride	Ave	1.406	1.538		2.19	2.00	9.4	30.0
Butane	Ave	1.503	1.688		2.25	2.00	12.3	30.0
1,3-Butadiene	Ave	0.8692	0.9682		2.23	2.00	11.4	30.0
Bromomethane	Ave	1.738	1.909		2.20	2.00	9.8	30.0
Chloroethane	Ave	0.5975	0.6577		2.20	2.00	10.1	30.0
Ethanol	Ave	0.4679	0.4875		10.4	10.0	4.2	30.0
Vinyl bromide	Ave	1.670	1.877		2.25	2.00	12.4	30.0
2-Methylbutane	Ave	1.038	1.232		2.37	2.00	18.7	30.0
Trichlorofluoromethane	Ave	4.447	4.985		2.24	2.00	12.1	30.0
Acrolein	Ave	0.3610	0.4416		2.45	2.00	22.3	30.0
Acetonitrile	Ave	0.4835	0.5109		2.11	2.00	5.7	30.0
Acetone	Ave	0.5921	0.6266		6.35	6.00	5.8	30.0
Pentane	Ave	0.1709	0.1972		2.31	2.00	15.4	30.0
Isopropyl alcohol	Ave	1.570	1.659		6.34	6.00	5.7	30.0
Ethyl ether	Ave	1.157	1.347		2.33	2.00	16.5	30.0
1,1-Dichloroethene	Ave	1.342	1.507		2.25	2.00	12.3	30.0
Acrylonitrile	Ave	0.8517	0.9682		2.27	2.00	13.7	30.0
tert-Butyl alcohol	Ave	2.138	2.316		2.17	2.00	8.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.133	3.533		2.26	2.00	12.8	30.0
Methylene Chloride	Ave	1.471	1.446		1.97	2.00	-1.6	30.0
3-Chloropropene	Ave	1.009	1.064		2.11	2.00	5.5	30.0
Carbon disulfide	Ave	3.923	4.401		2.24	2.00	12.2	30.0
trans-1,2-Dichloroethene	Ave	1.363	1.532		2.25	2.00	12.4	30.0
2-Methylpentane	Ave	2.329	2.677		2.30	2.00	14.9	30.0
Methyl tert-butyl ether	Ave	3.120	3.576		2.29	2.00	14.6	30.0
1,1-Dichloroethane	Ave	2.382	2.685		2.25	2.00	12.7	30.0
Vinyl acetate	Ave	3.031	3.441		2.27	2.00	13.6	30.0
2-Butanone (MEK)	Ave	0.6067	0.6486		2.14	2.00	6.9	30.0
Hexane	Ave	0.8676	0.9937		2.29	2.00	14.5	30.0
Isopropyl ether	Ave	3.711	4.289		2.31	2.00	15.6	30.0
cis-1,2-Dichloroethene	Ave	1.425	1.609		2.26	2.00	12.9	30.0
Ethyl acetate	Ave	2.625	2.967		2.26	2.00	13.0	30.0
Chloroform	Ave	3.126	3.459		2.21	2.00	10.7	30.0
Tert-butyl ethyl ether	Ave	3.487	4.054		2.33	2.00	16.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-24681/6 Calibration Date: 10/23/2018 12:19
 Instrument ID: MH Calib Start Date: 10/17/2018 18:52
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 10/18/2018 03:53
 Lab File ID: HCCVJ23A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.218	1.372		2.25	2.00	12.7	30.0
1,1,1-Trichloroethane	Ave	2.931	3.291		2.25	2.00	12.3	30.0
1,2-Dichloroethane	Ave	0.3370	0.3880		2.30	2.00	15.1	30.0
Benzene	Ave	0.7296	0.8119		2.23	2.00	11.3	30.0
Cyclohexane	Ave	0.0976	0.1160		2.38	2.00	18.8	30.0
1-Butanol	Ave	0.0836	0.0871		2.09	2.00	4.3	30.0
Carbon tetrachloride	Ave	0.6039	0.6535		2.16	2.00	8.2	30.0
2,3-Dimethylpentane	Ave	0.1398	0.1647		2.36	2.00	17.9	30.0
Thiophene	Ave	0.4191	0.4813		2.30	2.00	14.9	30.0
2,2,4-Trimethylpentane	Ave	1.018	1.169		2.30	2.00	14.8	30.0
Heptane	Ave	0.2189	0.2490		2.28	2.00	13.8	30.0
1,2-Dichloropropane	Ave	0.2872	0.3270		2.28	2.00	13.9	30.0
Trichloroethene	Ave	0.3537	0.4038		2.28	2.00	14.2	30.0
Dibromomethane	Ave	0.3928	0.4260		2.17	2.00	8.4	30.0
Bromodichloromethane	Ave	0.5624	0.6501		2.31	2.00	15.6	30.0
1,4-Dioxane	Ave	0.1061	0.1127		2.12	2.00	6.2	30.0
Methyl methacrylate	Ave	0.2708	0.3085		2.28	2.00	13.9	30.0
Methylcyclohexane	Ave	0.3896	0.4572		2.35	2.00	17.4	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5242	0.5903		2.25	2.00	12.6	30.0
cis-1,3-Dichloropropene	Ave	0.4141	0.4873		2.35	2.00	17.7	30.0
trans-1,3-Dichloropropene	Ave	0.4398	0.5063		2.30	2.00	15.1	30.0
Toluene	Ave	0.997	1.182		2.37	2.00	18.6	30.0
1,1,2-Trichloroethane	Ave	0.3494	0.3986		2.28	2.00	14.1	30.0
2-Hexanone	Ave	0.2985	0.3428		2.30	2.00	14.8	30.0
Octane	Ave	0.2658	0.3093		2.33	2.00	16.4	30.0
Dibromochloromethane	Ave	0.7324	0.8731		2.38	2.00	19.2	30.0
1,2-Dibromoethane (EDB)	Ave	0.6395	0.7365		2.30	2.00	15.2	30.0
Tetrachloroethene	Ave	0.4129	0.4774		2.31	2.00	15.6	30.0
Chlorobenzene	Ave	0.8687	0.9898		2.28	2.00	13.9	30.0
2,3-Dimethylheptane	Ave	0.7996	0.9555		2.39	2.00	19.5	30.0
Ethylbenzene	Ave	1.284	1.536		2.39	2.00	19.6	30.0
m-Xylene & p-Xylene	Ave	0.9906	1.211		4.89	4.00	22.3	30.0
Nonane	Ave	0.5516	0.6588		2.39	2.00	19.4	30.0
Bromoform	Ave	0.7419	1.006		2.71	2.00	35.6*	30.0
Styrene	Ave	0.6799	0.8742		2.57	2.00	28.6	30.0
o-Xylene	Ave	1.011	1.230		2.43	2.00	21.6	30.0
1,1,2,2-Tetrachloroethane	Ave	0.8903	1.030		2.31	2.00	15.7	30.0
1,2,3-Trichloropropane	Ave	0.2130	0.2463		2.31	2.00	15.7	30.0
Isopropylbenzene	Ave	1.440	1.668		2.32	2.00	15.8	30.0
Propylbenzene	Ave	0.3996	0.4552		2.28	2.00	13.9	30.0
2-Chlorotoluene	Ave	0.3985	0.4568		2.29	2.00	14.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-24681/6 Calibration Date: 10/23/2018 12:19
 Instrument ID: MH Calib Start Date: 10/17/2018 18:52
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 10/18/2018 03:53
 Lab File ID: HCCVJ23A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.490	1.713		2.30	2.00	15.0	30.0
1,3,5-Trimethylbenzene	Ave	0.5991	0.6997		2.34	2.00	16.8	30.0
Alpha Methyl Styrene	Ave	0.6062	0.7004		2.31	2.00	15.5	30.0
Decane	Ave	0.7900	0.8998		2.28	2.00	13.9	30.0
tert-Butylbenzene	Ave	1.425	1.582		2.22	2.00	11.0	30.0
1,2,4-Trimethylbenzene	Ave	1.302	1.491		2.29	2.00	14.5	30.0
sec-Butylbenzene	Ave	1.965	2.203		2.24	2.00	12.1	30.0
1,3-Dichlorobenzene	Ave	1.014	1.122		2.21	2.00	10.7	30.0
Benzyl chloride	Ave	1.033	1.147		2.22	2.00	11.0	30.0
1,4-Dichlorobenzene	Ave	0.9424	1.074		2.28	2.00	14.0	30.0
4-Isopropyltoluene	Ave	1.547	1.823		2.36	2.00	17.8	30.0
1,2,3-Trimethylbenzene	Ave	1.241	1.473		2.38	2.00	18.8	30.0
Butylcyclohexane	Ave	0.999	1.196		2.39	2.00	19.7	30.0
1,2-Dichlorobenzene	Ave	0.9909	1.120		2.26	2.00	13.0	30.0
Indane	Ave	1.259	1.463		2.32	2.00	16.2	30.0
Indene	Ave	1.094	1.219		2.23	2.00	11.3	30.0
Butylbenzene	Ave	1.722	1.930		2.24	2.00	12.0	30.0
Undecane	Ave	0.9349	1.029		2.20	2.00	10.1	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4855	0.5693		2.35	2.00	17.3	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.399	1.664		2.38	2.00	18.9	30.0
Dodecane	Ave	0.9500	0.9103		1.92	2.00	-4.2	30.0
1,2,4-Trichlorobenzene	Ave	0.8523	0.9622		2.26	2.00	12.9	30.0
Naphthalene	Ave	1.711	1.876		2.19	2.00	9.6	30.0
Hexachlorobutadiene	Ave	0.9923	1.048		2.11	2.00	5.6	30.0
1,2,3-Trichlorobenzene	Ave	0.8929	0.9585		2.15	2.00	7.3	30.0
2-Methylnaphthalene	Ave	0.8165	0.6267		1.54	2.00	-23.3	50.0
1-Methylnaphthalene	Ave	0.8782	0.7039		1.60	2.00	-19.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6691	0.6805		4.07	4.00	1.7	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HCCVJ23A.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 23-Oct-2018 12:19:30 ALS Bottle#: 1 Worklist Smp#: 6
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009735-002
 Misc. Info.: S75
 Operator ID: HMT Instrument ID: MH
 Sublist: chrom-MH_TO15*sub7
 Method: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 24-Oct-2018 11:08:21 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: sodsaip

Date: 24-Oct-2018 11:08:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.379	0.000	87	211350	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.581	10.581	0.000	93	1127501	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.000	86	949585	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.067	17.067	0.000	97	646170	4.00	4.07	
6 Chlorodifluoromethane	51	3.479	3.479	0.000	97	278741	2.00	2.09	
7 Propene	41	3.490	3.490	0.000	98	112281	2.00	2.13	
8 Dichlorodifluoromethane	85	3.536	3.536	0.000	100	483511	2.00	2.43	
9 Chloromethane	52	3.707	3.707	0.000	98	47472	2.00	2.13	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.712	0.000	90	438342	2.00	2.24	
11 Acetaldehyde	44	3.852	3.852	0.000	96	245882	10.0	10.2	
12 Vinyl chloride	62	3.862	3.862	0.000	99	162575	2.00	2.19	
14 Butane	43	3.939	3.939	0.000	81	178402	2.00	2.25	
13 Butadiene	54	3.945	3.945	0.000	75	102310	2.00	2.23	
15 Bromomethane	94	4.239	4.239	0.000	98	201707	2.00	2.20	
16 Chloroethane	64	4.368	4.368	0.000	97	69497	2.00	2.20	
17 Ethanol	31	4.472	4.472	0.000	97	257563	10.0	10.4	
18 Vinyl bromide	106	4.647	4.647	0.000	97	198334	2.00	2.25	
19 2-Methylbutane	43	4.689	4.689	0.000	87	130198	2.00	2.37	
21 Trichlorofluoromethane	101	4.896	4.896	0.000	99	526757	2.00	2.24	
20 Acrolein	56	4.916	4.916	0.000	94	46669	2.00	2.45	
22 Acetonitrile	40	4.978	4.978	0.000	100	53994	2.00	2.11	
23 Acetone	58	5.035	5.035	0.000	98	198643	6.00	6.35	
24 Pentane	72	5.107	5.107	0.000	96	20842	2.00	2.31	
25 Isopropyl alcohol	45	5.128	5.128	0.000	96	525913	6.00	6.34	
26 Ethyl ether	31	5.278	5.278	0.000	96	142390	2.00	2.33	
27 1,1-Dichloroethene	96	5.567	5.567	0.000	99	159265	2.00	2.25	
28 Acrylonitrile	53	5.676	5.676	0.000	94	102314	2.00	2.27	
29 2-Methyl-2-propanol	59	5.717	5.717	0.000	95	244773	2.00	2.17	
30 1,1,2-Trichloro-1,2,2-trif	101	5.738	5.738	0.000	97	373377	2.00	2.26	
31 Methylene Chloride	84	5.903	5.903	0.000	94	152846	2.00	1.97	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.919	5.919	0.000	98	112463	2.00	2.11	
33 Carbon disulfide	76	6.058	6.058	0.000	99	465076	2.00	2.24	
34 trans-1,2-Dichloroethene	96	6.684	6.684	0.000	99	161890	2.00	2.25	
35 2-Methylpentane	43	6.699	6.699	0.000	93	282880	2.00	2.30	
36 Methyl tert-butyl ether	73	6.829	6.829	0.000	96	377889	2.00	2.29	
37 1,1-Dichloroethane	63	7.092	7.092	0.000	100	283718	2.00	2.25	
38 Vinyl acetate	43	7.201	7.201	0.000	100	363668	2.00	2.27	
39 2-Butanone (MEK)	72	7.650	7.650	0.000	97	68544	2.00	2.14	
40 Hexane	56	7.661	7.661	0.000	76	105008	2.00	2.29	
171 Isopropyl ether	45	7.831	7.831	0.000	97	453196	2.00	2.31	
41 cis-1,2-Dichloroethene	96	8.053	8.053	0.000	93	170001	2.00	2.26	
42 Ethyl acetate	43	8.255	8.255	0.000	99	313491	2.00	2.26	
43 Chloroform	83	8.395	8.395	0.000	96	365520	2.00	2.21	
173 Tert-butyl ethyl ether	59	8.498	8.498	0.000	95	428442	2.00	2.33	
44 Tetrahydrofuran	42	8.813	8.813	0.000	91	144991	2.00	2.25	
45 1,1,1-Trichloroethane	97	9.408	9.408	0.000	96	347738	2.00	2.25	
46 1,2-Dichloroethane	62	9.516	9.516	0.000	98	218710	2.00	2.30	
47 Benzene	78	10.007	10.007	0.000	97	457696	2.00	2.23	
48 Cyclohexane	69	10.017	10.017	0.000	88	65372	2.00	2.38	
49 n-Butanol	31	10.023	10.023	0.000	67	49115	2.00	2.09	
50 Carbon tetrachloride	117	10.033	10.033	0.000	97	368416	2.00	2.16	
51 2,3-Dimethylpentane	71	10.141	10.141	0.000	90	92853	2.00	2.36	
52 Thiophene	84	10.291	10.291	0.000	94	271351	2.00	2.30	
53 Isooctane	57	10.803	10.803	0.000	98	659013	2.00	2.30	
55 n-Heptane	71	11.196	11.196	0.000	90	140397	2.00	2.28	
54 1,2-Dichloropropane	63	11.268	11.268	0.000	93	184360	2.00	2.28	
56 Trichloroethene	130	11.304	11.304	0.000	96	227644	2.00	2.28	
57 Dibromomethane	93	11.387	11.387	0.000	94	240167	2.00	2.17	
58 Dichlorobromomethane	83	11.537	11.537	0.000	98	366511	2.00	2.31	
59 1,4-Dioxane	88	11.583	11.583	0.000	85	63542	2.00	2.12	
60 Methyl methacrylate	41	11.656	11.656	0.000	96	173908	2.00	2.28	
61 Methylcyclohexane	83	12.090	12.090	0.000	97	257746	2.00	2.35	
62 4-Methyl-2-pentanone (MIBK)	43	12.534	12.534	0.000	97	332789	2.00	2.25	
63 cis-1,3-Dichloropropene	75	12.565	12.565	0.000	93	274709	2.00	2.35	
64 trans-1,3-Dichloropropene	75	13.279	13.279	0.000	97	240393	2.00	2.30	
65 Toluene	91	13.398	13.398	0.000	93	561332	2.00	2.37	
66 1,1,2-Trichloroethane	83	13.475	13.475	0.000	97	189249	2.00	2.28	
69 2-Hexanone	58	13.889	13.889	0.000	93	162768	2.00	2.30	
71 n-Octane	85	14.111	14.111	0.000	92	146863	2.00	2.33	
70 Chlorodibromomethane	129	14.183	14.183	0.000	97	414527	2.00	2.38	
72 Ethylene Dibromide	107	14.478	14.478	0.000	99	349663	2.00	2.30	
73 Tetrachloroethene	129	14.555	14.555	0.000	95	226672	2.00	2.31	
74 Chlorobenzene	112	15.439	15.439	0.000	97	469960	2.00	2.28	
75 2,3-Dimethylheptane	43	15.475	15.475	0.000	95	453648	2.00	2.39	
76 Ethylbenzene	91	15.734	15.734	0.000	98	729338	2.00	2.39	
78 m-Xylene & p-Xylene	91	15.899	15.899	0.000	98	1150242	4.00	4.89	
81 n-Nonane	57	16.333	16.333	0.000	91	312812	2.00	2.39	
79 Bromoform	173	16.338	16.338	0.000	95	477514	2.00	2.71	
80 Styrene	104	16.364	16.364	0.000	98	415079	2.00	2.57	
82 o-Xylene	91	16.426	16.426	0.000	99	583820	2.00	2.43	
83 1,1,2,2-Tetrachloroethane	83	16.757	16.757	0.000	99	488969	2.00	2.31	
84 1,2,3-Trichloropropane	110	16.922	16.922	0.000	99	116956	2.00	2.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	17.036	17.036	0.000	96	792120	2.00	2.32	
86 N-Propylbenzene	120	17.615	17.615	0.000	99	216124	2.00	2.28	
87 2-Chlorotoluene	126	17.656	17.656	0.000	97	216869	2.00	2.29	
88 4-Ethyltoluene	105	17.780	17.780	0.000	99	813553	2.00	2.30	
89 1,3,5-Trimethylbenzene	120	17.858	17.858	0.000	93	332214	2.00	2.34	
90 Alpha Methyl Styrene	118	18.106	18.106	0.000	89	332529	2.00	2.31	
91 n-Decane	57	18.178	18.178	0.000	91	427200	2.00	2.28	
92 tert-Butylbenzene	119	18.313	18.313	0.000	93	750923	2.00	2.22	
93 1,2,4-Trimethylbenzene	105	18.323	18.323	0.000	95	708146	2.00	2.29	
95 sec-Butylbenzene	105	18.597	18.597	0.000	99	1046070	2.00	2.24	
94 1,3-Dichlorobenzene	146	18.607	18.607	0.000	97	532740	2.00	2.21	
96 Benzyl chloride	91	18.690	18.690	0.000	98	544586	2.00	2.22	
97 1,4-Dichlorobenzene	146	18.700	18.700	0.000	96	510122	2.00	2.28	
98 4-Isopropyltoluene	119	18.773	18.773	0.000	97	865644	2.00	2.36	
99 1,2,3-Trimethylbenzene	105	18.824	18.824	0.000	98	699510	2.00	2.38	
100 Butylcyclohexane	83	18.886	18.886	0.000	97	567789	2.00	2.39	
101 1,2-Dichlorobenzene	146	19.078	19.078	0.000	93	531808	2.00	2.26	
102 2,3-Dihydroindene	117	19.078	19.078	0.000	93	694569	2.00	2.32	
103 Indene	116	19.217	19.217	0.000	90	578563	2.00	2.23	
104 n-Butylbenzene	91	19.227	19.227	0.000	98	916161	2.00	2.24	
105 Undecane	57	19.563	19.563	0.000	95	488551	2.00	2.20	
106 1,2-Dibromo-3-Chloropropan	157	19.708	19.708	0.000	97	270276	2.00	2.35	
107 1,2,4,5-Tetramethylbenzene	119	20.018	20.018	0.000	97	789931	2.00	2.38	
110 Dodecane	57	20.659	20.659	0.000	96	432196	2.00	1.92	
111 1,2,4-Trichlorobenzene	180	20.845	20.845	0.000	93	456856	2.00	2.26	
113 Naphthalene	128	20.990	20.990	0.000	99	890727	2.00	2.19	
115 Hexachlorobutadiene	225	21.217	21.217	0.000	92	497655	2.00	2.11	
116 1,2,3-Trichlorobenzene	180	21.290	21.290	0.000	95	455082	2.00	2.15	
117 2-Methylnaphthalene	142	21.982	21.982	0.000	100	297548	2.00	1.54	
118 1-Methylnaphthalene	142	22.111	22.111	0.000	100	334239	2.00	1.60	
A 120 C8 Range	1	14.100	(14.059-14.162)		0	1378557	2.00	2.24	
S 121 Xylenes, Total	100				0		6.00	7.32	
S 122 1,2-Dichloroethene, Total	1				0		4.00	4.51	

Reagents:

40CV101P_00072

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HCCVJ23A.D

Injection Date: 23-Oct-2018 12:19:30

Instrument ID: MH

Operator ID: HMT

Lims ID: CCVIS

Worklist Smp#: 6

Client ID:

Purge Vol: 500.000 mL

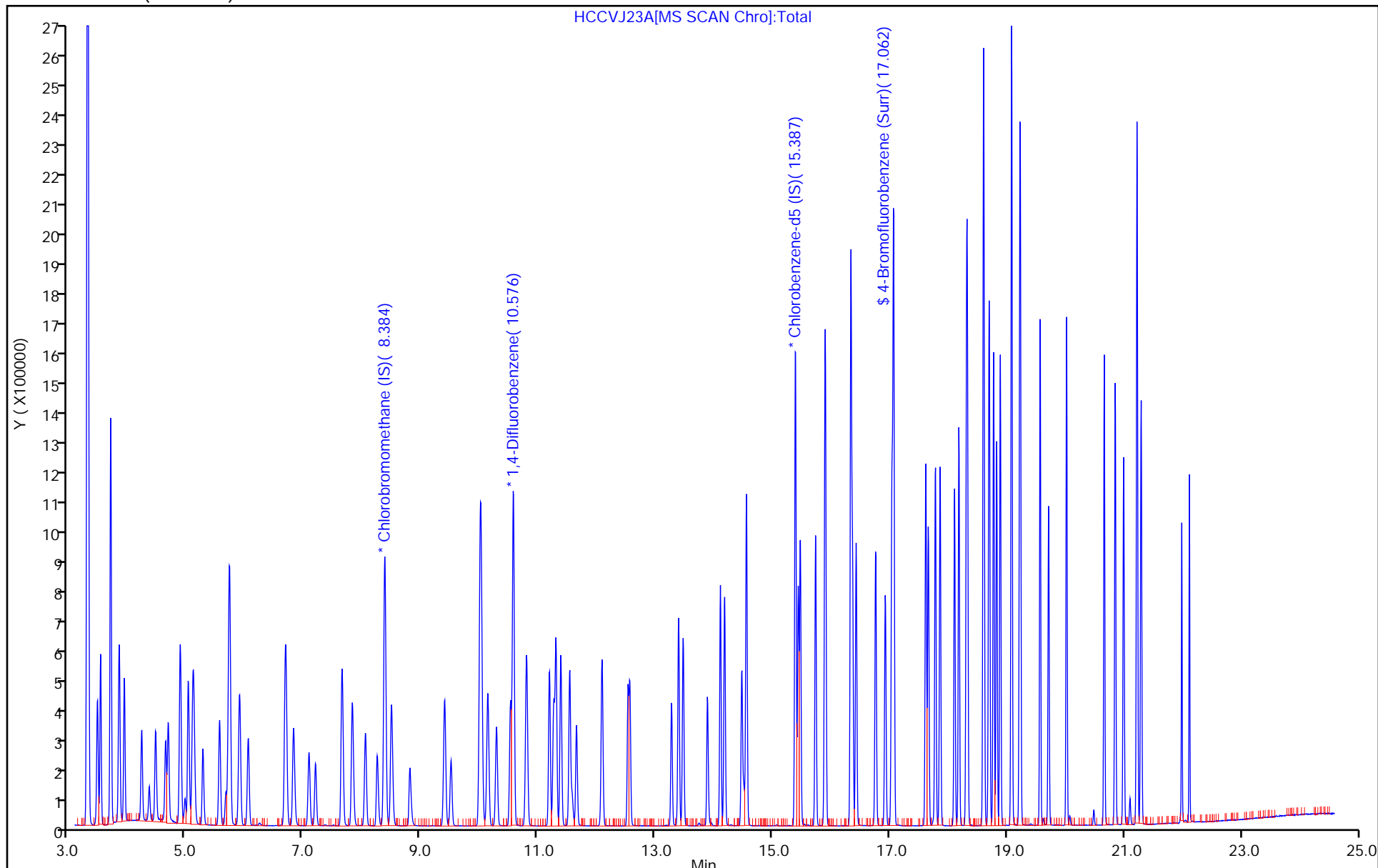
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17BFB.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 17-Oct-2018 18:22:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0009689-001
 Misc. Info.: BFB
 Operator ID: AFB Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 18-Oct-2018 12:38:36 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: barlozhetskayaa Date: 17-Oct-2018 18:40:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	4.423	4.423	0.000	0	934615	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

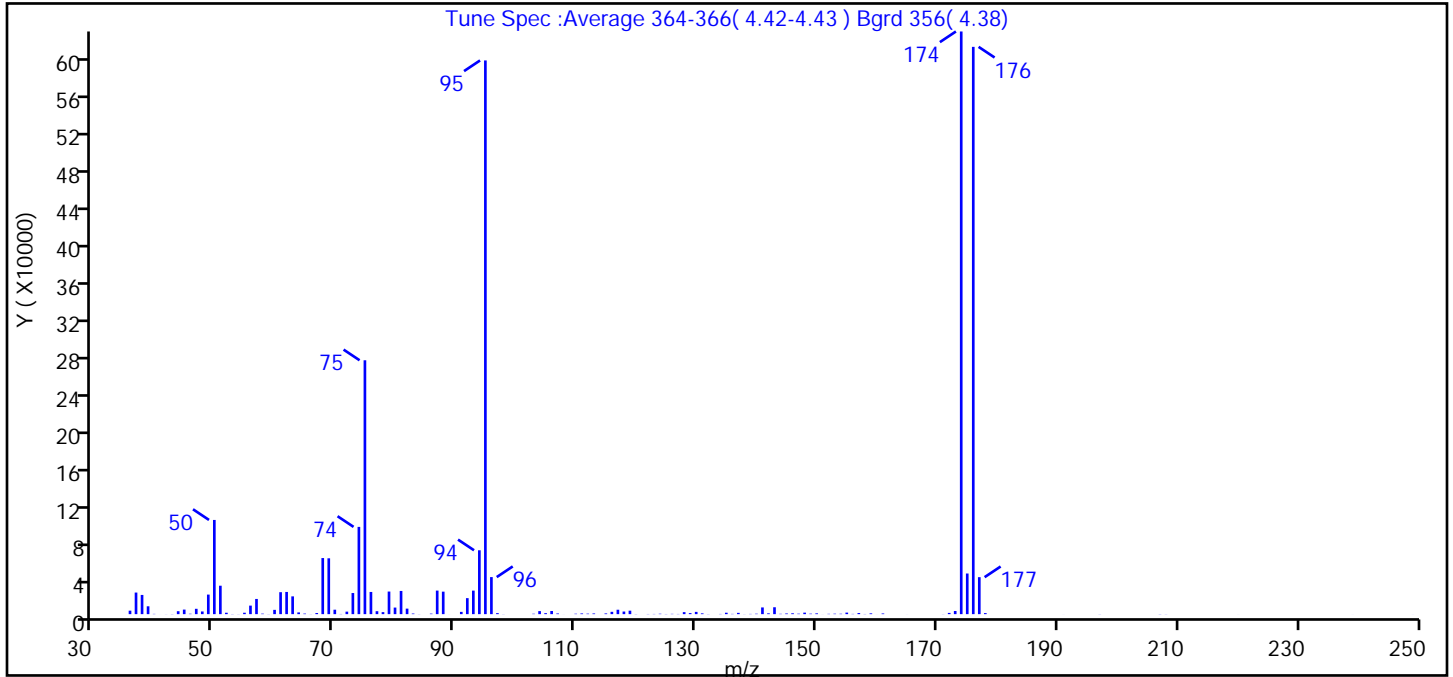
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17BFB.D
 Injection Date: 17-Oct-2018 18:22:30 Instrument ID: MH
 Lims ID: BFB
 Client ID:
 Operator ID: AFB ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.0
75	30 to 60% of m/z 95	45.8
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.6 (0.5)
174	50 to 120% of m/z 95	105.2
175	5 to 9% of m/z 174	7.3 (7.0)
176	Greater than 95% but less than 101% of m/z 174	102.5 (97.4)
177	5 to 9% of m/z 176	6.7 (6.5)

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17BFB.D\MH_TO15.rsl\spectra.d
Injection Date: 17-Oct-2018 18:22:30
Spectrum: Tune Spec :Average 364-366(4.42-4.43) Bgrd 356(4.38)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 133

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3717	70.00	4744	111.00	768	148.00	1607
37.00	23088	71.00	193	112.00	530	149.00	513
38.00	20536	72.00	2675	113.00	746	150.00	827
39.00	8403	73.00	22576	115.00	778	151.00	37
40.00	275	74.00	93312	116.00	2481	152.00	322
41.00	16	75.00	271488	117.00	4713	153.00	477
42.00	75	76.00	23728	118.00	2788	154.00	411
43.00	139	77.00	3148	119.00	3701	155.00	1649
44.00	3143	78.00	2147	120.00	140	156.00	255
45.00	4870	79.00	24168	122.00	176	157.00	1178
46.00	425	80.00	7030	123.00	206	158.00	177
47.00	5709	81.00	24800	124.00	435	159.00	852
48.00	2857	82.00	5893	125.00	167	160.00	30
49.00	20912	83.00	654	126.00	306	161.00	725
50.00	100736	84.00	102	127.00	203	165.00	35
51.00	30400	86.00	552	128.00	2141	171.00	99
52.00	1505	87.00	25184	129.00	1118	172.00	1312
53.00	161	88.00	24056	130.00	2415	173.00	3367
54.00	98	89.00	26	131.00	839	174.00	623104
55.00	1500	91.00	2419	132.00	126	175.00	43456
56.00	9121	92.00	17112	134.00	209	176.00	606656
57.00	16250	93.00	25168	135.00	1513	177.00	39544
58.00	530	94.00	68304	136.00	267	178.00	1118
59.00	115	95.00	592128	137.00	1372	191.00	31
60.00	4584	96.00	39624	138.00	91	197.00	106
61.00	23488	97.00	1075	139.00	243	207.00	156
62.00	23736	98.00	101	140.00	449	208.00	100
63.00	19008	103.00	425	141.00	7176	209.00	3
64.00	1843	104.00	3247	142.00	867	220.00	30
65.00	597	105.00	1067	143.00	7369	239.00	27
66.00	82	106.00	3360	144.00	355	249.00	34
67.00	1183	107.00	712	145.00	709		
68.00	59976	108.00	35	146.00	921		

Report Date: 18-Oct-2018 12:38:37

Chrom Revision: 2.3 12-Oct-2018 08:24:38

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17BFB.D\MH_TO15.rslt\spectra.d

Injection Date: 17-Oct-2018 18:22:30

Spectrum: Tune Spec :Average 364-366(4.42-4.43) Bgrd 356(4.38)

Base Peak: 174.00

Minimum % Base Peak: 0

Number of Points: 133

m/z	Y	m/z	Y	m/z	Y	m/z	Y
69.00	59712	110.00	448	147.00	491		

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17BFB.D

Injection Date: 17-Oct-2018 18:22:30

Instrument ID: MH

Operator ID: AFB

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

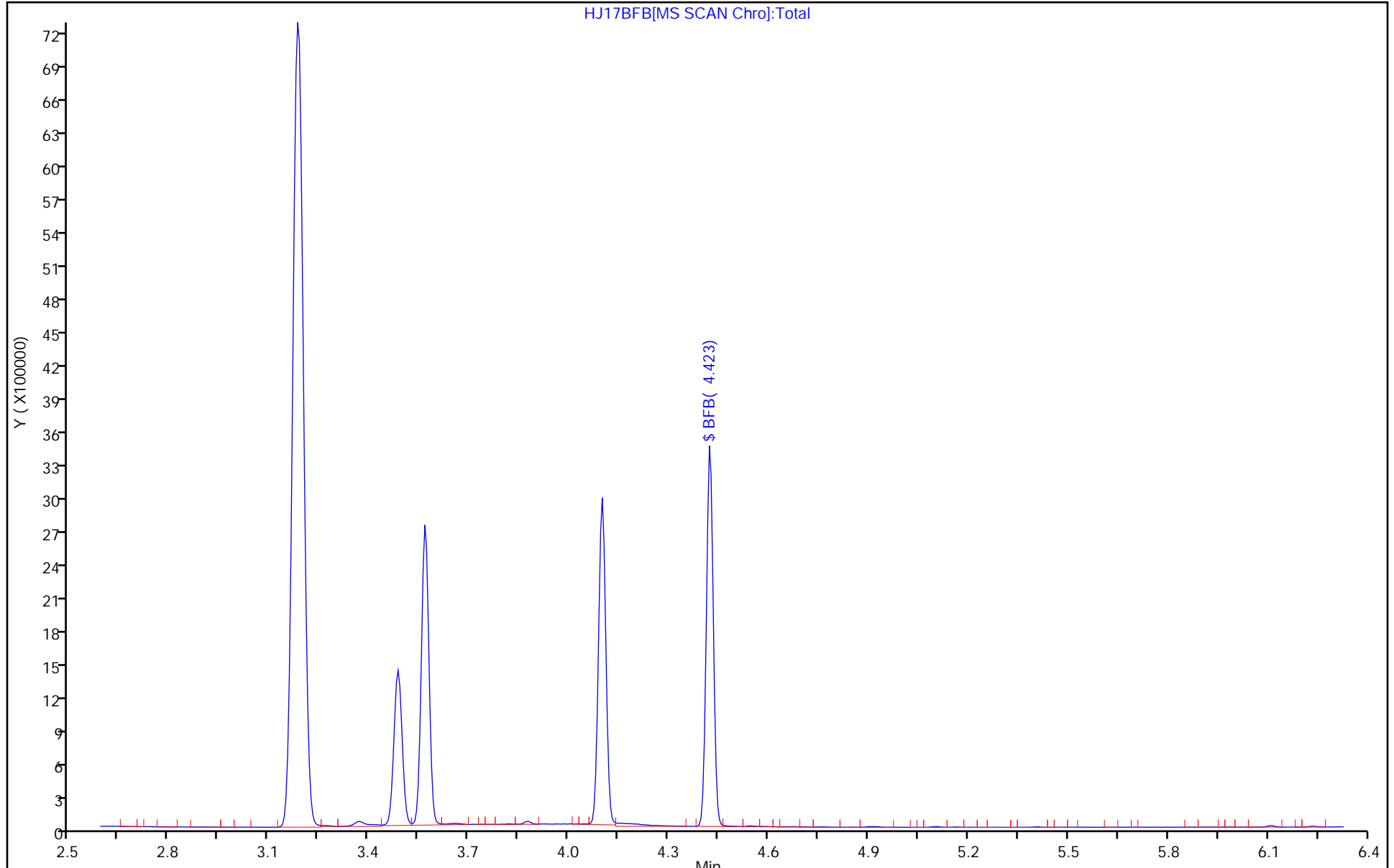
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HBFBJ23A.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 23-Oct-2018 11:50:30 ALS Bottle#: 16 Worklist Smp#: 5
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0009735-001
 Misc. Info.: BFB
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 24-Oct-2018 11:07:20 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: sodsaip Date: 24-Oct-2018 11:07:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	4.443	4.443	0.000	0	696674	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

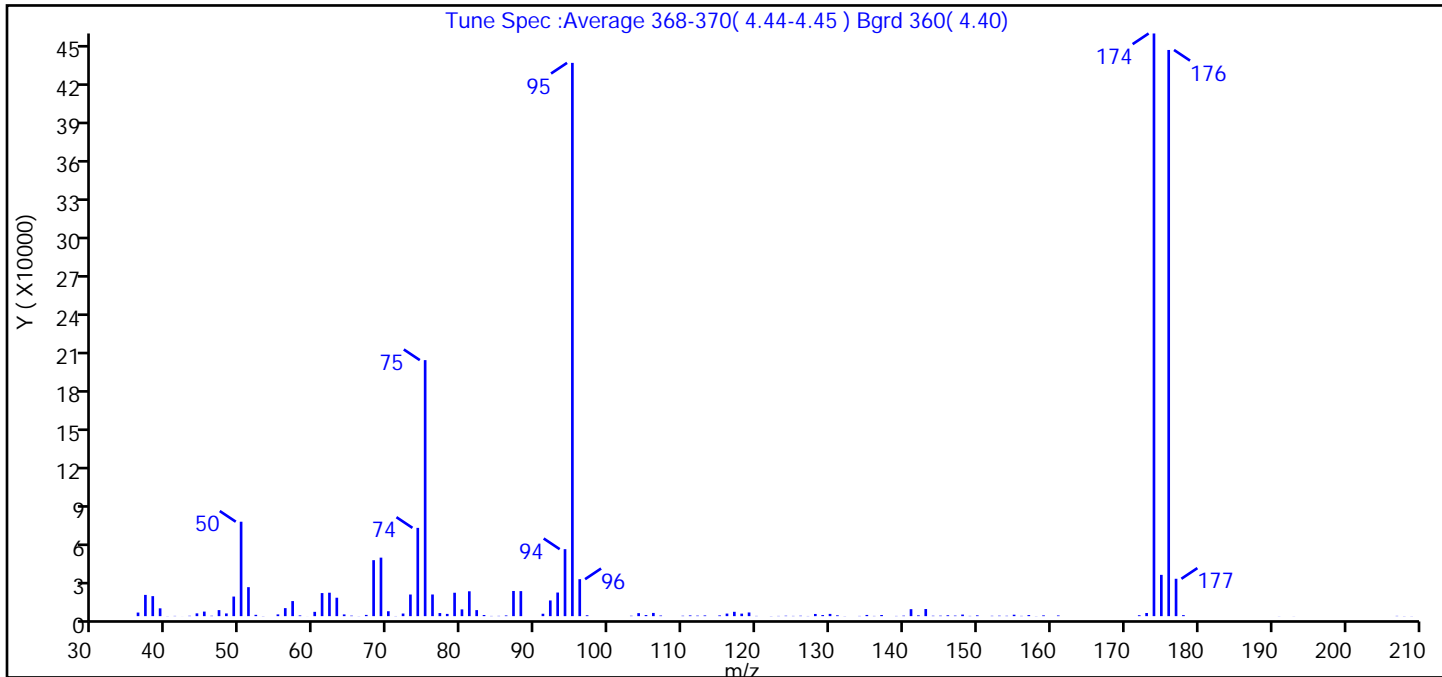
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HBFBJ23A.D
 Injection Date: 23-Oct-2018 11:50:30 Instrument ID: MH
 Lims ID: BFB
 Client ID:
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 5
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.1
75	30 to 60% of m/z 95	46.3
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.6 (0.5)
174	50 to 120% of m/z 95	105.3
175	5 to 9% of m/z 174	7.5 (7.1)
176	Greater than 95% but less than 101% of m/z 174	102.3 (97.2)
177	5 to 9% of m/z 176	6.8 (6.6)

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HBFBJ23A.D\MH_TO15.rslt\spectra.d
 Injection Date: 23-Oct-2018 11:50:30
 Spectrum: Tune Spec :Average 368-370(4.44-4.45) Bgrd 360(4.40)
 Base Peak: 174.00
 Minimum % Base Peak: 0
 Number of Points: 122

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2825	68.00	44120	106.00	2531	143.00	5604
37.00	16744	69.00	46120	107.00	486	144.00	308
38.00	15766	70.00	3868	110.00	306	145.00	372
39.00	6158	71.00	121	111.00	572	146.00	691
40.00	93	72.00	2053	112.00	407	147.00	416
41.00	186	73.00	17048	113.00	557	148.00	1235
42.00	29	74.00	69584	115.00	583	149.00	202
43.00	270	75.00	201792	116.00	2024	150.00	616
44.00	2194	76.00	17072	117.00	3422	152.00	263
45.00	3593	77.00	2431	118.00	1981	153.00	351
46.00	289	78.00	1768	119.00	2890	154.00	270
47.00	4753	79.00	18448	120.00	189	155.00	1128
48.00	2134	80.00	5323	122.00	109	156.00	210
49.00	15436	81.00	19592	123.00	177	157.00	833
50.00	74432	82.00	4752	124.00	312	158.00	97
51.00	22840	83.00	892	125.00	185	159.00	596
52.00	1046	84.00	168	126.00	310	161.00	536
53.00	113	85.00	210	127.00	133	172.00	719
55.00	1381	86.00	547	128.00	1724	173.00	2477
56.00	6319	87.00	19840	129.00	855	174.00	459264
57.00	11872	88.00	19728	130.00	1759	175.00	32536
58.00	554	91.00	1892	131.00	656	176.00	446272
59.00	33	92.00	12373	132.00	102	177.00	29456
60.00	3387	93.00	18616	134.00	180	178.00	802
61.00	18184	94.00	52792	135.00	950	191.00	69
62.00	18472	95.00	436096	136.00	178	193.00	61
63.00	14514	96.00	29136	137.00	890	207.00	204
64.00	1350	97.00	693	139.00	174	208.00	108
65.00	381	103.00	306	140.00	367	209.00	92
66.00	86	104.00	2375	141.00	5498		
67.00	985	105.00	856	142.00	621		

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HBFBJ23A.D

Injection Date: 23-Oct-2018 11:50:30

Instrument ID: MH

Operator ID: HMT

Lims ID: BFB

Worklist Smp#: 5

Client ID:

Injection Vol: 500.0 mL

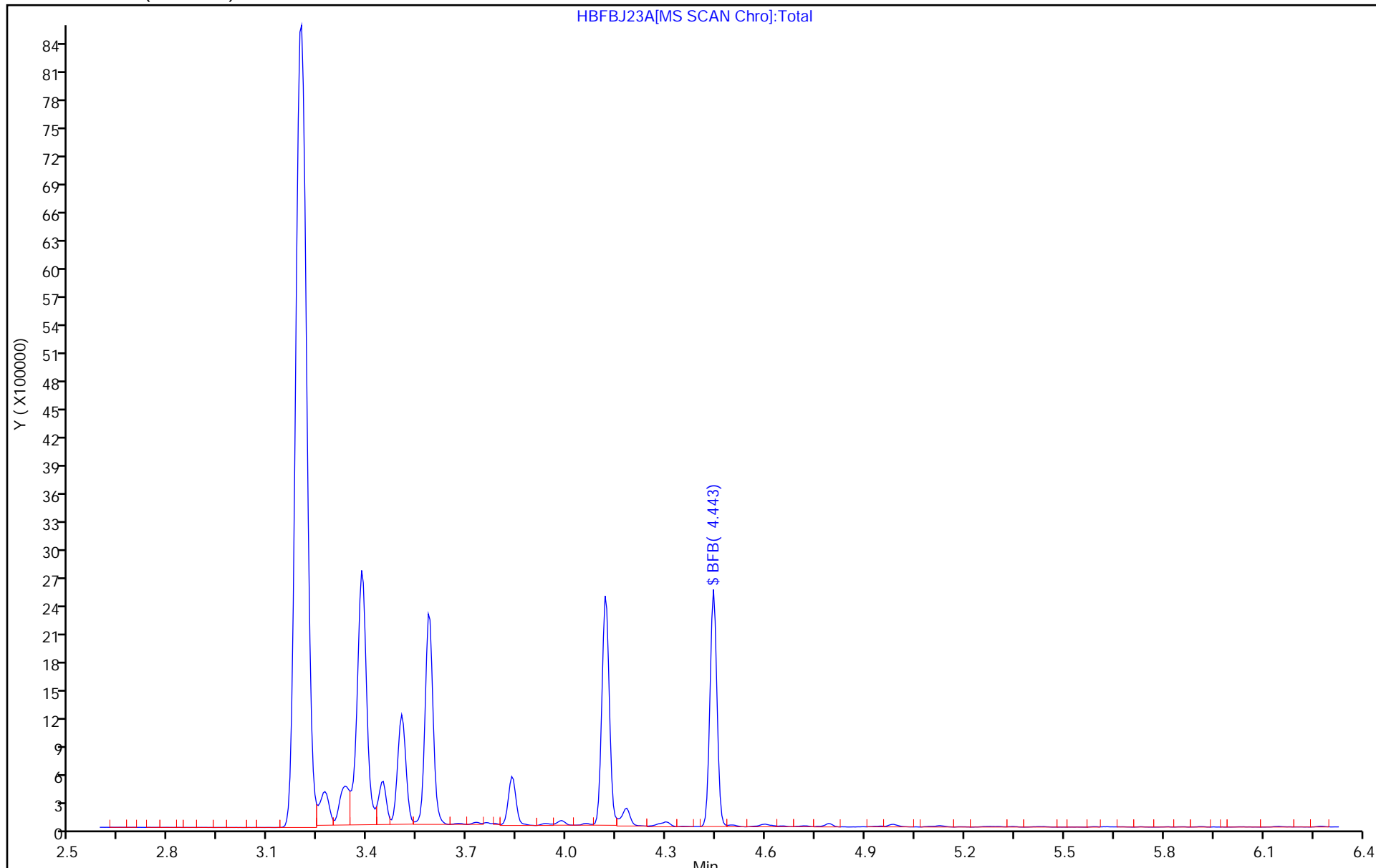
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-24681/8
 Matrix: Air Lab File ID: H500BJ23.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 10/23/2018 14:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24681 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	0.0269	J	0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-24681/8
 Matrix: Air Lab File ID: H500BJ23.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 10/23/2018 14:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24681 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	0.147	J	0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\H500BJ23.D
 Lims ID: mb
 Client ID:
 Sample Type: MB
 Inject. Date: 23-Oct-2018 14:47:30 ALS Bottle#: 16 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009735-008
 Misc. Info.: 500ML BLK
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 24-Oct-2018 11:17:07 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: sodsaip Date: 24-Oct-2018 11:17:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.379	0.000	85	212485	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.581	-0.005	94	1150138	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.001	86	953514	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.067	-0.020	96	600744	4.00	3.77	
29 2-Methyl-2-propanol	59	5.811	5.717	0.094	79	2585		0.0228	
44 Tetrahydrofuran	42	8.896	8.813	0.083	82	2213		0.0342	
45 1,1,1-Trichloroethane	97	9.408	9.408	0.000	98	4194		0.0269	
114 Benzo(b)thiophene	134	21.088	21.092	-0.010	1	141		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\H500BJ23.D

Injection Date: 23-Oct-2018 14:47:30

Instrument ID: MH

Operator ID: HMT

Lims ID: mb

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

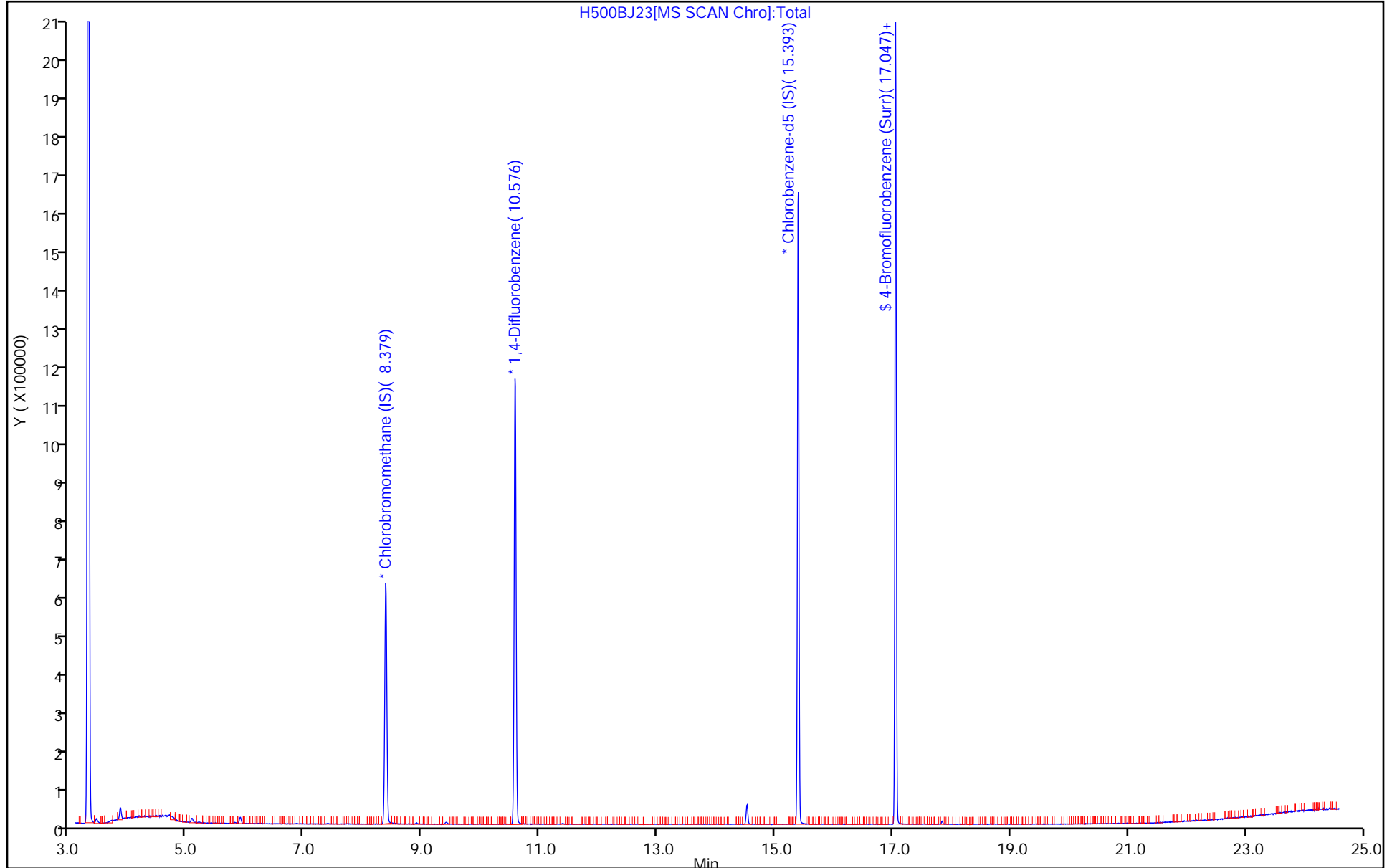
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\H500BJ23.D
 Lims ID: mb
 Client ID:
 Sample Type: MB
 Inject. Date: 23-Oct-2018 14:47:30 ALS Bottle#: 16 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009735-008
 Misc. Info.: 500ML BLK
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 24-Oct-2018 11:17:07 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: sodsaip Date: 24-Oct-2018 11:17:07

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.77	94.16

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\H500BJ23.D

Injection Date: 23-Oct-2018 14:47:30

Instrument ID: MH

Lims ID: mb

Client ID:

Operator ID: HMT

ALS Bottle#: 16

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

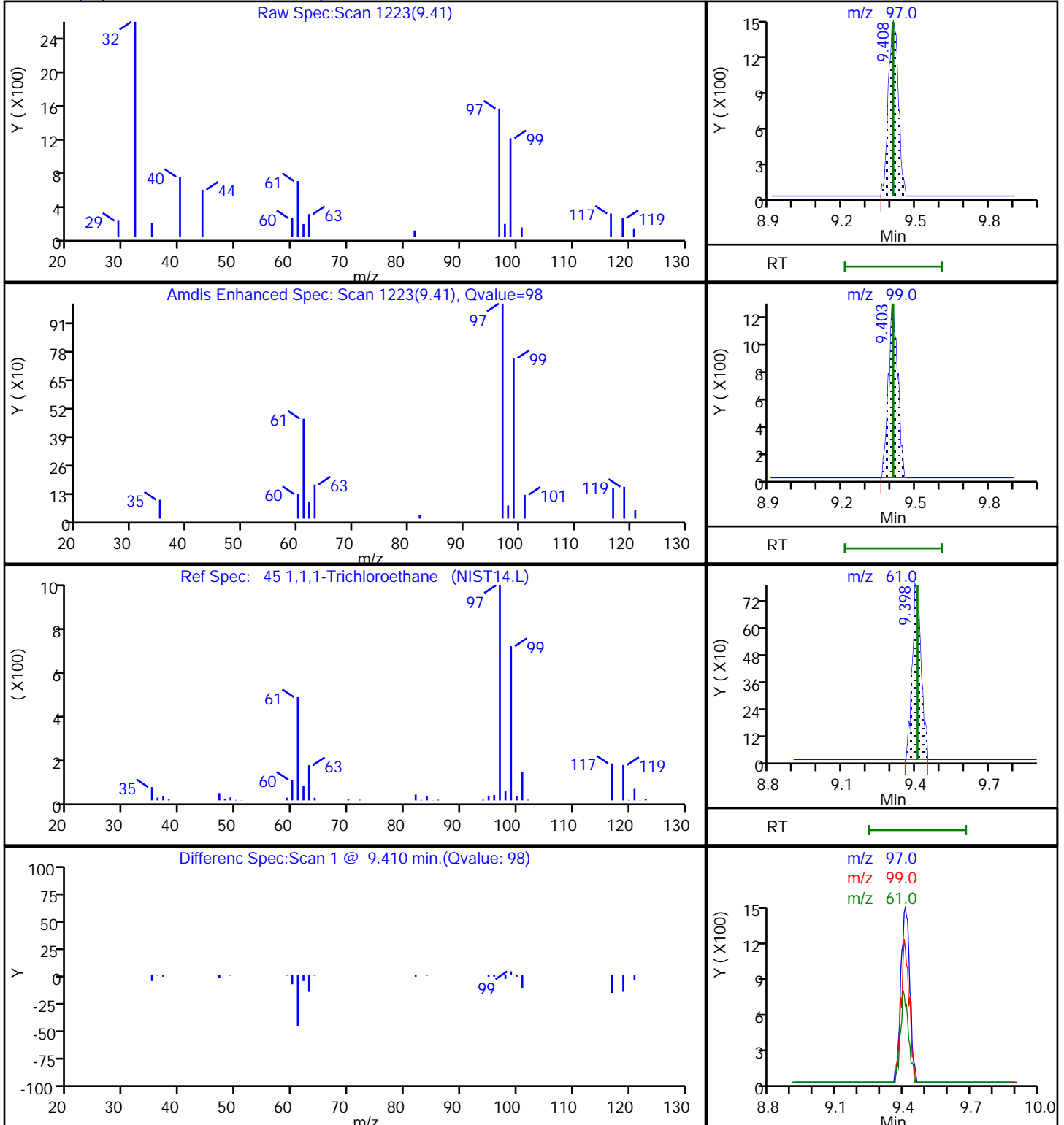
Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-24681/1006
 Matrix: Air Lab File ID: HCCVJ23A-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 10/23/2018 12:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24681 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.23		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.16		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.09		0.080	0.015
67-66-3	Chloroform	119.38	2.21		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.26		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.43		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.25		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.30		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.25		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.39		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.97		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.29		0.40	0.068
91-20-3	Naphthalene	128.17	2.19		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.31		0.080	0.016
108-88-3	Toluene	92.14	2.37		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.25		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.26		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.25		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.28		0.080	0.021
79-01-6	Trichloroethene	131.39	2.28		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.38		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.29		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.34		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.19		0.040	0.029
1330-20-7	Xylenes, Total	106.17	7.32		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HCCVJ23A-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 23-Oct-2018 12:19:30 ALS Bottle#: 1 Worklist Smp#: 1006
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009735-002
 Misc. Info.: S75
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 24-Oct-2018 11:08:21 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: sodsaip

Date: 24-Oct-2018 11:08:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.379	0.000	87	211350	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.581	10.581	0.000	93	1127501	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.393	15.393	0.000	86	949585	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.067	17.067	0.000	97	646170	4.00	4.07	
6 Chlorodifluoromethane	51	3.479	3.479	0.000	97	278741	2.00	2.09	
7 Propene	41	3.490	3.490	0.000	98	112281	2.00	2.13	
8 Dichlorodifluoromethane	85	3.536	3.536	0.000	100	483511	2.00	2.43	
9 Chloromethane	52	3.707	3.707	0.000	98	47472	2.00	2.13	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.712	3.712	0.000	90	438342	2.00	2.24	
11 Acetaldehyde	44	3.852	3.852	0.000	96	245882	10.0	10.2	
12 Vinyl chloride	62	3.862	3.862	0.000	99	162575	2.00	2.19	
14 Butane	43	3.939	3.939	0.000	81	178402	2.00	2.25	
13 Butadiene	54	3.945	3.945	0.000	75	102310	2.00	2.23	
15 Bromomethane	94	4.239	4.239	0.000	98	201707	2.00	2.20	
16 Chloroethane	64	4.368	4.368	0.000	97	69497	2.00	2.20	
17 Ethanol	31	4.472	4.472	0.000	97	257563	10.0	10.4	
18 Vinyl bromide	106	4.647	4.647	0.000	97	198334	2.00	2.25	
19 2-Methylbutane	43	4.689	4.689	0.000	87	130198	2.00	2.37	
21 Trichlorofluoromethane	101	4.896	4.896	0.000	99	526757	2.00	2.24	
20 Acrolein	56	4.916	4.916	0.000	94	46669	2.00	2.45	
22 Acetonitrile	40	4.978	4.978	0.000	100	53994	2.00	2.11	
23 Acetone	58	5.035	5.035	0.000	98	198643	6.00	6.35	
24 Pentane	72	5.107	5.107	0.000	96	20842	2.00	2.31	
25 Isopropyl alcohol	45	5.128	5.128	0.000	96	525913	6.00	6.34	
26 Ethyl ether	31	5.278	5.278	0.000	96	142390	2.00	2.33	
27 1,1-Dichloroethene	96	5.567	5.567	0.000	99	159265	2.00	2.25	
28 Acrylonitrile	53	5.676	5.676	0.000	94	102314	2.00	2.27	
29 2-Methyl-2-propanol	59	5.717	5.717	0.000	95	244773	2.00	2.17	
30 1,1,2-Trichloro-1,2,2-trif	101	5.738	5.738	0.000	97	373377	2.00	2.26	
31 Methylene Chloride	84	5.903	5.903	0.000	94	152846	2.00	1.97	
32 3-Chloro-1-propene	39	5.919	5.919	0.000	98	112463	2.00	2.11	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.058	6.058	0.000	99	465076	2.00	2.24	
34 trans-1,2-Dichloroethene	96	6.684	6.684	0.000	99	161890	2.00	2.25	
35 2-Methylpentane	43	6.699	6.699	0.000	93	282880	2.00	2.30	
36 Methyl tert-butyl ether	73	6.829	6.829	0.000	96	377889	2.00	2.29	
37 1,1-Dichloroethane	63	7.092	7.092	0.000	100	283718	2.00	2.25	
38 Vinyl acetate	43	7.201	7.201	0.000	100	363668	2.00	2.27	
39 2-Butanone (MEK)	72	7.650	7.650	0.000	97	68544	2.00	2.14	
40 Hexane	56	7.661	7.661	0.000	76	105008	2.00	2.29	
171 Isopropyl ether	45	7.831	7.831	0.000	97	453196	2.00	2.31	
41 cis-1,2-Dichloroethene	96	8.053	8.053	0.000	93	170001	2.00	2.26	
42 Ethyl acetate	43	8.255	8.255	0.000	99	313491	2.00	2.26	
43 Chloroform	83	8.395	8.395	0.000	96	365520	2.00	2.21	
173 Tert-butyl ethyl ether	59	8.498	8.498	0.000	95	428442	2.00	2.33	
44 Tetrahydrofuran	42	8.813	8.813	0.000	91	144991	2.00	2.25	
45 1,1,1-Trichloroethane	97	9.408	9.408	0.000	96	347738	2.00	2.25	
46 1,2-Dichloroethane	62	9.516	9.516	0.000	98	218710	2.00	2.30	
47 Benzene	78	10.007	10.007	0.000	97	457696	2.00	2.23	
48 Cyclohexane	69	10.017	10.017	0.000	88	65372	2.00	2.38	
49 n-Butanol	31	10.023	10.023	0.000	67	49115	2.00	2.09	
50 Carbon tetrachloride	117	10.033	10.033	0.000	97	368416	2.00	2.16	
51 2,3-Dimethylpentane	71	10.141	10.141	0.000	90	92853	2.00	2.36	
52 Thiophene	84	10.291	10.291	0.000	94	271351	2.00	2.30	
53 Isooctane	57	10.803	10.803	0.000	98	659013	2.00	2.30	
55 n-Heptane	71	11.196	11.196	0.000	90	140397	2.00	2.28	
54 1,2-Dichloropropane	63	11.268	11.268	0.000	93	184360	2.00	2.28	
56 Trichloroethene	130	11.304	11.304	0.000	96	227644	2.00	2.28	
57 Dibromomethane	93	11.387	11.387	0.000	94	240167	2.00	2.17	
58 Dichlorobromomethane	83	11.537	11.537	0.000	98	366511	2.00	2.31	
59 1,4-Dioxane	88	11.583	11.583	0.000	85	63542	2.00	2.12	
60 Methyl methacrylate	41	11.656	11.656	0.000	96	173908	2.00	2.28	
61 Methylcyclohexane	83	12.090	12.090	0.000	97	257746	2.00	2.35	
62 4-Methyl-2-pentanone (MIBK)	43	12.534	12.534	0.000	97	332789	2.00	2.25	
63 cis-1,3-Dichloropropene	75	12.565	12.565	0.000	93	274709	2.00	2.35	
64 trans-1,3-Dichloropropene	75	13.279	13.279	0.000	97	240393	2.00	2.30	
65 Toluene	91	13.398	13.398	0.000	93	561332	2.00	2.37	
66 1,1,2-Trichloroethane	83	13.475	13.475	0.000	97	189249	2.00	2.28	
69 2-Hexanone	58	13.889	13.889	0.000	93	162768	2.00	2.30	
71 n-Octane	85	14.111	14.111	0.000	92	146863	2.00	2.33	
70 Chlorodibromomethane	129	14.183	14.183	0.000	97	414527	2.00	2.38	
72 Ethylene Dibromide	107	14.478	14.478	0.000	99	349663	2.00	2.30	
73 Tetrachloroethene	129	14.555	14.555	0.000	95	226672	2.00	2.31	
74 Chlorobenzene	112	15.439	15.439	0.000	97	469960	2.00	2.28	
75 2,3-Dimethylheptane	43	15.475	15.475	0.000	95	453648	2.00	2.39	
76 Ethylbenzene	91	15.734	15.734	0.000	98	729338	2.00	2.39	
78 m-Xylene & p-Xylene	91	15.899	15.899	0.000	98	1150242	4.00	4.89	
81 n-Nonane	57	16.333	16.333	0.000	91	312812	2.00	2.39	
79 Bromoform	173	16.338	16.338	0.000	95	477514	2.00	2.71	
80 Styrene	104	16.364	16.364	0.000	98	415079	2.00	2.57	
82 o-Xylene	91	16.426	16.426	0.000	99	583820	2.00	2.43	
83 1,1,2,2-Tetrachloroethane	83	16.757	16.757	0.000	99	488969	2.00	2.31	
84 1,2,3-Trichloropropane	110	16.922	16.922	0.000	99	116956	2.00	2.31	
85 Isopropylbenzene	105	17.036	17.036	0.000	96	792120	2.00	2.32	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	17.615	17.615	0.000	99	216124	2.00	2.28	
87 2-Chlorotoluene	126	17.656	17.656	0.000	97	216869	2.00	2.29	
88 4-Ethyltoluene	105	17.780	17.780	0.000	99	813553	2.00	2.30	
89 1,3,5-Trimethylbenzene	120	17.858	17.858	0.000	93	332214	2.00	2.34	
90 Alpha Methyl Styrene	118	18.106	18.106	0.000	89	332529	2.00	2.31	
91 n-Decane	57	18.178	18.178	0.000	91	427200	2.00	2.28	
92 tert-Butylbenzene	119	18.313	18.313	0.000	93	750923	2.00	2.22	
93 1,2,4-Trimethylbenzene	105	18.323	18.323	0.000	95	708146	2.00	2.29	
95 sec-Butylbenzene	105	18.597	18.597	0.000	99	1046070	2.00	2.24	
94 1,3-Dichlorobenzene	146	18.607	18.607	0.000	97	532740	2.00	2.21	
96 Benzyl chloride	91	18.690	18.690	0.000	98	544586	2.00	2.22	
97 1,4-Dichlorobenzene	146	18.700	18.700	0.000	96	510122	2.00	2.28	
98 4-Isopropyltoluene	119	18.773	18.773	0.000	97	865644	2.00	2.36	
99 1,2,3-Trimethylbenzene	105	18.824	18.824	0.000	98	699510	2.00	2.38	
100 Butylcyclohexane	83	18.886	18.886	0.000	97	567789	2.00	2.39	
101 1,2-Dichlorobenzene	146	19.078	19.078	0.000	93	531808	2.00	2.26	
102 2,3-Dihydroindene	117	19.078	19.078	0.000	93	694569	2.00	2.32	
103 Indene	116	19.217	19.217	0.000	90	578563	2.00	2.23	
104 n-Butylbenzene	91	19.227	19.227	0.000	98	916161	2.00	2.24	
105 Undecane	57	19.563	19.563	0.000	95	488551	2.00	2.20	
106 1,2-Dibromo-3-Chloropropan	157	19.708	19.708	0.000	97	270276	2.00	2.35	
107 1,2,4,5-Tetramethylbenzene	119	20.018	20.018	0.000	97	789931	2.00	2.38	
110 Dodecane	57	20.659	20.659	0.000	96	432196	2.00	1.92	
111 1,2,4-Trichlorobenzene	180	20.845	20.845	0.000	93	456856	2.00	2.26	
113 Naphthalene	128	20.990	20.990	0.000	99	890727	2.00	2.19	
115 Hexachlorobutadiene	225	21.217	21.217	0.000	92	497655	2.00	2.11	
116 1,2,3-Trichlorobenzene	180	21.290	21.290	0.000	95	455082	2.00	2.15	
117 2-Methylnaphthalene	142	21.982	21.982	0.000	100	297548	2.00	1.54	
118 1-Methylnaphthalene	142	22.111	22.111	0.000	100	334239	2.00	1.60	
A 120 C8 Range	1	14.100	(14.059-14.162)		0	1378557	2.00	2.24	
S 121 Xylenes, Total	100				0		6.00	7.32	
S 122 1,2-Dichloroethene, Total	1				0		4.00	4.51	

Reagents:

40CV101P_00072

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HCCVJ23A-LCS.d

Injection Date: 23-Oct-2018 12:19:30

Instrument ID: MH

Operator ID: HMT

Lims ID: LCS

Worklist Smp#: 1006

Client ID:

Purge Vol: 500.000 mL

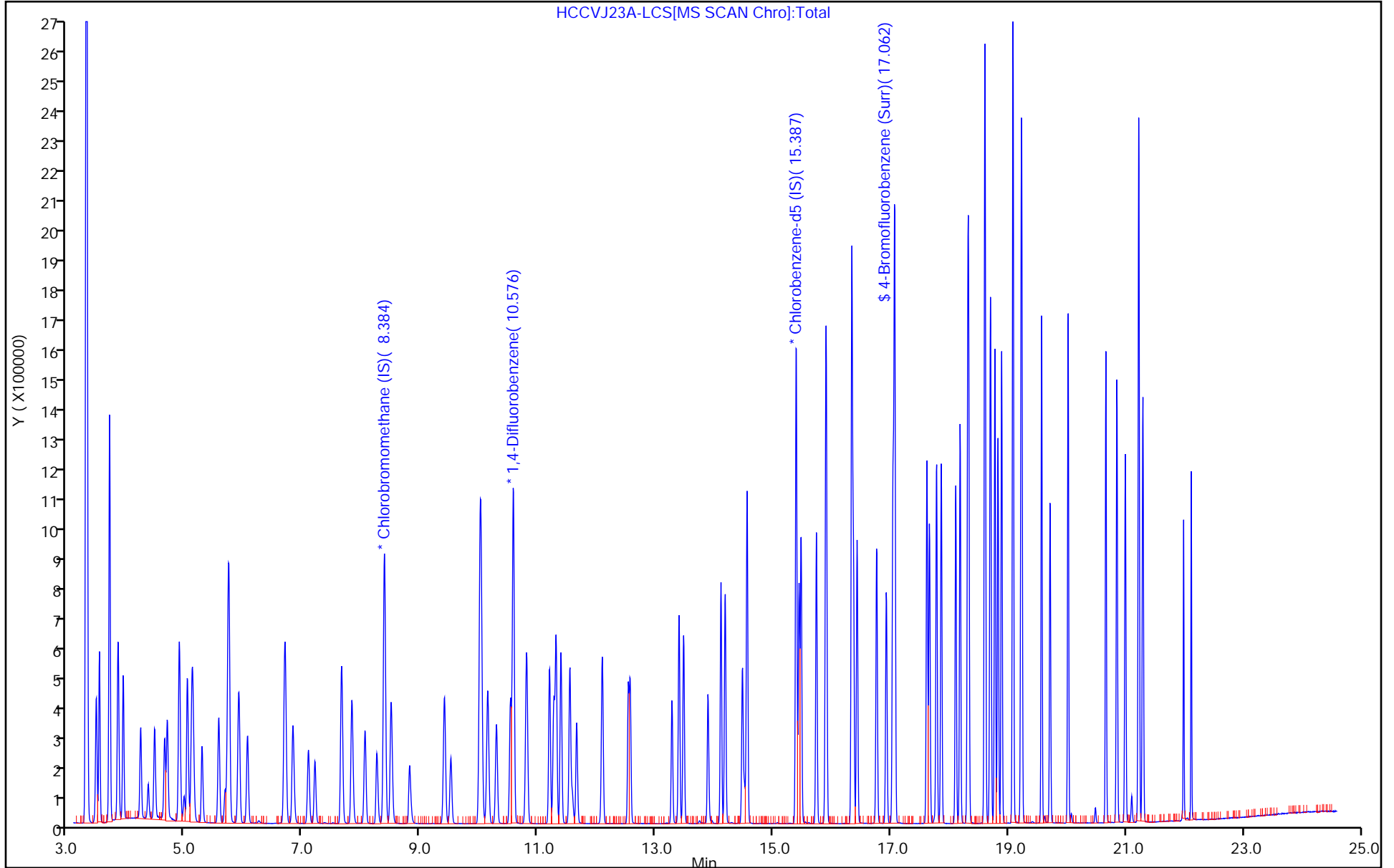
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\HCCVJ23A-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 23-Oct-2018 12:19:30 ALS Bottle#: 1 Worklist Smp#: 1006
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009735-002
 Misc. Info.: S75
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181022-9735.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 24-Oct-2018 11:08:21 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ17IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK009

First Level Reviewer: sodsaip Date: 24-Oct-2018 11:08:21

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.07	101.69

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1

SDG No.: _____

Instrument ID: MH Start Date: 10/17/2018 18:22

Analysis Batch Number: 24544 End Date: 10/18/2018 07:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-24544/1		10/17/2018 18:22	1	HJ17BFB.D	RTX-5 0.32 (mm)
IC 140-24544/2		10/17/2018 18:52	1	HJ17IC09.D	RTX-5 0.32 (mm)
IC 140-24544/4		10/17/2018 20:25	1	HJ17IC10.D	RTX-5 0.32 (mm)
IC 140-24544/7		10/17/2018 22:43	1	HJ17IC01.D	RTX-5 0.32 (mm)
IC 140-24544/8		10/17/2018 23:26	1	HJ17IC02.D	RTX-5 0.32 (mm)
140-12898-A-1 MDLV		10/17/2018 23:26	1		RTX-5 0.32 (mm)
ZZZZZ		10/17/2018 23:26	1		RTX-5 0.32 (mm)
IC 140-24544/9		10/18/2018 00:11	1	HJ17IC03.D	RTX-5 0.32 (mm)
140-12898-A-2 MDLV		10/18/2018 00:11	1		RTX-5 0.32 (mm)
ZZZZZ		10/18/2018 00:11	1		RTX-5 0.32 (mm)
IC 140-24544/10		10/18/2018 00:55	1	HJ17IC04.D	RTX-5 0.32 (mm)
140-12898-A-3 MDLV		10/18/2018 00:55	1		RTX-5 0.32 (mm)
ZZZZZ		10/18/2018 00:55	1		RTX-5 0.32 (mm)
IC 140-24544/11		10/18/2018 01:39	1	HJ17IC05.D	RTX-5 0.32 (mm)
140-12898-A-4 MDLV		10/18/2018 01:39	1		RTX-5 0.32 (mm)
ZZZZZ		10/18/2018 01:39	1		RTX-5 0.32 (mm)
IC 140-24544/12		10/18/2018 02:24	1	HJ17IC06.D	RTX-5 0.32 (mm)
ICIS 140-24544/13		10/18/2018 03:08	1	HJ17IC07.D	RTX-5 0.32 (mm)
IC 140-24544/14		10/18/2018 03:53	1	HJ17IC08.D	RTX-5 0.32 (mm)
ICV 140-24544/16		10/18/2018 05:24	1	HJ17ICV.D	RTX-5 0.32 (mm)
ZZZZZ		10/18/2018 07:43	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date:	10/17	Instrument:	MH	Chrom WL #:	9689	TALS Batch & Event #	TO14/15: 1712 24544							
							DOD:	1713 24546	OHIO: 1712, 24545					
Chrom/Worklist Review							1 st	Comments		2 nd				
1. Re-read each Limit Group [method editor-limit groups]							✓			na				
2. Verify LODV in Chrom [method editor -> edit -> MDL]							✓			na				
3. Are the reagents and ini/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]							✓	✓ on screen		✓				
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]							✓			✓				
5. Did BFB meet tune criteria? [F8]							✓			✓				
6. Were all standards injected within 24 hr of BFB? [F7]							✓			✓				
7. High point checked for saturation and point removed if so? [Chrom]							✓			✓				
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]							NA			NA				
9. RT for each IS +20 sec avg. RT? [F6 IstdRec]							✓			✓				
10. Area for each IS ± 40% avg. area? [F6 IstdRec]							✓			✓				
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]							✓			✓				
12. Elution order checked on isomeric pairs? [Chrom]														
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane							✓			✓				
• 2-methyl butane / acrolein							✓			✓				
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane							✓			✓				
• vinyl acetate / hexane							✓			✓				
• cis- and trans- isomers							✓			✓				
• ethyl benzene / m/p-xylene / o-xylene							✓			✓				
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene							✓			✓				
• tert-butylbenzene/4-isopropyltoluene							✓			✓				
• 1,3-, 1,4-, and 1,2-dichlorobenzene							✓			✓				
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes							✓			✓				
• 1,2,4- and 1,2,3-trichlorobenzenes							✓			✓				
• 2-, and 1-methylnaphthalene							✓			✓				
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?							✓			✓				
MLG Review							TO	DOD	OH	Comments	TO	DOD	OH	
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene < 50% [F6 Σ]							✓	✓	✓			✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]							✓	→	→			✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]							✓	→	→			✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]							NA	→	→			NA	→	→
18. If curves were used, is correlation coefficient ≥ 0.990? [F6]							NA	→	→			NA	→	→
19. Is the intercept less than the RL for each curve? [F6]							NA	→	→			NA	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]							NA	→	na			NA	→	na
21. Is low point RSE ≤ 50%? [F6]							✓	✓	✓			✓	✓	✓
22. Is the second source analysis within limits? [F8 - icv]							✓	✓	✓			✓	✓	✓
Analyst/Date:							2nd Level Reviewer/Date:							
GK 10/18/18							B 10/18/18							
TALS Review							TO	DOD	OH	Comments	TO	DOD	OH	
23. Upload ICAL								✓	✓			na	na	na
24. Graphics uploaded? [paperclip]							✓	→	→			✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events - 'Fix ICAL linkage' if needed]							✓	→	→			✓	✓	✓
26. Runs linked to BFB? [QC Links]							✓	→	→			✓	✓	✓
27. Run Checklist and acknowledge findings [F8]							✓	→	→			✓	✓	✓
28. If criteria not met, was a NCM generated?							NA	→	→			NA	NA	NA
29. After review in TALS, approve the method in TALS.							na	na	na			✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>							na	na	na			✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?							na	na	na			✓	✓	✓
Analyst/date:							2nd Level Reviewer/date:							
Browns from UK 4.0 10/18/18							B 10/18/18							
Comments: #106, 107 UK PD							Comments:							
#111 to 10/18/18														

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1

SDG No.: _____

Instrument ID: MH Start Date: 10/23/2018 11:50

Analysis Batch Number: 24681 End Date: 10/24/2018 03:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-24681/5		10/23/2018 11:50	1	HBFBJ23A.D	RTX-5 0.32 (mm)
CCVIS 140-24681/6		10/23/2018 12:19	1	HCCVJ23A.D	RTX-5 0.32 (mm)
LCS 140-24681/1006		10/23/2018 12:19	1	HCCVJ23A-LCS.d	RTX-5 0.32 (mm)
MB 140-24681/8		10/23/2018 14:47	1	H500BJ23.D	RTX-5 0.32 (mm)
ZZZZZ		10/23/2018 15:30	4.15		RTX-5 0.32 (mm)
ZZZZZ		10/23/2018 16:13	1		RTX-5 0.32 (mm)
ZZZZZ		10/23/2018 16:57	1		RTX-5 0.32 (mm)
ZZZZZ		10/23/2018 17:40	3.71		RTX-5 0.32 (mm)
ZZZZZ		10/23/2018 18:23	12.89		RTX-5 0.32 (mm)
ZZZZZ		10/23/2018 19:07	13.23		RTX-5 0.32 (mm)
ZZZZZ		10/23/2018 20:34	1		RTX-5 0.32 (mm)
ZZZZZ		10/23/2018 21:17	1276.45		RTX-5 0.32 (mm)
ZZZZZ		10/23/2018 22:00	1112.36		RTX-5 0.32 (mm)
ZZZZZ		10/23/2018 22:44	38.02		RTX-5 0.32 (mm)
ZZZZZ		10/23/2018 23:27	1		RTX-5 0.32 (mm)
140-13100-1		10/24/2018 00:11	1	HJ23P113.D	RTX-5 0.32 (mm)
140-13100-2		10/24/2018 00:55	1	HJ23P114.D	RTX-5 0.32 (mm)
140-13100-3		10/24/2018 01:39	1	HJ23P115.D	RTX-5 0.32 (mm)
ZZZZZ		10/24/2018 02:22	1.63		RTX-5 0.32 (mm)
ZZZZZ		10/24/2018 03:10	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 / KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

24 #3 10/25/18

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Instrument/Date	M4 10/21/2018	Routine	DOD	OHIO VAP
CCAL Chrom WL#	9735	CCAL Batch #	24681	
ICAL Chrom WL#	9689	ICAL Batch # / Event #	24644 / 1711	
Chrom Review		1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]		/		NA
2. Did BFB meet tune criteria? [F8]		/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]		/	List Target analytes outside CCV limits: Bromofarm	✓
4. Elution order checked on isomeric pairs? [Chrom]				
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		/		✓
• 2-methyl butane / acrolein		/		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		/		✓
• vinyl acetate / hexane		/		✓
• cis- and trans- isomers		/		✓
• ethyl benzene / m/p-xylene / o-xylene		/		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene		/		✓
• tert-butylbenzene/4-isopropyltoluene		/		✓
• 1,3-, 1,4-, and 1,2-dichlorobenzene		/		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		NA		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene		/		✓
• 2-, and 1-methylnaphthalene		/		✓
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?		NA		NA
6. Has the RT been updated to the method?		/		✓
Analyst/date	Pornwiman S. 10/24/2018	2nd Level Reviewer/date	JAS 10/25/18	
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]		/	✓ on seen 10/24/18H	✓
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]		/		✓
9. Can dilution history verified? [Mgmt Report]		/		✓
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:		/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	✓
11. All runs - peaks ID'd correctly and false positives removed?		/		✓
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?		/		✓
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]		/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur, Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)	✓
Sample Reason Sample Reason				
14. Samples outside calibration range scheduled for dilution?		NA	<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution	NA
Chrom Review		1st	If No, why is data reportable?	2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason: Sample Reason Sample Reason		/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume, see DRC. 13087# 10 Rf 50ml	✓
16. RIC inspected for proper integration for TPH?		NA		NA
17. Obvious non-TPH peaks excluded?		/		✓
18. Individual TPH peak area < octane high point area?		/		✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 2 of 2

TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	NA														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input checked="" type="checkbox"/> CCV - %D - LCS criteria met (NCM# <u>14823</u>) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		NA														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	/	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	NA														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random; Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr><td>>90</td><td>5</td></tr> <tr><td>71 - 90</td><td>4</td></tr> <tr><td>51 - 70</td><td>3</td></tr> <tr><td>31 - 50</td><td>2</td></tr> <tr><td>11 - 30</td><td>1</td></tr> <tr><td><11</td><td>0</td></tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	<11	0			
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
<11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	NA		NA														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		NA														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: <u>140-24621/2</u> 200 mL blank ID: <u>NA</u>	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	/		/														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	-na-		/														
40. Checklist & Entech report scanned, attached & assigned properly?	-na-		/														

Analyst: <u>Pornwiman S.</u>	Date: <u>10/24/18</u>	2nd Level Reviewer: <u>[Signature]</u>	Date: <u>10/25/18</u>
Comments:		Comments:	
<u>Uses 20-25 10/24/18H</u>		<u>BKE NCM# 14839</u>	
Example Calculation: <u>140-13087-1 Vinyl Chloride</u>			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
<u>7.943665 X $\frac{500}{10}$ X 4.75 = 1648.3104875</u>			

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13100-1

SDG No.: _____

Batch Number: 24681 Batch Start Date: 10/23/18 11:50 Batch Analyst: Sodsai, Pornwimon

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00072	40MXISSURP 00003
BFB 140-24681/5		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-24681/6		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-24681/8		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-13100-A-1	BLDG-A INFLUENT	TO 15 LL	T	20 mL	500 mL	1	1		40 mL
140-13100-A-2	BLDG-A MID GAC	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-13100-A-3	BLDG-A EFFLUENT	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-24681/1006		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-24681/5		TO 15 LL		40 mL					
CCVIS 140-24681/6		TO 15 LL							
MB 140-24681/8		TO 15 LL							
140-13100-A-1	BLDG-A INFLUENT	TO 15 LL	T						
140-13100-A-2	BLDG-A MID GAC	TO 15 LL	T						
140-13100-A-3	BLDG-A EFFLUENT	TO 15 LL	T						
LCS 140-24681/1006		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-12652-1
 SDG No.: _____
 Client Sample ID: 11707 Lab Sample ID: 140-12652-8
 Matrix: Air Lab File ID: I12L12652.D
 Analysis Method: TO-15 Date Collected: 09/11/2018 14:45
 Sample wt/vol: 200 (mL) Date Analyzed: 09/13/2018 04:50
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 23487 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-12652-1
 SDG No.: _____
 Client Sample ID: 11707 Lab Sample ID: 140-12652-8
 Matrix: Air Lab File ID: I12L12652.D
 Analysis Method: TO-15 Date Collected: 09/11/2018 14:45
 Sample wt/vol: 200 (mL) Date Analyzed: 09/13/2018 04:50
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 23487 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-12652-1
 SDG No.: _____
 Client Sample ID: 11707 Lab Sample ID: 140-12652-8
 Matrix: Air Lab File ID: I12L12652.D
 Analysis Method: TO-15 Date Collected: 09/11/2018 14:45
 Sample wt/vol: 200 (mL) Date Analyzed: 09/13/2018 04:50
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 23487 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180911-9307.b\12L12652.D
 Lims ID: 140-12652-A-8
 Client ID: 11707
 Sample Type: Client
 Inject. Date: 13-Sep-2018 04:50:30 ALS Bottle#: 2 Worklist Smp#: 25
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009307-025
 Misc. Info.: 11707
 Operator ID: Instrument ID: MR
 Method: \\ChromNA\Knoxville\ChromData\MR\20180911-9307.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 13-Sep-2018 09:12:35 Calib Date: 12-Jul-2018 21:05:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180712-8770.b\RG12IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0301

First Level Reviewer: tajh Date: 13-Sep-2018 09:11:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.428	7.449	-0.021	73	326306	4.00	
* 2 1,4-Difluorobenzene	114	9.536	9.547	-0.011	95	1840868	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.594	14.600	-0.006	90	1557196	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.314	16.314	-0.006	88	1326139	3.89	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180911-9307.b\12L12652.D

Injection Date: 13-Sep-2018 04:50:30

Instrument ID: MR

Operator ID:

Lims ID: 140-12652-A-8

Lab Sample ID: 140-12652-8

Worklist Smp#: 25

Client ID: 11707

Purge Vol: 500.000 mL

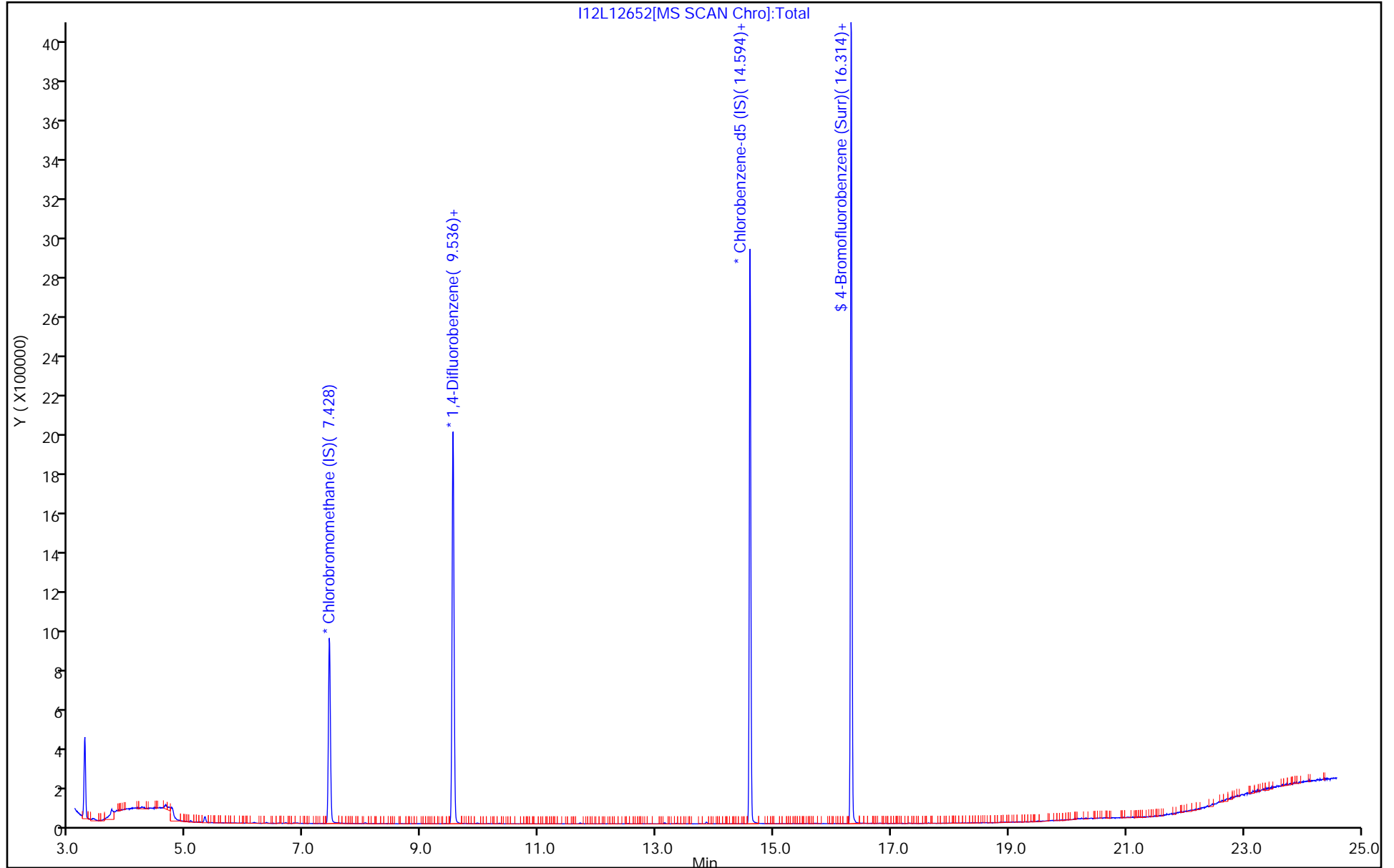
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180911-9307.b\12L12652.D

Injection Date: 13-Sep-2018 04:50:30

Instrument ID: MR

Lims ID: 140-12652-A-8

Lab Sample ID: 140-12652-8

Client ID: 11707

Operator ID:

ALS Bottle#:

2

Worklist Smp#: 25

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

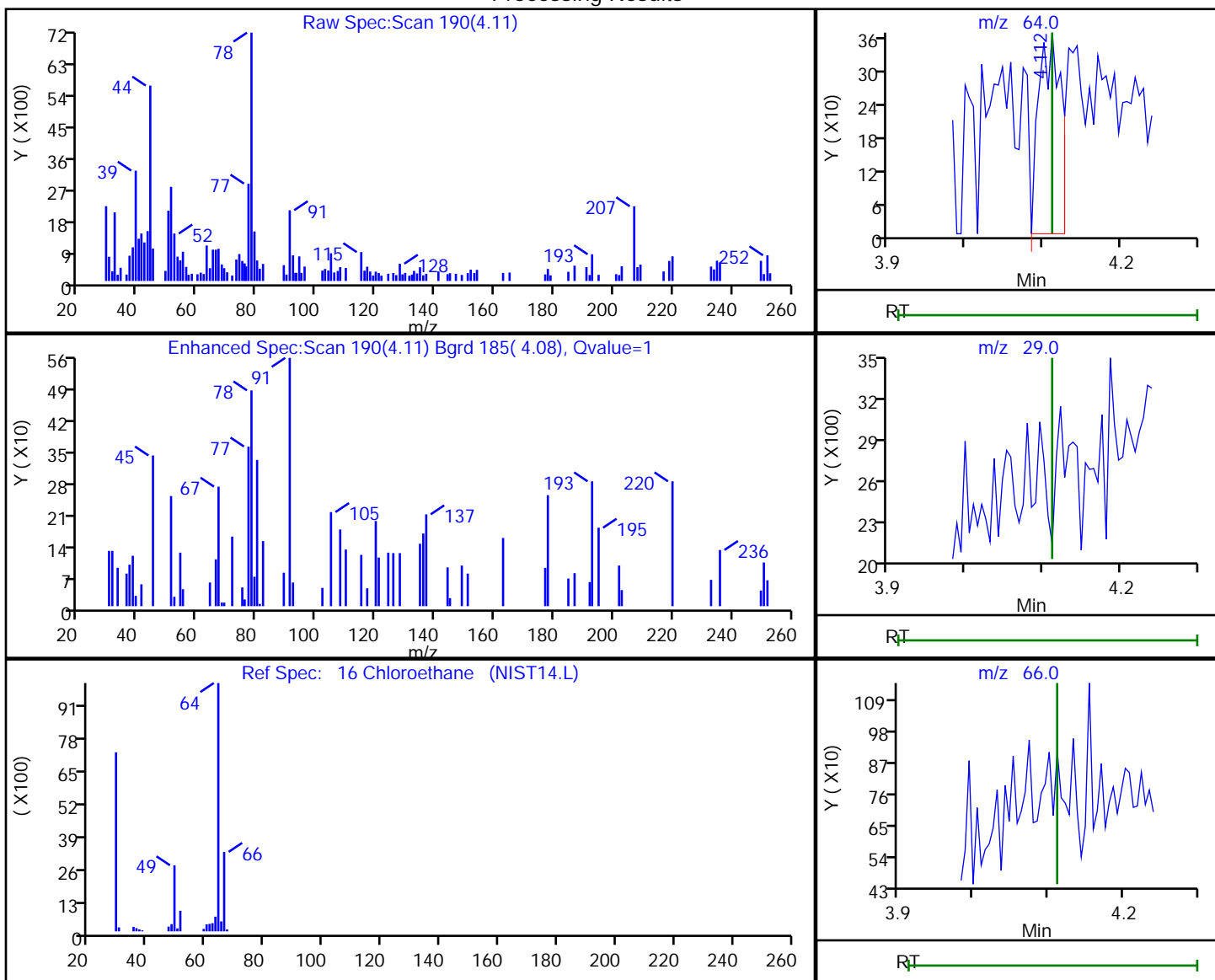
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
4.11	64.00	725	0.016088
4.11	29.00	0	
4.11	66.00	0	

Reviewer: tajh, 13-Sep-2018 09:11:06

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5

Date: 10/22/2018

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
afb	140-13100-A-1	11753	12652	b	1	-1.9	1430	
afb	140-13100-A-2	11893	12652	b	1	-1.8	1431	
afb	140-13100-A-3	10524	12652	b	1	-3.1	1432	
<input type="checkbox"/> Receiving –Air Can –Calve Open (NCM # _____) <input type="checkbox"/> Air - Can P -24 to -25 " - Flow Contr. Works (NCM# _____) <input type="checkbox"/> Air - Can P -24 to -25 " - Flow Contr. Faulty (NCM# _____) <input type="checkbox"/> Air - Can P Out -26" - Flow Contr. Works (NCM# _____)						<input type="checkbox"/> Air - Can P Out -26" - Flow Contr. Faulty (NCM# _____) <input type="checkbox"/> Air - Can P Low -24 to -25 " - Grab Sample (NCM# _____) <input type="checkbox"/> Air - Can P Low -26"- Grab Sample (NCM# _____)		

Shipping and Receiving Documents

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

Client Contact Information:
 Company: TestAmerica
 Address: 51 Franklin St
 City/State/Zip: Nashville, TN 37203
 Phone: 615-254-4607
 FAX: 615-254-4607

Project Name: LMC MRL
 Site/location: MRAS BUILDING-A
 PO # 117-0512110

Project Manager: Peter Blch
 Phone: 410-994-4607
 Site Contact:
 TAL Contact:

Sampled By: M Wilks of COCs

Barcode: 180325 BALTIMORE
 140-13100 Chain of Custody

Sample Identification	Sample Dates	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)					
													Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
BUILDING-A	10-18	1014	1015	24.5	4	10614	11753	✓										
BLDG-A INFLUENT	✓	1010	1011	30	4	11893	11694	✓										
BLDG-A MIDGAL	✓	1007	1008	30	4	10911	10524	✓										
BLDG-A EFFLUENT																		

Sampled by:
 Temperature (Fahrenheit)
 Interior: _____ Ambient: _____
 Start: _____ Stop: _____
 Pressure (inches of Hg)
 Interior: _____ Ambient: _____
 Start: _____ Stop: _____

Special Instructions/QC Requirements & Comments:
 * Submittal all
 Received @ ambient
 1 Box, FedEx po
 tag # 7735 1342 0891
 No Custody seal
 KLW 10/19/18

Canisters Shipped by: [Signature]
 Date/Time: 10-18/1115
 Samples Relinquished by: [Signature]
 Date/Time: 10/18/18
 Relinquished by: [Signature]
 Date/Time: 10/19/18

Canisters Received by: 3 Canisters
 Received by: 3 KR
 Received by: [Signature] 10/19/18

Lab Use Only Shipper Name: _____ Opened by: _____ Condition: _____

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?			/	<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	pH test strip lot number: _____
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____ Date: _____ Time: _____
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/	<input type="checkbox"/> If no, lab will adjust	
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> Project missing info	
20. For rad samples was sample activity info. Provided?			/		

Project #: 14002921 PM Instructions: _____

Sample Receiving Associate: *[Signature]* Date: 10/19/18

ANALYTICAL REPORT

Job Number: 140-13304-1

Job Description: LMC MRC - MRAS/BLDG-A & C

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401
Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
11/26/2018 9:01 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
11/26/2018

cc: Belssi Chang
Amy Thomson
Michael Wilks

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TestAmerica Laboratories, Inc.

TestAmerica Knoxville 5815 Middlebrook Pike, Knoxville, TN 37921
Tel (865) 291-3000 Fax (865) 584-4315 www.testamericainc.com

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Definitions/Glossary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-13304-1

Receipt

The samples were received on 11/10/2018 at 9:50 AM. The samples arrived in good condition and properly preserved.

Per client request, sample BLDG-A MIDGAC, shown on the chain of custody (COC), was canceled.

Air - GC/MS VOA - Method TO-15 LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

Although the BFB is flagged as outside control limits for TO-14 on batch 140-25249, the results are within limits for TO-15, which is required for this project.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: BLDG-C EFFLUENT

Lab Sample ID: 140-13304-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.0		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.85		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.54		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.45		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.54		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.91	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.87		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.17	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.18	J	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.2		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.43		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.5		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.0		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.7		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	1.8		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.1	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	3.3		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.95	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.88	J	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	5.7		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	2.1		2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-C MIDGAC

Lab Sample ID: 140-13304-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.2		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.82		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.72		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.44		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.52		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.49		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.49		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	10		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	3.5		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	1.7		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.6		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	2.6		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	2.4		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-C INFLUENT

Lab Sample ID: 140-13304-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.63		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1	CI	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: BLDG-C INFLUENT (Continued)

Lab Sample ID: 140-13304-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.64		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.50		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.20	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.80	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.085	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.73		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	4.7		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.80		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.25	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.43	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.0		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.8	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.5		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.86	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.57	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.7		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	25		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	3.9		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.3	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.9	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-13304-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.33	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.36	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.1		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.56		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.20	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.1		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	3.2		2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.86		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	3.0		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.8		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.31	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	8.1		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.80	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	4.4		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	11		6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	3.2		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	16		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	9.5		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.5	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-13304-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.4		2.0	0.58	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.76	J	2.0	0.38	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	14		2.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.84	J	2.0	0.68	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.7		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	15		2.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	82		2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	150		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	11		6.4	1.8	ug/m3	1		TO 15 LL	Total/NA
Chloroform	3.7	J	9.8	1.8	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	56		7.9	2.4	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	4.1	J	9.9	3.3	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	11		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	60		7.9	1.4	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	450		11	1.6	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	810		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: BLDG-C EFFLUENT

Lab Sample ID: 140-13304-1

Date Collected: 11/09/18 11:41

Matrix: Air

Date Received: 11/10/18 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.0		0.40	0.12	ppb v/v			11/13/18 17:40	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			11/13/18 17:40	1
Chlorodifluoromethane	0.85		0.40	0.075	ppb v/v			11/13/18 17:40	1
Chloroform	0.54		0.40	0.075	ppb v/v			11/13/18 17:40	1
cis-1,2-Dichloroethene	0.45		0.40	0.12	ppb v/v			11/13/18 17:40	1
Dichlorodifluoromethane	0.54		0.40	0.14	ppb v/v			11/13/18 17:40	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			11/13/18 17:40	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			11/13/18 17:40	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			11/13/18 17:40	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			11/13/18 17:40	1
Methylene Chloride	0.91	J	2.0	0.65	ppb v/v			11/13/18 17:40	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/13/18 17:40	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/13/18 17:40	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			11/13/18 17:40	1
Toluene	0.87		0.60	0.60	ppb v/v			11/13/18 17:40	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			11/13/18 17:40	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/13/18 17:40	1
1,1,1-Trichloroethane	0.17	J	0.40	0.060	ppb v/v			11/13/18 17:40	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/13/18 17:40	1
Trichloroethene	ND		0.20	0.070	ppb v/v			11/13/18 17:40	1
1,2,3-Trimethylbenzene	0.18	J	0.40	0.17	ppb v/v			11/13/18 17:40	1
1,2,4-Trimethylbenzene	1.2		0.40	0.13	ppb v/v			11/13/18 17:40	1
1,3,5-Trimethylbenzene	0.43		0.40	0.13	ppb v/v			11/13/18 17:40	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			11/13/18 17:40	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			11/13/18 17:40	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	6.5		1.3	0.37	ug/m3			11/13/18 17:40	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			11/13/18 17:40	1
Chlorodifluoromethane	3.0		1.4	0.27	ug/m3			11/13/18 17:40	1
Chloroform	2.7		2.0	0.37	ug/m3			11/13/18 17:40	1
cis-1,2-Dichloroethene	1.8		1.6	0.48	ug/m3			11/13/18 17:40	1
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3			11/13/18 17:40	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			11/13/18 17:40	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			11/13/18 17:40	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			11/13/18 17:40	1
Ethylbenzene	ND		1.7	0.59	ug/m3			11/13/18 17:40	1
Methylene Chloride	3.1	J	6.9	2.3	ug/m3			11/13/18 17:40	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/13/18 17:40	1
Naphthalene	ND		1.0	1.0	ug/m3			11/13/18 17:40	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			11/13/18 17:40	1
Toluene	3.3		2.3	2.3	ug/m3			11/13/18 17:40	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			11/13/18 17:40	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/13/18 17:40	1
1,1,1-Trichloroethane	0.95	J	2.2	0.33	ug/m3			11/13/18 17:40	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/13/18 17:40	1
Trichloroethene	ND		1.1	0.38	ug/m3			11/13/18 17:40	1
1,2,3-Trimethylbenzene	0.88	J	2.0	0.84	ug/m3			11/13/18 17:40	1
1,2,4-Trimethylbenzene	5.7		2.0	0.61	ug/m3			11/13/18 17:40	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: BLDG-C EFFLUENT

Lab Sample ID: 140-13304-1

Date Collected: 11/09/18 11:41

Matrix: Air

Date Received: 11/10/18 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	2.1		2.0	0.64	ug/m3			11/13/18 17:40	1
Vinyl chloride	ND		0.51	0.37	ug/m3			11/13/18 17:40	1
Xylenes, Total	ND		3.5	0.52	ug/m3			11/13/18 17:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		60 - 140					11/13/18 17:40	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: BLDG-C MIDGAC

Lab Sample ID: 140-13304-2

Date Collected: 11/09/18 11:44

Matrix: Air

Date Received: 11/10/18 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	3.2		0.40	0.12	ppb v/v			11/13/18 18:32	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			11/13/18 18:32	1
Chlorodifluoromethane	0.82		0.40	0.075	ppb v/v			11/13/18 18:32	1
Chloroform	0.72		0.40	0.075	ppb v/v			11/13/18 18:32	1
cis-1,2-Dichloroethene	0.44		0.40	0.12	ppb v/v			11/13/18 18:32	1
Dichlorodifluoromethane	0.52		0.40	0.14	ppb v/v			11/13/18 18:32	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			11/13/18 18:32	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			11/13/18 18:32	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			11/13/18 18:32	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			11/13/18 18:32	1
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			11/13/18 18:32	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/13/18 18:32	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/13/18 18:32	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			11/13/18 18:32	1
Toluene	ND		0.60	0.60	ppb v/v			11/13/18 18:32	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			11/13/18 18:32	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/13/18 18:32	1
1,1,1-Trichloroethane	0.49		0.40	0.060	ppb v/v			11/13/18 18:32	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/13/18 18:32	1
Trichloroethene	ND		0.20	0.070	ppb v/v			11/13/18 18:32	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			11/13/18 18:32	1
1,2,4-Trimethylbenzene	0.49		0.40	0.13	ppb v/v			11/13/18 18:32	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			11/13/18 18:32	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			11/13/18 18:32	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			11/13/18 18:32	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	10		1.3	0.37	ug/m3			11/13/18 18:32	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			11/13/18 18:32	1
Chlorodifluoromethane	2.9		1.4	0.27	ug/m3			11/13/18 18:32	1
Chloroform	3.5		2.0	0.37	ug/m3			11/13/18 18:32	1
cis-1,2-Dichloroethene	1.7		1.6	0.48	ug/m3			11/13/18 18:32	1
Dichlorodifluoromethane	2.6		2.0	0.67	ug/m3			11/13/18 18:32	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			11/13/18 18:32	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			11/13/18 18:32	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			11/13/18 18:32	1
Ethylbenzene	ND		1.7	0.59	ug/m3			11/13/18 18:32	1
Methylene Chloride	3.5	J	6.9	2.3	ug/m3			11/13/18 18:32	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/13/18 18:32	1
Naphthalene	ND		1.0	1.0	ug/m3			11/13/18 18:32	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			11/13/18 18:32	1
Toluene	ND		2.3	2.3	ug/m3			11/13/18 18:32	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			11/13/18 18:32	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/13/18 18:32	1
1,1,1-Trichloroethane	2.6		2.2	0.33	ug/m3			11/13/18 18:32	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/13/18 18:32	1
Trichloroethene	ND		1.1	0.38	ug/m3			11/13/18 18:32	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			11/13/18 18:32	1
1,2,4-Trimethylbenzene	2.4		2.0	0.61	ug/m3			11/13/18 18:32	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: BLDG-C MIDGAC

Lab Sample ID: 140-13304-2

Date Collected: 11/09/18 11:44

Matrix: Air

Date Received: 11/10/18 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			11/13/18 18:32	1
Vinyl chloride	ND		0.51	0.37	ug/m3			11/13/18 18:32	1
Xylenes, Total	ND		3.5	0.52	ug/m3			11/13/18 18:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		60 - 140					11/13/18 18:32	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: BLDG-C INFLUENT

Lab Sample ID: 140-13304-3

Date Collected: 11/09/18 11:48

Matrix: Air

Date Received: 11/10/18 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.63		0.40	0.12	ppb v/v			11/13/18 19:24	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			11/13/18 19:24	1
Chlorodifluoromethane	1.1	CI	0.40	0.075	ppb v/v			11/13/18 19:24	1
Chloroform	ND		0.40	0.075	ppb v/v			11/13/18 19:24	1
cis-1,2-Dichloroethene	0.64		0.40	0.12	ppb v/v			11/13/18 19:24	1
Dichlorodifluoromethane	0.50		0.40	0.14	ppb v/v			11/13/18 19:24	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			11/13/18 19:24	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			11/13/18 19:24	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			11/13/18 19:24	1
Ethylbenzene	0.20	J	0.40	0.14	ppb v/v			11/13/18 19:24	1
Methylene Chloride	0.80	J	2.0	0.65	ppb v/v			11/13/18 19:24	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/13/18 19:24	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/13/18 19:24	1
Tetrachloroethene	0.085	J	0.40	0.080	ppb v/v			11/13/18 19:24	1
Toluene	0.73		0.60	0.60	ppb v/v			11/13/18 19:24	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			11/13/18 19:24	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/13/18 19:24	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			11/13/18 19:24	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/13/18 19:24	1
Trichloroethene	4.7		0.20	0.070	ppb v/v			11/13/18 19:24	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			11/13/18 19:24	1
1,2,4-Trimethylbenzene	0.80		0.40	0.13	ppb v/v			11/13/18 19:24	1
1,3,5-Trimethylbenzene	0.25	J	0.40	0.13	ppb v/v			11/13/18 19:24	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			11/13/18 19:24	1
Xylenes, Total	0.43	J	0.80	0.12	ppb v/v			11/13/18 19:24	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.0		1.3	0.37	ug/m3			11/13/18 19:24	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			11/13/18 19:24	1
Chlorodifluoromethane	3.8	CI	1.4	0.27	ug/m3			11/13/18 19:24	1
Chloroform	ND		2.0	0.37	ug/m3			11/13/18 19:24	1
cis-1,2-Dichloroethene	2.5		1.6	0.48	ug/m3			11/13/18 19:24	1
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3			11/13/18 19:24	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			11/13/18 19:24	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			11/13/18 19:24	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			11/13/18 19:24	1
Ethylbenzene	0.86	J	1.7	0.59	ug/m3			11/13/18 19:24	1
Methylene Chloride	2.8	J	6.9	2.3	ug/m3			11/13/18 19:24	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/13/18 19:24	1
Naphthalene	ND		1.0	1.0	ug/m3			11/13/18 19:24	1
Tetrachloroethene	0.57	J	2.7	0.54	ug/m3			11/13/18 19:24	1
Toluene	2.7		2.3	2.3	ug/m3			11/13/18 19:24	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			11/13/18 19:24	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/13/18 19:24	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			11/13/18 19:24	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/13/18 19:24	1
Trichloroethene	25		1.1	0.38	ug/m3			11/13/18 19:24	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			11/13/18 19:24	1
1,2,4-Trimethylbenzene	3.9		2.0	0.61	ug/m3			11/13/18 19:24	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: BLDG-C INFLUENT

Lab Sample ID: 140-13304-3

Date Collected: 11/09/18 11:48

Matrix: Air

Date Received: 11/10/18 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.3	J	2.0	0.64	ug/m3			11/13/18 19:24	1
Vinyl chloride	ND		0.51	0.37	ug/m3			11/13/18 19:24	1
Xylenes, Total	1.9	J	3.5	0.52	ug/m3			11/13/18 19:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		60 - 140					11/13/18 19:24	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-13304-4

Date Collected: 11/09/18 13:37

Matrix: Air

Date Received: 11/10/18 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.33	J	0.40	0.12	ppb v/v			11/13/18 20:16	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			11/13/18 20:16	1
Chlorodifluoromethane	0.36	J	0.40	0.075	ppb v/v			11/13/18 20:16	1
Chloroform	ND		0.40	0.075	ppb v/v			11/13/18 20:16	1
cis-1,2-Dichloroethene	2.1		0.40	0.12	ppb v/v			11/13/18 20:16	1
Dichlorodifluoromethane	0.56		0.40	0.14	ppb v/v			11/13/18 20:16	1
1,1-Dichloroethane	0.20	J	0.40	0.050	ppb v/v			11/13/18 20:16	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			11/13/18 20:16	1
1,1-Dichloroethene	1.1		0.40	0.070	ppb v/v			11/13/18 20:16	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			11/13/18 20:16	1
Methylene Chloride	3.2		2.0	0.65	ppb v/v			11/13/18 20:16	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/13/18 20:16	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/13/18 20:16	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			11/13/18 20:16	1
Toluene	0.86		0.60	0.60	ppb v/v			11/13/18 20:16	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			11/13/18 20:16	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/13/18 20:16	1
1,1,1-Trichloroethane	3.0		0.40	0.060	ppb v/v			11/13/18 20:16	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/13/18 20:16	1
Trichloroethene	1.8		0.20	0.070	ppb v/v			11/13/18 20:16	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			11/13/18 20:16	1
1,2,4-Trimethylbenzene	0.31	J	0.40	0.13	ppb v/v			11/13/18 20:16	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			11/13/18 20:16	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			11/13/18 20:16	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			11/13/18 20:16	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			11/13/18 20:16	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			11/13/18 20:16	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			11/13/18 20:16	1
Chloroform	ND		2.0	0.37	ug/m3			11/13/18 20:16	1
cis-1,2-Dichloroethene	8.1		1.6	0.48	ug/m3			11/13/18 20:16	1
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3			11/13/18 20:16	1
1,1-Dichloroethane	0.80	J	1.6	0.20	ug/m3			11/13/18 20:16	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			11/13/18 20:16	1
1,1-Dichloroethene	4.4		1.6	0.28	ug/m3			11/13/18 20:16	1
Ethylbenzene	ND		1.7	0.59	ug/m3			11/13/18 20:16	1
Methylene Chloride	11		6.9	2.3	ug/m3			11/13/18 20:16	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/13/18 20:16	1
Naphthalene	ND		1.0	1.0	ug/m3			11/13/18 20:16	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			11/13/18 20:16	1
Toluene	3.2		2.3	2.3	ug/m3			11/13/18 20:16	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			11/13/18 20:16	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/13/18 20:16	1
1,1,1-Trichloroethane	16		2.2	0.33	ug/m3			11/13/18 20:16	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/13/18 20:16	1
Trichloroethene	9.5		1.1	0.38	ug/m3			11/13/18 20:16	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			11/13/18 20:16	1
1,2,4-Trimethylbenzene	1.5	J	2.0	0.61	ug/m3			11/13/18 20:16	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-13304-4

Date Collected: 11/09/18 13:37

Matrix: Air

Date Received: 11/10/18 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			11/13/18 20:16	1
Vinyl chloride	ND		0.51	0.37	ug/m3			11/13/18 20:16	1
Xylenes, Total	ND		3.5	0.52	ug/m3			11/13/18 20:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		60 - 140					11/13/18 20:16	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-13304-6

Date Collected: 11/09/18 13:45

Matrix: Air

Date Received: 11/10/18 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	3.4		2.0	0.58	ppb v/v			11/13/18 16:47	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			11/13/18 16:47	1
Chlorodifluoromethane	ND		2.0	0.38	ppb v/v			11/13/18 16:47	1
Chloroform	0.76	J	2.0	0.38	ppb v/v			11/13/18 16:47	1
cis-1,2-Dichloroethene	14		2.0	0.60	ppb v/v			11/13/18 16:47	1
Dichlorodifluoromethane	0.84	J	2.0	0.68	ppb v/v			11/13/18 16:47	1
1,1-Dichloroethane	2.7		2.0	0.25	ppb v/v			11/13/18 16:47	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			11/13/18 16:47	1
1,1-Dichloroethene	15		2.0	0.35	ppb v/v			11/13/18 16:47	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			11/13/18 16:47	1
Methylene Chloride	ND		10	3.3	ppb v/v			11/13/18 16:47	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			11/13/18 16:47	1
Naphthalene	ND		1.0	1.0	ppb v/v			11/13/18 16:47	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			11/13/18 16:47	1
Toluene	ND		3.0	3.0	ppb v/v			11/13/18 16:47	1
trans-1,2-Dichloroethene	ND		2.0	0.50	ppb v/v			11/13/18 16:47	1
1,2,4-Trichlorobenzene	ND		2.0	0.98	ppb v/v			11/13/18 16:47	1
1,1,1-Trichloroethane	82		2.0	0.30	ppb v/v			11/13/18 16:47	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			11/13/18 16:47	1
Trichloroethene	150		1.0	0.35	ppb v/v			11/13/18 16:47	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			11/13/18 16:47	1
1,2,4-Trimethylbenzene	ND		2.0	0.63	ppb v/v			11/13/18 16:47	1
1,3,5-Trimethylbenzene	ND		2.0	0.65	ppb v/v			11/13/18 16:47	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			11/13/18 16:47	1
Xylenes, Total	ND		4.0	0.60	ppb v/v			11/13/18 16:47	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	11		6.4	1.8	ug/m3			11/13/18 16:47	1
Carbon tetrachloride	ND		13	2.4	ug/m3			11/13/18 16:47	1
Chlorodifluoromethane	ND		7.1	1.3	ug/m3			11/13/18 16:47	1
Chloroform	3.7	J	9.8	1.8	ug/m3			11/13/18 16:47	1
cis-1,2-Dichloroethene	56		7.9	2.4	ug/m3			11/13/18 16:47	1
Dichlorodifluoromethane	4.1	J	9.9	3.3	ug/m3			11/13/18 16:47	1
1,1-Dichloroethane	11		8.1	1.0	ug/m3			11/13/18 16:47	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			11/13/18 16:47	1
1,1-Dichloroethene	60		7.9	1.4	ug/m3			11/13/18 16:47	1
Ethylbenzene	ND		8.7	2.9	ug/m3			11/13/18 16:47	1
Methylene Chloride	ND		35	11	ug/m3			11/13/18 16:47	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			11/13/18 16:47	1
Naphthalene	ND		5.2	5.2	ug/m3			11/13/18 16:47	1
Tetrachloroethene	ND		14	2.7	ug/m3			11/13/18 16:47	1
Toluene	ND		11	11	ug/m3			11/13/18 16:47	1
trans-1,2-Dichloroethene	ND		7.9	2.0	ug/m3			11/13/18 16:47	1
1,2,4-Trichlorobenzene	ND		15	7.2	ug/m3			11/13/18 16:47	1
1,1,1-Trichloroethane	450		11	1.6	ug/m3			11/13/18 16:47	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			11/13/18 16:47	1
Trichloroethene	810		5.4	1.9	ug/m3			11/13/18 16:47	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			11/13/18 16:47	1
1,2,4-Trimethylbenzene	ND		9.8	3.1	ug/m3			11/13/18 16:47	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-13304-6

Date Collected: 11/09/18 13:45

Matrix: Air

Date Received: 11/10/18 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		9.8	3.2	ug/m3			11/13/18 16:47	1
Vinyl chloride	ND		2.6	1.9	ug/m3			11/13/18 16:47	1
Xylenes, Total	ND		17	2.6	ug/m3			11/13/18 16:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		60 - 140					11/13/18 16:47	1

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-13304-1	BLDG-C EFFLUENT	94
140-13304-2	BLDG-C MIDGAC	94
140-13304-3	BLDG-C INFLUENT	96
140-13304-4	BLDG-A EFFLUENT	93
140-13304-6	BLDG-A INFLUENT	93
LCS 140-25249/1008	Lab Control Sample	100
MB 140-25249/10	Method Blank	93

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-25249/10
Matrix: Air
Analysis Batch: 25249

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			11/13/18 15:55	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			11/13/18 15:55	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			11/13/18 15:55	1
Chloroform	ND		0.080	0.015	ppb v/v			11/13/18 15:55	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			11/13/18 15:55	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			11/13/18 15:55	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			11/13/18 15:55	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			11/13/18 15:55	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			11/13/18 15:55	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			11/13/18 15:55	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			11/13/18 15:55	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			11/13/18 15:55	1
Naphthalene	ND		0.040	0.040	ppb v/v			11/13/18 15:55	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			11/13/18 15:55	1
Toluene	ND		0.12	0.12	ppb v/v			11/13/18 15:55	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			11/13/18 15:55	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			11/13/18 15:55	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			11/13/18 15:55	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			11/13/18 15:55	1
Trichloroethene	ND		0.040	0.014	ppb v/v			11/13/18 15:55	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			11/13/18 15:55	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			11/13/18 15:55	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			11/13/18 15:55	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			11/13/18 15:55	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			11/13/18 15:55	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			11/13/18 15:55	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			11/13/18 15:55	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			11/13/18 15:55	1
Chloroform	ND		0.39	0.073	ug/m3			11/13/18 15:55	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			11/13/18 15:55	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			11/13/18 15:55	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			11/13/18 15:55	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			11/13/18 15:55	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			11/13/18 15:55	1
Ethylbenzene	ND		0.35	0.12	ug/m3			11/13/18 15:55	1
Methylene Chloride	ND		1.4	0.45	ug/m3			11/13/18 15:55	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			11/13/18 15:55	1
Naphthalene	ND		0.21	0.21	ug/m3			11/13/18 15:55	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			11/13/18 15:55	1
Toluene	ND		0.45	0.45	ug/m3			11/13/18 15:55	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			11/13/18 15:55	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			11/13/18 15:55	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			11/13/18 15:55	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			11/13/18 15:55	1
Trichloroethene	ND		0.21	0.075	ug/m3			11/13/18 15:55	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			11/13/18 15:55	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-25249/10
Matrix: Air
Analysis Batch: 25249

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			11/13/18 15:55	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			11/13/18 15:55	1
Vinyl chloride	ND		0.10	0.074	ug/m3			11/13/18 15:55	1
Xylenes, Total	ND		0.69	0.10	ug/m3			11/13/18 15:55	1
Surrogate	MB	MB	Limits			D	Prepared	Analyzed	Dil Fac
%Recovery	Qualifier								
4-Bromofluorobenzene (Surr)	93		60 - 140					11/13/18 15:55	1

Lab Sample ID: LCS 140-25249/1008
Matrix: Air
Analysis Batch: 25249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.03		ppb v/v		101	70 - 130
Chlorodifluoromethane	2.00	1.77		ppb v/v		88	60 - 140
Chloroform	2.00	1.79		ppb v/v		90	70 - 130
cis-1,2-Dichloroethene	2.00	1.84		ppb v/v		92	70 - 130
Dichlorodifluoromethane	2.00	2.53		ppb v/v		127	60 - 140
1,1-Dichloroethane	2.00	1.73		ppb v/v		86	70 - 130
1,2-Dichloroethane	2.00	1.80		ppb v/v		90	70 - 130
1,1-Dichloroethene	2.00	1.83		ppb v/v		92	70 - 130
Ethylbenzene	2.00	1.93		ppb v/v		96	70 - 130
Methylene Chloride	2.00	1.62		ppb v/v		81	70 - 130
Methyl tert-butyl ether	2.00	1.77		ppb v/v		89	60 - 140
Naphthalene	2.00	2.03		ppb v/v		101	60 - 140
Tetrachloroethene	2.00	1.96		ppb v/v		98	70 - 130
Toluene	2.00	1.88		ppb v/v		94	70 - 130
trans-1,2-Dichloroethene	2.00	1.79		ppb v/v		90	70 - 130
1,2,4-Trichlorobenzene	2.00	2.15		ppb v/v		108	60 - 140
1,1,1-Trichloroethane	2.00	1.80		ppb v/v		90	70 - 130
1,1,2-Trichloroethane	2.00	1.87		ppb v/v		94	70 - 130
Trichloroethene	2.00	1.96		ppb v/v		98	70 - 130
1,2,3-Trimethylbenzene	2.00	1.56		ppb v/v		78	70 - 130
1,2,4-Trimethylbenzene	2.00	2.09		ppb v/v		104	70 - 130
1,3,5-Trimethylbenzene	2.00	2.35		ppb v/v		118	70 - 130
Vinyl chloride	2.00	1.74		ppb v/v		87	70 - 130
Xylenes, Total	6.00	5.97		ppb v/v		100	70 - 130
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	5.88		ug/m3		92	70 - 130
Carbon tetrachloride	13	12.7		ug/m3		101	70 - 130
Chlorodifluoromethane	7.1	6.26		ug/m3		88	60 - 140
Chloroform	9.8	8.76		ug/m3		90	70 - 130
cis-1,2-Dichloroethene	7.9	7.28		ug/m3		92	70 - 130
Dichlorodifluoromethane	9.9	12.5		ug/m3		127	60 - 140
1,1-Dichloroethane	8.1	7.00		ug/m3		86	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-25249/1008
Matrix: Air
Analysis Batch: 25249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
1,2-Dichloroethane	8.1	7.30		ug/m3		90	70 - 130
1,1-Dichloroethene	7.9	7.27		ug/m3		92	70 - 130
Ethylbenzene	8.7	8.37		ug/m3		96	70 - 130
Methylene Chloride	6.9	5.62		ug/m3		81	70 - 130
Methyl tert-butyl ether	7.2	6.38		ug/m3		89	60 - 140
Naphthalene	10	10.6		ug/m3		101	60 - 140
Tetrachloroethene	14	13.3		ug/m3		98	70 - 130
Toluene	7.5	7.07		ug/m3		94	70 - 130
trans-1,2-Dichloroethene	7.9	7.11		ug/m3		90	70 - 130
1,2,4-Trichlorobenzene	15	16.0		ug/m3		108	60 - 140
1,1,1-Trichloroethane	11	9.82		ug/m3		90	70 - 130
1,1,2-Trichloroethane	11	10.2		ug/m3		94	70 - 130
Trichloroethene	11	10.6		ug/m3		98	70 - 130
1,2,3-Trimethylbenzene	9.8	7.66		ug/m3		78	70 - 130
1,2,4-Trimethylbenzene	9.8	10.3		ug/m3		104	70 - 130
1,3,5-Trimethylbenzene	9.8	11.6		ug/m3		118	70 - 130
Vinyl chloride	5.1	4.45		ug/m3		87	70 - 130
Xylenes, Total	26	25.9		ug/m3		100	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	100		60 - 140

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Air - GC/MS VOA

Analysis Batch: 25249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-13304-1	BLDG-C EFFLUENT	Total/NA	Air	TO 15 LL	
140-13304-2	BLDG-C MIDGAC	Total/NA	Air	TO 15 LL	
140-13304-3	BLDG-C INFLUENT	Total/NA	Air	TO 15 LL	
140-13304-4	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
140-13304-6	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
MB 140-25249/10	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-25249/1008	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: BLDG-C EFFLUENT

Date Collected: 11/09/18 11:41

Date Received: 11/10/18 09:50

Lab Sample ID: 140-13304-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	25249	11/13/18 17:40	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-C MIDGAC

Date Collected: 11/09/18 11:44

Date Received: 11/10/18 09:50

Lab Sample ID: 140-13304-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	25249	11/13/18 18:32	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-C INFLUENT

Date Collected: 11/09/18 11:48

Date Received: 11/10/18 09:50

Lab Sample ID: 140-13304-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	25249	11/13/18 19:24	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-A EFFLUENT

Date Collected: 11/09/18 13:37

Date Received: 11/10/18 09:50

Lab Sample ID: 140-13304-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	25249	11/13/18 20:16	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-A INFLUENT

Date Collected: 11/09/18 13:45

Date Received: 11/10/18 09:50

Lab Sample ID: 140-13304-6

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	25249	11/13/18 16:47	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-25249/10

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	25249	11/13/18 15:55	S1K	TAL KNX
Instrument ID: MR										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-25249/1008

Date Collected: N/A

Matrix: Air

Date Received: N/A

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dil Factor</u>	<u>Initial Amount</u>	<u>Final Amount</u>	<u>Batch Number</u>	<u>Prepared or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	25249	11/13/18 12:47	S1K	TAL KNX
Instrument ID: MR										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/BLDG-A & C

TestAmerica Job ID: 140-13304-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-13304-1	BLDG-C EFFLUENT	Air	11/09/18 11:41	11/10/18 09:50
140-13304-2	BLDG-C MIDGAC	Air	11/09/18 11:44	11/10/18 09:50
140-13304-3	BLDG-C INFLUENT	Air	11/09/18 11:48	11/10/18 09:50
140-13304-4	BLDG-A EFFLUENT	Air	11/09/18 13:37	11/10/18 09:50
140-13304-6	BLDG-A INFLUENT	Air	11/09/18 13:45	11/10/18 09:50

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Matrix: Air Level: Low
 GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-C EFFLUENT	140-13304-1	94
BLDG-C MIDGAC	140-13304-2	94
BLDG-C INFLUENT	140-13304-3	96
BLDG-A EFFLUENT	140-13304-4	93
BLDG-A INFLUENT	140-13304-6	93
	MB 140-25249/10	93
	LCS 140-25249/1008	100

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: RCCVK13C-LCS.d
 Lab ID: LCS 140-25249/1008 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.84	92	70-130	
Carbon tetrachloride	2.00	2.03	101	70-130	
Chlorodifluoromethane	2.00	1.77	88	60-140	
Chloroform	2.00	1.79	90	70-130	
cis-1,2-Dichloroethene	2.00	1.84	92	70-130	
Dichlorodifluoromethane	2.00	2.53	127	60-140	
1,1-Dichloroethane	2.00	1.73	86	70-130	
1,2-Dichloroethane	2.00	1.80	90	70-130	
1,1-Dichloroethene	2.00	1.83	92	70-130	
Ethylbenzene	2.00	1.93	96	70-130	
Methylene Chloride	2.00	1.62	81	70-130	
Methyl tert-butyl ether	2.00	1.77	89	60-140	
Naphthalene	2.00	2.03	101	60-140	
Tetrachloroethene	2.00	1.96	98	70-130	
Toluene	2.00	1.88	94	70-130	
trans-1,2-Dichloroethene	2.00	1.79	90	70-130	
1,2,4-Trichlorobenzene	2.00	2.15	108	60-140	
1,1,1-Trichloroethane	2.00	1.80	90	70-130	
1,1,2-Trichloroethane	2.00	1.87	94	70-130	
Trichloroethene	2.00	1.96	98	70-130	
1,2,3-Trimethylbenzene	2.00	1.56	78	70-130	
1,2,4-Trimethylbenzene	2.00	2.09	104	70-130	
1,3,5-Trimethylbenzene	2.00	2.35	118	70-130	
Vinyl chloride	2.00	1.74	87	70-130	
Xylenes, Total	6.00	5.97	100	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Lab File ID: R500BK13.D Lab Sample ID: MB 140-25249/10
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MR Date Analyzed: 11/13/2018 15:55
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-25249/1008	RCCVK13C-LC S.d	11/13/2018 12:47
BLDG-A INFLUENT	140-13304-6	RK13P101.D	11/13/2018 16:47
BLDG-C EFFLUENT	140-13304-1	RK13P102.D	11/13/2018 17:40
BLDG-C MIDGAC	140-13304-2	RK13P103.D	11/13/2018 18:32
BLDG-C INFLUENT	140-13304-3	RK13P104.D	11/13/2018 19:24
BLDG-A EFFLUENT	140-13304-4	RK13P105.D	11/13/2018 20:16

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Lab File ID: RFBFXK02.D BFB Injection Date: 11/02/2018
 Instrument ID: MR BFB Injection Time: 17:03
 Analysis Batch No.: 25052

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.3	
75	30.0 - 60.0 % of mass 95	53.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.3	(0.5) 1
174	50.0 - 120.00 % of mass 95	65.7	
175	5.0 - 9.0 % of mass 174	4.6	(7.0) 1
176	95.0 - 101.0 % of mass 174	63.2	(96.1) 1
177	5.0 - 9.0 % of mass 176	4.0	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-25052/3	RK02IC09.D	11/02/2018	18:28
	IC 140-25052/5	RK02IC10.D	11/02/2018	20:08
	IC 140-25052/8	RK02IC01.D	11/02/2018	22:37
	IC 140-25052/9	RK02IC02.D	11/02/2018	23:26
	IC 140-25052/10	RK02IC03.D	11/03/2018	00:16
	IC 140-25052/11	RK02IC04.D	11/03/2018	01:06
	IC 140-25052/12	RK02IC05.D	11/03/2018	01:56
	IC 140-25052/13	RK02IC06.D	11/03/2018	02:45
	ICIS 140-25052/14	RK02IC07.D	11/03/2018	03:35
	IC 140-25052/15	RK02IC08.D	11/03/2018	04:25
	ICV 140-25052/18	RK02LCS.D	11/03/2018	06:57

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Lab File ID: RFBK13C.D BFB Injection Date: 11/13/2018
 Instrument ID: MR BFB Injection Time: 12:16
 Analysis Batch No.: 25249

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.4	
75	30.0 - 60.0 % of mass 95	56.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.3	(0.5) 1
174	50.0 - 120.00 % of mass 95	69.0	
175	5.0 - 9.0 % of mass 174	4.8	(7.0) 1
176	95.0 - 101.0 % of mass 174	65.4	(94.8) 1 *
177	5.0 - 9.0 % of mass 176	4.2	(6.3) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-25249/8	RCCVK13C.D	11/13/2018	12:47
	LCS 140-25249/1008	RCCVK13C-LCS .d	11/13/2018	12:47
	MB 140-25249/10	R500BK13.D	11/13/2018	15:55
BLDG-A INFLUENT	140-13304-6	RK13P101.D	11/13/2018	16:47
BLDG-C EFFLUENT	140-13304-1	RK13P102.D	11/13/2018	17:40
BLDG-C MIDGAC	140-13304-2	RK13P103.D	11/13/2018	18:32
BLDG-C INFLUENT	140-13304-3	RK13P104.D	11/13/2018	19:24
BLDG-A EFFLUENT	140-13304-4	RK13P105.D	11/13/2018	20:16

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Sample No.: ICIS 140-25052/14 Date Analyzed: 11/03/2018 03:35
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RK02IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1735

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	229973	7.41	1508086	9.51	1220448	14.57
UPPER LIMIT	321962	7.74	2111320	9.84	1708627	14.90
LOWER LIMIT	137984	7.08	904852	9.18	732269	14.24
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-25052/18	238199	7.41	1551901	9.50	1275356	14.56

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Sample No.: CCVIS 140-25249/8 Date Analyzed: 11/13/2018 12:47
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RCCVK13C.D Heated Purge: (Y/N) N
 Calibration ID: 1735

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	189474	7.40	1221114	9.49	1025453	14.56	
UPPER LIMIT	265264	7.73	1709560	9.82	1435634	14.89	
LOWER LIMIT	113684	7.07	732668	9.16	615272	14.23	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-25249/1008	189474	7.40	1221114	9.49	1025453	14.56	
MB 140-25249/10	187323	7.39	1215687	9.49	1008512	14.56	
140-13304-6	BLDG-A INFLUENT	196520	7.39	1284204	9.49	1036382	14.56
140-13304-1	BLDG-C EFFLUENT	198825	7.41	1280525	9.49	1056030	14.56
140-13304-2	BLDG-C MIDGAC	210324	7.40	1348648	9.49	1108442	14.56
140-13304-3	BLDG-C INFLUENT	214025	7.40	1382326	9.49	1124462	14.56
140-13304-4	BLDG-A EFFLUENT	212532	7.40	1377132	9.49	1111150	14.56

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Client Sample ID: BLDG-C EFFLUENT Lab Sample ID: 140-13304-1
 Matrix: Air Lab File ID: RK13P102.D
 Analysis Method: TO 15 LL Date Collected: 11/09/2018 11:41
 Sample wt/vol: 100(mL) Date Analyzed: 11/13/2018 17:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25249 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.0		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.85		0.40	0.075
67-66-3	Chloroform	119.38	0.54		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.45		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.91	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.87		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.17	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.18	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.2		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.43		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Client Sample ID: BLDG-C EFFLUENT Lab Sample ID: 140-13304-1
 Matrix: Air Lab File ID: RK13P102.D
 Analysis Method: TO 15 LL Date Collected: 11/09/2018 11:41
 Sample wt/vol: 100(mL) Date Analyzed: 11/13/2018 17:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25249 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	6.5		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.0		1.4	0.27
67-66-3	Chloroform	119.38	2.7		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.8		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.95	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	0.88	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	5.7		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	2.1		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D
 Lims ID: 140-13304-A-1
 Client ID: BLDG-C EFFLUENT
 Sample Type: Client
 Inject. Date: 13-Nov-2018 17:40:30 ALS Bottle#: 2 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-012
 Misc. Info.: 140-13304-a-1
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 16:56:28 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits Date: 14-Nov-2018 11:04:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.395	0.011	97	198825	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.493	0.000	95	1280525	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.557	-0.001	90	1056030	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.282	0.000	83	748153	3.77	
6 Chlorodifluoromethane	51	3.416	3.416	0.011	33	36036	0.1693	M
8 Dichlorodifluoromethane	85	3.459	3.453	0.011	99	17021	0.1074	
31 Methylene Chloride	84	5.309	5.284	0.033	99	17581	0.1812	
41 cis-1,2-Dichloroethene	96	7.137	7.131	0.017	95	8543	0.0905	
43 Chloroform	83	7.439	7.444	0.006	95	22014	0.1089	
45 1,1,1-Trichloroethane	97	8.371	8.373	0.010	96	6608	0.0347	
47 Benzene	78	8.921	8.926	-0.001	98	116885	0.4064	
65 Toluene	91	12.470	12.475	-0.005	93	55660	0.1745	
89 1,3,5-Trimethylbenzene	120	17.112	17.118	-0.006	91	15253	0.0857	
93 1,2,4-Trimethylbenzene	105	17.603	17.603	0.000	98	94472	0.2338	
99 1,2,3-Trimethylbenzene	105	18.132	18.126	0.006	98	14938	0.0357	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D

Injection Date: 13-Nov-2018 17:40:30

Instrument ID: MR

Operator ID:

Lims ID: 140-13304-A-1

Lab Sample ID: 140-13304-1

Worklist Smp#: 12

Client ID: BLDG-C EFFLUENT

Purge Vol: 500.000 mL

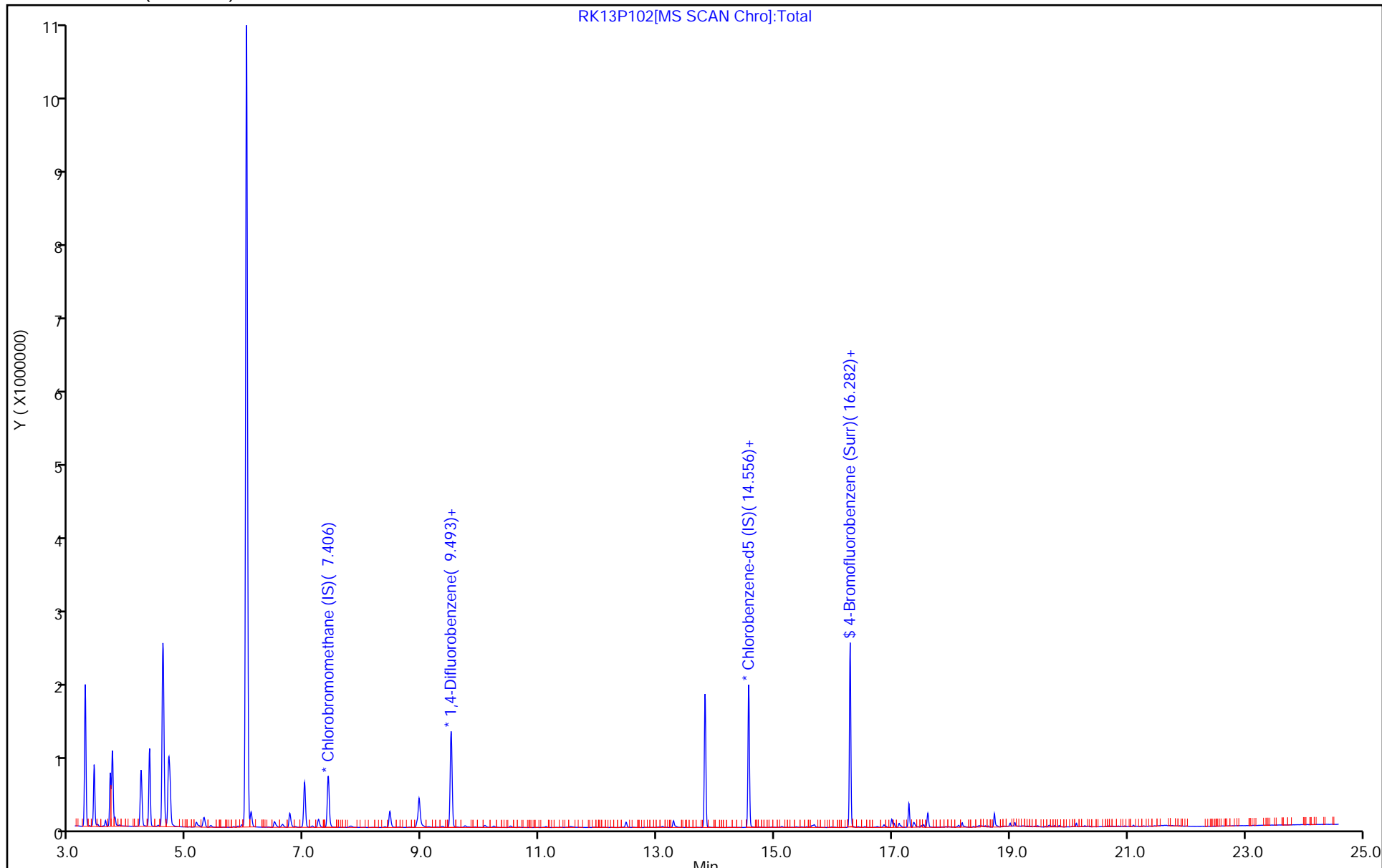
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D
 Lims ID: 140-13304-A-1
 Client ID: BLDG-C EFFLUENT
 Sample Type: Client
 Inject. Date: 13-Nov-2018 17:40:30 ALS Bottle#: 2 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-012
 Misc. Info.: 140-13304-a-1
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 16:56:28 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits Date: 14-Nov-2018 11:04:12

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.77	94.34

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D

Injection Date: 13-Nov-2018 17:40:30

Instrument ID: MR

Lims ID: 140-13304-A-1

Lab Sample ID: 140-13304-1

Client ID: BLDG-C EFFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

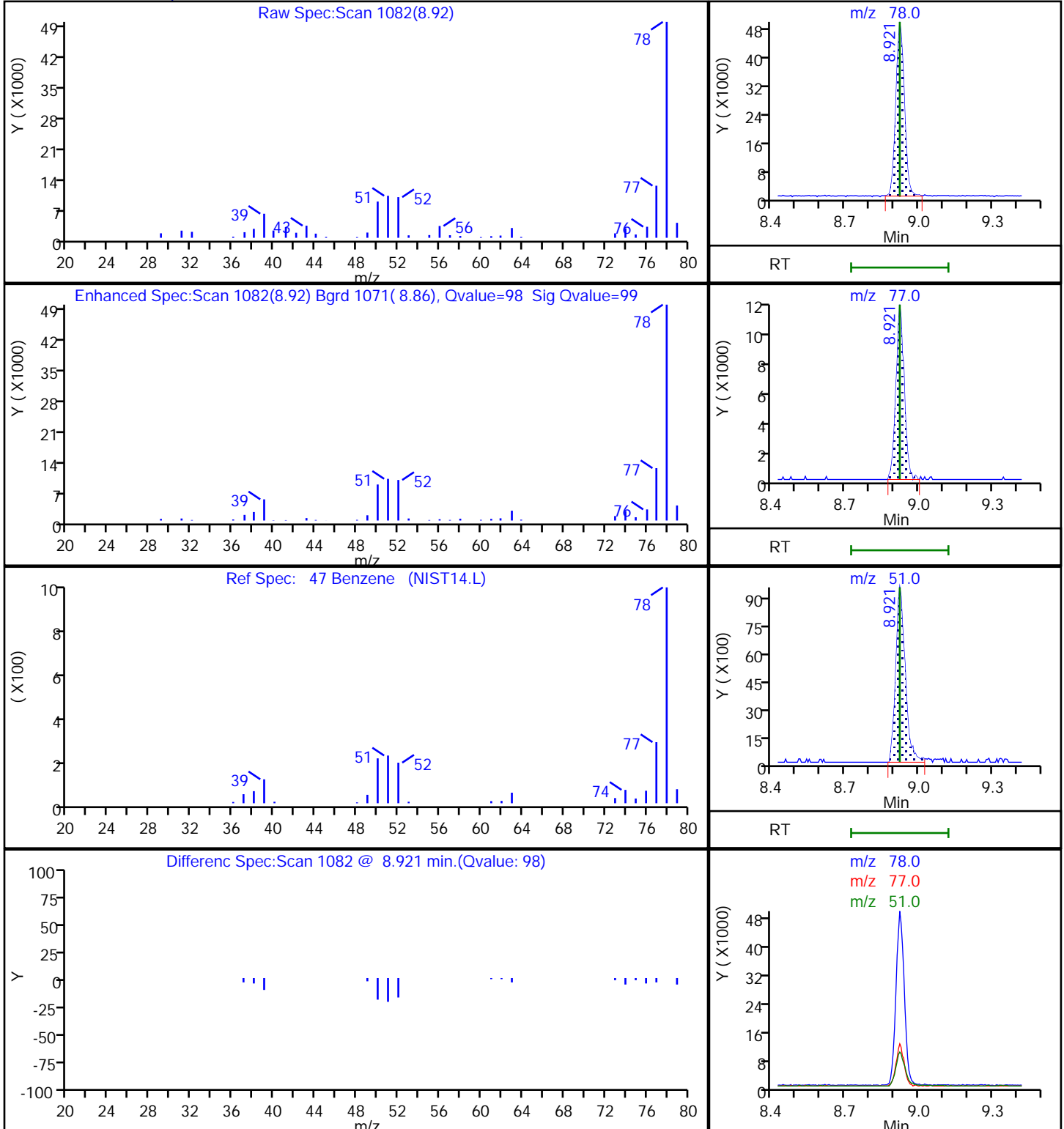
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D

Injection Date: 13-Nov-2018 17:40:30

Instrument ID: MR

Lims ID: 140-13304-A-1

Lab Sample ID: 140-13304-1

Client ID: BLDG-C EFFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

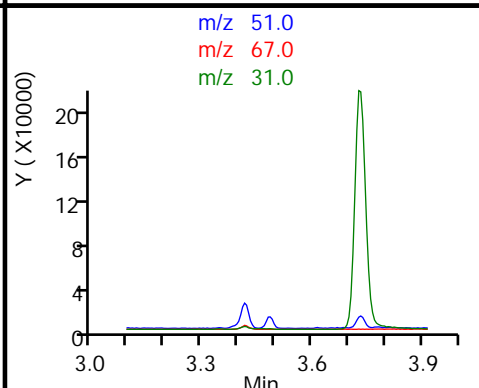
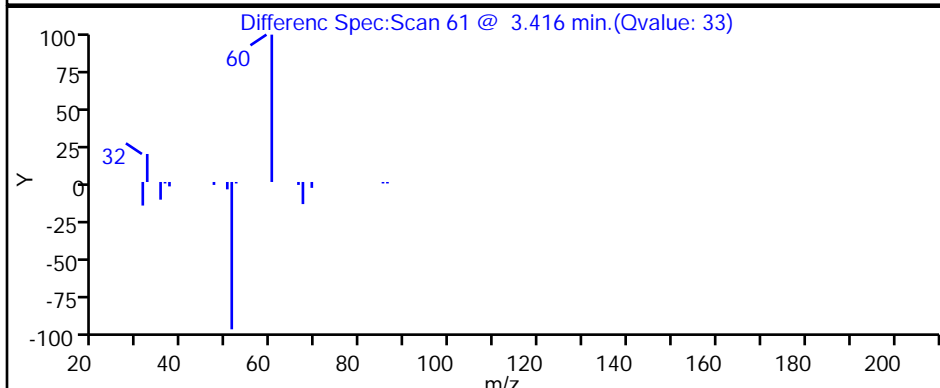
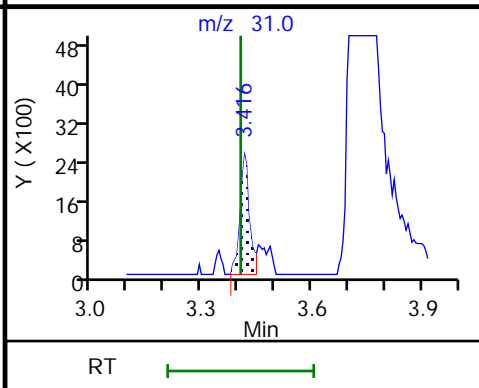
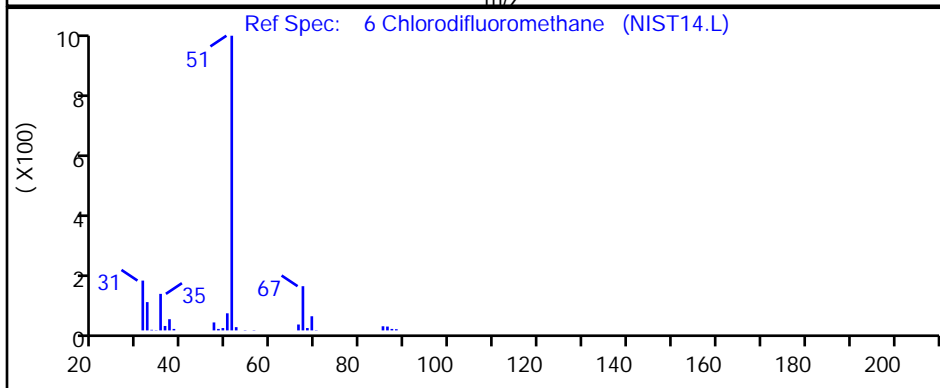
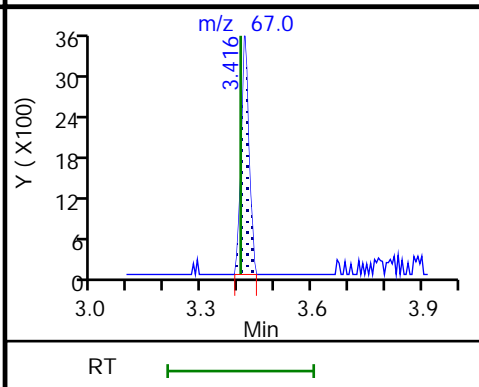
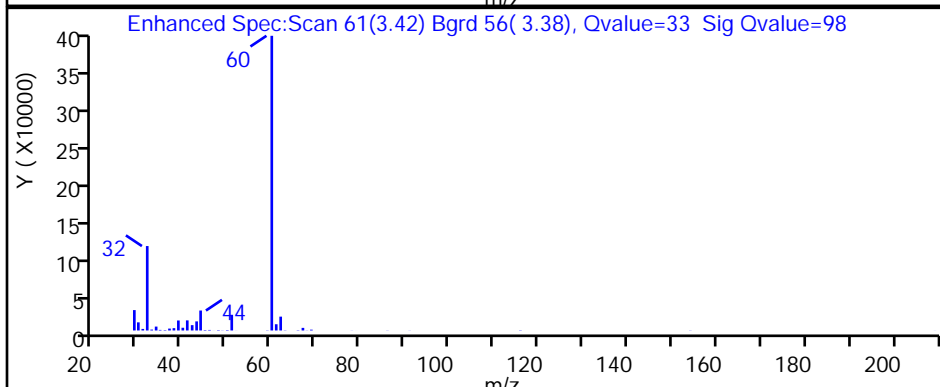
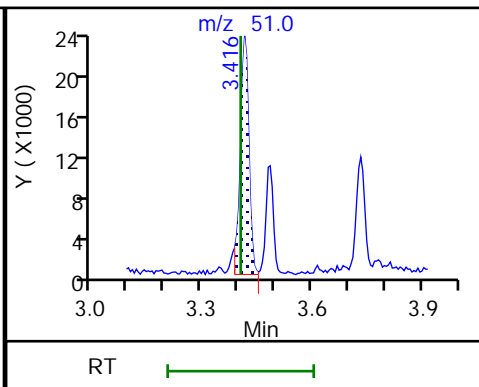
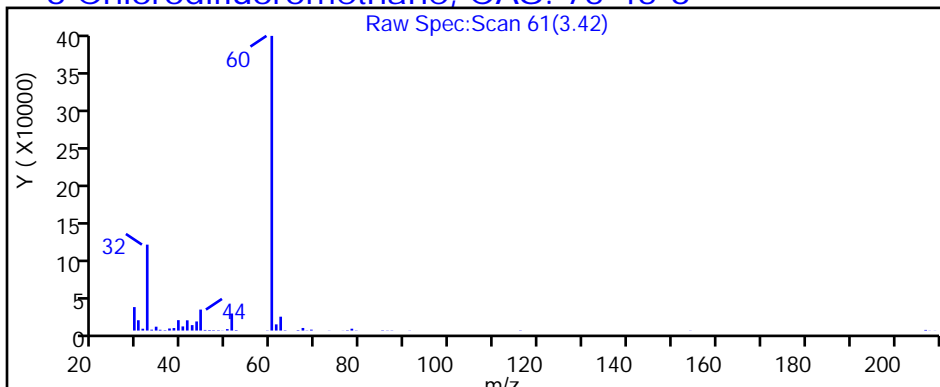
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D

Injection Date: 13-Nov-2018 17:40:30

Instrument ID: MR

Lims ID: 140-13304-A-1

Lab Sample ID: 140-13304-1

Client ID: BLDG-C EFFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

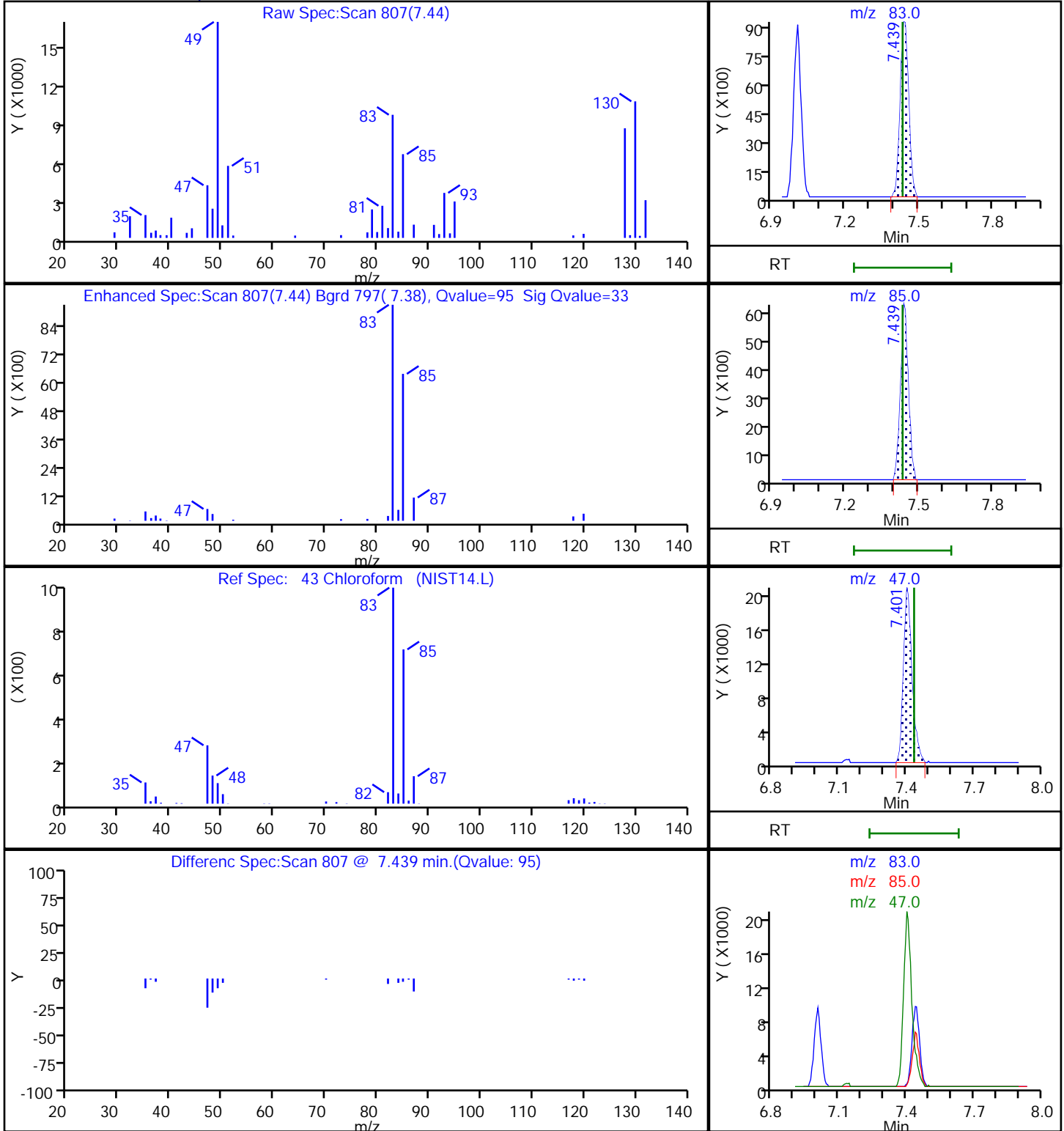
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D

Injection Date: 13-Nov-2018 17:40:30

Instrument ID: MR

Lims ID: 140-13304-A-1

Lab Sample ID: 140-13304-1

Client ID: BLDG-C EFFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

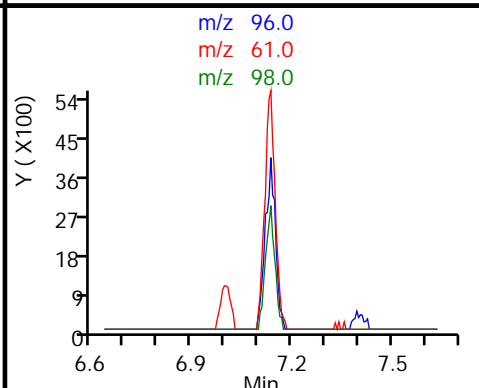
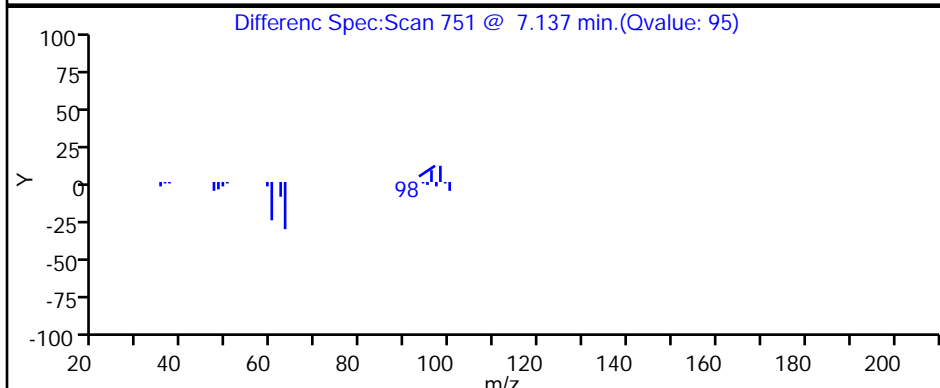
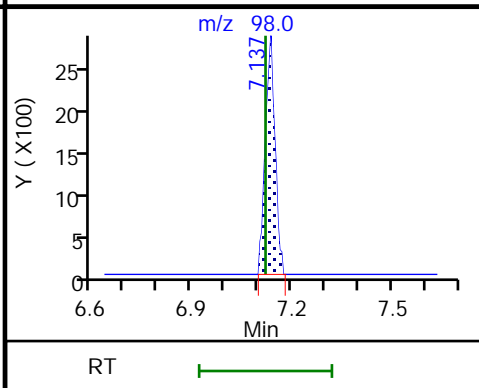
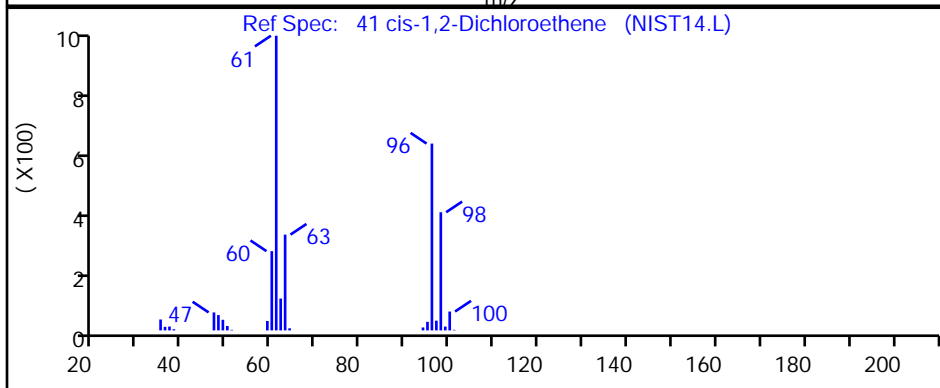
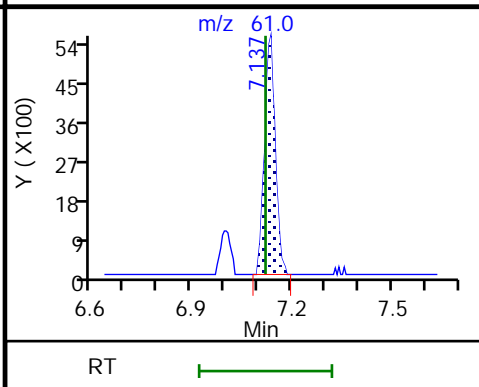
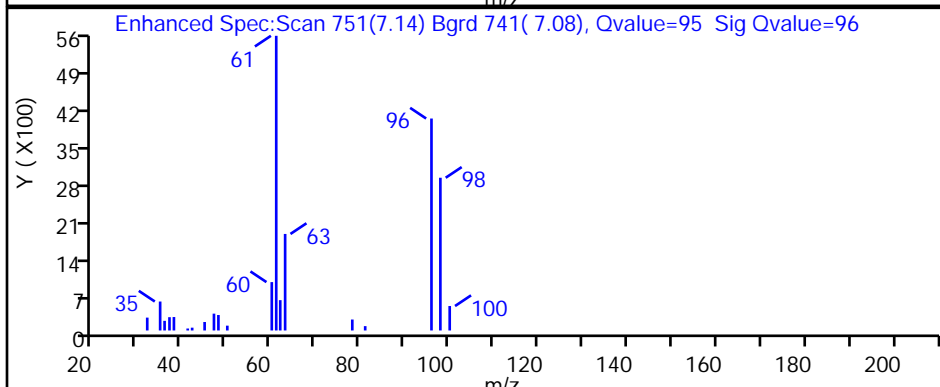
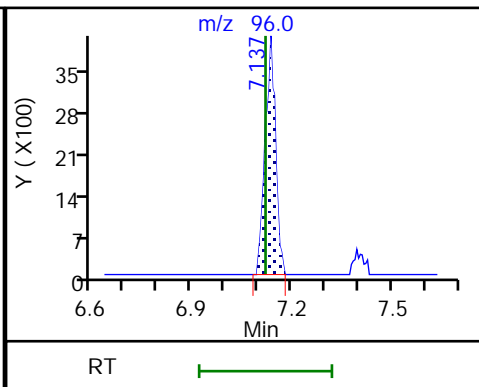
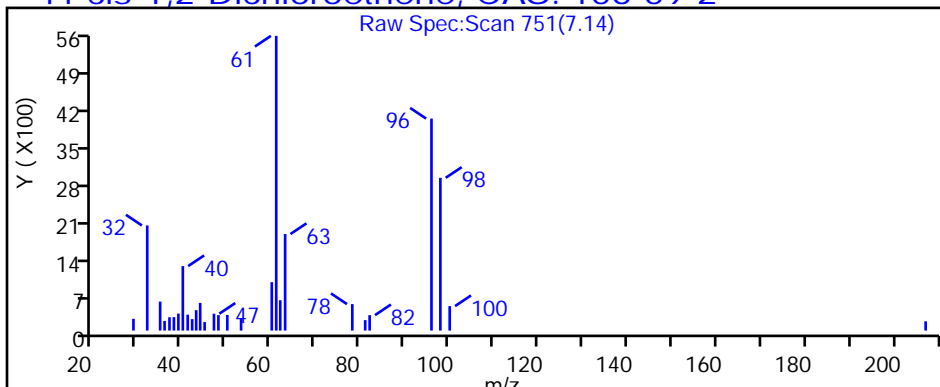
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D

Injection Date: 13-Nov-2018 17:40:30

Instrument ID: MR

Lims ID: 140-13304-A-1

Lab Sample ID: 140-13304-1

Client ID: BLDG-C EFFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

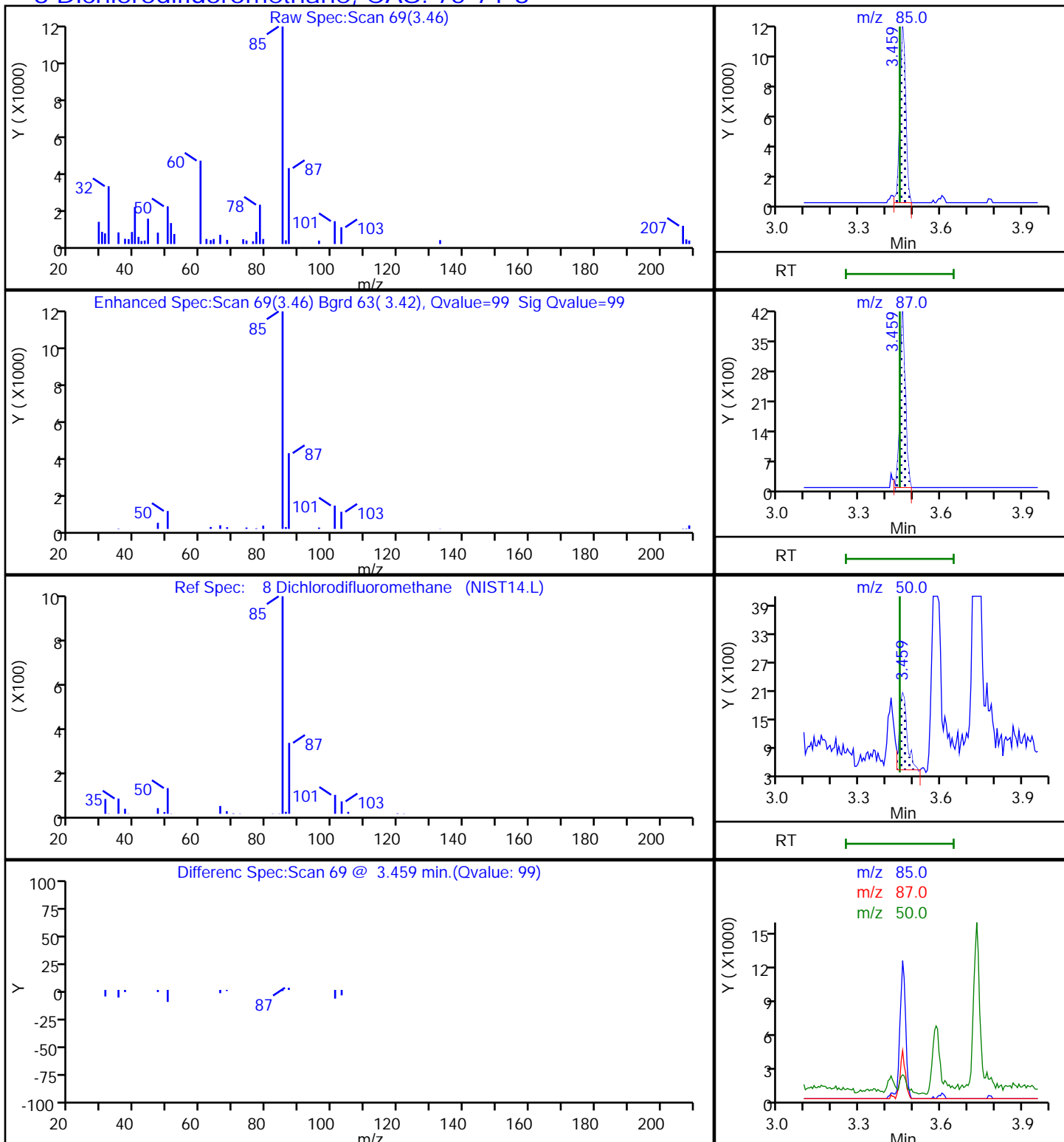
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D

Injection Date: 13-Nov-2018 17:40:30

Instrument ID: MR

Lims ID: 140-13304-A-1

Lab Sample ID: 140-13304-1

Client ID: BLDG-C EFFLUENT

Operator ID:

ALS Bottle#: 2 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

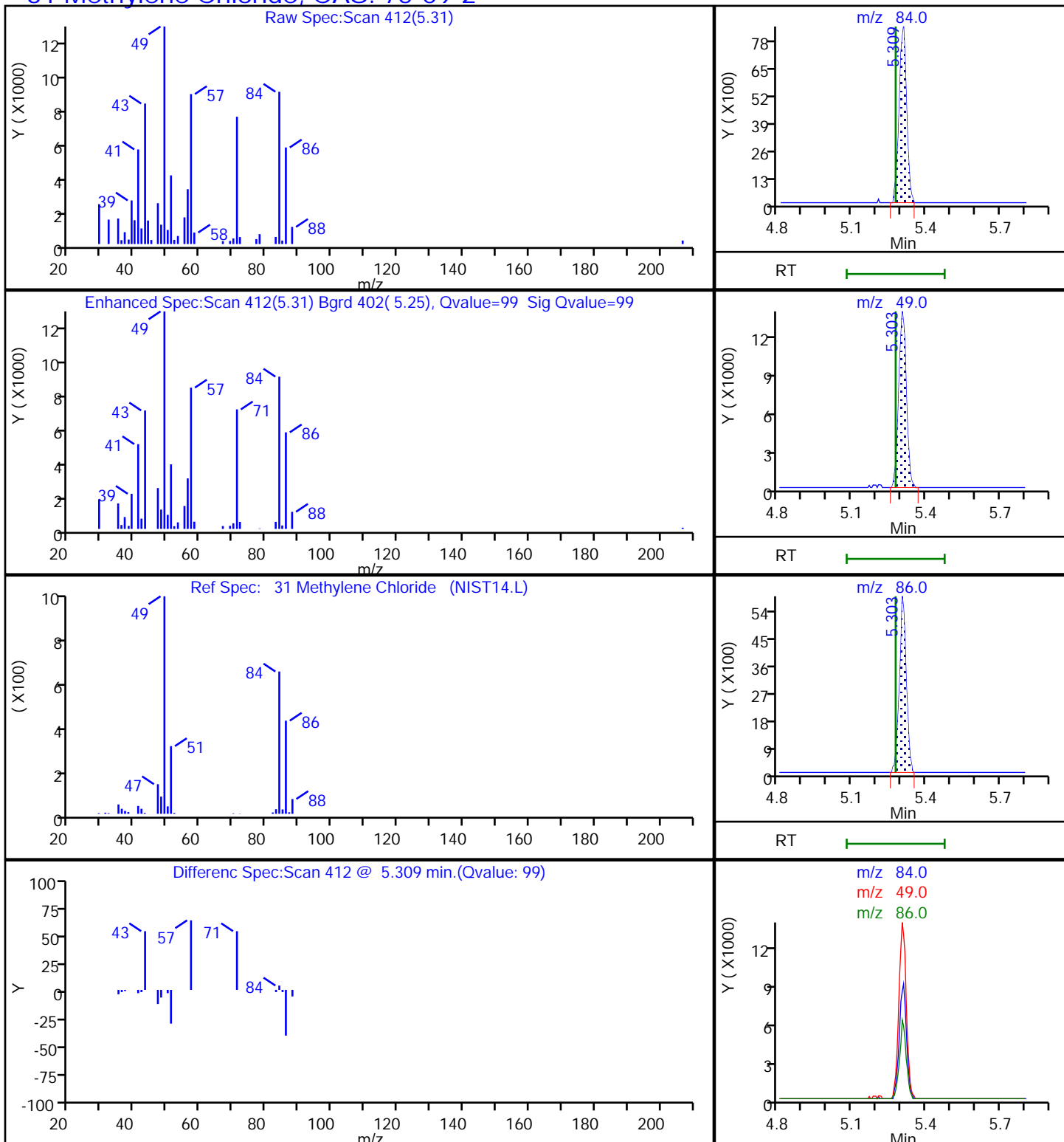
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D

Injection Date: 13-Nov-2018 17:40:30

Instrument ID: MR

Lims ID: 140-13304-A-1

Lab Sample ID: 140-13304-1

Client ID: BLDG-C EFFLUENT

Operator ID:

ALS Bottle#: 2 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

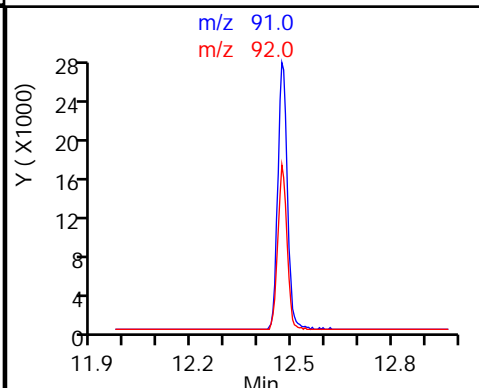
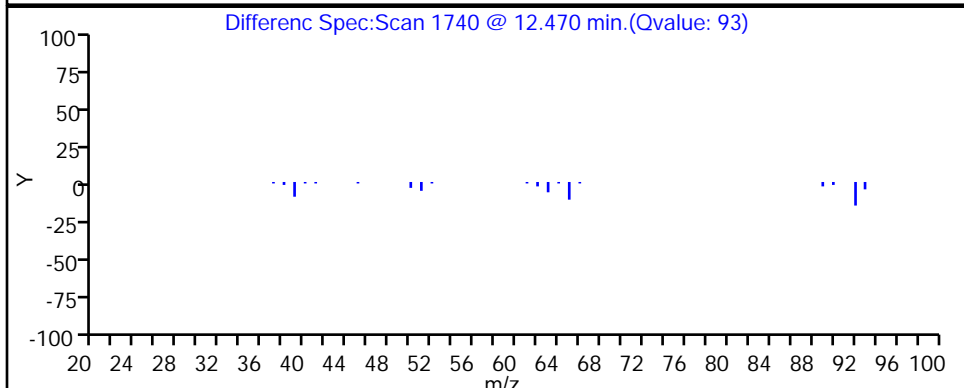
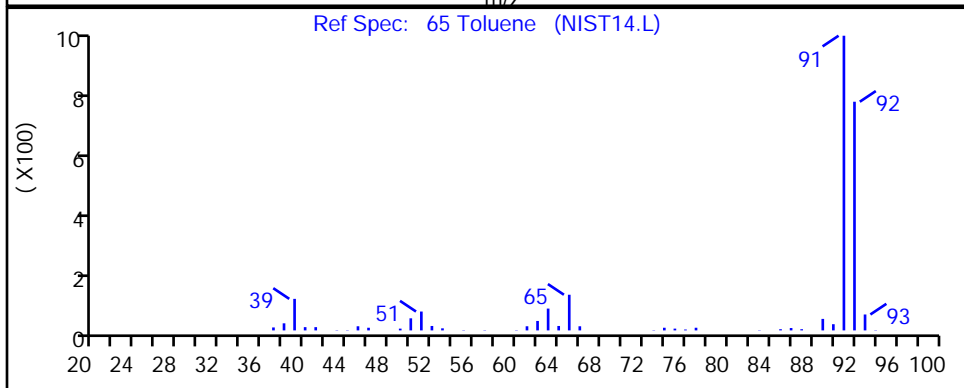
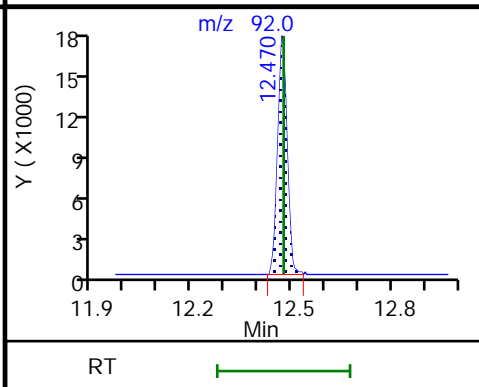
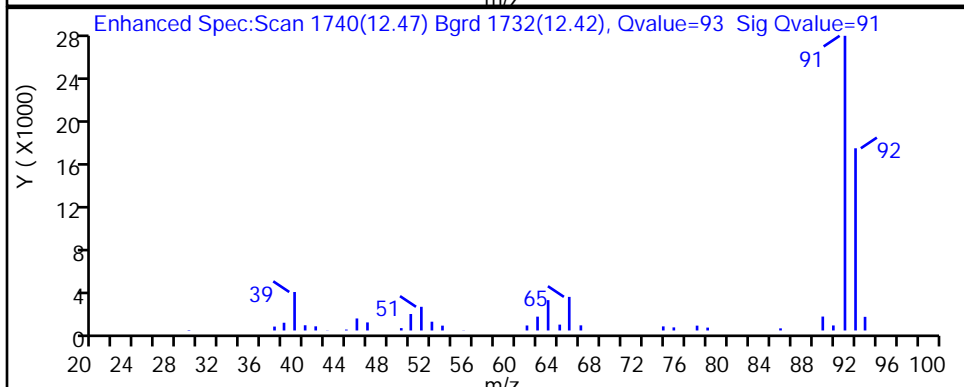
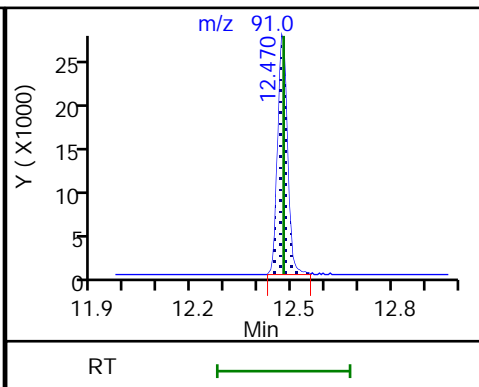
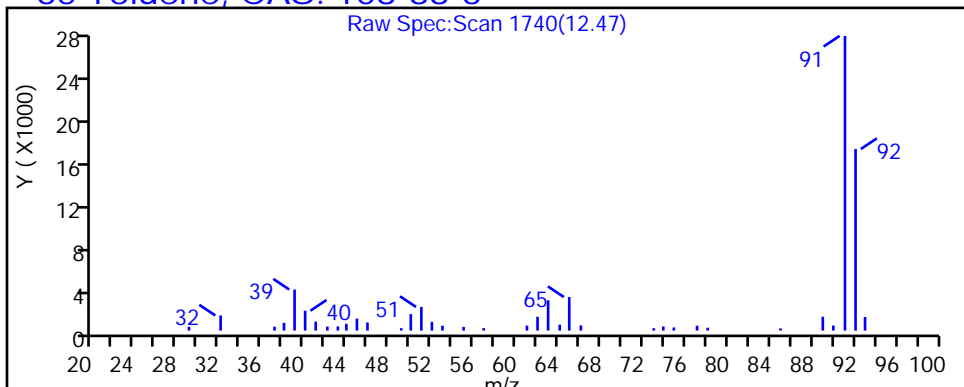
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D

Injection Date: 13-Nov-2018 17:40:30

Instrument ID: MR

Lims ID: 140-13304-A-1

Lab Sample ID: 140-13304-1

Client ID: BLDG-C EFFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

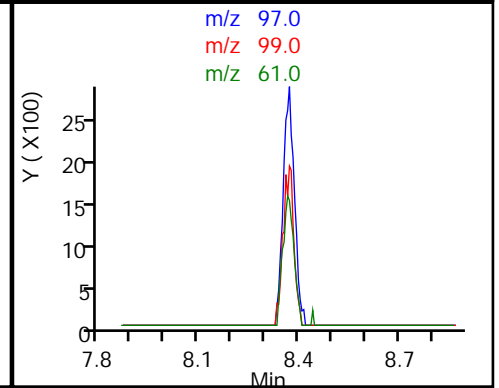
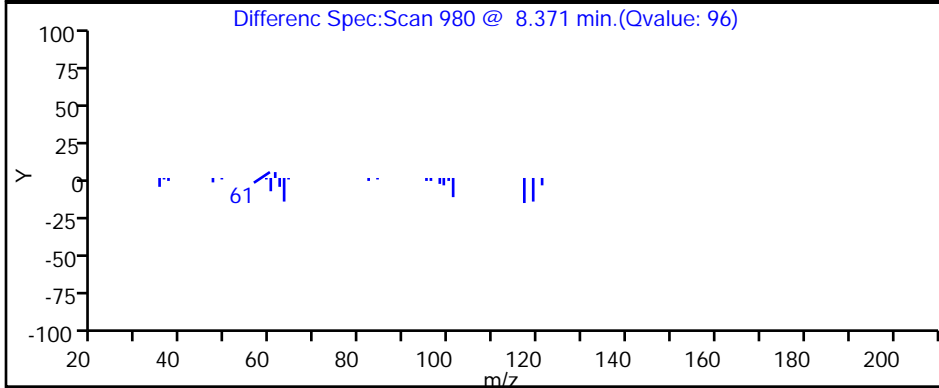
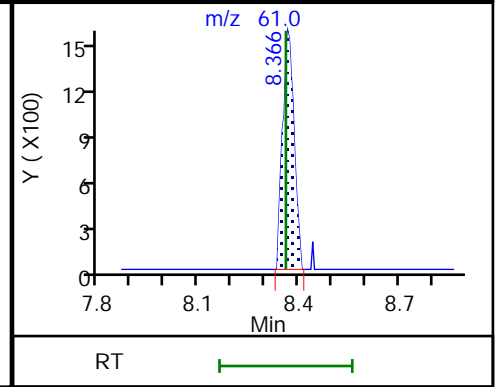
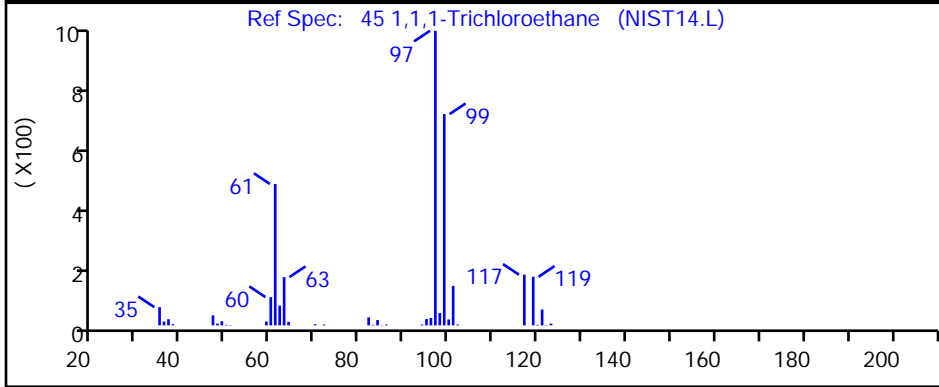
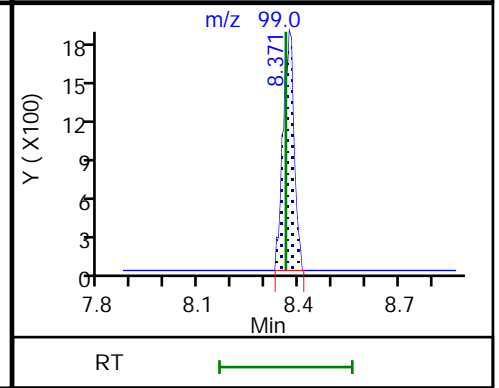
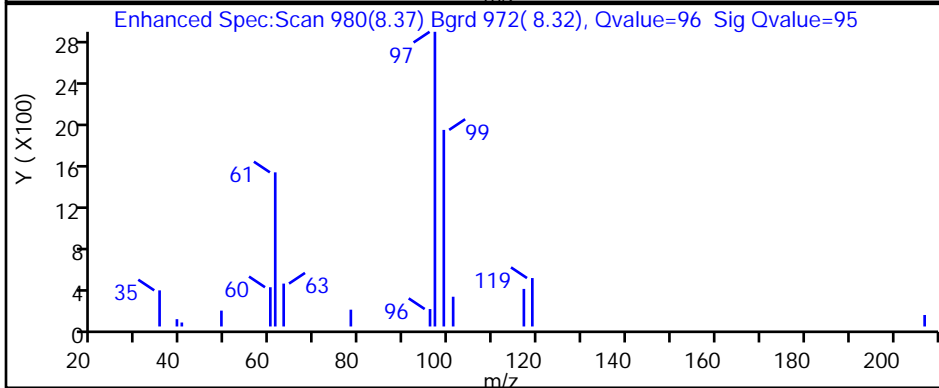
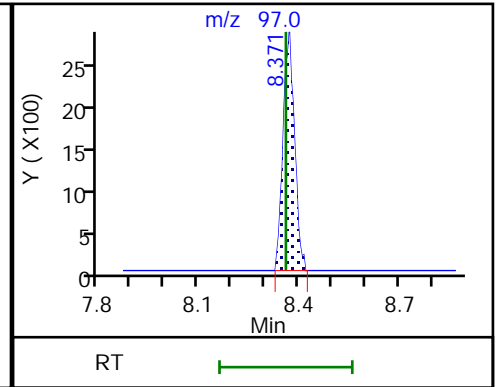
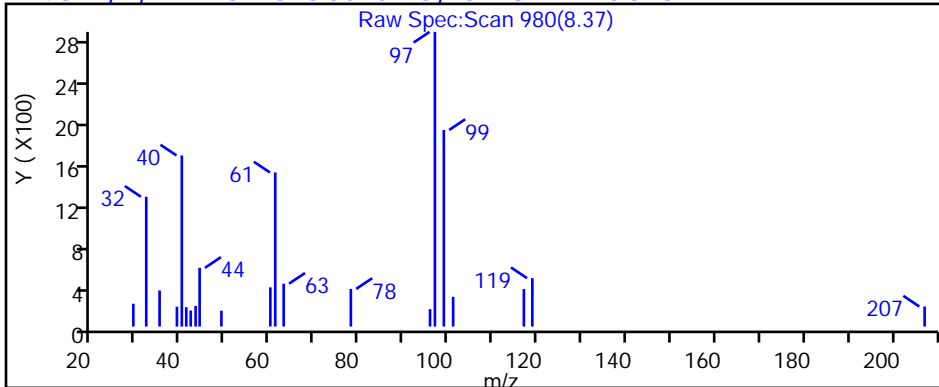
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D

Injection Date: 13-Nov-2018 17:40:30

Instrument ID: MR

Lims ID: 140-13304-A-1

Lab Sample ID: 140-13304-1

Client ID: BLDG-C EFFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

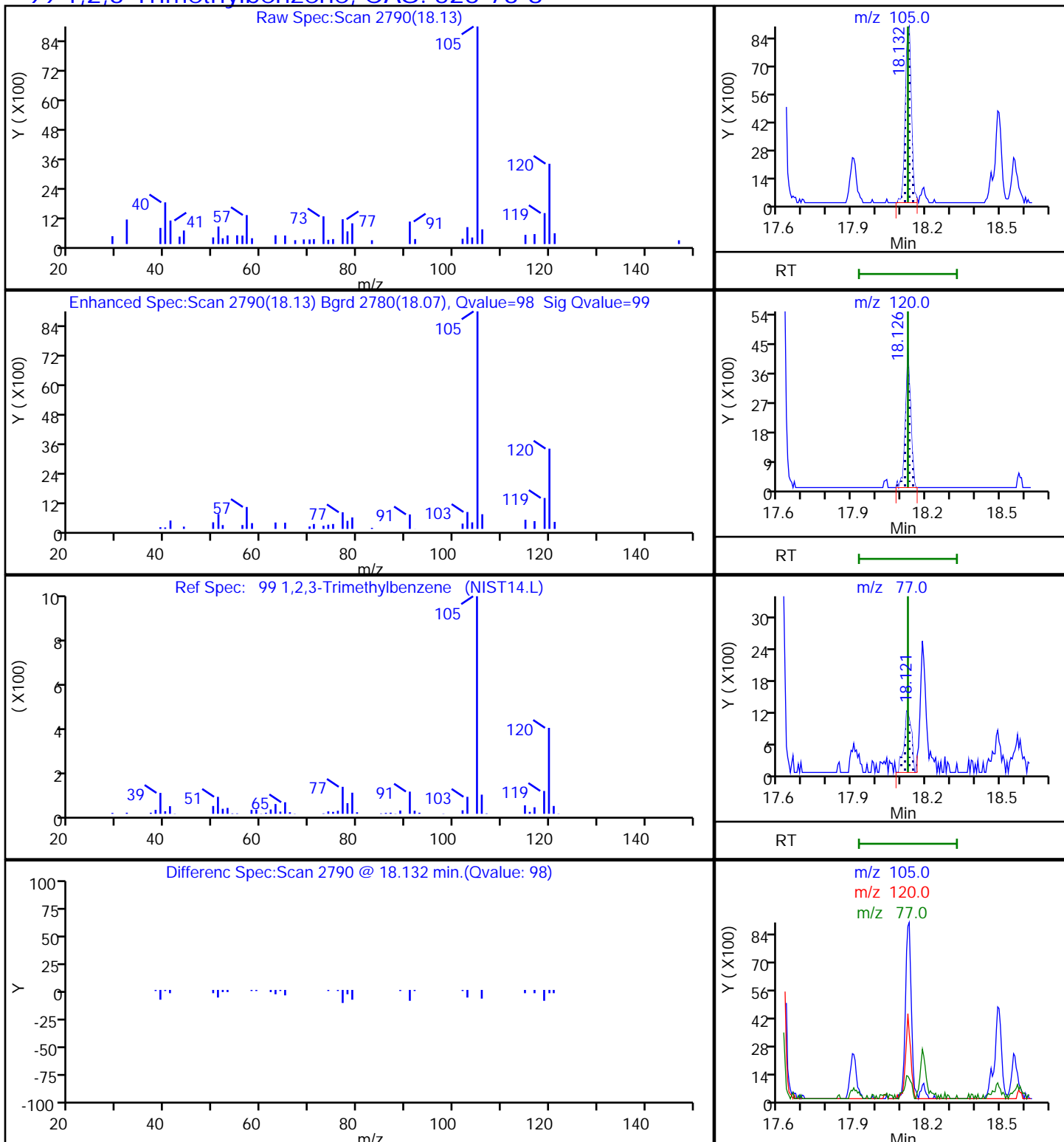
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

99 1,2,3-Trimethylbenzene, CAS: 526-73-8



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D

Injection Date: 13-Nov-2018 17:40:30

Instrument ID: MR

Lims ID: 140-13304-A-1

Lab Sample ID: 140-13304-1

Client ID: BLDG-C EFFLUENT

Operator ID:

ALS Bottle#: 2 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

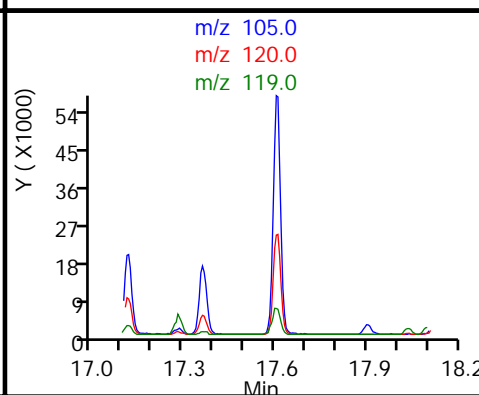
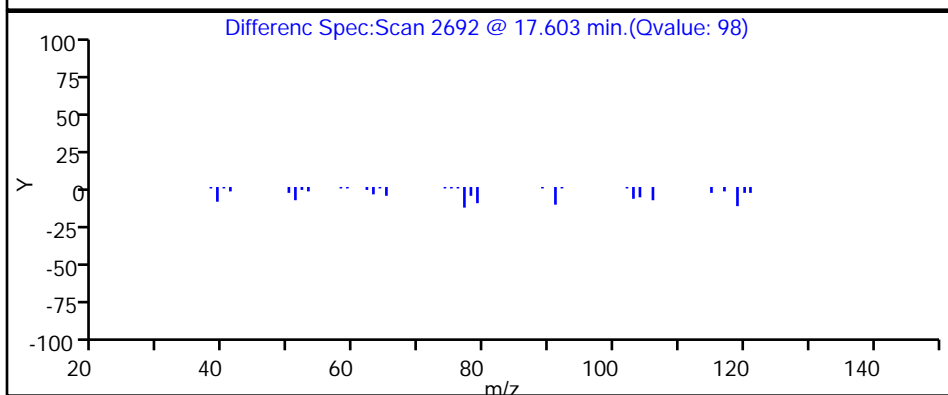
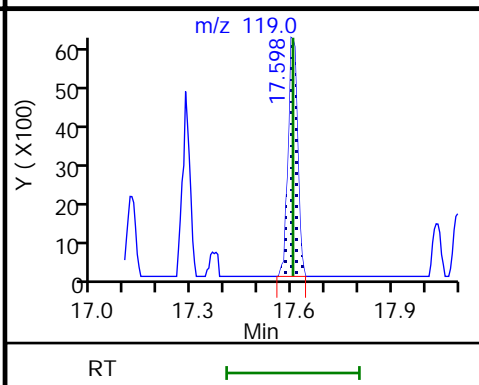
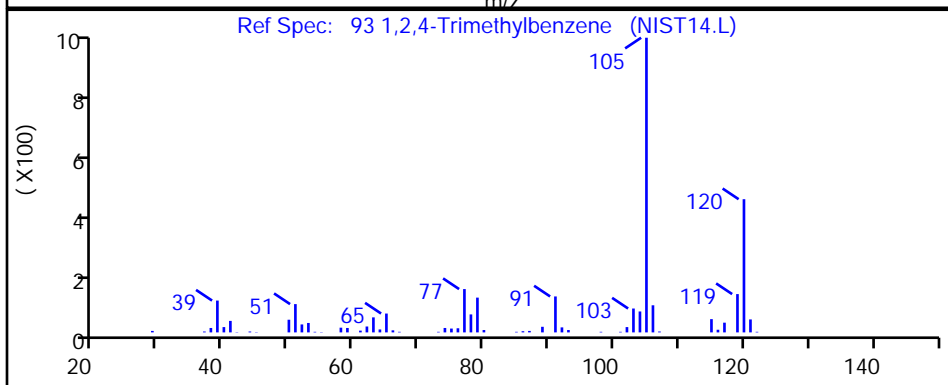
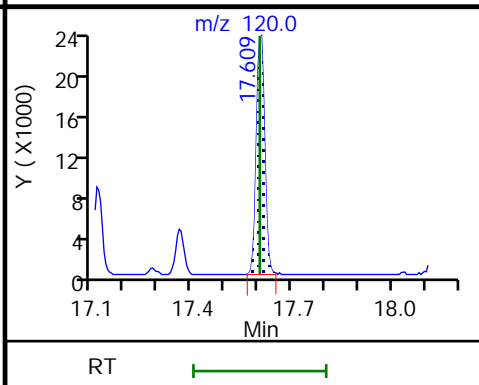
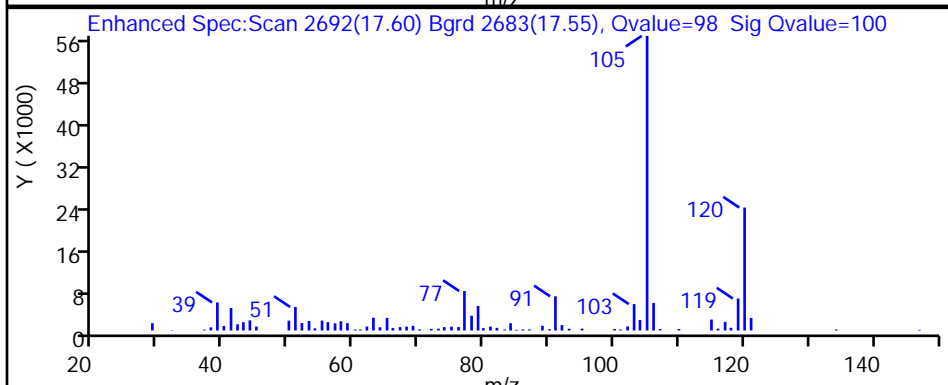
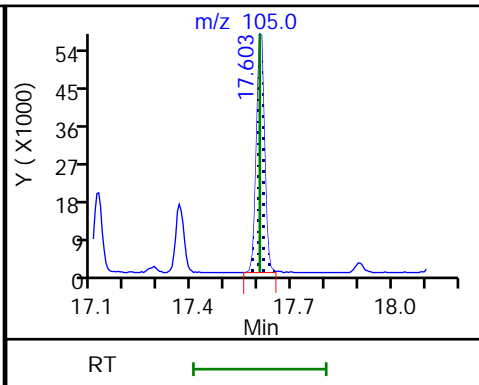
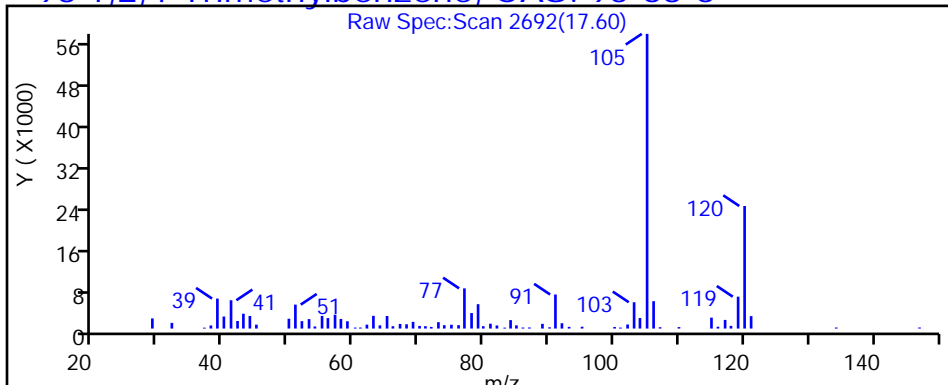
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D

Injection Date: 13-Nov-2018 17:40:30

Instrument ID: MR

Lims ID: 140-13304-A-1

Lab Sample ID: 140-13304-1

Client ID: BLDG-C EFFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

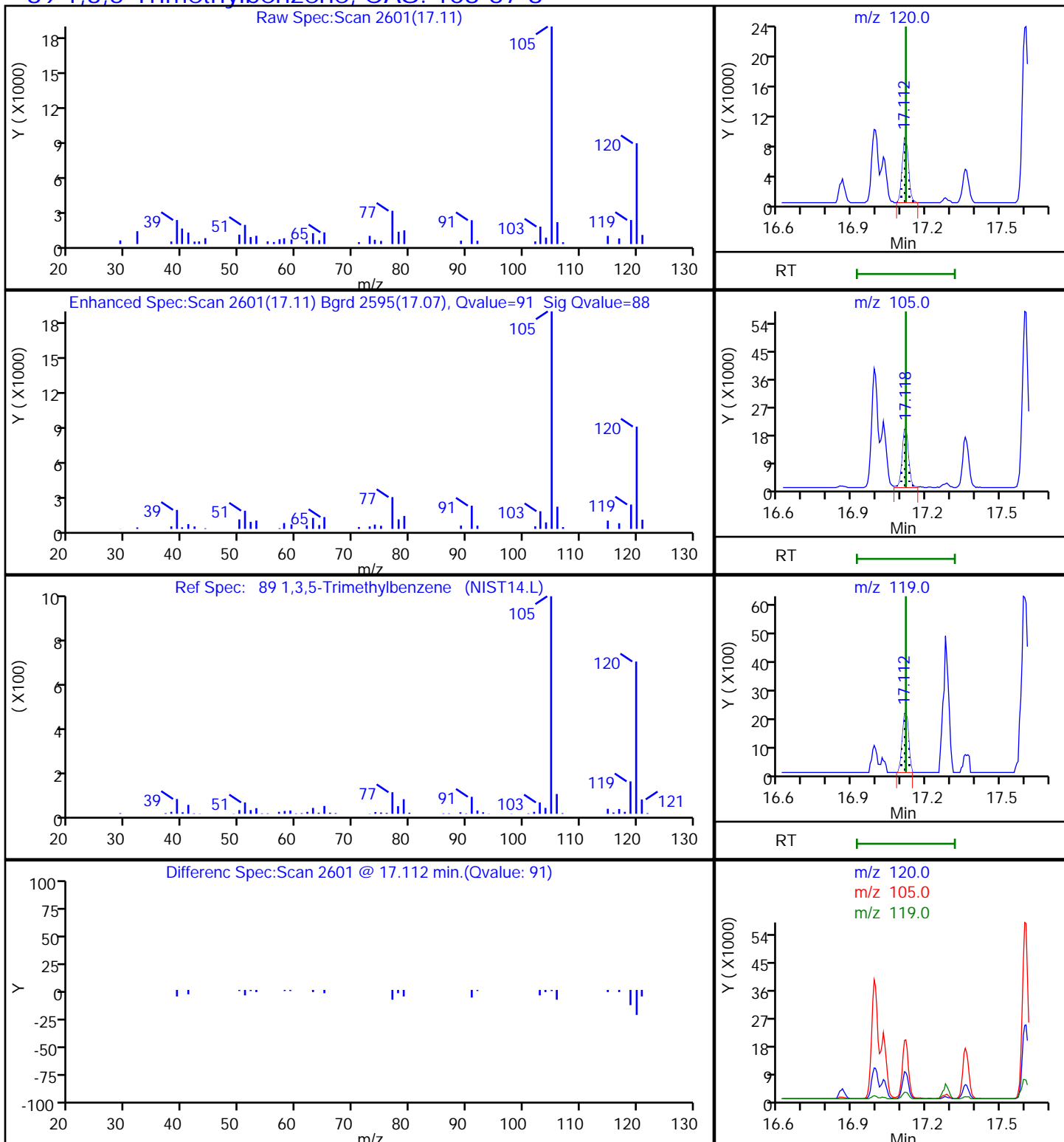
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

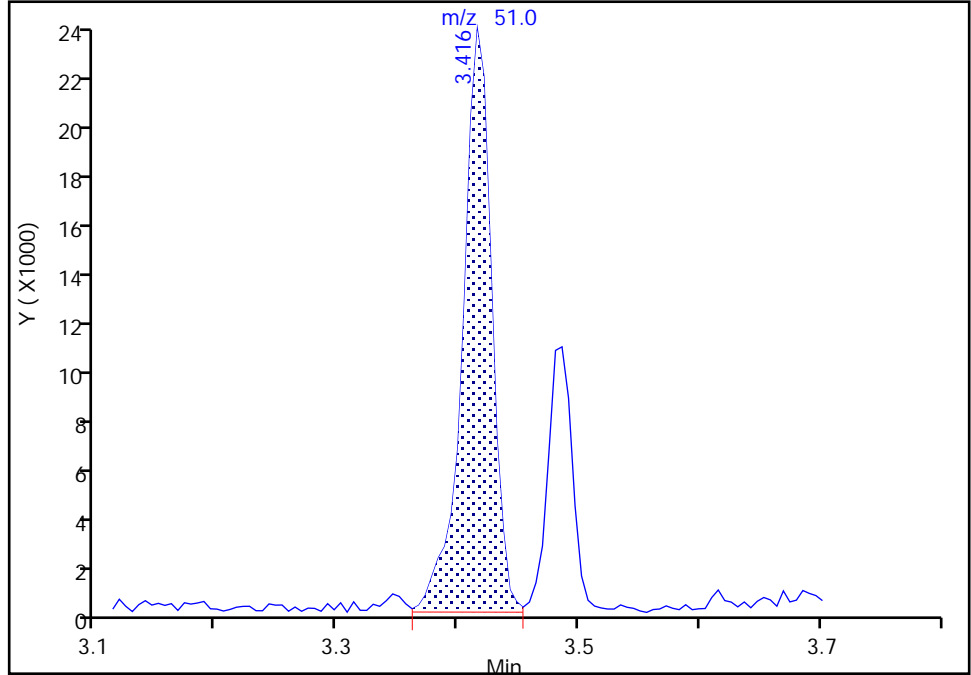
Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P102.D
Injection Date: 13-Nov-2018 17:40:30 Instrument ID: MR
Lims ID: 140-13304-A-1 Lab Sample ID: 140-13304-1
Client ID: BLDG-C EFFLUENT
Operator ID: ALS Bottle#: 2 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

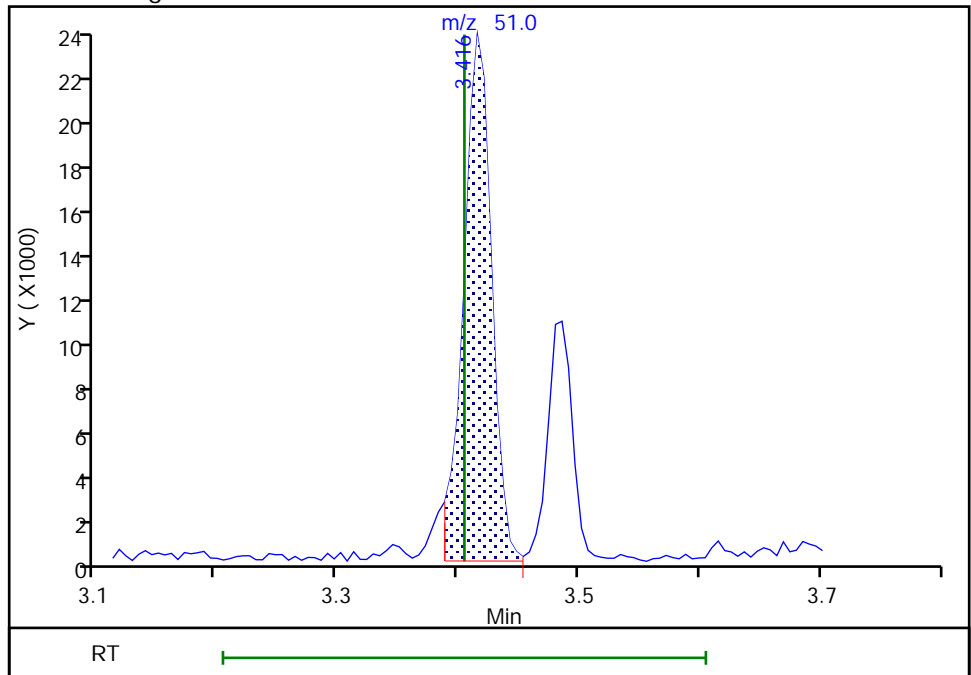
RT: 3.42
Area: 37465
Amount: 0.176049
Amount Units: ppb v/v

Processing Integration Results



RT: 3.42
Area: 36036
Amount: 0.169334
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 14-Nov-2018 16:56:14

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Client Sample ID: BLDG-C MIDGAC Lab Sample ID: 140-13304-2
 Matrix: Air Lab File ID: RK13P103.D
 Analysis Method: TO 15 LL Date Collected: 11/09/2018 11:44
 Sample wt/vol: 100(mL) Date Analyzed: 11/13/2018 18:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25249 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.2		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.82		0.40	0.075
67-66-3	Chloroform	119.38	0.72		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.44		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.49		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.49		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Client Sample ID: BLDG-C MIDGAC Lab Sample ID: 140-13304-2
 Matrix: Air Lab File ID: RK13P103.D
 Analysis Method: TO 15 LL Date Collected: 11/09/2018 11:44
 Sample wt/vol: 100(mL) Date Analyzed: 11/13/2018 18:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25249 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	10		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.9		1.4	0.27
67-66-3	Chloroform	119.38	3.5		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.7		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.6		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.4		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P103.D
 Lims ID: 140-13304-A-2
 Client ID: BLDG-C MIDGAC
 Sample Type: Client
 Inject. Date: 13-Nov-2018 18:32:30 ALS Bottle#: 3 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-013
 Misc. Info.: 140-13304-a-2
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 16:57:07 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits

Date: 14-Nov-2018 11:06:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.395	7.395	0.000	96	210324	4.00	
* 2 1,4-Difluorobenzene	114	9.487	9.493	-0.006	95	1348648	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.557	-0.001	90	1108442	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.282	0.000	84	784532	3.77	
6 Chlorodifluoromethane	51	3.416	3.416	0.011	95	36978	0.1643	M
8 Dichlorodifluoromethane	85	3.459	3.453	0.011	99	17476	0.1042	
31 Methylene Chloride	84	5.292	5.284	0.016	97	20679	0.2015	
41 cis-1,2-Dichloroethene	96	7.126	7.131	0.006	98	8764	0.0877	
43 Chloroform	83	7.433	7.444	0.000	94	30839	0.1443	
45 1,1,1-Trichloroethane	97	8.360	8.373	-0.001	97	19589	0.0971	
47 Benzene	78	8.916	8.926	-0.006	97	193836	0.6399	
65 Toluene	91	12.464	12.475	-0.011	93	32392	0.0967	
93 1,2,4-Trimethylbenzene	105	17.603	17.603	0.000	97	41953	0.0989	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P103.D

Injection Date: 13-Nov-2018 18:32:30

Instrument ID: MR

Operator ID:

Lims ID: 140-13304-A-2

Lab Sample ID: 140-13304-2

Worklist Smp#: 13

Client ID: BLDG-C MIDGAC

Purge Vol: 500.000 mL

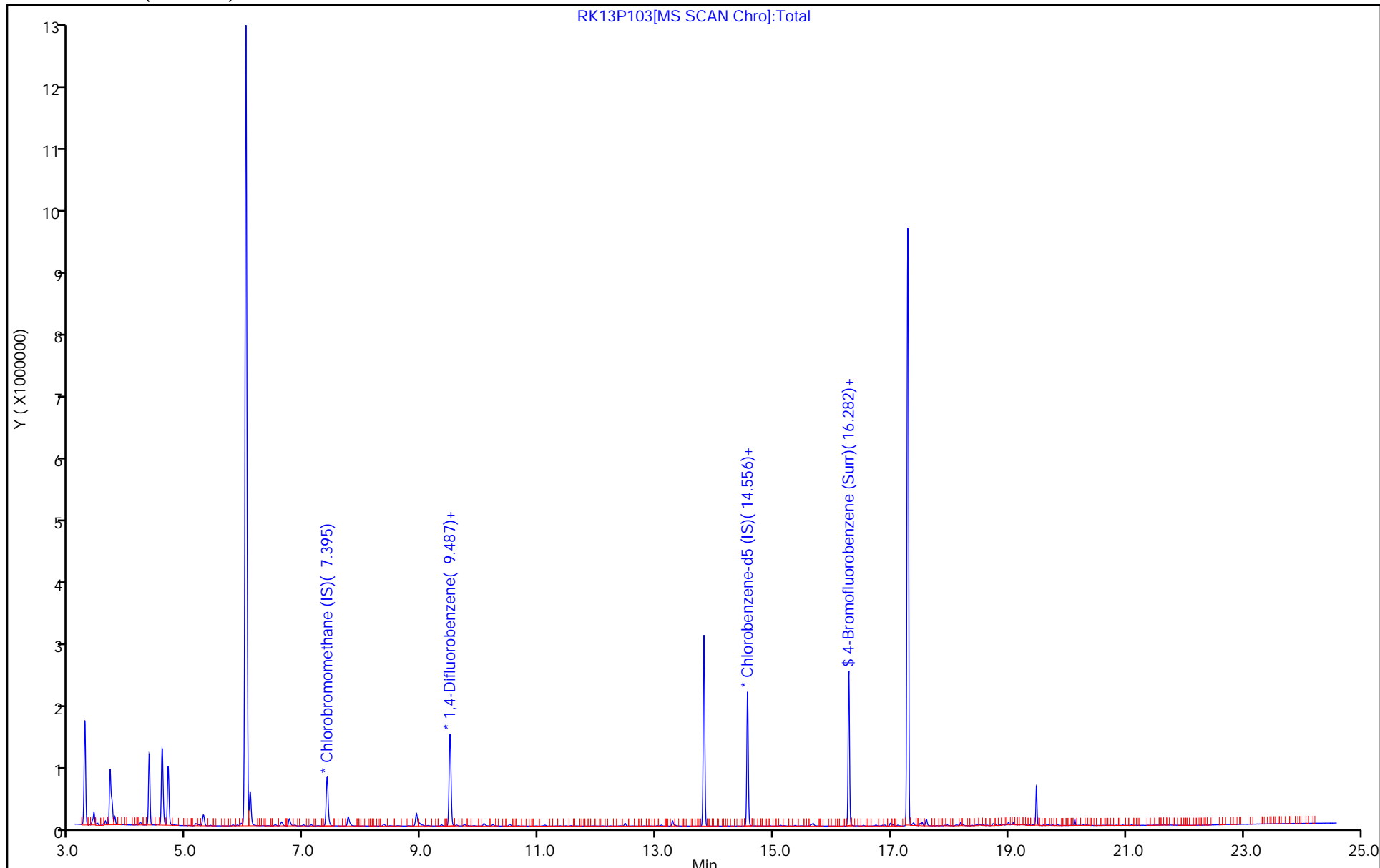
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P103.D
 Lims ID: 140-13304-A-2
 Client ID: BLDG-C MIDGAC
 Sample Type: Client
 Inject. Date: 13-Nov-2018 18:32:30 ALS Bottle#: 3 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-013
 Misc. Info.: 140-13304-a-2
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 16:57:07 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits Date: 14-Nov-2018 11:06:22

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.77	94.25

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P103.D

Injection Date: 13-Nov-2018 18:32:30

Instrument ID: MR

Lims ID: 140-13304-A-2

Lab Sample ID: 140-13304-2

Client ID: BLDG-C MIDGAC

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

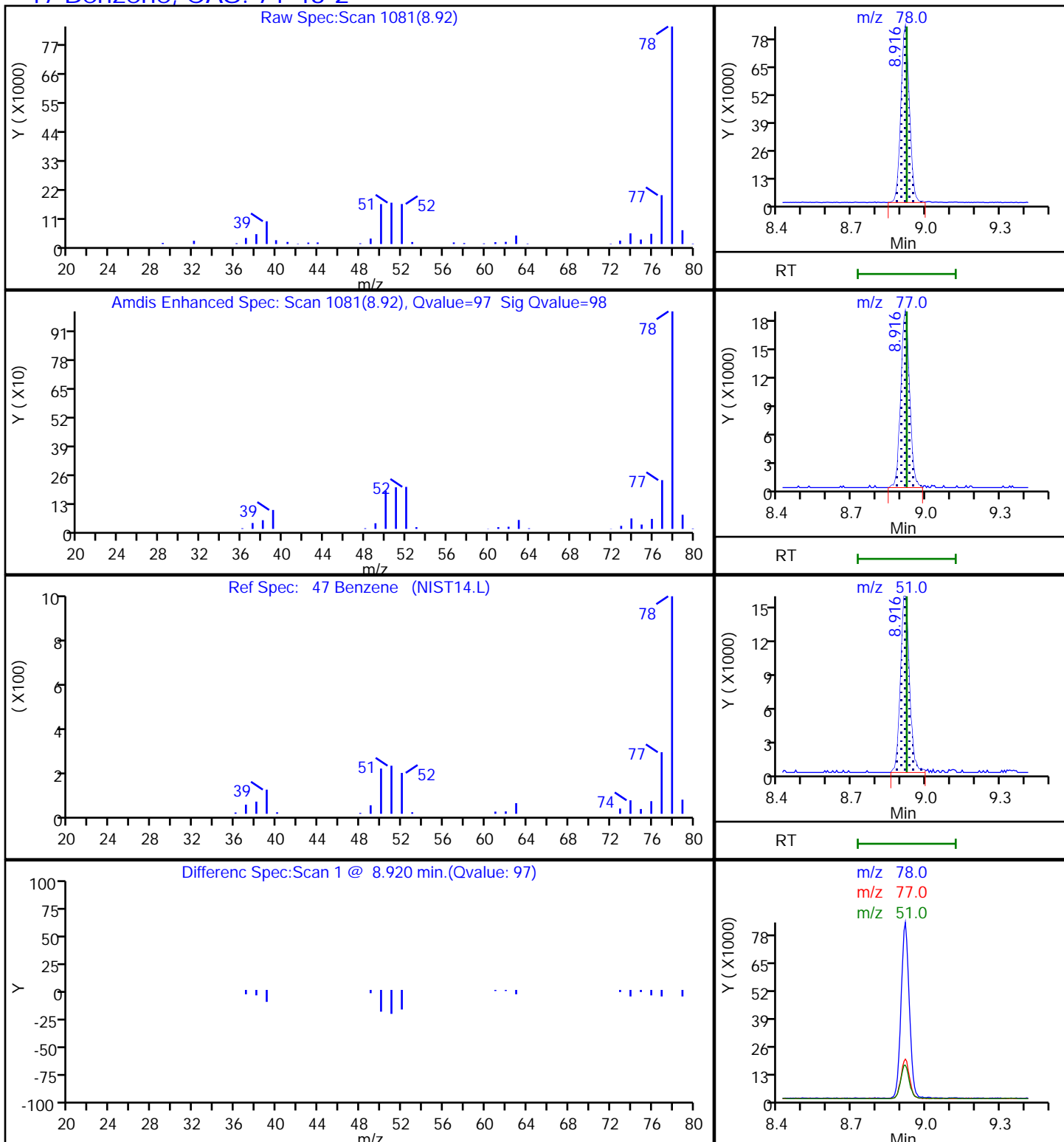
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P103.D

Injection Date: 13-Nov-2018 18:32:30

Instrument ID: MR

Lims ID: 140-13304-A-2

Lab Sample ID: 140-13304-2

Client ID: BLDG-C MIDGAC

Operator ID:

ALS Bottle#: 3 Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

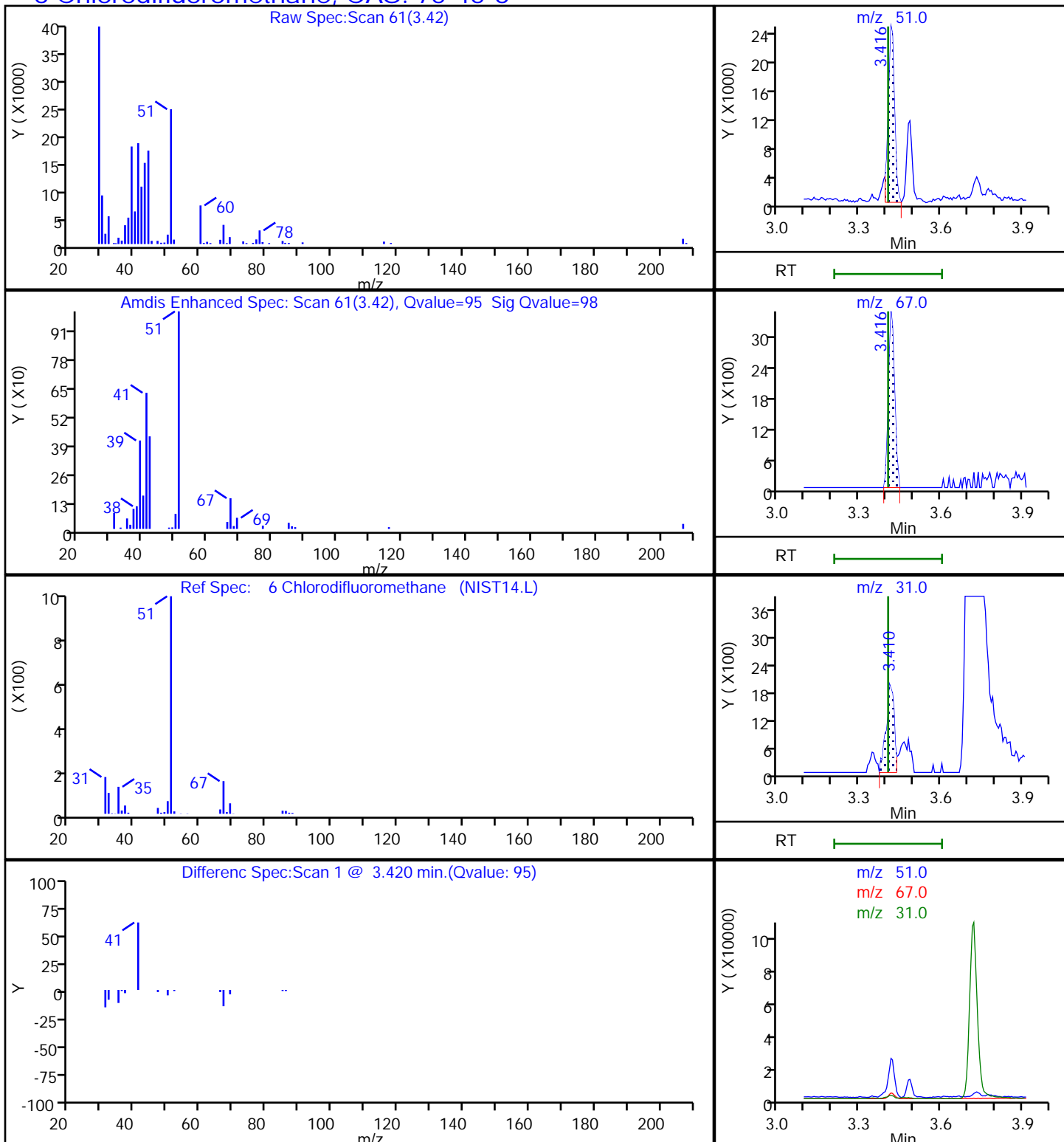
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P103.D

Injection Date: 13-Nov-2018 18:32:30

Instrument ID: MR

Lims ID: 140-13304-A-2

Lab Sample ID: 140-13304-2

Client ID: BLDG-C MIDGAC

Operator ID:

ALS Bottle#: 3 Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

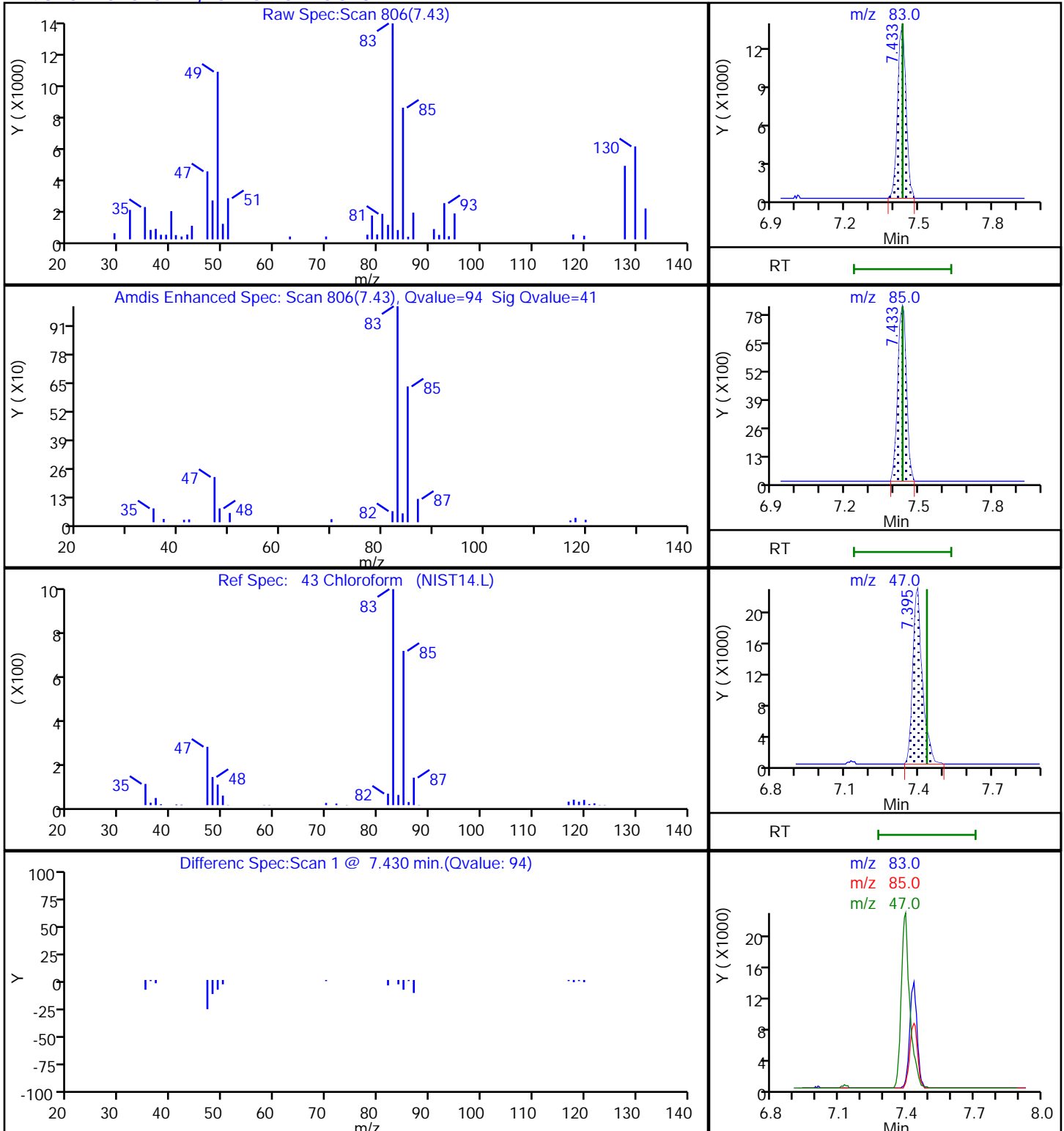
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P103.D

Injection Date: 13-Nov-2018 18:32:30

Instrument ID: MR

Lims ID: 140-13304-A-2

Lab Sample ID: 140-13304-2

Client ID: BLDG-C MIDGAC

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

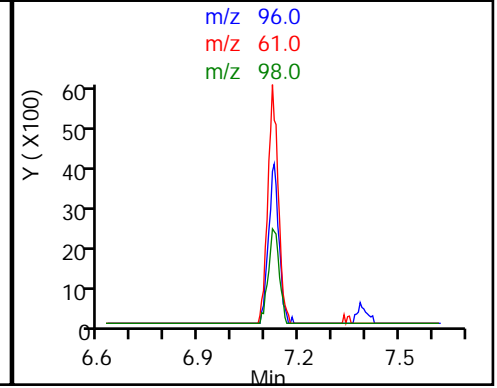
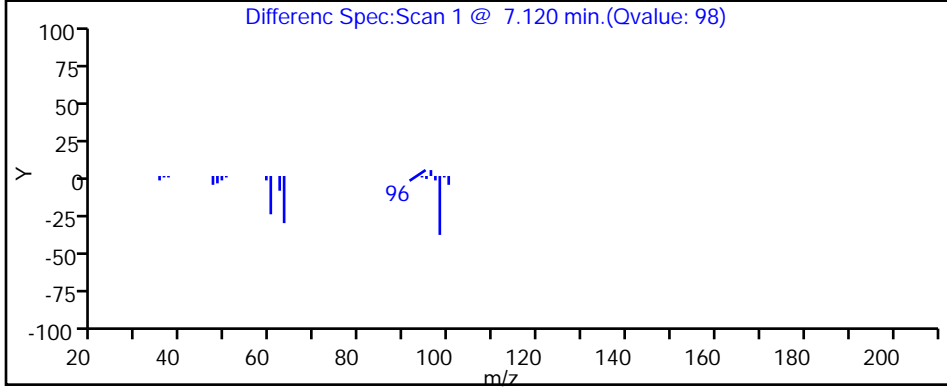
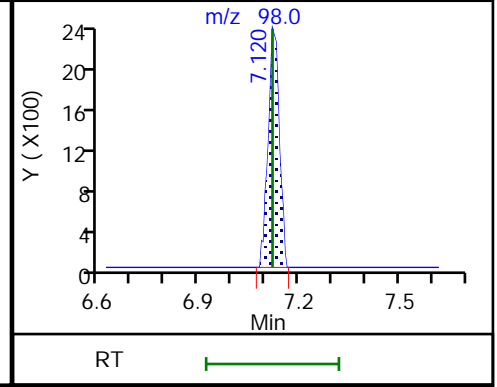
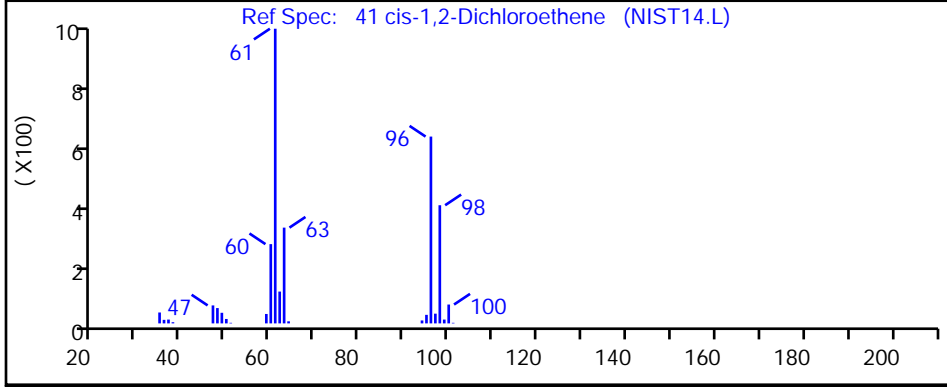
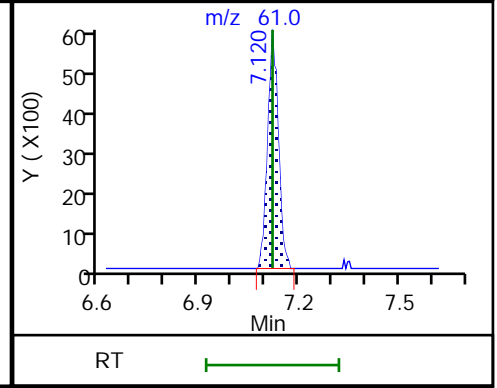
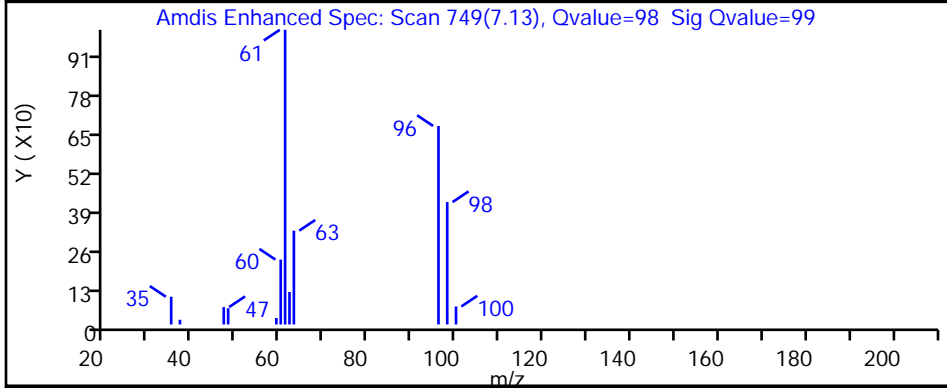
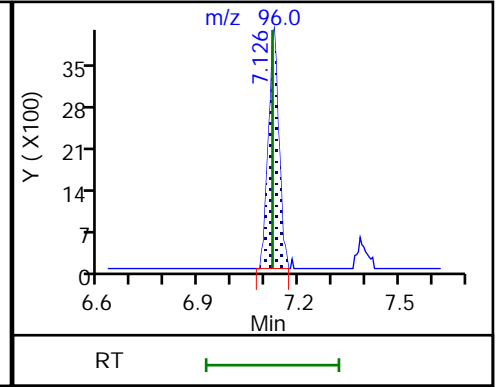
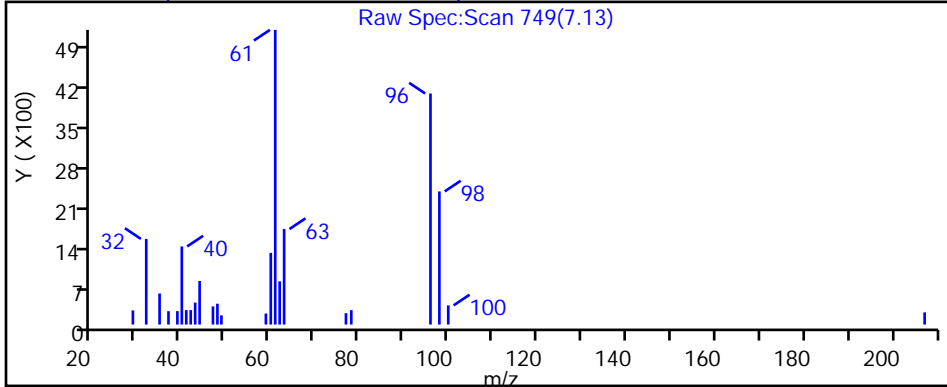
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P103.D

Injection Date: 13-Nov-2018 18:32:30

Instrument ID: MR

Lims ID: 140-13304-A-2

Lab Sample ID: 140-13304-2

Client ID: BLDG-C MIDGAC

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

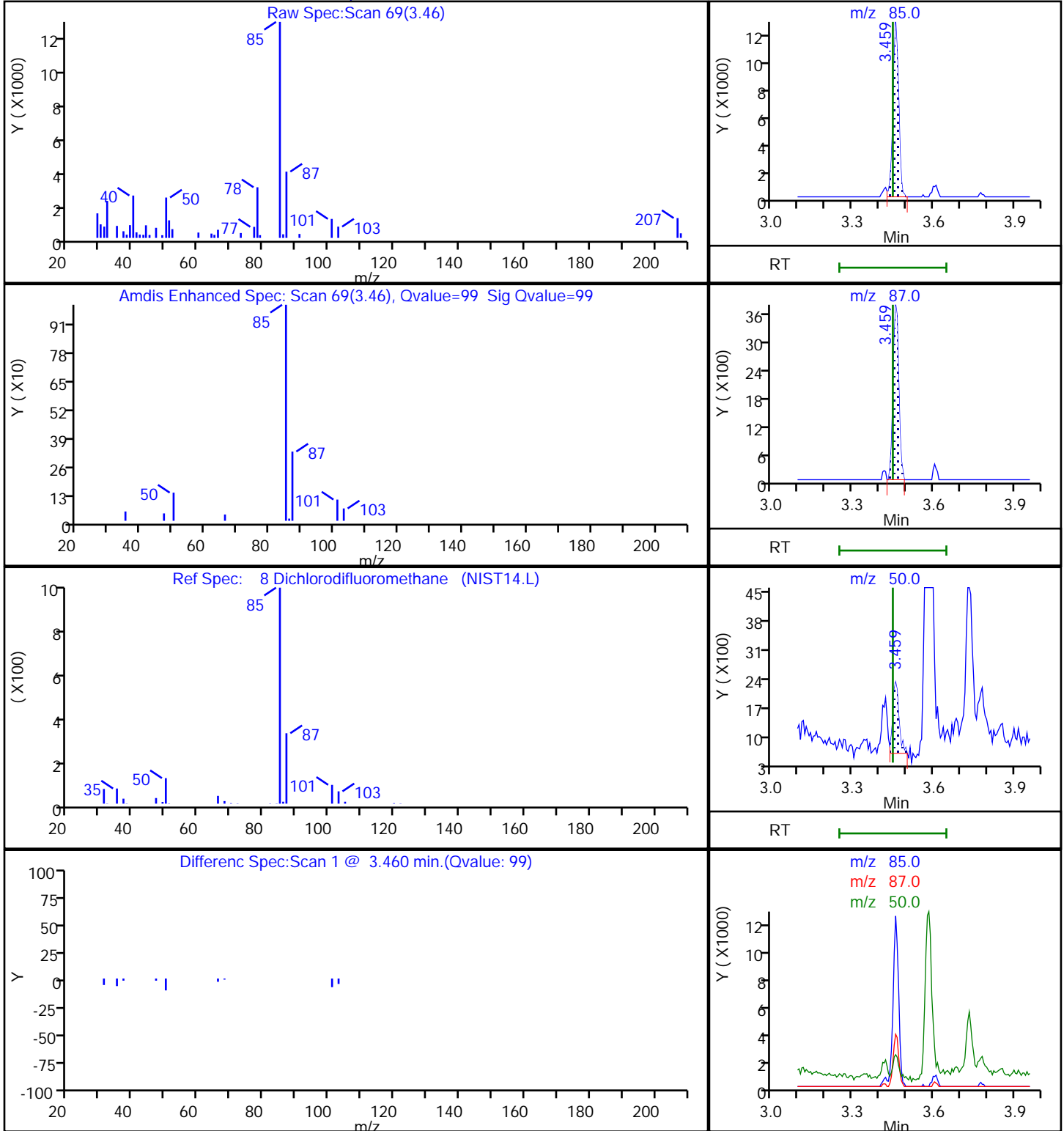
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P103.D

Injection Date: 13-Nov-2018 18:32:30

Instrument ID: MR

Lims ID: 140-13304-A-2

Lab Sample ID: 140-13304-2

Client ID: BLDG-C MIDGAC

Operator ID:

ALS Bottle#: 3 Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

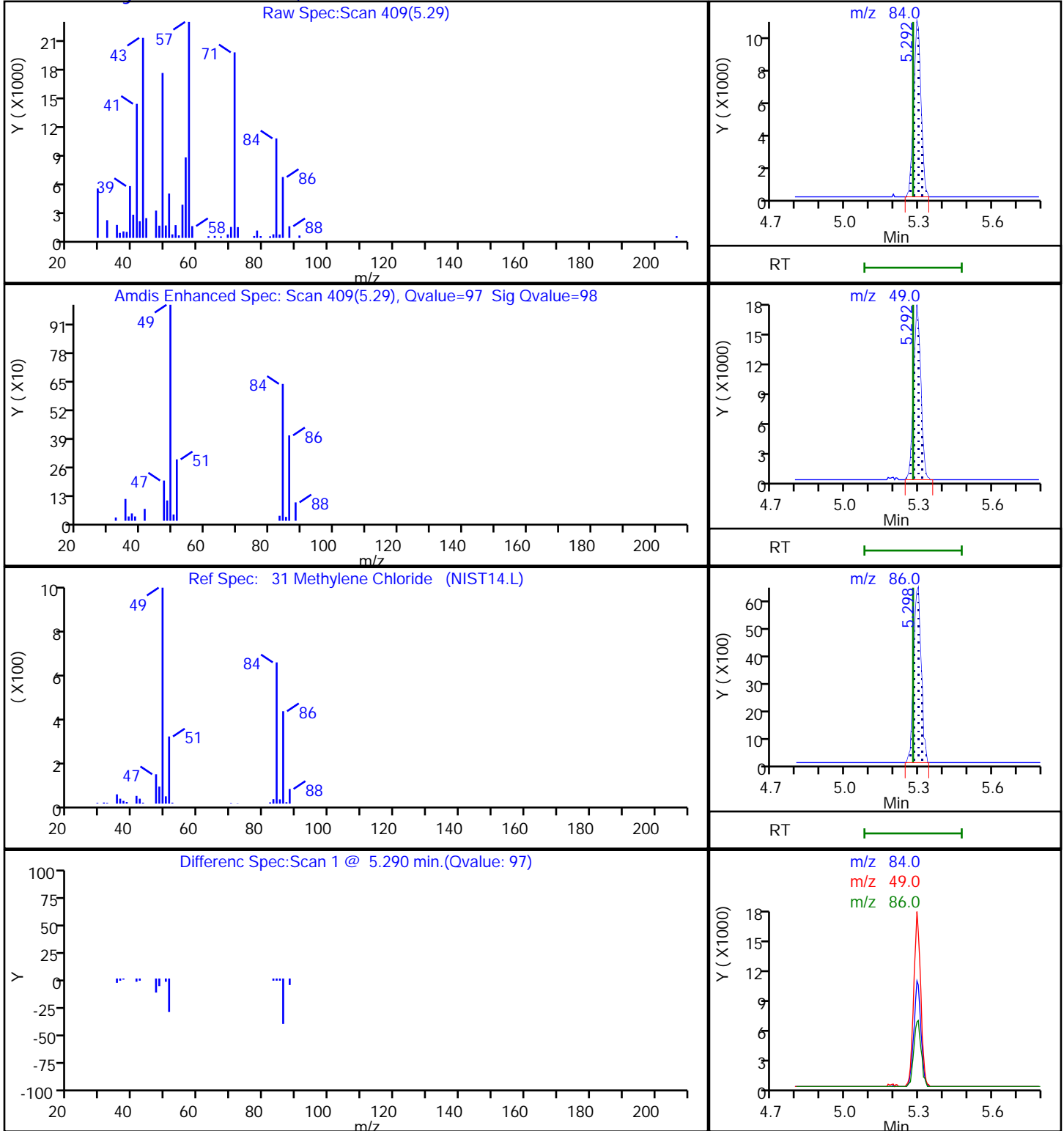
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P103.D

Injection Date: 13-Nov-2018 18:32:30

Instrument ID: MR

Lims ID: 140-13304-A-2

Lab Sample ID: 140-13304-2

Client ID: BLDG-C MIDGAC

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

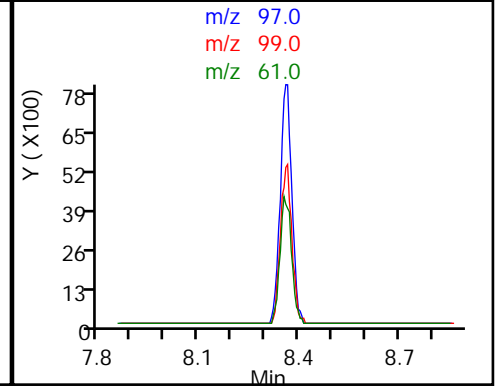
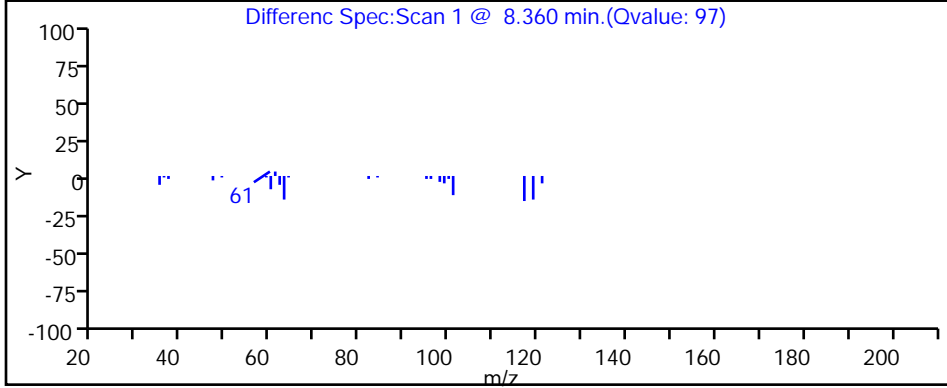
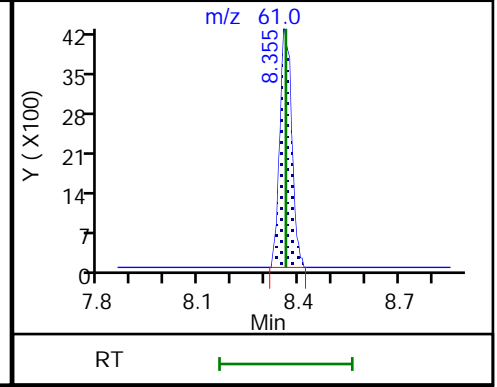
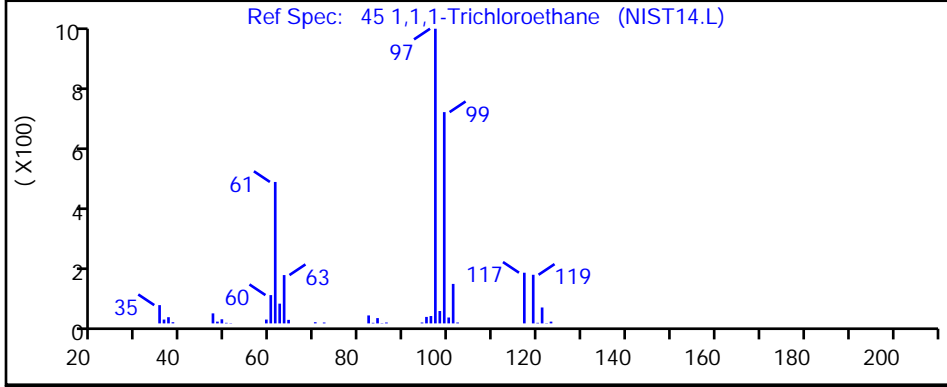
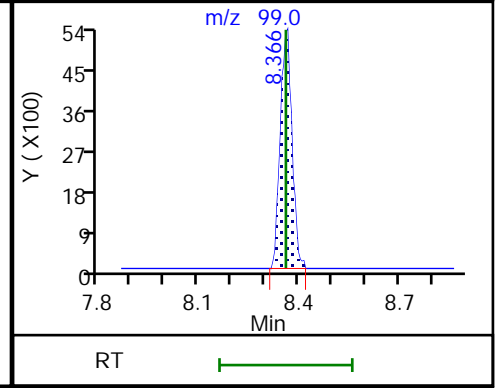
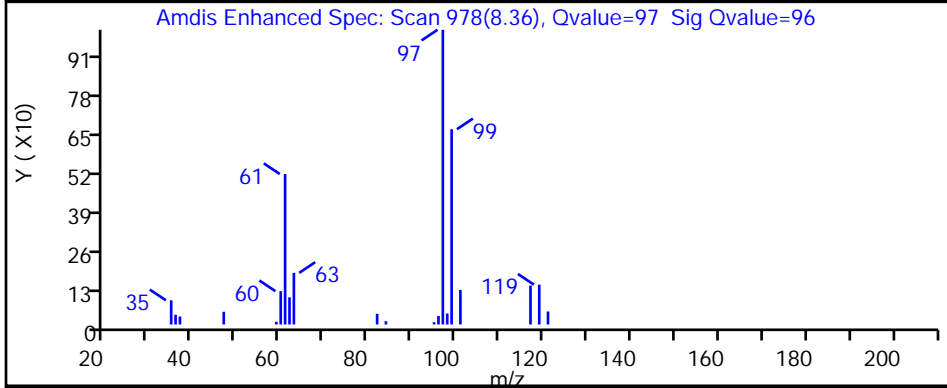
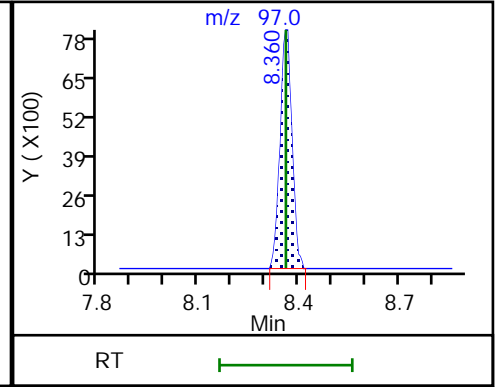
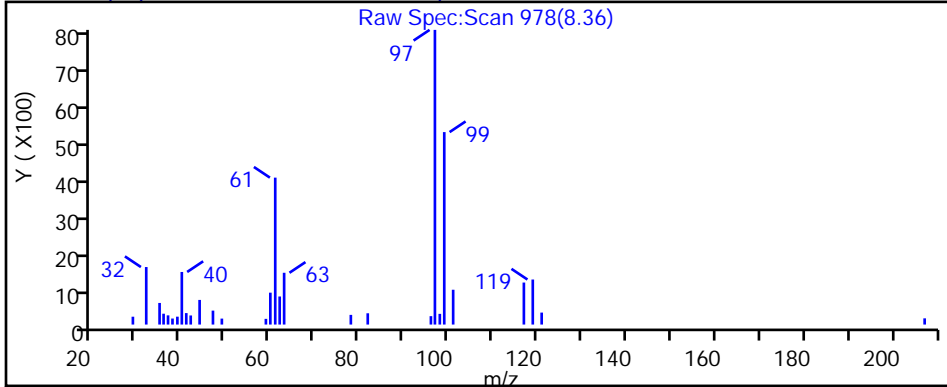
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P103.D

Injection Date: 13-Nov-2018 18:32:30

Instrument ID: MR

Lims ID: 140-13304-A-2

Lab Sample ID: 140-13304-2

Client ID: BLDG-C MIDGAC

Operator ID:

ALS Bottle#: 3 Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

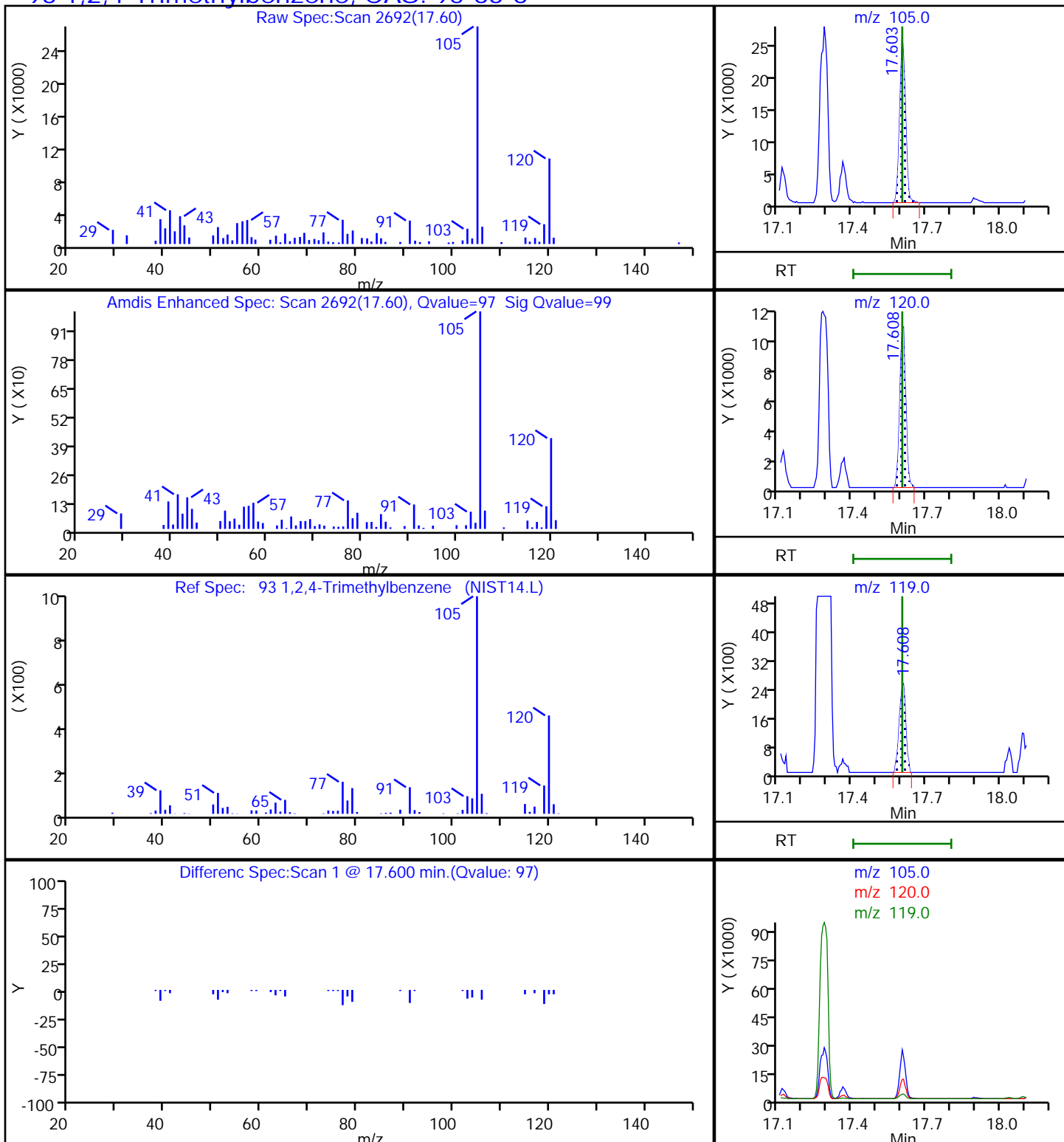
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

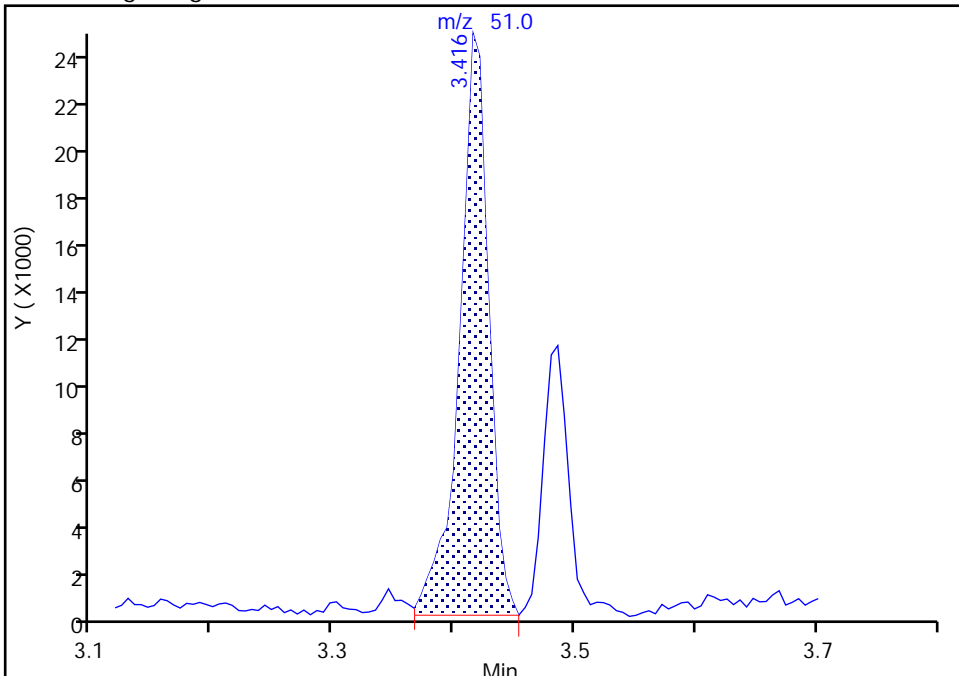
Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P103.D
Injection Date: 13-Nov-2018 18:32:30 Instrument ID: MR
Lims ID: 140-13304-A-2 Lab Sample ID: 140-13304-2
Client ID: BLDG-C MIDGAC
Operator ID: ALS Bottle#: 3 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

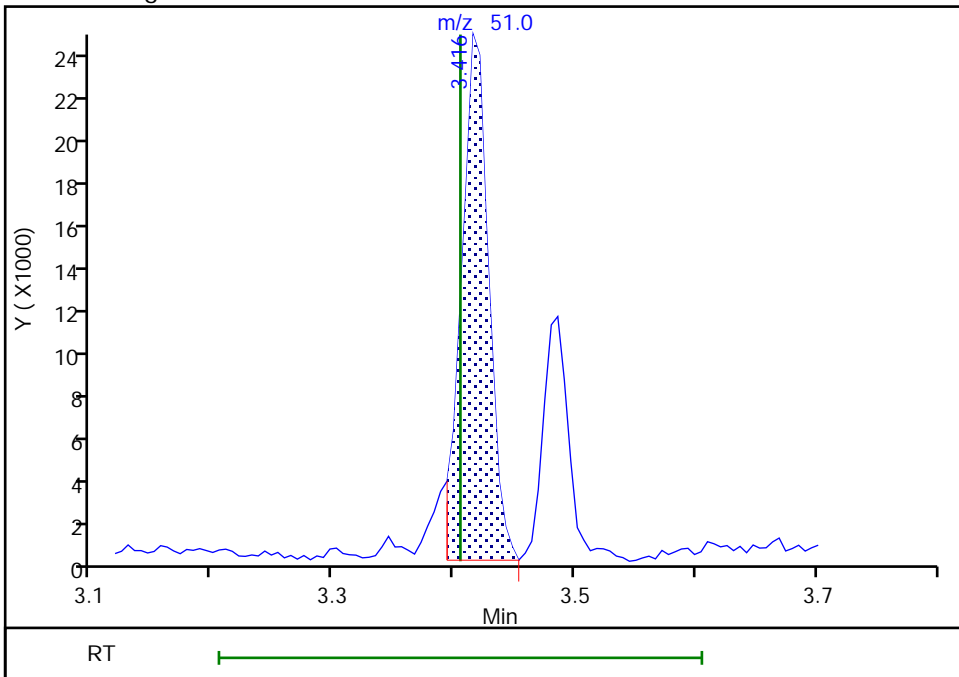
RT: 3.42
Area: 39518
Amount: 0.175544
Amount Units: ppb v/v

Processing Integration Results



RT: 3.42
Area: 36978
Amount: 0.164261
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 14-Nov-2018 16:57:02
Audit Action: Split an Integrated Peak

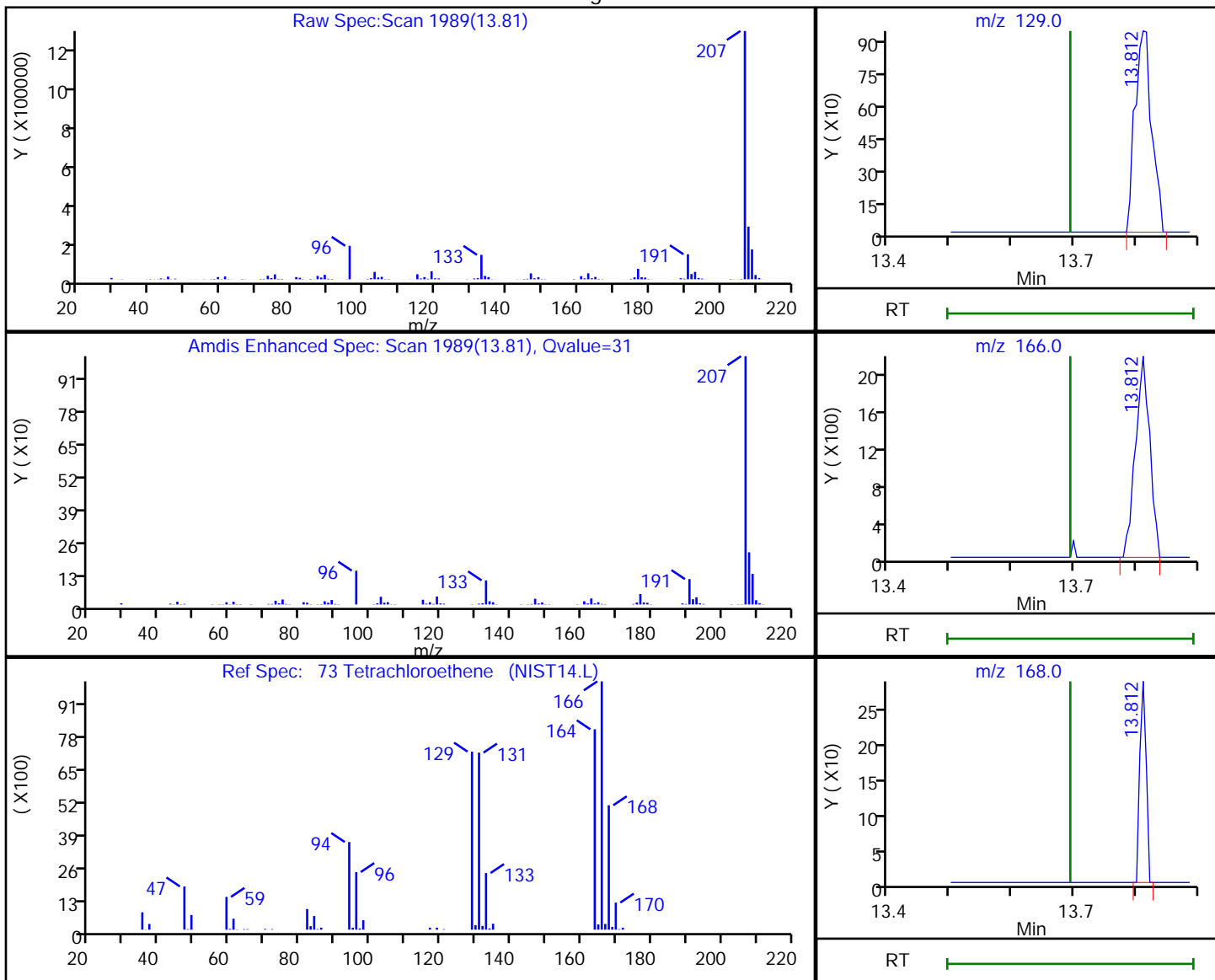
Audit Reason: Split Peak

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P103.D
 Injection Date: 13-Nov-2018 18:32:30 Instrument ID: MR
 Lims ID: 140-13304-A-2 Lab Sample ID: 140-13304-2
 Client ID: BLDG-C MIDGAC
 Operator ID: ALS Bottle#: 3 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4

Processing Results



RT	Mass	Response	Amount
13.81	129.00	1778	0.016824
13.81	166.00	3509	
13.81	168.00	207	

Reviewer: khachitpongpanits, 14-Nov-2018 11:05:41

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Client Sample ID: BLDG-C INFLUENT Lab Sample ID: 140-13304-3
 Matrix: Air Lab File ID: RK13P104.D
 Analysis Method: TO 15 LL Date Collected: 11/09/2018 11:48
 Sample wt/vol: 100(mL) Date Analyzed: 11/13/2018 19:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25249 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.63		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.64		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.085	J	0.40	0.080
108-88-3	Toluene	92.14	0.73		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	4.7		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.80		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.25	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.43	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Client Sample ID: BLDG-C INFLUENT Lab Sample ID: 140-13304-3
 Matrix: Air Lab File ID: RK13P104.D
 Analysis Method: TO 15 LL Date Collected: 11/09/2018 11:48
 Sample wt/vol: 100(mL) Date Analyzed: 11/13/2018 19:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25249 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.0		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.8	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	2.5		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.86	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.57	J	2.7	0.54
108-88-3	Toluene	92.14	2.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	25		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	3.9		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.3	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.9	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D
 Lims ID: 140-13304-A-3
 Client ID: BLDG-C INFLUENT
 Sample Type: Client
 Inject. Date: 13-Nov-2018 19:24:30 ALS Bottle#: 4 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-014
 Misc. Info.: 140-13304-a-3
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 12:29:23 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits Date: 14-Nov-2018 13:06:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.395	0.006	96	214025	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.493	0.000	95	1382326	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.557	-0.001	90	1124462	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.282	0.000	83	813700	3.85	
6 Chlorodifluoromethane	51	3.421	3.408	0.016	95	49547	0.2163	
8 Dichlorodifluoromethane	85	3.464	3.451	0.016	99	16989	0.0996	
31 Methylene Chloride	84	5.308	5.280	0.032	97	16708	0.1600	
41 cis-1,2-Dichloroethene	96	7.131	7.131	0.011	96	13022	0.1281	
47 Benzene	78	8.921	8.921	-0.001	97	39353	0.1267	
56 Trichloroethene	130	10.248	10.254	0.000	94	110262	0.9460	
65 Toluene	91	12.469	12.475	-0.006	93	49331	0.1452	
73 Tetrachloroethene	129	13.699	13.694	0.005	84	1815	0.0169	
76 Ethylbenzene	91	14.945	14.945	-0.001	97	17657	0.0398	
78 m-Xylene & p-Xylene	91	15.117	15.123	-0.006	95	18964	0.0558	
82 o-Xylene	91	15.656	15.656	-0.001	99	10288	0.0293	
89 1,3,5-Trimethylbenzene	120	17.118	17.118	0.000	91	9660	0.0510	
93 1,2,4-Trimethylbenzene	105	17.603	17.603	0.000	98	68433	0.1591	
S 121 Xylenes, Total	100				0		0.0850	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D

Injection Date: 13-Nov-2018 19:24:30

Instrument ID: MR

Operator ID:

Lims ID: 140-13304-A-3

Lab Sample ID: 140-13304-3

Worklist Smp#: 14

Client ID: BLDG-C INFLUENT

Purge Vol: 500.000 mL

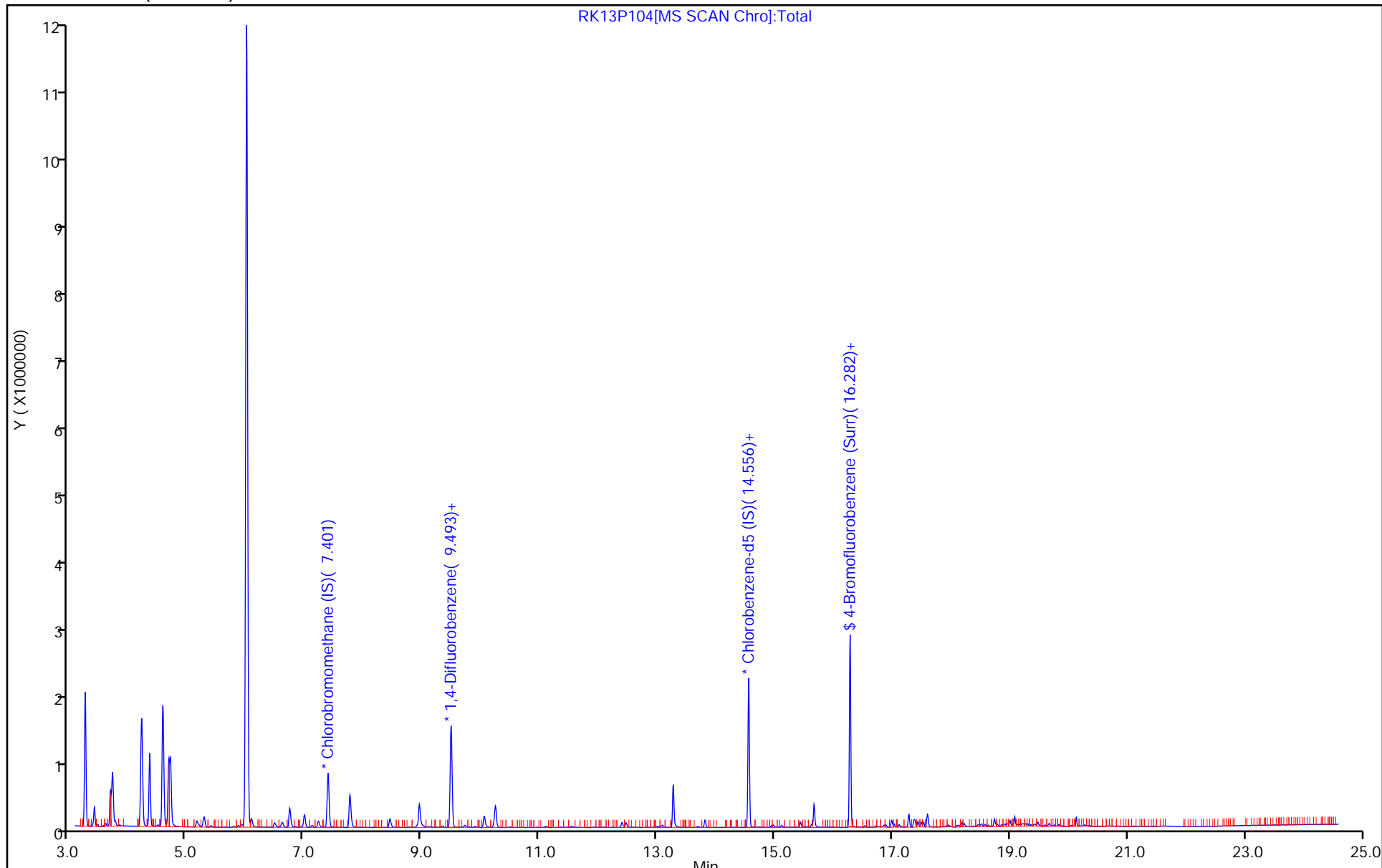
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D
 Lims ID: 140-13304-A-3
 Client ID: BLDG-C INFLUENT
 Sample Type: Client
 Inject. Date: 13-Nov-2018 19:24:30 ALS Bottle#: 4 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-014
 Misc. Info.: 140-13304-a-3
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 12:29:23 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits Date: 14-Nov-2018 13:06:54

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.85	96.36

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D

Injection Date: 13-Nov-2018 19:24:30

Instrument ID: MR

Lims ID: 140-13304-A-3

Lab Sample ID: 140-13304-3

Client ID: BLDG-C INFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

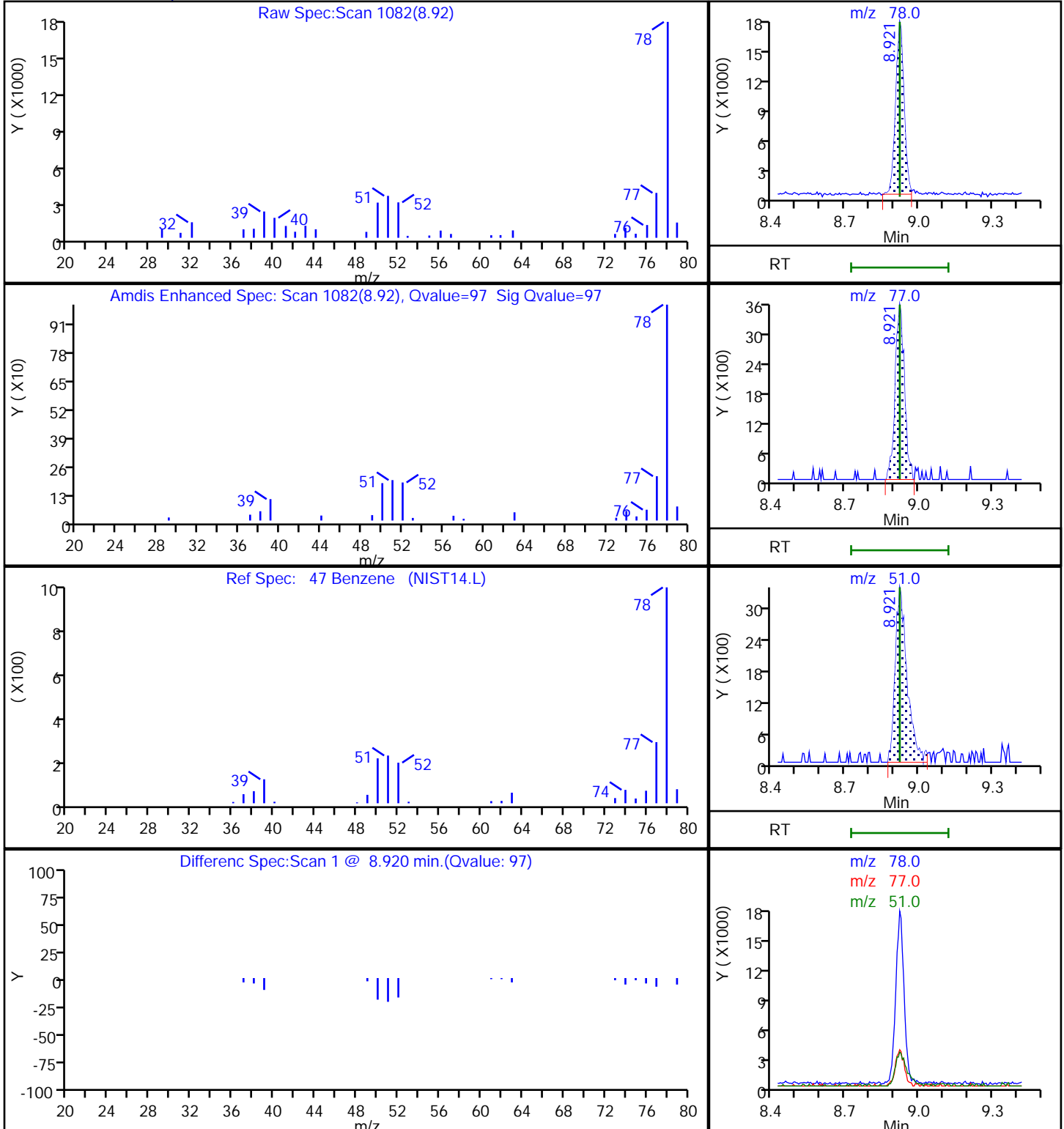
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D

Injection Date: 13-Nov-2018 19:24:30

Instrument ID: MR

Lims ID: 140-13304-A-3

Lab Sample ID: 140-13304-3

Client ID: BLDG-C INFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

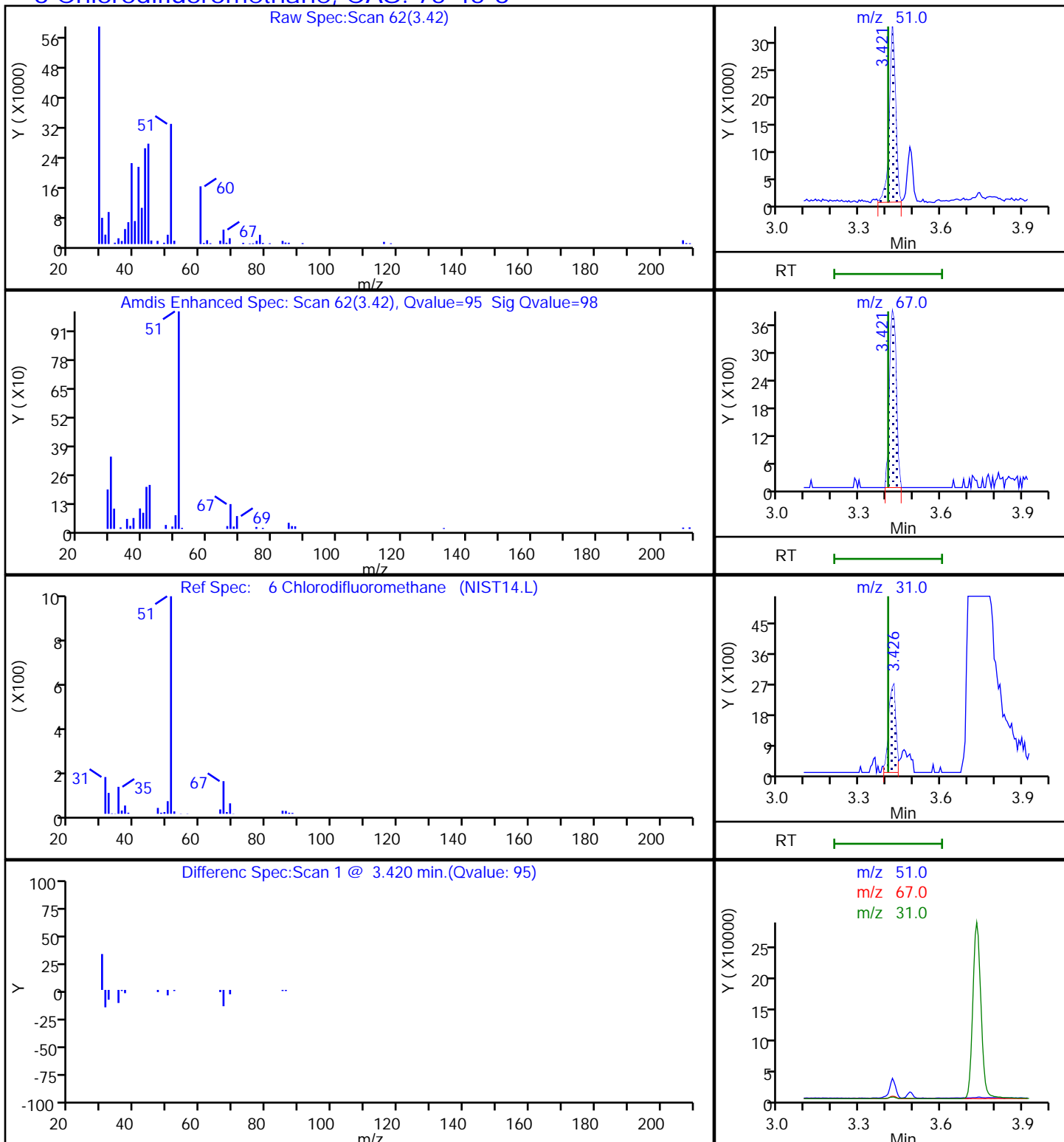
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D

Injection Date: 13-Nov-2018 19:24:30

Instrument ID: MR

Lims ID: 140-13304-A-3

Lab Sample ID: 140-13304-3

Client ID: BLDG-C INFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

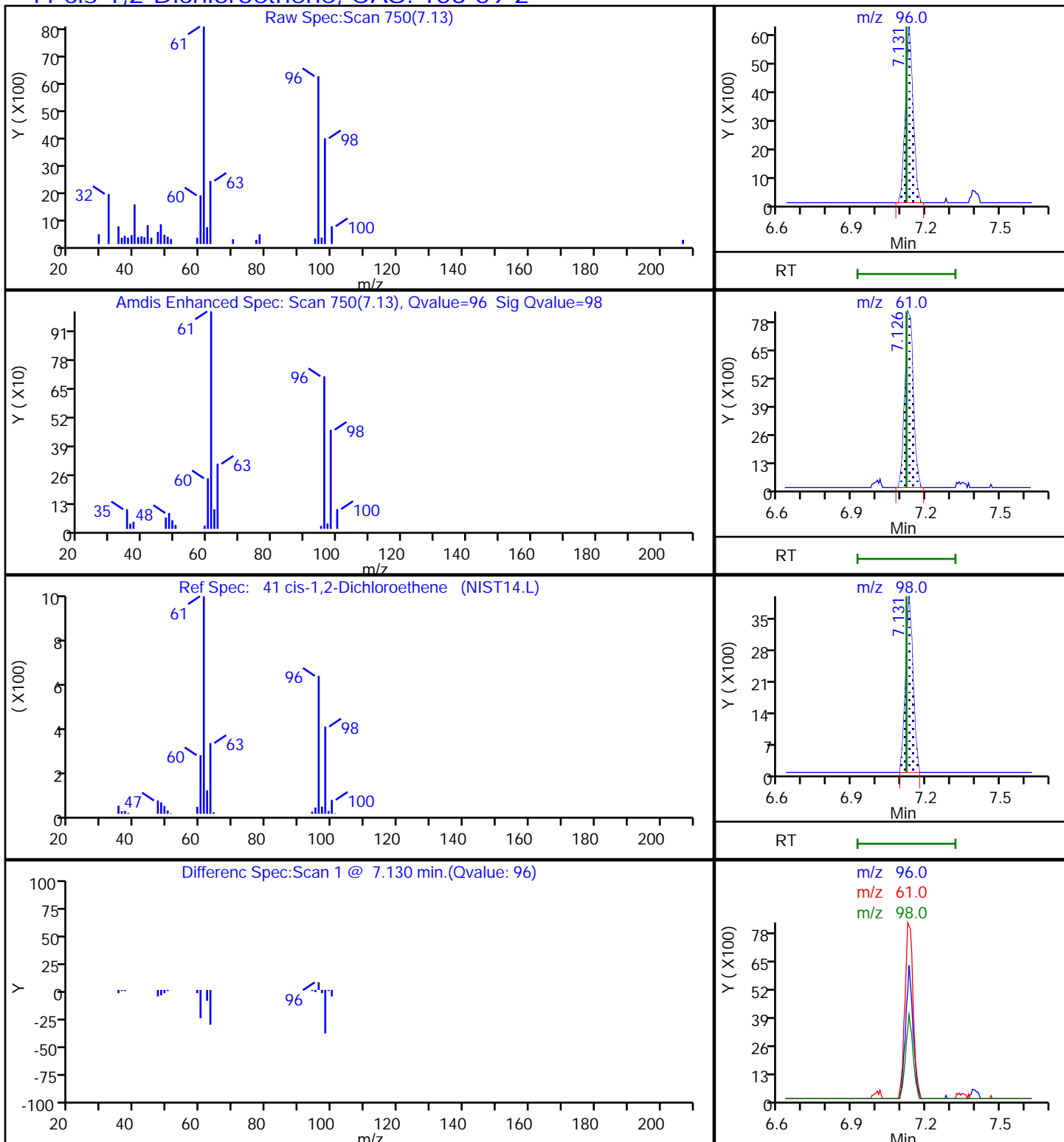
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D

Injection Date: 13-Nov-2018 19:24:30

Instrument ID: MR

Lims ID: 140-13304-A-3

Lab Sample ID: 140-13304-3

Client ID: BLDG-C INFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

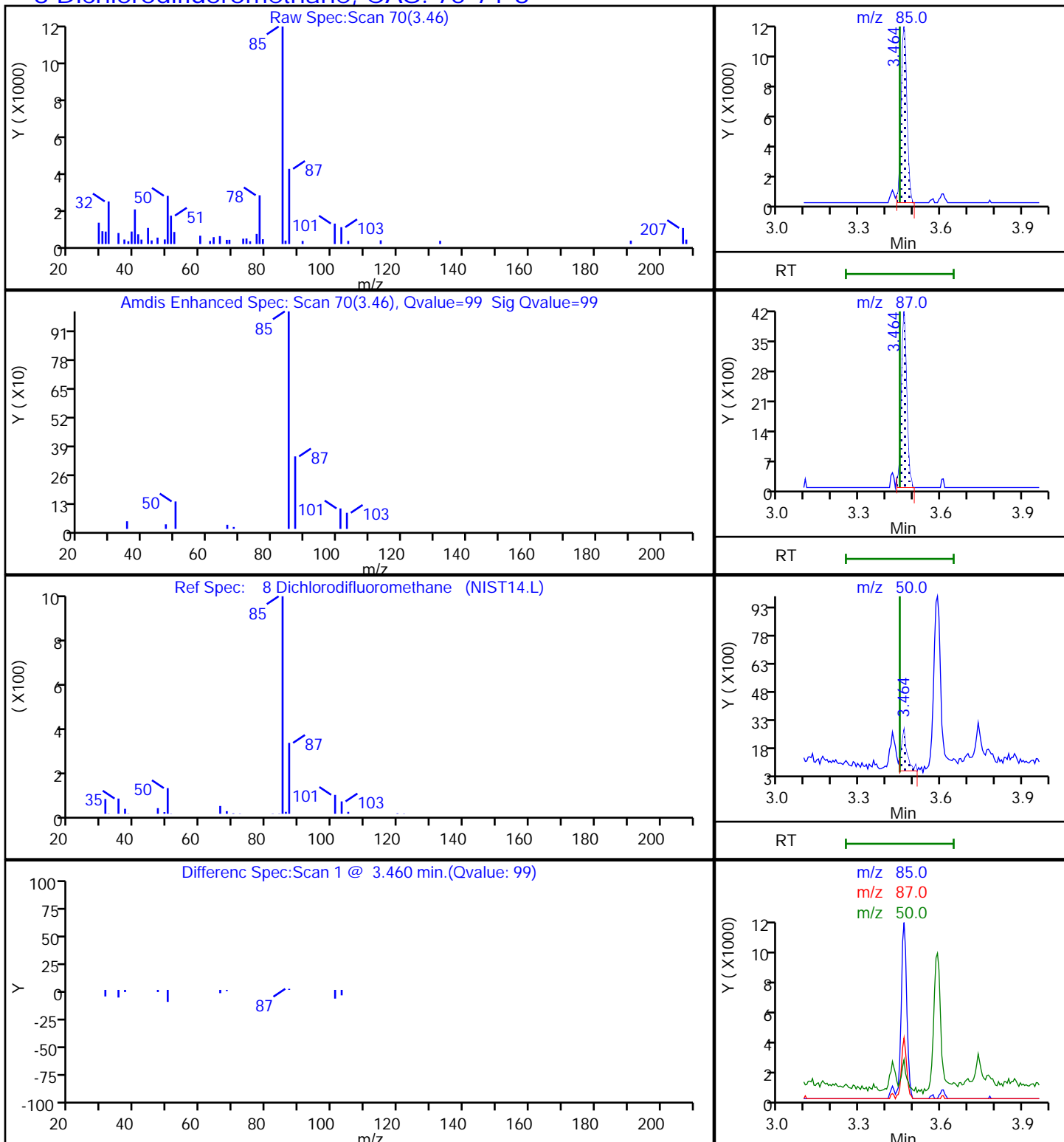
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D

Injection Date: 13-Nov-2018 19:24:30

Instrument ID: MR

Lims ID: 140-13304-A-3

Lab Sample ID: 140-13304-3

Client ID: BLDG-C INFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

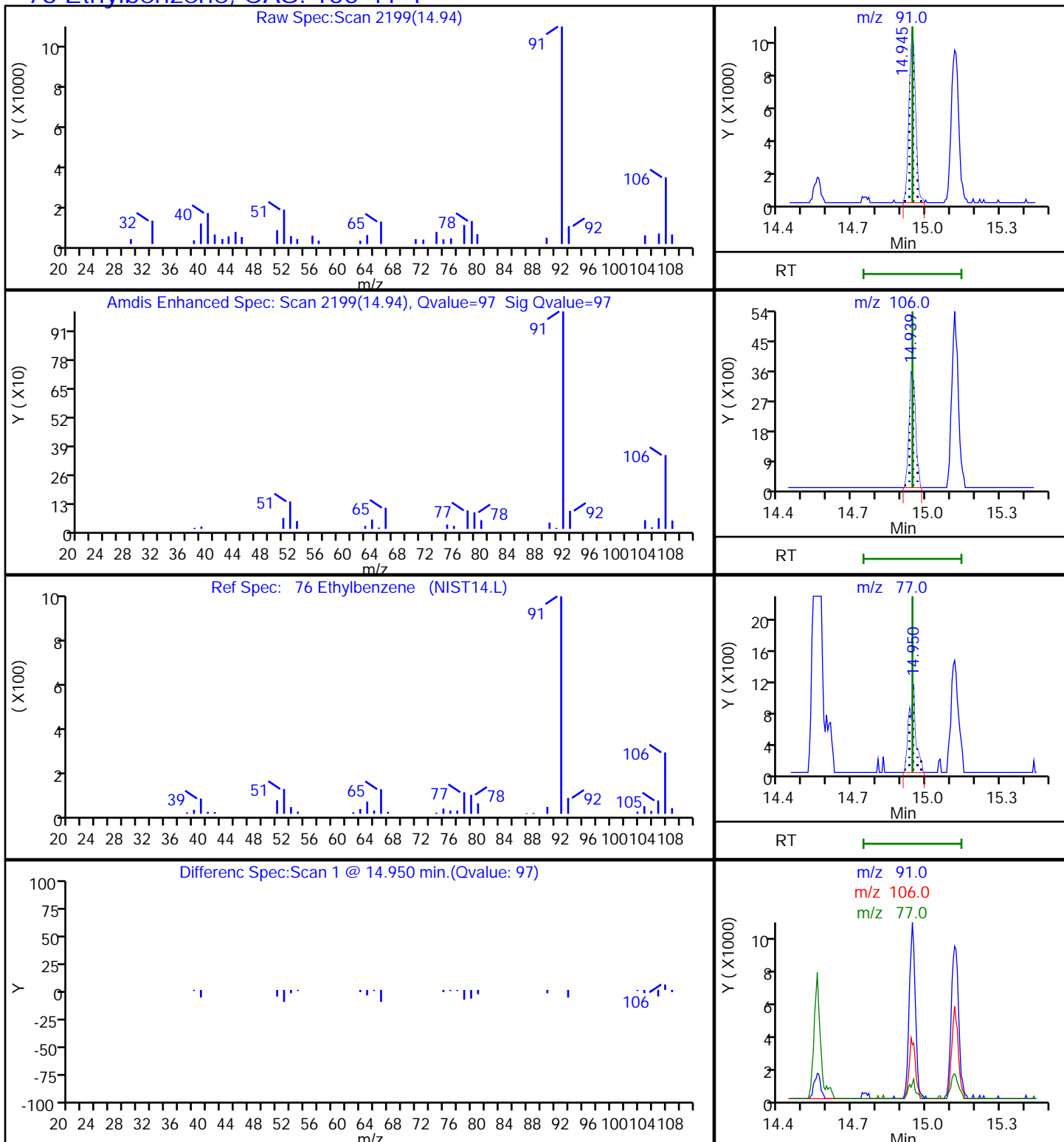
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D

Injection Date: 13-Nov-2018 19:24:30

Instrument ID: MR

Lims ID: 140-13304-A-3

Lab Sample ID: 140-13304-3

Client ID: BLDG-C INFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

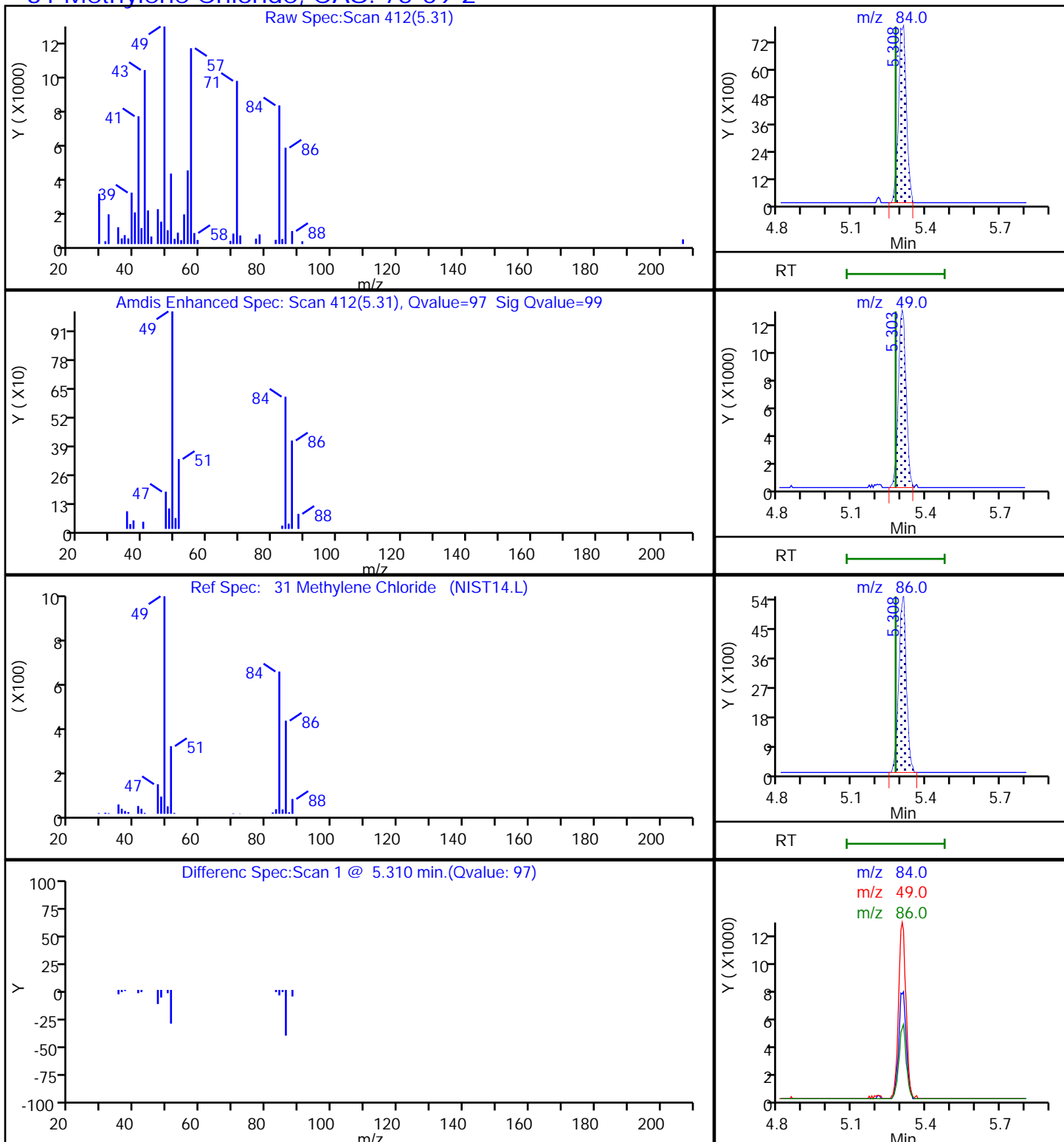
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D

Injection Date: 13-Nov-2018 19:24:30

Instrument ID: MR

Lims ID: 140-13304-A-3

Lab Sample ID: 140-13304-3

Client ID: BLDG-C INFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

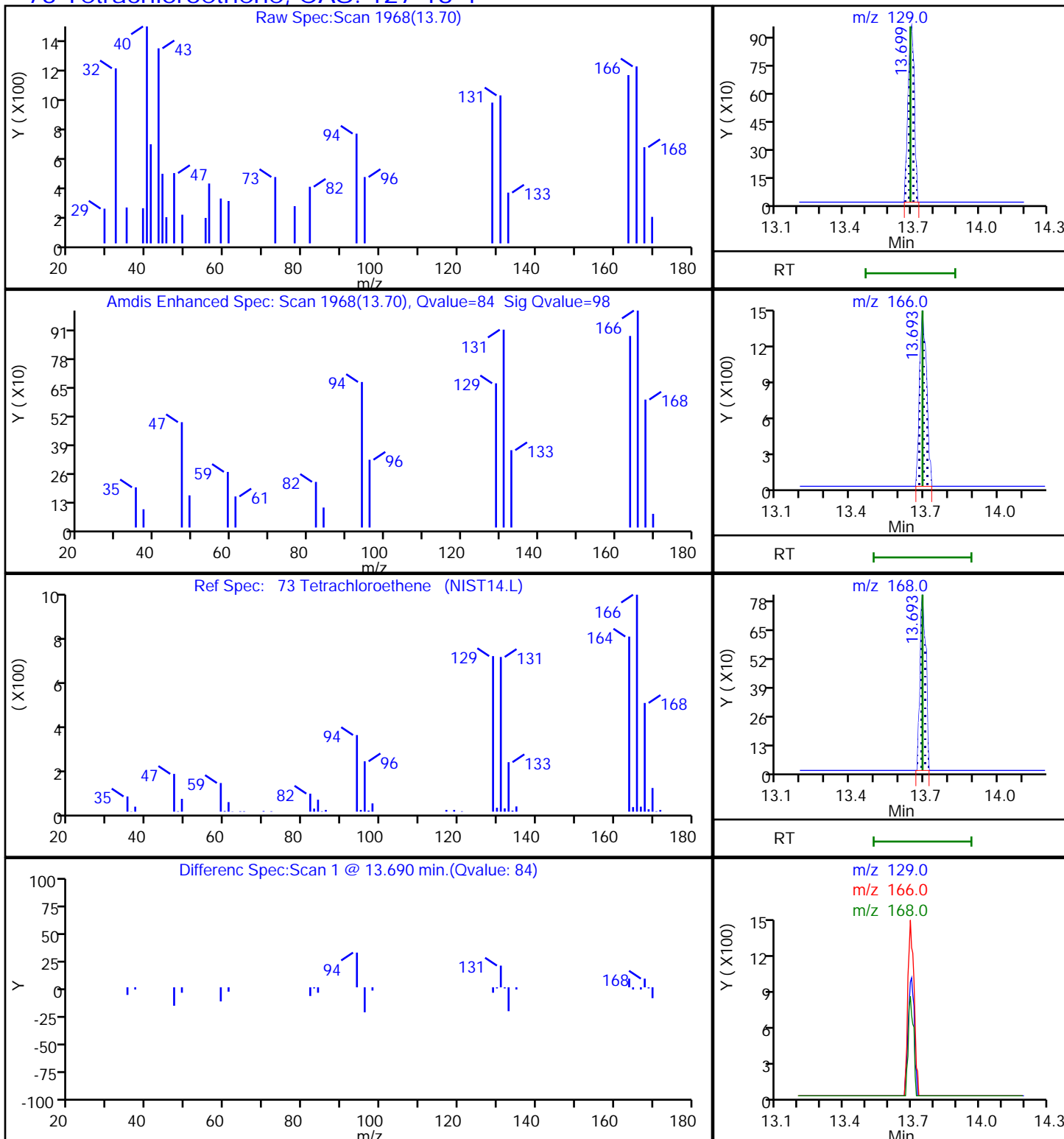
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D

Injection Date: 13-Nov-2018 19:24:30

Instrument ID: MR

Lims ID: 140-13304-A-3

Lab Sample ID: 140-13304-3

Client ID: BLDG-C INFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

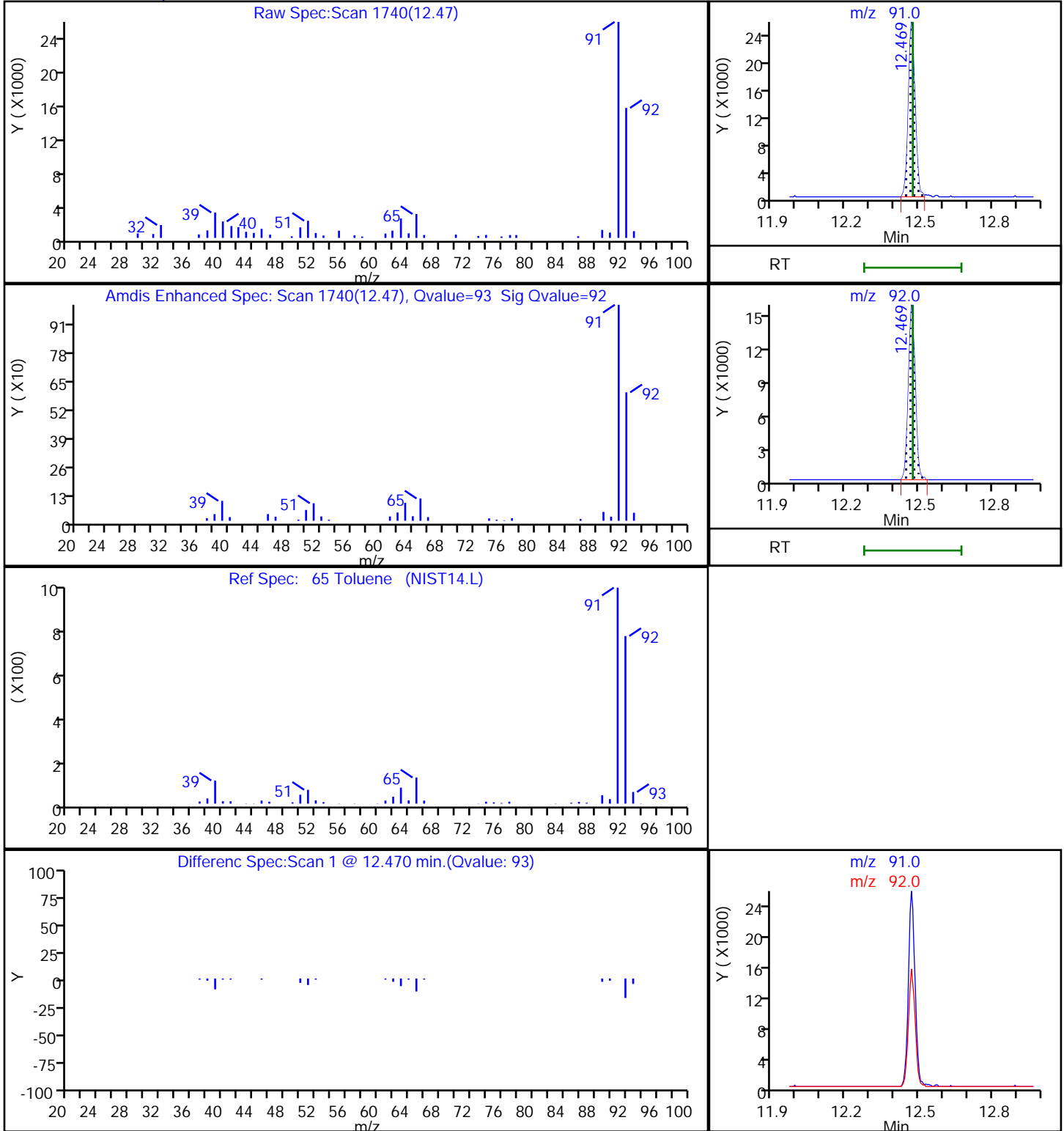
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D

Injection Date: 13-Nov-2018 19:24:30

Instrument ID: MR

Lims ID: 140-13304-A-3

Lab Sample ID: 140-13304-3

Client ID: BLDG-C INFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

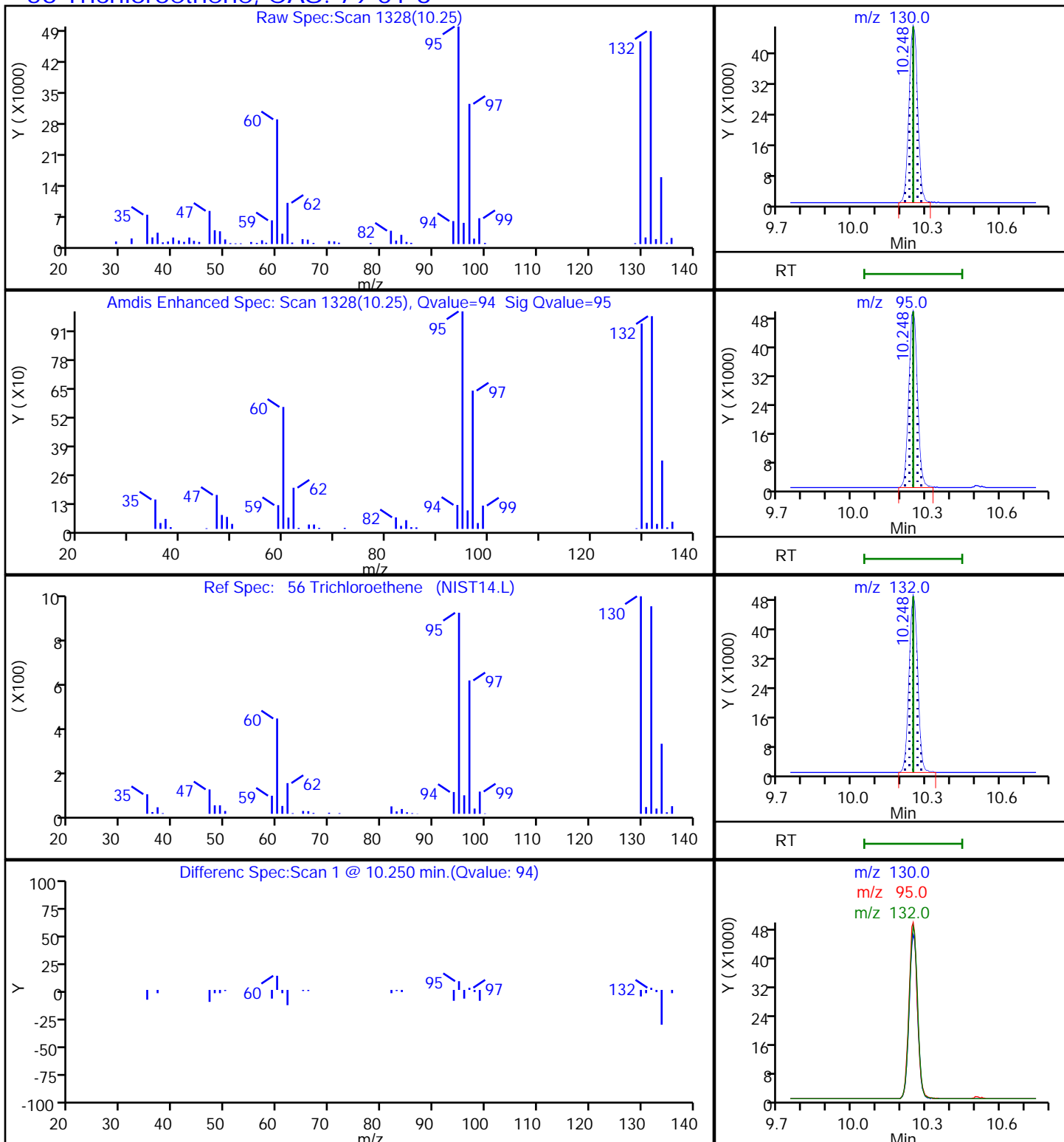
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D

Injection Date: 13-Nov-2018 19:24:30

Instrument ID: MR

Lims ID: 140-13304-A-3

Lab Sample ID: 140-13304-3

Client ID: BLDG-C INFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

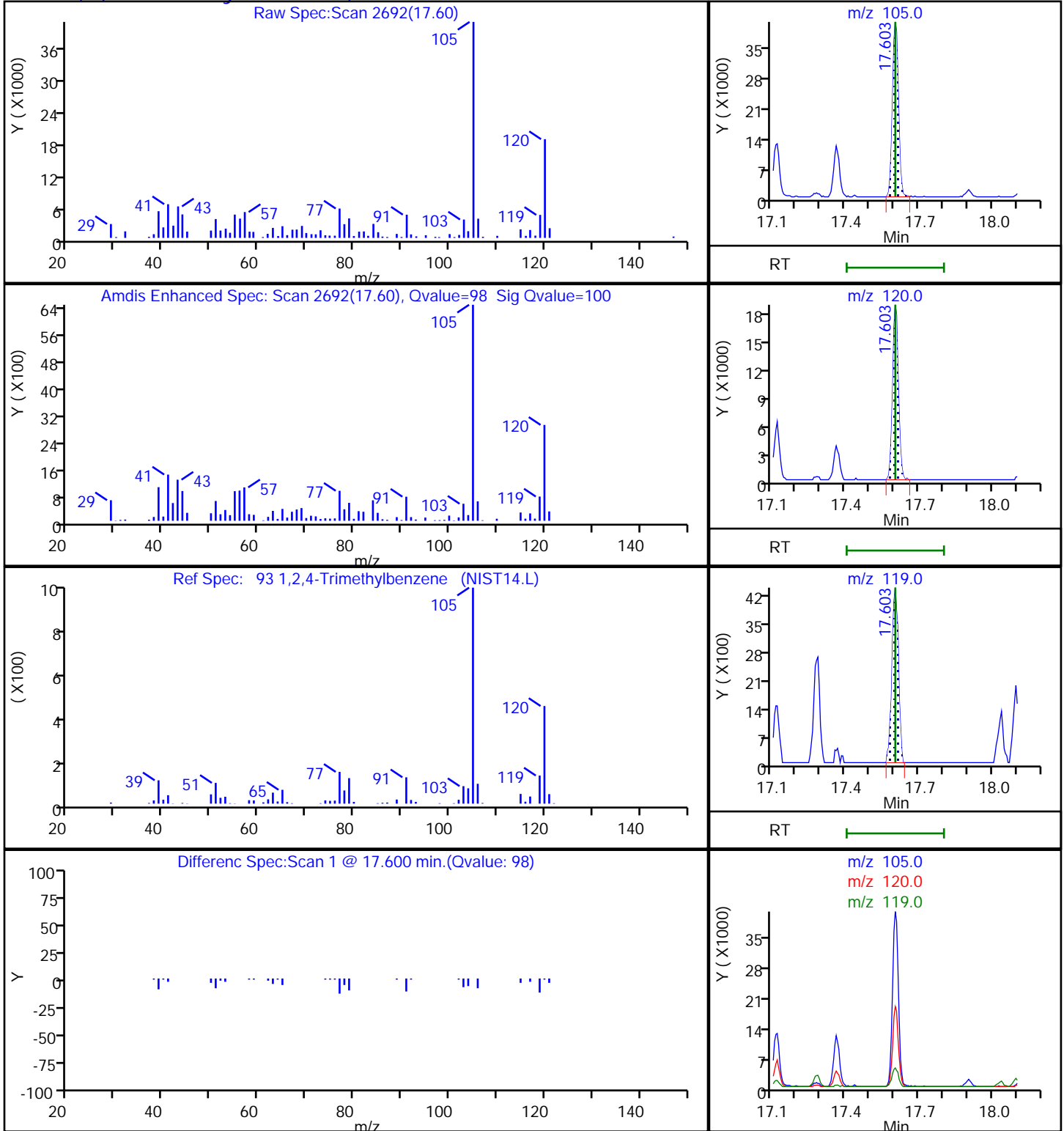
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D

Injection Date: 13-Nov-2018 19:24:30

Instrument ID: MR

Lims ID: 140-13304-A-3

Lab Sample ID: 140-13304-3

Client ID: BLDG-C INFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

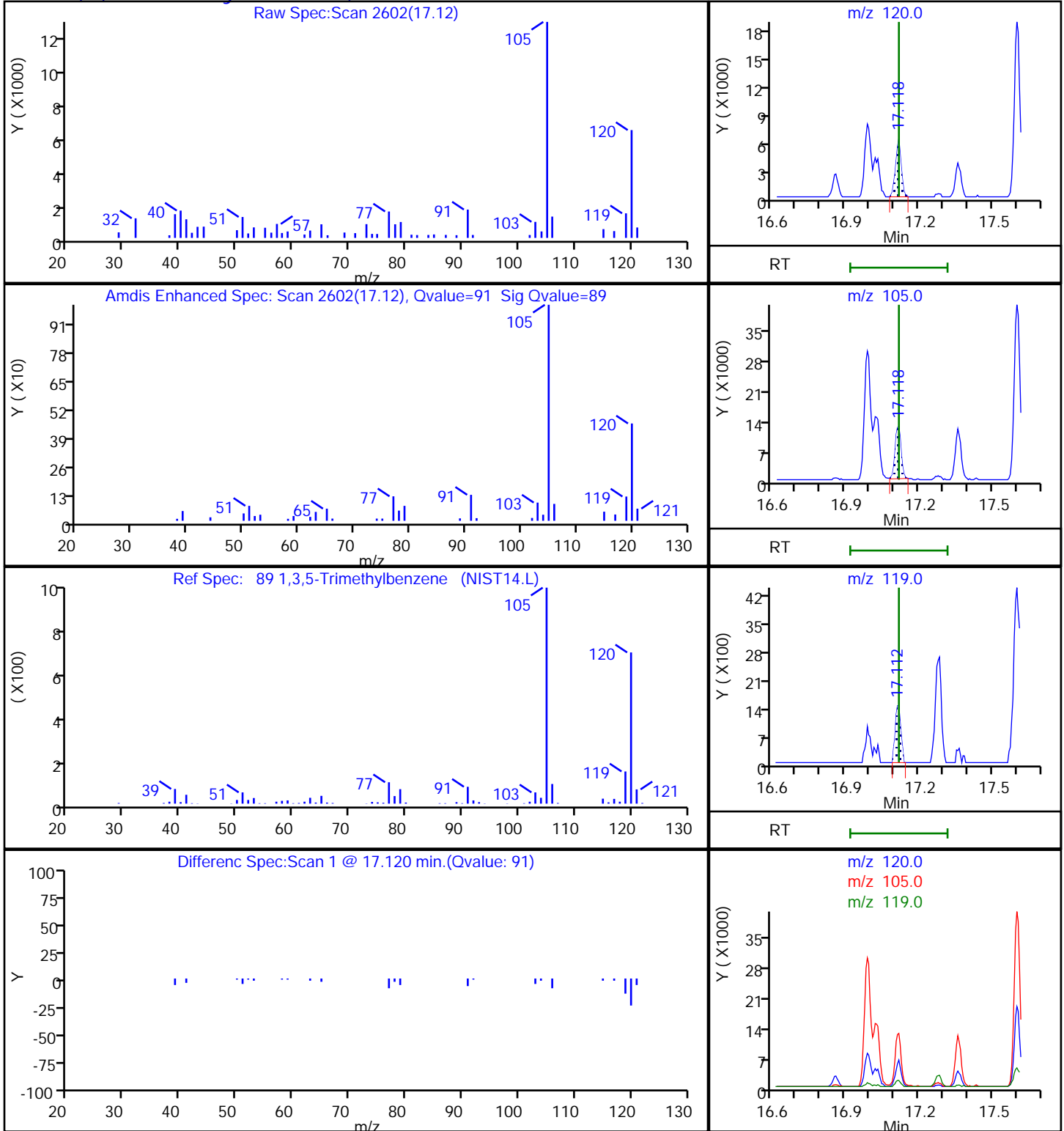
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D

Injection Date: 13-Nov-2018 19:24:30

Instrument ID: MR

Lims ID: 140-13304-A-3

Lab Sample ID: 140-13304-3

Client ID: BLDG-C INFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

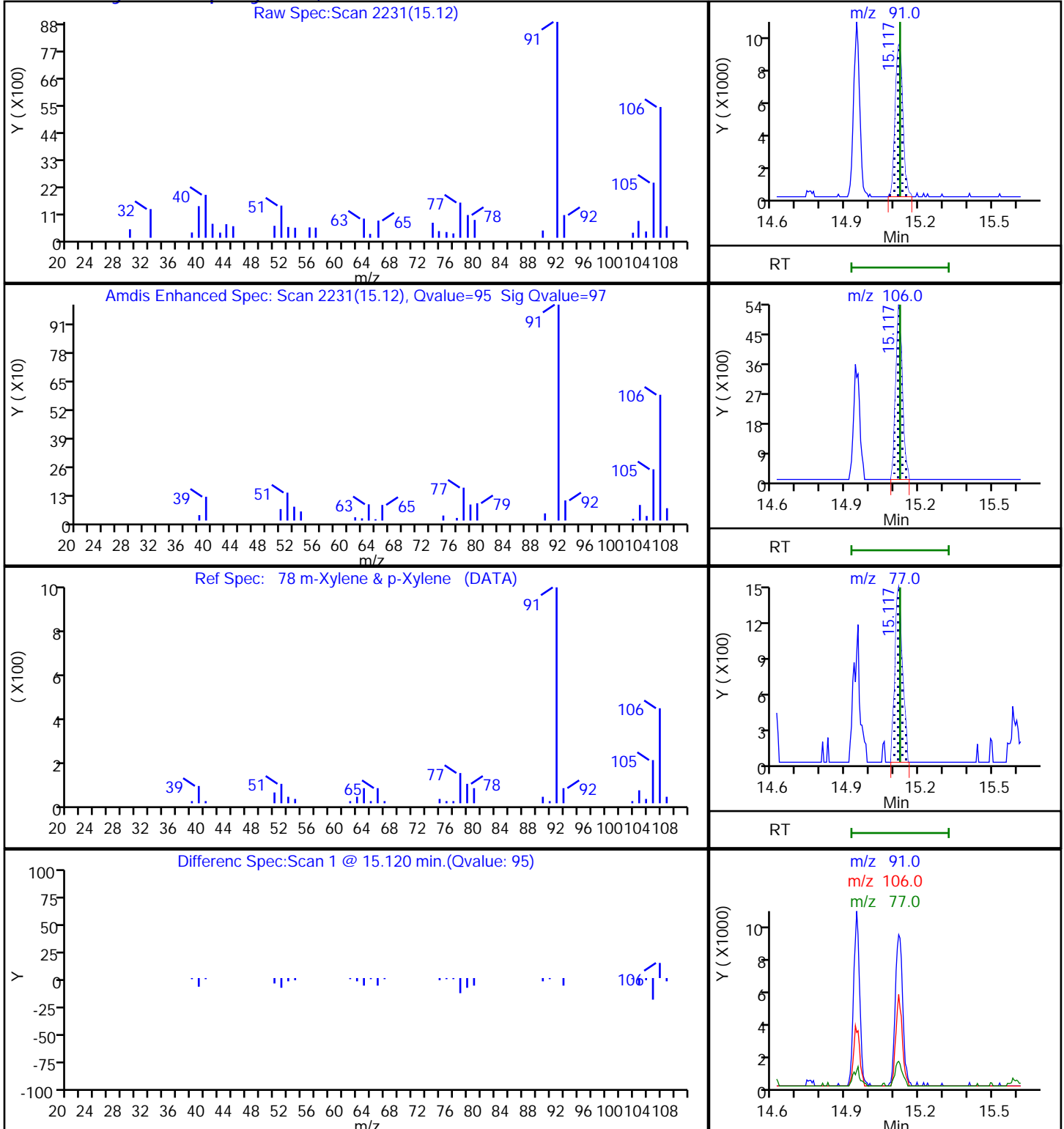
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P104.D

Injection Date: 13-Nov-2018 19:24:30

Instrument ID: MR

Lims ID: 140-13304-A-3

Lab Sample ID: 140-13304-3

Client ID: BLDG-C INFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

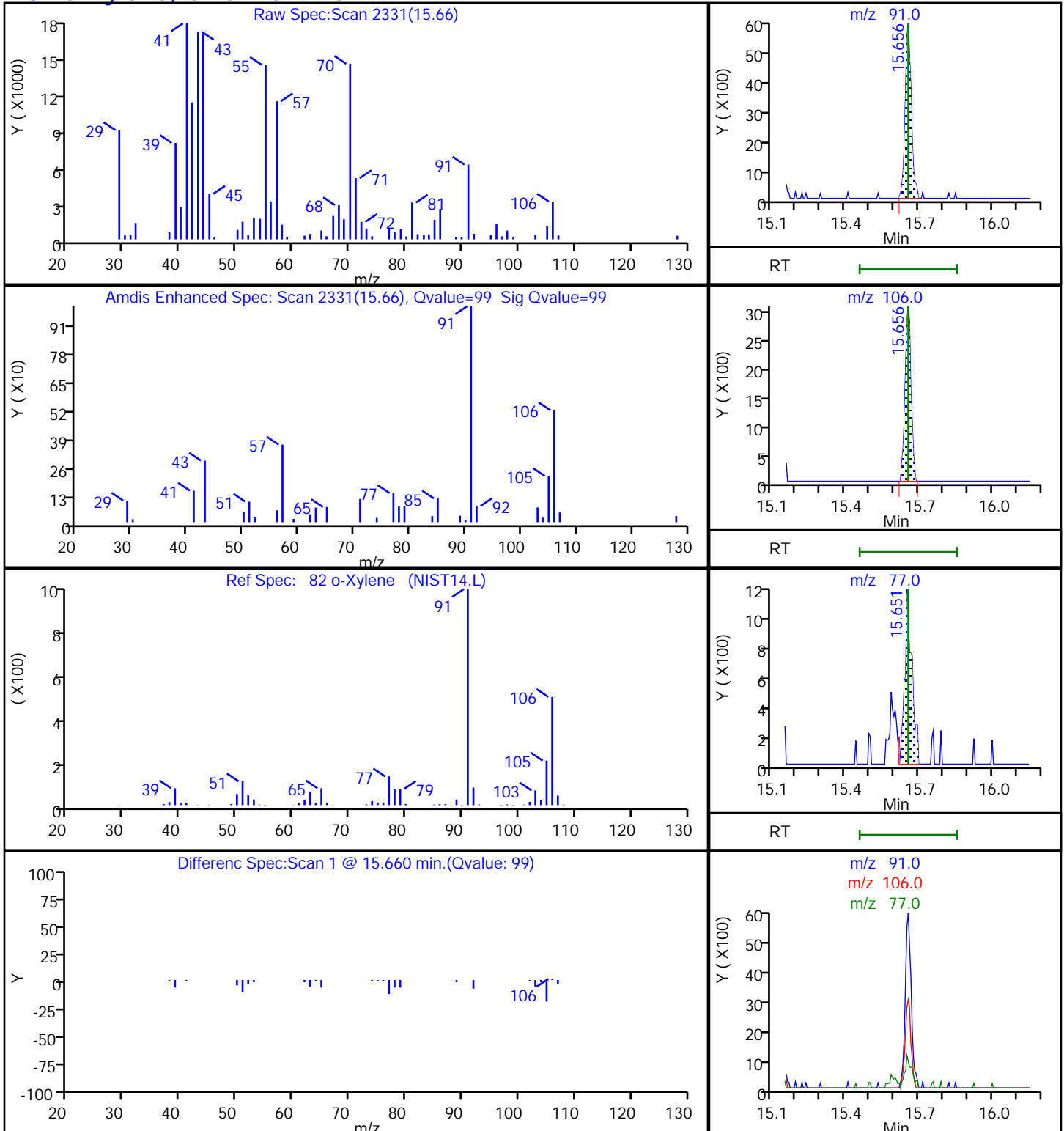
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Client Sample ID: BLDG-A EFFLUENT Lab Sample ID: 140-13304-4
 Matrix: Air Lab File ID: RK13P105.D
 Analysis Method: TO 15 LL Date Collected: 11/09/2018 13:37
 Sample wt/vol: 100(mL) Date Analyzed: 11/13/2018 20:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25249 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.33	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.36	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.20	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	1.1		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.2		2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.86		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	3.0		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.8		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.31	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Client Sample ID: BLDG-A EFFLUENT Lab Sample ID: 140-13304-4
 Matrix: Air Lab File ID: RK13P105.D
 Analysis Method: TO 15 LL Date Collected: 11/09/2018 13:37
 Sample wt/vol: 100(mL) Date Analyzed: 11/13/2018 20:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25249 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	8.1		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.80	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	4.4		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	11		6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	16		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	9.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.5	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P105.D
 Lims ID: 140-13304-A-4
 Client ID: BLDG-A EFFLUENT
 Sample Type: Client
 Inject. Date: 13-Nov-2018 20:16:30 ALS Bottle#: 5 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-015
 Misc. Info.: 140-13304-a-4
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 11:06:22 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits Date: 14-Nov-2018 11:15:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.395	7.395	0.000	96	212532	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.493	0.000	95	1377132	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.557	-0.001	90	1111150	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.282	0.000	84	779240	3.74	
6 Chlorodifluoromethane	51	3.427	3.405	0.022	48	16419	0.0722	
8 Dichlorodifluoromethane	85	3.464	3.446	0.016	99	18820	0.1111	
27 1,1-Dichloroethene	96	5.033	5.023	0.010	95	20193	0.2240	
31 Methylene Chloride	84	5.287	5.276	0.011	99	66175	0.6380	
37 1,1-Dichloroethane	63	6.285	6.269	0.010	99	7775	0.0396	
41 cis-1,2-Dichloroethene	96	7.126	7.115	0.006	98	41480	0.4109	
45 1,1,1-Trichloroethane	97	8.366	8.361	0.005	96	122144	0.5993	
47 Benzene	78	8.916	8.922	-0.006	98	20512	0.0663	
56 Trichloroethene	130	10.248	10.242	0.000	94	41078	0.3537	
65 Toluene	91	12.470	12.475	-0.005	94	57445	0.1711	
93 1,2,4-Trimethylbenzene	105	17.608	17.603	0.005	97	26287	0.0618	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P105.D

Injection Date: 13-Nov-2018 20:16:30

Instrument ID: MR

Operator ID:

Lims ID: 140-13304-A-4

Lab Sample ID: 140-13304-4

Worklist Smp#: 15

Client ID: BLDG-A EFFLUENT

Purge Vol: 500.000 mL

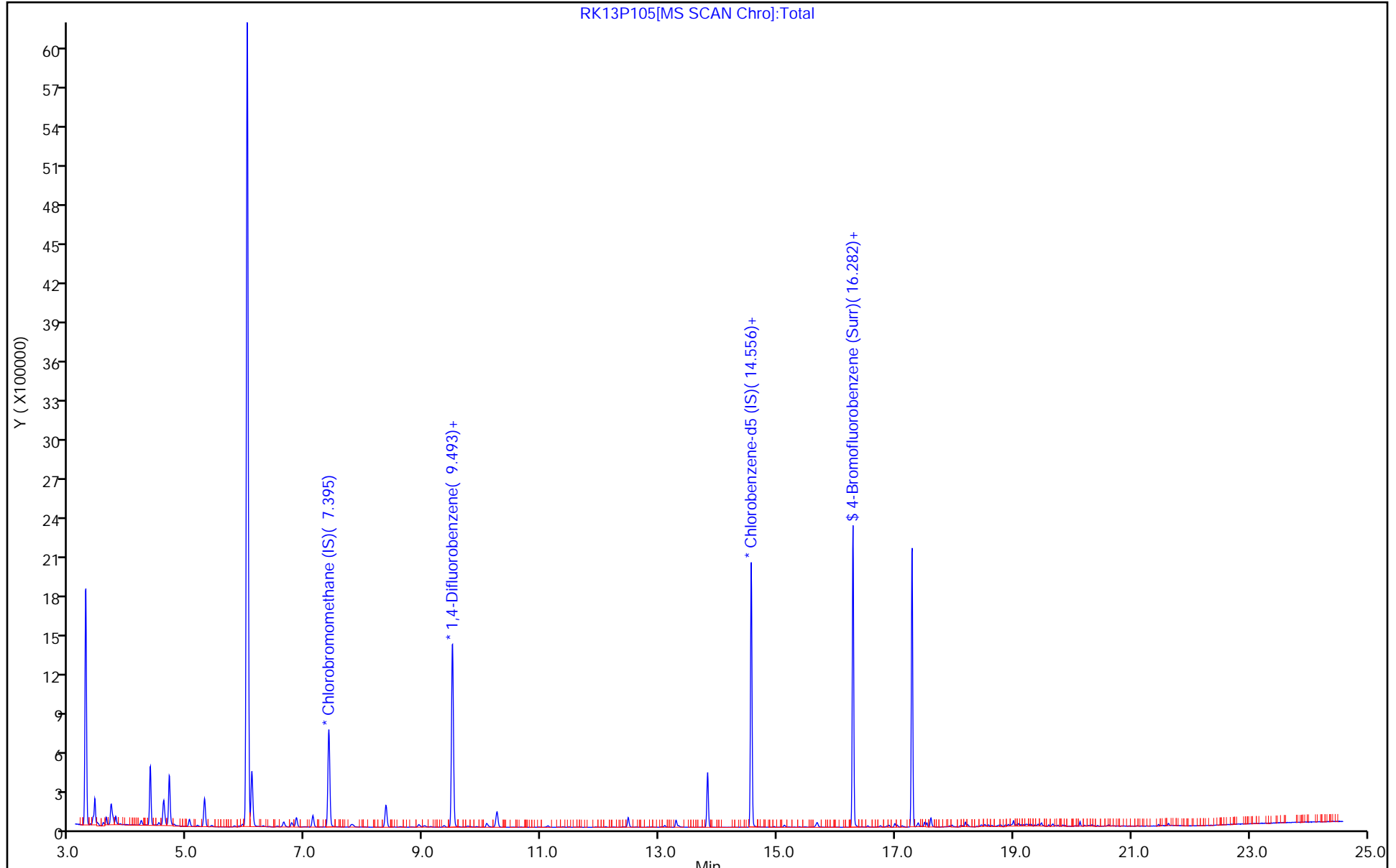
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P105.D
 Lims ID: 140-13304-A-4
 Client ID: BLDG-A EFFLUENT
 Sample Type: Client
 Inject. Date: 13-Nov-2018 20:16:30 ALS Bottle#: 5 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-015
 Misc. Info.: 140-13304-a-4
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 11:06:22 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits Date: 14-Nov-2018 11:15:51

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.74	93.38

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P105.D

Injection Date: 13-Nov-2018 20:16:30

Instrument ID: MR

Lims ID: 140-13304-A-4

Lab Sample ID: 140-13304-4

Client ID: BLDG-A EFFLUENT

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

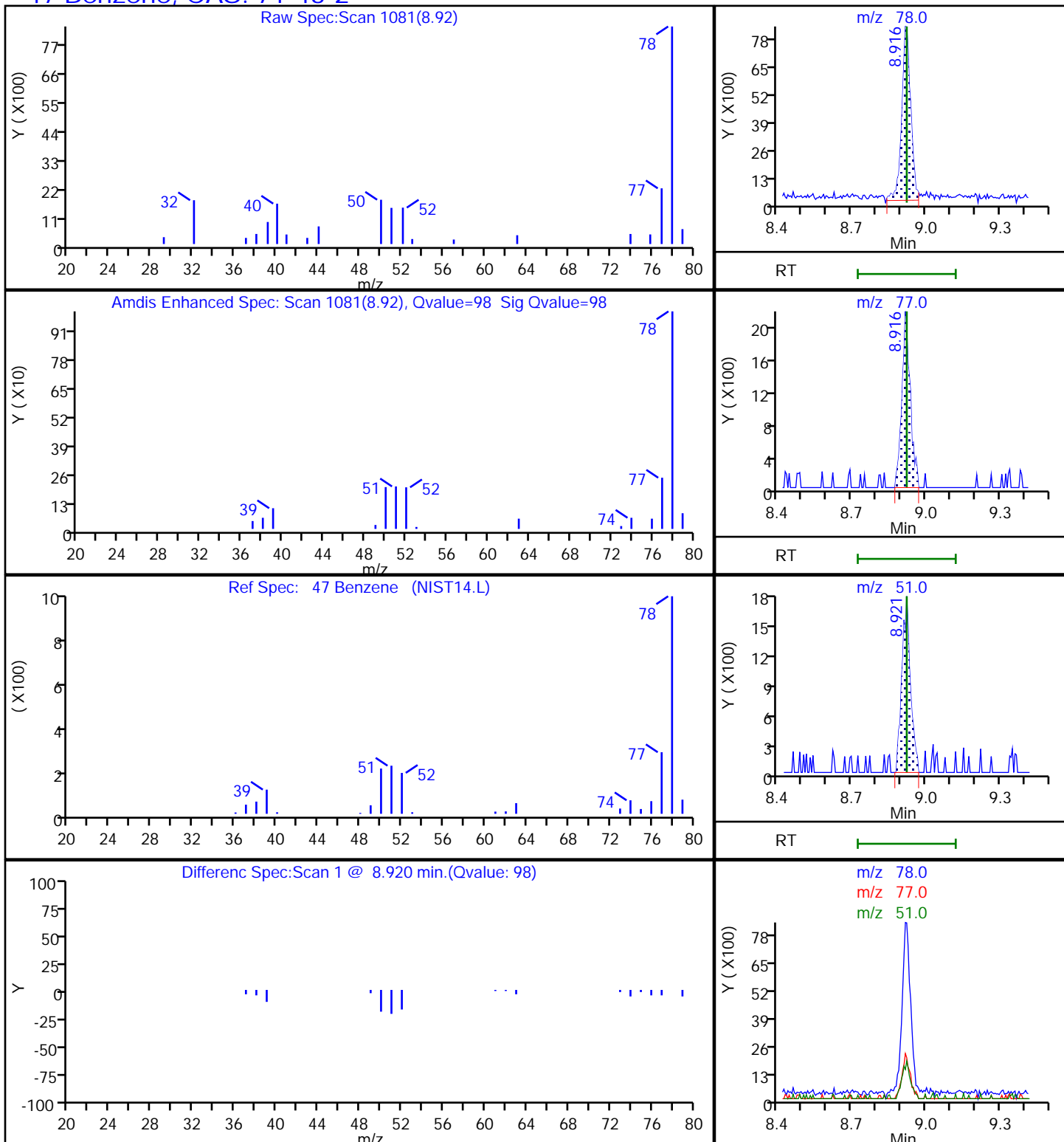
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P105.D

Injection Date: 13-Nov-2018 20:16:30

Instrument ID: MR

Lims ID: 140-13304-A-4

Lab Sample ID: 140-13304-4

Client ID: BLDG-A EFFLUENT

Operator ID:

ALS Bottle#: 5

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

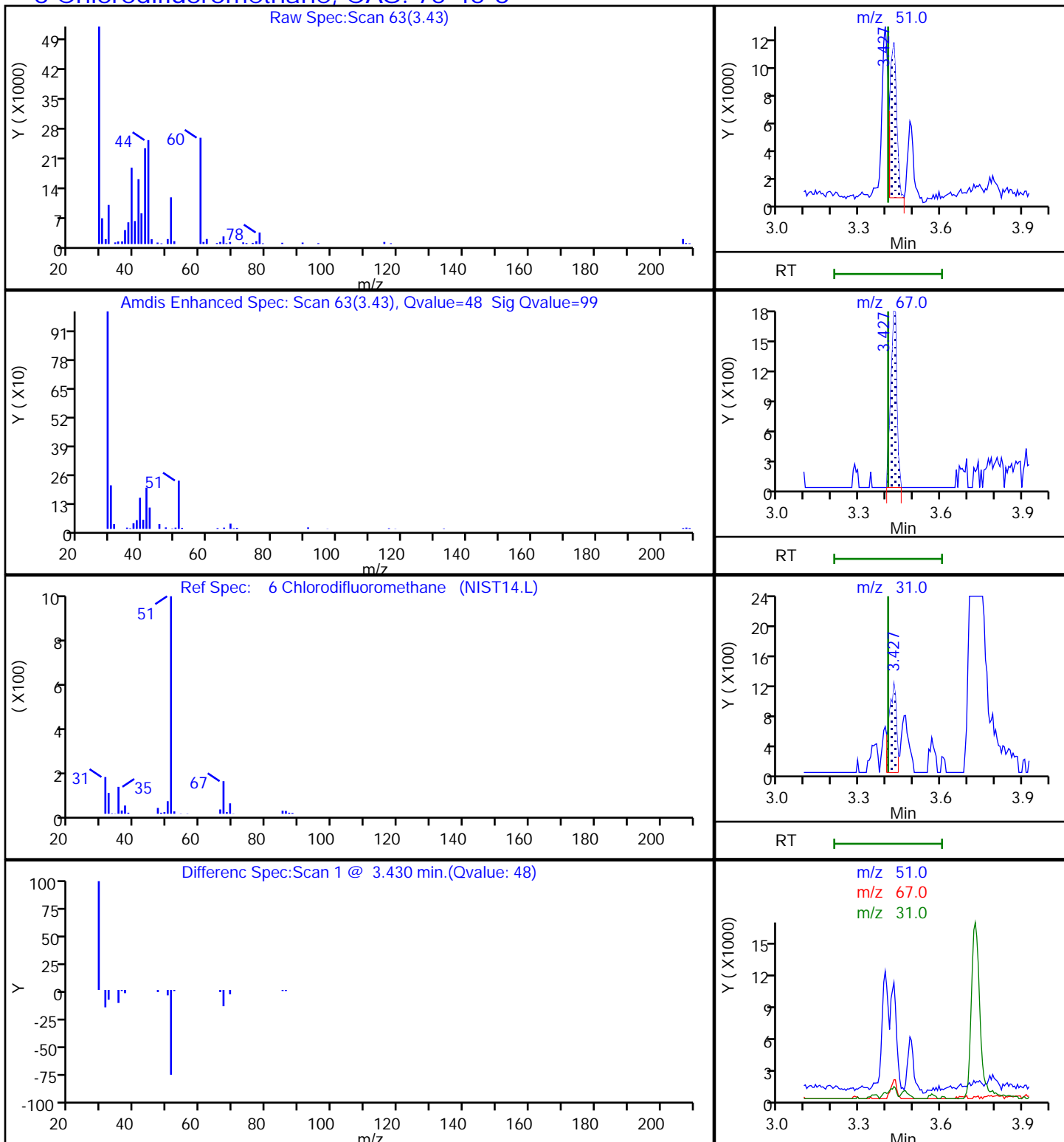
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P105.D

Injection Date: 13-Nov-2018 20:16:30

Instrument ID: MR

Lims ID: 140-13304-A-4

Lab Sample ID: 140-13304-4

Client ID: BLDG-A EFFLUENT

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

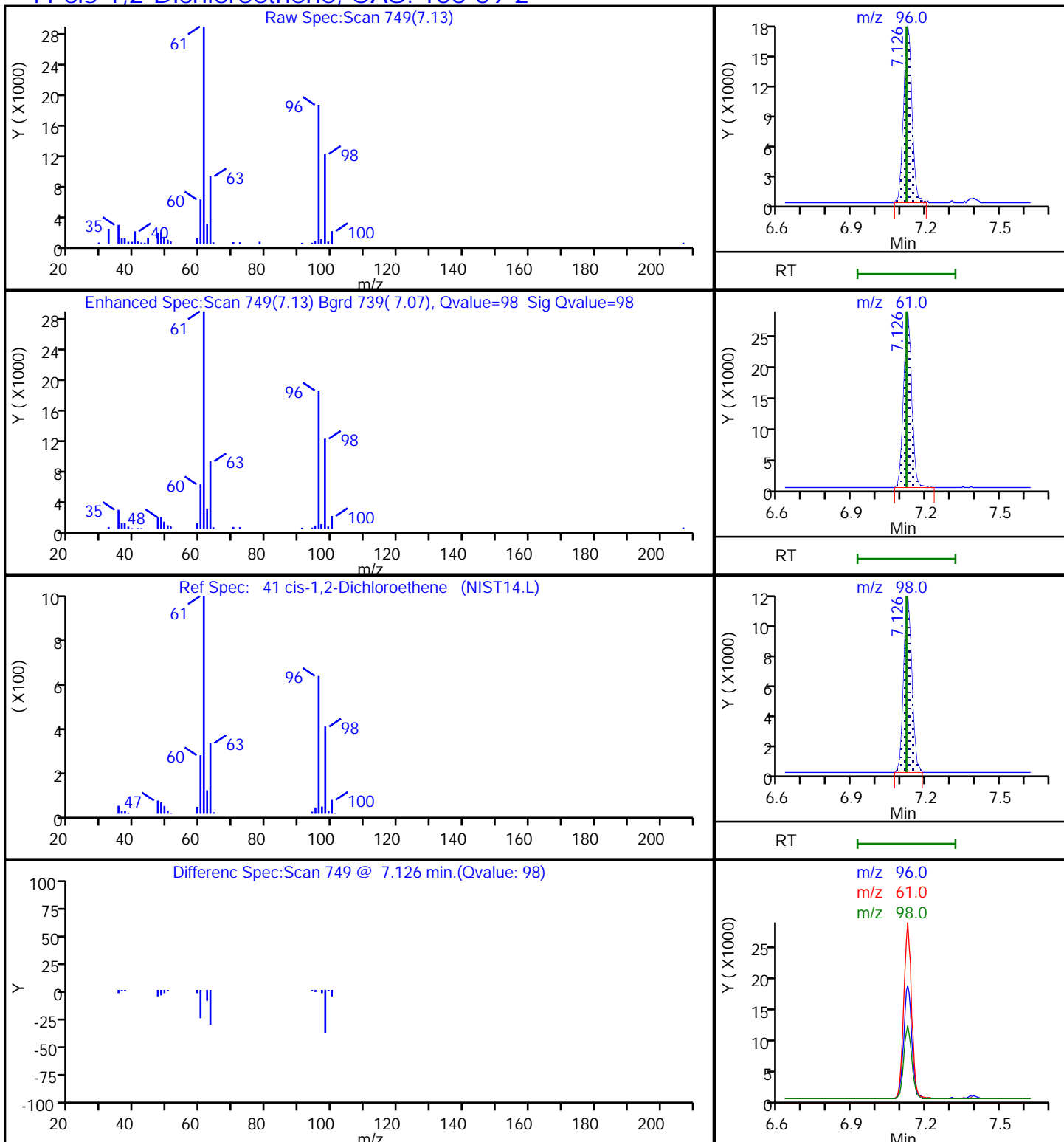
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P105.D

Injection Date: 13-Nov-2018 20:16:30

Instrument ID: MR

Lims ID: 140-13304-A-4

Lab Sample ID: 140-13304-4

Client ID: BLDG-A EFFLUENT

Operator ID:

ALS Bottle#:

5

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

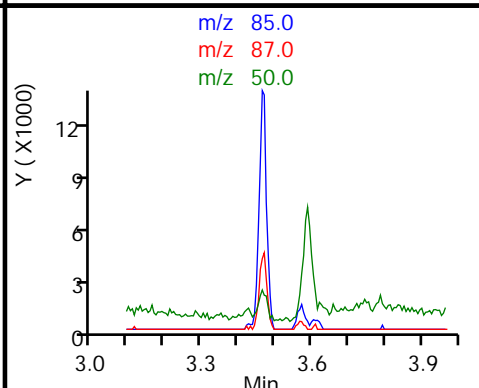
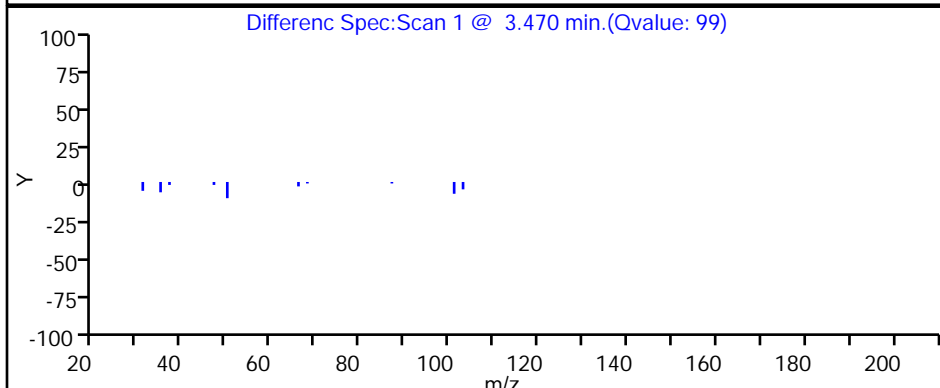
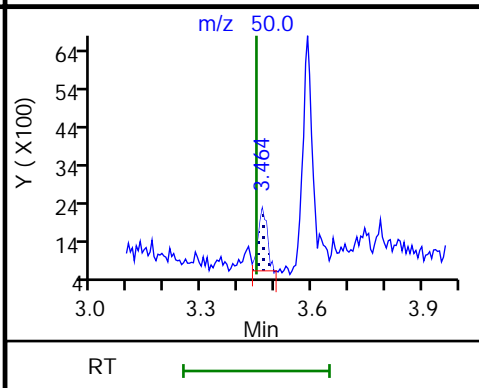
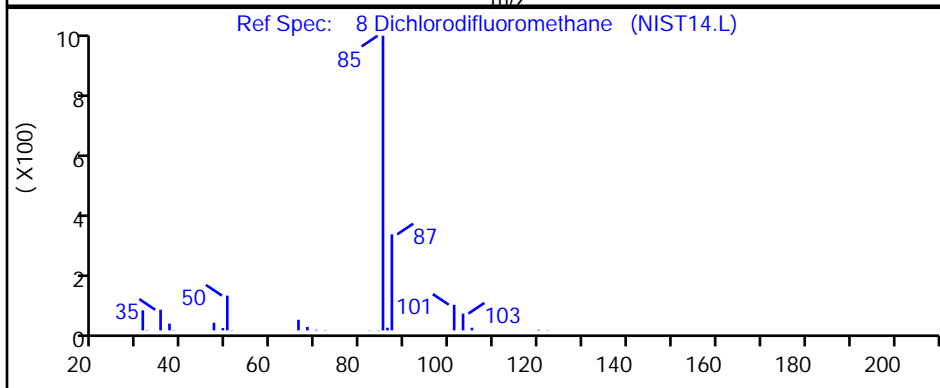
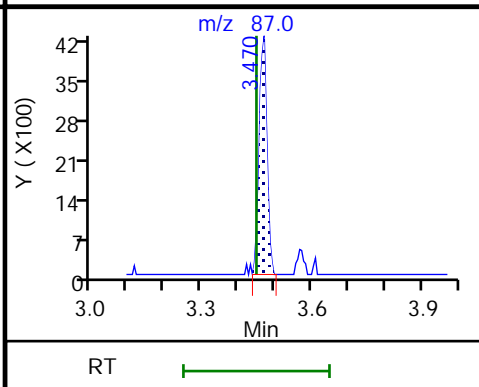
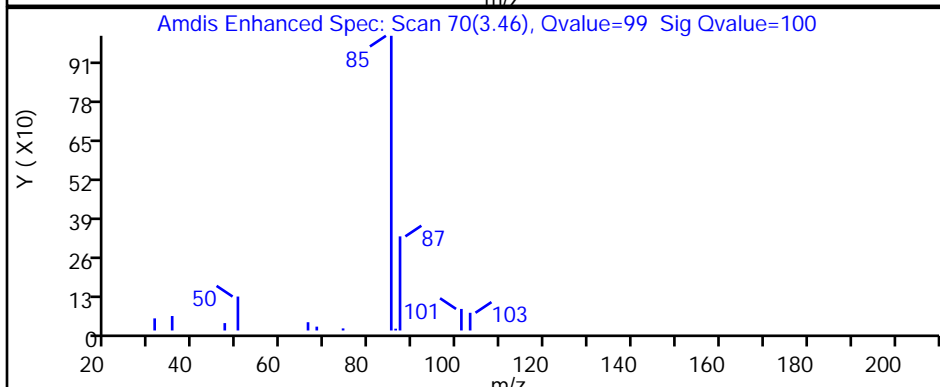
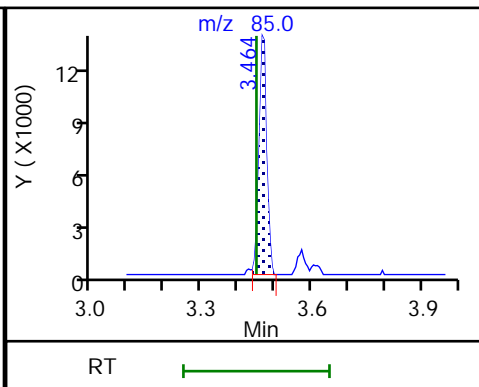
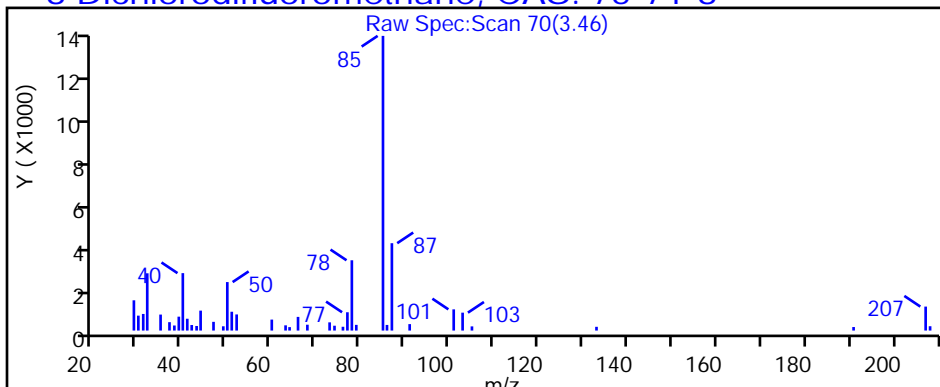
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P105.D

Injection Date: 13-Nov-2018 20:16:30

Instrument ID: MR

Lims ID: 140-13304-A-4

Lab Sample ID: 140-13304-4

Client ID: BLDG-A EFFLUENT

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

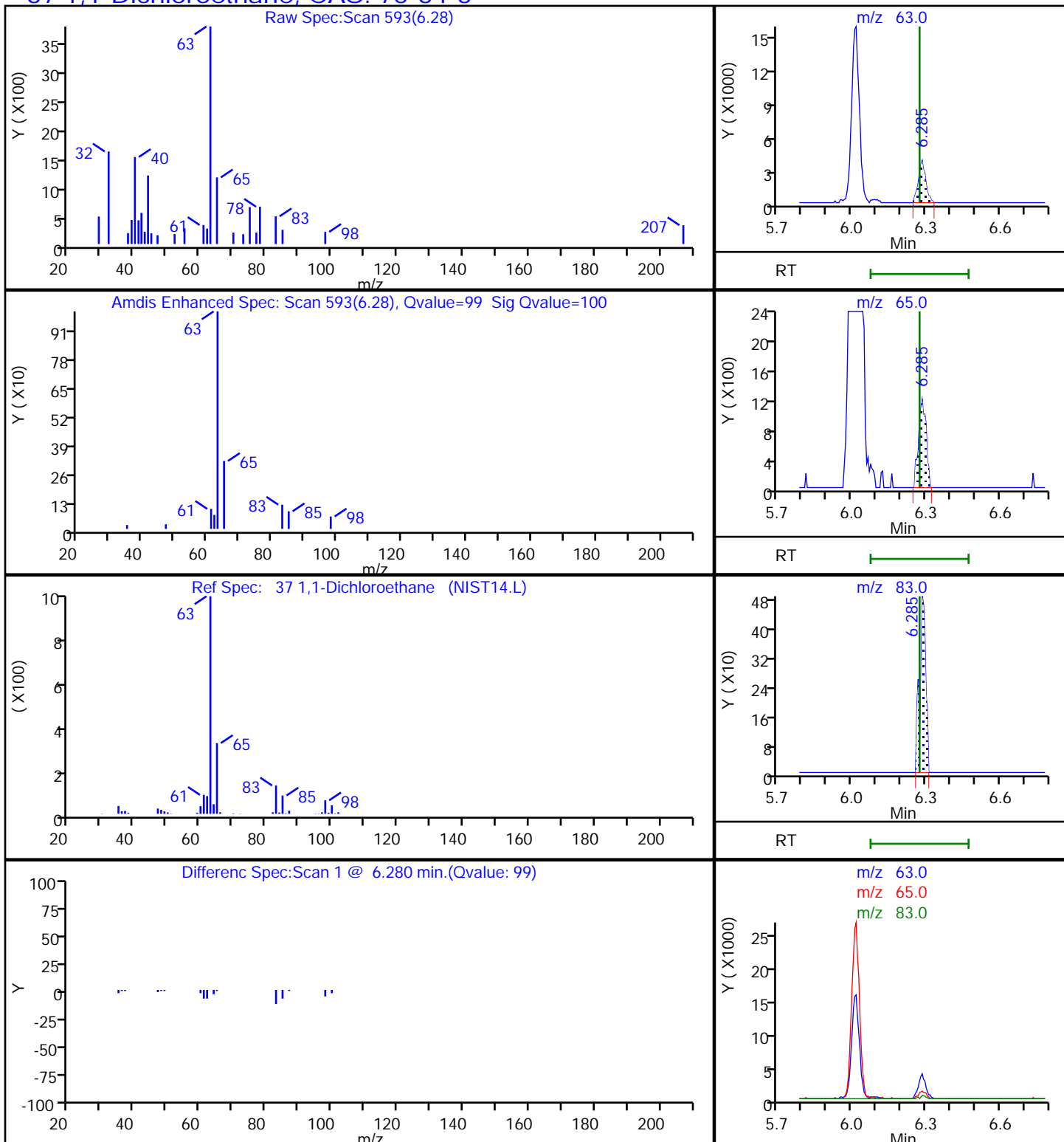
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P105.D

Injection Date: 13-Nov-2018 20:16:30

Instrument ID: MR

Lims ID: 140-13304-A-4

Lab Sample ID: 140-13304-4

Client ID: BLDG-A EFFLUENT

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

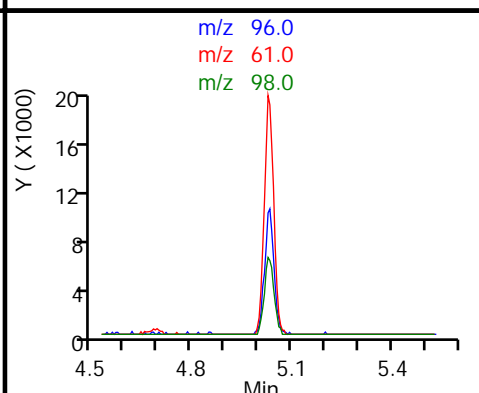
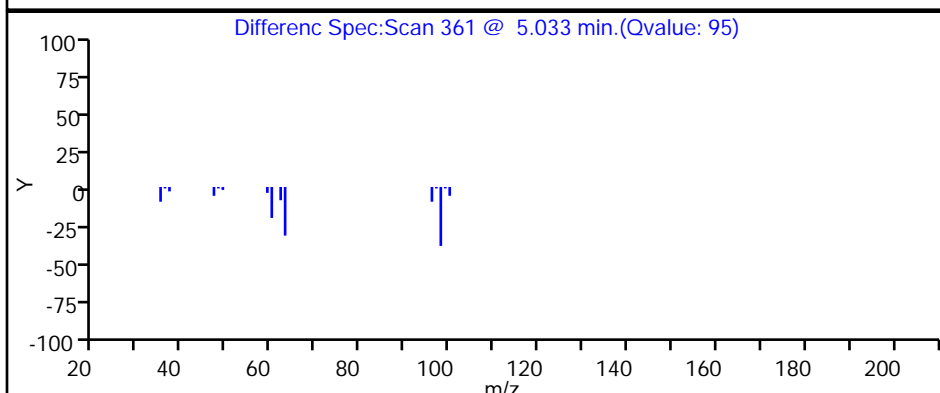
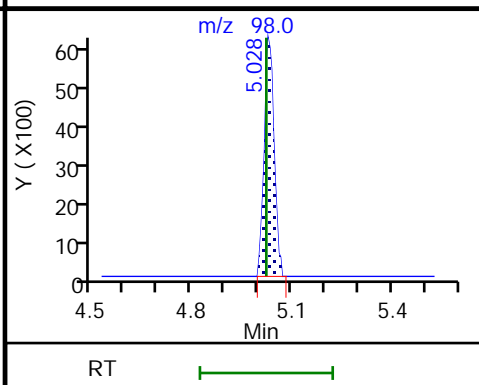
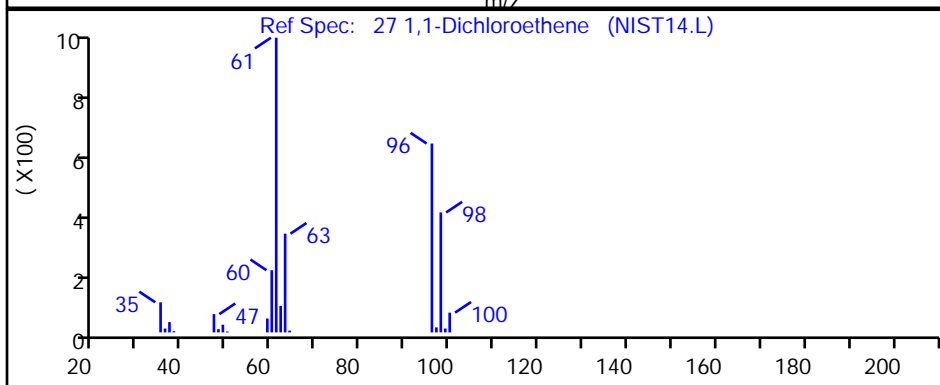
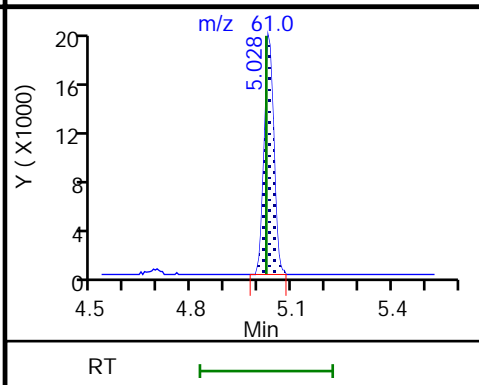
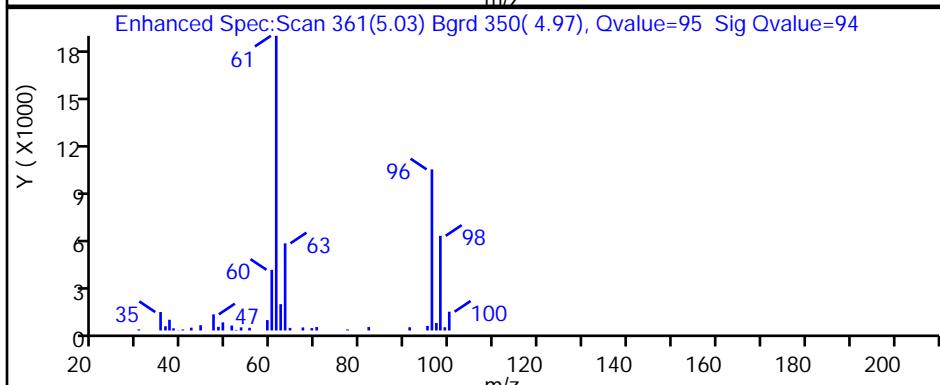
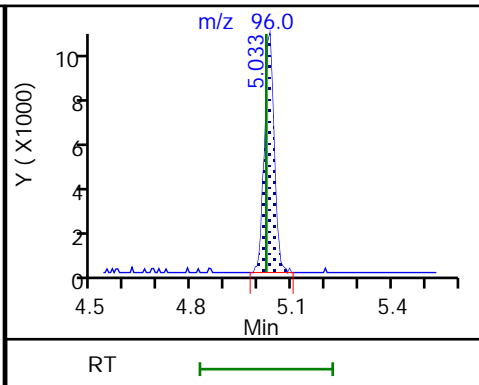
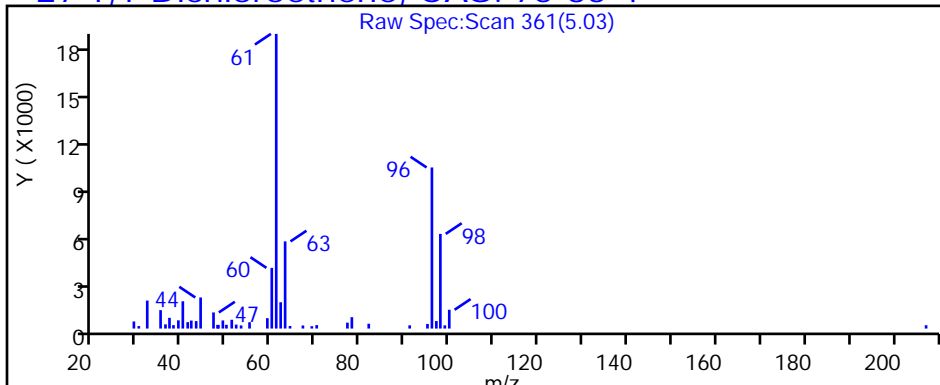
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P105.D

Injection Date: 13-Nov-2018 20:16:30

Instrument ID: MR

Lims ID: 140-13304-A-4

Lab Sample ID: 140-13304-4

Client ID: BLDG-A EFFLUENT

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

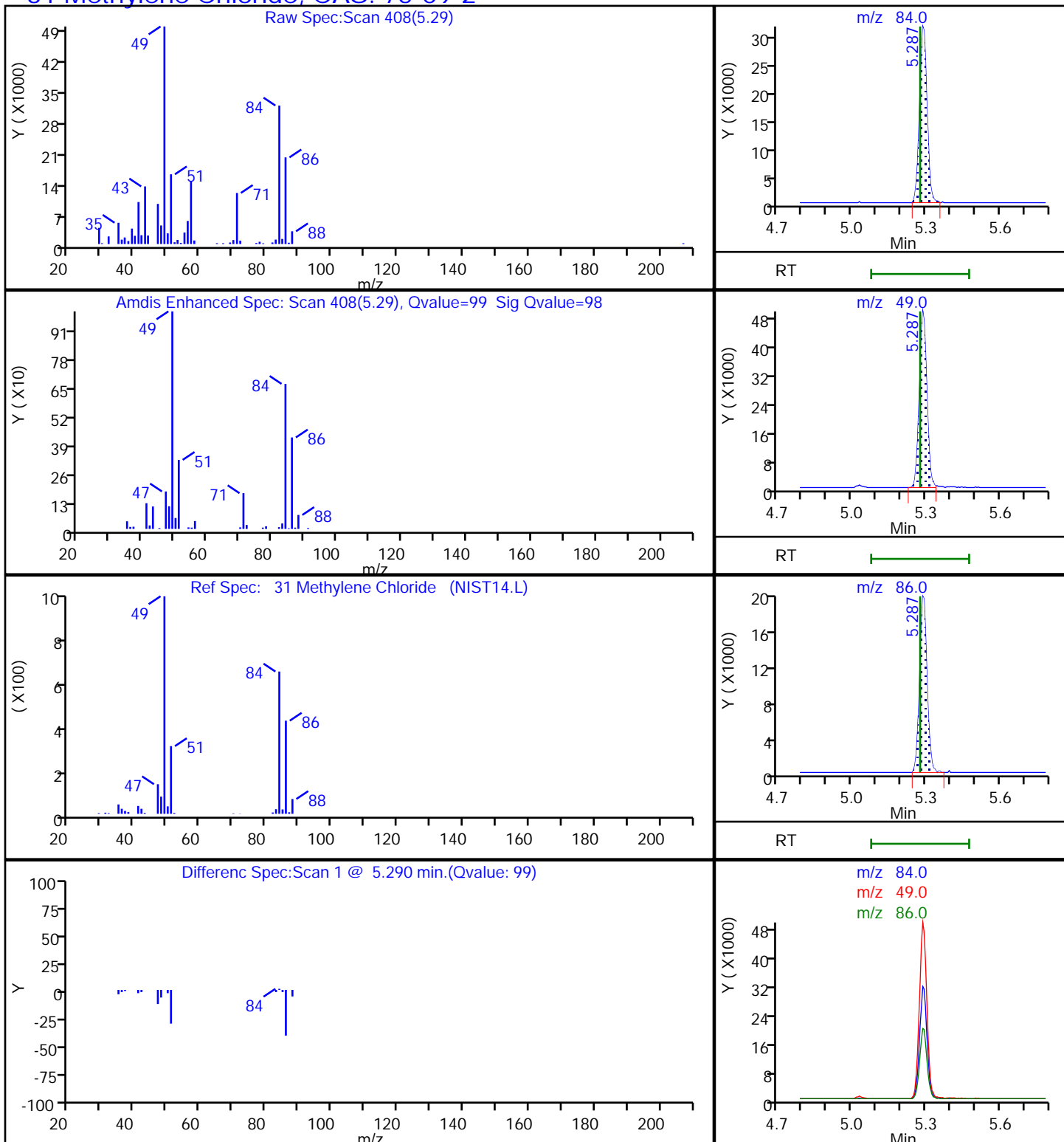
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P105.D

Injection Date: 13-Nov-2018 20:16:30

Instrument ID: MR

Lims ID: 140-13304-A-4

Lab Sample ID: 140-13304-4

Client ID: BLDG-A EFFLUENT

Operator ID:

ALS Bottle#: 5

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

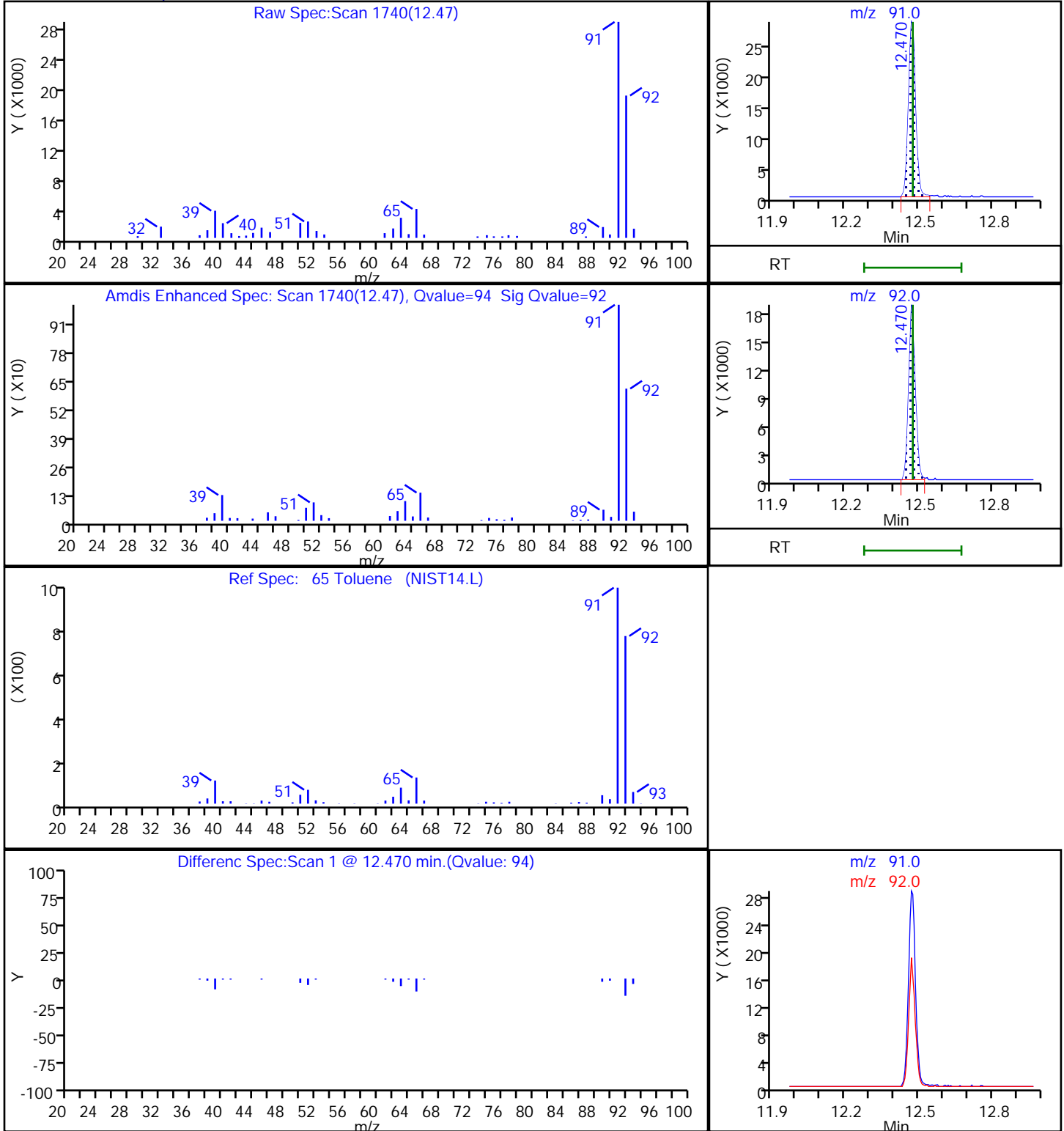
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P105.D

Injection Date: 13-Nov-2018 20:16:30

Instrument ID: MR

Lims ID: 140-13304-A-4

Lab Sample ID: 140-13304-4

Client ID: BLDG-A EFFLUENT

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

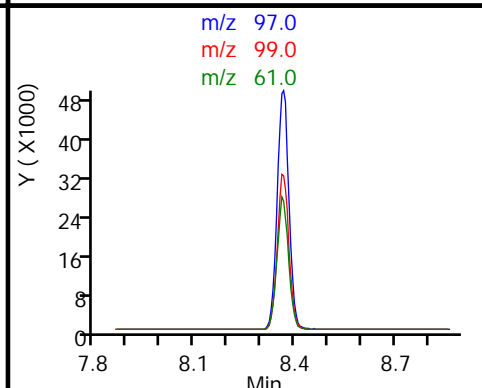
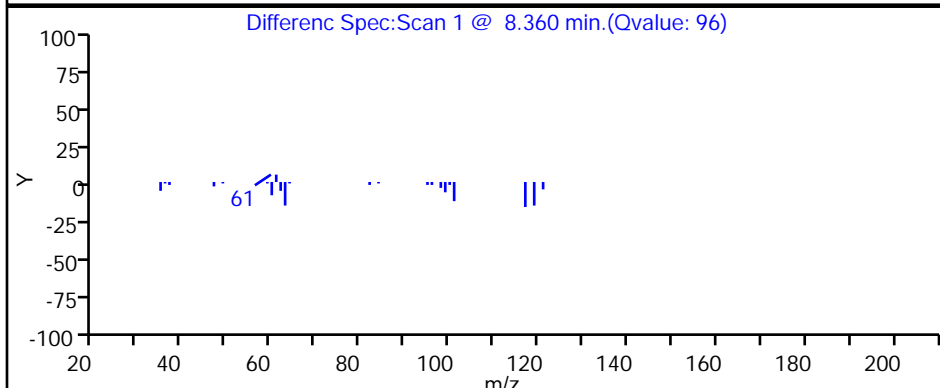
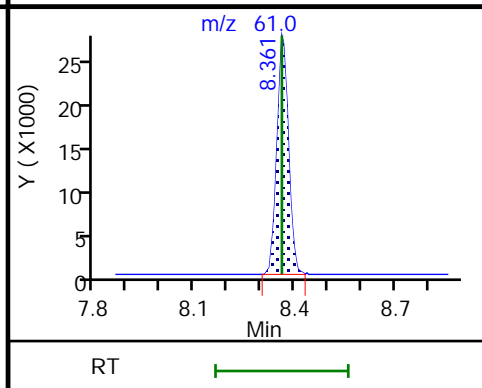
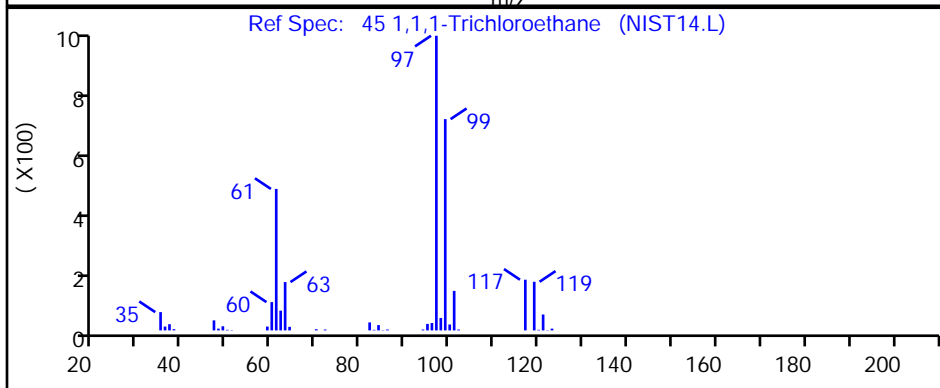
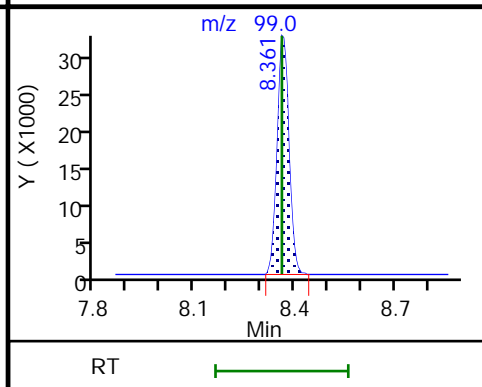
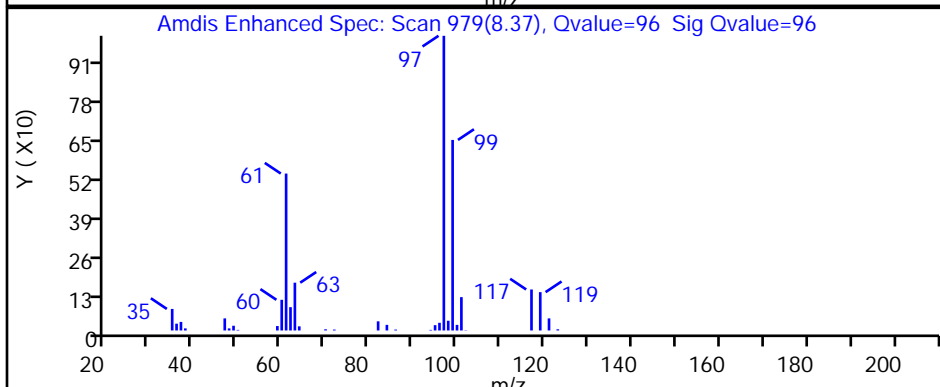
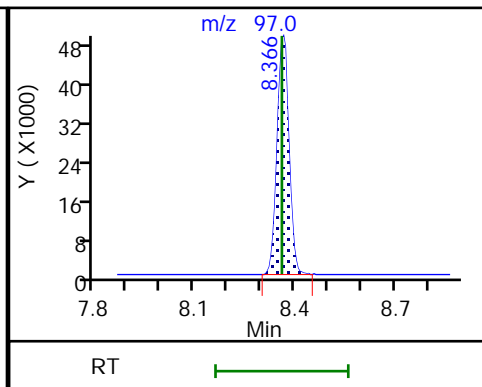
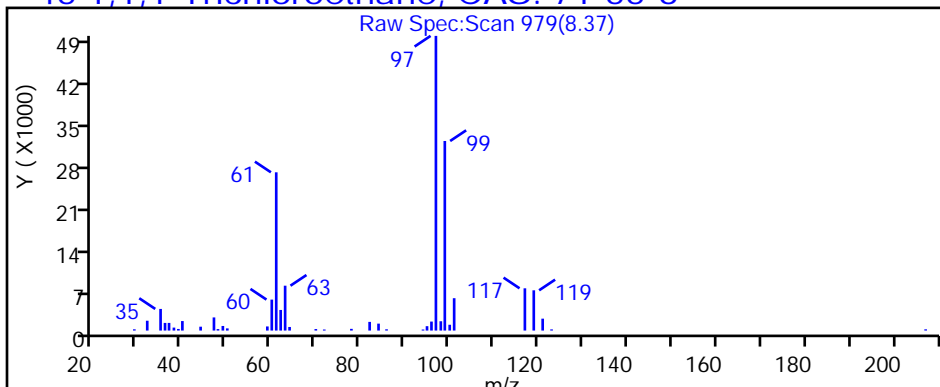
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P105.D

Injection Date: 13-Nov-2018 20:16:30

Instrument ID: MR

Lims ID: 140-13304-A-4

Lab Sample ID: 140-13304-4

Client ID: BLDG-A EFFLUENT

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

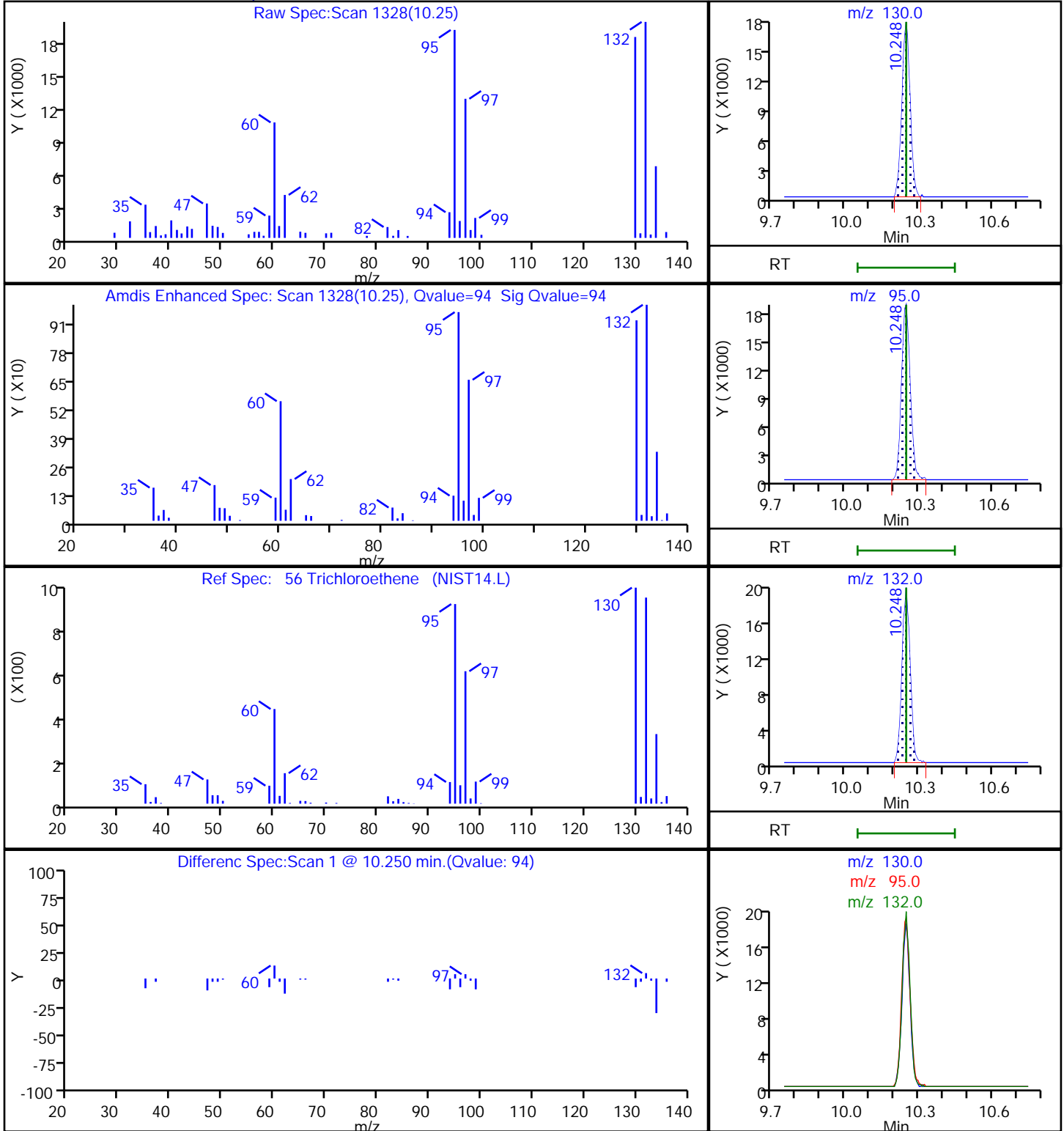
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P105.D

Injection Date: 13-Nov-2018 20:16:30

Instrument ID: MR

Lims ID: 140-13304-A-4

Lab Sample ID: 140-13304-4

Client ID: BLDG-A EFFLUENT

Operator ID:

ALS Bottle#:

5

Worklist Smp#:

15

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

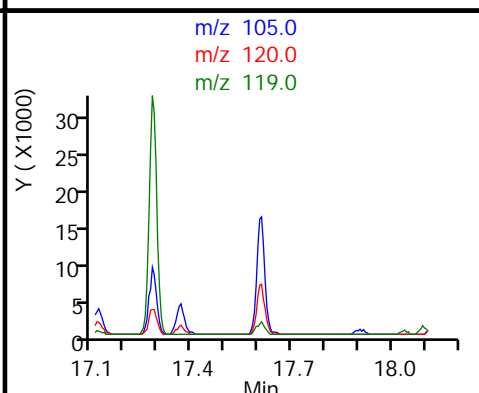
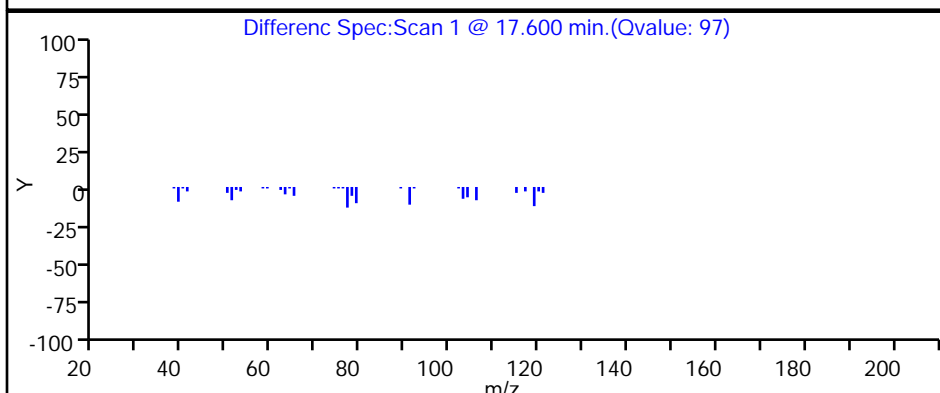
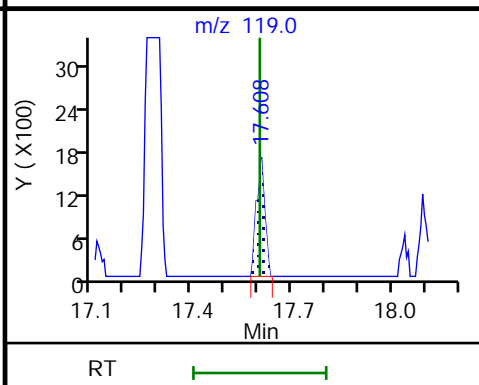
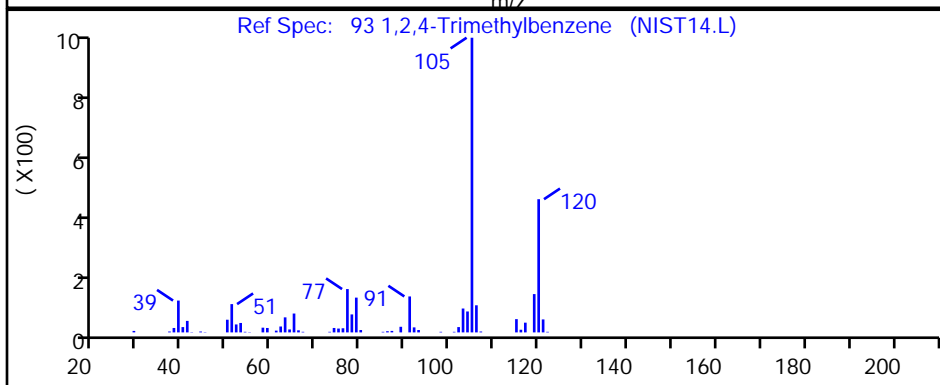
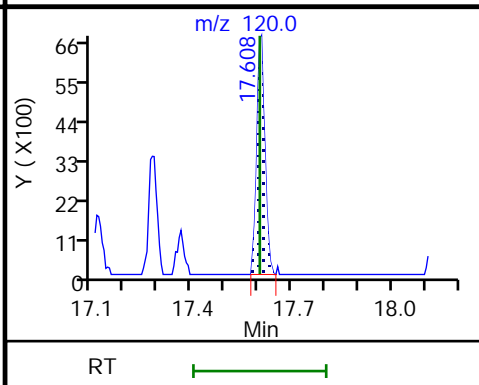
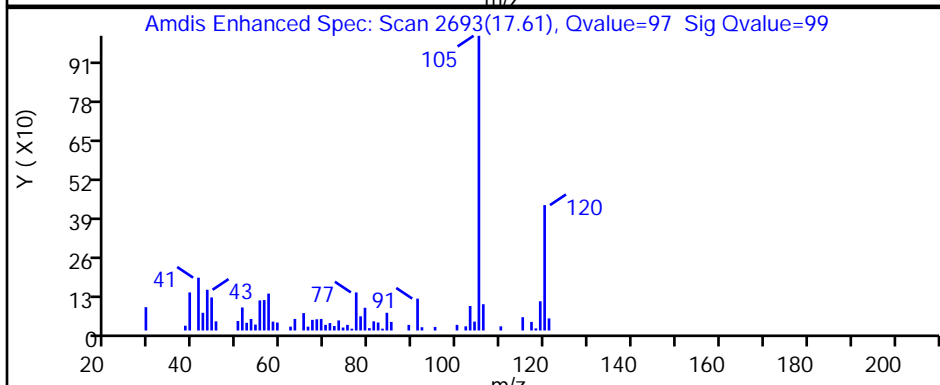
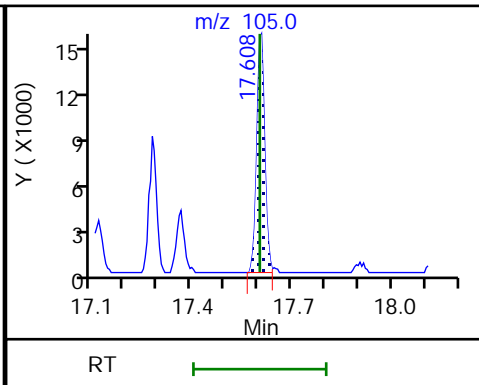
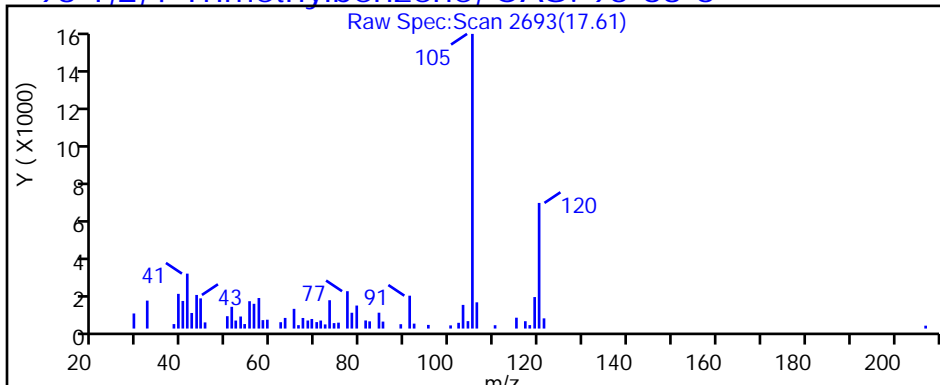
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-13304-6
 Matrix: Air Lab File ID: RK13P101.D
 Analysis Method: TO 15 LL Date Collected: 11/09/2018 13:45
 Sample wt/vol: 20 (mL) Date Analyzed: 11/13/2018 16:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25249 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.4		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	ND		2.0	0.38
67-66-3	Chloroform	119.38	0.76	J	2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	14		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	0.84	J	2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	2.7		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	15		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	ND		10	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	82		2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	150		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-13304-6
 Matrix: Air Lab File ID: RK13P101.D
 Analysis Method: TO 15 LL Date Collected: 11/09/2018 13:45
 Sample wt/vol: 20 (mL) Date Analyzed: 11/13/2018 16:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25249 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	11		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	ND		7.1	1.3
67-66-3	Chloroform	119.38	3.7	J	9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	56		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	4.1	J	9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	11		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	60		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	ND		35	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	450		11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	810		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P101.D
 Lims ID: 140-13304-A-6
 Client ID: BLDG-A INFLUENT
 Sample Type: Client
 Inject. Date: 13-Nov-2018 16:47:30 ALS Bottle#: 1 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-011
 Misc. Info.: 140-13304-a-6
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 11:01:34 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits

Date: 14-Nov-2018 11:01:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.395	-0.010	96	196520	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.493	-0.005	95	1284204	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.557	-0.001	90	1036382	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.282	0.000	83	724309	3.72	
8 Dichlorodifluoromethane	85	3.448	3.446	0.000	99	5238	0.0334	
27 1,1-Dichloroethene	96	5.017	5.019	-0.006	95	50682	0.6080	
37 1,1-Dichloroethane	63	6.268	6.269	-0.006	100	19431	0.1070	
41 cis-1,2-Dichloroethene	96	7.115	7.115	-0.005	97	52657	0.5641	
43 Chloroform	83	7.428	7.428	-0.005	84	6095	0.0305	
45 1,1,1-Trichloroethane	97	8.355	8.361	-0.006	96	617513	3.28	
47 Benzene	78	8.916	8.922	-0.006	98	39605	0.1373	
56 Trichloroethene	130	10.243	10.248	-0.005	94	648872	5.99	

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P101.D

Injection Date: 13-Nov-2018 16:47:30

Instrument ID: MR

Operator ID:

Lims ID: 140-13304-A-6

Lab Sample ID: 140-13304-6

Worklist Smp#: 11

Client ID: BLDG-A INFLUENT

Purge Vol: 500.000 mL

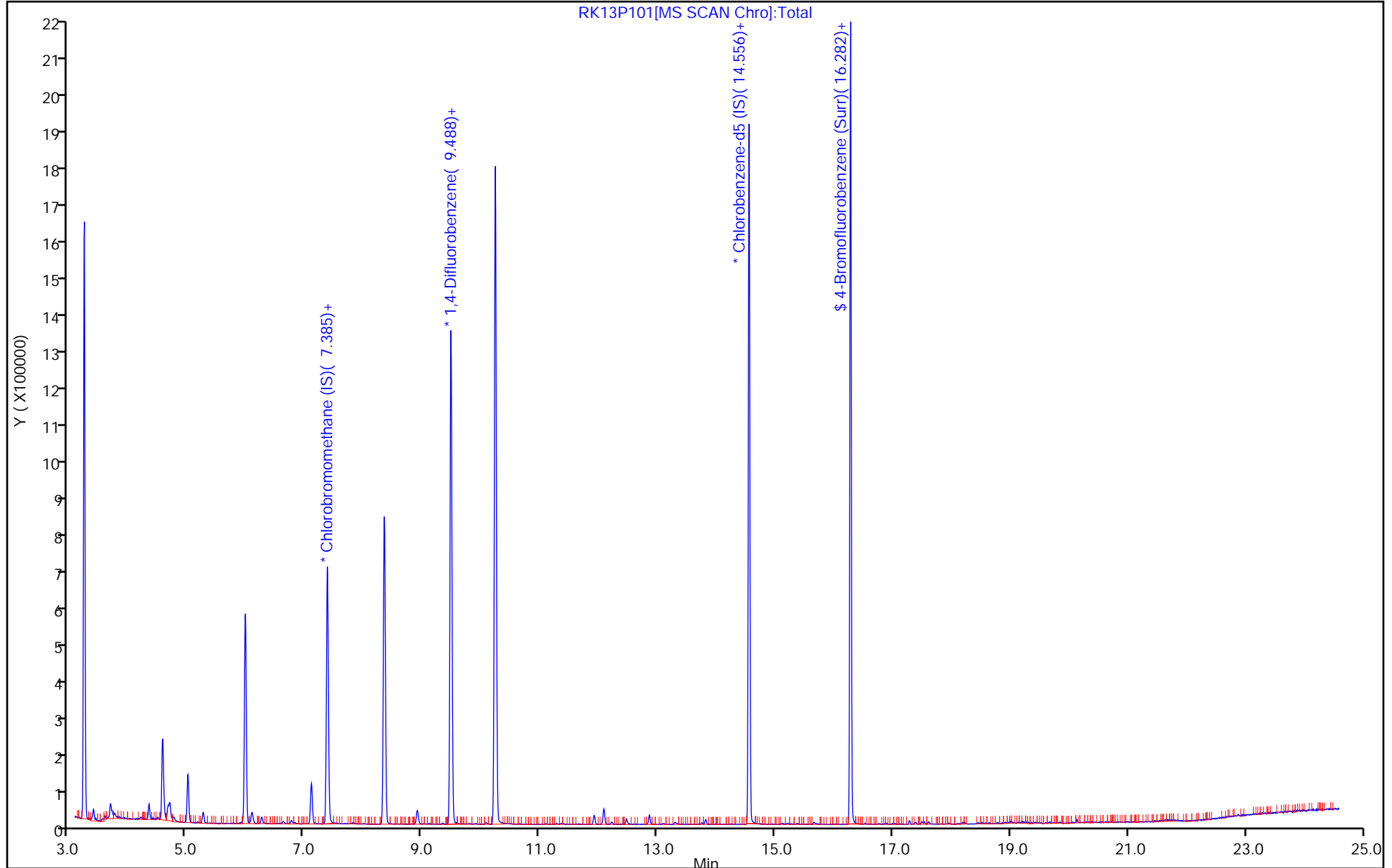
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P101.D
 Lims ID: 140-13304-A-6
 Client ID: BLDG-A INFLUENT
 Sample Type: Client
 Inject. Date: 13-Nov-2018 16:47:30 ALS Bottle#: 1 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-011
 Misc. Info.: 140-13304-a-6
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 11:01:34 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits Date: 14-Nov-2018 11:01:34

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.72	93.06

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P101.D

Injection Date: 13-Nov-2018 16:47:30

Instrument ID: MR

Lims ID: 140-13304-A-6

Lab Sample ID: 140-13304-6

Client ID: BLDG-A INFLUENT

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

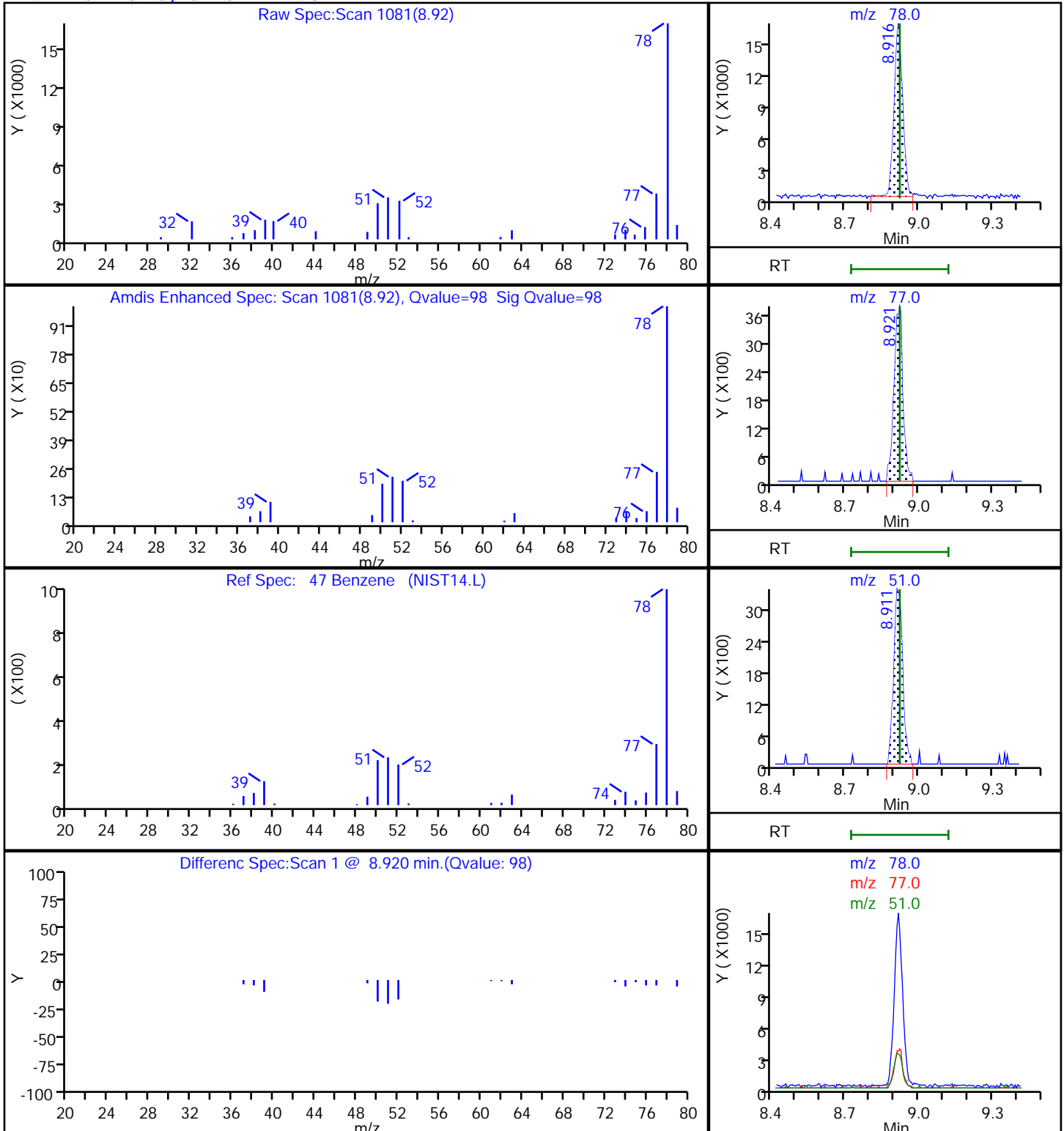
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P101.D

Injection Date: 13-Nov-2018 16:47:30

Instrument ID: MR

Lims ID: 140-13304-A-6

Lab Sample ID: 140-13304-6

Client ID: BLDG-A INFLUENT

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

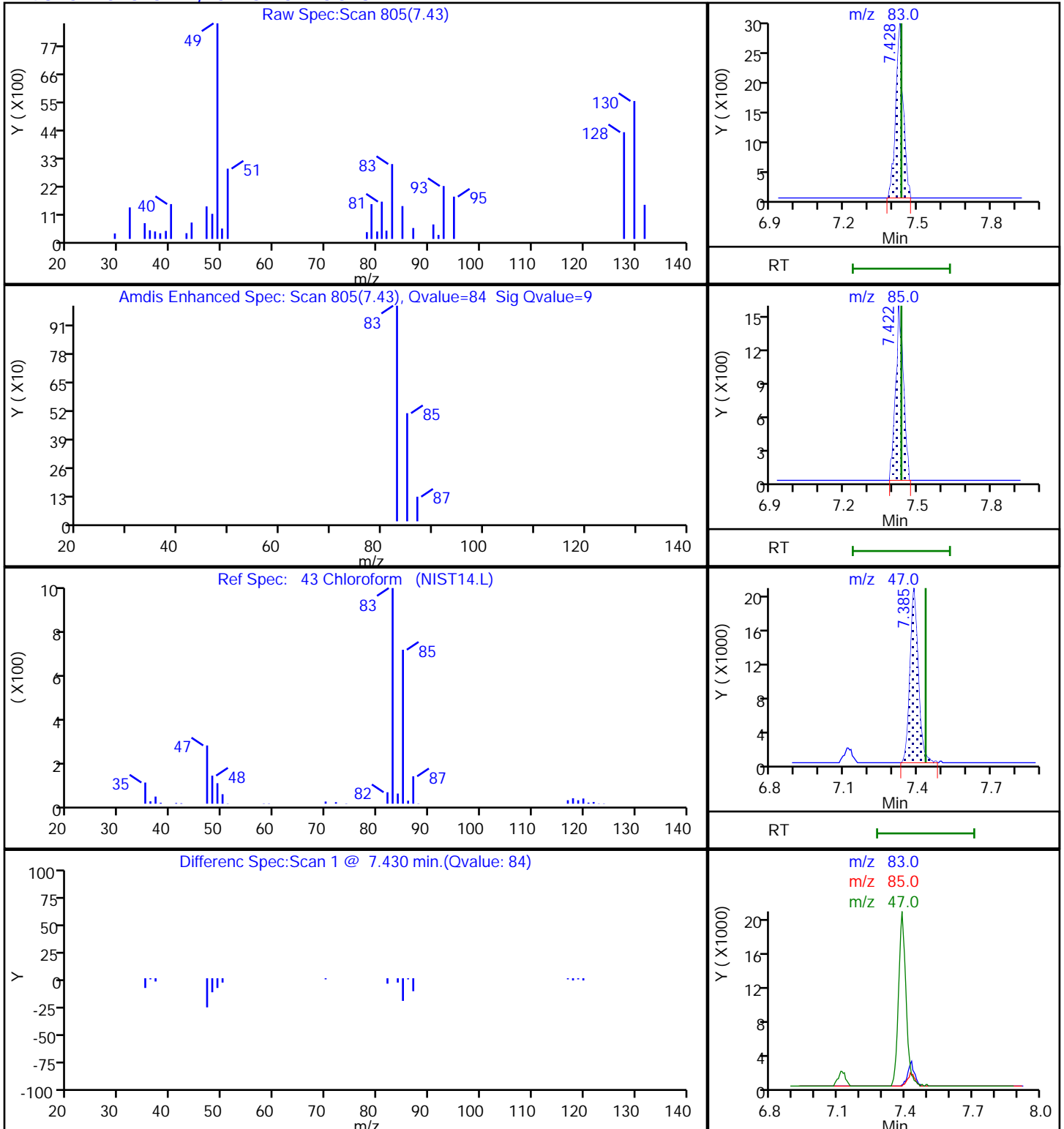
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P101.D

Injection Date: 13-Nov-2018 16:47:30

Instrument ID: MR

Lims ID: 140-13304-A-6

Lab Sample ID: 140-13304-6

Client ID: BLDG-A INFLUENT

Operator ID:

ALS Bottle#: 1 Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

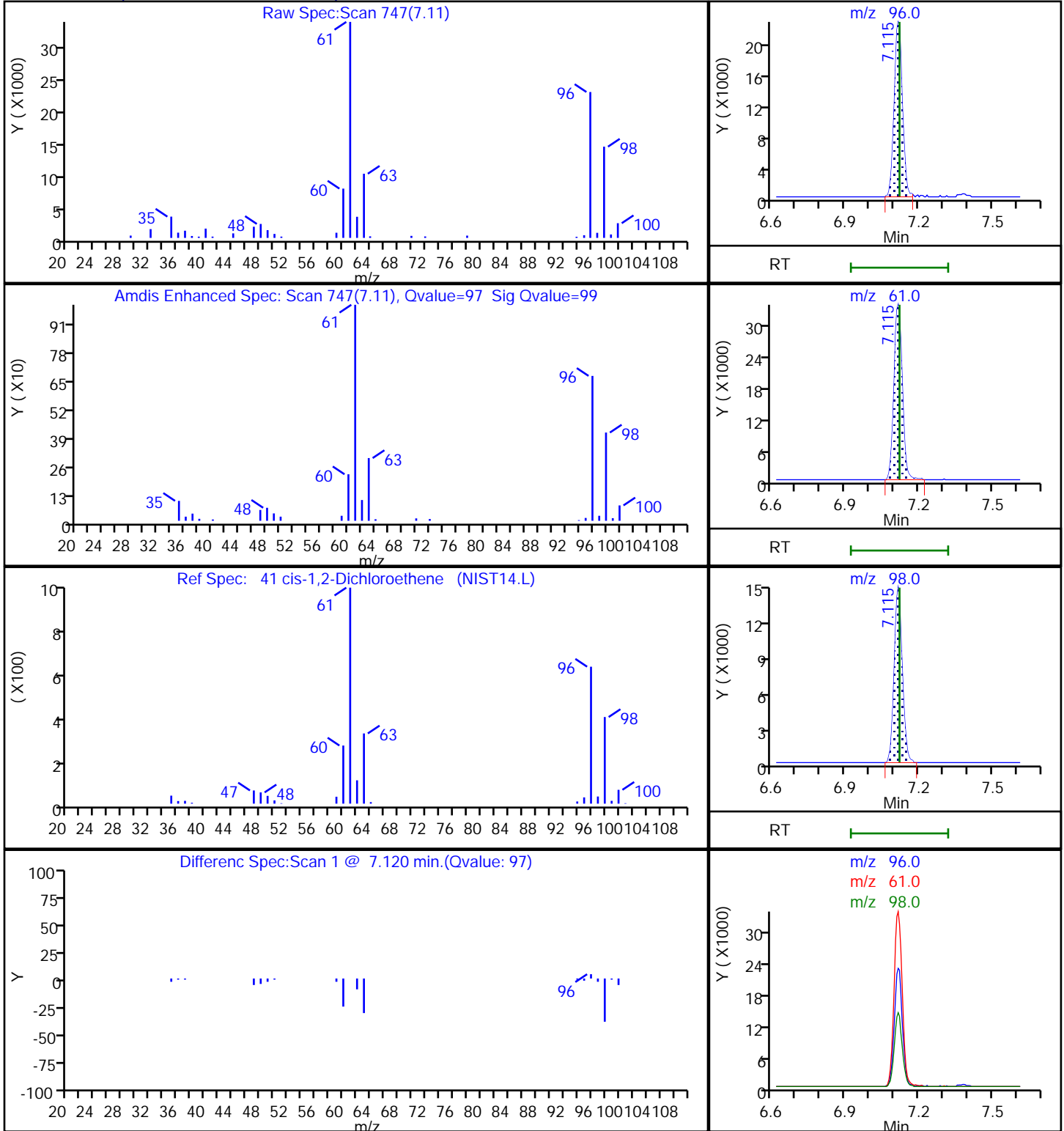
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P101.D

Injection Date: 13-Nov-2018 16:47:30

Instrument ID: MR

Lims ID: 140-13304-A-6

Lab Sample ID: 140-13304-6

Client ID: BLDG-A INFLUENT

Operator ID:

ALS Bottle#: 1 Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

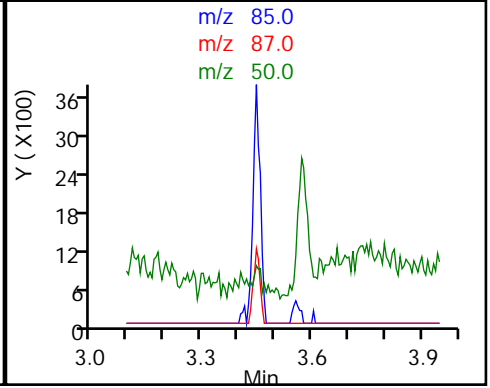
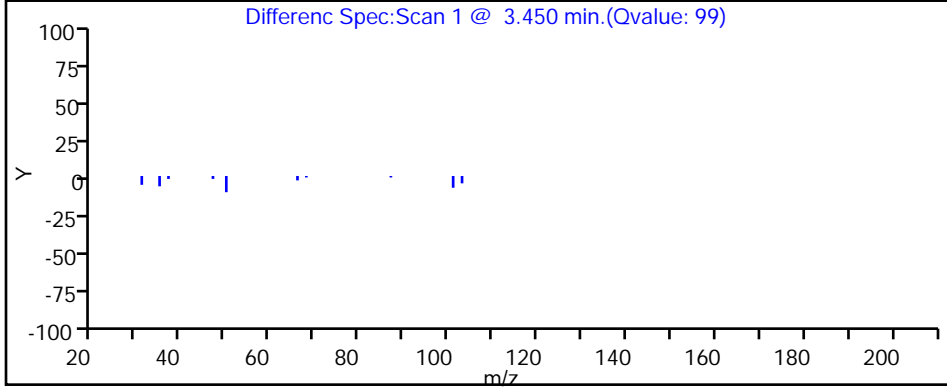
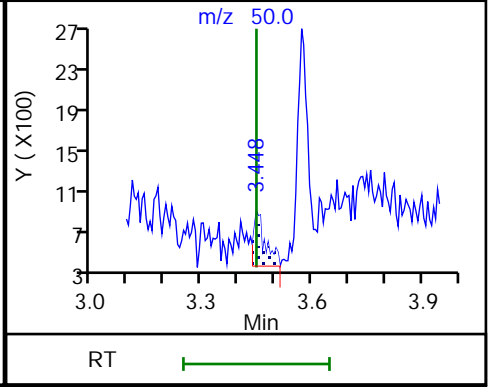
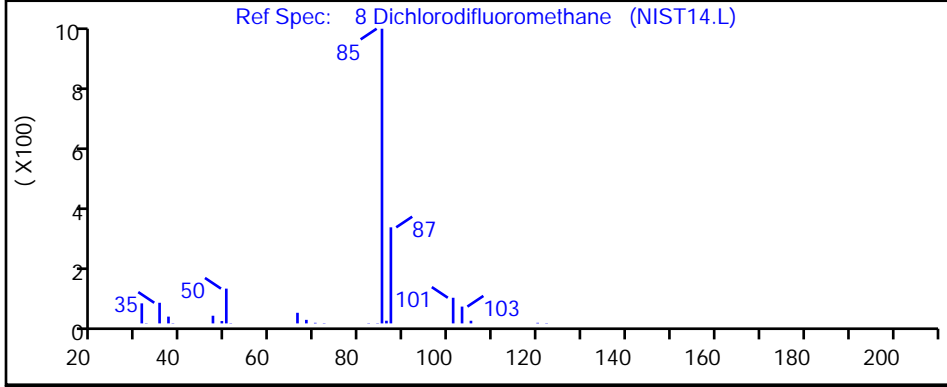
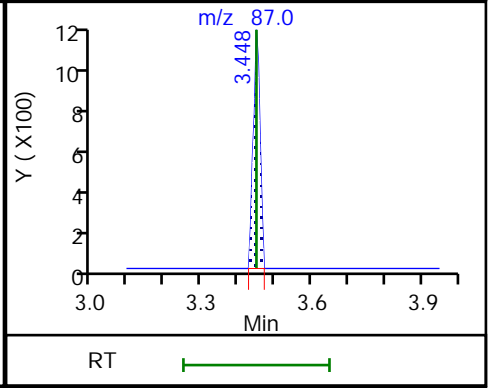
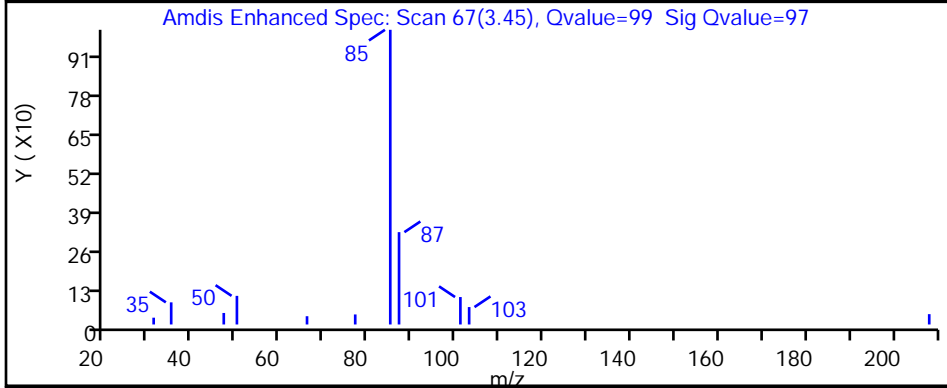
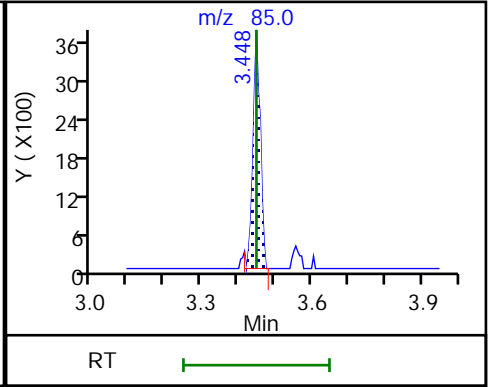
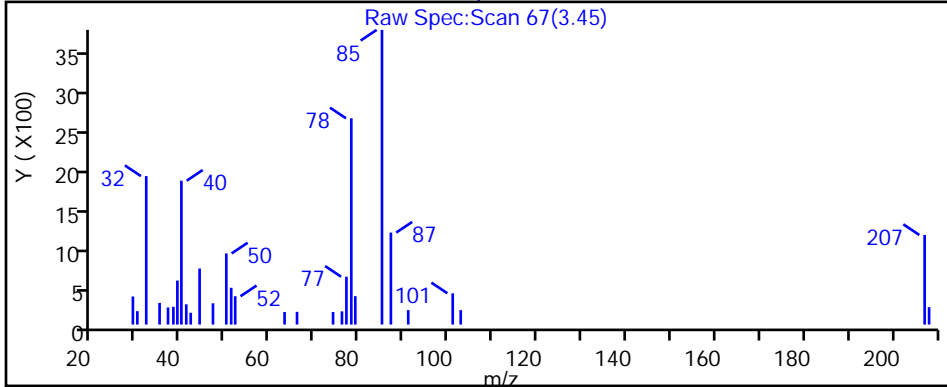
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P101.D

Injection Date: 13-Nov-2018 16:47:30

Instrument ID: MR

Lims ID: 140-13304-A-6

Lab Sample ID: 140-13304-6

Client ID: BLDG-A INFLUENT

Operator ID:

ALS Bottle#: 1 Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

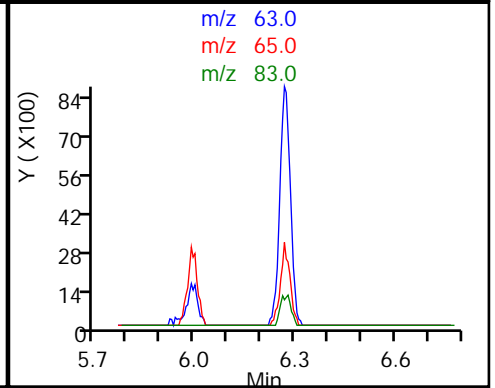
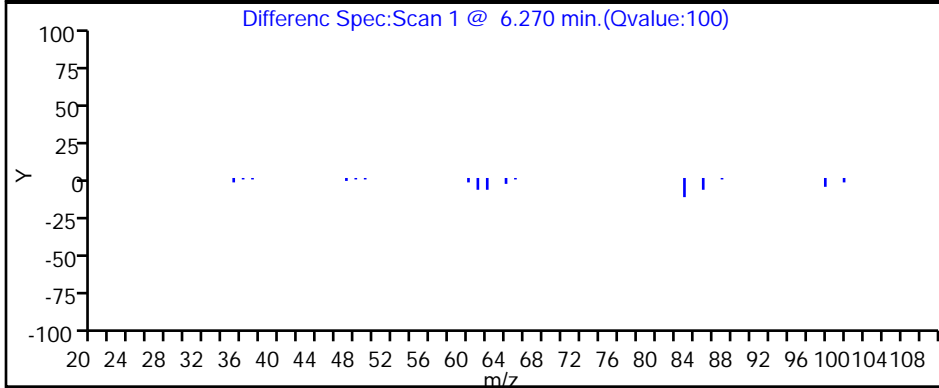
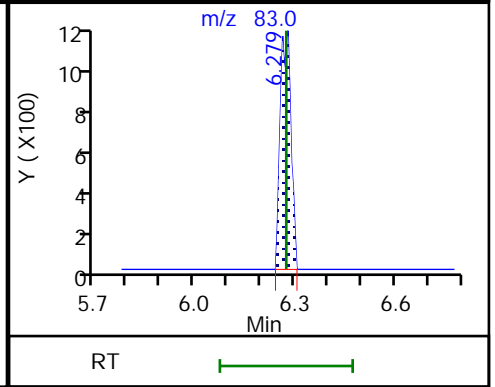
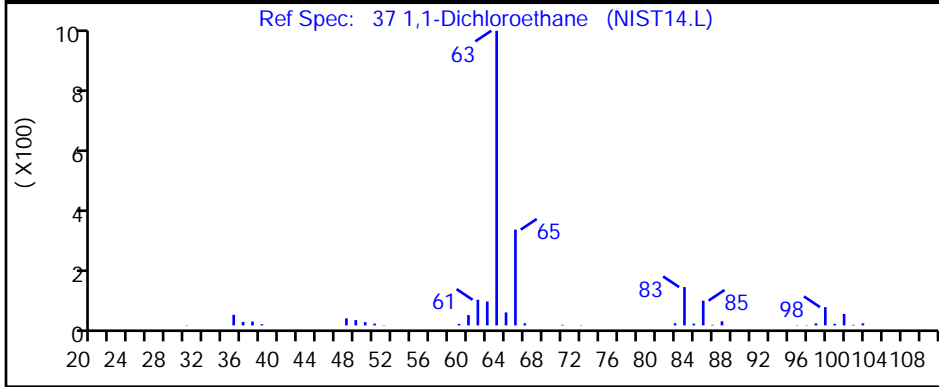
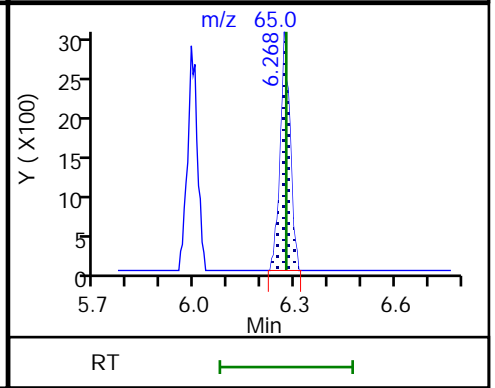
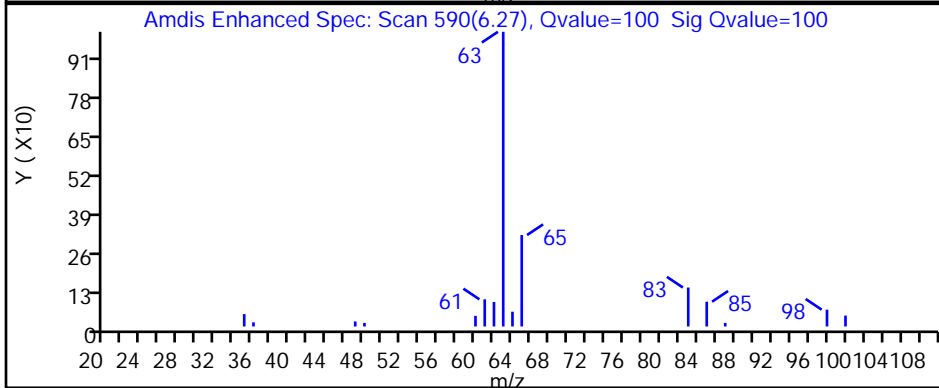
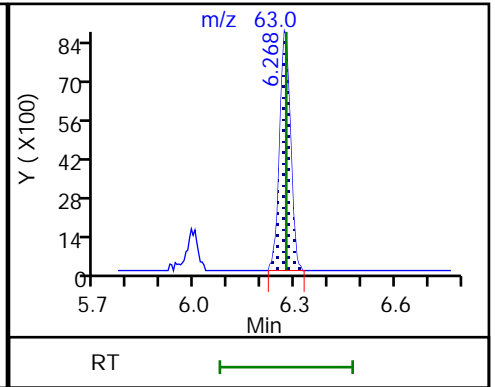
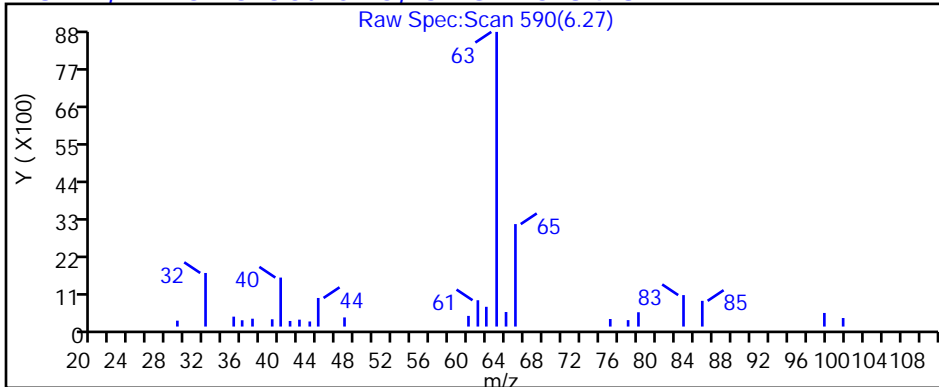
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P101.D

Injection Date: 13-Nov-2018 16:47:30

Instrument ID: MR

Lims ID: 140-13304-A-6

Lab Sample ID: 140-13304-6

Client ID: BLDG-A INFLUENT

Operator ID:

ALS Bottle#: 1 Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

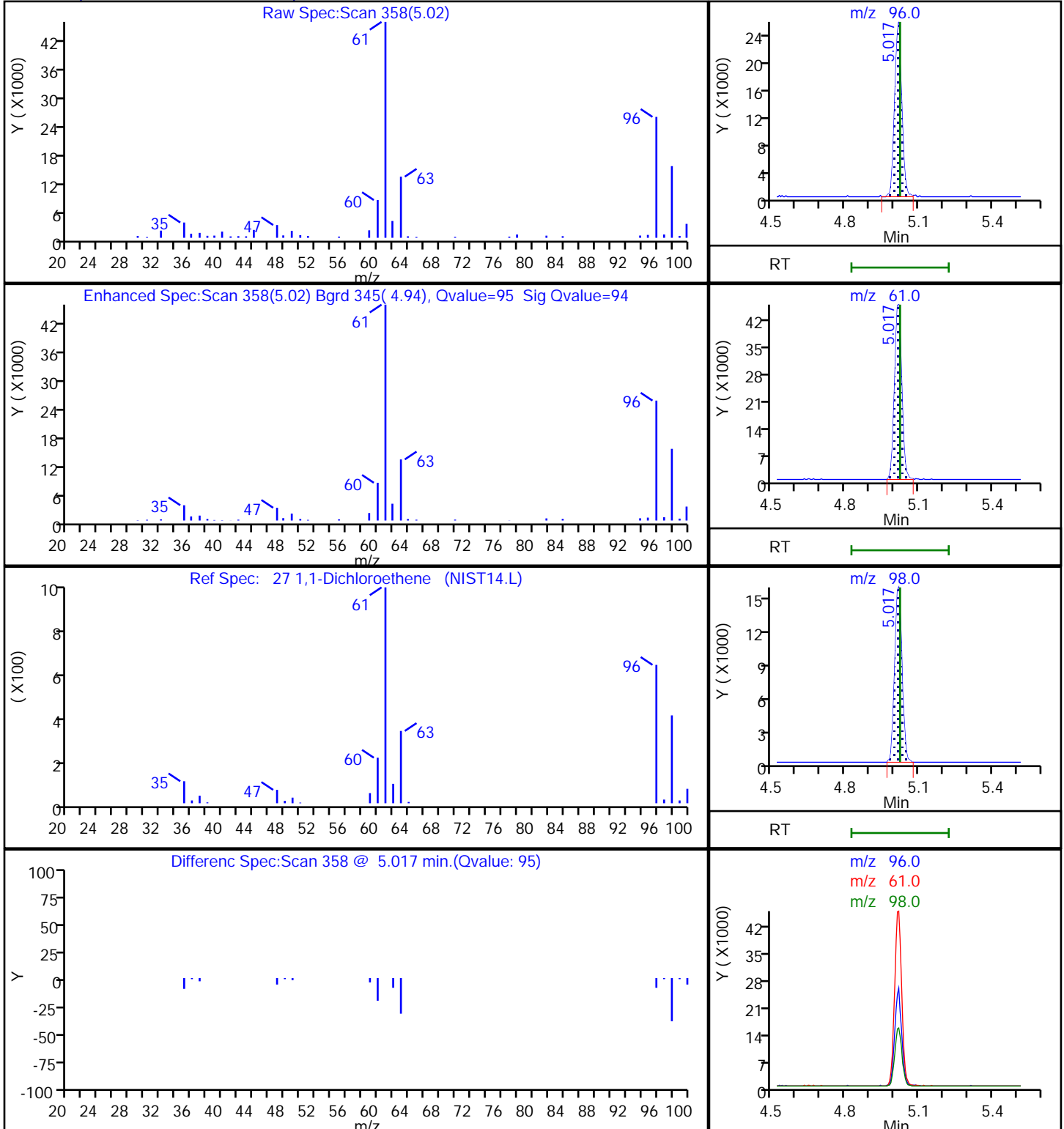
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P101.D

Injection Date: 13-Nov-2018 16:47:30

Instrument ID: MR

Lims ID: 140-13304-A-6

Lab Sample ID: 140-13304-6

Client ID: BLDG-A INFLUENT

Operator ID:

ALS Bottle#: 1 Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

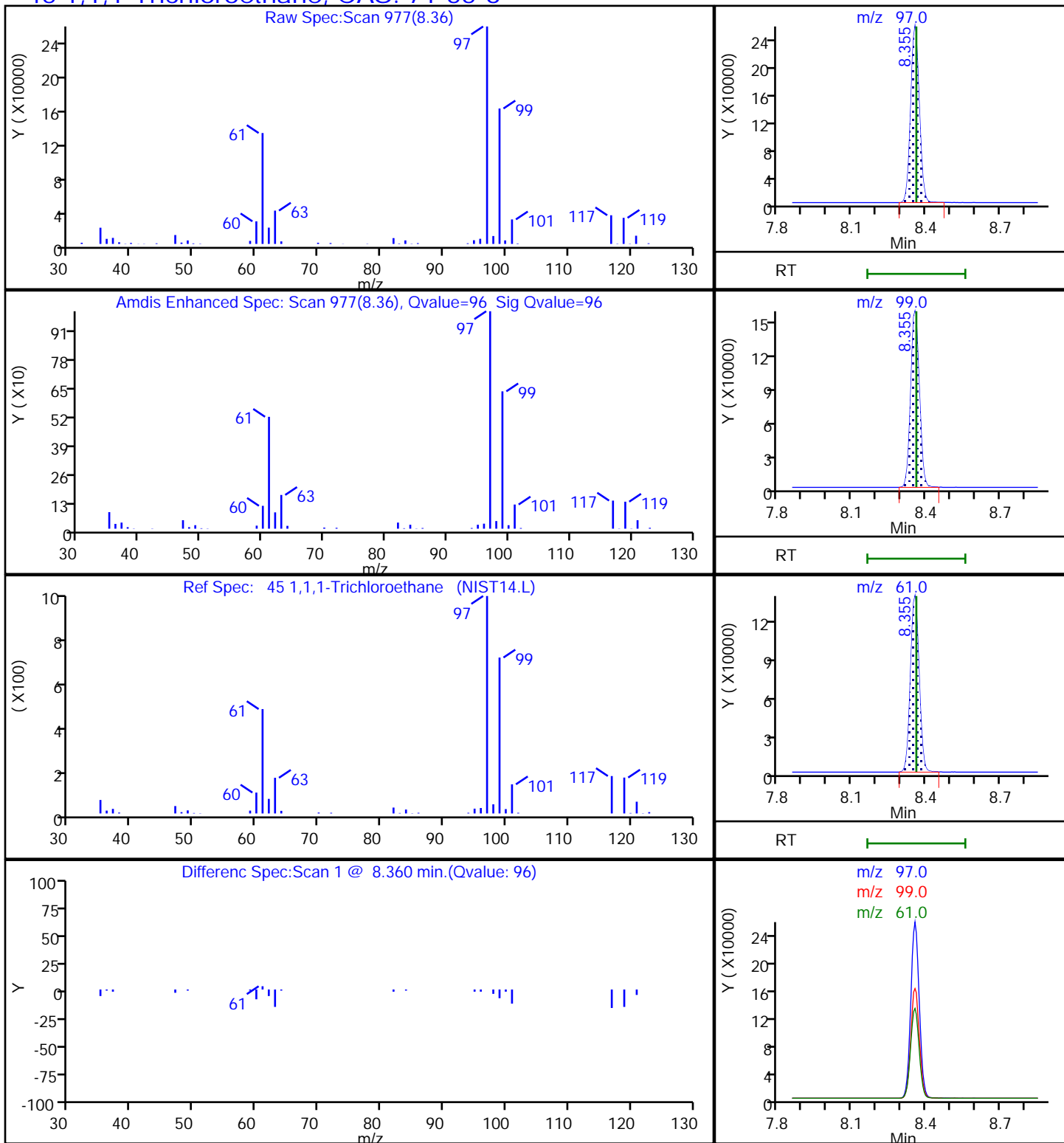
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P101.D

Injection Date: 13-Nov-2018 16:47:30

Instrument ID: MR

Lims ID: 140-13304-A-6

Lab Sample ID: 140-13304-6

Client ID: BLDG-A INFLUENT

Operator ID:

ALS Bottle#: 1 Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

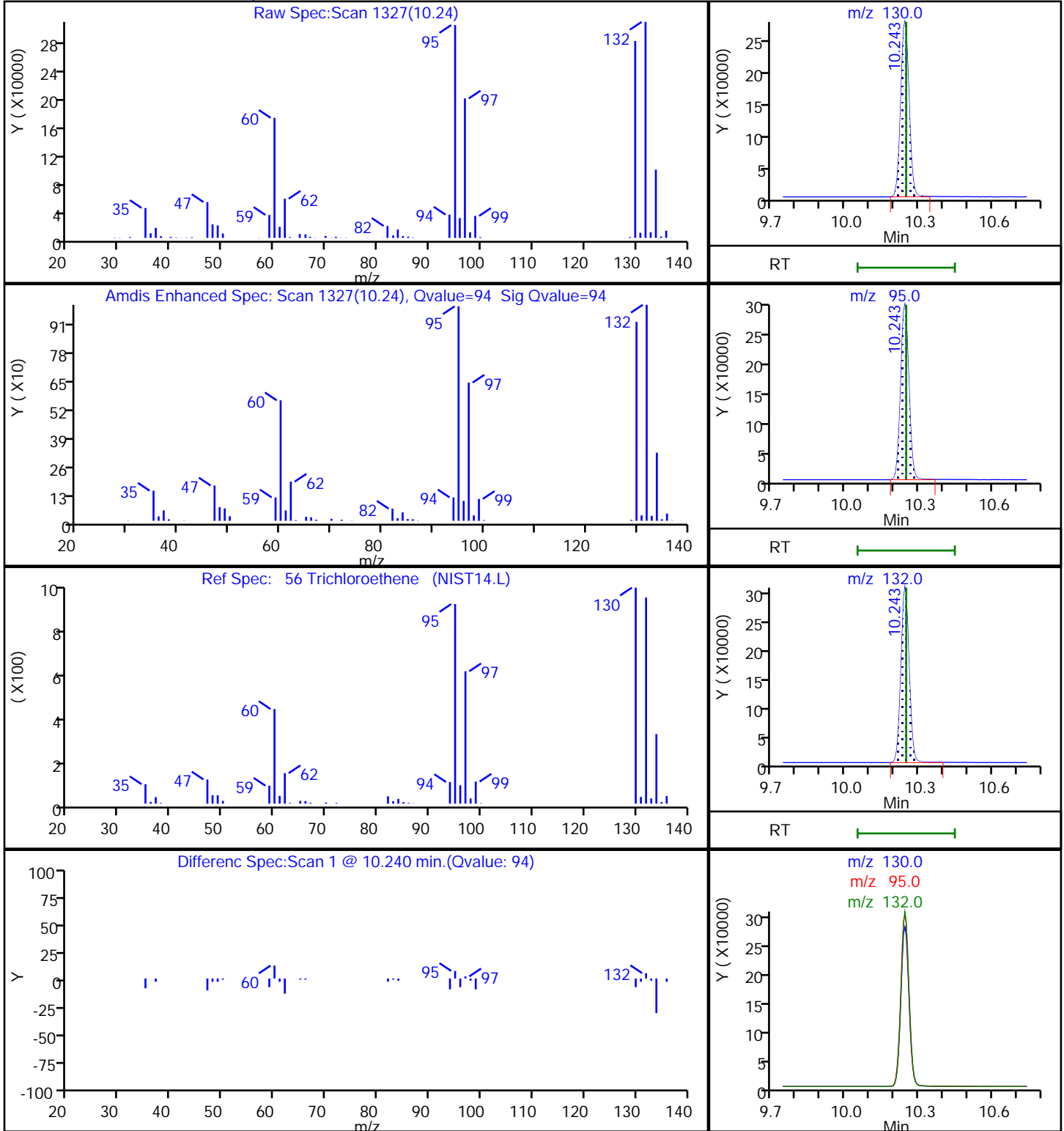
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6

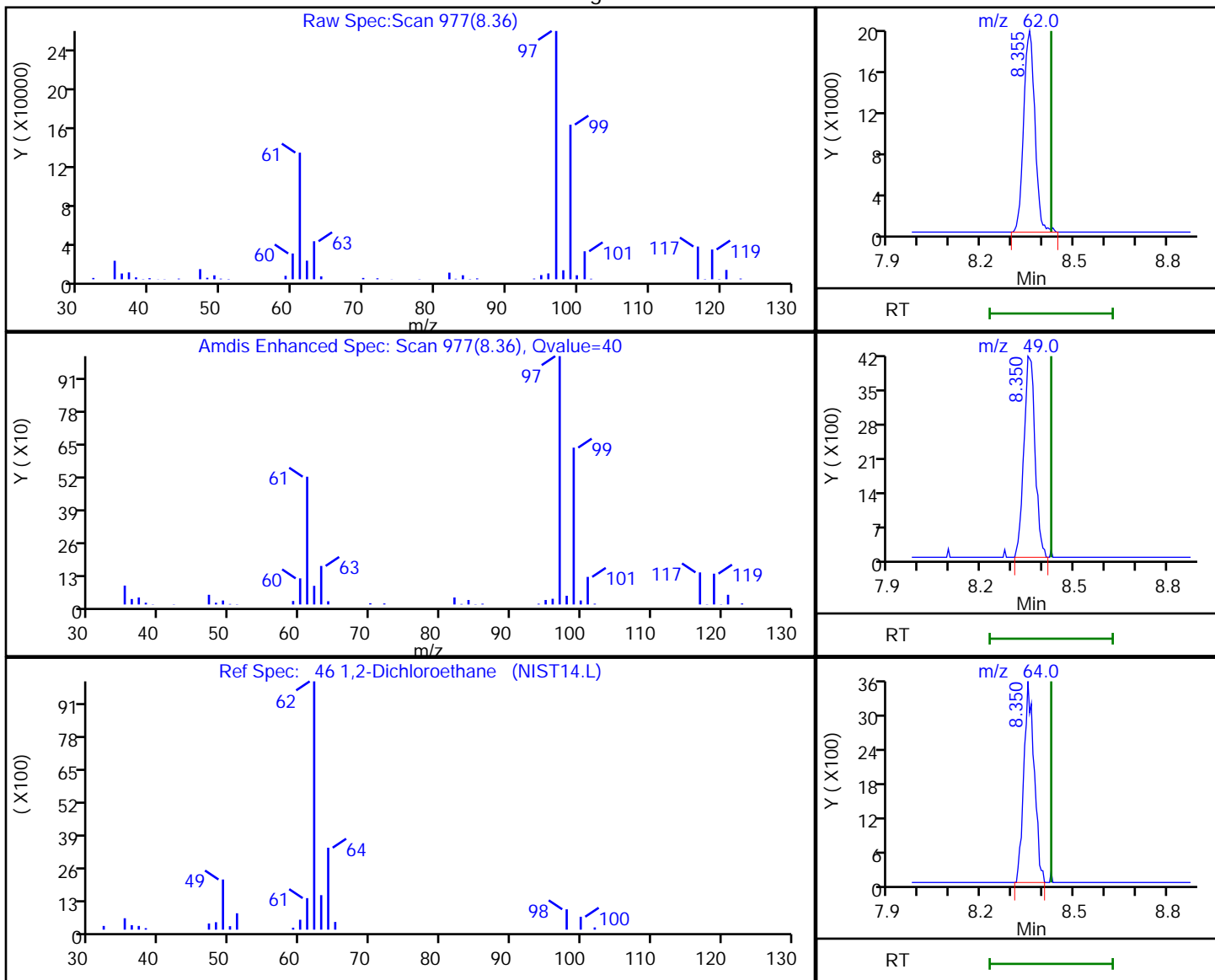


TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RK13P101.D
 Injection Date: 13-Nov-2018 16:47:30 Instrument ID: MR
 Lims ID: 140-13304-A-6 Lab Sample ID: 140-13304-6
 Client ID: BLDG-A INFLUENT
 Operator ID: ALS Bottle#: 1 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.36	62.00	48662	0.325452
8.35	49.00	10429	
8.35	64.00	8214	

Reviewer: khachitpongpanits, 14-Nov-2018 11:01:07

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1 Analy Batch No.: 25052

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2018 18:28 Calibration End Date: 11/03/2018 04:25 Calibration ID: 1735

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25052/8	RK02IC01.D
Level 2	IC 140-25052/9	RK02IC02.D
Level 3	IC 140-25052/10	RK02IC03.D
Level 4	IC 140-25052/11	RK02IC04.D
Level 5	IC 140-25052/12	RK02IC05.D
Level 6	IC 140-25052/13	RK02IC06.D
Level 7	ICIS 140-25052/14	RK02IC07.D
Level 8	IC 140-25052/15	RK02IC08.D
Level 9	IC 140-25052/3	RK02IC09.D
Level 10	IC 140-25052/5	RK02IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	5.2794	4.4460	4.3244	Ave		4.2814			10.8		30.0				
	4.3311	4.0527	3.9573	4.1047	3.7551												
Propene	+++++	+++++	+++++	2.3671	2.1746	Ave		2.0697			8.3		30.0				
	2.1238	2.0328	1.9324	2.0152	1.8418												
Dichlorodifluoromethane	+++++	+++++	3.7385	3.6134	3.7466	Ave		3.1888			16.3		30.0				
	3.4531	2.5265	2.6273	3.1265	2.6786												
Chloromethane	+++++	+++++	0.8359	0.8393	0.8657	Ave		0.7844			8.3		30.0				
	0.8233	0.7530	0.7197	0.7522	0.6864												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.3620	2.8416	2.6004	2.7087	Ave		2.5841			21.9		30.0				
	2.9085	1.7989	1.8685	+++++	+++++												
Vinyl chloride	2.3076	2.4328	2.3406	2.1647	2.0531	Ave		2.1552			7.8		30.0				
	2.1427	2.1399	2.0583	2.0502	1.8626												
1,3-Butadiene	+++++	+++++	+++++	1.5151	1.6242	Ave		1.5683			6.2		30.0				
	1.6971	1.6109	1.5237	1.6061	1.4007												
Butane	+++++	+++++	+++++	2.9176	3.1823	Ave		2.9771			7.5		30.0				
	3.2554	3.0262	2.8529	3.0247	2.5803												
Bromomethane	+++++	+++++	1.6941	1.6005	1.5011	Ave		1.4729			10.3		30.0				
	1.5913	1.3786	1.3180	1.4400	1.2595												
Chloroethane	+++++	+++++	0.8704	0.8339	0.8098	Ave		0.7966			5.9		30.0				
	0.8322	0.7803	0.7517	0.7575	0.7370												
Ethanol	+++++	+++++	+++++	0.7918	0.7641	Ave		0.7165			10.7		30.0				
	0.8089	0.7035	0.6651	0.6881	0.5940												
Vinyl bromide	+++++	+++++	1.4780	1.5299	1.4161	Ave		1.4325			5.4		30.0				
	1.5142	1.4314	1.3962	1.4111	1.2831												
2-Methylbutane	+++++	+++++	+++++	2.2434	1.9581	Ave		1.9792			9.3		30.0				
	2.1864	1.9398	1.8439	1.9648	1.7182												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13304-1

Analy Batch No.: 25052

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2018 18:28

Calibration End Date: 11/03/2018 04:25

Calibration ID: 1735

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Acrolein	++++ 0.3924	++++ 0.3770	++++ 0.4871	++++ 0.5246	0.4116 0.4231	Ave		0.4360			13.2		30.0				
Trichlorofluoromethane	++++ 5.0984	5.3410 5.0244	5.1283 5.0037	4.9320 4.9258	4.7362 4.5401	Ave		4.9700			4.6		30.0				
Acetonitrile	++++ 0.6792	++++ 0.6925	++++ 0.6508	++++ 0.7174	0.5997 0.6302	Ave		0.6616			6.5		30.0				
Acetone	++++ 0.7904	++++ 0.7245	++++ 0.6839	++++ 0.7078	1.0481 0.5864	Ave		0.7568			20.8		30.0				
Pentane	++++ 0.2966	++++ 0.2698	++++ 0.2544	++++ 0.2677	0.2880 0.2318	Ave		0.2681			8.7		30.0				
Isopropyl alcohol	++++ 2.5481	++++ 2.3337	++++ 2.1272	++++ 2.2869	2.5776 1.9061	Ave		2.2926			10.2		30.0				
Ethyl ether	++++ 1.8699	++++ 1.7675	1.9292 1.7826	1.8237 1.7409	1.6296 1.5968	Ave		1.7675			6.4		30.0				
1,1-Dichloroethene	++++ 1.7235	1.8441 1.6781	1.7610 1.7377	1.6252 1.6704	1.6015 1.6287	Ave		1.6967			4.6		30.0				
Acrylonitrile	++++ 1.5230	++++ 1.5653	++++ 1.5844	1.5294 1.5625	1.3778 1.4988	Ave		1.5202			4.6		30.0				
tert-Butyl alcohol	++++ 3.8883	++++ 3.8235	3.9839 3.8395	3.6955 3.6987	3.5259 3.4644	Ave		3.7400			4.8		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	4.0881 4.0882	3.9104 4.0085	4.0065 4.0939	3.7919 3.8786	3.8285 3.7402	Ave		3.9435			3.3		30.0				
Methylene Chloride	++++ 1.9027	++++ 1.9446	++++ 1.7252	++++ 1.6120	2.8708 1.5401	Ave		1.9522			22.9		30.0				
3-Chloropropene	++++ 1.8909	++++ 1.7891	1.8709 1.8012	1.8992 1.7552	1.6522 1.5516	Ave		1.7763			6.9		30.0				
Carbon disulfide	++++ 5.5725	++++ 5.4806	6.6280 5.5674	5.5833 5.3899	5.4016 5.2200	Ave		5.6054			7.7		30.0				
trans-1,2-Dichloroethene	++++ 1.8826	1.8461 1.8125	1.8341 1.8575	1.6867 1.8038	1.7681 1.7977	Ave		1.8099			3.2		30.0				
2-Methylpentane	++++ 5.0787	++++ 4.9442	5.0550 4.8748	4.9202 4.7335	4.7810 4.3276	Ave		4.8394			4.9		30.0				
Methyl tert-butyl ether	++++ 5.4983	++++ 5.3744	5.4645 5.4571	5.0622 5.2937	5.0742 5.0885	Ave		5.2891			3.6		30.0				
1,1-Dichloroethane	++++ 3.8701	3.9163 3.6837	3.7773 3.7035	3.5831 3.6181	3.6310 3.4747	Ave		3.6953			3.8		30.0				
Vinyl acetate	++++ 5.6771	++++ 5.6724	5.1288 5.8697	4.9353 5.9871	5.0679 5.6416	Ave		5.4975			7.2		30.0				
2-Butanone (MEK)	++++ 0.9542	++++ 0.9316	++++ 0.9958	++++ 0.9641	1.1932 0.9440	Ave		0.9997			9.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13304-1

Analy Batch No.: 25052

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2018 18:28

Calibration End Date: 11/03/2018 04:25

Calibration ID: 1735

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	++++	++++	1.9126	1.8175	1.7895	Ave		1.7902			4.4		30.0				
	1.8501	1.7873	1.7897	1.7278	1.6467												
cis-1,2-Dichloroethene	++++	++++	1.8219	1.8270	1.8288	Ave		1.9001			3.7		30.0				
	2.0450	1.9206	1.8219	1.8270	1.8288												
	1.9686	1.8869	1.9259	1.9015	1.8743												
Ethyl acetate	++++	++++	5.2639	4.4151	4.6544	Ave		4.9597			6.1		30.0				
	5.2038	5.0796	5.1191	5.1400	4.8017												
Chloroform	++++	++++	4.1161	3.9571	3.9671	Ave		4.0656			2.3		30.0				
	4.2227	4.0890	4.1478	4.0616	3.9398												
Tetrahydrofuran	++++	++++	++++	2.5252	2.5169	Ave		2.5210			3.1		30.0				
	2.6436	2.5143	2.5296	2.5395	2.3776												
1,1,1-Trichloroethane	++++	++++	3.7942	3.5564	3.5630	Ave		3.8360			4.5		30.0				
	4.0714	3.7672	3.7942	3.5564	3.5630												
	3.8734	3.8448	4.0016	3.9598	3.9285												
1,2-Dichloroethane	++++	++++	0.4761	0.4482	0.4454	Ave		0.4657			3.5		30.0				
	0.4602	0.4444	0.4761	0.4482	0.4454												
	0.4857	0.4632	0.4910	0.4732	0.4699												
Benzene	++++	++++	0.9323	0.8846	0.8568	Ave		0.8985			3.8		30.0				
	0.9247	0.9547	0.9323	0.8846	0.8568												
	0.9247	0.8838	0.9127	0.8730	0.8635												
Cyclohexane	++++	++++	++++	0.1360	0.1372	Ave		0.1389			3.6		30.0				
	0.1471	0.1401	0.1433	0.1356	0.1329												
1-Butanol	++++	++++	++++	++++	0.0840	Ave		0.1020			10.2		30.0				
	0.1084	0.1085	0.1099	0.1064	0.0948												
Carbon tetrachloride	++++	++++	0.5286	0.5244	0.5257	Ave		0.5707			7.7		30.0				
	0.5684	0.5162	0.5286	0.5244	0.5257												
	0.5897	0.5947	0.6230	0.6113	0.6254												
2,3-Dimethylpentane	++++	++++	0.2075	0.2028	0.2058	Ave		0.2112			3.1		30.0				
	0.2217	0.2131	0.2075	0.2028	0.2058												
	0.2217	0.2131	0.2195	0.2115	0.2078												
Thiophene	++++	++++	0.5005	0.4867	0.4876	Ave		0.5100			3.4		30.0				
	0.5382	0.5032	0.5005	0.4867	0.4876												
	0.5322	0.5092	0.5230	0.5120	0.5070												
2,2,4-Trimethylpentane	++++	++++	1.5817	1.5245	1.5339	Ave		1.5699			2.6		30.0				
	1.6461	1.5817	1.5817	1.5245	1.5339												
	1.6461	1.5673	1.5958	1.5625	1.5205												
1,2-Dichloropropane	++++	++++	0.3565	0.3398	0.3390	Ave		0.3528			3.1		30.0				
	0.3704	0.3482	0.3620	0.3568	0.3494												
Heptane	++++	++++	0.3235	0.3098	0.3056	Ave		0.3203			3.2		30.0				
	0.3351	0.3110	0.3235	0.3098	0.3056												
	0.3351	0.3226	0.3308	0.3274	0.3172												
Trichloroethene	++++	++++	0.3222	0.3236	0.3214	Ave		0.3373			3.5		30.0				
	0.3360	0.3471	0.3222	0.3236	0.3214												
	0.3407	0.3337	0.3521	0.3500	0.3461												
Dibromomethane	++++	++++	0.3656	0.3328	0.3260	Ave		0.3480			3.9		30.0				
	0.3464	0.3434	0.3572	0.3597	0.3526												
Bromodichloromethane	++++	++++	0.5323	0.5138	0.5557	Ave		0.5935			10.0		30.0				
	0.5457	0.5513	0.5323	0.5138	0.5557												
	0.6209	0.6264	0.6602	0.6664	0.6618												
1,4-Dioxane	++++	++++	++++	0.1188	0.1170	Ave		0.1283			6.0		30.0				
	0.1368	0.1306	0.1356	0.1312	0.1282												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13304-1

Analy Batch No.: 25052

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2018 18:28

Calibration End Date: 11/03/2018 04:25

Calibration ID: 1735

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.4181	++++ 0.4235	0.3867 0.4489	0.3397 0.4532	0.3420 0.4371	Ave	0.4061				11.2		30.0				
Methylcyclohexane	++++ 0.5476	0.5148 0.5275	0.5106 0.5451	0.5117 0.5426	0.5011 0.5457	Ave	0.5274				3.5		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.7791	++++ 0.7841	0.6923 0.8209	0.6803 0.8287	0.6968 0.7932	Ave	0.7594				7.9		30.0				
cis-1,3-Dichloropropene	++++ 0.5354	0.4569 0.5276	0.4614 0.5562	0.4587 0.5630	0.4756 0.5548	Ave	0.5100				9.0		30.0				
trans-1,3-Dichloropropene	++++ 0.6001	0.5188 0.5965	0.5029 0.6144	0.4642 0.6044	0.5170 0.5978	Ave	0.5574				10.1		30.0				
Toluene	++++ 1.2777	1.2426 1.2306	1.2238 1.2319	1.1509 1.1884	1.1650 1.1655	Ave	1.2085				3.5		30.0				
1,1,2-Trichloroethane	0.3713 0.4048	0.3726 0.3819	0.3561 0.3843	0.3573 0.3670	0.3645 0.3581	Ave	0.3718				4.1		30.0				
2-Hexanone	++++ 0.4481	++++ 0.4608	++++ 0.4760	++++ 0.4711	0.3610 0.4639	Ave	0.4382				10.4		30.0				
Dibromochloromethane	++++ 0.6174	++++ 0.6469	0.4521 0.6932	0.4235 0.7009	0.5088 0.6992	Ave	0.5927				19.4		30.0				
Octane	++++ 0.4264	++++ 0.4172	0.3941 0.4173	0.3774 0.4002	0.3773 0.3822	Ave	0.3990				4.9		30.0				
C8 Range	++++ 3.4473	++++ 3.2521	++++ 3.3053	++++ 3.1973	3.1577 3.1346	Ave	3.2491				3.6		30.0				
1,2-Dibromoethane (EDB)	++++ 0.6692	++++ 0.6652	0.5594 0.6901	0.5563 0.6824	0.5807 0.6839	Ave	0.6359				9.3		30.0				
Tetrachloroethene	0.3924 0.3993	0.3629 0.3862	0.3653 0.3955	0.3781 0.3836	0.3657 0.3846	Ave	0.3814				3.4		30.0				
Chlorobenzene	1.0219 1.0069	1.0240 0.9779	1.0141 0.9899	0.9306 0.9663	0.9283 0.9468	Ave	0.9807				3.7		30.0				
Ethylbenzene	1.6531 1.6829	1.5188 1.6229	1.5584 1.6389	1.4881 1.5981	1.5178 1.5127	Ave	1.5792				4.4		30.0				
m-Xylene & p-Xylene	1.2778 1.2925	1.1884 1.2498	1.2001 1.2754	1.1162 1.2242	1.1632 1.1057	Ave	1.2093				5.5		30.0				
Bromoform	++++ 0.5095	0.3136 0.5632	0.3309 0.6309	0.2802 0.6720	0.3835 ++++	Ave	0.4605				33.2	*	30.0				
Styrene	++++ 0.9327	++++ 0.9637	0.5783 1.0112	0.6383 1.0071	0.7421 0.9795	Ave	0.8566				20.6		30.0				
o-Xylene	1.3441 1.3452	1.2526 1.2964	1.2149 1.3130	1.2039 1.2486	1.2301 1.0602	Ave	1.2509				6.7		30.0				
Nonane	++++ 0.9679	++++ 0.9046	0.8849 0.8875	0.8536 0.8476	0.8808 0.6551	Ave	0.8603				10.5		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1 Analy Batch No.: 25052
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/02/2018 18:28 Calibration End Date: 11/03/2018 04:25 Calibration ID: 1735

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.8899 1.0114	0.8692 0.9714	0.8265 0.9838	0.8437 0.9795	0.8843 0.9511	Ave		0.9211			7.1		30.0				
1,2,3-Trichloropropane	++++ 0.2916	++++ 0.2858	0.2604 0.2880	0.2530 0.2877	0.2620 0.2770	Ave		0.2757			5.5		30.0				
Isopropylbenzene	++++ 1.8861	1.9106 1.8381	1.8309 1.8787	1.7156 1.8219	1.7266 1.6722	Ave		1.8090			4.7		30.0				
Propylbenzene	0.4620 0.4842	0.4372 0.4761	0.4334 0.5004	0.4310 0.4865	0.4376 0.4212	Ave		0.4570			6.2		30.0				
2-Chlorotoluene	++++ 0.4229	0.3933 0.4058	0.3846 0.4273	0.3773 0.4106	0.3909 0.3556	Ave		0.3965			5.8		30.0				
4-Ethyltoluene	++++ 1.9328	1.7136 1.8926	1.7931 1.9594	1.6790 1.9163	1.7587 1.7981	Ave		1.8271			5.6		30.0				
1,3,5-Trimethylbenzene	0.6308 0.7215	0.6371 0.7021	0.6473 0.7336	0.6199 0.7220	0.6411 0.6857	Ave		0.6741			6.4		30.0				
Alpha Methyl Styrene	++++ 0.6316	++++ 0.6754	++++ 0.7484	0.4001 0.7749	0.4609 0.7532	Ave		0.6349			23.5		30.0				
Decane	1.2063 1.2610	1.0977 1.2147	1.1175 1.2202	1.0938 1.1446	1.1596 1.0207	Ave		1.1536			6.3		30.0				
tert-Butylbenzene	1.4683 1.5820	1.4258 1.5288	1.4352 1.5933	1.3841 1.5388	1.4249 1.3283	Ave		1.4709			5.9		30.0				
1,2,4-Trimethylbenzene	1.4711 1.6620	1.4828 1.6089	1.4610 1.6832	1.4589 1.6053	1.4730 1.3967	Ave		1.5303			6.5		30.0				
1,3-Dichlorobenzene	0.9707 0.9161	0.8314 0.8947	0.8332 0.9403	0.8013 0.9533	0.8319 0.9188	Ave		0.8892			6.8		30.0				
sec-Butylbenzene	2.2878 2.4273	2.1430 2.3614	2.2000 2.4331	2.1469 2.3525	2.1803 2.1087	Ave		2.2641			5.4		30.0				
Benzyl chloride	++++ 1.2877	++++ 1.3255	1.0019 1.4030	0.9418 1.4399	1.0102 1.2831	Ave		1.2116			16.2		30.0				
1,4-Dichlorobenzene	0.9650 0.9315	0.8842 0.9197	0.8800 0.9710	0.8304 0.9531	0.8544 0.8487	Ave		0.9038			5.7		30.0				
4-Isopropyltoluene	1.8127 1.9675	1.7339 1.9286	1.7294 2.0146	1.6661 1.9744	1.7603 1.7814	Ave		1.8369			6.7		30.0				
1,2,3-Trimethylbenzene	1.5665 1.7137	1.4642 1.6635	1.4830 1.7227	1.4549 1.6739	1.5439 1.5821	Ave		1.5868			6.4		30.0				
1,2-Dichlorobenzene	0.9471 0.9022	0.8814 0.8793	0.8969 0.9192	0.7941 0.9253	0.8144 0.8095	Ave		0.8769			6.1		30.0				
Indane	1.2861 1.4206	1.2556 1.3776	1.2694 1.4428	1.2412 1.4175	1.2847 1.2005	Ave		1.3196			6.6		30.0				
Indene	++++ 1.1656	++++ 1.1819	++++ 1.2574	0.8703 1.3097	0.9392 1.2619	Ave		1.1409			14.9		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1 Analy Batch No.: 25052
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/02/2018 18:28 Calibration End Date: 11/03/2018 04:25 Calibration ID: 1735

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	2.0076	1.8312	1.8815	1.8019	1.8515	Ave	1.9002			5.3	30.0						
	2.0392	1.9523	1.9892	1.9277	1.7194												
Undecane	1.2942	1.2862	1.4008	1.3314	1.3774	Ave	1.3441			10.2	30.0						
	1.5325	1.4479	1.4166	1.3355	1.0188												
1,2-Dibromo-3-Chloropropane	++++	++++	0.2685	0.2361	0.3135	Ave	0.3981			28.0	30.0						
	0.4107	0.4449	0.4864	0.5312	0.4938												
1,2,4,5-Tetramethylbenzene	++++	1.5130	1.4920	1.4749	1.5048	Ave	1.6139			7.7	30.0						
	1.7203	1.6794	1.7674	1.7830	1.5906												
Dodecane	1.3738	1.2819	1.3917	1.3759	1.5035	Ave	1.4024			10.2	30.0						
	1.5945	1.5032	1.4950	1.4215	1.0831												
1,2,4-Trichlorobenzene	++++	0.7472	0.7492	0.7061	0.7007	Ave	0.7658			7.1	30.0						
	0.7551	0.7459	0.8015	0.8667	0.8201												
Naphthalene	++++	2.1611	2.2710	2.0857	1.8782	Ave	2.0721			5.6	30.0						
	2.0276	2.0261	2.0790	2.1544	1.9655												
Hexachlorobutadiene	0.5788	0.4999	0.4865	0.4510	0.4773	Ave	0.5725			17.6	30.0						
	0.5547	0.5681	0.6602	0.7464	0.7021												
1,2,3-Trichlorobenzene	++++	0.8176	0.7566	0.7014	0.6541	Ave	0.7420			7.7	30.0						
	0.7076	0.6939	0.7432	0.8072	0.7966												
2-Methylnaphthalene	++++	++++	++++	1.2315	1.0087	Ave	1.1809			8.2	50.0						
	1.1325	1.1787	1.2401	1.3141	1.1610												
1-Methylnaphthalene	++++	++++	++++	1.3346	1.0390	Ave	1.0651			14.4	50.0						
	1.1108	1.0931	1.0734	0.9812	0.8234												
4-Bromofluorobenzene (Surr)	0.7358	0.7417	0.7433	0.7447	0.7625	Ave	0.7510			1.9	30.0						
	0.7684	0.7584	0.7628	0.7653	0.7271												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1 Analy Batch No.: 25052

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2018 18:28 Calibration End Date: 11/03/2018 04:25 Calibration ID: 1735

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25052/8	RK02IC01.D
Level 2	IC 140-25052/9	RK02IC02.D
Level 3	IC 140-25052/10	RK02IC03.D
Level 4	IC 140-25052/11	RK02IC04.D
Level 5	IC 140-25052/12	RK02IC05.D
Level 6	IC 140-25052/13	RK02IC06.D
Level 7	ICIS 140-25052/14	RK02IC07.D
Level 8	IC 140-25052/15	RK02IC08.D
Level 9	IC 140-25052/3	RK02IC09.D
Level 10	IC 140-25052/5	RK02IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 231849	++++ 466010	20368 951925	36329 1801777	91600 3651956	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 113689	++++ 233746	++++ 464844	19342 884563	46062 1791186	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 184848	++++ 290508	14423 631992	29526 1372366	79361 2605007	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 44072	++++ 86581	3225 173128	6858 330193	18338 667495	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 155694	6853 206849	10963 449474	21248 ++++	57376 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 ++++	0.400 ++++
Vinyl chloride	CBM	Ave	2487 114702	4959 246064	9030 495118	17688 899944	43489 1811382	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 90846	++++ 185230	++++ 366528	12380 704992	34405 1362236	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 174264	++++ 347974	++++ 686270	23840 1327691	67407 2509415	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 85185	++++ 158523	6536 317035	13078 632091	31796 1224841	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 44548	++++ 89727	3358 180820	6814 332497	17153 716750	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 216518	++++ 404445	++++ 799971	32349 1510277	80930 2888194	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 81055	++++ 164591	5702 335851	12501 619400	29997 1247826	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 117041	++++ 223048	++++ 443553	18331 862459	41476 1670970	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Acrolein	CBM	Ave	++++ 21007	++++ 43345	++++ 117178	++++ 230266	8718 411439	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13304-1

Analy Batch No.: 25052

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2018 18:28

Calibration End Date: 11/03/2018 04:25

Calibration ID: 1735

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	++++ 272921	10887 577739	19785 1203652	40300 2162179	100322 4415319	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 36357	++++ 79626	++++ 156560	++++ 314907	++++ 612922	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
Acetone	CBM	Ave	++++ 126940	++++ 249912	++++ 493514	++++ 932023	++++ 66601 1710920	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	++++ 48.0
Pentane	CBM	Ave	++++ 15877	++++ 31026	++++ 61193	++++ 117521	++++ 6100 225462	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
Isopropyl alcohol	CBM	Ave	++++ 409204	++++ 805048	++++ 1535074	++++ 3011551	++++ 63187 144150 5561256	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	++++ 48.0
Ethyl ether	CBM	Ave	++++ 100098	++++ 203244	++++ 428803	++++ 7443 764152	++++ 14902 34519 1552897	++++ 1.00	++++ 2.00	++++ 0.0800 4.00	++++ 0.160 8.00	++++ 0.400 16.0
1,1-Dichloroethene	CBM	Ave	++++ 92259	++++ 192954	++++ 417996	++++ 733204	++++ 6794 13280 33923 1583919	++++ 1.00	++++ 2.00	++++ 0.0800 4.00	++++ 0.160 8.00	++++ 0.400 16.0
Acrylonitrile	CBM	Ave	++++ 81527	++++ 179985	++++ 381133	++++ 685856	++++ 12497 29184 1457579	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
tert-Butyl alcohol	CBM	Ave	++++ 208147	++++ 439653	++++ 15370 923601	++++ 30197 1623550	++++ 74687 3369228	++++ 1.00	++++ 2.00	++++ 0.0800 4.00	++++ 0.160 8.00	++++ 0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 218846	++++ 460926	++++ 984783	++++ 1702510	++++ 15457 30984 81096 3637387	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 101855	++++ 223608	++++ 415004	++++ 707571	++++ 23458 43850 1497743	++++ 1.00	++++ 2.00	++++ 4.00	++++ 0.160 8.00	++++ 0.400 16.0
3-Chloropropene	CBM	Ave	++++ 101220	++++ 205727	++++ 433282	++++ 770461	++++ 7218 15519 34997 1508985	++++ 1.00	++++ 2.00	++++ 0.0800 4.00	++++ 0.160 8.00	++++ 0.400 16.0
Carbon disulfide	CBM	Ave	++++ 298301	++++ 630194	++++ 1339231	++++ 2365889	++++ 25571 45622 114417 5076540	++++ 1.00	++++ 2.00	++++ 0.0800 4.00	++++ 0.160 8.00	++++ 0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 100776	++++ 208409	++++ 446824	++++ 791790	++++ 7076 13782 37453 1748281	++++ 1.00	++++ 2.00	++++ 0.0800 4.00	++++ 0.160 8.00	++++ 0.400 16.0
2-Methylpentane	CBM	Ave	++++ 271866	++++ 568514	++++ 1172636	++++ 2077750	++++ 19502 40204 101271 4208672	++++ 1.00	++++ 2.00	++++ 0.0800 4.00	++++ 0.160 8.00	++++ 0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 294327	++++ 617985	++++ 1312711	++++ 2323663	++++ 21082 41364 107483 4948705	++++ 1.00	++++ 2.00	++++ 0.0800 4.00	++++ 0.160 8.00	++++ 0.400 16.0
1,1-Dichloroethane	CBM	Ave	++++ 207169	++++ 423575	++++ 890884	++++ 1588165	++++ 7983 14573 29278 76912 3379186	++++ 1.00	++++ 2.00	++++ 0.0800 4.00	++++ 0.160 8.00	++++ 0.400 16.0
Vinyl acetate	CBM	Ave	++++ 303901	++++ 652250	++++ 1411960	++++ 2628052	++++ 19787 40327 107348 5486611	++++ 1.00	++++ 2.00	++++ 0.0800 4.00	++++ 0.160 8.00	++++ 0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 51080	++++ 107123	++++ 239534	++++ 423198	++++ 9750 21494 918018	++++ 1.00	++++ 2.00	++++ 4.00	++++ 0.160 8.00	++++ 0.400 16.0
Hexane	CBM	Ave	++++ 99038	++++ 205512	++++ 430519	++++ 758401	++++ 7379 14851 37905 1601494	++++ 1.00	++++ 2.00	++++ 0.0800 4.00	++++ 0.160 8.00	++++ 0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	++++ 105380	++++ 216971	++++ 463280	++++ 834677	++++ 2204 3915 7029 14929 38737 1822773	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13304-1

Analy Batch No.: 25052

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2018 18:28

Calibration End Date: 11/03/2018 04:25

Calibration ID: 1735

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 278564	++++ 584084	20308 1231408	36077 2256208	98591 4669780	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	++++ 226044	8336 470178	15880 997756	32334 1782832	84032 3831509	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 141517	++++ 289106	++++ 608507	20634 1114717	53313 2312273	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	4388 207345	7679 442101	14638 962576	29060 1738158	75472 3820513	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	3249 168927	5942 349263	12182 757522	23925 1364302	61559 2908560	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	++++ 321613	12766 666390	23854 1408085	47216 2517032	118436 5345081	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 51160	++++ 105650	++++ 221068	7260 391015	18962 822589	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 37691	++++ 81832	++++ 169591	++++ 306919	11609 586637	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	4013 205099	6903 448416	13524 961183	27991 1762563	72667 3870941	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 77103	++++ 160666	5309 338567	10826 609718	28447 1285978	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	3800 185093	6728 383959	12806 806940	25979 1476364	67392 3138085	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 572507	21149 1181785	40854 2461970	81375 4505125	212015 9411481	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 128831	++++ 262553	9120 558428	18138 1028789	46851 2162866	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 116537	4159 243267	8278 510397	16538 944109	42237 1963209	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	2372 118506	4641 251631	8243 543287	17273 1009029	44427 2142430	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 120489	++++ 258916	9354 551133	17765 1037214	45057 2182410	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	3853 215951	7372 472344	13620 1018560	27424 1921388	76810 4096043	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 47592	++++ 98506	++++ 209175	6339 378256	16175 793468	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 145426	++++ 319365	9894 692496	18130 1306810	47269 2705260	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	++++ 190467	6883 397763	13064 840972	27315 1564622	69268 3377868	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 270976	++++ 591220	17714 1266534	36311 2389368	96312 4909807	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13304-1

Analy Batch No.: 25052

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2018 18:28

Calibration End Date: 11/03/2018 04:25

Calibration ID: 1735

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 186197	6110 397868	11804 858100	24482 1623445	65745 3433910	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 167492	5601 364022	10383 793713	20053 1527562	57701 3290785	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	++++ 356596	13414 750962	25265 1591393	49722 3003517	130019 6415594	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2126 112990	4022 233018	7352 496426	15435 927522	40674 1971390	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 125070	++++ 281163	++++ 614954	15595 1190566	43143 2553416	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	++++ 172310	++++ 394764	9334 895518	18294 1771389	56779 3848813	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 119020	++++ 254591	8136 539089	16304 1011453	42108 2103755	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	DFBZ	Ave	++++ 1198990	++++ 2452242	++++ 5099279	++++ 9218721	++++ 19402462	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 186770	++++ 405930	11548 891488	24032 1724714	64811 3764681	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	2247 111450	3918 235644	7542 510864	16335 969503	40817 2117340	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	5851 281026	11055 596751	20936 1278772	40205 2442366	103601 5211844	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	9465 469705	16396 990329	32173 2117241	64289 4039197	169388 8326983	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	14633 721489	25658 1525331	49551 3295253	96444 6188036	259626 12172906	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	++++ 142211	3386 343651	6832 814953	12106 1698340	42803 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Styrene	CBZd 5	Ave	++++ 260320	++++ 588080	11939 1306244	27578 2545491	82823 5391636	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	7696 375445	13523 791096	25081 1696240	52013 3155810	137281 5835834	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Nonane	CBZd 5	Ave	++++ 270134	++++ 552039	18269 1146449	36877 2142293	98296 3606269	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	5095 282266	9384 592794	17064 1270869	36449 2475737	98694 5235266	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 81382	++++ 174380	5375 371987	10928 727052	29239 1524565	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 526413	++++ 1121672	20626 2426908	37798 4604864	74118 9205067	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	2645 135138	4720 290508	8947 646457	18619 1229525	48841 2318654	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13304-1

Analy Batch No.: 25052

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2018 18:28

Calibration End Date: 11/03/2018 04:25

Calibration ID: 1735

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 118041	4246 247614	7940 551995	16300 1037825	43624 1957392	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	++++ 539442	18499 1154927	37018 2531231	72536 4843274	196269 9897773	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	3612 201382	6878 428442	13363 947728	26781 1824865	71552 3774412	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 176269	++++ 412134	++++ 966752	17285 1958453	51439 4145842	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	6907 351946	11850 741260	23070 1576258	47254 2893004	129410 5618362	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	8407 441543	15392 932902	29629 2058258	59795 3889261	159019 7312051	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	8423 463859	16008 981808	30163 2174377	63028 4057212	164384 7688238	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	5558 255682	8975 545975	17201 1214748	34618 2409520	92845 5057758	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	13099 677466	23135 1440975	45418 3143100	92751 5945919	243328 11607551	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 359392	++++ 808874	20684 1812466	40689 3639368	112737 7062917	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	5525 259988	9545 561241	18167 1254389	35873 2408925	95354 4671976	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	10379 549116	18718 1176860	35703 2602549	71981 4990203	196455 9805983	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	8969 478298	15807 1015124	30617 2225443	62853 4230693	172299 8708657	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	5423 251799	9515 536576	18517 1187475	34307 2338718	90883 4455847	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	7364 396498	13555 840621	26206 1863860	53621 3582759	143379 6608314	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 325323	++++ 721254	++++ 1624318	37597 3310228	104815 6946269	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	11495 569135	19769 1191358	38844 2569763	77847 4872099	206625 9464701	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	7410 427707	13885 883546	28920 1829949	57518 3375357	153722 5608245	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 114622	++++ 271473	5544 628411	10201 1342637	34990 2718009	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 480127	16334 1024834	30803 2283228	63719 4506376	167938 8755692	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	7866 445020	13839 917276	28731 1931319	59441 3592682	167792 5962276	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1 Analy Batch No.: 25052

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2018 18:28 Calibration End Date: 11/03/2018 04:25 Calibration ID: 1735

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 210760	8066 455190	15467 1035413	30507 2190463	78198 4514467	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 565900	23330 1236388	46885 2685719	90105 5444993	209608 10819360	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	3314 154812	5397 346674	10044 852817	19483 1886486	53263 3864701	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 197486	8826 423408	15619 960127	30301 2040262	73002 4385194	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 316104	++++ 719297	++++ 1602140	53204 3321444	112574 6390949	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 310034	++++ 667094	++++ 1386760	57660 2479981	115955 4532491	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	842535 857801	800736 925571	767245 985355	804306 967088	850940 1000551	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1 Analy Batch No.: 25052

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2018 18:28 Calibration End Date: 11/03/2018 04:25 Calibration ID: 1735

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25052/8	RK02IC01.D
Level 2	IC 140-25052/9	RK02IC02.D
Level 3	IC 140-25052/10	RK02IC03.D
Level 4	IC 140-25052/11	RK02IC04.D
Level 5	IC 140-25052/12	RK02IC05.D
Level 6	IC 140-25052/13	RK02IC06.D
Level 7	ICIS 140-25052/14	RK02IC07.D
Level 8	IC 140-25052/15	RK02IC08.D
Level 9	IC 140-25052/3	RK02IC09.D
Level 10	IC 140-25052/5	RK02IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	23.3						50			
Propene	+++++	+++++	+++++	14.4						50		
Dichlorodifluoromethane	+++++	+++++	17.2						50			
Chloromethane	+++++	+++++	6.6						50			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	30.1	+++++	+++++				50				
Vinyl chloride	7.1						50					
1,3-Butadiene	+++++	+++++	+++++	-3.4						50		
Butane	+++++	+++++	+++++	-2.0						50		
Bromomethane	+++++	+++++	15.0						50			
Chloroethane	+++++	+++++	9.3						50			
Ethanol	+++++	+++++	+++++	10.5						50		
Vinyl bromide	+++++	+++++	3.2						50			
2-Methylbutane	+++++	+++++	+++++	13.3						50		
Acrolein	+++++	+++++	+++++	+++++	-5.6						50	

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1 Analy Batch No.: 25052
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/02/2018 18:28 Calibration End Date: 11/03/2018 04:25 Calibration ID: 1735

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Trichlorofluoromethane	+++++	7.5						50				
Acetonitrile	+++++	+++++	+++++	+++++	-9.4						50	
Acetone	+++++	+++++	+++++	+++++	38.5						80	
Pentane	+++++	+++++	+++++	+++++	7.4						50	
Isopropyl alcohol	+++++	+++++	+++++	12.4						50		
Ethyl ether	+++++	+++++	9.1						50			
1,1-Dichloroethene	+++++	8.7						50				
Acrylonitrile	+++++	+++++	+++++	0.6						50		
tert-Butyl alcohol	+++++	+++++	6.5						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	3.7						50					
Methylene Chloride	+++++	+++++	+++++	47.1						80		
3-Chloropropene	+++++	+++++	5.3						50			
Carbon disulfide	+++++	+++++	18.2						50			
trans-1,2-Dichloroethene	+++++	2.0						50				
2-Methylpentane	+++++	+++++	4.5						50			
Methyl tert-butyl ether	+++++	+++++	3.3						50			
1,1-Dichloroethane	+++++	6.0						50				
Vinyl acetate	+++++	+++++	-6.7						50			
2-Butanone (MEK)	+++++	+++++	+++++	19.4						50		
Hexane	+++++	+++++	6.8						50			
cis-1,2-Dichloroethene	7.6						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1 Analy Batch No.: 25052
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/02/2018 18:28 Calibration End Date: 11/03/2018 04:25 Calibration ID: 1735

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	6.1						50			
Chloroform	+++++	0.6						50				
Tetrahydrofuran	+++++	+++++	+++++	0.2						50		
1,1,1-Trichloroethane	6.1						50					
1,2-Dichloroethane	-1.2						50					
Benzene	+++++	6.3						50				
Cyclohexane	+++++	+++++	+++++	-2.1						50		
1-Butanol	+++++	+++++	+++++	+++++	-17.7						50	
Carbon tetrachloride	-0.4						50					
2,3-Dimethylpentane	+++++	+++++	-1.7						50			
Thiophene	5.5						50					
2,2,4-Trimethylpentane	+++++	0.7						50				
1,2-Dichloropropane	+++++	+++++	1.0						50			
Heptane	+++++	-2.9						50				
Trichloroethene	-0.4						50					
Dibromomethane	+++++	+++++	5.1						50			
Bromodichloromethane	-8.0						50					
1,4-Dioxane	+++++	+++++	+++++	-7.4						50		
Methyl methacrylate	+++++	+++++	-4.8						50			
Methylcyclohexane	+++++	-2.4						50				
4-Methyl-2-pentanone (MIBK)	+++++	+++++	-8.8						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1 Analy Batch No.: 25052
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/02/2018 18:28 Calibration End Date: 11/03/2018 04:25 Calibration ID: 1735

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-10.4						50				
trans-1,3-Dichloropropene	+++++	-6.9						50				
Toluene	+++++	2.8						50				
1,1,2-Trichloroethane	-0.1						50					
2-Hexanone	+++++	+++++	+++++	-17.6						50		
Dibromochloromethane	+++++	+++++	-23.7						50			
Octane	+++++	+++++	-1.2						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-12.0						50			
Tetrachloroethene	2.9						50					
Chlorobenzene	4.2						50					
Ethylbenzene	4.7						50					
m-Xylene & p-Xylene	5.7						50					
Bromoform	+++++	-31.9		+++++				50				
Styrene	+++++	+++++	-32.5						50			
o-Xylene	7.5						50					
Nonane	+++++	+++++	2.9						50			
1,1,2,2-Tetrachloroethane	-3.4						50					
1,2,3-Trichloropropane	+++++	+++++	-5.5						50			
Isopropylbenzene	+++++	5.6						50				
Propylbenzene	1.1						50					
2-Chlorotoluene	+++++	-0.8						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1 Analy Batch No.: 25052
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/02/2018 18:28 Calibration End Date: 11/03/2018 04:25 Calibration ID: 1735

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	+++++	-6.2						50				
1,3,5-Trimethylbenzene	-6.4						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-37.0						50		
Decane	4.6						50					
tert-Butylbenzene	-0.2						50					
1,2,4-Trimethylbenzene	-3.9						50					
1,3-Dichlorobenzene	9.2						50					
sec-Butylbenzene	1.0						50					
Benzyl chloride	+++++	+++++	-17.3						50			
1,4-Dichlorobenzene	6.8						50					
4-Isopropyltoluene	-1.3						50					
1,2,3-Trimethylbenzene	-1.3						50					
1,2-Dichlorobenzene	8.0						50					
Indane	-2.5						50					
Indene	+++++	+++++	+++++	-23.7						50		
Butylbenzene	5.7						50					
Undecane	-3.7						50					
1,2-Dibromo-3-Chloropropane	+++++	+++++	-32.6						50			
1,2,4,5-Tetramethylbenzene	+++++	-6.3						50				
Dodecane	-2.0						50					
1,2,4-Trichlorobenzene	+++++	-2.4						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1 Analy Batch No.: 25052

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/02/2018 18:28 Calibration End Date: 11/03/2018 04:25 Calibration ID: 1735

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	4.3						80				
Hexachlorobutadiene	1.1						50					
1,2,3-Trichlorobenzene	+++++	10.2						50				
2-Methylnaphthalene	+++++	+++++	+++++	4.3						80		
1-Methylnaphthalene	+++++	+++++	+++++	25.3						80		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 02-Nov-2018 18:28:30 ALS Bottle#: 14 Worklist Smp#: 3
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009868-003
 Misc. Info.: 160085
 Operator ID: AFB Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 08:48:38 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 05-Nov-2018 14:38:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.422	7.407	0.015	96	219475	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.520	9.505	0.015	96	1441662	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.567	14.564	0.003	90	1263720	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.293	16.288	0.005	79	967088	4.00	4.08	
6 Chlorodifluoromethane	51	3.410	3.416	-0.006	96	1801777	8.00	7.67	
7 Propene	41	3.416	3.418	-0.002	98	884563	8.00	7.79	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	100	1372366	8.00	7.84	
9 Chloromethane	52	3.588	3.587	0.001	100	330193	8.00	7.67	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	95	904451	8.00	6.38	
11 Acetaldehyde	44	3.712	3.709	0.003	91	1760129	40.0	35.6	
12 Vinyl chloride	62	3.712	3.710	0.002	98	899944	8.00	7.61	
13 Butadiene	54	3.782	3.780	0.002	97	704992	8.00	8.19	
14 Butane	43	3.782	3.782	0.000	91	1327691	8.00	8.13	
15 Bromomethane	94	4.004	3.997	0.007	98	632091	8.00	7.82	
16 Chloroethane	64	4.106	4.101	0.005	96	332497	8.00	7.61	
17 Ethanol	31	4.235	4.225	0.010	92	1510277	40.0	38.4	
18 Vinyl bromide	106	4.327	4.317	0.010	98	619400	8.00	7.88	
19 2-Methylbutane	43	4.376	4.372	0.004	91	862459	8.00	7.94	
20 Acrolein	56	4.521	4.520	0.001	93	230266	8.00	9.63	
21 Trichlorofluoromethane	101	4.527	4.522	0.005	99	2162179	8.00	7.93	
22 Acetonitrile	40	4.570	4.547	0.023	98	314907	8.00	8.67	
23 Acetone	58	4.607	4.607	0.000	99	932023	24.0	22.4	
24 Pentane	72	4.699	4.695	0.004	98	117521	8.00	7.99	
25 Isopropyl alcohol	45	4.726	4.722	0.004	97	3011551	24.0	23.9	
26 Ethyl ether	31	4.818	4.822	-0.004	97	764152	8.00	7.88	
27 1,1-Dichloroethene	96	5.050	5.039	0.011	94	733204	8.00	7.88	
28 Acrylonitrile	53	5.114	5.100	0.014	95	685856	8.00	8.22	
29 2-Methyl-2-propanol	59	5.174	5.176	-0.002	92	1623550	8.00	7.91	
30 1,1,2-Trichloro-1,2,2-trif	101	5.211	5.206	0.005	94	1702510	8.00	7.87	
31 Methylene Chloride	84	5.308	5.296	0.012	97	707571	8.00	6.61	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.325	5.315	0.010	95	770461	8.00	7.91	
33 Carbon disulfide	76	5.427	5.416	0.011	99	2365889	8.00	7.69	
34 trans-1,2-Dichloroethene	96	5.972	5.959	0.013	94	791790	8.00	7.97	
35 2-Methylpentane	43	6.026	6.019	0.007	95	2077750	8.00	7.82	
36 Methyl tert-butyl ether	73	6.090	6.101	-0.011	97	2323663	8.00	8.01	
37 1,1-Dichloroethane	63	6.306	6.291	0.015	100	1588165	8.00	7.83	
38 Vinyl acetate	43	6.414	6.409	0.005	100	2628052	8.00	8.71	
39 2-Butanone (MEK)	72	6.770	6.770	0.000	98	423198	8.00	7.72	
40 Hexane	56	6.861	6.856	0.005	89	758401	8.00	7.72	
171 Isopropyl ether	45	6.996	6.997	-0.001	98	3254103	8.00	7.68	
41 cis-1,2-Dichloroethene	96	7.153	7.136	0.017	98	834677	8.00	8.01	
42 Ethyl acetate	43	7.336	7.338	-0.002	99	2256208	8.00	8.29	
43 Chloroform	83	7.465	7.446	0.019	97	1782832	8.00	7.99	
173 Tert-butyl ethyl ether	59	7.589	7.592	-0.003	95	2909820	8.00	8.09	
44 Tetrahydrofuran	42	7.794	7.801	-0.007	96	1114717	8.00	8.06	
45 1,1,1-Trichloroethane	97	8.388	8.376	0.012	96	1738158	8.00	8.26	
46 1,2-Dichloroethane	62	8.452	8.439	0.013	96	1364302	8.00	8.13	
47 Benzene	78	8.943	8.933	0.010	98	2517032	8.00	7.77	
48 Cyclohexane	69	8.970	8.963	0.007	92	391015	8.00	7.81	
50 Carbon tetrachloride	117	8.986	8.973	0.013	97	1762563	8.00	8.57	
49 n-Butanol	31	8.959	8.991	-0.032	66	306919	8.00	8.35	
51 2,3-Dimethylpentane	71	9.142	9.136	0.006	89	609718	8.00	8.01	
52 Thiophene	84	9.202	9.186	0.016	97	1476364	8.00	8.03	
53 Isooctane	57	9.817	9.810	0.007	98	4505125	8.00	7.96	
54 1,2-Dichloropropane	63	10.194	10.186	0.008	89	1028789	8.00	8.09	
55 n-Heptane	71	10.243	10.233	0.009	91	944109	8.00	8.18	
56 Trichloroethene	130	10.269	10.261	0.008	92	1009029	8.00	8.30	
57 Dibromomethane	93	10.302	10.292	0.010	89	1037214	8.00	8.27	
58 Dichlorobromomethane	83	10.491	10.480	0.011	99	1921388	8.00	8.98	
59 1,4-Dioxane	88	10.501	10.513	-0.012	90	378256	8.00	8.18	
60 Methyl methacrylate	41	10.658	10.661	-0.003	94	1306810	8.00	8.93	
61 Methylcyclohexane	83	11.127	11.119	0.008	93	1564622	8.00	8.23	
62 4-Methyl-2-pentanone (MIBK)	43	11.553	11.561	-0.008	98	2389368	8.00	8.73	
63 cis-1,3-Dichloropropene	75	11.591	11.587	0.004	95	1623445	8.00	8.83	
64 trans-1,3-Dichloropropene	75	12.346	12.342	0.004	99	1527562	8.00	8.68	
65 Toluene	91	12.486	12.480	0.006	93	3003517	8.00	7.87	
66 1,1,2-Trichloroethane	83	12.540	12.536	0.004	98	927522	8.00	7.90	
69 2-Hexanone	58	13.003	13.013	-0.010	93	1190566	8.00	8.60	
70 Chlorodibromomethane	129	13.273	13.267	0.006	96	1771389	8.00	9.46	
71 n-Octane	85	13.338	13.336	0.002	93	1011453	8.00	8.02	
72 Ethylene Dibromide	107	13.564	13.560	0.004	98	1724714	8.00	8.58	
73 Tetrachloroethene	129	13.710	13.704	0.006	95	969503	8.00	8.05	
74 Chlorobenzene	112	14.616	14.614	0.002	92	2442366	8.00	7.88	
75 2,3-Dimethylheptane	43	14.761	14.757	0.004	96	3213081	8.00	7.43	
76 Ethylbenzene	91	14.955	14.951	0.004	98	4039197	8.00	8.10	
78 m-Xylene & p-Xylene	91	15.133	15.130	0.003	97	6188036	16.0	16.2	
79 Bromoform	173	15.516	15.514	0.002	93	1698340	8.00	11.7	
80 Styrene	104	15.603	15.599	0.004	99	2545491	8.00	9.41	
82 o-Xylene	91	15.667	15.663	0.004	99	3155810	8.00	7.99	
81 n-Nonane	57	15.667	15.667	0.000	92	2142293	8.00	7.88	
83 1,1,2,2-Tetrachloroethane	83	15.985	15.986	-0.001	99	2475737	8.00	8.51	
84 1,2,3-Trichloropropane	110	16.142	16.137	0.005	97	727052	8.00	8.35	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.293	16.291	0.002	96	4604864	8.00	8.06	
86 N-Propylbenzene	120	16.864	16.863	0.001	99	1229525	8.00	8.52	
87 2-Chlorotoluene	126	16.875	16.877	-0.002	92	1037825	8.00	8.29	
88 4-Ethyltoluene	105	17.037	17.033	0.004	99	4843274	8.00	8.39	
89 1,3,5-Trimethylbenzene	120	17.123	17.122	0.001	92	1824865	8.00	8.57	
90 Alpha Methyl Styrene	118	17.377	17.374	0.003	90	1958453	8.00	9.76	
91 n-Decane	57	17.544	17.540	0.004	90	2893004	8.00	7.94	
92 tert-Butylbenzene	119	17.598	17.597	0.001	91	3889261	8.00	8.37	
93 1,2,4-Trimethylbenzene	105	17.614	17.612	0.002	96	4057212	8.00	8.39	
94 1,3-Dichlorobenzene	146	17.884	17.880	0.004	99	2409520	8.00	8.58	
95 sec-Butylbenzene	105	17.910	17.907	0.003	99	5945919	8.00	8.31	
96 Benzyl chloride	91	17.970	17.967	0.003	98	3639368	8.00	9.51	
97 1,4-Dichlorobenzene	146	17.986	17.983	0.003	95	2408925	8.00	8.44	
98 4-Isopropyltoluene	119	18.105	18.101	0.004	96	4990203	8.00	8.60	
99 1,2,3-Trimethylbenzene	105	18.137	18.133	0.004	98	4230693	8.00	8.44	
100 Butylcyclohexane	83	18.239	18.238	0.001	93	3262685	8.00	8.08	
101 1,2-Dichlorobenzene	146	18.380	18.376	0.004	93	2338718	8.00	8.44	
102 2,3-Dihydroindene	117	18.390	18.391	-0.001	94	3582759	8.00	8.59	
103 Indene	116	18.531	18.527	0.004	91	3310228	8.00	9.18	
104 n-Butylbenzene	91	18.590	18.586	0.004	99	4872099	8.00	8.12	
105 Undecane	57	19.011	19.007	0.003	96	3375357	8.00	7.95	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.033	-0.001	96	1342637	8.00	10.7	
107 1,2,4,5-Tetramethylbenzene	119	19.415	19.412	0.003	97	4506376	8.00	8.84	
110 Dodecane	57	20.138	20.133	0.005	98	3592682	8.00	8.11	
111 1,2,4-Trichlorobenzene	180	20.213	20.213	0.000	93	2190463	8.00	9.05	
113 Naphthalene	128	20.337	20.335	0.002	99	5444993	8.00	8.32	
115 Hexachlorobutadiene	225	20.596	20.597	-0.001	93	1886486	8.00	10.4	
116 1,2,3-Trichlorobenzene	180	20.623	20.623	0.000	94	2040262	8.00	8.70	
117 2-Methylnaphthalene	142	21.464	21.464	0.000	100	3321444	8.00	8.90	
118 1-Methylnaphthalene	142	21.631	21.632	-0.001	98	2479981	8.00	7.37	
A 120 C8 Range	1	13.351	(13.289-13.386)		0	9218721	8.00	7.87	
S 121 Xylenes, Total	100				0		24.0	24.2	
S 122 1,2-Dichloroethene, Total	1				0		16.0	16.0	

Reagents:

40L9DQP_00006

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC09.D

Injection Date: 02-Nov-2018 18:28:30

Instrument ID: MR

Operator ID: AFB

Lims ID: IC L9

Worklist Smp#: 3

Client ID:

Purge Vol: 500.000 mL

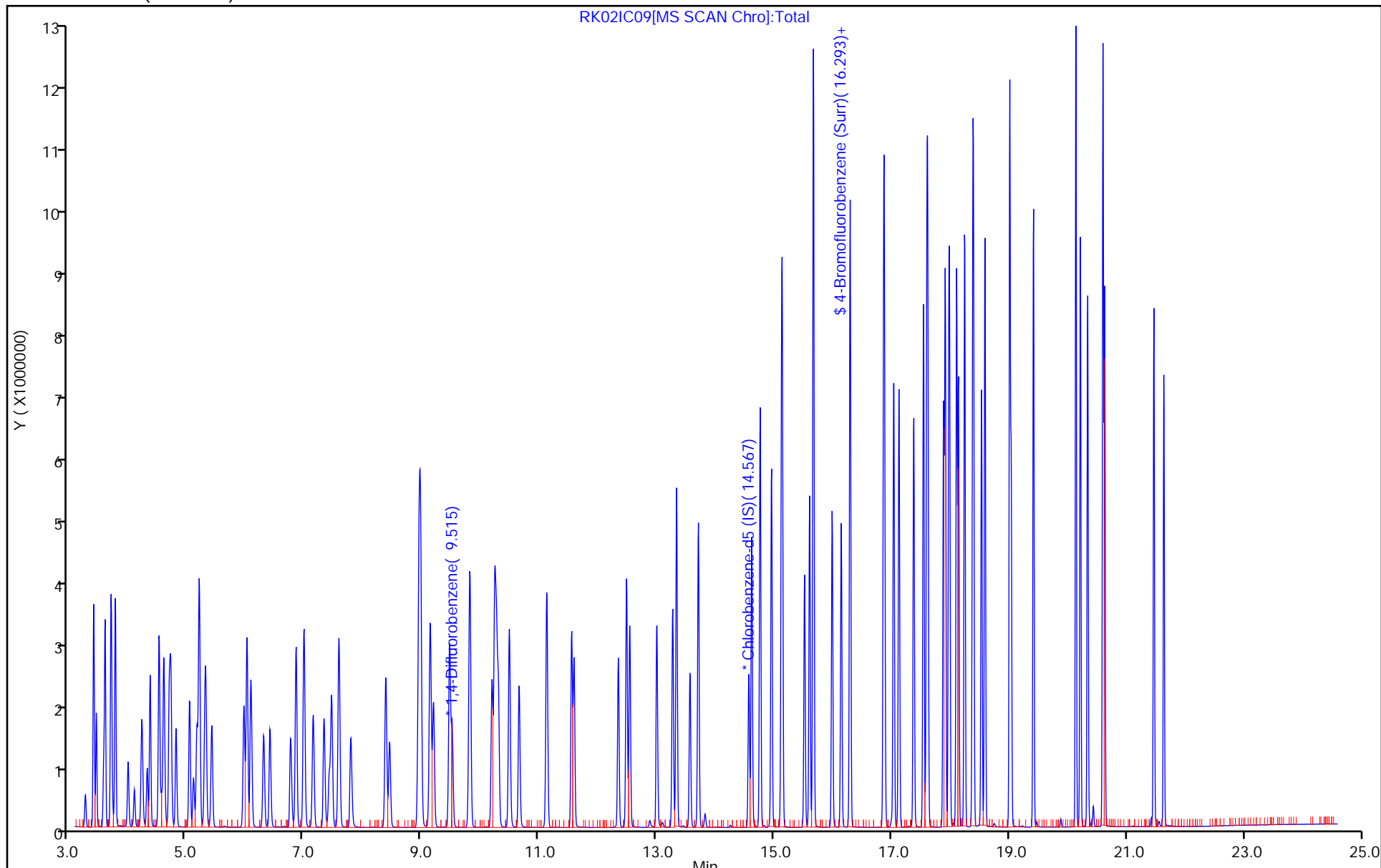
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC09.D

Injection Date: 02-Nov-2018 18:28:30

Instrument ID: MR

Lims ID: IC L9

Client ID:

Operator ID: AFB

ALS Bottle#: 14

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

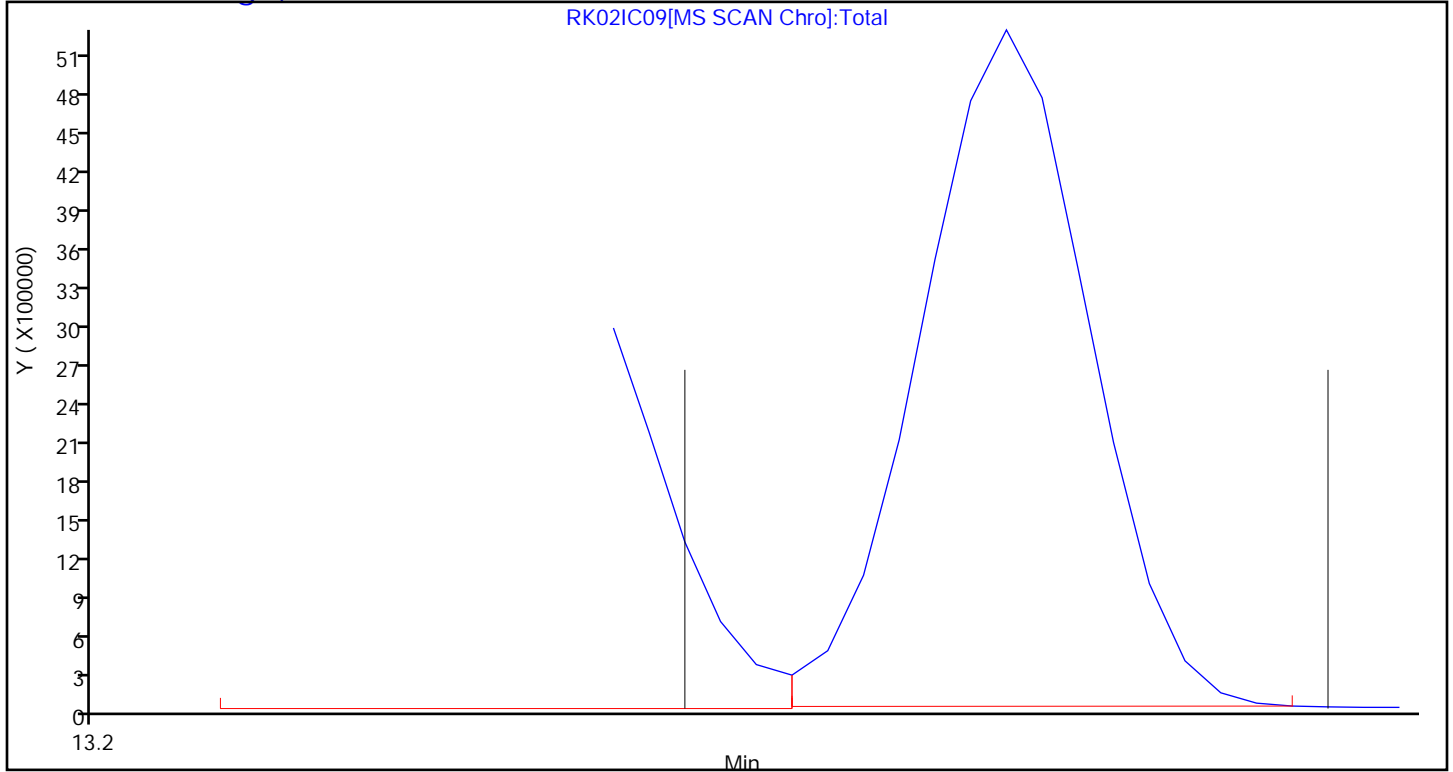
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 02-Nov-2018 20:08:30 ALS Bottle#: 15 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009868-005
 Misc. Info.: 160084
 Operator ID: AFB Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 08:48:49 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 05-Nov-2018 08:50:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.433	7.407	0.026	97	243130	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.525	9.505	0.020	94	1547422	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.573	14.564	0.009	89	1376159	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.293	16.288	0.005	80	1000551	4.00	3.87	
6 Chlorodifluoromethane	51	3.410	3.416	-0.006	96	3651956	16.0	14.0	
7 Propene	41	3.416	3.418	-0.002	99	1791186	16.0	14.2	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	100	2605007	16.0	13.4	
9 Chloromethane	52	3.588	3.587	0.001	99	667495	16.0	14.0	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	95	1883752	16.0	12.0	
11 Acetaldehyde	44	3.712	3.709	0.003	91	3496741	80.0	63.9	
12 Vinyl chloride	62	3.712	3.710	0.002	71	1811382	16.0	13.8	
13 Butadiene	54	3.783	3.780	0.003	95	1362236	16.0	14.3	
14 Butane	43	3.783	3.782	0.001	91	2509415	16.0	13.9	
15 Bromomethane	94	4.004	3.997	0.007	97	1224841	16.0	13.7	
16 Chloroethane	64	4.112	4.101	0.011	97	716750	16.0	14.8	
17 Ethanol	31	4.241	4.225	0.016	92	2888194	80.0	66.3	
18 Vinyl bromide	106	4.327	4.317	0.010	98	1247826	16.0	14.3	
19 2-Methylbutane	43	4.376	4.372	0.004	90	1670970	16.0	13.9	
20 Acrolein	56	4.521	4.520	0.001	93	411439	16.0	15.5	
21 Trichlorofluoromethane	101	4.532	4.522	0.010	99	4415319	16.0	14.6	
22 Acetonitrile	40	4.575	4.547	0.028	98	612922	16.0	15.2	
23 Acetone	58	4.613	4.607	0.006	100	1710920	48.0	37.2	
24 Pentane	72	4.699	4.695	0.004	99	225462	16.0	13.8	
25 Isopropyl alcohol	45	4.737	4.722	0.015	98	5561256	48.0	39.9	
26 Ethyl ether	31	4.818	4.822	-0.004	93	1552897	16.0	14.5	
27 1,1-Dichloroethene	96	5.050	5.039	0.011	94	1583919	16.0	15.4	
28 Acrylonitrile	53	5.120	5.100	0.020	95	1457579	16.0	15.8	
29 2-Methyl-2-propanol	59	5.179	5.176	0.003	94	3369228	16.0	14.8	
30 1,1,2-Trichloro-1,2,2-trif	101	5.217	5.206	0.011	94	3637387	16.0	15.2	
31 Methylene Chloride	84	5.314	5.296	0.018	98	1497743	16.0	12.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.330	5.315	0.015	95	1508985	16.0	14.0	
33 Carbon disulfide	76	5.427	5.416	0.011	99	5076540	16.0	14.9	
34 trans-1,2-Dichloroethene	96	5.977	5.959	0.018	95	1748281	16.0	15.9	
35 2-Methylpentane	43	6.026	6.019	0.007	95	4208672	16.0	14.3	
36 Methyl tert-butyl ether	73	6.096	6.101	-0.005	96	4948705	16.0	15.4	
37 1,1-Dichloroethane	63	6.312	6.291	0.021	100	3379186	16.0	15.0	
38 Vinyl acetate	43	6.425	6.409	0.016	100	5486611	16.0	16.4	
39 2-Butanone (MEK)	72	6.775	6.770	0.005	98	918018	16.0	15.1	
40 Hexane	56	6.867	6.856	0.011	88	1601494	16.0	14.7	
171 Isopropyl ether	45	7.002	6.997	0.005	98	6556644	16.0	14.0	
41 cis-1,2-Dichloroethene	96	7.158	7.136	0.022	98	1822773	16.0	15.8	
42 Ethyl acetate	43	7.342	7.338	0.004	99	4669780	16.0	15.5	
43 Chloroform	83	7.471	7.446	0.025	98	3831509	16.0	15.5	
173 Tert-butyl ethyl ether	59	7.595	7.592	0.003	95	6077238	16.0	15.2	
44 Tetrahydrofuran	42	7.794	7.801	-0.007	95	2312273	16.0	15.1	
45 1,1,1-Trichloroethane	97	8.393	8.376	0.017	97	3820513	16.0	16.4	
46 1,2-Dichloroethane	62	8.458	8.439	0.019	97	2908560	16.0	16.1	
47 Benzene	78	8.954	8.933	0.021	97	5345081	16.0	15.4	
48 Cyclohexane	69	8.975	8.963	0.012	92	822589	16.0	15.3	
50 Carbon tetrachloride	117	8.992	8.973	0.019	97	3870941	16.0	17.5	
49 n-Butanol	31	8.965	8.991	-0.026	67	586637	16.0	14.9	
51 2,3-Dimethylpentane	71	9.148	9.136	0.012	89	1285978	16.0	15.7	
52 Thiophene	84	9.207	9.186	0.021	97	3138085	16.0	15.9	
53 Isooctane	57	9.822	9.810	0.012	98	9411481	16.0	15.5	
54 1,2-Dichloropropane	63	10.205	10.186	0.019	88	2162866	16.0	15.8	
55 n-Heptane	71	10.248	10.233	0.015	90	1963209	16.0	15.8	
56 Trichloroethene	130	10.280	10.261	0.019	92	2142430	16.0	16.4	
57 Dibromomethane	93	10.313	10.292	0.021	95	2182410	16.0	16.2	
58 Dichlorobromomethane	83	10.496	10.480	0.016	99	4096043	16.0	17.8	
59 1,4-Dioxane	88	10.507	10.513	-0.006	86	793468	16.0	16.0	
60 Methyl methacrylate	41	10.663	10.661	0.002	95	2705260	16.0	17.2	
61 Methylcyclohexane	83	11.132	11.119	0.013	94	3377868	16.0	16.6	
62 4-Methyl-2-pentanone (MIBK)	43	11.558	11.561	-0.003	97	4909807	16.0	16.7	
63 cis-1,3-Dichloropropene	75	11.596	11.587	0.009	93	3433910	16.0	17.4	
64 trans-1,3-Dichloropropene	75	12.351	12.342	0.009	98	3290785	16.0	17.2	
65 Toluene	91	12.491	12.480	0.011	94	6415594	16.0	15.4	
66 1,1,2-Trichloroethane	83	12.545	12.536	0.009	98	1971390	16.0	15.4	
69 2-Hexanone	58	13.004	13.013	-0.009	93	2553416	16.0	16.9	
70 Chlorodibromomethane	129	13.279	13.267	0.012	97	3848813	16.0	18.9	
71 n-Octane	85	13.343	13.336	0.007	93	2103755	16.0	15.3	
72 Ethylene Dibromide	107	13.570	13.560	0.010	98	3764681	16.0	17.2	
73 Tetrachloroethene	129	13.710	13.704	0.006	92	2117340	16.0	16.1	
74 Chlorobenzene	112	14.621	14.614	0.007	93	5211844	16.0	15.4	
75 2,3-Dimethylheptane	43	14.761	14.757	0.004	95	6363487	16.0	13.5	
76 Ethylbenzene	91	14.956	14.951	0.005	99	8326983	16.0	15.3	
78 m-Xylene & p-Xylene	91	15.134	15.130	0.004	98	12172906	32.0	29.3	
79 Bromoform	173	15.522	15.514	0.008	94	3879422	16.0	24.5	
80 Styrene	104	15.608	15.599	0.009	100	5391636	16.0	18.3	
82 o-Xylene	91	15.667	15.663	0.004	98	5835834	16.0	13.6	
81 n-Nonane	57	15.673	15.667	0.006	90	3606269	16.0	12.2	
83 1,1,2,2-Tetrachloroethane	83	15.991	15.986	0.005	99	5235266	16.0	16.5	
84 1,2,3-Trichloropropane	110	16.142	16.137	0.005	97	1524565	16.0	16.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.298	16.291	0.007	97	9205067	16.0	14.8	
86 N-Propylbenzene	120	16.864	16.863	0.001	97	2318654	16.0	14.7	
87 2-Chlorotoluene	126	16.881	16.877	0.004	92	1957392	16.0	14.3	
88 4-Ethyltoluene	105	17.037	17.033	0.004	99	9897773	16.0	15.7	
89 1,3,5-Trimethylbenzene	120	17.129	17.122	0.007	91	3774412	16.0	16.3	
90 Alpha Methyl Styrene	118	17.377	17.374	0.003	87	4145842	16.0	19.0	
91 n-Decane	57	17.544	17.540	0.004	91	5618362	16.0	14.2	
92 tert-Butylbenzene	119	17.603	17.597	0.006	89	7312051	16.0	14.4	
93 1,2,4-Trimethylbenzene	105	17.619	17.612	0.007	96	7688238	16.0	14.6	
94 1,3-Dichlorobenzene	146	17.884	17.880	0.004	98	5057758	16.0	16.5	
95 sec-Butylbenzene	105	17.916	17.907	0.009	99	11607551	16.0	14.9	
96 Benzyl chloride	91	17.975	17.967	0.008	97	7062917	16.0	16.9	
97 1,4-Dichlorobenzene	146	17.991	17.983	0.008	94	4671976	16.0	15.0	
98 4-Isopropyltoluene	119	18.110	18.101	0.009	95	9805983	16.0	15.5	
99 1,2,3-Trimethylbenzene	105	18.137	18.133	0.004	99	8708657	16.0	16.0	
100 Butylcyclohexane	83	18.245	18.238	0.007	92	6328846	16.0	14.4	
101 1,2-Dichlorobenzene	146	18.380	18.376	0.004	96	4455847	16.0	14.8	
102 2,3-Dihydroindene	117	18.401	18.391	0.010	94	6608314	16.0	14.6	
103 Indene	116	18.531	18.527	0.004	91	6946269	16.0	17.7	
104 n-Butylbenzene	91	18.590	18.586	0.004	99	9464701	16.0	14.5	
105 Undecane	57	19.011	19.007	0.004	94	5608245	16.0	12.1	
106 1,2-Dibromo-3-Chloropropan	157	19.038	19.033	0.005	96	2718009	16.0	19.8	
107 1,2,4,5-Tetramethylbenzene	119	19.415	19.412	0.003	96	8755692	16.0	15.8	
110 Dodecane	57	20.138	20.133	0.005	97	5962276	16.0	12.4	
111 1,2,4-Trichlorobenzene	180	20.213	20.213	0.000	93	4514467	16.0	17.1	
113 Naphthalene	128	20.337	20.335	0.002	98	10819360	16.0	15.2	
115 Hexachlorobutadiene	225	20.601	20.597	0.004	94	3864701	16.0	19.6	
116 1,2,3-Trichlorobenzene	180	20.628	20.623	0.005	94	4385194	16.0	17.2	
117 2-Methylnaphthalene	142	21.464	21.464	0.000	99	6390949	16.0	15.7	
118 1-Methylnaphthalene	142	21.637	21.632	0.005	97	4532491	16.0	12.4	
A 120 C8 Range	1	13.354	(13.295-13.392)		0	19402462	16.0	15.4	
S 121 Xylenes, Total	100				0		48.0	42.8	
S 122 1,2-Dichloroethene, Total	1				0		32.0	31.7	

Reagents:

40L10DQP_00006

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC10.D

Injection Date: 02-Nov-2018 20:08:30

Instrument ID: MR

Operator ID: AFB

Lims ID: IC L10

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

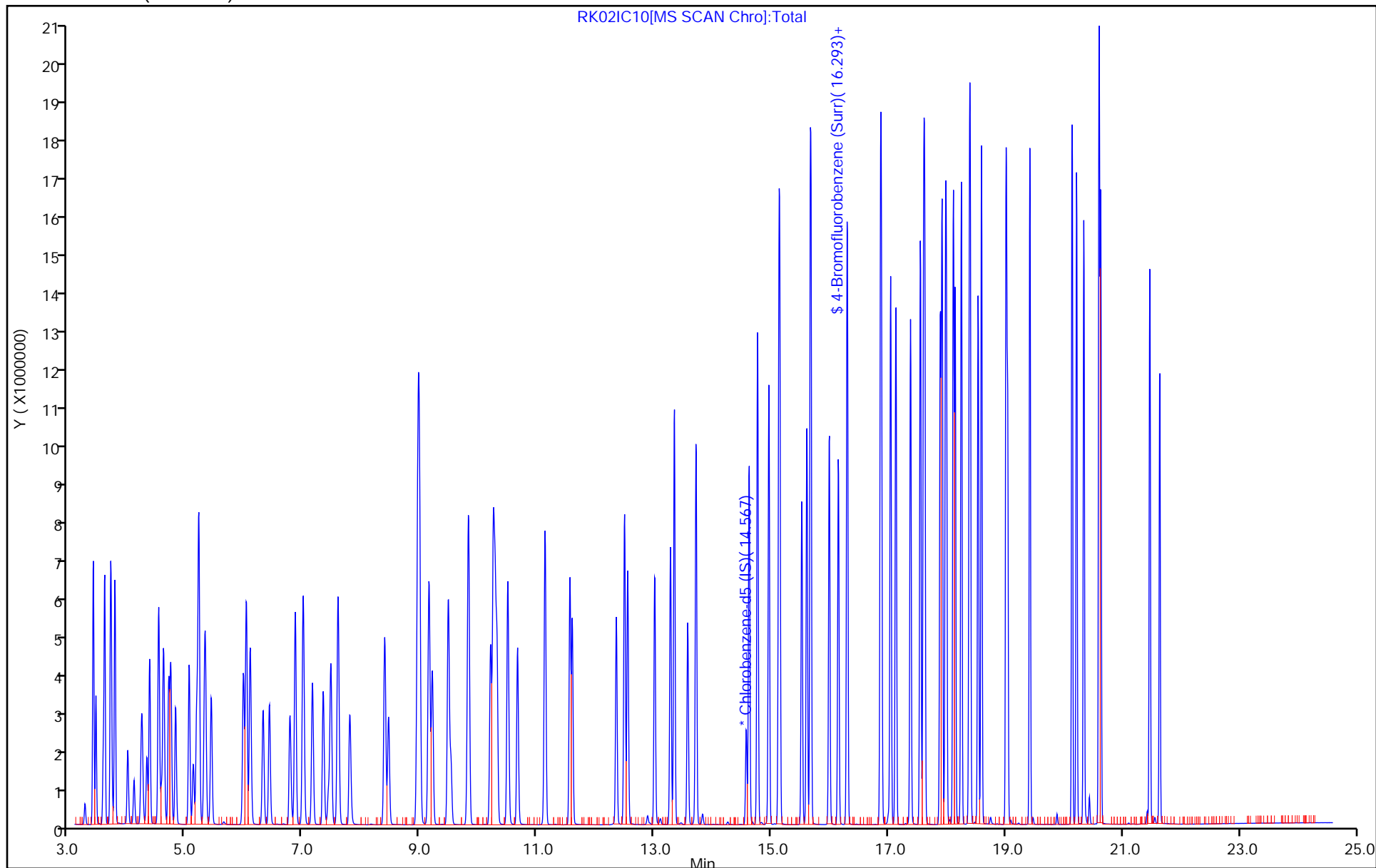
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC10.D

Injection Date: 02-Nov-2018 20:08:30

Instrument ID: MR

Lims ID: IC L10

Client ID:

Operator ID: AFB

ALS Bottle#: 15

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

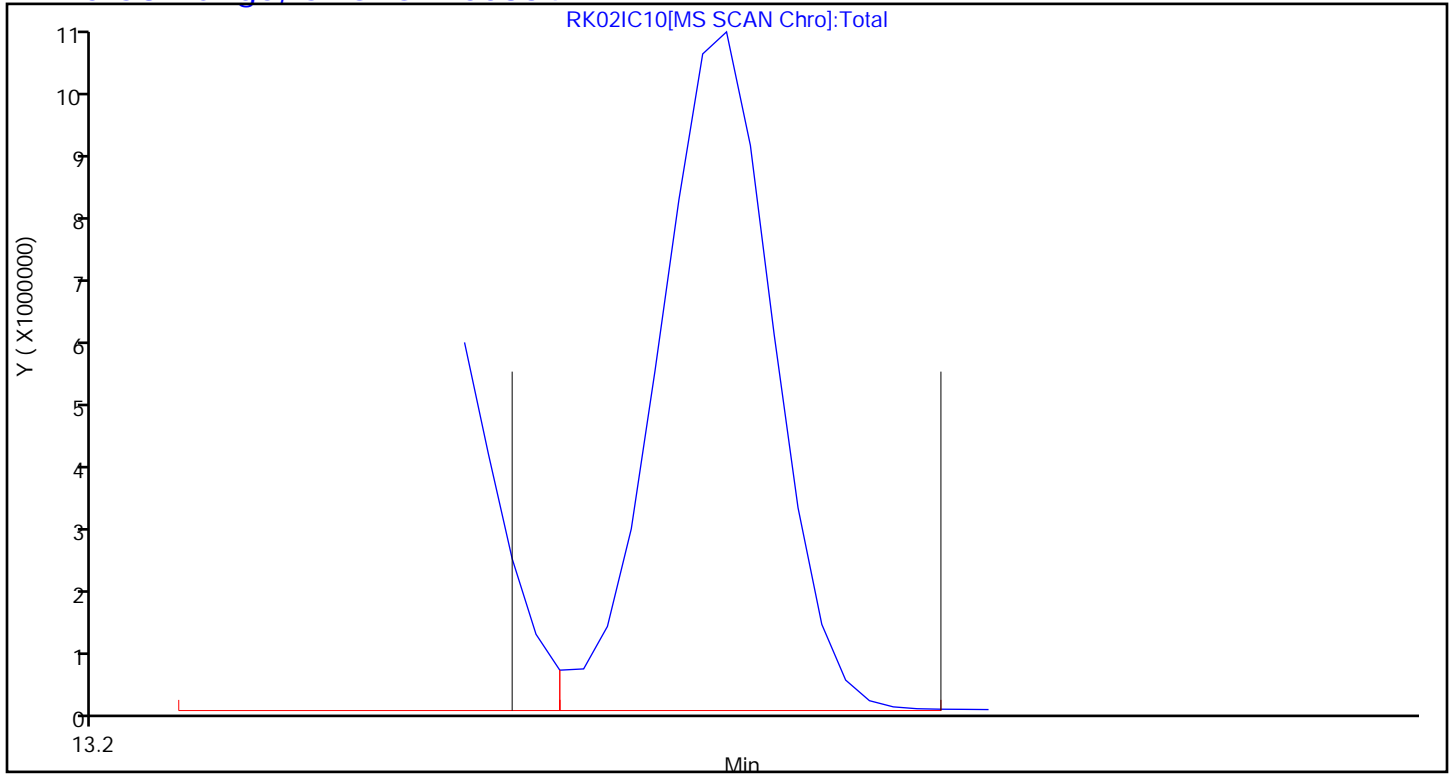
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 02-Nov-2018 22:37:30 ALS Bottle#: 1 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009868-008
 Misc. Info.: 180307
 Operator ID: AFB Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 08:49:00 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: barlozhetskayaa

Date: 05-Nov-2018 10:41:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.407	-0.001	95	215552	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.498	9.505	-0.007	96	1412054	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.564	-0.002	92	1145130	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.287	16.288	-0.001	81	842535	4.00	3.92	
6 Chlorodifluoromethane	51	3.432	3.416	0.016	94	7146	0.0200	0.0310	
7 Propene	41	3.432	3.418	0.014	78	3383	0.0200	0.0303	
8 Dichlorodifluoromethane	85	3.475	3.461	0.014	100	6001	0.0200	0.0349	
9 Chloromethane	52	3.599	3.587	0.012	99	1886	0.0200	0.0446	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.621	3.609	0.012	96	4451	0.0200	0.0320	
11 Acetaldehyde	44	3.729	3.709	0.020	95	17547	0.1000	0.3617	
12 Vinyl chloride	62	3.723	3.710	0.013	42	2487	0.0200	0.0214	
13 Butadiene	54	3.793	3.780	0.013	66	2285	0.0200	0.0270	
14 Butane	43	3.799	3.782	0.017	83	4186	0.0200	0.0261	
15 Bromomethane	94	4.009	3.997	0.012	91	2656	0.0200	0.0335	
16 Chloroethane	64	4.117	4.101	0.016	89	1211	0.0200	0.0282	
17 Ethanol	31	4.236	4.225	0.011	96	5770	0.1000	0.1494	
18 Vinyl bromide	106	4.333	4.317	0.016	93	1976	0.0200	0.0256	
19 2-Methylbutane	43	4.381	4.372	0.009	89	2806	0.0200	0.0263	
20 Acrolein	56	4.543	4.520	0.023	35	2041	0.0200	0.0869	
21 Trichlorofluoromethane	101	4.532	4.522	0.010	97	5858	0.0200	0.0219	
22 Acetonitrile	40	4.457	4.547	-0.090	58	299	0.0200	0.008386	
23 Acetone	58	4.635	4.607	0.028	97	9632	0.0600	0.2362	
24 Pentane	72	4.705	4.695	0.010	91	411	0.0200	0.0285	
25 Isopropyl alcohol	45	4.742	4.722	0.020	98	12037	0.0600	0.0974	
26 Ethyl ether	31	4.856	4.822	0.034	93	2417	0.0200	0.0254	
27 1,1-Dichloroethene	96	5.050	5.039	0.011	93	2087	0.0200	0.0228	
28 Acrylonitrile	53	5.109	5.100	0.009	86	2265	0.0200	0.0276	
29 2-Methyl-2-propanol	59	5.195	5.176	0.019	82	4720	0.0200	0.0234	
30 1,1,2-Trichloro-1,2,2-trif	101	5.212	5.206	0.006	92	4406	0.0200	0.0207	
31 Methylene Chloride	84	5.298	5.296	0.002	98	12607	0.0200	0.1198	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.325	5.315	0.010	93	2249	0.0200	0.0235	
33 Carbon disulfide	76	5.427	5.416	0.011	98	7721	0.0200	0.0256	
34 trans-1,2-Dichloroethene	96	5.961	5.959	0.002	95	1973	0.0200	0.0202	
35 2-Methylpentane	43	6.026	6.019	0.007	94	6579	0.0200	0.0252	
36 Methyl tert-butyl ether	73	6.134	6.101	0.033	93	6355	0.0200	0.0223	
37 1,1-Dichloroethane	63	6.290	6.291	-0.001	97	4777	0.0200	0.0240	
38 Vinyl acetate	43	6.425	6.409	0.016	99	5832	0.0200	0.0197	
39 2-Butanone (MEK)	72	6.808	6.770	0.038	98	1537	0.0200	0.0285	
40 Hexane	56	6.867	6.856	0.011	86	2367	0.0200	0.0245	
171 Isopropyl ether	45	7.023	6.997	0.026	98	9149	0.0200	0.0220	
41 cis-1,2-Dichloroethene	96	7.131	7.136	-0.005	97	2204	0.0200	0.0215	
42 Ethyl acetate	43	7.368	7.338	0.030	33	4971	0.0200	0.0186	
43 Chloroform	83	7.444	7.446	-0.002	89	5030	0.0200	0.0230	
173 Tert-butyl ethyl ether	59	7.611	7.592	0.019	96	7364	0.0200	0.0208	
44 Tetrahydrofuran	42	7.838	7.801	0.037	95	3038	0.0200	0.0224	
45 1,1,1-Trichloroethane	97	8.377	8.376	0.001	93	4388	0.0200	0.0212	
46 1,2-Dichloroethane	62	8.436	8.439	-0.003	95	3249	0.0200	0.0198	
47 Benzene	78	8.932	8.933	-0.001	96	8000	0.0200	0.0252	
48 Cyclohexane	69	8.965	8.963	0.002	95	994	0.0200	0.0203	
50 Carbon tetrachloride	117	8.959	8.973	-0.014	85	4013	0.0200	0.0199	
51 2,3-Dimethylpentane	71	9.143	9.136	0.007	86	1542	0.0200	0.0207	
52 Thiophene	84	9.180	9.186	-0.006	88	3800	0.0200	0.0211	
53 Isooctane	57	9.817	9.810	0.007	97	12197	0.0200	0.0220	
54 1,2-Dichloropropane	63	10.189	10.186	0.003	83	2777	0.0200	0.0223	
55 n-Heptane	71	10.232	10.233	-0.001	88	2150	0.0200	0.0190	
56 Trichloroethene	130	10.264	10.261	0.003	70	2372	0.0200	0.0199	
57 Dibromomethane	93	10.291	10.292	-0.001	79	3158	0.0200	0.0257	
58 Dichlorobromomethane	83	10.485	10.480	0.005	95	3853	0.0200	0.0184	
59 1,4-Dioxane	88	10.550	10.513	0.037	4	871	0.0200	0.0192	
60 Methyl methacrylate	41	10.685	10.661	0.024	78	2283	0.0200	0.0159	
61 Methylcyclohexane	83	11.111	11.119	-0.008	92	3833	0.0200	0.0206	
62 4-Methyl-2-pentanone (MIBK)	43	11.585	11.561	0.024	87	5025	0.0200	0.0187	
63 cis-1,3-Dichloropropene	75	11.591	11.587	0.004	95	3384	0.0200	0.0188	
64 trans-1,3-Dichloropropene	75	12.346	12.342	0.004	94	3208	0.0200	0.0201	
65 Toluene	91	12.480	12.480	0.000	95	7710	0.0200	0.0223	
66 1,1,2-Trichloroethane	83	12.545	12.536	0.009	95	2126	0.0200	0.0200	
69 2-Hexanone	58	13.052	13.013	0.039	81	1274	0.0200	0.0102	
70 Chlorodibromomethane	129	13.262	13.267	-0.005	94	2506	0.0200	0.0148	
71 n-Octane	85	13.332	13.336	-0.004	93	2292	0.0200	0.0201	
72 Ethylene Dibromide	107	13.564	13.560	0.004	94	3184	0.0200	0.0175	
73 Tetrachloroethene	129	13.705	13.704	0.001	85	2247	0.0200	0.0206	
74 Chlorobenzene	112	14.610	14.614	-0.004	93	5851	0.0200	0.0208	
75 2,3-Dimethylheptane	43	14.756	14.757	-0.001	96	8279	0.0200	0.0211	
76 Ethylbenzene	91	14.956	14.951	0.005	99	9465	0.0200	0.0209	
78 m-Xylene & p-Xylene	91	15.134	15.130	0.004	97	14633	0.0400	0.0423	
79 Bromoform	173	15.511	15.514	-0.003	84	1956	0.0200	0.0148	
80 Styrene	104	15.603	15.599	0.004	96	3486	0.0200	0.0142	
82 o-Xylene	91	15.662	15.663	-0.001	95	7696	0.0200	0.0215	
81 n-Nonane	57	15.667	15.667	0.000	91	5071	0.0200	0.0206	
83 1,1,2,2-Tetrachloroethane	83	15.985	15.986	-0.001	94	5095	0.0200	0.0193	
84 1,2,3-Trichloropropane	110	16.136	16.137	-0.001	95	1309	0.0200	0.0166	
85 Isopropylbenzene	105	16.287	16.291	-0.004	49	11994	0.0200	0.0232	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	16.864	16.863	0.001	97	2645	0.0200	0.0202	
87 2-Chlorotoluene	126	16.886	16.877	0.009	89	2360	0.0200	0.0208	
88 4-Ethyltoluene	105	17.037	17.033	0.004	98	10190	0.0200	0.0195	
89 1,3,5-Trimethylbenzene	120	17.118	17.122	-0.004	90	3612	0.0200	0.0187	
90 Alpha Methyl Styrene	118	17.377	17.374	0.003	87	2147	0.0200	0.0118	
91 n-Decane	57	17.539	17.540	-0.002	90	6907	0.0200	0.0209	
92 tert-Butylbenzene	119	17.598	17.597	0.001	91	8407	0.0200	0.0200	
93 1,2,4-Trimethylbenzene	105	17.614	17.612	0.002	96	8423	0.0200	0.0192	
94 1,3-Dichlorobenzene	146	17.884	17.880	0.004	96	5558	0.0200	0.0218	
95 sec-Butylbenzene	105	17.905	17.907	-0.002	99	13099	0.0200	0.0202	
96 Benzyl chloride	91	17.964	17.967	-0.003	75	5771	0.0200	0.0166	
97 1,4-Dichlorobenzene	146	17.986	17.983	0.003	87	5525	0.0200	0.0214	
98 4-Isopropyltoluene	119	18.105	18.101	0.004	96	10379	0.0200	0.0197	
99 1,2,3-Trimethylbenzene	105	18.137	18.133	0.004	96	8969	0.0200	0.0197	
100 Butylcyclohexane	83	18.240	18.238	0.002	92	7367	0.0200	0.0201	
101 1,2-Dichlorobenzene	146	18.380	18.376	0.004	91	5423	0.0200	0.0216	
102 2,3-Dihydroindene	117	18.390	18.391	-0.001	92	7364	0.0200	0.0195	
103 Indene	116	18.531	18.527	0.004	85	5074	0.0200	0.0155	
104 n-Butylbenzene	91	18.590	18.586	0.004	97	11495	0.0200	0.0211	
105 Undecane	57	19.011	19.007	0.004	95	7410	0.0200	0.0193	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.033	-0.001	80	1525	0.0200	0.0134	
107 1,2,4,5-Tetramethylbenzene	119	19.415	19.412	0.003	95	9085	0.0200	0.0197	
110 Dodecane	57	20.132	20.133	-0.001	95	7866	0.0200	0.0196	
111 1,2,4-Trichlorobenzene	180	20.213	20.213	0.000	89	4988	0.0200	0.0228	
113 Naphthalene	128	20.337	20.335	0.002	98	14831	0.0200	0.0250	
115 Hexachlorobutadiene	225	20.601	20.597	0.004	83	3314	0.0200	0.0202	
116 1,2,3-Trichlorobenzene	180	20.623	20.623	0.000	89	5647	0.0200	0.0266	
117 2-Methylnaphthalene	142	21.470	21.464	0.006	97	9833	0.0200	0.0291	
118 1-Methylnaphthalene	142	21.631	21.632	-0.001	99	12869	0.0200	0.0422	
A 120 C8 Range	1	13.343	(13.305-13.370)		0	26327	0.0200	0.0230	
S 121 Xylenes, Total	100				0		0.0600	0.0638	
S 122 1,2-Dichloroethene, Total	1				0		0.0400	0.0418	

Reagents:

40L1-3DQP_00006

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC01.D

Injection Date: 02-Nov-2018 22:37:30

Instrument ID: MR

Operator ID: AFB

Lims ID: IC L1

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

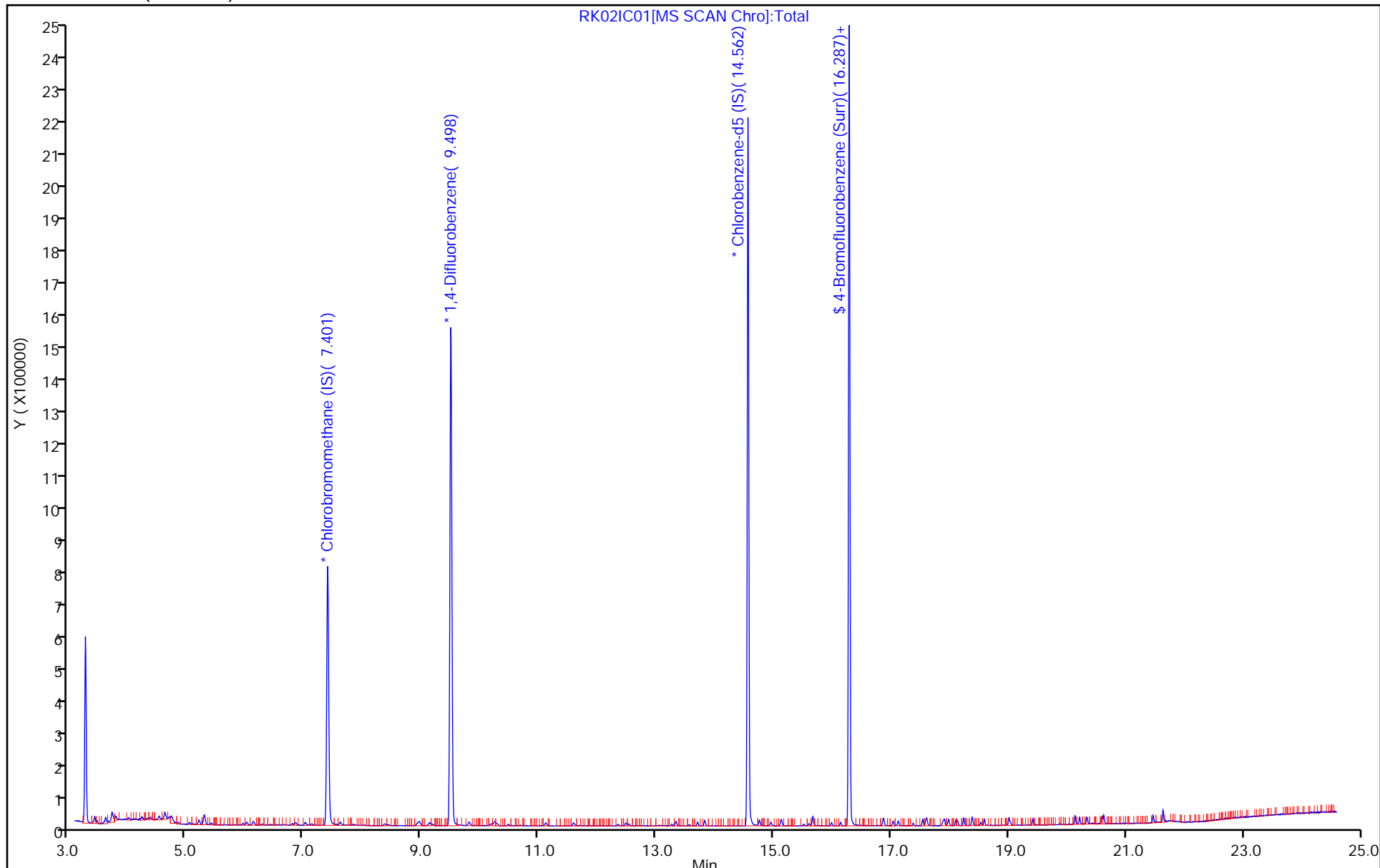
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC01.D

Injection Date: 02-Nov-2018 22:37:30

Instrument ID: MR

Lims ID: IC L1

Client ID:

Operator ID: AFB

ALS Bottle#: 1

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

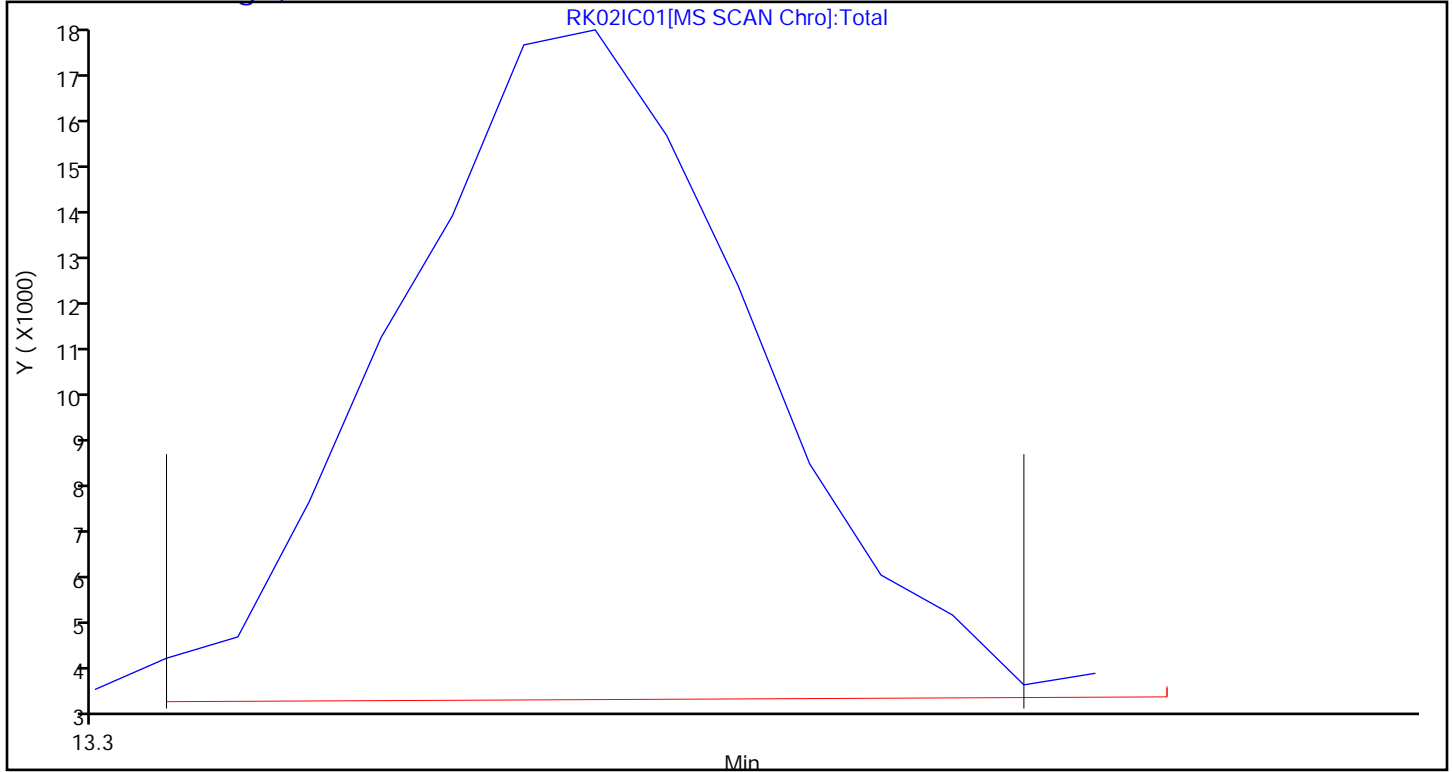
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 02-Nov-2018 23:26:30 ALS Bottle#: 2 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009868-009
 Misc. Info.: 180645
 Operator ID: AFB Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 08:49:14 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: barlozhetskayaa

Date: 05-Nov-2018 10:44:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.407	-0.001	94	203839	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.504	9.505	-0.001	96	1337145	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.564	-0.002	92	1079552	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.287	16.288	-0.001	80	800736	4.00	3.95	
6 Chlorodifluoromethane	51	3.432	3.416	0.016	95	10909	0.0400	0.0500	
7 Propene	41	3.421	3.418	0.003	48	2216	0.0400	0.0210	
8 Dichlorodifluoromethane	85	3.470	3.461	0.009	99	9401	0.0400	0.0579	
9 Chloromethane	52	3.594	3.587	0.007	100	2388	0.0400	0.0597	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.621	3.609	0.012	98	6853	0.0400	0.0520	
11 Acetaldehyde	44	3.723	3.709	0.014	89	45164	0.2000	0.9845	
12 Vinyl chloride	62	3.718	3.710	0.008	39	4959	0.0400	0.0452	
13 Butadiene	54	3.788	3.780	0.008	68	3756	0.0400	0.0470	
14 Butane	43	3.793	3.782	0.011	81	7209	0.0400	0.0475	
15 Bromomethane	94	4.003	3.997	0.006	96	4259	0.0400	0.0567	
16 Chloroethane	64	4.111	4.101	0.010	70	2064	0.0400	0.0508	
17 Ethanol	31	4.241	4.225	0.016	94	11268	0.2000	0.3086	
18 Vinyl bromide	106	4.322	4.317	0.005	95	3470	0.0400	0.0475	
19 2-Methylbutane	43	4.386	4.372	0.014	90	5106	0.0400	0.0506	
20 Acrolein	56	4.548	4.520	0.028	33	2954	0.0400	0.1330	
21 Trichlorofluoromethane	101	4.532	4.522	0.010	99	10887	0.0400	0.0430	
22 Acetonitrile	40	4.570	4.547	0.023	88	679	0.0400	0.0201	
23 Acetone	58	4.624	4.607	0.017	99	23468	0.1200	0.6085	
24 Pentane	72	4.704	4.695	0.009	95	740	0.0400	0.0542	
25 Isopropyl alcohol	45	4.742	4.722	0.020	95	20214	0.1200	0.1730	
26 Ethyl ether	31	4.850	4.822	0.028	90	3768	0.0400	0.0418	
27 1,1-Dichloroethene	96	5.044	5.039	0.005	96	3759	0.0400	0.0435	
28 Acrylonitrile	53	5.109	5.100	0.009	90	3593	0.0400	0.0464	
29 2-Methyl-2-propanol	59	5.201	5.176	0.025	93	8336	0.0400	0.0437	
30 1,1,2-Trichloro-1,2,2-trif	101	5.217	5.206	0.011	91	7971	0.0400	0.0397	
31 Methylene Chloride	84	5.298	5.296	0.002	97	13537	0.0400	0.1361	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.325	5.315	0.010	93	3881	0.0400	0.0429	
33 Carbon disulfide	76	5.422	5.416	0.006	99	13596	0.0400	0.0476	
34 trans-1,2-Dichloroethene	96	5.961	5.959	0.002	94	3763	0.0400	0.0408	
35 2-Methylpentane	43	6.026	6.019	0.007	95	11623	0.0400	0.0471	
36 Methyl tert-butyl ether	73	6.133	6.101	0.032	90	10929	0.0400	0.0405	
37 1,1-Dichloroethane	63	6.290	6.291	-0.001	99	7983	0.0400	0.0424	
38 Vinyl acetate	43	6.425	6.409	0.016	99	11000	0.0400	0.0393	
39 2-Butanone (MEK)	72	6.786	6.770	0.016	97	4102	0.0400	0.0805	
40 Hexane	56	6.861	6.856	0.005	82	4184	0.0400	0.0459	
171 Isopropyl ether	45	7.023	6.997	0.026	99	17071	0.0400	0.0434	
41 cis-1,2-Dichloroethene	96	7.136	7.136	0.000	97	3915	0.0400	0.0404	
42 Ethyl acetate	43	7.363	7.338	0.025	98	9602	0.0400	0.0380	
43 Chloroform	83	7.444	7.446	-0.002	87	8336	0.0400	0.0402	
173 Tert-butyl ethyl ether	59	7.622	7.592	0.030	95	13275	0.0400	0.0397	
44 Tetrahydrofuran	42	7.832	7.801	0.031	93	6068	0.0400	0.0472	
45 1,1,1-Trichloroethane	97	8.377	8.376	0.001	94	7679	0.0400	0.0393	
46 1,2-Dichloroethane	62	8.441	8.439	0.002	96	5942	0.0400	0.0382	
47 Benzene	78	8.937	8.933	0.004	97	12766	0.0400	0.0425	
48 Cyclohexane	69	8.964	8.963	0.001	94	1763	0.0400	0.0380	
50 Carbon tetrachloride	117	8.975	8.973	0.002	97	6903	0.0400	0.0362	
49 n-Butanol	31	9.061	8.991	0.070	38	512	0.0400	0.0150	
51 2,3-Dimethylpentane	71	9.137	9.136	0.001	90	2795	0.0400	0.0396	
52 Thiophene	84	9.180	9.186	-0.006	94	6728	0.0400	0.0395	
53 Isooctane	57	9.811	9.810	0.001	96	21149	0.0400	0.0403	
54 1,2-Dichloropropane	63	10.188	10.186	0.002	86	5083	0.0400	0.0431	
55 n-Heptane	71	10.237	10.233	0.004	91	4159	0.0400	0.0388	
56 Trichloroethene	130	10.264	10.261	0.003	91	4641	0.0400	0.0412	
57 Dibromomethane	93	10.291	10.292	-0.001	85	5398	0.0400	0.0464	
58 Dichlorobromomethane	83	10.480	10.480	0.000	94	7372	0.0400	0.0372	
59 1,4-Dioxane	88	10.544	10.513	0.031	65	1775	0.0400	0.0414	
60 Methyl methacrylate	41	10.679	10.661	0.018	85	5048	0.0400	0.0372	
61 Methylcyclohexane	83	11.116	11.119	-0.003	91	6883	0.0400	0.0390	
62 4-Methyl-2-pentanone (MIBK)	43	11.591	11.561	0.029	91	8680	0.0400	0.0342	
63 cis-1,3-Dichloropropene	75	11.591	11.587	0.003	96	6110	0.0400	0.0358	
64 trans-1,3-Dichloropropene	75	12.345	12.342	0.003	96	5601	0.0400	0.0372	
65 Toluene	91	12.480	12.480	0.000	91	13414	0.0400	0.0411	
66 1,1,2-Trichloroethane	83	12.540	12.536	0.004	91	4022	0.0400	0.0401	
69 2-Hexanone	58	13.030	13.013	0.017	94	2541	0.0400	0.0215	
70 Chlorodibromomethane	129	13.273	13.267	0.006	94	4905	0.0400	0.0307	
71 n-Octane	85	13.338	13.336	0.002	93	4219	0.0400	0.0392	
72 Ethylene Dibromide	107	13.559	13.560	-0.001	96	5940	0.0400	0.0346	
73 Tetrachloroethene	129	13.704	13.704	0.000	84	3918	0.0400	0.0381	
74 Chlorobenzene	112	14.616	14.614	0.002	93	11055	0.0400	0.0418	
75 2,3-Dimethylheptane	43	14.756	14.757	-0.001	95	15910	0.0400	0.0431	
76 Ethylbenzene	91	14.950	14.951	-0.001	99	16396	0.0400	0.0385	
78 m-Xylene & p-Xylene	91	15.133	15.130	0.003	97	25658	0.0800	0.0786	
79 Bromoform	173	15.516	15.514	0.002	86	3386	0.0400	0.0272	
80 Styrene	104	15.597	15.599	-0.002	96	5847	0.0400	0.0253	
82 o-Xylene	91	15.662	15.663	-0.001	96	13523	0.0400	0.0401	
81 n-Nonane	57	15.667	15.667	0.000	96	9485	0.0400	0.0409	
83 1,1,2,2-Tetrachloroethane	83	15.985	15.986	-0.001	96	9384	0.0400	0.0377	
84 1,2,3-Trichloropropane	110	16.136	16.137	-0.001	97	2690	0.0400	0.0362	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.293	16.291	0.002	53	20626	0.0400	0.0422	
86 N-Propylbenzene	120	16.870	16.863	0.007	97	4720	0.0400	0.0383	
87 2-Chlorotoluene	126	16.880	16.877	0.003	93	4246	0.0400	0.0397	
88 4-Ethyltoluene	105	17.031	17.033	-0.002	99	18499	0.0400	0.0375	
89 1,3,5-Trimethylbenzene	120	17.123	17.122	0.001	93	6878	0.0400	0.0378	
90 Alpha Methyl Styrene	118	17.377	17.374	0.003	88	3032	0.0400	0.0177	
91 n-Decane	57	17.544	17.540	0.004	88	11850	0.0400	0.0381	
92 tert-Butylbenzene	119	17.598	17.597	0.001	90	15392	0.0400	0.0388	
93 1,2,4-Trimethylbenzene	105	17.614	17.612	0.002	96	16008	0.0400	0.0388	
94 1,3-Dichlorobenzene	146	17.883	17.880	0.003	96	8975	0.0400	0.0374	
95 sec-Butylbenzene	105	17.905	17.907	-0.002	99	23135	0.0400	0.0379	
96 Benzyl chloride	91	17.970	17.967	0.003	96	10815	0.0400	0.0331	
97 1,4-Dichlorobenzene	146	17.980	17.983	-0.003	87	9545	0.0400	0.0391	
98 4-Isopropyltoluene	119	18.099	18.101	-0.002	96	18718	0.0400	0.0378	
99 1,2,3-Trimethylbenzene	105	18.131	18.133	-0.002	98	15807	0.0400	0.0369	
100 Butylcyclohexane	83	18.234	18.238	-0.004	88	13103	0.0400	0.0380	
101 1,2-Dichlorobenzene	146	18.380	18.376	0.004	89	9515	0.0400	0.0402	
102 2,3-Dihydroindene	117	18.390	18.391	-0.001	93	13555	0.0400	0.0381	
103 Indene	116	18.530	18.527	0.003	91	8024	0.0400	0.0261	
104 n-Butylbenzene	91	18.584	18.586	-0.002	98	19769	0.0400	0.0385	
105 Undecane	57	19.005	19.007	-0.002	95	13885	0.0400	0.0383	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.033	-0.001	83	2650	0.0400	0.0247	
107 1,2,4,5-Tetramethylbenzene	119	19.415	19.412	0.003	97	16334	0.0400	0.0375	
110 Dodecane	57	20.132	20.133	-0.001	94	13839	0.0400	0.0366	
111 1,2,4-Trichlorobenzene	180	20.213	20.213	0.000	89	8066	0.0400	0.0390	
113 Naphthalene	128	20.337	20.335	0.002	98	23330	0.0400	0.0417	
115 Hexachlorobutadiene	225	20.596	20.597	-0.001	83	5397	0.0400	0.0349	
116 1,2,3-Trichlorobenzene	180	20.623	20.623	0.000	91	8826	0.0400	0.0441	
117 2-Methylnaphthalene	142	21.464	21.464	0.000	98	12349	0.0400	0.0387	
118 1-Methylnaphthalene	142	21.631	21.632	-0.001	99	17186	0.0400	0.0598	
A 120 C8 Range	1	13.338	(13.305-13.370)		0	51227	0.0400	0.0472	
S 121 Xylenes, Total	100				0		0.1200	0.1187	
S 122 1,2-Dichloroethene, Total	1				0		0.0800	0.0812	

Reagents:

40L1-3DQP_00007

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC02.D

Injection Date: 02-Nov-2018 23:26:30

Instrument ID: MR

Operator ID: AFB

Lims ID: IC L2

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC02.D

Injection Date: 02-Nov-2018 23:26:30

Instrument ID: MR

Lims ID: IC L2

Client ID:

Operator ID: AFB

ALS Bottle#: 2

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

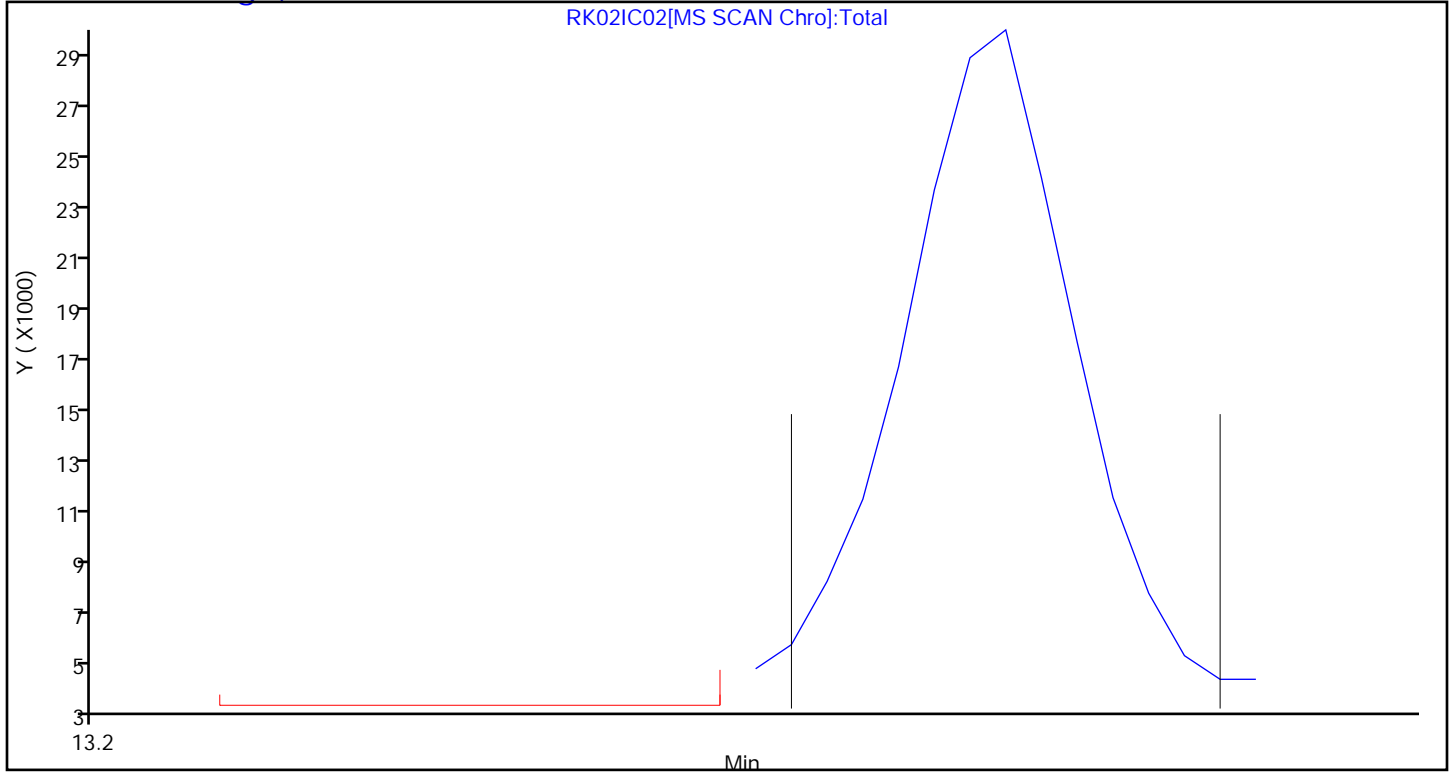
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 03-Nov-2018 00:16:30 ALS Bottle#: 2 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009868-010
 Misc. Info.: 180645
 Operator ID: AFB Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 08:49:24 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 05-Nov-2018 14:58:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.407	-0.022	94	192900	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.505	-0.017	96	1279276	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.564	-0.002	92	1032244	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.288	-0.006	80	767245	4.00	3.96	
6 Chlorodifluoromethane	51	3.405	3.416	-0.011	96	20368	0.0800	0.0986	
7 Propene	41	3.405	3.418	-0.013	77	12289	0.0800	0.1231	
8 Dichlorodifluoromethane	85	3.448	3.461	-0.013	99	14423	0.0800	0.0938	
9 Chloromethane	52	3.578	3.587	-0.009	100	3225	0.0800	0.0853	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.594	3.609	-0.015	96	10963	0.0800	0.0880	
11 Acetaldehyde	44	3.691	3.709	-0.018	91	83337	0.4000	1.92	
12 Vinyl chloride	62	3.696	3.710	-0.014	39	9030	0.0800	0.0869	
13 Butadiene	54	3.766	3.780	-0.014	65	7194	0.0800	0.0951	
14 Butane	43	3.766	3.782	-0.016	83	13900	0.0800	0.0968	
15 Bromomethane	94	3.977	3.997	-0.020	97	6536	0.0800	0.0920	
16 Chloroethane	64	4.079	4.101	-0.022	96	3358	0.0800	0.0874	
17 Ethanol	31	4.209	4.225	-0.016	92	18554	0.4000	0.5370	
18 Vinyl bromide	106	4.300	4.317	-0.017	97	5702	0.0800	0.0825	
19 2-Methylbutane	43	4.354	4.372	-0.018	88	8940	0.0800	0.0937	
20 Acrolein	56	4.500	4.520	-0.020	33	4470	0.0800	0.2126	
21 Trichlorofluoromethane	101	4.505	4.522	-0.017	99	19785	0.0800	0.0825	
22 Acetonitrile	40	4.537	4.547	-0.010	86	2554	0.0800	0.0800	
23 Acetone	58	4.591	4.607	-0.016	99	41971	0.2400	1.15	
24 Pentane	72	4.678	4.695	-0.017	95	1207	0.0800	0.0934	
25 Isopropyl alcohol	45	4.710	4.722	-0.012	98	35484	0.2400	0.3209	
26 Ethyl ether	31	4.818	4.822	-0.004	95	7443	0.0800	0.0873	
27 1,1-Dichloroethene	96	5.023	5.039	-0.016	94	6794	0.0800	0.0830	
28 Acrylonitrile	53	5.082	5.100	-0.018	97	6453	0.0800	0.0880	
29 2-Methyl-2-propanol	59	5.174	5.176	-0.002	95	15370	0.0800	0.0852	
30 1,1,2-Trichloro-1,2,2-trif	101	5.190	5.206	-0.016	92	15457	0.0800	0.0813	
31 Methylene Chloride	84	5.276	5.296	-0.020	97	16019	0.0800	0.1702	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.298	5.315	-0.017	93	7218	0.0800	0.0843	
33 Carbon disulfide	76	5.400	5.416	-0.016	99	25571	0.0800	0.0946	
34 trans-1,2-Dichloroethene	96	5.940	5.959	-0.019	96	7076	0.0800	0.0811	
35 2-Methylpentane	43	6.004	6.019	-0.015	95	19502	0.0800	0.0836	
36 Methyl tert-butyl ether	73	6.101	6.101	0.000	83	21082	0.0800	0.0827	
37 1,1-Dichloroethane	63	6.268	6.291	-0.023	99	14573	0.0800	0.0818	
38 Vinyl acetate	43	6.392	6.409	-0.017	100	19787	0.0800	0.0746	
39 2-Butanone (MEK)	72	6.765	6.770	-0.005	98	8043	0.0800	0.1668	
40 Hexane	56	6.840	6.856	-0.016	86	7379	0.0800	0.0855	
171 Isopropyl ether	45	6.991	6.997	-0.006	98	30947	0.0800	0.0831	
41 cis-1,2-Dichloroethene	96	7.115	7.136	-0.021	98	7029	0.0800	0.0767	
42 Ethyl acetate	43	7.336	7.338	-0.002	99	20308	0.0800	0.0849	
43 Chloroform	83	7.422	7.446	-0.024	91	15880	0.0800	0.0810	
173 Tert-butyl ethyl ether	59	7.590	7.592	-0.002	96	25010	0.0800	0.0791	
44 Tetrahydrofuran	42	7.805	7.801	0.004	97	10670	0.0800	0.0878	
45 1,1,1-Trichloroethane	97	8.361	8.376	-0.015	95	14638	0.0800	0.0791	
46 1,2-Dichloroethane	62	8.425	8.439	-0.014	95	12182	0.0800	0.0818	
47 Benzene	78	8.916	8.933	-0.017	97	23854	0.0800	0.0830	
48 Cyclohexane	69	8.954	8.963	-0.009	96	3576	0.0800	0.0805	
50 Carbon tetrachloride	117	8.959	8.973	-0.014	93	13524	0.0800	0.0741	
49 n-Butanol	31	9.029	8.991	0.038	1	2276	0.0800	0.0698	
51 2,3-Dimethylpentane	71	9.126	9.136	-0.010	90	5309	0.0800	0.0786	
52 Thiophene	84	9.170	9.186	-0.016	94	12806	0.0800	0.0785	
53 Isooctane	57	9.795	9.810	-0.015	98	40854	0.0800	0.0814	
54 1,2-Dichloropropane	63	10.167	10.186	-0.019	87	9120	0.0800	0.0808	
55 n-Heptane	71	10.221	10.233	-0.012	89	8278	0.0800	0.0808	
56 Trichloroethene	130	10.248	10.261	-0.013	92	8243	0.0800	0.0764	
57 Dibromomethane	93	10.280	10.292	-0.012	79	9354	0.0800	0.0841	
58 Dichlorobromomethane	83	10.469	10.480	-0.011	98	13620	0.0800	0.0718	
59 1,4-Dioxane	88	10.512	10.513	-0.001	89	3070	0.0800	0.0748	
60 Methyl methacrylate	41	10.663	10.661	0.002	87	9894	0.0800	0.0762	
61 Methylcyclohexane	83	11.116	11.119	-0.003	92	13064	0.0800	0.0774	
62 4-Methyl-2-pentanone (MIBK)	43	11.564	11.561	0.003	93	17714	0.0800	0.0729	
63 cis-1,3-Dichloropropene	75	11.575	11.587	-0.012	93	11804	0.0800	0.0724	
64 trans-1,3-Dichloropropene	75	12.340	12.342	-0.002	97	10383	0.0800	0.0722	
65 Toluene	91	12.470	12.480	-0.010	93	25265	0.0800	0.0810	
66 1,1,2-Trichloroethane	83	12.529	12.536	-0.007	96	7352	0.0800	0.0766	
69 2-Hexanone	58	13.020	13.013	0.007	91	7120	0.0800	0.0630	
70 Chlorodibromomethane	129	13.257	13.267	-0.010	92	9334	0.0800	0.0610	
71 n-Octane	85	13.332	13.336	-0.004	95	8136	0.0800	0.0790	
72 Ethylene Dibromide	107	13.554	13.560	-0.006	97	11548	0.0800	0.0704	
73 Tetrachloroethene	129	13.699	13.704	-0.005	88	7542	0.0800	0.0766	
74 Chlorobenzene	112	14.610	14.614	-0.004	94	20936	0.0800	0.0827	
75 2,3-Dimethylheptane	43	14.756	14.757	-0.001	95	28763	0.0800	0.0815	
76 Ethylbenzene	91	14.950	14.951	-0.001	99	32173	0.0800	0.0789	
78 m-Xylene & p-Xylene	91	15.128	15.130	-0.002	96	49551	0.1600	0.1588	
79 Bromoform	173	15.511	15.514	-0.003	87	6832	0.0800	0.0575	
80 Styrene	104	15.597	15.599	-0.002	98	11939	0.0800	0.0540	
82 o-Xylene	91	15.662	15.663	-0.001	96	25081	0.0800	0.0777	
81 n-Nonane	57	15.667	15.667	0.000	94	18269	0.0800	0.0823	
83 1,1,2,2-Tetrachloroethane	83	15.985	15.986	-0.001	97	17064	0.0800	0.0718	
84 1,2,3-Trichloropropane	110	16.136	16.137	-0.001	97	5375	0.0800	0.0756	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.287	16.291	-0.004	60	37798	0.0800	0.0810	
86 N-Propylbenzene	120	16.864	16.863	0.001	97	8947	0.0800	0.0759	
87 2-Chlorotoluene	126	16.875	16.877	-0.002	92	7940	0.0800	0.0776	
88 4-Ethyltoluene	105	17.032	17.033	-0.001	98	37018	0.0800	0.0785	
89 1,3,5-Trimethylbenzene	120	17.123	17.122	0.001	91	13363	0.0800	0.0768	
90 Alpha Methyl Styrene	118	17.371	17.374	-0.003	85	5725	0.0800	0.0349	
91 n-Decane	57	17.538	17.540	-0.002	87	23070	0.0800	0.0775	
92 tert-Butylbenzene	119	17.592	17.597	-0.005	91	29629	0.0800	0.0781	
93 1,2,4-Trimethylbenzene	105	17.609	17.612	-0.003	96	30163	0.0800	0.0764	
94 1,3-Dichlorobenzene	146	17.878	17.880	-0.002	95	17201	0.0800	0.0750	
95 sec-Butylbenzene	105	17.905	17.907	-0.002	99	45418	0.0800	0.0777	
96 Benzyl chloride	91	17.970	17.967	0.003	97	20684	0.0800	0.0662	
97 1,4-Dichlorobenzene	146	17.981	17.983	-0.002	88	18167	0.0800	0.0779	
98 4-Isopropyltoluene	119	18.099	18.101	-0.002	97	35703	0.0800	0.0753	
99 1,2,3-Trimethylbenzene	105	18.132	18.133	-0.001	97	30617	0.0800	0.0748	
100 Butylcyclohexane	83	18.240	18.238	0.002	89	25369	0.0800	0.0769	
101 1,2-Dichlorobenzene	146	18.374	18.376	-0.002	89	18517	0.0800	0.0818	
102 2,3-Dihydroindene	117	18.385	18.391	-0.006	95	26206	0.0800	0.0770	
103 Indene	116	18.525	18.527	-0.002	89	15763	0.0800	0.0535	
104 n-Butylbenzene	91	18.585	18.586	-0.001	98	38844	0.0800	0.0792	
105 Undecane	57	19.005	19.007	-0.002	96	28920	0.0800	0.0834	
106 1,2-Dibromo-3-Chloropropan	157	19.038	19.033	0.005	84	5544	0.0800	0.0540	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.412	-0.002	96	30803	0.0800	0.0740	
110 Dodecane	57	20.132	20.133	-0.001	94	28731	0.0800	0.0794	
111 1,2,4-Trichlorobenzene	180	20.213	20.213	0.000	91	15467	0.0800	0.0783	
113 Naphthalene	128	20.337	20.335	0.002	98	46885	0.0800	0.0877	
115 Hexachlorobutadiene	225	20.596	20.597	-0.001	88	10044	0.0800	0.0680	
116 1,2,3-Trichlorobenzene	180	20.623	20.623	0.000	91	15619	0.0800	0.0816	
117 2-Methylnaphthalene	142	21.464	21.464	0.000	99	22739	0.0800	0.0746	
118 1-Methylnaphthalene	142	21.631	21.632	-0.001	99	30105	0.0800	0.1095	
A 120 C8 Range	1	13.338	(13.300-13.376)		0	99459	0.0800	0.0957	
S 121 Xylenes, Total	100				0		0.2400	0.2365	
S 122 1,2-Dichloroethene, Total	1				0		0.1600	0.1578	

Reagents:

40L1-3DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC03.D

Injection Date: 03-Nov-2018 00:16:30

Instrument ID: MR

Operator ID: AFB

Lims ID: IC L3

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

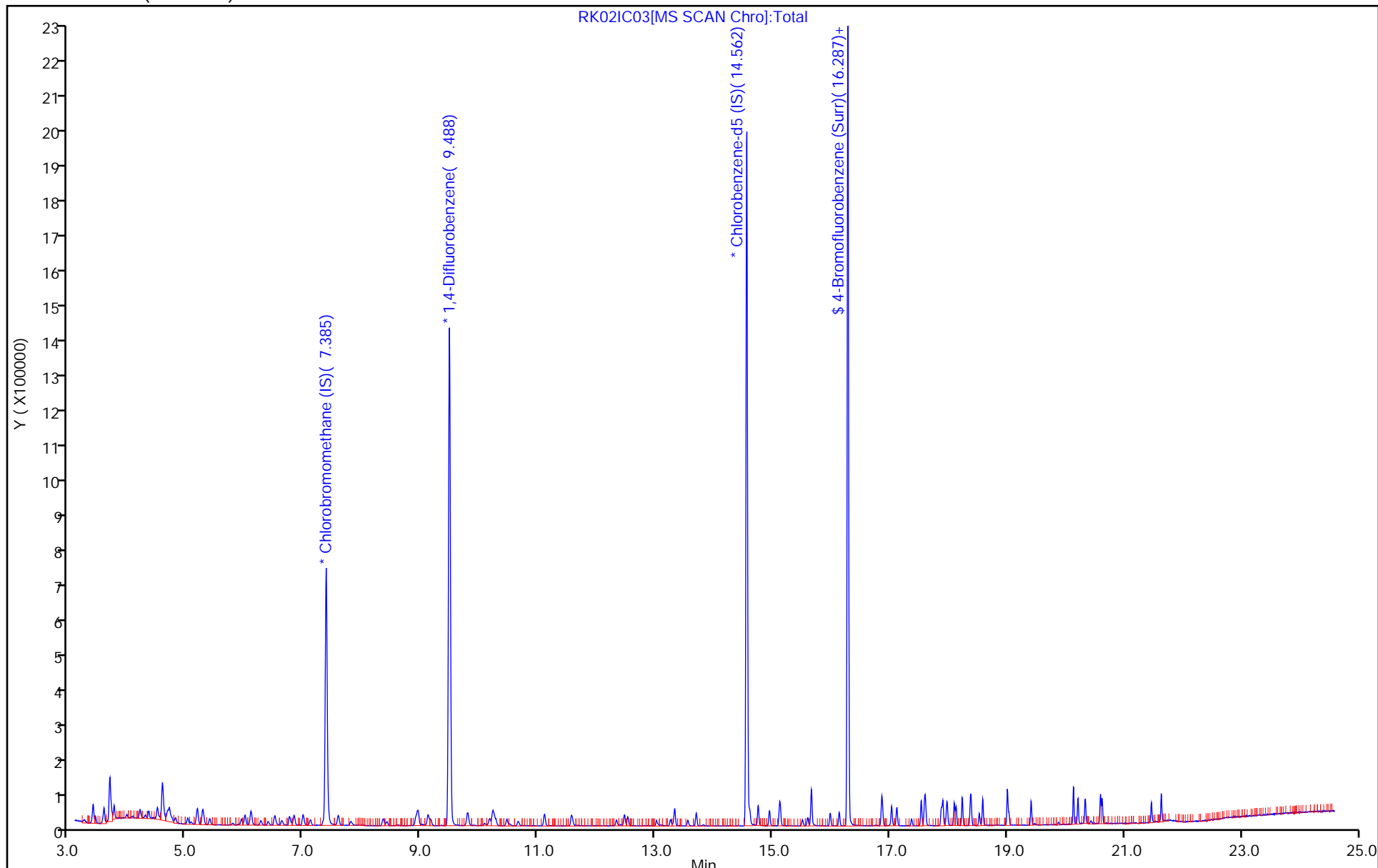
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC03.D

Injection Date: 03-Nov-2018 00:16:30

Instrument ID: MR

Lims ID: IC L3

Client ID:

Operator ID: AFB

ALS Bottle#: 2

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

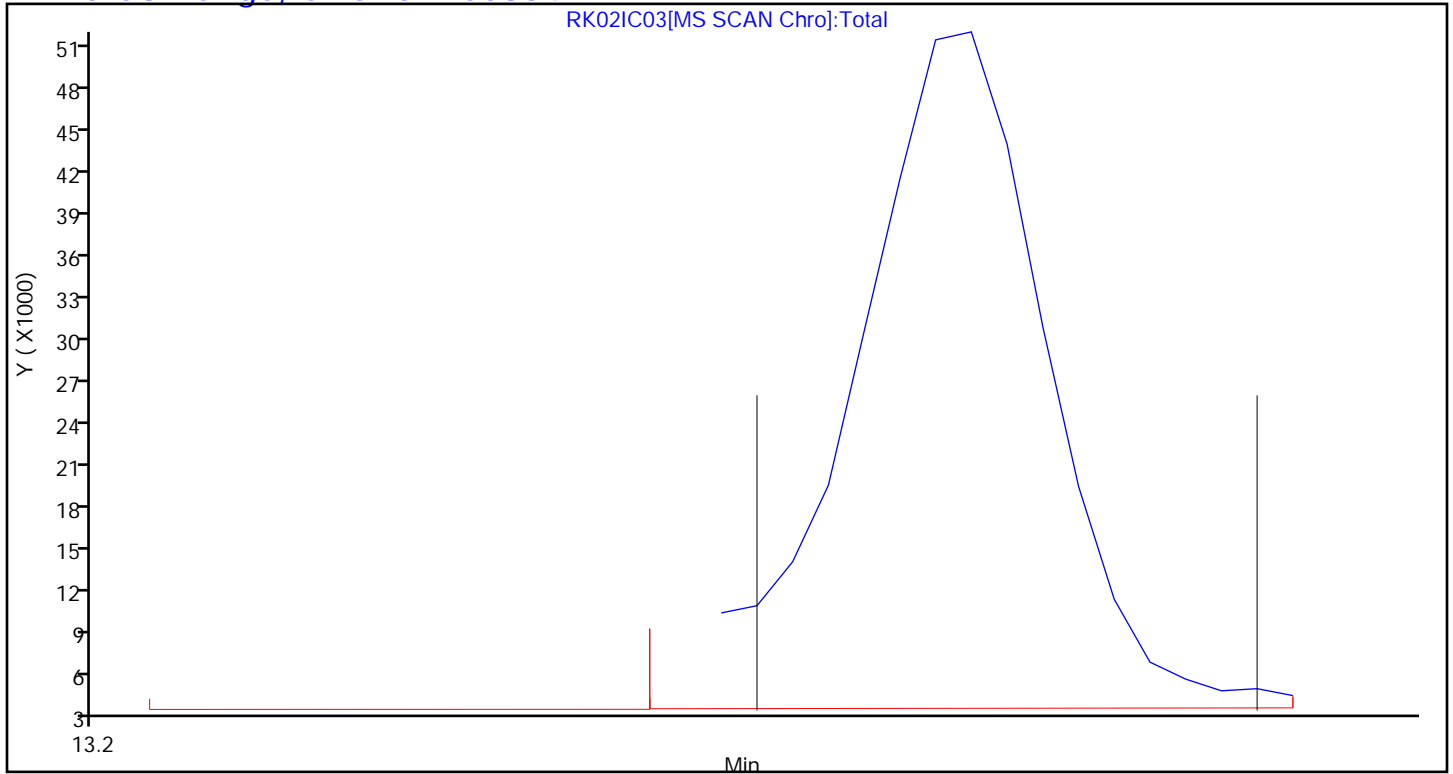
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 03-Nov-2018 01:06:30 ALS Bottle#: 3 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009868-011
 Misc. Info.: 180306
 Operator ID: AFB Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 08:49:31 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: barlozhetskayaa

Date: 05-Nov-2018 10:57:40

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.407	-0.006	94	204280	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.498	9.505	-0.007	96	1334437	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.564	-0.002	92	1080051	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.287	16.288	-0.001	92	804306	4.00	3.97	
6 Chlorodifluoromethane	51	3.427	3.416	0.011	96	36329	0.1600	0.1662	
7 Propene	41	3.427	3.418	0.009	64	19342	0.1600	0.1830	
8 Dichlorodifluoromethane	85	3.470	3.461	0.009	99	29526	0.1600	0.1813	
9 Chloromethane	52	3.594	3.587	0.007	100	6858	0.1600	0.1712	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.615	3.609	0.006	96	21248	0.1600	0.1610	
11 Acetaldehyde	44	3.712	3.709	0.003	90	66799	0.8000	1.45	
12 Vinyl chloride	62	3.718	3.710	0.008	51	17688	0.1600	0.1607	
13 Butadiene	54	3.788	3.780	0.008	92	12380	0.1600	0.1546	
14 Butane	43	3.788	3.782	0.006	88	23840	0.1600	0.1568	
15 Bromomethane	94	4.004	3.997	0.007	96	13078	0.1600	0.1739	
16 Chloroethane	64	4.101	4.101	0.000	96	6814	0.1600	0.1675	
17 Ethanol	31	4.225	4.225	0.000	92	32349	0.8000	0.8840	
18 Vinyl bromide	106	4.316	4.317	-0.001	97	12501	0.1600	0.1709	
19 2-Methylbutane	43	4.376	4.372	0.004	93	18331	0.1600	0.1814	
20 Acrolein	56	4.527	4.520	0.007	33	4532	0.1600	0.2036	
21 Trichlorofluoromethane	101	4.527	4.522	0.005	99	40300	0.1600	0.1588	
22 Acetonitrile	40	4.559	4.547	0.012	97	4310	0.1600	0.1276	
23 Acetone	58	4.613	4.607	0.006	98	38676	0.4800	1.00	
24 Pentane	72	4.699	4.695	0.004	98	2422	0.1600	0.1769	
25 Isopropyl alcohol	45	4.721	4.722	-0.001	96	63187	0.4800	0.5397	
26 Ethyl ether	31	4.829	4.822	0.007	96	14902	0.1600	0.1651	
27 1,1-Dichloroethene	96	5.044	5.039	0.005	94	13280	0.1600	0.1533	
28 Acrylonitrile	53	5.098	5.100	-0.002	97	12497	0.1600	0.1610	
29 2-Methyl-2-propanol	59	5.184	5.176	0.008	96	30197	0.1600	0.1581	
30 1,1,2-Trichloro-1,2,2-trif	101	5.211	5.206	0.005	92	30984	0.1600	0.1538	
31 Methylene Chloride	84	5.298	5.296	0.002	97	23458	0.1600	0.2353	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.315	-0.001	95	15519	0.1600	0.1711	
33 Carbon disulfide	76	5.416	5.416	0.000	99	45622	0.1600	0.1594	
34 trans-1,2-Dichloroethene	96	5.961	5.959	0.002	94	13782	0.1600	0.1491	
35 2-Methylpentane	43	6.020	6.019	0.001	95	40204	0.1600	0.1627	
36 Methyl tert-butyl ether	73	6.107	6.101	0.006	97	41364	0.1600	0.1531	
37 1,1-Dichloroethane	63	6.290	6.291	-0.001	100	29278	0.1600	0.1551	
38 Vinyl acetate	43	6.409	6.409	0.000	100	40327	0.1600	0.1436	
39 2-Butanone (MEK)	72	6.770	6.770	0.000	98	9750	0.1600	0.1910	
40 Hexane	56	6.856	6.856	0.000	89	14851	0.1600	0.1624	
171 Isopropyl ether	45	6.996	6.997	-0.001	98	62177	0.1600	0.1576	
41 cis-1,2-Dichloroethene	96	7.137	7.136	0.000	97	14929	0.1600	0.1539	
42 Ethyl acetate	43	7.336	7.338	-0.002	99	36077	0.1600	0.1424	
43 Chloroform	83	7.438	7.446	-0.008	93	32334	0.1600	0.1557	
173 Tert-butyl ethyl ether	59	7.595	7.592	0.003	96	51182	0.1600	0.1528	
44 Tetrahydrofuran	42	7.805	7.801	0.004	95	20634	0.1600	0.1603	
45 1,1,1-Trichloroethane	97	8.371	8.376	-0.005	95	29060	0.1600	0.1483	
46 1,2-Dichloroethane	62	8.431	8.439	-0.008	96	23925	0.1600	0.1540	
47 Benzene	78	8.932	8.933	-0.001	97	47216	0.1600	0.1575	
48 Cyclohexane	69	8.965	8.963	0.002	97	7260	0.1600	0.1567	
50 Carbon tetrachloride	117	8.970	8.973	-0.003	94	27991	0.1600	0.1470	
49 n-Butanol	31	9.013	8.991	0.022	74	3916	0.1600	0.1151	
51 2,3-Dimethylpentane	71	9.132	9.136	-0.004	88	10826	0.1600	0.1537	
52 Thiophene	84	9.180	9.186	-0.006	94	25979	0.1600	0.1527	
53 Isooctane	57	9.811	9.810	0.001	98	81375	0.1600	0.1554	
54 1,2-Dichloropropane	63	10.183	10.186	-0.003	88	18138	0.1600	0.1541	
55 n-Heptane	71	10.226	10.233	-0.007	91	16538	0.1600	0.1547	
56 Trichloroethene	130	10.253	10.261	-0.008	93	17273	0.1600	0.1535	
57 Dibromomethane	93	10.286	10.292	-0.006	83	17765	0.1600	0.1530	
58 Dichlorobromomethane	83	10.474	10.480	-0.006	97	27424	0.1600	0.1385	
59 1,4-Dioxane	88	10.518	10.513	0.005	91	6339	0.1600	0.1481	
60 Methyl methacrylate	41	10.663	10.661	0.002	92	18130	0.1600	0.1338	
61 Methylcyclohexane	83	11.121	11.119	0.002	92	27315	0.1600	0.1552	
62 4-Methyl-2-pentanone (MIBK)	43	11.564	11.561	0.003	98	36311	0.1600	0.1433	
63 cis-1,3-Dichloropropene	75	11.585	11.587	-0.002	98	24482	0.1600	0.1439	
64 trans-1,3-Dichloropropene	75	12.340	12.342	-0.002	97	20053	0.1600	0.1332	
65 Toluene	91	12.480	12.480	0.000	92	49722	0.1600	0.1524	
66 1,1,2-Trichloroethane	83	12.529	12.536	-0.007	92	15435	0.1600	0.1538	
69 2-Hexanone	58	13.014	13.013	0.001	91	15595	0.1600	0.1318	
70 Chlorodibromomethane	129	13.262	13.267	-0.005	94	18294	0.1600	0.1143	
71 n-Octane	85	13.332	13.336	-0.004	95	16304	0.1600	0.1513	
72 Ethylene Dibromide	107	13.559	13.560	-0.001	97	24032	0.1600	0.1400	
73 Tetrachloroethene	129	13.699	13.704	-0.005	87	16335	0.1600	0.1586	
74 Chlorobenzene	112	14.610	14.614	-0.004	93	40205	0.1600	0.1518	
75 2,3-Dimethylheptane	43	14.756	14.757	-0.001	96	58121	0.1600	0.1573	
76 Ethylbenzene	91	14.950	14.951	-0.001	99	64289	0.1600	0.1508	
78 m-Xylene & p-Xylene	91	15.128	15.130	-0.002	97	96444	0.3200	0.2954	
79 Bromoform	173	15.511	15.514	-0.003	87	12106	0.1600	0.0974	
80 Styrene	104	15.597	15.599	-0.002	98	27578	0.1600	0.1192	
82 o-Xylene	91	15.662	15.663	-0.001	99	52013	0.1600	0.1540	
81 n-Nonane	57	15.667	15.667	0.000	95	36877	0.1600	0.1588	
83 1,1,2,2-Tetrachloroethane	83	15.985	15.986	-0.001	98	36449	0.1600	0.1466	
84 1,2,3-Trichloropropane	110	16.136	16.137	-0.001	97	10928	0.1600	0.1468	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.287	16.291	-0.004	74	74118	0.1600	0.1517	
86 N-Propylbenzene	120	16.859	16.863	-0.004	99	18619	0.1600	0.1509	
87 2-Chlorotoluene	126	16.875	16.877	-0.002	96	16300	0.1600	0.1523	
88 4-Ethyltoluene	105	17.032	17.033	-0.001	98	72536	0.1600	0.1470	
89 1,3,5-Trimethylbenzene	120	17.118	17.122	-0.004	91	26781	0.1600	0.1471	
90 Alpha Methyl Styrene	118	17.377	17.374	0.003	86	17285	0.1600	0.1008	
91 n-Decane	57	17.538	17.540	-0.002	89	47254	0.1600	0.1517	
92 tert-Butylbenzene	119	17.598	17.597	0.001	90	59795	0.1600	0.1506	
93 1,2,4-Trimethylbenzene	105	17.608	17.612	-0.004	96	63028	0.1600	0.1525	
94 1,3-Dichlorobenzene	146	17.878	17.880	-0.002	95	34618	0.1600	0.1442	
95 sec-Butylbenzene	105	17.905	17.907	-0.002	99	92751	0.1600	0.1517	
96 Benzyl chloride	91	17.964	17.967	-0.003	96	40689	0.1600	0.1244	
97 1,4-Dichlorobenzene	146	17.981	17.983	-0.002	88	35873	0.1600	0.1470	
98 4-Isopropyltoluene	119	18.099	18.101	-0.002	96	71981	0.1600	0.1451	
99 1,2,3-Trimethylbenzene	105	18.132	18.133	-0.001	98	62853	0.1600	0.1467	
100 Butylcyclohexane	83	18.239	18.238	0.001	93	53283	0.1600	0.1544	
101 1,2-Dichlorobenzene	146	18.374	18.376	-0.002	89	34307	0.1600	0.1449	
102 2,3-Dihydroindene	117	18.390	18.391	-0.001	94	53621	0.1600	0.1505	
103 Indene	116	18.525	18.527	-0.002	90	37597	0.1600	0.1220	
104 n-Butylbenzene	91	18.585	18.586	-0.001	98	77847	0.1600	0.1517	
105 Undecane	57	19.005	19.007	-0.002	97	57518	0.1600	0.1585	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.033	-0.001	86	10201	0.1600	0.0949	
107 1,2,4,5-Tetramethylbenzene	119	19.415	19.412	0.003	96	63719	0.1600	0.1462	
110 Dodecane	57	20.132	20.133	-0.001	95	59441	0.1600	0.1570	
111 1,2,4-Trichlorobenzene	180	20.213	20.213	0.000	92	30507	0.1600	0.1475	
113 Naphthalene	128	20.337	20.335	0.002	98	90105	0.1600	0.1611	
115 Hexachlorobutadiene	225	20.596	20.597	-0.001	86	19483	0.1600	0.1260	
116 1,2,3-Trichlorobenzene	180	20.623	20.623	0.000	91	30301	0.1600	0.1512	
117 2-Methylnaphthalene	142	21.464	21.464	0.000	98	53204	0.1600	0.1669	
118 1-Methylnaphthalene	142	21.631	21.632	-0.001	99	57660	0.1600	0.2005	
A 120 C8 Range	1	13.340	(13.289-13.375)		0	173302	0.1600	0.1599	
S 121 Xylenes, Total	100				0		0.4800	0.4493	
S 122 1,2-Dichloroethene, Total	1				0		0.3200	0.3030	

Reagents:

40L4DQP_00006

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC04.D

Injection Date: 03-Nov-2018 01:06:30

Instrument ID: MR

Operator ID: AFB

Lims ID: IC L4

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

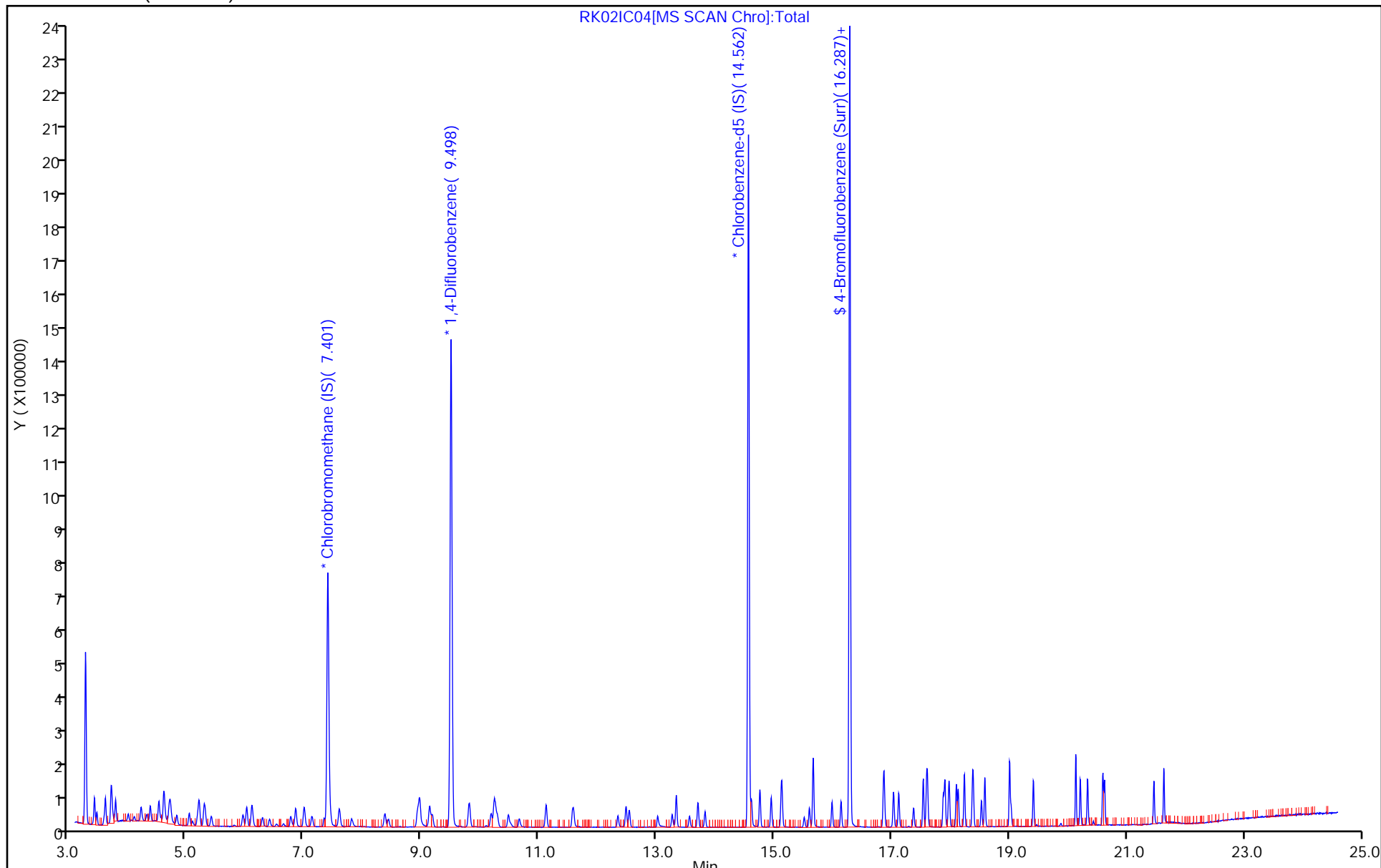
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC04.D

Injection Date: 03-Nov-2018 01:06:30

Instrument ID: MR

Lims ID: IC L4

Client ID:

Operator ID: AFB

ALS Bottle#: 3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

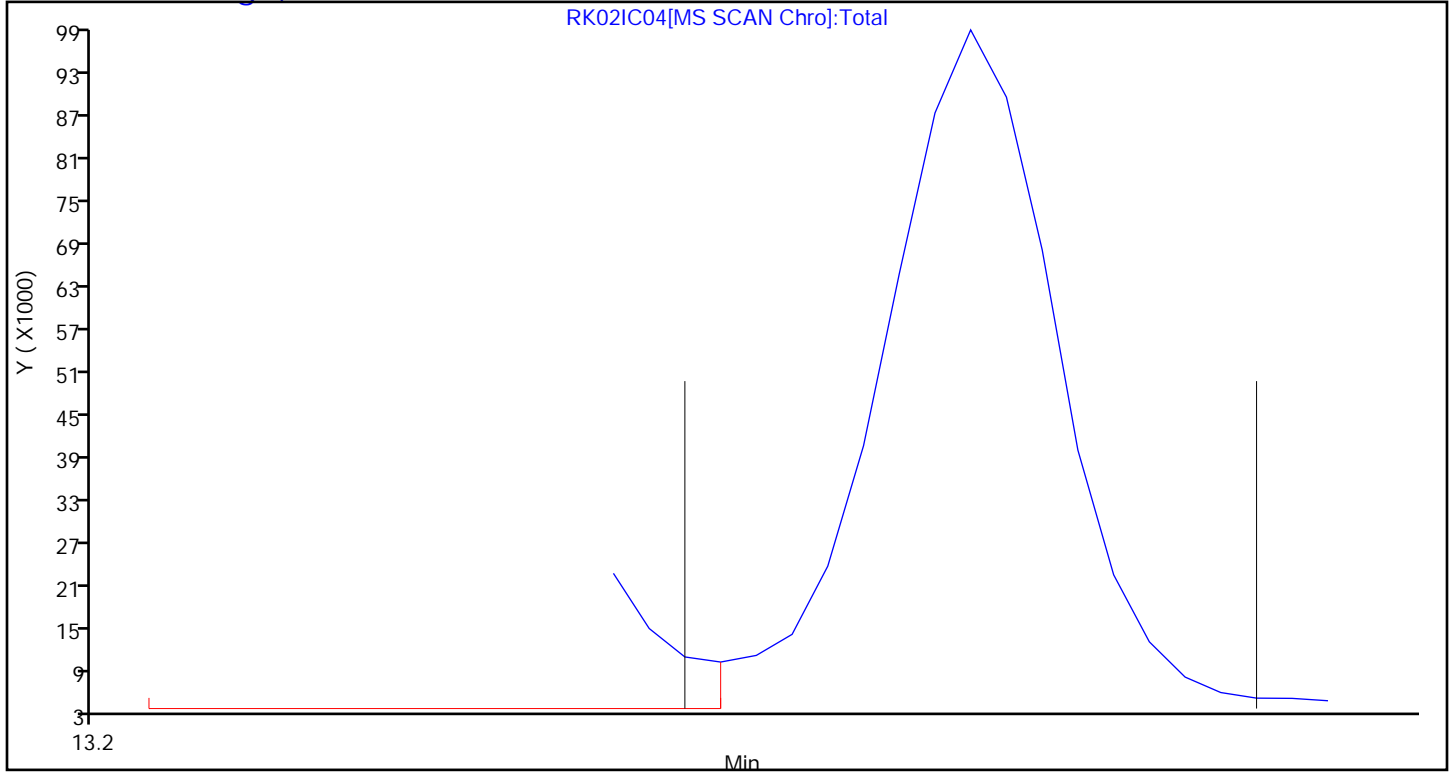
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 03-Nov-2018 01:56:30 ALS Bottle#: 4 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009868-012
 Misc. Info.: 180299
 Operator ID: AFB Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 08:49:38 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: barlozhetskayaa

Date: 05-Nov-2018 10:36:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.384	7.407	-0.023	95	211821	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.487	9.505	-0.018	96	1382234	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.564	-0.002	92	1116017	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.287	16.288	-0.001	88	850940	4.00	4.06	
6 Chlorodifluoromethane	51	3.394	3.416	-0.022	96	91600	0.4000	0.4040	
7 Propene	41	3.394	3.418	-0.024	60	46062	0.4000	0.4203	
8 Dichlorodifluoromethane	85	3.437	3.461	-0.024	100	79361	0.4000	0.4700	
9 Chloromethane	52	3.561	3.587	-0.026	99	18338	0.4000	0.4415	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.588	3.609	-0.021	98	57376	0.4000	0.4193	
11 Acetaldehyde	44	3.685	3.709	-0.024	90	134888	2.00	2.83	
12 Vinyl chloride	62	3.685	3.710	-0.025	98	43489	0.4000	0.3810	
13 Butadiene	54	3.755	3.780	-0.025	96	34405	0.4000	0.4143	
14 Butane	43	3.761	3.782	-0.021	92	67407	0.4000	0.4276	
15 Bromomethane	94	3.971	3.997	-0.026	98	31796	0.4000	0.4077	
16 Chloroethane	64	4.074	4.101	-0.027	98	17153	0.4000	0.4066	
17 Ethanol	31	4.198	4.225	-0.027	92	80930	2.00	2.13	
18 Vinyl bromide	106	4.289	4.317	-0.028	97	29997	0.4000	0.3954	
19 2-Methylbutane	43	4.349	4.372	-0.024	91	41476	0.4000	0.3957	
20 Acrolein	56	4.494	4.520	-0.026	85	8718	0.4000	0.3776	
21 Trichlorofluoromethane	101	4.499	4.522	-0.023	100	100322	0.4000	0.3812	
22 Acetonitrile	40	4.526	4.547	-0.021	99	12702	0.4000	0.3625	
23 Acetone	58	4.586	4.607	-0.021	99	66601	1.20	1.66	
24 Pentane	72	4.672	4.695	-0.023	97	6100	0.4000	0.4297	
25 Isopropyl alcohol	45	4.699	4.722	-0.023	98	144150	1.20	1.19	
26 Ethyl ether	31	4.796	4.822	-0.026	94	34519	0.4000	0.3688	
27 1,1-Dichloroethene	96	5.012	5.039	-0.027	93	33923	0.4000	0.3776	
28 Acrylonitrile	53	5.071	5.100	-0.029	94	29184	0.4000	0.3625	
29 2-Methyl-2-propanol	59	5.163	5.176	-0.013	96	74687	0.4000	0.3771	
30 1,1,2-Trichloro-1,2,2-trif	101	5.184	5.206	-0.022	91	81096	0.4000	0.3883	
31 Methylene Chloride	84	5.271	5.296	-0.025	96	43850	0.4000	0.4242	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.292	5.315	-0.023	95	34997	0.4000	0.3721	
33 Carbon disulfide	76	5.389	5.416	-0.027	99	114417	0.4000	0.3855	
34 trans-1,2-Dichloroethene	96	5.934	5.959	-0.025	94	37453	0.4000	0.3908	
35 2-Methylpentane	43	5.999	6.019	-0.020	95	101271	0.4000	0.3952	
36 Methyl tert-butyl ether	73	6.079	6.101	-0.022	97	107483	0.4000	0.3837	
37 1,1-Dichloroethane	63	6.268	6.291	-0.023	99	76912	0.4000	0.3930	
38 Vinyl acetate	43	6.387	6.409	-0.022	100	107348	0.4000	0.3687	
39 2-Butanone (MEK)	72	6.748	6.770	-0.022	98	21494	0.4000	0.4060	
40 Hexane	56	6.840	6.856	-0.016	89	37905	0.4000	0.3999	
171 Isopropyl ether	45	6.975	6.997	-0.022	98	157773	0.4000	0.3857	
41 cis-1,2-Dichloroethene	96	7.115	7.136	-0.021	98	38737	0.4000	0.3850	
42 Ethyl acetate	43	7.314	7.338	-0.024	99	98591	0.4000	0.3754	
43 Chloroform	83	7.422	7.446	-0.024	89	84032	0.4000	0.3903	
173 Tert-butyl ethyl ether	59	7.568	7.592	-0.024	96	134946	0.4000	0.3886	
44 Tetrahydrofuran	42	7.778	7.801	-0.023	96	53313	0.4000	0.3994	
45 1,1,1-Trichloroethane	97	8.360	8.376	-0.016	95	75472	0.4000	0.3715	
46 1,2-Dichloroethane	62	8.420	8.439	-0.019	96	61559	0.4000	0.3825	
47 Benzene	78	8.910	8.933	-0.023	98	118436	0.4000	0.3815	
48 Cyclohexane	69	8.948	8.963	-0.015	97	18962	0.4000	0.3951	
50 Carbon tetrachloride	117	8.954	8.973	-0.019	97	72667	0.4000	0.3684	
49 n-Butanol	31	8.991	8.991	0.000	60	11609	0.4000	0.3293	
51 2,3-Dimethylpentane	71	9.121	9.136	-0.015	90	28447	0.4000	0.3898	
52 Thiophene	84	9.164	9.186	-0.022	95	67392	0.4000	0.3824	
53 Isooctane	57	9.795	9.810	-0.015	98	212015	0.4000	0.3908	
54 1,2-Dichloropropane	63	10.172	10.186	-0.014	87	46851	0.4000	0.3844	
55 n-Heptane	71	10.221	10.233	-0.012	90	42237	0.4000	0.3816	
56 Trichloroethene	130	10.248	10.261	-0.013	92	44427	0.4000	0.3812	
57 Dibromomethane	93	10.275	10.292	-0.017	85	45057	0.4000	0.3747	
58 Dichlorobromomethane	83	10.463	10.480	-0.017	96	76810	0.4000	0.3746	
59 1,4-Dioxane	88	10.501	10.513	-0.012	93	16175	0.4000	0.3648	
60 Methyl methacrylate	41	10.647	10.661	-0.014	92	47269	0.4000	0.3368	
61 Methylcyclohexane	83	11.105	11.119	-0.014	93	69268	0.4000	0.3801	
62 4-Methyl-2-pentanone (MIBK)	43	11.553	11.561	-0.008	97	96312	0.4000	0.3670	
63 cis-1,3-Dichloropropene	75	11.580	11.587	-0.007	97	65745	0.4000	0.3731	
64 trans-1,3-Dichloropropene	75	12.335	12.342	-0.007	98	57701	0.4000	0.3711	
65 Toluene	91	12.475	12.480	-0.005	93	130019	0.4000	0.3856	
66 1,1,2-Trichloroethane	83	12.529	12.536	-0.007	96	40674	0.4000	0.3921	
69 2-Hexanone	58	13.003	13.013	-0.010	91	43143	0.4000	0.3529	
70 Chlorodibromomethane	129	13.262	13.267	-0.005	95	56779	0.4000	0.3433	
71 n-Octane	85	13.332	13.336	-0.004	95	42108	0.4000	0.3782	
72 Ethylene Dibromide	107	13.553	13.560	-0.007	96	64811	0.4000	0.3653	
73 Tetrachloroethene	129	13.699	13.704	-0.005	87	40817	0.4000	0.3836	
74 Chlorobenzene	112	14.610	14.614	-0.004	93	103601	0.4000	0.3786	
75 2,3-Dimethylheptane	43	14.756	14.757	-0.001	96	151386	0.4000	0.3966	
76 Ethylbenzene	91	14.945	14.951	-0.006	99	169388	0.4000	0.3845	
78 m-Xylene & p-Xylene	91	15.128	15.130	-0.002	97	259626	0.8000	0.7695	
79 Bromoform	173	15.511	15.514	-0.003	89	42803	0.4000	0.3332	
80 Styrene	104	15.597	15.599	-0.002	98	82823	0.4000	0.3465	
82 o-Xylene	91	15.662	15.663	-0.001	99	137281	0.4000	0.3933	
81 n-Nonane	57	15.662	15.667	-0.005	97	98296	0.4000	0.4095	
83 1,1,2,2-Tetrachloroethane	83	15.985	15.986	-0.001	98	98694	0.4000	0.3840	
84 1,2,3-Trichloropropane	110	16.136	16.137	-0.001	97	29239	0.4000	0.3802	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.287	16.291	-0.004	61	192690	0.4000	0.3818	
86 N-Propylbenzene	120	16.859	16.863	-0.004	99	48841	0.4000	0.3831	
87 2-Chlorotoluene	126	16.875	16.877	-0.002	92	43624	0.4000	0.3944	
88 4-Ethyltoluene	105	17.031	17.033	-0.002	99	196269	0.4000	0.3850	
89 1,3,5-Trimethylbenzene	120	17.118	17.122	-0.004	91	71552	0.4000	0.3804	
90 Alpha Methyl Styrene	118	17.371	17.374	-0.003	86	51439	0.4000	0.2904	
91 n-Decane	57	17.538	17.540	-0.002	89	129410	0.4000	0.4021	
92 tert-Butylbenzene	119	17.592	17.597	-0.005	91	159019	0.4000	0.3875	
93 1,2,4-Trimethylbenzene	105	17.608	17.612	-0.004	96	164384	0.4000	0.3850	
94 1,3-Dichlorobenzene	146	17.878	17.880	-0.002	97	92845	0.4000	0.3742	
95 sec-Butylbenzene	105	17.905	17.907	-0.002	99	243328	0.4000	0.3852	
96 Benzyl chloride	91	17.964	17.967	-0.003	97	112737	0.4000	0.3335	
97 1,4-Dichlorobenzene	146	17.980	17.983	-0.003	94	95354	0.4000	0.3781	
98 4-Isopropyltoluene	119	18.099	18.101	-0.002	95	196455	0.4000	0.3833	
99 1,2,3-Trimethylbenzene	105	18.131	18.133	-0.002	99	172299	0.4000	0.3892	
100 Butylcyclohexane	83	18.234	18.238	-0.004	92	142985	0.4000	0.4010	
101 1,2-Dichlorobenzene	146	18.374	18.376	-0.002	89	90883	0.4000	0.3715	
102 2,3-Dihydroindene	117	18.390	18.391	-0.001	93	143379	0.4000	0.3894	
103 Indene	116	18.525	18.527	-0.002	90	104815	0.4000	0.3293	
104 n-Butylbenzene	91	18.584	18.586	-0.002	98	206625	0.4000	0.3897	
105 Undecane	57	19.005	19.007	-0.002	97	153722	0.4000	0.4099	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.033	-0.001	87	34990	0.4000	0.3150	
107 1,2,4,5-Tetramethylbenzene	119	19.409	19.412	-0.003	97	167938	0.4000	0.3729	
110 Dodecane	57	20.132	20.133	-0.001	95	167792	0.4000	0.4288	
111 1,2,4-Trichlorobenzene	180	20.213	20.213	0.000	90	78198	0.4000	0.3660	
113 Naphthalene	128	20.332	20.335	-0.003	98	209608	0.4000	0.3626	
115 Hexachlorobutadiene	225	20.596	20.597	-0.001	85	53263	0.4000	0.3335	
116 1,2,3-Trichlorobenzene	180	20.623	20.623	0.000	93	73002	0.4000	0.3526	
117 2-Methylnaphthalene	142	21.464	21.464	0.000	99	112574	0.4000	0.3417	
118 1-Methylnaphthalene	142	21.631	21.632	-0.001	99	115955	0.4000	0.3902	
A 120 C8 Range	1	13.343	(13.294-13.381)		0	436471	0.4000	0.3888	
S 121 Xylenes, Total	100				0		1.20	1.16	
S 122 1,2-Dichloroethene, Total	1				0		0.8000	0.7758	

Reagents:

40L5DQP_00006

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC05.D

Injection Date: 03-Nov-2018 01:56:30

Instrument ID: MR

Operator ID: AFB

Lims ID: IC L5

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

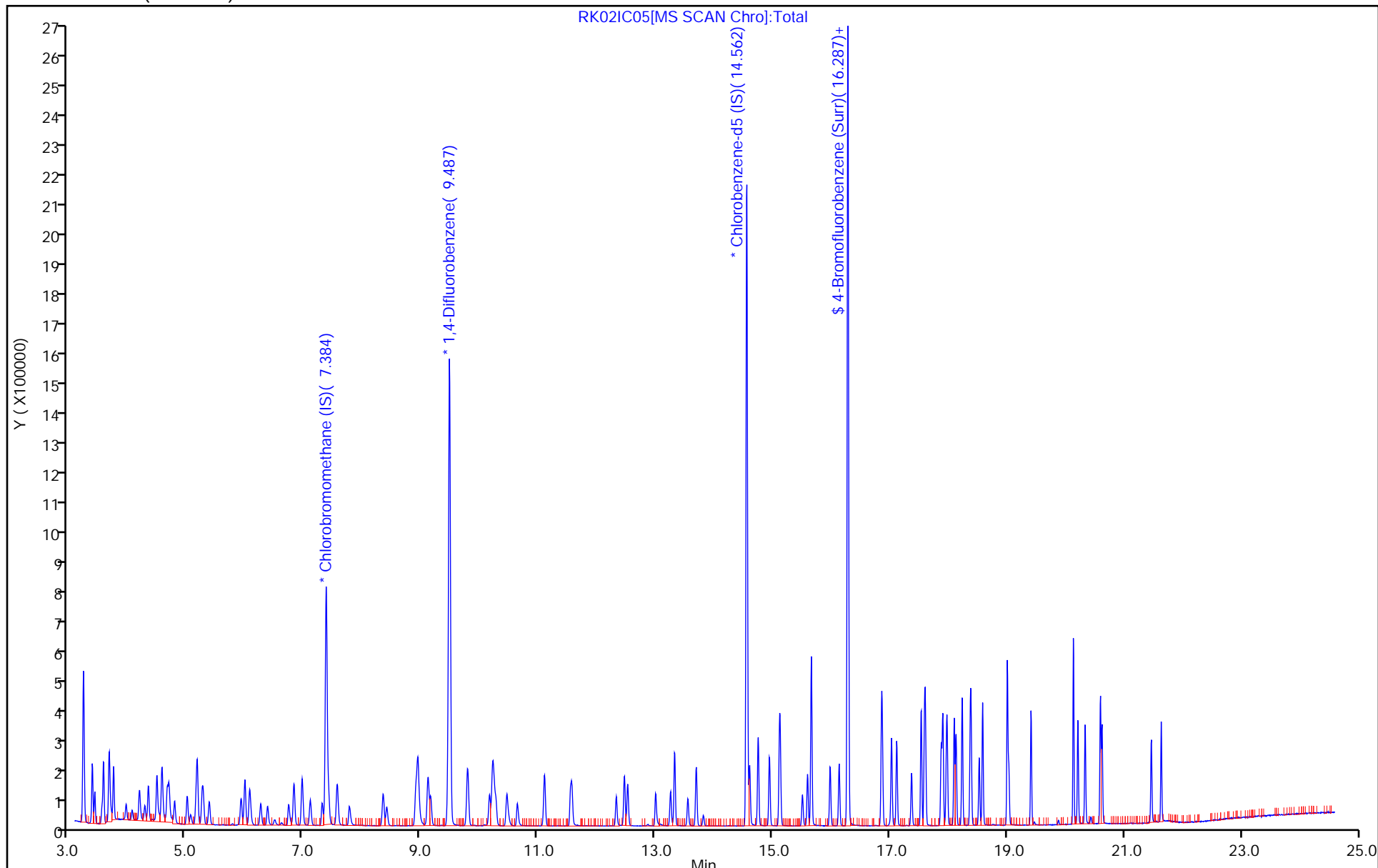
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC05.D

Injection Date: 03-Nov-2018 01:56:30

Instrument ID: MR

Lims ID: IC L5

Client ID:

Operator ID: AFB

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

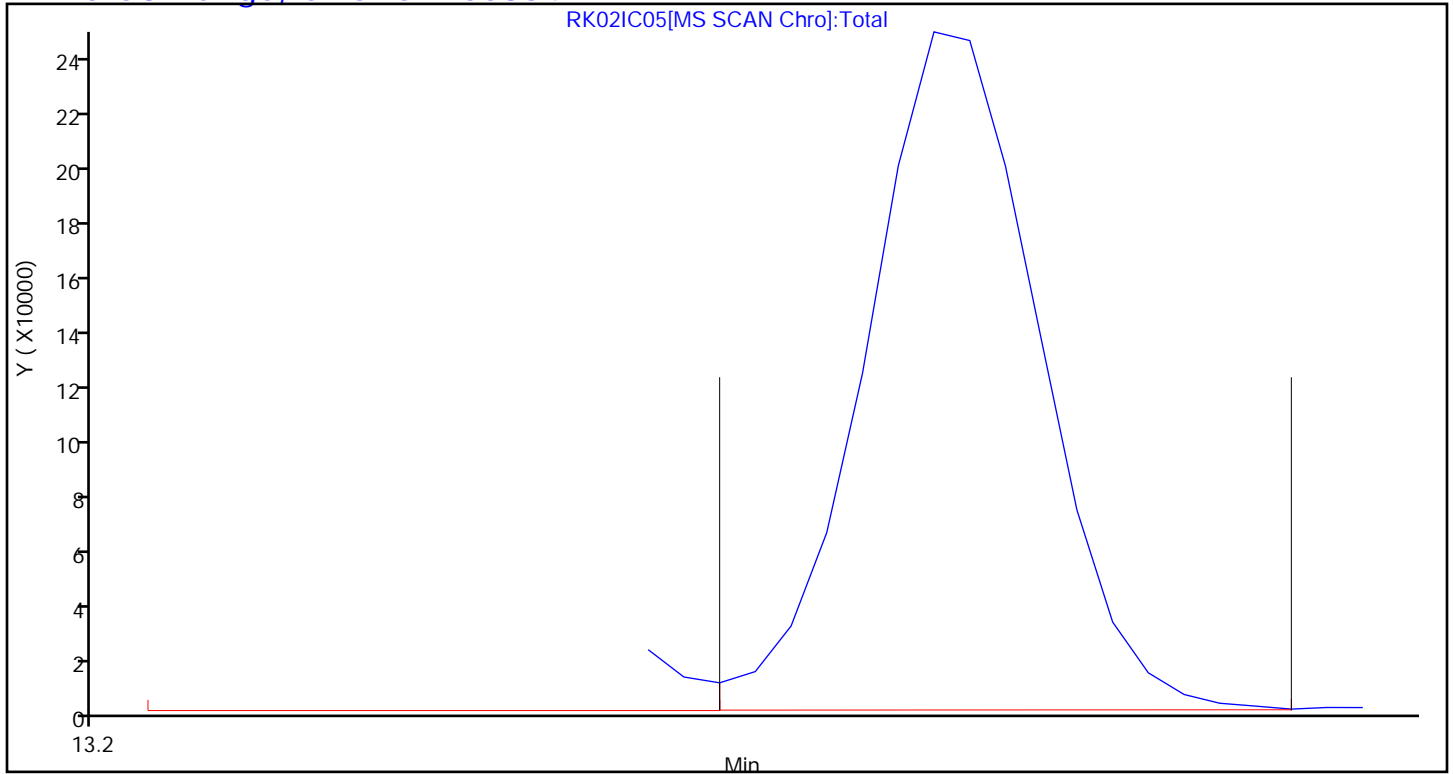
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 03-Nov-2018 02:45:30 ALS Bottle#: 5 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009868-013
 Misc. Info.: 180297
 Operator ID: AFB Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 08:49:46 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: barlozhetskayaa

Date: 05-Nov-2018 10:39:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.407	-0.001	95	214124	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.504	9.505	-0.001	96	1391207	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.564	-0.002	91	1116391	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.287	16.288	-0.001	80	857801	4.00	4.09	
6 Chlorodifluoromethane	51	3.421	3.416	0.005	96	231849	1.00	1.01	
7 Propene	41	3.427	3.418	0.009	98	113689	1.00	1.03	
8 Dichlorodifluoromethane	85	3.464	3.461	0.003	100	184848	1.00	1.08	
9 Chloromethane	52	3.588	3.587	0.001	99	44072	1.00	1.05	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.615	3.609	0.006	95	155694	1.00	1.13	
11 Acetaldehyde	44	3.707	3.709	-0.002	92	236725	5.00	4.91	
12 Vinyl chloride	62	3.712	3.710	0.002	98	114702	1.00	0.99	
13 Butadiene	54	3.783	3.780	0.002	97	90846	1.00	1.08	
14 Butane	43	3.788	3.782	0.006	93	174264	1.00	1.09	
15 Bromomethane	94	3.998	3.997	0.001	97	85185	1.00	1.08	
16 Chloroethane	64	4.106	4.101	0.005	98	44548	1.00	1.04	
17 Ethanol	31	4.219	4.225	-0.006	92	216518	5.00	5.65	
18 Vinyl bromide	106	4.316	4.317	-0.001	98	81055	1.00	1.06	
19 2-Methylbutane	43	4.376	4.372	0.004	91	117041	1.00	1.10	
20 Acrolein	56	4.516	4.520	-0.004	29	21007	1.00	0.9002	
21 Trichlorofluoromethane	101	4.521	4.522	-0.001	99	272921	1.00	1.03	
22 Acetonitrile	40	4.554	4.547	0.007	98	36357	1.00	1.03	
23 Acetone	58	4.602	4.607	-0.005	99	126940	3.00	3.13	
24 Pentane	72	4.694	4.695	-0.001	96	15877	1.00	1.11	
25 Isopropyl alcohol	45	4.710	4.722	-0.012	94	409204	3.00	3.33	
26 Ethyl ether	31	4.812	4.822	-0.010	95	100098	1.00	1.06	
27 1,1-Dichloroethene	96	5.039	5.039	0.000	93	92259	1.00	1.02	
28 Acrylonitrile	53	5.093	5.100	-0.007	97	81527	1.00	1.00	
29 2-Methyl-2-propanol	59	5.163	5.176	-0.013	93	208147	1.00	1.04	
30 1,1,2-Trichloro-1,2,2-trif	101	5.206	5.206	0.000	94	218846	1.00	1.04	
31 Methylene Chloride	84	5.292	5.296	-0.004	97	101855	1.00	0.9746	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.315	-0.001	96	101220	1.00	1.06	
33 Carbon disulfide	76	5.416	5.416	0.000	99	298301	1.00	0.99	
34 trans-1,2-Dichloroethene	96	5.956	5.959	-0.003	94	100776	1.00	1.04	
35 2-Methylpentane	43	6.020	6.019	0.001	96	271866	1.00	1.05	
36 Methyl tert-butyl ether	73	6.090	6.101	-0.011	97	294327	1.00	1.04	
37 1,1-Dichloroethane	63	6.290	6.291	-0.001	100	207169	1.00	1.05	
38 Vinyl acetate	43	6.403	6.409	-0.006	100	303901	1.00	1.03	
39 2-Butanone (MEK)	72	6.759	6.770	-0.011	98	51080	1.00	0.9545	
40 Hexane	56	6.856	6.856	0.000	89	99038	1.00	1.03	
171 Isopropyl ether	45	6.986	6.997	-0.011	98	427712	1.00	1.03	
41 cis-1,2-Dichloroethene	96	7.137	7.136	0.001	98	105380	1.00	1.04	
42 Ethyl acetate	43	7.325	7.338	-0.013	99	278564	1.00	1.05	
43 Chloroform	83	7.444	7.446	-0.002	94	226044	1.00	1.04	
173 Tert-butyl ethyl ether	59	7.584	7.592	-0.008	96	363943	1.00	1.04	
44 Tetrahydrofuran	42	7.789	7.801	-0.012	96	141517	1.00	1.05	
45 1,1,1-Trichloroethane	97	8.377	8.376	0.001	96	207345	1.00	1.01	
46 1,2-Dichloroethane	62	8.436	8.439	-0.003	96	168927	1.00	1.04	
47 Benzene	78	8.932	8.933	-0.001	98	321613	1.00	1.03	
48 Cyclohexane	69	8.965	8.963	0.002	97	51160	1.00	1.06	
50 Carbon tetrachloride	117	8.975	8.973	0.002	95	205099	1.00	1.03	
49 n-Butanol	31	8.981	8.991	-0.010	64	37691	1.00	1.06	
51 2,3-Dimethylpentane	71	9.132	9.136	-0.004	89	77103	1.00	1.05	
52 Thiophene	84	9.186	9.186	0.000	96	185093	1.00	1.04	
53 Isooctane	57	9.806	9.810	-0.004	98	572507	1.00	1.05	
54 1,2-Dichloropropane	63	10.183	10.186	-0.003	89	128831	1.00	1.05	
55 n-Heptane	71	10.232	10.233	-0.001	90	116537	1.00	1.05	
56 Trichloroethene	130	10.259	10.261	-0.002	93	118506	1.00	1.01	
57 Dibromomethane	93	10.291	10.292	-0.001	87	120489	1.00	1.00	
58 Dichlorobromomethane	83	10.480	10.480	0.000	98	215951	1.00	1.05	
59 1,4-Dioxane	88	10.501	10.513	-0.012	93	47592	1.00	1.07	
60 Methyl methacrylate	41	10.652	10.661	-0.009	93	145426	1.00	1.03	
61 Methylcyclohexane	83	11.122	11.119	0.003	93	190467	1.00	1.04	
62 4-Methyl-2-pentanone (MIBK)	43	11.553	11.561	-0.008	98	270976	1.00	1.03	
63 cis-1,3-Dichloropropene	75	11.585	11.587	-0.002	97	186197	1.00	1.05	
64 trans-1,3-Dichloropropene	75	12.340	12.342	-0.002	99	167492	1.00	1.08	
65 Toluene	91	12.480	12.480	0.000	93	356596	1.00	1.06	
66 1,1,2-Trichloroethane	83	12.534	12.536	-0.002	96	112990	1.00	1.09	
69 2-Hexanone	58	13.003	13.013	-0.010	91	125070	1.00	1.02	
70 Chlorodibromomethane	129	13.268	13.267	0.001	95	172310	1.00	1.04	
71 n-Octane	85	13.332	13.336	-0.004	95	119020	1.00	1.07	
72 Ethylene Dibromide	107	13.559	13.560	-0.001	99	186770	1.00	1.05	
73 Tetrachloroethene	129	13.704	13.704	0.000	89	111450	1.00	1.05	
74 Chlorobenzene	112	14.616	14.614	0.002	91	281026	1.00	1.03	
75 2,3-Dimethylheptane	43	14.756	14.757	-0.001	96	415338	1.00	1.09	
76 Ethylbenzene	91	14.950	14.951	-0.001	99	469705	1.00	1.07	
78 m-Xylene & p-Xylene	91	15.128	15.130	-0.002	97	721489	2.00	2.14	
79 Bromoform	173	15.511	15.514	-0.003	90	142211	1.00	1.11	
80 Styrene	104	15.597	15.599	-0.002	99	260320	1.00	1.09	
82 o-Xylene	91	15.662	15.663	-0.001	98	375445	1.00	1.08	
81 n-Nonane	57	15.667	15.667	0.000	95	270134	1.00	1.13	
83 1,1,2,2-Tetrachloroethane	83	15.985	15.986	-0.001	98	282266	1.00	1.10	
84 1,2,3-Trichloropropane	110	16.136	16.137	-0.001	97	81382	1.00	1.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.287	16.291	-0.004	77	526413	1.00	1.04	
86 N-Propylbenzene	120	16.859	16.863	-0.004	97	135138	1.00	1.06	
87 2-Chlorotoluene	126	16.875	16.877	-0.002	92	118041	1.00	1.07	
88 4-Ethyltoluene	105	17.032	17.033	-0.001	99	539442	1.00	1.06	
89 1,3,5-Trimethylbenzene	120	17.118	17.122	-0.004	91	201382	1.00	1.07	
90 Alpha Methyl Styrene	118	17.371	17.374	-0.003	86	176269	1.00	0.99	
91 n-Decane	57	17.538	17.540	-0.002	89	351946	1.00	1.09	
92 tert-Butylbenzene	119	17.592	17.597	-0.005	91	441543	1.00	1.08	
93 1,2,4-Trimethylbenzene	105	17.609	17.612	-0.003	96	463859	1.00	1.09	
94 1,3-Dichlorobenzene	146	17.878	17.880	-0.002	97	255682	1.00	1.03	
95 sec-Butylbenzene	105	17.905	17.907	-0.002	99	677466	1.00	1.07	
96 Benzyl chloride	91	17.964	17.967	-0.003	97	359392	1.00	1.06	
97 1,4-Dichlorobenzene	146	17.981	17.983	-0.002	93	259988	1.00	1.03	
98 4-Isopropyltoluene	119	18.099	18.101	-0.002	96	549116	1.00	1.07	
99 1,2,3-Trimethylbenzene	105	18.132	18.133	-0.001	99	478298	1.00	1.08	
100 Butylcyclohexane	83	18.234	18.238	-0.004	91	392396	1.00	1.10	
101 1,2-Dichlorobenzene	146	18.374	18.376	-0.002	90	251799	1.00	1.03	
102 2,3-Dihydroindene	117	18.390	18.391	-0.001	94	396498	1.00	1.08	
103 Indene	116	18.525	18.527	-0.002	91	325323	1.00	1.02	
104 n-Butylbenzene	91	18.585	18.586	-0.001	98	569135	1.00	1.07	
105 Undecane	57	19.005	19.007	-0.002	97	427707	1.00	1.14	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.033	-0.001	90	114622	1.00	1.03	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.412	-0.002	97	480127	1.00	1.07	
110 Dodecane	57	20.132	20.133	-0.001	95	445020	1.00	1.14	
111 1,2,4-Trichlorobenzene	180	20.213	20.213	0.000	93	210760	1.00	0.9860	
113 Naphthalene	128	20.332	20.335	-0.003	98	565900	1.00	0.9785	
115 Hexachlorobutadiene	225	20.596	20.597	-0.001	87	154812	1.00	0.9689	
116 1,2,3-Trichlorobenzene	180	20.623	20.623	0.000	93	197486	1.00	0.9536	
117 2-Methylnaphthalene	142	21.464	21.464	0.000	100	316104	1.00	0.9591	
118 1-Methylnaphthalene	142	21.631	21.632	-0.001	99	310034	1.00	1.04	
A 120 C8 Range	1	13.348	(13.284-13.392)		0	1198990	1.00	1.06	
S 121 Xylenes, Total	100				0		3.00	3.21	
S 122 1,2-Dichloroethene, Total	1				0		2.00	2.08	

Reagents:

40L7DQP_00006

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC06.D

Injection Date: 03-Nov-2018 02:45:30

Instrument ID: MR

Operator ID: AFB

Lims ID: IC L6

Worklist Smp#: 13

Client ID:

Purge Vol: 500.000 mL

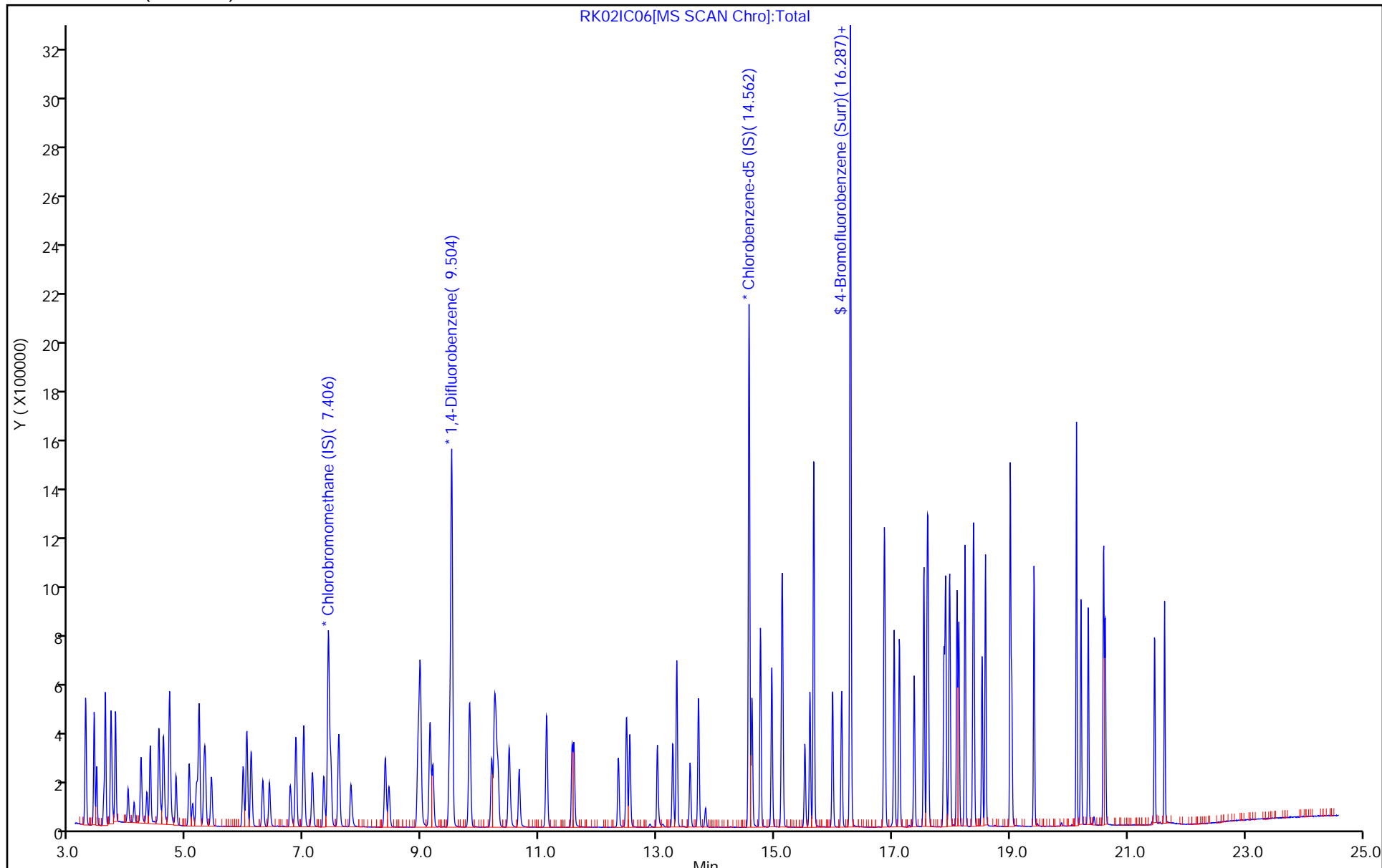
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC06.D

Injection Date: 03-Nov-2018 02:45:30

Instrument ID: MR

Lims ID: IC L6

Client ID:

Operator ID: AFB

ALS Bottle#: 5

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

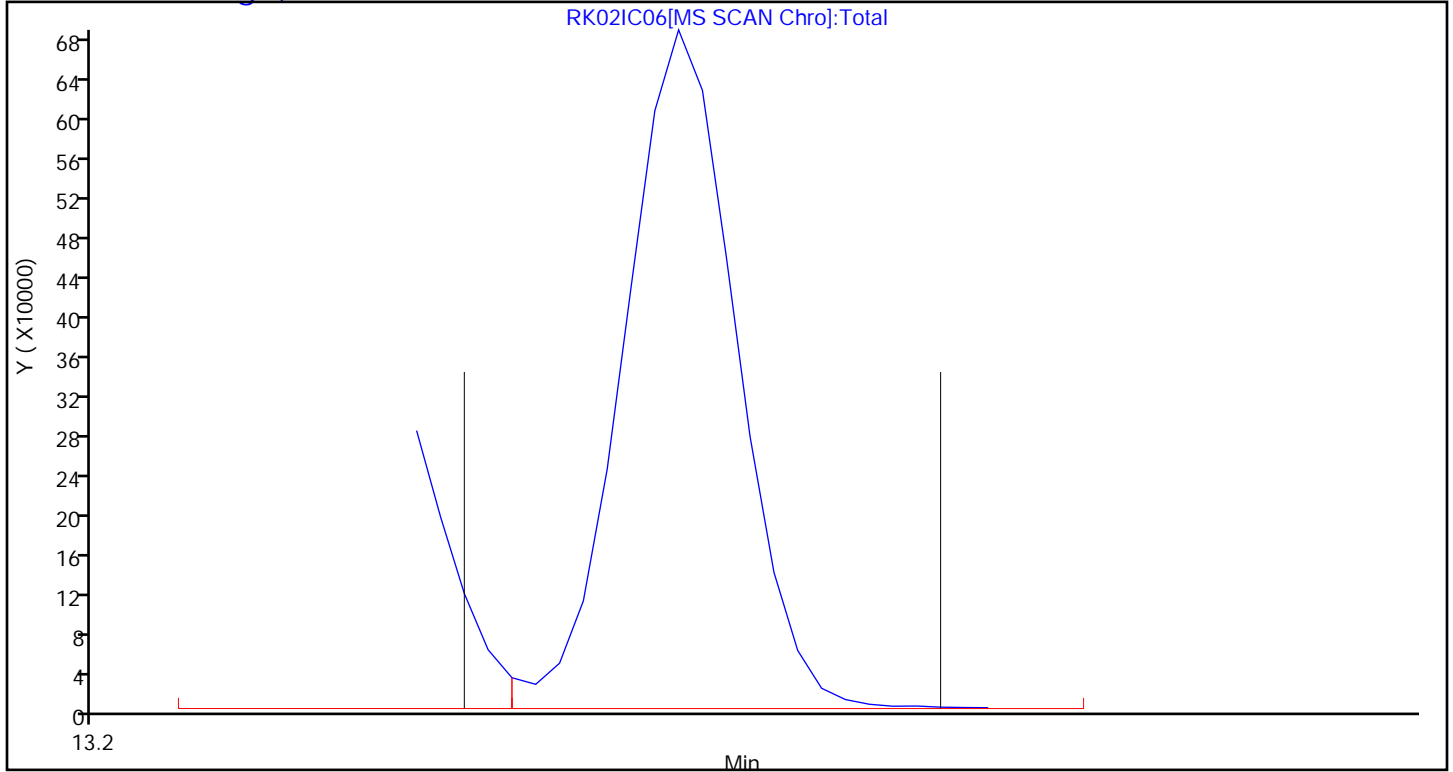
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 03-Nov-2018 03:35:30 ALS Bottle#: 5 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009868-014
 Misc. Info.: 180297
 Operator ID: AFB Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 08:49:59 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: tajh

Date: 05-Nov-2018 08:47:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.411	7.407	0.004	96	229973	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.509	9.505	0.004	96	1508086	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.567	14.564	0.003	91	1220448	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.287	16.288	-0.001	75	925571	4.00	4.04	
6 Chlorodifluoromethane	51	3.416	3.416	0.000	96	466010	2.00	1.89	
7 Propene	41	3.421	3.418	0.003	99	233746	2.00	1.96	
8 Dichlorodifluoromethane	85	3.464	3.461	0.003	100	290508	2.00	1.58	
9 Chloromethane	52	3.588	3.587	0.001	100	86581	2.00	1.92	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	95	206849	2.00	1.39	
11 Acetaldehyde	44	3.707	3.709	-0.002	92	511369	10.0	9.88	
12 Vinyl chloride	62	3.712	3.710	0.002	98	246064	2.00	1.99	
13 Butadiene	54	3.782	3.780	0.002	97	185230	2.00	2.05	
14 Butane	43	3.782	3.782	0.000	91	347974	2.00	2.03	
15 Bromomethane	94	3.998	3.997	0.001	97	158523	2.00	1.87	
16 Chloroethane	64	4.100	4.101	-0.001	97	89727	2.00	1.96	
17 Ethanol	31	4.219	4.225	-0.006	91	404445	10.0	9.82	
18 Vinyl bromide	106	4.322	4.317	0.005	98	164591	2.00	2.00	
19 2-Methylbutane	43	4.375	4.372	0.003	91	223048	2.00	1.96	
20 Acrolein	56	4.516	4.520	-0.004	91	43345	2.00	1.73	
21 Trichlorofluoromethane	101	4.521	4.522	-0.001	99	577739	2.00	2.02	
22 Acetonitrile	40	4.553	4.547	0.006	99	79626	2.00	2.09	
23 Acetone	58	4.597	4.607	-0.010	99	249912	6.00	5.74	
24 Pentane	72	4.699	4.695	0.004	98	31026	2.00	2.01	
25 Isopropyl alcohol	45	4.710	4.722	-0.012	97	805048	6.00	6.11	
26 Ethyl ether	31	4.812	4.822	-0.010	95	203244	2.00	2.00	
27 1,1-Dichloroethene	96	5.039	5.039	0.000	93	192954	2.00	1.98	
28 Acrylonitrile	53	5.098	5.100	-0.002	95	179985	2.00	2.06	
29 2-Methyl-2-propanol	59	5.163	5.176	-0.013	93	439653	2.00	2.04	
30 1,1,2-Trichloro-1,2,2-trif	101	5.206	5.206	0.000	93	460926	2.00	2.03	
31 Methylene Chloride	84	5.298	5.296	0.002	97	223608	2.00	1.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.315	-0.001	95	205727	2.00	2.01	
33 Carbon disulfide	76	5.416	5.416	0.000	99	630194	2.00	1.96	
34 trans-1,2-Dichloroethene	96	5.961	5.959	0.002	94	208409	2.00	2.00	
35 2-Methylpentane	43	6.020	6.019	0.001	96	568514	2.00	2.04	
36 Methyl tert-butyl ether	73	6.090	6.101	-0.011	97	617985	2.00	2.03	
37 1,1-Dichloroethane	63	6.295	6.291	0.004	100	423575	2.00	1.99	
38 Vinyl acetate	43	6.403	6.409	-0.006	100	652250	2.00	2.06	
39 2-Butanone (MEK)	72	6.759	6.770	-0.011	98	107123	2.00	1.86	
40 Hexane	56	6.856	6.856	0.000	89	205512	2.00	2.00	
171 Isopropyl ether	45	6.985	6.997	-0.012	98	871015	2.00	1.96	
41 cis-1,2-Dichloroethene	96	7.136	7.136	0.000	98	216971	2.00	1.99	
42 Ethyl acetate	43	7.331	7.338	-0.008	99	584084	2.00	2.05	
43 Chloroform	83	7.449	7.446	0.003	96	470178	2.00	2.01	
173 Tert-butyl ethyl ether	59	7.584	7.592	-0.008	96	769121	2.00	2.04	
44 Tetrahydrofuran	42	7.789	7.801	-0.012	96	289106	2.00	1.99	
45 1,1,1-Trichloroethane	97	8.377	8.376	0.001	96	442101	2.00	2.00	
46 1,2-Dichloroethane	62	8.441	8.439	0.002	96	349263	2.00	1.99	
47 Benzene	78	8.937	8.933	0.004	98	666390	2.00	1.97	
48 Cyclohexane	69	8.959	8.963	-0.004	91	105650	2.00	2.02	
50 Carbon tetrachloride	117	8.975	8.973	0.002	97	448416	2.00	2.08	
49 n-Butanol	31	8.964	8.991	-0.027	65	81832	2.00	2.13	
51 2,3-Dimethylpentane	71	9.137	9.136	0.001	90	160666	2.00	2.02	
52 Thiophene	84	9.191	9.186	0.005	97	383959	2.00	2.00	
53 Isooctane	57	9.811	9.810	0.001	98	1181785	2.00	2.00	
54 1,2-Dichloropropane	63	10.188	10.186	0.002	89	262553	2.00	1.97	
55 n-Heptane	71	10.237	10.233	0.004	91	243267	2.00	2.01	
56 Trichloroethene	130	10.264	10.261	0.003	92	251631	2.00	1.98	
57 Dibromomethane	93	10.296	10.292	0.004	90	258916	2.00	1.97	
58 Dichlorobromomethane	83	10.480	10.480	0.000	98	472344	2.00	2.11	
59 1,4-Dioxane	88	10.496	10.513	-0.017	92	98506	2.00	2.04	
60 Methyl methacrylate	41	10.652	10.661	-0.009	93	319365	2.00	2.09	
61 Methylcyclohexane	83	11.121	11.119	0.002	93	397763	2.00	2.00	
62 4-Methyl-2-pentanone (MIBK)	43	11.547	11.561	-0.014	98	591220	2.00	2.06	
63 cis-1,3-Dichloropropene	75	11.585	11.587	-0.002	96	397868	2.00	2.07	
64 trans-1,3-Dichloropropene	75	12.340	12.342	-0.002	99	364022	2.00	2.14	
65 Toluene	91	12.480	12.480	0.000	93	750962	2.00	2.04	
66 1,1,2-Trichloroethane	83	12.534	12.536	-0.002	97	233018	2.00	2.05	
69 2-Hexanone	58	13.003	13.013	-0.010	92	281163	2.00	2.10	
70 Chlorodibromomethane	129	13.268	13.267	0.001	96	394764	2.00	2.18	
71 n-Octane	85	13.338	13.336	0.002	95	254591	2.00	2.09	
72 Ethylene Dibromide	107	13.559	13.560	-0.001	98	405930	2.00	2.09	
73 Tetrachloroethene	129	13.704	13.704	0.000	89	235644	2.00	2.03	
74 Chlorobenzene	112	14.616	14.614	0.002	92	596751	2.00	1.99	
75 2,3-Dimethylheptane	43	14.756	14.757	-0.001	96	846090	2.00	2.03	
76 Ethylbenzene	91	14.950	14.951	-0.001	99	990329	2.00	2.06	
78 m-Xylene & p-Xylene	91	15.128	15.130	-0.002	97	1525331	4.00	4.13	
79 Bromoform	173	15.516	15.514	0.002	91	343651	2.00	2.45	
80 Styrene	104	15.597	15.599	-0.002	99	588080	2.00	2.25	
82 o-Xylene	91	15.662	15.663	-0.001	98	791096	2.00	2.07	
81 n-Nonane	57	15.667	15.667	0.000	93	552039	2.00	2.10	
83 1,1,2,2-Tetrachloroethane	83	15.985	15.986	-0.001	99	592794	2.00	2.11	
84 1,2,3-Trichloropropane	110	16.136	16.137	-0.001	97	174380	2.00	2.07	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.293	16.291	0.002	96	1121672	2.00	2.03	
86 N-Propylbenzene	120	16.864	16.863	0.001	97	290508	2.00	2.08	
87 2-Chlorotoluene	126	16.875	16.877	-0.002	92	247614	2.00	2.05	
88 4-Ethyltoluene	105	17.031	17.033	-0.002	99	1154927	2.00	2.07	
89 1,3,5-Trimethylbenzene	120	17.123	17.122	0.001	91	428442	2.00	2.08	
90 Alpha Methyl Styrene	118	17.371	17.374	-0.003	86	412134	2.00	2.13	
91 n-Decane	57	17.538	17.540	-0.002	89	741260	2.00	2.11	
92 tert-Butylbenzene	119	17.598	17.597	0.001	94	932902	2.00	2.08	
93 1,2,4-Trimethylbenzene	105	17.608	17.612	-0.004	96	981808	2.00	2.10	
94 1,3-Dichlorobenzene	146	17.878	17.880	-0.002	97	545975	2.00	2.01	
95 sec-Butylbenzene	105	17.905	17.907	-0.002	99	1440975	2.00	2.09	
96 Benzyl chloride	91	17.964	17.967	-0.003	97	808874	2.00	2.19	
97 1,4-Dichlorobenzene	146	17.980	17.983	-0.003	89	561241	2.00	2.04	
98 4-Isopropyltoluene	119	18.099	18.101	-0.002	96	1176860	2.00	2.10	
99 1,2,3-Trimethylbenzene	105	18.131	18.133	-0.002	98	1015124	2.00	2.10	
100 Butylcyclohexane	83	18.239	18.238	0.001	92	814417	2.00	2.09	
101 1,2-Dichlorobenzene	146	18.374	18.376	-0.002	91	536576	2.00	2.01	
102 2,3-Dihydroindene	117	18.390	18.391	-0.001	94	840621	2.00	2.09	
103 Indene	116	18.525	18.527	-0.002	91	721254	2.00	2.07	
104 n-Butylbenzene	91	18.584	18.586	-0.002	98	1191358	2.00	2.05	
105 Undecane	57	19.005	19.007	-0.002	97	883546	2.00	2.15	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.033	-0.001	91	271473	2.00	2.23	
107 1,2,4,5-Tetramethylbenzene	119	19.409	19.412	-0.003	97	1024834	2.00	2.08	
110 Dodecane	57	20.132	20.133	-0.001	95	917276	2.00	2.14	
111 1,2,4-Trichlorobenzene	180	20.213	20.213	0.000	93	455190	2.00	1.95	
113 Naphthalene	128	20.332	20.335	-0.003	98	1236388	2.00	1.96	
115 Hexachlorobutadiene	225	20.596	20.597	-0.001	89	346674	2.00	1.98	
116 1,2,3-Trichlorobenzene	180	20.623	20.623	0.000	92	423408	2.00	1.87	
117 2-Methylnaphthalene	142	21.459	21.464	-0.006	100	719297	2.00	2.00	
118 1-Methylnaphthalene	142	21.631	21.632	-0.001	99	667094	2.00	2.05	
A 120 C8 Range	1	13.351	(13.289-13.386)		0	2452242	2.00	2.00	
S 121 Xylenes, Total	100				0		6.00	6.21	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.99	

Reagents:

40L7DQP_00006

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC07.D

Injection Date: 03-Nov-2018 03:35:30

Instrument ID: MR

Operator ID: AFB

Lims ID: ICIS L7

Worklist Smp#: 14

Client ID:

Purge Vol: 500.000 mL

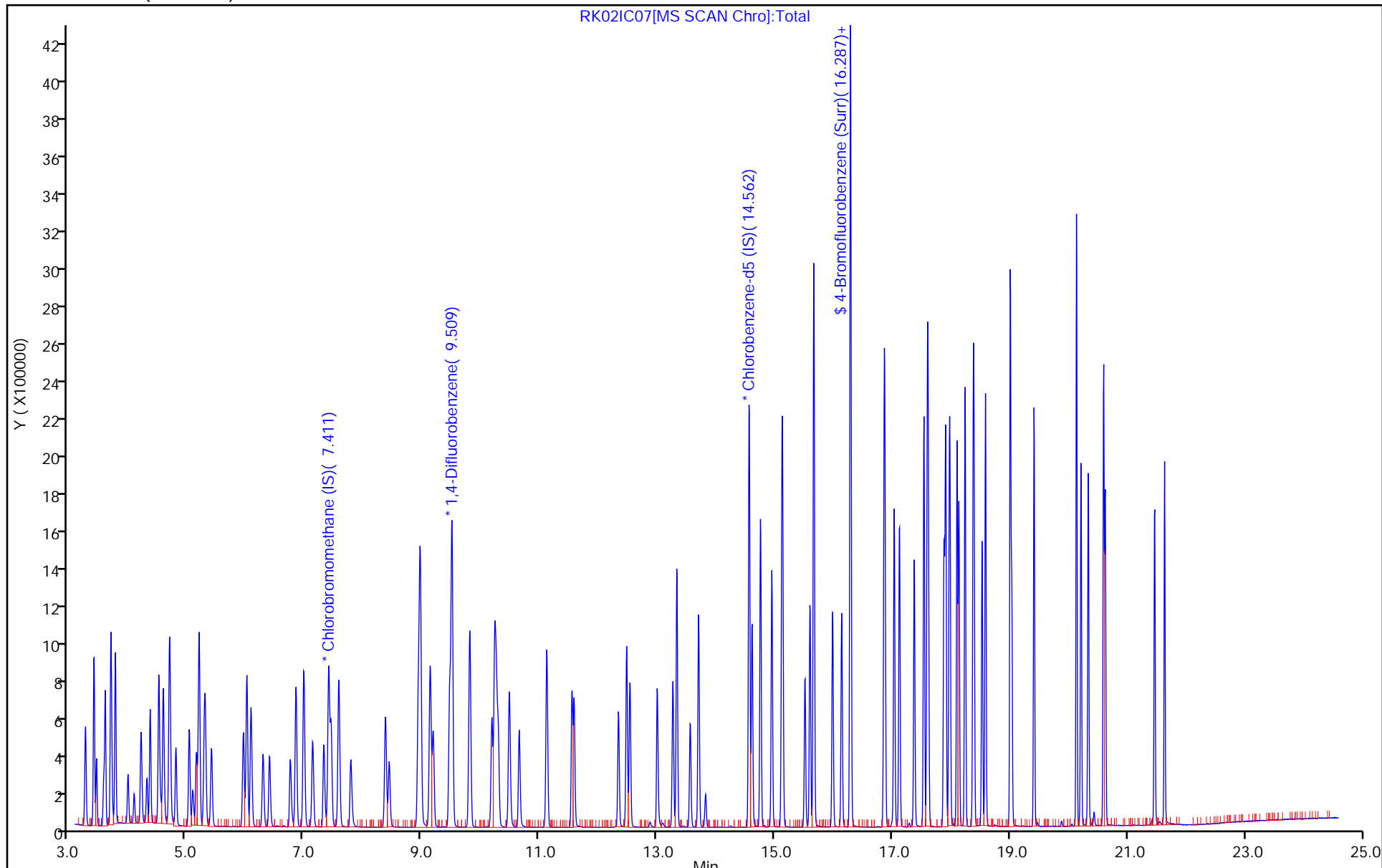
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC07.D

Injection Date: 03-Nov-2018 03:35:30

Instrument ID: MR

Lims ID: ICIS L7

Client ID:

Operator ID: AFB

ALS Bottle#: 5

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

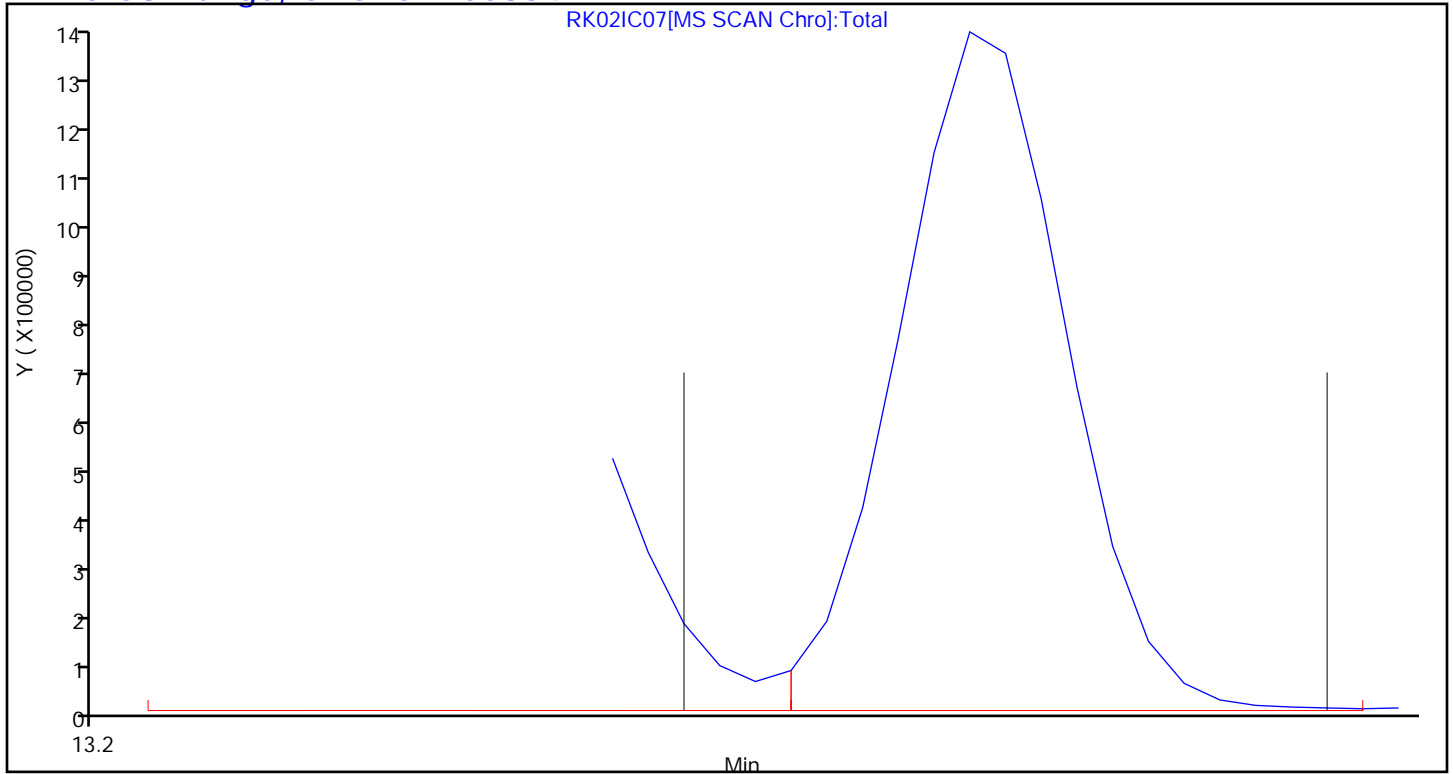
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 03-Nov-2018 04:25:30 ALS Bottle#: 6 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009868-015
 Misc. Info.: 180296
 Operator ID: AFB Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 08:50:09 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: barlozhetskayaa

Date: 05-Nov-2018 10:47:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.417	7.407	0.010	96	240550	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.514	9.505	0.009	95	1542778	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.567	14.564	0.003	90	1291832	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.287	16.288	-0.001	76	985355	4.00	4.06	
6 Chlorodifluoromethane	51	3.416	3.416	0.000	96	951925	4.00	3.70	
7 Propene	41	3.421	3.418	0.003	98	464844	4.00	3.73	
8 Dichlorodifluoromethane	85	3.464	3.461	0.003	99	631992	4.00	3.30	
9 Chloromethane	52	3.588	3.587	0.001	100	173128	4.00	3.67	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	97	449474	4.00	2.89	
11 Acetaldehyde	44	3.707	3.709	-0.002	91	1001606	20.0	18.5	
12 Vinyl chloride	62	3.712	3.710	0.002	98	495118	4.00	3.82	
13 Butadiene	54	3.782	3.780	0.002	97	366528	4.00	3.89	
14 Butane	43	3.782	3.782	0.000	92	686270	4.00	3.83	
15 Bromomethane	94	3.998	3.997	0.001	98	317035	4.00	3.58	
16 Chloroethane	64	4.106	4.101	0.005	97	180820	4.00	3.77	
17 Ethanol	31	4.225	4.225	-0.001	92	799971	20.0	18.6	
18 Vinyl bromide	106	4.322	4.317	0.005	98	335851	4.00	3.90	
19 2-Methylbutane	43	4.376	4.372	0.004	91	443553	4.00	3.73	
20 Acrolein	56	4.516	4.520	-0.004	93	117178	4.00	4.47	
21 Trichlorofluoromethane	101	4.526	4.522	0.004	99	1203652	4.00	4.03	
22 Acetonitrile	40	4.564	4.547	0.017	97	156560	4.00	3.93	
23 Acetone	58	4.602	4.607	-0.005	99	493514	12.0	10.8	
24 Pentane	72	4.699	4.695	0.004	98	61193	4.00	3.80	
25 Isopropyl alcohol	45	4.721	4.722	-0.001	96	1535074	12.0	11.1	
26 Ethyl ether	31	4.812	4.822	-0.010	95	428803	4.00	4.03	
27 1,1-Dichloroethene	96	5.044	5.039	0.005	93	417996	4.00	4.10	
28 Acrylonitrile	53	5.109	5.100	0.009	95	381133	4.00	4.17	
29 2-Methyl-2-propanol	59	5.163	5.176	-0.013	92	923601	4.00	4.11	
30 1,1,2-Trichloro-1,2,2-trif	101	5.206	5.206	0.000	93	984783	4.00	4.15	
31 Methylene Chloride	84	5.303	5.296	0.007	97	415004	4.00	3.53	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.319	5.315	0.004	95	433282	4.00	4.06	
33 Carbon disulfide	76	5.422	5.416	0.006	99	1339231	4.00	3.97	
34 trans-1,2-Dichloroethene	96	5.966	5.959	0.007	94	446824	4.00	4.11	
35 2-Methylpentane	43	6.020	6.019	0.001	95	1172636	4.00	4.03	
36 Methyl tert-butyl ether	73	6.090	6.101	-0.011	97	1312711	4.00	4.13	
37 1,1-Dichloroethane	63	6.301	6.291	0.010	100	890884	4.00	4.01	
38 Vinyl acetate	43	6.408	6.409	-0.001	100	1411960	4.00	4.27	
39 2-Butanone (MEK)	72	6.759	6.770	-0.011	98	239534	4.00	3.98	
40 Hexane	56	6.856	6.856	0.000	89	430519	4.00	4.00	
171 Isopropyl ether	45	6.991	6.997	-0.006	98	1823489	4.00	3.93	
41 cis-1,2-Dichloroethene	96	7.147	7.136	0.011	98	463280	4.00	4.05	
42 Ethyl acetate	43	7.331	7.338	-0.007	99	1231408	4.00	4.13	
43 Chloroform	83	7.460	7.446	0.014	96	997756	4.00	4.08	
173 Tert-butyl ethyl ether	59	7.584	7.592	-0.008	95	1622027	4.00	4.11	
44 Tetrahydrofuran	42	7.789	7.801	-0.012	95	608507	4.00	4.01	
45 1,1,1-Trichloroethane	97	8.382	8.376	0.006	96	962576	4.00	4.17	
46 1,2-Dichloroethane	62	8.447	8.439	0.008	96	757522	4.00	4.22	
47 Benzene	78	8.937	8.933	0.004	98	1408085	4.00	4.06	
48 Cyclohexane	69	8.964	8.963	0.001	92	221068	4.00	4.13	
50 Carbon tetrachloride	117	8.981	8.973	0.008	97	961183	4.00	4.37	
49 n-Butanol	31	8.959	8.991	-0.032	69	169591	4.00	4.31	
51 2,3-Dimethylpentane	71	9.142	9.136	0.006	90	338567	4.00	4.16	
52 Thiophene	84	9.196	9.186	0.010	95	806940	4.00	4.10	
53 Isooctane	57	9.816	9.810	0.006	98	2461970	4.00	4.07	
54 1,2-Dichloropropane	63	10.188	10.186	0.002	90	558428	4.00	4.10	
55 n-Heptane	71	10.237	10.233	0.004	91	510397	4.00	4.13	
56 Trichloroethene	130	10.264	10.261	0.003	92	543287	4.00	4.18	
57 Dibromomethane	93	10.296	10.292	0.004	90	551133	4.00	4.11	
58 Dichlorobromomethane	83	10.485	10.480	0.005	98	1018560	4.00	4.45	
59 1,4-Dioxane	88	10.496	10.513	-0.017	90	209175	4.00	4.23	
60 Methyl methacrylate	41	10.652	10.661	-0.009	94	692496	4.00	4.42	
61 Methylcyclohexane	83	11.121	11.119	0.002	93	840972	4.00	4.13	
62 4-Methyl-2-pentanone (MIBK)	43	11.547	11.561	-0.014	98	1266534	4.00	4.32	
63 cis-1,3-Dichloropropene	75	11.590	11.587	0.003	95	858100	4.00	4.36	
64 trans-1,3-Dichloropropene	75	12.340	12.342	-0.002	98	793713	4.00	4.41	
65 Toluene	91	12.480	12.480	0.000	93	1591393	4.00	4.08	
66 1,1,2-Trichloroethane	83	12.534	12.536	-0.002	97	496426	4.00	4.13	
69 2-Hexanone	58	12.998	13.013	-0.015	92	614954	4.00	4.35	
70 Chlorodibromomethane	129	13.268	13.267	0.001	96	895518	4.00	4.68	
71 n-Octane	85	13.338	13.336	0.002	94	539089	4.00	4.18	
72 Ethylene Dibromide	107	13.564	13.560	0.004	98	891488	4.00	4.34	
73 Tetrachloroethene	129	13.704	13.704	0.000	91	510864	4.00	4.15	
74 Chlorobenzene	112	14.616	14.614	0.002	92	1278772	4.00	4.04	
75 2,3-Dimethylheptane	43	14.756	14.757	-0.001	97	1763208	4.00	3.99	
76 Ethylbenzene	91	14.950	14.951	-0.001	98	2117241	4.00	4.15	
78 m-Xylene & p-Xylene	91	15.128	15.130	-0.002	97	3295253	8.00	8.44	
79 Bromoform	173	15.516	15.514	0.002	93	814953	4.00	5.48	
80 Styrene	104	15.597	15.599	-0.002	99	1306244	4.00	4.72	
82 o-Xylene	91	15.662	15.663	-0.001	99	1696240	4.00	4.20	
81 n-Nonane	57	15.667	15.667	0.000	92	1146449	4.00	4.13	
83 1,1,2,2-Tetrachloroethane	83	15.985	15.986	-0.001	99	1270869	4.00	4.27	
84 1,2,3-Trichloropropane	110	16.136	16.137	-0.001	97	371987	4.00	4.18	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.293	16.291	0.002	96	2426908	4.00	4.15	
86 N-Propylbenzene	120	16.864	16.863	0.001	99	646457	4.00	4.38	
87 2-Chlorotoluene	126	16.875	16.877	-0.002	92	551995	4.00	4.31	
88 4-Ethyltoluene	105	17.031	17.033	-0.002	99	2531231	4.00	4.29	
89 1,3,5-Trimethylbenzene	120	17.123	17.122	0.001	91	947728	4.00	4.35	
90 Alpha Methyl Styrene	118	17.371	17.374	-0.003	87	966752	4.00	4.71	
91 n-Decane	57	17.538	17.540	-0.002	89	1576258	4.00	4.23	
92 tert-Butylbenzene	119	17.598	17.597	0.001	92	2058258	4.00	4.33	
93 1,2,4-Trimethylbenzene	105	17.614	17.612	0.002	96	2174377	4.00	4.40	
94 1,3-Dichlorobenzene	146	17.878	17.880	-0.002	97	1214748	4.00	4.23	
95 sec-Butylbenzene	105	17.910	17.907	0.003	99	3143100	4.00	4.30	
96 Benzyl chloride	91	17.964	17.967	-0.003	97	1812466	4.00	4.63	
97 1,4-Dichlorobenzene	146	17.980	17.983	-0.003	93	1254389	4.00	4.30	
98 4-Isopropyltoluene	119	18.099	18.101	-0.002	96	2602549	4.00	4.39	
99 1,2,3-Trimethylbenzene	105	18.131	18.133	-0.002	98	2225443	4.00	4.34	
100 Butylcyclohexane	83	18.239	18.238	0.001	93	1749694	4.00	4.24	
101 1,2-Dichlorobenzene	146	18.374	18.376	-0.002	95	1187475	4.00	4.19	
102 2,3-Dihydroindene	117	18.390	18.391	-0.001	94	1863860	4.00	4.37	
103 Indene	116	18.525	18.527	-0.002	91	1624318	4.00	4.41	
104 n-Butylbenzene	91	18.584	18.586	-0.002	99	2569763	4.00	4.19	
105 Undecane	57	19.005	19.007	-0.002	96	1829949	4.00	4.22	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.033	-0.001	94	628411	4.00	4.89	
107 1,2,4,5-Tetramethylbenzene	119	19.409	19.412	-0.003	97	2283228	4.00	4.38	
110 Dodecane	57	20.132	20.133	-0.001	97	1931319	4.00	4.26	
111 1,2,4-Trichlorobenzene	180	20.213	20.213	0.000	92	1035413	4.00	4.19	
113 Naphthalene	128	20.337	20.335	0.002	99	2685719	4.00	4.01	
115 Hexachlorobutadiene	225	20.596	20.597	-0.001	91	852817	4.00	4.61	
116 1,2,3-Trichlorobenzene	180	20.623	20.623	0.000	93	960127	4.00	4.01	
117 2-Methylnaphthalene	142	21.464	21.464	0.000	100	1602140	4.00	4.20	
118 1-Methylnaphthalene	142	21.631	21.632	-0.001	99	1386760	4.00	4.03	
A 120 C8 Range	1	13.351	(13.289-13.386)		0	5099279	4.00	4.07	
S 121 Xylenes, Total	100				0		12.0	12.6	
S 122 1,2-Dichloroethene, Total	1				0		8.00	8.16	

Reagents:

40L8DQP_00006

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D

Injection Date: 03-Nov-2018 04:25:30

Instrument ID: MR

Operator ID: AFB

Lims ID: IC L8

Worklist Smp#: 15

Client ID:

Purge Vol: 500.000 mL

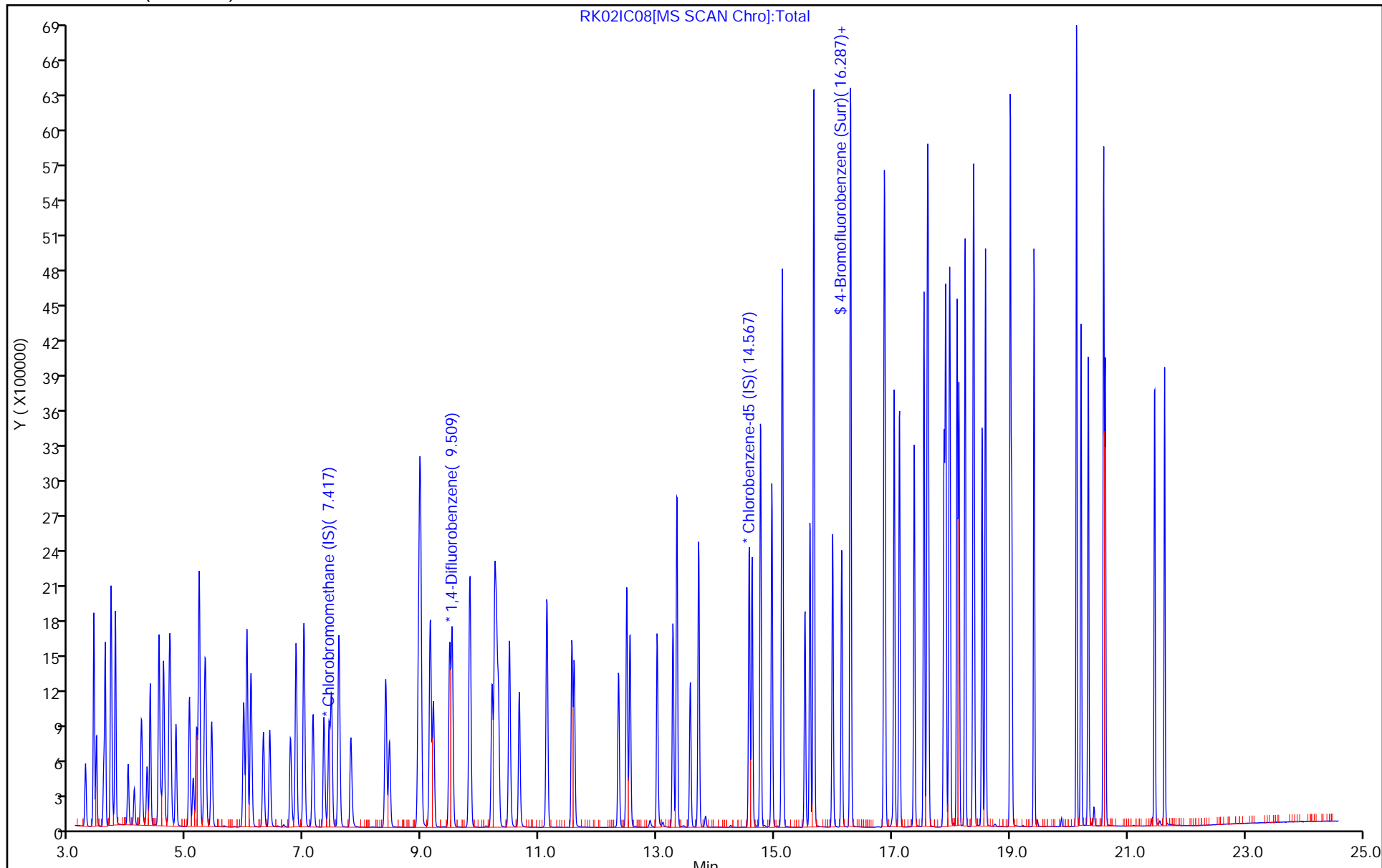
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D

Injection Date: 03-Nov-2018 04:25:30

Instrument ID: MR

Lims ID: IC L8

Client ID:

Operator ID: AFB

ALS Bottle#: 6

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

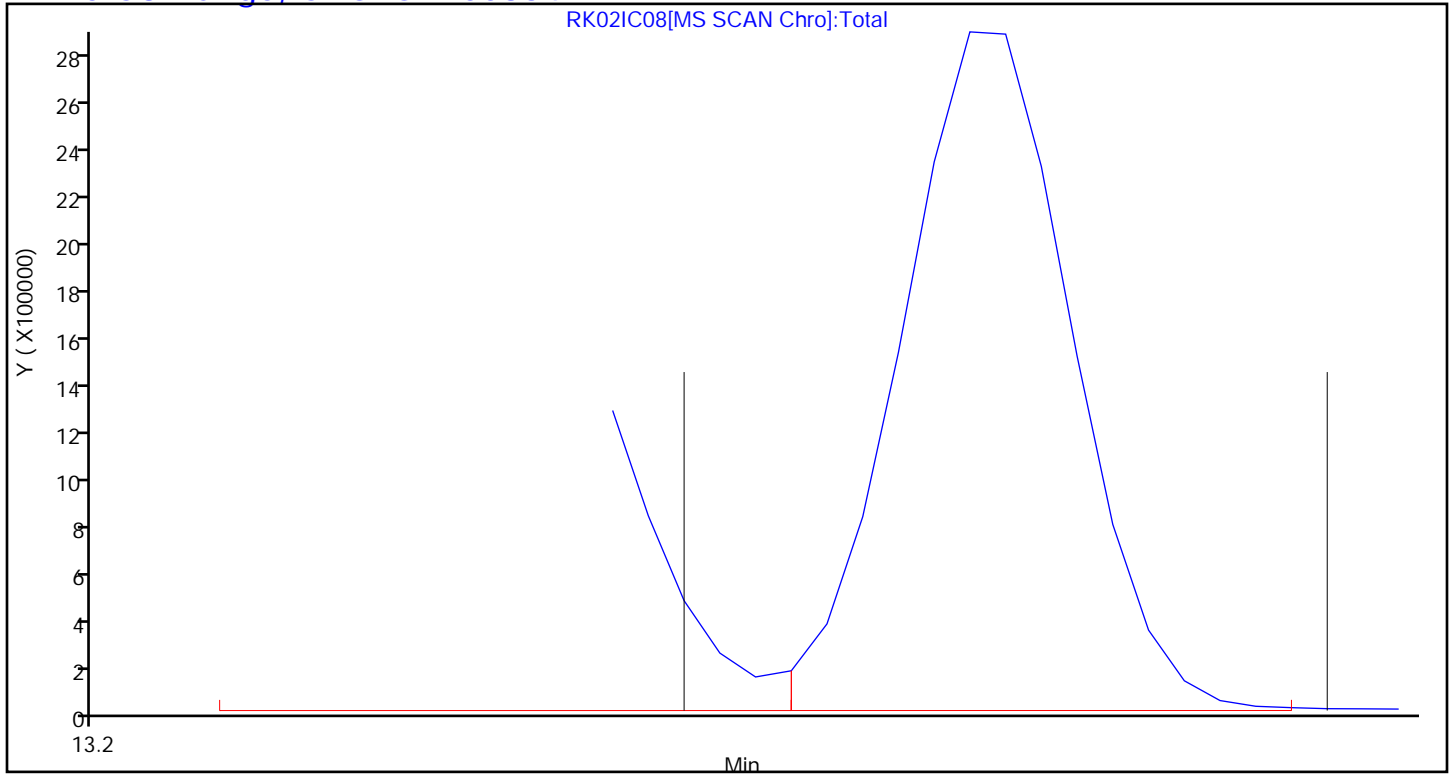
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25052/18 Calibration Date: 11/03/2018 06:57
 Instrument ID: MR Calib Start Date: 06/28/2017 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/28/2017 21:58
 Lab File ID: RK02LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6999	1.022			2.00	46.1*	35.0
3-Methylthiophene	Ave	0.6908	1.005			2.00	45.5*	35.0
2-Ethylthiophene	Ave	0.9153	1.217			2.00	33.0	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.400			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.016			2.00	11.2	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.378			2.00	11.4	35.0
Benzo (b) thiophene	Ave	0.9147	1.278			2.00	39.7*	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02LCS.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 03-Nov-2018 06:57:30 ALS Bottle#: 8 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009868-018
 Misc. Info.: S77-180293
 Operator ID: AFB Instrument ID: MR
 Sublist:
 Method: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 12:23:24 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: barlozhetskayaa

Date: 05-Nov-2018 10:55:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.412	7.407	0.005	96	238199	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.504	9.505	-0.001	96	1551901	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.564	-0.002	91	1275356	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.287	16.288	-0.001	73	972271	4.00	4.06	
6 Chlorodifluoromethane	51	3.416	3.416	0.000	96	497755	2.00	1.95	
7 Propene	41	3.421	3.418	0.003	100	238581	2.00	1.94	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	100	462561	2.00	2.44	
9 Chloromethane	52	3.583	3.587	-0.004	100	89979	2.00	1.93	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	95	387789	2.00	2.52	
11 Acetaldehyde	44	3.702	3.709	-0.007	91	478616	10.0	8.93	
12 Vinyl chloride	62	3.712	3.710	0.002	98	263223	2.00	2.05	
13 Butadiene	54	3.777	3.780	-0.003	96	190001	2.00	2.03	
14 Butane	43	3.783	3.782	0.001	90	364805	2.00	2.06	
15 Bromomethane	94	3.998	3.997	0.001	98	167896	2.00	1.91	
16 Chloroethane	64	4.101	4.101	0.000	98	99465	2.00	2.10	
17 Ethanol	31	4.219	4.225	-0.006	92	335740	10.0	7.87	
18 Vinyl bromide	106	4.316	4.317	-0.001	98	182554	2.00	2.14	
19 2-Methylbutane	43	4.376	4.372	0.004	91	236094	2.00	2.00	
20 Acrolein	56	4.511	4.520	-0.009	92	47755	2.00	1.84	
21 Trichlorofluoromethane	101	4.521	4.522	-0.001	99	622821	2.00	2.10	
22 Acetonitrile	40	4.554	4.547	0.007	98	76709	2.00	1.95	
23 Acetone	58	4.602	4.607	-0.005	99	97426	2.00	2.16	
24 Pentane	72	4.694	4.695	-0.001	97	33133	2.00	2.08	
25 Isopropyl alcohol	45	4.710	4.722	-0.012	93	343065	2.00	2.51	
26 Ethyl ether	31	4.813	4.822	-0.009	94	224428	2.00	2.13	
27 1,1-Dichloroethene	96	5.039	5.039	0.000	93	213830	2.00	2.12	
28 Acrylonitrile	53	5.098	5.100	-0.002	95	201482	2.00	2.23	
29 2-Methyl-2-propanol	59	5.158	5.176	-0.018	92	476608	2.00	2.14	
30 1,1,2-Trichloro-1,2,2-trif	101	5.206	5.206	0.000	94	505789	2.00	2.15	
31 Methylene Chloride	84	5.292	5.296	-0.004	97	217212	2.00	1.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.315	-0.001	95	200239	2.00	1.89	
33 Carbon disulfide	76	5.416	5.416	0.000	99	685854	2.00	2.05	
34 trans-1,2-Dichloroethene	96	5.956	5.959	-0.003	94	227453	2.00	2.11	
35 2-Methylpentane	43	6.020	6.019	0.001	96	565304	2.00	1.96	
36 Methyl tert-butyl ether	73	6.091	6.101	-0.010	97	688595	2.00	2.19	
37 1,1-Dichloroethane	63	6.290	6.291	-0.001	100	465668	2.00	2.12	
38 Vinyl acetate	43	6.403	6.409	-0.006	100	725608	2.00	2.22	
39 2-Butanone (MEK)	72	6.759	6.770	-0.011	98	123839	2.00	2.08	
40 Hexane	56	6.856	6.856	0.000	89	222517	2.00	2.09	
171 Isopropyl ether	45	6.986	6.997	-0.011	98	975672	2.00	2.12	
41 cis-1,2-Dichloroethene	96	7.137	7.136	0.001	98	242518	2.00	2.14	
42 Ethyl acetate	43	7.325	7.338	-0.013	99	603181	2.00	2.04	
43 Chloroform	83	7.449	7.446	0.003	96	518060	2.00	2.14	
173 Tert-butyl ethyl ether	59	7.584	7.592	-0.008	96	791483	2.00	2.03	
44 Tetrahydrofuran	42	7.784	7.801	-0.017	95	313347	2.00	2.09	
45 1,1,1-Trichloroethane	97	8.377	8.376	0.001	96	482617	2.00	2.11	
46 1,2-Dichloroethane	62	8.442	8.439	0.003	96	388043	2.00	2.15	
47 Benzene	78	8.932	8.933	-0.001	98	738935	2.00	2.12	
48 Cyclohexane	69	8.959	8.963	-0.004	91	115537	2.00	2.14	
50 Carbon tetrachloride	117	8.975	8.973	0.002	99	490112	2.00	2.21	
49 n-Butanol	31	8.965	8.991	-0.026	64	88281	2.00	2.23	
51 2,3-Dimethylpentane	71	9.137	9.136	0.001	90	171269	2.00	2.09	
52 Thiophene	84	9.186	9.186	0.000	96	414214	2.00	2.09	
53 Isooctane	57	9.811	9.810	0.001	98	1299995	2.00	2.13	
54 1,2-Dichloropropane	63	10.183	10.186	-0.003	89	289494	2.00	2.12	
55 n-Heptane	71	10.232	10.233	-0.001	91	264682	2.00	2.13	
56 Trichloroethene	130	10.264	10.261	0.003	91	279084	2.00	2.13	
57 Dibromomethane	93	10.291	10.292	-0.001	89	288295	2.00	2.14	
58 Dichlorobromomethane	83	10.480	10.480	0.000	98	513678	2.00	2.23	
59 1,4-Dioxane	88	10.496	10.513	-0.017	91	106438	2.00	2.14	
60 Methyl methacrylate	41	10.652	10.661	-0.009	93	340531	2.00	2.16	
61 Methylcyclohexane	83	11.122	11.119	0.003	93	525170	2.00	2.57	
62 4-Methyl-2-pentanone (MIBK)	43	11.548	11.561	-0.013	98	631533	2.00	2.14	
63 cis-1,3-Dichloropropene	75	11.585	11.587	-0.002	94	443903	2.00	2.24	
64 trans-1,3-Dichloropropene	75	12.340	12.342	-0.002	99	397673	2.00	2.24	
65 Toluene	91	12.480	12.480	0.000	93	829405	2.00	2.15	
66 1,1,2-Trichloroethane	83	12.534	12.536	-0.002	97	252655	2.00	2.13	
67 2-Methylthiophene	97	12.626	12.626	0.000	98	651850	NC	NC	
68 3-Methylthiophene	97	12.847	12.847	0.000	99	640856	NC	NC	
69 2-Hexanone	58	12.998	13.013	-0.015	92	303025	2.00	2.17	
70 Chlorodibromomethane	129	13.268	13.267	0.001	96	426219	2.00	2.26	
71 n-Octane	85	13.332	13.336	-0.004	94	280028	2.00	2.20	
72 Ethylene Dibromide	107	13.559	13.560	-0.001	98	448725	2.00	2.21	
73 Tetrachloroethene	129	13.705	13.704	0.001	91	259427	2.00	2.13	
74 Chlorobenzene	112	14.616	14.614	0.002	92	662296	2.00	2.12	
75 2,3-Dimethylheptane	43	14.756	14.757	-0.001	97	827121	2.00	1.90	
76 Ethylbenzene	91	14.950	14.951	-0.001	99	1087824	2.00	2.16	
77 2-Ethylthiophene	97	15.047	15.047	0.000	98	776042	NC	NC	
78 m-Xylene & p-Xylene	91	15.128	15.130	-0.002	97	1698876	4.00	4.41	
79 Bromoform	173	15.511	15.514	-0.003	92	350941	2.00	2.39	
80 Styrene	104	15.597	15.599	-0.002	99	636652	2.00	2.33	
82 o-Xylene	91	15.662	15.663	-0.001	99	855407	2.00	2.14	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.667	15.667	0.000	93	614643	2.00	2.24	
83 1,1,2,2-Tetrachloroethane	83	15.986	15.986	0.000	99	640795	2.00	2.18	
84 1,2,3-Trichloropropane	110	16.137	16.137	0.000	97	188739	2.00	2.15	
85 Isopropylbenzene	105	16.287	16.291	-0.004	96	1266410	2.00	2.20	
86 N-Propylbenzene	120	16.859	16.863	-0.004	99	333811	2.00	2.29	
87 2-Chlorotoluene	126	16.875	16.877	-0.002	92	283036	2.00	2.24	
88 4-Ethyltoluene	105	17.032	17.033	-0.001	99	1237111	2.00	2.12	
89 1,3,5-Trimethylbenzene	120	17.123	17.122	0.001	91	544370	2.00	2.53	
90 Alpha Methyl Styrene	118	17.371	17.374	-0.003	86	447426	2.00	2.21	
91 n-Decane	57	17.539	17.540	-0.001	89	835804	2.00	2.27	
92 tert-Butylbenzene	119	17.598	17.597	0.001	92	1055978	2.00	2.25	
93 1,2,4-Trimethylbenzene	105	17.609	17.612	-0.003	97	1099791	2.00	2.25	
94 1,3-Dichlorobenzene	146	17.878	17.880	-0.002	97	605095	2.00	2.13	
95 sec-Butylbenzene	105	17.905	17.907	-0.002	99	1629324	2.00	2.26	
96 Benzyl chloride	91	17.965	17.967	-0.002	97	871251	2.00	2.26	
97 1,4-Dichlorobenzene	146	17.981	17.983	-0.002	93	610909	2.00	2.12	
98 4-Isopropyltoluene	119	18.099	18.101	-0.002	96	1278771	2.00	2.18	
99 1,2,3-Trimethylbenzene	105	18.132	18.133	-0.001	99	858969	2.00	1.70	
100 Butylcyclohexane	83	18.240	18.238	0.002	93	853108	2.00	2.09	
101 1,2-Dichlorobenzene	146	18.374	18.376	-0.002	92	587620	2.00	2.10	
102 2,3-Dihydroindene	117	18.391	18.391	0.000	94	916004	2.00	2.18	
103 Indene	116	18.525	18.527	-0.002	91	680020	2.00	1.87	
104 n-Butylbenzene	91	18.585	18.586	-0.001	98	1334463	2.00	2.20	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.994	18.994	0.000	97	892985	NC	NC	
105 Undecane	57	19.005	19.007	-0.002	97	963232	2.00	2.25	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.033	-0.001	92	242383	2.00	1.91	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.412	-0.002	97	1068444	2.00	2.08	
109 1,2,3,5-Tetramethylbenzene	119	19.469	19.469	0.000	95	648051	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.879	19.879	0.000	97	878426	NC	NC	
110 Dodecane	57	20.132	20.133	-0.001	96	969045	2.00	2.17	
111 1,2,4-Trichlorobenzene	180	20.213	20.213	0.000	93	515275	2.00	2.11	
113 Naphthalene	128	20.332	20.335	-0.003	98	1375800	2.00	2.08	
114 Benzo(b)thiophene	134	20.429	20.429	0.000	99	815025	NC	NC	
115 Hexachlorobutadiene	225	20.596	20.597	-0.001	89	391320	2.00	2.14	
116 1,2,3-Trichlorobenzene	180	20.623	20.623	0.000	92	489438	2.00	2.07	
117 2-Methylnaphthalene	142	21.464	21.464	0.000	100	453798	2.00	1.21	
118 1-Methylnaphthalene	142	21.631	21.632	-0.001	99	443522	2.00	1.31	
A 120 C8 Range	1	13.345	(13.289-13.386)		0	2715328	2.00	2.15	
S 121 Xylenes, Total	100				0		6.00	6.55	
S 122 1,2-Dichloroethene, Total	1				0		4.00	4.25	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00077

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02LCS.D

Injection Date: 03-Nov-2018 06:57:30

Instrument ID: MR

Operator ID: AFB

Lims ID: ICV

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

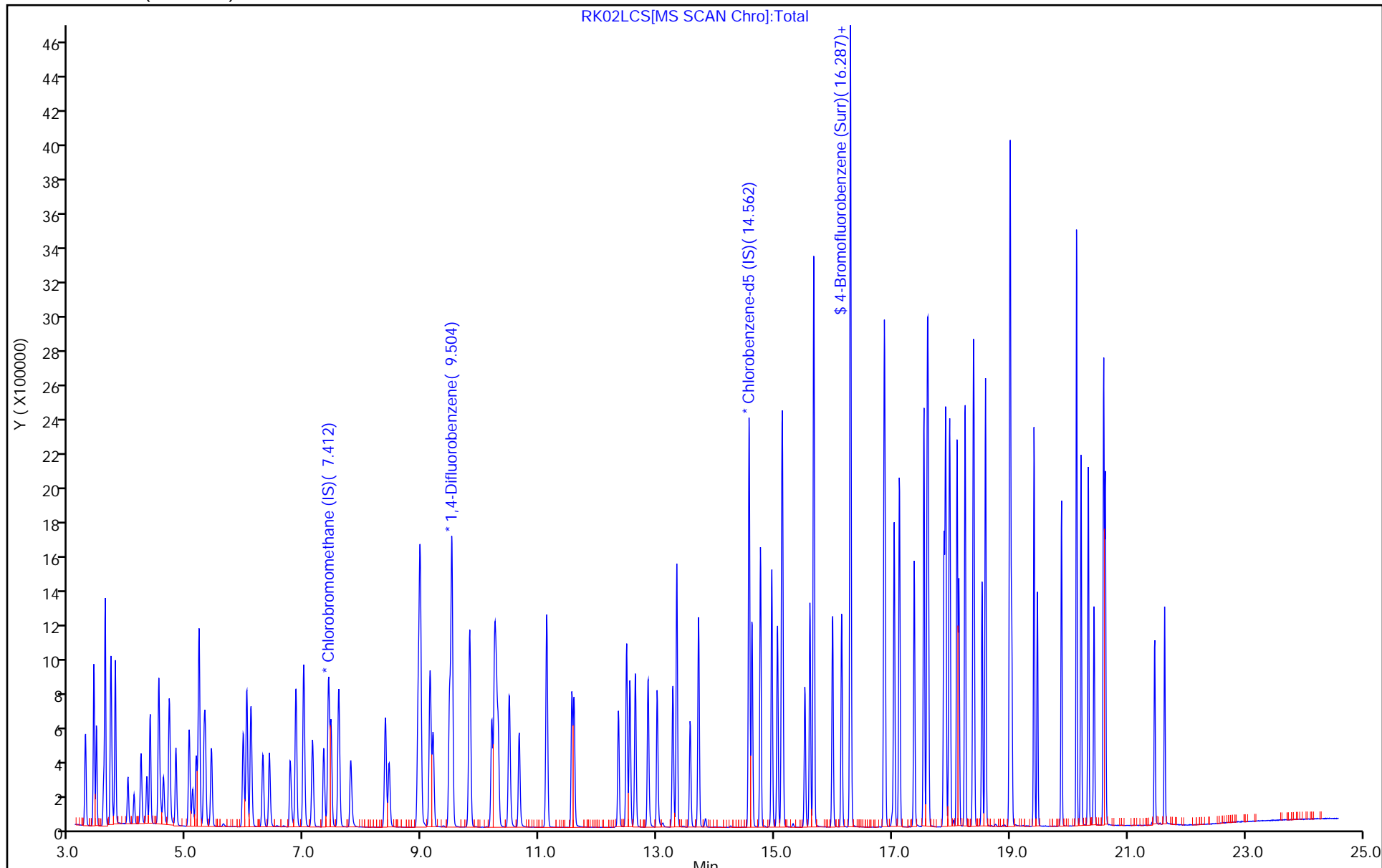
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25052/18 Calibration Date: 11/03/2018 06:57
 Instrument ID: MR Calib Start Date: 11/02/2018 18:28
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/03/2018 04:25
 Lab File ID: RK02LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	4.281	4.179		1.95	2.00	-2.4	35.0
Propene	Ave	2.070	2.003		1.94	2.00	-3.2	35.0
Dichlorodifluoromethane	Ave	3.189	3.884		2.44	2.00	21.8	35.0
Chloromethane	Ave	0.7844	0.7555		1.93	2.00	-3.7	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.584	3.256		2.52	2.00	26.0	35.0
Acetaldehyde	Ave	0.9002	0.8037		8.93	10.0	-10.7	35.0
Vinyl chloride	Ave	2.155	2.210		2.05	2.00	2.5	35.0
1,3-Butadiene	Ave	1.568	1.595		2.03	2.00	1.7	35.0
Butane	Ave	2.977	3.063		2.06	2.00	2.9	35.0
Bromomethane	Ave	1.473	1.410		1.91	2.00	-4.3	35.0
Chloroethane	Ave	0.7966	0.8351		2.10	2.00	4.8	35.0
Ethanol	Ave	0.7165	0.5638		7.87	10.0	-21.3	35.0
Vinyl bromide	Ave	1.432	1.533		2.14	2.00	7.0	35.0
2-Methylbutane	Ave	1.979	1.982		2.00	2.00	0.2	35.0
Acrolein	Ave	0.4360	0.4010		1.84	2.00	-8.0	35.0
Trichlorofluoromethane	Ave	4.970	5.229		2.10	2.00	5.2	35.0
Acetonitrile	Ave	0.6616	0.6441		1.95	2.00	-2.7	35.0
Acetone	Ave	0.7568	0.8180		2.16	2.00	8.1	35.0
Pentane	Ave	0.2681	0.2782		2.08	2.00	3.8	35.0
Isopropyl alcohol	Ave	2.293	2.880		2.51	2.00	25.6	35.0
Ethyl ether	Ave	1.768	1.884		2.13	2.00	6.6	35.0
1,1-Dichloroethene	Ave	1.697	1.795		2.12	2.00	5.8	35.0
Acrylonitrile	Ave	1.520	1.692		2.23	2.00	11.3	35.0
tert-Butyl alcohol	Ave	3.740	4.002		2.14	2.00	7.0	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.943	4.247		2.15	2.00	7.7	35.0
Methylene Chloride	Ave	1.952	1.824		1.87	2.00	-6.6	35.0
3-Chloropropene	Ave	1.776	1.681		1.89	2.00	-5.3	35.0
Carbon disulfide	Ave	5.605	5.759		2.05	2.00	2.7	35.0
trans-1,2-Dichloroethene	Ave	1.810	1.910		2.11	2.00	5.5	35.0
2-Methylpentane	Ave	4.839	4.746		1.96	2.00	-1.9	35.0
Methyl tert-butyl ether	Ave	5.289	5.782		2.19	2.00	9.3	35.0
1,1-Dichloroethane	Ave	3.695	3.910		2.12	2.00	5.8	35.0
Vinyl acetate	Ave	5.497	6.092		2.22	2.00	10.8	35.0
2-Butanone (MEK)	Ave	1.000	1.040		2.08	2.00	4.0	35.0
Hexane	Ave	1.790	1.868		2.09	2.00	4.4	35.0
Isopropyl ether	Ave	7.724	8.192		2.12	2.00	6.1	35.0
cis-1,2-Dichloroethene	Ave	1.900	2.036		2.14	2.00	7.2	35.0
Ethyl acetate	Ave	4.960	5.065		2.04	2.00	2.1	35.0
Chloroform	Ave	4.066	4.350		2.14	2.00	7.0	35.0
Tert-butyl ethyl ether	Ave	6.557	6.646		2.03	2.00	1.3	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25052/18 Calibration Date: 11/03/2018 06:57
 Instrument ID: MR Calib Start Date: 11/02/2018 18:28
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/03/2018 04:25
 Lab File ID: RK02LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	2.521	2.631		2.09	2.00	4.4	35.0
1,1,1-Trichloroethane	Ave	3.836	4.052		2.11	2.00	5.6	35.0
1,2-Dichloroethane	Ave	0.4657	0.5001		2.15	2.00	7.4	35.0
Benzene	Ave	0.8985	0.9523		2.12	2.00	6.0	35.0
Cyclohexane	Ave	0.1389	0.1489		2.14	2.00	7.2	35.0
1-Butanol	Ave	0.1020	0.1138		2.23	2.00	11.5	35.0
Carbon tetrachloride	Ave	0.5707	0.6316		2.21	2.00	10.7	35.0
2,3-Dimethylpentane	Ave	0.2112	0.2207		2.09	2.00	4.5	35.0
Thiophene	Ave	0.5100	0.5338		2.09	2.00	4.7	35.0
2,2,4-Trimethylpentane	Ave	1.570	1.675		2.13	2.00	6.7	35.0
1,2-Dichloropropane	Ave	0.3528	0.3731		2.12	2.00	5.8	35.0
Heptane	Ave	0.3203	0.3411		2.13	2.00	6.5	35.0
Trichloroethene	Ave	0.3373	0.3597		2.13	2.00	6.6	35.0
Dibromomethane	Ave	0.3480	0.3715		2.14	2.00	6.8	35.0
Bromodichloromethane	Ave	0.5935	0.6620		2.23	2.00	11.6	35.0
1,4-Dioxane	Ave	0.1283	0.1372		2.14	2.00	6.9	35.0
Methyl methacrylate	Ave	0.4061	0.4389		2.16	2.00	8.1	35.0
Methylcyclohexane	Ave	0.5274	0.6768		2.57	2.00	28.3	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7594	0.8139		2.14	2.00	7.2	35.0
cis-1,3-Dichloropropene	Ave	0.5100	0.5721		2.24	2.00	12.2	35.0
trans-1,3-Dichloropropene	Ave	0.5574	0.6236		2.24	2.00	11.9	35.0
Toluene	Ave	1.208	1.301		2.15	2.00	7.6	35.0
1,1,2-Trichloroethane	Ave	0.3718	0.3962		2.13	2.00	6.6	35.0
2-Hexanone	Ave	0.4382	0.4752		2.17	2.00	8.4	35.0
Dibromochloromethane	Ave	0.5927	0.6684		2.26	2.00	12.8	35.0
Octane	Ave	0.3990	0.4391		2.20	2.00	10.1	35.0
1,2-Dibromoethane (EDB)	Ave	0.6359	0.7037		2.21	2.00	10.7	35.0
Tetrachloroethene	Ave	0.3814	0.4068		2.13	2.00	6.7	35.0
Chlorobenzene	Ave	0.9807	1.039		2.12	2.00	5.9	35.0
2,3-Dimethylheptane	Ave	1.368	1.297		1.90	2.00	-5.2	35.0
Ethylbenzene	Ave	1.579	1.706		2.16	2.00	8.0	35.0
m-Xylene & p-Xylene	Ave	1.209	1.332		4.41	4.00	10.2	35.0
Bromoform	Ave	0.4605	0.5503		2.39	2.00	19.5	35.0
Styrene	Ave	0.8566	0.998		2.33	2.00	16.5	35.0
o-Xylene	Ave	1.251	1.341		2.14	2.00	7.2	35.0
Nonane	Ave	0.8603	0.9639		2.24	2.00	12.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.9211	1.005		2.18	2.00	9.1	35.0
1,2,3-Trichloropropane	Ave	0.2757	0.2960		2.15	2.00	7.4	35.0
Isopropylbenzene	Ave	1.809	1.986		2.20	2.00	9.8	35.0
Propylbenzene	Ave	0.4570	0.5235		2.29	2.00	14.6	35.0
2-Chlorotoluene	Ave	0.3965	0.4439		2.24	2.00	11.9	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25052/18 Calibration Date: 11/03/2018 06:57
 Instrument ID: MR Calib Start Date: 11/02/2018 18:28
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/03/2018 04:25
 Lab File ID: RK02LCS.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.827	1.940		2.12	2.00	6.2	35.0
1,3,5-Trimethylbenzene	Ave	0.6741	0.8537		2.53	2.00	26.6	35.0
Alpha Methyl Styrene	Ave	0.6349	0.7017		2.21	2.00	10.5	35.0
Decane	Ave	1.154	1.311		2.27	2.00	13.6	35.0
tert-Butylbenzene	Ave	1.471	1.656		2.25	2.00	12.6	35.0
1,2,4-Trimethylbenzene	Ave	1.530	1.725		2.25	2.00	12.7	35.0
1,3-Dichlorobenzene	Ave	0.8892	0.9489		2.13	2.00	6.7	35.0
sec-Butylbenzene	Ave	2.264	2.555		2.26	2.00	12.9	35.0
Benzyl chloride	Ave	1.212	1.366		2.26	2.00	12.8	35.0
1,4-Dichlorobenzene	Ave	0.9038	0.9580		2.12	2.00	6.0	35.0
4-Isopropyltoluene	Ave	1.837	2.005		2.18	2.00	9.2	35.0
1,2,3-Trimethylbenzene	Ave	1.587	1.347		1.70	2.00	-15.1	35.0
Butylcyclohexane	Ave	1.278	1.338		2.09	2.00	4.7	35.0
1,2-Dichlorobenzene	Ave	0.8769	0.9215		2.10	2.00	5.1	35.0
Indane	Ave	1.320	1.436		2.18	2.00	8.9	35.0
Indene	Ave	1.141	1.066		1.87	2.00	-6.5	35.0
Butylbenzene	Ave	1.900	2.093		2.20	2.00	10.1	35.0
Undecane	Ave	1.344	1.511		2.25	2.00	12.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.3981	0.3801		1.91	2.00	-4.5	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.614	1.676		2.08	2.00	3.8	35.0
Dodecane	Ave	1.402	1.520		2.17	2.00	8.4	35.0
1,2,4-Trichlorobenzene	Ave	0.7658	0.8081		2.11	2.00	5.5	35.0
Naphthalene	Ave	2.072	2.158		2.08	2.00	4.1	35.0
Hexachlorobutadiene	Ave	0.5725	0.6137		2.14	2.00	7.2	35.0
1,2,3-Trichlorobenzene	Ave	0.7420	0.7675		2.07	2.00	3.4	35.0
2-Methylnaphthalene	Ave	1.181	0.7116		1.21	2.00	-39.7	50.0
1-Methylnaphthalene	Ave	1.065	0.6955		1.31	2.00	-34.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7510	0.7624		4.06	4.00	1.5	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02LCS.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 03-Nov-2018 06:57:30 ALS Bottle#: 8 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009868-018
 Misc. Info.: S77-180293
 Operator ID: AFB Instrument ID: MR
 Sublist:
 Method: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 12:23:24 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: barlozhetskayaa

Date: 05-Nov-2018 10:55:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.412	7.407	0.005	96	238199	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.504	9.505	-0.001	96	1551901	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.564	-0.002	91	1275356	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.287	16.288	-0.001	73	972271	4.00	4.06	
6 Chlorodifluoromethane	51	3.416	3.416	0.000	96	497755	2.00	1.95	
7 Propene	41	3.421	3.418	0.003	100	238581	2.00	1.94	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	100	462561	2.00	2.44	
9 Chloromethane	52	3.583	3.587	-0.004	100	89979	2.00	1.93	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	95	387789	2.00	2.52	
11 Acetaldehyde	44	3.702	3.709	-0.007	91	478616	10.0	8.93	
12 Vinyl chloride	62	3.712	3.710	0.002	98	263223	2.00	2.05	
13 Butadiene	54	3.777	3.780	-0.003	96	190001	2.00	2.03	
14 Butane	43	3.783	3.782	0.001	90	364805	2.00	2.06	
15 Bromomethane	94	3.998	3.997	0.001	98	167896	2.00	1.91	
16 Chloroethane	64	4.101	4.101	0.000	98	99465	2.00	2.10	
17 Ethanol	31	4.219	4.225	-0.006	92	335740	10.0	7.87	
18 Vinyl bromide	106	4.316	4.317	-0.001	98	182554	2.00	2.14	
19 2-Methylbutane	43	4.376	4.372	0.004	91	236094	2.00	2.00	
20 Acrolein	56	4.511	4.520	-0.009	92	47755	2.00	1.84	
21 Trichlorofluoromethane	101	4.521	4.522	-0.001	99	622821	2.00	2.10	
22 Acetonitrile	40	4.554	4.547	0.007	98	76709	2.00	1.95	
23 Acetone	58	4.602	4.607	-0.005	99	97426	2.00	2.16	
24 Pentane	72	4.694	4.695	-0.001	97	33133	2.00	2.08	
25 Isopropyl alcohol	45	4.710	4.722	-0.012	93	343065	2.00	2.51	
26 Ethyl ether	31	4.813	4.822	-0.009	94	224428	2.00	2.13	
27 1,1-Dichloroethene	96	5.039	5.039	0.000	93	213830	2.00	2.12	
28 Acrylonitrile	53	5.098	5.100	-0.002	95	201482	2.00	2.23	
29 2-Methyl-2-propanol	59	5.158	5.176	-0.018	92	476608	2.00	2.14	
30 1,1,2-Trichloro-1,2,2-trif	101	5.206	5.206	0.000	94	505789	2.00	2.15	
31 Methylene Chloride	84	5.292	5.296	-0.004	97	217212	2.00	1.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.315	-0.001	95	200239	2.00	1.89	
33 Carbon disulfide	76	5.416	5.416	0.000	99	685854	2.00	2.05	
34 trans-1,2-Dichloroethene	96	5.956	5.959	-0.003	94	227453	2.00	2.11	
35 2-Methylpentane	43	6.020	6.019	0.001	96	565304	2.00	1.96	
36 Methyl tert-butyl ether	73	6.091	6.101	-0.010	97	688595	2.00	2.19	
37 1,1-Dichloroethane	63	6.290	6.291	-0.001	100	465668	2.00	2.12	
38 Vinyl acetate	43	6.403	6.409	-0.006	100	725608	2.00	2.22	
39 2-Butanone (MEK)	72	6.759	6.770	-0.011	98	123839	2.00	2.08	
40 Hexane	56	6.856	6.856	0.000	89	222517	2.00	2.09	
171 Isopropyl ether	45	6.986	6.997	-0.011	98	975672	2.00	2.12	
41 cis-1,2-Dichloroethene	96	7.137	7.136	0.001	98	242518	2.00	2.14	
42 Ethyl acetate	43	7.325	7.338	-0.013	99	603181	2.00	2.04	
43 Chloroform	83	7.449	7.446	0.003	96	518060	2.00	2.14	
173 Tert-butyl ethyl ether	59	7.584	7.592	-0.008	96	791483	2.00	2.03	
44 Tetrahydrofuran	42	7.784	7.801	-0.017	95	313347	2.00	2.09	
45 1,1,1-Trichloroethane	97	8.377	8.376	0.001	96	482617	2.00	2.11	
46 1,2-Dichloroethane	62	8.442	8.439	0.003	96	388043	2.00	2.15	
47 Benzene	78	8.932	8.933	-0.001	98	738935	2.00	2.12	
48 Cyclohexane	69	8.959	8.963	-0.004	91	115537	2.00	2.14	
50 Carbon tetrachloride	117	8.975	8.973	0.002	99	490112	2.00	2.21	
49 n-Butanol	31	8.965	8.991	-0.026	64	88281	2.00	2.23	
51 2,3-Dimethylpentane	71	9.137	9.136	0.001	90	171269	2.00	2.09	
52 Thiophene	84	9.186	9.186	0.000	96	414214	2.00	2.09	
53 Isooctane	57	9.811	9.810	0.001	98	1299995	2.00	2.13	
54 1,2-Dichloropropane	63	10.183	10.186	-0.003	89	289494	2.00	2.12	
55 n-Heptane	71	10.232	10.233	-0.001	91	264682	2.00	2.13	
56 Trichloroethene	130	10.264	10.261	0.003	91	279084	2.00	2.13	
57 Dibromomethane	93	10.291	10.292	-0.001	89	288295	2.00	2.14	
58 Dichlorobromomethane	83	10.480	10.480	0.000	98	513678	2.00	2.23	
59 1,4-Dioxane	88	10.496	10.513	-0.017	91	106438	2.00	2.14	
60 Methyl methacrylate	41	10.652	10.661	-0.009	93	340531	2.00	2.16	
61 Methylcyclohexane	83	11.122	11.119	0.003	93	525170	2.00	2.57	
62 4-Methyl-2-pentanone (MIBK)	43	11.548	11.561	-0.013	98	631533	2.00	2.14	
63 cis-1,3-Dichloropropene	75	11.585	11.587	-0.002	94	443903	2.00	2.24	
64 trans-1,3-Dichloropropene	75	12.340	12.342	-0.002	99	397673	2.00	2.24	
65 Toluene	91	12.480	12.480	0.000	93	829405	2.00	2.15	
66 1,1,2-Trichloroethane	83	12.534	12.536	-0.002	97	252655	2.00	2.13	
67 2-Methylthiophene	97	12.626	12.626	0.000	98	651850	NC	NC	
68 3-Methylthiophene	97	12.847	12.847	0.000	99	640856	NC	NC	
69 2-Hexanone	58	12.998	13.013	-0.015	92	303025	2.00	2.17	
70 Chlorodibromomethane	129	13.268	13.267	0.001	96	426219	2.00	2.26	
71 n-Octane	85	13.332	13.336	-0.004	94	280028	2.00	2.20	
72 Ethylene Dibromide	107	13.559	13.560	-0.001	98	448725	2.00	2.21	
73 Tetrachloroethene	129	13.705	13.704	0.001	91	259427	2.00	2.13	
74 Chlorobenzene	112	14.616	14.614	0.002	92	662296	2.00	2.12	
75 2,3-Dimethylheptane	43	14.756	14.757	-0.001	97	827121	2.00	1.90	
76 Ethylbenzene	91	14.950	14.951	-0.001	99	1087824	2.00	2.16	
77 2-Ethylthiophene	97	15.047	15.047	0.000	98	776042	NC	NC	
78 m-Xylene & p-Xylene	91	15.128	15.130	-0.002	97	1698876	4.00	4.41	
79 Bromoform	173	15.511	15.514	-0.003	92	350941	2.00	2.39	
80 Styrene	104	15.597	15.599	-0.002	99	636652	2.00	2.33	
82 o-Xylene	91	15.662	15.663	-0.001	99	855407	2.00	2.14	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.667	15.667	0.000	93	614643	2.00	2.24	
83 1,1,2,2-Tetrachloroethane	83	15.986	15.986	0.000	99	640795	2.00	2.18	
84 1,2,3-Trichloropropane	110	16.137	16.137	0.000	97	188739	2.00	2.15	
85 Isopropylbenzene	105	16.287	16.291	-0.004	96	1266410	2.00	2.20	
86 N-Propylbenzene	120	16.859	16.863	-0.004	99	333811	2.00	2.29	
87 2-Chlorotoluene	126	16.875	16.877	-0.002	92	283036	2.00	2.24	
88 4-Ethyltoluene	105	17.032	17.033	-0.001	99	1237111	2.00	2.12	
89 1,3,5-Trimethylbenzene	120	17.123	17.122	0.001	91	544370	2.00	2.53	
90 Alpha Methyl Styrene	118	17.371	17.374	-0.003	86	447426	2.00	2.21	
91 n-Decane	57	17.539	17.540	-0.001	89	835804	2.00	2.27	
92 tert-Butylbenzene	119	17.598	17.597	0.001	92	1055978	2.00	2.25	
93 1,2,4-Trimethylbenzene	105	17.609	17.612	-0.003	97	1099791	2.00	2.25	
94 1,3-Dichlorobenzene	146	17.878	17.880	-0.002	97	605095	2.00	2.13	
95 sec-Butylbenzene	105	17.905	17.907	-0.002	99	1629324	2.00	2.26	
96 Benzyl chloride	91	17.965	17.967	-0.002	97	871251	2.00	2.26	
97 1,4-Dichlorobenzene	146	17.981	17.983	-0.002	93	610909	2.00	2.12	
98 4-Isopropyltoluene	119	18.099	18.101	-0.002	96	1278771	2.00	2.18	
99 1,2,3-Trimethylbenzene	105	18.132	18.133	-0.001	99	858969	2.00	1.70	
100 Butylcyclohexane	83	18.240	18.238	0.002	93	853108	2.00	2.09	
101 1,2-Dichlorobenzene	146	18.374	18.376	-0.002	92	587620	2.00	2.10	
102 2,3-Dihydroindene	117	18.391	18.391	0.000	94	916004	2.00	2.18	
103 Indene	116	18.525	18.527	-0.002	91	680020	2.00	1.87	
104 n-Butylbenzene	91	18.585	18.586	-0.001	98	1334463	2.00	2.20	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.994	18.994	0.000	97	892985	NC	NC	
105 Undecane	57	19.005	19.007	-0.002	97	963232	2.00	2.25	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.033	-0.001	92	242383	2.00	1.91	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.412	-0.002	97	1068444	2.00	2.08	
109 1,2,3,5-Tetramethylbenzene	119	19.469	19.469	0.000	95	648051	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.879	19.879	0.000	97	878426	NC	NC	
110 Dodecane	57	20.132	20.133	-0.001	96	969045	2.00	2.17	
111 1,2,4-Trichlorobenzene	180	20.213	20.213	0.000	93	515275	2.00	2.11	
113 Naphthalene	128	20.332	20.335	-0.003	98	1375800	2.00	2.08	
114 Benzo(b)thiophene	134	20.429	20.429	0.000	99	815025	NC	NC	
115 Hexachlorobutadiene	225	20.596	20.597	-0.001	89	391320	2.00	2.14	
116 1,2,3-Trichlorobenzene	180	20.623	20.623	0.000	92	489438	2.00	2.07	
117 2-Methylnaphthalene	142	21.464	21.464	0.000	100	453798	2.00	1.21	
118 1-Methylnaphthalene	142	21.631	21.632	-0.001	99	443522	2.00	1.31	
A 120 C8 Range	1	13.345	(13.289-13.386)		0	2715328	2.00	2.15	
S 121 Xylenes, Total	100				0		6.00	6.55	
S 122 1,2-Dichloroethene, Total	1				0		4.00	4.25	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00077

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02LCS.D

Injection Date: 03-Nov-2018 06:57:30

Instrument ID: MR

Operator ID: AFB

Lims ID: ICV

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

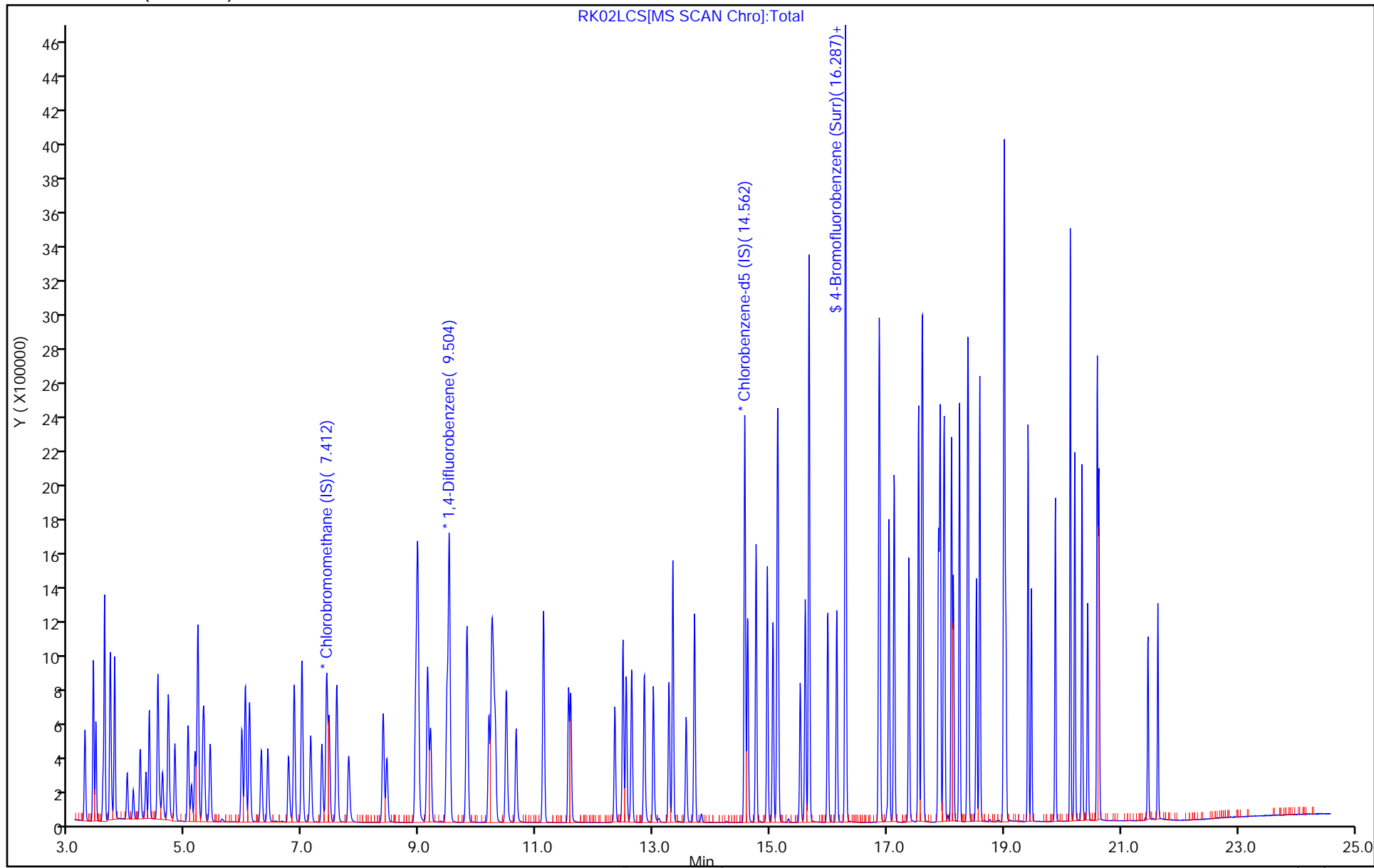
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-25249/8 Calibration Date: 11/13/2018 12:47
 Instrument ID: MR Calib Start Date: 06/28/2017 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/28/2017 21:58
 Lab File ID: RCCVK13C.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6999	0.3800			2.00	-45.7*	30.0
3-Methylthiophene	Ave	0.6908	0.8890			2.00	28.7	30.0
2-Ethylthiophene	Ave	0.9153	1.114			2.00	21.7	30.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.318			2.00		30.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	0.9726			2.00	6.4	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.319			2.00	6.7	30.0
Benzo (b) thiophene	Ave	0.9147	1.281			2.00	40.0*	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RCCVK13C.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 13-Nov-2018 12:47:30 ALS Bottle#: 15 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-002
 Misc. Info.: S79
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub19
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 10:53:35 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits

Date: 14-Nov-2018 10:53:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.395	7.395	0.000	96	189474	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.493	0.000	95	1221114	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.557	14.557	0.000	91	1025453	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.282	0.000	74	772257	4.00	4.01	
6 Chlorodifluoromethane	51	3.405	3.405	0.000	96	358921	2.00	1.77	
7 Propene	41	3.405	3.405	0.000	97	165944	2.00	1.69	
8 Dichlorodifluoromethane	85	3.448	3.448	0.000	100	382813	2.00	2.53	
9 Chloromethane	52	3.572	3.572	0.000	100	62026	2.00	1.67	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.599	3.599	0.000	94	293025	2.00	2.39	
11 Acetaldehyde	44	3.691	3.691	0.000	94	324819	10.0	7.62	
12 Vinyl chloride	62	3.696	3.696	0.000	98	177726	2.00	1.74	
13 Butadiene	54	3.766	3.766	0.000	93	118396	2.00	1.59	
14 Butane	43	3.772	3.772	0.000	91	232760	2.00	1.65	
15 Bromomethane	94	3.982	3.982	0.000	95	89489	2.00	1.28	
16 Chloroethane	64	4.090	4.090	0.000	85	40682	2.00	1.08	
17 Ethanol	31	4.203	4.203	0.000	96	133757	10.0	3.94	
18 Vinyl bromide	106	4.306	4.306	0.000	95	82308	2.00	1.21	
19 2-Methylbutane	43	4.360	4.360	0.000	84	91386	2.00	0.9748	
20 Acrolein	56	4.500	4.500	0.000	95	29978	2.00	1.45	
21 Trichlorofluoromethane	101	4.505	4.505	0.000	99	436809	2.00	1.86	
22 Acetonitrile	40	4.538	4.538	0.000	98	26580	2.00	0.8481	
23 Acetone	58	4.586	4.586	0.000	98	34943	2.00	0.9747	
24 Pentane	72	4.683	4.683	0.000	95	14400	2.00	1.13	
25 Isopropyl alcohol	45	4.699	4.699	0.000	94	152225	2.00	1.40	
26 Ethyl ether	31	4.796	4.796	0.000	93	154709	2.00	1.85	
27 1,1-Dichloroethene	96	5.023	5.023	0.000	95	147280	2.00	1.83	
28 Acrylonitrile	53	5.082	5.082	0.000	96	137103	2.00	1.90	
29 2-Methyl-2-propanol	59	5.147	5.147	0.000	93	295761	2.00	1.67	
30 1,1,2-Trichloro-1,2,2-trif	101	5.190	5.190	0.000	94	357983	2.00	1.92	
31 Methylene Chloride	84	5.276	5.276	0.000	98	149665	2.00	1.62	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.298	5.298	0.000	97	139151	2.00	1.65	
33 Carbon disulfide	76	5.400	5.400	0.000	99	455596	2.00	1.72	
34 trans-1,2-Dichloroethene	96	5.945	5.945	0.000	96	153703	2.00	1.79	
35 2-Methylpentane	43	6.004	6.004	0.000	95	373312	2.00	1.63	
36 Methyl tert-butyl ether	73	6.074	6.074	0.000	97	443492	2.00	1.77	
37 1,1-Dichloroethane	63	6.274	6.274	0.000	100	302769	2.00	1.73	
38 Vinyl acetate	43	6.387	6.387	0.000	100	477275	2.00	1.83	
39 2-Butanone (MEK)	72	6.748	6.748	0.000	98	79978	2.00	1.69	
40 Hexane	56	6.840	6.840	0.000	89	145398	2.00	1.71	
171 Isopropyl ether	45	6.975	6.975	0.000	98	652765	2.00	1.78	
41 cis-1,2-Dichloroethene	96	7.120	7.120	0.000	97	165270	2.00	1.84	
42 Ethyl acetate	43	7.315	7.315	0.000	99	400587	2.00	1.71	
43 Chloroform	83	7.433	7.433	0.000	96	345501	2.00	1.79	
173 Tert-butyl ethyl ether	59	7.568	7.568	0.000	96	505768	2.00	1.63	
44 Tetrahydrofuran	42	7.773	7.773	0.000	95	210707	2.00	1.76	
45 1,1,1-Trichloroethane	97	8.361	8.361	0.000	96	326982	2.00	1.80	
46 1,2-Dichloroethane	62	8.425	8.425	0.000	96	256552	2.00	1.80	
47 Benzene	78	8.922	8.922	0.000	98	505099	2.00	1.84	
48 Cyclohexane	69	8.948	8.948	0.000	97	77017	2.00	1.82	
49 n-Butanol	31	8.959	8.959	0.000	65	56547	2.00	1.82	
50 Carbon tetrachloride	117	8.959	8.959	0.000	96	353002	2.00	2.03	
51 2,3-Dimethylpentane	71	9.126	9.126	0.000	90	115286	2.00	1.79	
52 Thiophene	84	9.175	9.175	0.000	95	281388	2.00	1.81	
53 Isooctane	57	9.800	9.800	0.000	98	878002	2.00	1.83	
54 1,2-Dichloropropane	63	10.173	10.173	0.000	89	194527	2.00	1.81	
55 n-Heptane	71	10.226	10.226	0.000	91	178298	2.00	1.82	
56 Trichloroethene	130	10.248	10.248	0.000	91	202244	2.00	1.96	
57 Dibromomethane	93	10.280	10.280	0.000	91	202062	2.00	1.90	
58 Dichlorobromomethane	83	10.469	10.469	0.000	98	355014	2.00	1.96	
59 1,4-Dioxane	88	10.491	10.491	0.000	92	68763	2.00	1.76	
60 Methyl methacrylate	41	10.642	10.642	0.000	92	232246	2.00	1.87	
61 Methylcyclohexane	83	11.111	11.111	0.000	93	362799	2.00	2.25	
62 4-Methyl-2-pentanone (MIBK)	43	11.542	11.542	0.000	98	443249	2.00	1.91	
63 cis-1,3-Dichloropropene	75	11.575	11.575	0.000	96	297807	2.00	1.91	
64 trans-1,3-Dichloropropene	75	12.335	12.335	0.000	99	261451	2.00	1.83	
65 Toluene	91	12.475	12.475	0.000	93	581398	2.00	1.88	
67 2-Methylthiophene	97	12.529	12.529	0.000	76	194831	NC	NC	
66 1,1,2-Trichloroethane	83	12.529	12.529	0.000	97	178697	2.00	1.87	
68 3-Methylthiophene	97	12.836	12.836	0.000	99	455815	NC	NC	
69 2-Hexanone	58	12.993	12.993	0.000	91	205572	2.00	1.83	
70 Chlorodibromomethane	129	13.262	13.262	0.000	96	319716	2.00	2.10	
71 n-Octane	85	13.327	13.327	0.000	95	193458	2.00	1.89	
72 Ethylene Dibromide	107	13.554	13.554	0.000	97	328212	2.00	2.01	
73 Tetrachloroethene	129	13.694	13.694	0.000	91	191408	2.00	1.96	
74 Chlorobenzene	112	14.610	14.610	0.000	93	485708	2.00	1.93	
75 2,3-Dimethylheptane	43	14.751	14.751	0.000	96	597088	2.00	1.70	
76 Ethylbenzene	91	14.945	14.945	0.000	98	780563	2.00	1.93	
77 2-Ethylthiophene	97	15.042	15.042	0.000	98	571357	NC	NC	
78 m-Xylene & p-Xylene	91	15.123	15.123	0.000	97	1242430	4.00	4.01	
79 Bromoform	173	15.511	15.511	0.000	93	275163	2.00	2.33	
80 Styrene	104	15.592	15.592	0.000	98	479597	2.00	2.18	
82 o-Xylene	91	15.657	15.657	0.000	99	628859	2.00	1.96	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.662	15.662	0.000	94	434401	2.00	1.97	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.980	0.000	99	468107	2.00	1.98	
84 1,2,3-Trichloropropane	110	16.136	16.136	0.000	96	140735	2.00	1.99	
85 Isopropylbenzene	105	16.287	16.287	0.000	95	942405	2.00	2.03	
86 N-Propylbenzene	120	16.859	16.859	0.000	99	247278	2.00	2.11	
87 2-Chlorotoluene	126	16.870	16.870	0.000	93	211486	2.00	2.08	
88 4-Ethyltoluene	105	17.026	17.026	0.000	99	900214	2.00	1.92	
89 1,3,5-Trimethylbenzene	120	17.118	17.118	0.000	91	406531	2.00	2.35	
90 Alpha Methyl Styrene	118	17.371	17.371	0.000	86	353486	2.00	2.17	
91 n-Decane	57	17.533	17.533	0.000	89	576505	2.00	1.95	
92 tert-Butylbenzene	119	17.592	17.592	0.000	92	789111	2.00	2.09	
93 1,2,4-Trimethylbenzene	105	17.603	17.603	0.000	96	818297	2.00	2.09	
94 1,3-Dichlorobenzene	146	17.873	17.873	0.000	98	472329	2.00	2.07	
95 sec-Butylbenzene	105	17.905	17.905	0.000	99	1197351	2.00	2.06	
96 Benzyl chloride	91	17.965	17.965	0.000	97	641923	2.00	2.07	
97 1,4-Dichlorobenzene	146	17.975	17.975	0.000	94	475123	2.00	2.05	
98 4-Isopropyltoluene	119	18.099	18.099	0.000	96	951056	2.00	2.02	
99 1,2,3-Trimethylbenzene	105	18.126	18.126	0.000	99	633649	2.00	1.56	
100 Butylcyclohexane	83	18.234	18.234	0.000	93	620239	2.00	1.89	
101 1,2-Dichlorobenzene	146	18.374	18.374	0.000	92	453543	2.00	2.02	
102 2,3-Dihydroindene	117	18.385	18.385	0.000	94	699440	2.00	2.07	
103 Indene	116	18.525	18.525	0.000	91	530572	2.00	1.81	
104 n-Butylbenzene	91	18.579	18.579	0.000	98	1000003	2.00	2.05	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	97	676000	NC	NC	
105 Undecane	57	19.005	19.005	0.000	96	711458	2.00	2.06	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.027	0.000	92	189895	2.00	1.86	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.410	0.000	97	814164	2.00	1.97	
109 1,2,3,5-Tetramethylbenzene	119	19.464	19.464	0.000	95	498678	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	97	676468	NC	NC	
110 Dodecane	57	20.132	20.132	0.000	95	756495	2.00	2.10	
111 1,2,4-Trichlorobenzene	180	20.208	20.208	0.000	92	422825	2.00	2.15	
113 Naphthalene	128	20.332	20.332	0.000	99	1077712	2.00	2.03	
114 Benzo(b)thiophene	134	20.429	20.429	0.000	99	656584	NC	NC	
115 Hexachlorobutadiene	225	20.591	20.591	0.000	90	335021	2.00	2.28	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	93	408246	2.00	2.15	
117 2-Methylnaphthalene	142	21.459	21.459	0.000	100	437949	2.00	1.45	
118 1-Methylnaphthalene	142	21.631	21.631	0.000	98	431667	2.00	1.58	
A 120 C8 Range	1	13.351	(13.279-13.397)		0	1899064	2.00	1.91	
S 121 Xylenes, Total	100				0		6.00	5.97	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.63	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00079

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RCCVK13C.D

Injection Date: 13-Nov-2018 12:47:30

Instrument ID: MR

Operator ID:

Lims ID: CCVIS

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

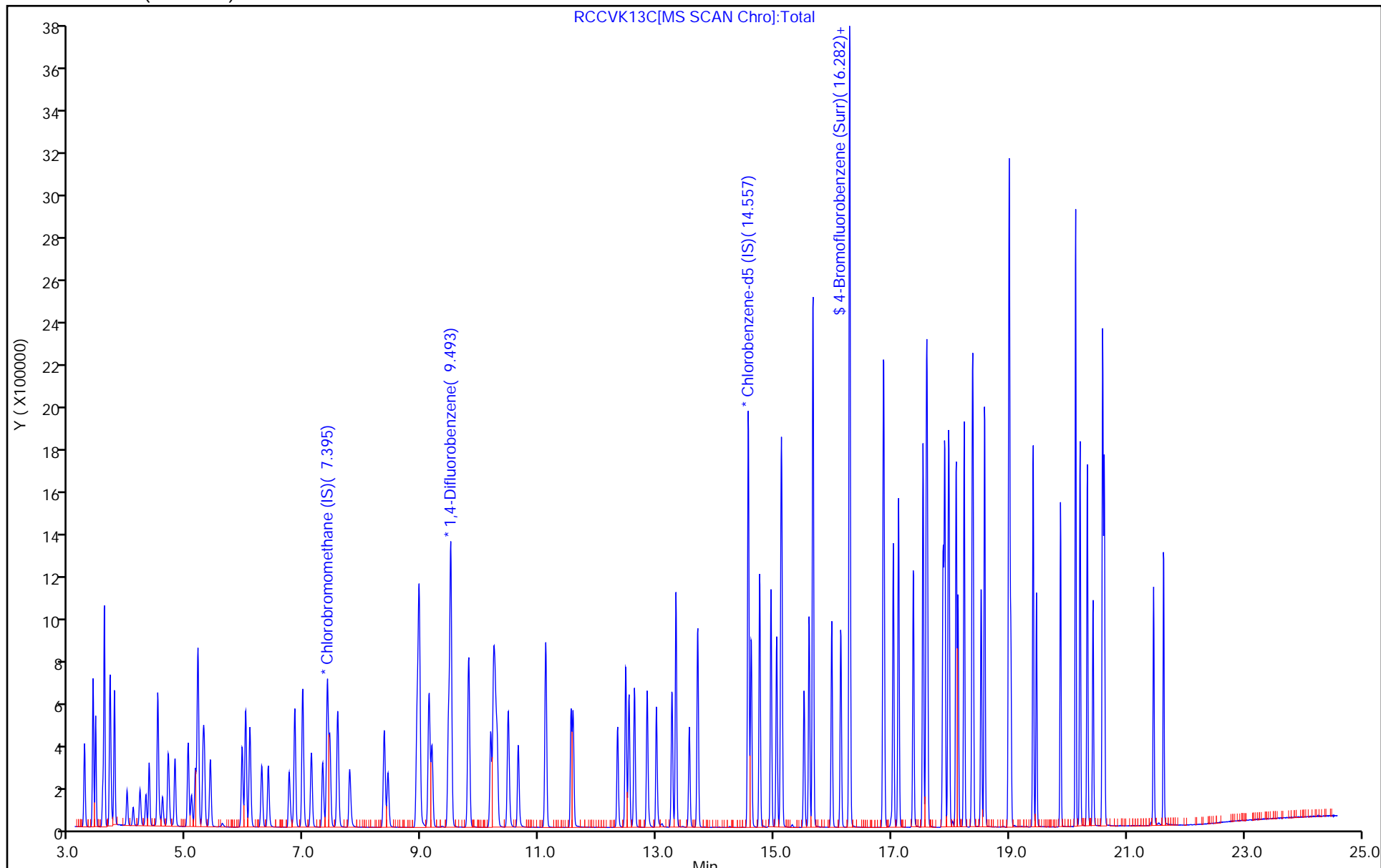
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-25249/8 Calibration Date: 11/13/2018 12:47
 Instrument ID: MR Calib Start Date: 11/02/2018 18:28
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/03/2018 04:25
 Lab File ID: RCCVK13C.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	4.281	3.789		1.77	2.00	-11.5	30.0
Propene	Ave	2.070	1.752		1.69	2.00	-15.4	30.0
Dichlorodifluoromethane	Ave	3.189	4.041		2.53	2.00	26.7	30.0
Chloromethane	Ave	0.7844	0.6547		1.67	2.00	-16.5	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.584	3.093		2.39	2.00	19.7	30.0
Acetaldehyde	Ave	0.9002	0.6857		7.62	10.0	-23.8	30.0
Vinyl chloride	Ave	2.155	1.876		1.74	2.00	-13.0	30.0
1,3-Butadiene	Ave	1.568	1.250		1.59	2.00	-20.3	30.0
Butane	Ave	2.977	2.457		1.65	2.00	-17.5	30.0
Bromomethane	Ave	1.473	0.9446		1.28	2.00	-35.9*	30.0
Chloroethane	Ave	0.7966	0.4294		1.08	2.00	-46.1*	30.0
Ethanol	Ave	0.7165	0.2824		3.94	10.0	-60.6*	30.0
Vinyl bromide	Ave	1.432	0.8688		1.21	2.00	-39.4*	30.0
2-Methylbutane	Ave	1.979	0.9646		0.975	2.00	-51.3*	30.0
Acrolein	Ave	0.4360	0.3164		1.45	2.00	-27.4	30.0
Trichlorofluoromethane	Ave	4.970	4.611		1.86	2.00	-7.2	30.0
Acetonitrile	Ave	0.6616	0.2806		0.848	2.00	-57.6*	30.0
Acetone	Ave	0.7568	0.3688		0.975	2.00	-51.3*	30.0
Pentane	Ave	0.2681	0.1520		1.13	2.00	-43.3*	30.0
Isopropyl alcohol	Ave	2.293	1.607		1.40	2.00	-29.9	30.0
Ethyl ether	Ave	1.768	1.633		1.85	2.00	-7.6	30.0
1,1-Dichloroethene	Ave	1.697	1.555		1.83	2.00	-8.4	30.0
Acrylonitrile	Ave	1.520	1.447		1.90	2.00	-4.8	30.0
tert-Butyl alcohol	Ave	3.740	3.122		1.67	2.00	-16.5	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.943	3.779		1.92	2.00	-4.2	30.0
Methylene Chloride	Ave	1.952	1.580		1.62	2.00	-19.1	30.0
3-Chloropropene	Ave	1.776	1.469		1.65	2.00	-17.3	30.0
Carbon disulfide	Ave	5.605	4.809		1.72	2.00	-14.2	30.0
trans-1,2-Dichloroethene	Ave	1.810	1.622		1.79	2.00	-10.4	30.0
2-Methylpentane	Ave	4.839	3.941		1.63	2.00	-18.6	30.0
Methyl tert-butyl ether	Ave	5.289	4.681		1.77	2.00	-11.5	30.0
1,1-Dichloroethane	Ave	3.695	3.196		1.73	2.00	-13.5	30.0
Vinyl acetate	Ave	5.497	5.038		1.83	2.00	-8.4	30.0
2-Butanone (MEK)	Ave	1.000	0.8442		1.69	2.00	-15.6	30.0
Hexane	Ave	1.790	1.535		1.71	2.00	-14.3	30.0
Isopropyl ether	Ave	7.724	6.890		1.78	2.00	-10.8	30.0
cis-1,2-Dichloroethene	Ave	1.900	1.745		1.84	2.00	-8.2	30.0
Ethyl acetate	Ave	4.960	4.228		1.71	2.00	-14.7	30.0
Chloroform	Ave	4.066	3.647		1.79	2.00	-10.3	30.0
Tert-butyl ethyl ether	Ave	6.557	5.339		1.63	2.00	-18.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-25249/8 Calibration Date: 11/13/2018 12:47
 Instrument ID: MR Calib Start Date: 11/02/2018 18:28
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/03/2018 04:25
 Lab File ID: RCCVK13C.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	2.521	2.224		1.76	2.00	-11.8	30.0
1,1,1-Trichloroethane	Ave	3.836	3.451		1.80	2.00	-10.0	30.0
1,2-Dichloroethane	Ave	0.4657	0.4202		1.80	2.00	-9.8	30.0
Benzene	Ave	0.8985	0.8273		1.84	2.00	-7.9	30.0
Cyclohexane	Ave	0.1389	0.1261		1.82	2.00	-9.2	30.0
1-Butanol	Ave	0.1020	0.0926		1.82	2.00	-9.2	30.0
Carbon tetrachloride	Ave	0.5707	0.5782		2.03	2.00	1.3	30.0
2,3-Dimethylpentane	Ave	0.2112	0.1888		1.79	2.00	-10.6	30.0
Thiophene	Ave	0.5100	0.4609		1.81	2.00	-9.6	30.0
2,2,4-Trimethylpentane	Ave	1.570	1.438		1.83	2.00	-8.4	30.0
1,2-Dichloropropane	Ave	0.3528	0.3186		1.81	2.00	-9.7	30.0
Heptane	Ave	0.3203	0.2920		1.82	2.00	-8.8	30.0
Trichloroethene	Ave	0.3373	0.3313		1.96	2.00	-1.8	30.0
Dibromomethane	Ave	0.3480	0.3310		1.90	2.00	-4.9	30.0
Bromodichloromethane	Ave	0.5935	0.5815		1.96	2.00	-2.0	30.0
1,4-Dioxane	Ave	0.1283	0.1126		1.76	2.00	-12.2	30.0
Methyl methacrylate	Ave	0.4061	0.3804		1.87	2.00	-6.3	30.0
Methylcyclohexane	Ave	0.5274	0.5942		2.25	2.00	12.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7594	0.7260		1.91	2.00	-4.4	30.0
cis-1,3-Dichloropropene	Ave	0.5100	0.4878		1.91	2.00	-4.4	30.0
trans-1,3-Dichloropropene	Ave	0.5574	0.5099		1.83	2.00	-8.5	30.0
Toluene	Ave	1.208	1.134		1.88	2.00	-6.2	30.0
1,1,2-Trichloroethane	Ave	0.3718	0.3485		1.87	2.00	-6.3	30.0
2-Hexanone	Ave	0.4382	0.4009		1.83	2.00	-8.5	30.0
Dibromochloromethane	Ave	0.5927	0.6236		2.10	2.00	5.2	30.0
Octane	Ave	0.3990	0.3773		1.89	2.00	-5.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.6359	0.6401		2.01	2.00	0.7	30.0
Tetrachloroethene	Ave	0.3814	0.3733		1.96	2.00	-2.1	30.0
Chlorobenzene	Ave	0.9807	0.9473		1.93	2.00	-3.4	30.0
2,3-Dimethylheptane	Ave	1.368	1.165		1.70	2.00	-14.9	30.0
Ethylbenzene	Ave	1.579	1.522		1.93	2.00	-3.6	30.0
m-Xylene & p-Xylene	Ave	1.209	1.212		4.01	4.00	0.2	30.0
Bromoform	Ave	0.4605	0.5367		2.33	2.00	16.5	30.0
Styrene	Ave	0.8566	0.9354		2.18	2.00	9.2	30.0
o-Xylene	Ave	1.251	1.227		1.96	2.00	-2.0	30.0
Nonane	Ave	0.8603	0.8472		1.97	2.00	-1.5	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9211	0.9130		1.98	2.00	-0.9	30.0
1,2,3-Trichloropropane	Ave	0.2757	0.2745		1.99	2.00	-0.4	30.0
Isopropylbenzene	Ave	1.809	1.838		2.03	2.00	1.6	30.0
Propylbenzene	Ave	0.4570	0.4823		2.11	2.00	5.5	30.0
2-Chlorotoluene	Ave	0.3965	0.4125		2.08	2.00	4.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-25249/8 Calibration Date: 11/13/2018 12:47
 Instrument ID: MR Calib Start Date: 11/02/2018 18:28
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/03/2018 04:25
 Lab File ID: RCCVK13C.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.827	1.756		1.92	2.00	-3.9	30.0
1,3,5-Trimethylbenzene	Ave	0.6741	0.7929		2.35	2.00	17.6	30.0
Alpha Methyl Styrene	Ave	0.6349	0.6894		2.17	2.00	8.6	30.0
Decane	Ave	1.154	1.124		1.95	2.00	-2.5	30.0
tert-Butylbenzene	Ave	1.471	1.539		2.09	2.00	4.6	30.0
1,2,4-Trimethylbenzene	Ave	1.530	1.596		2.09	2.00	4.3	30.0
1,3-Dichlorobenzene	Ave	0.8892	0.9212		2.07	2.00	3.6	30.0
sec-Butylbenzene	Ave	2.264	2.335		2.06	2.00	3.1	30.0
Benzyl chloride	Ave	1.212	1.252		2.07	2.00	3.3	30.0
1,4-Dichlorobenzene	Ave	0.9038	0.9267		2.05	2.00	2.5	30.0
4-Isopropyltoluene	Ave	1.837	1.855		2.02	2.00	1.0	30.0
1,2,3-Trimethylbenzene	Ave	1.587	1.236		1.56	2.00	-22.1	30.0
Butylcyclohexane	Ave	1.278	1.210		1.89	2.00	-5.3	30.0
1,2-Dichlorobenzene	Ave	0.8769	0.8846		2.02	2.00	0.9	30.0
Indane	Ave	1.320	1.364		2.07	2.00	3.4	30.0
Indene	Ave	1.141	1.035		1.81	2.00	-9.3	30.0
Butylbenzene	Ave	1.900	1.950		2.05	2.00	2.6	30.0
Undecane	Ave	1.344	1.388		2.06	2.00	3.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3981	0.3704		1.86	2.00	-7.0	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.614	1.588		1.97	2.00	-1.6	30.0
Dodecane	Ave	1.402	1.475		2.10	2.00	5.2	30.0
1,2,4-Trichlorobenzene	Ave	0.7658	0.8247		2.15	2.00	7.7	30.0
Naphthalene	Ave	2.072	2.102		2.03	2.00	1.4	30.0
Hexachlorobutadiene	Ave	0.5725	0.6534		2.28	2.00	14.1	30.0
1,2,3-Trichlorobenzene	Ave	0.7420	0.7962		2.15	2.00	7.3	30.0
2-Methylnaphthalene	Ave	1.181	0.8541		1.45	2.00	-27.7	50.0
1-Methylnaphthalene	Ave	1.065	0.8419		1.58	2.00	-21.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7510	0.7531		4.01	4.00	0.3	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RCCVK13C.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 13-Nov-2018 12:47:30 ALS Bottle#: 15 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-002
 Misc. Info.: S79
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub19
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 10:53:35 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits

Date: 14-Nov-2018 10:53:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.395	7.395	0.000	96	189474	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.493	0.000	95	1221114	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.557	14.557	0.000	91	1025453	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.282	0.000	74	772257	4.00	4.01	
6 Chlorodifluoromethane	51	3.405	3.405	0.000	96	358921	2.00	1.77	
7 Propene	41	3.405	3.405	0.000	97	165944	2.00	1.69	
8 Dichlorodifluoromethane	85	3.448	3.448	0.000	100	382813	2.00	2.53	
9 Chloromethane	52	3.572	3.572	0.000	100	62026	2.00	1.67	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.599	3.599	0.000	94	293025	2.00	2.39	
11 Acetaldehyde	44	3.691	3.691	0.000	94	324819	10.0	7.62	
12 Vinyl chloride	62	3.696	3.696	0.000	98	177726	2.00	1.74	
13 Butadiene	54	3.766	3.766	0.000	93	118396	2.00	1.59	
14 Butane	43	3.772	3.772	0.000	91	232760	2.00	1.65	
15 Bromomethane	94	3.982	3.982	0.000	95	89489	2.00	1.28	
16 Chloroethane	64	4.090	4.090	0.000	85	40682	2.00	1.08	
17 Ethanol	31	4.203	4.203	0.000	96	133757	10.0	3.94	
18 Vinyl bromide	106	4.306	4.306	0.000	95	82308	2.00	1.21	
19 2-Methylbutane	43	4.360	4.360	0.000	84	91386	2.00	0.9748	
20 Acrolein	56	4.500	4.500	0.000	95	29978	2.00	1.45	
21 Trichlorofluoromethane	101	4.505	4.505	0.000	99	436809	2.00	1.86	
22 Acetonitrile	40	4.538	4.538	0.000	98	26580	2.00	0.8481	
23 Acetone	58	4.586	4.586	0.000	98	34943	2.00	0.9747	
24 Pentane	72	4.683	4.683	0.000	95	14400	2.00	1.13	
25 Isopropyl alcohol	45	4.699	4.699	0.000	94	152225	2.00	1.40	
26 Ethyl ether	31	4.796	4.796	0.000	93	154709	2.00	1.85	
27 1,1-Dichloroethene	96	5.023	5.023	0.000	95	147280	2.00	1.83	
28 Acrylonitrile	53	5.082	5.082	0.000	96	137103	2.00	1.90	
29 2-Methyl-2-propanol	59	5.147	5.147	0.000	93	295761	2.00	1.67	
30 1,1,2-Trichloro-1,2,2-trif	101	5.190	5.190	0.000	94	357983	2.00	1.92	
31 Methylene Chloride	84	5.276	5.276	0.000	98	149665	2.00	1.62	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.298	5.298	0.000	97	139151	2.00	1.65	
33 Carbon disulfide	76	5.400	5.400	0.000	99	455596	2.00	1.72	
34 trans-1,2-Dichloroethene	96	5.945	5.945	0.000	96	153703	2.00	1.79	
35 2-Methylpentane	43	6.004	6.004	0.000	95	373312	2.00	1.63	
36 Methyl tert-butyl ether	73	6.074	6.074	0.000	97	443492	2.00	1.77	
37 1,1-Dichloroethane	63	6.274	6.274	0.000	100	302769	2.00	1.73	
38 Vinyl acetate	43	6.387	6.387	0.000	100	477275	2.00	1.83	
39 2-Butanone (MEK)	72	6.748	6.748	0.000	98	79978	2.00	1.69	
40 Hexane	56	6.840	6.840	0.000	89	145398	2.00	1.71	
171 Isopropyl ether	45	6.975	6.975	0.000	98	652765	2.00	1.78	
41 cis-1,2-Dichloroethene	96	7.120	7.120	0.000	97	165270	2.00	1.84	
42 Ethyl acetate	43	7.315	7.315	0.000	99	400587	2.00	1.71	
43 Chloroform	83	7.433	7.433	0.000	96	345501	2.00	1.79	
173 Tert-butyl ethyl ether	59	7.568	7.568	0.000	96	505768	2.00	1.63	
44 Tetrahydrofuran	42	7.773	7.773	0.000	95	210707	2.00	1.76	
45 1,1,1-Trichloroethane	97	8.361	8.361	0.000	96	326982	2.00	1.80	
46 1,2-Dichloroethane	62	8.425	8.425	0.000	96	256552	2.00	1.80	
47 Benzene	78	8.922	8.922	0.000	98	505099	2.00	1.84	
48 Cyclohexane	69	8.948	8.948	0.000	97	77017	2.00	1.82	
49 n-Butanol	31	8.959	8.959	0.000	65	56547	2.00	1.82	
50 Carbon tetrachloride	117	8.959	8.959	0.000	96	353002	2.00	2.03	
51 2,3-Dimethylpentane	71	9.126	9.126	0.000	90	115286	2.00	1.79	
52 Thiophene	84	9.175	9.175	0.000	95	281388	2.00	1.81	
53 Isooctane	57	9.800	9.800	0.000	98	878002	2.00	1.83	
54 1,2-Dichloropropane	63	10.173	10.173	0.000	89	194527	2.00	1.81	
55 n-Heptane	71	10.226	10.226	0.000	91	178298	2.00	1.82	
56 Trichloroethene	130	10.248	10.248	0.000	91	202244	2.00	1.96	
57 Dibromomethane	93	10.280	10.280	0.000	91	202062	2.00	1.90	
58 Dichlorobromomethane	83	10.469	10.469	0.000	98	355014	2.00	1.96	
59 1,4-Dioxane	88	10.491	10.491	0.000	92	68763	2.00	1.76	
60 Methyl methacrylate	41	10.642	10.642	0.000	92	232246	2.00	1.87	
61 Methylcyclohexane	83	11.111	11.111	0.000	93	362799	2.00	2.25	
62 4-Methyl-2-pentanone (MIBK)	43	11.542	11.542	0.000	98	443249	2.00	1.91	
63 cis-1,3-Dichloropropene	75	11.575	11.575	0.000	96	297807	2.00	1.91	
64 trans-1,3-Dichloropropene	75	12.335	12.335	0.000	99	261451	2.00	1.83	
65 Toluene	91	12.475	12.475	0.000	93	581398	2.00	1.88	
67 2-Methylthiophene	97	12.529	12.529	0.000	76	194831	NC	NC	
66 1,1,2-Trichloroethane	83	12.529	12.529	0.000	97	178697	2.00	1.87	
68 3-Methylthiophene	97	12.836	12.836	0.000	99	455815	NC	NC	
69 2-Hexanone	58	12.993	12.993	0.000	91	205572	2.00	1.83	
70 Chlorodibromomethane	129	13.262	13.262	0.000	96	319716	2.00	2.10	
71 n-Octane	85	13.327	13.327	0.000	95	193458	2.00	1.89	
72 Ethylene Dibromide	107	13.554	13.554	0.000	97	328212	2.00	2.01	
73 Tetrachloroethene	129	13.694	13.694	0.000	91	191408	2.00	1.96	
74 Chlorobenzene	112	14.610	14.610	0.000	93	485708	2.00	1.93	
75 2,3-Dimethylheptane	43	14.751	14.751	0.000	96	597088	2.00	1.70	
76 Ethylbenzene	91	14.945	14.945	0.000	98	780563	2.00	1.93	
77 2-Ethylthiophene	97	15.042	15.042	0.000	98	571357	NC	NC	
78 m-Xylene & p-Xylene	91	15.123	15.123	0.000	97	1242430	4.00	4.01	
79 Bromoform	173	15.511	15.511	0.000	93	275163	2.00	2.33	
80 Styrene	104	15.592	15.592	0.000	98	479597	2.00	2.18	
82 o-Xylene	91	15.657	15.657	0.000	99	628859	2.00	1.96	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.662	15.662	0.000	94	434401	2.00	1.97	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.980	0.000	99	468107	2.00	1.98	
84 1,2,3-Trichloropropane	110	16.136	16.136	0.000	96	140735	2.00	1.99	
85 Isopropylbenzene	105	16.287	16.287	0.000	95	942405	2.00	2.03	
86 N-Propylbenzene	120	16.859	16.859	0.000	99	247278	2.00	2.11	
87 2-Chlorotoluene	126	16.870	16.870	0.000	93	211486	2.00	2.08	
88 4-Ethyltoluene	105	17.026	17.026	0.000	99	900214	2.00	1.92	
89 1,3,5-Trimethylbenzene	120	17.118	17.118	0.000	91	406531	2.00	2.35	
90 Alpha Methyl Styrene	118	17.371	17.371	0.000	86	353486	2.00	2.17	
91 n-Decane	57	17.533	17.533	0.000	89	576505	2.00	1.95	
92 tert-Butylbenzene	119	17.592	17.592	0.000	92	789111	2.00	2.09	
93 1,2,4-Trimethylbenzene	105	17.603	17.603	0.000	96	818297	2.00	2.09	
94 1,3-Dichlorobenzene	146	17.873	17.873	0.000	98	472329	2.00	2.07	
95 sec-Butylbenzene	105	17.905	17.905	0.000	99	1197351	2.00	2.06	
96 Benzyl chloride	91	17.965	17.965	0.000	97	641923	2.00	2.07	
97 1,4-Dichlorobenzene	146	17.975	17.975	0.000	94	475123	2.00	2.05	
98 4-Isopropyltoluene	119	18.099	18.099	0.000	96	951056	2.00	2.02	
99 1,2,3-Trimethylbenzene	105	18.126	18.126	0.000	99	633649	2.00	1.56	
100 Butylcyclohexane	83	18.234	18.234	0.000	93	620239	2.00	1.89	
101 1,2-Dichlorobenzene	146	18.374	18.374	0.000	92	453543	2.00	2.02	
102 2,3-Dihydroindene	117	18.385	18.385	0.000	94	699440	2.00	2.07	
103 Indene	116	18.525	18.525	0.000	91	530572	2.00	1.81	
104 n-Butylbenzene	91	18.579	18.579	0.000	98	1000003	2.00	2.05	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	97	676000	NC	NC	
105 Undecane	57	19.005	19.005	0.000	96	711458	2.00	2.06	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.027	0.000	92	189895	2.00	1.86	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.410	0.000	97	814164	2.00	1.97	
109 1,2,3,5-Tetramethylbenzene	119	19.464	19.464	0.000	95	498678	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	97	676468	NC	NC	
110 Dodecane	57	20.132	20.132	0.000	95	756495	2.00	2.10	
111 1,2,4-Trichlorobenzene	180	20.208	20.208	0.000	92	422825	2.00	2.15	
113 Naphthalene	128	20.332	20.332	0.000	99	1077712	2.00	2.03	
114 Benzo(b)thiophene	134	20.429	20.429	0.000	99	656584	NC	NC	
115 Hexachlorobutadiene	225	20.591	20.591	0.000	90	335021	2.00	2.28	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	93	408246	2.00	2.15	
117 2-Methylnaphthalene	142	21.459	21.459	0.000	100	437949	2.00	1.45	
118 1-Methylnaphthalene	142	21.631	21.631	0.000	98	431667	2.00	1.58	
A 120 C8 Range	1	13.351	(13.279-13.397)		0	1899064	2.00	1.91	
S 121 Xylenes, Total	100				0		6.00	5.97	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.63	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00079

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RCCVK13C.D

Injection Date: 13-Nov-2018 12:47:30

Instrument ID: MR

Operator ID:

Lims ID: CCVIS

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

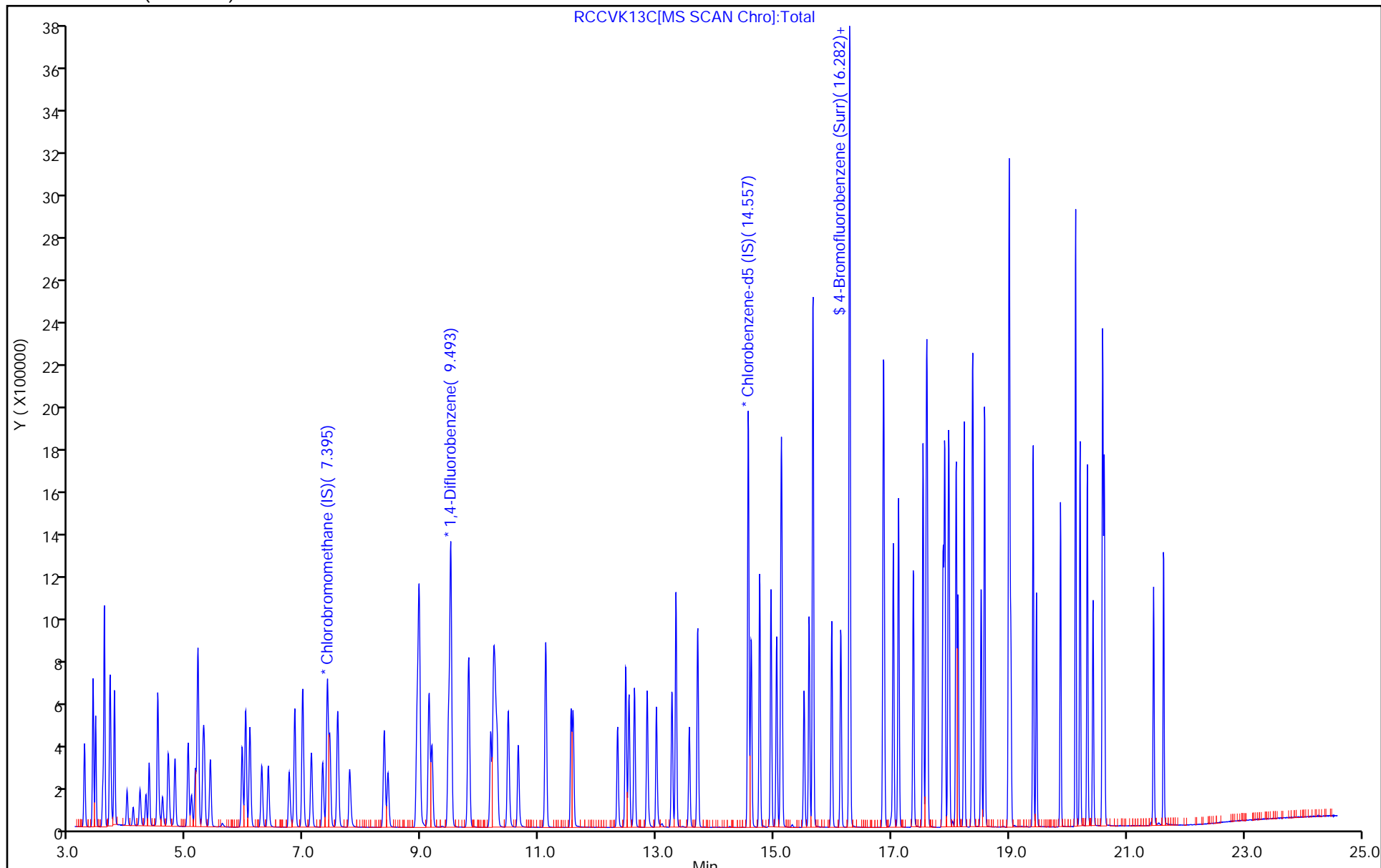
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



RCCVK13C[MS SCAN Chro]:Total

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RBFBXK02.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 02-Nov-2018 17:03:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0009868-001
 Misc. Info.: BFB
 Operator ID: AFB Instrument ID: MR
 Method: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 08:48:31 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: barlozhetskayaa Date: 02-Nov-2018 17:24:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.637	5.039	0.598	0	903770	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

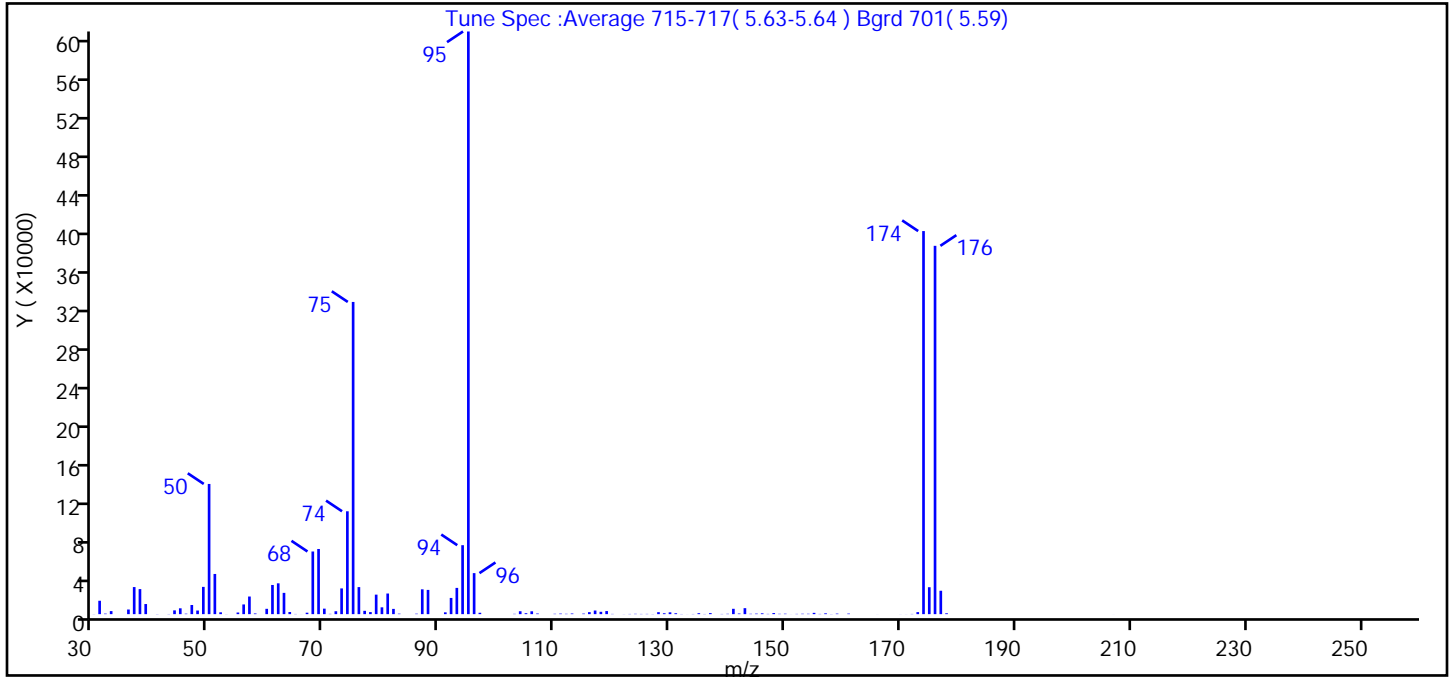
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RBFBXK02.D
 Injection Date: 02-Nov-2018 17:03:30 Instrument ID: MR
 Lims ID: BFB
 Client ID:
 Operator ID: AFB ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	22.3
75	30 to 60% of m/z 95	53.6
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.3 (0.5)
174	50 to 120% of m/z 95	65.7
175	5 to 9% of m/z 174	4.6 (7.0)
176	Greater than 95% but less than 101% of m/z 174	63.2 (96.1)
177	5 to 9% of m/z 176	4.0 (6.4)

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RBFBXK02.D\MR_TO15.rslt\spectra.d
 Injection Date: 02-Nov-2018 17:03:30
 Spectrum: Tune Spec :Average 715-717(5.63-5.64) Bgrd 701(5.59)
 Base Peak: 95.00
 Minimum % Base Peak: 0
 Number of Points: 123

m/z	Y	m/z	Y	m/z	Y	m/z	Y
30.00	104	67.00	1496	107.00	646	143.00	6199
31.00	13879	68.00	64944	110.00	369	144.00	363
32.00	542	69.00	67544	111.00	569	145.00	536
33.00	3154	70.00	5701	112.00	343	146.00	846
36.00	4808	71.00	292	113.00	671	147.00	260
37.00	28072	72.00	3020	115.00	561	148.00	1127
38.00	25968	73.00	26672	116.00	2079	149.00	344
39.00	10469	74.00	106640	117.00	3745	150.00	452
41.00	138	75.00	323648	118.00	2419	151.00	37
43.00	159	76.00	28032	119.00	3194	152.00	259
44.00	3916	77.00	3444	120.00	242	153.00	409
45.00	6051	78.00	2121	122.00	84	154.00	388
46.00	474	79.00	20224	123.00	208	155.00	1345
47.00	9474	80.00	7069	124.00	330	156.00	228
48.00	3737	81.00	21384	125.00	213	157.00	837
49.00	28264	82.00	5443	126.00	252	158.00	127
50.00	134976	83.00	491	127.00	129	159.00	551
51.00	41656	86.00	466	128.00	2053	161.00	572
52.00	1898	87.00	25720	129.00	916	166.00	36
53.00	85	88.00	25120	130.00	1884	170.00	55
55.00	1693	91.00	1867	131.00	939	171.00	54
56.00	10067	92.00	16800	132.00	164	172.00	215
57.00	18272	93.00	27208	133.00	44	173.00	2108
58.00	706	94.00	71488	134.00	179	174.00	397120
60.00	5517	95.00	604032	135.00	984	175.00	27912
61.00	30240	96.00	42520	136.00	174	176.00	381824
62.00	31952	97.00	1427	137.00	1073	177.00	24256
63.00	22056	103.00	316	139.00	199	178.00	885
64.00	2214	104.00	3009	140.00	361	207.00	26
65.00	192	105.00	977	141.00	5537	253.00	12
66.00	33	106.00	2969	142.00	639		

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RFBFBXK02.D

Injection Date: 02-Nov-2018 17:03:30

Instrument ID: MR

Operator ID: AFB

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

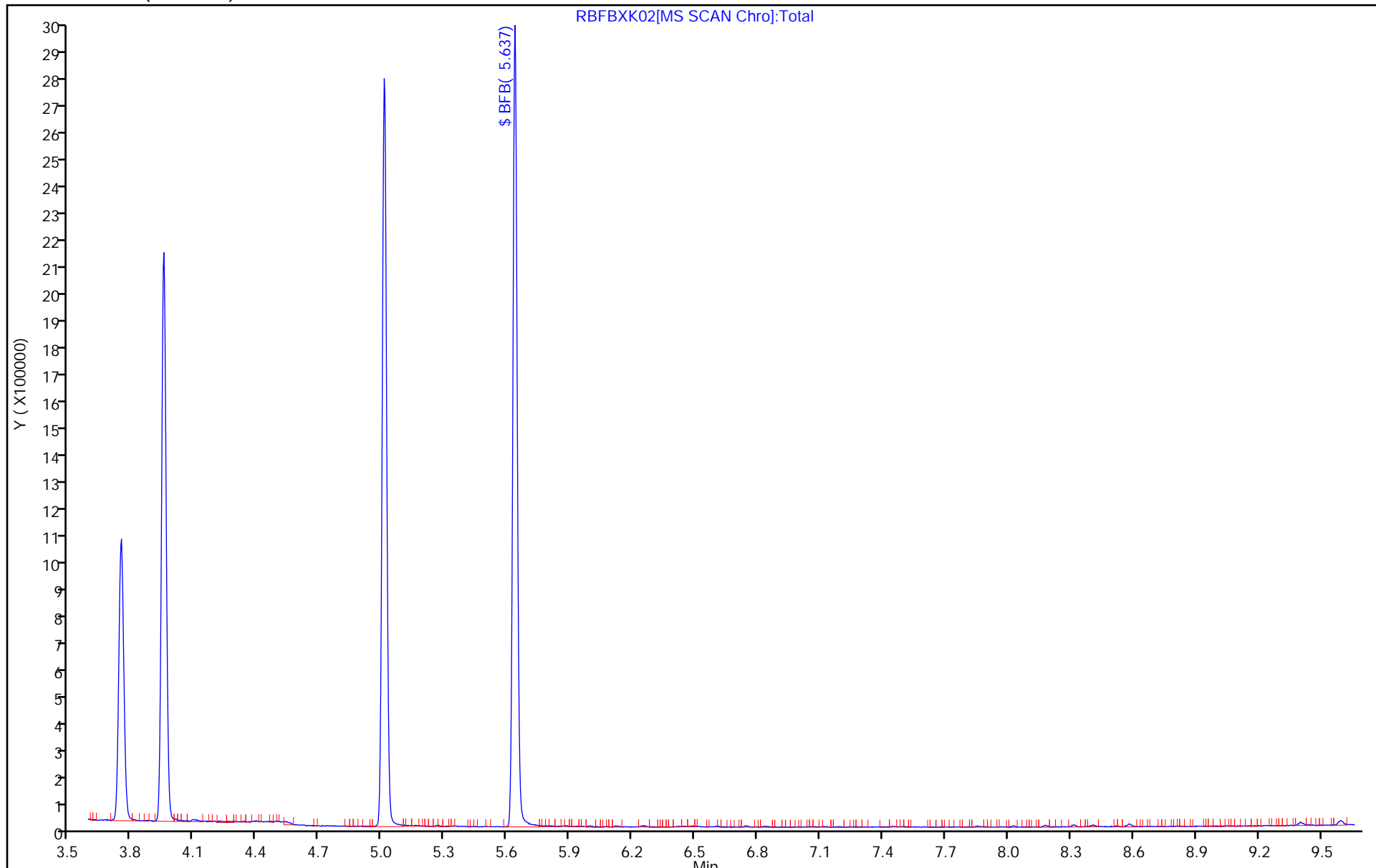
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RFBFBK13C.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 13-Nov-2018 12:16:30 ALS Bottle#: 16 Worklist Smp#: 7
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-001
 Misc. Info.: BFB
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 10:47:21 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits Date: 14-Nov-2018 10:47:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.634	5.634	0.000	0	712030	NR	NR	8
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QC Flag Legend

Processing Flags

- NR - Missing Quant Standard
- 8 - Failed MS Tune Ratio Test

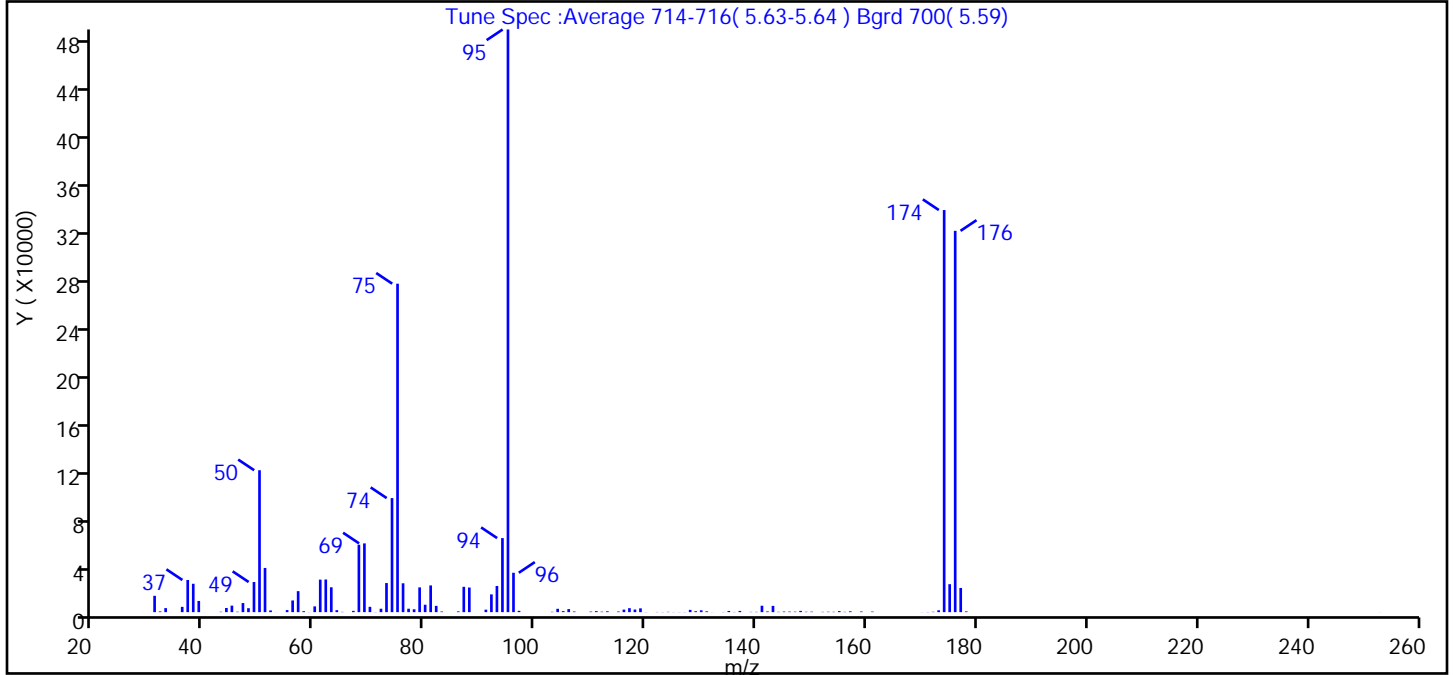
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RFBFBK13C.D
 Injection Date: 13-Nov-2018 12:16:30 Instrument ID: MR
 Lims ID: BFB
 Client ID:
 Operator ID: ALS Bottle#: 16 Worklist Smp#: 7
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	24.4
75	30 to 60% of m/z 95	56.4
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.3 (0.5)
174	50 to 120% of m/z 95	69.0
175	5 to 9% of m/z 174	4.8 (7.0)
176	Greater than 95% but less than 101% of m/z 174	65.4 (94.8)*
177	5 to 9% of m/z 176	4.2 (6.3)

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RBFBK13C.D\MR_TO15.rsl\spectra.d
Injection Date: 13-Nov-2018 12:16:30
Spectrum: Tune Spec :Average 714-716(5.63-5.64) Bgrd 700(5.59)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 119

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	21	64.00	1657	104.00	2800	140.00	238
31.00	13668	65.00	224	105.00	856	141.00	5367
32.00	608	67.00	1056	106.00	2539	142.00	590
33.00	3369	68.00	56400	107.00	527	143.00	5232
34.00	36	69.00	57536	110.00	459	144.00	246
36.00	4425	70.00	4462	111.00	851	145.00	485
37.00	26904	71.00	105	112.00	406	146.00	458
38.00	23752	72.00	2854	113.00	706	147.00	402
39.00	9381	73.00	24344	115.00	526	148.00	1044
40.00	32	74.00	95448	116.00	2130	149.00	315
43.00	322	75.00	274880	117.00	3328	150.00	411
44.00	3486	76.00	24152	118.00	2184	152.00	250
45.00	5440	77.00	2868	119.00	3175	153.00	341
46.00	346	78.00	2416	120.00	94	154.00	290
47.00	7589	79.00	20720	122.00	159	155.00	892
48.00	3286	80.00	6208	123.00	122	156.00	254
49.00	25216	81.00	22352	124.00	266	157.00	709
50.00	118760	82.00	5255	125.00	87	159.00	542
51.00	36984	83.00	533	126.00	95	161.00	474
52.00	1430	86.00	630	127.00	104	170.00	80
53.00	49	87.00	21192	128.00	1908	171.00	137
55.00	1719	88.00	20600	129.00	768	172.00	298
56.00	9777	91.00	2085	130.00	1536	173.00	1555
57.00	17568	92.00	14867	131.00	667	174.00	336512
58.00	804	93.00	21880	132.00	58	175.00	23400
59.00	76	94.00	61976	134.00	147	176.00	319104
60.00	4822	95.00	487616	135.00	1003	177.00	20240
61.00	27200	96.00	32960	136.00	151	178.00	615
62.00	27320	97.00	1106	137.00	1017	253.00	52
63.00	20800	103.00	289	139.00	220		

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RFBFBK13C.D

Injection Date: 13-Nov-2018 12:16:30

Instrument ID: MR

Operator ID:

Lims ID: BFB

Worklist Smp#: 7

Client ID:

Injection Vol: 500.0 mL

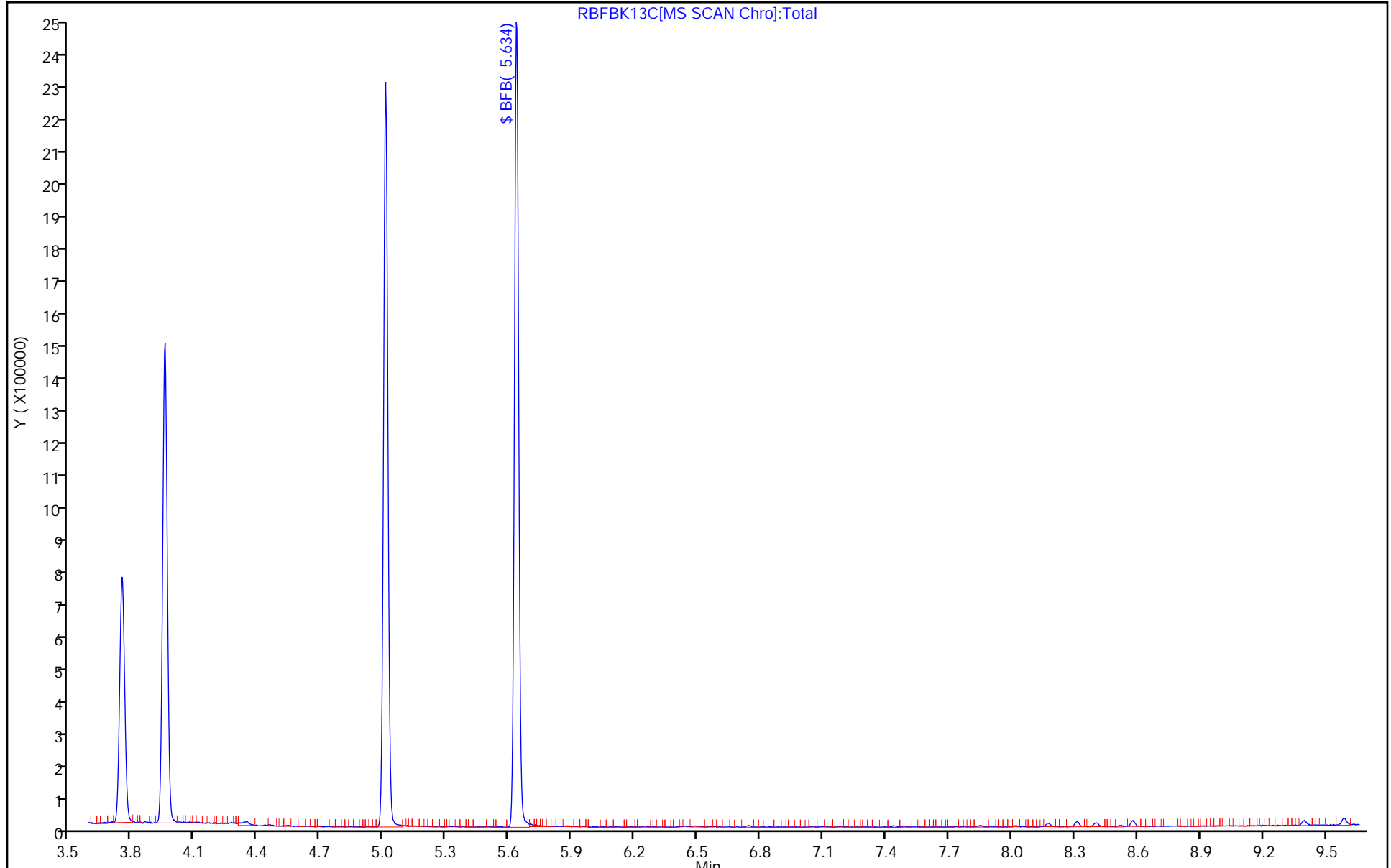
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-25249/10
 Matrix: Air Lab File ID: R500BK13.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 11/13/2018 15:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25249 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-25249/10
 Matrix: Air Lab File ID: R500BK13.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 11/13/2018 15:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25249 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\R500BK13.D
 Lims ID: mb
 Client ID:
 Sample Type: MB
 Inject. Date: 13-Nov-2018 15:55:30 ALS Bottle#: 16 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-010
 Misc. Info.: 500ML BLK
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 11:00:16 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits Date: 14-Nov-2018 11:00:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.395	-0.005	96	187323	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.493	0.000	95	1215687	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.557	-0.001	90	1008512	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.282	0.000	84	702989	4.00	3.71	
109 1,2,3,5-Tetramethylbenzene	119	19.410	19.464	-0.054	1	193		NC	
114 Benzo(b)thiophene	134	20.440	20.429	0.011	1	999		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\R500BK13.D

Injection Date: 13-Nov-2018 15:55:30

Instrument ID: MR

Operator ID:

Lims ID: mb

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

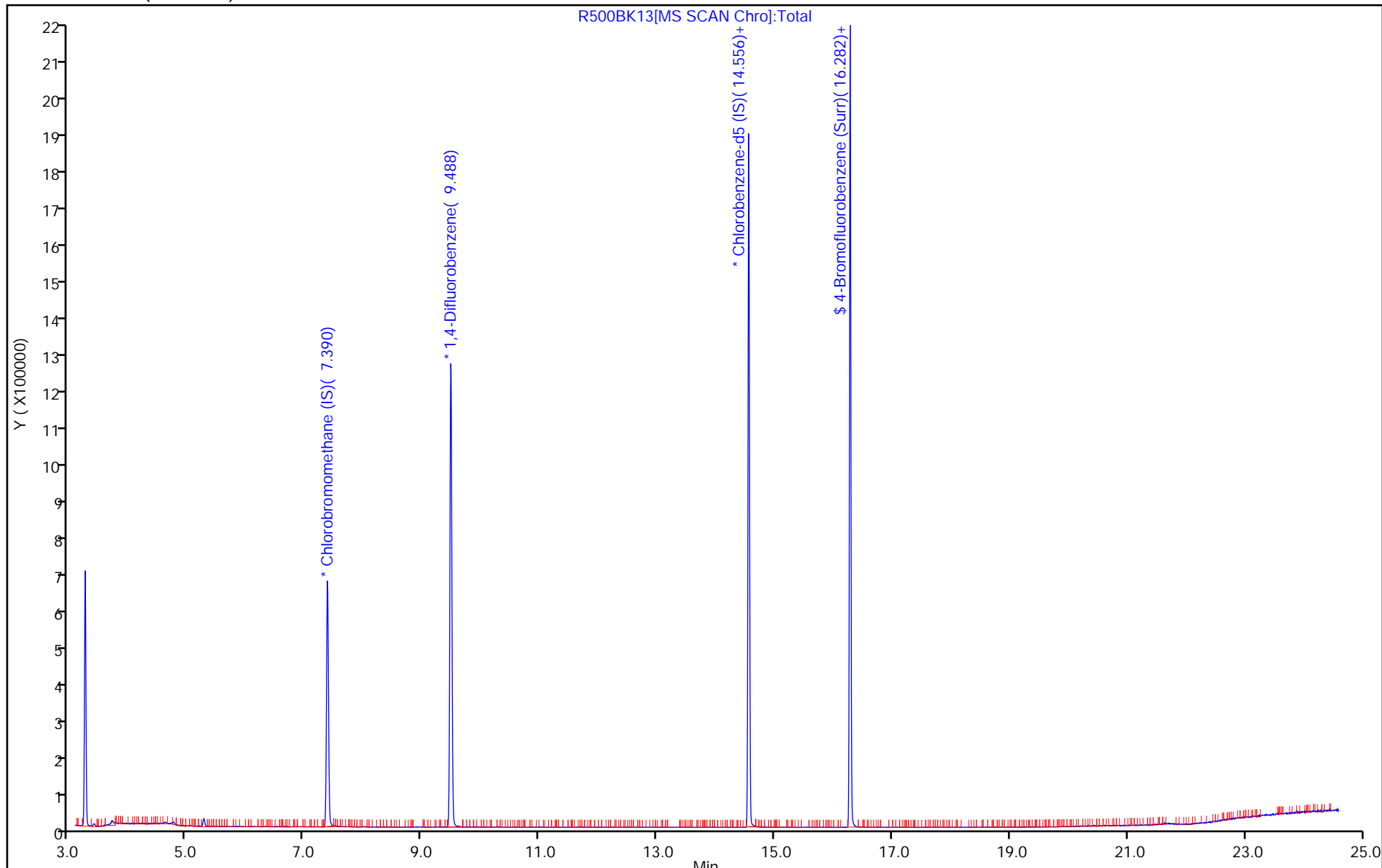
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\R500BK13.D
 Lims ID: mb
 Client ID:
 Sample Type: MB
 Inject. Date: 13-Nov-2018 15:55:30 ALS Bottle#: 16 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-010
 Misc. Info.: 500ML BLK
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 11:00:16 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits Date: 14-Nov-2018 11:00:16

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.71	92.82

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-25249/1008
 Matrix: Air Lab File ID: RCCVK13C-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 11/13/2018 12:47
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25249 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.84		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.03		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.77		0.080	0.015
67-66-3	Chloroform	119.38	1.79		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.84		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.53		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.73		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.80		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.83		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.93		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.62		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.77		0.40	0.068
91-20-3	Naphthalene	128.17	2.03		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.96		0.080	0.016
108-88-3	Toluene	92.14	1.88		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.79		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.15		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.80		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.87		0.080	0.021
79-01-6	Trichloroethene	131.39	1.96		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.56		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.09		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.35		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.74		0.040	0.029
1330-20-7	Xylenes, Total	106.17	5.97		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RCCVK13C-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 13-Nov-2018 12:47:30 ALS Bottle#: 15 Worklist Smp#: 1008
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-002
 Misc. Info.: S79
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 10:53:35 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits

Date: 14-Nov-2018 10:53:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.395	7.395	0.000	96	189474	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.493	0.000	95	1221114	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.557	14.557	0.000	91	1025453	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.282	0.000	74	772257	4.00	4.01	
6 Chlorodifluoromethane	51	3.405	3.405	0.000	96	358921	2.00	1.77	
7 Propene	41	3.405	3.405	0.000	97	165944	2.00	1.69	
8 Dichlorodifluoromethane	85	3.448	3.448	0.000	100	382813	2.00	2.53	
9 Chloromethane	52	3.572	3.572	0.000	100	62026	2.00	1.67	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.599	3.599	0.000	94	293025	2.00	2.39	
11 Acetaldehyde	44	3.691	3.691	0.000	94	324819	10.0	7.62	
12 Vinyl chloride	62	3.696	3.696	0.000	98	177726	2.00	1.74	
13 Butadiene	54	3.766	3.766	0.000	93	118396	2.00	1.59	
14 Butane	43	3.772	3.772	0.000	91	232760	2.00	1.65	
15 Bromomethane	94	3.982	3.982	0.000	95	89489	2.00	1.28	
16 Chloroethane	64	4.090	4.090	0.000	85	40682	2.00	1.08	
17 Ethanol	31	4.203	4.203	0.000	96	133757	10.0	3.94	
18 Vinyl bromide	106	4.306	4.306	0.000	95	82308	2.00	1.21	
19 2-Methylbutane	43	4.360	4.360	0.000	84	91386	2.00	0.9748	
20 Acrolein	56	4.500	4.500	0.000	95	29978	2.00	1.45	
21 Trichlorofluoromethane	101	4.505	4.505	0.000	99	436809	2.00	1.86	
22 Acetonitrile	40	4.538	4.538	0.000	98	26580	2.00	0.8481	
23 Acetone	58	4.586	4.586	0.000	98	34943	2.00	0.9747	
24 Pentane	72	4.683	4.683	0.000	95	14400	2.00	1.13	
25 Isopropyl alcohol	45	4.699	4.699	0.000	94	152225	2.00	1.40	
26 Ethyl ether	31	4.796	4.796	0.000	93	154709	2.00	1.85	
27 1,1-Dichloroethene	96	5.023	5.023	0.000	95	147280	2.00	1.83	
28 Acrylonitrile	53	5.082	5.082	0.000	96	137103	2.00	1.90	
29 2-Methyl-2-propanol	59	5.147	5.147	0.000	93	295761	2.00	1.67	
30 1,1,2-Trichloro-1,2,2-trif	101	5.190	5.190	0.000	94	357983	2.00	1.92	
31 Methylene Chloride	84	5.276	5.276	0.000	98	149665	2.00	1.62	
32 3-Chloro-1-propene	39	5.298	5.298	0.000	97	139151	2.00	1.65	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.400	5.400	0.000	99	455596	2.00	1.72	
34 trans-1,2-Dichloroethene	96	5.945	5.945	0.000	96	153703	2.00	1.79	
35 2-Methylpentane	43	6.004	6.004	0.000	95	373312	2.00	1.63	
36 Methyl tert-butyl ether	73	6.074	6.074	0.000	97	443492	2.00	1.77	
37 1,1-Dichloroethane	63	6.274	6.274	0.000	100	302769	2.00	1.73	
38 Vinyl acetate	43	6.387	6.387	0.000	100	477275	2.00	1.83	
39 2-Butanone (MEK)	72	6.748	6.748	0.000	98	79978	2.00	1.69	
40 Hexane	56	6.840	6.840	0.000	89	145398	2.00	1.71	
171 Isopropyl ether	45	6.975	6.975	0.000	98	652765	2.00	1.78	
41 cis-1,2-Dichloroethene	96	7.120	7.120	0.000	97	165270	2.00	1.84	
42 Ethyl acetate	43	7.315	7.315	0.000	99	400587	2.00	1.71	
43 Chloroform	83	7.433	7.433	0.000	96	345501	2.00	1.79	
173 Tert-butyl ethyl ether	59	7.568	7.568	0.000	96	505768	2.00	1.63	
44 Tetrahydrofuran	42	7.773	7.773	0.000	95	210707	2.00	1.76	
45 1,1,1-Trichloroethane	97	8.361	8.361	0.000	96	326982	2.00	1.80	
46 1,2-Dichloroethane	62	8.425	8.425	0.000	96	256552	2.00	1.80	
47 Benzene	78	8.922	8.922	0.000	98	505099	2.00	1.84	
48 Cyclohexane	69	8.948	8.948	0.000	97	77017	2.00	1.82	
49 n-Butanol	31	8.959	8.959	0.000	65	56547	2.00	1.82	
50 Carbon tetrachloride	117	8.959	8.959	0.000	96	353002	2.00	2.03	
51 2,3-Dimethylpentane	71	9.126	9.126	0.000	90	115286	2.00	1.79	
52 Thiophene	84	9.175	9.175	0.000	95	281388	2.00	1.81	
53 Isooctane	57	9.800	9.800	0.000	98	878002	2.00	1.83	
54 1,2-Dichloropropane	63	10.173	10.173	0.000	89	194527	2.00	1.81	
55 n-Heptane	71	10.226	10.226	0.000	91	178298	2.00	1.82	
56 Trichloroethene	130	10.248	10.248	0.000	91	202244	2.00	1.96	
57 Dibromomethane	93	10.280	10.280	0.000	91	202062	2.00	1.90	
58 Dichlorobromomethane	83	10.469	10.469	0.000	98	355014	2.00	1.96	
59 1,4-Dioxane	88	10.491	10.491	0.000	92	68763	2.00	1.76	
60 Methyl methacrylate	41	10.642	10.642	0.000	92	232246	2.00	1.87	
61 Methylcyclohexane	83	11.111	11.111	0.000	93	362799	2.00	2.25	
62 4-Methyl-2-pentanone (MIBK)	43	11.542	11.542	0.000	98	443249	2.00	1.91	
63 cis-1,3-Dichloropropene	75	11.575	11.575	0.000	96	297807	2.00	1.91	
64 trans-1,3-Dichloropropene	75	12.335	12.335	0.000	99	261451	2.00	1.83	
65 Toluene	91	12.475	12.475	0.000	93	581398	2.00	1.88	
67 2-Methylthiophene	97	12.529	12.529	0.000	76	194831	NC	NC	
66 1,1,2-Trichloroethane	83	12.529	12.529	0.000	97	178697	2.00	1.87	
68 3-Methylthiophene	97	12.836	12.836	0.000	99	455815	NC	NC	
69 2-Hexanone	58	12.993	12.993	0.000	91	205572	2.00	1.83	
70 Chlorodibromomethane	129	13.262	13.262	0.000	96	319716	2.00	2.10	
71 n-Octane	85	13.327	13.327	0.000	95	193458	2.00	1.89	
72 Ethylene Dibromide	107	13.554	13.554	0.000	97	328212	2.00	2.01	
73 Tetrachloroethene	129	13.694	13.694	0.000	91	191408	2.00	1.96	
74 Chlorobenzene	112	14.610	14.610	0.000	93	485708	2.00	1.93	
75 2,3-Dimethylheptane	43	14.751	14.751	0.000	96	597088	2.00	1.70	
76 Ethylbenzene	91	14.945	14.945	0.000	98	780563	2.00	1.93	
77 2-Ethylthiophene	97	15.042	15.042	0.000	98	571357	NC	NC	
78 m-Xylene & p-Xylene	91	15.123	15.123	0.000	97	1242430	4.00	4.01	
79 Bromoform	173	15.511	15.511	0.000	93	275163	2.00	2.33	
80 Styrene	104	15.592	15.592	0.000	98	479597	2.00	2.18	
82 o-Xylene	91	15.657	15.657	0.000	99	628859	2.00	1.96	
81 n-Nonane	57	15.662	15.662	0.000	94	434401	2.00	1.97	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 1,1,2,2-Tetrachloroethane	83	15.980	15.980	0.000	99	468107	2.00	1.98	
84 1,2,3-Trichloropropane	110	16.136	16.136	0.000	96	140735	2.00	1.99	
85 Isopropylbenzene	105	16.287	16.287	0.000	95	942405	2.00	2.03	
86 N-Propylbenzene	120	16.859	16.859	0.000	99	247278	2.00	2.11	
87 2-Chlorotoluene	126	16.870	16.870	0.000	93	211486	2.00	2.08	
88 4-Ethyltoluene	105	17.026	17.026	0.000	99	900214	2.00	1.92	
89 1,3,5-Trimethylbenzene	120	17.118	17.118	0.000	91	406531	2.00	2.35	
90 Alpha Methyl Styrene	118	17.371	17.371	0.000	86	353486	2.00	2.17	
91 n-Decane	57	17.533	17.533	0.000	89	576505	2.00	1.95	
92 tert-Butylbenzene	119	17.592	17.592	0.000	92	789111	2.00	2.09	
93 1,2,4-Trimethylbenzene	105	17.603	17.603	0.000	96	818297	2.00	2.09	
94 1,3-Dichlorobenzene	146	17.873	17.873	0.000	98	472329	2.00	2.07	
95 sec-Butylbenzene	105	17.905	17.905	0.000	99	1197351	2.00	2.06	
96 Benzyl chloride	91	17.965	17.965	0.000	97	641923	2.00	2.07	
97 1,4-Dichlorobenzene	146	17.975	17.975	0.000	94	475123	2.00	2.05	
98 4-Isopropyltoluene	119	18.099	18.099	0.000	96	951056	2.00	2.02	
99 1,2,3-Trimethylbenzene	105	18.126	18.126	0.000	99	633649	2.00	1.56	
100 Butylcyclohexane	83	18.234	18.234	0.000	93	620239	2.00	1.89	
101 1,2-Dichlorobenzene	146	18.374	18.374	0.000	92	453543	2.00	2.02	
102 2,3-Dihydroindene	117	18.385	18.385	0.000	94	699440	2.00	2.07	
103 Indene	116	18.525	18.525	0.000	91	530572	2.00	1.81	
104 n-Butylbenzene	91	18.579	18.579	0.000	98	1000003	2.00	2.05	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	97	676000	NC	NC	
105 Undecane	57	19.005	19.005	0.000	96	711458	2.00	2.06	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.027	0.000	92	189895	2.00	1.86	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.410	0.000	97	814164	2.00	1.97	
109 1,2,3,5-Tetramethylbenzene	119	19.464	19.464	0.000	95	498678	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	97	676468	NC	NC	
110 Dodecane	57	20.132	20.132	0.000	95	756495	2.00	2.10	
111 1,2,4-Trichlorobenzene	180	20.208	20.208	0.000	92	422825	2.00	2.15	
113 Naphthalene	128	20.332	20.332	0.000	99	1077712	2.00	2.03	
114 Benzo(b)thiophene	134	20.429	20.429	0.000	99	656584	NC	NC	
115 Hexachlorobutadiene	225	20.591	20.591	0.000	90	335021	2.00	2.28	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	93	408246	2.00	2.15	
117 2-Methylnaphthalene	142	21.459	21.459	0.000	100	437949	2.00	1.45	
118 1-Methylnaphthalene	142	21.631	21.631	0.000	98	431667	2.00	1.58	
A 120 C8 Range	1	13.351	(13.279-13.397)		0	1899064	2.00	1.91	
S 121 Xylenes, Total	100				0		6.00	5.97	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.63	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00079

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RCCVK13C-LCS.d

Injection Date: 13-Nov-2018 12:47:30

Instrument ID: MR

Operator ID:

Lims ID: LCS

Worklist Smp#: 1008

Client ID:

Purge Vol: 500.000 mL

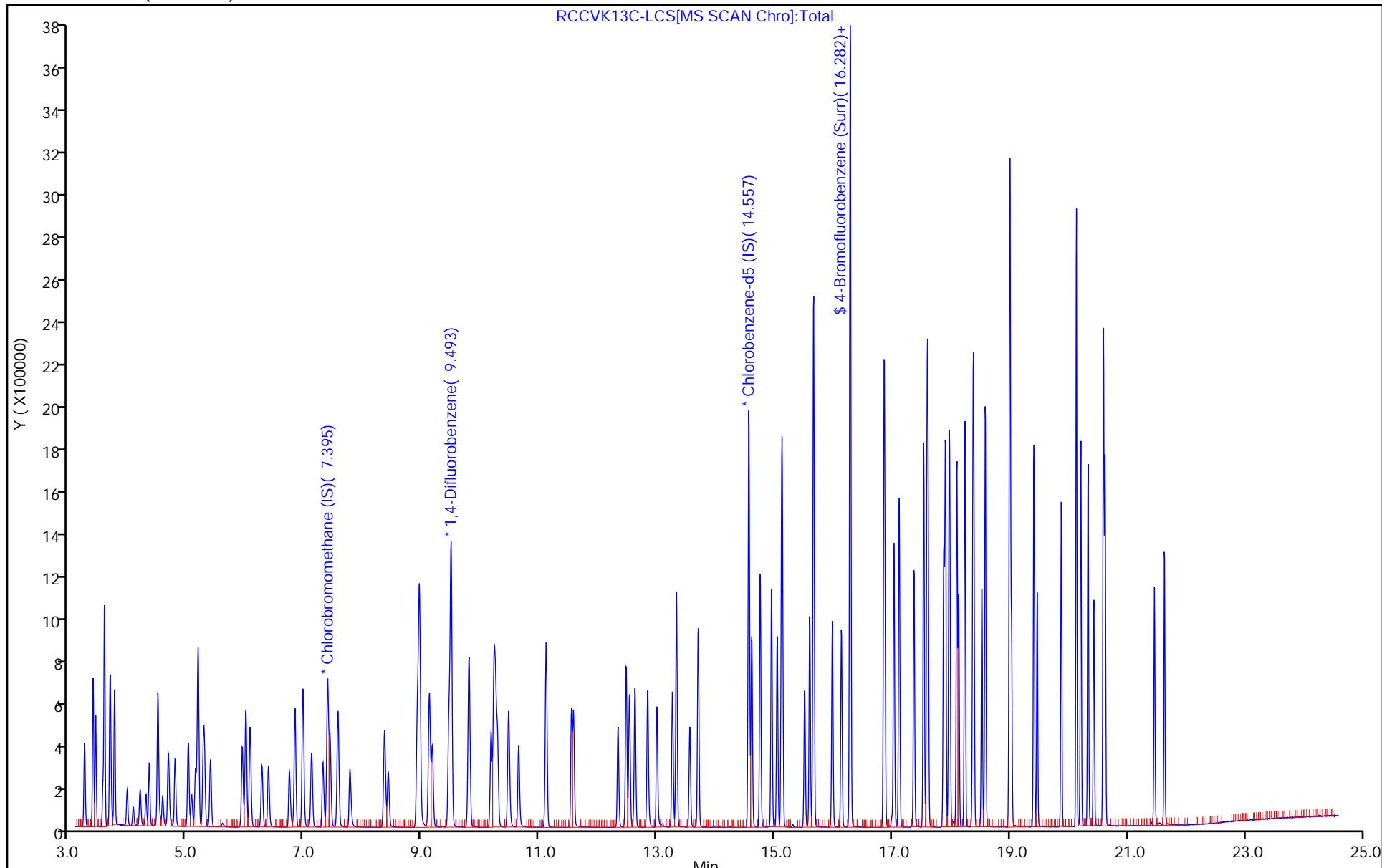
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



RCCVK13C-LCS[MS SCAN Chro]:Total

TestAmerica Laboratories
Recovery Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\RCCVK13C-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 13-Nov-2018 12:47:30 ALS Bottle#: 15 Worklist Smp#: 1008
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009935-002
 Misc. Info.: S79
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181109-9935.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 14-Nov-2018 10:53:35 Calib Date: 03-Nov-2018 04:25:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20181102-9868.b\RK02IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits Date: 14-Nov-2018 10:53:35

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.01	100.28

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1

SDG No.: _____

Instrument ID: MR Start Date: 11/02/2018 17:03

Analysis Batch Number: 25052 End Date: 11/03/2018 09:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25052/1		11/02/2018 17:03	1	RBF BXK02.D	RTX-5 0.32 (mm)
IC 140-25052/3		11/02/2018 18:28	1	RK02IC09.D	RTX-5 0.32 (mm)
IC 140-25052/5		11/02/2018 20:08	1	RK02IC10.D	RTX-5 0.32 (mm)
IC 140-25052/8		11/02/2018 22:37	1	RK02IC01.D	RTX-5 0.32 (mm)
IC 140-25052/9		11/02/2018 23:26	1	RK02IC02.D	RTX-5 0.32 (mm)
140-12901-A-5 MDLV		11/02/2018 23:26	1		RTX-5 0.32 (mm)
IC 140-25052/10		11/03/2018 00:16	1	RK02IC03.D	RTX-5 0.32 (mm)
140-12901-A-6 MDLV		11/03/2018 00:16	1		RTX-5 0.32 (mm)
IC 140-25052/11		11/03/2018 01:06	1	RK02IC04.D	RTX-5 0.32 (mm)
140-12901-A-7 MDLV		11/03/2018 01:06	1		RTX-5 0.32 (mm)
IC 140-25052/12		11/03/2018 01:56	1	RK02IC05.D	RTX-5 0.32 (mm)
140-12901-A-8 MDLV		11/03/2018 01:56	1		RTX-5 0.32 (mm)
IC 140-25052/13		11/03/2018 02:45	1	RK02IC06.D	RTX-5 0.32 (mm)
ICIS 140-25052/14		11/03/2018 03:35	1	RK02IC07.D	RTX-5 0.32 (mm)
IC 140-25052/15		11/03/2018 04:25	1	RK02IC08.D	RTX-5 0.32 (mm)
ICV 140-25052/18		11/03/2018 06:57	1	RK02LCS.D	RTX-5 0.32 (mm)
ZZZZZ		11/03/2018 09:35	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date: 11/2/18	Instrument: MR	Chrom WL #: 988	TALS Batch & Event #	TO14/15: 1735/ 25052						
				DOD: 1737/ 25054	OHIO: 1736/ 25053					
Chrom/Worklist Review				1 st	2 nd					
1. Re-read each Limit Group [method editor-limit groups]				✓	na					
2. Verify LODV in Chrom [method editor -> edit -> MDL]				✓	na					
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]				✓	checked on screen					
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]				✓	✓					
5. Did BFB meet tune criteria? [F8]				✓	✓					
6. Were all standards injected within 24 hr of BFB? [F7]				✓	✓					
7. High point checked for saturation and point removed if so? [Chrom]				✓	✓					
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]				na	na					
9. RT for each IS +20 sec avg. RT? [F6 IstdRec]				✓	✓					
10. Area for each IS + 40% avg. area? [F6 IstdRec]				✓	✓					
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]				✓	✓					
12. Elution order checked on isomeric pairs? [Chrom]				✓	✓					
<ul style="list-style-type: none"> dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane 2-methyl butane / acrolein trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane vinyl acetate / hexane cis- and trans- isomers ethyl benzene / m/p-xylene / o-xylene n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene tert-butylbenzene/4-isopropyltoluene 1,3-, 1,4-, and 1,2-dichlorobenzene 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes 1,2,4- and 1,2,3-trichlorobenzenes 2-, and 1-methylnaphthalene 				✓	✓					
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?				✓	✓					
MLG Review				TO	DOD	OH	Comments	TO	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1 & 2 methylnaphthalene ≤ 50% [F6 Σ]				✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]				✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]				✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]				na	→	→		na	→	→
18. If curves were used, is correlation coefficient ≥ 0.990? [F6]				na	→	→		na	→	→
19. Is the intercept less than the RL for each curve? [F6]				na	→	→		na	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntl-C, details]				na	→	na		na	→	na
21. Is low point RSE ≤ 50 %? [F6]				✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits? [F8 - icv]				✓	✓	✓		✓	✓	✓
Analyst/Date: <i>JK 11/5/18</i>				2nd Level Reviewer/Date: <i>11/05/18</i>						
TALS Review				TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL				✓	✓	✓		na	na	na
24. Graphics uploaded? [paperclip]				✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events - 'Fix ICAL linkage' if needed]				✓	✓	✓		✓	✓	✓
26. Runs linked to BFB? [QC Links]				✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings [F8]				✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?				na	→	→		na	→	→
29. After review in TALS, approve the method in TALS.				na	na	na		na	na	na
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>				na	na	na		na	na	na
31. Checklist & Entech report scanned, attached & assigned properly?				na	na	na		na	na	na
Analyst/date: <i>JK 11/6/18</i>				2nd Level Reviewer/date: <i>11/06/18</i>						
Comments: <i>MR #10 & Bromofor - B.O. P.O. 11/5/18</i>				Comments:						

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1

SDG No.: _____

Instrument ID: MR Start Date: 11/13/2018 12:16

Analysis Batch Number: 25249 End Date: 11/14/2018 06:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25249/7		11/13/2018 12:16	1	RFBFK13C.D	RTX-5 0.32 (mm)
CCVIS 140-25249/8		11/13/2018 12:47	1	RCCVK13C.D	RTX-5 0.32 (mm)
LCS 140-25249/1008		11/13/2018 12:47	1	RCCVK13C-LCS.d	RTX-5 0.32 (mm)
MB 140-25249/10		11/13/2018 15:55	1	R500BK13.D	RTX-5 0.32 (mm)
140-13304-6		11/13/2018 16:47	1	RK13P101.D	RTX-5 0.32 (mm)
140-13304-1		11/13/2018 17:40	1	RK13P102.D	RTX-5 0.32 (mm)
140-13304-2		11/13/2018 18:32	1	RK13P103.D	RTX-5 0.32 (mm)
140-13304-3		11/13/2018 19:24	1	RK13P104.D	RTX-5 0.32 (mm)
140-13304-4		11/13/2018 20:16	1	RK13P105.D	RTX-5 0.32 (mm)
ZZZZZ		11/13/2018 21:08	1		RTX-5 0.32 (mm)
ZZZZZ		11/13/2018 22:00	1		RTX-5 0.32 (mm)
ZZZZZ		11/13/2018 22:51	1		RTX-5 0.32 (mm)
ZZZZZ		11/13/2018 23:43	1		RTX-5 0.32 (mm)
ZZZZZ		11/14/2018 00:35	1		RTX-5 0.32 (mm)
ZZZZZ		11/14/2018 01:26	1		RTX-5 0.32 (mm)
ZZZZZ		11/14/2018 02:18	1.33		RTX-5 0.32 (mm)
ZZZZZ		11/14/2018 03:09	1		RTX-5 0.32 (mm)
ZZZZZ		11/14/2018 04:01	1		RTX-5 0.32 (mm)
ZZZZZ		11/14/2018 04:53	1		RTX-5 0.32 (mm)
ZZZZZ		11/14/2018 05:44	1		RTX-5 0.32 (mm)
ZZZZZ		11/14/2018 06:36	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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Instrument/Date	MR 11/13/2018	Routine	DOD	OHIO VAP
CCAL Chrom WL #	9935	CCAL Batch #	25249	
ICAL Chrom WL #	9868	ICAL Batch # / Event #	25052 / 1735	
Chrom Review		1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]		/		NA
2. Did BFB meet tune criteria? [F8]		/	[Failed TO-14A, but passes TO-15]	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]		/	List Target analytes outside CCV limits: Acetone, Chloroethane, Vinyl bromide, Bromomethane	/
4. Elution order checked on isomeric pairs? [Chrom]				
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		/		
• 2-methyl butane / acrolein		/		
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		/		
• vinyl acetate / hexane		/		
• cis- and trans- isomers		/		
• ethyl benzene / m/p-xylene / o-xylene		/		
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene		/		
• tert-butylbenzene/4-isopropyltoluene		/		
• 1,3-, 1,4-, and 1,2-dichlorobenzene		/		
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		NA		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene		/		/
• 2-, and 1-methylnaphthalene		/		/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?		NA		NA
6. Has the RT been updated to the method?		/		/
Analyst/date	FORNIMAN S. ON 14/2018	2nd Level Reviewer/date		11/15/18
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]		/	on screen 11/14/18	/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]		/		/
9. Can dilution history verified? [Mgmt Report]		/		/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:		/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	/
11. All runs - peaks ID'd correctly and false positives removed?		/		/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?		/		/
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]		/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur, Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)	/
Sample Reason Sample Reason				
14. Samples outside calibration range scheduled for dilution?		NA	<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution	NA
Chrom Review		1st	If No, why is data reportable?	2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:		/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.	/
Sample Reason Sample Reason				
16. RIC inspected for proper integration for TPH?		NA		NA
17. Obvious non-TPH peaks excluded?		↓		NA
18. Individual TPH peak area < octane high point area?		↓		NA

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 2 of 2

TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	/	<input checked="" type="checkbox"/> Failed TO-14A, but passes TO-15 (NCM# 15118)	/														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] TALS-Sample Results Tab	/	<input checked="" type="checkbox"/> CCV - %D - LCS criteria met (NCM# 15120) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		NA														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM#)	NA														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM#) <input type="checkbox"/> Holding Time - Receipt (NCM#)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input checked="" type="checkbox"/> Marginal Exceedances - Within ME Limits and Random; Report (NCM# 15119) <input type="checkbox"/> LCS/LCSD - %R High (NCM#)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr> <td>>90</td> <td>5</td> </tr> <tr> <td>71 - 90</td> <td>4</td> </tr> <tr> <td>51 - 70</td> <td>3</td> </tr> <tr> <td>31 - 50</td> <td>2</td> </tr> <tr> <td>11 - 30</td> <td>1</td> </tr> <tr> <td>< 11</td> <td>0</td> </tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	< 11	0			
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
< 11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	NA		NA														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		NA														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-25249/10 200 mL blank ID: _____	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	/		/														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	-NA-		/														
40. Checklist & Entech report scanned, attached & assigned properly?	-NA-		/														

Analyst: <u>Porawimon S.</u>	Date: <u>11/14/2018</u>	2nd Level Reviewer: <u>[Signature]</u>	Date: <u>11/15/18</u>
Comments:	Comments:		
<u>CE flag Line # 14, for Chlorodifluoromethane</u>			
<u>CE flag Line # 18 to 27 for ACE</u>			
<u>Job 13305 Short list Only, 11/14/18</u>			
Example Calculation: <u>140-13305-6 Trichlorofluoromethane</u>			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
<u>0.055327 x 500 x 1.33 = 0.55327</u>			
<u>66.5</u>			

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13304-1

SDG No.: _____

Batch Number: 25249 Batch Start Date: 11/13/18 12:16 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101S 00079	40MXISSURP 00003
BFB 140-25249/7		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-25249/8		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-25249/10		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-13304-A-6	BLDG-A INFLUENT	TO 15 LL	T	20 mL	500 mL	1	1		40 mL
140-13304-A-1	BLDG-C EFFLUENT	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-13304-A-2	BLDG-C MIDGAC	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-13304-A-3	BLDG-C INFLUENT	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-13304-A-4	BLDG-A EFFLUENT	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-25249/1008		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-25249/7		TO 15 LL		40 mL					
CCVIS 140-25249/8		TO 15 LL							
MB 140-25249/10		TO 15 LL							
140-13304-A-6	BLDG-A INFLUENT	TO 15 LL	T						
140-13304-A-1	BLDG-C EFFLUENT	TO 15 LL	T						
140-13304-A-2	BLDG-C MIDGAC	TO 15 LL	T						
140-13304-A-3	BLDG-C INFLUENT	TO 15 LL	T						
140-13304-A-4	BLDG-A EFFLUENT	TO 15 LL	T						
LCS 140-25249/1008		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

180325

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

BALTIMORE

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Canister Samples Chain of Custody Record

Client Contact Information
 Company: **Tetra Tech**
 Address: **989 Annapolis Rd**
 City/State/Zip: **Annapolis MD 21403**
 Phone: **410-990-4607**
 FAX: _____

Project Name: **L46 MRG**
 Site/Location: **MRAS/BLDG-A*G**
 PO # **117-0512140**

Project Manager: **Peter Rich**
 Phone: **410-990-4607**
 Site Contact: _____
 TAL Contact: _____

Sampled By: **J.M. Wilks**

Analysis Turnaround Time _____
 Standard (Specify) _____
 Rush (Specify) _____



Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	of COCs					
													Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas
BLDG-C EFFLUENT	11-9-18	1240	1141	30	4	10797	11778	✓										
BLDG-C MTDGAC		1143	1144	30	4	09899	11872	-										
BLDG-C EFFLUENT		1147	1148	28.5	4	10930	10605	-										
BLDG-A EFFLUENT		1336	1337	28.5	4	10901	11269	-										
BLDG-A MTDGAC		1340	1341	30	4	10104	11269	-										
BLDG-A EFFLUENT		1344	1345	30	4	09059	11727	✓										

Sampled by: _____

Temperature (Fahrenheit)

Interior	Ambient
Start	
Stop	

Pressure (inches of Hg)

Interior	Ambient
Start	
Stop	

Received @ ambient, 1 box
 Fedex to custody seal intact
 TRK# 7736 9449 7010
 KLW 11/10/18

Special Instructions/QC Requirements & Comments:
BLDG-A EFFLUENT canister 1D-11606

Canisters Shipped by: _____

Date/Time: _____

Samples Relinquished by: *[Signature]*
 Date/Time: **11-9-2018 / 1535**

Relinquished by: *[Signature]*
 Date/Time: **11-9-2018 / 1545**

Canisters Received by: _____

Date/Time: _____

Received by: *[Signature]*
 Date/Time: **11/10/18 0950 TA-KW**

Relinquished by: *[Signature]*
 Date/Time: _____

Received by: _____

Canisters Received: **6 CAN
6 KR**

Lab Use Only

Shipper Name: _____

Opened by: _____

Condition: _____

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID: _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	pH test strip lot number: _____
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only)	Date: _____ Time: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/	<input type="checkbox"/> Residual Chlorine	
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, lab will adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	
Project #: 1402921 PM Instructions: _____					

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5

Date: 11/10/2018

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-13304-a-1	11778	13050	B	1	-2.8	1600	
AFB	140-13304-a-2	11872	13050	B	1	-2.6	1601	
AFB	140-13304-a-3	10605	13076	B	1	-1.4	1602	
AFB	140-13304-a-4	11606	13076	B	1	-3.3	1603	
AFB	140-13304-a-5	11269	13076	B	1	-3.1	1604	
AFB	140-13304-a-6	11727	13076	B	1	-1.7	1605	

<input type="checkbox"/> Receiving -Air Can -Calve Open (NCM # _____)	<input type="checkbox"/> Air - Can P Out -26" - Flow Contr. Faulty (NCM# _____)
<input type="checkbox"/> Air - Can P -24 to -25 " - Flow Contr. Works (NCM# _____)	<input type="checkbox"/> Air - Can P Low -24 to -25 " - Grab Sample (NCM# _____)
<input type="checkbox"/> Air - Can P -24 to -25 " - Flow Contr. Faulty (NCM# _____)	<input type="checkbox"/> Air - Can P Low -26 "- Grab Sample (NCM# _____)
<input type="checkbox"/> Air - Can P Out -26" - Flow Contr. Works (NCM# _____)	

ANALYTICAL REPORT

Job Number: 140-13371-1

Job Description: LMC MRC, MRAS/Building-A

For:

Tetra Tech GEO
51 Franklin Street
Suite 400

Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
11/28/2018 1:17 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
11/28/2018

cc: Belssi Chang
Amy Thomson
Michael Wilks

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TestAmerica Laboratories, Inc.

TestAmerica Knoxville 5815 Middlebrook Pike, Knoxville, TN 37921
Tel (865) 291-3000 Fax (865) 584-4315 www.testamericainc.com

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Definitions/Glossary

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/Building-A

TestAmerica Job ID: 140-13371-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-13371-1

Receipt

The sample was received on 11/16/2018 at 10:15 AM. The sample arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

This report includes canister certification data for the batch certified and/or individually certified canisters used to collect samples as well as for any canisters used for dilution of those samples. All of the canisters used for sample collection or sample dilution for this job were certified to be clean to the levels listed on the results page. Please note that results for individually certified canisters that were not used for sample collection or sample dilution may also be included in the report because these canisters were in the same cleaning batch as the canisters used for this project. Since these canisters were not used for this job, the results have no bearing on the sample results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech GEO
 Project/Site: LMC MRC, MRAS/Building-A

TestAmerica Job ID: 140-13371-1

Client Sample ID: BLDG-A MIDGAC

Lab Sample ID: 140-13371-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.33	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.1		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	16		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.5		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	12		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.72	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.32	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	24		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	5.5		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	65		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	14		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	49		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.5	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.3	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	130		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/Building-A

TestAmerica Job ID: 140-13371-1

Client Sample ID: BLDG-A MIDGAC

Lab Sample ID: 140-13371-1

Date Collected: 11/14/18 14:11

Matrix: Air

Date Received: 11/16/18 10:15

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			11/20/18 03:32	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			11/20/18 03:32	1
Chlorodifluoromethane	0.33	J	0.40	0.075	ppb v/v			11/20/18 03:32	1
Chloroform	1.1		0.40	0.075	ppb v/v			11/20/18 03:32	1
cis-1,2-Dichloroethene	16		0.40	0.12	ppb v/v			11/20/18 03:32	1
Dichlorodifluoromethane	0.44		0.40	0.14	ppb v/v			11/20/18 03:32	1
1,1-Dichloroethane	3.5		0.40	0.050	ppb v/v			11/20/18 03:32	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			11/20/18 03:32	1
1,1-Dichloroethene	12		0.40	0.070	ppb v/v			11/20/18 03:32	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			11/20/18 03:32	1
Methylene Chloride	0.72	J	2.0	0.65	ppb v/v			11/20/18 03:32	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			11/20/18 03:32	1
Naphthalene	ND		0.20	0.20	ppb v/v			11/20/18 03:32	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			11/20/18 03:32	1
Toluene	ND		0.60	0.60	ppb v/v			11/20/18 03:32	1
trans-1,2-Dichloroethene	0.32	J	0.40	0.10	ppb v/v			11/20/18 03:32	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			11/20/18 03:32	1
1,1,1-Trichloroethane	24		0.40	0.060	ppb v/v			11/20/18 03:32	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			11/20/18 03:32	1
Trichloroethene	ND		0.20	0.070	ppb v/v			11/20/18 03:32	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			11/20/18 03:32	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			11/20/18 03:32	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			11/20/18 03:32	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			11/20/18 03:32	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			11/20/18 03:32	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			11/20/18 03:32	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			11/20/18 03:32	1
Chlorodifluoromethane	1.2	J	1.4	0.27	ug/m3			11/20/18 03:32	1
Chloroform	5.5		2.0	0.37	ug/m3			11/20/18 03:32	1
cis-1,2-Dichloroethene	65		1.6	0.48	ug/m3			11/20/18 03:32	1
Dichlorodifluoromethane	2.2		2.0	0.67	ug/m3			11/20/18 03:32	1
1,1-Dichloroethane	14		1.6	0.20	ug/m3			11/20/18 03:32	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			11/20/18 03:32	1
1,1-Dichloroethene	49		1.6	0.28	ug/m3			11/20/18 03:32	1
Ethylbenzene	ND		1.7	0.59	ug/m3			11/20/18 03:32	1
Methylene Chloride	2.5	J	6.9	2.3	ug/m3			11/20/18 03:32	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			11/20/18 03:32	1
Naphthalene	ND		1.0	1.0	ug/m3			11/20/18 03:32	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			11/20/18 03:32	1
Toluene	ND		2.3	2.3	ug/m3			11/20/18 03:32	1
trans-1,2-Dichloroethene	1.3	J	1.6	0.40	ug/m3			11/20/18 03:32	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			11/20/18 03:32	1
1,1,1-Trichloroethane	130		2.2	0.33	ug/m3			11/20/18 03:32	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			11/20/18 03:32	1
Trichloroethene	ND		1.1	0.38	ug/m3			11/20/18 03:32	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			11/20/18 03:32	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			11/20/18 03:32	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/Building-A

TestAmerica Job ID: 140-13371-1

Client Sample ID: BLDG-A MIDGAC

Lab Sample ID: 140-13371-1

Date Collected: 11/14/18 14:11

Matrix: Air

Date Received: 11/16/18 10:15

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			11/20/18 03:32	1
Vinyl chloride	ND		0.51	0.37	ug/m3			11/20/18 03:32	1
Xylenes, Total	ND		3.5	0.52	ug/m3			11/20/18 03:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					11/20/18 03:32	1

Default Detection Limits

Client: Tetra Tech GEO
 Project/Site: LMC MRC, MRAS/Building-A

TestAmerica Job ID: 140-13371-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/Building-A

TestAmerica Job ID: 140-13371-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-13371-1	BLDG-A MIDGAC	102
LCS 140-25527/1002	Lab Control Sample	103
MB 140-25527/9	Method Blank	99

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/Building-A

TestAmerica Job ID: 140-13371-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-25527/9
Matrix: Air
Analysis Batch: 25527

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			11/19/18 16:12	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			11/19/18 16:12	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			11/19/18 16:12	1
Chloroform	ND		0.080	0.015	ppb v/v			11/19/18 16:12	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			11/19/18 16:12	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			11/19/18 16:12	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			11/19/18 16:12	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			11/19/18 16:12	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			11/19/18 16:12	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			11/19/18 16:12	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			11/19/18 16:12	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			11/19/18 16:12	1
Naphthalene	ND		0.040	0.040	ppb v/v			11/19/18 16:12	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			11/19/18 16:12	1
Toluene	ND		0.12	0.12	ppb v/v			11/19/18 16:12	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			11/19/18 16:12	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			11/19/18 16:12	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			11/19/18 16:12	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			11/19/18 16:12	1
Trichloroethene	ND		0.040	0.014	ppb v/v			11/19/18 16:12	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			11/19/18 16:12	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			11/19/18 16:12	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			11/19/18 16:12	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			11/19/18 16:12	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			11/19/18 16:12	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			11/19/18 16:12	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			11/19/18 16:12	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			11/19/18 16:12	1
Chloroform	ND		0.39	0.073	ug/m3			11/19/18 16:12	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			11/19/18 16:12	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			11/19/18 16:12	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			11/19/18 16:12	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			11/19/18 16:12	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			11/19/18 16:12	1
Ethylbenzene	ND		0.35	0.12	ug/m3			11/19/18 16:12	1
Methylene Chloride	ND		1.4	0.45	ug/m3			11/19/18 16:12	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			11/19/18 16:12	1
Naphthalene	ND		0.21	0.21	ug/m3			11/19/18 16:12	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			11/19/18 16:12	1
Toluene	ND		0.45	0.45	ug/m3			11/19/18 16:12	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			11/19/18 16:12	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			11/19/18 16:12	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			11/19/18 16:12	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			11/19/18 16:12	1
Trichloroethene	ND		0.21	0.075	ug/m3			11/19/18 16:12	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			11/19/18 16:12	1

QC Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/Building-A

TestAmerica Job ID: 140-13371-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-25527/9
Matrix: Air
Analysis Batch: 25527

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			11/19/18 16:12	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			11/19/18 16:12	1
Vinyl chloride	ND		0.10	0.074	ug/m3			11/19/18 16:12	1
Xylenes, Total	ND		0.69	0.10	ug/m3			11/19/18 16:12	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	99		60 - 140		11/19/18 16:12	1

Lab Sample ID: LCS 140-25527/1002
Matrix: Air
Analysis Batch: 25527

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.35		ppb v/v		117	70 - 130
Chlorodifluoromethane	2.00	2.06		ppb v/v		103	60 - 140
Chloroform	2.00	2.12		ppb v/v		106	70 - 130
cis-1,2-Dichloroethene	2.00	2.07		ppb v/v		104	70 - 130
Dichlorodifluoromethane	2.00	2.19		ppb v/v		109	60 - 140
1,1-Dichloroethane	2.00	2.05		ppb v/v		102	70 - 130
1,2-Dichloroethane	2.00	2.16		ppb v/v		108	70 - 130
1,1-Dichloroethene	2.00	2.02		ppb v/v		101	70 - 130
Ethylbenzene	2.00	2.20		ppb v/v		110	70 - 130
Methylene Chloride	2.00	1.84		ppb v/v		92	70 - 130
Methyl tert-butyl ether	2.00	2.14		ppb v/v		107	60 - 140
Naphthalene	2.00	2.16		ppb v/v		108	60 - 140
Tetrachloroethene	2.00	2.15		ppb v/v		108	70 - 130
Toluene	2.00	2.14		ppb v/v		107	70 - 130
trans-1,2-Dichloroethene	2.00	2.03		ppb v/v		102	70 - 130
1,2,4-Trichlorobenzene	2.00	2.26		ppb v/v		113	60 - 140
1,1,1-Trichloroethane	2.00	2.18		ppb v/v		109	70 - 130
1,1,2-Trichloroethane	2.00	2.16		ppb v/v		108	70 - 130
Trichloroethene	2.00	2.13		ppb v/v		106	70 - 130
1,2,3-Trimethylbenzene	2.00	1.73		ppb v/v		86	70 - 130
1,2,4-Trimethylbenzene	2.00	2.30		ppb v/v		115	70 - 130
1,3,5-Trimethylbenzene	2.00	2.53		ppb v/v		126	70 - 130
Vinyl chloride	2.00	1.98		ppb v/v		99	70 - 130
Xylenes, Total	6.00	6.69		ppb v/v		112	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	13	14.8		ug/m3		117	70 - 130
Chlorodifluoromethane	7.1	7.28		ug/m3		103	60 - 140
Chloroform	9.8	10.3		ug/m3		106	70 - 130
cis-1,2-Dichloroethene	7.9	8.21		ug/m3		104	70 - 130
Dichlorodifluoromethane	9.9	10.8		ug/m3		109	60 - 140
1,1-Dichloroethane	8.1	8.28		ug/m3		102	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC, MRAS/Building-A

TestAmerica Job ID: 140-13371-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-25527/1002
Matrix: Air
Analysis Batch: 25527

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	8.74		ug/m3		108	70 - 130
1,1-Dichloroethene	7.9	8.01		ug/m3		101	70 - 130
Ethylbenzene	8.7	9.55		ug/m3		110	70 - 130
Methylene Chloride	6.9	6.39		ug/m3		92	70 - 130
Methyl tert-butyl ether	7.2	7.71		ug/m3		107	60 - 140
Naphthalene	10	11.3		ug/m3		108	60 - 140
Tetrachloroethene	14	14.6		ug/m3		108	70 - 130
Toluene	7.5	8.06		ug/m3		107	70 - 130
trans-1,2-Dichloroethene	7.9	8.07		ug/m3		102	70 - 130
1,2,4-Trichlorobenzene	15	16.7		ug/m3		113	60 - 140
1,1,1-Trichloroethane	11	11.9		ug/m3		109	70 - 130
1,1,2-Trichloroethane	11	11.8		ug/m3		108	70 - 130
Trichloroethene	11	11.4		ug/m3		106	70 - 130
1,2,3-Trimethylbenzene	9.8	8.49		ug/m3		86	70 - 130
1,2,4-Trimethylbenzene	9.8	11.3		ug/m3		115	70 - 130
1,3,5-Trimethylbenzene	9.8	12.4		ug/m3		126	70 - 130
Vinyl chloride	5.1	5.06		ug/m3		99	70 - 130
Xylenes, Total	26	29.1		ug/m3		112	70 - 130

Surrogate	LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	103		60 - 140

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/Building-A

TestAmerica Job ID: 140-13371-1

Air - GC/MS VOA

Analysis Batch: 25527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-13371-1	BLDG-A MIDGAC	Total/NA	Air	TO 15 LL	
MB 140-25527/9	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-25527/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/Building-A

TestAmerica Job ID: 140-13371-1

Client Sample ID: BLDG-A MIDGAC

Lab Sample ID: 140-13371-1

Date Collected: 11/14/18 14:11

Matrix: Air

Date Received: 11/16/18 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	25527	11/20/18 03:32	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-25527/9

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	25527	11/19/18 16:12	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-25527/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	25527	11/19/18 10:01	S1K	TAL KNX
Instrument ID: MR										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/Building-A

TestAmerica Job ID: 140-13371-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC, MRAS/Building-A

TestAmerica Job ID: 140-13371-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-13371-1	BLDG-A MIDGAC	Air	11/14/18 14:11	11/16/18 10:15

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-13371-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-A MIDGAC	140-13371-1	102
	MB 140-25527/9	99
	LCS 140-25527/1002	103

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: RCCVK19-Client.d
 Lab ID: LCS 140-25527/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.06	103	70-130	
Carbon tetrachloride	2.00	2.35	117	70-130	
Chlorodifluoromethane	2.00	2.06	103	60-140	
Chloroform	2.00	2.12	106	70-130	
cis-1,2-Dichloroethene	2.00	2.07	104	70-130	
Dichlorodifluoromethane	2.00	2.19	109	60-140	
1,1-Dichloroethane	2.00	2.05	102	70-130	
1,2-Dichloroethane	2.00	2.16	108	70-130	
1,1-Dichloroethene	2.00	2.02	101	70-130	
Ethylbenzene	2.00	2.20	110	70-130	
Methylene Chloride	2.00	1.84	92	70-130	
Methyl tert-butyl ether	2.00	2.14	107	60-140	
Naphthalene	2.00	2.16	108	60-140	
Tetrachloroethene	2.00	2.15	108	70-130	
Toluene	2.00	2.14	107	70-130	
trans-1,2-Dichloroethene	2.00	2.03	102	70-130	
1,2,4-Trichlorobenzene	2.00	2.26	113	60-140	
1,1,1-Trichloroethane	2.00	2.18	109	70-130	
1,1,2-Trichloroethane	2.00	2.16	108	70-130	
Trichloroethene	2.00	2.13	106	70-130	
1,2,3-Trimethylbenzene	2.00	1.73	86	70-130	
1,2,4-Trimethylbenzene	2.00	2.30	115	70-130	
1,3,5-Trimethylbenzene	2.00	2.53	126	70-130	
Vinyl chloride	2.00	1.98	99	70-130	
Xylenes, Total	6.00	6.69	112	70-130	

Column to be used to flag recovery and RPD values
 FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Lab File ID: R500BK19.D Lab Sample ID: MB 140-25527/9
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MR Date Analyzed: 11/19/2018 16:12
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
BLDG-A MIDGAC	140-13371-1	RK19P113.D	11/20/2018 03:32

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Lab File ID: RFBK16I.D BFB Injection Date: 11/16/2018
 Instrument ID: MR BFB Injection Time: 16:00
 Analysis Batch No.: 25490

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	58.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	91.0	
175	5.0 - 9.0 % of mass 174	6.6	(7.3) 1
176	95.0 - 101.0 % of mass 174	88.8	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-25490/3	RK16IC09.D	11/16/2018	17:23
	IC 140-25490/5	RK16IC10.D	11/16/2018	19:07
	IC 140-25490/8	RK16IC01.D	11/16/2018	21:42
	IC 140-25490/9	RK16IC02.D	11/16/2018	22:34
	IC 140-25490/10	RK16IC03.D	11/16/2018	23:27
	IC 140-25490/11	RK16IC04.D	11/17/2018	00:20
	IC 140-25490/12	RK16IC05.D	11/17/2018	01:12
	IC 140-25490/13	RK16IC06.D	11/17/2018	02:05
	ICIS 140-25490/14	RK16IC07.D	11/17/2018	02:58
	IC 140-25490/15	RK16IC08.D	11/17/2018	03:51
	ICV 140-25490/18	RK16ICV.D	11/17/2018	06:27

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Lab File ID: RBFBK19.D BFB Injection Date: 11/19/2018
 Instrument ID: MR BFB Injection Time: 09:29
 Analysis Batch No.: 25527

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	19.7
75	30.0 - 60.0 % of mass 95	58.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.9
173	Less than 2.0 % of mass 174	0.6 (0.7) 1
174	50.0 - 120.00 % of mass 95	88.5
175	5.0 - 9.0 % of mass 174	6.6 (7.5) 1
176	95.0 - 101.0 % of mass 174	86.6 (97.9) 1
177	5.0 - 9.0 % of mass 176	5.7 (6.6) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-25527/2	RCCVK19.D	11/19/2018	10:01
	LCS 140-25527/1002	RCCVK19-Client.d	11/19/2018	10:01
	MB 140-25527/9	R500BK19.D	11/19/2018	16:12
BLDG-A MIDGAC	140-13371-1	RK19P113.D	11/20/2018	03:32

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Sample No.: ICIS 140-25490/14 Date Analyzed: 11/17/2018 02:58
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RK16IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	298864	7.40	1677758	9.49	1487799	14.56
UPPER LIMIT	418410	7.73	2348861	9.82	2082919	14.89
LOWER LIMIT	179318	7.07	1006655	9.16	892679	14.23
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-25490/18	299493	7.38	1671036	9.48	1499042	14.55

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Sample No.: CCVIS 140-25527/2 Date Analyzed: 11/19/2018 10:01
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RCCVK19.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	255068	7.39	1449950	9.48	1303291	14.55	
UPPER LIMIT	357095	7.72	2029930	9.81	1824607	14.88	
LOWER LIMIT	153041	7.06	869970	9.15	781975	14.22	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-25527/1002	255068	7.39	1449950	9.48	1303291	14.55	
MB 140-25527/9	263863	7.39	1481834	9.48	1296573	14.55	
140-13371-1	BLDG-A MIDGAC	253647	7.40	1436401	9.49	1250034	14.56

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Client Sample ID: BLDG-A MIDGAC Lab Sample ID: 140-13371-1
 Matrix: Air Lab File ID: RK19P113.D
 Analysis Method: TO 15 LL Date Collected: 11/14/2018 14:11
 Sample wt/vol: 100(mL) Date Analyzed: 11/20/2018 03:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25527 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.33	J	0.40	0.075
67-66-3	Chloroform	119.38	1.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	16		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	3.5		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	12		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.72	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.32	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	24		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Client Sample ID: BLDG-A MIDGAC Lab Sample ID: 140-13371-1
 Matrix: Air Lab File ID: RK19P113.D
 Analysis Method: TO 15 LL Date Collected: 11/14/2018 14:11
 Sample wt/vol: 100(mL) Date Analyzed: 11/20/2018 03:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25527 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.2	J	1.4	0.27
67-66-3	Chloroform	119.38	5.5		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	65		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	14		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	49		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.3	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	130		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RK19P113.D
 Lims ID: 140-13371-A-1
 Client ID: BLDG-A MIDGAC
 Sample Type: Client
 Inject. Date: 20-Nov-2018 03:32:30 ALS Bottle#: 13 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010037-022
 Misc. Info.: 140-13371-a-1
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 17:32:10 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: sodsaip Date: 20-Nov-2018 16:54:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.395	7.385	0.010	69	253647	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.482	0.011	95	1436401	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.557	14.551	0.005	90	1250034	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.282	0.000	89	1085444	4.08	
6 Chlorodifluoromethane	51	3.427	3.402	0.027	61	10067	0.0669	
8 Dichlorodifluoromethane	85	3.470	3.451	0.022	100	24459	0.0886	
27 1,1-Dichloroethene	96	5.034	5.021	0.017	97	222671	2.49	
31 Methylene Chloride	84	5.287	5.280	0.011	88	12231	0.1442	
34 trans-1,2-Dichloroethene	96	5.945	5.938	0.011	93	5908	0.0649	
37 1,1-Dichloroethane	63	6.279	6.273	0.011	98	106340	0.6980	
41 cis-1,2-Dichloroethene	96	7.120	7.120	0.005	95	300467	3.27	
43 Chloroform	83	7.433	7.428	0.011	95	55076	0.2273	
45 1,1,1-Trichloroethane	97	8.361	8.356	0.011	95	1479418	4.82	
47 Benzene	78	8.916	8.910	0.011	93	5254	0.0224	
65 Toluene	91	12.470	12.469	0.006	92	17946	0.0599	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RK19P113.D

Injection Date: 20-Nov-2018 03:32:30

Instrument ID: MR

Operator ID:

Lims ID: 140-13371-A-1

Lab Sample ID: 140-13371-1

Worklist Smp#: 22

Client ID: BLDG-A MIDGAC

Purge Vol: 500.000 mL

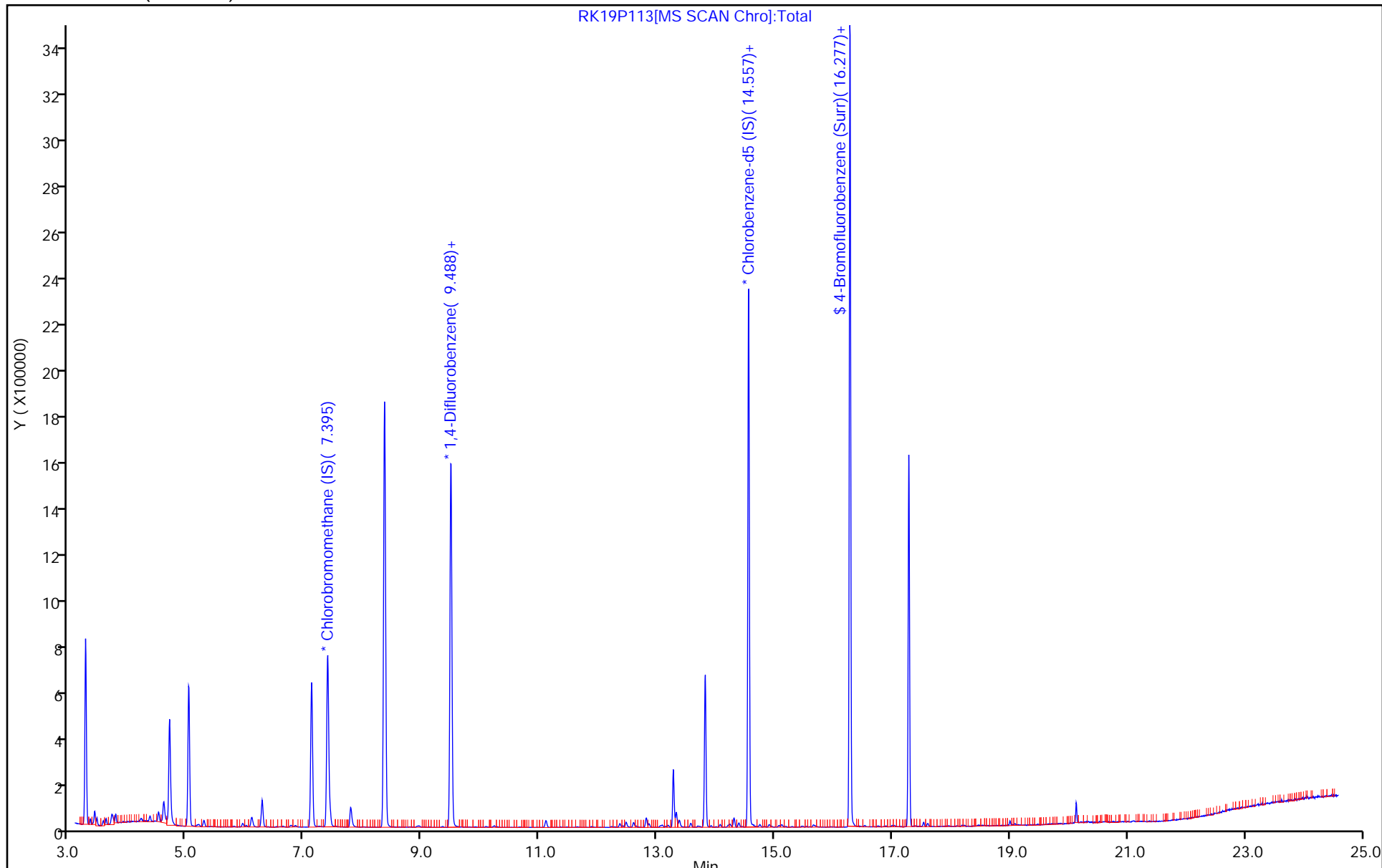
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RK19P113.D
 Lims ID: 140-13371-A-1
 Client ID: BLDG-A MIDGAC
 Sample Type: Client
 Inject. Date: 20-Nov-2018 03:32:30 ALS Bottle#: 13 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010037-022
 Misc. Info.: 140-13371-a-1
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 17:32:10 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: sodsaip Date: 20-Nov-2018 16:54:02

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.08	102.08

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RK19P113.D

Injection Date: 20-Nov-2018 03:32:30

Instrument ID: MR

Lims ID: 140-13371-A-1

Lab Sample ID: 140-13371-1

Client ID: BLDG-A MIDGAC

Operator ID:

ALS Bottle#: 13

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

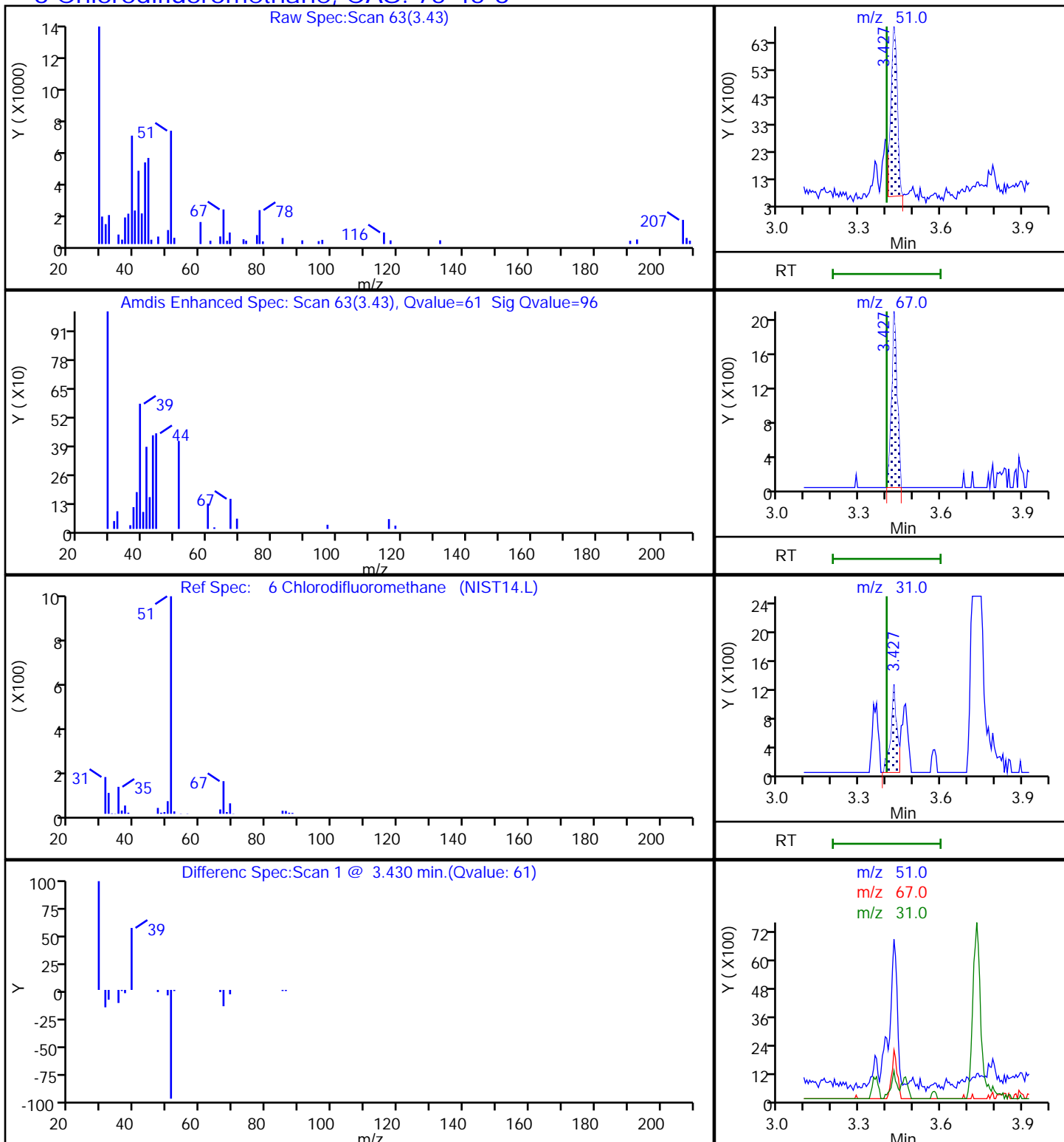
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RK19P113.D

Injection Date: 20-Nov-2018 03:32:30

Instrument ID: MR

Lims ID: 140-13371-A-1

Lab Sample ID: 140-13371-1

Client ID: BLDG-A MIDGAC

Operator ID:

ALS Bottle#: 13 Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

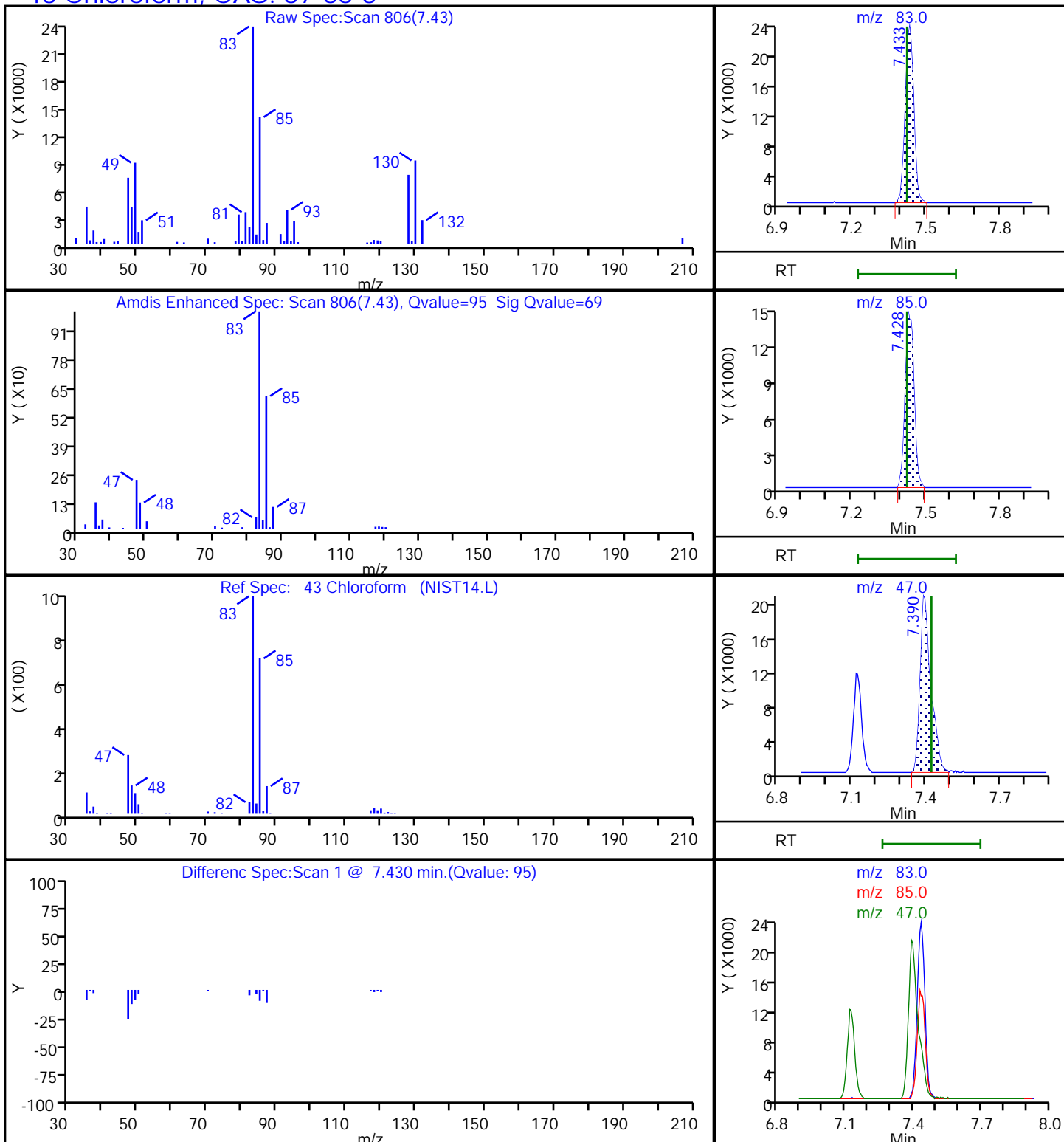
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RK19P113.D

Injection Date: 20-Nov-2018 03:32:30

Instrument ID: MR

Lims ID: 140-13371-A-1

Lab Sample ID: 140-13371-1

Client ID: BLDG-A MIDGAC

Operator ID:

ALS Bottle#: 13

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

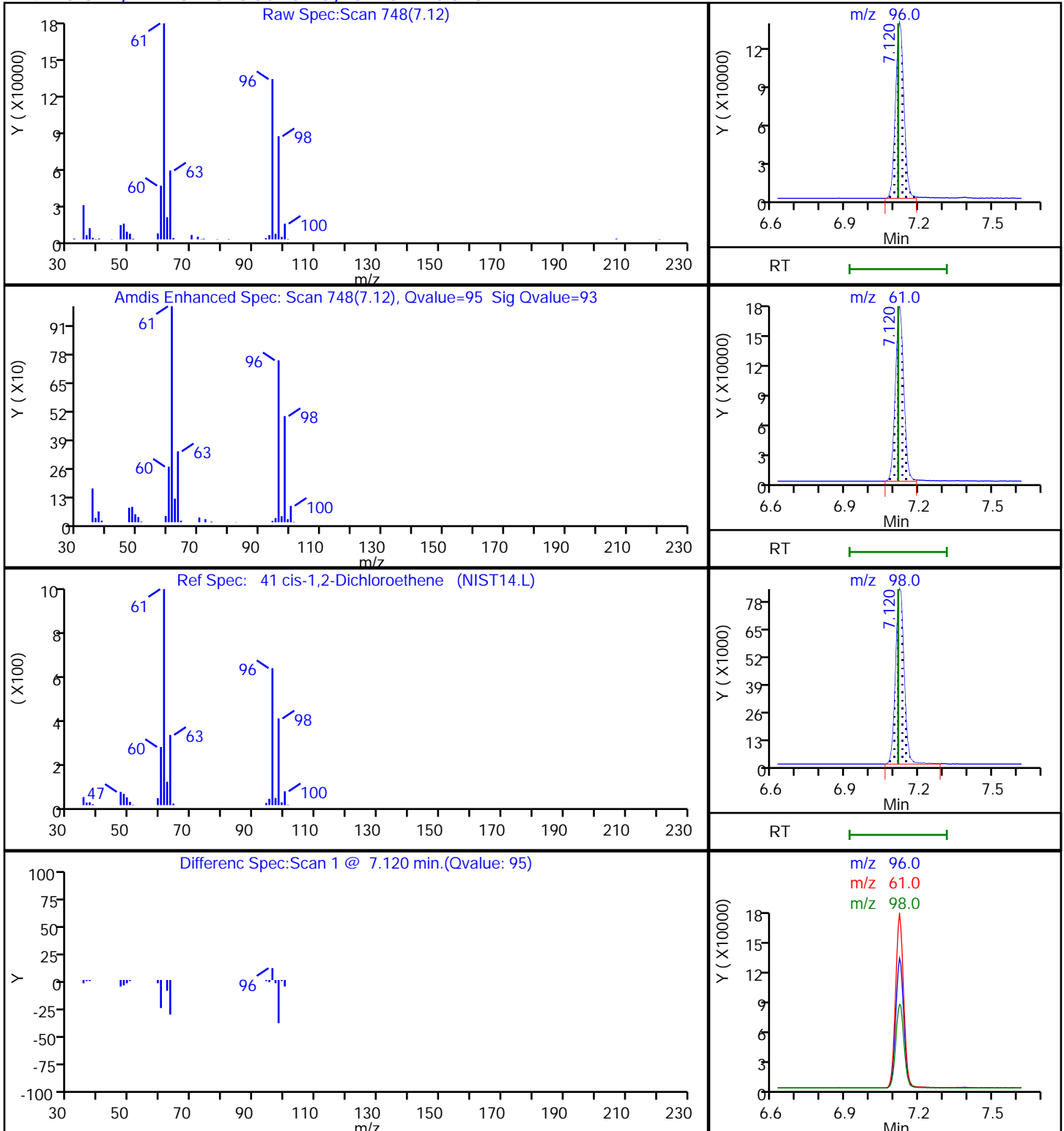
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RK19P113.D

Injection Date: 20-Nov-2018 03:32:30

Instrument ID: MR

Lims ID: 140-13371-A-1

Lab Sample ID: 140-13371-1

Client ID: BLDG-A MIDGAC

Operator ID:

ALS Bottle#: 13

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

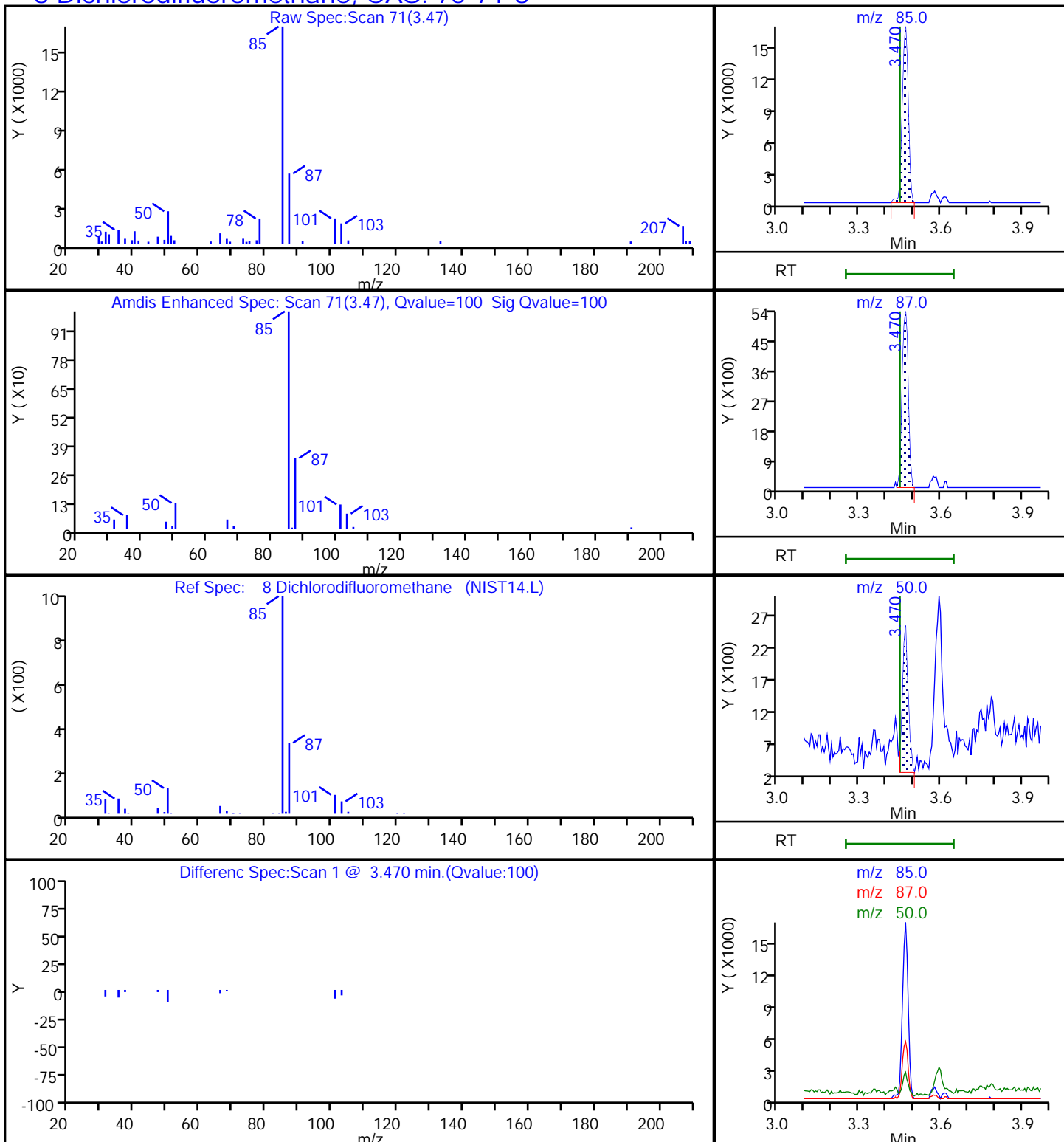
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RK19P113.D

Injection Date: 20-Nov-2018 03:32:30

Instrument ID: MR

Lims ID: 140-13371-A-1

Lab Sample ID: 140-13371-1

Client ID: BLDG-A MIDGAC

Operator ID:

ALS Bottle#: 13 Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

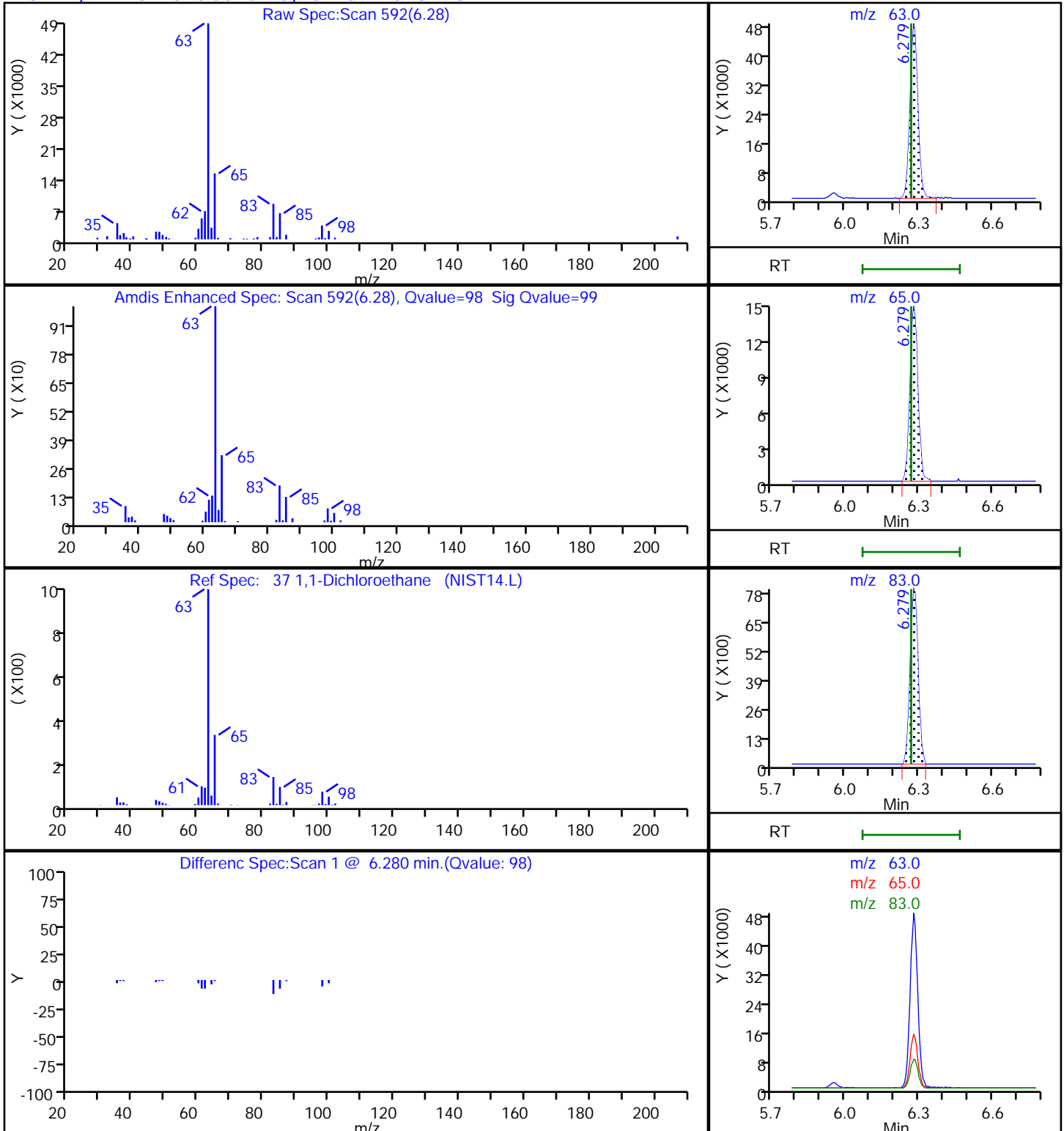
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RK19P113.D

Injection Date: 20-Nov-2018 03:32:30

Instrument ID: MR

Lims ID: 140-13371-A-1

Lab Sample ID: 140-13371-1

Client ID: BLDG-A MIDGAC

Operator ID:

ALS Bottle#: 13 Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

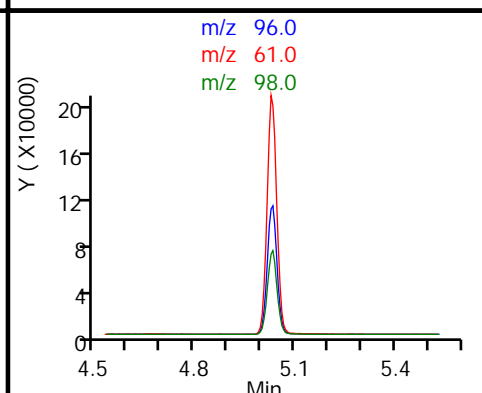
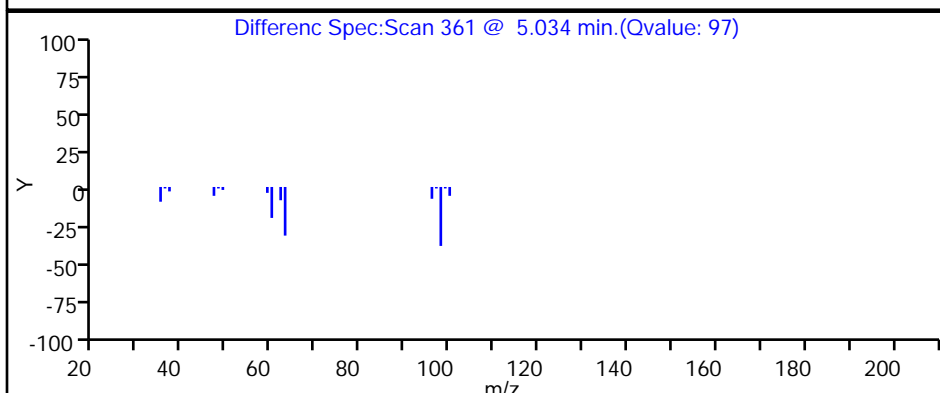
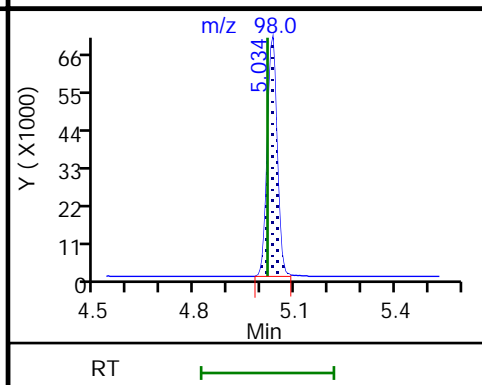
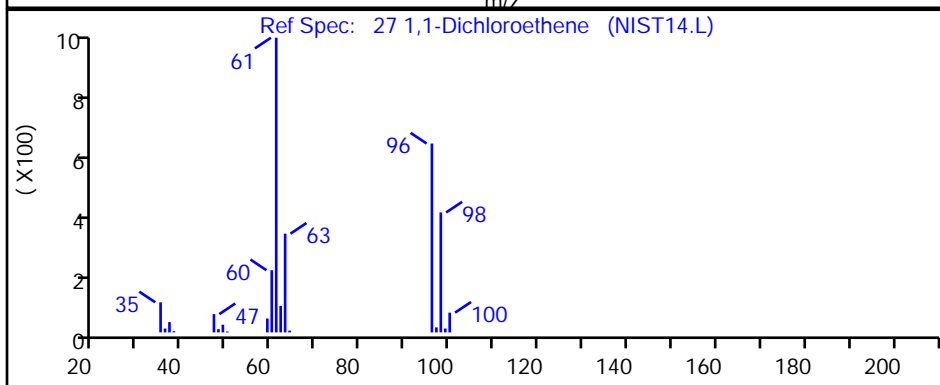
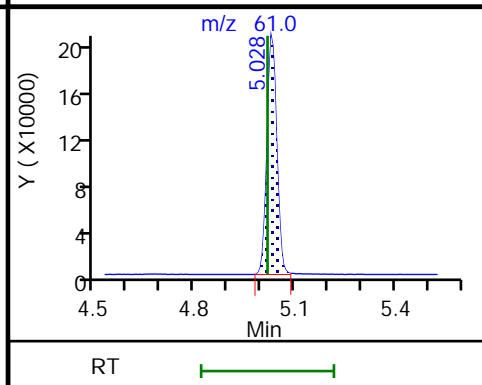
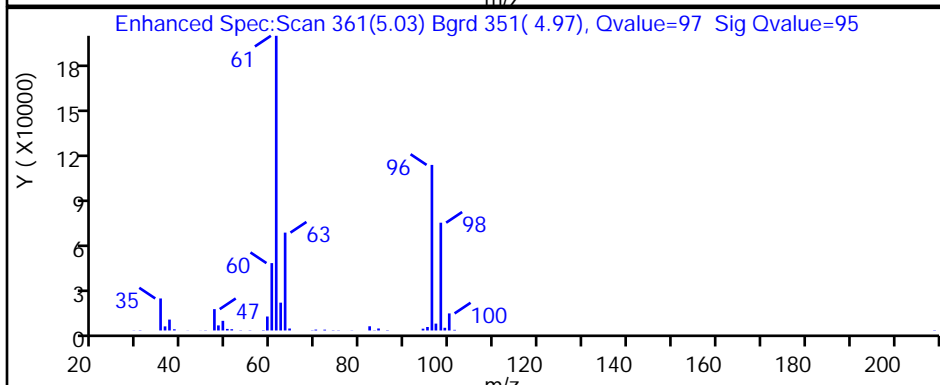
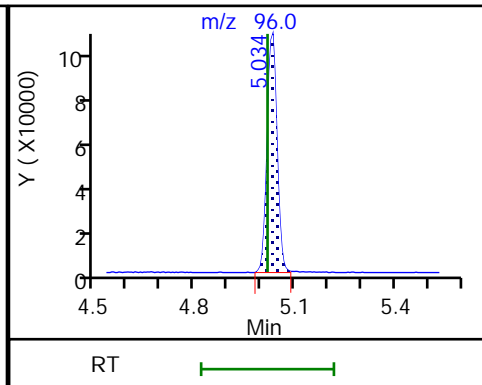
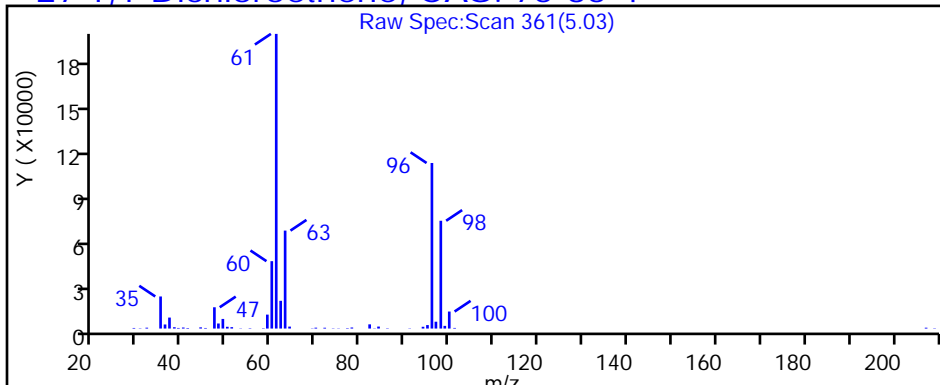
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RK19P113.D

Injection Date: 20-Nov-2018 03:32:30

Instrument ID: MR

Lims ID: 140-13371-A-1

Lab Sample ID: 140-13371-1

Client ID: BLDG-A MIDGAC

Operator ID:

ALS Bottle#: 13 Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

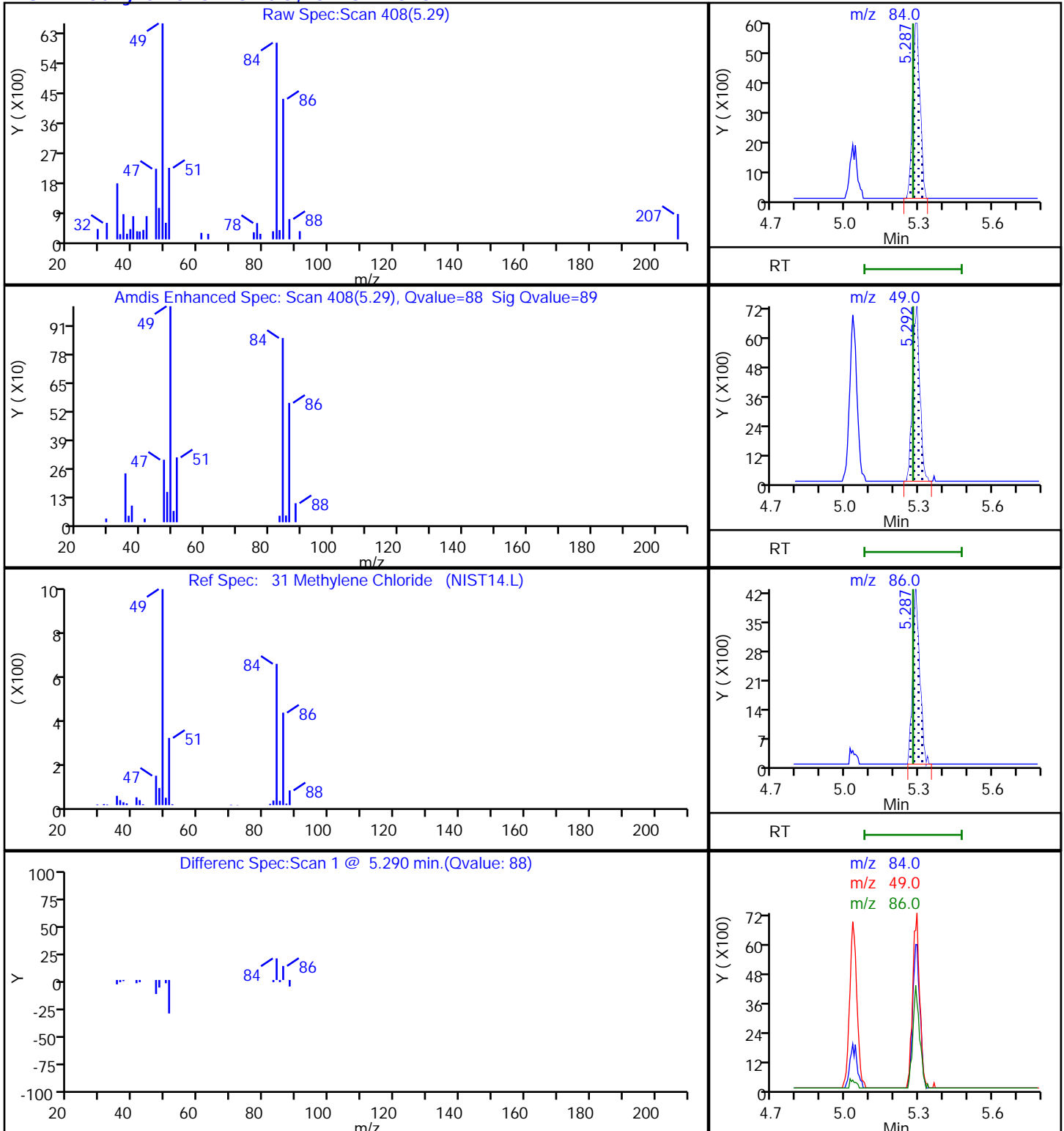
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RK19P113.D

Injection Date: 20-Nov-2018 03:32:30

Instrument ID: MR

Lims ID: 140-13371-A-1

Lab Sample ID: 140-13371-1

Client ID: BLDG-A MIDGAC

Operator ID:

ALS Bottle#: 13 Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

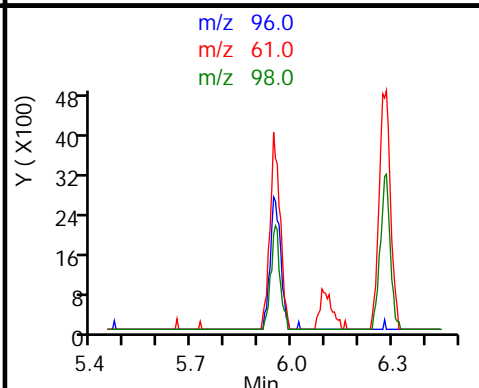
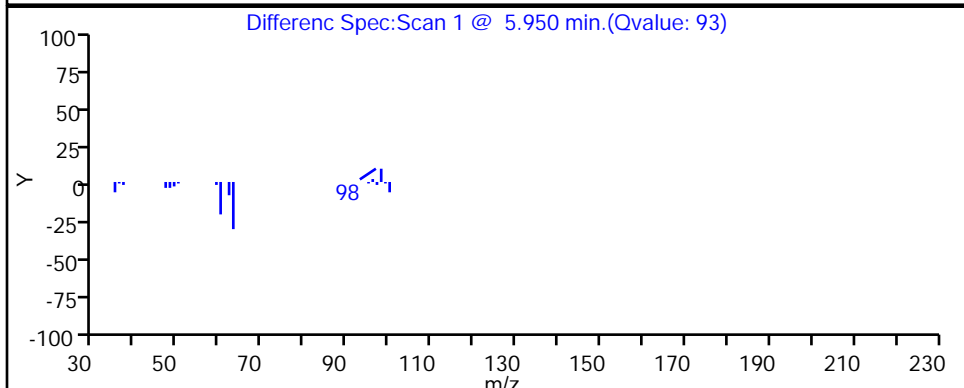
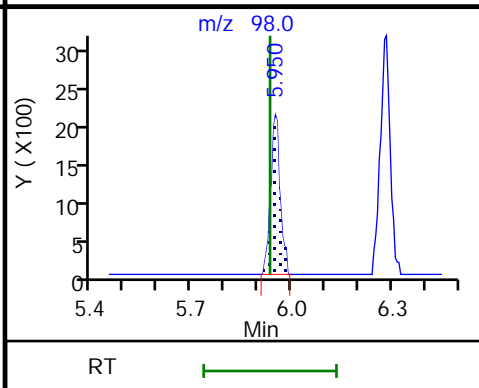
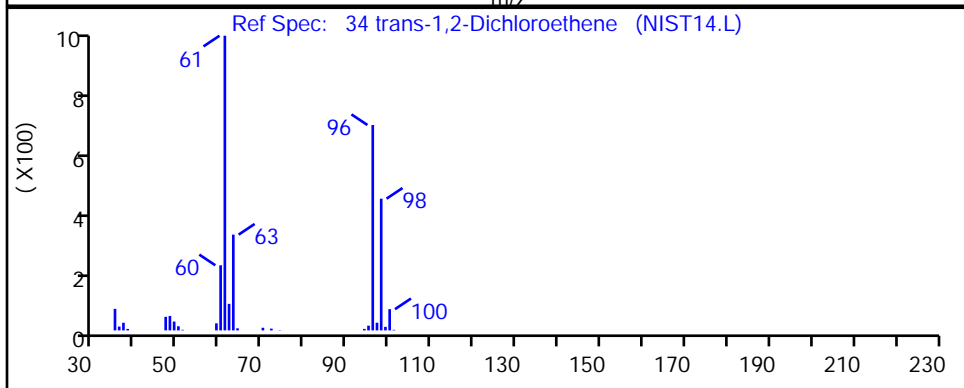
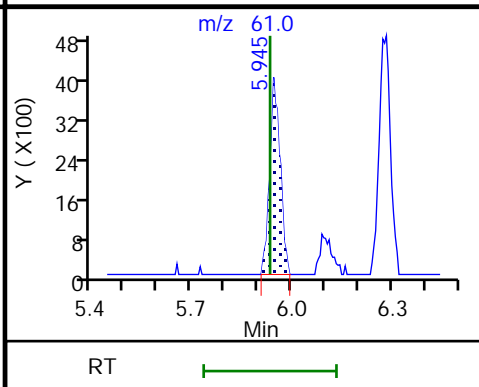
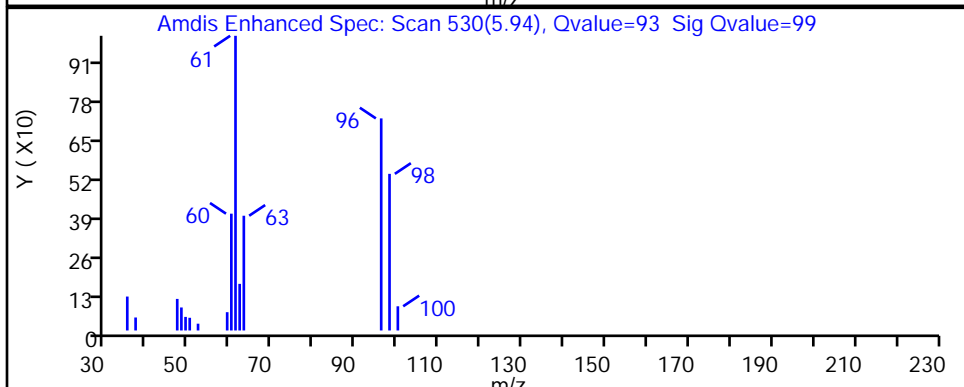
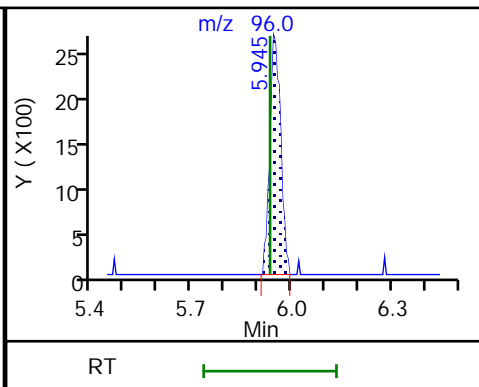
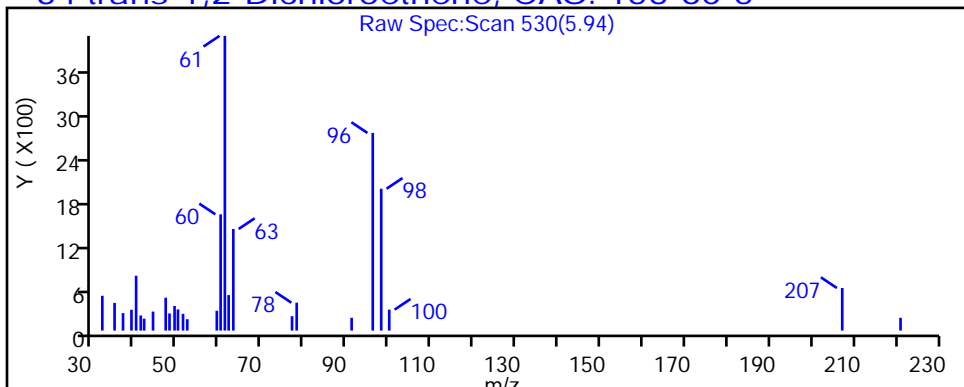
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RK19P113.D

Injection Date: 20-Nov-2018 03:32:30

Instrument ID: MR

Lims ID: 140-13371-A-1

Lab Sample ID: 140-13371-1

Client ID: BLDG-A MIDGAC

Operator ID:

ALS Bottle#: 13 Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

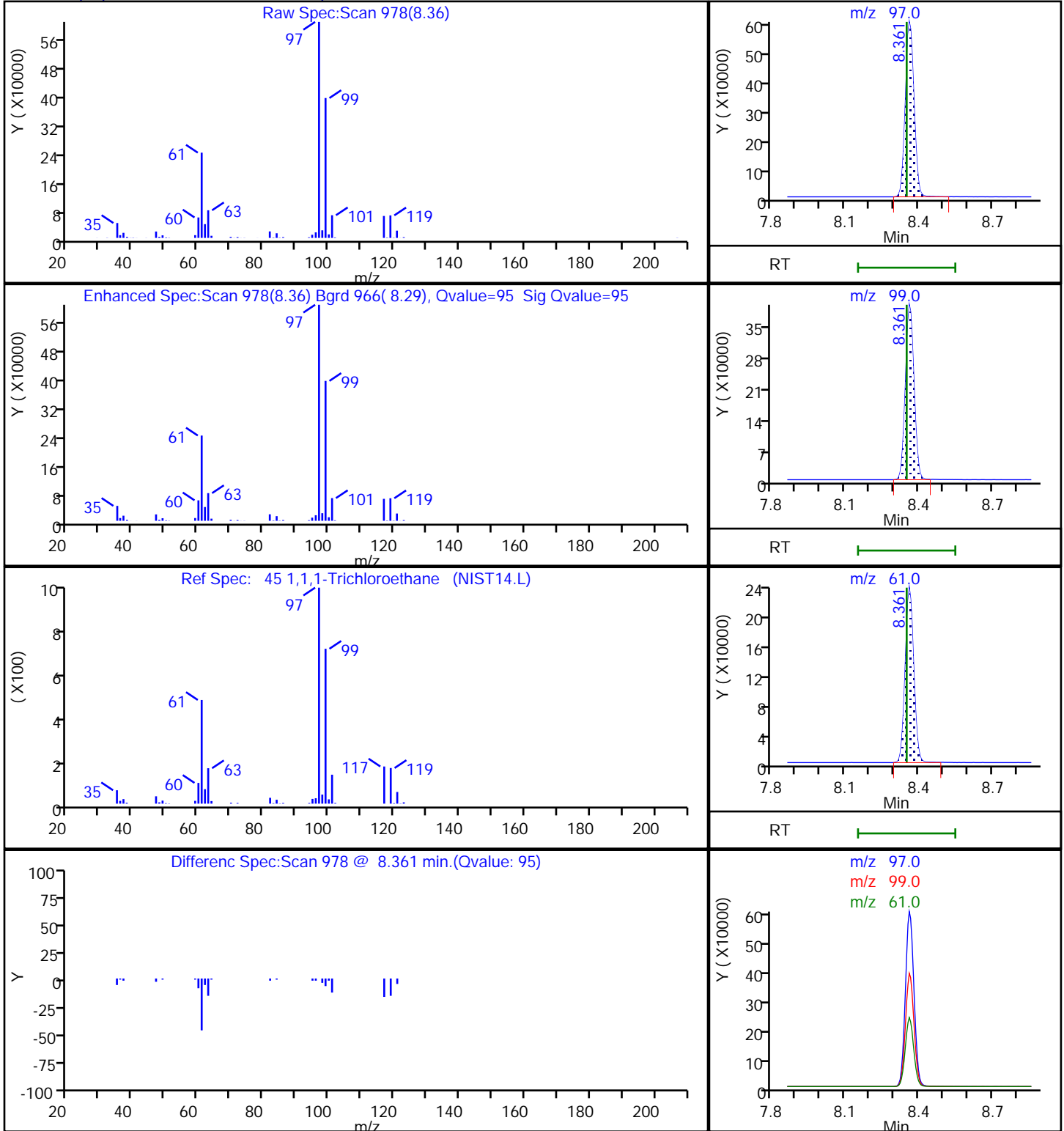
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6

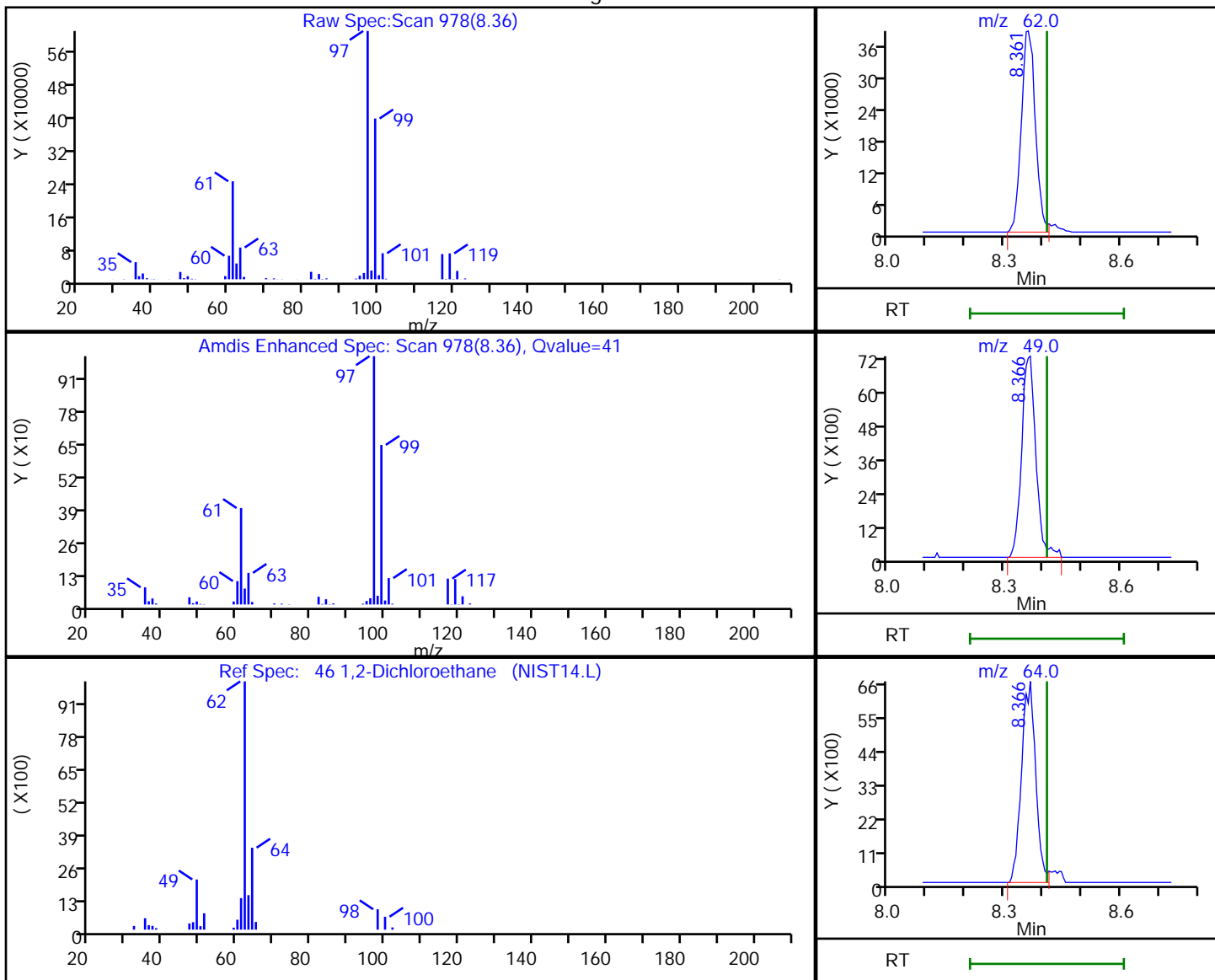


TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RK19P113.D
 Injection Date: 20-Nov-2018 03:32:30 Instrument ID: MR
 Lims ID: 140-13371-A-1 Lab Sample ID: 140-13371-1
 Client ID: BLDG-A MIDGAC
 Operator ID: ALS Bottle#: 13 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.36	62.00	97974	0.538862
8.37	49.00	18643	
8.37	64.00	16842	

Reviewer: sodsaip, 20-Nov-2018 17:31:57

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	++++ 2.3273	++++ 2.2136	2.6032 2.2367	2.5523 2.4103	2.4630 2.1808	Ave		2.3734			6.7		30.0				
Propene	++++ 0.7221	++++ 0.6895	++++ 0.6844	0.8419 0.7524	0.7507 0.6660	Ave		0.7296			8.2		30.0				
Dichlorodifluoromethane	++++ 4.1510	++++ 3.9686	4.5412 4.0428	4.2461 4.8211	5.3003 3.7479	Ave		4.3524			11.7		30.0				
Chloromethane	++++ 0.2871	++++ 0.2733	0.4314 0.2689	0.2960 0.2912	0.3371 0.2638	Ave		0.3061			18.1		30.0				
1,2-Dichloro-1,1,2,2-tetrafluoroethane	++++ 3.0989	3.8991 3.0537	3.2433 3.1101	3.1843 3.3433	3.5538 2.6767	Ave		3.2404			10.6		30.0				
Vinyl chloride	1.3396 0.9887	1.3354 0.9559	1.1215 0.9544	1.1058 0.9748	1.0442 0.9105	Ave		1.0731			14.4		30.0				
1,3-Butadiene	++++ 0.6523	++++ 0.6352	++++ 0.6377	0.7017 0.6500	0.6571 0.6202	Ave		0.6506			4.0		30.0				
Butane	++++ 1.1091	++++ 1.0560	1.3166 1.0795	1.1752 1.0850	1.2095 1.0260	Ave		1.1321			8.5		30.0				
Bromomethane	++++ 1.2054	++++ 1.1811	1.4266 1.1809	1.2696 1.2035	1.2705 1.1456	Ave		1.2354			7.2		30.0				
Chloroethane	++++ 0.4893	++++ 0.4606	0.6023 0.4673	0.5518 0.4597	0.4948 0.4499	Ave		0.4970			10.7		30.0				
Ethanol	++++ 0.2949	++++ 0.2999	++++ 0.2981	0.3286 0.2885	0.3153 0.2724	Ave		0.2997			6.1		30.0				
Vinyl bromide	++++ 1.2738	++++ 1.2507	1.4513 1.2699	1.3532 1.2460	1.3493 1.2216	Ave		1.3020			5.9		30.0				
2-Methylbutane	++++ 0.7979	++++ 0.7734	0.8639 0.7606	0.8536 0.7713	0.8359 0.7425	Ave		0.7999			5.7		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Acrolein	++++ 0.2149	++++ 0.2505	++++ 0.2493	0.3397 0.2426	0.2316 0.2411	Ave		0.2528			15.9		30.0				
Trichlorofluoromethane	6.6790 5.8128	6.2714 5.6498	6.2323 5.6579	6.0249 5.5584	5.9679 5.2697	Ave		5.9124			6.9		30.0				
Acetonitrile	++++ 0.2348	++++ 0.2373	++++ 0.2818	0.2630 0.2803	0.2428 0.2703	Ave		0.2586			7.8		30.0				
Acetone	++++ 0.4175	++++ 0.3860	++++ 0.3784	0.5760 0.3627	0.4291 0.3557	Ave		0.4151			18.3		30.0				
Pentane	++++ 0.1987	++++ 0.1907	++++ 0.1944	0.2412 0.1914	0.2034 0.1879	Ave		0.2011			9.2		30.0				
Isopropyl alcohol	++++ 1.1215	++++ 1.1376	++++ 1.1294	1.2584 1.0760	1.1488 1.0492	Ave		1.1316			5.9		30.0				
Ethyl ether	++++ 0.6540	++++ 0.6244	++++ 0.6327	0.7089 0.6995	0.6970 0.6464	Ave		0.6661			5.2		30.0				
1,1-Dichloroethene	1.6400 1.3612	1.4528 1.3523	1.4077 1.3829	1.3842 1.3970	1.3751 1.3233	Ave		1.4076			6.3		30.0				
Acrylonitrile	++++ 0.6195	++++ 0.6124	++++ 0.6202	++++ 0.6572	0.6255 0.6313	Ave		0.6277			2.5		30.0				
tert-Butyl alcohol	++++ 2.6737	++++ 2.7383	++++ 2.6973	2.6805 2.6655	2.7132 2.5593	Ave		2.6773			2.0		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.5282	3.6010 3.4530	3.7397 3.4392	3.5306 3.4042	3.5510 3.1580	Ave		3.4894			4.6		30.0				
Methylene Chloride	++++ 1.2853	++++ 1.1917	++++ 1.1531	2.0228 1.1482	1.5003 1.0647	Ave		1.3380			24.9		30.0				
3-Chloropropene	++++ 1.3439	++++ 1.2944	1.1777 1.2837	1.4302 1.3374	1.3141 1.2919	Ave		1.3092			5.4		30.0				
Carbon disulfide	++++ 3.4096	++++ 3.3395	3.3655 3.3248	3.2471 3.4285	3.3320 3.2774	Ave		3.3406			1.8		30.0				
trans-1,2-Dichloroethene	1.5926 1.4009	1.5829 1.3797	1.4276 1.4044	1.3885 1.4254	1.3834 1.3721	Ave		1.4358			5.7		30.0				
2-Methylpentane	++++ 1.8951	++++ 1.8425	++++ 1.8466	1.9630 1.9346	1.9304 1.8132	Ave		1.8940			2.8		30.0				
Methyl tert-butyl ether	++++ 4.5873	++++ 4.5288	4.7495 4.5802	4.4631 4.6026	4.5963 4.4400	Ave		4.5685			2.1		30.0				
1,1-Dichloroethane	2.6815 2.3300	2.6739 2.2911	2.4729 2.3182	2.3130 2.3408	2.3587 2.2447	Ave		2.4025			6.5		30.0				
Vinyl acetate	++++ 2.2364	++++ 2.3368	++++ 2.4359	2.0297 2.5381	2.1537 2.5129	Ave		2.3205			8.2		30.0				
2-Butanone (MEK)	++++ 0.5380	++++ 0.5309	++++ 0.5519	0.5759 0.5616	0.5098 0.5445	Ave		0.5446			3.9		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13371-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	++++ 0.8187	++++ 0.8108	0.9023 0.8291	0.8416 0.8382	0.8376 0.8031	Ave		0.8352			3.6		30.0				
cis-1,2-Dichloroethene	1.6200 1.4112	1.4958 1.4310	1.4342 1.4304	1.4272 1.4418	1.3943 1.3928	Ave		1.4479			4.6		30.0				
Ethyl acetate	++++ 2.0207	++++ 2.0336	1.8097 2.1099	1.9184 2.1701	1.9214 2.1110	Ave		2.0119			6.0		30.0				
Chloroform	4.2334 3.7394	4.0960 3.6835	3.8341 3.7449	3.7602 3.7523	3.7763 3.5872	Ave		3.8207			5.1		30.0				
Tetrahydrofuran	++++ 0.8846	++++ 0.8714	++++ 0.8870	0.8784 0.9150	0.8832 0.8836	Ave		0.8862			1.5		30.0				
1,1,1-Trichloroethane	4.9709 4.7770	4.9939 4.7670	5.0122 4.8476	4.7467 4.8764	4.7402 4.7023	Ave		4.8434			2.4		30.0				
1,2-Dichloroethane	0.5380 0.5057	0.5327 0.4936	0.5166 0.4997	0.4858 0.5068	0.4926 0.4915	Ave		0.5063			3.5		30.0				
Benzene	0.7533 0.6321	0.7075 0.6240	0.7019 0.6266	0.6312 0.6238	0.6214 0.5956	Ave		0.6517			7.8		30.0				
Cyclohexane	++++ 0.1013	++++ 0.0986	++++ 0.1001	0.0959 0.0971	0.0939 0.0911	Ave		0.0968			3.7		30.0				
1-Butanol	++++ 0.0448	++++ 0.0477	++++ 0.0492	++++ 0.0516	0.0330 0.0509	Ave		0.0462			14.9		30.0				
Carbon tetrachloride	0.9231 0.9489	0.9429 0.9372	0.7537 0.9263	0.9038 0.9692	0.9350 0.9273	Ave		0.9167			6.5		30.0				
2,3-Dimethylpentane	++++ 0.1378	++++ 0.1390	++++ 0.1212	0.1277 0.1410	0.1355 0.1365	Ave		0.1349			5.2		30.0				
Thiophene	++++ 0.3778	++++ 0.3718	0.3563 0.3816	0.3607 0.3893	0.3698 0.3754	Ave		0.3728			2.9		30.0				
2,2,4-Trimethylpentane	++++ 0.8423	++++ 0.8248	++++ 0.8652	0.8182 0.8535	0.8128 0.8176	Ave		0.8342			2.3		30.0				
1,2-Dichloropropane	++++ 0.2041	++++ 0.2015	0.2130 0.2054	0.1991 0.2089	0.2024 0.2020	Ave		0.2045			2.2		30.0				
Heptane	++++ 0.2142	++++ 0.2122	++++ 0.1976	0.1979 0.2154	0.2071 0.2066	Ave		0.2083			3.5		30.0				
Trichloroethene	0.4192 0.3857	0.3851 0.3869	0.4007 0.4221	0.3771 0.3913	0.3880 0.3727	Ave		0.3929			4.2		30.0				
Dibromomethane	++++ 0.3459	++++ 0.3374	++++ 0.3725	0.3565 0.3576	0.3464 0.3447	Ave		0.3514			3.1		30.0				
Bromodichloromethane	++++ 0.6680	++++ 0.6726	0.5971 0.7005	0.5918 0.7174	0.6239 0.6980	Ave		0.6587			7.4		30.0				
1,4-Dioxane	++++ 0.0965	++++ 0.1030	++++ 0.1037	++++ 0.1007	0.0992 0.0954	Ave		0.0994			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13371-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.2243	++++ 0.2331	0.2139 0.2468	0.1766 0.2628	0.2044 0.2582	Ave		0.2275			12.8		30.0				
Methylcyclohexane	++++ 0.4067	++++ 0.4050	0.3972 0.4110	0.3842 0.4158	0.3938 0.4053	Ave		0.4024			2.5		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.3577	++++ 0.3715	++++ 0.3933	0.2895 0.4035	0.3277 0.3952	Ave		0.3626			11.5		30.0				
cis-1,3-Dichloropropene	++++ 0.3940	0.3635 0.4127	0.3972 0.4288	0.3514 0.4368	0.3808 0.4249	Ave		0.3948			8.2		30.0				
trans-1,3-Dichloropropene	++++ 0.4780	0.4035 0.4968	0.3959 0.5178	0.4276 0.5209	0.4537 0.5119	Ave		0.4674			10.5		30.0				
Toluene	1.0184 0.9698	0.9133 0.9624	0.9750 0.9710	0.9478 0.9638	0.9541 0.9102	Ave		0.9586			3.2		30.0				
1,1,2-Trichloroethane	0.2339 0.2639	0.2426 0.2594	0.2564 0.2610	0.2580 0.2630	0.2596 0.2452	Ave		0.2543			4.0		30.0				
2-Hexanone	++++ 0.1981	++++ 0.2103	++++ 0.2238	0.1399 0.2293	0.1787 0.2239	Ave		0.2006			16.0		30.0				
Dibromochloromethane	0.6655 0.7840	0.5795 0.8296	0.6334 0.8666	0.6501 0.8735	0.6985 0.8331	Ave		0.7414			14.6		30.0				
Octane	++++ 0.3146	++++ 0.3133	0.2922 0.3156	0.3033 0.3109	0.2998 0.2932	Ave		0.3054			3.1		30.0				
C8 Range	++++ 2.1678	++++ 2.1237	++++ 2.1591	++++ 2.2092	2.0961 2.0601	Ave		2.1360			2.5		30.0				
1,2-Dibromoethane (EDB)	++++ 0.5766	++++ 0.5804	0.5000 0.5952	0.4942 0.5984	0.5448 0.5694	Ave		0.5574			7.3		30.0				
Tetrachloroethene	0.4858 0.4849	0.4864 0.4819	0.4732 0.4752	0.4838 0.4653	0.4706 0.4417	Ave		0.4749			2.9		30.0				
Chlorobenzene	0.8210 0.8508	0.8425 0.8373	0.8551 0.8444	0.8450 0.8430	0.8379 0.7968	Ave		0.8374			2.0		30.0				
Ethylbenzene	1.3703 1.4178	1.3589 1.4128	1.4055 1.4174	1.3343 1.4023	1.4017 1.2986	Ave		1.3820			2.9		30.0				
m-Xylene & p-Xylene	1.1137 1.1838	1.1023 1.1550	1.1618 1.1536	1.1488 1.1251	1.1673 1.0234	Ave		1.1335			4.1		30.0				
Bromoform	++++ 0.7606	++++ 0.8485	0.5893 0.9286	0.6166 0.9279	0.6638 0.8938	Ave		0.7786			18.1		30.0				
Styrene	++++ 0.7750	++++ 0.7975	0.6004 0.8292	0.6182 0.8487	0.6786 0.7961	Ave		0.7430			13.0		30.0				
o-Xylene	1.1430 1.2366	1.1230 1.2060	1.2624 1.1986	1.2290 1.1769	1.2492 1.0804	Ave		1.1905			5.0		30.0				
Nonane	++++ 0.4737	++++ 0.4580	0.4455 0.4538	0.4515 0.4433	0.4801 0.4032	Ave		0.4511			5.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13371-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.5797	0.5118	0.5697	0.5802	0.6188	Ave		0.6050			7.5		30.0				
	0.6456	0.6455	0.6181	0.6658	0.6146												
1,2,3-Trichloropropane	++++	++++	0.2911	0.2918	0.2978	Ave		0.3000			2.7		30.0				
	0.3084	0.3034	0.3046	0.3115	0.2914												
Isopropylbenzene	++++	++++	1.8308	1.7528	1.7150	Ave		1.6941			5.0		30.0				
	1.7012	1.6661	1.6871	1.6694	1.5307												
Propylbenzene	0.4435	0.4328	0.4534	0.4640	0.4755	Ave		0.4652			4.5		30.0				
	0.4963	0.4795	0.4859	0.4778	0.4438												
2-Chlorotoluene	++++	0.3991	0.4619	0.4417	0.4398	Ave		0.4306			5.3		30.0				
	0.4524	0.4310	0.4318	0.4245	0.3929												
4-Ethyltoluene	1.5529	1.6047	1.7828	1.7531	1.7972	Ave		1.7594			6.6		30.0				
	1.8829	1.8611	1.8557	1.8469	1.6563												
1,3,5-Trimethylbenzene	0.6792	0.6523	0.7326	0.7228	0.7292	Ave		0.7199			5.1		30.0				
	0.7724	0.7416	0.7410	0.7434	0.6843												
Alpha Methyl Styrene	++++	++++	++++	0.5439	0.5731	Ave		0.6844			13.4		30.0				
	0.6781	0.7295	0.7535	0.7838	0.7289												
Decane	++++	++++	0.6176	0.6408	0.6488	Ave		0.6421			4.6		30.0				
	0.6849	0.6585	0.6522	0.6491	0.5849												
tert-Butylbenzene	1.6566	1.6665	1.8313	1.8740	1.8639	Ave		1.7534			6.6		30.0				
	1.8841	1.7827	1.7468	1.6988	1.5293												
1,2,4-Trimethylbenzene	1.4293	1.4880	1.6887	1.6986	1.7123	Ave		1.6066			7.2		30.0				
	1.7233	1.6671	1.6372	1.5922	1.4293												
1,3-Dichlorobenzene	1.1997	1.0963	1.2442	1.1823	1.1621	Ave		1.1598			4.5		30.0				
	1.1856	1.1603	1.1572	1.1516	1.0583												
sec-Butylbenzene	2.0787	2.1298	2.2743	2.2407	2.2363	Ave		2.1706			5.7		30.0				
	2.3069	2.2195	2.1908	2.1561	1.8732												
Benzyl chloride	++++	++++	1.0998	1.0436	1.1034	Ave		1.2392			11.3		30.0				
	1.2529	1.3231	1.4041	1.3938	1.2924												
1,4-Dichlorobenzene	1.2196	1.1487	1.2267	1.2179	1.1651	Ave		1.1644			5.1		30.0				
	1.2112	1.1594	1.1399	1.1212	1.0340												
4-Isopropyltoluene	2.1095	2.1432	2.2305	2.2370	2.2728	Ave		2.1910			5.2		30.0				
	2.3345	2.2554	2.2238	2.1784	1.9244												
1,2,3-Trimethylbenzene	1.6103	1.5786	1.8623	1.7831	1.7558	Ave		1.7253			6.2		30.0				
	1.8346	1.7874	1.7524	1.7335	1.5556												
1,2-Dichlorobenzene	1.1708	1.2083	1.2580	1.2065	1.1355	Ave		1.1443			6.3		30.0				
	1.1557	1.1157	1.1029	1.0865	1.0034												
Indane	1.4503	1.3817	1.4785	1.4862	1.4419	Ave		1.4233			5.0		30.0				
	1.4994	1.4300	1.4226	1.3893	1.2529												
Indene	++++	++++	1.0339	1.0803	1.0663	Ave		1.1682			8.2		30.0				
	1.2013	1.2223	1.2542	1.2953	1.1920												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.8231 1.8829	1.6985 1.8028	1.8359 1.7871	1.8719 1.7597	1.8266 1.5551	Ave		1.7844			5.4		30.0				
Undecane	++++ 0.8059	++++ 0.7917	++++ 0.7809	++++ 0.7402	0.7701 0.6720	Ave		0.7598			5.8		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.5799	++++ 0.6160	0.4391 0.6515	0.4709 0.6213	0.4861 0.5926	Ave		0.5572			14.3		30.0				
1,2,4,5-Tetramethylbenzene	++++ 2.1235	++++ 2.1635	2.1451 2.1540	2.1430 1.9985	1.9593 1.8488	Ave		2.0670			5.7		30.0				
Dodecane	++++ 0.7733	++++ 0.8936	++++ 0.8877	0.8688 0.7212	0.6803 0.7447	Ave		0.7957			10.9		30.0				
1,2,4-Trichlorobenzene	++++ 1.1894	++++ 1.2694	1.4472 1.2818	1.3888 1.0940	1.0856 1.1269	Ave		1.2354			10.9		30.0				
Naphthalene	++++ 2.0750	3.4525 2.4487	2.8184 2.5087	2.7367 2.1182	1.8255 ++++	Ave		2.4980			20.6		30.0				
Hexachlorobutadiene	++++ 1.4923	++++ 1.4393	1.7181 1.4314	1.5746 1.2072	1.3912 1.2353	Ave		1.4362			11.7		30.0				
1,2,3-Trichlorobenzene	++++ 1.1295	++++ 1.2212	1.4432 1.2323	1.3860 0.9868	1.0237 1.0761	Ave		1.1873			13.9		30.0				
2-Methylnaphthalene	++++ 0.3586	++++ 0.9509	++++ 1.0808	++++ 0.6399	++++ 0.9374	Ave		0.7935			36.8		50.0				
1-Methylnaphthalene	++++ 0.3899	++++ 0.8629	++++ 0.9496	++++ 0.5203	++++ 0.7770	Ave		0.6999			33.7		50.0				
4-Bromofluorobenzene (Surr)	0.8488 0.8636	0.8528 0.8535	0.8654 0.8546	0.8648 0.8319	0.8641 0.8066	Ave		0.8506			2.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 165552	++++ 330784	13488 670931	27178 1511149	67965 2786793	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 51364	++++ 103039	++++ 205301	8965 471697	20715 851034	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 295289	++++ 593041	23530 1212691	45214 3022572	146259 4789313	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 20420	++++ 40844	2235 80675	3152 182542	9302 337068	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 220441	10161 456323	16805 932912	33908 2096072	98065 3420506	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	1811 70331	3480 142840	5811 286294	11775 611179	28814 1163551	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 46402	++++ 94920	++++ 191280	7472 407531	18132 792495	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 78896	++++ 157806	6822 323819	12514 680235	33375 1311043	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 85746	++++ 176496	7392 354225	13519 754560	35058 1463890	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 34804	++++ 68833	3121 140181	5876 288211	13655 574974	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 104882	++++ 224069	++++ 447098	17498 904290	43508 1740692	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 90610	++++ 186899	7520 380924	14410 781185	37233 1560991	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 56760	++++ 115570	4476 228167	9090 483547	23067 948871	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrolein	CBM	Ave	++++ 15289	++++ 37440	++++ 74788	3617 152096	6392 308108	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13371-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	9029 413497	16343 844261	32292 1697186	64156 3484877	164680 6733950	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 16703	++++ 35460	++++ 84531	++++ 175714	2801 345458	6701 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Acetone	CBM	Ave	++++ 89101	++++ 173059	++++ 340521	18402 682117	35521 1363433	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 14137	++++ 28499	++++ 58302	2568 119973	5613 240067	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 239341	++++ 509997	++++ 1016357	40201 2023732	95103 4022317	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 46526	++++ 93310	++++ 189800	7549 438542	19232 826066	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	2217 96830	3786 202076	7294 414812	14740 875865	37945 1690964	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 44072	++++ 91512	++++ 186041	++++ 412056	17259 806690	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 190196	++++ 409183	13889 809098	28891 1671112	74242 3270376	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 250984	9384 515989	19377 1031649	37596 2134286	97989 4035478	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 91431	++++ 178076	++++ 345898	21540 719893	41401 1360585	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 95603	++++ 193431	6102 385054	15229 838478	36262 1650820	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 242543	++++ 499031	17438 997332	34577 2149500	91945 4188128	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	2153 99652	4125 206172	7397 421281	14785 893667	38175 1753401	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 134813	++++ 275324	10171 553915	20556 1212878	53163 2316982	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 326320	++++ 676752	24609 1373906	47525 2885627	126834 5673760	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	3625 165748	6968 342362	12813 695373	24630 1467554	65086 2868475	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 159088	++++ 349189	++++ 730693	21613 1591261	59429 3211124	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 38268	++++ 79333	++++ 165553	6132 352107	14067 695780	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 58239	++++ 121155	++++ 248691	4675 525494	8962 1026278	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	2190 100389	3898 213838	7431 429081	15197 903953	38474 1779827	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13371-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 143745	++++ 303889	9377 632910	20428 1360573	53019 2697533	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	5723 266010	10674 550434	19866 1123349	40040 2352521	104204 4583947	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 62926	++++ 130211	++++ 266070	9354 573668	24371 1129072	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	6720 339819	13014 712345	25970 1454125	50545 3057281	130803 6008857	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4162 199683	7880 414101	15042 837957	29238 1778626	76773 3480930	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	5827 249589	10465 523482	20437 1050705	37991 2189441	96837 4217712	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 39991	++++ 82675	++++ 167839	5770 340746	14632 645373	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 17690	++++ 40004	++++ 82457	++++ 181076	5146 360622	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7141 374679	13947 786171	21947 1553305	54395 3401707	145724 6567265	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 54415	++++ 116636	3528 235995	7686 494713	21116 966448	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 149183	++++ 311873	10374 639928	21711 1366267	57630 2658371	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 332582	++++ 691902	25192 1407509	49245 2995449	126672 5790015	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 80581	++++ 169011	6201 344383	11982 733246	31548 1430590	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 84592	++++ 178041	5754 361284	11910 756110	32279 1463381	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	3243 152289	5696 324569	11668 707793	22698 1373208	60473 2639630	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 136587	++++ 283066	10846 586890	21454 1255108	53985 2441282	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 263754	++++ 564189	17387 1174659	35620 2518000	97237 4943175	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 38117	++++ 86437	++++ 173912	5968 353467	15165 675333	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 88559	++++ 195505	6227 413937	10629 922467	31857 1828238	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	++++ 160604	++++ 339768	11565 689164	23124 1459181	61375 2870166	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 141224	++++ 311634	++++ 659470	17423 1416282	51070 2798783	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13371-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 155584	5376 346235	10488 719012	21150 1532867	59340 3009068	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 165754	5189 369600	10066 783879	22215 1677181	61443 3381888	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	6779 336279	11744 715966	24790 1469948	49243 3103222	129198 6012505	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	1557 91510	3120 192987	6520 395113	13406 846792	35149 1619482	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 68694	++++ 156406	++++ 338784	7267 738442	24199 1478910	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	4430 271846	7451 617174	16103 1311808	33778 2812660	94584 5503585	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 109095	++++ 233063	7429 477723	15759 1000926	40600 1936591	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	DFBZ	Ave	++++ 855982	++++ 1781529	++++ 3620641	++++ 7753468	++++ 14589114	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 199953	++++ 431756	12712 900939	25676 1926667	73769 3761382	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3234 168145	6255 358488	12031 719415	25138 1498188	63725 2918044	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	5465 295002	10833 622855	21742 1278293	43900 2714425	113462 5263414	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	9121 491615	17474 1050972	35735 2145561	69322 4515180	189812 8578718	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	14827 820994	28347 1718390	59080 3492522	119367 7245395	316153 13520878	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	++++ 263744	++++ 631165	14982 1405685	32037 2987666	89888 5904670	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd 5	Ave	++++ 268745	++++ 593262	15265 1255220	32117 2732738	91899 5258738	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	7608 428791	14440 897122	32097 1814388	63851 3789404	169158 7137002	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Nonane	CBZd 5	Ave	++++ 164273	++++ 340741	11326 686883	23460 1427330	65019 2663319	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	3859 223872	6581 480219	14484 935594	30142 2143813	83793 4060026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 106933	++++ 225670	7400 461156	15160 1003093	40330 1925261	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 589911	++++ 1239416	46548 2553866	91067 5375264	232238 10111819	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	2952 172077	5565 356669	11527 735475	24106 1538516	64393 2931395	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13371-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 156859	5132 320641	11745 653681	22951 1366689	59552 2595696	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	10337 652888	20634 1384436	45329 2809081	91082 5946732	243377 10941125	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	4521 267835	8388 551670	18627 1121740	37553 2393487	98748 4520211	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 235120	++++ 542707	++++ 1140621	28257 2523695	77610 4814736	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 237483	++++ 489862	15703 987208	33292 2090024	87862 3864099	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11027 653325	21429 1326146	46562 2644216	97365 5469769	252400 10102100	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	9514 597546	19133 1240172	42935 2478370	88253 5126755	231880 9441765	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7986 411115	14097 863153	31633 1751738	61425 3707873	157370 6991250	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	13837 799929	27386 1651103	57824 3316313	116417 6942238	302828 12374020	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 434461	++++ 984275	27963 2125520	54221 4487660	149421 8537696	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	8118 419983	14770 862511	31188 1725619	63275 3610216	157774 6830228	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	14042 809499	27559 1677824	56711 3366403	116224 7014221	307780 12712650	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	10719 636168	20298 1329610	47349 2652674	92640 5581569	237762 10276226	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	7793 400754	15537 829934	31984 1669523	62682 3498467	153773 6628325	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	9654 519916	17767 1063787	37591 2153540	77218 4473280	195256 8276746	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 416558	++++ 909289	26287 1898638	56129 4170791	144394 7874065	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	12135 652919	21840 1341073	46679 2705337	97253 5666096	247354 10272864	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 279455	++++ 588913	++++ 1182131	40009 2383371	102646 4439100	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 201092	++++ 458234	11163 986255	24464 2000539	65829 3914341	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 736323	++++ 1609444	54539 3260653	111338 6434741	265327 12213199	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 268129	++++ 664765	++++ 1343815	45141 2322024	92125 4919414	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 412431	++++ 944306	36794 1940306	72153 3522363	147015 7444026	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 719521	++++ 1821564	44394 3797602	71658 6820345	142183 247207 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Hexachlorobutadiene	CBZd 5	Ave	++++ 517445	++++ 1070672	43683 2166873	81808 3886960	188387 8160248	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 391665	++++ 908417	36693 1865471	72007 3177370	138621 7108780	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 124366	++++ 707384	++++ 1636134	++++ 2060557	++++ 6192720	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 135206	++++ 641933	++++ 1437560	++++ 1675488	++++ 5133017	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1129964 1197793	1096528 1269845	1100173 1293730	1123241 1339226	1170099 1332053	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	9.7						50			
Propene	+++++	+++++	+++++	15.4						50		
Dichlorodifluoromethane	+++++	+++++	4.3						50			
Chloromethane	+++++	+++++	40.9						50			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	20.3						50				
Vinyl chloride	24.8						50					
1,3-Butadiene	+++++	+++++	+++++	7.9						50		
Butane	+++++	+++++	16.3						50			
Bromomethane	+++++	+++++	15.5						50			
Chloroethane	+++++	+++++	21.2						50			
Ethanol	+++++	+++++	+++++	9.7						50		
Vinyl bromide	+++++	+++++	11.5						50			
2-Methylbutane	+++++	+++++	8.0						50			
Acrolein	+++++	+++++	+++++	34.3						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Trichlorofluoromethane	13.0						50					
Acetonitrile	+++++	+++++	+++++	1.7						50		
Acetone	+++++	+++++	+++++	38.8						80		
Pentane	+++++	+++++	+++++	19.9						50		
Isopropyl alcohol	+++++	+++++	+++++	11.2						50		
Ethyl ether	+++++	+++++	+++++	6.4						50		
1,1-Dichloroethene	16.5						50					
Acrylonitrile	+++++	+++++	+++++	+++++	-0.4						50	
tert-Butyl alcohol	+++++	+++++	0.1						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.2						50				
Methylene Chloride	+++++	+++++	+++++	51.2						80		
3-Chloropropene	+++++	+++++	-10.0						50			
Carbon disulfide	+++++	+++++	0.7						50			
trans-1,2-Dichloroethene	10.9						50					
2-Methylpentane	+++++	+++++	3.6						50			
Methyl tert-butyl ether	+++++	+++++	4.0						50			
1,1-Dichloroethane	11.6						50					
Vinyl acetate	+++++	+++++	+++++	-12.5						50		
2-Butanone (MEK)	+++++	+++++	+++++	5.7						50		
Hexane	+++++	+++++	8.0						50			
cis-1,2-Dichloroethene	11.9						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-10.0						50			
Chloroform	10.8						50					
Tetrahydrofuran	+++++	+++++	+++++	-0.9						50		
1,1,1-Trichloroethane	2.6						50					
1,2-Dichloroethane	6.3						50					
Benzene	15.6						50					
Cyclohexane	+++++	+++++	+++++	-1.0						50		
1-Butanol	+++++	+++++	+++++	+++++	-28.5						50	
Carbon tetrachloride	0.7						50					
2,3-Dimethylpentane	+++++	+++++	-10.2						50			
Thiophene	+++++	+++++	-4.4						50			
2,2,4-Trimethylpentane	+++++	+++++	3.7						50			
1,2-Dichloropropane	+++++	+++++	4.1						50			
Heptane	+++++	+++++	-5.1						50			
Trichloroethene	6.7						50					
Dibromomethane	+++++	+++++	6.0						50			
Bromodichloromethane	+++++	+++++	-9.3						50			
1,4-Dioxane	+++++	+++++	+++++	-0.2						50		
Methyl methacrylate	+++++	+++++	-6.0						50			
Methylcyclohexane	+++++	+++++	-1.3						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	-20.2						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.9						50				
trans-1,3-Dichloropropene	+++++	-13.7						50				
Toluene	6.2						50					
1,1,2-Trichloroethane	-8.0						50					
2-Hexanone	+++++	+++++	+++++	-30.3						50		
Dibromochloromethane	-10.2						50					
Octane	+++++	+++++	-4.3						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-10.3						50			
Tetrachloroethene	2.3						50					
Chlorobenzene	-2.0						50					
Ethylbenzene	-0.8						50					
m-Xylene & p-Xylene	-1.7						50					
Bromoform	+++++	+++++	-24.3						50			
Styrene	+++++	+++++	-19.2						50			
o-Xylene	-4.0						50					
Nonane	+++++	+++++	-1.3						50			
1,1,2,2-Tetrachloroethane	-4.2						50					
1,2,3-Trichloropropane	+++++	+++++	-3.0						50			
Isopropylbenzene	+++++	+++++	8.1						50			
Propylbenzene	-4.7						50					
2-Chlorotoluene	+++++	-7.3						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	-11.7						50					
1,3,5-Trimethylbenzene	-5.7						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-20.5						50		
Decane	+++++	+++++	-3.8						50			
tert-Butylbenzene	-5.5						50					
1,2,4-Trimethylbenzene	-11.0						50					
1,3-Dichlorobenzene	3.4						50					
sec-Butylbenzene	-4.2						50					
Benzyl chloride	+++++	+++++	-11.2						50			
1,4-Dichlorobenzene	4.7						50					
4-Isopropyltoluene	-3.7						50					
1,2,3-Trimethylbenzene	-6.7						50					
1,2-Dichlorobenzene	2.3						50					
Indane	1.9						50					
Indene	+++++	+++++	-11.5						50			
Butylbenzene	2.2						50					
Undecane	+++++	+++++	+++++	1.3						50		
1,2-Dibromo-3-Chloropropane	+++++	+++++	-21.2						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	3.8						50			
Dodecane	+++++	+++++	+++++	9.2						50		
1,2,4-Trichlorobenzene	+++++	+++++	17.1						50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	38.2		+++++				80				
Hexachlorobutadiene	+++++	+++++	19.6						50			
1,2,3-Trichlorobenzene	+++++	+++++	21.5						50			
2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-54.8						80
1-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-44.3						80

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 16-Nov-2018 17:23:30 ALS Bottle#: 15 Worklist Smp#: 3
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-003
 Misc. Info.: 190391
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:32 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 09:42:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.411	7.397	0.014	70	313476	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.504	9.494	0.010	90	1754853	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.555	0.007	62	1609921	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	48	1339226	4.00	3.91	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	95	1511149	8.00	8.12	
7 Propene	41	3.416	3.420	-0.004	49	471697	8.00	8.25	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	3022572	8.00	8.86	
9 Chloromethane	52	3.583	3.586	-0.003	98	182542	8.00	7.61	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	87	2096072	8.00	8.25	
11 Acetaldehyde	44	3.707	3.710	-0.003	92	850959	40.0	38.0	
12 Vinyl chloride	62	3.712	3.711	0.001	71	611179	8.00	7.27	
13 Butadiene	54	3.777	3.780	-0.003	85	407531	8.00	7.99	
14 Butane	43	3.782	3.782	0.000	76	680235	8.00	7.67	
15 Bromomethane	94	3.998	3.995	0.003	93	754560	8.00	7.79	
16 Chloroethane	64	4.106	4.100	0.006	97	288211	8.00	7.40	
17 Ethanol	31	4.230	4.222	0.008	93	904290	40.0	38.5	
18 Vinyl bromide	106	4.322	4.315	0.007	94	781185	8.00	7.66	
19 2-Methylbutane	43	4.370	4.369	0.001	79	483547	8.00	7.71	
20 Acrolein	56	4.516	4.516	0.000	13	152096	8.00	7.68	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	99	3484877	8.00	7.52	
22 Acetonitrile	40	4.564	4.545	0.019	94	175714	8.00	8.67	
23 Acetone	58	4.602	4.605	-0.003	94	682117	24.0	21.0	
24 Pentane	72	4.694	4.693	0.001	89	119973	8.00	7.61	
25 Isopropyl alcohol	45	4.721	4.716	0.005	96	2023732	24.0	22.8	
26 Ethyl ether	31	4.807	4.817	-0.010	72	438542	8.00	8.40	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	875865	8.00	7.94	
28 Acrylonitrile	53	5.109	5.097	0.012	85	412056	8.00	8.38	
29 2-Methyl-2-propanol	59	5.168	5.173	-0.005	86	1671112	8.00	7.96	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	91	2134286	8.00	7.80	
31 Methylene Chloride	84	5.298	5.290	0.008	85	719893	8.00	6.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	79	838478	8.00	8.17	
33 Carbon disulfide	76	5.416	5.410	0.006	99	2149500	8.00	8.21	
34 trans-1,2-Dichloroethene	96	5.961	5.951	0.010	97	893667	8.00	7.94	
35 2-Methylpentane	43	6.015	6.011	0.004	84	1212878	8.00	8.17	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	86	2885627	8.00	8.06	
37 1,1-Dichloroethane	63	6.301	6.283	0.018	98	1467554	8.00	7.79	
38 Vinyl acetate	43	6.409	6.402	0.006	98	1591261	8.00	8.75	
39 2-Butanone (MEK)	72	6.759	6.761	-0.002	66	352107	8.00	8.25	
40 Hexane	56	6.851	6.845	0.006	78	525494	8.00	8.03	
171 Isopropyl ether	45	6.985	6.989	-0.004	86	1854270	8.00	8.23	
41 cis-1,2-Dichloroethene	96	7.142	7.127	0.015	94	903953	8.00	7.97	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	1360573	8.00	8.63	
43 Chloroform	83	7.455	7.439	0.016	97	2352521	8.00	7.86	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	93	2652444	8.00	8.17	
44 Tetrahydrofuran	42	7.784	7.793	-0.009	75	573668	8.00	8.26	
45 1,1,1-Trichloroethane	97	8.377	8.364	0.013	94	3057281	8.00	8.05	
46 1,2-Dichloroethane	62	8.441	8.427	0.014	76	1778626	8.00	8.01	
47 Benzene	78	8.932	8.920	0.012	98	2189441	8.00	7.66	
48 Cyclohexane	69	8.959	8.951	0.008	71	340746	8.00	8.02	
50 Carbon tetrachloride	117	8.975	8.962	0.013	98	3401707	8.00	8.46	
49 n-Butanol	31	8.948	8.969	-0.021	42	181076	8.00	8.93	
51 2,3-Dimethylpentane	71	9.132	9.126	0.006	83	494713	8.00	8.36	
52 Thiophene	84	9.186	9.174	0.012	87	1366267	8.00	8.35	
53 Isooctane	57	9.806	9.798	0.008	95	2995449	8.00	8.18	
54 1,2-Dichloropropane	63	10.183	10.175	0.008	72	733246	8.00	8.17	
55 n-Heptane	71	10.232	10.224	0.008	76	756110	8.00	8.27	
56 Trichloroethene	130	10.259	10.250	0.009	88	1373208	8.00	7.97	
57 Dibromomethane	93	10.291	10.279	0.012	92	1255108	8.00	8.14	
58 Dichlorobromomethane	83	10.474	10.468	0.006	98	2518000	8.00	8.71	
59 1,4-Dioxane	88	10.491	10.497	-0.006	37	353467	8.00	8.11	
60 Methyl methacrylate	41	10.647	10.649	-0.002	90	922467	8.00	9.24	
61 Methylcyclohexane	83	11.116	11.109	0.007	93	1459181	8.00	8.27	
62 4-Methyl-2-pentanone (MIBK)	43	11.542	11.552	-0.010	91	1416282	8.00	8.90	
63 cis-1,3-Dichloropropene	75	11.580	11.577	0.003	95	1532867	8.00	8.85	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	97	1677181	8.00	8.92	
65 Toluene	91	12.475	12.471	0.004	92	3103222	8.00	8.04	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	90	846792	8.00	8.27	
69 2-Hexanone	58	12.993	13.003	-0.010	95	738442	8.00	9.15	
70 Chlorodibromomethane	129	13.262	13.258	0.004	95	2812660	8.00	9.43	
71 n-Octane	85	13.327	13.326	0.001	75	1000926	8.00	8.14	
72 Ethylene Dibromide	107	13.559	13.551	0.008	93	1926667	8.00	8.59	
73 Tetrachloroethene	129	13.699	13.695	0.004	93	1498188	8.00	7.84	
74 Chlorobenzene	112	14.610	14.606	0.004	91	2714425	8.00	8.05	
75 2,3-Dimethylheptane	43	14.751	14.750	0.000	77	1819678	8.00	8.04	
76 Ethylbenzene	91	14.945	14.943	0.002	99	4515180	8.00	8.12	
78 m-Xylene & p-Xylene	91	15.123	15.119	0.004	99	7245395	16.0	15.9	
79 Bromoform	173	15.505	15.507	-0.002	96	2987666	8.00	9.53	
80 Styrene	104	15.597	15.594	0.003	93	2732738	8.00	9.14	
82 o-Xylene	91	15.656	15.655	0.001	77	3789404	8.00	7.91	
81 n-Nonane	57	15.662	15.659	0.003	72	1427330	8.00	7.86	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	93	2143813	8.00	8.80	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	1003093	8.00	8.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.287	16.283	0.004	98	5375264	8.00	7.88	
86 N-Propylbenzene	120	16.859	16.856	0.003	96	1538516	8.00	8.22	
87 2-Chlorotoluene	126	16.870	16.867	0.003	93	1366689	8.00	7.89	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	5946732	8.00	8.40	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	90	2393487	8.00	8.26	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	84	2523695	8.00	9.16	
91 n-Decane	57	17.533	17.532	0.001	95	2090024	8.00	8.09	
92 tert-Butylbenzene	119	17.592	17.590	0.002	64	5469769	8.00	7.75	
93 1,2,4-Trimethylbenzene	105	17.608	17.605	0.003	94	5126755	8.00	7.93	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	3707873	8.00	7.94	
95 sec-Butylbenzene	105	17.905	17.902	0.003	74	6942238	8.00	7.95	
96 Benzyl chloride	91	17.964	17.962	0.002	97	4487660	8.00	9.00	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	92	3610216	8.00	7.70	
98 4-Isopropyltoluene	119	18.099	18.095	0.004	94	7014221	8.00	7.95	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	5581569	8.00	8.04	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	3064197	8.00	8.02	
101 1,2-Dichlorobenzene	146	18.374	18.370	0.004	93	3498467	8.00	7.60	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	88	4473280	8.00	7.81	
103 Indene	116	18.520	18.520	0.000	87	4170791	8.00	8.87	
104 n-Butylbenzene	91	18.579	18.580	-0.001	95	5666096	8.00	7.89	
105 Undecane	57	19.005	19.001	0.004	85	2383371	8.00	7.79	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	97	2000539	8.00	8.92	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.405	0.005	95	6434741	8.00	7.73	
110 Dodecane	57	20.132	20.128	0.004	90	2322024	8.00	7.25	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	3522363	8.00	7.08	
113 Naphthalene	128	20.332	20.329	0.003	98	6820345	8.00	6.78	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	85	3886960	8.00	6.72	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	92	3177370	8.00	6.65	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	2060557	8.00	6.45	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	1675488	8.00	5.95	
A 120 C8 Range	1	13.343	(13.284-13.381)		0	7753468	8.00	8.27	
S 121 Xylenes, Total	100				0		24.0	23.8	
S 122 1,2-Dichloroethene, Total	1				0		16.0	15.9	

Reagents:

40L10DQP_00007

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D

Injection Date: 16-Nov-2018 17:23:30

Instrument ID: MR

Operator ID:

Lims ID: IC L9

Worklist Smp#: 3

Client ID:

Purge Vol: 500.000 mL

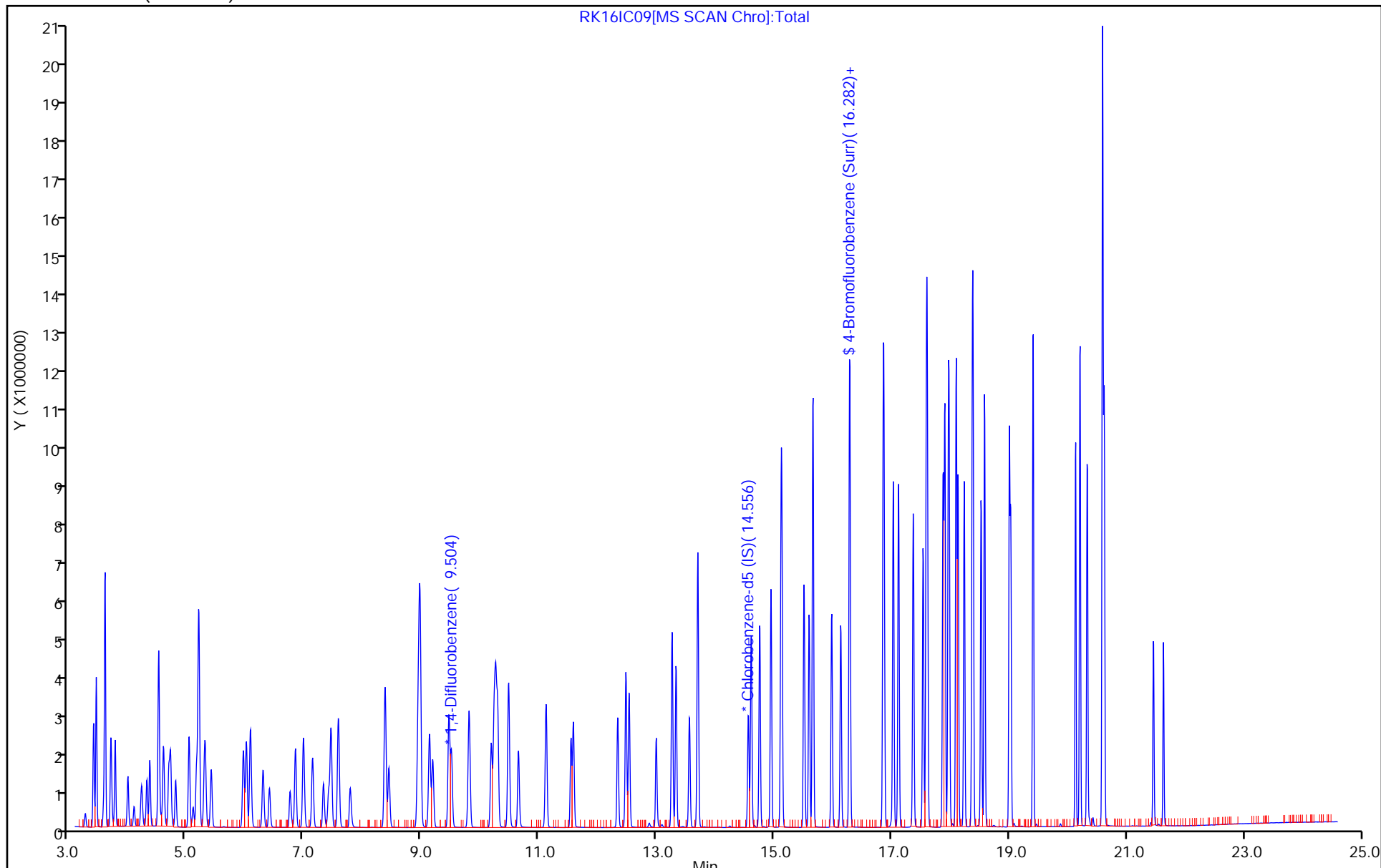
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D

Injection Date: 16-Nov-2018 17:23:30

Instrument ID: MR

Lims ID: IC L9

Client ID:

Operator ID:

ALS Bottle#:

15

Worklist Smp#:

3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

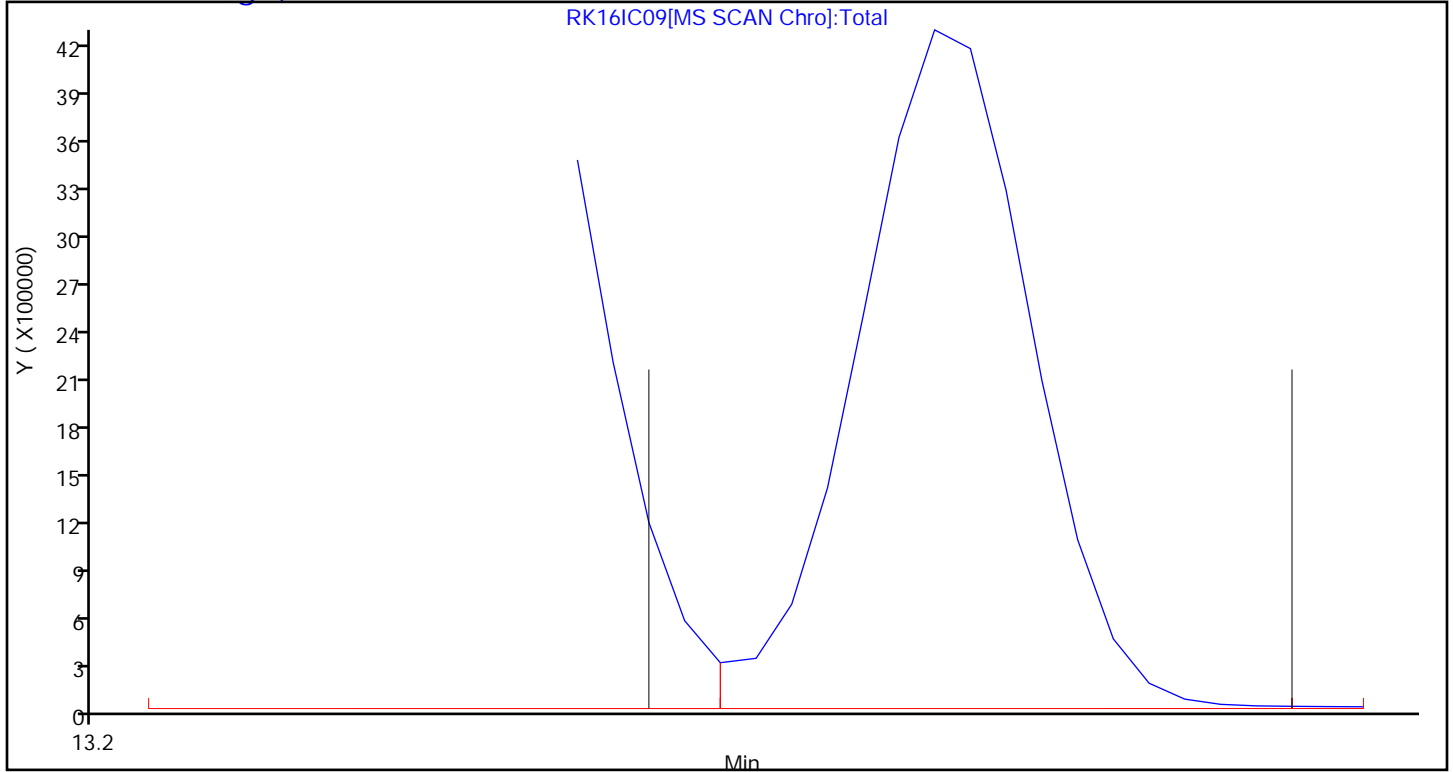
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 16-Nov-2018 19:07:30 ALS Bottle#: 15 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-005
 Misc. Info.: 190391
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:37 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 09:41:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.422	7.397	0.025	70	319466	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.515	9.494	0.020	95	1770477	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.555	0.007	89	1651474	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	84	1332053	4.00	3.79	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	96	2786793	16.0	14.7	
7 Propene	41	3.416	3.420	-0.004	92	851034	16.0	14.6	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	100	4789313	16.0	13.8	
9 Chloromethane	52	3.588	3.586	0.002	98	337068	16.0	13.8	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	89	3420506	16.0	13.2	
11 Acetaldehyde	44	3.718	3.710	0.008	94	1587481	80.0	69.5	
12 Vinyl chloride	62	3.712	3.711	0.001	99	1163551	16.0	13.6	
13 Butadiene	54	3.782	3.780	0.002	89	792495	16.0	15.3	
14 Butane	43	3.782	3.782	0.000	89	1311043	16.0	14.5	
15 Bromomethane	94	4.004	3.995	0.009	97	1463890	16.0	14.8	
16 Chloroethane	64	4.111	4.100	0.011	96	574974	16.0	14.5	
17 Ethanol	31	4.241	4.222	0.019	93	1740692	80.0	72.7	
18 Vinyl bromide	106	4.327	4.315	0.012	97	1560991	16.0	15.0	
19 2-Methylbutane	43	4.376	4.369	0.007	78	948871	16.0	14.9	
20 Acrolein	56	4.527	4.516	0.011	97	308108	16.0	15.3	
21 Trichlorofluoromethane	101	4.532	4.517	0.015	100	6733950	16.0	14.3	
22 Acetonitrile	40	4.575	4.545	0.030	95	345458	16.0	16.7	
23 Acetone	58	4.618	4.605	0.013	100	1363433	48.0	41.1	
24 Pentane	72	4.699	4.693	0.006	93	240067	16.0	14.9	
25 Isopropyl alcohol	45	4.737	4.716	0.021	98	4022317	48.0	44.5	
26 Ethyl ether	31	4.818	4.817	0.001	74	826066	16.0	15.5	
27 1,1-Dichloroethene	96	5.050	5.033	0.017	97	1690964	16.0	15.0	
28 Acrylonitrile	53	5.120	5.097	0.023	90	806690	16.0	16.1	
29 2-Methyl-2-propanol	59	5.179	5.173	0.006	92	3270376	16.0	15.3	
30 1,1,2-Trichloro-1,2,2-trif	101	5.211	5.199	0.012	92	4035478	16.0	14.5	
31 Methylene Chloride	84	5.308	5.290	0.018	89	1360585	16.0	12.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.330	5.309	0.021	85	1650820	16.0	15.8	
33 Carbon disulfide	76	5.427	5.410	0.017	99	4188128	16.0	15.7	
34 trans-1,2-Dichloroethene	96	5.972	5.951	0.021	97	1753401	16.0	15.3	
35 2-Methylpentane	43	6.026	6.011	0.015	84	2316982	16.0	15.3	
36 Methyl tert-butyl ether	73	6.090	6.094	-0.004	93	5673760	16.0	15.6	
37 1,1-Dichloroethane	63	6.311	6.283	0.028	98	2868475	16.0	14.9	
38 Vinyl acetate	43	6.419	6.402	0.017	98	3211124	16.0	17.3	
39 2-Butanone (MEK)	72	6.770	6.761	0.009	97	695780	16.0	16.0	
40 Hexane	56	6.861	6.845	0.016	81	1026278	16.0	15.4	
171 Isopropyl ether	45	6.996	6.989	0.007	86	3587859	16.0	15.6	
41 cis-1,2-Dichloroethene	96	7.153	7.127	0.026	94	1779827	16.0	15.4	
42 Ethyl acetate	43	7.336	7.330	0.006	98	2697533	16.0	16.8	
43 Chloroform	83	7.465	7.439	0.026	98	4583947	16.0	15.0	
173 Tert-butyl ethyl ether	59	7.589	7.580	0.009	92	5236388	16.0	15.8	
44 Tetrahydrofuran	42	7.789	7.793	-0.004	75	1129072	16.0	16.0	
45 1,1,1-Trichloroethane	97	8.382	8.364	0.018	95	6008857	16.0	15.5	
46 1,2-Dichloroethane	62	8.447	8.427	0.020	97	3480930	16.0	15.5	
47 Benzene	78	8.943	8.920	0.023	98	4217712	16.0	14.6	
48 Cyclohexane	69	8.964	8.951	0.013	91	645373	16.0	15.1	
50 Carbon tetrachloride	117	8.981	8.962	0.019	98	6567265	16.0	16.2	
49 n-Butanol	31	8.959	8.969	-0.010	72	360622	16.0	17.6	
51 2,3-Dimethylpentane	71	9.142	9.126	0.016	83	966448	16.0	16.2	
52 Thiophene	84	9.196	9.174	0.022	94	2658371	16.0	16.1	
53 Isooctane	57	9.811	9.798	0.013	95	5790015	16.0	15.7	
54 1,2-Dichloropropane	63	10.194	10.175	0.019	76	1430590	16.0	15.8	
55 n-Heptane	71	10.237	10.224	0.013	82	1463381	16.0	15.9	
56 Trichloroethene	130	10.269	10.250	0.019	95	2639630	16.0	15.2	
57 Dibromomethane	93	10.296	10.279	0.017	93	2441282	16.0	15.7	
58 Dichlorobromomethane	83	10.485	10.468	0.017	98	4943175	16.0	17.0	
59 1,4-Dioxane	88	10.496	10.497	-0.001	86	675333	16.0	15.3	
60 Methyl methacrylate	41	10.652	10.649	0.003	90	1828238	16.0	18.2	
61 Methylcyclohexane	83	11.121	11.109	0.012	92	2870166	16.0	16.1	
62 4-Methyl-2-pentanone (MIBK)	43	11.547	11.552	-0.005	91	2798783	16.0	17.4	
63 cis-1,3-Dichloropropene	75	11.585	11.577	0.008	96	3009068	16.0	17.2	
64 trans-1,3-Dichloropropene	75	12.340	12.332	0.008	97	3381888	16.0	17.5	
65 Toluene	91	12.480	12.471	0.009	93	6012505	16.0	15.2	
66 1,1,2-Trichloroethane	83	12.534	12.527	0.007	93	1619482	16.0	15.4	
69 2-Hexanone	58	12.998	13.003	-0.005	95	1478910	16.0	17.9	
70 Chlorodibromomethane	129	13.268	13.258	0.010	97	5503585	16.0	18.0	
71 n-Octane	85	13.332	13.326	0.006	73	1936591	16.0	15.4	
72 Ethylene Dibromide	107	13.559	13.551	0.008	97	3761382	16.0	16.3	
73 Tetrachloroethene	129	13.704	13.695	0.009	96	2918044	16.0	14.9	
74 Chlorobenzene	112	14.610	14.606	0.004	92	5263414	16.0	15.2	
75 2,3-Dimethylheptane	43	14.756	14.750	0.006	76	3470701	16.0	14.9	
76 Ethylbenzene	91	14.950	14.943	0.007	99	8578718	16.0	15.0	
78 m-Xylene & p-Xylene	91	15.128	15.119	0.009	98	13520878	32.0	28.9	
79 Bromoform	173	15.511	15.507	0.004	96	5904670	16.0	18.4	
80 Styrene	104	15.597	15.594	0.003	97	5258738	16.0	17.1	
82 o-Xylene	91	15.662	15.655	0.007	97	7137002	16.0	14.5	
81 n-Nonane	57	15.662	15.659	0.003	72	2663319	16.0	14.3	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	93	4060026	16.0	16.3	
84 1,2,3-Trichloropropane	110	16.136	16.132	0.004	92	1925261	16.0	15.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.287	16.283	0.004	98	10111819	16.0	14.5	
86 N-Propylbenzene	120	16.859	16.856	0.003	98	2931395	16.0	15.3	
87 2-Chlorotoluene	126	16.870	16.867	0.003	94	2595696	16.0	14.6	
88 4-Ethyltoluene	105	17.031	17.027	0.004	97	10941125	16.0	15.1	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	4520211	16.0	15.2	
90 Alpha Methyl Styrene	118	17.371	17.366	0.005	85	4814736	16.0	17.0	
91 n-Decane	57	17.538	17.532	0.006	96	3864099	16.0	14.6	
92 tert-Butylbenzene	119	17.598	17.590	0.008	89	10102100	16.0	14.0	
93 1,2,4-Trimethylbenzene	105	17.614	17.605	0.009	96	9441765	16.0	14.2	
94 1,3-Dichlorobenzene	146	17.878	17.874	0.004	98	6991250	16.0	14.6	
95 sec-Butylbenzene	105	17.910	17.902	0.008	97	12374020	16.0	13.8	
96 Benzyl chloride	91	17.970	17.962	0.008	97	8537696	16.0	16.7	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	92	6830228	16.0	14.2	
98 4-Isopropyltoluene	119	18.099	18.095	0.004	94	12712650	16.0	14.1	
99 1,2,3-Trimethylbenzene	105	18.132	18.127	0.005	98	10276226	16.0	14.4	
100 Butylcyclohexane	83	18.239	18.232	0.007	90	5583243	16.0	14.3	
101 1,2-Dichlorobenzene	146	18.374	18.370	0.004	95	6628325	16.0	14.0	
102 2,3-Dihydroindene	117	18.390	18.383	0.007	93	8276746	16.0	14.1	
103 Indene	116	18.525	18.520	0.005	90	7874065	16.0	16.3	
104 n-Butylbenzene	91	18.584	18.580	0.004	97	10272864	16.0	13.9	
105 Undecane	57	19.005	19.001	0.004	85	4439100	16.0	14.2	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	98	3914341	16.0	17.0	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.405	0.005	96	12213199	16.0	14.3	
110 Dodecane	57	20.132	20.128	0.004	87	4919414	16.0	15.0	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	7444026	16.0	14.6	
113 Naphthalene	128	20.332	20.329	0.003	97	13677643	16.0	13.3	e
115 Hexachlorobutadiene	225	20.596	20.590	0.006	96	8160248	16.0	13.8	
116 1,2,3-Trichlorobenzene	180	20.623	20.618	0.005	94	7108780	16.0	14.5	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	6192720	16.0	18.9	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	5133017	16.0	17.8	
A 120 C8 Range	1	13.348	(13.284-13.381)		0	14589114	16.0	15.4	
S 121 Xylenes, Total	100				0		48.0	43.4	
S 122 1,2-Dichloroethene, Total	1				0		32.0	30.7	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Reagents:

40L10DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D

Injection Date: 16-Nov-2018 19:07:30

Instrument ID: MR

Operator ID:

Lims ID: IC L10

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

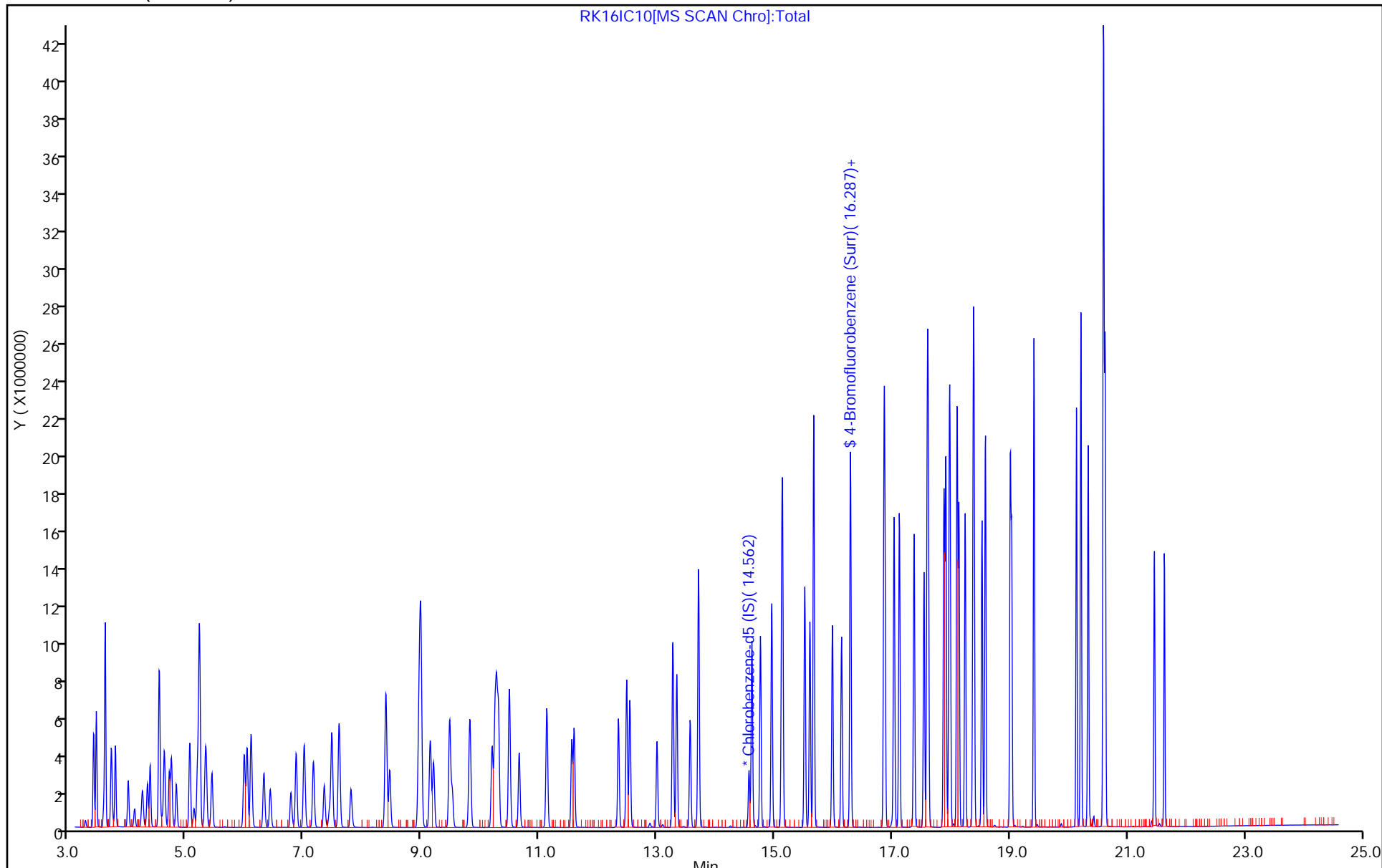
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D

Injection Date: 16-Nov-2018 19:07:30

Instrument ID: MR

Lims ID: IC L10

Client ID:

Operator ID:

ALS Bottle#:

15

Worklist Smp#:

5

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

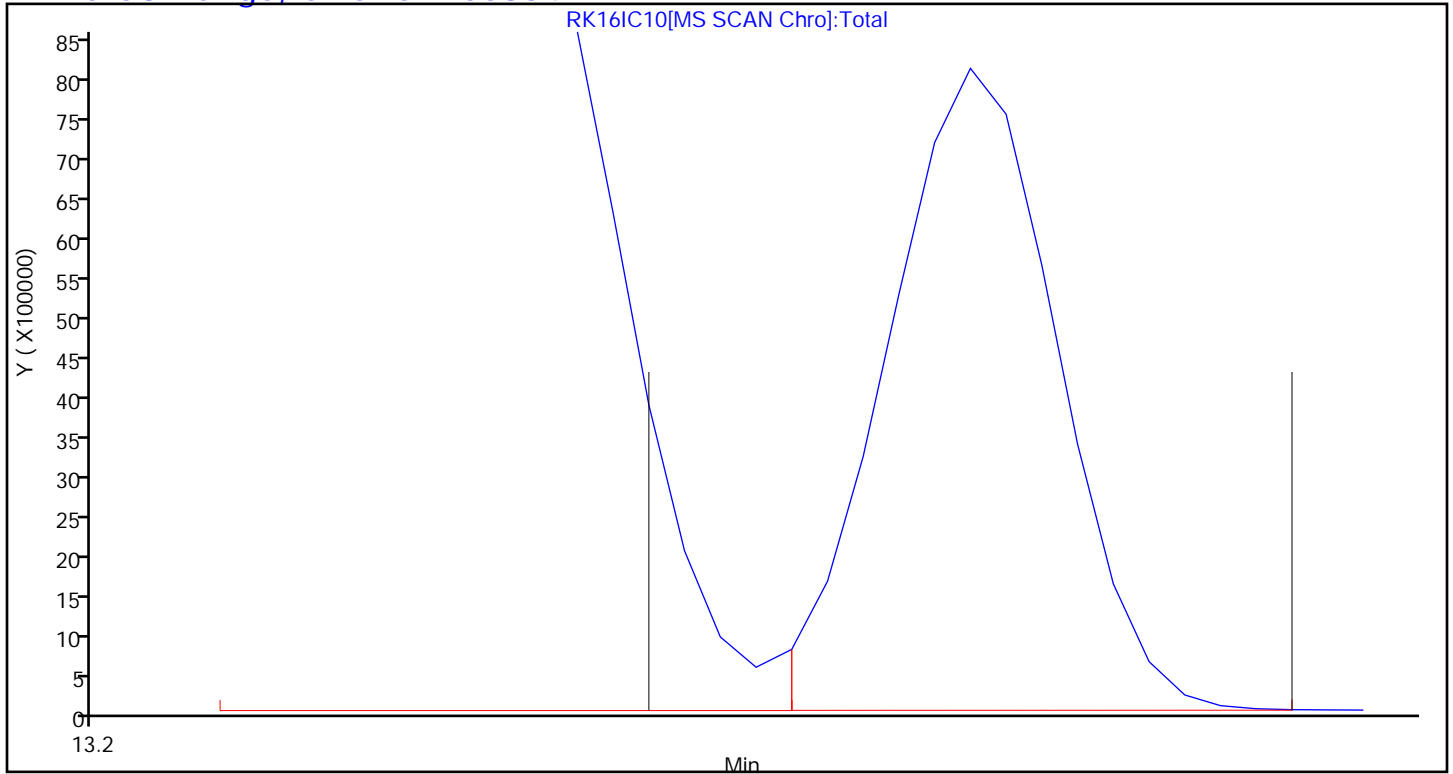
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 16-Nov-2018 21:42:30 ALS Bottle#: 1 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-008
 Misc. Info.: 191045
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:45 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh Date: 19-Nov-2018 10:13:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	270371	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1547161	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1331283	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1129964	4.00	3.99	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	92	4967	0.0200	0.0310	
7 Propene	41	3.416	3.420	-0.004	55	1914	0.0200	0.0388	
8 Dichlorodifluoromethane	85	3.454	3.461	-0.007	99	8536	0.0200	0.0290	
9 Chloromethane	52	3.594	3.586	0.008	56	1365	0.0200	0.0660	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	85	5703	0.0200	0.0260	
11 Acetaldehyde	44	3.712	3.710	0.002	96	5299	0.1000	0.2741	
12 Vinyl chloride	62	3.707	3.711	-0.004	48	1811	0.0200	0.0250	
13 Butadiene	54	3.777	3.780	-0.003	80	1171	0.0200	0.0266	
14 Butane	43	3.777	3.782	-0.005	67	2106	0.0200	0.0275	
15 Bromomethane	94	3.982	3.995	-0.013	91	3340	0.0200	0.0400	
16 Chloroethane	64	4.095	4.100	-0.005	54	1060	0.0200	0.0316	
17 Ethanol	31	4.230	4.222	0.008	85	2602	0.1000	0.1285	
18 Vinyl bromide	106	4.311	4.315	-0.004	93	2112	0.0200	0.0240	
19 2-Methylbutane	43	4.370	4.369	0.001	74	1411	0.0200	0.0261	
20 Acrolein	56	4.527	4.516	0.011	26	1199	0.0200	0.0702	
21 Trichlorofluoromethane	101	4.511	4.517	-0.006	99	9029	0.0200	0.0226	
22 Acetonitrile	40	4.462	4.545	-0.083	58	291	0.0200	0.0166	
23 Acetone	58	4.613	4.605	0.008	99	4528	0.0600	0.1614	
24 Pentane	72	4.694	4.693	0.001	68	224	0.0200	0.0165	
25 Isopropyl alcohol	45	4.732	4.716	0.016	91	7411	0.0600	0.0969	
26 Ethyl ether	31	4.839	4.817	0.022	57	905	0.0200	0.0201	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	96	2217	0.0200	0.0233	
28 Acrylonitrile	53	5.088	5.097	-0.009	49	399	0.0200	0.009404	
29 2-Methyl-2-propanol	59	5.201	5.173	0.028	73	3567	0.0200	0.0197	
30 1,1,2-Trichloro-1,2,2-trif	101	5.190	5.199	-0.009	88	5091	0.0200	0.0216	
31 Methylene Chloride	84	5.282	5.290	-0.008	89	10784	0.0200	0.1192	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	61	1958	0.0200	0.0221	
33 Carbon disulfide	76	5.400	5.410	-0.010	98	5154	0.0200	0.0228	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	89	2153	0.0200	0.0222	
35 2-Methylpentane	43	6.004	6.011	-0.007	85	3091	0.0200	0.0241	
36 Methyl tert-butyl ether	73	6.128	6.094	0.034	91	6785	0.0200	0.0220	
37 1,1-Dichloroethane	63	6.268	6.283	-0.015	96	3625	0.0200	0.0223	
38 Vinyl acetate	43	6.409	6.402	0.007	98	3011	0.0200	0.0192	
40 Hexane	56	6.845	6.845	0.000	79	1159	0.0200	0.0205	
171 Isopropyl ether	45	7.002	6.989	0.013	84	3919	0.0200	0.0202	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	92	2190	0.0200	0.0224	
42 Ethyl acetate	43	7.358	7.330	0.028	33	2159	0.0200	0.0159	
43 Chloroform	83	7.428	7.439	-0.011	90	5723	0.0200	0.0222	
44 Tetrahydrofuran	42	7.821	7.793	0.028	63	1324	0.0200	0.0221	
45 1,1,1-Trichloroethane	97	8.350	8.364	-0.014	95	6720	0.0200	0.0205	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	4162	0.0200	0.0213	
47 Benzene	78	8.911	8.920	-0.009	97	5827	0.0200	0.0231	
48 Cyclohexane	69	8.948	8.951	-0.003	69	709	0.0200	0.0189	
50 Carbon tetrachloride	117	8.959	8.962	-0.003	90	7141	0.0200	0.0201	
51 2,3-Dimethylpentane	71	9.126	9.126	0.000	81	1016	0.0200	0.0195	
52 Thiophene	84	9.164	9.174	-0.010	90	3146	0.0200	0.0218	
53 Isooctane	57	9.790	9.798	-0.008	82	3563	0.0200	0.0110	
54 1,2-Dichloropropane	63	10.167	10.175	-0.008	81	1807	0.0200	0.0228	
55 n-Heptane	71	10.232	10.224	0.008	58	1584	0.0200	0.0197	
56 Trichloroethene	130	10.243	10.250	-0.007	88	3243	0.0200	0.0213	
57 Dibromomethane	93	10.275	10.279	-0.004	93	3779	0.0200	0.0278	
60 Methyl methacrylate	41	10.652	10.649	0.003	1	1037	0.0200	0.0118	
61 Methylcyclohexane	83	11.100	11.109	-0.009	90	2938	0.0200	0.0189	
62 4-Methyl-2-pentanone (MIBK)	43	11.585	11.552	0.033	58	1793	0.0200	0.0128	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	93	2757	0.0200	0.0181	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	93	3115	0.0200	0.0200	
65 Toluene	91	12.470	12.471	-0.001	91	6779	0.0200	0.0212	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	89	1557	0.0200	0.0184	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	93	4430	0.0200	0.0180	
71 n-Octane	85	13.327	13.326	0.001	66	2061	0.0200	0.0203	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	91	3322	0.0200	0.0179	
73 Tetrachloroethene	129	13.699	13.695	0.004	88	3234	0.0200	0.0205	
74 Chlorobenzene	112	14.610	14.606	0.004	84	5465	0.0200	0.0196	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	74	3791	0.0200	0.0202	
76 Ethylbenzene	91	14.945	14.943	0.002	98	9121	0.0200	0.0198	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	99	14827	0.0400	0.0393	
79 Bromoform	173	15.506	15.507	-0.001	93	3956	0.0200	0.0153	
80 Styrene	104	15.603	15.594	0.009	93	3532	0.0200	0.0143	
82 o-Xylene	91	15.657	15.655	0.002	94	7608	0.0200	0.0192	
81 n-Nonane	57	15.657	15.659	-0.002	69	2778	0.0200	0.0185	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	88	3859	0.0200	0.0192	
84 1,2,3-Trichloropropane	110	16.136	16.132	0.004	93	1899	0.0200	0.0190	
85 Isopropylbenzene	105	16.282	16.283	-0.001	46	13150	0.0200	0.0233	
86 N-Propylbenzene	120	16.859	16.856	0.003	96	2952	0.0200	0.0191	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	2686	0.0200	0.0187	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	10337	0.0200	0.0177	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	4521	0.0200	0.0189	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	88	2640	0.0200	0.0116	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
91 n-Decane	57	17.528	17.532	-0.004	92	3562	0.0200	0.0167	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	11027	0.0200	0.0189	
93 1,2,4-Trimethylbenzene	105	17.609	17.605	0.004	96	9514	0.0200	0.0178	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	96	7986	0.0200	0.0207	
95 sec-Butylbenzene	105	17.905	17.902	0.003	96	13837	0.0200	0.0192	
96 Benzyl chloride	91	17.959	17.962	-0.003	96	6895	0.0200	0.0167	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	93	8118	0.0200	0.0209	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	14042	0.0200	0.0193	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	10719	0.0200	0.0187	
100 Butylcyclohexane	83	18.234	18.232	0.002	93	5805	0.0200	0.0184	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	90	7793	0.0200	0.0205	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	93	9654	0.0200	0.0204	
103 Indene	116	18.520	18.520	0.000	89	5834	0.0200	0.0150	
104 n-Butylbenzene	91	18.585	18.580	0.005	95	12135	0.0200	0.0204	
105 Undecane	57	19.005	19.001	0.004	86	5832	0.0200	0.0231	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	93	3364	0.0200	0.0181	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	15662	0.0200	0.0228	
110 Dodecane	57	20.127	20.128	-0.001	89	9191	0.0200	0.0347	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	93	13993	0.0200	0.0340	
113 Naphthalene	128	20.332	20.329	0.003	98	24682	0.0200	0.0297	
115 Hexachlorobutadiene	225	20.585	20.590	-0.005	95	19167	0.0200	0.0401	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	93	17493	0.0200	0.0443	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	96	6762	0.0200	0.0256	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	99	10187	0.0200	0.0437	
A 120 C8 Range	1	13.332	(13.295-13.359)		0	15685	0.0200	0.0190	
S 121 Xylenes, Total	100				0		0.0600	0.0585	
S 122 1,2-Dichloroethene, Total	1				0		0.0400	0.0446	

Reagents:

40L1-3DQP_00010

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D

Injection Date: 16-Nov-2018 21:42:30

Instrument ID: MR

Operator ID:

Lims ID: IC L1

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

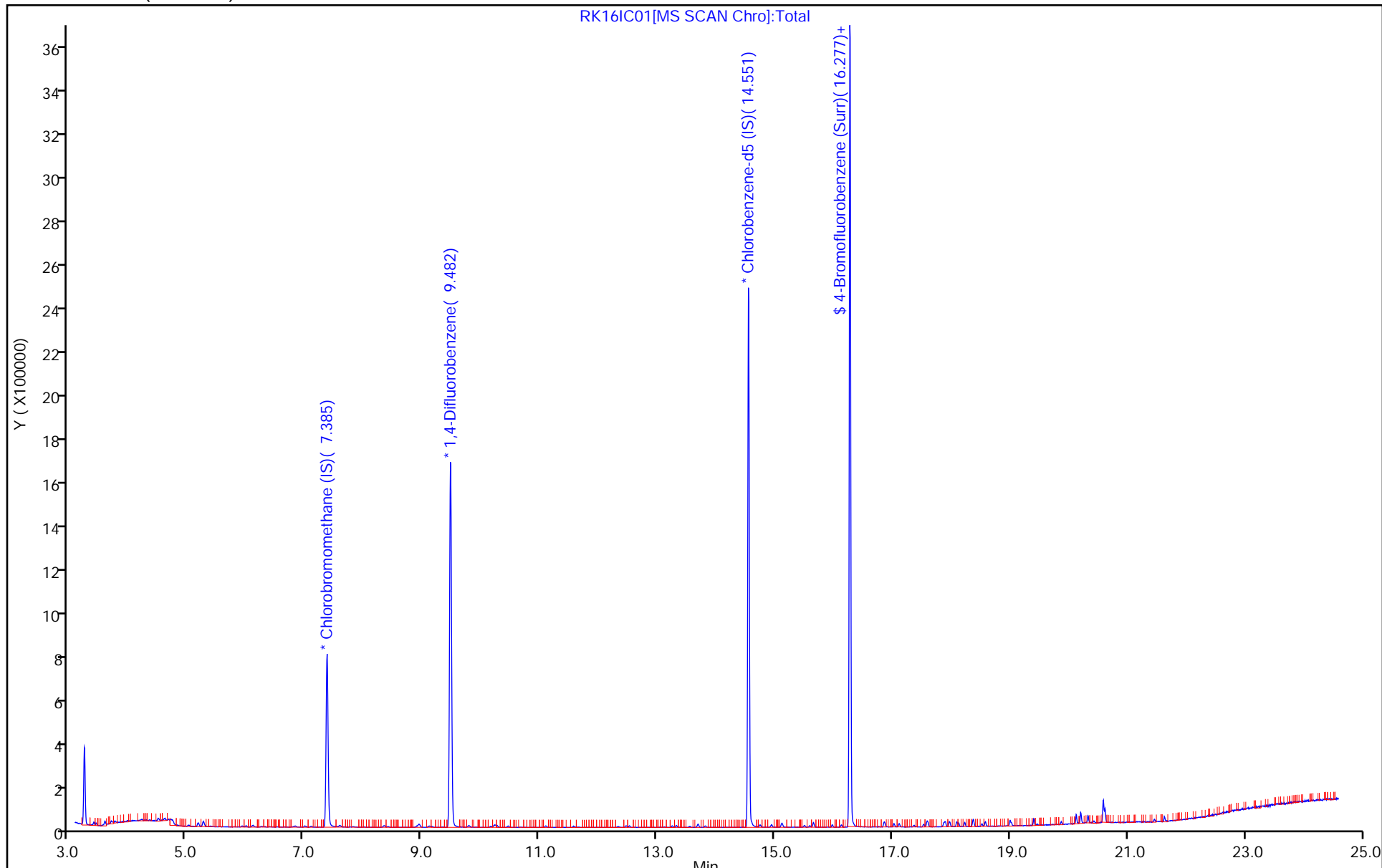
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D

Injection Date: 16-Nov-2018 21:42:30

Instrument ID: MR

Lims ID: IC L1

Client ID:

Operator ID:

ALS Bottle#:

1

Worklist Smp#:

8

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

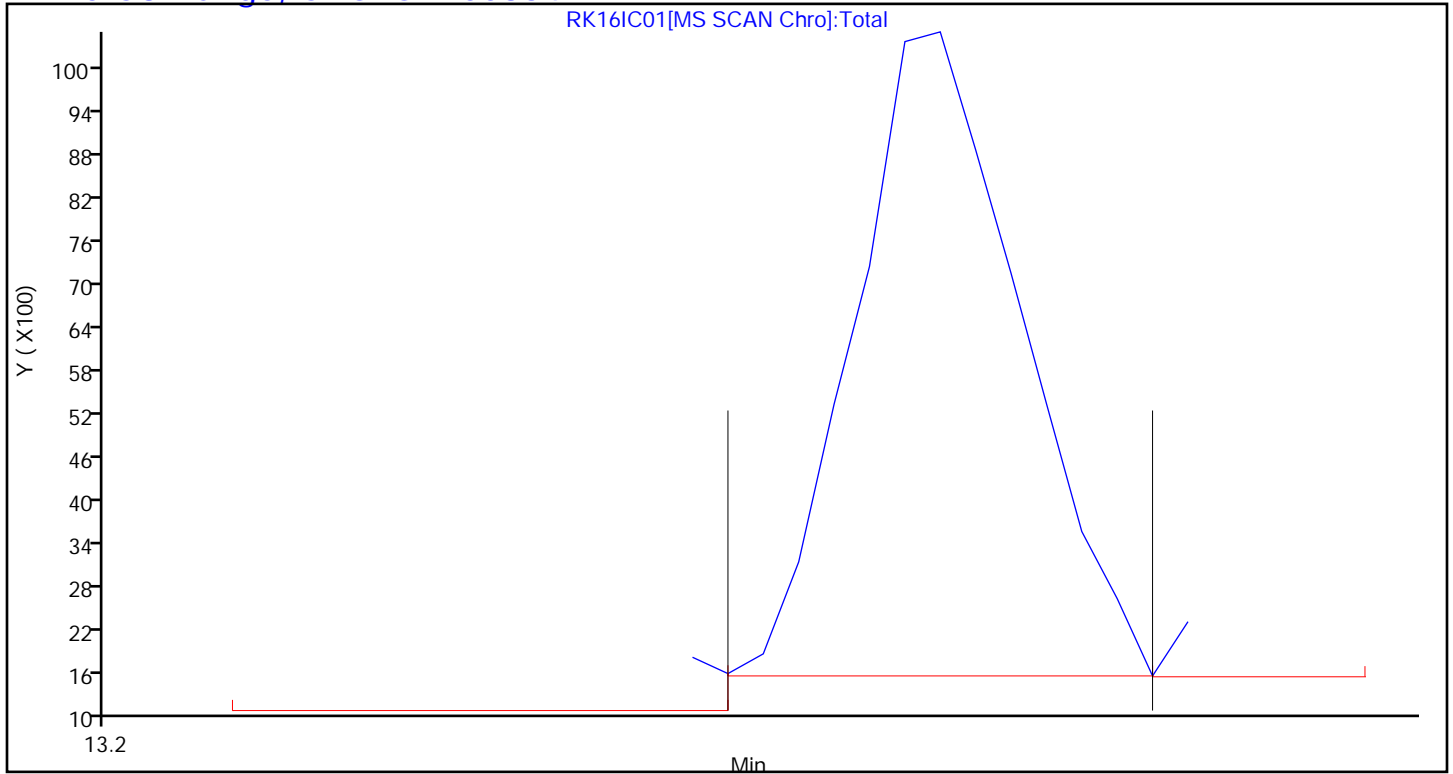
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 16-Nov-2018 22:34:30 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-009
 Misc. Info.: 191045
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:50 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:19:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.397	-0.007	70	260596	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1479125	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1285854	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1096528	4.00	4.01	
6 Chlorodifluoromethane	51	3.432	3.417	0.015	95	7544	0.0400	0.0488	
7 Propene	41	3.427	3.420	0.007	52	2713	0.0400	0.0571	
8 Dichlorodifluoromethane	85	3.470	3.461	0.009	100	14537	0.0400	0.0513	
9 Chloromethane	52	3.594	3.586	0.008	93	1035	0.0400	0.0519	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.615	3.609	0.006	89	10161	0.0400	0.0481	
11 Acetaldehyde	44	3.723	3.710	0.013	97	9143	0.2000	0.4906	
12 Vinyl chloride	62	3.718	3.711	0.007	52	3480	0.0400	0.0498	
13 Butadiene	54	3.788	3.780	0.008	74	1929	0.0400	0.0455	
14 Butane	43	3.788	3.782	0.006	74	3557	0.0400	0.0482	
15 Bromomethane	94	4.004	3.995	0.009	94	4039	0.0400	0.0502	
16 Chloroethane	64	4.106	4.100	0.006	80	1538	0.0400	0.0475	
17 Ethanol	31	4.225	4.222	0.003	91	4623	0.2000	0.2368	
18 Vinyl bromide	106	4.316	4.315	0.001	94	4463	0.0400	0.0526	
19 2-Methylbutane	43	4.370	4.369	0.001	75	2381	0.0400	0.0457	
20 Acrolein	56	4.516	4.516	0.000	28	1003	0.0400	0.0609	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	98	16343	0.0400	0.0424	
22 Acetonitrile	40	4.548	4.545	0.003	68	183	0.0400	0.0109	
23 Acetone	58	4.618	4.605	0.013	99	6843	0.1200	0.2531	
24 Pentane	72	4.694	4.693	0.001	57	764	0.0400	0.0583	
25 Isopropyl alcohol	45	4.721	4.716	0.005	95	10421	0.1200	0.1414	
26 Ethyl ether	31	4.834	4.817	0.017	76	1931	0.0400	0.0445	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	3786	0.0400	0.0413	
28 Acrylonitrile	53	5.098	5.097	0.001	78	1777	0.0400	0.0435	
29 2-Methyl-2-propanol	59	5.190	5.173	0.017	73	6749	0.0400	0.0387	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	92	9384	0.0400	0.0413	
31 Methylene Chloride	84	5.292	5.290	0.002	88	11735	0.0400	0.1346	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.308	5.309	-0.001	61	3483	0.0400	0.0408	
33 Carbon disulfide	76	5.411	5.410	0.001	97	8992	0.0400	0.0413	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	97	4125	0.0400	0.0441	
35 2-Methylpentane	43	6.004	6.011	-0.007	81	5672	0.0400	0.0460	
36 Methyl tert-butyl ether	73	6.112	6.094	0.018	93	12232	0.0400	0.0411	
37 1,1-Dichloroethane	63	6.274	6.283	-0.009	97	6968	0.0400	0.0445	
38 Vinyl acetate	43	6.409	6.402	0.007	97	5742	0.0400	0.0380	
39 2-Butanone (MEK)	72	6.791	6.761	0.030	97	1330	0.0400	0.0375	
40 Hexane	56	6.845	6.845	0.000	80	2274	0.0400	0.0418	
171 Isopropyl ether	45	7.002	6.989	0.013	86	7835	0.0400	0.0419	
41 cis-1,2-Dichloroethene	96	7.115	7.127	-0.012	96	3898	0.0400	0.0413	
42 Ethyl acetate	43	7.347	7.330	0.017	97	5081	0.0400	0.0388	
43 Chloroform	83	7.428	7.439	-0.011	87	10674	0.0400	0.0429	
173 Tert-butyl ethyl ether	59	7.589	7.580	0.009	92	10439	0.0400	0.0387	
44 Tetrahydrofuran	42	7.816	7.793	0.023	76	2575	0.0400	0.0446	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	94	13014	0.0400	0.0412	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	7880	0.0400	0.0421	
47 Benzene	78	8.911	8.920	-0.009	86	10465	0.0400	0.0434	
48 Cyclohexane	69	8.948	8.951	-0.003	60	1344	0.0400	0.0375	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	94	13947	0.0400	0.0411	
51 2,3-Dimethylpentane	71	9.115	9.126	-0.011	81	2179	0.0400	0.0437	
52 Thiophene	84	9.169	9.174	-0.005	90	5500	0.0400	0.0399	
53 Isooctane	57	9.800	9.798	0.002	94	11906	0.0400	0.0386	
54 1,2-Dichloropropane	63	10.178	10.175	0.003	78	2944	0.0400	0.0389	
55 n-Heptane	71	10.216	10.224	-0.008	79	2941	0.0400	0.0382	
56 Trichloroethene	130	10.237	10.250	-0.013	92	5696	0.0400	0.0392	
57 Dibromomethane	93	10.269	10.279	-0.010	87	5842	0.0400	0.0450	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	97	8635	0.0400	0.0355	
59 1,4-Dioxane	88	10.523	10.497	0.026	27	1245	0.0400	0.0339	
60 Methyl methacrylate	41	10.668	10.649	0.019	86	2528	0.0400	0.0300	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	5955	0.0400	0.0400	
62 4-Methyl-2-pentanone (MIBK)	43	11.569	11.552	0.017	61	3006	0.0400	0.0224	
63 cis-1,3-Dichloropropene	75	11.580	11.577	0.003	91	5376	0.0400	0.0368	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	5189	0.0400	0.0345	
65 Toluene	91	12.464	12.471	-0.007	92	11744	0.0400	0.0381	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	90	3120	0.0400	0.0382	
69 2-Hexanone	58	13.036	13.003	0.033	1	1297	0.0400	0.0201	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	93	7451	0.0400	0.0313	
71 n-Octane	85	13.327	13.326	0.001	79	3598	0.0400	0.0367	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	6066	0.0400	0.0339	
73 Tetrachloroethene	129	13.694	13.695	-0.001	89	6255	0.0400	0.0410	
74 Chlorobenzene	112	14.600	14.606	-0.006	96	10833	0.0400	0.0402	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	74	6840	0.0400	0.0378	
76 Ethylbenzene	91	14.945	14.943	0.002	99	17474	0.0400	0.0393	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	28347	0.0800	0.0778	
79 Bromoform	173	15.511	15.507	0.004	92	6657	0.0400	0.0266	
80 Styrene	104	15.592	15.594	-0.002	97	6834	0.0400	0.0286	
82 o-Xylene	91	15.656	15.655	0.001	96	14440	0.0400	0.0377	
81 n-Nonane	57	15.662	15.659	0.003	71	5104	0.0400	0.0352	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	89	6581	0.0400	0.0338	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	91	3252	0.0400	0.0337	
85 Isopropylbenzene	105	16.282	16.283	-0.001	47	23558	0.0400	0.0433	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	16.859	16.856	0.003	96	5565	0.0400	0.0372	
87 2-Chlorotoluene	126	16.870	16.867	0.003	91	5132	0.0400	0.0371	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	20634	0.0400	0.0365	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	89	8388	0.0400	0.0362	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	83	5656	0.0400	0.0257	
91 n-Decane	57	17.533	17.532	0.001	94	7343	0.0400	0.0356	
92 tert-Butylbenzene	119	17.592	17.590	0.002	89	21429	0.0400	0.0380	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	19133	0.0400	0.0370	
94 1,3-Dichlorobenzene	146	17.878	17.874	0.004	97	14097	0.0400	0.0378	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	27386	0.0400	0.0392	
96 Benzyl chloride	91	17.964	17.962	0.002	87	13082	0.0400	0.0328	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	90	14770	0.0400	0.0395	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	27559	0.0400	0.0391	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	20298	0.0400	0.0366	
100 Butylcyclohexane	83	18.234	18.232	0.002	91	12105	0.0400	0.0397	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	15537	0.0400	0.0422	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	91	17767	0.0400	0.0388	
103 Indene	116	18.520	18.520	0.000	89	11379	0.0400	0.0303	
104 n-Butylbenzene	91	18.579	18.580	-0.001	98	21840	0.0400	0.0381	
105 Undecane	57	19.000	19.001	-0.001	85	11356	0.0400	0.0465	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	92	6080	0.0400	0.0339	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	28122	0.0400	0.0423	
110 Dodecane	57	20.132	20.128	0.004	92	20145	0.0400	0.0788	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	93	24325	0.0400	0.0613	
113 Naphthalene	128	20.332	20.329	0.003	98	44394	0.0400	0.0553	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	36463	0.0400	0.0790	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	95	30595	0.0400	0.0802	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	96	7926	0.0400	0.0311	
118 1-Methylnaphthalene	142	21.631	21.626	0.005	97	11502	0.0400	0.0511	
A 120 C8 Range	1	13.332	(13.295-13.359)		0	31729	0.0400	0.0402	
S 121 Xylenes, Total	100				0		0.1200	0.1155	
S 122 1,2-Dichloroethene, Total	1				0		0.0800	0.0854	

Reagents:

40L1-3DQP_00010

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D

Injection Date: 16-Nov-2018 22:34:30

Instrument ID: MR

Operator ID:

Lims ID: IC L2

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

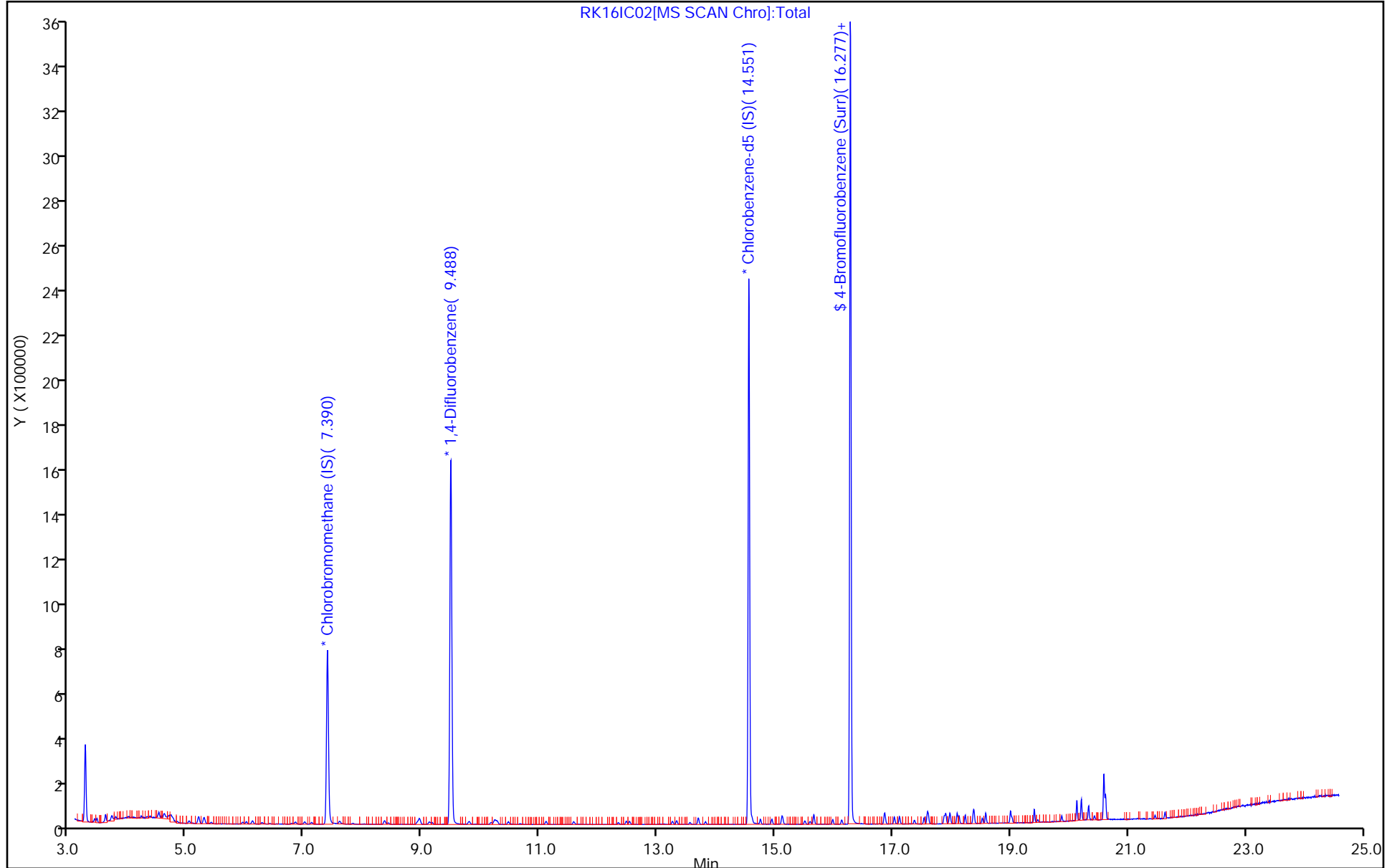
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D

Injection Date: 16-Nov-2018 22:34:30

Instrument ID: MR

Lims ID: IC L2

Client ID:

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

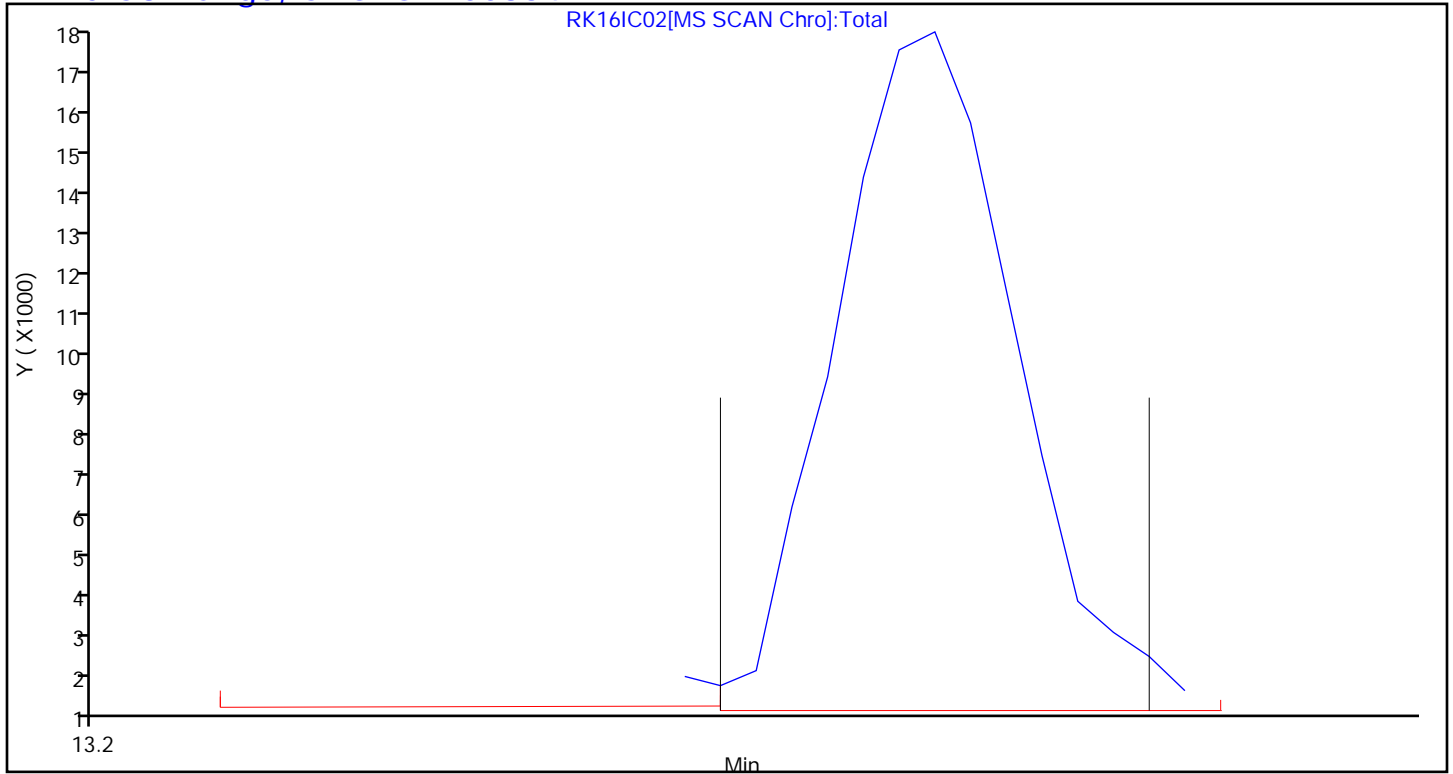
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 16-Nov-2018 23:27:30 ALS Bottle#: 2 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-010
 Misc. Info.: 190398
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:54 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:20:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.395	7.397	-0.002	80	259070	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.494	-0.001	95	1455868	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	90	1271256	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	90	1100173	4.00	4.07	
6 Chlorodifluoromethane	51	3.437	3.417	0.020	94	13488	0.0800	0.0877	
7 Propene	41	3.432	3.420	0.012	55	5125	0.0800	0.1085	
8 Dichlorodifluoromethane	85	3.475	3.461	0.014	99	23530	0.0800	0.0835	
9 Chloromethane	52	3.594	3.586	0.008	98	2235	0.0800	0.1127	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.621	3.609	0.012	88	16805	0.0800	0.0801	
11 Acetaldehyde	44	3.723	3.710	0.013	93	15383	0.4000	0.8304	
12 Vinyl chloride	62	3.723	3.711	0.012	49	5811	0.0800	0.0836	
13 Butadiene	54	3.793	3.780	0.013	81	3945	0.0800	0.0936	
14 Butane	43	3.799	3.782	0.017	77	6822	0.0800	0.0930	
15 Bromomethane	94	4.009	3.995	0.014	94	7392	0.0800	0.0924	
16 Chloroethane	64	4.106	4.100	0.006	95	3121	0.0800	0.0970	
17 Ethanol	31	4.225	4.222	0.003	94	11273	0.4000	0.5808	
18 Vinyl bromide	106	4.327	4.315	0.012	95	7520	0.0800	0.0892	
19 2-Methylbutane	43	4.381	4.369	0.012	80	4476	0.0800	0.0864	
20 Acrolein	56	4.527	4.516	0.011	30	2267	0.0800	0.1384	
21 Trichlorofluoromethane	101	4.527	4.517	0.010	98	32292	0.0800	0.0843	
22 Acetonitrile	40	4.559	4.545	0.014	52	776	0.0800	0.0463	
23 Acetone	58	4.618	4.605	0.013	100	12343	0.2400	0.4592	
24 Pentane	72	4.699	4.693	0.006	91	1155	0.0800	0.0887	
25 Isopropyl alcohol	45	4.721	4.716	0.005	97	22445	0.2400	0.3063	
26 Ethyl ether	31	4.834	4.817	0.017	69	3716	0.0800	0.0861	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	7294	0.0800	0.0800	
28 Acrylonitrile	53	5.098	5.097	0.001	97	3780	0.0800	0.0930	
29 2-Methyl-2-propanol	59	5.190	5.173	0.017	96	13889	0.0800	0.0801	
30 1,1,2-Trichloro-1,2,2-trif	101	5.211	5.199	0.012	93	19377	0.0800	0.0857	
31 Methylene Chloride	84	5.298	5.290	0.008	89	14815	0.0800	0.1710	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	83	6102	0.0800	0.0720	
33 Carbon disulfide	76	5.422	5.410	0.012	99	17438	0.0800	0.0806	
34 trans-1,2-Dichloroethene	96	5.956	5.951	0.005	95	7397	0.0800	0.0795	
35 2-Methylpentane	43	6.020	6.011	0.009	84	10171	0.0800	0.0829	
36 Methyl tert-butyl ether	73	6.112	6.094	0.018	92	24609	0.0800	0.0832	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	96	12813	0.0800	0.0823	
38 Vinyl acetate	43	6.409	6.402	0.007	97	10473	0.0800	0.0697	
39 2-Butanone (MEK)	72	6.775	6.761	0.014	96	2930	0.0800	0.0831	
40 Hexane	56	6.845	6.845	0.000	80	4675	0.0800	0.0864	
171 Isopropyl ether	45	7.002	6.989	0.013	83	15025	0.0800	0.0807	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	94	7431	0.0800	0.0792	
42 Ethyl acetate	43	7.336	7.330	0.006	96	9377	0.0800	0.0720	
43 Chloroform	83	7.439	7.439	0.000	91	19866	0.0800	0.0803	
173 Tert-butyl ethyl ether	59	7.595	7.580	0.015	93	21806	0.0800	0.0813	
44 Tetrahydrofuran	42	7.816	7.793	0.023	77	4556	0.0800	0.0794	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	93	25970	0.0800	0.0828	
46 1,2-Dichloroethane	62	8.431	8.427	0.004	97	15042	0.0800	0.0816	
47 Benzene	78	8.921	8.920	0.001	98	20437	0.0800	0.0862	
48 Cyclohexane	69	8.954	8.951	0.003	70	3013	0.0800	0.0855	
50 Carbon tetrachloride	117	8.965	8.962	0.003	95	21947	0.0800	0.0658	
49 n-Butanol	31	9.008	8.969	0.039	1	1240	0.0800	0.0737	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	80	3528	0.0800	0.0718	
52 Thiophene	84	9.169	9.174	-0.005	94	10374	0.0800	0.0764	
53 Isooctane	57	9.800	9.798	0.002	94	25192	0.0800	0.0830	
54 1,2-Dichloropropane	63	10.172	10.175	-0.003	72	6201	0.0800	0.0833	
55 n-Heptane	71	10.226	10.224	0.002	81	5754	0.0800	0.0759	
56 Trichloroethene	130	10.253	10.250	0.003	92	11668	0.0800	0.0816	
57 Dibromomethane	93	10.275	10.279	-0.004	91	10846	0.0800	0.0848	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	17387	0.0800	0.0725	
59 1,4-Dioxane	88	10.507	10.497	0.010	90	2726	0.0800	0.0753	
60 Methyl methacrylate	41	10.658	10.649	0.009	88	6227	0.0800	0.0752	
61 Methylcyclohexane	83	11.111	11.109	0.002	93	11565	0.0800	0.0790	
62 4-Methyl-2-pentanone (MIBK)	43	11.564	11.552	0.012	79	9056	0.0800	0.0686	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	94	10488	0.0800	0.0730	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	96	10066	0.0800	0.0678	
65 Toluene	91	12.470	12.471	-0.001	93	24790	0.0800	0.0814	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	91	6520	0.0800	0.0807	
69 2-Hexanone	58	13.020	13.003	0.017	93	3236	0.0800	0.0508	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	16103	0.0800	0.0683	
71 n-Octane	85	13.327	13.326	0.001	72	7429	0.0800	0.0766	
72 Ethylene Dibromide	107	13.553	13.551	0.002	97	12712	0.0800	0.0718	
73 Tetrachloroethene	129	13.694	13.695	-0.001	93	12031	0.0800	0.0797	
74 Chlorobenzene	112	14.605	14.606	-0.001	91	21742	0.0800	0.0817	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	76	14645	0.0800	0.0819	
76 Ethylbenzene	91	14.945	14.943	0.002	99	35735	0.0800	0.0814	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	59080	0.1600	0.1640	
79 Bromoform	173	15.506	15.507	-0.001	94	14982	0.0800	0.0605	
80 Styrene	104	15.592	15.594	-0.002	96	15265	0.0800	0.0646	
82 o-Xylene	91	15.656	15.655	0.001	95	32097	0.0800	0.0848	
81 n-Nonane	57	15.662	15.659	0.003	72	11326	0.0800	0.0790	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	88	14484	0.0800	0.0753	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	91	7400	0.0800	0.0776	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	48	46548	0.0800	0.0865	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	11527	0.0800	0.0780	
87 2-Chlorotoluene	126	16.870	16.867	0.003	93	11745	0.0800	0.0858	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	45329	0.0800	0.0811	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	18627	0.0800	0.0814	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	87	12787	0.0800	0.0588	
91 n-Decane	57	17.528	17.532	-0.004	95	15703	0.0800	0.0769	
92 tert-Butylbenzene	119	17.592	17.590	0.002	89	46562	0.0800	0.0836	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	42935	0.0800	0.0841	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	31633	0.0800	0.0858	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	57824	0.0800	0.0838	
96 Benzyl chloride	91	17.964	17.962	0.002	97	27963	0.0800	0.0710	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	91	31188	0.0800	0.0843	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	56711	0.0800	0.0814	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	47349	0.0800	0.0863	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	24822	0.0800	0.0823	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	94	31984	0.0800	0.0879	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	92	37591	0.0800	0.0831	
103 Indene	116	18.520	18.520	0.000	91	26287	0.0800	0.0708	
104 n-Butylbenzene	91	18.579	18.580	-0.001	98	46679	0.0800	0.0823	
105 Undecane	57	19.000	19.001	-0.001	90	20015	0.0800	0.0829	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	95	11163	0.0800	0.0630	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	96	54539	0.0800	0.0830	
110 Dodecane	57	20.127	20.128	-0.001	89	22733	0.0800	0.0899	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	36794	0.0800	0.0937	
113 Naphthalene	128	20.332	20.329	0.003	98	71658	0.0800	0.0903	
115 Hexachlorobutadiene	225	20.591	20.590	0.000	96	43683	0.0800	0.0957	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	36693	0.0800	0.0972	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	22514	0.0800	0.0893	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	96	25106	0.0800	0.1129	
A 120 C8 Range	1	13.335	(13.289-13.365)		0	65978	0.0800	0.0849	
S 121 Xylenes, Total	100				0		0.2400	0.2488	
S 122 1,2-Dichloroethene, Total	1				0		0.1600	0.1588	

Reagents:

40L1-3DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D

Injection Date: 16-Nov-2018 23:27:30

Instrument ID: MR

Operator ID:

Lims ID: IC L3

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D

Injection Date: 16-Nov-2018 23:27:30

Instrument ID: MR

Lims ID: IC L3

Client ID:

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

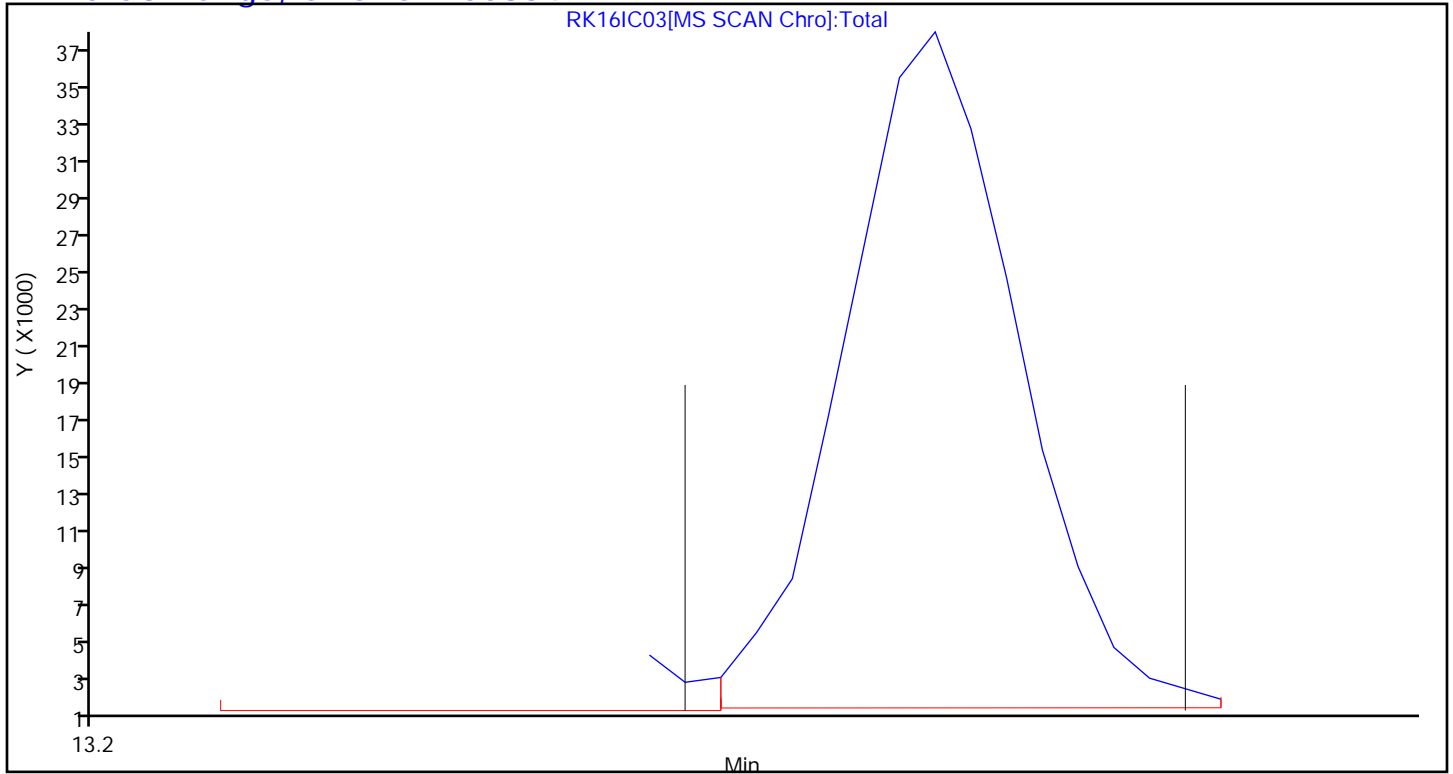
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 17-Nov-2018 00:20:30 ALS Bottle#: 3 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-011
 Misc. Info.: 190397
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:59 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:30:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	266212	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	95	1504650	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1298874	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1123241	4.00	4.07	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	96	27178	0.1600	0.1721	
7 Propene	41	3.421	3.420	0.001	49	8965	0.1600	0.1846	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	45214	0.1600	0.1561	
9 Chloromethane	52	3.583	3.586	-0.003	98	3152	0.1600	0.1547	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.605	3.609	-0.004	89	33908	0.1600	0.1572	
11 Acetaldehyde	44	3.707	3.710	-0.003	91	22123	0.8000	1.16	
12 Vinyl chloride	62	3.707	3.711	-0.004	60	11775	0.1600	0.1649	
13 Butadiene	54	3.777	3.780	-0.003	78	7472	0.1600	0.1726	
14 Butane	43	3.777	3.782	-0.005	77	12514	0.1600	0.1661	
15 Bromomethane	94	3.993	3.995	-0.002	95	13519	0.1600	0.1644	
16 Chloroethane	64	4.095	4.100	-0.005	97	5876	0.1600	0.1777	
17 Ethanol	31	4.209	4.222	-0.013	91	17498	0.8000	0.8773	
18 Vinyl bromide	106	4.306	4.315	-0.009	96	14410	0.1600	0.1663	
19 2-Methylbutane	43	4.365	4.369	-0.004	80	9090	0.1600	0.1708	
20 Acrolein	56	4.516	4.516	0.000	29	3617	0.1600	0.2150	
21 Trichlorofluoromethane	101	4.511	4.517	-0.006	100	64156	0.1600	0.1630	
22 Acetonitrile	40	4.548	4.545	0.003	95	2801	0.1600	0.1627	
23 Acetone	58	4.597	4.605	-0.008	100	18402	0.4800	0.6662	
24 Pentane	72	4.688	4.693	-0.005	90	2568	0.1600	0.1919	
25 Isopropyl alcohol	45	4.705	4.716	-0.011	97	40201	0.4800	0.5338	
26 Ethyl ether	31	4.818	4.817	0.001	78	7549	0.1600	0.1703	
27 1,1-Dichloroethene	96	5.023	5.033	-0.010	96	14740	0.1600	0.1573	
28 Acrylonitrile	53	5.088	5.097	-0.009	93	6563	0.1600	0.1571	
29 2-Methyl-2-propanol	59	5.163	5.173	-0.010	96	28891	0.1600	0.1621	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	91	37596	0.1600	0.1619	
31 Methylene Chloride	84	5.276	5.290	-0.014	88	21540	0.1600	0.2419	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.298	5.309	-0.011	83	15229	0.1600	0.1748	
33 Carbon disulfide	76	5.400	5.410	-0.010	99	34577	0.1600	0.1555	
34 trans-1,2-Dichloroethene	96	5.939	5.951	-0.012	97	14785	0.1600	0.1547	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	20556	0.1600	0.1631	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	47525	0.1600	0.1563	
37 1,1-Dichloroethane	63	6.268	6.283	-0.015	96	24630	0.1600	0.1540	
38 Vinyl acetate	43	6.387	6.402	-0.015	98	21613	0.1600	0.1399	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	97	6132	0.1600	0.1692	
40 Hexane	56	6.840	6.845	-0.005	80	8962	0.1600	0.1612	
171 Isopropyl ether	45	6.986	6.989	-0.003	87	30112	0.1600	0.1575	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	96	15197	0.1600	0.1577	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	20428	0.1600	0.1526	
43 Chloroform	83	7.422	7.439	-0.017	90	40040	0.1600	0.1575	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	93	42934	0.1600	0.1558	
44 Tetrahydrofuran	42	7.794	7.793	0.001	70	9354	0.1600	0.1586	
45 1,1,1-Trichloroethane	97	8.355	8.364	-0.009	94	50545	0.1600	0.1568	
46 1,2-Dichloroethane	62	8.415	8.427	-0.012	98	29238	0.1600	0.1535	
47 Benzene	78	8.911	8.920	-0.009	98	37991	0.1600	0.1550	
48 Cyclohexane	69	8.948	8.951	-0.003	61	5770	0.1600	0.1584	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	95	54395	0.1600	0.1577	
49 n-Butanol	31	8.997	8.969	0.028	35	1642	0.1600	0.0945	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	7686	0.1600	0.1514	
52 Thiophene	84	9.164	9.174	-0.010	94	21711	0.1600	0.1548	
53 Isooctane	57	9.790	9.798	-0.008	95	49245	0.1600	0.1569	
54 1,2-Dichloropropane	63	10.173	10.175	-0.003	75	11982	0.1600	0.1557	
55 n-Heptane	71	10.210	10.224	-0.014	80	11910	0.1600	0.1520	
56 Trichloroethene	130	10.243	10.250	-0.007	91	22698	0.1600	0.1536	
57 Dibromomethane	93	10.270	10.279	-0.009	91	21454	0.1600	0.1623	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	35620	0.1600	0.1438	
59 1,4-Dioxane	88	10.507	10.497	0.010	85	5968	0.1600	0.1596	
60 Methyl methacrylate	41	10.647	10.649	-0.002	88	10629	0.1600	0.1242	
61 Methylcyclohexane	83	11.105	11.109	-0.004	93	23124	0.1600	0.1528	
62 4-Methyl-2-pentanone (MIBK)	43	11.553	11.552	0.001	90	17423	0.1600	0.1277	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	96	21150	0.1600	0.1424	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	22215	0.1600	0.1464	
65 Toluene	91	12.470	12.471	-0.001	93	49243	0.1600	0.1582	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	92	13406	0.1600	0.1623	
69 2-Hexanone	58	13.009	13.003	0.006	93	7267	0.1600	0.1116	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	33778	0.1600	0.1403	
71 n-Octane	85	13.322	13.326	-0.004	72	15759	0.1600	0.1589	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	98	25676	0.1600	0.1419	
73 Tetrachloroethene	129	13.688	13.695	-0.007	93	25138	0.1600	0.1630	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	43900	0.1600	0.1614	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	77	29630	0.1600	0.1622	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	69322	0.1600	0.1545	
78 m-Xylene & p-Xylene	91	15.123	15.119	0.004	100	119367	0.3200	0.3243	
79 Bromoform	173	15.506	15.507	-0.001	95	32037	0.1600	0.1267	
80 Styrene	104	15.592	15.594	-0.002	97	32117	0.1600	0.1331	
82 o-Xylene	91	15.657	15.655	0.002	97	63851	0.1600	0.1652	
81 n-Nonane	57	15.657	15.659	-0.002	76	23460	0.1600	0.1601	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	92	30142	0.1600	0.1534	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	92	15160	0.1600	0.1556	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	50	91067	0.1600	0.1655	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	24106	0.1600	0.1596	
87 2-Chlorotoluene	126	16.870	16.867	0.003	94	22951	0.1600	0.1642	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	91082	0.1600	0.1594	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	90	37553	0.1600	0.1606	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	89	28257	0.1600	0.1271	
91 n-Decane	57	17.533	17.532	0.001	96	33292	0.1600	0.1597	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	90	97365	0.1600	0.1710	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	88253	0.1600	0.1692	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	61425	0.1600	0.1631	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	98	116417	0.1600	0.1652	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	54221	0.1600	0.1348	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	92	63275	0.1600	0.1674	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	116224	0.1600	0.1634	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	98	92640	0.1600	0.1654	
100 Butylcyclohexane	83	18.229	18.232	-0.003	93	50956	0.1600	0.1654	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	62682	0.1600	0.1687	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	92	77218	0.1600	0.1671	
103 Indene	116	18.520	18.520	0.000	90	56129	0.1600	0.1480	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	97253	0.1600	0.1678	
105 Undecane	57	19.000	19.001	-0.001	87	40009	0.1600	0.1622	
106 1,2-Dibromo-3-Chloropropan	157	19.021	19.028	-0.007	94	24464	0.1600	0.1352	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	111338	0.1600	0.1659	
110 Dodecane	57	20.127	20.128	-0.001	90	45141	0.1600	0.1747	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	72153	0.1600	0.1799	
113 Naphthalene	128	20.326	20.329	-0.003	98	142183	0.1600	0.1753	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	96	81808	0.1600	0.1754	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	94	72007	0.1600	0.1868	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	50645	0.1600	0.1965	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	98	54962	0.1600	0.2418	
A 120 C8 Range	1	13.337	(13.284-13.370)		0	123442	0.1600	0.1536	
S 121 Xylenes, Total	100				0		0.4800	0.4895	
S 122 1,2-Dichloroethene, Total	1				0		0.3200	0.3124	

Reagents:

40L4DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D

Injection Date: 17-Nov-2018 00:20:30

Instrument ID: MR

Operator ID:

Lims ID: IC L4

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

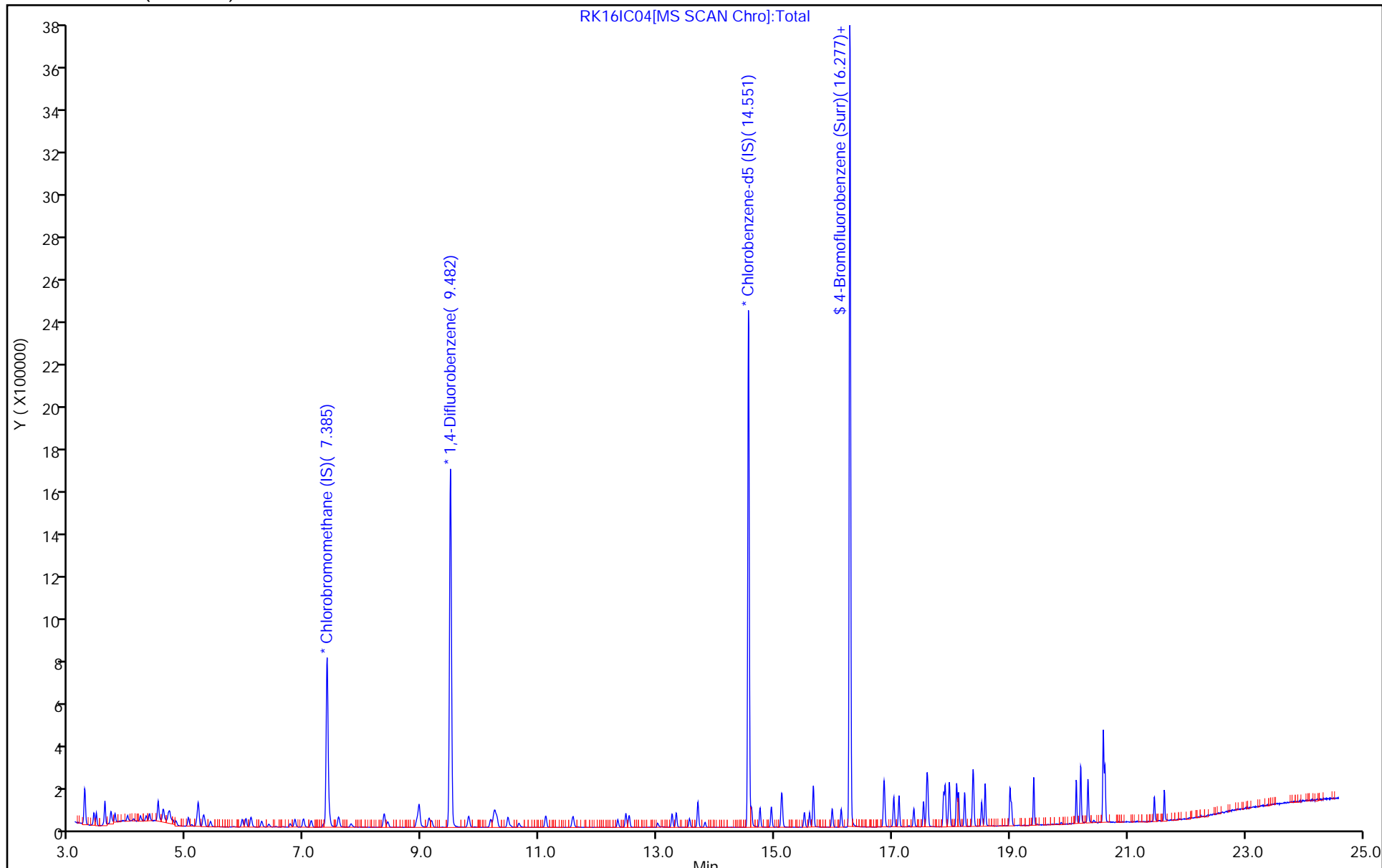
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D

Injection Date: 17-Nov-2018 00:20:30

Instrument ID: MR

Lims ID: IC L4

Client ID:

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

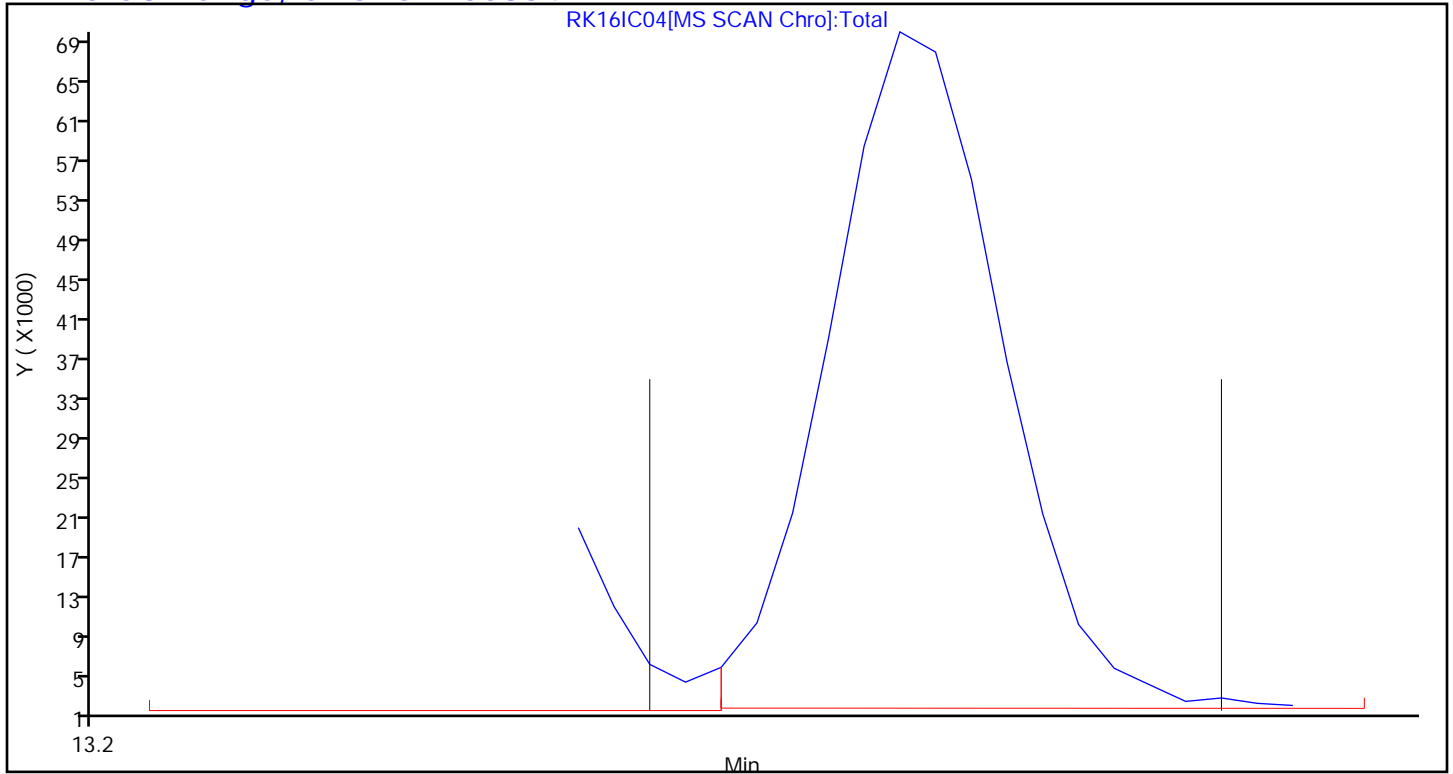
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK161C05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 17-Nov-2018 01:12:30 ALS Bottle#: 4 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-012
 Misc. Info.: 190395
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:05 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK161C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:25:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	275927	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1558367	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1354086	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	90	1170099	4.00	4.06	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	95	67965	0.4000	0.4151	
7 Propene	41	3.410	3.420	-0.010	48	20715	0.4000	0.4116	
8 Dichlorodifluoromethane	85	3.448	3.461	-0.013	100	146259	0.4000	0.4871	
9 Chloromethane	52	3.572	3.586	-0.014	99	9302	0.4000	0.4405	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.599	3.609	-0.010	90	98065	0.4000	0.4387	
11 Acetaldehyde	44	3.696	3.710	-0.014	93	45673	2.00	2.31	
12 Vinyl chloride	62	3.702	3.711	-0.009	85	28814	0.4000	0.3893	
13 Butadiene	54	3.766	3.780	-0.014	83	18132	0.4000	0.4040	
14 Butane	43	3.772	3.782	-0.010	78	33375	0.4000	0.4274	
15 Bromomethane	94	3.982	3.995	-0.013	96	35058	0.4000	0.4114	
16 Chloroethane	64	4.084	4.100	-0.016	95	13655	0.4000	0.3983	
17 Ethanol	31	4.209	4.222	-0.014	92	43508	2.00	2.10	
18 Vinyl bromide	106	4.300	4.315	-0.015	96	37233	0.4000	0.4146	
19 2-Methylbutane	43	4.359	4.369	-0.010	78	23067	0.4000	0.4180	
20 Acrolein	56	4.510	4.516	-0.006	28	6392	0.4000	0.3665	
21 Trichlorofluoromethane	101	4.505	4.517	-0.012	99	164680	0.4000	0.4038	
22 Acetonitrile	40	4.548	4.545	0.003	98	6701	0.4000	0.3756	
23 Acetone	58	4.597	4.605	-0.008	100	35521	1.20	1.24	
24 Pentane	72	4.683	4.693	-0.010	91	5613	0.4000	0.4046	
25 Isopropyl alcohol	45	4.705	4.716	-0.011	97	95103	1.20	1.22	
26 Ethyl ether	31	4.807	4.817	-0.010	72	19232	0.4000	0.4185	
27 1,1-Dichloroethene	96	5.023	5.033	-0.010	98	37945	0.4000	0.3908	
28 Acrylonitrile	53	5.087	5.097	-0.010	95	17259	0.4000	0.3986	
29 2-Methyl-2-propanol	59	5.168	5.173	-0.005	95	74242	0.4000	0.4020	
30 1,1,2-Trichloro-1,2,2-trif	101	5.190	5.199	-0.009	94	97989	0.4000	0.4071	
31 Methylene Chloride	84	5.276	5.290	-0.014	90	41401	0.4000	0.4485	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.298	5.309	-0.011	83	36262	0.4000	0.4015	
33 Carbon disulfide	76	5.395	5.410	-0.015	99	91945	0.4000	0.3990	
34 trans-1,2-Dichloroethene	96	5.939	5.951	-0.012	97	38175	0.4000	0.3854	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	53163	0.4000	0.4069	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	126834	0.4000	0.4025	
37 1,1-Dichloroethane	63	6.274	6.283	-0.009	98	65086	0.4000	0.3927	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	59429	0.4000	0.3713	
39 2-Butanone (MEK)	72	6.754	6.761	-0.007	97	14067	0.4000	0.3744	
40 Hexane	56	6.835	6.845	-0.010	81	23112	0.4000	0.4012	
171 Isopropyl ether	45	6.980	6.989	-0.009	85	80134	0.4000	0.4043	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	95	38474	0.4000	0.3852	
42 Ethyl acetate	43	7.320	7.330	-0.010	98	53019	0.4000	0.3820	
43 Chloroform	83	7.433	7.439	-0.006	89	104204	0.4000	0.3954	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	92	113240	0.4000	0.3965	
44 Tetrahydrofuran	42	7.784	7.793	-0.009	77	24371	0.4000	0.3987	
45 1,1,1-Trichloroethane	97	8.355	8.364	-0.009	94	130803	0.4000	0.3915	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	76773	0.4000	0.3892	
47 Benzene	78	8.911	8.920	-0.009	98	96837	0.4000	0.3814	
48 Cyclohexane	69	8.943	8.951	-0.008	91	14632	0.4000	0.3878	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	98	145724	0.4000	0.4080	
49 n-Butanol	31	8.981	8.969	0.012	66	5146	0.4000	0.2859	
51 2,3-Dimethylpentane	71	9.126	9.126	0.000	80	21116	0.4000	0.4017	
52 Thiophene	84	9.169	9.174	-0.005	92	57630	0.4000	0.3968	
53 Isooctane	57	9.795	9.798	-0.003	94	126672	0.4000	0.3898	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	75	31548	0.4000	0.3959	
55 n-Heptane	71	10.221	10.224	-0.003	82	32279	0.4000	0.3977	
56 Trichloroethene	130	10.243	10.250	-0.007	93	60473	0.4000	0.3951	
57 Dibromomethane	93	10.270	10.279	-0.009	94	53985	0.4000	0.3944	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	98	97237	0.4000	0.3789	
59 1,4-Dioxane	88	10.496	10.497	-0.001	88	15165	0.4000	0.3916	
60 Methyl methacrylate	41	10.642	10.649	-0.007	91	31857	0.4000	0.3594	
61 Methylcyclohexane	83	11.105	11.109	-0.004	92	61375	0.4000	0.3915	
62 4-Methyl-2-pentanone (MIBK)	43	11.548	11.552	-0.004	91	51070	0.4000	0.3615	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	97	59340	0.4000	0.3858	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	61443	0.4000	0.3884	
65 Toluene	91	12.470	12.471	-0.001	93	129198	0.4000	0.3981	
66 1,1,2-Trichloroethane	83	12.524	12.527	-0.003	93	35149	0.4000	0.4083	
69 2-Hexanone	58	13.003	13.003	0.000	95	24199	0.4000	0.3564	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	94584	0.4000	0.3769	
71 n-Octane	85	13.327	13.326	0.001	75	40600	0.4000	0.3928	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	73769	0.4000	0.3910	
73 Tetrachloroethene	129	13.688	13.695	-0.007	93	63725	0.4000	0.3964	
74 Chlorobenzene	112	14.605	14.606	-0.001	93	113462	0.4000	0.4003	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	80	76114	0.4000	0.3997	
76 Ethylbenzene	91	14.939	14.943	-0.004	100	189812	0.4000	0.4057	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	316153	0.8001	0.8239	
79 Bromoform	173	15.506	15.507	-0.001	96	89888	0.4000	0.3410	
80 Styrene	104	15.592	15.594	-0.002	97	91899	0.4000	0.3654	
82 o-Xylene	91	15.651	15.655	-0.004	96	169158	0.4000	0.4197	
81 n-Nonane	57	15.657	15.659	-0.003	73	65019	0.4000	0.4257	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	92	83793	0.4000	0.4091	
84 1,2,3-Trichloropropane	110	16.126	16.132	-0.006	94	40330	0.4000	0.3971	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	95	232238	0.4000	0.4049	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	64393	0.4000	0.4089	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	91	59552	0.4000	0.4086	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	243377	0.4000	0.4086	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	98748	0.4000	0.4052	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	88	77610	0.4000	0.3350	
91 n-Decane	57	17.533	17.532	0.001	97	87862	0.4000	0.4042	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	90	252400	0.4000	0.4252	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	231880	0.4000	0.4264	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	157370	0.4000	0.4008	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	302828	0.4000	0.4121	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	149421	0.4000	0.3562	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	93	157774	0.4000	0.4003	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	307780	0.4000	0.4150	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	98	237762	0.4000	0.4071	
100 Butylcyclohexane	83	18.229	18.232	-0.003	92	134022	0.4000	0.4173	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	153773	0.4000	0.3970	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	93	195256	0.4000	0.4053	
103 Indene	116	18.520	18.520	0.000	90	144394	0.4000	0.3651	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	247354	0.4000	0.4095	
105 Undecane	57	19.000	19.001	-0.001	88	102646	0.4000	0.3991	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	97	65829	0.4000	0.3490	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	96	265327	0.4000	0.3792	
110 Dodecane	57	20.127	20.128	-0.001	89	92125	0.4000	0.3420	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	147015	0.4000	0.3515	
113 Naphthalene	128	20.326	20.329	-0.003	98	247207	0.4000	0.2923	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	96	188387	0.4000	0.3875	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	138621	0.4000	0.3449	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	37139	0.4000	0.1383	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	96	44726	0.4000	0.1888	
A 120 C8 Range	1	13.343	(13.284-13.381)		0	326670	0.4000	0.3926	
S 121 Xylenes, Total	100				0		1.20	1.24	
S 122 1,2-Dichloroethene, Total	1				0		0.8001	0.7707	

Reagents:

40L6DQP_00007

Amount Added: 80.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC05.D

Injection Date: 17-Nov-2018 01:12:30

Instrument ID: MR

Operator ID:

Lims ID: IC L5

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

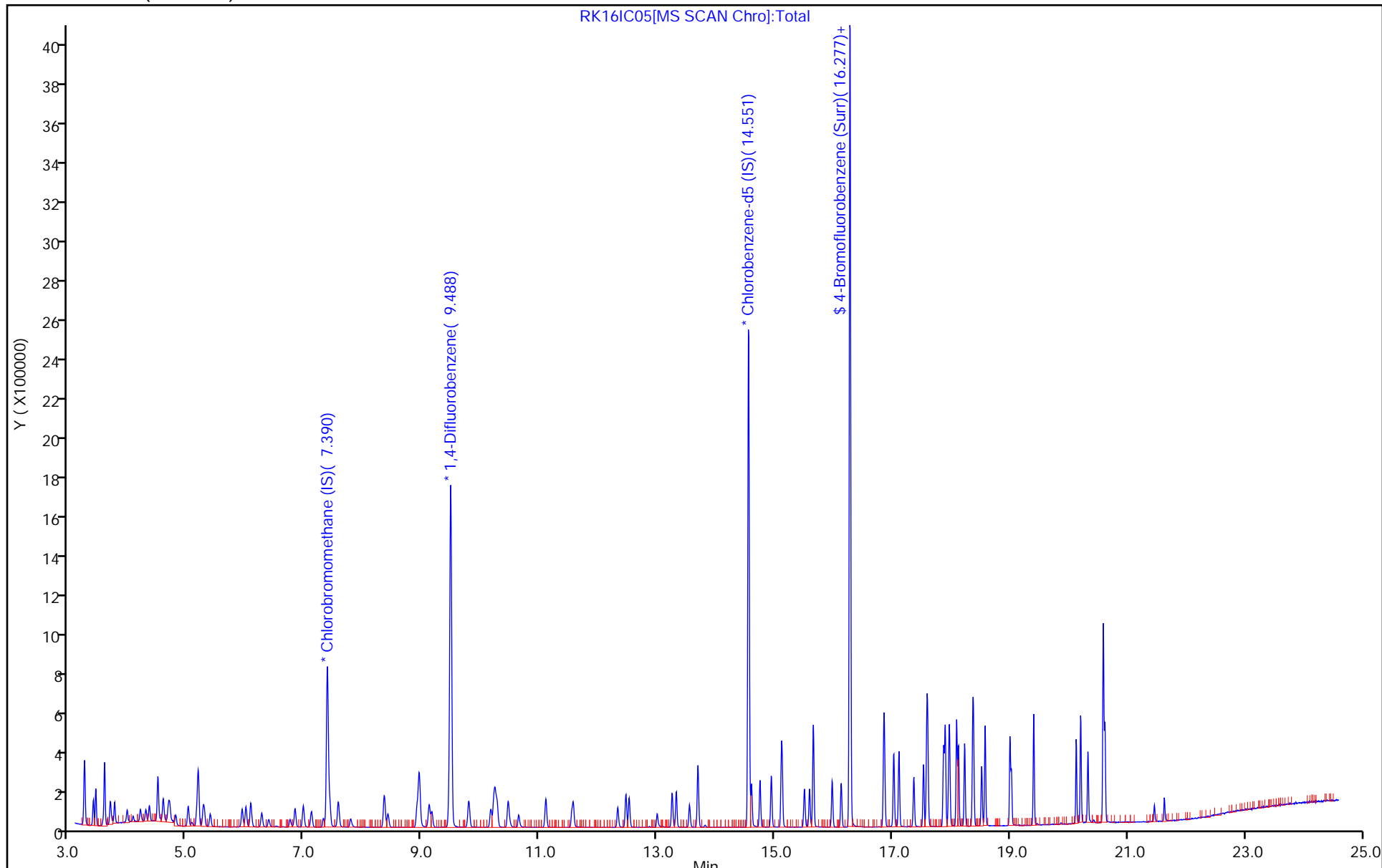
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC05.D

Injection Date: 17-Nov-2018 01:12:30

Instrument ID: MR

Lims ID: IC L5

Client ID:

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

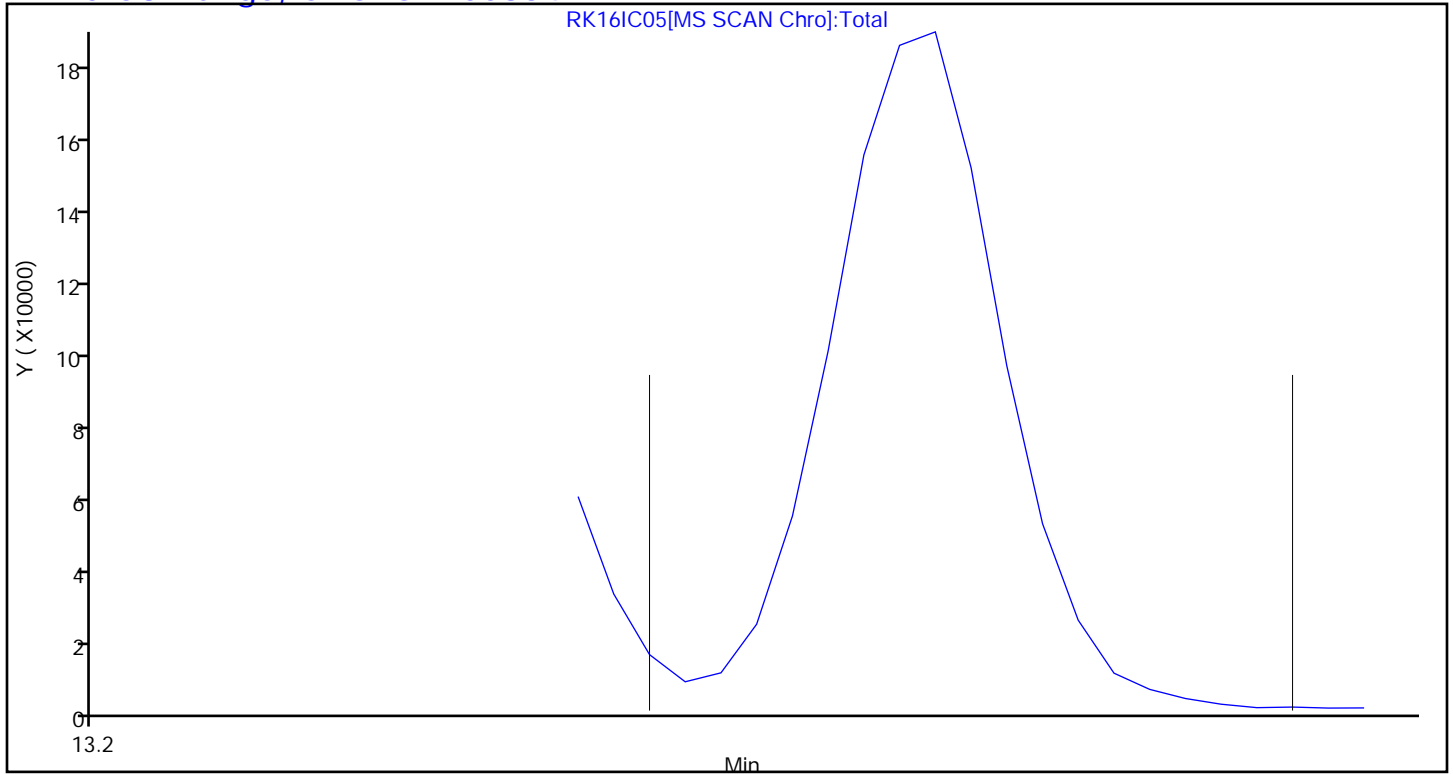
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 17-Nov-2018 02:05:30 ALS Bottle#: 4 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-013
 Misc. Info.: 190395
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:12 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh Date: 17-Nov-2018 07:29:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.397	-0.007	70	284526	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1579313	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	90	1386926	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	90	1197793	4.00	4.06	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	95	165552	1.00	0.9806	
7 Propene	41	3.421	3.420	0.001	94	51364	1.00	0.9898	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	295289	1.00	0.9538	
9 Chloromethane	52	3.583	3.586	-0.003	98	20420	1.00	0.9379	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	89	220441	1.00	0.9564	
11 Acetaldehyde	44	3.702	3.710	-0.008	93	111533	5.00	5.48	
12 Vinyl chloride	62	3.707	3.711	-0.004	100	70331	1.00	0.9214	
13 Butadiene	54	3.777	3.780	-0.003	88	46402	1.00	1.00	
14 Butane	43	3.782	3.782	0.000	90	78896	1.00	0.9797	
15 Bromomethane	94	3.993	3.995	-0.002	95	85746	1.00	0.9758	
16 Chloroethane	64	4.095	4.100	-0.005	94	34804	1.00	0.9845	
17 Ethanol	31	4.208	4.222	-0.014	93	104882	5.00	4.92	
18 Vinyl bromide	106	4.311	4.315	-0.004	97	90610	1.00	0.9784	
19 2-Methylbutane	43	4.365	4.369	-0.004	79	56760	1.00	1.00	
20 Acrolein	56	4.505	4.516	-0.011	27	15289	1.00	0.8501	
21 Trichlorofluoromethane	101	4.510	4.517	-0.007	99	413497	1.00	0.9832	
22 Acetonitrile	40	4.543	4.545	-0.002	93	16703	1.00	0.9079	
23 Acetone	58	4.591	4.605	-0.014	100	89101	3.00	3.02	
24 Pentane	72	4.688	4.693	-0.005	92	14137	1.00	0.9884	
25 Isopropyl alcohol	45	4.699	4.716	-0.017	93	239341	3.00	2.97	
26 Ethyl ether	31	4.802	4.817	-0.015	72	46526	1.00	0.9819	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	97	96830	1.00	0.9671	
28 Acrylonitrile	53	5.082	5.097	-0.015	91	44072	1.00	0.9871	
29 2-Methyl-2-propanol	59	5.152	5.173	-0.021	91	190196	1.00	1.00	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	92	250984	1.00	1.01	
31 Methylene Chloride	84	5.281	5.290	-0.009	88	91431	1.00	0.9606	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	86	95603	1.00	1.03	
33 Carbon disulfide	76	5.406	5.410	-0.004	99	242543	1.00	1.02	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	97	99652	1.00	0.9758	
35 2-Methylpentane	43	6.009	6.011	-0.002	86	134813	1.00	1.00	
36 Methyl tert-butyl ether	73	6.080	6.094	-0.014	93	326320	1.00	1.00	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	98	165748	1.00	0.9699	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	159088	1.00	0.9638	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	98	38268	1.00	0.9878	
40 Hexane	56	6.840	6.845	-0.005	82	58239	1.00	0.9804	
171 Isopropyl ether	45	6.975	6.989	-0.014	86	203305	1.00	0.99	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	94	100389	1.00	0.9748	
42 Ethyl acetate	43	7.314	7.330	-0.016	98	143745	1.00	1.00	
43 Chloroform	83	7.433	7.439	-0.006	94	266010	1.00	0.9788	
173 Tert-butyl ethyl ether	59	7.568	7.580	-0.012	93	291639	1.00	0.99	
44 Tetrahydrofuran	42	7.778	7.793	-0.015	77	62926	1.00	1.00	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	94	339819	1.00	0.9864	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	199683	1.00	1.00	
47 Benzene	78	8.916	8.920	-0.004	98	249589	1.00	0.9699	
48 Cyclohexane	69	8.943	8.951	-0.008	84	39991	1.00	1.05	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	97	374679	1.00	1.04	
49 n-Butanol	31	8.959	8.969	-0.010	73	17690	1.00	0.9698	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	54415	1.00	1.02	
52 Thiophene	84	9.169	9.174	-0.005	94	149183	1.00	1.01	
53 Isooctane	57	9.795	9.798	-0.003	95	332582	1.00	1.01	
54 1,2-Dichloropropane	63	10.167	10.175	-0.008	73	80581	1.00	1.00	
55 n-Heptane	71	10.215	10.224	-0.009	82	84592	1.00	1.03	
56 Trichloroethene	130	10.248	10.250	-0.002	93	152289	1.00	0.9817	
57 Dibromomethane	93	10.275	10.279	-0.004	92	136587	1.00	0.9845	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	98	263754	1.00	1.01	
59 1,4-Dioxane	88	10.485	10.497	-0.012	88	38117	1.00	0.9712	
60 Methyl methacrylate	41	10.641	10.649	-0.008	91	88559	1.00	0.9859	
61 Methylcyclohexane	83	11.105	11.109	-0.004	92	160604	1.00	1.01	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	141224	1.00	0.9864	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	97	155584	1.00	1.00	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	165754	1.00	1.02	
65 Toluene	91	12.470	12.471	-0.001	93	336279	1.00	1.01	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	94	91510	1.00	1.04	
69 2-Hexanone	58	12.993	13.003	-0.010	94	68694	1.00	0.9878	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	271846	1.00	1.06	
71 n-Octane	85	13.322	13.326	-0.004	75	109095	1.00	1.03	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	199953	1.00	1.03	
73 Tetrachloroethene	129	13.694	13.695	-0.001	93	168145	1.00	1.02	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	295002	1.00	1.02	
75 2,3-Dimethylheptane	43	14.750	14.750	0.000	78	202047	1.00	1.04	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	491615	1.00	1.03	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	820994	2.00	2.09	
79 Bromoform	173	15.505	15.507	-0.002	96	263744	1.00	0.9769	
80 Styrene	104	15.592	15.594	-0.002	97	268745	1.00	1.04	
82 o-Xylene	91	15.651	15.655	-0.004	97	428791	1.00	1.04	
81 n-Nonane	57	15.656	15.659	-0.003	75	164273	1.00	1.05	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	93	223872	1.00	1.07	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	106933	1.00	1.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	589911	1.00	1.00	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	172077	1.00	1.07	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	93	156859	1.00	1.05	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	652888	1.00	1.07	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	267835	1.00	1.07	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	235120	1.00	0.99	
91 n-Decane	57	17.528	17.532	-0.004	97	237483	1.00	1.07	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	88	653325	1.00	1.07	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	597546	1.00	1.07	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	411115	1.00	1.02	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	799929	1.00	1.06	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	434461	1.00	1.01	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	95	419983	1.00	1.04	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	809499	1.00	1.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	636168	1.00	1.06	
100 Butylcyclohexane	83	18.229	18.232	-0.003	93	349539	1.00	1.06	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	400754	1.00	1.01	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	93	519916	1.00	1.05	
103 Indene	116	18.520	18.520	0.000	90	416558	1.00	1.03	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	652919	1.00	1.06	
105 Undecane	57	19.000	19.001	-0.001	87	279455	1.00	1.06	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	98	201092	1.00	1.04	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	736323	1.00	1.03	
110 Dodecane	57	20.127	20.128	-0.001	90	268129	1.00	0.9719	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	412431	1.00	0.9629	
113 Naphthalene	128	20.326	20.329	-0.003	98	719521	1.00	0.8307	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	96	517445	1.00	1.04	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	95	391665	1.00	0.9514	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	99	124366	1.00	0.4520	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	135206	1.00	0.5571	
A 120 C8 Range	1	13.340	(13.278-13.375)		0	855982	1.00	1.01	
S 121 Xylenes, Total	100				0		3.00	3.13	
S 122 1,2-Dichloroethene, Total	1				0		2.00	1.95	

Reagents:

40L6DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D

Injection Date: 17-Nov-2018 02:05:30

Instrument ID: MR

Operator ID:

Lims ID: IC L6

Worklist Smp#: 13

Client ID:

Purge Vol: 500.000 mL

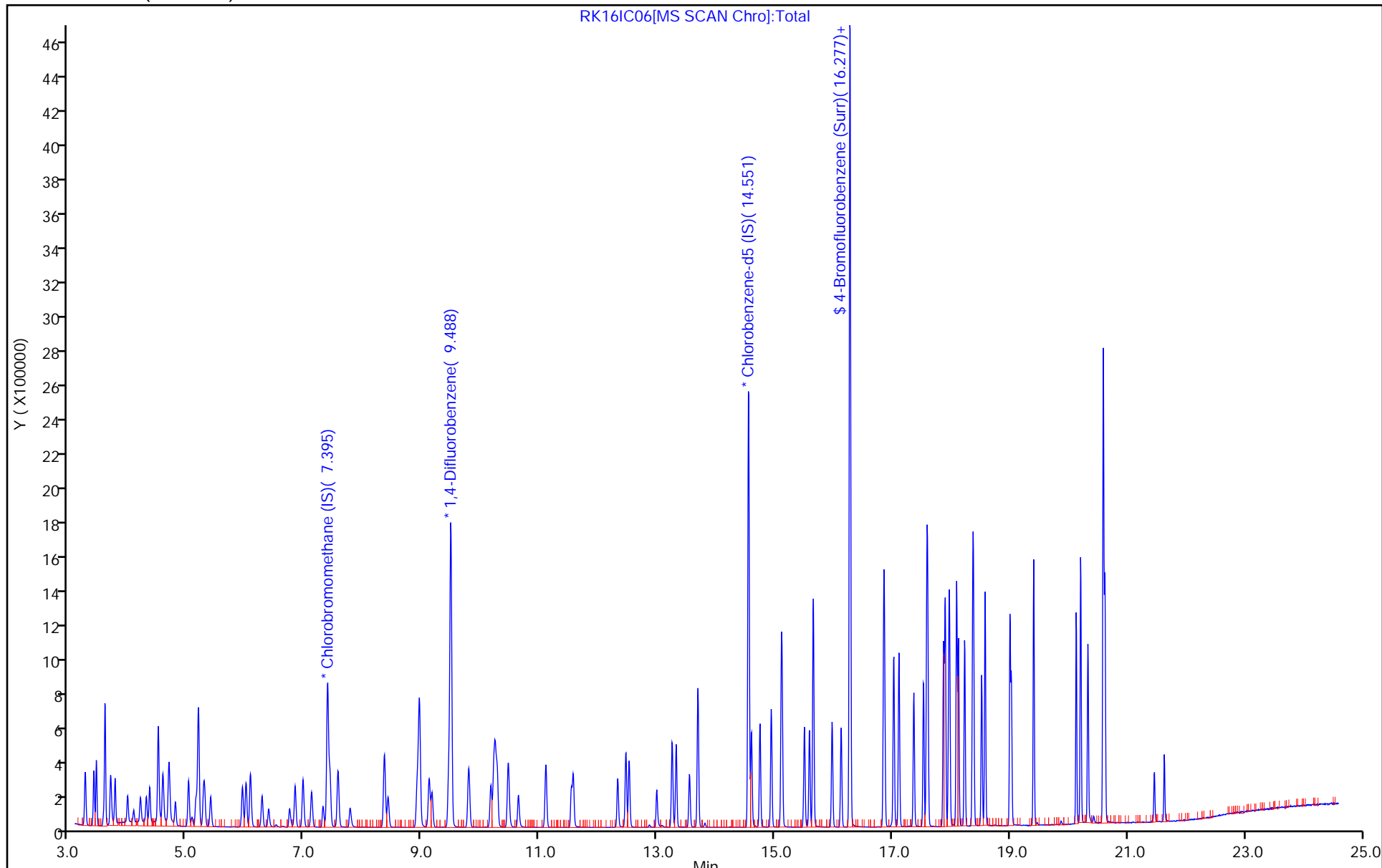
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D

Injection Date: 17-Nov-2018 02:05:30

Instrument ID: MR

Lims ID: IC L6

Client ID:

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

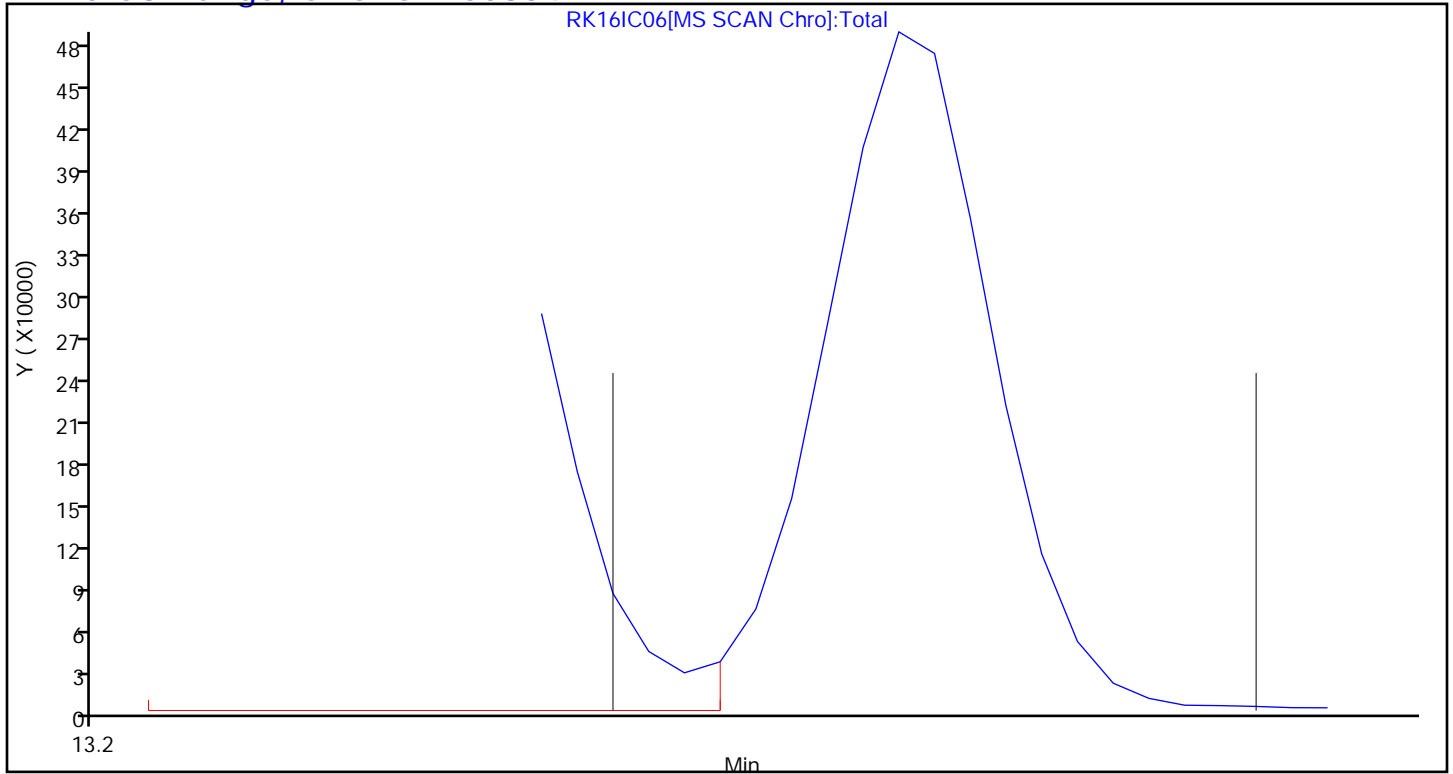
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 17-Nov-2018 02:58:30 ALS Bottle#: 5 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-014
 Misc. Info.: 190394
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:18 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:29:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.397	0.004	69	298864	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.494	-0.001	95	1677758	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	82	1487799	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	87	1269845	4.00	4.01	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	77	330784	2.00	1.87	
7 Propene	41	3.416	3.420	-0.004	49	103039	2.00	1.89	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	95	593041	2.00	1.82	
9 Chloromethane	52	3.583	3.586	-0.003	98	40844	2.00	1.79	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.604	3.609	-0.005	89	456323	2.00	1.88	
11 Acetaldehyde	44	3.701	3.710	-0.009	91	205358	10.0	9.61	
12 Vinyl chloride	62	3.707	3.711	-0.004	71	142840	2.00	1.78	
13 Butadiene	54	3.777	3.780	-0.003	82	94920	2.00	1.95	
14 Butane	43	3.777	3.782	-0.005	74	157806	2.00	1.87	
15 Bromomethane	94	3.993	3.995	-0.002	95	176496	2.00	1.91	
16 Chloroethane	64	4.095	4.100	-0.005	94	68833	2.00	1.85	
17 Ethanol	31	4.214	4.222	-0.008	93	224069	10.0	10.0	
18 Vinyl bromide	106	4.311	4.315	-0.004	95	186899	2.00	1.92	
19 2-Methylbutane	43	4.365	4.369	-0.004	78	115570	2.00	1.93	
20 Acrolein	56	4.505	4.516	-0.011	26	37440	2.00	1.98	
21 Trichlorofluoromethane	101	4.516	4.517	-0.001	99	844261	2.00	1.91	
22 Acetonitrile	40	4.548	4.545	0.003	68	35460	2.00	1.84	
23 Acetone	58	4.591	4.605	-0.014	92	173059	6.00	5.58	
24 Pentane	72	4.688	4.693	-0.005	91	28499	2.00	1.90	
25 Isopropyl alcohol	45	4.704	4.716	-0.012	91	509997	6.00	6.03	
26 Ethyl ether	31	4.802	4.817	-0.015	70	93310	2.00	1.87	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	96	202076	2.00	1.92	
28 Acrylonitrile	53	5.093	5.097	-0.004	84	91512	2.00	1.95	
29 2-Methyl-2-propanol	59	5.152	5.173	-0.021	53	409183	2.00	2.05	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	90	515989	2.00	1.98	
31 Methylene Chloride	84	5.287	5.290	-0.003	86	178076	2.00	1.78	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	82	193431	2.00	1.98	
33 Carbon disulfide	76	5.405	5.410	-0.005	99	499031	2.00	2.00	
34 trans-1,2-Dichloroethene	96	5.950	5.951	-0.001	95	206172	2.00	1.92	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	275324	2.00	1.95	
36 Methyl tert-butyl ether	73	6.080	6.094	-0.014	89	676752	2.00	1.98	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	98	342362	2.00	1.91	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	349189	2.00	2.01	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	66	79333	2.00	1.95	
40 Hexane	56	6.840	6.845	-0.005	80	121155	2.00	1.94	
171 Isopropyl ether	45	6.975	6.989	-0.014	86	426151	2.00	1.99	
41 cis-1,2-Dichloroethene	96	7.126	7.127	-0.001	93	213838	2.00	1.98	
42 Ethyl acetate	43	7.314	7.330	-0.016	98	303889	2.00	2.02	
43 Chloroform	83	7.438	7.439	-0.001	85	550434	2.00	1.93	
173 Tert-butyl ethyl ether	59	7.568	7.580	-0.012	92	613018	2.00	1.98	
44 Tetrahydrofuran	42	7.773	7.793	-0.020	77	130211	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.366	8.364	0.002	95	712345	2.00	1.97	
46 1,2-Dichloroethane	62	8.425	8.427	-0.002	78	414101	2.00	1.95	
47 Benzene	78	8.921	8.920	0.001	98	523482	2.00	1.91	
48 Cyclohexane	69	8.948	8.951	-0.003	71	82675	2.00	2.04	
50 Carbon tetrachloride	117	8.959	8.962	-0.003	96	786171	2.00	2.04	
49 n-Butanol	31	8.948	8.969	-0.021	25	40004	2.00	2.06	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	116636	2.00	2.06	
52 Thiophene	84	9.175	9.174	0.001	89	311873	2.00	1.99	
53 Isooctane	57	9.795	9.798	-0.003	95	691902	2.00	1.98	
54 1,2-Dichloropropane	63	10.172	10.175	-0.003	68	169011	2.00	1.97	
55 n-Heptane	71	10.221	10.224	-0.003	77	178041	2.00	2.04	
56 Trichloroethene	130	10.248	10.250	-0.002	93	324569	2.00	1.97	
57 Dibromomethane	93	10.280	10.279	0.001	91	283066	2.00	1.92	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	564189	2.00	2.04	
59 1,4-Dioxane	88	10.485	10.497	-0.012	40	86437	2.00	2.07	
60 Methyl methacrylate	41	10.641	10.649	-0.008	91	195505	2.00	2.05	
61 Methylcyclohexane	83	11.111	11.109	0.002	92	339768	2.00	2.01	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	311634	2.00	2.05	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	96	346235	2.00	2.09	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	369600	2.00	2.13	
65 Toluene	91	12.469	12.471	-0.002	93	715966	2.00	2.01	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	91	192987	2.00	2.04	
69 2-Hexanone	58	12.987	13.003	-0.016	94	156406	2.00	2.10	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	617174	2.00	2.24	
71 n-Octane	85	13.321	13.326	-0.005	74	233063	2.00	2.05	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	431756	2.00	2.08	
73 Tetrachloroethene	129	13.694	13.695	-0.001	94	358488	2.00	2.03	
74 Chlorobenzene	112	14.605	14.606	-0.001	85	622855	2.00	2.00	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	79	424515	2.00	2.03	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1050972	2.00	2.04	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1718390	4.00	4.08	
79 Bromoform	173	15.505	15.507	-0.002	96	631165	2.00	2.18	
80 Styrene	104	15.592	15.594	-0.002	93	593262	2.00	2.15	
82 o-Xylene	91	15.651	15.655	-0.004	77	897122	2.00	2.03	
81 n-Nonane	57	15.656	15.659	-0.003	72	340741	2.00	2.03	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.002	93	480219	2.00	2.13	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	225670	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1239416	2.00	1.97	
86 N-Propylbenzene	120	16.853	16.856	-0.003	96	356669	2.00	2.06	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	320641	2.00	2.00	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	1384436	2.00	2.12	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	551670	2.00	2.06	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	84	542707	2.00	2.13	
91 n-Decane	57	17.533	17.532	0.001	94	489862	2.00	2.05	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	65	1326146	2.00	2.03	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	93	1240172	2.00	2.08	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	863153	2.00	2.00	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	94	1651103	2.00	2.05	
96 Benzyl chloride	91	17.959	17.962	-0.003	96	984275	2.00	2.14	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	92	862511	2.00	1.99	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	92	1677824	2.00	2.06	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1329610	2.00	2.07	
100 Butylcyclohexane	83	18.229	18.232	-0.003	92	722497	2.00	2.05	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	829934	2.00	1.95	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	88	1063787	2.00	2.01	
103 Indene	116	18.520	18.520	0.000	83	909289	2.00	2.09	
104 n-Butylbenzene	91	18.579	18.580	-0.001	95	1341073	2.00	2.02	
105 Undecane	57	19.000	19.001	-0.001	86	588913	2.00	2.08	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	99	458234	2.00	2.21	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	94	1609444	2.00	2.09	
110 Dodecane	57	20.127	20.128	-0.001	90	664765	2.00	2.25	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	93	944306	2.00	2.06	
113 Naphthalene	128	20.326	20.329	-0.003	98	1821564	2.00	1.96	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	85	1070672	2.00	2.00	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	93	908417	2.00	2.06	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	707384	2.00	2.40	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	641933	2.00	2.47	
A 120 C8 Range	1	13.340	(13.278-13.375)		0	1781529	2.00	1.99	
S 121 Xylenes, Total	100				0		6.00	6.10	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.90	

Reagents:

40L7DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D

Injection Date: 17-Nov-2018 02:58:30

Instrument ID: MR

Operator ID:

Lims ID: ICIS L7

Worklist Smp#: 14

Client ID:

Purge Vol: 500.000 mL

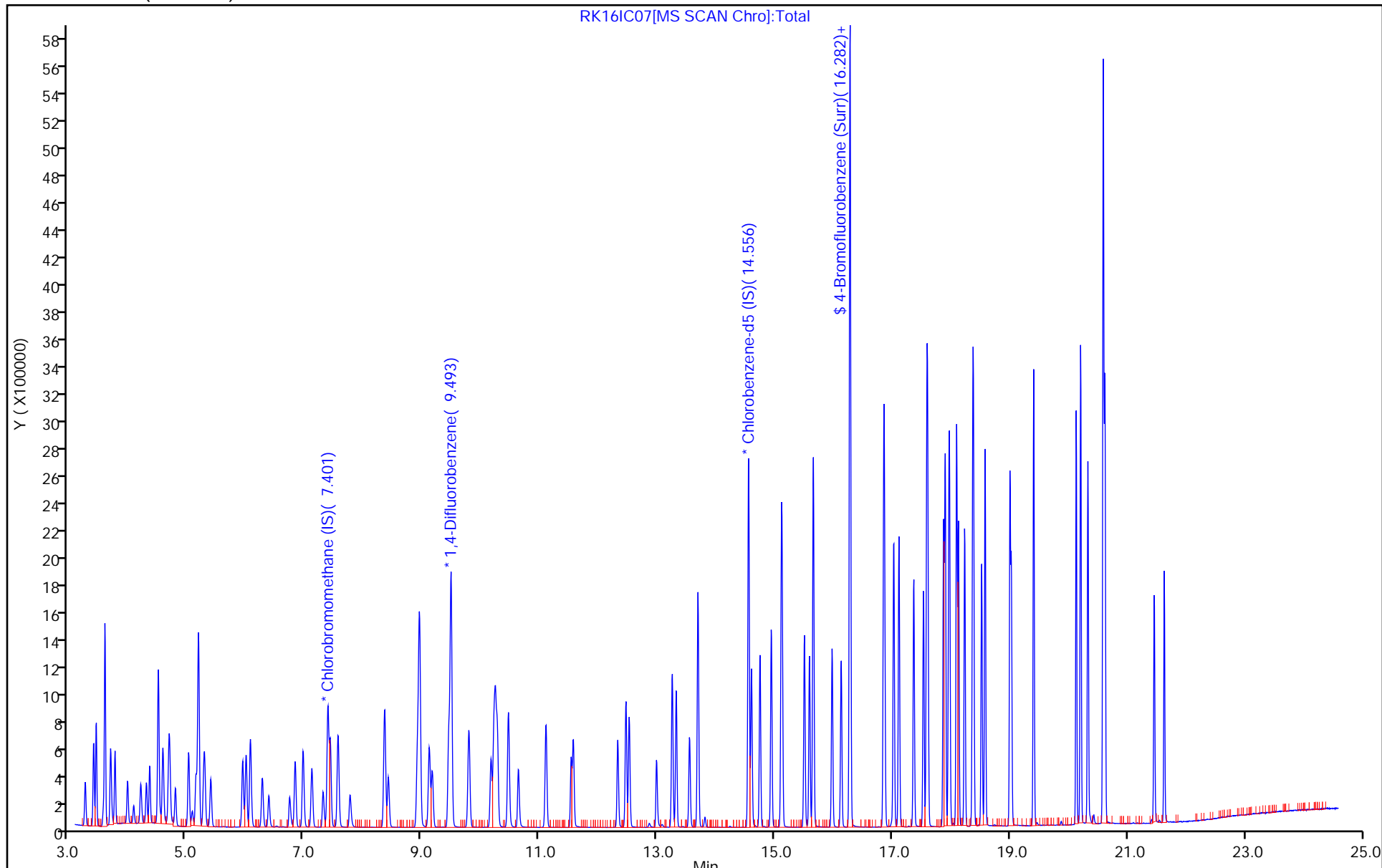
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



RK16IC07[MS SCAN Chro]:Total

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D

Injection Date: 17-Nov-2018 02:58:30

Instrument ID: MR

Lims ID: ICIS L7

Client ID:

Operator ID:

ALS Bottle#: 5

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

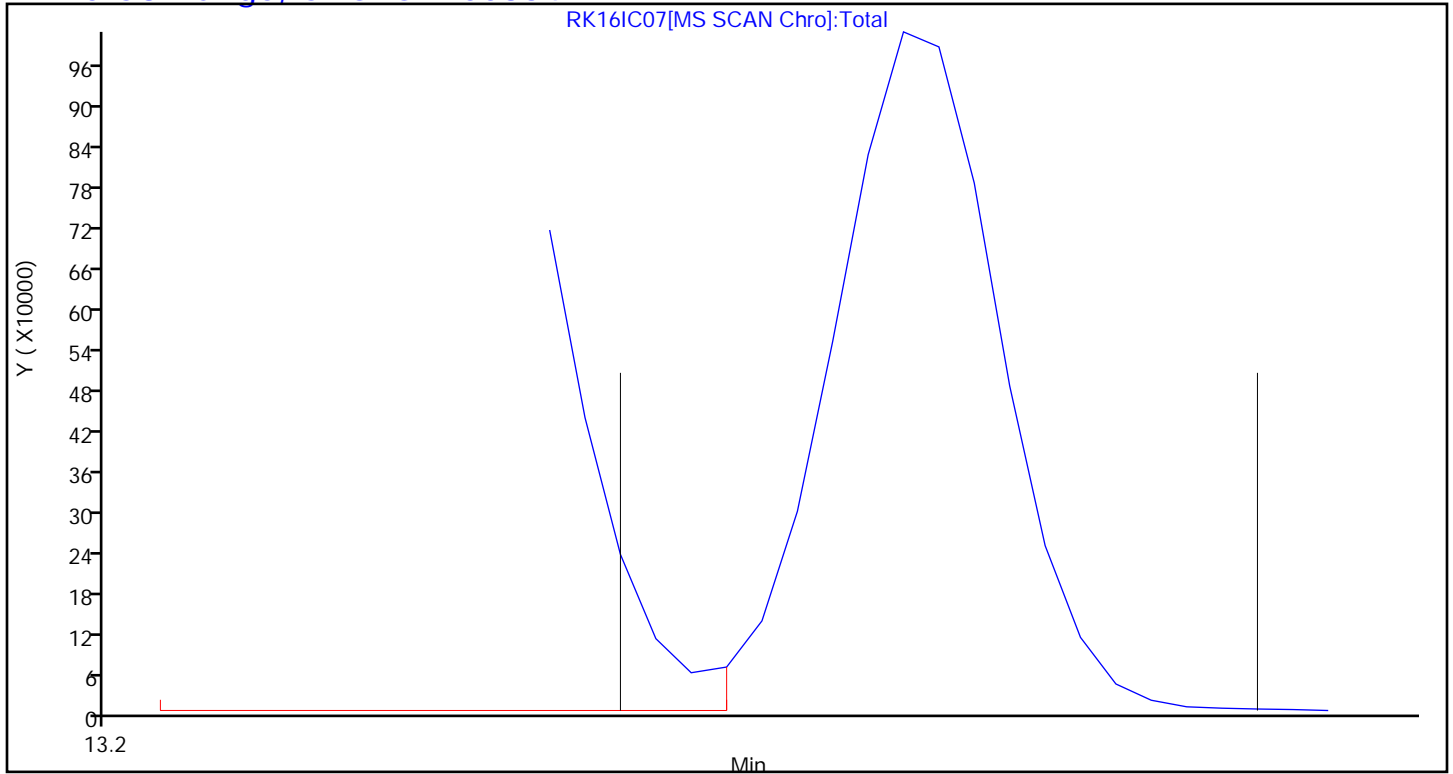
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 17-Nov-2018 03:51:30 ALS Bottle#: 6 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-015
 Misc. Info.: 190393
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:24 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:34:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.397	0.009	81	299965	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.498	9.494	0.004	95	1676956	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.557	14.555	0.001	89	1513773	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	84	1293730	4.00	4.02	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	96	670931	4.00	3.77	
7 Propene	41	3.421	3.420	0.001	91	205301	4.00	3.75	
8 Dichlorodifluoromethane	85	3.464	3.461	0.003	100	1212691	4.00	3.72	
9 Chloromethane	52	3.588	3.586	0.002	98	80675	4.00	3.51	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	97	932912	4.00	3.84	
11 Acetaldehyde	44	3.707	3.710	-0.003	94	415146	20.0	19.4	
12 Vinyl chloride	62	3.712	3.711	0.001	99	286294	4.00	3.56	
13 Butadiene	54	3.783	3.780	0.003	88	191280	4.00	3.92	
14 Butane	43	3.783	3.782	0.001	89	323819	4.00	3.81	
15 Bromomethane	94	3.998	3.995	0.003	96	354225	4.00	3.82	
16 Chloroethane	64	4.106	4.100	0.006	96	140181	4.00	3.76	
17 Ethanol	31	4.230	4.222	0.008	93	447098	20.0	19.9	
18 Vinyl bromide	106	4.322	4.315	0.007	96	380924	4.00	3.90	
19 2-Methylbutane	43	4.370	4.369	0.001	79	228167	4.00	3.80	
20 Acrolein	56	4.516	4.516	0.000	97	74788	4.00	3.94	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	99	1697186	4.00	3.83	
22 Acetonitrile	40	4.559	4.545	0.014	94	84531	4.00	4.36	
23 Acetone	58	4.602	4.605	-0.003	100	340521	12.0	10.9	
24 Pentane	72	4.699	4.693	0.006	92	58302	4.00	3.87	
25 Isopropyl alcohol	45	4.715	4.716	-0.001	93	1016357	12.0	12.0	
26 Ethyl ether	31	4.812	4.817	-0.005	71	189800	4.00	3.80	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	97	414812	4.00	3.93	
28 Acrylonitrile	53	5.104	5.097	0.007	91	186041	4.00	3.95	
29 2-Methyl-2-propanol	59	5.163	5.173	-0.010	92	809098	4.00	4.03	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	93	1031649	4.00	3.94	
31 Methylene Chloride	84	5.298	5.290	0.008	88	345898	4.00	3.45	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	85	385054	4.00	3.92	
33 Carbon disulfide	76	5.416	5.410	0.006	99	997332	4.00	3.98	
34 trans-1,2-Dichloroethene	96	5.961	5.951	0.010	97	421281	4.00	3.91	
35 2-Methylpentane	43	6.015	6.011	0.004	84	553915	4.00	3.90	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	1373906	4.00	4.01	
37 1,1-Dichloroethane	63	6.295	6.283	0.012	98	695373	4.00	3.86	
38 Vinyl acetate	43	6.403	6.402	0.001	98	730693	4.00	4.20	
39 2-Butanone (MEK)	72	6.759	6.761	-0.002	97	165553	4.00	4.05	
40 Hexane	56	6.845	6.845	0.000	81	248691	4.00	3.97	
171 Isopropyl ether	45	6.986	6.989	-0.003	86	863733	4.00	4.01	
41 cis-1,2-Dichloroethene	96	7.137	7.127	0.010	94	429081	4.00	3.95	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	632910	4.00	4.20	
43 Chloroform	83	7.449	7.439	0.010	96	1123349	4.00	3.92	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	92	1274961	4.00	4.11	
44 Tetrahydrofuran	42	7.778	7.793	-0.015	76	266070	4.00	4.00	
45 1,1,1-Trichloroethane	97	8.371	8.364	0.007	95	1454125	4.00	4.00	
46 1,2-Dichloroethane	62	8.436	8.427	0.009	97	837957	4.00	3.95	
47 Benzene	78	8.927	8.920	0.007	98	1050705	4.00	3.85	
48 Cyclohexane	69	8.954	8.951	0.003	91	167839	4.00	4.13	
50 Carbon tetrachloride	117	8.965	8.962	0.003	98	1553305	4.00	4.04	
49 n-Butanol	31	8.948	8.969	-0.021	65	82457	4.00	4.26	
51 2,3-Dimethylpentane	71	9.132	9.126	0.006	83	235995	4.00	4.17	
52 Thiophene	84	9.180	9.174	0.006	94	639928	4.00	4.09	
53 Isooctane	57	9.800	9.798	0.002	94	1407509	4.00	4.02	
54 1,2-Dichloropropane	63	10.178	10.175	0.003	77	344383	4.00	4.02	
55 n-Heptane	71	10.226	10.224	0.002	83	361284	4.00	4.14	
56 Trichloroethene	130	10.253	10.250	0.003	96	707793	4.00	4.30	
57 Dibromomethane	93	10.286	10.279	0.007	91	586890	4.00	3.98	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	1174659	4.00	4.25	
59 1,4-Dioxane	88	10.485	10.497	-0.012	86	173912	4.00	4.17	
60 Methyl methacrylate	41	10.642	10.649	-0.007	91	413937	4.00	4.34	
61 Methylcyclohexane	83	11.111	11.109	0.002	92	689164	4.00	4.09	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	659470	4.00	4.34	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	95	719012	4.00	4.34	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	783879	4.00	4.43	
65 Toluene	91	12.470	12.471	-0.001	93	1469948	4.00	4.05	
66 1,1,2-Trichloroethane	83	12.524	12.527	-0.003	94	395113	4.00	4.11	
69 2-Hexanone	58	12.987	13.003	-0.016	95	338784	4.00	4.46	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	1311808	4.00	4.68	
71 n-Octane	85	13.327	13.326	0.001	74	477723	4.00	4.13	
72 Ethylene Dibromide	107	13.554	13.551	0.003	97	900939	4.00	4.27	
73 Tetrachloroethene	129	13.694	13.695	-0.001	94	719415	4.00	4.00	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	1278293	4.00	4.03	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	77	866249	4.00	4.07	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	2145561	4.00	4.10	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	3492522	8.00	8.14	
79 Bromoform	173	15.506	15.507	-0.001	96	1405685	4.00	4.77	
80 Styrene	104	15.592	15.594	-0.002	98	1255220	4.00	4.46	
82 o-Xylene	91	15.657	15.655	0.002	97	1814388	4.00	4.03	
81 n-Nonane	57	15.657	15.659	-0.002	75	686883	4.00	4.02	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	93	935594	4.00	4.09	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	461156	4.00	4.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	97	2553866	4.00	3.98	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	735475	4.00	4.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	653681	4.00	4.01	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	2809081	4.00	4.22	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	1121740	4.00	4.12	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	1140621	4.00	4.40	
91 n-Decane	57	17.533	17.532	0.001	97	987208	4.00	4.06	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	2644216	4.00	3.98	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	2478370	4.00	4.08	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	1751738	4.00	3.99	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	3316313	4.00	4.04	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	2125520	4.00	4.53	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	95	1725619	4.00	3.92	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	3366403	4.00	4.06	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	2652674	4.00	4.06	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	1440937	4.00	4.01	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	95	1669523	4.00	3.86	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	93	2153540	4.00	4.00	
103 Indene	116	18.520	18.520	0.000	90	1898638	4.00	4.29	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	2705337	4.00	4.01	
105 Undecane	57	19.000	19.001	-0.001	87	1182131	4.00	4.11	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	98	986255	4.00	4.68	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	3260653	4.00	4.17	
110 Dodecane	57	20.127	20.128	-0.001	90	1343815	4.00	4.46	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	1940306	4.00	4.15	
113 Naphthalene	128	20.326	20.329	-0.003	98	3797602	4.00	4.02	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	95	2166873	4.00	3.99	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	94	1865471	4.00	4.15	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	1636134	4.00	5.45	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	1437560	4.00	5.43	
A 120 C8 Range	1	13.340	(13.279-13.376)		0	3620641	4.00	4.04	
S 121 Xylenes, Total	100				0		12.0	12.2	
S 122 1,2-Dichloroethene, Total	1				0		8.00	7.86	

Reagents:

40L8DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Injection Date: 17-Nov-2018 03:51:30

Instrument ID: MR

Operator ID:

Lims ID: IC L8

Worklist Smp#: 15

Client ID:

Purge Vol: 500.000 mL

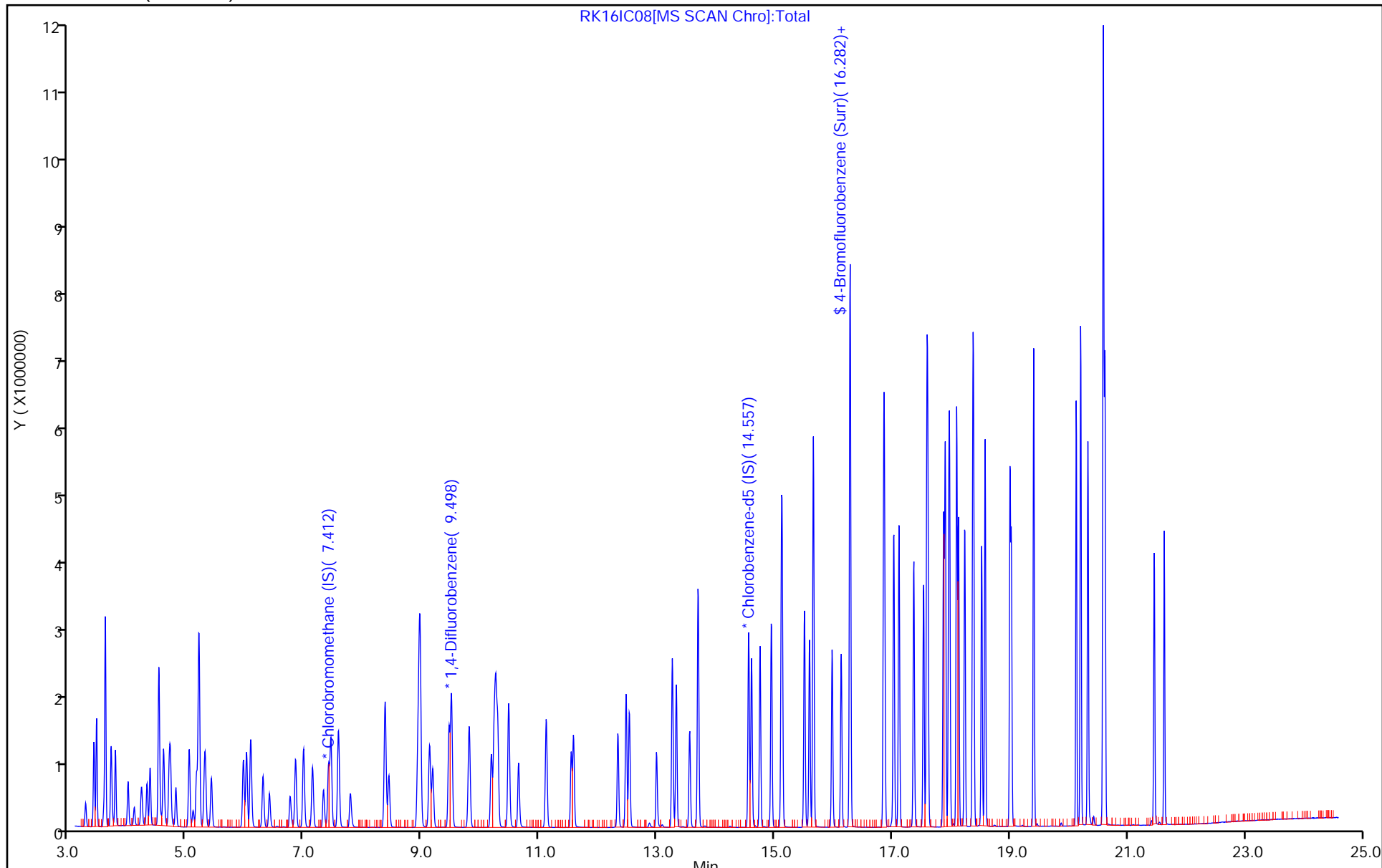
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Injection Date: 17-Nov-2018 03:51:30

Instrument ID: MR

Lims ID: IC L8

Client ID:

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

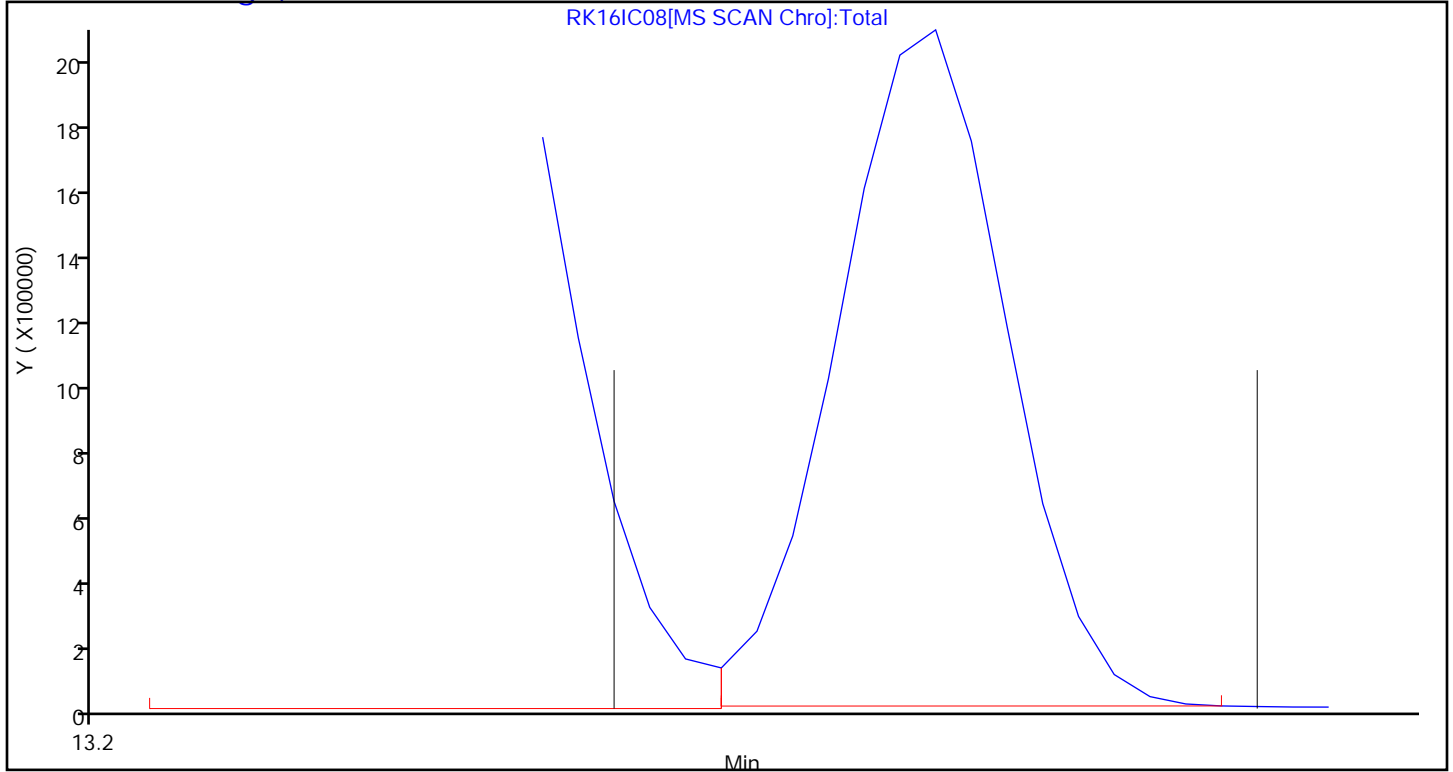
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 06/28/2017 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/28/2017 21:58
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6999	0.3362			2.00	-52.0*	35.0
3-Methylthiophene	Ave	0.6908	0.7960			2.00	15.2	35.0
2-Ethylthiophene	Ave	0.9153	1.134			2.00	23.9	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.640			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.275			2.00	39.5*	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.768			2.00	43.0*	35.0
Benzo (b) thiophene	Ave	0.9147	1.487			2.00	62.6*	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 17-Nov-2018 06:27:30 ALS Bottle#: 8 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-018
 Misc. Info.: S80
 Operator ID: Instrument ID: MR
 Sublist:

Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 16:30:16 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: tajh Date: 19-Nov-2018 10:15:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.397	-0.018	68	299493	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	94	1671036	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	89	1499042	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	89	1270095	4.00	3.98	
6 Chlorodifluoromethane	51	3.383	3.417	-0.034	95	337816	2.00	1.90	
7 Propene	41	3.389	3.420	-0.031	91	101676	2.00	1.86	
8 Dichlorodifluoromethane	85	3.432	3.461	-0.029	100	757267	2.00	2.32	
9 Chloromethane	52	3.550	3.586	-0.036	98	40890	2.00	1.78	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.583	3.609	-0.026	89	519503	2.00	2.14	
11 Acetaldehyde	44	3.674	3.710	-0.036	93	179473	10.0	8.38	
12 Vinyl chloride	62	3.680	3.711	-0.031	99	144783	2.00	1.80	
13 Butadiene	54	3.750	3.780	-0.030	87	93331	2.00	1.92	
14 Butane	43	3.750	3.782	-0.032	89	162697	2.00	1.92	
15 Bromomethane	94	3.966	3.995	-0.029	96	171614	2.00	1.86	
16 Chloroethane	64	4.068	4.100	-0.032	95	69702	2.00	1.87	
17 Ethanol	31	4.198	4.222	-0.024	92	172190	10.0	7.67	
18 Vinyl bromide	106	4.284	4.315	-0.031	97	197656	2.00	2.03	
19 2-Methylbutane	43	4.343	4.369	-0.026	77	117076	2.00	1.95	
20 Acrolein	56	4.483	4.516	-0.033	97	41705	2.00	2.20	
21 Trichlorofluoromethane	101	4.489	4.517	-0.028	99	845437	2.00	1.91	
22 Acetonitrile	40	4.516	4.545	-0.029	96	35597	2.00	1.84	
23 Acetone	58	4.575	4.605	-0.030	100	57219	2.00	1.84	
24 Pentane	72	4.661	4.693	-0.032	91	30029	2.00	1.99	
25 Isopropyl alcohol	45	4.688	4.716	-0.028	95	209729	2.00	2.48	
26 Ethyl ether	31	4.780	4.817	-0.037	69	85111	2.00	1.71	
27 1,1-Dichloroethene	96	5.006	5.033	-0.027	97	198342	2.00	1.88	
28 Acrylonitrile	53	5.066	5.097	-0.031	91	93387	2.00	1.99	
29 2-Methyl-2-propanol	59	5.141	5.173	-0.032	94	405847	2.00	2.02	
30 1,1,2-Trichloro-1,2,2-trif	101	5.174	5.199	-0.025	92	514124	2.00	1.97	
31 Methylene Chloride	84	5.260	5.290	-0.030	88	175058	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.281	5.309	-0.028	85	194281	2.00	1.98	
33 Carbon disulfide	76	5.378	5.410	-0.032	99	488020	2.00	1.95	
34 trans-1,2-Dichloroethene	96	5.929	5.951	-0.023	97	204116	2.00	1.90	
35 2-Methylpentane	43	5.988	6.011	-0.023	84	255391	2.00	1.80	
36 Methyl tert-butyl ether	73	6.058	6.094	-0.036	92	690950	2.00	2.02	
37 1,1-Dichloroethane	63	6.257	6.283	-0.026	98	346185	2.00	1.92	
38 Vinyl acetate	43	6.376	6.402	-0.026	98	366118	2.00	2.11	
39 2-Butanone (MEK)	72	6.732	6.761	-0.029	98	78637	2.00	1.93	
40 Hexane	56	6.824	6.845	-0.021	81	122366	2.00	1.96	
171 Isopropyl ether	45	6.958	6.989	-0.031	86	443358	2.00	2.06	
41 cis-1,2-Dichloroethene	96	7.104	7.127	-0.023	94	212288	2.00	1.96	
42 Ethyl acetate	43	7.298	7.330	-0.032	98	293488	2.00	1.95	
43 Chloroform	83	7.422	7.439	-0.017	96	555199	2.00	1.94	
173 Tert-butyl ethyl ether	59	7.557	7.580	-0.023	92	591267	2.00	1.91	
44 Tetrahydrofuran	42	7.762	7.793	-0.031	76	130960	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.344	8.364	-0.020	94	715022	2.00	1.97	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	419142	2.00	1.98	
47 Benzene	78	8.905	8.920	-0.015	98	541647	2.00	1.99	
48 Cyclohexane	69	8.932	8.951	-0.019	88	85082	2.00	2.10	
50 Carbon tetrachloride	117	8.943	8.962	-0.019	97	823420	2.00	2.15	
49 n-Butanol	31	8.943	8.969	-0.026	54	40428	2.00	2.09	
51 2,3-Dimethylpentane	71	9.110	9.126	-0.016	82	113510	2.00	2.01	
52 Thiophene	84	9.159	9.174	-0.015	95	308039	2.00	1.98	
53 Isooctane	57	9.784	9.798	-0.014	95	705085	2.00	2.02	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	76	170084	2.00	1.99	
55 n-Heptane	71	10.210	10.224	-0.014	83	179014	2.00	2.06	
56 Trichloroethene	130	10.237	10.250	-0.013	93	332896	2.00	2.03	
57 Dibromomethane	93	10.269	10.279	-0.010	92	292459	2.00	1.99	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	572509	2.00	2.08	
59 1,4-Dioxane	88	10.474	10.497	-0.023	86	85996	2.00	2.07	
60 Methyl methacrylate	41	10.631	10.649	-0.018	90	196157	2.00	2.06	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	414520	2.00	2.47	
62 4-Methyl-2-pentanone (MIBK)	43	11.531	11.552	-0.021	91	315480	2.00	2.08	
63 cis-1,3-Dichloropropene	75	11.569	11.577	-0.008	97	358004	2.00	2.17	
64 trans-1,3-Dichloropropene	75	12.324	12.332	-0.008	97	387987	2.00	2.22	
65 Toluene	91	12.464	12.471	-0.007	93	738479	2.00	2.06	
67 2-Methylthiophene	97	12.518	12.524	-0.006	80	252005	NC	NC	
66 1,1,2-Trichloroethane	83	12.518	12.527	-0.009	94	195833	2.00	2.05	
68 3-Methylthiophene	97	12.831	12.836	-0.005	99	596590	NC	NC	
69 2-Hexanone	58	12.987	13.003	-0.016	95	157281	2.00	2.09	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	97	630906	2.00	2.27	
71 n-Octane	85	13.321	13.326	-0.005	74	241345	2.00	2.11	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	440376	2.00	2.11	
73 Tetrachloroethene	129	13.688	13.695	-0.007	94	362784	2.00	2.04	
74 Chlorobenzene	112	14.599	14.606	-0.007	92	644974	2.00	2.06	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	78	387573	2.00	1.84	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1081684	2.00	2.09	
77 2-Ethylthiophene	97	15.036	15.042	-0.006	98	850130	NC	NC	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1797001	4.00	4.23	
79 Bromoform	173	15.505	15.507	-0.002	96	657515	2.00	2.25	
80 Styrene	104	15.592	15.594	-0.002	97	618923	2.00	2.22	
82 o-Xylene	91	15.651	15.655	-0.004	97	908326	2.00	2.04	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.656	15.659	-0.003	81	352264	2.00	2.08	
83 1,1,2,2-Tetrachloroethane	83	15.974	15.976	-0.002	93	486519	2.00	2.15	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	231227	2.00	2.06	
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1305567	2.00	2.06	
86 N-Propylbenzene	120	16.853	16.856	-0.003	98	380100	2.00	2.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	338365	2.00	2.10	
88 4-Ethyltoluene	105	17.021	17.027	-0.006	98	1360898	2.00	2.06	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	643905	2.00	2.39	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	552848	2.00	2.16	
91 n-Decane	57	17.528	17.532	-0.004	97	510052	2.00	2.12	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	1376781	2.00	2.10	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	1269827	2.00	2.11	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	888433	2.00	2.04	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	1714335	2.00	2.11	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	1039012	2.00	2.24	
97 1,4-Dichlorobenzene	146	17.970	17.977	-0.007	94	887663	2.00	2.03	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	1699119	2.00	2.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1037942	2.00	1.61	
100 Butylcyclohexane	83	18.229	18.232	-0.004	92	701115	2.00	1.97	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	96	857489	2.00	2.00	
102 2,3-Dihydroindene	117	18.379	18.383	-0.004	93	1087727	2.00	2.04	
103 Indene	116	18.520	18.520	0.000	90	809464	2.00	1.85	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	1414728	2.00	2.12	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	96	1229369	NC	NC	
105 Undecane	57	19.000	19.001	-0.001	87	616308	2.00	2.16	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	94	386560	2.00	1.85	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	1560478	2.00	2.01	
109 1,2,3,5-Tetramethylbenzene	119	19.463	19.464	-0.001	94	955538	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	96	1325184	NC	NC	
110 Dodecane	57	20.127	20.128	-0.001	90	688062	2.00	2.31	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	999500	2.00	2.16	
113 Naphthalene	128	20.326	20.329	-0.003	98	1949612	2.00	2.08	
114 Benzo(b)thiophene	134	20.423	20.429	-0.006	99	1114636	NC	NC	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	1114590	2.00	2.07	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	970744	2.00	2.18	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	761819	2.00	2.56	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	709921	2.00	2.71	
A 120 C8 Range	1	13.335	(13.279-13.376)		0	1874356	2.00	2.10	
S 121 Xylenes, Total	100				0		6.00	6.27	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.86	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00080

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D

Injection Date: 17-Nov-2018 06:27:30

Instrument ID: MR

Operator ID:

Lims ID: icv

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

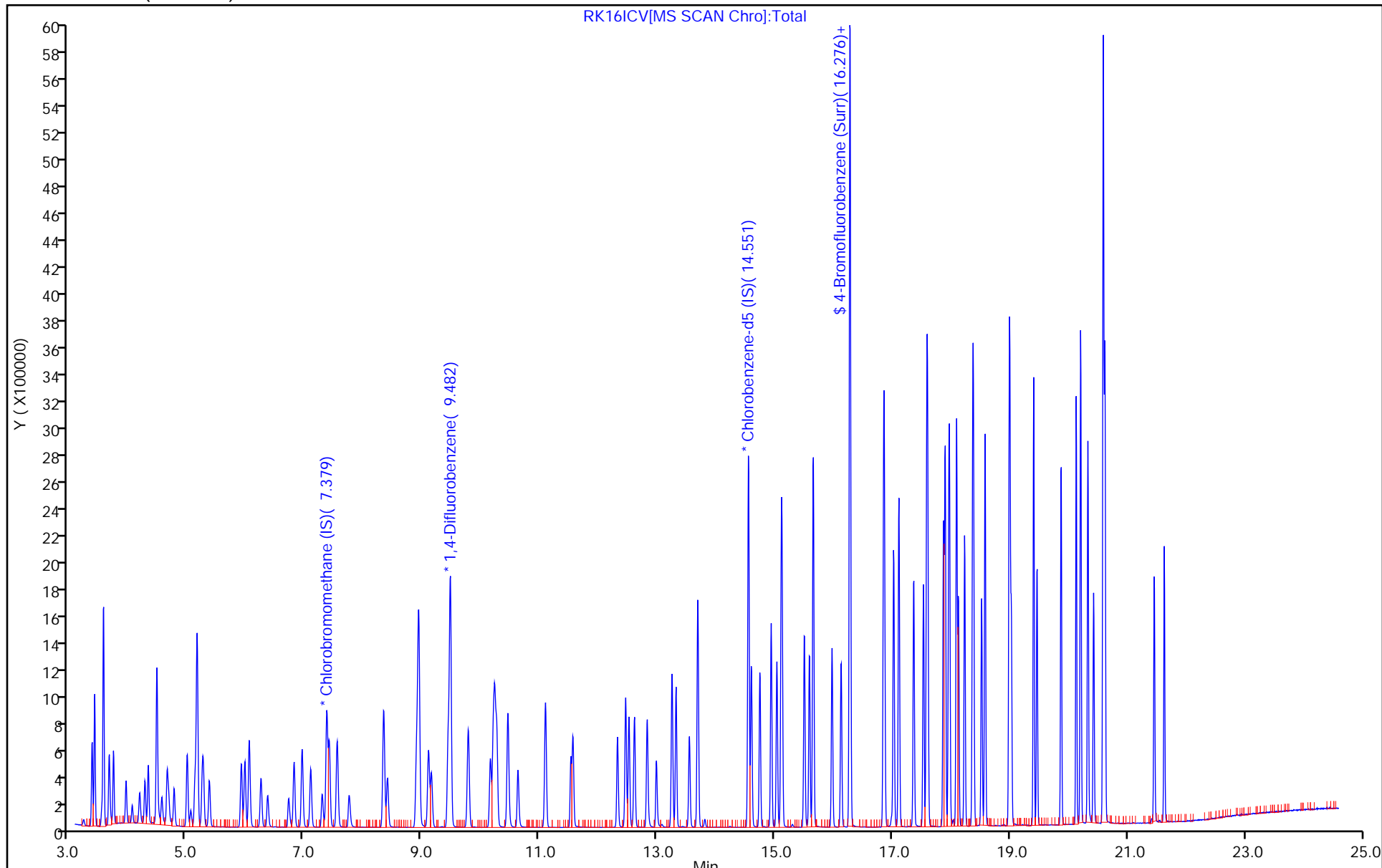
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



RK16ICV[MS SCAN Chro]:Total

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.256		1.90	2.00	-4.9	35.0
Propene	Ave	0.7296	0.6790		1.86	2.00	-6.9	35.0
Dichlorodifluoromethane	Ave	4.352	5.057		2.32	2.00	16.2	35.0
Chloromethane	Ave	0.3061	0.2731		1.78	2.00	-10.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	3.469		2.14	2.00	7.1	35.0
Acetaldehyde	Ave	0.2860	0.2397		8.38	10.0	-16.2	35.0
Vinyl chloride	Ave	1.073	0.9669		1.80	2.00	-9.9	35.0
1,3-Butadiene	Ave	0.6506	0.6233		1.92	2.00	-4.2	35.0
Butane	Ave	1.132	1.086		1.92	2.00	-4.0	35.0
Bromomethane	Ave	1.235	1.146		1.86	2.00	-7.2	35.0
Chloroethane	Ave	0.4970	0.4655		1.87	2.00	-6.3	35.0
Ethanol	Ave	0.2997	0.2300		7.67	10.0	-23.3	35.0
Vinyl bromide	Ave	1.302	1.320		2.03	2.00	1.4	35.0
2-Methylbutane	Ave	0.7999	0.7818		1.95	2.00	-2.3	35.0
Acrolein	Ave	0.2528	0.2785		2.20	2.00	10.2	35.0
Trichlorofluoromethane	Ave	5.912	5.646		1.91	2.00	-4.5	35.0
Acetonitrile	Ave	0.2586	0.2377		1.84	2.00	-8.1	35.0
Acetone	Ave	0.4151	0.3821		1.84	2.00	-7.9	35.0
Pentane	Ave	0.2011	0.2005		1.99	2.00	-0.3	35.0
Isopropyl alcohol	Ave	1.132	1.401		2.48	2.00	23.8	35.0
Ethyl ether	Ave	0.6661	0.5684		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.408	1.325		1.88	2.00	-5.9	35.0
Acrylonitrile	Ave	0.6277	0.6236		1.99	2.00	-0.6	35.0
tert-Butyl alcohol	Ave	2.677	2.710		2.02	2.00	1.2	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.433		1.97	2.00	-1.6	35.0
Methylene Chloride	Ave	1.338	1.169		1.75	2.00	-12.6	35.0
3-Chloropropene	Ave	1.309	1.297		1.98	2.00	-0.9	35.0
Carbon disulfide	Ave	3.341	3.259		1.95	2.00	-2.4	35.0
trans-1,2-Dichloroethene	Ave	1.436	1.363		1.90	2.00	-5.1	35.0
2-Methylpentane	Ave	1.894	1.705		1.80	2.00	-10.0	35.0
Methyl tert-butyl ether	Ave	4.568	4.614		2.02	2.00	1.0	35.0
1,1-Dichloroethane	Ave	2.402	2.312		1.92	2.00	-3.8	35.0
Vinyl acetate	Ave	2.320	2.445		2.11	2.00	5.4	35.0
2-Butanone (MEK)	Ave	0.5446	0.5251		1.93	2.00	-3.6	35.0
Hexane	Ave	0.8352	0.8172		1.96	2.00	-2.2	35.0
Isopropyl ether	Ave	2.873	2.961		2.06	2.00	3.0	35.0
cis-1,2-Dichloroethene	Ave	1.448	1.418		1.96	2.00	-2.1	35.0
Ethyl acetate	Ave	2.012	1.960		1.95	2.00	-2.6	35.0
Chloroform	Ave	3.821	3.708		1.94	2.00	-3.0	35.0
Tert-butyl ethyl ether	Ave	4.141	3.948		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.8745		1.97	2.00	-1.3	35.0
1,1,1-Trichloroethane	Ave	4.843	4.775		1.97	2.00	-1.4	35.0
1,2-Dichloroethane	Ave	0.5063	0.5017		1.98	2.00	-0.9	35.0
Benzene	Ave	0.6517	0.6483		1.99	2.00	-0.5	35.0
Cyclohexane	Ave	0.0968	0.1018		2.10	2.00	5.2	35.0
1-Butanol	Ave	0.0462	0.0484		2.09	2.00	4.7	35.0
Carbon tetrachloride	Ave	0.9167	0.9855		2.15	2.00	7.5	35.0
2,3-Dimethylpentane	Ave	0.1349	0.1359		2.01	2.00	0.7	35.0
Thiophene	Ave	0.3728	0.3687		1.98	2.00	-1.1	35.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8439		2.02	2.00	1.2	35.0
1,2-Dichloropropane	Ave	0.2045	0.2036		1.99	2.00	-0.5	35.0
Heptane	Ave	0.2083	0.2143		2.06	2.00	2.8	35.0
Trichloroethene	Ave	0.3929	0.3984		2.03	2.00	1.4	35.0
Dibromomethane	Ave	0.3514	0.3500		1.99	2.00	-0.4	35.0
Bromodichloromethane	Ave	0.6587	0.6852		2.08	2.00	4.0	35.0
1,4-Dioxane	Ave	0.0994	0.1029		2.07	2.00	3.5	35.0
Methyl methacrylate	Ave	0.2275	0.2348		2.06	2.00	3.2	35.0
Methylcyclohexane	Ave	0.4024	0.4961		2.47	2.00	23.3	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3776		2.08	2.00	4.1	35.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4285		2.17	2.00	8.5	35.0
trans-1,3-Dichloropropene	Ave	0.4674	0.5177		2.22	2.00	10.8	35.0
Toluene	Ave	0.9586	0.9853		2.06	2.00	2.8	35.0
1,1,2-Trichloroethane	Ave	0.2543	0.2613		2.05	2.00	2.7	35.0
2-Hexanone	Ave	0.2006	0.2098		2.09	2.00	4.6	35.0
Dibromochloromethane	Ave	0.7414	0.8418		2.27	2.00	13.5	35.0
Octane	Ave	0.3054	0.3220		2.11	2.00	5.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5875		2.11	2.00	5.4	35.0
Tetrachloroethene	Ave	0.4749	0.4840		2.04	2.00	1.9	35.0
Chlorobenzene	Ave	0.8374	0.8605		2.06	2.00	2.8	35.0
2,3-Dimethylheptane	Ave	0.5626	0.5171		1.84	2.00	-8.1	35.0
Ethylbenzene	Ave	1.382	1.443		2.09	2.00	4.4	35.0
m-Xylene & p-Xylene	Ave	1.133	1.199		4.23	4.00	5.8	35.0
Bromoform	Ave	0.7786	0.8773		2.25	2.00	12.7	35.0
Styrene	Ave	0.7430	0.8258		2.22	2.00	11.1	35.0
o-Xylene	Ave	1.190	1.212		2.04	2.00	1.8	35.0
Nonane	Ave	0.4511	0.4700		2.08	2.00	4.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6491		2.15	2.00	7.3	35.0
1,2,3-Trichloropropane	Ave	0.3000	0.3085		2.06	2.00	2.8	35.0
Isopropylbenzene	Ave	1.694	1.742		2.06	2.00	2.8	35.0
Propylbenzene	Ave	0.4652	0.5071		2.18	2.00	9.0	35.0
2-Chlorotoluene	Ave	0.4306	0.4514		2.10	2.00	4.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.816		2.06	2.00	3.2	35.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.8591		2.39	2.00	19.3	35.0
Alpha Methyl Styrene	Ave	0.6844	0.7376		2.16	2.00	7.8	35.0
Decane	Ave	0.6421	0.6805		2.12	2.00	6.0	35.0
tert-Butylbenzene	Ave	1.753	1.837		2.10	2.00	4.8	35.0
1,2,4-Trimethylbenzene	Ave	1.607	1.694		2.11	2.00	5.5	35.0
1,3-Dichlorobenzene	Ave	1.160	1.185		2.04	2.00	2.2	35.0
sec-Butylbenzene	Ave	2.171	2.287		2.11	2.00	5.4	35.0
Benzyl chloride	Ave	1.239	1.386		2.24	2.00	11.9	35.0
1,4-Dichlorobenzene	Ave	1.164	1.184		2.03	2.00	1.7	35.0
4-Isopropyltoluene	Ave	2.191	2.267		2.07	2.00	3.5	35.0
1,2,3-Trimethylbenzene	Ave	1.725	1.385		1.61	2.00	-19.7	35.0
Butylcyclohexane	Ave	0.9488	0.9354		1.97	2.00	-1.4	35.0
1,2-Dichlorobenzene	Ave	1.144	1.144		2.00	2.00	-0.0	35.0
Indane	Ave	1.423	1.451		2.04	2.00	2.0	35.0
Indene	Ave	1.168	1.080		1.85	2.00	-7.6	35.0
Butylbenzene	Ave	1.784	1.888		2.12	2.00	5.8	35.0
Undecane	Ave	0.7598	0.8223		2.16	2.00	8.2	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5157		1.85	2.00	-7.4	35.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.082		2.01	2.00	0.7	35.0
Dodecane	Ave	0.7957	0.9180		2.31	2.00	15.4	35.0
1,2,4-Trichlorobenzene	Ave	1.235	1.334		2.16	2.00	7.9	35.0
Naphthalene	Ave	2.498	2.601		2.08	2.00	4.1	35.0
Hexachlorobutadiene	Ave	1.436	1.487		2.07	2.00	3.5	35.0
1,2,3-Trichlorobenzene	Ave	1.187	1.295		2.18	2.00	9.1	35.0
2-Methylnaphthalene	Ave	0.7935	1.016		2.56	2.00	28.1	50.0
1-Methylnaphthalene	Ave	0.6999	0.9471		2.71	2.00	35.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8473		3.98	4.00	-0.4	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 17-Nov-2018 06:27:30 ALS Bottle#: 8 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-018
 Misc. Info.: S80
 Operator ID: Instrument ID: MR
 Sublist:

Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 16:30:16 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: tajh Date: 19-Nov-2018 10:15:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.397	-0.018	68	299493	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	94	1671036	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	89	1499042	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	89	1270095	4.00	3.98	
6 Chlorodifluoromethane	51	3.383	3.417	-0.034	95	337816	2.00	1.90	
7 Propene	41	3.389	3.420	-0.031	91	101676	2.00	1.86	
8 Dichlorodifluoromethane	85	3.432	3.461	-0.029	100	757267	2.00	2.32	
9 Chloromethane	52	3.550	3.586	-0.036	98	40890	2.00	1.78	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.583	3.609	-0.026	89	519503	2.00	2.14	
11 Acetaldehyde	44	3.674	3.710	-0.036	93	179473	10.0	8.38	
12 Vinyl chloride	62	3.680	3.711	-0.031	99	144783	2.00	1.80	
13 Butadiene	54	3.750	3.780	-0.030	87	93331	2.00	1.92	
14 Butane	43	3.750	3.782	-0.032	89	162697	2.00	1.92	
15 Bromomethane	94	3.966	3.995	-0.029	96	171614	2.00	1.86	
16 Chloroethane	64	4.068	4.100	-0.032	95	69702	2.00	1.87	
17 Ethanol	31	4.198	4.222	-0.024	92	172190	10.0	7.67	
18 Vinyl bromide	106	4.284	4.315	-0.031	97	197656	2.00	2.03	
19 2-Methylbutane	43	4.343	4.369	-0.026	77	117076	2.00	1.95	
20 Acrolein	56	4.483	4.516	-0.033	97	41705	2.00	2.20	
21 Trichlorofluoromethane	101	4.489	4.517	-0.028	99	845437	2.00	1.91	
22 Acetonitrile	40	4.516	4.545	-0.029	96	35597	2.00	1.84	
23 Acetone	58	4.575	4.605	-0.030	100	57219	2.00	1.84	
24 Pentane	72	4.661	4.693	-0.032	91	30029	2.00	1.99	
25 Isopropyl alcohol	45	4.688	4.716	-0.028	95	209729	2.00	2.48	
26 Ethyl ether	31	4.780	4.817	-0.037	69	85111	2.00	1.71	
27 1,1-Dichloroethene	96	5.006	5.033	-0.027	97	198342	2.00	1.88	
28 Acrylonitrile	53	5.066	5.097	-0.031	91	93387	2.00	1.99	
29 2-Methyl-2-propanol	59	5.141	5.173	-0.032	94	405847	2.00	2.02	
30 1,1,2-Trichloro-1,2,2-trif	101	5.174	5.199	-0.025	92	514124	2.00	1.97	
31 Methylene Chloride	84	5.260	5.290	-0.030	88	175058	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.281	5.309	-0.028	85	194281	2.00	1.98	
33 Carbon disulfide	76	5.378	5.410	-0.032	99	488020	2.00	1.95	
34 trans-1,2-Dichloroethene	96	5.929	5.951	-0.023	97	204116	2.00	1.90	
35 2-Methylpentane	43	5.988	6.011	-0.023	84	255391	2.00	1.80	
36 Methyl tert-butyl ether	73	6.058	6.094	-0.036	92	690950	2.00	2.02	
37 1,1-Dichloroethane	63	6.257	6.283	-0.026	98	346185	2.00	1.92	
38 Vinyl acetate	43	6.376	6.402	-0.026	98	366118	2.00	2.11	
39 2-Butanone (MEK)	72	6.732	6.761	-0.029	98	78637	2.00	1.93	
40 Hexane	56	6.824	6.845	-0.021	81	122366	2.00	1.96	
171 Isopropyl ether	45	6.958	6.989	-0.031	86	443358	2.00	2.06	
41 cis-1,2-Dichloroethene	96	7.104	7.127	-0.023	94	212288	2.00	1.96	
42 Ethyl acetate	43	7.298	7.330	-0.032	98	293488	2.00	1.95	
43 Chloroform	83	7.422	7.439	-0.017	96	555199	2.00	1.94	
173 Tert-butyl ethyl ether	59	7.557	7.580	-0.023	92	591267	2.00	1.91	
44 Tetrahydrofuran	42	7.762	7.793	-0.031	76	130960	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.344	8.364	-0.020	94	715022	2.00	1.97	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	419142	2.00	1.98	
47 Benzene	78	8.905	8.920	-0.015	98	541647	2.00	1.99	
48 Cyclohexane	69	8.932	8.951	-0.019	88	85082	2.00	2.10	
50 Carbon tetrachloride	117	8.943	8.962	-0.019	97	823420	2.00	2.15	
49 n-Butanol	31	8.943	8.969	-0.026	54	40428	2.00	2.09	
51 2,3-Dimethylpentane	71	9.110	9.126	-0.016	82	113510	2.00	2.01	
52 Thiophene	84	9.159	9.174	-0.015	95	308039	2.00	1.98	
53 Isooctane	57	9.784	9.798	-0.014	95	705085	2.00	2.02	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	76	170084	2.00	1.99	
55 n-Heptane	71	10.210	10.224	-0.014	83	179014	2.00	2.06	
56 Trichloroethene	130	10.237	10.250	-0.013	93	332896	2.00	2.03	
57 Dibromomethane	93	10.269	10.279	-0.010	92	292459	2.00	1.99	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	572509	2.00	2.08	
59 1,4-Dioxane	88	10.474	10.497	-0.023	86	85996	2.00	2.07	
60 Methyl methacrylate	41	10.631	10.649	-0.018	90	196157	2.00	2.06	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	414520	2.00	2.47	
62 4-Methyl-2-pentanone (MIBK)	43	11.531	11.552	-0.021	91	315480	2.00	2.08	
63 cis-1,3-Dichloropropene	75	11.569	11.577	-0.008	97	358004	2.00	2.17	
64 trans-1,3-Dichloropropene	75	12.324	12.332	-0.008	97	387987	2.00	2.22	
65 Toluene	91	12.464	12.471	-0.007	93	738479	2.00	2.06	
67 2-Methylthiophene	97	12.518	12.524	-0.006	80	252005	NC	NC	
66 1,1,2-Trichloroethane	83	12.518	12.527	-0.009	94	195833	2.00	2.05	
68 3-Methylthiophene	97	12.831	12.836	-0.005	99	596590	NC	NC	
69 2-Hexanone	58	12.987	13.003	-0.016	95	157281	2.00	2.09	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	97	630906	2.00	2.27	
71 n-Octane	85	13.321	13.326	-0.005	74	241345	2.00	2.11	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	440376	2.00	2.11	
73 Tetrachloroethene	129	13.688	13.695	-0.007	94	362784	2.00	2.04	
74 Chlorobenzene	112	14.599	14.606	-0.007	92	644974	2.00	2.06	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	78	387573	2.00	1.84	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1081684	2.00	2.09	
77 2-Ethylthiophene	97	15.036	15.042	-0.006	98	850130	NC	NC	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1797001	4.00	4.23	
79 Bromoform	173	15.505	15.507	-0.002	96	657515	2.00	2.25	
80 Styrene	104	15.592	15.594	-0.002	97	618923	2.00	2.22	
82 o-Xylene	91	15.651	15.655	-0.004	97	908326	2.00	2.04	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.656	15.659	-0.003	81	352264	2.00	2.08	
83 1,1,2,2-Tetrachloroethane	83	15.974	15.976	-0.002	93	486519	2.00	2.15	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	231227	2.00	2.06	
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1305567	2.00	2.06	
86 N-Propylbenzene	120	16.853	16.856	-0.003	98	380100	2.00	2.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	338365	2.00	2.10	
88 4-Ethyltoluene	105	17.021	17.027	-0.006	98	1360898	2.00	2.06	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	643905	2.00	2.39	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	552848	2.00	2.16	
91 n-Decane	57	17.528	17.532	-0.004	97	510052	2.00	2.12	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	1376781	2.00	2.10	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	1269827	2.00	2.11	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	888433	2.00	2.04	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	1714335	2.00	2.11	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	1039012	2.00	2.24	
97 1,4-Dichlorobenzene	146	17.970	17.977	-0.007	94	887663	2.00	2.03	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	1699119	2.00	2.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1037942	2.00	1.61	
100 Butylcyclohexane	83	18.229	18.232	-0.004	92	701115	2.00	1.97	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	96	857489	2.00	2.00	
102 2,3-Dihydroindene	117	18.379	18.383	-0.004	93	1087727	2.00	2.04	
103 Indene	116	18.520	18.520	0.000	90	809464	2.00	1.85	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	1414728	2.00	2.12	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	96	1229369	NC	NC	
105 Undecane	57	19.000	19.001	-0.001	87	616308	2.00	2.16	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	94	386560	2.00	1.85	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	1560478	2.00	2.01	
109 1,2,3,5-Tetramethylbenzene	119	19.463	19.464	-0.001	94	955538	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	96	1325184	NC	NC	
110 Dodecane	57	20.127	20.128	-0.001	90	688062	2.00	2.31	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	999500	2.00	2.16	
113 Naphthalene	128	20.326	20.329	-0.003	98	1949612	2.00	2.08	
114 Benzo(b)thiophene	134	20.423	20.429	-0.006	99	1114636	NC	NC	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	1114590	2.00	2.07	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	970744	2.00	2.18	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	761819	2.00	2.56	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	709921	2.00	2.71	
A 120 C8 Range	1	13.335	(13.279-13.376)		0	1874356	2.00	2.10	
S 121 Xylenes, Total	100				0		6.00	6.27	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.86	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00080

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D

Injection Date: 17-Nov-2018 06:27:30

Instrument ID: MR

Operator ID:

Lims ID: icv

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

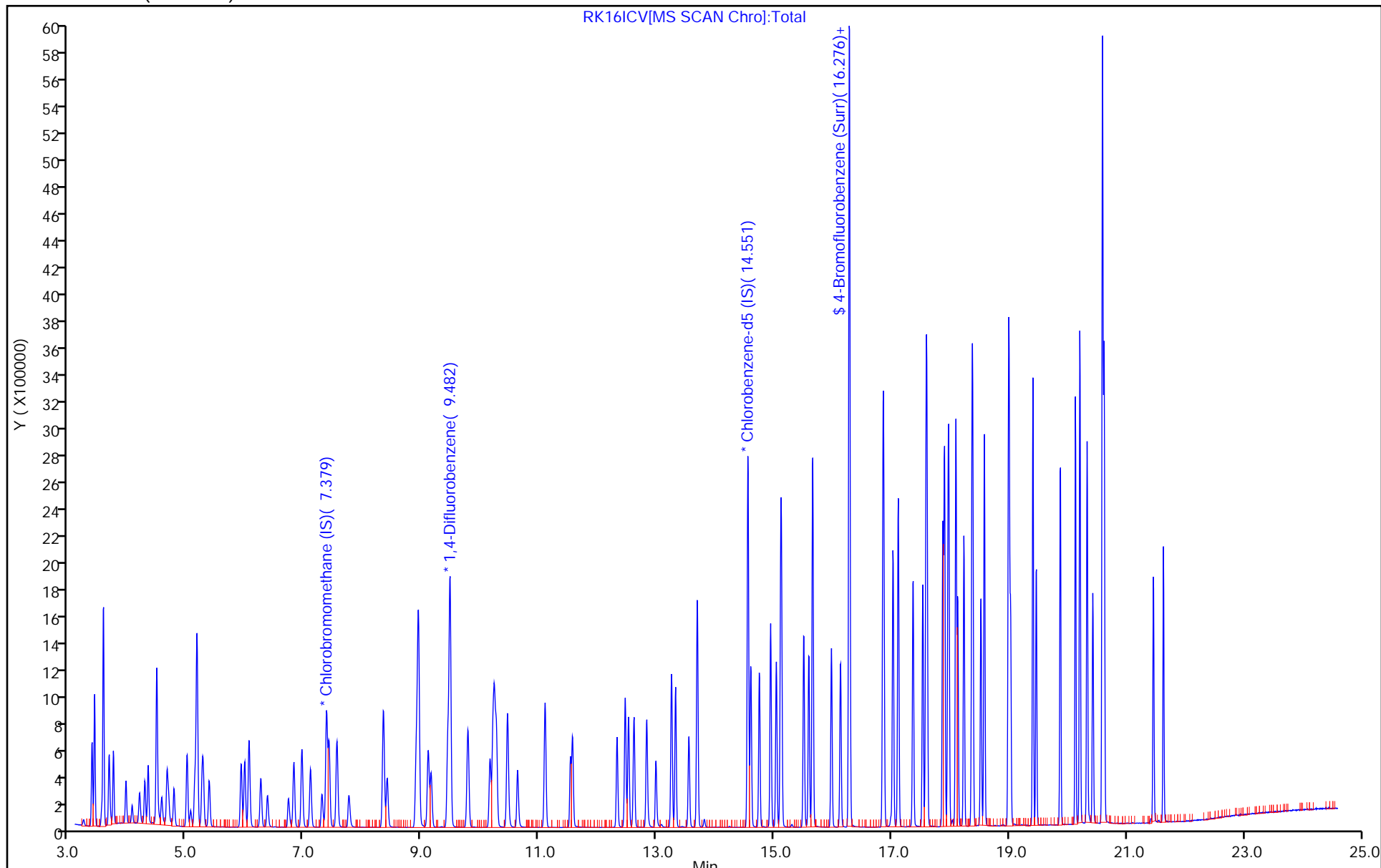
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-25527/2 Calibration Date: 11/19/2018 10:01
 Instrument ID: MR Calib Start Date: 06/28/2017 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/28/2017 21:58
 Lab File ID: RCCVK19.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6999	0.8502			2.00	21.5	30.0
3-Methylthiophene	Ave	0.6908	0.8245			2.00	19.4	30.0
2-Ethylthiophene	Ave	0.9153	1.209			2.00	32.1*	30.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.747			2.00		30.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.352			2.00	47.9*	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.876			2.00	51.8*	30.0
Benzo (b) thiophene	Ave	0.9147	1.536			2.00	67.9*	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RCCVK19.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 19-Nov-2018 10:01:30 ALS Bottle#: 15 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010037-002
 Misc. Info.: S79
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub19
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 09:59:26 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: sodsaip

Date: 20-Nov-2018 09:59:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.385	0.000	69	255068	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.482	0.000	95	1449950	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.551	0.000	90	1303291	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.277	0.000	87	1138300	4.00	4.11	
6 Chlorodifluoromethane	51	3.400	3.400	0.000	95	311507	2.00	2.06	
7 Propene	41	3.405	3.405	0.000	90	87380	2.00	1.88	
8 Dichlorodifluoromethane	85	3.448	3.448	0.000	100	606482	2.00	2.19	
9 Chloromethane	52	3.572	3.572	0.000	98	36400	2.00	1.86	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.599	3.599	0.000	88	449163	2.00	2.17	
11 Acetaldehyde	44	3.691	3.691	0.000	93	167467	10.0	9.18	
12 Vinyl chloride	62	3.696	3.696	0.000	100	135567	2.00	1.98	
13 Butadiene	54	3.766	3.766	0.000	93	86589	2.00	2.09	
14 Butane	43	3.772	3.772	0.000	90	153610	2.00	2.13	
15 Bromomethane	94	3.982	3.982	0.000	96	163837	2.00	2.08	
16 Chloroethane	64	4.085	4.085	0.000	95	64696	2.00	2.04	
17 Ethanol	31	4.192	4.192	0.000	92	158125	10.0	8.27	
18 Vinyl bromide	106	4.300	4.300	0.000	96	185968	2.00	2.24	
19 2-Methylbutane	43	4.360	4.360	0.000	78	109824	2.00	2.15	
20 Acrolein	56	4.494	4.494	0.000	97	42608	2.00	2.64	
21 Trichlorofluoromethane	101	4.505	4.505	0.000	100	829755	2.00	2.20	
22 Acetonitrile	40	4.532	4.532	0.000	97	31929	2.00	1.94	
23 Acetone	58	4.581	4.581	0.000	100	51829	2.00	1.96	
24 Pentane	72	4.678	4.678	0.000	91	27484	2.00	2.14	
25 Isopropyl alcohol	45	4.683	4.683	0.000	96	190081	2.00	2.63	
26 Ethyl ether	31	4.796	4.796	0.000	70	86953	2.00	2.05	
27 1,1-Dichloroethene	96	5.017	5.017	0.000	96	181449	2.00	2.02	
28 Acrylonitrile	53	5.071	5.071	0.000	89	88223	2.00	2.20	
29 2-Methyl-2-propanol	59	5.131	5.131	0.000	91	359554	2.00	2.11	
30 1,1,2-Trichloro-1,2,2-trif	101	5.185	5.185	0.000	91	475662	2.00	2.14	
31 Methylene Chloride	84	5.276	5.276	0.000	89	157032	2.00	1.84	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.292	5.292	0.000	85	173432	2.00	2.08	
33 Carbon disulfide	76	5.395	5.395	0.000	98	435973	2.00	2.05	
34 trans-1,2-Dichloroethene	96	5.934	5.934	0.000	97	186260	2.00	2.03	
35 2-Methylpentane	43	5.993	5.993	0.000	84	232004	2.00	1.92	
36 Methyl tert-butyl ether	73	6.064	6.064	0.000	93	622915	2.00	2.14	
37 1,1-Dichloroethane	63	6.268	6.268	0.000	98	313353	2.00	2.05	
38 Vinyl acetate	43	6.376	6.376	0.000	98	333221	2.00	2.25	
39 2-Butanone (MEK)	72	6.732	6.732	0.000	98	71045	2.00	2.05	
40 Hexane	56	6.829	6.829	0.000	81	111535	2.00	2.09	
171 Isopropyl ether	45	6.964	6.964	0.000	85	397476	2.00	2.17	
41 cis-1,2-Dichloroethene	96	7.115	7.115	0.000	95	191281	2.00	2.07	
42 Ethyl acetate	43	7.298	7.298	0.000	98	265393	2.00	2.07	
43 Chloroform	83	7.422	7.422	0.000	97	516011	2.00	2.12	
173 Tert-butyl ethyl ether	59	7.557	7.557	0.000	92	539618	2.00	2.04	
44 Tetrahydrofuran	42	7.762	7.762	0.000	76	121074	2.00	2.14	
45 1,1,1-Trichloroethane	97	8.350	8.350	0.000	94	672247	2.00	2.18	
46 1,2-Dichloroethane	62	8.409	8.409	0.000	97	396255	2.00	2.16	
47 Benzene	78	8.905	8.905	0.000	98	485663	2.00	2.06	
48 Cyclohexane	69	8.932	8.932	0.000	89	75932	2.00	2.16	
49 n-Butanol	31	8.943	8.943	0.000	61	36787	2.00	2.20	
50 Carbon tetrachloride	117	8.948	8.948	0.000	98	780107	2.00	2.35	
51 2,3-Dimethylpentane	71	9.110	9.110	0.000	83	103097	2.00	2.11	
52 Thiophene	84	9.164	9.164	0.000	94	278581	2.00	2.06	
53 Isooctane	57	9.784	9.784	0.000	94	645068	2.00	2.13	
54 1,2-Dichloropropane	63	10.162	10.162	0.000	73	153748	2.00	2.07	
55 n-Heptane	71	10.210	10.210	0.000	82	162694	2.00	2.15	
56 Trichloroethene	130	10.237	10.237	0.000	93	303300	2.00	2.13	
57 Dibromomethane	93	10.270	10.270	0.000	92	278416	2.00	2.19	
58 Dichlorobromomethane	83	10.453	10.453	0.000	98	528297	2.00	2.21	
59 1,4-Dioxane	88	10.474	10.474	0.000	87	73315	2.00	2.03	
60 Methyl methacrylate	41	10.625	10.625	0.000	90	182395	2.00	2.21	
61 Methylcyclohexane	83	11.100	11.100	0.000	92	373381	2.00	2.56	
62 4-Methyl-2-pentanone (MIBK)	43	11.531	11.531	0.000	91	289300	2.00	2.20	
63 cis-1,3-Dichloropropene	75	11.564	11.564	0.000	96	329705	2.00	2.30	
64 trans-1,3-Dichloropropene	75	12.324	12.324	0.000	97	351274	2.00	2.31	
65 Toluene	91	12.464	12.464	0.000	93	668398	2.00	2.14	
66 1,1,2-Trichloroethane	83	12.518	12.518	0.000	93	179021	2.00	2.16	
67 2-Methylthiophene	97	12.610	12.610	0.000	97	554058	NC	NC	
68 3-Methylthiophene	97	12.831	12.831	0.000	99	537311	NC	NC	
69 2-Hexanone	58	12.987	12.987	0.000	94	141724	2.00	2.17	
70 Chlorodibromomethane	129	13.252	13.252	0.000	97	573594	2.00	2.37	
71 n-Octane	85	13.322	13.322	0.000	75	217808	2.00	2.19	
72 Ethylene Dibromide	107	13.548	13.548	0.000	96	407935	2.00	2.25	
73 Tetrachloroethene	129	13.688	13.688	0.000	93	333419	2.00	2.15	
74 Chlorobenzene	112	14.600	14.600	0.000	92	591931	2.00	2.17	
75 2,3-Dimethylheptane	43	14.745	14.745	0.000	77	360933	2.00	1.97	
76 Ethylbenzene	91	14.939	14.939	0.000	100	990248	2.00	2.20	
77 2-Ethylthiophene	97	15.036	15.036	0.000	98	788067	NC	NC	
78 m-Xylene & p-Xylene	91	15.117	15.117	0.000	100	1661689	4.00	4.50	
79 Bromoform	173	15.506	15.506	0.000	96	560005	2.00	2.21	
80 Styrene	104	15.586	15.586	0.000	97	568657	2.00	2.35	
82 o-Xylene	91	15.651	15.651	0.000	97	851142	2.00	2.19	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.657	15.657	0.000	79	324377	2.00	2.21	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.975	0.000	93	450485	2.00	2.29	
84 1,2,3-Trichloropropane	110	16.131	16.131	0.000	93	214818	2.00	2.20	
85 Isopropylbenzene	105	16.282	16.282	0.000	96	1216736	2.00	2.20	
86 N-Propylbenzene	120	16.854	16.854	0.000	97	351243	2.00	2.32	
87 2-Chlorotoluene	126	16.864	16.864	0.000	93	313186	2.00	2.23	
88 4-Ethyltoluene	105	17.026	17.026	0.000	98	1262003	2.00	2.20	
89 1,3,5-Trimethylbenzene	120	17.113	17.113	0.000	91	592392	2.00	2.53	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	514552	2.00	2.31	
91 n-Decane	57	17.533	17.533	0.000	96	471980	2.00	2.26	
92 tert-Butylbenzene	119	17.587	17.587	0.000	89	1278921	2.00	2.24	
93 1,2,4-Trimethylbenzene	105	17.603	17.603	0.000	97	1204721	2.00	2.30	
94 1,3-Dichlorobenzene	146	17.873	17.873	0.000	98	828486	2.00	2.19	
95 sec-Butylbenzene	105	17.900	17.900	0.000	97	1597305	2.00	2.26	
96 Benzyl chloride	91	17.959	17.959	0.000	97	970884	2.00	2.40	
97 1,4-Dichlorobenzene	146	17.975	17.975	0.000	94	824486	2.00	2.17	
98 4-Isopropyltoluene	119	18.094	18.094	0.000	95	1589177	2.00	2.23	
99 1,2,3-Trimethylbenzene	105	18.126	18.126	0.000	98	970381	2.00	1.73	
100 Butylcyclohexane	83	18.234	18.234	0.000	92	650538	2.00	2.10	
101 1,2-Dichlorobenzene	146	18.369	18.369	0.000	93	792406	2.00	2.13	
102 2,3-Dihydroindene	117	18.380	18.380	0.000	92	1011114	2.00	2.18	
103 Indene	116	18.520	18.520	0.000	90	756077	2.00	1.99	
104 n-Butylbenzene	91	18.579	18.579	0.000	97	1336483	2.00	2.30	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	96	1138562	NC	NC	
105 Undecane	57	19.000	19.000	0.000	87	571398	2.00	2.31	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.027	0.000	96	332819	2.00	1.83	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.404	0.000	95	1455145	2.00	2.16	
109 1,2,3,5-Tetramethylbenzene	119	19.464	19.464	0.000	94	880992	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	95	1222700	NC	NC	
110 Dodecane	57	20.127	20.127	0.000	89	619853	2.00	2.39	
111 1,2,4-Trichlorobenzene	180	20.202	20.202	0.000	94	908192	2.00	2.26	
113 Naphthalene	128	20.326	20.326	0.000	98	1759862	2.00	2.16	
114 Benzo(b)thiophene	134	20.423	20.423	0.000	99	1000728	NC	NC	
115 Hexachlorobutadiene	225	20.591	20.591	0.000	95	1031264	2.00	2.20	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	94	869462	2.00	2.25	
117 2-Methylnaphthalene	142	21.453	21.453	0.000	98	578766	2.00	2.24	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	525116	2.00	2.30	
A 120 C8 Range	1	13.338	(13.273-13.392)		0	1727880	2.00	2.23	
S 121 Xylenes, Total	100				0		6.00	6.69	
S 122 1,2-Dichloroethene, Total	1				0		4.00	4.11	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00079

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RCCVK19.D

Injection Date: 19-Nov-2018 10:01:30

Instrument ID: MR

Operator ID:

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

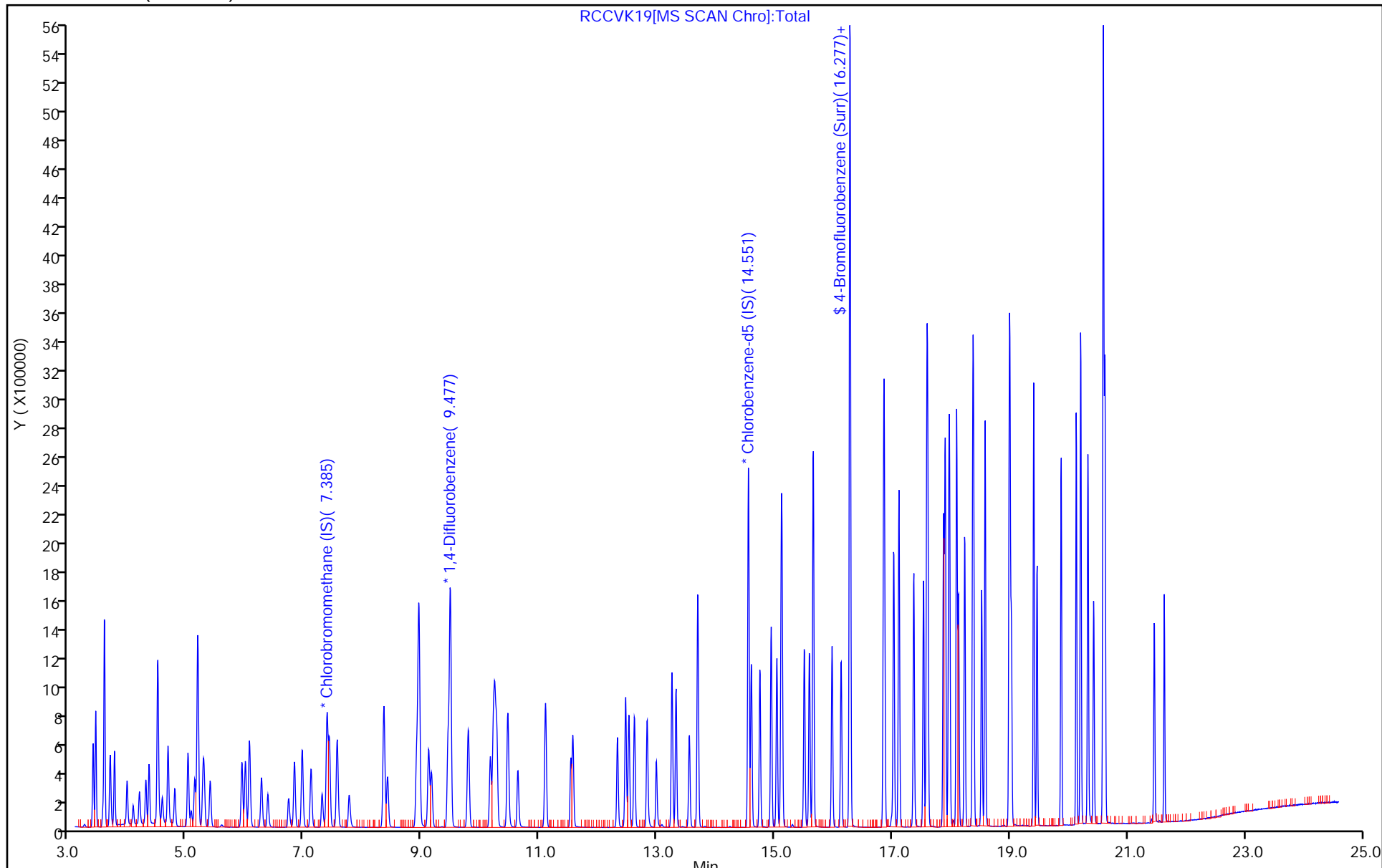
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-25527/2 Calibration Date: 11/19/2018 10:01
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVK19.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.443		2.06	2.00	2.9	30.0
Propene	Ave	0.7296	0.6852		1.88	2.00	-6.1	30.0
Dichlorodifluoromethane	Ave	4.352	4.755		2.19	2.00	9.3	30.0
Chloromethane	Ave	0.3061	0.2854		1.86	2.00	-6.8	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	3.522		2.17	2.00	8.7	30.0
Acetaldehyde	Ave	0.2860	0.2626		9.18	10.0	-8.2	30.0
Vinyl chloride	Ave	1.073	1.063		1.98	2.00	-0.9	30.0
1,3-Butadiene	Ave	0.6506	0.6790		2.09	2.00	4.4	30.0
Butane	Ave	1.132	1.204		2.13	2.00	6.4	30.0
Bromomethane	Ave	1.235	1.285		2.08	2.00	4.0	30.0
Chloroethane	Ave	0.4970	0.5073		2.04	2.00	2.1	30.0
Ethanol	Ave	0.2997	0.2480		8.27	10.0	-17.3	30.0
Vinyl bromide	Ave	1.302	1.458		2.24	2.00	12.0	30.0
2-Methylbutane	Ave	0.7999	0.8611		2.15	2.00	7.7	30.0
Acrolein	Ave	0.2528	0.3341		2.64	2.00	32.1*	30.0
Trichlorofluoromethane	Ave	5.912	6.506		2.20	2.00	10.0	30.0
Acetonitrile	Ave	0.2586	0.2504		1.94	2.00	-3.2	30.0
Acetone	Ave	0.4151	0.4064		1.96	2.00	-2.1	30.0
Pentane	Ave	0.2011	0.2155		2.14	2.00	7.2	30.0
Isopropyl alcohol	Ave	1.132	1.490		2.63	2.00	31.7*	30.0
Ethyl ether	Ave	0.6661	0.6818		2.05	2.00	2.4	30.0
1,1-Dichloroethene	Ave	1.408	1.423		2.02	2.00	1.1	30.0
Acrylonitrile	Ave	0.6277	0.6918		2.20	2.00	10.2	30.0
tert-Butyl alcohol	Ave	2.677	2.819		2.11	2.00	5.3	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.730		2.14	2.00	6.9	30.0
Methylene Chloride	Ave	1.338	1.231		1.84	2.00	-8.0	30.0
3-Chloropropene	Ave	1.309	1.360		2.08	2.00	3.9	30.0
Carbon disulfide	Ave	3.341	3.418		2.05	2.00	2.3	30.0
trans-1,2-Dichloroethene	Ave	1.436	1.460		2.03	2.00	1.7	30.0
2-Methylpentane	Ave	1.894	1.819		1.92	2.00	-4.0	30.0
Methyl tert-butyl ether	Ave	4.568	4.884		2.14	2.00	6.9	30.0
1,1-Dichloroethane	Ave	2.402	2.457		2.05	2.00	2.3	30.0
Vinyl acetate	Ave	2.320	2.613		2.25	2.00	12.6	30.0
2-Butanone (MEK)	Ave	0.5446	0.5571		2.05	2.00	2.3	30.0
Hexane	Ave	0.8352	0.8746		2.09	2.00	4.7	30.0
Isopropyl ether	Ave	2.873	3.117		2.17	2.00	8.5	30.0
cis-1,2-Dichloroethene	Ave	1.448	1.500		2.07	2.00	3.6	30.0
Ethyl acetate	Ave	2.012	2.081		2.07	2.00	3.4	30.0
Chloroform	Ave	3.821	4.046		2.12	2.00	5.9	30.0
Tert-butyl ethyl ether	Ave	4.141	4.231		2.04	2.00	2.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-25527/2 Calibration Date: 11/19/2018 10:01
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVK19.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.9494		2.14	2.00	7.1	30.0
1,1,1-Trichloroethane	Ave	4.843	5.271		2.18	2.00	8.8	30.0
1,2-Dichloroethane	Ave	0.5063	0.5466		2.16	2.00	8.0	30.0
Benzene	Ave	0.6517	0.6699		2.06	2.00	2.8	30.0
Cyclohexane	Ave	0.0968	0.1047		2.16	2.00	8.2	30.0
1-Butanol	Ave	0.0462	0.0507		2.20	2.00	9.8	30.0
Carbon tetrachloride	Ave	0.9167	1.076		2.35	2.00	17.4	30.0
2,3-Dimethylpentane	Ave	0.1349	0.1422		2.11	2.00	5.4	30.0
Thiophene	Ave	0.3728	0.3843		2.06	2.00	3.1	30.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8898		2.13	2.00	6.7	30.0
1,2-Dichloropropane	Ave	0.2045	0.2121		2.07	2.00	3.7	30.0
Heptane	Ave	0.2083	0.2244		2.15	2.00	7.7	30.0
Trichloroethene	Ave	0.3929	0.4184		2.13	2.00	6.5	30.0
Dibromomethane	Ave	0.3514	0.3840		2.19	2.00	9.3	30.0
Bromodichloromethane	Ave	0.6587	0.7287		2.21	2.00	10.6	30.0
1,4-Dioxane	Ave	0.0994	0.1011		2.03	2.00	1.7	30.0
Methyl methacrylate	Ave	0.2275	0.2516		2.21	2.00	10.6	30.0
Methylcyclohexane	Ave	0.4024	0.5150		2.56	2.00	28.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3991		2.20	2.00	10.0	30.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4548		2.30	2.00	15.2	30.0
trans-1,3-Dichloropropene	Ave	0.4674	0.5391		2.31	2.00	15.3	30.0
Toluene	Ave	0.9586	1.026		2.14	2.00	7.0	30.0
1,1,2-Trichloroethane	Ave	0.2543	0.2747		2.16	2.00	8.0	30.0
2-Hexanone	Ave	0.2006	0.2175		2.17	2.00	8.4	30.0
Dibromochloromethane	Ave	0.7414	0.8802		2.37	2.00	18.7	30.0
Octane	Ave	0.3054	0.3342		2.19	2.00	9.5	30.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.6260		2.25	2.00	12.3	30.0
Tetrachloroethene	Ave	0.4749	0.5117		2.15	2.00	7.7	30.0
Chlorobenzene	Ave	0.8374	0.9084		2.17	2.00	8.5	30.0
2,3-Dimethylheptane	Ave	0.5626	0.5539		1.97	2.00	-1.5	30.0
Ethylbenzene	Ave	1.382	1.520		2.20	2.00	10.0	30.0
m-Xylene & p-Xylene	Ave	1.133	1.275		4.50	4.00	12.5	30.0
Bromoform	Ave	0.7786	0.8594		2.21	2.00	10.4	30.0
Styrene	Ave	0.7430	0.8727		2.35	2.00	17.5	30.0
o-Xylene	Ave	1.190	1.306		2.19	2.00	9.7	30.0
Nonane	Ave	0.4511	0.4978		2.21	2.00	10.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6913		2.29	2.00	14.3	30.0
1,2,3-Trichloropropane	Ave	0.3000	0.3297		2.20	2.00	9.9	30.0
Isopropylbenzene	Ave	1.694	1.867		2.20	2.00	10.2	30.0
Propylbenzene	Ave	0.4652	0.5390		2.32	2.00	15.9	30.0
2-Chlorotoluene	Ave	0.4306	0.4806		2.23	2.00	11.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-25527/2 Calibration Date: 11/19/2018 10:01
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVK19.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.937		2.20	2.00	10.1	30.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.9091		2.53	2.00	26.3	30.0
Alpha Methyl Styrene	Ave	0.6844	0.7896		2.31	2.00	15.4	30.0
Decane	Ave	0.6421	0.7243		2.26	2.00	12.8	30.0
tert-Butylbenzene	Ave	1.753	1.963		2.24	2.00	11.9	30.0
1,2,4-Trimethylbenzene	Ave	1.607	1.849		2.30	2.00	15.1	30.0
1,3-Dichlorobenzene	Ave	1.160	1.271		2.19	2.00	9.6	30.0
sec-Butylbenzene	Ave	2.171	2.451		2.26	2.00	12.9	30.0
Benzyl chloride	Ave	1.239	1.490		2.40	2.00	20.2	30.0
1,4-Dichlorobenzene	Ave	1.164	1.265		2.17	2.00	8.7	30.0
4-Isopropyltoluene	Ave	2.191	2.439		2.23	2.00	11.3	30.0
1,2,3-Trimethylbenzene	Ave	1.725	1.489		1.73	2.00	-13.7	30.0
Butylcyclohexane	Ave	0.9488	0.998		2.10	2.00	5.2	30.0
1,2-Dichlorobenzene	Ave	1.144	1.216		2.13	2.00	6.3	30.0
Indane	Ave	1.423	1.552		2.18	2.00	9.0	30.0
Indene	Ave	1.168	1.160		1.99	2.00	-0.7	30.0
Butylbenzene	Ave	1.784	2.051		2.30	2.00	14.9	30.0
Undecane	Ave	0.7598	0.8769		2.31	2.00	15.4	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5107		1.83	2.00	-8.3	30.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.233		2.16	2.00	8.0	30.0
Dodecane	Ave	0.7957	0.9512		2.39	2.00	19.6	30.0
1,2,4-Trichlorobenzene	Ave	1.235	1.394		2.26	2.00	12.8	30.0
Naphthalene	Ave	2.498	2.701		2.16	2.00	8.1	30.0
Hexachlorobutadiene	Ave	1.436	1.583		2.20	2.00	10.2	30.0
1,2,3-Trichlorobenzene	Ave	1.187	1.334		2.25	2.00	12.4	30.0
2-Methylnaphthalene	Ave	0.7935	0.8881		2.24	2.00	11.9	50.0
1-Methylnaphthalene	Ave	0.6999	0.8058		2.30	2.00	15.1	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8734		4.11	4.00	2.7	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RCCVK19.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 19-Nov-2018 10:01:30 ALS Bottle#: 15 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010037-002
 Misc. Info.: S79
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub19
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 09:59:26 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: sodsaip

Date: 20-Nov-2018 09:59:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.385	0.000	69	255068	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.482	0.000	95	1449950	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.551	0.000	90	1303291	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.277	0.000	87	1138300	4.00	4.11	
6 Chlorodifluoromethane	51	3.400	3.400	0.000	95	311507	2.00	2.06	
7 Propene	41	3.405	3.405	0.000	90	87380	2.00	1.88	
8 Dichlorodifluoromethane	85	3.448	3.448	0.000	100	606482	2.00	2.19	
9 Chloromethane	52	3.572	3.572	0.000	98	36400	2.00	1.86	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.599	3.599	0.000	88	449163	2.00	2.17	
11 Acetaldehyde	44	3.691	3.691	0.000	93	167467	10.0	9.18	
12 Vinyl chloride	62	3.696	3.696	0.000	100	135567	2.00	1.98	
13 Butadiene	54	3.766	3.766	0.000	93	86589	2.00	2.09	
14 Butane	43	3.772	3.772	0.000	90	153610	2.00	2.13	
15 Bromomethane	94	3.982	3.982	0.000	96	163837	2.00	2.08	
16 Chloroethane	64	4.085	4.085	0.000	95	64696	2.00	2.04	
17 Ethanol	31	4.192	4.192	0.000	92	158125	10.0	8.27	
18 Vinyl bromide	106	4.300	4.300	0.000	96	185968	2.00	2.24	
19 2-Methylbutane	43	4.360	4.360	0.000	78	109824	2.00	2.15	
20 Acrolein	56	4.494	4.494	0.000	97	42608	2.00	2.64	
21 Trichlorofluoromethane	101	4.505	4.505	0.000	100	829755	2.00	2.20	
22 Acetonitrile	40	4.532	4.532	0.000	97	31929	2.00	1.94	
23 Acetone	58	4.581	4.581	0.000	100	51829	2.00	1.96	
24 Pentane	72	4.678	4.678	0.000	91	27484	2.00	2.14	
25 Isopropyl alcohol	45	4.683	4.683	0.000	96	190081	2.00	2.63	
26 Ethyl ether	31	4.796	4.796	0.000	70	86953	2.00	2.05	
27 1,1-Dichloroethene	96	5.017	5.017	0.000	96	181449	2.00	2.02	
28 Acrylonitrile	53	5.071	5.071	0.000	89	88223	2.00	2.20	
29 2-Methyl-2-propanol	59	5.131	5.131	0.000	91	359554	2.00	2.11	
30 1,1,2-Trichloro-1,2,2-trif	101	5.185	5.185	0.000	91	475662	2.00	2.14	
31 Methylene Chloride	84	5.276	5.276	0.000	89	157032	2.00	1.84	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.292	5.292	0.000	85	173432	2.00	2.08	
33 Carbon disulfide	76	5.395	5.395	0.000	98	435973	2.00	2.05	
34 trans-1,2-Dichloroethene	96	5.934	5.934	0.000	97	186260	2.00	2.03	
35 2-Methylpentane	43	5.993	5.993	0.000	84	232004	2.00	1.92	
36 Methyl tert-butyl ether	73	6.064	6.064	0.000	93	622915	2.00	2.14	
37 1,1-Dichloroethane	63	6.268	6.268	0.000	98	313353	2.00	2.05	
38 Vinyl acetate	43	6.376	6.376	0.000	98	333221	2.00	2.25	
39 2-Butanone (MEK)	72	6.732	6.732	0.000	98	71045	2.00	2.05	
40 Hexane	56	6.829	6.829	0.000	81	111535	2.00	2.09	
171 Isopropyl ether	45	6.964	6.964	0.000	85	397476	2.00	2.17	
41 cis-1,2-Dichloroethene	96	7.115	7.115	0.000	95	191281	2.00	2.07	
42 Ethyl acetate	43	7.298	7.298	0.000	98	265393	2.00	2.07	
43 Chloroform	83	7.422	7.422	0.000	97	516011	2.00	2.12	
173 Tert-butyl ethyl ether	59	7.557	7.557	0.000	92	539618	2.00	2.04	
44 Tetrahydrofuran	42	7.762	7.762	0.000	76	121074	2.00	2.14	
45 1,1,1-Trichloroethane	97	8.350	8.350	0.000	94	672247	2.00	2.18	
46 1,2-Dichloroethane	62	8.409	8.409	0.000	97	396255	2.00	2.16	
47 Benzene	78	8.905	8.905	0.000	98	485663	2.00	2.06	
48 Cyclohexane	69	8.932	8.932	0.000	89	75932	2.00	2.16	
49 n-Butanol	31	8.943	8.943	0.000	61	36787	2.00	2.20	
50 Carbon tetrachloride	117	8.948	8.948	0.000	98	780107	2.00	2.35	
51 2,3-Dimethylpentane	71	9.110	9.110	0.000	83	103097	2.00	2.11	
52 Thiophene	84	9.164	9.164	0.000	94	278581	2.00	2.06	
53 Isooctane	57	9.784	9.784	0.000	94	645068	2.00	2.13	
54 1,2-Dichloropropane	63	10.162	10.162	0.000	73	153748	2.00	2.07	
55 n-Heptane	71	10.210	10.210	0.000	82	162694	2.00	2.15	
56 Trichloroethene	130	10.237	10.237	0.000	93	303300	2.00	2.13	
57 Dibromomethane	93	10.270	10.270	0.000	92	278416	2.00	2.19	
58 Dichlorobromomethane	83	10.453	10.453	0.000	98	528297	2.00	2.21	
59 1,4-Dioxane	88	10.474	10.474	0.000	87	73315	2.00	2.03	
60 Methyl methacrylate	41	10.625	10.625	0.000	90	182395	2.00	2.21	
61 Methylcyclohexane	83	11.100	11.100	0.000	92	373381	2.00	2.56	
62 4-Methyl-2-pentanone (MIBK)	43	11.531	11.531	0.000	91	289300	2.00	2.20	
63 cis-1,3-Dichloropropene	75	11.564	11.564	0.000	96	329705	2.00	2.30	
64 trans-1,3-Dichloropropene	75	12.324	12.324	0.000	97	351274	2.00	2.31	
65 Toluene	91	12.464	12.464	0.000	93	668398	2.00	2.14	
66 1,1,2-Trichloroethane	83	12.518	12.518	0.000	93	179021	2.00	2.16	
67 2-Methylthiophene	97	12.610	12.610	0.000	97	554058	NC	NC	
68 3-Methylthiophene	97	12.831	12.831	0.000	99	537311	NC	NC	
69 2-Hexanone	58	12.987	12.987	0.000	94	141724	2.00	2.17	
70 Chlorodibromomethane	129	13.252	13.252	0.000	97	573594	2.00	2.37	
71 n-Octane	85	13.322	13.322	0.000	75	217808	2.00	2.19	
72 Ethylene Dibromide	107	13.548	13.548	0.000	96	407935	2.00	2.25	
73 Tetrachloroethene	129	13.688	13.688	0.000	93	333419	2.00	2.15	
74 Chlorobenzene	112	14.600	14.600	0.000	92	591931	2.00	2.17	
75 2,3-Dimethylheptane	43	14.745	14.745	0.000	77	360933	2.00	1.97	
76 Ethylbenzene	91	14.939	14.939	0.000	100	990248	2.00	2.20	
77 2-Ethylthiophene	97	15.036	15.036	0.000	98	788067	NC	NC	
78 m-Xylene & p-Xylene	91	15.117	15.117	0.000	100	1661689	4.00	4.50	
79 Bromoform	173	15.506	15.506	0.000	96	560005	2.00	2.21	
80 Styrene	104	15.586	15.586	0.000	97	568657	2.00	2.35	
82 o-Xylene	91	15.651	15.651	0.000	97	851142	2.00	2.19	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.657	15.657	0.000	79	324377	2.00	2.21	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.975	0.000	93	450485	2.00	2.29	
84 1,2,3-Trichloropropane	110	16.131	16.131	0.000	93	214818	2.00	2.20	
85 Isopropylbenzene	105	16.282	16.282	0.000	96	1216736	2.00	2.20	
86 N-Propylbenzene	120	16.854	16.854	0.000	97	351243	2.00	2.32	
87 2-Chlorotoluene	126	16.864	16.864	0.000	93	313186	2.00	2.23	
88 4-Ethyltoluene	105	17.026	17.026	0.000	98	1262003	2.00	2.20	
89 1,3,5-Trimethylbenzene	120	17.113	17.113	0.000	91	592392	2.00	2.53	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	514552	2.00	2.31	
91 n-Decane	57	17.533	17.533	0.000	96	471980	2.00	2.26	
92 tert-Butylbenzene	119	17.587	17.587	0.000	89	1278921	2.00	2.24	
93 1,2,4-Trimethylbenzene	105	17.603	17.603	0.000	97	1204721	2.00	2.30	
94 1,3-Dichlorobenzene	146	17.873	17.873	0.000	98	828486	2.00	2.19	
95 sec-Butylbenzene	105	17.900	17.900	0.000	97	1597305	2.00	2.26	
96 Benzyl chloride	91	17.959	17.959	0.000	97	970884	2.00	2.40	
97 1,4-Dichlorobenzene	146	17.975	17.975	0.000	94	824486	2.00	2.17	
98 4-Isopropyltoluene	119	18.094	18.094	0.000	95	1589177	2.00	2.23	
99 1,2,3-Trimethylbenzene	105	18.126	18.126	0.000	98	970381	2.00	1.73	
100 Butylcyclohexane	83	18.234	18.234	0.000	92	650538	2.00	2.10	
101 1,2-Dichlorobenzene	146	18.369	18.369	0.000	93	792406	2.00	2.13	
102 2,3-Dihydroindene	117	18.380	18.380	0.000	92	1011114	2.00	2.18	
103 Indene	116	18.520	18.520	0.000	90	756077	2.00	1.99	
104 n-Butylbenzene	91	18.579	18.579	0.000	97	1336483	2.00	2.30	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	96	1138562	NC	NC	
105 Undecane	57	19.000	19.000	0.000	87	571398	2.00	2.31	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.027	0.000	96	332819	2.00	1.83	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.404	0.000	95	1455145	2.00	2.16	
109 1,2,3,5-Tetramethylbenzene	119	19.464	19.464	0.000	94	880992	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	95	1222700	NC	NC	
110 Dodecane	57	20.127	20.127	0.000	89	619853	2.00	2.39	
111 1,2,4-Trichlorobenzene	180	20.202	20.202	0.000	94	908192	2.00	2.26	
113 Naphthalene	128	20.326	20.326	0.000	98	1759862	2.00	2.16	
114 Benzo(b)thiophene	134	20.423	20.423	0.000	99	1000728	NC	NC	
115 Hexachlorobutadiene	225	20.591	20.591	0.000	95	1031264	2.00	2.20	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	94	869462	2.00	2.25	
117 2-Methylnaphthalene	142	21.453	21.453	0.000	98	578766	2.00	2.24	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	525116	2.00	2.30	
A 120 C8 Range	1	13.338	(13.273-13.392)		0	1727880	2.00	2.23	
S 121 Xylenes, Total	100				0		6.00	6.69	
S 122 1,2-Dichloroethene, Total	1				0		4.00	4.11	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00079

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RCCVK19.D

Injection Date: 19-Nov-2018 10:01:30

Instrument ID: MR

Operator ID:

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

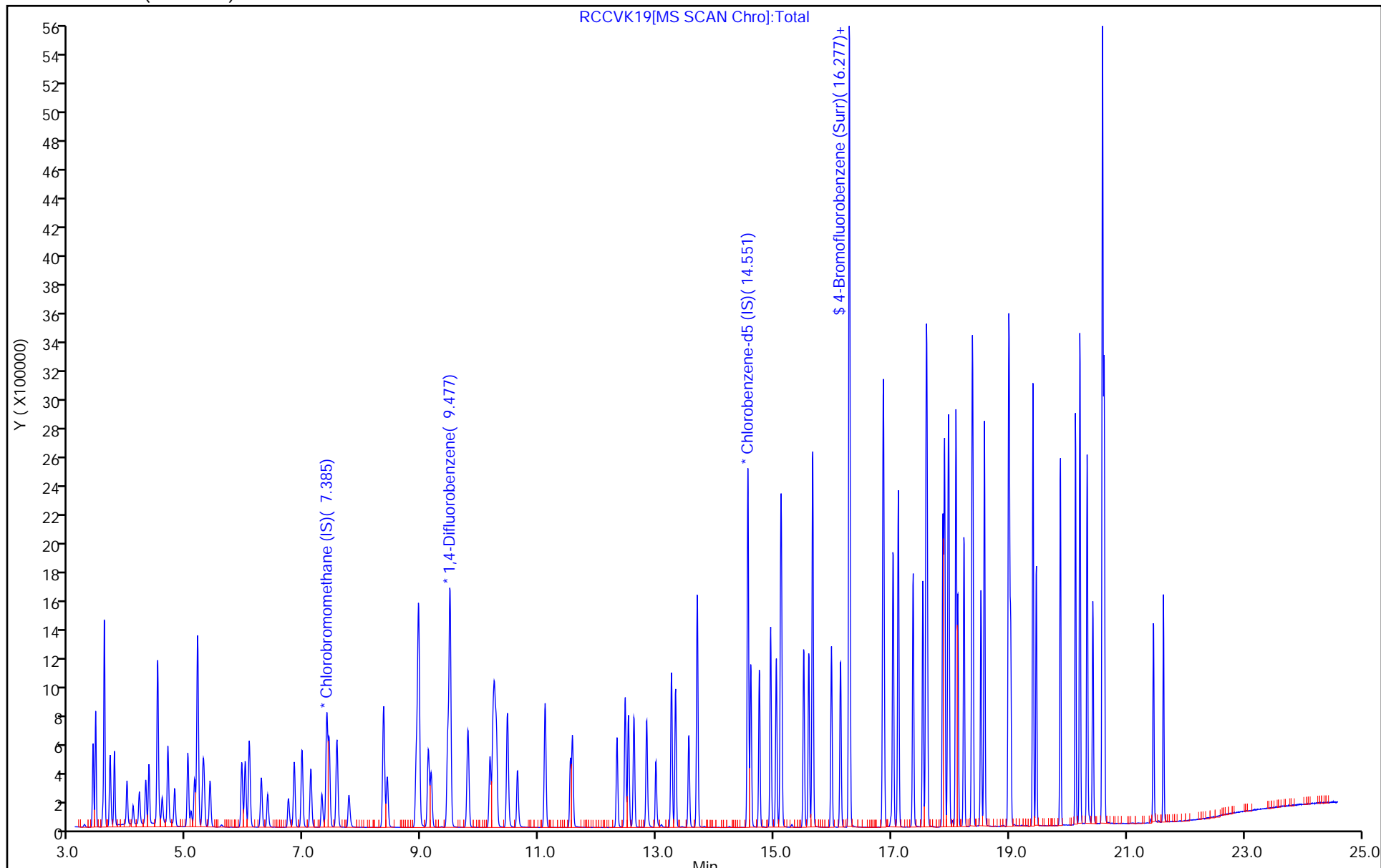
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RBFBK16I.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 16-Nov-2018 16:00:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-001
 Misc. Info.: BFB
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:29 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh Date: 16-Nov-2018 16:19:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.637	5.637	0.000	0	1507667	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

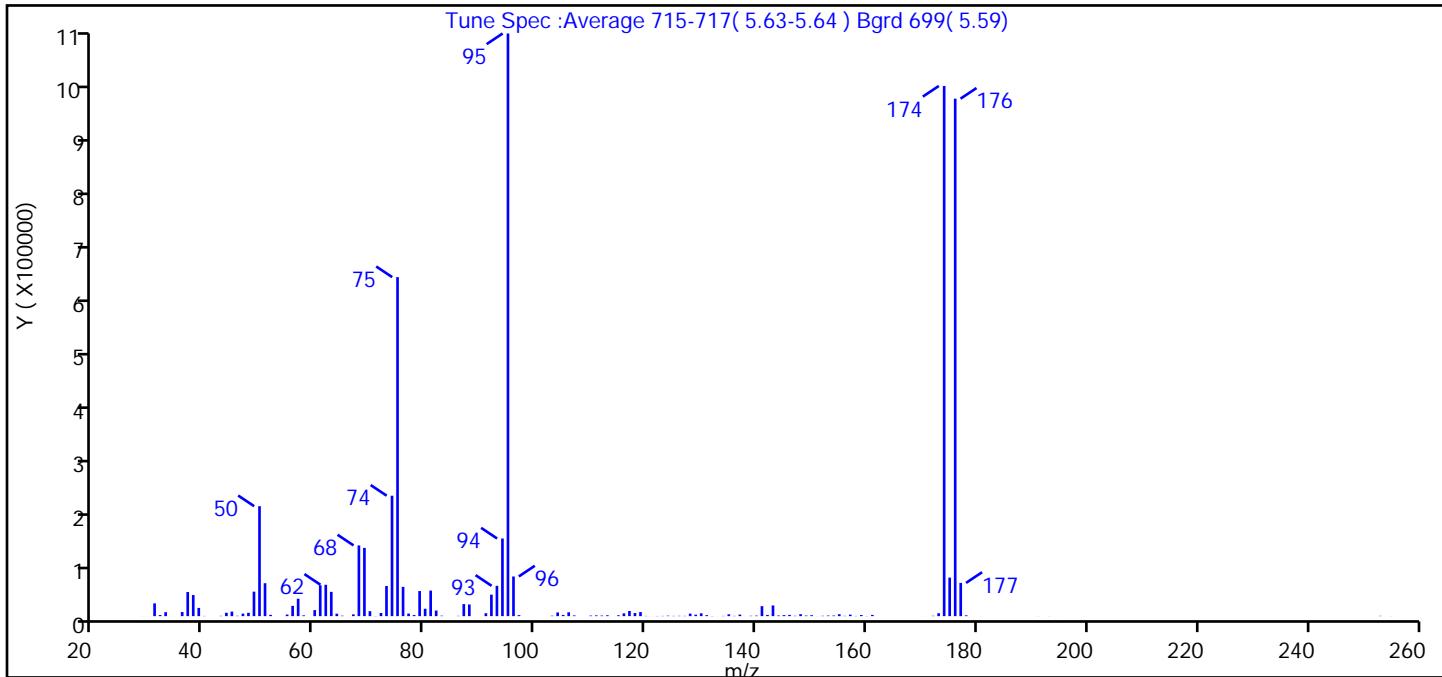
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\BFBK16I.D
 Injection Date: 16-Nov-2018 16:00:30 Instrument ID: MR
 Lims ID: BFB
 Client ID:
 Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.9
75	30 to 60% of m/z 95	58.2
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	91.0
175	5 to 9% of m/z 174	6.6 (7.3)
176	Greater than 95% but less than 101% of m/z 174	88.8 (97.6)
177	5 to 9% of m/z 176	5.7 (6.4)

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RBFBK161.DMR_TO15.rslt\spectra.d
Injection Date: 16-Nov-2018 16:00:30
Spectrum: Tune Spec :Average 715-717(5.63-5.64) Bgrd 699(5.59)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 129

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	82	67.00	3051	111.00	1314	145.00	1799
30.00	42	68.00	121608	112.00	1000	146.00	2167
31.00	21976	69.00	117344	113.00	1472	147.00	587
32.00	1872	70.00	8559	115.00	1498	148.00	3341
33.00	6807	71.00	242	116.00	4788	149.00	1013
34.00	47	72.00	5436	117.00	8901	150.00	1582
36.00	7075	73.00	51896	118.00	5361	151.00	97
37.00	41472	74.00	207104	119.00	6961	152.00	589
38.00	36296	75.00	582976	120.00	382	153.00	1032
39.00	14146	76.00	50352	121.00	80	154.00	1046
40.00	352	77.00	4415	122.00	293	155.00	3329
41.00	12	78.00	1882	123.00	395	156.00	504
43.00	505	79.00	43192	124.00	805	157.00	2542
44.00	5765	80.00	12674	125.00	442	158.00	344
45.00	7821	81.00	43936	126.00	550	159.00	1896
46.00	624	82.00	9626	127.00	471	160.00	211
47.00	4314	83.00	791	128.00	4329	161.00	2127
48.00	5729	86.00	523	129.00	2485	170.00	42
49.00	42160	87.00	20704	130.00	4919	172.00	609
50.00	189056	88.00	20064	131.00	1754	173.00	5015
51.00	56648	91.00	5000	132.00	262	174.00	911744
52.00	2215	92.00	36920	133.00	57	175.00	66280
53.00	37	93.00	52152	134.00	435	176.00	889856
55.00	2753	94.00	133504	135.00	3202	177.00	57168
56.00	17664	95.00	1001984	136.00	443	178.00	1378
57.00	29976	96.00	68240	137.00	2704	191.00	97
58.00	1338	97.00	1768	138.00	52	193.00	111
60.00	10347	103.00	745	139.00	624	195.00	40
61.00	53120	104.00	6342	140.00	916	253.00	525
62.00	53968	105.00	2057	141.00	17160	255.00	125
63.00	41768	106.00	6637	142.00	2048		
64.00	4211	107.00	1249	143.00	18376		
65.00	772	110.00	963	144.00	1092		

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	82	67.00	3051	111.00	1314	145.00	1799
30.00	42	68.00	121608	112.00	1000	146.00	2167
31.00	21976	69.00	117344	113.00	1472	147.00	587
32.00	1872	70.00	8559	115.00	1498	148.00	3341
33.00	6807	71.00	242	116.00	4788	149.00	1013
34.00	47	72.00	5436	117.00	8901	150.00	1582
36.00	7075	73.00	51896	118.00	5361	151.00	97
37.00	41472	74.00	207104	119.00	6961	152.00	589
38.00	36296	75.00	582976	120.00	382	153.00	1032
39.00	14146	76.00	50352	121.00	80	154.00	1046
40.00	352	77.00	4415	122.00	293	155.00	3329
41.00	12	78.00	1882	123.00	395	156.00	504
43.00	505	79.00	43192	124.00	805	157.00	2542
44.00	5765	80.00	12674	125.00	442	158.00	344
45.00	7821	81.00	43936	126.00	550	159.00	1896
46.00	624	82.00	9626	127.00	471	160.00	211
47.00	4314	83.00	791	128.00	4329	161.00	2127
48.00	5729	86.00	523	129.00	2485	170.00	42
49.00	42160	87.00	20704	130.00	4919	172.00	609
50.00	189056	88.00	20064	131.00	1754	173.00	5015
51.00	56648	91.00	5000	132.00	262	174.00	911744
52.00	2215	92.00	36920	133.00	57	175.00	66280
53.00	37	93.00	52152	134.00	435	176.00	889856
55.00	2753	94.00	133504	135.00	3202	177.00	57168
56.00	17664	95.00	1001984	136.00	443	178.00	1378
57.00	29976	96.00	68240	137.00	2704	191.00	97
58.00	1338	97.00	1768	138.00	52	193.00	111
60.00	10347	103.00	745	139.00	624	195.00	40
61.00	53120	104.00	6342	140.00	916	253.00	525
62.00	53968	105.00	2057	141.00	17160	255.00	125
63.00	41768	106.00	6637	142.00	2048		
64.00	4211	107.00	1249	143.00	18376		
65.00	772	110.00	963	144.00	1092		

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RBFBK16I.D

Injection Date: 16-Nov-2018 16:00:30

Instrument ID: MR

Operator ID:

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

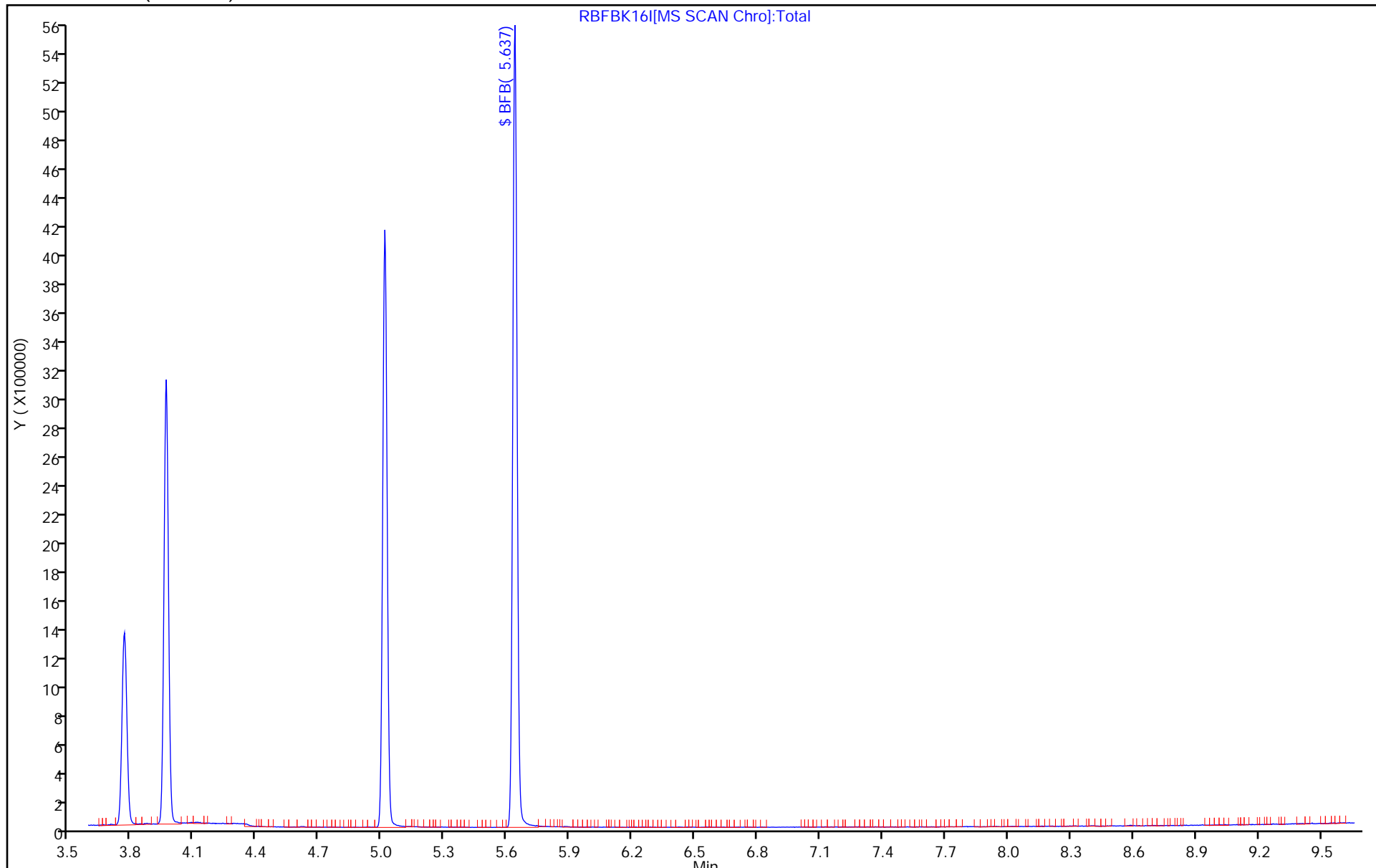
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RBFBK19.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 19-Nov-2018 09:29:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010037-001
 Misc. Info.: BFB
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 09:58:09 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: sodsaip Date: 20-Nov-2018 09:58:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.631	5.631	0.000	0	1386618	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

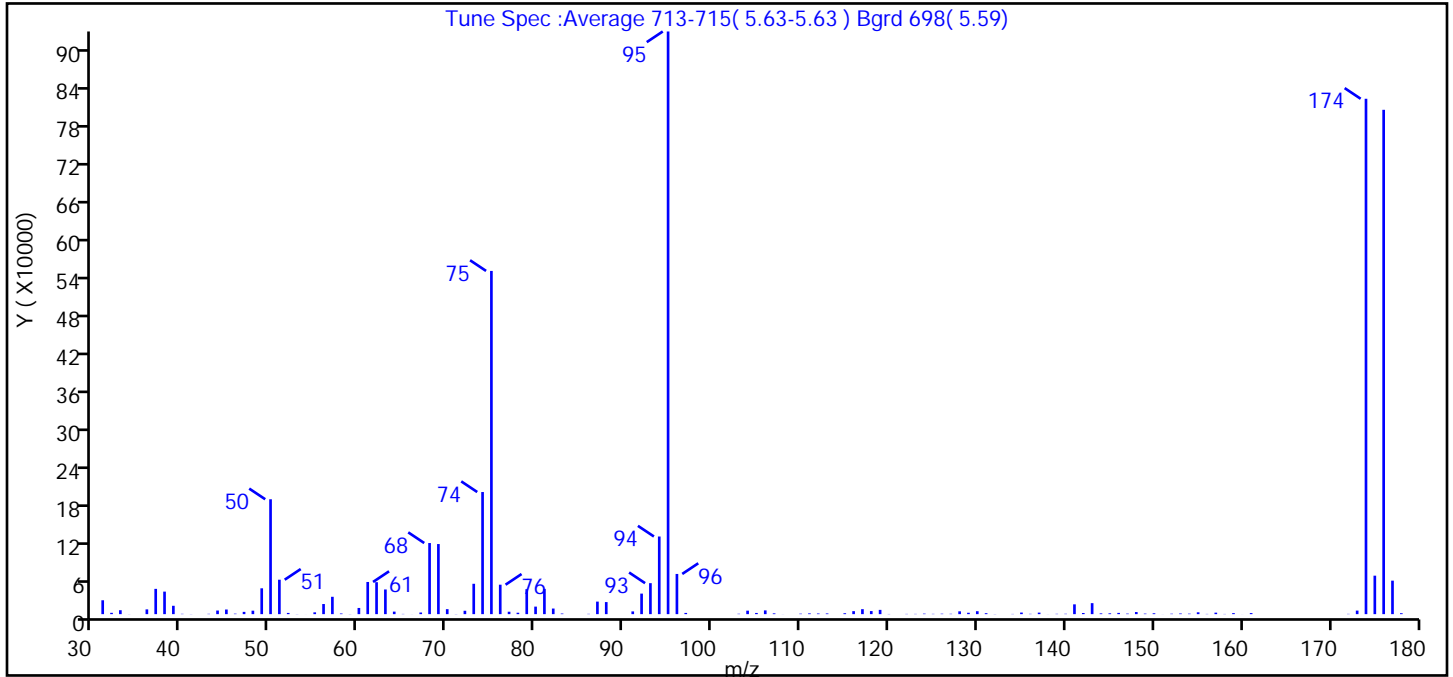
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RBFBK19.D
 Injection Date: 19-Nov-2018 09:29:30 Instrument ID: MR
 Lims ID: BFB
 Client ID:
 Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.7
75	30 to 60% of m/z 95	58.9
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.6 (0.7)
174	50 to 120% of m/z 95	88.5
175	5 to 9% of m/z 174	6.6 (7.5)
176	Greater than 95% but less than 101% of m/z 174	86.6 (97.9)
177	5 to 9% of m/z 176	5.7 (6.6)

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RBFBK19.D\MR_TO15.rsl\spectra.d
 Injection Date: 19-Nov-2018 09:29:30
 Spectrum: Tune Spec :Average 713-715(5.63-5.63) Bgrd 698(5.59)
 Base Peak: 95.00
 Minimum % Base Peak: 0
 Number of Points: 123

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	22128	64.00	4032	104.00	5541	139.00	499
32.00	2114	65.00	366	105.00	1897	140.00	580
33.00	6270	66.00	73	106.00	5969	141.00	15636
34.00	128	67.00	2602	107.00	1248	142.00	1812
36.00	7608	68.00	113408	108.00	97	143.00	17528
37.00	40312	69.00	111792	110.00	755	144.00	1224
38.00	35936	70.00	7948	111.00	1209	145.00	1317
39.00	13332	71.00	223	112.00	1029	146.00	1986
40.00	497	72.00	5400	113.00	1121	147.00	849
41.00	173	73.00	48432	115.00	1455	148.00	3355
43.00	496	74.00	194752	116.00	4783	149.00	837
44.00	5754	75.00	547392	117.00	7945	150.00	1396
45.00	7395	76.00	46968	118.00	4907	151.00	76
46.00	757	77.00	3852	119.00	6812	152.00	686
47.00	3629	78.00	2252	120.00	278	153.00	1045
48.00	5540	79.00	39864	122.00	375	154.00	764
49.00	41208	80.00	12009	123.00	397	155.00	2949
50.00	183232	81.00	40352	124.00	804	156.00	360
51.00	54920	82.00	8933	125.00	450	157.00	2362
52.00	1927	83.00	976	126.00	700	158.00	318
53.00	183	86.00	466	127.00	556	159.00	1624
54.00	46	87.00	19992	128.00	4501	160.00	58
55.00	2865	88.00	19256	129.00	2199	161.00	1702
56.00	16132	91.00	4369	130.00	4687	172.00	420
57.00	27672	92.00	32760	131.00	1510	173.00	5661
58.00	1030	93.00	49416	132.00	217	174.00	821952
59.00	181	94.00	123824	134.00	338	175.00	61352
60.00	9861	95.00	929280	135.00	2547	176.00	804352
61.00	51312	96.00	64112	136.00	486	177.00	53416
62.00	50984	97.00	1952	137.00	2434	178.00	1475
63.00	39368	103.00	587	138.00	81		

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RBFBK19.D

Injection Date: 19-Nov-2018 09:29:30

Instrument ID: MR

Operator ID:

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

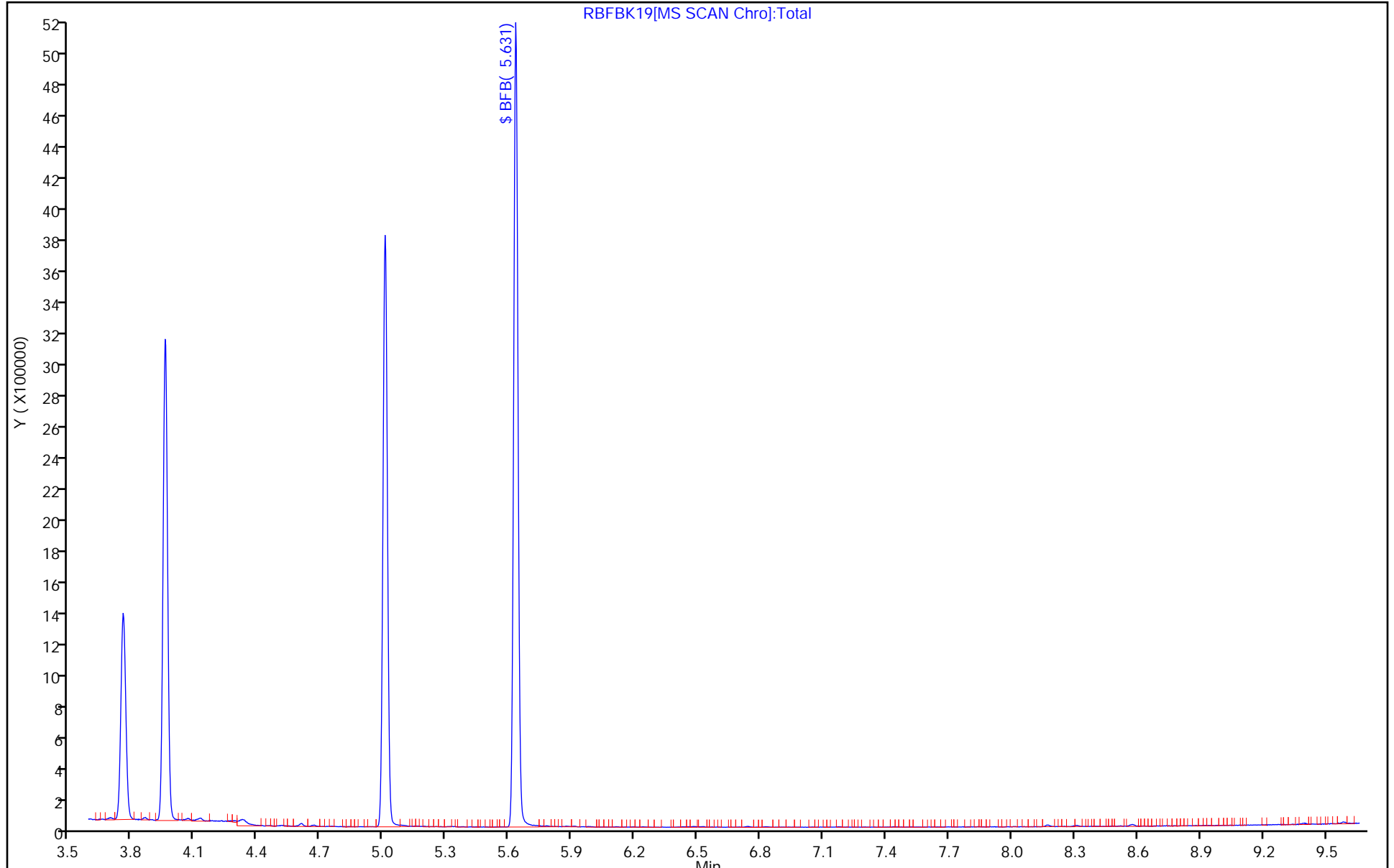
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-25527/9
 Matrix: Air Lab File ID: R500BK19.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 11/19/2018 16:12
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25527 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-25527/9
 Matrix: Air Lab File ID: R500BK19.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 11/19/2018 16:12
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25527 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\R500BK19.D
 Lims ID: mb
 Client ID:
 Sample Type: MB
 Inject. Date: 19-Nov-2018 16:12:30 ALS Bottle#: 16 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010037-009
 Misc. Info.: 500ML BLK
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 10:05:09 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: sodsaip Date: 20-Nov-2018 10:05:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.385	0.000	69	263863	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.482	0.000	95	1481834	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.551	0.000	90	1296573	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.277	0.000	89	1096245	4.00	3.98	
109 1,2,3,5-Tetramethylbenzene	119	19.420	19.464	-0.044	1	67		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\R500BK19.D

Injection Date: 19-Nov-2018 16:12:30

Instrument ID: MR

Operator ID:

Lims ID: mb

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

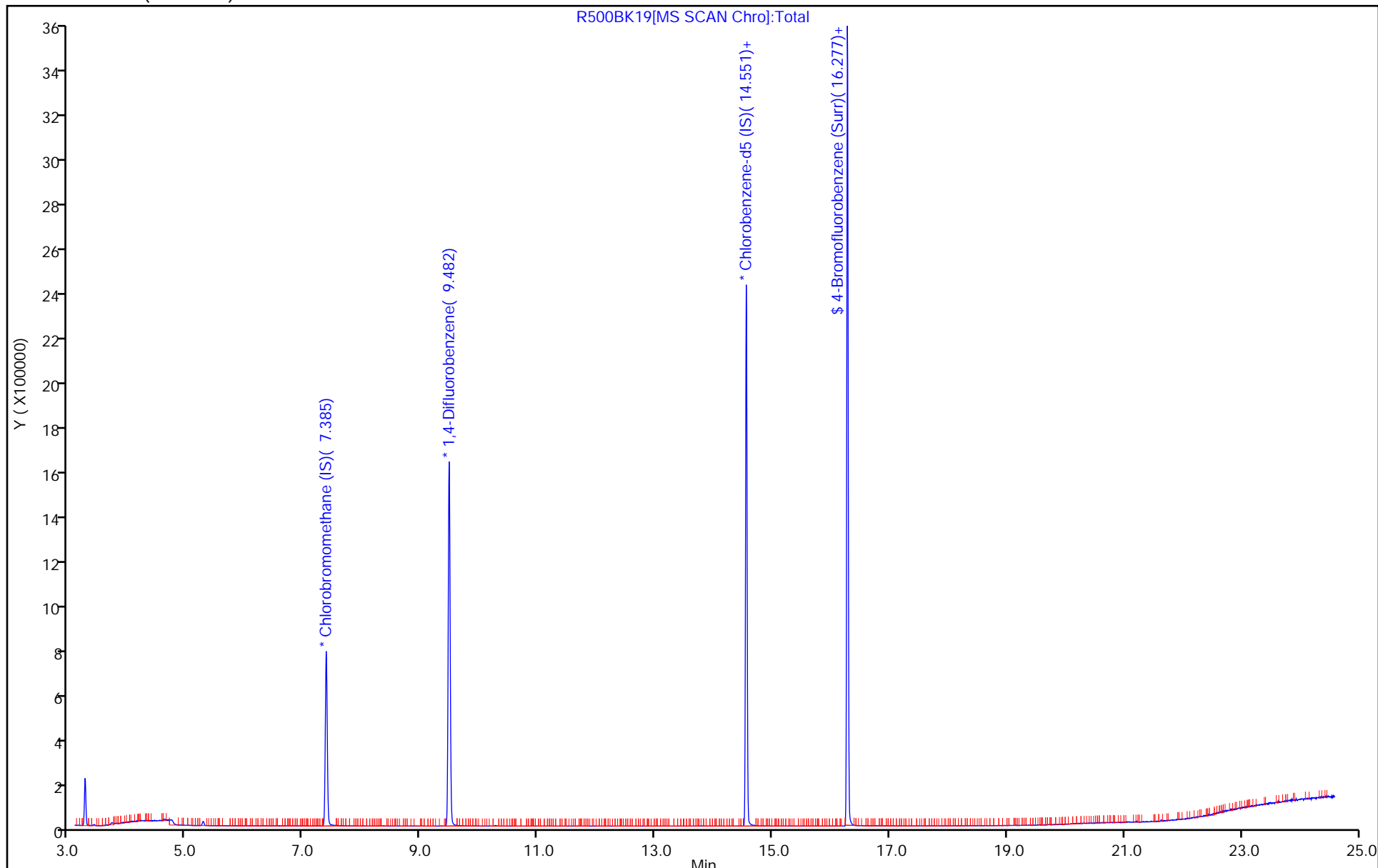
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\R500BK19.D
 Lims ID: mb
 Client ID:
 Sample Type: MB
 Inject. Date: 19-Nov-2018 16:12:30 ALS Bottle#: 16 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010037-009
 Misc. Info.: 500ML BLK
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 10:05:09 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: sodsaip Date: 20-Nov-2018 10:05:09

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.98	99.40

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-25527/1002
 Matrix: Air Lab File ID: RCCVK19-Client.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 11/19/2018 10:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25527 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.06		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.35		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.06		0.080	0.015
67-66-3	Chloroform	119.38	2.12		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.07		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.19		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.05		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.16		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.02		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.20		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.84		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.14		0.40	0.068
91-20-3	Naphthalene	128.17	2.16		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.15		0.080	0.016
108-88-3	Toluene	92.14	2.14		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.03		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.26		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.18		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.16		0.080	0.021
79-01-6	Trichloroethene	131.39	2.13		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.73		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.30		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.53		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.98		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.69		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RCCVK19-Client.d
 Lims ID: Client
 Client ID:
 Sample Type: Client
 Inject. Date: 19-Nov-2018 10:01:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010037-002
 Misc. Info.: S79
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 09:59:26 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: sodsaip

Date: 20-Nov-2018 09:59:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.385	0.000	69	255068	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.482	0.000	95	1449950	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.551	0.000	90	1303291	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.277	0.000	87	1138300	4.11	
6 Chlorodifluoromethane	51	3.400	3.400	0.000	95	311507	2.06	
7 Propene	41	3.405	3.405	0.000	90	87380	1.88	
8 Dichlorodifluoromethane	85	3.448	3.448	0.000	100	606482	2.19	
9 Chloromethane	52	3.572	3.572	0.000	98	36400	1.86	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.599	3.599	0.000	88	449163	2.17	
11 Acetaldehyde	44	3.691	3.691	0.000	93	167467	9.18	
12 Vinyl chloride	62	3.696	3.696	0.000	100	135567	1.98	
13 Butadiene	54	3.766	3.766	0.000	93	86589	2.09	
14 Butane	43	3.772	3.772	0.000	90	153610	2.13	
15 Bromomethane	94	3.982	3.982	0.000	96	163837	2.08	
16 Chloroethane	64	4.085	4.085	0.000	95	64696	2.04	
17 Ethanol	31	4.192	4.192	0.000	92	158125	8.27	
18 Vinyl bromide	106	4.300	4.300	0.000	96	185968	2.24	
19 2-Methylbutane	43	4.360	4.360	0.000	78	109824	2.15	
20 Acrolein	56	4.494	4.494	0.000	97	42608	2.64	
21 Trichlorofluoromethane	101	4.505	4.505	0.000	100	829755	2.20	
22 Acetonitrile	40	4.532	4.532	0.000	97	31929	1.94	
23 Acetone	58	4.581	4.581	0.000	100	51829	1.96	
24 Pentane	72	4.678	4.678	0.000	91	27484	2.14	
25 Isopropyl alcohol	45	4.683	4.683	0.000	96	190081	2.63	
26 Ethyl ether	31	4.796	4.796	0.000	70	86953	2.05	
27 1,1-Dichloroethene	96	5.017	5.017	0.000	96	181449	2.02	
28 Acrylonitrile	53	5.071	5.071	0.000	89	88223	2.20	
29 2-Methyl-2-propanol	59	5.131	5.131	0.000	91	359554	2.11	
30 1,1,2-Trichloro-1,2,2-trif	101	5.185	5.185	0.000	91	475662	2.14	
31 Methylene Chloride	84	5.276	5.276	0.000	89	157032	1.84	
32 3-Chloro-1-propene	39	5.292	5.292	0.000	85	173432	2.08	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.395	5.395	0.000	98	435973	2.05	
34 trans-1,2-Dichloroethene	96	5.934	5.934	0.000	97	186260	2.03	
35 2-Methylpentane	43	5.993	5.993	0.000	84	232004	1.92	
36 Methyl tert-butyl ether	73	6.064	6.064	0.000	93	622915	2.14	
37 1,1-Dichloroethane	63	6.268	6.268	0.000	98	313353	2.05	
38 Vinyl acetate	43	6.376	6.376	0.000	98	333221	2.25	
39 2-Butanone (MEK)	72	6.732	6.732	0.000	98	71045	2.05	
40 Hexane	56	6.829	6.829	0.000	81	111535	2.09	
171 Isopropyl ether	45	6.964	6.964	0.000	85	397476	2.17	
41 cis-1,2-Dichloroethene	96	7.115	7.115	0.000	95	191281	2.07	
42 Ethyl acetate	43	7.298	7.298	0.000	98	265393	2.07	
43 Chloroform	83	7.422	7.422	0.000	97	516011	2.12	
173 Tert-butyl ethyl ether	59	7.557	7.557	0.000	92	539618	2.04	
44 Tetrahydrofuran	42	7.762	7.762	0.000	76	121074	2.14	
45 1,1,1-Trichloroethane	97	8.350	8.350	0.000	94	672247	2.18	
46 1,2-Dichloroethane	62	8.409	8.409	0.000	97	396255	2.16	
47 Benzene	78	8.905	8.905	0.000	98	485663	2.06	
48 Cyclohexane	69	8.932	8.932	0.000	89	75932	2.16	
49 n-Butanol	31	8.943	8.943	0.000	61	36787	2.20	
50 Carbon tetrachloride	117	8.948	8.948	0.000	98	780107	2.35	
51 2,3-Dimethylpentane	71	9.110	9.110	0.000	83	103097	2.11	
52 Thiophene	84	9.164	9.164	0.000	94	278581	2.06	
53 Isooctane	57	9.784	9.784	0.000	94	645068	2.13	
54 1,2-Dichloropropane	63	10.162	10.162	0.000	73	153748	2.07	
55 n-Heptane	71	10.210	10.210	0.000	82	162694	2.15	
56 Trichloroethene	130	10.237	10.237	0.000	93	303300	2.13	
57 Dibromomethane	93	10.270	10.270	0.000	92	278416	2.19	
58 Dichlorobromomethane	83	10.453	10.453	0.000	98	528297	2.21	
59 1,4-Dioxane	88	10.474	10.474	0.000	87	73315	2.03	
60 Methyl methacrylate	41	10.625	10.625	0.000	90	182395	2.21	
61 Methylcyclohexane	83	11.100	11.100	0.000	92	373381	2.56	
62 4-Methyl-2-pentanone (MIBK)	43	11.531	11.531	0.000	91	289300	2.20	
63 cis-1,3-Dichloropropene	75	11.564	11.564	0.000	96	329705	2.30	
64 trans-1,3-Dichloropropene	75	12.324	12.324	0.000	97	351274	2.31	
65 Toluene	91	12.464	12.464	0.000	93	668398	2.14	
66 1,1,2-Trichloroethane	83	12.518	12.518	0.000	93	179021	2.16	
67 2-Methylthiophene	97	12.610	12.610	0.000	97	554058	NC	
68 3-Methylthiophene	97	12.831	12.831	0.000	99	537311	NC	
69 2-Hexanone	58	12.987	12.987	0.000	94	141724	2.17	
70 Chlorodibromomethane	129	13.252	13.252	0.000	97	573594	2.37	
71 n-Octane	85	13.322	13.322	0.000	75	217808	2.19	
72 Ethylene Dibromide	107	13.548	13.548	0.000	96	407935	2.25	
73 Tetrachloroethene	129	13.688	13.688	0.000	93	333419	2.15	
74 Chlorobenzene	112	14.600	14.600	0.000	92	591931	2.17	
75 2,3-Dimethylheptane	43	14.745	14.745	0.000	77	360933	1.97	
76 Ethylbenzene	91	14.939	14.939	0.000	100	990248	2.20	
77 2-Ethylthiophene	97	15.036	15.036	0.000	98	788067	NC	
78 m-Xylene & p-Xylene	91	15.117	15.117	0.000	100	1661689	4.50	
79 Bromoform	173	15.506	15.506	0.000	96	560005	2.21	
80 Styrene	104	15.586	15.586	0.000	97	568657	2.35	
82 o-Xylene	91	15.651	15.651	0.000	97	851142	2.19	
81 n-Nonane	57	15.657	15.657	0.000	79	324377	2.21	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
83 1,1,2,2-Tetrachloroethane	83	15.975	15.975	0.000	93	450485	2.29	
84 1,2,3-Trichloropropane	110	16.131	16.131	0.000	93	214818	2.20	
85 Isopropylbenzene	105	16.282	16.282	0.000	96	1216736	2.20	
86 N-Propylbenzene	120	16.854	16.854	0.000	97	351243	2.32	
87 2-Chlorotoluene	126	16.864	16.864	0.000	93	313186	2.23	
88 4-Ethyltoluene	105	17.026	17.026	0.000	98	1262003	2.20	
89 1,3,5-Trimethylbenzene	120	17.113	17.113	0.000	91	592392	2.53	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	514552	2.31	
91 n-Decane	57	17.533	17.533	0.000	96	471980	2.26	
92 tert-Butylbenzene	119	17.587	17.587	0.000	89	1278921	2.24	
93 1,2,4-Trimethylbenzene	105	17.603	17.603	0.000	97	1204721	2.30	
94 1,3-Dichlorobenzene	146	17.873	17.873	0.000	98	828486	2.19	
95 sec-Butylbenzene	105	17.900	17.900	0.000	97	1597305	2.26	
96 Benzyl chloride	91	17.959	17.959	0.000	97	970884	2.40	
97 1,4-Dichlorobenzene	146	17.975	17.975	0.000	94	824486	2.17	
98 4-Isopropyltoluene	119	18.094	18.094	0.000	95	1589177	2.23	
99 1,2,3-Trimethylbenzene	105	18.126	18.126	0.000	98	970381	1.73	
100 Butylcyclohexane	83	18.234	18.234	0.000	92	650538	2.10	
101 1,2-Dichlorobenzene	146	18.369	18.369	0.000	93	792406	2.13	
102 2,3-Dihydroindene	117	18.380	18.380	0.000	92	1011114	2.18	
103 Indene	116	18.520	18.520	0.000	90	756077	1.99	
104 n-Butylbenzene	91	18.579	18.579	0.000	97	1336483	2.30	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	96	1138562	NC	
105 Undecane	57	19.000	19.000	0.000	87	571398	2.31	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.027	0.000	96	332819	1.83	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.404	0.000	95	1455145	2.16	
109 1,2,3,5-Tetramethylbenzene	119	19.464	19.464	0.000	94	880992	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	95	1222700	NC	
110 Dodecane	57	20.127	20.127	0.000	89	619853	2.39	
111 1,2,4-Trichlorobenzene	180	20.202	20.202	0.000	94	908192	2.26	
113 Naphthalene	128	20.326	20.326	0.000	98	1759862	2.16	
114 Benzo(b)thiophene	134	20.423	20.423	0.000	99	1000728	NC	
115 Hexachlorobutadiene	225	20.591	20.591	0.000	95	1031264	2.20	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	94	869462	2.25	
117 2-Methylnaphthalene	142	21.453	21.453	0.000	98	578766	2.24	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	525116	2.30	
A 120 C8 Range	1	13.338	(13.273-13.392)		0	1727880	2.23	
S 121 Xylenes, Total	100				0		6.69	
S 122 1,2-Dichloroethene, Total	1				0		4.11	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00079

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RCCVK19-Client.d

Injection Date: 19-Nov-2018 10:01:30

Instrument ID: MR

Operator ID:

Lims ID: Client

Lab Sample ID:

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

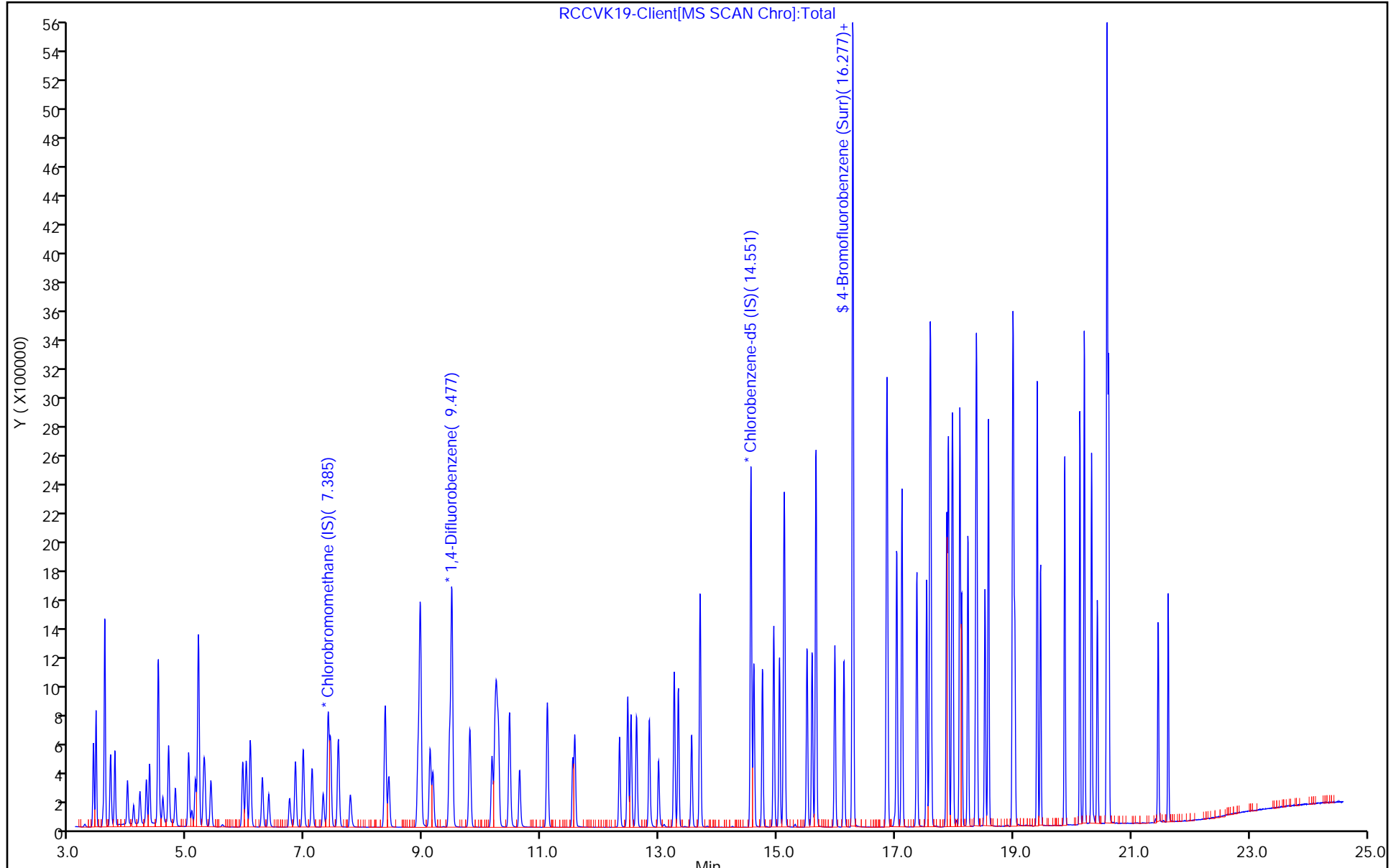
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\RCCVK19-Client.d
 Lims ID: Client
 Client ID:
 Sample Type: Client
 Inject. Date: 19-Nov-2018 10:01:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010037-002
 Misc. Info.: S79
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181119-10037.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 09:59:26 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0304

First Level Reviewer: sodsaip Date: 20-Nov-2018 09:59:26

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.11	102.68

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1

SDG No.: _____

Instrument ID: MR Start Date: 11/16/2018 16:00

Analysis Batch Number: 25490 End Date: 11/17/2018 06:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25490/1		11/16/2018 16:00	1	RBFBK16I.D	RTX-5 0.32 (mm)
IC 140-25490/3		11/16/2018 17:23	1	RK16IC09.D	RTX-5 0.32 (mm)
IC 140-25490/5		11/16/2018 19:07	1	RK16IC10.D	RTX-5 0.32 (mm)
IC 140-25490/8		11/16/2018 21:42	1	RK16IC01.D	RTX-5 0.32 (mm)
IC 140-25490/9		11/16/2018 22:34	1	RK16IC02.D	RTX-5 0.32 (mm)
IC 140-25490/10		11/16/2018 23:27	1	RK16IC03.D	RTX-5 0.32 (mm)
IC 140-25490/11		11/17/2018 00:20	1	RK16IC04.D	RTX-5 0.32 (mm)
IC 140-25490/12		11/17/2018 01:12	1	RK16IC05.D	RTX-5 0.32 (mm)
IC 140-25490/13		11/17/2018 02:05	1	RK16IC06.D	RTX-5 0.32 (mm)
ICIS 140-25490/14		11/17/2018 02:58	1	RK16IC07.D	RTX-5 0.32 (mm)
IC 140-25490/15		11/17/2018 03:51	1	RK16IC08.D	RTX-5 0.32 (mm)
ICV 140-25490/18		11/17/2018 06:27	1	RK16ICV.D	RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date:	11/16/18	Instrument:	MR	Chrom WL #:	10019	TALS Batch & Event #	TO14/15: 1744 25490						
							DOD:	1749 / 25492	OHIO: PMT / 25491				
Chrom/Worklist Review							1 st	Comments			2 nd		
1. Re-read each Limit Group [method editor-limit groups]							✓				na		
2. Verify LODV in Chrom [method editor -> edit -> MDL]							✓				na		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]							✓				/		
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]							✓				/		
5. Did BFB meet tune criteria? [F8]							✓				/		
6. Were all standards injected within 24 hr of BFB? [F7]							✓	Vol ✓ on screen			/		
7. High point checked for saturation and point removed if so? [Chrom]							✓	Naph.			✓		
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]							na				MS		
9. RT for each IS +20 sec avg. RT? [F6 IstdRec]							✓				/		
10. Area for each IS ± 40% avg. area? [F6 IstdRec]							✓				/		
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]							✓				/		
12. Elution order checked on isomeric pairs? [Chrom]											/		
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane							✓				/		
• 2-methyl butane / acrolein							✓				/		
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane							✓				/		
• vinyl acetate / hexane							✓				/		
• cis- and trans- isomers							✓				/		
• ethyl benzene / m/p-xylene / o-xylene							✓				/		
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene							✓				/		
• tert-butylbenzene/4-isopropyltoluene							✓				/		
• 1,3-, 1,4-, and 1,2-dichlorobenzene							✓				/		
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes							na				MS		
• 1,2,4- and 1,2,3-trichlorobenzenes							✓				/		
• 2-, and 1-methylnaphthalene							✓				/		
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?							✓				✓		
MLG Review							TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1 & 2 methylnaphthalene ≤ 50% [F6 Σ]							✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]							✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]							✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]							na	→	→		na	→	→
18. If curves were used, is correlation coefficient ≥ 0.990? [F6]							na	→	→		na	→	→
19. Is the intercept less than the RL for each curve? [F6]							na	→	→		na	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]							na	→	na		na	→	na
21. Is low point RSE ≤ 50%? [F6]							✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits? [F8 - icv]							✓	✓	✓		✓	✓	✓
Analyst/Date:							2nd Level Reviewer/Date:						
[Signature]							[Signature] 11/19/18						
TALS Review							TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL							✓	✓	✓		na	na	na
24. Graphics uploaded? [paperclip]							✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events --'Fix ICAL linkage' if needed]							✓	✓	✓		✓	✓	✓
26. Runs linked to BFB? [QC Links]							✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings [F8]							✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?							na	→	→		na	→	→
29. After review in TALS, approve the method in TALS.							na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>							na	na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?							na	na	na		✓	✓	✓
Analyst/date:							2nd Level Reviewer/date:						
[Signature]							[Signature] 11/19/18						
Comments:							Comments:						
[Handwritten notes]							[Handwritten notes]						

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1

SDG No.: _____

Instrument ID: MR Start Date: 11/19/2018 09:29

Analysis Batch Number: 25527 End Date: 11/20/2018 07:28

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25527/1		11/19/2018 09:29	1	RFBK19.D	RTX-5 0.32 (mm)
CCVIS 140-25527/2		11/19/2018 10:01	1	RCCVK19.D	RTX-5 0.32 (mm)
LCS 140-25527/1002		11/19/2018 10:01	1	RCCVK19-Client.d	RTX-5 0.32 (mm)
ZZZZZ		11/19/2018 11:47	1		RTX-5 0.32 (mm)
ZZZZZ		11/19/2018 12:41	1		RTX-5 0.32 (mm)
ZZZZZ		11/19/2018 12:41	1		RTX-5 0.32 (mm)
ZZZZZ		11/19/2018 13:37	1		RTX-5 0.32 (mm)
MB 140-25527/9		11/19/2018 16:12	1	R500BK19.D	RTX-5 0.32 (mm)
ZZZZZ		11/19/2018 17:05	90.79		RTX-5 0.32 (mm)
ZZZZZ		11/19/2018 17:57	1		RTX-5 0.32 (mm)
ZZZZZ		11/19/2018 18:50	1		RTX-5 0.32 (mm)
ZZZZZ		11/19/2018 19:41	1		RTX-5 0.32 (mm)
ZZZZZ		11/19/2018 20:33	1		RTX-5 0.32 (mm)
ZZZZZ		11/19/2018 21:25	506.1		RTX-5 0.32 (mm)
ZZZZZ		11/19/2018 22:18	1		RTX-5 0.32 (mm)
ZZZZZ		11/19/2018 23:10	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 00:02	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 00:56	2.78		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 01:48	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 02:40	3.1		RTX-5 0.32 (mm)
140-13371-1		11/20/2018 03:32	1	RK19P113.D	RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 04:32	1.37		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 05:31	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 06:31	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 07:28	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 1 of 2

Instrument/Date	MR 11/19/2018	Routine	DOD	OHIO VAP
CCAL Chrom WL #	10037	CCAL Batch #	25527	
ICAL Chrom WL #	9997 10019	ICAL Batch # / Event #	25490 / 1746	
Chrom Review		1 st	If No, why is data reportable?	2 nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]		/		na
2. Did BFB meet tune criteria? [F8]		/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]		/	List Target analytes outside CCV limits: [Isopropyl alcohol]	/
4. Elution order checked on isomeric pairs? [Chrom]				
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		/		/
• 2-methyl butane / acrolein		/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		/		/
• vinyl acetate / hexane		/		/
• cis- and trans- isomers		/		/
• ethyl benzene / m/p-xylene / o-xylene		/		/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butyl benzene/1,2,3-trimethylbenzene		/		/
• tert-butylbenzene/4-isopropyltoluene		/		/
• 1,3-, 1,4-, and 1,2-dichlorobenzene		/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		NA		MS
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene		/		/
• 2-, and 1-methylnaphthalene		/		/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration? 11/20/18		NA		MS
6. Has the RT been updated to the method? 20		/		/
Analyst/date	Poyhinimon 9 11/20/2018	2nd Level Reviewer/date	W 11/20/18	
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt, final amt = 500 mL]		/	Volume checked on-screen 11/20/18	/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]		/		/
9. Can dilution history verified? [Mgmt Report]		/		/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:		/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	/
11. All runs - peaks ID'd correctly and false positives removed?		/		/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?		/		/
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]		/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur, Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)	/
Sample Reason Sample Reason				
14. Samples outside calibration range scheduled for dilution?		/	<input type="checkbox"/> ICAL - Range Exceeded, Minimum Dilution	/
Chrom Review		1 st	If No, why is data reportable?	2 nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:		/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input checked="" type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# 15219) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.	/
Sample Reason Sample Reason				
16. RIC inspected for proper integration for TPH?		NA		MS
17. Obvious non-TPH peaks excluded?		↓		/
18. Individual TPH peak area < octane high point area?		↓		/

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4
 Page 2 of 2

TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	MB														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input checked="" type="checkbox"/> CCV - %D - LCS criteria met (NCM# 15221) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	MB														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MES). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random; Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr> <td>>90</td> <td>5</td> </tr> <tr> <td>71 - 90</td> <td>4</td> </tr> <tr> <td>51 - 70</td> <td>3</td> </tr> <tr> <td>31 - 50</td> <td>2</td> </tr> <tr> <td>11 - 30</td> <td>1</td> </tr> <tr> <td><11</td> <td>0</td> </tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	<11	0			/
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
<11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	NA		MB														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	/		/														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-2552719 200 mL blank ID: 140-2552717	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	/		/														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	-NA-		/														
40. Checklist & Entech report scanned, attached & assigned properly?	-NA-		/														

Analyst: Porquiman S.	Date: 11/16/18	2nd Level Reviewer: [Signature]	Date: 11/20/18
Comments: CE flag line 19 for Acetone	[Signature] 11/20/18		
Example Calculation: 140-13287-5 Tetrachloroethene On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF $\frac{7.761484 \times 500}{50} \times 3.1 = 240.6060$			

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13371-1

SDG No.: _____

Batch Number: 25527 Batch Start Date: 11/19/18 09:29 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101S 00079	40MXISSURP 00003
BFB 140-25527/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-25527/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-25527/9		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-13371-A-1	BLDG-A MIDGAC	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-25527/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-25527/1		TO 15 LL		40 mL					
CCVIS 140-25527/2		TO 15 LL							
MB 140-25527/9		TO 15 LL							
140-13371-A-1	BLDG-A MIDGAC	TO 15 LL	T						
LCS 140-25527/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11706 Lab Sample ID: 140-13239-4
 Matrix: Air Lab File ID: 13239BK04.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 13:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11706 Lab Sample ID: 140-13239-4
 Matrix: Air Lab File ID: 13239BK04.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 13:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11706 Lab Sample ID: 140-13239-4
 Matrix: Air Lab File ID: 13239BK04.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 13:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK04.D
 Lims ID: 140-13239-A-4
 Client ID: 11706
 Sample Type: Client
 Inject. Date: 05-Nov-2018 13:18:30 ALS Bottle#: 2 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009839-011
 Misc. Info.: 11706
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 14:03:16 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: sodsaip Date: 06-Nov-2018 14:03:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.374	0.005	86	396611	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.576	0.000	94	2117630	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.388	15.388	0.000	88	1721158	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.041	17.062	-0.021	96	1102894	3.83	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK04.D

Injection Date: 05-Nov-2018 13:18:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13239-A-4

Lab Sample ID: 140-13239-4

Worklist Smp#: 11

Client ID: 11706

Purge Vol: 500.000 mL

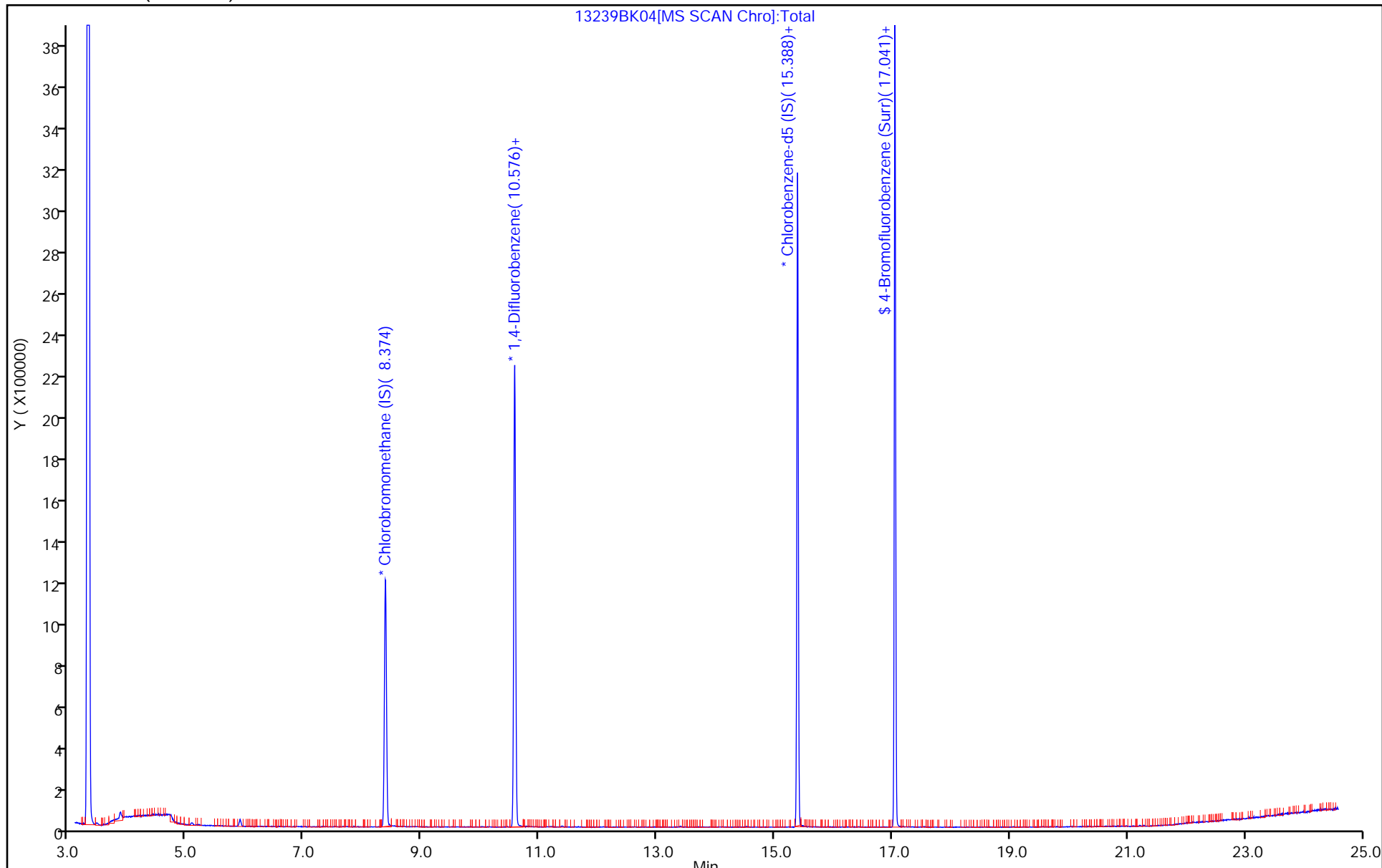
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

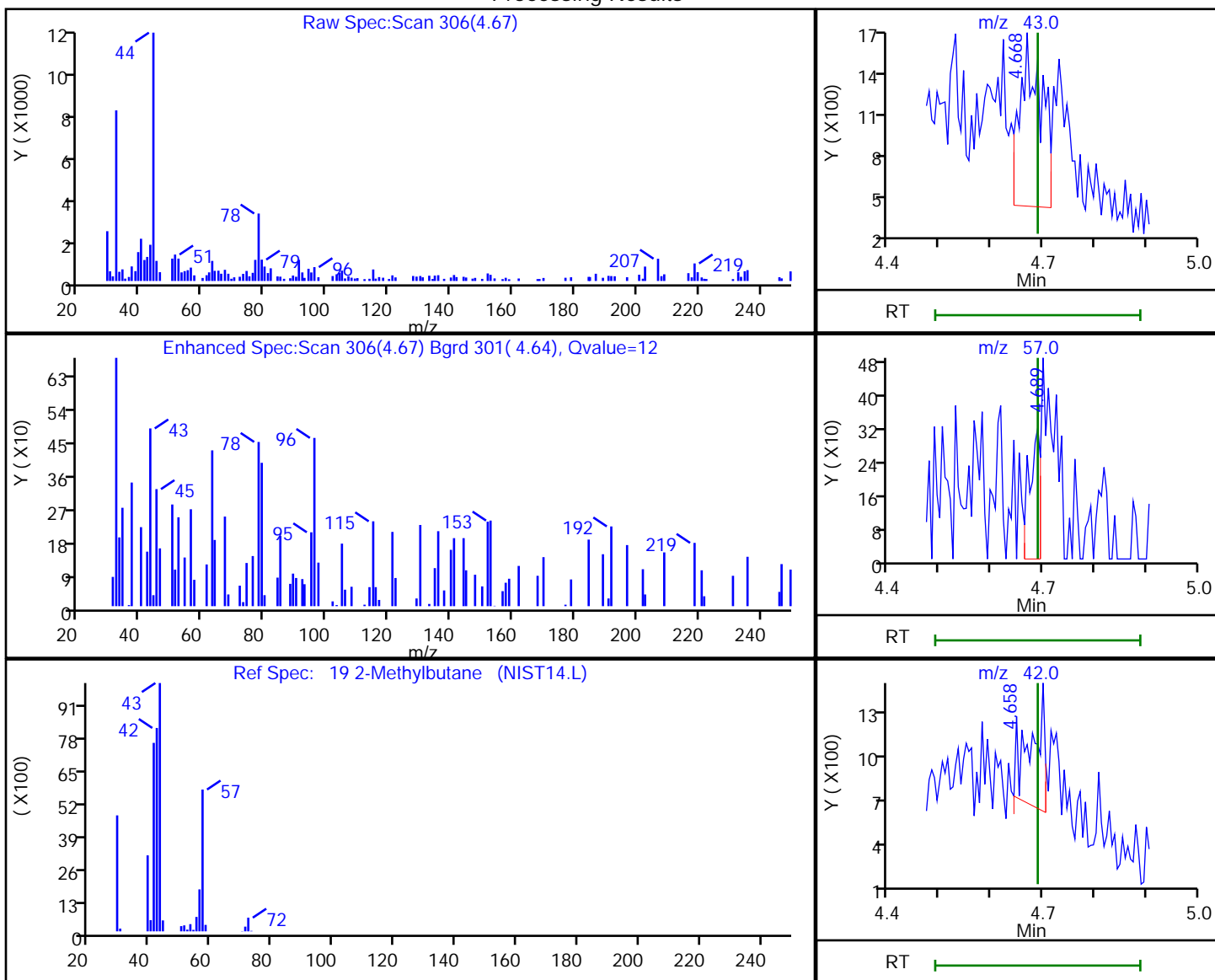


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK04.D
 Injection Date: 05-Nov-2018 13:18:30 Instrument ID: MH
 Lims ID: 140-13239-A-4 Lab Sample ID: 140-13239-4
 Client ID: 11706
 Operator ID: HMT ALS Bottle#: 2 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.67	43.00	3368	0.032720
4.69	57.00	472	
4.66	42.00	1489	

Reviewer: sodsaip, 06-Nov-2018 14:02:44

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11767 Lab Sample ID: 140-13239-5
 Matrix: Air Lab File ID: 13239BK05.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 14:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11767 Lab Sample ID: 140-13239-5
 Matrix: Air Lab File ID: 13239BK05.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200(mL) Date Analyzed: 11/05/2018 14:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11767 Lab Sample ID: 140-13239-5
 Matrix: Air Lab File ID: 13239BK05.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 14:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
 Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK05.D
 Lims ID: 140-13239-A-5
 Client ID: 11767
 Sample Type: Client
 Inject. Date: 05-Nov-2018 14:19:30 ALS Bottle#: 3 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009839-012
 Misc. Info.: 11767
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 14:04:19 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: sodsaip Date: 06-Nov-2018 14:04:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.374	0.005	88	370858	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.576	0.000	94	1977216	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.388	15.388	0.000	88	1605095	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.062	-0.015	95	1047801	3.90	
110 Dodecane	57	20.649	20.659	-0.010	87	13888	0.0364	
115 Hexachlorobutadiene	225	21.212	21.217	-0.005	89	15278	0.0384	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK05.D

Injection Date: 05-Nov-2018 14:19:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13239-A-5

Lab Sample ID: 140-13239-5

Worklist Smp#: 12

Client ID: 11767

Purge Vol: 500.000 mL

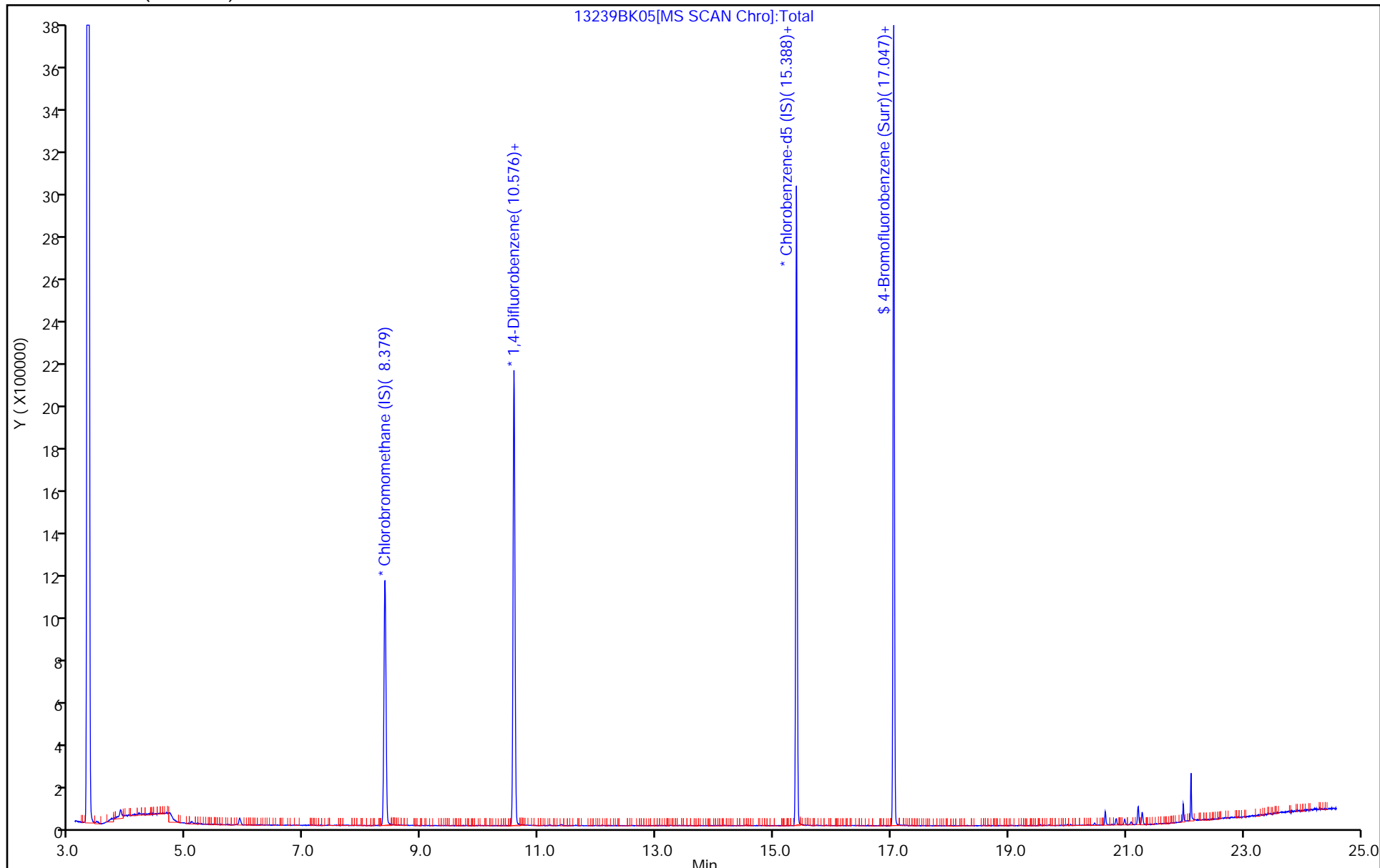
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

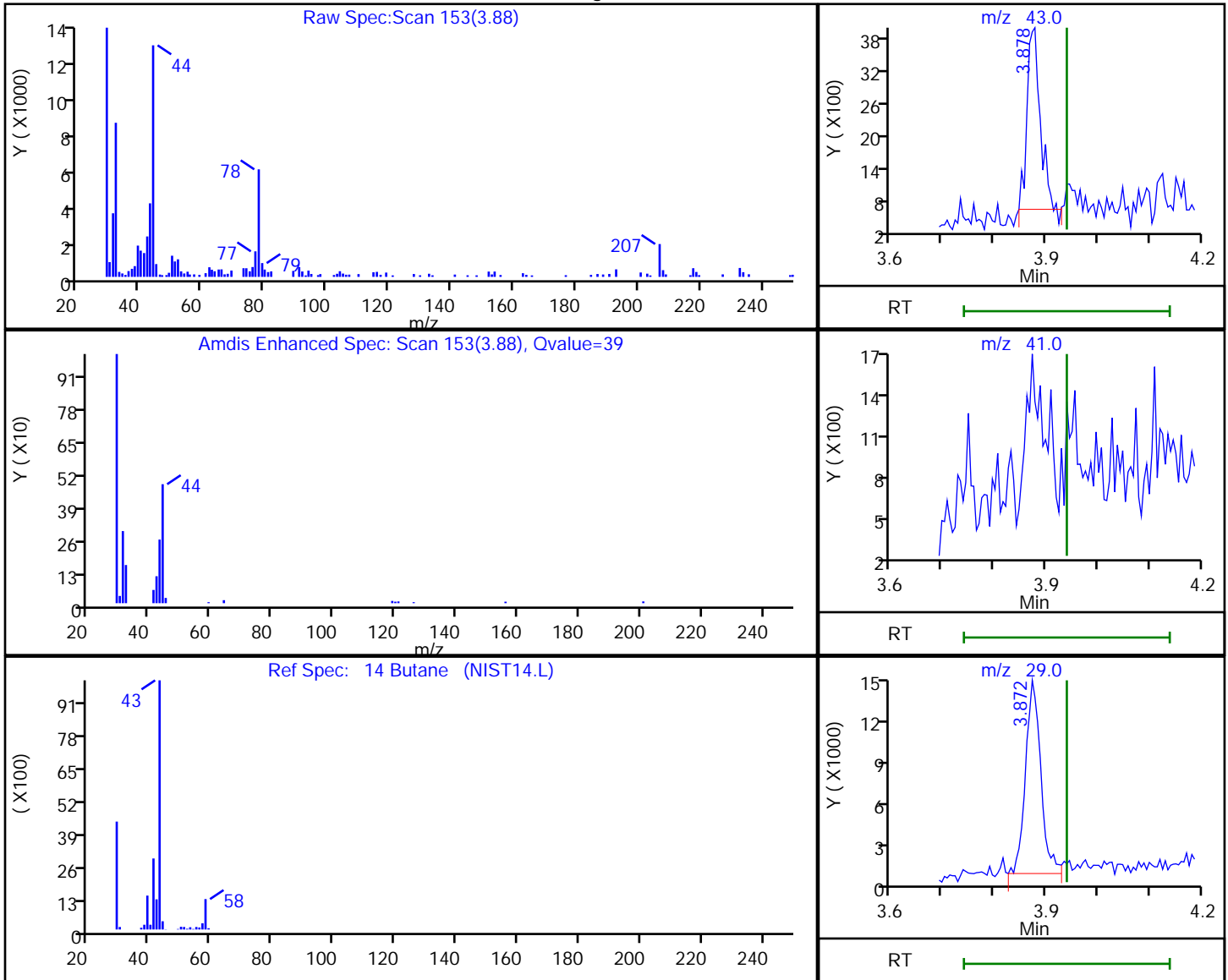


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK05.D
 Injection Date: 05-Nov-2018 14:19:30 Instrument ID: MH
 Lims ID: 140-13239-A-5 Lab Sample ID: 140-13239-5
 Client ID: 11767
 Operator ID: HMT ALS Bottle#: 3 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.88	43.00	5865	0.042080
3.94	41.00	0	
3.87	29.00	27668	

Reviewer: sodsaip, 06-Nov-2018 14:03:40
 Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11692 Lab Sample ID: 140-13239-6
 Matrix: Air Lab File ID: 13239BK06.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 15:04
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11692 Lab Sample ID: 140-13239-6
 Matrix: Air Lab File ID: 13239BK06.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 15:04
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11692 Lab Sample ID: 140-13239-6
 Matrix: Air Lab File ID: 13239BK06.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 15:04
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK06.D
 Lims ID: 140-13239-A-6
 Client ID: 11692
 Sample Type: Client
 Inject. Date: 05-Nov-2018 15:04:30 ALS Bottle#: 4 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009839-013
 Misc. Info.: 11692
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 14:04:19 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: sodsaip Date: 06-Nov-2018 14:05:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.374	8.374	0.000	86	347009	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.576	0.000	95	1873328	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.387	15.388	-0.001	88	1534939	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.041	17.062	-0.021	95	987428	3.85	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK06.D

Injection Date: 05-Nov-2018 15:04:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13239-A-6

Lab Sample ID: 140-13239-6

Worklist Smp#: 13

Client ID: 11692

Purge Vol: 500.000 mL

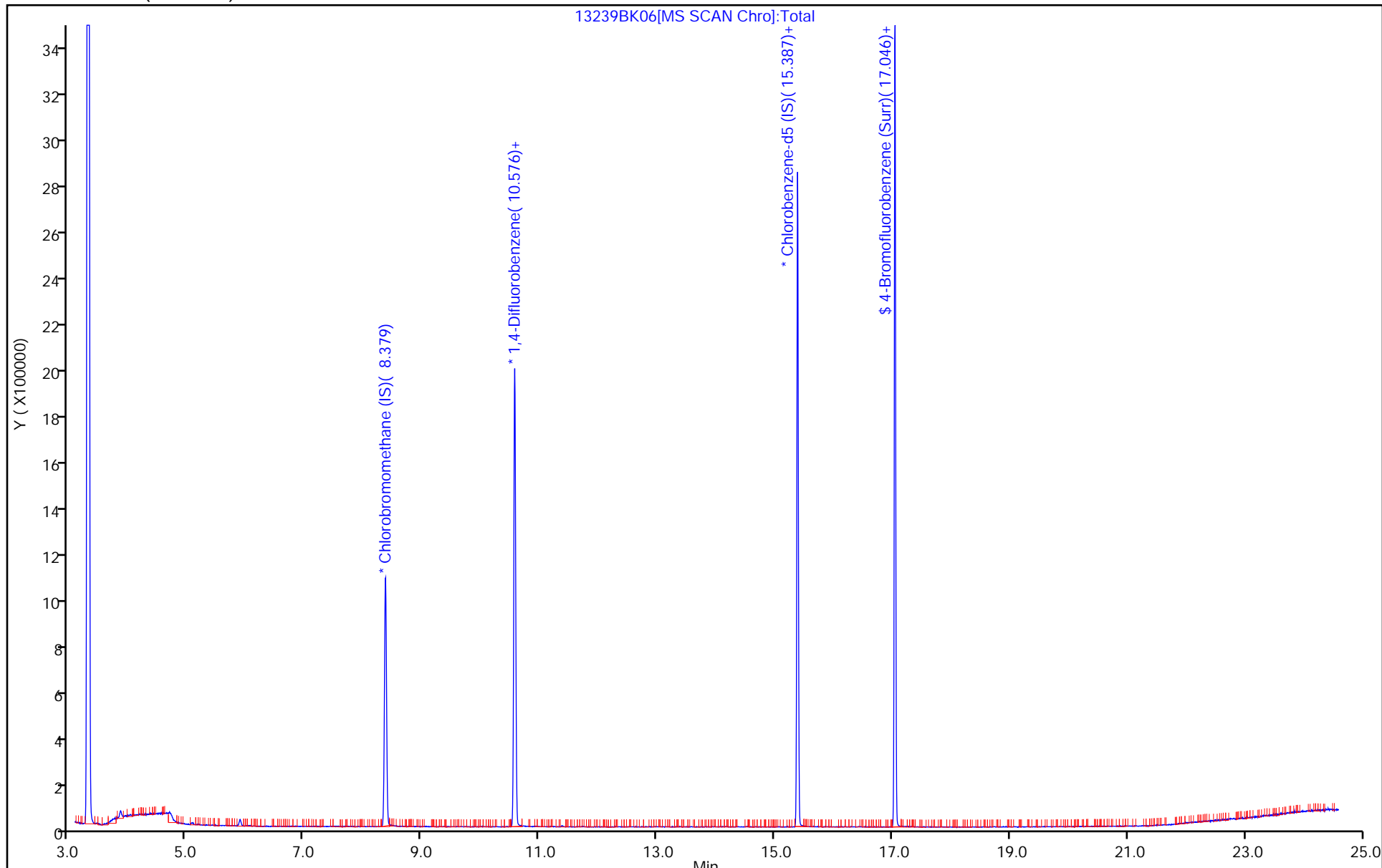
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 10493 Lab Sample ID: 140-13239-7
 Matrix: Air Lab File ID: 13239BK07.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 15:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 10493 Lab Sample ID: 140-13239-7
 Matrix: Air Lab File ID: 13239BK07.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 15:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 10493 Lab Sample ID: 140-13239-7
 Matrix: Air Lab File ID: 13239BK07.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 15:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK07.D
 Lims ID: 140-13239-A-7
 Client ID: 10493
 Sample Type: Client
 Inject. Date: 05-Nov-2018 15:48:30 ALS Bottle#: 5 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009839-014
 Misc. Info.: 10493
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 14:06:26 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: sodsaip Date: 06-Nov-2018 14:06:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.374	0.005	87	337131	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.576	0.000	95	1781264	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.387	15.388	-0.001	88	1459421	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.062	-0.015	95	942786	3.86	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK07.D

Injection Date: 05-Nov-2018 15:48:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13239-A-7

Lab Sample ID: 140-13239-7

Worklist Smp#: 14

Client ID: 10493

Purge Vol: 500.000 mL

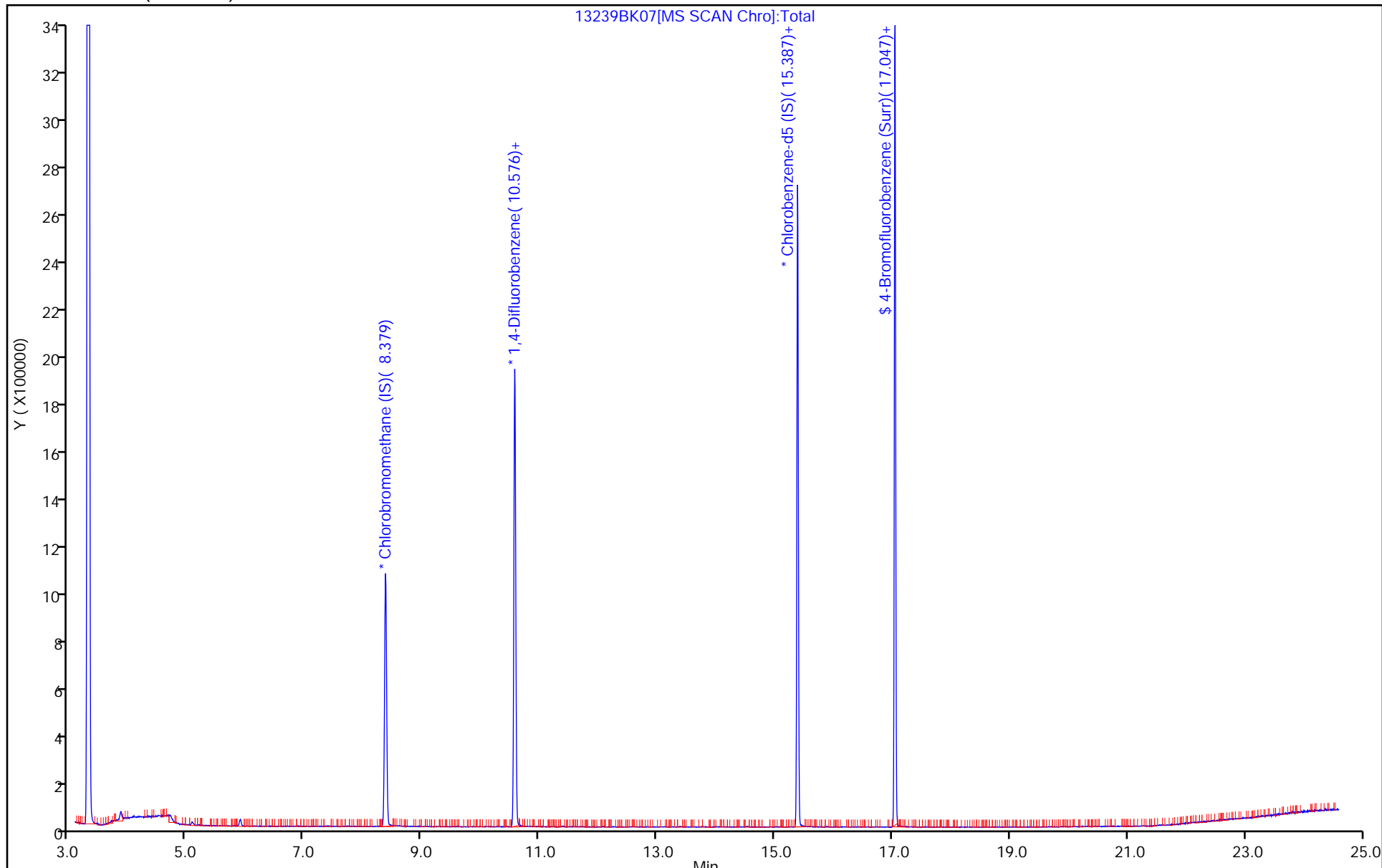
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK07.D

Injection Date: 05-Nov-2018 15:48:30

Instrument ID: MH

Lims ID: 140-13239-A-7

Lab Sample ID: 140-13239-7

Client ID: 10493

Operator ID: HMT

ALS Bottle#: 5 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MH_TO15

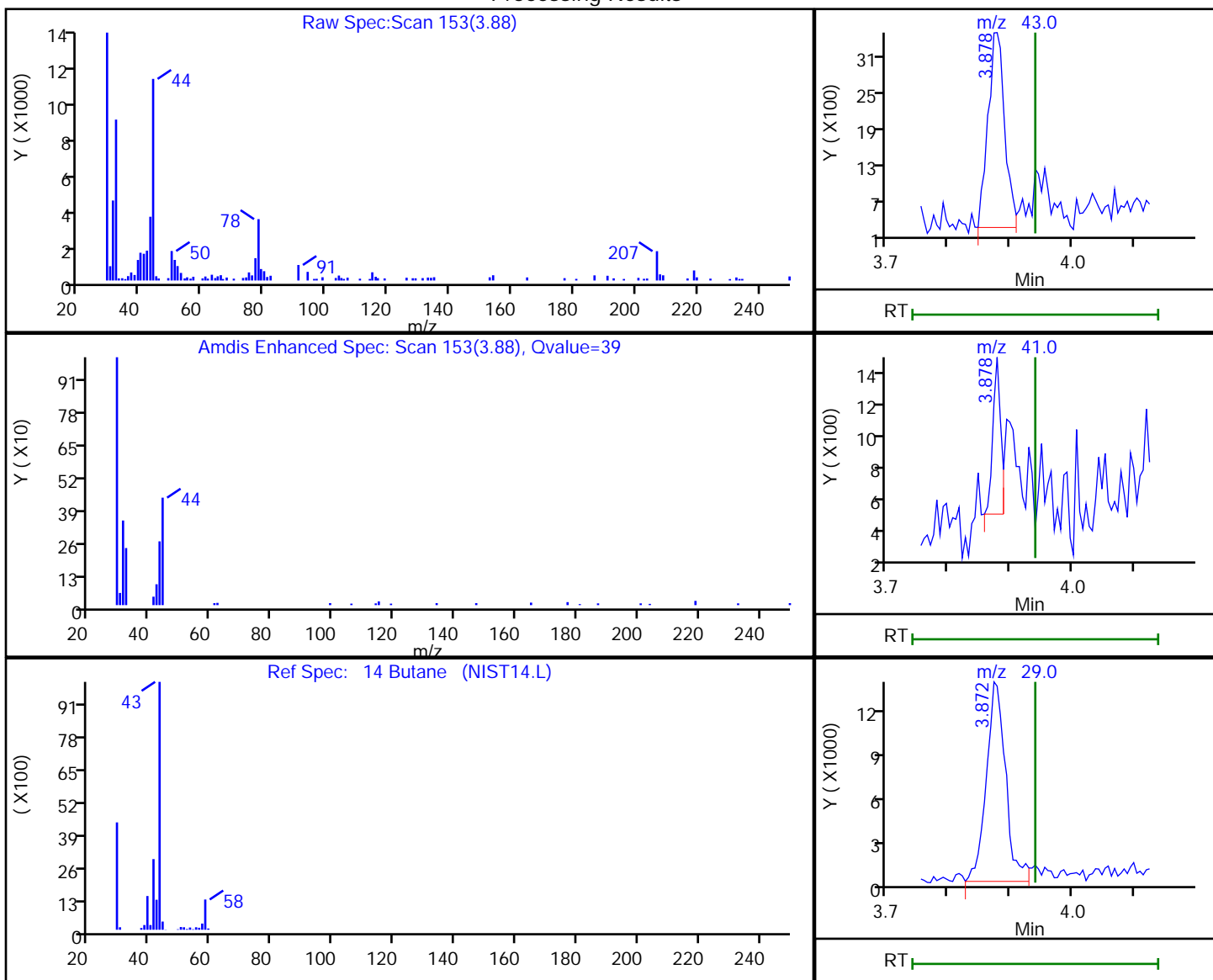
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.88	43.00	5973	0.047142
3.88	41.00	812	
3.87	29.00	28439	

Reviewer: sodsaip, 06-Nov-2018 14:05:49

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11771 Lab Sample ID: 140-13239-9
 Matrix: Air Lab File ID: 13239BK09.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 17:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11771 Lab Sample ID: 140-13239-9
 Matrix: Air Lab File ID: 13239BK09.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 17:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11771 Lab Sample ID: 140-13239-9
 Matrix: Air Lab File ID: 13239BK09.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 17:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK09.D
 Lims ID: 140-13239-A-9
 Client ID: 11771
 Sample Type: Client
 Inject. Date: 05-Nov-2018 17:17:30 ALS Bottle#: 7 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009839-016
 Misc. Info.: 11771
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 14:08:58 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: sodsaip Date: 06-Nov-2018 14:08:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.374	0.005	88	306899	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.576	0.000	95	1615792	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.388	15.388	0.000	89	1330170	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.041	17.062	-0.021	95	871132	3.91	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK09.D

Injection Date: 05-Nov-2018 17:17:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13239-A-9

Lab Sample ID: 140-13239-9

Worklist Smp#: 16

Client ID: 11771

Purge Vol: 500.000 mL

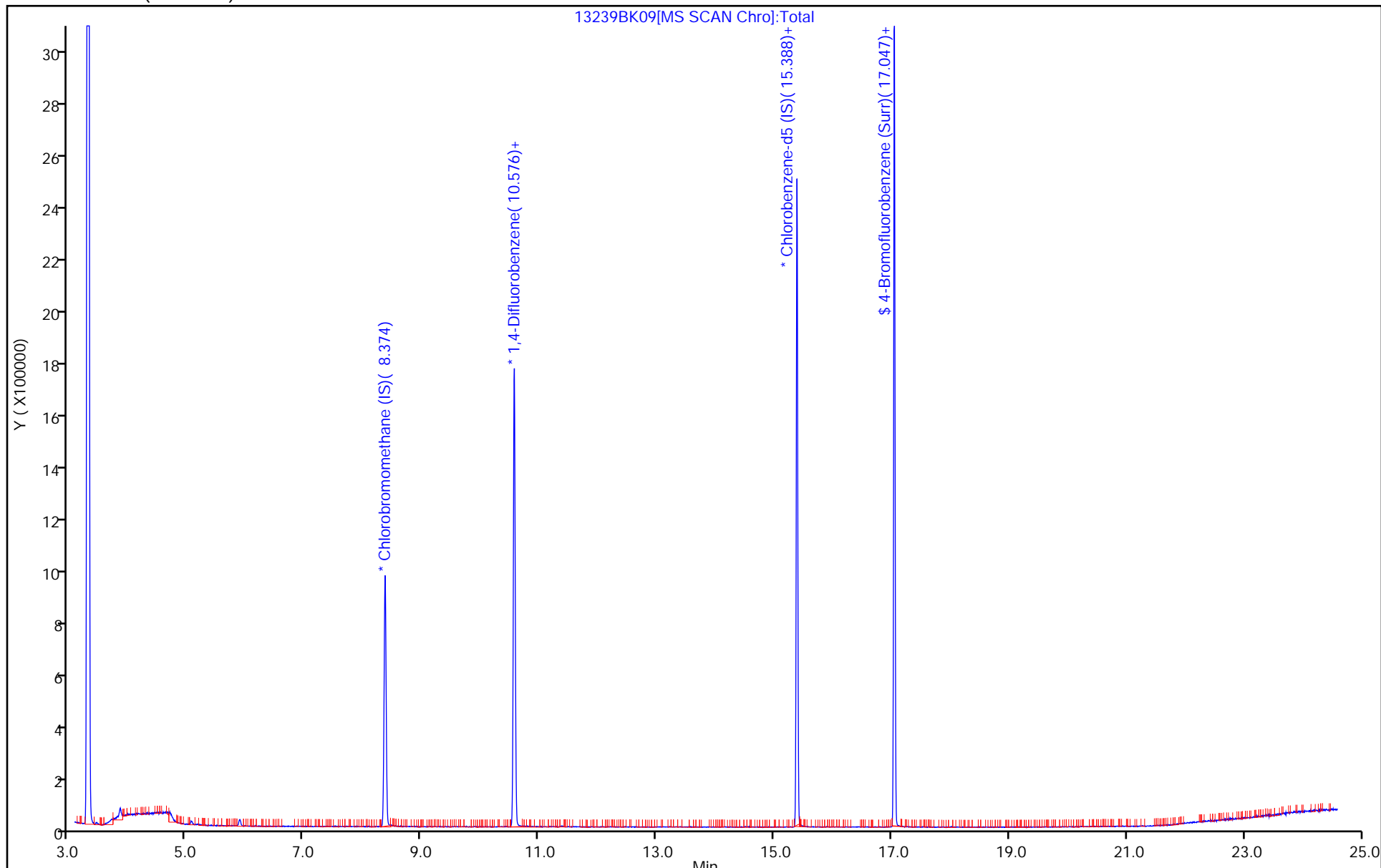
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK09.D

Injection Date: 05-Nov-2018 17:17:30

Instrument ID: MH

Lims ID: 140-13239-A-9

Lab Sample ID: 140-13239-9

Client ID: 11771

Operator ID: HMT

ALS Bottle#: 7

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MH_TO15

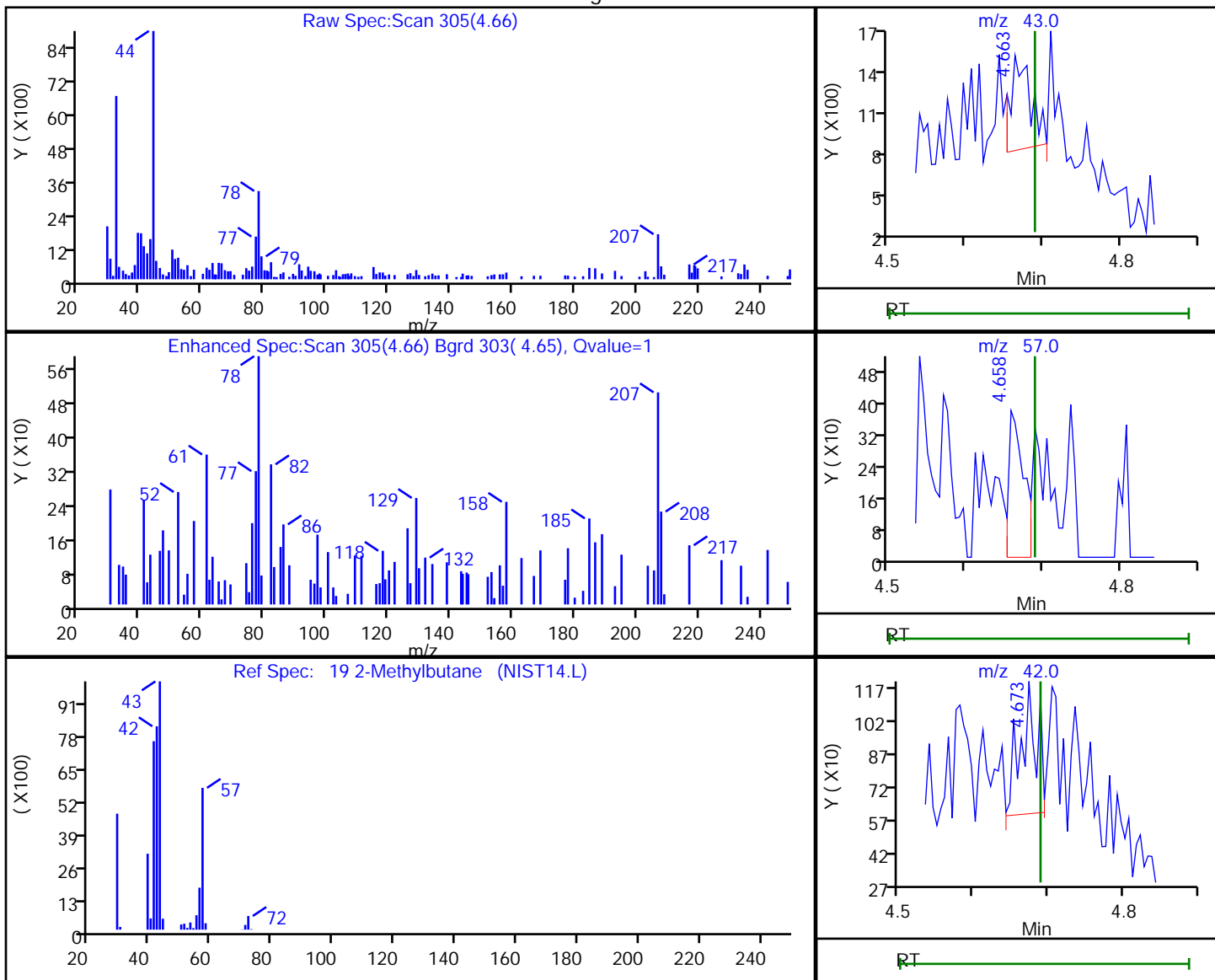
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.66	43.00	1127	0.014149
4.66	57.00	512	
4.67	42.00	912	

Reviewer: sodsaip, 06-Nov-2018 14:08:27

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11492 Lab Sample ID: 140-13239-10
 Matrix: Air Lab File ID: 13239BK10.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 18:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11492 Lab Sample ID: 140-13239-10
 Matrix: Air Lab File ID: 13239BK10.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 18:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11492 Lab Sample ID: 140-13239-10
 Matrix: Air Lab File ID: 13239BK10.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/05/2018 18:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24956 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK10.D
 Lims ID: 140-13239-A-10
 Client ID: 11492
 Sample Type: Client
 Inject. Date: 05-Nov-2018 18:01:30 ALS Bottle#: 8 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009839-017
 Misc. Info.: 11492
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 06-Nov-2018 14:08:58 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK005

First Level Reviewer: sodsaip Date: 06-Nov-2018 14:09:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.374	8.374	0.000	88	299492	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.576	0.000	95	1621853	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.388	15.388	0.000	89	1323285	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.041	17.062	-0.021	95	859277	3.88	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9839.b\13239BK10.D

Injection Date: 05-Nov-2018 18:01:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13239-A-10

Lab Sample ID: 140-13239-10

Worklist Smp#: 17

Client ID: 11492

Purge Vol: 500.000 mL

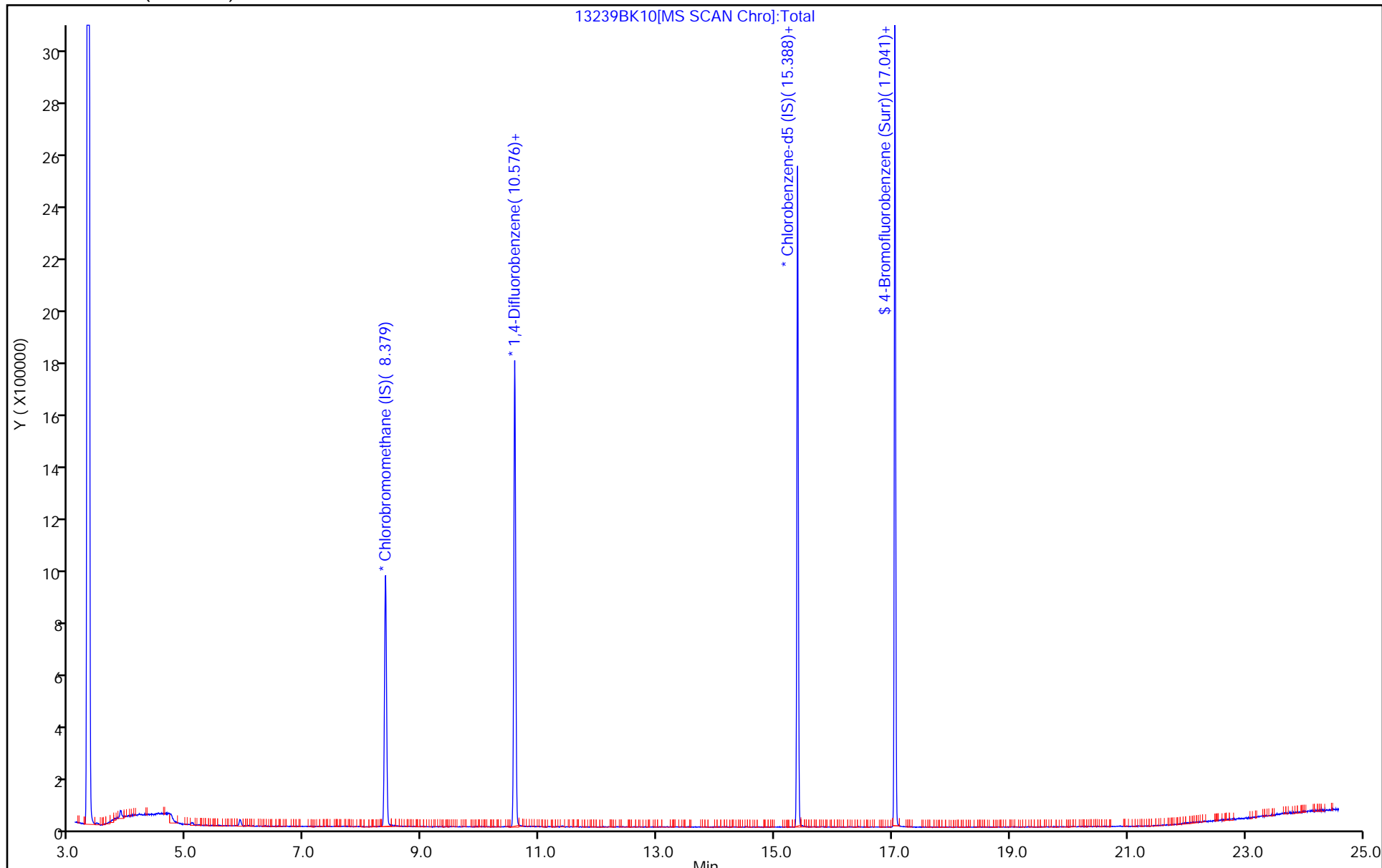
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11623 Lab Sample ID: 140-13239-11
 Matrix: Air Lab File ID: 13239BK11R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 11:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11623 Lab Sample ID: 140-13239-11
 Matrix: Air Lab File ID: 13239BK11R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 11:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11623 Lab Sample ID: 140-13239-11
 Matrix: Air Lab File ID: 13239BK11R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 11:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK11R.D
 Lims ID: 140-13239-A-11
 Client ID: 11623
 Sample Type: Client
 Inject. Date: 06-Nov-2018 11:17:30 ALS Bottle#: 11 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009840-004
 Misc. Info.: 11623
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 07-Nov-2018 10:35:52 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0327

First Level Reviewer: sodsaip Date: 07-Nov-2018 10:35:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.374	8.374	0.000	86	291726	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.576	0.000	95	1523485	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.388	15.387	0.001	89	1256612	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.062	-0.015	95	834212	3.97	
25 Isopropyl alcohol	45	5.201	5.133	0.068	94	8591	0.0750	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK11R.D

Injection Date: 06-Nov-2018 11:17:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13239-A-11

Lab Sample ID: 140-13239-11

Worklist Smp#: 4

Client ID: 11623

Purge Vol: 500.000 mL

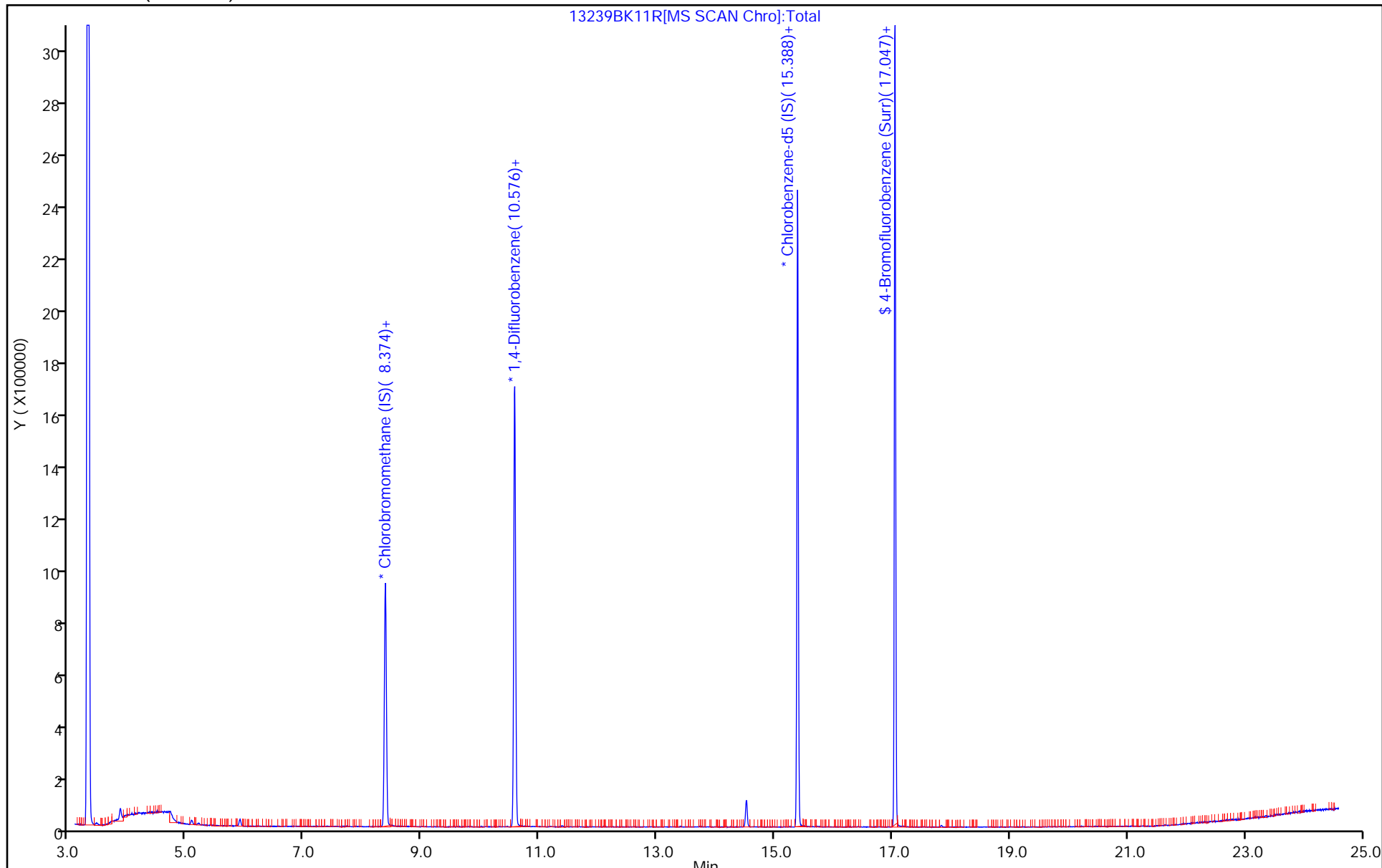
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

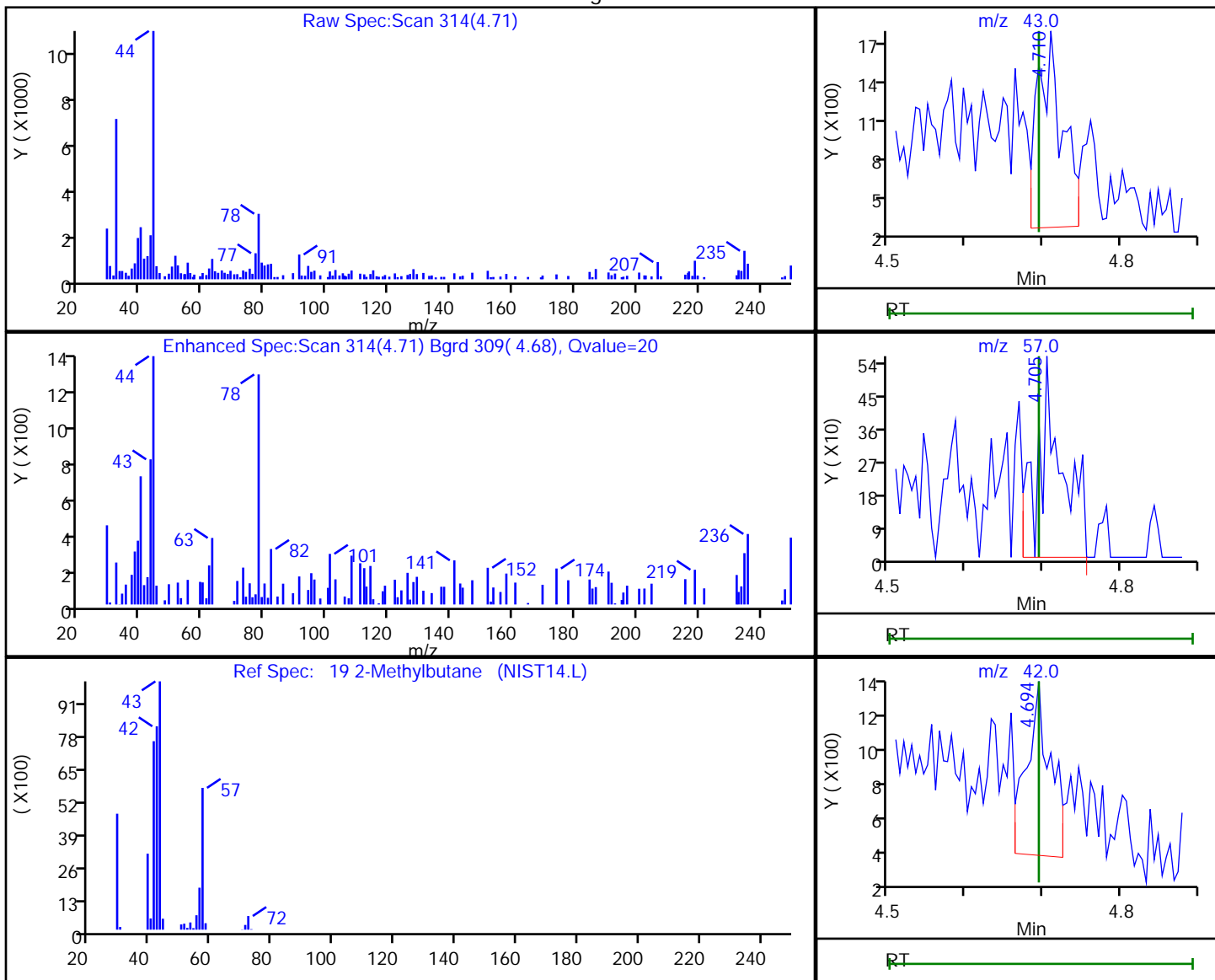


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK11R.D
 Injection Date: 06-Nov-2018 11:17:30 Instrument ID: MH
 Lims ID: 140-13239-A-11 Lab Sample ID: 140-13239-11
 Client ID: 11623
 Operator ID: HMT ALS Bottle#: 11 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.71	43.00	3284	0.043374
4.70	57.00	1200	
4.69	42.00	2082	

Reviewer: sodsaip, 07-Nov-2018 10:35:12

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 10923 Lab Sample ID: 140-13239-12
 Matrix: Air Lab File ID: 13239BK12R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 12:04
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 10923 Lab Sample ID: 140-13239-12
 Matrix: Air Lab File ID: 13239BK12R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 12:04
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 10923 Lab Sample ID: 140-13239-12
 Matrix: Air Lab File ID: 13239BK12R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 12:04
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK12R.D
 Lims ID: 140-13239-A-12
 Client ID: 10923
 Sample Type: Client
 Inject. Date: 06-Nov-2018 12:04:30 ALS Bottle#: 12 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009840-005
 Misc. Info.: 10923
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 07-Nov-2018 10:36:50 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0327

First Level Reviewer: sodsaip Date: 07-Nov-2018 10:36:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.374	8.374	0.000	90	263961	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.576	0.000	95	1381494	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.388	15.387	0.001	89	1133310	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.042	17.062	-0.020	94	757153	3.99	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK12R.D

Injection Date: 06-Nov-2018 12:04:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13239-A-12

Lab Sample ID: 140-13239-12

Worklist Smp#: 5

Client ID: 10923

Purge Vol: 500.000 mL

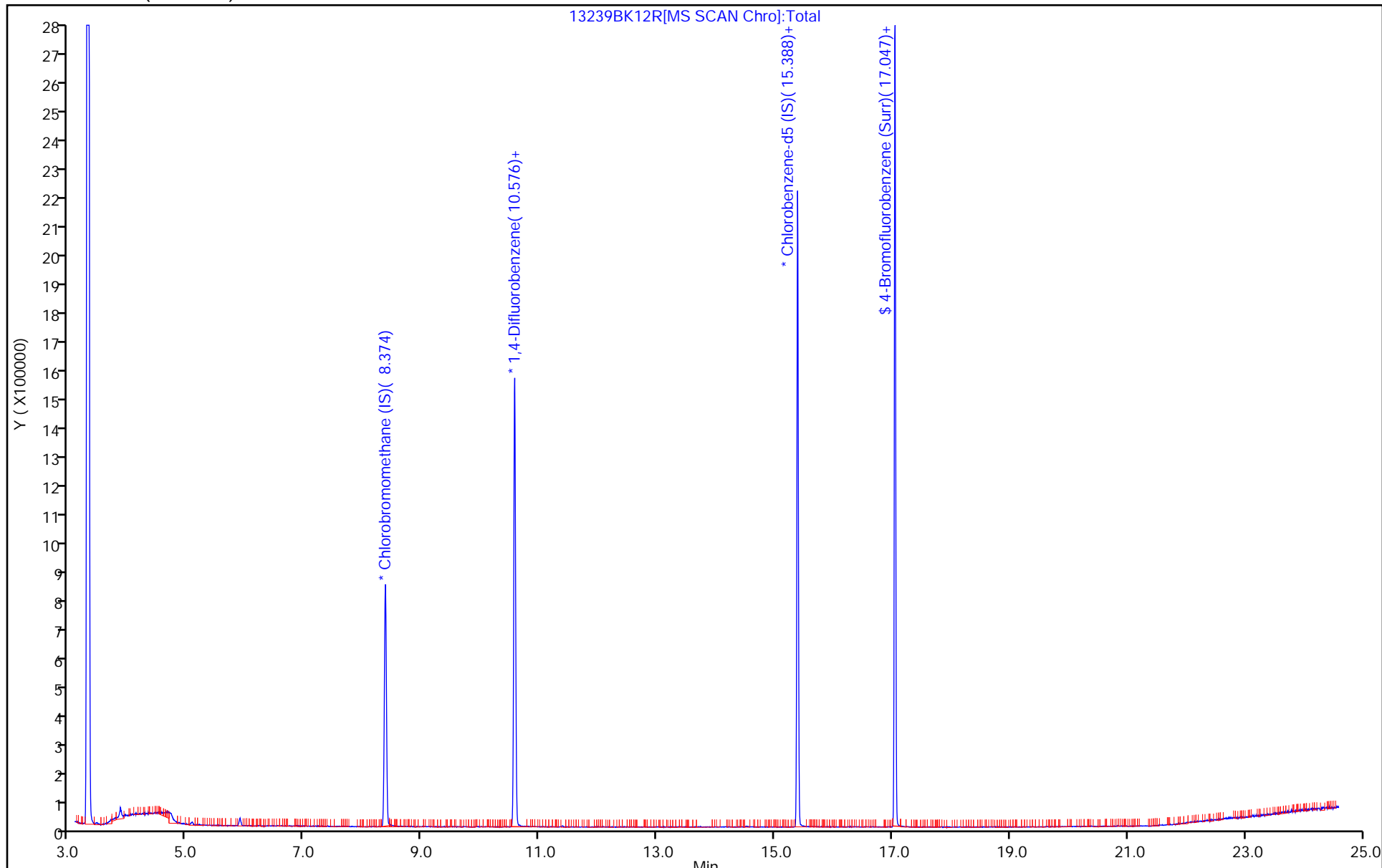
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK12R.D

Injection Date: 06-Nov-2018 12:04:30

Instrument ID: MH

Lims ID: 140-13239-A-12

Lab Sample ID: 140-13239-12

Client ID: 10923

Operator ID: HMT

ALS Bottle#: 12 Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MH_TO15

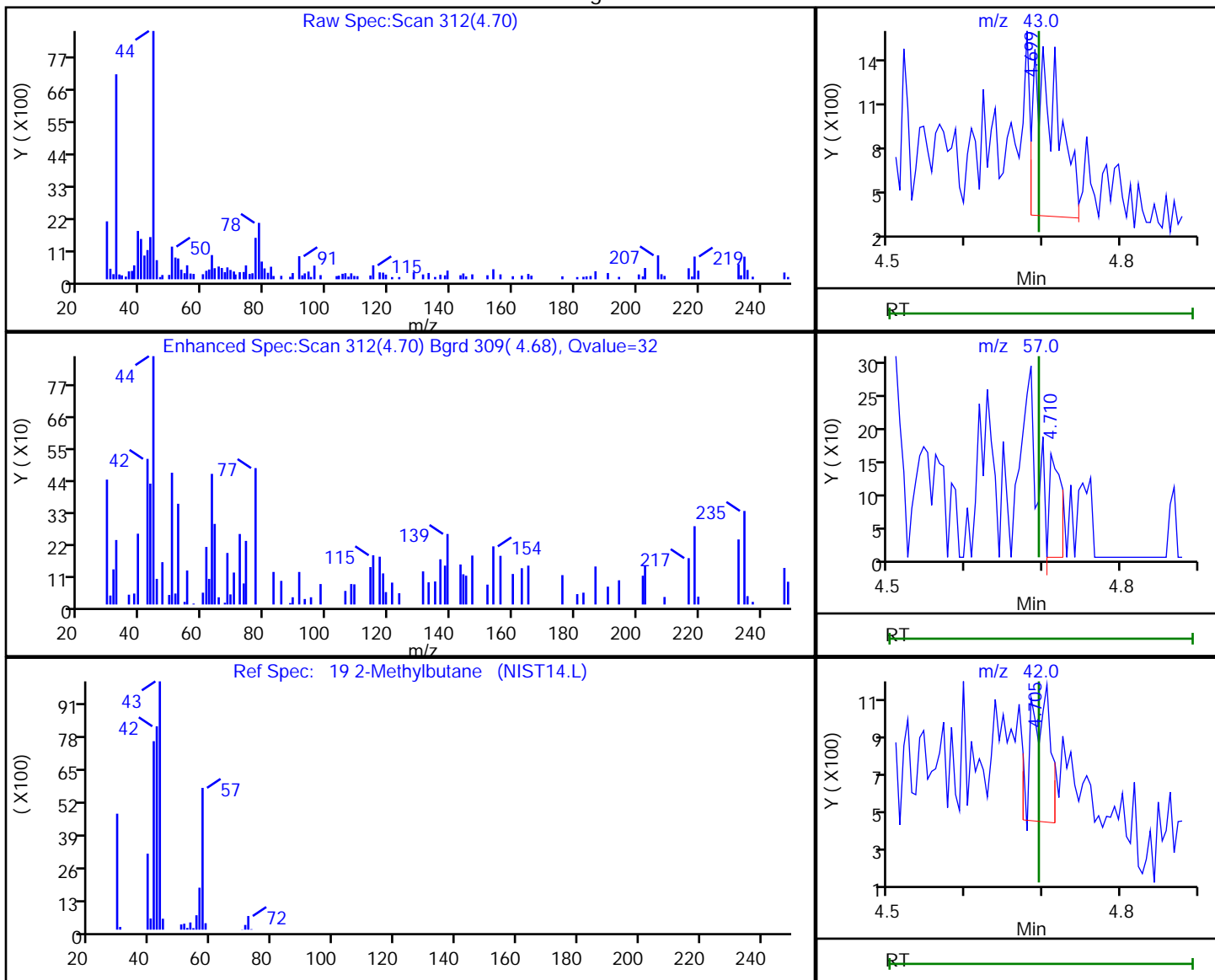
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.70	43.00	2419	0.035310
4.71	57.00	163	
4.70	42.00	1212	

Reviewer: sodsaip, 07-Nov-2018 10:36:20

Audit Action: Marked Compound Undetected

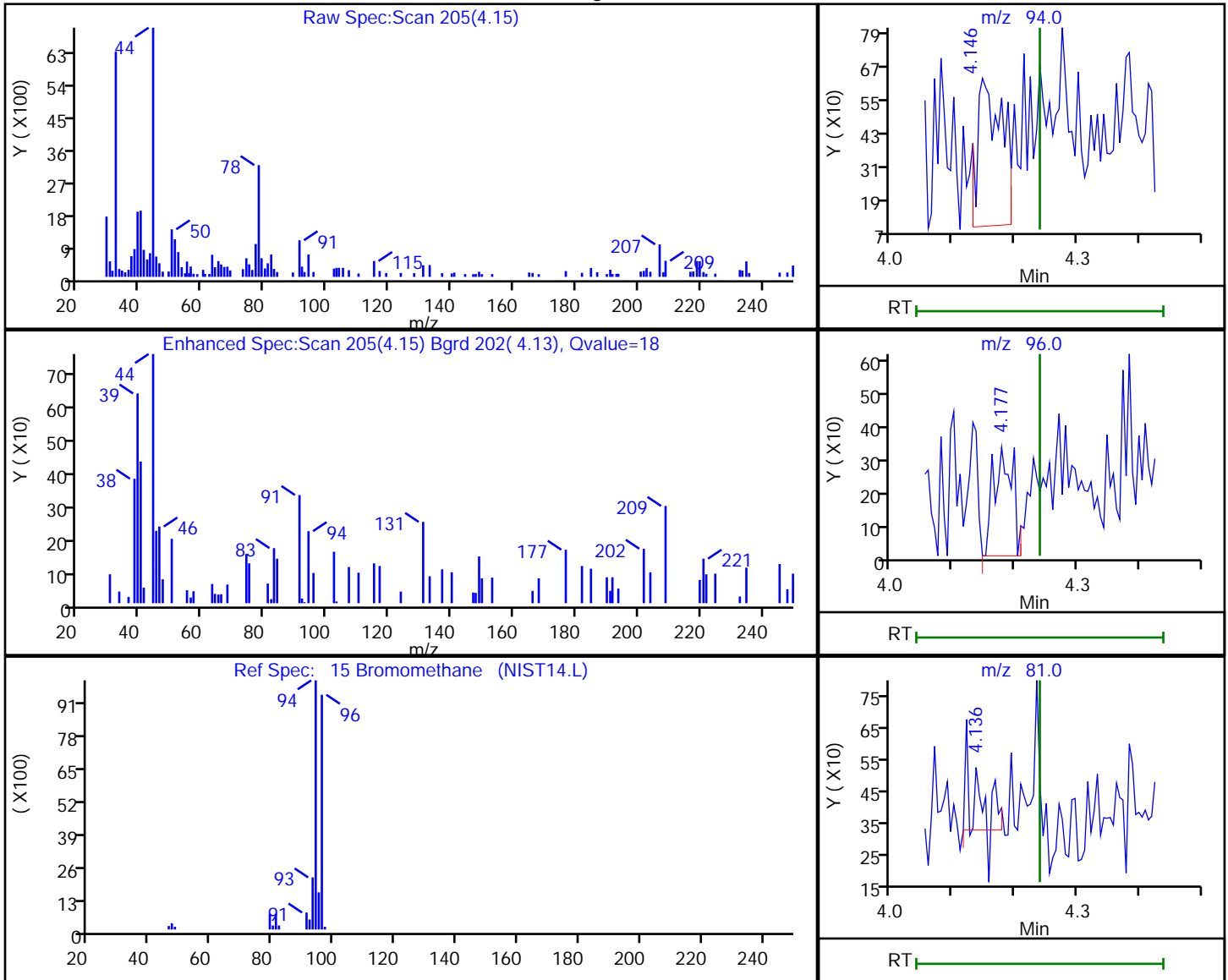
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK12R.D
 Injection Date: 06-Nov-2018 12:04:30 Instrument ID: MH
 Lims ID: 140-13239-A-12 Lab Sample ID: 140-13239-12
 Client ID: 10923
 Operator ID: HMT ALS Bottle#: 12 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.15	94.00	1474	0.012852
4.18	96.00	703	
4.14	81.00	324	

Reviewer: sodsaip, 07-Nov-2018 10:36:17

Audit Action: Marked Compound Undetected

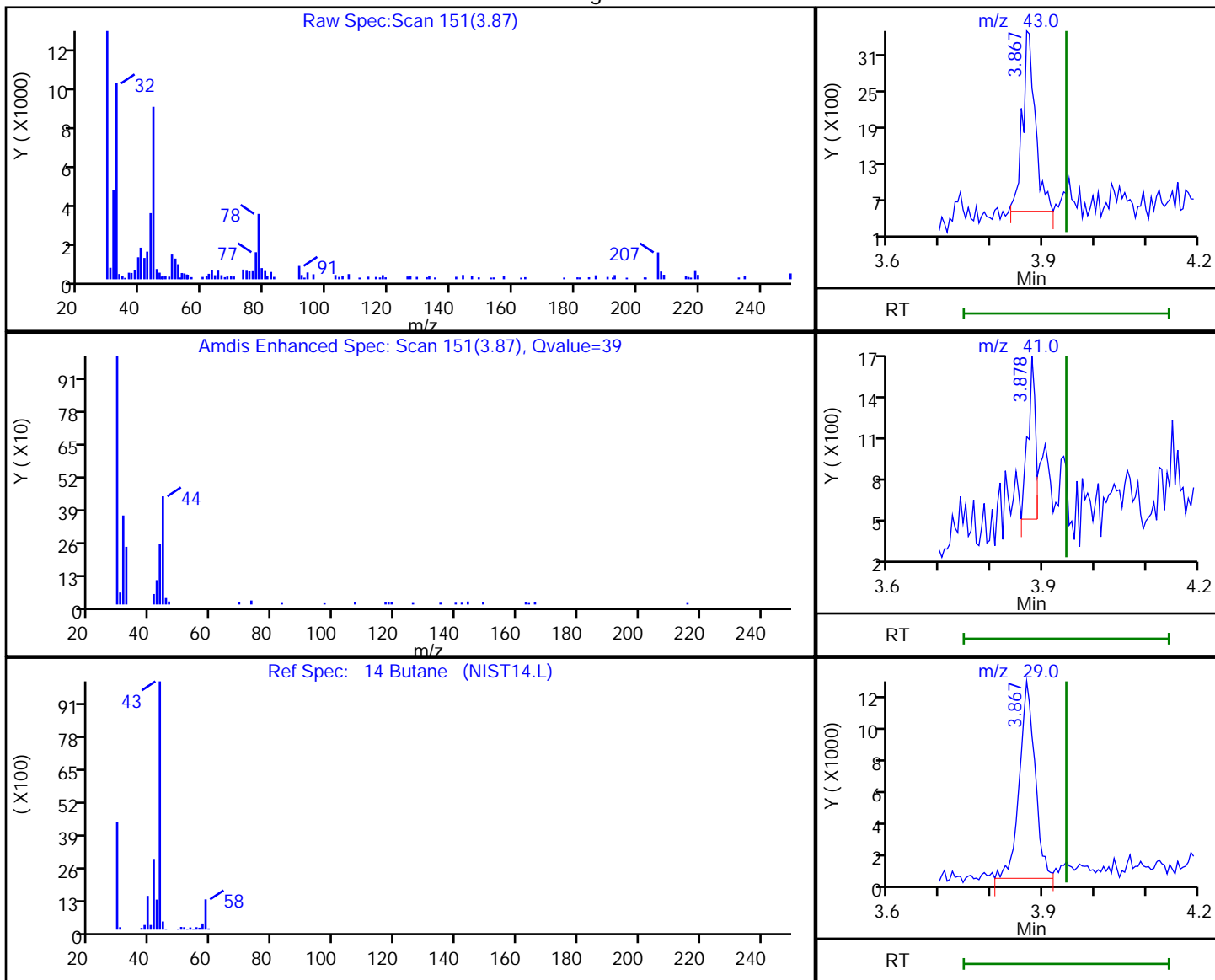
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK12R.D
Injection Date: 06-Nov-2018 12:04:30 Instrument ID: MH
Lims ID: 140-13239-A-12 Lab Sample ID: 140-13239-12
Client ID: 10923
Operator ID: HMT ALS Bottle#: 12 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.87	43.00	5049	0.050896
3.88	41.00	1147	
3.87	29.00	25231	

Reviewer: sodsaip, 07-Nov-2018 10:36:15

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11703 Lab Sample ID: 140-13239-14
 Matrix: Air Lab File ID: 13239BK14R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 12:50
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11703 Lab Sample ID: 140-13239-14
 Matrix: Air Lab File ID: 13239BK14R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 12:50
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11703 Lab Sample ID: 140-13239-14
 Matrix: Air Lab File ID: 13239BK14R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 12:50
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
 Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK14R.D
 Lims ID: 140-13239-A-14
 Client ID: 11703
 Sample Type: Client
 Inject. Date: 06-Nov-2018 12:50:30 ALS Bottle#: 13 Worklist Smp#: 6
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009840-006
 Misc. Info.: 11703
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 07-Nov-2018 10:37:33 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0327

First Level Reviewer: sodsaip Date: 07-Nov-2018 10:37:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.374	8.374	0.000	88	238880	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.576	0.000	95	1283219	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.387	15.387	0.000	89	1056423	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.062	-0.015	94	706223	4.00	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK14R.D

Injection Date: 06-Nov-2018 12:50:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13239-A-14

Lab Sample ID: 140-13239-14

Worklist Smp#: 6

Client ID: 11703

Purge Vol: 500.000 mL

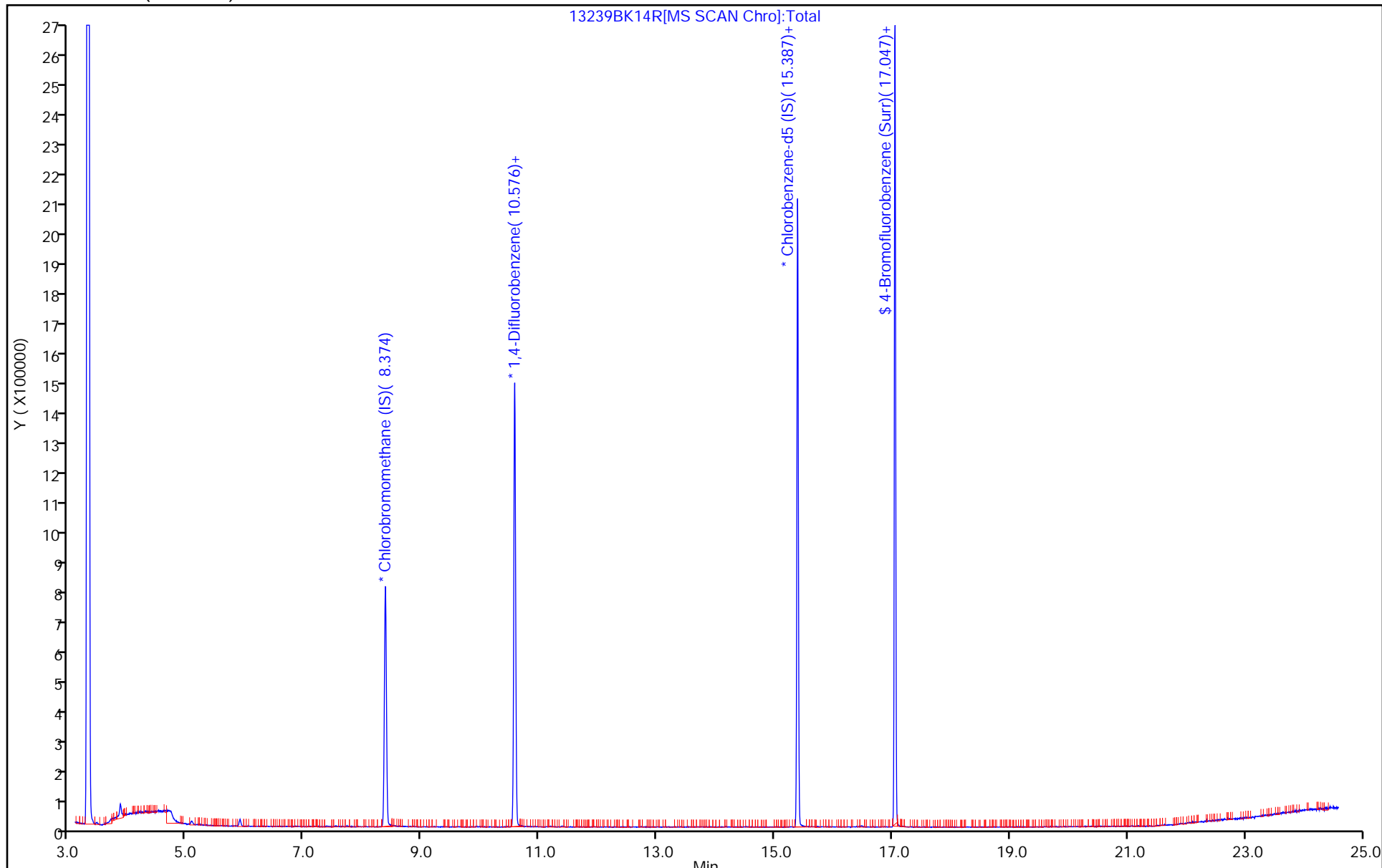
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK14R.D

Injection Date: 06-Nov-2018 12:50:30

Instrument ID: MH

Lims ID: 140-13239-A-14

Lab Sample ID: 140-13239-14

Client ID: 11703

Operator ID: HMT

ALS Bottle#: 13 Worklist Smp#: 6

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MH_TO15

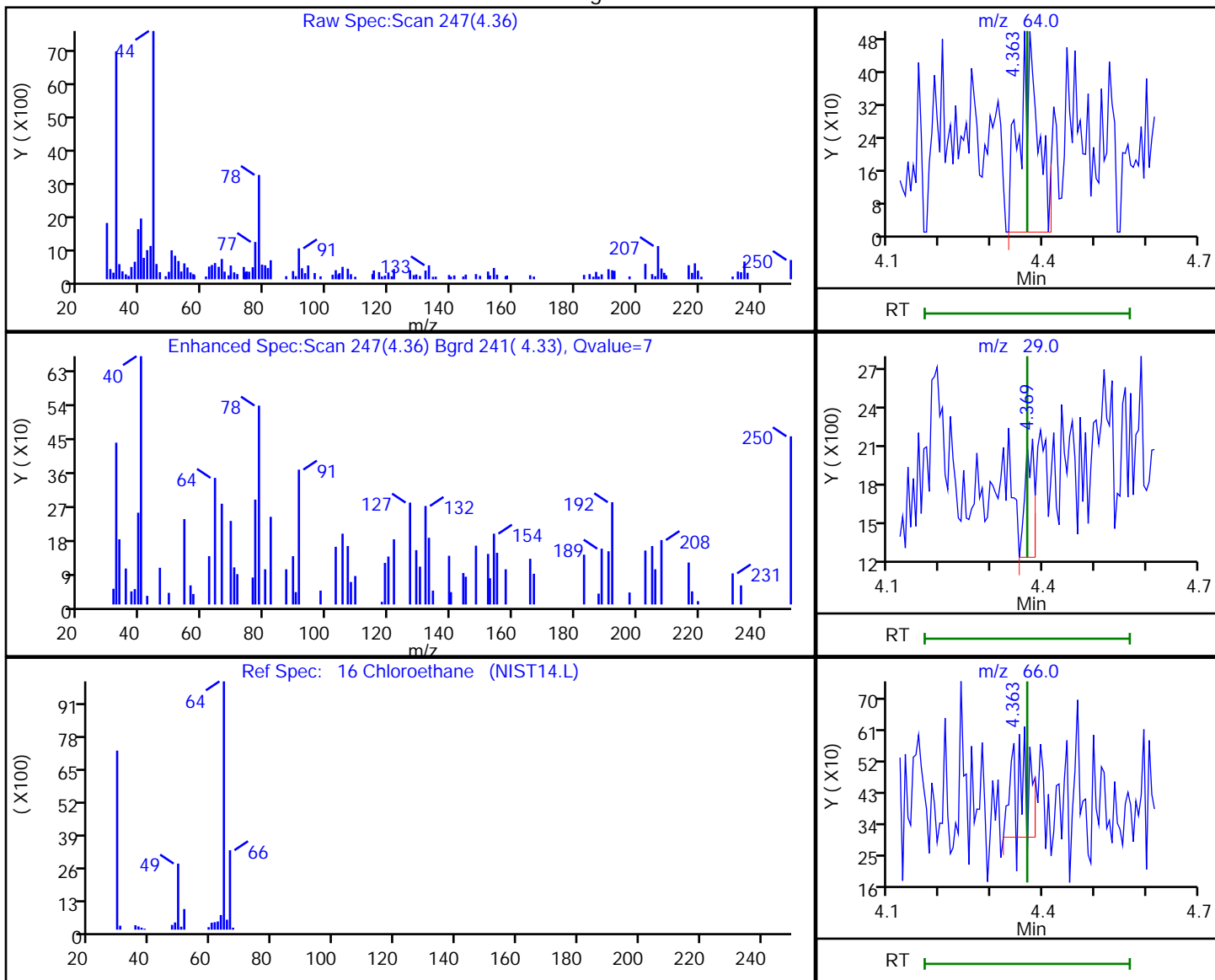
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
4.36	64.00	1231	0.034496
4.37	29.00	1096	
4.36	66.00	559	

Reviewer: sodsaip, 07-Nov-2018 10:37:05

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11777 Lab Sample ID: 140-13239-15
 Matrix: Air Lab File ID: 13239BK15R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 13:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11777 Lab Sample ID: 140-13239-15
 Matrix: Air Lab File ID: 13239BK15R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 13:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11777 Lab Sample ID: 140-13239-15
 Matrix: Air Lab File ID: 13239BK15R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 13:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK15R.D
 Lims ID: 140-13239-A-15
 Client ID: 11777
 Sample Type: Client
 Inject. Date: 06-Nov-2018 13:37:30 ALS Bottle#: 14 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009840-007
 Misc. Info.: 11777
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 07-Nov-2018 10:38:31 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0327

First Level Reviewer: sodsaip Date: 07-Nov-2018 10:38:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.369	8.374	-0.005	88	232776	4.00	
* 2 1,4-Difluorobenzene	114	10.571	10.576	-0.005	95	1223077	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.388	15.387	0.001	90	1002582	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.041	17.062	-0.021	93	680392	4.06	
25 Isopropyl alcohol	45	5.180	5.133	0.047	66	3797	0.0416	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK15R.D

Injection Date: 06-Nov-2018 13:37:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13239-A-15

Lab Sample ID: 140-13239-15

Worklist Smp#: 7

Client ID: 11777

Purge Vol: 500.000 mL

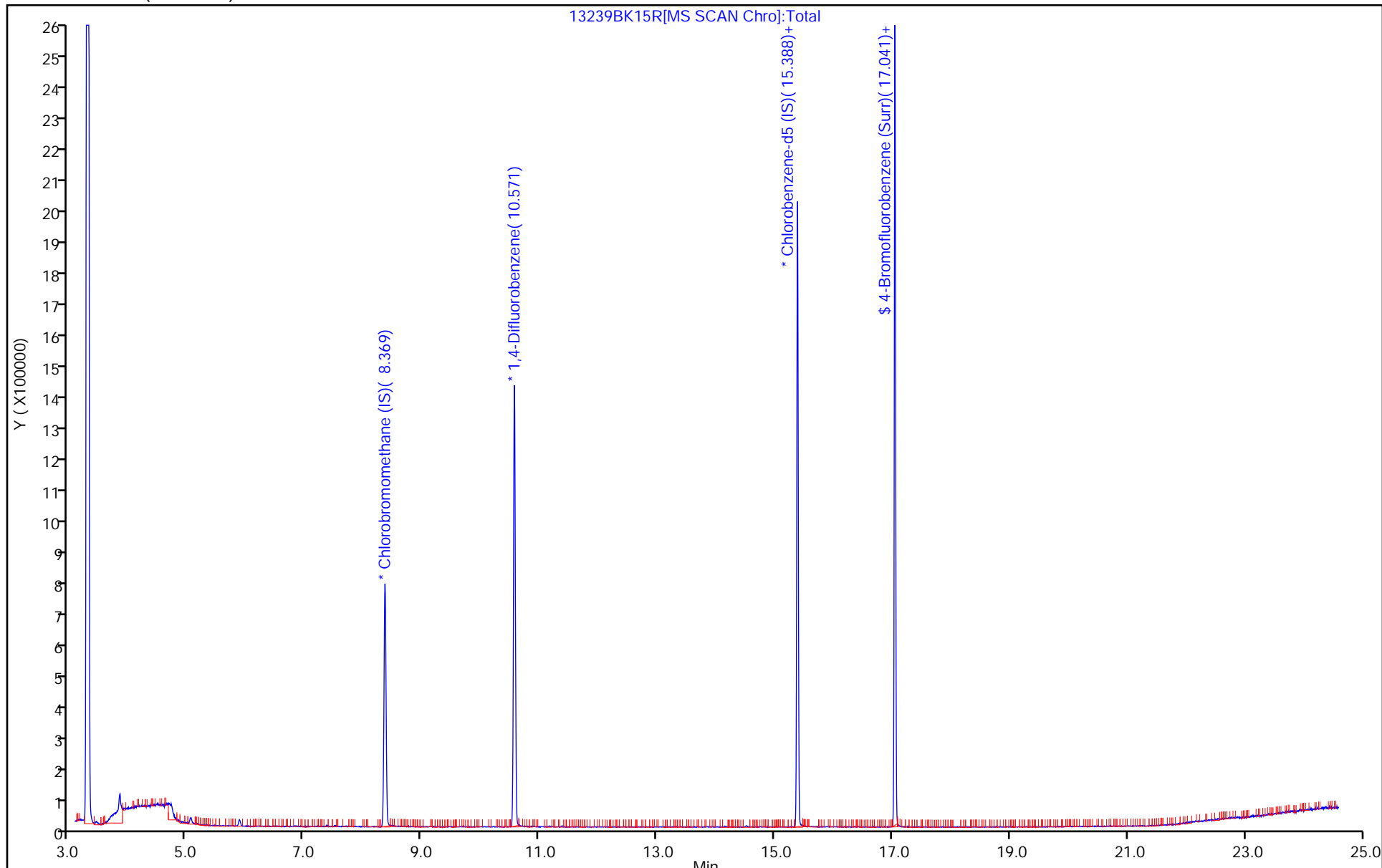
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

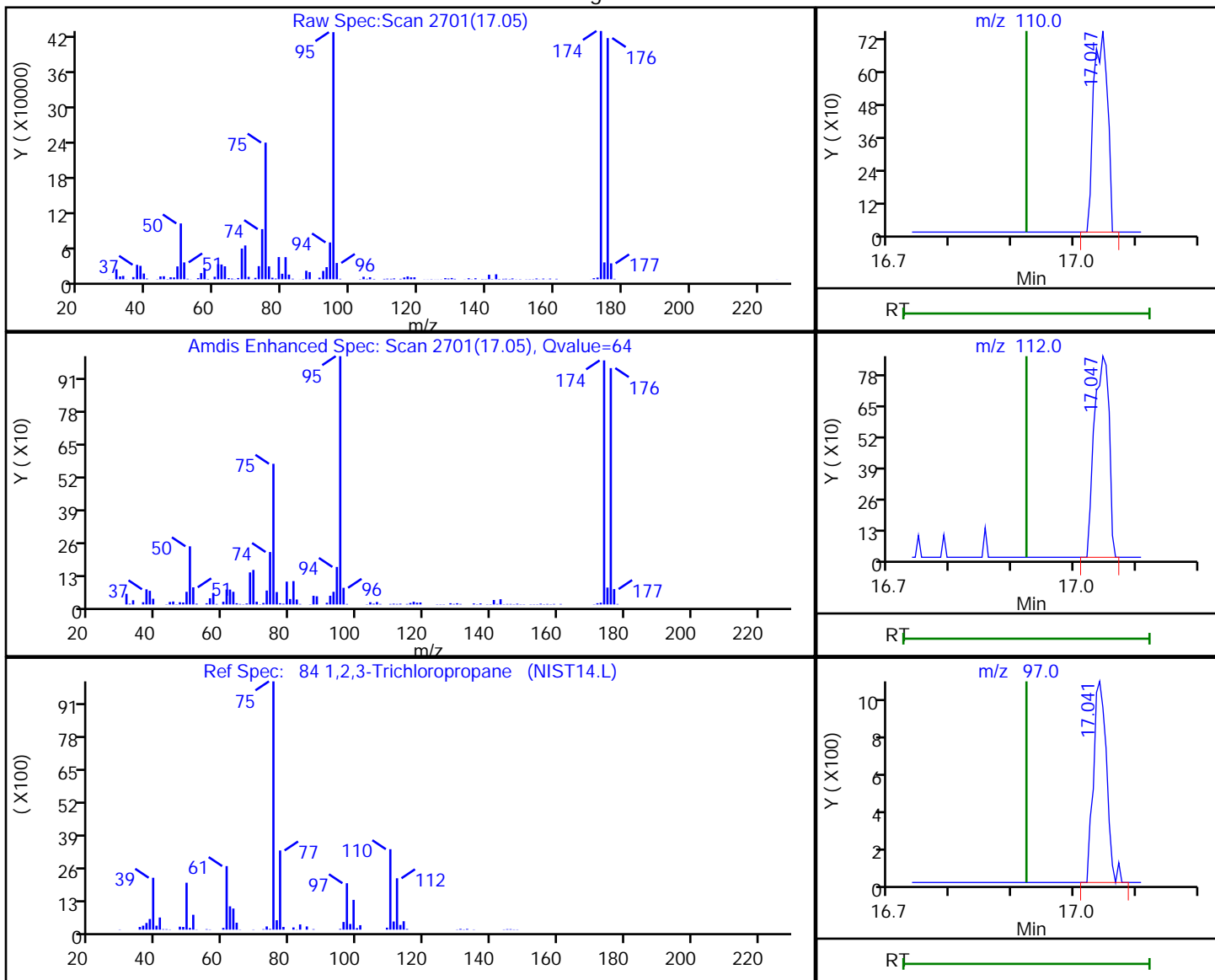


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK15R.D
 Injection Date: 06-Nov-2018 13:37:30 Instrument ID: MH
 Lims ID: 140-13239-A-15 Lab Sample ID: 140-13239-15
 Client ID: 11777
 Operator ID: HMT ALS Bottle#: 14 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

84 1,2,3-Trichloropropane, CAS: 96-18-4

Processing Results



RT	Mass	Response	Amount
17.05	110.00	1150	0.021542
17.05	112.00	1424	
17.04	97.00	1527	

Reviewer: sodsaip, 07-Nov-2018 10:38:17

Audit Action: Marked Compound Undetected

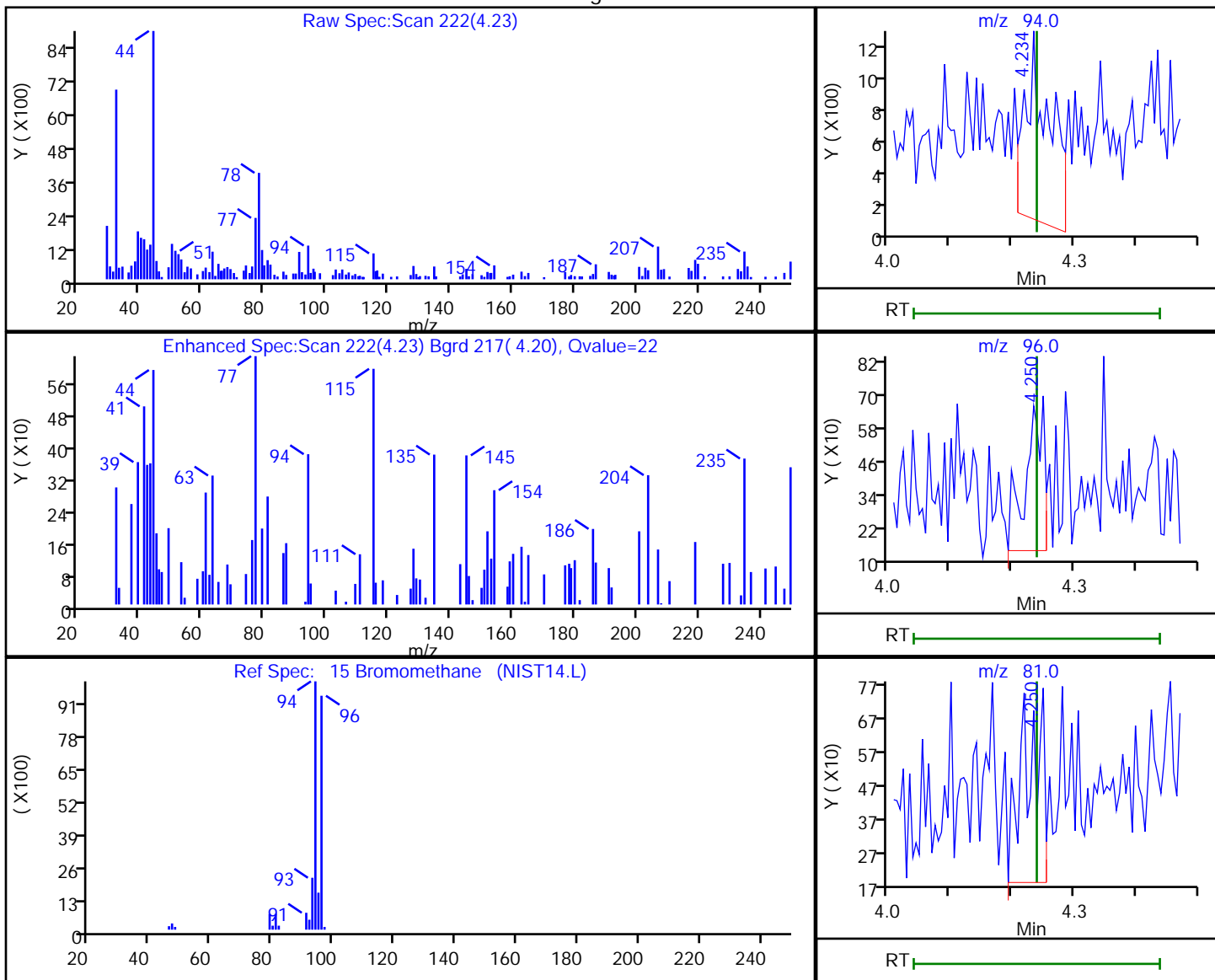
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK15R.D
 Injection Date: 06-Nov-2018 13:37:30 Instrument ID: MH
 Lims ID: 140-13239-A-15 Lab Sample ID: 140-13239-15
 Client ID: 11777
 Operator ID: HMT ALS Bottle#: 14 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.23	94.00	3121	0.030859
4.25	96.00	1114	
4.25	81.00	1205	

Reviewer: sodsaip, 07-Nov-2018 10:37:53

Audit Action: Marked Compound Undetected

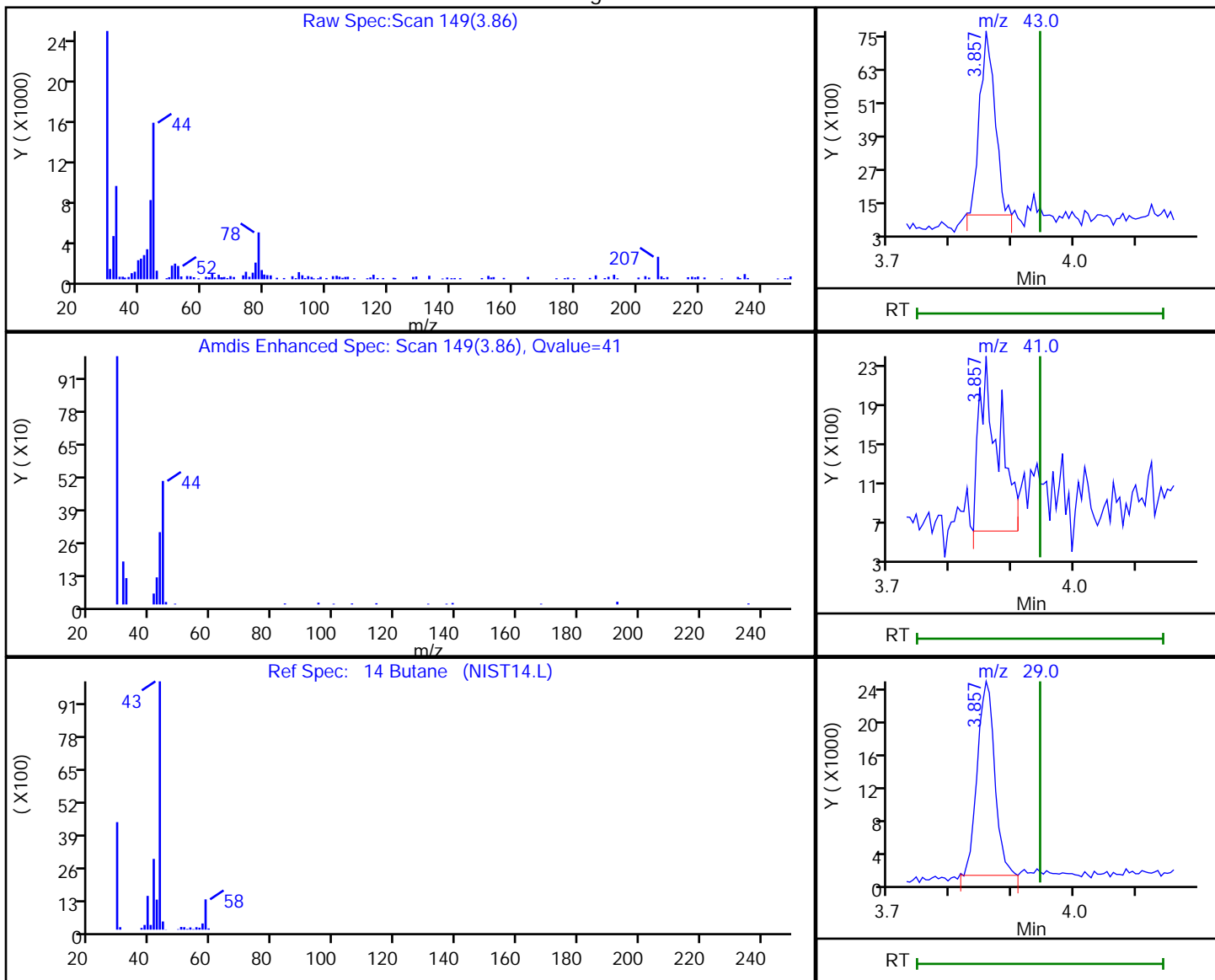
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK15R.D
 Injection Date: 06-Nov-2018 13:37:30 Instrument ID: MH
 Lims ID: 140-13239-A-15 Lab Sample ID: 140-13239-15
 Client ID: 11777
 Operator ID: HMT ALS Bottle#: 14 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.86	43.00	11448	0.130861
3.86	41.00	3954	
3.86	29.00	43723	

Reviewer: sodsaip, 07-Nov-2018 10:37:51

Audit Action: Marked Compound Undetected

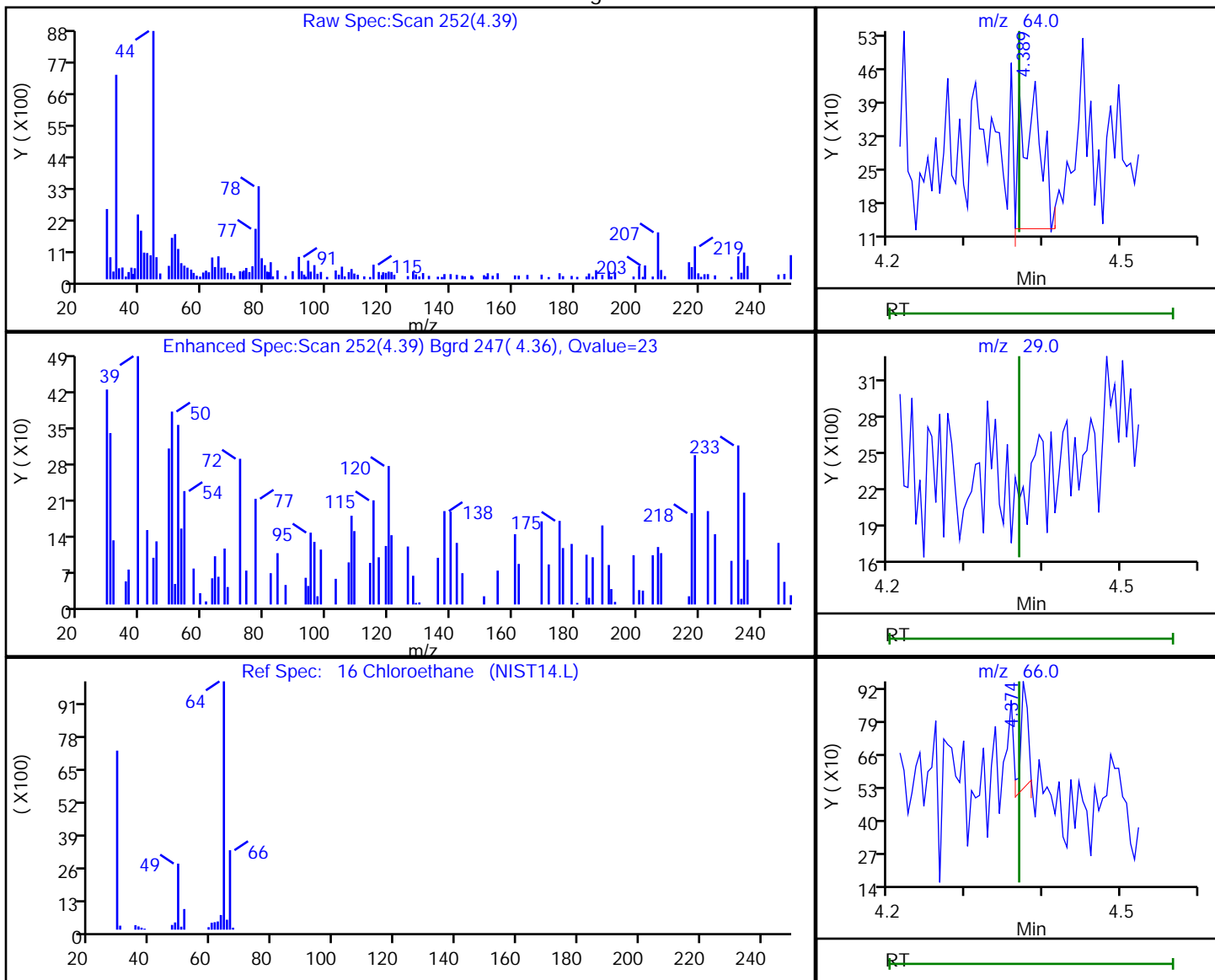
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK15R.D
 Injection Date: 06-Nov-2018 13:37:30 Instrument ID: MH
 Lims ID: 140-13239-A-15 Lab Sample ID: 140-13239-15
 Client ID: 11777
 Operator ID: HMT ALS Bottle#: 14 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
4.39	64.00	506	0.014551
4.37	29.00	0	
4.37	66.00	268	

Reviewer: sodsaip, 07-Nov-2018 10:37:54

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 10964 Lab Sample ID: 140-13239-16
 Matrix: Air Lab File ID: 13239BK16R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 14:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 10964 Lab Sample ID: 140-13239-16
 Matrix: Air Lab File ID: 13239BK16R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 14:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 10964 Lab Sample ID: 140-13239-16
 Matrix: Air Lab File ID: 13239BK16R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 14:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK16R.D
 Lims ID: 140-13239-A-16
 Client ID: 10964
 Sample Type: Client
 Inject. Date: 06-Nov-2018 14:25:30 ALS Bottle#: 15 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009840-008
 Misc. Info.: 10964
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 07-Nov-2018 10:39:16 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0327

First Level Reviewer: sodsaip Date: 07-Nov-2018 10:39:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.374	0.005	87	227323	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.576	0.000	95	1159805	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.388	15.387	0.001	90	958796	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.047	17.062	-0.015	94	648594	4.04	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK16R.D

Injection Date: 06-Nov-2018 14:25:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13239-A-16

Lab Sample ID: 140-13239-16

Worklist Smp#: 8

Client ID: 10964

Purge Vol: 500.000 mL

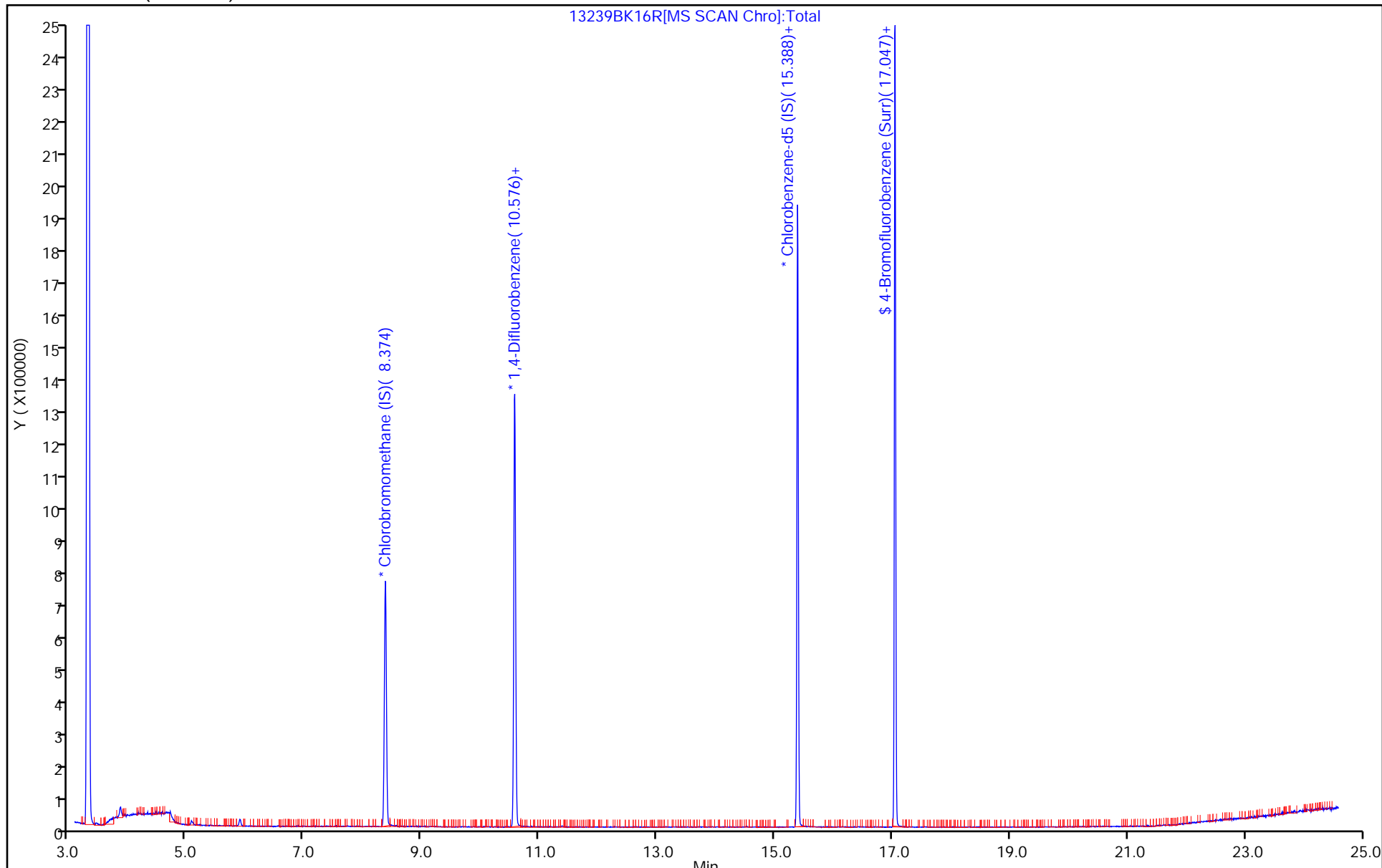
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

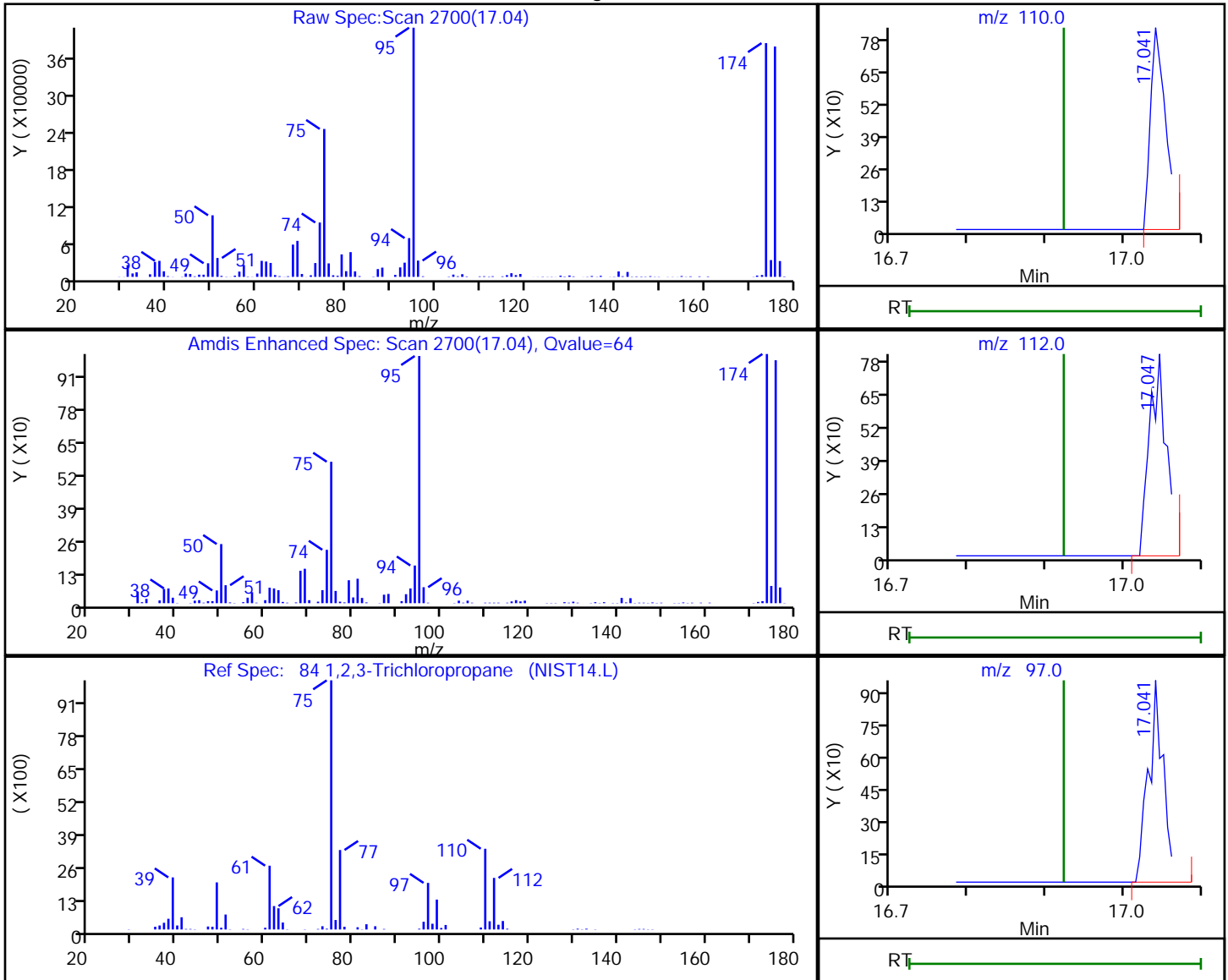


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK16R.D
 Injection Date: 06-Nov-2018 14:25:30 Instrument ID: MH
 Lims ID: 140-13239-A-16 Lab Sample ID: 140-13239-16
 Client ID: 10964
 Operator ID: HMT ALS Bottle#: 15 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

84 1,2,3-Trichloropropane, CAS: 96-18-4

Processing Results



RT	Mass	Response	Amount
17.04	110.00	1149	0.022506
17.05	112.00	1237	
17.04	97.00	1286	

Reviewer: sodsaip, 07-Nov-2018 10:39:04

Audit Action: Marked Compound Undetected

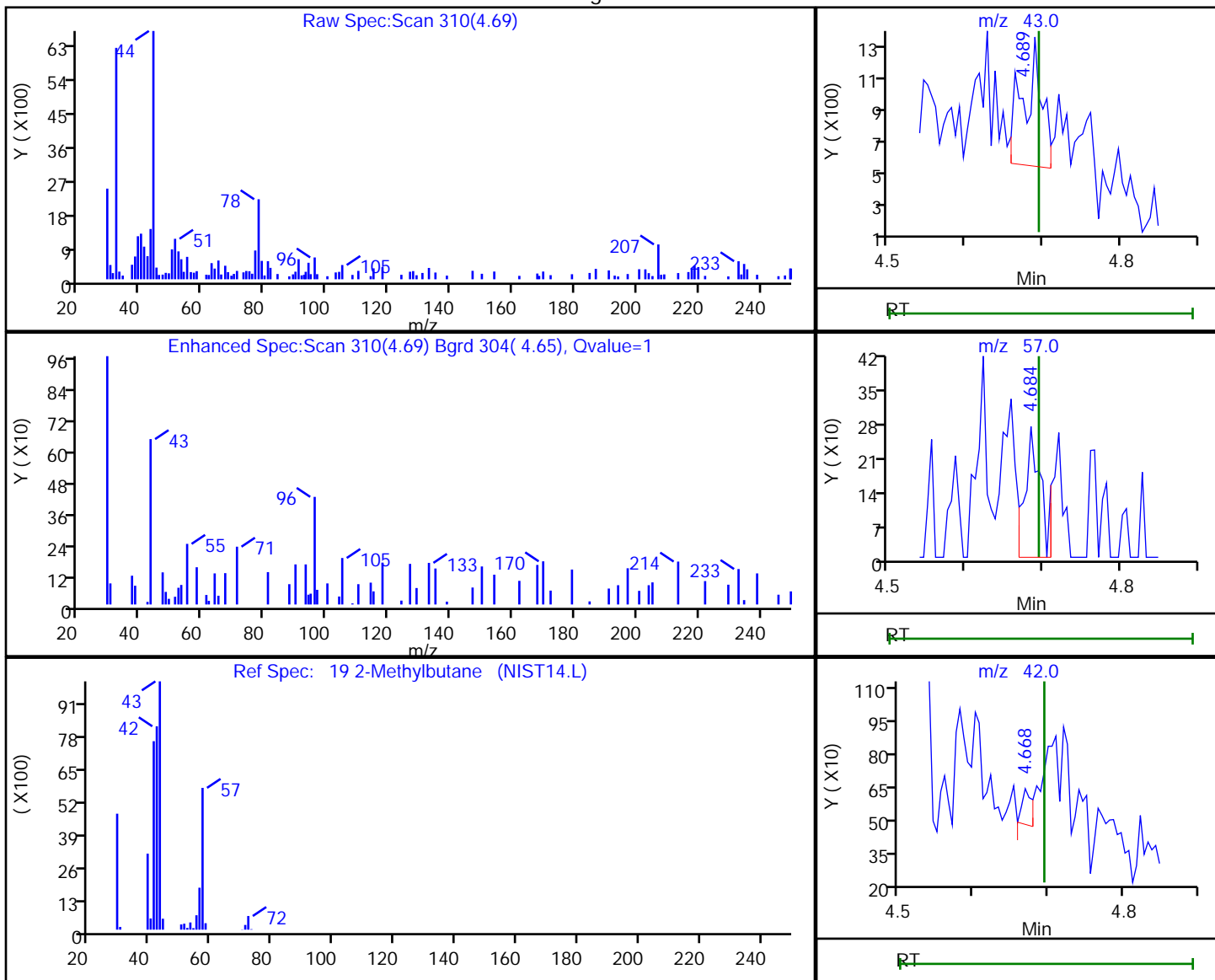
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK16R.D
 Injection Date: 06-Nov-2018 14:25:30 Instrument ID: MH
 Lims ID: 140-13239-A-16 Lab Sample ID: 140-13239-16
 Client ID: 10964
 Operator ID: HMT ALS Bottle#: 15 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.69	43.00	1317	0.022323
4.68	57.00	401	
4.67	42.00	152	

Reviewer: sodsaip, 07-Nov-2018 10:38:46

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 10835 Lab Sample ID: 140-13239-17
 Matrix: Air Lab File ID: 13239BK17R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 15:12
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 10835 Lab Sample ID: 140-13239-17
 Matrix: Air Lab File ID: 13239BK17R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 15:12
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 10835 Lab Sample ID: 140-13239-17
 Matrix: Air Lab File ID: 13239BK17R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 15:12
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK17R.D
 Lims ID: 140-13239-A-17
 Client ID: 10835
 Sample Type: Client
 Inject. Date: 06-Nov-2018 15:12:30 ALS Bottle#: 16 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009840-009
 Misc. Info.: 10835
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 07-Nov-2018 10:40:10 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0327

First Level Reviewer: sodsaip Date: 07-Nov-2018 10:40:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.369	8.374	-0.005	89	216853	4.00	
* 2 1,4-Difluorobenzene	114	10.571	10.576	-0.005	95	1151474	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.388	15.387	0.001	90	953727	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.041	17.062	-0.021	93	637862	4.00	
25 Isopropyl alcohol	45	5.175	5.133	0.042	96	9897	0.1163	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK17R.D

Injection Date: 06-Nov-2018 15:12:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13239-A-17

Lab Sample ID: 140-13239-17

Worklist Smp#: 9

Client ID: 10835

Purge Vol: 500.000 mL

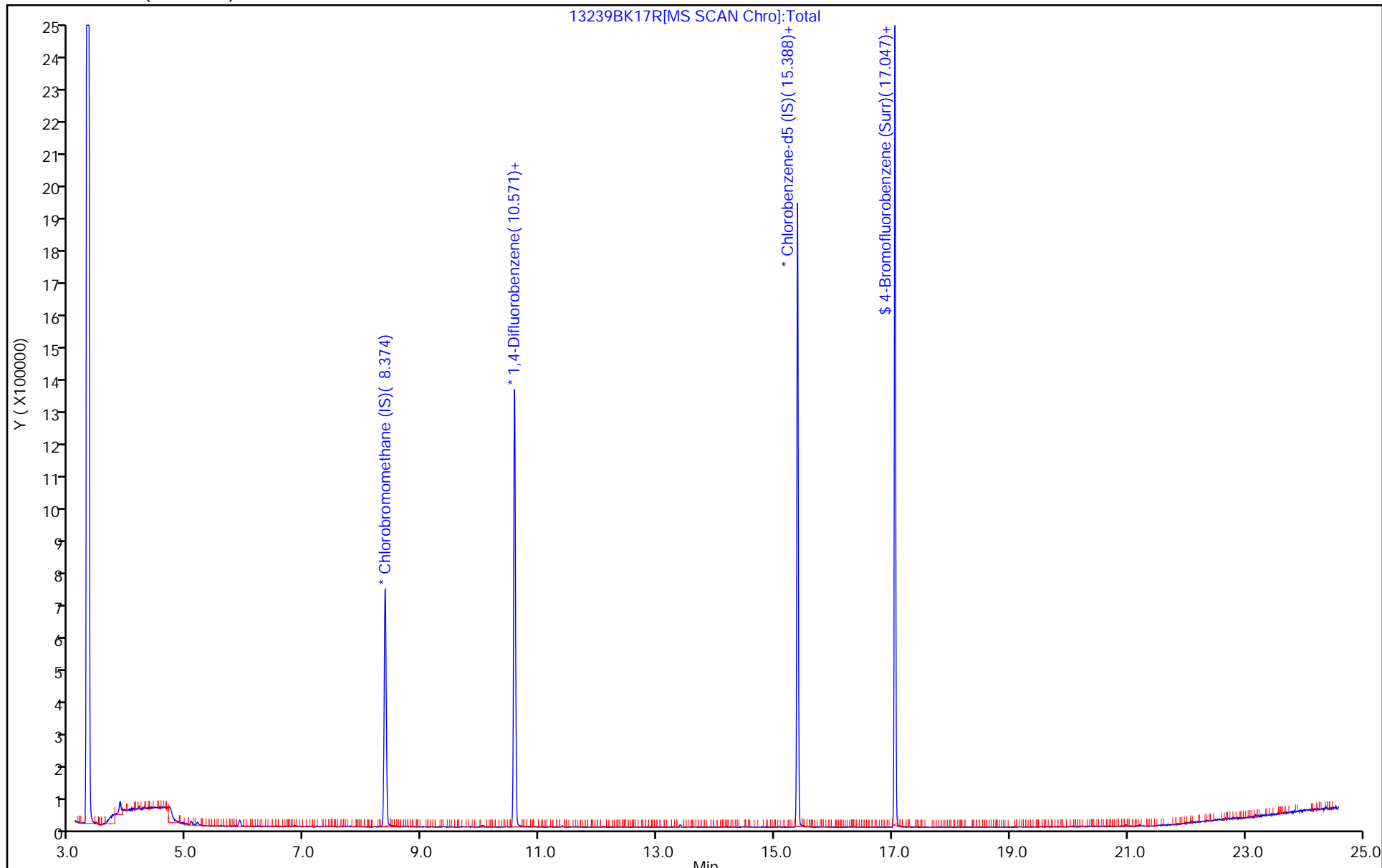
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

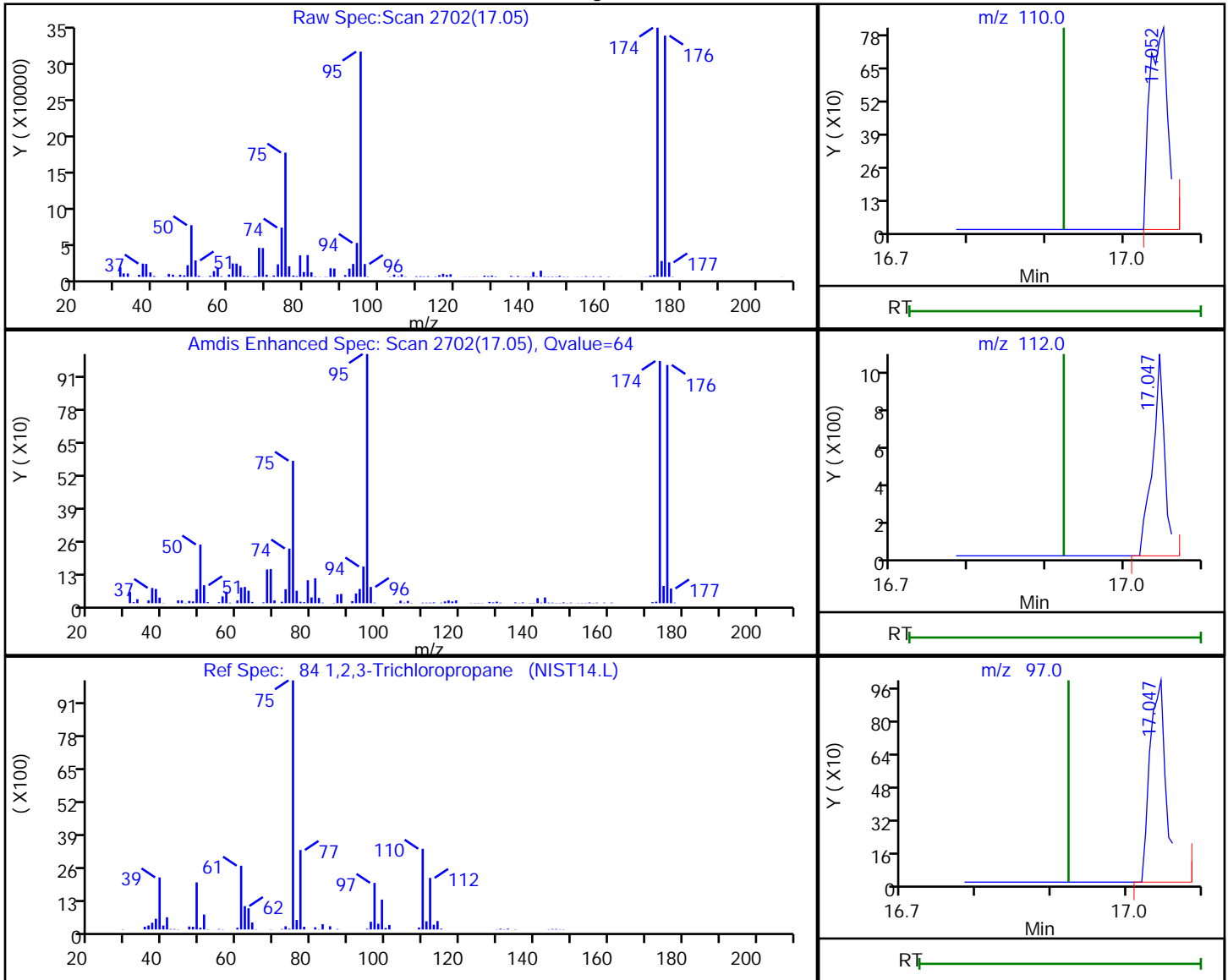


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK17R.D
 Injection Date: 06-Nov-2018 15:12:30 Instrument ID: MH
 Lims ID: 140-13239-A-17 Lab Sample ID: 140-13239-17
 Client ID: 10835
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MH_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

84 1,2,3-Trichloropropane, CAS: 96-18-4

Processing Results



RT	Mass	Response	Amount
17.05	110.00	1257	0.024752
17.05	112.00	1143	
17.05	97.00	1473	

Reviewer: sodsaip, 07-Nov-2018 10:39:55

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK17R.D

Injection Date: 06-Nov-2018 15:12:30

Instrument ID: MH

Lims ID: 140-13239-A-17

Lab Sample ID: 140-13239-17

Client ID: 10835

Operator ID: HMT

ALS Bottle#: 16 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MH_TO15

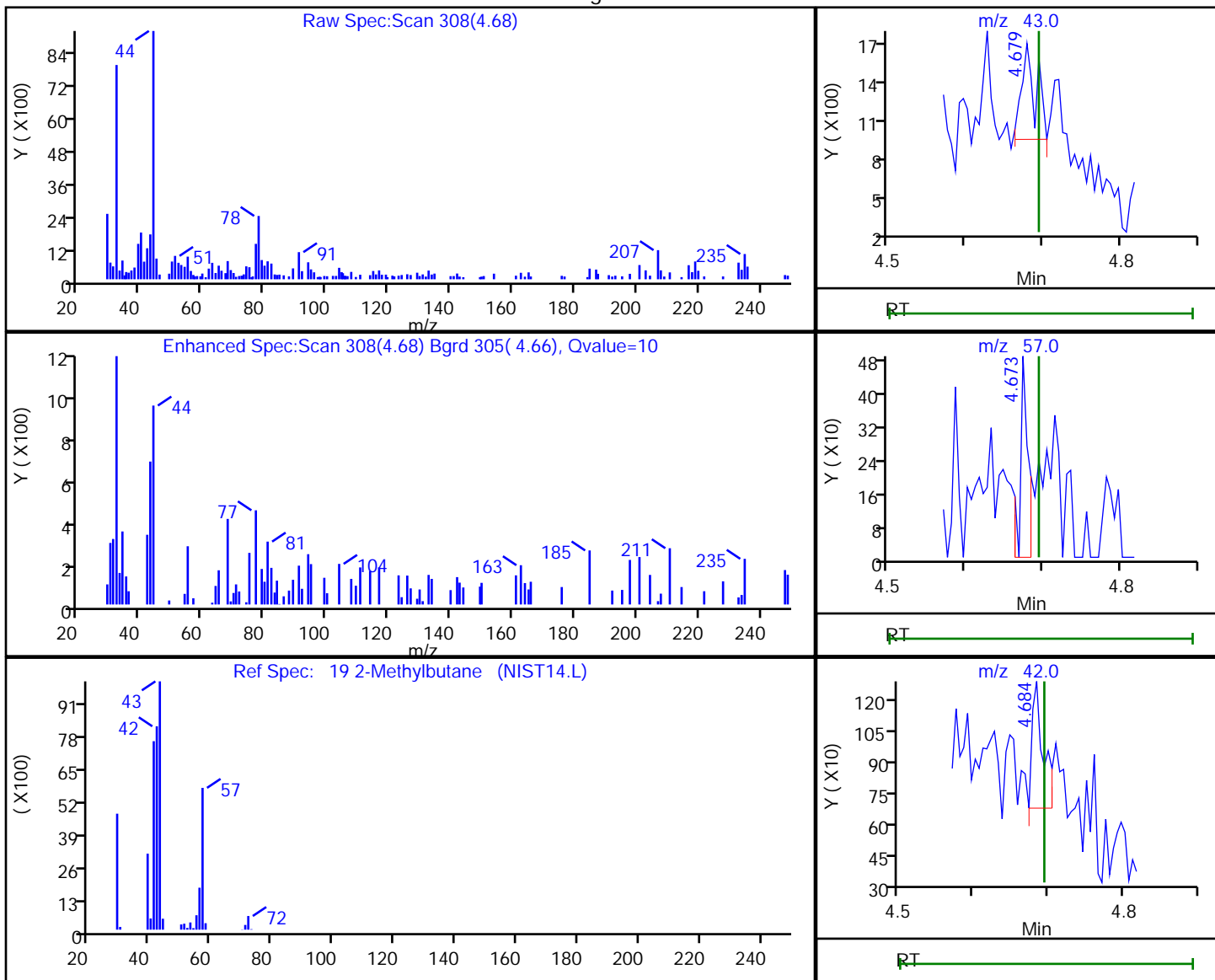
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.68	43.00	912	0.016205
4.67	57.00	339	
4.68	42.00	636	

Reviewer: sodsaip, 07-Nov-2018 10:39:35

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK17R.D

Injection Date: 06-Nov-2018 15:12:30

Instrument ID: MH

Lims ID: 140-13239-A-17

Lab Sample ID: 140-13239-17

Client ID: 10835

Operator ID: HMT

ALS Bottle#: 16 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MH_TO15

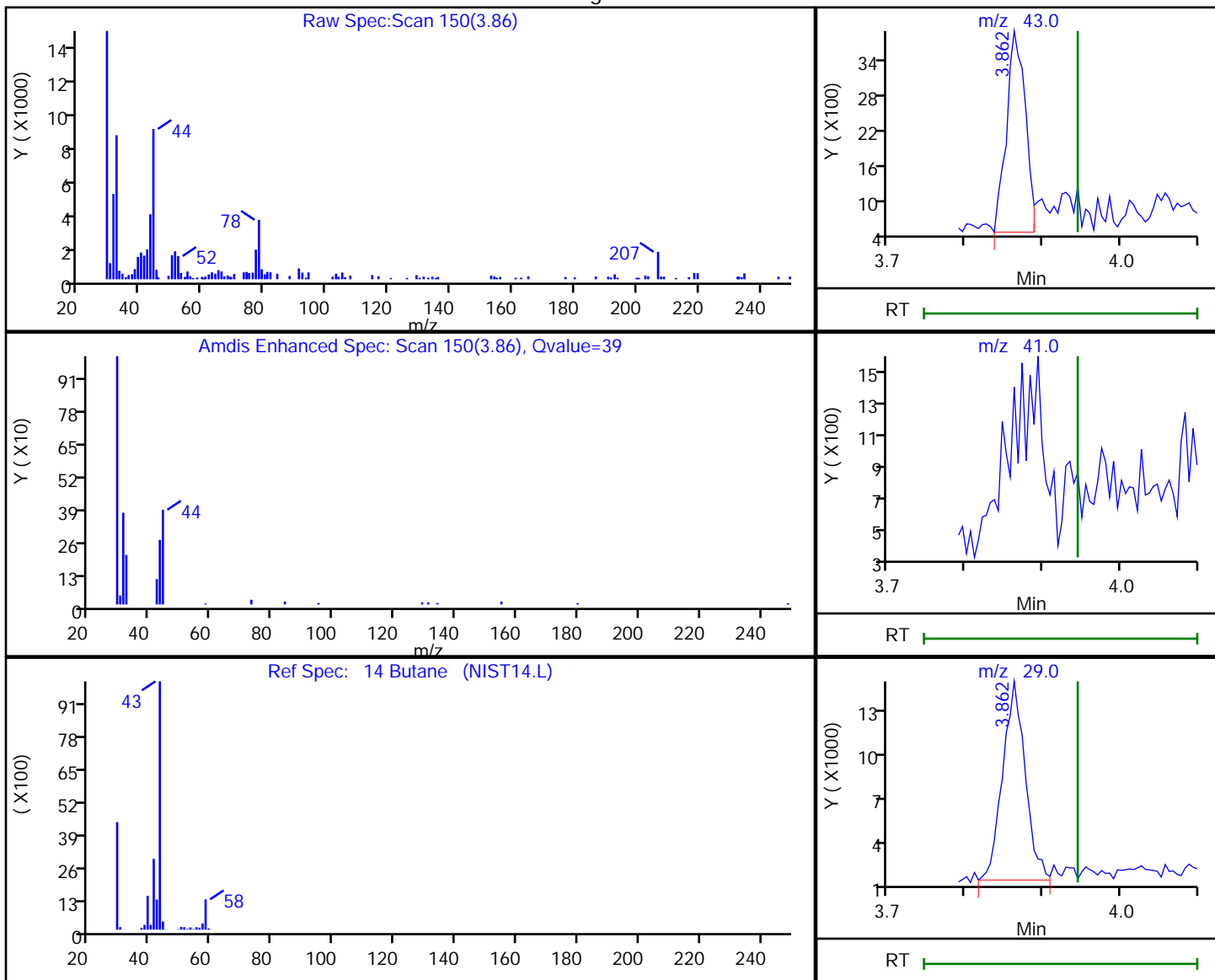
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.86	43.00	5871	0.072039
3.94	41.00	0	
3.86	29.00	27596	

Reviewer: sodsaip, 07-Nov-2018 10:39:32

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11575 Lab Sample ID: 140-13239-18
 Matrix: Air Lab File ID: 13239BK18R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 15:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11575 Lab Sample ID: 140-13239-18
 Matrix: Air Lab File ID: 13239BK18R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 15:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13239-1
 SDG No.: _____
 Client Sample ID: 11575 Lab Sample ID: 140-13239-18
 Matrix: Air Lab File ID: 13239BK18R.D
 Analysis Method: TO-15 Date Collected: 11/02/2018 12:15
 Sample wt/vol: 200 (mL) Date Analyzed: 11/06/2018 15:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 24957 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK18R.D
 Lims ID: 140-13239-A-18
 Client ID: 11575
 Sample Type: Client
 Inject. Date: 06-Nov-2018 15:58:30 ALS Bottle#: 1 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0009840-010
 Misc. Info.: 11575
 Operator ID: HMT Instrument ID: MH
 Method: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\MH_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 07-Nov-2018 10:41:05 Calib Date: 18-Oct-2018 03:53:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MH\20181017-9689.b\HJ171C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0327

First Level Reviewer: sodsaip Date: 07-Nov-2018 10:41:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.379	8.374	0.005	88	213084	4.00	
* 2 1,4-Difluorobenzene	114	10.576	10.576	0.000	96	1132018	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.388	15.387	0.001	90	949090	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.062	17.062	0.000	91	619245	3.90	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK18R.D

Injection Date: 06-Nov-2018 15:58:30

Instrument ID: MH

Operator ID: HMT

Lims ID: 140-13239-A-18

Lab Sample ID: 140-13239-18

Worklist Smp#: 10

Client ID: 11575

Purge Vol: 500.000 mL

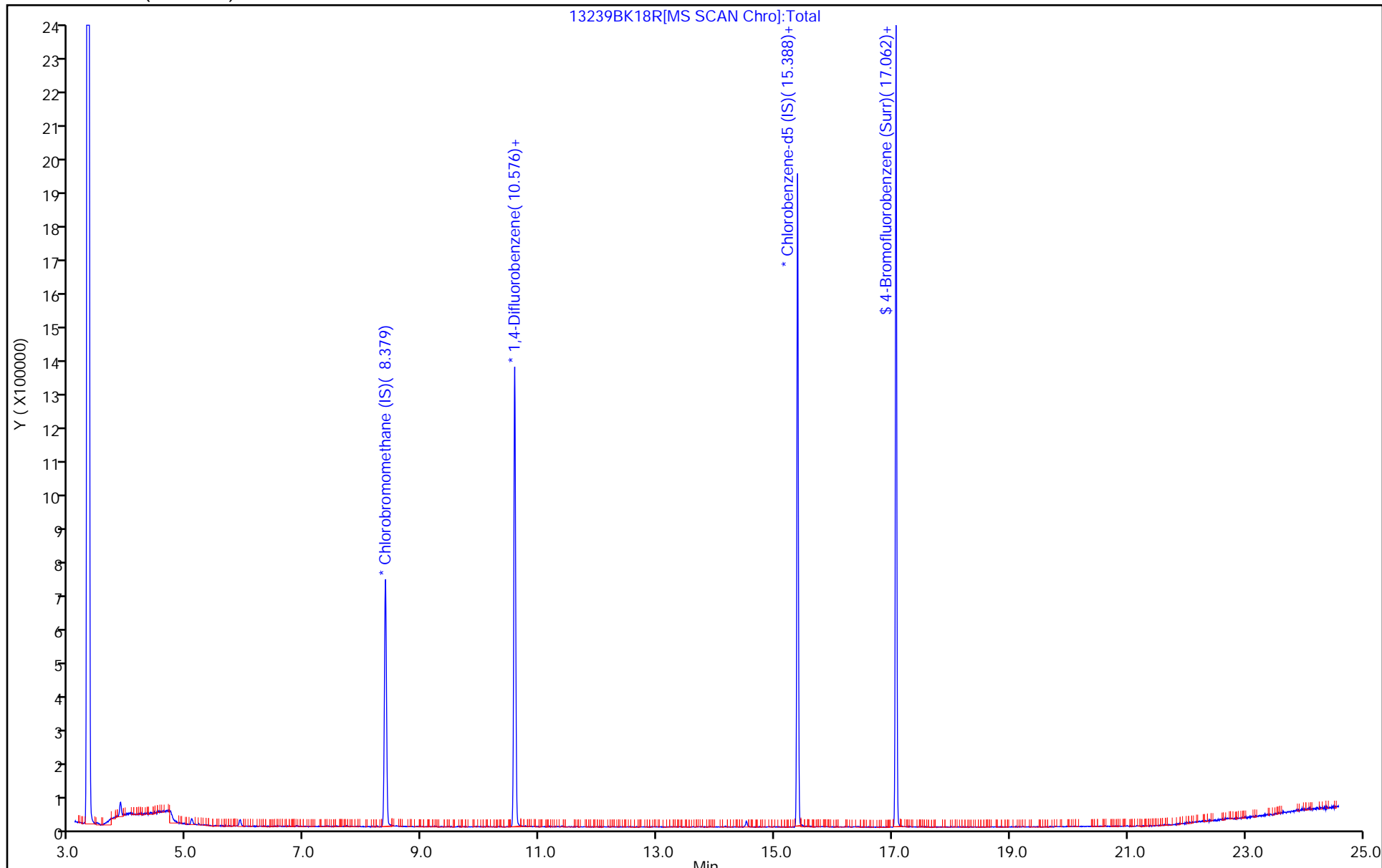
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MH_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK18R.D

Injection Date: 06-Nov-2018 15:58:30

Instrument ID: MH

Lims ID: 140-13239-A-18

Lab Sample ID: 140-13239-18

Client ID: 11575

Operator ID: HMT

ALS Bottle#: 1 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MH_TO15

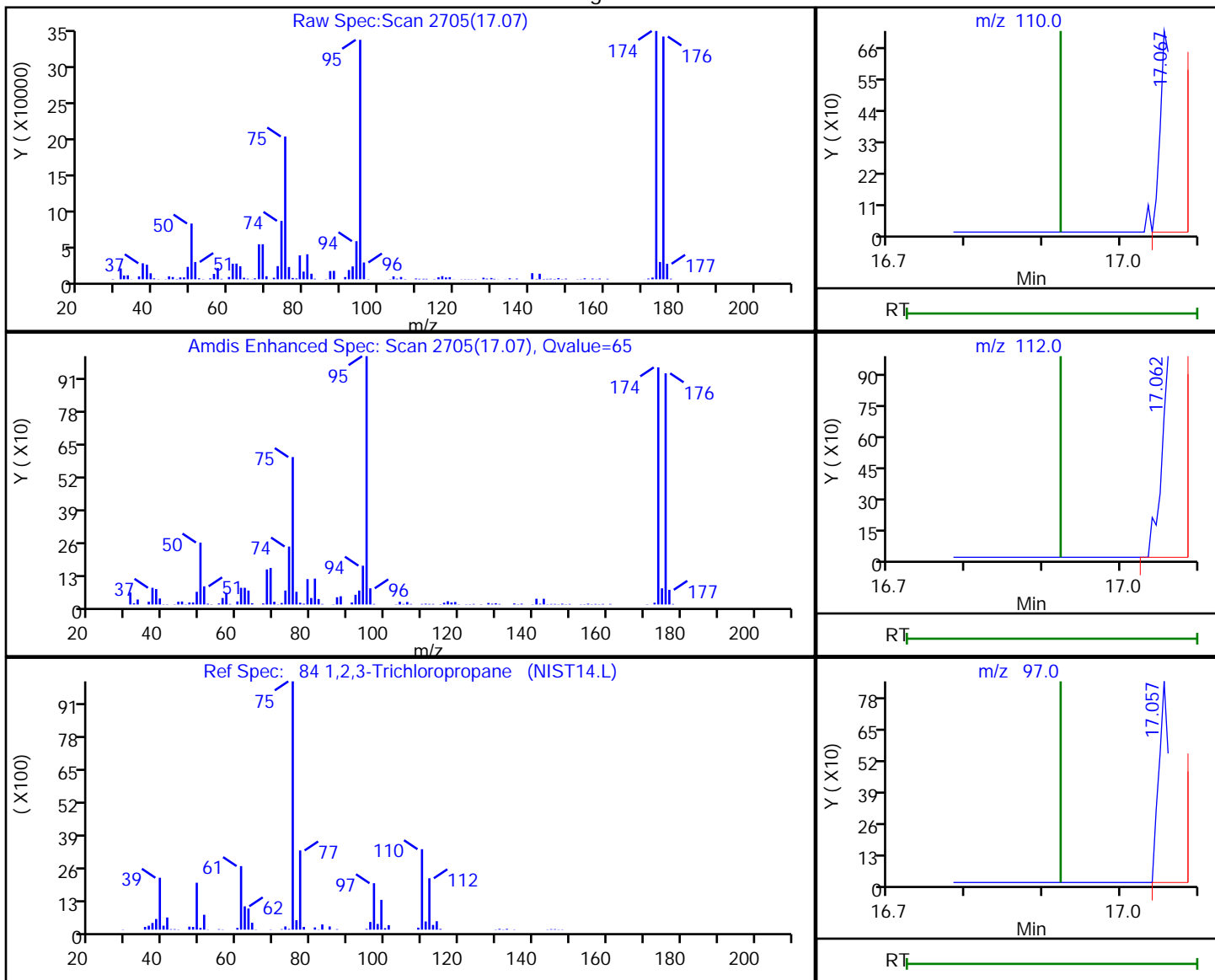
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

84 1,2,3-Trichloropropane, CAS: 96-18-4

Processing Results



RT	Mass	Response	Amount
17.07	110.00	1151	0.022776
17.06	112.00	1319	
17.06	97.00	1093	

Reviewer: sodsaip, 07-Nov-2018 10:40:51

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK18R.D

Injection Date: 06-Nov-2018 15:58:30

Instrument ID: MH

Lims ID: 140-13239-A-18

Lab Sample ID: 140-13239-18

Client ID: 11575

Operator ID: HMT

ALS Bottle#: 1 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MH_TO15

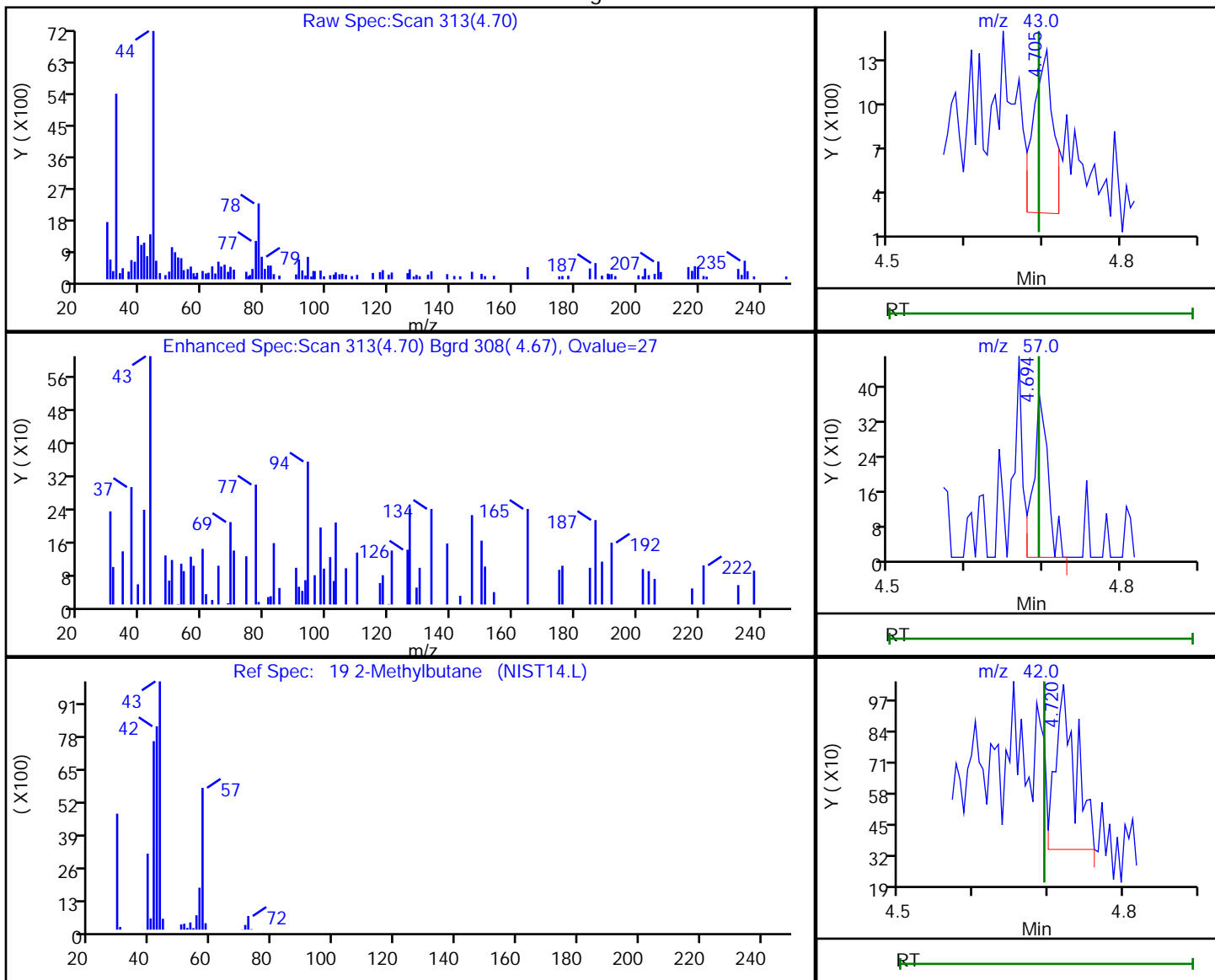
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.70	43.00	1826	0.033018
4.69	57.00	487	
4.72	42.00	1303	

Reviewer: sodsaip, 07-Nov-2018 10:40:33

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK18R.D

Injection Date: 06-Nov-2018 15:58:30

Instrument ID: MH

Lims ID: 140-13239-A-18

Lab Sample ID: 140-13239-18

Client ID: 11575

Operator ID: HMT

ALS Bottle#: 1 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MH_TO15

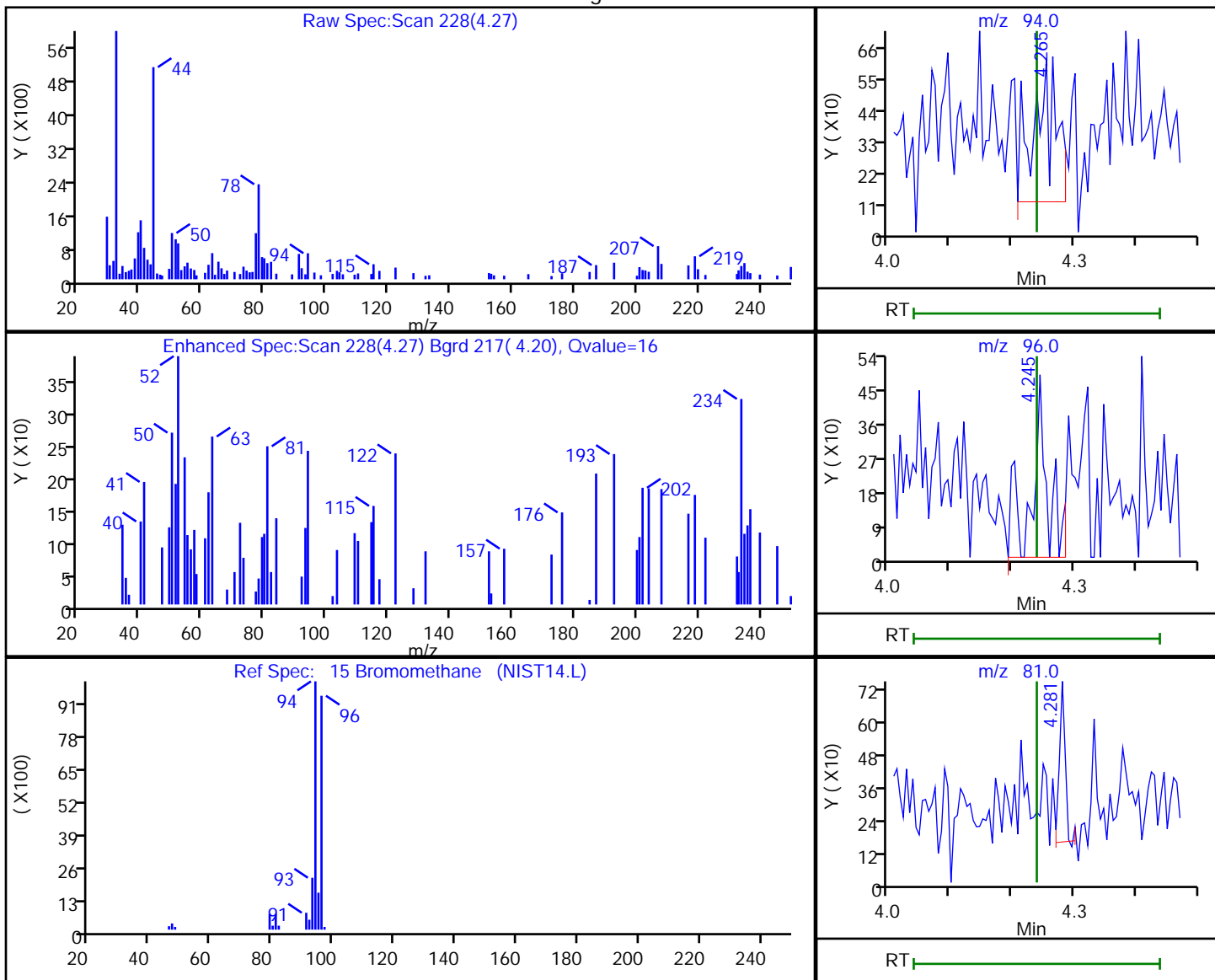
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.27	94.00	1280	0.013826
4.24	96.00	881	
4.28	81.00	389	

Reviewer: sodsaip, 07-Nov-2018 10:40:29

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MH\20181031-9840.b\13239BK18R.D

Injection Date: 06-Nov-2018 15:58:30

Instrument ID: MH

Lims ID: 140-13239-A-18

Lab Sample ID: 140-13239-18

Client ID: 11575

Operator ID: HMT

ALS Bottle#: 1 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MH_TO15

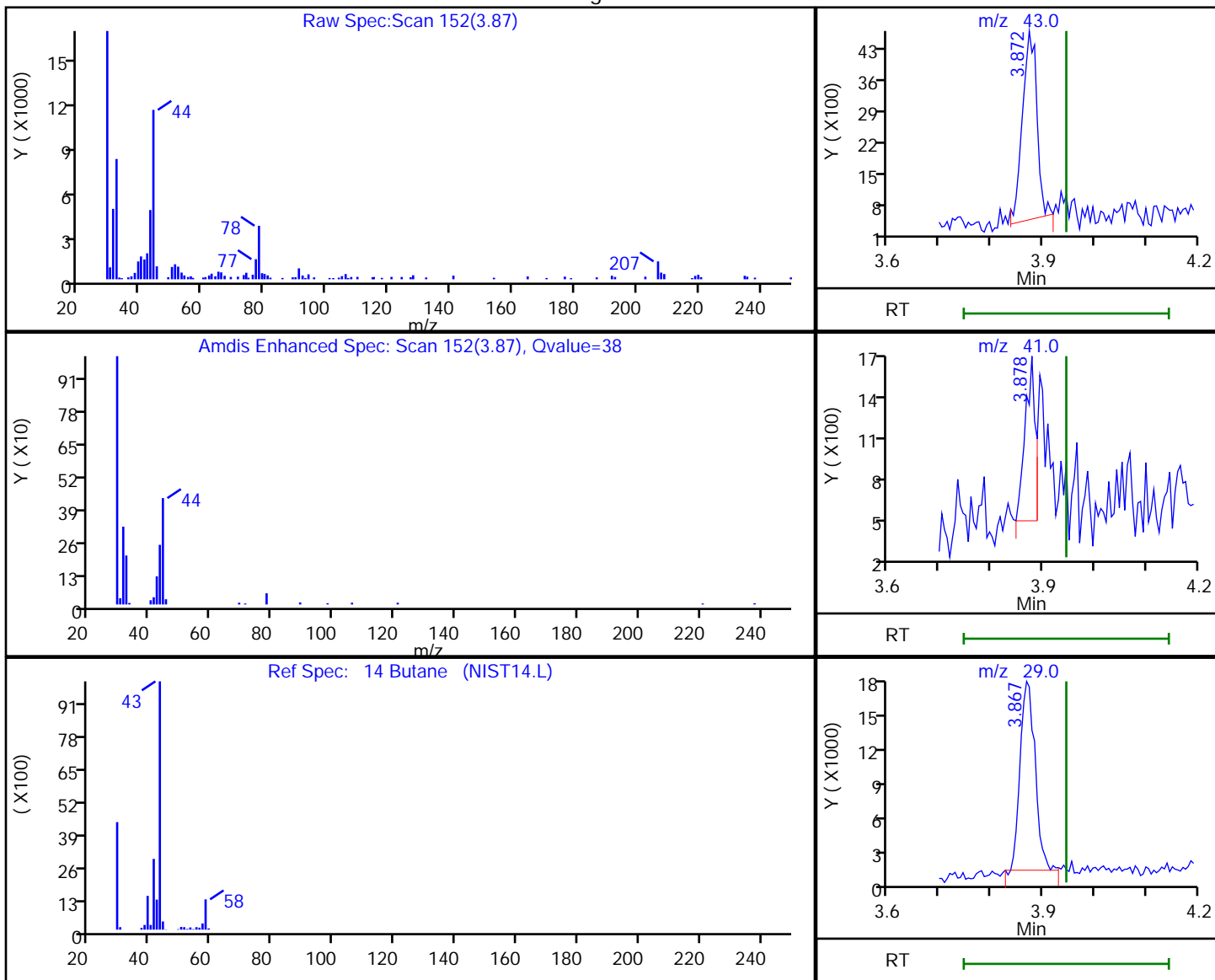
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results




RT	Mass	Response	Amount
3.87	43.00	8232	0.102795
3.88	41.00	1612	
3.87	29.00	31830	

Reviewer: sodsaip, 07-Nov-2018 10:40:27

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Shipping and Receiving Documents

Client Contact Information Company: ETA Tech Address: 980 Award Rd City/State/Zip: Annapolis, MD / 21403 Phone: 410-990-4607 FAX: _____		Project Manager: Peter Rich Phone: 410-990-4607 Site Contact: TAL Contact:		Sampled By: J. M. Wilks 1 of 1 COCs															
Project Name: LMC MRC Site/Location: MRAS / Building-A PO # 17-0512140		180325 BALTIMORE																	
Analysis Turnaround Time Standard (Specify) Rush (Specify)																			
Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
11-14	1410	1411	30	4	11594	11623	✓												
Sample Identification BLDG-A MIDGAC																			
Sampled by:  140-13371 Chain of Custody																			
Special Instructions/QC Requirements & Comments: Received @ ambient, 1 box Fed ex 10/24/18 custody seal intact TRF# 7787 279 0387 RW 11/16/18																			
Canisters Shipped by:		Date/Time:		Canisters Received by:															
Samples Relinquished by: <i>[Signature]</i>		Date/Time: 11-14-18 / 1505		Received by: <i>[Signature]</i>		1 can 1 KR													
Relinquished by: <i>[Signature]</i>		Date/Time: 11/14/18 / 1700		Received by: <i>[Signature]</i>		11/16/18 10:50 1 ds TA-18													
Lab Use Only		Shipper Name:		Opened by:		Condition:													

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	pH test strip lot number: _____
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation _____ Box 18A: Residual Chlorine _____
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only)	Date: _____ Time: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/	<input type="checkbox"/> Residual Chlorine	
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, lab will adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	

Project #: 14002921 PM Instructions: _____

Sample Receiving Associate: ke w Date: 11/6/18

ANALYTICAL REPORT

Job Number: 140-13856-1

Job Description: LMMRC SSDS - Middle River

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401
Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
1/10/2019 11:44 AM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
01/10/2019

cc: Belssi Chang
Amy Thomson
Michael Wilks

The test results in this report meet all 2003 NELAC and 2003 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

TestAmerica Laboratories, Inc.

TestAmerica Knoxville 5815 Middlebrook Pike, Knoxville, TN 37921
Tel (865) 291-3000 Fax (865) 584-4315 www.testamericainc.com

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Definitions/Glossary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-13856-1

Receipt

The samples were received on 1/3/2019 at 9:45 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-13856-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.0		2.0	0.58	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.77	J	2.0	0.38	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.77	J	2.0	0.38	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	19		2.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.2		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	27		2.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	5.1	J B	10	3.3	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	130		2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	200		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.3		6.4	1.8	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.7	J	7.1	1.3	ug/m3	1		TO 15 LL	Total/NA
Chloroform	3.7	J	9.8	1.8	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	77		7.9	2.4	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	17		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	110		7.9	1.4	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	18	J B	35	11	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	690		11	1.6	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1100		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A MID GAC

Lab Sample ID: 140-13856-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.21	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.39	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.5		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	18		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.52		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.9		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.12	J	0.40	0.095	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	21		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.7	J B	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.35	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	32		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.67	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.4	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	7.4		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	73		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.6		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	16		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.48	J	1.6	0.38	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	84		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.8	J B	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.4	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	170		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-13856-3

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Client Sample ID: BLDG-A EFFLUENT (Continued)

Lab Sample ID: 140-13856-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.47		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.51		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	4.7		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.6		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	15		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.4	J B	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.28	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.12	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	9.9		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	2.9		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.5		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.5		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	18		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	11		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	58		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.9	J B	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	1.9	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.47	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	54		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	15		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-13856-1

Date Collected: 12/28/18 15:50

Matrix: Air

Date Received: 01/03/19 09:45

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.0		2.0	0.58	ppb v/v			01/03/19 20:38	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			01/03/19 20:38	1
Chlorodifluoromethane	0.77	J	2.0	0.38	ppb v/v			01/03/19 20:38	1
Chloroform	0.77	J	2.0	0.38	ppb v/v			01/03/19 20:38	1
cis-1,2-Dichloroethene	19		2.0	0.60	ppb v/v			01/03/19 20:38	1
Dichlorodifluoromethane	ND		2.0	0.68	ppb v/v			01/03/19 20:38	1
1,1-Dichloroethane	4.2		2.0	0.25	ppb v/v			01/03/19 20:38	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			01/03/19 20:38	1
1,1-Dichloroethene	27		2.0	0.35	ppb v/v			01/03/19 20:38	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			01/03/19 20:38	1
Methylene Chloride	5.1	J B	10	3.3	ppb v/v			01/03/19 20:38	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			01/03/19 20:38	1
Naphthalene	ND		1.0	1.0	ppb v/v			01/03/19 20:38	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			01/03/19 20:38	1
Toluene	ND		3.0	3.0	ppb v/v			01/03/19 20:38	1
trans-1,2-Dichloroethene	ND		2.0	0.50	ppb v/v			01/03/19 20:38	1
1,2,4-Trichlorobenzene	ND		2.0	0.98	ppb v/v			01/03/19 20:38	1
1,1,1-Trichloroethane	130		2.0	0.30	ppb v/v			01/03/19 20:38	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			01/03/19 20:38	1
Trichloroethene	200		1.0	0.35	ppb v/v			01/03/19 20:38	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			01/03/19 20:38	1
1,2,4-Trimethylbenzene	ND		2.0	0.63	ppb v/v			01/03/19 20:38	1
1,3,5-Trimethylbenzene	ND		2.0	0.65	ppb v/v			01/03/19 20:38	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			01/03/19 20:38	1
Xylenes, Total	ND		4.0	0.60	ppb v/v			01/03/19 20:38	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	6.3		6.4	1.8	ug/m3			01/03/19 20:38	1
Carbon tetrachloride	ND		13	2.4	ug/m3			01/03/19 20:38	1
Chlorodifluoromethane	2.7	J	7.1	1.3	ug/m3			01/03/19 20:38	1
Chloroform	3.7	J	9.8	1.8	ug/m3			01/03/19 20:38	1
cis-1,2-Dichloroethene	77		7.9	2.4	ug/m3			01/03/19 20:38	1
Dichlorodifluoromethane	ND		9.9	3.3	ug/m3			01/03/19 20:38	1
1,1-Dichloroethane	17		8.1	1.0	ug/m3			01/03/19 20:38	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			01/03/19 20:38	1
1,1-Dichloroethene	110		7.9	1.4	ug/m3			01/03/19 20:38	1
Ethylbenzene	ND		8.7	2.9	ug/m3			01/03/19 20:38	1
Methylene Chloride	18	J B	35	11	ug/m3			01/03/19 20:38	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			01/03/19 20:38	1
Naphthalene	ND		5.2	5.2	ug/m3			01/03/19 20:38	1
Tetrachloroethene	ND		14	2.7	ug/m3			01/03/19 20:38	1
Toluene	ND		11	11	ug/m3			01/03/19 20:38	1
trans-1,2-Dichloroethene	ND		7.9	2.0	ug/m3			01/03/19 20:38	1
1,2,4-Trichlorobenzene	ND		15	7.2	ug/m3			01/03/19 20:38	1
1,1,1-Trichloroethane	690		11	1.6	ug/m3			01/03/19 20:38	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			01/03/19 20:38	1
Trichloroethene	1100		5.4	1.9	ug/m3			01/03/19 20:38	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			01/03/19 20:38	1
1,2,4-Trimethylbenzene	ND		9.8	3.1	ug/m3			01/03/19 20:38	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-13856-1

Date Collected: 12/28/18 15:50

Matrix: Air

Date Received: 01/03/19 09:45

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		9.8	3.2	ug/m3			01/03/19 20:38	1
Vinyl chloride	ND		2.6	1.9	ug/m3			01/03/19 20:38	1
Xylenes, Total	ND		17	2.6	ug/m3			01/03/19 20:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					01/03/19 20:38	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Client Sample ID: BLDG-A MID GAC

Lab Sample ID: 140-13856-2

Date Collected: 12/28/18 15:55

Matrix: Air

Date Received: 01/03/19 09:45

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.21	J	0.40	0.12	ppb v/v			01/03/19 19:54	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/03/19 19:54	1
Chlorodifluoromethane	0.39	J	0.40	0.075	ppb v/v			01/03/19 19:54	1
Chloroform	1.5		0.40	0.075	ppb v/v			01/03/19 19:54	1
cis-1,2-Dichloroethene	18		0.40	0.12	ppb v/v			01/03/19 19:54	1
Dichlorodifluoromethane	0.52		0.40	0.14	ppb v/v			01/03/19 19:54	1
1,1-Dichloroethane	3.9		0.40	0.050	ppb v/v			01/03/19 19:54	1
1,2-Dichloroethane	0.12	J	0.40	0.095	ppb v/v			01/03/19 19:54	1
1,1-Dichloroethene	21		0.40	0.070	ppb v/v			01/03/19 19:54	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			01/03/19 19:54	1
Methylene Chloride	1.7	J B	2.0	0.65	ppb v/v			01/03/19 19:54	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/03/19 19:54	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/03/19 19:54	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			01/03/19 19:54	1
Toluene	ND		0.60	0.60	ppb v/v			01/03/19 19:54	1
trans-1,2-Dichloroethene	0.35	J	0.40	0.10	ppb v/v			01/03/19 19:54	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/03/19 19:54	1
1,1,1-Trichloroethane	32		0.40	0.060	ppb v/v			01/03/19 19:54	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/03/19 19:54	1
Trichloroethene	ND		0.20	0.070	ppb v/v			01/03/19 19:54	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/03/19 19:54	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/03/19 19:54	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/03/19 19:54	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/03/19 19:54	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			01/03/19 19:54	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.67	J	1.3	0.37	ug/m3			01/03/19 19:54	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/03/19 19:54	1
Chlorodifluoromethane	1.4	J	1.4	0.27	ug/m3			01/03/19 19:54	1
Chloroform	7.4		2.0	0.37	ug/m3			01/03/19 19:54	1
cis-1,2-Dichloroethene	73		1.6	0.48	ug/m3			01/03/19 19:54	1
Dichlorodifluoromethane	2.6		2.0	0.67	ug/m3			01/03/19 19:54	1
1,1-Dichloroethane	16		1.6	0.20	ug/m3			01/03/19 19:54	1
1,2-Dichloroethane	0.48	J	1.6	0.38	ug/m3			01/03/19 19:54	1
1,1-Dichloroethene	84		1.6	0.28	ug/m3			01/03/19 19:54	1
Ethylbenzene	ND		1.7	0.59	ug/m3			01/03/19 19:54	1
Methylene Chloride	5.8	J B	6.9	2.3	ug/m3			01/03/19 19:54	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/03/19 19:54	1
Naphthalene	ND		1.0	1.0	ug/m3			01/03/19 19:54	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			01/03/19 19:54	1
Toluene	ND		2.3	2.3	ug/m3			01/03/19 19:54	1
trans-1,2-Dichloroethene	1.4	J	1.6	0.40	ug/m3			01/03/19 19:54	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/03/19 19:54	1
1,1,1-Trichloroethane	170		2.2	0.33	ug/m3			01/03/19 19:54	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/03/19 19:54	1
Trichloroethene	ND		1.1	0.38	ug/m3			01/03/19 19:54	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/03/19 19:54	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			01/03/19 19:54	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Client Sample ID: BLDG-A MID GAC

Lab Sample ID: 140-13856-2

Date Collected: 12/28/18 15:55

Matrix: Air

Date Received: 01/03/19 09:45

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			01/03/19 19:54	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/03/19 19:54	1
Xylenes, Total	ND		3.5	0.52	ug/m3			01/03/19 19:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 140					01/03/19 19:54	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-13856-3

Date Collected: 12/28/18 15:59

Matrix: Air

Date Received: 01/03/19 09:45

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.47		0.40	0.12	ppb v/v			01/03/19 19:11	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/03/19 19:11	1
Chlorodifluoromethane	0.38	J	0.40	0.075	ppb v/v			01/03/19 19:11	1
Chloroform	0.51		0.40	0.075	ppb v/v			01/03/19 19:11	1
cis-1,2-Dichloroethene	4.7		0.40	0.12	ppb v/v			01/03/19 19:11	1
Dichlorodifluoromethane	0.47		0.40	0.14	ppb v/v			01/03/19 19:11	1
1,1-Dichloroethane	2.6		0.40	0.050	ppb v/v			01/03/19 19:11	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/03/19 19:11	1
1,1-Dichloroethene	15		0.40	0.070	ppb v/v			01/03/19 19:11	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			01/03/19 19:11	1
Methylene Chloride	1.4	J B	2.0	0.65	ppb v/v			01/03/19 19:11	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/03/19 19:11	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/03/19 19:11	1
Tetrachloroethene	0.28	J	0.40	0.080	ppb v/v			01/03/19 19:11	1
Toluene	ND		0.60	0.60	ppb v/v			01/03/19 19:11	1
trans-1,2-Dichloroethene	0.12	J	0.40	0.10	ppb v/v			01/03/19 19:11	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/03/19 19:11	1
1,1,1-Trichloroethane	9.9		0.40	0.060	ppb v/v			01/03/19 19:11	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/03/19 19:11	1
Trichloroethene	2.9		0.20	0.070	ppb v/v			01/03/19 19:11	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/03/19 19:11	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/03/19 19:11	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/03/19 19:11	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/03/19 19:11	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			01/03/19 19:11	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.5		1.3	0.37	ug/m3			01/03/19 19:11	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/03/19 19:11	1
Chlorodifluoromethane	1.3	J	1.4	0.27	ug/m3			01/03/19 19:11	1
Chloroform	2.5		2.0	0.37	ug/m3			01/03/19 19:11	1
cis-1,2-Dichloroethene	18		1.6	0.48	ug/m3			01/03/19 19:11	1
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3			01/03/19 19:11	1
1,1-Dichloroethane	11		1.6	0.20	ug/m3			01/03/19 19:11	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/03/19 19:11	1
1,1-Dichloroethene	58		1.6	0.28	ug/m3			01/03/19 19:11	1
Ethylbenzene	ND		1.7	0.59	ug/m3			01/03/19 19:11	1
Methylene Chloride	4.9	J B	6.9	2.3	ug/m3			01/03/19 19:11	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/03/19 19:11	1
Naphthalene	ND		1.0	1.0	ug/m3			01/03/19 19:11	1
Tetrachloroethene	1.9	J	2.7	0.54	ug/m3			01/03/19 19:11	1
Toluene	ND		2.3	2.3	ug/m3			01/03/19 19:11	1
trans-1,2-Dichloroethene	0.47	J	1.6	0.40	ug/m3			01/03/19 19:11	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/03/19 19:11	1
1,1,1-Trichloroethane	54		2.2	0.33	ug/m3			01/03/19 19:11	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/03/19 19:11	1
Trichloroethene	15		1.1	0.38	ug/m3			01/03/19 19:11	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/03/19 19:11	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			01/03/19 19:11	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-13856-3

Date Collected: 12/28/18 15:59

Matrix: Air

Date Received: 01/03/19 09:45

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			01/03/19 19:11	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/03/19 19:11	1
Xylenes, Total	ND		3.5	0.52	ug/m3			01/03/19 19:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 140					01/03/19 19:11	1

Default Detection Limits

Client: Tetra Tech GEO
 Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-13856-1	BLDG-A INFLUENT	102
140-13856-2	BLDG-A MID GAC	103
140-13856-3	BLDG-A EFFLUENT	103
LCS 140-26610/1002	Lab Control Sample	104
MB 140-26610/5	Method Blank	106

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-26610/5
Matrix: Air
Analysis Batch: 26610

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			01/03/19 14:07	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			01/03/19 14:07	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			01/03/19 14:07	1
Chloroform	ND		0.080	0.015	ppb v/v			01/03/19 14:07	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			01/03/19 14:07	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			01/03/19 14:07	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			01/03/19 14:07	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			01/03/19 14:07	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			01/03/19 14:07	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			01/03/19 14:07	1
Methylene Chloride	0.130	J	0.40	0.13	ppb v/v			01/03/19 14:07	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			01/03/19 14:07	1
Naphthalene	ND		0.040	0.040	ppb v/v			01/03/19 14:07	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			01/03/19 14:07	1
Toluene	ND		0.12	0.12	ppb v/v			01/03/19 14:07	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			01/03/19 14:07	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			01/03/19 14:07	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			01/03/19 14:07	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			01/03/19 14:07	1
Trichloroethene	ND		0.040	0.014	ppb v/v			01/03/19 14:07	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			01/03/19 14:07	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			01/03/19 14:07	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			01/03/19 14:07	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			01/03/19 14:07	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			01/03/19 14:07	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			01/03/19 14:07	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			01/03/19 14:07	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			01/03/19 14:07	1
Chloroform	ND		0.39	0.073	ug/m3			01/03/19 14:07	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			01/03/19 14:07	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			01/03/19 14:07	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			01/03/19 14:07	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			01/03/19 14:07	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			01/03/19 14:07	1
Ethylbenzene	ND		0.35	0.12	ug/m3			01/03/19 14:07	1
Methylene Chloride	0.450	J	1.4	0.45	ug/m3			01/03/19 14:07	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			01/03/19 14:07	1
Naphthalene	ND		0.21	0.21	ug/m3			01/03/19 14:07	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			01/03/19 14:07	1
Toluene	ND		0.45	0.45	ug/m3			01/03/19 14:07	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			01/03/19 14:07	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			01/03/19 14:07	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			01/03/19 14:07	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			01/03/19 14:07	1
Trichloroethene	ND		0.21	0.075	ug/m3			01/03/19 14:07	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			01/03/19 14:07	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech GEO
 Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-26610/5
Matrix: Air
Analysis Batch: 26610

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			01/03/19 14:07	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			01/03/19 14:07	1
Vinyl chloride	ND		0.10	0.074	ug/m3			01/03/19 14:07	1
Xylenes, Total	ND		0.69	0.10	ug/m3			01/03/19 14:07	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		60 - 140					01/03/19 14:07	1

Lab Sample ID: LCS 140-26610/1002
Matrix: Air
Analysis Batch: 26610

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.38		ppb v/v		119	70 - 130
Chlorodifluoromethane	2.00	2.04		ppb v/v		102	60 - 140
Chloroform	2.00	2.22		ppb v/v		111	70 - 130
cis-1,2-Dichloroethene	2.00	2.15		ppb v/v		107	70 - 130
Dichlorodifluoromethane	2.00	1.99		ppb v/v		100	60 - 140
1,1-Dichloroethane	2.00	2.25		ppb v/v		112	70 - 130
1,2-Dichloroethane	2.00	2.34		ppb v/v		117	70 - 130
1,1-Dichloroethene	2.00	2.21		ppb v/v		110	70 - 130
Ethylbenzene	2.00	2.11		ppb v/v		105	70 - 130
Methylene Chloride	2.00	1.95		ppb v/v		98	70 - 130
Methyl tert-butyl ether	2.00	2.28		ppb v/v		114	60 - 140
Naphthalene	2.00	1.67		ppb v/v		83	60 - 140
Tetrachloroethene	2.00	2.08		ppb v/v		104	70 - 130
Toluene	2.00	2.06		ppb v/v		103	70 - 130
trans-1,2-Dichloroethene	2.00	2.22		ppb v/v		111	70 - 130
1,2,4-Trichlorobenzene	2.00	1.69		ppb v/v		84	60 - 140
1,1,1-Trichloroethane	2.00	2.22		ppb v/v		111	70 - 130
1,1,2-Trichloroethane	2.00	2.14		ppb v/v		107	70 - 130
Trichloroethene	2.00	2.03		ppb v/v		101	70 - 130
1,2,3-Trimethylbenzene	2.00	2.35		ppb v/v		117	70 - 130
1,2,4-Trimethylbenzene	2.00	2.08		ppb v/v		104	70 - 130
1,3,5-Trimethylbenzene	2.00	2.02		ppb v/v		101	70 - 130
Vinyl chloride	2.00	2.09		ppb v/v		104	70 - 130
Xylenes, Total	6.00	6.22		ppb v/v		104	70 - 130
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.65		ug/m3		104	70 - 130
Carbon tetrachloride	13	15.0		ug/m3		119	70 - 130
Chlorodifluoromethane	7.1	7.21		ug/m3		102	60 - 140
Chloroform	9.8	10.9		ug/m3		111	70 - 130
cis-1,2-Dichloroethene	7.9	8.51		ug/m3		107	70 - 130
Dichlorodifluoromethane	9.9	9.84		ug/m3		100	60 - 140
1,1-Dichloroethane	8.1	9.10		ug/m3		112	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech GEO
 Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-26610/1002
Matrix: Air
Analysis Batch: 26610

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	9.46		ug/m3		117	70 - 130
1,1-Dichloroethene	7.9	8.74		ug/m3		110	70 - 130
Ethylbenzene	8.7	9.15		ug/m3		105	70 - 130
Methylene Chloride	6.9	6.78		ug/m3		98	70 - 130
Methyl tert-butyl ether	7.2	8.22		ug/m3		114	60 - 140
Naphthalene	10	8.75		ug/m3		83	60 - 140
Tetrachloroethene	14	14.1		ug/m3		104	70 - 130
Toluene	7.5	7.76		ug/m3		103	70 - 130
trans-1,2-Dichloroethene	7.9	8.81		ug/m3		111	70 - 130
1,2,4-Trichlorobenzene	15	12.5		ug/m3		84	60 - 140
1,1,1-Trichloroethane	11	12.1		ug/m3		111	70 - 130
1,1,2-Trichloroethane	11	11.7		ug/m3		107	70 - 130
Trichloroethene	11	10.9		ug/m3		101	70 - 130
1,2,3-Trimethylbenzene	9.8	11.5		ug/m3		117	70 - 130
1,2,4-Trimethylbenzene	9.8	10.2		ug/m3		104	70 - 130
1,3,5-Trimethylbenzene	9.8	9.94		ug/m3		101	70 - 130
Vinyl chloride	5.1	5.33		ug/m3		104	70 - 130
Xylenes, Total	26	27.0		ug/m3		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		60 - 140

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Air - GC/MS VOA

Analysis Batch: 26610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-13856-1	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
140-13856-2	BLDG-A MID GAC	Total/NA	Air	TO 15 LL	
140-13856-3	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
MB 140-26610/5	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-26610/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Client Sample ID: BLDG-A INFLUENT

Date Collected: 12/28/18 15:50

Date Received: 01/03/19 09:45

Lab Sample ID: 140-13856-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	26610	01/03/19 20:38	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: BLDG-A MID GAC

Date Collected: 12/28/18 15:55

Date Received: 01/03/19 09:45

Lab Sample ID: 140-13856-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	26610	01/03/19 19:54	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: BLDG-A EFFLUENT

Date Collected: 12/28/18 15:59

Date Received: 01/03/19 09:45

Lab Sample ID: 140-13856-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	26610	01/03/19 19:11	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-26610/5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	26610	01/03/19 14:07	S1K	TAL KNX
Instrument ID: MG										

Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

Lab Sample ID: LCS 140-26610/1002

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	26610	01/03/19 11:24	S1K	TAL KNX
Instrument ID: MG										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-13856-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-13856-1	BLDG-A INFLUENT	Air	12/28/18 15:50	01/03/19 09:45
140-13856-2	BLDG-A MID GAC	Air	12/28/18 15:55	01/03/19 09:45
140-13856-3	BLDG-A EFFLUENT	Air	12/28/18 15:59	01/03/19 09:45

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-13856-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-A INFLUENT	140-13856-1	102
BLDG-A MID GAC	140-13856-2	103
BLDG-A EFFLUENT	140-13856-3	103
	MB 140-26610/5	106
	LCS 140-26610/1002	104

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: GCCVA03-LCS.d
 Lab ID: LCS 140-26610/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.08	104	70-130	
Carbon tetrachloride	2.00	2.38	119	70-130	
Chlorodifluoromethane	2.00	2.04	102	60-140	
Chloroform	2.00	2.22	111	70-130	
cis-1,2-Dichloroethene	2.00	2.15	107	70-130	
Dichlorodifluoromethane	2.00	1.99	100	60-140	
1,1-Dichloroethane	2.00	2.25	112	70-130	
1,2-Dichloroethane	2.00	2.34	117	70-130	
1,1-Dichloroethene	2.00	2.21	110	70-130	
Ethylbenzene	2.00	2.11	105	70-130	
Methylene Chloride	2.00	1.95	98	70-130	
Methyl tert-butyl ether	2.00	2.28	114	60-140	
Naphthalene	2.00	1.67	83	60-140	
Tetrachloroethene	2.00	2.08	104	70-130	
Toluene	2.00	2.06	103	70-130	
trans-1,2-Dichloroethene	2.00	2.22	111	70-130	
1,2,4-Trichlorobenzene	2.00	1.69	84	60-140	
1,1,1-Trichloroethane	2.00	2.22	111	70-130	
1,1,2-Trichloroethane	2.00	2.14	107	70-130	
Trichloroethene	2.00	2.03	101	70-130	
1,2,3-Trimethylbenzene	2.00	2.35	117	70-130	
1,2,4-Trimethylbenzene	2.00	2.08	104	70-130	
1,3,5-Trimethylbenzene	2.00	2.02	101	70-130	
Vinyl chloride	2.00	2.09	104	70-130	
Xylenes, Total	6.00	6.22	104	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Lab File ID: Gmb500A03.D Lab Sample ID: MB 140-26610/5
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MG Date Analyzed: 01/03/2019 14:07
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
BLDG-A EFFLUENT	140-13856-3	GA03p104.D	01/03/2019 19:11
BLDG-A MID GAC	140-13856-2	GA03p105.D	01/03/2019 19:54
BLDG-A INFLUENT	140-13856-1	GA03p106.D	01/03/2019 20:38

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Lab File ID: GBFBK19.D BFB Injection Date: 11/19/2018
 Instrument ID: MG BFB Injection Time: 12:29
 Analysis Batch No.: 25539

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.7	
75	30.0 - 60.0 % of mass 95	52.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.3	(0.4) 1
174	50.0 - 120.00 % of mass 95	67.1	
175	5.0 - 9.0 % of mass 174	4.7	(7.1) 1
176	95.0 - 101.0 % of mass 174	66.4	(98.9) 1
177	5.0 - 9.0 % of mass 176	4.3	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-25539/3	GK19IC09.D	11/19/2018	13:04
	IC 140-25539/5	GK19IC10.D	11/19/2018	14:34
	IC 140-25539/8	GK19IC01.D	11/19/2018	16:45
	IC 140-25539/9	GK19IC02.D	11/19/2018	17:30
	IC 140-25539/10	GK19IC03.D	11/19/2018	18:17
	IC 140-25539/11	GK19IC04.D	11/19/2018	19:00
	IC 140-25539/12	GK19IC05.D	11/19/2018	19:44
	IC 140-25539/13	GK19IC06.D	11/19/2018	20:26
	ICIS 140-25539/14	GK19IC07.D	11/19/2018	21:10
	IC 140-25539/15	GK19IC08.D	11/19/2018	21:56
	ICV 140-25539/18	GK19ICV.D	11/20/2018	00:05

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Lab File ID: GBFBA03.D BFB Injection Date: 01/03/2019
 Instrument ID: MG BFB Injection Time: 10:51
 Analysis Batch No.: 26610

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	26.6
75	30.0 - 60.0 % of mass 95	56.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.9
173	Less than 2.0 % of mass 174	0.3 (0.5) 1
174	50.0 - 120.00 % of mass 95	62.6
175	5.0 - 9.0 % of mass 174	4.3 (6.9) 1
176	95.0 - 101.0 % of mass 174	61.4 (98.0) 1
177	5.0 - 9.0 % of mass 176	3.8 (6.2) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-26610/2	GCCVA03.D	01/03/2019	11:24
	LCS 140-26610/1002	GCCVA03-LCS. d	01/03/2019	11:24
	MB 140-26610/5	Gmb500A03.D	01/03/2019	14:07
BLDG-A EFFLUENT	140-13856-3	GA03p104.D	01/03/2019	19:11
BLDG-A MID GAC	140-13856-2	GA03p105.D	01/03/2019	19:54
BLDG-A INFLUENT	140-13856-1	GA03p106.D	01/03/2019	20:38

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Sample No.: ICIS 140-25539/14 Date Analyzed: 11/19/2018 21:10
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GK19IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1749

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	294053	9.27	1860742	11.44	1709487	16.12
UPPER LIMIT	411674	9.60	2605039	11.77	2393282	16.45
LOWER LIMIT	176432	8.94	1116445	11.11	1025692	15.79
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-25539/18	300065	9.26	1814254	11.44	1690936	16.12

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Sample No.: CCVIS 140-26610/2 Date Analyzed: 01/03/2019 11:24
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVA03.D Heated Purge: (Y/N) N
 Calibration ID: 1749

	CBM		DFBZ		CBzd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	286081	9.26	1732806	11.43	1575804	16.10	
UPPER LIMIT	400513	9.59	2425928	11.76	2206126	16.43	
LOWER LIMIT	171649	8.93	1039684	11.10	945482	15.77	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-26610/1002	286081	9.26	1732806	11.43	1575804	16.10	
MB 140-26610/5	256681	9.25	1488526	11.42	1383128	16.10	
140-13856-3	BLDG-A EFFLUENT	207654	9.25	1332750	11.42	1258517	16.10
140-13856-2	BLDG-A MID GAC	213473	9.25	1332746	11.42	1184307	16.10
140-13856-1	BLDG-A INFLUENT	180447	9.25	1090150	11.43	1022489	16.10

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-13856-1
 Matrix: Air Lab File ID: GA03p106.D
 Analysis Method: TO 15 LL Date Collected: 12/28/2018 15:50
 Sample wt/vol: 20 (mL) Date Analyzed: 01/03/2019 20:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26610 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.0		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	0.77	J	2.0	0.38
67-66-3	Chloroform	119.38	0.77	J	2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	19		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	4.2		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	27		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	5.1	J B	10	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	130		2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	200		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-13856-1
 Matrix: Air Lab File ID: GA03p106.D
 Analysis Method: TO 15 LL Date Collected: 12/28/2018 15:50
 Sample wt/vol: 20 (mL) Date Analyzed: 01/03/2019 20:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26610 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	6.3		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	2.7	J	7.1	1.3
67-66-3	Chloroform	119.38	3.7	J	9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	77		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	17		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	110		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	18	J B	35	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	690		11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	1100		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p106.D
 Lims ID: 140-13856-A-1
 Client ID: BLDG-A INFLUENT
 Sample Type: Client
 Inject. Date: 03-Jan-2019 20:38:30 ALS Bottle#: 6 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010438-012
 Misc. Info.: 140-13856-A-1
 Operator ID: 403468 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Jan-2019 12:35:05 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 04-Jan-2019 12:39:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.259	-0.011	91	180447	4.00	
* 2 1,4-Difluorobenzene	114	11.426	11.426	0.000	98	1090150	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.096	16.102	-0.006	97	1022489	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.719	-0.006	74	852655	4.10	
6 Chlorodifluoromethane	51	3.839	3.822	0.010	96	4208	0.0309	
27 1,1-Dichloroethene	96	6.244	6.228	0.005	91	68562	1.08	
31 Methylene Chloride	84	6.617	6.600	0.005	94	14860	0.2035	
37 1,1-Dichloroethane	63	7.894	7.886	-0.006	99	23445	0.1689	
42 cis-1,2-Dichloroethene	96	8.908	8.898	-0.006	98	51371	0.7764	
44 Chloroform	83	9.253	9.253	-0.017	28	4422	0.0307	
47 1,1,1-Trichloroethane	97	10.305	10.292	-0.005	95	760207	5.05	
50 Benzene	78	10.898	10.898	-0.005	98	15771	0.0791	
58 Trichloroethene	130	12.128	12.127	-0.005	87	653779	7.84	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p106.D

Injection Date: 03-Jan-2019 20:38:30

Instrument ID: MG

Operator ID: 403468

Lims ID: 140-13856-A-1

Lab Sample ID: 140-13856-1

Worklist Smp#: 12

Client ID: BLDG-A INFLUENT

Purge Vol: 500.000 mL

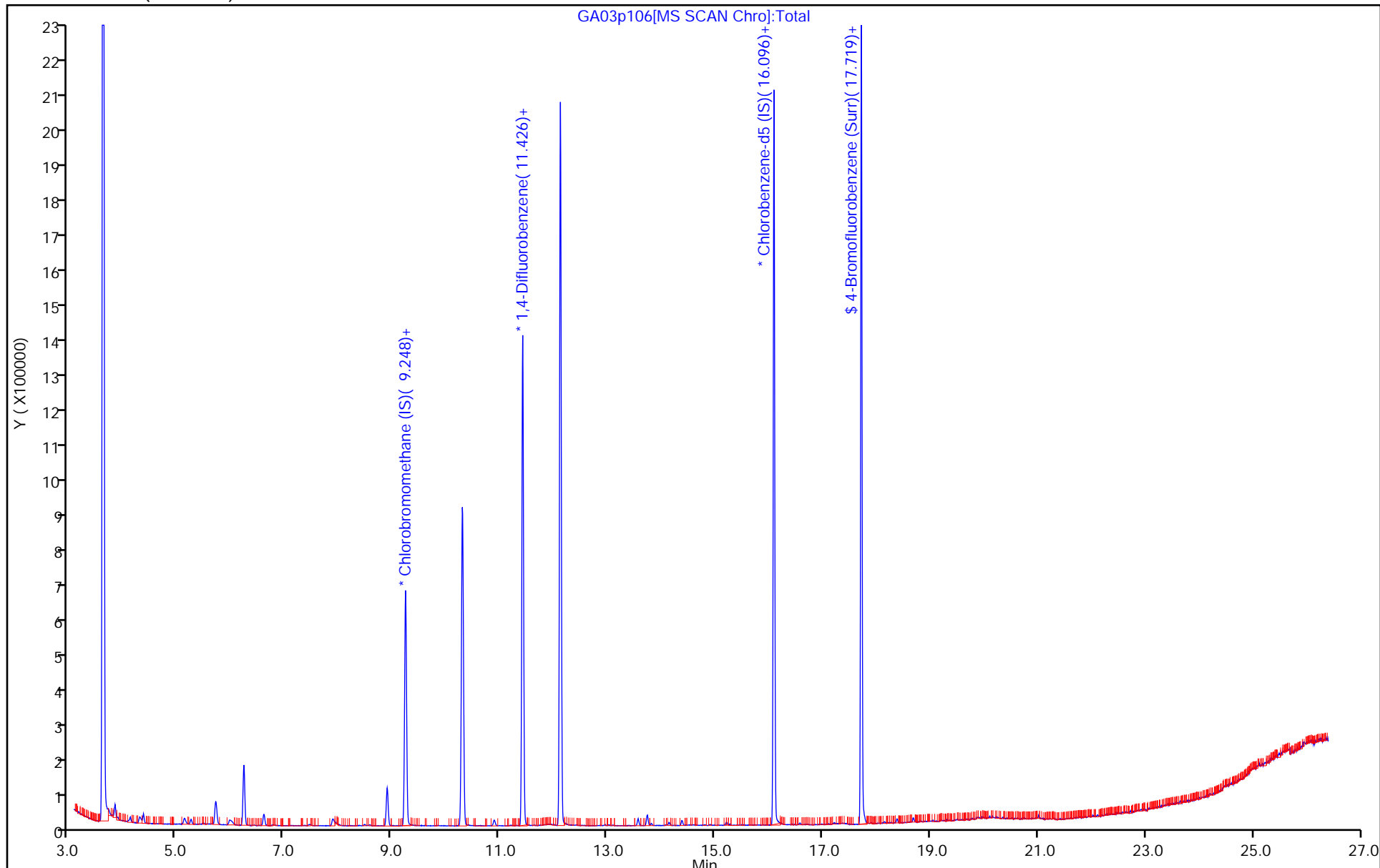
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p106.D
 Lims ID: 140-13856-A-1
 Client ID: BLDG-A INFLUENT
 Sample Type: Client
 Inject. Date: 03-Jan-2019 20:38:30 ALS Bottle#: 6 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010438-012
 Misc. Info.: 140-13856-A-1
 Operator ID: 403468 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Jan-2019 12:35:05 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 04-Jan-2019 12:39:00

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.10	102.49

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p106.D

Injection Date: 03-Jan-2019 20:38:30

Instrument ID: MG

Lims ID: 140-13856-A-1

Lab Sample ID: 140-13856-1

Client ID: BLDG-A INFLUENT

Operator ID: 403468

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

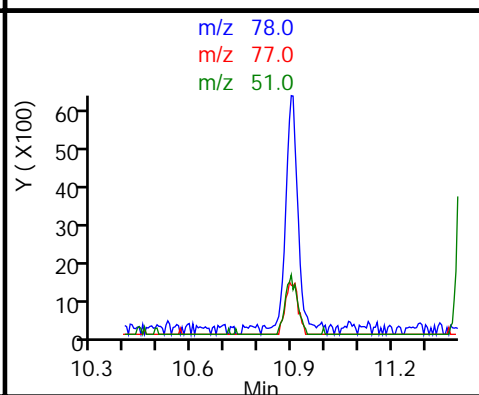
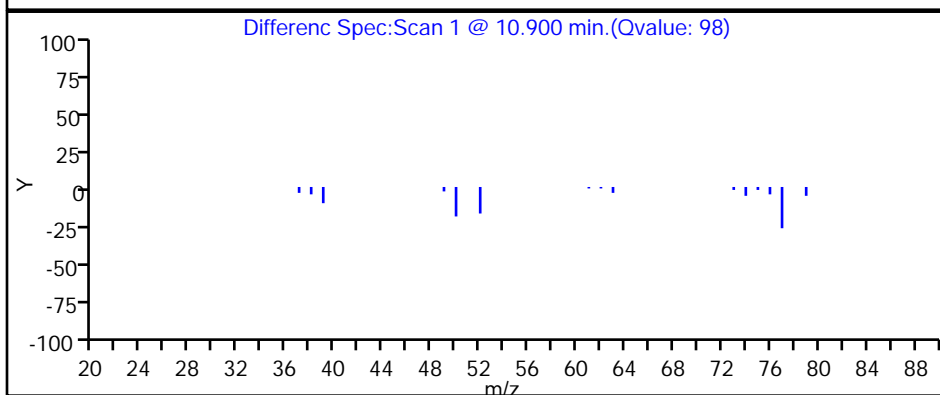
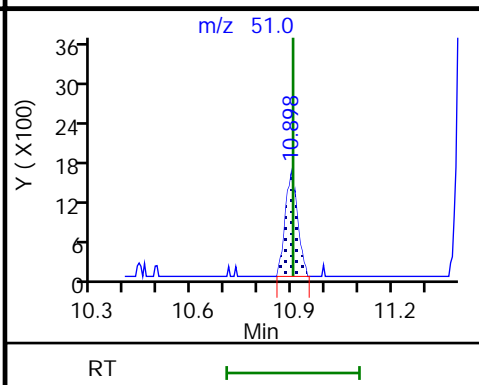
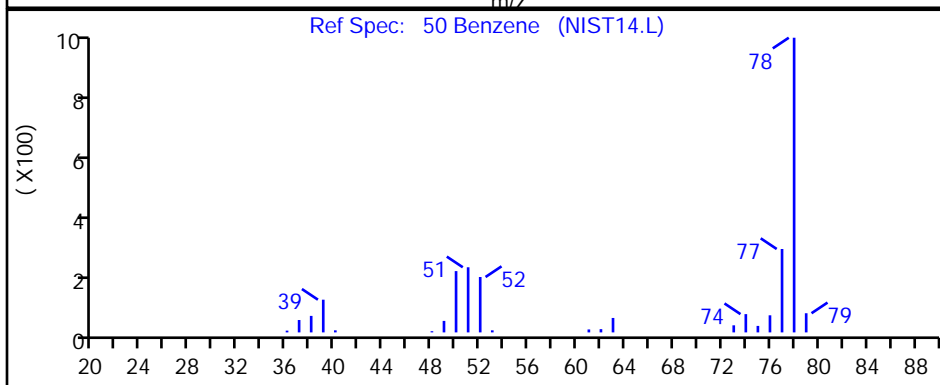
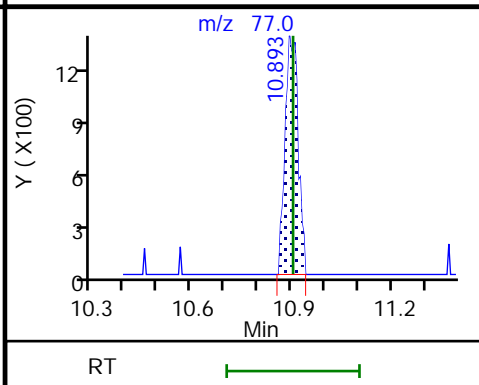
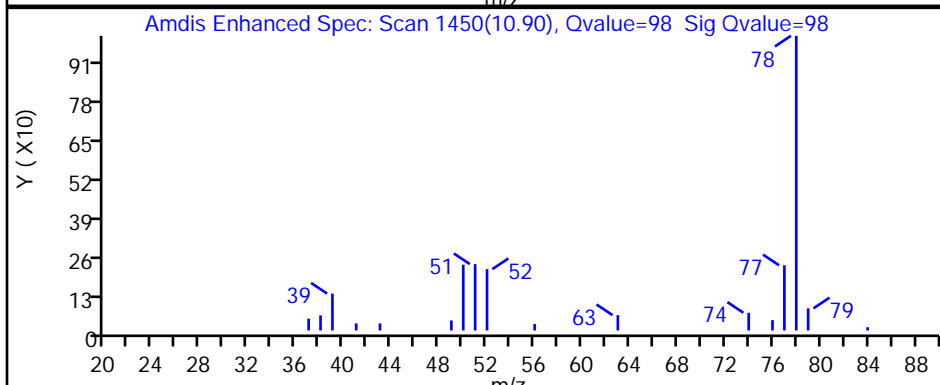
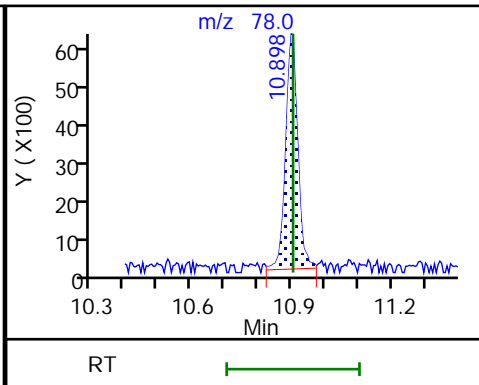
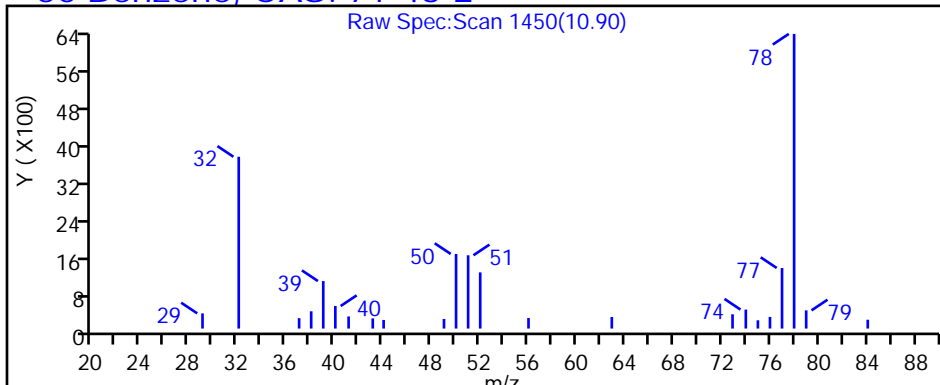
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p106.D

Injection Date: 03-Jan-2019 20:38:30

Instrument ID: MG

Lims ID: 140-13856-A-1

Lab Sample ID: 140-13856-1

Client ID: BLDG-A INFLUENT

Operator ID: 403468

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

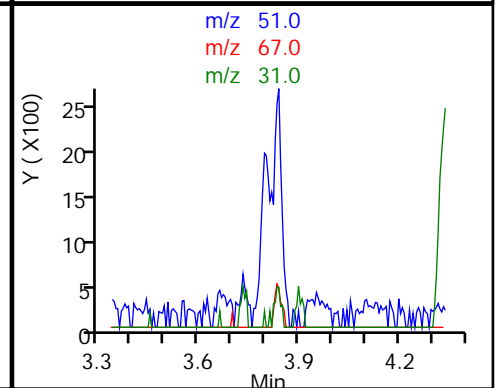
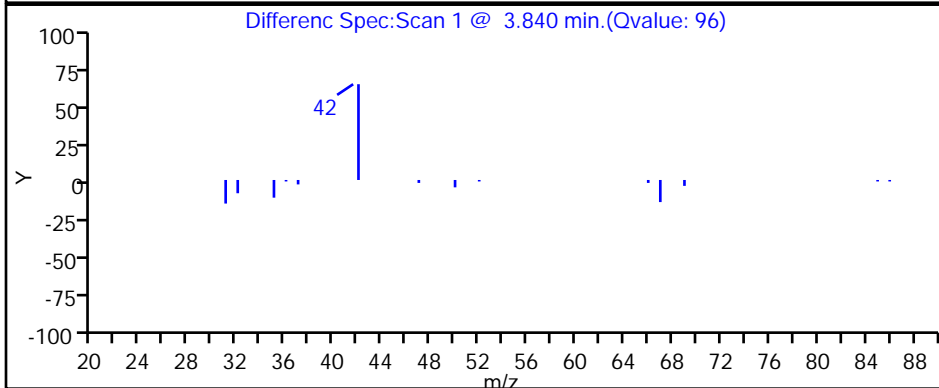
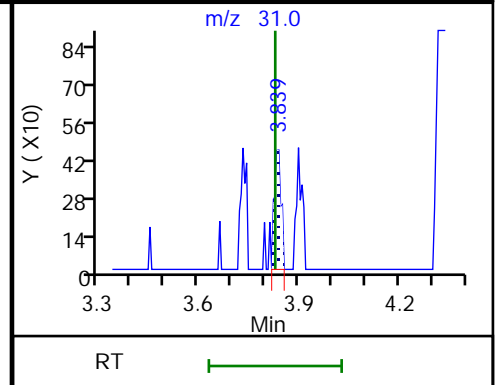
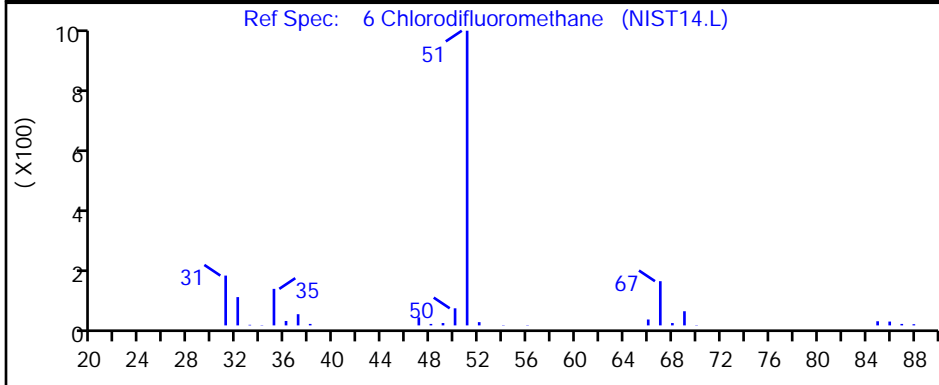
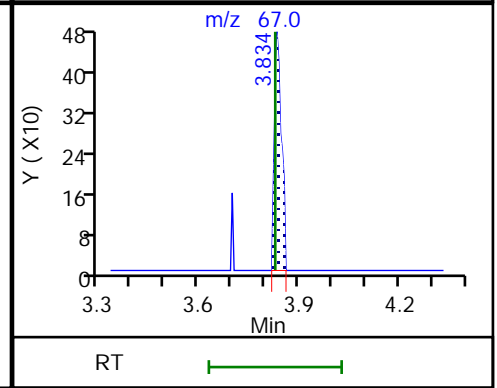
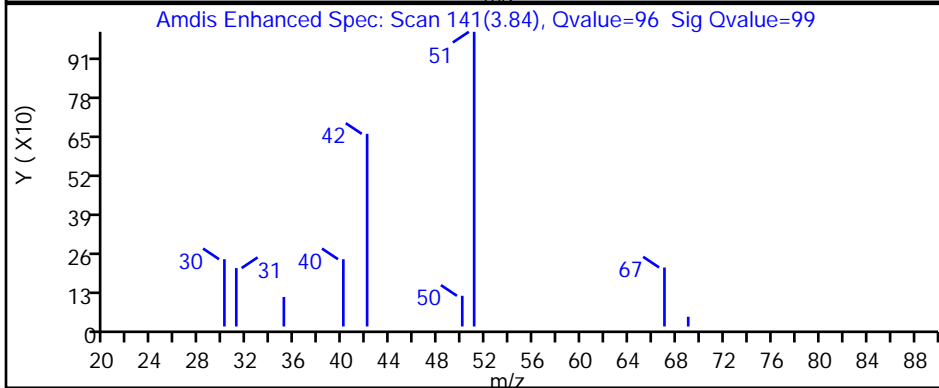
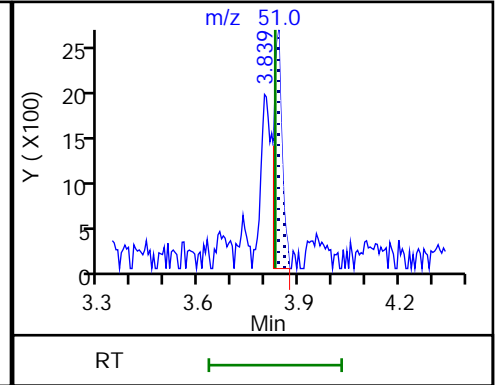
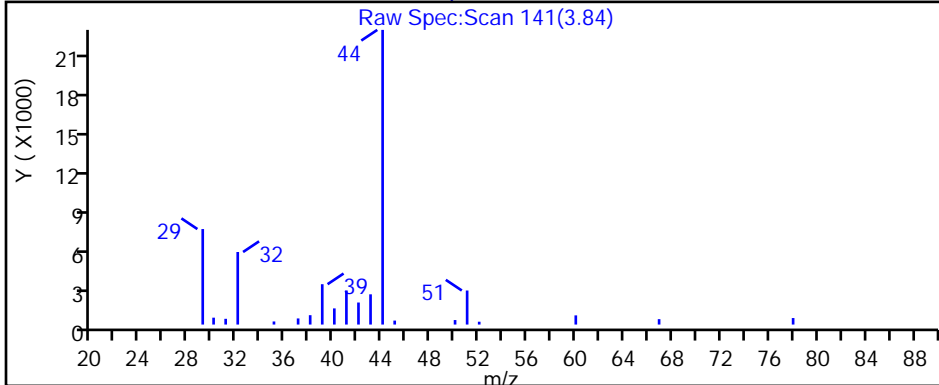
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p106.D

Injection Date: 03-Jan-2019 20:38:30

Instrument ID: MG

Lims ID: 140-13856-A-1

Lab Sample ID: 140-13856-1

Client ID: BLDG-A INFLUENT

Operator ID: 403468

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

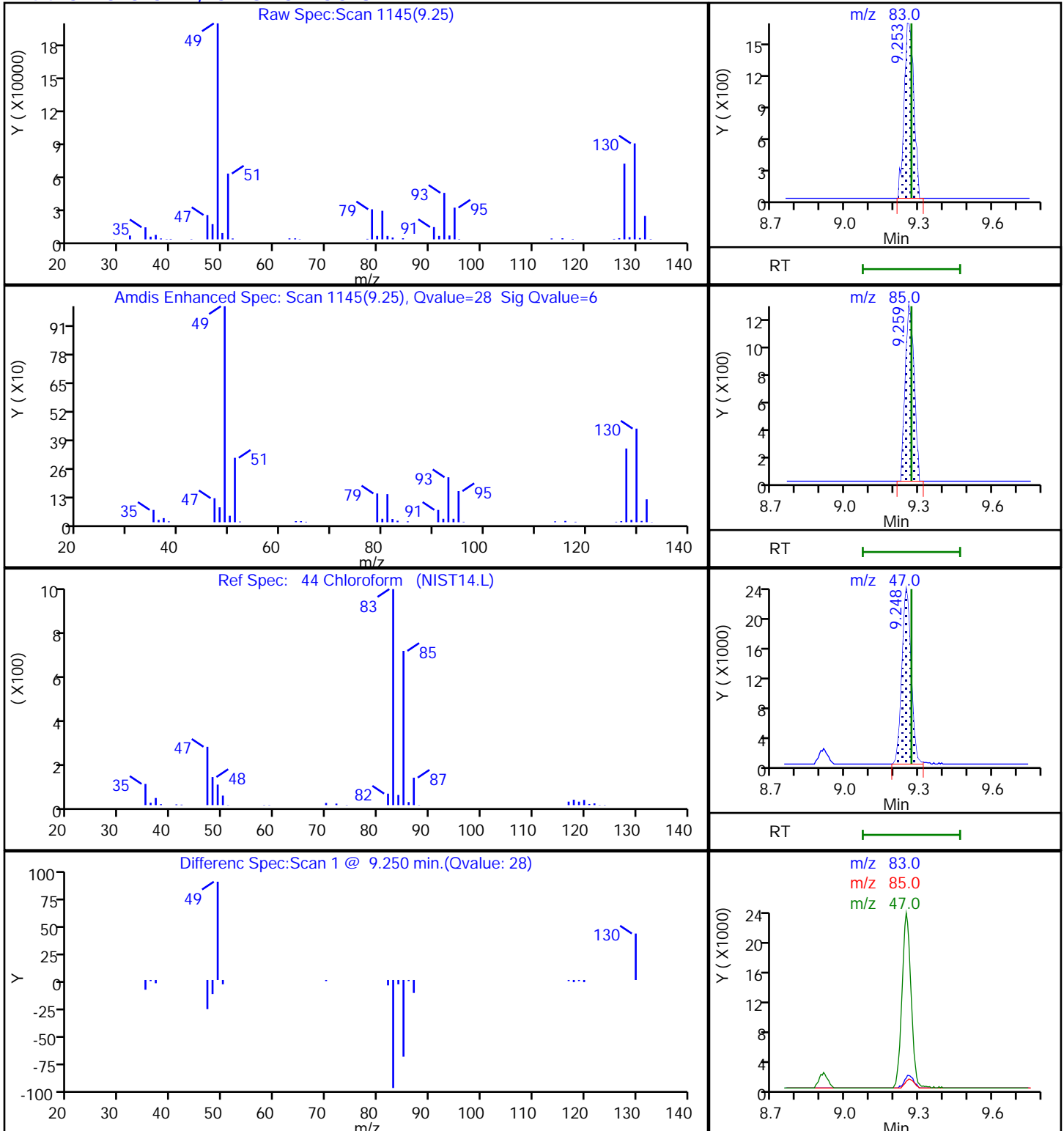
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p106.D

Injection Date: 03-Jan-2019 20:38:30

Instrument ID: MG

Lims ID: 140-13856-A-1

Lab Sample ID: 140-13856-1

Client ID: BLDG-A INFLUENT

Operator ID: 403468

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

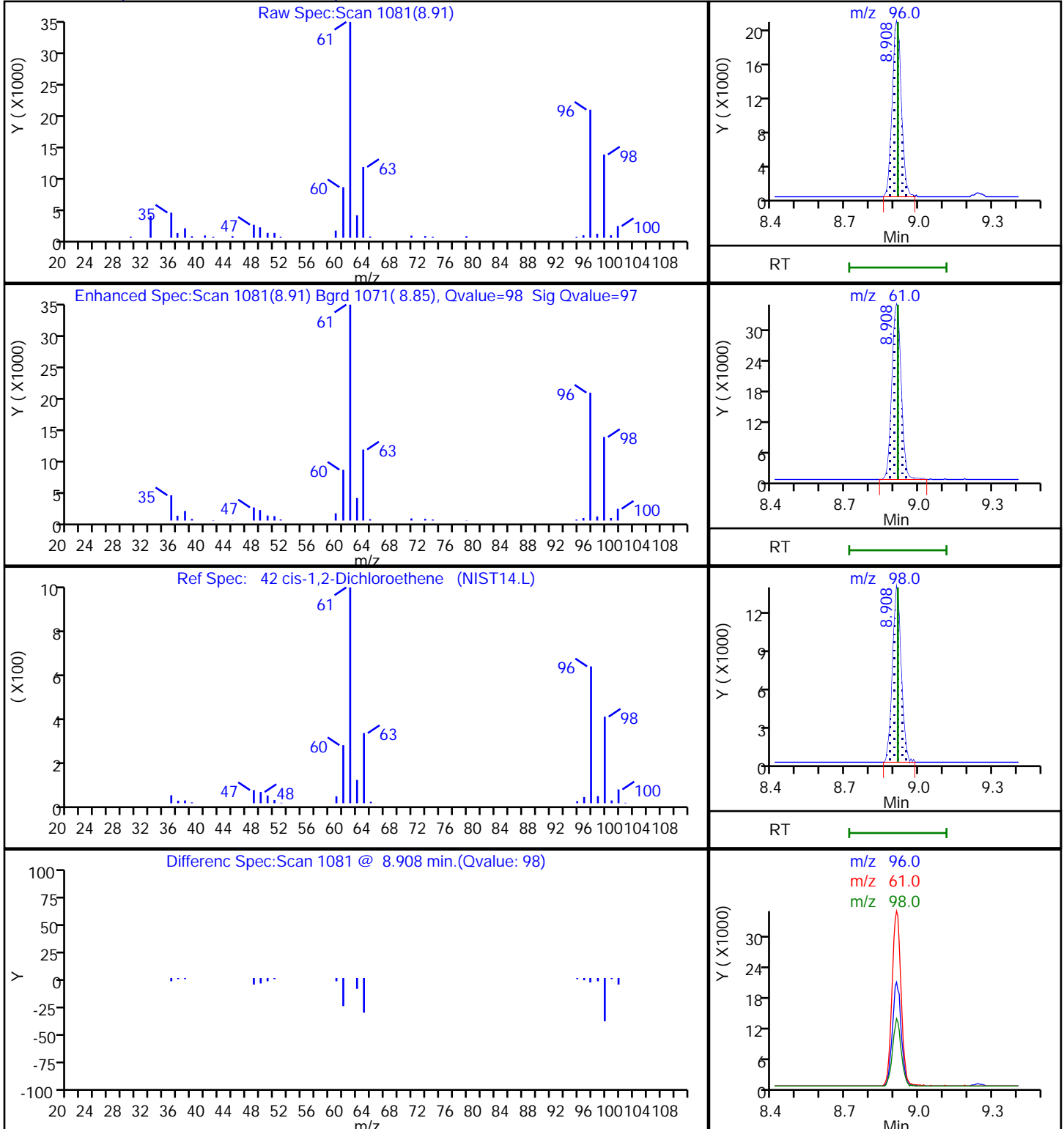
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p106.D

Injection Date: 03-Jan-2019 20:38:30

Instrument ID: MG

Lims ID: 140-13856-A-1

Lab Sample ID: 140-13856-1

Client ID: BLDG-A INFLUENT

Operator ID: 403468

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

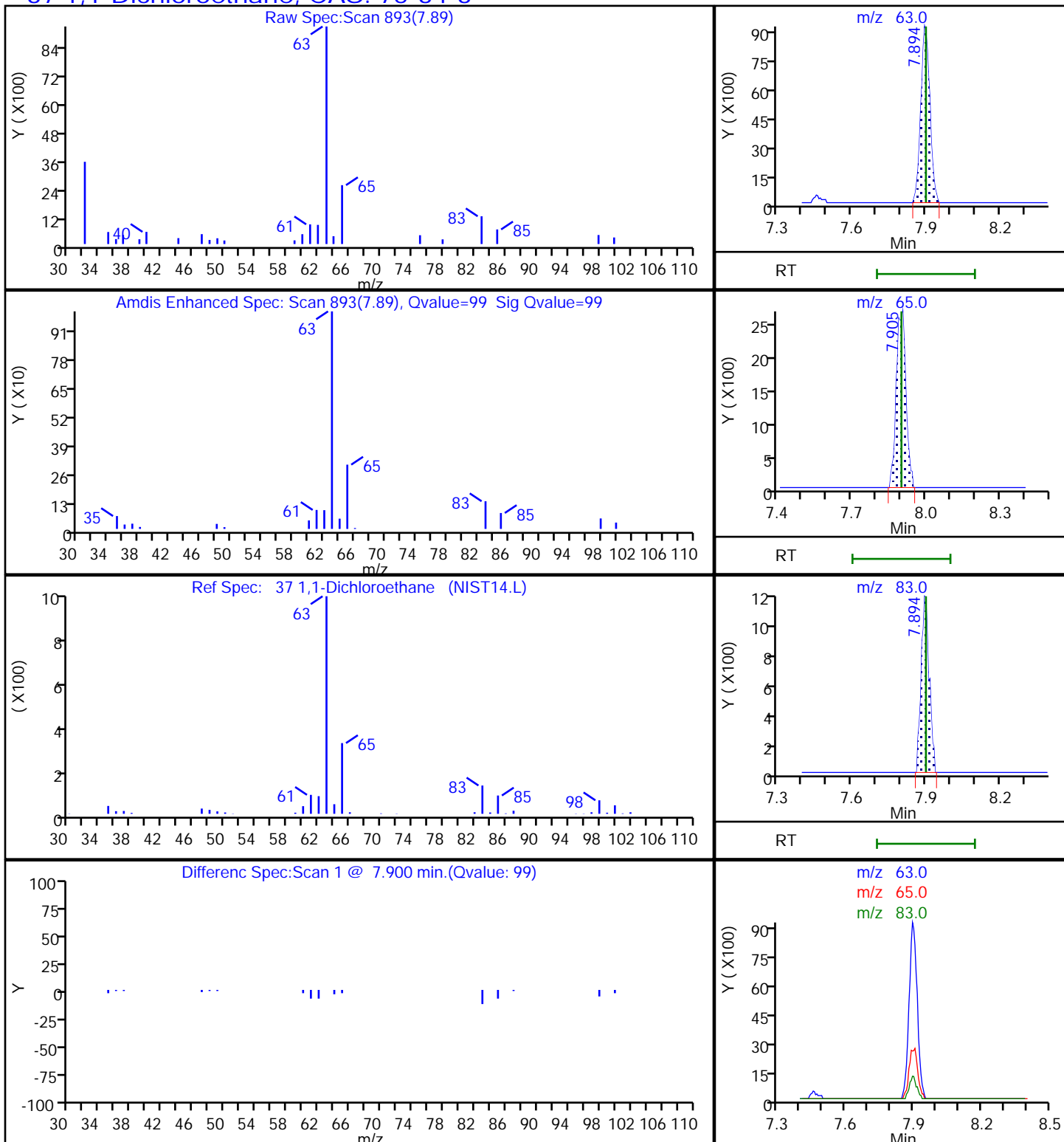
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p106.D

Injection Date: 03-Jan-2019 20:38:30

Instrument ID: MG

Lims ID: 140-13856-A-1

Lab Sample ID: 140-13856-1

Client ID: BLDG-A INFLUENT

Operator ID: 403468

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

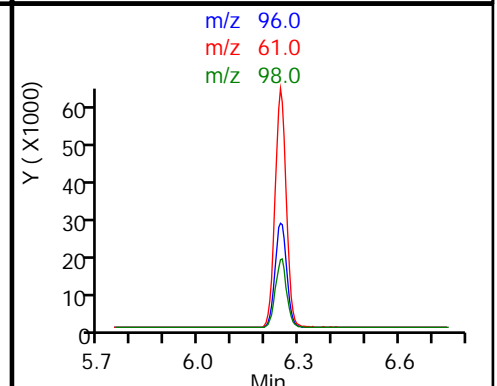
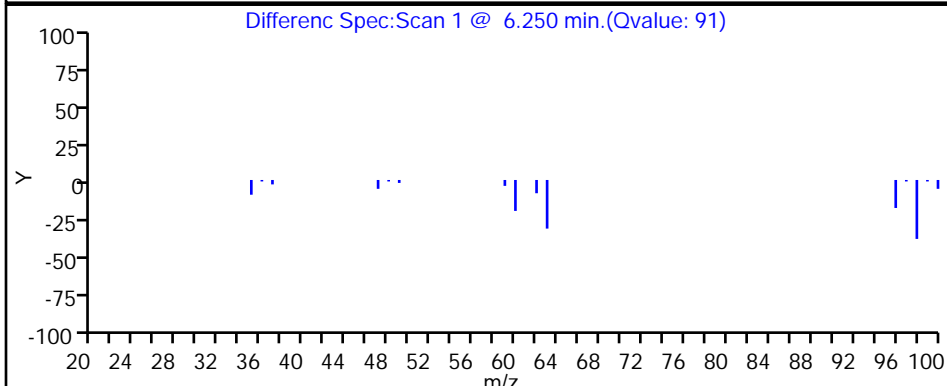
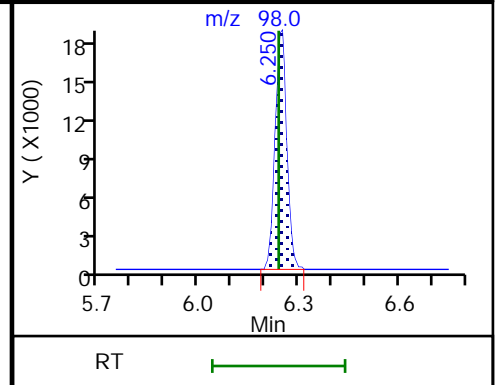
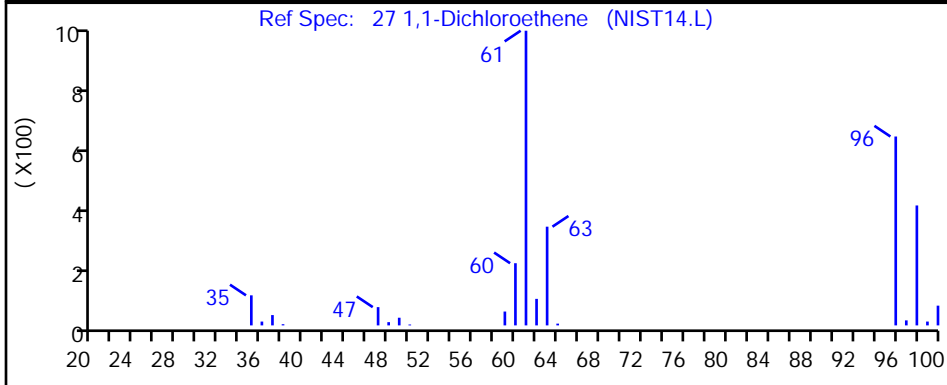
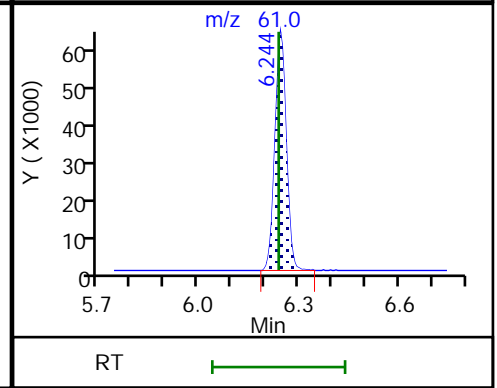
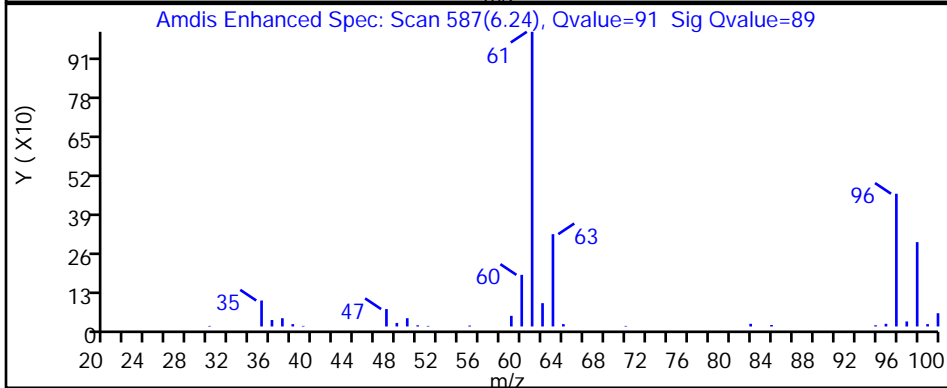
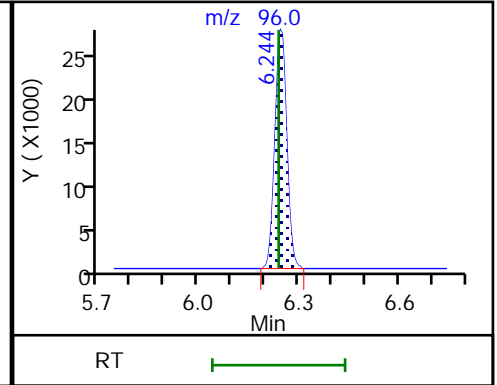
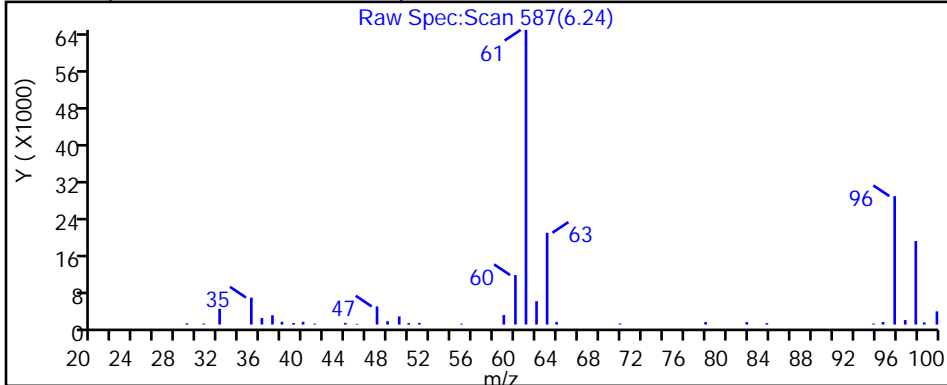
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p106.D

Injection Date: 03-Jan-2019 20:38:30

Instrument ID: MG

Lims ID: 140-13856-A-1

Lab Sample ID: 140-13856-1

Client ID: BLDG-A INFLUENT

Operator ID: 403468

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

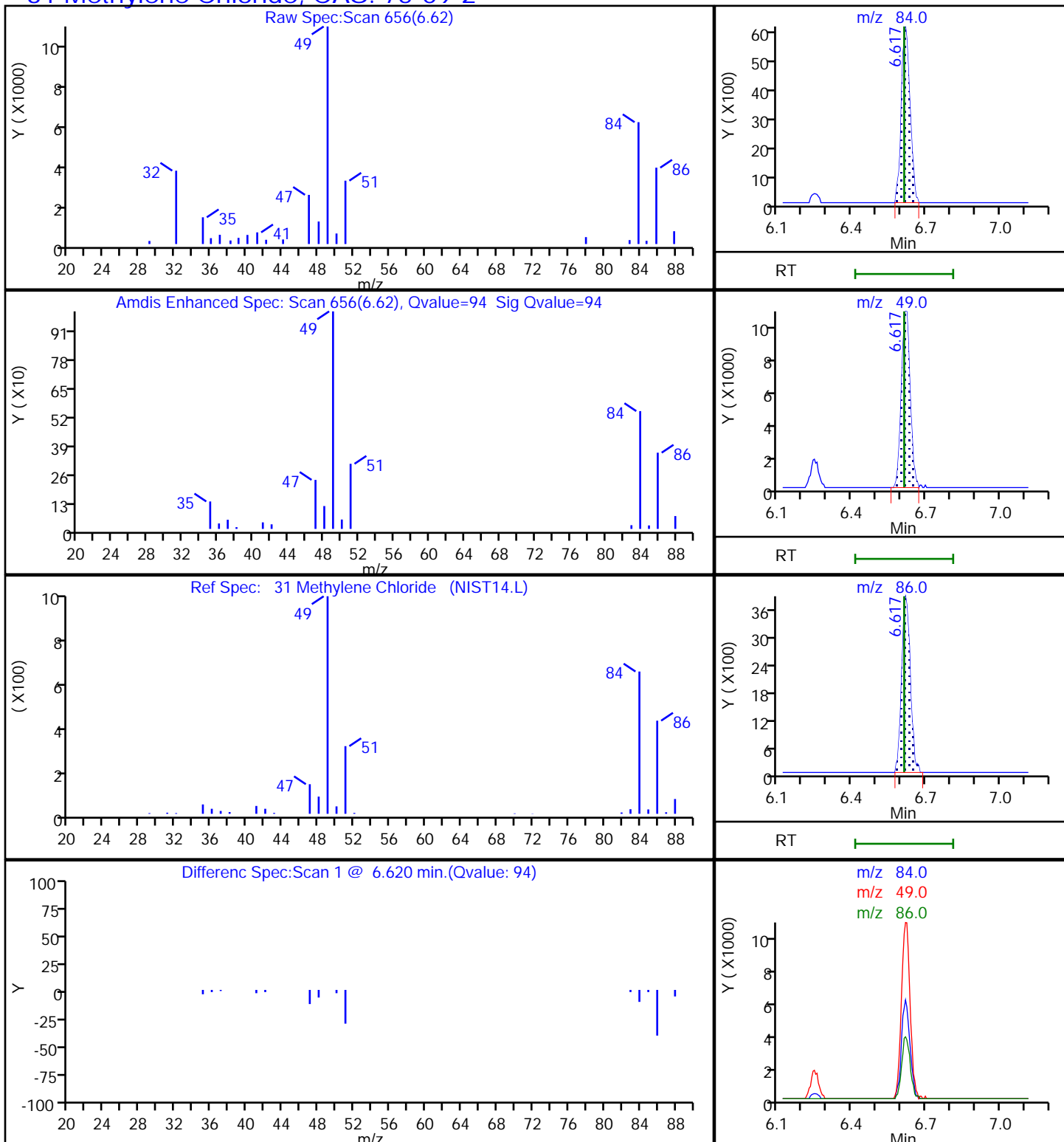
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p106.D

Injection Date: 03-Jan-2019 20:38:30

Instrument ID: MG

Lims ID: 140-13856-A-1

Lab Sample ID: 140-13856-1

Client ID: BLDG-A INFLUENT

Operator ID: 403468

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

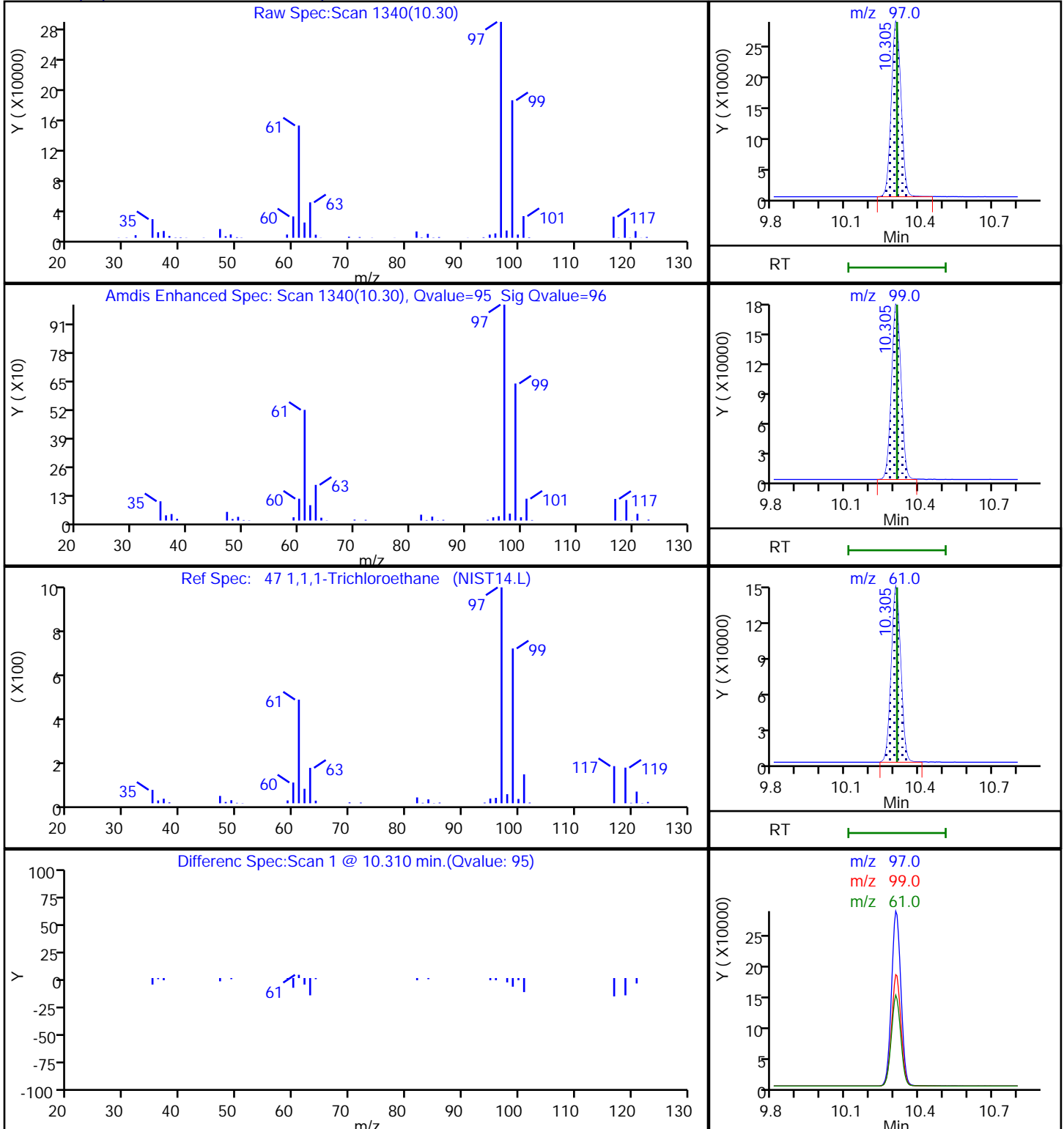
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p106.D

Injection Date: 03-Jan-2019 20:38:30

Instrument ID: MG

Lims ID: 140-13856-A-1

Lab Sample ID: 140-13856-1

Client ID: BLDG-A INFLUENT

Operator ID: 403468

ALS Bottle#: 6 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

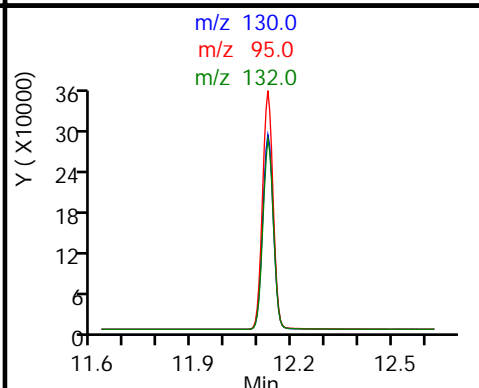
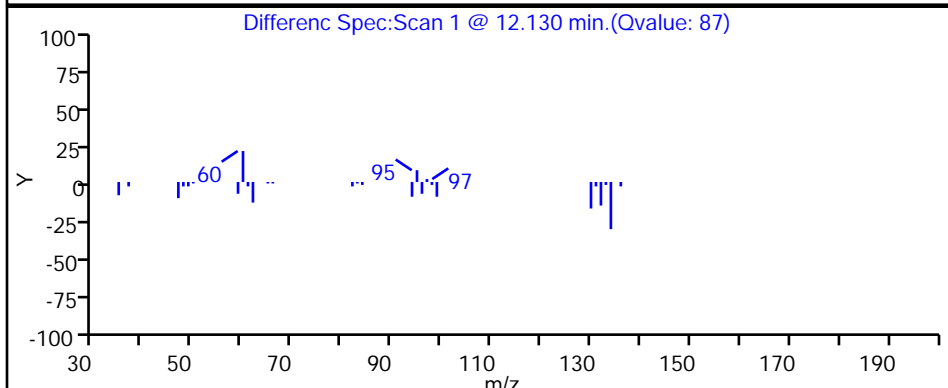
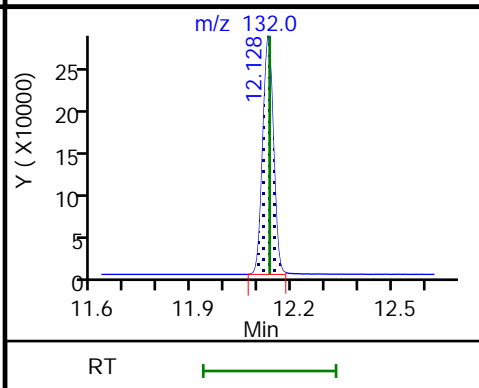
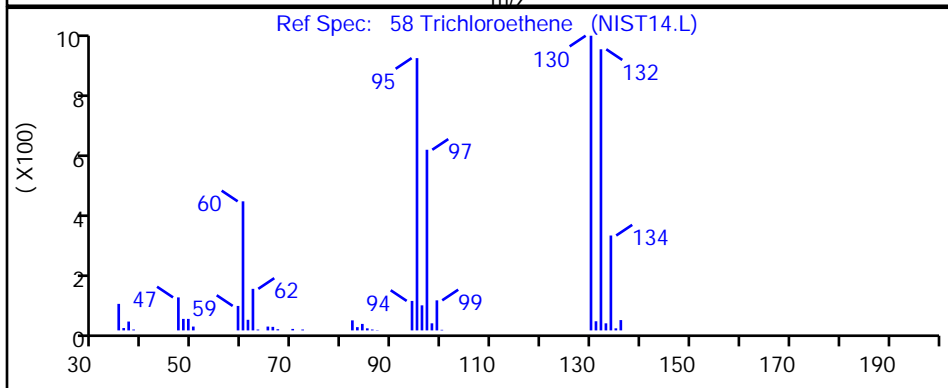
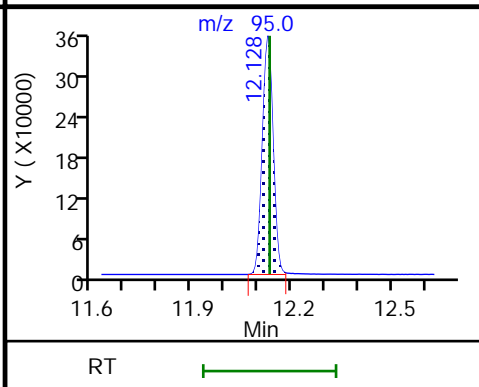
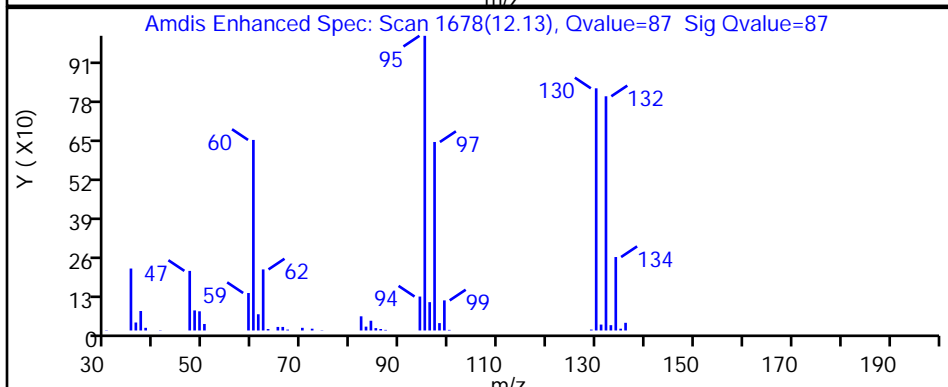
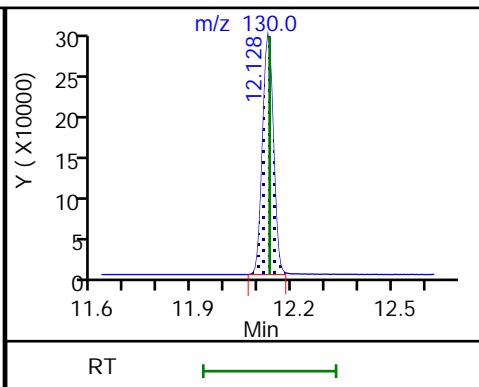
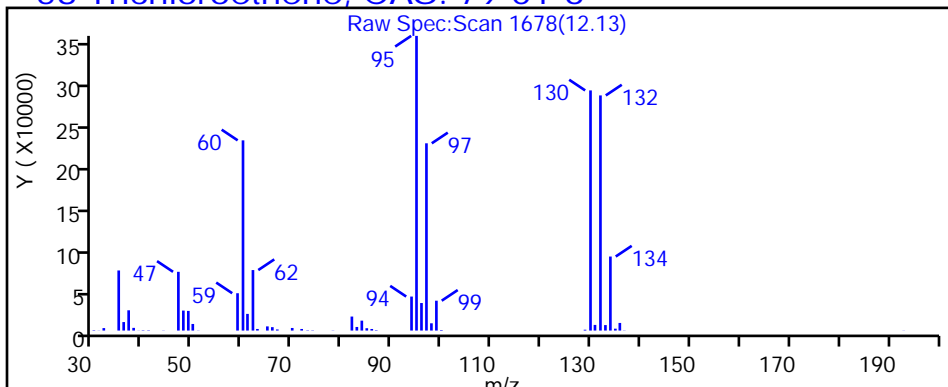
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

58 Trichloroethene, CAS: 79-01-6

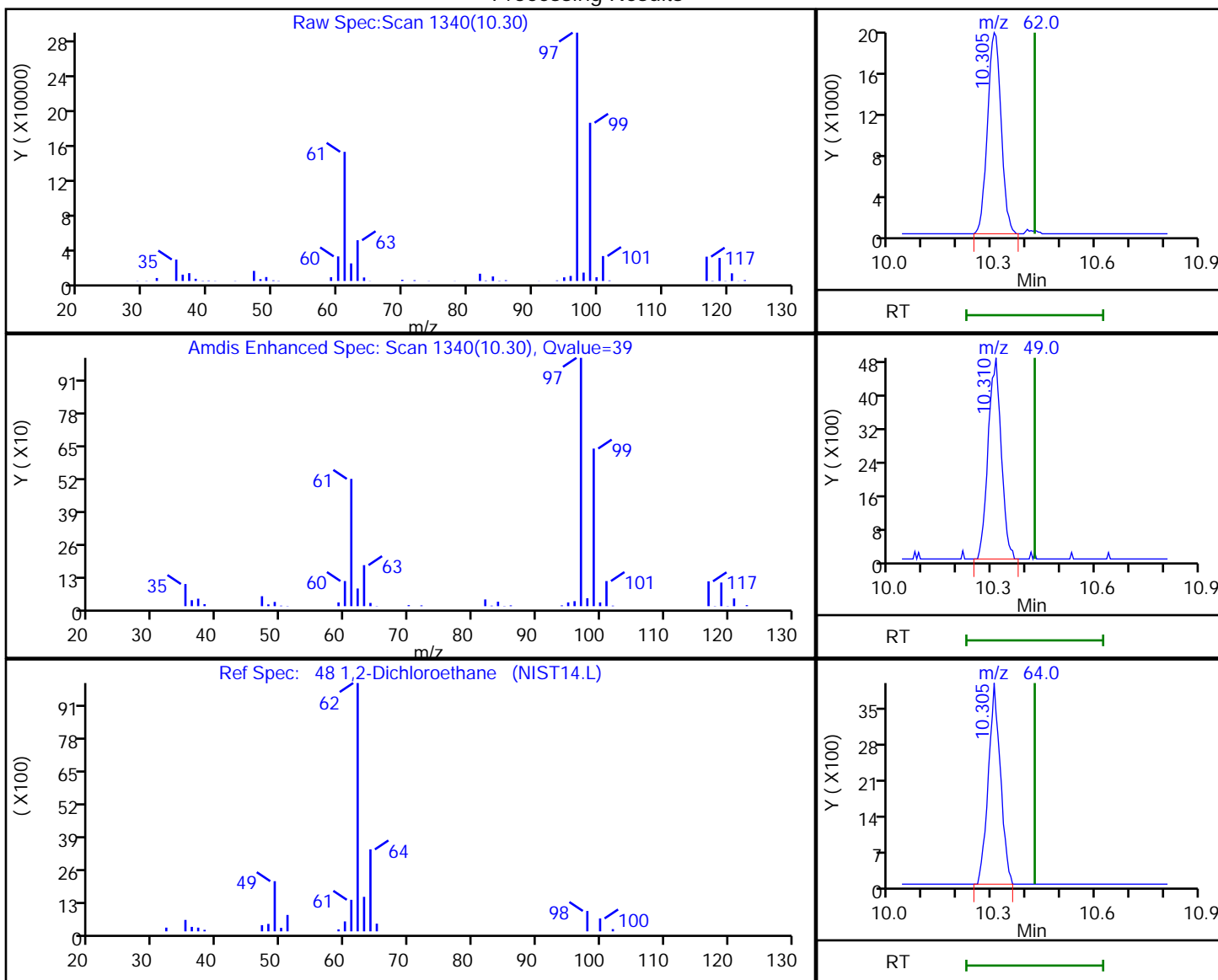


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p106.D
 Injection Date: 03-Jan-2019 20:38:30 Instrument ID: MG
 Lims ID: 140-13856-A-1 Lab Sample ID: 140-13856-1
 Client ID: BLDG-A INFLUENT
 Operator ID: 403468 ALS Bottle#: 6 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

48 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
10.30	62.00	55145	0.559315
10.31	49.00	12803	
10.30	64.00	9732	

Reviewer: khachitpongpanits, 04-Jan-2019 12:34:59

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Client Sample ID: BLDG-A MID GAC Lab Sample ID: 140-13856-2
 Matrix: Air Lab File ID: GA03p105.D
 Analysis Method: TO 15 LL Date Collected: 12/28/2018 15:55
 Sample wt/vol: 100(mL) Date Analyzed: 01/03/2019 19:54
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26610 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	1.5		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	18		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	3.9		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.12	J	0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	21		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7	J B	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.35	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	32		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Client Sample ID: BLDG-A MID GAC Lab Sample ID: 140-13856-2
 Matrix: Air Lab File ID: GA03p105.D
 Analysis Method: TO 15 LL Date Collected: 12/28/2018 15:55
 Sample wt/vol: 100(mL) Date Analyzed: 01/03/2019 19:54
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26610 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.67	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	7.4		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	73		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	16		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	0.48	J	1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	84		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.8	J B	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.4	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	170		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p105.D
 Lims ID: 140-13856-A-2
 Client ID: BLDG-A MID GAC
 Sample Type: Client
 Inject. Date: 03-Jan-2019 19:54:30 ALS Bottle#: 5 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010438-011
 Misc. Info.: 140-13856-A-2
 Operator ID: 403468 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Jan-2019 12:35:05 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 04-Jan-2019 12:36:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.259	-0.011	92	213473	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.426	-0.005	98	1332746	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.096	16.102	-0.006	96	1184307	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.719	-0.006	76	995579	4.13	
6 Chlorodifluoromethane	51	3.829	3.822	0.000	95	12720	0.0789	
8 Dichlorodifluoromethane	85	3.893	3.887	0.000	98	23636	0.1048	
27 1,1-Dichloroethene	96	6.239	6.228	0.000	92	320830	4.26	
31 Methylene Chloride	84	6.606	6.600	-0.005	95	28683	0.3320	
34 trans-1,2-Dichloroethene	96	7.447	7.439	-0.005	91	5262	0.0699	
37 1,1-Dichloroethane	63	7.889	7.886	-0.011	99	126845	0.7725	
42 cis-1,2-Dichloroethene	96	8.903	8.898	-0.011	97	289082	3.69	
44 Chloroform	83	9.259	9.253	-0.011	96	52050	0.3051	
47 1,1,1-Trichloroethane	97	10.305	10.292	-0.005	96	1141919	6.41	
48 1,2-Dichloroethane	62	10.407	10.419	-0.017	8	2834	0.0235	
50 Benzene	78	10.887	10.898	-0.016	96	10156	0.0416	
67 Toluene	91	14.150	14.145	0.000	91	12317	0.0505	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p105.D

Injection Date: 03-Jan-2019 19:54:30

Instrument ID: MG

Operator ID: 403468

Lims ID: 140-13856-A-2

Lab Sample ID: 140-13856-2

Worklist Smp#: 11

Client ID: BLDG-A MID GAC

Purge Vol: 500.000 mL

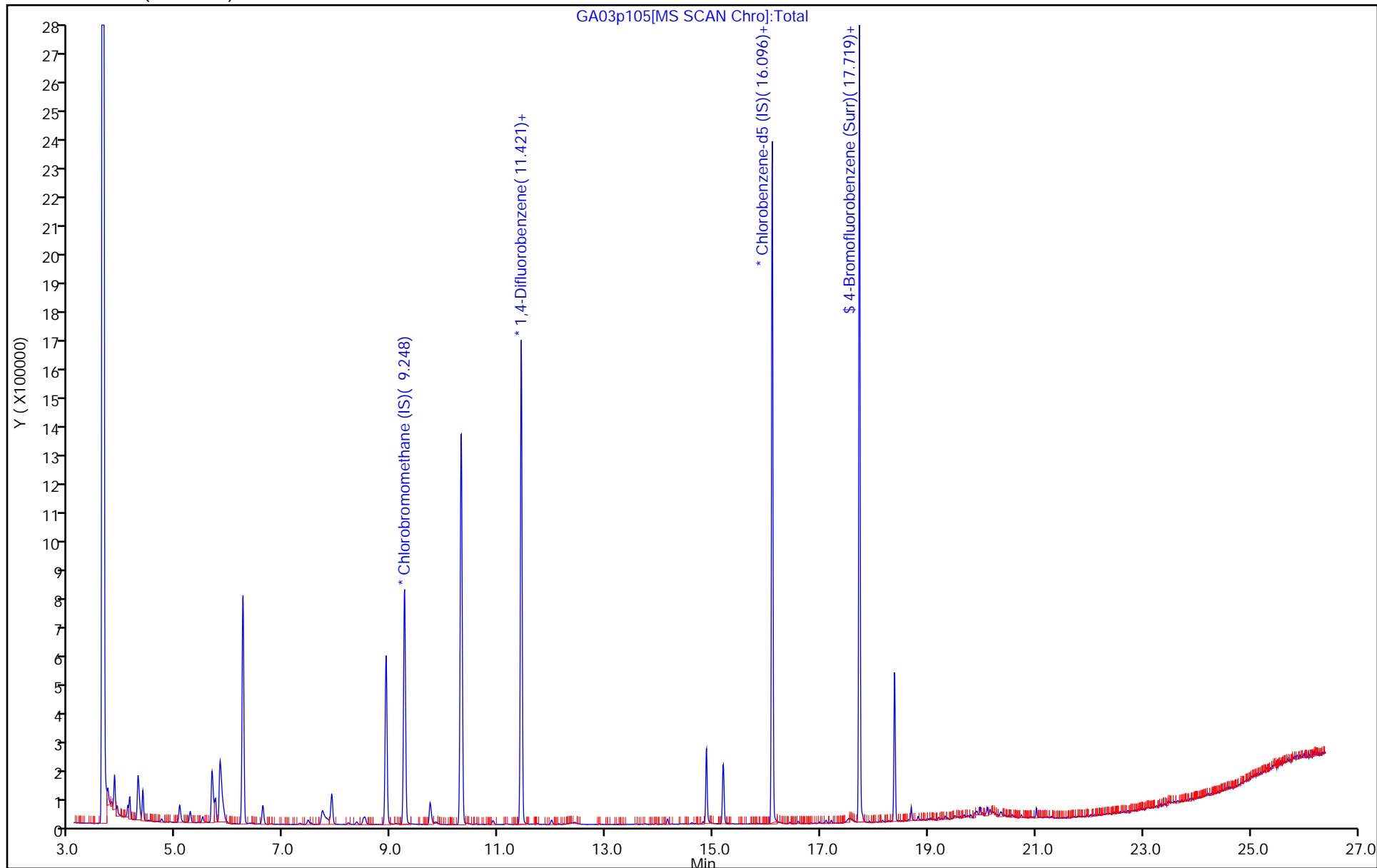
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p105.D
 Lims ID: 140-13856-A-2
 Client ID: BLDG-A MID GAC
 Sample Type: Client
 Inject. Date: 03-Jan-2019 19:54:30 ALS Bottle#: 5 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010438-011
 Misc. Info.: 140-13856-A-2
 Operator ID: 403468 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Jan-2019 12:35:05 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 04-Jan-2019 12:36:45

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.13	103.32

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p105.D

Injection Date: 03-Jan-2019 19:54:30

Instrument ID: MG

Lims ID: 140-13856-A-2

Lab Sample ID: 140-13856-2

Client ID: BLDG-A MID GAC

Operator ID: 403468

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

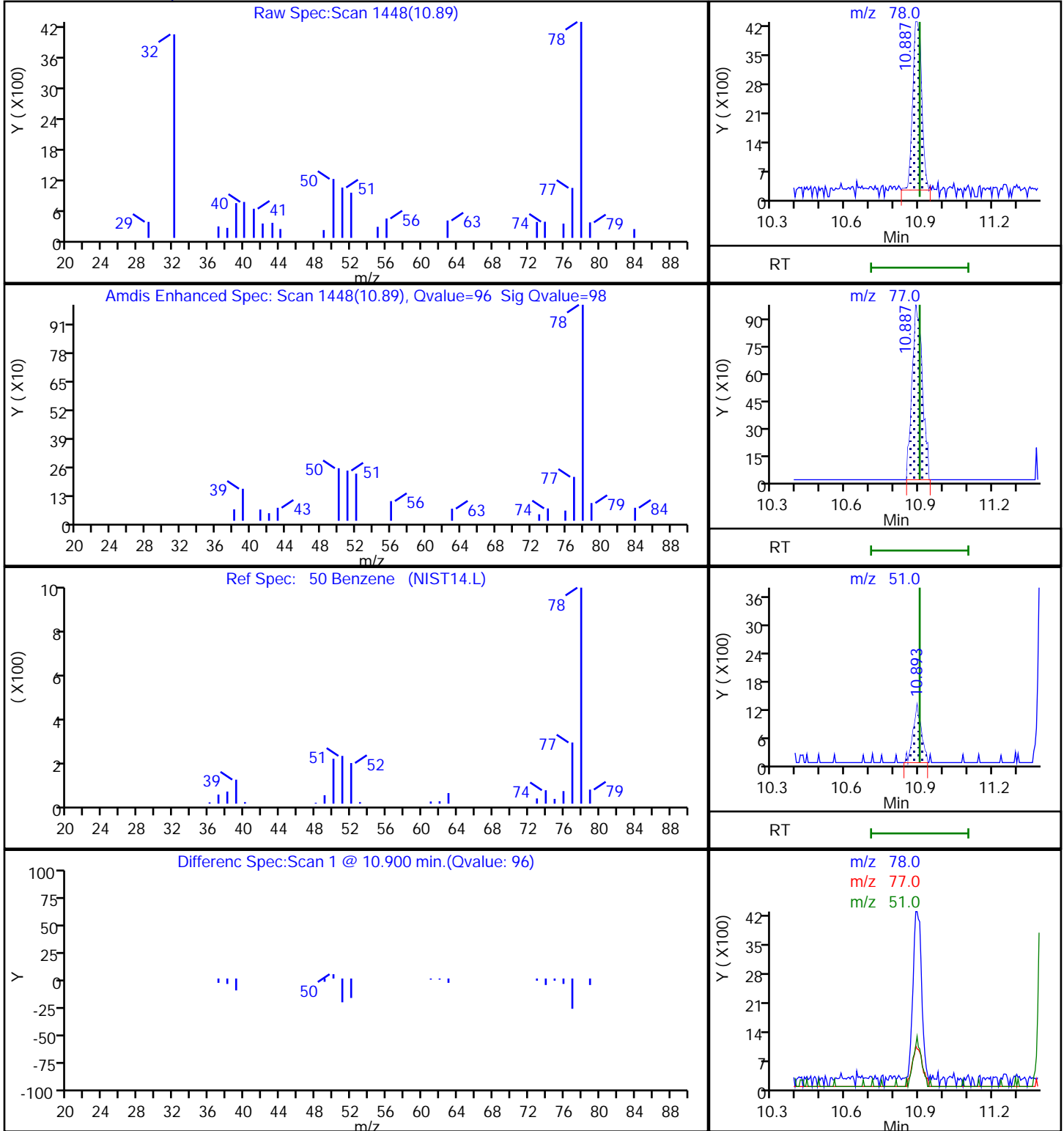
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p105.D

Injection Date: 03-Jan-2019 19:54:30

Instrument ID: MG

Lims ID: 140-13856-A-2

Lab Sample ID: 140-13856-2

Client ID: BLDG-A MID GAC

Operator ID: 403468

ALS Bottle#: 5 Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

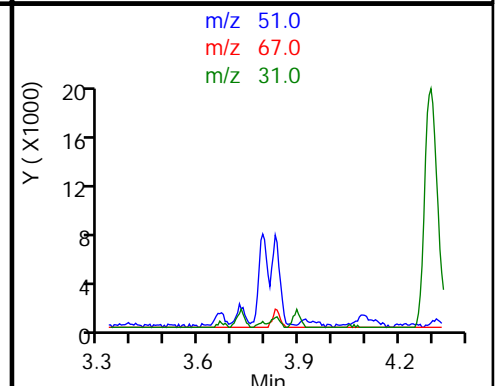
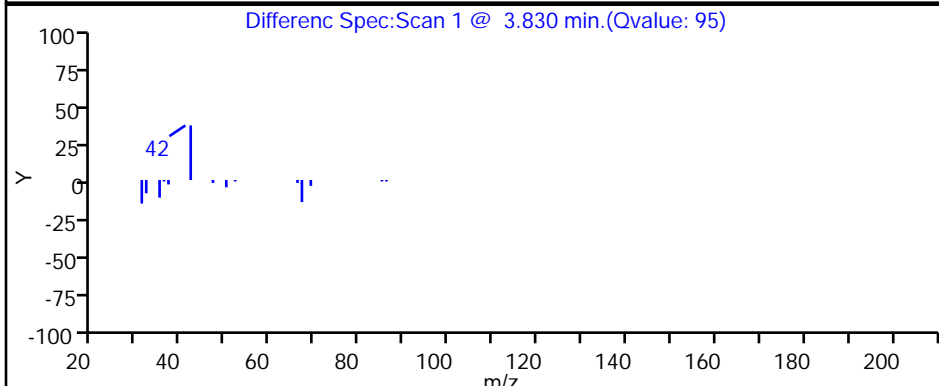
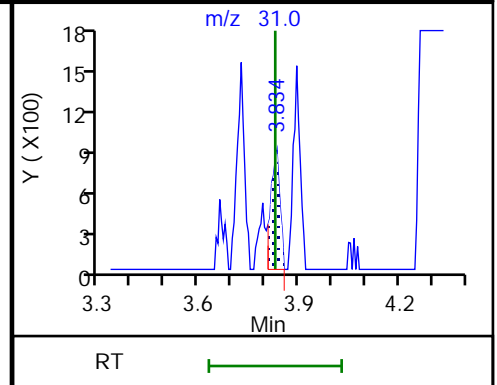
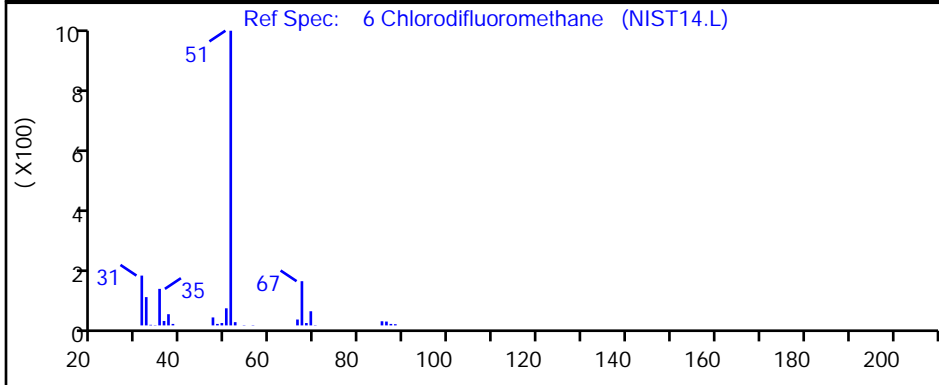
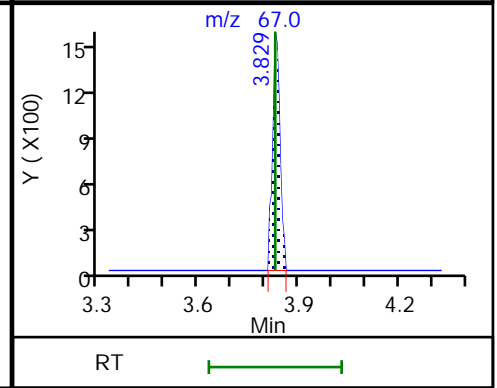
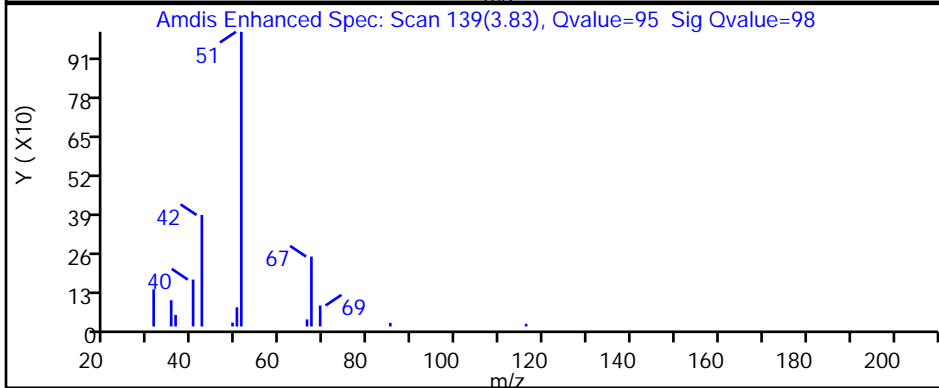
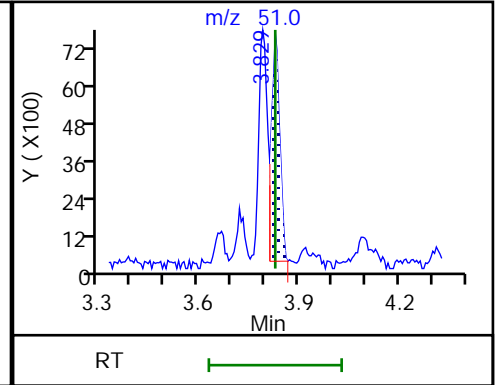
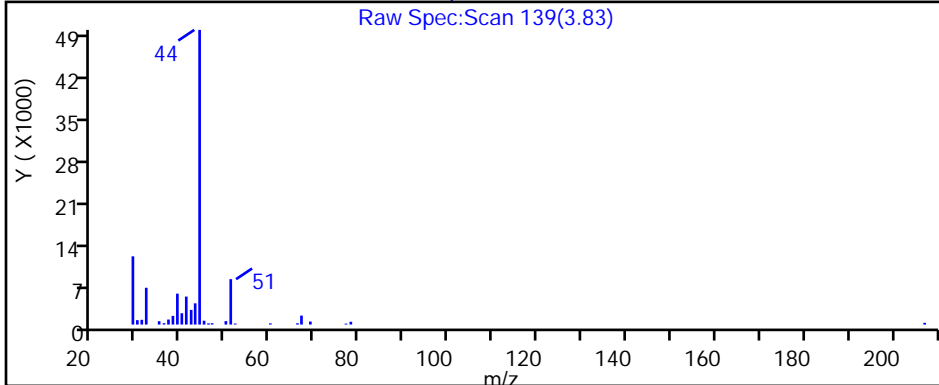
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p105.D

Injection Date: 03-Jan-2019 19:54:30

Instrument ID: MG

Lims ID: 140-13856-A-2

Lab Sample ID: 140-13856-2

Client ID: BLDG-A MID GAC

Operator ID: 403468

ALS Bottle#: 5 Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

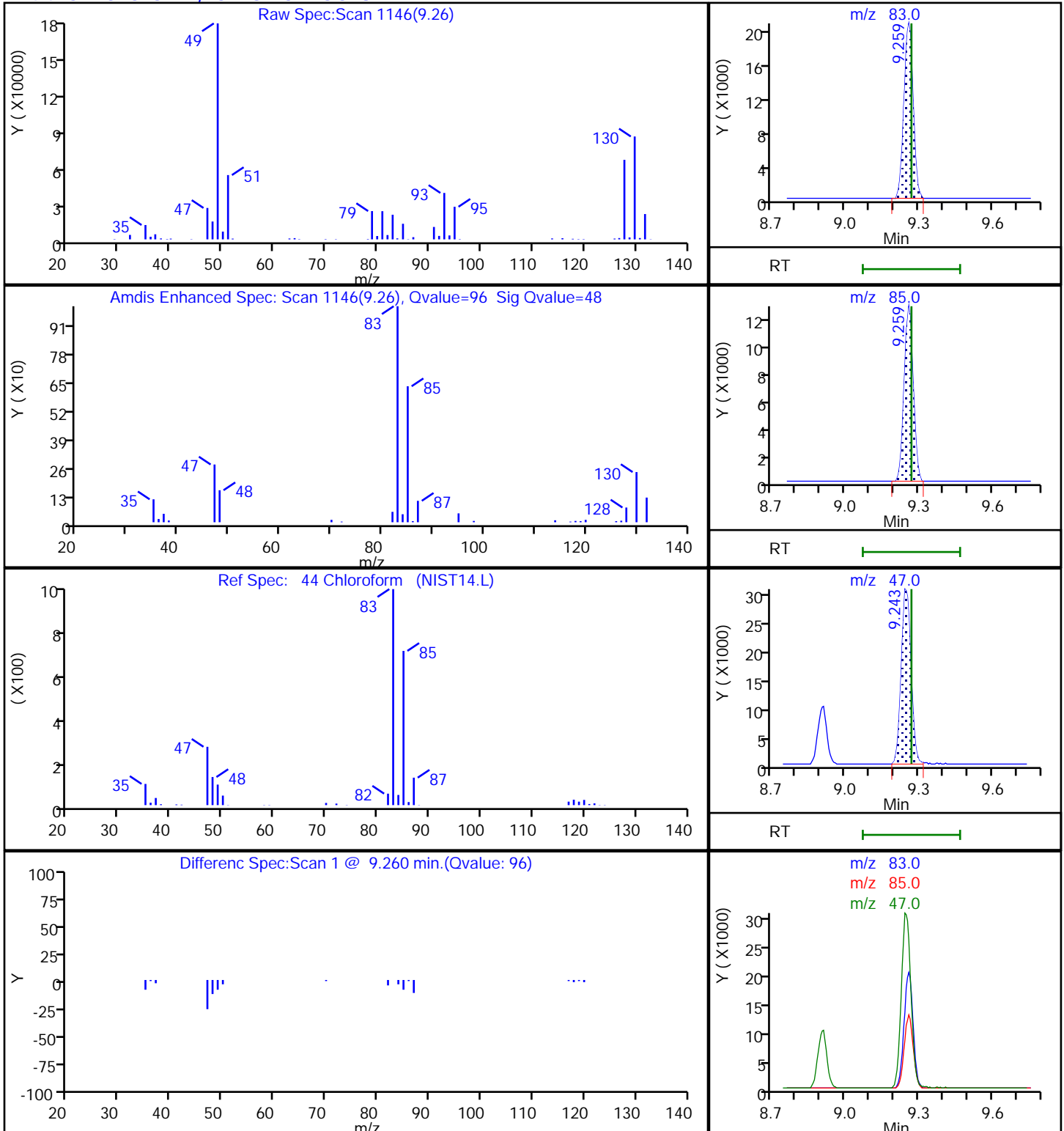
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p105.D

Injection Date: 03-Jan-2019 19:54:30

Instrument ID: MG

Lims ID: 140-13856-A-2

Lab Sample ID: 140-13856-2

Client ID: BLDG-A MID GAC

Operator ID: 403468

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

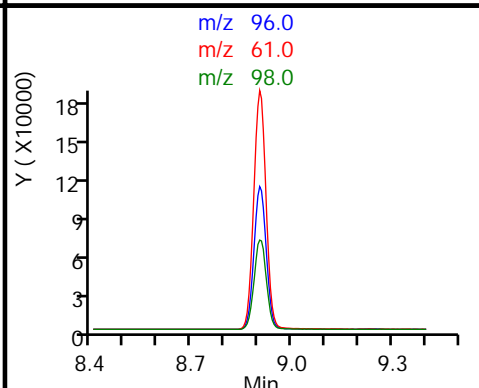
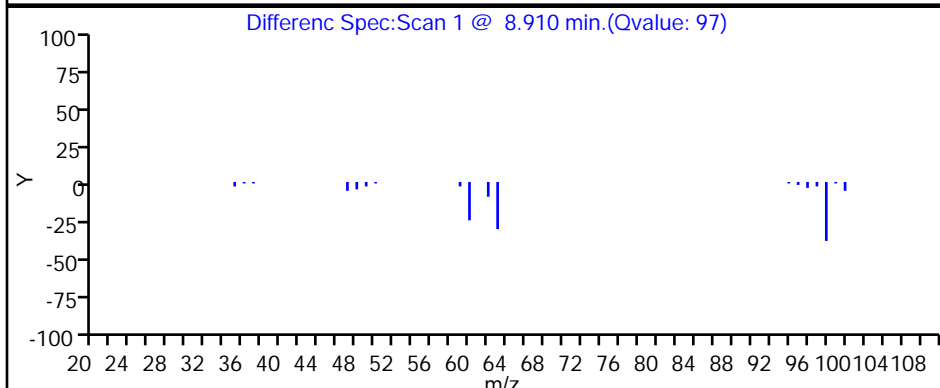
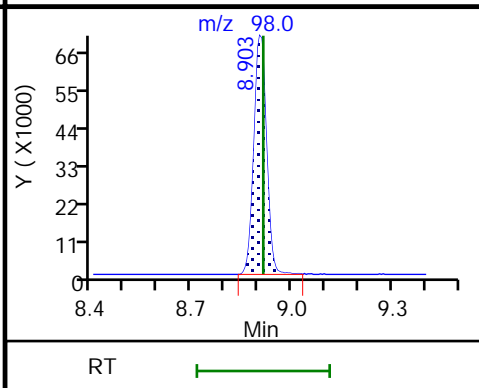
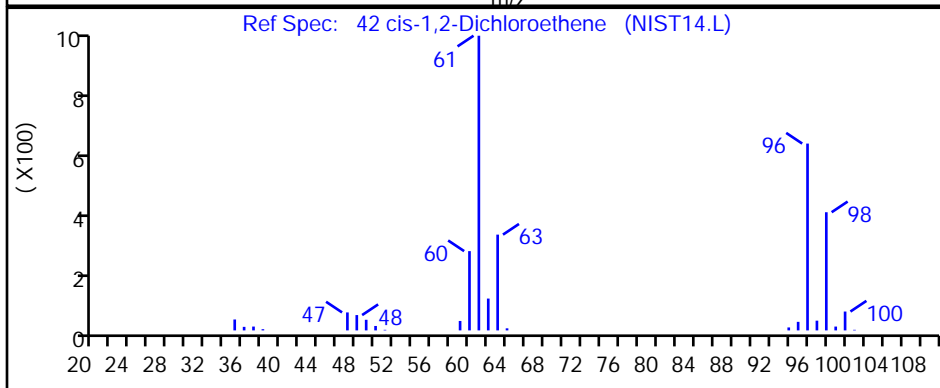
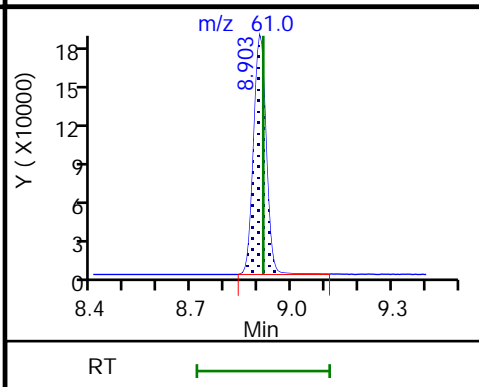
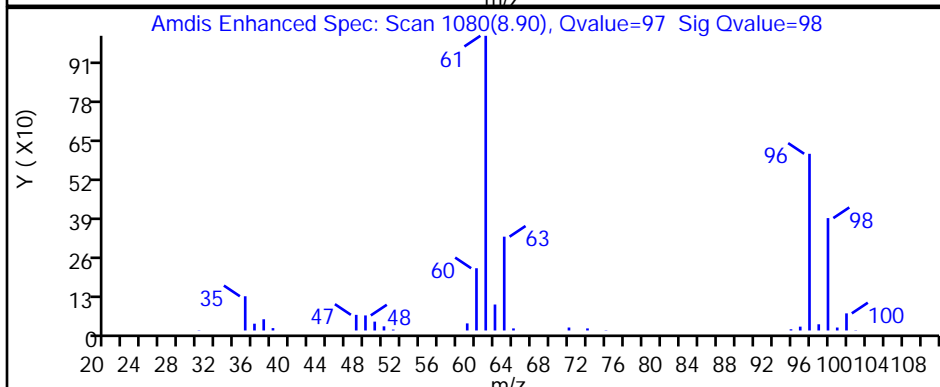
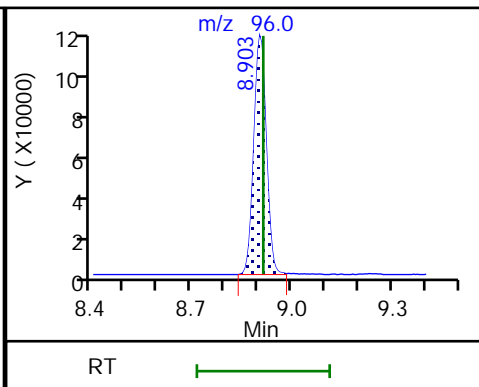
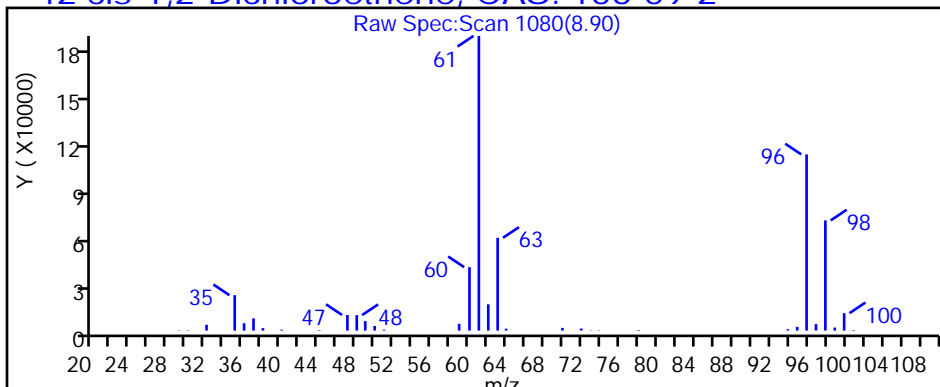
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p105.D

Injection Date: 03-Jan-2019 19:54:30

Instrument ID: MG

Lims ID: 140-13856-A-2

Lab Sample ID: 140-13856-2

Client ID: BLDG-A MID GAC

Operator ID: 403468

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

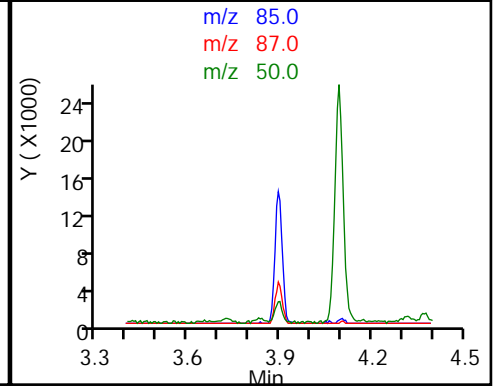
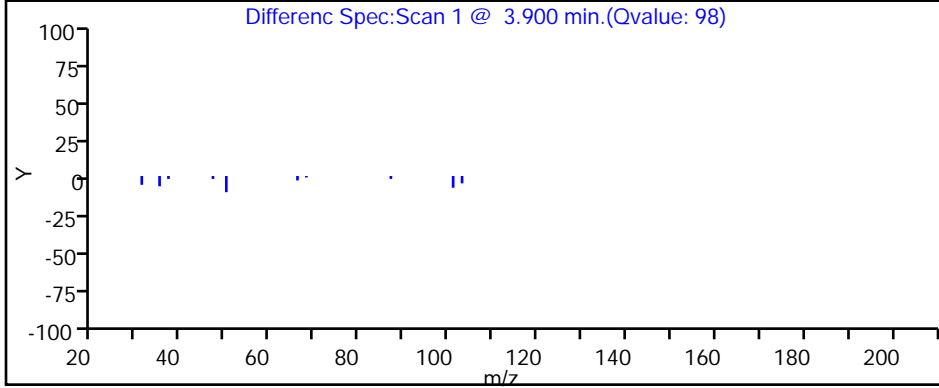
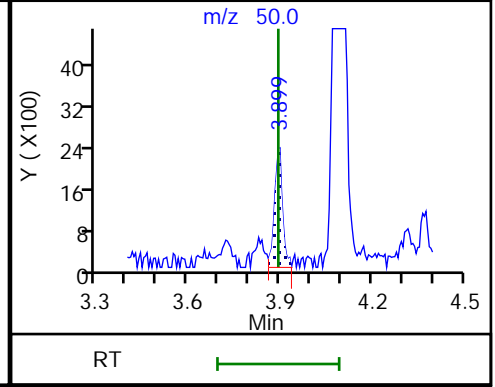
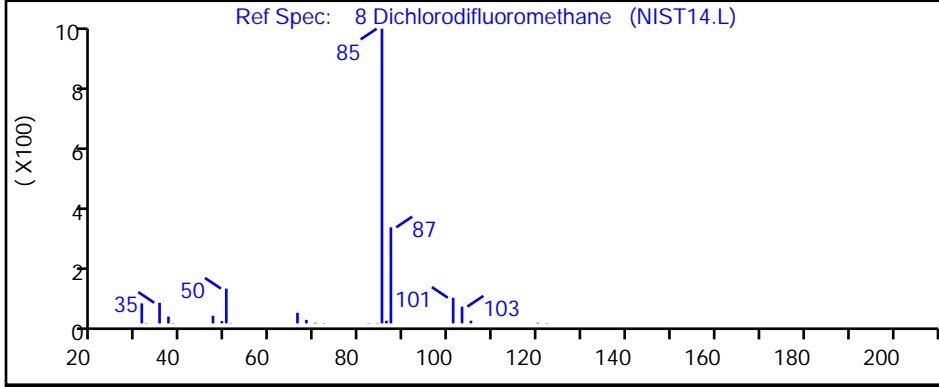
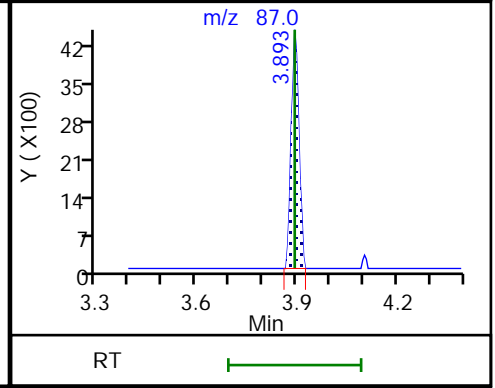
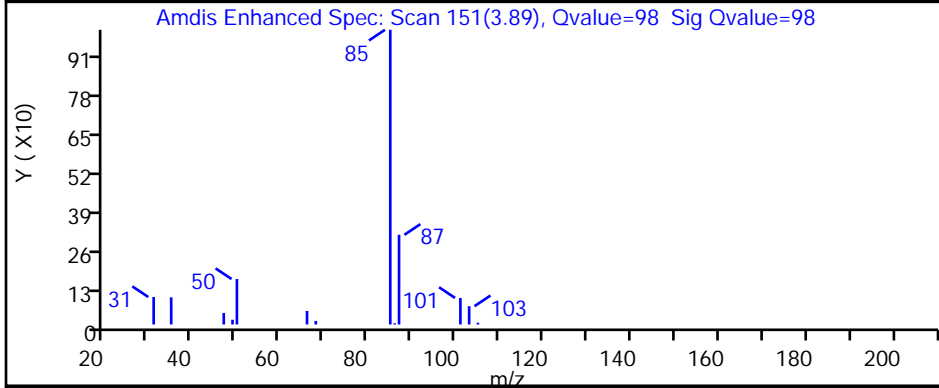
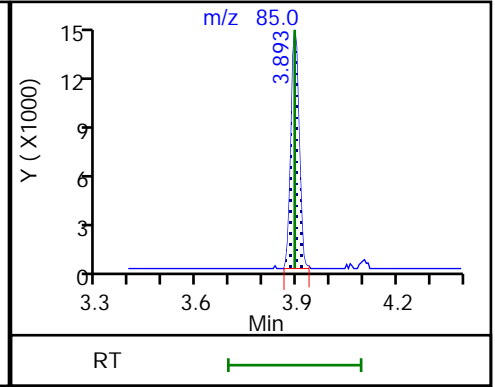
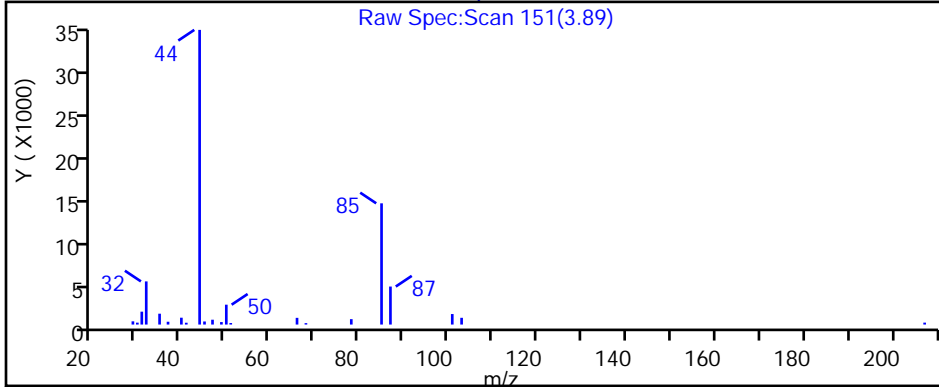
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p105.D

Injection Date: 03-Jan-2019 19:54:30

Instrument ID: MG

Lims ID: 140-13856-A-2

Lab Sample ID: 140-13856-2

Client ID: BLDG-A MID GAC

Operator ID: 403468

ALS Bottle#: 5 Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

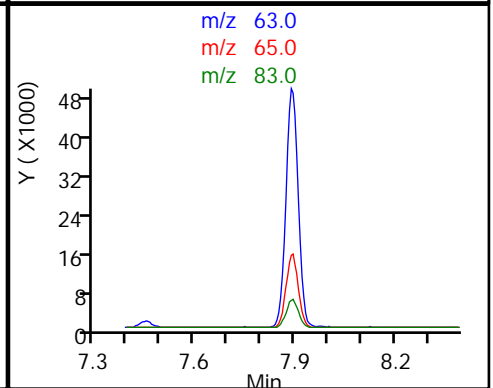
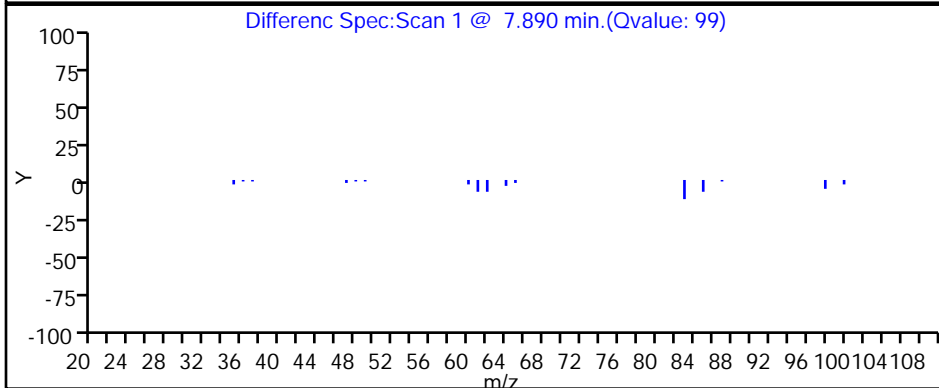
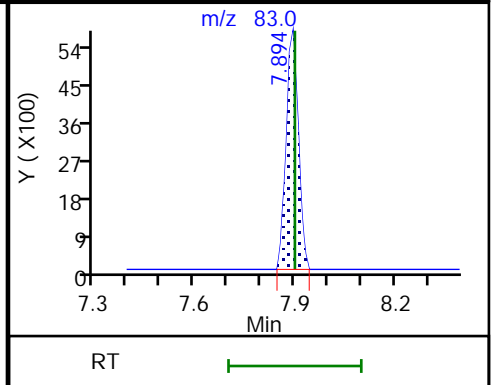
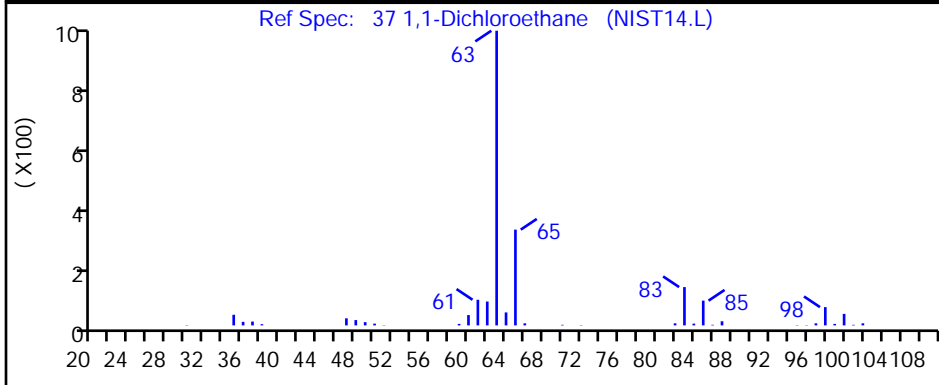
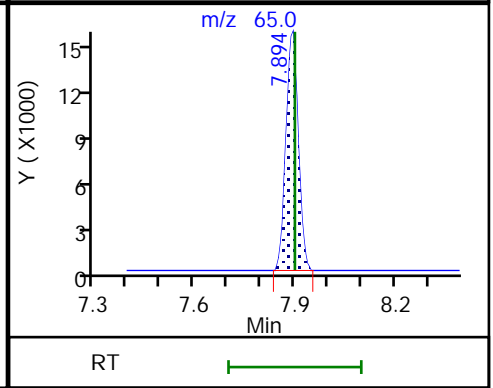
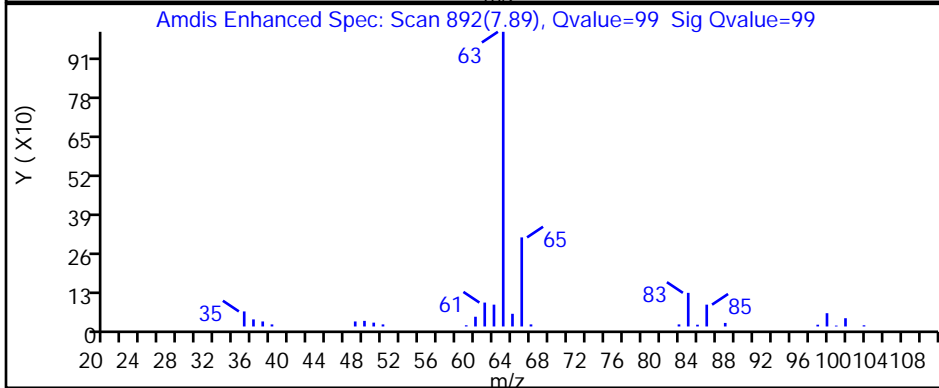
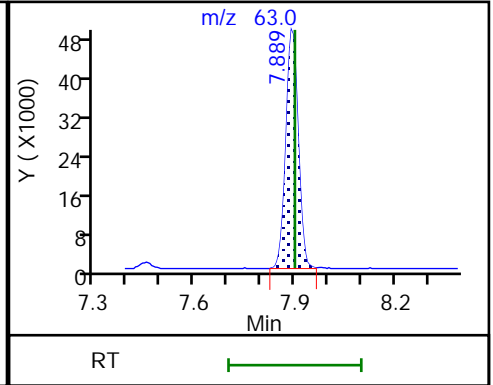
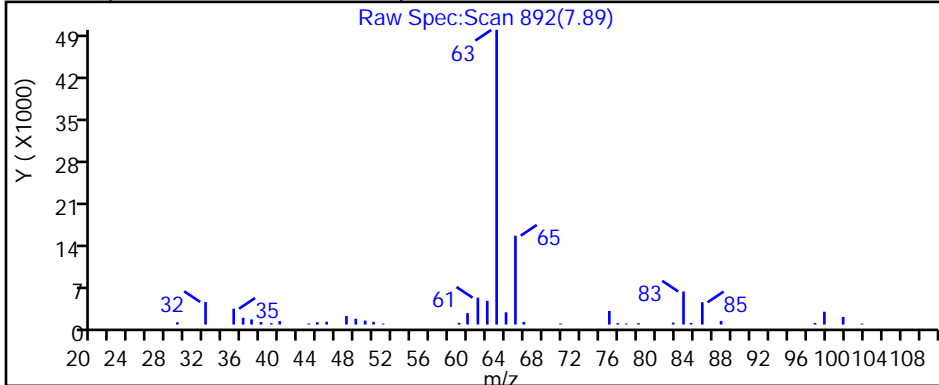
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p105.D

Injection Date: 03-Jan-2019 19:54:30

Instrument ID: MG

Lims ID: 140-13856-A-2

Lab Sample ID: 140-13856-2

Client ID: BLDG-A MID GAC

Operator ID: 403468

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

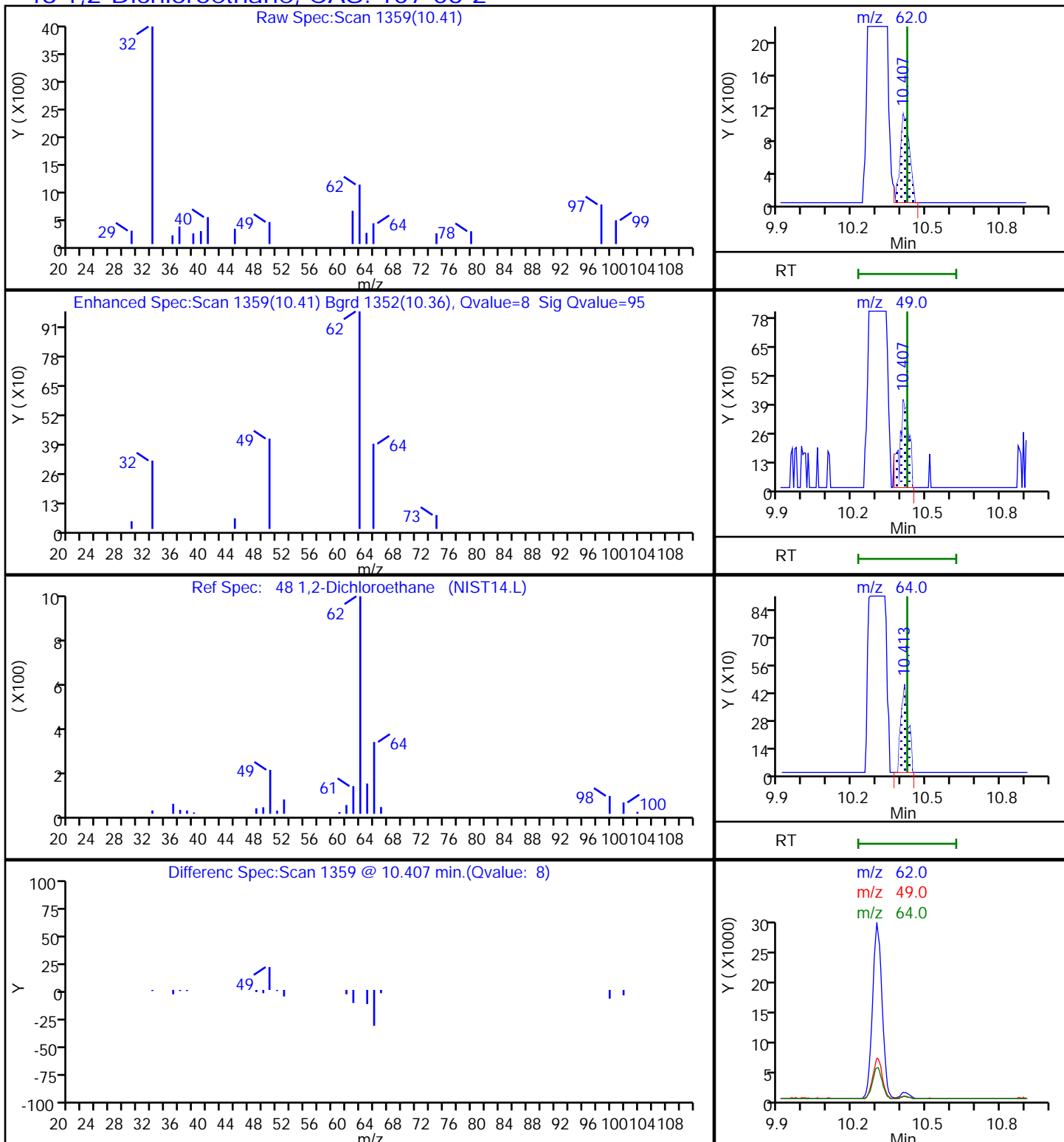
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

48 1,2-Dichloroethane, CAS: 107-06-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p105.D

Injection Date: 03-Jan-2019 19:54:30

Instrument ID: MG

Lims ID: 140-13856-A-2

Lab Sample ID: 140-13856-2

Client ID: BLDG-A MID GAC

Operator ID: 403468

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

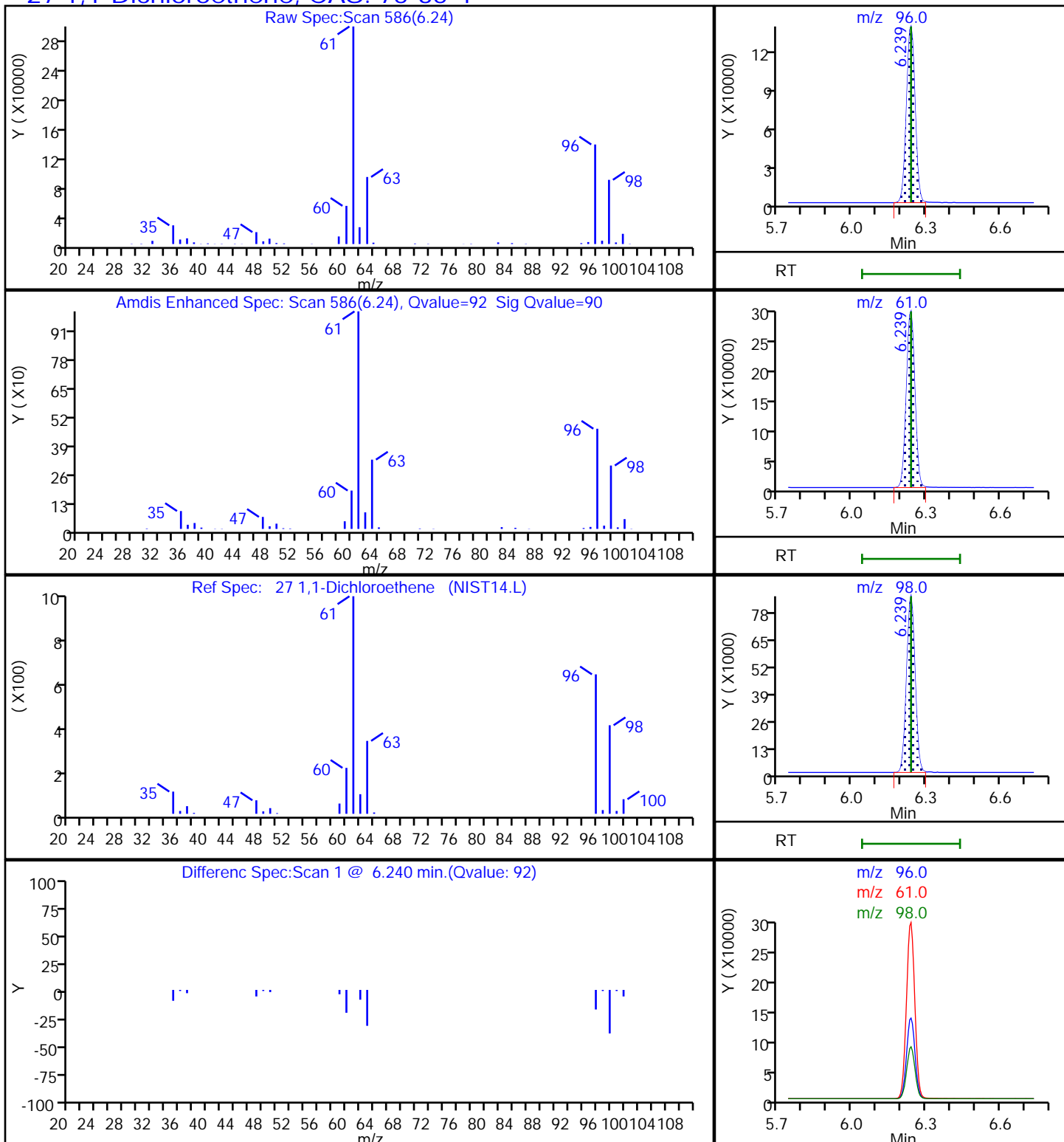
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

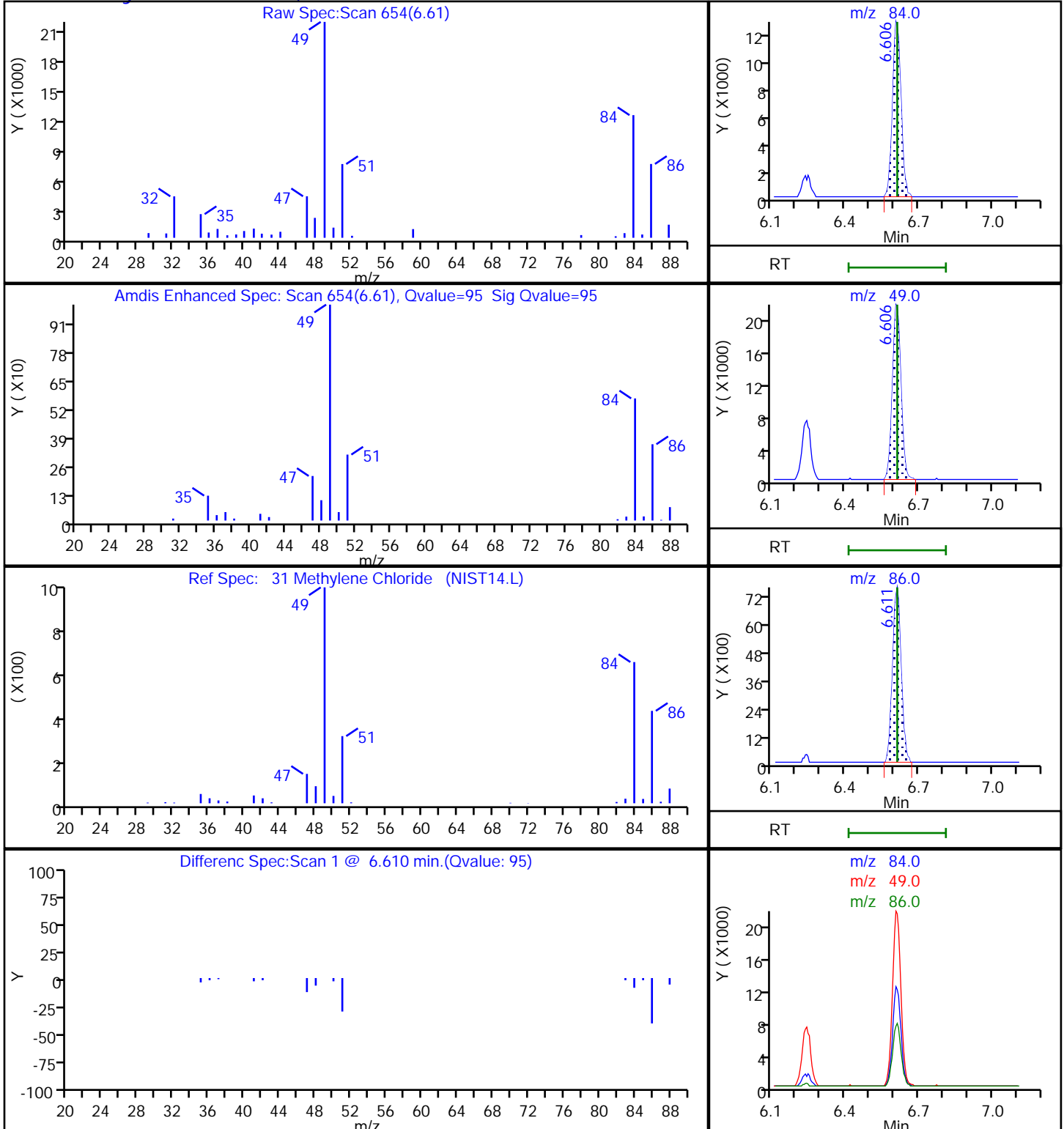
27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p105.D
Injection Date: 03-Jan-2019 19:54:30 Instrument ID: MG
Lims ID: 140-13856-A-2 Lab Sample ID: 140-13856-2
Client ID: BLDG-A MID GAC
Operator ID: 403468 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

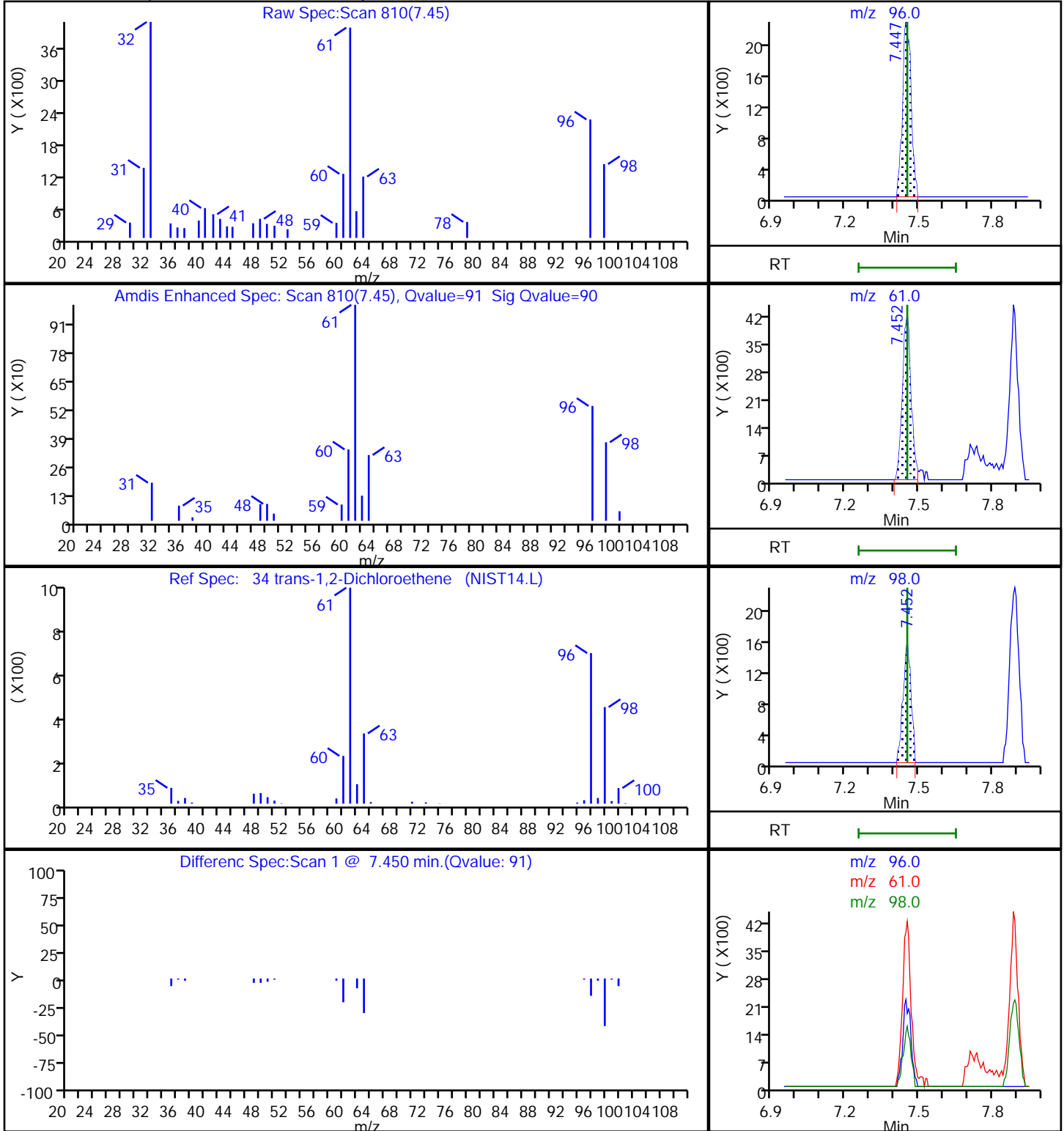
31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p105.D
Injection Date: 03-Jan-2019 19:54:30 Instrument ID: MG
Lims ID: 140-13856-A-2 Lab Sample ID: 140-13856-2
Client ID: BLDG-A MID GAC
Operator ID: 403468 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p105.D

Injection Date: 03-Jan-2019 19:54:30

Instrument ID: MG

Lims ID: 140-13856-A-2

Lab Sample ID: 140-13856-2

Client ID: BLDG-A MID GAC

Operator ID: 403468

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

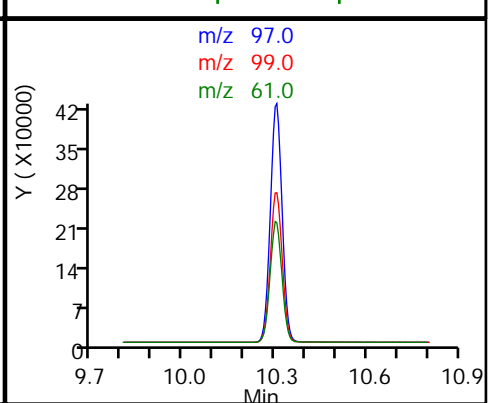
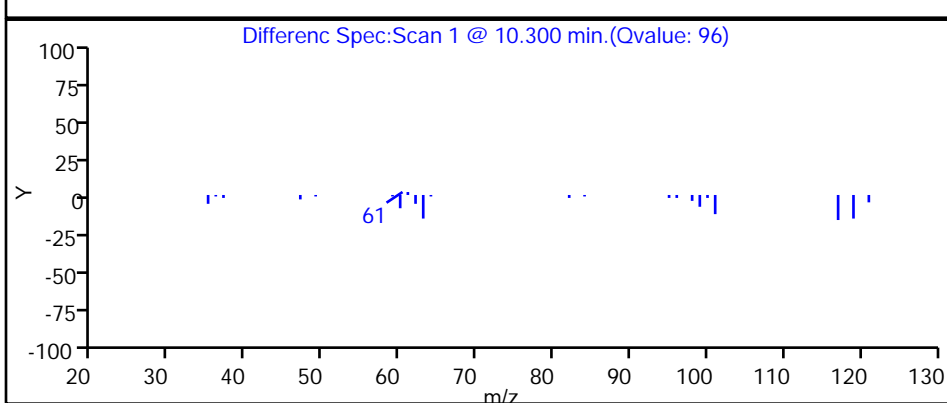
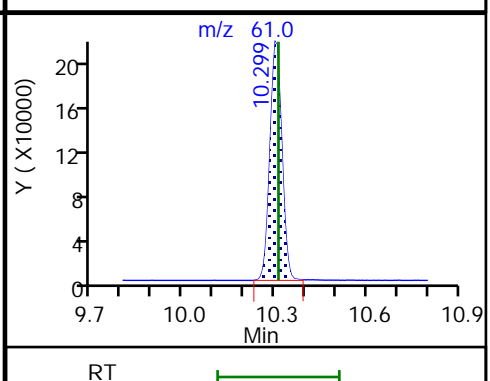
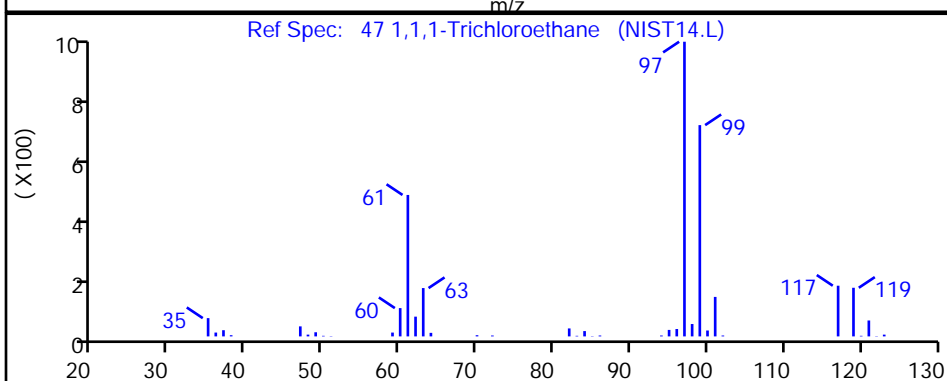
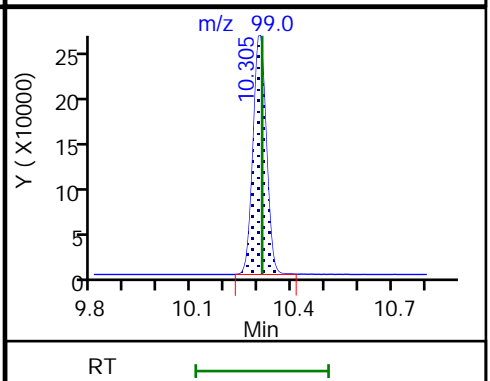
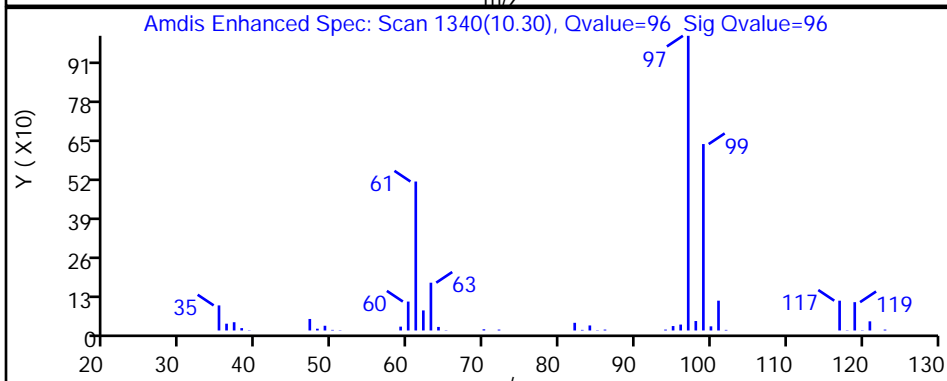
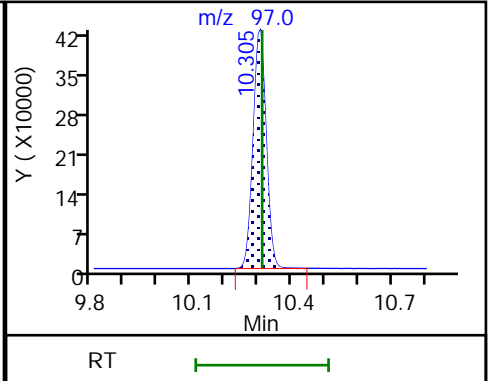
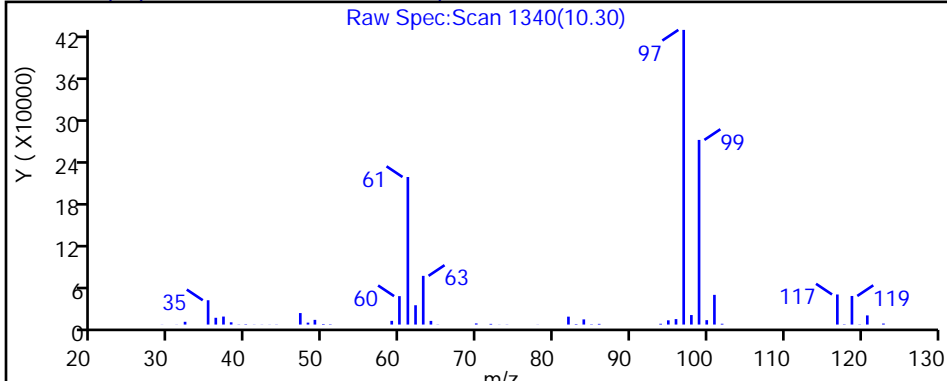
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Client Sample ID: BLDG-A EFFLUENT Lab Sample ID: 140-13856-3
 Matrix: Air Lab File ID: GA03p104.D
 Analysis Method: TO 15 LL Date Collected: 12/28/2018 15:59
 Sample wt/vol: 100(mL) Date Analyzed: 01/03/2019 19:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26610 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.51		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	4.7		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.47		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.6		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	15		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4	J B	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.28	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.12	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	9.9		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.9		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Client Sample ID: BLDG-A EFFLUENT Lab Sample ID: 140-13856-3
 Matrix: Air Lab File ID: GA03p104.D
 Analysis Method: TO 15 LL Date Collected: 12/28/2018 15:59
 Sample wt/vol: 100(mL) Date Analyzed: 01/03/2019 19:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26610 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.5		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	2.5		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	18		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	11		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	58		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.9	J B	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.9	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.47	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	54		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	15		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D
 Lims ID: 140-13856-A-3
 Client ID: BLDG-A EFFLUENT
 Sample Type: Client
 Inject. Date: 03-Jan-2019 19:11:30 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010438-010
 Misc. Info.: 140-13856-A-3
 Operator ID: 403468 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Jan-2019 12:32:29 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 04-Jan-2019 12:32:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.259	-0.011	92	207654	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.426	-0.005	98	1332750	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.096	16.102	-0.006	96	1258517	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.719	-0.006	78	1056593	4.13	
6 Chlorodifluoromethane	51	3.834	3.822	0.005	96	11825	0.0754	
8 Dichlorodifluoromethane	85	3.899	3.887	0.006	99	20773	0.0947	
27 1,1-Dichloroethene	96	6.239	6.228	0.000	92	214205	2.92	
31 Methylene Chloride	84	6.611	6.600	0.000	94	23917	0.2846	
34 trans-1,2-Dichloroethene	96	7.458	7.439	0.006	94	1728	0.0236	
37 1,1-Dichloroethane	63	7.895	7.886	-0.005	99	84267	0.5276	
42 cis-1,2-Dichloroethene	96	8.908	8.898	-0.006	97	70945	0.9318	
44 Chloroform	83	9.259	9.253	-0.011	42	16811	0.1013	
47 1,1,1-Trichloroethane	97	10.305	10.292	-0.005	96	344227	1.99	
50 Benzene	78	10.893	10.898	-0.010	97	22802	0.0935	
58 Trichloroethene	130	12.122	12.127	-0.011	88	58282	0.5719	
73 Tetrachloroethene	129	15.271	15.271	-0.006	80	5300	0.0570	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D

Injection Date: 03-Jan-2019 19:11:30

Instrument ID: MG

Operator ID: 403468

Lims ID: 140-13856-A-3

Lab Sample ID: 140-13856-3

Worklist Smp#: 10

Client ID: BLDG-A EFFLUENT

Purge Vol: 500.000 mL

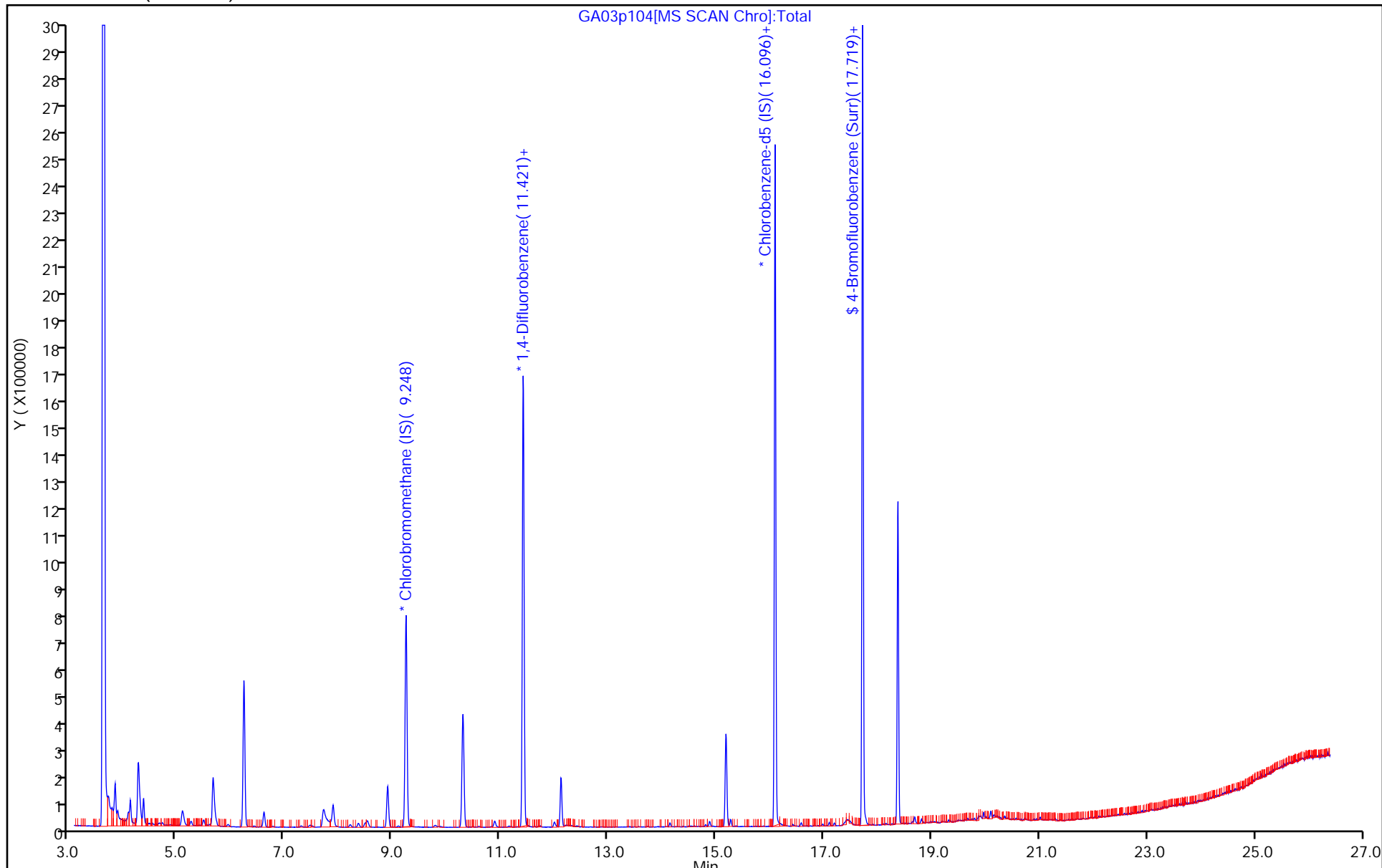
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D
 Lims ID: 140-13856-A-3
 Client ID: BLDG-A EFFLUENT
 Sample Type: Client
 Inject. Date: 03-Jan-2019 19:11:30 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010438-010
 Misc. Info.: 140-13856-A-3
 Operator ID: 403468 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Jan-2019 12:32:29 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 04-Jan-2019 12:32:29

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.13	103.18

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D

Injection Date: 03-Jan-2019 19:11:30

Instrument ID: MG

Lims ID: 140-13856-A-3

Lab Sample ID: 140-13856-3

Client ID: BLDG-A EFFLUENT

Operator ID: 403468

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

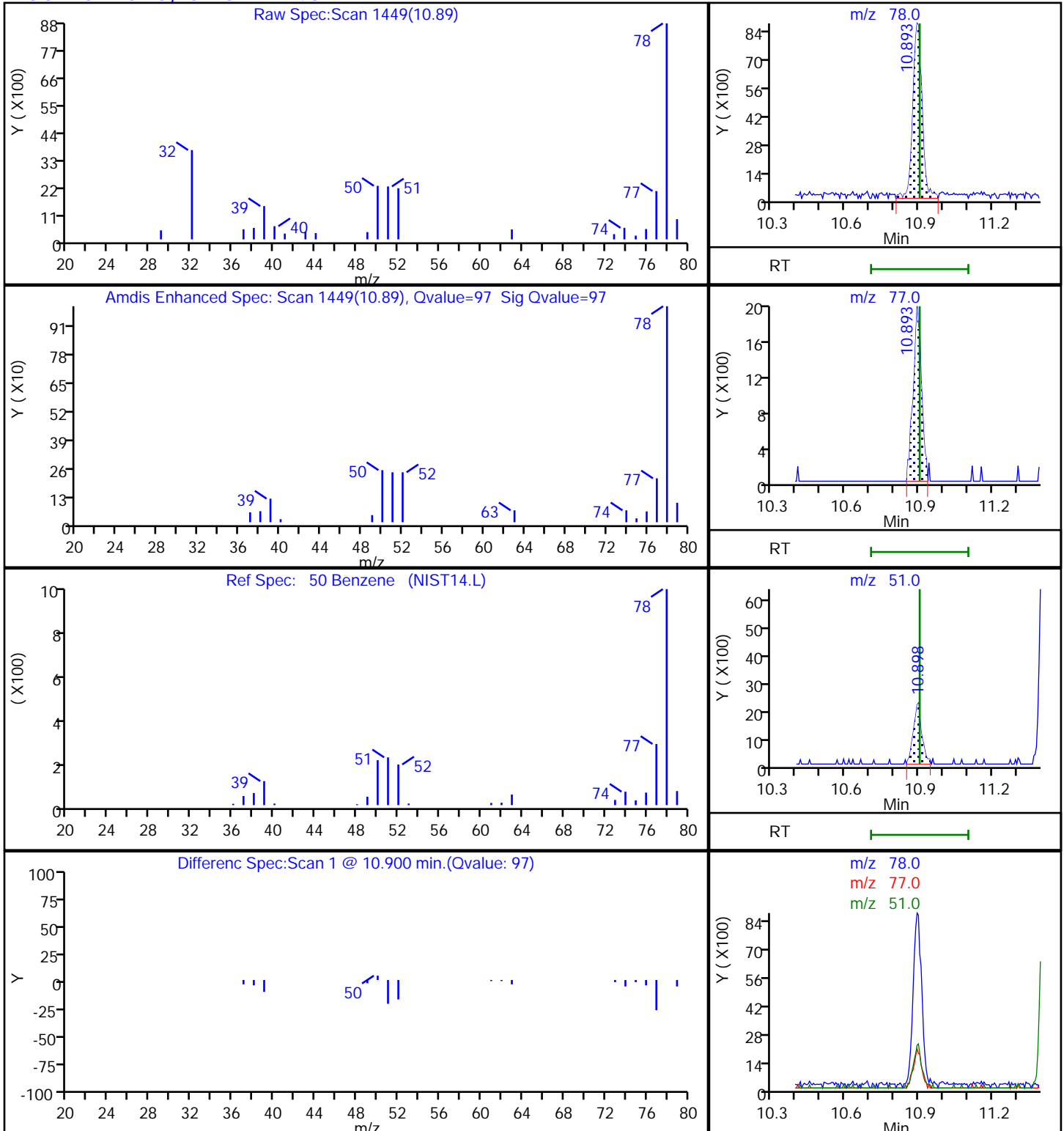
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D

Injection Date: 03-Jan-2019 19:11:30

Instrument ID: MG

Lims ID: 140-13856-A-3

Lab Sample ID: 140-13856-3

Client ID: BLDG-A EFFLUENT

Operator ID: 403468

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

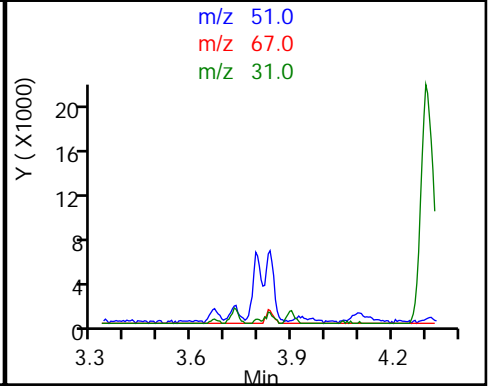
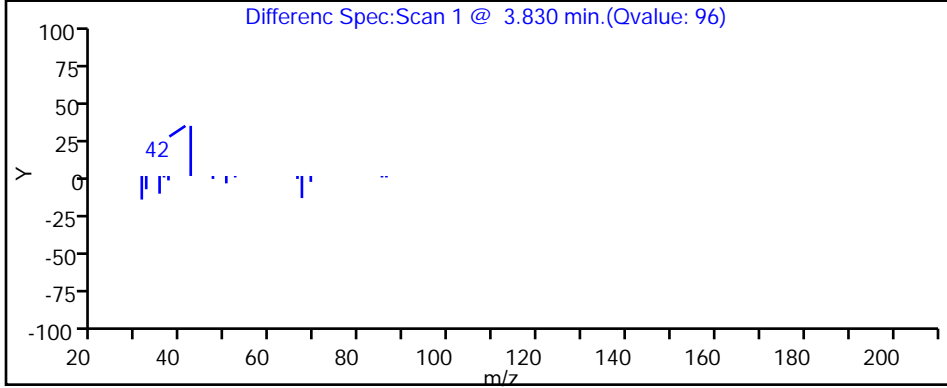
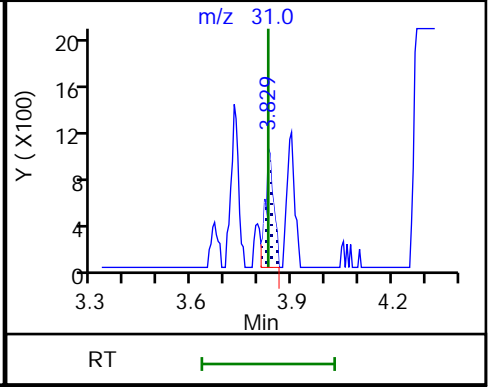
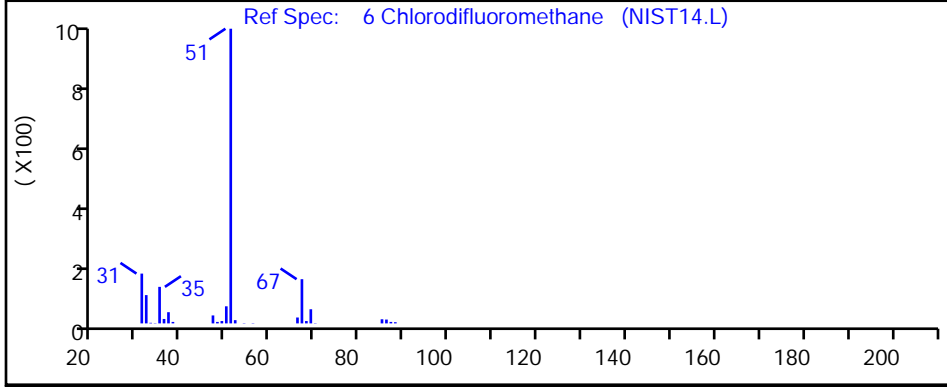
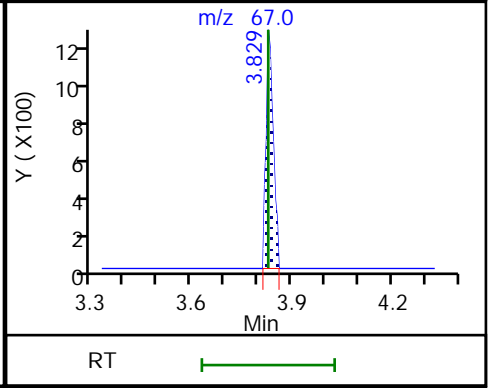
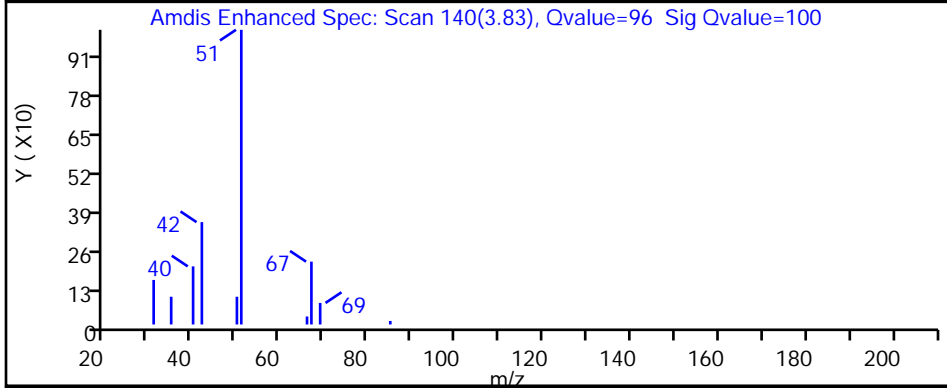
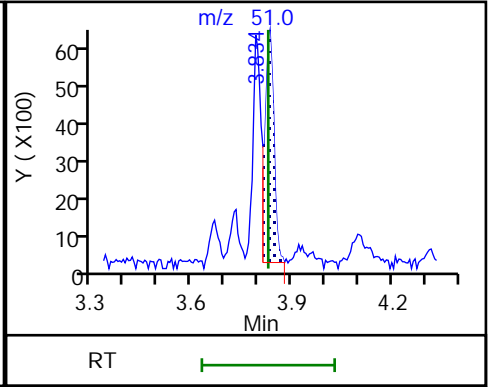
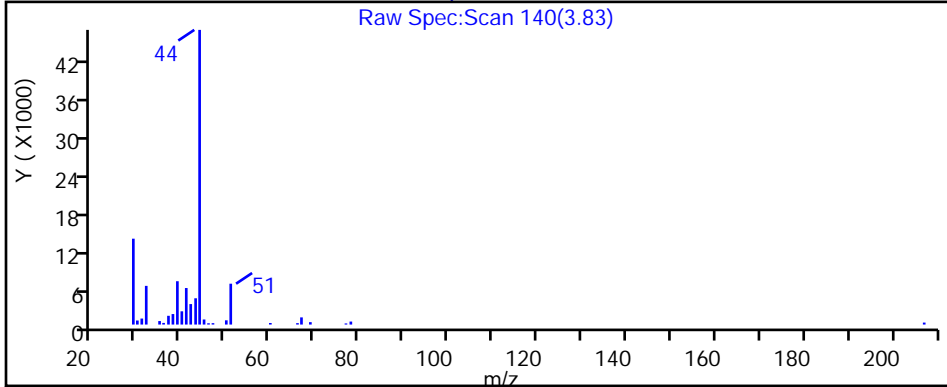
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D

Injection Date: 03-Jan-2019 19:11:30

Instrument ID: MG

Lims ID: 140-13856-A-3

Lab Sample ID: 140-13856-3

Client ID: BLDG-A EFFLUENT

Operator ID: 403468

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

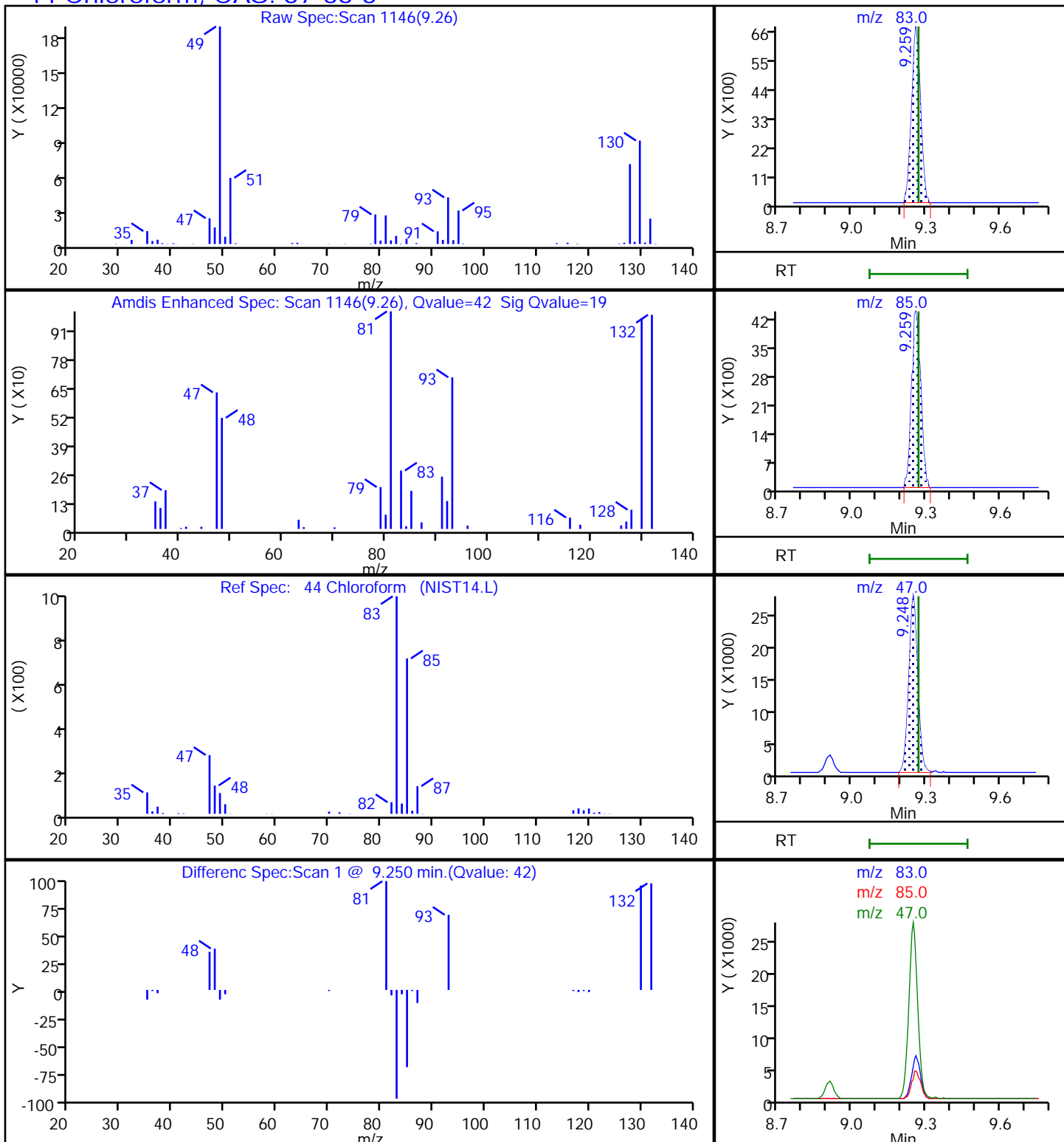
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

44 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D

Injection Date: 03-Jan-2019 19:11:30

Instrument ID: MG

Lims ID: 140-13856-A-3

Lab Sample ID: 140-13856-3

Client ID: BLDG-A EFFLUENT

Operator ID: 403468

ALS Bottle#: 4 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

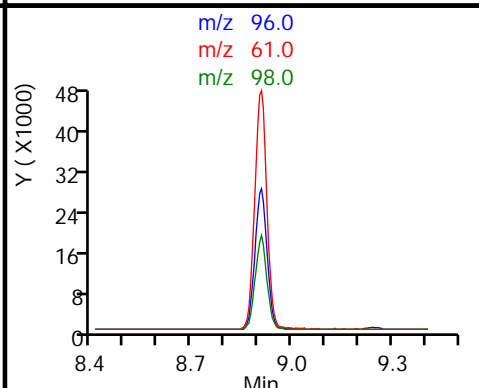
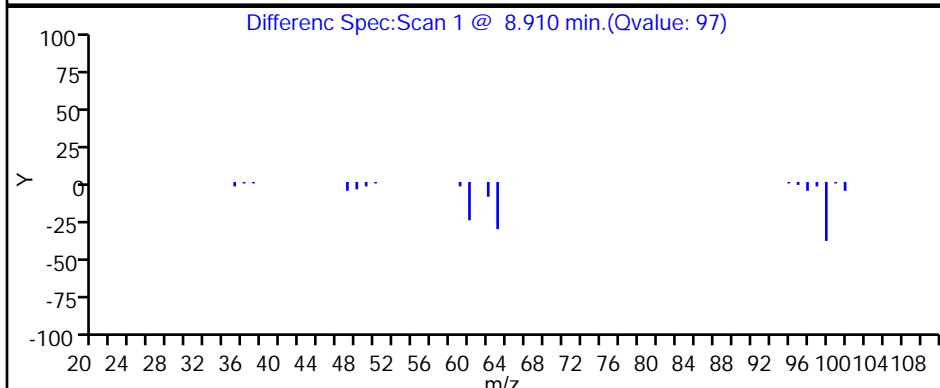
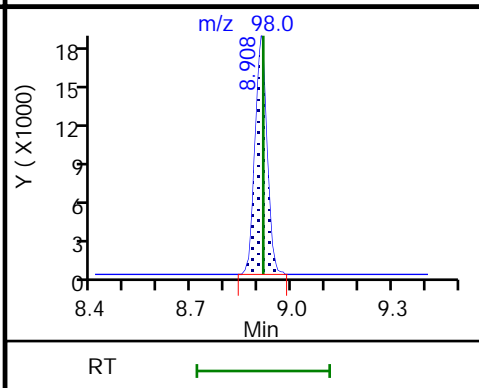
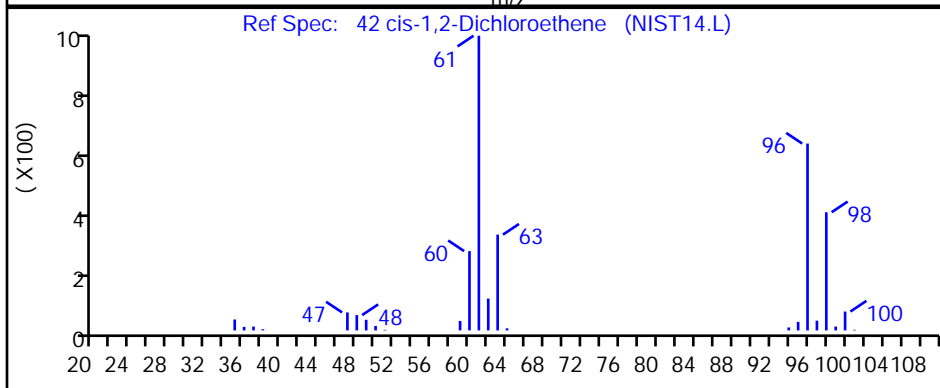
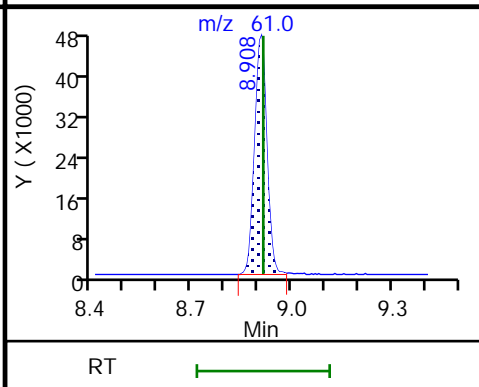
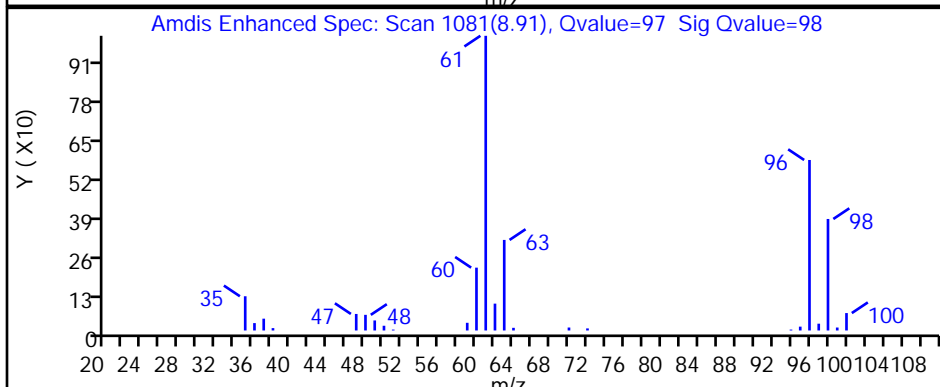
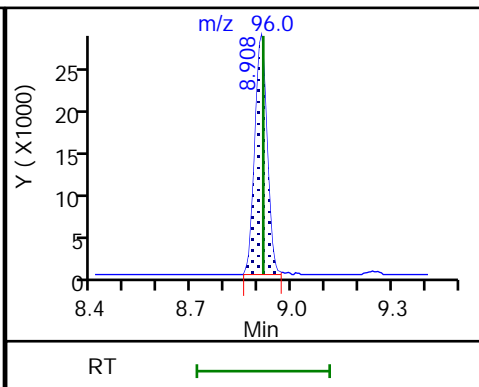
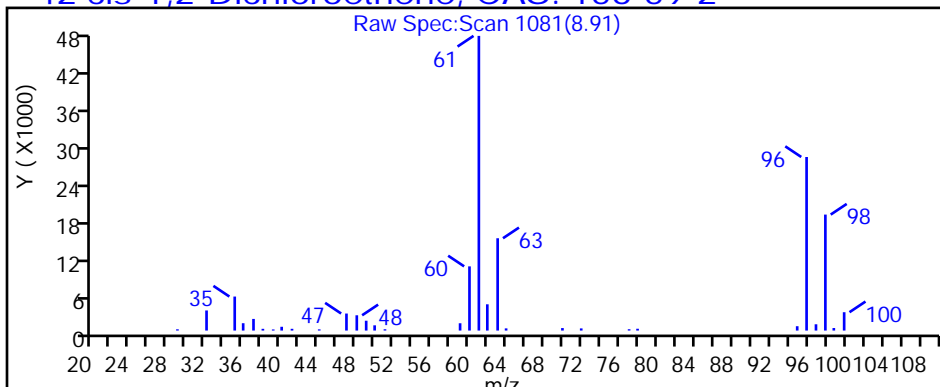
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D

Injection Date: 03-Jan-2019 19:11:30

Instrument ID: MG

Lims ID: 140-13856-A-3

Lab Sample ID: 140-13856-3

Client ID: BLDG-A EFFLUENT

Operator ID: 403468

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

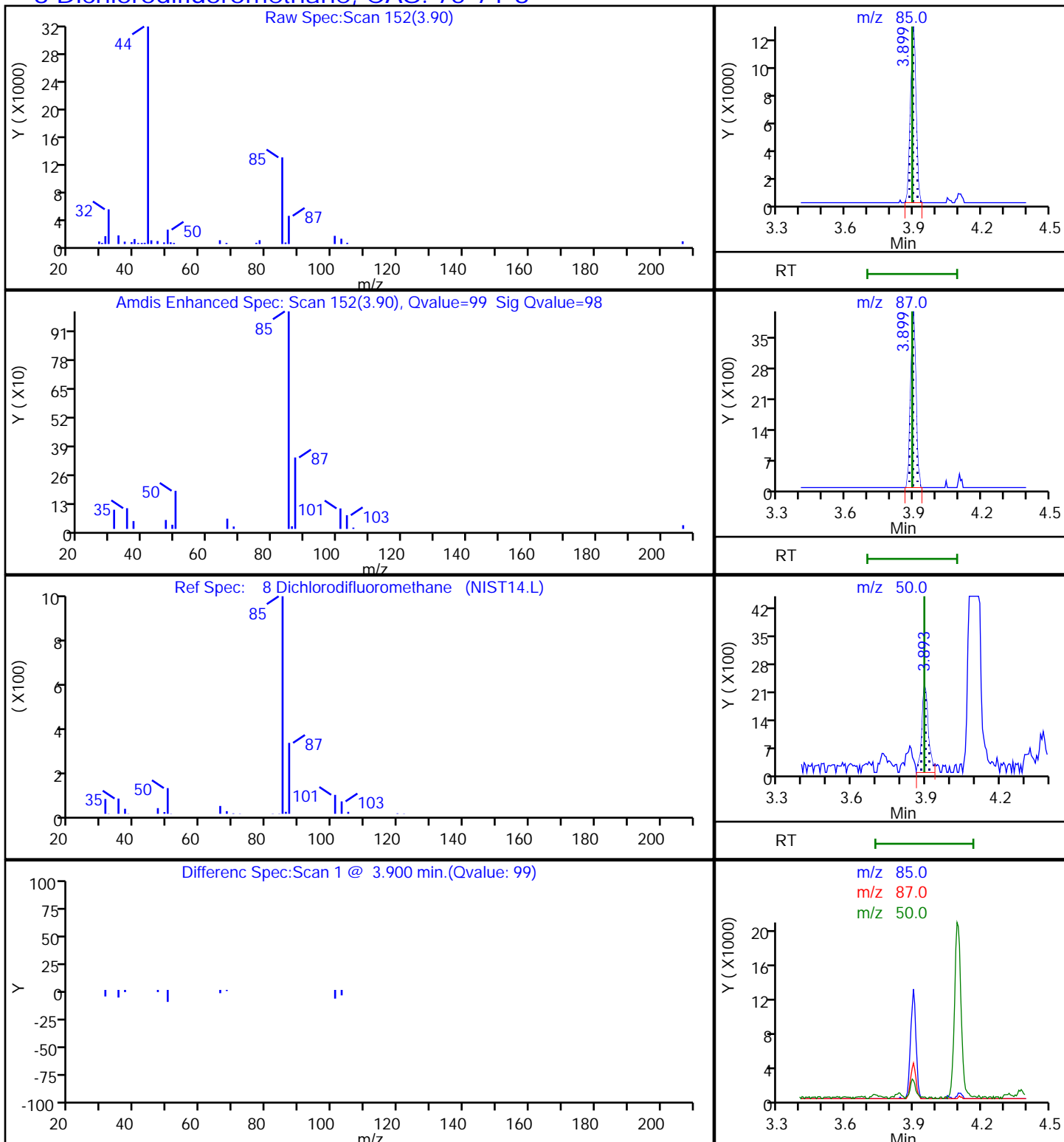
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

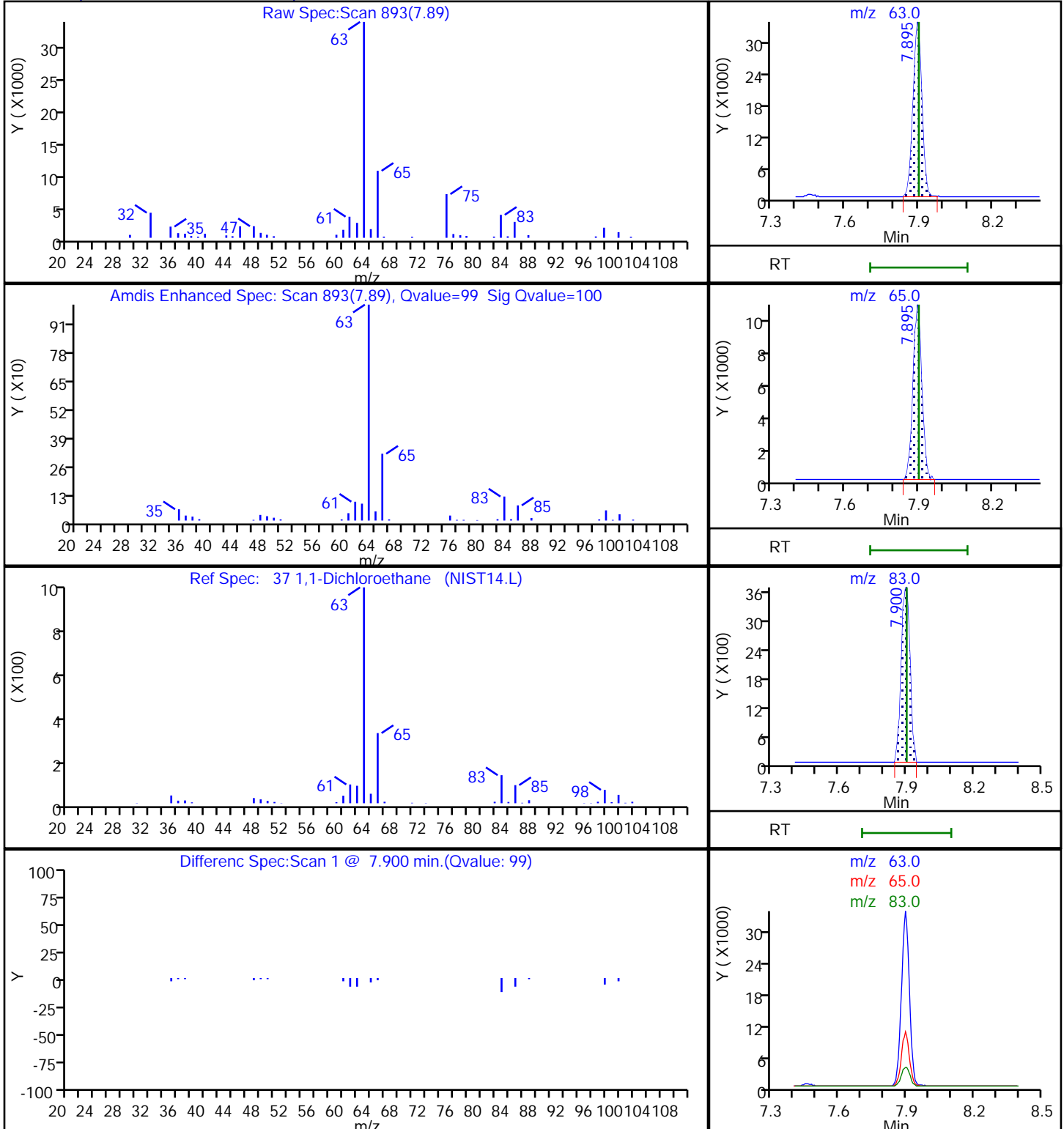
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D
Injection Date: 03-Jan-2019 19:11:30 Instrument ID: MG
Lims ID: 140-13856-A-3 Lab Sample ID: 140-13856-3
Client ID: BLDG-A EFFLUENT
Operator ID: 403468 ALS Bottle#: 4 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D

Injection Date: 03-Jan-2019 19:11:30

Instrument ID: MG

Lims ID: 140-13856-A-3

Lab Sample ID: 140-13856-3

Client ID: BLDG-A EFFLUENT

Operator ID: 403468

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

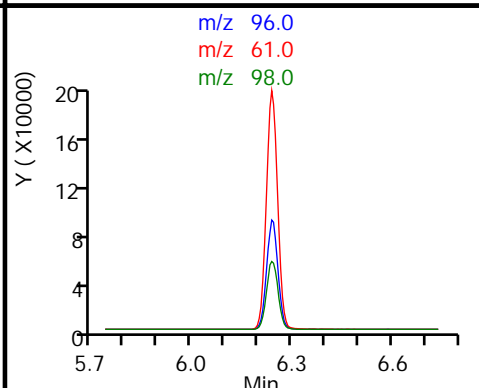
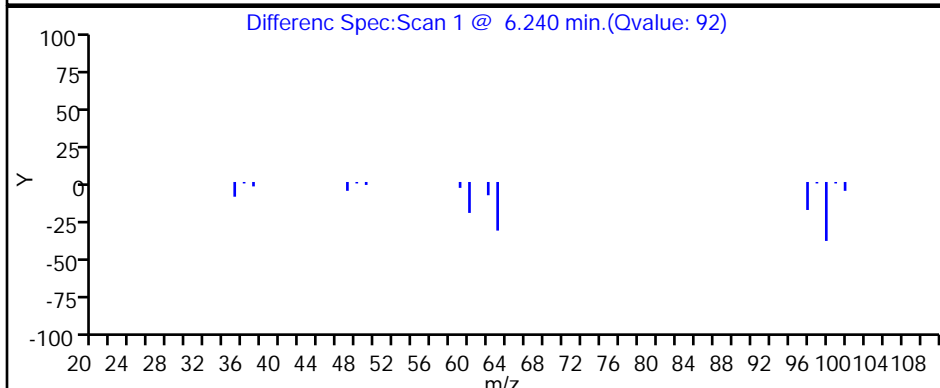
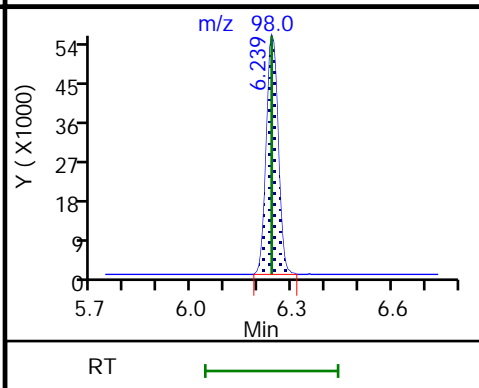
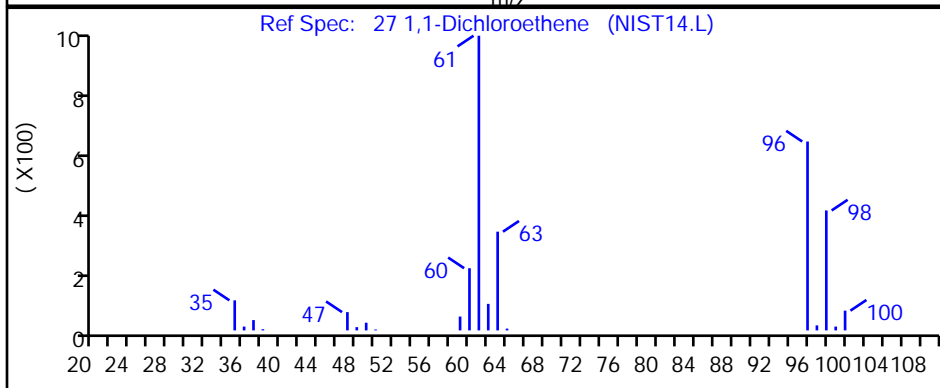
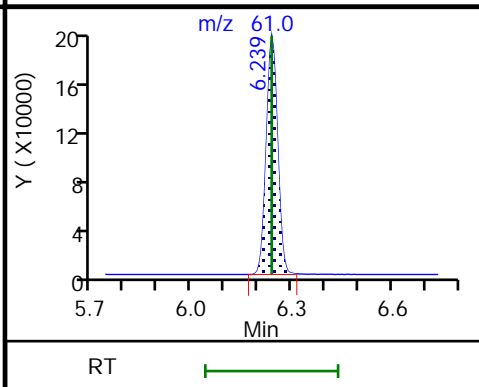
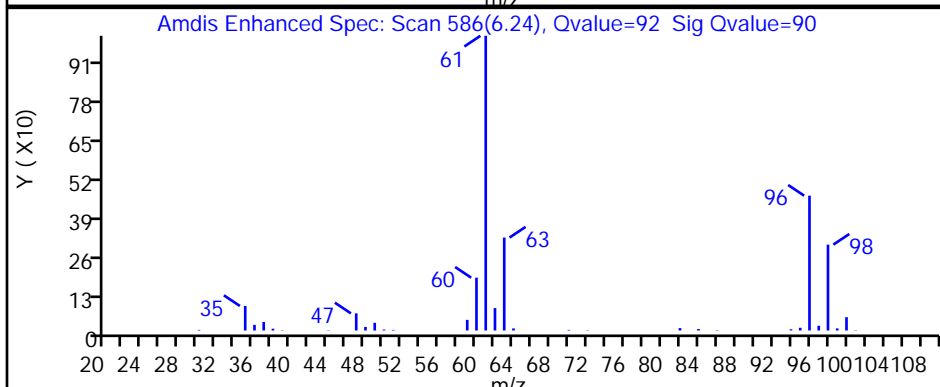
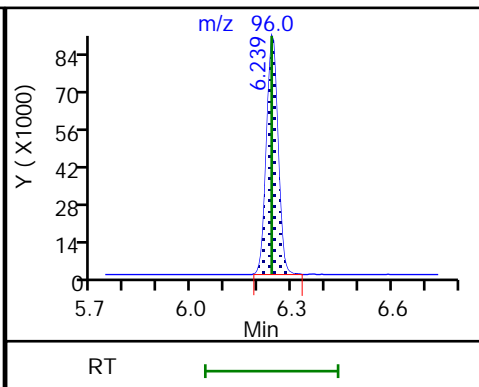
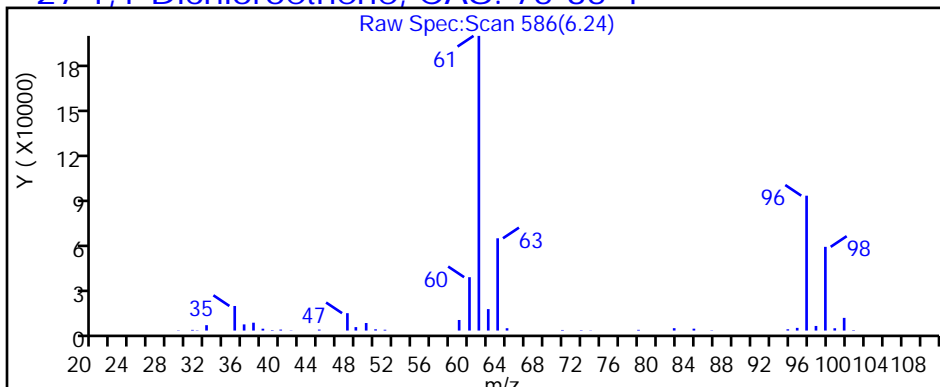
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D

Injection Date: 03-Jan-2019 19:11:30

Instrument ID: MG

Lims ID: 140-13856-A-3

Lab Sample ID: 140-13856-3

Client ID: BLDG-A EFFLUENT

Operator ID: 403468

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

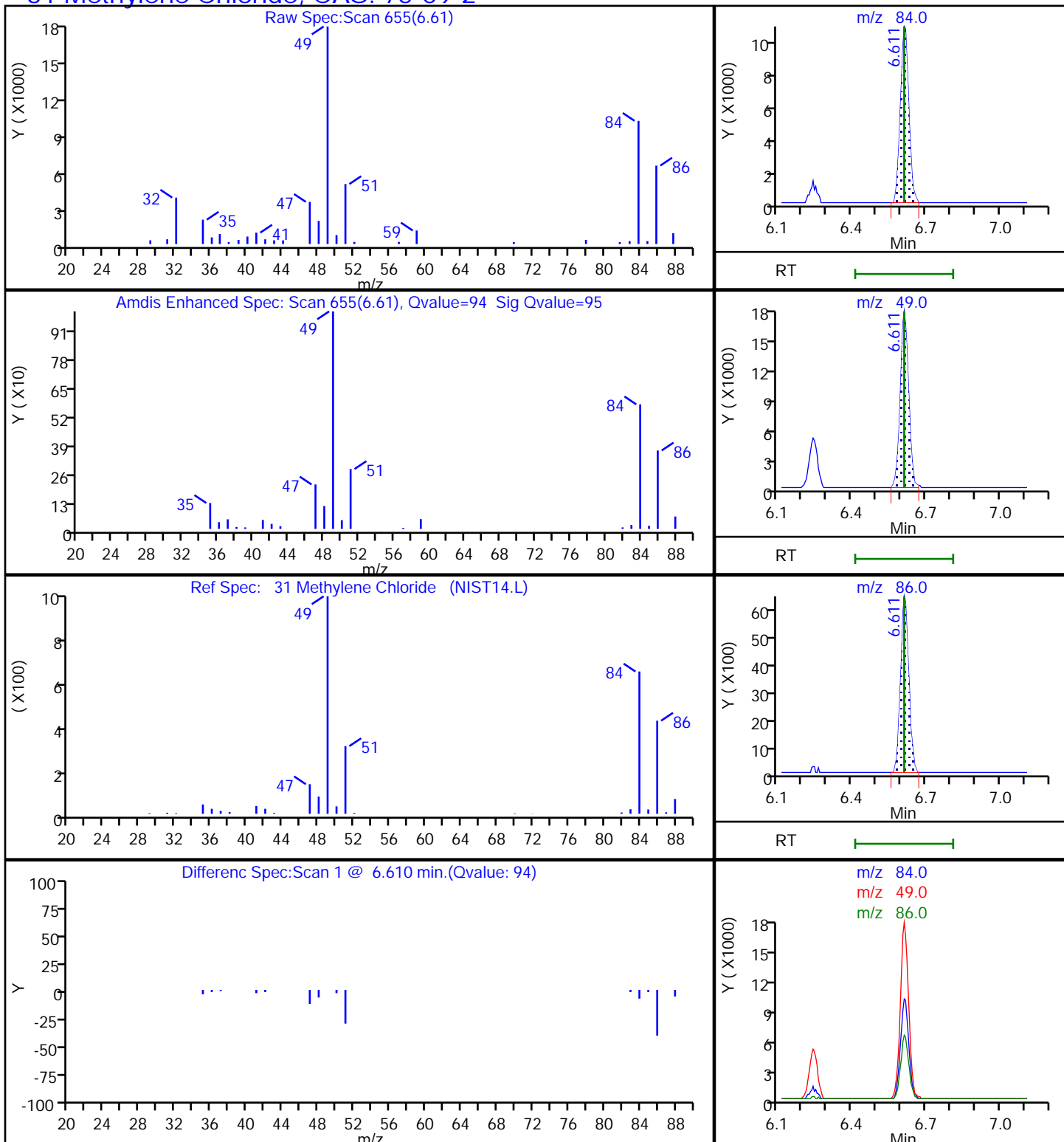
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D

Injection Date: 03-Jan-2019 19:11:30

Instrument ID: MG

Lims ID: 140-13856-A-3

Lab Sample ID: 140-13856-3

Client ID: BLDG-A EFFLUENT

Operator ID: 403468

ALS Bottle#: 4 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

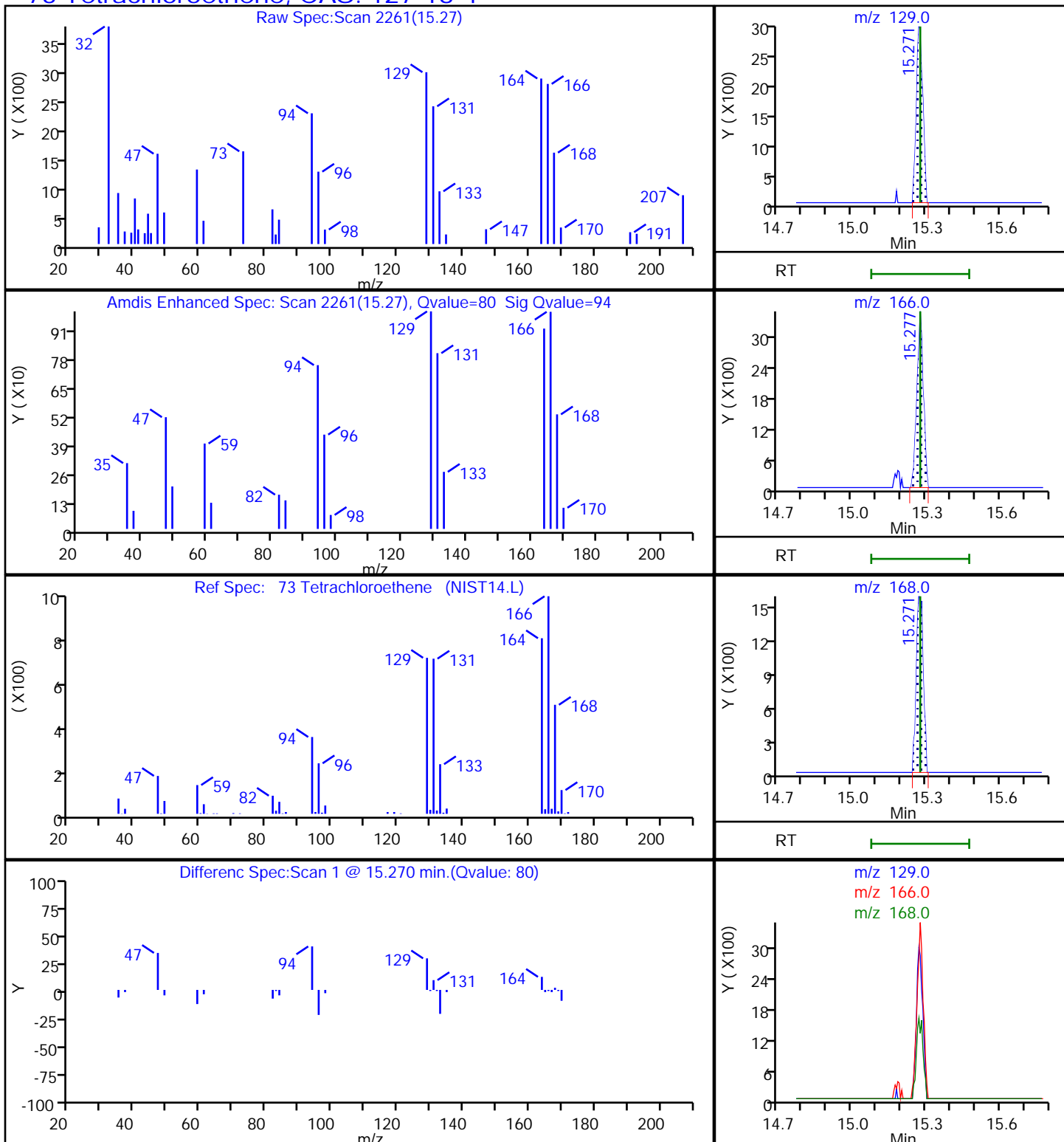
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D

Injection Date: 03-Jan-2019 19:11:30

Instrument ID: MG

Lims ID: 140-13856-A-3

Lab Sample ID: 140-13856-3

Client ID: BLDG-A EFFLUENT

Operator ID: 403468

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

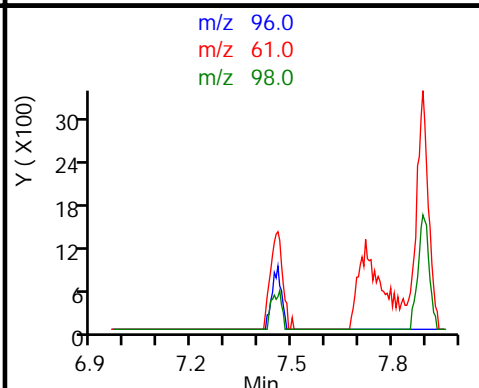
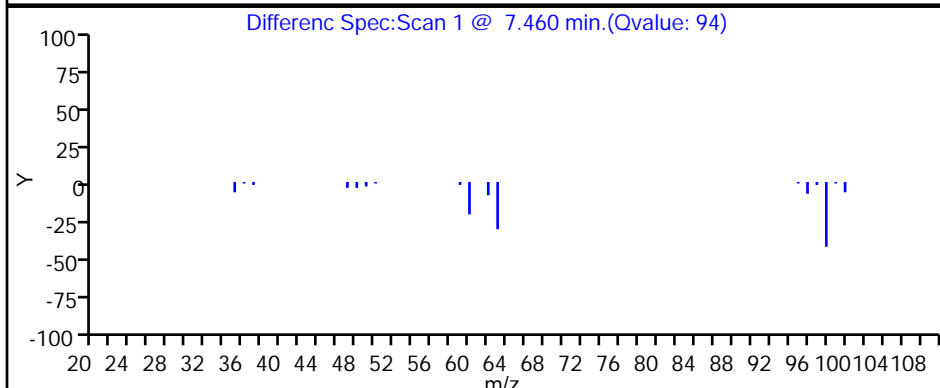
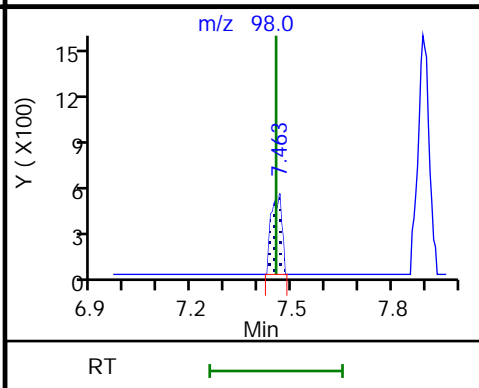
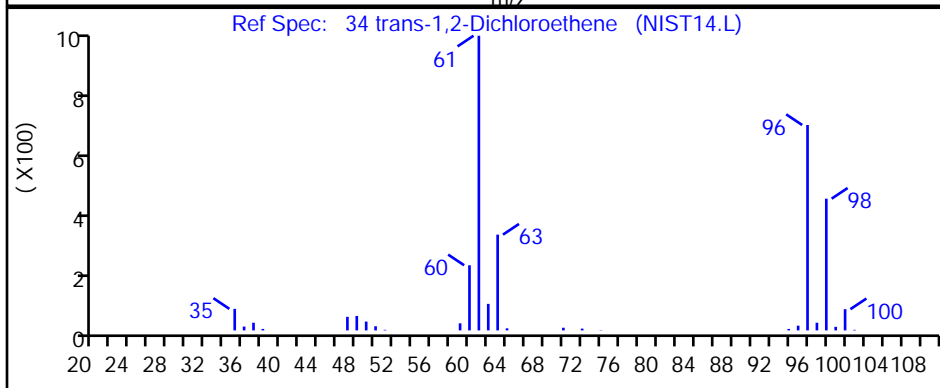
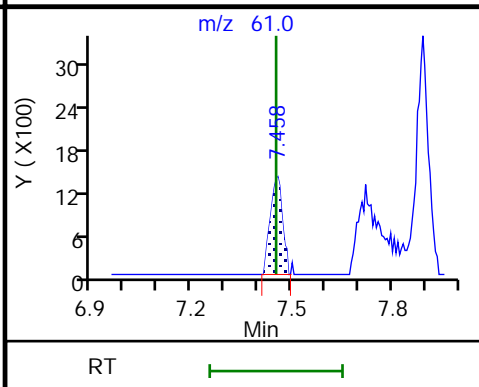
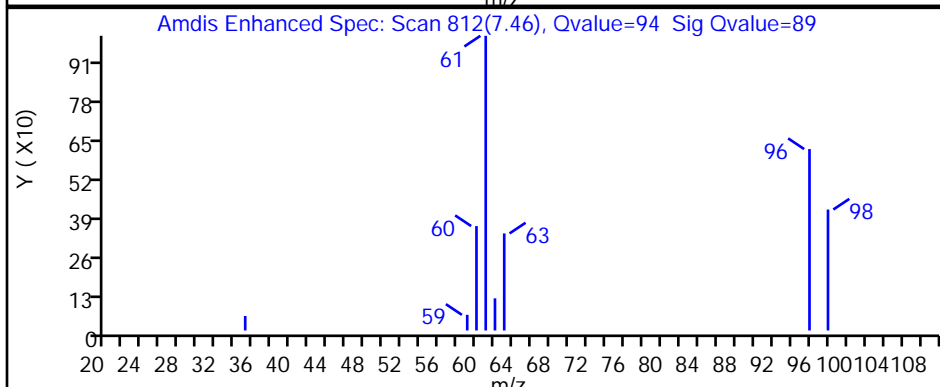
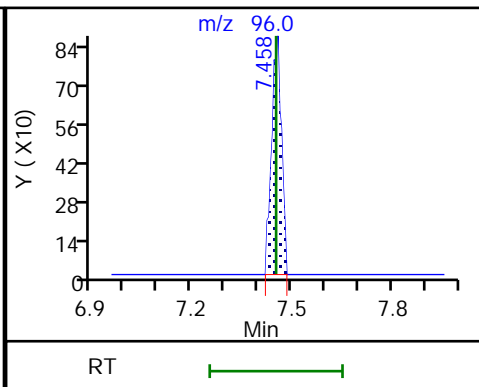
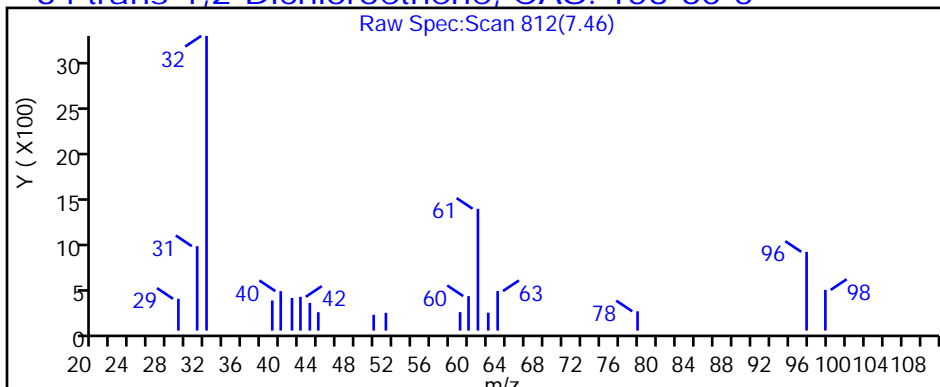
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D

Injection Date: 03-Jan-2019 19:11:30

Instrument ID: MG

Lims ID: 140-13856-A-3

Lab Sample ID: 140-13856-3

Client ID: BLDG-A EFFLUENT

Operator ID: 403468

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

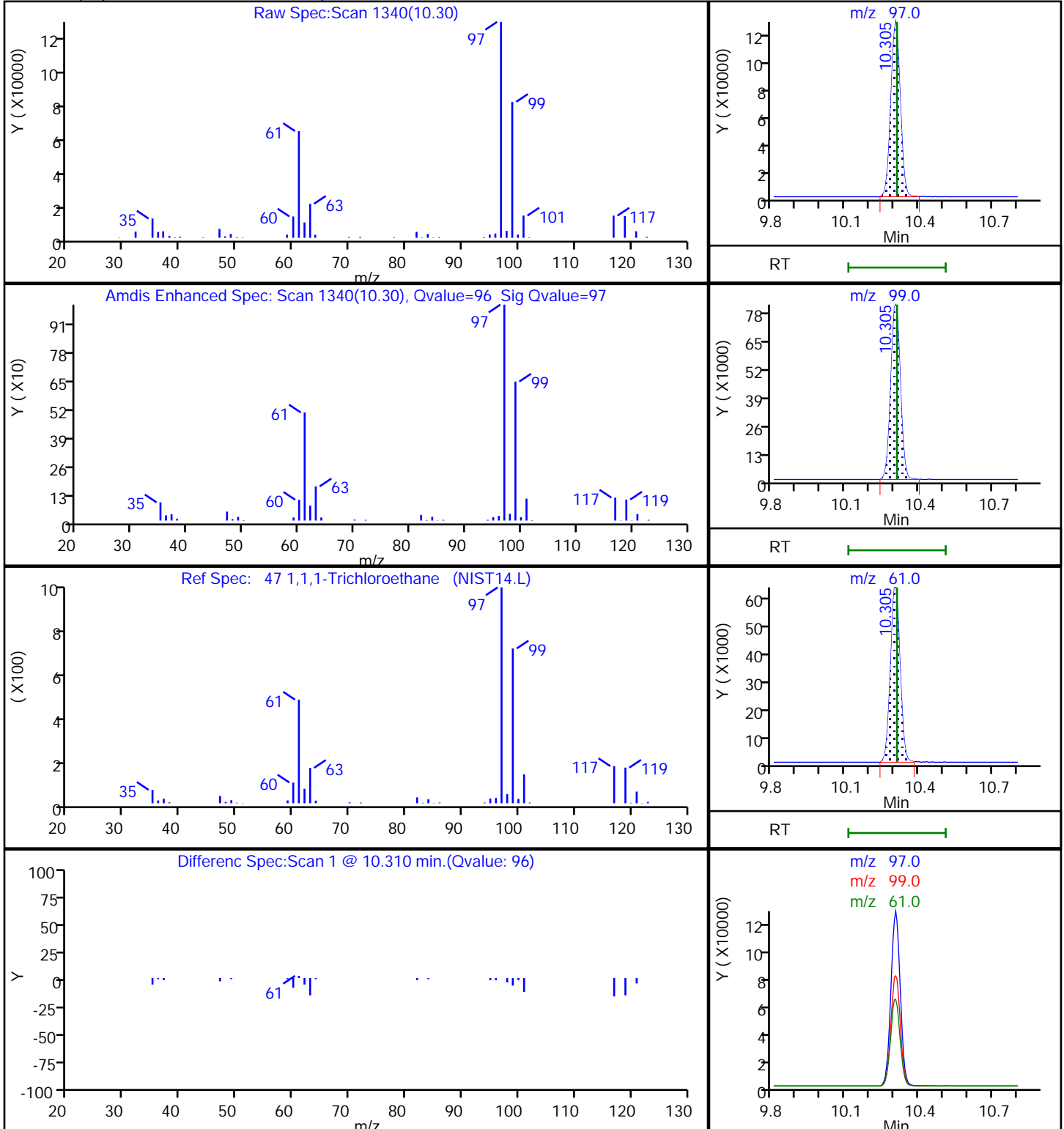
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D

Injection Date: 03-Jan-2019 19:11:30

Instrument ID: MG

Lims ID: 140-13856-A-3

Lab Sample ID: 140-13856-3

Client ID: BLDG-A EFFLUENT

Operator ID: 403468

ALS Bottle#: 4 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

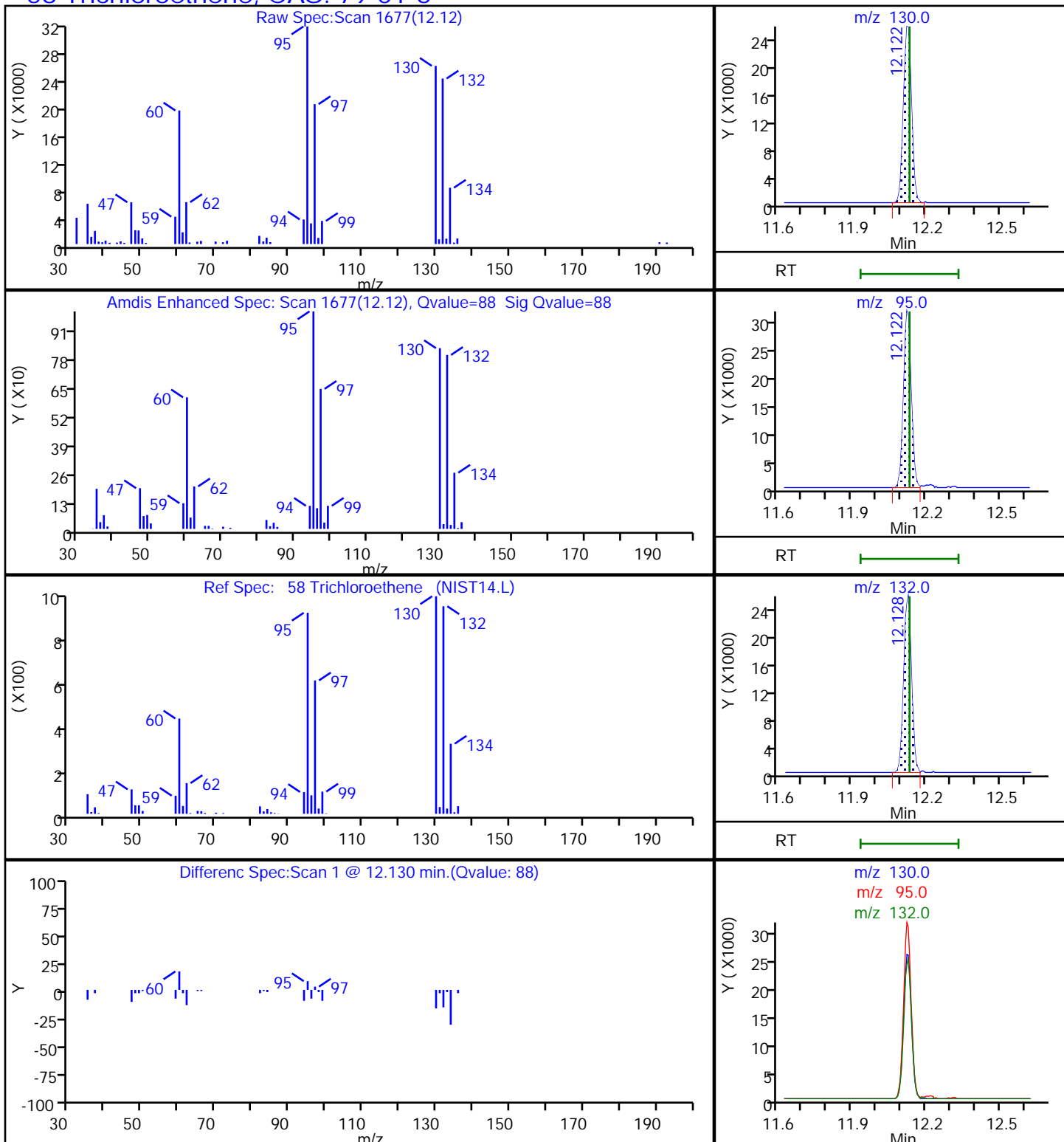
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

58 Trichloroethene, CAS: 79-01-6

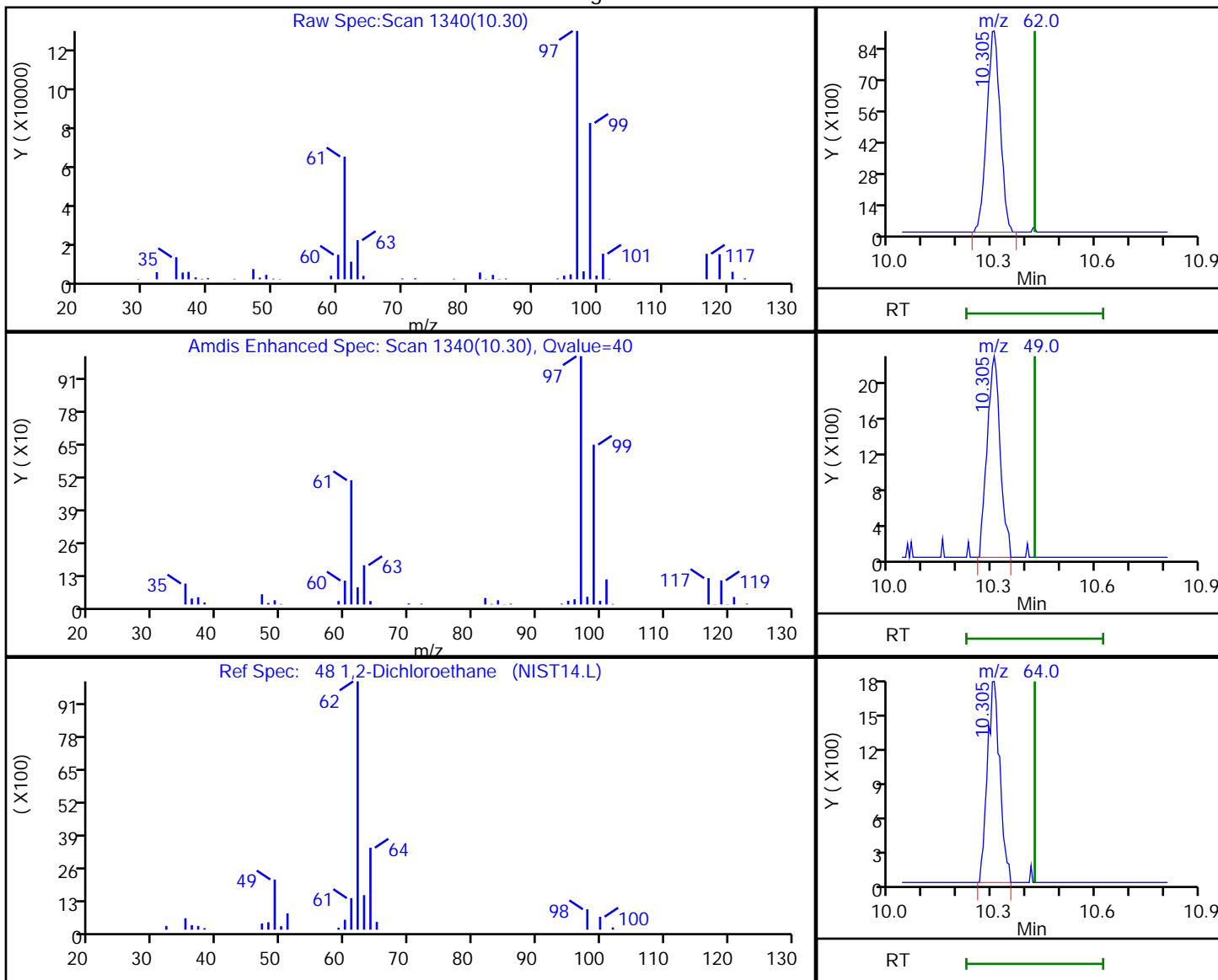


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D
 Injection Date: 03-Jan-2019 19:11:30 Instrument ID: MG
 Lims ID: 140-13856-A-3 Lab Sample ID: 140-13856-3
 Client ID: BLDG-A EFFLUENT
 Operator ID: 403468 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

48 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
10.30	62.00	24876	0.206380
10.30	49.00	6071	
10.30	64.00	4539	

Reviewer: khachitpongpanits, 04-Jan-2019 12:32:04

Audit Action: Marked Compound Undetected

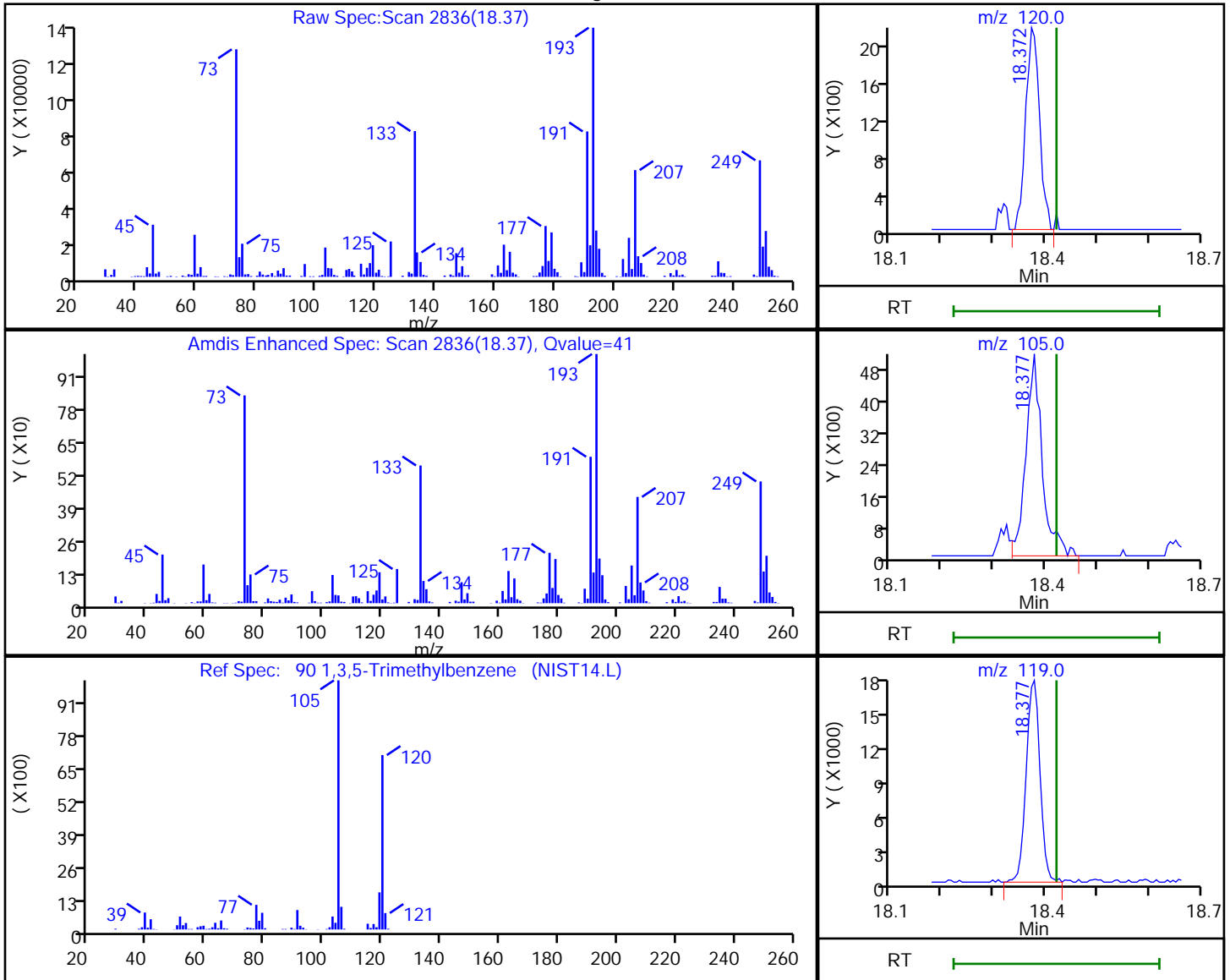
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GA03p104.D
 Injection Date: 03-Jan-2019 19:11:30 Instrument ID: MG
 Lims ID: 140-13856-A-3 Lab Sample ID: 140-13856-3
 Client ID: BLDG-A EFFLUENT
 Operator ID: 403468 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

90 1,3,5-Trimethylbenzene, CAS: 108-67-8

Processing Results



RT	Mass	Response	Amount
18.37	120.00	4017	0.029323
18.38	105.00	11377	
18.38	119.00	32031	

Reviewer: khachitpongpanits, 04-Jan-2019 12:32:20

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25539/8	GK19IC01.D
Level 2	IC 140-25539/9	GK19IC02.D
Level 3	IC 140-25539/10	GK19IC03.D
Level 4	IC 140-25539/11	GK19IC04.D
Level 5	IC 140-25539/12	GK19IC05.D
Level 6	IC 140-25539/13	GK19IC06.D
Level 7	ICIS 140-25539/14	GK19IC07.D
Level 8	IC 140-25539/15	GK19IC08.D
Level 9	IC 140-25539/3	GK19IC09.D
Level 10	IC 140-25539/5	GK19IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	++++ 3.0513	++++ 2.8974	3.0732 2.8926	3.1931 2.8986	3.3852 2.7775	Ave		3.0211			6.5		30.0				
Propene	++++ 1.7523	++++ 1.6715	++++ 1.6475	2.3333 1.6297	2.0161 1.5604	Ave		1.8015			15.4		30.0				
Dichlorodifluoromethane	++++ 4.2082	4.6298 4.0287	4.2179 4.0040	4.3941 4.0672	4.6841 3.8083	Ave		4.2269			6.9		30.0				
Chloromethane	++++ 0.5564	++++ 0.5047	++++ 0.5184	0.6846 0.5030	0.6635 0.4789	Ave		0.5585			14.8		30.0				
1,2-Dichloro-1,1,2,2-tetrafluoroethane	++++ 2.3739	2.4985 2.2660	2.3440 2.2454	2.4583 2.2059	2.7097 2.0689	Ave		2.3523			8.0		30.0				
Vinyl chloride	1.9649 1.7432	1.8343 1.6566	1.6957 1.6605	1.7201 1.6479	1.9808 1.5890	Ave		1.7493			7.7		30.0				
Butane	++++ 3.0113	++++ 2.7783	++++ 2.8052	3.1560 2.7858	3.5459 2.7047	Ave		2.9696			10.1		30.0				
1,3-Butadiene	++++ 1.4061	++++ 1.3337	++++ 1.3594	1.4001 1.3439	1.6158 1.3131	Ave		1.3960			7.4		30.0				
Bromomethane	++++ 1.3384	++++ 1.2806	1.4004 1.3047	1.3848 1.3001	1.4802 1.2644	Ave		1.3442			5.4		30.0				
Chloroethane	++++ 0.8137	++++ 0.7755	0.8199 0.8050	0.8218 0.7986	0.8960 0.7837	Ave		0.8143			4.5		30.0				
Ethanol	++++ 0.7564	++++ 0.6409	++++ 0.6954	0.7442 0.6514	0.7148 0.6541	Ave		0.6939			6.7		30.0				
Vinyl bromide	++++ 1.2081	1.3201 1.1629	1.1684 1.1928	1.2357 1.1909	1.3362 1.1705	Ave		1.2206			5.3		30.0				
2-Methylbutane	++++ 1.9744	++++ 1.8631	2.1017 1.9793	2.1520 1.9428	2.1528 1.8888	Ave		2.0069			5.7		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.4984	3.6226 3.2648	3.3904 3.3577	3.4667 3.5646	3.8799 3.2956	Ave		3.4823			5.5		30.0				
Acrolein	++++ 0.2589	++++ 0.3059	++++ 0.3087	++++ 0.2901	0.2761 0.3360	Ave		0.2960			9.1		30.0				
Acetonitrile	++++ 0.5262	++++ 0.4776	++++ 0.4788	++++ 0.4717	0.3293 0.5246	Ave		0.4680			15.4		30.0				
Acetone	++++ 0.6144	++++ 0.5198	++++ 0.5193	++++ 0.4809	0.5816 0.5108	Ave		0.5378			9.3		30.0				
Pentane	++++ 0.2645	++++ 0.2416	++++ 0.2560	++++ 0.2623	0.2836 0.2560	Ave		0.2607			5.3		30.0				
Isopropyl alcohol	++++ 1.7927	++++ 1.3994	++++ 1.5977	++++ 1.4709	1.7607 1.4629	Ave		1.5863			9.6		30.0				
Ethyl ether	++++ 1.6850	++++ 1.4653	++++ 1.6011	++++ 1.4265	1.7711 1.5792	Ave		1.5880			8.2		30.0				
1,1-Dichloroethene	1.5881 1.3803	1.4913 1.3150	1.2949 1.4082	1.3811 1.3832	1.5033 1.3752	Ave		1.4121			6.4		30.0				
Acrylonitrile	++++ 0.9792	++++ 0.9584	0.9151 0.9682	0.9731 0.9008	0.8481 1.0417	Ave		0.9481			6.2		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 2.9182	3.1032 2.8181	2.8515 2.8926	2.9406 2.8073	3.2211 2.7813	Ave		2.9260			5.0		30.0				
tert-Butyl alcohol	++++ 2.7826	++++ 1.9787	2.1182 2.4542	2.8146 2.0281	2.3988 2.1471	Ave		2.3403			14.0		30.0				
Methylene Chloride	++++ 1.5084	++++ 1.3706	++++ 1.3704	++++ 1.2802	2.5596 1.2883	Ave		1.6190			29.4		30.0				
3-Chloropropene	++++ 1.6873	++++ 1.6106	1.2603 1.6386	1.7646 1.6799	1.9779 1.6864	Ave		1.6632			11.9		30.0				
Carbon disulfide	++++ 4.4997	++++ 4.2288	4.2607 4.3545	4.3589 4.2900	4.9643 4.2405	Ave		4.3997			5.6		30.0				
trans-1,2-Dichloroethene	++++ 1.4106	1.4246 1.4036	1.2942 1.4460	1.3772 1.4061	1.5206 1.4109	Ave		1.4104			4.2		30.0				
2-Methylpentane	++++ 4.4798	4.7177 4.4074	4.6839 4.4605	4.4358 4.2730	4.8901 4.1883	Ave		4.5041			4.9		30.0				
Methyl tert-butyl ether	++++ 3.9934	++++ 3.4686	3.8684 3.5451	3.9829 3.2379	3.4713 3.7510	Ave		3.6648			7.5		30.0				
1,1-Dichloroethane	++++ 3.1222	3.1357 3.0634	3.1066 3.0563	3.0369 2.9520	3.1641 3.0542	Ave		3.0768			2.1		30.0				
Vinyl acetate	++++ 4.0400	++++ 4.0967	4.0229 3.8849	4.0751 3.7695	3.6563 4.3912	Ave		3.9921			5.6		30.0				
Hexane	++++ 1.4084	++++ 1.4126	1.4999 1.4118	1.4584 1.3493	1.5094 1.3904	Ave		1.4300			3.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13856-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone (MEK)	++++ 0.7072	++++ 0.5962	++++ 0.6245	0.7876 0.5643	0.5815 0.6573	Ave		0.6455			12.3		30.0				
cis-1,2-Dichloroethene	++++ 1.4838	1.4869 1.4533	1.4586 1.4677	1.4361 1.4252	1.5000 1.4882	Ave		1.4666			1.7		30.0				
Ethyl acetate	++++ 3.7946	++++ 3.2940	3.8015 3.3896	3.7028 3.2037	3.0512 3.7178	Ave		3.4944			8.4		30.0				
Chloroform	++++ 3.2011	3.3768 3.1162	3.2230 3.1129	3.1637 3.0462	3.3482 3.1791	Ave		3.1963			3.4		30.0				
Tetrahydrofuran	++++ 1.9363	++++ 1.7372	++++ 1.7900	++++ 1.6856	1.6761 1.9451	Ave		1.7950			6.7		30.0				
1,1,1-Trichloroethane	3.7430 3.3105	3.3998 3.2134	3.4183 3.2189	3.2984 3.1364	3.4236 3.2270	Ave		3.3389			5.2		30.0				
1,2-Dichloroethane	0.3791 0.3630	0.3466 0.3536	0.3636 0.3591	0.3652 0.3484	0.3675 0.3715	Ave		0.3618			2.8		30.0				
Cyclohexane	++++ 0.1407	++++ 0.1232	++++ 0.1323	++++ 0.1199	0.1402 0.1197	Ave		0.1320			8.6		30.0				
Benzene	0.8035 0.7545	0.7500 0.7026	0.7279 0.7227	0.7715 0.6625	0.7478 0.6760	Ave		0.7319			5.9		30.0				
1-Butanol	++++ 0.1327	++++ 0.0856	++++ 0.1120	++++ 0.0918	0.1229 0.0990	Ave		0.1081			15.6		30.0				
Carbon tetrachloride	0.5266 0.5320	0.3719 0.4769	0.3674 0.4717	0.4995 0.4838	0.5414 0.4869	Ave		0.4758			12.8		30.0				
2,3-Dimethylpentane	++++ 0.2004	++++ 0.1827	++++ 0.1833	0.2081 0.1750	0.2027 0.1861	Ave		0.1912			6.0		30.0				
Thiophene	++++ 0.4236	++++ 0.3973	0.4053 0.4095	0.4131 0.3908	0.4297 0.4202	Ave		0.4112			3.2		30.0				
2,2,4-Trimethylpentane	++++ 1.5115	1.4799 1.3280	1.3894 1.4079	1.5278 1.2934	1.4912 1.3430	Ave		1.4191			6.1		30.0				
Heptane	++++ 0.2981	++++ 0.2720	0.2784 0.2879	0.2930 0.2684	0.3035 0.2828	Ave		0.2855			4.3		30.0				
1,2-Dichloropropane	++++ 0.2996	0.3163 0.2821	0.3080 0.2912	0.3035 0.2627	0.2901 0.2904	Ave		0.2938			5.3		30.0				
Trichloroethene	0.3457 0.3108	0.3142 0.2869	0.2926 0.3139	0.3044 0.2854	0.3149 0.2900	Ave		0.3059			6.0		30.0				
Dibromomethane	++++ 0.2862	++++ 0.2616	0.3011 0.2698	0.2926 0.2655	0.2867 0.2726	Ave		0.2795			5.0		30.0				
Bromodichloromethane	++++ 0.5622	0.4984 0.5150	0.5076 0.5370	0.5261 0.5203	0.5531 0.5355	Ave		0.5283			3.9		30.0				
1,4-Dioxane	++++ 0.1089	++++ 0.0822	0.3011 0.0952	0.2926 0.0773	0.2867 0.0893	Ave		0.0910			11.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13856-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3963	++++ 0.3193	0.3791 0.3489	0.3842 0.3277	0.3111 0.3902	Ave		0.3571			9.7		30.0				
Methylcyclohexane	++++ 0.5008	0.4679 0.4532	0.4726 0.4782	0.4995 0.4377	0.5052 0.4594	Ave		0.4749			4.9		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.7376	++++ 0.5114	0.5427 0.5931	0.6704 0.5033	0.5135 0.6255	Ave		0.5872			14.6		30.0				
cis-1,3-Dichloropropene	0.4555 0.4327	0.3977 0.4166	0.3950 0.4332	0.4121 0.4057	0.4121 0.4453	Ave		0.4206			4.8		30.0				
trans-1,3-Dichloropropene	0.4256 0.4168	0.3873 0.3976	0.3645 0.4213	0.3847 0.3904	0.3654 0.4394	Ave		0.3993			6.4		30.0				
Toluene	++++ 0.8789	0.8590 0.8111	0.8480 0.8345	0.8439 0.7385	0.7849 0.8137	Ave		0.8236			5.2		30.0				
1,1,2-Trichloroethane	0.2691 0.2761	0.2573 0.2540	0.2530 0.2647	0.2734 0.2355	0.2542 0.2612	Ave		0.2599			4.6		30.0				
2-Hexanone	++++ 0.3601	++++ 0.2423	++++ 0.3018	++++ 0.2374	0.3210 0.3040	Ave		0.2871			16.4		30.0				
Octane	++++ 0.3383	++++ 0.3037	0.3119 0.3252	0.3197 0.2988	0.3159 0.3110	Ave		0.3156			3.9		30.0				
C8 Range	++++ 3.3866	++++ 3.0673	++++ 3.2447	++++ 3.0104	3.3153 3.0667	Ave		3.1891			4.5		30.0				
Dibromochloromethane	++++ 0.4949	++++ 0.4796	0.4002 0.5117	0.4374 0.4775	0.4585 0.5016	Ave		0.4702			7.9		30.0				
1,2-Dibromoethane (EDB)	0.4362 0.4642	0.3924 0.4366	0.4160 0.4565	0.4307 0.4133	0.4186 0.4485	Ave		0.4313			5.1		30.0				
Tetrachloroethene	0.3191 0.3085	0.3056 0.2875	0.2955 0.2904	0.2973 0.2723	0.2986 0.2811	Ave		0.2956			4.6		30.0				
Chlorobenzene	++++ 0.6823	0.6347 0.6165	0.6274 0.6471	0.6665 0.5687	0.6372 0.5936	Ave		0.6304			5.5		30.0				
Ethylbenzene	++++ 1.2040	0.9927 1.0426	1.0913 1.0990	1.1219 0.9529	1.0188 1.0741	Ave		1.0664			7.0		30.0				
m-Xylene & p-Xylene	0.8906 0.9334	0.7895 0.8128	0.8240 0.8440	0.8839 0.7232	0.7930 0.7928	Ave		0.8287			7.4		30.0				
Nonane	0.6804 0.7411	0.6353 0.6548	0.6442 0.7062	0.6989 0.6265	0.6708 0.6597	Ave		0.6718			5.3		30.0				
Bromoform	++++ 0.4303	++++ 0.4100	0.3148 0.4507	0.3638 0.3997	0.3628 0.4287	Ave		0.3951			11.4		30.0				
Styrene	++++ 0.6561	++++ 0.5753	0.5448 0.6233	0.5671 0.5434	0.5317 0.6016	Ave		0.5804			7.5		30.0				
o-Xylene	0.9483 0.9765	0.8461 0.8518	0.8730 0.8801	0.9055 0.7737	0.8035 0.8709	Ave		0.8729			7.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13856-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++	++++	0.5935	0.6423	0.5712	Ave		0.5985			8.7		30.0				
	0.6990	0.5729	0.5565	0.5391	0.6133												
1,2,3-Trichloropropane	++++	++++	0.1776	0.1859	0.1615	Ave		0.1752			7.6		30.0				
	0.1977	0.1650	0.1757	0.1580	0.1807												
Isopropylbenzene	1.2167	1.1206	1.1654	1.2047	1.0500	Ave		1.1293			7.6		30.0				
	1.2684	1.0727	1.1118	0.9839	1.0988												
Propylbenzene	++++	++++	0.2905	0.3245	0.2785	Ave		0.3023			8.0		30.0				
	0.3444	0.2903	0.3061	0.2722	0.3115												
2-Chlorotoluene	++++	0.2683	0.2858	0.3069	0.2717	Ave		0.2837			6.8		30.0				
	0.3163	0.2751	0.2915	0.2545	0.2833												
4-Ethyltoluene	1.1802	1.0116	1.1413	1.2070	1.0471	Ave		1.1170			8.4		30.0				
	1.2983	1.0515	1.1220	0.9993	1.1117												
1,3,5-Trimethylbenzene	0.4380	0.3882	0.4426	0.4745	0.3987	Ave		0.4354			8.7		30.0				
	0.5075	0.4149	0.4432	0.3926	0.4537												
Alpha Methyl Styrene	++++	++++	0.3989	0.4374	0.3833	Ave		0.4430			9.3		30.0				
	0.5033	0.4343	0.4736	0.4299	0.4831												
Decane	0.8747	0.7509	0.8187	0.8780	0.7935	Ave		0.8194			8.1		30.0				
	0.9432	0.7920	0.8445	0.7261	0.7728												
tert-Butylbenzene	0.9684	0.8858	0.9841	1.0423	0.8844	Ave		0.9434			8.7		30.0				
	1.0983	0.8812	0.9323	0.8275	0.9292												
1,2,4-Trimethylbenzene	++++	++++	0.9629	1.0532	0.8790	Ave		0.9442			9.8		30.0				
	1.1015	0.8786	0.9379	0.8297	0.9109												
sec-Butylbenzene	1.4042	1.2383	1.3928	1.4963	1.3002	Ave		1.3579			9.2		30.0				
	1.6121	1.2838	1.3577	1.1958	1.2979												
1,3-Dichlorobenzene	0.6719	0.5859	0.6097	0.6686	0.5840	Ave		0.6140			7.8		30.0				
	0.6879	0.5841	0.6223	0.5421	0.5830												
Benzyl chloride	++++	++++	0.7453	0.8357	0.6939	Ave		0.8268			10.3		30.0				
	0.9497	0.7915	0.8976	0.8082	0.8925												
1,4-Dichlorobenzene	++++	0.6078	0.6125	0.6709	0.5802	Ave		0.6126			7.5		30.0				
	0.6937	0.5884	0.6275	0.5475	0.5853												
4-Isopropyltoluene	++++	++++	1.0677	1.2097	0.9962	Ave		1.0916			10.2		30.0				
	1.2964	1.0111	1.0849	0.9716	1.0954												
1,2,3-Trimethylbenzene	0.8730	0.8179	0.9554	1.0217	0.8661	QuaF		0.8383	0.0058413					0.9990		0.9900	
	1.1017	0.8798	0.9421	0.8438	0.9356												
Indane	0.8789	0.7828	0.8917	0.9675	0.8181	Ave		0.8523			9.7		30.0				
	0.9974	0.8038	0.8452	0.7360	0.8012												
1,2-Dichlorobenzene	++++	0.5633	0.5995	0.6559	0.5632	Ave		0.5824			9.2		30.0				
	0.6723	0.5556	0.5826	0.5036	0.5457												
Butylbenzene	1.1836	1.0732	1.1566	1.3153	1.0574	Ave		1.1510			10.4		30.0				
	1.3906	1.0867	1.1543	1.0099	1.0819												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1 Analy Batch No.: 25539
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.8801	++++ 0.7121	0.7574 0.7655	0.8315 0.6820	0.6782 0.7448	Ave		0.7565			9.3		30.0				
Undecane	++++ 0.9943	++++ 0.7761	0.8500 0.8540	0.9850 0.7602	0.7623 0.8384	Ave		0.8525			10.9		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.3478	++++ 0.2779	0.2832 0.3121	0.3169 0.2736	0.2457 0.3173	Ave		0.2968			10.9		30.0				
1,2,4,5-Tetramethylbenzene	++++ 1.1899	++++ 0.9212	1.0058 0.9972	1.1740 0.8826	0.7962 1.0228	Ave		0.9987			13.6		30.0				
Dodecane	++++ 0.7357	++++ 0.5299	++++ 0.7091	++++ 0.5805	0.5269 0.7107	Ave		0.6321			15.3		30.0				
1,2,4-Trichlorobenzene	++++ 0.5006	0.4549 0.4143	0.4857 0.4838	0.5498 0.4296	0.3674 0.4992	Ave		0.4650			11.7		30.0				
Naphthalene	++++ 1.1302	1.1299 0.9984	1.1239 1.1677	1.4420 1.0181	0.8036 1.1595	Ave		1.1082			15.4		30.0				
Hexachlorobutadiene	++++ 0.4597	0.4096 0.3590	0.4490 0.3963	0.4721 0.3521	0.3766 0.4165	Ave		0.4101			10.6		30.0				
1,2,3-Trichlorobenzene	++++ 0.4713	0.4475 0.3731	0.4274 0.4448	0.5521 0.3790	0.3362 0.4545	Ave		0.4318			14.7		30.0				
2-Methylnaphthalene	++++ 0.2118	++++ 0.2243	++++ 0.4338	++++ 0.2777	++++ 0.3721	Ave		0.3039			31.7		50.0				
1-Methylnaphthalene	++++ 0.2729	++++ 0.2544	++++ 0.4766	++++ 0.2879	++++ 0.3737	Ave		0.3331			27.7		50.0				
4-Bromofluorobenzene (Surr)	0.7913 0.8258	0.7928 0.8081	0.7863 0.8410	0.8252 0.8281	0.8159	Ave		0.8136			2.3		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25539/8	GK19IC01.D
Level 2	IC 140-25539/9	GK19IC02.D
Level 3	IC 140-25539/10	GK19IC03.D
Level 4	IC 140-25539/11	GK19IC04.D
Level 5	IC 140-25539/12	GK19IC05.D
Level 6	IC 140-25539/13	GK19IC06.D
Level 7	ICIS 140-25539/14	GK19IC07.D
Level 8	IC 140-25539/15	GK19IC08.D
Level 9	IC 140-25539/3	GK19IC09.D
Level 10	IC 140-25539/5	GK19IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 213134	++++ 425995	17313 852115	34392 1641060	91638 3312685	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 122399	++++ 245751	++++ 485328	25131 922660	54576 1861073	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 293942	12847 592333	23762 1179512	47328 2302698	126801 4542189	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 38867	++++ 74207	++++ 152707	7374 284794	17960 571155	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 165816	6933 333157	13205 661452	26478 1248913	73353 2467542	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	2842 121765	5090 243569	9553 489146	18527 933000	53622 1895212	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 210337	++++ 408489	++++ 826350	33993 1577208	95989 3225870	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 98217	++++ 196095	++++ 400466	15080 760847	43741 1566166	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 93490	++++ 188277	7889 384351	14915 736086	40069 1508068	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 56838	++++ 114013	4619 237140	8851 452118	24256 934730	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 264173	++++ 471116	++++ 1024247	40079 1844034	96753 3900907	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 84388	3663 170971	6582 351375	13309 674263	36170 1396076	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 137913	++++ 273919	11840 583065	23179 1099927	58276 2252813	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 244363	10052 480008	19100 989104	37339 2018158	105029 3930679	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13856-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	++++ 18084	++++ 44982	++++ 90941	++++ 164247	7475 400688	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 36755	++++ 70220	++++ 141051	++++ 267075	8913 625658	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetone	CBM	Ave	++++ 128743	++++ 229293	++++ 458917	++++ 816802	47231 1827590	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 18477	++++ 35517	++++ 75410	++++ 148503	7676 305309	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 375654	++++ 617236	++++ 1411959	++++ 2498339	56892 131556 5234518	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 117694	++++ 215434	++++ 471654	++++ 807636	47943 1883466	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	2297 96413	4138 193344	7295 414843	14876 783088	40696 1640145	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 68397	++++ 140907	++++ 285199	++++ 509989	5155 1242476	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 203839	++++ 414334	++++ 852094	++++ 1589363	8611 16064 3317262	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 194363	++++ 290919	++++ 722973	++++ 1148226	11933 30315 64937 2560873	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 105364	++++ 201519	++++ 403707	++++ 724823	27569 52924 1536576	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 117858	++++ 236800	++++ 482696	++++ 951069	7100 19006 53543 2011369	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 314303	++++ 621752	++++ 1282762	++++ 2428840	24003 46949 134386 5057684	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 98532	++++ 206361	++++ 425966	++++ 796056	7291 14833 41163 1682746	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 312910	++++ 648001	++++ 1313967	++++ 2419211	13091 26387 47777 132377 4995390	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 278941	++++ 509969	++++ 1044311	++++ 1833163	21793 42899 93968 4473786	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	++++ 218087	++++ 450395	++++ 900321	++++ 1671302	8701 17501 32710 85654 3642762	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 282190	++++ 602326	++++ 1144430	++++ 2134172	22663 43892 98976 5237334	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 98376	++++ 207693	++++ 415892	++++ 763910	8450 15708 40860 1658330	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 49398	++++ 87654	++++ 183971	++++ 319512	8483 15742 784000	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	++++ 103642	++++ 213674	++++ 432348	++++ 806875	4126 8217 15468 40605 1774981	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13856-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Ethyl acetate	CBM	Ave	++++ 265053	++++ 484309	21416 998518	39882 1813820	82596 4434165	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	++++ 223597	9370 458167	18157 916990	34075 1724652	90637 3791654	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 135248	++++ 255412	++++ 527305	++++ 954335	45372 2319928	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	5414 231241	9434 472457	19257 948241	35526 1775710	92677 3848807	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	3515 149022	6167 328987	12952 645316	23404 1251312	59768 2781931	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 57756	++++ 114639	++++ 237706	8987 430813	24070 896181	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	7450 309735	13343 653669	25930 1298691	49442 2379560	121628 5061484	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 54462	++++ 79637	++++ 201295	7877 329596	18291 741238	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	4882 218396	6616 443671	13089 847780	32010 1737710	88058 3645457	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 82285	++++ 169965	6528 344322	13336 628549	32961 1393431	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 173881	++++ 369642	14436 735880	26473 1403861	69887 3146075	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 620492	26330 1235504	49494 2530256	97913 4645523	242545 10056141	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 122383	++++ 253052	9917 517408	18777 964177	49369 2117126	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 122969	5627 262474	10970 523379	19451 943495	47190 2174092	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	3205 127565	5590 266889	10423 564088	19511 1025189	51213 2171695	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 117498	++++ 243347	10726 484886	18753 953758	46630 2041273	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 230779	8867 479179	18081 964967	33715 1868708	89969 4009628	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 44708	++++ 76432	3087 171069	6500 277476	14191 668565	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 162679	++++ 297095	13506 627079	24620 1176973	50603 2921446	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	++++ 205561	8324 421647	16836 859405	32014 1572038	82164 3439448	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 302782	++++ 475813	19331 1065796	42961 1807905	83517 4683489	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13856-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	4223	7075	14071	26411	67030	0.0200	0.0400	0.0800	0.160	0.400
			177618	387570	778502	1457194	3334227	1.00	2.00	4.00	8.00	16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	3678	6417	12164	23363	57675	0.0200	0.0400	0.0800	0.160	0.400
			158910	339832	700890	1310210	3089373	1.00	2.00	4.00	8.00	16.0
Toluene	CBZd 5	Ave	++++	14232	28303	51257	123882	++++	0.0400	0.0800	0.160	0.400
			335051	693251	1388384	2478512	5720473	1.00	2.00	4.00	8.00	16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2326	4263	8444	16606	40113	0.0200	0.0400	0.0800	0.160	0.400
			105258	217108	440430	790249	1836669	1.00	2.00	4.00	8.00	16.0
2-Hexanone	CBZd 5	Ave	++++	++++	++++	19499	38394	++++	++++	++++	0.160	0.400
			137273	207099	502190	796624	2137087	1.00	2.00	4.00	8.00	16.0
Octane	CBZd 5	Ave	++++	++++	10409	19420	49853	++++	++++	0.0800	0.160	0.400
			128965	259562	541042	1002854	2186474	1.00	2.00	4.00	8.00	16.0
C8 Range	CBZd 5	Ave	++++	++++	++++	201359	510187	++++	++++	++++	0.160	0.400
			1291089	2621723	5398304	10103657	21559958	1.00	2.00	4.00	8.00	16.0
Dibromochloromethane	CBZd 5	Ave	++++	++++	13356	26567	72362	++++	++++	0.0800	0.160	0.400
			188691	409895	851378	1602672	3526724	1.00	2.00	4.00	8.00	16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	3770	6501	13885	26157	66073	0.0200	0.0400	0.0800	0.160	0.400
			176960	373205	759482	1386991	3152916	1.00	2.00	4.00	8.00	16.0
Tetrachloroethene	CBZd 5	Ave	2758	5064	9863	18059	47134	0.0200	0.0400	0.0800	0.160	0.400
			117594	245717	483226	913891	1976468	1.00	2.00	4.00	8.00	16.0
Chlorobenzene	CBZd 5	Ave	++++	10517	20939	40481	100567	++++	0.0400	0.0800	0.160	0.400
			260123	526924	1076675	1908819	4172904	1.00	2.00	4.00	8.00	16.0
Ethylbenzene	CBZd 5	Ave	++++	16448	36421	68140	160794	++++	0.0400	0.0800	0.160	0.400
			459007	891181	1828423	3198014	7551419	1.00	2.00	4.00	8.00	16.0
m-Xylene & p-Xylene	CBZd 5	Ave	15395	26164	55002	107364	250316	0.0400	0.0800	0.160	0.320	0.800
			711699	1389444	2808548	4854329	11146974	2.00	4.00	8.00	16.0	32.0
Nonane	CBZd 5	Ave	5881	10526	21500	42447	105880	0.0200	0.0400	0.0800	0.160	0.400
			282529	559652	1174879	2102592	4637617	1.00	2.00	4.00	8.00	16.0
Bromoform	CBZd 5	Ave	++++	++++	10507	22098	57258	++++	++++	0.0800	0.160	0.400
			164039	350460	749817	1341429	3013694	1.00	2.00	4.00	8.00	16.0
Styrene	CBZd 5	Ave	++++	++++	18184	34443	83914	++++	++++	0.0800	0.160	0.400
			250111	491766	1037031	1823684	4229327	1.00	2.00	4.00	8.00	16.0
o-Xylene	CBZd 5	Ave	8196	14019	29137	54994	126815	0.0200	0.0400	0.0800	0.160	0.400
			372286	728079	1464208	2596658	6122615	1.00	2.00	4.00	8.00	16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	++++	++++	19807	39013	90150	++++	++++	0.0800	0.160	0.400
			266474	489686	925921	1809382	4311662	1.00	2.00	4.00	8.00	16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++	++++	5928	11288	25496	++++	++++	0.0800	0.160	0.400
			75369	140992	292259	530200	1270140	1.00	2.00	4.00	8.00	16.0
Isopropylbenzene	CBZd 5	Ave	10516	18567	38895	73170	165726	0.0200	0.0400	0.0800	0.160	0.400
			483580	916878	1849824	3302284	7725096	1.00	2.00	4.00	8.00	16.0
Propylbenzene	CBZd 5	Ave	++++	++++	9696	19711	43961	++++	++++	0.0800	0.160	0.400
			131304	248105	509297	913517	2189792	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13856-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 120577	4446 235104	9540 484959	18637 854299	42884 1991626	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	10200 494958	16761 898739	38090 1866746	73309 3353829	165259 7815900	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	3786 193494	6432 354673	14772 737322	28820 1317619	62934 3189740	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 191892	++++ 371223	13313 787900	26567 1442818	60498 3396315	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	7560 359592	12441 676932	27324 1405096	53327 2436845	125239 5432796	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	8370 418713	14677 753238	32844 1551104	63305 2777445	139594 6532801	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 419918	++++ 750976	32137 1560491	63968 2784519	138740 6404114	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	12136 614586	20517 1097360	46486 2258822	90880 4013369	205213 9124681	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	5807 262262	9708 499287	20350 1035420	40610 1819495	92171 4098836	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 362042	++++ 676508	24875 1493396	50754 2712511	109523 6274527	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	++++ 264470	10071 502954	20441 1043933	40748 1837381	91575 4114618	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	++++ 494218	++++ 864208	35635 1804954	73474 3260871	157227 7700803	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	QuaF	7545 419992	13552 751993	31888 1567341	62052 2832151	136691 6577412	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	7596 380253	12970 687080	29760 1406234	58762 2470291	129114 5633002	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 256293	9334 474922	20010 969247	39836 1690175	88894 3836439	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	10230 530160	17781 928877	38603 1920490	79887 3389522	166884 7605792	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 335541	++++ 608660	25279 1273573	50502 2288947	107041 5236482	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 379057	++++ 663396	28369 1420906	59824 2551359	120308 5894210	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 132611	++++ 237572	9452 519301	19247 918221	38782 2230442	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 453650	++++ 787407	33570 1659059	71303 2962260	125664 7190615	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 280491	++++ 452943	++++ 1179708	++++ 1948321	83156 4996610	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 190857	7537 354159	16209 804852	33390 1441740	57989 3509735	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 430856	18721 853395	37511 1942781	87580 3417093	126841 8151861	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 175239	6787 306859	14985 659395	28674 1181716	59443 2927915	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 179674	7414 318921	14265 739999	33535 1271858	53064 3195184	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 80738	++++ 191719	++++ 721705	++++ 932228	++++ 2615960	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 104049	++++ 217486	++++ 792974	++++ 966216	++++ 2627036	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1367760 1259220	1313630 1381357	1312187 1399256	1252969 1389696	1297299 1433969	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD
QuaF = Quadratic ISTD forced zero

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25539/8	GK19IC01.D
Level 2	IC 140-25539/9	GK19IC02.D
Level 3	IC 140-25539/10	GK19IC03.D
Level 4	IC 140-25539/11	GK19IC04.D
Level 5	IC 140-25539/12	GK19IC05.D
Level 6	IC 140-25539/13	GK19IC06.D
Level 7	ICIS 140-25539/14	GK19IC07.D
Level 8	IC 140-25539/15	GK19IC08.D
Level 9	IC 140-25539/3	GK19IC09.D
Level 10	IC 140-25539/5	GK19IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	1.7						50			
Propene	+++++	+++++	+++++	29.5						50		
Dichlorodifluoromethane	+++++	9.5						50				
Chloromethane	+++++	+++++	+++++	22.6						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	6.2						50				
Vinyl chloride	12.3						50					
Butane	+++++	+++++	+++++	6.3						50		
1,3-Butadiene	+++++	+++++	+++++	0.3						50		
Bromomethane	+++++	+++++	4.2						50			
Chloroethane	+++++	+++++	0.7						50			
Ethanol	+++++	+++++	+++++	7.3						50		
Vinyl bromide	+++++	8.1						50				
2-Methylbutane	+++++	+++++	4.7						50			
Trichlorofluoromethane	+++++	4.0						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1 Analy Batch No.: 25539
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	+++++	-6.7							50
Acetonitrile	+++++	+++++	+++++	+++++	-29.7							50
Acetone	+++++	+++++	+++++	+++++	8.1							80
Pentane	+++++	+++++	+++++	+++++	8.8							50
Isopropyl alcohol	+++++	+++++	+++++	11.0						50		
Ethyl ether	+++++	+++++	+++++	+++++	11.5							50
1,1-Dichloroethene	12.5						50					
Acrylonitrile	+++++	+++++	-3.5						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	6.1							50			
tert-Butyl alcohol	+++++	+++++	-9.5						50			
Methylene Chloride	+++++	+++++	+++++	58.1							80	
3-Chloropropene	+++++	+++++	-24.2						50			
Carbon disulfide	+++++	+++++	-3.2						50			
trans-1,2-Dichloroethene	+++++	1.0							50			
2-Methylpentane	+++++	4.7							50			
Methyl tert-butyl ether	+++++	+++++	5.6						50			
1,1-Dichloroethane	+++++	1.9							50			
Vinyl acetate	+++++	+++++	0.8						50			
Hexane	+++++	+++++	4.9						50			
2-Butanone (MEK)	+++++	+++++	+++++	22.0							50	
cis-1,2-Dichloroethene	+++++	1.4							50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1 Analy Batch No.: 25539
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	8.8						50			
Chloroform	+++++	5.6						50				
Tetrahydrofuran	+++++	+++++	+++++	+++++	-6.6						50	
1,1,1-Trichloroethane	12.1						50					
1,2-Dichloroethane	4.8						50					
Cyclohexane	+++++	+++++	+++++	6.2						50		
Benzene	9.8						50					
1-Butanol	+++++	+++++	+++++	13.7						50		
Carbon tetrachloride	10.7						50					
2,3-Dimethylpentane	+++++	+++++	-4.2						50			
Thiophene	+++++	+++++	-1.4						50			
2,2,4-Trimethylpentane	+++++	4.3						50				
Heptane	+++++	+++++	-2.5						50			
1,2-Dichloropropane	+++++	7.7						50				
Trichloroethene	13.0						50					
Dibromomethane	+++++	+++++	7.7						50			
Bromodichloromethane	+++++	-5.7						50				
1,4-Dioxane	+++++	+++++	-4.8						50			
Methyl methacrylate	+++++	+++++	6.2						50			
Methylcyclohexane	+++++	-1.5						50				
4-Methyl-2-pentanone (MIBK)	+++++	+++++	-7.6						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1 Analy Batch No.: 25539
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	8.3						50					
trans-1,3-Dichloropropene	6.6						50					
Toluene	++++	4.3						50				
1,1,2-Trichloroethane	3.6						50					
2-Hexanone	++++	++++	++++	11.8						50		
Octane	++++	++++	-1.2						50			
Dibromochloromethane	++++	++++	-14.9						50			
1,2-Dibromoethane (EDB)	1.1						50					
Tetrachloroethene	8.0						50					
Chlorobenzene	++++	0.7						50				
Ethylbenzene	++++	-6.9						50				
m-Xylene & p-Xylene	7.5						50					
Nonane	1.3						50					
Bromoform	++++	++++	-20.3						50			
Styrene	++++	++++	-6.1						50			
o-Xylene	8.6						50					
1,1,2,2-Tetrachloroethane	++++	++++	-0.8						50			
1,2,3-Trichloropropane	++++	++++	1.4						50			
Isopropylbenzene	7.7						50					
Propylbenzene	++++	++++	-3.9						50			
2-Chlorotoluene	++++	-5.4						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	5.7						50					
1,3,5-Trimethylbenzene	0.6						50					
Alpha Methyl Styrene	+++++	+++++	-10.0						50			
Decane	6.7						50					
tert-Butylbenzene	2.7						50					
1,2,4-Trimethylbenzene	+++++	+++++	2.0						50			
sec-Butylbenzene	3.4						50					
1,3-Dichlorobenzene	9.4						50					
Benzyl chloride	+++++	+++++	-9.9						50			
1,4-Dichlorobenzene	+++++	-0.8						50				
4-Isopropyltoluene	+++++	+++++	-2.2						50			
1,2,3-Trimethylbenzene	4.1						50					
Indane	3.1						50					
1,2-Dichlorobenzene	+++++	-3.3						50				
Butylbenzene	2.8						50					
Indene	+++++	+++++	0.1						50			
Undecane	+++++	+++++	-0.3						50			
1,2-Dibromo-3-Chloropropane	+++++	+++++	-4.6						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	0.7						50			
Dodecane	+++++	+++++	+++++	+++++	-16.7						50	
1,2,4-Trichlorobenzene	+++++	-2.2						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	2.0						80				
Hexachlorobutadiene	+++++	-0.1						50				
1,2,3-Trichlorobenzene	+++++	3.6						50				
2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-30.3						80
1-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-18.1						80

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 19-Nov-2018 13:04:30 ALS Bottle#: 15 Worklist Smp#: 3
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010044-003
 Misc. Info.: 190391
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:16:23 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0301

First Level Reviewer: tajh

Date: 19-Nov-2018 14:11:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.280	9.274	0.006	92	283081	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.454	11.449	0.005	97	1795920	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.123	16.123	0.000	92	1678117	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.746	17.747	-0.001	81	1389696	4.00	4.07	
6 Chlorodifluoromethane	51	3.823	3.827	-0.004	97	1641060	8.00	7.68	
7 Propene	41	3.834	3.837	-0.003	98	922660	8.00	7.24	
8 Dichlorodifluoromethane	85	3.893	3.894	-0.001	100	2302698	8.00	7.70	
9 Chloromethane	52	4.093	4.095	-0.002	99	284794	8.00	7.21	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	95	1248913	8.00	7.50	
11 Acetaldehyde	44	4.266	4.275	-0.009	94	1511837	40.0	33.8	
12 Vinyl chloride	62	4.276	4.280	-0.004	99	933000	8.00	7.54	
13 Butane	43	4.373	4.374	-0.001	86	1577208	8.00	7.50	
14 Butadiene	54	4.373	4.376	-0.003	67	760847	8.00	7.70	
15 Bromomethane	94	4.724	4.727	-0.003	99	736086	8.00	7.74	
16 Chloroethane	64	4.880	4.883	-0.003	91	452118	8.00	7.85	
17 Ethanol	31	5.010	5.037	-0.027	98	1844034	40.0	37.6	
18 Vinyl bromide	106	5.209	5.210	-0.001	99	674263	8.00	7.81	
19 2-Methylbutane	43	5.258	5.263	-0.005	93	1099927	8.00	7.74	
20 Trichlorofluoromethane	101	5.495	5.499	-0.004	100	2018158	8.00	8.19	
21 Acrolein	56	5.517	5.532	-0.015	96	164247	8.00	7.84	
22 Acetonitrile	40	5.592	5.604	-0.012	98	267075	8.00	8.06	
23 Acetone	58	5.641	5.667	-0.026	99	816802	24.0	21.5	
24 Pentane	72	5.732	5.734	-0.002	96	148503	8.00	8.05	
25 Isopropyl alcohol	45	5.748	5.794	-0.046	97	2498339	24.0	22.3	
26 Ethyl ether	31	5.916	5.944	-0.028	91	807636	8.00	7.19	
27 1,1-Dichloroethene	96	6.250	6.252	-0.002	93	783088	8.00	7.84	
28 Acrylonitrile	53	6.379	6.386	-0.007	95	509989	8.00	7.60	
29 1,1,2-Trichloro-1,2,2-trif	101	6.433	6.437	-0.004	93	1589363	8.00	7.68	
30 2-Methyl-2-propanol	59	6.385	6.458	-0.073	95	1148226	8.00	6.93	
31 Methylene Chloride	84	6.627	6.625	0.002	96	724823	8.00	6.33	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.638	6.638	0.000	95	951069	8.00	8.08	
33 Carbon disulfide	76	6.795	6.794	0.001	100	2428840	8.00	7.80	
34 trans-1,2-Dichloroethene	96	7.469	7.467	0.002	94	796056	8.00	7.98	
35 2-Methylpentane	43	7.485	7.485	0.000	96	2419211	8.00	7.59	
36 Methyl tert-butyl ether	73	7.603	7.642	-0.039	97	1833163	8.00	7.07	
37 1,1-Dichloroethane	63	7.916	7.913	0.003	99	1671302	8.00	7.68	
38 Vinyl acetate	43	8.019	8.029	-0.010	100	2134172	8.00	7.55	
40 Hexane	56	8.499	8.500	-0.001	80	763910	8.00	7.55	
39 2-Butanone (MEK)	72	8.493	8.515	-0.022	95	319512	8.00	6.99	
41 Isopropyl ether	45	8.666	8.694	-0.028	97	2699494	8.00	7.20	
42 cis-1,2-Dichloroethene	96	8.935	8.930	0.005	98	806875	8.00	7.77	
43 Ethyl acetate	43	9.119	9.141	-0.022	98	1813820	8.00	7.33	
44 Chloroform	83	9.291	9.286	0.005	97	1724652	8.00	7.62	
45 Tert-butyl ethyl ether	59	9.361	9.395	-0.034	97	2355516	8.00	7.25	
46 Tetrahydrofuran	42	9.701	9.736	-0.035	94	954335	8.00	7.51	
47 1,1,1-Trichloroethane	97	10.332	10.331	0.001	96	1775710	8.00	7.51	
48 1,2-Dichloroethane	62	10.445	10.443	0.002	97	1251312	8.00	7.70	
49 Cyclohexane	69	10.914	10.914	0.000	92	430813	8.00	7.27	
50 Benzene	78	10.925	10.921	0.004	98	2379560	8.00	7.24	
51 n-Butanol	31	10.882	10.936	-0.054	94	329596	8.00	6.79	
52 Carbon tetrachloride	117	10.941	10.941	0.000	97	1737710	8.00	8.13	
53 2,3-Dimethylpentane	71	11.028	11.026	0.002	93	628549	8.00	7.32	
54 Thiophene	84	11.195	11.192	0.003	97	1403861	8.00	7.60	
55 Isooctane	57	11.653	11.656	-0.003	98	4645523	8.00	7.29	
56 n-Heptane	71	12.020	12.019	0.001	95	964177	8.00	7.52	
57 1,2-Dichloropropane	63	12.122	12.122	0.000	89	943495	8.00	7.15	
58 Trichloroethene	130	12.155	12.152	0.003	93	1025189	8.00	7.47	
59 Dibromomethane	93	12.246	12.243	0.003	90	953758	8.00	7.60	
60 Dichlorobromomethane	83	12.386	12.384	0.002	98	1868708	8.00	7.88	
61 1,4-Dioxane	88	12.403	12.434	-0.031	98	277476	8.00	6.79	
62 Methyl methacrylate	41	12.462	12.472	-0.010	90	1176973	8.00	7.34	
63 Methylcyclohexane	83	12.909	12.908	0.001	92	1572038	8.00	7.37	
64 4-Methyl-2-pentanone (MIBK)	43	13.309	13.332	-0.023	99	1807905	8.00	6.86	
65 cis-1,3-Dichloropropene	75	13.362	13.363	-0.001	99	1457194	8.00	7.72	
66 trans-1,3-Dichloropropene	75	14.047	14.048	-0.001	96	1310210	8.00	7.82	
67 Toluene	91	14.177	14.173	0.004	93	2478512	8.00	7.17	
68 1,1,2-Trichloroethane	83	14.252	14.250	0.002	97	790249	8.00	7.25	
69 2-Hexanone	58	14.624	14.639	-0.015	91	796624	8.00	6.61	
70 n-Octane	85	14.829	14.829	0.000	97	1002854	8.00	7.58	
71 Chlorodibromomethane	129	14.948	14.950	-0.002	97	1602672	8.00	8.12	
72 Ethylene Dibromide	107	15.239	15.238	0.001	98	1386991	8.00	7.67	
73 Tetrachloroethene	129	15.304	15.302	0.002	96	913891	8.00	7.37	
74 2,3-Dimethylheptane	43	16.166	16.165	0.001	96	3427504	8.00	7.30	
75 Chlorobenzene	112	16.172	16.172	0.000	90	1908819	8.00	7.22	
78 Ethylbenzene	91	16.452	16.450	0.002	99	3198014	8.00	7.15	
79 m-Xylene & p-Xylene	91	16.609	16.609	0.000	98	4854329	16.0	14.0	
80 n-Nonane	57	17.002	17.003	-0.001	95	2102592	8.00	7.46	
81 Bromoform	173	17.072	17.072	0.000	90	1341429	8.00	8.09	
82 Styrene	104	17.072	17.073	-0.001	99	1823684	8.00	7.49	
83 o-Xylene	91	17.137	17.133	0.004	98	2596658	8.00	7.09	
84 1,1,2,2-Tetrachloroethane	83	17.455	17.456	-0.001	99	1809382	8.00	7.21	
85 1,2,3-Trichloropropane	110	17.617	17.616	0.001	97	530200	8.00	7.21	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.714	17.710	0.004	97	3302284	8.00	6.97	
87 N-Propylbenzene	120	18.232	18.229	0.003	98	913517	8.00	7.20	
88 2-Chlorotoluene	126	18.280	18.280	0.000	97	854299	8.00	7.18	
89 4-Ethyltoluene	105	18.372	18.373	-0.001	98	3353829	8.00	7.16	
90 1,3,5-Trimethylbenzene	120	18.442	18.443	-0.001	92	1317619	8.00	7.21	
92 Alpha Methyl Styrene	118	18.669	18.669	0.000	86	1442818	8.00	7.76	
93 n-Decane	57	18.706	18.705	0.001	89	2436845	8.00	7.09	
94 tert-Butylbenzene	119	18.857	18.857	0.000	89	2777445	8.00	7.02	
95 1,2,4-Trimethylbenzene	105	18.873	18.870	0.003	96	2784519	8.00	7.03	
96 sec-Butylbenzene	105	19.116	19.117	-0.001	98	4013369	8.00	7.04	
97 1,3-Dichlorobenzene	146	19.143	19.141	0.002	97	1819495	8.00	7.06	
98 Benzyl chloride	91	19.213	19.213	0.000	97	2712511	8.00	7.82	
99 1,4-Dichlorobenzene	146	19.229	19.226	0.003	93	1837381	8.00	7.15	
100 4-Isopropyltoluene	119	19.272	19.273	-0.001	96	3260871	8.00	7.12	
101 1,2,3-Trimethylbenzene	105	19.332	19.332	0.000	99	2832151	8.00	7.65	
102 Butylcyclohexane	83	19.375	19.375	0.000	91	2675744	8.00	7.13	
103 2,3-Dihydroindene	117	19.574	19.574	0.000	93	2470291	8.00	6.91	
104 1,2-Dichlorobenzene	146	19.580	19.579	0.001	94	1690175	8.00	6.92	
105 n-Butylbenzene	91	19.698	19.696	0.002	98	3389522	8.00	7.02	
106 Indene	116	19.704	19.704	0.000	97	2288947	8.00	7.21	
107 Undecane	57	19.984	19.984	0.000	96	2551359	8.00	7.13	
108 1,2-Dibromo-3-Chloropropan	157	20.168	20.168	0.000	90	918221	8.00	7.37	
109 1,2,4,5-Tetramethylbenzene	119	20.443	20.443	0.000	97	2962260	8.00	7.07	
110 Dodecane	57	21.036	21.036	0.000	94	1948321	8.00	7.35	
111 1,2,4-Trichlorobenzene	180	21.262	21.262	0.000	93	1441740	8.00	7.39	
112 Naphthalene	128	21.402	21.403	-0.001	99	3417093	8.00	7.35	
113 Hexachlorobutadiene	225	21.602	21.598	0.004	93	1181716	8.00	6.87	
114 1,2,3-Trichlorobenzene	180	21.677	21.676	0.001	94	1271858	8.00	7.02	
115 2-Methylnaphthalene	142	22.416	22.418	-0.002	100	932228	8.00	7.31	
116 1-Methylnaphthalene	142	22.589	22.590	-0.001	100	966216	8.00	6.91	
A 122 C8 Range	1	14.830	(14.771-14.908)		0	10103657	8.00	7.55	
S 123 1,2-Dichloroethene, Total	1				0		16.0	15.7	
S 124 Xylenes, Total	100				0		24.0	21.1	

Reagents:

40L10DQP_00007

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC09.D

Injection Date: 19-Nov-2018 13:04:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L9

Worklist Smp#: 3

Client ID:

Purge Vol: 500.000 mL

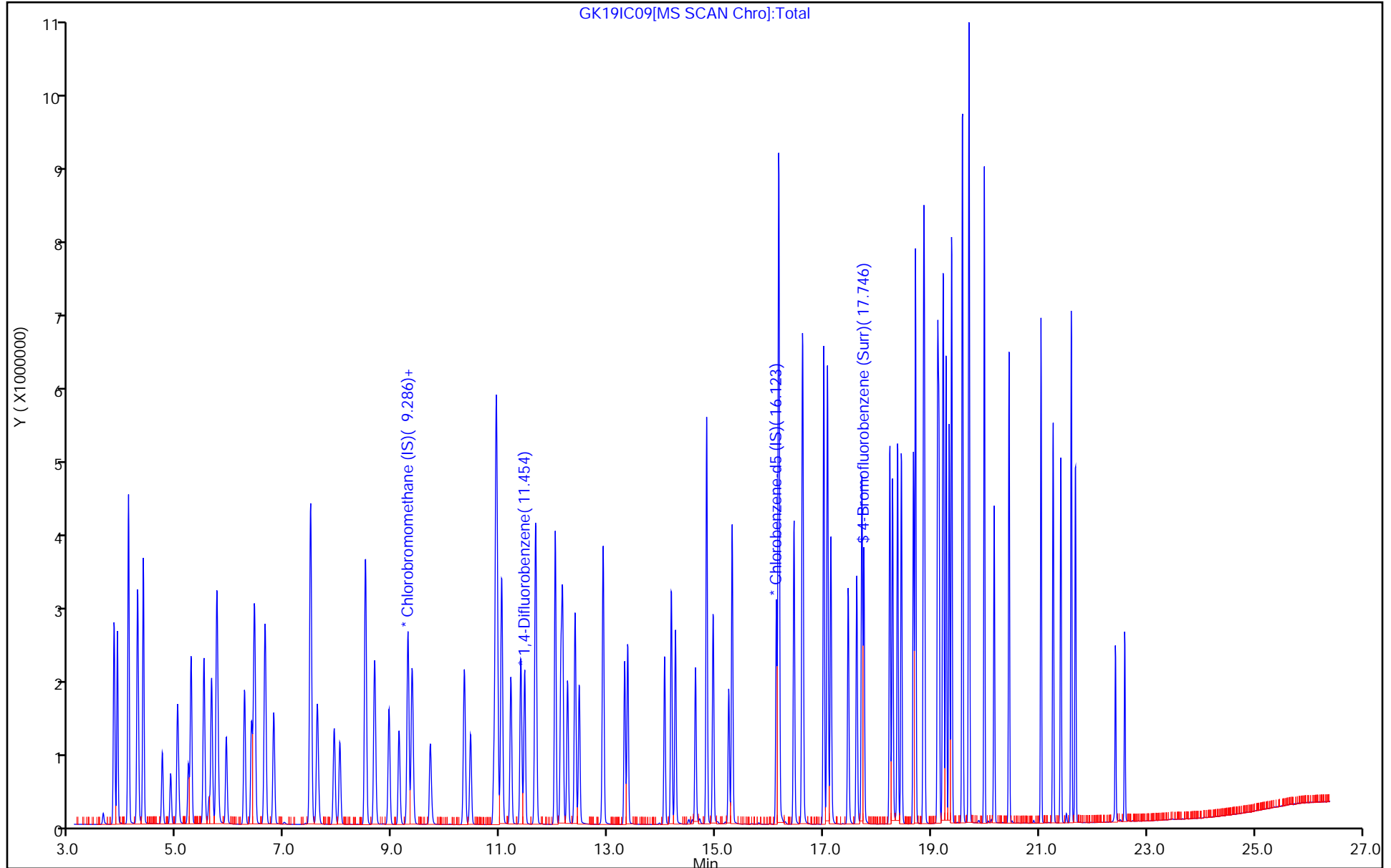
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC09.D

Injection Date: 19-Nov-2018 13:04:30

Instrument ID: MG

Lims ID: IC L9

Client ID:

Operator ID: 007126

ALS Bottle#: 15

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

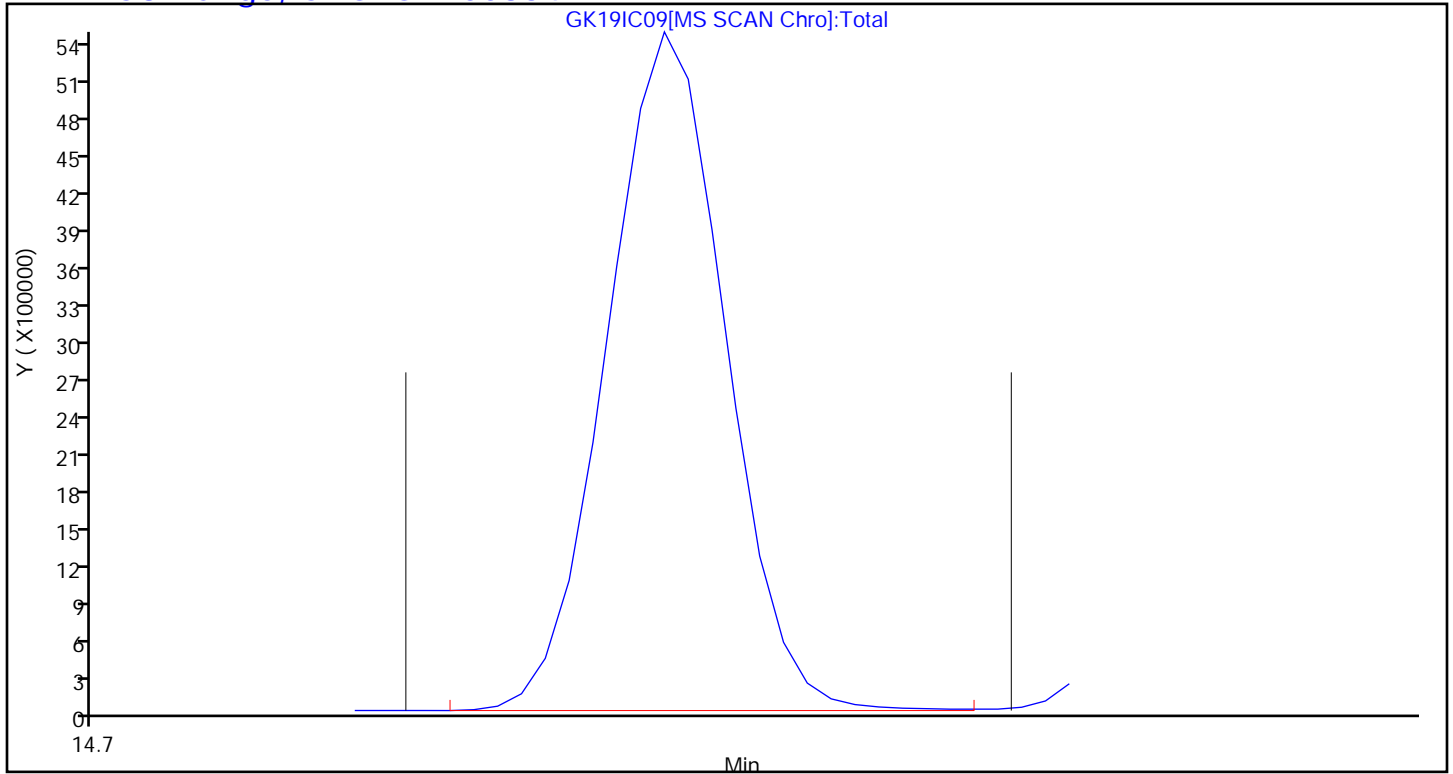
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 19-Nov-2018 14:34:30 ALS Bottle#: 15 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010044-005
 Misc. Info.: 190391
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:16:29 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0301

First Level Reviewer: tajh Date: 19-Nov-2018 15:21:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.291	9.274	0.017	89	298174	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.459	11.449	0.010	97	1871902	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.129	16.123	0.006	92	1757584	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.752	17.747	0.005	82	1433969	4.00	4.01	
6 Chlorodifluoromethane	51	3.823	3.827	-0.004	97	3312685	16.0	14.7	
7 Propene	41	3.834	3.837	-0.003	99	1861073	16.0	13.9	
8 Dichlorodifluoromethane	85	3.893	3.894	-0.001	100	4542189	16.0	14.4	
9 Chloromethane	52	4.093	4.095	-0.002	99	571155	16.0	13.7	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	96	2467542	16.0	14.1	
11 Acetaldehyde	44	4.266	4.275	-0.009	97	3396920	80.0	72.2	
12 Vinyl chloride	62	4.276	4.280	-0.004	99	1895212	16.0	14.5	
13 Butane	43	4.373	4.374	-0.001	86	3225870	16.0	14.6	
14 Butadiene	54	4.373	4.376	-0.003	66	1566166	16.0	15.0	
15 Bromomethane	94	4.729	4.727	0.002	99	1508068	16.0	15.1	
16 Chloroethane	64	4.886	4.883	0.003	92	934730	16.0	15.4	
17 Ethanol	31	5.031	5.037	-0.006	98	3900907	80.0	75.4	
18 Vinyl bromide	106	5.215	5.210	0.005	99	1396076	16.0	15.3	
19 2-Methylbutane	43	5.263	5.263	0.000	93	2252813	16.0	15.1	
20 Trichlorofluoromethane	101	5.500	5.499	0.001	100	3930679	16.0	15.1	
21 Acrolein	56	5.527	5.532	-0.005	96	400688	16.0	18.2	
22 Acetonitrile	40	5.608	5.604	0.004	99	625658	16.0	17.9	
23 Acetone	58	5.651	5.667	-0.016	98	1827590	48.0	45.6	
24 Pentane	72	5.738	5.734	0.004	98	305309	16.0	15.7	
25 Isopropyl alcohol	45	5.770	5.794	-0.024	99	5234518	48.0	44.3	
26 Ethyl ether	31	5.921	5.944	-0.023	92	1883466	16.0	15.9	
27 1,1-Dichloroethene	96	6.255	6.252	0.003	94	1640145	16.0	15.6	
28 Acrylonitrile	53	6.396	6.386	0.010	94	1242476	16.0	17.6	
29 1,1,2-Trichloro-1,2,2-trif	101	6.444	6.437	0.007	93	3317262	16.0	15.2	
30 2-Methyl-2-propanol	59	6.401	6.458	-0.057	96	2560873	16.0	14.7	
31 Methylene Chloride	84	6.633	6.625	0.008	96	1536576	16.0	12.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.649	6.638	0.011	94	2011369	16.0	16.2	
33 Carbon disulfide	76	6.800	6.794	0.006	100	5057684	16.0	15.4	
34 trans-1,2-Dichloroethene	96	7.479	7.467	0.012	94	1682746	16.0	16.0	
35 2-Methylpentane	43	7.490	7.485	0.005	96	4995390	16.0	14.9	
36 Methyl tert-butyl ether	73	7.609	7.642	-0.033	98	4473786	16.0	16.4	
37 1,1-Dichloroethane	63	7.927	7.913	0.014	99	3642762	16.0	15.9	
38 Vinyl acetate	43	8.035	8.029	0.006	100	5237334	16.0	17.6	
40 Hexane	56	8.504	8.500	0.004	87	1658330	16.0	15.6	
39 2-Butanone (MEK)	72	8.504	8.515	-0.011	98	784000	16.0	16.3	
41 Isopropyl ether	45	8.676	8.694	-0.018	97	6537601	16.0	16.5	
42 cis-1,2-Dichloroethene	96	8.946	8.930	0.016	98	1774981	16.0	16.2	
43 Ethyl acetate	43	9.129	9.141	-0.012	98	4434165	16.0	17.0	
44 Chloroform	83	9.302	9.286	0.016	97	3791654	16.0	15.9	
45 Tert-butyl ethyl ether	59	9.372	9.395	-0.023	97	5774079	16.0	16.9	
46 Tetrahydrofuran	42	9.706	9.736	-0.030	94	2319928	16.0	17.3	
47 1,1,1-Trichloroethane	97	10.343	10.331	0.012	97	3848807	16.0	15.5	
48 1,2-Dichloroethane	62	10.456	10.443	0.013	97	2781931	16.0	16.4	
49 Cyclohexane	69	10.920	10.914	0.006	93	896181	16.0	14.5	
50 Benzene	78	10.936	10.921	0.015	98	5061484	16.0	14.8	
51 n-Butanol	31	10.887	10.936	-0.049	82	741238	16.0	14.7	
52 Carbon tetrachloride	117	10.952	10.941	0.011	97	3645457	16.0	16.4	
53 2,3-Dimethylpentane	71	11.033	11.026	0.007	93	1393431	16.0	15.6	
54 Thiophene	84	11.206	11.192	0.014	97	3146075	16.0	16.4	
55 Isooctane	57	11.664	11.656	0.008	98	10056141	16.0	15.1	
56 n-Heptane	71	12.031	12.019	0.012	95	2117126	16.0	15.8	
57 1,2-Dichloropropane	63	12.133	12.122	0.011	88	2174092	16.0	15.8	
58 Trichloroethene	130	12.165	12.152	0.013	94	2171695	16.0	15.2	
59 Dibromomethane	93	12.257	12.243	0.014	91	2041273	16.0	15.6	
60 Dichlorobromomethane	83	12.392	12.384	0.008	98	4009628	16.0	16.2	
61 1,4-Dioxane	88	12.408	12.434	-0.026	97	668565	16.0	15.7	
62 Methyl methacrylate	41	12.473	12.472	0.001	90	2921446	16.0	17.5	
63 Methylcyclohexane	83	12.915	12.908	0.007	92	3439448	16.0	15.5	
64 4-Methyl-2-pentanone (MIBK)	43	13.314	13.332	-0.018	98	4683489	16.0	17.0	
65 cis-1,3-Dichloropropene	75	13.373	13.363	0.010	98	3334227	16.0	16.9	
66 trans-1,3-Dichloropropene	75	14.058	14.048	0.010	97	3089373	16.0	17.6	
67 Toluene	91	14.182	14.173	0.009	93	5720473	16.0	15.8	
68 1,1,2-Trichloroethane	83	14.258	14.250	0.008	98	1836669	16.0	16.1	
69 2-Hexanone	58	14.630	14.639	-0.009	92	2137087	16.0	16.9	
70 n-Octane	85	14.835	14.829	0.006	96	2186474	16.0	15.8	
71 Chlorodibromomethane	129	14.959	14.950	0.009	97	3526724	16.0	17.1	
72 Ethylene Dibromide	107	15.244	15.238	0.006	99	3152916	16.0	16.6	
73 Tetrachloroethene	129	15.309	15.302	0.007	96	1976468	16.0	15.2	
74 2,3-Dimethylheptane	43	16.166	16.165	0.001	96	6759713	16.0	13.7	
75 Chlorobenzene	112	16.177	16.172	0.005	90	4172904	16.0	15.1	
78 Ethylbenzene	91	16.452	16.450	0.002	99	7551419	16.0	16.1	
79 m-Xylene & p-Xylene	91	16.614	16.609	0.005	98	11146974	32.0	30.6	
80 n-Nonane	57	17.008	17.003	0.005	94	4637617	16.0	15.7	
81 Bromoform	173	17.078	17.072	0.006	91	3013694	16.0	17.4	
82 Styrene	104	17.078	17.073	0.005	99	4229327	16.0	16.6	
83 o-Xylene	91	17.137	17.133	0.004	98	6122615	16.0	16.0	
84 1,1,2,2-Tetrachloroethane	83	17.461	17.456	0.005	99	4311662	16.0	16.4	
85 1,2,3-Trichloropropane	110	17.622	17.616	0.006	97	1270140	16.0	16.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.714	17.710	0.004	97	7725096	16.0	15.6	
87 N-Propylbenzene	120	18.232	18.229	0.003	98	2189792	16.0	16.5	
88 2-Chlorotoluene	126	18.286	18.280	0.006	98	1991626	16.0	16.0	
89 4-Ethyltoluene	105	18.377	18.373	0.004	98	7815900	16.0	15.9	
90 1,3,5-Trimethylbenzene	120	18.447	18.443	0.004	92	3189740	16.0	16.7	
92 Alpha Methyl Styrene	118	18.674	18.669	0.005	86	3396315	16.0	17.4	
93 n-Decane	57	18.712	18.705	0.007	89	5432796	16.0	15.1	
94 tert-Butylbenzene	119	18.863	18.857	0.006	94	6532801	16.0	15.8	
95 1,2,4-Trimethylbenzene	105	18.873	18.870	0.003	96	6404114	16.0	15.4	
96 sec-Butylbenzene	105	19.122	19.117	0.005	97	9124681	16.0	15.3	
97 1,3-Dichlorobenzene	146	19.143	19.141	0.002	98	4098836	16.0	15.2	
98 Benzyl chloride	91	19.219	19.213	0.006	97	6274527	16.0	17.3	
99 1,4-Dichlorobenzene	146	19.229	19.226	0.003	90	4114618	16.0	15.3	
100 4-Isopropyltoluene	119	19.278	19.273	0.005	96	7700803	16.0	16.1	
101 1,2,3-Trimethylbenzene	105	19.337	19.332	0.005	98	6577412	16.0	16.1	
102 Butylcyclohexane	83	19.380	19.375	0.005	92	5827034	16.0	14.8	
103 2,3-Dihydroindene	117	19.580	19.574	0.006	94	5633002	16.0	15.0	
104 1,2-Dichlorobenzene	146	19.585	19.579	0.006	94	3836439	16.0	15.0	
105 n-Butylbenzene	91	19.698	19.696	0.002	99	7605792	16.0	15.0	
106 Indene	116	19.709	19.704	0.005	92	5236482	16.0	15.8	
107 Undecane	57	19.984	19.984	0.000	97	5894210	16.0	15.7	
108 1,2-Dibromo-3-Chloropropan	157	20.173	20.168	0.005	94	2230442	16.0	17.1	
109 1,2,4,5-Tetramethylbenzene	119	20.443	20.443	0.000	98	7190615	16.0	16.4	
110 Dodecane	57	21.036	21.036	0.000	96	4996610	16.0	18.0	
111 1,2,4-Trichlorobenzene	180	21.262	21.262	0.000	94	3509735	16.0	17.2	
112 Naphthalene	128	21.408	21.403	0.005	98	8151861	16.0	16.7	
113 Hexachlorobutadiene	225	21.602	21.598	0.004	96	2927915	16.0	16.2	
114 1,2,3-Trichlorobenzene	180	21.677	21.676	0.001	94	3195184	16.0	16.8	
115 2-Methylnaphthalene	142	22.422	22.418	0.004	100	2615960	16.0	19.6	
116 1-Methylnaphthalene	142	22.594	22.590	0.004	100	2627036	16.0	17.9	
A 122 C8 Range	1	14.843	(14.776-14.913)		0	21559958	16.0	15.4	
S 123 1,2-Dichloroethene, Total	1				0		32.0	32.2	
S 124 Xylenes, Total	100				0		48.0	46.6	

Reagents:

40L10DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC10.D

Injection Date: 19-Nov-2018 14:34:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L10

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

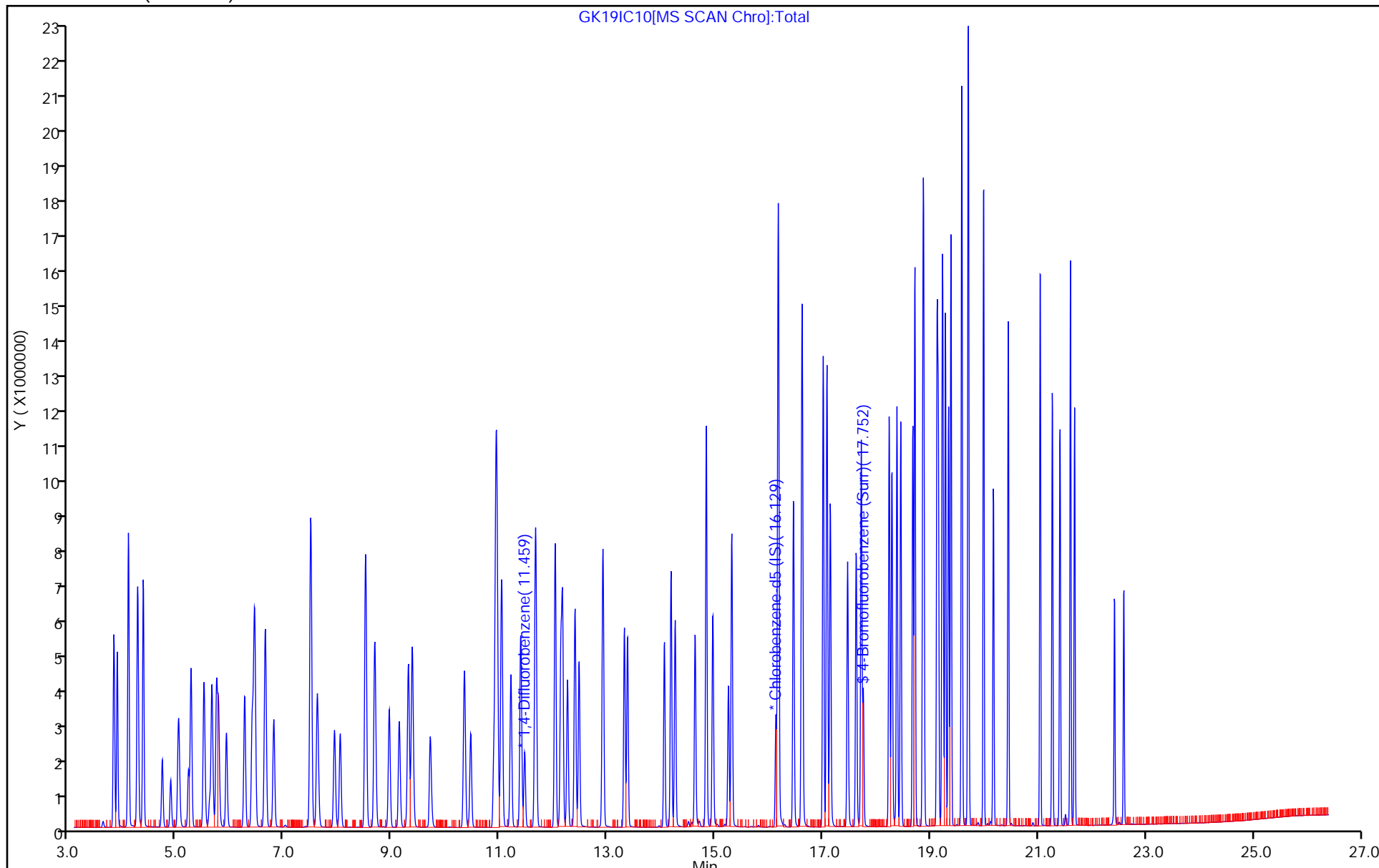
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC10.D

Injection Date: 19-Nov-2018 14:34:30

Instrument ID: MG

Lims ID: IC L10

Client ID:

Operator ID: 007126

ALS Bottle#: 15

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

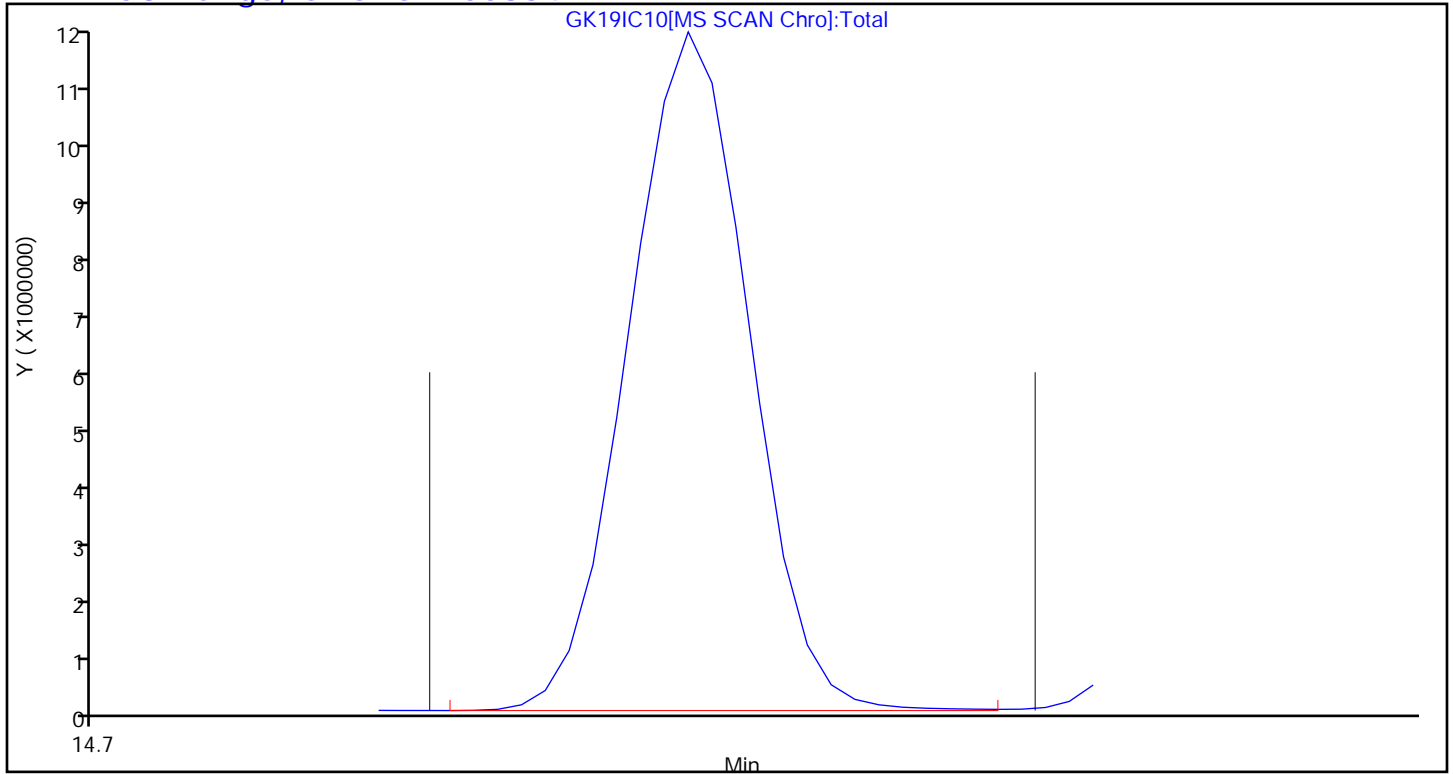
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 19-Nov-2018 16:45:30 ALS Bottle#: 1 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010044-008
 Misc. Info.: 191045
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:16:35 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0301

First Level Reviewer: barlozhetskayaa

Date: 19-Nov-2018 17:20:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.264	9.274	-0.010	98	289283	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.443	11.449	-0.006	97	1854315	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.123	16.123	0.000	91	1728579	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.746	17.747	-0.001	81	1367760	4.00	3.89	
6 Chlorodifluoromethane	51	3.829	3.827	0.002	53	4998	0.0200	0.0229	
7 Propene	41	3.839	3.837	0.002	99	8984	0.0200	0.0690	
8 Dichlorodifluoromethane	85	3.893	3.894	-0.001	99	6939	0.0200	0.0227	
9 Chloromethane	52	4.098	4.095	0.003	89	3016	0.0200	0.0747	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.103	0.001	91	3842	0.0200	0.0226	
11 Acetaldehyde	44	4.282	4.275	0.007	92	15937	0.1000	0.3491	
12 Vinyl chloride	62	4.282	4.280	0.002	43	2842	0.0200	0.0225	
13 Butane	43	4.379	4.374	0.005	87	6658	0.0200	0.0310	
14 Butadiene	54	4.373	4.376	-0.003	59	2504	0.0200	0.0248	
15 Bromomethane	94	4.729	4.727	0.002	96	2756	0.0200	0.0283	
16 Chloroethane	64	4.875	4.883	-0.008	69	1287	0.0200	0.0219	
17 Ethanol	31	5.042	5.037	0.005	95	5605	0.1000	0.1117	
18 Vinyl bromide	106	5.209	5.210	-0.001	96	2101	0.0200	0.0238	
19 2-Methylbutane	43	5.258	5.263	-0.005	92	3837	0.0200	0.0264	
20 Trichlorofluoromethane	101	5.495	5.499	-0.004	97	5945	0.0200	0.0236	
21 Acrolein	56	5.533	5.532	0.001	53	861	0.0200	0.0402	
23 Acetone	58	5.689	5.667	0.022	95	6368	0.0600	0.1637	
24 Pentane	72	5.732	5.734	-0.002	62	564	0.0200	0.0299	
25 Isopropyl alcohol	45	5.813	5.794	0.019	98	6114	0.0600	0.0533	
26 Ethyl ether	31	5.964	5.944	0.020	79	2932	0.0200	0.0255	
27 1,1-Dichloroethene	96	6.250	6.252	-0.002	93	2297	0.0200	0.0225	
28 Acrylonitrile	53	6.379	6.386	-0.007	97	1593	0.0200	0.0232	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.437	-0.009	86	4995	0.0200	0.0236	
30 2-Methyl-2-propanol	59	6.492	6.458	0.034	91	2898	0.0200	0.0171	
31 Methylene Chloride	84	6.622	6.625	-0.003	96	15301	0.0200	0.1307	
32 3-Chloro-1-propene	39	6.627	6.638	-0.011	28	3071	0.0200	0.0255	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.789	6.794	-0.005	99	7251	0.0200	0.0228	
34 trans-1,2-Dichloroethene	96	7.452	7.467	-0.015	73	2399	0.0200	0.0235	
35 2-Methylpentane	43	7.479	7.485	-0.006	95	8272	0.0200	0.0254	
36 Methyl tert-butyl ether	73	7.679	7.642	0.037	95	5967	0.0200	0.0225	
37 1,1-Dichloroethane	63	7.911	7.913	-0.002	97	5043	0.0200	0.0227	
38 Vinyl acetate	43	8.024	8.029	-0.005	99	5708	0.0200	0.0198	
40 Hexane	56	8.488	8.500	-0.012	79	2919	0.0200	0.0282	
39 2-Butanone (MEK)	72	8.531	8.515	0.016	71	708	0.0200	0.0152	
41 Isopropyl ether	45	8.714	8.694	0.020	97	7591	0.0200	0.0198	
42 cis-1,2-Dichloroethene	96	8.919	8.930	-0.011	94	2442	0.0200	0.0230	
43 Ethyl acetate	43	9.156	9.141	0.015	54	5021	0.0200	0.0199	
44 Chloroform	83	9.280	9.286	-0.006	51	5347	0.0200	0.0231	
45 Tert-butyl ethyl ether	59	9.415	9.395	0.020	96	6228	0.0200	0.0188	M
46 Tetrahydrofuran	42	9.771	9.736	0.035	90	3570	0.0200	0.0275	
47 1,1,1-Trichloroethane	97	10.326	10.331	-0.005	94	5414	0.0200	0.0224	
48 1,2-Dichloroethane	62	10.440	10.443	-0.003	94	3515	0.0200	0.0210	
49 Cyclohexane	69	10.903	10.914	-0.011	69	1418	0.0200	0.0232	
50 Benzene	78	10.920	10.921	-0.001	96	7450	0.0200	0.0220	
51 n-Butanol	31	10.957	10.936	0.021	20	1467	0.0200	0.0293	
52 Carbon tetrachloride	117	10.936	10.941	-0.005	94	4882	0.0200	0.0221	
53 2,3-Dimethylpentane	71	11.022	11.026	-0.004	94	1953	0.0200	0.0220	
54 Thiophene	84	11.184	11.192	-0.008	95	4064	0.0200	0.0213	
55 Isooctane	57	11.648	11.656	-0.008	98	15185	0.0200	0.0231	
56 n-Heptane	71	12.014	12.019	-0.005	95	2816	0.0200	0.0213	
57 1,2-Dichloropropane	63	12.111	12.122	-0.011	83	3124	0.0200	0.0229	
58 Trichloroethene	130	12.138	12.152	-0.014	90	3205	0.0200	0.0226	
59 Dibromomethane	93	12.235	12.243	-0.008	88	4055	0.0200	0.0313	
60 Dichlorobromomethane	83	12.381	12.384	-0.003	96	5294	0.0200	0.0216	
61 1,4-Dioxane	88	12.473	12.434	0.039	46	516	0.0200	0.0122	
62 Methyl methacrylate	41	12.478	12.472	0.006	85	2153	0.0200	0.0130	
63 Methylcyclohexane	83	12.904	12.908	-0.004	94	5230	0.0200	0.0238	
64 4-Methyl-2-pentanone (MIBK)	43	13.357	13.332	0.025	91	4127	0.0200	0.0152	
65 cis-1,3-Dichloropropene	75	13.357	13.363	-0.006	97	4223	0.0200	0.0217	
66 trans-1,3-Dichloropropene	75	14.047	14.048	-0.001	94	3678	0.0200	0.0213	
67 Toluene	91	14.166	14.173	-0.007	95	8106	0.0200	0.0228	
68 1,1,2-Trichloroethane	83	14.247	14.250	-0.003	95	2326	0.0200	0.0207	
69 2-Hexanone	58	14.646	14.639	0.007	88	1532	0.0200	0.0123	
70 n-Octane	85	14.824	14.829	-0.005	95	2720	0.0200	0.0199	
71 Chlorodibromomethane	129	14.948	14.950	-0.002	94	3839	0.0200	0.0189	
72 Ethylene Dibromide	107	15.239	15.238	0.001	95	3770	0.0200	0.0202	
73 Tetrachloroethene	129	15.304	15.302	0.002	90	2758	0.0200	0.0216	
74 2,3-Dimethylheptane	43	16.161	16.165	-0.004	94	10837	0.0200	0.0224	
75 Chlorobenzene	112	16.172	16.172	0.000	89	5777	0.0200	0.0212	
78 Ethylbenzene	91	16.447	16.450	-0.003	98	10709	0.0200	0.0232	
79 m-Xylene & p-Xylene	91	16.609	16.609	0.000	98	15395	0.0400	0.0430	
80 n-Nonane	57	16.997	17.003	-0.006	94	5881	0.0200	0.0203	
81 Bromoform	173	17.072	17.072	0.000	73	2878	0.0200	0.0169	
82 Styrene	104	17.072	17.073	-0.001	96	4855	0.0200	0.0194	
83 o-Xylene	91	17.132	17.133	-0.001	98	8196	0.0200	0.0217	
84 1,1,1,2-Tetrachloroethane	83	17.455	17.456	-0.001	97	5179	0.0200	0.0200	
85 1,2,3-Trichloropropane	110	17.612	17.616	-0.004	96	1593	0.0200	0.0210	
86 Isopropylbenzene	105	17.709	17.710	-0.001	87	10516	0.0200	0.0215	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 N-Propylbenzene	120	18.226	18.229	-0.003	98	2552	0.0200	0.0195	
88 2-Chlorotoluene	126	18.280	18.280	0.000	96	2543	0.0200	0.0207	
89 4-Ethyltoluene	105	18.372	18.373	-0.001	98	10200	0.0200	0.0211	
90 1,3,5-Trimethylbenzene	120	18.442	18.443	-0.001	91	3786	0.0200	0.0201	
92 Alpha Methyl Styrene	118	18.668	18.669	-0.001	89	3262	0.0200	0.0170	
93 n-Decane	57	18.701	18.705	-0.004	92	7560	0.0200	0.0213	
94 tert-Butylbenzene	119	18.857	18.857	0.000	88	8370	0.0200	0.0205	
95 1,2,4-Trimethylbenzene	105	18.868	18.870	-0.002	96	8149	0.0200	0.0200	
96 sec-Butylbenzene	105	19.116	19.117	-0.001	98	12136	0.0200	0.0207	
97 1,3-Dichlorobenzene	146	19.143	19.141	0.002	96	5807	0.0200	0.0219	
98 Benzyl chloride	91	19.208	19.213	-0.005	95	5365	0.0200	0.0150	
99 1,4-Dichlorobenzene	146	19.224	19.226	-0.002	89	5933	0.0200	0.0224	
100 4-Isopropyltoluene	119	19.272	19.273	-0.001	95	8307	0.0200	0.0176	
101 1,2,3-Trimethylbenzene	105	19.332	19.332	0.000	98	7545	0.0200	0.0208	
102 Butylcyclohexane	83	19.375	19.375	0.000	88	8100	0.0200	0.0209	
103 2,3-Dihydroindene	117	19.574	19.574	0.000	91	7596	0.0200	0.0206	
104 1,2-Dichlorobenzene	146	19.580	19.579	0.001	88	5928	0.0200	0.0236	
105 n-Butylbenzene	91	19.698	19.696	0.002	95	10230	0.0200	0.0206	
106 Indene	116	19.704	19.704	0.000	84	5687	0.0200	0.0174	
107 Undecane	57	19.979	19.984	-0.005	91	6894	0.0200	0.0187	
108 1,2-Dibromo-3-Chloropropan	157	20.162	20.168	-0.006	81	2411	0.0200	0.0188	
109 1,2,4,5-Tetramethylbenzene	119	20.443	20.443	0.000	94	8162	0.0200	0.0189	
110 Dodecane	57	21.036	21.036	0.000	93	7865	0.0200	0.0288	
111 1,2,4-Trichlorobenzene	180	21.262	21.262	0.000	93	6075	0.0200	0.0302	
112 Naphthalene	128	21.402	21.403	-0.001	98	14858	0.0200	0.0310	
113 Hexachlorobutadiene	225	21.597	21.598	-0.002	90	6108	0.0200	0.0345	
114 1,2,3-Trichlorobenzene	180	21.672	21.676	-0.004	91	7075	0.0200	0.0379	
115 2-Methylnaphthalene	142	22.416	22.418	-0.002	99	5596	0.0200	0.0426	
116 1-Methylnaphthalene	142	22.589	22.590	-0.001	99	7635	0.0200	0.0530	
A 122 C8 Range	1	14.839	(14.792-14.886)		0	30287	0.0200	0.0220	
S 123 1,2-Dichloroethene, Total	1				0		0.0400	0.0465	
S 124 Xylenes, Total	100				0		0.0600	0.0647	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L1-3DQP_00010

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC01.D

Injection Date: 19-Nov-2018 16:45:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L1

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

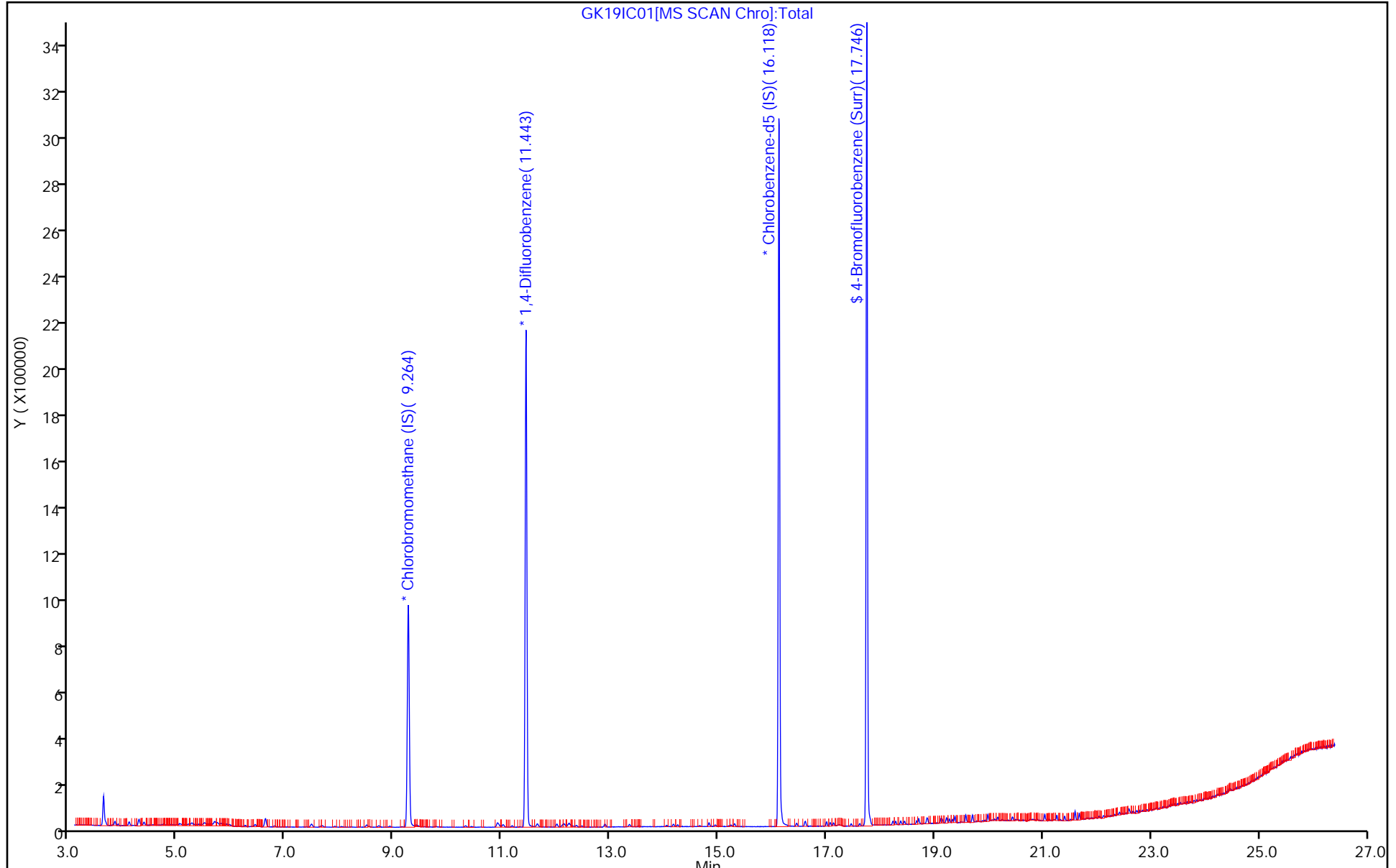
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC01.D

Injection Date: 19-Nov-2018 16:45:30

Instrument ID: MG

Lims ID: IC L1

Client ID:

Operator ID: 007126

ALS Bottle#: 1

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

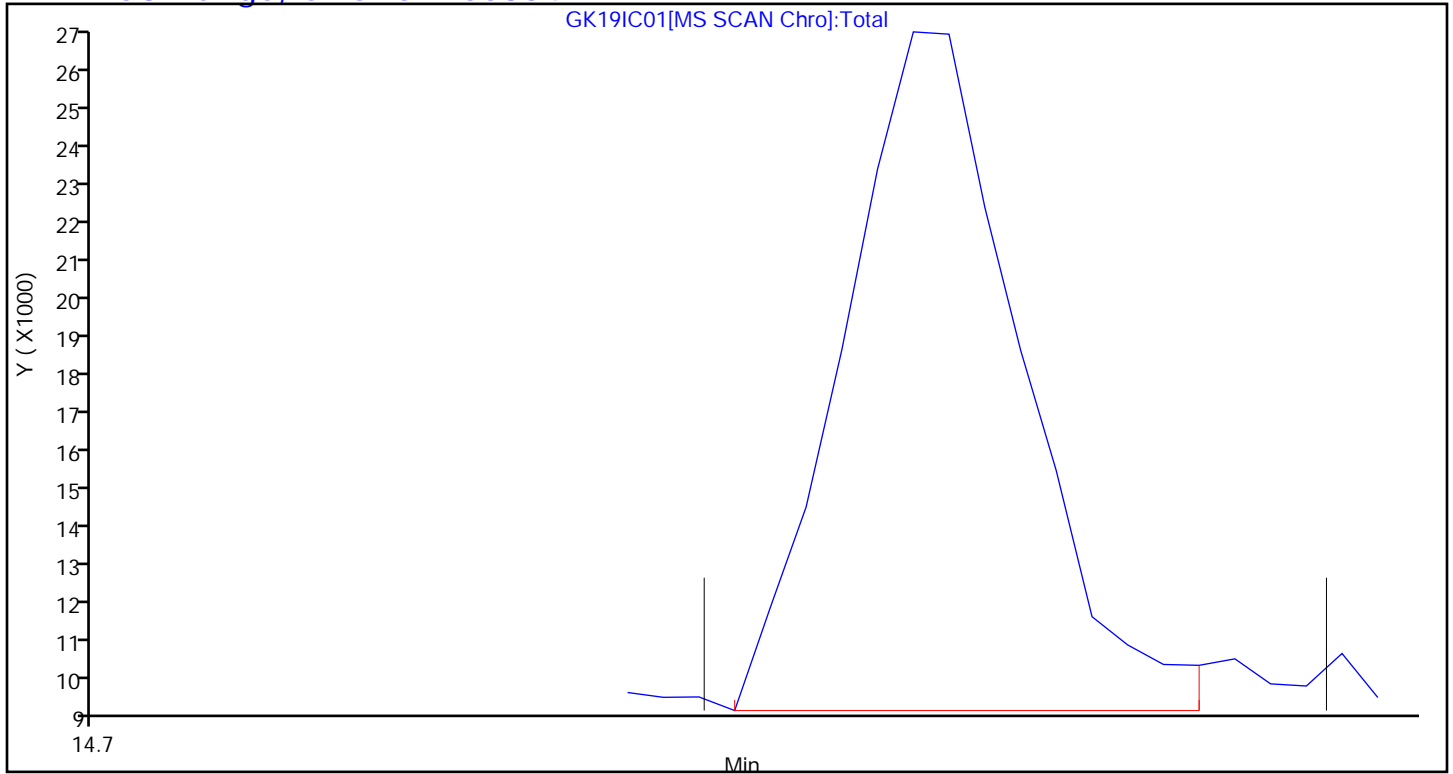
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 19-Nov-2018 17:30:30 ALS Bottle#: 2 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010044-009
 Misc. Info.: 190398
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:16:42 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0301

First Level Reviewer: tajh Date: 19-Nov-2018 18:27:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.264	9.274	-0.010	95	277484	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.443	11.449	-0.006	97	1779175	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.118	16.123	-0.005	92	1656894	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.746	17.747	-0.001	85	1313630	4.00	3.90	
6 Chlorodifluoromethane	51	3.823	3.827	-0.004	84	9339	0.0400	0.0446	
7 Propene	41	3.834	3.837	-0.003	98	10563	0.0400	0.0845	
8 Dichlorodifluoromethane	85	3.893	3.894	-0.001	99	12847	0.0400	0.0438	
9 Chloromethane	52	4.098	4.095	0.003	75	3187	0.0400	0.0823	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	91	6933	0.0400	0.0425	
11 Acetaldehyde	44	4.276	4.275	0.001	92	22201	0.2000	0.5069	
12 Vinyl chloride	62	4.276	4.280	-0.004	44	5090	0.0400	0.0419	
13 Butane	43	4.368	4.374	-0.006	88	10493	0.0400	0.0509	
14 Butadiene	54	4.373	4.376	-0.003	58	3854	0.0400	0.0398	
15 Bromomethane	94	4.724	4.727	-0.003	97	4229	0.0400	0.0454	
16 Chloroethane	64	4.886	4.883	0.003	94	2434	0.0400	0.0431	
17 Ethanol	31	5.037	5.037	-0.001	99	12843	0.2000	0.2668	
18 Vinyl bromide	106	5.204	5.210	-0.006	99	3663	0.0400	0.0433	
19 2-Methylbutane	43	5.263	5.263	0.000	92	6850	0.0400	0.0492	
20 Trichlorofluoromethane	101	5.495	5.499	-0.004	100	10052	0.0400	0.0416	
21 Acrolein	56	5.533	5.532	0.001	76	1616	0.0400	0.0787	
23 Acetone	58	5.678	5.667	0.011	98	9052	0.1200	0.2426	
24 Pentane	72	5.727	5.734	-0.007	94	783	0.0400	0.0433	
25 Isopropyl alcohol	45	5.797	5.794	0.003	98	13567	0.1200	0.1233	
26 Ethyl ether	31	5.953	5.944	0.009	90	4886	0.0400	0.0444	
27 1,1-Dichloroethene	96	6.250	6.252	-0.002	94	4138	0.0400	0.0422	
28 Acrylonitrile	53	6.379	6.386	-0.007	80	2607	0.0400	0.0396	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.437	-0.009	91	8611	0.0400	0.0424	
30 2-Methyl-2-propanol	59	6.476	6.458	0.018	91	5352	0.0400	0.0330	
31 Methylene Chloride	84	6.616	6.625	-0.009	98	17282	0.0400	0.1539	
32 3-Chloro-1-propene	39	6.627	6.638	-0.011	94	3985	0.0400	0.0345	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.789	6.794	-0.005	100	12698	0.0400	0.0416	
34 trans-1,2-Dichloroethene	96	7.463	7.467	-0.004	87	3953	0.0400	0.0404	
35 2-Methylpentane	43	7.479	7.485	-0.006	96	13091	0.0400	0.0419	
36 Methyl tert-butyl ether	73	7.663	7.642	0.021	95	9924	0.0400	0.0390	
37 1,1-Dichloroethane	63	7.900	7.913	-0.013	99	8701	0.0400	0.0408	
38 Vinyl acetate	43	8.024	8.029	-0.005	99	11238	0.0400	0.0406	
40 Hexane	56	8.493	8.500	-0.007	88	4518	0.0400	0.0455	
39 2-Butanone (MEK)	72	8.531	8.515	0.016	97	1982	0.0400	0.0443	
41 Isopropyl ether	45	8.709	8.694	0.015	97	13759	0.0400	0.0374	
42 cis-1,2-Dichloroethene	96	8.919	8.930	-0.011	96	4126	0.0400	0.0406	
43 Ethyl acetate	43	9.145	9.141	0.004	97	9563	0.0400	0.0394	
44 Chloroform	83	9.275	9.286	-0.011	27	9370	0.0400	0.0423	
45 Tert-butyl ethyl ether	59	9.410	9.395	0.015	96	11036	0.0400	0.0346	
46 Tetrahydrofuran	42	9.755	9.736	0.019	96	5977	0.0400	0.0480	
47 1,1,1-Trichloroethane	97	10.326	10.331	-0.005	96	9434	0.0400	0.0407	
48 1,2-Dichloroethane	62	10.429	10.443	-0.014	96	6167	0.0400	0.0383	
49 Cyclohexane	69	10.909	10.914	-0.005	73	2569	0.0400	0.0438	
50 Benzene	78	10.914	10.921	-0.007	96	13343	0.0400	0.0410	
51 n-Butanol	31	10.930	10.936	-0.006	47	2964	0.0400	0.0617	
52 Carbon tetrachloride	117	10.936	10.941	-0.005	94	6616	0.0400	0.0313	
53 2,3-Dimethylpentane	71	11.017	11.026	-0.009	91	3561	0.0400	0.0419	
54 Thiophene	84	11.184	11.192	-0.008	95	7366	0.0400	0.0403	
55 Isooctane	57	11.648	11.656	-0.008	98	26330	0.0400	0.0417	
56 n-Heptane	71	12.014	12.019	-0.005	95	5043	0.0400	0.0397	
57 1,2-Dichloropropane	63	12.117	12.122	-0.005	87	5627	0.0400	0.0431	
58 Trichloroethene	130	12.144	12.152	-0.008	91	5590	0.0400	0.0411	
59 Dibromomethane	93	12.235	12.243	-0.008	91	6282	0.0400	0.0505	
60 Dichlorobromomethane	83	12.376	12.384	-0.008	97	8867	0.0400	0.0377	
61 1,4-Dioxane	88	12.451	12.434	0.017	79	1271	0.0400	0.0314	
62 Methyl methacrylate	41	12.467	12.472	-0.005	91	6181	0.0400	0.0389	
63 Methylcyclohexane	83	12.904	12.908	-0.004	89	8324	0.0400	0.0394	
64 4-Methyl-2-pentanone (MIBK)	43	13.335	13.332	0.003	97	7293	0.0400	0.0279	
65 cis-1,3-Dichloropropene	75	13.357	13.363	-0.006	97	7075	0.0400	0.0378	
66 trans-1,3-Dichloropropene	75	14.042	14.048	-0.006	93	6417	0.0400	0.0388	
67 Toluene	91	14.166	14.173	-0.007	93	14232	0.0400	0.0417	
68 1,1,2-Trichloroethane	83	14.247	14.250	-0.003	95	4263	0.0400	0.0396	
69 2-Hexanone	58	14.646	14.639	0.007	91	3145	0.0400	0.0264	
70 n-Octane	85	14.824	14.829	-0.005	96	5034	0.0400	0.0385	
71 Chlorodibromomethane	129	14.942	14.950	-0.008	95	6914	0.0400	0.0355	
72 Ethylene Dibromide	107	15.233	15.238	-0.005	99	6501	0.0400	0.0364	
73 Tetrachloroethene	129	15.298	15.302	-0.004	89	5064	0.0400	0.0414	
74 2,3-Dimethylheptane	43	16.161	16.165	-0.004	89	19157	0.0400	0.0413	
75 Chlorobenzene	112	16.166	16.172	-0.006	72	10517	0.0400	0.0403	
78 Ethylbenzene	91	16.447	16.450	-0.003	99	16448	0.0400	0.0372	
79 m-Xylene & p-Xylene	91	16.603	16.609	-0.006	98	26164	0.0800	0.0762	
80 n-Nonane	57	17.002	17.003	-0.001	96	10526	0.0400	0.0378	
81 Bromoform	173	17.072	17.072	0.000	74	5006	0.0400	0.0306	
82 Styrene	104	17.067	17.073	-0.006	97	7932	0.0400	0.0330	
83 o-Xylene	91	17.126	17.133	-0.007	98	14019	0.0400	0.0388	
84 1,1,1,2,2-Tetrachloroethane	83	17.455	17.456	-0.001	98	8461	0.0400	0.0341	
85 1,2,3-Trichloropropane	110	17.617	17.616	0.001	95	2518	0.0400	0.0347	
86 Isopropylbenzene	105	17.709	17.710	-0.001	93	18567	0.0400	0.0397	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 N-Propylbenzene	120	18.232	18.229	0.003	98	4398	0.0400	0.0351	
88 2-Chlorotoluene	126	18.280	18.280	0.000	97	4446	0.0400	0.0378	
89 4-Ethyltoluene	105	18.372	18.373	-0.001	98	16761	0.0400	0.0362	
90 1,3,5-Trimethylbenzene	120	18.442	18.443	-0.001	90	6432	0.0400	0.0357	
92 Alpha Methyl Styrene	118	18.668	18.669	-0.001	84	5850	0.0400	0.0319	
93 n-Decane	57	18.706	18.705	0.001	87	12441	0.0400	0.0367	
94 tert-Butylbenzene	119	18.852	18.857	-0.005	89	14677	0.0400	0.0376	
95 1,2,4-Trimethylbenzene	105	18.868	18.870	-0.002	96	12940	0.0400	0.0331	
96 sec-Butylbenzene	105	19.116	19.117	-0.001	98	20517	0.0400	0.0365	
97 1,3-Dichlorobenzene	146	19.143	19.141	0.002	97	9708	0.0400	0.0382	
98 Benzyl chloride	91	19.213	19.213	0.000	97	10802	0.0400	0.0315	
99 1,4-Dichlorobenzene	146	19.224	19.226	-0.002	88	10071	0.0400	0.0397	
100 4-Isopropyltoluene	119	19.272	19.273	-0.001	96	15817	0.0400	0.0350	
101 1,2,3-Trimethylbenzene	105	19.332	19.332	0.000	99	13552	0.0400	0.0390	
102 Butylcyclohexane	83	19.375	19.375	0.000	88	14152	0.0400	0.0382	
103 2,3-Dihydroindene	117	19.574	19.574	0.000	93	12970	0.0400	0.0367	
104 1,2-Dichlorobenzene	146	19.574	19.579	-0.005	90	9334	0.0400	0.0387	
105 n-Butylbenzene	91	19.693	19.696	-0.003	94	17781	0.0400	0.0373	
106 Indene	116	19.698	19.704	-0.006	79	10912	0.0400	0.0348	
107 Undecane	57	19.984	19.984	0.000	93	11815	0.0400	0.0335	
108 1,2-Dibromo-3-Chloropropan	157	20.167	20.168	-0.001	87	4047	0.0400	0.0329	
109 1,2,4,5-Tetramethylbenzene	119	20.443	20.443	-0.001	95	13496	0.0400	0.0326	
110 Dodecane	57	21.036	21.036	0.000	93	8011	0.0400	0.0306	
111 1,2,4-Trichlorobenzene	180	21.262	21.262	0.000	92	7537	0.0400	0.0391	
112 Naphthalene	128	21.402	21.403	-0.001	98	18721	0.0400	0.0408	
113 Hexachlorobutadiene	225	21.596	21.598	-0.002	89	6787	0.0400	0.0400	
114 1,2,3-Trichlorobenzene	180	21.677	21.676	0.001	92	7414	0.0400	0.0415	
115 2-Methylnaphthalene	142	22.422	22.418	0.004	96	7270	0.0400	0.0577	
116 1-Methylnaphthalene	142	22.594	22.590	0.004	99	8758	0.0400	0.0635	
A 122 C8 Range	1	14.839	(14.787-14.891)		0	51969	0.0400	0.0393	
S 123 1,2-Dichloroethene, Total	1				0		0.0800	0.0810	
S 124 Xylenes, Total	100				0		0.1200	0.1150	

Reagents:

40L1-3DQP_00009

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC02.D

Injection Date: 19-Nov-2018 17:30:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L2

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

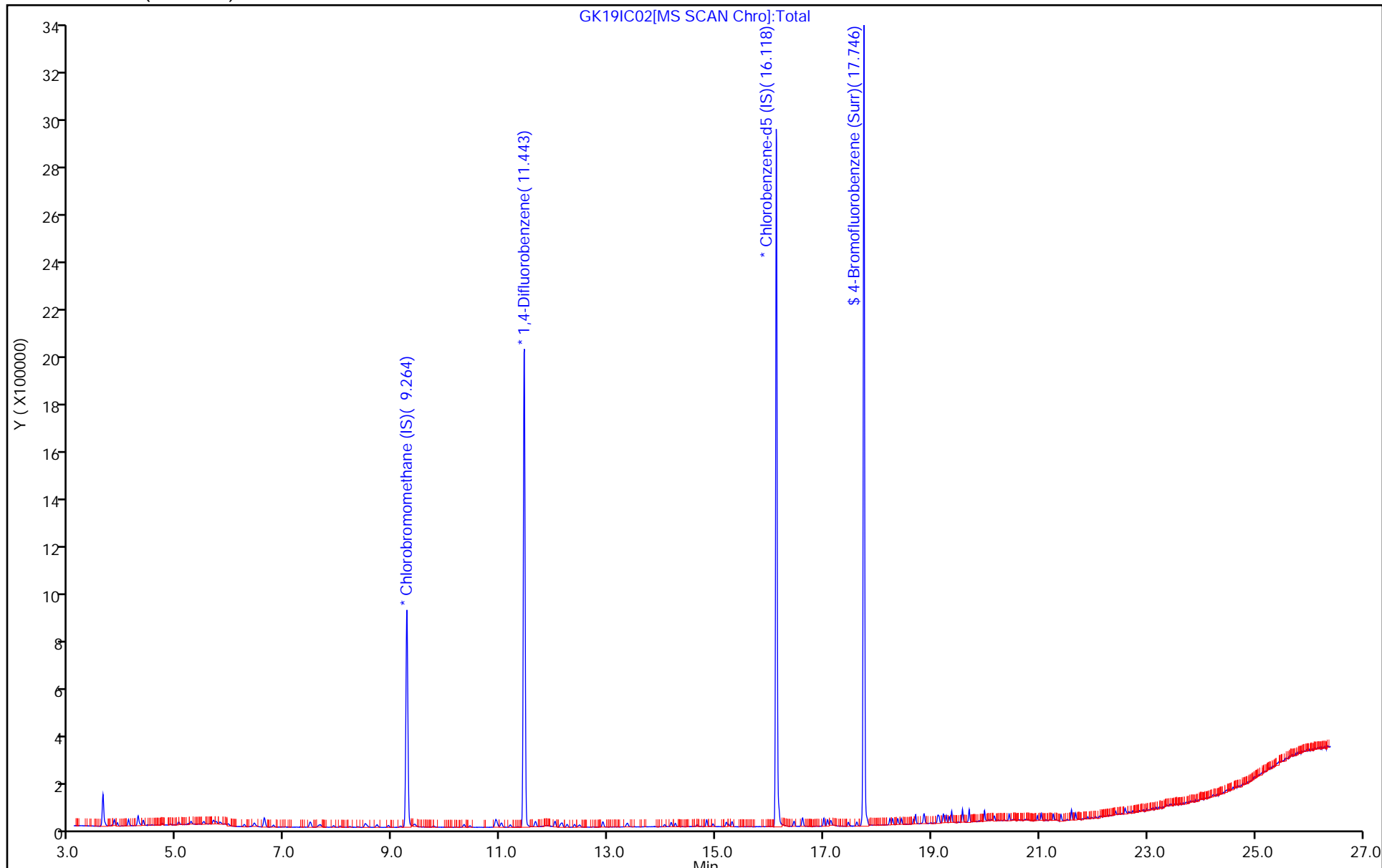
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC02.D

Injection Date: 19-Nov-2018 17:30:30

Instrument ID: MG

Lims ID: IC L2

Client ID:

Operator ID: 007126

ALS Bottle#: 2

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

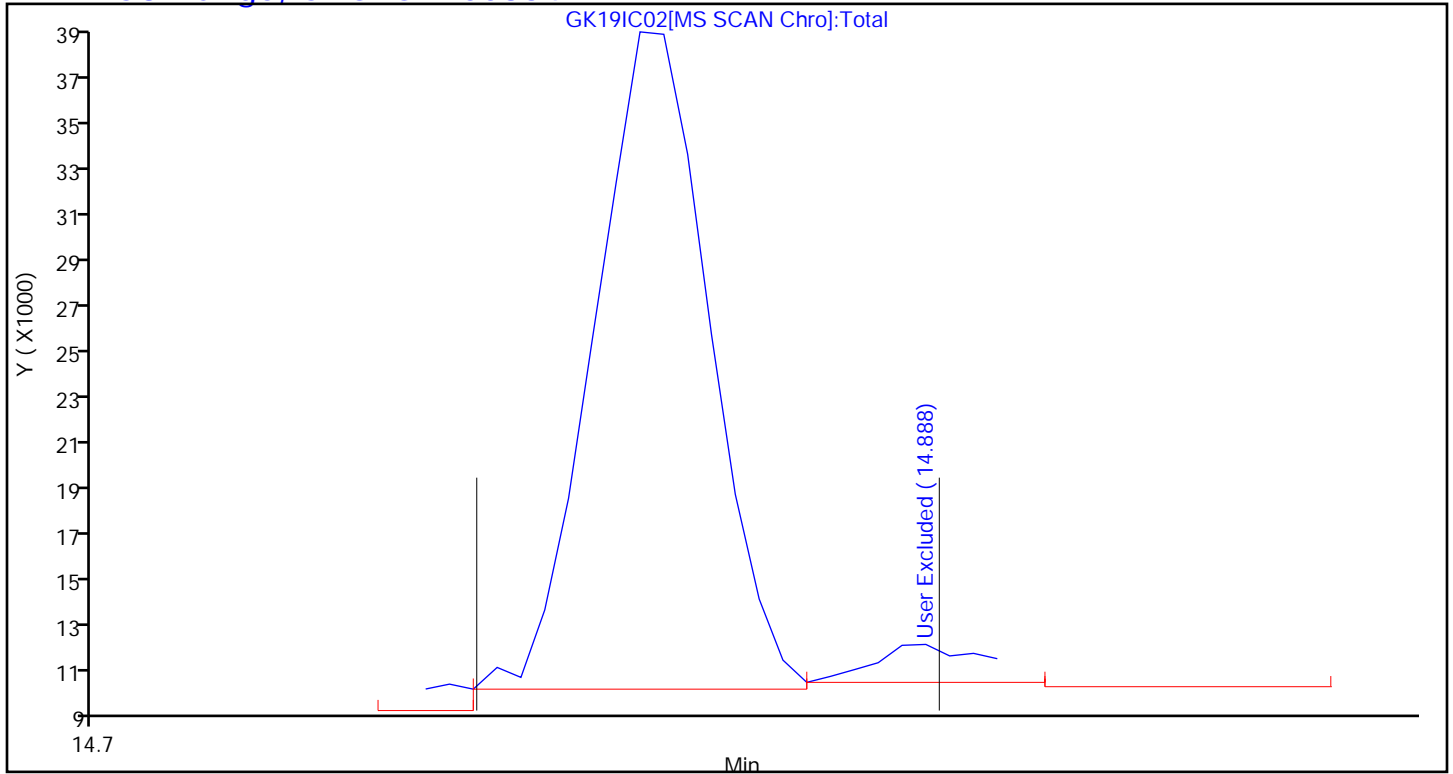
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 19-Nov-2018 18:17:30 ALS Bottle#: 2 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010044-010
 Misc. Info.: 190398
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:16:48 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0301

First Level Reviewer: tajh Date: 20-Nov-2018 15:01:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.270	9.274	-0.004	95	281678	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.448	11.449	-0.001	97	1781093	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.123	16.123	0.000	92	1668757	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.746	17.747	-0.001	81	1312187	4.00	3.87	
6 Chlorodifluoromethane	51	3.834	3.827	0.007	98	17313	0.0800	0.0814	
7 Propene	41	3.839	3.837	0.002	98	15056	0.0800	0.1187	
8 Dichlorodifluoromethane	85	3.899	3.894	0.005	100	23762	0.0800	0.0798	
9 Chloromethane	52	4.098	4.095	0.003	80	4455	0.0800	0.1133	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.109	4.103	0.006	94	13205	0.0800	0.0797	
11 Acetaldehyde	44	4.287	4.275	0.012	95	40731	0.4000	0.9162	
12 Vinyl chloride	62	4.282	4.280	0.002	45	9553	0.0800	0.0775	
13 Butane	43	4.379	4.374	0.005	88	18866	0.0800	0.0902	
14 Butadiene	54	4.384	4.376	0.008	63	7713	0.0800	0.0785	
15 Bromomethane	94	4.729	4.727	0.002	98	7889	0.0800	0.0833	
16 Chloroethane	64	4.891	4.883	0.008	92	4619	0.0800	0.0806	
17 Ethanol	31	5.064	5.037	0.027	98	26450	0.4000	0.5413	
18 Vinyl bromide	106	5.215	5.210	0.005	98	6582	0.0800	0.0766	
19 2-Methylbutane	43	5.268	5.263	0.005	92	11840	0.0800	0.0838	
20 Trichlorofluoromethane	101	5.506	5.499	0.007	99	19100	0.0800	0.0779	
21 Acrolein	56	5.560	5.532	0.028	84	3168	0.0800	0.1520	
23 Acetone	58	5.694	5.667	0.027	96	19674	0.2400	0.5195	
24 Pentane	72	5.738	5.734	0.004	84	1497	0.0800	0.0816	
25 Isopropyl alcohol	45	5.840	5.794	0.046	99	31274	0.2400	0.2800	
26 Ethyl ether	31	5.975	5.944	0.031	92	10707	0.0800	0.0957	
27 1,1-Dichloroethene	96	6.261	6.252	0.009	93	7295	0.0800	0.0734	
28 Acrylonitrile	53	6.401	6.386	0.015	95	5155	0.0800	0.0772	
29 1,1,2-Trichloro-1,2,2-trif	101	6.444	6.437	0.007	92	16064	0.0800	0.0780	
30 2-Methyl-2-propanol	59	6.525	6.458	0.067	96	11933	0.0800	0.0724	
31 Methylene Chloride	84	6.627	6.625	0.002	98	20854	0.0800	0.1829	
32 3-Chloro-1-propene	39	6.638	6.638	0.000	96	7100	0.0800	0.0606	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.794	6.794	0.000	99	24003	0.0800	0.0775	
34 trans-1,2-Dichloroethene	96	7.469	7.467	0.002	95	7291	0.0800	0.0734	
35 2-Methylpentane	43	7.485	7.485	0.000	95	26387	0.0800	0.0832	
36 Methyl tert-butyl ether	73	7.684	7.642	0.042	95	21793	0.0800	0.0844	
37 1,1-Dichloroethane	63	7.911	7.913	-0.002	100	17501	0.0800	0.0808	
38 Vinyl acetate	43	8.040	8.029	0.011	100	22663	0.0800	0.0806	
40 Hexane	56	8.504	8.500	0.004	90	8450	0.0800	0.0839	
39 2-Butanone (MEK)	72	8.542	8.515	0.027	98	4454	0.0800	0.0980	
41 Isopropyl ether	45	8.725	8.694	0.031	98	30688	0.0800	0.0822	
42 cis-1,2-Dichloroethene	96	8.930	8.930	0.000	98	8217	0.0800	0.0796	
43 Ethyl acetate	43	9.167	9.141	0.026	98	21416	0.0800	0.0870	
44 Chloroform	83	9.280	9.286	-0.006	28	18157	0.0800	0.0807	
45 Tert-butyl ethyl ether	59	9.431	9.395	0.036	97	26126	0.0800	0.0808	
46 Tetrahydrofuran	42	9.771	9.736	0.035	94	11957	0.0800	0.0946	
47 1,1,1-Trichloroethane	97	10.332	10.331	0.001	96	19257	0.0800	0.0819	
48 1,2-Dichloroethane	62	10.440	10.443	-0.003	97	12952	0.0800	0.0804	
49 Cyclohexane	69	10.920	10.914	0.006	72	4597	0.0800	0.0782	
50 Benzene	78	10.920	10.921	-0.001	96	25930	0.0800	0.0796	
51 n-Butanol	31	10.979	10.936	0.043	68	5411	0.0800	0.1125	
52 Carbon tetrachloride	117	10.941	10.941	0.000	95	13089	0.0800	0.0618	
53 2,3-Dimethylpentane	71	11.027	11.026	0.001	94	6528	0.0800	0.0767	
54 Thiophene	84	11.189	11.192	-0.003	97	14436	0.0800	0.0788	
55 Isooctane	57	11.658	11.656	0.002	97	49494	0.0800	0.0783	
56 n-Heptane	71	12.014	12.019	-0.005	94	9917	0.0800	0.0780	
57 1,2-Dichloropropane	63	12.128	12.122	0.006	89	10970	0.0800	0.0839	
58 Trichloroethene	130	12.149	12.152	-0.003	92	10423	0.0800	0.0765	
59 Dibromomethane	93	12.241	12.243	-0.002	91	10726	0.0800	0.0862	
60 Dichlorobromomethane	83	12.381	12.384	-0.003	97	18081	0.0800	0.0769	
61 1,4-Dioxane	88	12.462	12.434	0.028	82	3087	0.0800	0.0762	
62 Methyl methacrylate	41	12.478	12.472	0.006	90	13506	0.0800	0.0849	
63 Methylcyclohexane	83	12.909	12.908	0.001	92	16836	0.0800	0.0796	
64 4-Methyl-2-pentanone (MIBK)	43	13.352	13.332	0.020	99	19331	0.0800	0.0739	
65 cis-1,3-Dichloropropene	75	13.368	13.363	0.005	97	14071	0.0800	0.0751	
66 trans-1,3-Dichloropropene	75	14.047	14.048	-0.001	96	12164	0.0800	0.0730	
67 Toluene	91	14.177	14.173	0.004	93	28303	0.0800	0.0824	
68 1,1,2-Trichloroethane	83	14.252	14.250	0.002	95	8444	0.0800	0.0779	
69 2-Hexanone	58	14.657	14.639	0.018	90	7238	0.0800	0.0604	
70 n-Octane	85	14.829	14.829	0.000	96	10409	0.0800	0.0791	
71 Chlorodibromomethane	129	14.953	14.950	0.003	95	13356	0.0800	0.0681	
72 Ethylene Dibromide	107	15.239	15.238	0.001	98	13885	0.0800	0.0772	
73 Tetrachloroethene	129	15.304	15.302	0.002	91	9863	0.0800	0.0800	
74 2,3-Dimethylheptane	43	16.166	16.165	0.001	95	37834	0.0800	0.0810	
75 Chlorobenzene	112	16.177	16.172	0.005	90	20939	0.0800	0.0796	
78 Ethylbenzene	91	16.452	16.450	0.002	99	36421	0.0800	0.0819	
79 m-Xylene & p-Xylene	91	16.609	16.609	0.000	98	55002	0.1600	0.1591	
80 n-Nonane	57	17.002	17.003	-0.001	95	21500	0.0800	0.0767	
81 Bromoform	173	17.072	17.072	0.000	86	10507	0.0800	0.0637	
82 Styrene	104	17.078	17.073	0.005	97	18184	0.0800	0.0751	
83 o-Xylene	91	17.137	17.133	0.004	98	29137	0.0800	0.0800	
84 1,1,1,2-Tetrachloroethane	83	17.455	17.456	-0.001	98	19807	0.0800	0.0793	
85 1,2,3-Trichloropropane	110	17.617	17.616	0.001	97	5928	0.0800	0.0811	
86 Isopropylbenzene	105	17.709	17.710	-0.001	95	38895	0.0800	0.0826	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 N-Propylbenzene	120	18.232	18.229	0.003	97	9696	0.0800	0.0769	
88 2-Chlorotoluene	126	18.280	18.280	0.000	97	9540	0.0800	0.0806	
89 4-Ethyltoluene	105	18.372	18.373	-0.001	98	38090	0.0800	0.0817	
90 1,3,5-Trimethylbenzene	120	18.442	18.443	-0.001	92	14772	0.0800	0.0813	
92 Alpha Methyl Styrene	118	18.668	18.669	-0.001	85	13313	0.0800	0.0720	
93 n-Decane	57	18.706	18.705	0.001	88	27324	0.0800	0.0799	
94 tert-Butylbenzene	119	18.857	18.857	0.000	90	32844	0.0800	0.0835	
95 1,2,4-Trimethylbenzene	105	18.868	18.870	-0.002	96	32137	0.0800	0.0816	
96 sec-Butylbenzene	105	19.116	19.117	-0.001	98	46486	0.0800	0.0821	
97 1,3-Dichlorobenzene	146	19.143	19.141	0.002	97	20350	0.0800	0.0794	
98 Benzyl chloride	91	19.213	19.213	0.000	97	24875	0.0800	0.0721	
99 1,4-Dichlorobenzene	146	19.229	19.226	0.003	92	20441	0.0800	0.0800	
100 4-Isopropyltoluene	119	19.272	19.273	-0.001	95	35635	0.0800	0.0782	
101 1,2,3-Trimethylbenzene	105	19.332	19.332	0.000	99	31888	0.0800	0.0911	
102 Butylcyclohexane	83	19.375	19.375	0.000	89	29852	0.0800	0.0799	
103 2,3-Dihydroindene	117	19.574	19.574	0.000	94	29760	0.0800	0.0837	
104 1,2-Dichlorobenzene	146	19.580	19.579	0.001	92	20010	0.0800	0.0824	
105 n-Butylbenzene	91	19.698	19.696	0.002	98	38603	0.0800	0.0804	
106 Indene	116	19.704	19.704	0.000	94	25279	0.0800	0.0801	
107 Undecane	57	19.984	19.984	0.000	95	28369	0.0800	0.0798	
108 1,2-Dibromo-3-Chloropropan	157	20.168	20.168	0.000	85	9452	0.0800	0.0763	
109 1,2,4,5-Tetramethylbenzene	119	20.443	20.443	0.000	96	33570	0.0800	0.0806	
110 Dodecane	57	21.041	21.036	0.005	93	19614	0.0800	0.0744	
111 1,2,4-Trichlorobenzene	180	21.262	21.262	0.000	93	16209	0.0800	0.0835	
112 Naphthalene	128	21.402	21.403	-0.001	99	37511	0.0800	0.0811	
113 Hexachlorobutadiene	225	21.597	21.598	-0.001	91	14985	0.0800	0.0876	
114 1,2,3-Trichlorobenzene	180	21.677	21.676	0.001	93	14265	0.0800	0.0792	
115 2-Methylnaphthalene	142	22.422	22.418	0.004	97	10413	0.0800	0.0821	
116 1-Methylnaphthalene	142	22.594	22.590	0.004	99	13730	0.0800	0.0988	
A 122 C8 Range	1	14.845	(14.781-14.908)		0	104318	0.0800	0.0784	
S 123 1,2-Dichloroethene, Total	1				0		0.1600	0.1530	
S 124 Xylenes, Total	100				0		0.2400	0.2391	

Reagents:

40L1-3DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC03.D

Injection Date: 19-Nov-2018 18:17:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L3

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

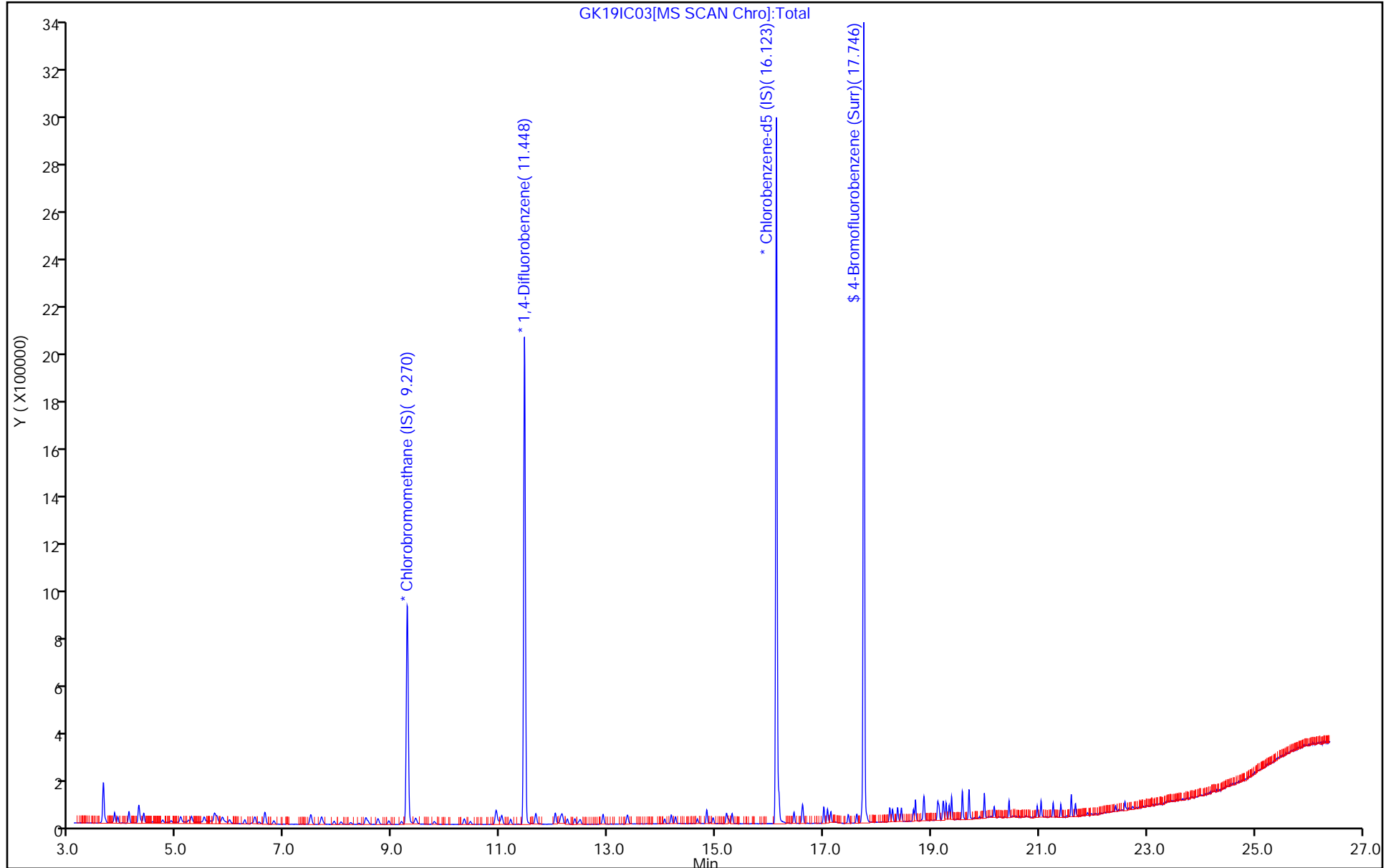
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC03.D

Injection Date: 19-Nov-2018 18:17:30

Instrument ID: MG

Lims ID: IC L3

Client ID:

Operator ID: 007126

ALS Bottle#: 2

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

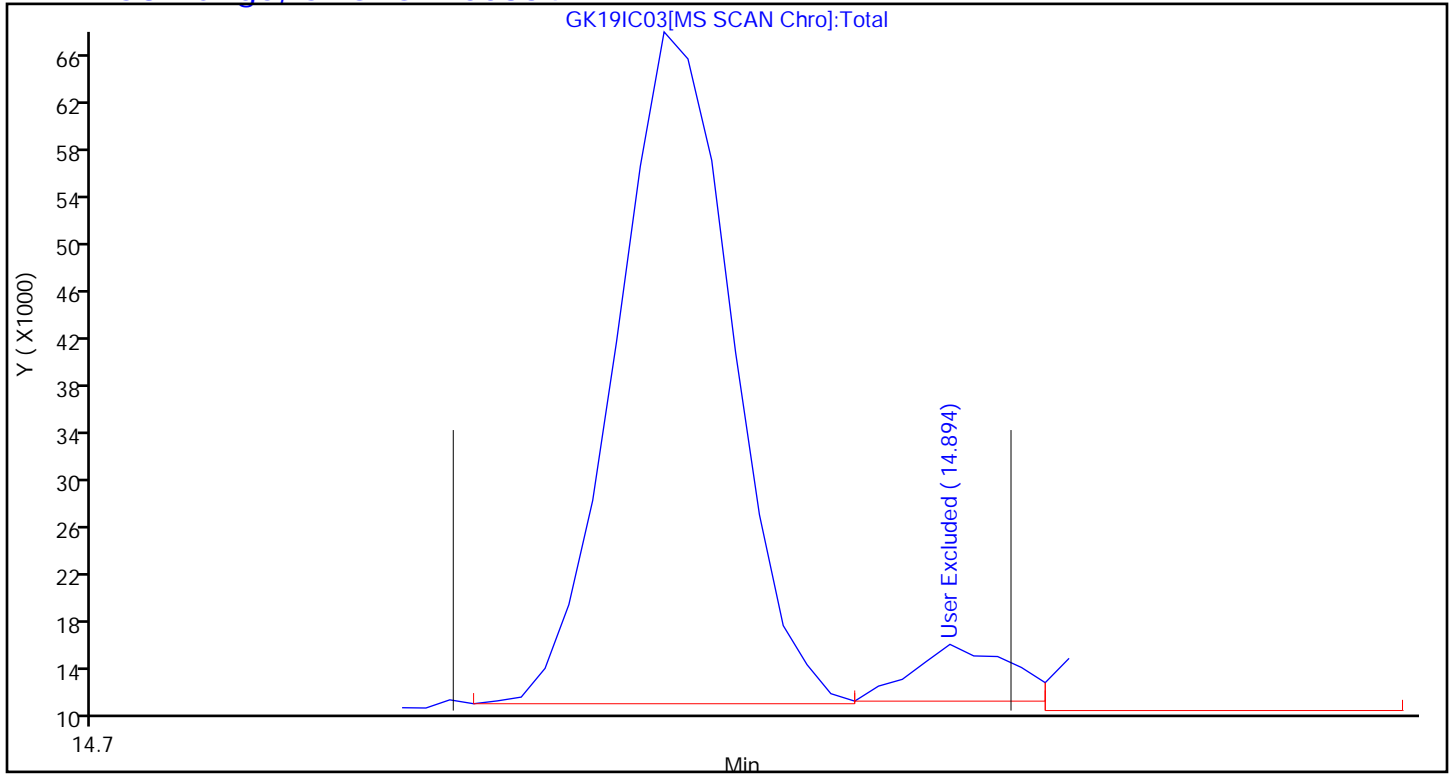
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 19-Nov-2018 19:00:30 ALS Bottle#: 3 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010044-011
 Misc. Info.: 190397
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:16:55 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0301

First Level Reviewer: tajh

Date: 19-Nov-2018 20:18:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.264	9.274	-0.010	96	269269	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.443	11.449	-0.006	97	1602160	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.118	16.123	-0.005	92	1518397	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.741	17.747	-0.006	81	1252969	4.00	4.06	
6 Chlorodifluoromethane	51	3.823	3.827	-0.004	98	34392	0.1600	0.1691	
7 Propene	41	3.834	3.837	-0.003	99	25131	0.1600	0.2072	
8 Dichlorodifluoromethane	85	3.894	3.894	0.000	100	47328	0.1600	0.1663	
9 Chloromethane	52	4.093	4.095	-0.002	67	7374	0.1600	0.1961	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	94	26478	0.1600	0.1672	
11 Acetaldehyde	44	4.271	4.275	-0.004	92	52451	0.8000	1.23	
12 Vinyl chloride	62	4.282	4.280	0.002	50	18527	0.1600	0.1573	
13 Butane	43	4.373	4.374	-0.001	87	33993	0.1600	0.1700	
14 Butadiene	54	4.373	4.376	-0.003	64	15080	0.1600	0.1605	
15 Bromomethane	94	4.724	4.727	-0.003	98	14915	0.1600	0.1648	
16 Chloroethane	64	4.880	4.883	-0.003	90	8851	0.1600	0.1615	
17 Ethanol	31	5.026	5.037	-0.011	98	40079	0.8000	0.8580	
18 Vinyl bromide	106	5.198	5.210	-0.012	99	13309	0.1600	0.1620	
19 2-Methylbutane	43	5.258	5.263	-0.005	94	23179	0.1600	0.1716	
20 Trichlorofluoromethane	101	5.495	5.499	-0.004	100	37339	0.1600	0.1593	
21 Acrolein	56	5.527	5.532	-0.005	89	4805	0.1600	0.2412	
22 Acetonitrile	40	5.597	5.604	-0.007	98	3665	0.1600	0.1163	
23 Acetone	58	5.662	5.667	-0.005	98	28660	0.4800	0.7916	
24 Pentane	72	5.727	5.734	-0.007	96	2950	0.1600	0.1681	
25 Isopropyl alcohol	45	5.786	5.794	-0.008	97	56892	0.4800	0.5328	
26 Ethyl ether	31	5.943	5.944	-0.001	90	19957	0.1600	0.1867	
27 1,1-Dichloroethene	96	6.245	6.252	-0.007	93	14876	0.1600	0.1565	
28 Acrylonitrile	53	6.374	6.386	-0.012	92	10481	0.1600	0.1642	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.437	-0.009	91	31673	0.1600	0.1608	
30 2-Methyl-2-propanol	59	6.449	6.458	-0.009	96	30315	0.1600	0.1924	
31 Methylene Chloride	84	6.617	6.625	-0.008	97	27569	0.1600	0.2530	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.633	6.638	-0.005	96	19006	0.1600	0.1698	
33 Carbon disulfide	76	6.789	6.794	-0.005	100	46949	0.1600	0.1585	
34 trans-1,2-Dichloroethene	96	7.458	7.467	-0.009	94	14833	0.1600	0.1562	
35 2-Methylpentane	43	7.479	7.485	-0.006	96	47777	0.1600	0.1576	
36 Methyl tert-butyl ether	73	7.641	7.642	-0.001	97	42899	0.1600	0.1739	
37 1,1-Dichloroethane	63	7.911	7.913	-0.002	99	32710	0.1600	0.1579	
38 Vinyl acetate	43	8.024	8.029	-0.005	100	43892	0.1600	0.1633	
40 Hexane	56	8.493	8.500	-0.007	88	15708	0.1600	0.1632	
39 2-Butanone (MEK)	72	8.509	8.515	-0.006	96	8483	0.1600	0.1952	
41 Isopropyl ether	45	8.693	8.694	-0.001	97	60364	0.1600	0.1692	
42 cis-1,2-Dichloroethene	96	8.919	8.930	-0.011	98	15468	0.1600	0.1567	
43 Ethyl acetate	43	9.135	9.141	-0.006	98	39882	0.1600	0.1695	
44 Chloroform	83	9.275	9.286	-0.011	92	34075	0.1600	0.1584	
45 Tert-butyl ethyl ether	59	9.394	9.395	-0.001	98	52534	0.1600	0.1700	
46 Tetrahydrofuran	42	9.739	9.736	0.003	94	22121	0.1600	0.1831	
47 1,1,1-Trichloroethane	97	10.321	10.331	-0.010	97	35526	0.1600	0.1581	
48 1,2-Dichloroethane	62	10.434	10.443	-0.009	97	23404	0.1600	0.1615	
49 Cyclohexane	69	10.904	10.914	-0.010	78	8987	0.1600	0.1700	
50 Benzene	78	10.914	10.921	-0.007	97	49442	0.1600	0.1687	
51 n-Butanol	31	10.941	10.936	0.005	50	7877	0.1600	0.1820	
52 Carbon tetrachloride	117	10.936	10.941	-0.005	95	32010	0.1600	0.1680	
53 2,3-Dimethylpentane	71	11.017	11.026	-0.009	93	13336	0.1600	0.1741	
54 Thiophene	84	11.184	11.192	-0.008	97	26473	0.1600	0.1607	
55 Isooctane	57	11.653	11.656	-0.003	98	97913	0.1600	0.1723	
56 n-Heptane	71	12.014	12.019	-0.005	95	18777	0.1600	0.1642	
57 1,2-Dichloropropane	63	12.111	12.122	-0.011	87	19451	0.1600	0.1653	
58 Trichloroethene	130	12.149	12.152	-0.003	92	19511	0.1600	0.1593	
59 Dibromomethane	93	12.236	12.243	-0.007	90	18753	0.1600	0.1675	
60 Dichlorobromomethane	83	12.376	12.384	-0.008	97	33715	0.1600	0.1593	
61 1,4-Dioxane	88	12.440	12.434	0.006	93	6500	0.1600	0.1783	
62 Methyl methacrylate	41	12.467	12.472	-0.005	89	24620	0.1600	0.1721	
63 Methylcyclohexane	83	12.904	12.908	-0.004	92	32014	0.1600	0.1683	
64 4-Methyl-2-pentanone (MIBK)	43	13.330	13.332	-0.002	97	42961	0.1600	0.1827	
65 cis-1,3-Dichloropropene	75	13.357	13.363	-0.006	98	26411	0.1600	0.1568	
66 trans-1,3-Dichloropropene	75	14.042	14.048	-0.006	95	23363	0.1600	0.1541	
67 Toluene	91	14.166	14.173	-0.007	93	51257	0.1600	0.1640	
68 1,1,2-Trichloroethane	83	14.247	14.250	-0.003	97	16606	0.1600	0.1684	
69 2-Hexanone	58	14.641	14.639	0.001	91	19499	0.1600	0.1789	
70 n-Octane	85	14.824	14.829	-0.005	96	19420	0.1600	0.1621	
71 Chlorodibromomethane	129	14.948	14.950	-0.002	96	26567	0.1600	0.1489	
72 Ethylene Dibromide	107	15.234	15.238	-0.004	98	26157	0.1600	0.1598	
73 Tetrachloroethene	129	15.298	15.302	-0.004	91	18059	0.1600	0.1609	
74 2,3-Dimethylheptane	43	16.161	16.165	-0.004	95	71822	0.1600	0.1690	
75 Chlorobenzene	112	16.167	16.172	-0.005	91	40481	0.1600	0.1692	
78 Ethylbenzene	91	16.447	16.450	-0.003	99	68140	0.1600	0.1683	
79 m-Xylene & p-Xylene	91	16.603	16.609	-0.006	99	107364	0.3200	0.3413	
80 n-Nonane	57	17.002	17.003	-0.001	95	42447	0.1600	0.1665	
81 Bromoform	173	17.067	17.072	-0.005	89	22098	0.1600	0.1473	
82 Styrene	104	17.067	17.073	-0.006	97	34443	0.1600	0.1563	
83 o-Xylene	91	17.132	17.133	-0.001	98	54994	0.1600	0.1660	
84 1,1,2,2-Tetrachloroethane	83	17.455	17.456	-0.001	98	39013	0.1600	0.1717	
85 1,2,3-Trichloropropane	110	17.612	17.616	-0.004	97	11288	0.1600	0.1697	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.709	17.710	-0.001	95	73170	0.1600	0.1707	
87 N-Propylbenzene	120	18.226	18.229	-0.003	98	19711	0.1600	0.1718	
88 2-Chlorotoluene	126	18.275	18.280	-0.005	97	18637	0.1600	0.1731	
89 4-Ethyltoluene	105	18.372	18.373	-0.001	98	73309	0.1600	0.1729	
90 1,3,5-Trimethylbenzene	120	18.442	18.443	-0.001	91	28820	0.1600	0.1744	
92 Alpha Methyl Styrene	118	18.663	18.669	-0.006	86	26567	0.1600	0.1580	
93 n-Decane	57	18.701	18.705	-0.004	88	53327	0.1600	0.1714	
94 tert-Butylbenzene	119	18.857	18.857	0.000	90	63305	0.1600	0.1768	
95 1,2,4-Trimethylbenzene	105	18.868	18.870	-0.002	96	63968	0.1600	0.1785	
96 sec-Butylbenzene	105	19.116	19.117	-0.001	98	90880	0.1600	0.1763	
97 1,3-Dichlorobenzene	146	19.138	19.141	-0.003	97	40610	0.1600	0.1742	
98 Benzyl chloride	91	19.208	19.213	-0.005	97	50754	0.1600	0.1617	
99 1,4-Dichlorobenzene	146	19.224	19.226	-0.002	90	40748	0.1600	0.1752	
100 4-Isopropyltoluene	119	19.273	19.273	0.000	97	73474	0.1600	0.1773	
101 1,2,3-Trimethylbenzene	105	19.332	19.332	0.000	99	62052	0.1600	0.1947	
102 Butylcyclohexane	83	19.375	19.375	0.000	91	59375	0.1600	0.1747	
103 2,3-Dihydroindene	117	19.569	19.574	-0.005	93	58762	0.1600	0.1816	
104 1,2-Dichlorobenzene	146	19.575	19.579	-0.004	94	39836	0.1600	0.1802	
105 n-Butylbenzene	91	19.693	19.696	-0.003	98	79887	0.1600	0.1828	
106 Indene	116	19.704	19.704	0.000	90	50502	0.1600	0.1759	
107 Undecane	57	19.984	19.984	0.000	95	59824	0.1600	0.1849	
108 1,2-Dibromo-3-Chloropropan	157	20.168	20.168	0.000	86	19247	0.1600	0.1708	
109 1,2,4,5-Tetramethylbenzene	119	20.443	20.443	0.000	96	71303	0.1600	0.1881	
110 Dodecane	57	21.036	21.036	0.000	94	55142	0.1600	0.2298	
111 1,2,4-Trichlorobenzene	180	21.262	21.262	0.000	93	33390	0.1600	0.1892	
112 Naphthalene	128	21.403	21.403	0.000	99	87580	0.1600	0.2082	
113 Hexachlorobutadiene	225	21.597	21.598	-0.001	92	28674	0.1600	0.1842	
114 1,2,3-Trichlorobenzene	180	21.678	21.676	0.002	93	33535	0.1600	0.2046	
115 2-Methylnaphthalene	142	22.416	22.418	-0.002	100	36983	0.1600	0.3206	
116 1-Methylnaphthalene	142	22.589	22.590	-0.001	99	44027	0.1600	0.3482	
A 122 C8 Range	1	14.839	(14.776-14.902)		0	201359	0.1600	0.1663	
S 123 1,2-Dichloroethene, Total	1				0		0.3200	0.3129	
S 124 Xylenes, Total	100				0		0.4800	0.5073	

Reagents:

40L4DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC04.D

Injection Date: 19-Nov-2018 19:00:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L4

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

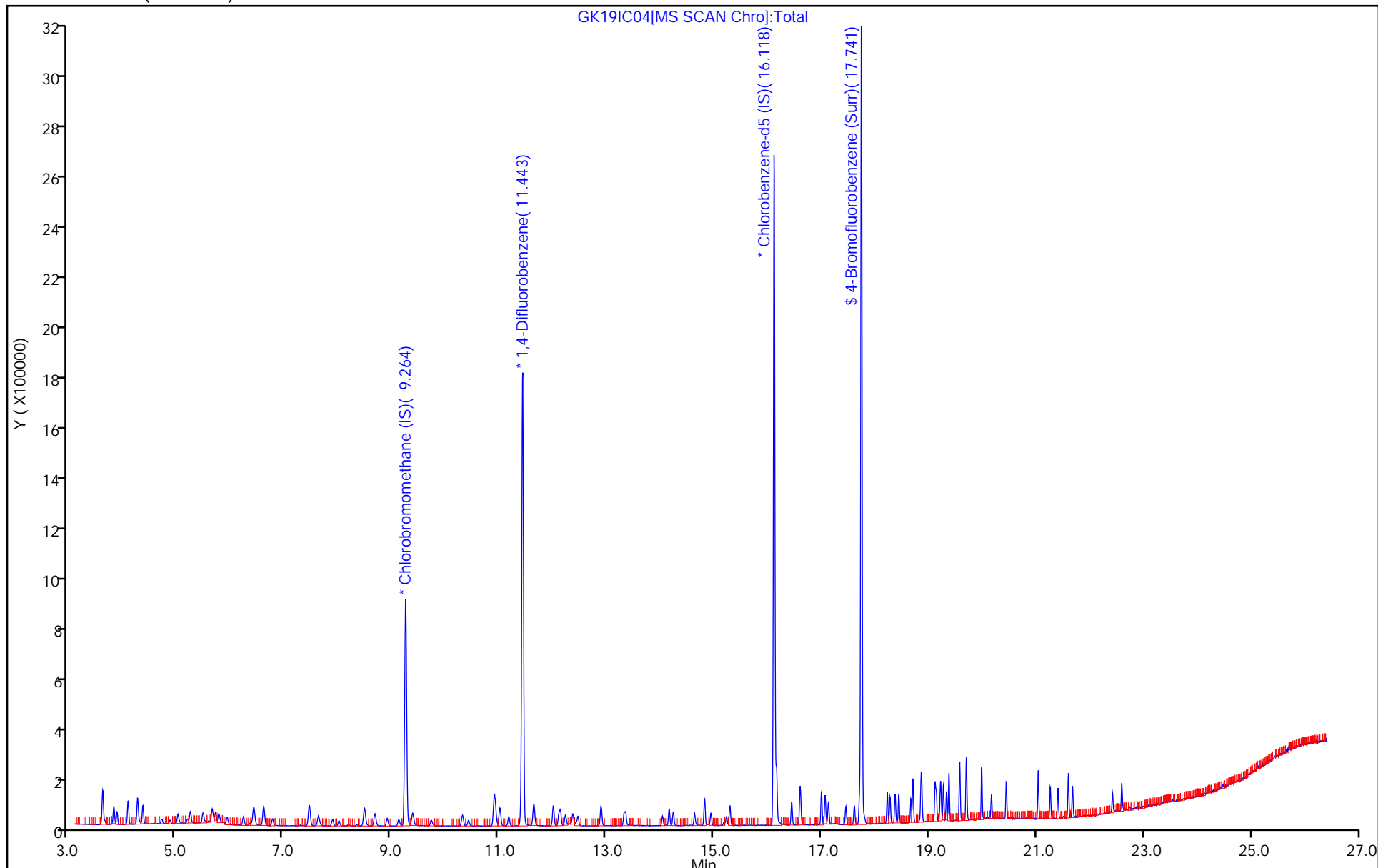
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC04.D

Injection Date: 19-Nov-2018 19:00:30

Instrument ID: MG

Lims ID: IC L4

Client ID:

Operator ID: 007126

ALS Bottle#: 3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

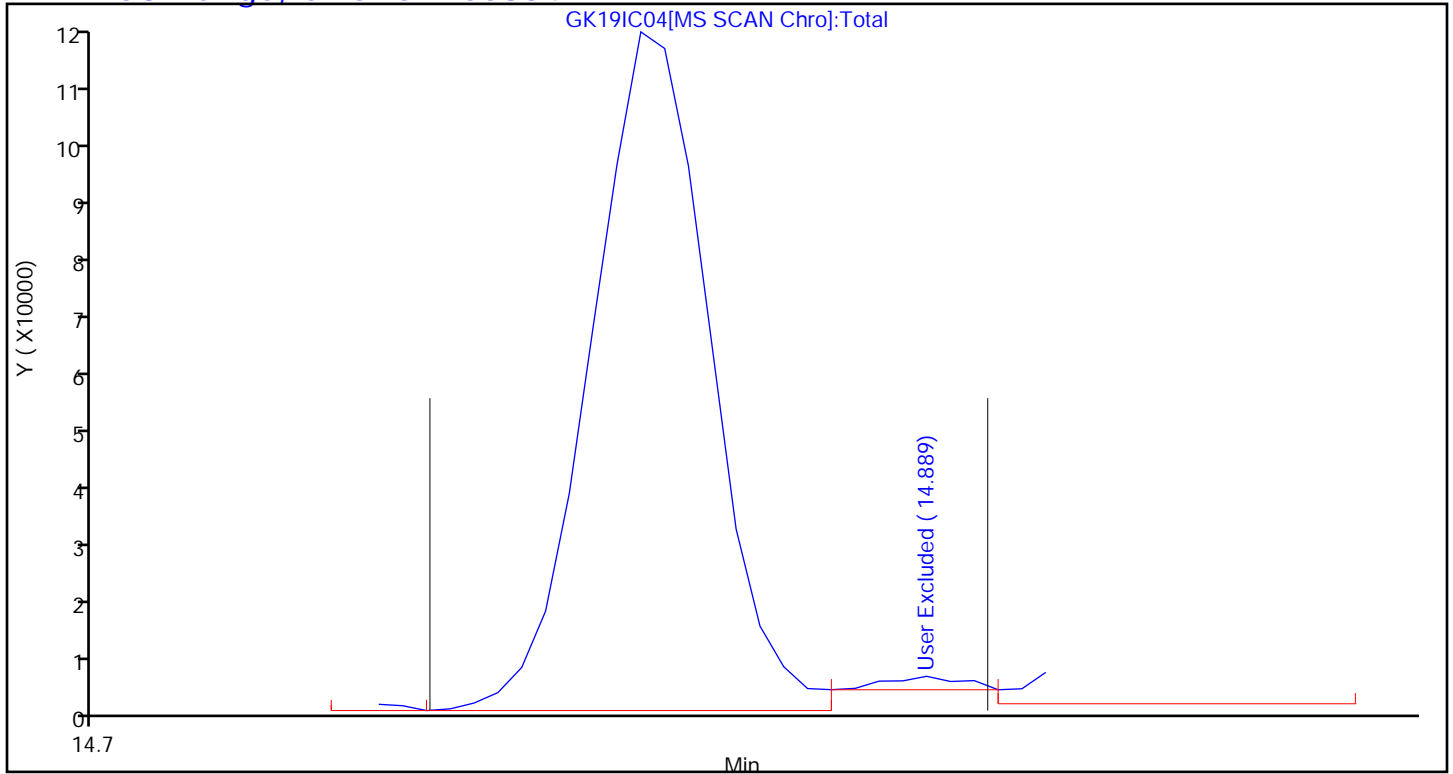
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 19-Nov-2018 19:44:30 ALS Bottle#: 4 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010044-012
 Misc. Info.: 190395
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:17:02 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0301

First Level Reviewer: tajh

Date: 20-Nov-2018 15:04:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.297	9.274	0.023	96	270685	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.464	11.449	0.015	97	1626379	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.129	16.123	0.006	92	1578211	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.752	17.747	0.005	81	1297299	4.00	4.04	
6 Chlorodifluoromethane	51	3.845	3.827	0.018	97	91638	0.4000	0.4482	
7 Propene	41	3.850	3.837	0.013	97	54576	0.4000	0.4477	
8 Dichlorodifluoromethane	85	3.910	3.894	0.016	100	126801	0.4000	0.4433	
9 Chloromethane	52	4.109	4.095	0.014	100	17960	0.4000	0.4752	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.120	4.103	0.017	96	73353	0.4000	0.4608	
11 Acetaldehyde	44	4.314	4.275	0.039	97	100805	2.00	2.36	
12 Vinyl chloride	62	4.298	4.280	0.018	99	53622	0.4000	0.4530	
13 Butane	43	4.390	4.374	0.016	86	95989	0.4000	0.4777	
14 Butadiene	54	4.395	4.376	0.019	67	43741	0.4000	0.4630	
15 Bromomethane	94	4.745	4.727	0.018	98	40069	0.4000	0.4405	
16 Chloroethane	64	4.902	4.883	0.019	91	24256	0.4000	0.4402	
17 Ethanol	31	5.128	5.037	0.091	98	96753	2.00	2.06	
18 Vinyl bromide	106	5.231	5.210	0.021	98	36170	0.4000	0.4379	
19 2-Methylbutane	43	5.285	5.263	0.022	93	58276	0.4000	0.4291	
20 Trichlorofluoromethane	101	5.522	5.499	0.023	100	105029	0.4000	0.4457	
21 Acrolein	56	5.581	5.532	0.049	93	7475	0.4000	0.3732	
22 Acetonitrile	40	5.657	5.604	0.053	98	8913	0.4000	0.2814	
23 Acetone	58	5.732	5.667	0.065	98	47231	1.20	1.30	
24 Pentane	72	5.759	5.734	0.025	92	7676	0.4000	0.4352	
25 Isopropyl alcohol	45	5.910	5.794	0.116	99	131556	1.20	1.23	
26 Ethyl ether	31	6.007	5.944	0.063	86	47943	0.4000	0.4461	
27 1,1-Dichloroethene	96	6.271	6.252	0.019	94	40696	0.4000	0.4259	
28 Acrylonitrile	53	6.428	6.386	0.042	96	22957	0.4000	0.3578	
29 1,1,2-Trichloro-1,2,2-trif	101	6.466	6.437	0.029	92	87196	0.4000	0.4404	
30 2-Methyl-2-propanol	59	6.622	6.458	0.164	90	64937	0.4000	0.4100	
31 Methylene Chloride	84	6.649	6.625	0.024	97	52924	0.4000	0.4831	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.660	6.638	0.022	95	53543	0.4000	0.4757	
33 Carbon disulfide	76	6.811	6.794	0.017	100	134386	0.4000	0.4514	
34 trans-1,2-Dichloroethene	96	7.490	7.467	0.023	95	41163	0.4000	0.4313	
35 2-Methylpentane	43	7.512	7.485	0.027	96	132377	0.4000	0.4343	
36 Methyl tert-butyl ether	73	7.706	7.642	0.064	97	93968	0.4000	0.3789	
37 1,1-Dichloroethane	63	7.932	7.913	0.019	99	85654	0.4000	0.4114	
38 Vinyl acetate	43	8.073	8.029	0.043	100	98976	0.4000	0.3664	
40 Hexane	56	8.525	8.500	0.025	89	40860	0.4000	0.4222	
39 2-Butanone (MEK)	72	8.563	8.515	0.048	98	15742	0.4000	0.3604	
41 Isopropyl ether	45	8.747	8.694	0.053	97	136416	0.4000	0.3803	
42 cis-1,2-Dichloroethene	96	8.951	8.930	0.021	98	40605	0.4000	0.4091	
43 Ethyl acetate	43	9.189	9.141	0.048	98	82596	0.4000	0.3493	
44 Chloroform	83	9.307	9.286	0.021	95	90637	0.4000	0.4190	
45 Tert-butyl ethyl ether	59	9.464	9.395	0.069	97	115063	0.4000	0.3703	
46 Tetrahydrofuran	42	9.787	9.736	0.051	94	45372	0.4000	0.3735	
47 1,1,1-Trichloroethane	97	10.348	10.331	0.017	97	92677	0.4000	0.4102	
48 1,2-Dichloroethane	62	10.461	10.443	0.018	97	59768	0.4000	0.4063	
49 Cyclohexane	69	10.930	10.914	0.016	87	24070	0.4000	0.4485	
50 Benzene	78	10.936	10.921	0.015	97	121628	0.4000	0.4087	
51 n-Butanol	31	11.054	10.936	0.118	71	18291	0.4000	0.4163	
52 Carbon tetrachloride	117	10.957	10.941	0.016	97	88058	0.4000	0.4552	
53 2,3-Dimethylpentane	71	11.044	11.026	0.018	89	32961	0.4000	0.4239	
54 Thiophene	84	11.205	11.192	0.013	97	69887	0.4000	0.4180	
55 Isooctane	57	11.675	11.656	0.019	98	242545	0.4000	0.4203	
56 n-Heptane	71	12.036	12.019	0.017	95	49369	0.4000	0.4253	
57 1,2-Dichloropropane	63	12.138	12.122	0.016	88	47190	0.4000	0.3951	
58 Trichloroethene	130	12.165	12.152	0.013	93	51213	0.4000	0.4118	
59 Dibromomethane	93	12.257	12.243	0.014	91	46630	0.4000	0.4103	
60 Dichlorobromomethane	83	12.397	12.384	0.013	98	89969	0.4000	0.4188	
61 1,4-Dioxane	88	12.478	12.434	0.044	95	14191	0.4000	0.3835	
62 Methyl methacrylate	41	12.500	12.472	0.028	89	50603	0.4000	0.3485	
63 Methylcyclohexane	83	12.920	12.908	0.012	90	82164	0.4000	0.4255	
64 4-Methyl-2-pentanone (MIBK)	43	13.373	13.332	0.041	97	83517	0.4000	0.3498	
65 cis-1,3-Dichloropropene	75	13.373	13.363	0.010	95	67030	0.4000	0.3920	
66 trans-1,3-Dichloropropene	75	14.058	14.048	0.010	97	57675	0.4000	0.3661	
67 Toluene	91	14.182	14.173	0.009	92	123882	0.4000	0.3812	
68 1,1,2-Trichloroethane	83	14.258	14.250	0.008	98	40113	0.4000	0.3913	
69 2-Hexanone	58	14.673	14.639	0.034	90	38394	0.4000	0.3389	
70 n-Octane	85	14.840	14.829	0.011	97	49853	0.4000	0.4004	
71 Chlorodibromomethane	129	14.959	14.950	0.009	97	72362	0.4000	0.3901	
72 Ethylene Dibromide	107	15.244	15.238	0.006	98	66073	0.4000	0.3883	
73 Tetrachloroethene	129	15.309	15.302	0.007	92	47134	0.4000	0.4041	
74 2,3-Dimethylheptane	43	16.172	16.165	0.007	95	184576	0.4000	0.4180	
75 Chlorobenzene	112	16.177	16.172	0.005	88	100567	0.4000	0.4043	
78 Ethylbenzene	91	16.458	16.450	0.008	99	160794	0.4000	0.3822	
79 m-Xylene & p-Xylene	91	16.614	16.609	0.005	99	250316	0.8001	0.7656	
80 n-Nonane	57	17.008	17.003	0.005	94	105880	0.4000	0.3995	
81 Bromoform	173	17.072	17.072	0.000	91	57258	0.4000	0.3673	
82 Styrene	104	17.078	17.073	0.005	99	83914	0.4000	0.3664	
83 o-Xylene	91	17.137	17.133	0.004	98	126815	0.4000	0.3682	
84 1,1,2,2-Tetrachloroethane	83	17.461	17.456	0.005	98	90150	0.4000	0.3818	
85 1,2,3-Trichloropropane	110	17.617	17.616	0.001	98	25496	0.4000	0.3687	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.714	17.710	0.004	97	165726	0.4000	0.3719	
87 N-Propylbenzene	120	18.232	18.229	0.003	98	43961	0.4000	0.3686	
88 2-Chlorotoluene	126	18.280	18.280	0.000	97	42884	0.4000	0.3831	
89 4-Ethyltoluene	105	18.377	18.373	0.004	98	165259	0.4000	0.3750	
90 1,3,5-Trimethylbenzene	120	18.447	18.443	0.004	92	62934	0.4000	0.3663	
92 Alpha Methyl Styrene	118	18.674	18.669	0.005	86	60498	0.4000	0.3461	
93 n-Decane	57	18.706	18.705	0.001	88	125239	0.4000	0.3874	
94 tert-Butylbenzene	119	18.857	18.857	0.000	90	139594	0.4000	0.3750	
95 1,2,4-Trimethylbenzene	105	18.873	18.870	0.003	96	138740	0.4000	0.3724	
96 sec-Butylbenzene	105	19.121	19.117	0.004	98	205213	0.4000	0.3830	
97 1,3-Dichlorobenzene	146	19.143	19.141	0.002	97	92171	0.4000	0.3805	
98 Benzyl chloride	91	19.213	19.213	0.000	97	109523	0.4000	0.3357	
99 1,4-Dichlorobenzene	146	19.224	19.226	-0.002	93	91575	0.4000	0.3789	
100 4-Isopropyltoluene	119	19.272	19.273	-0.001	96	157227	0.4000	0.3651	
101 1,2,3-Trimethylbenzene	105	19.332	19.332	0.000	100	136691	0.4000	0.4121	
102 Butylcyclohexane	83	19.375	19.375	0.000	90	139105	0.4000	0.3939	
103 2,3-Dihydroindene	117	19.574	19.574	0.000	95	129114	0.4000	0.3840	
104 1,2-Dichlorobenzene	146	19.580	19.579	0.001	95	88894	0.4000	0.3868	
105 n-Butylbenzene	91	19.698	19.696	0.002	97	166884	0.4000	0.3675	
106 Indene	116	19.704	19.704	0.000	90	107041	0.4000	0.3586	
107 Undecane	57	19.984	19.984	0.000	95	120308	0.4000	0.3577	
108 1,2-Dibromo-3-Chloropropan	157	20.168	20.168	0.000	87	38782	0.4000	0.3312	
109 1,2,4,5-Tetramethylbenzene	119	20.443	20.443	0.000	97	125664	0.4000	0.3189	
110 Dodecane	57	21.036	21.036	0.000	94	83156	0.4000	0.3334	
111 1,2,4-Trichlorobenzene	180	21.262	21.262	0.000	93	57989	0.4000	0.3161	
112 Naphthalene	128	21.402	21.403	-0.001	99	126841	0.4000	0.2901	
113 Hexachlorobutadiene	225	21.597	21.598	-0.001	91	59443	0.4000	0.3674	
114 1,2,3-Trichlorobenzene	180	21.677	21.676	0.001	93	53064	0.4000	0.3115	
115 2-Methylnaphthalene	142	22.422	22.418	0.004	100	23428	0.4000	0.1954	
116 1-Methylnaphthalene	142	22.589	22.590	-0.001	99	30317	0.4000	0.2307	
A 122 C8 Range	1	14.833	(14.787-14.913)		0	510187	0.4000	0.4055	
S 123 1,2-Dichloroethene, Total	1				0		0.8001	0.8404	
S 124 Xylenes, Total	100				0		1.20	1.13	

Reagents:

40L6DQP_00007

Amount Added: 80.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC05.D

Injection Date: 19-Nov-2018 19:44:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L5

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

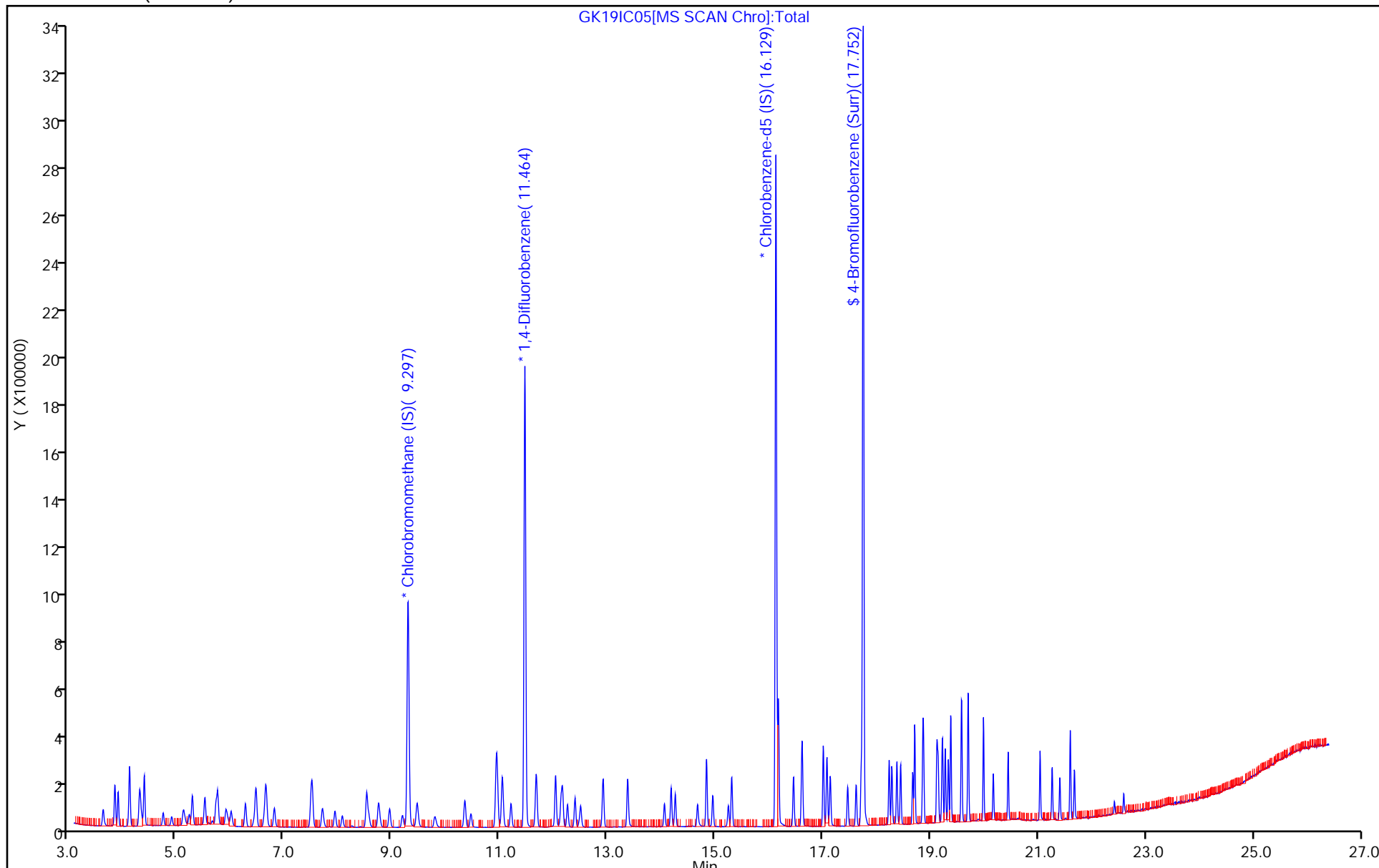
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC05.D

Injection Date: 19-Nov-2018 19:44:30

Instrument ID: MG

Lims ID: IC L5

Client ID:

Operator ID: 007126

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

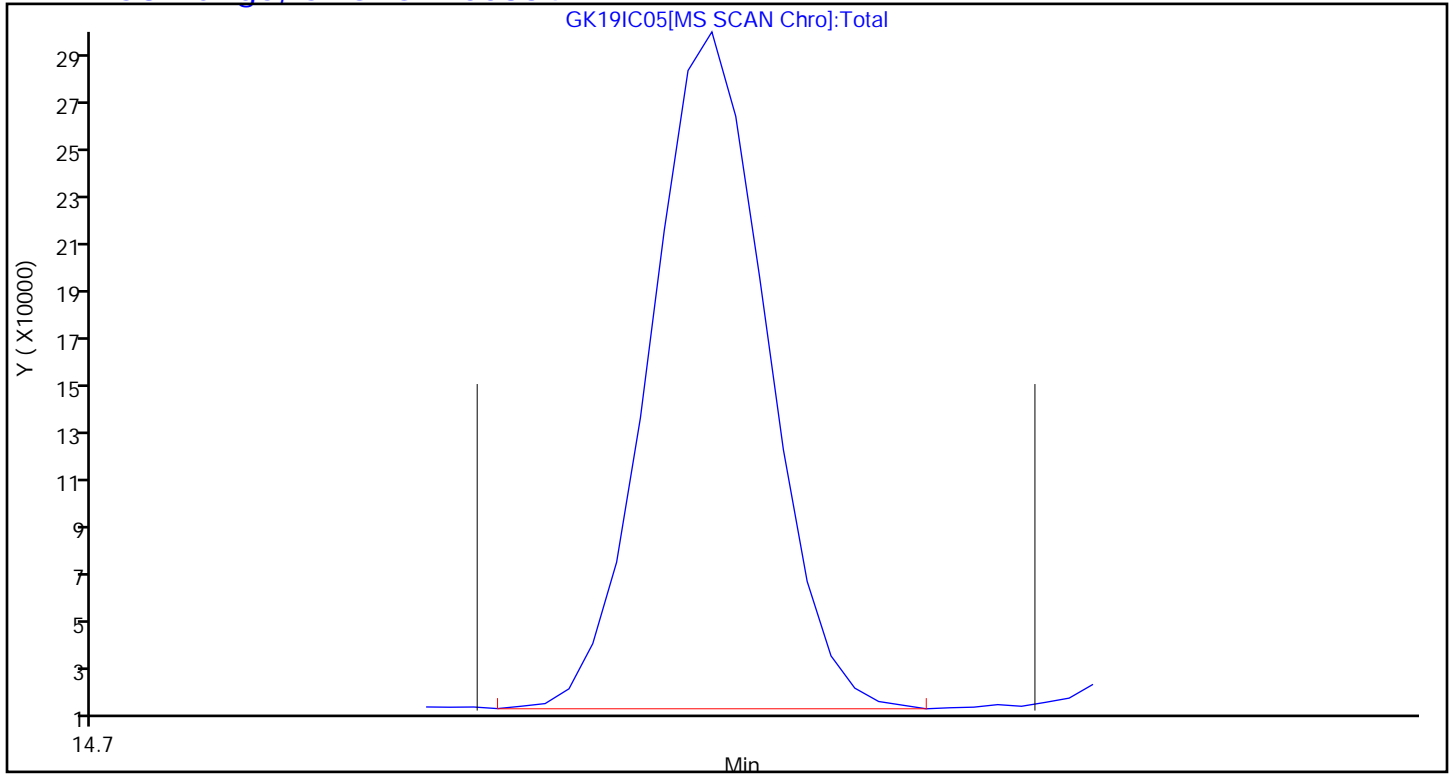
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 19-Nov-2018 20:26:30 ALS Bottle#: 4 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010044-013
 Misc. Info.: 190395
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:17:09 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0301

First Level Reviewer: barlozhetskayaa

Date: 20-Nov-2018 15:38:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.269	9.274	-0.005	94	279381	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.443	11.449	-0.006	97	1641907	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.123	16.123	0.000	91	1524849	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.746	17.747	-0.001	81	1259220	4.00	4.06	
6 Chlorodifluoromethane	51	3.823	3.827	-0.004	97	213134	1.00	1.01	
7 Propene	41	3.834	3.837	-0.003	99	122399	1.00	0.9727	
8 Dichlorodifluoromethane	85	3.888	3.894	-0.006	100	293942	1.00	1.00	
9 Chloromethane	52	4.093	4.095	-0.002	99	38867	1.00	1.00	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	95	165816	1.00	1.01	
11 Acetaldehyde	44	4.265	4.275	-0.010	93	247772	5.00	5.62	
12 Vinyl chloride	62	4.276	4.280	-0.004	99	121765	1.00	1.00	
13 Butane	43	4.368	4.374	-0.006	87	210337	1.00	1.01	
14 Butadiene	54	4.373	4.376	-0.003	66	98217	1.00	1.01	
15 Bromomethane	94	4.724	4.727	-0.003	99	93490	1.00	1.00	
16 Chloroethane	64	4.875	4.883	-0.008	92	56838	1.00	1.00	
17 Ethanol	31	5.010	5.037	-0.027	98	264173	5.00	5.45	
18 Vinyl bromide	106	5.204	5.210	-0.006	99	84388	1.00	0.9898	
19 2-Methylbutane	43	5.258	5.263	-0.005	93	137913	1.00	0.9839	
20 Trichlorofluoromethane	101	5.495	5.499	-0.004	99	244363	1.00	1.00	
21 Acrolein	56	5.516	5.532	-0.016	95	18084	1.00	0.8748	
22 Acetonitrile	40	5.592	5.604	-0.012	99	36755	1.00	1.12	
23 Acetone	58	5.646	5.667	-0.021	99	128743	3.00	3.43	
24 Pentane	72	5.727	5.734	-0.007	97	18477	1.00	1.01	
25 Isopropyl alcohol	45	5.764	5.794	-0.030	98	375654	3.00	3.39	
26 Ethyl ether	31	5.926	5.944	-0.018	91	117694	1.00	1.06	
27 1,1-Dichloroethene	96	6.244	6.252	-0.008	93	96413	1.00	0.9776	
28 Acrylonitrile	53	6.368	6.386	-0.018	96	68397	1.00	1.03	
29 1,1,2-Trichloro-1,2,2-trif	101	6.433	6.437	-0.004	94	203839	1.00	1.00	
30 2-Methyl-2-propanol	59	6.422	6.458	-0.036	95	194363	1.00	1.19	
31 Methylene Chloride	84	6.616	6.625	-0.009	96	105364	1.00	0.9318	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.633	6.638	-0.005	94	117858	1.00	1.01	
33 Carbon disulfide	76	6.789	6.794	-0.005	100	314303	1.00	1.02	
34 trans-1,2-Dichloroethene	96	7.463	7.467	-0.004	95	98532	1.00	1.00	
35 2-Methylpentane	43	7.479	7.485	-0.006	96	312910	1.00	0.99	
36 Methyl tert-butyl ether	73	7.614	7.642	-0.028	97	278941	1.00	1.09	
37 1,1-Dichloroethane	63	7.905	7.913	-0.008	99	218087	1.00	1.01	
38 Vinyl acetate	43	8.018	8.029	-0.011	100	282190	1.00	1.01	
40 Hexane	56	8.498	8.500	-0.002	72	98376	1.00	0.9849	
39 2-Butanone (MEK)	72	8.493	8.515	-0.022	92	49398	1.00	1.10	
41 Isopropyl ether	45	8.671	8.694	-0.023	97	407836	1.00	1.10	
42 cis-1,2-Dichloroethene	96	8.930	8.930	0.000	98	103642	1.00	1.01	
43 Ethyl acetate	43	9.124	9.141	-0.017	98	265053	1.00	1.09	
44 Chloroform	83	9.280	9.286	-0.006	97	223597	1.00	1.00	
45 Tert-butyl ethyl ether	59	9.372	9.395	-0.023	97	355348	1.00	1.11	
46 Tetrahydrofuran	42	9.712	9.736	-0.024	94	135248	1.00	1.08	
47 1,1,1-Trichloroethane	97	10.326	10.331	-0.005	96	231241	1.00	0.99	
48 1,2-Dichloroethane	62	10.440	10.443	-0.003	97	149022	1.00	1.00	
49 Cyclohexane	69	10.914	10.914	0.000	94	57756	1.00	1.07	
50 Benzene	78	10.914	10.921	-0.007	98	309735	1.00	1.03	
51 n-Butanol	31	10.925	10.936	-0.011	67	54462	1.00	1.23	
52 Carbon tetrachloride	117	10.936	10.941	-0.005	96	218396	1.00	1.12	
53 2,3-Dimethylpentane	71	11.022	11.026	-0.004	93	82285	1.00	1.05	
54 Thiophene	84	11.189	11.192	-0.003	97	173881	1.00	1.03	
55 Isooctane	57	11.653	11.656	-0.003	98	620492	1.00	1.07	
56 n-Heptane	71	12.014	12.019	-0.005	95	122383	1.00	1.04	
57 1,2-Dichloropropane	63	12.122	12.122	0.000	88	122969	1.00	1.02	
58 Trichloroethene	130	12.149	12.152	-0.003	93	127565	1.00	1.02	
59 Dibromomethane	93	12.241	12.243	-0.002	90	117498	1.00	1.02	
60 Dichlorobromomethane	83	12.381	12.384	-0.003	98	230779	1.00	1.06	
61 1,4-Dioxane	88	12.413	12.434	-0.021	97	44708	1.00	1.20	
62 Methyl methacrylate	41	12.467	12.472	-0.005	90	162679	1.00	1.11	
63 Methylcyclohexane	83	12.904	12.908	-0.004	91	205561	1.00	1.05	
64 4-Methyl-2-pentanone (MIBK)	43	13.319	13.332	-0.013	98	302782	1.00	1.26	
65 cis-1,3-Dichloropropene	75	13.362	13.363	-0.001	97	177618	1.00	1.03	
66 trans-1,3-Dichloropropene	75	14.047	14.048	-0.001	96	158910	1.00	1.04	
67 Toluene	91	14.171	14.173	-0.002	93	335051	1.00	1.07	
68 1,1,2-Trichloroethane	83	14.247	14.250	-0.003	98	105258	1.00	1.06	
69 2-Hexanone	58	14.630	14.639	-0.009	90	137273	1.00	1.25	
70 n-Octane	85	14.829	14.829	0.000	98	128965	1.00	1.07	
71 Chlorodibromomethane	129	14.948	14.950	-0.002	97	188691	1.00	1.05	
72 Ethylene Dibromide	107	15.233	15.238	-0.005	98	176960	1.00	1.08	
73 Tetrachloroethene	129	15.298	15.302	-0.004	92	117594	1.00	1.04	
74 2,3-Dimethylheptane	43	16.166	16.165	0.001	96	462439	1.00	1.08	
75 Chlorobenzene	112	16.172	16.172	0.000	90	260123	1.00	1.08	
78 Ethylbenzene	91	16.447	16.450	-0.003	99	459007	1.00	1.13	
79 m-Xylene & p-Xylene	91	16.609	16.609	-0.001	99	711699	2.00	2.25	
80 n-Nonane	57	17.002	17.003	-0.001	96	282529	1.00	1.10	
81 Bromoform	173	17.072	17.072	0.000	89	164039	1.00	1.09	
82 Styrene	104	17.072	17.073	-0.001	98	250111	1.00	1.13	
83 o-Xylene	91	17.132	17.133	-0.001	98	372286	1.00	1.12	
84 1,1,2,2-Tetrachloroethane	83	17.455	17.456	-0.001	98	266474	1.00	1.17	
85 1,2,3-Trichloropropane	110	17.611	17.616	-0.005	98	75369	1.00	1.13	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.709	17.710	-0.001	98	483580	1.00	1.12	
87 N-Propylbenzene	120	18.226	18.229	-0.003	98	131304	1.00	1.14	
88 2-Chlorotoluene	126	18.280	18.280	0.000	97	120577	1.00	1.11	
89 4-Ethyltoluene	105	18.372	18.373	-0.001	98	494958	1.00	1.16	
90 1,3,5-Trimethylbenzene	120	18.442	18.443	-0.001	92	193494	1.00	1.17	
92 Alpha Methyl Styrene	118	18.668	18.669	-0.001	86	191892	1.00	1.14	
93 n-Decane	57	18.706	18.705	0.001	88	359592	1.00	1.15	
94 tert-Butylbenzene	119	18.857	18.857	0.000	90	418713	1.00	1.16	
95 1,2,4-Trimethylbenzene	105	18.868	18.870	-0.002	97	419918	1.00	1.17	
96 sec-Butylbenzene	105	19.116	19.117	-0.001	98	614586	1.00	1.19	
97 1,3-Dichlorobenzene	146	19.138	19.141	-0.003	97	262262	1.00	1.12	
98 Benzyl chloride	91	19.213	19.213	0.000	97	362042	1.00	1.15	
99 1,4-Dichlorobenzene	146	19.224	19.226	-0.002	93	264470	1.00	1.13	
100 4-Isopropyltoluene	119	19.272	19.273	-0.001	96	494218	1.00	1.19	
101 1,2,3-Trimethylbenzene	105	19.332	19.332	0.000	99	419992	1.00	1.30	
102 Butylcyclohexane	83	19.375	19.375	0.000	91	389083	1.00	1.14	
103 2,3-Dihydroindene	117	19.574	19.574	0.000	94	380253	1.00	1.17	
104 1,2-Dichlorobenzene	146	19.580	19.579	0.001	93	256293	1.00	1.15	
105 n-Butylbenzene	91	19.693	19.696	-0.003	98	530160	1.00	1.21	
106 Indene	116	19.704	19.704	0.000	92	335541	1.00	1.16	
107 Undecane	57	19.984	19.984	0.000	96	379057	1.00	1.17	
108 1,2-Dibromo-3-Chloropropan	157	20.167	20.168	-0.001	89	132611	1.00	1.17	
109 1,2,4,5-Tetramethylbenzene	119	20.442	20.443	-0.001	96	453650	1.00	1.19	
110 Dodecane	57	21.036	21.036	0.000	93	280491	1.00	1.16	
111 1,2,4-Trichlorobenzene	180	21.262	21.262	0.000	93	190857	1.00	1.08	
112 Naphthalene	128	21.402	21.403	-0.001	99	430856	1.00	1.02	
113 Hexachlorobutadiene	225	21.596	21.598	-0.002	92	175239	1.00	1.12	
114 1,2,3-Trichlorobenzene	180	21.677	21.676	0.001	94	179674	1.00	1.09	
115 2-Methylnaphthalene	142	22.416	22.418	-0.002	99	80738	1.00	0.6969	
116 1-Methylnaphthalene	142	22.589	22.590	-0.001	99	104049	1.00	0.8194	
A 122 C8 Range	1	14.833	(14.771-14.908)		0	1291089	1.00	1.06	
S 123 1,2-Dichloroethene, Total	1				0		2.00	2.01	
S 124 Xylenes, Total	100				0		3.00	3.37	

Reagents:

40L6DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC06.D

Injection Date: 19-Nov-2018 20:26:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L6

Worklist Smp#: 13

Client ID:

Purge Vol: 500.000 mL

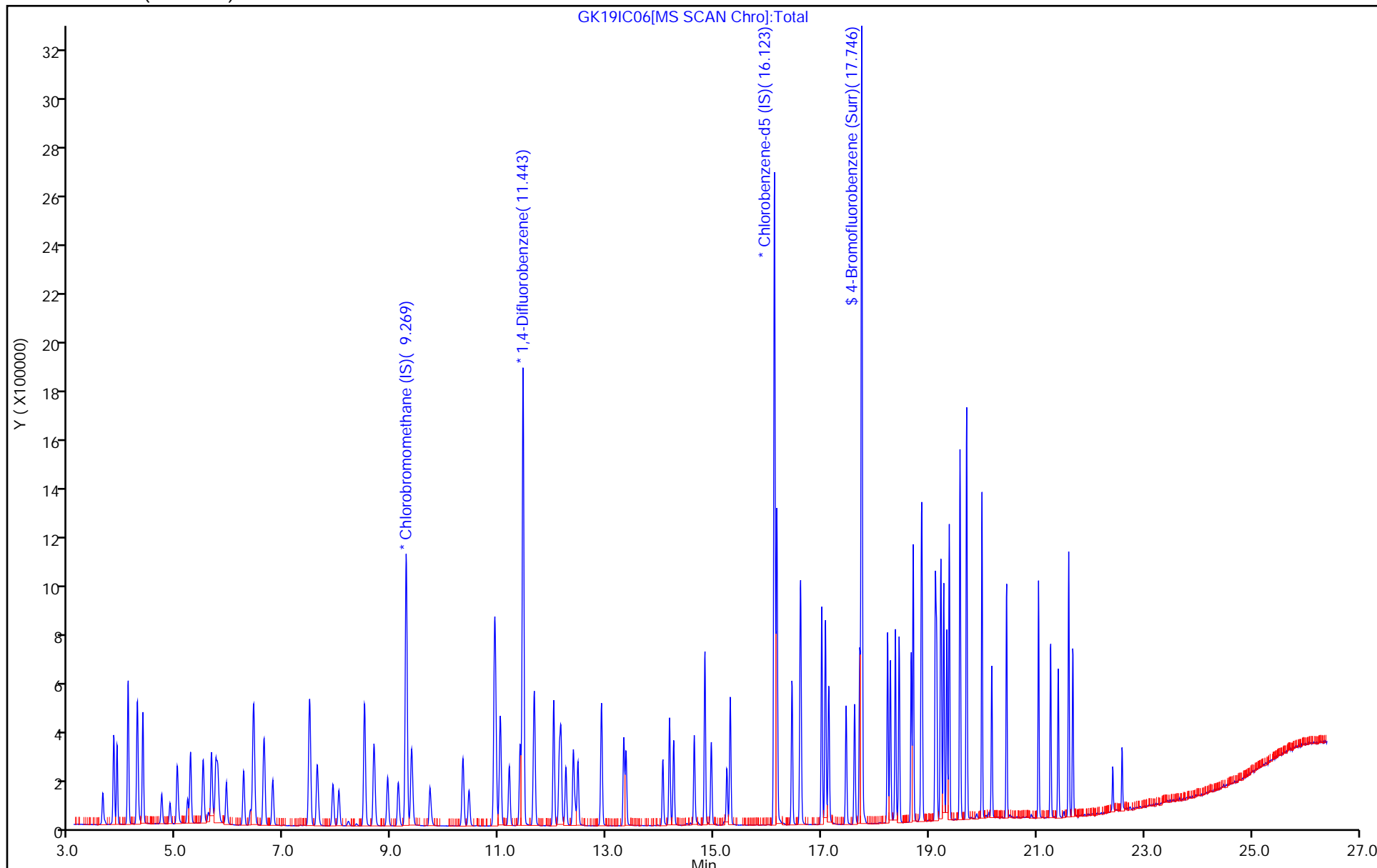
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC06.D

Injection Date: 19-Nov-2018 20:26:30

Instrument ID: MG

Lims ID: IC L6

Client ID:

Operator ID: 007126

ALS Bottle#: 4

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

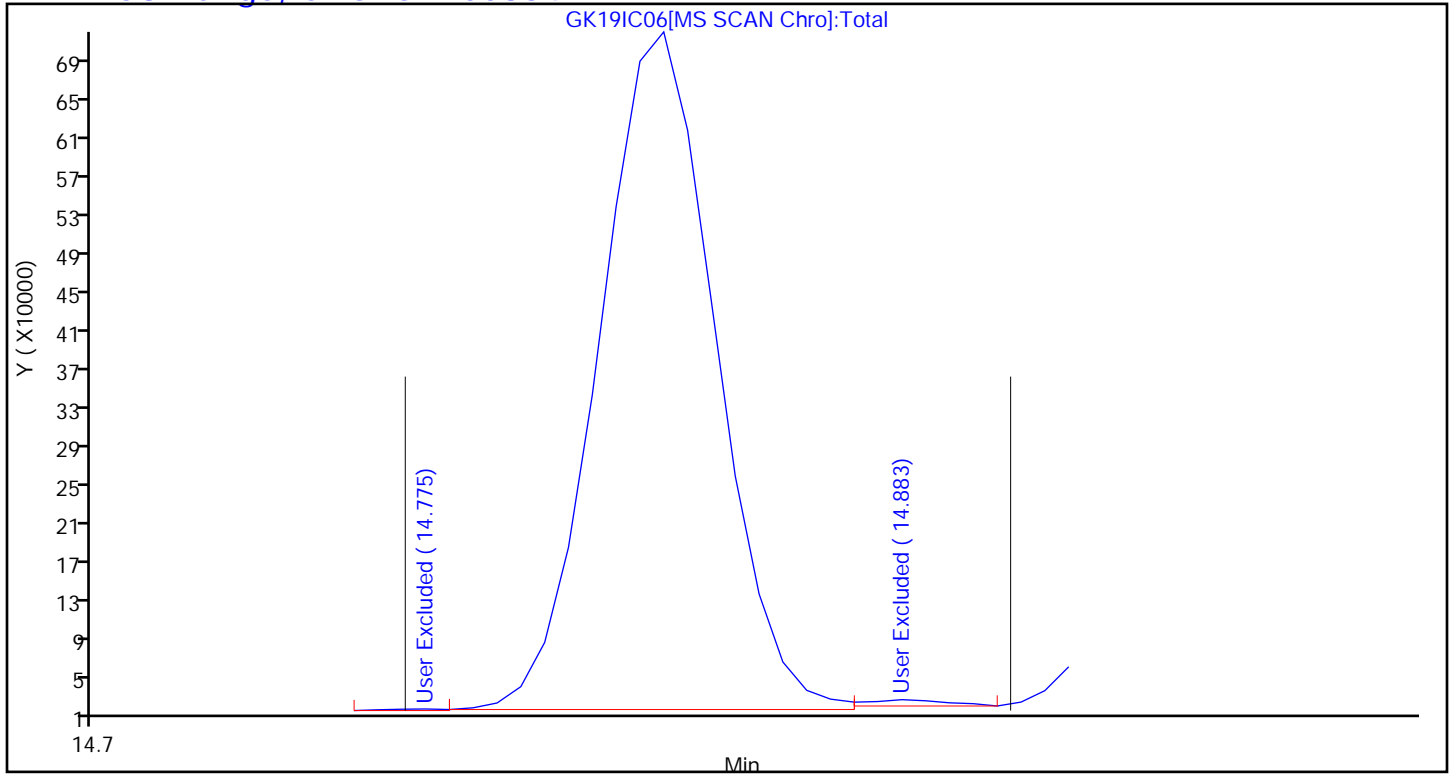
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 19-Nov-2018 21:10:30 ALS Bottle#: 5 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010044-014
 Misc. Info.: 190394
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:17:17 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0301

First Level Reviewer: tajh

Date: 20-Nov-2018 06:46:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.270	9.274	-0.004	94	294053	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.443	11.449	-0.006	97	1860742	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.123	16.123	0.000	91	1709487	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.747	17.747	0.000	81	1381357	4.00	3.97	
6 Chlorodifluoromethane	51	3.823	3.827	-0.004	97	425995	2.00	1.92	
7 Propene	41	3.834	3.837	-0.003	98	245751	2.00	1.86	
8 Dichlorodifluoromethane	85	3.888	3.894	-0.006	100	592333	2.00	1.91	
9 Chloromethane	52	4.088	4.095	-0.007	98	74207	2.00	1.81	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	94	333157	2.00	1.93	
11 Acetaldehyde	44	4.260	4.275	-0.015	95	467317	10.0	10.1	
12 Vinyl chloride	62	4.276	4.280	-0.004	98	243569	2.00	1.89	
13 Butane	43	4.368	4.374	-0.006	87	408489	2.00	1.87	
14 Butadiene	54	4.368	4.376	-0.008	66	196095	2.00	1.91	
15 Bromomethane	94	4.719	4.727	-0.008	99	188277	2.00	1.91	
16 Chloroethane	64	4.875	4.883	-0.008	92	114013	2.00	1.90	
17 Ethanol	31	5.004	5.037	-0.033	97	471116	10.0	9.24	
18 Vinyl bromide	106	5.204	5.210	-0.006	99	170971	2.00	1.91	
19 2-Methylbutane	43	5.258	5.263	-0.005	92	273919	2.00	1.86	
20 Trichlorofluoromethane	101	5.490	5.499	-0.009	99	480008	2.00	1.88	
21 Acrolein	56	5.511	5.532	-0.021	96	44982	2.00	2.07	
22 Acetonitrile	40	5.587	5.604	-0.017	99	70220	2.00	2.04	
23 Acetone	58	5.641	5.667	-0.026	98	229293	6.00	5.80	
24 Pentane	72	5.727	5.734	-0.007	96	35517	2.00	1.85	
25 Isopropyl alcohol	45	5.749	5.794	-0.045	95	617236	6.00	5.29	
26 Ethyl ether	31	5.916	5.944	-0.028	92	215434	2.00	1.85	
27 1,1-Dichloroethene	96	6.245	6.252	-0.007	93	193344	2.00	1.86	
28 Acrylonitrile	53	6.374	6.386	-0.012	94	140907	2.00	2.02	
29 1,1,2-Trichloro-1,2,2-trif	101	6.433	6.437	-0.004	93	414334	2.00	1.93	
30 2-Methyl-2-propanol	59	6.401	6.458	-0.057	95	290919	2.00	1.69	
31 Methylene Chloride	84	6.617	6.625	-0.008	96	201519	2.00	1.69	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.633	6.638	-0.005	94	236800	2.00	1.94	
33 Carbon disulfide	76	6.789	6.794	-0.005	100	621752	2.00	1.92	
34 trans-1,2-Dichloroethene	96	7.463	7.467	-0.004	95	206361	2.00	1.99	
35 2-Methylpentane	43	7.479	7.485	-0.006	96	648001	2.00	1.96	
36 Methyl tert-butyl ether	73	7.609	7.642	-0.033	97	509969	2.00	1.89	
37 1,1-Dichloroethane	63	7.905	7.913	-0.008	99	450395	2.00	1.99	
38 Vinyl acetate	43	8.013	8.029	-0.016	100	602326	2.00	2.05	
40 Hexane	56	8.493	8.500	-0.007	76	207693	2.00	1.98	
39 2-Butanone (MEK)	72	8.488	8.515	-0.027	95	87654	2.00	1.85	
41 Isopropyl ether	45	8.666	8.694	-0.028	97	741252	2.00	1.90	
42 cis-1,2-Dichloroethene	96	8.925	8.930	-0.005	98	213674	2.00	1.98	
43 Ethyl acetate	43	9.119	9.141	-0.022	98	484309	2.00	1.89	
44 Chloroform	83	9.281	9.286	-0.005	97	458167	2.00	1.95	
45 Tert-butyl ethyl ether	59	9.367	9.395	-0.028	97	642668	2.00	1.90	
46 Tetrahydrofuran	42	9.707	9.736	-0.029	94	255412	2.00	1.94	
47 1,1,1-Trichloroethane	97	10.327	10.331	-0.004	96	472457	2.00	1.92	
48 1,2-Dichloroethane	62	10.440	10.443	-0.003	97	328987	2.00	1.95	
49 Cyclohexane	69	10.914	10.914	0.000	85	114639	2.00	1.87	
50 Benzene	78	10.914	10.921	-0.007	97	653669	2.00	1.92	
51 n-Butanol	31	10.904	10.936	-0.032	67	79637	2.00	1.58	
52 Carbon tetrachloride	117	10.936	10.941	-0.005	97	443671	2.00	2.00	
53 2,3-Dimethylpentane	71	11.022	11.026	-0.004	93	169965	2.00	1.91	
54 Thiophene	84	11.189	11.192	-0.003	97	369642	2.00	1.93	
55 Isooctane	57	11.653	11.656	-0.003	98	1235504	2.00	1.87	
56 n-Heptane	71	12.014	12.019	-0.005	95	253052	2.00	1.91	
57 1,2-Dichloropropane	63	12.117	12.122	-0.005	90	262474	2.00	1.92	
58 Trichloroethene	130	12.149	12.152	-0.003	94	266889	2.00	1.88	
59 Dibromomethane	93	12.241	12.243	-0.002	90	243347	2.00	1.87	
60 Dichlorobromomethane	83	12.381	12.384	-0.003	98	479179	2.00	1.95	
61 1,4-Dioxane	88	12.408	12.434	-0.026	98	76432	2.00	1.81	
62 Methyl methacrylate	41	12.462	12.472	-0.010	90	297095	2.00	1.79	
63 Methylcyclohexane	83	12.904	12.908	-0.004	92	421647	2.00	1.91	
64 4-Methyl-2-pentanone (MIBK)	43	13.314	13.332	-0.018	99	475813	2.00	1.74	
65 cis-1,3-Dichloropropene	75	13.357	13.363	-0.006	97	387570	2.00	1.98	
66 trans-1,3-Dichloropropene	75	14.042	14.048	-0.006	96	339832	2.00	1.99	
67 Toluene	91	14.171	14.173	-0.002	93	693251	2.00	1.97	
68 1,1,2-Trichloroethane	83	14.247	14.250	-0.003	98	217108	2.00	1.95	
69 2-Hexanone	58	14.624	14.639	-0.015	90	207099	2.00	1.69	
70 n-Octane	85	14.829	14.829	0.000	97	259562	2.00	1.92	
71 Chlorodibromomethane	129	14.948	14.950	-0.002	97	409895	2.00	2.04	
72 Ethylene Dibromide	107	15.234	15.238	-0.004	98	373205	2.00	2.02	
73 Tetrachloroethene	129	15.298	15.302	-0.004	92	245717	2.00	1.95	
74 2,3-Dimethylheptane	43	16.161	16.165	-0.004	96	926179	2.00	1.94	
75 Chlorobenzene	112	16.167	16.172	-0.005	90	526924	2.00	1.96	
78 Ethylbenzene	91	16.447	16.450	-0.003	99	891181	2.00	1.96	
79 m-Xylene & p-Xylene	91	16.609	16.609	0.000	99	1389444	4.00	3.92	
80 n-Nonane	57	17.002	17.003	-0.001	95	559652	2.00	1.95	
81 Bromoform	173	17.067	17.072	-0.005	90	350460	2.00	2.08	
82 Styrene	104	17.073	17.073	-0.001	99	491766	2.00	1.98	
83 o-Xylene	91	17.132	17.133	-0.001	98	728079	2.00	1.95	
84 1,1,2,2-Tetrachloroethane	83	17.455	17.456	-0.001	98	489686	2.00	1.91	
85 1,2,3-Trichloropropane	110	17.617	17.616	0.001	98	140992	2.00	1.88	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.709	17.710	-0.001	97	916878	2.00	1.90	
87 N-Propylbenzene	120	18.226	18.229	-0.003	98	248105	2.00	1.92	
88 2-Chlorotoluene	126	18.280	18.280	0.000	97	235104	2.00	1.94	
89 4-Ethyltoluene	105	18.372	18.373	-0.001	98	898739	2.00	1.88	
90 1,3,5-Trimethylbenzene	120	18.442	18.443	-0.001	91	354673	2.00	1.91	
92 Alpha Methyl Styrene	118	18.669	18.669	0.000	86	371223	2.00	1.96	
93 n-Decane	57	18.701	18.705	-0.004	88	676932	2.00	1.93	
94 tert-Butylbenzene	119	18.857	18.857	0.000	94	753238	2.00	1.87	
95 1,2,4-Trimethylbenzene	105	18.868	18.870	-0.002	97	750976	2.00	1.86	
96 sec-Butylbenzene	105	19.116	19.117	-0.001	98	1097360	2.00	1.89	
97 1,3-Dichlorobenzene	146	19.138	19.141	-0.003	98	499287	2.00	1.90	
98 Benzyl chloride	91	19.213	19.213	0.000	97	676508	2.00	1.91	
99 1,4-Dichlorobenzene	146	19.224	19.226	-0.002	94	502954	2.00	1.92	
100 4-Isopropyltoluene	119	19.273	19.273	0.000	96	864208	2.00	1.85	
101 1,2,3-Trimethylbenzene	105	19.332	19.332	0.000	99	751993	2.00	2.07	
102 Butylcyclohexane	83	19.375	19.375	0.000	91	730265	2.00	1.91	
103 2,3-Dihydroindene	117	19.575	19.574	0.001	93	687080	2.00	1.89	
104 1,2-Dichlorobenzene	146	19.580	19.579	0.001	93	474922	2.00	1.91	
105 n-Butylbenzene	91	19.693	19.696	-0.003	98	928877	2.00	1.89	
106 Indene	116	19.704	19.704	0.000	91	608660	2.00	1.88	
107 Undecane	57	19.984	19.984	0.000	96	663396	2.00	1.82	
108 1,2-Dibromo-3-Chloropropan	157	20.168	20.168	0.000	90	237572	2.00	1.87	
109 1,2,4,5-Tetramethylbenzene	119	20.443	20.443	0.000	97	787407	2.00	1.84	
110 Dodecane	57	21.036	21.036	0.000	93	452943	2.00	1.68	
111 1,2,4-Trichlorobenzene	180	21.262	21.262	0.000	93	354159	2.00	1.78	
112 Naphthalene	128	21.403	21.403	0.000	99	853395	2.00	1.80	
113 Hexachlorobutadiene	225	21.597	21.598	-0.001	92	306859	2.00	1.75	
114 1,2,3-Trichlorobenzene	180	21.672	21.676	-0.004	95	318921	2.00	1.73	
115 2-Methylnaphthalene	142	22.416	22.418	-0.002	100	191719	2.00	1.48	
116 1-Methylnaphthalene	142	22.589	22.590	-0.001	99	217486	2.00	1.53	
A 122 C8 Range	1	14.830	(14.771-14.908)		0	2621723	2.00	1.92	
S 123 1,2-Dichloroethene, Total	1				0		4.00	3.97	
S 124 Xylenes, Total	100				0		6.00	5.87	

Reagents:

40L7DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC07.D

Injection Date: 19-Nov-2018 21:10:30

Instrument ID: MG

Operator ID: 007126

Lims ID: ICIS L7

Worklist Smp#: 14

Client ID:

Purge Vol: 500.000 mL

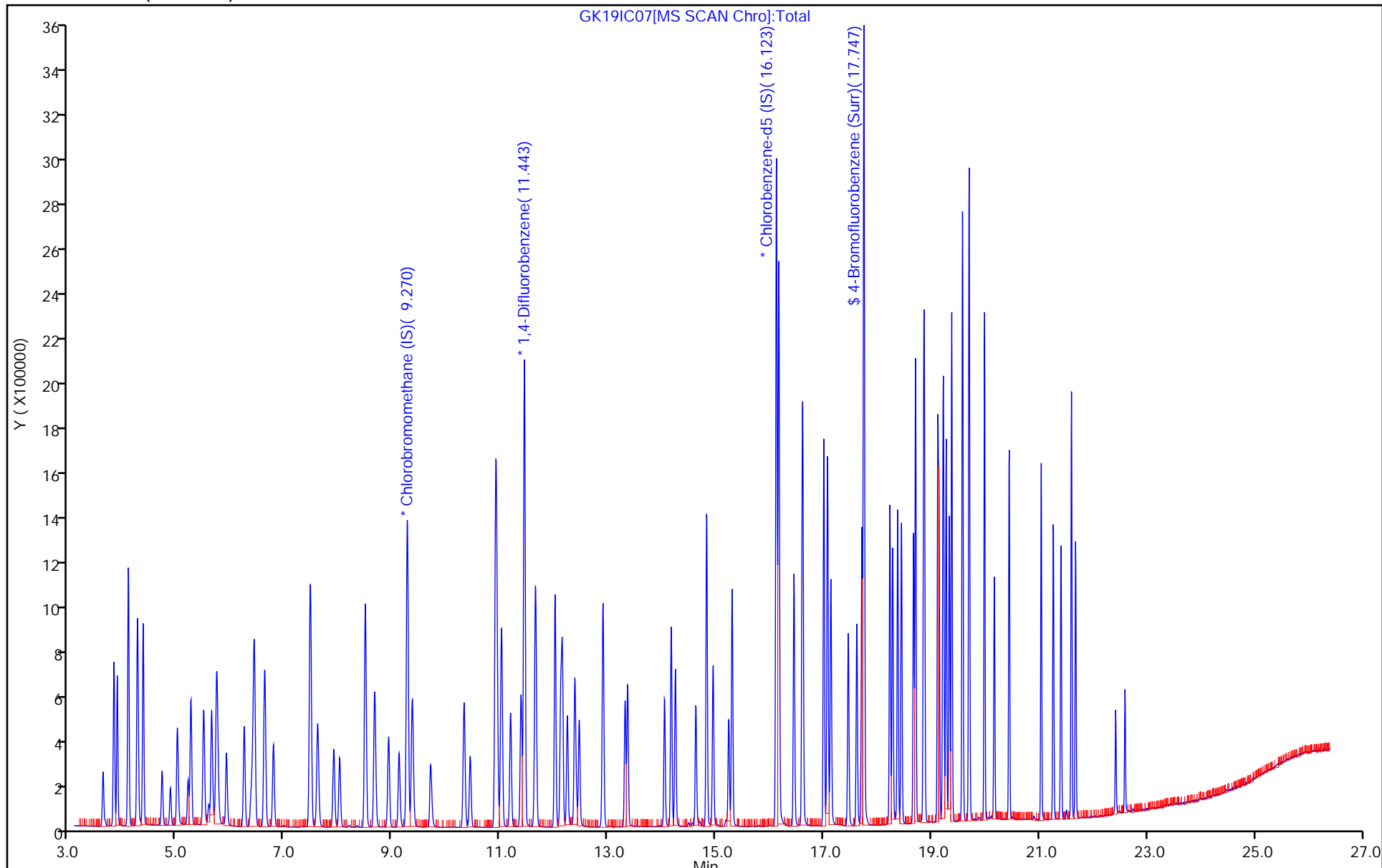
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC07.D

Injection Date: 19-Nov-2018 21:10:30

Instrument ID: MG

Lims ID: ICIS L7

Client ID:

Operator ID: 007126

ALS Bottle#: 5

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

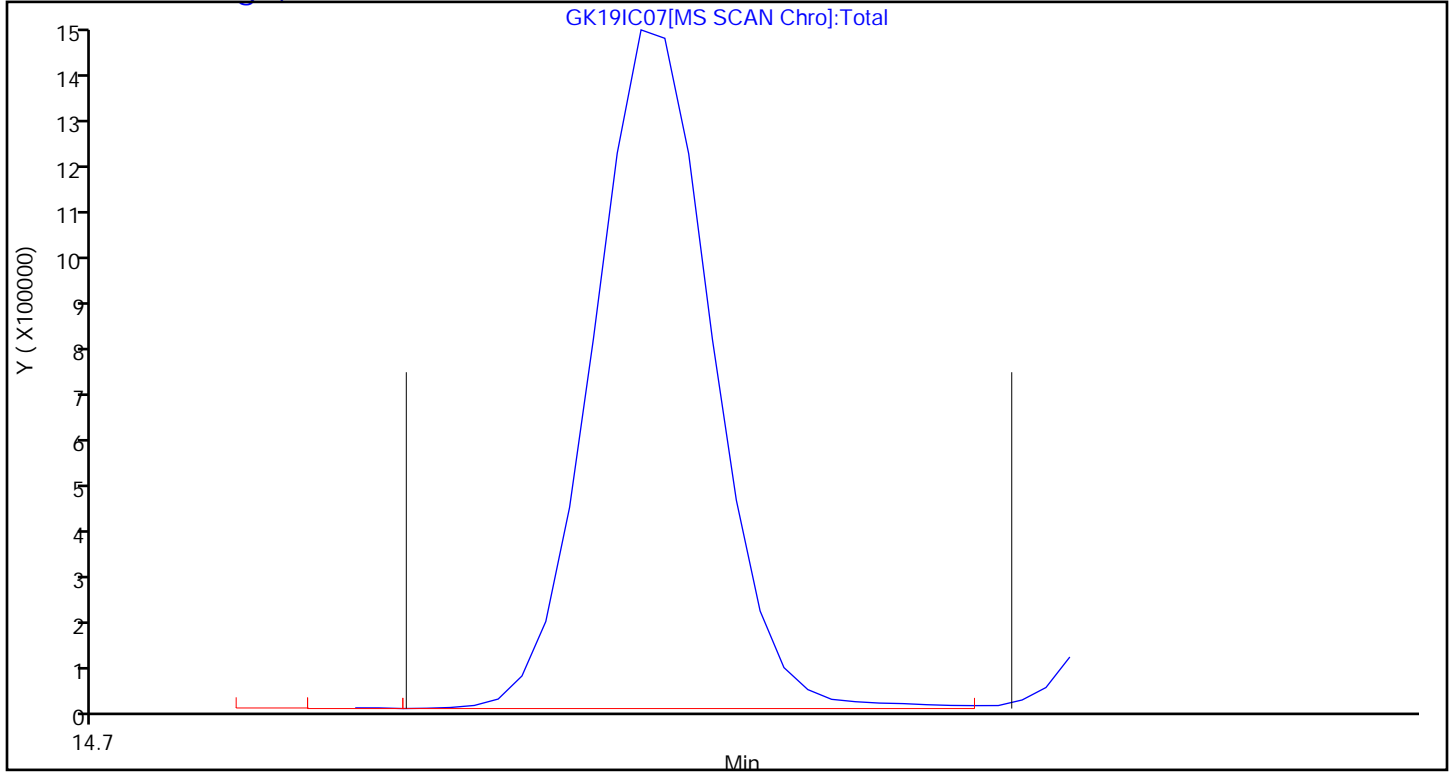
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 19-Nov-2018 21:56:30 ALS Bottle#: 6 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010044-015
 Misc. Info.: 190393
 Operator ID: 007126 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:17:26 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0301

First Level Reviewer: barlozhetskayaa

Date: 20-Nov-2018 15:34:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.275	9.274	0.001	94	294581	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.448	11.449	-0.001	97	1797121	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.123	16.123	0.000	91	1663745	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.746	17.747	-0.001	81	1399256	4.00	4.13	
6 Chlorodifluoromethane	51	3.823	3.827	-0.004	97	852115	4.00	3.83	
7 Propene	41	3.834	3.837	-0.003	99	485328	4.00	3.66	
8 Dichlorodifluoromethane	85	3.888	3.894	-0.006	100	1179512	4.00	3.79	
9 Chloromethane	52	4.088	4.095	-0.007	98	152707	4.00	3.71	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.098	4.103	-0.005	94	661452	4.00	3.82	
11 Acetaldehyde	44	4.265	4.275	-0.010	95	875390	20.0	18.8	
12 Vinyl chloride	62	4.276	4.280	-0.004	99	489146	4.00	3.80	
13 Butane	43	4.373	4.374	-0.001	87	826350	4.00	3.78	
14 Butadiene	54	4.373	4.376	-0.003	66	400466	4.00	3.90	
15 Bromomethane	94	4.724	4.727	-0.003	99	384351	4.00	3.88	
16 Chloroethane	64	4.880	4.883	-0.003	93	237140	4.00	3.95	
17 Ethanol	31	5.015	5.037	-0.022	98	1024247	20.0	20.0	
18 Vinyl bromide	106	5.209	5.210	-0.001	98	351375	4.00	3.91	
19 2-Methylbutane	43	5.258	5.263	-0.005	93	583065	4.00	3.95	
20 Trichlorofluoromethane	101	5.495	5.499	-0.004	100	989104	4.00	3.86	
21 Acrolein	56	5.517	5.532	-0.016	94	90941	4.00	4.17	
22 Acetonitrile	40	5.592	5.604	-0.012	98	141051	4.00	4.09	
23 Acetone	58	5.641	5.667	-0.026	99	458917	12.0	11.6	
24 Pentane	72	5.732	5.734	-0.002	97	75410	4.00	3.93	
25 Isopropyl alcohol	45	5.759	5.794	-0.035	97	1411959	12.0	12.1	
26 Ethyl ether	31	5.916	5.944	-0.028	92	471654	4.00	4.03	
27 1,1-Dichloroethene	96	6.250	6.252	-0.002	94	414843	4.00	3.99	
28 Acrylonitrile	53	6.379	6.386	-0.007	94	285199	4.00	4.08	
29 1,1,2-Trichloro-1,2,2-trif	101	6.433	6.437	-0.004	93	852094	4.00	3.95	
30 2-Methyl-2-propanol	59	6.406	6.458	-0.052	95	722973	4.00	4.19	
31 Methylene Chloride	84	6.622	6.625	-0.003	97	403707	4.00	3.39	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.638	6.638	0.000	94	482696	4.00	3.94	
33 Carbon disulfide	76	6.794	6.794	0.000	100	1282762	4.00	3.96	
34 trans-1,2-Dichloroethene	96	7.469	7.467	0.002	95	425966	4.00	4.10	
35 2-Methylpentane	43	7.479	7.485	-0.006	96	1313967	4.00	3.96	
36 Methyl tert-butyl ether	73	7.609	7.642	-0.033	97	1044311	4.00	3.87	
37 1,1-Dichloroethane	63	7.911	7.913	-0.002	99	900321	4.00	3.97	
38 Vinyl acetate	43	8.019	8.029	-0.010	100	1144430	4.00	3.89	
40 Hexane	56	8.498	8.500	-0.002	75	415892	4.00	3.95	
39 2-Butanone (MEK)	72	8.493	8.515	-0.022	94	183971	4.00	3.87	
41 Isopropyl ether	45	8.671	8.694	-0.023	97	1526037	4.00	3.91	
42 cis-1,2-Dichloroethene	96	8.930	8.930	0.000	98	432348	4.00	4.00	
43 Ethyl acetate	43	9.124	9.141	-0.017	98	998518	4.00	3.88	
44 Chloroform	83	9.286	9.286	0.000	97	916990	4.00	3.90	
45 Tert-butyl ethyl ether	59	9.367	9.395	-0.028	97	1327676	4.00	3.93	
46 Tetrahydrofuran	42	9.706	9.736	-0.030	94	527305	4.00	3.99	
47 1,1,1-Trichloroethane	97	10.332	10.331	0.001	96	948241	4.00	3.86	
48 1,2-Dichloroethane	62	10.445	10.443	0.002	97	645316	4.00	3.97	
49 Cyclohexane	69	10.914	10.914	0.000	86	237706	4.00	4.01	
50 Benzene	78	10.920	10.921	-0.001	98	1298691	4.00	3.95	
51 n-Butanol	31	10.898	10.936	-0.038	73	201295	4.00	4.15	
52 Carbon tetrachloride	117	10.941	10.941	0.000	97	847780	4.00	3.97	
53 2,3-Dimethylpentane	71	11.028	11.026	0.002	93	344322	4.00	4.01	
54 Thiophene	84	11.195	11.192	0.003	97	735880	4.00	3.98	
55 Isooctane	57	11.653	11.656	-0.003	98	2530256	4.00	3.97	
56 n-Heptane	71	12.020	12.019	0.001	95	517408	4.00	4.03	
57 1,2-Dichloropropane	63	12.122	12.122	0.000	89	523379	4.00	3.97	
58 Trichloroethene	130	12.155	12.152	0.002	94	564088	4.00	4.10	
59 Dibromomethane	93	12.246	12.243	0.003	90	484886	4.00	3.86	
60 Dichlorobromomethane	83	12.386	12.384	0.002	98	964967	4.00	4.07	
61 1,4-Dioxane	88	12.408	12.434	-0.026	98	171069	4.00	4.18	
62 Methyl methacrylate	41	12.467	12.472	-0.005	90	627079	4.00	3.91	
63 Methylcyclohexane	83	12.909	12.908	0.001	92	859405	4.00	4.03	
64 4-Methyl-2-pentanone (MIBK)	43	13.314	13.332	-0.018	99	1065796	4.00	4.04	
65 cis-1,3-Dichloropropene	75	13.362	13.363	-0.001	98	778502	4.00	4.12	
66 trans-1,3-Dichloropropene	75	14.047	14.048	-0.001	97	700890	4.00	4.22	
67 Toluene	91	14.171	14.173	-0.002	93	1388384	4.00	4.05	
68 1,1,2-Trichloroethane	83	14.247	14.250	-0.003	98	440430	4.00	4.07	
69 2-Hexanone	58	14.624	14.639	-0.015	97	502190	4.00	4.21	
70 n-Octane	85	14.829	14.829	0.000	97	541042	4.00	4.12	
71 Chlorodibromomethane	129	14.948	14.950	-0.002	97	851378	4.00	4.35	
72 Ethylene Dibromide	107	15.239	15.238	0.001	98	759482	4.00	4.23	
73 Tetrachloroethene	129	15.298	15.302	-0.004	92	483226	4.00	3.93	
74 2,3-Dimethylheptane	43	16.166	16.165	0.001	96	1916811	4.00	4.12	
75 Chlorobenzene	112	16.172	16.172	0.000	91	1076675	4.00	4.11	
78 Ethylbenzene	91	16.447	16.450	-0.003	99	1828423	4.00	4.12	
79 m-Xylene & p-Xylene	91	16.609	16.609	0.000	98	2808548	8.00	8.15	
80 n-Nonane	57	17.002	17.003	-0.001	95	1174879	4.00	4.20	
81 Bromoform	173	17.072	17.072	0.000	90	749817	4.00	4.56	
82 Styrene	104	17.072	17.073	-0.001	99	1037031	4.00	4.30	
83 o-Xylene	91	17.132	17.133	-0.001	98	1464208	4.00	4.03	
84 1,1,2,2-Tetrachloroethane	83	17.455	17.456	-0.001	99	925921	4.00	3.72	
85 1,2,3-Trichloropropane	110	17.617	17.616	0.001	98	292259	4.00	4.01	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.709	17.710	-0.001	98	1849824	4.00	3.94	
87 N-Propylbenzene	120	18.226	18.229	-0.003	98	509297	4.00	4.05	
88 2-Chlorotoluene	126	18.280	18.280	0.000	97	484959	4.00	4.11	
89 4-Ethyltoluene	105	18.372	18.373	-0.001	98	1866746	4.00	4.02	
90 1,3,5-Trimethylbenzene	120	18.442	18.443	-0.001	92	737322	4.00	4.07	
92 Alpha Methyl Styrene	118	18.668	18.669	-0.001	86	787900	4.00	4.28	
93 n-Decane	57	18.706	18.705	0.001	88	1405096	4.00	4.12	
94 tert-Butylbenzene	119	18.857	18.857	0.000	90	1551104	4.00	3.95	
95 1,2,4-Trimethylbenzene	105	18.868	18.870	-0.002	97	1560491	4.00	3.97	
96 sec-Butylbenzene	105	19.116	19.117	-0.001	98	2258822	4.00	4.00	
97 1,3-Dichlorobenzene	146	19.138	19.141	-0.003	97	1035420	4.00	4.05	
98 Benzyl chloride	91	19.213	19.213	0.000	97	1493396	4.00	4.34	
99 1,4-Dichlorobenzene	146	19.224	19.226	-0.002	90	1043933	4.00	4.10	
100 4-Isopropyltoluene	119	19.272	19.273	-0.001	96	1804954	4.00	3.98	
101 1,2,3-Trimethylbenzene	105	19.332	19.332	0.000	99	1567341	4.00	4.36	
102 Butylcyclohexane	83	19.375	19.375	0.000	91	1506620	4.00	4.05	
103 2,3-Dihydroindene	117	19.574	19.574	0.000	93	1406234	4.00	3.97	
104 1,2-Dichlorobenzene	146	19.574	19.579	-0.005	97	969247	4.00	4.00	
105 n-Butylbenzene	91	19.693	19.696	-0.003	98	1920490	4.00	4.01	
106 Indene	116	19.704	19.704	0.000	92	1273573	4.00	4.05	
107 Undecane	57	19.984	19.984	0.000	96	1420906	4.00	4.01	
108 1,2-Dibromo-3-Chloropropan	157	20.168	20.168	0.000	92	519301	4.00	4.21	
109 1,2,4,5-Tetramethylbenzene	119	20.443	20.443	0.000	97	1659059	4.00	3.99	
110 Dodecane	57	21.036	21.036	0.000	94	1179708	4.00	4.49	
111 1,2,4-Trichlorobenzene	180	21.262	21.262	0.000	94	804852	4.00	4.16	
112 Naphthalene	128	21.402	21.403	-0.001	99	1942781	4.00	4.21	
113 Hexachlorobutadiene	225	21.597	21.598	-0.001	93	659395	4.00	3.87	
114 1,2,3-Trichlorobenzene	180	21.672	21.676	-0.004	94	739999	4.00	4.12	
115 2-Methylnaphthalene	142	22.416	22.418	-0.002	100	721705	4.00	5.71	
116 1-Methylnaphthalene	142	22.589	22.590	-0.001	100	792974	4.00	5.72	
A 122 C8 Range	1	14.833	(14.771-14.908)		0	5398304	4.00	4.07	
S 123 1,2-Dichloroethene, Total	1				0		8.00	8.10	
S 124 Xylenes, Total	100				0		12.0	12.2	

Reagents:

40L8DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D

Injection Date: 19-Nov-2018 21:56:30

Instrument ID: MG

Operator ID: 007126

Lims ID: IC L8

Worklist Smp#: 15

Client ID:

Purge Vol: 500.000 mL

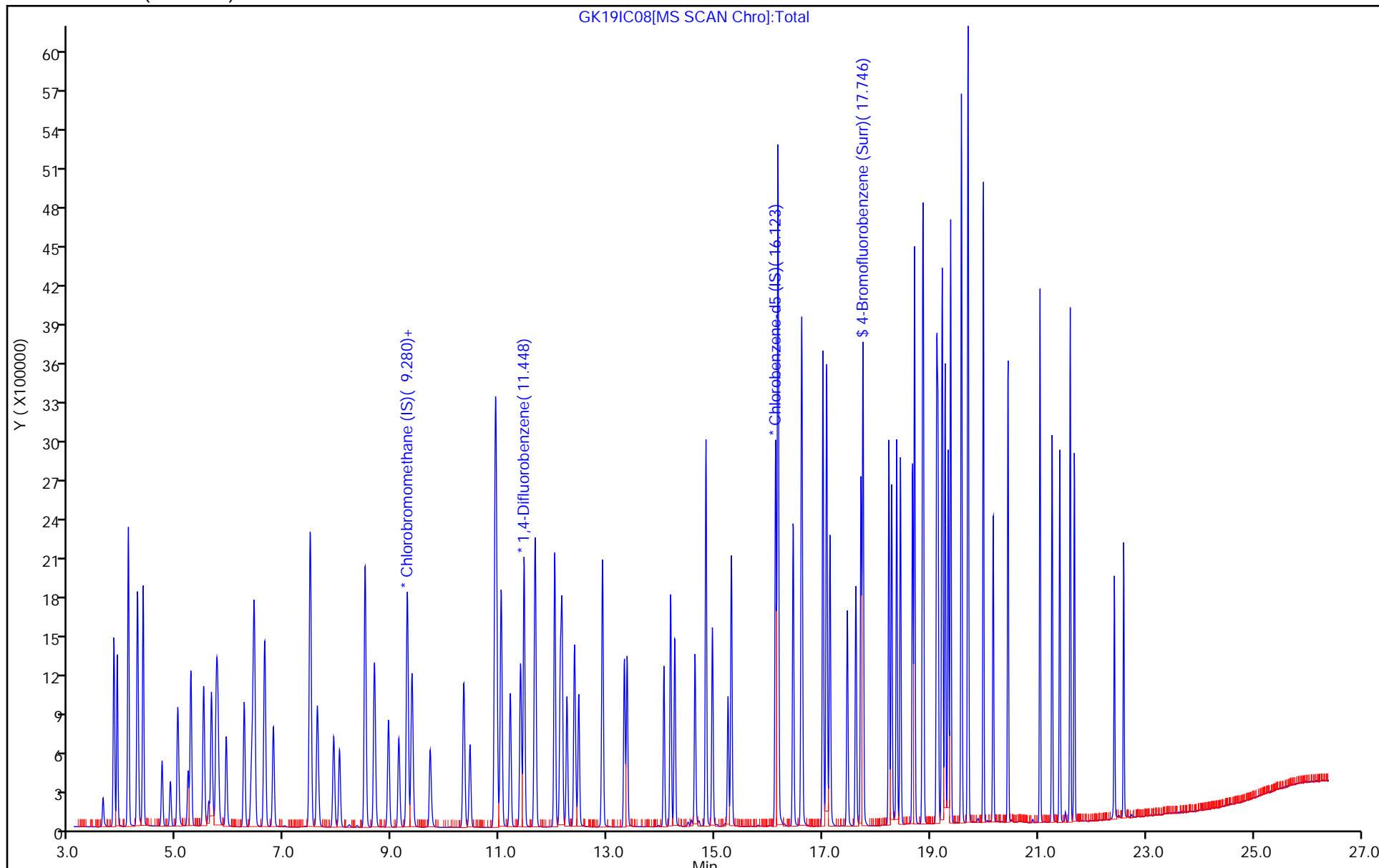
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D

Injection Date: 19-Nov-2018 21:56:30

Instrument ID: MG

Lims ID: IC L8

Client ID:

Operator ID: 007126

ALS Bottle#: 6

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

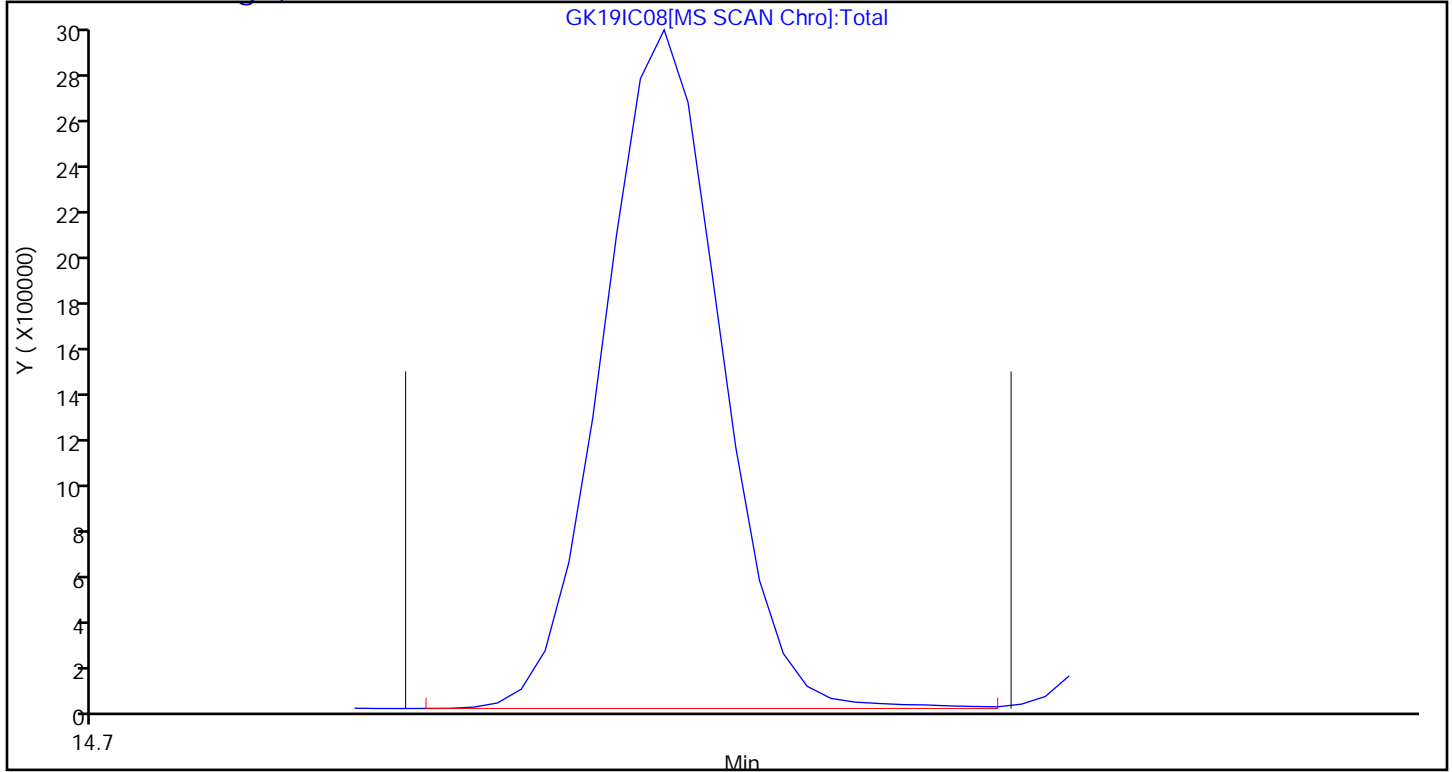
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 122 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25539/18 Calibration Date: 11/20/2018 00:05
 Instrument ID: MG Calib Start Date: 06/21/2017 17:00
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/21/2017 22:43
 Lab File ID: GK19ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.7395	0.6943			2.00	-6.1	35.0
3-Methylthiophene	Ave	0.7319	0.6778			2.00	-7.4	35.0
2-Ethylthiophene	Ave	0.9478	0.7785			2.00	-17.9	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.7194			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.8516	0.5113			2.00	-40.0*	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.167	0.6768			2.00	-42.0*	35.0
Benzo (b) thiophene	Ave	1.068	0.6204			2.00	-41.9*	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19ICV.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 20-Nov-2018 00:05:30 ALS Bottle#: 8 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010044-018
 Misc. Info.: S80
 Operator ID: 007126 Instrument ID: MG
 Sublist:
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:23:39 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0301

First Level Reviewer: barlozhetskayaa

Date: 20-Nov-2018 16:41:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.264	9.274	-0.010	94	300065	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.443	11.449	-0.006	97	1814254	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.123	16.123	0.000	91	1690936	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.746	17.747	-0.001	81	1375636	4.00	4.00	
6 Chlorodifluoromethane	51	3.818	3.827	-0.009	97	463340	2.00	2.04	
7 Propene	41	3.834	3.837	-0.003	99	257034	2.00	1.90	
8 Dichlorodifluoromethane	85	3.888	3.894	-0.006	100	634104	2.00	2.00	
9 Chloromethane	52	4.088	4.095	-0.007	98	78549	2.00	1.87	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.093	4.103	-0.010	94	352718	2.00	2.00	
11 Acetaldehyde	44	4.260	4.275	-0.015	95	378869	10.0	8.00	
12 Vinyl chloride	62	4.271	4.280	-0.009	99	262242	2.00	2.00	
13 Butane	43	4.368	4.374	-0.006	87	444785	2.00	2.00	
14 Butadiene	54	4.368	4.376	-0.008	64	207481	2.00	1.98	
15 Bromomethane	94	4.718	4.727	-0.009	99	195179	2.00	1.94	
16 Chloroethane	64	4.875	4.883	-0.008	93	123863	2.00	2.03	
17 Ethanol	31	4.999	5.037	-0.038	98	367566	10.0	7.06	
18 Vinyl bromide	106	5.204	5.210	-0.006	99	190526	2.00	2.08	
19 2-Methylbutane	43	5.252	5.263	-0.011	93	297212	2.00	1.97	
20 Trichlorofluoromethane	101	5.490	5.499	-0.009	99	517168	2.00	1.98	
21 Acrolein	56	5.511	5.532	-0.021	95	49325	2.00	2.22	
22 Acetonitrile	40	5.587	5.604	-0.017	99	58351	2.00	1.66	
23 Acetone	58	5.646	5.667	-0.021	98	72661	2.00	1.80	
24 Pentane	72	5.727	5.734	-0.007	97	40390	2.00	2.07	
25 Isopropyl alcohol	45	5.754	5.794	-0.040	94	261148	2.00	2.19	
26 Ethyl ether	31	5.921	5.944	-0.023	92	233387	2.00	1.96	
27 1,1-Dichloroethene	96	6.244	6.252	-0.008	94	216294	2.00	2.04	
28 Acrylonitrile	53	6.363	6.386	-0.023	94	140143	2.00	1.97	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.437	-0.009	92	453952	2.00	2.07	
30 2-Methyl-2-propanol	59	6.401	6.458	-0.057	95	340648	2.00	1.94	
31 Methylene Chloride	84	6.617	6.625	-0.008	96	218587	2.00	1.80	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.633	6.638	-0.005	94	264750	2.00	2.12	
33 Carbon disulfide	76	6.784	6.794	-0.010	100	686191	2.00	2.08	
34 trans-1,2-Dichloroethene	96	7.463	7.467	-0.004	95	224185	2.00	2.12	
35 2-Methylpentane	43	7.474	7.485	-0.011	96	651680	2.00	1.93	
36 Methyl tert-butyl ether	73	7.609	7.642	-0.033	97	490662	2.00	1.78	
37 1,1-Dichloroethane	63	7.900	7.913	-0.013	99	495857	2.00	2.15	
38 Vinyl acetate	43	8.013	8.029	-0.016	100	576321	2.00	1.92	
40 Hexane	56	8.488	8.500	-0.012	77	224725	2.00	2.09	
39 2-Butanone (MEK)	72	8.488	8.515	-0.027	94	83581	2.00	1.73	
41 Isopropyl ether	45	8.660	8.694	-0.034	97	730464	2.00	1.84	
42 cis-1,2-Dichloroethene	96	8.919	8.930	-0.011	98	236762	2.00	2.15	
43 Ethyl acetate	43	9.113	9.141	-0.028	98	438176	2.00	1.67	
44 Chloroform	83	9.275	9.286	-0.011	97	498986	2.00	2.08	
45 Tert-butyl ethyl ether	59	9.361	9.395	-0.034	97	582853	2.00	1.69	
46 Tetrahydrofuran	42	9.701	9.736	-0.035	94	245272	2.00	1.82	
47 1,1,1-Trichloroethane	97	10.321	10.331	-0.010	96	512172	2.00	2.04	
48 1,2-Dichloroethane	62	10.434	10.443	-0.009	97	351413	2.00	2.14	
49 Cyclohexane	69	10.909	10.914	-0.005	83	128263	2.00	2.14	
50 Benzene	78	10.914	10.921	-0.007	97	721295	2.00	2.17	
51 n-Butanol	31	10.898	10.936	-0.038	79	96119	2.00	1.96	
52 Carbon tetrachloride	117	10.936	10.941	-0.005	95	500853	2.00	2.32	
53 2,3-Dimethylpentane	71	11.017	11.026	-0.009	93	184507	2.00	2.13	
54 Thiophene	84	11.184	11.192	-0.008	98	393208	2.00	2.11	
55 Isooctane	57	11.648	11.656	-0.008	98	1366532	2.00	2.12	
56 n-Heptane	71	12.014	12.019	-0.005	95	275583	2.00	2.13	
57 1,2-Dichloropropane	63	12.117	12.122	-0.005	89	267409	2.00	2.01	
58 Trichloroethene	130	12.149	12.152	-0.003	95	298703	2.00	2.15	
59 Dibromomethane	93	12.241	12.243	-0.002	90	269616	2.00	2.13	
60 Dichlorobromomethane	83	12.376	12.384	-0.008	98	515090	2.00	2.15	
61 1,4-Dioxane	88	12.403	12.434	-0.031	98	75443	2.00	1.83	
62 Methyl methacrylate	41	12.462	12.472	-0.010	90	278364	2.00	1.72	
63 Methylcyclohexane	83	12.904	12.908	-0.004	93	562544	2.00	2.61	
64 4-Methyl-2-pentanone (MIBK)	43	13.314	13.332	-0.018	98	445954	2.00	1.67	
65 cis-1,3-Dichloropropene	75	13.357	13.363	-0.006	97	407461	2.00	2.14	
66 trans-1,3-Dichloropropene	75	14.042	14.048	-0.006	97	351177	2.00	2.08	
67 Toluene	91	14.166	14.173	-0.007	93	706236	2.00	2.03	
68 1,1,2-Trichloroethane	83	14.247	14.250	-0.003	97	219506	2.00	2.00	
76 2-Methylthiophene	97	14.322	14.322	0.000	98	587013	NC	NC	
77 3-Methylthiophene	97	14.522	14.522	0.000	99	573093	NC	NC	
69 2-Hexanone	58	14.624	14.639	-0.015	91	211684	2.00	1.74	
70 n-Octane	85	14.824	14.829	-0.005	97	281083	2.00	2.11	
71 Chlorodibromomethane	129	14.948	14.950	-0.002	97	431035	2.00	2.17	
72 Ethylene Dibromide	107	15.234	15.238	-0.004	98	380513	2.00	2.09	
73 Tetrachloroethene	129	15.298	15.302	-0.004	92	258825	2.00	2.07	
74 2,3-Dimethylheptane	43	16.161	16.165	-0.004	96	883846	2.00	1.87	
75 Chlorobenzene	112	16.166	16.172	-0.006	90	551853	2.00	2.07	
78 Ethylbenzene	91	16.447	16.450	-0.003	99	876228	2.00	1.94	
91 2-Ethylthiophene	97	16.549	16.549	0.000	99	658156	NC	NC	
79 m-Xylene & p-Xylene	91	16.609	16.609	0.000	99	1363330	4.00	3.89	
80 n-Nonane	57	17.002	17.003	-0.001	95	586131	2.00	2.06	
81 Bromoform	173	17.067	17.072	-0.005	91	359874	2.00	2.15	
82 Styrene	104	17.072	17.073	-0.001	98	491483	2.00	2.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 o-Xylene	91	17.132	17.133	-0.001	98	701452	2.00	1.90	
84 1,1,2,2-Tetrachloroethane	83	17.455	17.456	-0.001	98	487840	2.00	1.93	
85 1,2,3-Trichloropropane	110	17.612	17.616	-0.004	98	140676	2.00	1.90	
86 Isopropylbenzene	105	17.709	17.710	-0.001	97	912523	2.00	1.91	
87 N-Propylbenzene	120	18.226	18.229	-0.003	98	250681	2.00	1.96	
88 2-Chlorotoluene	126	18.280	18.280	0.000	97	239531	2.00	2.00	
89 4-Ethyltoluene	105	18.372	18.373	-0.001	98	865562	2.00	1.83	
90 1,3,5-Trimethylbenzene	120	18.442	18.443	-0.001	91	396825	2.00	2.16	
92 Alpha Methyl Styrene	118	18.669	18.669	-0.001	86	365765	2.00	1.95	
93 n-Decane	57	18.701	18.705	-0.004	88	687001	2.00	1.98	
94 tert-Butylbenzene	119	18.857	18.857	0.000	89	752762	2.00	1.89	
95 1,2,4-Trimethylbenzene	105	18.868	18.870	-0.002	97	758626	2.00	1.90	
96 sec-Butylbenzene	105	19.116	19.117	-0.001	98	1108237	2.00	1.93	
97 1,3-Dichlorobenzene	146	19.138	19.141	-0.003	97	506196	2.00	1.95	
98 Benzyl chloride	91	19.208	19.213	-0.005	97	710886	2.00	2.03	
99 1,4-Dichlorobenzene	146	19.224	19.226	-0.002	94	507388	2.00	1.96	
100 4-Isopropyltoluene	119	19.272	19.273	-0.001	96	846239	2.00	1.83	
101 1,2,3-Trimethylbenzene	105	19.332	19.332	0.000	99	563445	2.00	1.57	
102 Butylcyclohexane	83	19.375	19.375	0.000	90	705309	2.00	1.86	
103 2,3-Dihydroindene	117	19.574	19.574	0.000	94	683012	2.00	1.90	
104 1,2-Dichlorobenzene	146	19.574	19.579	-0.005	94	473510	2.00	1.92	
105 n-Butylbenzene	91	19.693	19.696	-0.003	98	935964	2.00	1.92	
106 Indene	116	19.704	19.704	0.000	95	532347	2.00	1.66	
107 Undecane	57	19.984	19.984	0.000	96	686746	2.00	1.91	
117 1,2-Dimethyl-4-Ethylbenzen	119	20.060	20.060	0.000	98	608219	NC	NC	
108 1,2-Dibromo-3-Chloropropan	157	20.168	20.168	0.000	91	189887	2.00	1.51	
109 1,2,4,5-Tetramethylbenzene	119	20.443	20.443	0.000	97	703296	2.00	1.67	
118 1,2,3,5-Tetramethylbenzene	119	20.497	20.497	0.000	95	432266	NC	NC	
119 1,2,3,4-Tetramethylbenzene	119	20.901	20.901	0.000	97	572239	NC	NC	
110 Dodecane	57	21.036	21.036	0.000	94	527831	2.00	1.98	
111 1,2,4-Trichlorobenzene	180	21.262	21.262	0.000	93	375494	2.00	1.91	
112 Naphthalene	128	21.402	21.403	-0.001	99	887658	2.00	1.89	
120 Benzo(b)thiophene	134	21.505	21.505	0.000	99	524496	NC	NC	
113 Hexachlorobutadiene	225	21.597	21.598	-0.001	92	318928	2.00	1.84	
114 1,2,3-Trichlorobenzene	180	21.672	21.676	-0.004	94	343179	2.00	1.88	
115 2-Methylnaphthalene	142	22.416	22.418	-0.002	100	300392	2.00	2.34	
116 1-Methylnaphthalene	142	22.589	22.590	-0.001	100	343275	2.00	2.44	
A 122 C8 Range	1	14.825	(14.771-14.908)		0	2805964	2.00	2.08	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.27	
S 124 Xylenes, Total	100				0		6.00	5.79	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00080

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19ICV.D

Injection Date: 20-Nov-2018 00:05:30

Instrument ID: MG

Operator ID: 007126

Lims ID: ICV

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

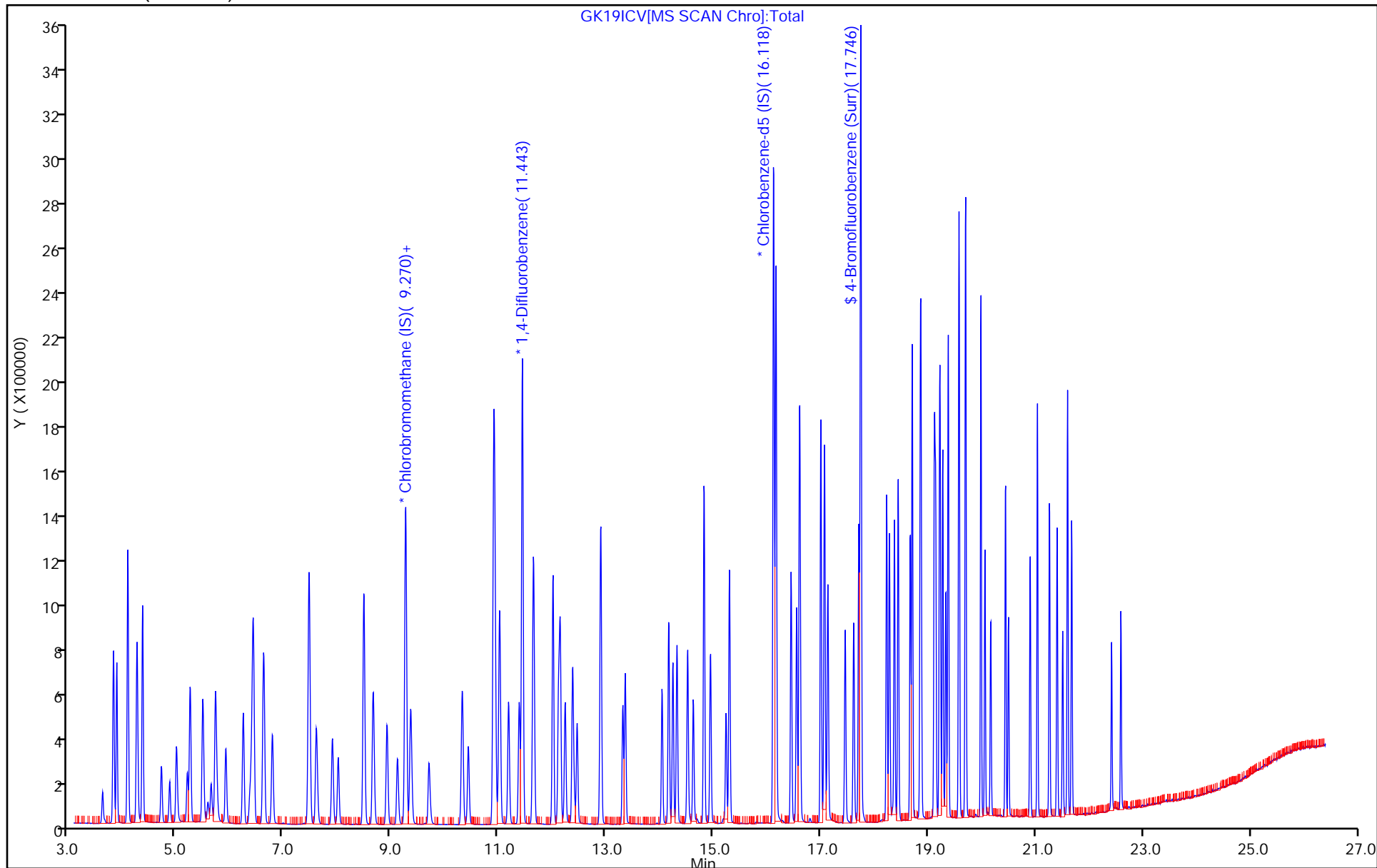
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25539/18 Calibration Date: 11/20/2018 00:05
 Instrument ID: MG Calib Start Date: 11/19/2018 13:04
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/19/2018 21:56
 Lab File ID: GK19ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.021	3.088		2.04	2.00	2.2	35.0
Propene	Ave	1.802	1.713		1.90	2.00	-4.9	35.0
Dichlorodifluoromethane	Ave	4.227	4.226		2.00	2.00	-0.0	35.0
Chloromethane	Ave	0.5585	0.5236		1.87	2.00	-6.3	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.352	2.351		2.00	2.00	-0.0	35.0
Acetaldehyde	Ave	0.6313	0.5051		8.00	10.0	-20.0	35.0
Vinyl chloride	Ave	1.749	1.748		2.00	2.00	-0.0	35.0
1,3-Butadiene	Ave	1.396	1.383		1.98	2.00	-0.9	35.0
Butane	Ave	2.970	2.965		2.00	2.00	-0.2	35.0
Bromomethane	Ave	1.344	1.301		1.94	2.00	-3.2	35.0
Chloroethane	Ave	0.8143	0.8256		2.03	2.00	1.4	35.0
Ethanol	Ave	0.6939	0.4900		7.06	10.0	-29.4	35.0
Vinyl bromide	Ave	1.221	1.270		2.08	2.00	4.0	35.0
2-Methylbutane	Ave	2.007	1.981		1.97	2.00	-1.3	35.0
Trichlorofluoromethane	Ave	3.482	3.447		1.98	2.00	-1.0	35.0
Acrolein	Ave	0.2960	0.3288		2.22	2.00	11.1	35.0
Acetonitrile	Ave	0.4680	0.3889		1.66	2.00	-16.9	35.0
Acetone	Ave	0.5378	0.4843		1.80	2.00	-9.9	35.0
Pentane	Ave	0.2607	0.2692		2.07	2.00	3.3	35.0
Isopropyl alcohol	Ave	1.586	1.741		2.19	2.00	9.7	35.0
Ethyl ether	Ave	1.588	1.556		1.96	2.00	-2.0	35.0
1,1-Dichloroethene	Ave	1.412	1.442		2.04	2.00	2.1	35.0
Acrylonitrile	Ave	0.9481	0.9341		1.97	2.00	-1.5	35.0
tert-Butyl alcohol	Ave	2.340	2.270		1.94	2.00	-3.0	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.926	3.026		2.07	2.00	3.4	35.0
Methylene Chloride	Ave	1.619	1.457		1.80	2.00	-10.0	35.0
3-Chloropropene	Ave	1.663	1.765		2.12	2.00	6.1	35.0
Carbon disulfide	Ave	4.400	4.574		2.08	2.00	4.0	35.0
trans-1,2-Dichloroethene	Ave	1.410	1.494		2.12	2.00	5.9	35.0
2-Methylpentane	Ave	4.504	4.344		1.93	2.00	-3.6	35.0
Methyl tert-butyl ether	Ave	3.665	3.270		1.78	2.00	-10.8	35.0
1,1-Dichloroethane	Ave	3.077	3.305		2.15	2.00	7.4	35.0
Vinyl acetate	Ave	3.992	3.841		1.92	2.00	-3.8	35.0
2-Butanone (MEK)	Ave	0.6455	0.5571		1.73	2.00	-13.7	35.0
Hexane	Ave	1.430	1.498		2.09	2.00	4.7	35.0
Isopropyl ether	Ave	5.300	4.869		1.84	2.00	-8.1	35.0
cis-1,2-Dichloroethene	Ave	1.467	1.578		2.15	2.00	7.6	35.0
Ethyl acetate	Ave	3.494	2.921		1.67	2.00	-16.4	35.0
Chloroform	Ave	3.196	3.326		2.08	2.00	4.1	35.0
Tert-butyl ethyl ether	Ave	4.592	3.885		1.69	2.00	-15.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25539/18 Calibration Date: 11/20/2018 00:05
 Instrument ID: MG Calib Start Date: 11/19/2018 13:04
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/19/2018 21:56
 Lab File ID: GK19ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.795	1.635		1.82	2.00	-8.9	35.0
1,1,1-Trichloroethane	Ave	3.339	3.414		2.04	2.00	2.2	35.0
1,2-Dichloroethane	Ave	0.3618	0.3874		2.14	2.00	7.1	35.0
1-Butanol	Ave	0.1081	0.1060		1.96	2.00	-1.9	35.0
Cyclohexane	Ave	0.1320	0.1414		2.14	2.00	7.1	35.0
Benzene	Ave	0.7319	0.7951		2.17	2.00	8.6	35.0
Carbon tetrachloride	Ave	0.4758	0.5521		2.32	2.00	16.0	35.0
2,3-Dimethylpentane	Ave	0.1912	0.2034		2.13	2.00	6.4	35.0
Thiophene	Ave	0.4112	0.4335		2.11	2.00	5.4	35.0
2,2,4-Trimethylpentane	Ave	1.419	1.506		2.12	2.00	6.2	35.0
Heptane	Ave	0.2855	0.3038		2.13	2.00	6.4	35.0
1,2-Dichloropropane	Ave	0.2938	0.2948		2.01	2.00	0.4	35.0
Trichloroethene	Ave	0.3059	0.3293		2.15	2.00	7.7	35.0
Dibromomethane	Ave	0.2795	0.2972		2.13	2.00	6.3	35.0
Bromodichloromethane	Ave	0.5283	0.5678		2.15	2.00	7.5	35.0
1,4-Dioxane	Ave	0.0910	0.0832		1.83	2.00	-8.6	35.0
Methyl methacrylate	Ave	0.3571	0.3069		1.72	2.00	-14.1	35.0
Methylcyclohexane	Ave	0.4749	0.6201		2.61	2.00	30.6	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5872	0.4916		1.67	2.00	-16.3	35.0
cis-1,3-Dichloropropene	Ave	0.4206	0.4492		2.14	2.00	6.8	35.0
trans-1,3-Dichloropropene	Ave	0.3993	0.4154		2.08	2.00	4.0	35.0
Toluene	Ave	0.8236	0.8353		2.03	2.00	1.4	35.0
1,1,2-Trichloroethane	Ave	0.2599	0.2596		2.00	2.00	-0.0	35.0
2-Hexanone	Ave	0.2871	0.2504		1.74	2.00	-12.8	35.0
Octane	Ave	0.3156	0.3325		2.11	2.00	5.4	35.0
Dibromochloromethane	Ave	0.4702	0.5098		2.17	2.00	8.4	35.0
1,2-Dibromoethane (EDB)	Ave	0.4313	0.4501		2.09	2.00	4.4	35.0
Tetrachloroethene	Ave	0.2956	0.3061		2.07	2.00	3.6	35.0
2,3-Dimethylheptane	Ave	1.119	1.045		1.87	2.00	-6.6	35.0
Chlorobenzene	Ave	0.6304	0.6527		2.07	2.00	3.5	35.0
Ethylbenzene	Ave	1.066	1.036		1.94	2.00	-2.8	35.0
m-Xylene & p-Xylene	Ave	0.8287	0.8063		3.89	4.00	-2.7	35.0
Nonane	Ave	0.6718	0.6933		2.06	2.00	3.2	35.0
Bromoform	Ave	0.3951	0.4257		2.15	2.00	7.7	35.0
Styrene	Ave	0.5804	0.5813		2.00	2.00	0.2	35.0
o-Xylene	Ave	0.8729	0.8297		1.90	2.00	-5.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5985	0.5770		1.93	2.00	-3.6	35.0
1,2,3-Trichloropropane	Ave	0.1752	0.1664		1.90	2.00	-5.1	35.0
Isopropylbenzene	Ave	1.129	1.079		1.91	2.00	-4.4	35.0
Propylbenzene	Ave	0.3023	0.2965		1.96	2.00	-1.9	35.0
2-Chlorotoluene	Ave	0.2837	0.2833		2.00	2.00	-0.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25539/18 Calibration Date: 11/20/2018 00:05
 Instrument ID: MG Calib Start Date: 11/19/2018 13:04
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/19/2018 21:56
 Lab File ID: GK19ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.117	1.024		1.83	2.00	-8.3	35.0
1,3,5-Trimethylbenzene	Ave	0.4354	0.4694		2.16	2.00	7.8	35.0
Alpha Methyl Styrene	Ave	0.4430	0.4326		1.95	2.00	-2.3	35.0
Decane	Ave	0.8194	0.8126		1.98	2.00	-0.8	35.0
tert-Butylbenzene	Ave	0.9434	0.8904		1.89	2.00	-5.6	35.0
1,2,4-Trimethylbenzene	Ave	0.9442	0.8973		1.90	2.00	-5.0	35.0
sec-Butylbenzene	Ave	1.358	1.311		1.93	2.00	-3.5	35.0
1,3-Dichlorobenzene	Ave	0.6140	0.5987		1.95	2.00	-2.5	35.0
Benzyl chloride	Ave	0.8268	0.8408		2.03	2.00	1.7	35.0
1,4-Dichlorobenzene	Ave	0.6126	0.6001		1.96	2.00	-2.0	35.0
4-Isopropyltoluene	Ave	1.092	1.001		1.83	2.00	-8.3	35.0
1,2,3-Trimethylbenzene	QuaF		0.6664		1.57	2.00	-21.4	35.0
Butylcyclohexane	Ave	0.8951	0.8342		1.86	2.00	-6.8	35.0
1,2-Dichlorobenzene	Ave	0.5824	0.5601		1.92	2.00	-3.8	35.0
Indane	Ave	0.8523	0.8079		1.90	2.00	-5.2	35.0
Butylbenzene	Ave	1.151	1.107		1.92	2.00	-3.8	35.0
Indene	Ave	0.7565	0.6297		1.66	2.00	-16.8	35.0
Undecane	Ave	0.8525	0.8123		1.91	2.00	-4.7	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2968	0.2246		1.51	2.00	-24.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.999	0.8318		1.67	2.00	-16.7	35.0
Dodecane	Ave	0.6321	0.6243		1.98	2.00	-1.2	35.0
1,2,4-Trichlorobenzene	Ave	0.4650	0.4441		1.91	2.00	-4.5	35.0
Naphthalene	Ave	1.108	1.050		1.89	2.00	-5.3	35.0
Hexachlorobutadiene	Ave	0.4101	0.3772		1.84	2.00	-8.0	35.0
1,2,3-Trichlorobenzene	Ave	0.4318	0.4059		1.88	2.00	-6.0	35.0
2-Methylnaphthalene	Ave	0.3039	0.3553		2.34	2.00	16.9	50.0
1-Methylnaphthalene	Ave	0.3331	0.4060		2.44	2.00	21.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8136	0.8135		4.00	4.00	-0.0	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19ICV.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 20-Nov-2018 00:05:30 ALS Bottle#: 8 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010044-018
 Misc. Info.: S80
 Operator ID: 007126 Instrument ID: MG
 Sublist:

Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:23:39 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0301

First Level Reviewer: barlozhetskayaa Date: 20-Nov-2018 16:41:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.264	9.274	-0.010	94	300065	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.443	11.449	-0.006	97	1814254	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.123	16.123	0.000	91	1690936	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.746	17.747	-0.001	81	1375636	4.00	4.00	
6 Chlorodifluoromethane	51	3.818	3.827	-0.009	97	463340	2.00	2.04	
7 Propene	41	3.834	3.837	-0.003	99	257034	2.00	1.90	
8 Dichlorodifluoromethane	85	3.888	3.894	-0.006	100	634104	2.00	2.00	
9 Chloromethane	52	4.088	4.095	-0.007	98	78549	2.00	1.87	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.093	4.103	-0.010	94	352718	2.00	2.00	
11 Acetaldehyde	44	4.260	4.275	-0.015	95	378869	10.0	8.00	
12 Vinyl chloride	62	4.271	4.280	-0.009	99	262242	2.00	2.00	
13 Butane	43	4.368	4.374	-0.006	87	444785	2.00	2.00	
14 Butadiene	54	4.368	4.376	-0.008	64	207481	2.00	1.98	
15 Bromomethane	94	4.718	4.727	-0.009	99	195179	2.00	1.94	
16 Chloroethane	64	4.875	4.883	-0.008	93	123863	2.00	2.03	
17 Ethanol	31	4.999	5.037	-0.038	98	367566	10.0	7.06	
18 Vinyl bromide	106	5.204	5.210	-0.006	99	190526	2.00	2.08	
19 2-Methylbutane	43	5.252	5.263	-0.011	93	297212	2.00	1.97	
20 Trichlorofluoromethane	101	5.490	5.499	-0.009	99	517168	2.00	1.98	
21 Acrolein	56	5.511	5.532	-0.021	95	49325	2.00	2.22	
22 Acetonitrile	40	5.587	5.604	-0.017	99	58351	2.00	1.66	
23 Acetone	58	5.646	5.667	-0.021	98	72661	2.00	1.80	
24 Pentane	72	5.727	5.734	-0.007	97	40390	2.00	2.07	
25 Isopropyl alcohol	45	5.754	5.794	-0.040	94	261148	2.00	2.19	
26 Ethyl ether	31	5.921	5.944	-0.023	92	233387	2.00	1.96	
27 1,1-Dichloroethene	96	6.244	6.252	-0.008	94	216294	2.00	2.04	
28 Acrylonitrile	53	6.363	6.386	-0.023	94	140143	2.00	1.97	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.437	-0.009	92	453952	2.00	2.07	
30 2-Methyl-2-propanol	59	6.401	6.458	-0.057	95	340648	2.00	1.94	
31 Methylene Chloride	84	6.617	6.625	-0.008	96	218587	2.00	1.80	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.633	6.638	-0.005	94	264750	2.00	2.12	
33 Carbon disulfide	76	6.784	6.794	-0.010	100	686191	2.00	2.08	
34 trans-1,2-Dichloroethene	96	7.463	7.467	-0.004	95	224185	2.00	2.12	
35 2-Methylpentane	43	7.474	7.485	-0.011	96	651680	2.00	1.93	
36 Methyl tert-butyl ether	73	7.609	7.642	-0.033	97	490662	2.00	1.78	
37 1,1-Dichloroethane	63	7.900	7.913	-0.013	99	495857	2.00	2.15	
38 Vinyl acetate	43	8.013	8.029	-0.016	100	576321	2.00	1.92	
40 Hexane	56	8.488	8.500	-0.012	77	224725	2.00	2.09	
39 2-Butanone (MEK)	72	8.488	8.515	-0.027	94	83581	2.00	1.73	
41 Isopropyl ether	45	8.660	8.694	-0.034	97	730464	2.00	1.84	
42 cis-1,2-Dichloroethene	96	8.919	8.930	-0.011	98	236762	2.00	2.15	
43 Ethyl acetate	43	9.113	9.141	-0.028	98	438176	2.00	1.67	
44 Chloroform	83	9.275	9.286	-0.011	97	498986	2.00	2.08	
45 Tert-butyl ethyl ether	59	9.361	9.395	-0.034	97	582853	2.00	1.69	
46 Tetrahydrofuran	42	9.701	9.736	-0.035	94	245272	2.00	1.82	
47 1,1,1-Trichloroethane	97	10.321	10.331	-0.010	96	512172	2.00	2.04	
48 1,2-Dichloroethane	62	10.434	10.443	-0.009	97	351413	2.00	2.14	
49 Cyclohexane	69	10.909	10.914	-0.005	83	128263	2.00	2.14	
50 Benzene	78	10.914	10.921	-0.007	97	721295	2.00	2.17	
51 n-Butanol	31	10.898	10.936	-0.038	79	96119	2.00	1.96	
52 Carbon tetrachloride	117	10.936	10.941	-0.005	95	500853	2.00	2.32	
53 2,3-Dimethylpentane	71	11.017	11.026	-0.009	93	184507	2.00	2.13	
54 Thiophene	84	11.184	11.192	-0.008	98	393208	2.00	2.11	
55 Isooctane	57	11.648	11.656	-0.008	98	1366532	2.00	2.12	
56 n-Heptane	71	12.014	12.019	-0.005	95	275583	2.00	2.13	
57 1,2-Dichloropropane	63	12.117	12.122	-0.005	89	267409	2.00	2.01	
58 Trichloroethene	130	12.149	12.152	-0.003	95	298703	2.00	2.15	
59 Dibromomethane	93	12.241	12.243	-0.002	90	269616	2.00	2.13	
60 Dichlorobromomethane	83	12.376	12.384	-0.008	98	515090	2.00	2.15	
61 1,4-Dioxane	88	12.403	12.434	-0.031	98	75443	2.00	1.83	
62 Methyl methacrylate	41	12.462	12.472	-0.010	90	278364	2.00	1.72	
63 Methylcyclohexane	83	12.904	12.908	-0.004	93	562544	2.00	2.61	
64 4-Methyl-2-pentanone (MIBK)	43	13.314	13.332	-0.018	98	445954	2.00	1.67	
65 cis-1,3-Dichloropropene	75	13.357	13.363	-0.006	97	407461	2.00	2.14	
66 trans-1,3-Dichloropropene	75	14.042	14.048	-0.006	97	351177	2.00	2.08	
67 Toluene	91	14.166	14.173	-0.007	93	706236	2.00	2.03	
68 1,1,2-Trichloroethane	83	14.247	14.250	-0.003	97	219506	2.00	2.00	
76 2-Methylthiophene	97	14.322	14.322	0.000	98	587013	NC	NC	
77 3-Methylthiophene	97	14.522	14.522	0.000	99	573093	NC	NC	
69 2-Hexanone	58	14.624	14.639	-0.015	91	211684	2.00	1.74	
70 n-Octane	85	14.824	14.829	-0.005	97	281083	2.00	2.11	
71 Chlorodibromomethane	129	14.948	14.950	-0.002	97	431035	2.00	2.17	
72 Ethylene Dibromide	107	15.234	15.238	-0.004	98	380513	2.00	2.09	
73 Tetrachloroethene	129	15.298	15.302	-0.004	92	258825	2.00	2.07	
74 2,3-Dimethylheptane	43	16.161	16.165	-0.004	96	883846	2.00	1.87	
75 Chlorobenzene	112	16.166	16.172	-0.006	90	551853	2.00	2.07	
78 Ethylbenzene	91	16.447	16.450	-0.003	99	876228	2.00	1.94	
91 2-Ethylthiophene	97	16.549	16.549	0.000	99	658156	NC	NC	
79 m-Xylene & p-Xylene	91	16.609	16.609	0.000	99	1363330	4.00	3.89	
80 n-Nonane	57	17.002	17.003	-0.001	95	586131	2.00	2.06	
81 Bromoform	173	17.067	17.072	-0.005	91	359874	2.00	2.15	
82 Styrene	104	17.072	17.073	-0.001	98	491483	2.00	2.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 o-Xylene	91	17.132	17.133	-0.001	98	701452	2.00	1.90	
84 1,1,2,2-Tetrachloroethane	83	17.455	17.456	-0.001	98	487840	2.00	1.93	
85 1,2,3-Trichloropropane	110	17.612	17.616	-0.004	98	140676	2.00	1.90	
86 Isopropylbenzene	105	17.709	17.710	-0.001	97	912523	2.00	1.91	
87 N-Propylbenzene	120	18.226	18.229	-0.003	98	250681	2.00	1.96	
88 2-Chlorotoluene	126	18.280	18.280	0.000	97	239531	2.00	2.00	
89 4-Ethyltoluene	105	18.372	18.373	-0.001	98	865562	2.00	1.83	
90 1,3,5-Trimethylbenzene	120	18.442	18.443	-0.001	91	396825	2.00	2.16	
92 Alpha Methyl Styrene	118	18.669	18.669	-0.001	86	365765	2.00	1.95	
93 n-Decane	57	18.701	18.705	-0.004	88	687001	2.00	1.98	
94 tert-Butylbenzene	119	18.857	18.857	0.000	89	752762	2.00	1.89	
95 1,2,4-Trimethylbenzene	105	18.868	18.870	-0.002	97	758626	2.00	1.90	
96 sec-Butylbenzene	105	19.116	19.117	-0.001	98	1108237	2.00	1.93	
97 1,3-Dichlorobenzene	146	19.138	19.141	-0.003	97	506196	2.00	1.95	
98 Benzyl chloride	91	19.208	19.213	-0.005	97	710886	2.00	2.03	
99 1,4-Dichlorobenzene	146	19.224	19.226	-0.002	94	507388	2.00	1.96	
100 4-Isopropyltoluene	119	19.272	19.273	-0.001	96	846239	2.00	1.83	
101 1,2,3-Trimethylbenzene	105	19.332	19.332	0.000	99	563445	2.00	1.57	
102 Butylcyclohexane	83	19.375	19.375	0.000	90	705309	2.00	1.86	
103 2,3-Dihydroindene	117	19.574	19.574	0.000	94	683012	2.00	1.90	
104 1,2-Dichlorobenzene	146	19.574	19.579	-0.005	94	473510	2.00	1.92	
105 n-Butylbenzene	91	19.693	19.696	-0.003	98	935964	2.00	1.92	
106 Indene	116	19.704	19.704	0.000	95	532347	2.00	1.66	
107 Undecane	57	19.984	19.984	0.000	96	686746	2.00	1.91	
117 1,2-Dimethyl-4-Ethylbenzen	119	20.060	20.060	0.000	98	608219	NC	NC	
108 1,2-Dibromo-3-Chloropropan	157	20.168	20.168	0.000	91	189887	2.00	1.51	
109 1,2,4,5-Tetramethylbenzene	119	20.443	20.443	0.000	97	703296	2.00	1.67	
118 1,2,3,5-Tetramethylbenzene	119	20.497	20.497	0.000	95	432266	NC	NC	
119 1,2,3,4-Tetramethylbenzene	119	20.901	20.901	0.000	97	572239	NC	NC	
110 Dodecane	57	21.036	21.036	0.000	94	527831	2.00	1.98	
111 1,2,4-Trichlorobenzene	180	21.262	21.262	0.000	93	375494	2.00	1.91	
112 Naphthalene	128	21.402	21.403	-0.001	99	887658	2.00	1.89	
120 Benzo(b)thiophene	134	21.505	21.505	0.000	99	524496	NC	NC	
113 Hexachlorobutadiene	225	21.597	21.598	-0.001	92	318928	2.00	1.84	
114 1,2,3-Trichlorobenzene	180	21.672	21.676	-0.004	94	343179	2.00	1.88	
115 2-Methylnaphthalene	142	22.416	22.418	-0.002	100	300392	2.00	2.34	
116 1-Methylnaphthalene	142	22.589	22.590	-0.001	100	343275	2.00	2.44	
A 122 C8 Range	1	14.825	(14.771-14.908)		0	2805964	2.00	2.08	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.27	
S 124 Xylenes, Total	100				0		6.00	5.79	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00080

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19ICV.D

Injection Date: 20-Nov-2018 00:05:30

Instrument ID: MG

Operator ID: 007126

Lims ID: ICV

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

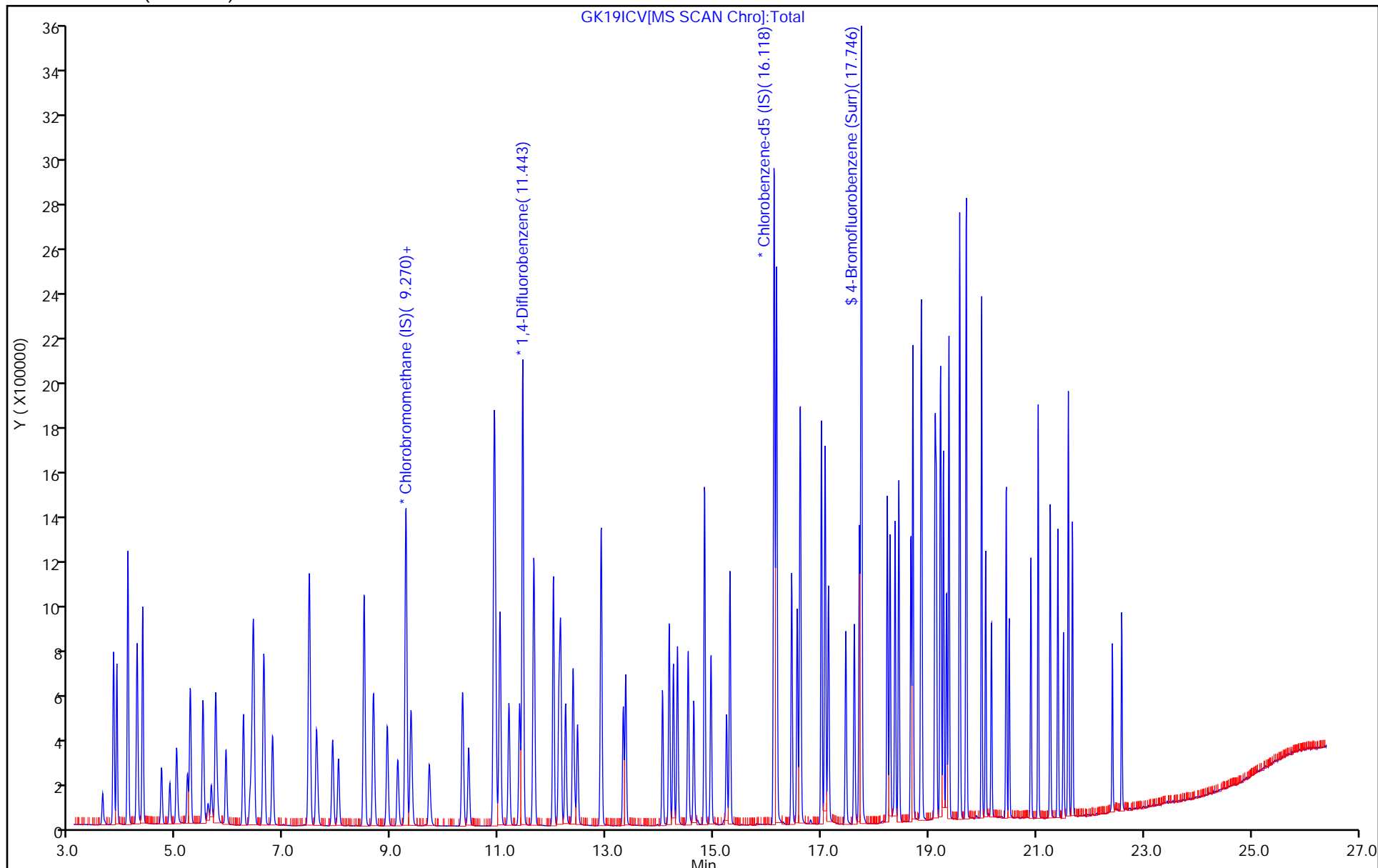
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-26610/2 Calibration Date: 01/03/2019 11:24
 Instrument ID: MG Calib Start Date: 11/19/2018 13:04
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/19/2018 21:56
 Lab File ID: GCCVA03.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.021	3.079		2.04	2.00	1.9	30.0
Propene	Ave	1.802	1.762		1.96	2.00	-2.2	30.0
Dichlorodifluoromethane	Ave	4.227	4.206		1.99	2.00	-0.5	30.0
Chloromethane	Ave	0.5585	0.5437		1.95	2.00	-2.6	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.352	2.260		1.92	2.00	-3.9	30.0
Acetaldehyde	Ave	0.6313	0.7000		11.1	10.0	10.9	30.0
Vinyl chloride	Ave	1.749	1.824		2.09	2.00	4.3	30.0
1,3-Butadiene	Ave	1.396	1.523		2.18	2.00	9.1	30.0
Butane	Ave	2.970	3.341		2.25	2.00	12.5	30.0
Bromomethane	Ave	1.344	1.193		1.77	2.00	-11.3	30.0
Chloroethane	Ave	0.8143	0.7172		1.76	2.00	-11.9	30.0
Ethanol	Ave	0.6939	0.7887		11.4	10.0	13.7	30.0
Vinyl bromide	Ave	1.221	1.085		1.78	2.00	-11.1	30.0
2-Methylbutane	Ave	2.007	2.035		2.03	2.00	1.4	30.0
Trichlorofluoromethane	Ave	3.482	3.748		2.15	2.00	7.6	30.0
Acrolein	Ave	0.2960	0.3660		2.47	2.00	23.7	30.0
Acetonitrile	Ave	0.4680	0.6880		2.94	2.00	47.0*	30.0
Acetone	Ave	0.5378	0.5914		6.60	6.00	10.0	30.0
Pentane	Ave	0.2607	0.2501		1.92	2.00	-4.0	30.0
Isopropyl alcohol	Ave	1.586	1.760		6.66	6.00	10.9	30.0
Ethyl ether	Ave	1.588	2.009		2.53	2.00	26.5	30.0
1,1-Dichloroethene	Ave	1.412	1.557		2.21	2.00	10.3	30.0
Acrylonitrile	Ave	0.9481	1.156		2.44	2.00	21.9	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.926	3.293		2.25	2.00	12.5	30.0
tert-Butyl alcohol	Ave	2.340	2.737		2.34	2.00	16.9	30.0
Methylene Chloride	Ave	1.619	1.580		1.95	2.00	-2.4	30.0
3-Chloropropene	Ave	1.663	2.093		2.52	2.00	25.8	30.0
Carbon disulfide	Ave	4.400	4.975		2.26	2.00	13.1	30.0
trans-1,2-Dichloroethene	Ave	1.410	1.567		2.22	2.00	11.1	30.0
2-Methylpentane	Ave	4.504	5.132		2.28	2.00	13.9	30.0
Methyl tert-butyl ether	Ave	3.665	4.177		2.28	2.00	14.0	30.0
1,1-Dichloroethane	Ave	3.077	3.458		2.25	2.00	12.4	30.0
Vinyl acetate	Ave	3.992	4.779		2.39	2.00	19.7	30.0
2-Butanone (MEK)	Ave	0.6455	0.6662		2.06	2.00	3.2	30.0
Hexane	Ave	1.430	1.576		2.20	2.00	10.2	30.0
Isopropyl ether	Ave	5.300	6.067		2.29	2.00	14.5	30.0
cis-1,2-Dichloroethene	Ave	1.467	1.573		2.15	2.00	7.3	30.0
Ethyl acetate	Ave	3.494	4.041		2.31	2.00	15.6	30.0
Chloroform	Ave	3.196	3.553		2.22	2.00	11.2	30.0
Tert-butyl ethyl ether	Ave	4.592	5.220		2.27	2.00	13.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-26610/2 Calibration Date: 01/03/2019 11:24
 Instrument ID: MG Calib Start Date: 11/19/2018 13:04
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/19/2018 21:56
 Lab File ID: GCCVA03.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.795	2.136		2.38	2.00	19.0	30.0
1,1,1-Trichloroethane	Ave	3.339	3.709		2.22	2.00	11.1	30.0
1,2-Dichloroethane	Ave	0.3618	0.4229		2.34	2.00	16.9	30.0
Cyclohexane	Ave	0.1320	0.1449		2.19	2.00	9.7	30.0
Benzene	Ave	0.7319	0.7622		2.08	2.00	4.1	30.0
Carbon tetrachloride	Ave	0.4758	0.5656		2.38	2.00	18.9	30.0
1-Butanol	Ave	0.1081	0.1272		2.36	2.00	17.8	30.0
2,3-Dimethylpentane	Ave	0.1912	0.2004		2.10	2.00	4.8	30.0
Thiophene	Ave	0.4112	0.4223		2.05	2.00	2.7	30.0
2,2,4-Trimethylpentane	Ave	1.419	1.555		2.19	2.00	9.5	30.0
Heptane	Ave	0.2855	0.3016		2.11	2.00	5.6	30.0
1,2-Dichloropropane	Ave	0.2938	0.3109		2.12	2.00	5.8	30.0
Trichloroethene	Ave	0.3059	0.3099		2.03	2.00	1.3	30.0
Dibromomethane	Ave	0.2795	0.3006		2.15	2.00	7.5	30.0
Bromodichloromethane	Ave	0.5283	0.6040		2.29	2.00	14.3	30.0
1,4-Dioxane	Ave	0.0910	0.0930		2.04	2.00	2.2	30.0
Methyl methacrylate	Ave	0.3571	0.4146		2.32	2.00	16.1	30.0
Methylcyclohexane	Ave	0.4749	0.4932		2.08	2.00	3.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5872	0.6109		2.08	2.00	4.0	30.0
cis-1,3-Dichloropropene	Ave	0.4206	0.4468		2.12	2.00	6.2	30.0
trans-1,3-Dichloropropene	Ave	0.3993	0.4594		2.30	2.00	15.1	30.0
Toluene	Ave	0.8236	0.8479		2.06	2.00	2.9	30.0
1,1,2-Trichloroethane	Ave	0.2599	0.2785		2.14	2.00	7.2	30.0
2-Hexanone	Ave	0.2871	0.2894		2.02	2.00	0.8	30.0
Octane	Ave	0.3156	0.3265		2.07	2.00	3.5	30.0
Dibromochloromethane	Ave	0.4702	0.5051		2.15	2.00	7.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.4313	0.4574		2.12	2.00	6.1	30.0
Tetrachloroethene	Ave	0.2956	0.3074		2.08	2.00	4.0	30.0
2,3-Dimethylheptane	Ave	1.119	1.275		2.28	2.00	14.0	30.0
Chlorobenzene	Ave	0.6304	0.6171		1.96	2.00	-2.1	30.0
Ethylbenzene	Ave	1.066	1.124		2.11	2.00	5.4	30.0
m-Xylene & p-Xylene	Ave	0.8287	0.8516		4.11	4.00	2.8	30.0
Nonane	Ave	0.6718	0.7118		2.12	2.00	6.0	30.0
Bromoform	Ave	0.3951	0.3834		1.94	2.00	-3.0	30.0
Styrene	Ave	0.5804	0.5842		2.01	2.00	0.7	30.0
o-Xylene	Ave	0.8729	0.9201		2.11	2.00	5.4	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5985	0.6443		2.15	2.00	7.7	30.0
1,2,3-Trichloropropane	Ave	0.1752	0.1909		2.18	2.00	8.9	30.0
Isopropylbenzene	Ave	1.129	1.131		2.00	2.00	0.2	30.0
Propylbenzene	Ave	0.3023	0.3068		2.03	2.00	1.5	30.0
2-Chlorotoluene	Ave	0.2837	0.2813		1.98	2.00	-0.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-26610/2 Calibration Date: 01/03/2019 11:24
 Instrument ID: MG Calib Start Date: 11/19/2018 13:04
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/19/2018 21:56
 Lab File ID: GCCVA03.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.117	1.160		2.08	2.00	3.9	30.0
1,3,5-Trimethylbenzene	Ave	0.4354	0.4404		2.02	2.00	1.1	30.0
Alpha Methyl Styrene	Ave	0.4430	0.4596		2.08	2.00	3.8	30.0
Decane	Ave	0.8194	0.8724		2.13	2.00	6.5	30.0
tert-Butylbenzene	Ave	0.9434	0.9662		2.05	2.00	2.4	30.0
1,2,4-Trimethylbenzene	Ave	0.9442	0.9820		2.08	2.00	4.0	30.0
sec-Butylbenzene	Ave	1.358	1.419		2.09	2.00	4.5	30.0
1,3-Dichlorobenzene	Ave	0.6140	0.5845		1.90	2.00	-4.8	30.0
Benzyl chloride	Ave	0.8268	0.9607		2.32	2.00	16.2	30.0
1,4-Dichlorobenzene	Ave	0.6126	0.5969		1.95	2.00	-2.6	30.0
4-Isopropyltoluene	Ave	1.092	1.122		2.06	2.00	2.8	30.0
1,2,3-Trimethylbenzene	QuaF		1.000		2.35	2.00	17.4	30.0
Butylcyclohexane	Ave	0.8951	0.9111		2.04	2.00	1.8	30.0
Indane	Ave	0.8523	0.8638		2.03	2.00	1.3	30.0
1,2-Dichlorobenzene	Ave	0.5824	0.5664		1.95	2.00	-2.7	30.0
Butylbenzene	Ave	1.151	1.238		2.15	2.00	7.6	30.0
Indene	Ave	0.7565	0.7648		2.02	2.00	1.1	30.0
Undecane	Ave	0.8525	0.8770		2.06	2.00	2.9	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2968	0.2578		1.74	2.00	-13.1	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.999	0.9667		1.94	2.00	-3.2	30.0
Dodecane	Ave	0.6321	0.5392		1.71	2.00	-14.7	30.0
1,2,4-Trichlorobenzene	Ave	0.4650	0.3924		1.69	2.00	-15.6	30.0
Naphthalene	Ave	1.108	0.9250		1.67	2.00	-16.5	30.0
Hexachlorobutadiene	Ave	0.4101	0.3423		1.67	2.00	-16.5	30.0
1,2,3-Trichlorobenzene	Ave	0.4318	0.3274		1.52	2.00	-24.2	30.0
2-Methylnaphthalene	Ave	0.3039	0.3689		2.43	2.00	21.4	50.0
1-Methylnaphthalene	Ave	0.3331	0.4237		2.54	2.00	27.2	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8136	0.8452		4.16	4.00	3.9	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GCCVA03.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 03-Jan-2019 11:24:30 ALS Bottle#: 13 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010438-002
 Misc. Info.: P79
 Operator ID: 403648 Instrument ID: MG
 Sublist: chrom-MG_TO15*sub17
 Method: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Jan-2019 12:07:59 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits

Date: 04-Jan-2019 12:07:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.259	9.259	0.000	92	286081	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.426	11.426	0.000	98	1732806	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.102	16.102	0.000	94	1575804	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.725	17.725	0.000	77	1331838	4.00	4.16	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	98	440488	2.00	2.04	
7 Propene	41	3.839	3.839	0.000	98	252034	2.00	1.96	
8 Dichlorodifluoromethane	85	3.893	3.893	0.000	100	601627	2.00	1.99	
9 Chloromethane	52	4.093	4.093	0.000	98	77772	2.00	1.95	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.104	0.000	95	323218	2.00	1.92	
11 Acetaldehyde	44	4.271	4.271	0.000	92	500620	10.0	11.1	
12 Vinyl chloride	62	4.276	4.276	0.000	99	260864	2.00	2.09	
13 Butane	43	4.373	4.373	0.000	87	477969	2.00	2.25	
14 Butadiene	54	4.373	4.373	0.000	66	217827	2.00	2.18	
15 Bromomethane	94	4.718	4.718	0.000	98	170585	2.00	1.77	
16 Chloroethane	64	4.875	4.875	0.000	82	102582	2.00	1.76	
17 Ethanol	31	5.042	5.042	0.000	96	564109	10.0	11.4	
18 Vinyl bromide	106	5.204	5.204	0.000	98	155208	2.00	1.78	
19 2-Methylbutane	43	5.258	5.258	0.000	93	291109	2.00	2.03	
20 Trichlorofluoromethane	101	5.489	5.489	0.000	99	536142	2.00	2.15	
21 Acrolein	56	5.516	5.516	0.000	94	52351	2.00	2.47	
22 Acetonitrile	40	5.597	5.597	0.000	97	98408	2.00	2.94	
23 Acetone	58	5.651	5.651	0.000	100	253795	6.00	6.60	
24 Pentane	72	5.727	5.727	0.000	97	35775	2.00	1.92	
25 Isopropyl alcohol	45	5.791	5.791	0.000	97	755148	6.00	6.66	
26 Ethyl ether	31	5.915	5.915	0.000	86	287297	2.00	2.53	
27 1,1-Dichloroethene	96	6.239	6.239	0.000	93	222732	2.00	2.21	
28 Acrylonitrile	53	6.374	6.374	0.000	94	165344	2.00	2.44	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	91	471019	2.00	2.25	
30 2-Methyl-2-propanol	59	6.460	6.460	0.000	96	391438	2.00	2.34	
31 Methylene Chloride	84	6.611	6.611	0.000	95	226027	2.00	1.95	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.627	6.627	0.000	95	299360	2.00	2.52	
33 Carbon disulfide	76	6.778	6.778	0.000	100	711559	2.00	2.26	
34 trans-1,2-Dichloroethene	96	7.452	7.452	0.000	94	224199	2.00	2.22	
35 2-Methylpentane	43	7.468	7.468	0.000	97	734132	2.00	2.28	
36 Methyl tert-butyl ether	73	7.609	7.609	0.000	96	597418	2.00	2.28	
37 1,1-Dichloroethane	63	7.900	7.900	0.000	99	494682	2.00	2.25	
38 Vinyl acetate	43	8.013	8.013	0.000	100	683628	2.00	2.39	
39 2-Butanone (MEK)	72	8.482	8.482	0.000	82	95293	2.00	2.06	
40 Hexane	56	8.488	8.488	0.000	74	225378	2.00	2.20	
41 Isopropyl ether	45	8.660	8.660	0.000	96	867814	2.00	2.29	
42 cis-1,2-Dichloroethene	96	8.914	8.914	0.000	98	225047	2.00	2.15	
43 Ethyl acetate	43	9.113	9.113	0.000	97	578030	2.00	2.31	
44 Chloroform	83	9.270	9.270	0.000	96	508241	2.00	2.22	
45 Tert-butyl ethyl ether	59	9.361	9.361	0.000	98	746728	2.00	2.27	
46 Tetrahydrofuran	42	9.696	9.696	0.000	92	305494	2.00	2.38	
47 1,1,1-Trichloroethane	97	10.310	10.310	0.000	96	530572	2.00	2.22	
48 1,2-Dichloroethane	62	10.424	10.424	0.000	97	366366	2.00	2.34	
49 Cyclohexane	69	10.893	10.893	0.000	89	125512	2.00	2.19	
50 Benzene	78	10.903	10.903	0.000	98	660391	2.00	2.08	
52 Carbon tetrachloride	117	10.920	10.920	0.000	95	490076	2.00	2.38	
51 n-Butanol	31	10.984	10.984	0.000	73	110241	2.00	2.36	
53 2,3-Dimethylpentane	71	11.000	11.000	0.000	90	173620	2.00	2.10	
54 Thiophene	84	11.173	11.173	0.000	97	365881	2.00	2.05	
55 Isooctane	57	11.637	11.637	0.000	97	1346902	2.00	2.19	
56 n-Heptane	71	11.998	11.998	0.000	96	261335	2.00	2.11	
57 1,2-Dichloropropane	63	12.101	12.101	0.000	87	269357	2.00	2.12	
58 Trichloroethene	130	12.133	12.133	0.000	91	268476	2.00	2.03	
59 Dibromomethane	93	12.219	12.219	0.000	87	260419	2.00	2.15	
60 Dichlorobromomethane	83	12.365	12.365	0.000	98	523343	2.00	2.29	
61 1,4-Dioxane	88	12.397	12.397	0.000	95	80592	2.00	2.04	
62 Methyl methacrylate	41	12.446	12.446	0.000	87	359187	2.00	2.32	
63 Methylcyclohexane	83	12.882	12.882	0.000	88	427264	2.00	2.08	
64 4-Methyl-2-pentanone (MIBK)	43	13.303	13.303	0.000	99	529282	2.00	2.08	
65 cis-1,3-Dichloropropene	75	13.341	13.341	0.000	98	387078	2.00	2.12	
66 trans-1,3-Dichloropropene	75	14.026	14.026	0.000	94	361994	2.00	2.30	
67 Toluene	91	14.150	14.150	0.000	92	668048	2.00	2.06	
68 1,1,2-Trichloroethane	83	14.225	14.225	0.000	95	219398	2.00	2.14	
69 2-Hexanone	58	14.619	14.619	0.000	90	227987	2.00	2.02	
70 n-Octane	85	14.808	14.808	0.000	98	257220	2.00	2.07	
71 Chlorodibromomethane	129	14.926	14.926	0.000	96	397936	2.00	2.15	
72 Ethylene Dibromide	107	15.212	15.212	0.000	98	360415	2.00	2.12	
73 Tetrachloroethene	129	15.277	15.277	0.000	88	242217	2.00	2.08	
74 2,3-Dimethylheptane	43	16.145	16.145	0.000	94	1004911	2.00	2.28	
75 Chlorobenzene	112	16.145	16.145	0.000	90	486243	2.00	1.96	
78 Ethylbenzene	91	16.425	16.425	0.000	99	885565	2.00	2.11	
79 m-Xylene & p-Xylene	91	16.587	16.587	0.000	99	1341972	4.00	4.11	
80 n-Nonane	57	16.981	16.981	0.000	94	560841	2.00	2.12	
81 Bromoform	173	17.045	17.045	0.000	87	302113	2.00	1.94	
82 Styrene	104	17.051	17.051	0.000	96	460298	2.00	2.01	
83 o-Xylene	91	17.110	17.110	0.000	97	724949	2.00	2.11	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.428	0.000	98	507613	2.00	2.15	
85 1,2,3-Trichloropropane	110	17.590	17.590	0.000	96	150381	2.00	2.18	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 Isopropylbenzene	105	17.687	17.687	0.000	98	891134	2.00	2.00	
87 N-Propylbenzene	120	18.205	18.205	0.000	98	241727	2.00	2.03	
88 2-Chlorotoluene	126	18.259	18.259	0.000	97	221612	2.00	1.98	
89 4-Ethyltoluene	105	18.350	18.350	0.000	98	914146	2.00	2.08	
90 1,3,5-Trimethylbenzene	120	18.420	18.420	0.000	90	346951	2.00	2.02	
92 Alpha Methyl Styrene	118	18.647	18.647	0.000	84	362133	2.00	2.08	
93 n-Decane	57	18.685	18.685	0.000	86	687353	2.00	2.13	
94 tert-Butylbenzene	119	18.836	18.836	0.000	87	761257	2.00	2.05	
95 1,2,4-Trimethylbenzene	105	18.846	18.846	0.000	96	773742	2.00	2.08	
96 sec-Butylbenzene	105	19.094	19.094	0.000	97	1118406	2.00	2.09	
97 1,3-Dichlorobenzene	146	19.121	19.121	0.000	97	460551	2.00	1.90	
98 Benzyl chloride	91	19.191	19.191	0.000	96	756900	2.00	2.32	
99 1,4-Dichlorobenzene	146	19.202	19.202	0.000	94	470308	2.00	1.95	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	883954	2.00	2.06	
101 1,2,3-Trimethylbenzene	105	19.310	19.310	0.000	99	787968	2.00	2.35	
102 Butylcyclohexane	83	19.353	19.353	0.000	86	717892	2.00	2.04	
103 2,3-Dihydroindene	117	19.553	19.553	0.000	93	680561	2.00	2.03	
104 1,2-Dichlorobenzene	146	19.558	19.558	0.000	93	446296	2.00	1.95	
105 n-Butylbenzene	91	19.677	19.677	0.000	97	975346	2.00	2.15	
106 Indene	116	19.682	19.682	0.000	90	602603	2.00	2.02	
107 Undecane	57	19.963	19.963	0.000	92	691019	2.00	2.06	
108 1,2-Dibromo-3-Chloropropan	157	20.146	20.146	0.000	85	203140	2.00	1.74	
109 1,2,4,5-Tetramethylbenzene	119	20.421	20.421	0.000	96	761635	2.00	1.94	
110 Dodecane	57	21.014	21.014	0.000	91	424810	2.00	1.71	
111 1,2,4-Trichlorobenzene	180	21.241	21.241	0.000	92	309193	2.00	1.69	
112 Naphthalene	128	21.381	21.381	0.000	98	728777	2.00	1.67	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	90	269707	2.00	1.67	
114 1,2,3-Trichlorobenzene	180	21.656	21.656	0.000	93	257986	2.00	1.52	
115 2-Methylnaphthalene	142	22.400	22.400	0.000	99	290651	2.00	2.43	
116 1-Methylnaphthalene	142	22.573	22.573	0.000	99	333863	2.00	2.54	
A 122 C8 Range	1	14.816	(14.749-14.886)		0	2824457	2.00	2.25	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.37	
S 124 Xylenes, Total	100				0		6.00	6.22	

Reagents:

40CV101P_00079

Amount Added: 100.00

Units: ml

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GCCVA03.D

Injection Date: 03-Jan-2019 11:24:30

Instrument ID: MG

Operator ID: 403648

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

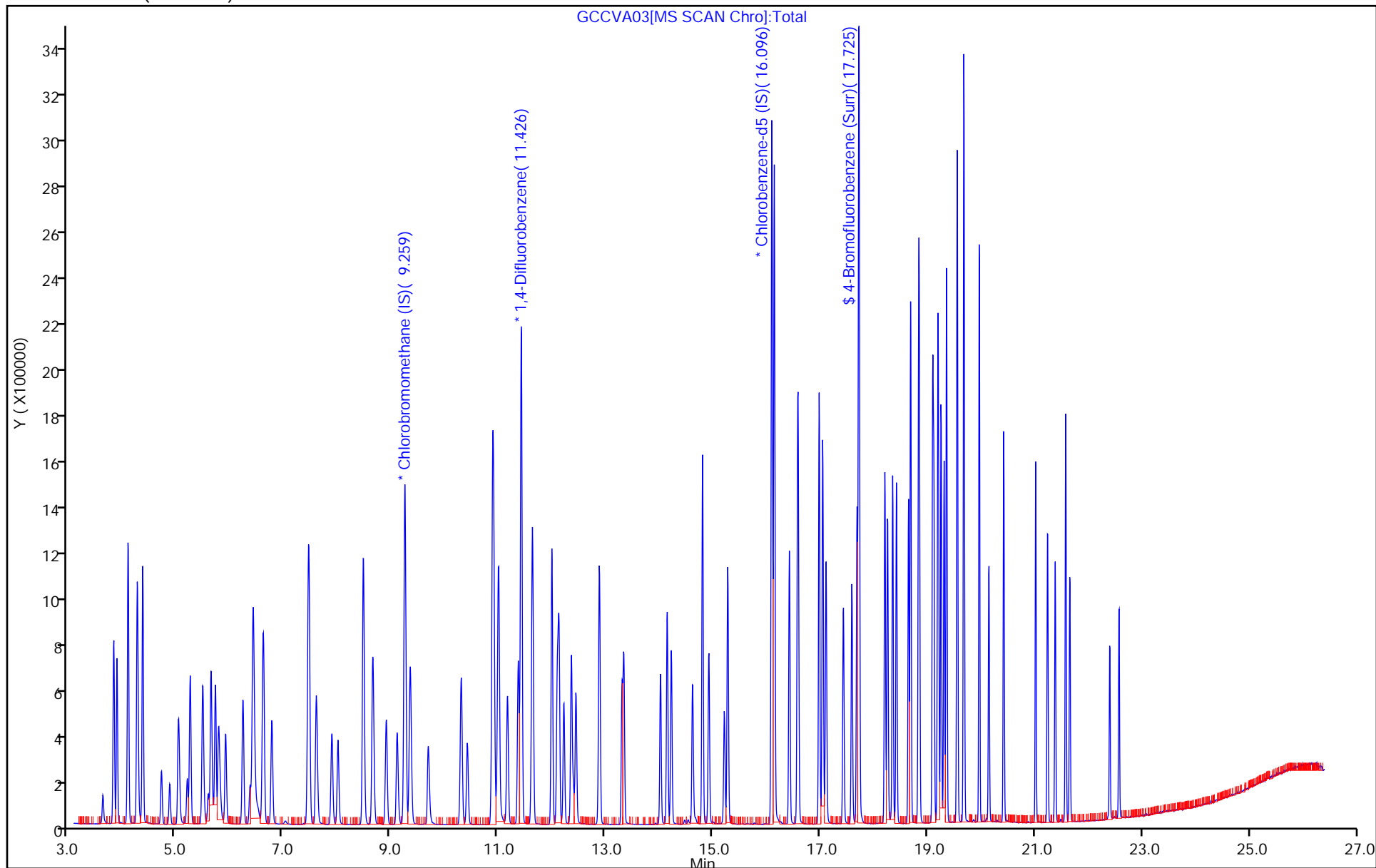
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GBFBK19.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 19-Nov-2018 12:29:30 ALS Bottle#: 16 Worklist Smp#: 2
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010044-002
 Misc. Info.: TUNE
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:21:38 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0301

First Level Reviewer: tajh Date: 20-Nov-2018 15:06:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.348	5.348	0.000	0	1118352	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

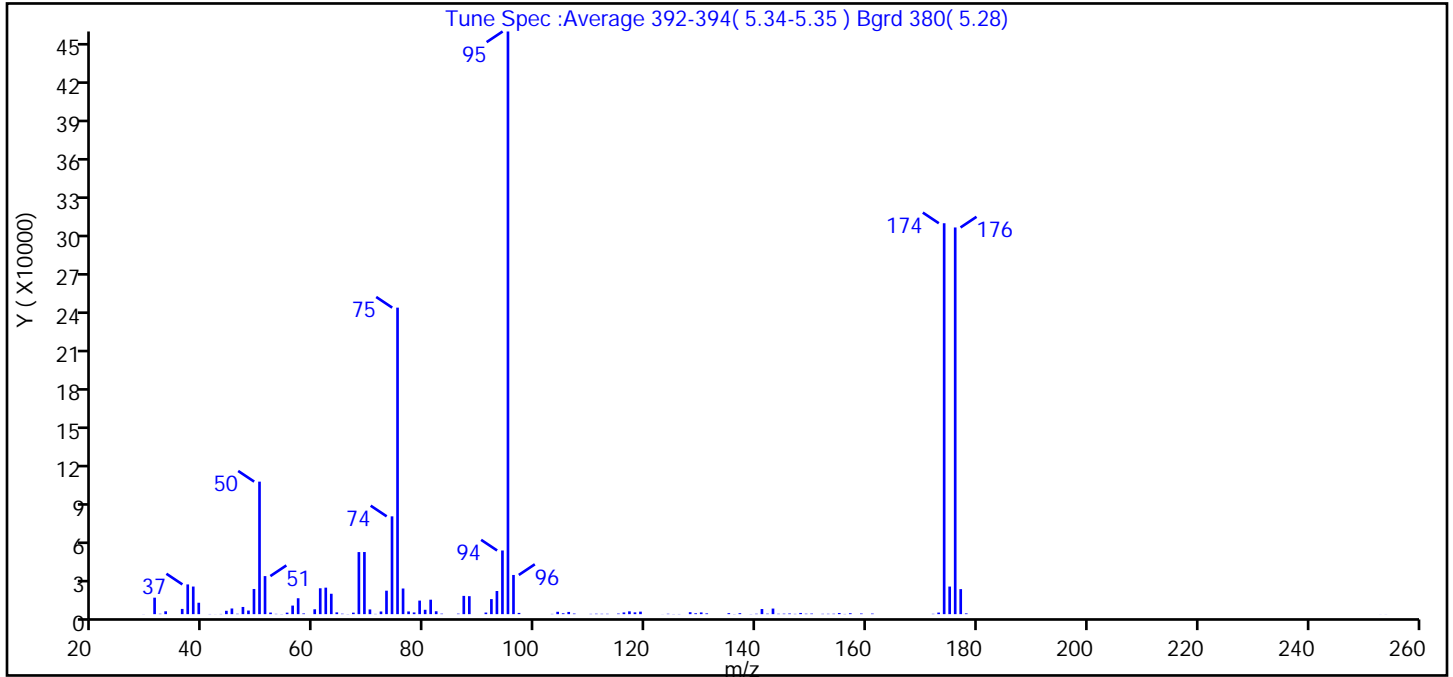
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GBFBK19.D
 Injection Date: 19-Nov-2018 12:29:30 Instrument ID: MG
 Lims ID: BFB
 Client ID:
 Operator ID: 007126 ALS Bottle#: 16 Worklist Smp#: 2
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	22.7
75	30 to 60% of m/z 95	52.6
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.3 (0.4)
174	50 to 120% of m/z 95	67.1
175	5 to 9% of m/z 174	4.7 (7.1)
176	Greater than 95% but less than 101% of m/z 174	66.4 (98.9)
177	5 to 9% of m/z 176	4.3 (6.5)

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GBFBK19.D\MG_TO15.rsl\spectra.d
Injection Date: 19-Nov-2018 12:29:30
Spectrum: Tune Spec :Average 392-394(5.34-5.35) Bgrd 380(5.28)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 114

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	71	63.00	15787	96.00	30344	141.00	3963
31.00	12752	64.00	1373	97.00	966	142.00	379
32.00	294	65.00	333	103.00	191	143.00	4317
33.00	2203	66.00	114	104.00	1830	144.00	297
36.00	4037	67.00	1151	105.00	670	145.00	365
37.00	23016	68.00	48048	106.00	1705	146.00	499
38.00	21368	69.00	48096	107.00	452	147.00	219
39.00	8831	70.00	3634	110.00	215	148.00	928
41.00	125	71.00	182	111.00	324	149.00	333
42.00	53	72.00	2049	112.00	270	150.00	440
43.00	155	73.00	18160	113.00	271	152.00	252
44.00	2598	74.00	75720	115.00	454	153.00	278
45.00	4383	75.00	237312	116.00	1315	154.00	318
46.00	293	76.00	19848	117.00	2161	155.00	891
47.00	5562	77.00	2085	118.00	1390	156.00	149
48.00	2785	78.00	1308	119.00	1930	157.00	691
49.00	19480	79.00	10497	123.00	52	159.00	485
50.00	102600	80.00	3376	124.00	297	161.00	431
51.00	29464	81.00	11185	125.00	116	172.00	246
52.00	1226	82.00	2229	126.00	128	173.00	1219
53.00	223	83.00	373	128.00	1511	174.00	302656
54.00	106	86.00	380	129.00	696	175.00	21360
55.00	1161	87.00	14137	130.00	1328	176.00	299392
56.00	6630	88.00	13918	131.00	603	177.00	19368
57.00	12317	91.00	1238	135.00	781	178.00	585
58.00	539	92.00	11643	136.00	108	253.00	39
60.00	3764	93.00	17912	137.00	743	254.00	50
61.00	20032	94.00	49280	139.00	114		
62.00	20512	95.00	451136	140.00	302		

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GBFBK19.D

Injection Date: 19-Nov-2018 12:29:30

Instrument ID: MG

Operator ID: 007126

Lims ID: BFB

Worklist Smp#: 2

Client ID:

Injection Vol: 500.0 mL

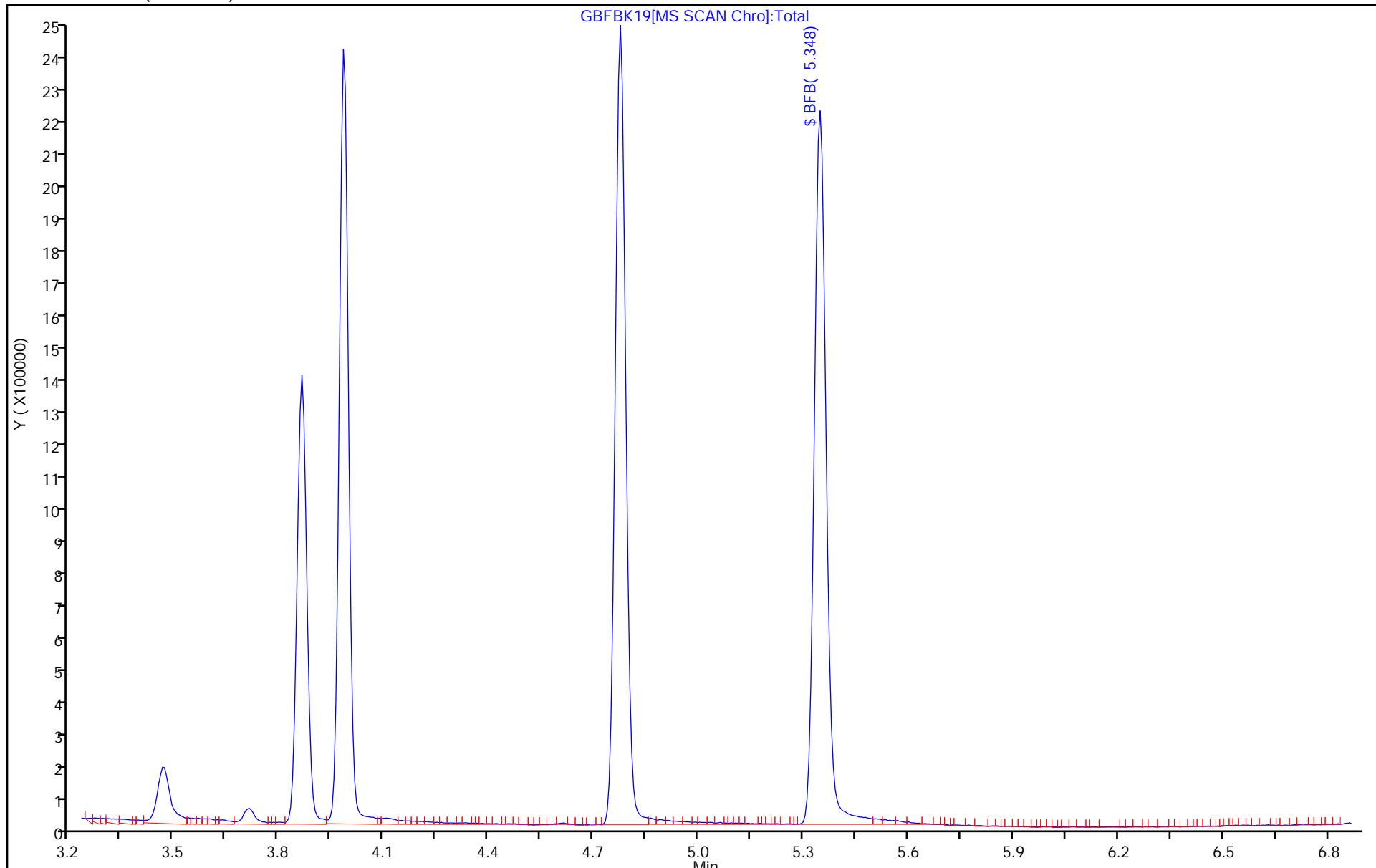
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GBFBA03.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 03-Jan-2019 10:51:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010438-001
 Misc. Info.: TUNE
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Jan-2019 12:05:43 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 04-Jan-2019 12:05:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.381	5.381	0.000	0	1104428	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

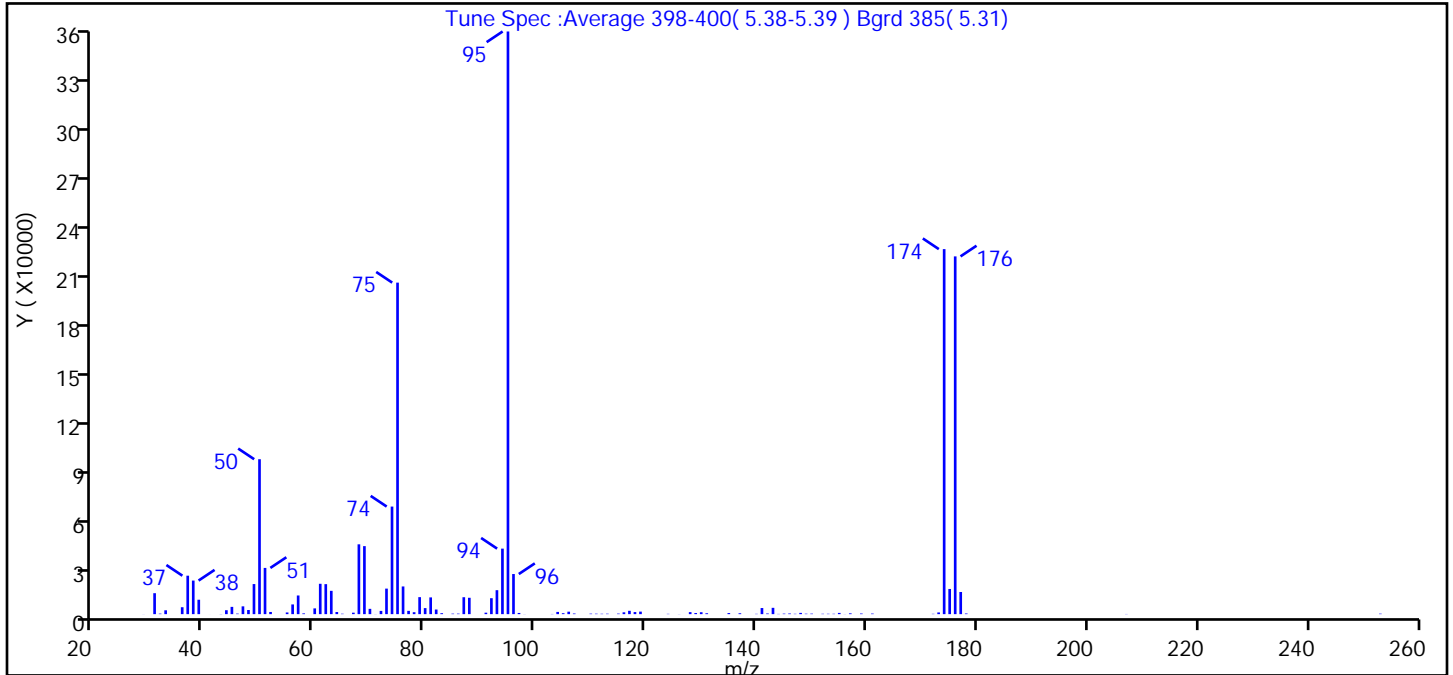
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GBFBA03.D
 Injection Date: 03-Jan-2019 10:51:30 Instrument ID: MG
 Lims ID: BFB
 Client ID:
 Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	26.6
75	30 to 60% of m/z 95	56.9
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.3 (0.5)
174	50 to 120% of m/z 95	62.6
175	5 to 9% of m/z 174	4.3 (6.9)
176	Greater than 95% but less than 101% of m/z 174	61.4 (98.0)
177	5 to 9% of m/z 176	3.8 (6.2)

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GBFBA03.D\MG_TO15.rslt\spectra.d
Injection Date: 03-Jan-2019 10:51:30
Spectrum: Tune Spec :Average 398-400(5.38-5.39) Bgrd 385(5.31)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 108

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	40	64.00	1288	95.00	353984	141.00	3708
31.00	12730	65.00	253	96.00	24368	142.00	393
32.00	315	67.00	889	97.00	719	143.00	3839
33.00	2333	68.00	42416	98.00	55	144.00	145
36.00	4202	69.00	41320	103.00	111	145.00	313
37.00	23360	70.00	3217	104.00	1353	146.00	398
38.00	20400	71.00	53	105.00	574	147.00	210
39.00	8753	72.00	1965	106.00	1494	148.00	762
41.00	14	73.00	15509	107.00	386	149.00	268
43.00	76	74.00	65352	110.00	308	150.00	311
44.00	2389	75.00	201408	111.00	274	152.00	222
45.00	4412	76.00	16824	112.00	231	153.00	228
46.00	319	77.00	1998	113.00	268	154.00	220
47.00	4737	78.00	1173	115.00	327	155.00	748
48.00	2511	79.00	10332	116.00	1113	156.00	50
49.00	18272	80.00	3669	117.00	2027	157.00	480
50.00	94120	81.00	10173	118.00	1268	159.00	377
51.00	28080	82.00	2808	119.00	1533	161.00	345
52.00	1321	83.00	579	124.00	185	172.00	195
55.00	1026	85.00	302	126.00	59	173.00	1031
56.00	5903	86.00	315	128.00	1227	174.00	221760
57.00	11337	87.00	10281	129.00	677	175.00	15294
58.00	460	88.00	9940	130.00	1162	176.00	217344
60.00	3496	91.00	890	131.00	539	177.00	13455
61.00	18440	92.00	9687	135.00	658	178.00	393
62.00	18224	93.00	14556	137.00	535	207.00	106
63.00	14157	94.00	39800	140.00	186	253.00	286

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GBFBA03.D

Injection Date: 03-Jan-2019 10:51:30

Instrument ID: MG

Operator ID: 403648

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

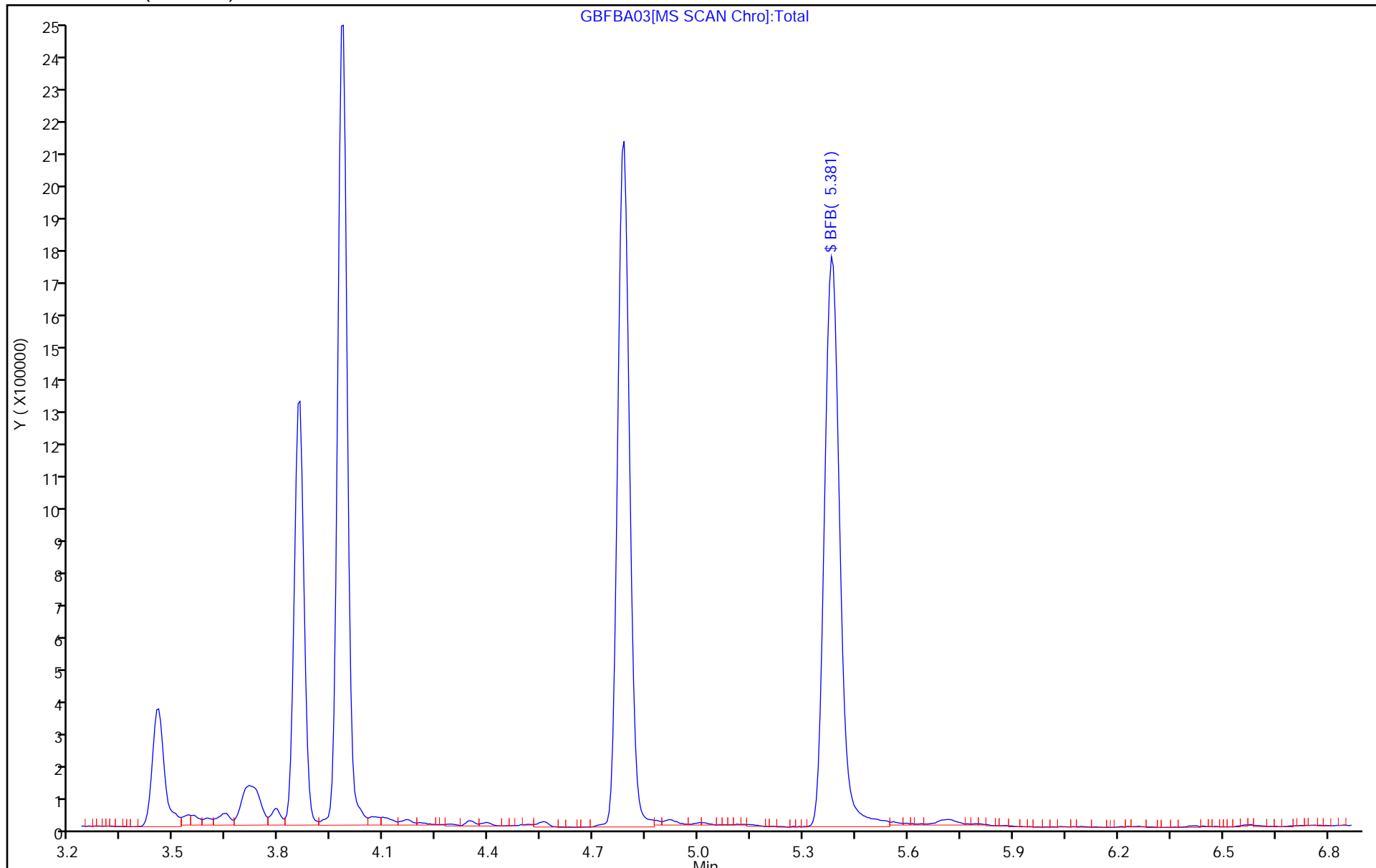
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-26610/5
 Matrix: Air Lab File ID: Gmb500A03.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 01/03/2019 14:07
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26610 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	0.130	J	0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-26610/5
 Matrix: Air Lab File ID: Gmb500A03.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 01/03/2019 14:07
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26610 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	0.450	J	1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\Gmb500A03.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 03-Jan-2019 14:07:30 ALS Bottle#: 16 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010437-005
 Misc. Info.: mb500mL
 Operator ID: 403468 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Jan-2019 12:10:37 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 04-Jan-2019 12:10:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.259	-0.011	93	256681	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.421	11.426	-0.005	98	1488526	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.096	16.102	-0.006	96	1383128	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.719	17.725	-0.006	76	1193392	4.00	4.24	
31 Methylene Chloride	84	6.611	6.611	0.000	95	13454		0.1295	
117 1,2-Dimethyl-4-Ethylbenzen	119	20.044	20.038	0.006	1	342		NC	
118 1,2,3,5-Tetramethylbenzene	119	20.475	20.475	0.000	1	1243		NC	
119 1,2,3,4-Tetramethylbenzene	119	20.879	20.879	0.000	1	214		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\Gmb500A03.D

Injection Date: 03-Jan-2019 14:07:30

Instrument ID: MG

Operator ID: 403468

Lims ID: MB

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

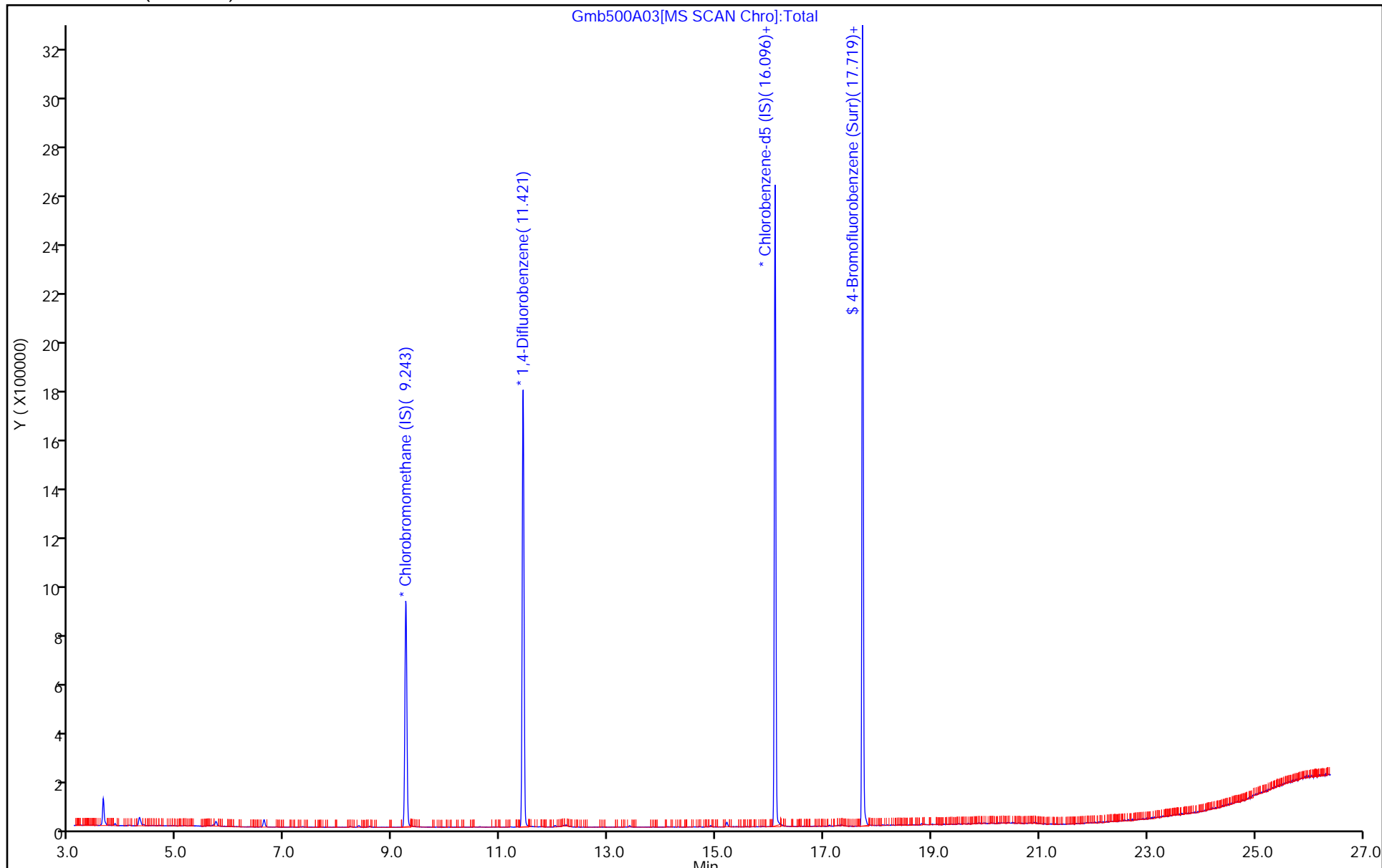
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\Gmb500A03.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 03-Jan-2019 14:07:30 ALS Bottle#: 16 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010437-005
 Misc. Info.: mb500mL
 Operator ID: 403468 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Jan-2019 12:10:37 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 04-Jan-2019 12:10:37

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.24	106.04

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\Gmb500A03.D

Injection Date: 03-Jan-2019 14:07:30

Instrument ID: MG

Lims ID: MB

Client ID:

Operator ID: 403468

ALS Bottle#: 16

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

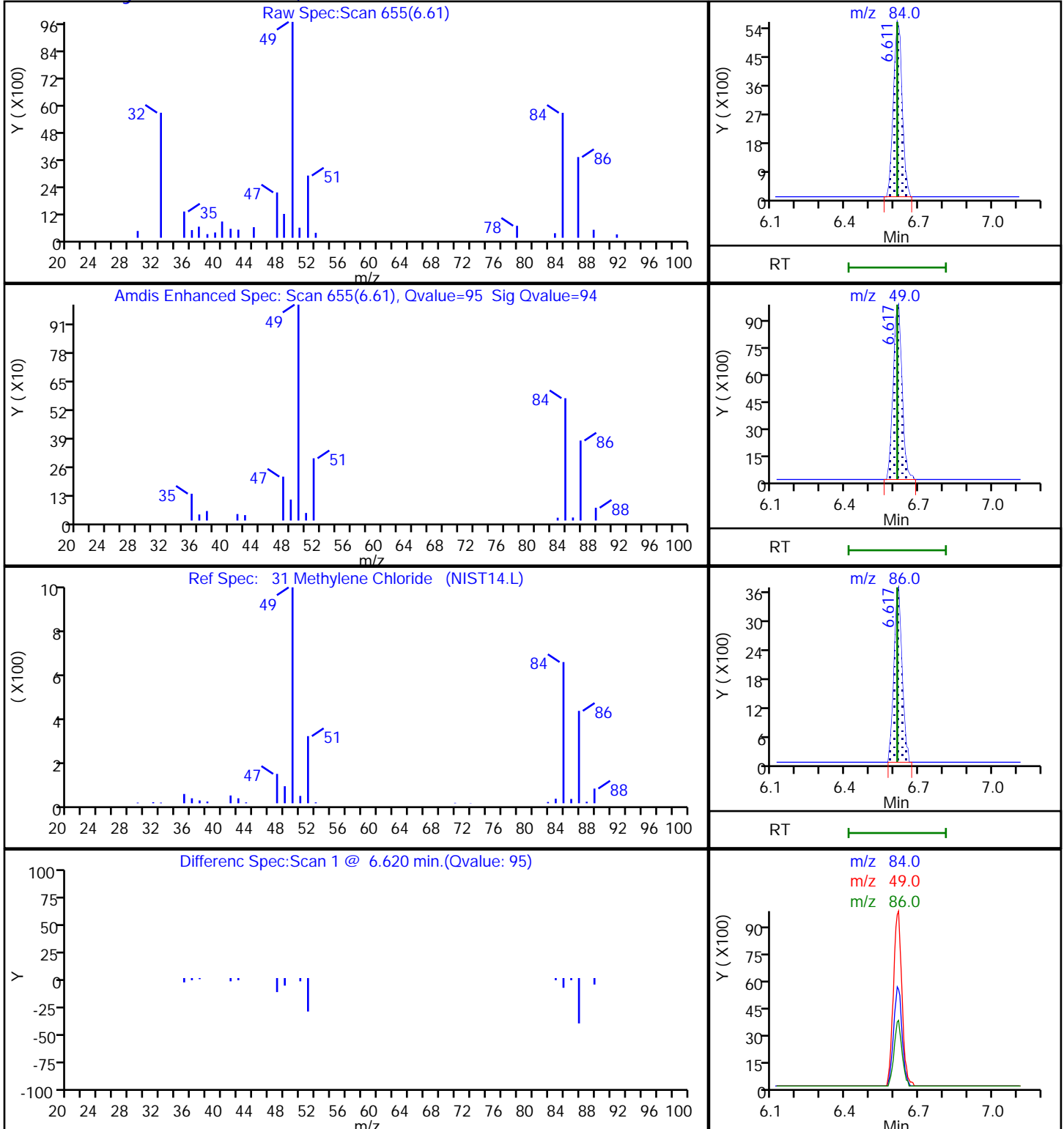
Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-26610/1002
 Matrix: Air Lab File ID: GCCVA03-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 01/03/2019 11:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26610 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.08		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.38		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.04		0.080	0.015
67-66-3	Chloroform	119.38	2.22		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.15		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.99		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.25		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.34		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.21		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.11		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.95		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.28		0.40	0.068
91-20-3	Naphthalene	128.17	1.67		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.08		0.080	0.016
108-88-3	Toluene	92.14	2.06		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.22		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.69		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.22		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.14		0.080	0.021
79-01-6	Trichloroethene	131.39	2.03		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.35		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.08		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.02		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.09		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.22		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GCCVA03-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 03-Jan-2019 11:24:30 ALS Bottle#: 13 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010438-002
 Misc. Info.: P79
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Jan-2019 12:07:59 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits

Date: 04-Jan-2019 12:07:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.259	9.259	0.000	92	286081	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.426	11.426	0.000	98	1732806	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.102	16.102	0.000	94	1575804	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.725	17.725	0.000	77	1331838	4.00	4.16	
6 Chlorodifluoromethane	51	3.829	3.829	0.000	98	440488	2.00	2.04	
7 Propene	41	3.839	3.839	0.000	98	252034	2.00	1.96	
8 Dichlorodifluoromethane	85	3.893	3.893	0.000	100	601627	2.00	1.99	
9 Chloromethane	52	4.093	4.093	0.000	98	77772	2.00	1.95	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.104	4.104	0.000	95	323218	2.00	1.92	
11 Acetaldehyde	44	4.271	4.271	0.000	92	500620	10.0	11.1	
12 Vinyl chloride	62	4.276	4.276	0.000	99	260864	2.00	2.09	
13 Butane	43	4.373	4.373	0.000	87	477969	2.00	2.25	
14 Butadiene	54	4.373	4.373	0.000	66	217827	2.00	2.18	
15 Bromomethane	94	4.718	4.718	0.000	98	170585	2.00	1.77	
16 Chloroethane	64	4.875	4.875	0.000	82	102582	2.00	1.76	
17 Ethanol	31	5.042	5.042	0.000	96	564109	10.0	11.4	
18 Vinyl bromide	106	5.204	5.204	0.000	98	155208	2.00	1.78	
19 2-Methylbutane	43	5.258	5.258	0.000	93	291109	2.00	2.03	
20 Trichlorofluoromethane	101	5.489	5.489	0.000	99	536142	2.00	2.15	
21 Acrolein	56	5.516	5.516	0.000	94	52351	2.00	2.47	
22 Acetonitrile	40	5.597	5.597	0.000	97	98408	2.00	2.94	
23 Acetone	58	5.651	5.651	0.000	100	253795	6.00	6.60	
24 Pentane	72	5.727	5.727	0.000	97	35775	2.00	1.92	
25 Isopropyl alcohol	45	5.791	5.791	0.000	97	755148	6.00	6.66	
26 Ethyl ether	31	5.915	5.915	0.000	86	287297	2.00	2.53	
27 1,1-Dichloroethene	96	6.239	6.239	0.000	93	222732	2.00	2.21	
28 Acrylonitrile	53	6.374	6.374	0.000	94	165344	2.00	2.44	
29 1,1,2-Trichloro-1,2,2-trif	101	6.428	6.428	0.000	91	471019	2.00	2.25	
30 2-Methyl-2-propanol	59	6.460	6.460	0.000	96	391438	2.00	2.34	
31 Methylene Chloride	84	6.611	6.611	0.000	95	226027	2.00	1.95	
32 3-Chloro-1-propene	39	6.627	6.627	0.000	95	299360	2.00	2.52	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.778	6.778	0.000	100	711559	2.00	2.26	
34 trans-1,2-Dichloroethene	96	7.452	7.452	0.000	94	224199	2.00	2.22	
35 2-Methylpentane	43	7.468	7.468	0.000	97	734132	2.00	2.28	
36 Methyl tert-butyl ether	73	7.609	7.609	0.000	96	597418	2.00	2.28	
37 1,1-Dichloroethane	63	7.900	7.900	0.000	99	494682	2.00	2.25	
38 Vinyl acetate	43	8.013	8.013	0.000	100	683628	2.00	2.39	
39 2-Butanone (MEK)	72	8.482	8.482	0.000	82	95293	2.00	2.06	
40 Hexane	56	8.488	8.488	0.000	74	225378	2.00	2.20	
41 Isopropyl ether	45	8.660	8.660	0.000	96	867814	2.00	2.29	
42 cis-1,2-Dichloroethene	96	8.914	8.914	0.000	98	225047	2.00	2.15	
43 Ethyl acetate	43	9.113	9.113	0.000	97	578030	2.00	2.31	
44 Chloroform	83	9.270	9.270	0.000	96	508241	2.00	2.22	
45 Tert-butyl ethyl ether	59	9.361	9.361	0.000	98	746728	2.00	2.27	
46 Tetrahydrofuran	42	9.696	9.696	0.000	92	305494	2.00	2.38	
47 1,1,1-Trichloroethane	97	10.310	10.310	0.000	96	530572	2.00	2.22	
48 1,2-Dichloroethane	62	10.424	10.424	0.000	97	366366	2.00	2.34	
49 Cyclohexane	69	10.893	10.893	0.000	89	125512	2.00	2.19	
50 Benzene	78	10.903	10.903	0.000	98	660391	2.00	2.08	
52 Carbon tetrachloride	117	10.920	10.920	0.000	95	490076	2.00	2.38	
51 n-Butanol	31	10.984	10.984	0.000	73	110241	2.00	2.36	
53 2,3-Dimethylpentane	71	11.000	11.000	0.000	90	173620	2.00	2.10	
54 Thiophene	84	11.173	11.173	0.000	97	365881	2.00	2.05	
55 Isooctane	57	11.637	11.637	0.000	97	1346902	2.00	2.19	
56 n-Heptane	71	11.998	11.998	0.000	96	261335	2.00	2.11	
57 1,2-Dichloropropane	63	12.101	12.101	0.000	87	269357	2.00	2.12	
58 Trichloroethene	130	12.133	12.133	0.000	91	268476	2.00	2.03	
59 Dibromomethane	93	12.219	12.219	0.000	87	260419	2.00	2.15	
60 Dichlorobromomethane	83	12.365	12.365	0.000	98	523343	2.00	2.29	
61 1,4-Dioxane	88	12.397	12.397	0.000	95	80592	2.00	2.04	
62 Methyl methacrylate	41	12.446	12.446	0.000	87	359187	2.00	2.32	
63 Methylcyclohexane	83	12.882	12.882	0.000	88	427264	2.00	2.08	
64 4-Methyl-2-pentanone (MIBK)	43	13.303	13.303	0.000	99	529282	2.00	2.08	
65 cis-1,3-Dichloropropene	75	13.341	13.341	0.000	98	387078	2.00	2.12	
66 trans-1,3-Dichloropropene	75	14.026	14.026	0.000	94	361994	2.00	2.30	
67 Toluene	91	14.150	14.150	0.000	92	668048	2.00	2.06	
68 1,1,2-Trichloroethane	83	14.225	14.225	0.000	95	219398	2.00	2.14	
69 2-Hexanone	58	14.619	14.619	0.000	90	227987	2.00	2.02	
70 n-Octane	85	14.808	14.808	0.000	98	257220	2.00	2.07	
71 Chlorodibromomethane	129	14.926	14.926	0.000	96	397936	2.00	2.15	
72 Ethylene Dibromide	107	15.212	15.212	0.000	98	360415	2.00	2.12	
73 Tetrachloroethene	129	15.277	15.277	0.000	88	242217	2.00	2.08	
74 2,3-Dimethylheptane	43	16.145	16.145	0.000	94	1004911	2.00	2.28	
75 Chlorobenzene	112	16.145	16.145	0.000	90	486243	2.00	1.96	
78 Ethylbenzene	91	16.425	16.425	0.000	99	885565	2.00	2.11	
79 m-Xylene & p-Xylene	91	16.587	16.587	0.000	99	1341972	4.00	4.11	
80 n-Nonane	57	16.981	16.981	0.000	94	560841	2.00	2.12	
81 Bromoform	173	17.045	17.045	0.000	87	302113	2.00	1.94	
82 Styrene	104	17.051	17.051	0.000	96	460298	2.00	2.01	
83 o-Xylene	91	17.110	17.110	0.000	97	724949	2.00	2.11	
84 1,1,2,2-Tetrachloroethane	83	17.428	17.428	0.000	98	507613	2.00	2.15	
85 1,2,3-Trichloropropane	110	17.590	17.590	0.000	96	150381	2.00	2.18	
86 Isopropylbenzene	105	17.687	17.687	0.000	98	891134	2.00	2.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 N-Propylbenzene	120	18.205	18.205	0.000	98	241727	2.00	2.03	
88 2-Chlorotoluene	126	18.259	18.259	0.000	97	221612	2.00	1.98	
89 4-Ethyltoluene	105	18.350	18.350	0.000	98	914146	2.00	2.08	
90 1,3,5-Trimethylbenzene	120	18.420	18.420	0.000	90	346951	2.00	2.02	
92 Alpha Methyl Styrene	118	18.647	18.647	0.000	84	362133	2.00	2.08	
93 n-Decane	57	18.685	18.685	0.000	86	687353	2.00	2.13	
94 tert-Butylbenzene	119	18.836	18.836	0.000	87	761257	2.00	2.05	
95 1,2,4-Trimethylbenzene	105	18.846	18.846	0.000	96	773742	2.00	2.08	
96 sec-Butylbenzene	105	19.094	19.094	0.000	97	1118406	2.00	2.09	
97 1,3-Dichlorobenzene	146	19.121	19.121	0.000	97	460551	2.00	1.90	
98 Benzyl chloride	91	19.191	19.191	0.000	96	756900	2.00	2.32	
99 1,4-Dichlorobenzene	146	19.202	19.202	0.000	94	470308	2.00	1.95	
100 4-Isopropyltoluene	119	19.251	19.251	0.000	96	883954	2.00	2.06	
101 1,2,3-Trimethylbenzene	105	19.310	19.310	0.000	99	787968	2.00	2.35	
102 Butylcyclohexane	83	19.353	19.353	0.000	86	717892	2.00	2.04	
103 2,3-Dihydroindene	117	19.553	19.553	0.000	93	680561	2.00	2.03	
104 1,2-Dichlorobenzene	146	19.558	19.558	0.000	93	446296	2.00	1.95	
105 n-Butylbenzene	91	19.677	19.677	0.000	97	975346	2.00	2.15	
106 Indene	116	19.682	19.682	0.000	90	602603	2.00	2.02	
107 Undecane	57	19.963	19.963	0.000	92	691019	2.00	2.06	
108 1,2-Dibromo-3-Chloropropan	157	20.146	20.146	0.000	85	203140	2.00	1.74	
109 1,2,4,5-Tetramethylbenzene	119	20.421	20.421	0.000	96	761635	2.00	1.94	
110 Dodecane	57	21.014	21.014	0.000	91	424810	2.00	1.71	
111 1,2,4-Trichlorobenzene	180	21.241	21.241	0.000	92	309193	2.00	1.69	
112 Naphthalene	128	21.381	21.381	0.000	98	728777	2.00	1.67	
113 Hexachlorobutadiene	225	21.575	21.575	0.000	90	269707	2.00	1.67	
114 1,2,3-Trichlorobenzene	180	21.656	21.656	0.000	93	257986	2.00	1.52	
115 2-Methylnaphthalene	142	22.400	22.400	0.000	99	290651	2.00	2.43	
116 1-Methylnaphthalene	142	22.573	22.573	0.000	99	333863	2.00	2.54	
A 122 C8 Range	1	14.816	(14.749-14.886)		0	2824457	2.00	2.25	
S 123 1,2-Dichloroethene, Total	1				0		4.00	4.37	
S 124 Xylenes, Total	100				0		6.00	6.22	

Reagents:

40CV101P_00079

Amount Added: 100.00

Units: ml

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GCCVA03-LCS.d

Injection Date: 03-Jan-2019 11:24:30

Instrument ID: MG

Operator ID: 403648

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

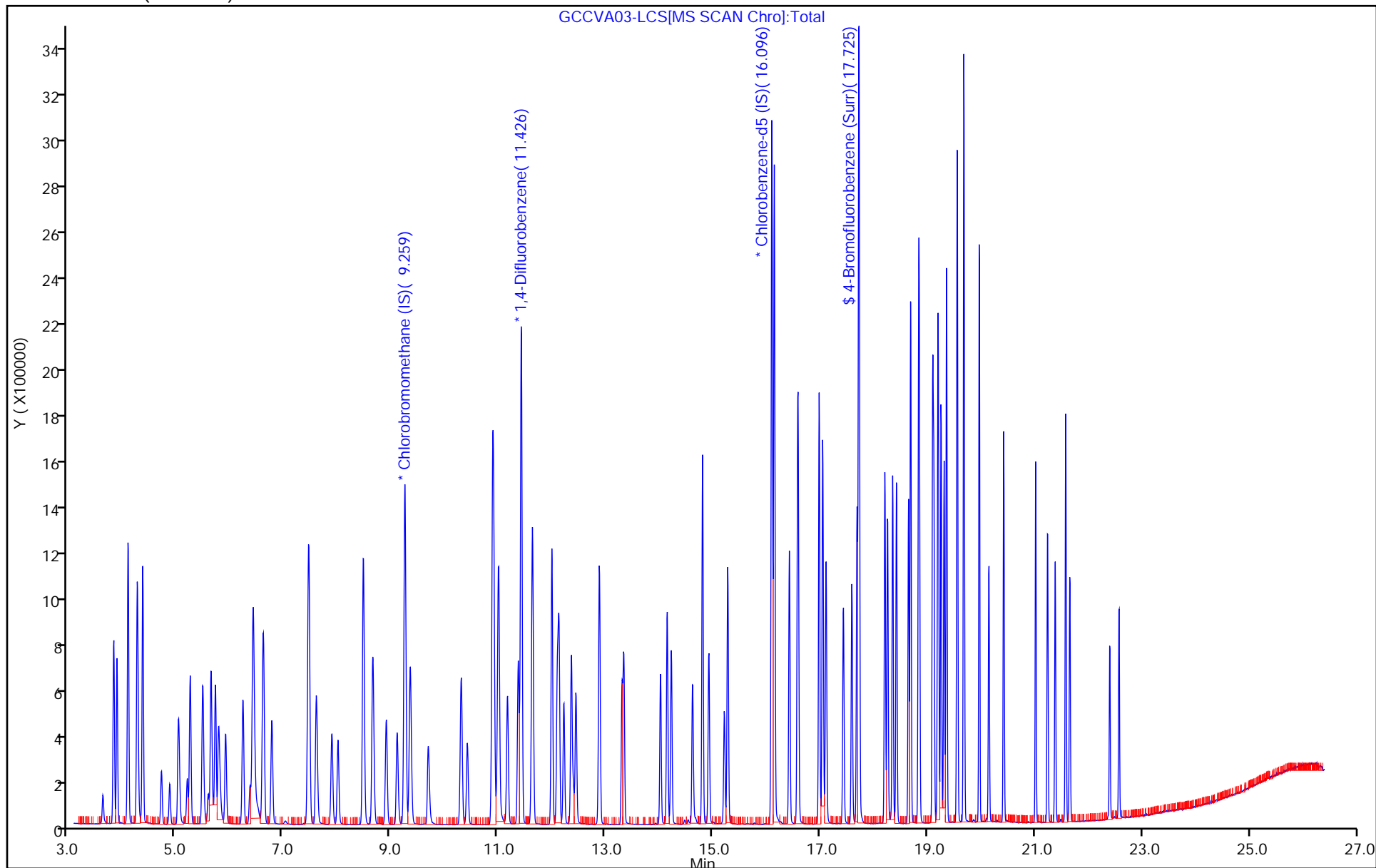
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\GCCVA03-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 03-Jan-2019 11:24:30 ALS Bottle#: 13 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010438-002
 Misc. Info.: P79
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20181228-10438.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Jan-2019 12:07:59 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 04-Jan-2019 12:07:59

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.16	103.88

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1

SDG No.: _____

Instrument ID: MG Start Date: 11/19/2018 12:29

Analysis Batch Number: 25539 End Date: 11/20/2018 06:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25539/2		11/19/2018 12:29	1	GBFBK19.D	RTX-5 0.32 (mm)
IC 140-25539/3		11/19/2018 13:04	1	GK19IC09.D	RTX-5 0.32 (mm)
IC 140-25539/5		11/19/2018 14:34	1	GK19IC10.D	RTX-5 0.32 (mm)
IC 140-25539/8		11/19/2018 16:45	1	GK19IC01.D	RTX-5 0.32 (mm)
IC 140-25539/9		11/19/2018 17:30	1	GK19IC02.D	RTX-5 0.32 (mm)
IC 140-25539/10		11/19/2018 18:17	1	GK19IC03.D	RTX-5 0.32 (mm)
IC 140-25539/11		11/19/2018 19:00	1	GK19IC04.D	RTX-5 0.32 (mm)
IC 140-25539/12		11/19/2018 19:44	1	GK19IC05.D	RTX-5 0.32 (mm)
IC 140-25539/13		11/19/2018 20:26	1	GK19IC06.D	RTX-5 0.32 (mm)
ICIS 140-25539/14		11/19/2018 21:10	1	GK19IC07.D	RTX-5 0.32 (mm)
IC 140-25539/15		11/19/2018 21:56	1	GK19IC08.D	RTX-5 0.32 (mm)
ICV 140-25539/18		11/20/2018 00:05	1	GK19ICV.D	RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 02:18	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 03:01	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 03:44	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 04:27	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 05:11	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 05:55	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 06:38	1		RTX-5 0.32 (mm)

181119.ZZZ

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	34.3	11/19/2018	12:29:22 PM
ICAL09	15 - 101 mL	24.2	11/19/2018	1:04:12 PM
blk	16 - 101 mL	34.2	11/19/2018	1:47:21 PM
ICAL10	15 - 200 mL	23.5	11/19/2018	2:34:08 PM
blk	16 - 101 mL	33.9	11/19/2018	3:18:38 PM
blk	16 - 101 mL	33.8	11/19/2018	4:01:23 PM
ICAL01	1 - 50 mL	31.3	11/19/2018	4:45:28 PM
ICAL02	2 - 101 mL	25.6	11/19/2018	5:30:46 PM
ICAL03	2 - 200 mL	25	11/19/2018	6:17:07 PM
ICAL04	3 - 200 mL	24.8	11/19/2018	7:00:48 PM
ICAL05	4 - 81 mL	25.8	11/19/2018	7:44:13 PM
ICAL06	4 - 200 mL	24.8	11/19/2018	8:26:57 PM
ICAL07	5 - 201 mL	23.1	11/19/2018	9:10:54 PM
ICAL08	6 - 202 mL	21.2	11/19/2018	9:56:17 PM
blk	16 - 100 mL	33.3	11/19/2018	10:39:31 PM
LCS	7 - 100 mL	20.3	11/19/2018	11:23:29 PM
ICV	8 - 101 mL	24.9	11/20/2018	12:05:40 AM
blk	16 - 100 mL	33.2	11/20/2018	12:47:56 AM
blk	16 - 501 mL	32.9	11/20/2018	1:34:01 AM
13293-02	9 - 201 mL	22.7	11/20/2018	2:18:25 AM
13293-03	10 - 201 mL	22.1	11/20/2018	3:01:29 AM
13293-04	11 - 201 mL	22.7	11/20/2018	3:44:37 AM
13293-05	12 - 201 mL	21.8	11/20/2018	4:27:58 AM
13293-06	13 - 201 mL	22.4	11/20/2018	5:11:54 AM
13293-07	14 - 201 mL	20.3	11/20/2018	5:55:13 AM
13293-01	15 - 201 mL	14.3	11/20/2018	6:38:17 AM
13293-01	15 - 202 mL	10	11/20/2018	7:21:36 AM
13293-01	15 - 201 mL	5.7	11/20/2018	8:05:37 AM

MG WL 10044

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date: 11/19/18	Instrument: HG	Chrom WL #: 10049	TALS Batch & Event #	TO14/15: 1749 11/20/18 1304 / 25539	DOD: 1751 / 25541	OHIO: 1750 / 25540
Chrom/Worklist Review				1 st	Comments	2 nd
1. Re-read each Limit Group [method editor-limit groups]				/		na
2. Verify LODV in Chrom [method editor -> edit -> MDL]				/		na
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL, Sample Reagents Tab vs. Entech]				/		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]				/		✓
5. Did BFB meet tune criteria? [F8]				/		✓
6. Were all standards injected within 24 hr of BFB? [F7]				/		✓
7. High point checked for saturation and point removed if so? [Chrom]				/		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]				/		✓
9. RT for each IS +20 sec avg. RT? [F6 IstdRec]				/		✓
10. Area for each IS + 40% avg. area? [F6 IstdRec]				/		✓
11. Each analyte + 0.06 RRT of avg. RRT? [F6 - RRT]				/		✓
12. Elution order checked on isomeric pairs? [Chrom]						
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane				/		✓
• 2-methyl butane / acrolein				/		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane				/		✓
• vinyl acetate / hexane				/		✓
• cis- and trans- isomers				/		✓
• ethyl benzene / m/p-xylene / o-xylene				/		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene				/		✓
• tert-butylbenzene/4-isopropyltoluene				/		✓
• 1,3-, 1,4-, and 1,2-dichlorobenzene				/		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes				ML	in ICV ✓	✓
• 1,2,4- and 1,2,3-trichlorobenzenes				/		✓
• 2-, and 1-methylnaphthalene				/		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?				/		✓
MLG Review				TO	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1 & 2 methylnaphthalene ≤ 50% [F6 Σ]				✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]				✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]				✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]				✓	NA →	NA
18. If curves were used, is correlation coefficient ≥ 0.990? [F6]				✓	NA →	NA
19. Is the intercept less than the RL for each curve? [F6]				✓	NA →	NA
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]				✓	NA	na
21. Is low point RSE ≤ 50 %? [F6]				✓	✓	✓
22. Is the second source analysis within limits? [F8 - icv]				✓	✓	✓
Analyst/Date: JH 11/20/18				2nd Level Reviewer/Date: AS 11/20/18		
TALS Review				TO	DOD	OH
23. Upload ICAL				✓	✓	✓
24. Graphics uploaded? [paperclip]				✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events - 'Fix ICAL linkage' if needed]				✓	✓	✓
26. Runs linked to BFB? [QC Links]				✓	✓	✓
27. Run Checklist and acknowledge findings [F8]				✓	✓	✓
28. If criteria not met, was a NCM generated?				ML →		NA →
29. After review in TALS, approve the method in TALS.				na	na	na
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>				na	na	na
31. Checklist & Entech report scanned, attached & assigned properly?				na	na	na
Analyst/Date: JH 11/20/18				2nd Level Reviewer/Date: AS 11/20/18		
Comments:				Comments:		

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1

SDG No.: _____

Instrument ID: MG Start Date: 01/03/2019 10:51

Analysis Batch Number: 26610 End Date: 01/03/2019 23:40

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-26610/1		01/03/2019 10:51	1	GBFBA03.D	RTX-5 0.32 (mm)
CCVIS 140-26610/2		01/03/2019 11:24	1	GCCVA03.D	RTX-5 0.32 (mm)
LCS 140-26610/1002		01/03/2019 11:24	1	GCCVA03-LCS.d	RTX-5 0.32 (mm)
ZZZZZ		01/03/2019 13:22	1		RTX-5 0.32 (mm)
MB 140-26610/5		01/03/2019 14:07	1	Gmb500A03.D	RTX-5 0.32 (mm)
ZZZZZ		01/03/2019 16:14	1		RTX-5 0.32 (mm)
ZZZZZ		01/03/2019 18:28	1		RTX-5 0.32 (mm)
140-13856-3		01/03/2019 19:11	1	GA03p104.D	RTX-5 0.32 (mm)
140-13856-2		01/03/2019 19:54	1	GA03p105.D	RTX-5 0.32 (mm)
140-13856-1		01/03/2019 20:38	1	GA03p106.D	RTX-5 0.32 (mm)
ZZZZZ		01/03/2019 23:40	1		RTX-5 0.32 (mm)

190103.ZZZ

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	29.5	1/3/2019	10:51:31 AM
CCVIS	13 - 101 mL	32.6	1/3/2019	11:24:42 AM
flush	16 - 101 mL	29.4	1/3/2019	12:48:22 PM
mb200	16 - 201 mL	29.3	1/3/2019	1:22:20 PM
mb500	16 - 501 mL	28.9	1/3/2019	2:07:25 PM
leak	16 - 101 mL	28.9	1/3/2019	3:40:17 PM
13855-01	1 - 201 mL	8	1/3/2019	4:14:12 PM
13852-01	2 - 500 mL	6.2	1/3/2019	5:00:48 PM
13852-02	3 - 81 mL	12.2	1/3/2019	5:44:11 PM
13856-03du	4 - 101 mL	8	1/3/2019	6:28:51 PM
13856-03	4 - 101 mL	5.2	1/3/2019	7:11:10 PM
13856-02	5 - 101 mL	7.3	1/3/2019	7:54:15 PM
13856-01	6 - 21 mL	11	1/3/2019	8:38:13 PM
lot13847	7 - 500 mL	24.7	1/3/2019	9:24:30 PM
lot13849	8 - 500 mL	26.1	1/3/2019	10:10:43 PM
lot13850	9 - 201 mL	24.9	1/3/2019	10:54:08 PM
lot13847	7 - 501 mL	22.7	1/3/2019	11:40:21 PM
lot13849	8 - 501 mL	24.3	1/4/2019	12:26:47 AM
lot13850	9 - 200 mL	20.1	1/4/2019	1:10:52 AM

MG WL 10438

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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Instrument/Date	MG 01/03/2019	Routine	DOD	OHIO VAP
CCAL Chrom WL #	10438	CCAL Batch #	26610	26657
ICAL Chrom WL #	10044	ICAL Batch # / Event #	25539 / 1749	25540 / 1750
Chrom Review		1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt injected) [WL Sample Reagent Tab]		/		na
2. Did BFB meet tune criteria? [F8]		/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]		/	List Target analytes outside CCV limits: _____	/
4. Elution order checked on isomeric pairs? [Chrom]				
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		/		/
• 2-methyl butane / acrolein		/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		/		/
• vinyl acetate / hexane		/		/
• cis- and trans- isomers		/		/
• ethyl benzene / m/p-xylene / o-xylene		/		/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene		/		/
• tert-butylbenzene/4-isopropyltoluene		/		/
• 1,3-, 1,4-, and 1,2-dichlorobenzene		/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		NA		MS
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene		/		/
• 2-, and 1-methylnaphthalene		/		/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?		NA		MS
6. Has the RT been updated to the method?		/		/
Analyst/date	Supernova Kh. 01/04/2019	2nd Level Reviewer/date	[Signature] 010419	
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt, final amt = 500 mL]		/	As 1/4/19	/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]		/		/
9. Can dilution history verified? [Mgmt Report]		/		/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:		/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	/
11. All runs - peaks ID'd correctly and false positives removed?		/		/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?		/		/
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]		/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur, Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)	/
Sample Reason Sample Reason				
14. Samples outside calibration range scheduled for dilution?		NA	<input type="checkbox"/> ICAL - Range Exceeded: Minimum Dilution	MS
Chrom Review		1st	If No, why is data reportable?	2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:		/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DR.	/
Sample Reason Sample Reason				
16. RIC inspected for proper integration for TPH?		NA		MS
17. Obvious non-TPH peaks excluded?		/		/
18. Individual TPH peak area < octane high point area?		/		/

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4
 Page 2 of 2

TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	NA														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input type="checkbox"/> CCV - %D - LCS criteria met (NCM# _____) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		no														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	NA														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random, Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr> <td>>90</td> <td>3</td> </tr> <tr> <td>71 - 90</td> <td>4</td> </tr> <tr> <td>51 - 70</td> <td>5</td> </tr> <tr> <td>31 - 50</td> <td>2</td> </tr> <tr> <td>11 - 30</td> <td>1</td> </tr> <tr> <td><11</td> <td>0</td> </tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	3	71 - 90	4	51 - 70	5	31 - 50	2	11 - 30	1	<11	0			
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	3																
71 - 90	4																
51 - 70	5																
31 - 50	2																
11 - 30	1																
<11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	NA		NA														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		NA														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (if DUP not reported - set to 'Acceptable' for each job)	/	RPD OK, RR due to IS out to 1/4/19	/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-76670/5, 140-26657/5 200 mL blank ID: 140-26670/4	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	NA		/														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	-NA-		/														
40. Checklist & Entech report scanned, attached & assigned properly?	-NA-		/														

Analyst: <u>Sujarwan Kh.</u>	Date: <u>01/04/2019</u>	2nd Level Reviewer: <u>[Signature]</u>	Date: <u>01/04/19</u>
Comments:		Comments:	
Example Calculation: 140-13852-2 Tetrachloroethene			
On-column ppbv x Final Vol (mL) / Entech Initial Vol (mL) x Canister Dilution Log DF			
$\frac{4.871370}{80} \times 500 \times 4195.73 = 126,221, 155$			

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13856-1

SDG No.: _____

Batch Number: 26610 Batch Start Date: 01/03/19 10:51 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00079	40MXISSURP 00003
BFB 140-26610/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-26610/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-26610/5		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-13856-A-3	BLDG-A EFFLUENT	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-13856-A-2	BLDG-A MID GAC	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-13856-A-1	BLDG-A INFLUENT	TO 15 LL	T	20 mL	500 mL	1	1		40 mL
LCS 140-26610/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-26610/1		TO 15 LL		40 mL					
CCVIS 140-26610/2		TO 15 LL							
MB 140-26610/5		TO 15 LL							
140-13856-A-3	BLDG-A EFFLUENT	TO 15 LL	T						
140-13856-A-2	BLDG-A MID GAC	TO 15 LL	T						
140-13856-A-1	BLDG-A INFLUENT	TO 15 LL	T						
LCS 140-26610/1002		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1
 SDG No.: _____
 Lab File ID: GBFBK19.D BFB Injection Date: 11/19/2018
 Instrument ID: MG BFB Injection Time: 12:29
 Analysis Batch No.: 25539

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.7	
75	30.0 - 60.0 % of mass 95	52.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.3	(0.4) 1
174	50.0 - 120.00 % of mass 95	67.1	
175	5.0 - 9.0 % of mass 174	4.7	(7.1) 1
176	95.0 - 101.0 % of mass 174	66.4	(98.9) 1
177	5.0 - 9.0 % of mass 176	4.3	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-25539/3	GK19IC09.D	11/19/2018	13:04
	IC 140-25539/5	GK19IC10.D	11/19/2018	14:34
	IC 140-25539/8	GK19IC01.D	11/19/2018	16:45
	IC 140-25539/9	GK19IC02.D	11/19/2018	17:30
	IC 140-25539/10	GK19IC03.D	11/19/2018	18:17
	IC 140-25539/11	GK19IC04.D	11/19/2018	19:00
	IC 140-25539/12	GK19IC05.D	11/19/2018	19:44
	IC 140-25539/13	GK19IC06.D	11/19/2018	20:26
	ICIS 140-25539/14	GK19IC07.D	11/19/2018	21:10
	IC 140-25539/15	GK19IC08.D	11/19/2018	21:56

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1
 SDG No.: _____
 Lab File ID: GBFBK29.D BFB Injection Date: 11/29/2018
 Instrument ID: MG BFB Injection Time: 09:47
 Analysis Batch No.: 25664

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	23.4
75	30.0 - 60.0 % of mass 95	53.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.3 (0.5) 1
174	50.0 - 120.00 % of mass 95	66.5
175	5.0 - 9.0 % of mass 174	4.5 (6.8) 1
176	95.0 - 101.0 % of mass 174	64.9 (97.7) 1
177	5.0 - 9.0 % of mass 176	4.2 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-25664/2	GCCVK29.D	11/29/2018	10:22
10334	140-13479-1	K29L13479.D	11/30/2018	03:07

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1
 SDG No.: _____
 Sample No.: CCVIS 140-25664/2 Date Analyzed: 11/29/2018 10:22
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): GCCVK29.D Heated Purge: (Y/N) N
 Calibration ID: 1749

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	280639	9.27	1796999	11.44	1654030	16.12
UPPER LIMIT	392895	9.60	2515799	11.77	2315642	16.45
LOWER LIMIT	168383	8.94	1078199	11.11	992418	15.79
LAB SAMPLE ID	CLIENT SAMPLE ID					
140-13479-1	10334	248845	9.26	1476894	11.44	1363076 16.11

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1
 SDG No.: _____
 Client Sample ID: 10334 Lab Sample ID: 140-13479-1
 Matrix: Air Lab File ID: K29L13479.D
 Analysis Method: TO-15 Date Collected: 11/28/2018 15:00
 Sample wt/vol: 200 (mL) Date Analyzed: 11/30/2018 03:07
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25664 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1
 SDG No.: _____
 Client Sample ID: 10334 Lab Sample ID: 140-13479-1
 Matrix: Air Lab File ID: K29L13479.D
 Analysis Method: TO-15 Date Collected: 11/28/2018 15:00
 Sample wt/vol: 200 (mL) Date Analyzed: 11/30/2018 03:07
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25664 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1
 SDG No.: _____
 Client Sample ID: 10334 Lab Sample ID: 140-13479-1
 Matrix: Air Lab File ID: K29L13479.D
 Analysis Method: TO-15 Date Collected: 11/28/2018 15:00
 Sample wt/vol: 200 (mL) Date Analyzed: 11/30/2018 03:07
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25664 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20181126-10085.b\K29L13479.D
 Lims ID: 140-13479-A-1
 Client ID: 10334
 Sample Type: Client
 Inject. Date: 30-Nov-2018 03:07:30 ALS Bottle#: 16 Worklist Smp#: 27
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010085-027
 Misc. Info.: 10334
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20181126-10085.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 30-Nov-2018 01:41:52 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0309

First Level Reviewer: khachitpongpanits Date: 30-Nov-2018 15:44:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.259	9.270	-0.011	93	248845	4.00	
* 2 1,4-Difluorobenzene	114	11.437	11.443	-0.006	98	1476894	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.112	16.118	-0.006	94	1363076	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.736	17.735	-0.005	78	1146484	4.13	
31 Methylene Chloride	84	6.622	6.614	0.000	96	13609	0.1351	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181126-10085.b\K29L13479.D

Injection Date: 30-Nov-2018 03:07:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-13479-A-1

Lab Sample ID: 140-13479-1

Worklist Smp#: 27

Client ID: 10334

Purge Vol: 500.000 mL

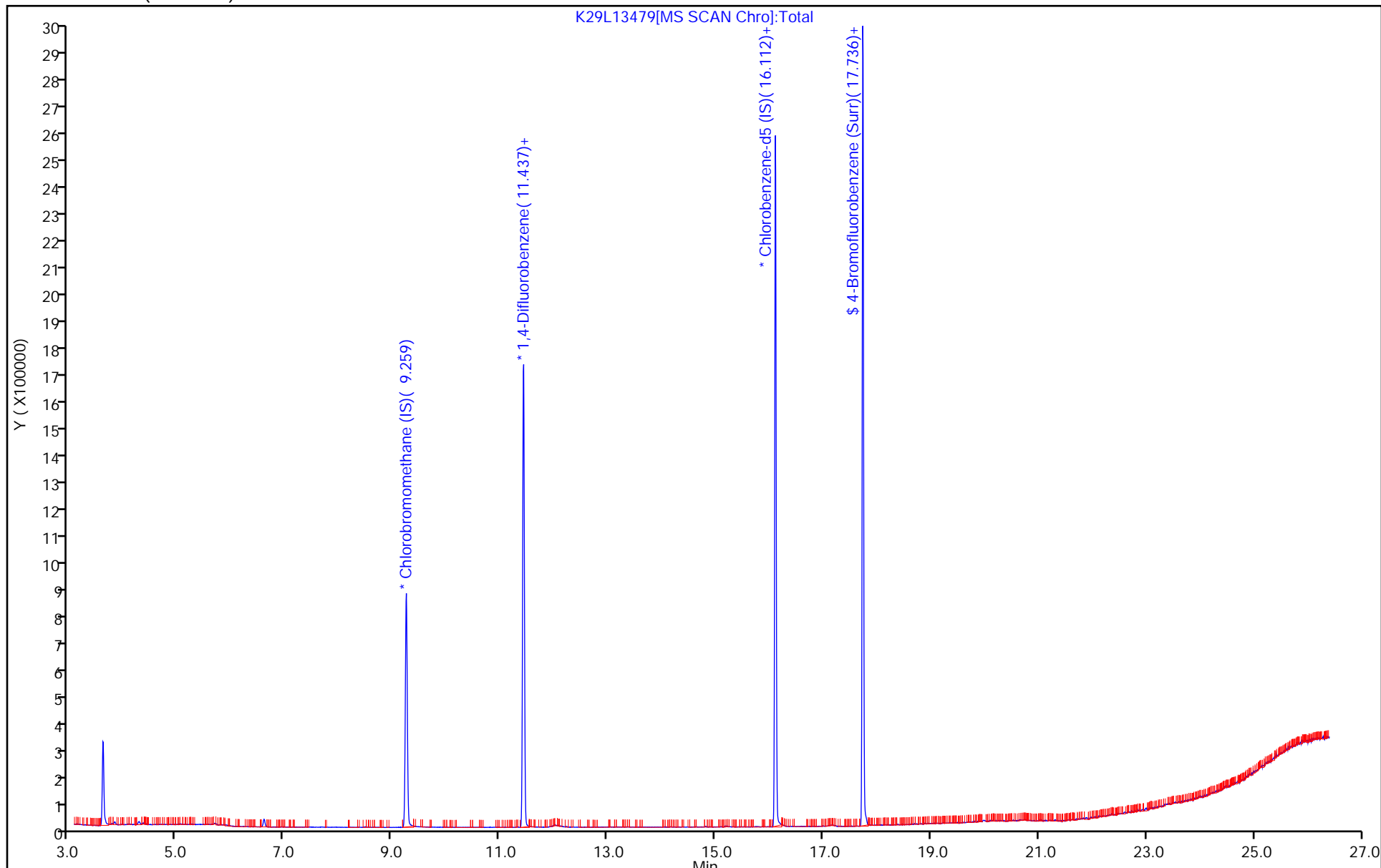
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25539/8	GK19IC01.D
Level 2	IC 140-25539/9	GK19IC02.D
Level 3	IC 140-25539/10	GK19IC03.D
Level 4	IC 140-25539/11	GK19IC04.D
Level 5	IC 140-25539/12	GK19IC05.D
Level 6	IC 140-25539/13	GK19IC06.D
Level 7	ICIS 140-25539/14	GK19IC07.D
Level 8	IC 140-25539/15	GK19IC08.D
Level 9	IC 140-25539/3	GK19IC09.D
Level 10	IC 140-25539/5	GK19IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	++++ 3.0513	++++ 2.8974	3.0732 2.8926	3.1931 2.8986	3.3852 2.7775	Ave		3.0211			6.5		30.0				
Propene	++++ 1.7523	++++ 1.6715	++++ 1.6475	2.3333 1.6297	2.0161 1.5604	Ave		1.8015			15.4		30.0				
Dichlorodifluoromethane	++++ 4.2082	4.6298 4.0287	4.2179 4.0040	4.3941 4.0672	4.6841 3.8083	Ave		4.2269			6.9		30.0				
Chloromethane	++++ 0.5564	++++ 0.5047	++++ 0.5184	0.6846 0.5030	0.6635 0.4789	Ave		0.5585			14.8		30.0				
1,2-Dichlorotetrafluoroethane	++++ 2.3739	2.4985 2.2660	2.3440 2.2454	2.4583 2.2059	2.7097 2.0689	Ave		2.3523			8.0		30.0				
Vinyl chloride	1.9649 1.7432	1.8343 1.6566	1.6957 1.6605	1.7201 1.6479	1.9808 1.5890	Ave		1.7493			7.7		30.0				
Butane	++++ 3.0113	++++ 2.7783	++++ 2.8052	3.1560 2.7858	3.5459 2.7047	Ave		2.9696			10.1		30.0				
1,3-Butadiene	++++ 1.4061	++++ 1.3337	++++ 1.3594	1.4001 1.3439	1.6158 1.3131	Ave		1.3960			7.4		30.0				
Bromomethane	++++ 1.3384	++++ 1.2806	1.4004 1.3047	1.3848 1.3001	1.4802 1.2644	Ave		1.3442			5.4		30.0				
Chloroethane	++++ 0.8137	++++ 0.7755	0.8199 0.8050	0.8218 0.7986	0.8960 0.7837	Ave		0.8143			4.5		30.0				
Ethanol	++++ 0.7564	++++ 0.6409	++++ 0.6954	0.7442 0.6514	0.7148 0.6541	Ave		0.6939			6.7		30.0				
Vinyl bromide	++++ 1.2081	1.3201 1.1629	1.1684 1.1928	1.2357 1.1909	1.3362 1.1705	Ave		1.2206			5.3		30.0				
2-Methylbutane	++++ 1.9744	++++ 1.8631	2.1017 1.9793	2.1520 1.9428	2.1528 1.8888	Ave		2.0069			5.7		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.4984	3.6226 3.2648	3.3904 3.3577	3.4667 3.5646	3.8799 3.2956	Ave		3.4823			5.5		30.0				
Acrolein	++++ 0.2589	++++ 0.3059	++++ 0.3087	++++ 0.2901	0.2761 0.3360	Ave		0.2960			9.1		30.0				
Acetonitrile	++++ 0.5262	++++ 0.4776	++++ 0.4788	++++ 0.4717	0.3293 0.5246	Ave		0.4680			15.4		30.0				
Acetone	++++ 0.6144	++++ 0.5198	++++ 0.5193	++++ 0.4809	0.5816 0.5108	Ave		0.5378			9.3		30.0				
Pentane	++++ 0.2645	++++ 0.2416	++++ 0.2560	++++ 0.2623	0.2836 0.2560	Ave		0.2607			5.3		30.0				
Isopropyl alcohol	++++ 1.7927	++++ 1.3994	++++ 1.5977	++++ 1.4709	1.7607 1.4629	Ave		1.5863			9.6		30.0				
Ethyl ether	++++ 1.6850	++++ 1.4653	++++ 1.6011	++++ 1.4265	1.7711 1.5792	Ave		1.5880			8.2		30.0				
1,1-Dichloroethene	1.5881 1.3803	1.4913 1.3150	1.2949 1.4082	1.3811 1.3832	1.5033 1.3752	Ave		1.4121			6.4		30.0				
Acrylonitrile	++++ 0.9792	++++ 0.9584	0.9151 0.9682	0.9731 0.9008	0.8481 1.0417	Ave		0.9481			6.2		30.0				
1,1,2-Trichlorotrifluoroethane	++++ 2.9182	3.1032 2.8181	2.8515 2.8926	2.9406 2.8073	3.2211 2.7813	Ave		2.9260			5.0		30.0				
tert-Butanol	++++ 2.7826	++++ 1.9787	2.1182 2.4542	2.8146 2.0281	2.3988 2.1471	Ave		2.3403			14.0		30.0				
Methylene Chloride	++++ 1.5084	++++ 1.3706	++++ 1.3704	++++ 1.2802	2.5596 1.2883	Ave		1.6190			29.4		30.0				
3-Chloropropene	++++ 1.6873	++++ 1.6106	1.2603 1.6386	1.7646 1.6799	1.9779 1.6864	Ave		1.6632			11.9		30.0				
Carbon disulfide	++++ 4.4997	++++ 4.2288	4.2607 4.3545	4.3589 4.2900	4.9643 4.2405	Ave		4.3997			5.6		30.0				
trans-1,2-Dichloroethene	++++ 1.4106	1.4246 1.4036	1.2942 1.4460	1.3772 1.4061	1.5206 1.4109	Ave		1.4104			4.2		30.0				
2-Methylpentane	++++ 4.4798	4.7177 4.4074	4.6839 4.4605	4.4358 4.2730	4.8901 4.1883	Ave		4.5041			4.9		30.0				
Methyl tert-butyl ether	++++ 3.9934	++++ 3.4686	3.8684 3.5451	3.9829 3.2379	3.4713 3.7510	Ave		3.6648			7.5		30.0				
1,1-Dichloroethane	++++ 3.1222	3.1357 3.0634	3.1066 3.0563	3.0369 2.9520	3.1641 3.0542	Ave		3.0768			2.1		30.0				
Vinyl acetate	++++ 4.0400	++++ 4.0967	4.0229 3.8849	4.0751 3.7695	3.6563 4.3912	Ave		3.9921			5.6		30.0				
Hexane	++++ 1.4084	++++ 1.4126	1.4999 1.4118	1.4584 1.3493	1.5094 1.3904	Ave		1.4300			3.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone	++++ 0.7072	++++ 0.5962	++++ 0.6245	0.7876 0.5643	0.5815 0.6573	Ave		0.6455			12.3		30.0				
cis-1,2-Dichloroethene	++++ 1.4838	1.4869 1.4533	1.4586 1.4677	1.4361 1.4252	1.5000 1.4882	Ave		1.4666			1.7		30.0				
Ethyl acetate	++++ 3.7946	++++ 3.2940	3.8015 3.3896	3.7028 3.2037	3.0512 3.7178	Ave		3.4944			8.4		30.0				
Chloroform	++++ 3.2011	3.3768 3.1162	3.2230 3.1129	3.1637 3.0462	3.3482 3.1791	Ave		3.1963			3.4		30.0				
Tetrahydrofuran	++++ 1.9363	++++ 1.7372	++++ 1.7900	++++ 1.6856	1.6761 1.9451	Ave		1.7950			6.7		30.0				
1,1,1-Trichloroethane	3.7430 3.3105	3.3998 3.2134	3.4183 3.2189	3.2984 3.1364	3.4236 3.2270	Ave		3.3389			5.2		30.0				
1,2-Dichloroethane	0.3791 0.3630	0.3466 0.3536	0.3636 0.3591	0.3652 0.3484	0.3675 0.3715	Ave		0.3618			2.8		30.0				
Cyclohexane	++++ 0.1407	++++ 0.1232	++++ 0.1323	++++ 0.1199	0.1402 0.1197	Ave		0.1320			8.6		30.0				
Benzene	0.8035 0.7545	0.7500 0.7026	0.7279 0.7227	0.7715 0.6625	0.7478 0.6760	Ave		0.7319			5.9		30.0				
1-Butanol	++++ 0.1327	++++ 0.0856	++++ 0.1120	++++ 0.0918	0.1229 0.0990	Ave		0.1081			15.6		30.0				
Carbon tetrachloride	0.5266 0.5320	0.3719 0.4769	0.3674 0.4717	0.4995 0.4838	0.5414 0.4869	Ave		0.4758			12.8		30.0				
2,3-Dimethylpentane	++++ 0.2004	++++ 0.1827	++++ 0.1833	++++ 0.1750	0.2081 0.1861	Ave		0.1912			6.0		30.0				
Thiophene	++++ 0.4236	++++ 0.3973	0.4053 0.4095	0.4131 0.3908	0.4297 0.4202	Ave		0.4112			3.2		30.0				
2,2,4-Trimethylpentane	++++ 1.5115	1.4799 1.3280	1.3894 1.4079	1.5278 1.2934	1.4912 1.3430	Ave		1.4191			6.1		30.0				
n-Heptane	++++ 0.2981	++++ 0.2720	0.2784 0.2879	0.2930 0.2684	0.3035 0.2828	Ave		0.2855			4.3		30.0				
1,2-Dichloropropane	++++ 0.2996	0.3163 0.2821	0.3080 0.2912	0.3035 0.2627	0.2901 0.2904	Ave		0.2938			5.3		30.0				
Trichloroethene	0.3457 0.3108	0.3142 0.2869	0.2926 0.3139	0.3044 0.2854	0.3149 0.2900	Ave		0.3059			6.0		30.0				
Dibromomethane	++++ 0.2862	++++ 0.2616	0.3011 0.2698	0.2926 0.2655	0.2867 0.2726	Ave		0.2795			5.0		30.0				
Bromodichloromethane	++++ 0.5622	0.4984 0.5150	0.5076 0.5370	0.5261 0.5203	0.5531 0.5355	Ave		0.5283			3.9		30.0				
1,4-Dioxane	++++ 0.1089	++++ 0.0822	0.0867 0.0952	0.1014 0.0773	0.0872 0.0893	Ave		0.0910			11.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13479-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3963	++++ 0.3193	0.3791 0.3489	0.3842 0.3277	0.3111 0.3902	Ave		0.3571			9.7		30.0				
Methylcyclohexane	++++ 0.5008	0.4679 0.4532	0.4726 0.4782	0.4995 0.4377	0.5052 0.4594	Ave		0.4749			4.9		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.7376	++++ 0.5114	0.5427 0.5931	0.6704 0.5033	0.5135 0.6255	Ave		0.5872			14.6		30.0				
cis-1,3-Dichloropropene	0.4555 0.4327	0.3977 0.4166	0.3950 0.4332	0.4121 0.4057	0.4121 0.4453	Ave		0.4206			4.8		30.0				
trans-1,3-Dichloropropene	0.4256 0.4168	0.3873 0.3976	0.3645 0.4213	0.3847 0.3904	0.3654 0.4394	Ave		0.3993			6.4		30.0				
Toluene	++++ 0.8789	0.8590 0.8111	0.8480 0.8345	0.8439 0.7385	0.7849 0.8137	Ave		0.8236			5.2		30.0				
1,1,2-Trichloroethane	0.2691 0.2761	0.2573 0.2540	0.2530 0.2647	0.2734 0.2355	0.2542 0.2612	Ave		0.2599			4.6		30.0				
2-Hexanone	++++ 0.3601	++++ 0.2423	++++ 0.3018	++++ 0.2374	0.3210 0.3040	Ave		0.2871			16.4		30.0				
n-Octane	++++ 0.3383	++++ 0.3037	0.3119 0.3252	0.3197 0.2988	0.3159 0.3110	Ave		0.3156			3.9		30.0				
C8 Range	++++ 3.3866	++++ 3.0673	++++ 3.2447	++++ 3.0104	3.3153 3.0667	Ave		3.1891			4.5		30.0				
Dibromochloromethane	++++ 0.4949	++++ 0.4796	0.4002 0.5117	0.4374 0.4775	0.4585 0.5016	Ave		0.4702			7.9		30.0				
1,2-Dibromoethane	0.4362 0.4642	0.3924 0.4366	0.4160 0.4565	0.4307 0.4133	0.4186 0.4485	Ave		0.4313			5.1		30.0				
Tetrachloroethene	0.3191 0.3085	0.3056 0.2875	0.2955 0.2904	0.2973 0.2723	0.2986 0.2811	Ave		0.2956			4.6		30.0				
Chlorobenzene	++++ 0.6823	0.6347 0.6165	0.6274 0.6471	0.6665 0.5687	0.6372 0.5936	Ave		0.6304			5.5		30.0				
Ethylbenzene	++++ 1.2040	0.9927 1.0426	1.0913 1.0990	1.1219 0.9529	1.0188 1.0741	Ave		1.0664			7.0		30.0				
m&p-Xylene	0.8906 0.9334	0.7895 0.8128	0.8240 0.8440	0.8839 0.7232	0.7930 0.7928	Ave		0.8287			7.4		30.0				
n-Nonane	0.6804 0.7411	0.6353 0.6548	0.6442 0.7062	0.6989 0.6265	0.6708 0.6597	Ave		0.6718			5.3		30.0				
Bromoform	++++ 0.4303	++++ 0.4100	0.3148 0.4507	0.3638 0.3997	0.3628 0.4287	Ave		0.3951			11.4		30.0				
Styrene	++++ 0.6561	++++ 0.5753	0.5448 0.6233	0.5671 0.5434	0.5317 0.6016	Ave		0.5804			7.5		30.0				
o-Xylene	0.9483 0.9765	0.8461 0.8518	0.8730 0.8801	0.9055 0.7737	0.8035 0.8709	Ave		0.8729			7.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13479-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++ 0.6990	++++ 0.5729	0.5935 0.5565	0.6423 0.5391	0.5712 0.6133	Ave		0.5985			8.7		30.0				
1,2,3-Trichloropropane	++++ 0.1977	++++ 0.1650	0.1776 0.1757	0.1859 0.1580	0.1615 0.1807	Ave		0.1752			7.6		30.0				
Cumene	1.2167 1.2684	1.1206 1.0727	1.1654 1.1118	1.2047 0.9839	1.0500 1.0988	Ave		1.1293			7.6		30.0				
N-Propylbenzene	++++ 0.3444	++++ 0.2903	0.2905 0.3061	0.3245 0.2722	0.2785 0.3115	Ave		0.3023			8.0		30.0				
2-Chlorotoluene	++++ 0.3163	0.2683 0.2751	0.2858 0.2915	0.3069 0.2545	0.2717 0.2833	Ave		0.2837			6.8		30.0				
4-Ethyltoluene	1.1802 1.2983	1.0116 1.0515	1.1413 1.1220	1.2070 0.9993	1.0471 1.1117	Ave		1.1170			8.4		30.0				
1,3,5-Trimethylbenzene	0.4380 0.5075	0.3882 0.4149	0.4426 0.4432	0.4745 0.3926	0.3987 0.4537	Ave		0.4354			8.7		30.0				
Alpha Methyl Styrene	++++ 0.5033	++++ 0.4343	0.3989 0.4736	0.4374 0.4299	0.3833 0.4831	Ave		0.4430			9.3		30.0				
n-Decane	0.8747 0.9432	0.7509 0.7920	0.8187 0.8445	0.8780 0.7261	0.7935 0.7728	Ave		0.8194			8.1		30.0				
tert-Butylbenzene	0.9684 1.0983	0.8858 0.8812	0.9841 0.9323	1.0423 0.8275	0.8844 0.9292	Ave		0.9434			8.7		30.0				
1,2,4-Trimethylbenzene	++++ 1.1015	++++ 0.8786	0.9629 0.9379	1.0532 0.8297	0.8790 0.9109	Ave		0.9442			9.8		30.0				
sec-Butylbenzene	1.4042 1.6121	1.2383 1.2838	1.3928 1.3577	1.4963 1.1958	1.3002 1.2979	Ave		1.3579			9.2		30.0				
1,3-Dichlorobenzene	0.6719 0.6879	0.5859 0.5841	0.6097 0.6223	0.6686 0.5421	0.5840 0.5830	Ave		0.6140			7.8		30.0				
Benzyl chloride	++++ 0.9497	++++ 0.7915	0.7453 0.8976	0.8357 0.8082	0.6939 0.8925	Ave		0.8268			10.3		30.0				
1,4-Dichlorobenzene	++++ 0.6937	0.6078 0.5884	0.6125 0.6275	0.6709 0.5475	0.5802 0.5853	Ave		0.6126			7.5		30.0				
p-Cymene	++++ 1.2964	++++ 1.0111	1.0677 1.0849	1.2097 0.9716	0.9962 1.0954	Ave		1.0916			10.2		30.0				
1,2,3-Trimethylbenzene	0.8730 1.1017	0.8179 0.8798	0.9554 0.9421	1.0217 0.8438	0.8661 0.9356	QuaF		0.8383	0.0058413					0.9990		0.9900	
Indane	0.8789 0.9974	0.7828 0.8038	0.8917 0.8452	0.9675 0.7360	0.8181 0.8012	Ave		0.8523			9.7		30.0				
1,2-Dichlorobenzene	++++ 0.6723	0.5633 0.5556	0.5995 0.5826	0.6559 0.5036	0.5632 0.5457	Ave		0.5824			9.2		30.0				
n-Butylbenzene	1.1836 1.3906	1.0732 1.0867	1.1566 1.1543	1.3153 1.0099	1.0574 1.0819	Ave		1.1510			10.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.8801	++++ 0.7121	0.7574 0.7655	0.8315 0.6820	0.6782 0.7448	Ave		0.7565			9.3		30.0				
n-Undecane	++++ 0.9943	++++ 0.7761	0.8500 0.8540	0.9850 0.7602	0.7623 0.8384	Ave		0.8525			10.9		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.3478	++++ 0.2779	0.2832 0.3121	0.3169 0.2736	0.2457 0.3173	Ave		0.2968			10.9		30.0				
1,2,4,5-Tetramethylbenzene	++++ 1.1899	++++ 0.9212	1.0058 0.9972	1.1740 0.8826	0.7962 1.0228	Ave		0.9987			13.6		30.0				
n-Dodecane	++++ 0.7357	++++ 0.5299	++++ 0.7091	++++ 0.5805	0.5269 0.7107	Ave		0.6321			15.3		30.0				
1,2,4-Trichlorobenzene	++++ 0.5006	0.4549 0.4143	0.4857 0.4838	0.5498 0.4296	0.3674 0.4992	Ave		0.4650			11.7		30.0				
Naphthalene	++++ 1.1302	1.1299 0.9984	1.1239 1.1677	1.4420 1.0181	0.8036 1.1595	Ave		1.1082			15.4		30.0				
Hexachlorobutadiene	++++ 0.4597	0.4096 0.3590	0.4490 0.3963	0.4721 0.3521	0.3766 0.4165	Ave		0.4101			10.6		30.0				
1,2,3-Trichlorobenzene	++++ 0.4713	0.4475 0.3731	0.4274 0.4448	0.5521 0.3790	0.3362 0.4545	Ave		0.4318			14.7		30.0				
2-Methylnaphthalene	++++ 0.2118	++++ 0.2243	++++ 0.4338	++++ 0.2777	++++ 0.3721	Ave		0.3039			31.7		50.0				
1-Methylnaphthalene	++++ 0.2729	++++ 0.2544	++++ 0.4766	++++ 0.2879	++++ 0.3737	Ave		0.3331			27.7		50.0				
4-Bromofluorobenzene (Surr)	0.7913 0.8258	0.7928 0.8081	0.7863 0.8410	0.8252 0.8281	0.8159	Ave		0.8136			2.3		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25539/8	GK19IC01.D
Level 2	IC 140-25539/9	GK19IC02.D
Level 3	IC 140-25539/10	GK19IC03.D
Level 4	IC 140-25539/11	GK19IC04.D
Level 5	IC 140-25539/12	GK19IC05.D
Level 6	IC 140-25539/13	GK19IC06.D
Level 7	ICIS 140-25539/14	GK19IC07.D
Level 8	IC 140-25539/15	GK19IC08.D
Level 9	IC 140-25539/3	GK19IC09.D
Level 10	IC 140-25539/5	GK19IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 213134	++++ 425995	17313 852115	34392 1641060	91638 3312685	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 122399	++++ 245751	++++ 485328	25131 922660	54576 1861073	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 293942	12847 592333	23762 1179512	47328 2302698	126801 4542189	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 38867	++++ 74207	++++ 152707	7374 284794	17960 571155	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorotetrafluoroethane	CBM	Ave	++++ 165816	6933 333157	13205 661452	26478 1248913	73353 2467542	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	2842 121765	5090 243569	9553 489146	18527 933000	53622 1895212	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 210337	++++ 408489	++++ 826350	33993 1577208	95989 3225870	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 98217	++++ 196095	++++ 400466	15080 760847	43741 1566166	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 93490	++++ 188277	7889 384351	14915 736086	40069 1508068	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 56838	++++ 114013	4619 237140	8851 452118	24256 934730	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 264173	++++ 471116	++++ 1024247	40079 1844034	96753 3900907	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 84388	3663 170971	6582 351375	13309 674263	36170 1396076	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 137913	++++ 273919	11840 583065	23179 1099927	58276 2252813	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 244363	10052 480008	19100 989104	37339 2018158	105029 3930679	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13479-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	++++ 18084	++++ 44982	++++ 90941	++++ 164247	7475 400688	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 36755	++++ 70220	++++ 141051	++++ 267075	8913 625658	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetone	CBM	Ave	++++ 128743	++++ 229293	++++ 458917	++++ 816802	47231 1827590	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 18477	++++ 35517	++++ 75410	++++ 148503	7676 305309	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 375654	++++ 617236	++++ 1411959	++++ 2498339	56892 131556 5234518	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 117694	++++ 215434	++++ 471654	++++ 807636	47943 1883466	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	2297 96413	4138 193344	7295 414843	14876 783088	40696 1640145	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 68397	++++ 140907	++++ 285199	++++ 509989	5155 1242476	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichlorotrifluoroethane	CBM	Ave	++++ 203839	++++ 414334	++++ 852094	++++ 1589363	8611 3317262	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butanol	CBM	Ave	++++ 194363	++++ 290919	++++ 722973	++++ 1148226	11933 2560873	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 105364	++++ 201519	++++ 403707	++++ 724823	27569 1536576	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 117858	++++ 236800	++++ 482696	++++ 951069	7100 2011369	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 314303	++++ 621752	++++ 1282762	++++ 2428840	24003 5057684	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 98532	++++ 206361	++++ 425966	++++ 796056	7291 1682746	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 312910	++++ 648001	++++ 1313967	++++ 2419211	13091 4995390	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 278941	++++ 509969	++++ 1044311	++++ 1833163	21793 4473786	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	++++ 218087	++++ 450395	++++ 900321	++++ 1671302	8701 3642762	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 282190	++++ 602326	++++ 1144430	++++ 2134172	22663 5237334	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 98376	++++ 207693	++++ 415892	++++ 763910	8450 1658330	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone	CBM	Ave	++++ 49398	++++ 87654	++++ 183971	++++ 319512	8483 784000	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	++++ 103642	++++ 213674	++++ 432348	++++ 806875	4126 1774981	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13479-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)					
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	
Ethyl acetate	CBM	Ave	++++ 265053	++++ 484309	21416 998518	39882 1813820	82596 4434165	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Chloroform	CBM	Ave	++++ 223597	++++ 458167	9370 916990	18157 1724652	90637 3791654	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Tetrahydrofuran	CBM	Ave	++++ 135248	++++ 255412	++++ 527305	++++ 954335	45372 2319928	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0	
1,1,1-Trichloroethane	CBM	Ave	5414 231241	9434 472457	19257 948241	35526 1775710	92677 3848807	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
1,2-Dichloroethane	DFBZ	Ave	3515 149022	6167 328987	12952 645316	23404 1251312	59768 2781931	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Cyclohexane	DFBZ	Ave	++++ 57756	++++ 114639	++++ 237706	8987 430813	24070 896181	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0	
Benzene	DFBZ	Ave	7450 309735	13343 653669	25930 1298691	49442 2379560	121628 5061484	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
1-Butanol	DFBZ	Ave	++++ 54462	++++ 79637	++++ 201295	7877 329596	18291 741238	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0	
Carbon tetrachloride	DFBZ	Ave	4882 218396	6616 443671	13089 847780	32010 1737710	88058 3645457	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
2,3-Dimethylpentane	DFBZ	Ave	++++ 82285	++++ 169965	6528 344322	13336 628549	32961 1393431	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Thiophene	DFBZ	Ave	++++ 173881	++++ 369642	14436 735880	26473 1403861	69887 3146075	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 620492	++++ 1235504	26330 2530256	49494 4645523	97913 10056141	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
n-Heptane	DFBZ	Ave	++++ 122383	++++ 253052	9917 517408	18777 964177	49369 2117126	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
1,2-Dichloropropane	DFBZ	Ave	++++ 122969	5627 262474	10970 523379	19451 943495	47190 2174092	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Trichloroethene	DFBZ	Ave	3205 127565	5590 266889	10423 564088	19511 1025189	51213 2171695	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Dibromomethane	DFBZ	Ave	++++ 117498	++++ 243347	10726 484886	18753 953758	46630 2041273	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Bromodichloromethane	DFBZ	Ave	++++ 230779	8867 479179	18081 964967	33715 1868708	89969 4009628	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
1,4-Dioxane	DFBZ	Ave	++++ 44708	++++ 76432	3087 171069	6500 277476	14191 668565	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Methyl methacrylate	DFBZ	Ave	++++ 162679	++++ 297095	13506 627079	24620 1176973	50603 2921446	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	
Methylcyclohexane	DFBZ	Ave	++++ 205561	++++ 421647	8324 859405	16836 1572038	32014 3439448	82164 82164	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 302782	++++ 475813	19331 1065796	42961 1807905	83517 4683489	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0	

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13479-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	4223	7075	14071	26411	67030	0.0200	0.0400	0.0800	0.160	0.400
			177618	387570	778502	1457194	3334227	1.00	2.00	4.00	8.00	16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	3678	6417	12164	23363	57675	0.0200	0.0400	0.0800	0.160	0.400
			158910	339832	700890	1310210	3089373	1.00	2.00	4.00	8.00	16.0
Toluene	CBZd 5	Ave	++++	14232	28303	51257	123882	++++	0.0400	0.0800	0.160	0.400
			335051	693251	1388384	2478512	5720473	1.00	2.00	4.00	8.00	16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2326	4263	8444	16606	40113	0.0200	0.0400	0.0800	0.160	0.400
			105258	217108	440430	790249	1836669	1.00	2.00	4.00	8.00	16.0
2-Hexanone	CBZd 5	Ave	++++	++++	++++	19499	38394	++++	++++	++++	0.160	0.400
			137273	207099	502190	796624	2137087	1.00	2.00	4.00	8.00	16.0
n-Octane	CBZd 5	Ave	++++	++++	10409	19420	49853	++++	++++	0.0800	0.160	0.400
			128965	259562	541042	1002854	2186474	1.00	2.00	4.00	8.00	16.0
C8 Range	CBZd 5	Ave	++++	++++	++++	201359	510187	++++	++++	++++	0.160	0.400
			1291089	2621723	5398304	10103657	21559958	1.00	2.00	4.00	8.00	16.0
Dibromochloromethane	CBZd 5	Ave	++++	++++	13356	26567	72362	++++	++++	0.0800	0.160	0.400
			188691	409895	851378	1602672	3526724	1.00	2.00	4.00	8.00	16.0
1,2-Dibromoethane	CBZd 5	Ave	3770	6501	13885	26157	66073	0.0200	0.0400	0.0800	0.160	0.400
			176960	373205	759482	1386991	3152916	1.00	2.00	4.00	8.00	16.0
Tetrachloroethene	CBZd 5	Ave	2758	5064	9863	18059	47134	0.0200	0.0400	0.0800	0.160	0.400
			117594	245717	483226	913891	1976468	1.00	2.00	4.00	8.00	16.0
Chlorobenzene	CBZd 5	Ave	++++	10517	20939	40481	100567	++++	0.0400	0.0800	0.160	0.400
			260123	526924	1076675	1908819	4172904	1.00	2.00	4.00	8.00	16.0
Ethylbenzene	CBZd 5	Ave	++++	16448	36421	68140	160794	++++	0.0400	0.0800	0.160	0.400
			459007	891181	1828423	3198014	7551419	1.00	2.00	4.00	8.00	16.0
m&p-Xylene	CBZd 5	Ave	15395	26164	55002	107364	250316	0.0400	0.0800	0.160	0.320	0.800
			711699	1389444	2808548	4854329	11146974	2.00	4.00	8.00	16.0	32.0
n-Nonane	CBZd 5	Ave	5881	10526	21500	42447	105880	0.0200	0.0400	0.0800	0.160	0.400
			282529	559652	1174879	2102592	4637617	1.00	2.00	4.00	8.00	16.0
Bromoform	CBZd 5	Ave	++++	++++	10507	22098	57258	++++	++++	0.0800	0.160	0.400
			164039	350460	749817	1341429	3013694	1.00	2.00	4.00	8.00	16.0
Styrene	CBZd 5	Ave	++++	++++	18184	34443	83914	++++	++++	0.0800	0.160	0.400
			250111	491766	1037031	1823684	4229327	1.00	2.00	4.00	8.00	16.0
o-Xylene	CBZd 5	Ave	8196	14019	29137	54994	126815	0.0200	0.0400	0.0800	0.160	0.400
			372286	728079	1464208	2596658	6122615	1.00	2.00	4.00	8.00	16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	++++	++++	19807	39013	90150	++++	++++	0.0800	0.160	0.400
			266474	489686	925921	1809382	4311662	1.00	2.00	4.00	8.00	16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++	++++	5928	11288	25496	++++	++++	0.0800	0.160	0.400
			75369	140992	292259	530200	1270140	1.00	2.00	4.00	8.00	16.0
Cumene	CBZd 5	Ave	10516	18567	38895	73170	165726	0.0200	0.0400	0.0800	0.160	0.400
			483580	916878	1849824	3302284	7725096	1.00	2.00	4.00	8.00	16.0
N-Propylbenzene	CBZd 5	Ave	++++	++++	9696	19711	43961	++++	++++	0.0800	0.160	0.400
			131304	248105	509297	913517	2189792	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13479-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 120577	4446 235104	9540 484959	18637 854299	42884 1991626	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	10200 494958	16761 898739	38090 1866746	73309 3353829	165259 7815900	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	3786 193494	6432 354673	14772 737322	28820 1317619	62934 3189740	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 191892	++++ 371223	13313 787900	26567 1442818	60498 3396315	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Decane	CBZd 5	Ave	7560 359592	12441 676932	27324 1405096	53327 2436845	125239 5432796	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	8370 418713	14677 753238	32844 1551104	63305 2777445	139594 6532801	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 419918	++++ 750976	32137 1560491	63968 2784519	138740 6404114	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	12136 614586	20517 1097360	46486 2258822	90880 4013369	205213 9124681	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	5807 262262	9708 499287	20350 1035420	40610 1819495	92171 4098836	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 362042	++++ 676508	24875 1493396	50754 2712511	109523 6274527	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	++++ 264470	10071 502954	20441 1043933	40748 1837381	91575 4114618	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
p-Cymene	CBZd 5	Ave	++++ 494218	++++ 864208	35635 1804954	73474 3260871	157227 7700803	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	QuaF	7545 419992	13552 751993	31888 1567341	62052 2832151	136691 6577412	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	7596 380253	12970 687080	29760 1406234	58762 2470291	129114 5633002	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 256293	9334 474922	20010 969247	39836 1690175	88894 3836439	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Butylbenzene	CBZd 5	Ave	10230 530160	17781 928877	38603 1920490	79887 3389522	166884 7605792	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 335541	++++ 608660	25279 1273573	50502 2288947	107041 5236482	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Undecane	CBZd 5	Ave	++++ 379057	++++ 663396	28369 1420906	59824 2551359	120308 5894210	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 132611	++++ 237572	9452 519301	19247 918221	38782 2230442	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 453650	++++ 787407	33570 1659059	71303 2962260	125664 7190615	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Dodecane	CBZd 5	Ave	++++ 280491	++++ 452943	++++ 1179708	++++ 1948321	83156 4996610	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 190857	7537 354159	16209 804852	33390 1441740	57989 3509735	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 430856	18721 853395	37511 1942781	87580 3417093	126841 8151861	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 175239	6787 306859	14985 659395	28674 1181716	59443 2927915	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 179674	7414 318921	14265 739999	33535 1271858	53064 3195184	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 80738	++++ 191719	++++ 721705	++++ 932228	++++ 2615960	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 104049	++++ 217486	++++ 792974	++++ 966216	++++ 2627036	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1367760 1259220	1313630 1381357	1312187 1399256	1252969 1389696	1297299 1433969	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD
QuaF = Quadratic ISTD forced zero

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-25664/2 Calibration Date: 11/29/2018 10:22
 Instrument ID: MG Calib Start Date: 11/19/2018 13:04
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/19/2018 21:56
 Lab File ID: GCCVK29.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.021	3.162		2.09	2.00	4.7	30.0
Propene	Ave	1.802	1.808		2.01	2.00	0.4	30.0
Dichlorodifluoromethane	Ave	4.227	4.350		2.06	2.00	2.9	30.0
Chloromethane	Ave	0.5585	0.5519		1.98	2.00	-1.2	30.0
1,2-Dichlorotetrafluoroethane	Ave	2.352	2.340		1.99	2.00	-0.5	30.0
Acetaldehyde	Ave	0.6313	0.5704		9.04	10.0	-9.6	30.0
Vinyl chloride	Ave	1.749	1.766		2.02	2.00	0.9	30.0
1,3-Butadiene	Ave	1.396	1.438		2.06	2.00	3.0	30.0
Butane	Ave	2.970	3.085		2.08	2.00	3.9	30.0
Bromomethane	Ave	1.344	1.382		2.06	2.00	2.8	30.0
Chloroethane	Ave	0.8143	0.8499		2.09	2.00	4.4	30.0
Ethanol	Ave	0.6939	0.5967		8.60	10.0	-14.0	30.0
Vinyl bromide	Ave	1.221	1.226		2.01	2.00	0.4	30.0
2-Methylbutane	Ave	2.007	2.067		2.06	2.00	3.0	30.0
Trichlorofluoromethane	Ave	3.482	3.701		2.13	2.00	6.3	30.0
Acrolein	Ave	0.2960	0.2737		1.85	2.00	-7.5	30.0
Acetonitrile	Ave	0.4680	0.4427		1.89	2.00	-5.4	30.0
Acetone	Ave	0.5378	0.4728		5.27	6.00	-12.1	30.0
Pentane	Ave	0.2607	0.2614		2.01	2.00	0.3	30.0
Isopropyl alcohol	Ave	1.586	1.244		4.71	6.00	-21.6	30.0
Ethyl ether	Ave	1.588	1.481		1.86	2.00	-6.8	30.0
1,1-Dichloroethene	Ave	1.412	1.429		2.02	2.00	1.2	30.0
Acrylonitrile	Ave	0.9481	0.8971		1.89	2.00	-5.4	30.0
tert-Butanol	Ave	2.340	1.713		1.46	2.00	-26.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	2.926	3.035		2.07	2.00	3.7	30.0
Methylene Chloride	Ave	1.619	1.471		1.82	2.00	-9.2	30.0
3-Chloropropene	Ave	1.663	1.722		2.07	2.00	3.5	30.0
Carbon disulfide	Ave	4.400	4.618		2.10	2.00	5.0	30.0
trans-1,2-Dichloroethene	Ave	1.410	1.493		2.12	2.00	5.9	30.0
2-Methylpentane	Ave	4.504	4.869		2.16	2.00	8.1	30.0
Methyl tert-butyl ether	Ave	3.665	3.189		1.74	2.00	-13.0	30.0
1,1-Dichloroethane	Ave	3.077	3.101		2.02	2.00	0.8	30.0
Vinyl acetate	Ave	3.992	3.809		1.91	2.00	-4.6	30.0
2-Butanone	Ave	0.6455	0.5329		1.65	2.00	-17.4	30.0
Hexane	Ave	1.430	1.483		2.07	2.00	3.7	30.0
Isopropyl ether	Ave	5.300	4.728		1.78	2.00	-10.8	30.0
cis-1,2-Dichloroethene	Ave	1.467	1.445		1.97	2.00	-1.5	30.0
Ethyl acetate	Ave	3.494	3.123		1.79	2.00	-10.6	30.0
Chloroform	Ave	3.196	3.150		1.97	2.00	-1.4	30.0
Tert-butyl ethyl ether	Ave	4.592	4.027		1.75	2.00	-12.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-25664/2 Calibration Date: 11/29/2018 10:22
 Instrument ID: MG Calib Start Date: 11/19/2018 13:04
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/19/2018 21:56
 Lab File ID: GCCVK29.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.795	1.658		1.85	2.00	-7.7	30.0
1,1,1-Trichloroethane	Ave	3.339	3.262		1.95	2.00	-2.3	30.0
1,2-Dichloroethane	Ave	0.3618	0.3600		1.99	2.00	-0.5	30.0
Cyclohexane	Ave	0.1320	0.1320		2.00	2.00	-0.0	30.0
1-Butanol	Ave	0.1081	0.0724		1.34	2.00	-33.0*	30.0
Benzene	Ave	0.7319	0.6879		1.88	2.00	-6.0	30.0
Carbon tetrachloride	Ave	0.4758	0.5058		2.13	2.00	6.3	30.0
2,3-Dimethylpentane	Ave	0.1912	0.1793		1.88	2.00	-6.2	30.0
Thiophene	Ave	0.4112	0.3859		1.88	2.00	-6.1	30.0
2,2,4-Trimethylpentane	Ave	1.419	1.330		1.87	2.00	-6.3	30.0
n-Heptane	Ave	0.2855	0.2669		1.87	2.00	-6.5	30.0
1,2-Dichloropropane	Ave	0.2938	0.2664		1.81	2.00	-9.3	30.0
Trichloroethene	Ave	0.3059	0.2741		1.79	2.00	-10.4	30.0
Dibromomethane	Ave	0.2795	0.2582		1.85	2.00	-7.6	30.0
Bromodichloromethane	Ave	0.5283	0.5117		1.94	2.00	-3.1	30.0
1,4-Dioxane	Ave	0.0910	0.0658		1.45	2.00	-27.7	30.0
Methyl methacrylate	Ave	0.3571	0.2976		1.67	2.00	-16.7	30.0
Methylcyclohexane	Ave	0.4749	0.4398		1.85	2.00	-7.4	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5872	0.4004		1.36	2.00	-31.8*	30.0
cis-1,3-Dichloropropene	Ave	0.4206	0.3966		1.89	2.00	-5.7	30.0
trans-1,3-Dichloropropene	Ave	0.3993	0.3650		1.83	2.00	-8.6	30.0
Toluene	Ave	0.8236	0.7227		1.76	2.00	-12.2	30.0
1,1,2-Trichloroethane	Ave	0.2599	0.2321		1.79	2.00	-10.7	30.0
2-Hexanone	Ave	0.2871	0.1821		1.27	2.00	-36.6*	30.0
n-Octane	Ave	0.3156	0.2929		1.86	2.00	-7.2	30.0
Dibromochloromethane	Ave	0.4702	0.4475		1.90	2.00	-4.8	30.0
1,2-Dibromoethane	Ave	0.4313	0.3938		1.83	2.00	-8.7	30.0
Tetrachloroethene	Ave	0.2956	0.2708		1.83	2.00	-8.4	30.0
2,3-Dimethylheptane	Ave	1.119	1.105		1.97	2.00	-1.3	30.0
Chlorobenzene	Ave	0.6304	0.5600		1.78	2.00	-11.2	30.0
Ethylbenzene	Ave	1.066	0.9078		1.70	2.00	-14.9	30.0
m&p-Xylene	Ave	0.8287	0.7030		3.39	4.00	-15.2	30.0
n-Nonane	Ave	0.6718	0.6165		1.84	2.00	-8.2	30.0
Bromoform	Ave	0.3951	0.3578		1.81	2.00	-9.4	30.0
Styrene	Ave	0.5804	0.4864		1.68	2.00	-16.2	30.0
o-Xylene	Ave	0.8729	0.7322		1.68	2.00	-16.1	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5985	0.5073		1.70	2.00	-15.2	30.0
1,2,3-Trichloropropane	Ave	0.1752	0.1424		1.63	2.00	-18.7	30.0
Cumene	Ave	1.129	0.9102		1.61	2.00	-19.4	30.0
N-Propylbenzene	Ave	0.3023	0.2395		1.58	2.00	-20.8	30.0
2-Chlorotoluene	Ave	0.2837	0.2305		1.62	2.00	-18.8	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-25664/2 Calibration Date: 11/29/2018 10:22
 Instrument ID: MG Calib Start Date: 11/19/2018 13:04
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/19/2018 21:56
 Lab File ID: GCCVK29.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.117	0.8911		1.60	2.00	-20.2	30.0
1,3,5-Trimethylbenzene	Ave	0.4354	0.3416		1.57	2.00	-21.6	30.0
Alpha Methyl Styrene	Ave	0.4430	0.3505		1.58	2.00	-20.9	30.0
n-Decane	Ave	0.8194	0.7066		1.72	2.00	-13.8	30.0
tert-Butylbenzene	Ave	0.9434	0.7473		1.58	2.00	-20.8	30.0
1,2,4-Trimethylbenzene	Ave	0.9442	0.7586		1.61	2.00	-19.7	30.0
sec-Butylbenzene	Ave	1.358	1.092		1.61	2.00	-19.6	30.0
1,3-Dichlorobenzene	Ave	0.6140	0.4928		1.61	2.00	-19.7	30.0
Benzyl chloride	Ave	0.8268	0.6805		1.65	2.00	-17.7	30.0
1,4-Dichlorobenzene	Ave	0.6126	0.4958		1.62	2.00	-19.1	30.0
p-Cymene	Ave	1.092	0.8462		1.55	2.00	-22.5	30.0
1,2,3-Trimethylbenzene	QuaF		0.7536		1.78	2.00	-11.2	30.0
Butylcyclohexane	Ave	0.8951	0.7496		1.67	2.00	-16.3	30.0
Indane	Ave	0.8523	0.6826		1.60	2.00	-19.9	30.0
1,2-Dichlorobenzene	Ave	0.5824	0.4659		1.60	2.00	-20.0	30.0
n-Butylbenzene	Ave	1.151	0.9324		1.62	2.00	-19.0	30.0
Indene	Ave	0.7565	0.5930		1.57	2.00	-21.6	30.0
n-Undecane	Ave	0.8525	0.6999		1.64	2.00	-17.9	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2968	0.2182		1.47	2.00	-26.5	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.999	0.7443		1.49	2.00	-25.5	30.0
n-Dodecane	Ave	0.6321	0.4762		1.51	2.00	-24.7	30.0
1,2,4-Trichlorobenzene	Ave	0.4650	0.3507		1.51	2.00	-24.6	30.0
Naphthalene	Ave	1.108	0.8159		1.47	2.00	-26.4	30.0
Hexachlorobutadiene	Ave	0.4101	0.3015		1.47	2.00	-26.5	30.0
1,2,3-Trichlorobenzene	Ave	0.4318	0.3049		1.41	2.00	-29.4	30.0
2-Methylnaphthalene	Ave	0.3039	0.1934		1.27	2.00	-36.4	50.0
1-Methylnaphthalene	Ave	0.3331	0.2200		1.32	2.00	-34.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8136	0.8210		4.04	4.00	0.9	30.0

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1

SDG No.: _____

Instrument ID: MG Start Date: 11/19/2018 12:29

Analysis Batch Number: 25539 End Date: 11/20/2018 06:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25539/2		11/19/2018 12:29	1	GBFBK19.D	RTX-5 0.32 (mm)
IC 140-25539/3		11/19/2018 13:04	1	GK19IC09.D	RTX-5 0.32 (mm)
IC 140-25539/5		11/19/2018 14:34	1	GK19IC10.D	RTX-5 0.32 (mm)
IC 140-25539/8		11/19/2018 16:45	1	GK19IC01.D	RTX-5 0.32 (mm)
IC 140-25539/9		11/19/2018 17:30	1	GK19IC02.D	RTX-5 0.32 (mm)
IC 140-25539/10		11/19/2018 18:17	1	GK19IC03.D	RTX-5 0.32 (mm)
IC 140-25539/11		11/19/2018 19:00	1	GK19IC04.D	RTX-5 0.32 (mm)
IC 140-25539/12		11/19/2018 19:44	1	GK19IC05.D	RTX-5 0.32 (mm)
IC 140-25539/13		11/19/2018 20:26	1	GK19IC06.D	RTX-5 0.32 (mm)
ICIS 140-25539/14		11/19/2018 21:10	1	GK19IC07.D	RTX-5 0.32 (mm)
IC 140-25539/15		11/19/2018 21:56	1	GK19IC08.D	RTX-5 0.32 (mm)
ICV 140-25539/18		11/20/2018 00:05	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 02:18	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 03:01	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 03:44	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 04:27	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 05:11	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 05:55	1		RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 06:38	1		RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13479-1

SDG No.: _____

Instrument ID: MG Start Date: 11/29/2018 09:47

Analysis Batch Number: 25664 End Date: 11/30/2018 09:07

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25664/1		11/29/2018 09:47	1	GBFBK29.D	RTX-5 0.32 (mm)
CCVIS 140-25664/2		11/29/2018 10:22	1	GCCVK29.D	RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 10:22	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 12:04	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 12:04	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 12:48	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 15:18	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 16:02	341.42		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 16:45	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 17:29	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 18:13	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 18:57	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 19:40	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 20:24	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 21:11	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 21:11	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 21:58	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 21:58	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 22:45	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 22:45	1		RTX-5 0.32 (mm)
ZZZZZ		11/29/2018 23:29	1		RTX-5 0.32 (mm)
ZZZZZ		11/30/2018 00:13	60		RTX-5 0.32 (mm)
ZZZZZ		11/30/2018 00:56	40		RTX-5 0.32 (mm)
ZZZZZ		11/30/2018 01:40	314.29		RTX-5 0.32 (mm)
ZZZZZ		11/30/2018 02:24	168.37		RTX-5 0.32 (mm)
140-13479-1		11/30/2018 03:07	1	K29L13479.D	RTX-5 0.32 (mm)
ZZZZZ		11/30/2018 09:07	1		RTX-5 0.32 (mm)

Shipping and Receiving Documents

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?		/		<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : _____ Correction factor: _____	/		/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/		/	<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	pH test strip lot number: _____
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?	/		/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____
17. Were VOA samples received without headspace?	/		/	<input type="checkbox"/> Headspace (VOA only)	Date: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____	/		/	<input type="checkbox"/> Residual Chlorine	Time: _____
19. For 1613B water samples is pH<9?	/		/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?	/		/	<input type="checkbox"/> Project missing info	

Project #: 140292A PM Instructions: _____

Sample Receiving Associate: *Randy Danner* Date: 1-3-19

QA026R31.doc, 112618

ANALYTICAL REPORT

Job Number: 140-13996-1

Job Description: LMC MRC - MRAS/Buildings A&C

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401
Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
1/25/2019 2:48 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
01/25/2019

cc: Belssi Chang
Amy Thomson
Michael Wilks

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TestAmerica Laboratories, Inc.

TestAmerica Knoxville 5815 Middlebrook Pike, Knoxville, TN 37921
Tel (865) 291-3000 Fax (865) 584-4315 www.testamericainc.com

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Definitions/Glossary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-13996-1

Receipt

The samples were received on 1/18/2019 at 9:50 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: BLDG-C EFFLUENT

Lab Sample ID: 140-13996-1

Sample Analysis Not Complete.

Client Sample ID: BLDG-C MIDGAC

Lab Sample ID: 140-13996-2

Sample Analysis Not Complete.

Client Sample ID: BLDG-C INFLUENT

Lab Sample ID: 140-13996-3

Sample Analysis Not Complete.

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-13996-4

Sample Analysis Not Complete.

Client Sample ID: BLDG-A MIDGAC

Lab Sample ID: 140-13996-5

Sample Analysis Not Complete.

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-13996-6

Sample Analysis Not Complete.

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: BLDG-C EFFLUENT

Lab Sample ID: 140-13996-1

Date Collected: 01/16/19 12:42

Matrix: Air

Date Received: 01/18/19 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.8		0.40	0.12	ppb v/v			01/21/19 20:42	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/21/19 20:42	1
Chlorodifluoromethane	0.77		0.40	0.075	ppb v/v			01/21/19 20:42	1
Chloroform	0.35	J	0.40	0.075	ppb v/v			01/21/19 20:42	1
cis-1,2-Dichloroethene	0.19	J	0.40	0.12	ppb v/v			01/21/19 20:42	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			01/21/19 20:42	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			01/21/19 20:42	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/21/19 20:42	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			01/21/19 20:42	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			01/21/19 20:42	1
Methylene Chloride	1.0	J	2.0	0.65	ppb v/v			01/21/19 20:42	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/21/19 20:42	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/21/19 20:42	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			01/21/19 20:42	1
Toluene	ND		0.60	0.60	ppb v/v			01/21/19 20:42	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			01/21/19 20:42	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/21/19 20:42	1
1,1,1-Trichloroethane	0.12	J	0.40	0.060	ppb v/v			01/21/19 20:42	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/21/19 20:42	1
Trichloroethene	ND		0.20	0.070	ppb v/v			01/21/19 20:42	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/21/19 20:42	1
1,2,4-Trimethylbenzene	0.78		0.40	0.13	ppb v/v			01/21/19 20:42	1
1,3,5-Trimethylbenzene	0.28	J	0.40	0.13	ppb v/v			01/21/19 20:42	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/21/19 20:42	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			01/21/19 20:42	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.7		1.3	0.37	ug/m3			01/21/19 20:42	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/21/19 20:42	1
Chlorodifluoromethane	2.7		1.4	0.27	ug/m3			01/21/19 20:42	1
Chloroform	1.7	J	2.0	0.37	ug/m3			01/21/19 20:42	1
cis-1,2-Dichloroethene	0.77	J	1.6	0.48	ug/m3			01/21/19 20:42	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			01/21/19 20:42	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			01/21/19 20:42	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/21/19 20:42	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			01/21/19 20:42	1
Ethylbenzene	ND		1.7	0.59	ug/m3			01/21/19 20:42	1
Methylene Chloride	3.5	J	6.9	2.3	ug/m3			01/21/19 20:42	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/21/19 20:42	1
Naphthalene	ND		1.0	1.0	ug/m3			01/21/19 20:42	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			01/21/19 20:42	1
Toluene	ND		2.3	2.3	ug/m3			01/21/19 20:42	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			01/21/19 20:42	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/21/19 20:42	1
1,1,1-Trichloroethane	0.64	J	2.2	0.33	ug/m3			01/21/19 20:42	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/21/19 20:42	1
Trichloroethene	ND		1.1	0.38	ug/m3			01/21/19 20:42	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/21/19 20:42	1
1,2,4-Trimethylbenzene	3.8		2.0	0.61	ug/m3			01/21/19 20:42	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: BLDG-C EFFLUENT

Lab Sample ID: 140-13996-1

Date Collected: 01/16/19 12:42

Matrix: Air

Date Received: 01/18/19 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.4	J	2.0	0.64	ug/m3			01/21/19 20:42	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/21/19 20:42	1
Xylenes, Total	ND		3.5	0.52	ug/m3			01/21/19 20:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					01/21/19 20:42	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: BLDG-C MIDGAC

Lab Sample ID: 140-13996-2

Date Collected: 01/16/19 12:47

Matrix: Air

Date Received: 01/18/19 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.4		0.40	0.12	ppb v/v			01/21/19 21:33	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/21/19 21:33	1
Chlorodifluoromethane	0.93	CI	0.40	0.075	ppb v/v			01/21/19 21:33	1
Chloroform	0.34	J	0.40	0.075	ppb v/v			01/21/19 21:33	1
cis-1,2-Dichloroethene	0.23	J	0.40	0.12	ppb v/v			01/21/19 21:33	1
Dichlorodifluoromethane	0.28	J	0.40	0.14	ppb v/v			01/21/19 21:33	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			01/21/19 21:33	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/21/19 21:33	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			01/21/19 21:33	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			01/21/19 21:33	1
Methylene Chloride	1.1	J	2.0	0.65	ppb v/v			01/21/19 21:33	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/21/19 21:33	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/21/19 21:33	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			01/21/19 21:33	1
Toluene	ND		0.60	0.60	ppb v/v			01/21/19 21:33	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			01/21/19 21:33	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/21/19 21:33	1
1,1,1-Trichloroethane	0.28	J	0.40	0.060	ppb v/v			01/21/19 21:33	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/21/19 21:33	1
Trichloroethene	ND		0.20	0.070	ppb v/v			01/21/19 21:33	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/21/19 21:33	1
1,2,4-Trimethylbenzene	0.24	J	0.40	0.13	ppb v/v			01/21/19 21:33	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/21/19 21:33	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/21/19 21:33	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			01/21/19 21:33	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	7.8		1.3	0.37	ug/m3			01/21/19 21:33	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/21/19 21:33	1
Chlorodifluoromethane	3.3	CI	1.4	0.27	ug/m3			01/21/19 21:33	1
Chloroform	1.6	J	2.0	0.37	ug/m3			01/21/19 21:33	1
cis-1,2-Dichloroethene	0.92	J	1.6	0.48	ug/m3			01/21/19 21:33	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			01/21/19 21:33	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			01/21/19 21:33	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/21/19 21:33	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			01/21/19 21:33	1
Ethylbenzene	ND		1.7	0.59	ug/m3			01/21/19 21:33	1
Methylene Chloride	3.8	J	6.9	2.3	ug/m3			01/21/19 21:33	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/21/19 21:33	1
Naphthalene	ND		1.0	1.0	ug/m3			01/21/19 21:33	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			01/21/19 21:33	1
Toluene	ND		2.3	2.3	ug/m3			01/21/19 21:33	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			01/21/19 21:33	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/21/19 21:33	1
1,1,1-Trichloroethane	1.5	J	2.2	0.33	ug/m3			01/21/19 21:33	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/21/19 21:33	1
Trichloroethene	ND		1.1	0.38	ug/m3			01/21/19 21:33	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/21/19 21:33	1
1,2,4-Trimethylbenzene	1.2	J	2.0	0.61	ug/m3			01/21/19 21:33	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: BLDG-C MIDGAC

Lab Sample ID: 140-13996-2

Date Collected: 01/16/19 12:47

Matrix: Air

Date Received: 01/18/19 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			01/21/19 21:33	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/21/19 21:33	1
Xylenes, Total	ND		3.5	0.52	ug/m3			01/21/19 21:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 140					01/21/19 21:33	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: BLDG-C INFLUENT

Lab Sample ID: 140-13996-3

Date Collected: 01/16/19 12:52

Matrix: Air

Date Received: 01/18/19 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.49		0.40	0.12	ppb v/v			01/21/19 22:24	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/21/19 22:24	1
Chlorodifluoromethane	0.86	CI	0.40	0.075	ppb v/v			01/21/19 22:24	1
Chloroform	ND		0.40	0.075	ppb v/v			01/21/19 22:24	1
cis-1,2-Dichloroethene	0.57		0.40	0.12	ppb v/v			01/21/19 22:24	1
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v			01/21/19 22:24	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			01/21/19 22:24	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/21/19 22:24	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			01/21/19 22:24	1
Ethylbenzene	0.20	J	0.40	0.14	ppb v/v			01/21/19 22:24	1
Methylene Chloride	0.91	J	2.0	0.65	ppb v/v			01/21/19 22:24	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/21/19 22:24	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/21/19 22:24	1
Tetrachloroethene	0.14	J	0.40	0.080	ppb v/v			01/21/19 22:24	1
Toluene	1.3		0.60	0.60	ppb v/v			01/21/19 22:24	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			01/21/19 22:24	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/21/19 22:24	1
1,1,1-Trichloroethane	ND		0.40	0.060	ppb v/v			01/21/19 22:24	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/21/19 22:24	1
Trichloroethene	3.7		0.20	0.070	ppb v/v			01/21/19 22:24	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/21/19 22:24	1
1,2,4-Trimethylbenzene	0.55		0.40	0.13	ppb v/v			01/21/19 22:24	1
1,3,5-Trimethylbenzene	0.18	J	0.40	0.13	ppb v/v			01/21/19 22:24	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/21/19 22:24	1
Xylenes, Total	1.1		0.80	0.12	ppb v/v			01/21/19 22:24	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.6		1.3	0.37	ug/m3			01/21/19 22:24	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/21/19 22:24	1
Chlorodifluoromethane	3.0	CI	1.4	0.27	ug/m3			01/21/19 22:24	1
Chloroform	ND		2.0	0.37	ug/m3			01/21/19 22:24	1
cis-1,2-Dichloroethene	2.3		1.6	0.48	ug/m3			01/21/19 22:24	1
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3			01/21/19 22:24	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			01/21/19 22:24	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/21/19 22:24	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			01/21/19 22:24	1
Ethylbenzene	0.88	J	1.7	0.59	ug/m3			01/21/19 22:24	1
Methylene Chloride	3.2	J	6.9	2.3	ug/m3			01/21/19 22:24	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/21/19 22:24	1
Naphthalene	ND		1.0	1.0	ug/m3			01/21/19 22:24	1
Tetrachloroethene	0.93	J	2.7	0.54	ug/m3			01/21/19 22:24	1
Toluene	5.0		2.3	2.3	ug/m3			01/21/19 22:24	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			01/21/19 22:24	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/21/19 22:24	1
1,1,1-Trichloroethane	ND		2.2	0.33	ug/m3			01/21/19 22:24	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/21/19 22:24	1
Trichloroethene	20		1.1	0.38	ug/m3			01/21/19 22:24	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/21/19 22:24	1
1,2,4-Trimethylbenzene	2.7		2.0	0.61	ug/m3			01/21/19 22:24	1

TestAmerica Knoxville

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: BLDG-C INFLUENT

Lab Sample ID: 140-13996-3

Date Collected: 01/16/19 12:52

Matrix: Air

Date Received: 01/18/19 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.88	J	2.0	0.64	ug/m3			01/21/19 22:24	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/21/19 22:24	1
Xylenes, Total	4.7		3.5	0.52	ug/m3			01/21/19 22:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 140					01/21/19 22:24	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-13996-4

Date Collected: 01/16/19 15:17

Matrix: Air

Date Received: 01/18/19 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.35	J	0.40	0.12	ppb v/v			01/21/19 23:15	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/21/19 23:15	1
Chlorodifluoromethane	0.51	CI	0.40	0.075	ppb v/v			01/21/19 23:15	1
Chloroform	0.77		0.40	0.075	ppb v/v			01/21/19 23:15	1
cis-1,2-Dichloroethene	5.8		0.40	0.12	ppb v/v			01/21/19 23:15	1
Dichlorodifluoromethane	0.31	J	0.40	0.14	ppb v/v			01/21/19 23:15	1
1,1-Dichloroethane	3.4		0.40	0.050	ppb v/v			01/21/19 23:15	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/21/19 23:15	1
1,1-Dichloroethene	16		0.40	0.070	ppb v/v			01/21/19 23:15	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			01/21/19 23:15	1
Methylene Chloride	0.91	J	2.0	0.65	ppb v/v			01/21/19 23:15	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/21/19 23:15	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/21/19 23:15	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			01/21/19 23:15	1
Toluene	ND		0.60	0.60	ppb v/v			01/21/19 23:15	1
trans-1,2-Dichloroethene	0.18	J	0.40	0.10	ppb v/v			01/21/19 23:15	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/21/19 23:15	1
1,1,1-Trichloroethane	19		0.40	0.060	ppb v/v			01/21/19 23:15	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/21/19 23:15	1
Trichloroethene	1.0		0.20	0.070	ppb v/v			01/21/19 23:15	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/21/19 23:15	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/21/19 23:15	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/21/19 23:15	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/21/19 23:15	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			01/21/19 23:15	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.1	J	1.3	0.37	ug/m3			01/21/19 23:15	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/21/19 23:15	1
Chlorodifluoromethane	1.8	CI	1.4	0.27	ug/m3			01/21/19 23:15	1
Chloroform	3.8		2.0	0.37	ug/m3			01/21/19 23:15	1
cis-1,2-Dichloroethene	23		1.6	0.48	ug/m3			01/21/19 23:15	1
Dichlorodifluoromethane	1.6	J	2.0	0.67	ug/m3			01/21/19 23:15	1
1,1-Dichloroethane	14		1.6	0.20	ug/m3			01/21/19 23:15	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/21/19 23:15	1
1,1-Dichloroethene	64		1.6	0.28	ug/m3			01/21/19 23:15	1
Ethylbenzene	ND		1.7	0.59	ug/m3			01/21/19 23:15	1
Methylene Chloride	3.2	J	6.9	2.3	ug/m3			01/21/19 23:15	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/21/19 23:15	1
Naphthalene	ND		1.0	1.0	ug/m3			01/21/19 23:15	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			01/21/19 23:15	1
Toluene	ND		2.3	2.3	ug/m3			01/21/19 23:15	1
trans-1,2-Dichloroethene	0.72	J	1.6	0.40	ug/m3			01/21/19 23:15	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/21/19 23:15	1
1,1,1-Trichloroethane	110		2.2	0.33	ug/m3			01/21/19 23:15	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/21/19 23:15	1
Trichloroethene	5.5		1.1	0.38	ug/m3			01/21/19 23:15	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/21/19 23:15	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			01/21/19 23:15	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: BLDG-A EFFLUENT

Lab Sample ID: 140-13996-4

Date Collected: 01/16/19 15:17

Matrix: Air

Date Received: 01/18/19 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			01/21/19 23:15	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/21/19 23:15	1
Xylenes, Total	ND		3.5	0.52	ug/m3			01/21/19 23:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					01/21/19 23:15	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: BLDG-A MIDGAC

Lab Sample ID: 140-13996-5

Date Collected: 01/16/19 15:20

Matrix: Air

Date Received: 01/18/19 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			01/22/19 00:06	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			01/22/19 00:06	1
Chlorodifluoromethane	0.51	CI	0.40	0.075	ppb v/v			01/22/19 00:06	1
Chloroform	1.2		0.40	0.075	ppb v/v			01/22/19 00:06	1
cis-1,2-Dichloroethene	15		0.40	0.12	ppb v/v			01/22/19 00:06	1
Dichlorodifluoromethane	0.32	J	0.40	0.14	ppb v/v			01/22/19 00:06	1
1,1-Dichloroethane	3.5		0.40	0.050	ppb v/v			01/22/19 00:06	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			01/22/19 00:06	1
1,1-Dichloroethene	19		0.40	0.070	ppb v/v			01/22/19 00:06	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			01/22/19 00:06	1
Methylene Chloride	0.74	J	2.0	0.65	ppb v/v			01/22/19 00:06	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			01/22/19 00:06	1
Naphthalene	ND		0.20	0.20	ppb v/v			01/22/19 00:06	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			01/22/19 00:06	1
Toluene	ND		0.60	0.60	ppb v/v			01/22/19 00:06	1
trans-1,2-Dichloroethene	0.29	J	0.40	0.10	ppb v/v			01/22/19 00:06	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			01/22/19 00:06	1
1,1,1-Trichloroethane	36		0.40	0.060	ppb v/v			01/22/19 00:06	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			01/22/19 00:06	1
Trichloroethene	ND		0.20	0.070	ppb v/v			01/22/19 00:06	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			01/22/19 00:06	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/22/19 00:06	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			01/22/19 00:06	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			01/22/19 00:06	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			01/22/19 00:06	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			01/22/19 00:06	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			01/22/19 00:06	1
Chlorodifluoromethane	1.8	CI	1.4	0.27	ug/m3			01/22/19 00:06	1
Chloroform	5.7		2.0	0.37	ug/m3			01/22/19 00:06	1
cis-1,2-Dichloroethene	60		1.6	0.48	ug/m3			01/22/19 00:06	1
Dichlorodifluoromethane	1.6	J	2.0	0.67	ug/m3			01/22/19 00:06	1
1,1-Dichloroethane	14		1.6	0.20	ug/m3			01/22/19 00:06	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			01/22/19 00:06	1
1,1-Dichloroethene	77		1.6	0.28	ug/m3			01/22/19 00:06	1
Ethylbenzene	ND		1.7	0.59	ug/m3			01/22/19 00:06	1
Methylene Chloride	2.6	J	6.9	2.3	ug/m3			01/22/19 00:06	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			01/22/19 00:06	1
Naphthalene	ND		1.0	1.0	ug/m3			01/22/19 00:06	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			01/22/19 00:06	1
Toluene	ND		2.3	2.3	ug/m3			01/22/19 00:06	1
trans-1,2-Dichloroethene	1.2	J	1.6	0.40	ug/m3			01/22/19 00:06	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			01/22/19 00:06	1
1,1,1-Trichloroethane	200		2.2	0.33	ug/m3			01/22/19 00:06	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			01/22/19 00:06	1
Trichloroethene	ND		1.1	0.38	ug/m3			01/22/19 00:06	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			01/22/19 00:06	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			01/22/19 00:06	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: BLDG-A MIDGAC

Lab Sample ID: 140-13996-5

Date Collected: 01/16/19 15:20

Matrix: Air

Date Received: 01/18/19 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			01/22/19 00:06	1
Vinyl chloride	ND		0.51	0.37	ug/m3			01/22/19 00:06	1
Xylenes, Total	ND		3.5	0.52	ug/m3			01/22/19 00:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					01/22/19 00:06	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-13996-6

Date Collected: 01/16/19 15:24

Matrix: Air

Date Received: 01/18/19 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	3.4		2.0	0.58	ppb v/v			01/22/19 00:57	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			01/22/19 00:57	1
Chlorodifluoromethane	ND		2.0	0.38	ppb v/v			01/22/19 00:57	1
Chloroform	0.42	J	2.0	0.38	ppb v/v			01/22/19 00:57	1
cis-1,2-Dichloroethene	12		2.0	0.60	ppb v/v			01/22/19 00:57	1
Dichlorodifluoromethane	ND		2.0	0.68	ppb v/v			01/22/19 00:57	1
1,1-Dichloroethane	2.4		2.0	0.25	ppb v/v			01/22/19 00:57	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			01/22/19 00:57	1
1,1-Dichloroethene	14		2.0	0.35	ppb v/v			01/22/19 00:57	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			01/22/19 00:57	1
Methylene Chloride	3.4	J	10	3.3	ppb v/v			01/22/19 00:57	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			01/22/19 00:57	1
Naphthalene	ND		1.0	1.0	ppb v/v			01/22/19 00:57	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			01/22/19 00:57	1
Toluene	ND		3.0	3.0	ppb v/v			01/22/19 00:57	1
trans-1,2-Dichloroethene	ND		2.0	0.50	ppb v/v			01/22/19 00:57	1
1,2,4-Trichlorobenzene	ND		2.0	0.98	ppb v/v			01/22/19 00:57	1
1,1,1-Trichloroethane	61		2.0	0.30	ppb v/v			01/22/19 00:57	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			01/22/19 00:57	1
Trichloroethene	130		1.0	0.35	ppb v/v			01/22/19 00:57	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			01/22/19 00:57	1
1,2,4-Trimethylbenzene	ND		2.0	0.63	ppb v/v			01/22/19 00:57	1
1,3,5-Trimethylbenzene	ND		2.0	0.65	ppb v/v			01/22/19 00:57	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			01/22/19 00:57	1
Xylenes, Total	ND		4.0	0.60	ppb v/v			01/22/19 00:57	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	11		6.4	1.8	ug/m3			01/22/19 00:57	1
Carbon tetrachloride	ND		13	2.4	ug/m3			01/22/19 00:57	1
Chlorodifluoromethane	ND		7.1	1.3	ug/m3			01/22/19 00:57	1
Chloroform	2.1	J	9.8	1.8	ug/m3			01/22/19 00:57	1
cis-1,2-Dichloroethene	46		7.9	2.4	ug/m3			01/22/19 00:57	1
Dichlorodifluoromethane	ND		9.9	3.3	ug/m3			01/22/19 00:57	1
1,1-Dichloroethane	9.8		8.1	1.0	ug/m3			01/22/19 00:57	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			01/22/19 00:57	1
1,1-Dichloroethene	55		7.9	1.4	ug/m3			01/22/19 00:57	1
Ethylbenzene	ND		8.7	2.9	ug/m3			01/22/19 00:57	1
Methylene Chloride	12	J	35	11	ug/m3			01/22/19 00:57	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			01/22/19 00:57	1
Naphthalene	ND		5.2	5.2	ug/m3			01/22/19 00:57	1
Tetrachloroethene	ND		14	2.7	ug/m3			01/22/19 00:57	1
Toluene	ND		11	11	ug/m3			01/22/19 00:57	1
trans-1,2-Dichloroethene	ND		7.9	2.0	ug/m3			01/22/19 00:57	1
1,2,4-Trichlorobenzene	ND		15	7.2	ug/m3			01/22/19 00:57	1
1,1,1-Trichloroethane	330		11	1.6	ug/m3			01/22/19 00:57	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			01/22/19 00:57	1
Trichloroethene	700		5.4	1.9	ug/m3			01/22/19 00:57	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			01/22/19 00:57	1
1,2,4-Trimethylbenzene	ND		9.8	3.1	ug/m3			01/22/19 00:57	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: BLDG-A INFLUENT

Lab Sample ID: 140-13996-6

Date Collected: 01/16/19 15:24

Matrix: Air

Date Received: 01/18/19 09:50

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		9.8	3.2	ug/m3			01/22/19 00:57	1
Vinyl chloride	ND		2.6	1.9	ug/m3			01/22/19 00:57	1
Xylenes, Total	ND		17	2.6	ug/m3			01/22/19 00:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					01/22/19 00:57	1

Default Detection Limits

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-13996-1	BLDG-C EFFLUENT	102
140-13996-2	BLDG-C MIDGAC	103
140-13996-3	BLDG-C INFLUENT	103
140-13996-4	BLDG-A EFFLUENT	102
140-13996-5	BLDG-A MIDGAC	102
140-13996-6	BLDG-A INFLUENT	101
LCS 140-27023/1002	Lab Control Sample	104
MB 140-27023/4	Method Blank	101

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-27023/4
Matrix: Air
Analysis Batch: 27023

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			01/21/19 13:22	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			01/21/19 13:22	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			01/21/19 13:22	1
Chloroform	ND		0.080	0.015	ppb v/v			01/21/19 13:22	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			01/21/19 13:22	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			01/21/19 13:22	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			01/21/19 13:22	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			01/21/19 13:22	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			01/21/19 13:22	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			01/21/19 13:22	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			01/21/19 13:22	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			01/21/19 13:22	1
Naphthalene	ND		0.040	0.040	ppb v/v			01/21/19 13:22	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			01/21/19 13:22	1
Toluene	ND		0.12	0.12	ppb v/v			01/21/19 13:22	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			01/21/19 13:22	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			01/21/19 13:22	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			01/21/19 13:22	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			01/21/19 13:22	1
Trichloroethene	ND		0.040	0.014	ppb v/v			01/21/19 13:22	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			01/21/19 13:22	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			01/21/19 13:22	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			01/21/19 13:22	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			01/21/19 13:22	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			01/21/19 13:22	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			01/21/19 13:22	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			01/21/19 13:22	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			01/21/19 13:22	1
Chloroform	ND		0.39	0.073	ug/m3			01/21/19 13:22	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			01/21/19 13:22	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			01/21/19 13:22	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			01/21/19 13:22	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			01/21/19 13:22	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			01/21/19 13:22	1
Ethylbenzene	ND		0.35	0.12	ug/m3			01/21/19 13:22	1
Methylene Chloride	ND		1.4	0.45	ug/m3			01/21/19 13:22	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			01/21/19 13:22	1
Naphthalene	ND		0.21	0.21	ug/m3			01/21/19 13:22	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			01/21/19 13:22	1
Toluene	ND		0.45	0.45	ug/m3			01/21/19 13:22	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			01/21/19 13:22	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			01/21/19 13:22	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			01/21/19 13:22	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			01/21/19 13:22	1
Trichloroethene	ND		0.21	0.075	ug/m3			01/21/19 13:22	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			01/21/19 13:22	1

QC Sample Results

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27023/4
Matrix: Air
Analysis Batch: 27023

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			01/21/19 13:22	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			01/21/19 13:22	1
Vinyl chloride	ND		0.10	0.074	ug/m3			01/21/19 13:22	1
Xylenes, Total	ND		0.69	0.10	ug/m3			01/21/19 13:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140		01/21/19 13:22	1

Lab Sample ID: LCS 140-27023/1002
Matrix: Air
Analysis Batch: 27023

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	1.83		ppb v/v		92	70 - 130
Carbon tetrachloride	2.00	1.87		ppb v/v		94	70 - 130
Chlorodifluoromethane	2.00	1.79		ppb v/v		90	60 - 140
Chloroform	2.00	1.84		ppb v/v		92	70 - 130
cis-1,2-Dichloroethene	2.00	1.84		ppb v/v		92	70 - 130
Dichlorodifluoromethane	2.00	1.79		ppb v/v		90	60 - 140
1,1-Dichloroethane	2.00	1.88		ppb v/v		94	70 - 130
1,2-Dichloroethane	2.00	1.82		ppb v/v		91	70 - 130
1,1-Dichloroethene	2.00	1.79		ppb v/v		89	70 - 130
Ethylbenzene	2.00	1.92		ppb v/v		96	70 - 130
Methylene Chloride	2.00	1.68		ppb v/v		84	70 - 130
Methyl tert-butyl ether	2.00	1.90		ppb v/v		95	60 - 140
Naphthalene	2.00	1.61		ppb v/v		81	60 - 140
Tetrachloroethene	2.00	1.86		ppb v/v		93	70 - 130
Toluene	2.00	1.91		ppb v/v		95	70 - 130
trans-1,2-Dichloroethene	2.00	1.81		ppb v/v		91	70 - 130
1,2,4-Trichlorobenzene	2.00	1.70		ppb v/v		85	60 - 140
1,1,1-Trichloroethane	2.00	1.85		ppb v/v		93	70 - 130
1,1,2-Trichloroethane	2.00	1.97		ppb v/v		98	70 - 130
Trichloroethene	2.00	1.78		ppb v/v		89	70 - 130
1,2,3-Trimethylbenzene	2.00	1.89		ppb v/v		95	70 - 130
1,2,4-Trimethylbenzene	2.00	1.91		ppb v/v		95	70 - 130
1,3,5-Trimethylbenzene	2.00	1.84		ppb v/v		92	70 - 130
Vinyl chloride	2.00	1.93		ppb v/v		96	70 - 130
Xylenes, Total	6.00	5.92		ppb v/v		99	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	5.85		ug/m3		92	70 - 130
Carbon tetrachloride	13	11.8		ug/m3		94	70 - 130
Chlorodifluoromethane	7.1	6.33		ug/m3		90	60 - 140
Chloroform	9.8	8.99		ug/m3		92	70 - 130
cis-1,2-Dichloroethene	7.9	7.28		ug/m3		92	70 - 130
Dichlorodifluoromethane	9.9	8.88		ug/m3		90	60 - 140
1,1-Dichloroethane	8.1	7.62		ug/m3		94	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27023/1002
Matrix: Air
Analysis Batch: 27023

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
1,2-Dichloroethane	8.1	7.38		ug/m3		91	70 - 130
1,1-Dichloroethene	7.9	7.08		ug/m3		89	70 - 130
Ethylbenzene	8.7	8.35		ug/m3		96	70 - 130
Methylene Chloride	6.9	5.83		ug/m3		84	70 - 130
Methyl tert-butyl ether	7.2	6.85		ug/m3		95	60 - 140
Naphthalene	10	8.44		ug/m3		81	60 - 140
Tetrachloroethene	14	12.6		ug/m3		93	70 - 130
Toluene	7.5	7.19		ug/m3		95	70 - 130
trans-1,2-Dichloroethene	7.9	7.18		ug/m3		91	70 - 130
1,2,4-Trichlorobenzene	15	12.7		ug/m3		85	60 - 140
1,1,1-Trichloroethane	11	10.1		ug/m3		93	70 - 130
1,1,2-Trichloroethane	11	10.7		ug/m3		98	70 - 130
Trichloroethene	11	9.57		ug/m3		89	70 - 130
1,2,3-Trimethylbenzene	9.8	9.31		ug/m3		95	70 - 130
1,2,4-Trimethylbenzene	9.8	9.38		ug/m3		95	70 - 130
1,3,5-Trimethylbenzene	9.8	9.03		ug/m3		92	70 - 130
Vinyl chloride	5.1	4.92		ug/m3		96	70 - 130
Xylenes, Total	26	25.7		ug/m3		99	70 - 130
LCS LCS							
Surrogate	%Recovery	Qualifier	Limits				
4-Bromofluorobenzene (Surr)	104		60 - 140				

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Air - GC/MS VOA

Analysis Batch: 27023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-13996-1	BLDG-C EFFLUENT	Total/NA	Air	TO 15 LL	
140-13996-2	BLDG-C MIDGAC	Total/NA	Air	TO 15 LL	
140-13996-3	BLDG-C INFLUENT	Total/NA	Air	TO 15 LL	
140-13996-4	BLDG-A EFFLUENT	Total/NA	Air	TO 15 LL	
140-13996-5	BLDG-A MIDGAC	Total/NA	Air	TO 15 LL	
140-13996-6	BLDG-A INFLUENT	Total/NA	Air	TO 15 LL	
MB 140-27023/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27023/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: BLDG-C EFFLUENT

Date Collected: 01/16/19 12:42

Date Received: 01/18/19 09:50

Lab Sample ID: 140-13996-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27023	01/21/19 20:42	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-C MIDGAC

Date Collected: 01/16/19 12:47

Date Received: 01/18/19 09:50

Lab Sample ID: 140-13996-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27023	01/21/19 21:33	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-C INFLUENT

Date Collected: 01/16/19 12:52

Date Received: 01/18/19 09:50

Lab Sample ID: 140-13996-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27023	01/21/19 22:24	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-A EFFLUENT

Date Collected: 01/16/19 15:17

Date Received: 01/18/19 09:50

Lab Sample ID: 140-13996-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27023	01/21/19 23:15	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-A MIDGAC

Date Collected: 01/16/19 15:20

Date Received: 01/18/19 09:50

Lab Sample ID: 140-13996-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27023	01/22/19 00:06	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-A INFLUENT

Date Collected: 01/16/19 15:24

Date Received: 01/18/19 09:50

Lab Sample ID: 140-13996-6

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	27023	01/22/19 00:57	S1K	TAL KNX
Instrument ID: MR										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-27023/4

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27023	01/21/19 13:22	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-27023/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27023	01/21/19 11:43	S1K	TAL KNX
Instrument ID: MR										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMC MRC - MRAS/Buildings A&C

TestAmerica Job ID: 140-13996-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-13996-1	BLDG-C EFFLUENT	Air	01/16/19 12:42	01/18/19 09:50
140-13996-2	BLDG-C MIDGAC	Air	01/16/19 12:47	01/18/19 09:50
140-13996-3	BLDG-C INFLUENT	Air	01/16/19 12:52	01/18/19 09:50
140-13996-4	BLDG-A EFFLUENT	Air	01/16/19 15:17	01/18/19 09:50
140-13996-5	BLDG-A MIDGAC	Air	01/16/19 15:20	01/18/19 09:50
140-13996-6	BLDG-A INFLUENT	Air	01/16/19 15:24	01/18/19 09:50

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-13996-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-C EFFLUENT	140-13996-1	102
BLDG-C MIDGAC	140-13996-2	103
BLDG-C INFLUENT	140-13996-3	103
BLDG-A EFFLUENT	140-13996-4	102
BLDG-A MIDGAC	140-13996-5	102
BLDG-A INFLUENT	140-13996-6	101
	MB 140-27023/4	101
	LCS 140-27023/1002	104

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: RCCVA21-LCS.d
 Lab ID: LCS 140-27023/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.83	92	70-130	
Carbon tetrachloride	2.00	1.87	94	70-130	
Chlorodifluoromethane	2.00	1.79	90	60-140	
Chloroform	2.00	1.84	92	70-130	
cis-1,2-Dichloroethene	2.00	1.84	92	70-130	
Dichlorodifluoromethane	2.00	1.79	90	60-140	
1,1-Dichloroethane	2.00	1.88	94	70-130	
1,2-Dichloroethane	2.00	1.82	91	70-130	
1,1-Dichloroethene	2.00	1.79	89	70-130	
Ethylbenzene	2.00	1.92	96	70-130	
Methylene Chloride	2.00	1.68	84	70-130	
Methyl tert-butyl ether	2.00	1.90	95	60-140	
Naphthalene	2.00	1.61	81	60-140	
Tetrachloroethene	2.00	1.86	93	70-130	
Toluene	2.00	1.91	95	70-130	
trans-1,2-Dichloroethene	2.00	1.81	91	70-130	
1,2,4-Trichlorobenzene	2.00	1.70	85	60-140	
1,1,1-Trichloroethane	2.00	1.85	93	70-130	
1,1,2-Trichloroethane	2.00	1.97	98	70-130	
Trichloroethene	2.00	1.78	89	70-130	
1,2,3-Trimethylbenzene	2.00	1.89	95	70-130	
1,2,4-Trimethylbenzene	2.00	1.91	95	70-130	
1,3,5-Trimethylbenzene	2.00	1.84	92	70-130	
Vinyl chloride	2.00	1.93	96	70-130	
Xylenes, Total	6.00	5.92	99	70-130	

Column to be used to flag recovery and RPD values
 FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Lab File ID: Rmb500A21.D Lab Sample ID: MB 140-27023/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MR Date Analyzed: 01/21/2019 13:22
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27023/1002	RCCVA21-LCS .d	01/21/2019 11:43
BLDG-C EFFLUENT	140-13996-1	RA21p103.D	01/21/2019 20:42
BLDG-C MIDGAC	140-13996-2	RA21p104.D	01/21/2019 21:33
BLDG-C INFLUENT	140-13996-3	RA21p105.D	01/21/2019 22:24
BLDG-A EFFLUENT	140-13996-4	RA21p106.D	01/21/2019 23:15
BLDG-A MIDGAC	140-13996-5	RA21p107.D	01/22/2019 00:06
BLDG-A INFLUENT	140-13996-6	RA21p108.D	01/22/2019 00:57

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Lab File ID: RFBK16I.D BFB Injection Date: 11/16/2018
 Instrument ID: MR BFB Injection Time: 16:00
 Analysis Batch No.: 25490

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	58.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	91.0	
175	5.0 - 9.0 % of mass 174	6.6	(7.3) 1
176	95.0 - 101.0 % of mass 174	88.8	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-25490/3	RK16IC09.D	11/16/2018	17:23
	IC 140-25490/5	RK16IC10.D	11/16/2018	19:07
	IC 140-25490/8	RK16IC01.D	11/16/2018	21:42
	IC 140-25490/9	RK16IC02.D	11/16/2018	22:34
	IC 140-25490/10	RK16IC03.D	11/16/2018	23:27
	IC 140-25490/11	RK16IC04.D	11/17/2018	00:20
	IC 140-25490/12	RK16IC05.D	11/17/2018	01:12
	IC 140-25490/13	RK16IC06.D	11/17/2018	02:05
	ICIS 140-25490/14	RK16IC07.D	11/17/2018	02:58
	IC 140-25490/15	RK16IC08.D	11/17/2018	03:51
	ICV 140-25490/18	RK16ICV.D	11/17/2018	06:27

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Lab File ID: RBFBA21.D BFB Injection Date: 01/21/2019
 Instrument ID: MR BFB Injection Time: 11:13
 Analysis Batch No.: 27023

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	20.7
75	30.0 - 60.0 % of mass 95	59.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	7.0
173	Less than 2.0 % of mass 174	0.2 (0.2) 1
174	50.0 - 120.00 % of mass 95	85.1
175	5.0 - 9.0 % of mass 174	6.4 (7.5) 1
176	95.0 - 101.0 % of mass 174	83.0 (97.6) 1
177	5.0 - 9.0 % of mass 176	5.4 (6.6) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27023/2	RCCVA21.D	01/21/2019	11:43
	LCS 140-27023/1002	RCCVA21-LCS. d	01/21/2019	11:43
	MB 140-27023/4	Rmb500A21.D	01/21/2019	13:22
BLDG-C EFFLUENT	140-13996-1	RA21p103.D	01/21/2019	20:42
BLDG-C MIDGAC	140-13996-2	RA21p104.D	01/21/2019	21:33
BLDG-C INFLUENT	140-13996-3	RA21p105.D	01/21/2019	22:24
BLDG-A EFFLUENT	140-13996-4	RA21p106.D	01/21/2019	23:15
BLDG-A MIDGAC	140-13996-5	RA21p107.D	01/22/2019	00:06
BLDG-A INFLUENT	140-13996-6	RA21p108.D	01/22/2019	00:57

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Sample No.: ICIS 140-25490/14 Date Analyzed: 11/17/2018 02:58
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RK16IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	298864	7.40	1677758	9.49	1487799	14.56
UPPER LIMIT	418410	7.73	2348861	9.82	2082919	14.89
LOWER LIMIT	179318	7.07	1006655	9.16	892679	14.23
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-25490/18	299493	7.38	1671036	9.48	1499042	14.55

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Sample No.: CCVIS 140-27023/2 Date Analyzed: 01/21/2019 11:43
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RCCVA21.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	208734	7.41	1232684	9.48	1099880	14.52	
UPPER LIMIT	292228	7.74	1725758	9.81	1539832	14.85	
LOWER LIMIT	125240	7.08	739610	9.15	659928	14.19	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27023/1002	208734	7.41	1232684	9.48	1099880	14.52	
MB 140-27023/4	225333	7.41	1318468	9.48	1156347	14.52	
140-13996-1	BLDG-C EFFLUENT	207021	7.41	1198218	9.48	1062136	14.52
140-13996-2	BLDG-C MIDGAC	204663	7.41	1206245	9.48	1061260	14.52
140-13996-3	BLDG-C INFLUENT	207853	7.41	1206957	9.48	1057279	14.52
140-13996-4	BLDG-A EFFLUENT	203191	7.41	1187621	9.47	1075274	14.52
140-13996-5	BLDG-A MIDGAC	197466	7.41	1171289	9.48	1026551	14.52
140-13996-6	BLDG-A INFLUENT	195264	7.41	1165471	9.48	1002131	14.52

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: BLDG-C EFFLUENT Lab Sample ID: 140-13996-1
 Matrix: Air Lab File ID: RA21p103.D
 Analysis Method: TO 15 LL Date Collected: 01/16/2019 12:42
 Sample wt/vol: 100(mL) Date Analyzed: 01/21/2019 20:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.8		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.77		0.40	0.075
67-66-3	Chloroform	119.38	0.35	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.19	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.12	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.78		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.28	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: BLDG-C EFFLUENT Lab Sample ID: 140-13996-1
 Matrix: Air Lab File ID: RA21p103.D
 Analysis Method: TO 15 LL Date Collected: 01/16/2019 12:42
 Sample wt/vol: 100(mL) Date Analyzed: 01/21/2019 20:42
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.7		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	1.7	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.77	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.64	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	3.8		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.4	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p103.D
 Lims ID: 140-13996-A-1
 Client ID: BLDG-C EFFLUENT
 Sample Type: Client
 Inject. Date: 21-Jan-2019 20:42:30 ALS Bottle#: 3 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-009
 Misc. Info.: 140-13996-A-1
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 11:22:23 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 11:22:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.412	7.406	0.006	73	207021	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.477	0.000	95	1198218	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.524	0.000	94	1062136	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.250	0.000	89	922075	4.08	
6 Chlorodifluoromethane	51	3.518	3.518	0.000	96	18823	0.1532	M
8 Dichlorodifluoromethane	85	3.567	3.561	0.006	98	12555	0.0557	
31 Methylene Chloride	84	5.341	5.341	0.000	92	13949	0.2014	
41 cis-1,2-Dichloroethene	96	7.142	7.136	0.006	90	2912	0.0389	
43 Chloroform	83	7.444	7.444	0.000	92	14005	0.0708	
45 1,1,1-Trichloroethane	97	8.366	8.366	0.000	96	5897	0.0235	
47 Benzene	78	8.916	8.916	0.000	97	69837	0.3577	
65 Toluene	91	12.443	12.442	0.000	92	25375	0.0997	
89 1,3,5-Trimethylbenzene	120	17.069	17.085	-0.016	90	10881	0.0569	
93 1,2,4-Trimethylbenzene	105	17.555	17.571	-0.016	98	66729	0.1564	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p103.D

Injection Date: 21-Jan-2019 20:42:30

Instrument ID: MR

Operator ID: afb

Lims ID: 140-13996-A-1

Lab Sample ID: 140-13996-1

Worklist Smp#: 9

Client ID: BLDG-C EFFLUENT

Purge Vol: 500.000 mL

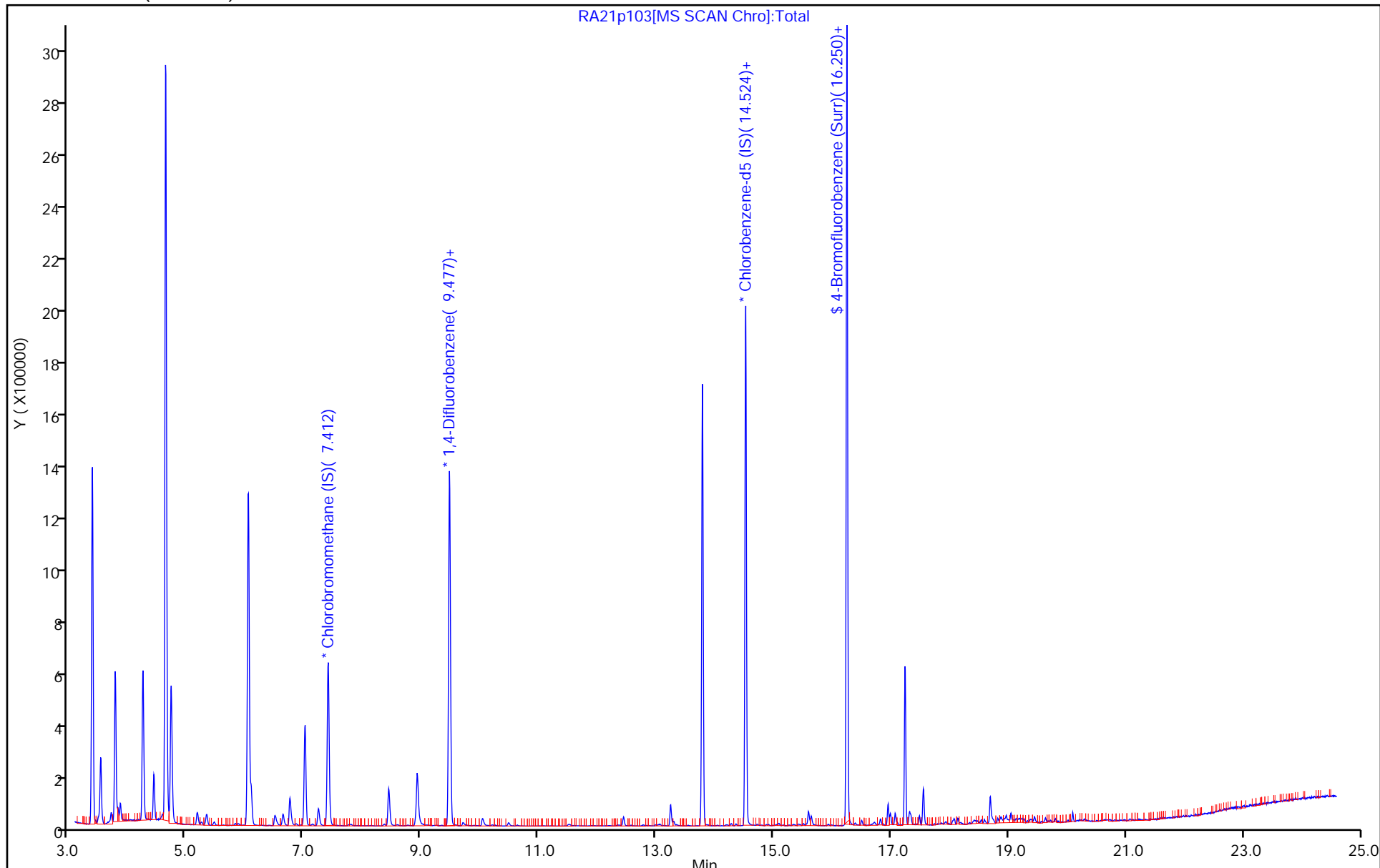
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p103.D
 Lims ID: 140-13996-A-1
 Client ID: BLDG-C EFFLUENT
 Sample Type: Client
 Inject. Date: 21-Jan-2019 20:42:30 ALS Bottle#: 3 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-009
 Misc. Info.: 140-13996-A-1
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 11:22:23 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 11:22:23

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.08	102.06

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p103.D

Injection Date: 21-Jan-2019 20:42:30

Instrument ID: MR

Lims ID: 140-13996-A-1

Lab Sample ID: 140-13996-1

Client ID: BLDG-C EFFLUENT

Operator ID: afb

ALS Bottle#: 3

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

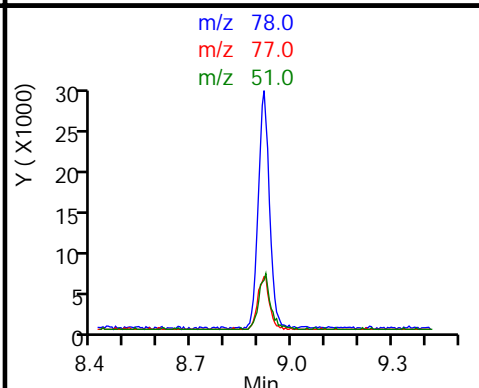
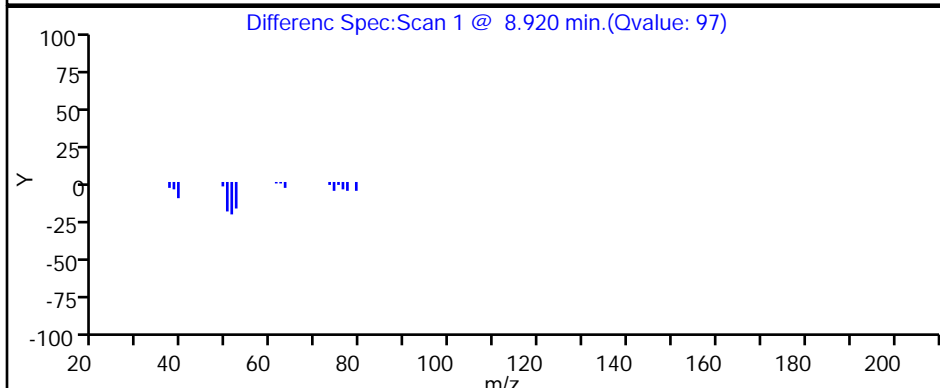
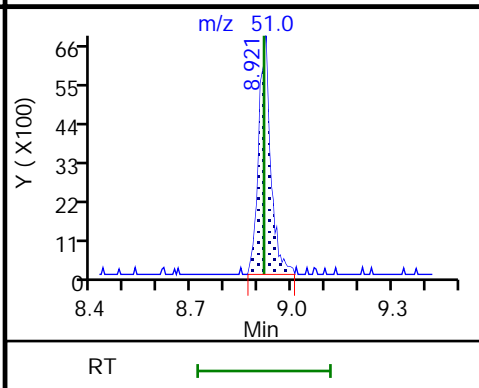
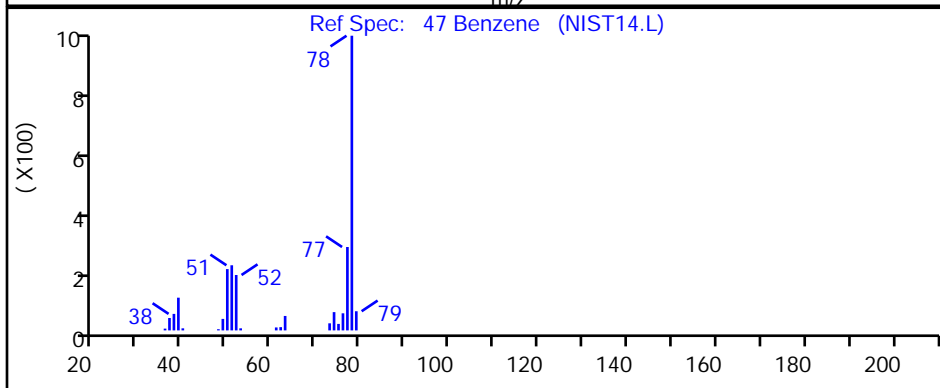
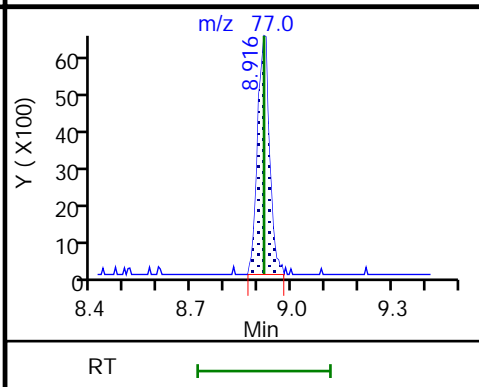
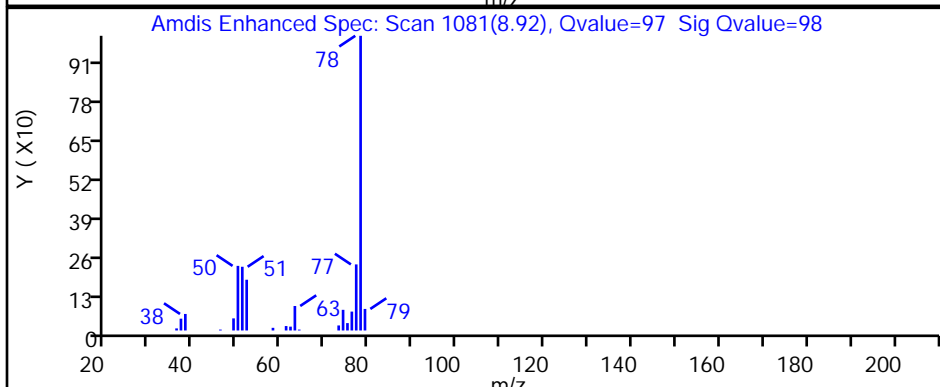
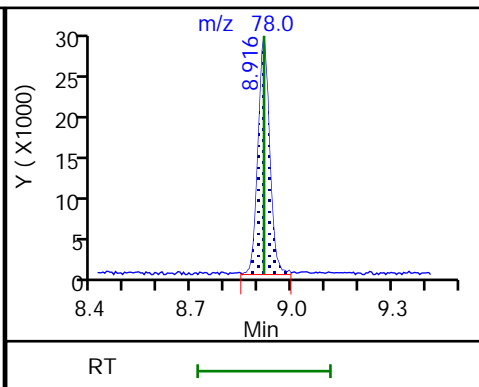
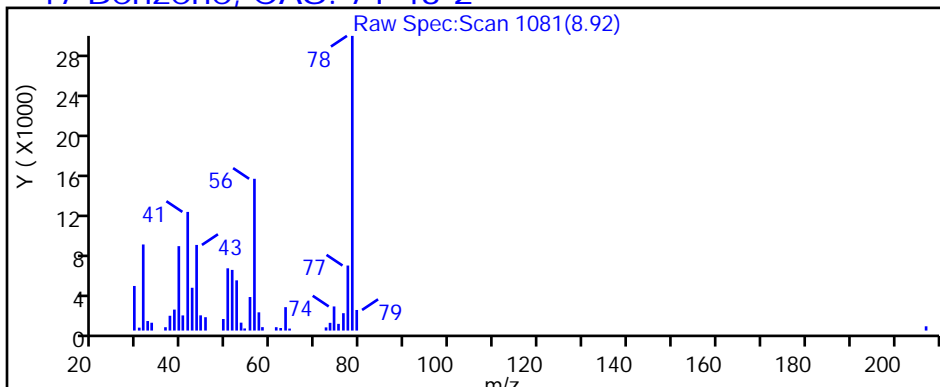
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p103.D

Injection Date: 21-Jan-2019 20:42:30

Instrument ID: MR

Lims ID: 140-13996-A-1

Lab Sample ID: 140-13996-1

Client ID: BLDG-C EFFLUENT

Operator ID: afb

ALS Bottle#: 3

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

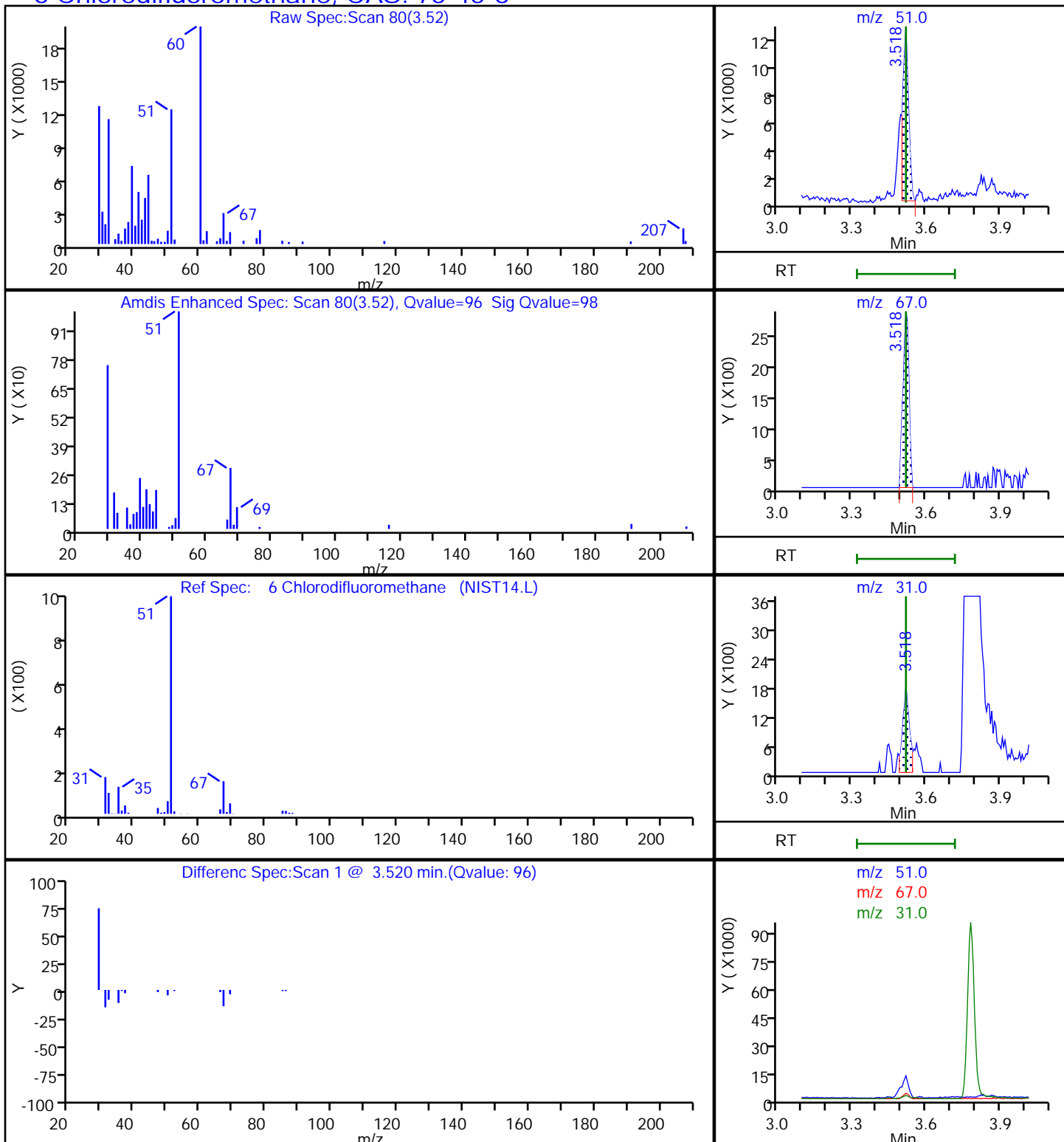
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p103.D

Injection Date: 21-Jan-2019 20:42:30

Instrument ID: MR

Lims ID: 140-13996-A-1

Lab Sample ID: 140-13996-1

Client ID: BLDG-C EFFLUENT

Operator ID: afb

ALS Bottle#: 3

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

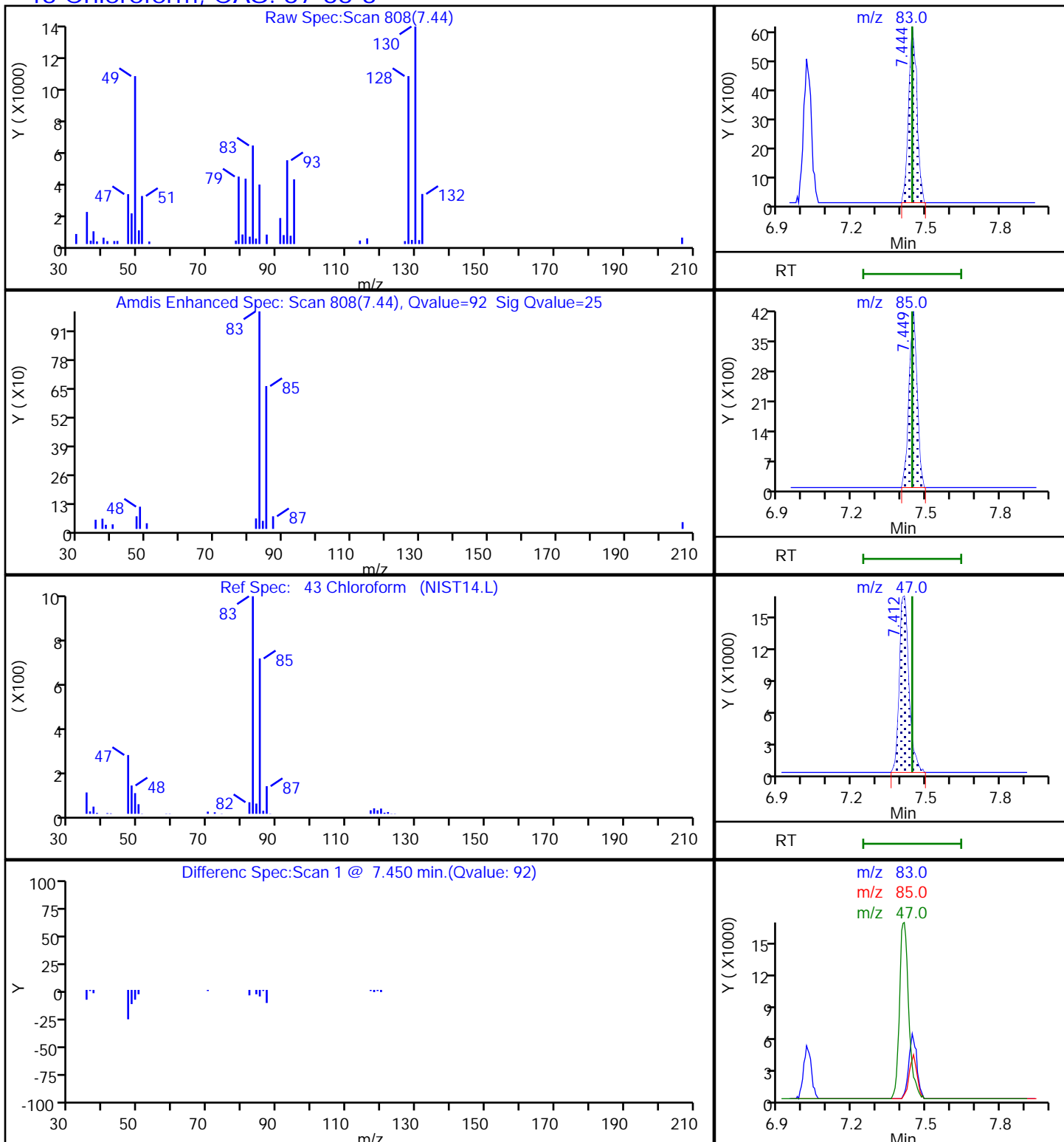
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p103.D

Injection Date: 21-Jan-2019 20:42:30

Instrument ID: MR

Lims ID: 140-13996-A-1

Lab Sample ID: 140-13996-1

Client ID: BLDG-C EFFLUENT

Operator ID: afb

ALS Bottle#: 3

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

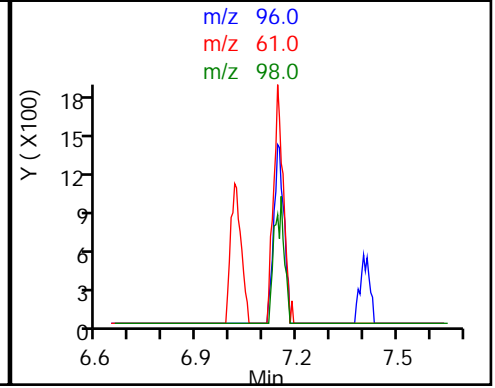
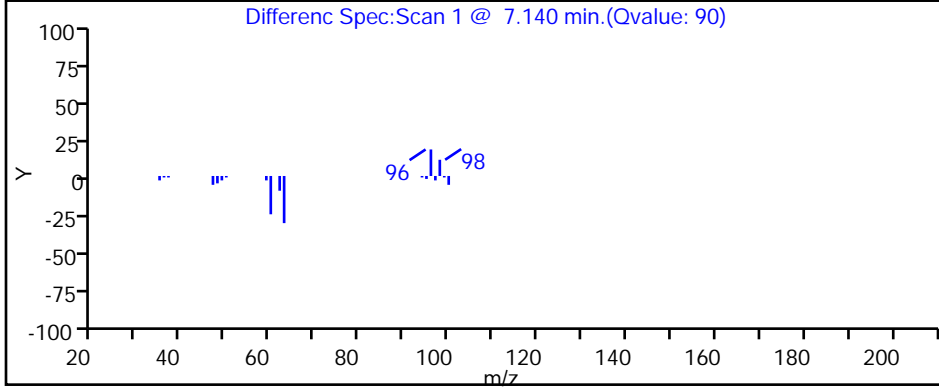
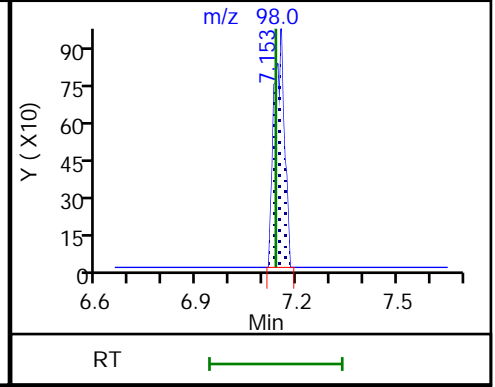
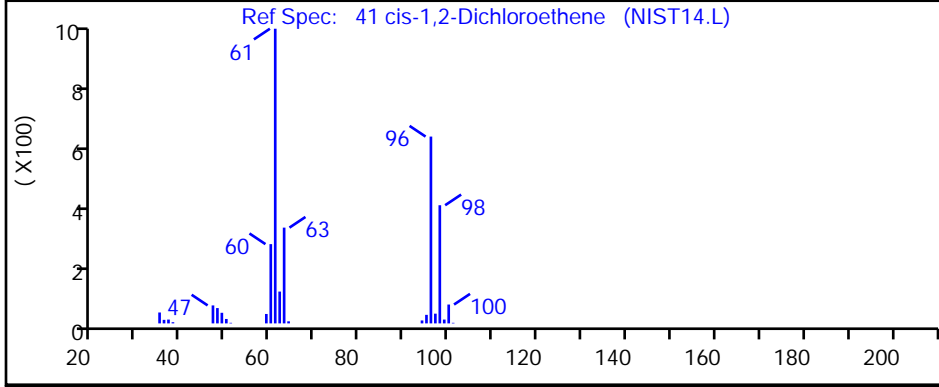
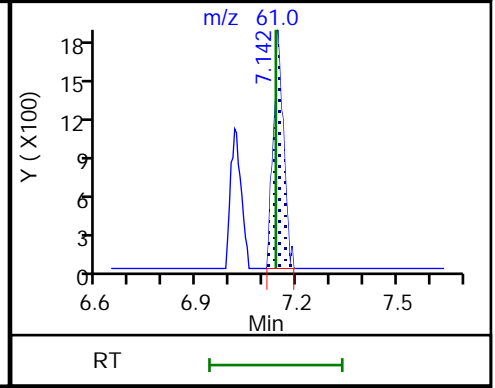
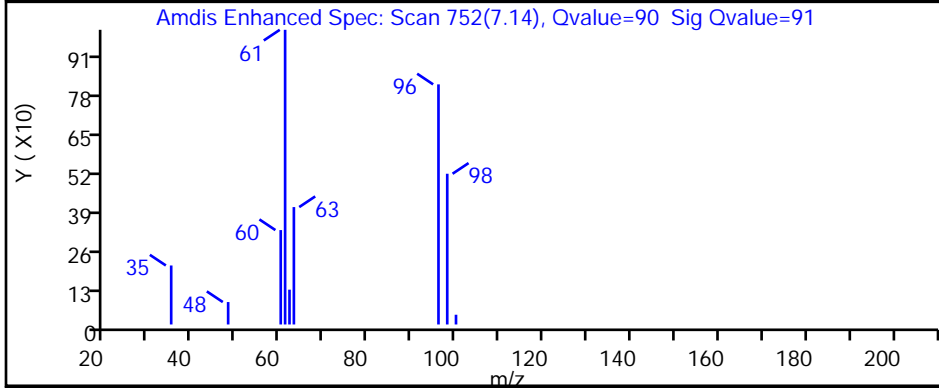
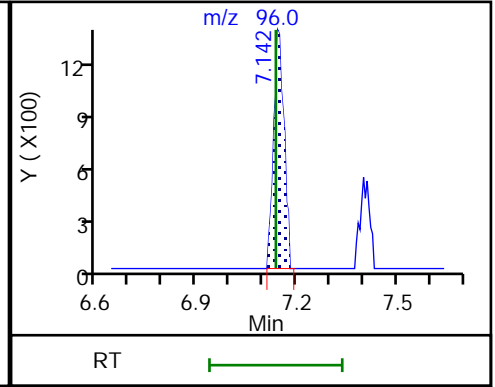
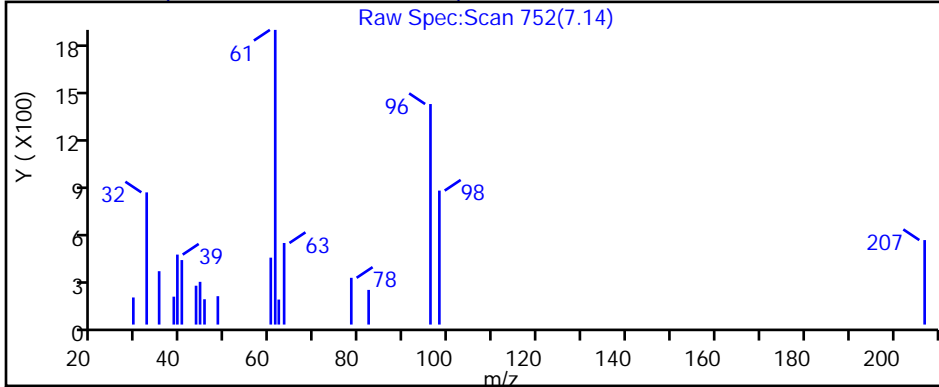
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p103.D

Injection Date: 21-Jan-2019 20:42:30

Instrument ID: MR

Lims ID: 140-13996-A-1

Lab Sample ID: 140-13996-1

Client ID: BLDG-C EFFLUENT

Operator ID: afb

ALS Bottle#: 3

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

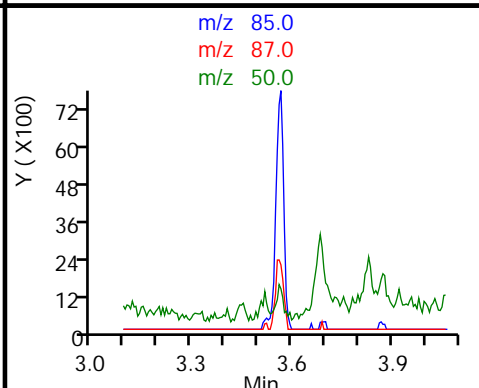
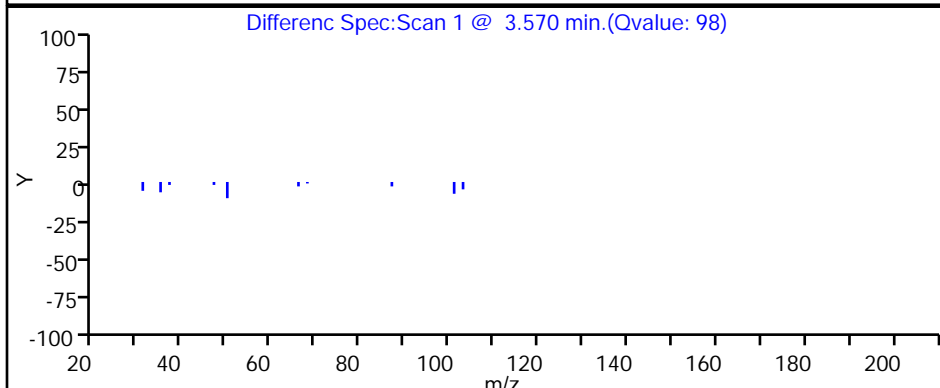
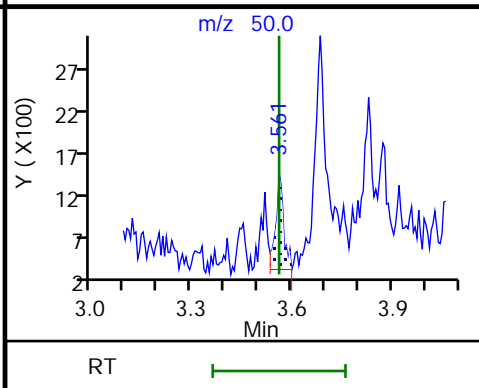
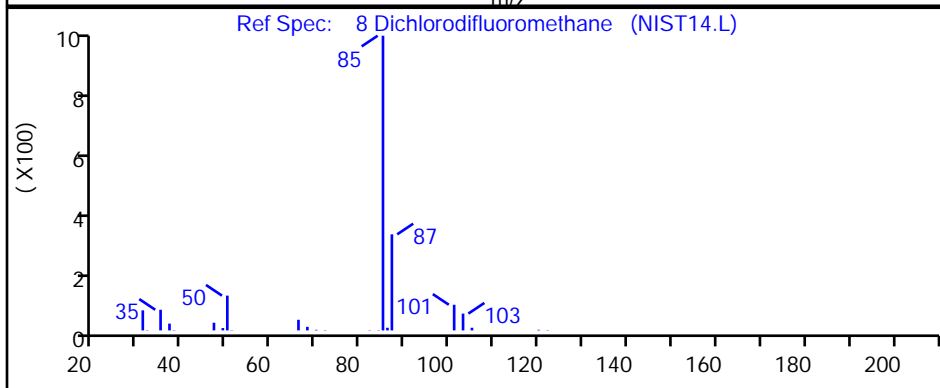
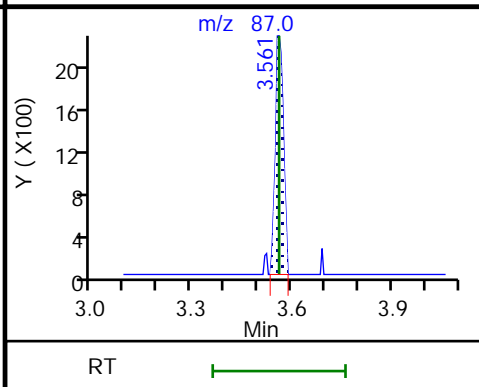
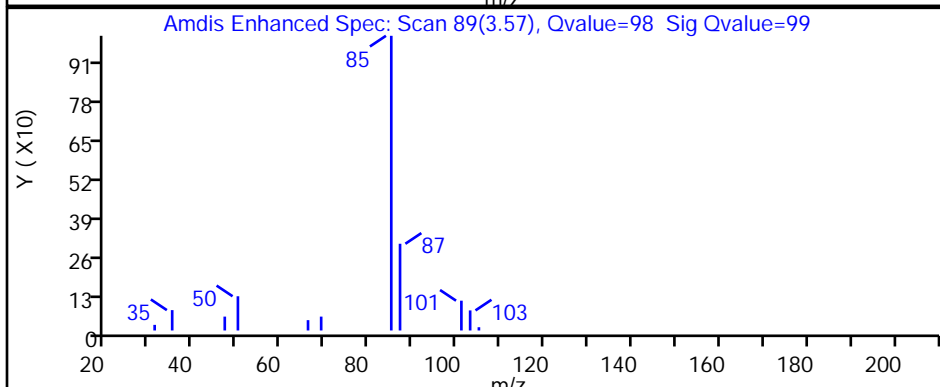
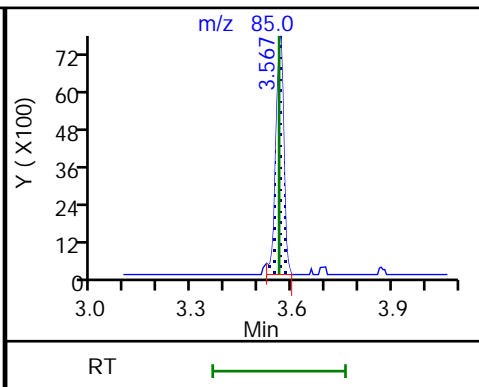
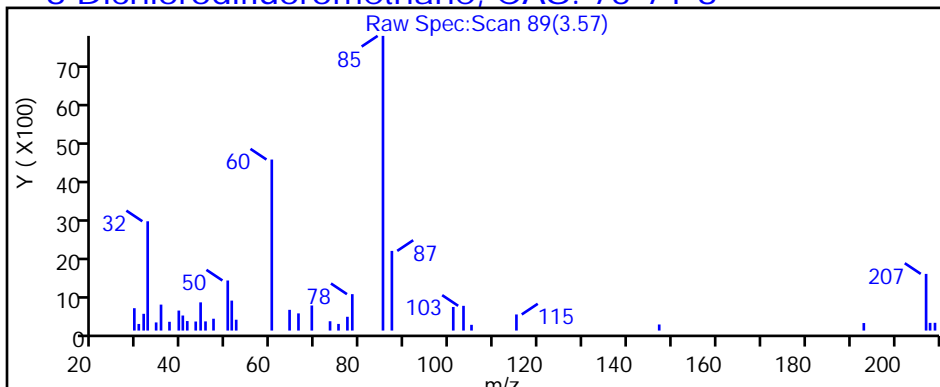
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p103.D

Injection Date: 21-Jan-2019 20:42:30

Instrument ID: MR

Lims ID: 140-13996-A-1

Lab Sample ID: 140-13996-1

Client ID: BLDG-C EFFLUENT

Operator ID: afb

ALS Bottle#: 3

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

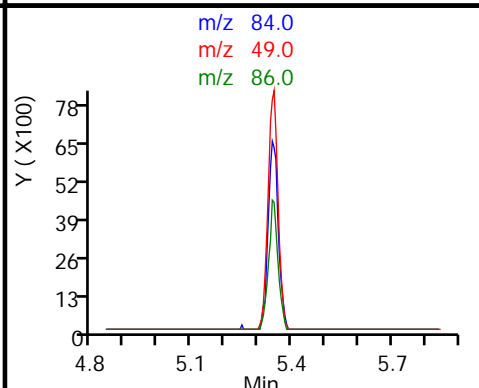
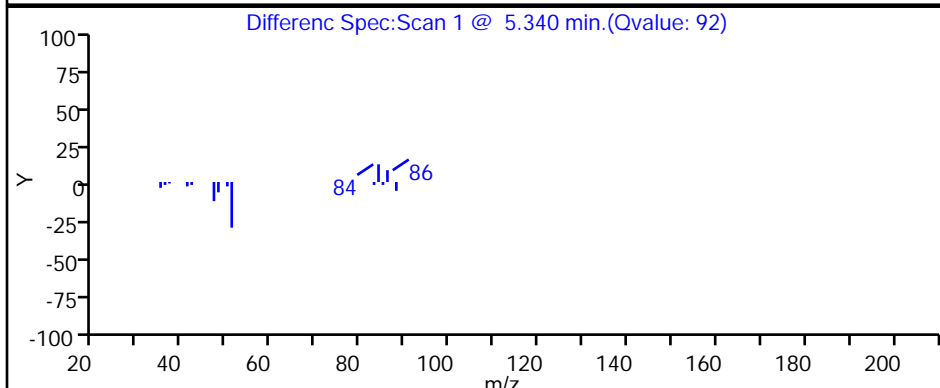
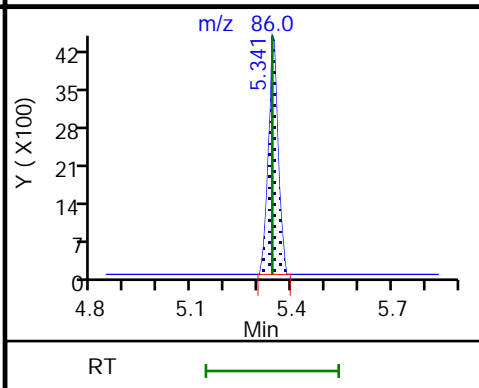
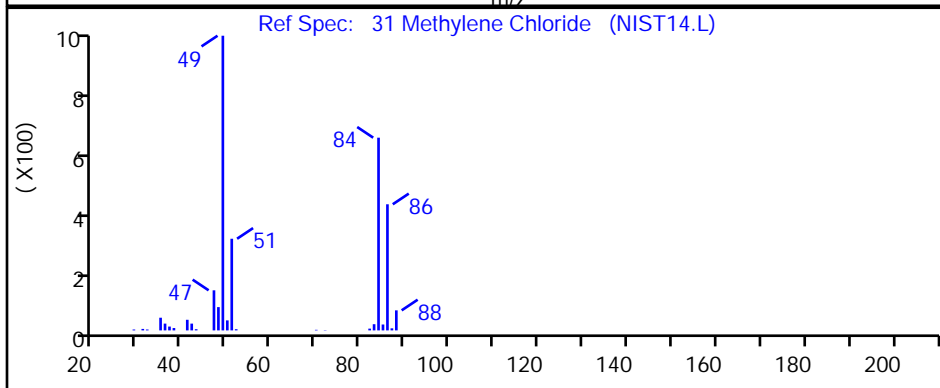
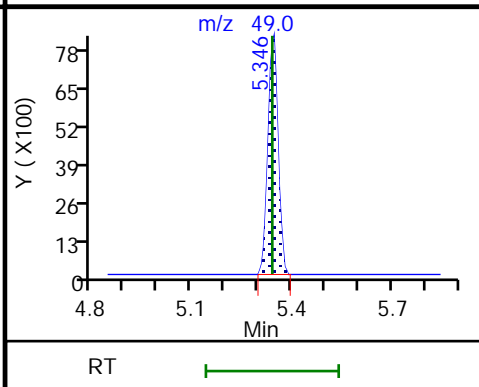
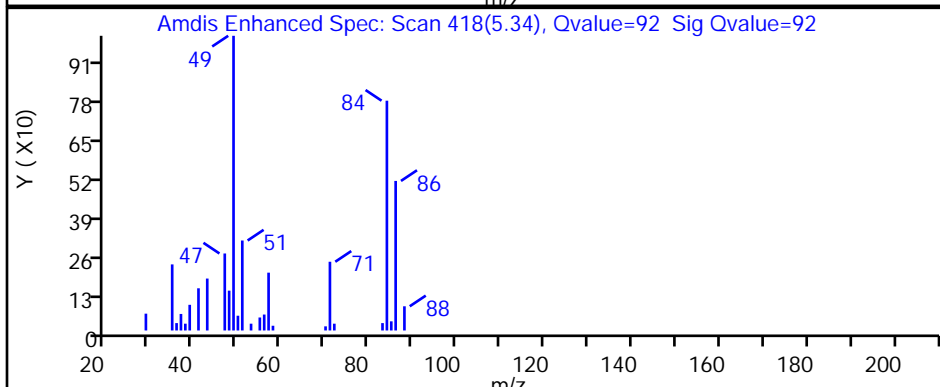
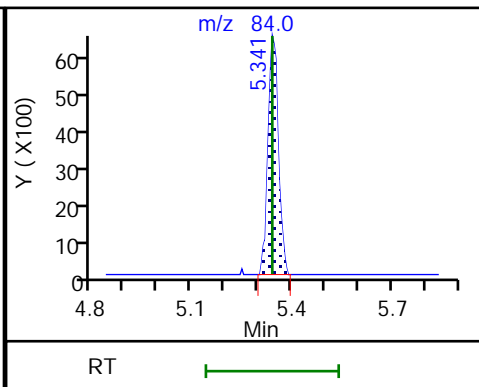
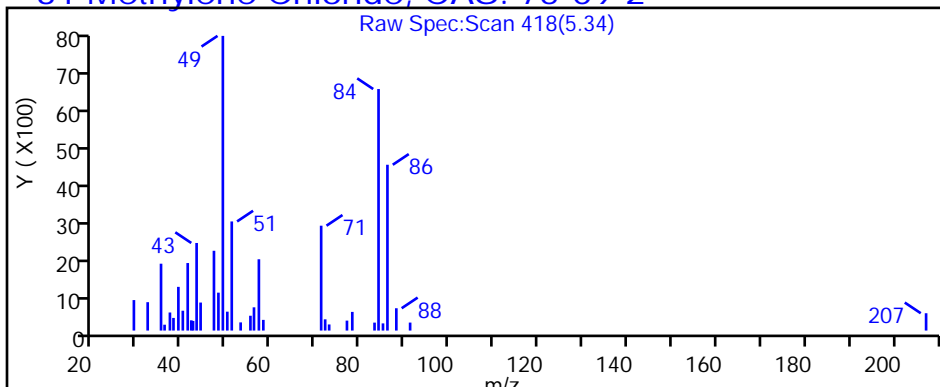
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p103.D

Injection Date: 21-Jan-2019 20:42:30

Instrument ID: MR

Lims ID: 140-13996-A-1

Lab Sample ID: 140-13996-1

Client ID: BLDG-C EFFLUENT

Operator ID: afb

ALS Bottle#: 3

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

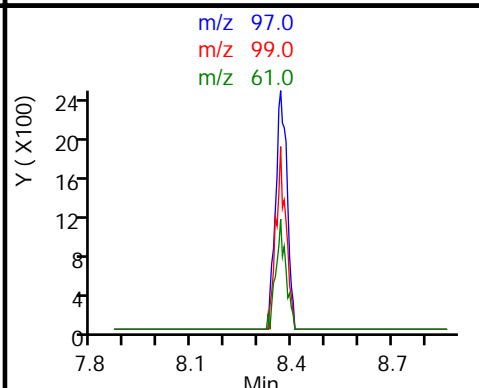
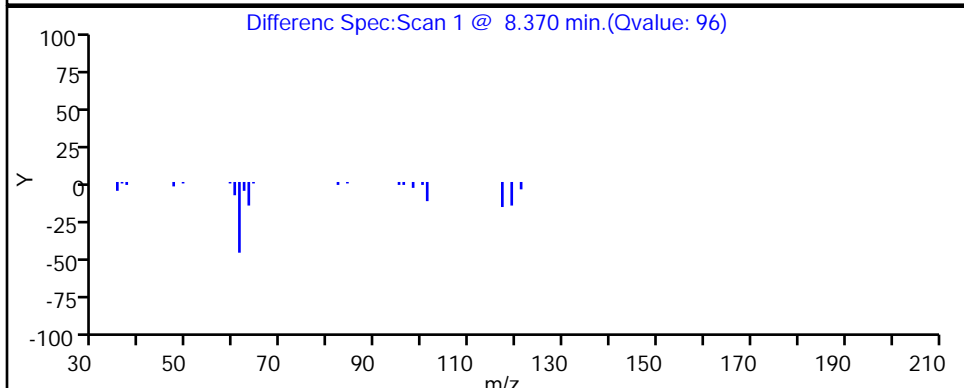
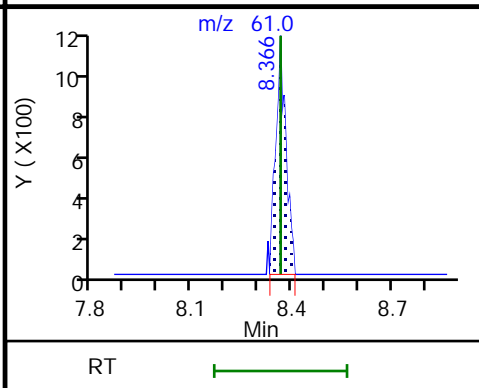
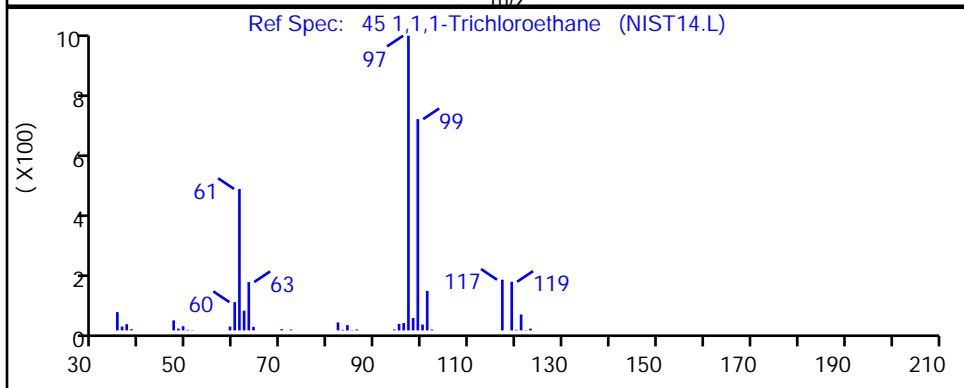
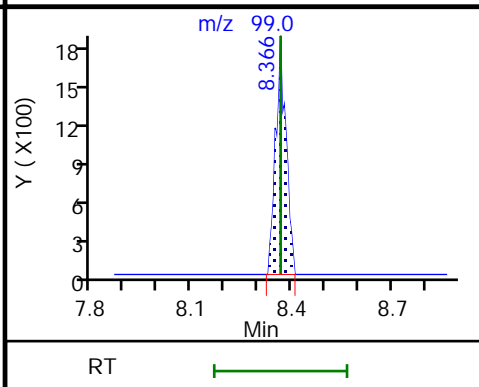
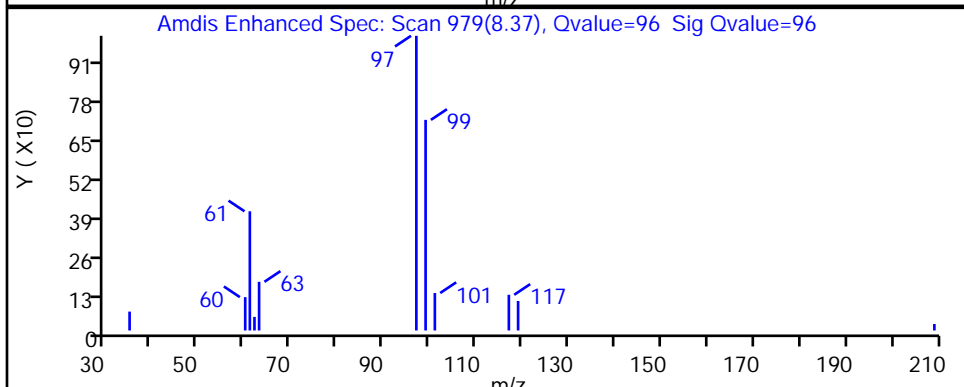
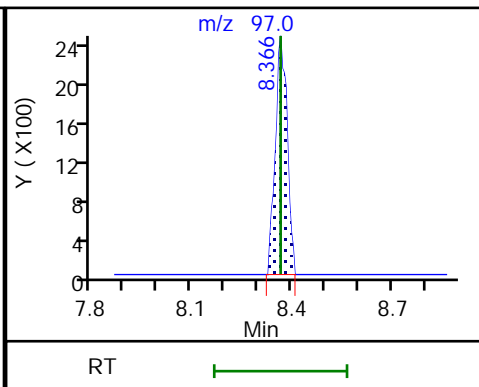
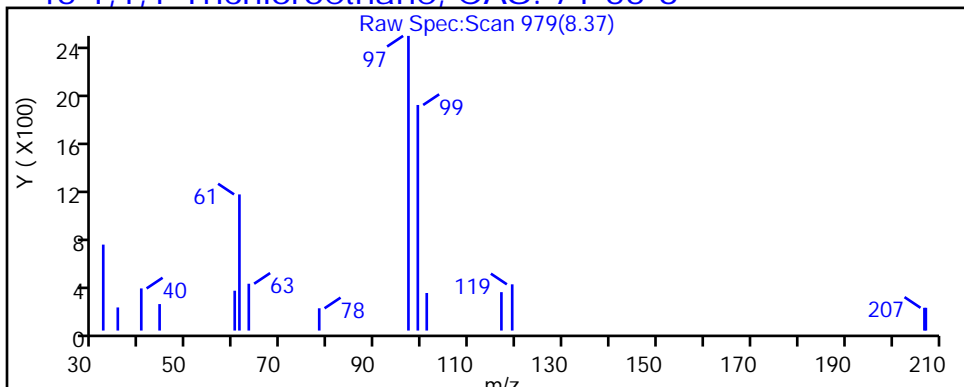
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p103.D

Injection Date: 21-Jan-2019 20:42:30

Instrument ID: MR

Lims ID: 140-13996-A-1

Lab Sample ID: 140-13996-1

Client ID: BLDG-C EFFLUENT

Operator ID: afb

ALS Bottle#: 3

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

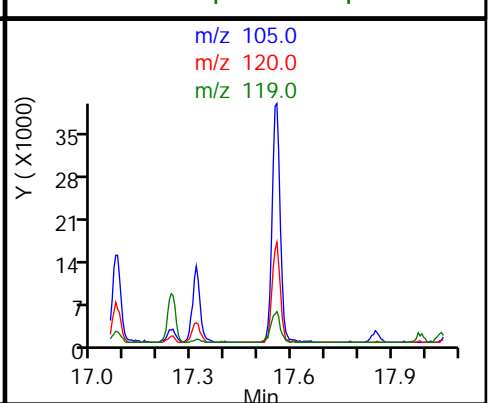
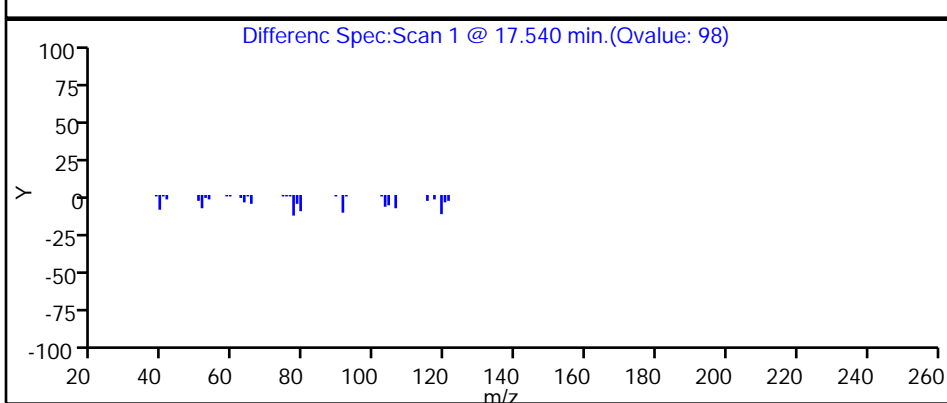
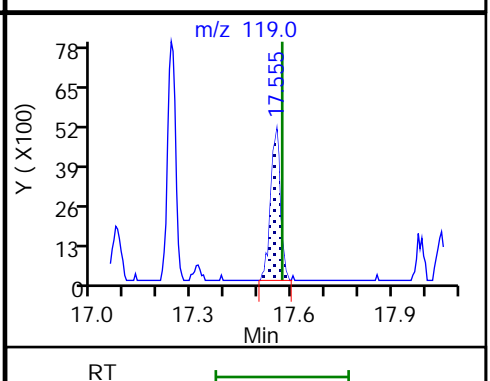
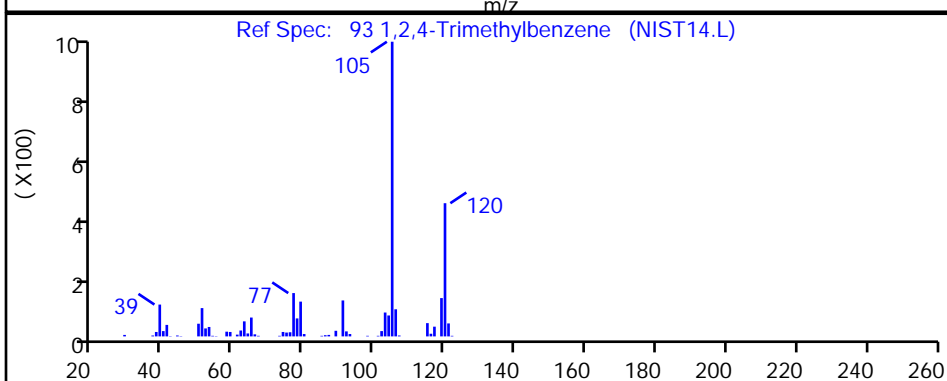
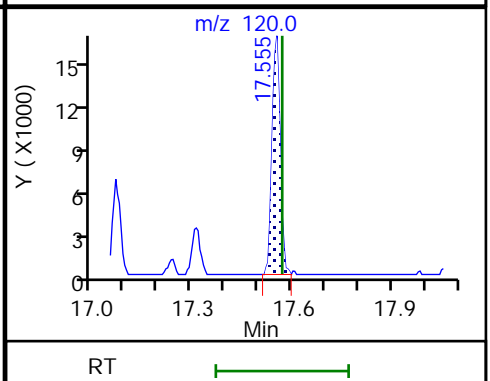
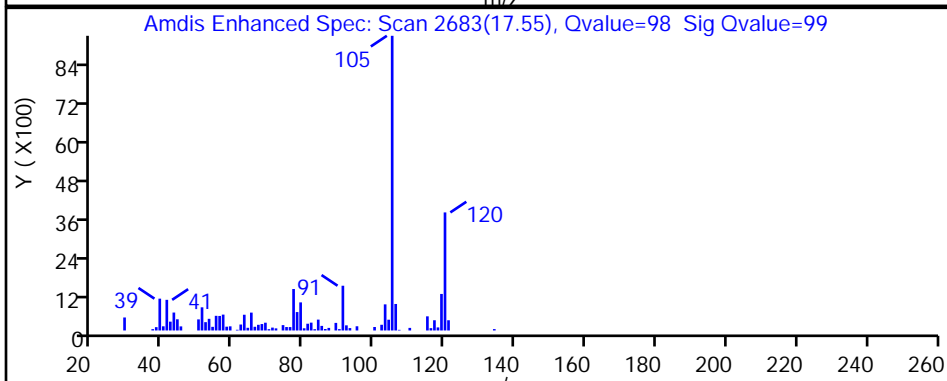
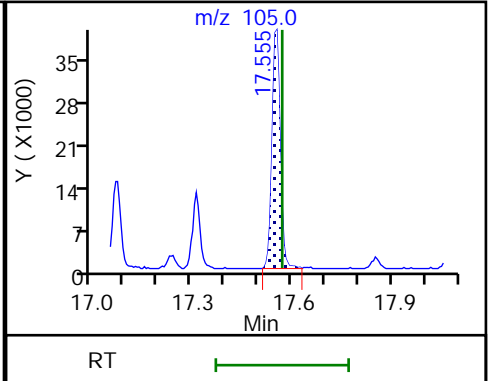
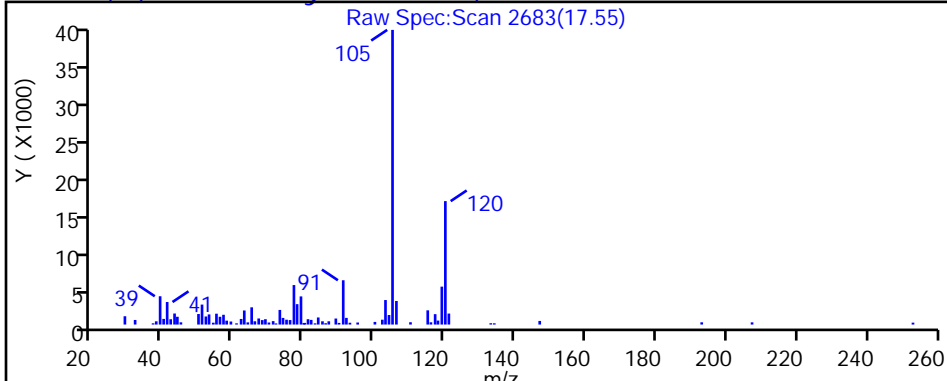
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p103.D

Injection Date: 21-Jan-2019 20:42:30

Instrument ID: MR

Lims ID: 140-13996-A-1

Lab Sample ID: 140-13996-1

Client ID: BLDG-C EFFLUENT

Operator ID: afb

ALS Bottle#: 3

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

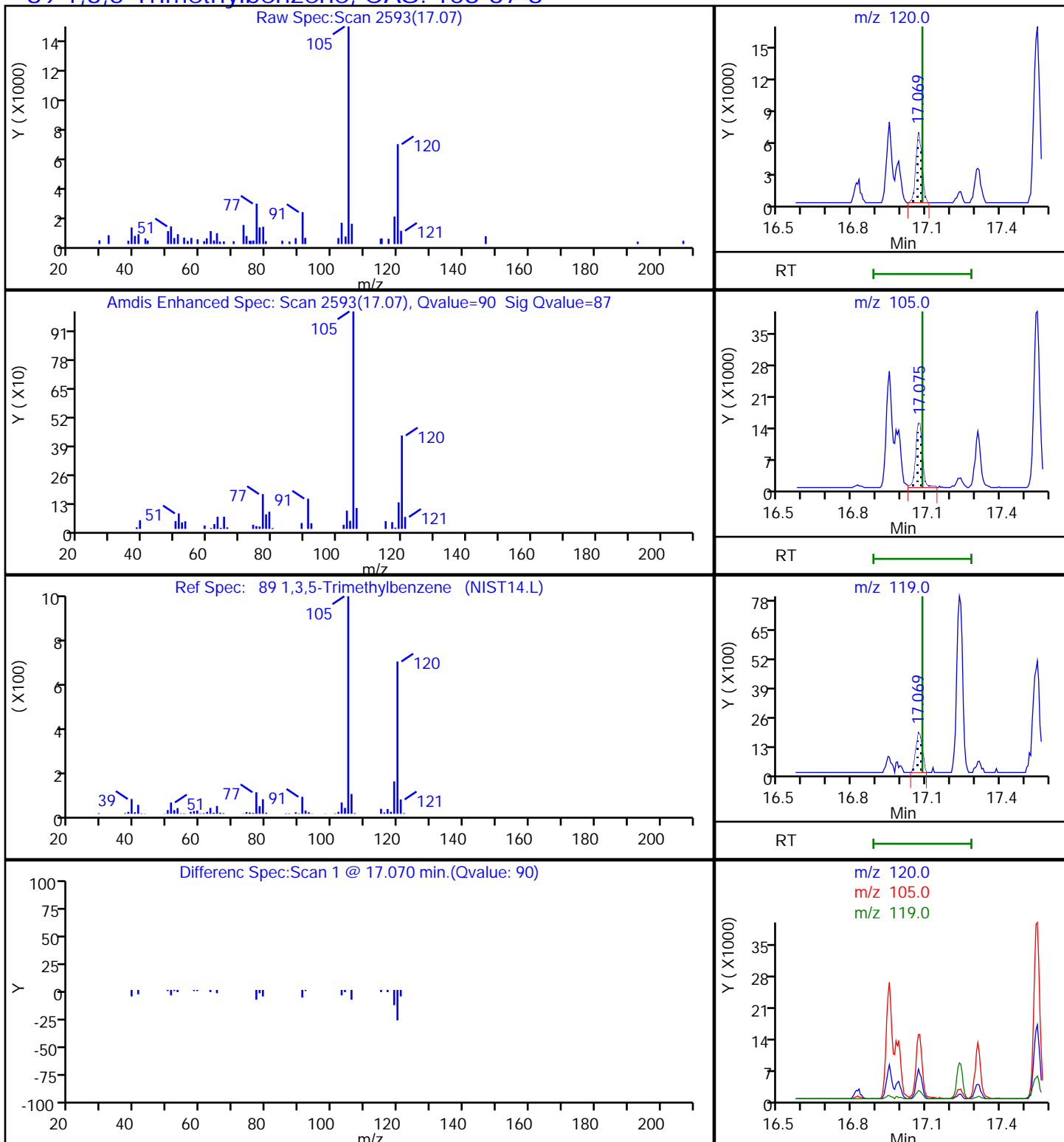
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

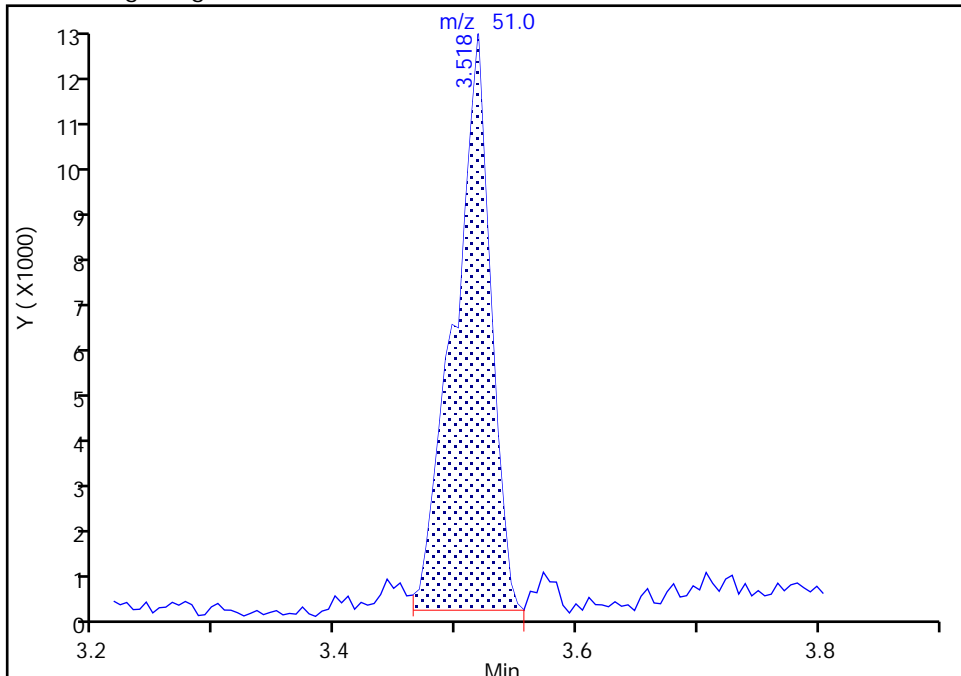
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Injection Date: 21-Jan-2019 20:42:30 Instrument ID: MR
Lims ID: 140-13996-A-1 Lab Sample ID: 140-13996-1
Client ID: BLDG-C EFFLUENT
Operator ID: afb ALS Bottle#: 3 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

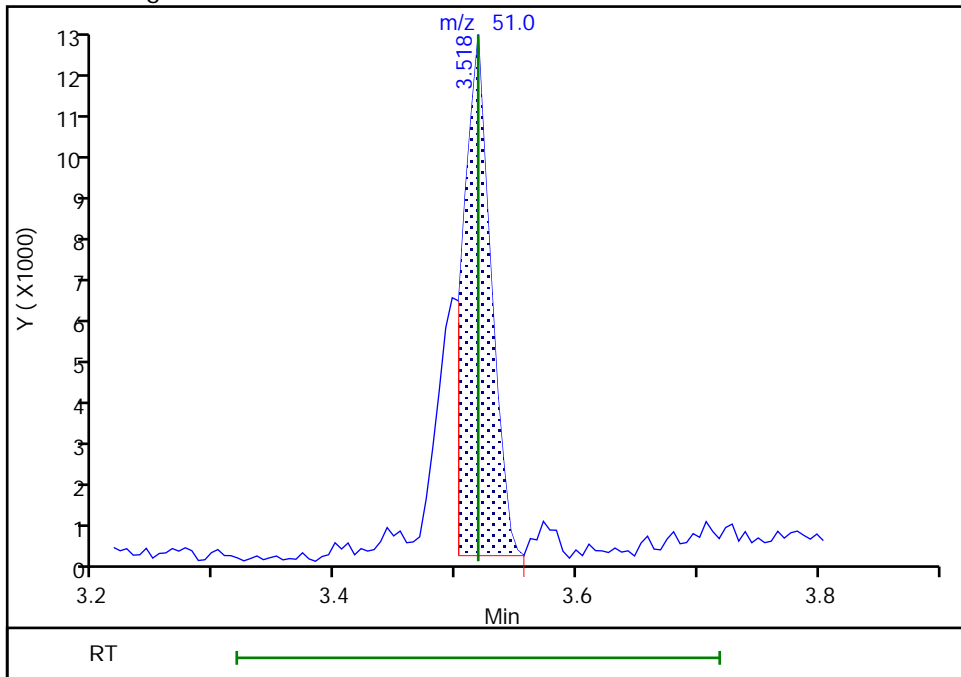
RT: 3.52
Area: 25108
Amount: 0.204404
Amount Units: ppb v/v

Processing Integration Results



RT: 3.52
Area: 18823
Amount: 0.153238
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 22-Jan-2019 11:21:36
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: BLDG-C MIDGAC Lab Sample ID: 140-13996-2
 Matrix: Air Lab File ID: RA21p104.D
 Analysis Method: TO 15 LL Date Collected: 01/16/2019 12:47
 Sample wt/vol: 100(mL) Date Analyzed: 01/21/2019 21:33
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.4		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.93	CI	0.40	0.075
67-66-3	Chloroform	119.38	0.34	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.23	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.28	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.28	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.24	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: BLDG-C MIDGAC Lab Sample ID: 140-13996-2
 Matrix: Air Lab File ID: RA21p104.D
 Analysis Method: TO 15 LL Date Collected: 01/16/2019 12:47
 Sample wt/vol: 100(mL) Date Analyzed: 01/21/2019 21:33
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	7.8		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.3	CI	1.4	0.27
67-66-3	Chloroform	119.38	1.6	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.92	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.5	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.2	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p104.D
 Lims ID: 140-13996-A-2
 Client ID: BLDG-C MIDGAC
 Sample Type: Client
 Inject. Date: 21-Jan-2019 21:33:30 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-010
 Misc. Info.: 140-13996-A-2
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 11:23:18 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 11:23:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.406	0.000	72	204663	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.477	0.000	95	1206245	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.524	0.000	90	1061260	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.244	16.250	-0.006	88	925415	4.10	
6 Chlorodifluoromethane	51	3.518	3.518	0.000	96	22647	0.1865	
8 Dichlorodifluoromethane	85	3.556	3.561	-0.005	99	12596	0.0566	
31 Methylene Chloride	84	5.336	5.341	-0.005	86	14855	0.2170	
41 cis-1,2-Dichloroethene	96	7.137	7.136	0.001	97	3432	0.0463	
43 Chloroform	83	7.439	7.444	-0.005	94	13193	0.0675	
45 1,1,1-Trichloroethane	97	8.366	8.366	0.000	97	13889	0.0560	
47 Benzene	78	8.911	8.916	-0.005	98	96177	0.4894	
93 1,2,4-Trimethylbenzene	105	17.555	17.571	-0.016	98	20442	0.0480	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p104.D

Injection Date: 21-Jan-2019 21:33:30

Instrument ID: MR

Operator ID: afb

Lims ID: 140-13996-A-2

Lab Sample ID: 140-13996-2

Worklist Smp#: 10

Client ID: BLDG-C MIDGAC

Purge Vol: 500.000 mL

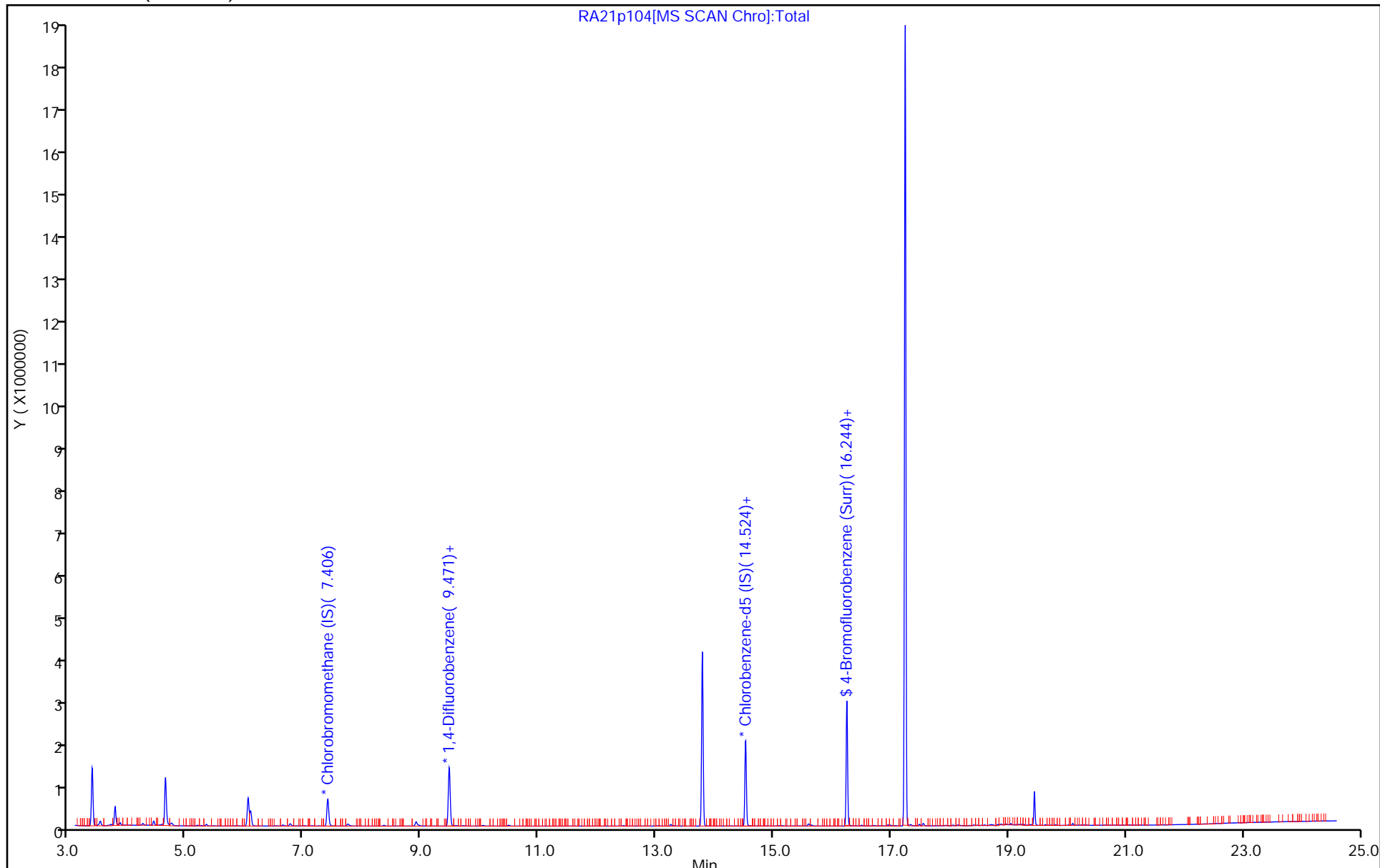
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p104.D
 Lims ID: 140-13996-A-2
 Client ID: BLDG-C MIDGAC
 Sample Type: Client
 Inject. Date: 21-Jan-2019 21:33:30 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-010
 Misc. Info.: 140-13996-A-2
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 11:23:18 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 11:23:42

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.10	102.51

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p104.D

Injection Date: 21-Jan-2019 21:33:30

Instrument ID: MR

Lims ID: 140-13996-A-2

Lab Sample ID: 140-13996-2

Client ID: BLDG-C MIDGAC

Operator ID: afb

ALS Bottle#: 4 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

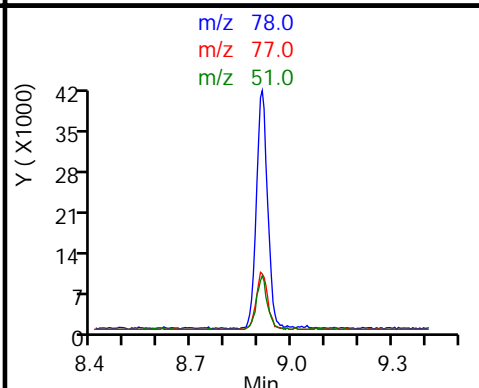
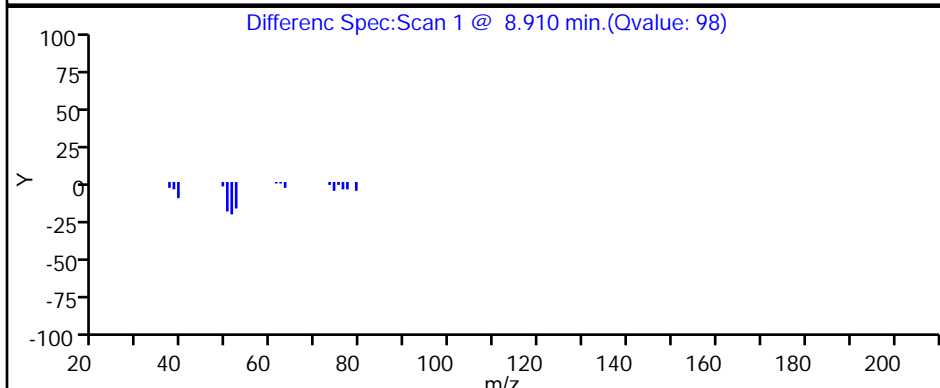
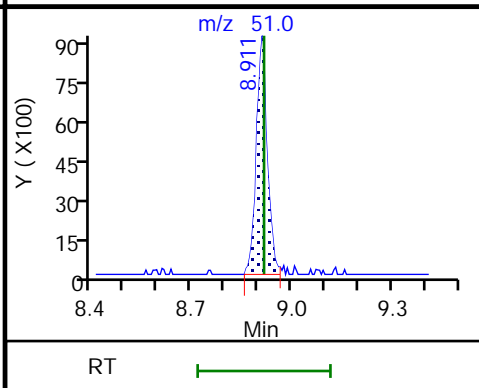
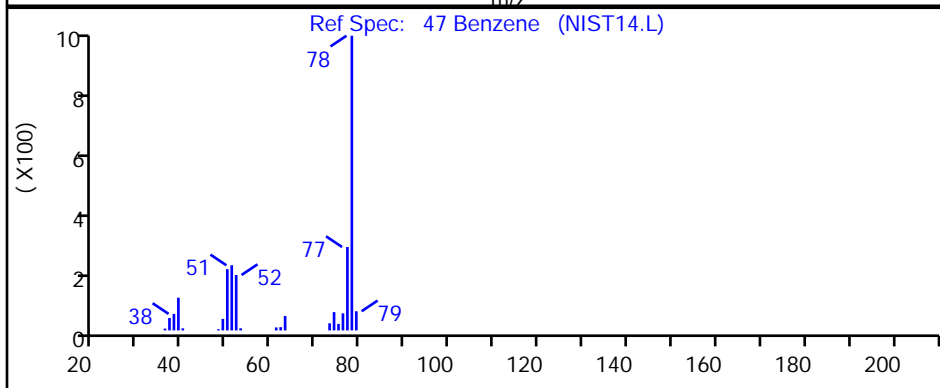
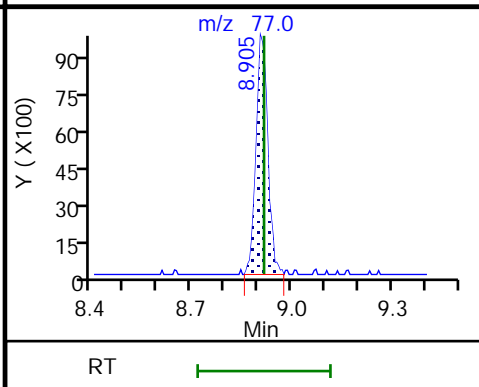
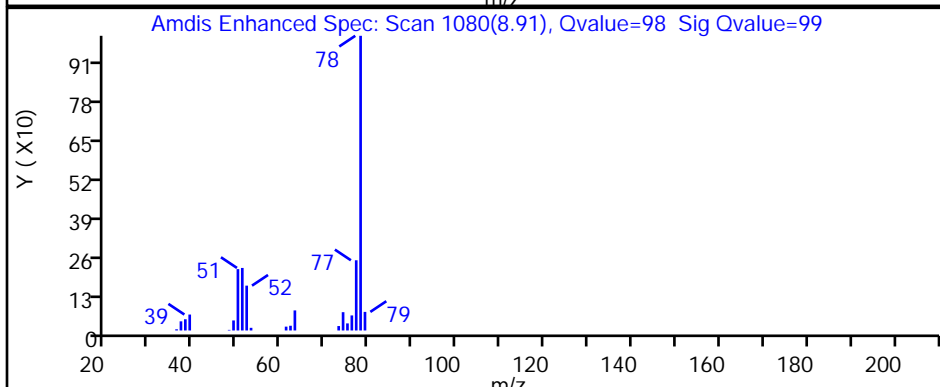
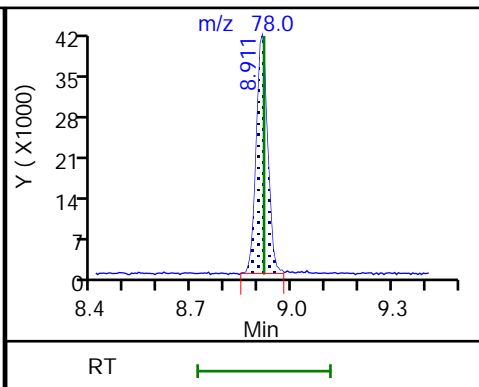
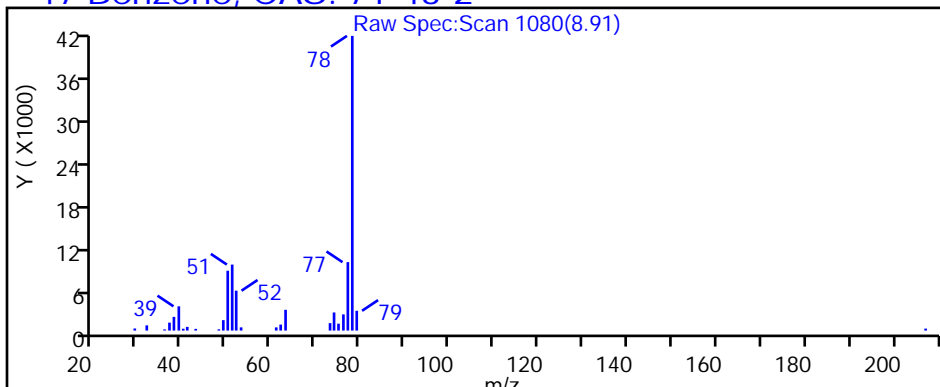
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p104.D

Injection Date: 21-Jan-2019 21:33:30

Instrument ID: MR

Lims ID: 140-13996-A-2

Lab Sample ID: 140-13996-2

Client ID: BLDG-C MIDGAC

Operator ID: afb

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

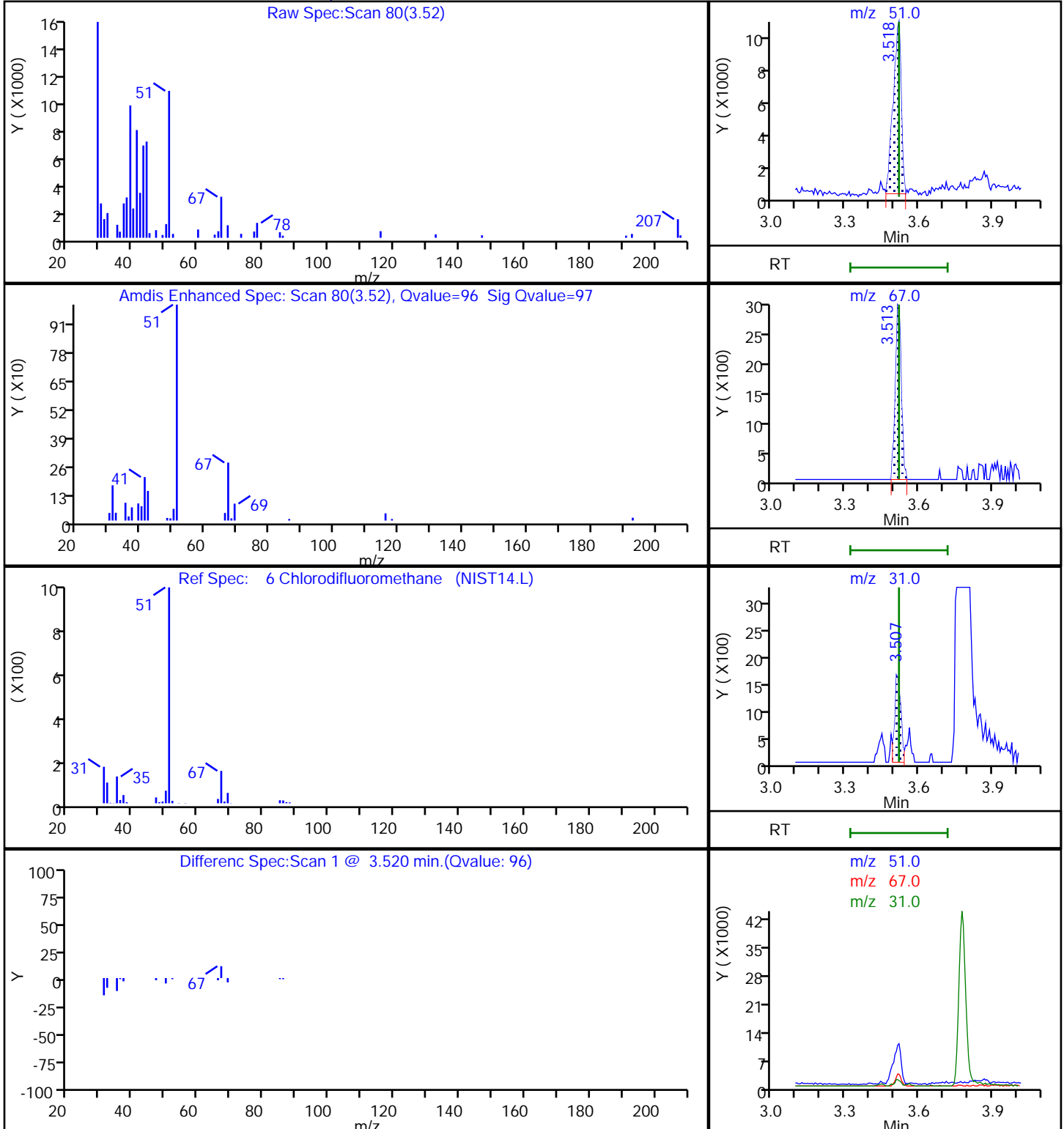
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p104.D

Injection Date: 21-Jan-2019 21:33:30

Instrument ID: MR

Lims ID: 140-13996-A-2

Lab Sample ID: 140-13996-2

Client ID: BLDG-C MIDGAC

Operator ID: afb

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

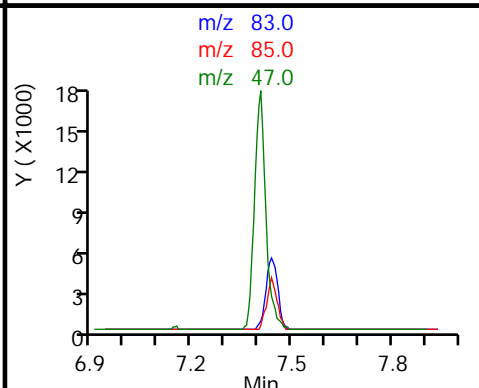
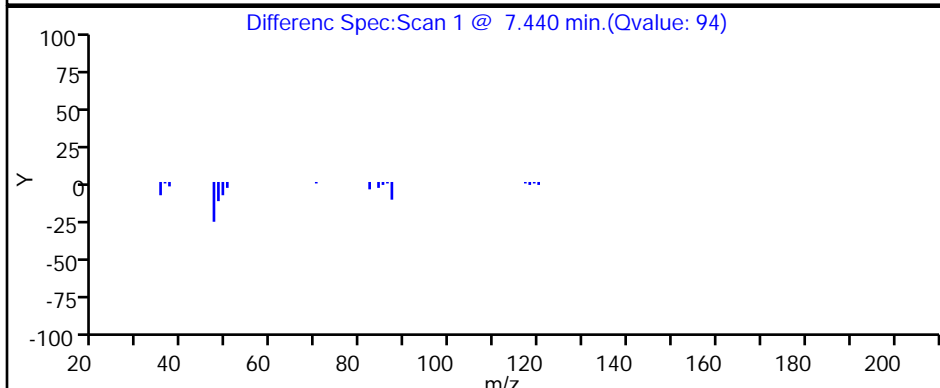
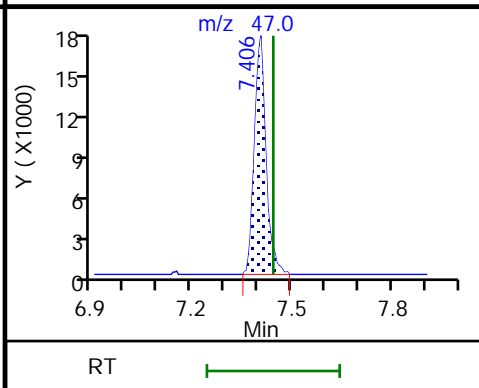
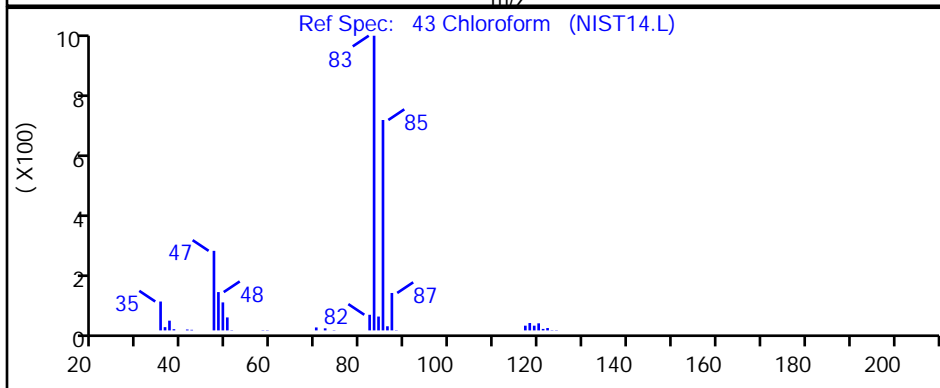
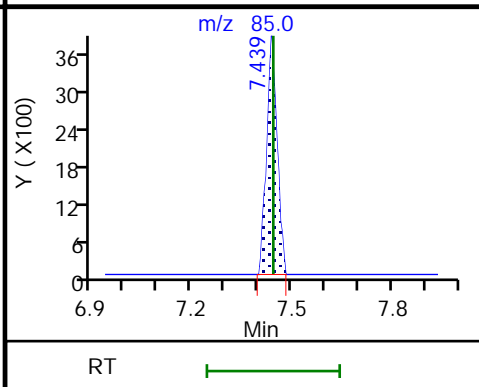
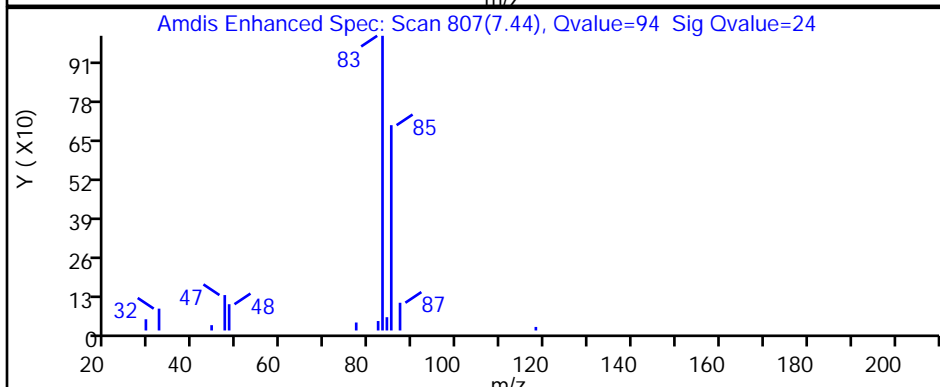
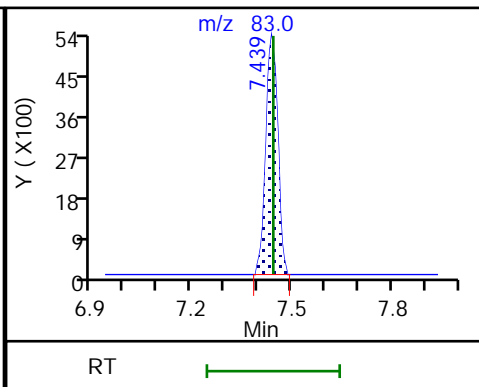
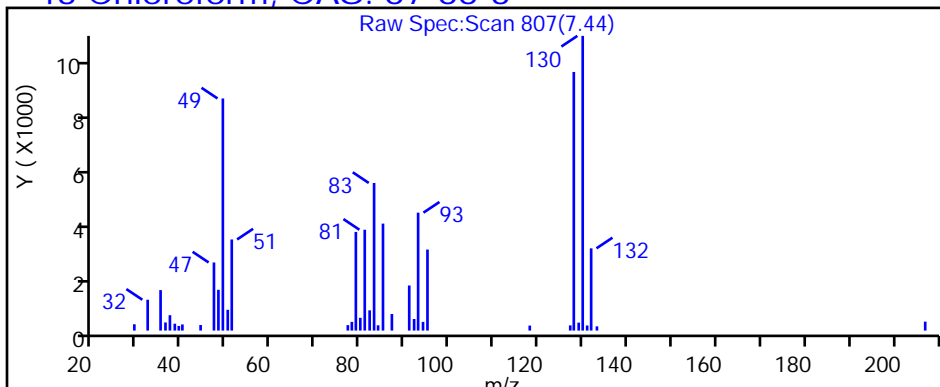
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p104.D

Injection Date: 21-Jan-2019 21:33:30

Instrument ID: MR

Lims ID: 140-13996-A-2

Lab Sample ID: 140-13996-2

Client ID: BLDG-C MIDGAC

Operator ID: afb

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

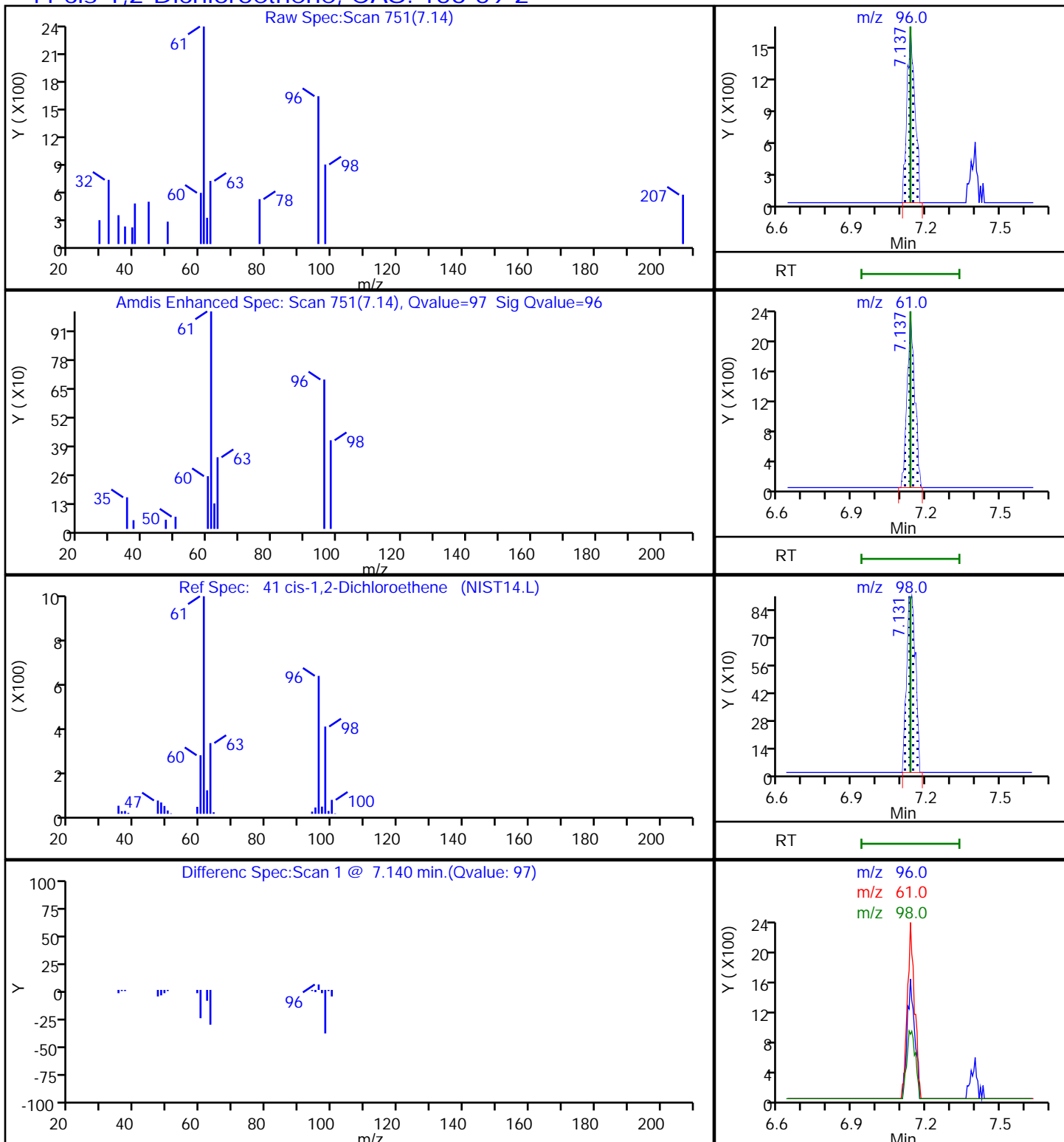
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p104.D

Injection Date: 21-Jan-2019 21:33:30

Instrument ID: MR

Lims ID: 140-13996-A-2

Lab Sample ID: 140-13996-2

Client ID: BLDG-C MIDGAC

Operator ID: afb

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

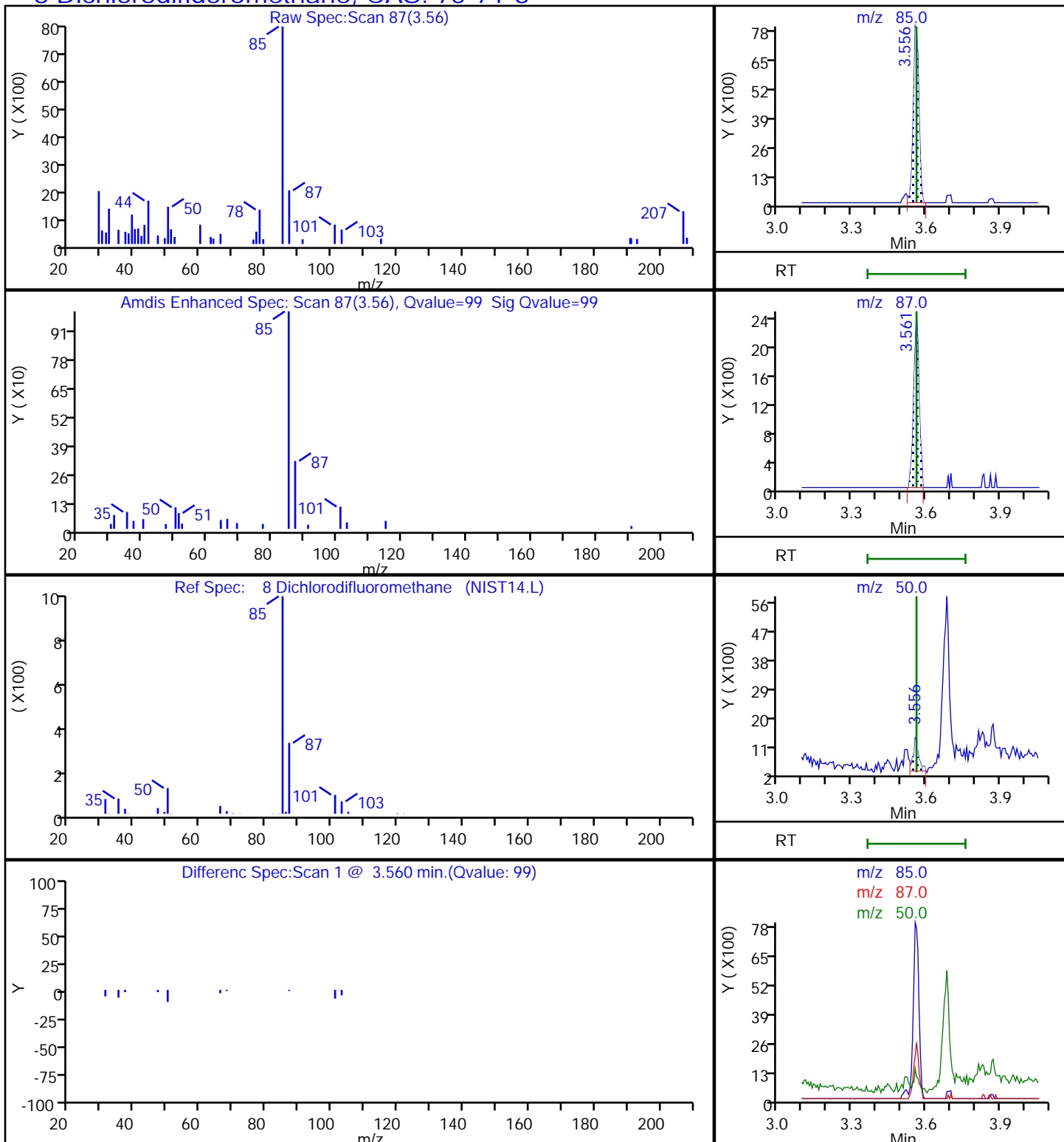
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p104.D

Injection Date: 21-Jan-2019 21:33:30

Instrument ID: MR

Lims ID: 140-13996-A-2

Lab Sample ID: 140-13996-2

Client ID: BLDG-C MIDGAC

Operator ID: afb

ALS Bottle#: 4 Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

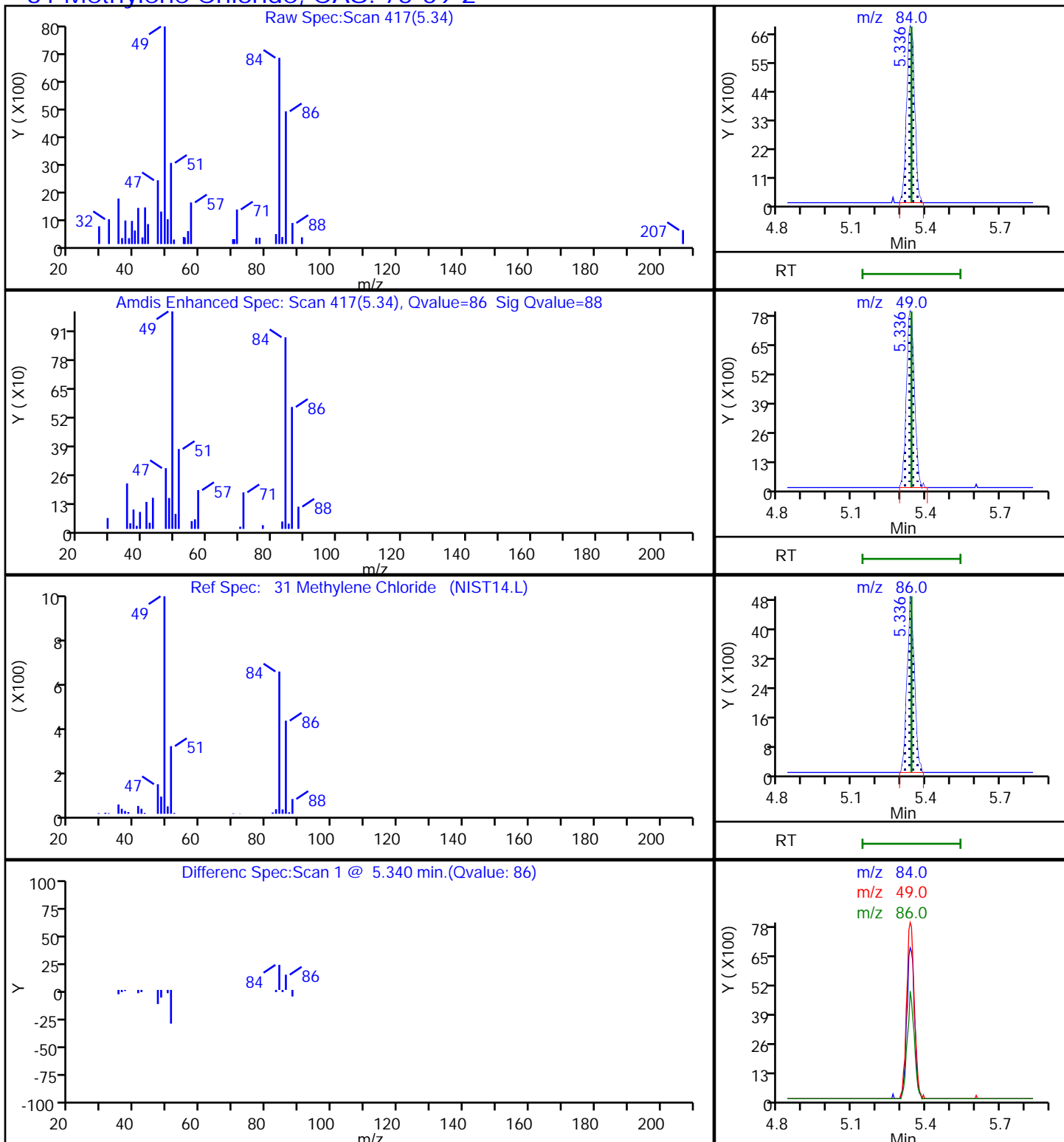
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p104.D

Injection Date: 21-Jan-2019 21:33:30

Instrument ID: MR

Lims ID: 140-13996-A-2

Lab Sample ID: 140-13996-2

Client ID: BLDG-C MIDGAC

Operator ID: afb

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

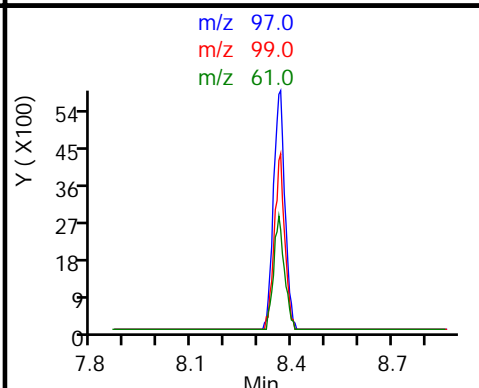
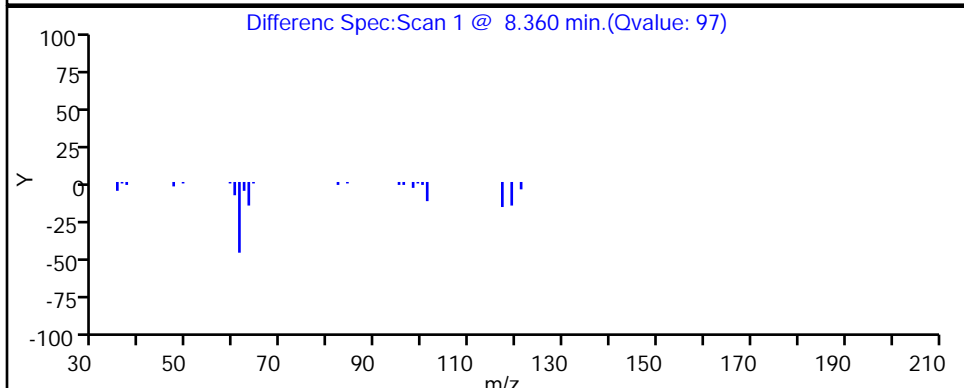
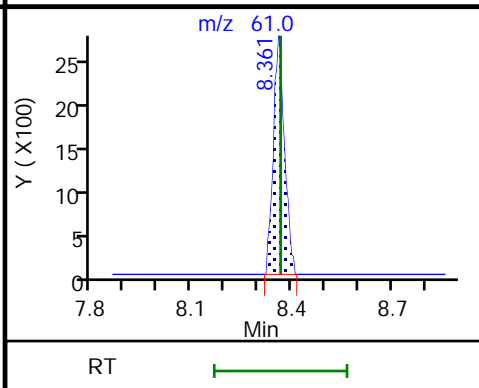
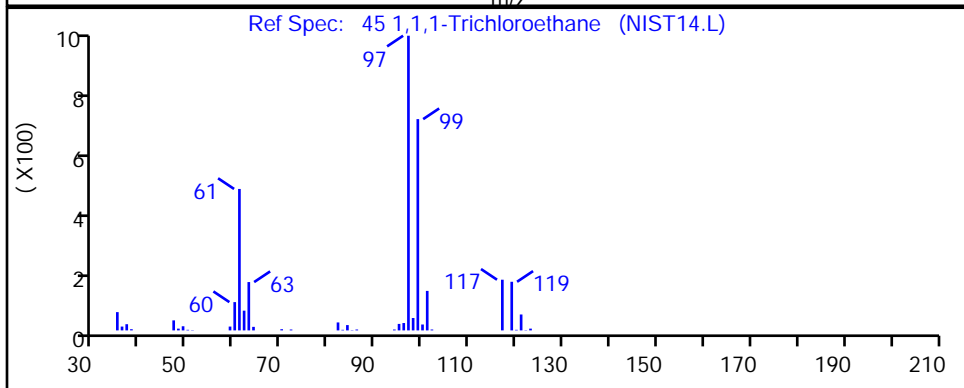
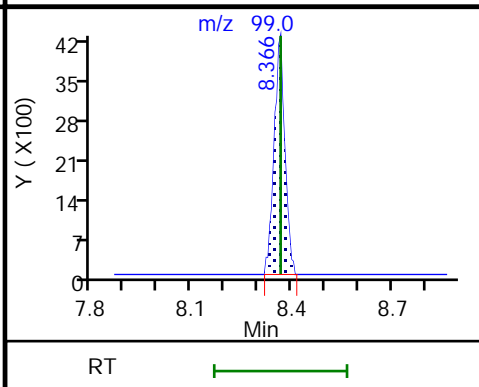
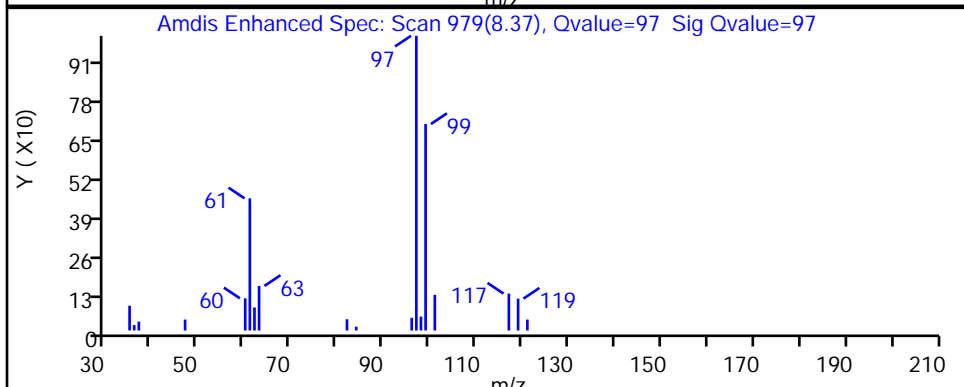
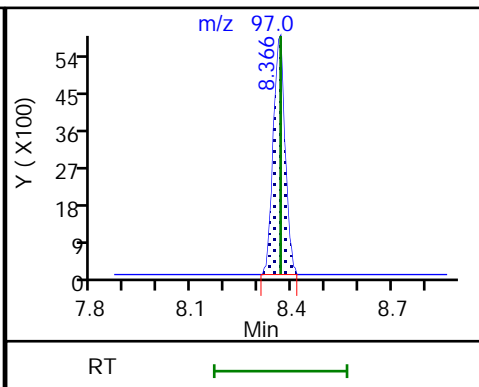
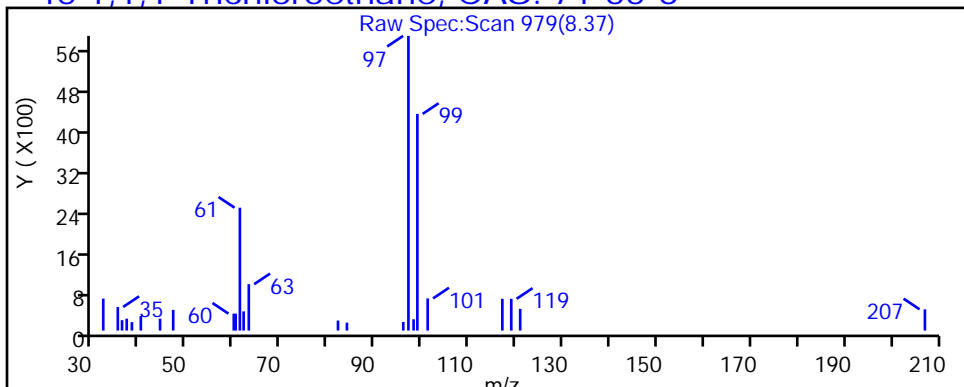
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p104.D

Injection Date: 21-Jan-2019 21:33:30

Instrument ID: MR

Lims ID: 140-13996-A-2

Lab Sample ID: 140-13996-2

Client ID: BLDG-C MIDGAC

Operator ID: afb

ALS Bottle#: 4

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

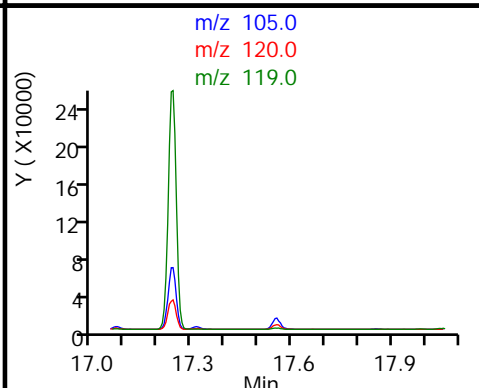
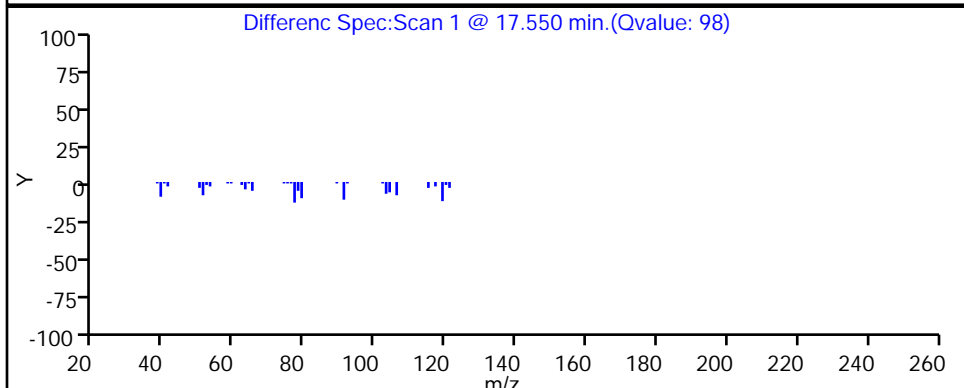
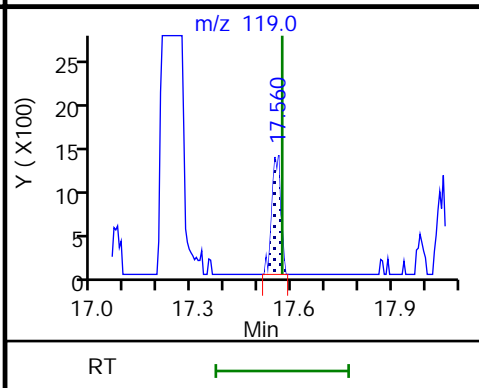
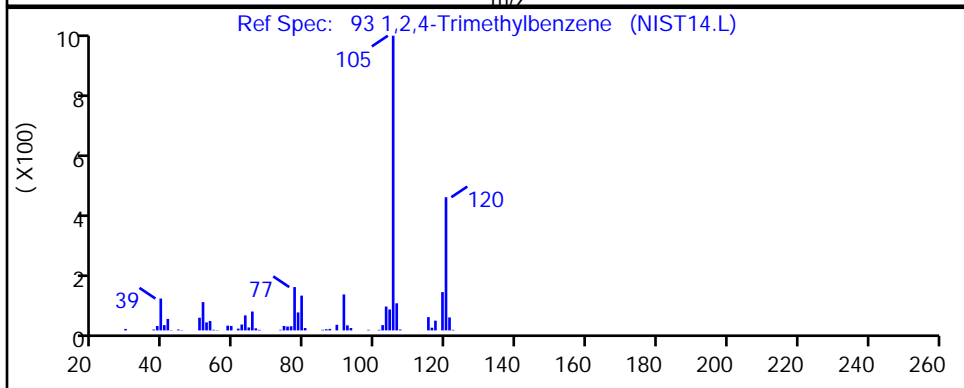
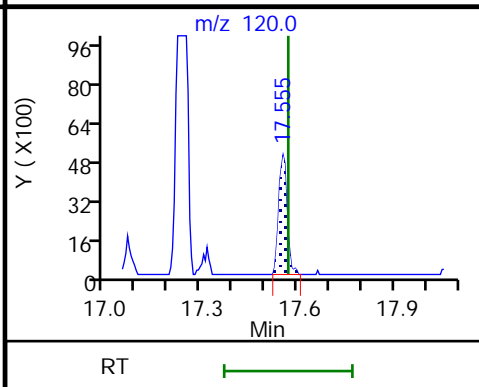
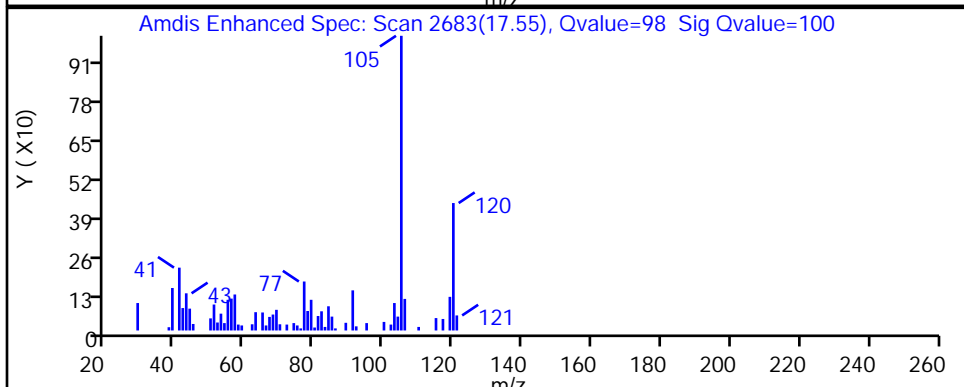
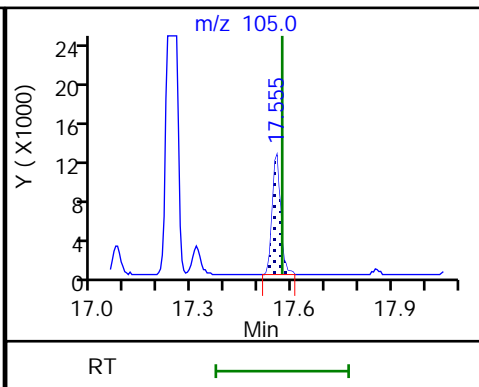
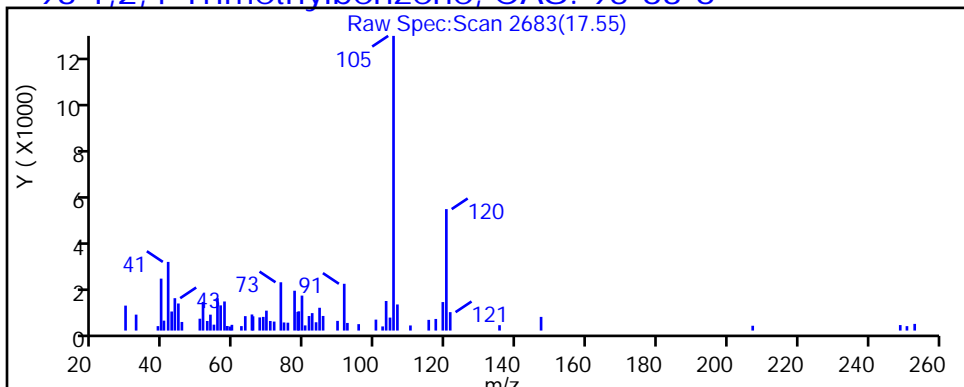
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6

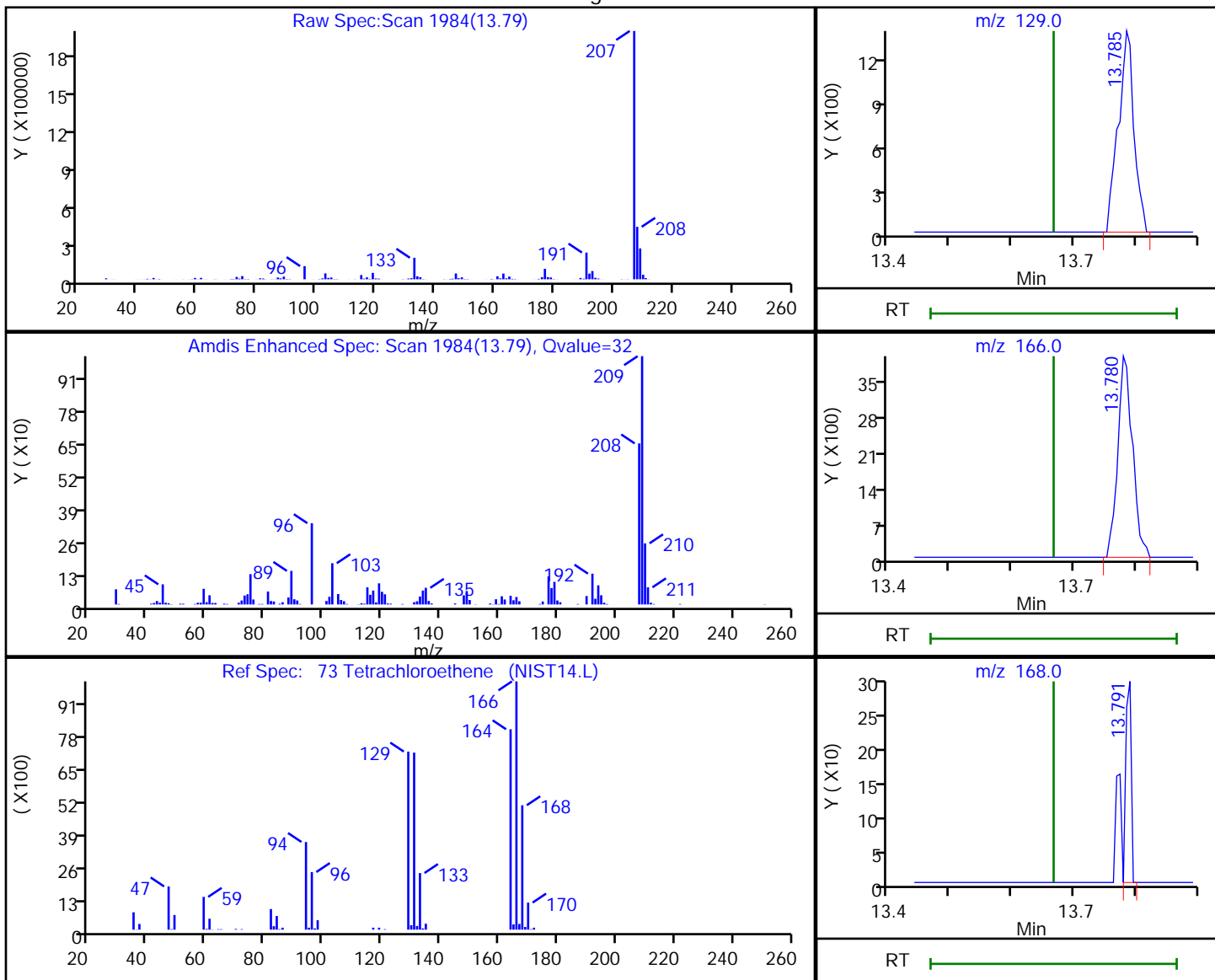


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p104.D
 Injection Date: 21-Jan-2019 21:33:30 Instrument ID: MR
 Lims ID: 140-13996-A-2 Lab Sample ID: 140-13996-2
 Client ID: BLDG-C MIDGAC
 Operator ID: afb ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4

Processing Results



RT	Mass	Response	Amount
13.79	129.00	2427	0.019262
13.78	166.00	6637	
13.79	168.00	179	

Reviewer: khachitpongpanits, 22-Jan-2019 11:23:17

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: BLDG-C INFLUENT Lab Sample ID: 140-13996-3
 Matrix: Air Lab File ID: RA21p105.D
 Analysis Method: TO 15 LL Date Collected: 01/16/2019 12:52
 Sample wt/vol: 100(mL) Date Analyzed: 01/21/2019 22:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.49		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.86	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.57		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.30	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.91	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.14	J	0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	3.7		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.55		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.18	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: BLDG-C INFLUENT Lab Sample ID: 140-13996-3
 Matrix: Air Lab File ID: RA21p105.D
 Analysis Method: TO 15 LL Date Collected: 01/16/2019 12:52
 Sample wt/vol: 100(mL) Date Analyzed: 01/21/2019 22:24
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.6		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.0	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	2.3		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.88	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.93	J	2.7	0.54
108-88-3	Toluene	92.14	5.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	20		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.7		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.88	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D
 Lims ID: 140-13996-A-3
 Client ID: BLDG-C INFLUENT
 Sample Type: Client
 Inject. Date: 21-Jan-2019 22:24:30 ALS Bottle#: 5 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-011
 Misc. Info.: 140-13996-A-3
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 11:23:18 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 11:24:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.406	0.000	73	207853	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.477	0.000	95	1206957	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.524	0.000	90	1057279	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.250	0.000	89	924893	4.11	
6 Chlorodifluoromethane	51	3.513	3.518	-0.005	95	21096	0.1711	
8 Dichlorodifluoromethane	85	3.561	3.561	0.000	99	13565	0.0600	
31 Methylene Chloride	84	5.341	5.341	0.000	85	12619	0.1815	
41 cis-1,2-Dichloroethene	96	7.142	7.136	0.006	95	8546	0.1136	
47 Benzene	78	8.911	8.916	-0.005	96	19278	0.0980	
56 Trichloroethene	130	10.226	10.226	0.000	94	88903	0.7499	
65 Toluene	91	12.443	12.442	0.000	93	67635	0.2669	
73 Tetrachloroethene	129	13.661	13.667	-0.006	95	3447	0.0275	
76 Ethylbenzene	91	14.912	14.912	0.000	99	14853	0.0407	
78 m-Xylene & p-Xylene	91	15.085	15.090	-0.005	99	48409	0.1616	
82 o-Xylene	91	15.624	15.624	0.000	96	17141	0.0545	
89 1,3,5-Trimethylbenzene	120	17.069	17.085	-0.016	90	6808	0.0358	
93 1,2,4-Trimethylbenzene	105	17.555	17.571	-0.016	98	46805	0.1102	
S 121 Xylenes, Total	100				0		0.2161	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D

Injection Date: 21-Jan-2019 22:24:30

Instrument ID: MR

Operator ID: afb

Lims ID: 140-13996-A-3

Lab Sample ID: 140-13996-3

Worklist Smp#: 11

Client ID: BLDG-C INFLUENT

Purge Vol: 500.000 mL

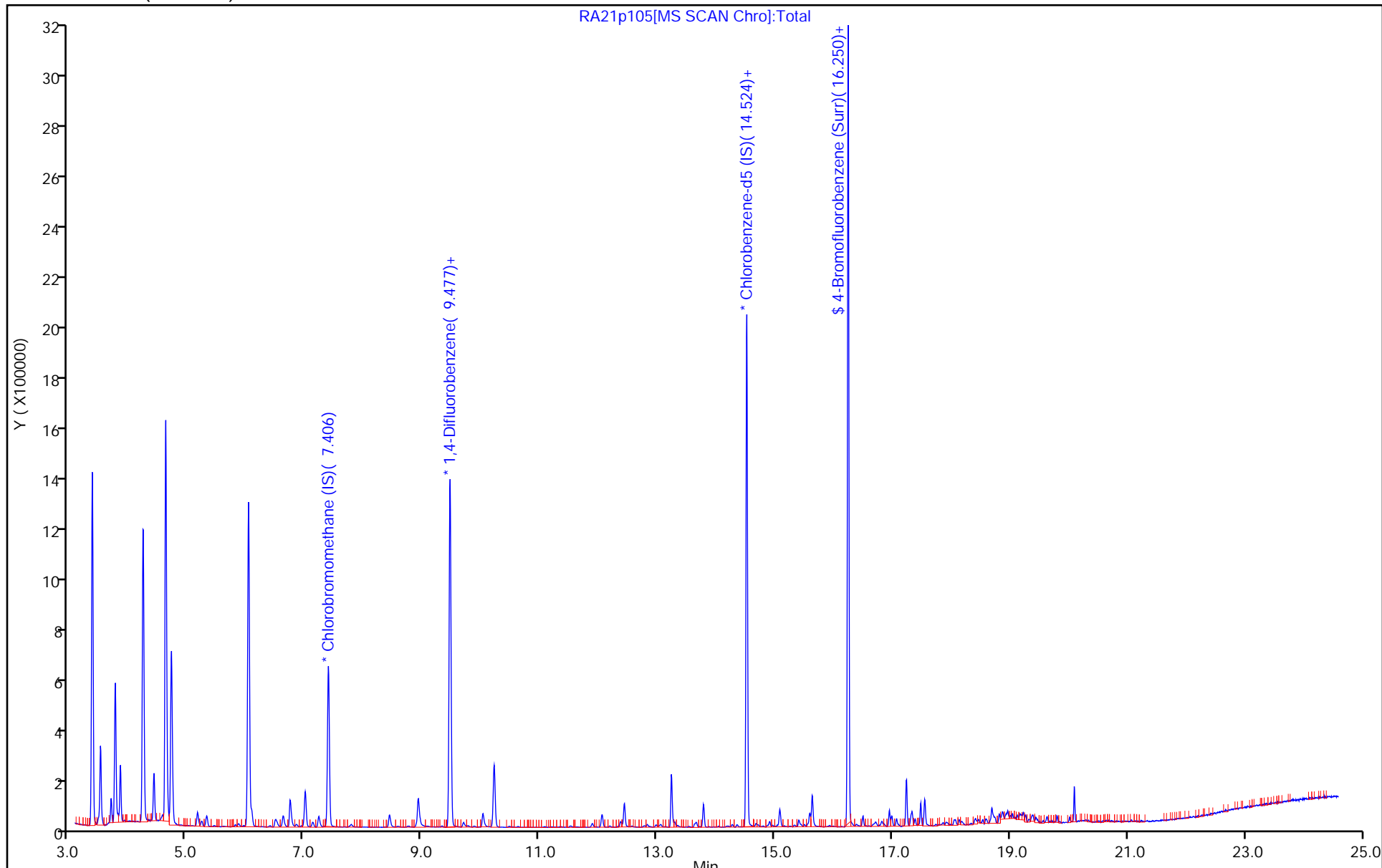
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D
 Lims ID: 140-13996-A-3
 Client ID: BLDG-C INFLUENT
 Sample Type: Client
 Inject. Date: 21-Jan-2019 22:24:30 ALS Bottle#: 5 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-011
 Misc. Info.: 140-13996-A-3
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 11:23:18 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 11:24:24

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.11	102.84

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D

Injection Date: 21-Jan-2019 22:24:30

Instrument ID: MR

Lims ID: 140-13996-A-3

Lab Sample ID: 140-13996-3

Client ID: BLDG-C INFLUENT

Operator ID: afb

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

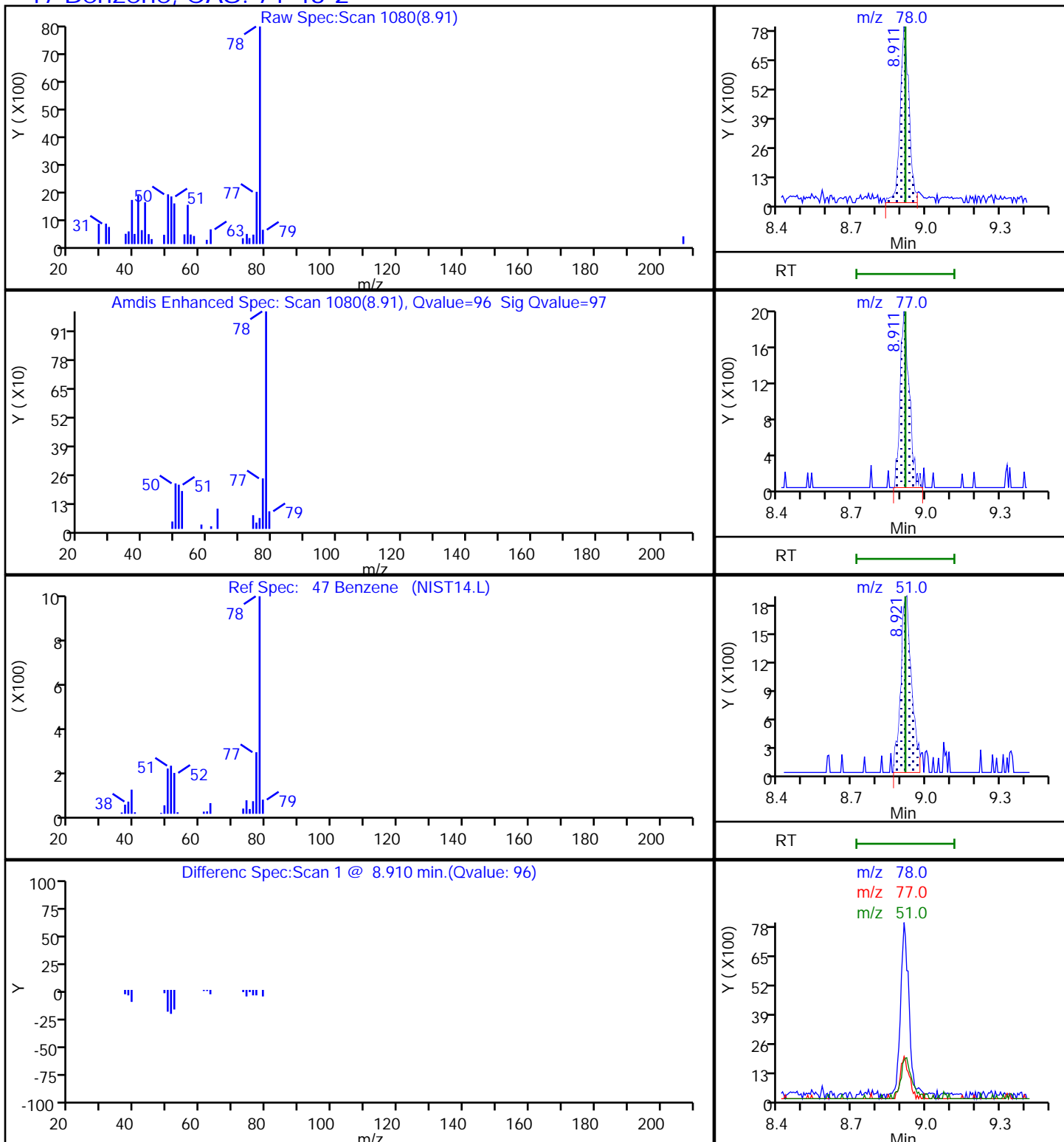
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D

Injection Date: 21-Jan-2019 22:24:30

Instrument ID: MR

Lims ID: 140-13996-A-3

Lab Sample ID: 140-13996-3

Client ID: BLDG-C INFLUENT

Operator ID: afb

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

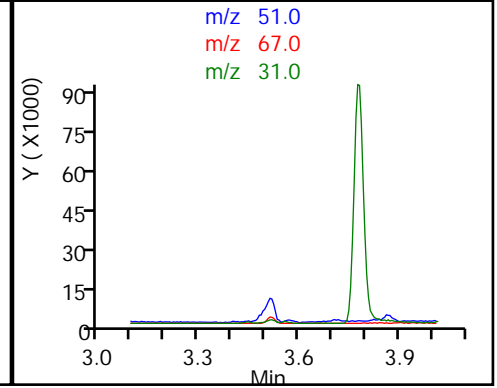
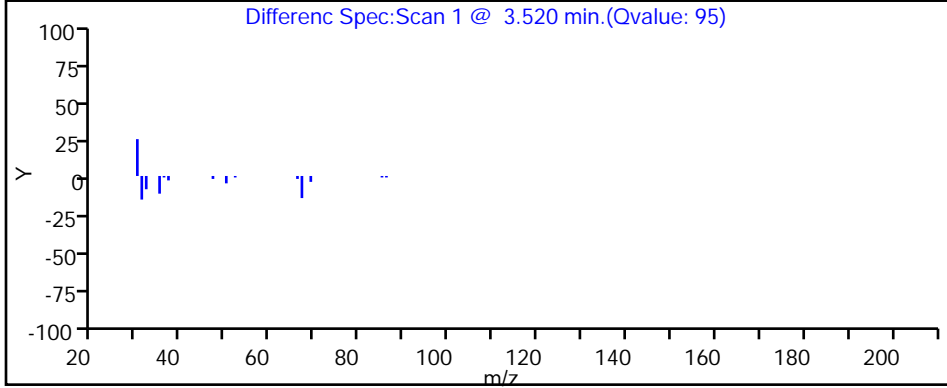
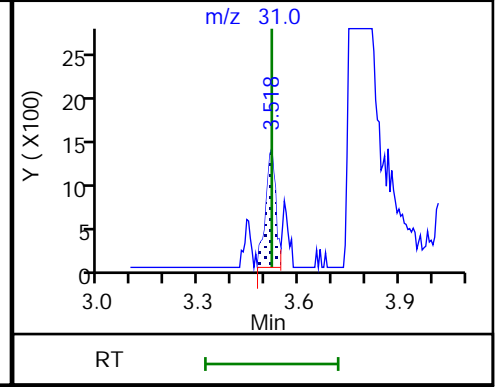
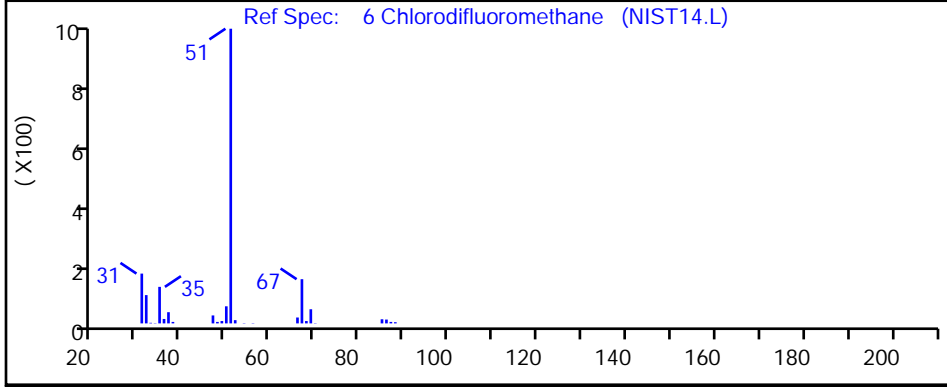
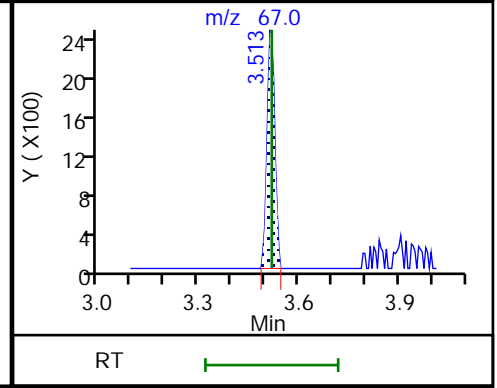
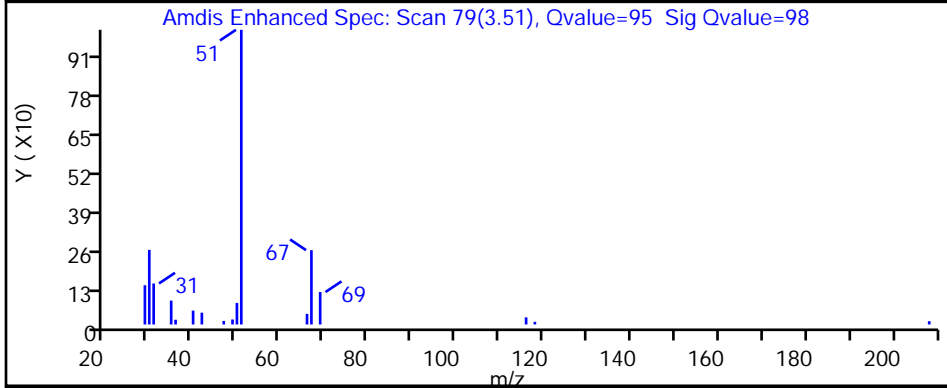
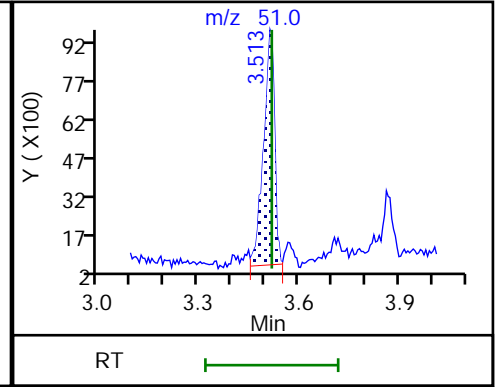
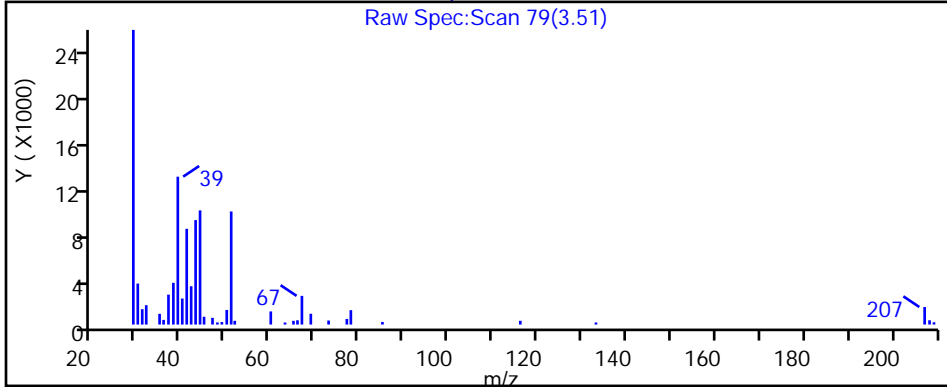
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D

Injection Date: 21-Jan-2019 22:24:30

Instrument ID: MR

Lims ID: 140-13996-A-3

Lab Sample ID: 140-13996-3

Client ID: BLDG-C INFLUENT

Operator ID: afb

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

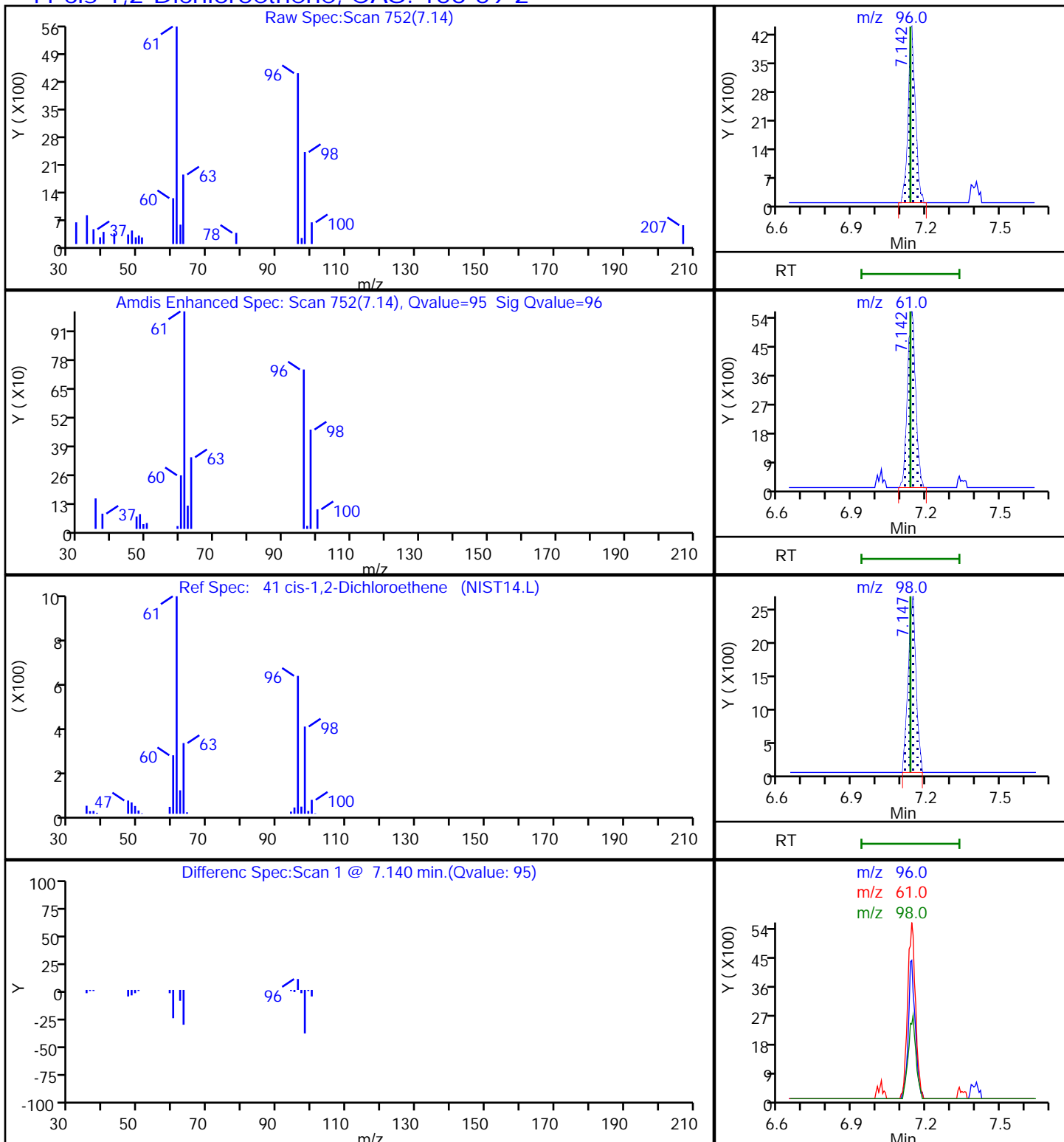
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D

Injection Date: 21-Jan-2019 22:24:30

Instrument ID: MR

Lims ID: 140-13996-A-3

Lab Sample ID: 140-13996-3

Client ID: BLDG-C INFLUENT

Operator ID: afb

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

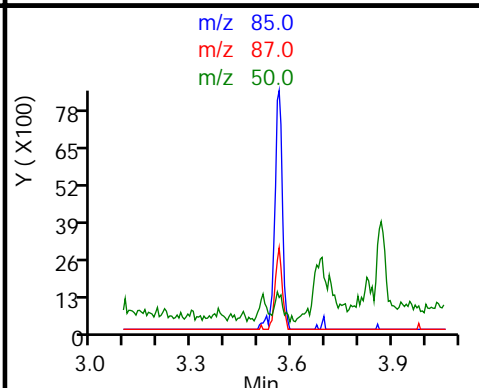
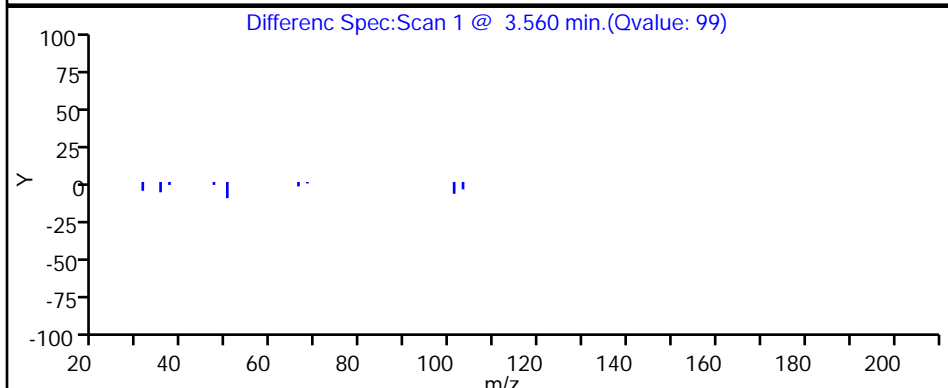
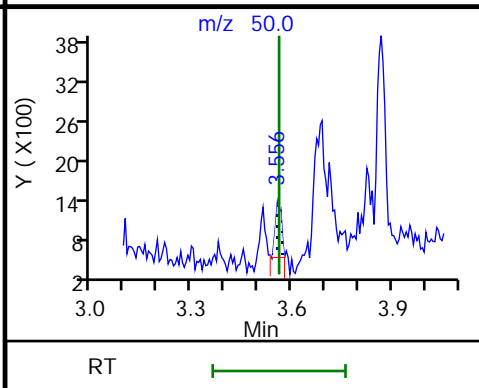
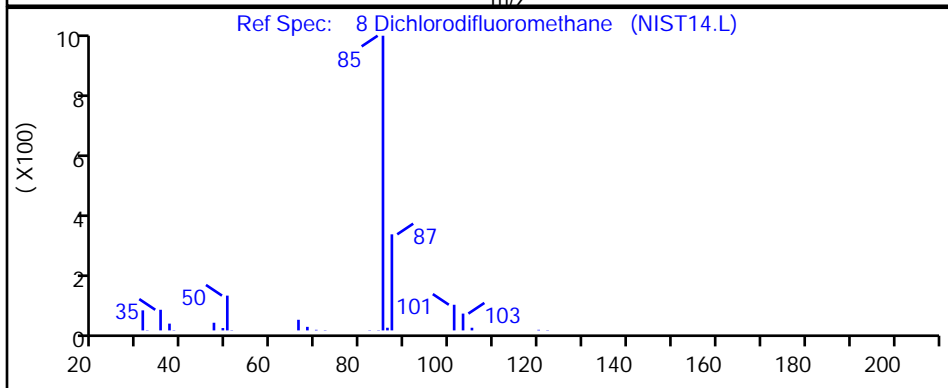
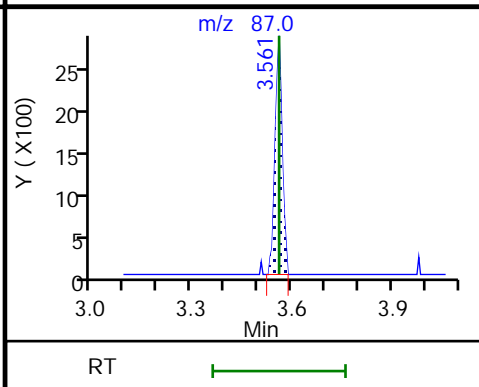
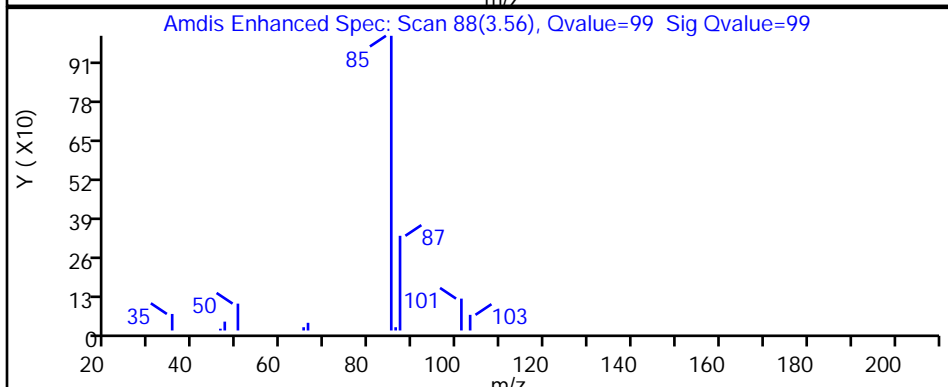
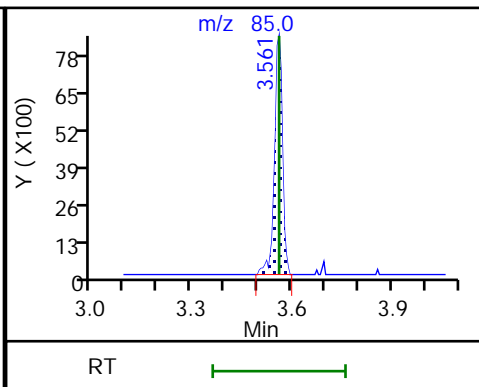
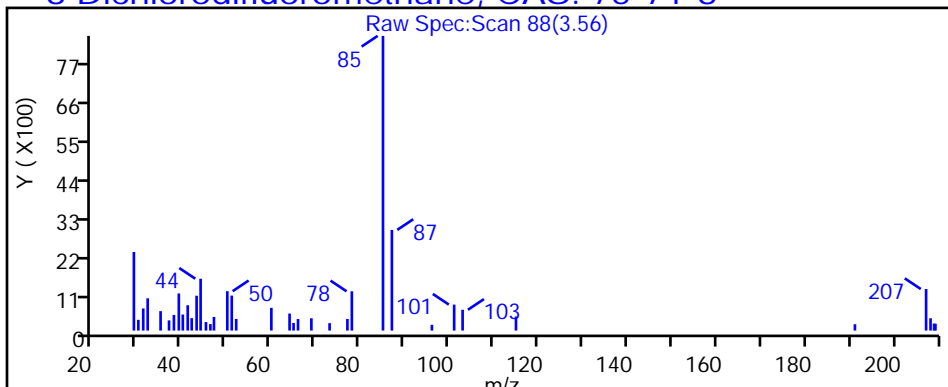
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D

Injection Date: 21-Jan-2019 22:24:30

Instrument ID: MR

Lims ID: 140-13996-A-3

Lab Sample ID: 140-13996-3

Client ID: BLDG-C INFLUENT

Operator ID: afb

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

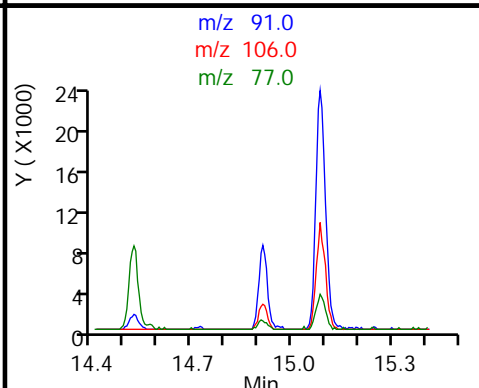
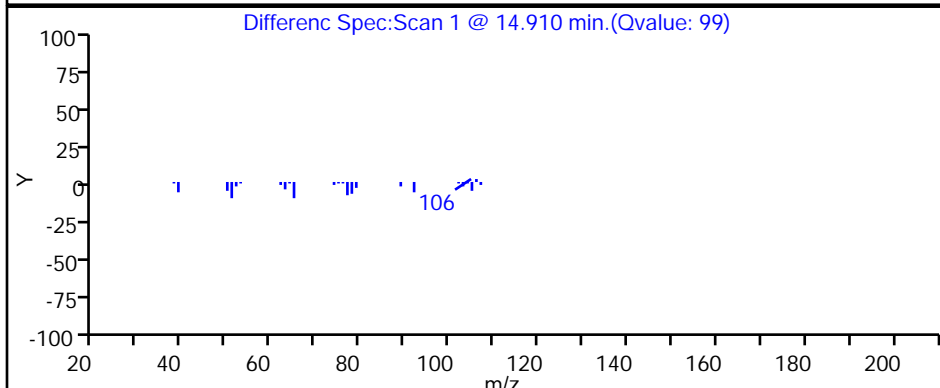
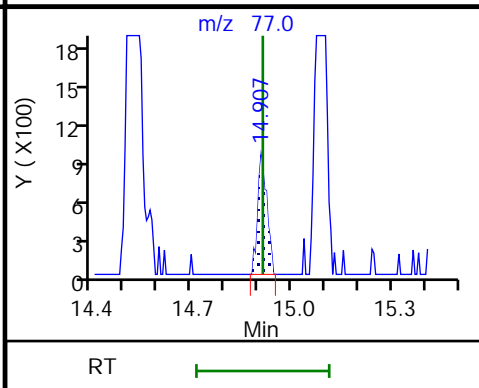
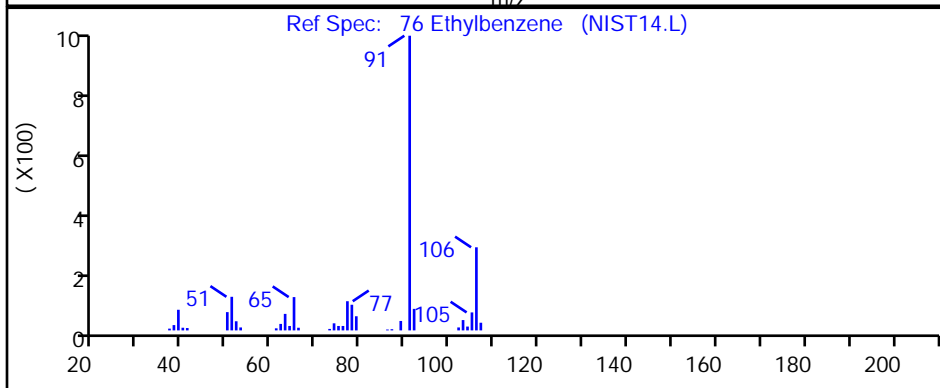
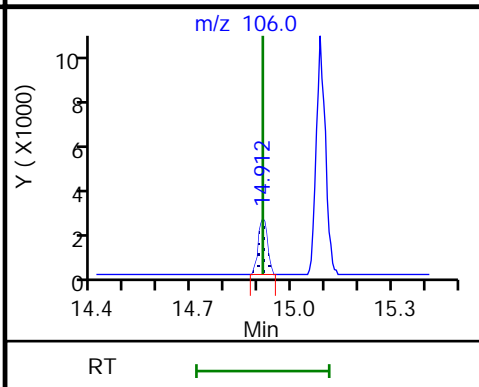
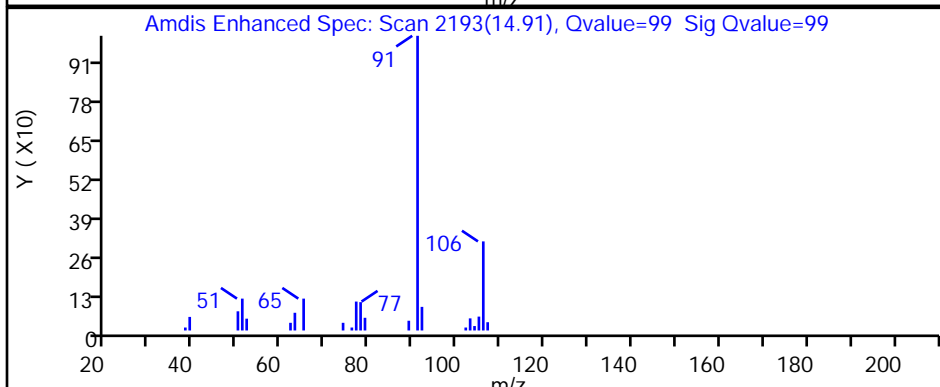
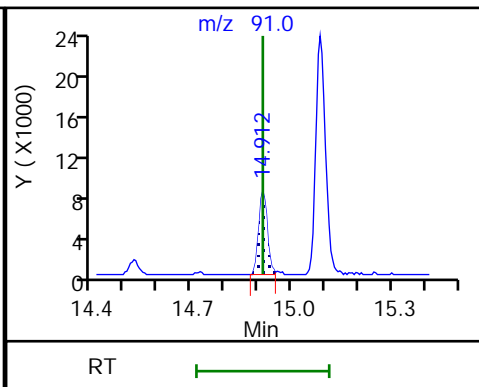
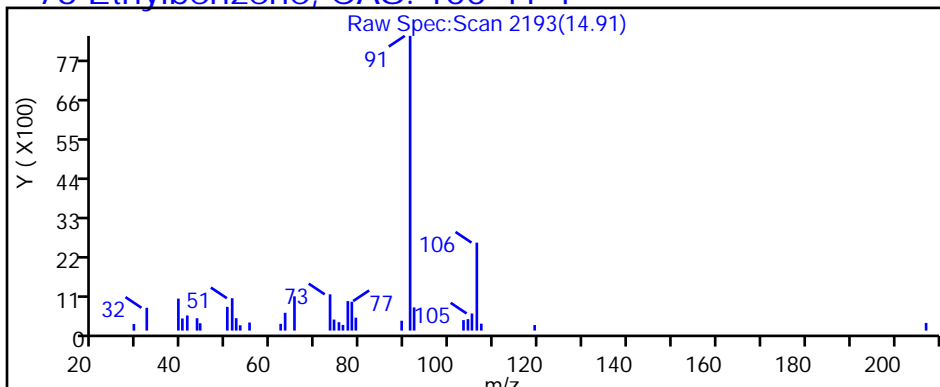
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

76 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D

Injection Date: 21-Jan-2019 22:24:30

Instrument ID: MR

Lims ID: 140-13996-A-3

Lab Sample ID: 140-13996-3

Client ID: BLDG-C INFLUENT

Operator ID: afb

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

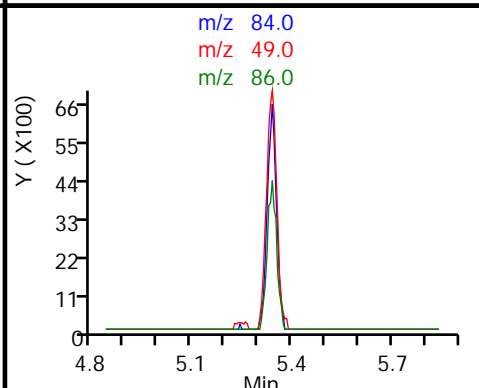
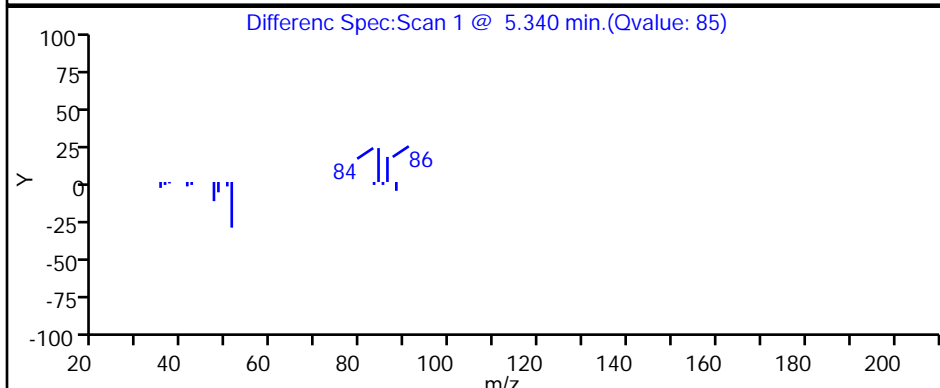
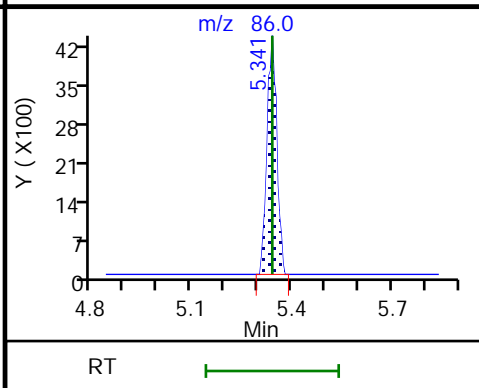
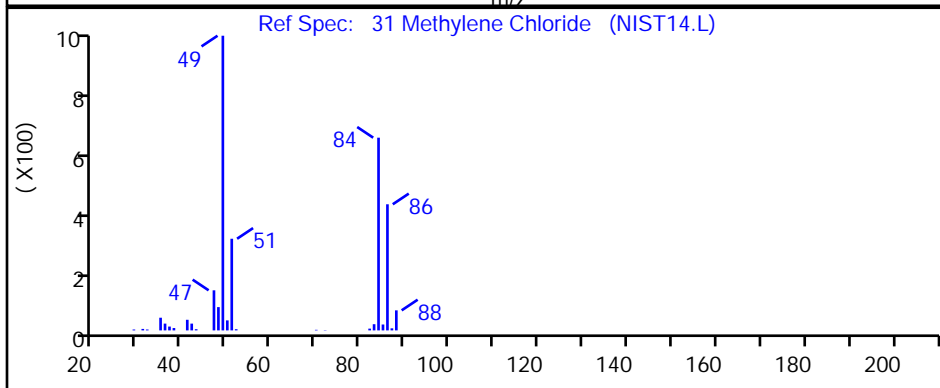
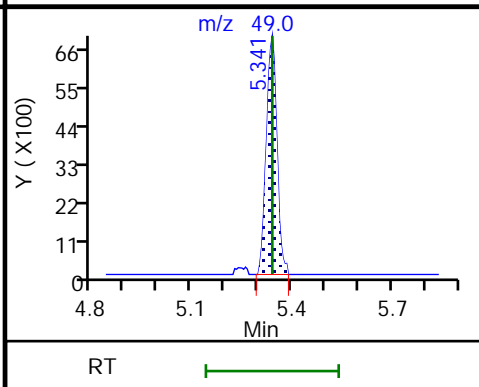
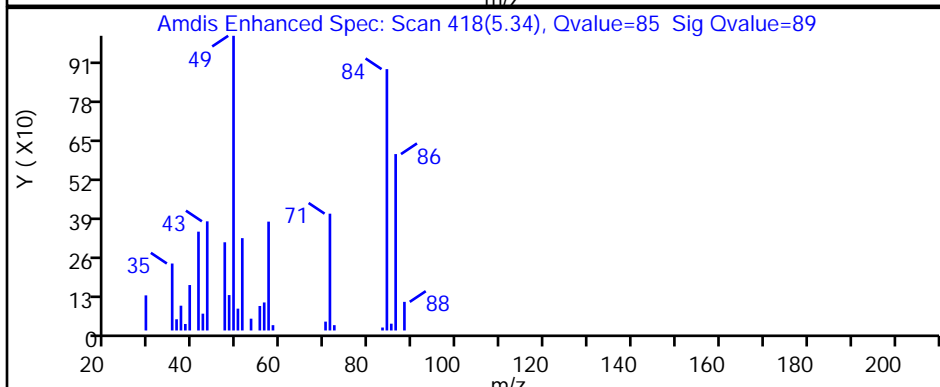
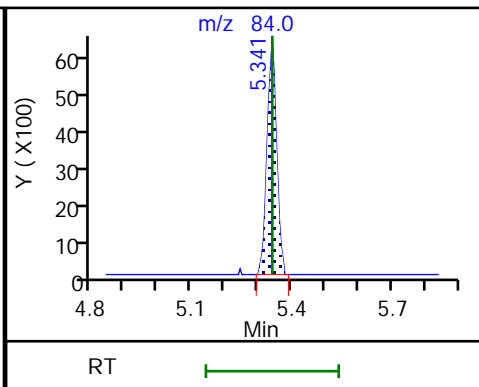
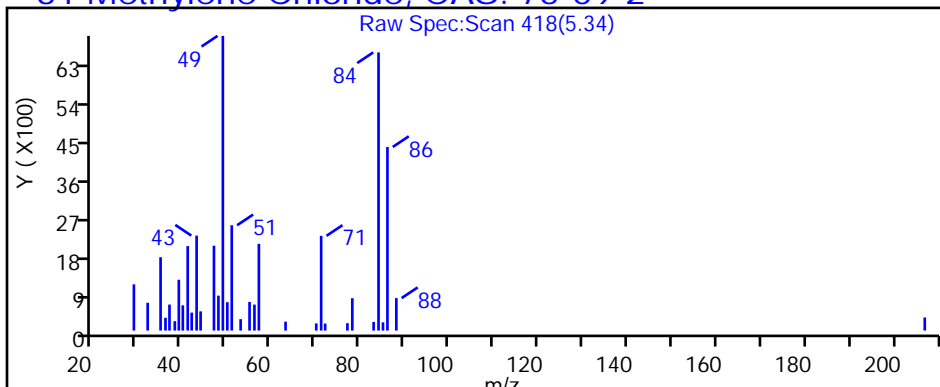
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D

Injection Date: 21-Jan-2019 22:24:30

Instrument ID: MR

Lims ID: 140-13996-A-3

Lab Sample ID: 140-13996-3

Client ID: BLDG-C INFLUENT

Operator ID: afb

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

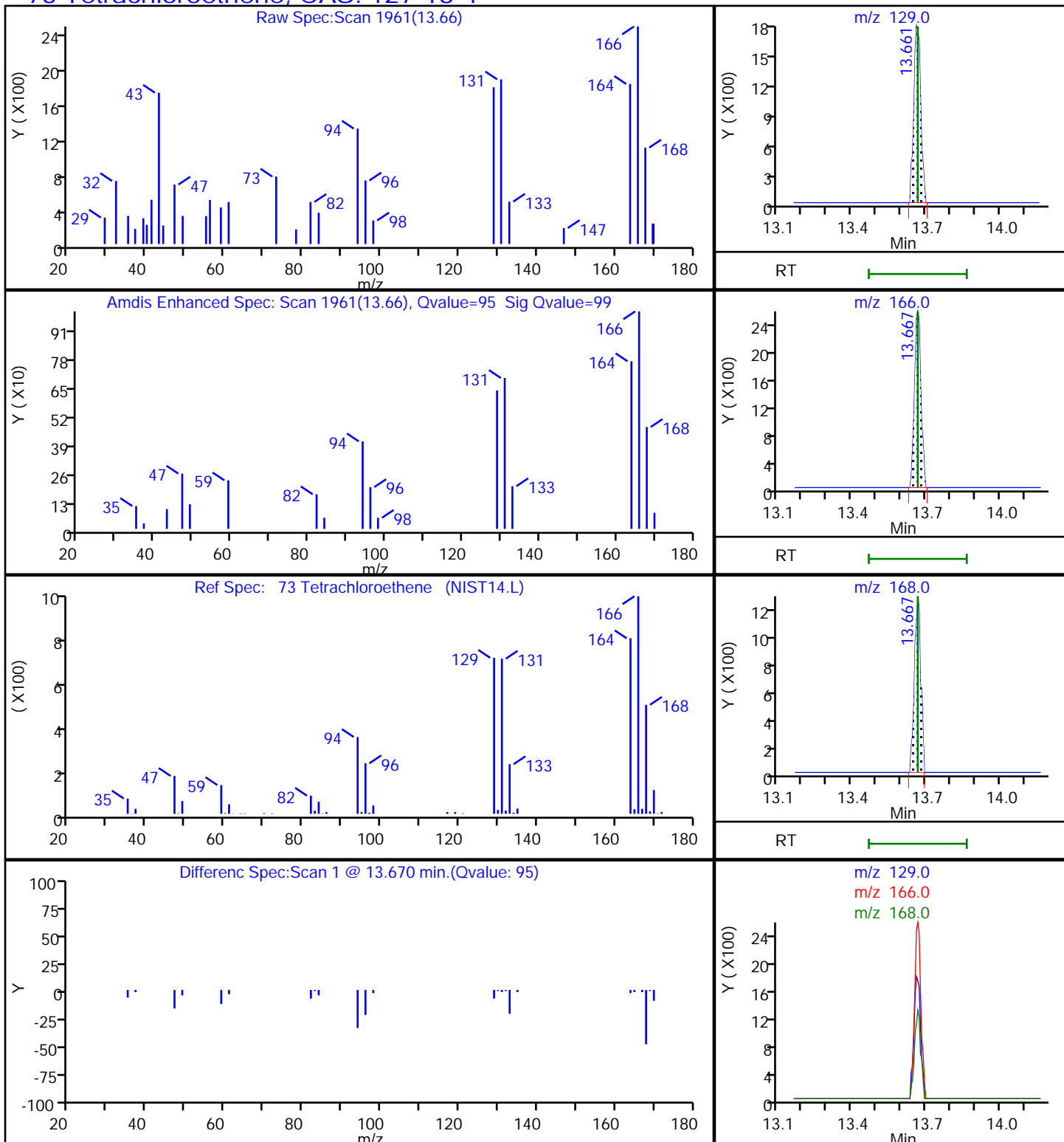
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D

Injection Date: 21-Jan-2019 22:24:30

Instrument ID: MR

Lims ID: 140-13996-A-3

Lab Sample ID: 140-13996-3

Client ID: BLDG-C INFLUENT

Operator ID: afb

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

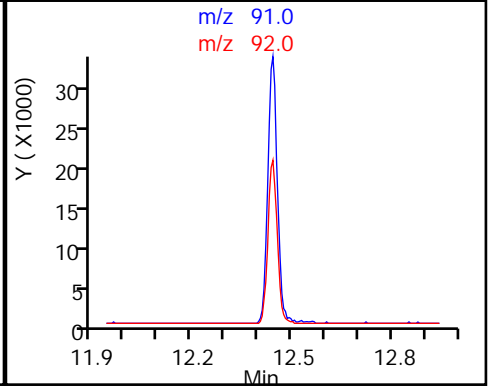
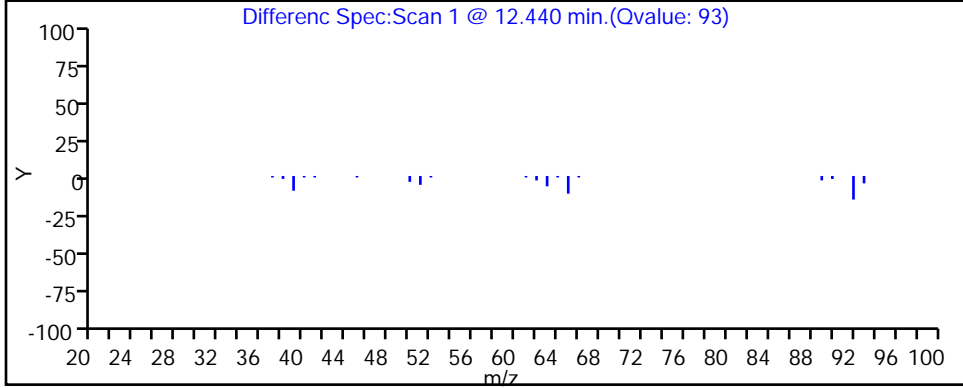
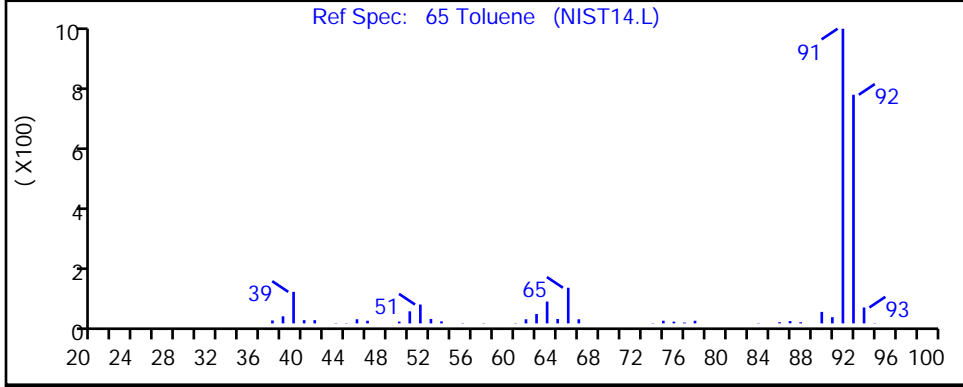
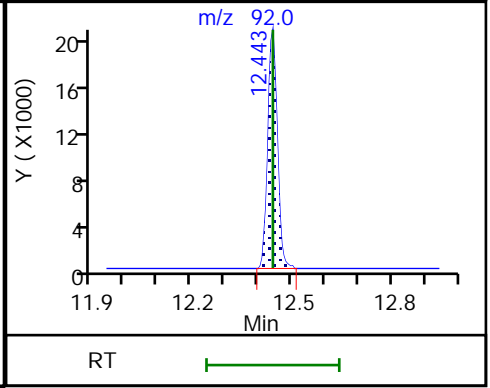
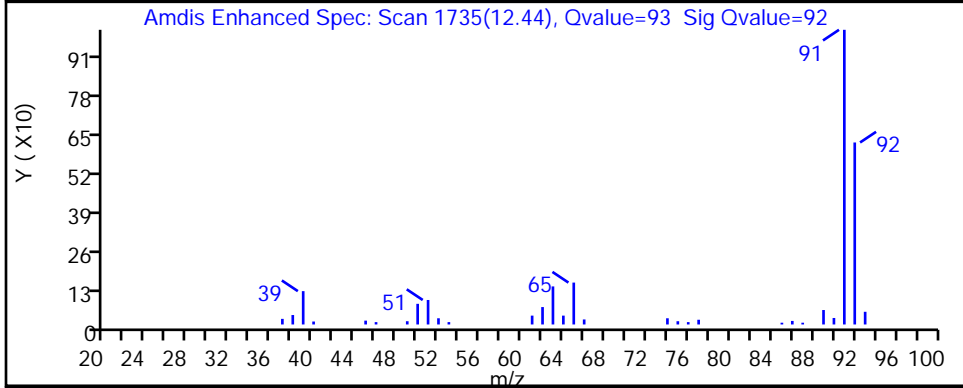
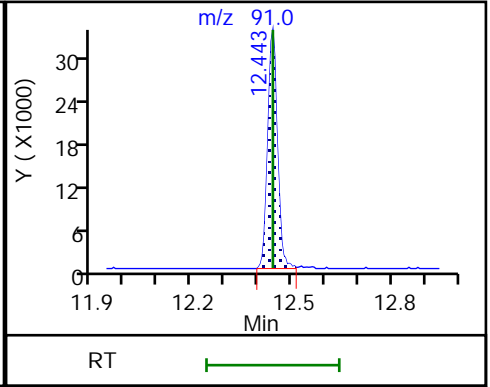
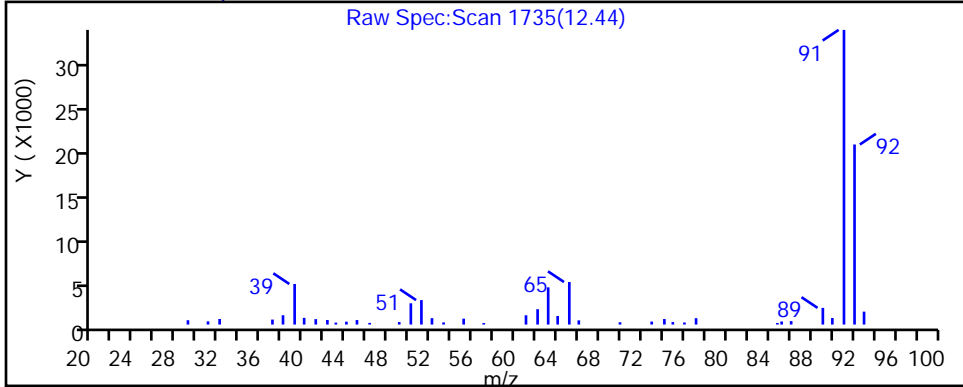
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D

Injection Date: 21-Jan-2019 22:24:30

Instrument ID: MR

Lims ID: 140-13996-A-3

Lab Sample ID: 140-13996-3

Client ID: BLDG-C INFLUENT

Operator ID: afb

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

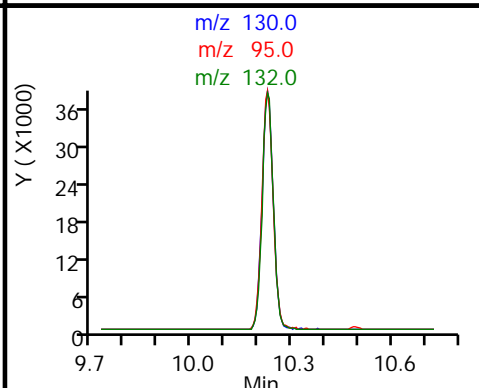
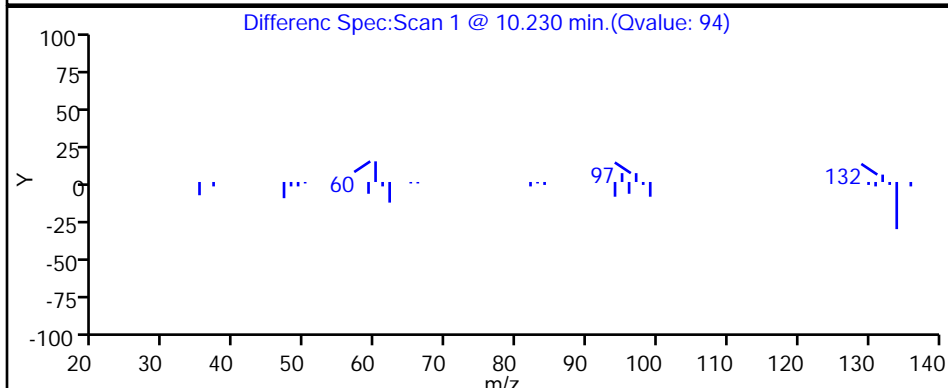
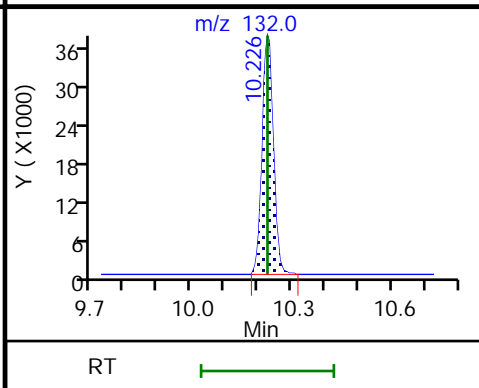
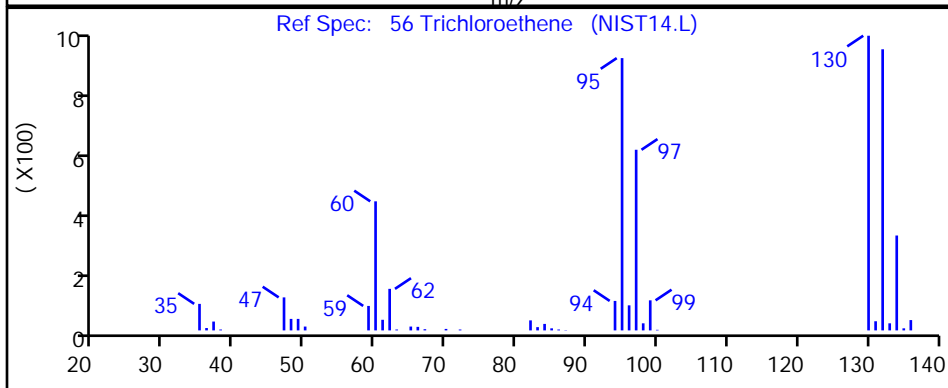
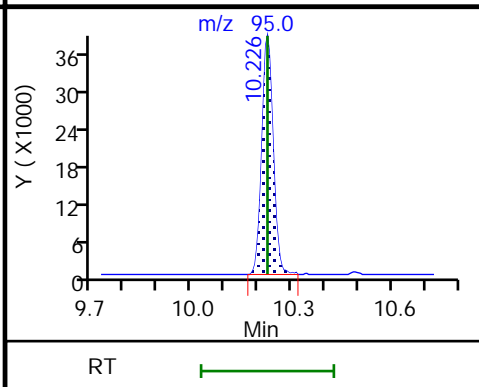
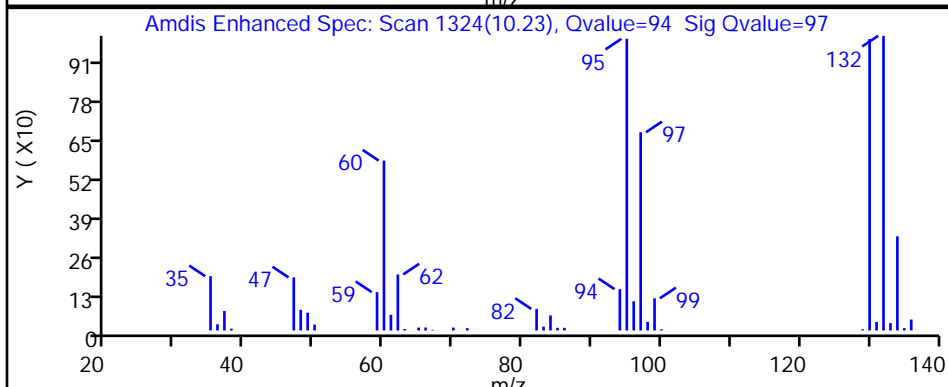
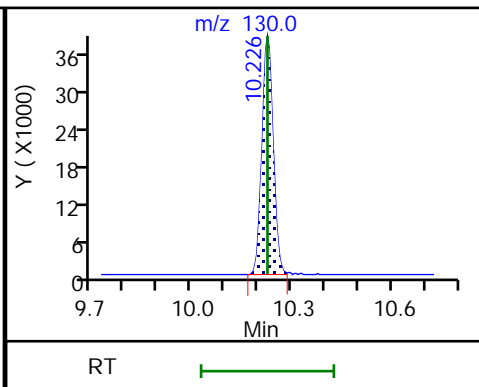
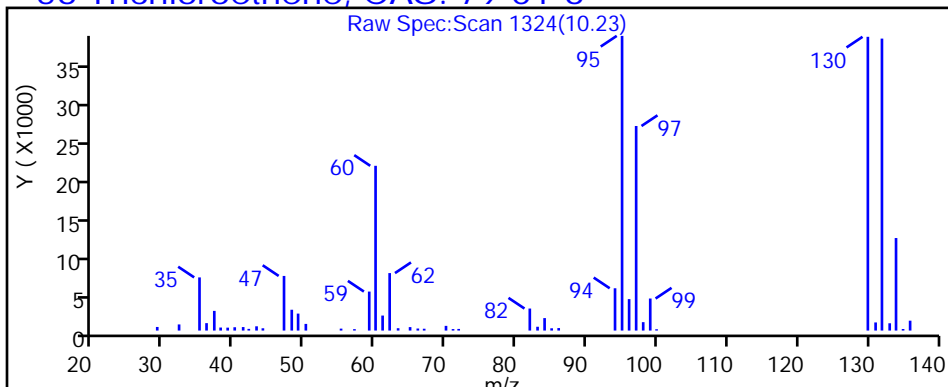
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D

Injection Date: 21-Jan-2019 22:24:30

Instrument ID: MR

Lims ID: 140-13996-A-3

Lab Sample ID: 140-13996-3

Client ID: BLDG-C INFLUENT

Operator ID: afb

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

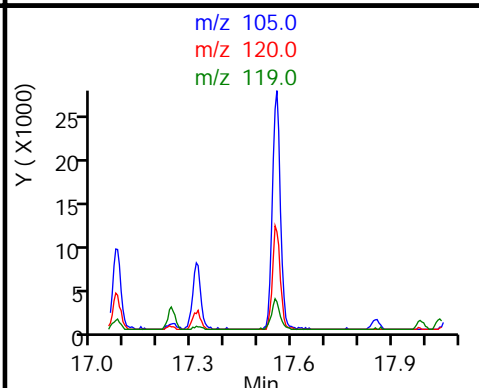
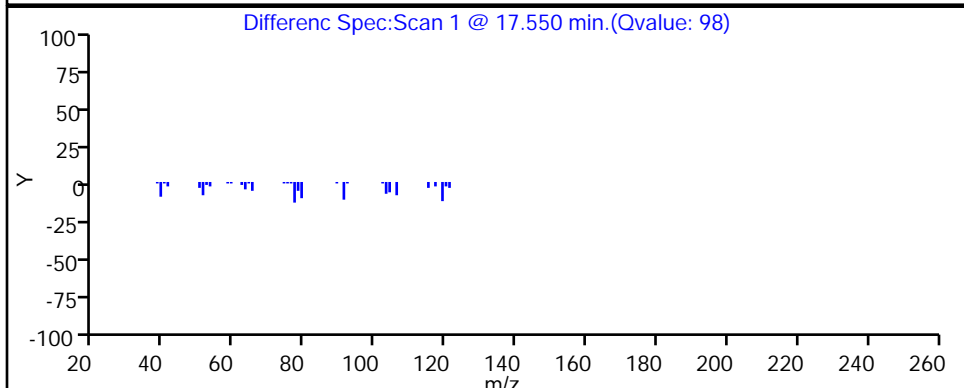
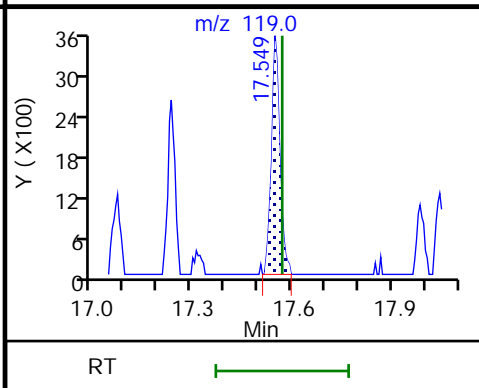
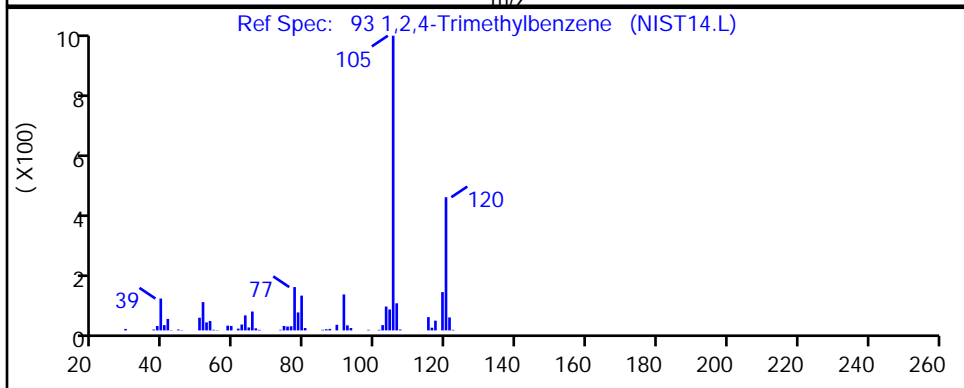
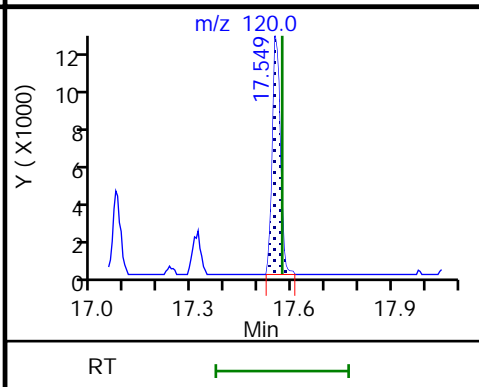
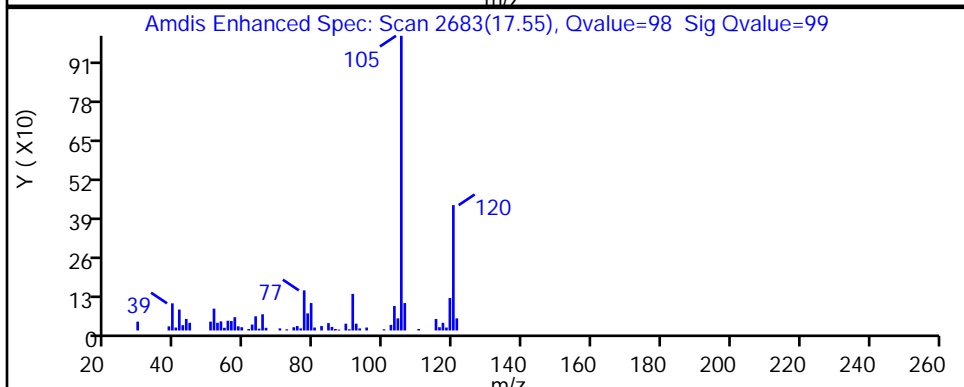
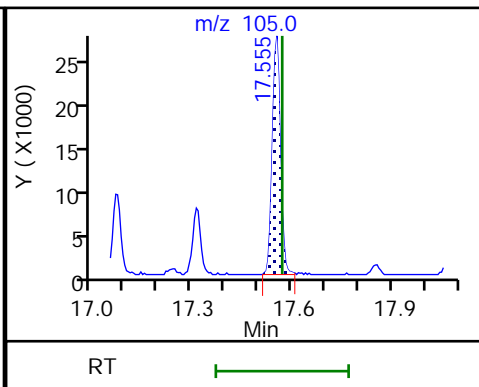
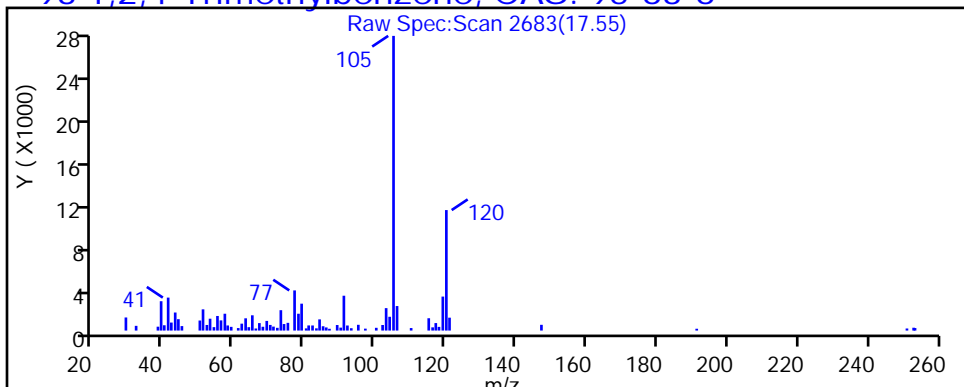
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D

Injection Date: 21-Jan-2019 22:24:30

Instrument ID: MR

Lims ID: 140-13996-A-3

Lab Sample ID: 140-13996-3

Client ID: BLDG-C INFLUENT

Operator ID: afb

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

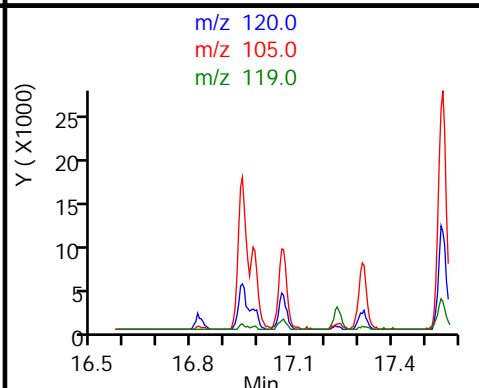
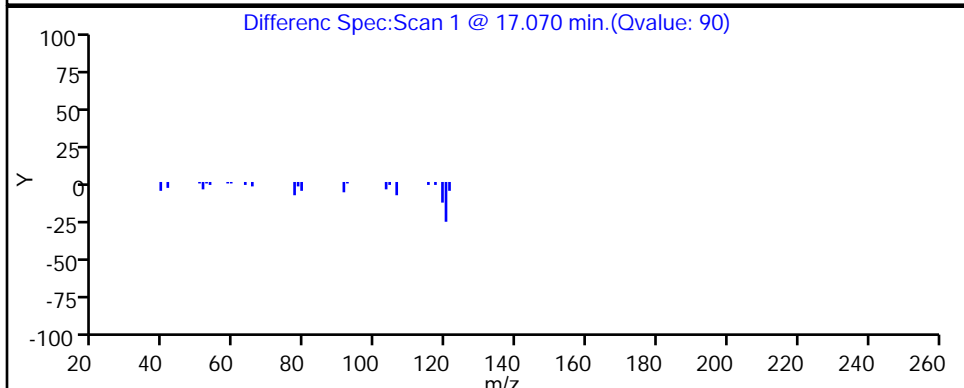
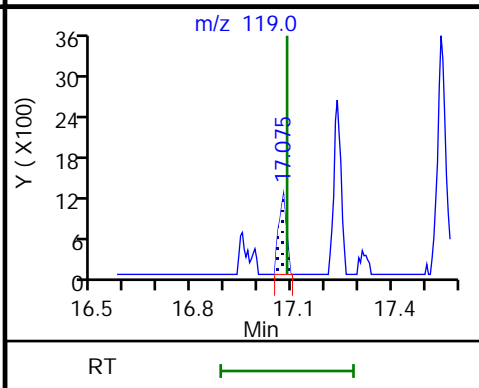
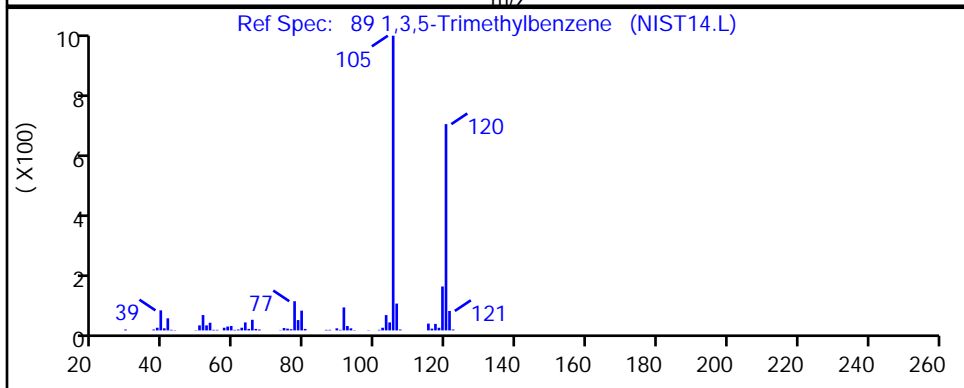
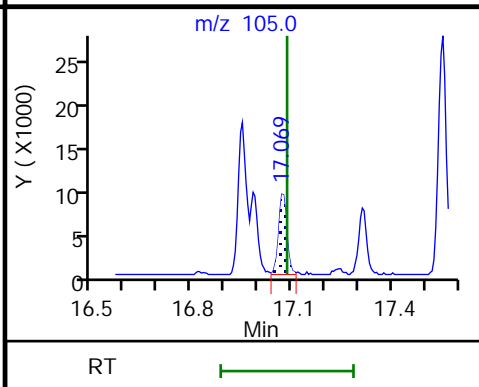
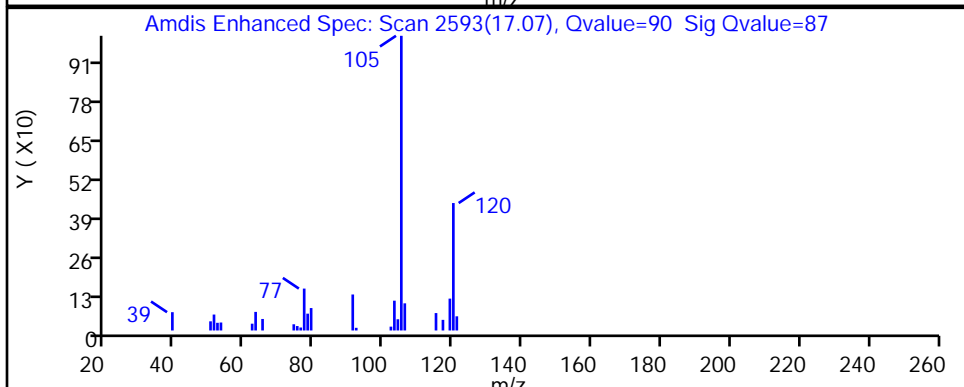
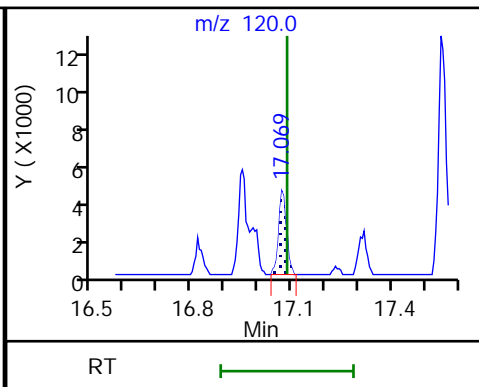
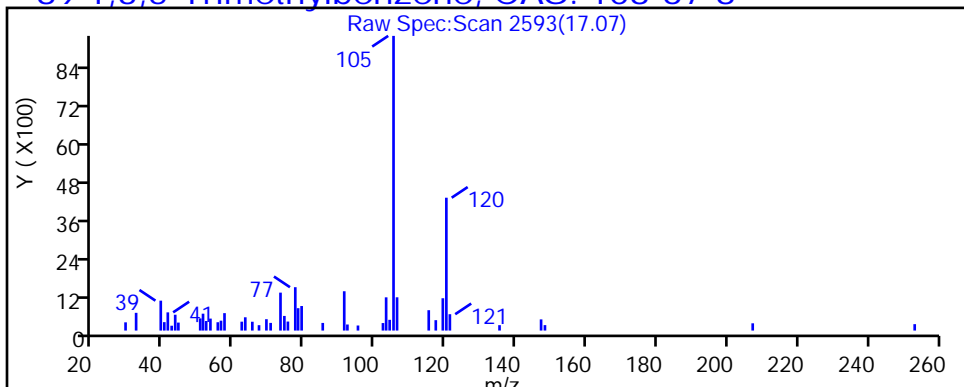
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D

Injection Date: 21-Jan-2019 22:24:30

Instrument ID: MR

Lims ID: 140-13996-A-3

Lab Sample ID: 140-13996-3

Client ID: BLDG-C INFLUENT

Operator ID: afb

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

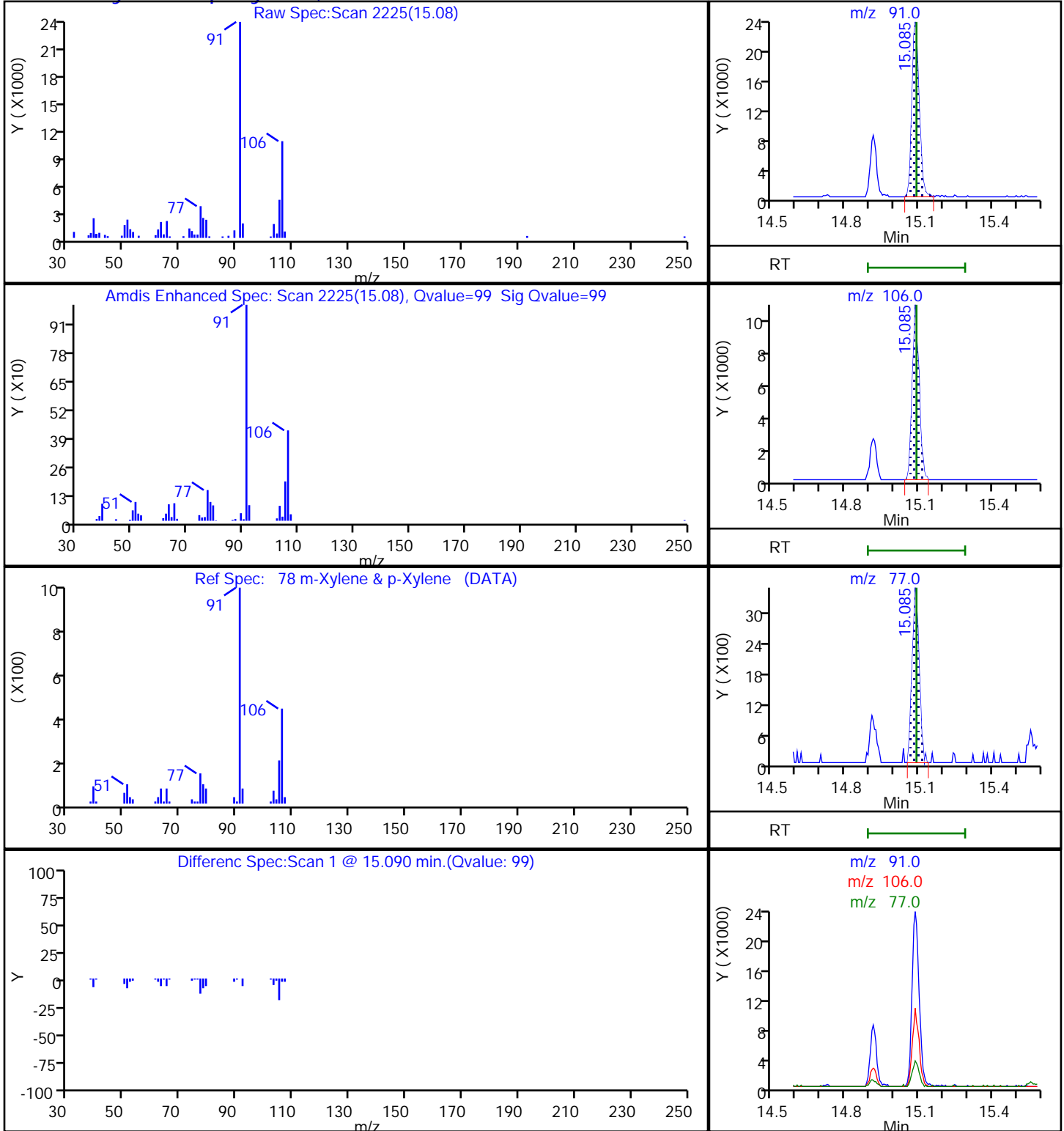
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p105.D

Injection Date: 21-Jan-2019 22:24:30

Instrument ID: MR

Lims ID: 140-13996-A-3

Lab Sample ID: 140-13996-3

Client ID: BLDG-C INFLUENT

Operator ID: afb

ALS Bottle#: 5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

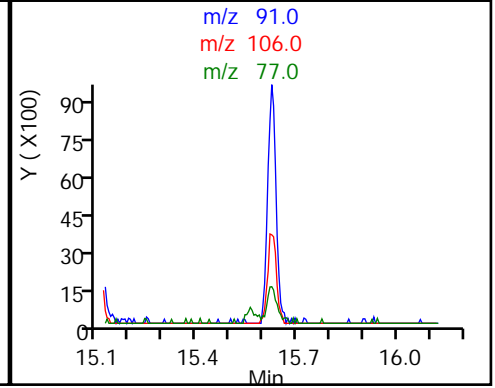
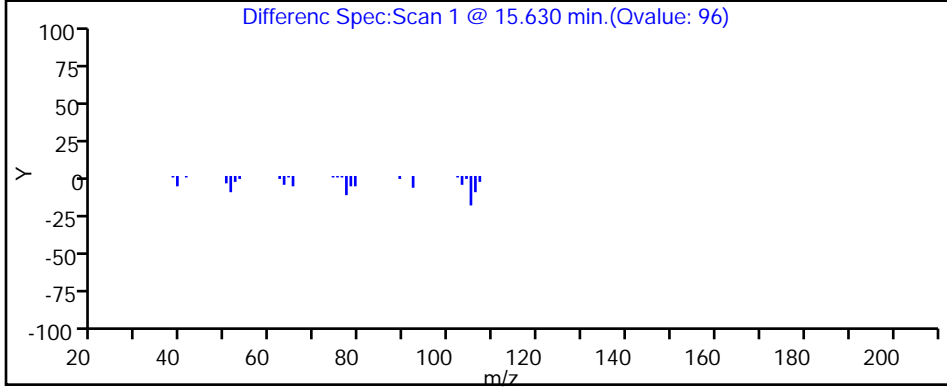
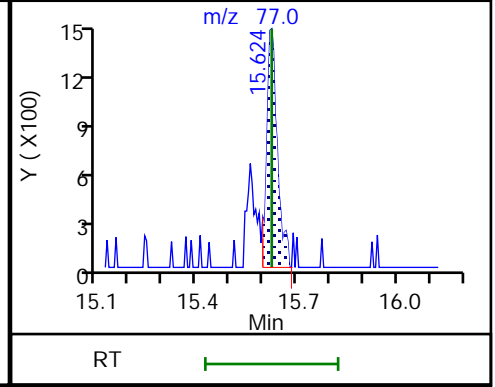
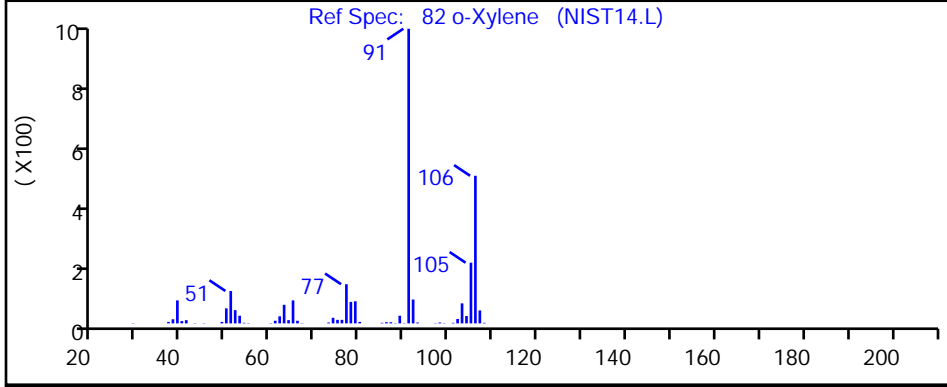
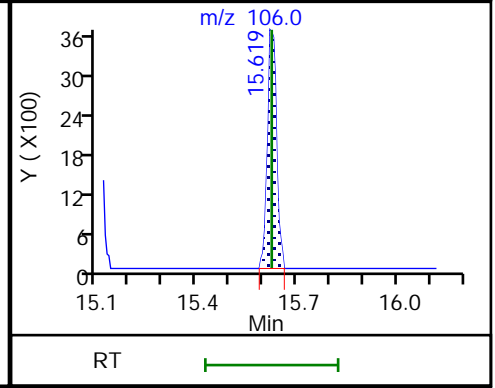
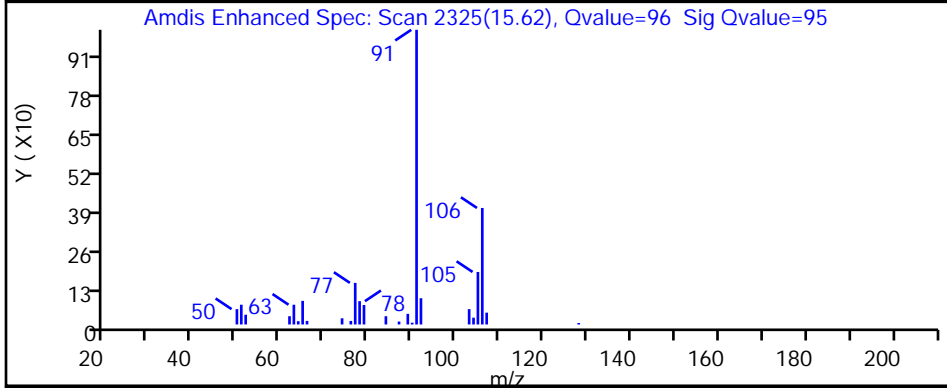
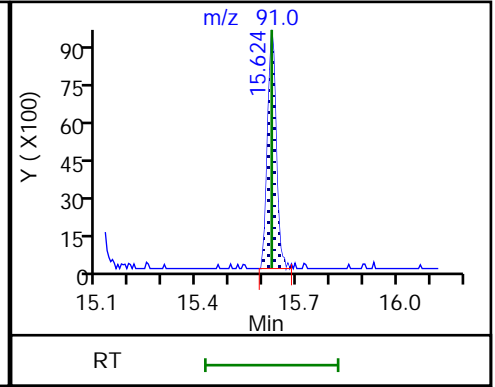
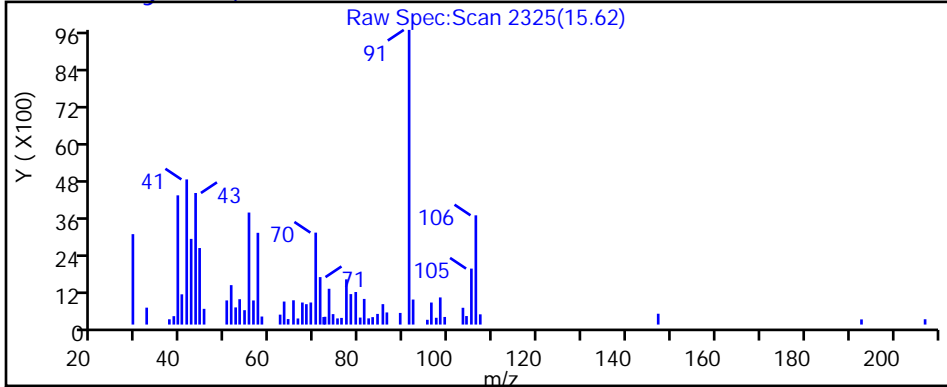
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: BLDG-A EFFLUENT Lab Sample ID: 140-13996-4
 Matrix: Air Lab File ID: RA21p106.D
 Analysis Method: TO 15 LL Date Collected: 01/16/2019 15:17
 Sample wt/vol: 100(mL) Date Analyzed: 01/21/2019 23:15
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.35	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.51	CI	0.40	0.075
67-66-3	Chloroform	119.38	0.77		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	5.8		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.31	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	3.4		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	16		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.91	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.18	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	19		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.0		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: BLDG-A EFFLUENT Lab Sample ID: 140-13996-4
 Matrix: Air Lab File ID: RA21p106.D
 Analysis Method: TO 15 LL Date Collected: 01/16/2019 15:17
 Sample wt/vol: 100(mL) Date Analyzed: 01/21/2019 23:15
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8	CI	1.4	0.27
67-66-3	Chloroform	119.38	3.8		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	23		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	14		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	64		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.72	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	110		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D
 Lims ID: 140-13996-A-4
 Client ID: BLDG-A EFFLUENT
 Sample Type: Client
 Inject. Date: 21-Jan-2019 23:15:30 ALS Bottle#: 6 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-012
 Misc. Info.: 140-13996-A-4
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 13:13:57 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 13:13:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.406	0.000	72	203191	4.00	
* 2 1,4-Difluorobenzene	114	9.471	9.477	-0.006	95	1187621	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.524	0.000	90	1075274	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.250	0.000	89	936248	4.09	
6 Chlorodifluoromethane	51	3.518	3.518	0.000	95	12192	0.1011	
8 Dichlorodifluoromethane	85	3.561	3.561	0.000	99	13869	0.0627	
27 1,1-Dichloroethene	96	5.093	5.093	0.000	97	231427	3.24	
31 Methylene Chloride	84	5.341	5.341	0.000	92	12388	0.1823	
34 trans-1,2-Dichloroethene	96	5.988	5.988	0.000	76	2654	0.0364	
37 1,1-Dichloroethane	63	6.311	6.311	0.000	98	82758	0.6781	
41 cis-1,2-Dichloroethene	96	7.136	7.136	0.000	96	84959	1.16	
43 Chloroform	83	7.444	7.444	0.000	91	29968	0.1544	
45 1,1,1-Trichloroethane	97	8.360	8.366	-0.006	95	952874	3.87	
47 Benzene	78	8.905	8.916	-0.011	99	13499	0.0698	
56 Trichloroethene	130	10.226	10.226	0.000	94	23999	0.2057	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D

Injection Date: 21-Jan-2019 23:15:30

Instrument ID: MR

Operator ID: afb

Lims ID: 140-13996-A-4

Lab Sample ID: 140-13996-4

Worklist Smp#: 12

Client ID: BLDG-A EFFLUENT

Purge Vol: 500.000 mL

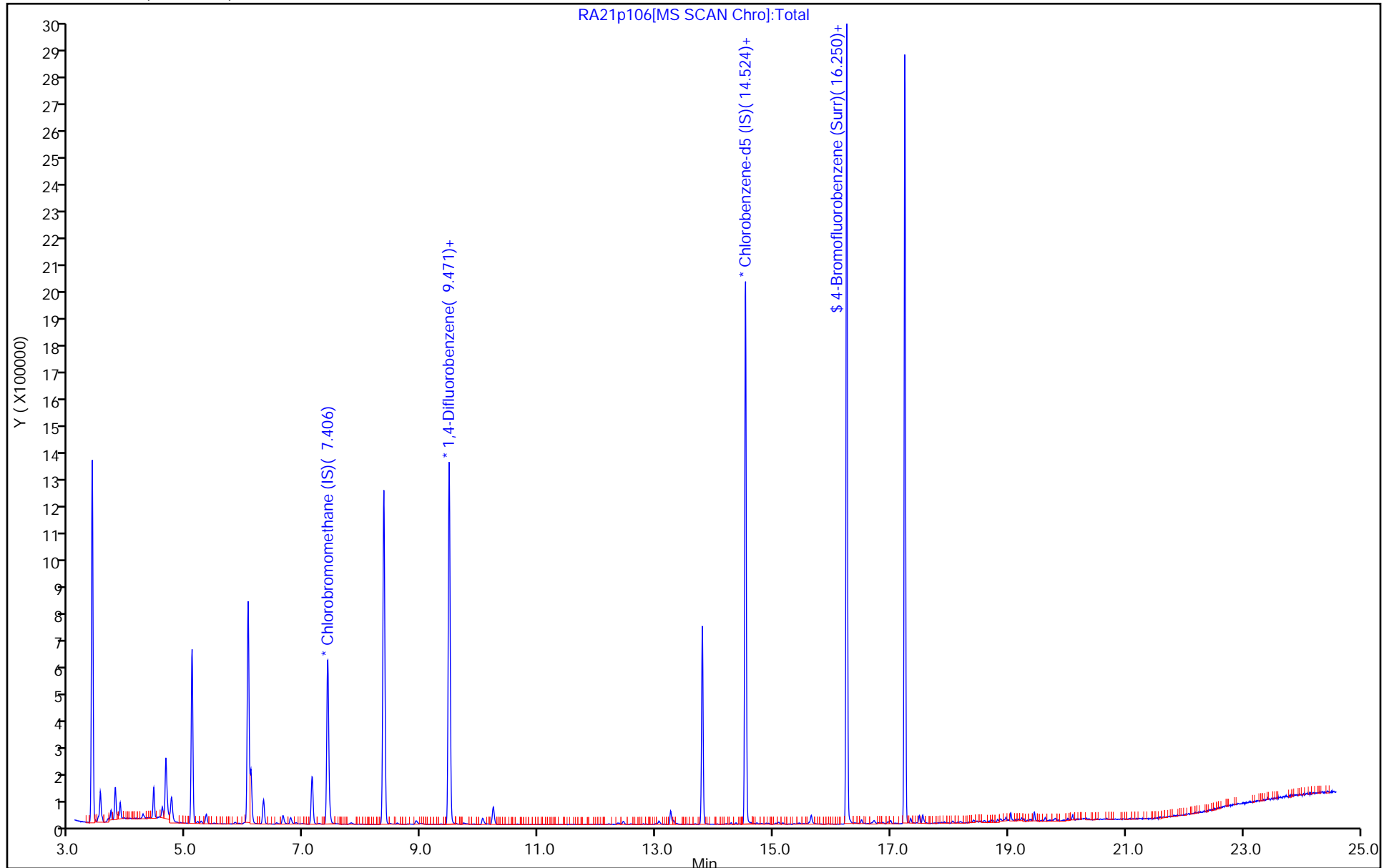
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D
 Lims ID: 140-13996-A-4
 Client ID: BLDG-A EFFLUENT
 Sample Type: Client
 Inject. Date: 21-Jan-2019 23:15:30 ALS Bottle#: 6 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-012
 Misc. Info.: 140-13996-A-4
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 13:13:57 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 13:13:57

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.09	102.36

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D

Injection Date: 21-Jan-2019 23:15:30

Instrument ID: MR

Lims ID: 140-13996-A-4

Lab Sample ID: 140-13996-4

Client ID: BLDG-A EFFLUENT

Operator ID: afb

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

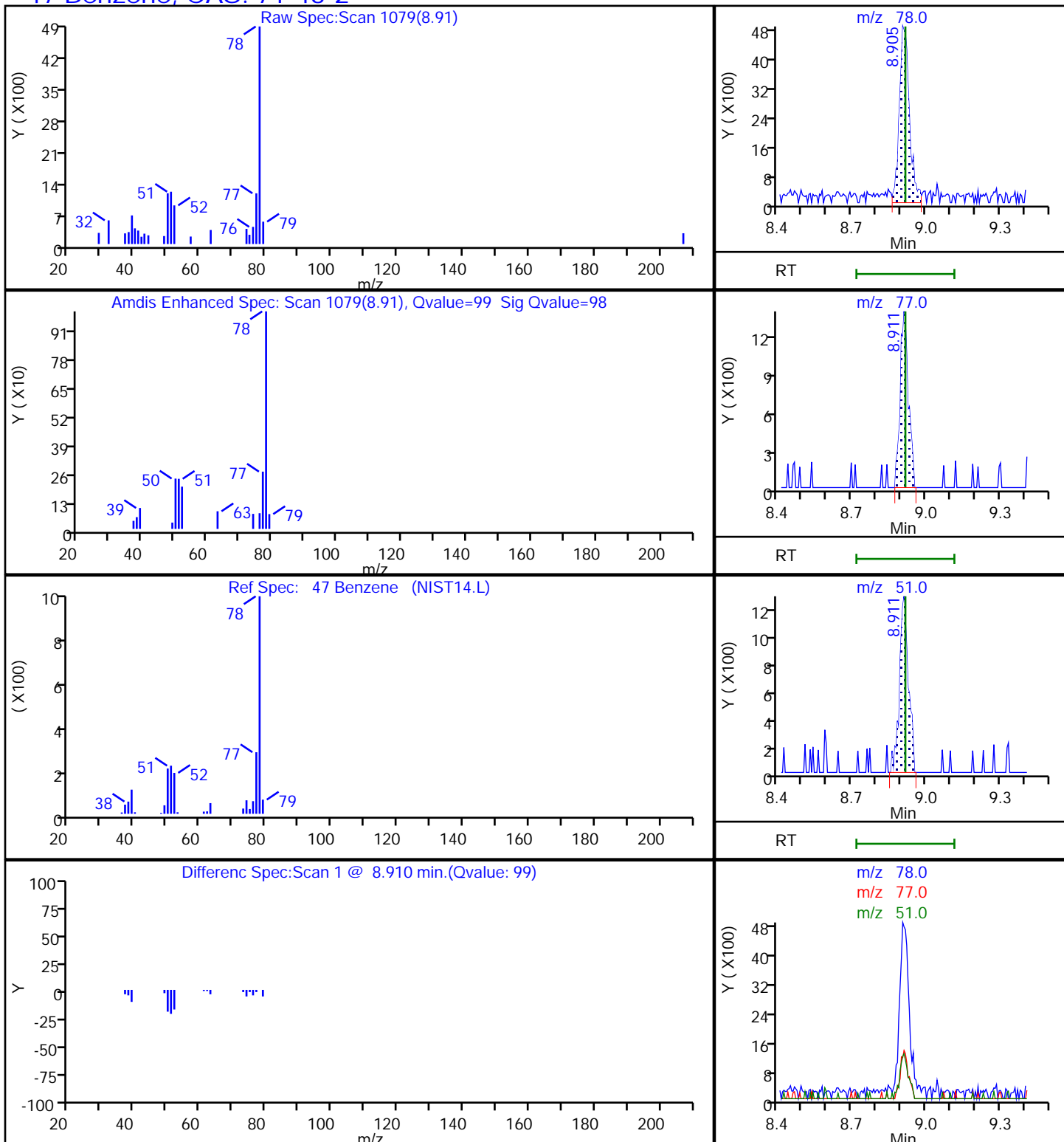
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D

Injection Date: 21-Jan-2019 23:15:30

Instrument ID: MR

Lims ID: 140-13996-A-4

Lab Sample ID: 140-13996-4

Client ID: BLDG-A EFFLUENT

Operator ID: afb

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

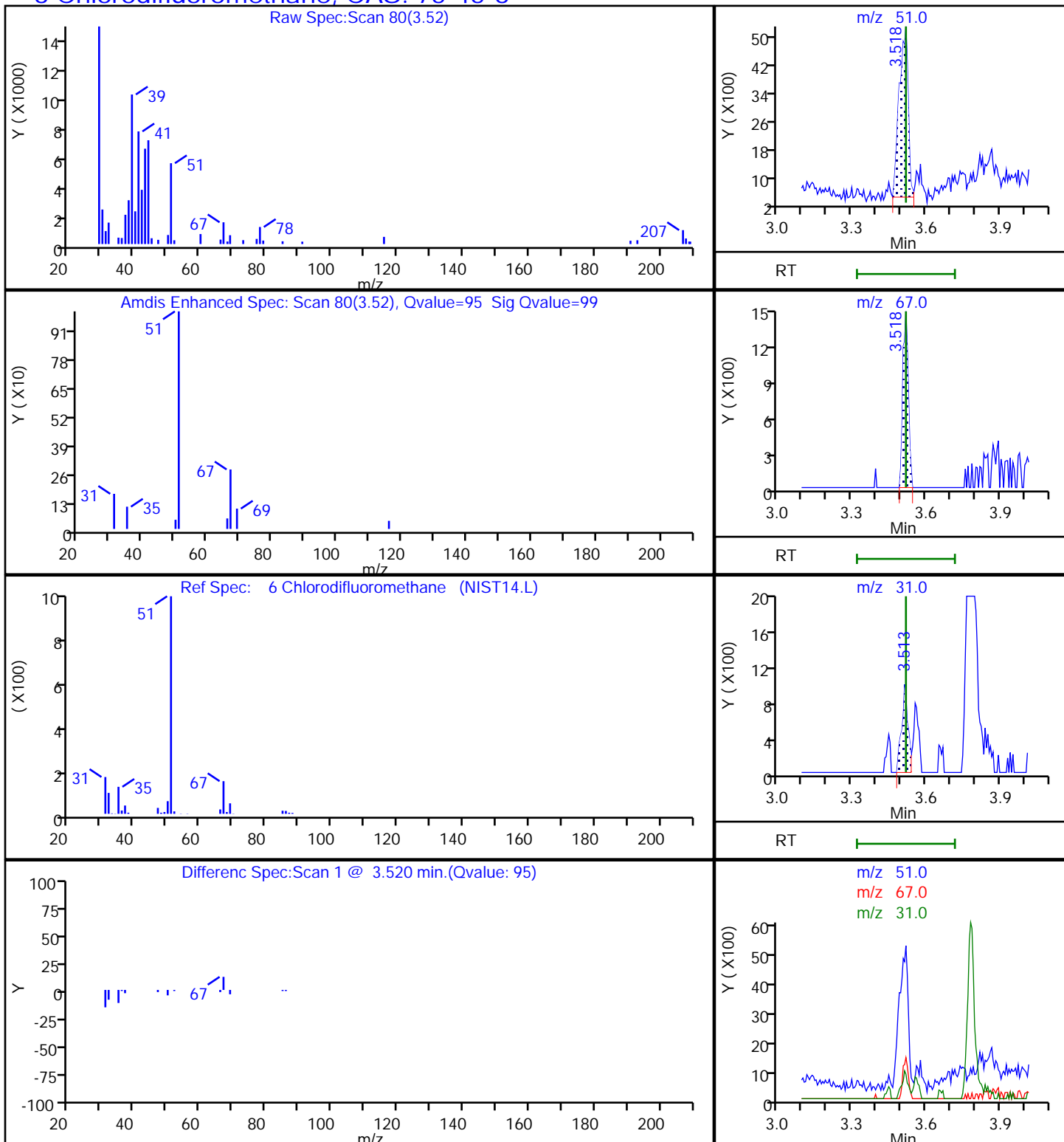
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D

Injection Date: 21-Jan-2019 23:15:30

Instrument ID: MR

Lims ID: 140-13996-A-4

Lab Sample ID: 140-13996-4

Client ID: BLDG-A EFFLUENT

Operator ID: afb

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

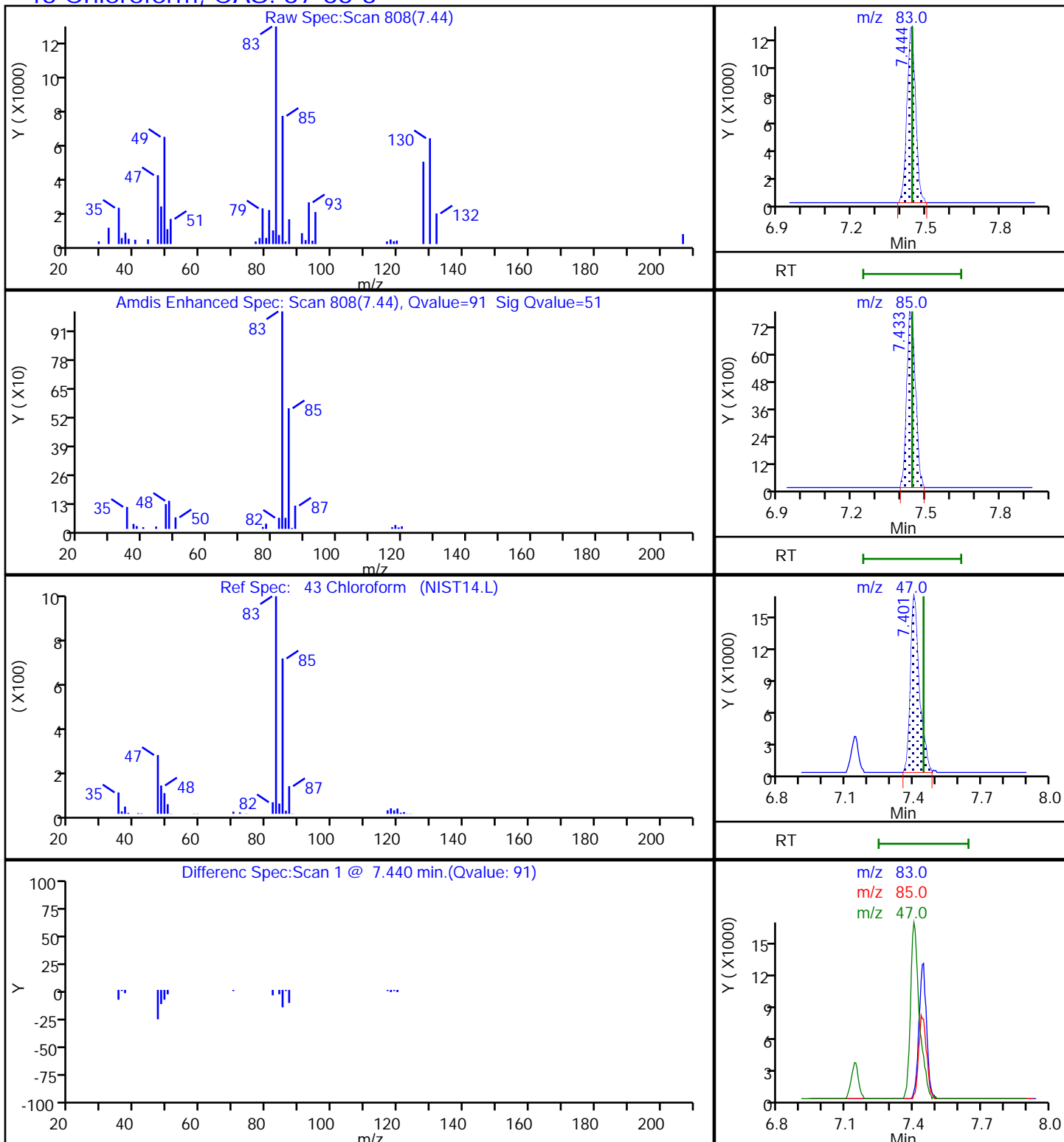
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D

Injection Date: 21-Jan-2019 23:15:30

Instrument ID: MR

Lims ID: 140-13996-A-4

Lab Sample ID: 140-13996-4

Client ID: BLDG-A EFFLUENT

Operator ID: afb

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

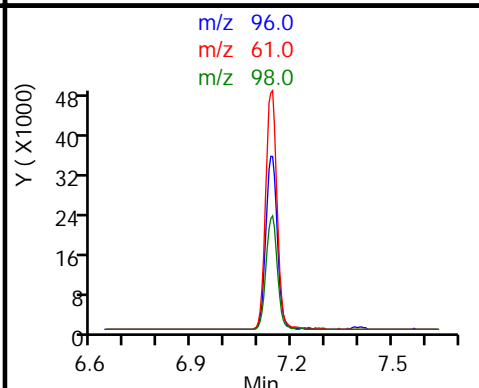
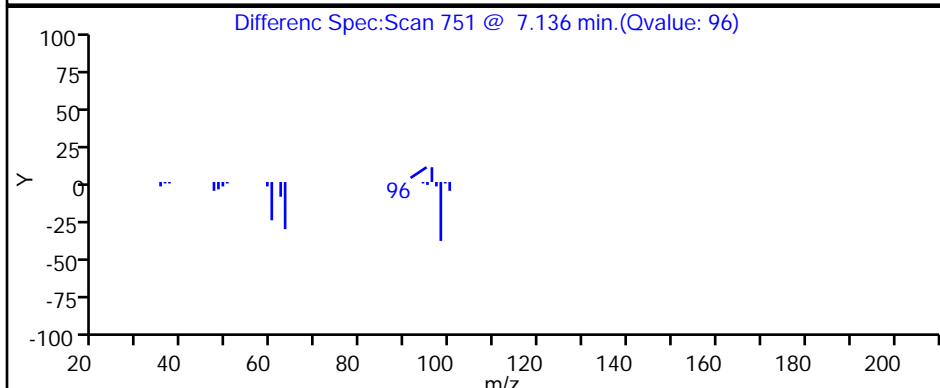
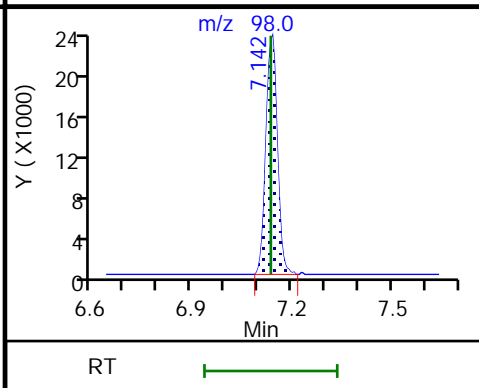
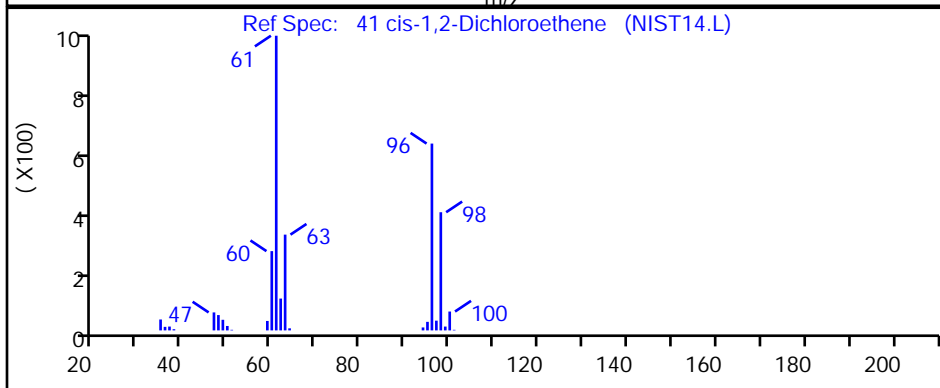
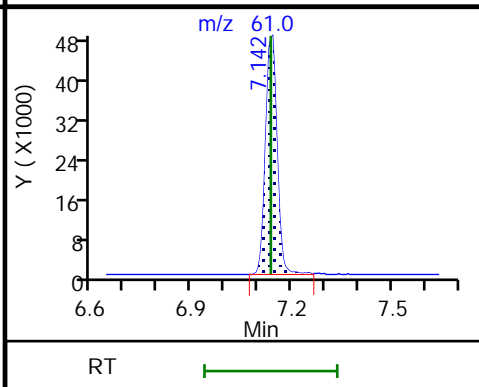
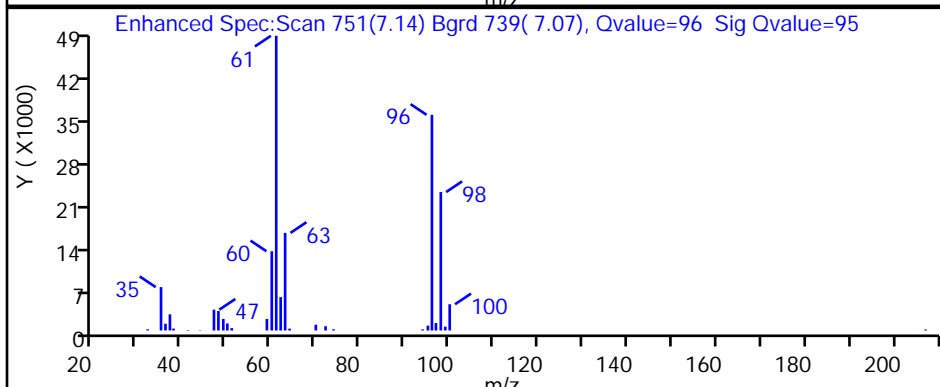
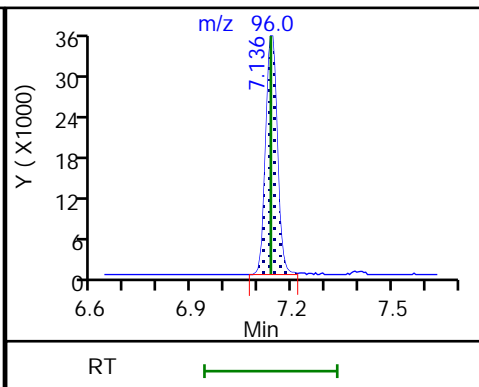
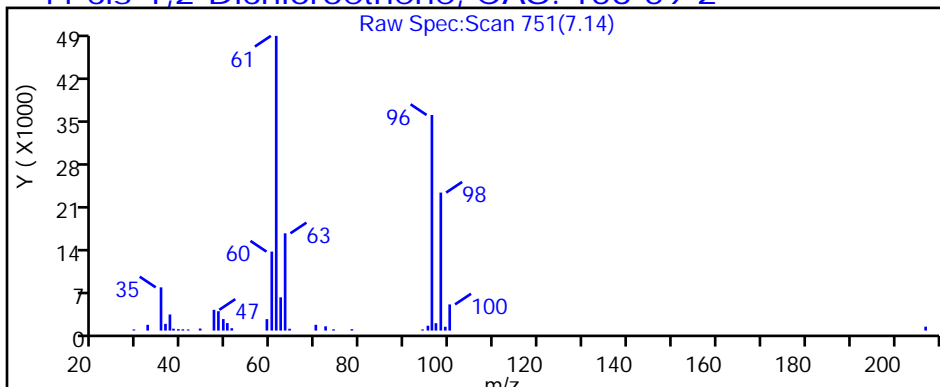
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D

Injection Date: 21-Jan-2019 23:15:30

Instrument ID: MR

Lims ID: 140-13996-A-4

Lab Sample ID: 140-13996-4

Client ID: BLDG-A EFFLUENT

Operator ID: afb

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

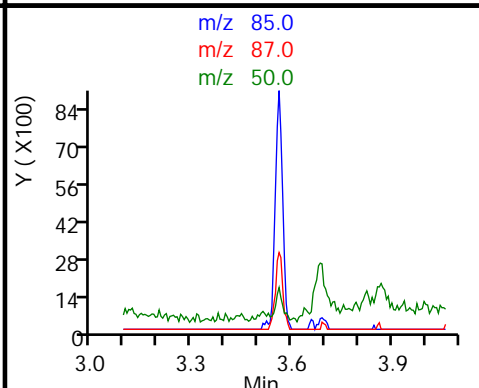
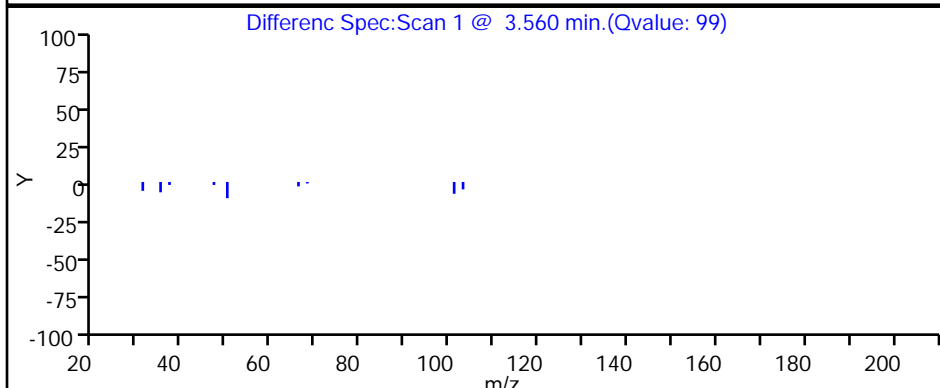
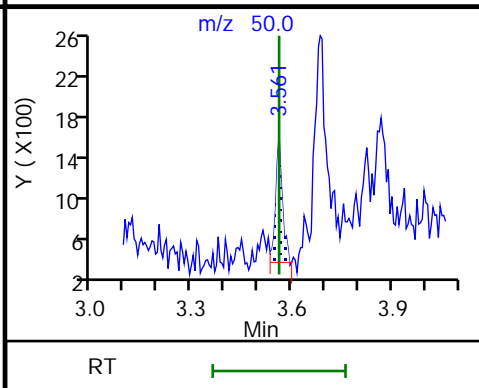
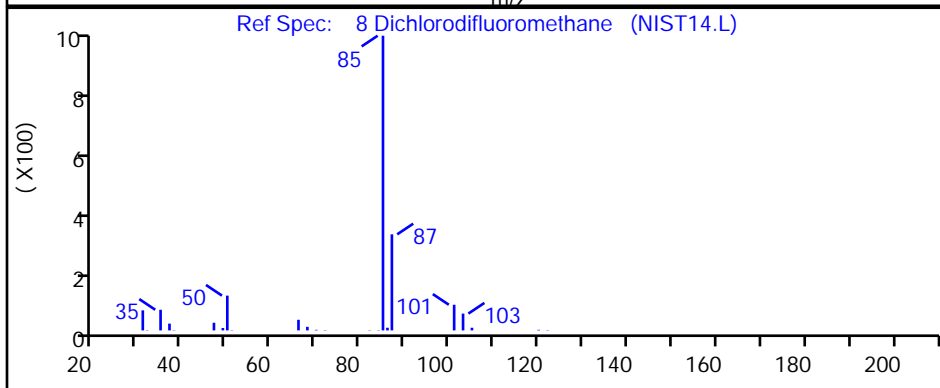
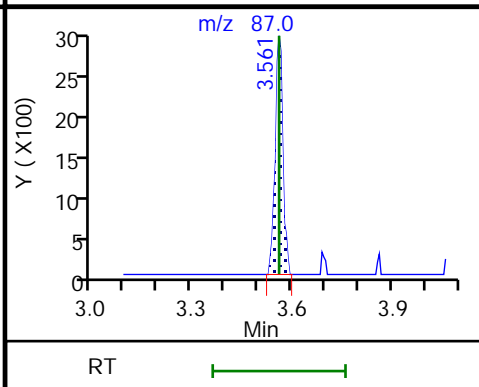
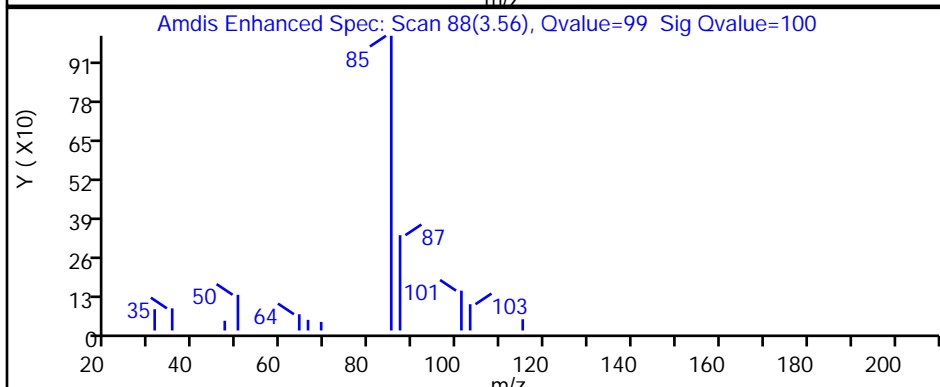
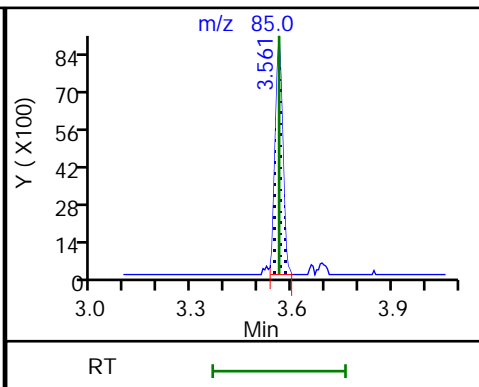
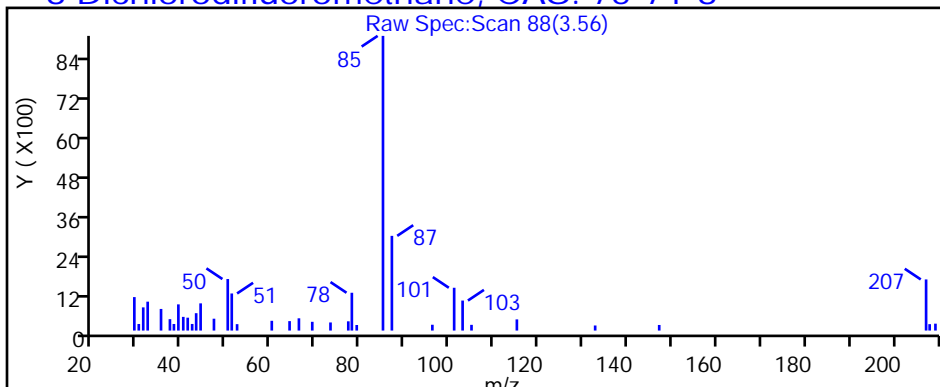
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D

Injection Date: 21-Jan-2019 23:15:30

Instrument ID: MR

Lims ID: 140-13996-A-4

Lab Sample ID: 140-13996-4

Client ID: BLDG-A EFFLUENT

Operator ID: afb

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

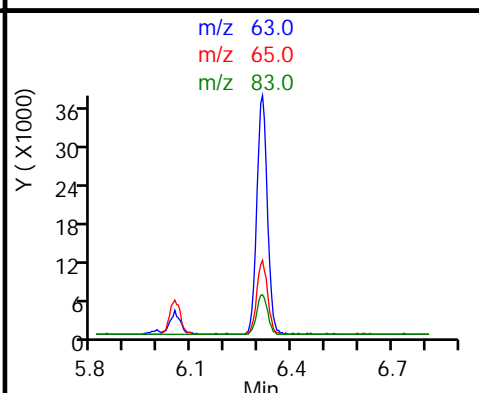
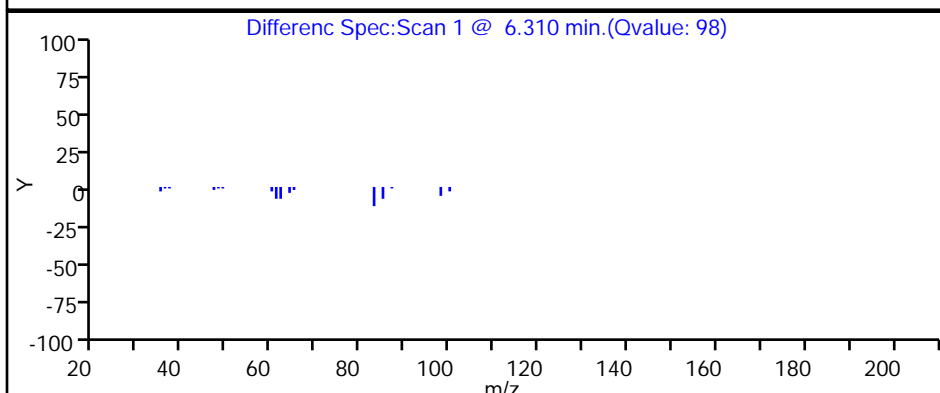
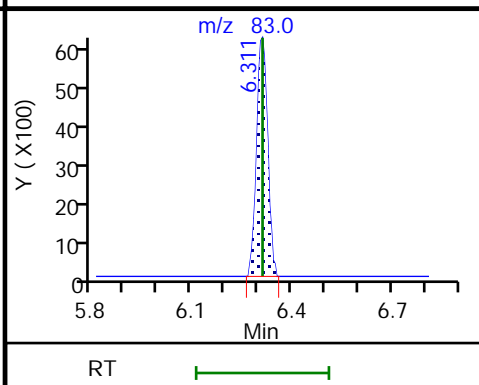
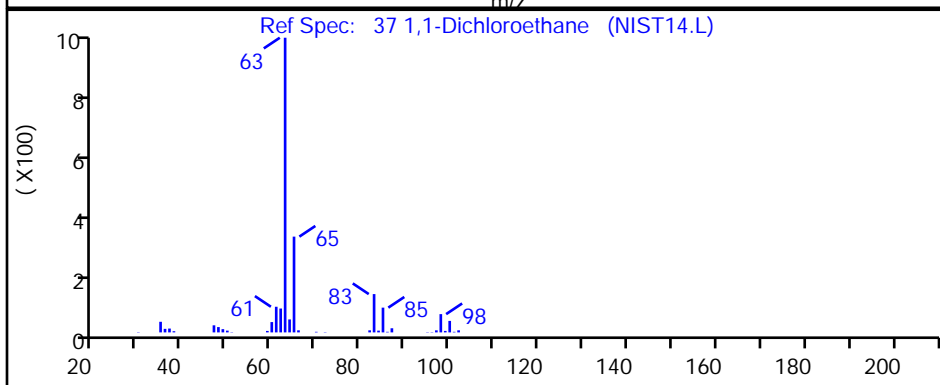
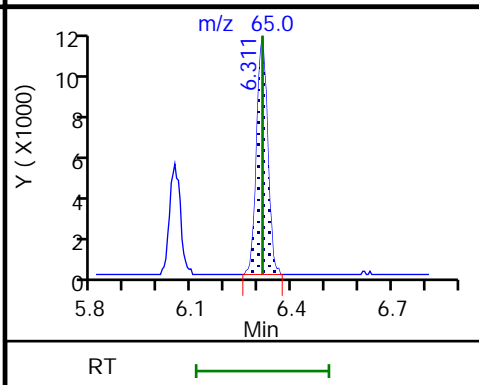
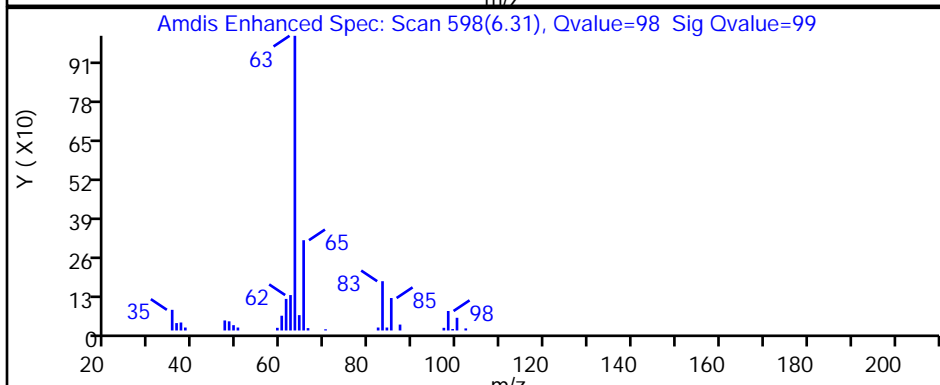
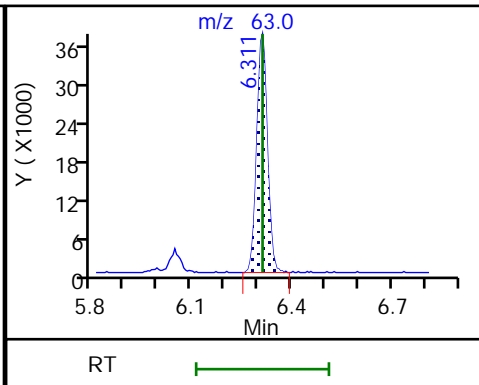
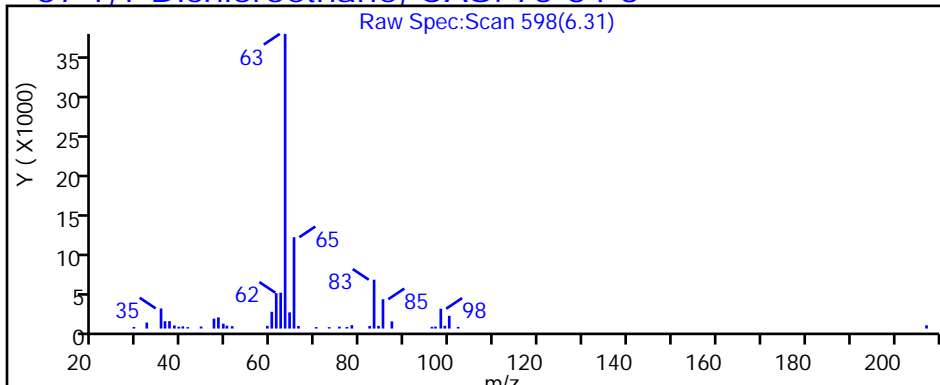
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D

Injection Date: 21-Jan-2019 23:15:30

Instrument ID: MR

Lims ID: 140-13996-A-4

Lab Sample ID: 140-13996-4

Client ID: BLDG-A EFFLUENT

Operator ID: afb

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

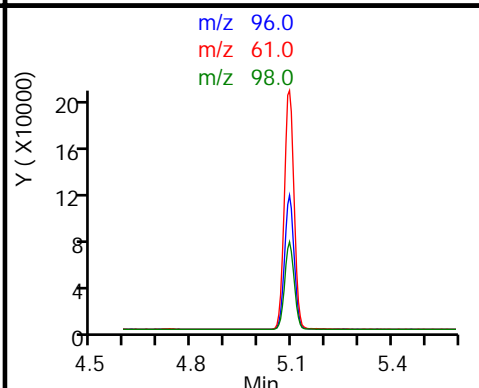
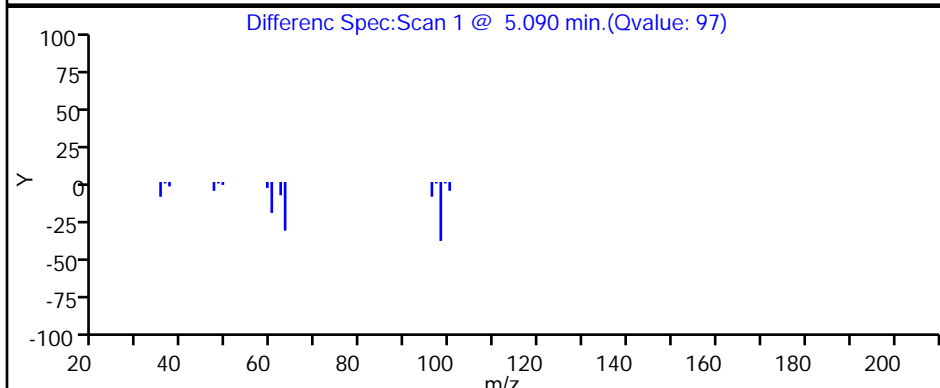
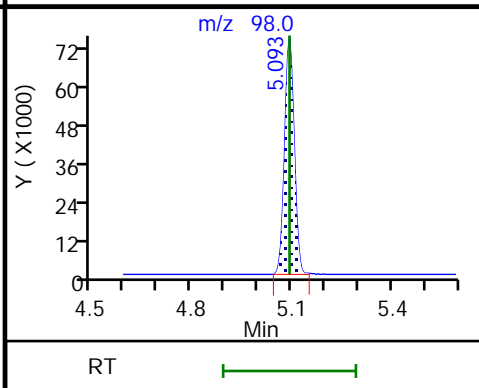
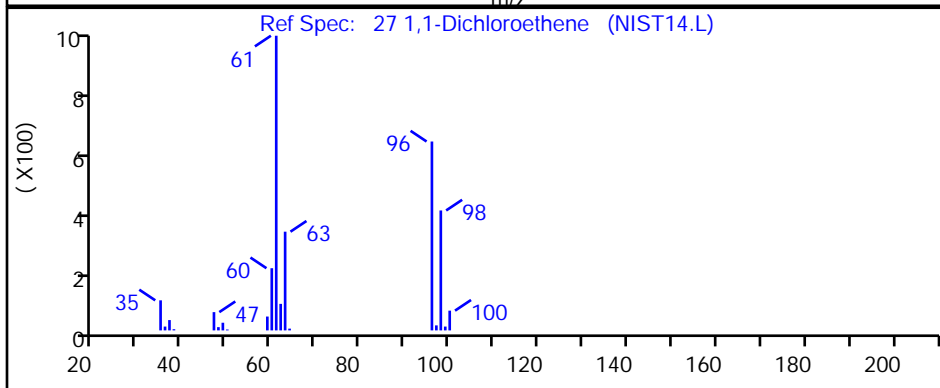
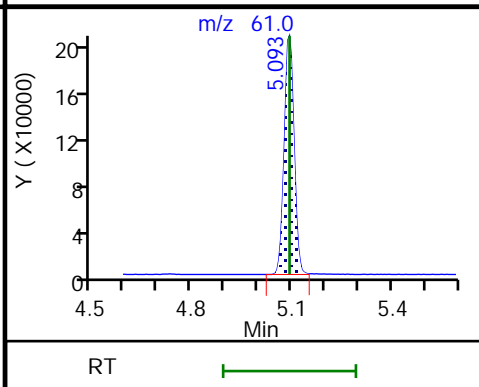
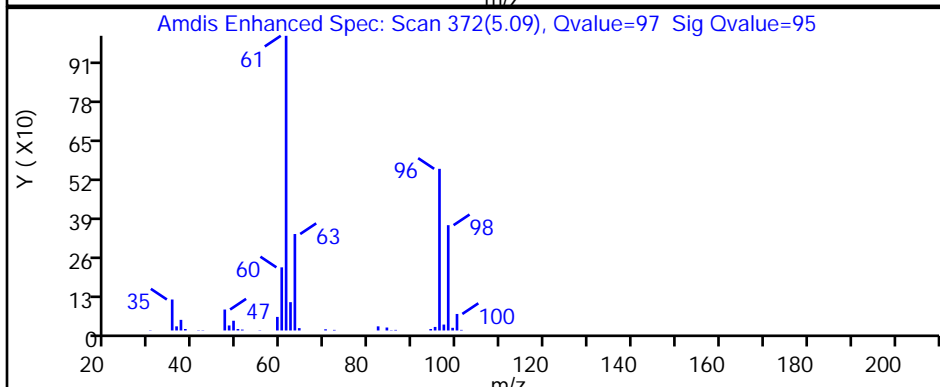
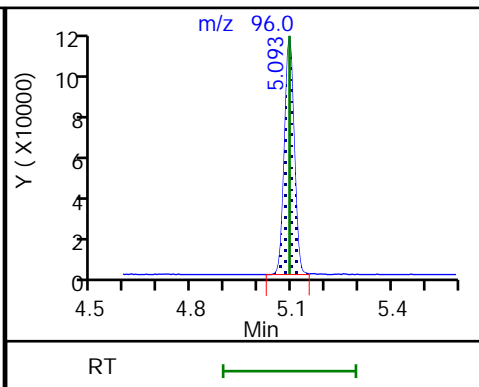
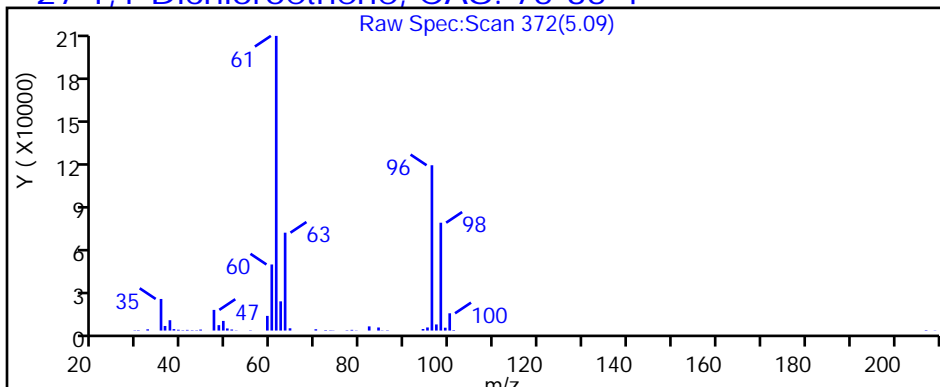
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D

Injection Date: 21-Jan-2019 23:15:30

Instrument ID: MR

Lims ID: 140-13996-A-4

Lab Sample ID: 140-13996-4

Client ID: BLDG-A EFFLUENT

Operator ID: afb

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

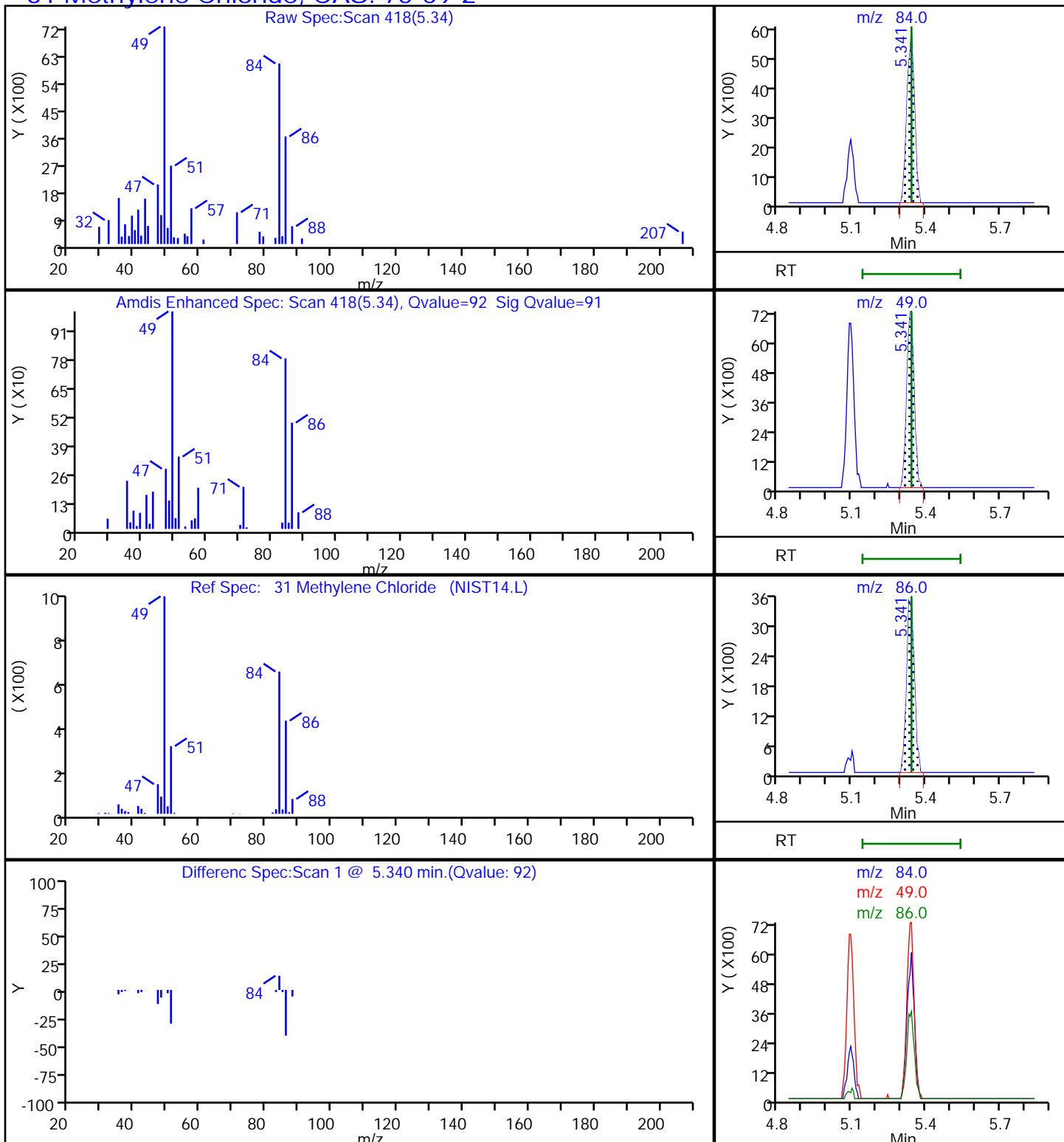
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

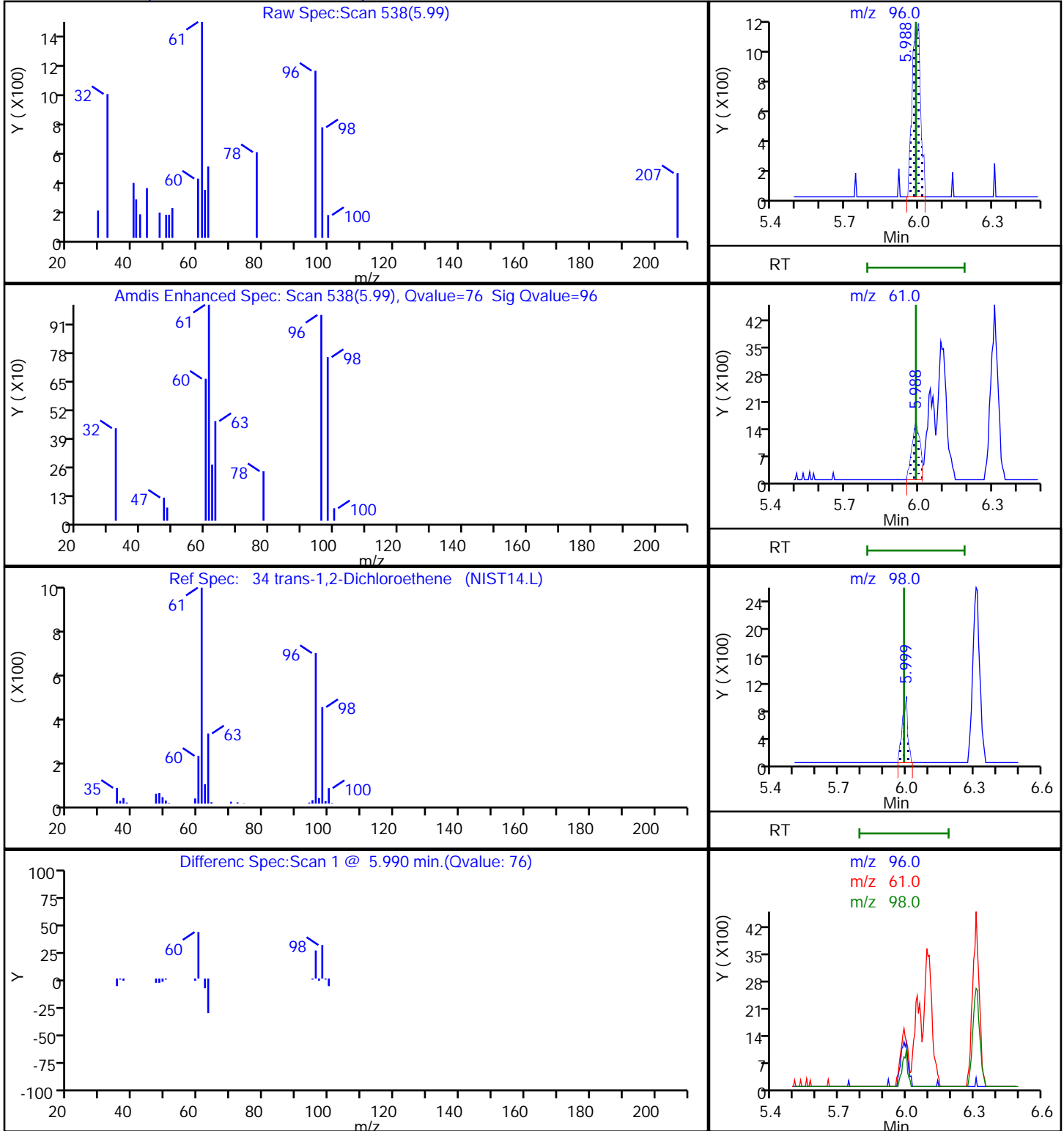
31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D
Injection Date: 21-Jan-2019 23:15:30 Instrument ID: MR
Lims ID: 140-13996-A-4 Lab Sample ID: 140-13996-4
Client ID: BLDG-A EFFLUENT
Operator ID: afb ALS Bottle#: 6 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D

Injection Date: 21-Jan-2019 23:15:30

Instrument ID: MR

Lims ID: 140-13996-A-4

Lab Sample ID: 140-13996-4

Client ID: BLDG-A EFFLUENT

Operator ID: afb

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

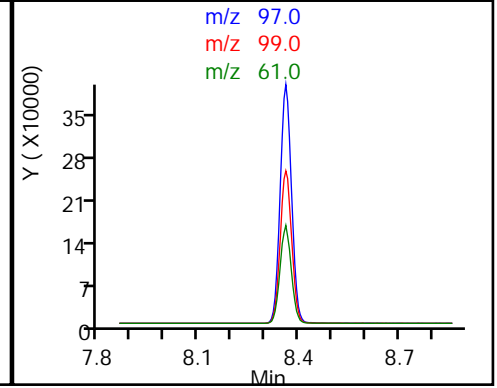
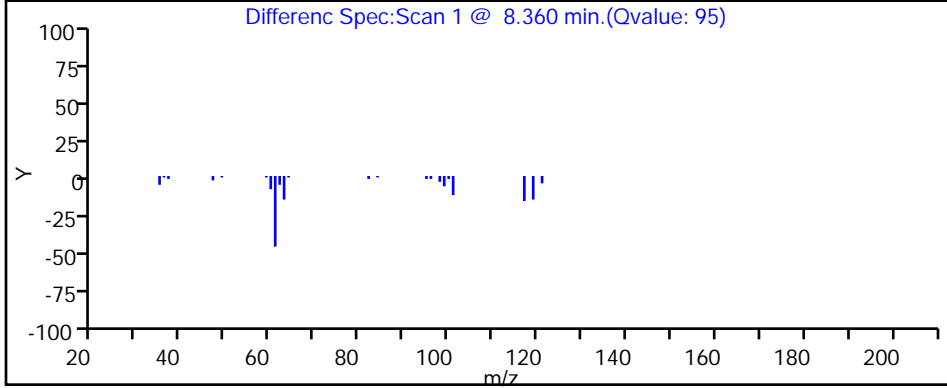
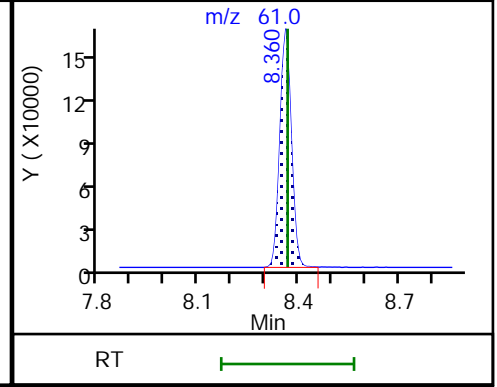
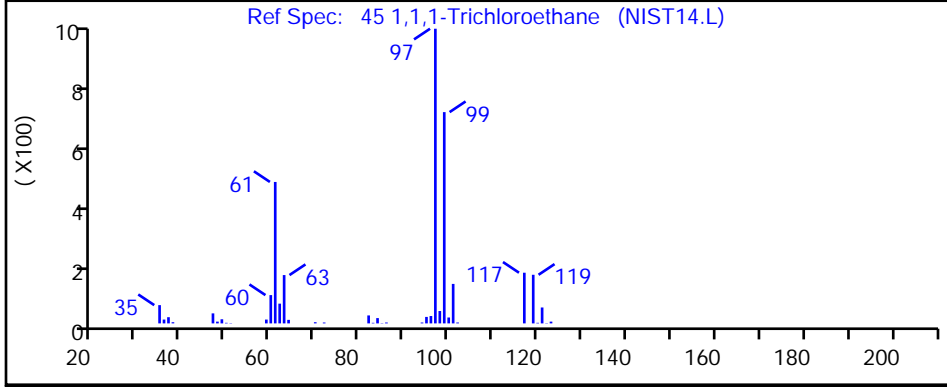
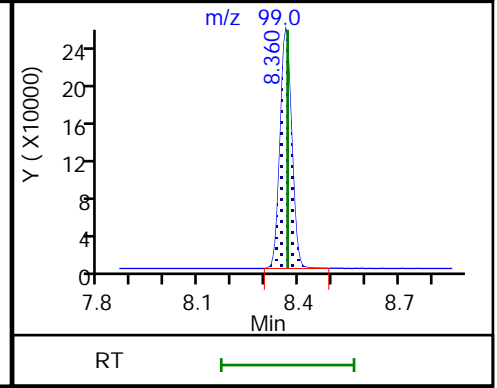
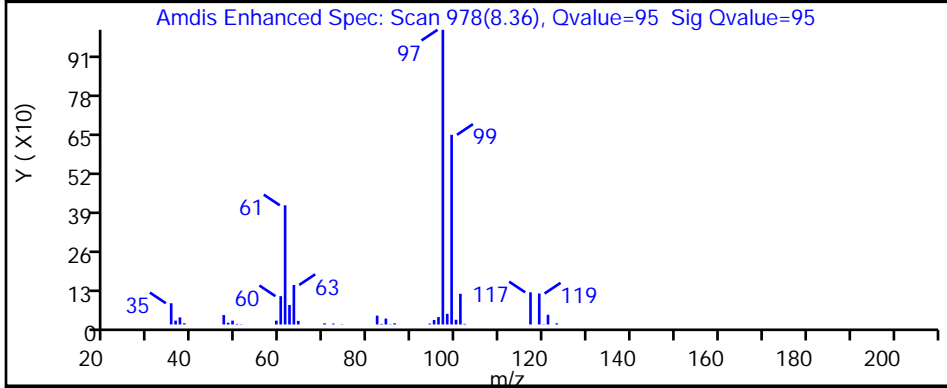
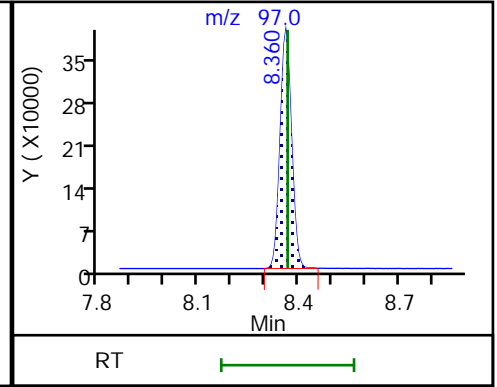
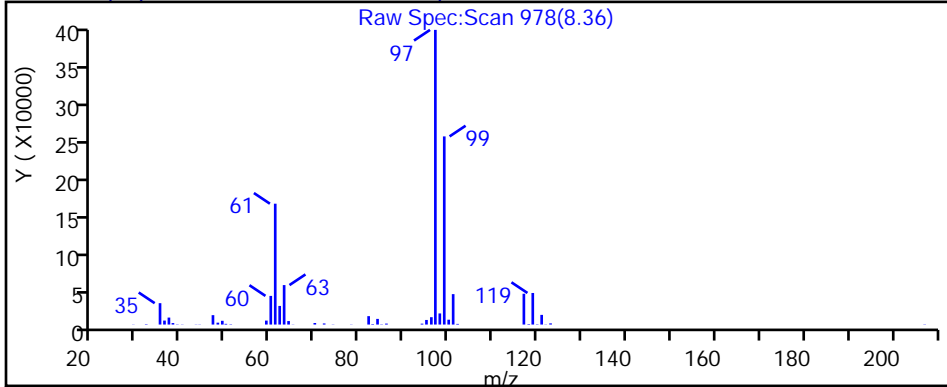
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D

Injection Date: 21-Jan-2019 23:15:30

Instrument ID: MR

Lims ID: 140-13996-A-4

Lab Sample ID: 140-13996-4

Client ID: BLDG-A EFFLUENT

Operator ID: afb

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

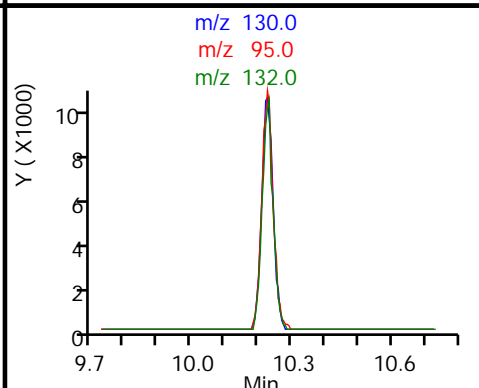
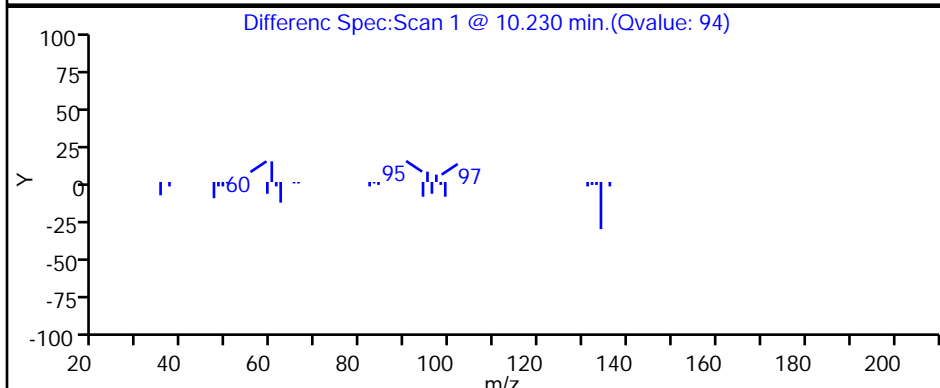
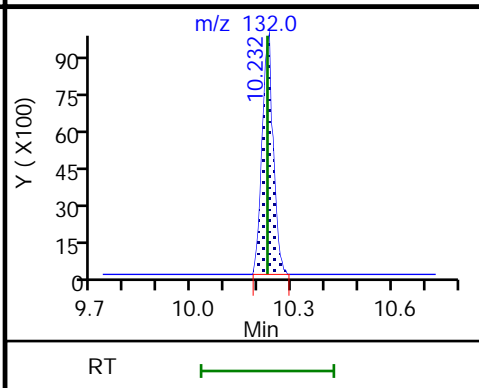
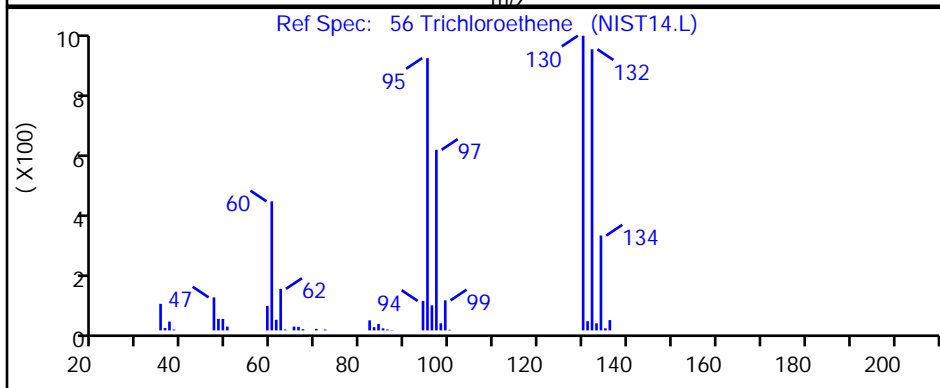
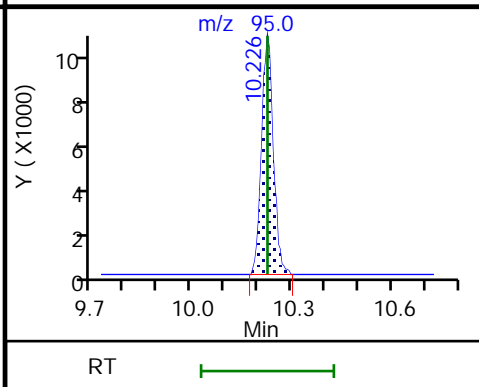
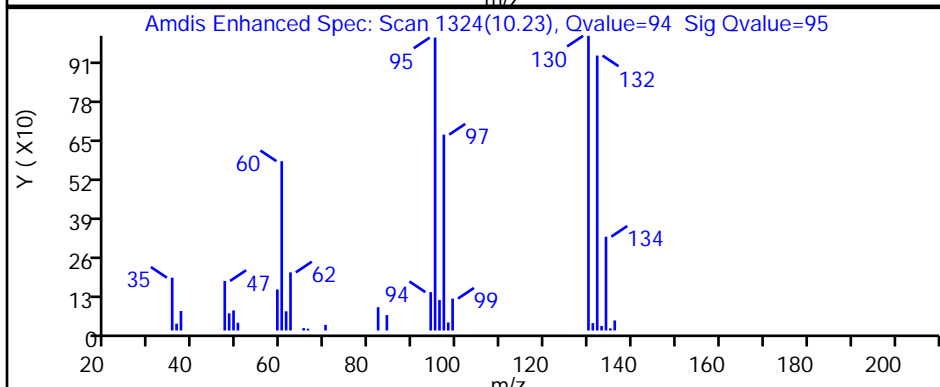
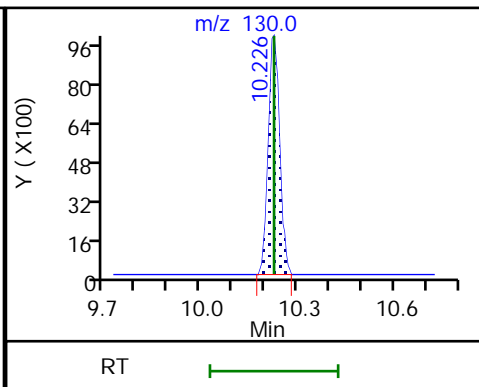
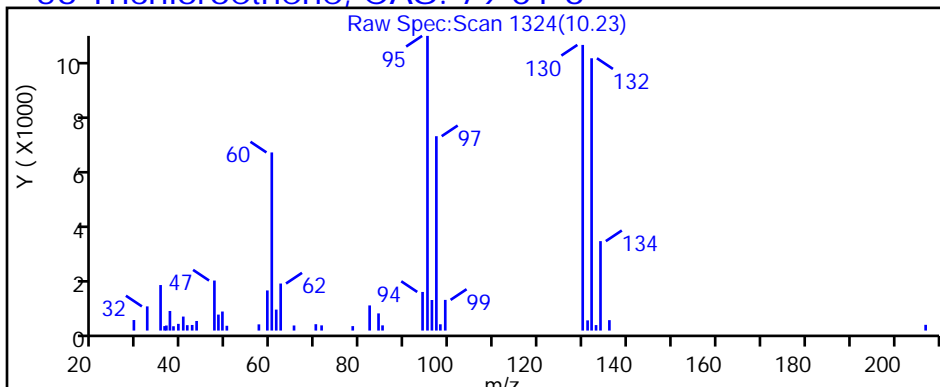
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6

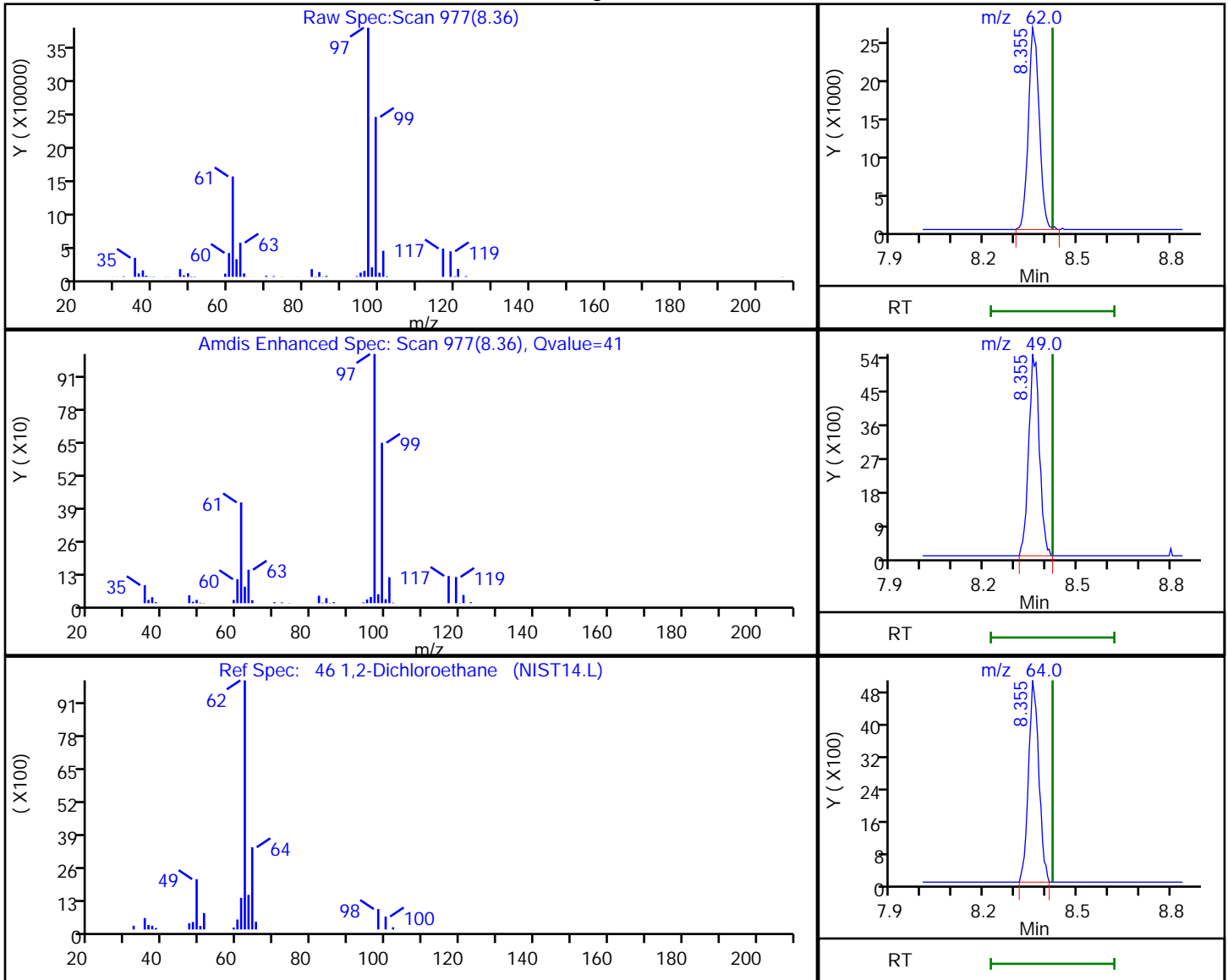


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p106.D
Injection Date: 21-Jan-2019 23:15:30 Instrument ID: MR
Lims ID: 140-13996-A-4 Lab Sample ID: 140-13996-4
Client ID: BLDG-A EFFLUENT
Operator ID: afb ALS Bottle#: 6 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.36	62.00	64914	0.431820
8.36	49.00	13003	
8.36	64.00	11788	

Reviewer: khachitpongpanits, 22-Jan-2019 13:13:41

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: BLDG-A MIDGAC Lab Sample ID: 140-13996-5
 Matrix: Air Lab File ID: RA21p107.D
 Analysis Method: TO 15 LL Date Collected: 01/16/2019 15:20
 Sample wt/vol: 100(mL) Date Analyzed: 01/22/2019 00:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.51	CI	0.40	0.075
67-66-3	Chloroform	119.38	1.2		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	15		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.32	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	3.5		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	19		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.74	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.29	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	36		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: BLDG-A MIDGAC Lab Sample ID: 140-13996-5
 Matrix: Air Lab File ID: RA21p107.D
 Analysis Method: TO 15 LL Date Collected: 01/16/2019 15:20
 Sample wt/vol: 100(mL) Date Analyzed: 01/22/2019 00:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8	CI	1.4	0.27
67-66-3	Chloroform	119.38	5.7		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	60		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.6	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	14		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	77		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.2	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	200		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p107.D
 Lims ID: 140-13996-A-5
 Client ID: BLDG-A MIDGAC
 Sample Type: Client
 Inject. Date: 22-Jan-2019 00:06:30 ALS Bottle#: 7 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-013
 Misc. Info.: 140-13996-A-5
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 13:14:26 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 13:14:40

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.406	0.000	73	197466	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.477	0.000	95	1171289	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.524	0.000	91	1026551	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.250	0.000	89	894640	4.10	
6 Chlorodifluoromethane	51	3.518	3.518	0.000	66	12010	0.1025	
8 Dichlorodifluoromethane	85	3.561	3.561	0.000	99	13629	0.0634	
27 1,1-Dichloroethene	96	5.093	5.093	0.000	96	269982	3.89	
31 Methylene Chloride	84	5.341	5.341	0.000	92	9804	0.1484	
34 trans-1,2-Dichloroethene	96	5.988	5.988	0.000	96	4143	0.0585	
37 1,1-Dichloroethane	63	6.311	6.311	0.000	98	84173	0.7097	
41 cis-1,2-Dichloroethene	96	7.142	7.136	0.006	95	215957	3.02	
43 Chloroform	83	7.438	7.444	-0.006	97	44228	0.2345	
45 1,1,1-Trichloroethane	97	8.361	8.366	-0.005	95	1730510	7.24	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p107.D

Injection Date: 22-Jan-2019 00:06:30

Instrument ID: MR

Operator ID: afb

Lims ID: 140-13996-A-5

Lab Sample ID: 140-13996-5

Worklist Smp#: 13

Client ID: BLDG-A MIDGAC

Purge Vol: 500.000 mL

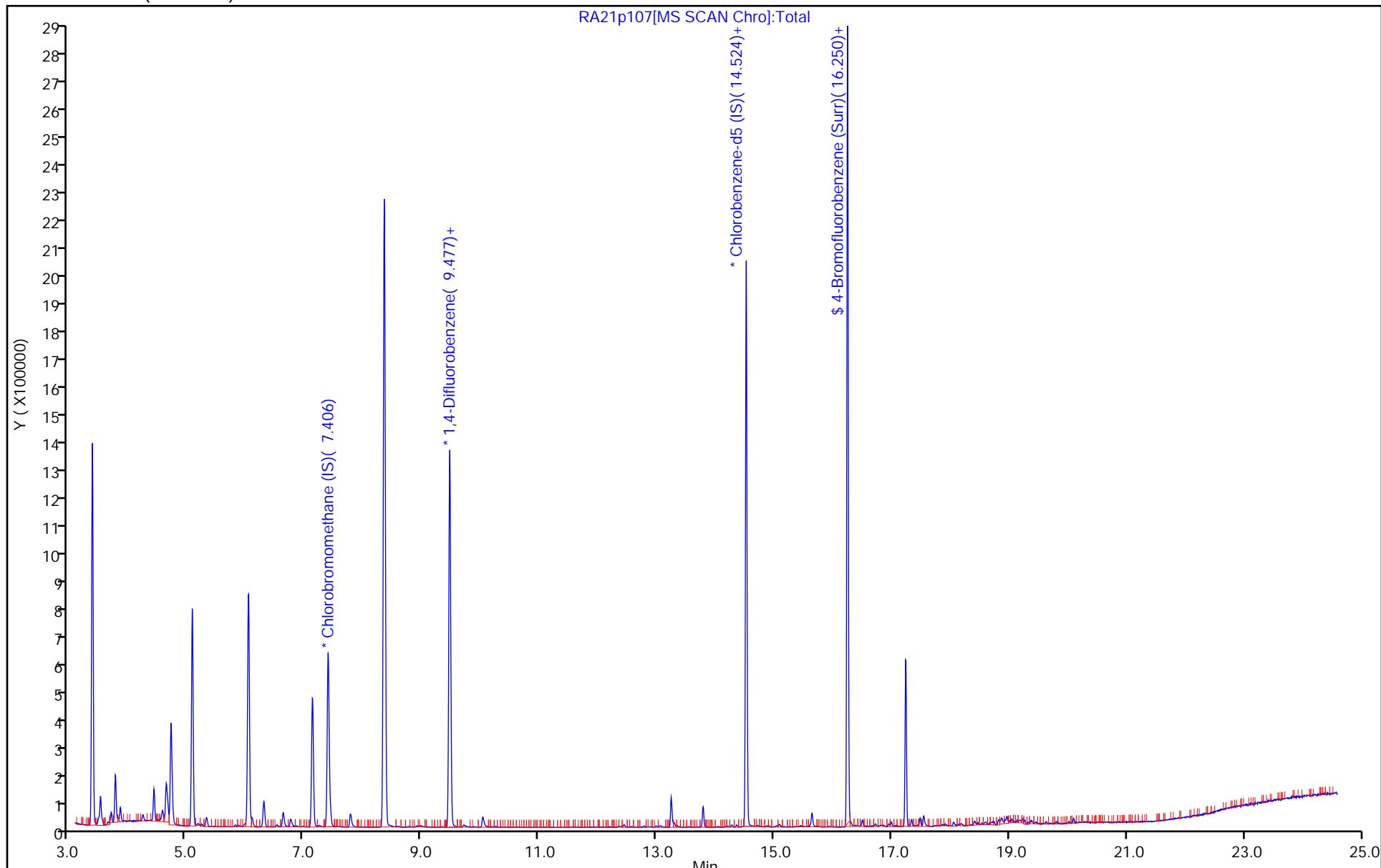
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p107.D
 Lims ID: 140-13996-A-5
 Client ID: BLDG-A MIDGAC
 Sample Type: Client
 Inject. Date: 22-Jan-2019 00:06:30 ALS Bottle#: 7 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-013
 Misc. Info.: 140-13996-A-5
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 13:14:26 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 13:14:40

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.10	102.46

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p107.D

Injection Date: 22-Jan-2019 00:06:30

Instrument ID: MR

Lims ID: 140-13996-A-5

Lab Sample ID: 140-13996-5

Client ID: BLDG-A MIDGAC

Operator ID: afb

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

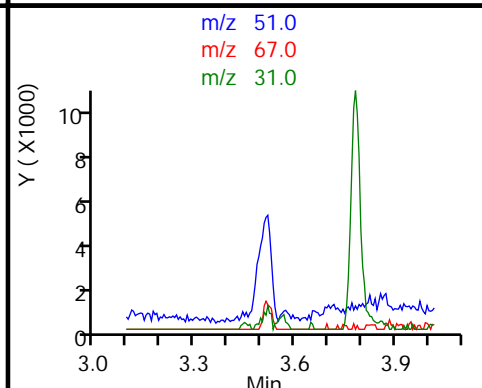
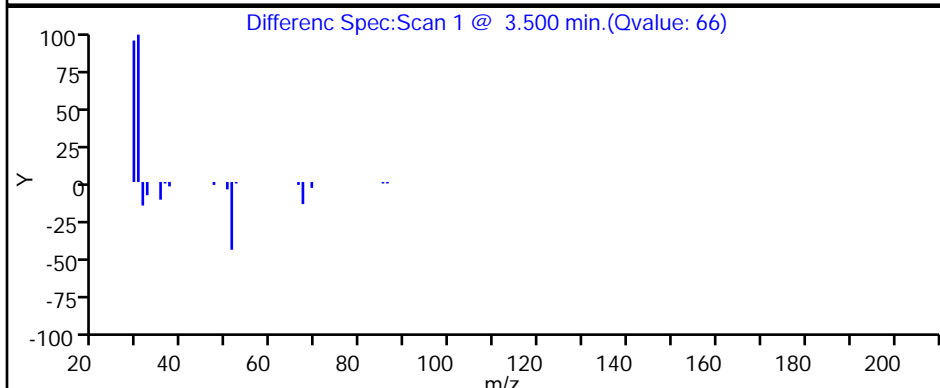
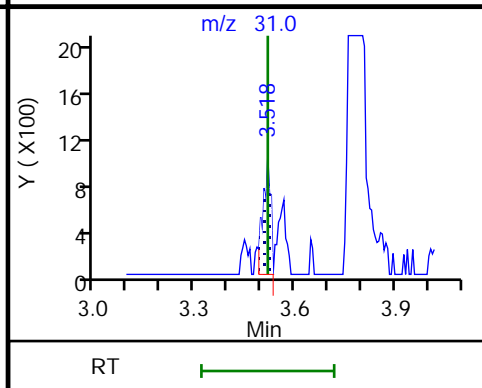
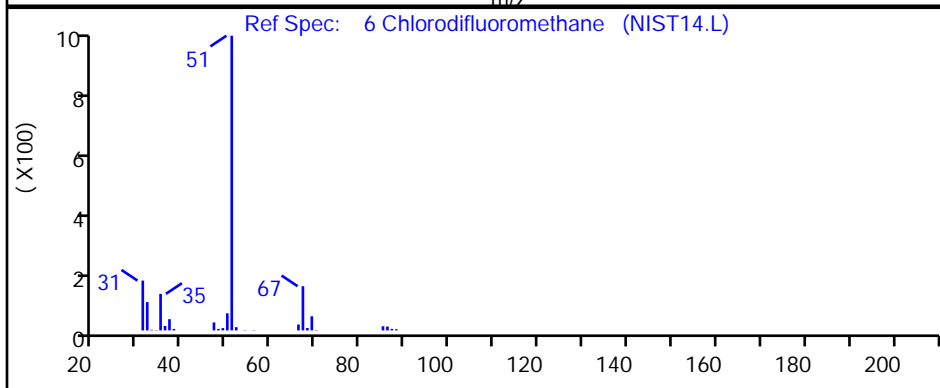
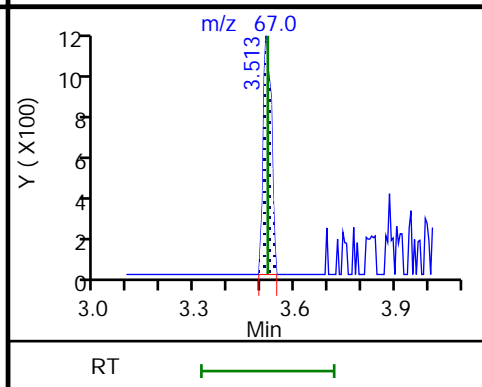
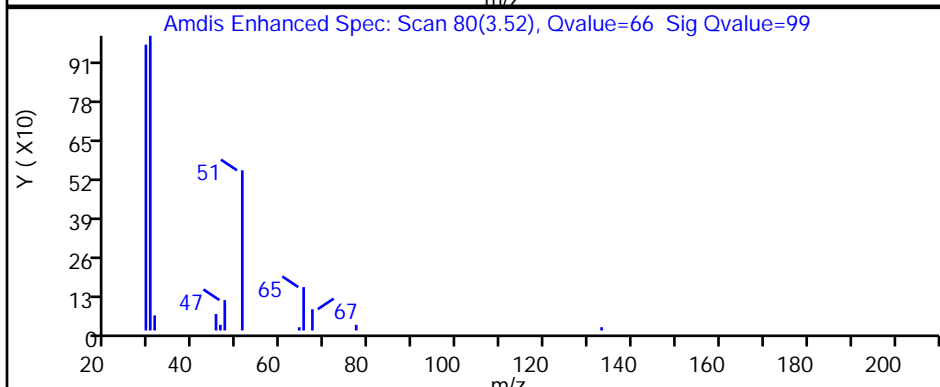
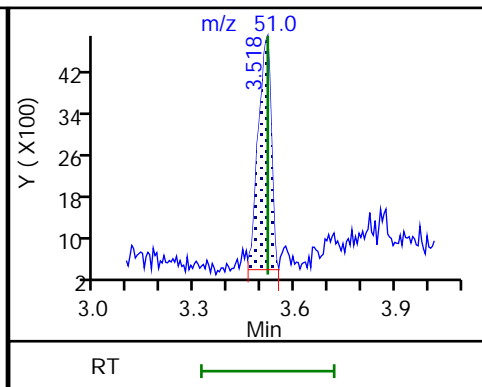
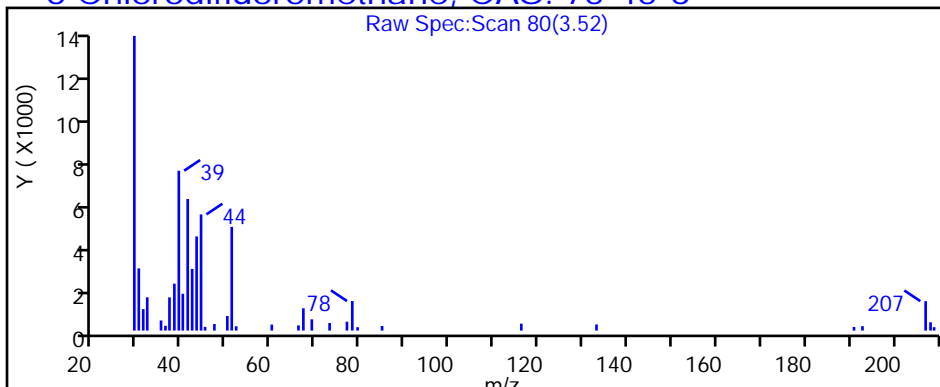
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p107.D

Injection Date: 22-Jan-2019 00:06:30

Instrument ID: MR

Lims ID: 140-13996-A-5

Lab Sample ID: 140-13996-5

Client ID: BLDG-A MIDGAC

Operator ID: afb

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

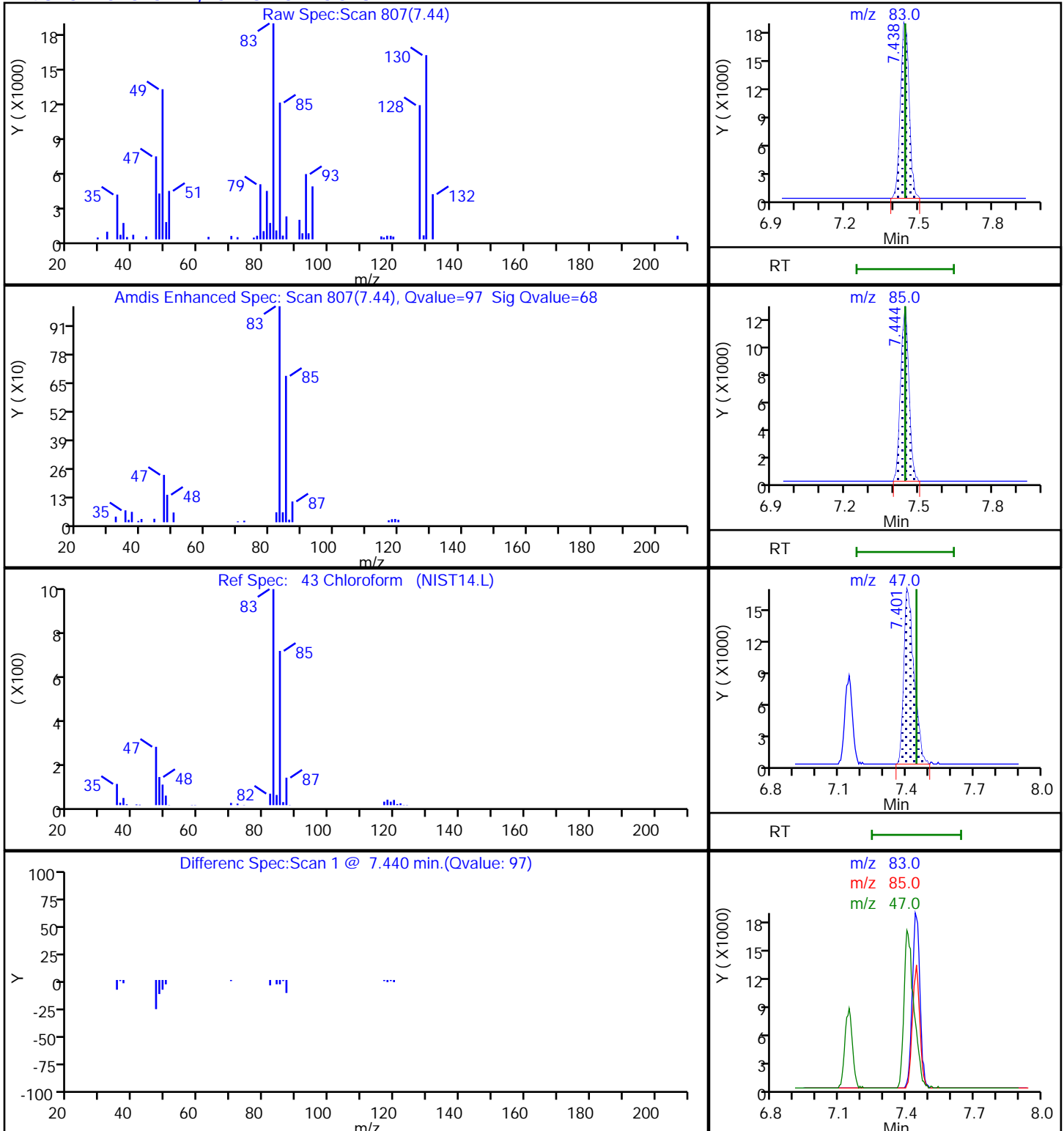
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p107.D

Injection Date: 22-Jan-2019 00:06:30

Instrument ID: MR

Lims ID: 140-13996-A-5

Lab Sample ID: 140-13996-5

Client ID: BLDG-A MIDGAC

Operator ID: afb

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

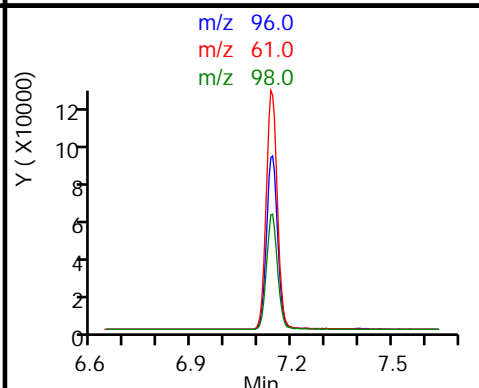
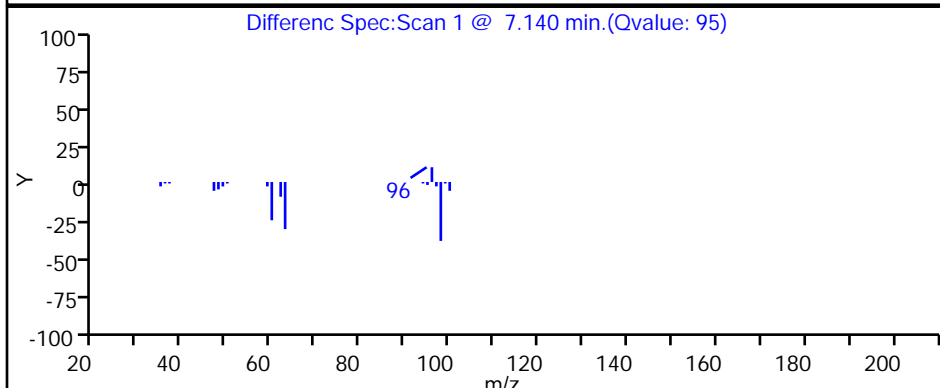
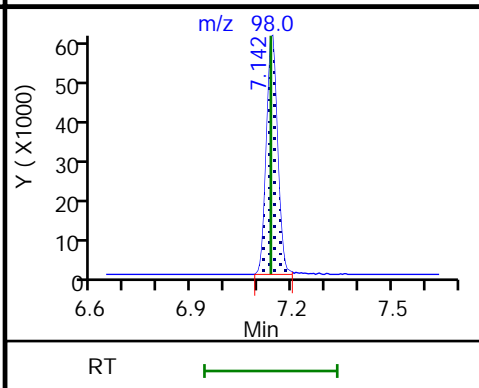
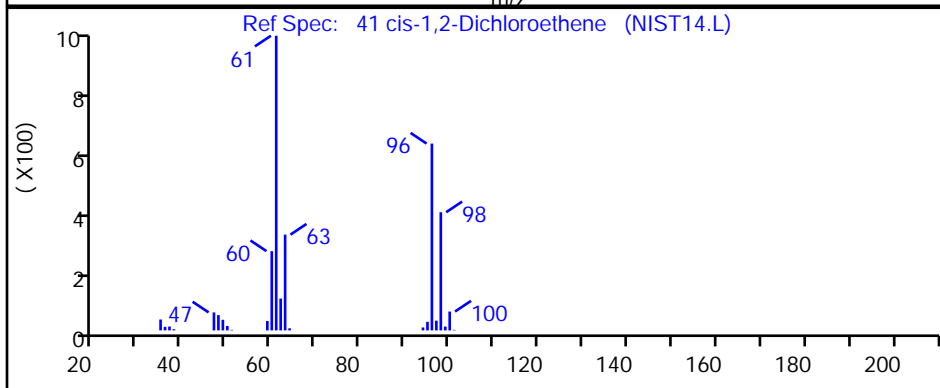
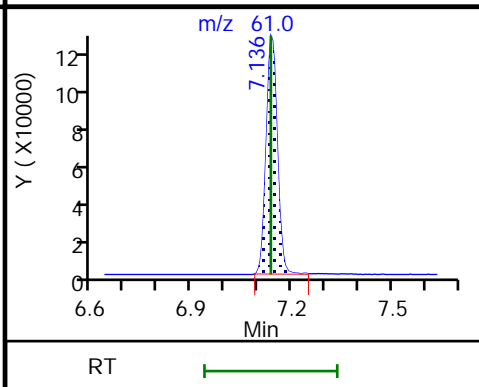
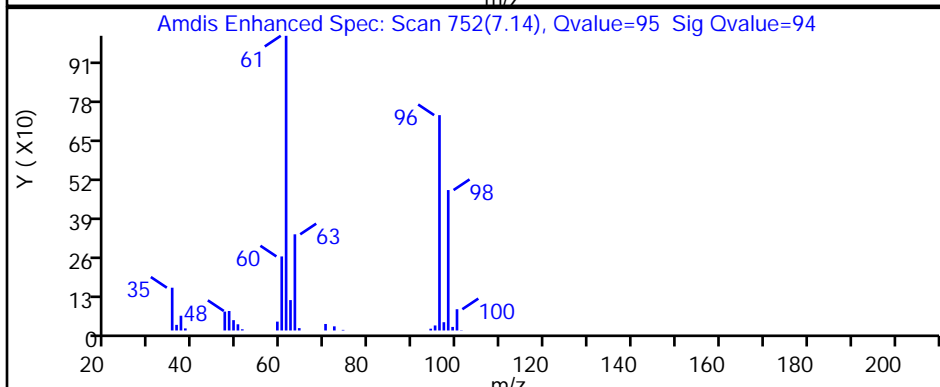
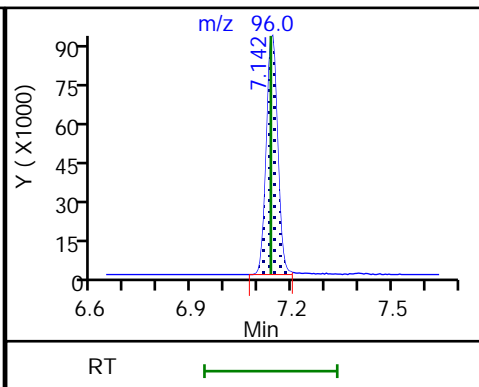
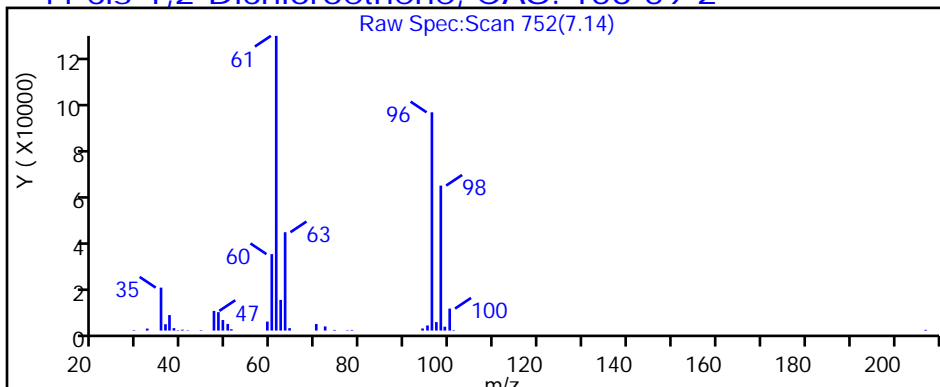
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p107.D

Injection Date: 22-Jan-2019 00:06:30

Instrument ID: MR

Lims ID: 140-13996-A-5

Lab Sample ID: 140-13996-5

Client ID: BLDG-A MIDGAC

Operator ID: afb

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

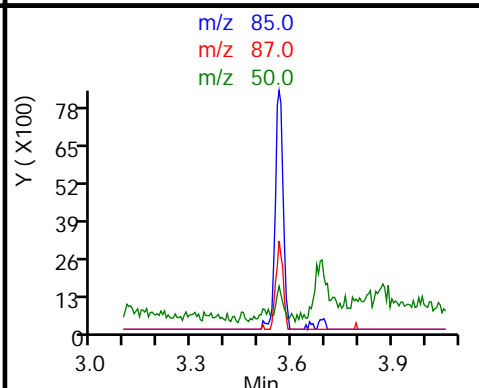
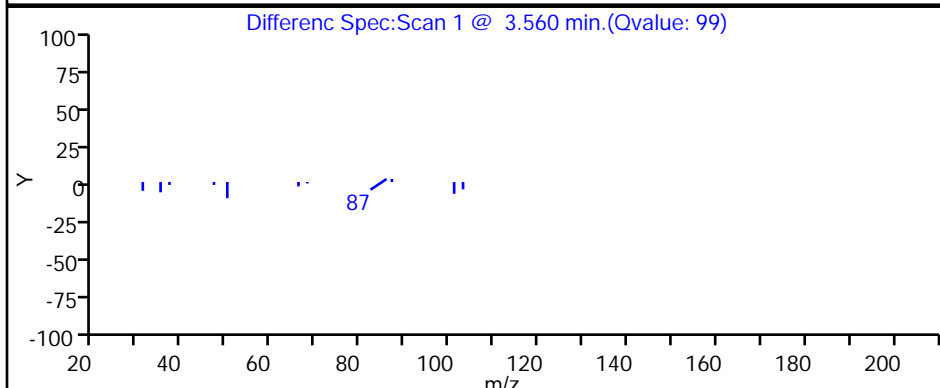
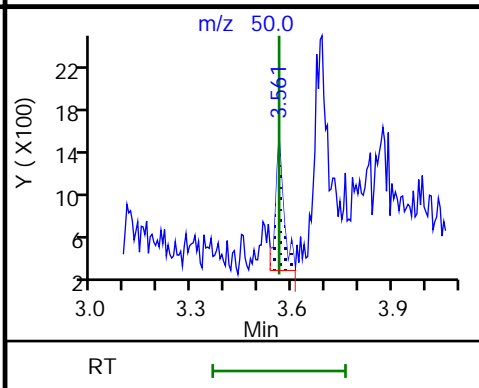
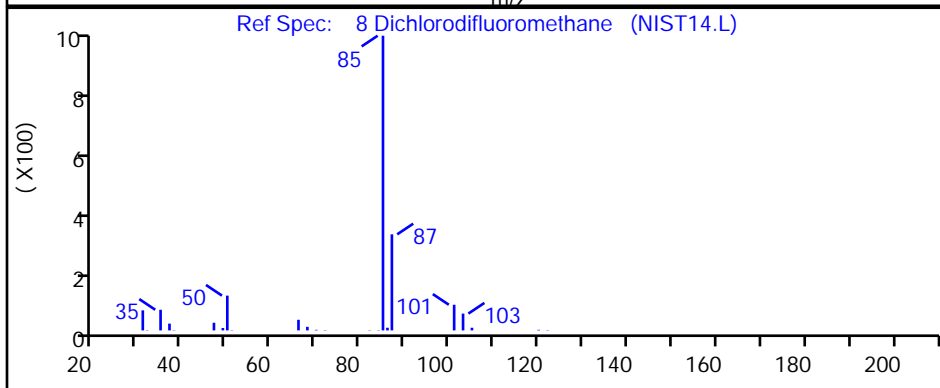
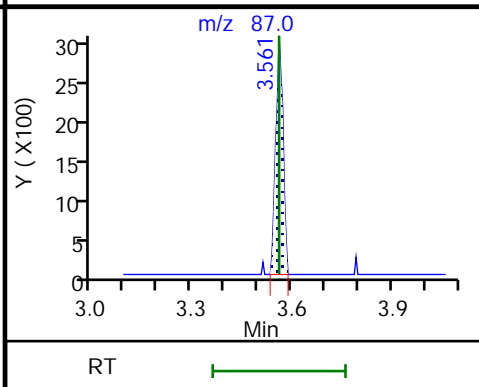
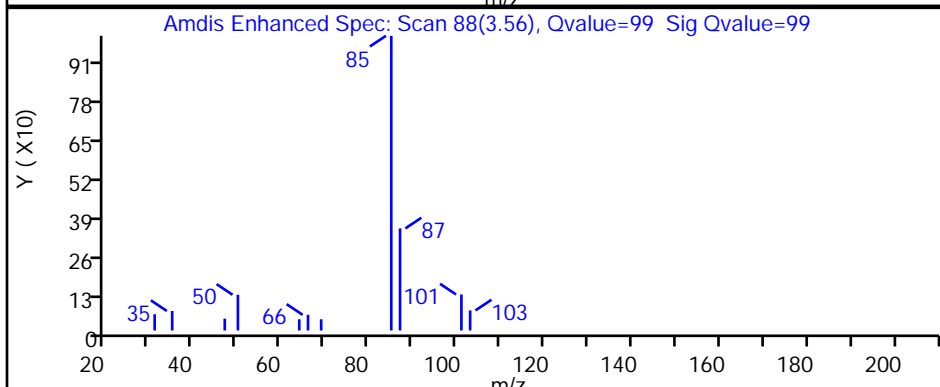
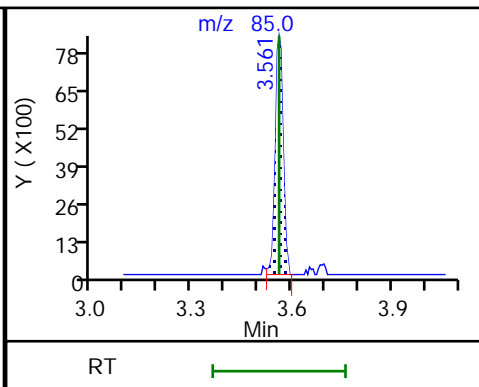
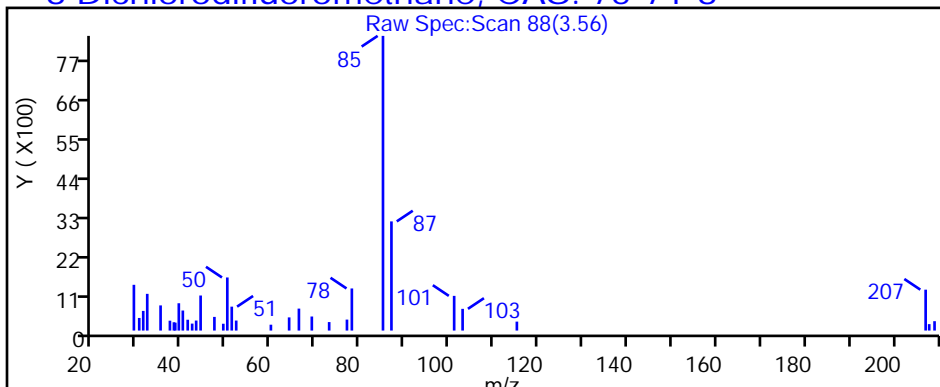
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p107.D

Injection Date: 22-Jan-2019 00:06:30

Instrument ID: MR

Lims ID: 140-13996-A-5

Lab Sample ID: 140-13996-5

Client ID: BLDG-A MIDGAC

Operator ID: afb

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

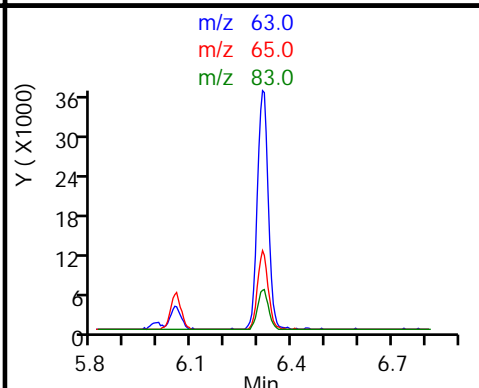
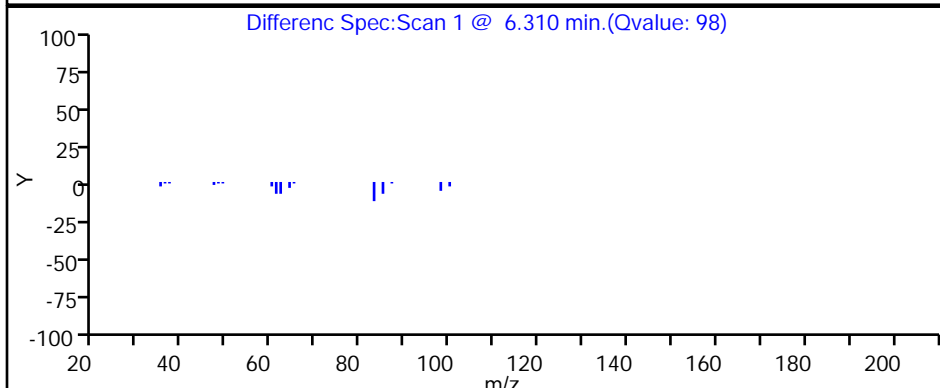
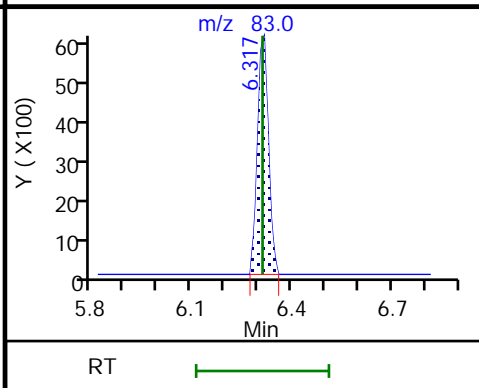
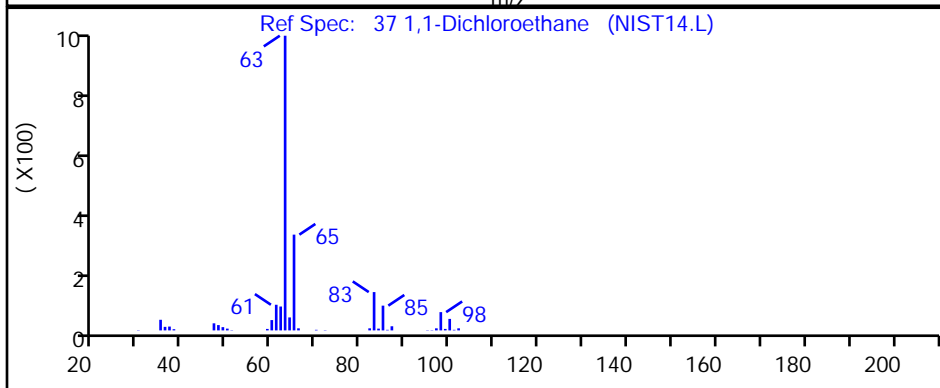
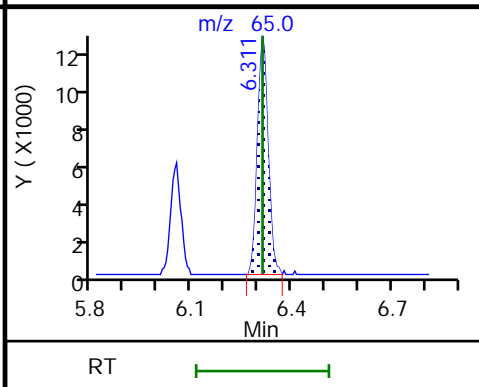
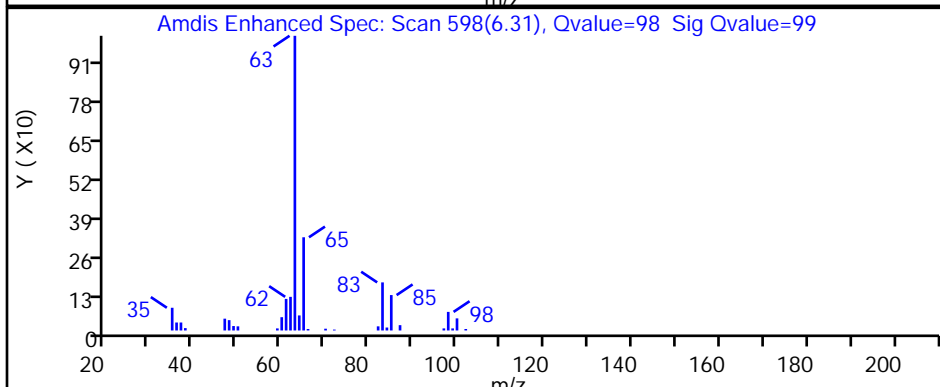
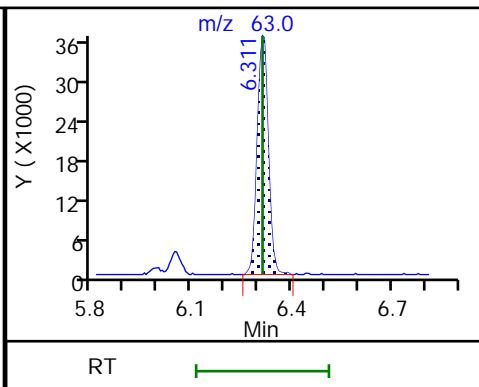
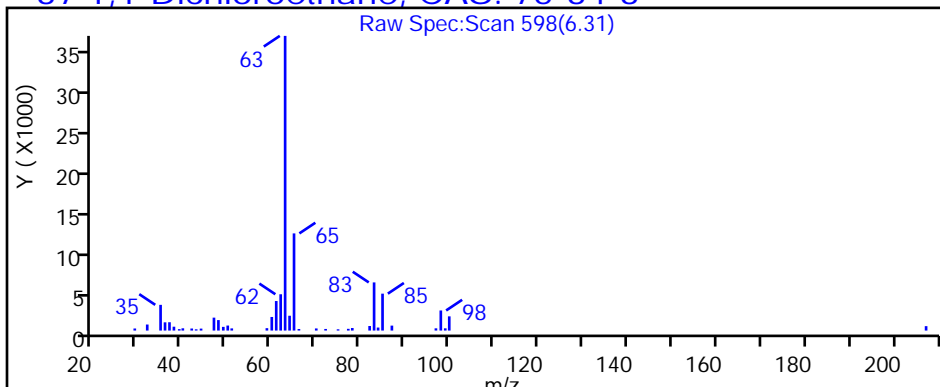
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p107.D

Injection Date: 22-Jan-2019 00:06:30

Instrument ID: MR

Lims ID: 140-13996-A-5

Lab Sample ID: 140-13996-5

Client ID: BLDG-A MIDGAC

Operator ID: afb

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

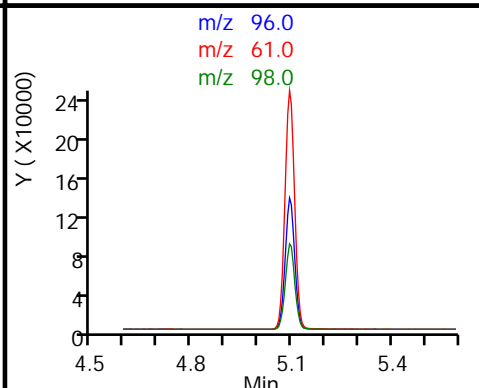
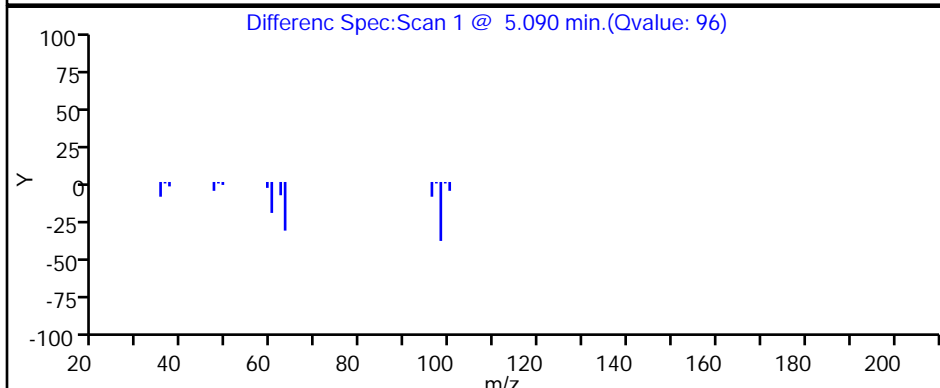
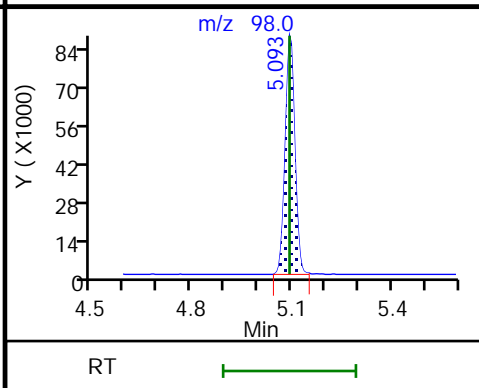
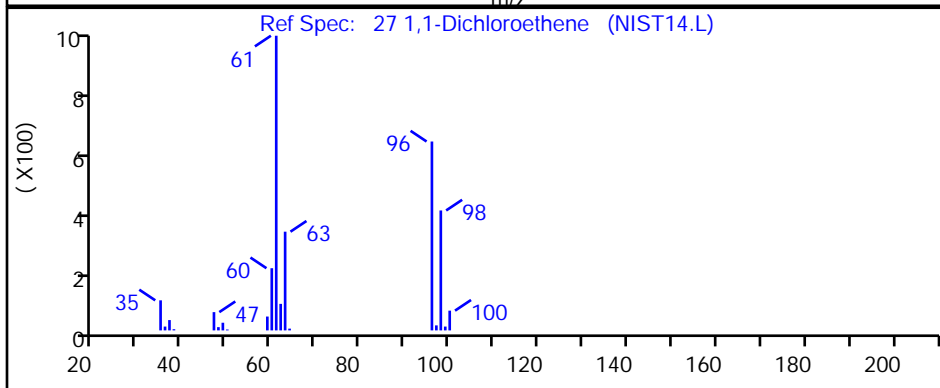
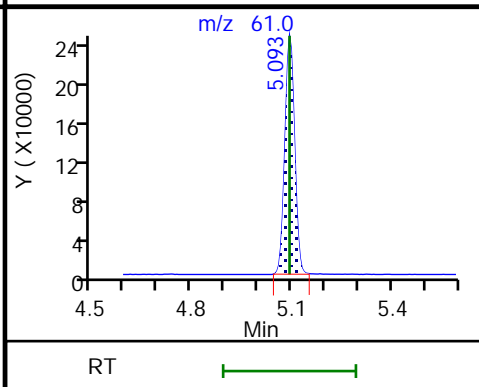
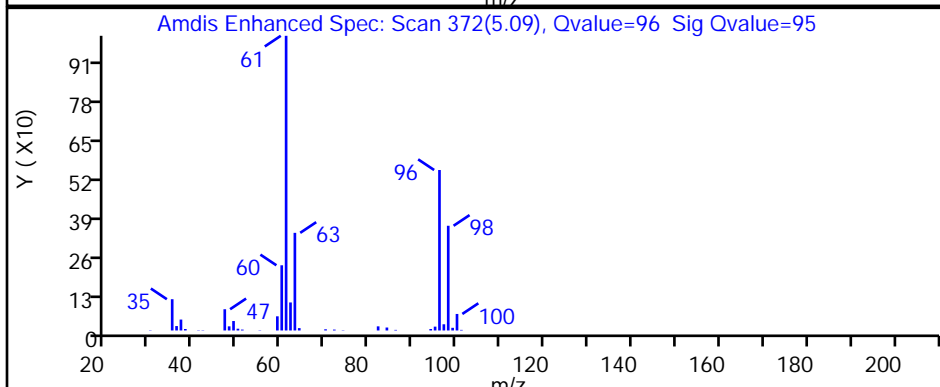
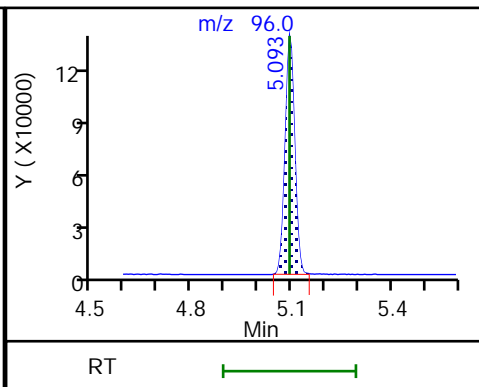
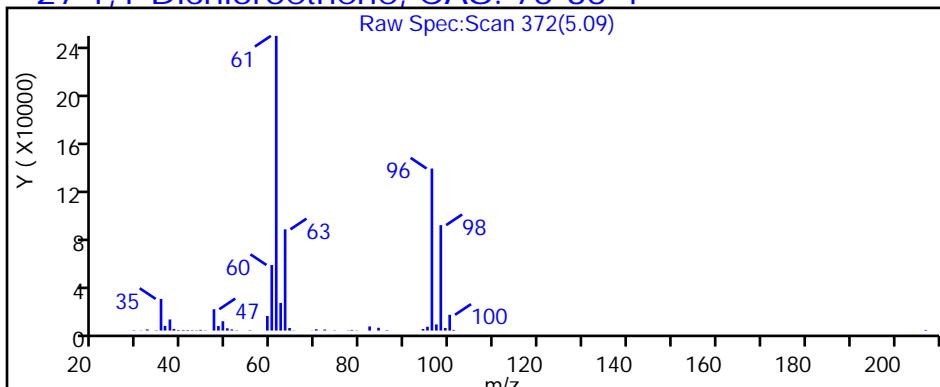
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p107.D

Injection Date: 22-Jan-2019 00:06:30

Instrument ID: MR

Lims ID: 140-13996-A-5

Lab Sample ID: 140-13996-5

Client ID: BLDG-A MIDGAC

Operator ID: afb

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

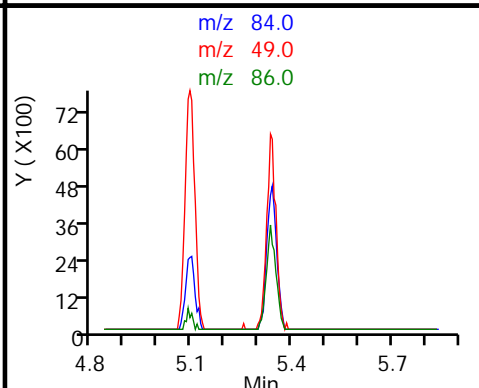
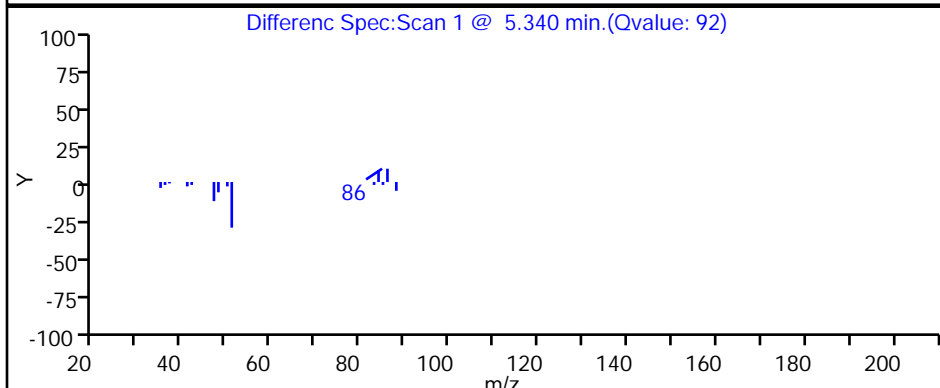
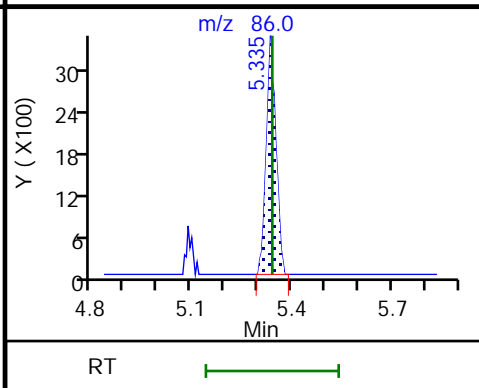
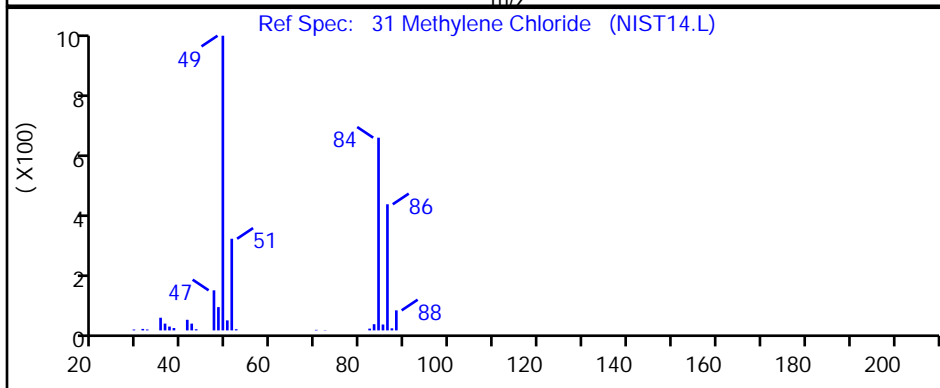
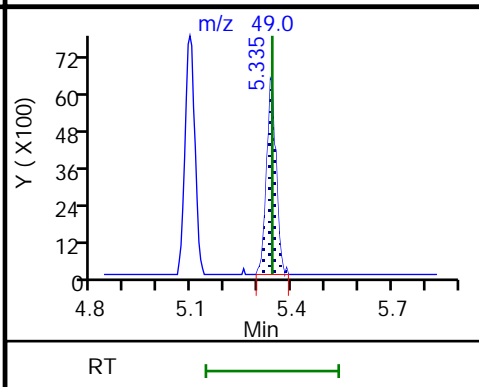
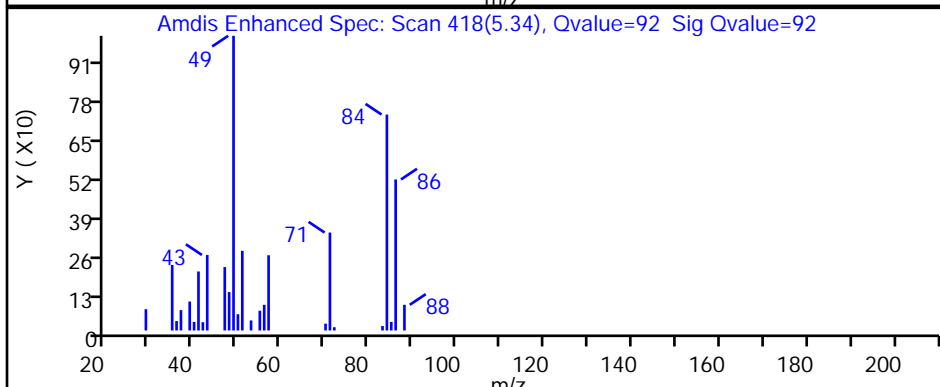
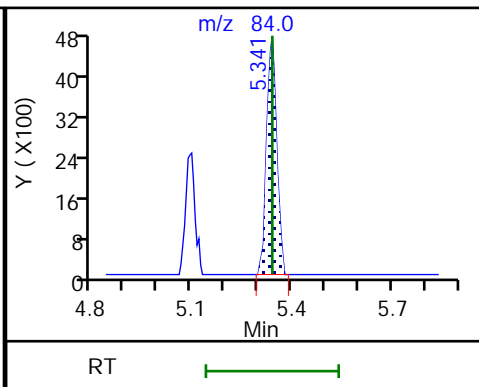
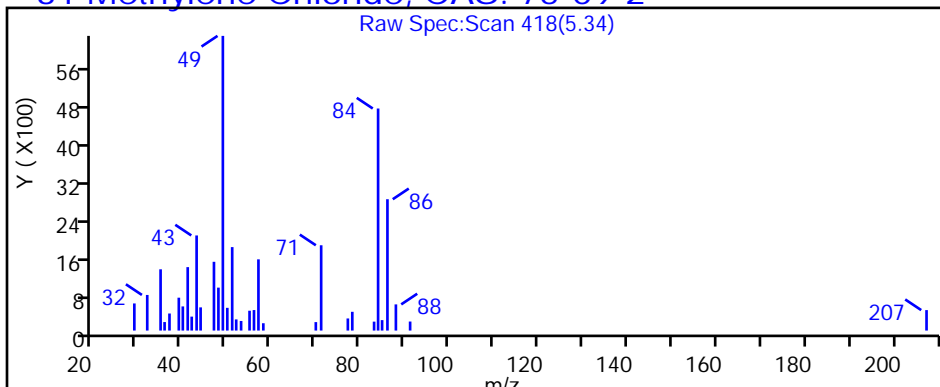
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p107.D

Injection Date: 22-Jan-2019 00:06:30

Instrument ID: MR

Lims ID: 140-13996-A-5

Lab Sample ID: 140-13996-5

Client ID: BLDG-A MIDGAC

Operator ID: afb

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

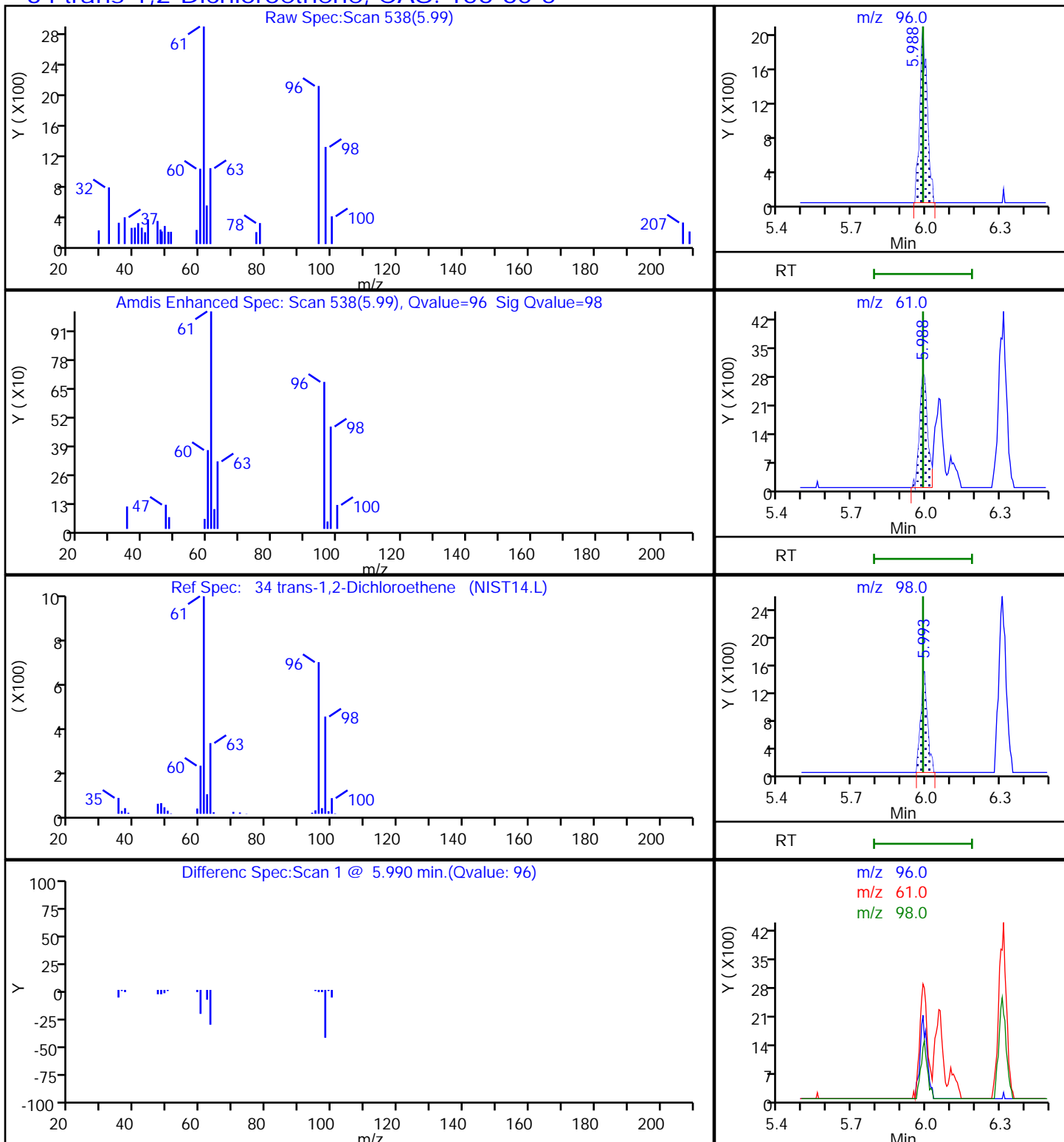
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p107.D

Injection Date: 22-Jan-2019 00:06:30

Instrument ID: MR

Lims ID: 140-13996-A-5

Lab Sample ID: 140-13996-5

Client ID: BLDG-A MIDGAC

Operator ID: afb

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

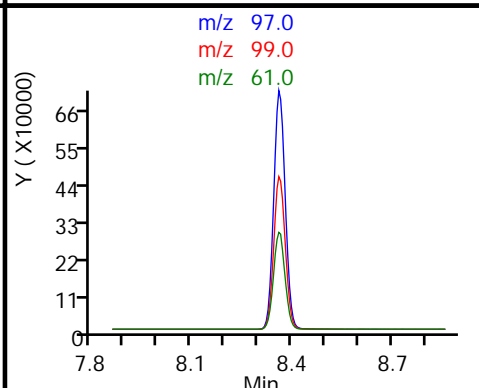
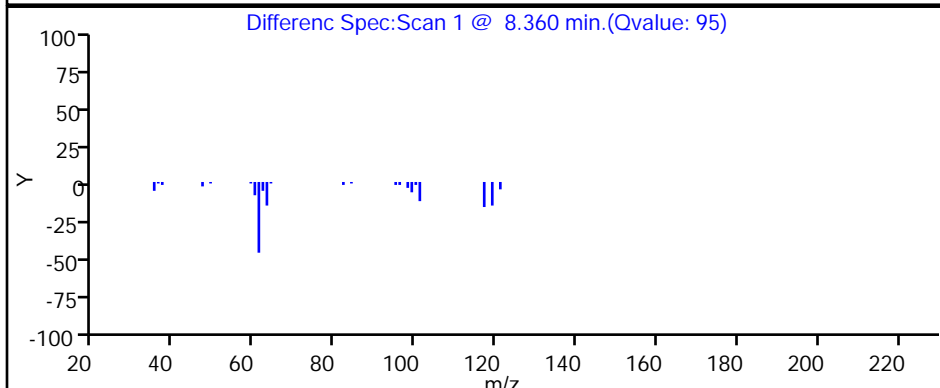
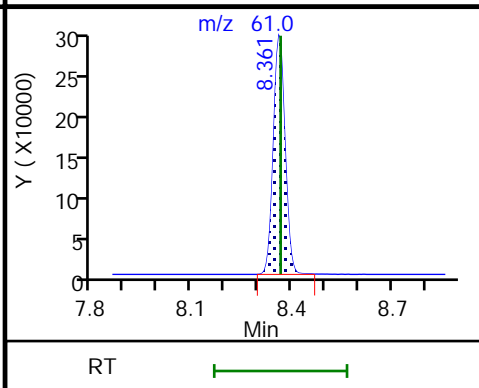
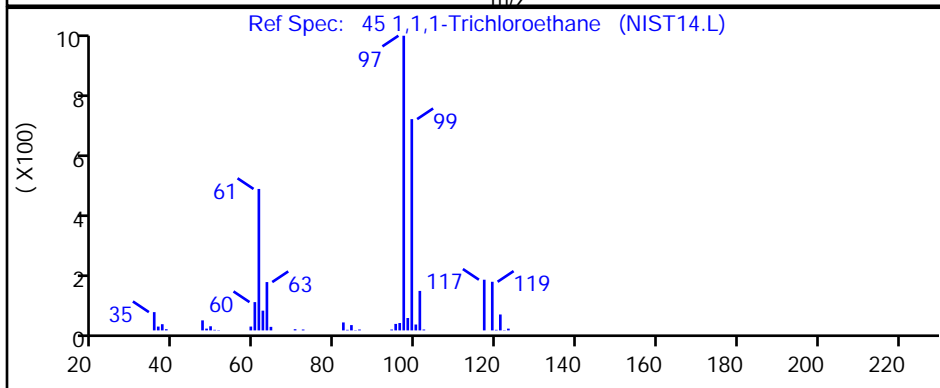
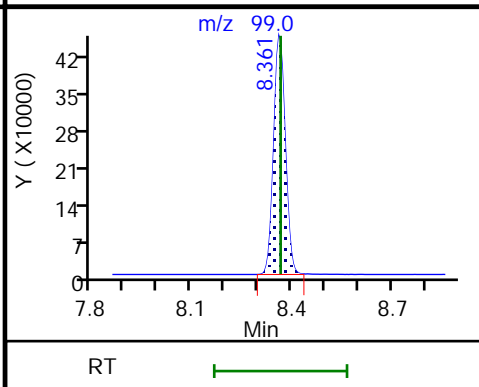
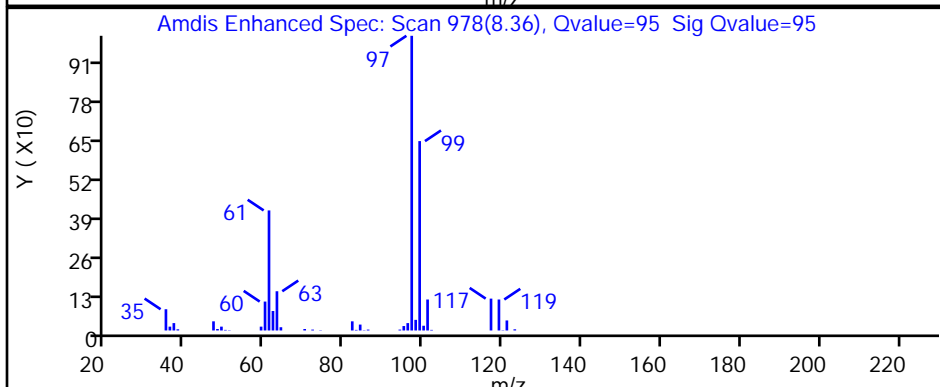
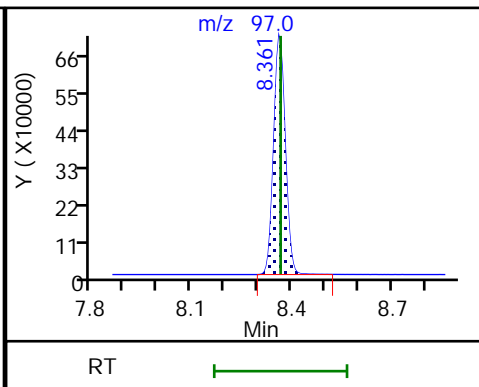
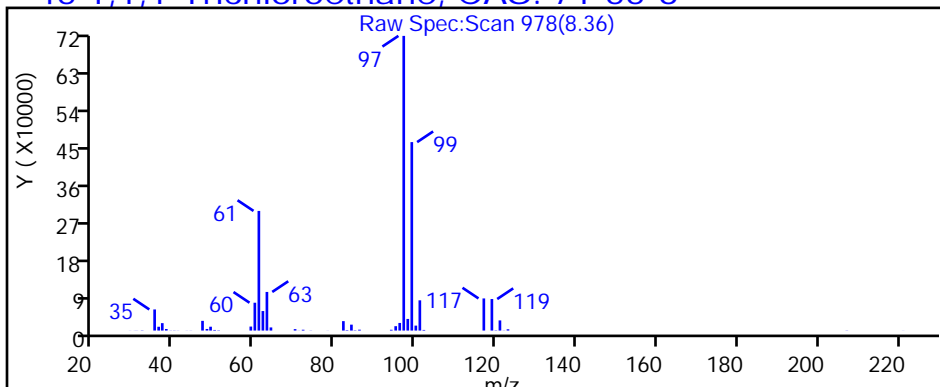
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6

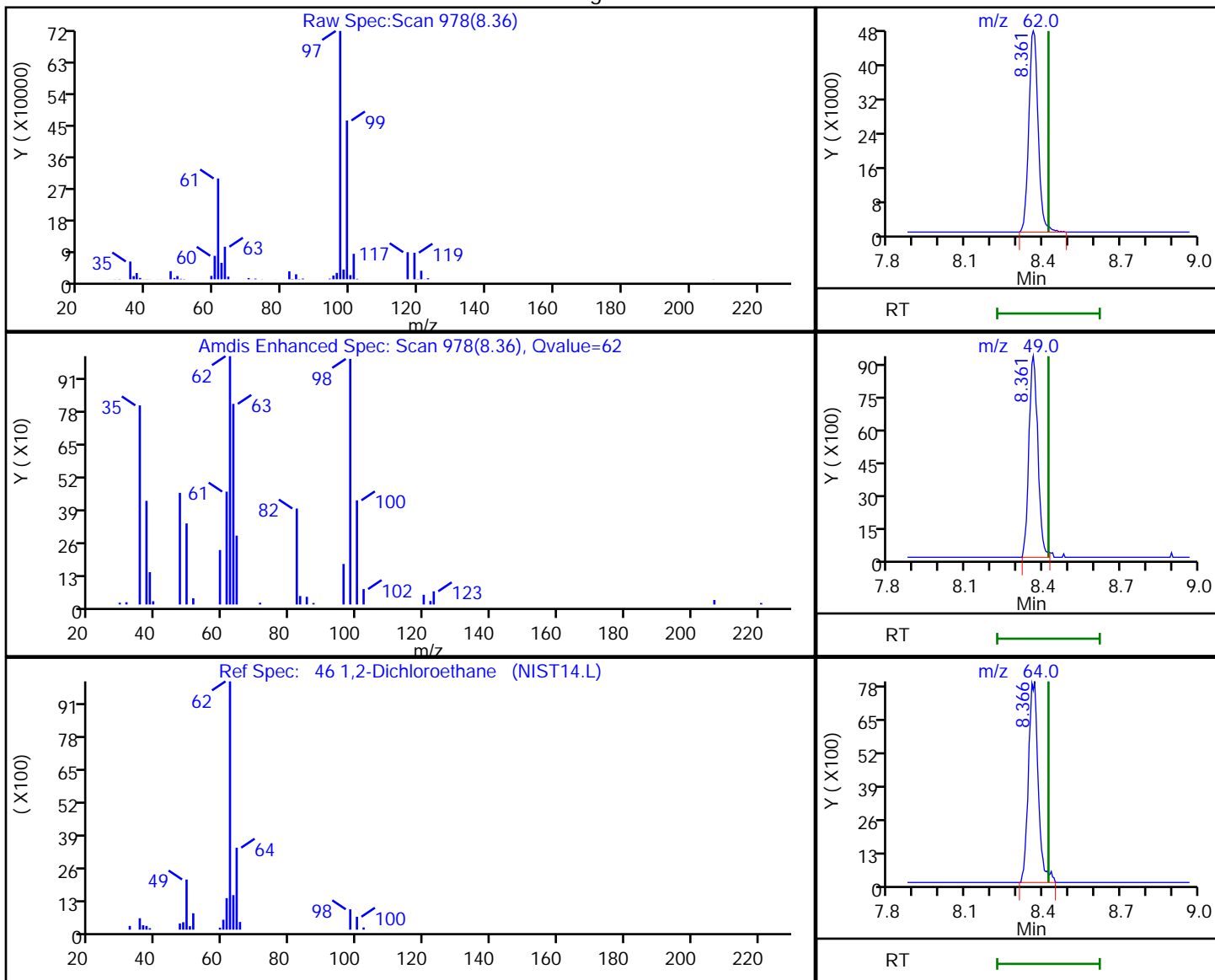


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p107.D
 Injection Date: 22-Jan-2019 00:06:30 Instrument ID: MR
 Lims ID: 140-13996-A-5 Lab Sample ID: 140-13996-5
 Client ID: BLDG-A MIDGAC
 Operator ID: afb ALS Bottle#: 7 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.36	62.00	120294	0.811376
8.36	49.00	22628	
8.37	64.00	20991	

Reviewer: khachitpongpanits, 22-Jan-2019 13:14:21

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-13996-6
 Matrix: Air Lab File ID: RA21p108.D
 Analysis Method: TO 15 LL Date Collected: 01/16/2019 15:24
 Sample wt/vol: 20 (mL) Date Analyzed: 01/22/2019 00:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.4		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	ND		2.0	0.38
67-66-3	Chloroform	119.38	0.42	J	2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	12		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	2.4		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	14		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	3.4	J	10	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	61		2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	130		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: BLDG-A INFLUENT Lab Sample ID: 140-13996-6
 Matrix: Air Lab File ID: RA21p108.D
 Analysis Method: TO 15 LL Date Collected: 01/16/2019 15:24
 Sample wt/vol: 20 (mL) Date Analyzed: 01/22/2019 00:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	11		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	ND		7.1	1.3
67-66-3	Chloroform	119.38	2.1	J	9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	46		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	9.8		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	55		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	12	J	35	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	330		11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	700		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p108.D
 Lims ID: 140-13996-A-6
 Client ID: BLDG-A INFLUENT
 Sample Type: Client
 Inject. Date: 22-Jan-2019 00:57:30 ALS Bottle#: 8 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-014
 Misc. Info.: 140-13996-A-6
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 00:29:58 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 15:15:38

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.406	0.000	72	195264	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.477	0.000	95	1165471	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.524	0.000	91	1002131	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.249	0.000	89	859377	4.03	
27 1,1-Dichloroethene	96	5.093	5.093	0.000	96	38306	0.5575	
31 Methylene Chloride	84	5.346	5.341	0.005	90	8936	0.1368	
37 1,1-Dichloroethane	63	6.312	6.311	0.001	98	11318	0.0965	
41 cis-1,2-Dichloroethene	96	7.137	7.136	0.001	96	32526	0.4602	
43 Chloroform	83	7.444	7.444	0.000	88	3156	0.0169	
45 1,1,1-Trichloroethane	97	8.366	8.366	0.000	95	574624	2.43	
47 Benzene	78	8.916	8.911	0.000	98	26151	0.1377	
56 Trichloroethene	130	10.226	10.220	0.000	96	594641	5.19	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p108.D

Injection Date: 22-Jan-2019 00:57:30

Instrument ID: MR

Operator ID: afb

Lims ID: 140-13996-A-6

Lab Sample ID: 140-13996-6

Worklist Smp#: 14

Client ID: BLDG-A INFLUENT

Purge Vol: 500.000 mL

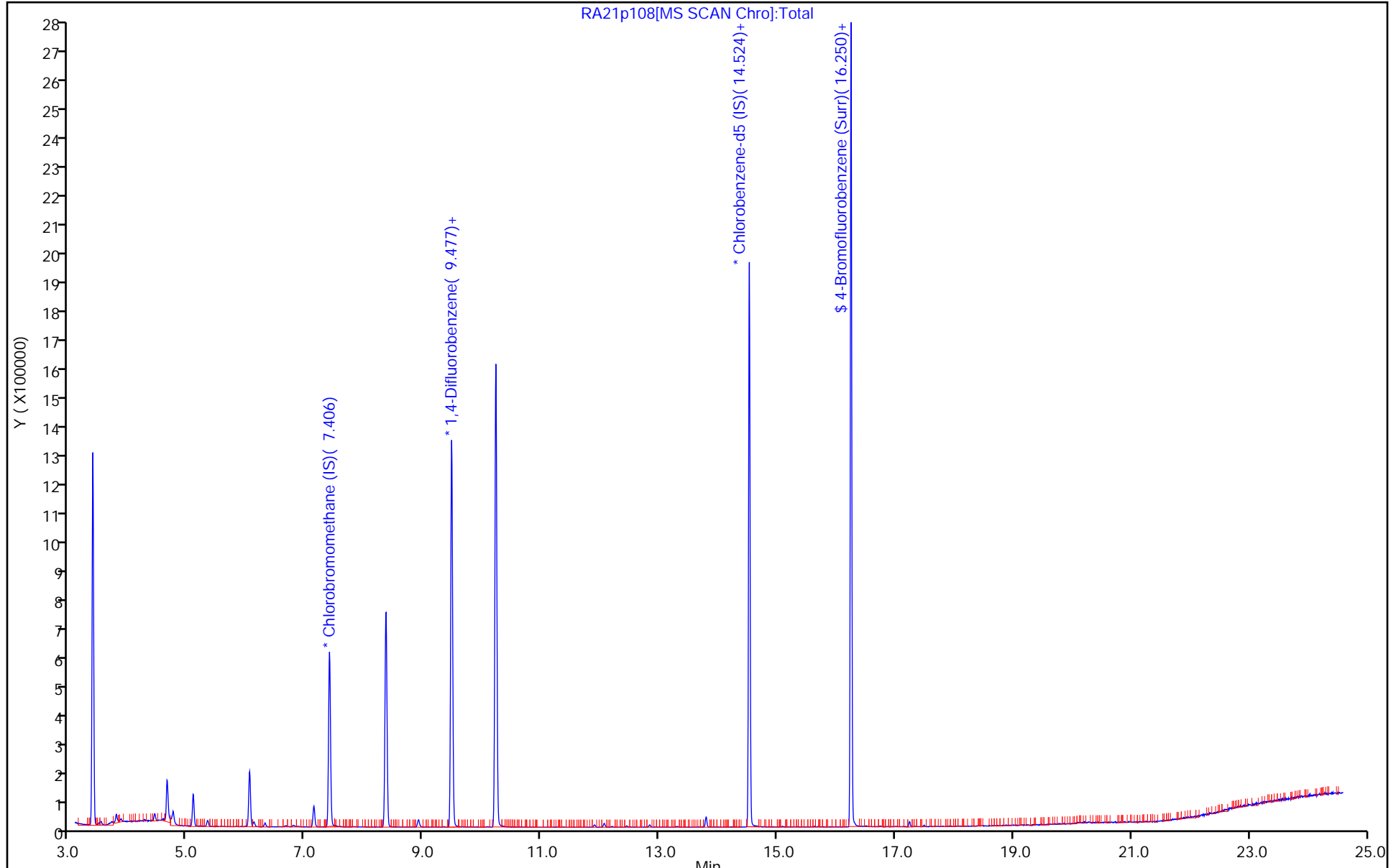
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p108.D
 Lims ID: 140-13996-A-6
 Client ID: BLDG-A INFLUENT
 Sample Type: Client
 Inject. Date: 22-Jan-2019 00:57:30 ALS Bottle#: 8 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-014
 Misc. Info.: 140-13996-A-6
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 00:29:58 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 15:15:38

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.03	100.82

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p108.D

Injection Date: 22-Jan-2019 00:57:30

Instrument ID: MR

Lims ID: 140-13996-A-6

Lab Sample ID: 140-13996-6

Client ID: BLDG-A INFLUENT

Operator ID: afb

ALS Bottle#: 8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

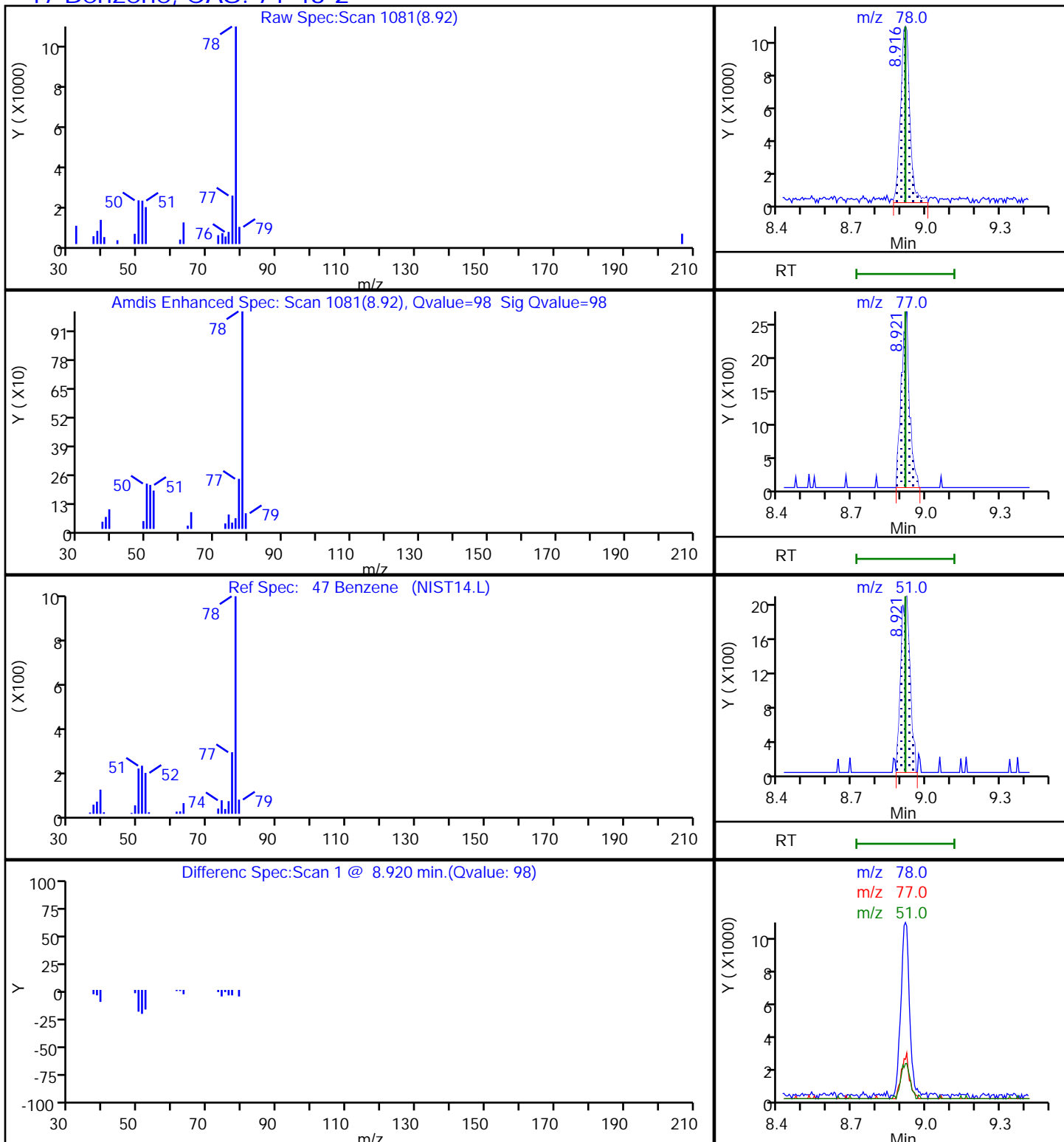
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p108.D

Injection Date: 22-Jan-2019 00:57:30

Instrument ID: MR

Lims ID: 140-13996-A-6

Lab Sample ID: 140-13996-6

Client ID: BLDG-A INFLUENT

Operator ID: afb

ALS Bottle#: 8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

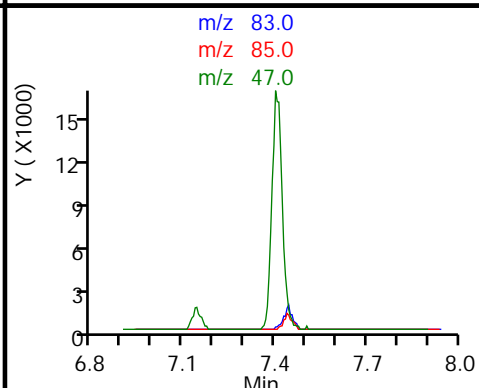
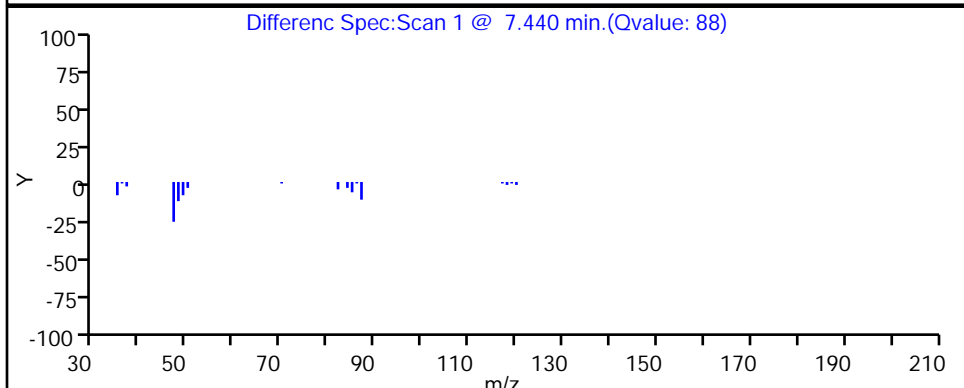
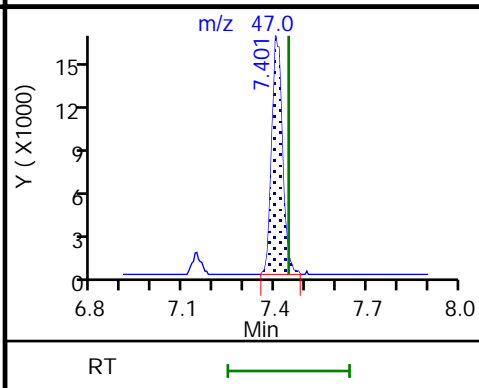
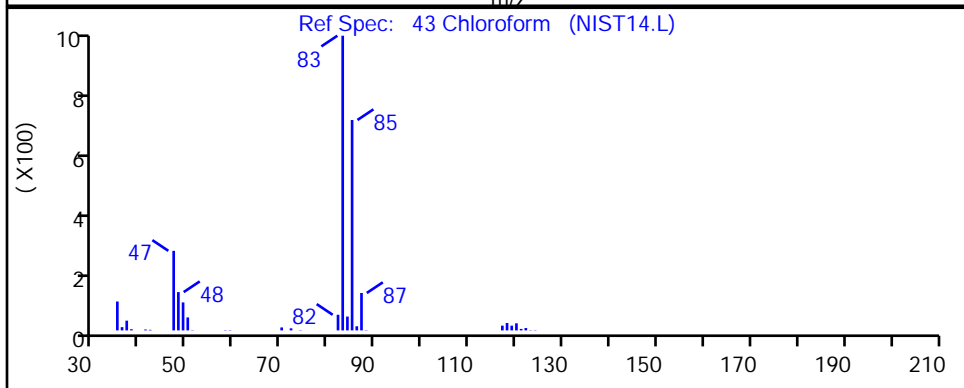
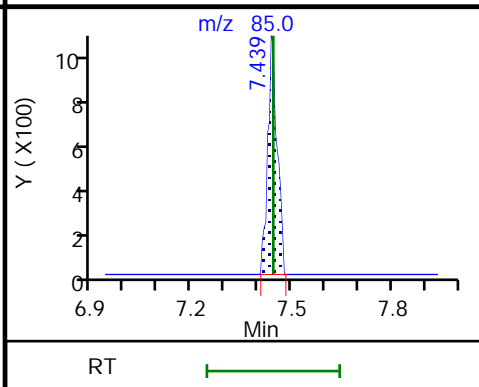
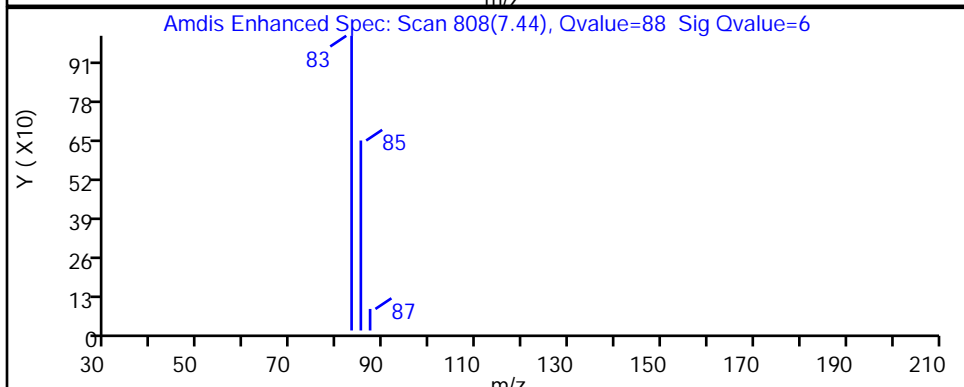
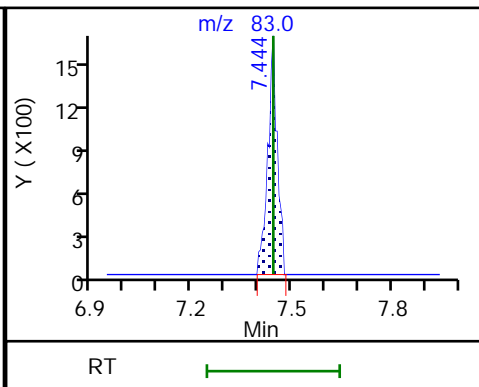
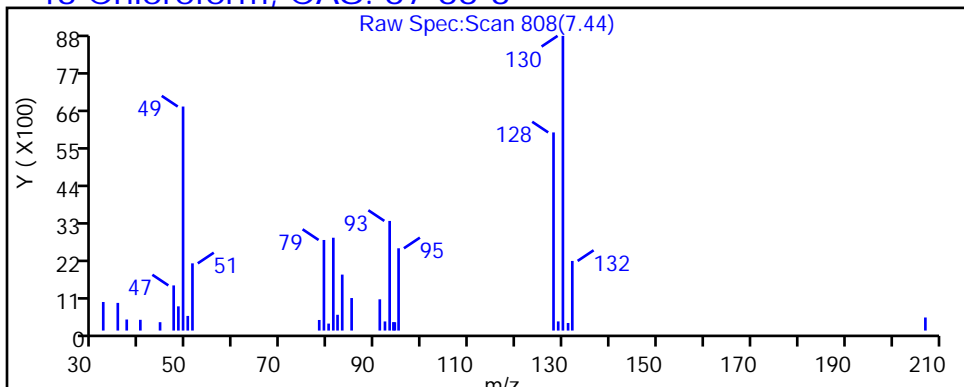
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p108.D

Injection Date: 22-Jan-2019 00:57:30

Instrument ID: MR

Lims ID: 140-13996-A-6

Lab Sample ID: 140-13996-6

Client ID: BLDG-A INFLUENT

Operator ID: afb

ALS Bottle#: 8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

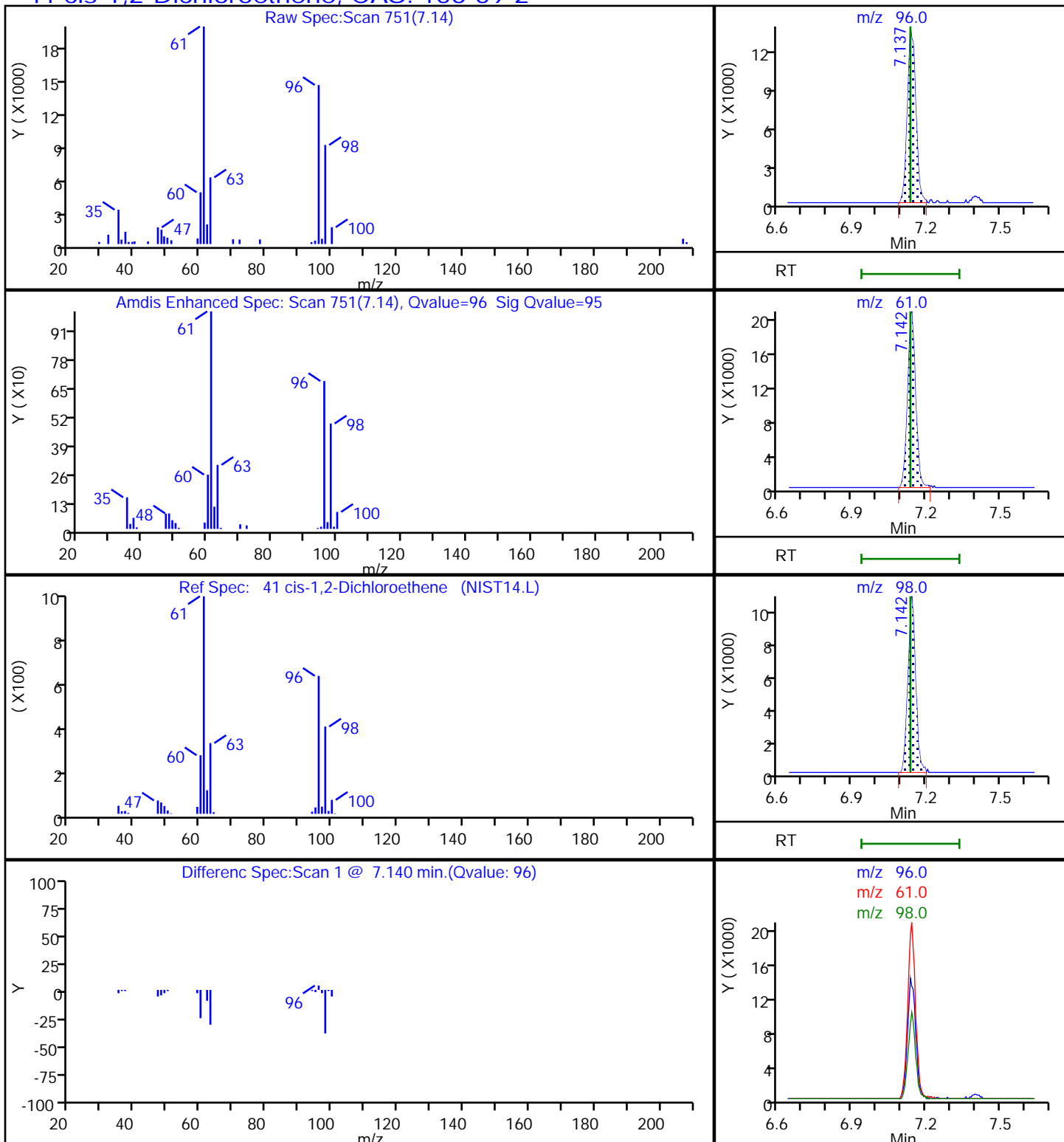
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p108.D

Injection Date: 22-Jan-2019 00:57:30

Instrument ID: MR

Lims ID: 140-13996-A-6

Lab Sample ID: 140-13996-6

Client ID: BLDG-A INFLUENT

Operator ID: afb

ALS Bottle#: 8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

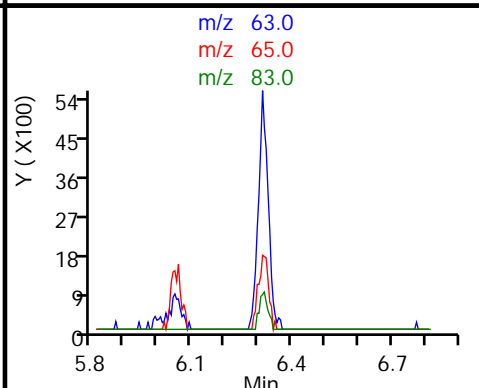
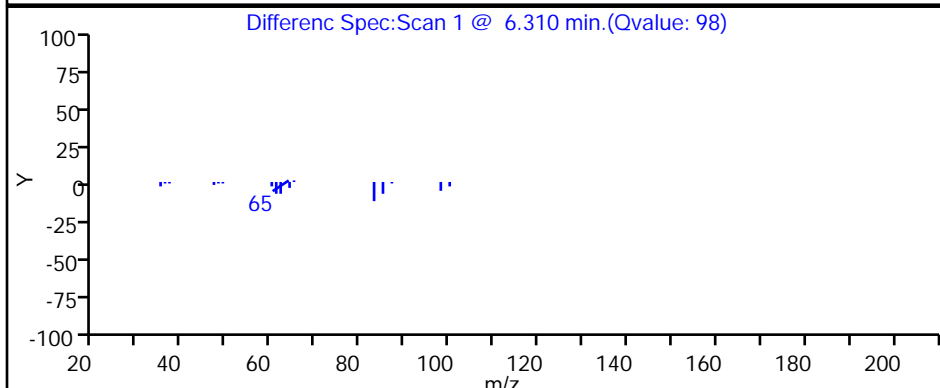
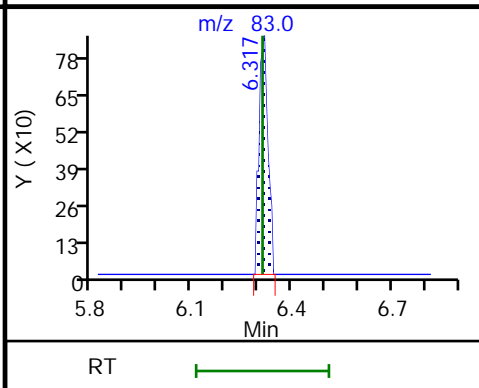
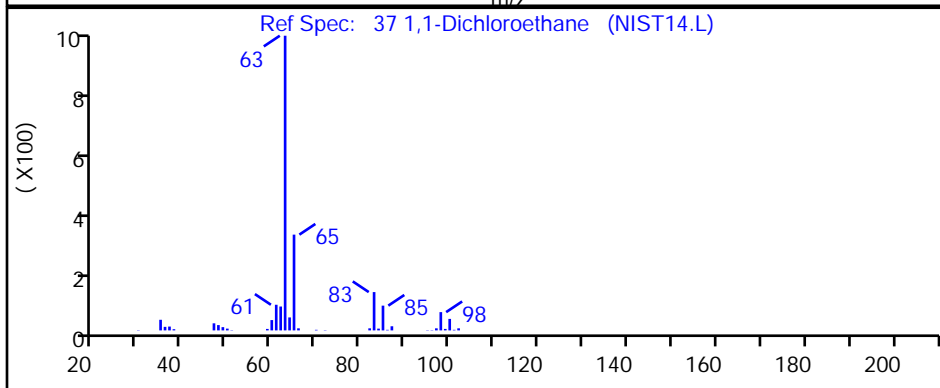
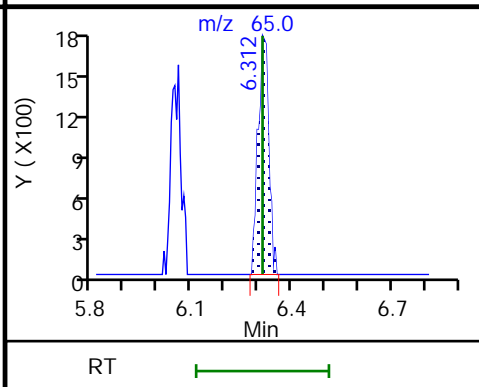
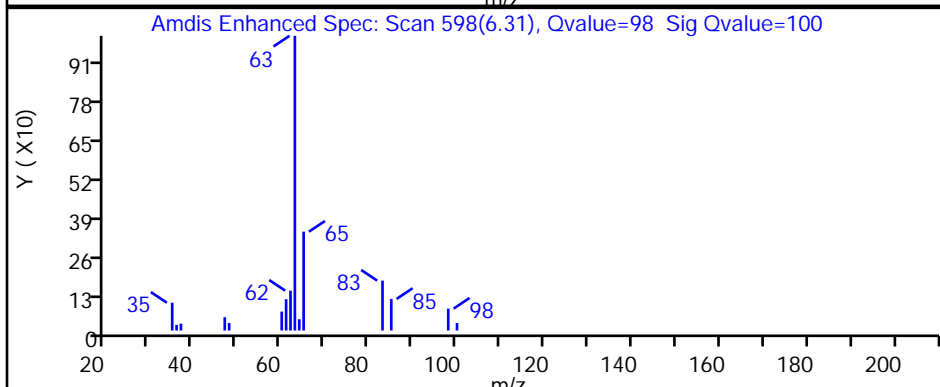
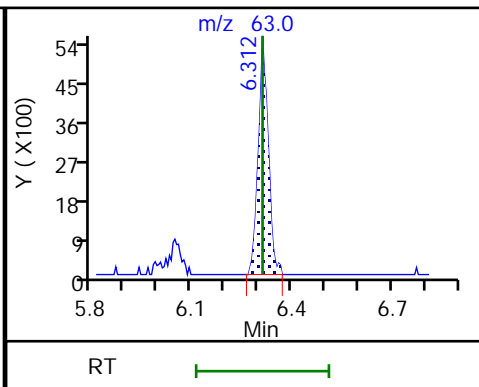
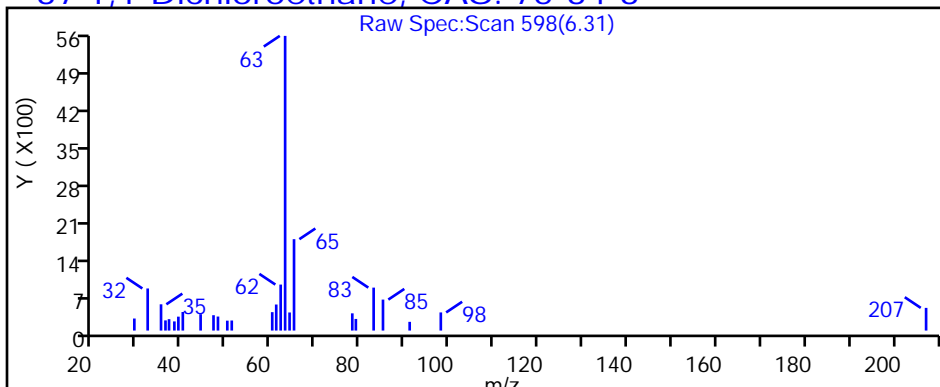
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p108.D

Injection Date: 22-Jan-2019 00:57:30

Instrument ID: MR

Lims ID: 140-13996-A-6

Lab Sample ID: 140-13996-6

Client ID: BLDG-A INFLUENT

Operator ID: afb

ALS Bottle#: 8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

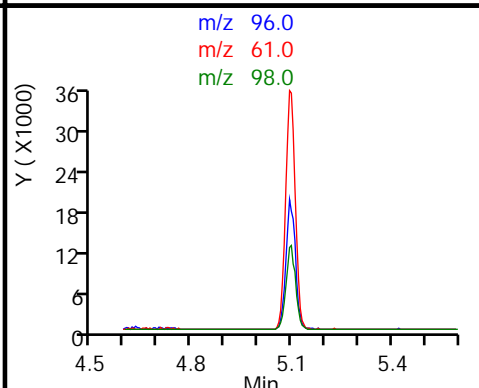
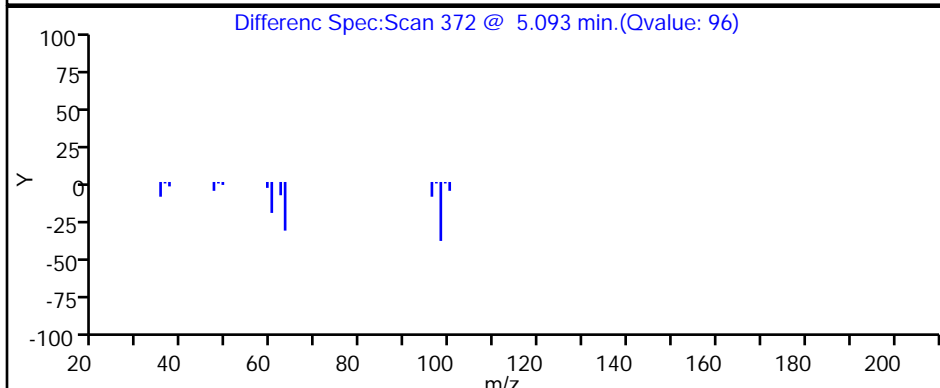
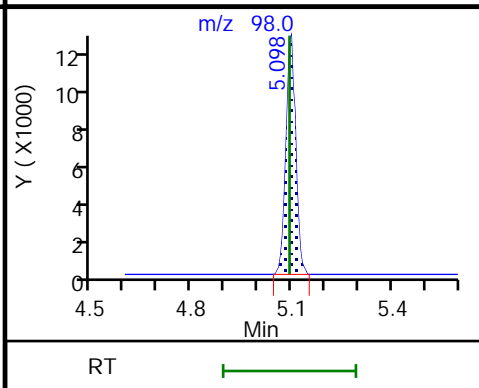
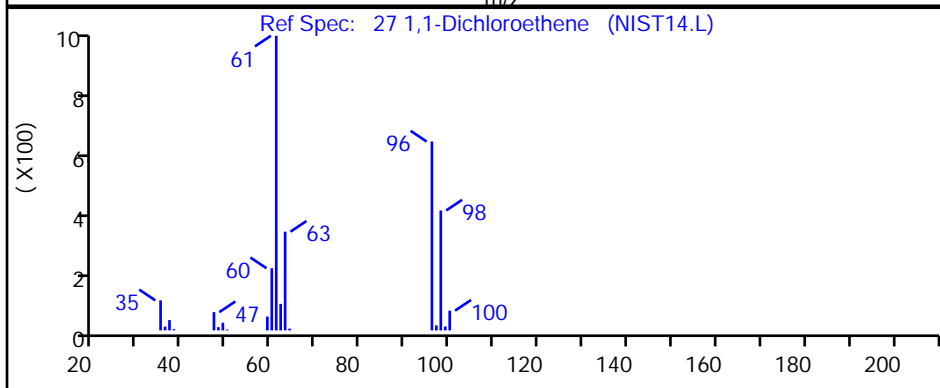
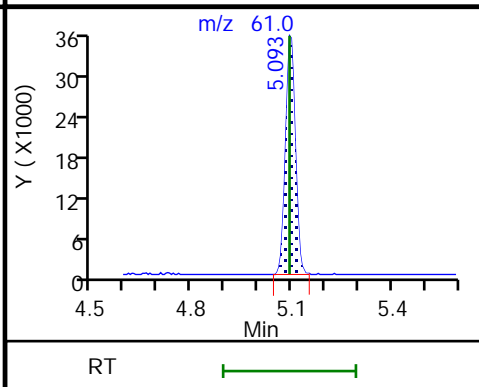
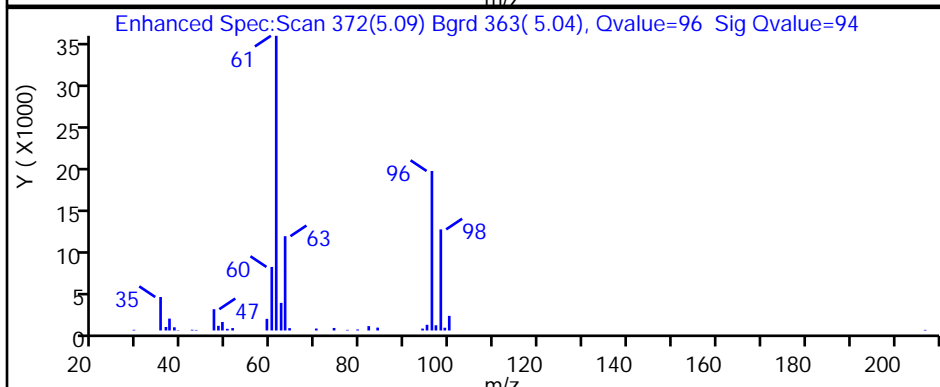
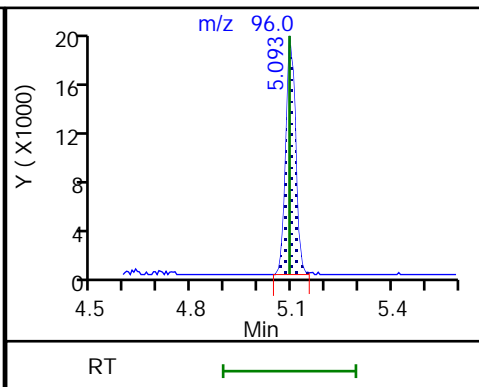
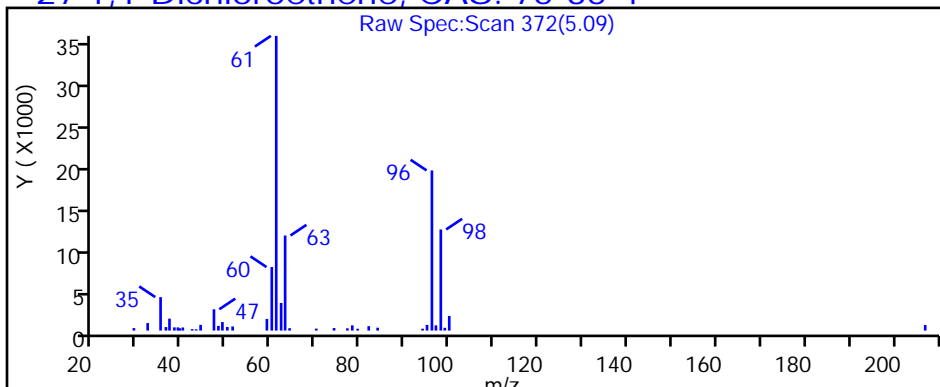
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p108.D

Injection Date: 22-Jan-2019 00:57:30

Instrument ID: MR

Lims ID: 140-13996-A-6

Lab Sample ID: 140-13996-6

Client ID: BLDG-A INFLUENT

Operator ID: afb

ALS Bottle#: 8 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

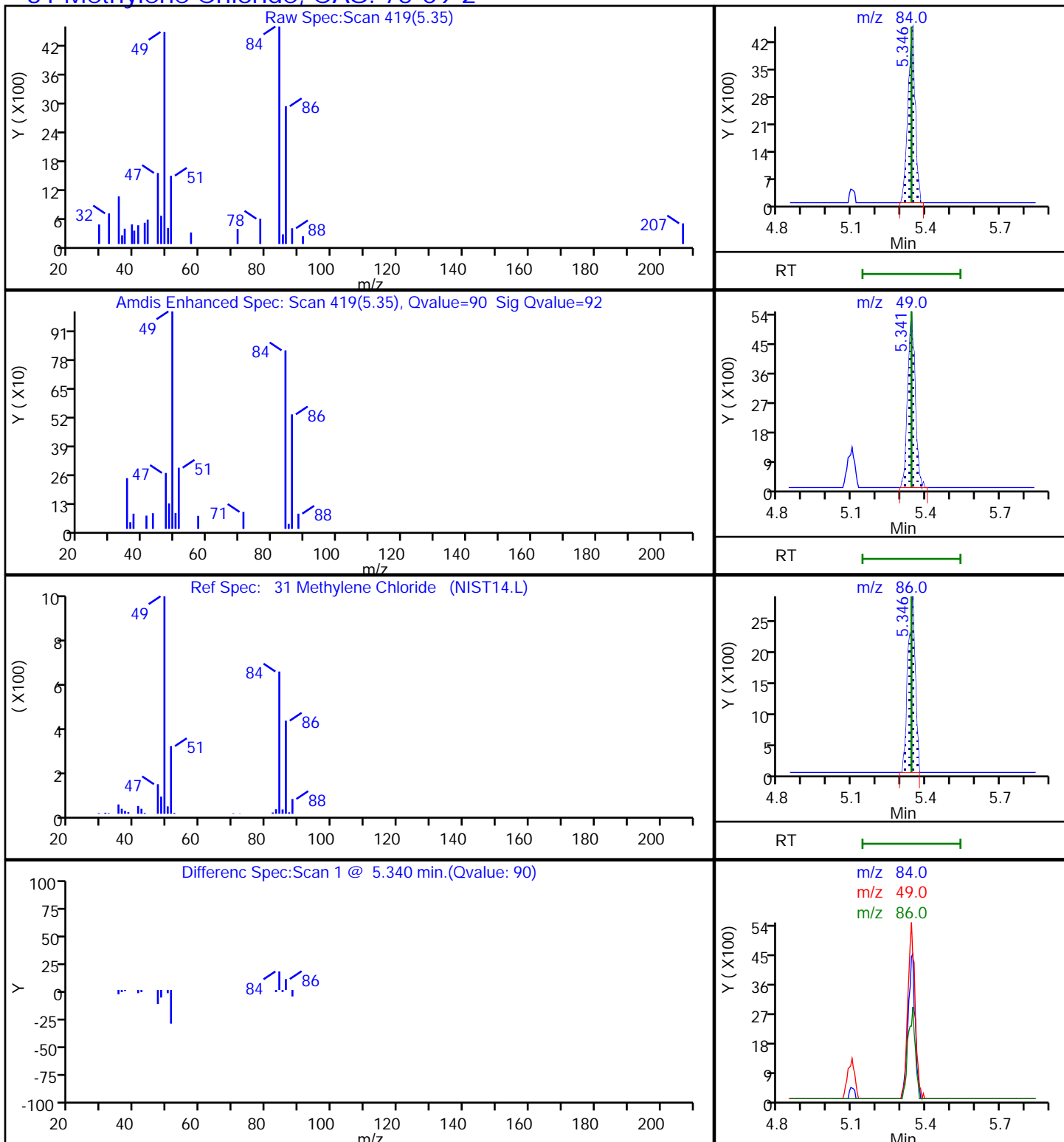
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p108.D

Injection Date: 22-Jan-2019 00:57:30

Instrument ID: MR

Lims ID: 140-13996-A-6

Lab Sample ID: 140-13996-6

Client ID: BLDG-A INFLUENT

Operator ID: afb

ALS Bottle#: 8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

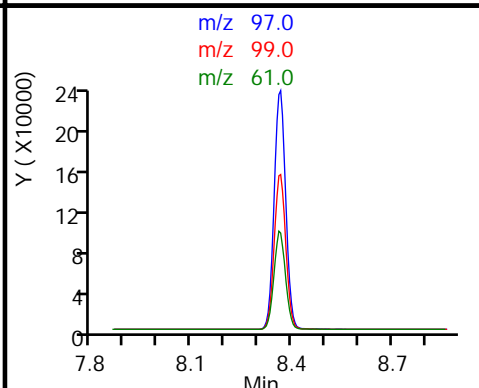
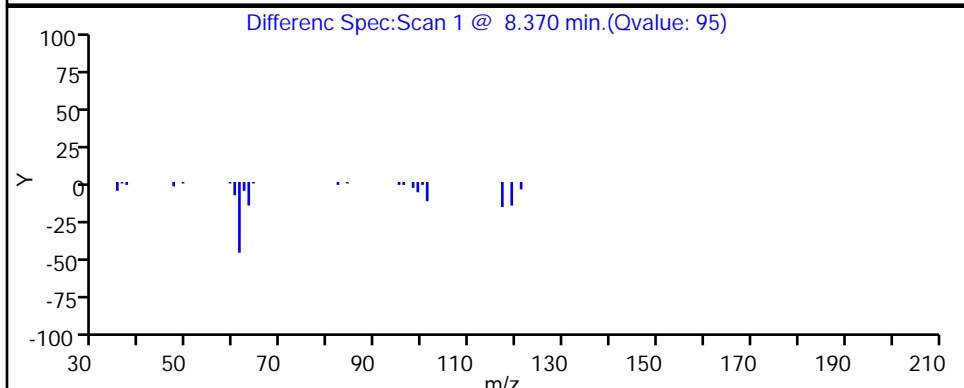
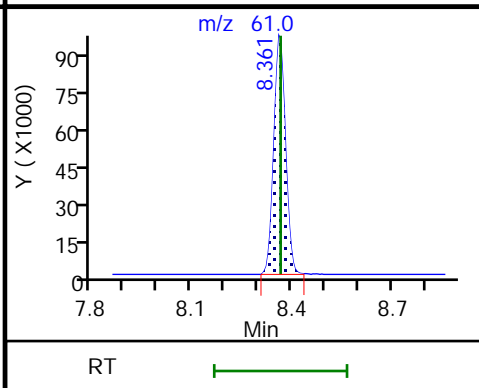
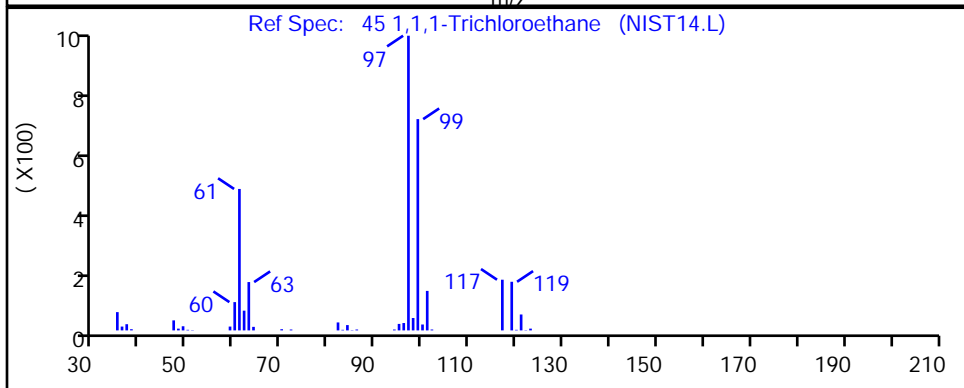
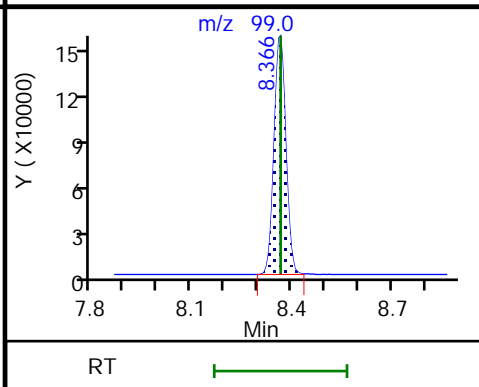
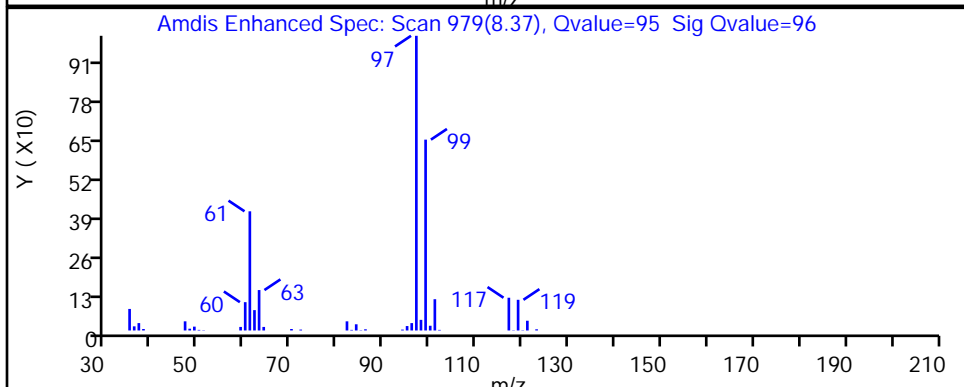
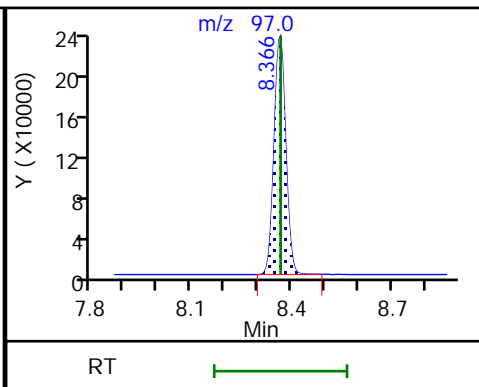
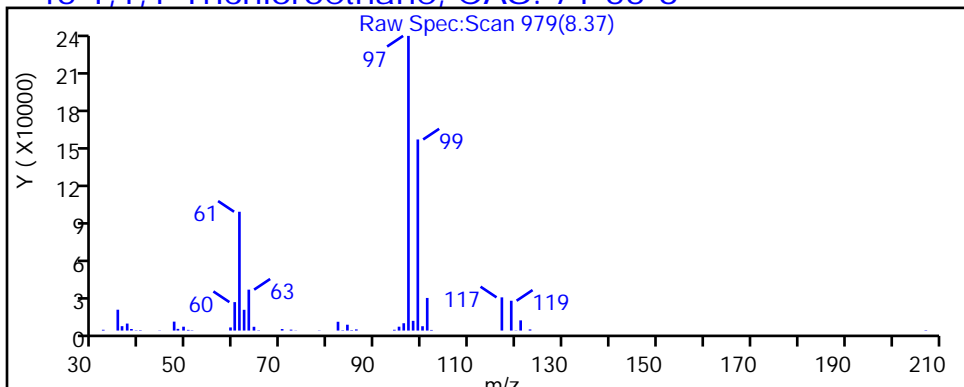
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RA21p108.D

Injection Date: 22-Jan-2019 00:57:30

Instrument ID: MR

Lims ID: 140-13996-A-6

Lab Sample ID: 140-13996-6

Client ID: BLDG-A INFLUENT

Operator ID: afb

ALS Bottle#: 8 Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

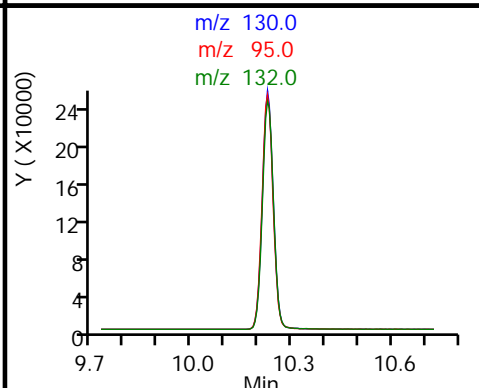
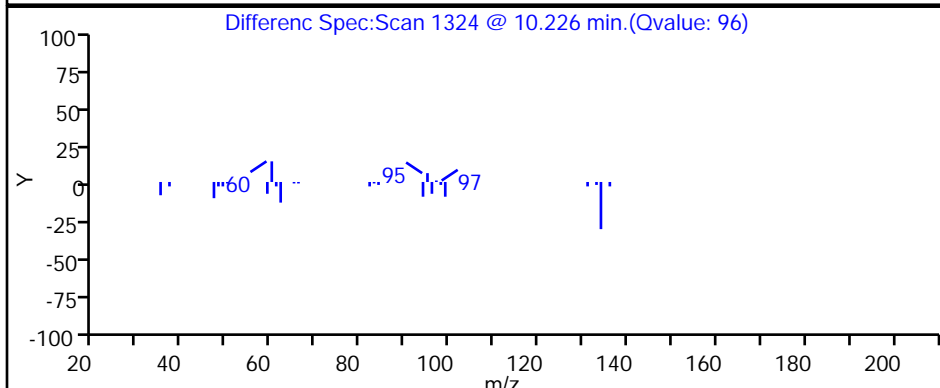
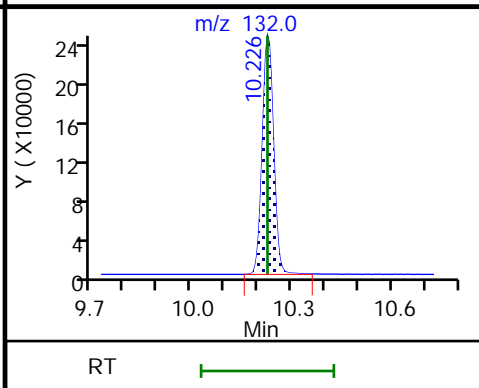
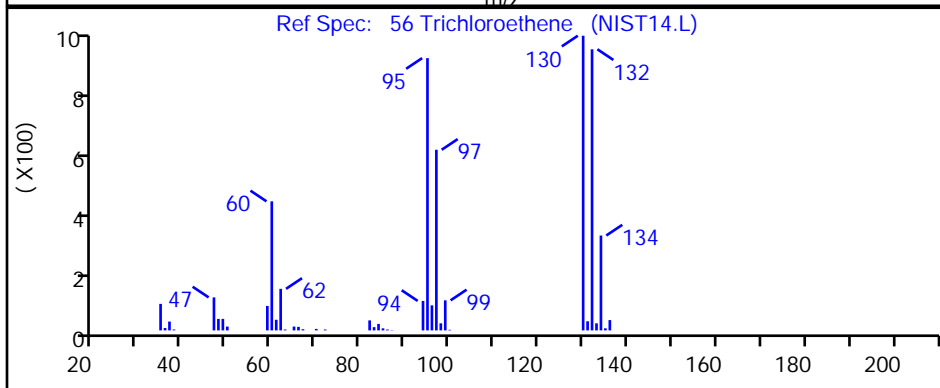
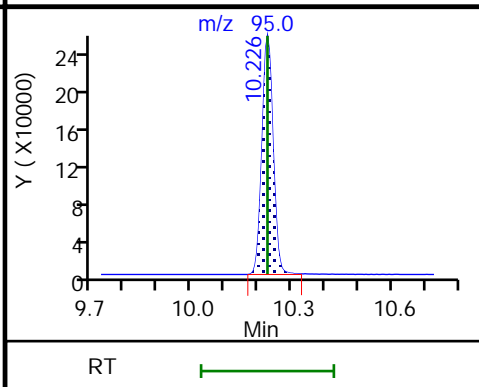
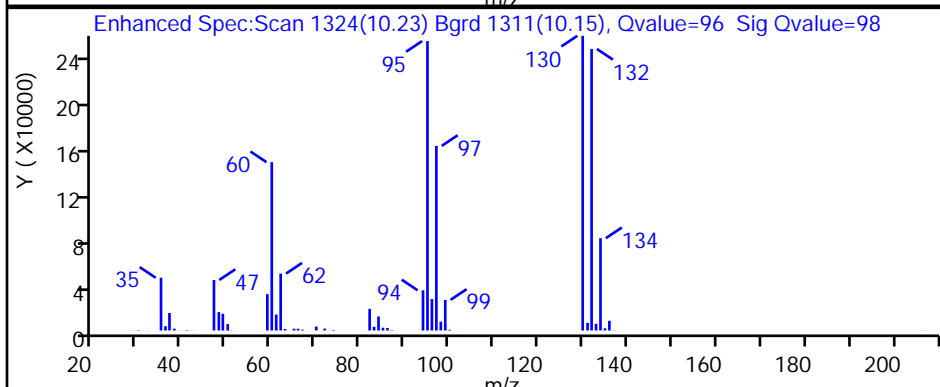
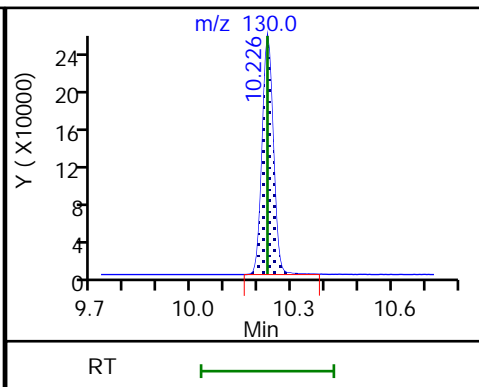
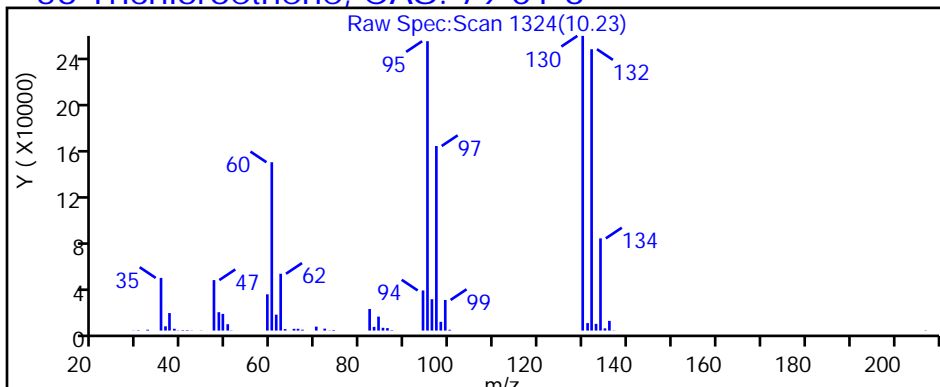
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.6032	2.5523	2.4630	Ave		2.3734			6.7		30.0				
	2.3273	2.2136	2.2367	2.4103	2.1808												
Propene	+++++	+++++	+++++	0.8419	0.7507	Ave		0.7296			8.2		30.0				
	0.7221	0.6895	0.6844	0.7524	0.6660												
Dichlorodifluoromethane	+++++	+++++	4.5412	4.2461	5.3003	Ave		4.3524			11.7		30.0				
	4.1510	3.9686	4.0428	4.8211	3.7479												
Chloromethane	+++++	+++++	0.4314	0.2960	0.3371	Ave		0.3061			18.1		30.0				
	0.2871	0.2733	0.2689	0.2912	0.2638												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.8991	3.2433	3.1843	3.5538	Ave		3.2404			10.6		30.0				
	3.0989	3.0537	3.1101	3.3433	2.6767												
Vinyl chloride	1.3396	1.3354	1.1215	1.1058	1.0442	Ave		1.0731			14.4		30.0				
	0.9887	0.9559	0.9544	0.9748	0.9105												
1,3-Butadiene	+++++	+++++	+++++	0.7017	0.6571	Ave		0.6506			4.0		30.0				
	0.6523	0.6352	0.6377	0.6500	0.6202												
Butane	+++++	+++++	1.3166	1.1752	1.2095	Ave		1.1321			8.5		30.0				
	1.1091	1.0560	1.0795	1.0850	1.0260												
Bromomethane	+++++	+++++	1.4266	1.2696	1.2705	Ave		1.2354			7.2		30.0				
	1.2054	1.1811	1.1809	1.2035	1.1456												
Chloroethane	+++++	+++++	0.6023	0.5518	0.4948	Ave		0.4970			10.7		30.0				
	0.4893	0.4606	0.4673	0.4597	0.4499												
Ethanol	+++++	+++++	+++++	0.3286	0.3153	Ave		0.2997			6.1		30.0				
	0.2949	0.2999	0.2981	0.2885	0.2724												
Vinyl bromide	+++++	+++++	1.4513	1.3532	1.3493	Ave		1.3020			5.9		30.0				
	1.2738	1.2507	1.2699	1.2460	1.2216												
2-Methylbutane	+++++	+++++	0.8639	0.8536	0.8359	Ave		0.7999			5.7		30.0				
	0.7979	0.7734	0.7606	0.7713	0.7425												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Acrolein	++++ 0.2149	++++ 0.2505	++++ 0.2493	0.3397 0.2426	0.2316 0.2411	Ave		0.2528			15.9		30.0				
Trichlorofluoromethane	6.6790 5.8128	6.2714 5.6498	6.2323 5.6579	6.0249 5.5584	5.9679 5.2697	Ave		5.9124			6.9		30.0				
Acetonitrile	++++ 0.2348	++++ 0.2373	++++ 0.2818	0.2630 0.2803	0.2428 0.2703	Ave		0.2586			7.8		30.0				
Acetone	++++ 0.4175	++++ 0.3860	++++ 0.3784	0.5760 0.3627	0.4291 0.3557	Ave		0.4151			18.3		30.0				
Pentane	++++ 0.1987	++++ 0.1907	++++ 0.1944	0.2412 0.1914	0.2034 0.1879	Ave		0.2011			9.2		30.0				
Isopropyl alcohol	++++ 1.1215	++++ 1.1376	++++ 1.1294	1.2584 1.0760	1.1488 1.0492	Ave		1.1316			5.9		30.0				
Ethyl ether	++++ 0.6540	++++ 0.6244	++++ 0.6327	0.7089 0.6995	0.6970 0.6464	Ave		0.6661			5.2		30.0				
1,1-Dichloroethene	1.6400 1.3612	1.4528 1.3523	1.4077 1.3829	1.3842 1.3970	1.3751 1.3233	Ave		1.4076			6.3		30.0				
Acrylonitrile	++++ 0.6195	++++ 0.6124	++++ 0.6202	++++ 0.6572	0.6255 0.6313	Ave		0.6277			2.5		30.0				
tert-Butyl alcohol	++++ 2.6737	++++ 2.7383	++++ 2.6973	2.6805 2.6655	2.7132 2.5593	Ave		2.6773			2.0		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.5282	3.6010 3.4530	3.7397 3.4392	3.5306 3.4042	3.5510 3.1580	Ave		3.4894			4.6		30.0				
Methylene Chloride	++++ 1.2853	++++ 1.1917	++++ 1.1531	2.0228 1.1482	1.5003 1.0647	Ave		1.3380			24.9		30.0				
3-Chloropropene	++++ 1.3439	++++ 1.2944	1.1777 1.2837	1.4302 1.3374	1.3141 1.2919	Ave		1.3092			5.4		30.0				
Carbon disulfide	++++ 3.4096	++++ 3.3395	3.3655 3.3248	3.2471 3.4285	3.3320 3.2774	Ave		3.3406			1.8		30.0				
trans-1,2-Dichloroethene	1.5926 1.4009	1.5829 1.3797	1.4276 1.4044	1.3885 1.4254	1.3834 1.3721	Ave		1.4358			5.7		30.0				
2-Methylpentane	++++ 1.8951	++++ 1.8425	++++ 1.8466	1.9630 1.9346	1.9304 1.8132	Ave		1.8940			2.8		30.0				
Methyl tert-butyl ether	++++ 4.5873	++++ 4.5288	4.7495 4.5802	4.4631 4.6026	4.5963 4.4400	Ave		4.5685			2.1		30.0				
1,1-Dichloroethane	2.6815 2.3300	2.6739 2.2911	2.4729 2.3182	2.3130 2.3408	2.3587 2.2447	Ave		2.4025			6.5		30.0				
Vinyl acetate	++++ 2.2364	++++ 2.3368	++++ 2.4359	2.0297 2.5381	2.1537 2.5129	Ave		2.3205			8.2		30.0				
2-Butanone (MEK)	++++ 0.5380	++++ 0.5309	++++ 0.5519	0.5759 0.5616	0.5098 0.5445	Ave		0.5446			3.9		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13996-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	++++ 0.8187	++++ 0.8108	0.9023 0.8291	0.8416 0.8382	0.8376 0.8031	Ave		0.8352			3.6		30.0				
cis-1,2-Dichloroethene	1.6200 1.4112	1.4958 1.4310	1.4342 1.4304	1.4272 1.4418	1.3943 1.3928	Ave		1.4479			4.6		30.0				
Ethyl acetate	++++ 2.0207	++++ 2.0336	1.8097 2.1099	1.9184 2.1701	1.9214 2.1110	Ave		2.0119			6.0		30.0				
Chloroform	4.2334 3.7394	4.0960 3.6835	3.8341 3.7449	3.7602 3.7523	3.7763 3.5872	Ave		3.8207			5.1		30.0				
Tetrahydrofuran	++++ 0.8846	++++ 0.8714	++++ 0.8870	0.8784 0.9150	0.8832 0.8836	Ave		0.8862			1.5		30.0				
1,1,1-Trichloroethane	4.9709 4.7770	4.9939 4.7670	5.0122 4.8476	4.7467 4.8764	4.7402 4.7023	Ave		4.8434			2.4		30.0				
1,2-Dichloroethane	0.5380 0.5057	0.5327 0.4936	0.5166 0.4997	0.4858 0.5068	0.4926 0.4915	Ave		0.5063			3.5		30.0				
Benzene	0.7533 0.6321	0.7075 0.6240	0.7019 0.6266	0.6312 0.6238	0.6214 0.5956	Ave		0.6517			7.8		30.0				
Cyclohexane	++++ 0.1013	++++ 0.0986	++++ 0.1001	0.0959 0.0971	0.0939 0.0911	Ave		0.0968			3.7		30.0				
1-Butanol	++++ 0.0448	++++ 0.0477	++++ 0.0492	++++ 0.0516	0.0330 0.0509	Ave		0.0462			14.9		30.0				
Carbon tetrachloride	0.9231 0.9489	0.9429 0.9372	0.7537 0.9263	0.9038 0.9692	0.9350 0.9273	Ave		0.9167			6.5		30.0				
2,3-Dimethylpentane	++++ 0.1378	++++ 0.1390	++++ 0.1212	0.1277 0.1410	0.1355 0.1365	Ave		0.1349			5.2		30.0				
Thiophene	++++ 0.3778	++++ 0.3718	0.3563 0.3816	0.3607 0.3893	0.3698 0.3754	Ave		0.3728			2.9		30.0				
2,2,4-Trimethylpentane	++++ 0.8423	++++ 0.8248	++++ 0.8652	0.8182 0.8535	0.8128 0.8176	Ave		0.8342			2.3		30.0				
1,2-Dichloropropane	++++ 0.2041	++++ 0.2015	0.2130 0.2054	0.1991 0.2089	0.2024 0.2020	Ave		0.2045			2.2		30.0				
Heptane	++++ 0.2142	++++ 0.2122	++++ 0.1976	0.1979 0.2154	0.2071 0.2066	Ave		0.2083			3.5		30.0				
Trichloroethene	0.4192 0.3857	0.3851 0.3869	0.4007 0.4221	0.3771 0.3913	0.3880 0.3727	Ave		0.3929			4.2		30.0				
Dibromomethane	++++ 0.3459	++++ 0.3374	++++ 0.3725	0.3565 0.3576	0.3464 0.3447	Ave		0.3514			3.1		30.0				
Bromodichloromethane	++++ 0.6680	++++ 0.6726	0.5971 0.7005	0.5918 0.7174	0.6239 0.6980	Ave		0.6587			7.4		30.0				
1,4-Dioxane	++++ 0.0965	++++ 0.1030	++++ 0.1037	0.0992 0.1007	0.0973 0.0954	Ave		0.0994			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13996-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.2243	++++ 0.2331	0.2139 0.2468	0.1766 0.2628	0.2044 0.2582	Ave		0.2275			12.8		30.0				
Methylcyclohexane	++++ 0.4067	++++ 0.4050	0.3972 0.4110	0.3842 0.4158	0.3938 0.4053	Ave		0.4024			2.5		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.3577	++++ 0.3715	++++ 0.3933	0.2895 0.4035	0.3277 0.3952	Ave		0.3626			11.5		30.0				
cis-1,3-Dichloropropene	++++ 0.3940	0.3635 0.4127	0.3972 0.4288	0.3514 0.4368	0.3808 0.4249	Ave		0.3948			8.2		30.0				
trans-1,3-Dichloropropene	++++ 0.4780	0.4035 0.4968	0.3959 0.5178	0.4276 0.5209	0.4537 0.5119	Ave		0.4674			10.5		30.0				
Toluene	1.0184 0.9698	0.9133 0.9624	0.9750 0.9710	0.9478 0.9638	0.9541 0.9102	Ave		0.9586			3.2		30.0				
1,1,2-Trichloroethane	0.2339 0.2639	0.2426 0.2594	0.2564 0.2610	0.2580 0.2630	0.2596 0.2452	Ave		0.2543			4.0		30.0				
2-Hexanone	++++ 0.1981	++++ 0.2103	++++ 0.2238	0.1399 0.2293	0.1787 0.2239	Ave		0.2006			16.0		30.0				
Dibromochloromethane	0.6655 0.7840	0.5795 0.8296	0.6334 0.8666	0.6501 0.8735	0.6985 0.8331	Ave		0.7414			14.6		30.0				
Octane	++++ 0.3146	++++ 0.3133	0.2922 0.3156	0.3033 0.3109	0.2998 0.2932	Ave		0.3054			3.1		30.0				
C8 Range	++++ 2.1678	++++ 2.1237	++++ 2.1591	++++ 2.2092	2.0961 2.0601	Ave		2.1360			2.5		30.0				
1,2-Dibromoethane (EDB)	++++ 0.5766	++++ 0.5804	0.5000 0.5952	0.4942 0.5984	0.5448 0.5694	Ave		0.5574			7.3		30.0				
Tetrachloroethene	0.4858 0.4849	0.4864 0.4819	0.4732 0.4752	0.4838 0.4653	0.4706 0.4417	Ave		0.4749			2.9		30.0				
Chlorobenzene	0.8210 0.8508	0.8425 0.8373	0.8551 0.8444	0.8450 0.8430	0.8379 0.7968	Ave		0.8374			2.0		30.0				
Ethylbenzene	1.3703 1.4178	1.3589 1.4128	1.4055 1.4174	1.3343 1.4023	1.4017 1.2986	Ave		1.3820			2.9		30.0				
m-Xylene & p-Xylene	1.1137 1.1838	1.1023 1.1550	1.1618 1.1536	1.1488 1.1251	1.1673 1.0234	Ave		1.1335			4.1		30.0				
Bromoform	++++ 0.7606	++++ 0.8485	0.5893 0.9286	0.6166 0.9279	0.6638 0.8938	Ave		0.7786			18.1		30.0				
Styrene	++++ 0.7750	++++ 0.7975	0.6004 0.8292	0.6182 0.8487	0.6786 0.7961	Ave		0.7430			13.0		30.0				
o-Xylene	1.1430 1.2366	1.1230 1.2060	1.2624 1.1986	1.2290 1.1769	1.2492 1.0804	Ave		1.1905			5.0		30.0				
Nonane	++++ 0.4737	++++ 0.4580	0.4455 0.4538	0.4515 0.4433	0.4801 0.4032	Ave		0.4511			5.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13996-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.5797 0.6456	0.5118 0.6455	0.5697 0.6181	0.5802 0.6658	0.6188 0.6146	Ave		0.6050			7.5		30.0				
1,2,3-Trichloropropane	++++ 0.3084	++++ 0.3034	0.2911 0.3046	0.2918 0.3115	0.2978 0.2914	Ave		0.3000			2.7		30.0				
Isopropylbenzene	++++ 1.7012	++++ 1.6661	1.8308 1.6871	1.7528 1.6694	1.7150 1.5307	Ave		1.6941			5.0		30.0				
Propylbenzene	0.4435 0.4963	0.4328 0.4795	0.4534 0.4859	0.4640 0.4778	0.4755 0.4438	Ave		0.4652			4.5		30.0				
2-Chlorotoluene	++++ 0.4524	0.3991 0.4310	0.4619 0.4318	0.4417 0.4245	0.4398 0.3929	Ave		0.4306			5.3		30.0				
4-Ethyltoluene	1.5529 1.8829	1.6047 1.8611	1.7828 1.8557	1.7531 1.8469	1.7972 1.6563	Ave		1.7594			6.6		30.0				
1,3,5-Trimethylbenzene	0.6792 0.7724	0.6523 0.7416	0.7326 0.7410	0.7228 0.7434	0.7292 0.6843	Ave		0.7199			5.1		30.0				
Alpha Methyl Styrene	++++ 0.6781	++++ 0.7295	++++ 0.7535	++++ 0.7838	0.5439 0.7289	Ave		0.6844			13.4		30.0				
Decane	++++ 0.6849	++++ 0.6585	0.6176 0.6522	0.6408 0.6491	0.6488 0.5849	Ave		0.6421			4.6		30.0				
tert-Butylbenzene	1.6566 1.8841	1.6665 1.7827	1.8313 1.7468	1.8740 1.6988	1.8639 1.5293	Ave		1.7534			6.6		30.0				
1,2,4-Trimethylbenzene	1.4293 1.7233	1.4880 1.6671	1.6887 1.6372	1.6986 1.5922	1.7123 1.4293	Ave		1.6066			7.2		30.0				
1,3-Dichlorobenzene	1.1997 1.1856	1.0963 1.1603	1.2442 1.1572	1.1823 1.1516	1.1621 1.0583	Ave		1.1598			4.5		30.0				
sec-Butylbenzene	2.0787 2.3069	2.1298 2.2195	2.2743 2.1908	2.2407 2.1561	2.2363 1.8732	Ave		2.1706			5.7		30.0				
Benzyl chloride	++++ 1.2529	++++ 1.3231	1.0998 1.4041	1.0436 1.3938	1.1034 1.2924	Ave		1.2392			11.3		30.0				
1,4-Dichlorobenzene	1.2196 1.2112	1.1487 1.1594	1.2267 1.1399	1.2179 1.1212	1.1651 1.0340	Ave		1.1644			5.1		30.0				
4-Isopropyltoluene	2.1095 2.3345	2.1432 2.2554	2.2305 2.2238	2.2370 2.1784	2.2728 1.9244	Ave		2.1910			5.2		30.0				
1,2,3-Trimethylbenzene	1.6103 1.8346	1.5786 1.7874	1.8623 1.7524	1.7831 1.7335	1.7558 1.5556	Ave		1.7253			6.2		30.0				
1,2-Dichlorobenzene	1.1708 1.1557	1.2083 1.1157	1.2580 1.1029	1.2065 1.0865	1.1355 1.0034	Ave		1.1443			6.3		30.0				
Indane	1.4503 1.4994	1.3817 1.4300	1.4785 1.4226	1.4862 1.3893	1.4419 1.2529	Ave		1.4233			5.0		30.0				
Indene	++++ 1.2013	++++ 1.2223	1.0339 1.2542	1.0803 1.2953	1.0663 1.1920	Ave		1.1682			8.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.8231 1.8829	1.6985 1.8028	1.8359 1.7871	1.8719 1.7597	1.8266 1.5551	Ave		1.7844			5.4		30.0				
Undecane	++++ 0.8059	++++ 0.7917	++++ 0.7809	++++ 0.7402	0.7701 0.6720	Ave		0.7598			5.8		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.5799	++++ 0.6160	0.4391 0.6515	0.4709 0.6213	0.4861 0.5926	Ave		0.5572			14.3		30.0				
1,2,4,5-Tetramethylbenzene	++++ 2.1235	++++ 2.1635	2.1451 2.1540	2.1430 1.9985	1.9593 1.8488	Ave		2.0670			5.7		30.0				
Dodecane	++++ 0.7733	++++ 0.8936	++++ 0.8877	0.8688 0.7212	0.6803 0.7447	Ave		0.7957			10.9		30.0				
1,2,4-Trichlorobenzene	++++ 1.1894	++++ 1.2694	1.4472 1.2818	1.3888 1.0940	1.0856 1.1269	Ave		1.2354			10.9		30.0				
Naphthalene	++++ 2.0750	3.4525 2.4487	2.8184 2.5087	2.7367 2.1182	1.8255 ++++	Ave		2.4980			20.6		30.0				
Hexachlorobutadiene	++++ 1.4923	++++ 1.4393	1.7181 1.4314	1.5746 1.2072	1.3912 1.2353	Ave		1.4362			11.7		30.0				
1,2,3-Trichlorobenzene	++++ 1.1295	++++ 1.2212	1.4432 1.2323	1.3860 0.9868	1.0237 1.0761	Ave		1.1873			13.9		30.0				
2-Methylnaphthalene	++++ 0.3586	++++ 0.9509	++++ 1.0808	++++ 0.6399	++++ 0.9374	Ave		0.7935			36.8		50.0				
1-Methylnaphthalene	++++ 0.3899	++++ 0.8629	++++ 0.9496	++++ 0.5203	++++ 0.7770	Ave		0.6999			33.7		50.0				
4-Bromofluorobenzene (Surr)	0.8488 0.8636	0.8528 0.8535	0.8654 0.8546	0.8648 0.8319	0.8641 0.8066	Ave		0.8506			2.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 165552	++++ 330784	13488 670931	27178 1511149	67965 2786793	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 51364	++++ 103039	++++ 205301	8965 471697	20715 851034	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 295289	++++ 593041	23530 1212691	45214 3022572	146259 4789313	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 20420	++++ 40844	2235 80675	3152 182542	9302 337068	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 220441	10161 456323	16805 932912	33908 2096072	98065 3420506	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	1811 70331	3480 142840	5811 286294	11775 611179	28814 1163551	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 46402	++++ 94920	++++ 191280	7472 407531	18132 792495	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 78896	++++ 157806	6822 323819	12514 680235	33375 1311043	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 85746	++++ 176496	7392 354225	13519 754560	35058 1463890	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 34804	++++ 68833	3121 140181	5876 288211	13655 574974	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 104882	++++ 224069	++++ 447098	17498 904290	43508 1740692	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 90610	++++ 186899	7520 380924	14410 781185	37233 1560991	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 56760	++++ 115570	4476 228167	9090 483547	23067 948871	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrolein	CBM	Ave	++++ 15289	++++ 37440	++++ 74788	3617 152096	6392 308108	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13996-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Trichlorofluoromethane	CBM	Ave	9029 413497	16343 844261	32292 1697186	64156 3484877	164680 6733950	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 16703	++++ 35460	++++ 84531	++++ 175714	2801 345458	6701 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Acetone	CBM	Ave	++++ 89101	++++ 173059	++++ 340521	18402 682117	35521 1363433	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 14137	++++ 28499	++++ 58302	2568 119973	5613 240067	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 239341	++++ 509997	++++ 1016357	40201 2023732	95103 4022317	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 46526	++++ 93310	++++ 189800	7549 438542	19232 826066	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	2217 96830	3786 202076	7294 414812	14740 875865	37945 1690964	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 44072	++++ 91512	++++ 186041	++++ 412056	17259 806690	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 190196	++++ 409183	13889 809098	28891 1671112	74242 3270376	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 250984	9384 515989	19377 1031649	37596 2134286	97989 4035478	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 91431	++++ 178076	++++ 345898	21540 719893	41401 1360585	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 95603	++++ 193431	6102 385054	15229 838478	36262 1650820	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 242543	++++ 499031	17438 997332	34577 2149500	91945 4188128	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	2153 99652	4125 206172	7397 421281	14785 893667	38175 1753401	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 134813	++++ 275324	10171 553915	20556 1212878	53163 2316982	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 326320	++++ 676752	24609 1373906	47525 2885627	126834 5673760	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	3625 165748	6968 342362	12813 695373	24630 1467554	65086 2868475	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 159088	++++ 349189	++++ 730693	21613 1591261	59429 3211124	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 38268	++++ 79333	++++ 165553	6132 352107	14067 695780	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 58239	++++ 121155	4675 248691	8962 525494	23112 1026278	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	2190 100389	3898 213838	7431 429081	15197 903953	38474 1779827	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13996-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 143745	++++ 303889	9377 632910	20428 1360573	53019 2697533	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	5723 266010	10674 550434	19866 1123349	40040 2352521	104204 4583947	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 62926	++++ 130211	++++ 266070	9354 573668	24371 1129072	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	6720 339819	13014 712345	25970 1454125	50545 3057281	130803 6008857	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4162 199683	7880 414101	15042 837957	29238 1778626	76773 3480930	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	5827 249589	10465 523482	20437 1050705	37991 2189441	96837 4217712	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 39991	++++ 82675	++++ 167839	5770 340746	14632 645373	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 17690	++++ 40004	++++ 82457	++++ 181076	5146 360622	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7141 374679	13947 786171	21947 1553305	54395 3401707	145724 6567265	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 54415	++++ 116636	++++ 235995	3528 494713	7686 966448	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 149183	++++ 311873	++++ 639928	10374 1366267	57630 2658371	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 332582	++++ 691902	++++ 1407509	25192 2995449	49245 5790015	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 80581	++++ 169011	++++ 344383	6201 733246	11982 1430590	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 84592	++++ 178041	++++ 361284	5754 756110	32279 1463381	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	3243 152289	5696 324569	11668 707793	22698 1373208	60473 2639630	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 136587	++++ 283066	++++ 586890	10846 1255108	53985 2441282	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 263754	++++ 564189	++++ 1174659	17387 2518000	97237 4943175	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 38117	++++ 86437	++++ 173912	5968 353467	15165 675333	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 88559	++++ 195505	++++ 413937	6227 922467	10629 1828238	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	++++ 160604	++++ 339768	++++ 689164	11565 1459181	23124 2870166	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 141224	++++ 311634	++++ 659470	17423 1416282	51070 2798783	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13996-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 155584	5376 346235	10488 719012	21150 1532867	59340 3009068	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 165754	5189 369600	10066 783879	22215 1677181	61443 3381888	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	6779 336279	11744 715966	24790 1469948	49243 3103222	129198 6012505	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	1557 91510	3120 192987	6520 395113	13406 846792	35149 1619482	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 68694	++++ 156406	++++ 338784	7267 738442	24199 1478910	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	4430 271846	7451 617174	16103 1311808	33778 2812660	94584 5503585	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 109095	++++ 233063	7429 477723	15759 1000926	40600 1936591	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	DFBZ	Ave	++++ 855982	++++ 1781529	++++ 3620641	++++ 7753468	++++ 14589114	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 199953	++++ 431756	12712 900939	25676 1926667	73769 3761382	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3234 168145	6255 358488	12031 719415	25138 1498188	63725 2918044	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	5465 295002	10833 622855	21742 1278293	43900 2714425	113462 5263414	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	9121 491615	17474 1050972	35735 2145561	69322 4515180	189812 8578718	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	14827 820994	28347 1718390	59080 3492522	119367 7245395	316153 13520878	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	++++ 263744	++++ 631165	14982 1405685	32037 2987666	89888 5904670	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd 5	Ave	++++ 268745	++++ 593262	15265 1255220	32117 2732738	91899 5258738	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	7608 428791	14440 897122	32097 1814388	63851 3789404	169158 7137002	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Nonane	CBZd 5	Ave	++++ 164273	++++ 340741	11326 686883	23460 1427330	65019 2663319	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	3859 223872	6581 480219	14484 935594	30142 2143813	83793 4060026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 106933	++++ 225670	7400 461156	15160 1003093	40330 1925261	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 589911	++++ 1239416	46548 2553866	91067 5375264	232238 10111819	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	2952 172077	5565 356669	11527 735475	24106 1538516	64393 2931395	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13996-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 156859	5132 320641	11745 653681	22951 1366689	59552 2595696	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	10337 652888	20634 1384436	45329 2809081	91082 5946732	243377 10941125	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	4521 267835	8388 551670	18627 1121740	37553 2393487	98748 4520211	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 235120	++++ 542707	++++ 1140621	28257 2523695	77610 4814736	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 237483	++++ 489862	15703 987208	33292 2090024	87862 3864099	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11027 653325	21429 1326146	46562 2644216	97365 5469769	252400 10102100	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	9514 597546	19133 1240172	42935 2478370	88253 5126755	231880 9441765	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7986 411115	14097 863153	31633 1751738	61425 3707873	157370 6991250	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	13837 799929	27386 1651103	57824 3316313	116417 6942238	302828 12374020	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 434461	++++ 984275	27963 2125520	54221 4487660	149421 8537696	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	8118 419983	14770 862511	31188 1725619	63275 3610216	157774 6830228	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	14042 809499	27559 1677824	56711 3366403	116224 7014221	307780 12712650	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	10719 636168	20298 1329610	47349 2652674	92640 5581569	237762 10276226	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	7793 400754	15537 829934	31984 1669523	62682 3498467	153773 6628325	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	9654 519916	17767 1063787	37591 2153540	77218 4473280	195256 8276746	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 416558	++++ 909289	26287 1898638	56129 4170791	144394 7874065	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	12135 652919	21840 1341073	46679 2705337	97253 5666096	247354 10272864	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 279455	++++ 588913	++++ 1182131	40009 2383371	102646 4439100	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 201092	++++ 458234	11163 986255	24464 2000539	65829 3914341	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 736323	++++ 1609444	54539 3260653	111338 6434741	265327 12213199	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 268129	++++ 664765	++++ 1343815	45141 2322024	92125 4919414	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 412431	++++ 944306	36794 1940306	72153 3522363	147015 7444026	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 719521	++++ 1821564	44394 3797602	71658 6820345	142183 247207 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Hexachlorobutadiene	CBZd 5	Ave	++++ 517445	++++ 1070672	43683 2166873	81808 3886960	188387 8160248	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 391665	++++ 908417	36693 1865471	72007 3177370	138621 7108780	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 124366	++++ 707384	++++ 1636134	++++ 2060557	++++ 6192720	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 135206	++++ 641933	++++ 1437560	++++ 1675488	++++ 5133017	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1129964 1197793	1096528 1269845	1100173 1293730	1123241 1339226	1170099 1332053	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	9.7						50			
Propene	+++++	+++++	+++++	15.4						50		
Dichlorodifluoromethane	+++++	+++++	4.3						50			
Chloromethane	+++++	+++++	40.9						50			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	20.3						50				
Vinyl chloride	24.8						50					
1,3-Butadiene	+++++	+++++	+++++	7.9						50		
Butane	+++++	+++++	16.3						50			
Bromomethane	+++++	+++++	15.5						50			
Chloroethane	+++++	+++++	21.2						50			
Ethanol	+++++	+++++	+++++	9.7						50		
Vinyl bromide	+++++	+++++	11.5						50			
2-Methylbutane	+++++	+++++	8.0						50			
Acrolein	+++++	+++++	+++++	34.3						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Trichlorofluoromethane	13.0						50					
Acetonitrile	+++++	+++++	+++++	1.7						50		
Acetone	+++++	+++++	+++++	38.8						80		
Pentane	+++++	+++++	+++++	19.9						50		
Isopropyl alcohol	+++++	+++++	+++++	11.2						50		
Ethyl ether	+++++	+++++	+++++	6.4						50		
1,1-Dichloroethene	16.5						50					
Acrylonitrile	+++++	+++++	+++++	+++++	-0.4						50	
tert-Butyl alcohol	+++++	+++++	0.1						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.2						50				
Methylene Chloride	+++++	+++++	+++++	51.2						80		
3-Chloropropene	+++++	+++++	-10.0						50			
Carbon disulfide	+++++	+++++	0.7						50			
trans-1,2-Dichloroethene	10.9						50					
2-Methylpentane	+++++	+++++	3.6						50			
Methyl tert-butyl ether	+++++	+++++	4.0						50			
1,1-Dichloroethane	11.6						50					
Vinyl acetate	+++++	+++++	+++++	-12.5						50		
2-Butanone (MEK)	+++++	+++++	+++++	5.7						50		
Hexane	+++++	+++++	8.0						50			
cis-1,2-Dichloroethene	11.9						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-10.0						50			
Chloroform	10.8						50					
Tetrahydrofuran	+++++	+++++	+++++	-0.9						50		
1,1,1-Trichloroethane	2.6						50					
1,2-Dichloroethane	6.3						50					
Benzene	15.6						50					
Cyclohexane	+++++	+++++	+++++	-1.0						50		
1-Butanol	+++++	+++++	+++++	+++++	-28.5						50	
Carbon tetrachloride	0.7						50					
2,3-Dimethylpentane	+++++	+++++	-10.2						50			
Thiophene	+++++	+++++	-4.4						50			
2,2,4-Trimethylpentane	+++++	+++++	3.7						50			
1,2-Dichloropropane	+++++	+++++	4.1						50			
Heptane	+++++	+++++	-5.1						50			
Trichloroethene	6.7						50					
Dibromomethane	+++++	+++++	6.0						50			
Bromodichloromethane	+++++	+++++	-9.3						50			
1,4-Dioxane	+++++	+++++	+++++	-0.2						50		
Methyl methacrylate	+++++	+++++	-6.0						50			
Methylcyclohexane	+++++	+++++	-1.3						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	-20.2						50		

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.9						50				
trans-1,3-Dichloropropene	+++++	-13.7						50				
Toluene	6.2						50					
1,1,2-Trichloroethane	-8.0						50					
2-Hexanone	+++++	+++++	+++++	-30.3						50		
Dibromochloromethane	-10.2						50					
Octane	+++++	+++++	-4.3						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-10.3						50			
Tetrachloroethene	2.3						50					
Chlorobenzene	-2.0						50					
Ethylbenzene	-0.8						50					
m-Xylene & p-Xylene	-1.7						50					
Bromoform	+++++	+++++	-24.3						50			
Styrene	+++++	+++++	-19.2						50			
o-Xylene	-4.0						50					
Nonane	+++++	+++++	-1.3						50			
1,1,2,2-Tetrachloroethane	-4.2						50					
1,2,3-Trichloropropane	+++++	+++++	-3.0						50			
Isopropylbenzene	+++++	+++++	8.1						50			
Propylbenzene	-4.7						50					
2-Chlorotoluene	+++++	-7.3						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	-11.7						50					
1,3,5-Trimethylbenzene	-5.7						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-20.5						50		
Decane	+++++	+++++	-3.8						50			
tert-Butylbenzene	-5.5						50					
1,2,4-Trimethylbenzene	-11.0						50					
1,3-Dichlorobenzene	3.4						50					
sec-Butylbenzene	-4.2						50					
Benzyl chloride	+++++	+++++	-11.2						50			
1,4-Dichlorobenzene	4.7						50					
4-Isopropyltoluene	-3.7						50					
1,2,3-Trimethylbenzene	-6.7						50					
1,2-Dichlorobenzene	2.3						50					
Indane	1.9						50					
Indene	+++++	+++++	-11.5						50			
Butylbenzene	2.2						50					
Undecane	+++++	+++++	+++++	1.3						50		
1,2-Dibromo-3-Chloropropane	+++++	+++++	-21.2						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	3.8						50			
Dodecane	+++++	+++++	+++++	9.2						50		
1,2,4-Trichlorobenzene	+++++	+++++	17.1						50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	38.2		+++++				80				
Hexachlorobutadiene	+++++	+++++	19.6						50			
1,2,3-Trichlorobenzene	+++++	+++++	21.5						50			
2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-54.8						80
1-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-44.3						80

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 16-Nov-2018 17:23:30 ALS Bottle#: 15 Worklist Smp#: 3
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-003
 Misc. Info.: 190391
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:32 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 09:42:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.411	7.397	0.014	70	313476	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.504	9.494	0.010	90	1754853	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.555	0.007	62	1609921	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	48	1339226	4.00	3.91	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	95	1511149	8.00	8.12	
7 Propene	41	3.416	3.420	-0.004	49	471697	8.00	8.25	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	3022572	8.00	8.86	
9 Chloromethane	52	3.583	3.586	-0.003	98	182542	8.00	7.61	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	87	2096072	8.00	8.25	
11 Acetaldehyde	44	3.707	3.710	-0.003	92	850959	40.0	38.0	
12 Vinyl chloride	62	3.712	3.711	0.001	71	611179	8.00	7.27	
13 Butadiene	54	3.777	3.780	-0.003	85	407531	8.00	7.99	
14 Butane	43	3.782	3.782	0.000	76	680235	8.00	7.67	
15 Bromomethane	94	3.998	3.995	0.003	93	754560	8.00	7.79	
16 Chloroethane	64	4.106	4.100	0.006	97	288211	8.00	7.40	
17 Ethanol	31	4.230	4.222	0.008	93	904290	40.0	38.5	
18 Vinyl bromide	106	4.322	4.315	0.007	94	781185	8.00	7.66	
19 2-Methylbutane	43	4.370	4.369	0.001	79	483547	8.00	7.71	
20 Acrolein	56	4.516	4.516	0.000	13	152096	8.00	7.68	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	99	3484877	8.00	7.52	
22 Acetonitrile	40	4.564	4.545	0.019	94	175714	8.00	8.67	
23 Acetone	58	4.602	4.605	-0.003	94	682117	24.0	21.0	
24 Pentane	72	4.694	4.693	0.001	89	119973	8.00	7.61	
25 Isopropyl alcohol	45	4.721	4.716	0.005	96	2023732	24.0	22.8	
26 Ethyl ether	31	4.807	4.817	-0.010	72	438542	8.00	8.40	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	875865	8.00	7.94	
28 Acrylonitrile	53	5.109	5.097	0.012	85	412056	8.00	8.38	
29 2-Methyl-2-propanol	59	5.168	5.173	-0.005	86	1671112	8.00	7.96	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	91	2134286	8.00	7.80	
31 Methylene Chloride	84	5.298	5.290	0.008	85	719893	8.00	6.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	79	838478	8.00	8.17	
33 Carbon disulfide	76	5.416	5.410	0.006	99	2149500	8.00	8.21	
34 trans-1,2-Dichloroethene	96	5.961	5.951	0.010	97	893667	8.00	7.94	
35 2-Methylpentane	43	6.015	6.011	0.004	84	1212878	8.00	8.17	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	86	2885627	8.00	8.06	
37 1,1-Dichloroethane	63	6.301	6.283	0.018	98	1467554	8.00	7.79	
38 Vinyl acetate	43	6.409	6.402	0.006	98	1591261	8.00	8.75	
39 2-Butanone (MEK)	72	6.759	6.761	-0.002	66	352107	8.00	8.25	
40 Hexane	56	6.851	6.845	0.006	78	525494	8.00	8.03	
171 Isopropyl ether	45	6.985	6.989	-0.004	86	1854270	8.00	8.23	
41 cis-1,2-Dichloroethene	96	7.142	7.127	0.015	94	903953	8.00	7.97	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	1360573	8.00	8.63	
43 Chloroform	83	7.455	7.439	0.016	97	2352521	8.00	7.86	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	93	2652444	8.00	8.17	
44 Tetrahydrofuran	42	7.784	7.793	-0.009	75	573668	8.00	8.26	
45 1,1,1-Trichloroethane	97	8.377	8.364	0.013	94	3057281	8.00	8.05	
46 1,2-Dichloroethane	62	8.441	8.427	0.014	76	1778626	8.00	8.01	
47 Benzene	78	8.932	8.920	0.012	98	2189441	8.00	7.66	
48 Cyclohexane	69	8.959	8.951	0.008	71	340746	8.00	8.02	
50 Carbon tetrachloride	117	8.975	8.962	0.013	98	3401707	8.00	8.46	
49 n-Butanol	31	8.948	8.969	-0.021	42	181076	8.00	8.93	
51 2,3-Dimethylpentane	71	9.132	9.126	0.006	83	494713	8.00	8.36	
52 Thiophene	84	9.186	9.174	0.012	87	1366267	8.00	8.35	
53 Isooctane	57	9.806	9.798	0.008	95	2995449	8.00	8.18	
54 1,2-Dichloropropane	63	10.183	10.175	0.008	72	733246	8.00	8.17	
55 n-Heptane	71	10.232	10.224	0.008	76	756110	8.00	8.27	
56 Trichloroethene	130	10.259	10.250	0.009	88	1373208	8.00	7.97	
57 Dibromomethane	93	10.291	10.279	0.012	92	1255108	8.00	8.14	
58 Dichlorobromomethane	83	10.474	10.468	0.006	98	2518000	8.00	8.71	
59 1,4-Dioxane	88	10.491	10.497	-0.006	37	353467	8.00	8.11	
60 Methyl methacrylate	41	10.647	10.649	-0.002	90	922467	8.00	9.24	
61 Methylcyclohexane	83	11.116	11.109	0.007	93	1459181	8.00	8.27	
62 4-Methyl-2-pentanone (MIBK)	43	11.542	11.552	-0.010	91	1416282	8.00	8.90	
63 cis-1,3-Dichloropropene	75	11.580	11.577	0.003	95	1532867	8.00	8.85	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	97	1677181	8.00	8.92	
65 Toluene	91	12.475	12.471	0.004	92	3103222	8.00	8.04	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	90	846792	8.00	8.27	
69 2-Hexanone	58	12.993	13.003	-0.010	95	738442	8.00	9.15	
70 Chlorodibromomethane	129	13.262	13.258	0.004	95	2812660	8.00	9.43	
71 n-Octane	85	13.327	13.326	0.001	75	1000926	8.00	8.14	
72 Ethylene Dibromide	107	13.559	13.551	0.008	93	1926667	8.00	8.59	
73 Tetrachloroethene	129	13.699	13.695	0.004	93	1498188	8.00	7.84	
74 Chlorobenzene	112	14.610	14.606	0.004	91	2714425	8.00	8.05	
75 2,3-Dimethylheptane	43	14.751	14.750	0.000	77	1819678	8.00	8.04	
76 Ethylbenzene	91	14.945	14.943	0.002	99	4515180	8.00	8.12	
78 m-Xylene & p-Xylene	91	15.123	15.119	0.004	99	7245395	16.0	15.9	
79 Bromoform	173	15.505	15.507	-0.002	96	2987666	8.00	9.53	
80 Styrene	104	15.597	15.594	0.003	93	2732738	8.00	9.14	
82 o-Xylene	91	15.656	15.655	0.001	77	3789404	8.00	7.91	
81 n-Nonane	57	15.662	15.659	0.003	72	1427330	8.00	7.86	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	93	2143813	8.00	8.80	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	1003093	8.00	8.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.287	16.283	0.004	98	5375264	8.00	7.88	
86 N-Propylbenzene	120	16.859	16.856	0.003	96	1538516	8.00	8.22	
87 2-Chlorotoluene	126	16.870	16.867	0.003	93	1366689	8.00	7.89	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	5946732	8.00	8.40	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	90	2393487	8.00	8.26	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	84	2523695	8.00	9.16	
91 n-Decane	57	17.533	17.532	0.001	95	2090024	8.00	8.09	
92 tert-Butylbenzene	119	17.592	17.590	0.002	64	5469769	8.00	7.75	
93 1,2,4-Trimethylbenzene	105	17.608	17.605	0.003	94	5126755	8.00	7.93	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	3707873	8.00	7.94	
95 sec-Butylbenzene	105	17.905	17.902	0.003	74	6942238	8.00	7.95	
96 Benzyl chloride	91	17.964	17.962	0.002	97	4487660	8.00	9.00	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	92	3610216	8.00	7.70	
98 4-Isopropyltoluene	119	18.099	18.095	0.004	94	7014221	8.00	7.95	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	5581569	8.00	8.04	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	3064197	8.00	8.02	
101 1,2-Dichlorobenzene	146	18.374	18.370	0.004	93	3498467	8.00	7.60	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	88	4473280	8.00	7.81	
103 Indene	116	18.520	18.520	0.000	87	4170791	8.00	8.87	
104 n-Butylbenzene	91	18.579	18.580	-0.001	95	5666096	8.00	7.89	
105 Undecane	57	19.005	19.001	0.004	85	2383371	8.00	7.79	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	97	2000539	8.00	8.92	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.405	0.005	95	6434741	8.00	7.73	
110 Dodecane	57	20.132	20.128	0.004	90	2322024	8.00	7.25	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	3522363	8.00	7.08	
113 Naphthalene	128	20.332	20.329	0.003	98	6820345	8.00	6.78	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	85	3886960	8.00	6.72	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	92	3177370	8.00	6.65	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	2060557	8.00	6.45	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	1675488	8.00	5.95	
A 120 C8 Range	1	13.343	(13.284-13.381)		0	7753468	8.00	8.27	
S 121 Xylenes, Total	100				0		24.0	23.8	
S 122 1,2-Dichloroethene, Total	1				0		16.0	15.9	

Reagents:

40L10DQP_00007

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D

Injection Date: 16-Nov-2018 17:23:30

Instrument ID: MR

Operator ID:

Lims ID: IC L9

Worklist Smp#: 3

Client ID:

Purge Vol: 500.000 mL

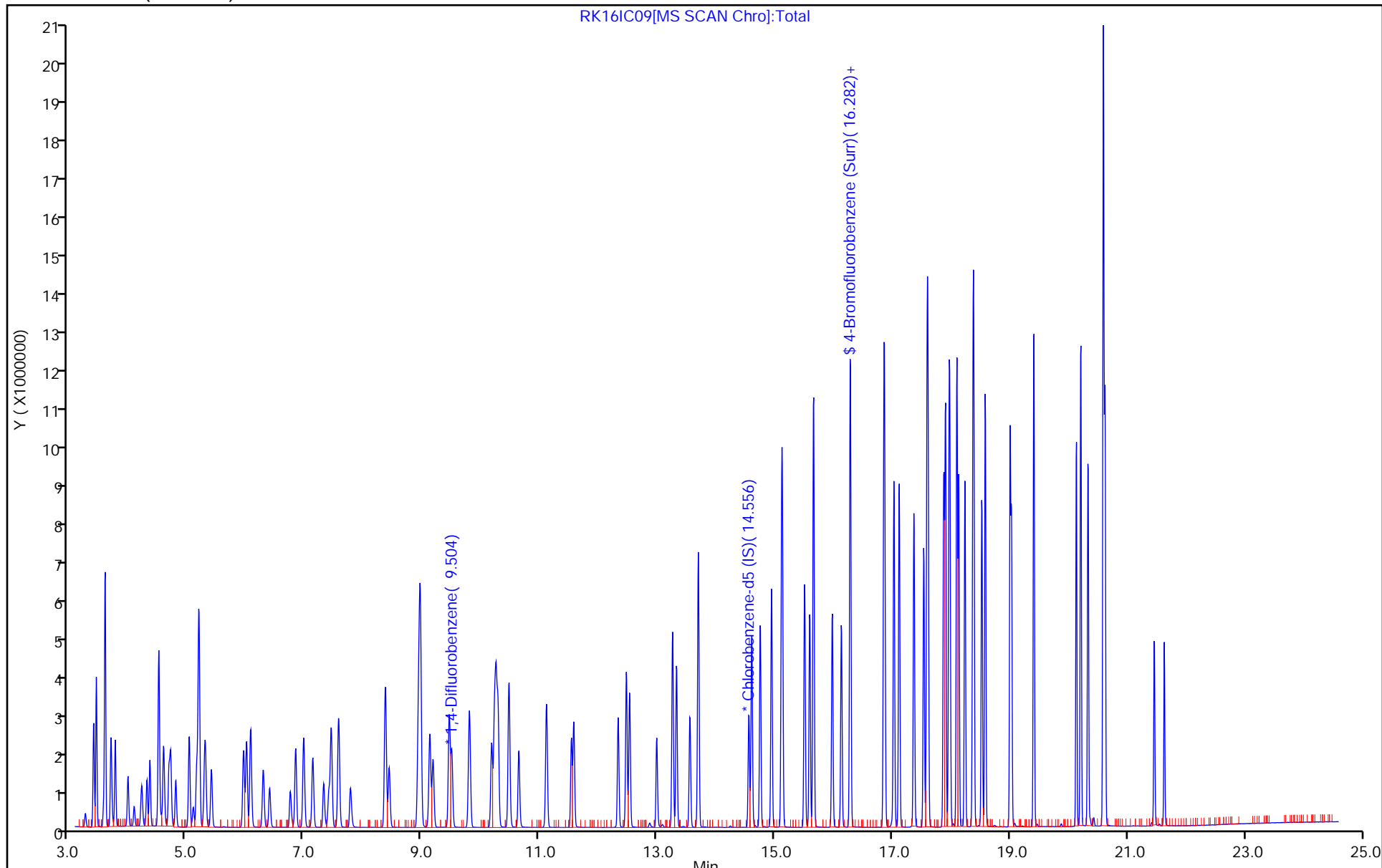
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D

Injection Date: 16-Nov-2018 17:23:30

Instrument ID: MR

Lims ID: IC L9

Client ID:

Operator ID:

ALS Bottle#:

15

Worklist Smp#:

3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

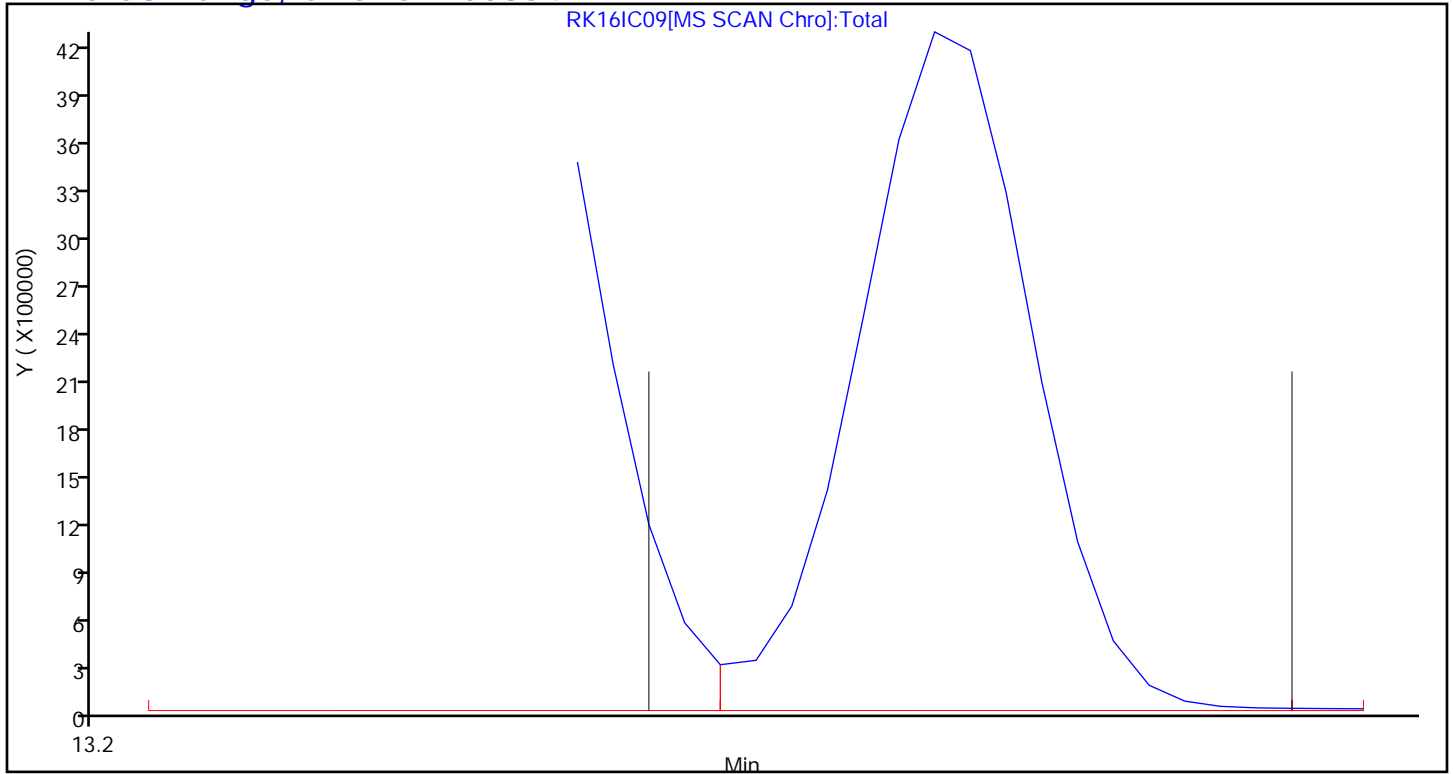
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 16-Nov-2018 19:07:30 ALS Bottle#: 15 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-005
 Misc. Info.: 190391
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:37 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 09:41:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.422	7.397	0.025	70	319466	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.515	9.494	0.020	95	1770477	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.555	0.007	89	1651474	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	84	1332053	4.00	3.79	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	96	2786793	16.0	14.7	
7 Propene	41	3.416	3.420	-0.004	92	851034	16.0	14.6	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	100	4789313	16.0	13.8	
9 Chloromethane	52	3.588	3.586	0.002	98	337068	16.0	13.8	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	89	3420506	16.0	13.2	
11 Acetaldehyde	44	3.718	3.710	0.008	94	1587481	80.0	69.5	
12 Vinyl chloride	62	3.712	3.711	0.001	99	1163551	16.0	13.6	
13 Butadiene	54	3.782	3.780	0.002	89	792495	16.0	15.3	
14 Butane	43	3.782	3.782	0.000	89	1311043	16.0	14.5	
15 Bromomethane	94	4.004	3.995	0.009	97	1463890	16.0	14.8	
16 Chloroethane	64	4.111	4.100	0.011	96	574974	16.0	14.5	
17 Ethanol	31	4.241	4.222	0.019	93	1740692	80.0	72.7	
18 Vinyl bromide	106	4.327	4.315	0.012	97	1560991	16.0	15.0	
19 2-Methylbutane	43	4.376	4.369	0.007	78	948871	16.0	14.9	
20 Acrolein	56	4.527	4.516	0.011	97	308108	16.0	15.3	
21 Trichlorofluoromethane	101	4.532	4.517	0.015	100	6733950	16.0	14.3	
22 Acetonitrile	40	4.575	4.545	0.030	95	345458	16.0	16.7	
23 Acetone	58	4.618	4.605	0.013	100	1363433	48.0	41.1	
24 Pentane	72	4.699	4.693	0.006	93	240067	16.0	14.9	
25 Isopropyl alcohol	45	4.737	4.716	0.021	98	4022317	48.0	44.5	
26 Ethyl ether	31	4.818	4.817	0.001	74	826066	16.0	15.5	
27 1,1-Dichloroethene	96	5.050	5.033	0.017	97	1690964	16.0	15.0	
28 Acrylonitrile	53	5.120	5.097	0.023	90	806690	16.0	16.1	
29 2-Methyl-2-propanol	59	5.179	5.173	0.006	92	3270376	16.0	15.3	
30 1,1,2-Trichloro-1,2,2-trif	101	5.211	5.199	0.012	92	4035478	16.0	14.5	
31 Methylene Chloride	84	5.308	5.290	0.018	89	1360585	16.0	12.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.330	5.309	0.021	85	1650820	16.0	15.8	
33 Carbon disulfide	76	5.427	5.410	0.017	99	4188128	16.0	15.7	
34 trans-1,2-Dichloroethene	96	5.972	5.951	0.021	97	1753401	16.0	15.3	
35 2-Methylpentane	43	6.026	6.011	0.015	84	2316982	16.0	15.3	
36 Methyl tert-butyl ether	73	6.090	6.094	-0.004	93	5673760	16.0	15.6	
37 1,1-Dichloroethane	63	6.311	6.283	0.028	98	2868475	16.0	14.9	
38 Vinyl acetate	43	6.419	6.402	0.017	98	3211124	16.0	17.3	
39 2-Butanone (MEK)	72	6.770	6.761	0.009	97	695780	16.0	16.0	
40 Hexane	56	6.861	6.845	0.016	81	1026278	16.0	15.4	
171 Isopropyl ether	45	6.996	6.989	0.007	86	3587859	16.0	15.6	
41 cis-1,2-Dichloroethene	96	7.153	7.127	0.026	94	1779827	16.0	15.4	
42 Ethyl acetate	43	7.336	7.330	0.006	98	2697533	16.0	16.8	
43 Chloroform	83	7.465	7.439	0.026	98	4583947	16.0	15.0	
173 Tert-butyl ethyl ether	59	7.589	7.580	0.009	92	5236388	16.0	15.8	
44 Tetrahydrofuran	42	7.789	7.793	-0.004	75	1129072	16.0	16.0	
45 1,1,1-Trichloroethane	97	8.382	8.364	0.018	95	6008857	16.0	15.5	
46 1,2-Dichloroethane	62	8.447	8.427	0.020	97	3480930	16.0	15.5	
47 Benzene	78	8.943	8.920	0.023	98	4217712	16.0	14.6	
48 Cyclohexane	69	8.964	8.951	0.013	91	645373	16.0	15.1	
50 Carbon tetrachloride	117	8.981	8.962	0.019	98	6567265	16.0	16.2	
49 n-Butanol	31	8.959	8.969	-0.010	72	360622	16.0	17.6	
51 2,3-Dimethylpentane	71	9.142	9.126	0.016	83	966448	16.0	16.2	
52 Thiophene	84	9.196	9.174	0.022	94	2658371	16.0	16.1	
53 Isooctane	57	9.811	9.798	0.013	95	5790015	16.0	15.7	
54 1,2-Dichloropropane	63	10.194	10.175	0.019	76	1430590	16.0	15.8	
55 n-Heptane	71	10.237	10.224	0.013	82	1463381	16.0	15.9	
56 Trichloroethene	130	10.269	10.250	0.019	95	2639630	16.0	15.2	
57 Dibromomethane	93	10.296	10.279	0.017	93	2441282	16.0	15.7	
58 Dichlorobromomethane	83	10.485	10.468	0.017	98	4943175	16.0	17.0	
59 1,4-Dioxane	88	10.496	10.497	-0.001	86	675333	16.0	15.3	
60 Methyl methacrylate	41	10.652	10.649	0.003	90	1828238	16.0	18.2	
61 Methylcyclohexane	83	11.121	11.109	0.012	92	2870166	16.0	16.1	
62 4-Methyl-2-pentanone (MIBK)	43	11.547	11.552	-0.005	91	2798783	16.0	17.4	
63 cis-1,3-Dichloropropene	75	11.585	11.577	0.008	96	3009068	16.0	17.2	
64 trans-1,3-Dichloropropene	75	12.340	12.332	0.008	97	3381888	16.0	17.5	
65 Toluene	91	12.480	12.471	0.009	93	6012505	16.0	15.2	
66 1,1,2-Trichloroethane	83	12.534	12.527	0.007	93	1619482	16.0	15.4	
69 2-Hexanone	58	12.998	13.003	-0.005	95	1478910	16.0	17.9	
70 Chlorodibromomethane	129	13.268	13.258	0.010	97	5503585	16.0	18.0	
71 n-Octane	85	13.332	13.326	0.006	73	1936591	16.0	15.4	
72 Ethylene Dibromide	107	13.559	13.551	0.008	97	3761382	16.0	16.3	
73 Tetrachloroethene	129	13.704	13.695	0.009	96	2918044	16.0	14.9	
74 Chlorobenzene	112	14.610	14.606	0.004	92	5263414	16.0	15.2	
75 2,3-Dimethylheptane	43	14.756	14.750	0.006	76	3470701	16.0	14.9	
76 Ethylbenzene	91	14.950	14.943	0.007	99	8578718	16.0	15.0	
78 m-Xylene & p-Xylene	91	15.128	15.119	0.009	98	13520878	32.0	28.9	
79 Bromoform	173	15.511	15.507	0.004	96	5904670	16.0	18.4	
80 Styrene	104	15.597	15.594	0.003	97	5258738	16.0	17.1	
82 o-Xylene	91	15.662	15.655	0.007	97	7137002	16.0	14.5	
81 n-Nonane	57	15.662	15.659	0.003	72	2663319	16.0	14.3	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	93	4060026	16.0	16.3	
84 1,2,3-Trichloropropane	110	16.136	16.132	0.004	92	1925261	16.0	15.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.287	16.283	0.004	98	10111819	16.0	14.5	
86 N-Propylbenzene	120	16.859	16.856	0.003	98	2931395	16.0	15.3	
87 2-Chlorotoluene	126	16.870	16.867	0.003	94	2595696	16.0	14.6	
88 4-Ethyltoluene	105	17.031	17.027	0.004	97	10941125	16.0	15.1	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	4520211	16.0	15.2	
90 Alpha Methyl Styrene	118	17.371	17.366	0.005	85	4814736	16.0	17.0	
91 n-Decane	57	17.538	17.532	0.006	96	3864099	16.0	14.6	
92 tert-Butylbenzene	119	17.598	17.590	0.008	89	10102100	16.0	14.0	
93 1,2,4-Trimethylbenzene	105	17.614	17.605	0.009	96	9441765	16.0	14.2	
94 1,3-Dichlorobenzene	146	17.878	17.874	0.004	98	6991250	16.0	14.6	
95 sec-Butylbenzene	105	17.910	17.902	0.008	97	12374020	16.0	13.8	
96 Benzyl chloride	91	17.970	17.962	0.008	97	8537696	16.0	16.7	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	92	6830228	16.0	14.2	
98 4-Isopropyltoluene	119	18.099	18.095	0.004	94	12712650	16.0	14.1	
99 1,2,3-Trimethylbenzene	105	18.132	18.127	0.005	98	10276226	16.0	14.4	
100 Butylcyclohexane	83	18.239	18.232	0.007	90	5583243	16.0	14.3	
101 1,2-Dichlorobenzene	146	18.374	18.370	0.004	95	6628325	16.0	14.0	
102 2,3-Dihydroindene	117	18.390	18.383	0.007	93	8276746	16.0	14.1	
103 Indene	116	18.525	18.520	0.005	90	7874065	16.0	16.3	
104 n-Butylbenzene	91	18.584	18.580	0.004	97	10272864	16.0	13.9	
105 Undecane	57	19.005	19.001	0.004	85	4439100	16.0	14.2	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	98	3914341	16.0	17.0	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.405	0.005	96	12213199	16.0	14.3	
110 Dodecane	57	20.132	20.128	0.004	87	4919414	16.0	15.0	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	7444026	16.0	14.6	
113 Naphthalene	128	20.332	20.329	0.003	97	13677643	16.0	13.3	e
115 Hexachlorobutadiene	225	20.596	20.590	0.006	96	8160248	16.0	13.8	
116 1,2,3-Trichlorobenzene	180	20.623	20.618	0.005	94	7108780	16.0	14.5	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	6192720	16.0	18.9	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	5133017	16.0	17.8	
A 120 C8 Range	1	13.348	(13.284-13.381)		0	14589114	16.0	15.4	
S 121 Xylenes, Total	100				0		48.0	43.4	
S 122 1,2-Dichloroethene, Total	1				0		32.0	30.7	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Reagents:

40L10DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D

Injection Date: 16-Nov-2018 19:07:30

Instrument ID: MR

Operator ID:

Lims ID: IC L10

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

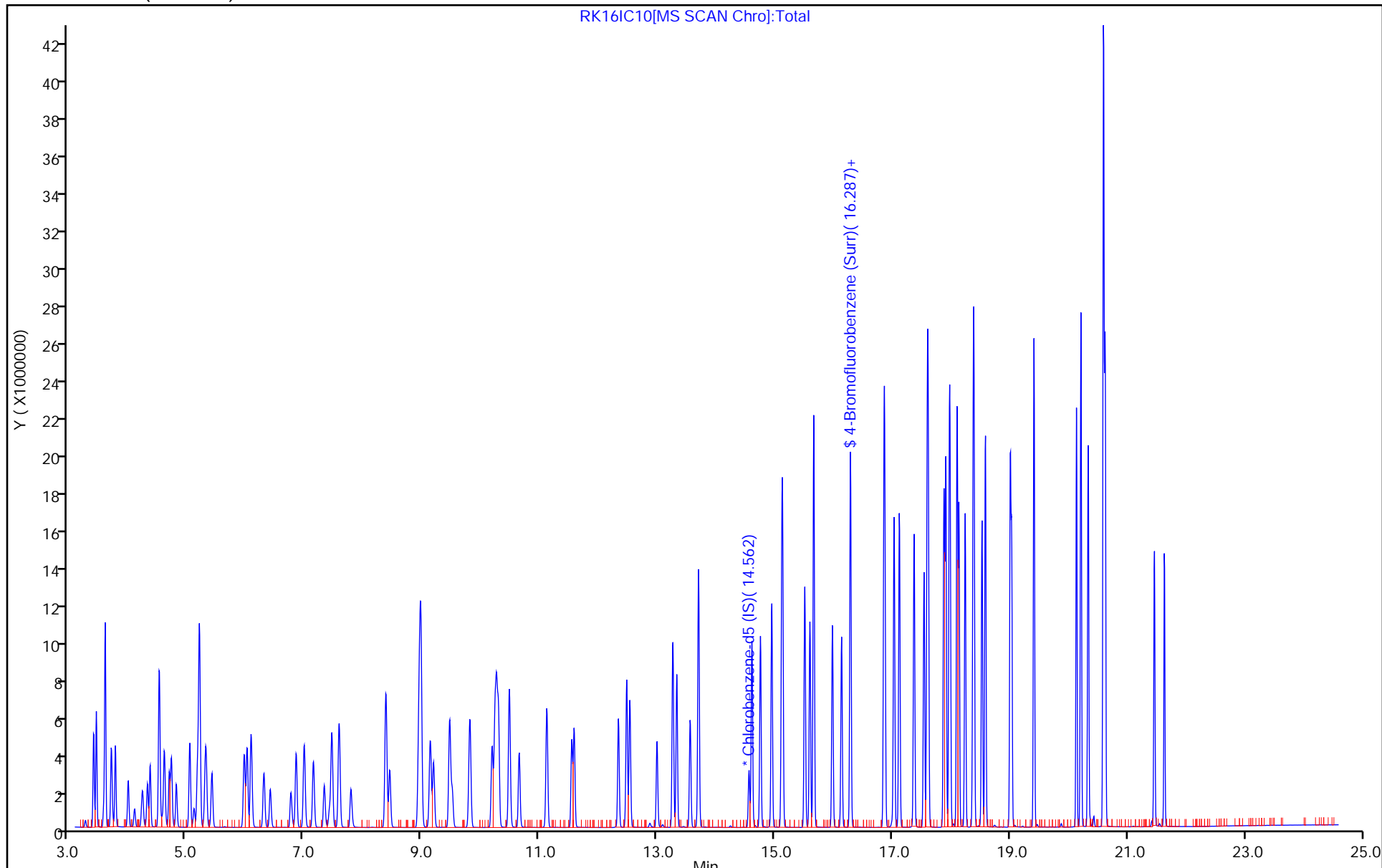
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D

Injection Date: 16-Nov-2018 19:07:30

Instrument ID: MR

Lims ID: IC L10

Client ID:

Operator ID:

ALS Bottle#:

15

Worklist Smp#:

5

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

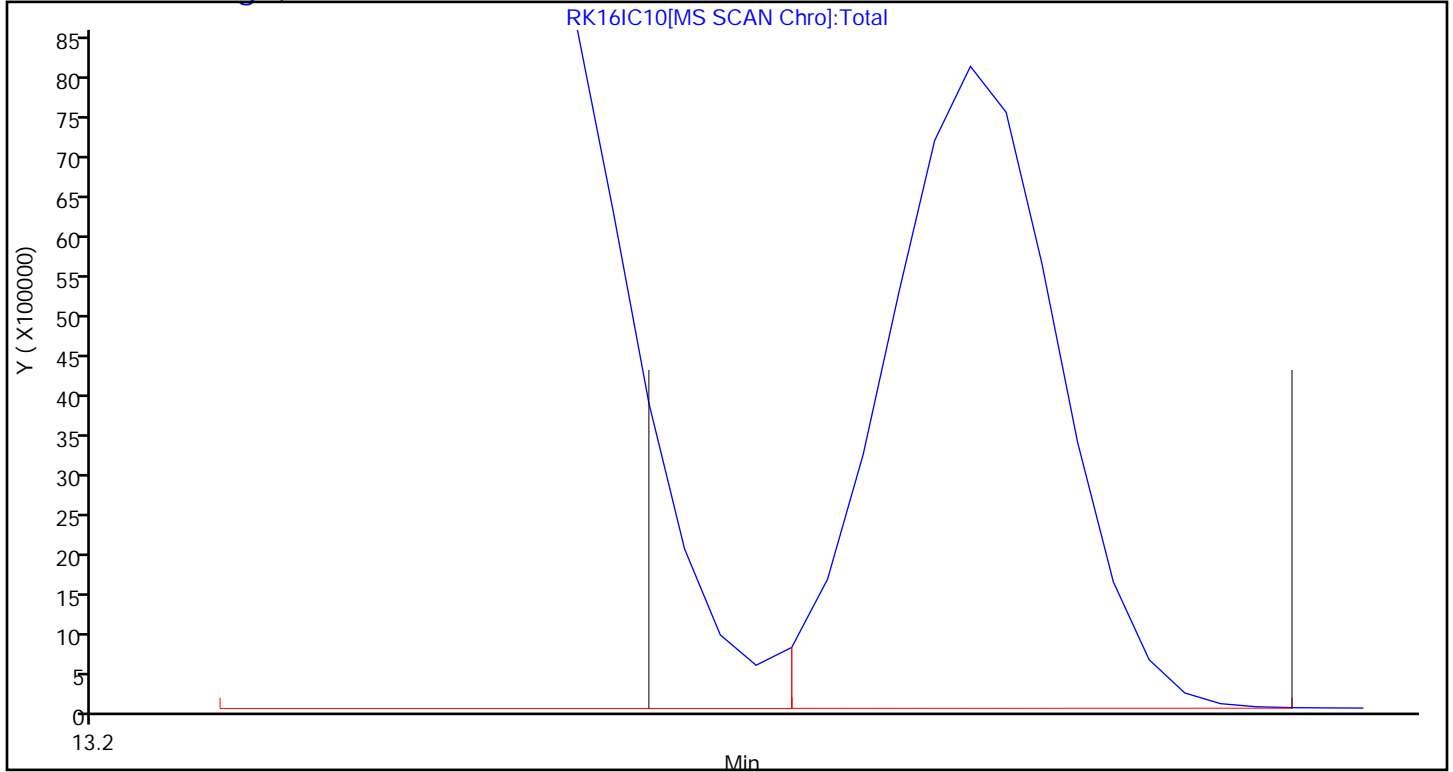
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 16-Nov-2018 21:42:30 ALS Bottle#: 1 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-008
 Misc. Info.: 191045
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:45 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:13:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	270371	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1547161	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1331283	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1129964	4.00	3.99	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	92	4967	0.0200	0.0310	
7 Propene	41	3.416	3.420	-0.004	55	1914	0.0200	0.0388	
8 Dichlorodifluoromethane	85	3.454	3.461	-0.007	99	8536	0.0200	0.0290	
9 Chloromethane	52	3.594	3.586	0.008	56	1365	0.0200	0.0660	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	85	5703	0.0200	0.0260	
11 Acetaldehyde	44	3.712	3.710	0.002	96	5299	0.1000	0.2741	
12 Vinyl chloride	62	3.707	3.711	-0.004	48	1811	0.0200	0.0250	
13 Butadiene	54	3.777	3.780	-0.003	80	1171	0.0200	0.0266	
14 Butane	43	3.777	3.782	-0.005	67	2106	0.0200	0.0275	
15 Bromomethane	94	3.982	3.995	-0.013	91	3340	0.0200	0.0400	
16 Chloroethane	64	4.095	4.100	-0.005	54	1060	0.0200	0.0316	
17 Ethanol	31	4.230	4.222	0.008	85	2602	0.1000	0.1285	
18 Vinyl bromide	106	4.311	4.315	-0.004	93	2112	0.0200	0.0240	
19 2-Methylbutane	43	4.370	4.369	0.001	74	1411	0.0200	0.0261	
20 Acrolein	56	4.527	4.516	0.011	26	1199	0.0200	0.0702	
21 Trichlorofluoromethane	101	4.511	4.517	-0.006	99	9029	0.0200	0.0226	
22 Acetonitrile	40	4.462	4.545	-0.083	58	291	0.0200	0.0166	
23 Acetone	58	4.613	4.605	0.008	99	4528	0.0600	0.1614	
24 Pentane	72	4.694	4.693	0.001	68	224	0.0200	0.0165	
25 Isopropyl alcohol	45	4.732	4.716	0.016	91	7411	0.0600	0.0969	
26 Ethyl ether	31	4.839	4.817	0.022	57	905	0.0200	0.0201	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	96	2217	0.0200	0.0233	
28 Acrylonitrile	53	5.088	5.097	-0.009	49	399	0.0200	0.009404	
29 2-Methyl-2-propanol	59	5.201	5.173	0.028	73	3567	0.0200	0.0197	
30 1,1,2-Trichloro-1,2,2-trif	101	5.190	5.199	-0.009	88	5091	0.0200	0.0216	
31 Methylene Chloride	84	5.282	5.290	-0.008	89	10784	0.0200	0.1192	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	61	1958	0.0200	0.0221	
33 Carbon disulfide	76	5.400	5.410	-0.010	98	5154	0.0200	0.0228	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	89	2153	0.0200	0.0222	
35 2-Methylpentane	43	6.004	6.011	-0.007	85	3091	0.0200	0.0241	
36 Methyl tert-butyl ether	73	6.128	6.094	0.034	91	6785	0.0200	0.0220	
37 1,1-Dichloroethane	63	6.268	6.283	-0.015	96	3625	0.0200	0.0223	
38 Vinyl acetate	43	6.409	6.402	0.007	98	3011	0.0200	0.0192	
40 Hexane	56	6.845	6.845	0.000	79	1159	0.0200	0.0205	
171 Isopropyl ether	45	7.002	6.989	0.013	84	3919	0.0200	0.0202	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	92	2190	0.0200	0.0224	
42 Ethyl acetate	43	7.358	7.330	0.028	33	2159	0.0200	0.0159	
43 Chloroform	83	7.428	7.439	-0.011	90	5723	0.0200	0.0222	
44 Tetrahydrofuran	42	7.821	7.793	0.028	63	1324	0.0200	0.0221	
45 1,1,1-Trichloroethane	97	8.350	8.364	-0.014	95	6720	0.0200	0.0205	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	4162	0.0200	0.0213	
47 Benzene	78	8.911	8.920	-0.009	97	5827	0.0200	0.0231	
48 Cyclohexane	69	8.948	8.951	-0.003	69	709	0.0200	0.0189	
50 Carbon tetrachloride	117	8.959	8.962	-0.003	90	7141	0.0200	0.0201	
51 2,3-Dimethylpentane	71	9.126	9.126	0.000	81	1016	0.0200	0.0195	
52 Thiophene	84	9.164	9.174	-0.010	90	3146	0.0200	0.0218	
53 Isooctane	57	9.790	9.798	-0.008	82	3563	0.0200	0.0110	
54 1,2-Dichloropropane	63	10.167	10.175	-0.008	81	1807	0.0200	0.0228	
55 n-Heptane	71	10.232	10.224	0.008	58	1584	0.0200	0.0197	
56 Trichloroethene	130	10.243	10.250	-0.007	88	3243	0.0200	0.0213	
57 Dibromomethane	93	10.275	10.279	-0.004	93	3779	0.0200	0.0278	
60 Methyl methacrylate	41	10.652	10.649	0.003	1	1037	0.0200	0.0118	
61 Methylcyclohexane	83	11.100	11.109	-0.009	90	2938	0.0200	0.0189	
62 4-Methyl-2-pentanone (MIBK)	43	11.585	11.552	0.033	58	1793	0.0200	0.0128	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	93	2757	0.0200	0.0181	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	93	3115	0.0200	0.0200	
65 Toluene	91	12.470	12.471	-0.001	91	6779	0.0200	0.0212	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	89	1557	0.0200	0.0184	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	93	4430	0.0200	0.0180	
71 n-Octane	85	13.327	13.326	0.001	66	2061	0.0200	0.0203	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	91	3322	0.0200	0.0179	
73 Tetrachloroethene	129	13.699	13.695	0.004	88	3234	0.0200	0.0205	
74 Chlorobenzene	112	14.610	14.606	0.004	84	5465	0.0200	0.0196	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	74	3791	0.0200	0.0202	
76 Ethylbenzene	91	14.945	14.943	0.002	98	9121	0.0200	0.0198	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	99	14827	0.0400	0.0393	
79 Bromoform	173	15.506	15.507	-0.001	93	3956	0.0200	0.0153	
80 Styrene	104	15.603	15.594	0.009	93	3532	0.0200	0.0143	
82 o-Xylene	91	15.657	15.655	0.002	94	7608	0.0200	0.0192	
81 n-Nonane	57	15.657	15.659	-0.002	69	2778	0.0200	0.0185	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	88	3859	0.0200	0.0192	
84 1,2,3-Trichloropropane	110	16.136	16.132	0.004	93	1899	0.0200	0.0190	
85 Isopropylbenzene	105	16.282	16.283	-0.001	46	13150	0.0200	0.0233	
86 N-Propylbenzene	120	16.859	16.856	0.003	96	2952	0.0200	0.0191	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	2686	0.0200	0.0187	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	10337	0.0200	0.0177	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	4521	0.0200	0.0189	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	88	2640	0.0200	0.0116	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
91 n-Decane	57	17.528	17.532	-0.004	92	3562	0.0200	0.0167	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	11027	0.0200	0.0189	
93 1,2,4-Trimethylbenzene	105	17.609	17.605	0.004	96	9514	0.0200	0.0178	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	96	7986	0.0200	0.0207	
95 sec-Butylbenzene	105	17.905	17.902	0.003	96	13837	0.0200	0.0192	
96 Benzyl chloride	91	17.959	17.962	-0.003	96	6895	0.0200	0.0167	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	93	8118	0.0200	0.0209	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	14042	0.0200	0.0193	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	10719	0.0200	0.0187	
100 Butylcyclohexane	83	18.234	18.232	0.002	93	5805	0.0200	0.0184	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	90	7793	0.0200	0.0205	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	93	9654	0.0200	0.0204	
103 Indene	116	18.520	18.520	0.000	89	5834	0.0200	0.0150	
104 n-Butylbenzene	91	18.585	18.580	0.005	95	12135	0.0200	0.0204	
105 Undecane	57	19.005	19.001	0.004	86	5832	0.0200	0.0231	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	93	3364	0.0200	0.0181	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	15662	0.0200	0.0228	
110 Dodecane	57	20.127	20.128	-0.001	89	9191	0.0200	0.0347	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	93	13993	0.0200	0.0340	
113 Naphthalene	128	20.332	20.329	0.003	98	24682	0.0200	0.0297	
115 Hexachlorobutadiene	225	20.585	20.590	-0.005	95	19167	0.0200	0.0401	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	93	17493	0.0200	0.0443	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	96	6762	0.0200	0.0256	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	99	10187	0.0200	0.0437	
A 120 C8 Range	1	13.332	(13.295-13.359)		0	15685	0.0200	0.0190	
S 121 Xylenes, Total	100				0		0.0600	0.0585	
S 122 1,2-Dichloroethene, Total	1				0		0.0400	0.0446	

Reagents:

40L1-3DQP_00010

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D

Injection Date: 16-Nov-2018 21:42:30

Instrument ID: MR

Operator ID:

Lims ID: IC L1

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

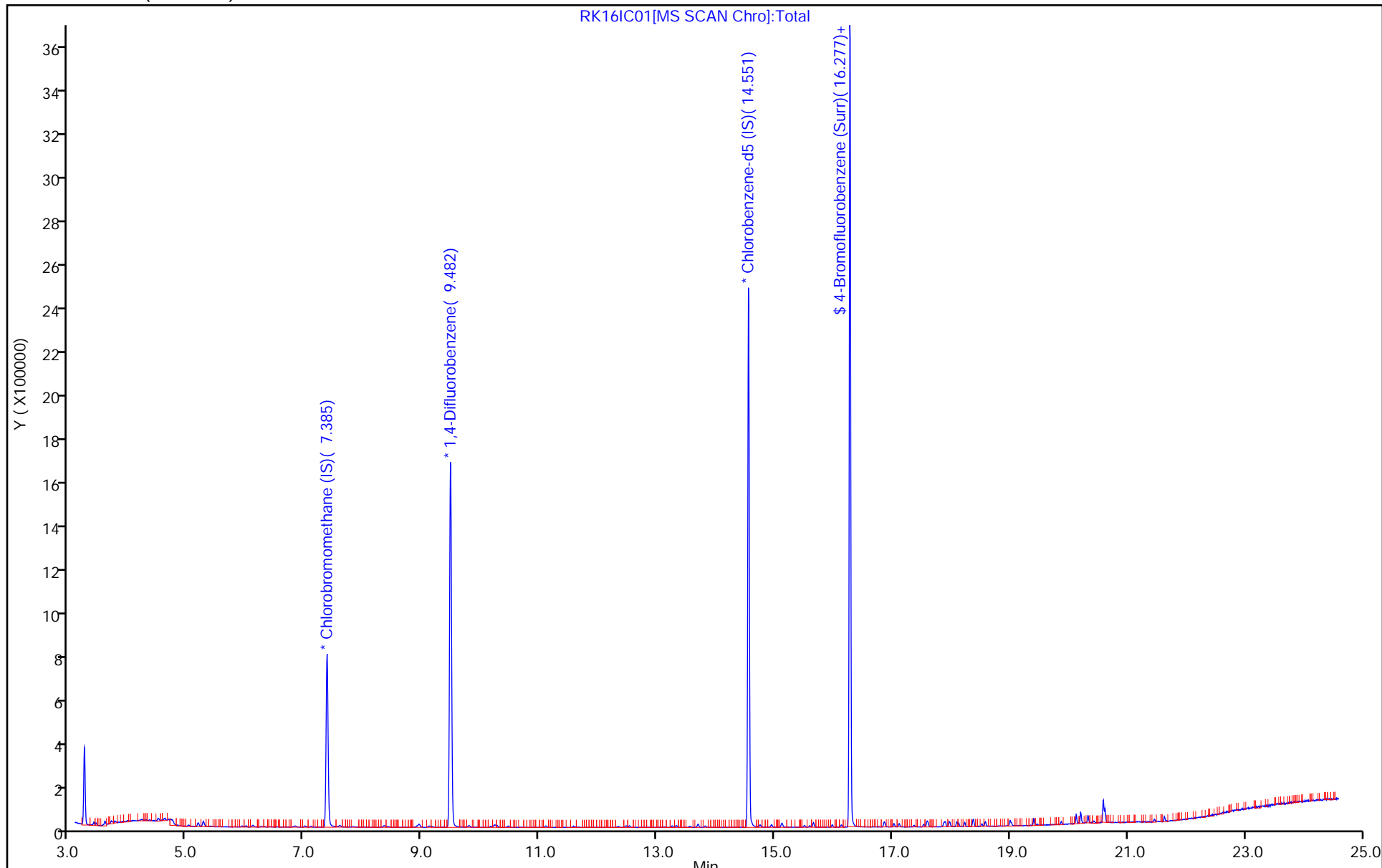
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D

Injection Date: 16-Nov-2018 21:42:30

Instrument ID: MR

Lims ID: IC L1

Client ID:

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

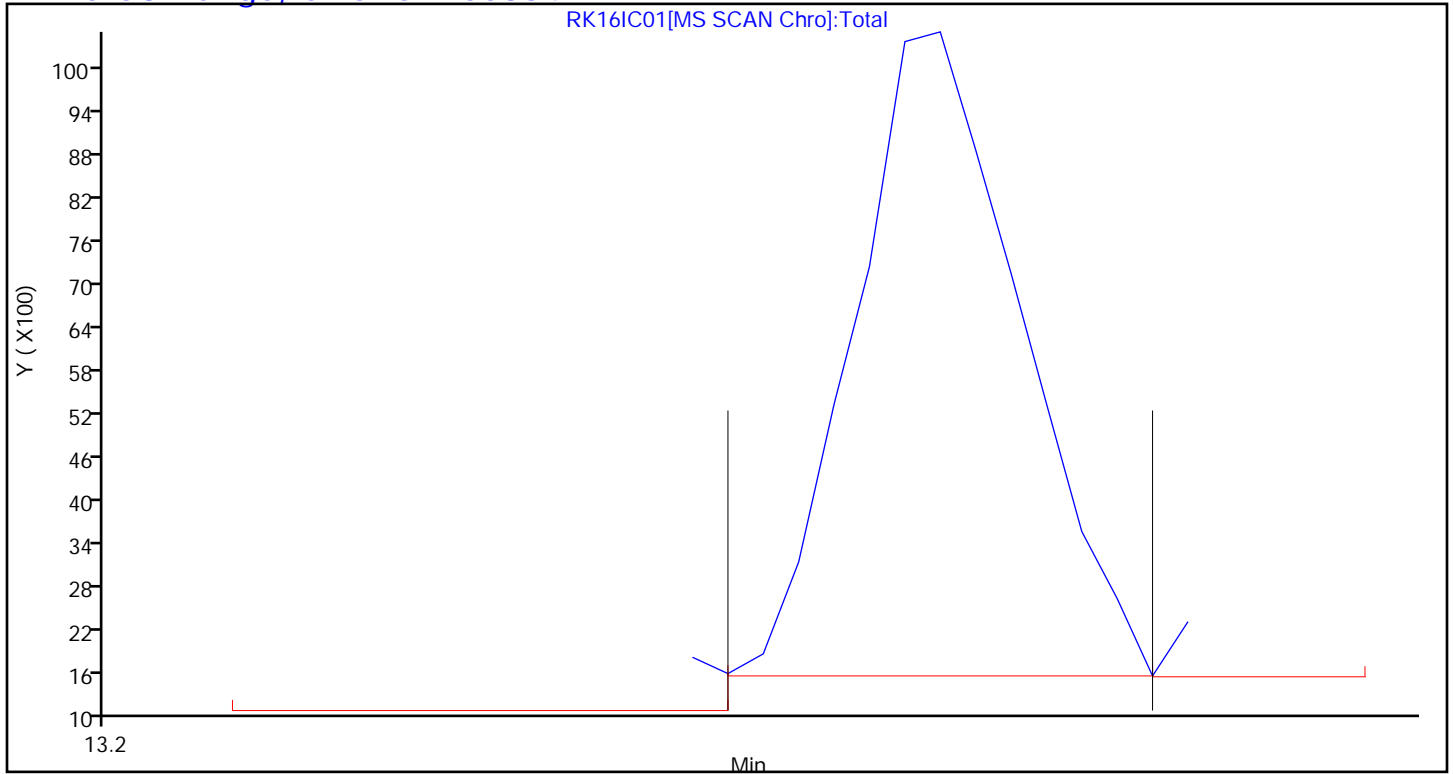
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 16-Nov-2018 22:34:30 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-009
 Misc. Info.: 191045
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:50 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:19:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.397	-0.007	70	260596	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1479125	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1285854	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1096528	4.00	4.01	
6 Chlorodifluoromethane	51	3.432	3.417	0.015	95	7544	0.0400	0.0488	
7 Propene	41	3.427	3.420	0.007	52	2713	0.0400	0.0571	
8 Dichlorodifluoromethane	85	3.470	3.461	0.009	100	14537	0.0400	0.0513	
9 Chloromethane	52	3.594	3.586	0.008	93	1035	0.0400	0.0519	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.615	3.609	0.006	89	10161	0.0400	0.0481	
11 Acetaldehyde	44	3.723	3.710	0.013	97	9143	0.2000	0.4906	
12 Vinyl chloride	62	3.718	3.711	0.007	52	3480	0.0400	0.0498	
13 Butadiene	54	3.788	3.780	0.008	74	1929	0.0400	0.0455	
14 Butane	43	3.788	3.782	0.006	74	3557	0.0400	0.0482	
15 Bromomethane	94	4.004	3.995	0.009	94	4039	0.0400	0.0502	
16 Chloroethane	64	4.106	4.100	0.006	80	1538	0.0400	0.0475	
17 Ethanol	31	4.225	4.222	0.003	91	4623	0.2000	0.2368	
18 Vinyl bromide	106	4.316	4.315	0.001	94	4463	0.0400	0.0526	
19 2-Methylbutane	43	4.370	4.369	0.001	75	2381	0.0400	0.0457	
20 Acrolein	56	4.516	4.516	0.000	28	1003	0.0400	0.0609	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	98	16343	0.0400	0.0424	
22 Acetonitrile	40	4.548	4.545	0.003	68	183	0.0400	0.0109	
23 Acetone	58	4.618	4.605	0.013	99	6843	0.1200	0.2531	
24 Pentane	72	4.694	4.693	0.001	57	764	0.0400	0.0583	
25 Isopropyl alcohol	45	4.721	4.716	0.005	95	10421	0.1200	0.1414	
26 Ethyl ether	31	4.834	4.817	0.017	76	1931	0.0400	0.0445	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	3786	0.0400	0.0413	
28 Acrylonitrile	53	5.098	5.097	0.001	78	1777	0.0400	0.0435	
29 2-Methyl-2-propanol	59	5.190	5.173	0.017	73	6749	0.0400	0.0387	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	92	9384	0.0400	0.0413	
31 Methylene Chloride	84	5.292	5.290	0.002	88	11735	0.0400	0.1346	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.308	5.309	-0.001	61	3483	0.0400	0.0408	
33 Carbon disulfide	76	5.411	5.410	0.001	97	8992	0.0400	0.0413	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	97	4125	0.0400	0.0441	
35 2-Methylpentane	43	6.004	6.011	-0.007	81	5672	0.0400	0.0460	
36 Methyl tert-butyl ether	73	6.112	6.094	0.018	93	12232	0.0400	0.0411	
37 1,1-Dichloroethane	63	6.274	6.283	-0.009	97	6968	0.0400	0.0445	
38 Vinyl acetate	43	6.409	6.402	0.007	97	5742	0.0400	0.0380	
39 2-Butanone (MEK)	72	6.791	6.761	0.030	97	1330	0.0400	0.0375	
40 Hexane	56	6.845	6.845	0.000	80	2274	0.0400	0.0418	
171 Isopropyl ether	45	7.002	6.989	0.013	86	7835	0.0400	0.0419	
41 cis-1,2-Dichloroethene	96	7.115	7.127	-0.012	96	3898	0.0400	0.0413	
42 Ethyl acetate	43	7.347	7.330	0.017	97	5081	0.0400	0.0388	
43 Chloroform	83	7.428	7.439	-0.011	87	10674	0.0400	0.0429	
173 Tert-butyl ethyl ether	59	7.589	7.580	0.009	92	10439	0.0400	0.0387	
44 Tetrahydrofuran	42	7.816	7.793	0.023	76	2575	0.0400	0.0446	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	94	13014	0.0400	0.0412	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	7880	0.0400	0.0421	
47 Benzene	78	8.911	8.920	-0.009	86	10465	0.0400	0.0434	
48 Cyclohexane	69	8.948	8.951	-0.003	60	1344	0.0400	0.0375	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	94	13947	0.0400	0.0411	
51 2,3-Dimethylpentane	71	9.115	9.126	-0.011	81	2179	0.0400	0.0437	
52 Thiophene	84	9.169	9.174	-0.005	90	5500	0.0400	0.0399	
53 Isooctane	57	9.800	9.798	0.002	94	11906	0.0400	0.0386	
54 1,2-Dichloropropane	63	10.178	10.175	0.003	78	2944	0.0400	0.0389	
55 n-Heptane	71	10.216	10.224	-0.008	79	2941	0.0400	0.0382	
56 Trichloroethene	130	10.237	10.250	-0.013	92	5696	0.0400	0.0392	
57 Dibromomethane	93	10.269	10.279	-0.010	87	5842	0.0400	0.0450	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	97	8635	0.0400	0.0355	
59 1,4-Dioxane	88	10.523	10.497	0.026	27	1245	0.0400	0.0339	
60 Methyl methacrylate	41	10.668	10.649	0.019	86	2528	0.0400	0.0300	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	5955	0.0400	0.0400	
62 4-Methyl-2-pentanone (MIBK)	43	11.569	11.552	0.017	61	3006	0.0400	0.0224	
63 cis-1,3-Dichloropropene	75	11.580	11.577	0.003	91	5376	0.0400	0.0368	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	5189	0.0400	0.0345	
65 Toluene	91	12.464	12.471	-0.007	92	11744	0.0400	0.0381	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	90	3120	0.0400	0.0382	
69 2-Hexanone	58	13.036	13.003	0.033	1	1297	0.0400	0.0201	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	93	7451	0.0400	0.0313	
71 n-Octane	85	13.327	13.326	0.001	79	3598	0.0400	0.0367	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	6066	0.0400	0.0339	
73 Tetrachloroethene	129	13.694	13.695	-0.001	89	6255	0.0400	0.0410	
74 Chlorobenzene	112	14.600	14.606	-0.006	96	10833	0.0400	0.0402	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	74	6840	0.0400	0.0378	
76 Ethylbenzene	91	14.945	14.943	0.002	99	17474	0.0400	0.0393	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	28347	0.0800	0.0778	
79 Bromoform	173	15.511	15.507	0.004	92	6657	0.0400	0.0266	
80 Styrene	104	15.592	15.594	-0.002	97	6834	0.0400	0.0286	
82 o-Xylene	91	15.656	15.655	0.001	96	14440	0.0400	0.0377	
81 n-Nonane	57	15.662	15.659	0.003	71	5104	0.0400	0.0352	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	89	6581	0.0400	0.0338	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	91	3252	0.0400	0.0337	
85 Isopropylbenzene	105	16.282	16.283	-0.001	47	23558	0.0400	0.0433	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	16.859	16.856	0.003	96	5565	0.0400	0.0372	
87 2-Chlorotoluene	126	16.870	16.867	0.003	91	5132	0.0400	0.0371	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	20634	0.0400	0.0365	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	89	8388	0.0400	0.0362	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	83	5656	0.0400	0.0257	
91 n-Decane	57	17.533	17.532	0.001	94	7343	0.0400	0.0356	
92 tert-Butylbenzene	119	17.592	17.590	0.002	89	21429	0.0400	0.0380	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	19133	0.0400	0.0370	
94 1,3-Dichlorobenzene	146	17.878	17.874	0.004	97	14097	0.0400	0.0378	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	27386	0.0400	0.0392	
96 Benzyl chloride	91	17.964	17.962	0.002	87	13082	0.0400	0.0328	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	90	14770	0.0400	0.0395	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	27559	0.0400	0.0391	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	20298	0.0400	0.0366	
100 Butylcyclohexane	83	18.234	18.232	0.002	91	12105	0.0400	0.0397	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	15537	0.0400	0.0422	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	91	17767	0.0400	0.0388	
103 Indene	116	18.520	18.520	0.000	89	11379	0.0400	0.0303	
104 n-Butylbenzene	91	18.579	18.580	-0.001	98	21840	0.0400	0.0381	
105 Undecane	57	19.000	19.001	-0.001	85	11356	0.0400	0.0465	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	92	6080	0.0400	0.0339	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	28122	0.0400	0.0423	
110 Dodecane	57	20.132	20.128	0.004	92	20145	0.0400	0.0788	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	93	24325	0.0400	0.0613	
113 Naphthalene	128	20.332	20.329	0.003	98	44394	0.0400	0.0553	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	36463	0.0400	0.0790	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	95	30595	0.0400	0.0802	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	96	7926	0.0400	0.0311	
118 1-Methylnaphthalene	142	21.631	21.626	0.005	97	11502	0.0400	0.0511	
A 120 C8 Range	1	13.332	(13.295-13.359)		0	31729	0.0400	0.0402	
S 121 Xylenes, Total	100				0		0.1200	0.1155	
S 122 1,2-Dichloroethene, Total	1				0		0.0800	0.0854	

Reagents:

40L1-3DQP_00010

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D

Injection Date: 16-Nov-2018 22:34:30

Instrument ID: MR

Operator ID:

Lims ID: IC L2

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

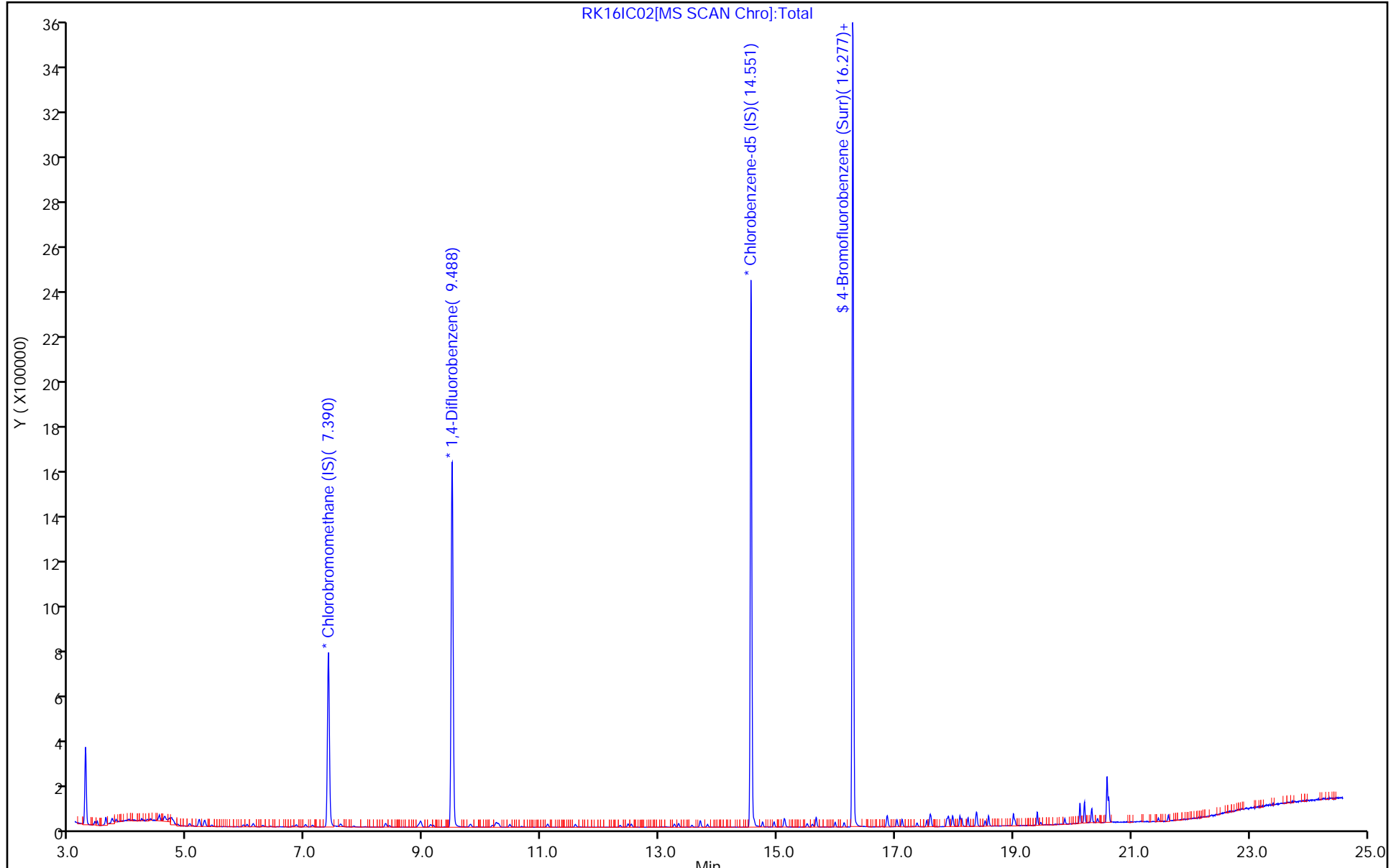
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D

Injection Date: 16-Nov-2018 22:34:30

Instrument ID: MR

Lims ID: IC L2

Client ID:

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

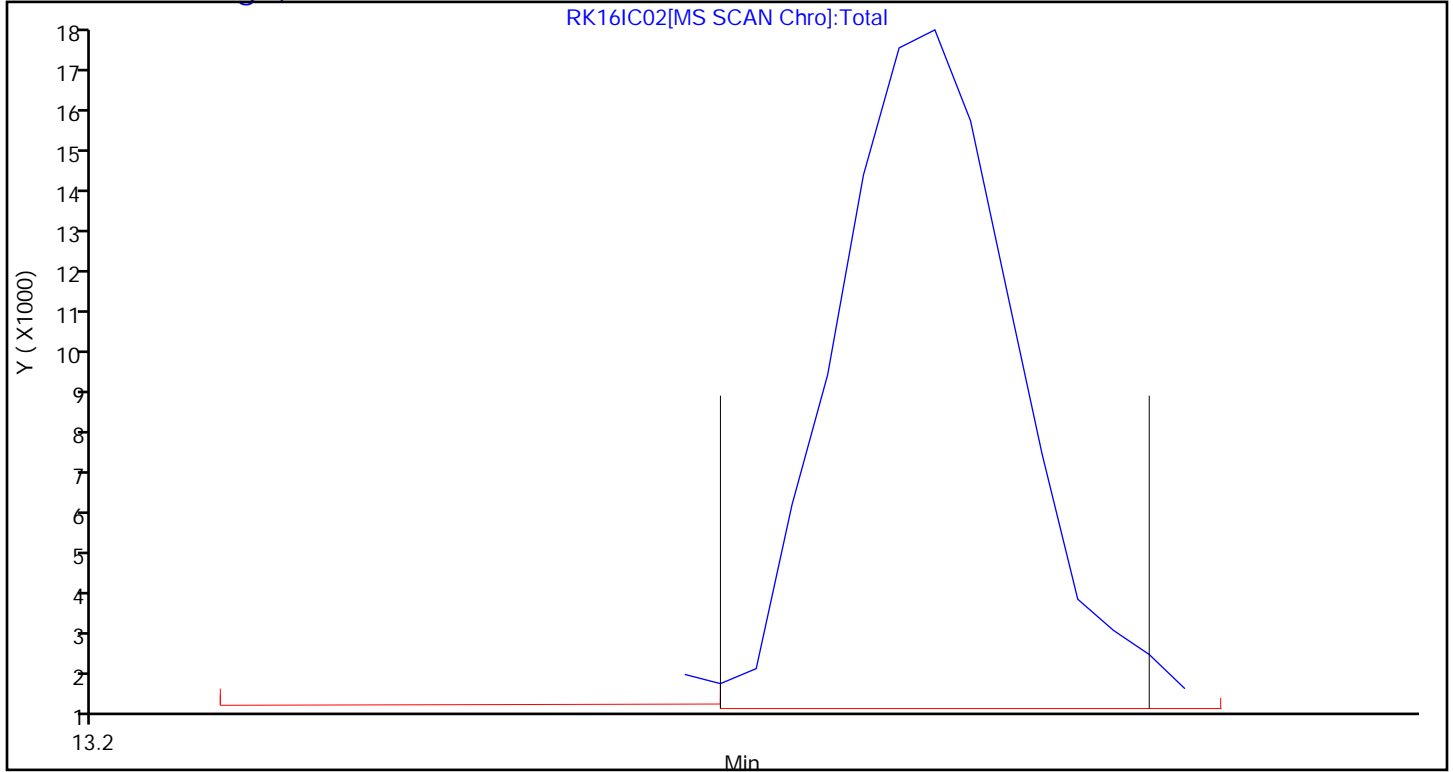
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 16-Nov-2018 23:27:30 ALS Bottle#: 2 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-010
 Misc. Info.: 190398
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:54 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:20:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.395	7.397	-0.002	80	259070	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.494	-0.001	95	1455868	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	90	1271256	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	90	1100173	4.00	4.07	
6 Chlorodifluoromethane	51	3.437	3.417	0.020	94	13488	0.0800	0.0877	
7 Propene	41	3.432	3.420	0.012	55	5125	0.0800	0.1085	
8 Dichlorodifluoromethane	85	3.475	3.461	0.014	99	23530	0.0800	0.0835	
9 Chloromethane	52	3.594	3.586	0.008	98	2235	0.0800	0.1127	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.621	3.609	0.012	88	16805	0.0800	0.0801	
11 Acetaldehyde	44	3.723	3.710	0.013	93	15383	0.4000	0.8304	
12 Vinyl chloride	62	3.723	3.711	0.012	49	5811	0.0800	0.0836	
13 Butadiene	54	3.793	3.780	0.013	81	3945	0.0800	0.0936	
14 Butane	43	3.799	3.782	0.017	77	6822	0.0800	0.0930	
15 Bromomethane	94	4.009	3.995	0.014	94	7392	0.0800	0.0924	
16 Chloroethane	64	4.106	4.100	0.006	95	3121	0.0800	0.0970	
17 Ethanol	31	4.225	4.222	0.003	94	11273	0.4000	0.5808	
18 Vinyl bromide	106	4.327	4.315	0.012	95	7520	0.0800	0.0892	
19 2-Methylbutane	43	4.381	4.369	0.012	80	4476	0.0800	0.0864	
20 Acrolein	56	4.527	4.516	0.011	30	2267	0.0800	0.1384	
21 Trichlorofluoromethane	101	4.527	4.517	0.010	98	32292	0.0800	0.0843	
22 Acetonitrile	40	4.559	4.545	0.014	52	776	0.0800	0.0463	
23 Acetone	58	4.618	4.605	0.013	100	12343	0.2400	0.4592	
24 Pentane	72	4.699	4.693	0.006	91	1155	0.0800	0.0887	
25 Isopropyl alcohol	45	4.721	4.716	0.005	97	22445	0.2400	0.3063	
26 Ethyl ether	31	4.834	4.817	0.017	69	3716	0.0800	0.0861	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	7294	0.0800	0.0800	
28 Acrylonitrile	53	5.098	5.097	0.001	97	3780	0.0800	0.0930	
29 2-Methyl-2-propanol	59	5.190	5.173	0.017	96	13889	0.0800	0.0801	
30 1,1,2-Trichloro-1,2,2-trif	101	5.211	5.199	0.012	93	19377	0.0800	0.0857	
31 Methylene Chloride	84	5.298	5.290	0.008	89	14815	0.0800	0.1710	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	83	6102	0.0800	0.0720	
33 Carbon disulfide	76	5.422	5.410	0.012	99	17438	0.0800	0.0806	
34 trans-1,2-Dichloroethene	96	5.956	5.951	0.005	95	7397	0.0800	0.0795	
35 2-Methylpentane	43	6.020	6.011	0.009	84	10171	0.0800	0.0829	
36 Methyl tert-butyl ether	73	6.112	6.094	0.018	92	24609	0.0800	0.0832	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	96	12813	0.0800	0.0823	
38 Vinyl acetate	43	6.409	6.402	0.007	97	10473	0.0800	0.0697	
39 2-Butanone (MEK)	72	6.775	6.761	0.014	96	2930	0.0800	0.0831	
40 Hexane	56	6.845	6.845	0.000	80	4675	0.0800	0.0864	
171 Isopropyl ether	45	7.002	6.989	0.013	83	15025	0.0800	0.0807	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	94	7431	0.0800	0.0792	
42 Ethyl acetate	43	7.336	7.330	0.006	96	9377	0.0800	0.0720	
43 Chloroform	83	7.439	7.439	0.000	91	19866	0.0800	0.0803	
173 Tert-butyl ethyl ether	59	7.595	7.580	0.015	93	21806	0.0800	0.0813	
44 Tetrahydrofuran	42	7.816	7.793	0.023	77	4556	0.0800	0.0794	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	93	25970	0.0800	0.0828	
46 1,2-Dichloroethane	62	8.431	8.427	0.004	97	15042	0.0800	0.0816	
47 Benzene	78	8.921	8.920	0.001	98	20437	0.0800	0.0862	
48 Cyclohexane	69	8.954	8.951	0.003	70	3013	0.0800	0.0855	
50 Carbon tetrachloride	117	8.965	8.962	0.003	95	21947	0.0800	0.0658	
49 n-Butanol	31	9.008	8.969	0.039	1	1240	0.0800	0.0737	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	80	3528	0.0800	0.0718	
52 Thiophene	84	9.169	9.174	-0.005	94	10374	0.0800	0.0764	
53 Isooctane	57	9.800	9.798	0.002	94	25192	0.0800	0.0830	
54 1,2-Dichloropropane	63	10.172	10.175	-0.003	72	6201	0.0800	0.0833	
55 n-Heptane	71	10.226	10.224	0.002	81	5754	0.0800	0.0759	
56 Trichloroethene	130	10.253	10.250	0.003	92	11668	0.0800	0.0816	
57 Dibromomethane	93	10.275	10.279	-0.004	91	10846	0.0800	0.0848	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	17387	0.0800	0.0725	
59 1,4-Dioxane	88	10.507	10.497	0.010	90	2726	0.0800	0.0753	
60 Methyl methacrylate	41	10.658	10.649	0.009	88	6227	0.0800	0.0752	
61 Methylcyclohexane	83	11.111	11.109	0.002	93	11565	0.0800	0.0790	
62 4-Methyl-2-pentanone (MIBK)	43	11.564	11.552	0.012	79	9056	0.0800	0.0686	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	94	10488	0.0800	0.0730	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	96	10066	0.0800	0.0678	
65 Toluene	91	12.470	12.471	-0.001	93	24790	0.0800	0.0814	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	91	6520	0.0800	0.0807	
69 2-Hexanone	58	13.020	13.003	0.017	93	3236	0.0800	0.0508	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	16103	0.0800	0.0683	
71 n-Octane	85	13.327	13.326	0.001	72	7429	0.0800	0.0766	
72 Ethylene Dibromide	107	13.553	13.551	0.002	97	12712	0.0800	0.0718	
73 Tetrachloroethene	129	13.694	13.695	-0.001	93	12031	0.0800	0.0797	
74 Chlorobenzene	112	14.605	14.606	-0.001	91	21742	0.0800	0.0817	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	76	14645	0.0800	0.0819	
76 Ethylbenzene	91	14.945	14.943	0.002	99	35735	0.0800	0.0814	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	59080	0.1600	0.1640	
79 Bromoform	173	15.506	15.507	-0.001	94	14982	0.0800	0.0605	
80 Styrene	104	15.592	15.594	-0.002	96	15265	0.0800	0.0646	
82 o-Xylene	91	15.656	15.655	0.001	95	32097	0.0800	0.0848	
81 n-Nonane	57	15.662	15.659	0.003	72	11326	0.0800	0.0790	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	88	14484	0.0800	0.0753	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	91	7400	0.0800	0.0776	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	48	46548	0.0800	0.0865	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	11527	0.0800	0.0780	
87 2-Chlorotoluene	126	16.870	16.867	0.003	93	11745	0.0800	0.0858	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	45329	0.0800	0.0811	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	18627	0.0800	0.0814	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	87	12787	0.0800	0.0588	
91 n-Decane	57	17.528	17.532	-0.004	95	15703	0.0800	0.0769	
92 tert-Butylbenzene	119	17.592	17.590	0.002	89	46562	0.0800	0.0836	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	42935	0.0800	0.0841	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	31633	0.0800	0.0858	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	57824	0.0800	0.0838	
96 Benzyl chloride	91	17.964	17.962	0.002	97	27963	0.0800	0.0710	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	91	31188	0.0800	0.0843	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	56711	0.0800	0.0814	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	47349	0.0800	0.0863	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	24822	0.0800	0.0823	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	94	31984	0.0800	0.0879	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	92	37591	0.0800	0.0831	
103 Indene	116	18.520	18.520	0.000	91	26287	0.0800	0.0708	
104 n-Butylbenzene	91	18.579	18.580	-0.001	98	46679	0.0800	0.0823	
105 Undecane	57	19.000	19.001	-0.001	90	20015	0.0800	0.0829	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	95	11163	0.0800	0.0630	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	96	54539	0.0800	0.0830	
110 Dodecane	57	20.127	20.128	-0.001	89	22733	0.0800	0.0899	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	36794	0.0800	0.0937	
113 Naphthalene	128	20.332	20.329	0.003	98	71658	0.0800	0.0903	
115 Hexachlorobutadiene	225	20.591	20.590	0.000	96	43683	0.0800	0.0957	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	36693	0.0800	0.0972	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	22514	0.0800	0.0893	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	96	25106	0.0800	0.1129	
A 120 C8 Range	1	13.335	(13.289-13.365)		0	65978	0.0800	0.0849	
S 121 Xylenes, Total	100				0		0.2400	0.2488	
S 122 1,2-Dichloroethene, Total	1				0		0.1600	0.1588	

Reagents:

40L1-3DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D

Injection Date: 16-Nov-2018 23:27:30

Instrument ID: MR

Operator ID:

Lims ID: IC L3

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D

Injection Date: 16-Nov-2018 23:27:30

Instrument ID: MR

Lims ID: IC L3

Client ID:

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

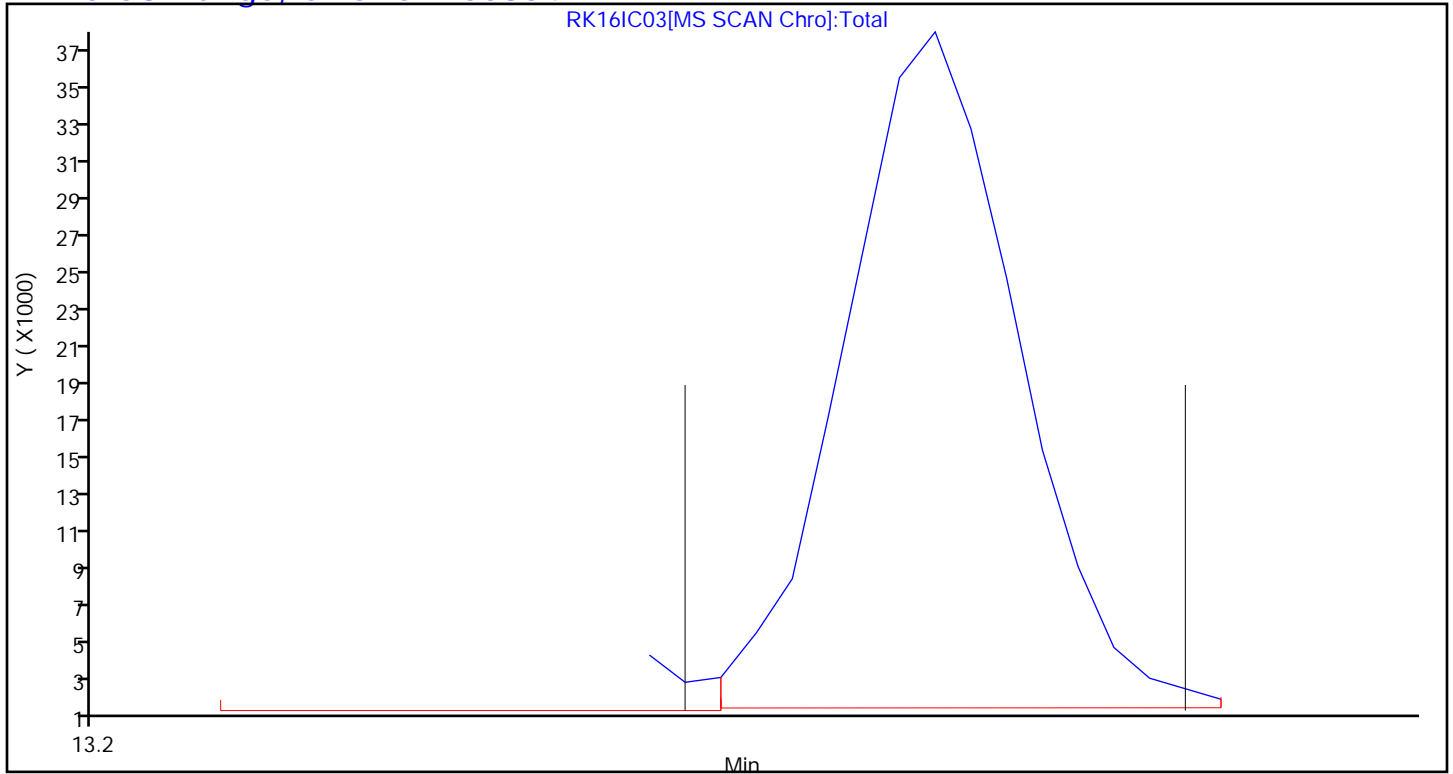
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 17-Nov-2018 00:20:30 ALS Bottle#: 3 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-011
 Misc. Info.: 190397
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:59 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:30:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	266212	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	95	1504650	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1298874	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1123241	4.00	4.07	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	96	27178	0.1600	0.1721	
7 Propene	41	3.421	3.420	0.001	49	8965	0.1600	0.1846	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	45214	0.1600	0.1561	
9 Chloromethane	52	3.583	3.586	-0.003	98	3152	0.1600	0.1547	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.605	3.609	-0.004	89	33908	0.1600	0.1572	
11 Acetaldehyde	44	3.707	3.710	-0.003	91	22123	0.8000	1.16	
12 Vinyl chloride	62	3.707	3.711	-0.004	60	11775	0.1600	0.1649	
13 Butadiene	54	3.777	3.780	-0.003	78	7472	0.1600	0.1726	
14 Butane	43	3.777	3.782	-0.005	77	12514	0.1600	0.1661	
15 Bromomethane	94	3.993	3.995	-0.002	95	13519	0.1600	0.1644	
16 Chloroethane	64	4.095	4.100	-0.005	97	5876	0.1600	0.1777	
17 Ethanol	31	4.209	4.222	-0.013	91	17498	0.8000	0.8773	
18 Vinyl bromide	106	4.306	4.315	-0.009	96	14410	0.1600	0.1663	
19 2-Methylbutane	43	4.365	4.369	-0.004	80	9090	0.1600	0.1708	
20 Acrolein	56	4.516	4.516	0.000	29	3617	0.1600	0.2150	
21 Trichlorofluoromethane	101	4.511	4.517	-0.006	100	64156	0.1600	0.1630	
22 Acetonitrile	40	4.548	4.545	0.003	95	2801	0.1600	0.1627	
23 Acetone	58	4.597	4.605	-0.008	100	18402	0.4800	0.6662	
24 Pentane	72	4.688	4.693	-0.005	90	2568	0.1600	0.1919	
25 Isopropyl alcohol	45	4.705	4.716	-0.011	97	40201	0.4800	0.5338	
26 Ethyl ether	31	4.818	4.817	0.001	78	7549	0.1600	0.1703	
27 1,1-Dichloroethene	96	5.023	5.033	-0.010	96	14740	0.1600	0.1573	
28 Acrylonitrile	53	5.088	5.097	-0.009	93	6563	0.1600	0.1571	
29 2-Methyl-2-propanol	59	5.163	5.173	-0.010	96	28891	0.1600	0.1621	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	91	37596	0.1600	0.1619	
31 Methylene Chloride	84	5.276	5.290	-0.014	88	21540	0.1600	0.2419	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.298	5.309	-0.011	83	15229	0.1600	0.1748	
33 Carbon disulfide	76	5.400	5.410	-0.010	99	34577	0.1600	0.1555	
34 trans-1,2-Dichloroethene	96	5.939	5.951	-0.012	97	14785	0.1600	0.1547	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	20556	0.1600	0.1631	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	47525	0.1600	0.1563	
37 1,1-Dichloroethane	63	6.268	6.283	-0.015	96	24630	0.1600	0.1540	
38 Vinyl acetate	43	6.387	6.402	-0.015	98	21613	0.1600	0.1399	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	97	6132	0.1600	0.1692	
40 Hexane	56	6.840	6.845	-0.005	80	8962	0.1600	0.1612	
171 Isopropyl ether	45	6.986	6.989	-0.003	87	30112	0.1600	0.1575	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	96	15197	0.1600	0.1577	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	20428	0.1600	0.1526	
43 Chloroform	83	7.422	7.439	-0.017	90	40040	0.1600	0.1575	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	93	42934	0.1600	0.1558	
44 Tetrahydrofuran	42	7.794	7.793	0.001	70	9354	0.1600	0.1586	
45 1,1,1-Trichloroethane	97	8.355	8.364	-0.009	94	50545	0.1600	0.1568	
46 1,2-Dichloroethane	62	8.415	8.427	-0.012	98	29238	0.1600	0.1535	
47 Benzene	78	8.911	8.920	-0.009	98	37991	0.1600	0.1550	
48 Cyclohexane	69	8.948	8.951	-0.003	61	5770	0.1600	0.1584	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	95	54395	0.1600	0.1577	
49 n-Butanol	31	8.997	8.969	0.028	35	1642	0.1600	0.0945	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	7686	0.1600	0.1514	
52 Thiophene	84	9.164	9.174	-0.010	94	21711	0.1600	0.1548	
53 Isooctane	57	9.790	9.798	-0.008	95	49245	0.1600	0.1569	
54 1,2-Dichloropropane	63	10.173	10.175	-0.003	75	11982	0.1600	0.1557	
55 n-Heptane	71	10.210	10.224	-0.014	80	11910	0.1600	0.1520	
56 Trichloroethene	130	10.243	10.250	-0.007	91	22698	0.1600	0.1536	
57 Dibromomethane	93	10.270	10.279	-0.009	91	21454	0.1600	0.1623	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	35620	0.1600	0.1438	
59 1,4-Dioxane	88	10.507	10.497	0.010	85	5968	0.1600	0.1596	
60 Methyl methacrylate	41	10.647	10.649	-0.002	88	10629	0.1600	0.1242	
61 Methylcyclohexane	83	11.105	11.109	-0.004	93	23124	0.1600	0.1528	
62 4-Methyl-2-pentanone (MIBK)	43	11.553	11.552	0.001	90	17423	0.1600	0.1277	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	96	21150	0.1600	0.1424	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	22215	0.1600	0.1464	
65 Toluene	91	12.470	12.471	-0.001	93	49243	0.1600	0.1582	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	92	13406	0.1600	0.1623	
69 2-Hexanone	58	13.009	13.003	0.006	93	7267	0.1600	0.1116	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	33778	0.1600	0.1403	
71 n-Octane	85	13.322	13.326	-0.004	72	15759	0.1600	0.1589	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	98	25676	0.1600	0.1419	
73 Tetrachloroethene	129	13.688	13.695	-0.007	93	25138	0.1600	0.1630	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	43900	0.1600	0.1614	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	77	29630	0.1600	0.1622	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	69322	0.1600	0.1545	
78 m-Xylene & p-Xylene	91	15.123	15.119	0.004	100	119367	0.3200	0.3243	
79 Bromoform	173	15.506	15.507	-0.001	95	32037	0.1600	0.1267	
80 Styrene	104	15.592	15.594	-0.002	97	32117	0.1600	0.1331	
82 o-Xylene	91	15.657	15.655	0.002	97	63851	0.1600	0.1652	
81 n-Nonane	57	15.657	15.659	-0.002	76	23460	0.1600	0.1601	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	92	30142	0.1600	0.1534	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	92	15160	0.1600	0.1556	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	50	91067	0.1600	0.1655	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	24106	0.1600	0.1596	
87 2-Chlorotoluene	126	16.870	16.867	0.003	94	22951	0.1600	0.1642	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	91082	0.1600	0.1594	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	90	37553	0.1600	0.1606	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	89	28257	0.1600	0.1271	
91 n-Decane	57	17.533	17.532	0.001	96	33292	0.1600	0.1597	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	90	97365	0.1600	0.1710	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	88253	0.1600	0.1692	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	61425	0.1600	0.1631	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	98	116417	0.1600	0.1652	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	54221	0.1600	0.1348	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	92	63275	0.1600	0.1674	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	116224	0.1600	0.1634	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	98	92640	0.1600	0.1654	
100 Butylcyclohexane	83	18.229	18.232	-0.003	93	50956	0.1600	0.1654	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	62682	0.1600	0.1687	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	92	77218	0.1600	0.1671	
103 Indene	116	18.520	18.520	0.000	90	56129	0.1600	0.1480	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	97253	0.1600	0.1678	
105 Undecane	57	19.000	19.001	-0.001	87	40009	0.1600	0.1622	
106 1,2-Dibromo-3-Chloropropan	157	19.021	19.028	-0.007	94	24464	0.1600	0.1352	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	111338	0.1600	0.1659	
110 Dodecane	57	20.127	20.128	-0.001	90	45141	0.1600	0.1747	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	72153	0.1600	0.1799	
113 Naphthalene	128	20.326	20.329	-0.003	98	142183	0.1600	0.1753	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	96	81808	0.1600	0.1754	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	94	72007	0.1600	0.1868	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	50645	0.1600	0.1965	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	98	54962	0.1600	0.2418	
A 120 C8 Range	1	13.337	(13.284-13.370)		0	123442	0.1600	0.1536	
S 121 Xylenes, Total	100				0		0.4800	0.4895	
S 122 1,2-Dichloroethene, Total	1				0		0.3200	0.3124	

Reagents:

40L4DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D

Injection Date: 17-Nov-2018 00:20:30

Instrument ID: MR

Operator ID:

Lims ID: IC L4

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

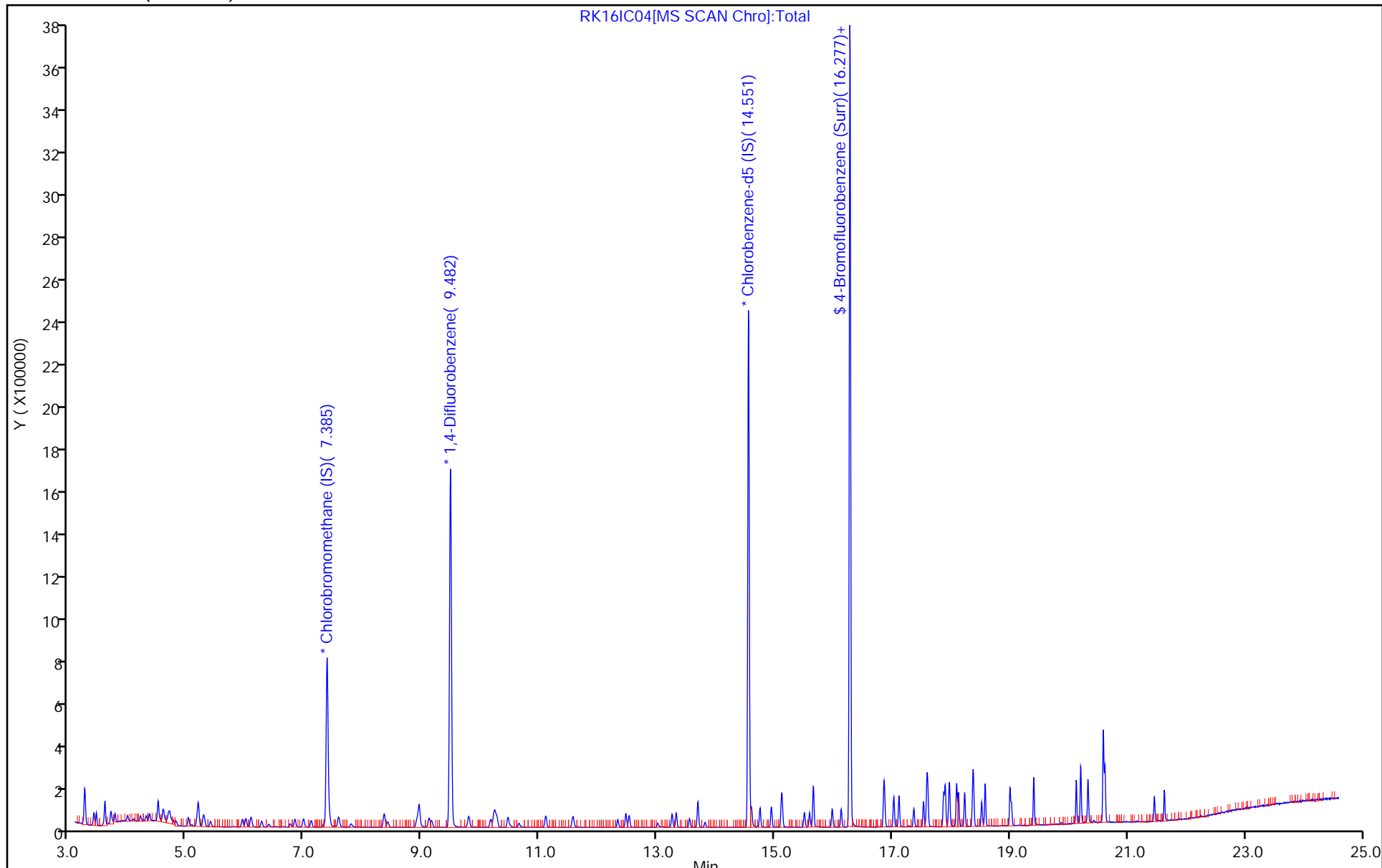
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D

Injection Date: 17-Nov-2018 00:20:30

Instrument ID: MR

Lims ID: IC L4

Client ID:

Operator ID:

ALS Bottle#:

3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

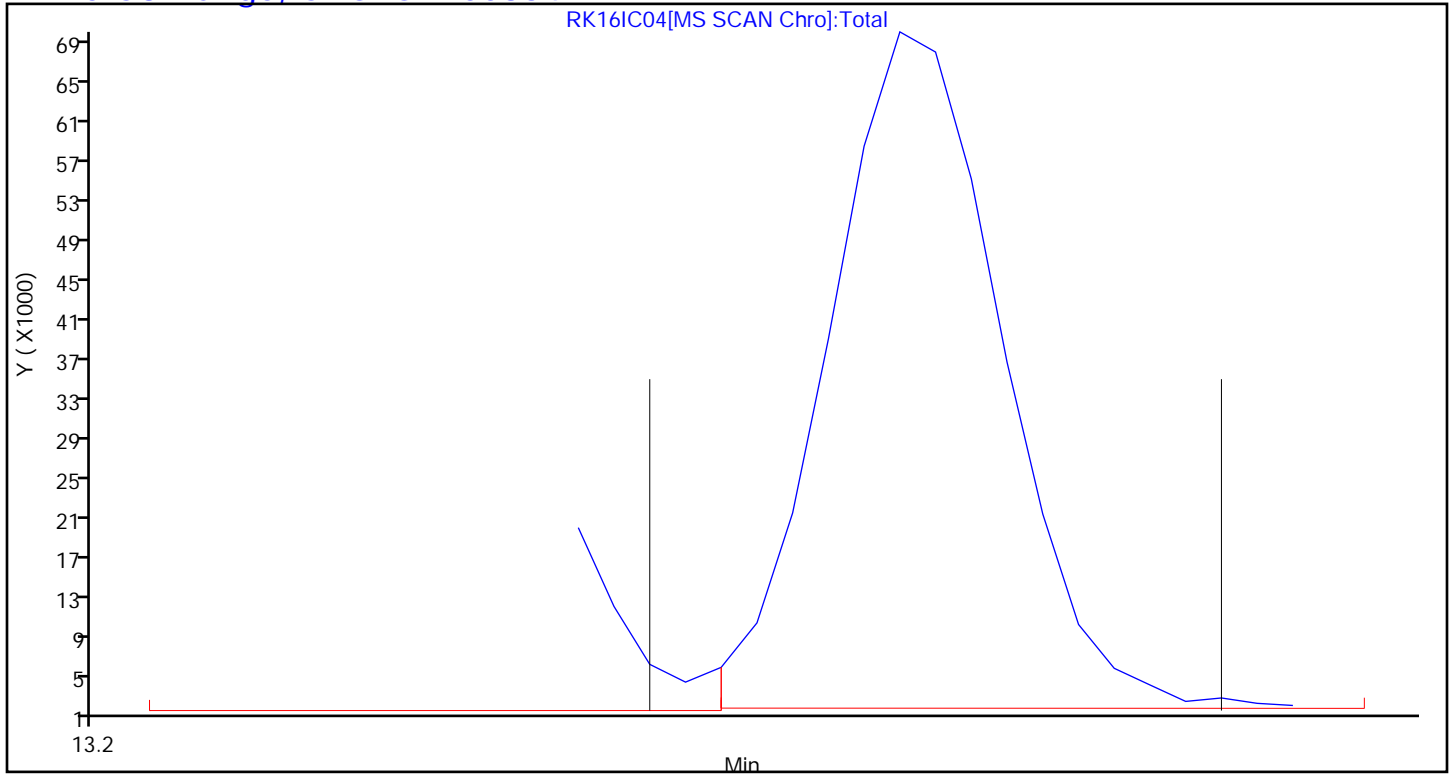
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 17-Nov-2018 01:12:30 ALS Bottle#: 4 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-012
 Misc. Info.: 190395
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:05 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:25:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	275927	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1558367	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1354086	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	90	1170099	4.00	4.06	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	95	67965	0.4000	0.4151	
7 Propene	41	3.410	3.420	-0.010	48	20715	0.4000	0.4116	
8 Dichlorodifluoromethane	85	3.448	3.461	-0.013	100	146259	0.4000	0.4871	
9 Chloromethane	52	3.572	3.586	-0.014	99	9302	0.4000	0.4405	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.599	3.609	-0.010	90	98065	0.4000	0.4387	
11 Acetaldehyde	44	3.696	3.710	-0.014	93	45673	2.00	2.31	
12 Vinyl chloride	62	3.702	3.711	-0.009	85	28814	0.4000	0.3893	
13 Butadiene	54	3.766	3.780	-0.014	83	18132	0.4000	0.4040	
14 Butane	43	3.772	3.782	-0.010	78	33375	0.4000	0.4274	
15 Bromomethane	94	3.982	3.995	-0.013	96	35058	0.4000	0.4114	
16 Chloroethane	64	4.084	4.100	-0.016	95	13655	0.4000	0.3983	
17 Ethanol	31	4.209	4.222	-0.014	92	43508	2.00	2.10	
18 Vinyl bromide	106	4.300	4.315	-0.015	96	37233	0.4000	0.4146	
19 2-Methylbutane	43	4.359	4.369	-0.010	78	23067	0.4000	0.4180	
20 Acrolein	56	4.510	4.516	-0.006	28	6392	0.4000	0.3665	
21 Trichlorofluoromethane	101	4.505	4.517	-0.012	99	164680	0.4000	0.4038	
22 Acetonitrile	40	4.548	4.545	0.003	98	6701	0.4000	0.3756	
23 Acetone	58	4.597	4.605	-0.008	100	35521	1.20	1.24	
24 Pentane	72	4.683	4.693	-0.010	91	5613	0.4000	0.4046	
25 Isopropyl alcohol	45	4.705	4.716	-0.011	97	95103	1.20	1.22	
26 Ethyl ether	31	4.807	4.817	-0.010	72	19232	0.4000	0.4185	
27 1,1-Dichloroethene	96	5.023	5.033	-0.010	98	37945	0.4000	0.3908	
28 Acrylonitrile	53	5.087	5.097	-0.010	95	17259	0.4000	0.3986	
29 2-Methyl-2-propanol	59	5.168	5.173	-0.005	95	74242	0.4000	0.4020	
30 1,1,2-Trichloro-1,2,2-trif	101	5.190	5.199	-0.009	94	97989	0.4000	0.4071	
31 Methylene Chloride	84	5.276	5.290	-0.014	90	41401	0.4000	0.4485	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.298	5.309	-0.011	83	36262	0.4000	0.4015	
33 Carbon disulfide	76	5.395	5.410	-0.015	99	91945	0.4000	0.3990	
34 trans-1,2-Dichloroethene	96	5.939	5.951	-0.012	97	38175	0.4000	0.3854	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	53163	0.4000	0.4069	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	126834	0.4000	0.4025	
37 1,1-Dichloroethane	63	6.274	6.283	-0.009	98	65086	0.4000	0.3927	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	59429	0.4000	0.3713	
39 2-Butanone (MEK)	72	6.754	6.761	-0.007	97	14067	0.4000	0.3744	
40 Hexane	56	6.835	6.845	-0.010	81	23112	0.4000	0.4012	
171 Isopropyl ether	45	6.980	6.989	-0.009	85	80134	0.4000	0.4043	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	95	38474	0.4000	0.3852	
42 Ethyl acetate	43	7.320	7.330	-0.010	98	53019	0.4000	0.3820	
43 Chloroform	83	7.433	7.439	-0.006	89	104204	0.4000	0.3954	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	92	113240	0.4000	0.3965	
44 Tetrahydrofuran	42	7.784	7.793	-0.009	77	24371	0.4000	0.3987	
45 1,1,1-Trichloroethane	97	8.355	8.364	-0.009	94	130803	0.4000	0.3915	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	76773	0.4000	0.3892	
47 Benzene	78	8.911	8.920	-0.009	98	96837	0.4000	0.3814	
48 Cyclohexane	69	8.943	8.951	-0.008	91	14632	0.4000	0.3878	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	98	145724	0.4000	0.4080	
49 n-Butanol	31	8.981	8.969	0.012	66	5146	0.4000	0.2859	
51 2,3-Dimethylpentane	71	9.126	9.126	0.000	80	21116	0.4000	0.4017	
52 Thiophene	84	9.169	9.174	-0.005	92	57630	0.4000	0.3968	
53 Isooctane	57	9.795	9.798	-0.003	94	126672	0.4000	0.3898	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	75	31548	0.4000	0.3959	
55 n-Heptane	71	10.221	10.224	-0.003	82	32279	0.4000	0.3977	
56 Trichloroethene	130	10.243	10.250	-0.007	93	60473	0.4000	0.3951	
57 Dibromomethane	93	10.270	10.279	-0.009	94	53985	0.4000	0.3944	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	98	97237	0.4000	0.3789	
59 1,4-Dioxane	88	10.496	10.497	-0.001	88	15165	0.4000	0.3916	
60 Methyl methacrylate	41	10.642	10.649	-0.007	91	31857	0.4000	0.3594	
61 Methylcyclohexane	83	11.105	11.109	-0.004	92	61375	0.4000	0.3915	
62 4-Methyl-2-pentanone (MIBK)	43	11.548	11.552	-0.004	91	51070	0.4000	0.3615	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	97	59340	0.4000	0.3858	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	61443	0.4000	0.3884	
65 Toluene	91	12.470	12.471	-0.001	93	129198	0.4000	0.3981	
66 1,1,2-Trichloroethane	83	12.524	12.527	-0.003	93	35149	0.4000	0.4083	
69 2-Hexanone	58	13.003	13.003	0.000	95	24199	0.4000	0.3564	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	94584	0.4000	0.3769	
71 n-Octane	85	13.327	13.326	0.001	75	40600	0.4000	0.3928	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	73769	0.4000	0.3910	
73 Tetrachloroethene	129	13.688	13.695	-0.007	93	63725	0.4000	0.3964	
74 Chlorobenzene	112	14.605	14.606	-0.001	93	113462	0.4000	0.4003	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	80	76114	0.4000	0.3997	
76 Ethylbenzene	91	14.939	14.943	-0.004	100	189812	0.4000	0.4057	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	316153	0.8001	0.8239	
79 Bromoform	173	15.506	15.507	-0.001	96	89888	0.4000	0.3410	
80 Styrene	104	15.592	15.594	-0.002	97	91899	0.4000	0.3654	
82 o-Xylene	91	15.651	15.655	-0.004	96	169158	0.4000	0.4197	
81 n-Nonane	57	15.657	15.659	-0.003	73	65019	0.4000	0.4257	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	92	83793	0.4000	0.4091	
84 1,2,3-Trichloropropane	110	16.126	16.132	-0.006	94	40330	0.4000	0.3971	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	95	232238	0.4000	0.4049	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	64393	0.4000	0.4089	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	91	59552	0.4000	0.4086	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	243377	0.4000	0.4086	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	98748	0.4000	0.4052	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	88	77610	0.4000	0.3350	
91 n-Decane	57	17.533	17.532	0.001	97	87862	0.4000	0.4042	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	90	252400	0.4000	0.4252	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	231880	0.4000	0.4264	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	157370	0.4000	0.4008	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	302828	0.4000	0.4121	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	149421	0.4000	0.3562	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	93	157774	0.4000	0.4003	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	307780	0.4000	0.4150	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	98	237762	0.4000	0.4071	
100 Butylcyclohexane	83	18.229	18.232	-0.003	92	134022	0.4000	0.4173	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	153773	0.4000	0.3970	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	93	195256	0.4000	0.4053	
103 Indene	116	18.520	18.520	0.000	90	144394	0.4000	0.3651	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	247354	0.4000	0.4095	
105 Undecane	57	19.000	19.001	-0.001	88	102646	0.4000	0.3991	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	97	65829	0.4000	0.3490	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	96	265327	0.4000	0.3792	
110 Dodecane	57	20.127	20.128	-0.001	89	92125	0.4000	0.3420	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	147015	0.4000	0.3515	
113 Naphthalene	128	20.326	20.329	-0.003	98	247207	0.4000	0.2923	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	96	188387	0.4000	0.3875	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	138621	0.4000	0.3449	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	37139	0.4000	0.1383	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	96	44726	0.4000	0.1888	
A 120 C8 Range	1	13.343	(13.284-13.381)		0	326670	0.4000	0.3926	
S 121 Xylenes, Total	100				0		1.20	1.24	
S 122 1,2-Dichloroethene, Total	1				0		0.8001	0.7707	

Reagents:

40L6DQP_00007

Amount Added: 80.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC05.D

Injection Date: 17-Nov-2018 01:12:30

Instrument ID: MR

Operator ID:

Lims ID: IC L5

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

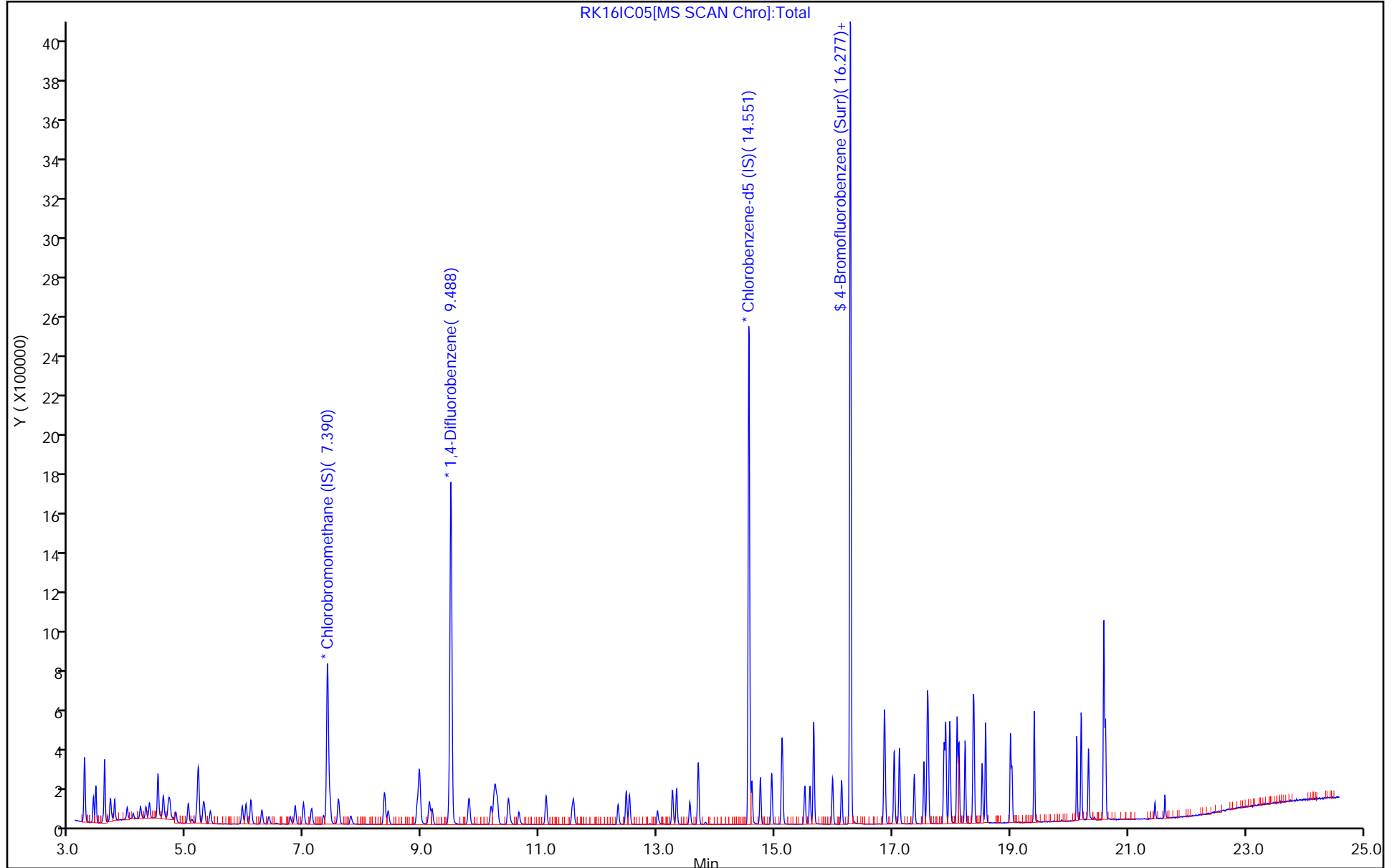
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC05.D

Injection Date: 17-Nov-2018 01:12:30

Instrument ID: MR

Lims ID: IC L5

Client ID:

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

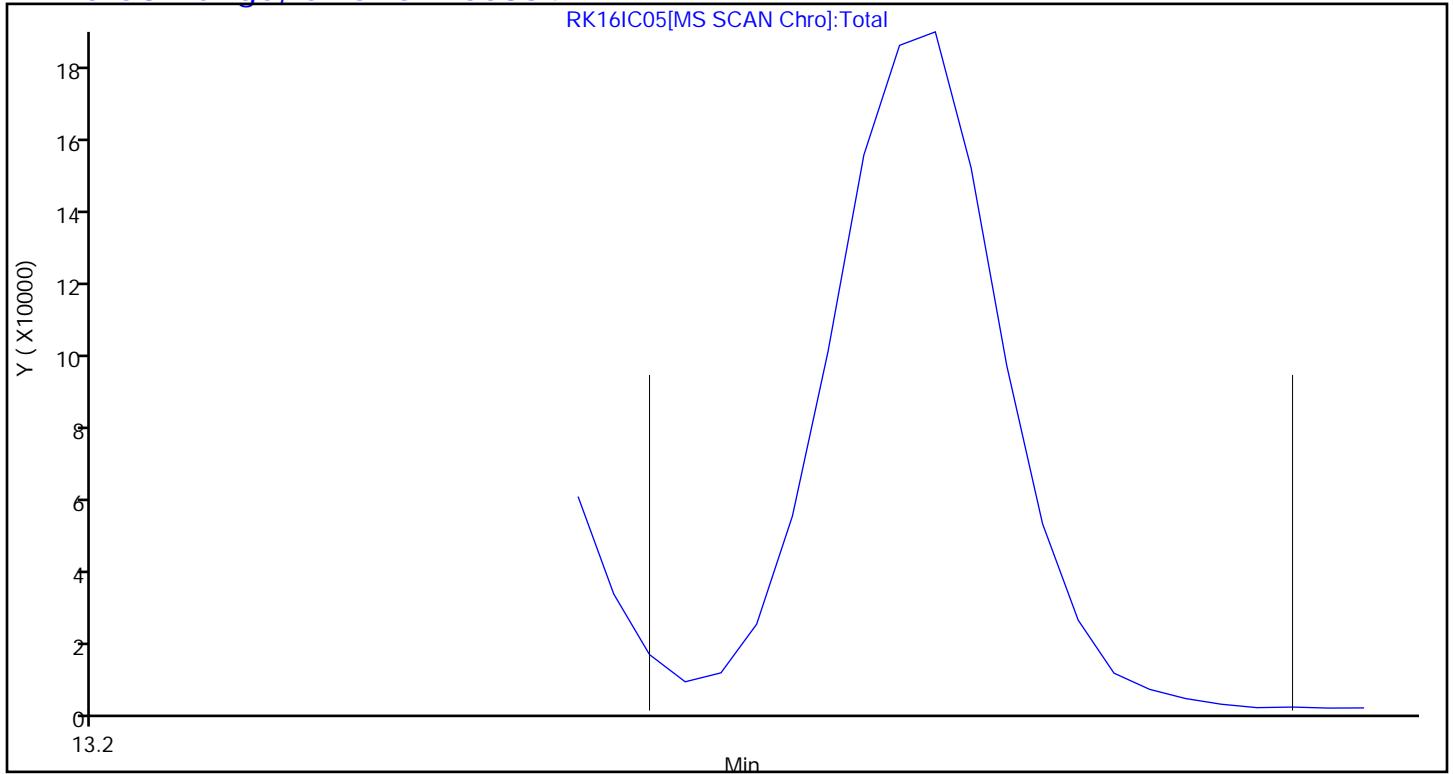
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 17-Nov-2018 02:05:30 ALS Bottle#: 4 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-013
 Misc. Info.: 190395
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:12 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:29:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.397	-0.007	70	284526	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1579313	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	90	1386926	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	90	1197793	4.00	4.06	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	95	165552	1.00	0.9806	
7 Propene	41	3.421	3.420	0.001	94	51364	1.00	0.9898	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	295289	1.00	0.9538	
9 Chloromethane	52	3.583	3.586	-0.003	98	20420	1.00	0.9379	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	89	220441	1.00	0.9564	
11 Acetaldehyde	44	3.702	3.710	-0.008	93	111533	5.00	5.48	
12 Vinyl chloride	62	3.707	3.711	-0.004	100	70331	1.00	0.9214	
13 Butadiene	54	3.777	3.780	-0.003	88	46402	1.00	1.00	
14 Butane	43	3.782	3.782	0.000	90	78896	1.00	0.9797	
15 Bromomethane	94	3.993	3.995	-0.002	95	85746	1.00	0.9758	
16 Chloroethane	64	4.095	4.100	-0.005	94	34804	1.00	0.9845	
17 Ethanol	31	4.208	4.222	-0.014	93	104882	5.00	4.92	
18 Vinyl bromide	106	4.311	4.315	-0.004	97	90610	1.00	0.9784	
19 2-Methylbutane	43	4.365	4.369	-0.004	79	56760	1.00	1.00	
20 Acrolein	56	4.505	4.516	-0.011	27	15289	1.00	0.8501	
21 Trichlorofluoromethane	101	4.510	4.517	-0.007	99	413497	1.00	0.9832	
22 Acetonitrile	40	4.543	4.545	-0.002	93	16703	1.00	0.9079	
23 Acetone	58	4.591	4.605	-0.014	100	89101	3.00	3.02	
24 Pentane	72	4.688	4.693	-0.005	92	14137	1.00	0.9884	
25 Isopropyl alcohol	45	4.699	4.716	-0.017	93	239341	3.00	2.97	
26 Ethyl ether	31	4.802	4.817	-0.015	72	46526	1.00	0.9819	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	97	96830	1.00	0.9671	
28 Acrylonitrile	53	5.082	5.097	-0.015	91	44072	1.00	0.9871	
29 2-Methyl-2-propanol	59	5.152	5.173	-0.021	91	190196	1.00	1.00	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	92	250984	1.00	1.01	
31 Methylene Chloride	84	5.281	5.290	-0.009	88	91431	1.00	0.9606	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	86	95603	1.00	1.03	
33 Carbon disulfide	76	5.406	5.410	-0.004	99	242543	1.00	1.02	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	97	99652	1.00	0.9758	
35 2-Methylpentane	43	6.009	6.011	-0.002	86	134813	1.00	1.00	
36 Methyl tert-butyl ether	73	6.080	6.094	-0.014	93	326320	1.00	1.00	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	98	165748	1.00	0.9699	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	159088	1.00	0.9638	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	98	38268	1.00	0.9878	
40 Hexane	56	6.840	6.845	-0.005	82	58239	1.00	0.9804	
171 Isopropyl ether	45	6.975	6.989	-0.014	86	203305	1.00	0.99	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	94	100389	1.00	0.9748	
42 Ethyl acetate	43	7.314	7.330	-0.016	98	143745	1.00	1.00	
43 Chloroform	83	7.433	7.439	-0.006	94	266010	1.00	0.9788	
173 Tert-butyl ethyl ether	59	7.568	7.580	-0.012	93	291639	1.00	0.99	
44 Tetrahydrofuran	42	7.778	7.793	-0.015	77	62926	1.00	1.00	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	94	339819	1.00	0.9864	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	199683	1.00	1.00	
47 Benzene	78	8.916	8.920	-0.004	98	249589	1.00	0.9699	
48 Cyclohexane	69	8.943	8.951	-0.008	84	39991	1.00	1.05	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	97	374679	1.00	1.04	
49 n-Butanol	31	8.959	8.969	-0.010	73	17690	1.00	0.9698	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	54415	1.00	1.02	
52 Thiophene	84	9.169	9.174	-0.005	94	149183	1.00	1.01	
53 Isooctane	57	9.795	9.798	-0.003	95	332582	1.00	1.01	
54 1,2-Dichloropropane	63	10.167	10.175	-0.008	73	80581	1.00	1.00	
55 n-Heptane	71	10.215	10.224	-0.009	82	84592	1.00	1.03	
56 Trichloroethene	130	10.248	10.250	-0.002	93	152289	1.00	0.9817	
57 Dibromomethane	93	10.275	10.279	-0.004	92	136587	1.00	0.9845	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	98	263754	1.00	1.01	
59 1,4-Dioxane	88	10.485	10.497	-0.012	88	38117	1.00	0.9712	
60 Methyl methacrylate	41	10.641	10.649	-0.008	91	88559	1.00	0.9859	
61 Methylcyclohexane	83	11.105	11.109	-0.004	92	160604	1.00	1.01	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	141224	1.00	0.9864	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	97	155584	1.00	1.00	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	165754	1.00	1.02	
65 Toluene	91	12.470	12.471	-0.001	93	336279	1.00	1.01	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	94	91510	1.00	1.04	
69 2-Hexanone	58	12.993	13.003	-0.010	94	68694	1.00	0.9878	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	271846	1.00	1.06	
71 n-Octane	85	13.322	13.326	-0.004	75	109095	1.00	1.03	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	199953	1.00	1.03	
73 Tetrachloroethene	129	13.694	13.695	-0.001	93	168145	1.00	1.02	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	295002	1.00	1.02	
75 2,3-Dimethylheptane	43	14.750	14.750	0.000	78	202047	1.00	1.04	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	491615	1.00	1.03	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	820994	2.00	2.09	
79 Bromoform	173	15.505	15.507	-0.002	96	263744	1.00	0.9769	
80 Styrene	104	15.592	15.594	-0.002	97	268745	1.00	1.04	
82 o-Xylene	91	15.651	15.655	-0.004	97	428791	1.00	1.04	
81 n-Nonane	57	15.656	15.659	-0.003	75	164273	1.00	1.05	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	93	223872	1.00	1.07	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	106933	1.00	1.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	589911	1.00	1.00	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	172077	1.00	1.07	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	93	156859	1.00	1.05	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	652888	1.00	1.07	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	267835	1.00	1.07	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	235120	1.00	0.99	
91 n-Decane	57	17.528	17.532	-0.004	97	237483	1.00	1.07	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	88	653325	1.00	1.07	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	597546	1.00	1.07	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	411115	1.00	1.02	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	799929	1.00	1.06	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	434461	1.00	1.01	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	95	419983	1.00	1.04	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	809499	1.00	1.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	636168	1.00	1.06	
100 Butylcyclohexane	83	18.229	18.232	-0.003	93	349539	1.00	1.06	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	400754	1.00	1.01	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	93	519916	1.00	1.05	
103 Indene	116	18.520	18.520	0.000	90	416558	1.00	1.03	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	652919	1.00	1.06	
105 Undecane	57	19.000	19.001	-0.001	87	279455	1.00	1.06	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	98	201092	1.00	1.04	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	736323	1.00	1.03	
110 Dodecane	57	20.127	20.128	-0.001	90	268129	1.00	0.9719	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	412431	1.00	0.9629	
113 Naphthalene	128	20.326	20.329	-0.003	98	719521	1.00	0.8307	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	96	517445	1.00	1.04	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	95	391665	1.00	0.9514	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	99	124366	1.00	0.4520	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	135206	1.00	0.5571	
A 120 C8 Range	1	13.340	(13.278-13.375)		0	855982	1.00	1.01	
S 121 Xylenes, Total	100				0		3.00	3.13	
S 122 1,2-Dichloroethene, Total	1				0		2.00	1.95	

Reagents:

40L6DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D

Injection Date: 17-Nov-2018 02:05:30

Instrument ID: MR

Operator ID:

Lims ID: IC L6

Worklist Smp#: 13

Client ID:

Purge Vol: 500.000 mL

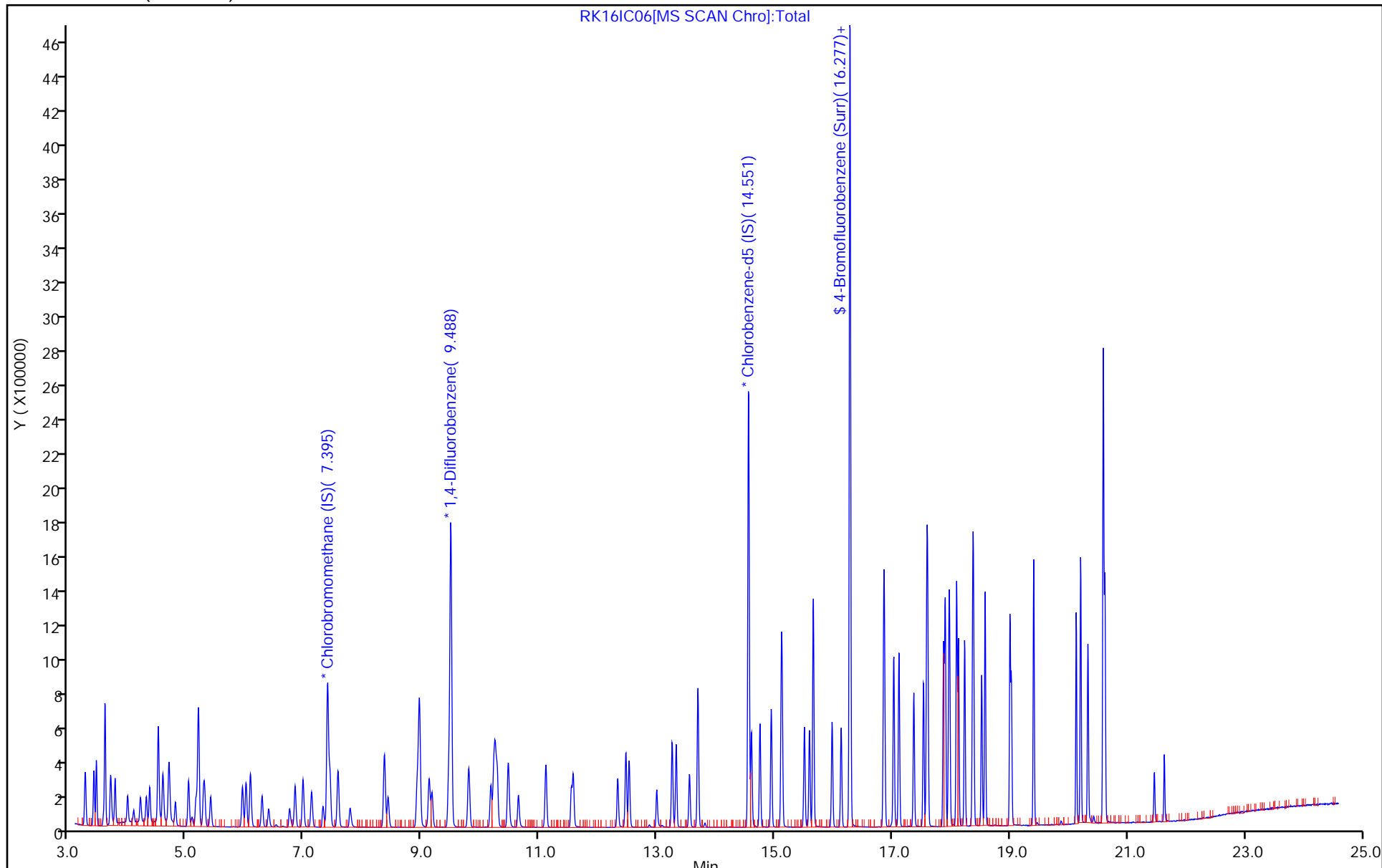
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D

Injection Date: 17-Nov-2018 02:05:30

Instrument ID: MR

Lims ID: IC L6

Client ID:

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

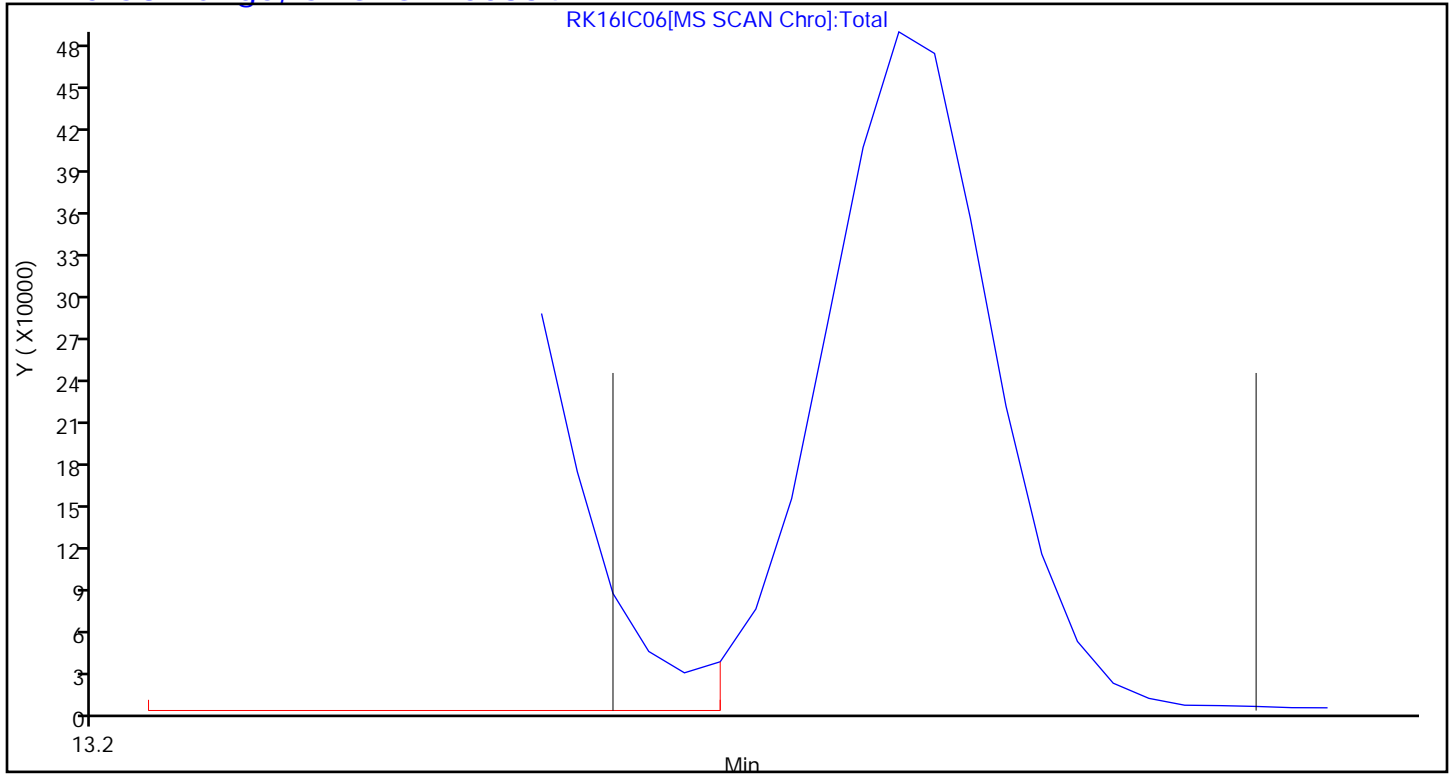
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 17-Nov-2018 02:58:30 ALS Bottle#: 5 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-014
 Misc. Info.: 190394
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:18 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:29:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.397	0.004	69	298864	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.494	-0.001	95	1677758	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	82	1487799	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	87	1269845	4.00	4.01	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	77	330784	2.00	1.87	
7 Propene	41	3.416	3.420	-0.004	49	103039	2.00	1.89	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	95	593041	2.00	1.82	
9 Chloromethane	52	3.583	3.586	-0.003	98	40844	2.00	1.79	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.604	3.609	-0.005	89	456323	2.00	1.88	
11 Acetaldehyde	44	3.701	3.710	-0.009	91	205358	10.0	9.61	
12 Vinyl chloride	62	3.707	3.711	-0.004	71	142840	2.00	1.78	
13 Butadiene	54	3.777	3.780	-0.003	82	94920	2.00	1.95	
14 Butane	43	3.777	3.782	-0.005	74	157806	2.00	1.87	
15 Bromomethane	94	3.993	3.995	-0.002	95	176496	2.00	1.91	
16 Chloroethane	64	4.095	4.100	-0.005	94	68833	2.00	1.85	
17 Ethanol	31	4.214	4.222	-0.008	93	224069	10.0	10.0	
18 Vinyl bromide	106	4.311	4.315	-0.004	95	186899	2.00	1.92	
19 2-Methylbutane	43	4.365	4.369	-0.004	78	115570	2.00	1.93	
20 Acrolein	56	4.505	4.516	-0.011	26	37440	2.00	1.98	
21 Trichlorofluoromethane	101	4.516	4.517	-0.001	99	844261	2.00	1.91	
22 Acetonitrile	40	4.548	4.545	0.003	68	35460	2.00	1.84	
23 Acetone	58	4.591	4.605	-0.014	92	173059	6.00	5.58	
24 Pentane	72	4.688	4.693	-0.005	91	28499	2.00	1.90	
25 Isopropyl alcohol	45	4.704	4.716	-0.012	91	509997	6.00	6.03	
26 Ethyl ether	31	4.802	4.817	-0.015	70	93310	2.00	1.87	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	96	202076	2.00	1.92	
28 Acrylonitrile	53	5.093	5.097	-0.004	84	91512	2.00	1.95	
29 2-Methyl-2-propanol	59	5.152	5.173	-0.021	53	409183	2.00	2.05	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	90	515989	2.00	1.98	
31 Methylene Chloride	84	5.287	5.290	-0.003	86	178076	2.00	1.78	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	82	193431	2.00	1.98	
33 Carbon disulfide	76	5.405	5.410	-0.005	99	499031	2.00	2.00	
34 trans-1,2-Dichloroethene	96	5.950	5.951	-0.001	95	206172	2.00	1.92	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	275324	2.00	1.95	
36 Methyl tert-butyl ether	73	6.080	6.094	-0.014	89	676752	2.00	1.98	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	98	342362	2.00	1.91	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	349189	2.00	2.01	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	66	79333	2.00	1.95	
40 Hexane	56	6.840	6.845	-0.005	80	121155	2.00	1.94	
171 Isopropyl ether	45	6.975	6.989	-0.014	86	426151	2.00	1.99	
41 cis-1,2-Dichloroethene	96	7.126	7.127	-0.001	93	213838	2.00	1.98	
42 Ethyl acetate	43	7.314	7.330	-0.016	98	303889	2.00	2.02	
43 Chloroform	83	7.438	7.439	-0.001	85	550434	2.00	1.93	
173 Tert-butyl ethyl ether	59	7.568	7.580	-0.012	92	613018	2.00	1.98	
44 Tetrahydrofuran	42	7.773	7.793	-0.020	77	130211	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.366	8.364	0.002	95	712345	2.00	1.97	
46 1,2-Dichloroethane	62	8.425	8.427	-0.002	78	414101	2.00	1.95	
47 Benzene	78	8.921	8.920	0.001	98	523482	2.00	1.91	
48 Cyclohexane	69	8.948	8.951	-0.003	71	82675	2.00	2.04	
50 Carbon tetrachloride	117	8.959	8.962	-0.003	96	786171	2.00	2.04	
49 n-Butanol	31	8.948	8.969	-0.021	25	40004	2.00	2.06	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	116636	2.00	2.06	
52 Thiophene	84	9.175	9.174	0.001	89	311873	2.00	1.99	
53 Isooctane	57	9.795	9.798	-0.003	95	691902	2.00	1.98	
54 1,2-Dichloropropane	63	10.172	10.175	-0.003	68	169011	2.00	1.97	
55 n-Heptane	71	10.221	10.224	-0.003	77	178041	2.00	2.04	
56 Trichloroethene	130	10.248	10.250	-0.002	93	324569	2.00	1.97	
57 Dibromomethane	93	10.280	10.279	0.001	91	283066	2.00	1.92	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	564189	2.00	2.04	
59 1,4-Dioxane	88	10.485	10.497	-0.012	40	86437	2.00	2.07	
60 Methyl methacrylate	41	10.641	10.649	-0.008	91	195505	2.00	2.05	
61 Methylcyclohexane	83	11.111	11.109	0.002	92	339768	2.00	2.01	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	311634	2.00	2.05	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	96	346235	2.00	2.09	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	369600	2.00	2.13	
65 Toluene	91	12.469	12.471	-0.002	93	715966	2.00	2.01	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	91	192987	2.00	2.04	
69 2-Hexanone	58	12.987	13.003	-0.016	94	156406	2.00	2.10	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	617174	2.00	2.24	
71 n-Octane	85	13.321	13.326	-0.005	74	233063	2.00	2.05	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	431756	2.00	2.08	
73 Tetrachloroethene	129	13.694	13.695	-0.001	94	358488	2.00	2.03	
74 Chlorobenzene	112	14.605	14.606	-0.001	85	622855	2.00	2.00	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	79	424515	2.00	2.03	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1050972	2.00	2.04	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1718390	4.00	4.08	
79 Bromoform	173	15.505	15.507	-0.002	96	631165	2.00	2.18	
80 Styrene	104	15.592	15.594	-0.002	93	593262	2.00	2.15	
82 o-Xylene	91	15.651	15.655	-0.004	77	897122	2.00	2.03	
81 n-Nonane	57	15.656	15.659	-0.003	72	340741	2.00	2.03	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.002	93	480219	2.00	2.13	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	225670	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1239416	2.00	1.97	
86 N-Propylbenzene	120	16.853	16.856	-0.003	96	356669	2.00	2.06	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	320641	2.00	2.00	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	1384436	2.00	2.12	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	551670	2.00	2.06	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	84	542707	2.00	2.13	
91 n-Decane	57	17.533	17.532	0.001	94	489862	2.00	2.05	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	65	1326146	2.00	2.03	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	93	1240172	2.00	2.08	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	863153	2.00	2.00	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	94	1651103	2.00	2.05	
96 Benzyl chloride	91	17.959	17.962	-0.003	96	984275	2.00	2.14	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	92	862511	2.00	1.99	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	92	1677824	2.00	2.06	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1329610	2.00	2.07	
100 Butylcyclohexane	83	18.229	18.232	-0.003	92	722497	2.00	2.05	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	829934	2.00	1.95	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	88	1063787	2.00	2.01	
103 Indene	116	18.520	18.520	0.000	83	909289	2.00	2.09	
104 n-Butylbenzene	91	18.579	18.580	-0.001	95	1341073	2.00	2.02	
105 Undecane	57	19.000	19.001	-0.001	86	588913	2.00	2.08	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	99	458234	2.00	2.21	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	94	1609444	2.00	2.09	
110 Dodecane	57	20.127	20.128	-0.001	90	664765	2.00	2.25	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	93	944306	2.00	2.06	
113 Naphthalene	128	20.326	20.329	-0.003	98	1821564	2.00	1.96	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	85	1070672	2.00	2.00	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	93	908417	2.00	2.06	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	707384	2.00	2.40	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	641933	2.00	2.47	
A 120 C8 Range	1	13.340	(13.278-13.375)		0	1781529	2.00	1.99	
S 121 Xylenes, Total	100				0		6.00	6.10	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.90	

Reagents:

40L7DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D

Injection Date: 17-Nov-2018 02:58:30

Instrument ID: MR

Operator ID:

Lims ID: ICIS L7

Worklist Smp#: 14

Client ID:

Purge Vol: 500.000 mL

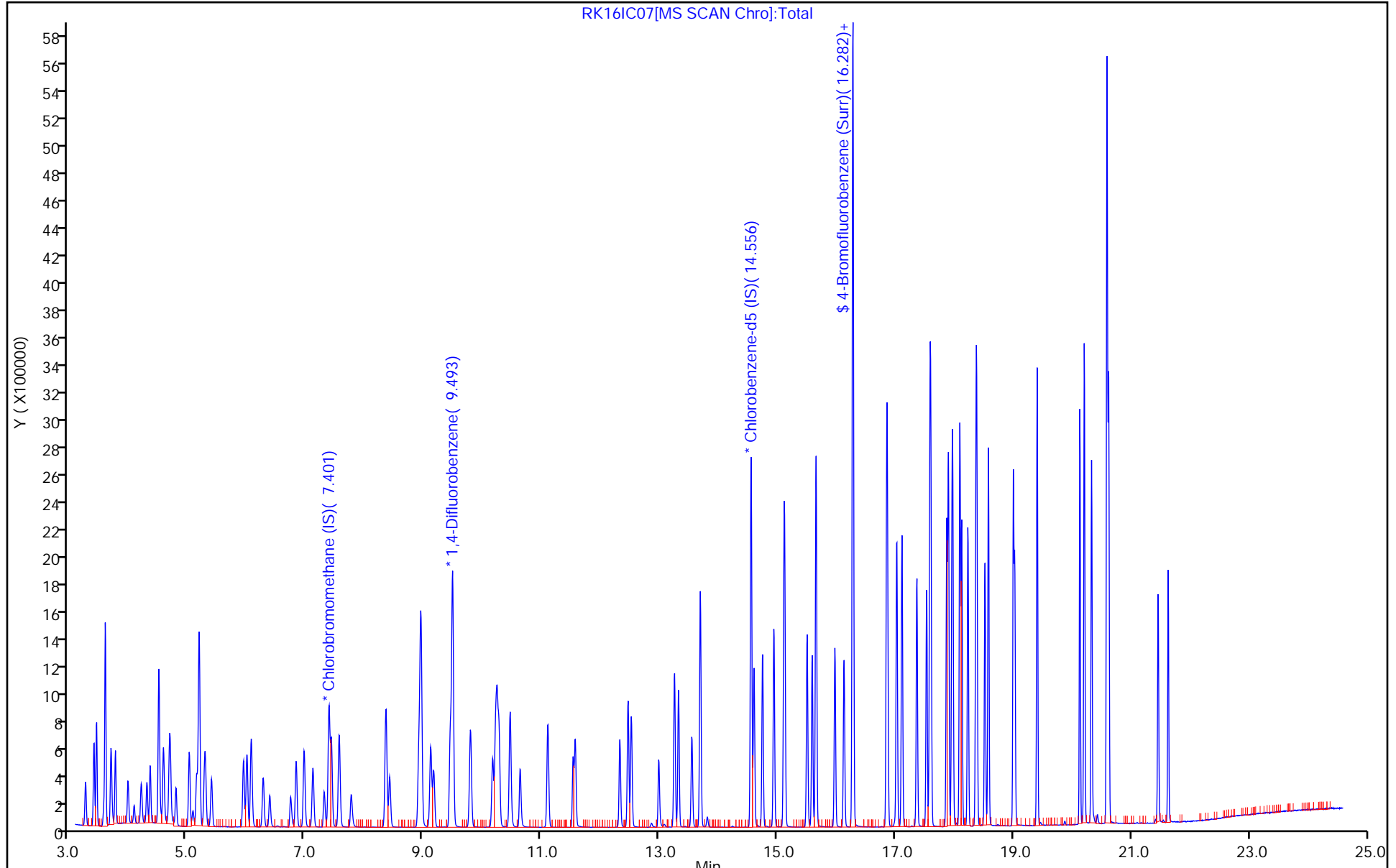
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



RK16IC07[MS SCAN Chro]:Total

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D

Injection Date: 17-Nov-2018 02:58:30

Instrument ID: MR

Lims ID: ICIS L7

Client ID:

Operator ID:

ALS Bottle#: 5

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

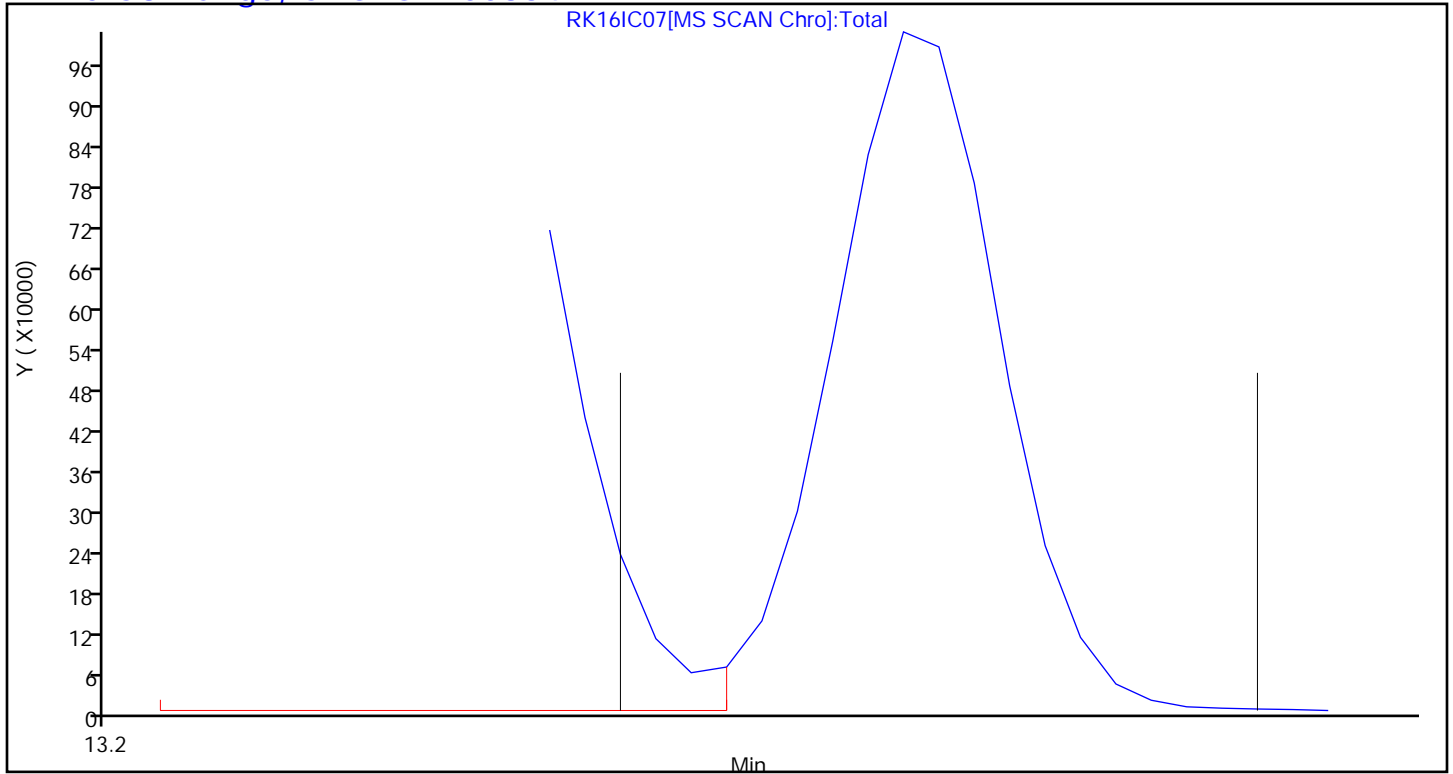
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 17-Nov-2018 03:51:30 ALS Bottle#: 6 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-015
 Misc. Info.: 190393
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:24 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:34:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.397	0.009	81	299965	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.498	9.494	0.004	95	1676956	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.557	14.555	0.001	89	1513773	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	84	1293730	4.00	4.02	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	96	670931	4.00	3.77	
7 Propene	41	3.421	3.420	0.001	91	205301	4.00	3.75	
8 Dichlorodifluoromethane	85	3.464	3.461	0.003	100	1212691	4.00	3.72	
9 Chloromethane	52	3.588	3.586	0.002	98	80675	4.00	3.51	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	97	932912	4.00	3.84	
11 Acetaldehyde	44	3.707	3.710	-0.003	94	415146	20.0	19.4	
12 Vinyl chloride	62	3.712	3.711	0.001	99	286294	4.00	3.56	
13 Butadiene	54	3.783	3.780	0.003	88	191280	4.00	3.92	
14 Butane	43	3.783	3.782	0.001	89	323819	4.00	3.81	
15 Bromomethane	94	3.998	3.995	0.003	96	354225	4.00	3.82	
16 Chloroethane	64	4.106	4.100	0.006	96	140181	4.00	3.76	
17 Ethanol	31	4.230	4.222	0.008	93	447098	20.0	19.9	
18 Vinyl bromide	106	4.322	4.315	0.007	96	380924	4.00	3.90	
19 2-Methylbutane	43	4.370	4.369	0.001	79	228167	4.00	3.80	
20 Acrolein	56	4.516	4.516	0.000	97	74788	4.00	3.94	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	99	1697186	4.00	3.83	
22 Acetonitrile	40	4.559	4.545	0.014	94	84531	4.00	4.36	
23 Acetone	58	4.602	4.605	-0.003	100	340521	12.0	10.9	
24 Pentane	72	4.699	4.693	0.006	92	58302	4.00	3.87	
25 Isopropyl alcohol	45	4.715	4.716	-0.001	93	1016357	12.0	12.0	
26 Ethyl ether	31	4.812	4.817	-0.005	71	189800	4.00	3.80	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	97	414812	4.00	3.93	
28 Acrylonitrile	53	5.104	5.097	0.007	91	186041	4.00	3.95	
29 2-Methyl-2-propanol	59	5.163	5.173	-0.010	92	809098	4.00	4.03	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	93	1031649	4.00	3.94	
31 Methylene Chloride	84	5.298	5.290	0.008	88	345898	4.00	3.45	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	85	385054	4.00	3.92	
33 Carbon disulfide	76	5.416	5.410	0.006	99	997332	4.00	3.98	
34 trans-1,2-Dichloroethene	96	5.961	5.951	0.010	97	421281	4.00	3.91	
35 2-Methylpentane	43	6.015	6.011	0.004	84	553915	4.00	3.90	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	1373906	4.00	4.01	
37 1,1-Dichloroethane	63	6.295	6.283	0.012	98	695373	4.00	3.86	
38 Vinyl acetate	43	6.403	6.402	0.001	98	730693	4.00	4.20	
39 2-Butanone (MEK)	72	6.759	6.761	-0.002	97	165553	4.00	4.05	
40 Hexane	56	6.845	6.845	0.000	81	248691	4.00	3.97	
171 Isopropyl ether	45	6.986	6.989	-0.003	86	863733	4.00	4.01	
41 cis-1,2-Dichloroethene	96	7.137	7.127	0.010	94	429081	4.00	3.95	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	632910	4.00	4.20	
43 Chloroform	83	7.449	7.439	0.010	96	1123349	4.00	3.92	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	92	1274961	4.00	4.11	
44 Tetrahydrofuran	42	7.778	7.793	-0.015	76	266070	4.00	4.00	
45 1,1,1-Trichloroethane	97	8.371	8.364	0.007	95	1454125	4.00	4.00	
46 1,2-Dichloroethane	62	8.436	8.427	0.009	97	837957	4.00	3.95	
47 Benzene	78	8.927	8.920	0.007	98	1050705	4.00	3.85	
48 Cyclohexane	69	8.954	8.951	0.003	91	167839	4.00	4.13	
50 Carbon tetrachloride	117	8.965	8.962	0.003	98	1553305	4.00	4.04	
49 n-Butanol	31	8.948	8.969	-0.021	65	82457	4.00	4.26	
51 2,3-Dimethylpentane	71	9.132	9.126	0.006	83	235995	4.00	4.17	
52 Thiophene	84	9.180	9.174	0.006	94	639928	4.00	4.09	
53 Isooctane	57	9.800	9.798	0.002	94	1407509	4.00	4.02	
54 1,2-Dichloropropane	63	10.178	10.175	0.003	77	344383	4.00	4.02	
55 n-Heptane	71	10.226	10.224	0.002	83	361284	4.00	4.14	
56 Trichloroethene	130	10.253	10.250	0.003	96	707793	4.00	4.30	
57 Dibromomethane	93	10.286	10.279	0.007	91	586890	4.00	3.98	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	1174659	4.00	4.25	
59 1,4-Dioxane	88	10.485	10.497	-0.012	86	173912	4.00	4.17	
60 Methyl methacrylate	41	10.642	10.649	-0.007	91	413937	4.00	4.34	
61 Methylcyclohexane	83	11.111	11.109	0.002	92	689164	4.00	4.09	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	659470	4.00	4.34	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	95	719012	4.00	4.34	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	783879	4.00	4.43	
65 Toluene	91	12.470	12.471	-0.001	93	1469948	4.00	4.05	
66 1,1,2-Trichloroethane	83	12.524	12.527	-0.003	94	395113	4.00	4.11	
69 2-Hexanone	58	12.987	13.003	-0.016	95	338784	4.00	4.46	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	1311808	4.00	4.68	
71 n-Octane	85	13.327	13.326	0.001	74	477723	4.00	4.13	
72 Ethylene Dibromide	107	13.554	13.551	0.003	97	900939	4.00	4.27	
73 Tetrachloroethene	129	13.694	13.695	-0.001	94	719415	4.00	4.00	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	1278293	4.00	4.03	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	77	866249	4.00	4.07	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	2145561	4.00	4.10	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	3492522	8.00	8.14	
79 Bromoform	173	15.506	15.507	-0.001	96	1405685	4.00	4.77	
80 Styrene	104	15.592	15.594	-0.002	98	1255220	4.00	4.46	
82 o-Xylene	91	15.657	15.655	0.002	97	1814388	4.00	4.03	
81 n-Nonane	57	15.657	15.659	-0.002	75	686883	4.00	4.02	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	93	935594	4.00	4.09	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	461156	4.00	4.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	97	2553866	4.00	3.98	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	735475	4.00	4.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	653681	4.00	4.01	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	2809081	4.00	4.22	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	1121740	4.00	4.12	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	1140621	4.00	4.40	
91 n-Decane	57	17.533	17.532	0.001	97	987208	4.00	4.06	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	2644216	4.00	3.98	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	2478370	4.00	4.08	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	1751738	4.00	3.99	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	3316313	4.00	4.04	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	2125520	4.00	4.53	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	95	1725619	4.00	3.92	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	3366403	4.00	4.06	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	2652674	4.00	4.06	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	1440937	4.00	4.01	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	95	1669523	4.00	3.86	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	93	2153540	4.00	4.00	
103 Indene	116	18.520	18.520	0.000	90	1898638	4.00	4.29	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	2705337	4.00	4.01	
105 Undecane	57	19.000	19.001	-0.001	87	1182131	4.00	4.11	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	98	986255	4.00	4.68	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	3260653	4.00	4.17	
110 Dodecane	57	20.127	20.128	-0.001	90	1343815	4.00	4.46	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	1940306	4.00	4.15	
113 Naphthalene	128	20.326	20.329	-0.003	98	3797602	4.00	4.02	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	95	2166873	4.00	3.99	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	94	1865471	4.00	4.15	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	1636134	4.00	5.45	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	1437560	4.00	5.43	
A 120 C8 Range	1	13.340	(13.279-13.376)		0	3620641	4.00	4.04	
S 121 Xylenes, Total	100				0		12.0	12.2	
S 122 1,2-Dichloroethene, Total	1				0		8.00	7.86	

Reagents:

40L8DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Injection Date: 17-Nov-2018 03:51:30

Instrument ID: MR

Operator ID:

Lims ID: IC L8

Worklist Smp#: 15

Client ID:

Purge Vol: 500.000 mL

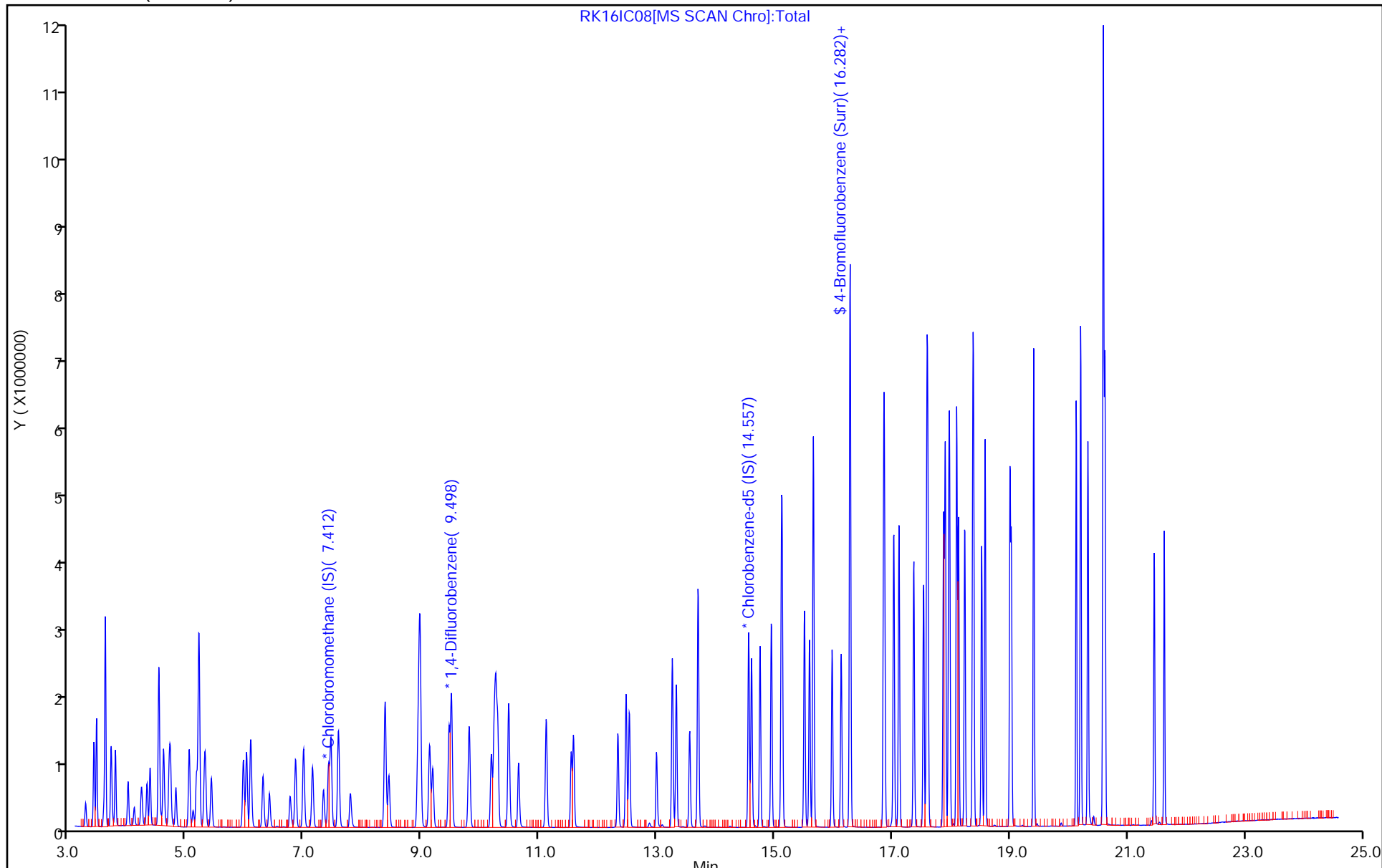
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Injection Date: 17-Nov-2018 03:51:30

Instrument ID: MR

Lims ID: IC L8

Client ID:

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

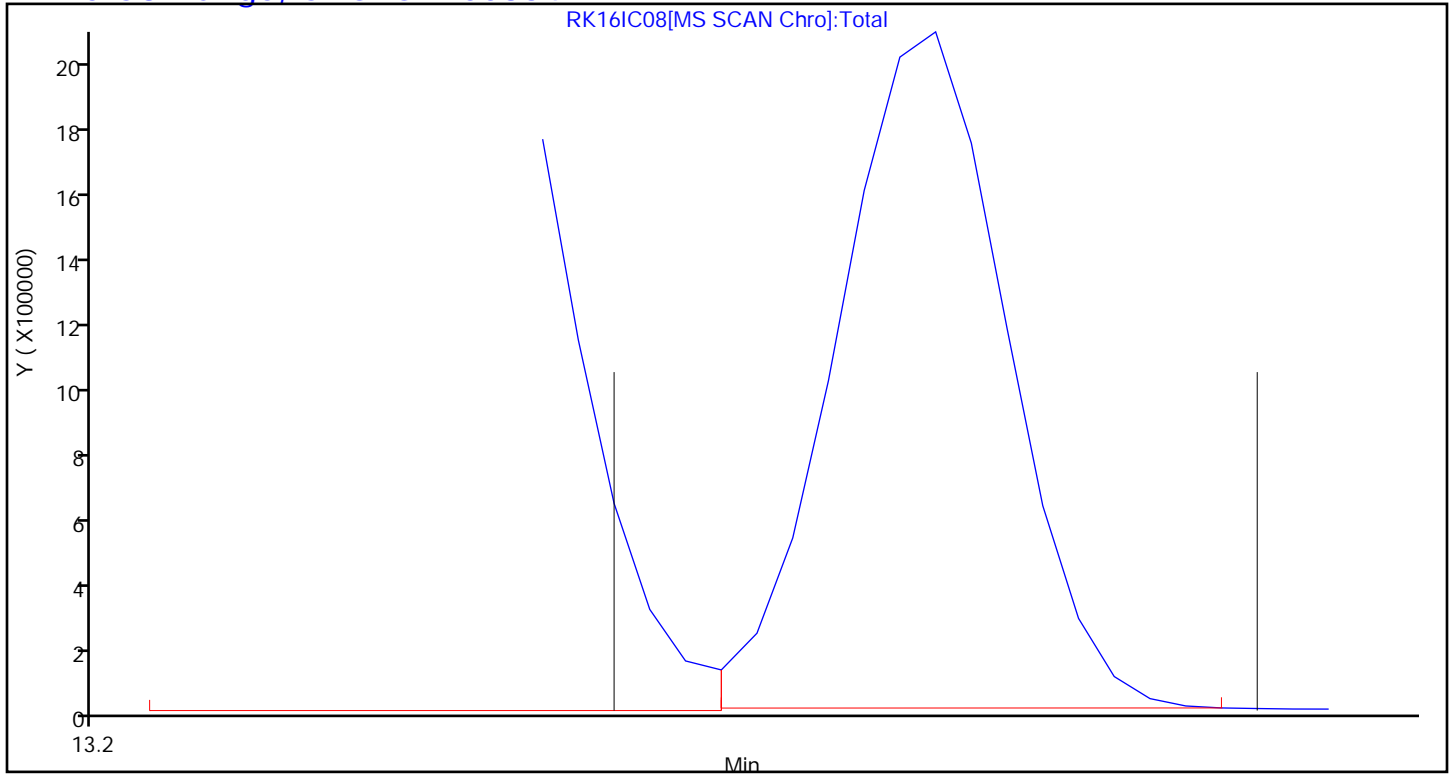
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 06/28/2017 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/28/2017 21:58
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6999	0.3362			2.00	-52.0*	35.0
3-Methylthiophene	Ave	0.6908	0.7960			2.00	15.2	35.0
2-Ethylthiophene	Ave	0.9153	1.134			2.00	23.9	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.640			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.275			2.00	39.5*	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.768			2.00	43.0*	35.0
Benzo (b) thiophene	Ave	0.9147	1.487			2.00	62.6*	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 17-Nov-2018 06:27:30 ALS Bottle#: 8 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-018
 Misc. Info.: S80
 Operator ID: Instrument ID: MR
 Sublist:

Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 16:30:16 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: tajh Date: 19-Nov-2018 10:15:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.397	-0.018	68	299493	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	94	1671036	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	89	1499042	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	89	1270095	4.00	3.98	
6 Chlorodifluoromethane	51	3.383	3.417	-0.034	95	337816	2.00	1.90	
7 Propene	41	3.389	3.420	-0.031	91	101676	2.00	1.86	
8 Dichlorodifluoromethane	85	3.432	3.461	-0.029	100	757267	2.00	2.32	
9 Chloromethane	52	3.550	3.586	-0.036	98	40890	2.00	1.78	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.583	3.609	-0.026	89	519503	2.00	2.14	
11 Acetaldehyde	44	3.674	3.710	-0.036	93	179473	10.0	8.38	
12 Vinyl chloride	62	3.680	3.711	-0.031	99	144783	2.00	1.80	
13 Butadiene	54	3.750	3.780	-0.030	87	93331	2.00	1.92	
14 Butane	43	3.750	3.782	-0.032	89	162697	2.00	1.92	
15 Bromomethane	94	3.966	3.995	-0.029	96	171614	2.00	1.86	
16 Chloroethane	64	4.068	4.100	-0.032	95	69702	2.00	1.87	
17 Ethanol	31	4.198	4.222	-0.024	92	172190	10.0	7.67	
18 Vinyl bromide	106	4.284	4.315	-0.031	97	197656	2.00	2.03	
19 2-Methylbutane	43	4.343	4.369	-0.026	77	117076	2.00	1.95	
20 Acrolein	56	4.483	4.516	-0.033	97	41705	2.00	2.20	
21 Trichlorofluoromethane	101	4.489	4.517	-0.028	99	845437	2.00	1.91	
22 Acetonitrile	40	4.516	4.545	-0.029	96	35597	2.00	1.84	
23 Acetone	58	4.575	4.605	-0.030	100	57219	2.00	1.84	
24 Pentane	72	4.661	4.693	-0.032	91	30029	2.00	1.99	
25 Isopropyl alcohol	45	4.688	4.716	-0.028	95	209729	2.00	2.48	
26 Ethyl ether	31	4.780	4.817	-0.037	69	85111	2.00	1.71	
27 1,1-Dichloroethene	96	5.006	5.033	-0.027	97	198342	2.00	1.88	
28 Acrylonitrile	53	5.066	5.097	-0.031	91	93387	2.00	1.99	
29 2-Methyl-2-propanol	59	5.141	5.173	-0.032	94	405847	2.00	2.02	
30 1,1,2-Trichloro-1,2,2-trif	101	5.174	5.199	-0.025	92	514124	2.00	1.97	
31 Methylene Chloride	84	5.260	5.290	-0.030	88	175058	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.281	5.309	-0.028	85	194281	2.00	1.98	
33 Carbon disulfide	76	5.378	5.410	-0.032	99	488020	2.00	1.95	
34 trans-1,2-Dichloroethene	96	5.929	5.951	-0.023	97	204116	2.00	1.90	
35 2-Methylpentane	43	5.988	6.011	-0.023	84	255391	2.00	1.80	
36 Methyl tert-butyl ether	73	6.058	6.094	-0.036	92	690950	2.00	2.02	
37 1,1-Dichloroethane	63	6.257	6.283	-0.026	98	346185	2.00	1.92	
38 Vinyl acetate	43	6.376	6.402	-0.026	98	366118	2.00	2.11	
39 2-Butanone (MEK)	72	6.732	6.761	-0.029	98	78637	2.00	1.93	
40 Hexane	56	6.824	6.845	-0.021	81	122366	2.00	1.96	
171 Isopropyl ether	45	6.958	6.989	-0.031	86	443358	2.00	2.06	
41 cis-1,2-Dichloroethene	96	7.104	7.127	-0.023	94	212288	2.00	1.96	
42 Ethyl acetate	43	7.298	7.330	-0.032	98	293488	2.00	1.95	
43 Chloroform	83	7.422	7.439	-0.017	96	555199	2.00	1.94	
173 Tert-butyl ethyl ether	59	7.557	7.580	-0.023	92	591267	2.00	1.91	
44 Tetrahydrofuran	42	7.762	7.793	-0.031	76	130960	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.344	8.364	-0.020	94	715022	2.00	1.97	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	419142	2.00	1.98	
47 Benzene	78	8.905	8.920	-0.015	98	541647	2.00	1.99	
48 Cyclohexane	69	8.932	8.951	-0.019	88	85082	2.00	2.10	
50 Carbon tetrachloride	117	8.943	8.962	-0.019	97	823420	2.00	2.15	
49 n-Butanol	31	8.943	8.969	-0.026	54	40428	2.00	2.09	
51 2,3-Dimethylpentane	71	9.110	9.126	-0.016	82	113510	2.00	2.01	
52 Thiophene	84	9.159	9.174	-0.015	95	308039	2.00	1.98	
53 Isooctane	57	9.784	9.798	-0.014	95	705085	2.00	2.02	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	76	170084	2.00	1.99	
55 n-Heptane	71	10.210	10.224	-0.014	83	179014	2.00	2.06	
56 Trichloroethene	130	10.237	10.250	-0.013	93	332896	2.00	2.03	
57 Dibromomethane	93	10.269	10.279	-0.010	92	292459	2.00	1.99	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	572509	2.00	2.08	
59 1,4-Dioxane	88	10.474	10.497	-0.023	86	85996	2.00	2.07	
60 Methyl methacrylate	41	10.631	10.649	-0.018	90	196157	2.00	2.06	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	414520	2.00	2.47	
62 4-Methyl-2-pentanone (MIBK)	43	11.531	11.552	-0.021	91	315480	2.00	2.08	
63 cis-1,3-Dichloropropene	75	11.569	11.577	-0.008	97	358004	2.00	2.17	
64 trans-1,3-Dichloropropene	75	12.324	12.332	-0.008	97	387987	2.00	2.22	
65 Toluene	91	12.464	12.471	-0.007	93	738479	2.00	2.06	
67 2-Methylthiophene	97	12.518	12.524	-0.006	80	252005	NC	NC	
66 1,1,2-Trichloroethane	83	12.518	12.527	-0.009	94	195833	2.00	2.05	
68 3-Methylthiophene	97	12.831	12.836	-0.005	99	596590	NC	NC	
69 2-Hexanone	58	12.987	13.003	-0.016	95	157281	2.00	2.09	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	97	630906	2.00	2.27	
71 n-Octane	85	13.321	13.326	-0.005	74	241345	2.00	2.11	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	440376	2.00	2.11	
73 Tetrachloroethene	129	13.688	13.695	-0.007	94	362784	2.00	2.04	
74 Chlorobenzene	112	14.599	14.606	-0.007	92	644974	2.00	2.06	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	78	387573	2.00	1.84	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1081684	2.00	2.09	
77 2-Ethylthiophene	97	15.036	15.042	-0.006	98	850130	NC	NC	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1797001	4.00	4.23	
79 Bromoform	173	15.505	15.507	-0.002	96	657515	2.00	2.25	
80 Styrene	104	15.592	15.594	-0.002	97	618923	2.00	2.22	
82 o-Xylene	91	15.651	15.655	-0.004	97	908326	2.00	2.04	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.656	15.659	-0.003	81	352264	2.00	2.08	
83 1,1,2,2-Tetrachloroethane	83	15.974	15.976	-0.002	93	486519	2.00	2.15	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	231227	2.00	2.06	
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1305567	2.00	2.06	
86 N-Propylbenzene	120	16.853	16.856	-0.003	98	380100	2.00	2.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	338365	2.00	2.10	
88 4-Ethyltoluene	105	17.021	17.027	-0.006	98	1360898	2.00	2.06	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	643905	2.00	2.39	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	552848	2.00	2.16	
91 n-Decane	57	17.528	17.532	-0.004	97	510052	2.00	2.12	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	1376781	2.00	2.10	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	1269827	2.00	2.11	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	888433	2.00	2.04	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	1714335	2.00	2.11	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	1039012	2.00	2.24	
97 1,4-Dichlorobenzene	146	17.970	17.977	-0.007	94	887663	2.00	2.03	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	1699119	2.00	2.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1037942	2.00	1.61	
100 Butylcyclohexane	83	18.229	18.232	-0.004	92	701115	2.00	1.97	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	96	857489	2.00	2.00	
102 2,3-Dihydroindene	117	18.379	18.383	-0.004	93	1087727	2.00	2.04	
103 Indene	116	18.520	18.520	0.000	90	809464	2.00	1.85	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	1414728	2.00	2.12	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	96	1229369	NC	NC	
105 Undecane	57	19.000	19.001	-0.001	87	616308	2.00	2.16	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	94	386560	2.00	1.85	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	1560478	2.00	2.01	
109 1,2,3,5-Tetramethylbenzene	119	19.463	19.464	-0.001	94	955538	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	96	1325184	NC	NC	
110 Dodecane	57	20.127	20.128	-0.001	90	688062	2.00	2.31	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	999500	2.00	2.16	
113 Naphthalene	128	20.326	20.329	-0.003	98	1949612	2.00	2.08	
114 Benzo(b)thiophene	134	20.423	20.429	-0.006	99	1114636	NC	NC	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	1114590	2.00	2.07	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	970744	2.00	2.18	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	761819	2.00	2.56	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	709921	2.00	2.71	
A 120 C8 Range	1	13.335	(13.279-13.376)		0	1874356	2.00	2.10	
S 121 Xylenes, Total	100				0		6.00	6.27	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.86	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00080

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D

Injection Date: 17-Nov-2018 06:27:30

Instrument ID: MR

Operator ID:

Lims ID: icv

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

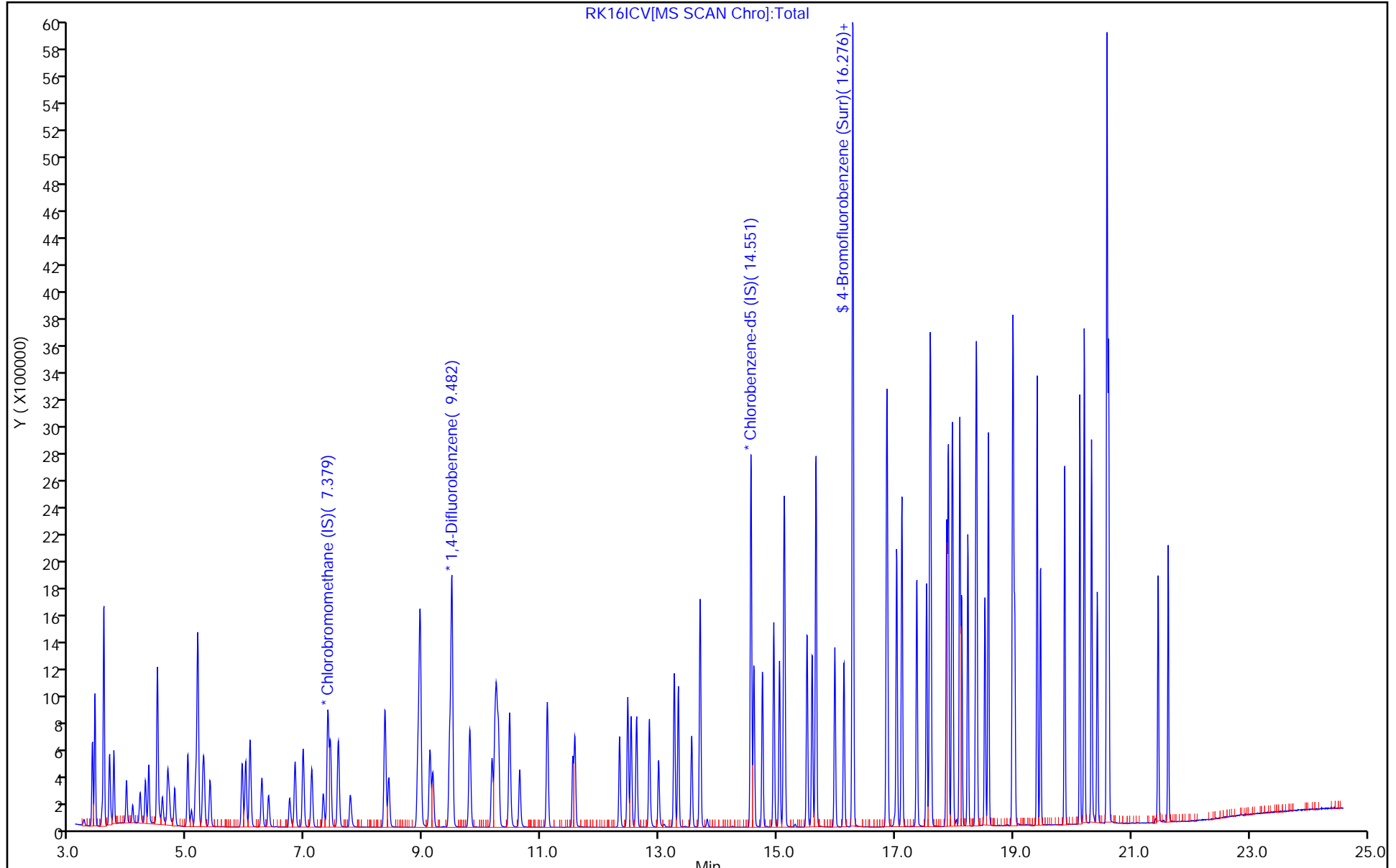
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.256		1.90	2.00	-4.9	35.0
Propene	Ave	0.7296	0.6790		1.86	2.00	-6.9	35.0
Dichlorodifluoromethane	Ave	4.352	5.057		2.32	2.00	16.2	35.0
Chloromethane	Ave	0.3061	0.2731		1.78	2.00	-10.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	3.469		2.14	2.00	7.1	35.0
Acetaldehyde	Ave	0.2860	0.2397		8.38	10.0	-16.2	35.0
Vinyl chloride	Ave	1.073	0.9669		1.80	2.00	-9.9	35.0
1,3-Butadiene	Ave	0.6506	0.6233		1.92	2.00	-4.2	35.0
Butane	Ave	1.132	1.086		1.92	2.00	-4.0	35.0
Bromomethane	Ave	1.235	1.146		1.86	2.00	-7.2	35.0
Chloroethane	Ave	0.4970	0.4655		1.87	2.00	-6.3	35.0
Ethanol	Ave	0.2997	0.2300		7.67	10.0	-23.3	35.0
Vinyl bromide	Ave	1.302	1.320		2.03	2.00	1.4	35.0
2-Methylbutane	Ave	0.7999	0.7818		1.95	2.00	-2.3	35.0
Acrolein	Ave	0.2528	0.2785		2.20	2.00	10.2	35.0
Trichlorofluoromethane	Ave	5.912	5.646		1.91	2.00	-4.5	35.0
Acetonitrile	Ave	0.2586	0.2377		1.84	2.00	-8.1	35.0
Acetone	Ave	0.4151	0.3821		1.84	2.00	-7.9	35.0
Pentane	Ave	0.2011	0.2005		1.99	2.00	-0.3	35.0
Isopropyl alcohol	Ave	1.132	1.401		2.48	2.00	23.8	35.0
Ethyl ether	Ave	0.6661	0.5684		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.408	1.325		1.88	2.00	-5.9	35.0
Acrylonitrile	Ave	0.6277	0.6236		1.99	2.00	-0.6	35.0
tert-Butyl alcohol	Ave	2.677	2.710		2.02	2.00	1.2	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.433		1.97	2.00	-1.6	35.0
Methylene Chloride	Ave	1.338	1.169		1.75	2.00	-12.6	35.0
3-Chloropropene	Ave	1.309	1.297		1.98	2.00	-0.9	35.0
Carbon disulfide	Ave	3.341	3.259		1.95	2.00	-2.4	35.0
trans-1,2-Dichloroethene	Ave	1.436	1.363		1.90	2.00	-5.1	35.0
2-Methylpentane	Ave	1.894	1.705		1.80	2.00	-10.0	35.0
Methyl tert-butyl ether	Ave	4.568	4.614		2.02	2.00	1.0	35.0
1,1-Dichloroethane	Ave	2.402	2.312		1.92	2.00	-3.8	35.0
Vinyl acetate	Ave	2.320	2.445		2.11	2.00	5.4	35.0
2-Butanone (MEK)	Ave	0.5446	0.5251		1.93	2.00	-3.6	35.0
Hexane	Ave	0.8352	0.8172		1.96	2.00	-2.2	35.0
Isopropyl ether	Ave	2.873	2.961		2.06	2.00	3.0	35.0
cis-1,2-Dichloroethene	Ave	1.448	1.418		1.96	2.00	-2.1	35.0
Ethyl acetate	Ave	2.012	1.960		1.95	2.00	-2.6	35.0
Chloroform	Ave	3.821	3.708		1.94	2.00	-3.0	35.0
Tert-butyl ethyl ether	Ave	4.141	3.948		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.8745		1.97	2.00	-1.3	35.0
1,1,1-Trichloroethane	Ave	4.843	4.775		1.97	2.00	-1.4	35.0
1,2-Dichloroethane	Ave	0.5063	0.5017		1.98	2.00	-0.9	35.0
Benzene	Ave	0.6517	0.6483		1.99	2.00	-0.5	35.0
Cyclohexane	Ave	0.0968	0.1018		2.10	2.00	5.2	35.0
1-Butanol	Ave	0.0462	0.0484		2.09	2.00	4.7	35.0
Carbon tetrachloride	Ave	0.9167	0.9855		2.15	2.00	7.5	35.0
2,3-Dimethylpentane	Ave	0.1349	0.1359		2.01	2.00	0.7	35.0
Thiophene	Ave	0.3728	0.3687		1.98	2.00	-1.1	35.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8439		2.02	2.00	1.2	35.0
1,2-Dichloropropane	Ave	0.2045	0.2036		1.99	2.00	-0.5	35.0
Heptane	Ave	0.2083	0.2143		2.06	2.00	2.8	35.0
Trichloroethene	Ave	0.3929	0.3984		2.03	2.00	1.4	35.0
Dibromomethane	Ave	0.3514	0.3500		1.99	2.00	-0.4	35.0
Bromodichloromethane	Ave	0.6587	0.6852		2.08	2.00	4.0	35.0
1,4-Dioxane	Ave	0.0994	0.1029		2.07	2.00	3.5	35.0
Methyl methacrylate	Ave	0.2275	0.2348		2.06	2.00	3.2	35.0
Methylcyclohexane	Ave	0.4024	0.4961		2.47	2.00	23.3	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3776		2.08	2.00	4.1	35.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4285		2.17	2.00	8.5	35.0
trans-1,3-Dichloropropene	Ave	0.4674	0.5177		2.22	2.00	10.8	35.0
Toluene	Ave	0.9586	0.9853		2.06	2.00	2.8	35.0
1,1,2-Trichloroethane	Ave	0.2543	0.2613		2.05	2.00	2.7	35.0
2-Hexanone	Ave	0.2006	0.2098		2.09	2.00	4.6	35.0
Dibromochloromethane	Ave	0.7414	0.8418		2.27	2.00	13.5	35.0
Octane	Ave	0.3054	0.3220		2.11	2.00	5.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5875		2.11	2.00	5.4	35.0
Tetrachloroethene	Ave	0.4749	0.4840		2.04	2.00	1.9	35.0
Chlorobenzene	Ave	0.8374	0.8605		2.06	2.00	2.8	35.0
2,3-Dimethylheptane	Ave	0.5626	0.5171		1.84	2.00	-8.1	35.0
Ethylbenzene	Ave	1.382	1.443		2.09	2.00	4.4	35.0
m-Xylene & p-Xylene	Ave	1.133	1.199		4.23	4.00	5.8	35.0
Bromoform	Ave	0.7786	0.8773		2.25	2.00	12.7	35.0
Styrene	Ave	0.7430	0.8258		2.22	2.00	11.1	35.0
o-Xylene	Ave	1.190	1.212		2.04	2.00	1.8	35.0
Nonane	Ave	0.4511	0.4700		2.08	2.00	4.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6491		2.15	2.00	7.3	35.0
1,2,3-Trichloropropane	Ave	0.3000	0.3085		2.06	2.00	2.8	35.0
Isopropylbenzene	Ave	1.694	1.742		2.06	2.00	2.8	35.0
Propylbenzene	Ave	0.4652	0.5071		2.18	2.00	9.0	35.0
2-Chlorotoluene	Ave	0.4306	0.4514		2.10	2.00	4.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.816		2.06	2.00	3.2	35.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.8591		2.39	2.00	19.3	35.0
Alpha Methyl Styrene	Ave	0.6844	0.7376		2.16	2.00	7.8	35.0
Decane	Ave	0.6421	0.6805		2.12	2.00	6.0	35.0
tert-Butylbenzene	Ave	1.753	1.837		2.10	2.00	4.8	35.0
1,2,4-Trimethylbenzene	Ave	1.607	1.694		2.11	2.00	5.5	35.0
1,3-Dichlorobenzene	Ave	1.160	1.185		2.04	2.00	2.2	35.0
sec-Butylbenzene	Ave	2.171	2.287		2.11	2.00	5.4	35.0
Benzyl chloride	Ave	1.239	1.386		2.24	2.00	11.9	35.0
1,4-Dichlorobenzene	Ave	1.164	1.184		2.03	2.00	1.7	35.0
4-Isopropyltoluene	Ave	2.191	2.267		2.07	2.00	3.5	35.0
1,2,3-Trimethylbenzene	Ave	1.725	1.385		1.61	2.00	-19.7	35.0
Butylcyclohexane	Ave	0.9488	0.9354		1.97	2.00	-1.4	35.0
1,2-Dichlorobenzene	Ave	1.144	1.144		2.00	2.00	-0.0	35.0
Indane	Ave	1.423	1.451		2.04	2.00	2.0	35.0
Indene	Ave	1.168	1.080		1.85	2.00	-7.6	35.0
Butylbenzene	Ave	1.784	1.888		2.12	2.00	5.8	35.0
Undecane	Ave	0.7598	0.8223		2.16	2.00	8.2	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5157		1.85	2.00	-7.4	35.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.082		2.01	2.00	0.7	35.0
Dodecane	Ave	0.7957	0.9180		2.31	2.00	15.4	35.0
1,2,4-Trichlorobenzene	Ave	1.235	1.334		2.16	2.00	7.9	35.0
Naphthalene	Ave	2.498	2.601		2.08	2.00	4.1	35.0
Hexachlorobutadiene	Ave	1.436	1.487		2.07	2.00	3.5	35.0
1,2,3-Trichlorobenzene	Ave	1.187	1.295		2.18	2.00	9.1	35.0
2-Methylnaphthalene	Ave	0.7935	1.016		2.56	2.00	28.1	50.0
1-Methylnaphthalene	Ave	0.6999	0.9471		2.71	2.00	35.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8473		3.98	4.00	-0.4	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 17-Nov-2018 06:27:30 ALS Bottle#: 8 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-018
 Misc. Info.: S80
 Operator ID: Instrument ID: MR
 Sublist:
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 16:30:16 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: tajh

Date: 19-Nov-2018 10:15:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.397	-0.018	68	299493	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	94	1671036	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	89	1499042	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	89	1270095	4.00	3.98	
6 Chlorodifluoromethane	51	3.383	3.417	-0.034	95	337816	2.00	1.90	
7 Propene	41	3.389	3.420	-0.031	91	101676	2.00	1.86	
8 Dichlorodifluoromethane	85	3.432	3.461	-0.029	100	757267	2.00	2.32	
9 Chloromethane	52	3.550	3.586	-0.036	98	40890	2.00	1.78	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.583	3.609	-0.026	89	519503	2.00	2.14	
11 Acetaldehyde	44	3.674	3.710	-0.036	93	179473	10.0	8.38	
12 Vinyl chloride	62	3.680	3.711	-0.031	99	144783	2.00	1.80	
13 Butadiene	54	3.750	3.780	-0.030	87	93331	2.00	1.92	
14 Butane	43	3.750	3.782	-0.032	89	162697	2.00	1.92	
15 Bromomethane	94	3.966	3.995	-0.029	96	171614	2.00	1.86	
16 Chloroethane	64	4.068	4.100	-0.032	95	69702	2.00	1.87	
17 Ethanol	31	4.198	4.222	-0.024	92	172190	10.0	7.67	
18 Vinyl bromide	106	4.284	4.315	-0.031	97	197656	2.00	2.03	
19 2-Methylbutane	43	4.343	4.369	-0.026	77	117076	2.00	1.95	
20 Acrolein	56	4.483	4.516	-0.033	97	41705	2.00	2.20	
21 Trichlorofluoromethane	101	4.489	4.517	-0.028	99	845437	2.00	1.91	
22 Acetonitrile	40	4.516	4.545	-0.029	96	35597	2.00	1.84	
23 Acetone	58	4.575	4.605	-0.030	100	57219	2.00	1.84	
24 Pentane	72	4.661	4.693	-0.032	91	30029	2.00	1.99	
25 Isopropyl alcohol	45	4.688	4.716	-0.028	95	209729	2.00	2.48	
26 Ethyl ether	31	4.780	4.817	-0.037	69	85111	2.00	1.71	
27 1,1-Dichloroethene	96	5.006	5.033	-0.027	97	198342	2.00	1.88	
28 Acrylonitrile	53	5.066	5.097	-0.031	91	93387	2.00	1.99	
29 2-Methyl-2-propanol	59	5.141	5.173	-0.032	94	405847	2.00	2.02	
30 1,1,2-Trichloro-1,2,2-trif	101	5.174	5.199	-0.025	92	514124	2.00	1.97	
31 Methylene Chloride	84	5.260	5.290	-0.030	88	175058	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.281	5.309	-0.028	85	194281	2.00	1.98	
33 Carbon disulfide	76	5.378	5.410	-0.032	99	488020	2.00	1.95	
34 trans-1,2-Dichloroethene	96	5.929	5.951	-0.023	97	204116	2.00	1.90	
35 2-Methylpentane	43	5.988	6.011	-0.023	84	255391	2.00	1.80	
36 Methyl tert-butyl ether	73	6.058	6.094	-0.036	92	690950	2.00	2.02	
37 1,1-Dichloroethane	63	6.257	6.283	-0.026	98	346185	2.00	1.92	
38 Vinyl acetate	43	6.376	6.402	-0.026	98	366118	2.00	2.11	
39 2-Butanone (MEK)	72	6.732	6.761	-0.029	98	78637	2.00	1.93	
40 Hexane	56	6.824	6.845	-0.021	81	122366	2.00	1.96	
171 Isopropyl ether	45	6.958	6.989	-0.031	86	443358	2.00	2.06	
41 cis-1,2-Dichloroethene	96	7.104	7.127	-0.023	94	212288	2.00	1.96	
42 Ethyl acetate	43	7.298	7.330	-0.032	98	293488	2.00	1.95	
43 Chloroform	83	7.422	7.439	-0.017	96	555199	2.00	1.94	
173 Tert-butyl ethyl ether	59	7.557	7.580	-0.023	92	591267	2.00	1.91	
44 Tetrahydrofuran	42	7.762	7.793	-0.031	76	130960	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.344	8.364	-0.020	94	715022	2.00	1.97	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	419142	2.00	1.98	
47 Benzene	78	8.905	8.920	-0.015	98	541647	2.00	1.99	
48 Cyclohexane	69	8.932	8.951	-0.019	88	85082	2.00	2.10	
50 Carbon tetrachloride	117	8.943	8.962	-0.019	97	823420	2.00	2.15	
49 n-Butanol	31	8.943	8.969	-0.026	54	40428	2.00	2.09	
51 2,3-Dimethylpentane	71	9.110	9.126	-0.016	82	113510	2.00	2.01	
52 Thiophene	84	9.159	9.174	-0.015	95	308039	2.00	1.98	
53 Isooctane	57	9.784	9.798	-0.014	95	705085	2.00	2.02	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	76	170084	2.00	1.99	
55 n-Heptane	71	10.210	10.224	-0.014	83	179014	2.00	2.06	
56 Trichloroethene	130	10.237	10.250	-0.013	93	332896	2.00	2.03	
57 Dibromomethane	93	10.269	10.279	-0.010	92	292459	2.00	1.99	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	572509	2.00	2.08	
59 1,4-Dioxane	88	10.474	10.497	-0.023	86	85996	2.00	2.07	
60 Methyl methacrylate	41	10.631	10.649	-0.018	90	196157	2.00	2.06	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	414520	2.00	2.47	
62 4-Methyl-2-pentanone (MIBK)	43	11.531	11.552	-0.021	91	315480	2.00	2.08	
63 cis-1,3-Dichloropropene	75	11.569	11.577	-0.008	97	358004	2.00	2.17	
64 trans-1,3-Dichloropropene	75	12.324	12.332	-0.008	97	387987	2.00	2.22	
65 Toluene	91	12.464	12.471	-0.007	93	738479	2.00	2.06	
67 2-Methylthiophene	97	12.518	12.524	-0.006	80	252005	NC	NC	
66 1,1,2-Trichloroethane	83	12.518	12.527	-0.009	94	195833	2.00	2.05	
68 3-Methylthiophene	97	12.831	12.836	-0.005	99	596590	NC	NC	
69 2-Hexanone	58	12.987	13.003	-0.016	95	157281	2.00	2.09	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	97	630906	2.00	2.27	
71 n-Octane	85	13.321	13.326	-0.005	74	241345	2.00	2.11	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	440376	2.00	2.11	
73 Tetrachloroethene	129	13.688	13.695	-0.007	94	362784	2.00	2.04	
74 Chlorobenzene	112	14.599	14.606	-0.007	92	644974	2.00	2.06	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	78	387573	2.00	1.84	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1081684	2.00	2.09	
77 2-Ethylthiophene	97	15.036	15.042	-0.006	98	850130	NC	NC	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1797001	4.00	4.23	
79 Bromoform	173	15.505	15.507	-0.002	96	657515	2.00	2.25	
80 Styrene	104	15.592	15.594	-0.002	97	618923	2.00	2.22	
82 o-Xylene	91	15.651	15.655	-0.004	97	908326	2.00	2.04	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.656	15.659	-0.003	81	352264	2.00	2.08	
83 1,1,2,2-Tetrachloroethane	83	15.974	15.976	-0.002	93	486519	2.00	2.15	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	231227	2.00	2.06	
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1305567	2.00	2.06	
86 N-Propylbenzene	120	16.853	16.856	-0.003	98	380100	2.00	2.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	338365	2.00	2.10	
88 4-Ethyltoluene	105	17.021	17.027	-0.006	98	1360898	2.00	2.06	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	643905	2.00	2.39	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	552848	2.00	2.16	
91 n-Decane	57	17.528	17.532	-0.004	97	510052	2.00	2.12	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	1376781	2.00	2.10	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	1269827	2.00	2.11	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	888433	2.00	2.04	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	1714335	2.00	2.11	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	1039012	2.00	2.24	
97 1,4-Dichlorobenzene	146	17.970	17.977	-0.007	94	887663	2.00	2.03	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	1699119	2.00	2.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1037942	2.00	1.61	
100 Butylcyclohexane	83	18.229	18.232	-0.004	92	701115	2.00	1.97	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	96	857489	2.00	2.00	
102 2,3-Dihydroindene	117	18.379	18.383	-0.004	93	1087727	2.00	2.04	
103 Indene	116	18.520	18.520	0.000	90	809464	2.00	1.85	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	1414728	2.00	2.12	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	96	1229369	NC	NC	
105 Undecane	57	19.000	19.001	-0.001	87	616308	2.00	2.16	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	94	386560	2.00	1.85	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	1560478	2.00	2.01	
109 1,2,3,5-Tetramethylbenzene	119	19.463	19.464	-0.001	94	955538	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	96	1325184	NC	NC	
110 Dodecane	57	20.127	20.128	-0.001	90	688062	2.00	2.31	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	999500	2.00	2.16	
113 Naphthalene	128	20.326	20.329	-0.003	98	1949612	2.00	2.08	
114 Benzo(b)thiophene	134	20.423	20.429	-0.006	99	1114636	NC	NC	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	1114590	2.00	2.07	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	970744	2.00	2.18	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	761819	2.00	2.56	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	709921	2.00	2.71	
A 120 C8 Range	1	13.335	(13.279-13.376)		0	1874356	2.00	2.10	
S 121 Xylenes, Total	100				0		6.00	6.27	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.86	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00080

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D

Injection Date: 17-Nov-2018 06:27:30

Instrument ID: MR

Operator ID:

Lims ID: icv

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

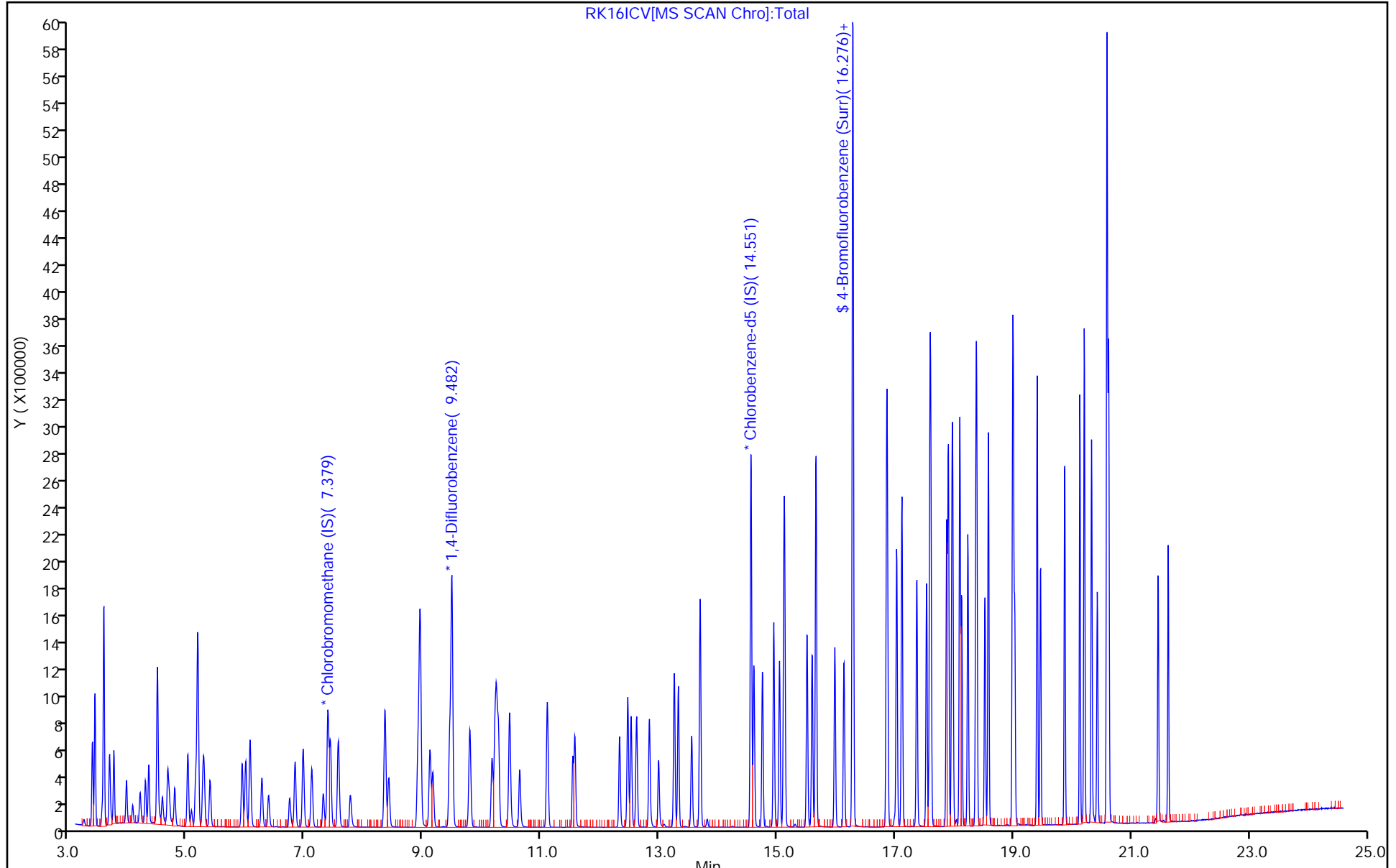
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27023/2 Calibration Date: 01/21/2019 11:43
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVA21.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.125		1.79	2.00	-10.5	30.0
Propene	Ave	0.7296	0.6457		1.77	2.00	-11.5	30.0
Dichlorodifluoromethane	Ave	4.352	3.906		1.79	2.00	-10.3	30.0
Chloromethane	Ave	0.3061	0.2525		1.65	2.00	-17.5	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	2.781		1.72	2.00	-14.2	30.0
Acetaldehyde	Ave	0.2860	0.2956		10.3	10.0	3.4	30.0
Vinyl chloride	Ave	1.073	1.033		1.93	2.00	-3.7	30.0
1,3-Butadiene	Ave	0.6506	0.7137		2.19	2.00	9.7	30.0
Butane	Ave	1.132	1.238		2.19	2.00	9.3	30.0
Bromomethane	Ave	1.235	1.272		2.06	2.00	3.0	30.0
Chloroethane	Ave	0.4970	0.5181		2.08	2.00	4.2	30.0
Ethanol	Ave	0.2997	0.3110		10.4	10.0	3.8	30.0
Vinyl bromide	Ave	1.302	1.331		2.04	2.00	2.2	30.0
2-Methylbutane	Ave	0.7999	0.9462		2.37	2.00	18.3	30.0
Acrolein	Ave	0.2528	0.3024		2.39	2.00	19.6	30.0
Trichlorofluoromethane	Ave	5.912	6.184		2.09	2.00	4.6	30.0
Acetonitrile	Ave	0.2586	0.2979		2.30	2.00	15.2	30.0
Acetone	Ave	0.4151	0.4271		6.17	6.00	2.9	30.0
Isopropyl alcohol	Ave	1.132	1.200		6.36	6.00	6.1	30.0
Pentane	Ave	0.2011	0.2170		2.16	2.00	7.9	30.0
Ethyl ether	Ave	0.6661	0.7553		2.27	2.00	13.4	30.0
1,1-Dichloroethene	Ave	1.408	1.257		1.79	2.00	-10.7	30.0
Acrylonitrile	Ave	0.6277	0.6573		2.09	2.00	4.7	30.0
tert-Butyl alcohol	Ave	2.677	2.345		1.75	2.00	-12.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.257		1.87	2.00	-6.7	30.0
Methylene Chloride	Ave	1.338	1.122		1.68	2.00	-16.1	30.0
3-Chloropropene	Ave	1.309	1.355		2.07	2.00	3.5	30.0
Carbon disulfide	Ave	3.341	3.208		1.92	2.00	-4.0	30.0
trans-1,2-Dichloroethene	Ave	1.436	1.299		1.81	2.00	-9.5	30.0
2-Methylpentane	Ave	1.894	2.003		2.12	2.00	5.8	30.0
Methyl tert-butyl ether	Ave	4.568	4.340		1.90	2.00	-5.0	30.0
1,1-Dichloroethane	Ave	2.402	2.261		1.88	2.00	-5.9	30.0
Vinyl acetate	Ave	2.320	2.493		2.15	2.00	7.4	30.0
2-Butanone (MEK)	Ave	0.5446	0.5031		1.85	2.00	-7.6	30.0
Hexane	Ave	0.8352	0.8642		2.07	2.00	3.5	30.0
Isopropyl ether	Ave	2.873	3.036		2.11	2.00	5.7	30.0
cis-1,2-Dichloroethene	Ave	1.448	1.329		1.84	2.00	-8.2	30.0
Ethyl acetate	Ave	2.012	2.145		2.13	2.00	6.6	30.0
Chloroform	Ave	3.821	3.517		1.84	2.00	-7.9	30.0
Tert-butyl ethyl ether	Ave	4.141	4.148		2.00	2.00	0.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27023/2 Calibration Date: 01/21/2019 11:43
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVA21.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.9401		2.12	2.00	6.1	30.0
1,1,1-Trichloroethane	Ave	4.843	4.488		1.85	2.00	-7.3	30.0
1,2-Dichloroethane	Ave	0.5063	0.4614		1.82	2.00	-8.9	30.0
Benzene	Ave	0.6517	0.5970		1.83	2.00	-8.4	30.0
1-Butanol	Ave	0.0462	0.0437		1.89	2.00	-5.4	30.0
Cyclohexane	Ave	0.0968	0.1009		2.08	2.00	4.2	30.0
Carbon tetrachloride	Ave	0.9167	0.8591		1.87	2.00	-6.3	30.0
2,3-Dimethylpentane	Ave	0.1349	0.1342		1.99	2.00	-0.5	30.0
Thiophene	Ave	0.3728	0.3509		1.88	2.00	-5.9	30.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8510		2.04	2.00	2.0	30.0
1,2-Dichloropropane	Ave	0.2045	0.1987		1.94	2.00	-2.8	30.0
Heptane	Ave	0.2083	0.2062		1.98	2.00	-1.0	30.0
Trichloroethene	Ave	0.3929	0.3500		1.78	2.00	-10.9	30.0
Dibromomethane	Ave	0.3514	0.3183		1.81	2.00	-9.4	30.0
Bromodichloromethane	Ave	0.6587	0.6193		1.88	2.00	-6.0	30.0
1,4-Dioxane	Ave	0.0994	0.0812		1.63	2.00	-18.3	30.0
Methyl methacrylate	Ave	0.2275	0.2380		2.09	2.00	4.6	30.0
Methylcyclohexane	Ave	0.4024	0.3814		1.90	2.00	-5.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3849		2.12	2.00	6.2	30.0
cis-1,3-Dichloropropene	Ave	0.3948	0.3902		1.98	2.00	-1.2	30.0
trans-1,3-Dichloropropene	Ave	0.4674	0.4663		2.00	2.00	-0.2	30.0
Toluene	Ave	0.9586	0.9146		1.91	2.00	-4.6	30.0
1,1,2-Trichloroethane	Ave	0.2543	0.2504		1.97	2.00	-1.5	30.0
2-Hexanone	Ave	0.2006	0.2067		2.06	2.00	3.1	30.0
Dibromochloromethane	Ave	0.7414	0.7407		2.00	2.00	-0.0	30.0
Octane	Ave	0.3054	0.3029		1.98	2.00	-0.8	30.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5247		1.88	2.00	-5.9	30.0
Tetrachloroethene	Ave	0.4749	0.4406		1.86	2.00	-7.2	30.0
Chlorobenzene	Ave	0.8374	0.7840		1.87	2.00	-6.4	30.0
2,3-Dimethylheptane	Ave	0.5626	0.6351		2.26	2.00	12.9	30.0
Ethylbenzene	Ave	1.382	1.329		1.92	2.00	-3.8	30.0
m-Xylene & p-Xylene	Ave	1.133	1.122		3.96	4.00	-1.0	30.0
Bromoform	Ave	0.7786	0.7647		1.96	2.00	-1.8	30.0
Styrene	Ave	0.7430	0.7317		1.97	2.00	-1.5	30.0
o-Xylene	Ave	1.190	1.166		1.96	2.00	-2.0	30.0
Nonane	Ave	0.4511	0.5021		2.23	2.00	11.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6168		2.04	2.00	2.0	30.0
1,2,3-Trichloropropane	Ave	0.3000	0.2695		1.80	2.00	-10.2	30.0
Isopropylbenzene	Ave	1.694	1.596		1.88	2.00	-5.8	30.0
Propylbenzene	Ave	0.4652	0.4384		1.88	2.00	-5.8	30.0
2-Chlorotoluene	Ave	0.4306	0.3928		1.82	2.00	-8.8	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27023/2 Calibration Date: 01/21/2019 11:43
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVA21.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.678		1.91	2.00	-4.6	30.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.6608		1.84	2.00	-8.2	30.0
Alpha Methyl Styrene	Ave	0.6844	0.6197		1.81	2.00	-9.5	30.0
Decane	Ave	0.6421	0.6902		2.15	2.00	7.5	30.0
tert-Butylbenzene	Ave	1.753	1.630		1.86	2.00	-7.0	30.0
1,2,4-Trimethylbenzene	Ave	1.607	1.533		1.91	2.00	-4.6	30.0
1,3-Dichlorobenzene	Ave	1.160	1.006		1.74	2.00	-13.2	30.0
sec-Butylbenzene	Ave	2.171	1.996		1.84	2.00	-8.1	30.0
Benzyl chloride	Ave	1.239	1.245		2.01	2.00	0.4	30.0
1,4-Dichlorobenzene	Ave	1.164	1.031		1.77	2.00	-11.4	30.0
4-Isopropyltoluene	Ave	2.191	2.021		1.84	2.00	-7.8	30.0
1,2,3-Trimethylbenzene	Ave	1.725	1.635		1.89	2.00	-5.3	30.0
Butylcyclohexane	Ave	0.9488	0.9047		1.91	2.00	-4.6	30.0
1,2-Dichlorobenzene	Ave	1.144	0.9833		1.72	2.00	-14.1	30.0
Indane	Ave	1.423	1.306		1.84	2.00	-8.2	30.0
Indene	Ave	1.168	1.070		1.83	2.00	-8.4	30.0
Butylbenzene	Ave	1.784	1.647		1.85	2.00	-7.7	30.0
Undecane	Ave	0.7598	0.8089		2.13	2.00	6.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5414		1.94	2.00	-2.8	30.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	1.908		1.85	2.00	-7.7	30.0
Dodecane	Ave	0.7957	0.8725		2.19	2.00	9.7	30.0
1,2,4-Trichlorobenzene	Ave	1.235	1.053		1.70	2.00	-14.8	30.0
Naphthalene	Ave	2.498	2.012		1.61	2.00	-19.5	30.0
Hexachlorobutadiene	Ave	1.436	1.210		1.68	2.00	-15.8	30.0
1,2,3-Trichlorobenzene	Ave	1.187	1.010		1.70	2.00	-15.0	30.0
2-Methylnaphthalene	Ave	0.7935	1.161		2.93	2.00	46.3	50.0
1-Methylnaphthalene	Ave	0.6999	1.253		3.58	2.00	79.1*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8828		4.15	4.00	3.8	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RCCVA21.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 21-Jan-2019 11:43:30 ALS Bottle#: 1 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-002
 Misc. Info.: P78
 Operator ID: afb Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16

Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 11:17:21 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK161C08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits

Date: 22-Jan-2019 11:17:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.406	0.000	73	208734	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.477	0.000	95	1232684	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.524	0.000	91	1099880	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.250	0.000	88	970990	4.00	4.15	
6 Chlorodifluoromethane	51	3.518	3.518	0.000	96	221739	2.00	1.79	
7 Propene	41	3.524	3.524	0.000	93	67393	2.00	1.77	
8 Dichlorodifluoromethane	85	3.561	3.561	0.000	100	407678	2.00	1.79	
9 Chloromethane	52	3.680	3.680	0.000	95	26348	2.00	1.65	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.696	3.696	0.000	88	290225	2.00	1.72	
11 Acetaldehyde	44	3.782	3.782	0.000	91	154264	10.0	10.3	
12 Vinyl chloride	62	3.804	3.804	0.000	100	107833	2.00	1.93	
13 Butadiene	54	3.863	3.863	0.000	89	74485	2.00	2.19	
14 Butane	43	3.869	3.869	0.000	89	129190	2.00	2.19	
15 Bromomethane	94	4.084	4.084	0.000	96	132749	2.00	2.06	
16 Chloroethane	64	4.176	4.176	0.000	97	54068	2.00	2.08	
17 Ethanol	31	4.252	4.252	0.000	94	162306	10.0	10.4	
18 Vinyl bromide	106	4.392	4.392	0.000	96	138926	2.00	2.04	
19 2-Methylbutane	43	4.440	4.440	0.000	79	98756	2.00	2.37	
20 Acrolein	56	4.570	4.570	0.000	97	31560	2.00	2.39	
21 Trichlorofluoromethane	101	4.591	4.591	0.000	99	645368	2.00	2.09	
22 Acetonitrile	40	4.597	4.597	0.000	24	31091	2.00	2.30	a
23 Acetone	58	4.640	4.640	0.000	100	133728	6.00	6.17	
25 Isopropyl alcohol	45	4.731	4.731	0.000	99	375759	6.00	6.36	
24 Pentane	72	4.753	4.753	0.000	93	22643	2.00	2.16	
26 Ethyl ether	31	4.861	4.861	0.000	73	78830	2.00	2.27	
27 1,1-Dichloroethene	96	5.093	5.093	0.000	96	131138	2.00	1.79	
28 Acrylonitrile	53	5.131	5.131	0.000	92	68604	2.00	2.09	
29 2-Methyl-2-propanol	59	5.174	5.174	0.000	95	244705	2.00	1.75	
30 1,1,2-Trichloro-1,2,2-trif	101	5.255	5.255	0.000	93	339955	2.00	1.87	
31 Methylene Chloride	84	5.341	5.341	0.000	92	117103	2.00	1.68	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.362	5.362	0.000	87	141441	2.00	2.07	
33 Carbon disulfide	76	5.470	5.470	0.000	98	334852	2.00	1.92	
34 trans-1,2-Dichloroethene	96	5.988	5.988	0.000	97	135619	2.00	1.81	
35 2-Methylpentane	43	6.047	6.047	0.000	86	209057	2.00	2.12	
36 Methyl tert-butyl ether	73	6.107	6.107	0.000	93	452907	2.00	1.90	
37 1,1-Dichloroethane	63	6.311	6.311	0.000	98	235927	2.00	1.88	
38 Vinyl acetate	43	6.414	6.414	0.000	98	260217	2.00	2.15	
39 2-Butanone (MEK)	72	6.754	6.754	0.000	98	52509	2.00	1.85	
40 Hexane	56	6.867	6.867	0.000	81	90195	2.00	2.07	
171 Isopropyl ether	45	6.985	6.985	0.000	87	316831	2.00	2.11	
41 cis-1,2-Dichloroethene	96	7.136	7.136	0.000	95	138747	2.00	1.84	
42 Ethyl acetate	43	7.320	7.320	0.000	98	223916	2.00	2.13	
43 Chloroform	83	7.444	7.444	0.000	97	367105	2.00	1.84	
173 Tert-butyl ethyl ether	59	7.573	7.573	0.000	93	432958	2.00	2.00	
44 Tetrahydrofuran	42	7.773	7.773	0.000	81	98110	2.00	2.12	
45 1,1,1-Trichloroethane	97	8.366	8.366	0.000	96	468405	2.00	1.85	
46 1,2-Dichloroethane	62	8.420	8.420	0.000	97	284351	2.00	1.82	
47 Benzene	78	8.916	8.916	0.000	98	367965	2.00	1.83	
49 n-Butanol	31	8.932	8.932	0.000	65	26949	2.00	1.89	
48 Cyclohexane	69	8.948	8.948	0.000	88	62190	2.00	2.08	
50 Carbon tetrachloride	117	8.959	8.959	0.000	98	529491	2.00	1.87	
51 2,3-Dimethylpentane	71	9.115	9.115	0.000	82	82739	2.00	1.99	
52 Thiophene	84	9.164	9.164	0.000	97	216281	2.00	1.88	
53 Isooctane	57	9.784	9.784	0.000	94	524525	2.00	2.04	
54 1,2-Dichloropropane	63	10.151	10.151	0.000	79	122490	2.00	1.94	
55 n-Heptane	71	10.205	10.205	0.000	87	127068	2.00	1.98	
56 Trichloroethene	130	10.226	10.226	0.000	94	215723	2.00	1.78	
57 Dibromomethane	93	10.259	10.259	0.000	93	196154	2.00	1.81	
58 Dichlorobromomethane	83	10.442	10.442	0.000	98	381672	2.00	1.88	
59 1,4-Dioxane	88	10.458	10.458	0.000	92	50038	2.00	1.63	
60 Methyl methacrylate	41	10.615	10.615	0.000	90	146697	2.00	2.09	
61 Methylcyclohexane	83	11.089	11.089	0.000	92	235066	2.00	1.90	
62 4-Methyl-2-pentanone (MIBK)	43	11.510	11.510	0.000	92	237247	2.00	2.12	
63 cis-1,3-Dichloropropene	75	11.547	11.547	0.000	97	240507	2.00	1.98	
64 trans-1,3-Dichloropropene	75	12.302	12.302	0.000	96	256427	2.00	2.00	
65 Toluene	91	12.443	12.443	0.000	92	502996	2.00	1.91	
66 1,1,2-Trichloroethane	83	12.496	12.496	0.000	94	137690	2.00	1.97	
69 2-Hexanone	58	12.960	12.960	0.000	94	113674	2.00	2.06	
70 Chlorodibromomethane	129	13.224	13.224	0.000	97	407340	2.00	2.00	
71 n-Octane	85	13.300	13.300	0.000	79	166585	2.00	1.98	
72 Ethylene Dibromide	107	13.521	13.521	0.000	97	288541	2.00	1.88	
73 Tetrachloroethene	129	13.667	13.667	0.000	93	242317	2.00	1.86	
74 Chlorobenzene	112	14.573	14.573	0.000	91	431160	2.00	1.87	
75 2,3-Dimethylheptane	43	14.724	14.724	0.000	82	349263	2.00	2.26	
76 Ethylbenzene	91	14.912	14.912	0.000	99	730765	2.00	1.92	
78 m-Xylene & p-Xylene	91	15.090	15.090	0.000	100	1234429	4.00	3.96	
79 Bromoform	173	15.473	15.473	0.000	95	420513	2.00	1.96	
80 Styrene	104	15.559	15.559	0.000	97	402378	2.00	1.97	
82 o-Xylene	91	15.624	15.624	0.000	97	641455	2.00	1.96	
81 n-Nonane	57	15.629	15.629	0.000	86	276101	2.00	2.23	
83 1,1,2,2-Tetrachloroethane	83	15.942	15.942	0.000	94	339192	2.00	2.04	
84 1,2,3-Trichloropropane	110	16.099	16.099	0.000	93	148182	2.00	1.80	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.255	16.255	0.000	97	877848	2.00	1.88	
86 N-Propylbenzene	120	16.827	16.827	0.000	97	241076	2.00	1.88	
87 2-Chlorotoluene	126	16.837	16.837	0.000	93	216033	2.00	1.82	
88 4-Ethyltoluene	105	16.994	16.994	0.000	98	922563	2.00	1.91	
89 1,3,5-Trimethylbenzene	120	17.085	17.085	0.000	91	363418	2.00	1.84	
90 Alpha Methyl Styrene	118	17.333	17.333	0.000	85	340784	2.00	1.81	
91 n-Decane	57	17.501	17.501	0.000	97	379586	2.00	2.15	
92 tert-Butylbenzene	119	17.555	17.555	0.000	88	896619	2.00	1.86	
93 1,2,4-Trimethylbenzene	105	17.571	17.571	0.000	96	843110	2.00	1.91	
94 1,3-Dichlorobenzene	146	17.840	17.840	0.000	98	553499	2.00	1.74	
95 sec-Butylbenzene	105	17.867	17.867	0.000	97	1097515	2.00	1.84	
96 Benzyl chloride	91	17.927	17.927	0.000	97	684496	2.00	2.01	
97 1,4-Dichlorobenzene	146	17.943	17.943	0.000	94	567092	2.00	1.77	
98 4-Isopropyltoluene	119	18.067	18.067	0.000	95	1111395	2.00	1.84	
99 1,2,3-Trimethylbenzene	105	18.094	18.094	0.000	98	898988	2.00	1.89	
100 Butylcyclohexane	83	18.202	18.202	0.000	89	497534	2.00	1.91	
101 1,2-Dichlorobenzene	146	18.336	18.336	0.000	92	540743	2.00	1.72	
102 2,3-Dihydroindene	117	18.353	18.353	0.000	95	718200	2.00	1.84	
103 Indene	116	18.487	18.487	0.000	89	588261	2.00	1.83	
104 n-Butylbenzene	91	18.547	18.547	0.000	97	905977	2.00	1.85	
105 Undecane	57	18.973	18.973	0.000	88	444835	2.00	2.13	
106 1,2-Dibromo-3-Chloropropan	157	18.994	18.994	0.000	95	297724	2.00	1.94	
107 1,2,4,5-Tetramethylbenzene	119	19.377	19.377	0.000	95	1049484	2.00	1.85	
110 Dodecane	57	20.100	20.100	0.000	91	479831	2.00	2.19	
111 1,2,4-Trichlorobenzene	180	20.175	20.175	0.000	94	579146	2.00	1.70	
113 Naphthalene	128	20.294	20.294	0.000	98	1106484	2.00	1.61	
115 Hexachlorobutadiene	225	20.558	20.558	0.000	95	665250	2.00	1.68	
116 1,2,3-Trichlorobenzene	180	20.585	20.585	0.000	95	555199	2.00	1.70	
117 2-Methylnaphthalene	142	21.421	21.421	0.000	98	638616	2.00	2.93	
118 1-Methylnaphthalene	142	21.593	21.593	0.000	98	689348	2.00	3.58	
A 120 C8 Range	1	13.310	(13.251-13.348)		0	1367788	2.00	2.08	
S 121 Xylenes, Total	100				0		6.00	5.92	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.65	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

40CV101P_00078

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RCCVA21.D

Injection Date: 21-Jan-2019 11:43:30

Instrument ID: MR

Operator ID: afb

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

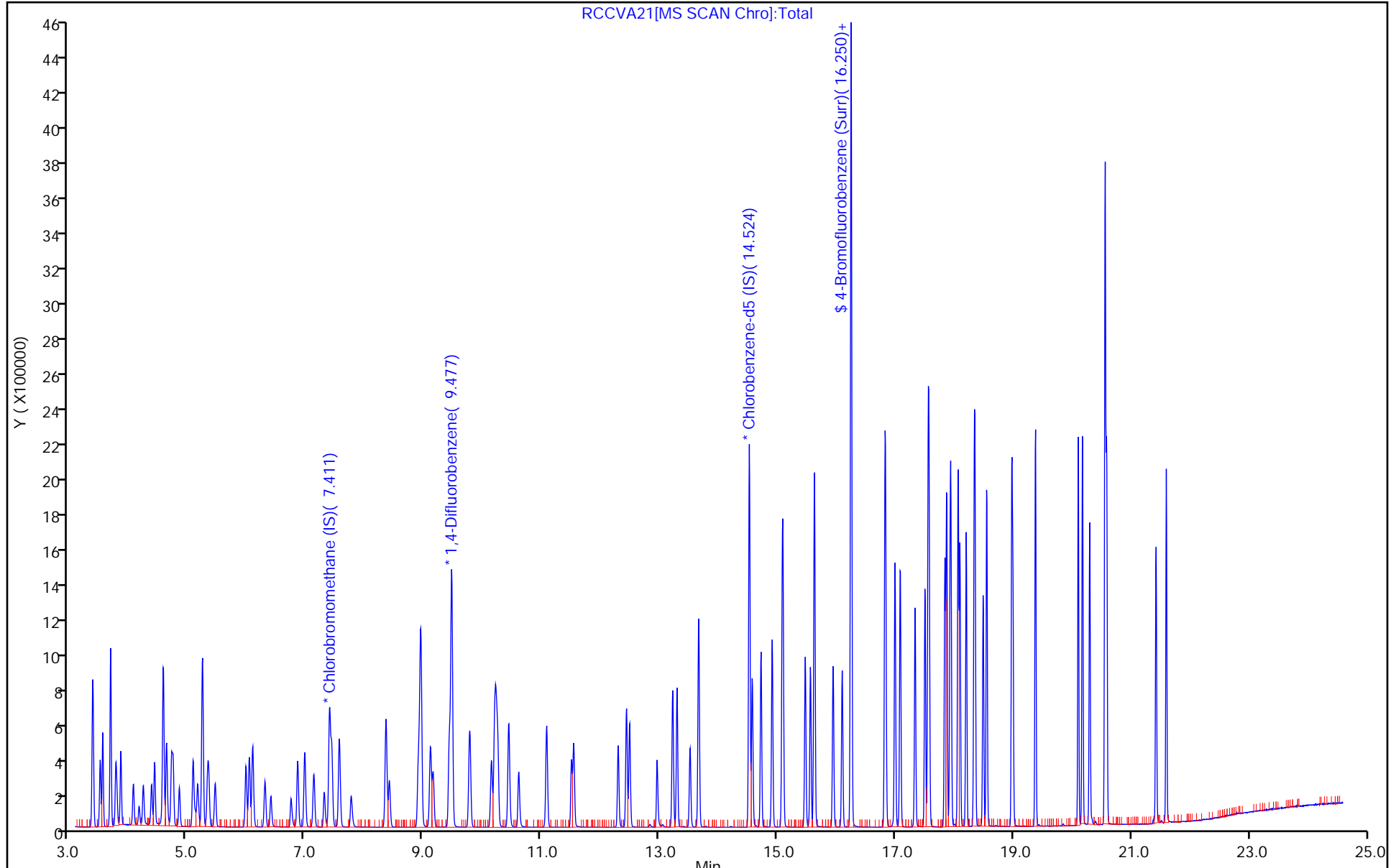
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

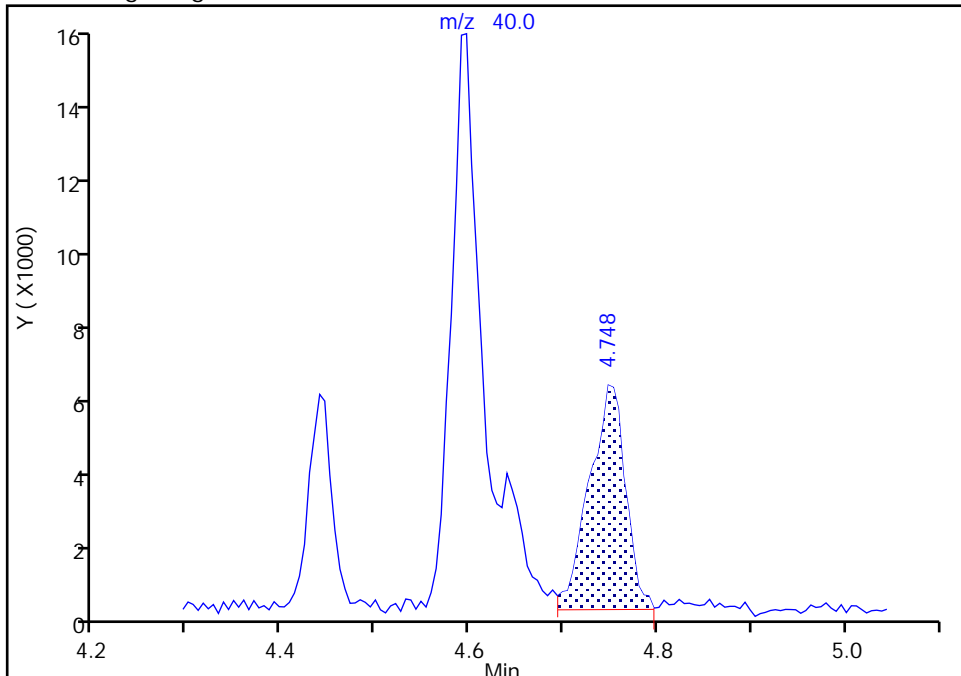
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Injection Date: 21-Jan-2019 11:43:30 Instrument ID: MR
Lims ID: CCVIS
Client ID:
Operator ID: afb ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

22 Acetonitrile, CAS: 75-05-8

Signal: 1

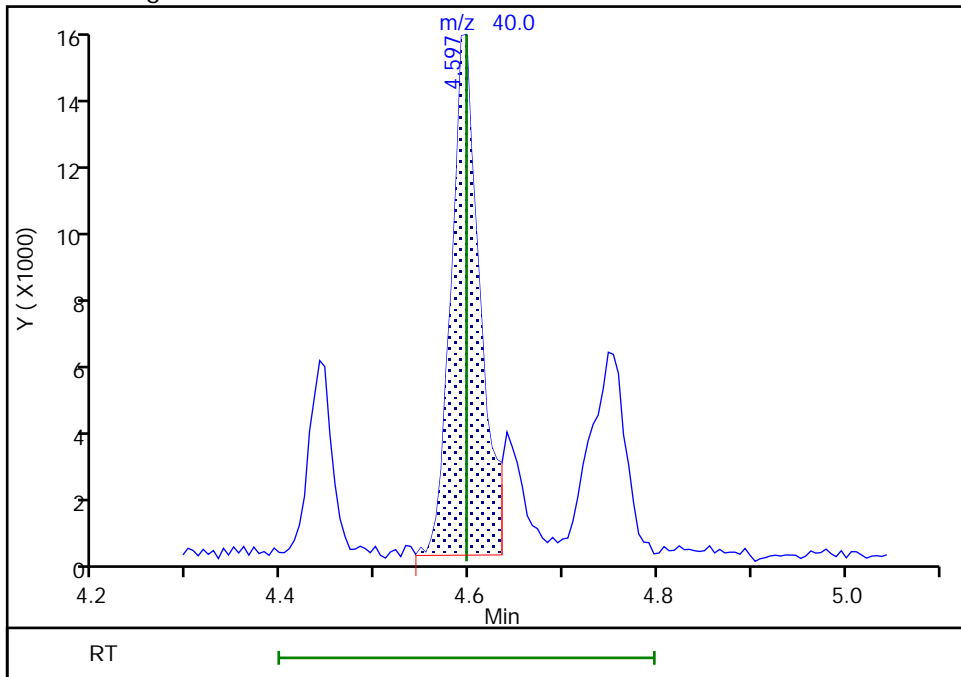
RT: 4.75
Area: 15258
Amount: 1.130550
Amount Units: ppb v/v

Processing Integration Results



RT: 4.60
Area: 31091
Amount: 2.303705
Amount Units: ppb v/v

Manual Integration Results



Reviewer: barlozhetskayaa, 21-Jan-2019 12:13:49

Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RBFBK16I.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 16-Nov-2018 16:00:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-001
 Misc. Info.: BFB
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:29 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh Date: 16-Nov-2018 16:19:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.637	5.637	0.000	0	1507667	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

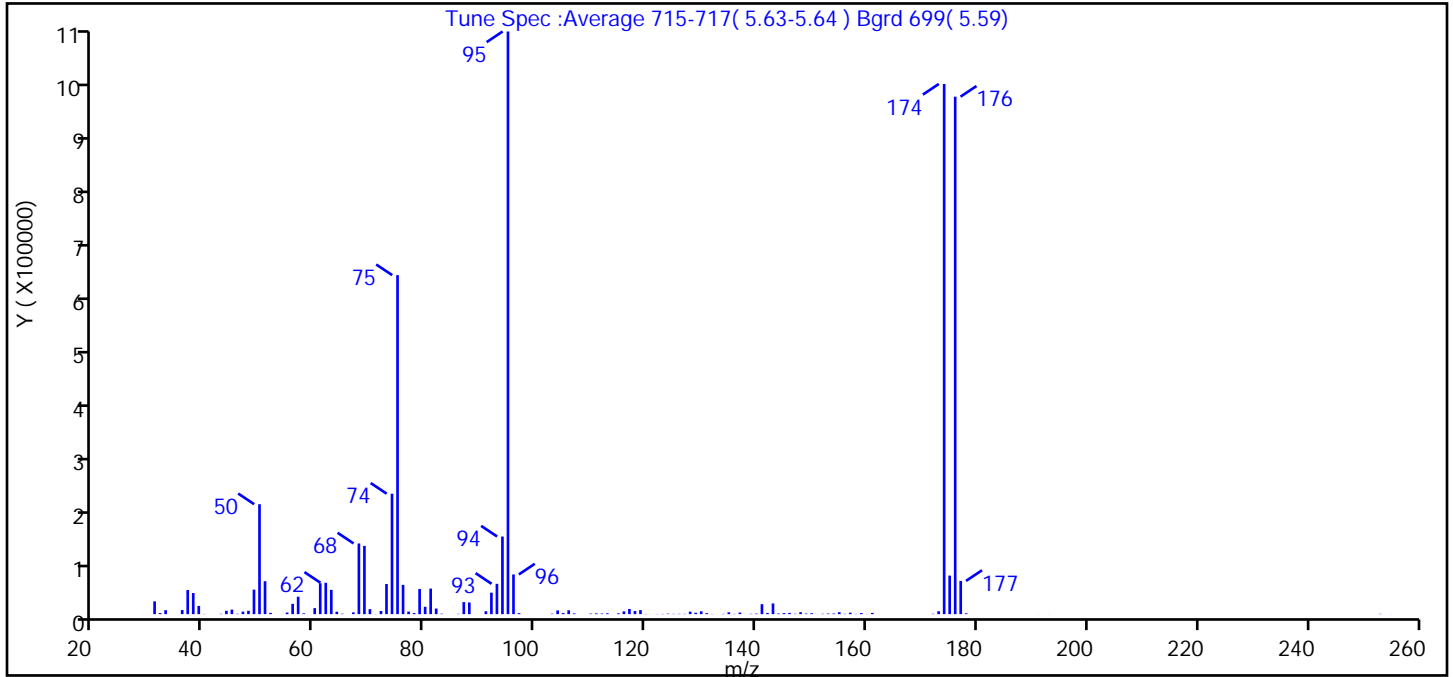
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RBFBK16I.D
 Injection Date: 16-Nov-2018 16:00:30 Instrument ID: MR
 Lims ID: BFB
 Client ID:
 Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.9
75	30 to 60% of m/z 95	58.2
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	91.0
175	5 to 9% of m/z 174	6.6 (7.3)
176	Greater than 95% but less than 101% of m/z 174	88.8 (97.6)
177	5 to 9% of m/z 176	5.7 (6.4)

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RBFBK161.DMR_TO15.rslt\spectra.d
Injection Date: 16-Nov-2018 16:00:30
Spectrum: Tune Spec :Average 715-717(5.63-5.64) Bgrd 699(5.59)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 129

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	82	67.00	3051	111.00	1314	145.00	1799
30.00	42	68.00	121608	112.00	1000	146.00	2167
31.00	21976	69.00	117344	113.00	1472	147.00	587
32.00	1872	70.00	8559	115.00	1498	148.00	3341
33.00	6807	71.00	242	116.00	4788	149.00	1013
34.00	47	72.00	5436	117.00	8901	150.00	1582
36.00	7075	73.00	51896	118.00	5361	151.00	97
37.00	41472	74.00	207104	119.00	6961	152.00	589
38.00	36296	75.00	582976	120.00	382	153.00	1032
39.00	14146	76.00	50352	121.00	80	154.00	1046
40.00	352	77.00	4415	122.00	293	155.00	3329
41.00	12	78.00	1882	123.00	395	156.00	504
43.00	505	79.00	43192	124.00	805	157.00	2542
44.00	5765	80.00	12674	125.00	442	158.00	344
45.00	7821	81.00	43936	126.00	550	159.00	1896
46.00	624	82.00	9626	127.00	471	160.00	211
47.00	4314	83.00	791	128.00	4329	161.00	2127
48.00	5729	86.00	523	129.00	2485	170.00	42
49.00	42160	87.00	20704	130.00	4919	172.00	609
50.00	189056	88.00	20064	131.00	1754	173.00	5015
51.00	56648	91.00	5000	132.00	262	174.00	911744
52.00	2215	92.00	36920	133.00	57	175.00	66280
53.00	37	93.00	52152	134.00	435	176.00	889856
55.00	2753	94.00	133504	135.00	3202	177.00	57168
56.00	17664	95.00	1001984	136.00	443	178.00	1378
57.00	29976	96.00	68240	137.00	2704	191.00	97
58.00	1338	97.00	1768	138.00	52	193.00	111
60.00	10347	103.00	745	139.00	624	195.00	40
61.00	53120	104.00	6342	140.00	916	253.00	525
62.00	53968	105.00	2057	141.00	17160	255.00	125
63.00	41768	106.00	6637	142.00	2048		
64.00	4211	107.00	1249	143.00	18376		
65.00	772	110.00	963	144.00	1092		

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	82	67.00	3051	111.00	1314	145.00	1799
30.00	42	68.00	121608	112.00	1000	146.00	2167
31.00	21976	69.00	117344	113.00	1472	147.00	587
32.00	1872	70.00	8559	115.00	1498	148.00	3341
33.00	6807	71.00	242	116.00	4788	149.00	1013
34.00	47	72.00	5436	117.00	8901	150.00	1582
36.00	7075	73.00	51896	118.00	5361	151.00	97
37.00	41472	74.00	207104	119.00	6961	152.00	589
38.00	36296	75.00	582976	120.00	382	153.00	1032
39.00	14146	76.00	50352	121.00	80	154.00	1046
40.00	352	77.00	4415	122.00	293	155.00	3329
41.00	12	78.00	1882	123.00	395	156.00	504
43.00	505	79.00	43192	124.00	805	157.00	2542
44.00	5765	80.00	12674	125.00	442	158.00	344
45.00	7821	81.00	43936	126.00	550	159.00	1896
46.00	624	82.00	9626	127.00	471	160.00	211
47.00	4314	83.00	791	128.00	4329	161.00	2127
48.00	5729	86.00	523	129.00	2485	170.00	42
49.00	42160	87.00	20704	130.00	4919	172.00	609
50.00	189056	88.00	20064	131.00	1754	173.00	5015
51.00	56648	91.00	5000	132.00	262	174.00	911744
52.00	2215	92.00	36920	133.00	57	175.00	66280
53.00	37	93.00	52152	134.00	435	176.00	889856
55.00	2753	94.00	133504	135.00	3202	177.00	57168
56.00	17664	95.00	1001984	136.00	443	178.00	1378
57.00	29976	96.00	68240	137.00	2704	191.00	97
58.00	1338	97.00	1768	138.00	52	193.00	111
60.00	10347	103.00	745	139.00	624	195.00	40
61.00	53120	104.00	6342	140.00	916	253.00	525
62.00	53968	105.00	2057	141.00	17160	255.00	125
63.00	41768	106.00	6637	142.00	2048		
64.00	4211	107.00	1249	143.00	18376		
65.00	772	110.00	963	144.00	1092		

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RFBFK16I.D

Injection Date: 16-Nov-2018 16:00:30

Instrument ID: MR

Operator ID:

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

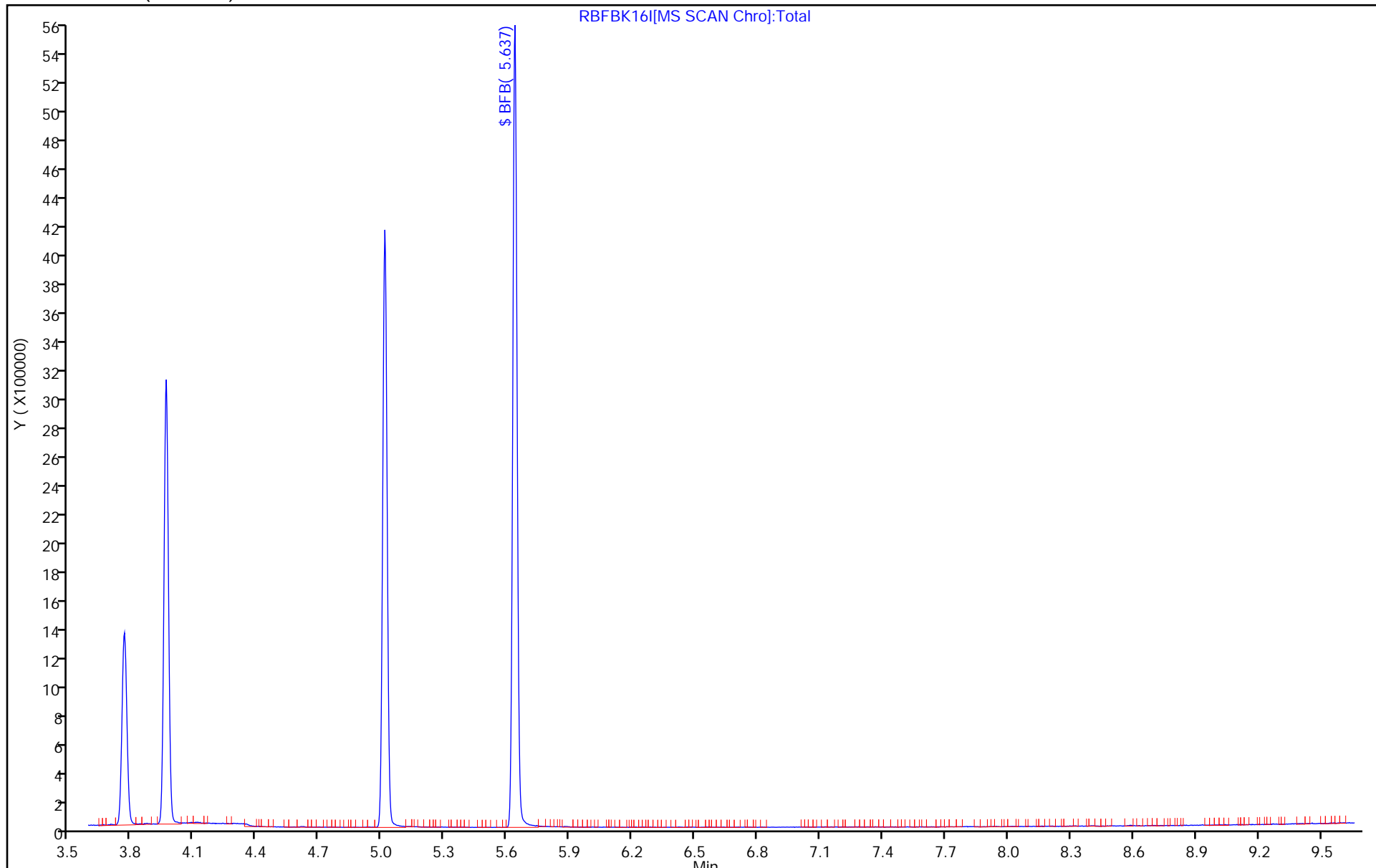
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\BFBFA21.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 21-Jan-2019 11:13:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-001
 Misc. Info.: BFB
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 11:16:29 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 11:16:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.628	5.628	0.000	0	1211054	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

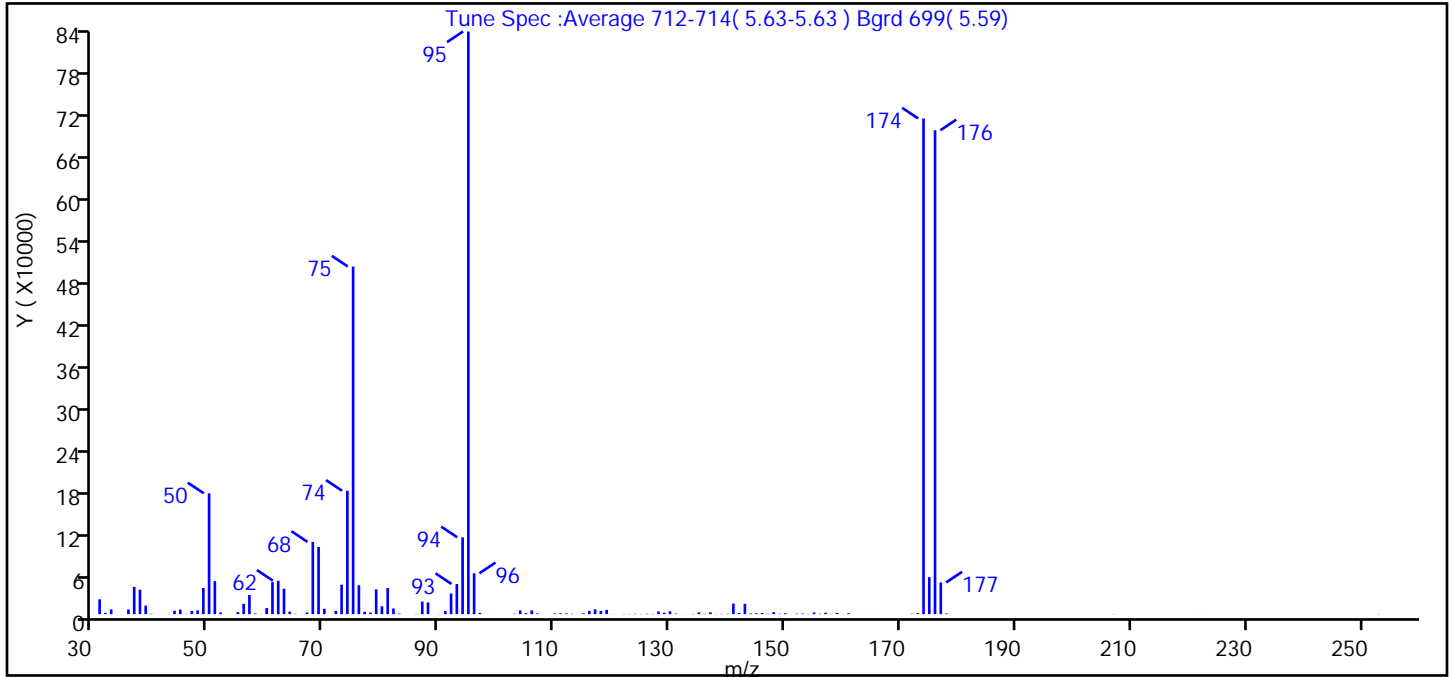
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\BFBFA21.D
 Injection Date: 21-Jan-2019 11:13:30 Instrument ID: MR
 Lims ID: BFB
 Client ID:
 Operator ID: afb ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.7
75	30 to 60% of m/z 95	59.7
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.2 (0.2)
174	50 to 120% of m/z 95	85.1
175	5 to 9% of m/z 174	6.4 (7.5)
176	Greater than 95% but less than 101% of m/z 174	83.0 (97.6)
177	5 to 9% of m/z 176	5.4 (6.6)

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RBFB21.D\MR_TO15.rslt\spectra.d
Injection Date: 21-Jan-2019 11:13:30
Spectrum: Tune Spec :Average 712-714(5.63-5.63) Bgrd 699(5.59)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 128

m/z	Y	m/z	Y	m/z	Y	m/z	Y
30.00	77	65.00	452	106.00	5456	142.00	1747
31.00	21168	66.00	116	107.00	982	143.00	14705
32.00	1793	67.00	2337	110.00	991	144.00	963
33.00	6751	68.00	103240	111.00	1187	145.00	1220
35.00	69	69.00	96040	112.00	1015	146.00	1660
36.00	6678	70.00	7683	113.00	578	147.00	562
37.00	39000	72.00	4641	115.00	1255	148.00	2841
38.00	34888	73.00	42136	116.00	4713	149.00	518
39.00	12225	74.00	176320	117.00	6832	150.00	1352
40.00	499	75.00	496832	118.00	4515	152.00	658
41.00	144	76.00	41416	119.00	6044	153.00	874
42.00	117	77.00	3451	120.00	199	154.00	350
43.00	290	78.00	2230	122.00	233	155.00	2409
44.00	4806	79.00	35408	123.00	278	156.00	608
45.00	6533	80.00	11183	124.00	600	157.00	1976
46.00	399	81.00	37256	125.00	341	158.00	357
47.00	4470	82.00	8074	126.00	563	159.00	1864
48.00	5390	83.00	782	127.00	334	160.00	171
49.00	37352	86.00	381	128.00	3895	161.00	1302
50.00	172672	87.00	17952	129.00	2029	162.00	155
51.00	47184	88.00	16704	130.00	4033	165.00	48
52.00	2382	90.00	193	131.00	796	172.00	509
55.00	2931	91.00	4428	132.00	91	173.00	1485
56.00	14698	92.00	29472	133.00	26	174.00	708352
57.00	27336	93.00	43080	134.00	334	175.00	52904
58.00	913	94.00	109760	135.00	2532	176.00	691520
59.00	148	95.00	832704	136.00	518	177.00	45312
60.00	8774	96.00	58440	137.00	2628	178.00	1003
61.00	45824	97.00	1834	138.00	109	207.00	227
62.00	47784	103.00	567	139.00	377	221.00	64
63.00	36288	104.00	5350	140.00	561	222.00	36
64.00	3513	105.00	1431	141.00	15097	253.00	182

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RBFBFA21.D

Injection Date: 21-Jan-2019 11:13:30

Instrument ID: MR

Operator ID: afb

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

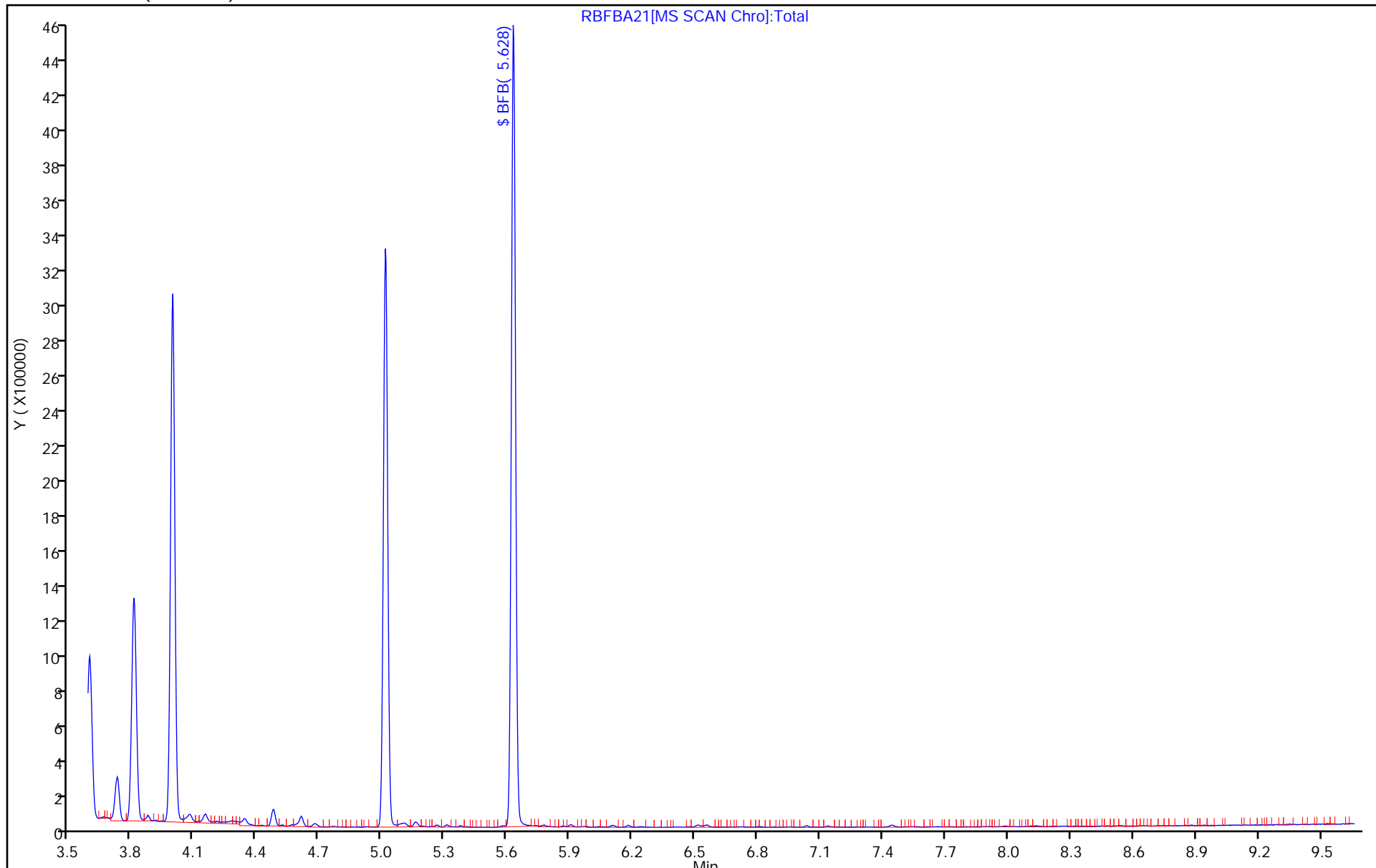
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27023/4
 Matrix: Air Lab File ID: Rmb500A21.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 01/21/2019 13:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27023/4
 Matrix: Air Lab File ID: Rmb500A21.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 01/21/2019 13:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\Rmb500A21.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 21-Jan-2019 13:22:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-004
 Misc. Info.: mb500mL
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 11:17:21 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 11:20:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.406	0.000	73	225333	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.477	0.000	95	1318468	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.524	0.000	91	1156347	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.250	0.000	88	993185	4.00	4.04	
11 Acetaldehyde	44	3.799	3.782	0.017	95	2880		0.1787	
23 Acetone	58	4.667	4.640	0.027	98	1708		0.0730	
31 Methylene Chloride	84	5.346	5.341	0.005	87	8230		0.1092	
45 1,1,1-Trichloroethane	97	8.371	8.366	0.005	76	878		0.003218	
57 Dibromomethane	93	10.259	10.259	0.000	77	824		0.007115	
85 Isopropylbenzene	105	16.250	16.255	-0.005	46	1996		0.004076	
107 1,2,4,5-Tetramethylbenzene	119	19.377	19.377	0.000	1	601		0.001006	
111 1,2,4-Trichlorobenzene	180	20.181	20.175	0.006	74	1256		0.003517	
113 Naphthalene	128	20.299	20.294	0.005	96	2869		0.003973	
116 1,2,3-Trichlorobenzene	180	20.591	20.585	0.006	88	2165		0.006307	
117 2-Methylnaphthalene	142	21.426	21.421	0.005	94	2395		0.0104	
118 1-Methylnaphthalene	142	21.599	21.593	0.006	96	4457		0.0220	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\Rmb500A21.D

Injection Date: 21-Jan-2019 13:22:30

Instrument ID: MR

Operator ID: afb

Lims ID: MB

Worklist Smp#: 4

Client ID:

Purge Vol: 500.000 mL

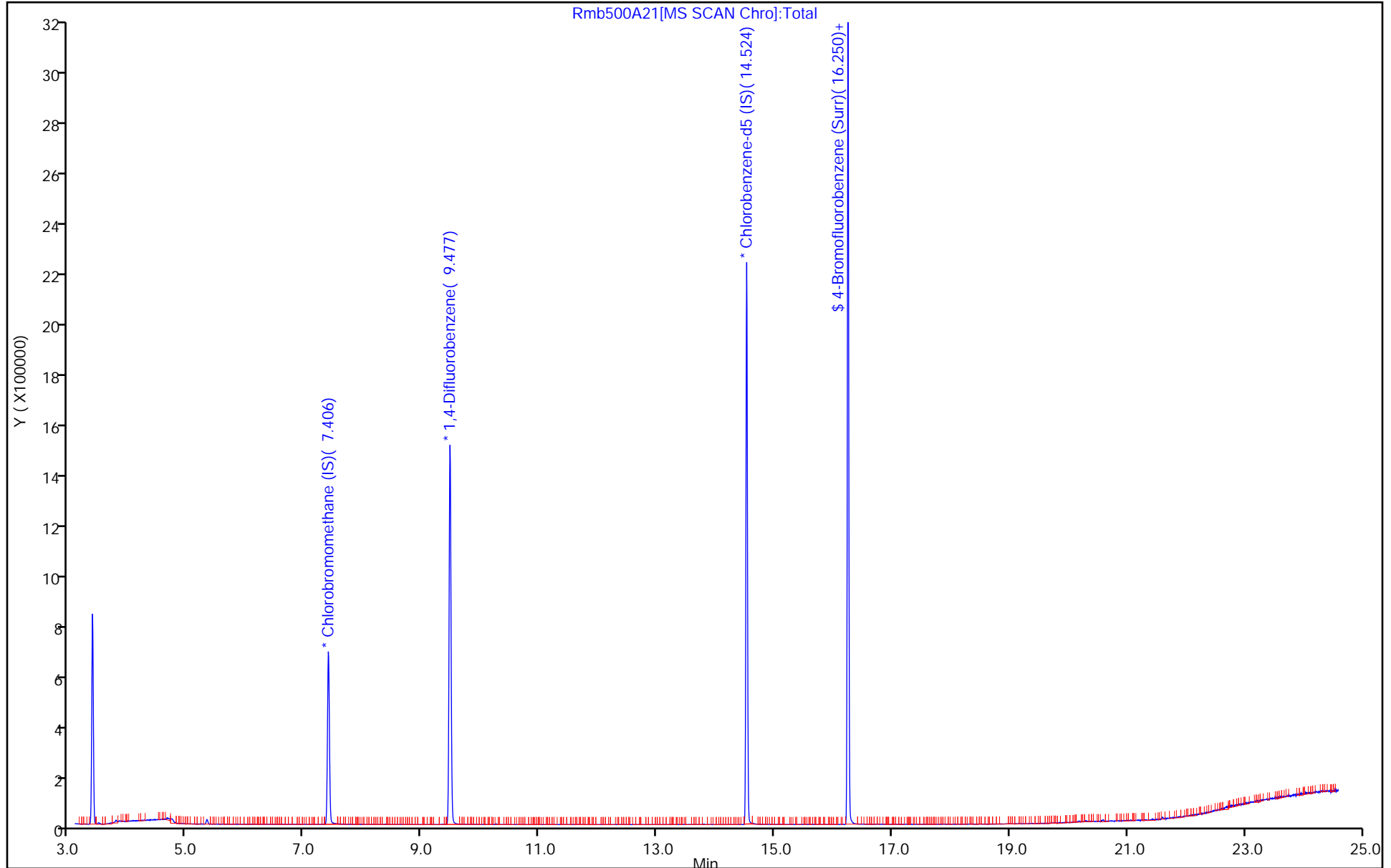
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\Rmb500A21.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 21-Jan-2019 13:22:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-004
 Misc. Info.: mb500mL
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 11:17:21 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 11:20:05

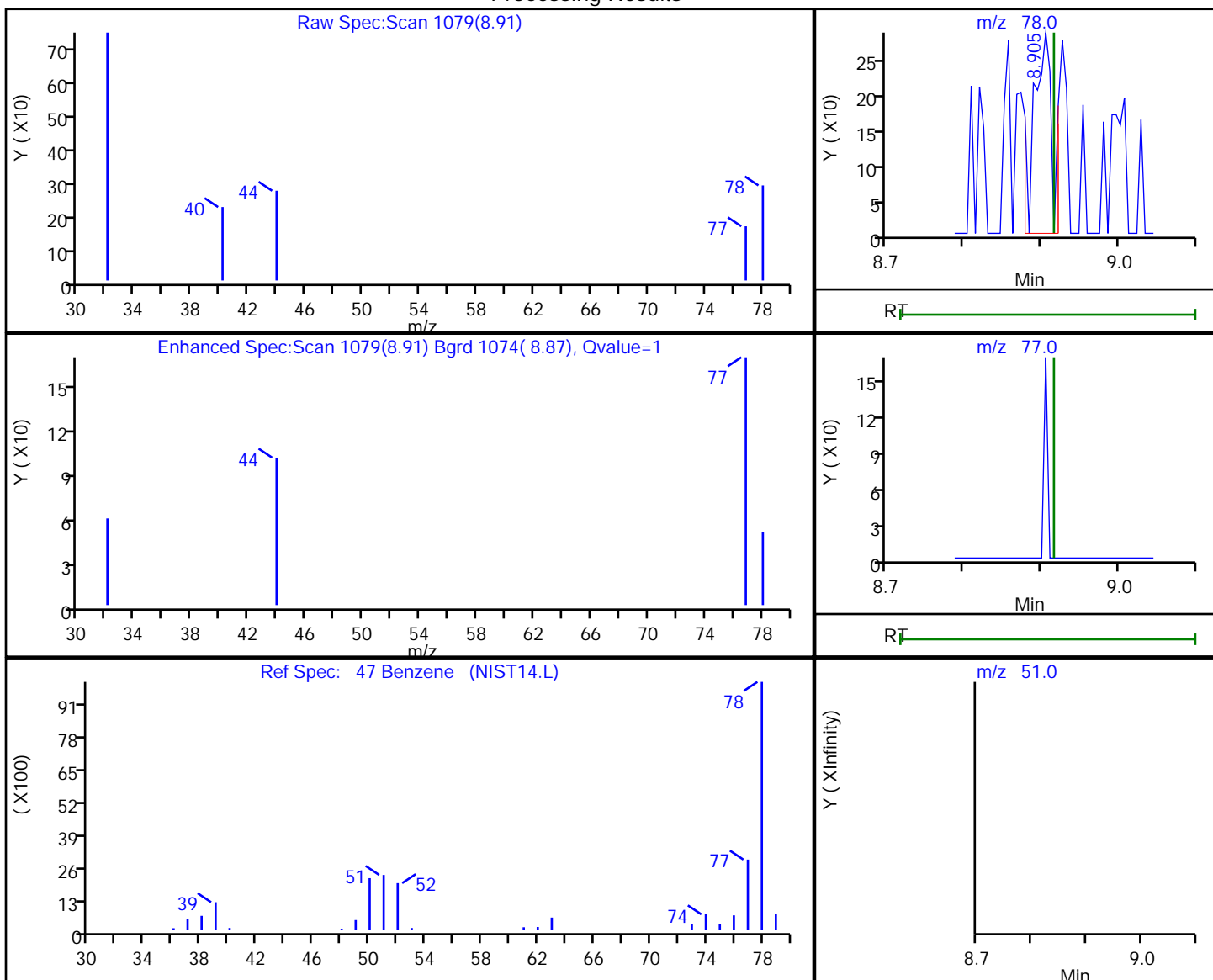
Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.04	100.97

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\Rmb500A21.D
 Injection Date: 21-Jan-2019 13:22:30 Instrument ID: MR
 Lims ID: MB
 Client ID:
 Operator ID: afb ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

47 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
8.91	78.00	488	0.002272
8.92	77.00	0	
8.92	51.00	0	

Reviewer: barlozhetskayaa, 21-Jan-2019 17:26:44

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27023/1002
 Matrix: Air Lab File ID: RCCVA21-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 01/21/2019 11:43
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27023 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.83		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.87		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.79		0.080	0.015
67-66-3	Chloroform	119.38	1.84		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.84		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.79		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.88		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.82		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.79		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.92		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.68		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.90		0.40	0.068
91-20-3	Naphthalene	128.17	1.61		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.86		0.080	0.016
108-88-3	Toluene	92.14	1.91		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.81		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.70		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.85		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.97		0.080	0.021
79-01-6	Trichloroethene	131.39	1.78		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.89		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.91		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.84		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.93		0.040	0.029
1330-20-7	Xylenes, Total	106.17	5.92		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RCCVA21-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 21-Jan-2019 11:43:30 ALS Bottle#: 1 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-002
 Misc. Info.: P78
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 11:17:21 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 11:17:21

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.406	0.000	73	208734	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.477	0.000	95	1232684	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.524	0.000	91	1099880	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.250	0.000	88	970990	4.00	4.15	
6 Chlorodifluoromethane	51	3.518	3.518	0.000	96	221739	2.00	1.79	
7 Propene	41	3.524	3.524	0.000	93	67393	2.00	1.77	
8 Dichlorodifluoromethane	85	3.561	3.561	0.000	100	407678	2.00	1.79	
9 Chloromethane	52	3.680	3.680	0.000	95	26348	2.00	1.65	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.696	3.696	0.000	88	290225	2.00	1.72	
11 Acetaldehyde	44	3.782	3.782	0.000	91	154264	10.0	10.3	
12 Vinyl chloride	62	3.804	3.804	0.000	100	107833	2.00	1.93	
13 Butadiene	54	3.863	3.863	0.000	89	74485	2.00	2.19	
14 Butane	43	3.869	3.869	0.000	89	129190	2.00	2.19	
15 Bromomethane	94	4.084	4.084	0.000	96	132749	2.00	2.06	
16 Chloroethane	64	4.176	4.176	0.000	97	54068	2.00	2.08	
17 Ethanol	31	4.252	4.252	0.000	94	162306	10.0	10.4	
18 Vinyl bromide	106	4.392	4.392	0.000	96	138926	2.00	2.04	
19 2-Methylbutane	43	4.440	4.440	0.000	79	98756	2.00	2.37	
20 Acrolein	56	4.570	4.570	0.000	97	31560	2.00	2.39	
21 Trichlorofluoromethane	101	4.591	4.591	0.000	99	645368	2.00	2.09	
22 Acetonitrile	40	4.597	4.597	0.000	24	31091	2.00	2.30	a
23 Acetone	58	4.640	4.640	0.000	100	133728	6.00	6.17	
25 Isopropyl alcohol	45	4.731	4.731	0.000	99	375759	6.00	6.36	
24 Pentane	72	4.753	4.753	0.000	93	22643	2.00	2.16	
26 Ethyl ether	31	4.861	4.861	0.000	73	78830	2.00	2.27	
27 1,1-Dichloroethene	96	5.093	5.093	0.000	96	131138	2.00	1.79	
28 Acrylonitrile	53	5.131	5.131	0.000	92	68604	2.00	2.09	
29 2-Methyl-2-propanol	59	5.174	5.174	0.000	95	244705	2.00	1.75	
30 1,1,2-Trichloro-1,2,2-trif	101	5.255	5.255	0.000	93	339955	2.00	1.87	
31 Methylene Chloride	84	5.341	5.341	0.000	92	117103	2.00	1.68	
32 3-Chloro-1-propene	39	5.362	5.362	0.000	87	141441	2.00	2.07	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.470	5.470	0.000	98	334852	2.00	1.92	
34 trans-1,2-Dichloroethene	96	5.988	5.988	0.000	97	135619	2.00	1.81	
35 2-Methylpentane	43	6.047	6.047	0.000	86	209057	2.00	2.12	
36 Methyl tert-butyl ether	73	6.107	6.107	0.000	93	452907	2.00	1.90	
37 1,1-Dichloroethane	63	6.311	6.311	0.000	98	235927	2.00	1.88	
38 Vinyl acetate	43	6.414	6.414	0.000	98	260217	2.00	2.15	
39 2-Butanone (MEK)	72	6.754	6.754	0.000	98	52509	2.00	1.85	
40 Hexane	56	6.867	6.867	0.000	81	90195	2.00	2.07	
171 Isopropyl ether	45	6.985	6.985	0.000	87	316831	2.00	2.11	
41 cis-1,2-Dichloroethene	96	7.136	7.136	0.000	95	138747	2.00	1.84	
42 Ethyl acetate	43	7.320	7.320	0.000	98	223916	2.00	2.13	
43 Chloroform	83	7.444	7.444	0.000	97	367105	2.00	1.84	
173 Tert-butyl ethyl ether	59	7.573	7.573	0.000	93	432958	2.00	2.00	
44 Tetrahydrofuran	42	7.773	7.773	0.000	81	98110	2.00	2.12	
45 1,1,1-Trichloroethane	97	8.366	8.366	0.000	96	468405	2.00	1.85	
46 1,2-Dichloroethane	62	8.420	8.420	0.000	97	284351	2.00	1.82	
47 Benzene	78	8.916	8.916	0.000	98	367965	2.00	1.83	
49 n-Butanol	31	8.932	8.932	0.000	65	26949	2.00	1.89	
48 Cyclohexane	69	8.948	8.948	0.000	88	62190	2.00	2.08	
50 Carbon tetrachloride	117	8.959	8.959	0.000	98	529491	2.00	1.87	
51 2,3-Dimethylpentane	71	9.115	9.115	0.000	82	82739	2.00	1.99	
52 Thiophene	84	9.164	9.164	0.000	97	216281	2.00	1.88	
53 Isooctane	57	9.784	9.784	0.000	94	524525	2.00	2.04	
54 1,2-Dichloropropane	63	10.151	10.151	0.000	79	122490	2.00	1.94	
55 n-Heptane	71	10.205	10.205	0.000	87	127068	2.00	1.98	
56 Trichloroethene	130	10.226	10.226	0.000	94	215723	2.00	1.78	
57 Dibromomethane	93	10.259	10.259	0.000	93	196154	2.00	1.81	
58 Dichlorobromomethane	83	10.442	10.442	0.000	98	381672	2.00	1.88	
59 1,4-Dioxane	88	10.458	10.458	0.000	92	50038	2.00	1.63	
60 Methyl methacrylate	41	10.615	10.615	0.000	90	146697	2.00	2.09	
61 Methylcyclohexane	83	11.089	11.089	0.000	92	235066	2.00	1.90	
62 4-Methyl-2-pentanone (MIBK)	43	11.510	11.510	0.000	92	237247	2.00	2.12	
63 cis-1,3-Dichloropropene	75	11.547	11.547	0.000	97	240507	2.00	1.98	
64 trans-1,3-Dichloropropene	75	12.302	12.302	0.000	96	256427	2.00	2.00	
65 Toluene	91	12.443	12.443	0.000	92	502996	2.00	1.91	
66 1,1,2-Trichloroethane	83	12.496	12.496	0.000	94	137690	2.00	1.97	
69 2-Hexanone	58	12.960	12.960	0.000	94	113674	2.00	2.06	
70 Chlorodibromomethane	129	13.224	13.224	0.000	97	407340	2.00	2.00	
71 n-Octane	85	13.300	13.300	0.000	79	166585	2.00	1.98	
72 Ethylene Dibromide	107	13.521	13.521	0.000	97	288541	2.00	1.88	
73 Tetrachloroethene	129	13.667	13.667	0.000	93	242317	2.00	1.86	
74 Chlorobenzene	112	14.573	14.573	0.000	91	431160	2.00	1.87	
75 2,3-Dimethylheptane	43	14.724	14.724	0.000	82	349263	2.00	2.26	
76 Ethylbenzene	91	14.912	14.912	0.000	99	730765	2.00	1.92	
78 m-Xylene & p-Xylene	91	15.090	15.090	0.000	100	1234429	4.00	3.96	
79 Bromoform	173	15.473	15.473	0.000	95	420513	2.00	1.96	
80 Styrene	104	15.559	15.559	0.000	97	402378	2.00	1.97	
82 o-Xylene	91	15.624	15.624	0.000	97	641455	2.00	1.96	
81 n-Nonane	57	15.629	15.629	0.000	86	276101	2.00	2.23	
83 1,1,2,2-Tetrachloroethane	83	15.942	15.942	0.000	94	339192	2.00	2.04	
84 1,2,3-Trichloropropane	110	16.099	16.099	0.000	93	148182	2.00	1.80	
85 Isopropylbenzene	105	16.255	16.255	0.000	97	877848	2.00	1.88	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	16.827	16.827	0.000	97	241076	2.00	1.88	
87 2-Chlorotoluene	126	16.837	16.837	0.000	93	216033	2.00	1.82	
88 4-Ethyltoluene	105	16.994	16.994	0.000	98	922563	2.00	1.91	
89 1,3,5-Trimethylbenzene	120	17.085	17.085	0.000	91	363418	2.00	1.84	
90 Alpha Methyl Styrene	118	17.333	17.333	0.000	85	340784	2.00	1.81	
91 n-Decane	57	17.501	17.501	0.000	97	379586	2.00	2.15	
92 tert-Butylbenzene	119	17.555	17.555	0.000	88	896619	2.00	1.86	
93 1,2,4-Trimethylbenzene	105	17.571	17.571	0.000	96	843110	2.00	1.91	
94 1,3-Dichlorobenzene	146	17.840	17.840	0.000	98	553499	2.00	1.74	
95 sec-Butylbenzene	105	17.867	17.867	0.000	97	1097515	2.00	1.84	
96 Benzyl chloride	91	17.927	17.927	0.000	97	684496	2.00	2.01	
97 1,4-Dichlorobenzene	146	17.943	17.943	0.000	94	567092	2.00	1.77	
98 4-Isopropyltoluene	119	18.067	18.067	0.000	95	1111395	2.00	1.84	
99 1,2,3-Trimethylbenzene	105	18.094	18.094	0.000	98	898988	2.00	1.89	
100 Butylcyclohexane	83	18.202	18.202	0.000	89	497534	2.00	1.91	
101 1,2-Dichlorobenzene	146	18.336	18.336	0.000	92	540743	2.00	1.72	
102 2,3-Dihydroindene	117	18.353	18.353	0.000	95	718200	2.00	1.84	
103 Indene	116	18.487	18.487	0.000	89	588261	2.00	1.83	
104 n-Butylbenzene	91	18.547	18.547	0.000	97	905977	2.00	1.85	
105 Undecane	57	18.973	18.973	0.000	88	444835	2.00	2.13	
106 1,2-Dibromo-3-Chloropropan	157	18.994	18.994	0.000	95	297724	2.00	1.94	
107 1,2,4,5-Tetramethylbenzene	119	19.377	19.377	0.000	95	1049484	2.00	1.85	
110 Dodecane	57	20.100	20.100	0.000	91	479831	2.00	2.19	
111 1,2,4-Trichlorobenzene	180	20.175	20.175	0.000	94	579146	2.00	1.70	
113 Naphthalene	128	20.294	20.294	0.000	98	1106484	2.00	1.61	
115 Hexachlorobutadiene	225	20.558	20.558	0.000	95	665250	2.00	1.68	
116 1,2,3-Trichlorobenzene	180	20.585	20.585	0.000	95	555199	2.00	1.70	
117 2-Methylnaphthalene	142	21.421	21.421	0.000	98	638616	2.00	2.93	
118 1-Methylnaphthalene	142	21.593	21.593	0.000	98	689348	2.00	3.58	
A 120 C8 Range	1	13.310	(13.251-13.348)		0	1367788	2.00	2.08	
S 121 Xylenes, Total	100				0		6.00	5.92	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.65	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

40CV101P_00078

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RCCVA21-LCS.d

Injection Date: 21-Jan-2019 11:43:30

Instrument ID: MR

Operator ID: afb

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

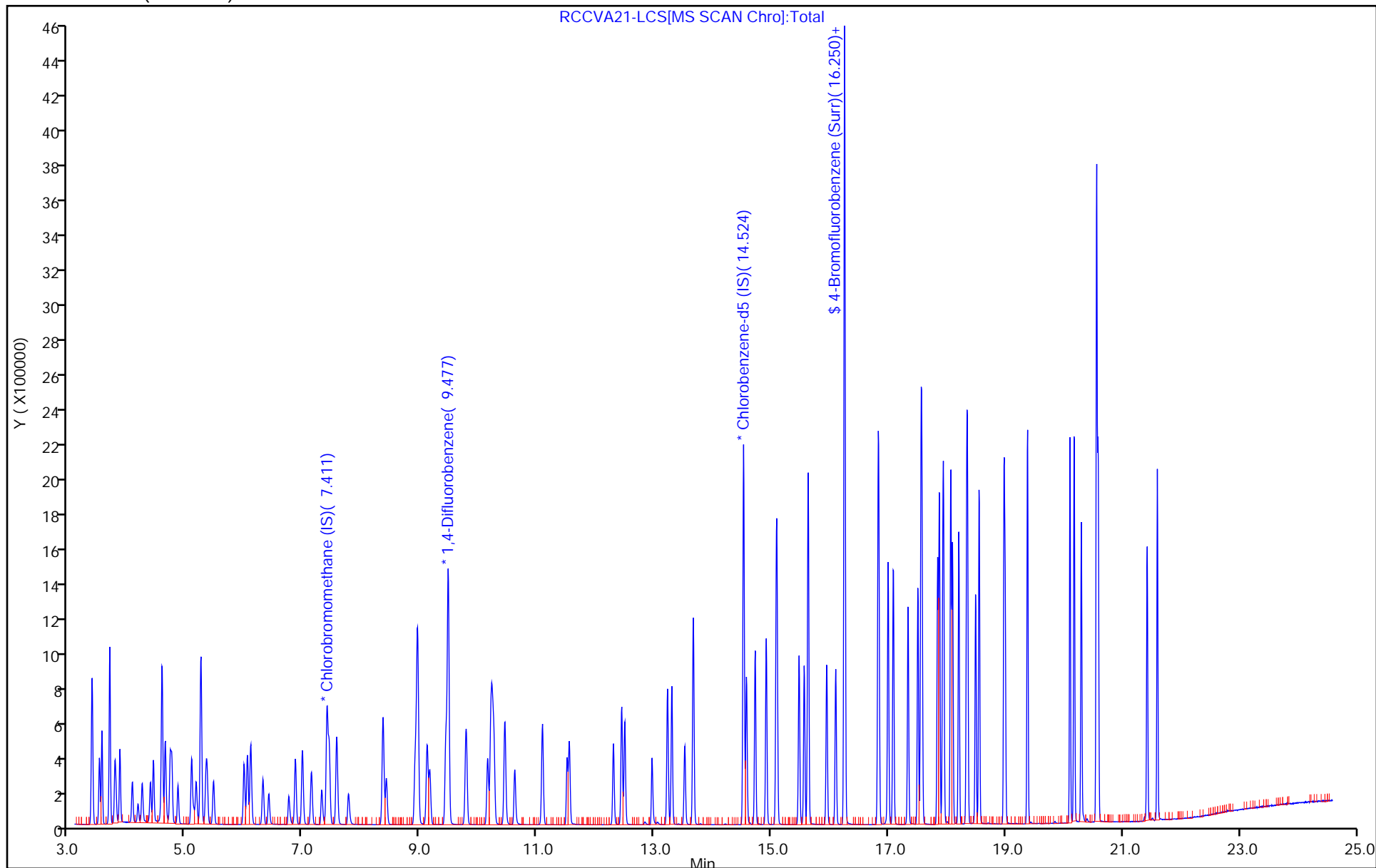
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\RCCVA21-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 21-Jan-2019 11:43:30 ALS Bottle#: 1 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010581-002
 Misc. Info.: P78
 Operator ID: afb Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190118-10581.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Jan-2019 11:17:21 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: khachitpongpanits Date: 22-Jan-2019 11:17:21

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.15	103.79

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1

SDG No.: _____

Instrument ID: MR Start Date: 11/16/2018 16:00

Analysis Batch Number: 25490 End Date: 11/17/2018 06:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25490/1		11/16/2018 16:00	1	RBFBK16I.D	RTX-5 0.32 (mm)
IC 140-25490/3		11/16/2018 17:23	1	RK16IC09.D	RTX-5 0.32 (mm)
IC 140-25490/5		11/16/2018 19:07	1	RK16IC10.D	RTX-5 0.32 (mm)
IC 140-25490/8		11/16/2018 21:42	1	RK16IC01.D	RTX-5 0.32 (mm)
IC 140-25490/9		11/16/2018 22:34	1	RK16IC02.D	RTX-5 0.32 (mm)
IC 140-25490/10		11/16/2018 23:27	1	RK16IC03.D	RTX-5 0.32 (mm)
IC 140-25490/11		11/17/2018 00:20	1	RK16IC04.D	RTX-5 0.32 (mm)
IC 140-25490/12		11/17/2018 01:12	1	RK16IC05.D	RTX-5 0.32 (mm)
IC 140-25490/13		11/17/2018 02:05	1	RK16IC06.D	RTX-5 0.32 (mm)
ICIS 140-25490/14		11/17/2018 02:58	1	RK16IC07.D	RTX-5 0.32 (mm)
IC 140-25490/15		11/17/2018 03:51	1	RK16IC08.D	RTX-5 0.32 (mm)
ICV 140-25490/18		11/17/2018 06:27	1	RK16ICV.D	RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date:	11/16/18	Instrument:	MR	Chrom WL #:	10019	TALS Batch & Event #	TO14/15: 1744 25490						
							DOD:	1749 / 25492	OHIO: PMT / 25491				
Chrom/Worklist Review							1 st	Comments			2 nd		
1. Re-read each Limit Group [method editor-limit groups]							✓				na		
2. Verify LODV in Chrom [method editor -> edit -> MDL]							✓				na		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]							✓				/		
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]							✓				/		
5. Did BFB meet tune criteria? [F8]							✓				/		
6. Were all standards injected within 24 hr of BFB? [F7]							✓	Vol ✓ on screen			/		
7. High point checked for saturation and point removed if so? [Chrom]							✓	Naph.			✓		
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]							na				MS		
9. RT for each IS +20 sec avg. RT? [F6 IstdRec]							✓				/		
10. Area for each IS ± 40% avg. area? [F6 IstdRec]							✓				/		
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]							✓				/		
12. Elution order checked on isomeric pairs? [Chrom]											/		
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane							✓				/		
• 2-methyl butane / acrolein							✓				/		
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane							✓				/		
• vinyl acetate / hexane							✓				/		
• cis- and trans- isomers							✓				/		
• ethyl benzene / m/p-xylene / o-xylene							✓				/		
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene							✓				/		
• tert-butylbenzene/4-isopropyltoluene							✓				/		
• 1,3-, 1,4-, and 1,2-dichlorobenzene							✓				/		
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes							na				MS		
• 1,2,4- and 1,2,3-trichlorobenzenes							✓				/		
• 2-, and 1-methylnaphthalene							✓				/		
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?							✓				/		
MLG Review							TO	DOD	OH	Comments	TO	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1 & 2 methylnaphthalene ≤ 50% [F6 Σ]							✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]							✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]							✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]							na	→	→		na	→	→
18. If curves were used, is correlation coefficient ≥ 0.990? [F6]							na	→	→		na	→	→
19. Is the intercept less than the RL for each curve? [F6]							na	→	→		na	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]							na	→	na		na	→	na
21. Is low point RSE ≤ 50%? [F6]							✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits? [F8 - icv]							✓	✓	✓		✓	✓	✓
Analyst/Date:							2nd Level Reviewer/Date:						
[Signature]							[Signature] 11/19/18						
TALS Review							TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL							✓	✓	✓		na	na	na
24. Graphics uploaded? [paperclip]							✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events --'Fix ICAL linkage' if needed]							✓	✓	✓		✓	✓	✓
26. Runs linked to BFB? [QC Links]							✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings [F8]							✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?							na	→	→		na	→	→
29. After review in TALS, approve the method in TALS.							na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>							na	na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?							na	na	na		✓	✓	✓
Analyst/date:							2nd Level Reviewer/date:						
[Signature]							[Signature] 11/19/18						
Comments:							Comments:						
[Handwritten notes]							[Handwritten notes]						

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1

SDG No.: _____

Instrument ID: MR Start Date: 01/21/2019 11:13

Analysis Batch Number: 27023 End Date: 01/22/2019 07:06

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27023/1		01/21/2019 11:13	1	RBFBA21.D	RTX-5 0.32 (mm)
CCVIS 140-27023/2		01/21/2019 11:43	1	RCCVA21.D	RTX-5 0.32 (mm)
LCS 140-27023/1002		01/21/2019 11:43	1	RCCVA21-LCS.d	RTX-5 0.32 (mm)
MB 140-27023/4		01/21/2019 13:22	1	Rmb500A21.D	RTX-5 0.32 (mm)
140-13811-A-4 MDLV		01/21/2019 16:26	1		RTX-5 0.32 (mm)
ZZZZZ		01/21/2019 16:26	1		RTX-5 0.32 (mm)
ZZZZZ		01/21/2019 17:17	1		RTX-5 0.32 (mm)
140-13811-A-3 MDLV		01/21/2019 18:09	1		RTX-5 0.32 (mm)
ZZZZZ		01/21/2019 18:09	1		RTX-5 0.32 (mm)
140-13811-A-2 MDLV		01/21/2019 19:01	1		RTX-5 0.32 (mm)
ZZZZZ		01/21/2019 19:01	1		RTX-5 0.32 (mm)
140-13811-A-1 MDLV		01/21/2019 19:52	1		RTX-5 0.32 (mm)
ZZZZZ		01/21/2019 19:52	1		RTX-5 0.32 (mm)
140-13996-1		01/21/2019 20:42	1	RA21p103.D	RTX-5 0.32 (mm)
140-13996-2		01/21/2019 21:33	1	RA21p104.D	RTX-5 0.32 (mm)
140-13996-3		01/21/2019 22:24	1	RA21p105.D	RTX-5 0.32 (mm)
140-13996-4		01/21/2019 23:15	1	RA21p106.D	RTX-5 0.32 (mm)
140-13996-5		01/22/2019 00:06	1	RA21p107.D	RTX-5 0.32 (mm)
140-13996-6		01/22/2019 00:57	1	RA21p108.D	RTX-5 0.32 (mm)
ZZZZZ		01/22/2019 01:49	1		RTX-5 0.32 (mm)
ZZZZZ		01/22/2019 02:41	1		RTX-5 0.32 (mm)
ZZZZZ		01/22/2019 03:33	1		RTX-5 0.32 (mm)
ZZZZZ		01/22/2019 04:26	1.41		RTX-5 0.32 (mm)
ZZZZZ		01/22/2019 05:20	1.85		RTX-5 0.32 (mm)
ZZZZZ		01/22/2019 06:12	1		RTX-5 0.32 (mm)
ZZZZZ		01/22/2019 07:06	1.83		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 1 of 2

Instrument/Date	MR 01/21/2019	Routine		DOD		OHIO VAP	
CCAL Chrom WL#	10581	CCAL Batch #	27023				
ICAL Chrom WL#	10099	ICAL Batch # / Event #	25490 / 1746	/	/	/	/
Chrom Review		1 st	If No, why is data reportable?				2 nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]		/					na
2. Did BFB meet tune criteria? [F8]		/	<input type="checkbox"/> [Failed TO-14A, but passes TO-15]				✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]		/	List Target analytes outside CCV limits: _____ _____				✓
4. Elution order checked on isomeric pairs? [Chrom]							
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		/					✓
• 2-methyl butane / acrolein		/					✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		/					✓
• vinyl acetate / hexane		/					✓
• cis- and trans- isomers		/					✓
• ethyl benzene / m/p-xylene / o-xylene		/					✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene		/					✓
• tert-butylbenzene/4-isopropyltoluene		/					✓
• 1,3-, 1,4-, and 1,2-dichlorobenzene		/					✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		NA					NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene		/					✓
• 2-, and 1-methylnaphthalene		/					✓
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?		NA					NA
6. Has the RT been updated to the method?		/					✓
Analyst/date Suphavana Kh. 01/22/2019		2nd Level Reviewer/date		JS 1/22/19			
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]		/	Volume checked on-screen JS 1/22/19				✓
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]		/					✓
9. Can dilution history verified? [Mgmt Report]		/					✓
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:		/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)				✓
11. All runs - peaks ID'd correctly and false positives removed?		/					✓
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?		/					✓
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]		/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur, Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)				✓
Sample	Reason	Sample	Reason				
_____	_____	_____	_____				
_____	_____	_____	_____				
14. Samples outside calibration range scheduled for dilution?		✓	<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution				✓
Chrom Review		1 st	If No, why is data reportable?				2 nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason: Sample Reason Sample Reason		/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.				✓
16. RIC inspected for proper integration for TPH?		NA					NA
17. Obvious non-TPH peaks excluded?		/					✓
18. Individual TPH peak area < octane high point area?		/					✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 2 of 2

TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	MB														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input type="checkbox"/> CCV - %D - LCS criteria met (NCM# _____) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	MB														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random; Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr> <td>>90</td> <td>5</td> </tr> <tr> <td>71 - 90</td> <td>4</td> </tr> <tr> <td>51 - 70</td> <td>3</td> </tr> <tr> <td>31 - 50</td> <td>2</td> </tr> <tr> <td>11 - 30</td> <td>1</td> </tr> <tr> <td><11</td> <td>0</td> </tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	<11	0			
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
<11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	NA		MB														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	NA	012319	/														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-27023/4 200 mL blank ID: 140-27023/15	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	NA		MB														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	-NA-		/														
40. Checklist & Entech report scanned, attached & assigned properly?	-NA-		/														

Analyst: Suphawana Kh.	Date: 01/24/2019	2nd Level Reviewer: [Signature]	Date: 01/23/19
Comments:		Comments:	
CE - line 10-13 for Chlorodifluoromethane - line 18 for MEK worked up MDLV 7138117 as # lines # 19-22 1/22/19			
Example Calculation: 140-13996-6 Trichloroethene On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF $\frac{9.194555 \times 500 \times 1.0}{20} = 129,804$			

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1

SDG No.: _____

Batch Number: 27023 Batch Start Date: 01/21/19 11:13 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00078	40MXISSURP 00003
BFB 140-27023/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27023/2		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27023/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-13996-A-1	BLDG-C EFFLUENT	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-13996-A-2	BLDG-C MIDGAC	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-13996-A-3	BLDG-C INFLUENT	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-13996-A-4	BLDG-A EFFLUENT	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-13996-A-5	BLDG-A MIDGAC	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-13996-A-6	BLDG-A INFLUENT	TO 15 LL	T	20 mL	500 mL	1	1		40 mL
LCS 140-27023/1002		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27023/1		TO 15 LL		40 mL					
CCVIS 140-27023/2		TO 15 LL							
MB 140-27023/4		TO 15 LL							
140-13996-A-1	BLDG-C EFFLUENT	TO 15 LL	T						
140-13996-A-2	BLDG-C MIDGAC	TO 15 LL	T						
140-13996-A-3	BLDG-C INFLUENT	TO 15 LL	T						
140-13996-A-4	BLDG-A EFFLUENT	TO 15 LL	T						
140-13996-A-5	BLDG-A MIDGAC	TO 15 LL	T						
140-13996-A-6	BLDG-A INFLUENT	TO 15 LL	T						
LCS 140-27023/1002		TO 15 LL							

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13996-1

SDG No.: _____

Batch Number: 27023 Batch Start Date: 01/21/19 11:13 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13505-1
 SDG No.: _____
 Client Sample ID: 10835 Lab Sample ID: 140-13505-1
 Matrix: Air Lab File ID: GL01LOT13505.D
 Analysis Method: TO-15 Date Collected: 11/30/2018 14:00
 Sample wt/vol: 200 (mL) Date Analyzed: 12/01/2018 20:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25780 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND	*	1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13505-1
 SDG No.: _____
 Client Sample ID: 10835 Lab Sample ID: 140-13505-1
 Matrix: Air Lab File ID: GL01LOT13505.D
 Analysis Method: TO-15 Date Collected: 11/30/2018 14:00
 Sample wt/vol: 200 (mL) Date Analyzed: 12/01/2018 20:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25780 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13505-1
 SDG No.: _____
 Client Sample ID: 10835 Lab Sample ID: 140-13505-1
 Matrix: Air Lab File ID: GL01LOT13505.D
 Analysis Method: TO-15 Date Collected: 11/30/2018 14:00
 Sample wt/vol: 200(mL) Date Analyzed: 12/01/2018 20:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25780 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20181129-10128.b\GL01LOT13505.D
 Lims ID: 140-13505-A-1
 Client ID: 10835
 Sample Type: Client
 Inject. Date: 01-Dec-2018 20:00:30 ALS Bottle#: 15 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010128-008
 Misc. Info.: 10835
 Operator ID: 403648 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20181129-10128.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 03-Dec-2018 10:09:49 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: khachitpongpanits Date: 03-Dec-2018 10:11:33

Compound	Sig	RT (min.)	Adj RT (min.)	Diff RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.264	9.270	-0.006	93	240511	4.00	
* 2 1,4-Difluorobenzene	114	11.443	11.443	0.000	98	1563230	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.118	16.118	0.000	95	1402899	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.741	17.741	0.000	77	1160720	4.07	
31 Methylene Chloride	84	6.627	6.622	0.005	96	15495	0.1592	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181129-10128.b\GL01LOT13505.D

Injection Date: 01-Dec-2018 20:00:30

Instrument ID: MG

Operator ID: 403648

Lims ID: 140-13505-A-1

Lab Sample ID: 140-13505-1

Worklist Smp#: 8

Client ID: 10835

Purge Vol: 500.000 mL

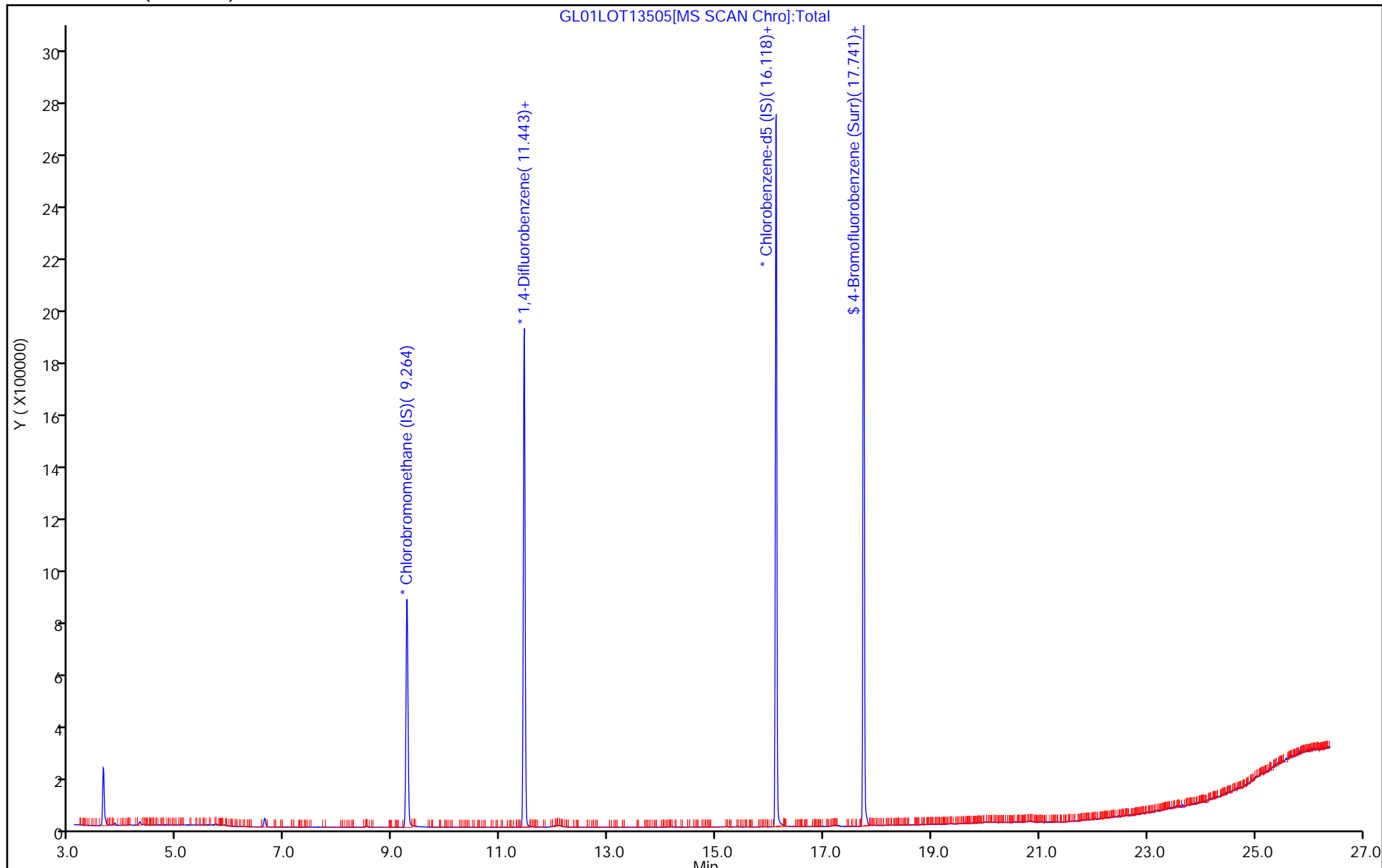
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13614-1
 SDG No.: _____
 Client Sample ID: 11558 Lab Sample ID: 140-13614-2
 Matrix: Air Lab File ID: L11L13614.D
 Analysis Method: TO-15 Date Collected: 12/10/2018 16:35
 Sample wt/vol: 200 (mL) Date Analyzed: 12/12/2018 09:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26123 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13614-1
 SDG No.: _____
 Client Sample ID: 11558 Lab Sample ID: 140-13614-2
 Matrix: Air Lab File ID: L11L13614.D
 Analysis Method: TO-15 Date Collected: 12/10/2018 16:35
 Sample wt/vol: 200 (mL) Date Analyzed: 12/12/2018 09:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26123 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13614-1
 SDG No.: _____
 Client Sample ID: 11558 Lab Sample ID: 140-13614-2
 Matrix: Air Lab File ID: L11L13614.D
 Analysis Method: TO-15 Date Collected: 12/10/2018 16:35
 Sample wt/vol: 200 (mL) Date Analyzed: 12/12/2018 09:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26123 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MG\20181210-10253.b\L11L13614.D
 Lims ID: 140-13614-A-2
 Client ID: 11558
 Sample Type: Client
 Inject. Date: 12-Dec-2018 09:02:30 ALS Bottle#: 17 Worklist Smp#: 30
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010253-030
 Misc. Info.: 11558
 Operator ID: 7126 Instrument ID: MG
 Method: \\chromna\Knoxville\ChromData\MG\20181210-10253.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 12-Dec-2018 09:43:55 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0316

First Level Reviewer: tajh Date: 12-Dec-2018 09:43:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.248	9.264	-0.016	92	213117	4.00	
* 2 1,4-Difluorobenzene	114	11.427	11.437	-0.010	98	1376366	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.107	16.107	0.000	95	1249714	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.730	17.730	0.000	75	1057659	4.16	
31 Methylene Chloride	84	6.611	6.609	-0.005	94	11169	0.1295	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MG\20181210-10253.b\L11L13614.D

Injection Date: 12-Dec-2018 09:02:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-13614-A-2

Lab Sample ID: 140-13614-2

Worklist Smp#: 30

Client ID: 11558

Purge Vol: 500.000 mL

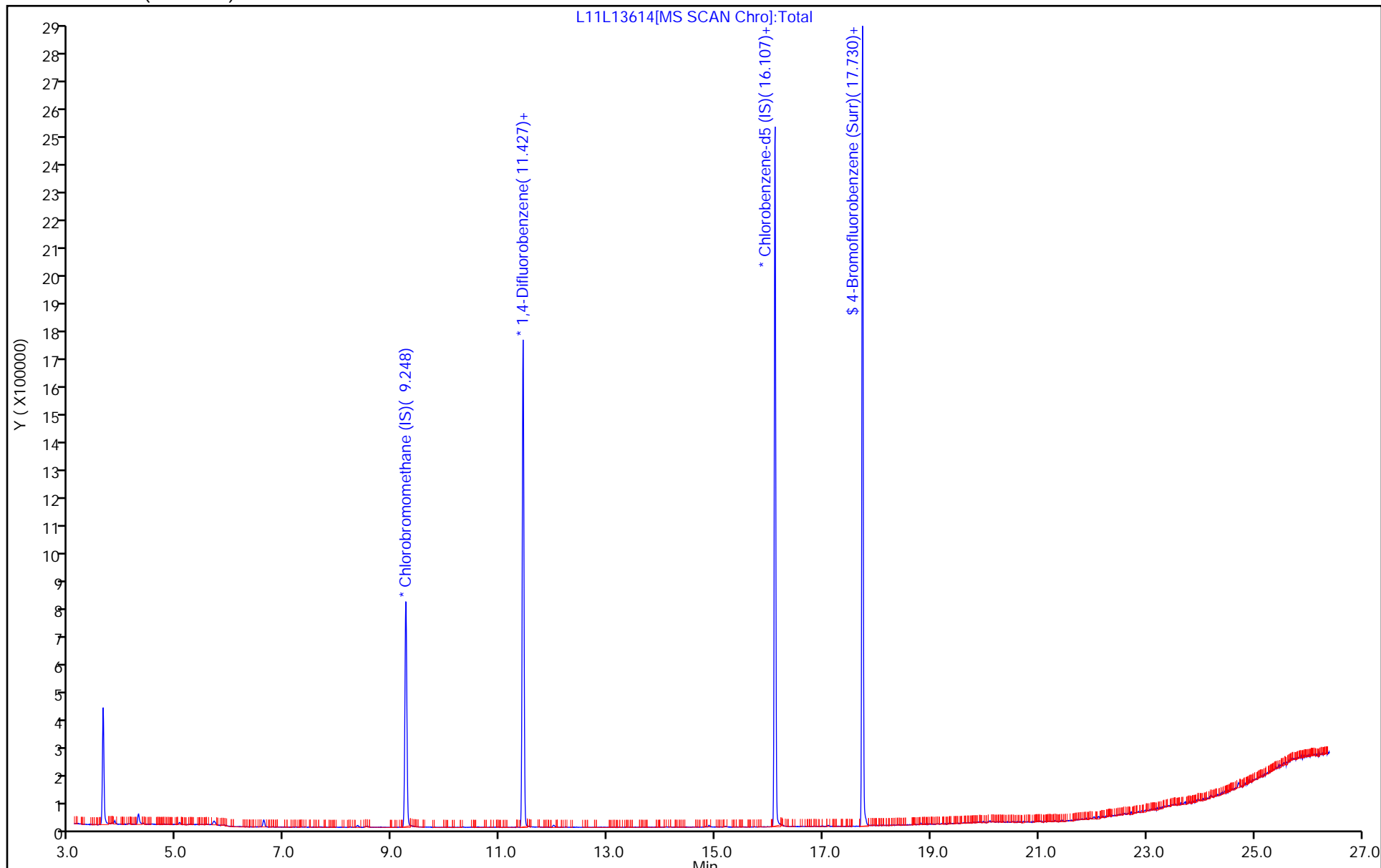
Dil. Factor: 1.0000

ALS Bottle#: 17

Method: MG_TO15


Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

Client Contact Information Company: <u>Tetra Tech</u> Address: <u>980 Awood Rd</u> City/State/Zip: <u>ANNAPOLIS MD 21403</u> Phone: <u>410-990-4607</u> FAX: _____		Project Manager: <u>Peter Rich</u> Phone: <u>410-990-6697</u> Site Contact: _____ TAL Contact: _____		Sampled By: <u>Lee Lucas</u>		_____ of _____ COCs					
Project Name: <u>N LAL MRC</u> Site/Location: <u>MRS/ Building A+C</u> PO # <u>117-0512140</u>		Analysis Turnaround Time Standard (Specify) _____ Rush (Specify) _____		 140-13996 Chain of Custody		Other (Please specify in notes section) _____ Landfill Gas _____ Soil Gas _____ Ambient Air _____ Indoor Air _____ Sample Type _____ Other (Please specify in notes section) _____ ASTM D-1946 _____ EPA 25C _____ EPA 3C _____ TO-14A _____ TO-15 _____					
Sample Identification <u>BLDG-C EFFLUENT</u> <u>BLDG-C MIDGAC</u> <u>BLDG-C INFLUENT</u> <u>BLDG-A EFFLUENT</u> <u>BLDG-A MIDGAC</u> <u>BLDG-A INFLUENT</u>		Sample Date(s) <u>11/16/19</u> <u>11/16/19</u> <u>11/16/19</u> <u>11/16/19</u> <u>11/16/19</u> <u>11/16/19</u>	Time Start <u>1242</u> <u>1247</u> <u>1252</u> <u>1516</u> <u>1519</u> <u>1523</u>	Time Stop <u>1242</u> <u>1247</u> <u>1252</u> <u>1517</u> <u>1520</u> <u>1524</u>	Canister Vacuum in Field, "Hg (Start) <u>-30</u> <u>-30</u> <u>-30</u> <u>-30</u> <u>-29</u> <u>-29</u>	Canister Vacuum in Field, "Hg (Stop) <u>-4</u> <u>-4</u> <u>-4</u> <u>-4</u> <u>-4</u> <u>-4</u>	Flow Controller ID <u>11594</u> <u>10911</u> <u>09958</u> <u>10104</u> <u>10614</u> <u>10901</u>	Canister ID <u>11541</u> <u>11710</u> <u>11872</u> <u>11492</u> <u>11558</u> <u>11575</u>	TO-15 <u>X</u> <u>X</u> <u>X</u> <u>X</u> <u>X</u> <u>X</u>	Temperature (Fahrenheit) Interior _____ Ambient _____ Pressure (inches of Hg) Interior _____ Ambient _____ Start _____ Stop _____	Other (Please specify in notes section) _____ Landfill Gas _____ Soil Gas _____ Ambient Air _____ Indoor Air _____ Sample Type _____ Other (Please specify in notes section) _____ ASTM D-1946 _____ EPA 25C _____ EPA 3C _____ TO-14A _____ TO-15 _____
Special Instructions/QC Requirements & Comments: <u>Received ambient, 1 box</u> <u>Fedex PO, Custody seal intact</u> <u>TK# 7742 2907 1766</u> <u>KLW 1/18/19</u>											
Canisters Shipped by: <u>[Signature]</u>		Date/Time: _____		Canisters Received by: _____		Date/Time: _____		Received by: <u>[Signature]</u>		Date/Time: <u>1-17-19 1700</u>	
Samples Relinquished by: <u>Michael Wilks</u>		Date/Time: <u>1-17-19 1700</u>		Relinquished by: <u>[Signature]</u>		Date/Time: <u>1/17/19 1700</u>		Relinquished by: <u>[Signature]</u>		Date/Time: <u>1/18/19 0850 JAR</u>	
Lab Use Only		Shipper Name: _____		Opened by: _____		Condition: _____		6 cans 6 HR		6 cans 6 HR	

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID: _____ Correction factor: _____			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	pH test strip lot number: _____
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?			/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____ Date: _____ Time: _____
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/		
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	

Project #: 1400292 PM Instructions: _____

Sample Receiving Associate:

Date: 1/18/19

ANALYTICAL REPORT

Job Number: 140-14199-1

Job Description: LMC-MRC, MRAS/Building A

For:

Tetra Tech GEO

51 Franklin Street

Suite 400

Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
2/13/2019 9:59 AM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
02/13/2019

cc: Belssi Chang
Amy Thomson
Michael Wilks

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TestAmerica Laboratories, Inc.

TestAmerica Knoxville 5815 Middlebrook Pike, Knoxville, TN 37921

Tel (865) 291-3000 Fax (865) 584-4315 www.testamericainc.com

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Definitions/Glossary

Client: Tetra Tech GEO
Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-14199-1

Receipt

The samples were received on 2/7/2019 at 9:30 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

Although the BFB is flagged as outside control limits for TO-14 on batch 140-27430, the results are within limits for TO-15, which is required for this project.

This report includes canister certification data for the batch certified and/or individually certified canisters used to collect samples as well as for any canisters used for dilution of those samples. All of the canisters used for sample collection or sample dilution for this job were certified to be clean to the levels listed on the results page. Please note that results for individually certified canisters that were not used for sample collection or sample dilution may also be included in the report because these canisters were in the same cleaning batch as the canisters used for this project. Since these canisters were not used for this job, the results have no bearing on the sample results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Client Sample ID: BLDG-A-INFLUENT

Lab Sample ID: 140-14199-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.94	J	2.0	0.58	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.47	J	2.0	0.38	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	14		2.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.2		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	18		2.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	79		2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	160		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.0	J	6.4	1.8	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.3	J	9.8	1.8	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	57		7.9	2.4	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	13		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	73		7.9	1.4	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	430		11	1.6	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	850		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A-MIDGAC

Lab Sample ID: 140-14199-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	0.44		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.66		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	10		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.24	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.0		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	14		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.24	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	17		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.30		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	3.2		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	40		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.2	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	8.2		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	54		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.1	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.94	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	91		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.6		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A-EFFLUENT

Lab Sample ID: 140-14199-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.30	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.55		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.76		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	7.9		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.23	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.1		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech GEO
 Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Client Sample ID: BLDG-A-EFFLUENT (Continued)

Lab Sample ID: 140-14199-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	16		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.5	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.21	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	20		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.96		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.95	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	3.7		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	31		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.2	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	13		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	64		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.2	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.83	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	110		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	5.2		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Client Sample ID: BLDG-A-INFLUENT

Lab Sample ID: 140-14199-1

Date Collected: 02/06/19 11:23

Matrix: Air

Date Received: 02/07/19 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.94	J	2.0	0.58	ppb v/v			02/07/19 17:37	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			02/07/19 17:37	1
Chlorodifluoromethane	ND		2.0	0.38	ppb v/v			02/07/19 17:37	1
Chloroform	0.47	J	2.0	0.38	ppb v/v			02/07/19 17:37	1
cis-1,2-Dichloroethene	14		2.0	0.60	ppb v/v			02/07/19 17:37	1
Dichlorodifluoromethane	ND		2.0	0.68	ppb v/v			02/07/19 17:37	1
1,1-Dichloroethane	3.2		2.0	0.25	ppb v/v			02/07/19 17:37	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			02/07/19 17:37	1
1,1-Dichloroethene	18		2.0	0.35	ppb v/v			02/07/19 17:37	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			02/07/19 17:37	1
Methylene Chloride	ND		10	3.3	ppb v/v			02/07/19 17:37	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			02/07/19 17:37	1
Naphthalene	ND		1.0	1.0	ppb v/v			02/07/19 17:37	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			02/07/19 17:37	1
Toluene	ND		3.0	3.0	ppb v/v			02/07/19 17:37	1
trans-1,2-Dichloroethene	ND		2.0	0.50	ppb v/v			02/07/19 17:37	1
1,2,4-Trichlorobenzene	ND		2.0	0.98	ppb v/v			02/07/19 17:37	1
1,1,1-Trichloroethane	79		2.0	0.30	ppb v/v			02/07/19 17:37	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			02/07/19 17:37	1
Trichloroethene	160		1.0	0.35	ppb v/v			02/07/19 17:37	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			02/07/19 17:37	1
1,2,4-Trimethylbenzene	ND		2.0	0.63	ppb v/v			02/07/19 17:37	1
1,3,5-Trimethylbenzene	ND		2.0	0.65	ppb v/v			02/07/19 17:37	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			02/07/19 17:37	1
Xylenes, Total	ND		4.0	0.60	ppb v/v			02/07/19 17:37	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	3.0	J	6.4	1.8	ug/m3			02/07/19 17:37	1
Carbon tetrachloride	ND		13	2.4	ug/m3			02/07/19 17:37	1
Chlorodifluoromethane	ND		7.1	1.3	ug/m3			02/07/19 17:37	1
Chloroform	2.3	J	9.8	1.8	ug/m3			02/07/19 17:37	1
cis-1,2-Dichloroethene	57		7.9	2.4	ug/m3			02/07/19 17:37	1
Dichlorodifluoromethane	ND		9.9	3.3	ug/m3			02/07/19 17:37	1
1,1-Dichloroethane	13		8.1	1.0	ug/m3			02/07/19 17:37	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			02/07/19 17:37	1
1,1-Dichloroethene	73		7.9	1.4	ug/m3			02/07/19 17:37	1
Ethylbenzene	ND		8.7	2.9	ug/m3			02/07/19 17:37	1
Methylene Chloride	ND		35	11	ug/m3			02/07/19 17:37	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			02/07/19 17:37	1
Naphthalene	ND		5.2	5.2	ug/m3			02/07/19 17:37	1
Tetrachloroethene	ND		14	2.7	ug/m3			02/07/19 17:37	1
Toluene	ND		11	11	ug/m3			02/07/19 17:37	1
trans-1,2-Dichloroethene	ND		7.9	2.0	ug/m3			02/07/19 17:37	1
1,2,4-Trichlorobenzene	ND		15	7.2	ug/m3			02/07/19 17:37	1
1,1,1-Trichloroethane	430		11	1.6	ug/m3			02/07/19 17:37	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			02/07/19 17:37	1
Trichloroethene	850		5.4	1.9	ug/m3			02/07/19 17:37	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			02/07/19 17:37	1
1,2,4-Trimethylbenzene	ND		9.8	3.1	ug/m3			02/07/19 17:37	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Client Sample ID: BLDG-A-INFLUENT

Lab Sample ID: 140-14199-1

Date Collected: 02/06/19 11:23

Matrix: Air

Date Received: 02/07/19 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		9.8	3.2	ug/m3			02/07/19 17:37	1
Vinyl chloride	ND		2.6	1.9	ug/m3			02/07/19 17:37	1
Xylenes, Total	ND		17	2.6	ug/m3			02/07/19 17:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140		02/07/19 17:37	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Client Sample ID: BLDG-A-MIDGAC

Lab Sample ID: 140-14199-2

Date Collected: 02/06/19 11:27

Matrix: Air

Date Received: 02/07/19 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.12	ppb v/v			02/07/19 18:26	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/07/19 18:26	1
Chlorodifluoromethane	0.44		0.40	0.075	ppb v/v			02/07/19 18:26	1
Chloroform	0.66		0.40	0.075	ppb v/v			02/07/19 18:26	1
cis-1,2-Dichloroethene	10		0.40	0.12	ppb v/v			02/07/19 18:26	1
Dichlorodifluoromethane	0.24	J	0.40	0.14	ppb v/v			02/07/19 18:26	1
1,1-Dichloroethane	2.0		0.40	0.050	ppb v/v			02/07/19 18:26	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/07/19 18:26	1
1,1-Dichloroethene	14		0.40	0.070	ppb v/v			02/07/19 18:26	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/07/19 18:26	1
Methylene Chloride	1.2	J	2.0	0.65	ppb v/v			02/07/19 18:26	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/07/19 18:26	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/07/19 18:26	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/07/19 18:26	1
Toluene	ND		0.60	0.60	ppb v/v			02/07/19 18:26	1
trans-1,2-Dichloroethene	0.24	J	0.40	0.10	ppb v/v			02/07/19 18:26	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/07/19 18:26	1
1,1,1-Trichloroethane	17		0.40	0.060	ppb v/v			02/07/19 18:26	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/07/19 18:26	1
Trichloroethene	0.30		0.20	0.070	ppb v/v			02/07/19 18:26	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/07/19 18:26	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/07/19 18:26	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/07/19 18:26	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/07/19 18:26	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/07/19 18:26	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.3	0.37	ug/m3			02/07/19 18:26	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/07/19 18:26	1
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3			02/07/19 18:26	1
Chloroform	3.2		2.0	0.37	ug/m3			02/07/19 18:26	1
cis-1,2-Dichloroethene	40		1.6	0.48	ug/m3			02/07/19 18:26	1
Dichlorodifluoromethane	1.2	J	2.0	0.67	ug/m3			02/07/19 18:26	1
1,1-Dichloroethane	8.2		1.6	0.20	ug/m3			02/07/19 18:26	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/07/19 18:26	1
1,1-Dichloroethene	54		1.6	0.28	ug/m3			02/07/19 18:26	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/07/19 18:26	1
Methylene Chloride	4.1	J	6.9	2.3	ug/m3			02/07/19 18:26	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/07/19 18:26	1
Naphthalene	ND		1.0	1.0	ug/m3			02/07/19 18:26	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/07/19 18:26	1
Toluene	ND		2.3	2.3	ug/m3			02/07/19 18:26	1
trans-1,2-Dichloroethene	0.94	J	1.6	0.40	ug/m3			02/07/19 18:26	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/07/19 18:26	1
1,1,1-Trichloroethane	91		2.2	0.33	ug/m3			02/07/19 18:26	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/07/19 18:26	1
Trichloroethene	1.6		1.1	0.38	ug/m3			02/07/19 18:26	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/07/19 18:26	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/07/19 18:26	1

Client Sample Results

Client: Tetra Tech GEO
Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Client Sample ID: BLDG-A-MIDGAC

Lab Sample ID: 140-14199-2

Date Collected: 02/06/19 11:27

Matrix: Air

Date Received: 02/07/19 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/07/19 18:26	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/07/19 18:26	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/07/19 18:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 140					02/07/19 18:26	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Client Sample ID: BLDG-A-EFFLUENT

Lab Sample ID: 140-14199-3

Date Collected: 02/06/19 11:18

Matrix: Air

Date Received: 02/07/19 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.30	J	0.40	0.12	ppb v/v			02/07/19 19:15	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			02/07/19 19:15	1
Chlorodifluoromethane	0.55		0.40	0.075	ppb v/v			02/07/19 19:15	1
Chloroform	0.76		0.40	0.075	ppb v/v			02/07/19 19:15	1
cis-1,2-Dichloroethene	7.9		0.40	0.12	ppb v/v			02/07/19 19:15	1
Dichlorodifluoromethane	0.23	J	0.40	0.14	ppb v/v			02/07/19 19:15	1
1,1-Dichloroethane	3.1		0.40	0.050	ppb v/v			02/07/19 19:15	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			02/07/19 19:15	1
1,1-Dichloroethene	16		0.40	0.070	ppb v/v			02/07/19 19:15	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			02/07/19 19:15	1
Methylene Chloride	1.5	J	2.0	0.65	ppb v/v			02/07/19 19:15	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			02/07/19 19:15	1
Naphthalene	ND		0.20	0.20	ppb v/v			02/07/19 19:15	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			02/07/19 19:15	1
Toluene	ND		0.60	0.60	ppb v/v			02/07/19 19:15	1
trans-1,2-Dichloroethene	0.21	J	0.40	0.10	ppb v/v			02/07/19 19:15	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			02/07/19 19:15	1
1,1,1-Trichloroethane	20		0.40	0.060	ppb v/v			02/07/19 19:15	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			02/07/19 19:15	1
Trichloroethene	0.96		0.20	0.070	ppb v/v			02/07/19 19:15	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			02/07/19 19:15	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/07/19 19:15	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			02/07/19 19:15	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			02/07/19 19:15	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			02/07/19 19:15	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.95	J	1.3	0.37	ug/m3			02/07/19 19:15	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			02/07/19 19:15	1
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3			02/07/19 19:15	1
Chloroform	3.7		2.0	0.37	ug/m3			02/07/19 19:15	1
cis-1,2-Dichloroethene	31		1.6	0.48	ug/m3			02/07/19 19:15	1
Dichlorodifluoromethane	1.2	J	2.0	0.67	ug/m3			02/07/19 19:15	1
1,1-Dichloroethane	13		1.6	0.20	ug/m3			02/07/19 19:15	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			02/07/19 19:15	1
1,1-Dichloroethene	64		1.6	0.28	ug/m3			02/07/19 19:15	1
Ethylbenzene	ND		1.7	0.59	ug/m3			02/07/19 19:15	1
Methylene Chloride	5.2	J	6.9	2.3	ug/m3			02/07/19 19:15	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			02/07/19 19:15	1
Naphthalene	ND		1.0	1.0	ug/m3			02/07/19 19:15	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			02/07/19 19:15	1
Toluene	ND		2.3	2.3	ug/m3			02/07/19 19:15	1
trans-1,2-Dichloroethene	0.83	J	1.6	0.40	ug/m3			02/07/19 19:15	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			02/07/19 19:15	1
1,1,1-Trichloroethane	110		2.2	0.33	ug/m3			02/07/19 19:15	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			02/07/19 19:15	1
Trichloroethene	5.2		1.1	0.38	ug/m3			02/07/19 19:15	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			02/07/19 19:15	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			02/07/19 19:15	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Client Sample ID: BLDG-A-EFFLUENT

Lab Sample ID: 140-14199-3

Date Collected: 02/06/19 11:18

Matrix: Air

Date Received: 02/07/19 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			02/07/19 19:15	1
Vinyl chloride	ND		0.51	0.37	ug/m3			02/07/19 19:15	1
Xylenes, Total	ND		3.5	0.52	ug/m3			02/07/19 19:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140					02/07/19 19:15	1

Default Detection Limits

Client: Tetra Tech GEO
 Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-14199-1	BLDG-A-INFLUENT	102
140-14199-2	BLDG-A-MIDGAC	103
140-14199-3	BLDG-A-EFFLUENT	101
LCS 140-27430/1006	Lab Control Sample	104
MB 140-27430/10	Method Blank	103

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-27430/10
Matrix: Air
Analysis Batch: 27430

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			02/07/19 14:36	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			02/07/19 14:36	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			02/07/19 14:36	1
Chloroform	ND		0.080	0.015	ppb v/v			02/07/19 14:36	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			02/07/19 14:36	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			02/07/19 14:36	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			02/07/19 14:36	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			02/07/19 14:36	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			02/07/19 14:36	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			02/07/19 14:36	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			02/07/19 14:36	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			02/07/19 14:36	1
Naphthalene	ND		0.040	0.040	ppb v/v			02/07/19 14:36	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			02/07/19 14:36	1
Toluene	ND		0.12	0.12	ppb v/v			02/07/19 14:36	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			02/07/19 14:36	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			02/07/19 14:36	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			02/07/19 14:36	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			02/07/19 14:36	1
Trichloroethene	ND		0.040	0.014	ppb v/v			02/07/19 14:36	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			02/07/19 14:36	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			02/07/19 14:36	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			02/07/19 14:36	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			02/07/19 14:36	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			02/07/19 14:36	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			02/07/19 14:36	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			02/07/19 14:36	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			02/07/19 14:36	1
Chloroform	ND		0.39	0.073	ug/m3			02/07/19 14:36	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			02/07/19 14:36	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			02/07/19 14:36	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			02/07/19 14:36	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			02/07/19 14:36	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			02/07/19 14:36	1
Ethylbenzene	ND		0.35	0.12	ug/m3			02/07/19 14:36	1
Methylene Chloride	ND		1.4	0.45	ug/m3			02/07/19 14:36	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			02/07/19 14:36	1
Naphthalene	ND		0.21	0.21	ug/m3			02/07/19 14:36	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			02/07/19 14:36	1
Toluene	ND		0.45	0.45	ug/m3			02/07/19 14:36	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			02/07/19 14:36	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			02/07/19 14:36	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			02/07/19 14:36	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			02/07/19 14:36	1
Trichloroethene	ND		0.21	0.075	ug/m3			02/07/19 14:36	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			02/07/19 14:36	1

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-27430/10
Matrix: Air
Analysis Batch: 27430

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			02/07/19 14:36	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			02/07/19 14:36	1
Vinyl chloride	ND		0.10	0.074	ug/m3			02/07/19 14:36	1
Xylenes, Total	ND		0.69	0.10	ug/m3			02/07/19 14:36	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	103		60 - 140		02/07/19 14:36	1

Lab Sample ID: LCS 140-27430/1006
Matrix: Air
Analysis Batch: 27430

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	2.00	2.19		ppb v/v		109	70 - 130
Chlorodifluoromethane	2.00	2.02		ppb v/v		101	60 - 140
Chloroform	2.00	2.16		ppb v/v		108	70 - 130
cis-1,2-Dichloroethene	2.00	2.10		ppb v/v		105	70 - 130
Dichlorodifluoromethane	2.00	1.85		ppb v/v		92	60 - 140
1,1-Dichloroethane	2.00	2.18		ppb v/v		109	70 - 130
1,2-Dichloroethane	2.00	2.16		ppb v/v		108	70 - 130
1,1-Dichloroethene	2.00	2.05		ppb v/v		102	70 - 130
Ethylbenzene	2.00	2.21		ppb v/v		110	70 - 130
Methylene Chloride	2.00	1.95		ppb v/v		98	70 - 130
Methyl tert-butyl ether	2.00	2.19		ppb v/v		109	60 - 140
Naphthalene	2.00	1.72		ppb v/v		86	60 - 140
Tetrachloroethene	2.00	2.07		ppb v/v		104	70 - 130
Toluene	2.00	2.15		ppb v/v		108	70 - 130
trans-1,2-Dichloroethene	2.00	2.05		ppb v/v		103	70 - 130
1,2,4-Trichlorobenzene	2.00	1.81		ppb v/v		91	60 - 140
1,1,1-Trichloroethane	2.00	2.16		ppb v/v		108	70 - 130
1,1,2-Trichloroethane	2.00	2.23		ppb v/v		112	70 - 130
Trichloroethene	2.00	2.01		ppb v/v		101	70 - 130
1,2,3-Trimethylbenzene	2.00	2.09		ppb v/v		105	70 - 130
1,2,4-Trimethylbenzene	2.00	2.16		ppb v/v		108	70 - 130
1,3,5-Trimethylbenzene	2.00	2.05		ppb v/v		103	70 - 130
Vinyl chloride	2.00	2.31		ppb v/v		115	70 - 130
Xylenes, Total	6.00	6.85		ppb v/v		114	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	13	13.7		ug/m3		109	70 - 130
Chlorodifluoromethane	7.1	7.14		ug/m3		101	60 - 140
Chloroform	9.8	10.5		ug/m3		108	70 - 130
cis-1,2-Dichloroethene	7.9	8.31		ug/m3		105	70 - 130
Dichlorodifluoromethane	9.9	9.14		ug/m3		92	60 - 140
1,1-Dichloroethane	8.1	8.83		ug/m3		109	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-27430/1006
Matrix: Air
Analysis Batch: 27430

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec. Limits
	Added	Result	Qualifier				
1,2-Dichloroethane	8.1	8.74		ug/m3		108	70 - 130
1,1-Dichloroethene	7.9	8.11		ug/m3		102	70 - 130
Ethylbenzene	8.7	9.59		ug/m3		110	70 - 130
Methylene Chloride	6.9	6.78		ug/m3		98	70 - 130
Methyl tert-butyl ether	7.2	7.89		ug/m3		109	60 - 140
Naphthalene	10	9.04		ug/m3		86	60 - 140
Tetrachloroethene	14	14.0		ug/m3		104	70 - 130
Toluene	7.5	8.11		ug/m3		108	70 - 130
trans-1,2-Dichloroethene	7.9	8.13		ug/m3		103	70 - 130
1,2,4-Trichlorobenzene	15	13.5		ug/m3		91	60 - 140
1,1,1-Trichloroethane	11	11.8		ug/m3		108	70 - 130
1,1,2-Trichloroethane	11	12.2		ug/m3		112	70 - 130
Trichloroethene	11	10.8		ug/m3		101	70 - 130
1,2,3-Trimethylbenzene	9.8	10.3		ug/m3		105	70 - 130
1,2,4-Trimethylbenzene	9.8	10.6		ug/m3		108	70 - 130
1,3,5-Trimethylbenzene	9.8	10.1		ug/m3		103	70 - 130
Vinyl chloride	5.1	5.90		ug/m3		115	70 - 130
Xylenes, Total	26	29.7		ug/m3		114	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	104		60 - 140

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Air - GC/MS VOA

Analysis Batch: 27430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14199-1	BLDG-A-INFLUENT	Total/NA	Air	TO 15 LL	
140-14199-2	BLDG-A-MIDGAC	Total/NA	Air	TO 15 LL	
140-14199-3	BLDG-A-EFFLUENT	Total/NA	Air	TO 15 LL	
MB 140-27430/10	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-27430/1006	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Client Sample ID: BLDG-A-INFLUENT

Date Collected: 02/06/19 11:23

Date Received: 02/07/19 09:30

Lab Sample ID: 140-14199-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	27430	02/07/19 17:37	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-A-MIDGAC

Date Collected: 02/06/19 11:27

Date Received: 02/07/19 09:30

Lab Sample ID: 140-14199-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27430	02/07/19 18:26	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-A-EFFLUENT

Date Collected: 02/06/19 11:18

Date Received: 02/07/19 09:30

Lab Sample ID: 140-14199-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	27430	02/07/19 19:15	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-27430/10

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27430	02/07/19 14:36	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

Lab Sample ID: LCS 140-27430/1006

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	27430	02/07/19 10:59	S1K	TAL KNX
Instrument ID: MR										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMC-MRC, MRAS/Building A

TestAmerica Job ID: 140-14199-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14199-1	BLDG-A-INFLUENT	Air	02/06/19 11:23	02/07/19 09:30
140-14199-2	BLDG-A-MIDGAC	Air	02/06/19 11:27	02/07/19 09:30
140-14199-3	BLDG-A-EFFLUENT	Air	02/06/19 11:18	02/07/19 09:30

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
SDG No.: _____
Matrix: Air Level: Low
GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-A-INFLUENT	140-14199-1	102
BLDG-A-MIDGAC	140-14199-2	103
BLDG-A-EFFLUENT	140-14199-3	101
	MB 140-27430/10	103
	LCS 140-27430/1006	104

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: RCCVB07A-LCS.d
 Lab ID: LCS 140-27430/1006 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.07	104	70-130	
Carbon tetrachloride	2.00	2.19	109	70-130	
Chlorodifluoromethane	2.00	2.02	101	60-140	
Chloroform	2.00	2.16	108	70-130	
cis-1,2-Dichloroethene	2.00	2.10	105	70-130	
Dichlorodifluoromethane	2.00	1.85	92	60-140	
1,1-Dichloroethane	2.00	2.18	109	70-130	
1,2-Dichloroethane	2.00	2.16	108	70-130	
1,1-Dichloroethene	2.00	2.05	102	70-130	
Ethylbenzene	2.00	2.21	110	70-130	
Methylene Chloride	2.00	1.95	98	70-130	
Methyl tert-butyl ether	2.00	2.19	109	60-140	
Naphthalene	2.00	1.72	86	60-140	
Tetrachloroethene	2.00	2.07	104	70-130	
Toluene	2.00	2.15	108	70-130	
trans-1,2-Dichloroethene	2.00	2.05	103	70-130	
1,2,4-Trichlorobenzene	2.00	1.81	91	60-140	
1,1,1-Trichloroethane	2.00	2.16	108	70-130	
1,1,2-Trichloroethane	2.00	2.23	112	70-130	
Trichloroethene	2.00	2.01	101	70-130	
1,2,3-Trimethylbenzene	2.00	2.09	105	70-130	
1,2,4-Trimethylbenzene	2.00	2.16	108	70-130	
1,3,5-Trimethylbenzene	2.00	2.05	103	70-130	
Vinyl chloride	2.00	2.31	115	70-130	
Xylenes, Total	6.00	6.85	114	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Lab File ID: R500BB07.D Lab Sample ID: MB 140-27430/10
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MR Date Analyzed: 02/07/2019 14:36
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-27430/1006	RCCVB07A-LC S.d	02/07/2019 10:59
BLDG-A-INFLUENT	140-14199-1	RB07P102.D	02/07/2019 17:37
BLDG-A-MIDGAC	140-14199-2	RB07P103.D	02/07/2019 18:26
BLDG-A-EFFLUENT	140-14199-3	RB07P104.D	02/07/2019 19:15

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Lab File ID: RFBK16I.D BFB Injection Date: 11/16/2018
 Instrument ID: MR BFB Injection Time: 16:00
 Analysis Batch No.: 25490

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	58.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	91.0	
175	5.0 - 9.0 % of mass 174	6.6	(7.3) 1
176	95.0 - 101.0 % of mass 174	88.8	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-25490/3	RK16IC09.D	11/16/2018	17:23
	IC 140-25490/5	RK16IC10.D	11/16/2018	19:07
	IC 140-25490/8	RK16IC01.D	11/16/2018	21:42
	IC 140-25490/9	RK16IC02.D	11/16/2018	22:34
	IC 140-25490/10	RK16IC03.D	11/16/2018	23:27
	IC 140-25490/11	RK16IC04.D	11/17/2018	00:20
	IC 140-25490/12	RK16IC05.D	11/17/2018	01:12
	IC 140-25490/13	RK16IC06.D	11/17/2018	02:05
	ICIS 140-25490/14	RK16IC07.D	11/17/2018	02:58
	IC 140-25490/15	RK16IC08.D	11/17/2018	03:51
	ICV 140-25490/18	RK16ICV.D	11/17/2018	06:27

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Lab File ID: RBFBB07A.D BFB Injection Date: 02/07/2019
 Instrument ID: MR BFB Injection Time: 10:30
 Analysis Batch No.: 27430

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.2	
75	30.0 - 60.0 % of mass 95	60.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.2	(0.2) 1
174	50.0 - 120.00 % of mass 95	84.0	
175	5.0 - 9.0 % of mass 174	6.2	(7.4) 1
176	95.0 - 101.0 % of mass 174	82.4	(98.2) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.7) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-27430/6	RCCVB07A.D	02/07/2019	10:59
	LCS 140-27430/1006	RCCVB07A-LCS .d	02/07/2019	10:59
	MB 140-27430/10	R500BB07.D	02/07/2019	14:36
BLDG-A-INFLUENT	140-14199-1	RB07P102.D	02/07/2019	17:37
BLDG-A-MIDGAC	140-14199-2	RB07P103.D	02/07/2019	18:26
BLDG-A-EFFLUENT	140-14199-3	RB07P104.D	02/07/2019	19:15

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Sample No.: ICIS 140-25490/14 Date Analyzed: 11/17/2018 02:58
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RK16IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	298864	7.40	1677758	9.49	1487799	14.56
UPPER LIMIT	418410	7.73	2348861	9.82	2082919	14.89
LOWER LIMIT	179318	7.07	1006655	9.16	892679	14.23
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-25490/18	299493	7.38	1671036	9.48	1499042	14.55

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Sample No.: CCVIS 140-27430/6 Date Analyzed: 02/07/2019 10:59
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RCCVB07A.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	214006	7.40	1280770	9.47	1141884	14.51	
UPPER LIMIT	299608	7.73	1793078	9.80	1598638	14.84	
LOWER LIMIT	128404	7.07	768462	9.14	685130	14.18	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-27430/1006	214006	7.40	1280770	9.47	1141884	14.51	
MB 140-27430/10	211173	7.39	1245003	9.46	1094431	14.51	
140-14199-1	BLDG-A-INFLUENT	201264	7.39	1182973	9.46	1013645	14.51
140-14199-2	BLDG-A-MIDGAC	203009	7.39	1172535	9.46	1024219	14.51
140-14199-3	BLDG-A-EFFLUENT	202685	7.39	1188015	9.46	1037336	14.51

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Client Sample ID: BLDG-A-INFLUENT Lab Sample ID: 140-14199-1
 Matrix: Air Lab File ID: RB07P102.D
 Analysis Method: TO 15 LL Date Collected: 02/06/2019 11:23
 Sample wt/vol: 20 (mL) Date Analyzed: 02/07/2019 17:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27430 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.94	J	2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	ND		2.0	0.38
67-66-3	Chloroform	119.38	0.47	J	2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	14		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	3.2		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	18		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	ND		10	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	79		2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	160		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Client Sample ID: BLDG-A-INFLUENT Lab Sample ID: 140-14199-1
 Matrix: Air Lab File ID: RB07P102.D
 Analysis Method: TO 15 LL Date Collected: 02/06/2019 11:23
 Sample wt/vol: 20 (mL) Date Analyzed: 02/07/2019 17:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27430 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.0	J	6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	ND		7.1	1.3
67-66-3	Chloroform	119.38	2.3	J	9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	57		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	13		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	73		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	ND		35	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	430		11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	850		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P102.D
 Lims ID: 140-14199-A-1
 Client ID: BLDG-A-INFLUENT
 Sample Type: Client
 Inject. Date: 07-Feb-2019 17:37:30 ALS Bottle#: 2 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010745-014
 Misc. Info.: 140-14199-a-1
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 08-Feb-2019 13:11:36 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 08-Feb-2019 13:11:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.401	-0.011	75	201264	4.00	
* 2 1,4-Difluorobenzene	114	9.461	9.466	-0.005	95	1182973	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.513	14.513	0.000	93	1013645	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.239	16.239	0.000	86	882543	4.09	
27 1,1-Dichloroethene	96	5.082	5.084	-0.005	95	52086	0.7354	
37 1,1-Dichloroethane	63	6.295	6.301	-0.011	97	15326	0.1268	
41 cis-1,2-Dichloroethene	96	7.126	7.126	-0.005	96	41563	0.5705	
43 Chloroform	83	7.417	7.422	-0.016	83	3628	0.0189	
45 1,1,1-Trichloroethane	97	8.344	8.349	-0.011	96	772723	3.17	
47 Benzene	78	8.900	8.905	-0.005	98	7266	0.0377	
56 Trichloroethene	130	10.210	10.210	-0.005	93	733091	6.31	
65 Toluene	91	12.432	12.432	0.000	91	13547	0.0558	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P102.D

Injection Date: 07-Feb-2019 17:37:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14199-A-1

Lab Sample ID: 140-14199-1

Worklist Smp#: 14

Client ID: BLDG-A-INFLUENT

Purge Vol: 500.000 mL

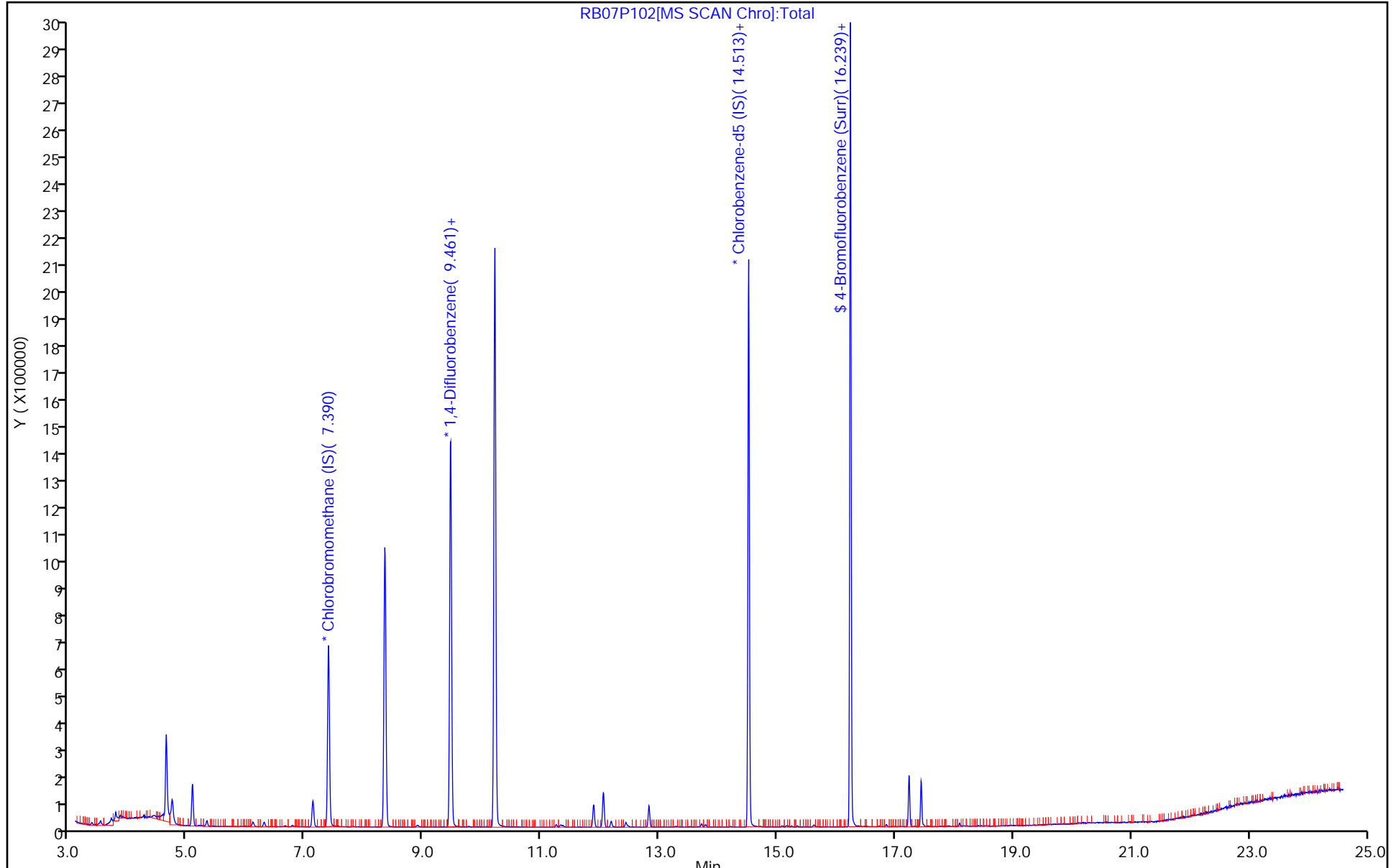
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P102.D
 Lims ID: 140-14199-A-1
 Client ID: BLDG-A-INFLUENT
 Sample Type: Client
 Inject. Date: 07-Feb-2019 17:37:30 ALS Bottle#: 2 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010745-014
 Misc. Info.: 140-14199-a-1
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 08-Feb-2019 13:11:36 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 08-Feb-2019 13:11:36

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.09	102.36

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P102.D

Injection Date: 07-Feb-2019 17:37:30

Instrument ID: MR

Lims ID: 140-14199-A-1

Lab Sample ID: 140-14199-1

Client ID: BLDG-A-INFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

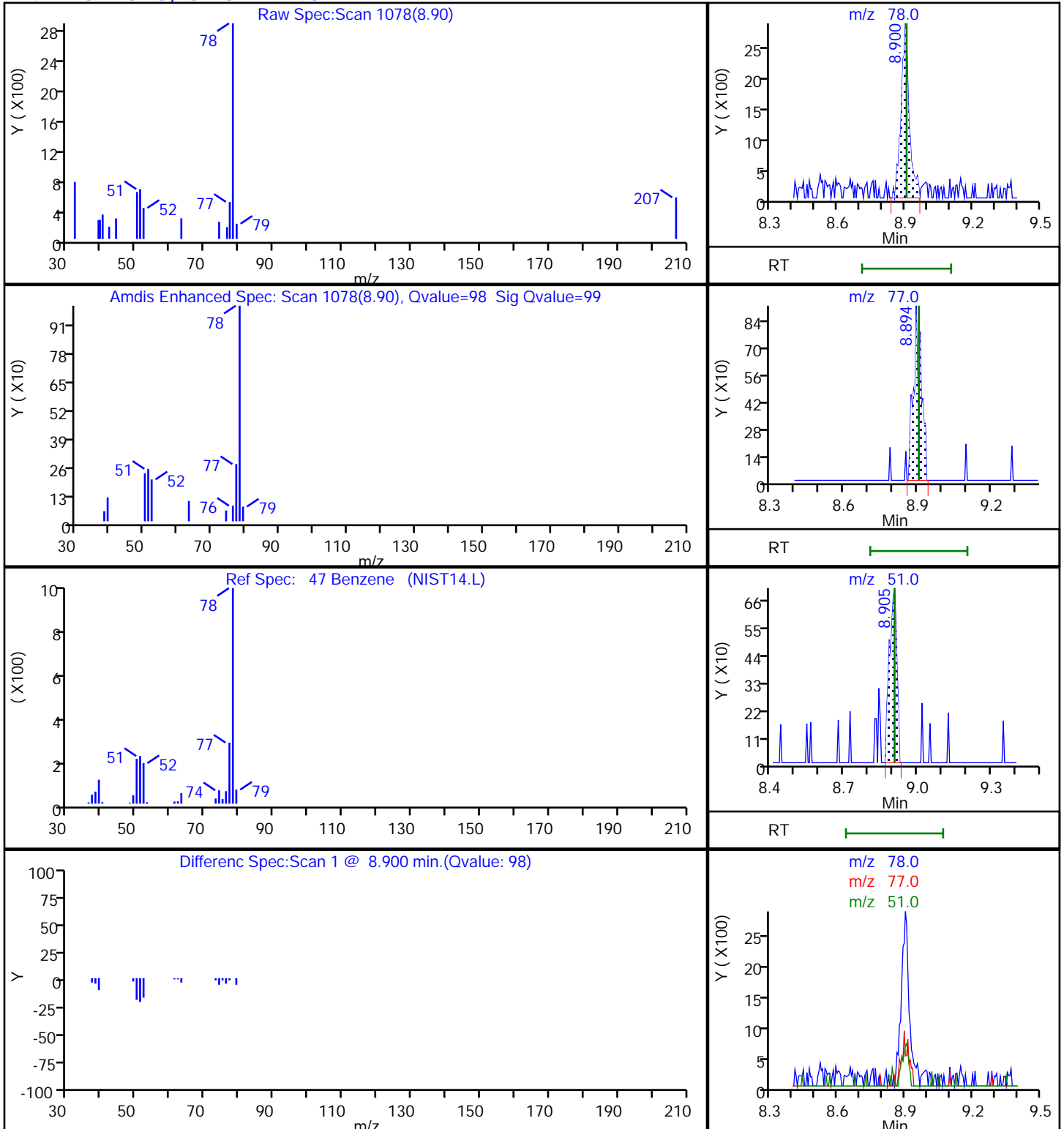
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P102.D

Injection Date: 07-Feb-2019 17:37:30

Instrument ID: MR

Lims ID: 140-14199-A-1

Lab Sample ID: 140-14199-1

Client ID: BLDG-A-INFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

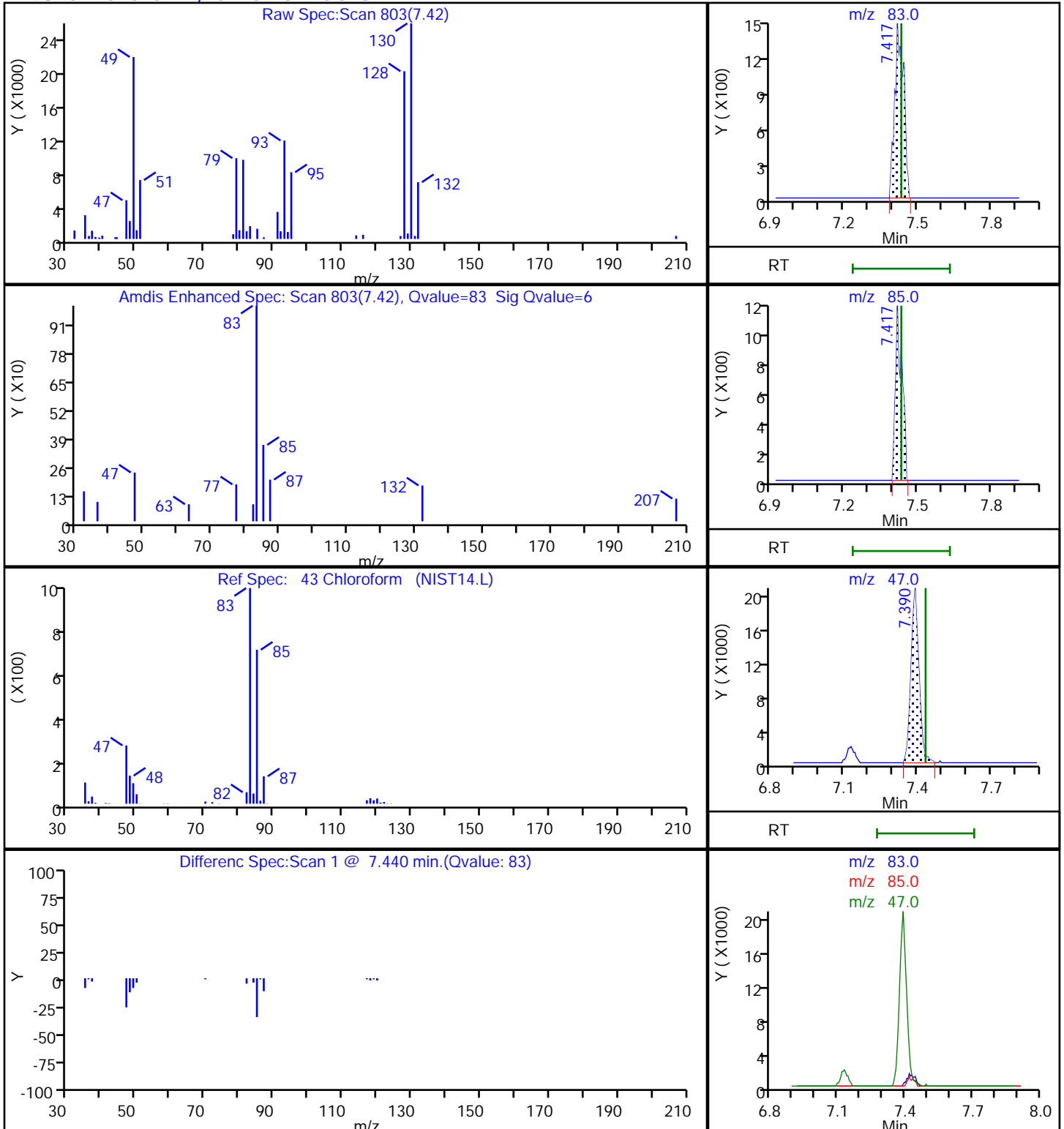
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P102.D

Injection Date: 07-Feb-2019 17:37:30

Instrument ID: MR

Lims ID: 140-14199-A-1

Lab Sample ID: 140-14199-1

Client ID: BLDG-A-INFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

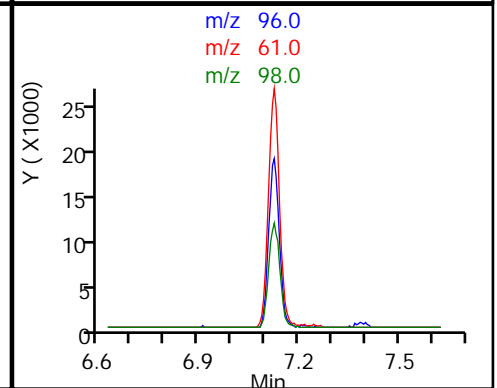
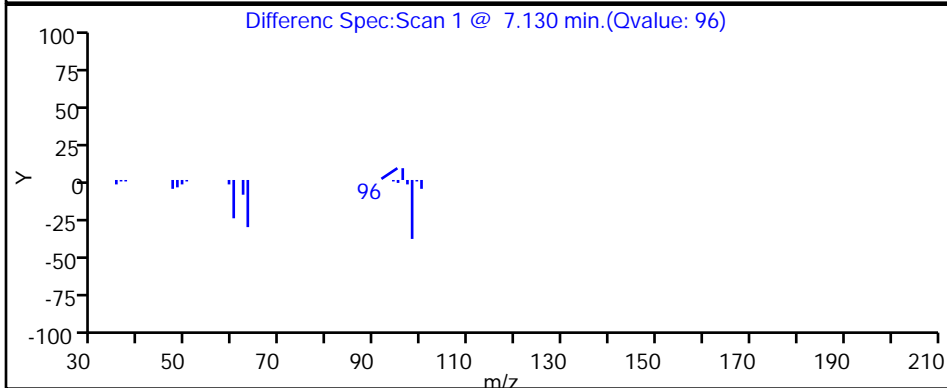
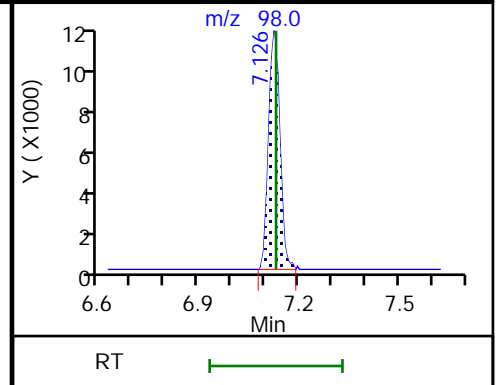
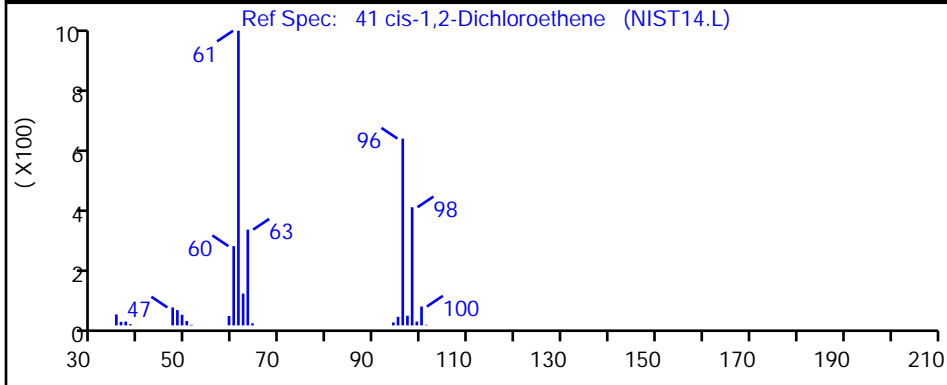
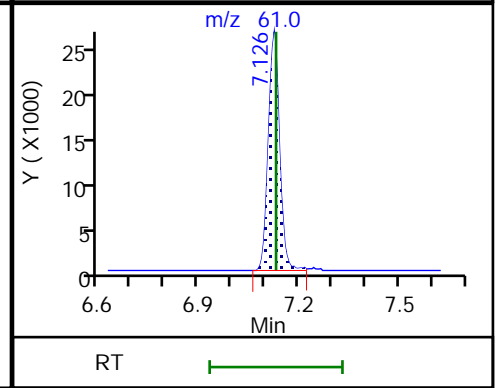
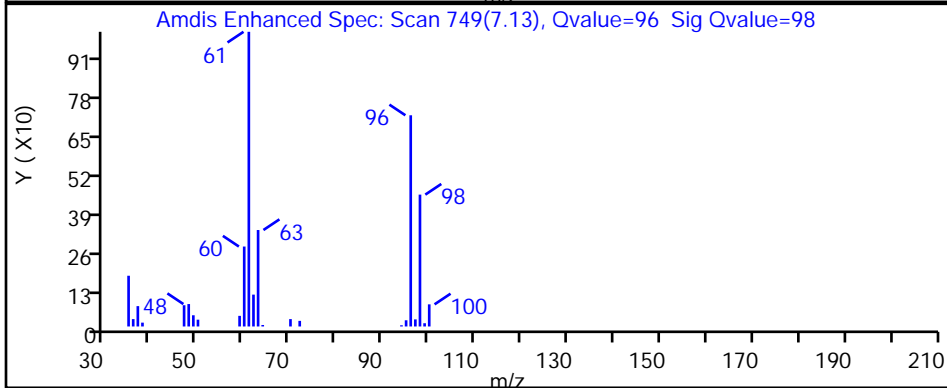
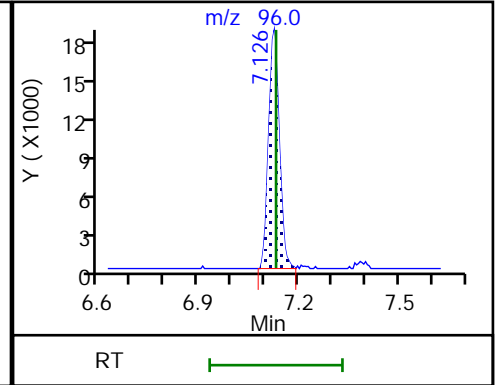
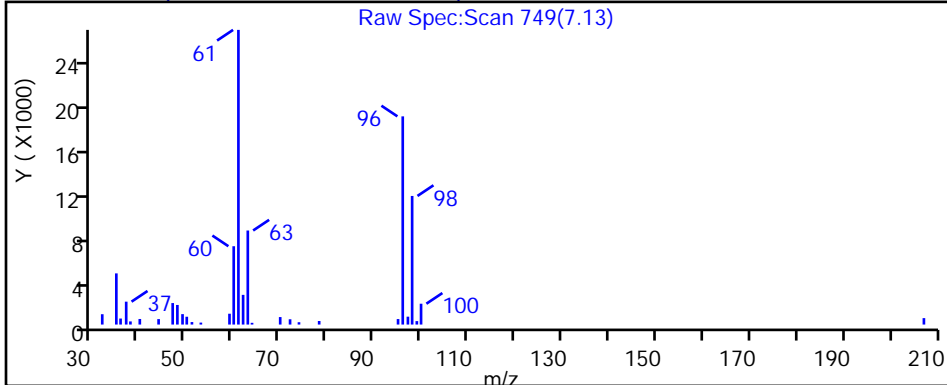
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P102.D

Injection Date: 07-Feb-2019 17:37:30

Instrument ID: MR

Lims ID: 140-14199-A-1

Lab Sample ID: 140-14199-1

Client ID: BLDG-A-INFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

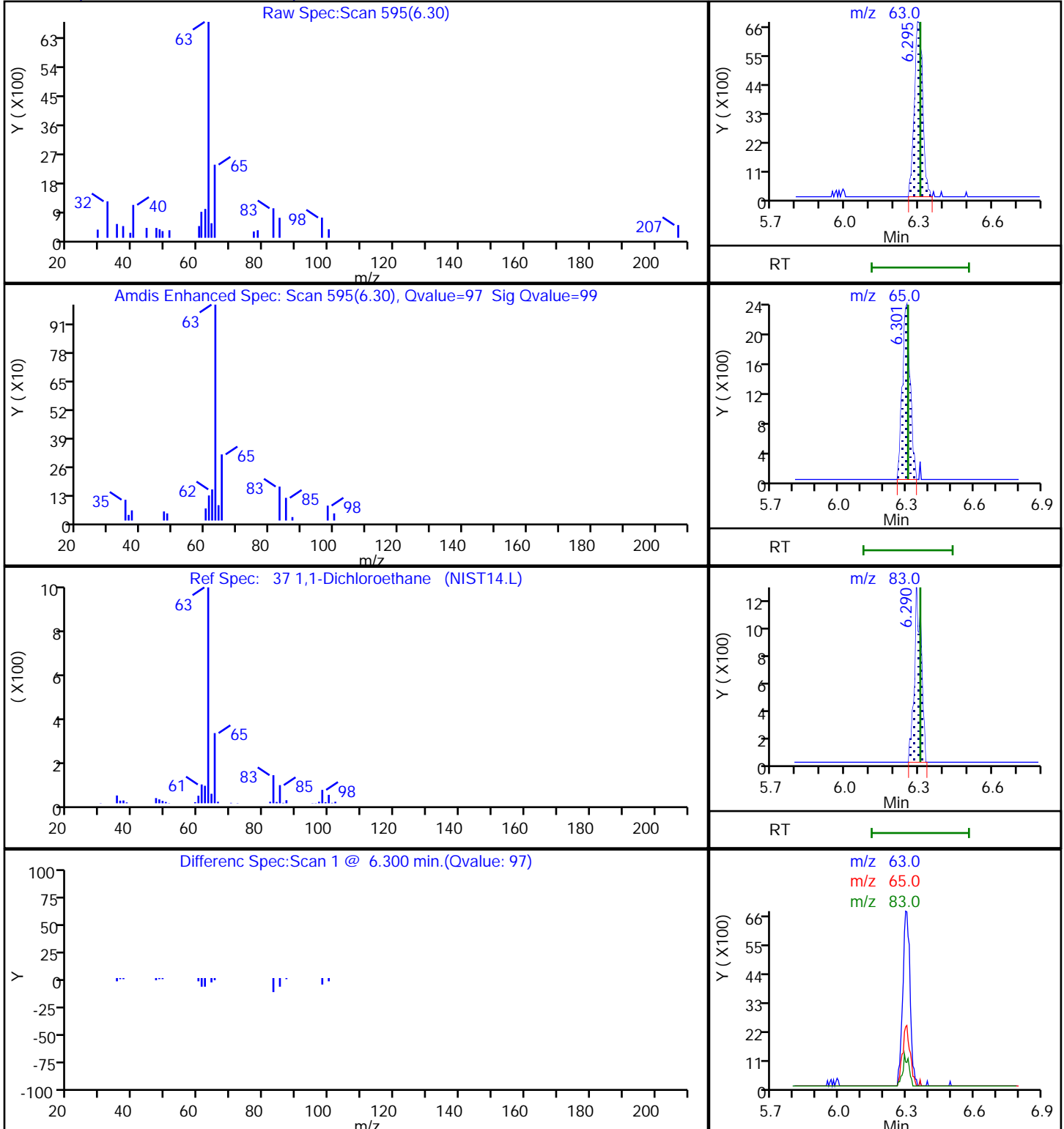
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P102.D

Injection Date: 07-Feb-2019 17:37:30

Instrument ID: MR

Lims ID: 140-14199-A-1

Lab Sample ID: 140-14199-1

Client ID: BLDG-A-INFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

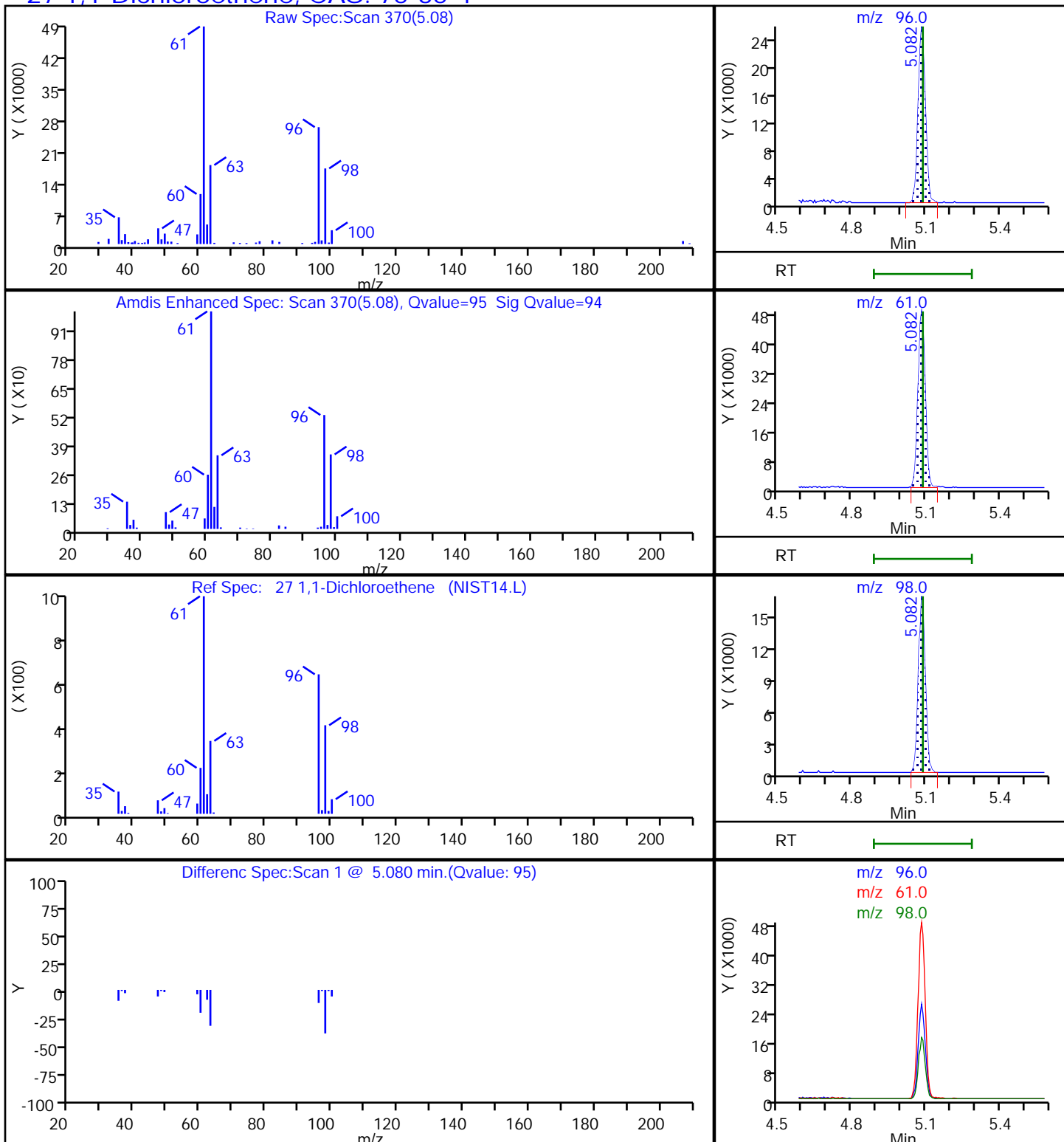
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P102.D

Injection Date: 07-Feb-2019 17:37:30

Instrument ID: MR

Lims ID: 140-14199-A-1

Lab Sample ID: 140-14199-1

Client ID: BLDG-A-INFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

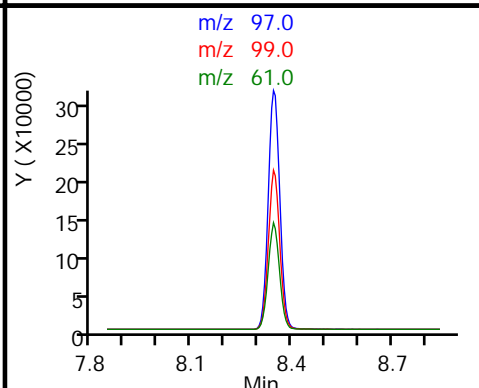
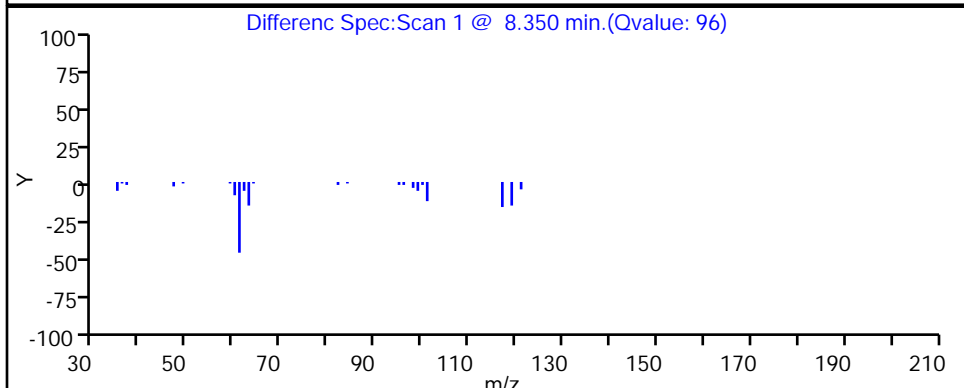
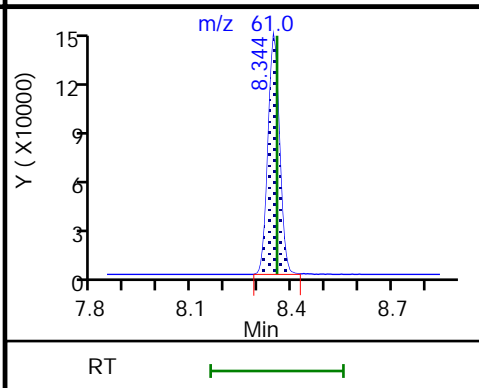
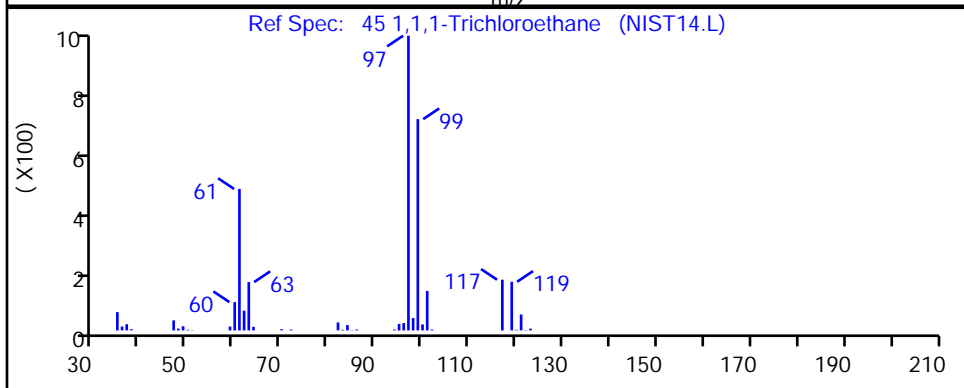
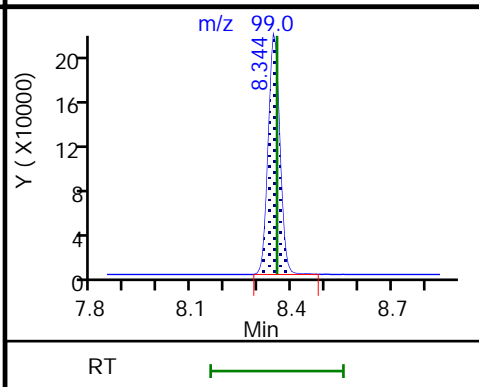
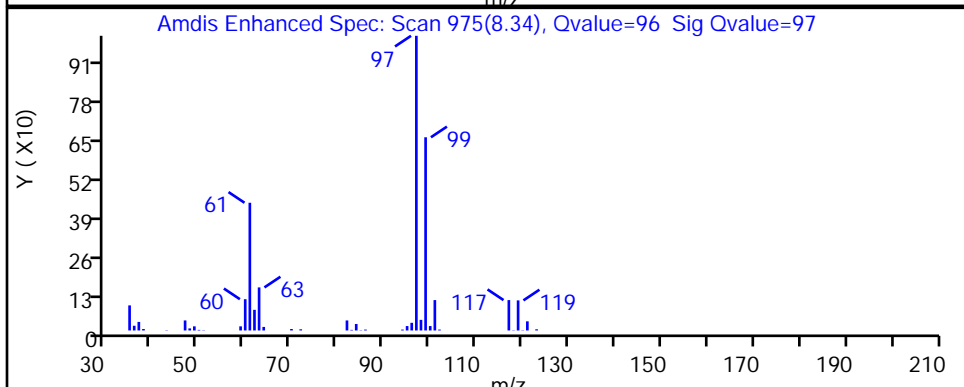
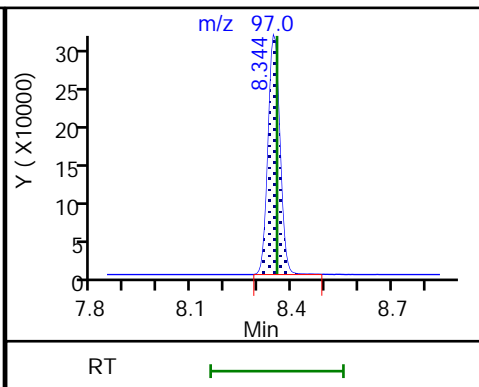
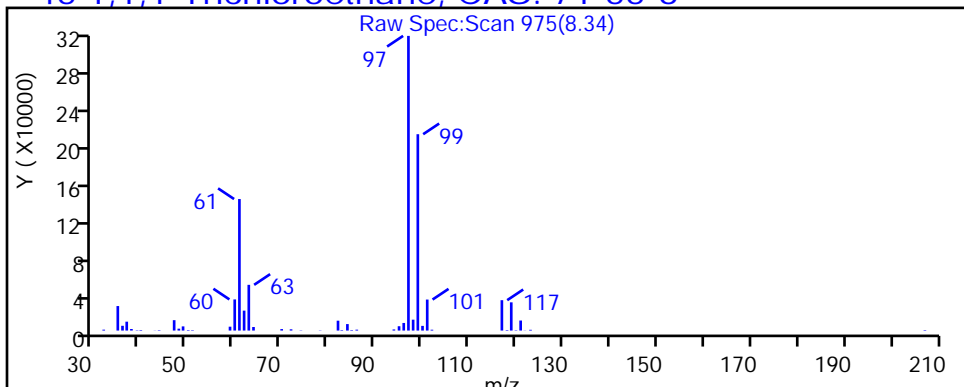
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P102.D

Injection Date: 07-Feb-2019 17:37:30

Instrument ID: MR

Lims ID: 140-14199-A-1

Lab Sample ID: 140-14199-1

Client ID: BLDG-A-INFLUENT

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

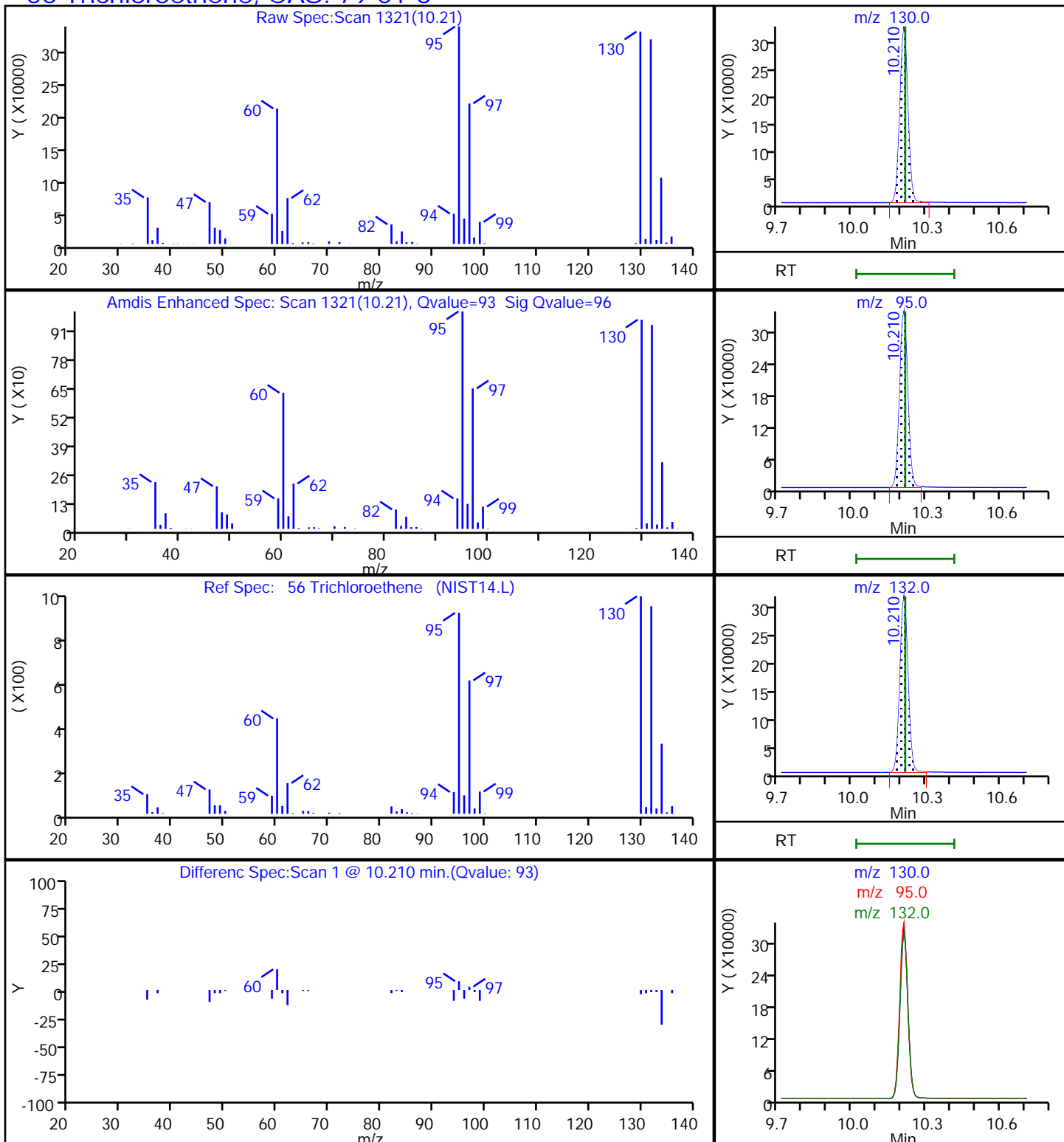
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6

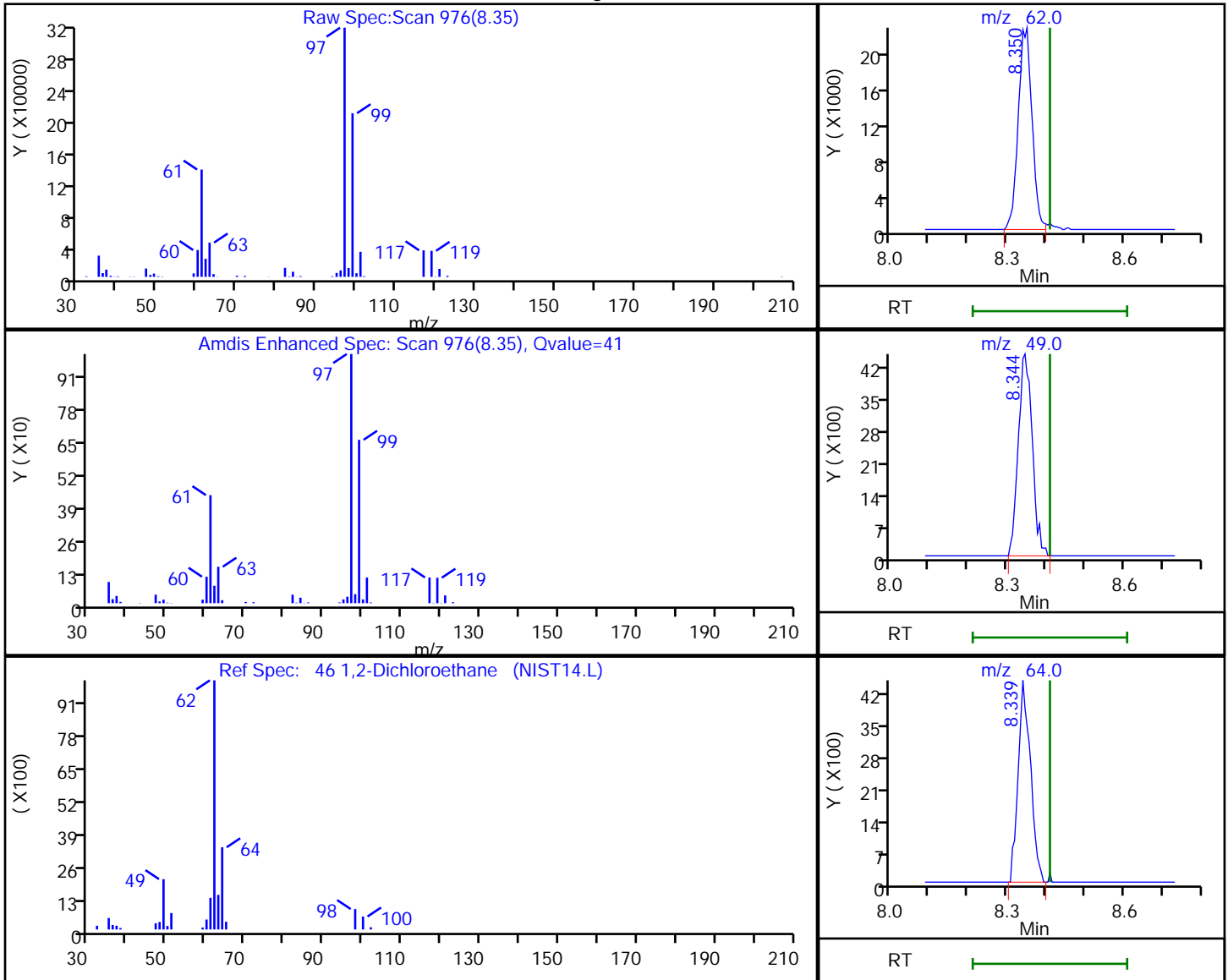


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P102.D
 Injection Date: 07-Feb-2019 17:37:30 Instrument ID: MR
 Lims ID: 140-14199-A-1 Lab Sample ID: 140-14199-1
 Client ID: BLDG-A-INFLUENT
 Operator ID: ALS Bottle#: 2 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.35	62.00	55960	0.373719
8.34	49.00	11266	
8.34	64.00	9844	

Reviewer: khachitpongpanits, 08-Feb-2019 13:11:17

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Client Sample ID: BLDG-A-MIDGAC Lab Sample ID: 140-14199-2
 Matrix: Air Lab File ID: RB07P103.D
 Analysis Method: TO 15 LL Date Collected: 02/06/2019 11:27
 Sample wt/vol: 100(mL) Date Analyzed: 02/07/2019 18:26
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27430 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.44		0.40	0.075
67-66-3	Chloroform	119.38	0.66		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	10		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.24	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.0		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	14		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.24	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	17		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.30		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Client Sample ID: BLDG-A-MIDGAC Lab Sample ID: 140-14199-2
 Matrix: Air Lab File ID: RB07P103.D
 Analysis Method: TO 15 LL Date Collected: 02/06/2019 11:27
 Sample wt/vol: 100(mL) Date Analyzed: 02/07/2019 18:26
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27430 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	3.2		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	40		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.2	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	8.2		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	54		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.94	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	91		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.6		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P103.D
 Lims ID: 140-14199-A-2
 Client ID: BLDG-A-MIDGAC
 Sample Type: Client
 Inject. Date: 07-Feb-2019 18:26:30 ALS Bottle#: 3 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010745-015
 Misc. Info.: 140-14199-a-2
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 08-Feb-2019 13:16:26 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 08-Feb-2019 13:16:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.401	-0.011	73	203009	4.00	
* 2 1,4-Difluorobenzene	114	9.455	9.466	-0.011	96	1172535	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.513	14.513	0.000	92	1024219	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.239	16.239	0.000	87	893830	4.10	
6 Chlorodifluoromethane	51	3.507	3.507	-0.011	96	10546	0.0876	
8 Dichlorodifluoromethane	85	3.556	3.556	-0.005	98	10495	0.0475	
27 1,1-Dichloroethene	96	5.082	5.084	-0.005	95	193010	2.70	
31 Methylene Chloride	84	5.325	5.335	-0.010	93	15837	0.2332	
34 trans-1,2-Dichloroethene	96	5.982	5.978	0.000	93	3461	0.0475	
37 1,1-Dichloroethane	63	6.301	6.301	-0.005	98	49171	0.4033	
41 cis-1,2-Dichloroethene	96	7.120	7.126	-0.011	97	149965	2.04	
43 Chloroform	83	7.422	7.422	-0.011	88	25703	0.1326	
45 1,1,1-Trichloroethane	97	8.344	8.349	-0.011	95	821940	3.34	
56 Trichloroethene	130	10.210	10.210	-0.005	91	6903	0.0599	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P103.D

Injection Date: 07-Feb-2019 18:26:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14199-A-2

Lab Sample ID: 140-14199-2

Worklist Smp#: 15

Client ID: BLDG-A-MIDGAC

Purge Vol: 500.000 mL

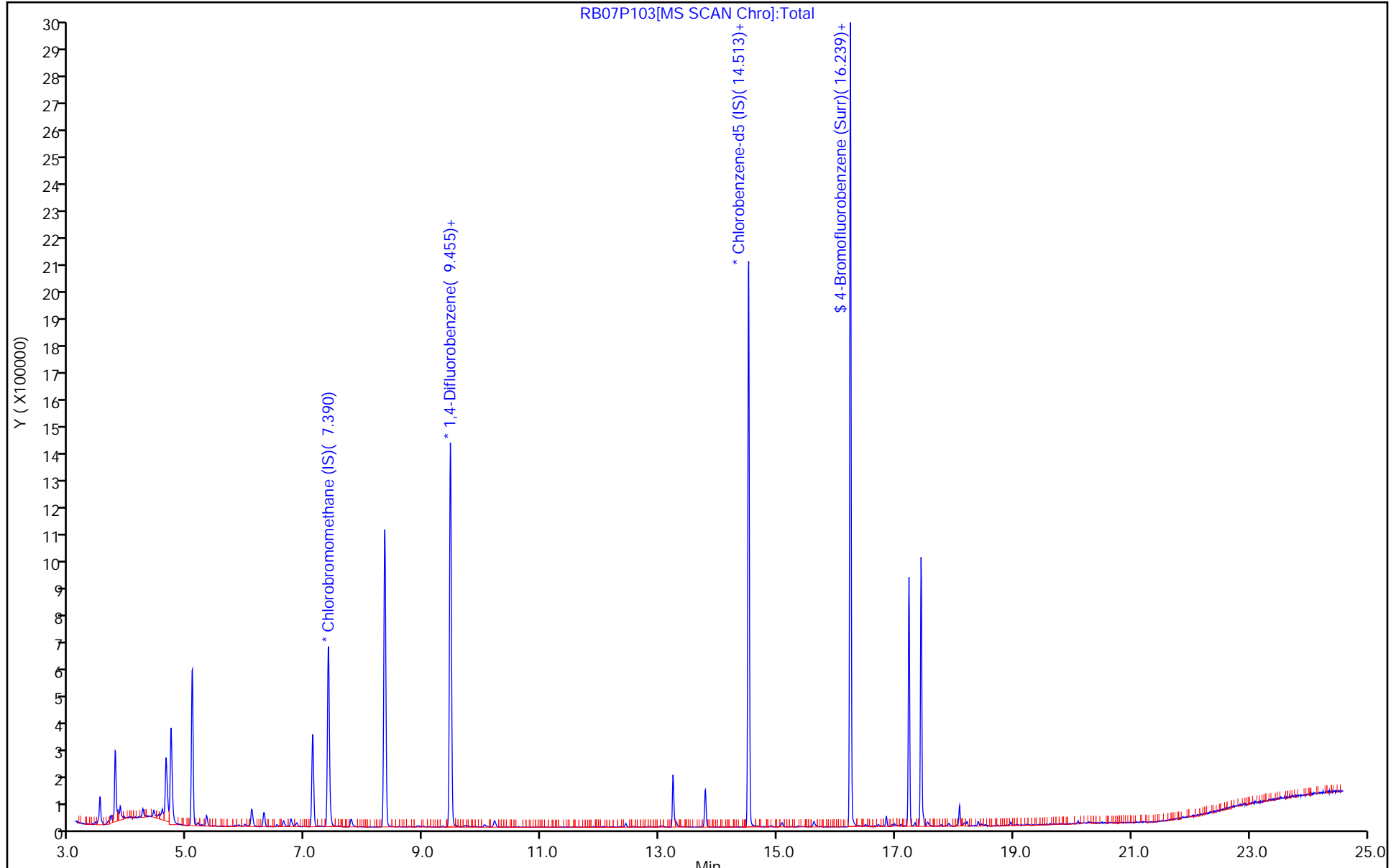
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P103.D
 Lims ID: 140-14199-A-2
 Client ID: BLDG-A-MIDGAC
 Sample Type: Client
 Inject. Date: 07-Feb-2019 18:26:30 ALS Bottle#: 3 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010745-015
 Misc. Info.: 140-14199-a-2
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 08-Feb-2019 13:16:26 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 08-Feb-2019 13:16:26

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.10	102.60

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P103.D

Injection Date: 07-Feb-2019 18:26:30

Instrument ID: MR

Lims ID: 140-14199-A-2

Lab Sample ID: 140-14199-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

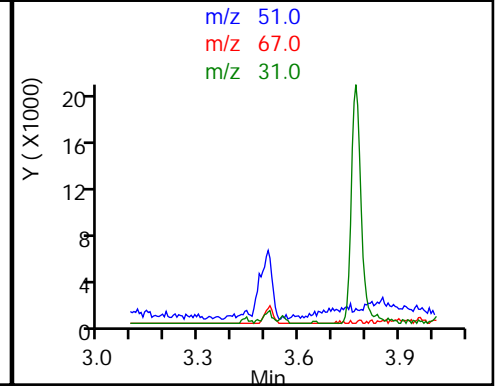
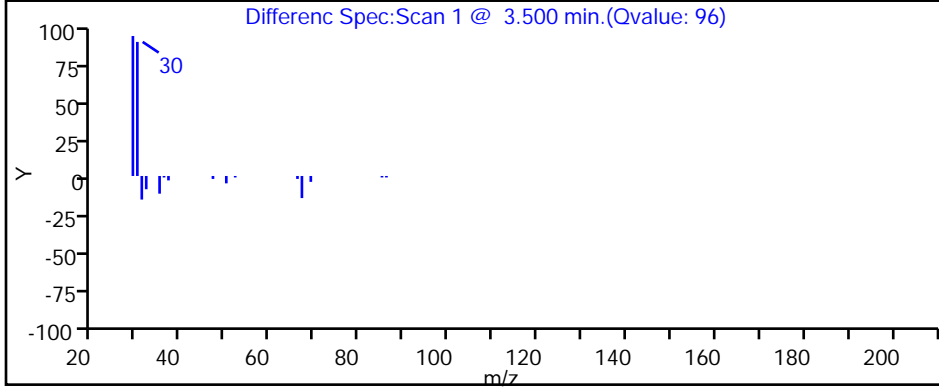
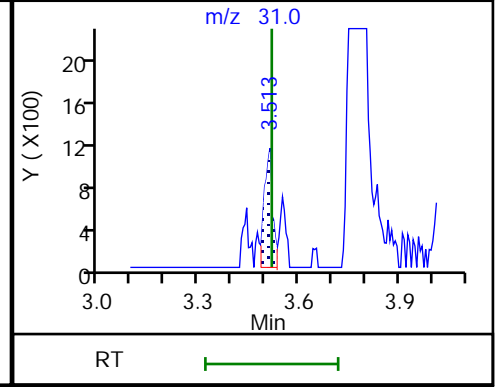
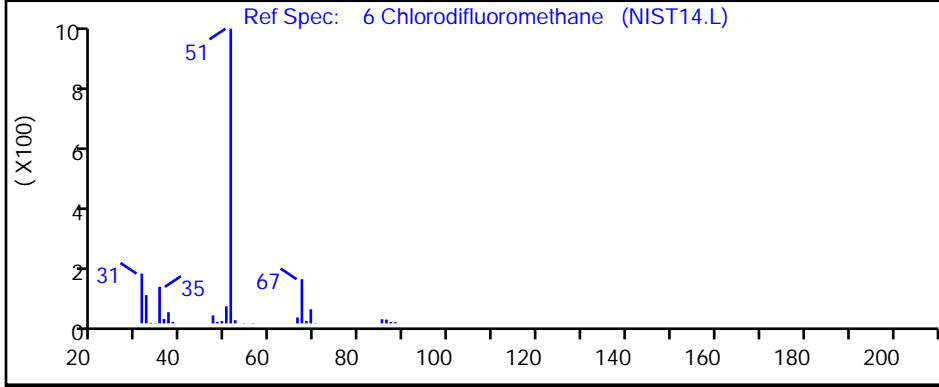
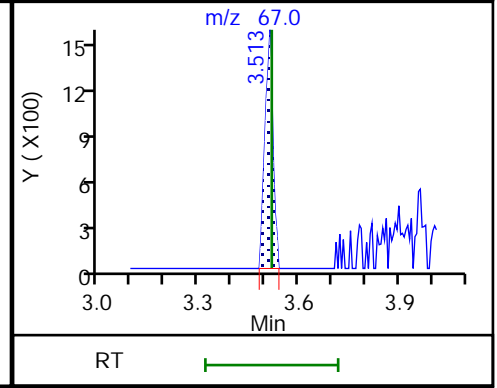
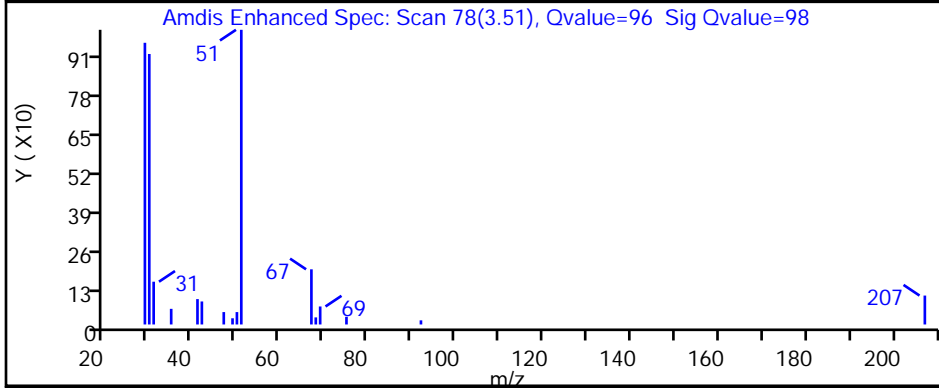
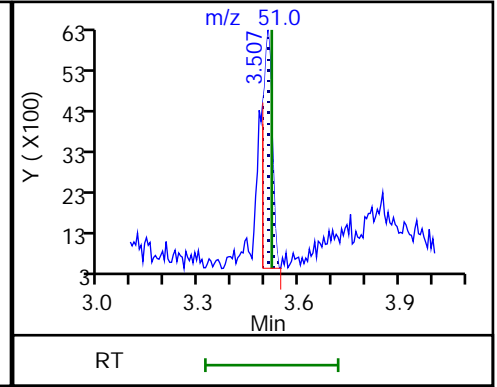
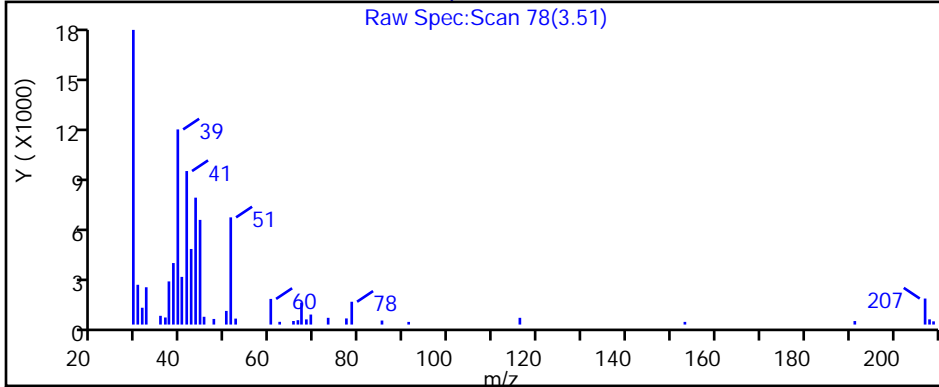
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P103.D

Injection Date: 07-Feb-2019 18:26:30

Instrument ID: MR

Lims ID: 140-14199-A-2

Lab Sample ID: 140-14199-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

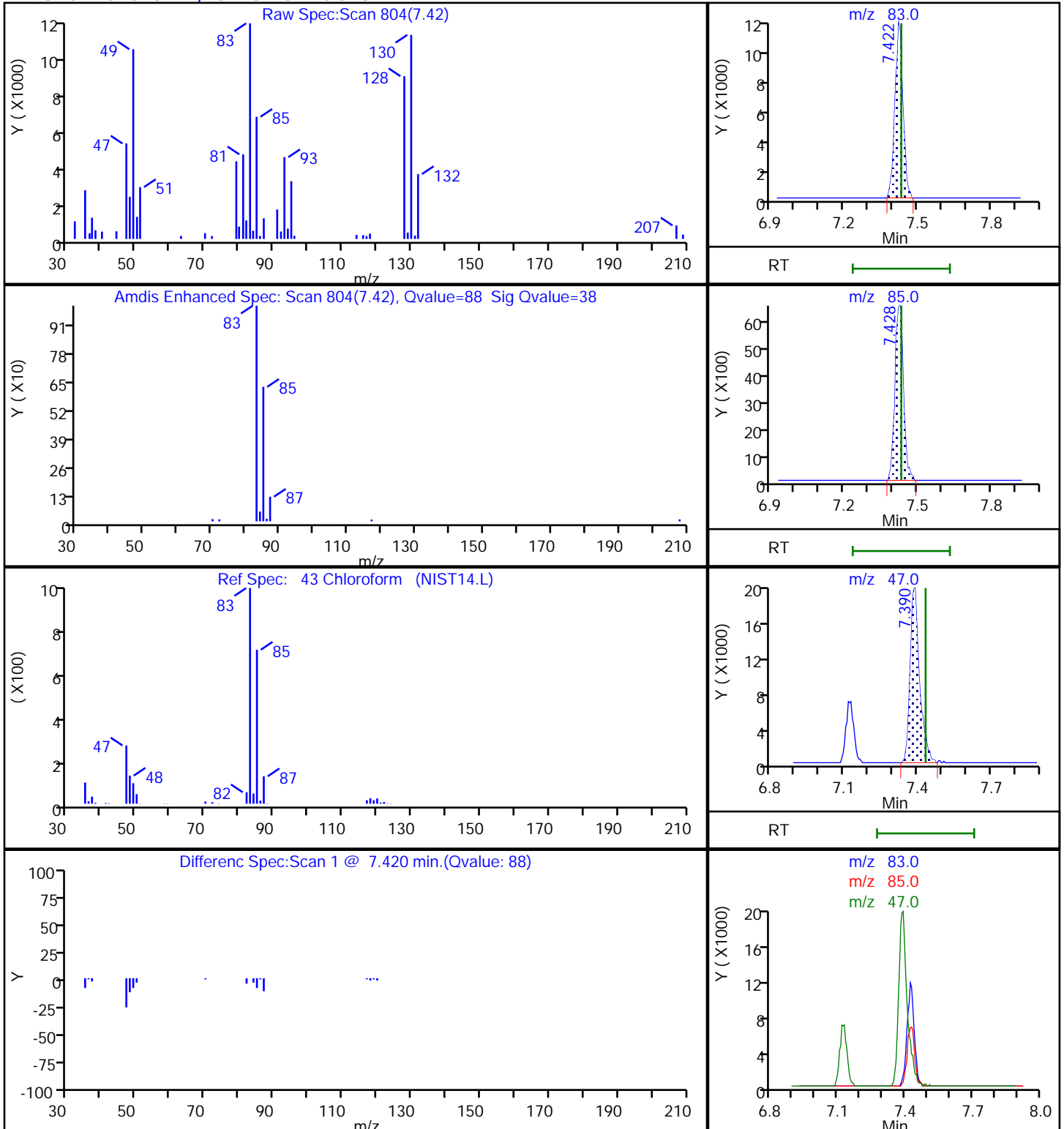
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P103.D

Injection Date: 07-Feb-2019 18:26:30

Instrument ID: MR

Lims ID: 140-14199-A-2

Lab Sample ID: 140-14199-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

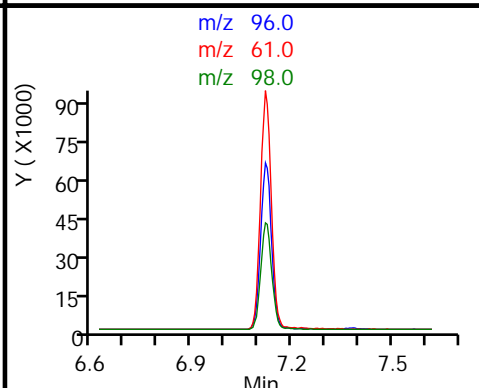
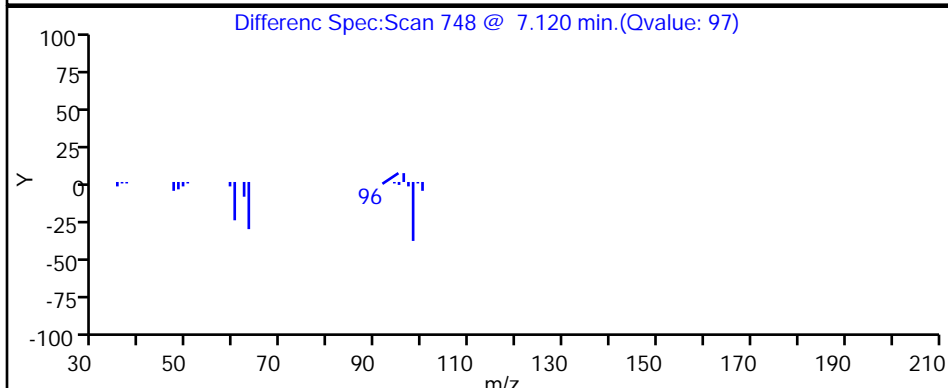
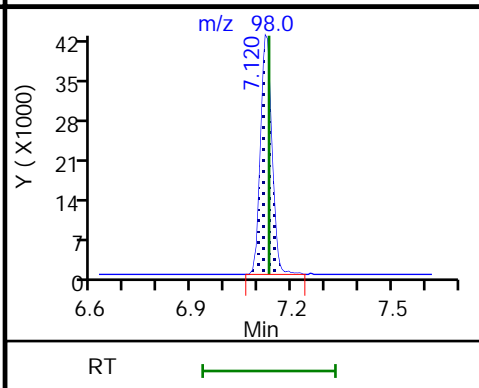
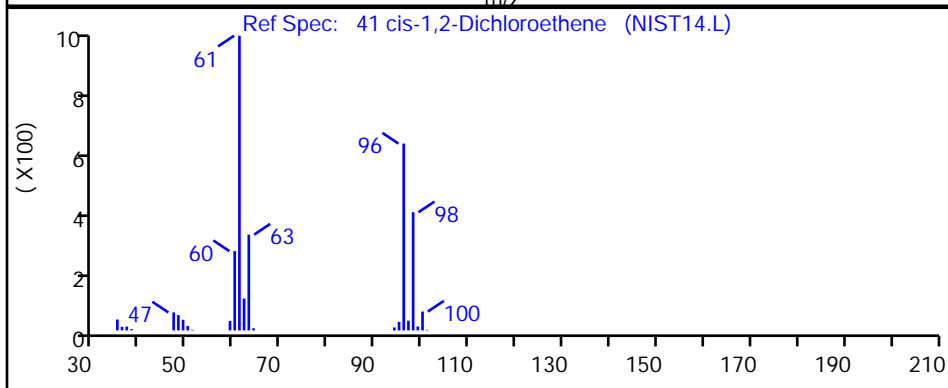
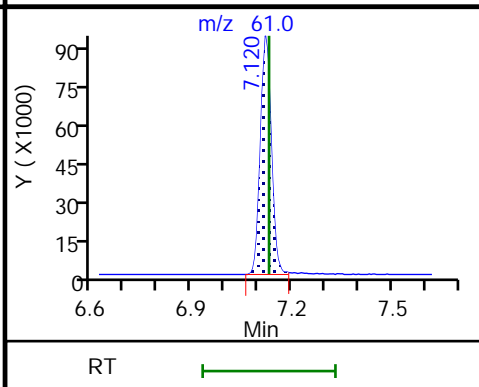
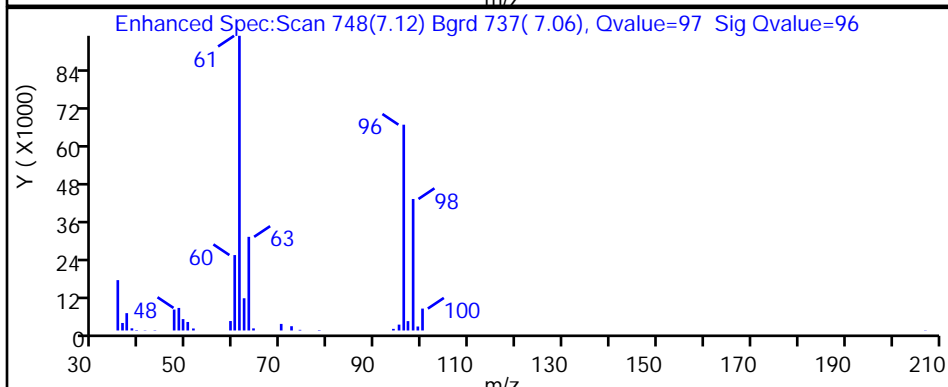
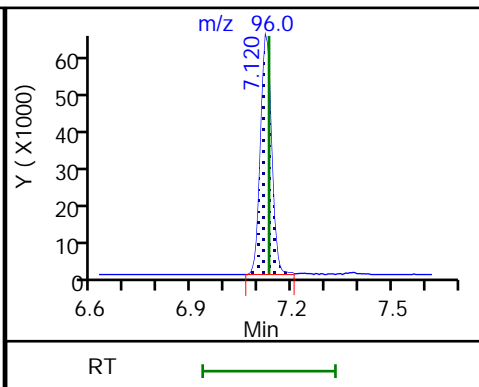
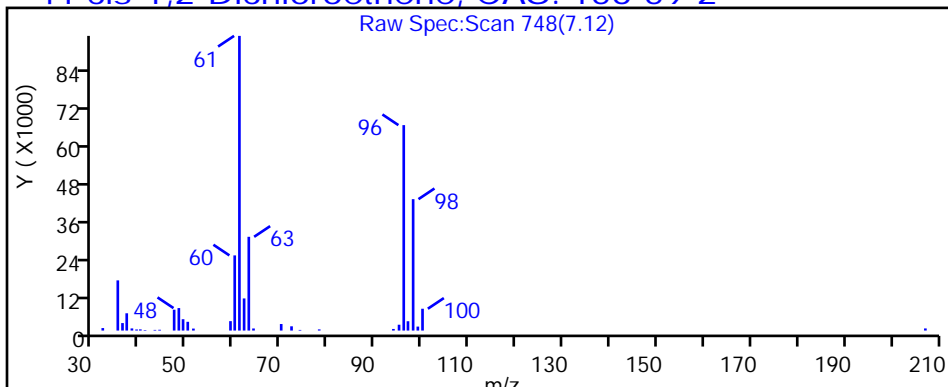
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P103.D

Injection Date: 07-Feb-2019 18:26:30

Instrument ID: MR

Lims ID: 140-14199-A-2

Lab Sample ID: 140-14199-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

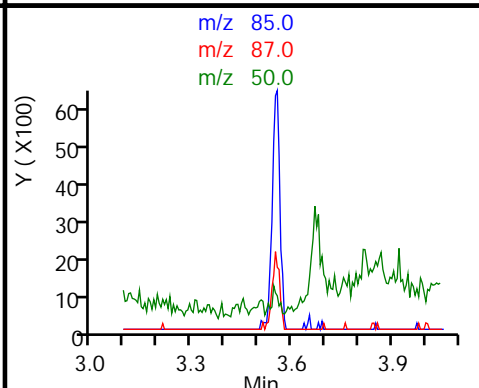
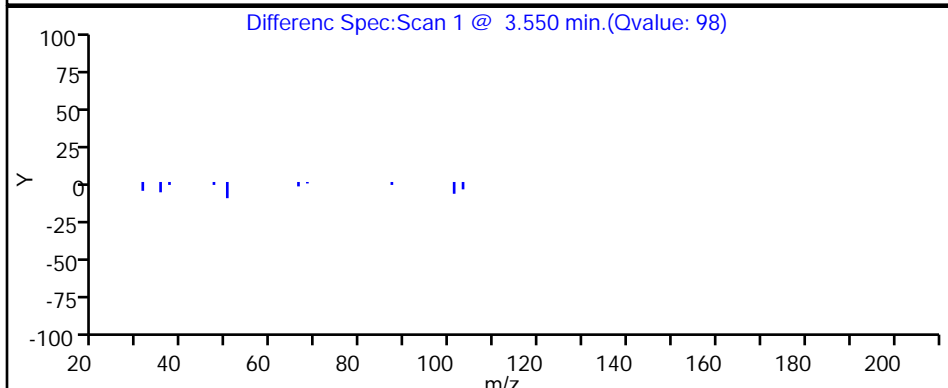
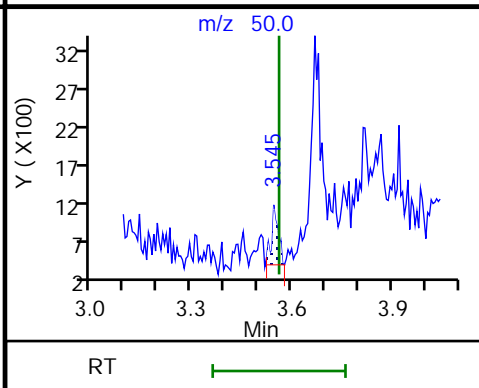
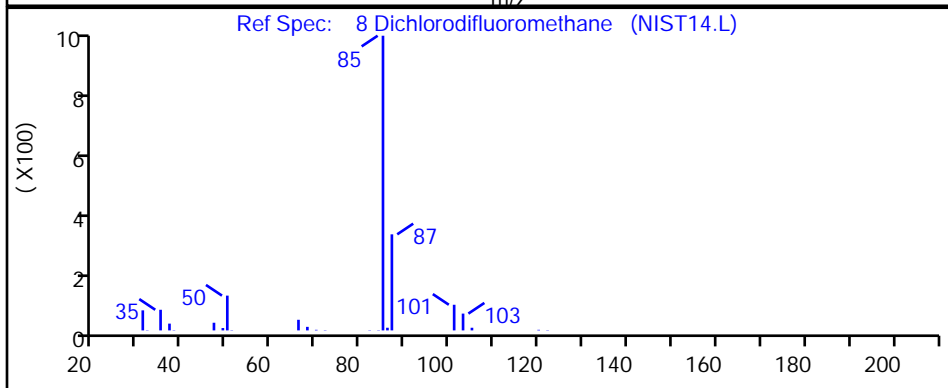
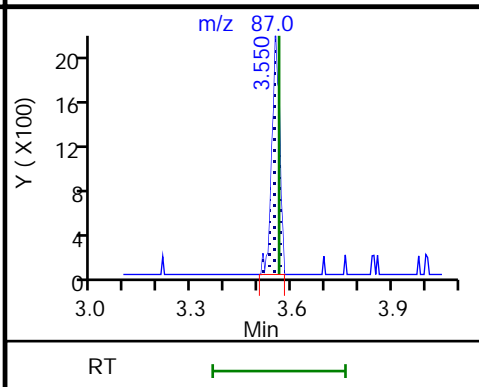
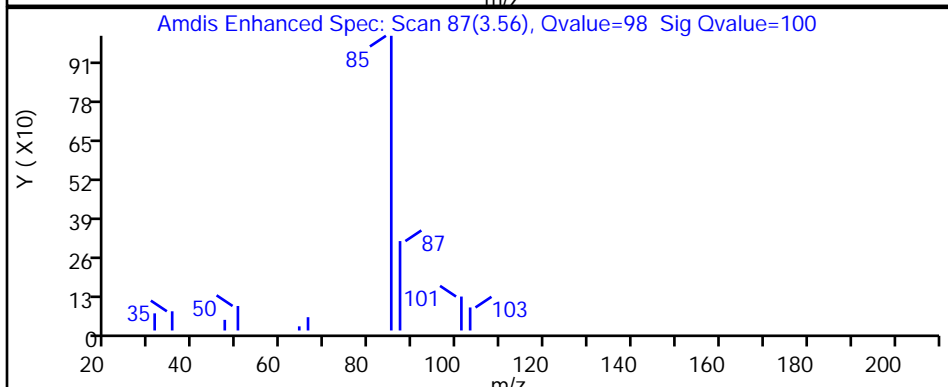
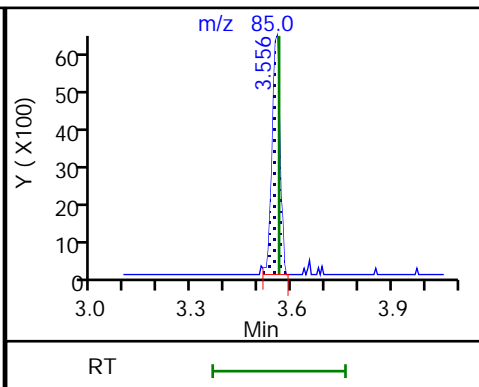
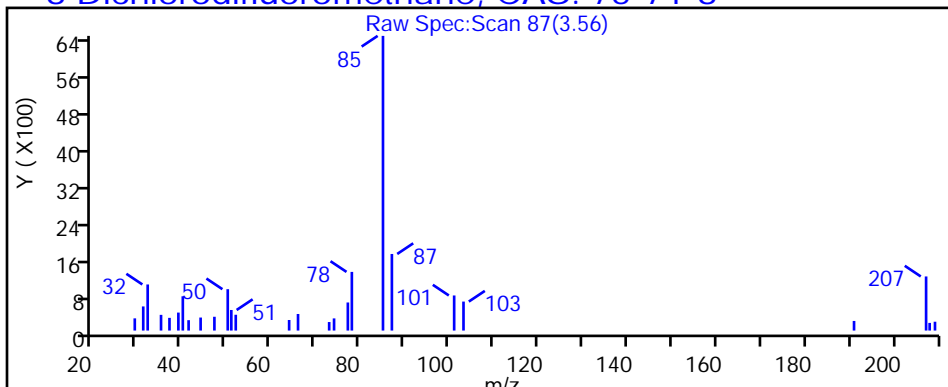
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P103.D

Injection Date: 07-Feb-2019 18:26:30

Instrument ID: MR

Lims ID: 140-14199-A-2

Lab Sample ID: 140-14199-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

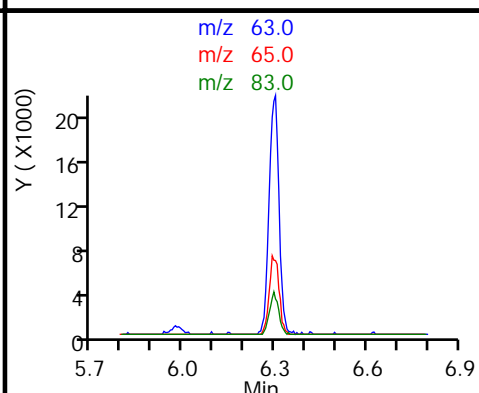
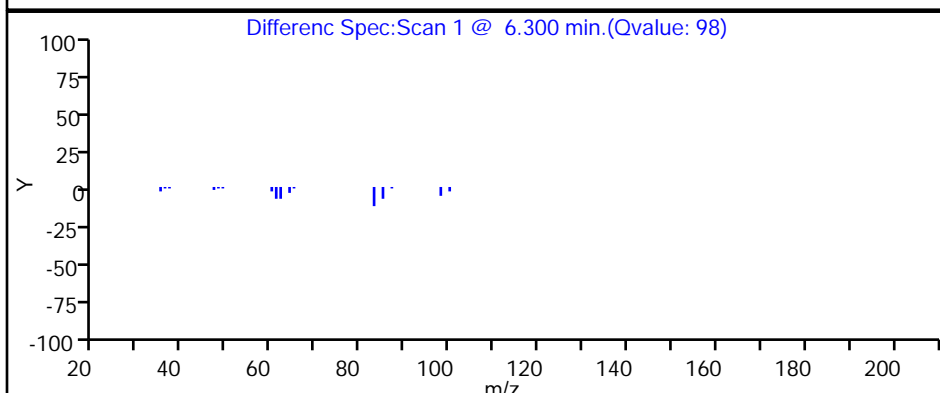
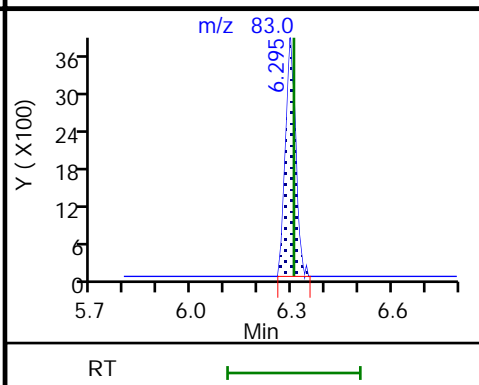
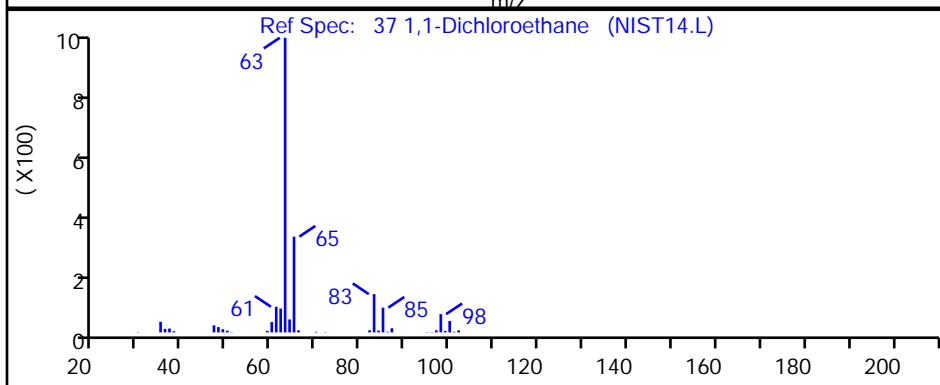
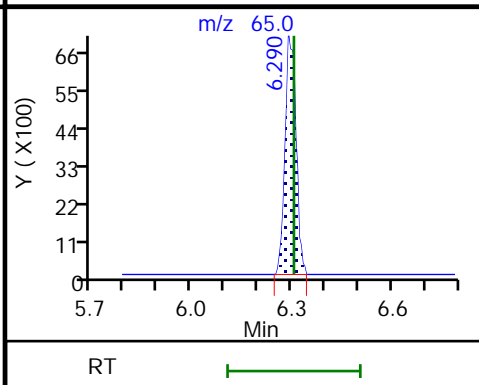
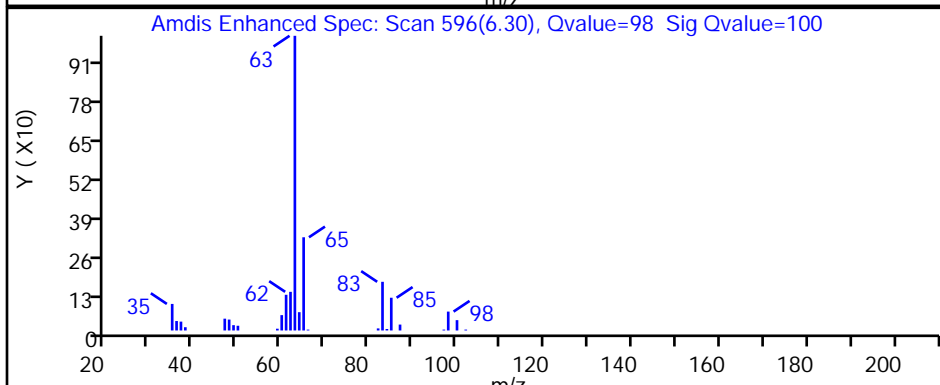
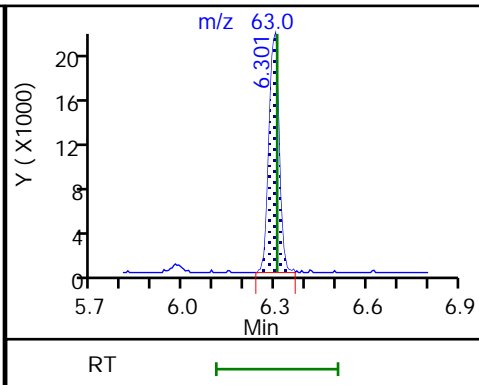
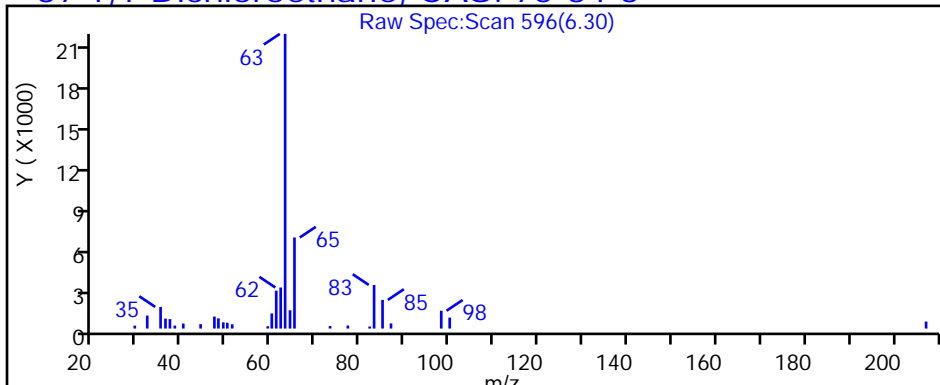
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P103.D

Injection Date: 07-Feb-2019 18:26:30

Instrument ID: MR

Lims ID: 140-14199-A-2

Lab Sample ID: 140-14199-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

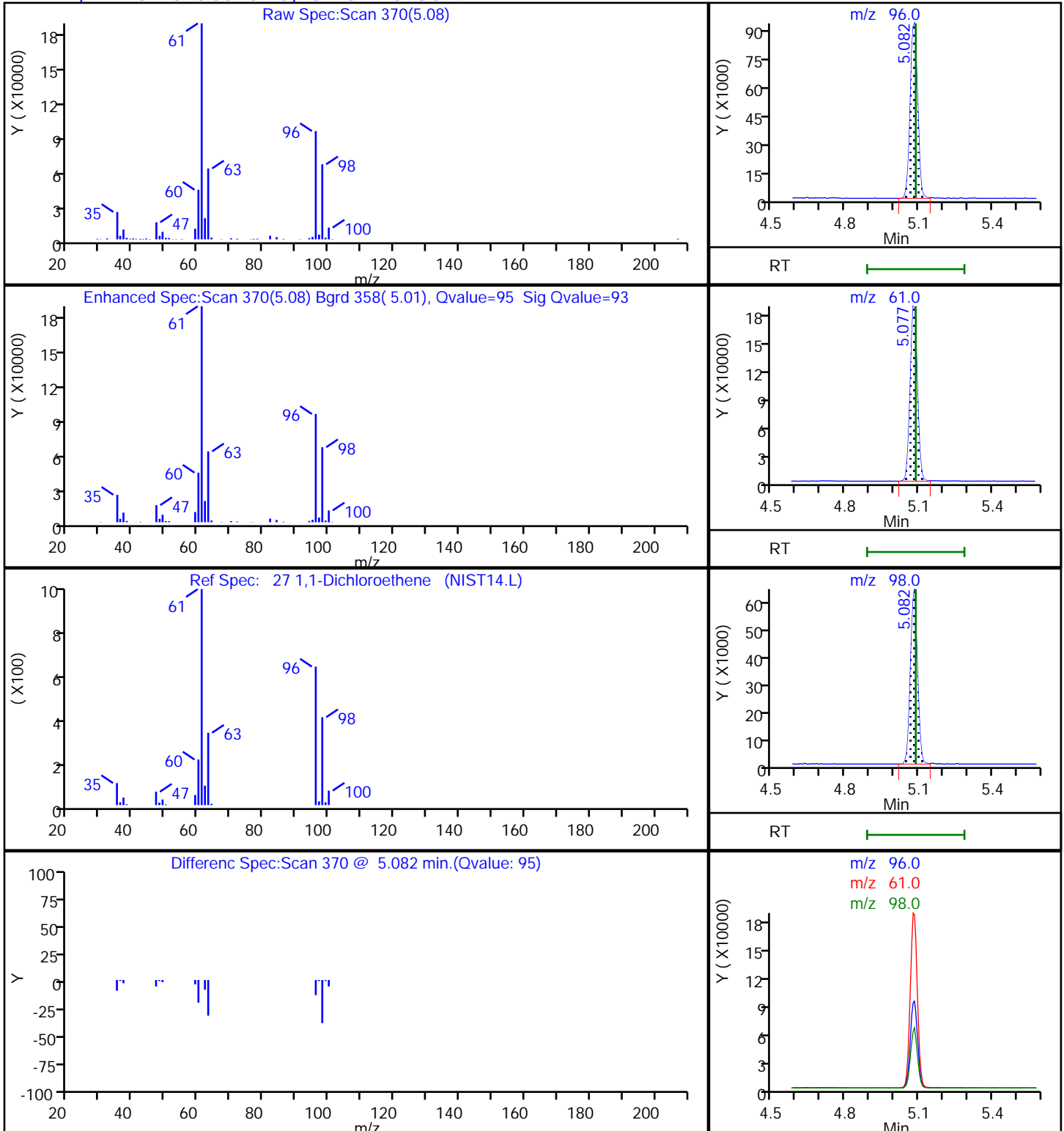
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P103.D

Injection Date: 07-Feb-2019 18:26:30

Instrument ID: MR

Lims ID: 140-14199-A-2

Lab Sample ID: 140-14199-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

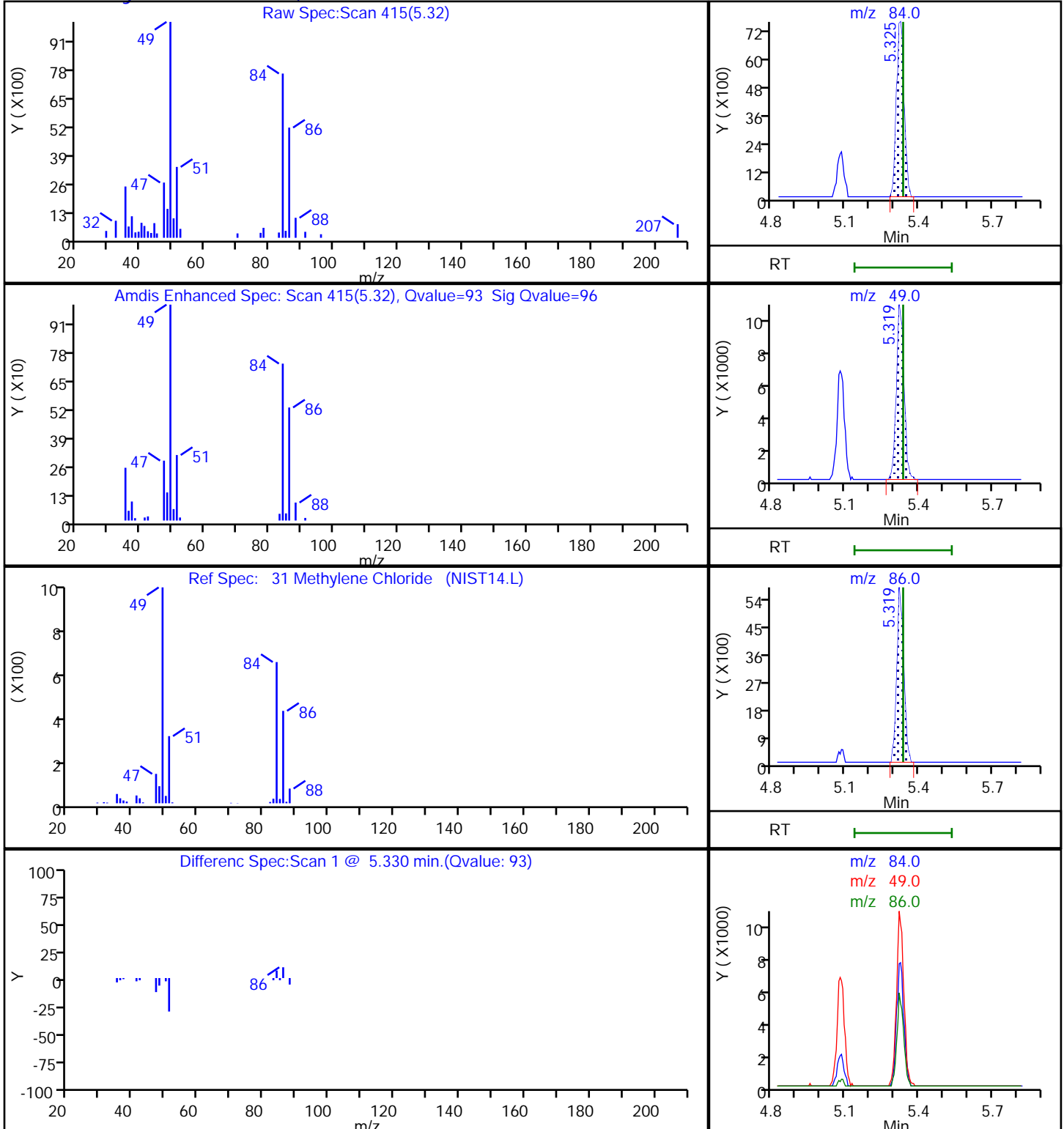
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P103.D

Injection Date: 07-Feb-2019 18:26:30

Instrument ID: MR

Lims ID: 140-14199-A-2

Lab Sample ID: 140-14199-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

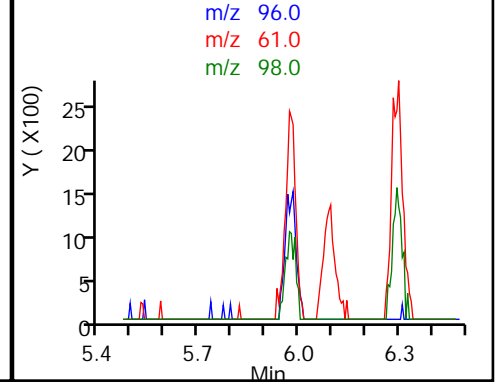
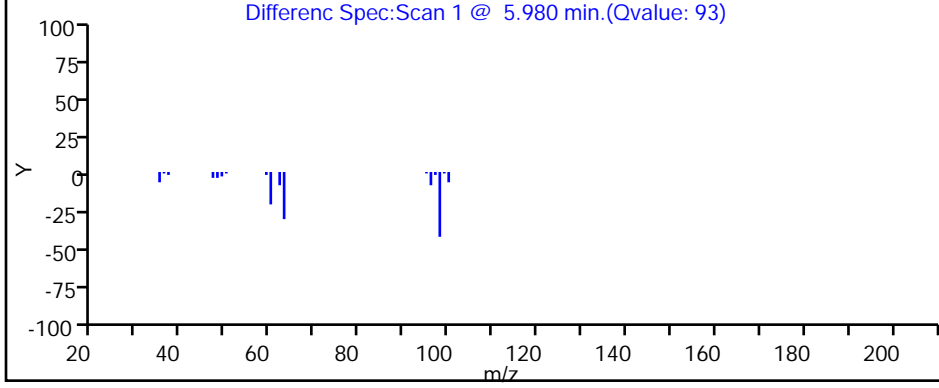
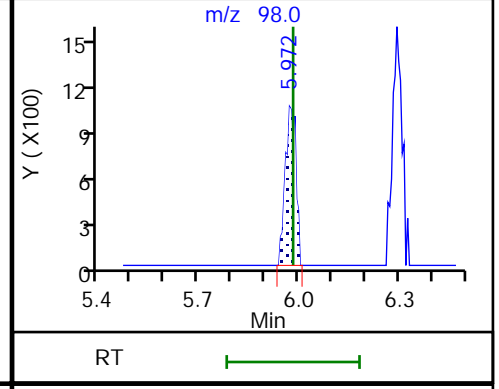
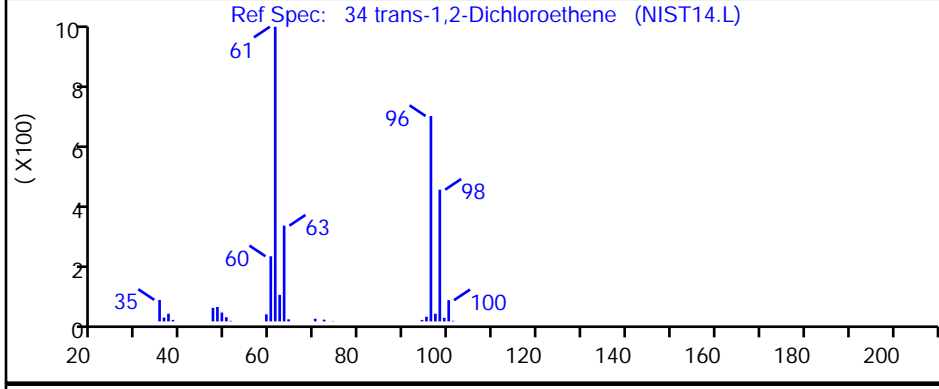
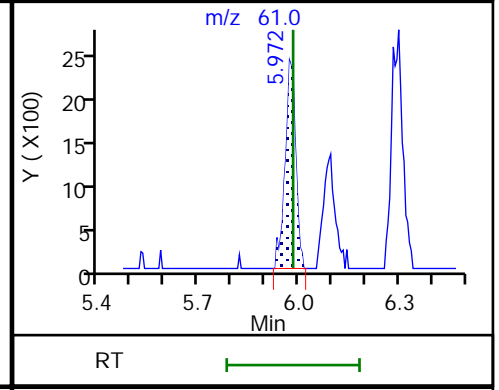
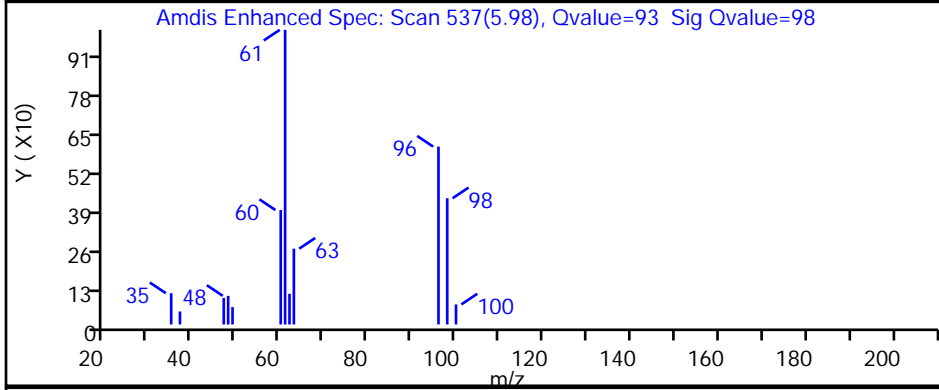
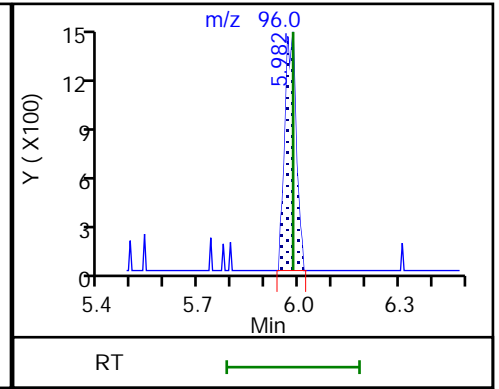
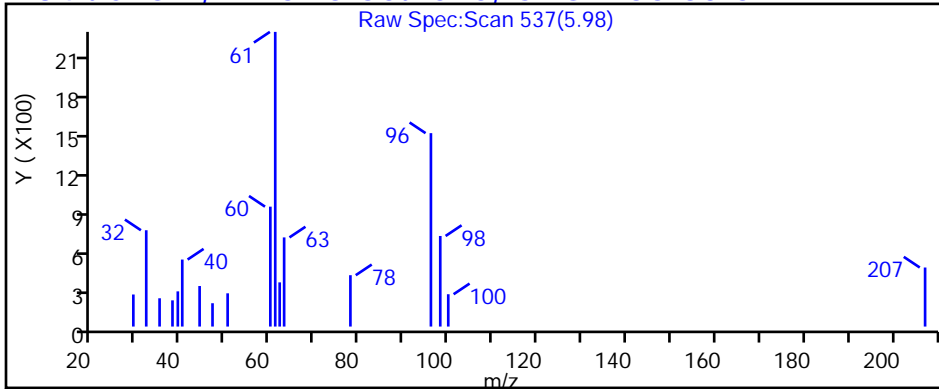
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P103.D

Injection Date: 07-Feb-2019 18:26:30

Instrument ID: MR

Lims ID: 140-14199-A-2

Lab Sample ID: 140-14199-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

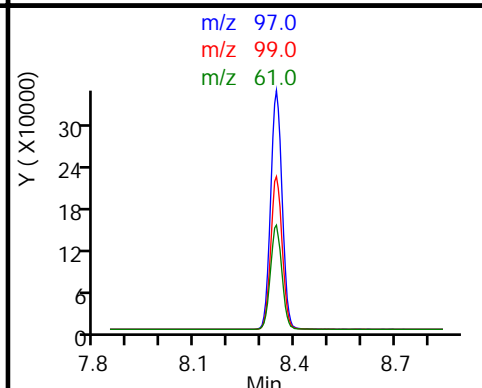
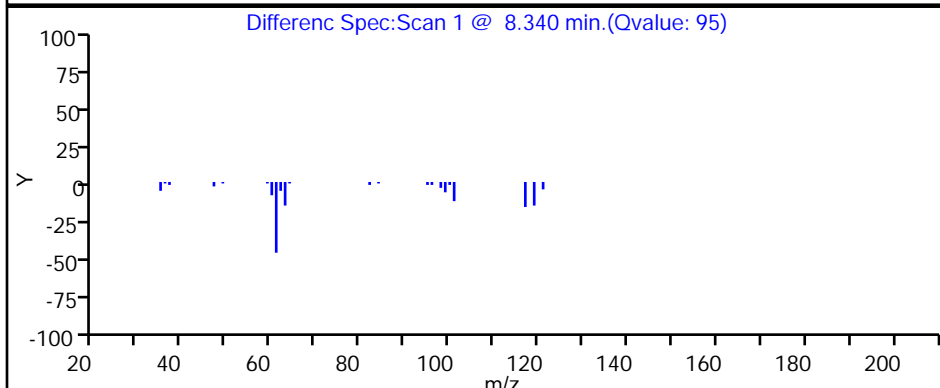
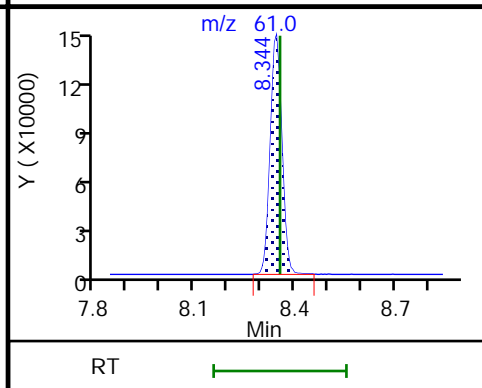
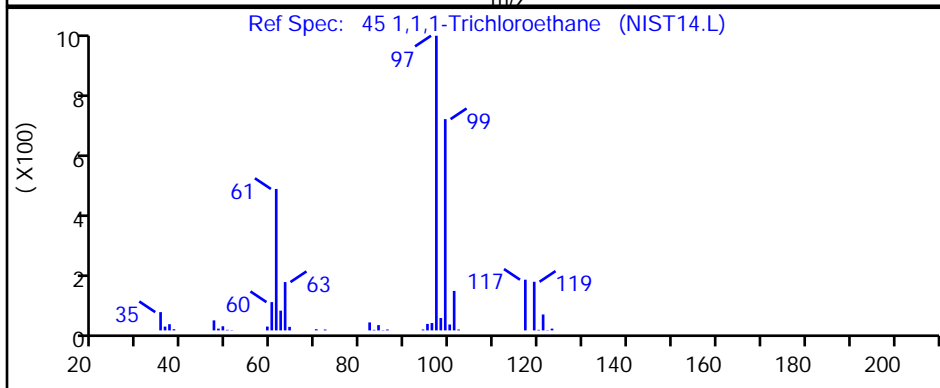
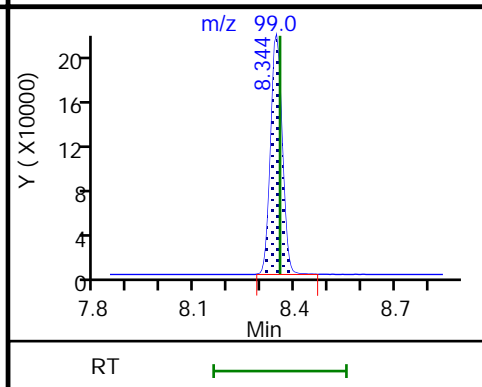
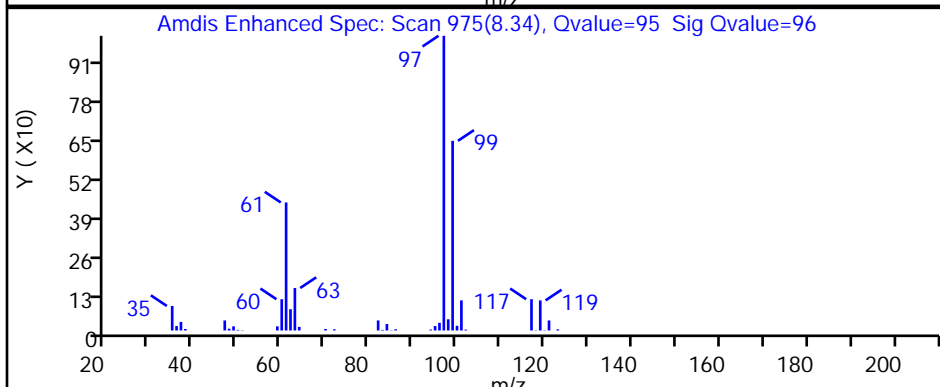
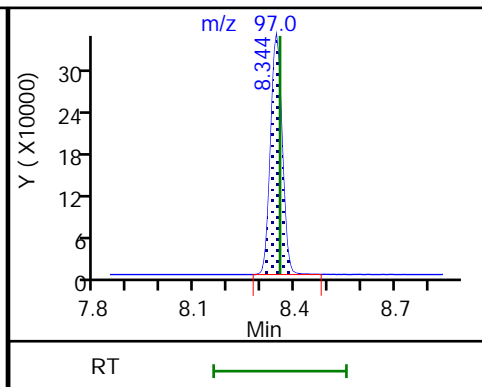
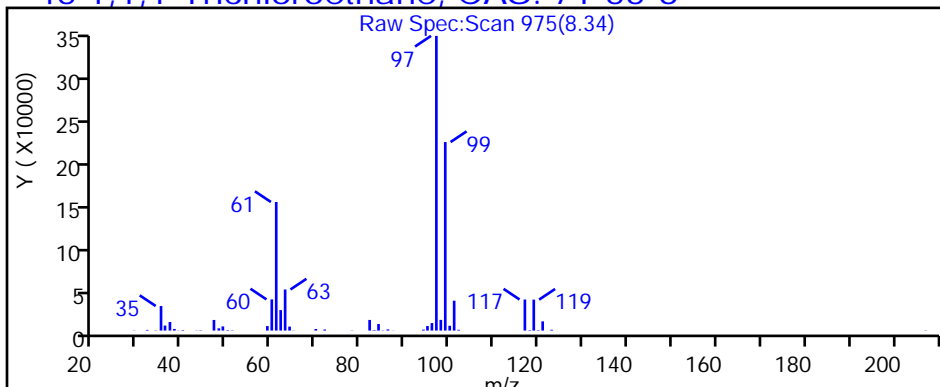
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P103.D

Injection Date: 07-Feb-2019 18:26:30

Instrument ID: MR

Lims ID: 140-14199-A-2

Lab Sample ID: 140-14199-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

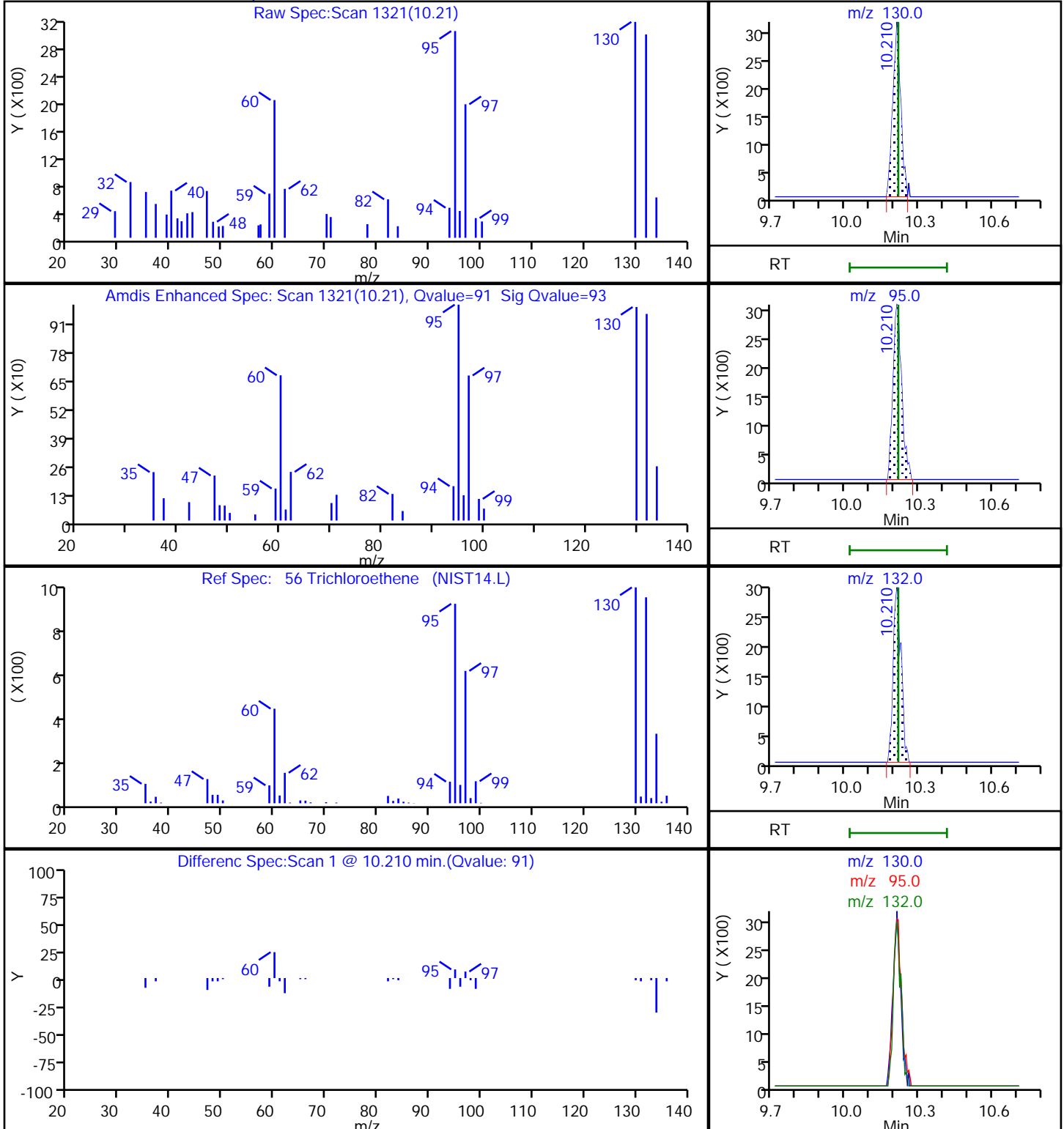
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6

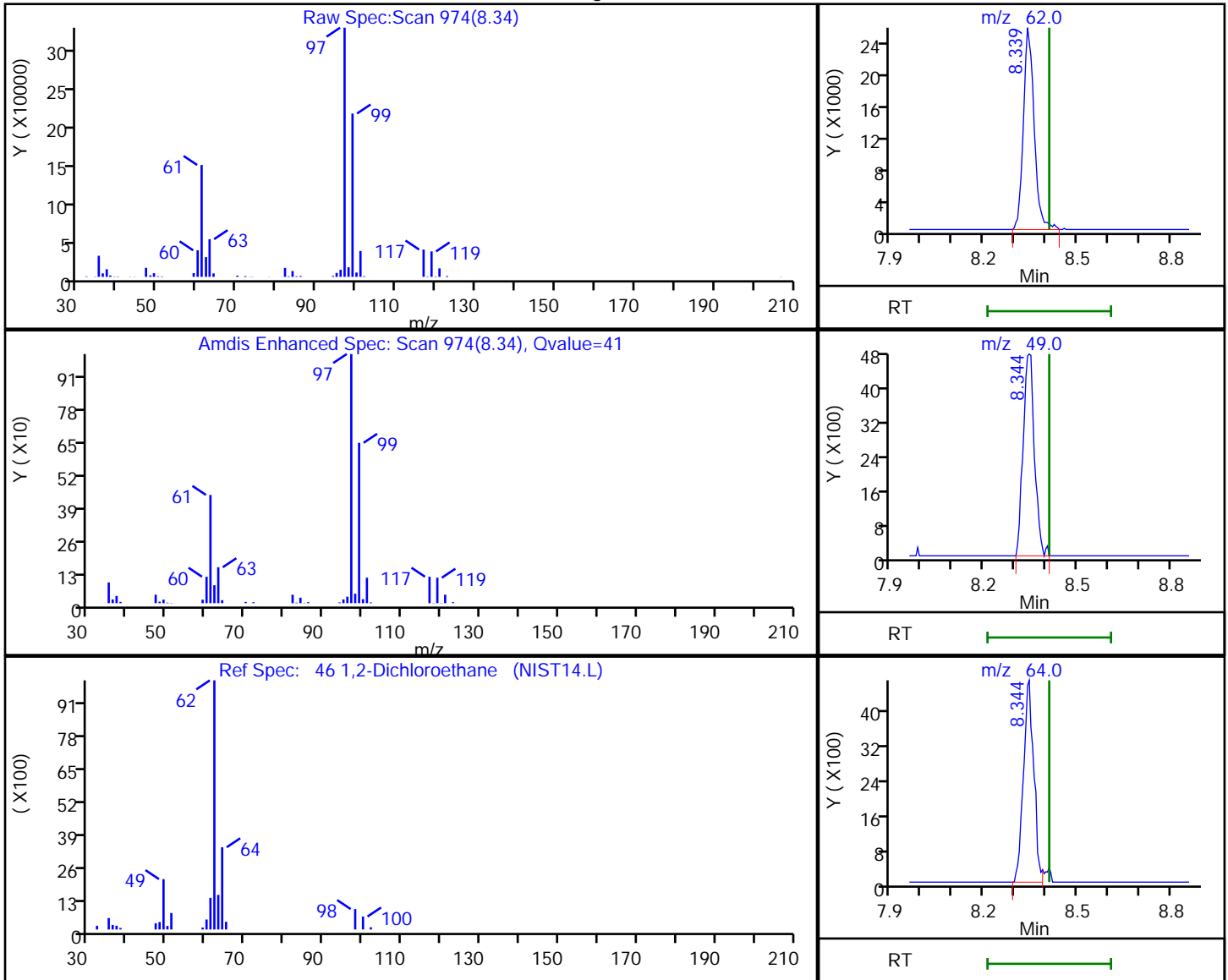


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P103.D
 Injection Date: 07-Feb-2019 18:26:30 Instrument ID: MR
 Lims ID: 140-14199-A-2 Lab Sample ID: 140-14199-2
 Client ID: BLDG-A-MIDGAC
 Operator ID: ALS Bottle#: 3 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.34	62.00	62248	0.419413
8.34	49.00	12203	
8.34	64.00	10692	

Reviewer: khachitpongpanits, 08-Feb-2019 13:16:01

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Client Sample ID: BLDG-A-EFFLUENT Lab Sample ID: 140-14199-3
 Matrix: Air Lab File ID: RB07P104.D
 Analysis Method: TO 15 LL Date Collected: 02/06/2019 11:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/07/2019 19:15
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27430 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.30	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.55		0.40	0.075
67-66-3	Chloroform	119.38	0.76		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	7.9		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.23	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	3.1		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	16		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.21	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	20		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.96		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Client Sample ID: BLDG-A-EFFLUENT Lab Sample ID: 140-14199-3
 Matrix: Air Lab File ID: RB07P104.D
 Analysis Method: TO 15 LL Date Collected: 02/06/2019 11:18
 Sample wt/vol: 100(mL) Date Analyzed: 02/07/2019 19:15
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27430 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.95	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	3.7		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	31		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.2	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	13		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	64		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.2	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.83	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	110		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D
 Lims ID: 140-14199-A-3
 Client ID: BLDG-A-EFFLUENT
 Sample Type: Client
 Inject. Date: 07-Feb-2019 19:15:30 ALS Bottle#: 4 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010745-016
 Misc. Info.: 140-14199-a-3
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 08-Feb-2019 13:18:25 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 08-Feb-2019 13:18:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.401	-0.011	74	202685	4.00	
* 2 1,4-Difluorobenzene	114	9.461	9.466	-0.005	96	1188015	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.513	14.513	0.000	92	1037336	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.239	16.239	0.000	86	892444	4.05	
6 Chlorodifluoromethane	51	3.507	3.507	-0.011	97	13255	0.1102	M
8 Dichlorodifluoromethane	85	3.556	3.556	-0.005	99	10325	0.0468	
27 1,1-Dichloroethene	96	5.082	5.084	-0.005	94	231657	3.25	
31 Methylene Chloride	84	5.325	5.335	-0.010	91	20264	0.2989	
34 trans-1,2-Dichloroethene	96	5.977	5.978	-0.005	92	3033	0.0417	
37 1,1-Dichloroethane	63	6.295	6.301	-0.011	99	76040	0.6246	
41 cis-1,2-Dichloroethene	96	7.126	7.126	-0.005	96	116047	1.58	
43 Chloroform	83	7.428	7.422	-0.005	92	29564	0.1527	
45 1,1,1-Trichloroethane	97	8.344	8.349	-0.011	95	985963	4.02	
47 Benzene	78	8.900	8.905	-0.005	97	11559	0.0597	
56 Trichloroethene	130	10.210	10.210	-0.005	92	22427	0.1922	
65 Toluene	91	12.432	12.432	0.000	89	28965	0.1165	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D

Injection Date: 07-Feb-2019 19:15:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14199-A-3

Lab Sample ID: 140-14199-3

Worklist Smp#: 16

Client ID: BLDG-A-EFFLUENT

Purge Vol: 500.000 mL

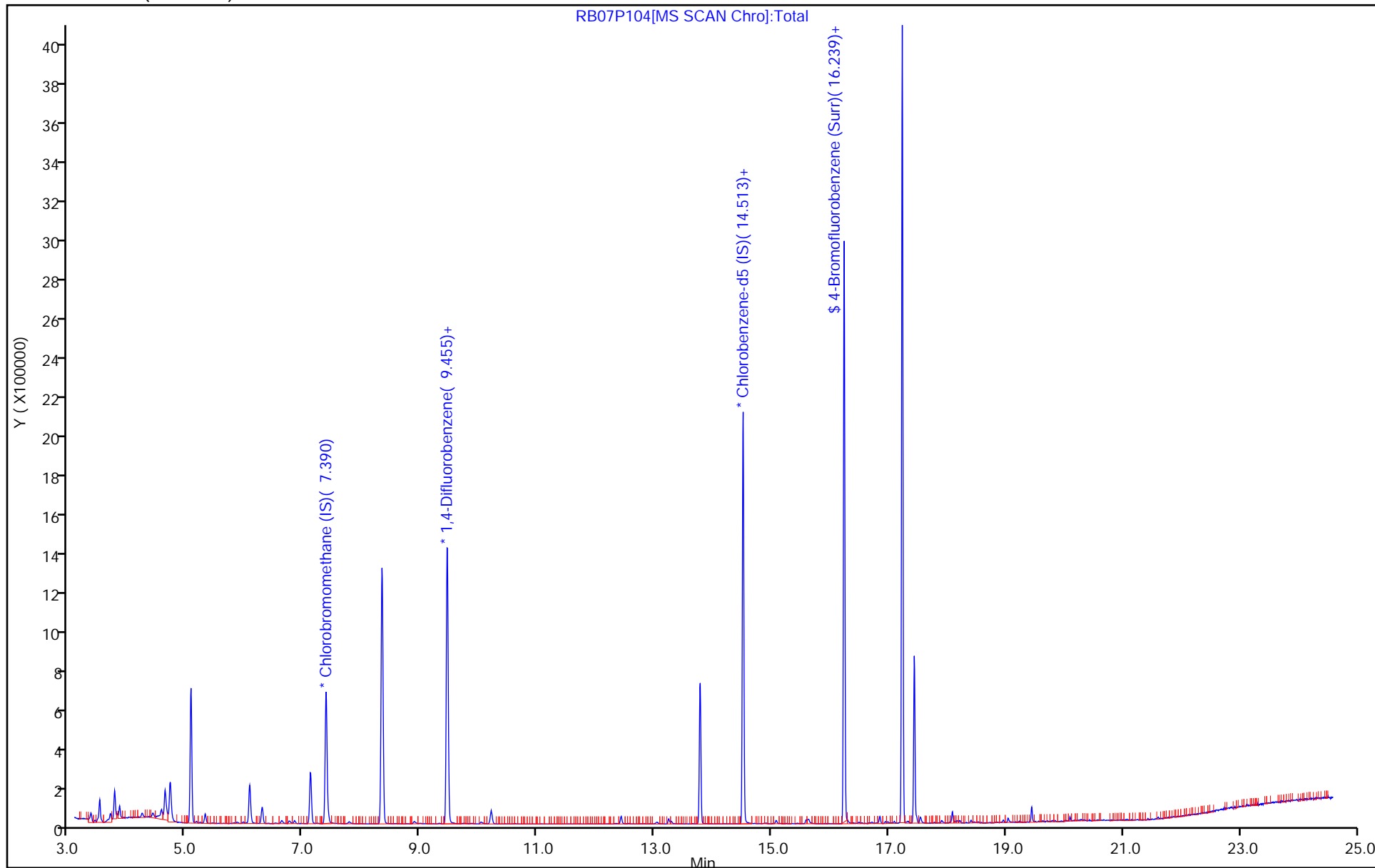
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D
 Lims ID: 140-14199-A-3
 Client ID: BLDG-A-EFFLUENT
 Sample Type: Client
 Inject. Date: 07-Feb-2019 19:15:30 ALS Bottle#: 4 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010745-016
 Misc. Info.: 140-14199-a-3
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 08-Feb-2019 13:18:25 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 08-Feb-2019 13:18:24

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.05	101.14

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D

Injection Date: 07-Feb-2019 19:15:30

Instrument ID: MR

Lims ID: 140-14199-A-3

Lab Sample ID: 140-14199-3

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

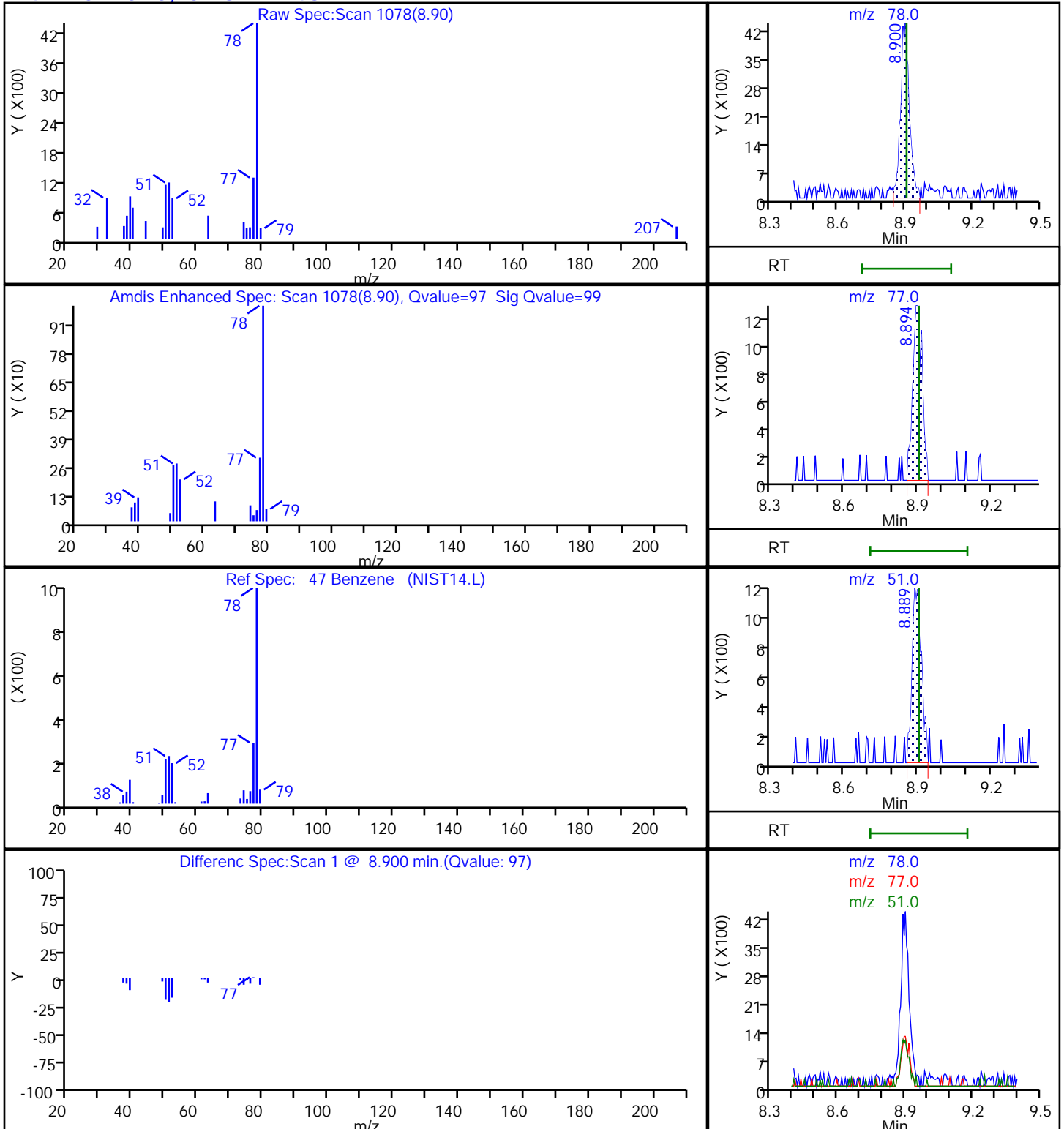
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D

Injection Date: 07-Feb-2019 19:15:30

Instrument ID: MR

Lims ID: 140-14199-A-3

Lab Sample ID: 140-14199-3

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

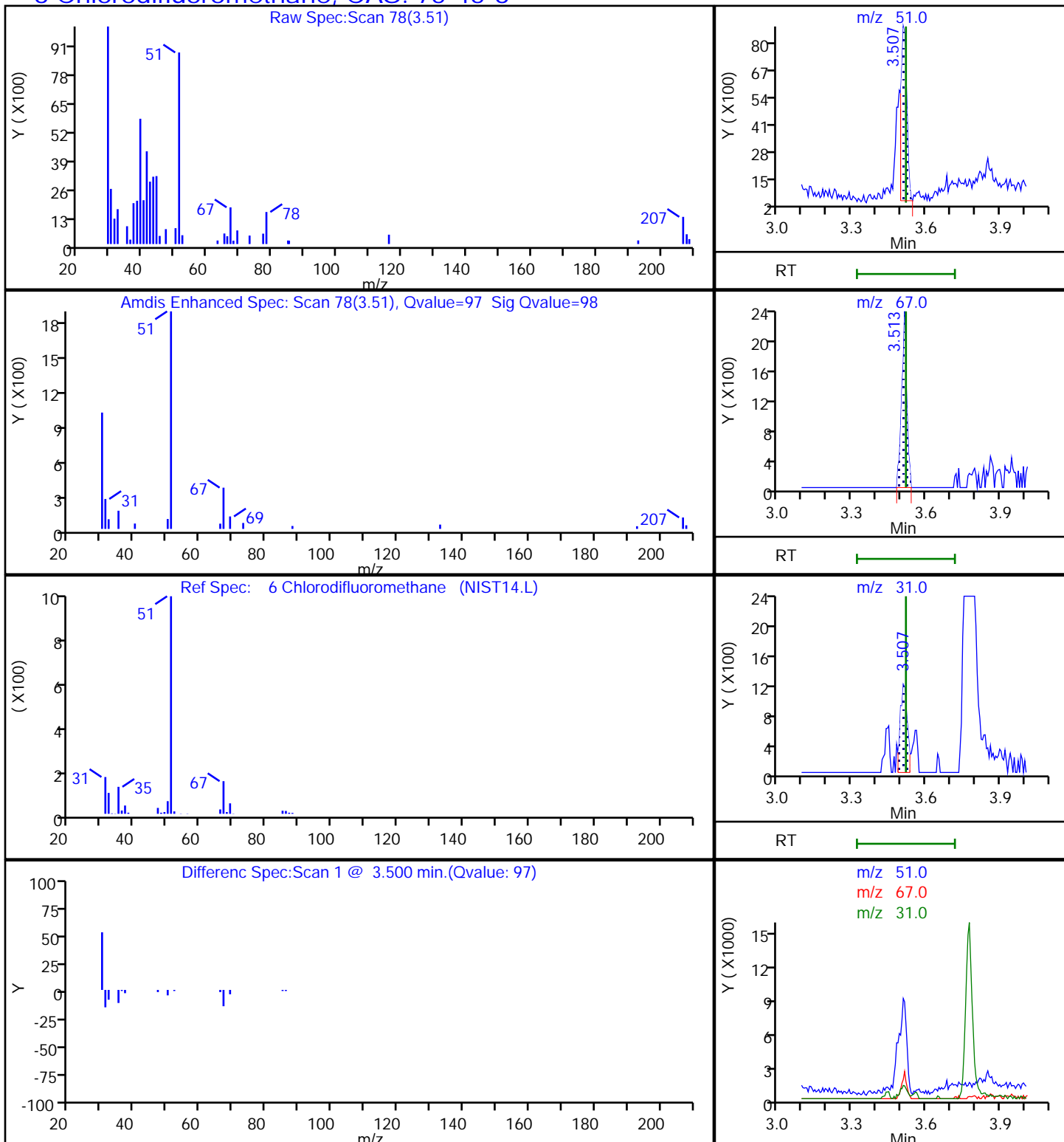
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D

Injection Date: 07-Feb-2019 19:15:30

Instrument ID: MR

Lims ID: 140-14199-A-3

Lab Sample ID: 140-14199-3

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

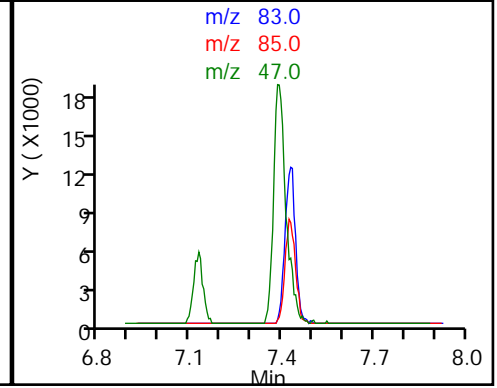
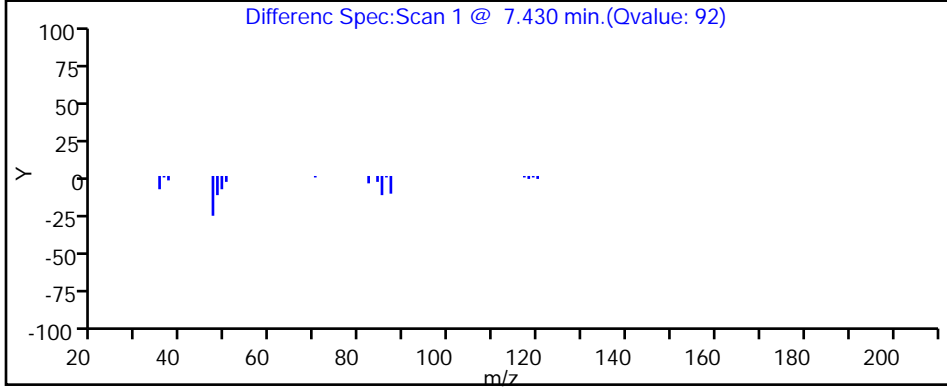
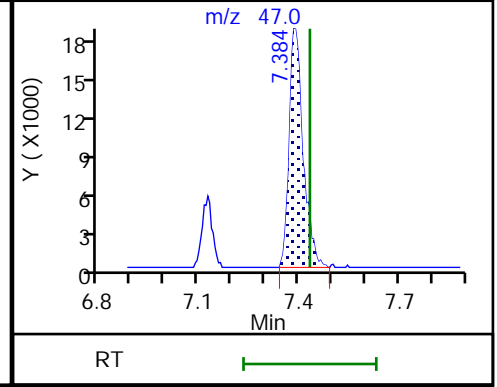
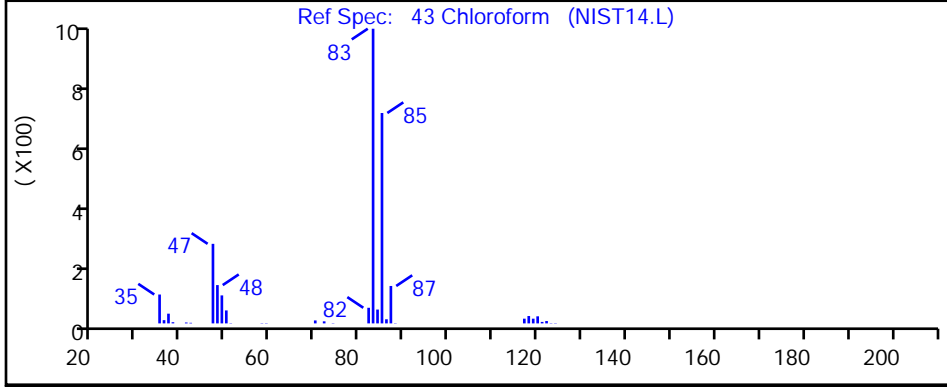
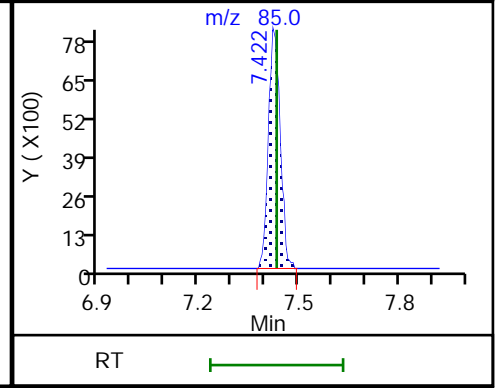
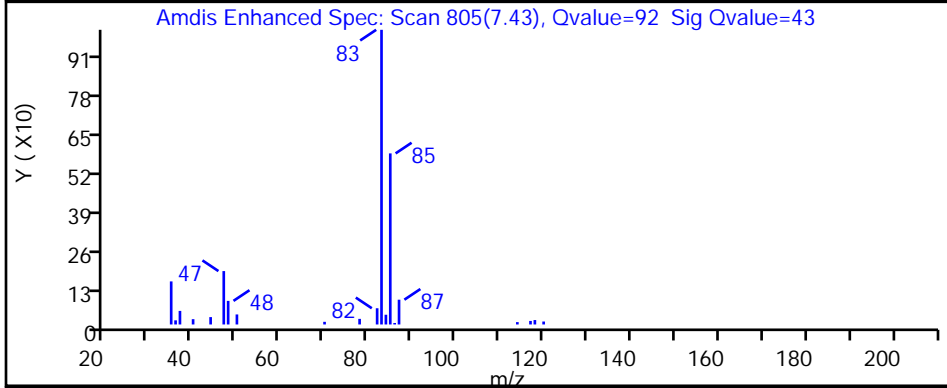
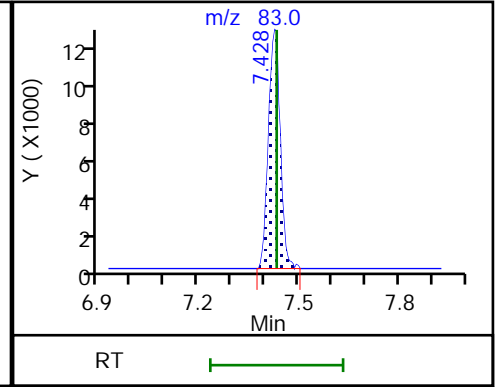
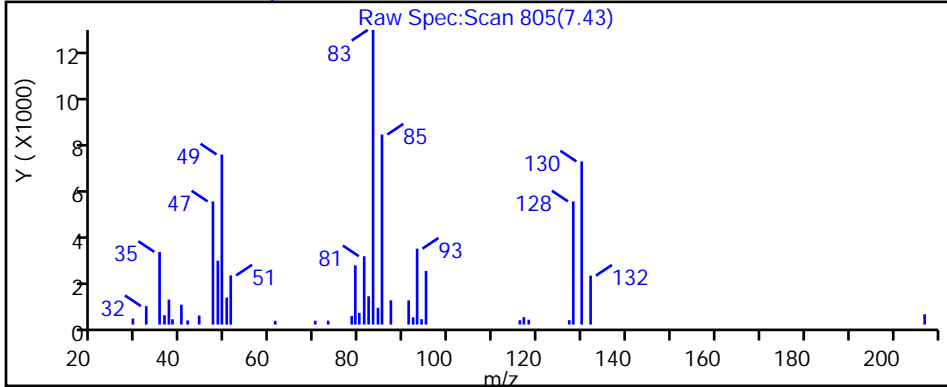
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D

Injection Date: 07-Feb-2019 19:15:30

Instrument ID: MR

Lims ID: 140-14199-A-3

Lab Sample ID: 140-14199-3

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

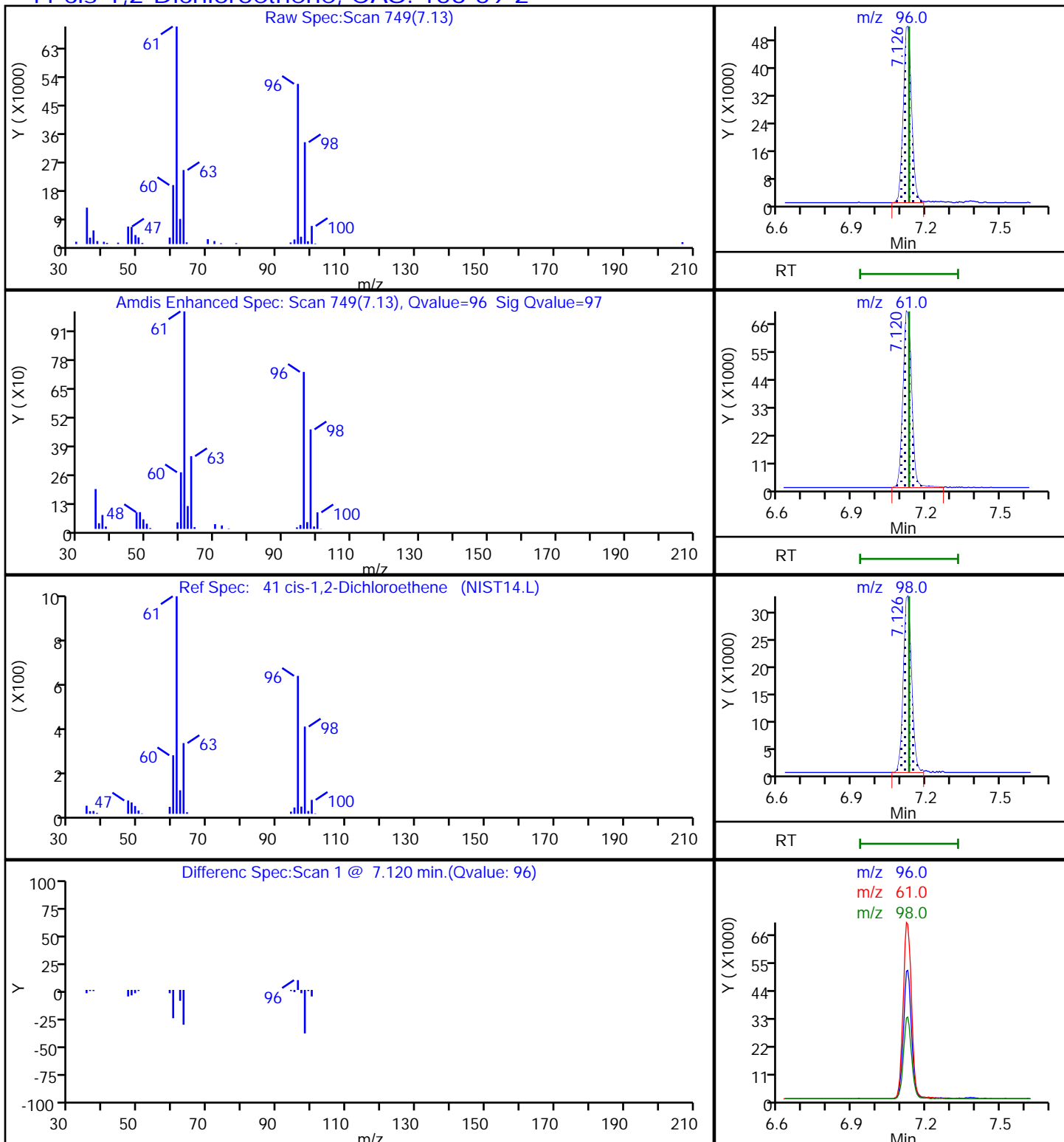
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D

Injection Date: 07-Feb-2019 19:15:30

Instrument ID: MR

Lims ID: 140-14199-A-3

Lab Sample ID: 140-14199-3

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

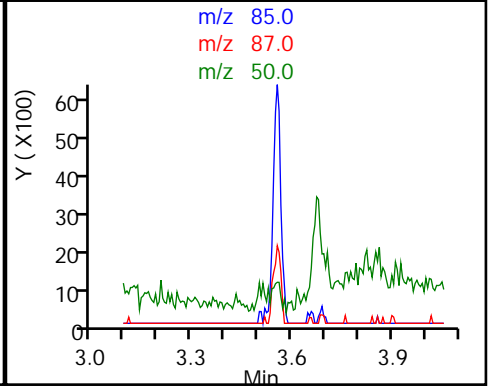
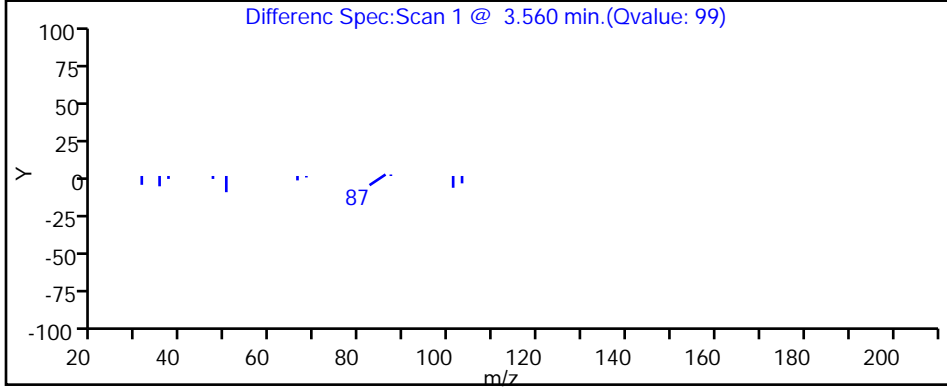
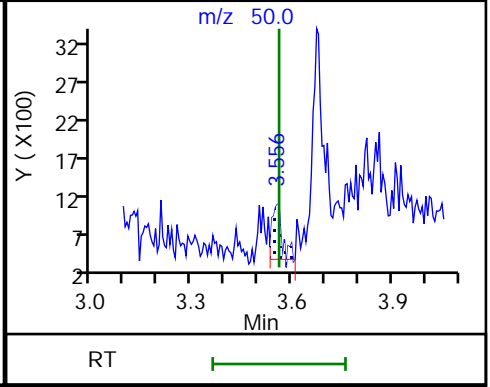
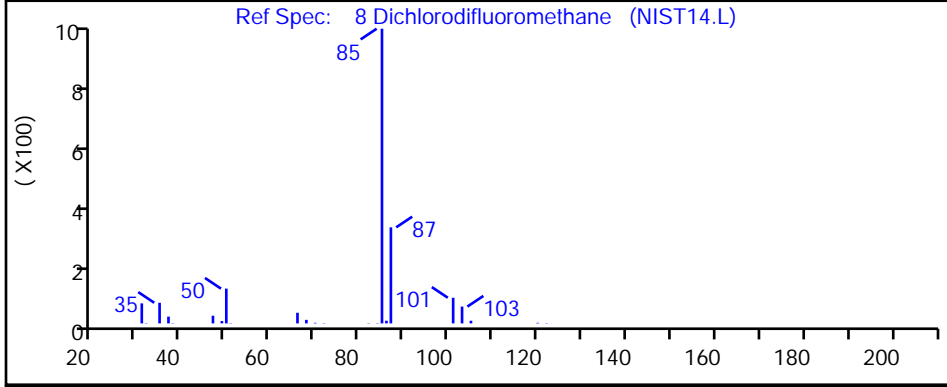
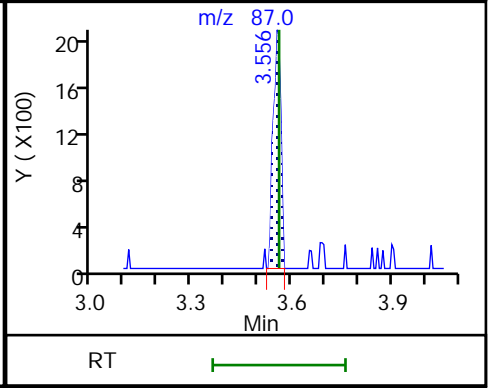
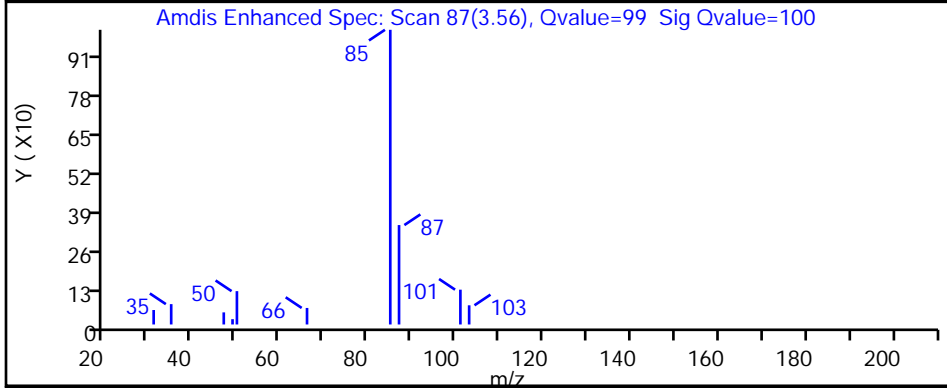
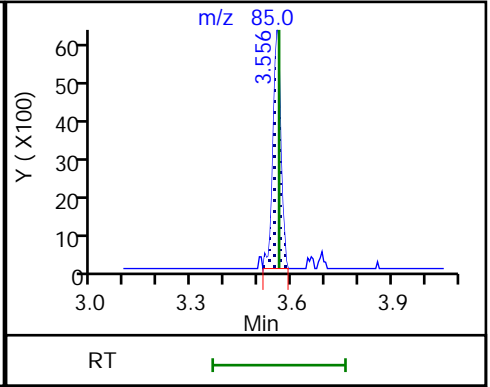
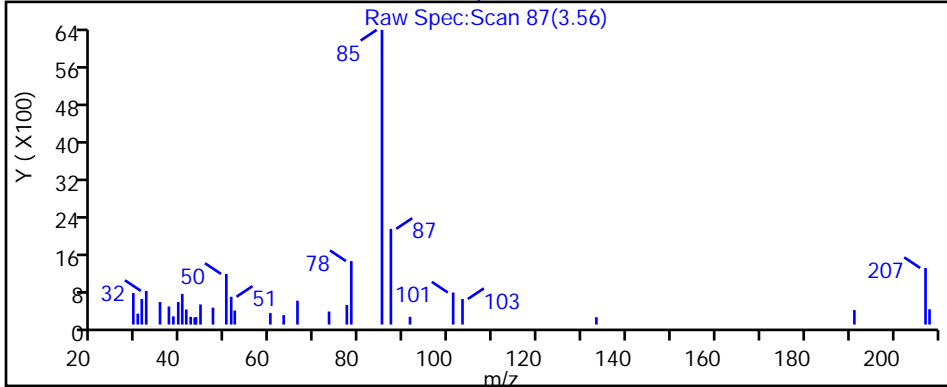
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D

Injection Date: 07-Feb-2019 19:15:30

Instrument ID: MR

Lims ID: 140-14199-A-3

Lab Sample ID: 140-14199-3

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

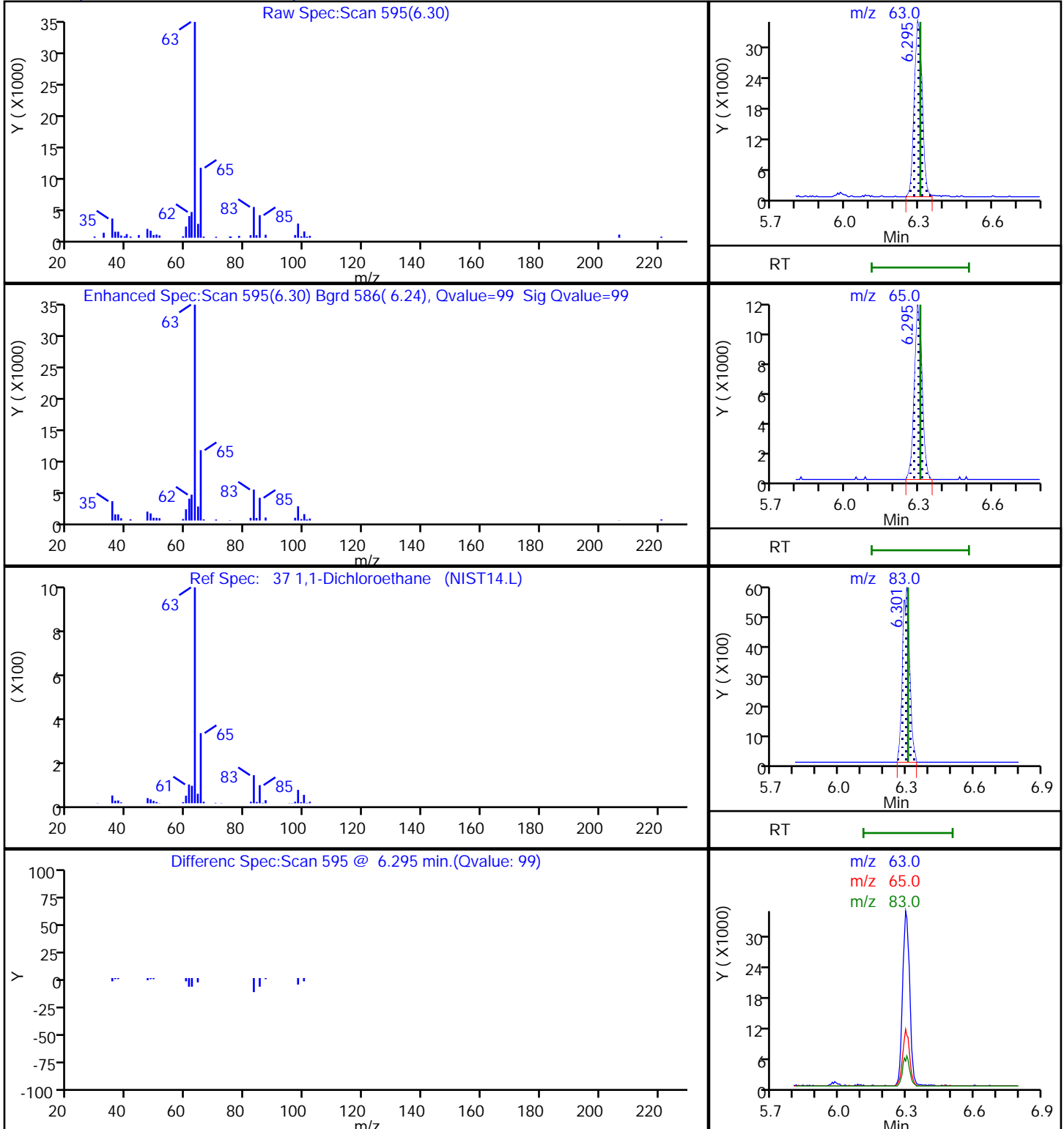
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D

Injection Date: 07-Feb-2019 19:15:30

Instrument ID: MR

Lims ID: 140-14199-A-3

Lab Sample ID: 140-14199-3

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

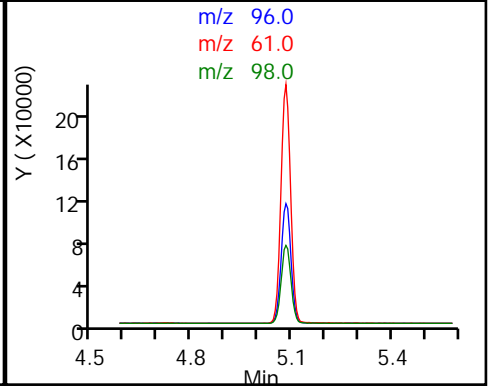
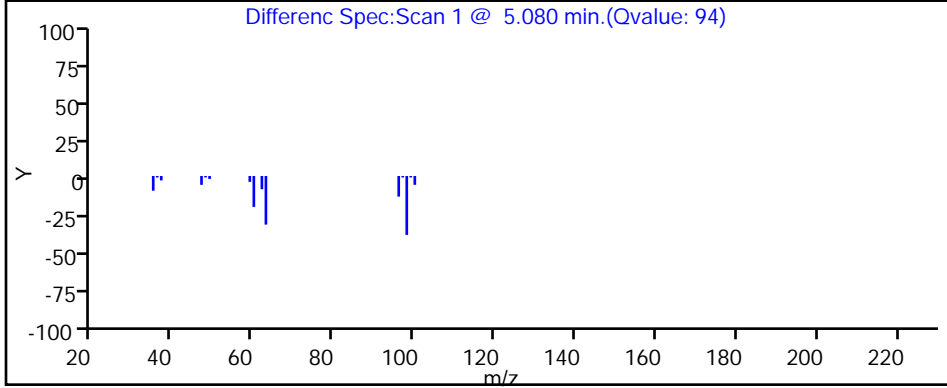
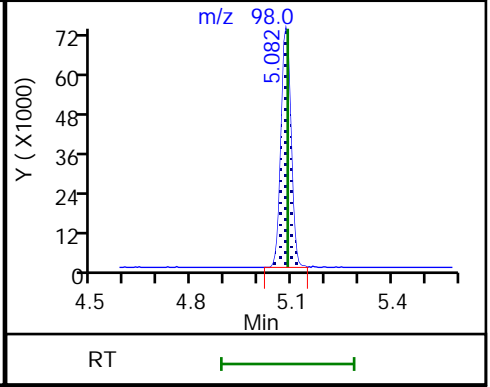
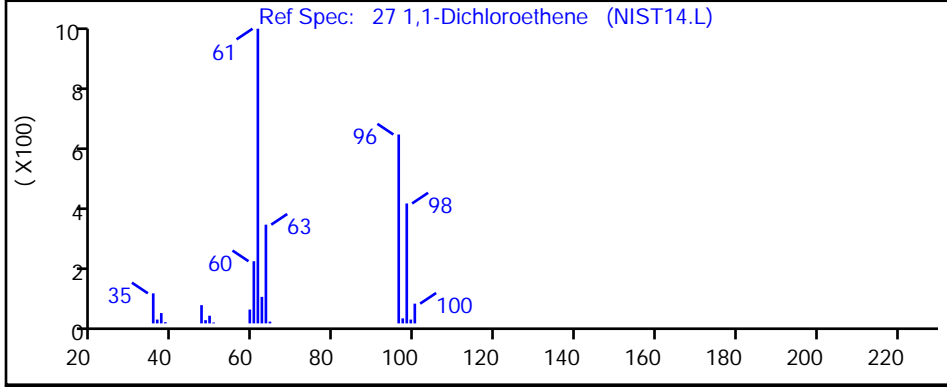
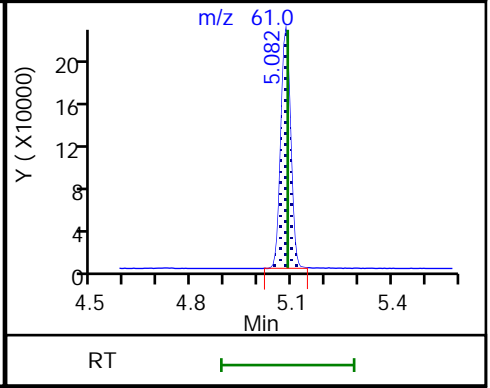
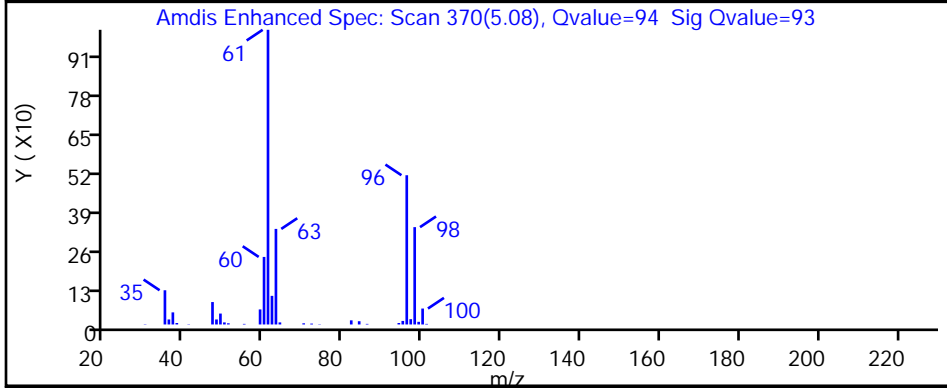
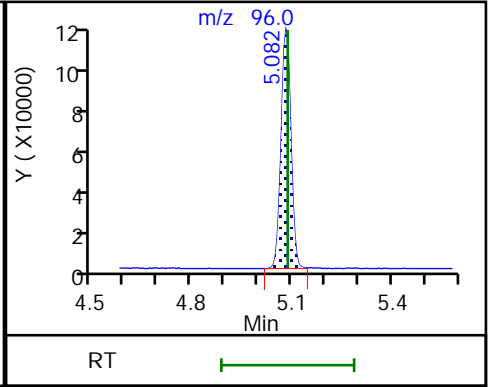
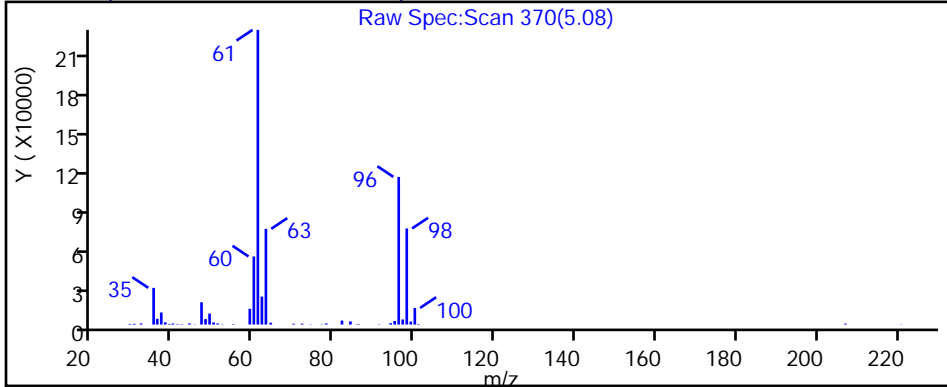
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D

Injection Date: 07-Feb-2019 19:15:30

Instrument ID: MR

Lims ID: 140-14199-A-3

Lab Sample ID: 140-14199-3

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

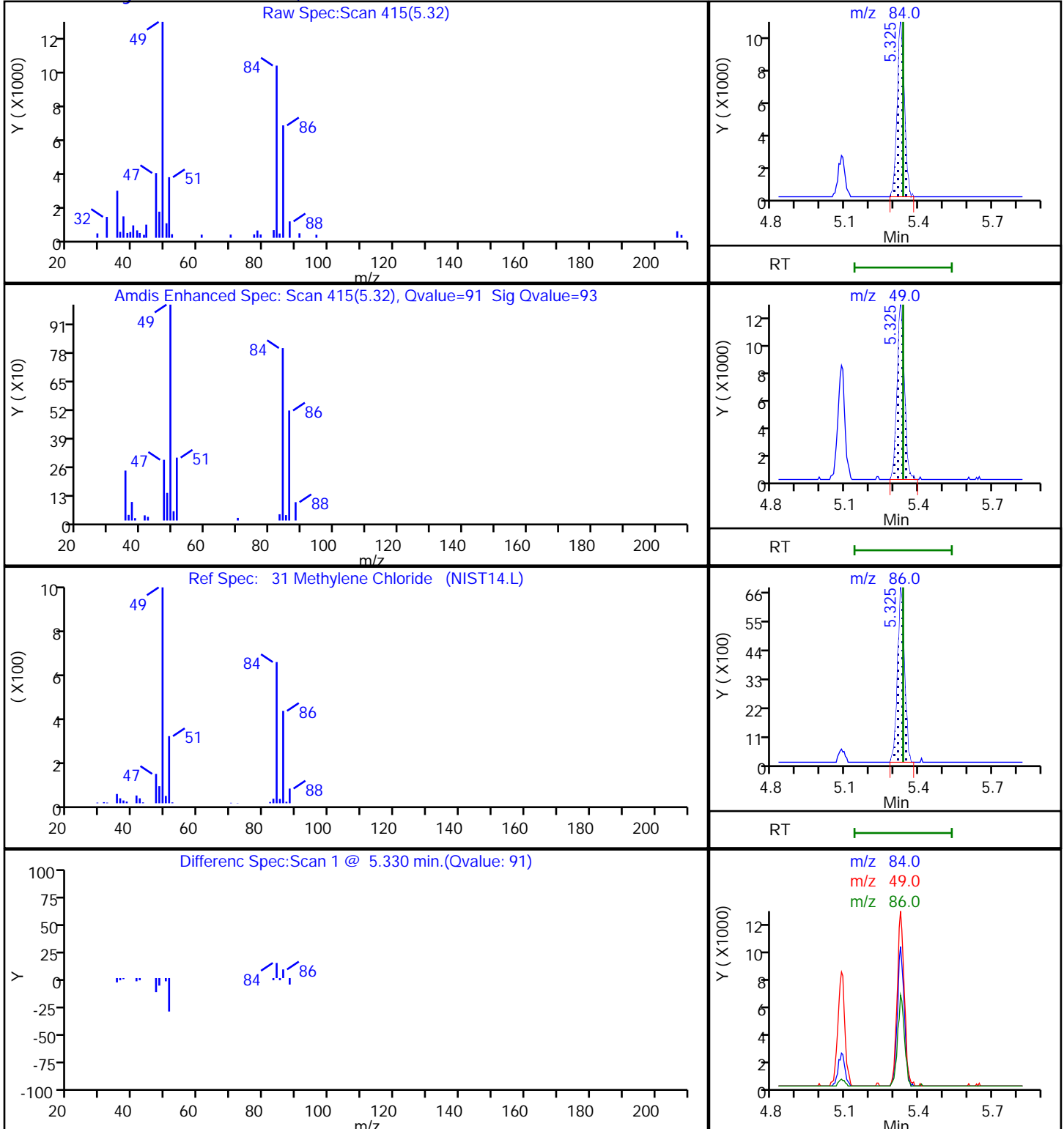
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D

Injection Date: 07-Feb-2019 19:15:30

Instrument ID: MR

Lims ID: 140-14199-A-3

Lab Sample ID: 140-14199-3

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

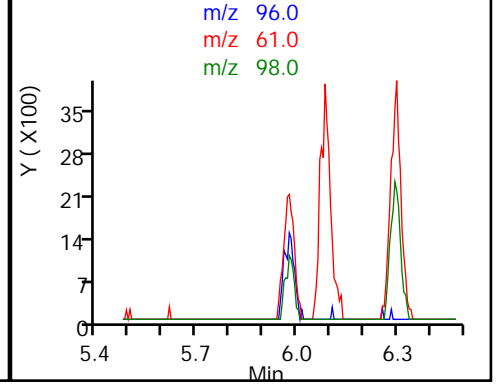
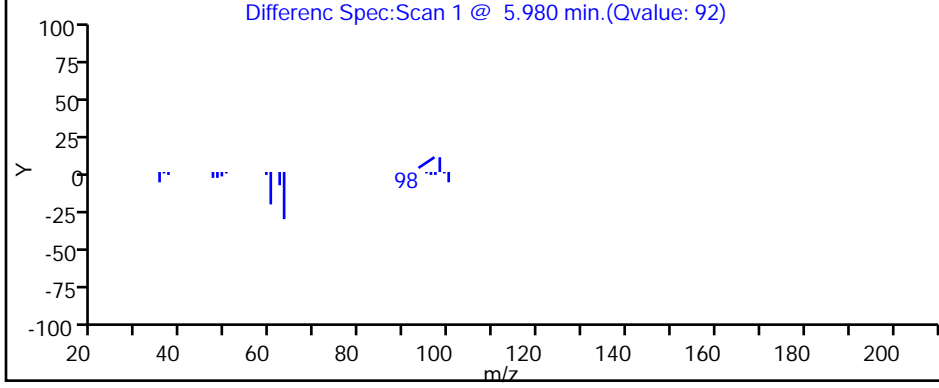
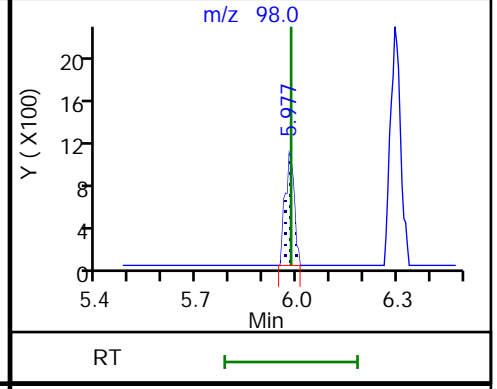
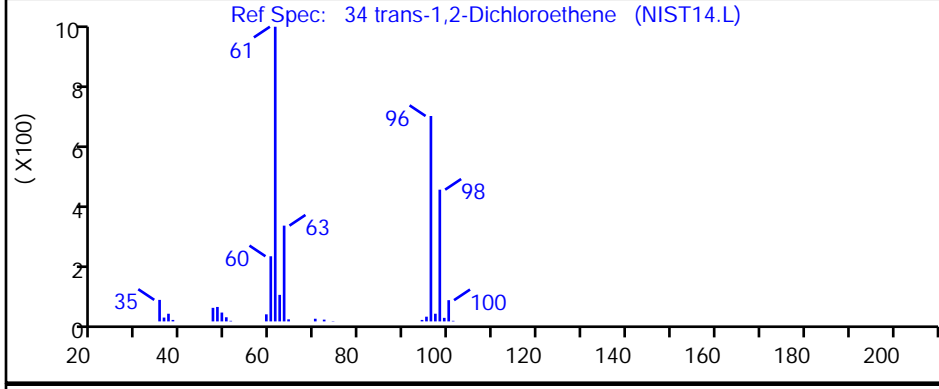
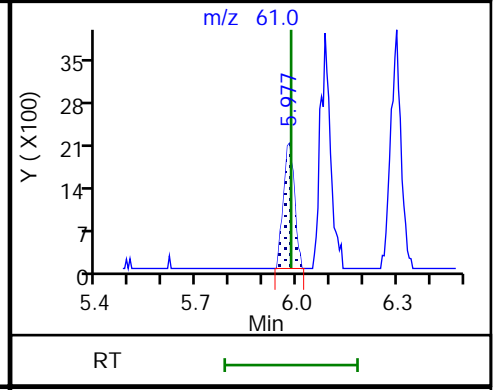
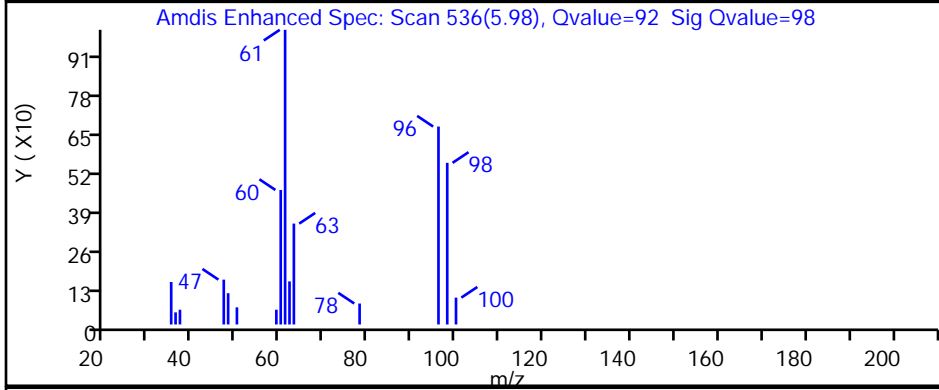
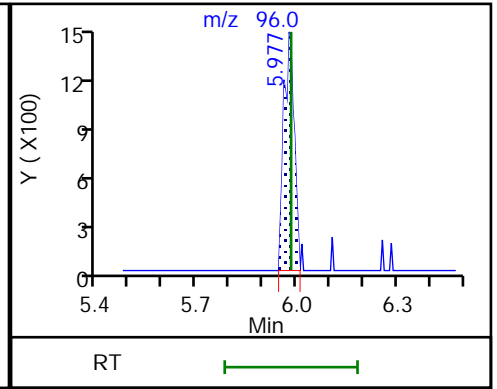
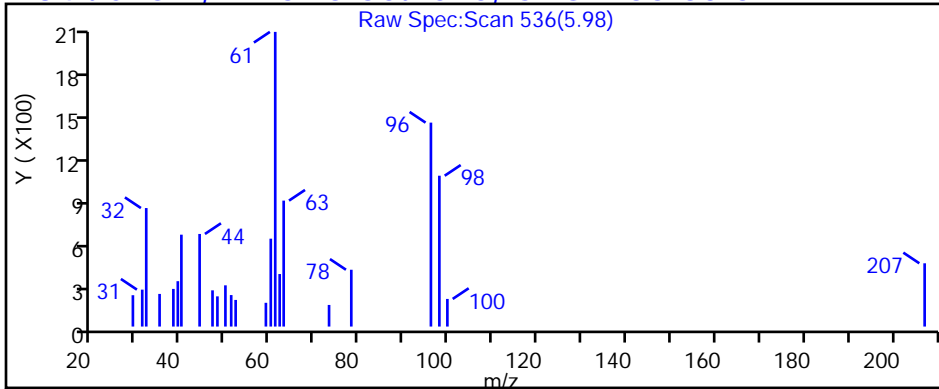
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D

Injection Date: 07-Feb-2019 19:15:30

Instrument ID: MR

Lims ID: 140-14199-A-3

Lab Sample ID: 140-14199-3

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

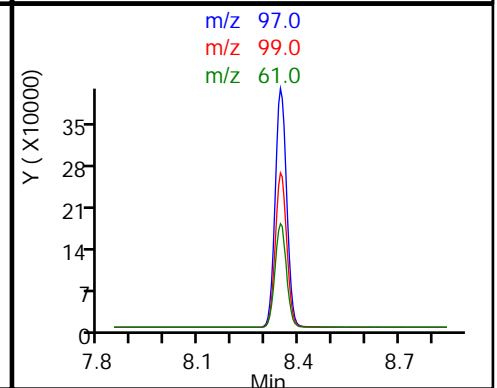
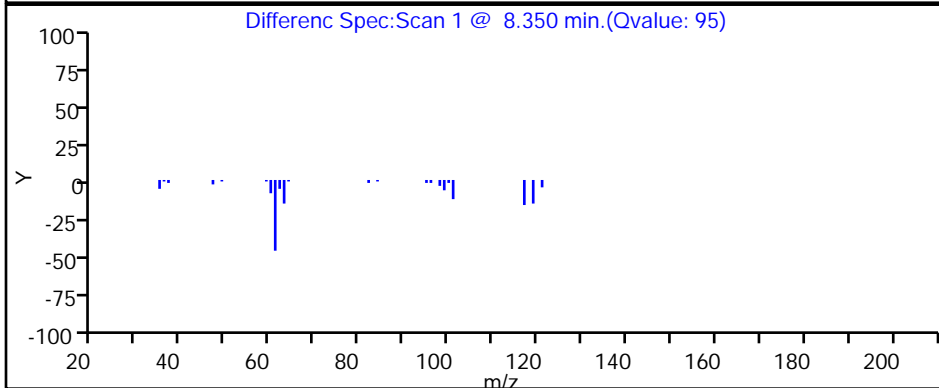
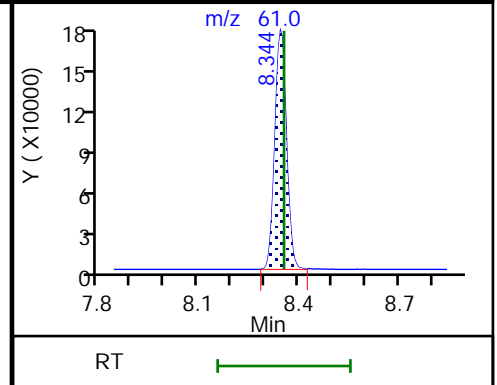
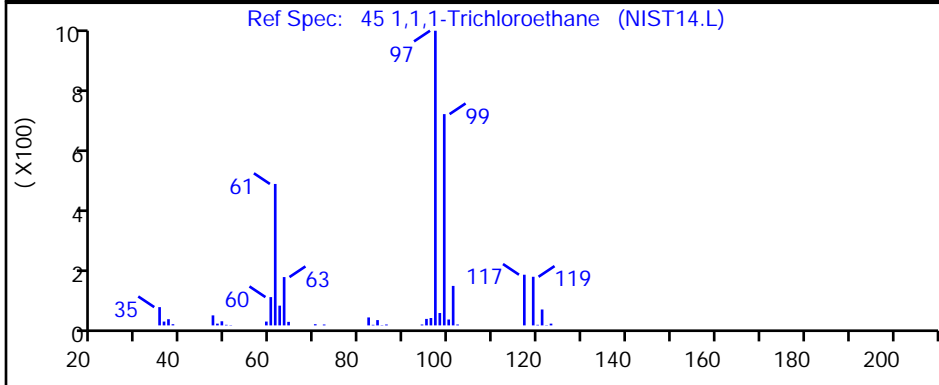
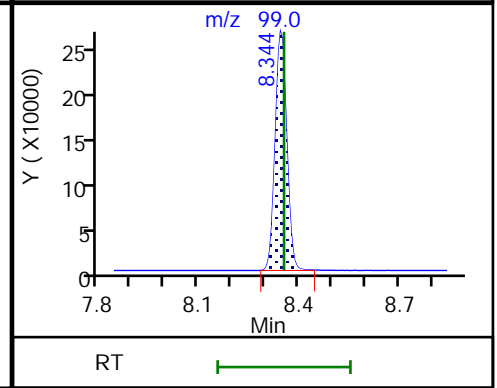
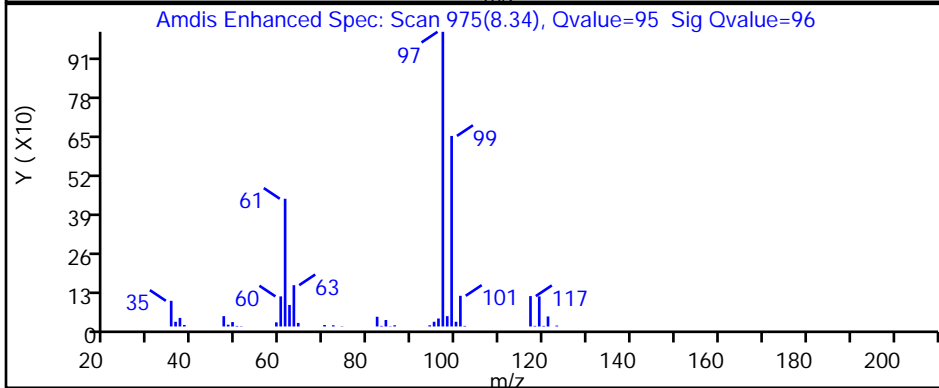
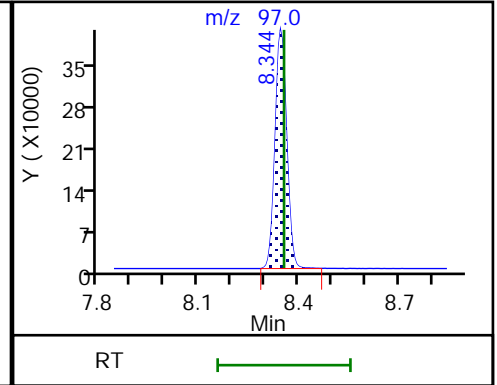
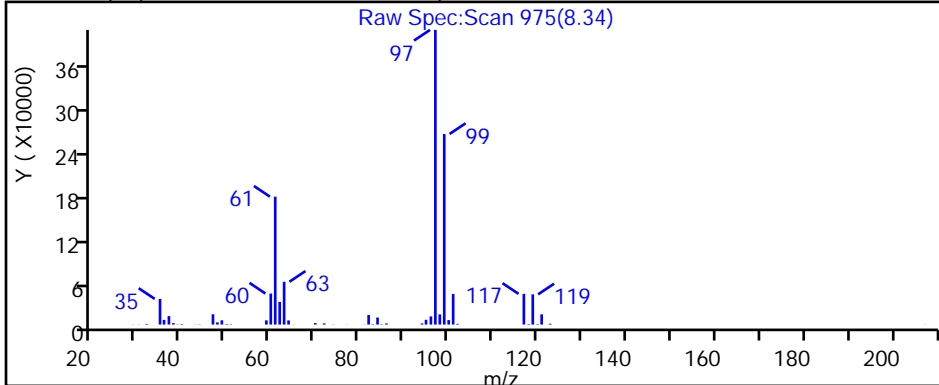
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D

Injection Date: 07-Feb-2019 19:15:30

Instrument ID: MR

Lims ID: 140-14199-A-3

Lab Sample ID: 140-14199-3

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

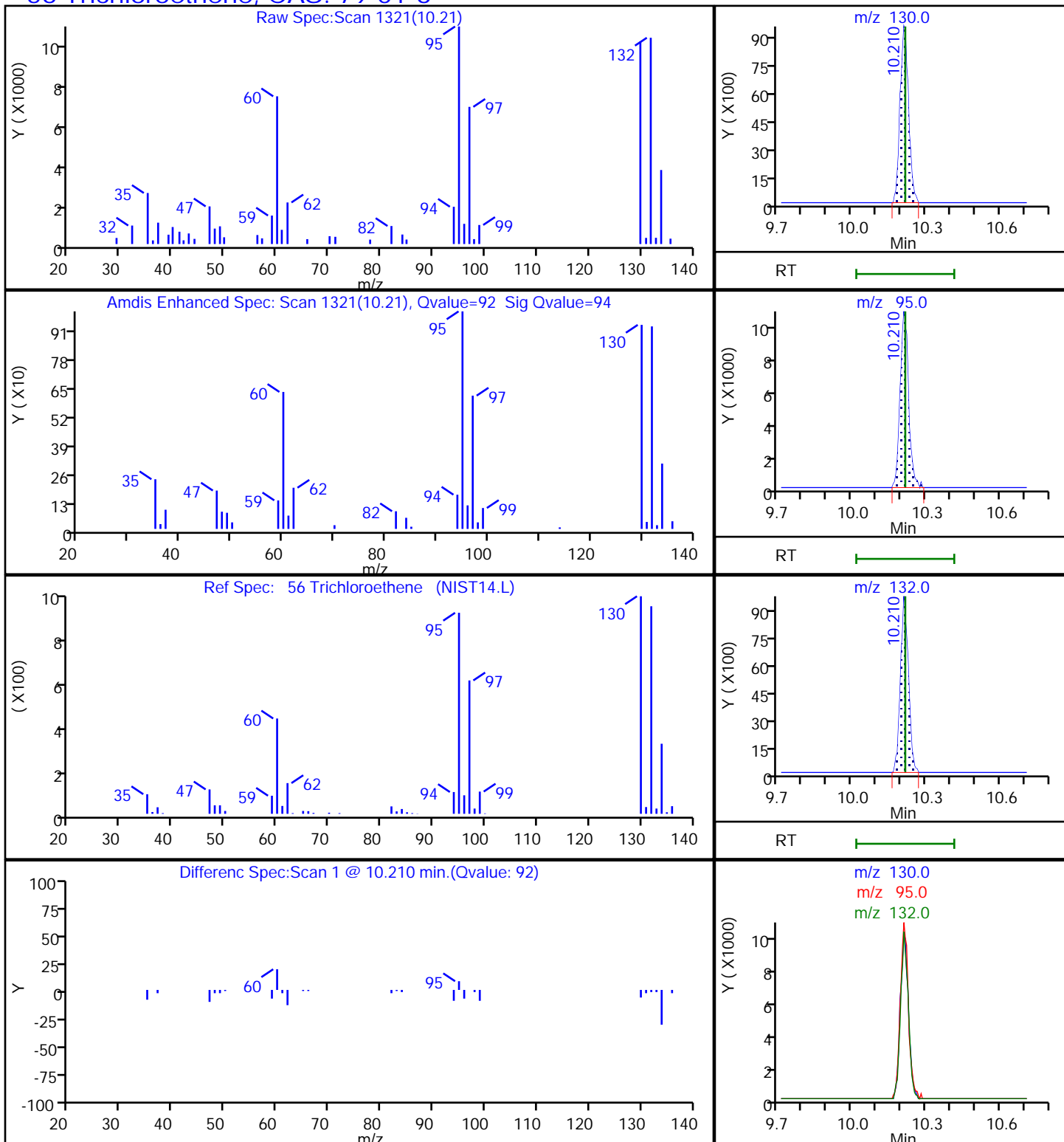
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

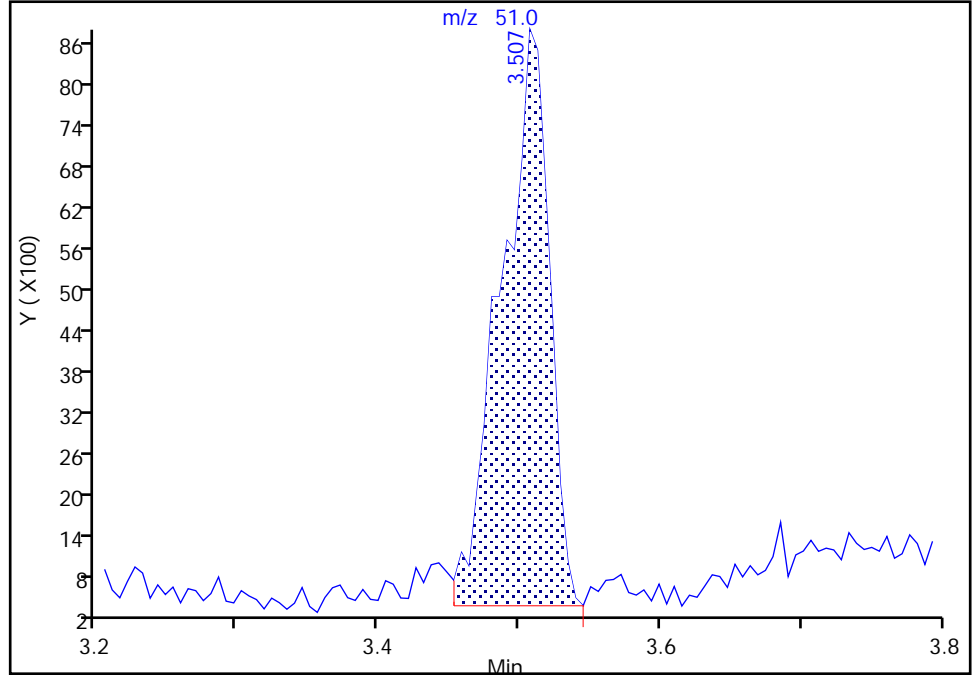
Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D
Injection Date: 07-Feb-2019 19:15:30 Instrument ID: MR
Lims ID: 140-14199-A-3 Lab Sample ID: 140-14199-3
Client ID: BLDG-A-EFFLUENT
Operator ID: ALS Bottle#: 4 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

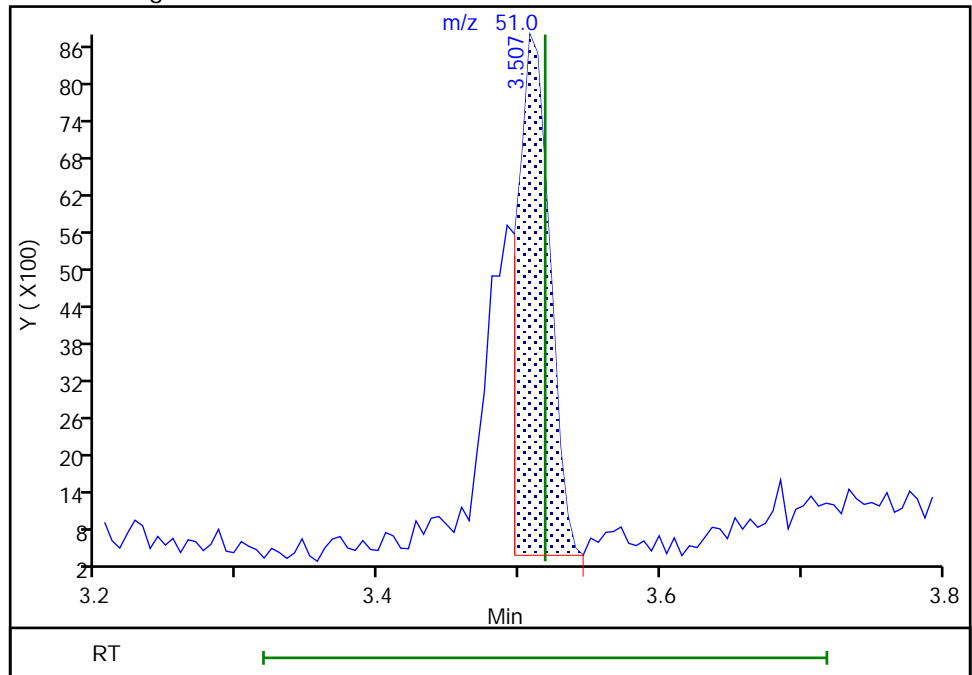
RT: 3.51
Area: 19821
Amount: 0.164814
Amount Units: ppb v/v

Processing Integration Results



RT: 3.51
Area: 13255
Amount: 0.110217
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 08-Feb-2019 13:16:59

Audit Action: Split an Integrated Peak

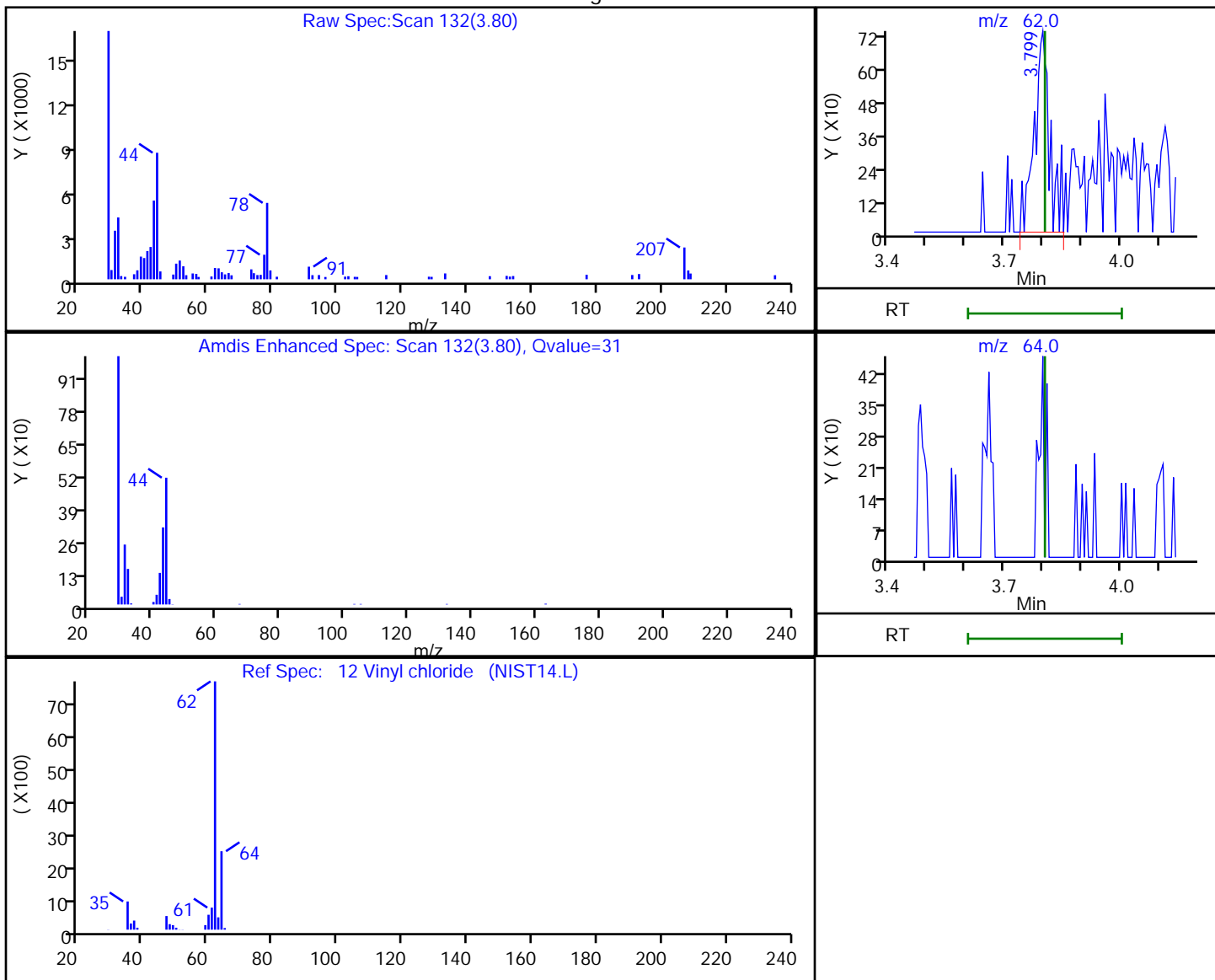
Audit Reason: Split Peak

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RB07P104.D
Injection Date: 07-Feb-2019 19:15:30 Instrument ID: MR
Lims ID: 140-14199-A-3 Lab Sample ID: 140-14199-3
Client ID: BLDG-A-EFFLUENT
Operator ID: ALS Bottle#: 4 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

12 Vinyl chloride, CAS: 75-01-4

Processing Results



RT	Mass	Response	Amount
3.80	62.00	2048	0.037664
3.80	64.00	0	

Reviewer: khachitpongpanits, 08-Feb-2019 13:17:12

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.6032	2.5523	2.4630	Ave		2.3734			6.7		30.0				
	2.3273	2.2136	2.2367	2.4103	2.1808												
Propene	+++++	+++++	+++++	0.8419	0.7507	Ave		0.7296			8.2		30.0				
	0.7221	0.6895	0.6844	0.7524	0.6660												
Dichlorodifluoromethane	+++++	+++++	4.5412	4.2461	5.3003	Ave		4.3524			11.7		30.0				
	4.1510	3.9686	4.0428	4.8211	3.7479												
Chloromethane	+++++	+++++	0.4314	0.2960	0.3371	Ave		0.3061			18.1		30.0				
	0.2871	0.2733	0.2689	0.2912	0.2638												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.8991	3.2433	3.1843	3.5538	Ave		3.2404			10.6		30.0				
	3.0989	3.0537	3.1101	3.3433	2.6767												
Vinyl chloride	1.3396	1.3354	1.1215	1.1058	1.0442	Ave		1.0731			14.4		30.0				
	0.9887	0.9559	0.9544	0.9748	0.9105												
1,3-Butadiene	+++++	+++++	+++++	0.7017	0.6571	Ave		0.6506			4.0		30.0				
	0.6523	0.6352	0.6377	0.6500	0.6202												
Butane	+++++	+++++	1.3166	1.1752	1.2095	Ave		1.1321			8.5		30.0				
	1.1091	1.0560	1.0795	1.0850	1.0260												
Bromomethane	+++++	+++++	1.4266	1.2696	1.2705	Ave		1.2354			7.2		30.0				
	1.2054	1.1811	1.1809	1.2035	1.1456												
Chloroethane	+++++	+++++	0.6023	0.5518	0.4948	Ave		0.4970			10.7		30.0				
	0.4893	0.4606	0.4673	0.4597	0.4499												
Ethanol	+++++	+++++	+++++	0.3286	0.3153	Ave		0.2997			6.1		30.0				
	0.2949	0.2999	0.2981	0.2885	0.2724												
Vinyl bromide	+++++	+++++	1.4513	1.3532	1.3493	Ave		1.3020			5.9		30.0				
	1.2738	1.2507	1.2699	1.2460	1.2216												
2-Methylbutane	+++++	+++++	0.8639	0.8536	0.8359	Ave		0.7999			5.7		30.0				
	0.7979	0.7734	0.7606	0.7713	0.7425												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Acrolein	++++ 0.2149	++++ 0.2505	++++ 0.2493	0.3397 0.2426	0.2316 0.2411	Ave		0.2528			15.9		30.0				
Trichlorofluoromethane	6.6790 5.8128	6.2714 5.6498	6.2323 5.6579	6.0249 5.5584	5.9679 5.2697	Ave		5.9124			6.9		30.0				
Acetonitrile	++++ 0.2348	++++ 0.2373	++++ 0.2818	0.2630 0.2803	0.2428 0.2703	Ave		0.2586			7.8		30.0				
Acetone	++++ 0.4175	++++ 0.3860	++++ 0.3784	0.5760 0.3627	0.4291 0.3557	Ave		0.4151			18.3		30.0				
Pentane	++++ 0.1987	++++ 0.1907	++++ 0.1944	0.2412 0.1914	0.2034 0.1879	Ave		0.2011			9.2		30.0				
Isopropyl alcohol	++++ 1.1215	++++ 1.1376	++++ 1.1294	1.2584 1.0760	1.1488 1.0492	Ave		1.1316			5.9		30.0				
Ethyl ether	++++ 0.6540	++++ 0.6244	++++ 0.6327	0.7089 0.6995	0.6970 0.6464	Ave		0.6661			5.2		30.0				
1,1-Dichloroethene	1.6400 1.3612	1.4528 1.3523	1.4077 1.3829	1.3842 1.3970	1.3751 1.3233	Ave		1.4076			6.3		30.0				
Acrylonitrile	++++ 0.6195	++++ 0.6124	++++ 0.6202	++++ 0.6572	0.6255 0.6313	Ave		0.6277			2.5		30.0				
tert-Butyl alcohol	++++ 2.6737	++++ 2.7383	++++ 2.6973	2.6805 2.6655	2.7132 2.5593	Ave		2.6773			2.0		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.5282	3.6010 3.4530	3.7397 3.4392	3.5306 3.4042	3.5510 3.1580	Ave		3.4894			4.6		30.0				
Methylene Chloride	++++ 1.2853	++++ 1.1917	++++ 1.1531	2.0228 1.1482	1.5003 1.0647	Ave		1.3380			24.9		30.0				
3-Chloropropene	++++ 1.3439	++++ 1.2944	1.1777 1.2837	1.4302 1.3374	1.3141 1.2919	Ave		1.3092			5.4		30.0				
Carbon disulfide	++++ 3.4096	++++ 3.3395	3.3655 3.3248	3.2471 3.4285	3.3320 3.2774	Ave		3.3406			1.8		30.0				
trans-1,2-Dichloroethene	1.5926 1.4009	1.5829 1.3797	1.4276 1.4044	1.3885 1.4254	1.3834 1.3721	Ave		1.4358			5.7		30.0				
2-Methylpentane	++++ 1.8951	++++ 1.8425	++++ 1.8466	1.9630 1.9346	1.9304 1.8132	Ave		1.8940			2.8		30.0				
Methyl tert-butyl ether	++++ 4.5873	++++ 4.5288	4.7495 4.5802	4.4631 4.6026	4.5963 4.4400	Ave		4.5685			2.1		30.0				
1,1-Dichloroethane	2.6815 2.3300	2.6739 2.2911	2.4729 2.3182	2.3130 2.3408	2.3587 2.2447	Ave		2.4025			6.5		30.0				
Vinyl acetate	++++ 2.2364	++++ 2.3368	++++ 2.4359	2.0297 2.5381	2.1537 2.5129	Ave		2.3205			8.2		30.0				
2-Butanone (MEK)	++++ 0.5380	++++ 0.5309	++++ 0.5519	0.5759 0.5616	0.5098 0.5445	Ave		0.5446			3.9		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14199-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	++++ 0.8187	++++ 0.8108	0.9023 0.8291	0.8416 0.8382	0.8376 0.8031	Ave		0.8352			3.6		30.0				
cis-1,2-Dichloroethene	1.6200 1.4112	1.4958 1.4310	1.4342 1.4304	1.4272 1.4418	1.3943 1.3928	Ave		1.4479			4.6		30.0				
Ethyl acetate	++++ 2.0207	++++ 2.0336	1.8097 2.1099	1.9184 2.1701	1.9214 2.1110	Ave		2.0119			6.0		30.0				
Chloroform	4.2334 3.7394	4.0960 3.6835	3.8341 3.7449	3.7602 3.7523	3.7763 3.5872	Ave		3.8207			5.1		30.0				
Tetrahydrofuran	++++ 0.8846	++++ 0.8714	++++ 0.8870	0.8784 0.9150	0.8832 0.8836	Ave		0.8862			1.5		30.0				
1,1,1-Trichloroethane	4.9709 4.7770	4.9939 4.7670	5.0122 4.8476	4.7467 4.8764	4.7402 4.7023	Ave		4.8434			2.4		30.0				
1,2-Dichloroethane	0.5380 0.5057	0.5327 0.4936	0.5166 0.4997	0.4858 0.5068	0.4926 0.4915	Ave		0.5063			3.5		30.0				
Benzene	0.7533 0.6321	0.7075 0.6240	0.7019 0.6266	0.6312 0.6238	0.6214 0.5956	Ave		0.6517			7.8		30.0				
Cyclohexane	++++ 0.1013	++++ 0.0986	++++ 0.1001	0.0959 0.0971	0.0939 0.0911	Ave		0.0968			3.7		30.0				
1-Butanol	++++ 0.0448	++++ 0.0477	++++ 0.0492	++++ 0.0516	0.0330 0.0509	Ave		0.0462			14.9		30.0				
Carbon tetrachloride	0.9231 0.9489	0.9429 0.9372	0.7537 0.9263	0.9038 0.9692	0.9350 0.9273	Ave		0.9167			6.5		30.0				
2,3-Dimethylpentane	++++ 0.1378	++++ 0.1390	++++ 0.1212	0.1277 0.1410	0.1355 0.1365	Ave		0.1349			5.2		30.0				
Thiophene	++++ 0.3778	++++ 0.3718	0.3563 0.3816	0.3607 0.3893	0.3698 0.3754	Ave		0.3728			2.9		30.0				
2,2,4-Trimethylpentane	++++ 0.8423	++++ 0.8248	++++ 0.8652	0.8182 0.8535	0.8128 0.8176	Ave		0.8342			2.3		30.0				
1,2-Dichloropropane	++++ 0.2041	++++ 0.2015	0.2130 0.2054	0.1991 0.2089	0.2024 0.2020	Ave		0.2045			2.2		30.0				
Heptane	++++ 0.2142	++++ 0.2122	++++ 0.1976	0.1979 0.2154	0.2071 0.2066	Ave		0.2083			3.5		30.0				
Trichloroethene	0.4192 0.3857	0.3851 0.3869	0.4007 0.4221	0.3771 0.3913	0.3880 0.3727	Ave		0.3929			4.2		30.0				
Dibromomethane	++++ 0.3459	++++ 0.3374	++++ 0.3725	0.3565 0.3576	0.3464 0.3447	Ave		0.3514			3.1		30.0				
Bromodichloromethane	++++ 0.6680	++++ 0.6726	0.5971 0.7005	0.5918 0.7174	0.6239 0.6980	Ave		0.6587			7.4		30.0				
1,4-Dioxane	++++ 0.0965	++++ 0.1030	++++ 0.1037	++++ 0.1007	0.0992 0.0954	Ave		0.0994			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.2243	++++ 0.2331	0.2139 0.2468	0.1766 0.2628	0.2044 0.2582	Ave		0.2275			12.8		30.0				
Methylcyclohexane	++++ 0.4067	++++ 0.4050	0.3972 0.4110	0.3842 0.4158	0.3938 0.4053	Ave		0.4024			2.5		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.3577	++++ 0.3715	++++ 0.3933	0.2895 0.4035	0.3277 0.3952	Ave		0.3626			11.5		30.0				
cis-1,3-Dichloropropene	++++ 0.3940	0.3635 0.4127	0.3972 0.4288	0.3514 0.4368	0.3808 0.4249	Ave		0.3948			8.2		30.0				
trans-1,3-Dichloropropene	++++ 0.4780	0.4035 0.4968	0.3959 0.5178	0.4276 0.5209	0.4537 0.5119	Ave		0.4674			10.5		30.0				
Toluene	1.0184 0.9698	0.9133 0.9624	0.9750 0.9710	0.9478 0.9638	0.9541 0.9102	Ave		0.9586			3.2		30.0				
1,1,2-Trichloroethane	0.2339 0.2639	0.2426 0.2594	0.2564 0.2610	0.2580 0.2630	0.2596 0.2452	Ave		0.2543			4.0		30.0				
2-Hexanone	++++ 0.1981	++++ 0.2103	++++ 0.2238	0.1399 0.2293	0.1787 0.2239	Ave		0.2006			16.0		30.0				
Dibromochloromethane	0.6655 0.7840	0.5795 0.8296	0.6334 0.8666	0.6501 0.8735	0.6985 0.8331	Ave		0.7414			14.6		30.0				
Octane	++++ 0.3146	++++ 0.3133	0.2922 0.3156	0.3033 0.3109	0.2998 0.2932	Ave		0.3054			3.1		30.0				
C8 Range	++++ 2.1678	++++ 2.1237	++++ 2.1591	++++ 2.2092	2.0961 2.0601	Ave		2.1360			2.5		30.0				
1,2-Dibromoethane (EDB)	++++ 0.5766	++++ 0.5804	0.5000 0.5952	0.4942 0.5984	0.5448 0.5694	Ave		0.5574			7.3		30.0				
Tetrachloroethene	0.4858 0.4849	0.4864 0.4819	0.4732 0.4752	0.4838 0.4653	0.4706 0.4417	Ave		0.4749			2.9		30.0				
Chlorobenzene	0.8210 0.8508	0.8425 0.8373	0.8551 0.8444	0.8450 0.8430	0.8379 0.7968	Ave		0.8374			2.0		30.0				
Ethylbenzene	1.3703 1.4178	1.3589 1.4128	1.4055 1.4174	1.3343 1.4023	1.4017 1.2986	Ave		1.3820			2.9		30.0				
m-Xylene & p-Xylene	1.1137 1.1838	1.1023 1.1550	1.1618 1.1536	1.1488 1.1251	1.1673 1.0234	Ave		1.1335			4.1		30.0				
Bromoform	++++ 0.7606	++++ 0.8485	0.5893 0.9286	0.6166 0.9279	0.6638 0.8938	Ave		0.7786			18.1		30.0				
Styrene	++++ 0.7750	++++ 0.7975	0.6004 0.8292	0.6182 0.8487	0.6786 0.7961	Ave		0.7430			13.0		30.0				
o-Xylene	1.1430 1.2366	1.1230 1.2060	1.2624 1.1986	1.2290 1.1769	1.2492 1.0804	Ave		1.1905			5.0		30.0				
Nonane	++++ 0.4737	++++ 0.4580	0.4455 0.4538	0.4515 0.4433	0.4801 0.4032	Ave		0.4511			5.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14199-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.5797	0.5118	0.5697	0.5802	0.6188	Ave		0.6050			7.5		30.0				
	0.6456	0.6455	0.6181	0.6658	0.6146												
1,2,3-Trichloropropane	++++	++++	0.2911	0.2918	0.2978	Ave		0.3000			2.7		30.0				
	0.3084	0.3034	0.3046	0.3115	0.2914												
Isopropylbenzene	++++	++++	1.8308	1.7528	1.7150	Ave		1.6941			5.0		30.0				
	1.7012	1.6661	1.6871	1.6694	1.5307												
Propylbenzene	0.4435	0.4328	0.4534	0.4640	0.4755	Ave		0.4652			4.5		30.0				
	0.4963	0.4795	0.4859	0.4778	0.4438												
2-Chlorotoluene	++++	0.3991	0.4619	0.4417	0.4398	Ave		0.4306			5.3		30.0				
	0.4524	0.4310	0.4318	0.4245	0.3929												
4-Ethyltoluene	1.5529	1.6047	1.7828	1.7531	1.7972	Ave		1.7594			6.6		30.0				
	1.8829	1.8611	1.8557	1.8469	1.6563												
1,3,5-Trimethylbenzene	0.6792	0.6523	0.7326	0.7228	0.7292	Ave		0.7199			5.1		30.0				
	0.7724	0.7416	0.7410	0.7434	0.6843												
Alpha Methyl Styrene	++++	++++	++++	0.5439	0.5731	Ave		0.6844			13.4		30.0				
	0.6781	0.7295	0.7535	0.7838	0.7289												
Decane	++++	++++	0.6176	0.6408	0.6488	Ave		0.6421			4.6		30.0				
	0.6849	0.6585	0.6522	0.6491	0.5849												
tert-Butylbenzene	1.6566	1.6665	1.8313	1.8740	1.8639	Ave		1.7534			6.6		30.0				
	1.8841	1.7827	1.7468	1.6988	1.5293												
1,2,4-Trimethylbenzene	1.4293	1.4880	1.6887	1.6986	1.7123	Ave		1.6066			7.2		30.0				
	1.7233	1.6671	1.6372	1.5922	1.4293												
1,3-Dichlorobenzene	1.1997	1.0963	1.2442	1.1823	1.1621	Ave		1.1598			4.5		30.0				
	1.1856	1.1603	1.1572	1.1516	1.0583												
sec-Butylbenzene	2.0787	2.1298	2.2743	2.2407	2.2363	Ave		2.1706			5.7		30.0				
	2.3069	2.2195	2.1908	2.1561	1.8732												
Benzyl chloride	++++	++++	1.0998	1.0436	1.1034	Ave		1.2392			11.3		30.0				
	1.2529	1.3231	1.4041	1.3938	1.2924												
1,4-Dichlorobenzene	1.2196	1.1487	1.2267	1.2179	1.1651	Ave		1.1644			5.1		30.0				
	1.2112	1.1594	1.1399	1.1212	1.0340												
4-Isopropyltoluene	2.1095	2.1432	2.2305	2.2370	2.2728	Ave		2.1910			5.2		30.0				
	2.3345	2.2554	2.2238	2.1784	1.9244												
1,2,3-Trimethylbenzene	1.6103	1.5786	1.8623	1.7831	1.7558	Ave		1.7253			6.2		30.0				
	1.8346	1.7874	1.7524	1.7335	1.5556												
1,2-Dichlorobenzene	1.1708	1.2083	1.2580	1.2065	1.1355	Ave		1.1443			6.3		30.0				
	1.1557	1.1157	1.1029	1.0865	1.0034												
Indane	1.4503	1.3817	1.4785	1.4862	1.4419	Ave		1.4233			5.0		30.0				
	1.4994	1.4300	1.4226	1.3893	1.2529												
Indene	++++	++++	1.0339	1.0803	1.0663	Ave		1.1682			8.2		30.0				
	1.2013	1.2223	1.2542	1.2953	1.1920												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.8231	1.6985	1.8359	1.8719	1.8266	Ave		1.7844			5.4		30.0				
	1.8829	1.8028	1.7871	1.7597	1.5551												
Undecane	++++	++++	++++	++++	0.7701	Ave		0.7598			5.8		30.0				
	0.8059	0.7917	0.7809	0.7402	0.6720												
1,2-Dibromo-3-Chloropropane	++++	++++	0.4391	0.4709	0.4861	Ave		0.5572			14.3		30.0				
	0.5799	0.6160	0.6515	0.6213	0.5926												
1,2,4,5-Tetramethylbenzene	++++	++++	2.1451	2.1430	1.9593	Ave		2.0670			5.7		30.0				
	2.1235	2.1635	2.1540	1.9985	1.8488												
Dodecane	++++	++++	++++	0.8688	0.6803	Ave		0.7957			10.9		30.0				
	0.7733	0.8936	0.8877	0.7212	0.7447												
1,2,4-Trichlorobenzene	++++	++++	1.4472	1.3888	1.0856	Ave		1.2354			10.9		30.0				
	1.1894	1.2694	1.2818	1.0940	1.1269												
Naphthalene	++++	3.4525	2.8184	2.7367	1.8255	Ave		2.4980			20.6		30.0				
	2.0750	2.4487	2.5087	2.1182	++++												
Hexachlorobutadiene	++++	++++	1.7181	1.5746	1.3912	Ave		1.4362			11.7		30.0				
	1.4923	1.4393	1.4314	1.2072	1.2353												
1,2,3-Trichlorobenzene	++++	++++	1.4432	1.3860	1.0237	Ave		1.1873			13.9		30.0				
	1.1295	1.2212	1.2323	0.9868	1.0761												
2-Methylnaphthalene	++++	++++	++++	++++	++++	Ave		0.7935			36.8		50.0				
	0.3586	0.9509	1.0808	0.6399	0.9374												
1-Methylnaphthalene	++++	++++	++++	++++	++++	Ave		0.6999			33.7		50.0				
	0.3899	0.8629	0.9496	0.5203	0.7770												
4-Bromofluorobenzene (Surr)	0.8488	0.8528	0.8654	0.8648	0.8641	Ave		0.8506			2.2		30.0				
	0.8636	0.8535	0.8546	0.8319	0.8066												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Chlorodifluoromethane	CBM	Ave	++++	++++	13488	27178	67965	++++	++++	0.0800	0.160	0.400
			165552	330784	670931	1511149	2786793	1.00	2.00	4.00	8.00	16.0
Propene	CBM	Ave	++++	++++	++++	8965	20715	++++	++++	++++	0.160	0.400
			51364	103039	205301	471697	851034	1.00	2.00	4.00	8.00	16.0
Dichlorodifluoromethane	CBM	Ave	++++	++++	23530	45214	146259	++++	++++	0.0800	0.160	0.400
			295289	593041	1212691	3022572	4789313	1.00	2.00	4.00	8.00	16.0
Chloromethane	CBM	Ave	++++	++++	2235	3152	9302	++++	++++	0.0800	0.160	0.400
			20420	40844	80675	182542	337068	1.00	2.00	4.00	8.00	16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++	10161	16805	33908	98065	++++	0.0400	0.0800	0.160	0.400
			220441	456323	932912	2096072	3420506	1.00	2.00	4.00	8.00	16.0
Vinyl chloride	CBM	Ave	1811	3480	5811	11775	28814	0.0200	0.0400	0.0800	0.160	0.400
			70331	142840	286294	611179	1163551	1.00	2.00	4.00	8.00	16.0
1,3-Butadiene	CBM	Ave	++++	++++	++++	7472	18132	++++	++++	++++	0.160	0.400
			46402	94920	191280	407531	792495	1.00	2.00	4.00	8.00	16.0
Butane	CBM	Ave	++++	++++	6822	12514	33375	++++	++++	0.0800	0.160	0.400
			78896	157806	323819	680235	1311043	1.00	2.00	4.00	8.00	16.0
Bromomethane	CBM	Ave	++++	++++	7392	13519	35058	++++	++++	0.0800	0.160	0.400
			85746	176496	354225	754560	1463890	1.00	2.00	4.00	8.00	16.0
Chloroethane	CBM	Ave	++++	++++	3121	5876	13655	++++	++++	0.0800	0.160	0.400
			34804	68833	140181	288211	574974	1.00	2.00	4.00	8.00	16.0
Ethanol	CBM	Ave	++++	++++	++++	17498	43508	++++	++++	++++	0.800	2.00
			104882	224069	447098	904290	1740692	5.00	10.0	20.0	40.0	80.0
Vinyl bromide	CBM	Ave	++++	++++	7520	14410	37233	++++	++++	0.0800	0.160	0.400
			90610	186899	380924	781185	1560991	1.00	2.00	4.00	8.00	16.0
2-Methylbutane	CBM	Ave	++++	++++	4476	9090	23067	++++	++++	0.0800	0.160	0.400
			56760	115570	228167	483547	948871	1.00	2.00	4.00	8.00	16.0
Acrolein	CBM	Ave	++++	++++	++++	3617	6392	++++	++++	++++	0.160	0.400
			15289	37440	74788	152096	308108	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14199-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	9029 413497	16343 844261	32292 1697186	64156 3484877	164680 6733950	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 16703	++++ 35460	++++ 84531	++++ 175714	2801 345458	6701 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Acetone	CBM	Ave	++++ 89101	++++ 173059	++++ 340521	18402 682117	35521 1363433	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 14137	++++ 28499	++++ 58302	2568 119973	5613 240067	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 239341	++++ 509997	++++ 1016357	40201 2023732	95103 4022317	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 46526	++++ 93310	++++ 189800	7549 438542	19232 826066	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	2217 96830	3786 202076	7294 414812	14740 875865	37945 1690964	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 44072	++++ 91512	++++ 186041	++++ 412056	17259 806690	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 190196	++++ 409183	13889 809098	28891 1671112	74242 3270376	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 250984	9384 515989	19377 1031649	37596 2134286	97989 4035478	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 91431	++++ 178076	++++ 345898	21540 719893	41401 1360585	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 95603	++++ 193431	6102 385054	15229 838478	36262 1650820	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 242543	++++ 499031	17438 997332	34577 2149500	91945 4188128	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	2153 99652	4125 206172	7397 421281	14785 893667	38175 1753401	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 134813	++++ 275324	10171 553915	20556 1212878	53163 2316982	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 326320	++++ 676752	24609 1373906	47525 2885627	126834 5673760	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	3625 165748	6968 342362	12813 695373	24630 1467554	65086 2868475	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 159088	++++ 349189	++++ 730693	21613 1591261	59429 3211124	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 38268	++++ 79333	++++ 165553	6132 352107	14067 695780	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 58239	++++ 121155	++++ 248691	4675 525494	8962 1026278	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	2190 100389	3898 213838	7431 429081	15197 903953	38474 1779827	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14199-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 143745	++++ 303889	9377 632910	20428 1360573	53019 2697533	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	5723 266010	10674 550434	19866 1123349	40040 2352521	104204 4583947	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 62926	++++ 130211	++++ 266070	9354 573668	24371 1129072	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	6720 339819	13014 712345	25970 1454125	50545 3057281	130803 6008857	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4162 199683	7880 414101	15042 837957	29238 1778626	76773 3480930	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	5827 249589	10465 523482	20437 1050705	37991 2189441	96837 4217712	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 39991	++++ 82675	++++ 167839	5770 340746	14632 645373	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 17690	++++ 40004	++++ 82457	++++ 181076	5146 360622	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7141 374679	13947 786171	21947 1553305	54395 3401707	145724 6567265	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 54415	++++ 116636	++++ 235995	3528 494713	7686 966448	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 149183	++++ 311873	++++ 639928	10374 1366267	57630 2658371	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 332582	++++ 691902	++++ 1407509	25192 2995449	49245 5790015	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 80581	++++ 169011	++++ 344383	6201 733246	11982 1430590	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 84592	++++ 178041	++++ 361284	5754 756110	32279 1463381	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	3243 152289	5696 324569	11668 707793	22698 1373208	60473 2639630	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 136587	++++ 283066	++++ 586890	10846 1255108	53985 2441282	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 263754	++++ 564189	++++ 1174659	17387 2518000	97237 4943175	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 38117	++++ 86437	++++ 173912	5968 353467	15165 675333	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 88559	++++ 195505	++++ 413937	6227 922467	10629 1828238	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	++++ 160604	++++ 339768	++++ 689164	11565 1459181	23124 2870166	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 141224	++++ 311634	++++ 659470	17423 1416282	51070 2798783	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14199-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 155584	5376 346235	10488 719012	21150 1532867	59340 3009068	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 165754	5189 369600	10066 783879	22215 1677181	61443 3381888	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	6779 336279	11744 715966	24790 1469948	49243 3103222	129198 6012505	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	1557 91510	3120 192987	6520 395113	13406 846792	35149 1619482	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 68694	++++ 156406	++++ 338784	7267 738442	24199 1478910	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	4430 271846	7451 617174	16103 1311808	33778 2812660	94584 5503585	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 109095	++++ 233063	7429 477723	15759 1000926	40600 1936591	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	DFBZ	Ave	++++ 855982	++++ 1781529	++++ 3620641	++++ 7753468	++++ 14589114	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 199953	++++ 431756	12712 900939	25676 1926667	73769 3761382	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3234 168145	6255 358488	12031 719415	25138 1498188	63725 2918044	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	5465 295002	10833 622855	21742 1278293	43900 2714425	113462 5263414	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	9121 491615	17474 1050972	35735 2145561	69322 4515180	189812 8578718	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	14827 820994	28347 1718390	59080 3492522	119367 7245395	316153 13520878	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	++++ 263744	++++ 631165	14982 1405685	32037 2987666	89888 5904670	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd 5	Ave	++++ 268745	++++ 593262	15265 1255220	32117 2732738	91899 5258738	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	7608 428791	14440 897122	32097 1814388	63851 3789404	169158 7137002	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Nonane	CBZd 5	Ave	++++ 164273	++++ 340741	11326 686883	23460 1427330	65019 2663319	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	3859 223872	6581 480219	14484 935594	30142 2143813	83793 4060026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 106933	++++ 225670	7400 461156	15160 1003093	40330 1925261	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 589911	++++ 1239416	46548 2553866	91067 5375264	232238 10111819	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	2952 172077	5565 356669	11527 735475	24106 1538516	64393 2931395	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14199-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 156859	5132 320641	11745 653681	22951 1366689	59552 2595696	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	10337 652888	20634 1384436	45329 2809081	91082 5946732	243377 10941125	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	4521 267835	8388 551670	18627 1121740	37553 2393487	98748 4520211	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 235120	++++ 542707	++++ 1140621	28257 2523695	77610 4814736	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 237483	++++ 489862	15703 987208	33292 2090024	87862 3864099	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11027 653325	21429 1326146	46562 2644216	97365 5469769	252400 10102100	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	9514 597546	19133 1240172	42935 2478370	88253 5126755	231880 9441765	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7986 411115	14097 863153	31633 1751738	61425 3707873	157370 6991250	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	13837 799929	27386 1651103	57824 3316313	116417 6942238	302828 12374020	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 434461	++++ 984275	27963 2125520	54221 4487660	149421 8537696	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	8118 419983	14770 862511	31188 1725619	63275 3610216	157774 6830228	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	14042 809499	27559 1677824	56711 3366403	116224 7014221	307780 12712650	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	10719 636168	20298 1329610	47349 2652674	92640 5581569	237762 10276226	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	7793 400754	15537 829934	31984 1669523	62682 3498467	153773 6628325	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	9654 519916	17767 1063787	37591 2153540	77218 4473280	195256 8276746	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 416558	++++ 909289	26287 1898638	56129 4170791	144394 7874065	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	12135 652919	21840 1341073	46679 2705337	97253 5666096	247354 10272864	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 279455	++++ 588913	++++ 1182131	40009 2383371	102646 4439100	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 201092	++++ 458234	11163 986255	24464 2000539	65829 3914341	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 736323	++++ 1609444	54539 3260653	111338 6434741	265327 12213199	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 268129	++++ 664765	++++ 1343815	45141 2322024	92125 4919414	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 412431	++++ 944306	36794 1940306	72153 3522363	147015 7444026	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 719521	++++ 1821564	44394 3797602	71658 6820345	142183 247207 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Hexachlorobutadiene	CBZd 5	Ave	++++ 517445	++++ 1070672	43683 2166873	81808 3886960	188387 8160248	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 391665	++++ 908417	36693 1865471	72007 3177370	138621 7108780	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 124366	++++ 707384	++++ 1636134	++++ 2060557	++++ 6192720	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 135206	++++ 641933	++++ 1437560	++++ 1675488	++++ 5133017	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1129964 1197793	1096528 1269845	1100173 1293730	1123241 1339226	1170099 1332053	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	9.7						50			
Propene	+++++	+++++	+++++	15.4						50		
Dichlorodifluoromethane	+++++	+++++	4.3						50			
Chloromethane	+++++	+++++	40.9						50			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	20.3						50				
Vinyl chloride	24.8						50					
1,3-Butadiene	+++++	+++++	+++++	7.9						50		
Butane	+++++	+++++	16.3						50			
Bromomethane	+++++	+++++	15.5						50			
Chloroethane	+++++	+++++	21.2						50			
Ethanol	+++++	+++++	+++++	9.7						50		
Vinyl bromide	+++++	+++++	11.5						50			
2-Methylbutane	+++++	+++++	8.0						50			
Acrolein	+++++	+++++	+++++	34.3						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Trichlorofluoromethane	13.0						50					
Acetonitrile	+++++	+++++	+++++	1.7						50		
Acetone	+++++	+++++	+++++	38.8						80		
Pentane	+++++	+++++	+++++	19.9						50		
Isopropyl alcohol	+++++	+++++	+++++	11.2						50		
Ethyl ether	+++++	+++++	+++++	6.4						50		
1,1-Dichloroethene	16.5						50					
Acrylonitrile	+++++	+++++	+++++	+++++	-0.4						50	
tert-Butyl alcohol	+++++	+++++	0.1						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.2						50				
Methylene Chloride	+++++	+++++	+++++	51.2						80		
3-Chloropropene	+++++	+++++	-10.0						50			
Carbon disulfide	+++++	+++++	0.7						50			
trans-1,2-Dichloroethene	10.9						50					
2-Methylpentane	+++++	+++++	3.6						50			
Methyl tert-butyl ether	+++++	+++++	4.0						50			
1,1-Dichloroethane	11.6						50					
Vinyl acetate	+++++	+++++	+++++	-12.5						50		
2-Butanone (MEK)	+++++	+++++	+++++	5.7						50		
Hexane	+++++	+++++	8.0						50			
cis-1,2-Dichloroethene	11.9						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-10.0						50			
Chloroform	10.8						50					
Tetrahydrofuran	+++++	+++++	+++++	-0.9						50		
1,1,1-Trichloroethane	2.6						50					
1,2-Dichloroethane	6.3						50					
Benzene	15.6						50					
Cyclohexane	+++++	+++++	+++++	-1.0						50		
1-Butanol	+++++	+++++	+++++	+++++	-28.5						50	
Carbon tetrachloride	0.7						50					
2,3-Dimethylpentane	+++++	+++++	-10.2						50			
Thiophene	+++++	+++++	-4.4						50			
2,2,4-Trimethylpentane	+++++	+++++	3.7						50			
1,2-Dichloropropane	+++++	+++++	4.1						50			
Heptane	+++++	+++++	-5.1						50			
Trichloroethene	6.7						50					
Dibromomethane	+++++	+++++	6.0						50			
Bromodichloromethane	+++++	+++++	-9.3						50			
1,4-Dioxane	+++++	+++++	+++++	-0.2						50		
Methyl methacrylate	+++++	+++++	-6.0						50			
Methylcyclohexane	+++++	+++++	-1.3						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	-20.2						50		

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.9						50				
trans-1,3-Dichloropropene	+++++	-13.7						50				
Toluene	6.2						50					
1,1,2-Trichloroethane	-8.0						50					
2-Hexanone	+++++	+++++	+++++	-30.3						50		
Dibromochloromethane	-10.2						50					
Octane	+++++	+++++	-4.3						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-10.3						50			
Tetrachloroethene	2.3						50					
Chlorobenzene	-2.0						50					
Ethylbenzene	-0.8						50					
m-Xylene & p-Xylene	-1.7						50					
Bromoform	+++++	+++++	-24.3						50			
Styrene	+++++	+++++	-19.2						50			
o-Xylene	-4.0						50					
Nonane	+++++	+++++	-1.3						50			
1,1,2,2-Tetrachloroethane	-4.2						50					
1,2,3-Trichloropropane	+++++	+++++	-3.0						50			
Isopropylbenzene	+++++	+++++	8.1						50			
Propylbenzene	-4.7						50					
2-Chlorotoluene	+++++	-7.3						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	-11.7						50					
1,3,5-Trimethylbenzene	-5.7						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-20.5						50		
Decane	+++++	+++++	-3.8						50			
tert-Butylbenzene	-5.5						50					
1,2,4-Trimethylbenzene	-11.0						50					
1,3-Dichlorobenzene	3.4						50					
sec-Butylbenzene	-4.2						50					
Benzyl chloride	+++++	+++++	-11.2						50			
1,4-Dichlorobenzene	4.7						50					
4-Isopropyltoluene	-3.7						50					
1,2,3-Trimethylbenzene	-6.7						50					
1,2-Dichlorobenzene	2.3						50					
Indane	1.9						50					
Indene	+++++	+++++	-11.5						50			
Butylbenzene	2.2						50					
Undecane	+++++	+++++	+++++	1.3						50		
1,2-Dibromo-3-Chloropropane	+++++	+++++	-21.2						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	3.8						50			
Dodecane	+++++	+++++	+++++	9.2						50		
1,2,4-Trichlorobenzene	+++++	+++++	17.1						50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	38.2		+++++				80				
Hexachlorobutadiene	+++++	+++++	19.6						50			
1,2,3-Trichlorobenzene	+++++	+++++	21.5						50			
2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-54.8						80
1-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-44.3						80

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 16-Nov-2018 17:23:30 ALS Bottle#: 15 Worklist Smp#: 3
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-003
 Misc. Info.: 190391
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:32 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh Date: 19-Nov-2018 09:42:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.411	7.397	0.014	70	313476	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.504	9.494	0.010	90	1754853	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.555	0.007	62	1609921	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	48	1339226	4.00	3.91	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	95	1511149	8.00	8.12	
7 Propene	41	3.416	3.420	-0.004	49	471697	8.00	8.25	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	3022572	8.00	8.86	
9 Chloromethane	52	3.583	3.586	-0.003	98	182542	8.00	7.61	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	87	2096072	8.00	8.25	
11 Acetaldehyde	44	3.707	3.710	-0.003	92	850959	40.0	38.0	
12 Vinyl chloride	62	3.712	3.711	0.001	71	611179	8.00	7.27	
13 Butadiene	54	3.777	3.780	-0.003	85	407531	8.00	7.99	
14 Butane	43	3.782	3.782	0.000	76	680235	8.00	7.67	
15 Bromomethane	94	3.998	3.995	0.003	93	754560	8.00	7.79	
16 Chloroethane	64	4.106	4.100	0.006	97	288211	8.00	7.40	
17 Ethanol	31	4.230	4.222	0.008	93	904290	40.0	38.5	
18 Vinyl bromide	106	4.322	4.315	0.007	94	781185	8.00	7.66	
19 2-Methylbutane	43	4.370	4.369	0.001	79	483547	8.00	7.71	
20 Acrolein	56	4.516	4.516	0.000	13	152096	8.00	7.68	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	99	3484877	8.00	7.52	
22 Acetonitrile	40	4.564	4.545	0.019	94	175714	8.00	8.67	
23 Acetone	58	4.602	4.605	-0.003	94	682117	24.0	21.0	
24 Pentane	72	4.694	4.693	0.001	89	119973	8.00	7.61	
25 Isopropyl alcohol	45	4.721	4.716	0.005	96	2023732	24.0	22.8	
26 Ethyl ether	31	4.807	4.817	-0.010	72	438542	8.00	8.40	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	875865	8.00	7.94	
28 Acrylonitrile	53	5.109	5.097	0.012	85	412056	8.00	8.38	
29 2-Methyl-2-propanol	59	5.168	5.173	-0.005	86	1671112	8.00	7.96	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	91	2134286	8.00	7.80	
31 Methylene Chloride	84	5.298	5.290	0.008	85	719893	8.00	6.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	79	838478	8.00	8.17	
33 Carbon disulfide	76	5.416	5.410	0.006	99	2149500	8.00	8.21	
34 trans-1,2-Dichloroethene	96	5.961	5.951	0.010	97	893667	8.00	7.94	
35 2-Methylpentane	43	6.015	6.011	0.004	84	1212878	8.00	8.17	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	86	2885627	8.00	8.06	
37 1,1-Dichloroethane	63	6.301	6.283	0.018	98	1467554	8.00	7.79	
38 Vinyl acetate	43	6.409	6.402	0.006	98	1591261	8.00	8.75	
39 2-Butanone (MEK)	72	6.759	6.761	-0.002	66	352107	8.00	8.25	
40 Hexane	56	6.851	6.845	0.006	78	525494	8.00	8.03	
171 Isopropyl ether	45	6.985	6.989	-0.004	86	1854270	8.00	8.23	
41 cis-1,2-Dichloroethene	96	7.142	7.127	0.015	94	903953	8.00	7.97	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	1360573	8.00	8.63	
43 Chloroform	83	7.455	7.439	0.016	97	2352521	8.00	7.86	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	93	2652444	8.00	8.17	
44 Tetrahydrofuran	42	7.784	7.793	-0.009	75	573668	8.00	8.26	
45 1,1,1-Trichloroethane	97	8.377	8.364	0.013	94	3057281	8.00	8.05	
46 1,2-Dichloroethane	62	8.441	8.427	0.014	76	1778626	8.00	8.01	
47 Benzene	78	8.932	8.920	0.012	98	2189441	8.00	7.66	
48 Cyclohexane	69	8.959	8.951	0.008	71	340746	8.00	8.02	
50 Carbon tetrachloride	117	8.975	8.962	0.013	98	3401707	8.00	8.46	
49 n-Butanol	31	8.948	8.969	-0.021	42	181076	8.00	8.93	
51 2,3-Dimethylpentane	71	9.132	9.126	0.006	83	494713	8.00	8.36	
52 Thiophene	84	9.186	9.174	0.012	87	1366267	8.00	8.35	
53 Isooctane	57	9.806	9.798	0.008	95	2995449	8.00	8.18	
54 1,2-Dichloropropane	63	10.183	10.175	0.008	72	733246	8.00	8.17	
55 n-Heptane	71	10.232	10.224	0.008	76	756110	8.00	8.27	
56 Trichloroethene	130	10.259	10.250	0.009	88	1373208	8.00	7.97	
57 Dibromomethane	93	10.291	10.279	0.012	92	1255108	8.00	8.14	
58 Dichlorobromomethane	83	10.474	10.468	0.006	98	2518000	8.00	8.71	
59 1,4-Dioxane	88	10.491	10.497	-0.006	37	353467	8.00	8.11	
60 Methyl methacrylate	41	10.647	10.649	-0.002	90	922467	8.00	9.24	
61 Methylcyclohexane	83	11.116	11.109	0.007	93	1459181	8.00	8.27	
62 4-Methyl-2-pentanone (MIBK)	43	11.542	11.552	-0.010	91	1416282	8.00	8.90	
63 cis-1,3-Dichloropropene	75	11.580	11.577	0.003	95	1532867	8.00	8.85	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	97	1677181	8.00	8.92	
65 Toluene	91	12.475	12.471	0.004	92	3103222	8.00	8.04	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	90	846792	8.00	8.27	
69 2-Hexanone	58	12.993	13.003	-0.010	95	738442	8.00	9.15	
70 Chlorodibromomethane	129	13.262	13.258	0.004	95	2812660	8.00	9.43	
71 n-Octane	85	13.327	13.326	0.001	75	1000926	8.00	8.14	
72 Ethylene Dibromide	107	13.559	13.551	0.008	93	1926667	8.00	8.59	
73 Tetrachloroethene	129	13.699	13.695	0.004	93	1498188	8.00	7.84	
74 Chlorobenzene	112	14.610	14.606	0.004	91	2714425	8.00	8.05	
75 2,3-Dimethylheptane	43	14.751	14.750	0.000	77	1819678	8.00	8.04	
76 Ethylbenzene	91	14.945	14.943	0.002	99	4515180	8.00	8.12	
78 m-Xylene & p-Xylene	91	15.123	15.119	0.004	99	7245395	16.0	15.9	
79 Bromoform	173	15.505	15.507	-0.002	96	2987666	8.00	9.53	
80 Styrene	104	15.597	15.594	0.003	93	2732738	8.00	9.14	
82 o-Xylene	91	15.656	15.655	0.001	77	3789404	8.00	7.91	
81 n-Nonane	57	15.662	15.659	0.003	72	1427330	8.00	7.86	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	93	2143813	8.00	8.80	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	1003093	8.00	8.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.287	16.283	0.004	98	5375264	8.00	7.88	
86 N-Propylbenzene	120	16.859	16.856	0.003	96	1538516	8.00	8.22	
87 2-Chlorotoluene	126	16.870	16.867	0.003	93	1366689	8.00	7.89	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	5946732	8.00	8.40	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	90	2393487	8.00	8.26	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	84	2523695	8.00	9.16	
91 n-Decane	57	17.533	17.532	0.001	95	2090024	8.00	8.09	
92 tert-Butylbenzene	119	17.592	17.590	0.002	64	5469769	8.00	7.75	
93 1,2,4-Trimethylbenzene	105	17.608	17.605	0.003	94	5126755	8.00	7.93	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	3707873	8.00	7.94	
95 sec-Butylbenzene	105	17.905	17.902	0.003	74	6942238	8.00	7.95	
96 Benzyl chloride	91	17.964	17.962	0.002	97	4487660	8.00	9.00	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	92	3610216	8.00	7.70	
98 4-Isopropyltoluene	119	18.099	18.095	0.004	94	7014221	8.00	7.95	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	5581569	8.00	8.04	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	3064197	8.00	8.02	
101 1,2-Dichlorobenzene	146	18.374	18.370	0.004	93	3498467	8.00	7.60	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	88	4473280	8.00	7.81	
103 Indene	116	18.520	18.520	0.000	87	4170791	8.00	8.87	
104 n-Butylbenzene	91	18.579	18.580	-0.001	95	5666096	8.00	7.89	
105 Undecane	57	19.005	19.001	0.004	85	2383371	8.00	7.79	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	97	2000539	8.00	8.92	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.405	0.005	95	6434741	8.00	7.73	
110 Dodecane	57	20.132	20.128	0.004	90	2322024	8.00	7.25	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	3522363	8.00	7.08	
113 Naphthalene	128	20.332	20.329	0.003	98	6820345	8.00	6.78	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	85	3886960	8.00	6.72	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	92	3177370	8.00	6.65	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	2060557	8.00	6.45	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	1675488	8.00	5.95	
A 120 C8 Range	1	13.343	(13.284-13.381)		0	7753468	8.00	8.27	
S 121 Xylenes, Total	100				0		24.0	23.8	
S 122 1,2-Dichloroethene, Total	1				0		16.0	15.9	

Reagents:

40L10DQP_00007

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D

Injection Date: 16-Nov-2018 17:23:30

Instrument ID: MR

Operator ID:

Lims ID: IC L9

Worklist Smp#: 3

Client ID:

Purge Vol: 500.000 mL

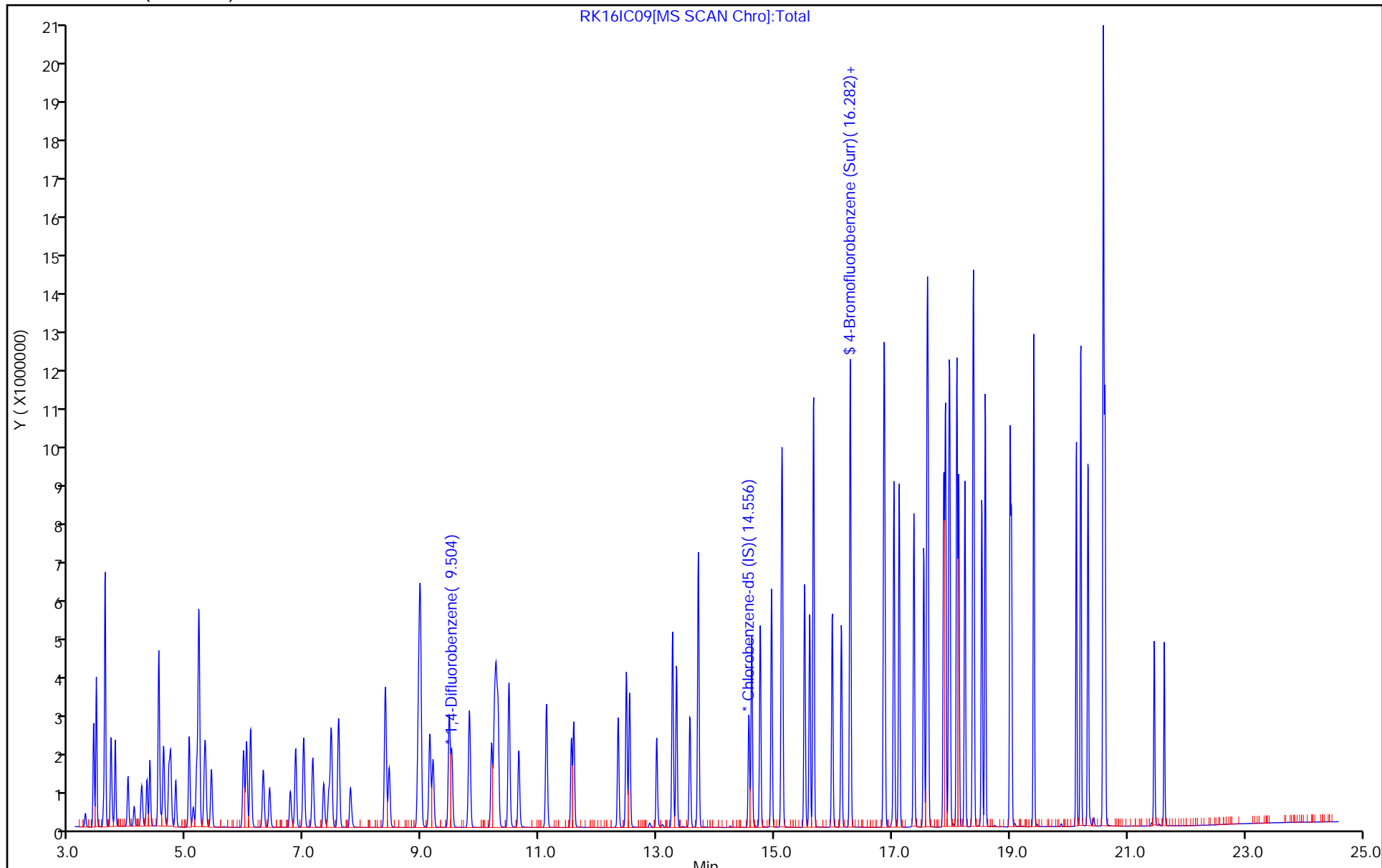
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D

Injection Date: 16-Nov-2018 17:23:30

Instrument ID: MR

Lims ID: IC L9

Client ID:

Operator ID:

ALS Bottle#: 15

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

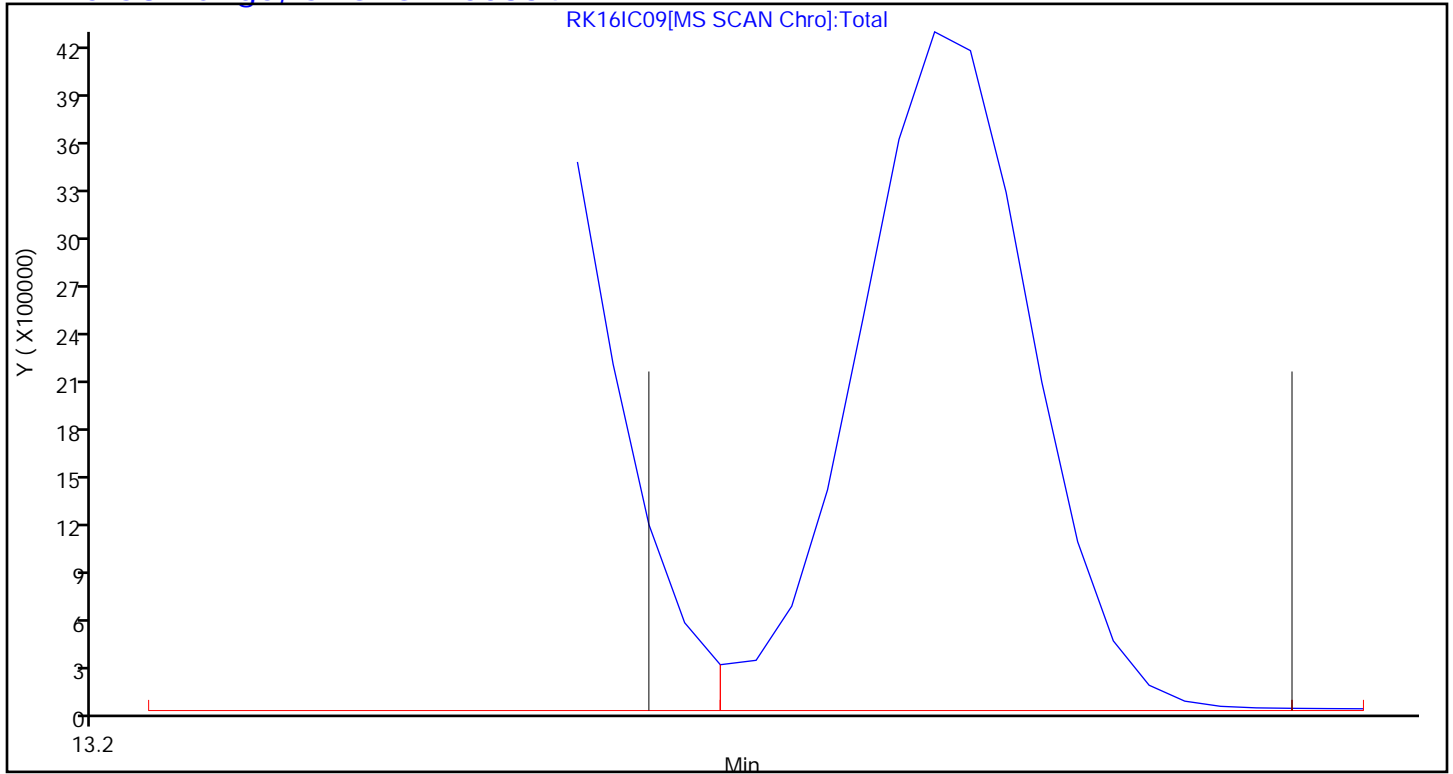
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 16-Nov-2018 19:07:30 ALS Bottle#: 15 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-005
 Misc. Info.: 190391
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:37 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 09:41:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.422	7.397	0.025	70	319466	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.515	9.494	0.020	95	1770477	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.555	0.007	89	1651474	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	84	1332053	4.00	3.79	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	96	2786793	16.0	14.7	
7 Propene	41	3.416	3.420	-0.004	92	851034	16.0	14.6	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	100	4789313	16.0	13.8	
9 Chloromethane	52	3.588	3.586	0.002	98	337068	16.0	13.8	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	89	3420506	16.0	13.2	
11 Acetaldehyde	44	3.718	3.710	0.008	94	1587481	80.0	69.5	
12 Vinyl chloride	62	3.712	3.711	0.001	99	1163551	16.0	13.6	
13 Butadiene	54	3.782	3.780	0.002	89	792495	16.0	15.3	
14 Butane	43	3.782	3.782	0.000	89	1311043	16.0	14.5	
15 Bromomethane	94	4.004	3.995	0.009	97	1463890	16.0	14.8	
16 Chloroethane	64	4.111	4.100	0.011	96	574974	16.0	14.5	
17 Ethanol	31	4.241	4.222	0.019	93	1740692	80.0	72.7	
18 Vinyl bromide	106	4.327	4.315	0.012	97	1560991	16.0	15.0	
19 2-Methylbutane	43	4.376	4.369	0.007	78	948871	16.0	14.9	
20 Acrolein	56	4.527	4.516	0.011	97	308108	16.0	15.3	
21 Trichlorofluoromethane	101	4.532	4.517	0.015	100	6733950	16.0	14.3	
22 Acetonitrile	40	4.575	4.545	0.030	95	345458	16.0	16.7	
23 Acetone	58	4.618	4.605	0.013	100	1363433	48.0	41.1	
24 Pentane	72	4.699	4.693	0.006	93	240067	16.0	14.9	
25 Isopropyl alcohol	45	4.737	4.716	0.021	98	4022317	48.0	44.5	
26 Ethyl ether	31	4.818	4.817	0.001	74	826066	16.0	15.5	
27 1,1-Dichloroethene	96	5.050	5.033	0.017	97	1690964	16.0	15.0	
28 Acrylonitrile	53	5.120	5.097	0.023	90	806690	16.0	16.1	
29 2-Methyl-2-propanol	59	5.179	5.173	0.006	92	3270376	16.0	15.3	
30 1,1,2-Trichloro-1,2,2-trif	101	5.211	5.199	0.012	92	4035478	16.0	14.5	
31 Methylene Chloride	84	5.308	5.290	0.018	89	1360585	16.0	12.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.330	5.309	0.021	85	1650820	16.0	15.8	
33 Carbon disulfide	76	5.427	5.410	0.017	99	4188128	16.0	15.7	
34 trans-1,2-Dichloroethene	96	5.972	5.951	0.021	97	1753401	16.0	15.3	
35 2-Methylpentane	43	6.026	6.011	0.015	84	2316982	16.0	15.3	
36 Methyl tert-butyl ether	73	6.090	6.094	-0.004	93	5673760	16.0	15.6	
37 1,1-Dichloroethane	63	6.311	6.283	0.028	98	2868475	16.0	14.9	
38 Vinyl acetate	43	6.419	6.402	0.017	98	3211124	16.0	17.3	
39 2-Butanone (MEK)	72	6.770	6.761	0.009	97	695780	16.0	16.0	
40 Hexane	56	6.861	6.845	0.016	81	1026278	16.0	15.4	
171 Isopropyl ether	45	6.996	6.989	0.007	86	3587859	16.0	15.6	
41 cis-1,2-Dichloroethene	96	7.153	7.127	0.026	94	1779827	16.0	15.4	
42 Ethyl acetate	43	7.336	7.330	0.006	98	2697533	16.0	16.8	
43 Chloroform	83	7.465	7.439	0.026	98	4583947	16.0	15.0	
173 Tert-butyl ethyl ether	59	7.589	7.580	0.009	92	5236388	16.0	15.8	
44 Tetrahydrofuran	42	7.789	7.793	-0.004	75	1129072	16.0	16.0	
45 1,1,1-Trichloroethane	97	8.382	8.364	0.018	95	6008857	16.0	15.5	
46 1,2-Dichloroethane	62	8.447	8.427	0.020	97	3480930	16.0	15.5	
47 Benzene	78	8.943	8.920	0.023	98	4217712	16.0	14.6	
48 Cyclohexane	69	8.964	8.951	0.013	91	645373	16.0	15.1	
50 Carbon tetrachloride	117	8.981	8.962	0.019	98	6567265	16.0	16.2	
49 n-Butanol	31	8.959	8.969	-0.010	72	360622	16.0	17.6	
51 2,3-Dimethylpentane	71	9.142	9.126	0.016	83	966448	16.0	16.2	
52 Thiophene	84	9.196	9.174	0.022	94	2658371	16.0	16.1	
53 Isooctane	57	9.811	9.798	0.013	95	5790015	16.0	15.7	
54 1,2-Dichloropropane	63	10.194	10.175	0.019	76	1430590	16.0	15.8	
55 n-Heptane	71	10.237	10.224	0.013	82	1463381	16.0	15.9	
56 Trichloroethene	130	10.269	10.250	0.019	95	2639630	16.0	15.2	
57 Dibromomethane	93	10.296	10.279	0.017	93	2441282	16.0	15.7	
58 Dichlorobromomethane	83	10.485	10.468	0.017	98	4943175	16.0	17.0	
59 1,4-Dioxane	88	10.496	10.497	-0.001	86	675333	16.0	15.3	
60 Methyl methacrylate	41	10.652	10.649	0.003	90	1828238	16.0	18.2	
61 Methylcyclohexane	83	11.121	11.109	0.012	92	2870166	16.0	16.1	
62 4-Methyl-2-pentanone (MIBK)	43	11.547	11.552	-0.005	91	2798783	16.0	17.4	
63 cis-1,3-Dichloropropene	75	11.585	11.577	0.008	96	3009068	16.0	17.2	
64 trans-1,3-Dichloropropene	75	12.340	12.332	0.008	97	3381888	16.0	17.5	
65 Toluene	91	12.480	12.471	0.009	93	6012505	16.0	15.2	
66 1,1,2-Trichloroethane	83	12.534	12.527	0.007	93	1619482	16.0	15.4	
69 2-Hexanone	58	12.998	13.003	-0.005	95	1478910	16.0	17.9	
70 Chlorodibromomethane	129	13.268	13.258	0.010	97	5503585	16.0	18.0	
71 n-Octane	85	13.332	13.326	0.006	73	1936591	16.0	15.4	
72 Ethylene Dibromide	107	13.559	13.551	0.008	97	3761382	16.0	16.3	
73 Tetrachloroethene	129	13.704	13.695	0.009	96	2918044	16.0	14.9	
74 Chlorobenzene	112	14.610	14.606	0.004	92	5263414	16.0	15.2	
75 2,3-Dimethylheptane	43	14.756	14.750	0.006	76	3470701	16.0	14.9	
76 Ethylbenzene	91	14.950	14.943	0.007	99	8578718	16.0	15.0	
78 m-Xylene & p-Xylene	91	15.128	15.119	0.009	98	13520878	32.0	28.9	
79 Bromoform	173	15.511	15.507	0.004	96	5904670	16.0	18.4	
80 Styrene	104	15.597	15.594	0.003	97	5258738	16.0	17.1	
82 o-Xylene	91	15.662	15.655	0.007	97	7137002	16.0	14.5	
81 n-Nonane	57	15.662	15.659	0.003	72	2663319	16.0	14.3	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	93	4060026	16.0	16.3	
84 1,2,3-Trichloropropane	110	16.136	16.132	0.004	92	1925261	16.0	15.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.287	16.283	0.004	98	10111819	16.0	14.5	
86 N-Propylbenzene	120	16.859	16.856	0.003	98	2931395	16.0	15.3	
87 2-Chlorotoluene	126	16.870	16.867	0.003	94	2595696	16.0	14.6	
88 4-Ethyltoluene	105	17.031	17.027	0.004	97	10941125	16.0	15.1	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	4520211	16.0	15.2	
90 Alpha Methyl Styrene	118	17.371	17.366	0.005	85	4814736	16.0	17.0	
91 n-Decane	57	17.538	17.532	0.006	96	3864099	16.0	14.6	
92 tert-Butylbenzene	119	17.598	17.590	0.008	89	10102100	16.0	14.0	
93 1,2,4-Trimethylbenzene	105	17.614	17.605	0.009	96	9441765	16.0	14.2	
94 1,3-Dichlorobenzene	146	17.878	17.874	0.004	98	6991250	16.0	14.6	
95 sec-Butylbenzene	105	17.910	17.902	0.008	97	12374020	16.0	13.8	
96 Benzyl chloride	91	17.970	17.962	0.008	97	8537696	16.0	16.7	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	92	6830228	16.0	14.2	
98 4-Isopropyltoluene	119	18.099	18.095	0.004	94	12712650	16.0	14.1	
99 1,2,3-Trimethylbenzene	105	18.132	18.127	0.005	98	10276226	16.0	14.4	
100 Butylcyclohexane	83	18.239	18.232	0.007	90	5583243	16.0	14.3	
101 1,2-Dichlorobenzene	146	18.374	18.370	0.004	95	6628325	16.0	14.0	
102 2,3-Dihydroindene	117	18.390	18.383	0.007	93	8276746	16.0	14.1	
103 Indene	116	18.525	18.520	0.005	90	7874065	16.0	16.3	
104 n-Butylbenzene	91	18.584	18.580	0.004	97	10272864	16.0	13.9	
105 Undecane	57	19.005	19.001	0.004	85	4439100	16.0	14.2	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	98	3914341	16.0	17.0	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.405	0.005	96	12213199	16.0	14.3	
110 Dodecane	57	20.132	20.128	0.004	87	4919414	16.0	15.0	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	7444026	16.0	14.6	
113 Naphthalene	128	20.332	20.329	0.003	97	13677643	16.0	13.3	e
115 Hexachlorobutadiene	225	20.596	20.590	0.006	96	8160248	16.0	13.8	
116 1,2,3-Trichlorobenzene	180	20.623	20.618	0.005	94	7108780	16.0	14.5	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	6192720	16.0	18.9	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	5133017	16.0	17.8	
A 120 C8 Range	1	13.348	(13.284-13.381)		0	14589114	16.0	15.4	
S 121 Xylenes, Total	100				0		48.0	43.4	
S 122 1,2-Dichloroethene, Total	1				0		32.0	30.7	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Reagents:

40L10DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D

Injection Date: 16-Nov-2018 19:07:30

Instrument ID: MR

Operator ID:

Lims ID: IC L10

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

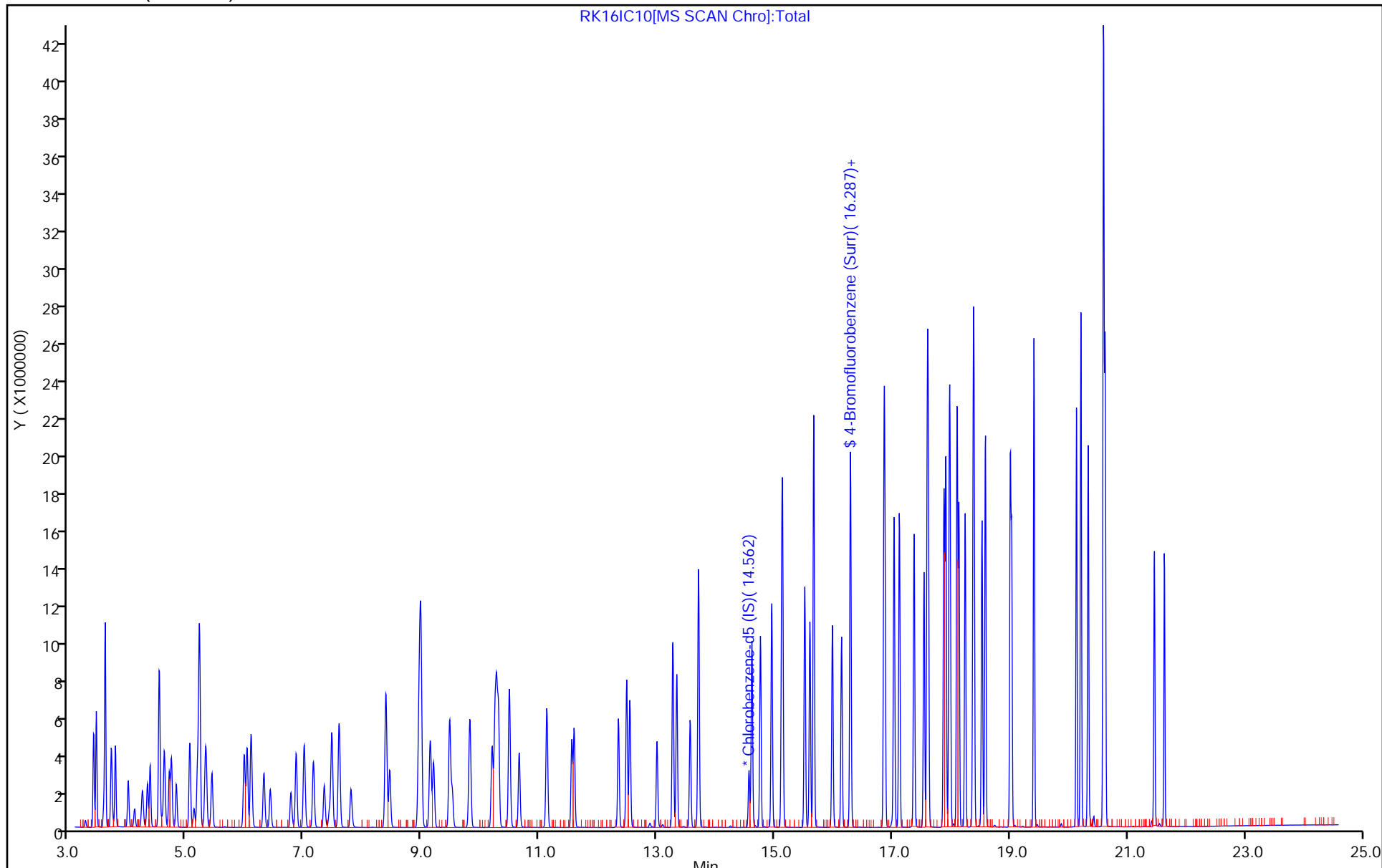
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D

Injection Date: 16-Nov-2018 19:07:30

Instrument ID: MR

Lims ID: IC L10

Client ID:

Operator ID:

ALS Bottle#:

15

Worklist Smp#:

5

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

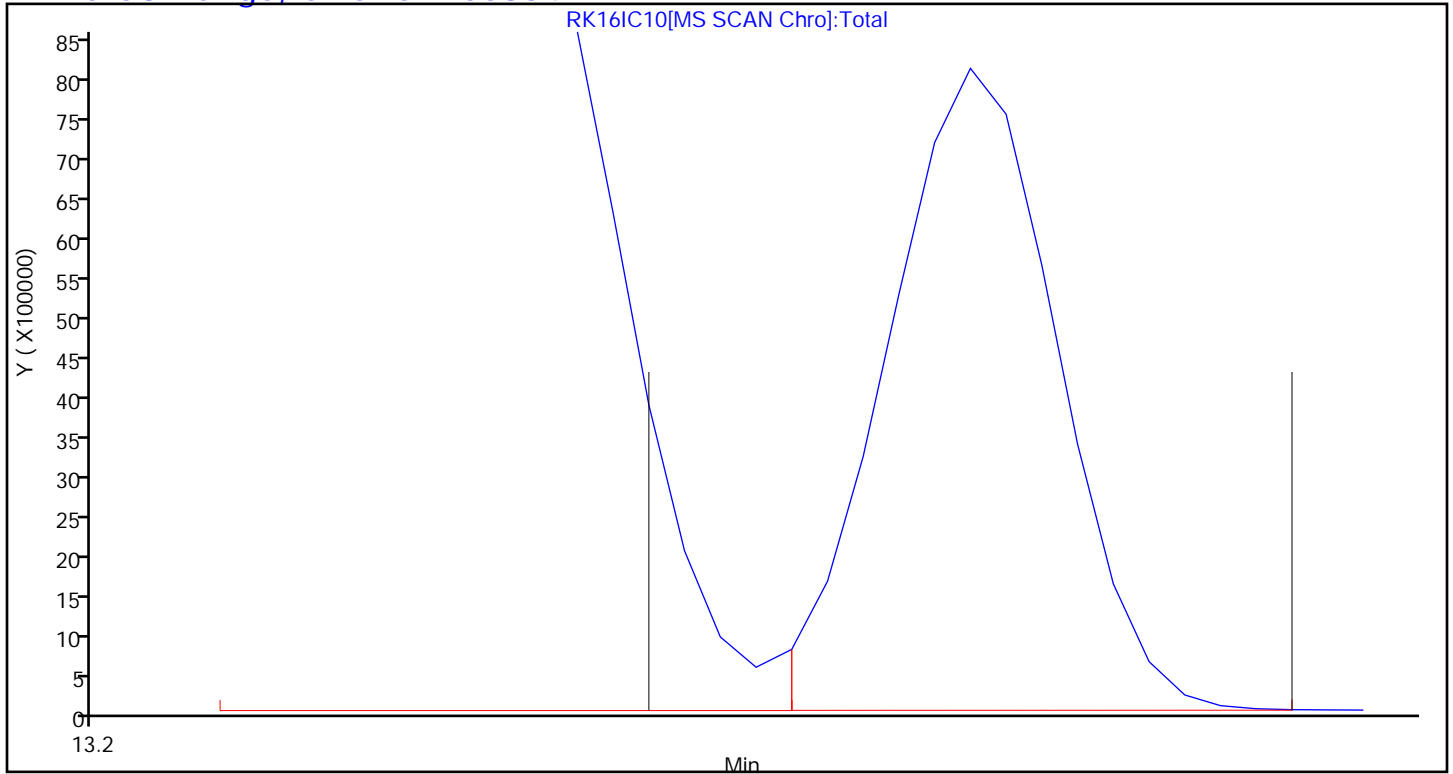
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 16-Nov-2018 21:42:30 ALS Bottle#: 1 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-008
 Misc. Info.: 191045
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:45 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:13:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	270371	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1547161	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1331283	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1129964	4.00	3.99	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	92	4967	0.0200	0.0310	
7 Propene	41	3.416	3.420	-0.004	55	1914	0.0200	0.0388	
8 Dichlorodifluoromethane	85	3.454	3.461	-0.007	99	8536	0.0200	0.0290	
9 Chloromethane	52	3.594	3.586	0.008	56	1365	0.0200	0.0660	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	85	5703	0.0200	0.0260	
11 Acetaldehyde	44	3.712	3.710	0.002	96	5299	0.1000	0.2741	
12 Vinyl chloride	62	3.707	3.711	-0.004	48	1811	0.0200	0.0250	
13 Butadiene	54	3.777	3.780	-0.003	80	1171	0.0200	0.0266	
14 Butane	43	3.777	3.782	-0.005	67	2106	0.0200	0.0275	
15 Bromomethane	94	3.982	3.995	-0.013	91	3340	0.0200	0.0400	
16 Chloroethane	64	4.095	4.100	-0.005	54	1060	0.0200	0.0316	
17 Ethanol	31	4.230	4.222	0.008	85	2602	0.1000	0.1285	
18 Vinyl bromide	106	4.311	4.315	-0.004	93	2112	0.0200	0.0240	
19 2-Methylbutane	43	4.370	4.369	0.001	74	1411	0.0200	0.0261	
20 Acrolein	56	4.527	4.516	0.011	26	1199	0.0200	0.0702	
21 Trichlorofluoromethane	101	4.511	4.517	-0.006	99	9029	0.0200	0.0226	
22 Acetonitrile	40	4.462	4.545	-0.083	58	291	0.0200	0.0166	
23 Acetone	58	4.613	4.605	0.008	99	4528	0.0600	0.1614	
24 Pentane	72	4.694	4.693	0.001	68	224	0.0200	0.0165	
25 Isopropyl alcohol	45	4.732	4.716	0.016	91	7411	0.0600	0.0969	
26 Ethyl ether	31	4.839	4.817	0.022	57	905	0.0200	0.0201	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	96	2217	0.0200	0.0233	
28 Acrylonitrile	53	5.088	5.097	-0.009	49	399	0.0200	0.009404	
29 2-Methyl-2-propanol	59	5.201	5.173	0.028	73	3567	0.0200	0.0197	
30 1,1,2-Trichloro-1,2,2-trif	101	5.190	5.199	-0.009	88	5091	0.0200	0.0216	
31 Methylene Chloride	84	5.282	5.290	-0.008	89	10784	0.0200	0.1192	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	61	1958	0.0200	0.0221	
33 Carbon disulfide	76	5.400	5.410	-0.010	98	5154	0.0200	0.0228	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	89	2153	0.0200	0.0222	
35 2-Methylpentane	43	6.004	6.011	-0.007	85	3091	0.0200	0.0241	
36 Methyl tert-butyl ether	73	6.128	6.094	0.034	91	6785	0.0200	0.0220	
37 1,1-Dichloroethane	63	6.268	6.283	-0.015	96	3625	0.0200	0.0223	
38 Vinyl acetate	43	6.409	6.402	0.007	98	3011	0.0200	0.0192	
40 Hexane	56	6.845	6.845	0.000	79	1159	0.0200	0.0205	
171 Isopropyl ether	45	7.002	6.989	0.013	84	3919	0.0200	0.0202	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	92	2190	0.0200	0.0224	
42 Ethyl acetate	43	7.358	7.330	0.028	33	2159	0.0200	0.0159	
43 Chloroform	83	7.428	7.439	-0.011	90	5723	0.0200	0.0222	
44 Tetrahydrofuran	42	7.821	7.793	0.028	63	1324	0.0200	0.0221	
45 1,1,1-Trichloroethane	97	8.350	8.364	-0.014	95	6720	0.0200	0.0205	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	4162	0.0200	0.0213	
47 Benzene	78	8.911	8.920	-0.009	97	5827	0.0200	0.0231	
48 Cyclohexane	69	8.948	8.951	-0.003	69	709	0.0200	0.0189	
50 Carbon tetrachloride	117	8.959	8.962	-0.003	90	7141	0.0200	0.0201	
51 2,3-Dimethylpentane	71	9.126	9.126	0.000	81	1016	0.0200	0.0195	
52 Thiophene	84	9.164	9.174	-0.010	90	3146	0.0200	0.0218	
53 Isooctane	57	9.790	9.798	-0.008	82	3563	0.0200	0.0110	
54 1,2-Dichloropropane	63	10.167	10.175	-0.008	81	1807	0.0200	0.0228	
55 n-Heptane	71	10.232	10.224	0.008	58	1584	0.0200	0.0197	
56 Trichloroethene	130	10.243	10.250	-0.007	88	3243	0.0200	0.0213	
57 Dibromomethane	93	10.275	10.279	-0.004	93	3779	0.0200	0.0278	
60 Methyl methacrylate	41	10.652	10.649	0.003	1	1037	0.0200	0.0118	
61 Methylcyclohexane	83	11.100	11.109	-0.009	90	2938	0.0200	0.0189	
62 4-Methyl-2-pentanone (MIBK)	43	11.585	11.552	0.033	58	1793	0.0200	0.0128	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	93	2757	0.0200	0.0181	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	93	3115	0.0200	0.0200	
65 Toluene	91	12.470	12.471	-0.001	91	6779	0.0200	0.0212	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	89	1557	0.0200	0.0184	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	93	4430	0.0200	0.0180	
71 n-Octane	85	13.327	13.326	0.001	66	2061	0.0200	0.0203	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	91	3322	0.0200	0.0179	
73 Tetrachloroethene	129	13.699	13.695	0.004	88	3234	0.0200	0.0205	
74 Chlorobenzene	112	14.610	14.606	0.004	84	5465	0.0200	0.0196	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	74	3791	0.0200	0.0202	
76 Ethylbenzene	91	14.945	14.943	0.002	98	9121	0.0200	0.0198	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	99	14827	0.0400	0.0393	
79 Bromoform	173	15.506	15.507	-0.001	93	3956	0.0200	0.0153	
80 Styrene	104	15.603	15.594	0.009	93	3532	0.0200	0.0143	
82 o-Xylene	91	15.657	15.655	0.002	94	7608	0.0200	0.0192	
81 n-Nonane	57	15.657	15.659	-0.002	69	2778	0.0200	0.0185	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	88	3859	0.0200	0.0192	
84 1,2,3-Trichloropropane	110	16.136	16.132	0.004	93	1899	0.0200	0.0190	
85 Isopropylbenzene	105	16.282	16.283	-0.001	46	13150	0.0200	0.0233	
86 N-Propylbenzene	120	16.859	16.856	0.003	96	2952	0.0200	0.0191	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	2686	0.0200	0.0187	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	10337	0.0200	0.0177	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	4521	0.0200	0.0189	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	88	2640	0.0200	0.0116	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
91 n-Decane	57	17.528	17.532	-0.004	92	3562	0.0200	0.0167	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	11027	0.0200	0.0189	
93 1,2,4-Trimethylbenzene	105	17.609	17.605	0.004	96	9514	0.0200	0.0178	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	96	7986	0.0200	0.0207	
95 sec-Butylbenzene	105	17.905	17.902	0.003	96	13837	0.0200	0.0192	
96 Benzyl chloride	91	17.959	17.962	-0.003	96	6895	0.0200	0.0167	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	93	8118	0.0200	0.0209	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	14042	0.0200	0.0193	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	10719	0.0200	0.0187	
100 Butylcyclohexane	83	18.234	18.232	0.002	93	5805	0.0200	0.0184	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	90	7793	0.0200	0.0205	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	93	9654	0.0200	0.0204	
103 Indene	116	18.520	18.520	0.000	89	5834	0.0200	0.0150	
104 n-Butylbenzene	91	18.585	18.580	0.005	95	12135	0.0200	0.0204	
105 Undecane	57	19.005	19.001	0.004	86	5832	0.0200	0.0231	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	93	3364	0.0200	0.0181	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	15662	0.0200	0.0228	
110 Dodecane	57	20.127	20.128	-0.001	89	9191	0.0200	0.0347	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	93	13993	0.0200	0.0340	
113 Naphthalene	128	20.332	20.329	0.003	98	24682	0.0200	0.0297	
115 Hexachlorobutadiene	225	20.585	20.590	-0.005	95	19167	0.0200	0.0401	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	93	17493	0.0200	0.0443	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	96	6762	0.0200	0.0256	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	99	10187	0.0200	0.0437	
A 120 C8 Range	1	13.332	(13.295-13.359)		0	15685	0.0200	0.0190	
S 121 Xylenes, Total	100				0		0.0600	0.0585	
S 122 1,2-Dichloroethene, Total	1				0		0.0400	0.0446	

Reagents:

40L1-3DQP_00010

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D

Injection Date: 16-Nov-2018 21:42:30

Instrument ID: MR

Operator ID:

Lims ID: IC L1

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

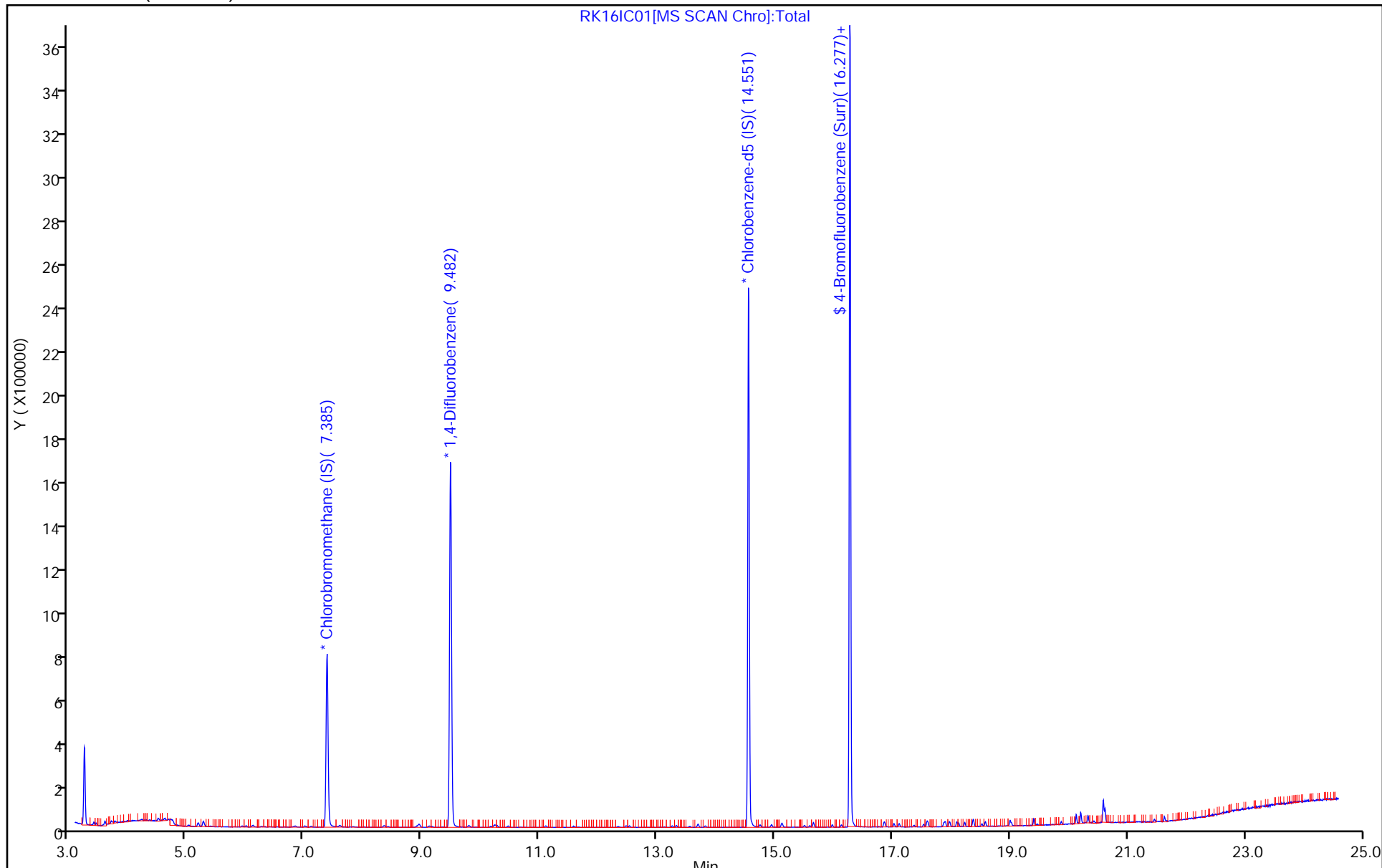
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D

Injection Date: 16-Nov-2018 21:42:30

Instrument ID: MR

Lims ID: IC L1

Client ID:

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

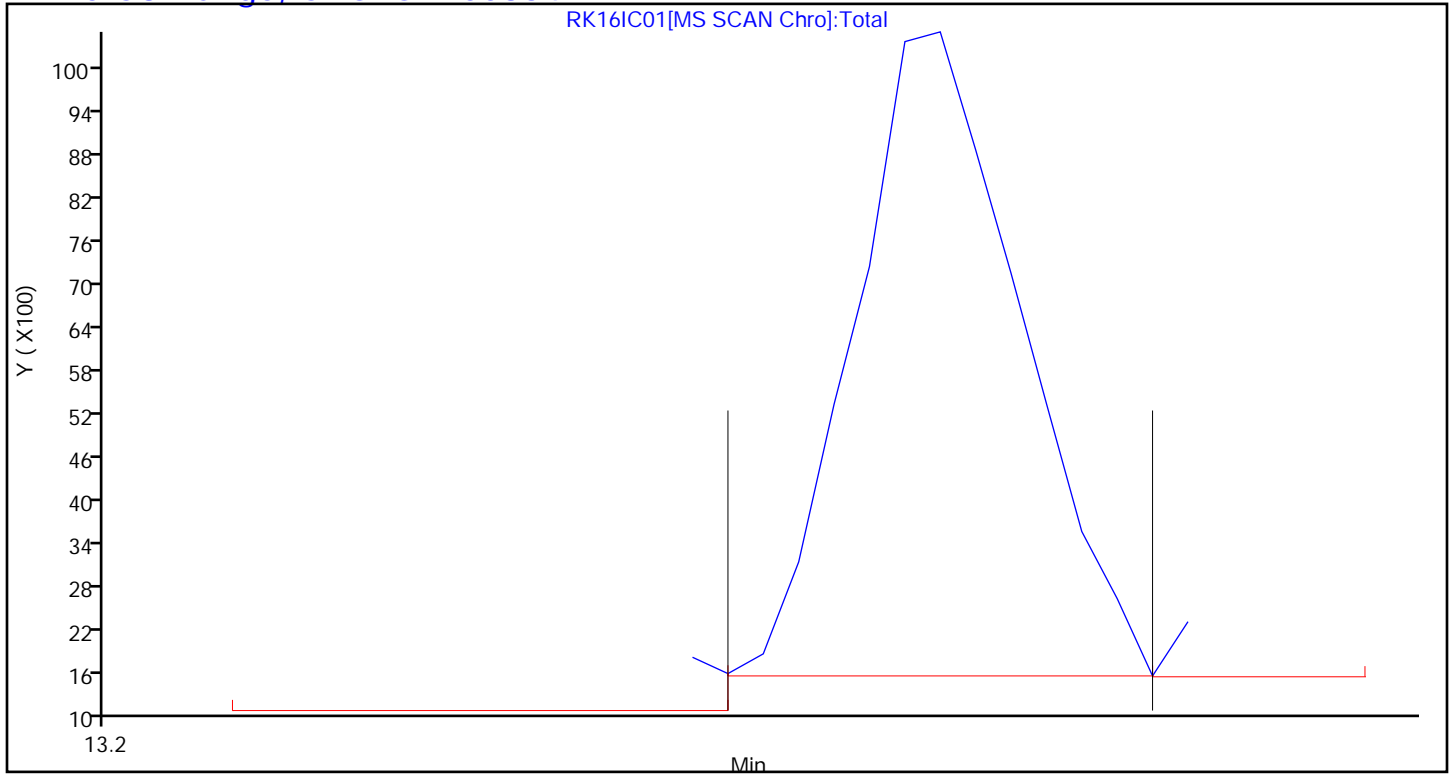
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 16-Nov-2018 22:34:30 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-009
 Misc. Info.: 191045
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:50 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:19:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.397	-0.007	70	260596	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1479125	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1285854	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1096528	4.00	4.01	
6 Chlorodifluoromethane	51	3.432	3.417	0.015	95	7544	0.0400	0.0488	
7 Propene	41	3.427	3.420	0.007	52	2713	0.0400	0.0571	
8 Dichlorodifluoromethane	85	3.470	3.461	0.009	100	14537	0.0400	0.0513	
9 Chloromethane	52	3.594	3.586	0.008	93	1035	0.0400	0.0519	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.615	3.609	0.006	89	10161	0.0400	0.0481	
11 Acetaldehyde	44	3.723	3.710	0.013	97	9143	0.2000	0.4906	
12 Vinyl chloride	62	3.718	3.711	0.007	52	3480	0.0400	0.0498	
13 Butadiene	54	3.788	3.780	0.008	74	1929	0.0400	0.0455	
14 Butane	43	3.788	3.782	0.006	74	3557	0.0400	0.0482	
15 Bromomethane	94	4.004	3.995	0.009	94	4039	0.0400	0.0502	
16 Chloroethane	64	4.106	4.100	0.006	80	1538	0.0400	0.0475	
17 Ethanol	31	4.225	4.222	0.003	91	4623	0.2000	0.2368	
18 Vinyl bromide	106	4.316	4.315	0.001	94	4463	0.0400	0.0526	
19 2-Methylbutane	43	4.370	4.369	0.001	75	2381	0.0400	0.0457	
20 Acrolein	56	4.516	4.516	0.000	28	1003	0.0400	0.0609	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	98	16343	0.0400	0.0424	
22 Acetonitrile	40	4.548	4.545	0.003	68	183	0.0400	0.0109	
23 Acetone	58	4.618	4.605	0.013	99	6843	0.1200	0.2531	
24 Pentane	72	4.694	4.693	0.001	57	764	0.0400	0.0583	
25 Isopropyl alcohol	45	4.721	4.716	0.005	95	10421	0.1200	0.1414	
26 Ethyl ether	31	4.834	4.817	0.017	76	1931	0.0400	0.0445	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	3786	0.0400	0.0413	
28 Acrylonitrile	53	5.098	5.097	0.001	78	1777	0.0400	0.0435	
29 2-Methyl-2-propanol	59	5.190	5.173	0.017	73	6749	0.0400	0.0387	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	92	9384	0.0400	0.0413	
31 Methylene Chloride	84	5.292	5.290	0.002	88	11735	0.0400	0.1346	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.308	5.309	-0.001	61	3483	0.0400	0.0408	
33 Carbon disulfide	76	5.411	5.410	0.001	97	8992	0.0400	0.0413	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	97	4125	0.0400	0.0441	
35 2-Methylpentane	43	6.004	6.011	-0.007	81	5672	0.0400	0.0460	
36 Methyl tert-butyl ether	73	6.112	6.094	0.018	93	12232	0.0400	0.0411	
37 1,1-Dichloroethane	63	6.274	6.283	-0.009	97	6968	0.0400	0.0445	
38 Vinyl acetate	43	6.409	6.402	0.007	97	5742	0.0400	0.0380	
39 2-Butanone (MEK)	72	6.791	6.761	0.030	97	1330	0.0400	0.0375	
40 Hexane	56	6.845	6.845	0.000	80	2274	0.0400	0.0418	
171 Isopropyl ether	45	7.002	6.989	0.013	86	7835	0.0400	0.0419	
41 cis-1,2-Dichloroethene	96	7.115	7.127	-0.012	96	3898	0.0400	0.0413	
42 Ethyl acetate	43	7.347	7.330	0.017	97	5081	0.0400	0.0388	
43 Chloroform	83	7.428	7.439	-0.011	87	10674	0.0400	0.0429	
173 Tert-butyl ethyl ether	59	7.589	7.580	0.009	92	10439	0.0400	0.0387	
44 Tetrahydrofuran	42	7.816	7.793	0.023	76	2575	0.0400	0.0446	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	94	13014	0.0400	0.0412	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	7880	0.0400	0.0421	
47 Benzene	78	8.911	8.920	-0.009	86	10465	0.0400	0.0434	
48 Cyclohexane	69	8.948	8.951	-0.003	60	1344	0.0400	0.0375	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	94	13947	0.0400	0.0411	
51 2,3-Dimethylpentane	71	9.115	9.126	-0.011	81	2179	0.0400	0.0437	
52 Thiophene	84	9.169	9.174	-0.005	90	5500	0.0400	0.0399	
53 Isooctane	57	9.800	9.798	0.002	94	11906	0.0400	0.0386	
54 1,2-Dichloropropane	63	10.178	10.175	0.003	78	2944	0.0400	0.0389	
55 n-Heptane	71	10.216	10.224	-0.008	79	2941	0.0400	0.0382	
56 Trichloroethene	130	10.237	10.250	-0.013	92	5696	0.0400	0.0392	
57 Dibromomethane	93	10.269	10.279	-0.010	87	5842	0.0400	0.0450	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	97	8635	0.0400	0.0355	
59 1,4-Dioxane	88	10.523	10.497	0.026	27	1245	0.0400	0.0339	
60 Methyl methacrylate	41	10.668	10.649	0.019	86	2528	0.0400	0.0300	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	5955	0.0400	0.0400	
62 4-Methyl-2-pentanone (MIBK)	43	11.569	11.552	0.017	61	3006	0.0400	0.0224	
63 cis-1,3-Dichloropropene	75	11.580	11.577	0.003	91	5376	0.0400	0.0368	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	5189	0.0400	0.0345	
65 Toluene	91	12.464	12.471	-0.007	92	11744	0.0400	0.0381	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	90	3120	0.0400	0.0382	
69 2-Hexanone	58	13.036	13.003	0.033	1	1297	0.0400	0.0201	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	93	7451	0.0400	0.0313	
71 n-Octane	85	13.327	13.326	0.001	79	3598	0.0400	0.0367	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	6066	0.0400	0.0339	
73 Tetrachloroethene	129	13.694	13.695	-0.001	89	6255	0.0400	0.0410	
74 Chlorobenzene	112	14.600	14.606	-0.006	96	10833	0.0400	0.0402	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	74	6840	0.0400	0.0378	
76 Ethylbenzene	91	14.945	14.943	0.002	99	17474	0.0400	0.0393	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	28347	0.0800	0.0778	
79 Bromoform	173	15.511	15.507	0.004	92	6657	0.0400	0.0266	
80 Styrene	104	15.592	15.594	-0.002	97	6834	0.0400	0.0286	
82 o-Xylene	91	15.656	15.655	0.001	96	14440	0.0400	0.0377	
81 n-Nonane	57	15.662	15.659	0.003	71	5104	0.0400	0.0352	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	89	6581	0.0400	0.0338	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	91	3252	0.0400	0.0337	
85 Isopropylbenzene	105	16.282	16.283	-0.001	47	23558	0.0400	0.0433	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	16.859	16.856	0.003	96	5565	0.0400	0.0372	
87 2-Chlorotoluene	126	16.870	16.867	0.003	91	5132	0.0400	0.0371	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	20634	0.0400	0.0365	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	89	8388	0.0400	0.0362	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	83	5656	0.0400	0.0257	
91 n-Decane	57	17.533	17.532	0.001	94	7343	0.0400	0.0356	
92 tert-Butylbenzene	119	17.592	17.590	0.002	89	21429	0.0400	0.0380	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	19133	0.0400	0.0370	
94 1,3-Dichlorobenzene	146	17.878	17.874	0.004	97	14097	0.0400	0.0378	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	27386	0.0400	0.0392	
96 Benzyl chloride	91	17.964	17.962	0.002	87	13082	0.0400	0.0328	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	90	14770	0.0400	0.0395	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	27559	0.0400	0.0391	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	20298	0.0400	0.0366	
100 Butylcyclohexane	83	18.234	18.232	0.002	91	12105	0.0400	0.0397	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	15537	0.0400	0.0422	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	91	17767	0.0400	0.0388	
103 Indene	116	18.520	18.520	0.000	89	11379	0.0400	0.0303	
104 n-Butylbenzene	91	18.579	18.580	-0.001	98	21840	0.0400	0.0381	
105 Undecane	57	19.000	19.001	-0.001	85	11356	0.0400	0.0465	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	92	6080	0.0400	0.0339	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	28122	0.0400	0.0423	
110 Dodecane	57	20.132	20.128	0.004	92	20145	0.0400	0.0788	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	93	24325	0.0400	0.0613	
113 Naphthalene	128	20.332	20.329	0.003	98	44394	0.0400	0.0553	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	36463	0.0400	0.0790	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	95	30595	0.0400	0.0802	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	96	7926	0.0400	0.0311	
118 1-Methylnaphthalene	142	21.631	21.626	0.005	97	11502	0.0400	0.0511	
A 120 C8 Range	1	13.332	(13.295-13.359)		0	31729	0.0400	0.0402	
S 121 Xylenes, Total	100				0		0.1200	0.1155	
S 122 1,2-Dichloroethene, Total	1				0		0.0800	0.0854	

Reagents:

40L1-3DQP_00010

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D

Injection Date: 16-Nov-2018 22:34:30

Instrument ID: MR

Operator ID:

Lims ID: IC L2

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

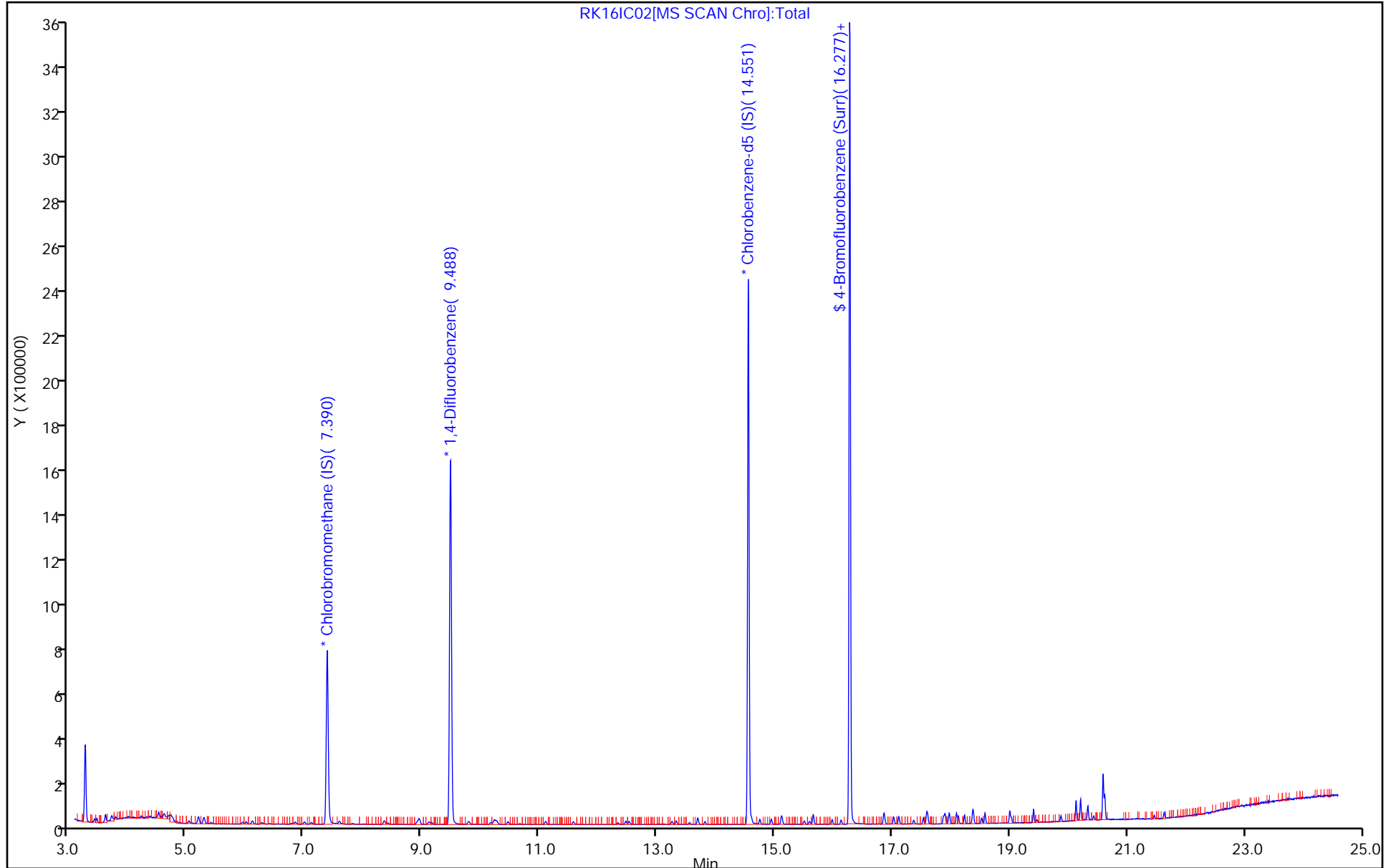
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D

Injection Date: 16-Nov-2018 22:34:30

Instrument ID: MR

Lims ID: IC L2

Client ID:

Operator ID:

ALS Bottle#: 1

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

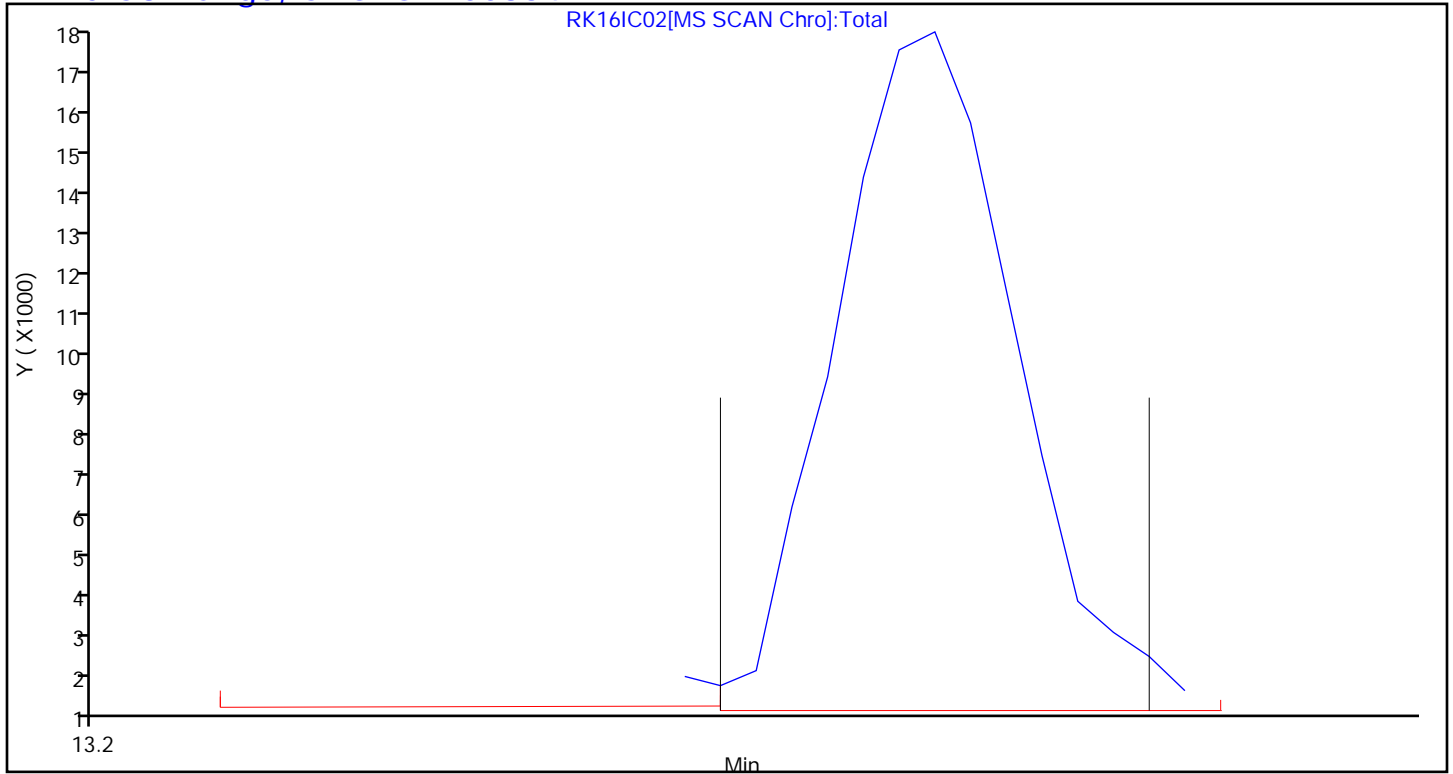
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 16-Nov-2018 23:27:30 ALS Bottle#: 2 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-010
 Misc. Info.: 190398
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:54 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:20:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.395	7.397	-0.002	80	259070	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.494	-0.001	95	1455868	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	90	1271256	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	90	1100173	4.00	4.07	
6 Chlorodifluoromethane	51	3.437	3.417	0.020	94	13488	0.0800	0.0877	
7 Propene	41	3.432	3.420	0.012	55	5125	0.0800	0.1085	
8 Dichlorodifluoromethane	85	3.475	3.461	0.014	99	23530	0.0800	0.0835	
9 Chloromethane	52	3.594	3.586	0.008	98	2235	0.0800	0.1127	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.621	3.609	0.012	88	16805	0.0800	0.0801	
11 Acetaldehyde	44	3.723	3.710	0.013	93	15383	0.4000	0.8304	
12 Vinyl chloride	62	3.723	3.711	0.012	49	5811	0.0800	0.0836	
13 Butadiene	54	3.793	3.780	0.013	81	3945	0.0800	0.0936	
14 Butane	43	3.799	3.782	0.017	77	6822	0.0800	0.0930	
15 Bromomethane	94	4.009	3.995	0.014	94	7392	0.0800	0.0924	
16 Chloroethane	64	4.106	4.100	0.006	95	3121	0.0800	0.0970	
17 Ethanol	31	4.225	4.222	0.003	94	11273	0.4000	0.5808	
18 Vinyl bromide	106	4.327	4.315	0.012	95	7520	0.0800	0.0892	
19 2-Methylbutane	43	4.381	4.369	0.012	80	4476	0.0800	0.0864	
20 Acrolein	56	4.527	4.516	0.011	30	2267	0.0800	0.1384	
21 Trichlorofluoromethane	101	4.527	4.517	0.010	98	32292	0.0800	0.0843	
22 Acetonitrile	40	4.559	4.545	0.014	52	776	0.0800	0.0463	
23 Acetone	58	4.618	4.605	0.013	100	12343	0.2400	0.4592	
24 Pentane	72	4.699	4.693	0.006	91	1155	0.0800	0.0887	
25 Isopropyl alcohol	45	4.721	4.716	0.005	97	22445	0.2400	0.3063	
26 Ethyl ether	31	4.834	4.817	0.017	69	3716	0.0800	0.0861	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	7294	0.0800	0.0800	
28 Acrylonitrile	53	5.098	5.097	0.001	97	3780	0.0800	0.0930	
29 2-Methyl-2-propanol	59	5.190	5.173	0.017	96	13889	0.0800	0.0801	
30 1,1,2-Trichloro-1,2,2-trif	101	5.211	5.199	0.012	93	19377	0.0800	0.0857	
31 Methylene Chloride	84	5.298	5.290	0.008	89	14815	0.0800	0.1710	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	83	6102	0.0800	0.0720	
33 Carbon disulfide	76	5.422	5.410	0.012	99	17438	0.0800	0.0806	
34 trans-1,2-Dichloroethene	96	5.956	5.951	0.005	95	7397	0.0800	0.0795	
35 2-Methylpentane	43	6.020	6.011	0.009	84	10171	0.0800	0.0829	
36 Methyl tert-butyl ether	73	6.112	6.094	0.018	92	24609	0.0800	0.0832	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	96	12813	0.0800	0.0823	
38 Vinyl acetate	43	6.409	6.402	0.007	97	10473	0.0800	0.0697	
39 2-Butanone (MEK)	72	6.775	6.761	0.014	96	2930	0.0800	0.0831	
40 Hexane	56	6.845	6.845	0.000	80	4675	0.0800	0.0864	
171 Isopropyl ether	45	7.002	6.989	0.013	83	15025	0.0800	0.0807	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	94	7431	0.0800	0.0792	
42 Ethyl acetate	43	7.336	7.330	0.006	96	9377	0.0800	0.0720	
43 Chloroform	83	7.439	7.439	0.000	91	19866	0.0800	0.0803	
173 Tert-butyl ethyl ether	59	7.595	7.580	0.015	93	21806	0.0800	0.0813	
44 Tetrahydrofuran	42	7.816	7.793	0.023	77	4556	0.0800	0.0794	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	93	25970	0.0800	0.0828	
46 1,2-Dichloroethane	62	8.431	8.427	0.004	97	15042	0.0800	0.0816	
47 Benzene	78	8.921	8.920	0.001	98	20437	0.0800	0.0862	
48 Cyclohexane	69	8.954	8.951	0.003	70	3013	0.0800	0.0855	
50 Carbon tetrachloride	117	8.965	8.962	0.003	95	21947	0.0800	0.0658	
49 n-Butanol	31	9.008	8.969	0.039	1	1240	0.0800	0.0737	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	80	3528	0.0800	0.0718	
52 Thiophene	84	9.169	9.174	-0.005	94	10374	0.0800	0.0764	
53 Isooctane	57	9.800	9.798	0.002	94	25192	0.0800	0.0830	
54 1,2-Dichloropropane	63	10.172	10.175	-0.003	72	6201	0.0800	0.0833	
55 n-Heptane	71	10.226	10.224	0.002	81	5754	0.0800	0.0759	
56 Trichloroethene	130	10.253	10.250	0.003	92	11668	0.0800	0.0816	
57 Dibromomethane	93	10.275	10.279	-0.004	91	10846	0.0800	0.0848	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	17387	0.0800	0.0725	
59 1,4-Dioxane	88	10.507	10.497	0.010	90	2726	0.0800	0.0753	
60 Methyl methacrylate	41	10.658	10.649	0.009	88	6227	0.0800	0.0752	
61 Methylcyclohexane	83	11.111	11.109	0.002	93	11565	0.0800	0.0790	
62 4-Methyl-2-pentanone (MIBK)	43	11.564	11.552	0.012	79	9056	0.0800	0.0686	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	94	10488	0.0800	0.0730	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	96	10066	0.0800	0.0678	
65 Toluene	91	12.470	12.471	-0.001	93	24790	0.0800	0.0814	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	91	6520	0.0800	0.0807	
69 2-Hexanone	58	13.020	13.003	0.017	93	3236	0.0800	0.0508	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	16103	0.0800	0.0683	
71 n-Octane	85	13.327	13.326	0.001	72	7429	0.0800	0.0766	
72 Ethylene Dibromide	107	13.553	13.551	0.002	97	12712	0.0800	0.0718	
73 Tetrachloroethene	129	13.694	13.695	-0.001	93	12031	0.0800	0.0797	
74 Chlorobenzene	112	14.605	14.606	-0.001	91	21742	0.0800	0.0817	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	76	14645	0.0800	0.0819	
76 Ethylbenzene	91	14.945	14.943	0.002	99	35735	0.0800	0.0814	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	59080	0.1600	0.1640	
79 Bromoform	173	15.506	15.507	-0.001	94	14982	0.0800	0.0605	
80 Styrene	104	15.592	15.594	-0.002	96	15265	0.0800	0.0646	
82 o-Xylene	91	15.656	15.655	0.001	95	32097	0.0800	0.0848	
81 n-Nonane	57	15.662	15.659	0.003	72	11326	0.0800	0.0790	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	88	14484	0.0800	0.0753	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	91	7400	0.0800	0.0776	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	48	46548	0.0800	0.0865	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	11527	0.0800	0.0780	
87 2-Chlorotoluene	126	16.870	16.867	0.003	93	11745	0.0800	0.0858	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	45329	0.0800	0.0811	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	18627	0.0800	0.0814	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	87	12787	0.0800	0.0588	
91 n-Decane	57	17.528	17.532	-0.004	95	15703	0.0800	0.0769	
92 tert-Butylbenzene	119	17.592	17.590	0.002	89	46562	0.0800	0.0836	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	42935	0.0800	0.0841	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	31633	0.0800	0.0858	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	57824	0.0800	0.0838	
96 Benzyl chloride	91	17.964	17.962	0.002	97	27963	0.0800	0.0710	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	91	31188	0.0800	0.0843	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	56711	0.0800	0.0814	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	47349	0.0800	0.0863	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	24822	0.0800	0.0823	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	94	31984	0.0800	0.0879	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	92	37591	0.0800	0.0831	
103 Indene	116	18.520	18.520	0.000	91	26287	0.0800	0.0708	
104 n-Butylbenzene	91	18.579	18.580	-0.001	98	46679	0.0800	0.0823	
105 Undecane	57	19.000	19.001	-0.001	90	20015	0.0800	0.0829	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	95	11163	0.0800	0.0630	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	96	54539	0.0800	0.0830	
110 Dodecane	57	20.127	20.128	-0.001	89	22733	0.0800	0.0899	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	36794	0.0800	0.0937	
113 Naphthalene	128	20.332	20.329	0.003	98	71658	0.0800	0.0903	
115 Hexachlorobutadiene	225	20.591	20.590	0.000	96	43683	0.0800	0.0957	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	36693	0.0800	0.0972	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	22514	0.0800	0.0893	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	96	25106	0.0800	0.1129	
A 120 C8 Range	1	13.335	(13.289-13.365)		0	65978	0.0800	0.0849	
S 121 Xylenes, Total	100				0		0.2400	0.2488	
S 122 1,2-Dichloroethene, Total	1				0		0.1600	0.1588	

Reagents:

40L1-3DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D

Injection Date: 16-Nov-2018 23:27:30

Instrument ID: MR

Operator ID:

Lims ID: IC L3

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D

Injection Date: 16-Nov-2018 23:27:30

Instrument ID: MR

Lims ID: IC L3

Client ID:

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

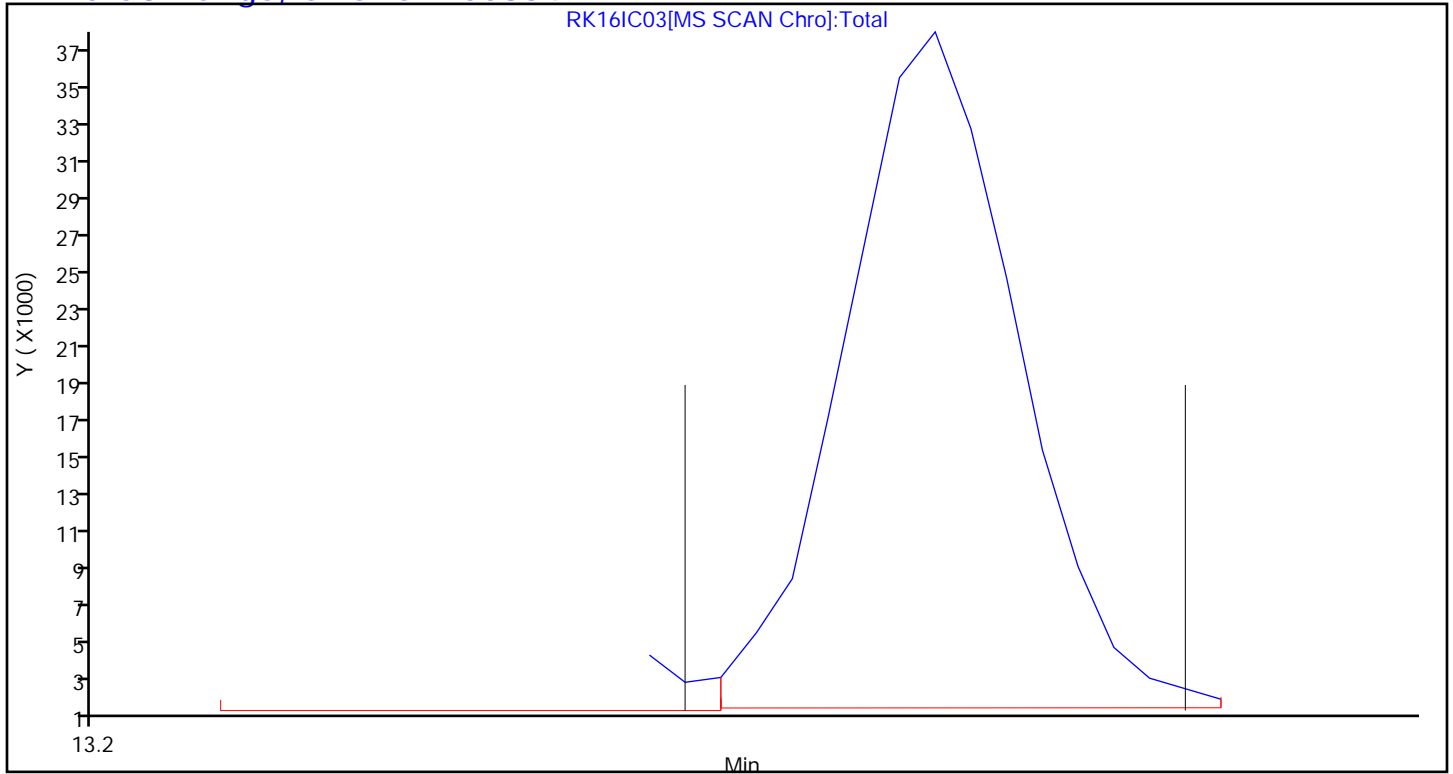
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 17-Nov-2018 00:20:30 ALS Bottle#: 3 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-011
 Misc. Info.: 190397
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:59 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:30:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	266212	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	95	1504650	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1298874	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1123241	4.00	4.07	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	96	27178	0.1600	0.1721	
7 Propene	41	3.421	3.420	0.001	49	8965	0.1600	0.1846	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	45214	0.1600	0.1561	
9 Chloromethane	52	3.583	3.586	-0.003	98	3152	0.1600	0.1547	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.605	3.609	-0.004	89	33908	0.1600	0.1572	
11 Acetaldehyde	44	3.707	3.710	-0.003	91	22123	0.8000	1.16	
12 Vinyl chloride	62	3.707	3.711	-0.004	60	11775	0.1600	0.1649	
13 Butadiene	54	3.777	3.780	-0.003	78	7472	0.1600	0.1726	
14 Butane	43	3.777	3.782	-0.005	77	12514	0.1600	0.1661	
15 Bromomethane	94	3.993	3.995	-0.002	95	13519	0.1600	0.1644	
16 Chloroethane	64	4.095	4.100	-0.005	97	5876	0.1600	0.1777	
17 Ethanol	31	4.209	4.222	-0.013	91	17498	0.8000	0.8773	
18 Vinyl bromide	106	4.306	4.315	-0.009	96	14410	0.1600	0.1663	
19 2-Methylbutane	43	4.365	4.369	-0.004	80	9090	0.1600	0.1708	
20 Acrolein	56	4.516	4.516	0.000	29	3617	0.1600	0.2150	
21 Trichlorofluoromethane	101	4.511	4.517	-0.006	100	64156	0.1600	0.1630	
22 Acetonitrile	40	4.548	4.545	0.003	95	2801	0.1600	0.1627	
23 Acetone	58	4.597	4.605	-0.008	100	18402	0.4800	0.6662	
24 Pentane	72	4.688	4.693	-0.005	90	2568	0.1600	0.1919	
25 Isopropyl alcohol	45	4.705	4.716	-0.011	97	40201	0.4800	0.5338	
26 Ethyl ether	31	4.818	4.817	0.001	78	7549	0.1600	0.1703	
27 1,1-Dichloroethene	96	5.023	5.033	-0.010	96	14740	0.1600	0.1573	
28 Acrylonitrile	53	5.088	5.097	-0.009	93	6563	0.1600	0.1571	
29 2-Methyl-2-propanol	59	5.163	5.173	-0.010	96	28891	0.1600	0.1621	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	91	37596	0.1600	0.1619	
31 Methylene Chloride	84	5.276	5.290	-0.014	88	21540	0.1600	0.2419	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.298	5.309	-0.011	83	15229	0.1600	0.1748	
33 Carbon disulfide	76	5.400	5.410	-0.010	99	34577	0.1600	0.1555	
34 trans-1,2-Dichloroethene	96	5.939	5.951	-0.012	97	14785	0.1600	0.1547	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	20556	0.1600	0.1631	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	47525	0.1600	0.1563	
37 1,1-Dichloroethane	63	6.268	6.283	-0.015	96	24630	0.1600	0.1540	
38 Vinyl acetate	43	6.387	6.402	-0.015	98	21613	0.1600	0.1399	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	97	6132	0.1600	0.1692	
40 Hexane	56	6.840	6.845	-0.005	80	8962	0.1600	0.1612	
171 Isopropyl ether	45	6.986	6.989	-0.003	87	30112	0.1600	0.1575	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	96	15197	0.1600	0.1577	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	20428	0.1600	0.1526	
43 Chloroform	83	7.422	7.439	-0.017	90	40040	0.1600	0.1575	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	93	42934	0.1600	0.1558	
44 Tetrahydrofuran	42	7.794	7.793	0.001	70	9354	0.1600	0.1586	
45 1,1,1-Trichloroethane	97	8.355	8.364	-0.009	94	50545	0.1600	0.1568	
46 1,2-Dichloroethane	62	8.415	8.427	-0.012	98	29238	0.1600	0.1535	
47 Benzene	78	8.911	8.920	-0.009	98	37991	0.1600	0.1550	
48 Cyclohexane	69	8.948	8.951	-0.003	61	5770	0.1600	0.1584	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	95	54395	0.1600	0.1577	
49 n-Butanol	31	8.997	8.969	0.028	35	1642	0.1600	0.0945	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	7686	0.1600	0.1514	
52 Thiophene	84	9.164	9.174	-0.010	94	21711	0.1600	0.1548	
53 Isooctane	57	9.790	9.798	-0.008	95	49245	0.1600	0.1569	
54 1,2-Dichloropropane	63	10.173	10.175	-0.003	75	11982	0.1600	0.1557	
55 n-Heptane	71	10.210	10.224	-0.014	80	11910	0.1600	0.1520	
56 Trichloroethene	130	10.243	10.250	-0.007	91	22698	0.1600	0.1536	
57 Dibromomethane	93	10.270	10.279	-0.009	91	21454	0.1600	0.1623	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	35620	0.1600	0.1438	
59 1,4-Dioxane	88	10.507	10.497	0.010	85	5968	0.1600	0.1596	
60 Methyl methacrylate	41	10.647	10.649	-0.002	88	10629	0.1600	0.1242	
61 Methylcyclohexane	83	11.105	11.109	-0.004	93	23124	0.1600	0.1528	
62 4-Methyl-2-pentanone (MIBK)	43	11.553	11.552	0.001	90	17423	0.1600	0.1277	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	96	21150	0.1600	0.1424	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	22215	0.1600	0.1464	
65 Toluene	91	12.470	12.471	-0.001	93	49243	0.1600	0.1582	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	92	13406	0.1600	0.1623	
69 2-Hexanone	58	13.009	13.003	0.006	93	7267	0.1600	0.1116	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	33778	0.1600	0.1403	
71 n-Octane	85	13.322	13.326	-0.004	72	15759	0.1600	0.1589	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	98	25676	0.1600	0.1419	
73 Tetrachloroethene	129	13.688	13.695	-0.007	93	25138	0.1600	0.1630	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	43900	0.1600	0.1614	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	77	29630	0.1600	0.1622	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	69322	0.1600	0.1545	
78 m-Xylene & p-Xylene	91	15.123	15.119	0.004	100	119367	0.3200	0.3243	
79 Bromoform	173	15.506	15.507	-0.001	95	32037	0.1600	0.1267	
80 Styrene	104	15.592	15.594	-0.002	97	32117	0.1600	0.1331	
82 o-Xylene	91	15.657	15.655	0.002	97	63851	0.1600	0.1652	
81 n-Nonane	57	15.657	15.659	-0.002	76	23460	0.1600	0.1601	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	92	30142	0.1600	0.1534	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	92	15160	0.1600	0.1556	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	50	91067	0.1600	0.1655	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	24106	0.1600	0.1596	
87 2-Chlorotoluene	126	16.870	16.867	0.003	94	22951	0.1600	0.1642	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	91082	0.1600	0.1594	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	90	37553	0.1600	0.1606	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	89	28257	0.1600	0.1271	
91 n-Decane	57	17.533	17.532	0.001	96	33292	0.1600	0.1597	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	90	97365	0.1600	0.1710	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	88253	0.1600	0.1692	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	61425	0.1600	0.1631	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	98	116417	0.1600	0.1652	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	54221	0.1600	0.1348	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	92	63275	0.1600	0.1674	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	116224	0.1600	0.1634	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	98	92640	0.1600	0.1654	
100 Butylcyclohexane	83	18.229	18.232	-0.003	93	50956	0.1600	0.1654	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	62682	0.1600	0.1687	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	92	77218	0.1600	0.1671	
103 Indene	116	18.520	18.520	0.000	90	56129	0.1600	0.1480	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	97253	0.1600	0.1678	
105 Undecane	57	19.000	19.001	-0.001	87	40009	0.1600	0.1622	
106 1,2-Dibromo-3-Chloropropan	157	19.021	19.028	-0.007	94	24464	0.1600	0.1352	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	111338	0.1600	0.1659	
110 Dodecane	57	20.127	20.128	-0.001	90	45141	0.1600	0.1747	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	72153	0.1600	0.1799	
113 Naphthalene	128	20.326	20.329	-0.003	98	142183	0.1600	0.1753	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	96	81808	0.1600	0.1754	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	94	72007	0.1600	0.1868	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	50645	0.1600	0.1965	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	98	54962	0.1600	0.2418	
A 120 C8 Range	1	13.337	(13.284-13.370)		0	123442	0.1600	0.1536	
S 121 Xylenes, Total	100				0		0.4800	0.4895	
S 122 1,2-Dichloroethene, Total	1				0		0.3200	0.3124	

Reagents:

40L4DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D

Injection Date: 17-Nov-2018 00:20:30

Instrument ID: MR

Operator ID:

Lims ID: IC L4

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

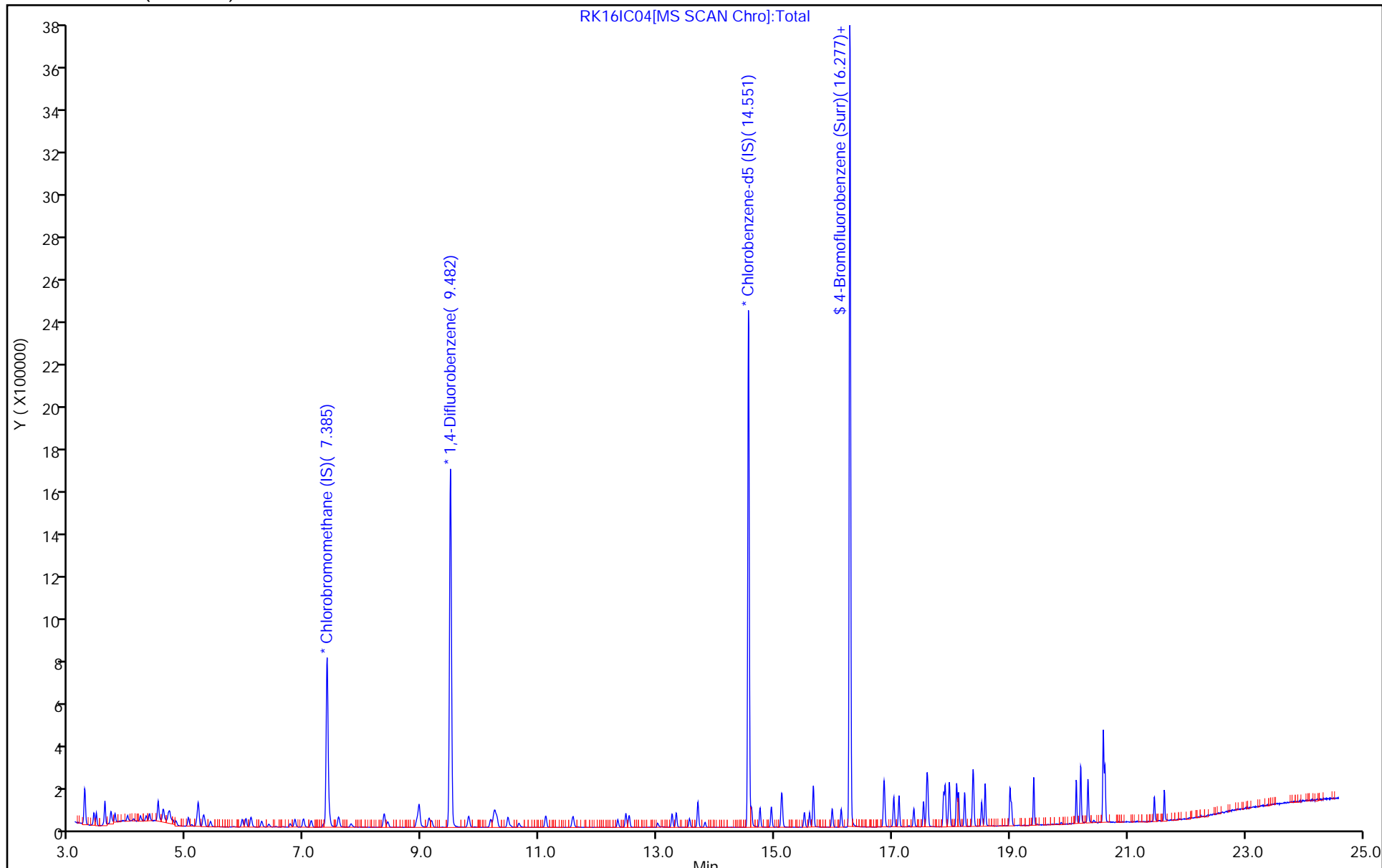
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D

Injection Date: 17-Nov-2018 00:20:30

Instrument ID: MR

Lims ID: IC L4

Client ID:

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

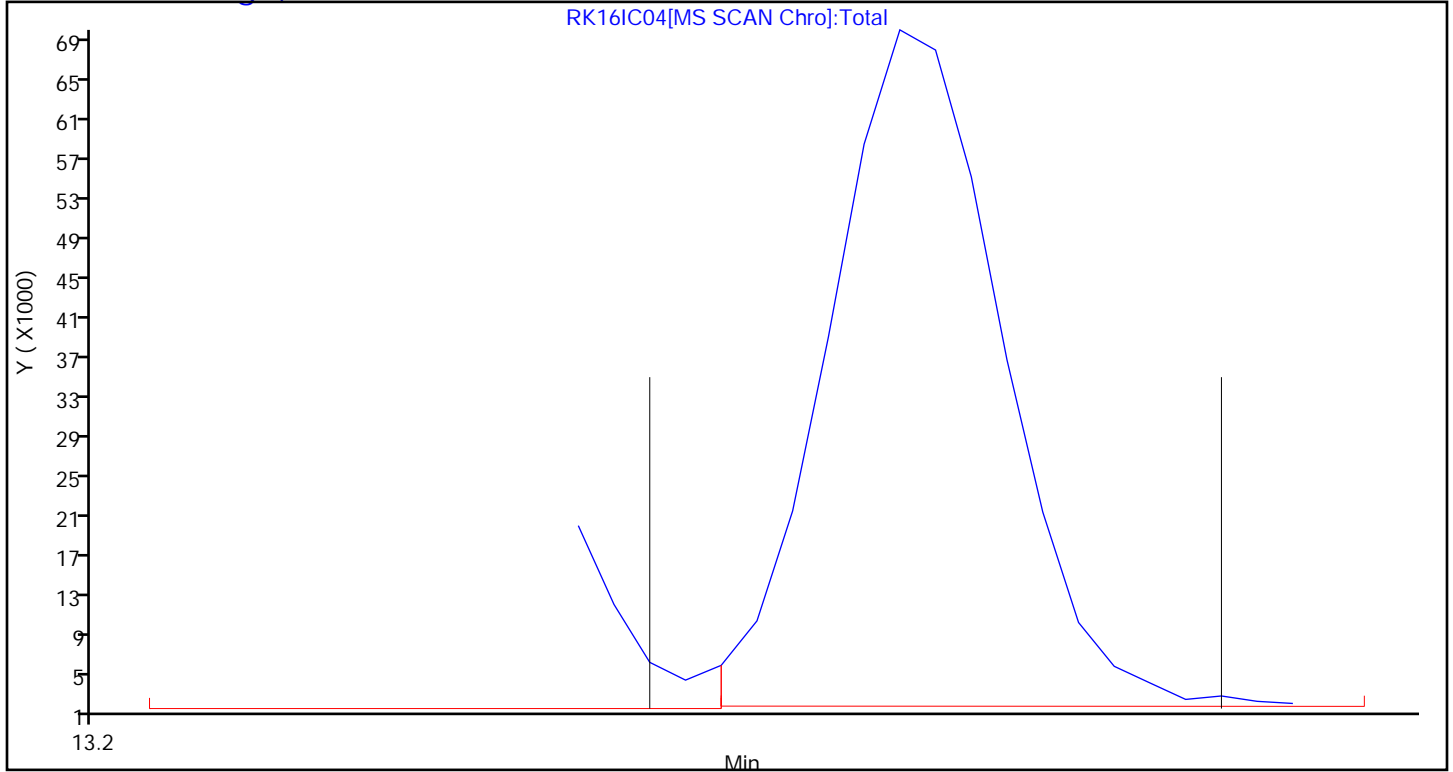
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 17-Nov-2018 01:12:30 ALS Bottle#: 4 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-012
 Misc. Info.: 190395
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:05 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:25:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	275927	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1558367	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1354086	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	90	1170099	4.00	4.06	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	95	67965	0.4000	0.4151	
7 Propene	41	3.410	3.420	-0.010	48	20715	0.4000	0.4116	
8 Dichlorodifluoromethane	85	3.448	3.461	-0.013	100	146259	0.4000	0.4871	
9 Chloromethane	52	3.572	3.586	-0.014	99	9302	0.4000	0.4405	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.599	3.609	-0.010	90	98065	0.4000	0.4387	
11 Acetaldehyde	44	3.696	3.710	-0.014	93	45673	2.00	2.31	
12 Vinyl chloride	62	3.702	3.711	-0.009	85	28814	0.4000	0.3893	
13 Butadiene	54	3.766	3.780	-0.014	83	18132	0.4000	0.4040	
14 Butane	43	3.772	3.782	-0.010	78	33375	0.4000	0.4274	
15 Bromomethane	94	3.982	3.995	-0.013	96	35058	0.4000	0.4114	
16 Chloroethane	64	4.084	4.100	-0.016	95	13655	0.4000	0.3983	
17 Ethanol	31	4.209	4.222	-0.014	92	43508	2.00	2.10	
18 Vinyl bromide	106	4.300	4.315	-0.015	96	37233	0.4000	0.4146	
19 2-Methylbutane	43	4.359	4.369	-0.010	78	23067	0.4000	0.4180	
20 Acrolein	56	4.510	4.516	-0.006	28	6392	0.4000	0.3665	
21 Trichlorofluoromethane	101	4.505	4.517	-0.012	99	164680	0.4000	0.4038	
22 Acetonitrile	40	4.548	4.545	0.003	98	6701	0.4000	0.3756	
23 Acetone	58	4.597	4.605	-0.008	100	35521	1.20	1.24	
24 Pentane	72	4.683	4.693	-0.010	91	5613	0.4000	0.4046	
25 Isopropyl alcohol	45	4.705	4.716	-0.011	97	95103	1.20	1.22	
26 Ethyl ether	31	4.807	4.817	-0.010	72	19232	0.4000	0.4185	
27 1,1-Dichloroethene	96	5.023	5.033	-0.010	98	37945	0.4000	0.3908	
28 Acrylonitrile	53	5.087	5.097	-0.010	95	17259	0.4000	0.3986	
29 2-Methyl-2-propanol	59	5.168	5.173	-0.005	95	74242	0.4000	0.4020	
30 1,1,2-Trichloro-1,2,2-trif	101	5.190	5.199	-0.009	94	97989	0.4000	0.4071	
31 Methylene Chloride	84	5.276	5.290	-0.014	90	41401	0.4000	0.4485	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.298	5.309	-0.011	83	36262	0.4000	0.4015	
33 Carbon disulfide	76	5.395	5.410	-0.015	99	91945	0.4000	0.3990	
34 trans-1,2-Dichloroethene	96	5.939	5.951	-0.012	97	38175	0.4000	0.3854	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	53163	0.4000	0.4069	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	126834	0.4000	0.4025	
37 1,1-Dichloroethane	63	6.274	6.283	-0.009	98	65086	0.4000	0.3927	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	59429	0.4000	0.3713	
39 2-Butanone (MEK)	72	6.754	6.761	-0.007	97	14067	0.4000	0.3744	
40 Hexane	56	6.835	6.845	-0.010	81	23112	0.4000	0.4012	
171 Isopropyl ether	45	6.980	6.989	-0.009	85	80134	0.4000	0.4043	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	95	38474	0.4000	0.3852	
42 Ethyl acetate	43	7.320	7.330	-0.010	98	53019	0.4000	0.3820	
43 Chloroform	83	7.433	7.439	-0.006	89	104204	0.4000	0.3954	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	92	113240	0.4000	0.3965	
44 Tetrahydrofuran	42	7.784	7.793	-0.009	77	24371	0.4000	0.3987	
45 1,1,1-Trichloroethane	97	8.355	8.364	-0.009	94	130803	0.4000	0.3915	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	76773	0.4000	0.3892	
47 Benzene	78	8.911	8.920	-0.009	98	96837	0.4000	0.3814	
48 Cyclohexane	69	8.943	8.951	-0.008	91	14632	0.4000	0.3878	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	98	145724	0.4000	0.4080	
49 n-Butanol	31	8.981	8.969	0.012	66	5146	0.4000	0.2859	
51 2,3-Dimethylpentane	71	9.126	9.126	0.000	80	21116	0.4000	0.4017	
52 Thiophene	84	9.169	9.174	-0.005	92	57630	0.4000	0.3968	
53 Isooctane	57	9.795	9.798	-0.003	94	126672	0.4000	0.3898	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	75	31548	0.4000	0.3959	
55 n-Heptane	71	10.221	10.224	-0.003	82	32279	0.4000	0.3977	
56 Trichloroethene	130	10.243	10.250	-0.007	93	60473	0.4000	0.3951	
57 Dibromomethane	93	10.270	10.279	-0.009	94	53985	0.4000	0.3944	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	98	97237	0.4000	0.3789	
59 1,4-Dioxane	88	10.496	10.497	-0.001	88	15165	0.4000	0.3916	
60 Methyl methacrylate	41	10.642	10.649	-0.007	91	31857	0.4000	0.3594	
61 Methylcyclohexane	83	11.105	11.109	-0.004	92	61375	0.4000	0.3915	
62 4-Methyl-2-pentanone (MIBK)	43	11.548	11.552	-0.004	91	51070	0.4000	0.3615	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	97	59340	0.4000	0.3858	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	61443	0.4000	0.3884	
65 Toluene	91	12.470	12.471	-0.001	93	129198	0.4000	0.3981	
66 1,1,2-Trichloroethane	83	12.524	12.527	-0.003	93	35149	0.4000	0.4083	
69 2-Hexanone	58	13.003	13.003	0.000	95	24199	0.4000	0.3564	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	94584	0.4000	0.3769	
71 n-Octane	85	13.327	13.326	0.001	75	40600	0.4000	0.3928	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	73769	0.4000	0.3910	
73 Tetrachloroethene	129	13.688	13.695	-0.007	93	63725	0.4000	0.3964	
74 Chlorobenzene	112	14.605	14.606	-0.001	93	113462	0.4000	0.4003	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	80	76114	0.4000	0.3997	
76 Ethylbenzene	91	14.939	14.943	-0.004	100	189812	0.4000	0.4057	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	316153	0.8001	0.8239	
79 Bromoform	173	15.506	15.507	-0.001	96	89888	0.4000	0.3410	
80 Styrene	104	15.592	15.594	-0.002	97	91899	0.4000	0.3654	
82 o-Xylene	91	15.651	15.655	-0.004	96	169158	0.4000	0.4197	
81 n-Nonane	57	15.657	15.659	-0.003	73	65019	0.4000	0.4257	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	92	83793	0.4000	0.4091	
84 1,2,3-Trichloropropane	110	16.126	16.132	-0.006	94	40330	0.4000	0.3971	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	95	232238	0.4000	0.4049	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	64393	0.4000	0.4089	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	91	59552	0.4000	0.4086	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	243377	0.4000	0.4086	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	98748	0.4000	0.4052	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	88	77610	0.4000	0.3350	
91 n-Decane	57	17.533	17.532	0.001	97	87862	0.4000	0.4042	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	90	252400	0.4000	0.4252	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	231880	0.4000	0.4264	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	157370	0.4000	0.4008	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	302828	0.4000	0.4121	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	149421	0.4000	0.3562	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	93	157774	0.4000	0.4003	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	307780	0.4000	0.4150	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	98	237762	0.4000	0.4071	
100 Butylcyclohexane	83	18.229	18.232	-0.003	92	134022	0.4000	0.4173	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	153773	0.4000	0.3970	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	93	195256	0.4000	0.4053	
103 Indene	116	18.520	18.520	0.000	90	144394	0.4000	0.3651	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	247354	0.4000	0.4095	
105 Undecane	57	19.000	19.001	-0.001	88	102646	0.4000	0.3991	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	97	65829	0.4000	0.3490	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	96	265327	0.4000	0.3792	
110 Dodecane	57	20.127	20.128	-0.001	89	92125	0.4000	0.3420	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	147015	0.4000	0.3515	
113 Naphthalene	128	20.326	20.329	-0.003	98	247207	0.4000	0.2923	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	96	188387	0.4000	0.3875	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	138621	0.4000	0.3449	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	37139	0.4000	0.1383	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	96	44726	0.4000	0.1888	
A 120 C8 Range	1	13.343	(13.284-13.381)		0	326670	0.4000	0.3926	
S 121 Xylenes, Total	100				0		1.20	1.24	
S 122 1,2-Dichloroethene, Total	1				0		0.8001	0.7707	

Reagents:

40L6DQP_00007

Amount Added: 80.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC05.D

Injection Date: 17-Nov-2018 01:12:30

Instrument ID: MR

Operator ID:

Lims ID: IC L5

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

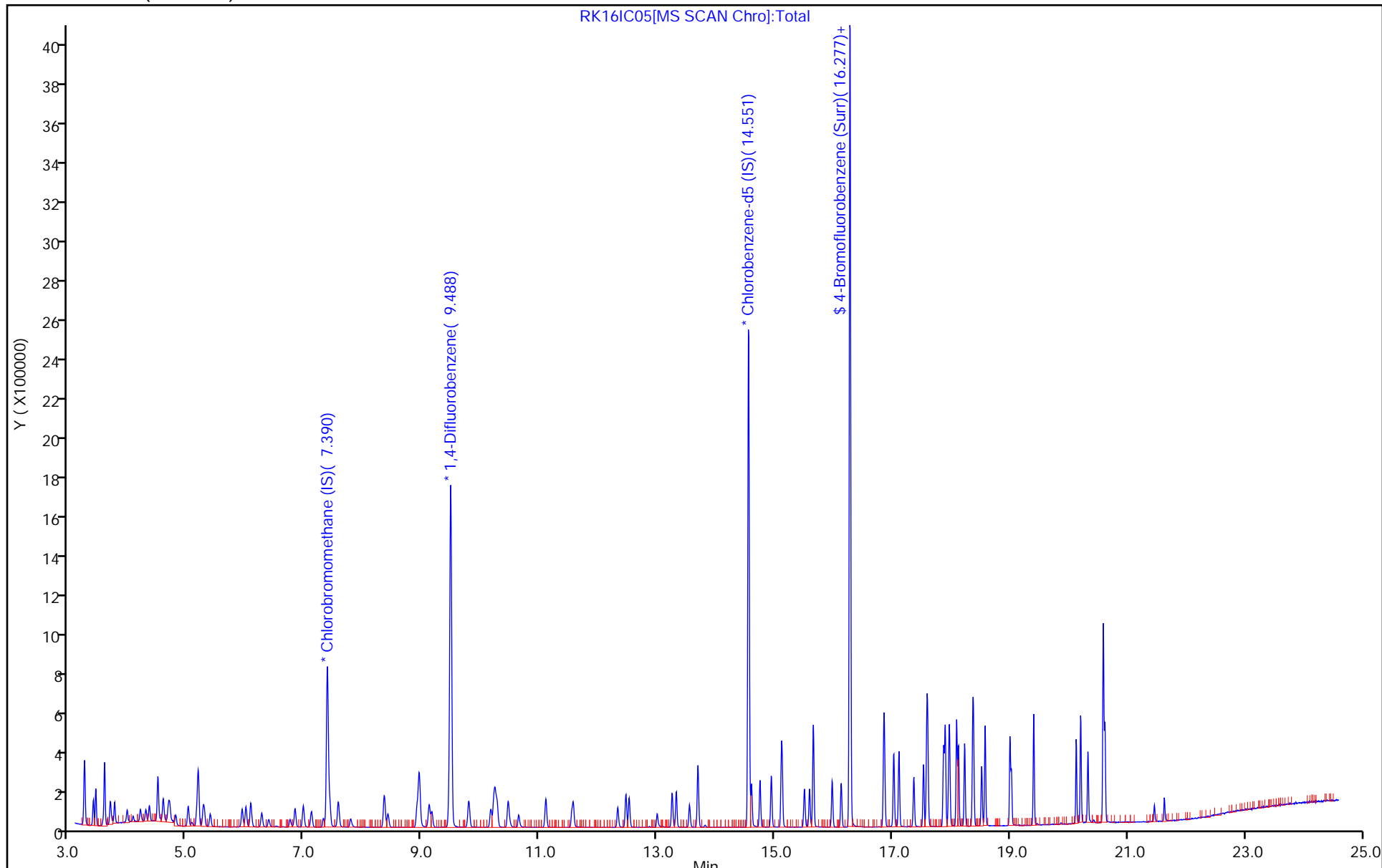
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC05.D

Injection Date: 17-Nov-2018 01:12:30

Instrument ID: MR

Lims ID: IC L5

Client ID:

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

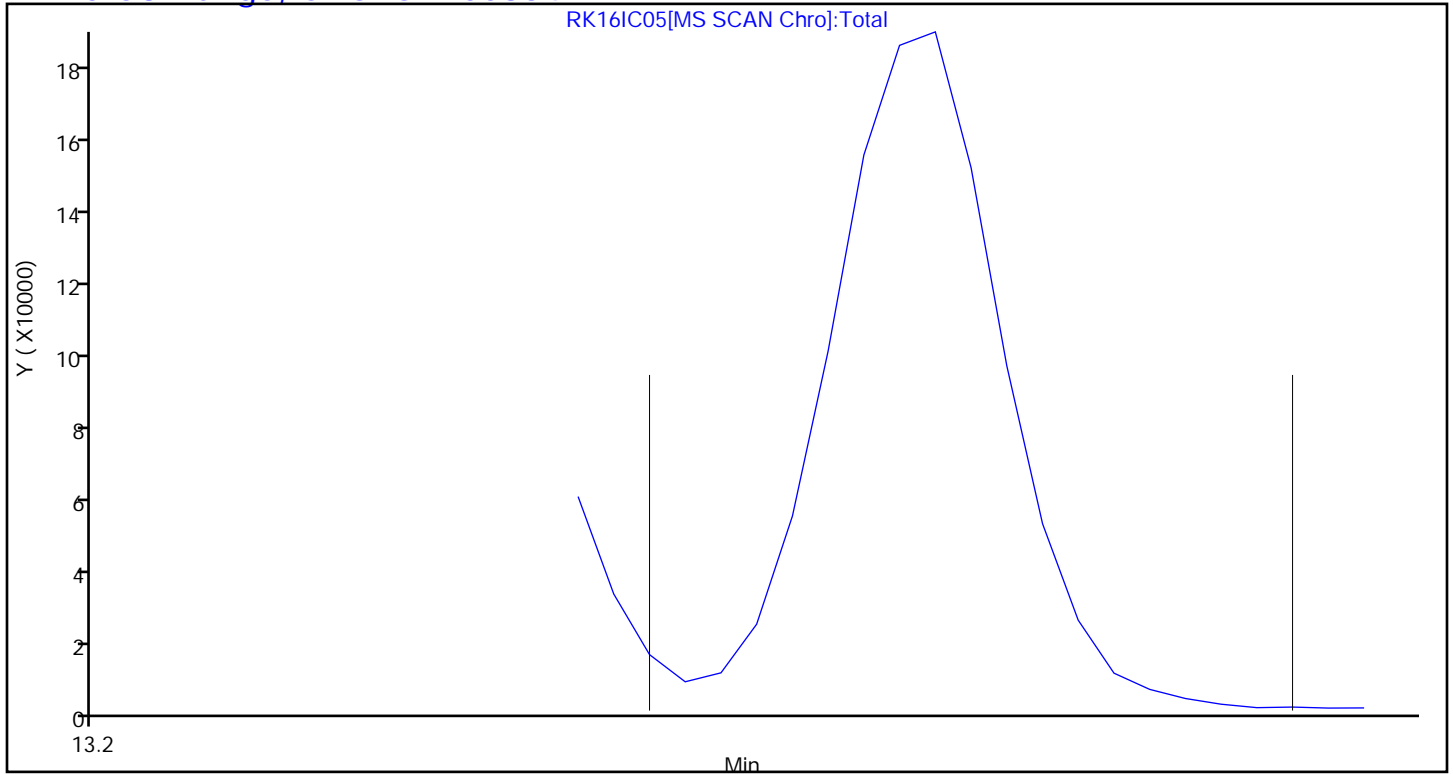
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 17-Nov-2018 02:05:30 ALS Bottle#: 4 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-013
 Misc. Info.: 190395
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:12 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:29:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.397	-0.007	70	284526	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1579313	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	90	1386926	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	90	1197793	4.00	4.06	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	95	165552	1.00	0.9806	
7 Propene	41	3.421	3.420	0.001	94	51364	1.00	0.9898	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	295289	1.00	0.9538	
9 Chloromethane	52	3.583	3.586	-0.003	98	20420	1.00	0.9379	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	89	220441	1.00	0.9564	
11 Acetaldehyde	44	3.702	3.710	-0.008	93	111533	5.00	5.48	
12 Vinyl chloride	62	3.707	3.711	-0.004	100	70331	1.00	0.9214	
13 Butadiene	54	3.777	3.780	-0.003	88	46402	1.00	1.00	
14 Butane	43	3.782	3.782	0.000	90	78896	1.00	0.9797	
15 Bromomethane	94	3.993	3.995	-0.002	95	85746	1.00	0.9758	
16 Chloroethane	64	4.095	4.100	-0.005	94	34804	1.00	0.9845	
17 Ethanol	31	4.208	4.222	-0.014	93	104882	5.00	4.92	
18 Vinyl bromide	106	4.311	4.315	-0.004	97	90610	1.00	0.9784	
19 2-Methylbutane	43	4.365	4.369	-0.004	79	56760	1.00	1.00	
20 Acrolein	56	4.505	4.516	-0.011	27	15289	1.00	0.8501	
21 Trichlorofluoromethane	101	4.510	4.517	-0.007	99	413497	1.00	0.9832	
22 Acetonitrile	40	4.543	4.545	-0.002	93	16703	1.00	0.9079	
23 Acetone	58	4.591	4.605	-0.014	100	89101	3.00	3.02	
24 Pentane	72	4.688	4.693	-0.005	92	14137	1.00	0.9884	
25 Isopropyl alcohol	45	4.699	4.716	-0.017	93	239341	3.00	2.97	
26 Ethyl ether	31	4.802	4.817	-0.015	72	46526	1.00	0.9819	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	97	96830	1.00	0.9671	
28 Acrylonitrile	53	5.082	5.097	-0.015	91	44072	1.00	0.9871	
29 2-Methyl-2-propanol	59	5.152	5.173	-0.021	91	190196	1.00	1.00	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	92	250984	1.00	1.01	
31 Methylene Chloride	84	5.281	5.290	-0.009	88	91431	1.00	0.9606	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	86	95603	1.00	1.03	
33 Carbon disulfide	76	5.406	5.410	-0.004	99	242543	1.00	1.02	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	97	99652	1.00	0.9758	
35 2-Methylpentane	43	6.009	6.011	-0.002	86	134813	1.00	1.00	
36 Methyl tert-butyl ether	73	6.080	6.094	-0.014	93	326320	1.00	1.00	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	98	165748	1.00	0.9699	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	159088	1.00	0.9638	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	98	38268	1.00	0.9878	
40 Hexane	56	6.840	6.845	-0.005	82	58239	1.00	0.9804	
171 Isopropyl ether	45	6.975	6.989	-0.014	86	203305	1.00	0.99	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	94	100389	1.00	0.9748	
42 Ethyl acetate	43	7.314	7.330	-0.016	98	143745	1.00	1.00	
43 Chloroform	83	7.433	7.439	-0.006	94	266010	1.00	0.9788	
173 Tert-butyl ethyl ether	59	7.568	7.580	-0.012	93	291639	1.00	0.99	
44 Tetrahydrofuran	42	7.778	7.793	-0.015	77	62926	1.00	1.00	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	94	339819	1.00	0.9864	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	199683	1.00	1.00	
47 Benzene	78	8.916	8.920	-0.004	98	249589	1.00	0.9699	
48 Cyclohexane	69	8.943	8.951	-0.008	84	39991	1.00	1.05	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	97	374679	1.00	1.04	
49 n-Butanol	31	8.959	8.969	-0.010	73	17690	1.00	0.9698	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	54415	1.00	1.02	
52 Thiophene	84	9.169	9.174	-0.005	94	149183	1.00	1.01	
53 Isooctane	57	9.795	9.798	-0.003	95	332582	1.00	1.01	
54 1,2-Dichloropropane	63	10.167	10.175	-0.008	73	80581	1.00	1.00	
55 n-Heptane	71	10.215	10.224	-0.009	82	84592	1.00	1.03	
56 Trichloroethene	130	10.248	10.250	-0.002	93	152289	1.00	0.9817	
57 Dibromomethane	93	10.275	10.279	-0.004	92	136587	1.00	0.9845	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	98	263754	1.00	1.01	
59 1,4-Dioxane	88	10.485	10.497	-0.012	88	38117	1.00	0.9712	
60 Methyl methacrylate	41	10.641	10.649	-0.008	91	88559	1.00	0.9859	
61 Methylcyclohexane	83	11.105	11.109	-0.004	92	160604	1.00	1.01	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	141224	1.00	0.9864	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	97	155584	1.00	1.00	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	165754	1.00	1.02	
65 Toluene	91	12.470	12.471	-0.001	93	336279	1.00	1.01	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	94	91510	1.00	1.04	
69 2-Hexanone	58	12.993	13.003	-0.010	94	68694	1.00	0.9878	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	271846	1.00	1.06	
71 n-Octane	85	13.322	13.326	-0.004	75	109095	1.00	1.03	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	199953	1.00	1.03	
73 Tetrachloroethene	129	13.694	13.695	-0.001	93	168145	1.00	1.02	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	295002	1.00	1.02	
75 2,3-Dimethylheptane	43	14.750	14.750	0.000	78	202047	1.00	1.04	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	491615	1.00	1.03	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	820994	2.00	2.09	
79 Bromoform	173	15.505	15.507	-0.002	96	263744	1.00	0.9769	
80 Styrene	104	15.592	15.594	-0.002	97	268745	1.00	1.04	
82 o-Xylene	91	15.651	15.655	-0.004	97	428791	1.00	1.04	
81 n-Nonane	57	15.656	15.659	-0.003	75	164273	1.00	1.05	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	93	223872	1.00	1.07	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	106933	1.00	1.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	589911	1.00	1.00	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	172077	1.00	1.07	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	93	156859	1.00	1.05	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	652888	1.00	1.07	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	267835	1.00	1.07	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	235120	1.00	0.99	
91 n-Decane	57	17.528	17.532	-0.004	97	237483	1.00	1.07	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	88	653325	1.00	1.07	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	597546	1.00	1.07	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	411115	1.00	1.02	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	799929	1.00	1.06	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	434461	1.00	1.01	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	95	419983	1.00	1.04	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	809499	1.00	1.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	636168	1.00	1.06	
100 Butylcyclohexane	83	18.229	18.232	-0.003	93	349539	1.00	1.06	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	400754	1.00	1.01	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	93	519916	1.00	1.05	
103 Indene	116	18.520	18.520	0.000	90	416558	1.00	1.03	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	652919	1.00	1.06	
105 Undecane	57	19.000	19.001	-0.001	87	279455	1.00	1.06	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	98	201092	1.00	1.04	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	736323	1.00	1.03	
110 Dodecane	57	20.127	20.128	-0.001	90	268129	1.00	0.9719	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	412431	1.00	0.9629	
113 Naphthalene	128	20.326	20.329	-0.003	98	719521	1.00	0.8307	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	96	517445	1.00	1.04	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	95	391665	1.00	0.9514	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	99	124366	1.00	0.4520	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	135206	1.00	0.5571	
A 120 C8 Range	1	13.340	(13.278-13.375)		0	855982	1.00	1.01	
S 121 Xylenes, Total	100				0		3.00	3.13	
S 122 1,2-Dichloroethene, Total	1				0		2.00	1.95	

Reagents:

40L6DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D

Injection Date: 17-Nov-2018 02:05:30

Instrument ID: MR

Operator ID:

Lims ID: IC L6

Worklist Smp#: 13

Client ID:

Purge Vol: 500.000 mL

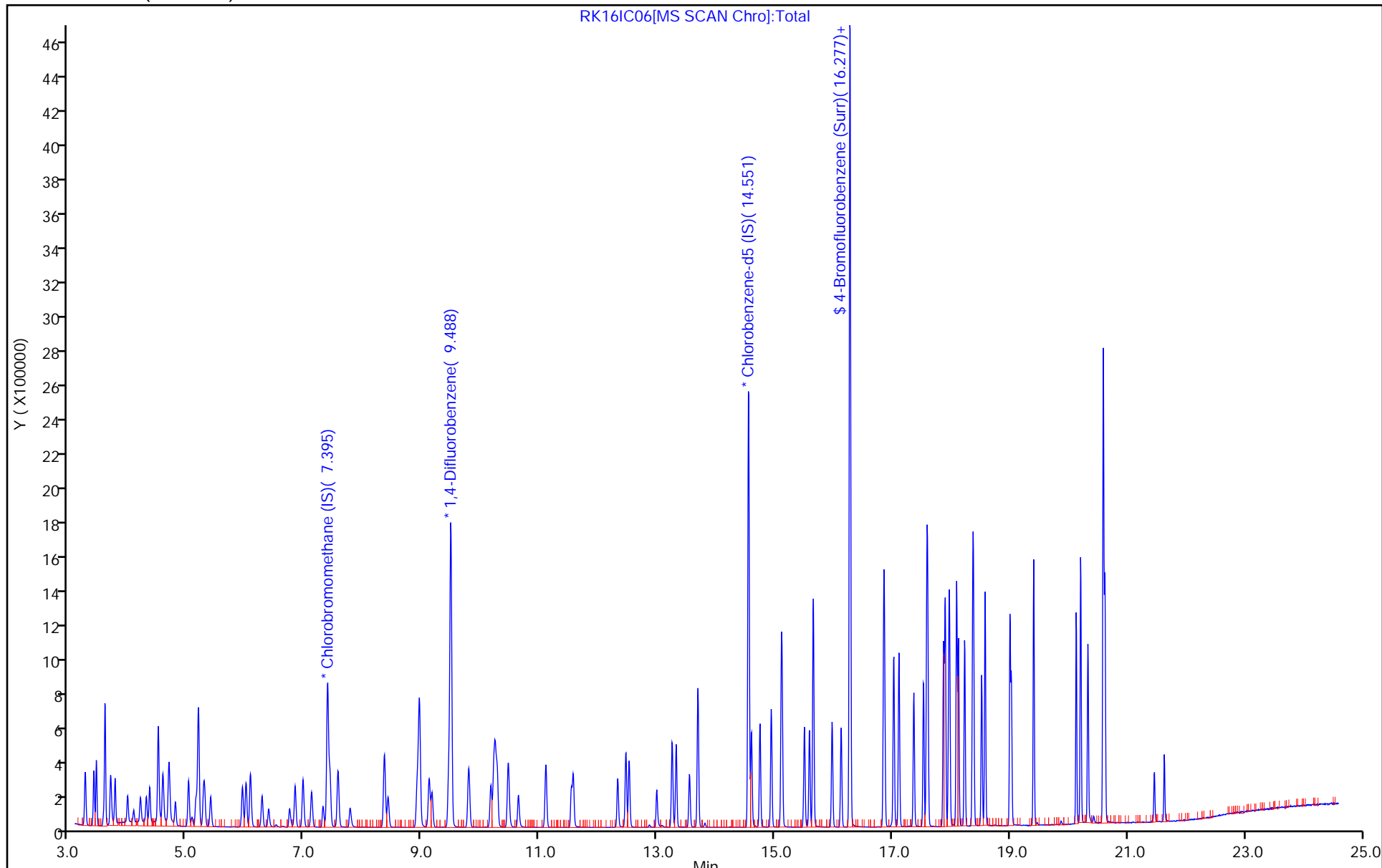
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D

Injection Date: 17-Nov-2018 02:05:30

Instrument ID: MR

Lims ID: IC L6

Client ID:

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

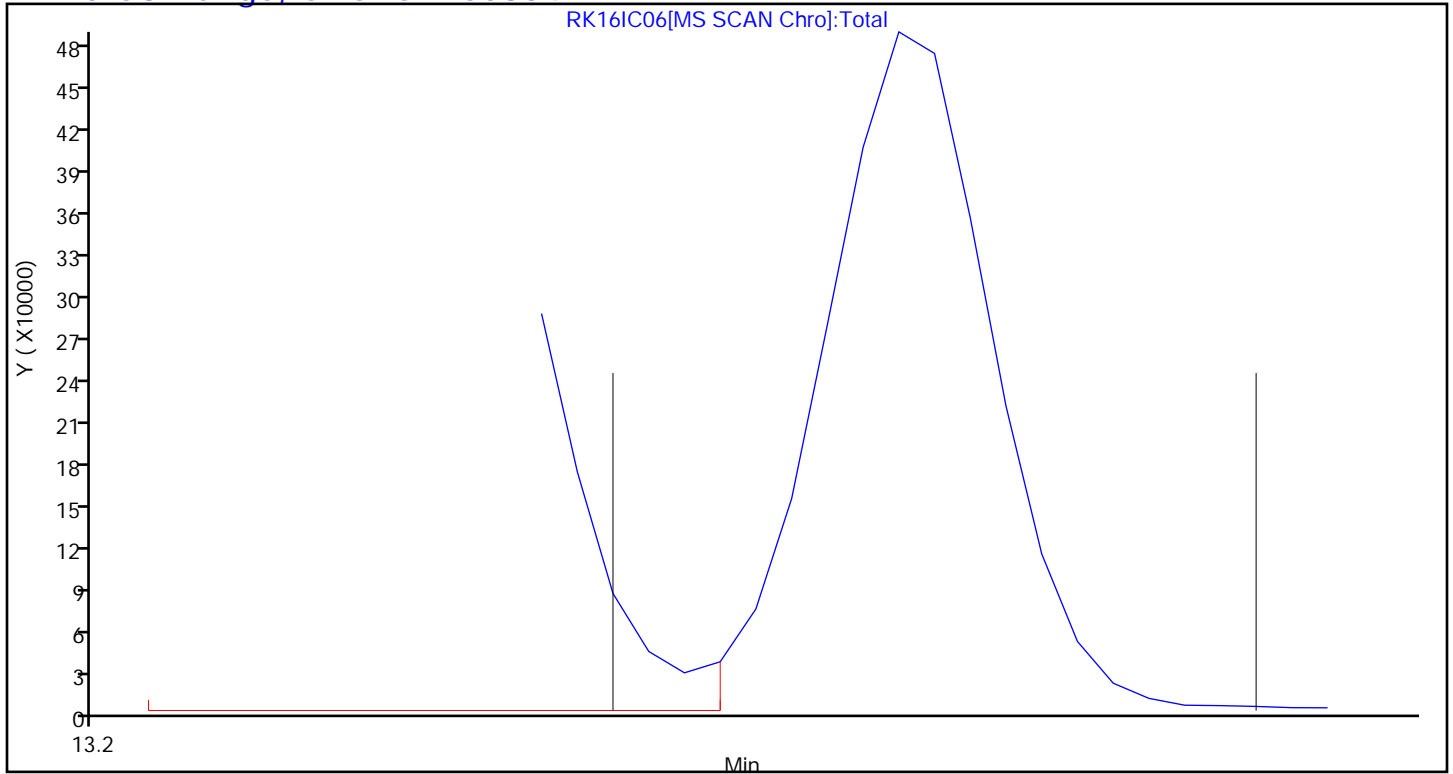
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 17-Nov-2018 02:58:30 ALS Bottle#: 5 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-014
 Misc. Info.: 190394
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:18 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:29:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.397	0.004	69	298864	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.494	-0.001	95	1677758	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	82	1487799	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	87	1269845	4.00	4.01	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	77	330784	2.00	1.87	
7 Propene	41	3.416	3.420	-0.004	49	103039	2.00	1.89	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	95	593041	2.00	1.82	
9 Chloromethane	52	3.583	3.586	-0.003	98	40844	2.00	1.79	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.604	3.609	-0.005	89	456323	2.00	1.88	
11 Acetaldehyde	44	3.701	3.710	-0.009	91	205358	10.0	9.61	
12 Vinyl chloride	62	3.707	3.711	-0.004	71	142840	2.00	1.78	
13 Butadiene	54	3.777	3.780	-0.003	82	94920	2.00	1.95	
14 Butane	43	3.777	3.782	-0.005	74	157806	2.00	1.87	
15 Bromomethane	94	3.993	3.995	-0.002	95	176496	2.00	1.91	
16 Chloroethane	64	4.095	4.100	-0.005	94	68833	2.00	1.85	
17 Ethanol	31	4.214	4.222	-0.008	93	224069	10.0	10.0	
18 Vinyl bromide	106	4.311	4.315	-0.004	95	186899	2.00	1.92	
19 2-Methylbutane	43	4.365	4.369	-0.004	78	115570	2.00	1.93	
20 Acrolein	56	4.505	4.516	-0.011	26	37440	2.00	1.98	
21 Trichlorofluoromethane	101	4.516	4.517	-0.001	99	844261	2.00	1.91	
22 Acetonitrile	40	4.548	4.545	0.003	68	35460	2.00	1.84	
23 Acetone	58	4.591	4.605	-0.014	92	173059	6.00	5.58	
24 Pentane	72	4.688	4.693	-0.005	91	28499	2.00	1.90	
25 Isopropyl alcohol	45	4.704	4.716	-0.012	91	509997	6.00	6.03	
26 Ethyl ether	31	4.802	4.817	-0.015	70	93310	2.00	1.87	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	96	202076	2.00	1.92	
28 Acrylonitrile	53	5.093	5.097	-0.004	84	91512	2.00	1.95	
29 2-Methyl-2-propanol	59	5.152	5.173	-0.021	53	409183	2.00	2.05	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	90	515989	2.00	1.98	
31 Methylene Chloride	84	5.287	5.290	-0.003	86	178076	2.00	1.78	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	82	193431	2.00	1.98	
33 Carbon disulfide	76	5.405	5.410	-0.005	99	499031	2.00	2.00	
34 trans-1,2-Dichloroethene	96	5.950	5.951	-0.001	95	206172	2.00	1.92	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	275324	2.00	1.95	
36 Methyl tert-butyl ether	73	6.080	6.094	-0.014	89	676752	2.00	1.98	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	98	342362	2.00	1.91	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	349189	2.00	2.01	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	66	79333	2.00	1.95	
40 Hexane	56	6.840	6.845	-0.005	80	121155	2.00	1.94	
171 Isopropyl ether	45	6.975	6.989	-0.014	86	426151	2.00	1.99	
41 cis-1,2-Dichloroethene	96	7.126	7.127	-0.001	93	213838	2.00	1.98	
42 Ethyl acetate	43	7.314	7.330	-0.016	98	303889	2.00	2.02	
43 Chloroform	83	7.438	7.439	-0.001	85	550434	2.00	1.93	
173 Tert-butyl ethyl ether	59	7.568	7.580	-0.012	92	613018	2.00	1.98	
44 Tetrahydrofuran	42	7.773	7.793	-0.020	77	130211	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.366	8.364	0.002	95	712345	2.00	1.97	
46 1,2-Dichloroethane	62	8.425	8.427	-0.002	78	414101	2.00	1.95	
47 Benzene	78	8.921	8.920	0.001	98	523482	2.00	1.91	
48 Cyclohexane	69	8.948	8.951	-0.003	71	82675	2.00	2.04	
50 Carbon tetrachloride	117	8.959	8.962	-0.003	96	786171	2.00	2.04	
49 n-Butanol	31	8.948	8.969	-0.021	25	40004	2.00	2.06	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	116636	2.00	2.06	
52 Thiophene	84	9.175	9.174	0.001	89	311873	2.00	1.99	
53 Isooctane	57	9.795	9.798	-0.003	95	691902	2.00	1.98	
54 1,2-Dichloropropane	63	10.172	10.175	-0.003	68	169011	2.00	1.97	
55 n-Heptane	71	10.221	10.224	-0.003	77	178041	2.00	2.04	
56 Trichloroethene	130	10.248	10.250	-0.002	93	324569	2.00	1.97	
57 Dibromomethane	93	10.280	10.279	0.001	91	283066	2.00	1.92	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	564189	2.00	2.04	
59 1,4-Dioxane	88	10.485	10.497	-0.012	40	86437	2.00	2.07	
60 Methyl methacrylate	41	10.641	10.649	-0.008	91	195505	2.00	2.05	
61 Methylcyclohexane	83	11.111	11.109	0.002	92	339768	2.00	2.01	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	311634	2.00	2.05	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	96	346235	2.00	2.09	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	369600	2.00	2.13	
65 Toluene	91	12.469	12.471	-0.002	93	715966	2.00	2.01	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	91	192987	2.00	2.04	
69 2-Hexanone	58	12.987	13.003	-0.016	94	156406	2.00	2.10	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	617174	2.00	2.24	
71 n-Octane	85	13.321	13.326	-0.005	74	233063	2.00	2.05	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	431756	2.00	2.08	
73 Tetrachloroethene	129	13.694	13.695	-0.001	94	358488	2.00	2.03	
74 Chlorobenzene	112	14.605	14.606	-0.001	85	622855	2.00	2.00	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	79	424515	2.00	2.03	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1050972	2.00	2.04	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1718390	4.00	4.08	
79 Bromoform	173	15.505	15.507	-0.002	96	631165	2.00	2.18	
80 Styrene	104	15.592	15.594	-0.002	93	593262	2.00	2.15	
82 o-Xylene	91	15.651	15.655	-0.004	77	897122	2.00	2.03	
81 n-Nonane	57	15.656	15.659	-0.003	72	340741	2.00	2.03	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.002	93	480219	2.00	2.13	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	225670	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1239416	2.00	1.97	
86 N-Propylbenzene	120	16.853	16.856	-0.003	96	356669	2.00	2.06	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	320641	2.00	2.00	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	1384436	2.00	2.12	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	551670	2.00	2.06	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	84	542707	2.00	2.13	
91 n-Decane	57	17.533	17.532	0.001	94	489862	2.00	2.05	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	65	1326146	2.00	2.03	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	93	1240172	2.00	2.08	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	863153	2.00	2.00	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	94	1651103	2.00	2.05	
96 Benzyl chloride	91	17.959	17.962	-0.003	96	984275	2.00	2.14	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	92	862511	2.00	1.99	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	92	1677824	2.00	2.06	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1329610	2.00	2.07	
100 Butylcyclohexane	83	18.229	18.232	-0.003	92	722497	2.00	2.05	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	829934	2.00	1.95	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	88	1063787	2.00	2.01	
103 Indene	116	18.520	18.520	0.000	83	909289	2.00	2.09	
104 n-Butylbenzene	91	18.579	18.580	-0.001	95	1341073	2.00	2.02	
105 Undecane	57	19.000	19.001	-0.001	86	588913	2.00	2.08	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	99	458234	2.00	2.21	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	94	1609444	2.00	2.09	
110 Dodecane	57	20.127	20.128	-0.001	90	664765	2.00	2.25	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	93	944306	2.00	2.06	
113 Naphthalene	128	20.326	20.329	-0.003	98	1821564	2.00	1.96	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	85	1070672	2.00	2.00	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	93	908417	2.00	2.06	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	707384	2.00	2.40	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	641933	2.00	2.47	
A 120 C8 Range	1	13.340	(13.278-13.375)		0	1781529	2.00	1.99	
S 121 Xylenes, Total	100				0		6.00	6.10	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.90	

Reagents:

40L7DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D

Injection Date: 17-Nov-2018 02:58:30

Instrument ID: MR

Operator ID:

Lims ID: ICIS L7

Worklist Smp#: 14

Client ID:

Purge Vol: 500.000 mL

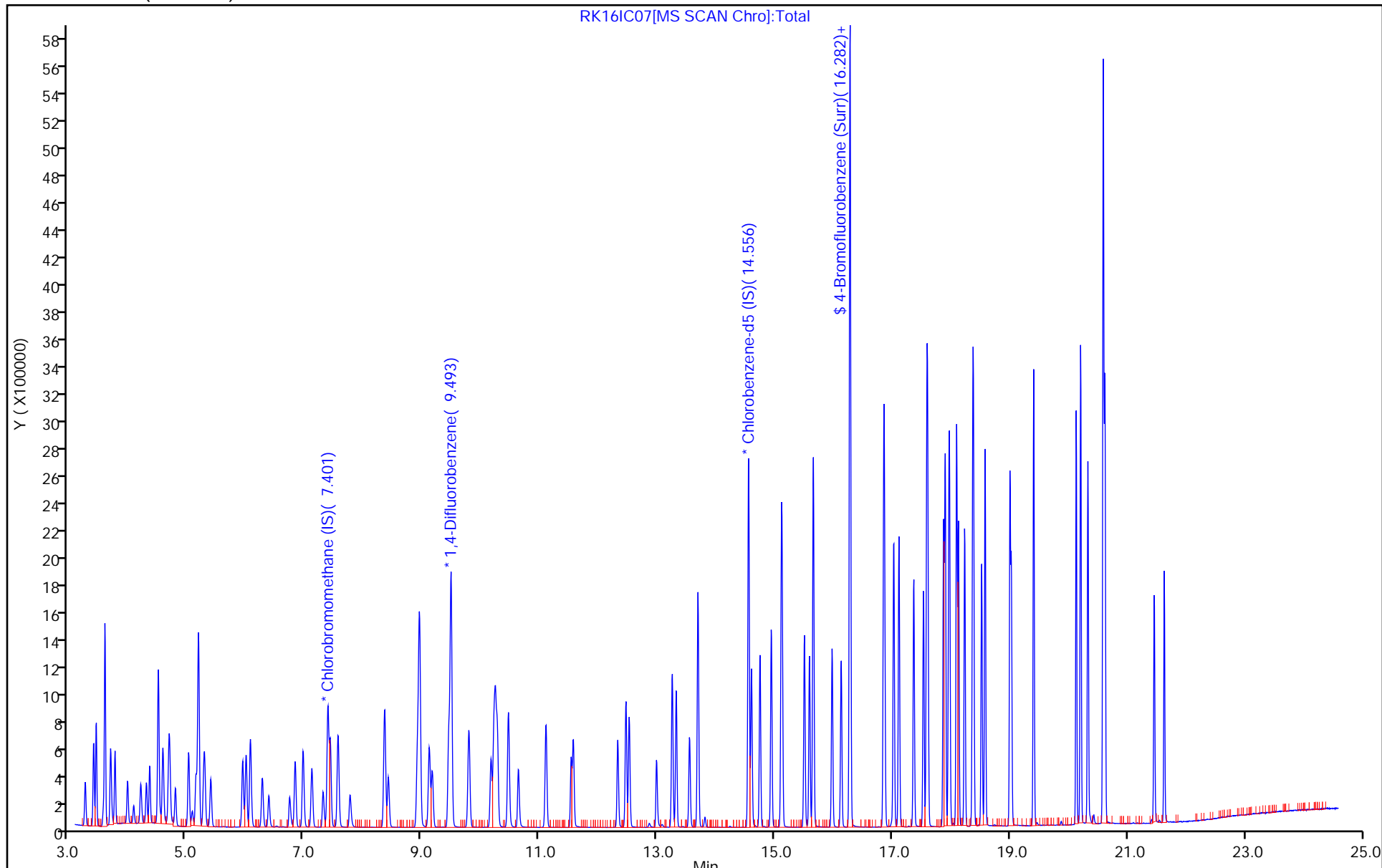
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D

Injection Date: 17-Nov-2018 02:58:30

Instrument ID: MR

Lims ID: ICIS L7

Client ID:

Operator ID:

ALS Bottle#: 5

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

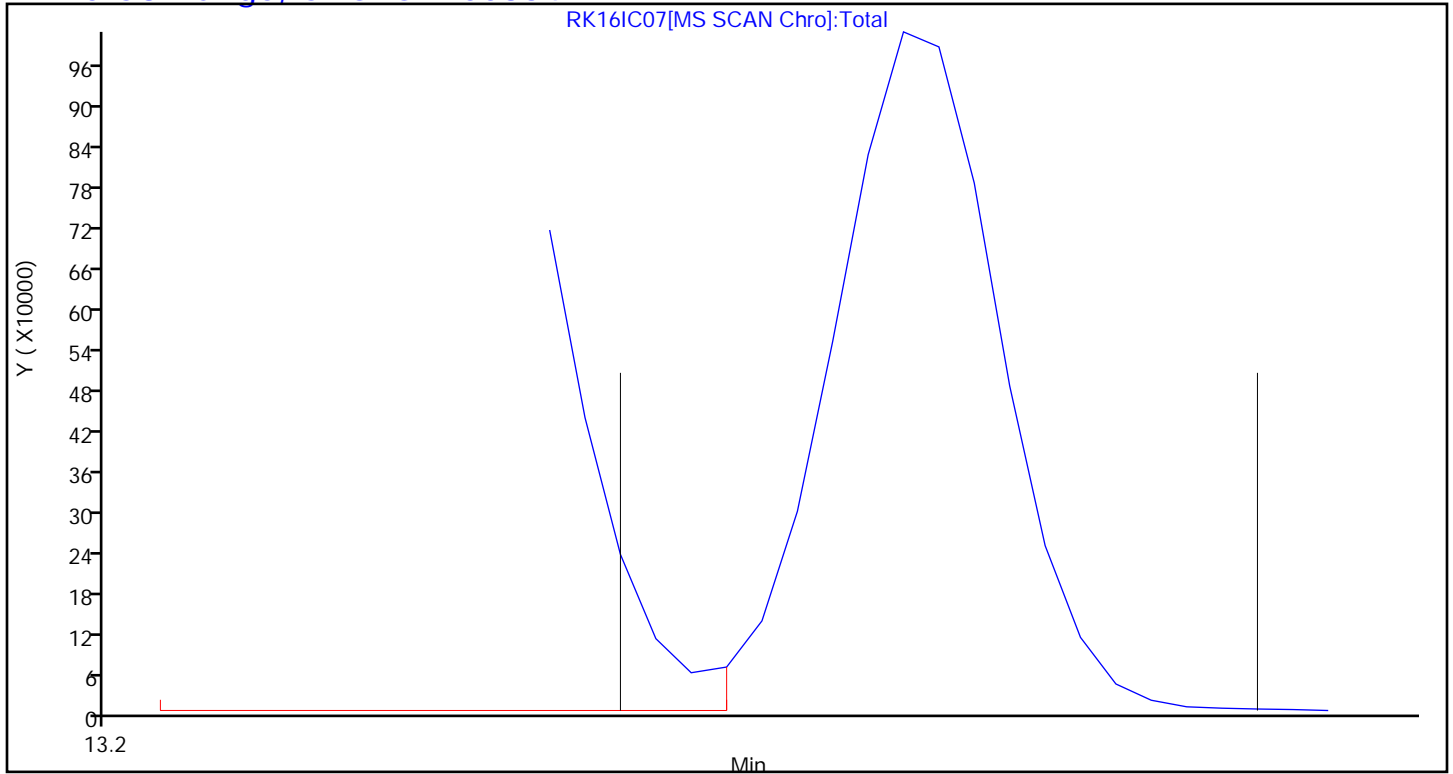
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 17-Nov-2018 03:51:30 ALS Bottle#: 6 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-015
 Misc. Info.: 190393
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:24 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:34:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.397	0.009	81	299965	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.498	9.494	0.004	95	1676956	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.557	14.555	0.001	89	1513773	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	84	1293730	4.00	4.02	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	96	670931	4.00	3.77	
7 Propene	41	3.421	3.420	0.001	91	205301	4.00	3.75	
8 Dichlorodifluoromethane	85	3.464	3.461	0.003	100	1212691	4.00	3.72	
9 Chloromethane	52	3.588	3.586	0.002	98	80675	4.00	3.51	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	97	932912	4.00	3.84	
11 Acetaldehyde	44	3.707	3.710	-0.003	94	415146	20.0	19.4	
12 Vinyl chloride	62	3.712	3.711	0.001	99	286294	4.00	3.56	
13 Butadiene	54	3.783	3.780	0.003	88	191280	4.00	3.92	
14 Butane	43	3.783	3.782	0.001	89	323819	4.00	3.81	
15 Bromomethane	94	3.998	3.995	0.003	96	354225	4.00	3.82	
16 Chloroethane	64	4.106	4.100	0.006	96	140181	4.00	3.76	
17 Ethanol	31	4.230	4.222	0.008	93	447098	20.0	19.9	
18 Vinyl bromide	106	4.322	4.315	0.007	96	380924	4.00	3.90	
19 2-Methylbutane	43	4.370	4.369	0.001	79	228167	4.00	3.80	
20 Acrolein	56	4.516	4.516	0.000	97	74788	4.00	3.94	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	99	1697186	4.00	3.83	
22 Acetonitrile	40	4.559	4.545	0.014	94	84531	4.00	4.36	
23 Acetone	58	4.602	4.605	-0.003	100	340521	12.0	10.9	
24 Pentane	72	4.699	4.693	0.006	92	58302	4.00	3.87	
25 Isopropyl alcohol	45	4.715	4.716	-0.001	93	1016357	12.0	12.0	
26 Ethyl ether	31	4.812	4.817	-0.005	71	189800	4.00	3.80	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	97	414812	4.00	3.93	
28 Acrylonitrile	53	5.104	5.097	0.007	91	186041	4.00	3.95	
29 2-Methyl-2-propanol	59	5.163	5.173	-0.010	92	809098	4.00	4.03	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	93	1031649	4.00	3.94	
31 Methylene Chloride	84	5.298	5.290	0.008	88	345898	4.00	3.45	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	85	385054	4.00	3.92	
33 Carbon disulfide	76	5.416	5.410	0.006	99	997332	4.00	3.98	
34 trans-1,2-Dichloroethene	96	5.961	5.951	0.010	97	421281	4.00	3.91	
35 2-Methylpentane	43	6.015	6.011	0.004	84	553915	4.00	3.90	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	1373906	4.00	4.01	
37 1,1-Dichloroethane	63	6.295	6.283	0.012	98	695373	4.00	3.86	
38 Vinyl acetate	43	6.403	6.402	0.001	98	730693	4.00	4.20	
39 2-Butanone (MEK)	72	6.759	6.761	-0.002	97	165553	4.00	4.05	
40 Hexane	56	6.845	6.845	0.000	81	248691	4.00	3.97	
171 Isopropyl ether	45	6.986	6.989	-0.003	86	863733	4.00	4.01	
41 cis-1,2-Dichloroethene	96	7.137	7.127	0.010	94	429081	4.00	3.95	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	632910	4.00	4.20	
43 Chloroform	83	7.449	7.439	0.010	96	1123349	4.00	3.92	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	92	1274961	4.00	4.11	
44 Tetrahydrofuran	42	7.778	7.793	-0.015	76	266070	4.00	4.00	
45 1,1,1-Trichloroethane	97	8.371	8.364	0.007	95	1454125	4.00	4.00	
46 1,2-Dichloroethane	62	8.436	8.427	0.009	97	837957	4.00	3.95	
47 Benzene	78	8.927	8.920	0.007	98	1050705	4.00	3.85	
48 Cyclohexane	69	8.954	8.951	0.003	91	167839	4.00	4.13	
50 Carbon tetrachloride	117	8.965	8.962	0.003	98	1553305	4.00	4.04	
49 n-Butanol	31	8.948	8.969	-0.021	65	82457	4.00	4.26	
51 2,3-Dimethylpentane	71	9.132	9.126	0.006	83	235995	4.00	4.17	
52 Thiophene	84	9.180	9.174	0.006	94	639928	4.00	4.09	
53 Isooctane	57	9.800	9.798	0.002	94	1407509	4.00	4.02	
54 1,2-Dichloropropane	63	10.178	10.175	0.003	77	344383	4.00	4.02	
55 n-Heptane	71	10.226	10.224	0.002	83	361284	4.00	4.14	
56 Trichloroethene	130	10.253	10.250	0.003	96	707793	4.00	4.30	
57 Dibromomethane	93	10.286	10.279	0.007	91	586890	4.00	3.98	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	1174659	4.00	4.25	
59 1,4-Dioxane	88	10.485	10.497	-0.012	86	173912	4.00	4.17	
60 Methyl methacrylate	41	10.642	10.649	-0.007	91	413937	4.00	4.34	
61 Methylcyclohexane	83	11.111	11.109	0.002	92	689164	4.00	4.09	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	659470	4.00	4.34	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	95	719012	4.00	4.34	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	783879	4.00	4.43	
65 Toluene	91	12.470	12.471	-0.001	93	1469948	4.00	4.05	
66 1,1,2-Trichloroethane	83	12.524	12.527	-0.003	94	395113	4.00	4.11	
69 2-Hexanone	58	12.987	13.003	-0.016	95	338784	4.00	4.46	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	1311808	4.00	4.68	
71 n-Octane	85	13.327	13.326	0.001	74	477723	4.00	4.13	
72 Ethylene Dibromide	107	13.554	13.551	0.003	97	900939	4.00	4.27	
73 Tetrachloroethene	129	13.694	13.695	-0.001	94	719415	4.00	4.00	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	1278293	4.00	4.03	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	77	866249	4.00	4.07	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	2145561	4.00	4.10	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	3492522	8.00	8.14	
79 Bromoform	173	15.506	15.507	-0.001	96	1405685	4.00	4.77	
80 Styrene	104	15.592	15.594	-0.002	98	1255220	4.00	4.46	
82 o-Xylene	91	15.657	15.655	0.002	97	1814388	4.00	4.03	
81 n-Nonane	57	15.657	15.659	-0.002	75	686883	4.00	4.02	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	93	935594	4.00	4.09	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	461156	4.00	4.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	97	2553866	4.00	3.98	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	735475	4.00	4.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	653681	4.00	4.01	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	2809081	4.00	4.22	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	1121740	4.00	4.12	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	1140621	4.00	4.40	
91 n-Decane	57	17.533	17.532	0.001	97	987208	4.00	4.06	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	2644216	4.00	3.98	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	2478370	4.00	4.08	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	1751738	4.00	3.99	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	3316313	4.00	4.04	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	2125520	4.00	4.53	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	95	1725619	4.00	3.92	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	3366403	4.00	4.06	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	2652674	4.00	4.06	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	1440937	4.00	4.01	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	95	1669523	4.00	3.86	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	93	2153540	4.00	4.00	
103 Indene	116	18.520	18.520	0.000	90	1898638	4.00	4.29	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	2705337	4.00	4.01	
105 Undecane	57	19.000	19.001	-0.001	87	1182131	4.00	4.11	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	98	986255	4.00	4.68	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	3260653	4.00	4.17	
110 Dodecane	57	20.127	20.128	-0.001	90	1343815	4.00	4.46	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	1940306	4.00	4.15	
113 Naphthalene	128	20.326	20.329	-0.003	98	3797602	4.00	4.02	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	95	2166873	4.00	3.99	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	94	1865471	4.00	4.15	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	1636134	4.00	5.45	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	1437560	4.00	5.43	
A 120 C8 Range	1	13.340	(13.279-13.376)		0	3620641	4.00	4.04	
S 121 Xylenes, Total	100				0		12.0	12.2	
S 122 1,2-Dichloroethene, Total	1				0		8.00	7.86	

Reagents:

40L8DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Injection Date: 17-Nov-2018 03:51:30

Instrument ID: MR

Operator ID:

Lims ID: IC L8

Worklist Smp#: 15

Client ID:

Purge Vol: 500.000 mL

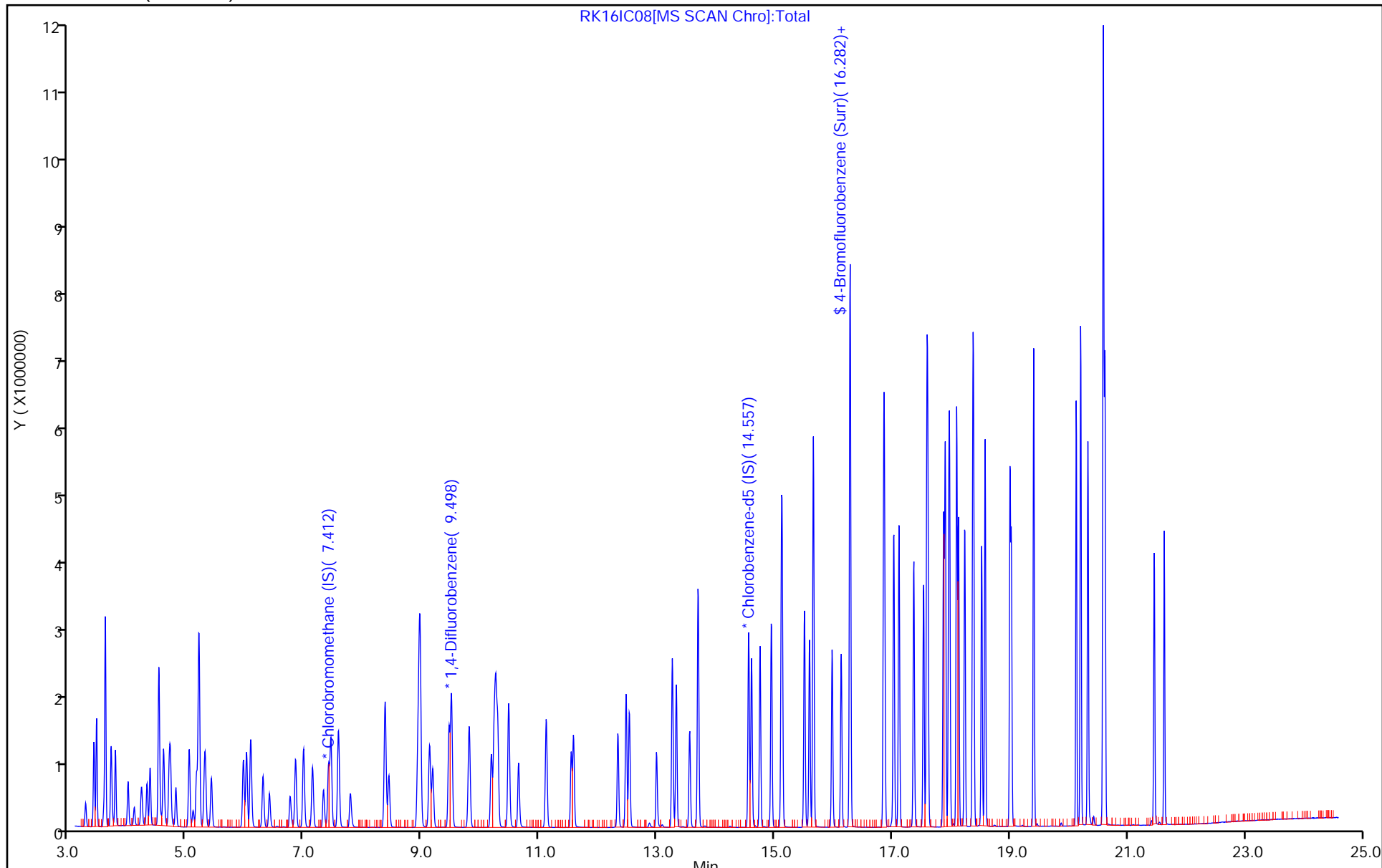
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Injection Date: 17-Nov-2018 03:51:30

Instrument ID: MR

Lims ID: IC L8

Client ID:

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

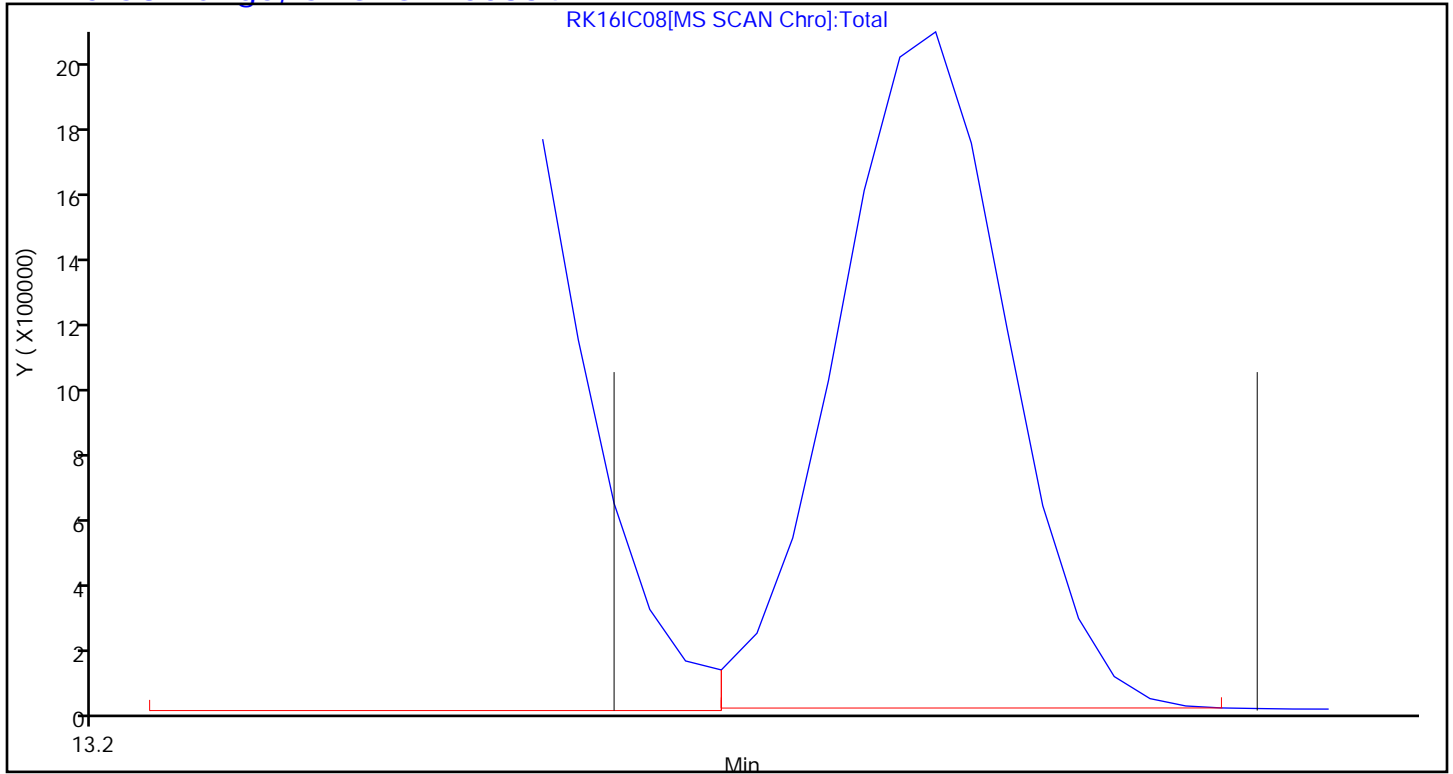
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 06/28/2017 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/28/2017 21:58
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6999	0.3362			2.00	-52.0*	35.0
3-Methylthiophene	Ave	0.6908	0.7960			2.00	15.2	35.0
2-Ethylthiophene	Ave	0.9153	1.134			2.00	23.9	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.640			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.275			2.00	39.5*	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.768			2.00	43.0*	35.0
Benzo (b) thiophene	Ave	0.9147	1.487			2.00	62.6*	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 17-Nov-2018 06:27:30 ALS Bottle#: 8 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-018
 Misc. Info.: S80
 Operator ID: Instrument ID: MR
 Sublist:

Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 16:30:16 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: tajh Date: 19-Nov-2018 10:15:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.397	-0.018	68	299493	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	94	1671036	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	89	1499042	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	89	1270095	4.00	3.98	
6 Chlorodifluoromethane	51	3.383	3.417	-0.034	95	337816	2.00	1.90	
7 Propene	41	3.389	3.420	-0.031	91	101676	2.00	1.86	
8 Dichlorodifluoromethane	85	3.432	3.461	-0.029	100	757267	2.00	2.32	
9 Chloromethane	52	3.550	3.586	-0.036	98	40890	2.00	1.78	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.583	3.609	-0.026	89	519503	2.00	2.14	
11 Acetaldehyde	44	3.674	3.710	-0.036	93	179473	10.0	8.38	
12 Vinyl chloride	62	3.680	3.711	-0.031	99	144783	2.00	1.80	
13 Butadiene	54	3.750	3.780	-0.030	87	93331	2.00	1.92	
14 Butane	43	3.750	3.782	-0.032	89	162697	2.00	1.92	
15 Bromomethane	94	3.966	3.995	-0.029	96	171614	2.00	1.86	
16 Chloroethane	64	4.068	4.100	-0.032	95	69702	2.00	1.87	
17 Ethanol	31	4.198	4.222	-0.024	92	172190	10.0	7.67	
18 Vinyl bromide	106	4.284	4.315	-0.031	97	197656	2.00	2.03	
19 2-Methylbutane	43	4.343	4.369	-0.026	77	117076	2.00	1.95	
20 Acrolein	56	4.483	4.516	-0.033	97	41705	2.00	2.20	
21 Trichlorofluoromethane	101	4.489	4.517	-0.028	99	845437	2.00	1.91	
22 Acetonitrile	40	4.516	4.545	-0.029	96	35597	2.00	1.84	
23 Acetone	58	4.575	4.605	-0.030	100	57219	2.00	1.84	
24 Pentane	72	4.661	4.693	-0.032	91	30029	2.00	1.99	
25 Isopropyl alcohol	45	4.688	4.716	-0.028	95	209729	2.00	2.48	
26 Ethyl ether	31	4.780	4.817	-0.037	69	85111	2.00	1.71	
27 1,1-Dichloroethene	96	5.006	5.033	-0.027	97	198342	2.00	1.88	
28 Acrylonitrile	53	5.066	5.097	-0.031	91	93387	2.00	1.99	
29 2-Methyl-2-propanol	59	5.141	5.173	-0.032	94	405847	2.00	2.02	
30 1,1,2-Trichloro-1,2,2-trif	101	5.174	5.199	-0.025	92	514124	2.00	1.97	
31 Methylene Chloride	84	5.260	5.290	-0.030	88	175058	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.281	5.309	-0.028	85	194281	2.00	1.98	
33 Carbon disulfide	76	5.378	5.410	-0.032	99	488020	2.00	1.95	
34 trans-1,2-Dichloroethene	96	5.929	5.951	-0.023	97	204116	2.00	1.90	
35 2-Methylpentane	43	5.988	6.011	-0.023	84	255391	2.00	1.80	
36 Methyl tert-butyl ether	73	6.058	6.094	-0.036	92	690950	2.00	2.02	
37 1,1-Dichloroethane	63	6.257	6.283	-0.026	98	346185	2.00	1.92	
38 Vinyl acetate	43	6.376	6.402	-0.026	98	366118	2.00	2.11	
39 2-Butanone (MEK)	72	6.732	6.761	-0.029	98	78637	2.00	1.93	
40 Hexane	56	6.824	6.845	-0.021	81	122366	2.00	1.96	
171 Isopropyl ether	45	6.958	6.989	-0.031	86	443358	2.00	2.06	
41 cis-1,2-Dichloroethene	96	7.104	7.127	-0.023	94	212288	2.00	1.96	
42 Ethyl acetate	43	7.298	7.330	-0.032	98	293488	2.00	1.95	
43 Chloroform	83	7.422	7.439	-0.017	96	555199	2.00	1.94	
173 Tert-butyl ethyl ether	59	7.557	7.580	-0.023	92	591267	2.00	1.91	
44 Tetrahydrofuran	42	7.762	7.793	-0.031	76	130960	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.344	8.364	-0.020	94	715022	2.00	1.97	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	419142	2.00	1.98	
47 Benzene	78	8.905	8.920	-0.015	98	541647	2.00	1.99	
48 Cyclohexane	69	8.932	8.951	-0.019	88	85082	2.00	2.10	
50 Carbon tetrachloride	117	8.943	8.962	-0.019	97	823420	2.00	2.15	
49 n-Butanol	31	8.943	8.969	-0.026	54	40428	2.00	2.09	
51 2,3-Dimethylpentane	71	9.110	9.126	-0.016	82	113510	2.00	2.01	
52 Thiophene	84	9.159	9.174	-0.015	95	308039	2.00	1.98	
53 Isooctane	57	9.784	9.798	-0.014	95	705085	2.00	2.02	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	76	170084	2.00	1.99	
55 n-Heptane	71	10.210	10.224	-0.014	83	179014	2.00	2.06	
56 Trichloroethene	130	10.237	10.250	-0.013	93	332896	2.00	2.03	
57 Dibromomethane	93	10.269	10.279	-0.010	92	292459	2.00	1.99	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	572509	2.00	2.08	
59 1,4-Dioxane	88	10.474	10.497	-0.023	86	85996	2.00	2.07	
60 Methyl methacrylate	41	10.631	10.649	-0.018	90	196157	2.00	2.06	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	414520	2.00	2.47	
62 4-Methyl-2-pentanone (MIBK)	43	11.531	11.552	-0.021	91	315480	2.00	2.08	
63 cis-1,3-Dichloropropene	75	11.569	11.577	-0.008	97	358004	2.00	2.17	
64 trans-1,3-Dichloropropene	75	12.324	12.332	-0.008	97	387987	2.00	2.22	
65 Toluene	91	12.464	12.471	-0.007	93	738479	2.00	2.06	
67 2-Methylthiophene	97	12.518	12.524	-0.006	80	252005	NC	NC	
66 1,1,2-Trichloroethane	83	12.518	12.527	-0.009	94	195833	2.00	2.05	
68 3-Methylthiophene	97	12.831	12.836	-0.005	99	596590	NC	NC	
69 2-Hexanone	58	12.987	13.003	-0.016	95	157281	2.00	2.09	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	97	630906	2.00	2.27	
71 n-Octane	85	13.321	13.326	-0.005	74	241345	2.00	2.11	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	440376	2.00	2.11	
73 Tetrachloroethene	129	13.688	13.695	-0.007	94	362784	2.00	2.04	
74 Chlorobenzene	112	14.599	14.606	-0.007	92	644974	2.00	2.06	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	78	387573	2.00	1.84	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1081684	2.00	2.09	
77 2-Ethylthiophene	97	15.036	15.042	-0.006	98	850130	NC	NC	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1797001	4.00	4.23	
79 Bromoform	173	15.505	15.507	-0.002	96	657515	2.00	2.25	
80 Styrene	104	15.592	15.594	-0.002	97	618923	2.00	2.22	
82 o-Xylene	91	15.651	15.655	-0.004	97	908326	2.00	2.04	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.656	15.659	-0.003	81	352264	2.00	2.08	
83 1,1,2,2-Tetrachloroethane	83	15.974	15.976	-0.002	93	486519	2.00	2.15	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	231227	2.00	2.06	
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1305567	2.00	2.06	
86 N-Propylbenzene	120	16.853	16.856	-0.003	98	380100	2.00	2.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	338365	2.00	2.10	
88 4-Ethyltoluene	105	17.021	17.027	-0.006	98	1360898	2.00	2.06	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	643905	2.00	2.39	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	552848	2.00	2.16	
91 n-Decane	57	17.528	17.532	-0.004	97	510052	2.00	2.12	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	1376781	2.00	2.10	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	1269827	2.00	2.11	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	888433	2.00	2.04	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	1714335	2.00	2.11	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	1039012	2.00	2.24	
97 1,4-Dichlorobenzene	146	17.970	17.977	-0.007	94	887663	2.00	2.03	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	1699119	2.00	2.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1037942	2.00	1.61	
100 Butylcyclohexane	83	18.229	18.232	-0.004	92	701115	2.00	1.97	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	96	857489	2.00	2.00	
102 2,3-Dihydroindene	117	18.379	18.383	-0.004	93	1087727	2.00	2.04	
103 Indene	116	18.520	18.520	0.000	90	809464	2.00	1.85	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	1414728	2.00	2.12	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	96	1229369	NC	NC	
105 Undecane	57	19.000	19.001	-0.001	87	616308	2.00	2.16	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	94	386560	2.00	1.85	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	1560478	2.00	2.01	
109 1,2,3,5-Tetramethylbenzene	119	19.463	19.464	-0.001	94	955538	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	96	1325184	NC	NC	
110 Dodecane	57	20.127	20.128	-0.001	90	688062	2.00	2.31	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	999500	2.00	2.16	
113 Naphthalene	128	20.326	20.329	-0.003	98	1949612	2.00	2.08	
114 Benzo(b)thiophene	134	20.423	20.429	-0.006	99	1114636	NC	NC	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	1114590	2.00	2.07	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	970744	2.00	2.18	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	761819	2.00	2.56	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	709921	2.00	2.71	
A 120 C8 Range	1	13.335	(13.279-13.376)		0	1874356	2.00	2.10	
S 121 Xylenes, Total	100				0		6.00	6.27	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.86	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00080

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D

Injection Date: 17-Nov-2018 06:27:30

Instrument ID: MR

Operator ID:

Lims ID: icv

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

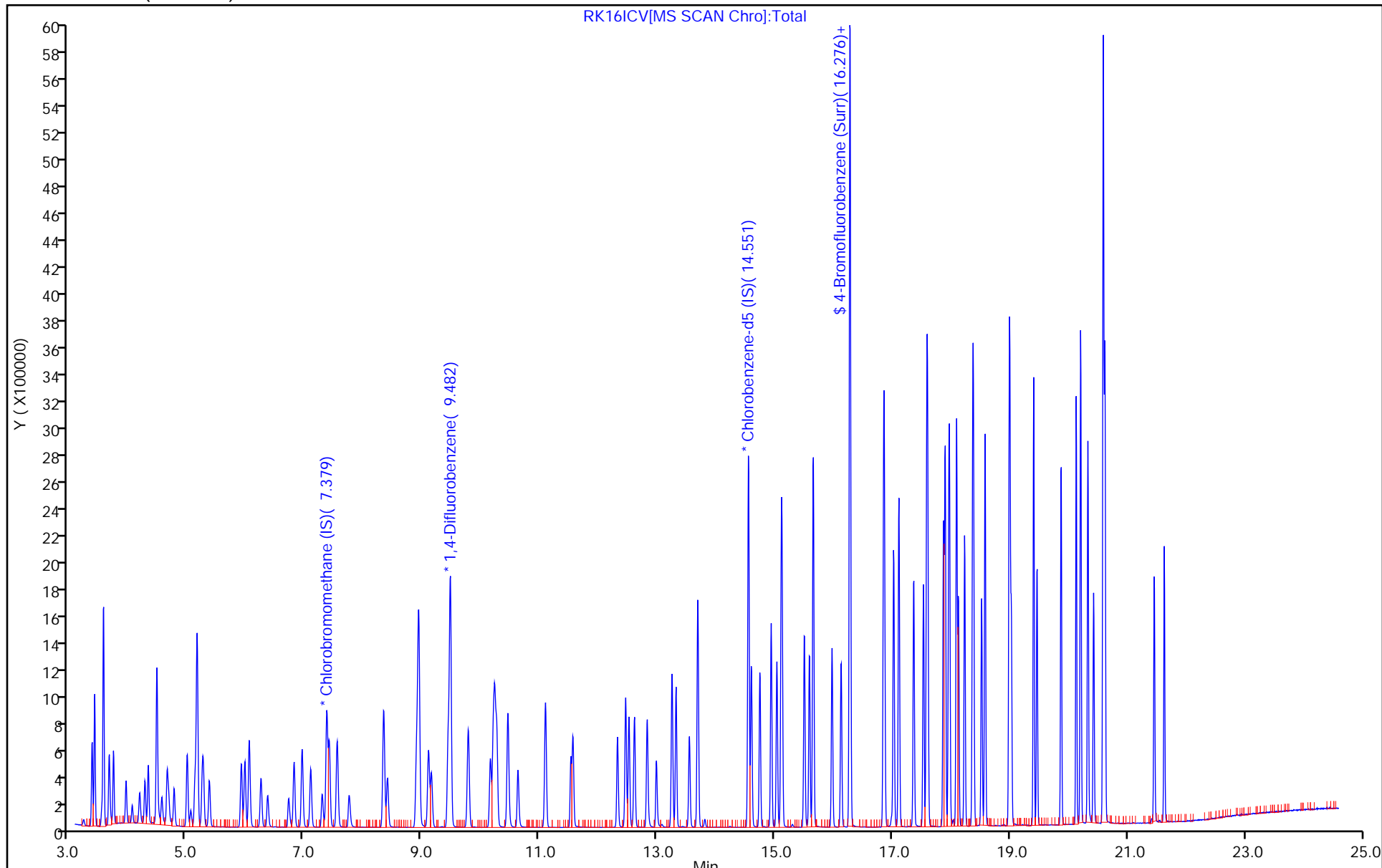
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.256		1.90	2.00	-4.9	35.0
Propene	Ave	0.7296	0.6790		1.86	2.00	-6.9	35.0
Dichlorodifluoromethane	Ave	4.352	5.057		2.32	2.00	16.2	35.0
Chloromethane	Ave	0.3061	0.2731		1.78	2.00	-10.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	3.469		2.14	2.00	7.1	35.0
Acetaldehyde	Ave	0.2860	0.2397		8.38	10.0	-16.2	35.0
Vinyl chloride	Ave	1.073	0.9669		1.80	2.00	-9.9	35.0
1,3-Butadiene	Ave	0.6506	0.6233		1.92	2.00	-4.2	35.0
Butane	Ave	1.132	1.086		1.92	2.00	-4.0	35.0
Bromomethane	Ave	1.235	1.146		1.86	2.00	-7.2	35.0
Chloroethane	Ave	0.4970	0.4655		1.87	2.00	-6.3	35.0
Ethanol	Ave	0.2997	0.2300		7.67	10.0	-23.3	35.0
Vinyl bromide	Ave	1.302	1.320		2.03	2.00	1.4	35.0
2-Methylbutane	Ave	0.7999	0.7818		1.95	2.00	-2.3	35.0
Acrolein	Ave	0.2528	0.2785		2.20	2.00	10.2	35.0
Trichlorofluoromethane	Ave	5.912	5.646		1.91	2.00	-4.5	35.0
Acetonitrile	Ave	0.2586	0.2377		1.84	2.00	-8.1	35.0
Acetone	Ave	0.4151	0.3821		1.84	2.00	-7.9	35.0
Pentane	Ave	0.2011	0.2005		1.99	2.00	-0.3	35.0
Isopropyl alcohol	Ave	1.132	1.401		2.48	2.00	23.8	35.0
Ethyl ether	Ave	0.6661	0.5684		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.408	1.325		1.88	2.00	-5.9	35.0
Acrylonitrile	Ave	0.6277	0.6236		1.99	2.00	-0.6	35.0
tert-Butyl alcohol	Ave	2.677	2.710		2.02	2.00	1.2	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.433		1.97	2.00	-1.6	35.0
Methylene Chloride	Ave	1.338	1.169		1.75	2.00	-12.6	35.0
3-Chloropropene	Ave	1.309	1.297		1.98	2.00	-0.9	35.0
Carbon disulfide	Ave	3.341	3.259		1.95	2.00	-2.4	35.0
trans-1,2-Dichloroethene	Ave	1.436	1.363		1.90	2.00	-5.1	35.0
2-Methylpentane	Ave	1.894	1.705		1.80	2.00	-10.0	35.0
Methyl tert-butyl ether	Ave	4.568	4.614		2.02	2.00	1.0	35.0
1,1-Dichloroethane	Ave	2.402	2.312		1.92	2.00	-3.8	35.0
Vinyl acetate	Ave	2.320	2.445		2.11	2.00	5.4	35.0
2-Butanone (MEK)	Ave	0.5446	0.5251		1.93	2.00	-3.6	35.0
Hexane	Ave	0.8352	0.8172		1.96	2.00	-2.2	35.0
Isopropyl ether	Ave	2.873	2.961		2.06	2.00	3.0	35.0
cis-1,2-Dichloroethene	Ave	1.448	1.418		1.96	2.00	-2.1	35.0
Ethyl acetate	Ave	2.012	1.960		1.95	2.00	-2.6	35.0
Chloroform	Ave	3.821	3.708		1.94	2.00	-3.0	35.0
Tert-butyl ethyl ether	Ave	4.141	3.948		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.8745		1.97	2.00	-1.3	35.0
1,1,1-Trichloroethane	Ave	4.843	4.775		1.97	2.00	-1.4	35.0
1,2-Dichloroethane	Ave	0.5063	0.5017		1.98	2.00	-0.9	35.0
Benzene	Ave	0.6517	0.6483		1.99	2.00	-0.5	35.0
Cyclohexane	Ave	0.0968	0.1018		2.10	2.00	5.2	35.0
1-Butanol	Ave	0.0462	0.0484		2.09	2.00	4.7	35.0
Carbon tetrachloride	Ave	0.9167	0.9855		2.15	2.00	7.5	35.0
2,3-Dimethylpentane	Ave	0.1349	0.1359		2.01	2.00	0.7	35.0
Thiophene	Ave	0.3728	0.3687		1.98	2.00	-1.1	35.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8439		2.02	2.00	1.2	35.0
1,2-Dichloropropane	Ave	0.2045	0.2036		1.99	2.00	-0.5	35.0
Heptane	Ave	0.2083	0.2143		2.06	2.00	2.8	35.0
Trichloroethene	Ave	0.3929	0.3984		2.03	2.00	1.4	35.0
Dibromomethane	Ave	0.3514	0.3500		1.99	2.00	-0.4	35.0
Bromodichloromethane	Ave	0.6587	0.6852		2.08	2.00	4.0	35.0
1,4-Dioxane	Ave	0.0994	0.1029		2.07	2.00	3.5	35.0
Methyl methacrylate	Ave	0.2275	0.2348		2.06	2.00	3.2	35.0
Methylcyclohexane	Ave	0.4024	0.4961		2.47	2.00	23.3	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3776		2.08	2.00	4.1	35.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4285		2.17	2.00	8.5	35.0
trans-1,3-Dichloropropene	Ave	0.4674	0.5177		2.22	2.00	10.8	35.0
Toluene	Ave	0.9586	0.9853		2.06	2.00	2.8	35.0
1,1,2-Trichloroethane	Ave	0.2543	0.2613		2.05	2.00	2.7	35.0
2-Hexanone	Ave	0.2006	0.2098		2.09	2.00	4.6	35.0
Dibromochloromethane	Ave	0.7414	0.8418		2.27	2.00	13.5	35.0
Octane	Ave	0.3054	0.3220		2.11	2.00	5.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5875		2.11	2.00	5.4	35.0
Tetrachloroethene	Ave	0.4749	0.4840		2.04	2.00	1.9	35.0
Chlorobenzene	Ave	0.8374	0.8605		2.06	2.00	2.8	35.0
2,3-Dimethylheptane	Ave	0.5626	0.5171		1.84	2.00	-8.1	35.0
Ethylbenzene	Ave	1.382	1.443		2.09	2.00	4.4	35.0
m-Xylene & p-Xylene	Ave	1.133	1.199		4.23	4.00	5.8	35.0
Bromoform	Ave	0.7786	0.8773		2.25	2.00	12.7	35.0
Styrene	Ave	0.7430	0.8258		2.22	2.00	11.1	35.0
o-Xylene	Ave	1.190	1.212		2.04	2.00	1.8	35.0
Nonane	Ave	0.4511	0.4700		2.08	2.00	4.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6491		2.15	2.00	7.3	35.0
1,2,3-Trichloropropane	Ave	0.3000	0.3085		2.06	2.00	2.8	35.0
Isopropylbenzene	Ave	1.694	1.742		2.06	2.00	2.8	35.0
Propylbenzene	Ave	0.4652	0.5071		2.18	2.00	9.0	35.0
2-Chlorotoluene	Ave	0.4306	0.4514		2.10	2.00	4.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.816		2.06	2.00	3.2	35.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.8591		2.39	2.00	19.3	35.0
Alpha Methyl Styrene	Ave	0.6844	0.7376		2.16	2.00	7.8	35.0
Decane	Ave	0.6421	0.6805		2.12	2.00	6.0	35.0
tert-Butylbenzene	Ave	1.753	1.837		2.10	2.00	4.8	35.0
1,2,4-Trimethylbenzene	Ave	1.607	1.694		2.11	2.00	5.5	35.0
1,3-Dichlorobenzene	Ave	1.160	1.185		2.04	2.00	2.2	35.0
sec-Butylbenzene	Ave	2.171	2.287		2.11	2.00	5.4	35.0
Benzyl chloride	Ave	1.239	1.386		2.24	2.00	11.9	35.0
1,4-Dichlorobenzene	Ave	1.164	1.184		2.03	2.00	1.7	35.0
4-Isopropyltoluene	Ave	2.191	2.267		2.07	2.00	3.5	35.0
1,2,3-Trimethylbenzene	Ave	1.725	1.385		1.61	2.00	-19.7	35.0
Butylcyclohexane	Ave	0.9488	0.9354		1.97	2.00	-1.4	35.0
1,2-Dichlorobenzene	Ave	1.144	1.144		2.00	2.00	-0.0	35.0
Indane	Ave	1.423	1.451		2.04	2.00	2.0	35.0
Indene	Ave	1.168	1.080		1.85	2.00	-7.6	35.0
Butylbenzene	Ave	1.784	1.888		2.12	2.00	5.8	35.0
Undecane	Ave	0.7598	0.8223		2.16	2.00	8.2	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5157		1.85	2.00	-7.4	35.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.082		2.01	2.00	0.7	35.0
Dodecane	Ave	0.7957	0.9180		2.31	2.00	15.4	35.0
1,2,4-Trichlorobenzene	Ave	1.235	1.334		2.16	2.00	7.9	35.0
Naphthalene	Ave	2.498	2.601		2.08	2.00	4.1	35.0
Hexachlorobutadiene	Ave	1.436	1.487		2.07	2.00	3.5	35.0
1,2,3-Trichlorobenzene	Ave	1.187	1.295		2.18	2.00	9.1	35.0
2-Methylnaphthalene	Ave	0.7935	1.016		2.56	2.00	28.1	50.0
1-Methylnaphthalene	Ave	0.6999	0.9471		2.71	2.00	35.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8473		3.98	4.00	-0.4	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 17-Nov-2018 06:27:30 ALS Bottle#: 8 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-018
 Misc. Info.: S80
 Operator ID: Instrument ID: MR
 Sublist:

Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 16:30:16 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: tajh Date: 19-Nov-2018 10:15:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.397	-0.018	68	299493	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	94	1671036	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	89	1499042	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	89	1270095	4.00	3.98	
6 Chlorodifluoromethane	51	3.383	3.417	-0.034	95	337816	2.00	1.90	
7 Propene	41	3.389	3.420	-0.031	91	101676	2.00	1.86	
8 Dichlorodifluoromethane	85	3.432	3.461	-0.029	100	757267	2.00	2.32	
9 Chloromethane	52	3.550	3.586	-0.036	98	40890	2.00	1.78	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.583	3.609	-0.026	89	519503	2.00	2.14	
11 Acetaldehyde	44	3.674	3.710	-0.036	93	179473	10.0	8.38	
12 Vinyl chloride	62	3.680	3.711	-0.031	99	144783	2.00	1.80	
13 Butadiene	54	3.750	3.780	-0.030	87	93331	2.00	1.92	
14 Butane	43	3.750	3.782	-0.032	89	162697	2.00	1.92	
15 Bromomethane	94	3.966	3.995	-0.029	96	171614	2.00	1.86	
16 Chloroethane	64	4.068	4.100	-0.032	95	69702	2.00	1.87	
17 Ethanol	31	4.198	4.222	-0.024	92	172190	10.0	7.67	
18 Vinyl bromide	106	4.284	4.315	-0.031	97	197656	2.00	2.03	
19 2-Methylbutane	43	4.343	4.369	-0.026	77	117076	2.00	1.95	
20 Acrolein	56	4.483	4.516	-0.033	97	41705	2.00	2.20	
21 Trichlorofluoromethane	101	4.489	4.517	-0.028	99	845437	2.00	1.91	
22 Acetonitrile	40	4.516	4.545	-0.029	96	35597	2.00	1.84	
23 Acetone	58	4.575	4.605	-0.030	100	57219	2.00	1.84	
24 Pentane	72	4.661	4.693	-0.032	91	30029	2.00	1.99	
25 Isopropyl alcohol	45	4.688	4.716	-0.028	95	209729	2.00	2.48	
26 Ethyl ether	31	4.780	4.817	-0.037	69	85111	2.00	1.71	
27 1,1-Dichloroethene	96	5.006	5.033	-0.027	97	198342	2.00	1.88	
28 Acrylonitrile	53	5.066	5.097	-0.031	91	93387	2.00	1.99	
29 2-Methyl-2-propanol	59	5.141	5.173	-0.032	94	405847	2.00	2.02	
30 1,1,2-Trichloro-1,2,2-trif	101	5.174	5.199	-0.025	92	514124	2.00	1.97	
31 Methylene Chloride	84	5.260	5.290	-0.030	88	175058	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.281	5.309	-0.028	85	194281	2.00	1.98	
33 Carbon disulfide	76	5.378	5.410	-0.032	99	488020	2.00	1.95	
34 trans-1,2-Dichloroethene	96	5.929	5.951	-0.023	97	204116	2.00	1.90	
35 2-Methylpentane	43	5.988	6.011	-0.023	84	255391	2.00	1.80	
36 Methyl tert-butyl ether	73	6.058	6.094	-0.036	92	690950	2.00	2.02	
37 1,1-Dichloroethane	63	6.257	6.283	-0.026	98	346185	2.00	1.92	
38 Vinyl acetate	43	6.376	6.402	-0.026	98	366118	2.00	2.11	
39 2-Butanone (MEK)	72	6.732	6.761	-0.029	98	78637	2.00	1.93	
40 Hexane	56	6.824	6.845	-0.021	81	122366	2.00	1.96	
171 Isopropyl ether	45	6.958	6.989	-0.031	86	443358	2.00	2.06	
41 cis-1,2-Dichloroethene	96	7.104	7.127	-0.023	94	212288	2.00	1.96	
42 Ethyl acetate	43	7.298	7.330	-0.032	98	293488	2.00	1.95	
43 Chloroform	83	7.422	7.439	-0.017	96	555199	2.00	1.94	
173 Tert-butyl ethyl ether	59	7.557	7.580	-0.023	92	591267	2.00	1.91	
44 Tetrahydrofuran	42	7.762	7.793	-0.031	76	130960	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.344	8.364	-0.020	94	715022	2.00	1.97	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	419142	2.00	1.98	
47 Benzene	78	8.905	8.920	-0.015	98	541647	2.00	1.99	
48 Cyclohexane	69	8.932	8.951	-0.019	88	85082	2.00	2.10	
50 Carbon tetrachloride	117	8.943	8.962	-0.019	97	823420	2.00	2.15	
49 n-Butanol	31	8.943	8.969	-0.026	54	40428	2.00	2.09	
51 2,3-Dimethylpentane	71	9.110	9.126	-0.016	82	113510	2.00	2.01	
52 Thiophene	84	9.159	9.174	-0.015	95	308039	2.00	1.98	
53 Isooctane	57	9.784	9.798	-0.014	95	705085	2.00	2.02	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	76	170084	2.00	1.99	
55 n-Heptane	71	10.210	10.224	-0.014	83	179014	2.00	2.06	
56 Trichloroethene	130	10.237	10.250	-0.013	93	332896	2.00	2.03	
57 Dibromomethane	93	10.269	10.279	-0.010	92	292459	2.00	1.99	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	572509	2.00	2.08	
59 1,4-Dioxane	88	10.474	10.497	-0.023	86	85996	2.00	2.07	
60 Methyl methacrylate	41	10.631	10.649	-0.018	90	196157	2.00	2.06	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	414520	2.00	2.47	
62 4-Methyl-2-pentanone (MIBK)	43	11.531	11.552	-0.021	91	315480	2.00	2.08	
63 cis-1,3-Dichloropropene	75	11.569	11.577	-0.008	97	358004	2.00	2.17	
64 trans-1,3-Dichloropropene	75	12.324	12.332	-0.008	97	387987	2.00	2.22	
65 Toluene	91	12.464	12.471	-0.007	93	738479	2.00	2.06	
67 2-Methylthiophene	97	12.518	12.524	-0.006	80	252005	NC	NC	
66 1,1,2-Trichloroethane	83	12.518	12.527	-0.009	94	195833	2.00	2.05	
68 3-Methylthiophene	97	12.831	12.836	-0.005	99	596590	NC	NC	
69 2-Hexanone	58	12.987	13.003	-0.016	95	157281	2.00	2.09	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	97	630906	2.00	2.27	
71 n-Octane	85	13.321	13.326	-0.005	74	241345	2.00	2.11	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	440376	2.00	2.11	
73 Tetrachloroethene	129	13.688	13.695	-0.007	94	362784	2.00	2.04	
74 Chlorobenzene	112	14.599	14.606	-0.007	92	644974	2.00	2.06	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	78	387573	2.00	1.84	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1081684	2.00	2.09	
77 2-Ethylthiophene	97	15.036	15.042	-0.006	98	850130	NC	NC	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1797001	4.00	4.23	
79 Bromoform	173	15.505	15.507	-0.002	96	657515	2.00	2.25	
80 Styrene	104	15.592	15.594	-0.002	97	618923	2.00	2.22	
82 o-Xylene	91	15.651	15.655	-0.004	97	908326	2.00	2.04	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.656	15.659	-0.003	81	352264	2.00	2.08	
83 1,1,2,2-Tetrachloroethane	83	15.974	15.976	-0.002	93	486519	2.00	2.15	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	231227	2.00	2.06	
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1305567	2.00	2.06	
86 N-Propylbenzene	120	16.853	16.856	-0.003	98	380100	2.00	2.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	338365	2.00	2.10	
88 4-Ethyltoluene	105	17.021	17.027	-0.006	98	1360898	2.00	2.06	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	643905	2.00	2.39	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	552848	2.00	2.16	
91 n-Decane	57	17.528	17.532	-0.004	97	510052	2.00	2.12	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	1376781	2.00	2.10	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	1269827	2.00	2.11	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	888433	2.00	2.04	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	1714335	2.00	2.11	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	1039012	2.00	2.24	
97 1,4-Dichlorobenzene	146	17.970	17.977	-0.007	94	887663	2.00	2.03	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	1699119	2.00	2.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1037942	2.00	1.61	
100 Butylcyclohexane	83	18.229	18.232	-0.004	92	701115	2.00	1.97	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	96	857489	2.00	2.00	
102 2,3-Dihydroindene	117	18.379	18.383	-0.004	93	1087727	2.00	2.04	
103 Indene	116	18.520	18.520	0.000	90	809464	2.00	1.85	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	1414728	2.00	2.12	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	96	1229369	NC	NC	
105 Undecane	57	19.000	19.001	-0.001	87	616308	2.00	2.16	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	94	386560	2.00	1.85	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	1560478	2.00	2.01	
109 1,2,3,5-Tetramethylbenzene	119	19.463	19.464	-0.001	94	955538	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	96	1325184	NC	NC	
110 Dodecane	57	20.127	20.128	-0.001	90	688062	2.00	2.31	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	999500	2.00	2.16	
113 Naphthalene	128	20.326	20.329	-0.003	98	1949612	2.00	2.08	
114 Benzo(b)thiophene	134	20.423	20.429	-0.006	99	1114636	NC	NC	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	1114590	2.00	2.07	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	970744	2.00	2.18	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	761819	2.00	2.56	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	709921	2.00	2.71	
A 120 C8 Range	1	13.335	(13.279-13.376)		0	1874356	2.00	2.10	
S 121 Xylenes, Total	100				0		6.00	6.27	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.86	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00080

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D

Injection Date: 17-Nov-2018 06:27:30

Instrument ID: MR

Operator ID:

Lims ID: icv

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

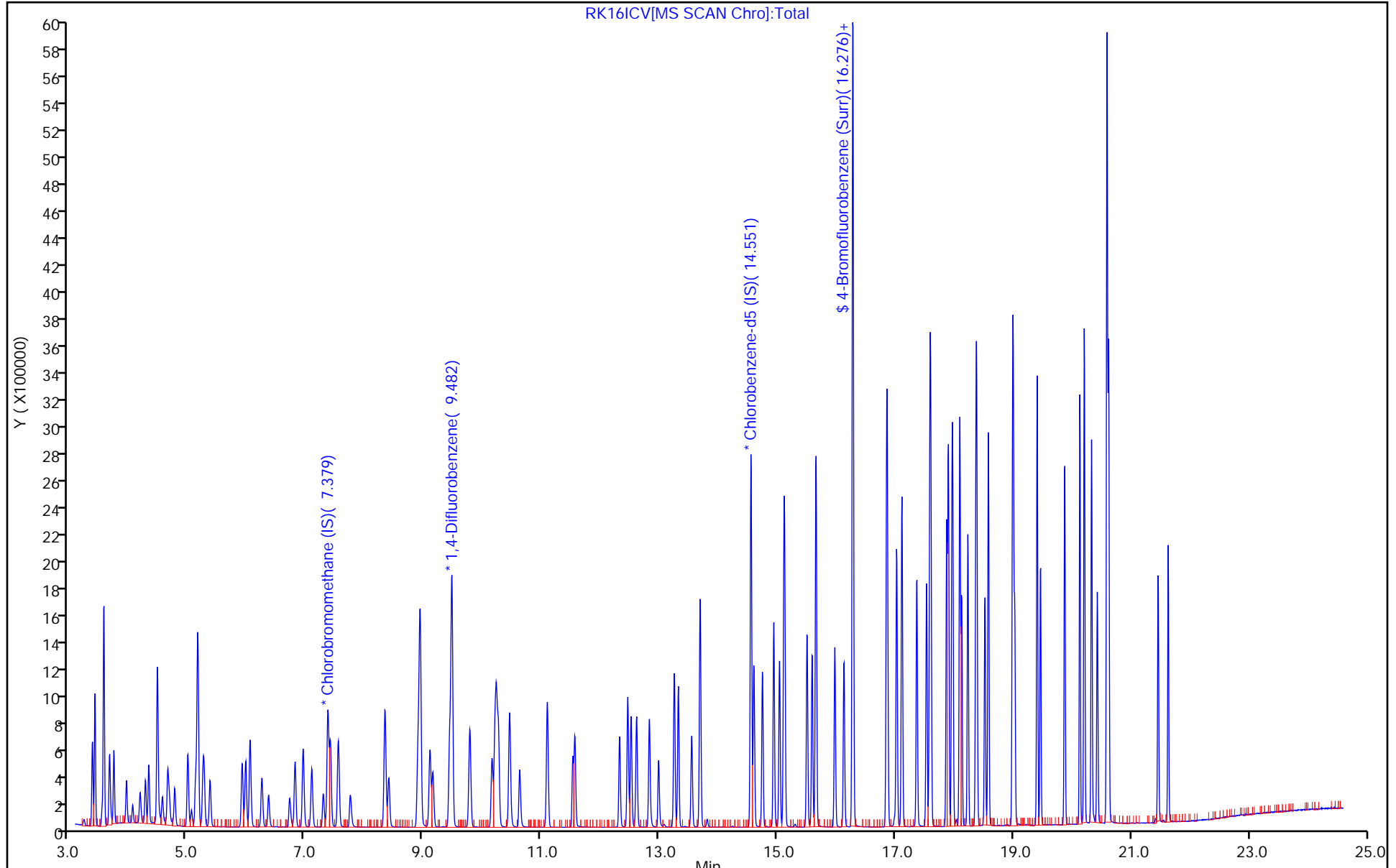
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



RK16ICV[MS SCAN Chro]:Total

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27430/6 Calibration Date: 02/07/2019 10:59
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB07A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.394		2.02	2.00	0.9	30.0
Propene	Ave	0.7296	0.7311		2.00	2.00	0.2	30.0
Dichlorodifluoromethane	Ave	4.352	4.021		1.85	2.00	-7.6	30.0
Chloromethane	Ave	0.3061	0.3086		2.02	2.00	0.8	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	2.464		1.52	2.00	-24.0	30.0
Acetaldehyde	Ave	0.2860	0.3709		13.0	10.0	29.7	30.0
Vinyl chloride	Ave	1.073	1.239		2.31	2.00	15.5	30.0
1,3-Butadiene	Ave	0.6506	0.8567		2.63	2.00	31.7*	30.0
Butane	Ave	1.132	1.537		2.71	2.00	35.7*	30.0
Bromomethane	Ave	1.235	1.476		2.39	2.00	19.5	30.0
Chloroethane	Ave	0.4970	0.6276		2.53	2.00	26.3	30.0
Ethanol	Ave	0.2997	0.3855		12.9	10.0	28.6	30.0
Vinyl bromide	Ave	1.302	1.608		2.47	2.00	23.5	30.0
2-Methylbutane	Ave	0.7999	1.172		2.93	2.00	46.6*	30.0
Acrolein	Ave	0.2528	0.3475		2.75	2.00	37.4*	30.0
Trichlorofluoromethane	Ave	5.912	7.466		2.53	2.00	26.3	30.0
Acetonitrile	Ave	0.2586	0.3705		2.86	2.00	43.2*	30.0
Acetone	Ave	0.4151	0.5371		7.76	6.00	29.4	30.0
Isopropyl alcohol	Ave	1.132	1.481		7.85	6.00	30.9*	30.0
Pentane	Ave	0.2011	0.2730		2.71	2.00	35.7*	30.0
Ethyl ether	Ave	0.6661	0.9489		2.85	2.00	42.5*	30.0
1,1-Dichloroethene	Ave	1.408	1.440		2.05	2.00	2.3	30.0
Acrylonitrile	Ave	0.6277	0.7786		2.48	2.00	24.0	30.0
tert-Butyl alcohol	Ave	2.677	2.732		2.04	2.00	2.1	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.824		2.19	2.00	9.6	30.0
Methylene Chloride	Ave	1.338	1.306		1.95	2.00	-2.4	30.0
3-Chloropropene	Ave	1.309	1.666		2.55	2.00	27.3	30.0
Carbon disulfide	Ave	3.341	3.651		2.19	2.00	9.3	30.0
trans-1,2-Dichloroethene	Ave	1.436	1.472		2.05	2.00	2.5	30.0
2-Methylpentane	Ave	1.894	2.402		2.54	2.00	26.8	30.0
Methyl tert-butyl ether	Ave	4.568	4.999		2.19	2.00	9.4	30.0
1,1-Dichloroethane	Ave	2.402	2.620		2.18	2.00	9.1	30.0
Vinyl acetate	Ave	2.320	2.997		2.58	2.00	29.2	30.0
2-Butanone (MEK)	Ave	0.5446	0.5737		2.11	2.00	5.3	30.0
Hexane	Ave	0.8352	1.009		2.42	2.00	20.8	30.0
Isopropyl ether	Ave	2.873	3.630		2.53	2.00	26.3	30.0
cis-1,2-Dichloroethene	Ave	1.448	1.517		2.10	2.00	4.8	30.0
Ethyl acetate	Ave	2.012	2.597		2.58	2.00	29.1	30.0
Chloroform	Ave	3.821	4.118		2.16	2.00	7.8	30.0
Tert-butyl ethyl ether	Ave	4.141	4.925		2.38	2.00	18.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27430/6 Calibration Date: 02/07/2019 10:59
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB07A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	1.125		2.54	2.00	27.0	30.0
1,1,1-Trichloroethane	Ave	4.843	5.228		2.16	2.00	7.9	30.0
1,2-Dichloroethane	Ave	0.5063	0.5465		2.16	2.00	7.9	30.0
Benzene	Ave	0.6517	0.6753		2.07	2.00	3.6	30.0
1-Butanol	Ave	0.0462	0.0514		2.22	2.00	11.2	30.0
Cyclohexane	Ave	0.0968	0.1143		2.36	2.00	18.1	30.0
Carbon tetrachloride	Ave	0.9167	1.002		2.19	2.00	9.3	30.0
2,3-Dimethylpentane	Ave	0.1349	0.1531		2.27	2.00	13.5	30.0
Thiophene	Ave	0.3728	0.3910		2.10	2.00	4.9	30.0
2,2,4-Trimethylpentane	Ave	0.8342	0.9792		2.35	2.00	17.4	30.0
1,2-Dichloropropane	Ave	0.2045	0.2235		2.19	2.00	9.3	30.0
Heptane	Ave	0.2083	0.2364		2.27	2.00	13.5	30.0
Trichloroethene	Ave	0.3929	0.3952		2.01	2.00	0.6	30.0
Dibromomethane	Ave	0.3514	0.3682		2.10	2.00	4.8	30.0
Bromodichloromethane	Ave	0.6587	0.7241		2.20	2.00	9.9	30.0
1,4-Dioxane	Ave	0.0994	0.0938		1.89	2.00	-5.7	30.0
Methyl methacrylate	Ave	0.2275	0.2814		2.47	2.00	23.7	30.0
Methylcyclohexane	Ave	0.4024	0.4374		2.17	2.00	8.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.4631		2.55	2.00	27.7	30.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4539		2.30	2.00	15.0	30.0
trans-1,3-Dichloropropene	Ave	0.4674	0.5337		2.28	2.00	14.2	30.0
Toluene	Ave	0.9586	1.032		2.15	2.00	7.6	30.0
1,1,2-Trichloroethane	Ave	0.2543	0.2836		2.23	2.00	11.5	30.0
2-Hexanone	Ave	0.2006	0.2437		2.43	2.00	21.5	30.0
Dibromochloromethane	Ave	0.7414	0.8457		2.28	2.00	14.1	30.0
Octane	Ave	0.3054	0.3447		2.26	2.00	12.9	30.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.6064		2.18	2.00	8.8	30.0
Tetrachloroethene	Ave	0.4749	0.4917		2.07	2.00	3.5	30.0
Chlorobenzene	Ave	0.8374	0.8823		2.11	2.00	5.4	30.0
2,3-Dimethylheptane	Ave	0.5626	0.7604		2.70	2.00	35.2*	30.0
Ethylbenzene	Ave	1.382	1.526		2.21	2.00	10.4	30.0
m-Xylene & p-Xylene	Ave	1.133	1.300		4.59	4.00	14.7	30.0
Bromoform	Ave	0.7786	0.8710		2.24	2.00	11.9	30.0
Styrene	Ave	0.7430	0.8360		2.25	2.00	12.5	30.0
o-Xylene	Ave	1.190	1.345		2.26	2.00	13.0	30.0
Nonane	Ave	0.4511	0.5890		2.61	2.00	30.6*	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.7028		2.32	2.00	16.2	30.0
1,2,3-Trichloropropane	Ave	0.3000	0.3086		2.06	2.00	2.9	30.0
Isopropylbenzene	Ave	1.694	1.798		2.12	2.00	6.1	30.0
Propylbenzene	Ave	0.4652	0.4779		2.05	2.00	2.7	30.0
2-Chlorotoluene	Ave	0.4306	0.4349		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-27430/6 Calibration Date: 02/07/2019 10:59
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVB07A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.837		2.09	2.00	4.4	30.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.7396		2.05	2.00	2.7	30.0
Alpha Methyl Styrene	Ave	0.6844	0.6930		2.03	2.00	1.3	30.0
Decane	Ave	0.6421	0.7855		2.45	2.00	22.3	30.0
tert-Butylbenzene	Ave	1.753	1.819		2.07	2.00	3.7	30.0
1,2,4-Trimethylbenzene	Ave	1.607	1.738		2.16	2.00	8.2	30.0
1,3-Dichlorobenzene	Ave	1.160	1.121		1.93	2.00	-3.3	30.0
sec-Butylbenzene	Ave	2.171	2.221		2.05	2.00	2.3	30.0
Benzyl chloride	Ave	1.239	1.395		2.25	2.00	12.6	30.0
1,4-Dichlorobenzene	Ave	1.164	1.141		1.96	2.00	-2.0	30.0
4-Isopropyltoluene	Ave	2.191	2.251		2.05	2.00	2.7	30.0
1,2,3-Trimethylbenzene	Ave	1.725	1.807		2.09	2.00	4.7	30.0
Butylcyclohexane	Ave	0.9488	1.008		2.12	2.00	6.2	30.0
1,2-Dichlorobenzene	Ave	1.144	1.081		1.89	2.00	-5.6	30.0
Indane	Ave	1.423	1.433		2.01	2.00	0.7	30.0
Indene	Ave	1.168	1.178		2.02	2.00	0.8	30.0
Butylbenzene	Ave	1.784	1.864		2.09	2.00	4.5	30.0
Undecane	Ave	0.7598	0.9060		2.38	2.00	19.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5858		2.10	2.00	5.1	30.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.073		2.01	2.00	0.3	30.0
Dodecane	Ave	0.7957	0.9444		2.37	2.00	18.7	30.0
1,2,4-Trichlorobenzene	Ave	1.235	1.121		1.81	2.00	-9.3	30.0
Naphthalene	Ave	2.498	2.153		1.72	2.00	-13.8	30.0
Hexachlorobutadiene	Ave	1.436	1.298		1.81	2.00	-9.6	30.0
1,2,3-Trichlorobenzene	Ave	1.187	1.061		1.79	2.00	-10.6	30.0
2-Methylnaphthalene	Ave	0.7935	1.204		3.03	2.00	51.7*	50.0
1-Methylnaphthalene	Ave	0.6999	1.351		3.86	2.00	93.1*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8858		4.17	4.00	4.1	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RCCVB07A.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 07-Feb-2019 10:59:30 ALS Bottle#: 15 Worklist Smp#: 6
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010745-002
 Misc. Info.: P78
 Operator ID: HMT Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 08-Feb-2019 12:55:39 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits

Date: 08-Feb-2019 12:55:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.401	0.000	72	214006	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.466	9.466	0.000	95	1280770	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.513	14.513	0.000	92	1141884	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.239	16.239	0.000	86	1011432	4.00	4.17	
6 Chlorodifluoromethane	51	3.518	3.518	0.000	97	256187	2.00	2.02	
7 Propene	41	3.524	3.524	0.000	91	78226	2.00	2.00	
8 Dichlorodifluoromethane	85	3.561	3.561	0.000	99	430258	2.00	1.85	
9 Chloromethane	52	3.685	3.685	0.000	96	33016	2.00	2.02	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.696	3.696	0.000	89	263605	2.00	1.52	
11 Acetaldehyde	44	3.782	3.782	0.000	90	198441	10.0	13.0	
12 Vinyl chloride	62	3.804	3.804	0.000	100	132572	2.00	2.31	
13 Butadiene	54	3.863	3.863	0.000	87	91672	2.00	2.63	
14 Butane	43	3.869	3.869	0.000	89	164438	2.00	2.71	
15 Bromomethane	94	4.079	4.079	0.000	94	157983	2.00	2.39	
16 Chloroethane	64	4.176	4.176	0.000	97	67154	2.00	2.53	
17 Ethanol	31	4.246	4.246	0.000	95	206267	10.0	12.9	
18 Vinyl bromide	106	4.386	4.386	0.000	96	172007	2.00	2.47	
19 2-Methylbutane	43	4.440	4.440	0.000	81	125435	2.00	2.93	
20 Acrolein	56	4.559	4.559	0.000	96	37182	2.00	2.75	
21 Trichlorofluoromethane	101	4.586	4.586	0.000	100	798901	2.00	2.53	
22 Acetonitrile	40	4.591	4.591	0.000	95	39640	2.00	2.86	
23 Acetone	58	4.640	4.640	0.000	100	172423	6.00	7.76	
25 Isopropyl alcohol	45	4.726	4.726	0.000	97	475472	6.00	7.85	
24 Pentane	72	4.753	4.753	0.000	92	29208	2.00	2.71	
26 Ethyl ether	31	4.855	4.855	0.000	76	101538	2.00	2.85	
27 1,1-Dichloroethene	96	5.087	5.087	0.000	94	154040	2.00	2.05	
28 Acrylonitrile	53	5.125	5.125	0.000	90	83313	2.00	2.48	
29 2-Methyl-2-propanol	59	5.163	5.163	0.000	96	292354	2.00	2.04	
30 1,1,2-Trichloro-1,2,2-trif	101	5.249	5.249	0.000	93	409228	2.00	2.19	
31 Methylene Chloride	84	5.335	5.335	0.000	92	139692	2.00	1.95	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.352	5.352	0.000	86	178303	2.00	2.55	
33 Carbon disulfide	76	5.465	5.465	0.000	98	390629	2.00	2.19	
34 trans-1,2-Dichloroethene	96	5.982	5.982	0.000	95	157495	2.00	2.05	
35 2-Methylpentane	43	6.036	6.036	0.000	86	257055	2.00	2.54	
36 Methyl tert-butyl ether	73	6.096	6.096	0.000	93	534865	2.00	2.19	
37 1,1-Dichloroethane	63	6.306	6.306	0.000	98	280358	2.00	2.18	
38 Vinyl acetate	43	6.403	6.403	0.000	99	320717	2.00	2.58	
39 2-Butanone (MEK)	72	6.748	6.748	0.000	99	61392	2.00	2.11	
40 Hexane	56	6.861	6.861	0.000	81	107980	2.00	2.42	
171 Isopropyl ether	45	6.975	6.975	0.000	88	388435	2.00	2.53	
41 cis-1,2-Dichloroethene	96	7.131	7.131	0.000	96	162334	2.00	2.10	
42 Ethyl acetate	43	7.304	7.304	0.000	98	277863	2.00	2.58	
43 Chloroform	83	7.433	7.433	0.000	96	440677	2.00	2.16	
173 Tert-butyl ethyl ether	59	7.562	7.562	0.000	94	526942	2.00	2.38	
44 Tetrahydrofuran	42	7.762	7.762	0.000	81	120412	2.00	2.54	
45 1,1,1-Trichloroethane	97	8.355	8.355	0.000	96	559380	2.00	2.16	
46 1,2-Dichloroethane	62	8.409	8.409	0.000	97	349988	2.00	2.16	
47 Benzene	78	8.905	8.905	0.000	98	432438	2.00	2.07	
49 n-Butanol	31	8.927	8.927	0.000	65	32906	2.00	2.22	
48 Cyclohexane	69	8.937	8.937	0.000	87	73213	2.00	2.36	
50 Carbon tetrachloride	117	8.943	8.943	0.000	97	641395	2.00	2.19	
51 2,3-Dimethylpentane	71	9.110	9.110	0.000	84	98067	2.00	2.27	
52 Thiophene	84	9.148	9.148	0.000	98	250419	2.00	2.10	
53 Isooctane	57	9.773	9.773	0.000	94	627062	2.00	2.35	
54 1,2-Dichloropropane	63	10.140	10.140	0.000	74	143123	2.00	2.19	
55 n-Heptane	71	10.194	10.194	0.000	87	151413	2.00	2.27	
56 Trichloroethene	130	10.215	10.215	0.000	93	253086	2.00	2.01	
57 Dibromomethane	93	10.242	10.242	0.000	92	235771	2.00	2.10	
58 Dichlorobromomethane	83	10.431	10.431	0.000	98	463686	2.00	2.20	
59 1,4-Dioxane	88	10.447	10.447	0.000	93	60040	2.00	1.89	
60 Methyl methacrylate	41	10.604	10.604	0.000	88	180213	2.00	2.47	
61 Methylcyclohexane	83	11.078	11.078	0.000	92	280101	2.00	2.17	
62 4-Methyl-2-pentanone (MIBK)	43	11.499	11.499	0.000	94	296581	2.00	2.55	
63 cis-1,3-Dichloropropene	75	11.537	11.537	0.000	97	290666	2.00	2.30	
64 trans-1,3-Dichloropropene	75	12.292	12.292	0.000	95	304730	2.00	2.28	
65 Toluene	91	12.432	12.432	0.000	92	589062	2.00	2.15	
66 1,1,2-Trichloroethane	83	12.480	12.480	0.000	92	161902	2.00	2.23	
69 2-Hexanone	58	12.949	12.949	0.000	93	139112	2.00	2.43	
70 Chlorodibromomethane	129	13.214	13.214	0.000	97	482851	2.00	2.28	
71 n-Octane	85	13.289	13.289	0.000	79	196791	2.00	2.26	
72 Ethylene Dibromide	107	13.510	13.510	0.000	96	346224	2.00	2.18	
73 Tetrachloroethene	129	13.656	13.656	0.000	92	280746	2.00	2.07	
74 Chlorobenzene	112	14.567	14.567	0.000	90	503749	2.00	2.11	
75 2,3-Dimethylheptane	43	14.713	14.713	0.000	83	434168	2.00	2.70	
76 Ethylbenzene	91	14.901	14.901	0.000	100	871060	2.00	2.21	
78 m-Xylene & p-Xylene	91	15.079	15.079	0.000	99	1483935	4.00	4.59	
79 Bromoform	173	15.462	15.462	0.000	94	497281	2.00	2.24	
80 Styrene	104	15.549	15.549	0.000	97	477328	2.00	2.25	
82 o-Xylene	91	15.613	15.613	0.000	97	768003	2.00	2.26	
81 n-Nonane	57	15.624	15.624	0.000	83	336304	2.00	2.61	
83 1,1,2,2-Tetrachloroethane	83	15.937	15.937	0.000	93	401239	2.00	2.32	
84 1,2,3-Trichloropropane	110	16.093	16.093	0.000	92	176210	2.00	2.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.244	16.244	0.000	99	1026440	2.00	2.12	
86 N-Propylbenzene	120	16.816	16.816	0.000	98	272864	2.00	2.05	
87 2-Chlorotoluene	126	16.827	16.827	0.000	93	248292	2.00	2.02	
88 4-Ethyltoluene	105	16.988	16.988	0.000	98	1048805	2.00	2.09	
89 1,3,5-Trimethylbenzene	120	17.075	17.075	0.000	90	422280	2.00	2.05	
90 Alpha Methyl Styrene	118	17.328	17.328	0.000	84	395656	2.00	2.03	
91 n-Decane	57	17.495	17.495	0.000	96	448491	2.00	2.45	
92 tert-Butylbenzene	119	17.549	17.549	0.000	87	1038476	2.00	2.07	
93 1,2,4-Trimethylbenzene	105	17.565	17.565	0.000	96	992503	2.00	2.16	
94 1,3-Dichlorobenzene	146	17.835	17.835	0.000	98	640114	2.00	1.93	
95 sec-Butylbenzene	105	17.862	17.862	0.000	96	1268043	2.00	2.05	
96 Benzyl chloride	91	17.921	17.921	0.000	96	796321	2.00	2.25	
97 1,4-Dichlorobenzene	146	17.937	17.937	0.000	92	651591	2.00	1.96	
98 4-Isopropyltoluene	119	18.056	18.056	0.000	95	1284925	2.00	2.05	
99 1,2,3-Trimethylbenzene	105	18.088	18.088	0.000	99	1031735	2.00	2.09	
100 Butylcyclohexane	83	18.196	18.196	0.000	88	575477	2.00	2.12	
101 1,2-Dichlorobenzene	146	18.331	18.331	0.000	91	617072	2.00	1.89	
102 2,3-Dihydroindene	117	18.347	18.347	0.000	92	818232	2.00	2.01	
103 Indene	116	18.482	18.482	0.000	89	672571	2.00	2.02	
104 n-Butylbenzene	91	18.547	18.547	0.000	97	1064436	2.00	2.09	
105 Undecane	57	18.973	18.973	0.000	89	517250	2.00	2.38	
106 1,2-Dibromo-3-Chloropropan	157	18.989	18.989	0.000	91	334474	2.00	2.10	
107 1,2,4,5-Tetramethylbenzene	119	19.372	19.372	0.000	95	1183293	2.00	2.01	
110 Dodecane	57	20.100	20.100	0.000	89	539174	2.00	2.37	
111 1,2,4-Trichlorobenzene	180	20.175	20.175	0.000	94	640049	2.00	1.81	
113 Naphthalene	128	20.294	20.294	0.000	98	1229144	2.00	1.72	
115 Hexachlorobutadiene	225	20.558	20.558	0.000	95	741054	2.00	1.81	
116 1,2,3-Trichlorobenzene	180	20.585	20.585	0.000	94	605955	2.00	1.79	
117 2-Methylnaphthalene	142	21.426	21.426	0.000	97	687502	2.00	3.03	
118 1-Methylnaphthalene	142	21.599	21.599	0.000	97	771578	2.00	3.86	
A 120 C8 Range	1	13.300	(13.241-13.338)		0	1700852	2.00	2.49	
S 121 Xylenes, Total	100				0		6.00	6.85	
S 122 1,2-Dichloroethene, Total	1				0		4.00	4.15	

Reagents:

40CV101P_00078

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RCCVB07A.D

Injection Date: 07-Feb-2019 10:59:30

Instrument ID: MR

Operator ID: HMT

Lims ID: CCVIS

Worklist Smp#: 6

Client ID:

Purge Vol: 500.000 mL

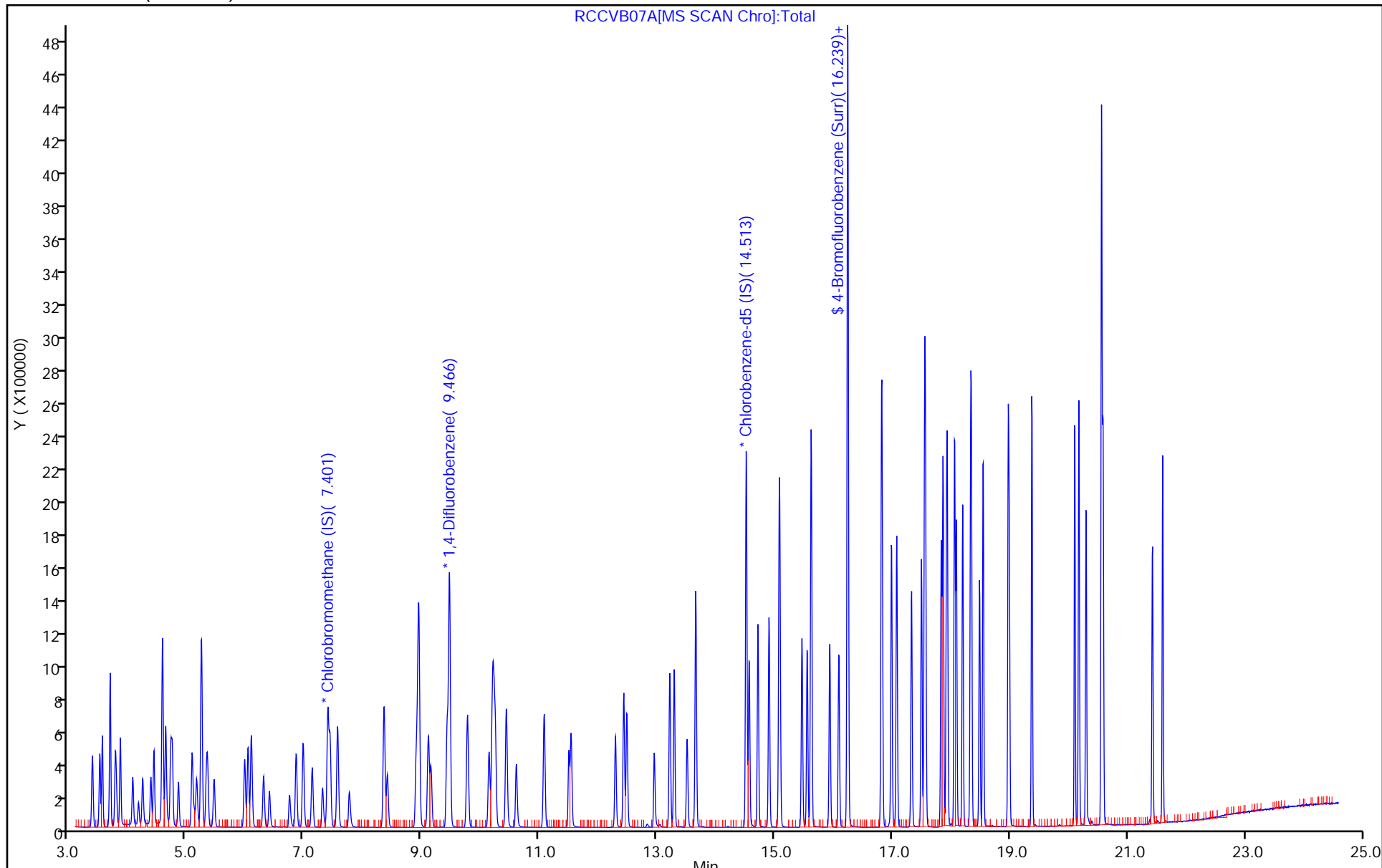
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



RCCVB07A[MS SCAN Chro]:Total

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RBFBK16I.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 16-Nov-2018 16:00:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-001
 Misc. Info.: BFB
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:29 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh Date: 16-Nov-2018 16:19:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.637	5.637	0.000	0	1507667	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

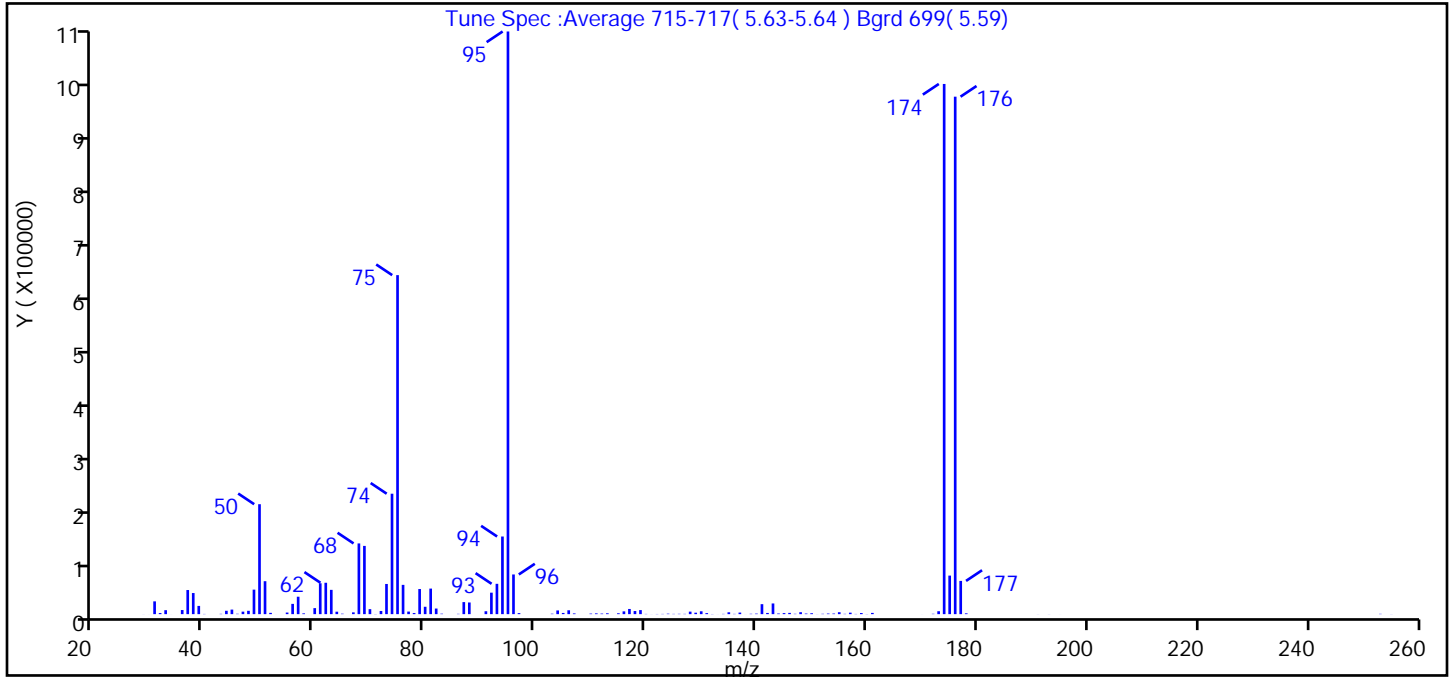
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\BFBK16I.D
 Injection Date: 16-Nov-2018 16:00:30 Instrument ID: MR
 Lims ID: BFB
 Client ID:
 Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.9
75	30 to 60% of m/z 95	58.2
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	91.0
175	5 to 9% of m/z 174	6.6 (7.3)
176	Greater than 95% but less than 101% of m/z 174	88.8 (97.6)
177	5 to 9% of m/z 176	5.7 (6.4)

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RBFBK161.DMR_TO15.rslt\spectra.d
Injection Date: 16-Nov-2018 16:00:30
Spectrum: Tune Spec :Average 715-717(5.63-5.64) Bgrd 699(5.59)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 129

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	82	67.00	3051	111.00	1314	145.00	1799
30.00	42	68.00	121608	112.00	1000	146.00	2167
31.00	21976	69.00	117344	113.00	1472	147.00	587
32.00	1872	70.00	8559	115.00	1498	148.00	3341
33.00	6807	71.00	242	116.00	4788	149.00	1013
34.00	47	72.00	5436	117.00	8901	150.00	1582
36.00	7075	73.00	51896	118.00	5361	151.00	97
37.00	41472	74.00	207104	119.00	6961	152.00	589
38.00	36296	75.00	582976	120.00	382	153.00	1032
39.00	14146	76.00	50352	121.00	80	154.00	1046
40.00	352	77.00	4415	122.00	293	155.00	3329
41.00	12	78.00	1882	123.00	395	156.00	504
43.00	505	79.00	43192	124.00	805	157.00	2542
44.00	5765	80.00	12674	125.00	442	158.00	344
45.00	7821	81.00	43936	126.00	550	159.00	1896
46.00	624	82.00	9626	127.00	471	160.00	211
47.00	4314	83.00	791	128.00	4329	161.00	2127
48.00	5729	86.00	523	129.00	2485	170.00	42
49.00	42160	87.00	20704	130.00	4919	172.00	609
50.00	189056	88.00	20064	131.00	1754	173.00	5015
51.00	56648	91.00	5000	132.00	262	174.00	911744
52.00	2215	92.00	36920	133.00	57	175.00	66280
53.00	37	93.00	52152	134.00	435	176.00	889856
55.00	2753	94.00	133504	135.00	3202	177.00	57168
56.00	17664	95.00	1001984	136.00	443	178.00	1378
57.00	29976	96.00	68240	137.00	2704	191.00	97
58.00	1338	97.00	1768	138.00	52	193.00	111
60.00	10347	103.00	745	139.00	624	195.00	40
61.00	53120	104.00	6342	140.00	916	253.00	525
62.00	53968	105.00	2057	141.00	17160	255.00	125
63.00	41768	106.00	6637	142.00	2048		
64.00	4211	107.00	1249	143.00	18376		
65.00	772	110.00	963	144.00	1092		

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	82	67.00	3051	111.00	1314	145.00	1799
30.00	42	68.00	121608	112.00	1000	146.00	2167
31.00	21976	69.00	117344	113.00	1472	147.00	587
32.00	1872	70.00	8559	115.00	1498	148.00	3341
33.00	6807	71.00	242	116.00	4788	149.00	1013
34.00	47	72.00	5436	117.00	8901	150.00	1582
36.00	7075	73.00	51896	118.00	5361	151.00	97
37.00	41472	74.00	207104	119.00	6961	152.00	589
38.00	36296	75.00	582976	120.00	382	153.00	1032
39.00	14146	76.00	50352	121.00	80	154.00	1046
40.00	352	77.00	4415	122.00	293	155.00	3329
41.00	12	78.00	1882	123.00	395	156.00	504
43.00	505	79.00	43192	124.00	805	157.00	2542
44.00	5765	80.00	12674	125.00	442	158.00	344
45.00	7821	81.00	43936	126.00	550	159.00	1896
46.00	624	82.00	9626	127.00	471	160.00	211
47.00	4314	83.00	791	128.00	4329	161.00	2127
48.00	5729	86.00	523	129.00	2485	170.00	42
49.00	42160	87.00	20704	130.00	4919	172.00	609
50.00	189056	88.00	20064	131.00	1754	173.00	5015
51.00	56648	91.00	5000	132.00	262	174.00	911744
52.00	2215	92.00	36920	133.00	57	175.00	66280
53.00	37	93.00	52152	134.00	435	176.00	889856
55.00	2753	94.00	133504	135.00	3202	177.00	57168
56.00	17664	95.00	1001984	136.00	443	178.00	1378
57.00	29976	96.00	68240	137.00	2704	191.00	97
58.00	1338	97.00	1768	138.00	52	193.00	111
60.00	10347	103.00	745	139.00	624	195.00	40
61.00	53120	104.00	6342	140.00	916	253.00	525
62.00	53968	105.00	2057	141.00	17160	255.00	125
63.00	41768	106.00	6637	142.00	2048		
64.00	4211	107.00	1249	143.00	18376		
65.00	772	110.00	963	144.00	1092		

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RFBFK16I.D

Injection Date: 16-Nov-2018 16:00:30

Instrument ID: MR

Operator ID:

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

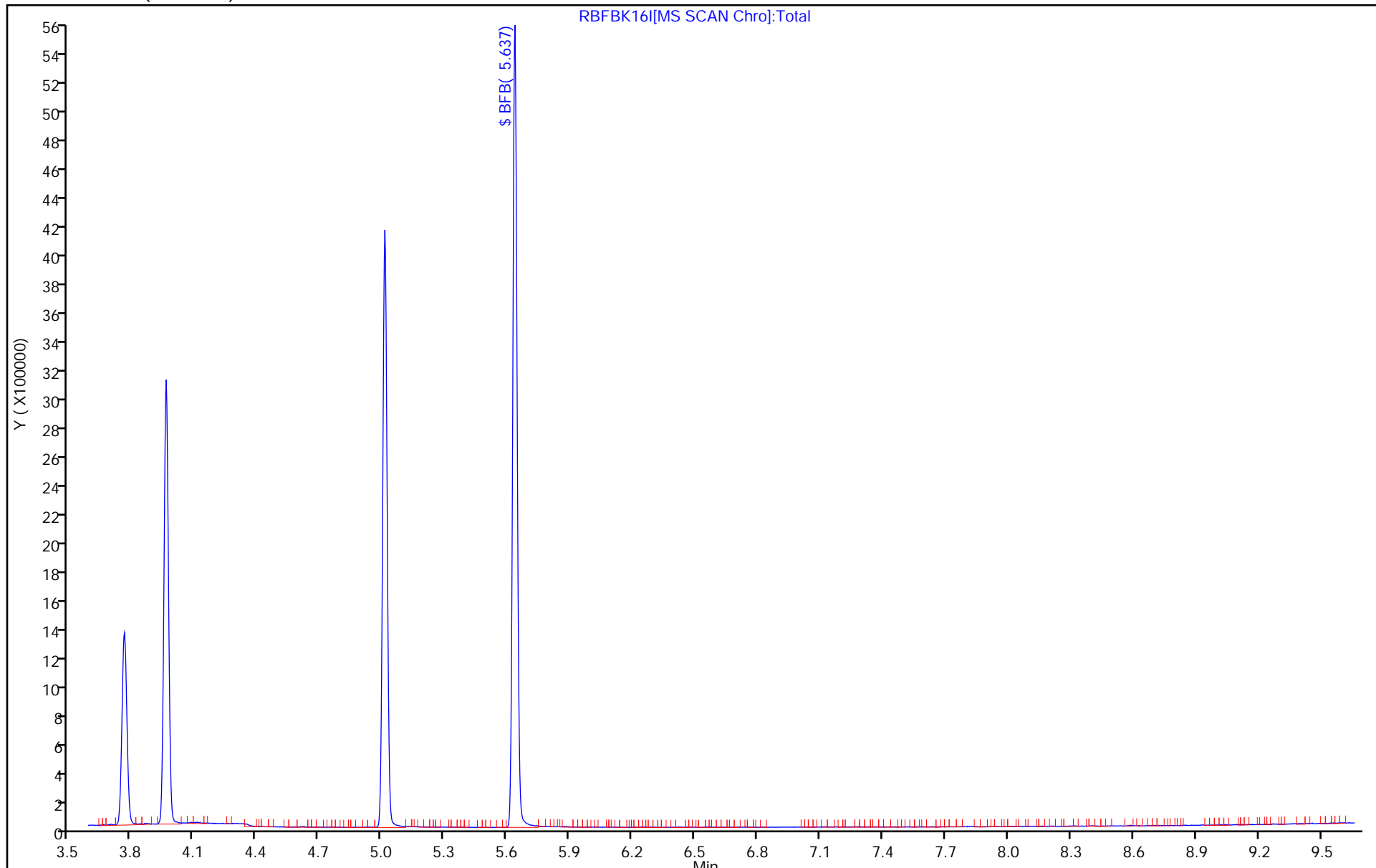
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\BFB07A.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 07-Feb-2019 10:30:30 ALS Bottle#: 16 Worklist Smp#: 5
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010745-001
 Misc. Info.: BFB
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 08-Feb-2019 12:53:50 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 08-Feb-2019 12:53:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.625	5.625	0.000	0	1025957	NR	NR	8
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

8 - Failed MS Tune Ratio Test

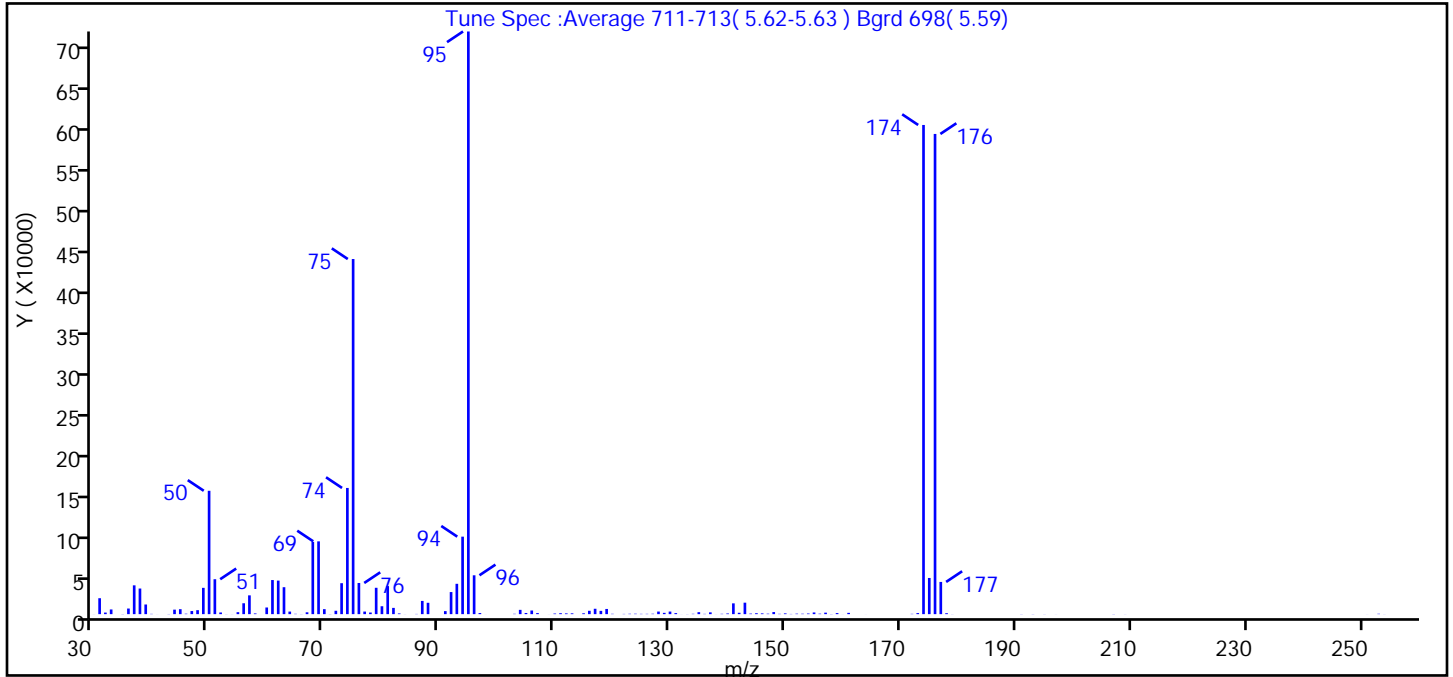
Reagents:

40MSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RBFB07A.D
 Injection Date: 07-Feb-2019 10:30:30 Instrument ID: MR
 Lims ID: BFB
 Client ID:
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 5
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.2
75	30 to 60% of m/z 95	60.9*
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.2 (0.2)
174	50 to 120% of m/z 95	84.0
175	5 to 9% of m/z 174	6.2 (7.4)
176	Greater than 95% but less than 101% of m/z 174	82.4 (98.2)
177	5 to 9% of m/z 176	5.5 (6.7)

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RBFB07A.D\MR_TO15.rslt\spectra.d
Injection Date: 07-Feb-2019 10:30:30
Spectrum: Tune Spec :Average 711-713(5.62-5.63) Bgrd 698(5.59)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 137

m/z	Y	m/z	Y	m/z	Y	m/z	Y
30.00	68	68.00	88096	111.00	1149	148.00	2536
31.00	19424	69.00	88744	112.00	911	149.00	375
32.00	1918	70.00	6078	113.00	989	150.00	931
33.00	5721	71.00	160	115.00	1042	151.00	246
35.00	168	72.00	4106	116.00	4091	152.00	578
36.00	6843	73.00	37736	117.00	6563	153.00	508
37.00	35120	74.00	153856	118.00	3987	154.00	759
38.00	31232	75.00	432960	119.00	6326	155.00	2051
39.00	11772	76.00	37992	120.00	410	156.00	571
40.00	328	77.00	3144	122.00	285	157.00	1812
41.00	43	78.00	1974	123.00	452	158.00	173
43.00	187	79.00	32136	124.00	512	159.00	1291
44.00	5482	80.00	9632	125.00	351	160.00	44
45.00	6035	81.00	34208	126.00	373	161.00	1569
46.00	520	82.00	7631	127.00	496	164.00	41
47.00	3772	83.00	858	128.00	3153	172.00	369
48.00	4836	84.00	71	129.00	1573	173.00	1308
49.00	32064	86.00	264	130.00	3147	174.00	596416
50.00	150400	87.00	16110	131.00	1261	175.00	44096
51.00	42568	88.00	13838	132.00	43	176.00	585472
52.00	2025	91.00	3683	133.00	119	177.00	39280
53.00	104	92.00	26920	134.00	413	178.00	1133
54.00	58	93.00	36992	135.00	2403	179.00	94
55.00	2402	94.00	94480	136.00	330	191.00	145
56.00	13272	95.00	710400	137.00	2189	193.00	150
57.00	22912	96.00	47368	138.00	51	195.00	110
58.00	874	97.00	1344	139.00	407	197.00	57
60.00	8107	98.00	37	140.00	824	207.00	174
61.00	41576	103.00	423	141.00	13156	209.00	83
62.00	40896	104.00	5227	142.00	1671	251.00	56
63.00	32848	105.00	1406	143.00	13982	253.00	454
64.00	3126	106.00	4440	144.00	681	254.00	81
65.00	384	107.00	1291	145.00	1123		

Report Date: 08-Feb-2019 12:53:50

Chrom Revision: 2.3 28-Jan-2019 09:43:36

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RBFBB07A.D\MR_TO15.rslt\spectra.d

Injection Date: 07-Feb-2019 10:30:30

Spectrum: Tune Spec :Average 711-713(5.62-5.63) Bgrd 698(5.59)

Base Peak: 95.00

Minimum % Base Peak: 0

Number of Points: 137

m/z	Y	m/z	Y	m/z	Y	m/z	Y
66.00	113	109.00	49	146.00	924		
67.00	2256	110.00	738	147.00	563		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RBFBB07A.D

Injection Date: 07-Feb-2019 10:30:30

Instrument ID: MR

Operator ID: HMT

Lims ID: BFB

Worklist Smp#: 5

Client ID:

Injection Vol: 500.0 mL

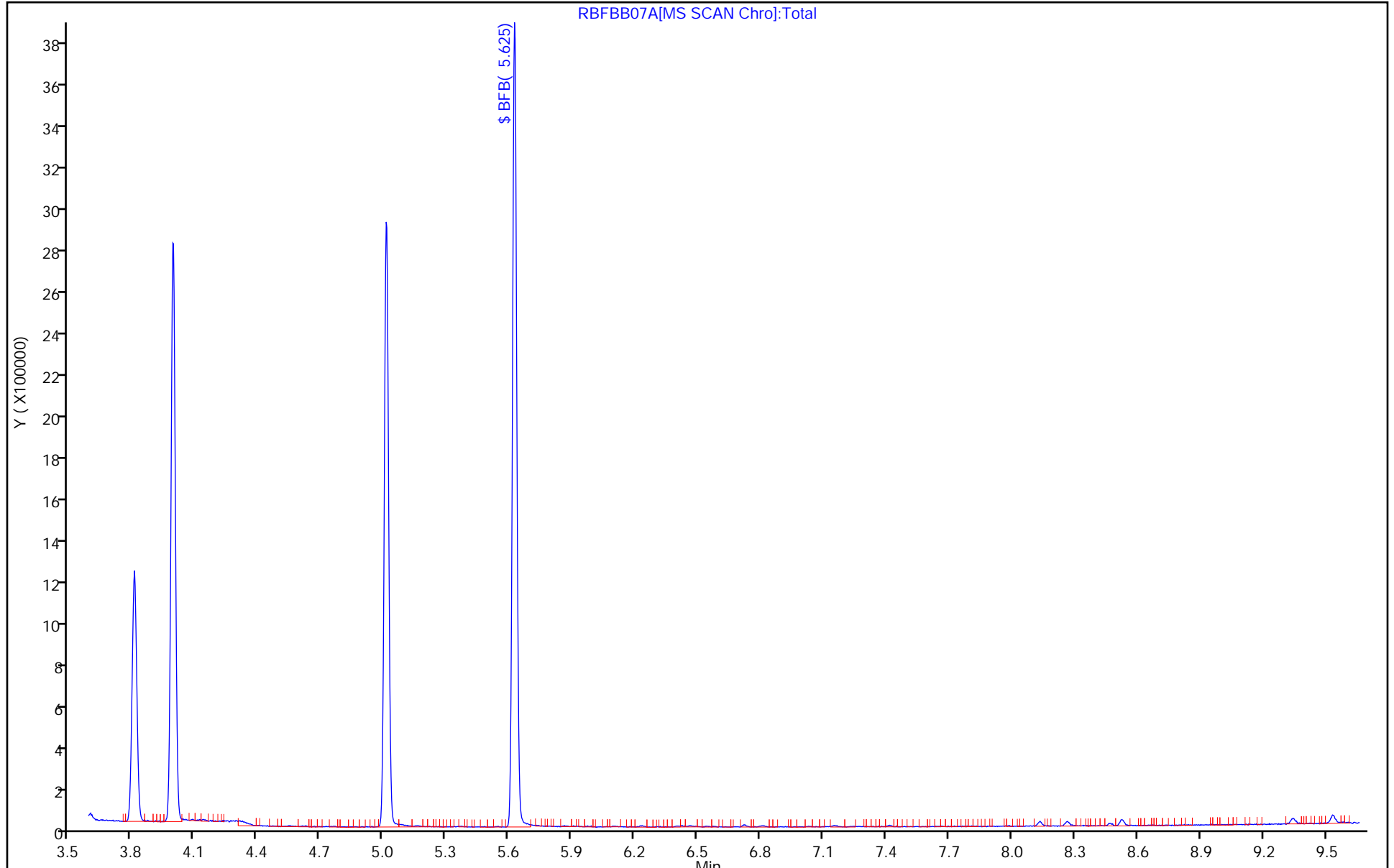
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27430/10
 Matrix: Air Lab File ID: R500BB07.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/07/2019 14:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27430 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-27430/10
 Matrix: Air Lab File ID: R500BB07.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/07/2019 14:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27430 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\R500BB07.D
 Lims ID: mb
 Client ID:
 Sample Type: MB
 Inject. Date: 07-Feb-2019 14:36:30 ALS Bottle#: 17 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010745-010
 Misc. Info.: 500ML BLK
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 08-Feb-2019 13:06:44 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 08-Feb-2019 13:06:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.401	-0.011	74	211173	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.461	9.466	-0.005	95	1245003	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.513	14.513	0.000	92	1094431	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.239	16.239	0.000	86	958674	4.00	4.12	
108 1,2-Dimethyl-4-Ethylbenzen	119	19.145	19.000	0.145	1	125		NC	
109 1,2,3,5-Tetramethylbenzene	119	19.377	19.436	-0.059	1	391		NC	
112 1,2,3,4-Tetramethylbenzene	119	19.846	19.852	-0.006	1	115		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\R500BB07.D

Injection Date: 07-Feb-2019 14:36:30

Instrument ID: MR

Operator ID:

Lims ID: mb

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

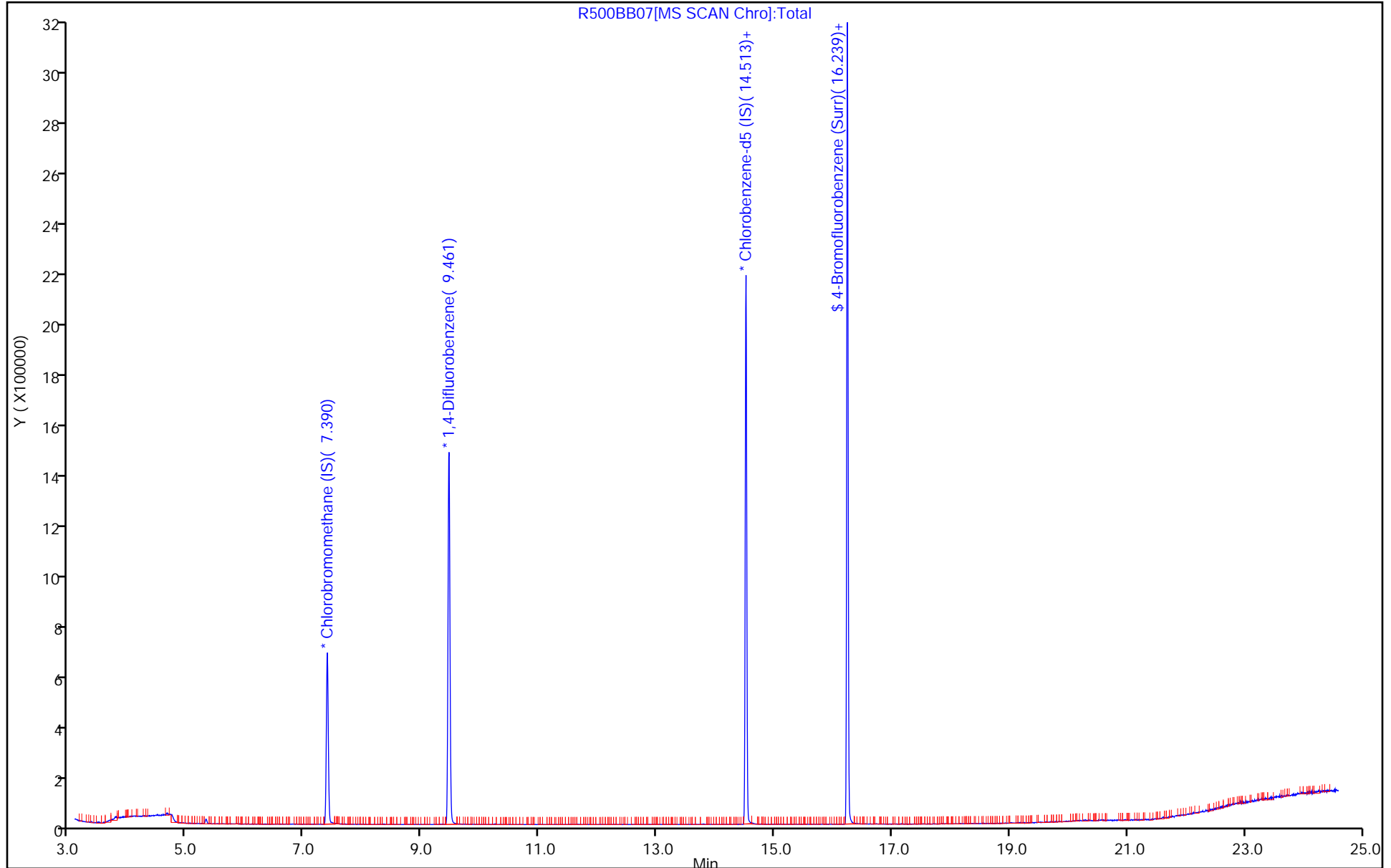
Dil. Factor: 1.0000

ALS Bottle#: 17

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\R500BB07.D
 Lims ID: mb
 Client ID:
 Sample Type: MB
 Inject. Date: 07-Feb-2019 14:36:30 ALS Bottle#: 17 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010745-010
 Misc. Info.: 500ML BLK
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 08-Feb-2019 13:06:44 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 08-Feb-2019 13:06:44

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.12	102.98

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-27430/1006
 Matrix: Air Lab File ID: RCCVB07A-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 02/07/2019 10:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 27430 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.07		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.19		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.02		0.080	0.015
67-66-3	Chloroform	119.38	2.16		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.10		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.85		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.18		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.16		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.05		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.21		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.95		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.19		0.40	0.068
91-20-3	Naphthalene	128.17	1.72		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.07		0.080	0.016
108-88-3	Toluene	92.14	2.15		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.05		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.81		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.16		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.23		0.080	0.021
79-01-6	Trichloroethene	131.39	2.01		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.09		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.16		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.05		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.31		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.85		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RCCVB07A-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 07-Feb-2019 10:59:30 ALS Bottle#: 15 Worklist Smp#: 1006
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010745-002
 Misc. Info.: P78
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 08-Feb-2019 12:55:39 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits

Date: 08-Feb-2019 12:55:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.401	0.000	72	214006	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.466	9.466	0.000	95	1280770	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.513	14.513	0.000	92	1141884	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.239	16.239	0.000	86	1011432	4.00	4.17	
6 Chlorodifluoromethane	51	3.518	3.518	0.000	97	256187	2.00	2.02	
7 Propene	41	3.524	3.524	0.000	91	78226	2.00	2.00	
8 Dichlorodifluoromethane	85	3.561	3.561	0.000	99	430258	2.00	1.85	
9 Chloromethane	52	3.685	3.685	0.000	96	33016	2.00	2.02	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.696	3.696	0.000	89	263605	2.00	1.52	
11 Acetaldehyde	44	3.782	3.782	0.000	90	198441	10.0	13.0	
12 Vinyl chloride	62	3.804	3.804	0.000	100	132572	2.00	2.31	
13 Butadiene	54	3.863	3.863	0.000	87	91672	2.00	2.63	
14 Butane	43	3.869	3.869	0.000	89	164438	2.00	2.71	
15 Bromomethane	94	4.079	4.079	0.000	94	157983	2.00	2.39	
16 Chloroethane	64	4.176	4.176	0.000	97	67154	2.00	2.53	
17 Ethanol	31	4.246	4.246	0.000	95	206267	10.0	12.9	
18 Vinyl bromide	106	4.386	4.386	0.000	96	172007	2.00	2.47	
19 2-Methylbutane	43	4.440	4.440	0.000	81	125435	2.00	2.93	
20 Acrolein	56	4.559	4.559	0.000	96	37182	2.00	2.75	
21 Trichlorofluoromethane	101	4.586	4.586	0.000	100	798901	2.00	2.53	
22 Acetonitrile	40	4.591	4.591	0.000	95	39640	2.00	2.86	
23 Acetone	58	4.640	4.640	0.000	100	172423	6.00	7.76	
25 Isopropyl alcohol	45	4.726	4.726	0.000	97	475472	6.00	7.85	
24 Pentane	72	4.753	4.753	0.000	92	29208	2.00	2.71	
26 Ethyl ether	31	4.855	4.855	0.000	76	101538	2.00	2.85	
27 1,1-Dichloroethene	96	5.087	5.087	0.000	94	154040	2.00	2.05	
28 Acrylonitrile	53	5.125	5.125	0.000	90	83313	2.00	2.48	
29 2-Methyl-2-propanol	59	5.163	5.163	0.000	96	292354	2.00	2.04	
30 1,1,2-Trichloro-1,2,2-trif	101	5.249	5.249	0.000	93	409228	2.00	2.19	
31 Methylene Chloride	84	5.335	5.335	0.000	92	139692	2.00	1.95	
32 3-Chloro-1-propene	39	5.352	5.352	0.000	86	178303	2.00	2.55	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.465	5.465	0.000	98	390629	2.00	2.19	
34 trans-1,2-Dichloroethene	96	5.982	5.982	0.000	95	157495	2.00	2.05	
35 2-Methylpentane	43	6.036	6.036	0.000	86	257055	2.00	2.54	
36 Methyl tert-butyl ether	73	6.096	6.096	0.000	93	534865	2.00	2.19	
37 1,1-Dichloroethane	63	6.306	6.306	0.000	98	280358	2.00	2.18	
38 Vinyl acetate	43	6.403	6.403	0.000	99	320717	2.00	2.58	
39 2-Butanone (MEK)	72	6.748	6.748	0.000	99	61392	2.00	2.11	
40 Hexane	56	6.861	6.861	0.000	81	107980	2.00	2.42	
171 Isopropyl ether	45	6.975	6.975	0.000	88	388435	2.00	2.53	
41 cis-1,2-Dichloroethene	96	7.131	7.131	0.000	96	162334	2.00	2.10	
42 Ethyl acetate	43	7.304	7.304	0.000	98	277863	2.00	2.58	
43 Chloroform	83	7.433	7.433	0.000	96	440677	2.00	2.16	
173 Tert-butyl ethyl ether	59	7.562	7.562	0.000	94	526942	2.00	2.38	
44 Tetrahydrofuran	42	7.762	7.762	0.000	81	120412	2.00	2.54	
45 1,1,1-Trichloroethane	97	8.355	8.355	0.000	96	559380	2.00	2.16	
46 1,2-Dichloroethane	62	8.409	8.409	0.000	97	349988	2.00	2.16	
47 Benzene	78	8.905	8.905	0.000	98	432438	2.00	2.07	
49 n-Butanol	31	8.927	8.927	0.000	65	32906	2.00	2.22	
48 Cyclohexane	69	8.937	8.937	0.000	87	73213	2.00	2.36	
50 Carbon tetrachloride	117	8.943	8.943	0.000	97	641395	2.00	2.19	
51 2,3-Dimethylpentane	71	9.110	9.110	0.000	84	98067	2.00	2.27	
52 Thiophene	84	9.148	9.148	0.000	98	250419	2.00	2.10	
53 Isooctane	57	9.773	9.773	0.000	94	627062	2.00	2.35	
54 1,2-Dichloropropane	63	10.140	10.140	0.000	74	143123	2.00	2.19	
55 n-Heptane	71	10.194	10.194	0.000	87	151413	2.00	2.27	
56 Trichloroethene	130	10.215	10.215	0.000	93	253086	2.00	2.01	
57 Dibromomethane	93	10.242	10.242	0.000	92	235771	2.00	2.10	
58 Dichlorobromomethane	83	10.431	10.431	0.000	98	463686	2.00	2.20	
59 1,4-Dioxane	88	10.447	10.447	0.000	93	60040	2.00	1.89	
60 Methyl methacrylate	41	10.604	10.604	0.000	88	180213	2.00	2.47	
61 Methylcyclohexane	83	11.078	11.078	0.000	92	280101	2.00	2.17	
62 4-Methyl-2-pentanone (MIBK)	43	11.499	11.499	0.000	94	296581	2.00	2.55	
63 cis-1,3-Dichloropropene	75	11.537	11.537	0.000	97	290666	2.00	2.30	
64 trans-1,3-Dichloropropene	75	12.292	12.292	0.000	95	304730	2.00	2.28	
65 Toluene	91	12.432	12.432	0.000	92	589062	2.00	2.15	
66 1,1,2-Trichloroethane	83	12.480	12.480	0.000	92	161902	2.00	2.23	
69 2-Hexanone	58	12.949	12.949	0.000	93	139112	2.00	2.43	
70 Chlorodibromomethane	129	13.214	13.214	0.000	97	482851	2.00	2.28	
71 n-Octane	85	13.289	13.289	0.000	79	196791	2.00	2.26	
72 Ethylene Dibromide	107	13.510	13.510	0.000	96	346224	2.00	2.18	
73 Tetrachloroethene	129	13.656	13.656	0.000	92	280746	2.00	2.07	
74 Chlorobenzene	112	14.567	14.567	0.000	90	503749	2.00	2.11	
75 2,3-Dimethylheptane	43	14.713	14.713	0.000	83	434168	2.00	2.70	
76 Ethylbenzene	91	14.901	14.901	0.000	100	871060	2.00	2.21	
78 m-Xylene & p-Xylene	91	15.079	15.079	0.000	99	1483935	4.00	4.59	
79 Bromoform	173	15.462	15.462	0.000	94	497281	2.00	2.24	
80 Styrene	104	15.549	15.549	0.000	97	477328	2.00	2.25	
82 o-Xylene	91	15.613	15.613	0.000	97	768003	2.00	2.26	
81 n-Nonane	57	15.624	15.624	0.000	83	336304	2.00	2.61	
83 1,1,2,2-Tetrachloroethane	83	15.937	15.937	0.000	93	401239	2.00	2.32	
84 1,2,3-Trichloropropane	110	16.093	16.093	0.000	92	176210	2.00	2.06	
85 Isopropylbenzene	105	16.244	16.244	0.000	99	1026440	2.00	2.12	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	16.816	16.816	0.000	98	272864	2.00	2.05	
87 2-Chlorotoluene	126	16.827	16.827	0.000	93	248292	2.00	2.02	
88 4-Ethyltoluene	105	16.988	16.988	0.000	98	1048805	2.00	2.09	
89 1,3,5-Trimethylbenzene	120	17.075	17.075	0.000	90	422280	2.00	2.05	
90 Alpha Methyl Styrene	118	17.328	17.328	0.000	84	395656	2.00	2.03	
91 n-Decane	57	17.495	17.495	0.000	96	448491	2.00	2.45	
92 tert-Butylbenzene	119	17.549	17.549	0.000	87	1038476	2.00	2.07	
93 1,2,4-Trimethylbenzene	105	17.565	17.565	0.000	96	992503	2.00	2.16	
94 1,3-Dichlorobenzene	146	17.835	17.835	0.000	98	640114	2.00	1.93	
95 sec-Butylbenzene	105	17.862	17.862	0.000	96	1268043	2.00	2.05	
96 Benzyl chloride	91	17.921	17.921	0.000	96	796321	2.00	2.25	
97 1,4-Dichlorobenzene	146	17.937	17.937	0.000	92	651591	2.00	1.96	
98 4-Isopropyltoluene	119	18.056	18.056	0.000	95	1284925	2.00	2.05	
99 1,2,3-Trimethylbenzene	105	18.088	18.088	0.000	99	1031735	2.00	2.09	
100 Butylcyclohexane	83	18.196	18.196	0.000	88	575477	2.00	2.12	
101 1,2-Dichlorobenzene	146	18.331	18.331	0.000	91	617072	2.00	1.89	
102 2,3-Dihydroindene	117	18.347	18.347	0.000	92	818232	2.00	2.01	
103 Indene	116	18.482	18.482	0.000	89	672571	2.00	2.02	
104 n-Butylbenzene	91	18.547	18.547	0.000	97	1064436	2.00	2.09	
105 Undecane	57	18.973	18.973	0.000	89	517250	2.00	2.38	
106 1,2-Dibromo-3-Chloropropan	157	18.989	18.989	0.000	91	334474	2.00	2.10	
107 1,2,4,5-Tetramethylbenzene	119	19.372	19.372	0.000	95	1183293	2.00	2.01	
110 Dodecane	57	20.100	20.100	0.000	89	539174	2.00	2.37	
111 1,2,4-Trichlorobenzene	180	20.175	20.175	0.000	94	640049	2.00	1.81	
113 Naphthalene	128	20.294	20.294	0.000	98	1229144	2.00	1.72	
115 Hexachlorobutadiene	225	20.558	20.558	0.000	95	741054	2.00	1.81	
116 1,2,3-Trichlorobenzene	180	20.585	20.585	0.000	94	605955	2.00	1.79	
117 2-Methylnaphthalene	142	21.426	21.426	0.000	97	687502	2.00	3.03	
118 1-Methylnaphthalene	142	21.599	21.599	0.000	97	771578	2.00	3.86	
A 120 C8 Range	1	13.300	(13.241-13.338)		0	1700852	2.00	2.49	
S 121 Xylenes, Total	100				0		6.00	6.85	
S 122 1,2-Dichloroethene, Total	1				0		4.00	4.15	

Reagents:

40CV101P_00078

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RCCVB07A-LCS.d

Injection Date: 07-Feb-2019 10:59:30

Instrument ID: MR

Operator ID: HMT

Lims ID: LCS

Worklist Smp#: 1006

Client ID:

Purge Vol: 500.000 mL

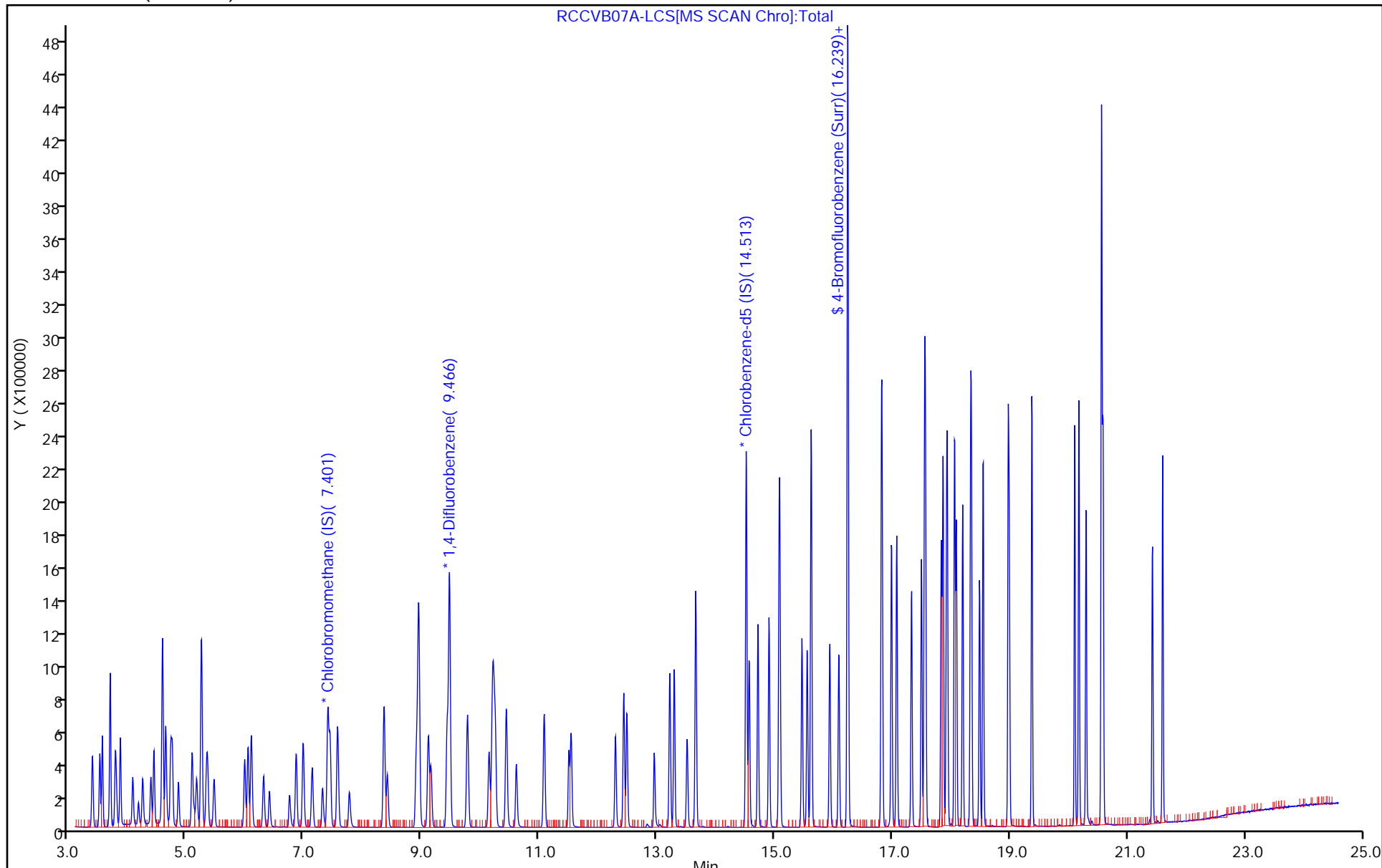
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\RCCVB07A-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 07-Feb-2019 10:59:30 ALS Bottle#: 15 Worklist Smp#: 1006
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010745-002
 Misc. Info.: P78
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190206-10745.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 08-Feb-2019 12:55:39 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 08-Feb-2019 12:55:39

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.17	104.13

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1

SDG No.: _____

Instrument ID: MR Start Date: 11/16/2018 16:00

Analysis Batch Number: 25490 End Date: 11/17/2018 06:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25490/1		11/16/2018 16:00	1	RBFBK16I.D	RTX-5 0.32 (mm)
IC 140-25490/3		11/16/2018 17:23	1	RK16IC09.D	RTX-5 0.32 (mm)
IC 140-25490/5		11/16/2018 19:07	1	RK16IC10.D	RTX-5 0.32 (mm)
IC 140-25490/8		11/16/2018 21:42	1	RK16IC01.D	RTX-5 0.32 (mm)
IC 140-25490/9		11/16/2018 22:34	1	RK16IC02.D	RTX-5 0.32 (mm)
IC 140-25490/10		11/16/2018 23:27	1	RK16IC03.D	RTX-5 0.32 (mm)
IC 140-25490/11		11/17/2018 00:20	1	RK16IC04.D	RTX-5 0.32 (mm)
IC 140-25490/12		11/17/2018 01:12	1	RK16IC05.D	RTX-5 0.32 (mm)
IC 140-25490/13		11/17/2018 02:05	1	RK16IC06.D	RTX-5 0.32 (mm)
ICIS 140-25490/14		11/17/2018 02:58	1	RK16IC07.D	RTX-5 0.32 (mm)
IC 140-25490/15		11/17/2018 03:51	1	RK16IC08.D	RTX-5 0.32 (mm)
ICV 140-25490/18		11/17/2018 06:27	1	RK16ICV.D	RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date:	11/16/18	Instrument:	MR	Chrom WL #:	10019	TALS Batch & Event #	TO14/15: 1744 25490						
							DOD:	1749 / 25492	OHIO: PMT / 25491				
Chrom/Worklist Review							1 st	Comments			2 nd		
1. Re-read each Limit Group [method editor-limit groups]							✓				na		
2. Verify LODV in Chrom [method editor -> edit -> MDL]							✓				na		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]							✓				/		
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]							✓				/		
5. Did BFB meet tune criteria? [F8]							✓				/		
6. Were all standards injected within 24 hr of BFB? [F7]							✓	Vol ✓ on screen			/		
7. High point checked for saturation and point removed if so? [Chrom]							✓	Naph.			✓		
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]							na				MS		
9. RT for each IS +20 sec avg. RT? [F6 IstdRec]							✓				/		
10. Area for each IS ± 40% avg. area? [F6 IstdRec]							✓				/		
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]							✓				/		
12. Elution order checked on isomeric pairs? [Chrom]											/		
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane							✓				/		
• 2-methyl butane / acrolein							✓				/		
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane							✓				/		
• vinyl acetate / hexane							✓				/		
• cis- and trans- isomers							✓				/		
• ethyl benzene / m/p-xylene / o-xylene							✓				/		
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene							✓				/		
• tert-butylbenzene/4-isopropyltoluene							✓				/		
• 1,3-, 1,4-, and 1,2-dichlorobenzene							✓				/		
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes							na				MS		
• 1,2,4- and 1,2,3-trichlorobenzenes							✓				/		
• 2-, and 1-methylnaphthalene							✓				/		
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?							✓				✓		
MLG Review							TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1 & 2 methylnaphthalene ≤ 50% [F6 Σ]							✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]							✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]							✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]							na	→	→		na	→	→
18. If curves were used, is correlation coefficient ≥ 0.990? [F6]							na	→	→		na	→	→
19. Is the intercept less than the RL for each curve? [F6]							na	→	→		na	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]							na	→	na		na	→	na
21. Is low point RSE ≤ 50%? [F6]							✓	✓	✓		✓	✓	✓
22. Is the second source analysis within limits? [F8 - icv]							✓	✓	✓		✓	✓	✓
Analyst/Date:							2nd Level Reviewer/Date:						
[Signature] 11/19/18							[Signature] 11/19/18						
TALS Review							TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL							✓	✓	✓		na	na	na
24. Graphics uploaded? [paperclip]							✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events --'Fix ICAL linkage' if needed]							✓	✓	✓		✓	✓	✓
26. Runs linked to BFB? [QC Links]							✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings [F8]							✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?							na	→	→		na	→	→
29. After review in TALS, approve the method in TALS.							na	na	na		✓	✓	✓
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>							na	na	na		✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?							na	na	na		✓	✓	✓
Analyst/date:							2nd Level Reviewer/date:						
[Signature] 11/19/18							[Signature] 11/19/18						
Comments:							Comments:						
[Handwritten notes]							[Handwritten notes]						

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1

SDG No.: _____

Instrument ID: MR Start Date: 02/07/2019 10:30

Analysis Batch Number: 27430 End Date: 02/08/2019 06:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-27430/5		02/07/2019 10:30	1	RBFB07A.D	RTX-5 0.32 (mm)
CCVIS 140-27430/6		02/07/2019 10:59	1	RCCVB07A.D	RTX-5 0.32 (mm)
LCS 140-27430/1006		02/07/2019 10:59	1	RCCVB07A-LCS.d	RTX-5 0.32 (mm)
ZZZZZ		02/07/2019 13:40	1		RTX-5 0.32 (mm)
ZZZZZ		02/07/2019 13:40	1		RTX-5 0.32 (mm)
MB 140-27430/10		02/07/2019 14:36	1	R500BB07.D	RTX-5 0.32 (mm)
ZZZZZ		02/07/2019 16:48	1		RTX-5 0.32 (mm)
140-14199-1		02/07/2019 17:37	1	RB07P102.D	RTX-5 0.32 (mm)
140-14199-2		02/07/2019 18:26	1	RB07P103.D	RTX-5 0.32 (mm)
140-14199-3		02/07/2019 19:15	1	RB07P104.D	RTX-5 0.32 (mm)
ZZZZZ		02/07/2019 20:11	1		RTX-5 0.32 (mm)
ZZZZZ		02/07/2019 21:08	1		RTX-5 0.32 (mm)
ZZZZZ		02/07/2019 22:02	1		RTX-5 0.32 (mm)
ZZZZZ		02/07/2019 22:57	1		RTX-5 0.32 (mm)
ZZZZZ		02/07/2019 23:46	1		RTX-5 0.32 (mm)
ZZZZZ		02/08/2019 00:35	1		RTX-5 0.32 (mm)
ZZZZZ		02/08/2019 01:24	1		RTX-5 0.32 (mm)
ZZZZZ		02/08/2019 02:15	1		RTX-5 0.32 (mm)
ZZZZZ		02/08/2019 03:07	1		RTX-5 0.32 (mm)
ZZZZZ		02/08/2019 03:59	1		RTX-5 0.32 (mm)
ZZZZZ		02/08/2019 04:49	1		RTX-5 0.32 (mm)
ZZZZZ		02/08/2019 06:35	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 1 of 2

Instrument/Date	MR 02/07/2019		Routine	DOD	OHIO VAP
CCAL Chrom WL #	10745	CCAL Batch #	27430		
ICAL Chrom WL #	10019	ICAL Batch # / Event #	25490 / 1746	/	/
Chrom Review			1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]			/		na
2. Did BFB meet tune criteria? [F8]			/	[Failed TO-14A, but passes TO-15]	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]			/	List Target analytes outside CCV limits: _____ _____	/
4. Elution order checked on isomeric pairs? [Chrom]					
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane			/		/
• 2-methyl butane / acrolein			/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane			/		/
• vinyl acetate / hexane			/		/
• cis- and trans- isomers			/		/
• ethyl benzene / m/p-xylene / o-xylene			/		/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene			/		/
• tert-butylbenzene/4-isopropyltoluene			/		/
• 1,3-, 1,4-, and 1,2-dichlorobenzene			/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes			NA		NA
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene			/		/
• 2-, and 1-methylnaphthalene			/		/
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?			/		/
6. Has the RT been updated to the method?			/		/
Analyst/date	Suphanna Kh. 02/08/2019		2nd Level Reviewer/date [Signature] 02/08/19		
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]			/	✓ on screen 2/8/19	/
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]			/		/
9. Can dilution history verified? [Mgmt Report]			/		/
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:			/	<input type="checkbox"/> Method Blank - Report, ND (NCM# _____) NCM 16325 <input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)	/
11. All runs - peaks ID'd correctly and false positives removed?			/		/
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?			/		/
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]			/	<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____) <input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____) <input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____) <input type="checkbox"/> (4) Surrogate -RX concur. Report both (NCM# _____) <input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)	/
Sample Reason Sample Reason					
14. Samples outside calibration range scheduled for dilution?			NA	<input type="checkbox"/> ICAL - Range Exceeded, Minimum Dilution	NA
Chrom Review			1st	If No, why is data reportable?	2nd
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason: Sample Reason Sample Reason			/	<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____) <input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____) <input type="checkbox"/> (3) Issues with initial collection volume; see DRC.	/
16. RIC inspected for proper integration for TPH?			/		/
17. Obvious non-TPH peaks excluded?			/		/
18. Individual TPH peak area < octane high point area?			/		/

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Page 2 of 2

TALS Review	1 st	If No. why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	/	<input checked="" type="checkbox"/> Failed TO-14A, but passes TO-15 (NCM# 16324)	/														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input checked="" type="checkbox"/> CCV - %D - LCS criteria met (NCM# 16326) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM#)	MS														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM#) <input type="checkbox"/> Holding Time - Receipt (NCM#)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random; Report (NCM#) <input type="checkbox"/> LCS/LCSD - %R High (NCM#)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr> <td>>90</td> <td>5</td> </tr> <tr> <td>71 - 90</td> <td>4</td> </tr> <tr> <td>51 - 70</td> <td>3</td> </tr> <tr> <td>31 - 50</td> <td>2</td> </tr> <tr> <td>11 - 30</td> <td>1</td> </tr> <tr> <td><11</td> <td>0</td> </tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	<11	0			/
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
<11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	/		/														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		MS														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/		/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	/	500 mL blank ID: 140-27430/10 200 mL blank ID: 140-27430/11	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	/		/														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?		Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	-na-		/														
40. Checklist & Entech report scanned, attached & assigned properly?	-na-		/														

Analyst: Suphanam Kh.	Date: 02/08/2019	2nd Level Reviewer:	Date: 02-11-19
Comments: CE line 17-20, 25 for Acetone		Comments:	
Example Calculation: 140-14168-1 Butane			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
10,07806 x $\frac{500}{100}$ x 1.0 = 50.39			

MS017r45, 7/05/2018

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14199-1

SDG No.: _____

Batch Number: 27430 Batch Start Date: 02/07/19 10:30 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00078	40MXISSURP 00003
BFB 140-27430/5		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-27430/6		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL
MB 140-27430/10		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14199-A-1	BLDG-A-INFLUENT	TO 15 LL	T	20 mL	500 mL	1	1		40 mL
140-14199-A-2	BLDG-A-MIDGAC	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14199-A-3	BLDG-A-EFFLUENT	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-27430/1006		TO 15 LL		500 mL	500 mL	1	1	100 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-27430/5		TO 15 LL		40 mL					
CCVIS 140-27430/6		TO 15 LL							
MB 140-27430/10		TO 15 LL							
140-14199-A-1	BLDG-A-INFLUENT	TO 15 LL	T						
140-14199-A-2	BLDG-A-MIDGAC	TO 15 LL	T						
140-14199-A-3	BLDG-A-EFFLUENT	TO 15 LL	T						
LCS 140-27430/1006		TO 15 LL							

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 11720 Lab Sample ID: 140-13293-1
 Matrix: Air Lab File ID: W13293BK1.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 06:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 11720 Lab Sample ID: 140-13293-1
 Matrix: Air Lab File ID: W13293BK1.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 06:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 11720 Lab Sample ID: 140-13293-1
 Matrix: Air Lab File ID: W13293BK1.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 06:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\W13293BK1.D
 Lims ID: 140-13293-A-1
 Client ID: 11720
 Sample Type: Client
 Inject. Date: 20-Nov-2018 06:38:30 ALS Bottle#: 24 Worklist Smp#: 27
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info:
 Misc. Info.: 11720
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:57:18 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: tajh Date: 20-Nov-2018 15:23:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.270	9.274	-0.004	96	275521	4.00	
* 2 1,4-Difluorobenzene	114	11.443	11.449	-0.006	97	1696245	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.118	16.123	-0.005	92	1516149	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.741	17.747	-0.006	81	1209993	3.92	
23 Acetone	58	5.694	5.667	0.027	90	23242	0.6274	
31 Methylene Chloride	84	6.622	6.625	-0.003	97	14389	0.1290	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\W13293BK1.D

Injection Date: 20-Nov-2018 06:38:30

Instrument ID: MG

Operator ID: 007126

Lims ID: 140-13293-A-1

Lab Sample ID: 140-13293-1

Worklist Smp#: 27

Client ID: 11720

Purge Vol: 500.000 mL

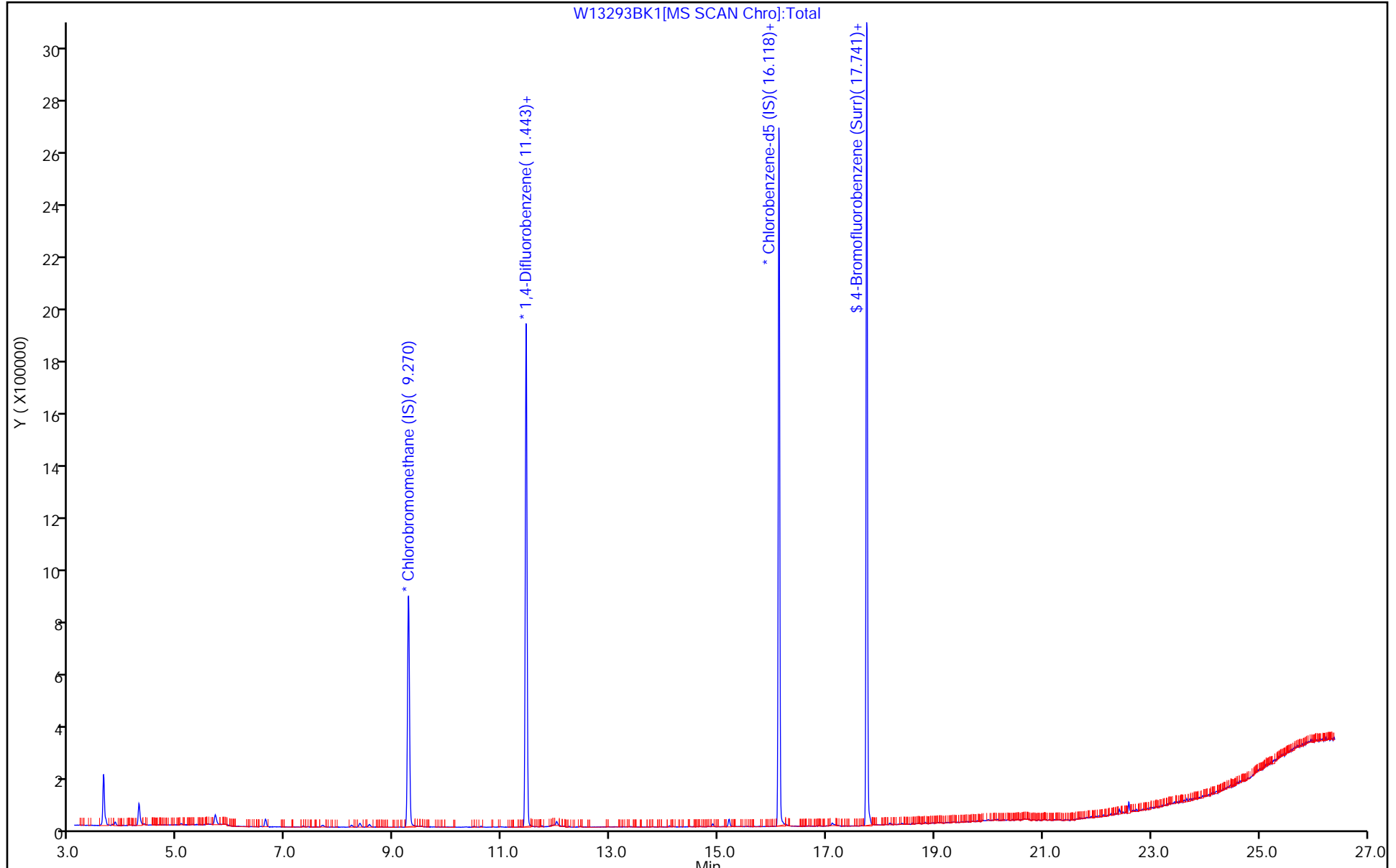
Dil. Factor: 1.0000

ALS Bottle#: 24

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 10603 Lab Sample ID: 140-13293-2
 Matrix: Air Lab File ID: W13293BK2.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 02:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 10603 Lab Sample ID: 140-13293-2
 Matrix: Air Lab File ID: W13293BK2.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 02:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 10603 Lab Sample ID: 140-13293-2
 Matrix: Air Lab File ID: W13293BK2.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 02:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\W13293BK2.D
 Lims ID: 140-13293-A-2
 Client ID: 10603
 Sample Type: Client
 Inject. Date: 20-Nov-2018 02:18:30 ALS Bottle#: 18 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info:
 Misc. Info.: 10603
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:57:18 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: tajh Date: 20-Nov-2018 15:21:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.264	9.274	-0.010	95	264891	4.00	
* 2 1,4-Difluorobenzene	114	11.443	11.449	-0.006	97	1553872	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.118	16.123	-0.005	92	1527110	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.741	17.747	-0.006	81	1208393	3.89	
9 Chloromethane	52	4.093	4.095	-0.002	96	2421	0.0655	
31 Methylene Chloride	84	6.622	6.625	-0.003	98	13866	0.1293	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\W13293BK2.D

Injection Date: 20-Nov-2018 02:18:30

Instrument ID: MG

Operator ID: 007126

Lims ID: 140-13293-A-2

Lab Sample ID: 140-13293-2

Worklist Smp#: 21

Client ID: 10603

Purge Vol: 500.000 mL

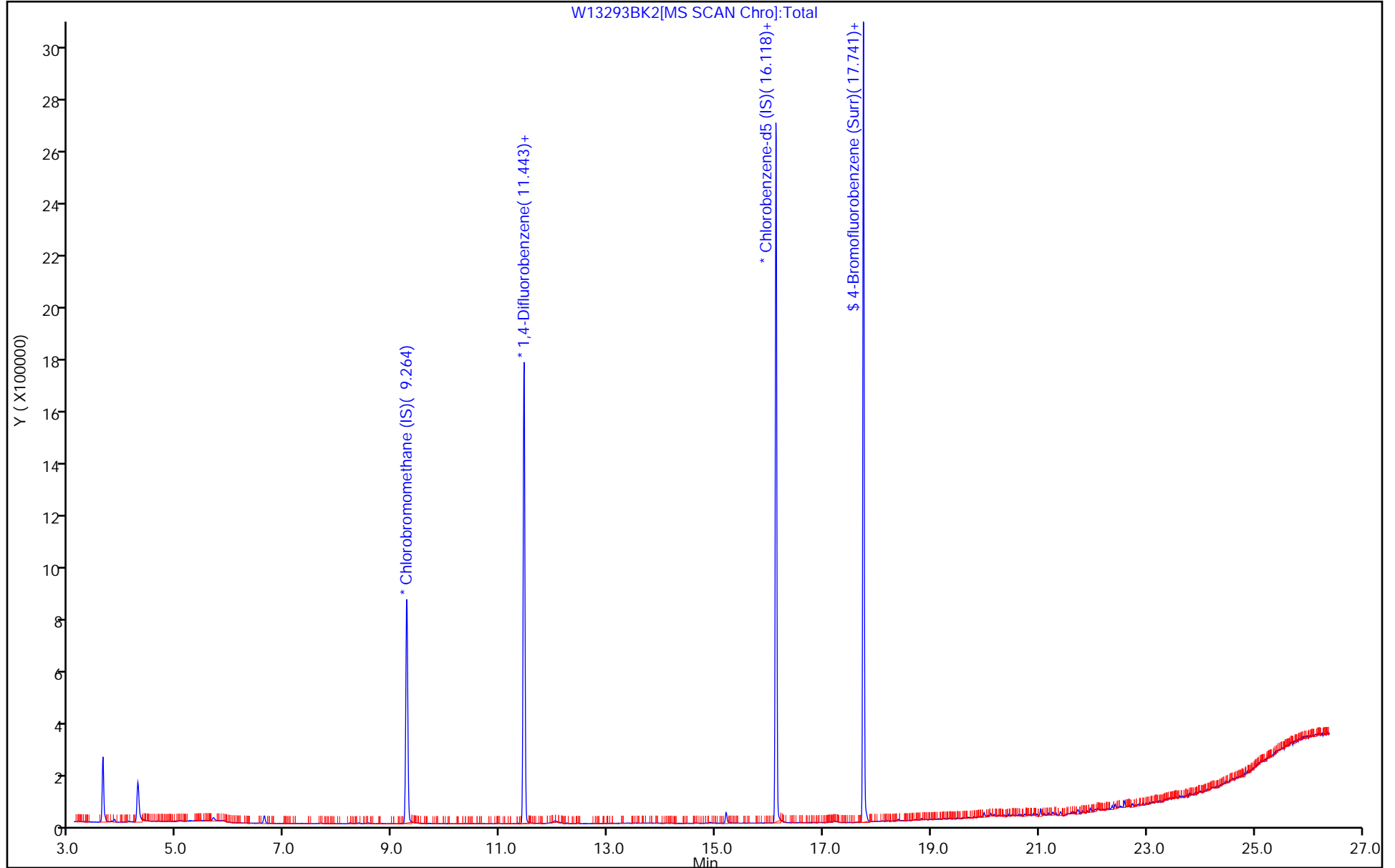
Dil. Factor: 1.0000

ALS Bottle#: 18

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 11812 Lab Sample ID: 140-13293-3
 Matrix: Air Lab File ID: W13293BK3.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 03:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 11812 Lab Sample ID: 140-13293-3
 Matrix: Air Lab File ID: W13293BK3.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 03:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 11812 Lab Sample ID: 140-13293-3
 Matrix: Air Lab File ID: W13293BK3.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 03:01
 Soil Aliquot Vol.: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\W13293BK3.D
 Lims ID: 140-13293-A-3
 Client ID: 11812
 Sample Type: Client
 Inject. Date: 20-Nov-2018 03:01:30 ALS Bottle#: 19 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info:
 Misc. Info.: 11812
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:57:18 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: tajh Date: 20-Nov-2018 15:21:53

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.264	9.274	-0.010	96	268700	4.00	
* 2 1,4-Difluorobenzene	114	11.443	11.449	-0.006	97	1641791	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.118	16.123	-0.005	92	1542229	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.741	17.747	-0.006	81	1241804	3.96	
23 Acetone	58	5.689	5.667	0.022	94	20071	0.5556	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\W13293BK3.D

Injection Date: 20-Nov-2018 03:01:30

Instrument ID: MG

Operator ID: 007126

Lims ID: 140-13293-A-3

Lab Sample ID: 140-13293-3

Worklist Smp#: 22

Client ID: 11812

Purge Vol: 500.000 mL

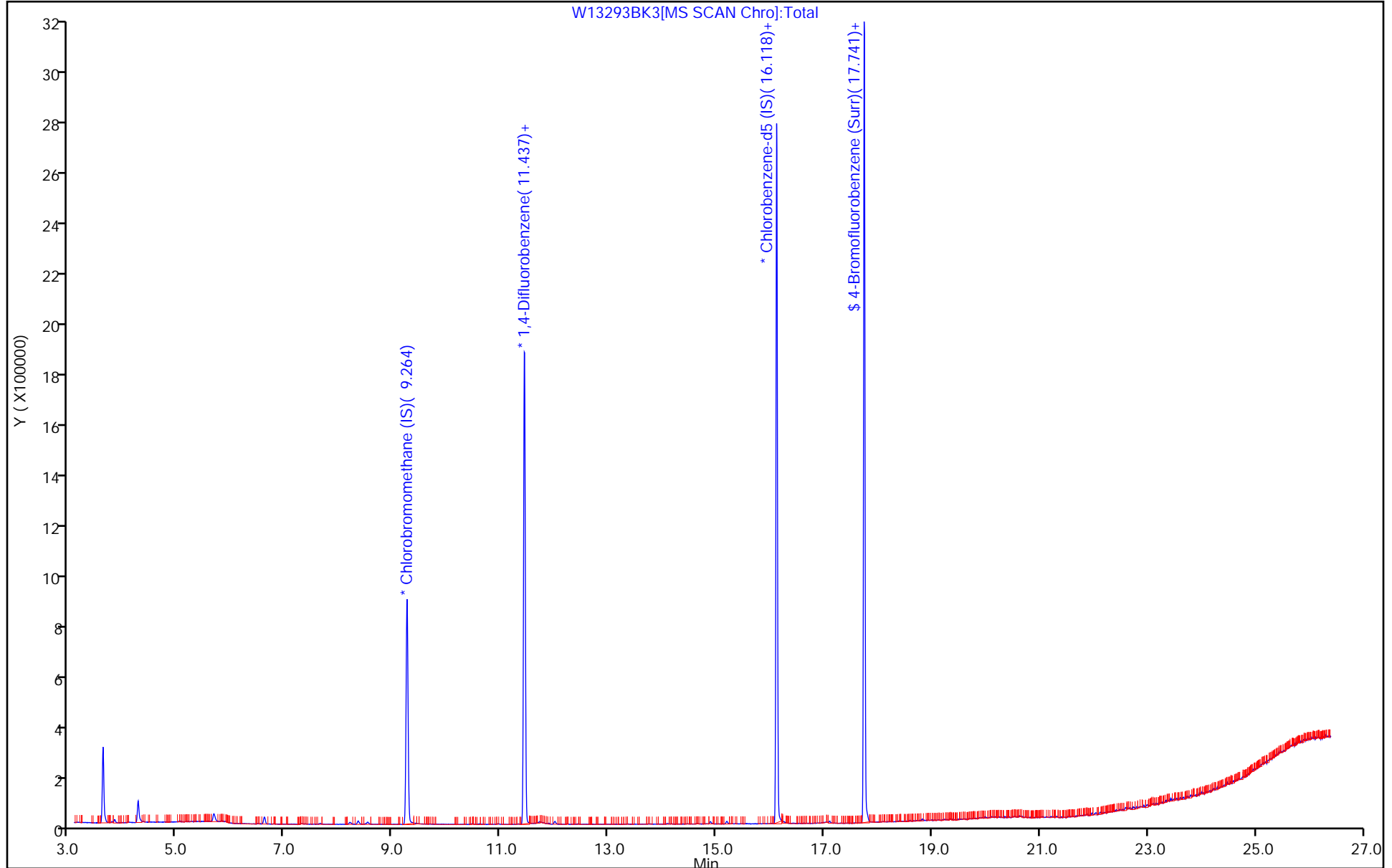
Dil. Factor: 1.0000

ALS Bottle#: 19

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 11885 Lab Sample ID: 140-13293-4
 Matrix: Air Lab File ID: W13293BK4.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 03:44
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 11885 Lab Sample ID: 140-13293-4
 Matrix: Air Lab File ID: W13293BK4.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 03:44
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 11885 Lab Sample ID: 140-13293-4
 Matrix: Air Lab File ID: W13293BK4.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 03:44
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\W13293BK4.D
 Lims ID: 140-13293-A-4
 Client ID: 11885
 Sample Type: Client
 Inject. Date: 20-Nov-2018 03:44:30 ALS Bottle#: 20 Worklist Smp#: 23
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info:
 Misc. Info.: 11885
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:57:18 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.264	9.274	-0.010	95	267011	4.00	
* 2 1,4-Difluorobenzene	114	11.443	11.449	-0.006	97	1624611	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.118	16.123	-0.005	92	1520529	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.741	17.747	-0.006	81	1224591	3.96	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\W13293BK4.D

Injection Date: 20-Nov-2018 03:44:30

Instrument ID: MG

Operator ID: 007126

Lims ID: 140-13293-A-4

Lab Sample ID: 140-13293-4

Worklist Smp#: 23

Client ID: 11885

Purge Vol: 500.000 mL

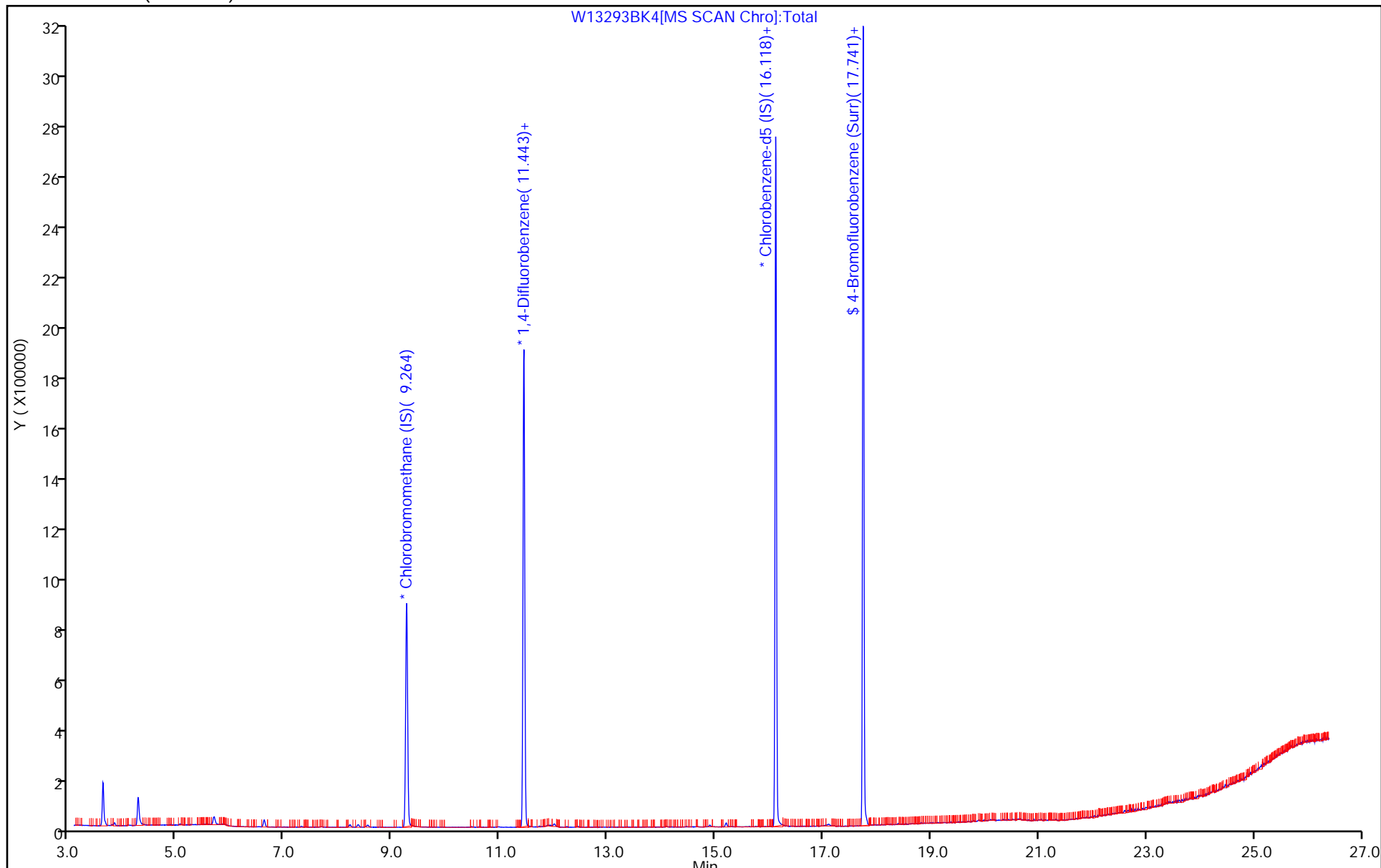
Dil. Factor: 1.0000

ALS Bottle#: 20

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 11801 Lab Sample ID: 140-13293-5
 Matrix: Air Lab File ID: W13293BK5.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 04:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 11801 Lab Sample ID: 140-13293-5
 Matrix: Air Lab File ID: W13293BK5.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 04:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 11801 Lab Sample ID: 140-13293-5
 Matrix: Air Lab File ID: W13293BK5.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 04:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\W13293BK5.D
 Lims ID: 140-13293-A-5
 Client ID: 11801
 Sample Type: Client
 Inject. Date: 20-Nov-2018 04:27:30 ALS Bottle#: 21 Worklist Smp#: 24
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info:
 Misc. Info.: 11801
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:57:18 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

First Level Reviewer: tajh Date: 20-Nov-2018 15:22:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.264	9.274	-0.010	95	262387	4.00	
* 2 1,4-Difluorobenzene	114	11.443	11.449	-0.006	97	1548818	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.118	16.123	-0.005	92	1485751	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.741	17.747	-0.006	81	1213247	4.01	
21 Acrolein	56	5.533	5.532	0.001	89	1957	0.1008	
23 Acetone	58	5.689	5.667	0.022	95	26348	0.7469	
25 Isopropyl alcohol	45	5.829	5.794	0.035	96	4203	0.0404	
30 2-Methyl-2-propanol	59	6.514	6.458	0.056	94	3296	0.0215	
31 Methylene Chloride	84	6.617	6.625	-0.008	97	13832	0.1302	
39 2-Butanone (MEK)	72	8.536	8.515	0.021	99	3490	0.0824	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\W13293BK5.D

Injection Date: 20-Nov-2018 04:27:30

Instrument ID: MG

Operator ID: 007126

Lims ID: 140-13293-A-5

Lab Sample ID: 140-13293-5

Worklist Smp#: 24

Client ID: 11801

Purge Vol: 500.000 mL

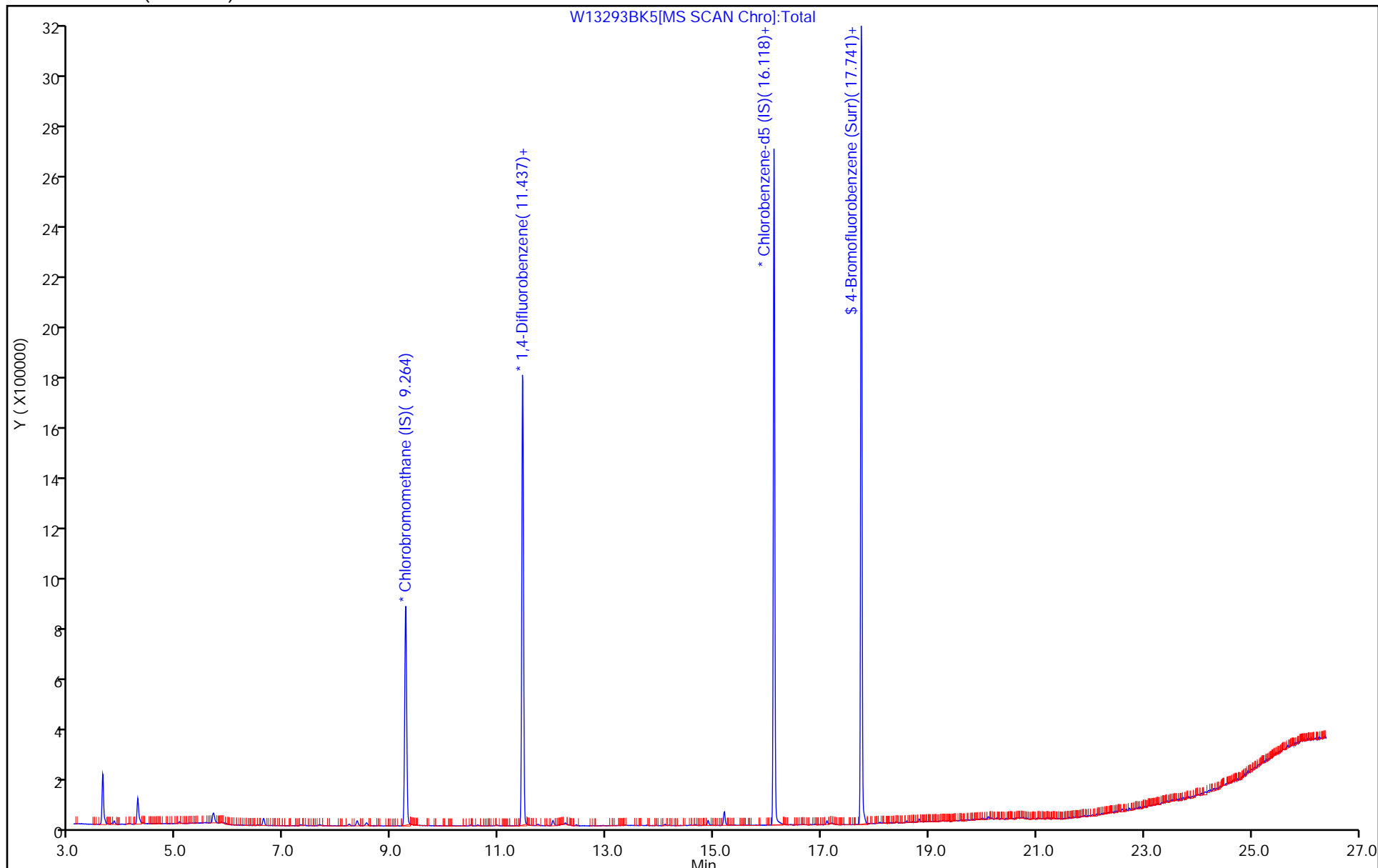
Dil. Factor: 1.0000

ALS Bottle#: 21

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

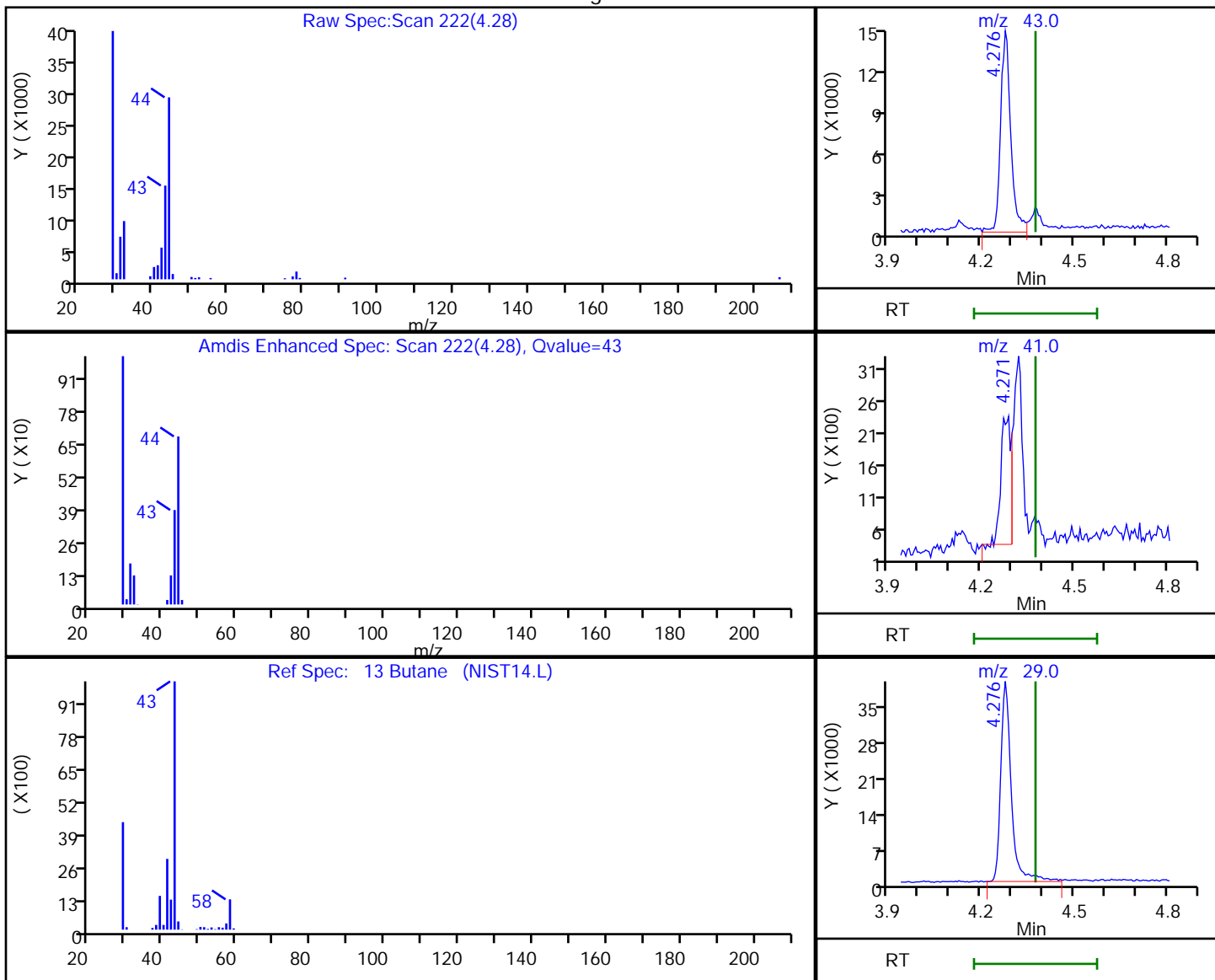


TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\W13293BK5.D
 Injection Date: 20-Nov-2018 04:27:30 Instrument ID: MG
 Lims ID: 140-13293-A-5 Lab Sample ID: 140-13293-5
 Client ID: 11801
 Operator ID: 007126 ALS Bottle#: 21 Worklist Smp#: 24
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
4.28	43.00	34058	0.172092
4.27	41.00	4578	
4.28	29.00	92040	

Reviewer: tajh, 20-Nov-2018 15:22:19

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 09888 Lab Sample ID: 140-13293-6
 Matrix: Air Lab File ID: W13293BK6.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 05:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 09888 Lab Sample ID: 140-13293-6
 Matrix: Air Lab File ID: W13293BK6.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 05:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Client Sample ID: 09888 Lab Sample ID: 140-13293-6
 Matrix: Air Lab File ID: W13293BK6.D
 Analysis Method: TO-15 Date Collected: 11/09/2018 11:25
 Sample wt/vol: 200 (mL) Date Analyzed: 11/20/2018 05:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 25539 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\W13293BK6.D
 Lims ID: 140-13293-A-6
 Client ID: 09888
 Sample Type: Client
 Inject. Date: 20-Nov-2018 05:11:30 ALS Bottle#: 22 Worklist Smp#: 25
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info:
 Misc. Info.: 09888
 Operator ID: 007126 Instrument ID: MG
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 20-Nov-2018 16:57:18 Calib Date: 19-Nov-2018 21:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\GK19IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0308

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.264	9.274	-0.010	95	267896	4.00	
* 2 1,4-Difluorobenzene	114	11.443	11.449	-0.006	97	1699268	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.118	16.123	-0.005	92	1582045	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.741	17.747	-0.006	81	1253118	3.89	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MG\20181119-10044.b\W13293BK6.D

Injection Date: 20-Nov-2018 05:11:30

Instrument ID: MG

Operator ID: 007126

Lims ID: 140-13293-A-6

Lab Sample ID: 140-13293-6

Worklist Smp#: 25

Client ID: 09888

Purge Vol: 500.000 mL

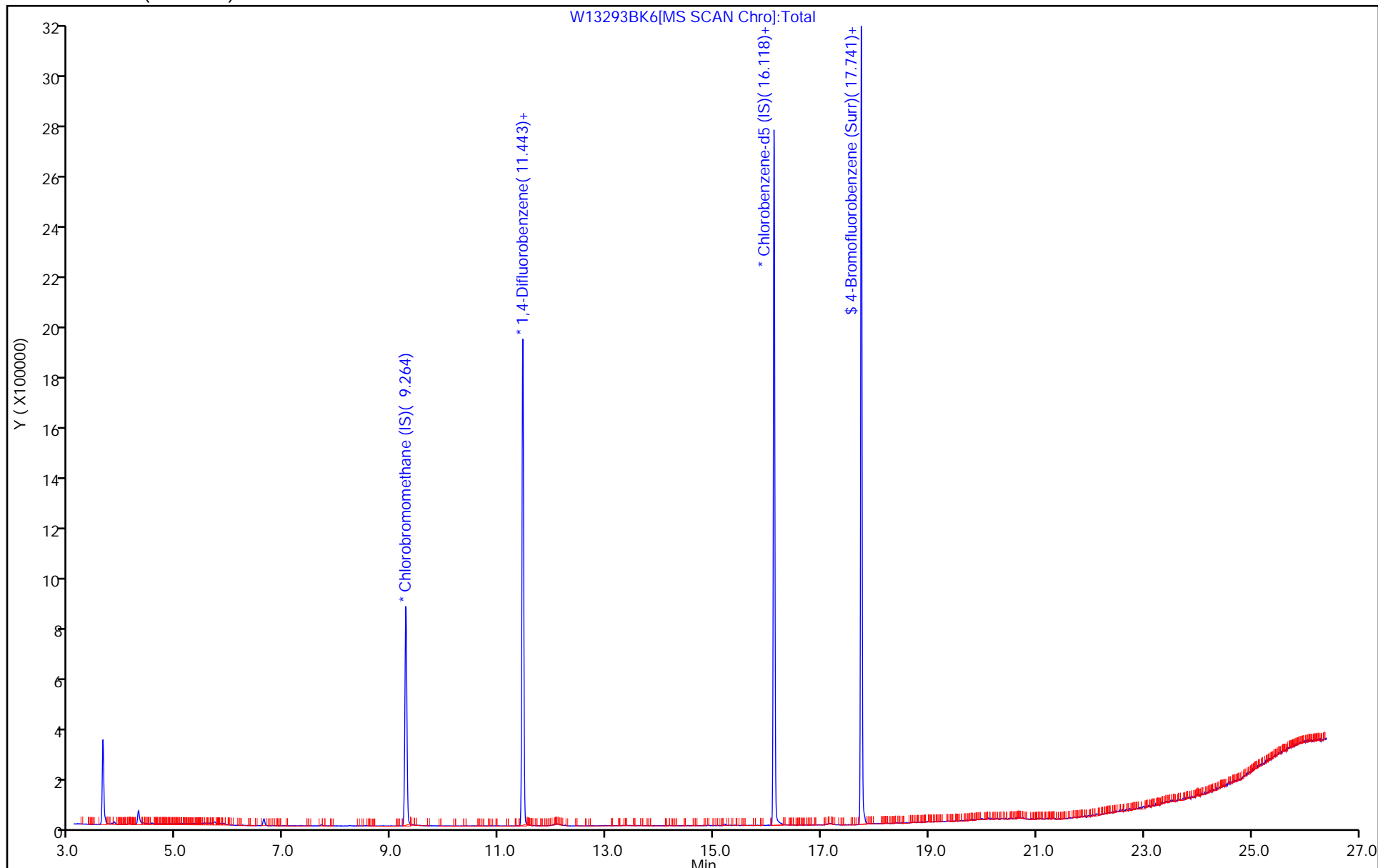
Dil. Factor: 1.0000

ALS Bottle#: 22

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11666 Lab Sample ID: 140-13934-1
 Matrix: Air Lab File ID: 13934BK01.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 16:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11666 Lab Sample ID: 140-13934-1
 Matrix: Air Lab File ID: 13934BK01.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200(mL) Date Analyzed: 01/15/2019 16:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11666 Lab Sample ID: 140-13934-1
 Matrix: Air Lab File ID: 13934BK01.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 16:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK01.D
 Lims ID: 140-13934-A-1
 Client ID: 11666
 Sample Type: Client
 Inject. Date: 15-Jan-2019 16:40:30 ALS Bottle#: 5 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010499-010
 Misc. Info.: 11666
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 16-Jan-2019 14:14:57 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 16-Jan-2019 14:14:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.411	7.412	-0.001	72	214690	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.482	0.000	95	1250292	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.529	14.530	-0.001	91	1079738	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.250	0.000	89	927602	4.04	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK01.D

Injection Date: 15-Jan-2019 16:40:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13934-A-1

Lab Sample ID: 140-13934-1

Worklist Smp#: 10

Client ID: 11666

Purge Vol: 500.000 mL

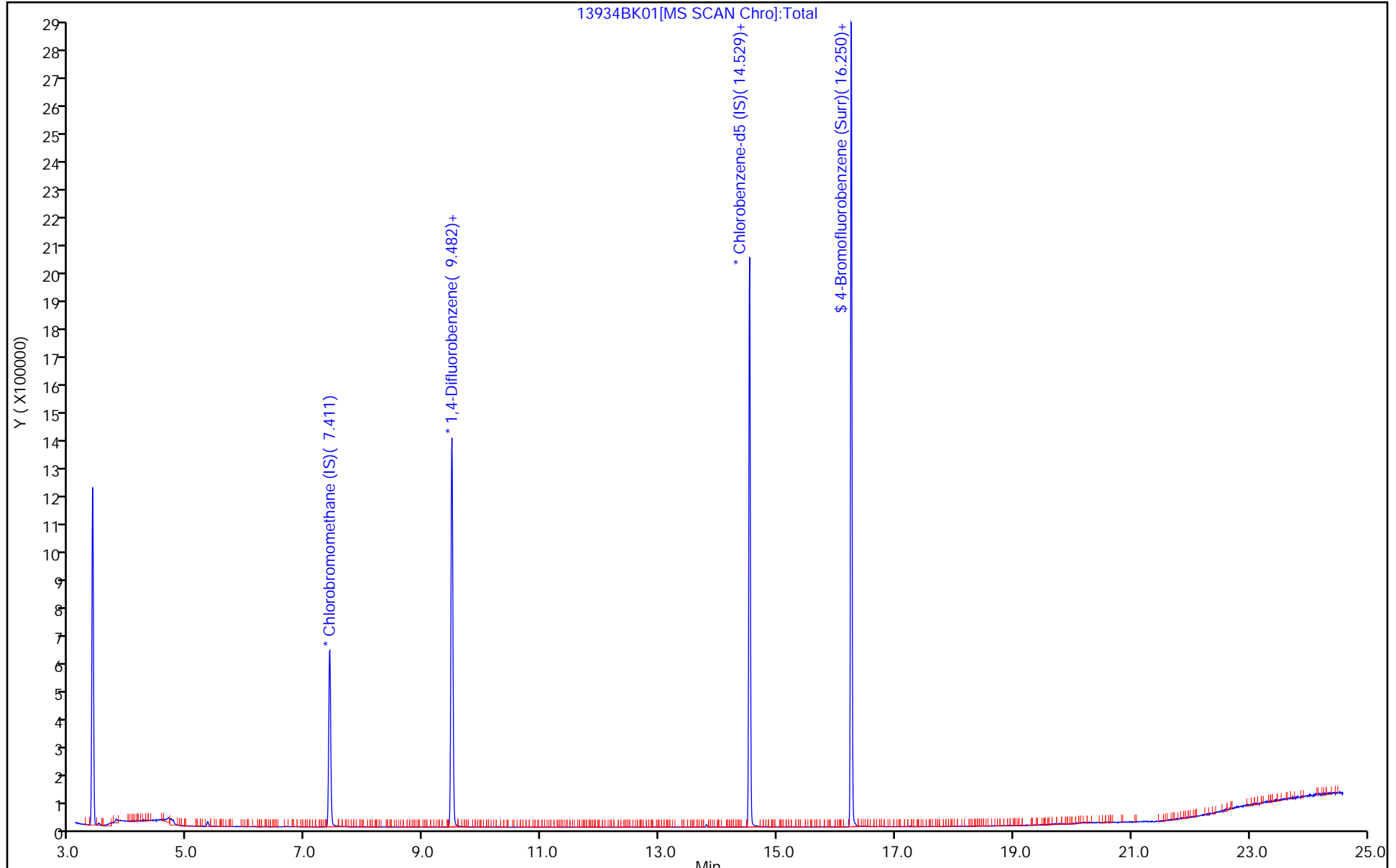
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

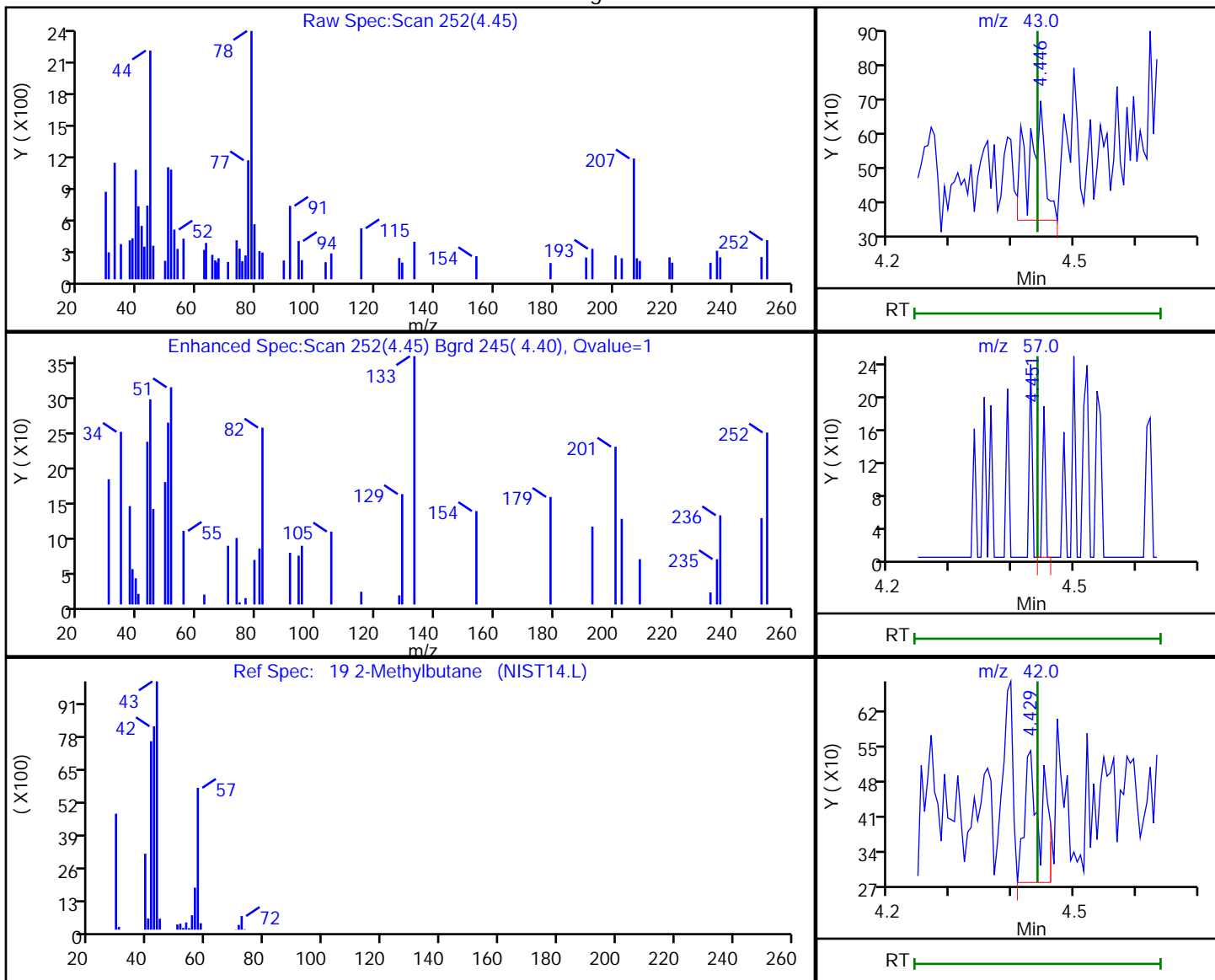


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK01.D
Injection Date: 15-Jan-2019 16:40:30 Instrument ID: MR
Lims ID: 140-13934-A-1 Lab Sample ID: 140-13934-1
Client ID: 11666
Operator ID: HMT ALS Bottle#: 5 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.45	43.00	636	0.014814
4.45	57.00	59	
4.43	42.00	492	

Reviewer: khachitpongpanits, 16-Jan-2019 14:14:10

Audit Action: Marked Compound Undetected

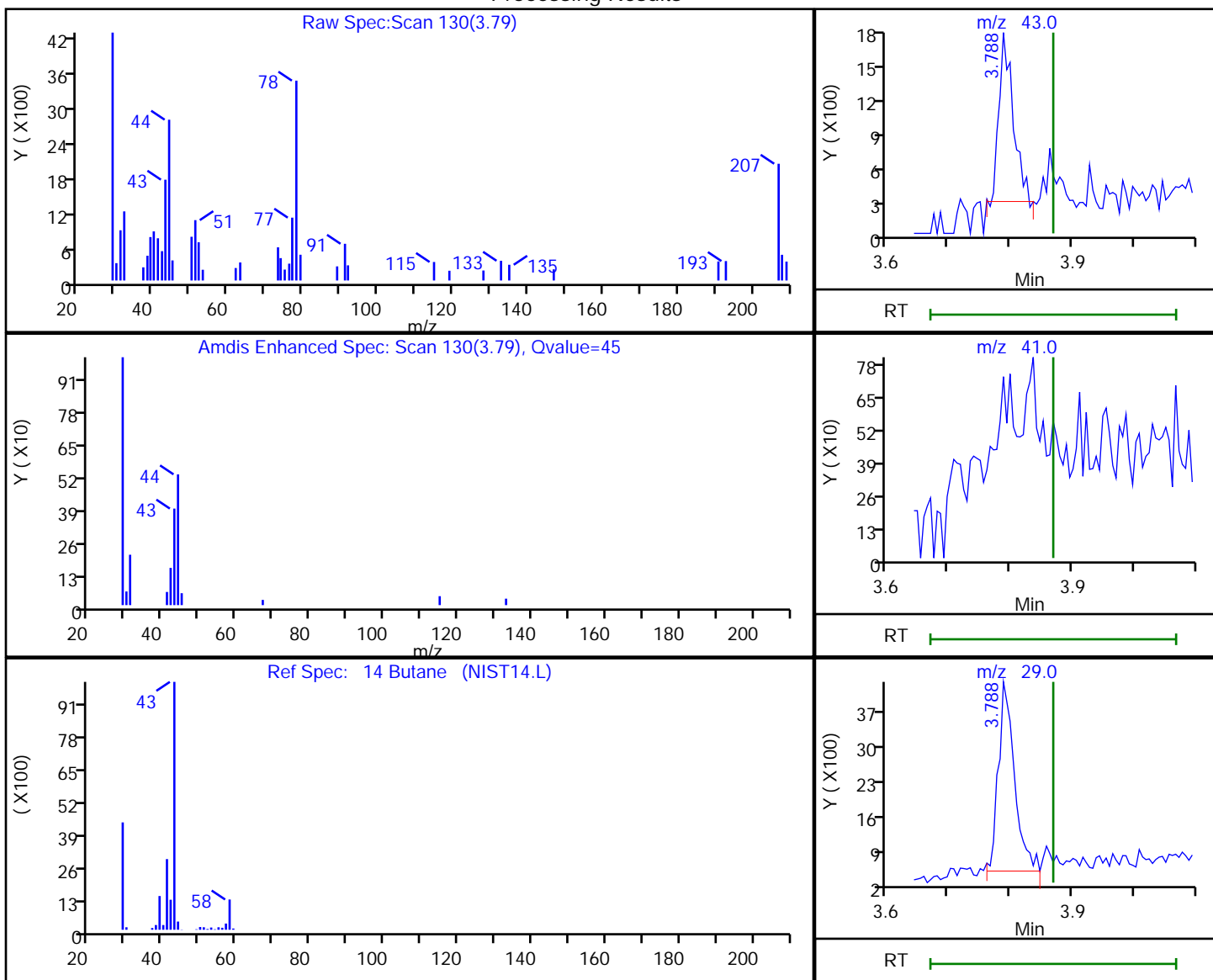
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK01.D
 Injection Date: 15-Jan-2019 16:40:30 Instrument ID: MR
 Lims ID: 140-13934-A-1 Lab Sample ID: 140-13934-1
 Client ID: 11666
 Operator ID: HMT ALS Bottle#: 5 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.79	43.00	2316	0.038115
3.87	41.00	0	
3.79	29.00	7001	

Reviewer: khachitpongpanits, 16-Jan-2019 14:14:08

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11610 Lab Sample ID: 140-13934-2
 Matrix: Air Lab File ID: 13934BK02.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200(mL) Date Analyzed: 01/15/2019 17:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11610 Lab Sample ID: 140-13934-2
 Matrix: Air Lab File ID: 13934BK02.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 17:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11610 Lab Sample ID: 140-13934-2
 Matrix: Air Lab File ID: 13934BK02.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 17:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK02.D
 Lims ID: 140-13934-A-2
 Client ID: 11610
 Sample Type: Client
 Inject. Date: 15-Jan-2019 17:30:30 ALS Bottle#: 6 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010499-011
 Misc. Info.: 11610
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 16-Jan-2019 14:20:57 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 16-Jan-2019 14:20:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.412	7.412	0.000	72	205831	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.482	0.000	95	1211031	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.529	14.530	-0.001	91	1059570	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.250	0.000	88	908467	4.03	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK02.D

Injection Date: 15-Jan-2019 17:30:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13934-A-2

Lab Sample ID: 140-13934-2

Worklist Smp#: 11

Client ID: 11610

Purge Vol: 500.000 mL

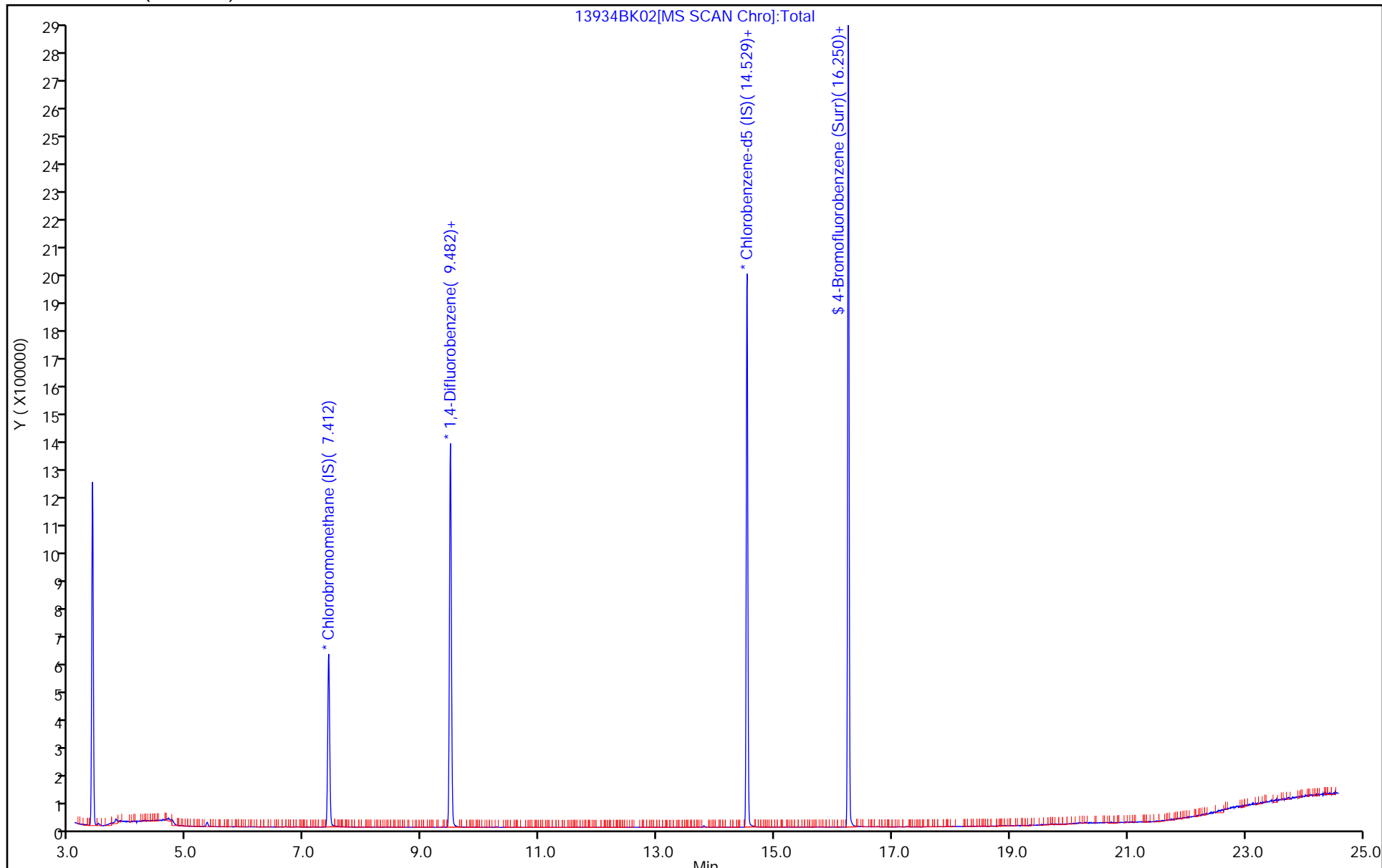
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

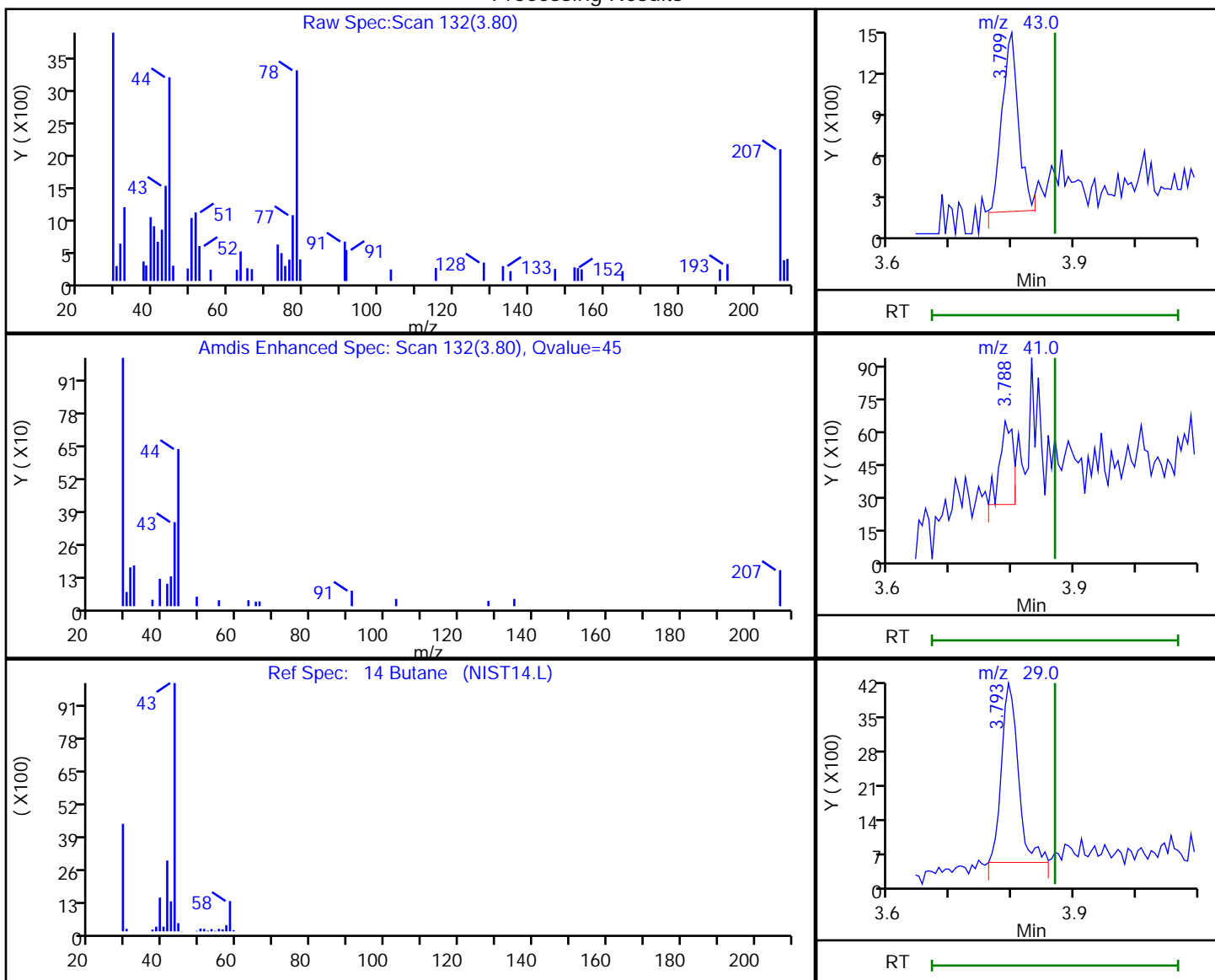


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK02.D
 Injection Date: 15-Jan-2019 17:30:30 Instrument ID: MR
 Lims ID: 140-13934-A-2 Lab Sample ID: 140-13934-2
 Client ID: 11610
 Operator ID: HMT ALS Bottle#: 6 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.80	43.00	2406	0.041300
3.79	41.00	580	
3.79	29.00	6936	

Reviewer: khachitpongpanits, 16-Jan-2019 14:20:30

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 09787 Lab Sample ID: 140-13934-3
 Matrix: Air Lab File ID: 13934BK03.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 18:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 09787 Lab Sample ID: 140-13934-3
 Matrix: Air Lab File ID: 13934BK03.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 18:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 09787 Lab Sample ID: 140-13934-3
 Matrix: Air Lab File ID: 13934BK03.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 18:20
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK03.D
 Lims ID: 140-13934-A-3
 Client ID: 09787
 Sample Type: Client
 Inject. Date: 15-Jan-2019 18:20:30 ALS Bottle#: 7 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010499-012
 Misc. Info.: 09787
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 16-Jan-2019 14:25:30 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 16-Jan-2019 14:21:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.412	7.412	0.000	72	208726	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.482	0.000	95	1223398	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.530	-0.006	90	1073408	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.250	0.000	88	923734	4.05	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK03.D

Injection Date: 15-Jan-2019 18:20:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13934-A-3

Lab Sample ID: 140-13934-3

Worklist Smp#: 12

Client ID: 09787

Purge Vol: 500.000 mL

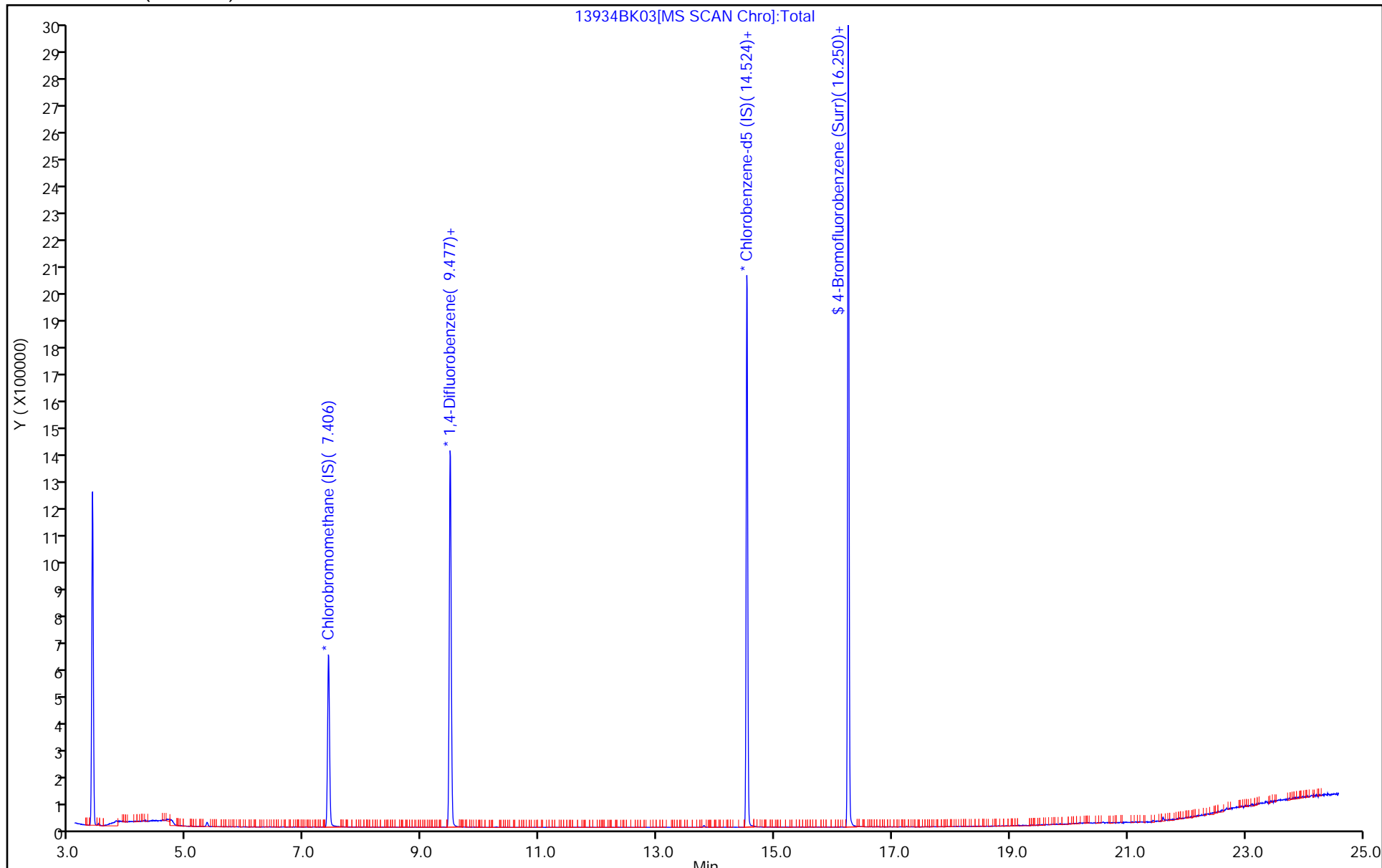
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11718 Lab Sample ID: 140-13934-4
 Matrix: Air Lab File ID: 13934BK04.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200(mL) Date Analyzed: 01/15/2019 19:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11718 Lab Sample ID: 140-13934-4
 Matrix: Air Lab File ID: 13934BK04.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 19:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11718 Lab Sample ID: 140-13934-4
 Matrix: Air Lab File ID: 13934BK04.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 19:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK04.D
 Lims ID: 140-13934-A-4
 Client ID: 11718
 Sample Type: Client
 Inject. Date: 15-Jan-2019 19:09:30 ALS Bottle#: 8 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010499-013
 Misc. Info.: 11718
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 16-Jan-2019 00:26:28 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 16-Jan-2019 14:22:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.412	7.412	0.000	72	206322	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.482	0.000	95	1204013	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.530	14.530	0.000	91	1054084	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.249	0.000	88	896064	4.00	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK04.D

Injection Date: 15-Jan-2019 19:09:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13934-A-4

Lab Sample ID: 140-13934-4

Worklist Smp#: 13

Client ID: 11718

Purge Vol: 500.000 mL

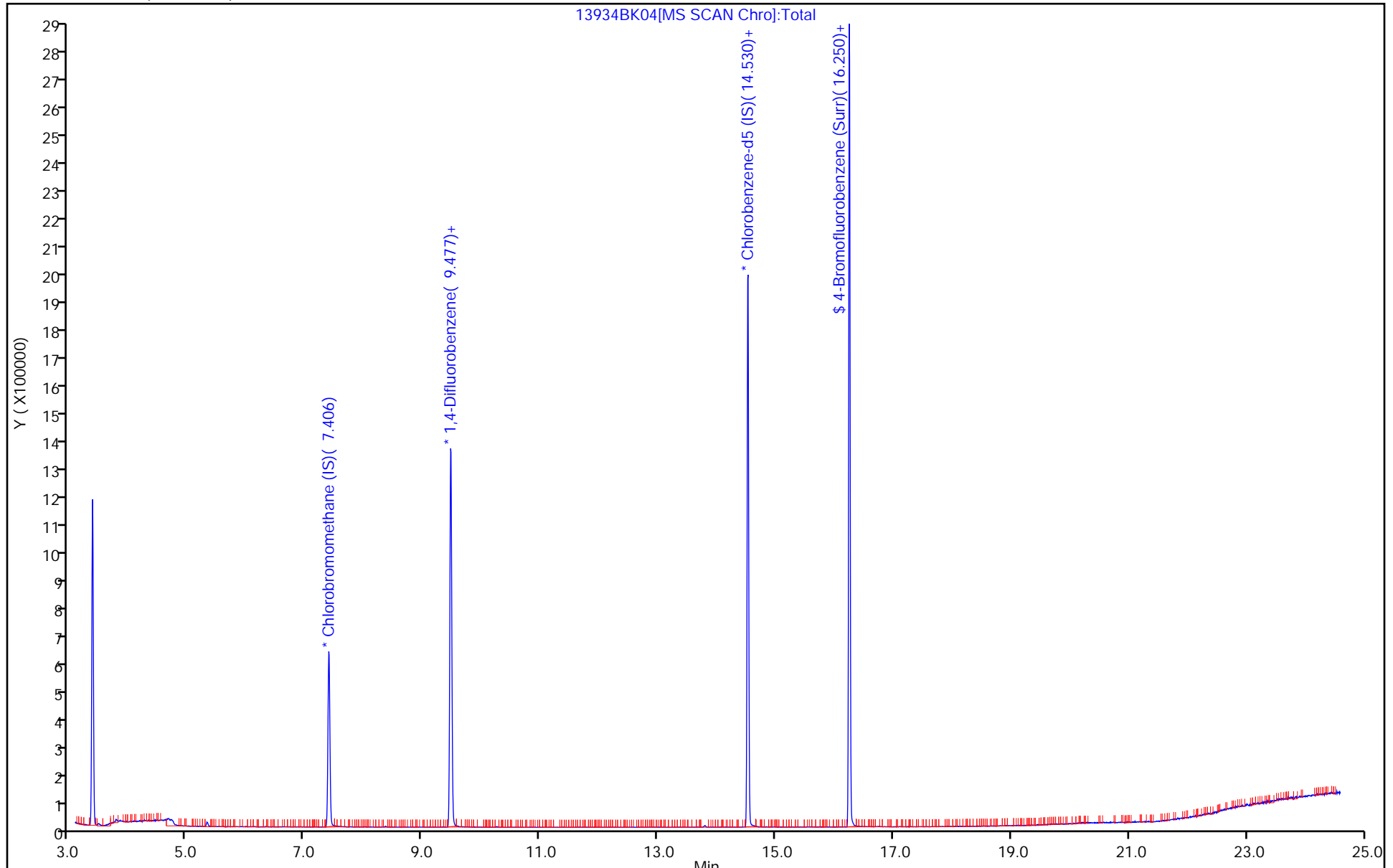
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



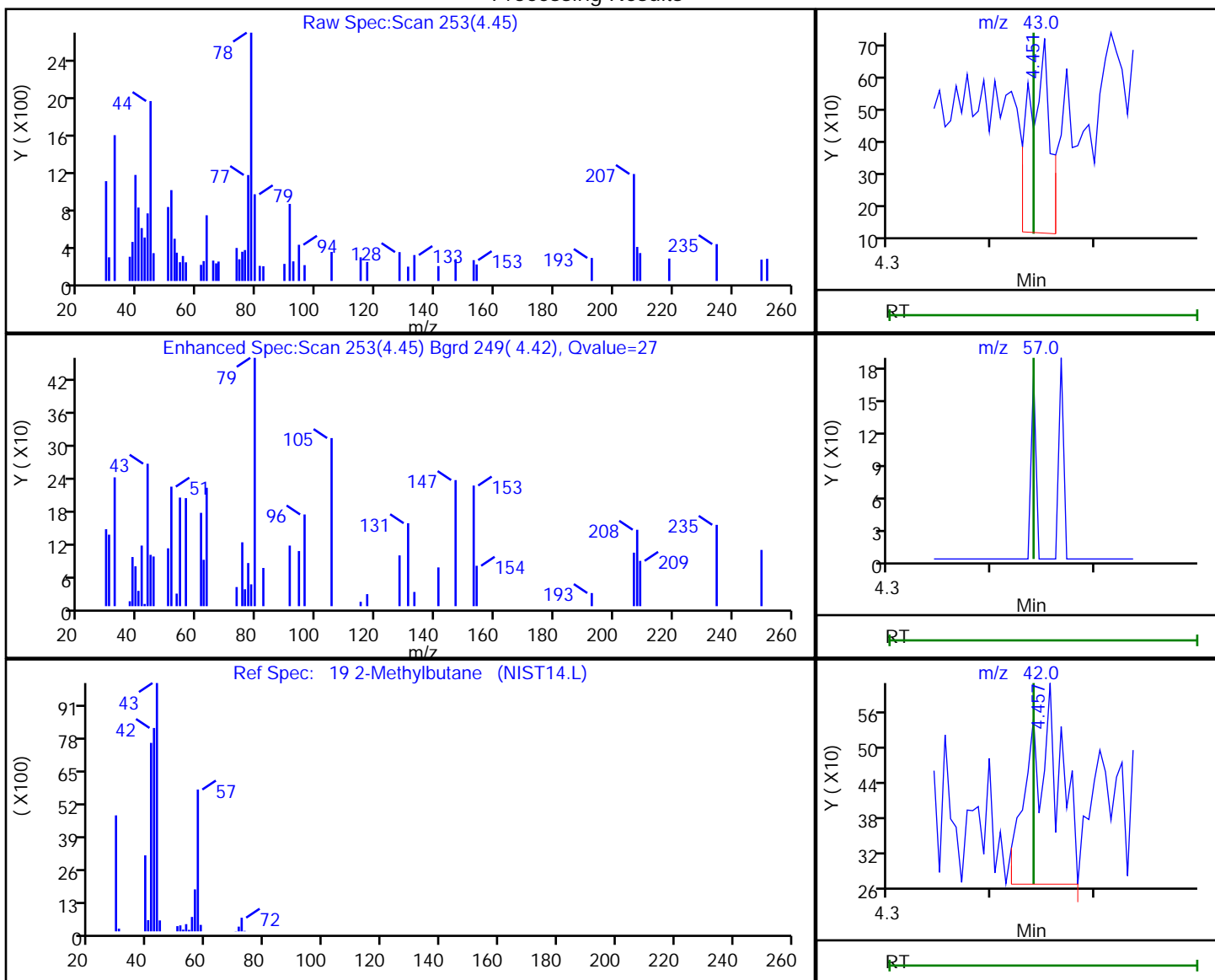
13934BK04[MS SCAN Chro]:Total

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK04.D
 Injection Date: 15-Jan-2019 19:09:30 Instrument ID: MR
 Lims ID: 140-13934-A-4 Lab Sample ID: 140-13934-4
 Client ID: 11718
 Operator ID: HMT ALS Bottle#: 8 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.45	43.00	833	0.020189
4.44	57.00	0	
4.46	42.00	682	

Reviewer: khachitpongpanits, 16-Jan-2019 14:21:55

Audit Action: Marked Compound Undetected

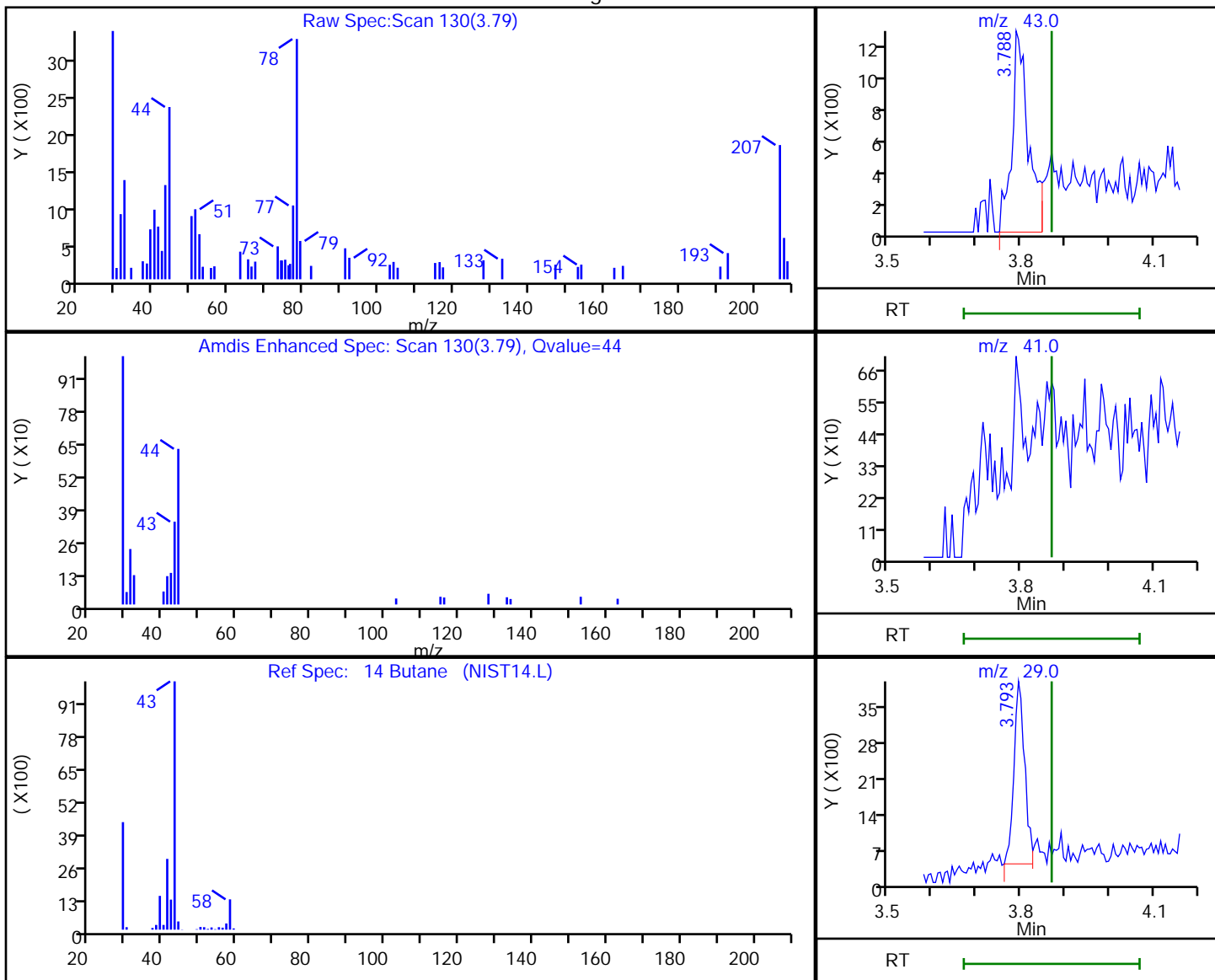
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK04.D
 Injection Date: 15-Jan-2019 19:09:30 Instrument ID: MR
 Lims ID: 140-13934-A-4 Lab Sample ID: 140-13934-4
 Client ID: 11718
 Operator ID: HMT ALS Bottle#: 8 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.79	43.00	3315	0.056769
3.87	41.00	0	
3.79	29.00	6164	

Reviewer: khachitpongpanits, 16-Jan-2019 14:22:00

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 09578 Lab Sample ID: 140-13934-8
 Matrix: Air Lab File ID: 13934BK08.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 21:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 09578 Lab Sample ID: 140-13934-8
 Matrix: Air Lab File ID: 13934BK08.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 21:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 09578 Lab Sample ID: 140-13934-8
 Matrix: Air Lab File ID: 13934BK08.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 21:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK08.D
 Lims ID: 140-13934-A-8
 Client ID: 09578
 Sample Type: Client
 Inject. Date: 15-Jan-2019 21:38:30 ALS Bottle#: 11 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010499-016
 Misc. Info.: 09578
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 16-Jan-2019 00:26:28 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 16-Jan-2019 14:23:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.412	7.412	0.000	72	204502	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.482	0.000	95	1188962	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.530	14.530	0.000	91	1038345	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.249	0.000	88	891346	4.04	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK08.D

Injection Date: 15-Jan-2019 21:38:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13934-A-8

Lab Sample ID: 140-13934-8

Worklist Smp#: 16

Client ID: 09578

Purge Vol: 500.000 mL

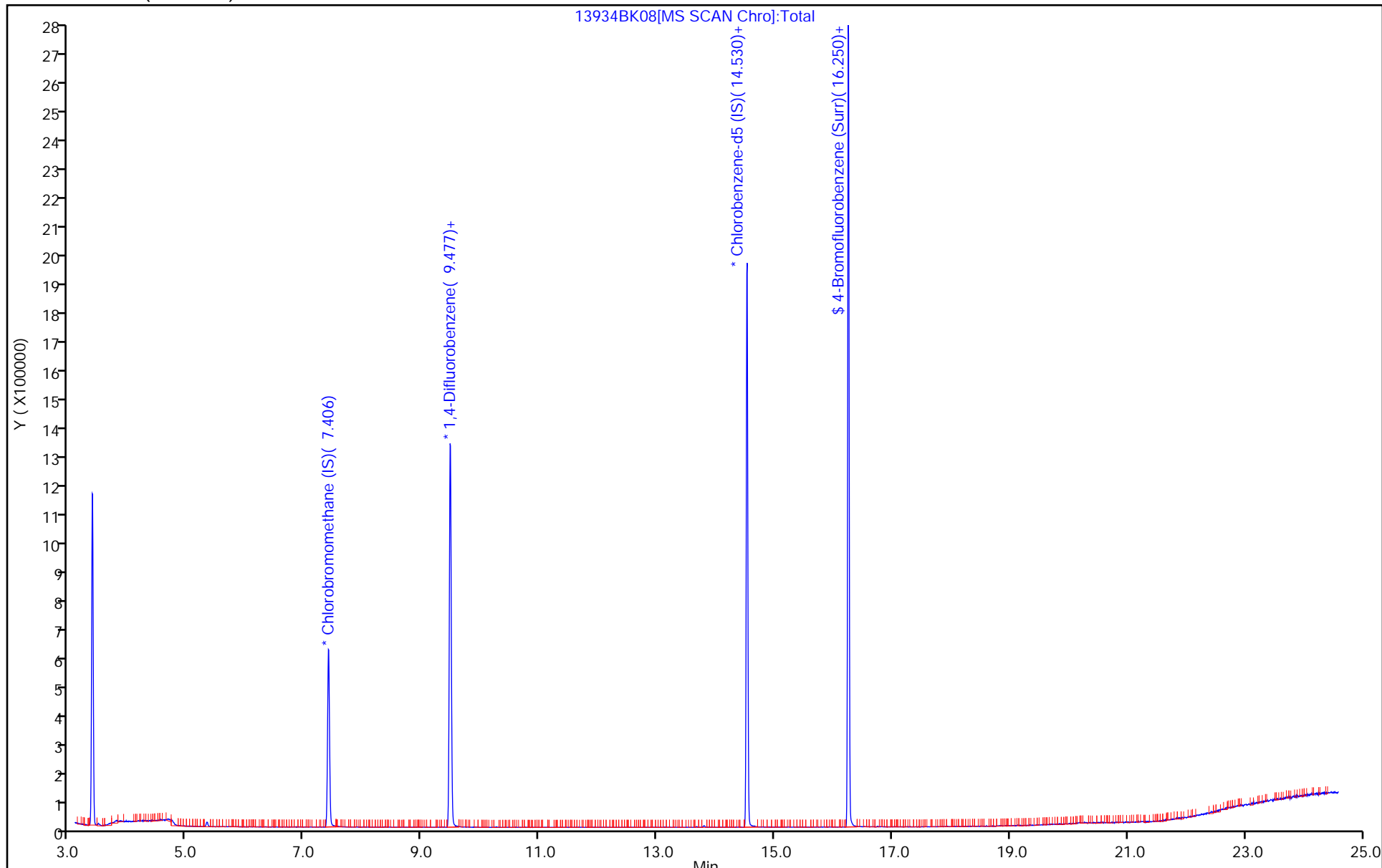
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11119 Lab Sample ID: 140-13934-12
 Matrix: Air Lab File ID: 13934BK12.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 22:28
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11119 Lab Sample ID: 140-13934-12
 Matrix: Air Lab File ID: 13934BK12.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 22:28
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11119 Lab Sample ID: 140-13934-12
 Matrix: Air Lab File ID: 13934BK12.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 22:28
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK12.D
 Lims ID: 140-13934-A-12
 Client ID: 11119
 Sample Type: Client
 Inject. Date: 15-Jan-2019 22:28:30 ALS Bottle#: 12 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010499-017
 Misc. Info.: 11119
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 16-Jan-2019 00:26:28 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 16-Jan-2019 14:29:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.412	-0.006	72	202817	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.482	-0.005	95	1180484	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.530	-0.006	91	1031357	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.249	0.000	88	894165	4.08	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK12.D

Injection Date: 15-Jan-2019 22:28:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13934-A-12

Lab Sample ID: 140-13934-12

Worklist Smp#: 17

Client ID: 11119

Purge Vol: 500.000 mL

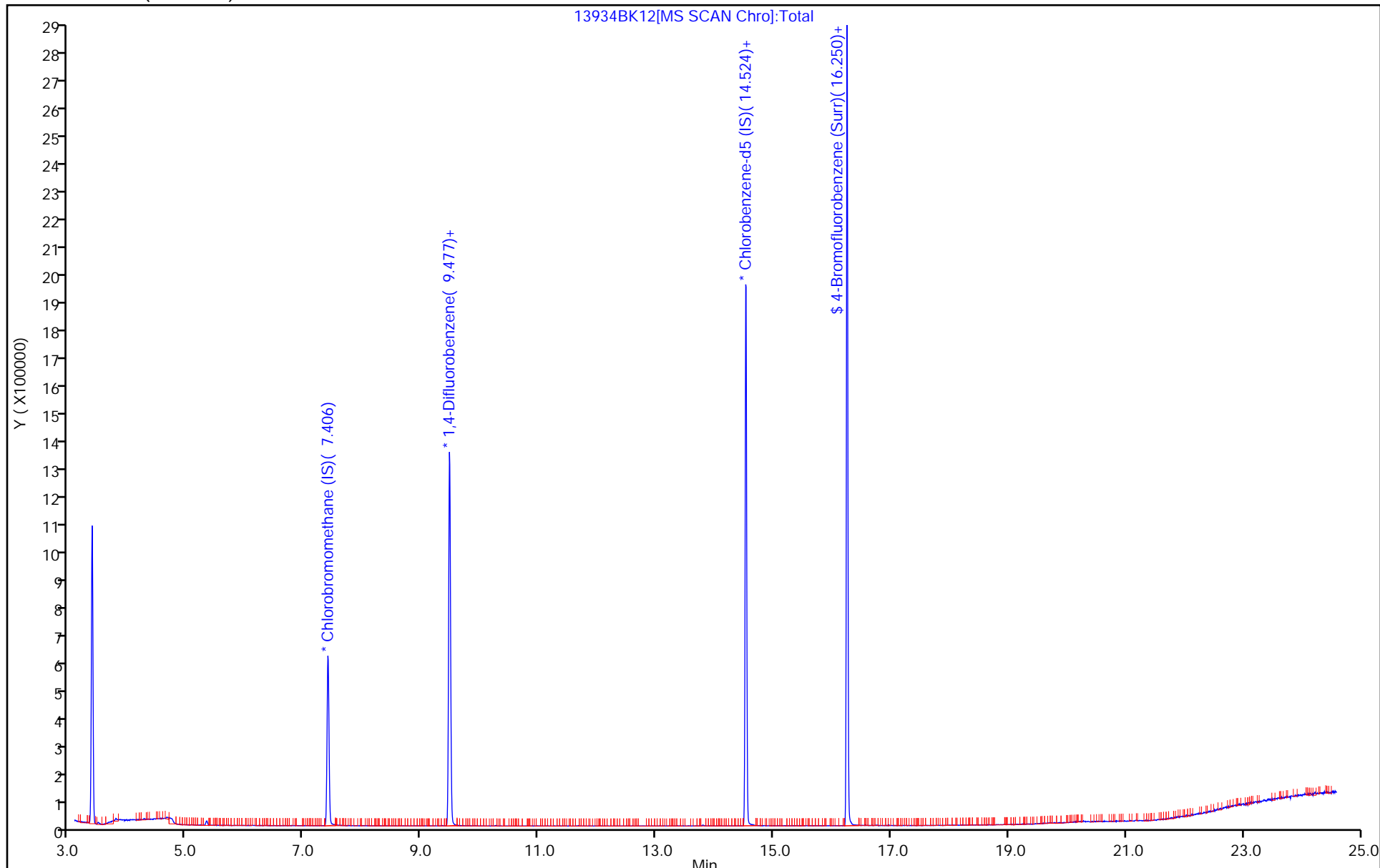
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

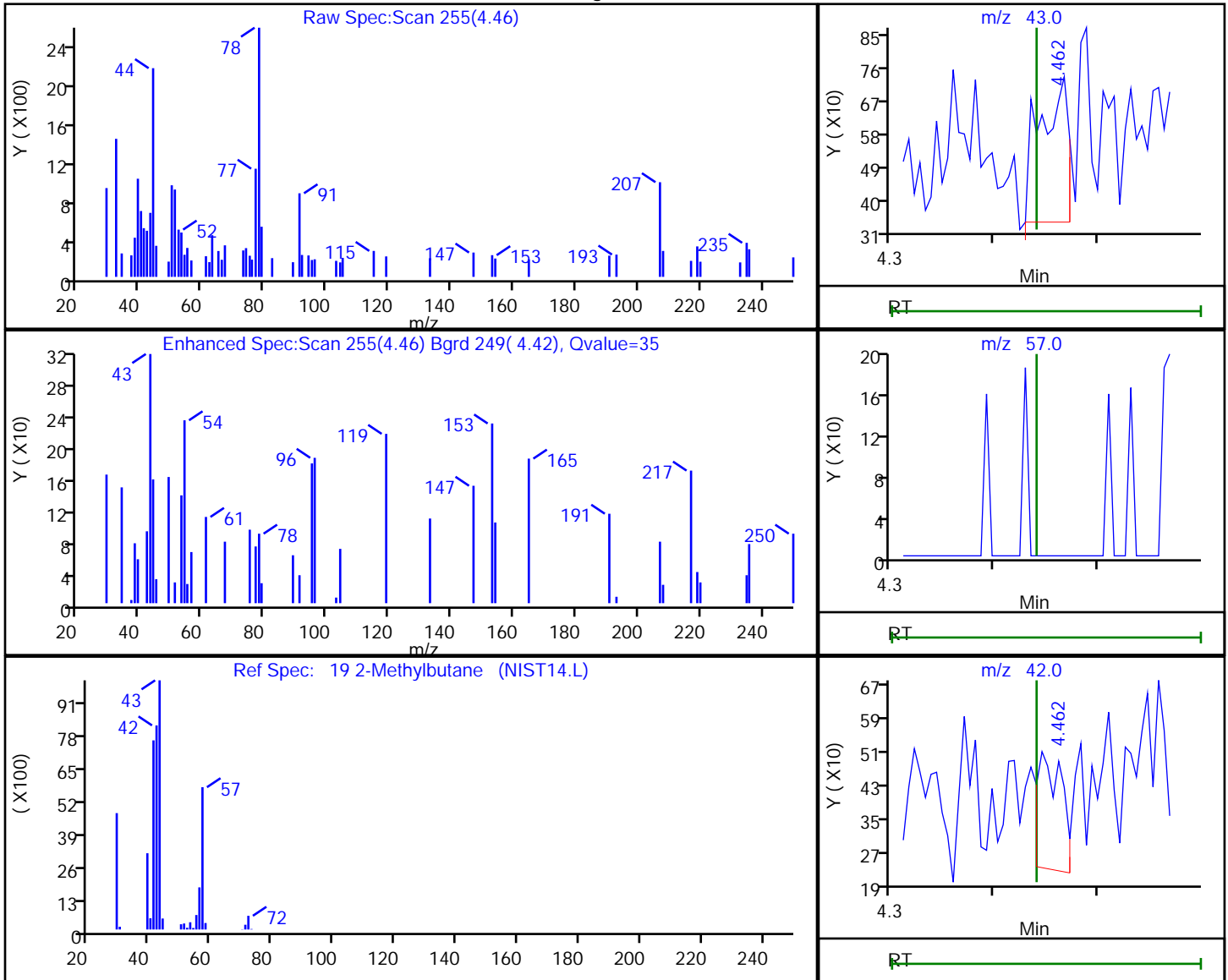


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK12.D
 Injection Date: 15-Jan-2019 22:28:30 Instrument ID: MR
 Lims ID: 140-13934-A-12 Lab Sample ID: 140-13934-12
 Client ID: 11119
 Operator ID: HMT ALS Bottle#: 12 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.46	43.00	745	0.018369
4.44	57.00	0	
4.46	42.00	463	

Reviewer: khachitpongpanits, 16-Jan-2019 14:23:29

Audit Action: Marked Compound Undetected

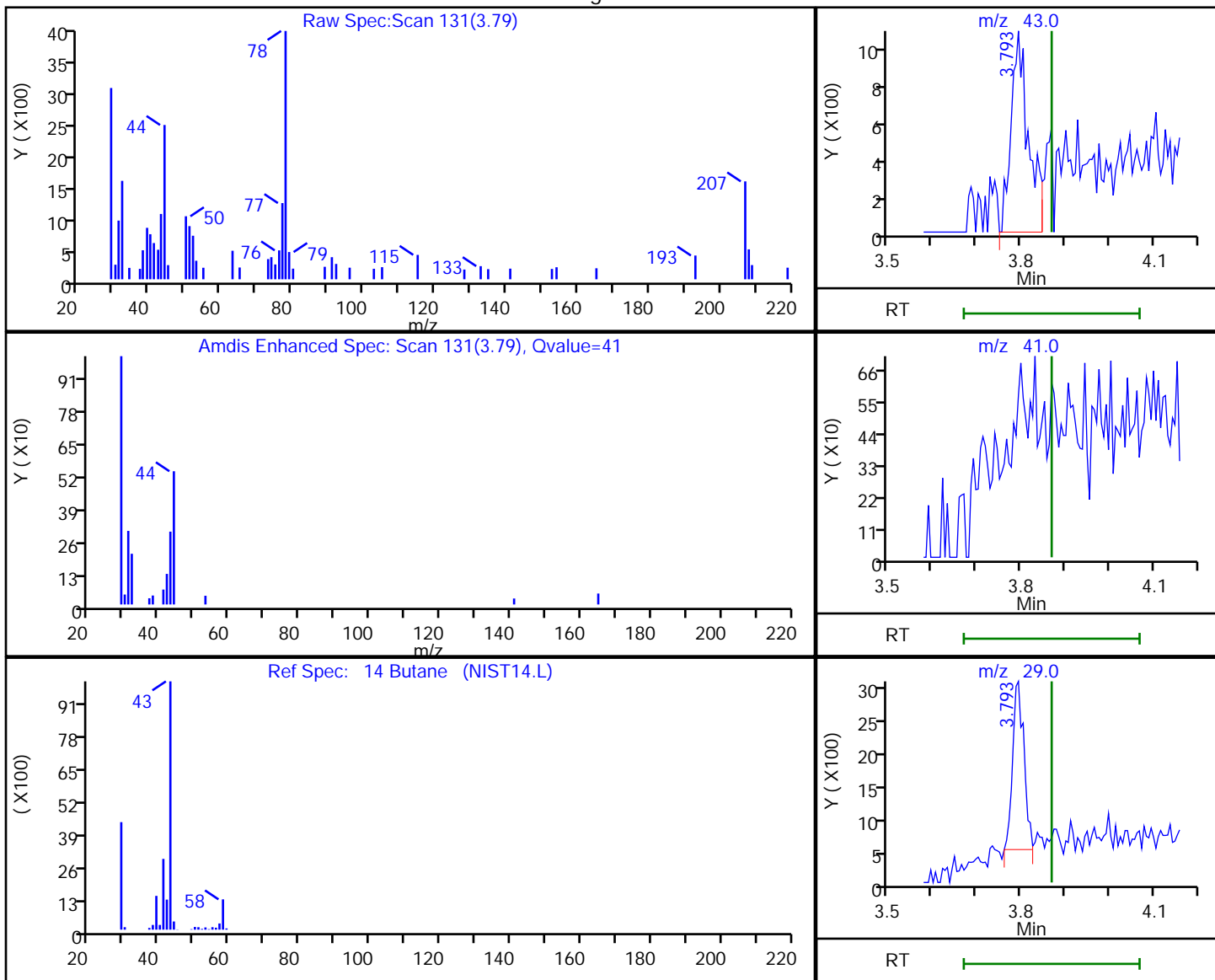
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK12.D
 Injection Date: 15-Jan-2019 22:28:30 Instrument ID: MR
 Lims ID: 140-13934-A-12 Lab Sample ID: 140-13934-12
 Client ID: 11119
 Operator ID: HMT ALS Bottle#: 12 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.79	43.00	2807	0.048900
3.87	41.00	0	
3.79	29.00	4465	

Reviewer: khachitpongpanits, 16-Jan-2019 14:23:37

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11779 Lab Sample ID: 140-13934-13
 Matrix: Air Lab File ID: 13934BK13.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200(mL) Date Analyzed: 01/15/2019 23:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11779 Lab Sample ID: 140-13934-13
 Matrix: Air Lab File ID: 13934BK13.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200(mL) Date Analyzed: 01/15/2019 23:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11779 Lab Sample ID: 140-13934-13
 Matrix: Air Lab File ID: 13934BK13.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/15/2019 23:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK13.D
 Lims ID: 140-13934-A-13
 Client ID: 11779
 Sample Type: Client
 Inject. Date: 15-Jan-2019 23:17:30 ALS Bottle#: 13 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010499-018
 Misc. Info.: 11779
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 16-Jan-2019 00:26:28 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 16-Jan-2019 14:30:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.412	-0.006	73	202053	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.482	-0.005	95	1192198	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.530	-0.006	94	1049607	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.249	0.000	88	894835	4.01	
25 Isopropyl alcohol	45	4.759	4.723	0.033	50	2364	0.0414	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK13.D

Injection Date: 15-Jan-2019 23:17:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13934-A-13

Lab Sample ID: 140-13934-13

Worklist Smp#: 18

Client ID: 11779

Purge Vol: 500.000 mL

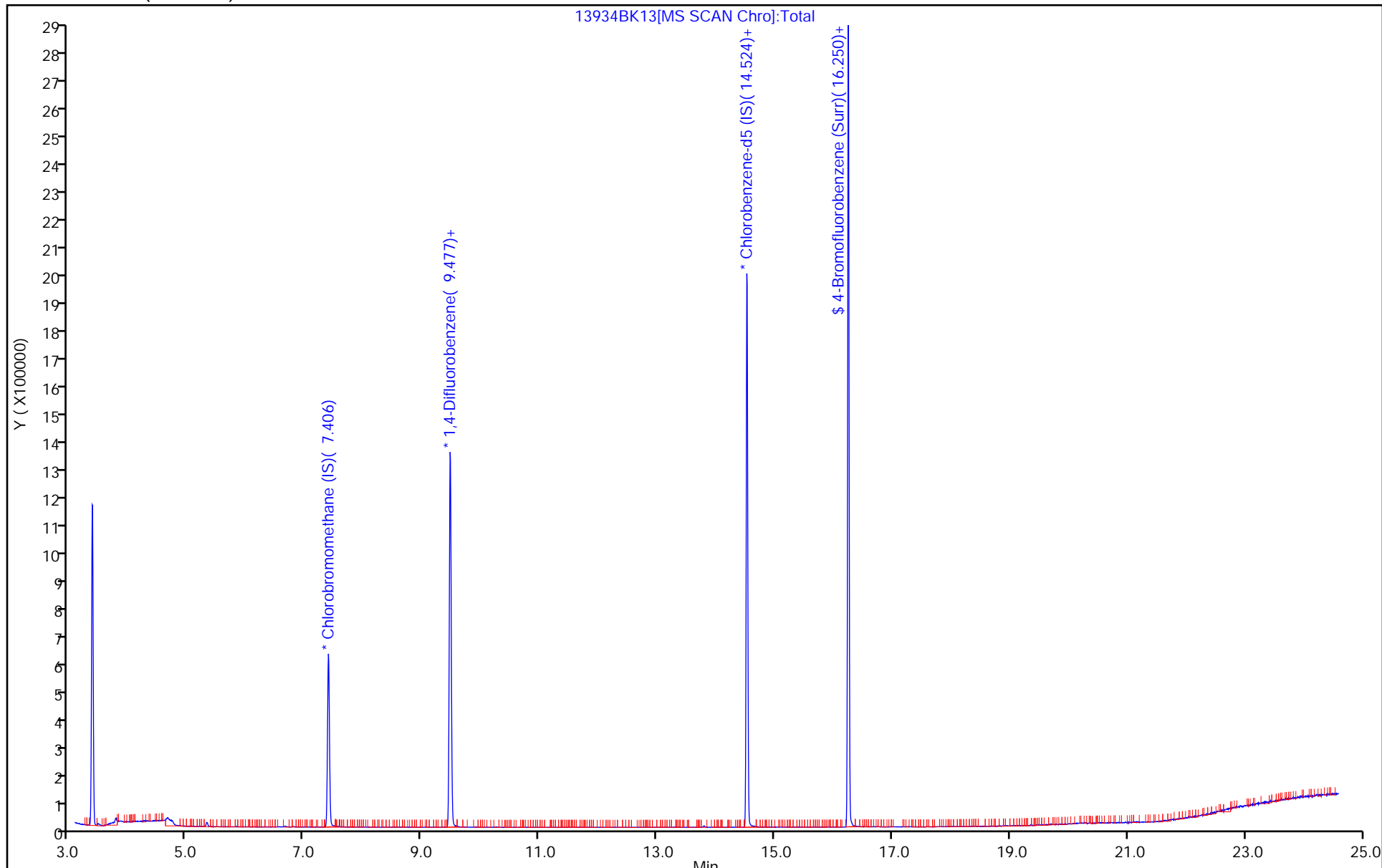
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

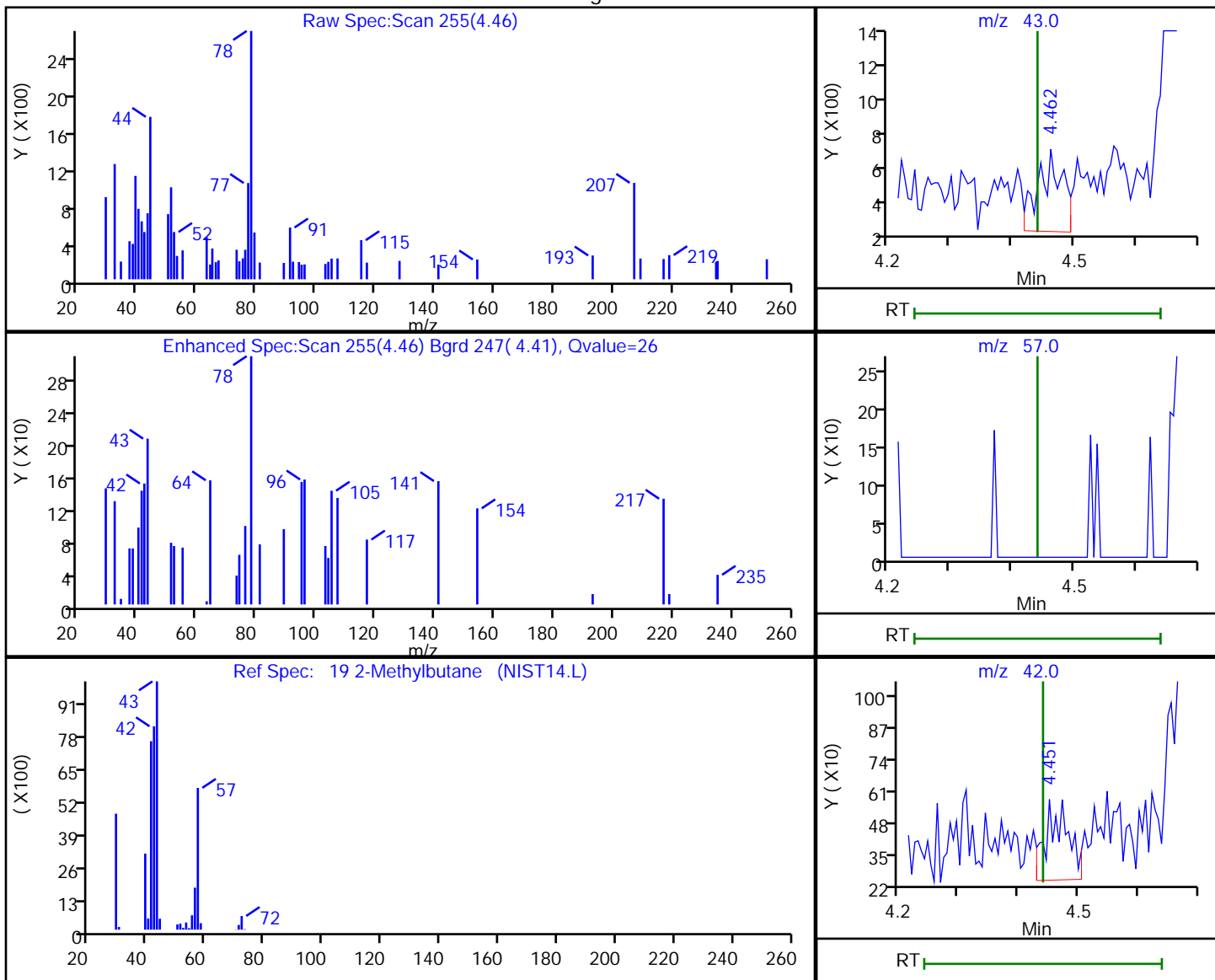


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK13.D
 Injection Date: 15-Jan-2019 23:17:30 Instrument ID: MR
 Lims ID: 140-13934-A-13 Lab Sample ID: 140-13934-13
 Client ID: 11779
 Operator ID: HMT ALS Bottle#: 13 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.46	43.00	1304	0.032273
4.44	57.00	0	
4.45	42.00	852	

Reviewer: khachitpongpanits, 16-Jan-2019 14:23:51

Audit Action: Marked Compound Undetected

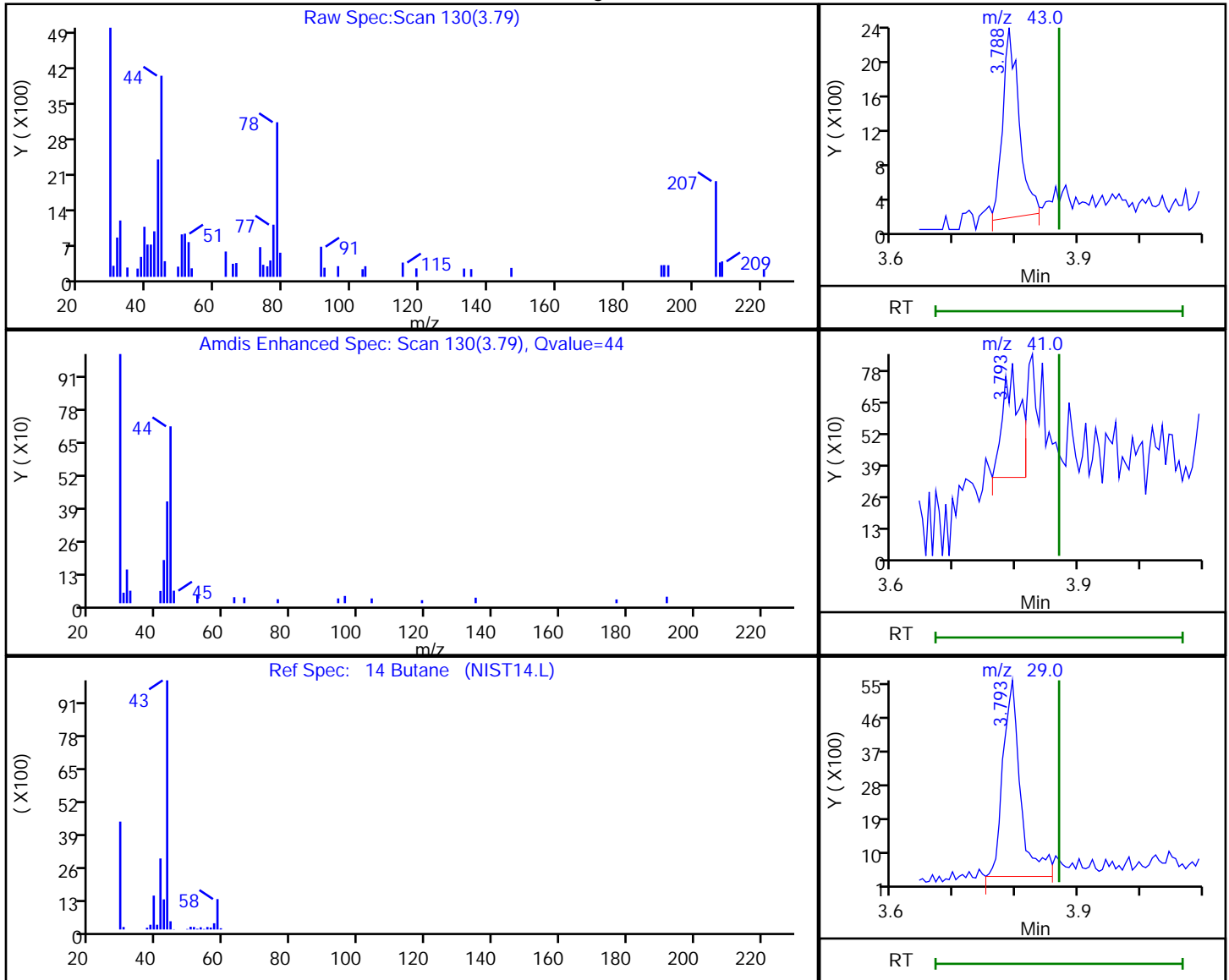
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK13.D
 Injection Date: 15-Jan-2019 23:17:30 Instrument ID: MR
 Lims ID: 140-13934-A-13 Lab Sample ID: 140-13934-13
 Client ID: 11779
 Operator ID: HMT ALS Bottle#: 13 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.79	43.00	4034	0.070541
3.79	41.00	901	
3.79	29.00	10369	

Reviewer: khachitpongpanits, 16-Jan-2019 14:24:30

Audit Action: Marked Compound Undetected

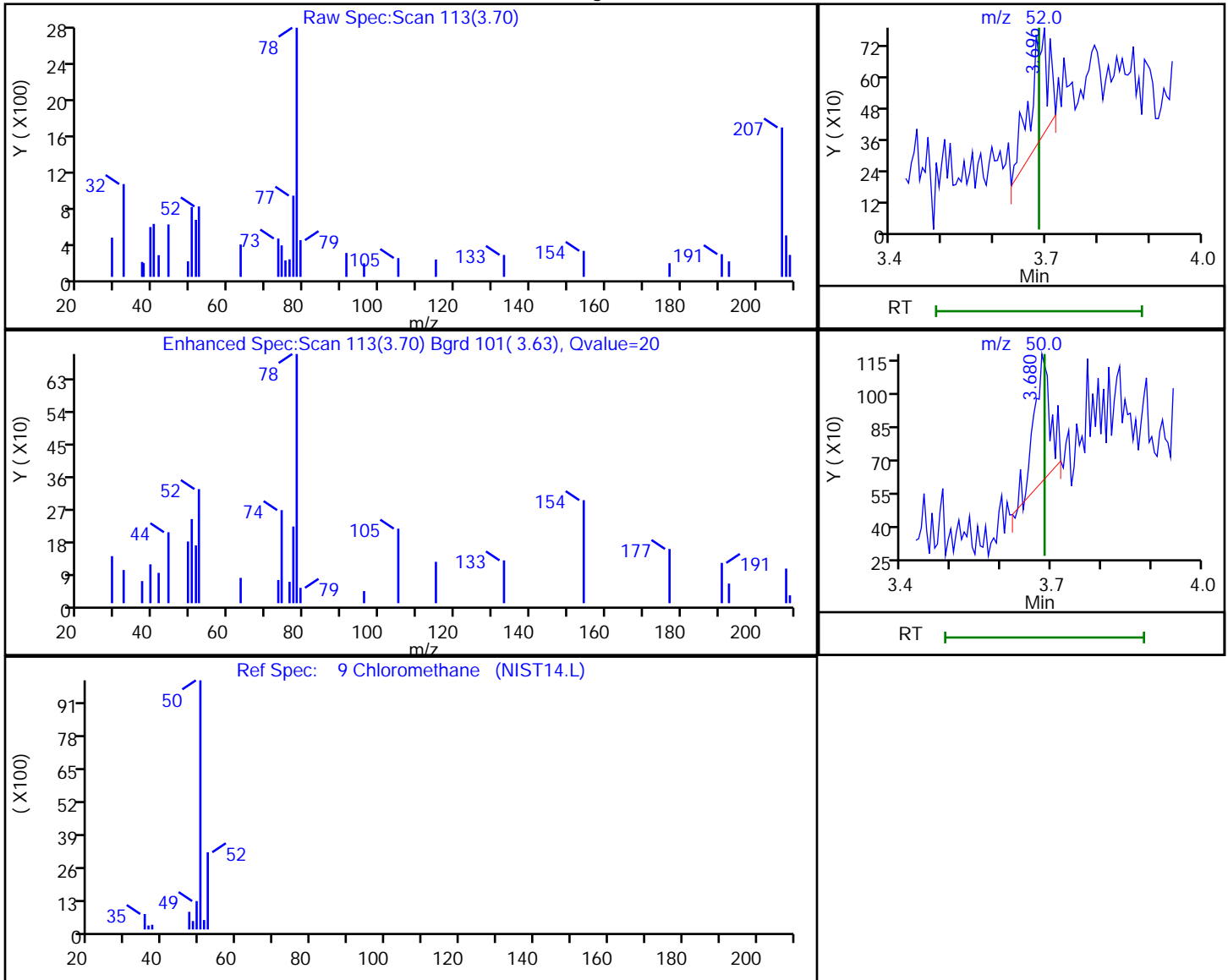
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK13.D
Injection Date: 15-Jan-2019 23:17:30 Instrument ID: MR
Lims ID: 140-13934-A-13 Lab Sample ID: 140-13934-13
Client ID: 11779
Operator ID: HMT ALS Bottle#: 13 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

9 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
3.70	52.00	1055	0.068234
3.68	50.00	1270	

Reviewer: khachitpongpanits, 16-Jan-2019 14:24:16

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 09663 Lab Sample ID: 140-13934-14
 Matrix: Air Lab File ID: 13934BK14.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200(mL) Date Analyzed: 01/16/2019 00:07
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 09663 Lab Sample ID: 140-13934-14
 Matrix: Air Lab File ID: 13934BK14.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 00:07
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 09663 Lab Sample ID: 140-13934-14
 Matrix: Air Lab File ID: 13934BK14.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 00:07
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK14.D
 Lims ID: 140-13934-A-14
 Client ID: 09663
 Sample Type: Client
 Inject. Date: 16-Jan-2019 00:07:30 ALS Bottle#: 14 Worklist Smp#: 19
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010499-019
 Misc. Info.: 09663
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 16-Jan-2019 00:26:28 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 16-Jan-2019 14:32:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.411	7.412	-0.001	74	202325	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.482	-0.005	95	1168233	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.529	14.530	-0.001	91	1018677	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.249	0.000	88	882573	4.07	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK14.D

Injection Date: 16-Jan-2019 00:07:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13934-A-14

Lab Sample ID: 140-13934-14

Worklist Smp#: 19

Client ID: 09663

Purge Vol: 500.000 mL

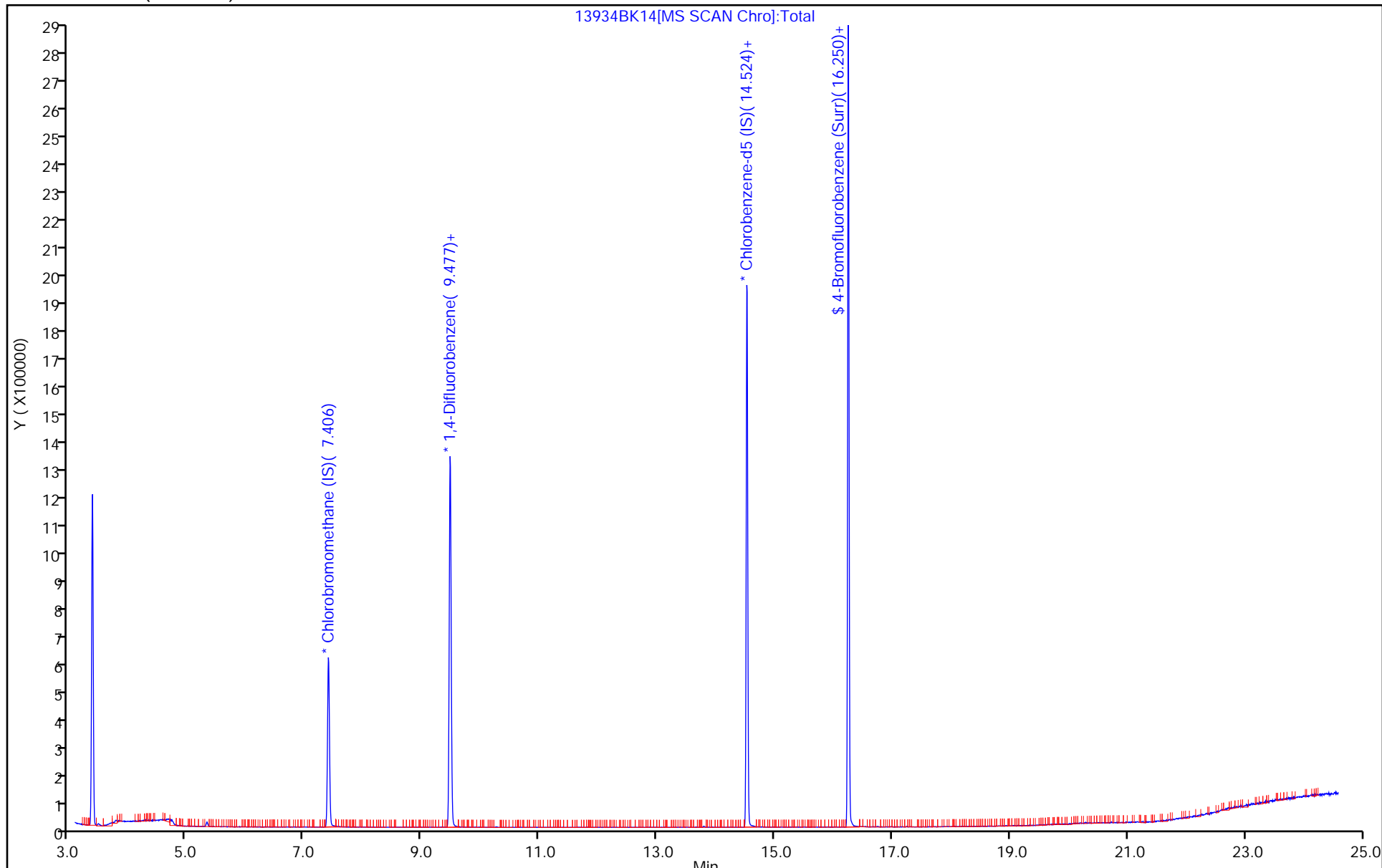
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 10969 Lab Sample ID: 140-13934-15
 Matrix: Air Lab File ID: 13934BK15.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 00:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 10969 Lab Sample ID: 140-13934-15
 Matrix: Air Lab File ID: 13934BK15.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 00:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 10969 Lab Sample ID: 140-13934-15
 Matrix: Air Lab File ID: 13934BK15.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 00:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK15.D
 Lims ID: 140-13934-A-15
 Client ID: 10969
 Sample Type: Client
 Inject. Date: 16-Jan-2019 00:57:30 ALS Bottle#: 15 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010499-020
 Misc. Info.: 10969
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 16-Jan-2019 14:35:20 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 16-Jan-2019 14:35:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.412	7.412	0.000	72	204149	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.482	0.000	95	1174057	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.529	14.530	-0.001	91	1024938	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.249	0.000	88	878932	4.03	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK15.D

Injection Date: 16-Jan-2019 00:57:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13934-A-15

Lab Sample ID: 140-13934-15

Worklist Smp#: 20

Client ID: 10969

Purge Vol: 500.000 mL

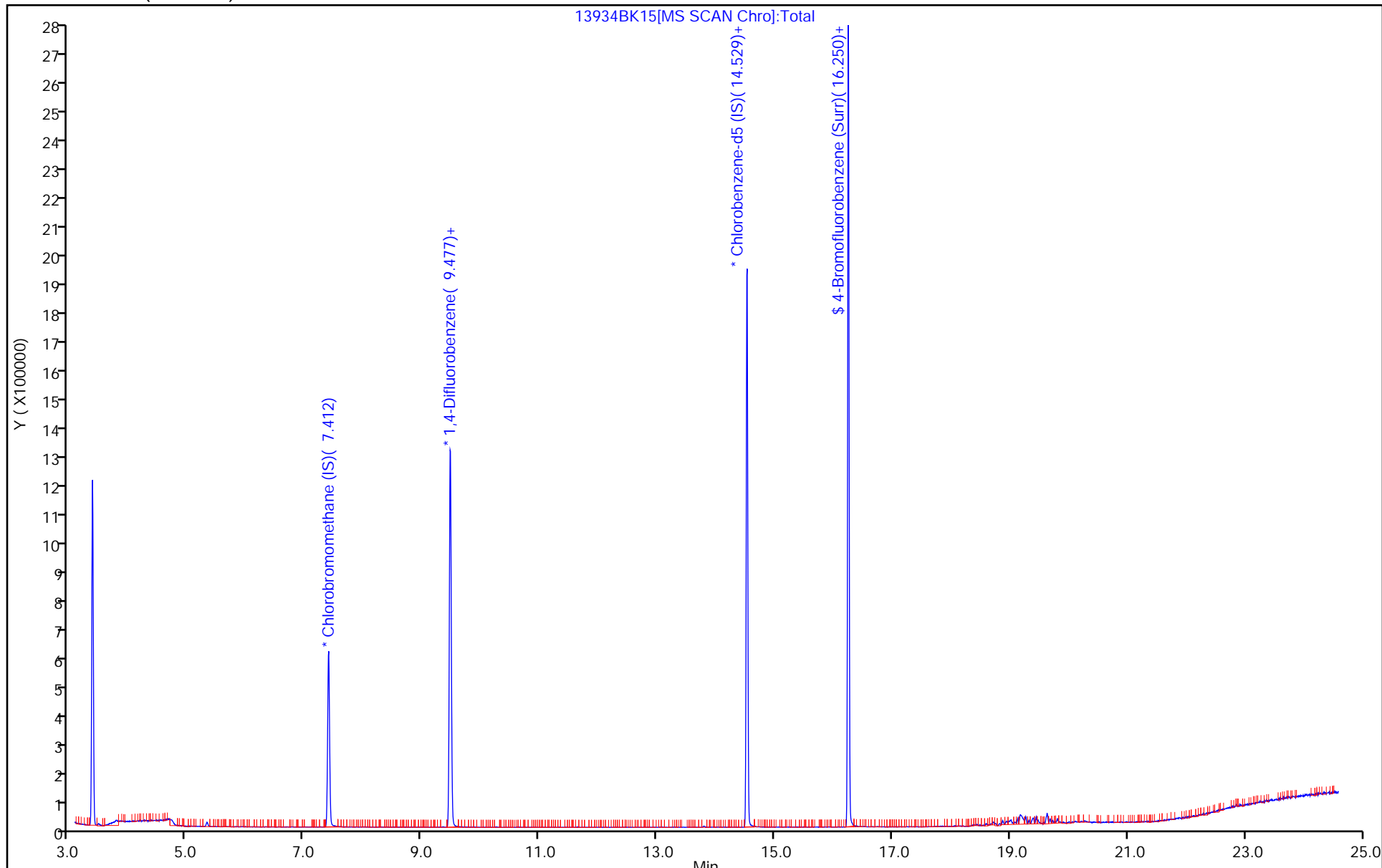
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

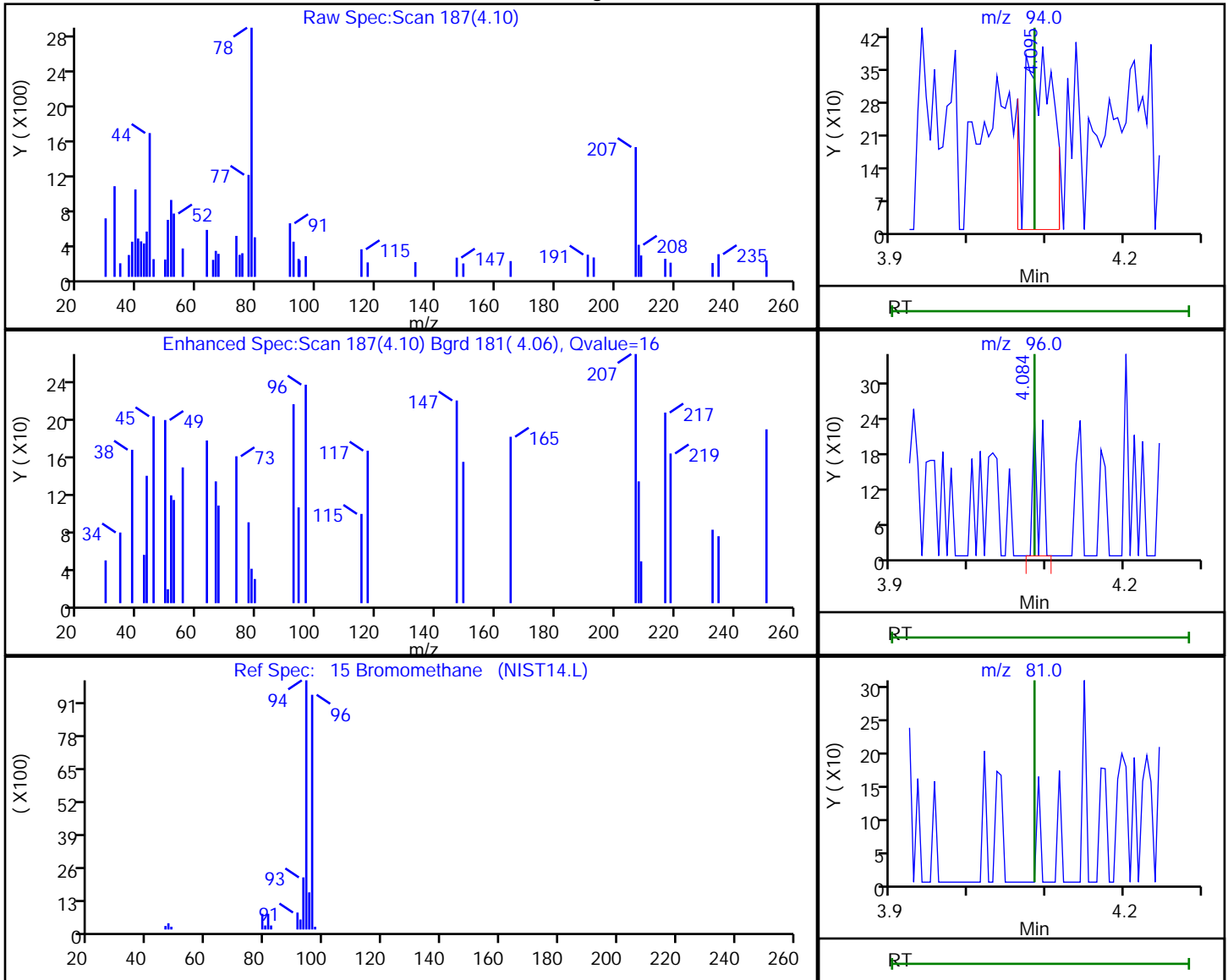


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK15.D
 Injection Date: 16-Jan-2019 00:57:30 Instrument ID: MR
 Lims ID: 140-13934-A-15 Lab Sample ID: 140-13934-15
 Client ID: 10969
 Operator ID: HMT ALS Bottle#: 15 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.10	94.00	974	0.015448
4.08	96.00	156	
4.08	81.00	0	

Reviewer: khachitpongpanits, 16-Jan-2019 14:25:12

Audit Action: Marked Compound Undetected

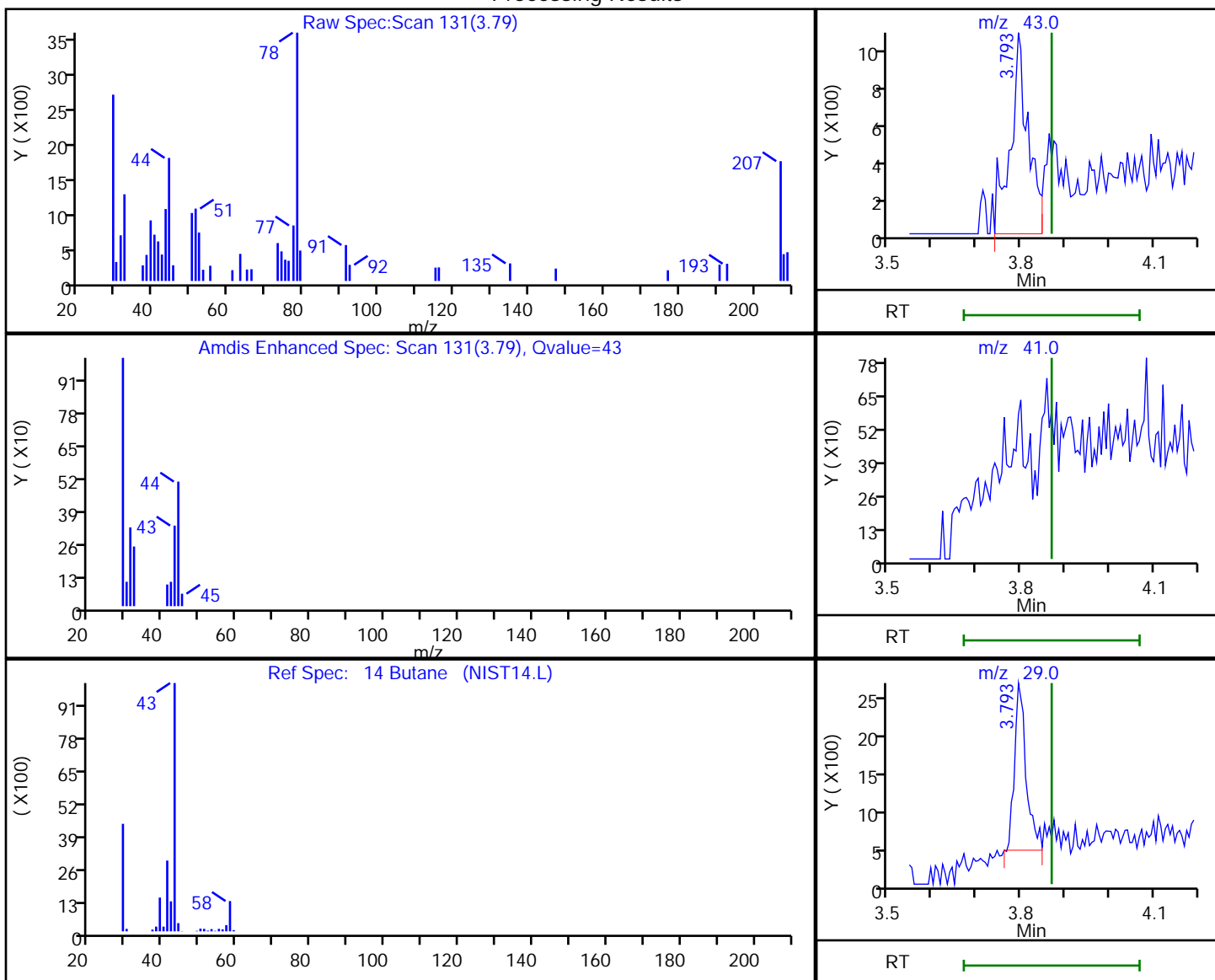
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK15.D
 Injection Date: 16-Jan-2019 00:57:30 Instrument ID: MR
 Lims ID: 140-13934-A-15 Lab Sample ID: 140-13934-15
 Client ID: 10969
 Operator ID: HMT ALS Bottle#: 15 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.79	43.00	2896	0.050121
3.87	41.00	0	
3.79	29.00	4092	

Reviewer: khachitpongpanits, 16-Jan-2019 14:25:16

Audit Action: Marked Compound Undetected

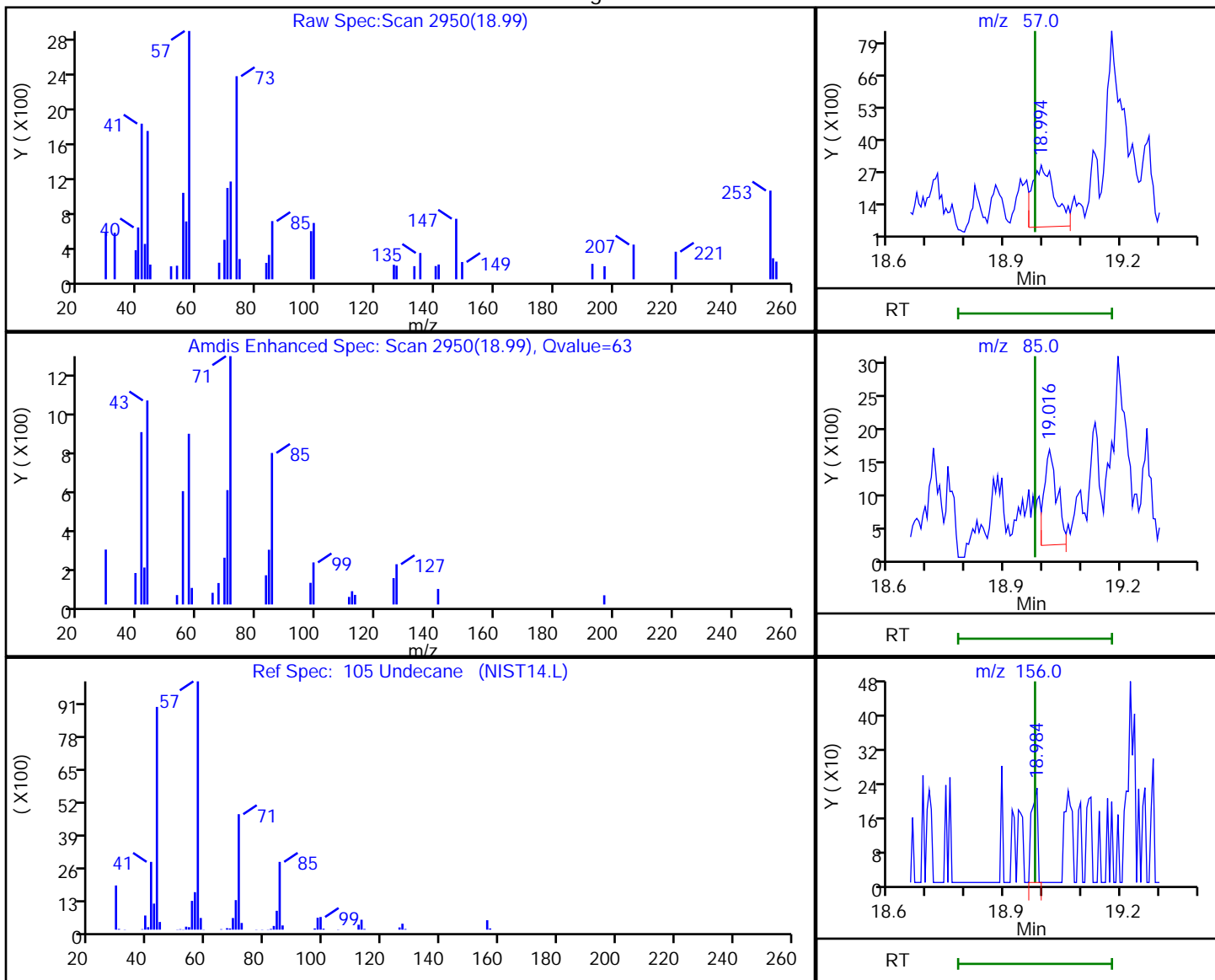
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK15.D
 Injection Date: 16-Jan-2019 00:57:30 Instrument ID: MR
 Lims ID: 140-13934-A-15 Lab Sample ID: 140-13934-15
 Client ID: 10969
 Operator ID: HMT ALS Bottle#: 15 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

105 Undecane, CAS: 1120-21-4

Processing Results



RT	Mass	Response	Amount
18.99	57.00	10231	0.052549
19.02	85.00	3333	
18.98	156.00	244	

Reviewer: khachitpongpanits, 16-Jan-2019 14:35:08

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11806 Lab Sample ID: 140-13934-16
 Matrix: Air Lab File ID: 13934BK16.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 01:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11806 Lab Sample ID: 140-13934-16
 Matrix: Air Lab File ID: 13934BK16.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 01:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11806 Lab Sample ID: 140-13934-16
 Matrix: Air Lab File ID: 13934BK16.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 01:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK16.D
 Lims ID: 140-13934-A-16
 Client ID: 11806
 Sample Type: Client
 Inject. Date: 16-Jan-2019 01:46:30 ALS Bottle#: 16 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010499-021
 Misc. Info.: 11806
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 16-Jan-2019 14:36:01 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 16-Jan-2019 14:36:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.412	-0.006	72	203059	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.482	-0.005	95	1175505	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.529	14.530	-0.001	91	1035176	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.249	16.249	-0.001	88	878089	3.99	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK16.D

Injection Date: 16-Jan-2019 01:46:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13934-A-16

Lab Sample ID: 140-13934-16

Worklist Smp#: 21

Client ID: 11806

Purge Vol: 500.000 mL

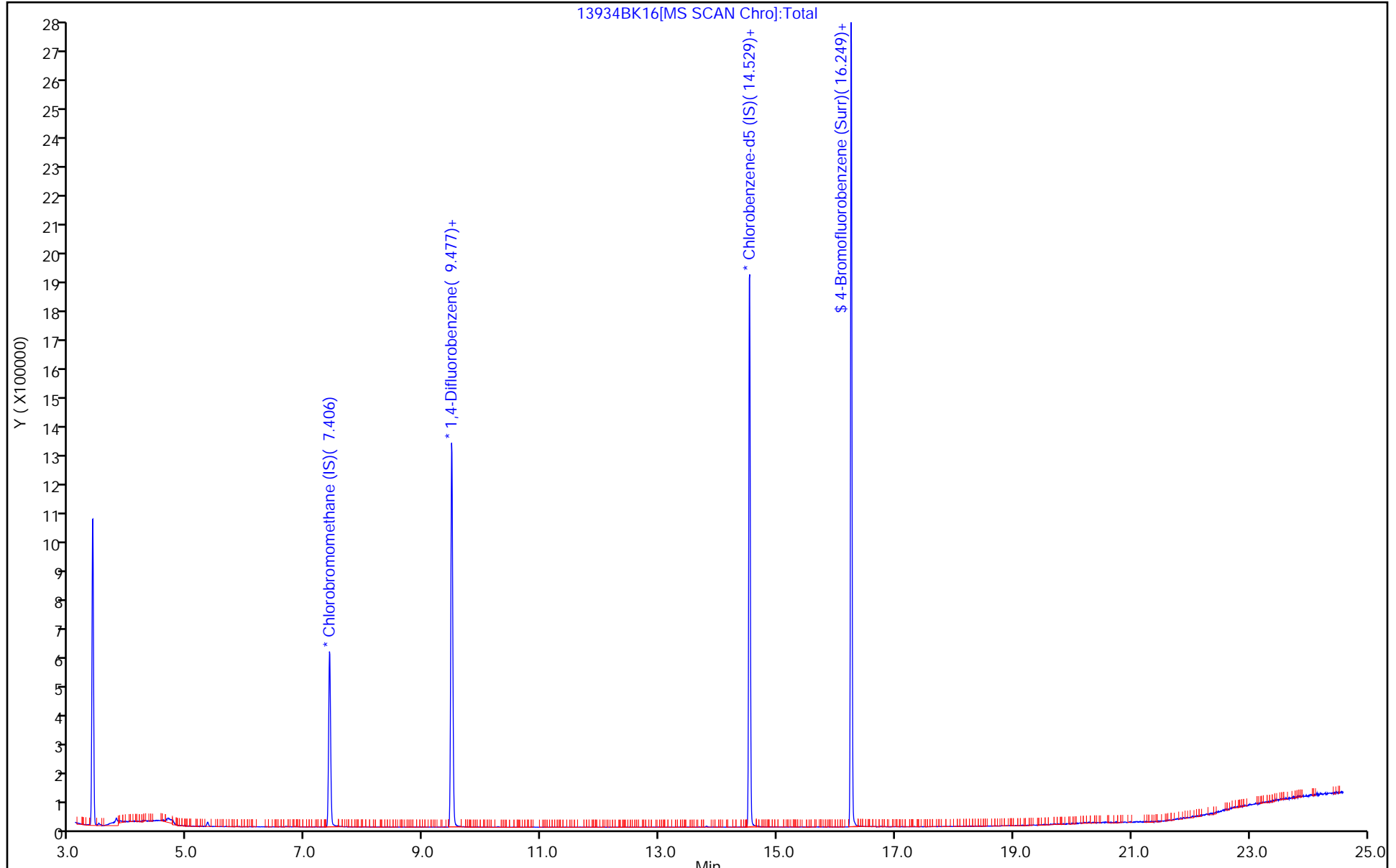
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

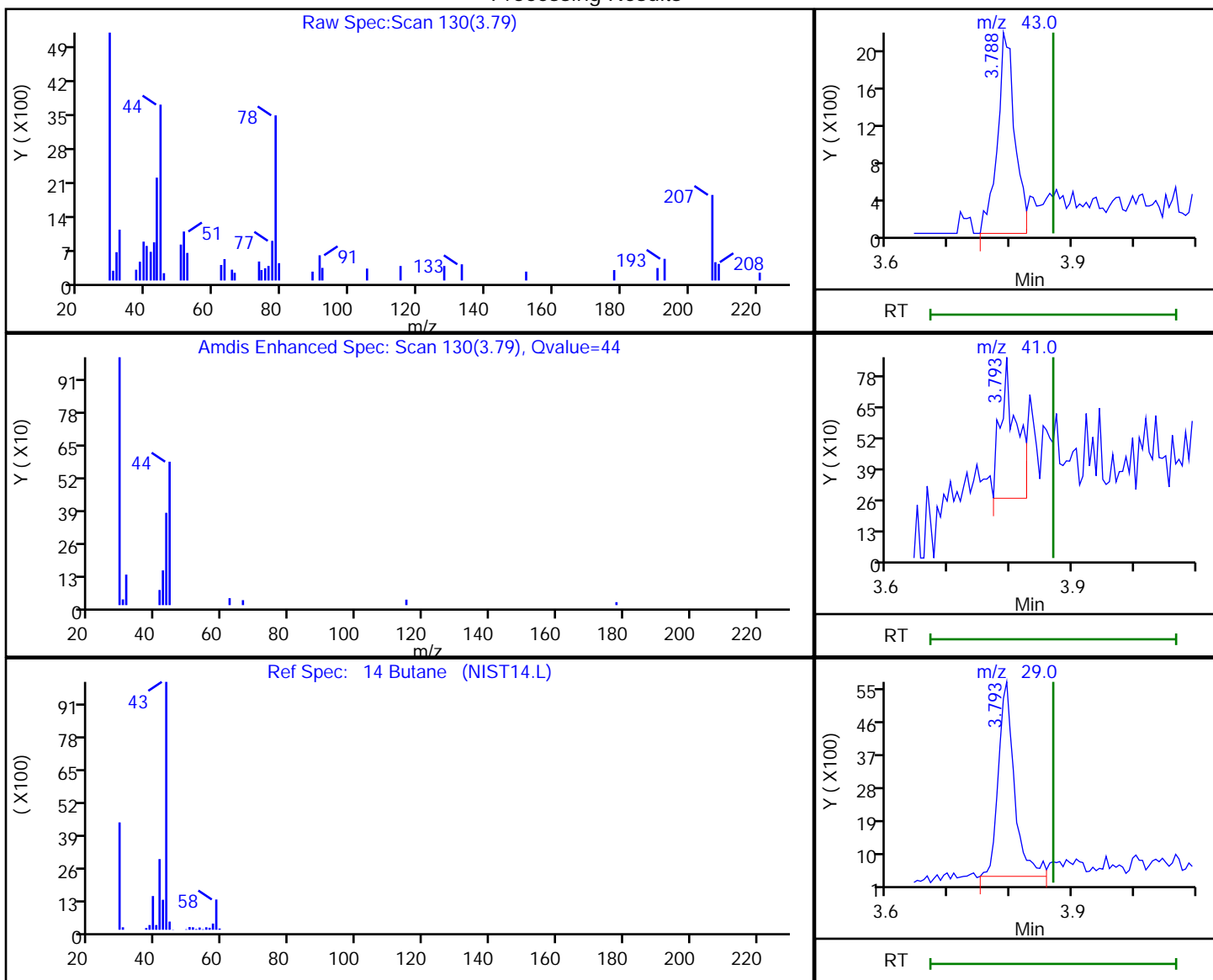


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK16.D
 Injection Date: 16-Jan-2019 01:46:30 Instrument ID: MR
 Lims ID: 140-13934-A-16 Lab Sample ID: 140-13934-16
 Client ID: 11806
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 21
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.79	43.00	4217	0.073376
3.79	41.00	1089	
3.79	29.00	9581	

Reviewer: khachitpongpanits, 16-Jan-2019 14:35:39

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11828 Lab Sample ID: 140-13934-17
 Matrix: Air Lab File ID: 13934BK17.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 02:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11828 Lab Sample ID: 140-13934-17
 Matrix: Air Lab File ID: 13934BK17.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 02:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Client Sample ID: 11828 Lab Sample ID: 140-13934-17
 Matrix: Air Lab File ID: 13934BK17.D
 Analysis Method: TO-15 Date Collected: 01/13/2019 13:05
 Sample wt/vol: 200 (mL) Date Analyzed: 01/16/2019 02:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 26778 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK17.D
 Lims ID: 140-13934-A-17
 Client ID: 11828
 Sample Type: Client
 Inject. Date: 16-Jan-2019 02:36:30 ALS Bottle#: 17 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010499-022
 Misc. Info.: 11828
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 16-Jan-2019 15:27:43 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: khachitpongpanits Date: 16-Jan-2019 15:27:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.412	-0.006	72	192380	4.00	
* 2 1,4-Difluorobenzene	114	9.477	9.482	-0.005	95	1123581	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.524	14.530	-0.006	91	988964	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.250	16.244	0.000	88	850085	4.04	
25 Isopropyl alcohol	45	4.758	4.723	0.032	72	2395	0.0440	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK17.D

Injection Date: 16-Jan-2019 02:36:30

Instrument ID: MR

Operator ID: HMT

Lims ID: 140-13934-A-17

Lab Sample ID: 140-13934-17

Worklist Smp#: 22

Client ID: 11828

Purge Vol: 500.000 mL

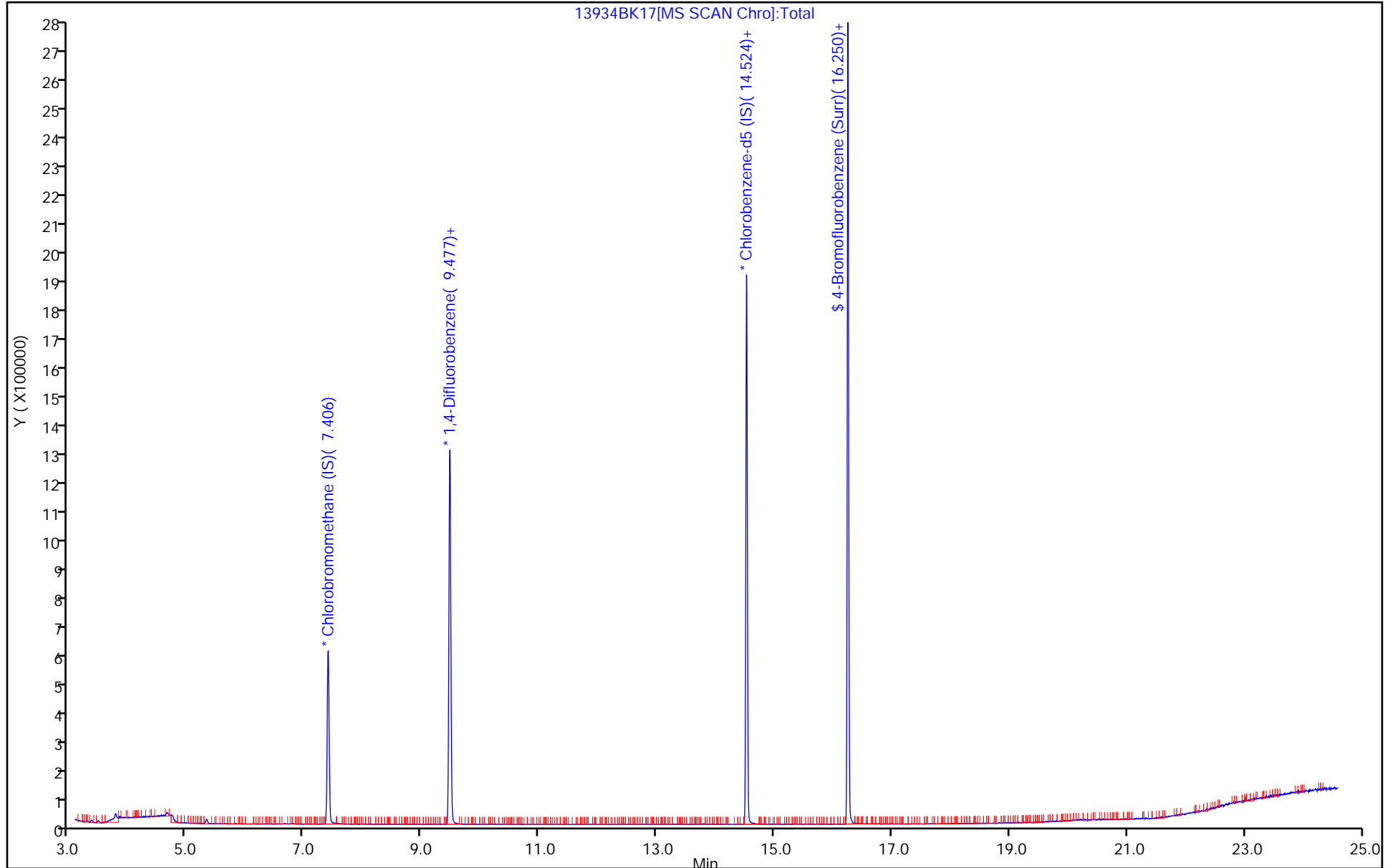
Dil. Factor: 1.0000

ALS Bottle#: 17

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

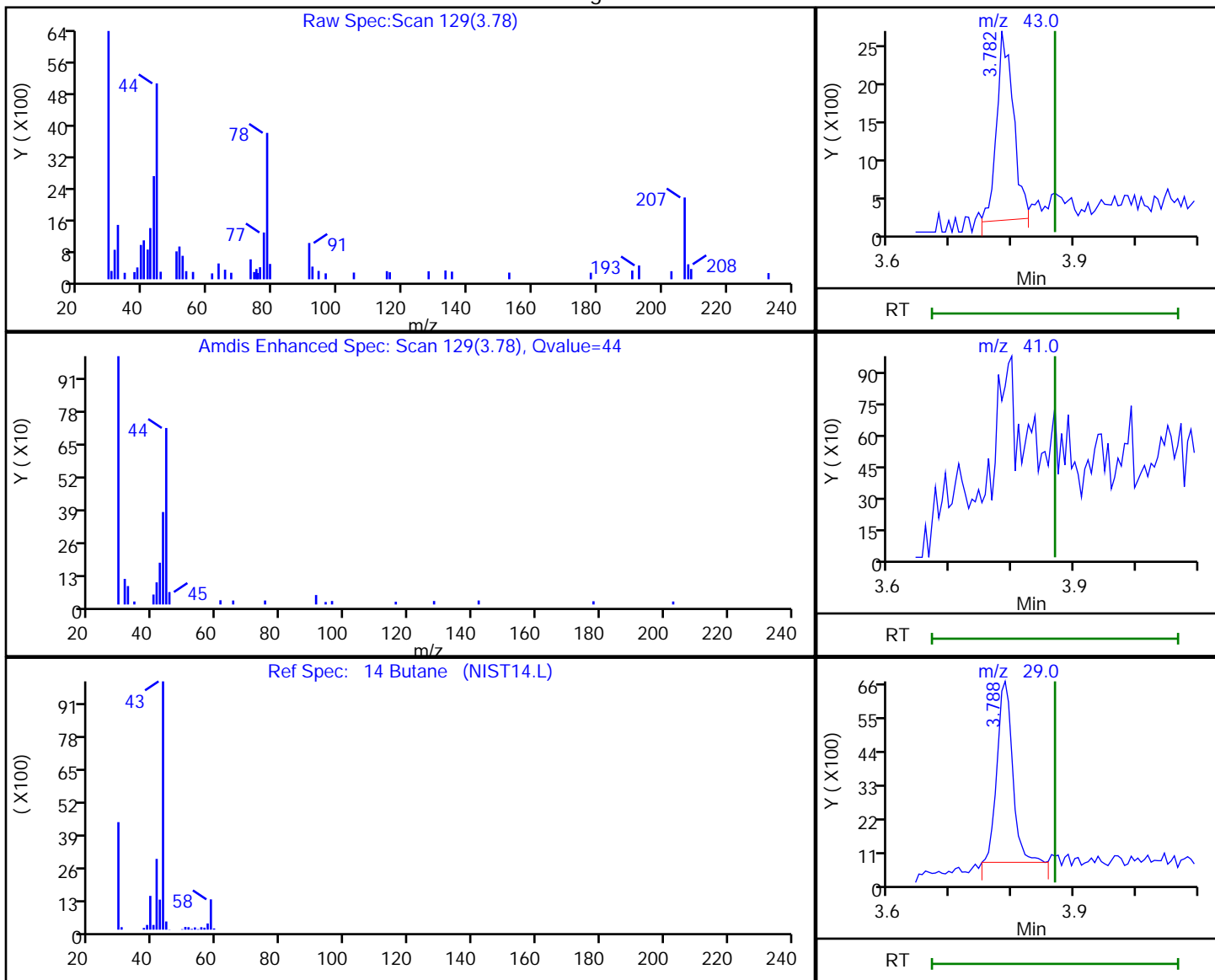


TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190109-10499.b\13934BK17.D
 Injection Date: 16-Jan-2019 02:36:30 Instrument ID: MR
 Lims ID: 140-13934-A-17 Lab Sample ID: 140-13934-17
 Client ID: 11828
 Operator ID: HMT ALS Bottle#: 17 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Column: RTX-5 (0.32 mm) Detector: MS SCAN

14 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.78	43.00	4642	0.085254
3.87	41.00	0	
3.79	29.00	10489	

Reviewer: khachitpongpanits, 16-Jan-2019 15:27:17

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25539/8	GK19IC01.D
Level 2	IC 140-25539/9	GK19IC02.D
Level 3	IC 140-25539/10	GK19IC03.D
Level 4	IC 140-25539/11	GK19IC04.D
Level 5	IC 140-25539/12	GK19IC05.D
Level 6	IC 140-25539/13	GK19IC06.D
Level 7	ICIS 140-25539/14	GK19IC07.D
Level 8	IC 140-25539/15	GK19IC08.D
Level 9	IC 140-25539/3	GK19IC09.D
Level 10	IC 140-25539/5	GK19IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	++++ 3.0513	++++ 2.8974	3.0732 2.8926	3.1931 2.8986	3.3852 2.7775	Ave		3.0211			6.5		30.0				
Propene	++++ 1.7523	++++ 1.6715	++++ 1.6475	2.3333 1.6297	2.0161 1.5604	Ave		1.8015			15.4		30.0				
Dichlorodifluoromethane	++++ 4.2082	4.6298 4.0287	4.2179 4.0040	4.3941 4.0672	4.6841 3.8083	Ave		4.2269			6.9		30.0				
Chloromethane	++++ 0.5564	++++ 0.5047	++++ 0.5184	0.6846 0.5030	0.6635 0.4789	Ave		0.5585			14.8		30.0				
1,2-Dichlorotetrafluoroethane	++++ 2.3739	2.4985 2.2660	2.3440 2.2454	2.4583 2.2059	2.7097 2.0689	Ave		2.3523			8.0		30.0				
Vinyl chloride	1.9649 1.7432	1.8343 1.6566	1.6957 1.6605	1.7201 1.6479	1.9808 1.5890	Ave		1.7493			7.7		30.0				
Butane	++++ 3.0113	++++ 2.7783	++++ 2.8052	3.1560 2.7858	3.5459 2.7047	Ave		2.9696			10.1		30.0				
1,3-Butadiene	++++ 1.4061	++++ 1.3337	++++ 1.3594	1.4001 1.3439	1.6158 1.3131	Ave		1.3960			7.4		30.0				
Bromomethane	++++ 1.3384	++++ 1.2806	1.4004 1.3047	1.3848 1.3001	1.4802 1.2644	Ave		1.3442			5.4		30.0				
Chloroethane	++++ 0.8137	++++ 0.7755	0.8199 0.8050	0.8218 0.7986	0.8960 0.7837	Ave		0.8143			4.5		30.0				
Ethanol	++++ 0.7564	++++ 0.6409	++++ 0.6954	0.7442 0.6514	0.7148 0.6541	Ave		0.6939			6.7		30.0				
Vinyl bromide	++++ 1.2081	1.3201 1.1629	1.1684 1.1928	1.2357 1.1909	1.3362 1.1705	Ave		1.2206			5.3		30.0				
2-Methylbutane	++++ 1.9744	++++ 1.8631	2.1017 1.9793	2.1520 1.9428	2.1528 1.8888	Ave		2.0069			5.7		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13293-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichlorofluoromethane	++++ 3.4984	3.6226 3.2648	3.3904 3.3577	3.4667 3.5646	3.8799 3.2956	Ave		3.4823			5.5		30.0				
Acrolein	++++ 0.2589	++++ 0.3059	++++ 0.3087	++++ 0.2901	0.2761 0.3360	Ave		0.2960			9.1		30.0				
Acetonitrile	++++ 0.5262	++++ 0.4776	++++ 0.4788	++++ 0.4717	0.3293 0.5246	Ave		0.4680			15.4		30.0				
Acetone	++++ 0.6144	++++ 0.5198	++++ 0.5193	++++ 0.4809	0.5816 0.5108	Ave		0.5378			9.3		30.0				
Pentane	++++ 0.2645	++++ 0.2416	++++ 0.2560	++++ 0.2623	0.2836 0.2560	Ave		0.2607			5.3		30.0				
Isopropyl alcohol	++++ 1.7927	++++ 1.3994	++++ 1.5977	++++ 1.4709	1.7607 1.4629	Ave		1.5863			9.6		30.0				
Ethyl ether	++++ 1.6850	++++ 1.4653	++++ 1.6011	++++ 1.4265	1.7711 1.5792	Ave		1.5880			8.2		30.0				
1,1-Dichloroethene	1.5881 1.3803	1.4913 1.3150	1.2949 1.4082	1.3811 1.3832	1.5033 1.3752	Ave		1.4121			6.4		30.0				
Acrylonitrile	++++ 0.9792	++++ 0.9584	0.9151 0.9682	0.9731 0.9008	0.8481 1.0417	Ave		0.9481			6.2		30.0				
1,1,2-Trichlorotrifluoroethane	++++ 2.9182	3.1032 2.8181	2.8515 2.8926	2.9406 2.8073	3.2211 2.7813	Ave		2.9260			5.0		30.0				
tert-Butanol	++++ 2.7826	++++ 1.9787	2.1182 2.4542	2.8146 2.0281	2.3988 2.1471	Ave		2.3403			14.0		30.0				
Methylene Chloride	++++ 1.5084	++++ 1.3706	++++ 1.3704	2.5596 1.2802	1.9551 1.2883	Ave		1.6190			29.4		30.0				
3-Chloropropene	++++ 1.6873	++++ 1.6106	1.2603 1.6386	1.7646 1.6799	1.9779 1.6864	Ave		1.6632			11.9		30.0				
Carbon disulfide	++++ 4.4997	++++ 4.2288	4.2607 4.3545	4.3589 4.2900	4.9643 4.2405	Ave		4.3997			5.6		30.0				
trans-1,2-Dichloroethene	++++ 1.4106	1.4246 1.4036	1.2942 1.4460	1.3772 1.4061	1.5206 1.4109	Ave		1.4104			4.2		30.0				
2-Methylpentane	++++ 4.4798	4.7177 4.4074	4.6839 4.4605	4.4358 4.2730	4.8901 4.1883	Ave		4.5041			4.9		30.0				
Methyl tert-butyl ether	++++ 3.9934	++++ 3.4686	3.8684 3.5451	3.9829 3.2379	3.4713 3.7510	Ave		3.6648			7.5		30.0				
1,1-Dichloroethane	++++ 3.1222	3.1357 3.0634	3.1066 3.0563	3.0369 2.9520	3.1641 3.0542	Ave		3.0768			2.1		30.0				
Vinyl acetate	++++ 4.0400	++++ 4.0967	4.0229 3.8849	4.0751 3.7695	3.6563 4.3912	Ave		3.9921			5.6		30.0				
Hexane	++++ 1.4084	++++ 1.4126	1.4999 1.4118	1.4584 1.3493	1.5094 1.3904	Ave		1.4300			3.8		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
2-Butanone	++++ 0.7072	++++ 0.5962	++++ 0.6245	0.7876 0.5643	0.5815 0.6573	Ave		0.6455			12.3		30.0				
cis-1,2-Dichloroethene	++++ 1.4838	1.4869 1.4533	1.4586 1.4677	1.4361 1.4252	1.5000 1.4882	Ave		1.4666			1.7		30.0				
Ethyl acetate	++++ 3.7946	++++ 3.2940	3.8015 3.3896	3.7028 3.2037	3.0512 3.7178	Ave		3.4944			8.4		30.0				
Chloroform	++++ 3.2011	3.3768 3.1162	3.2230 3.1129	3.1637 3.0462	3.3482 3.1791	Ave		3.1963			3.4		30.0				
Tetrahydrofuran	++++ 1.9363	++++ 1.7372	++++ 1.7900	++++ 1.6856	1.6761 1.9451	Ave		1.7950			6.7		30.0				
1,1,1-Trichloroethane	3.7430 3.3105	3.3998 3.2134	3.4183 3.2189	3.2984 3.1364	3.4236 3.2270	Ave		3.3389			5.2		30.0				
1,2-Dichloroethane	0.3791 0.3630	0.3466 0.3536	0.3636 0.3591	0.3652 0.3484	0.3675 0.3715	Ave		0.3618			2.8		30.0				
Cyclohexane	++++ 0.1407	++++ 0.1232	++++ 0.1323	++++ 0.1199	0.1402 0.1197	Ave		0.1320			8.6		30.0				
Benzene	0.8035 0.7545	0.7500 0.7026	0.7279 0.7227	0.7715 0.6625	0.7478 0.6760	Ave		0.7319			5.9		30.0				
1-Butanol	++++ 0.1327	++++ 0.0856	++++ 0.1120	++++ 0.0918	0.1229 0.0990	Ave		0.1081			15.6		30.0				
Carbon tetrachloride	0.5266 0.5320	0.3719 0.4769	0.3674 0.4717	0.4995 0.4838	0.5414 0.4869	Ave		0.4758			12.8		30.0				
2,3-Dimethylpentane	++++ 0.2004	++++ 0.1827	++++ 0.1833	0.2081 0.1750	0.2027 0.1861	Ave		0.1912			6.0		30.0				
Thiophene	++++ 0.4236	++++ 0.3973	0.4053 0.4095	0.4131 0.3908	0.4297 0.4202	Ave		0.4112			3.2		30.0				
2,2,4-Trimethylpentane	++++ 1.5115	1.4799 1.3280	1.3894 1.4079	1.5278 1.2934	1.4912 1.3430	Ave		1.4191			6.1		30.0				
n-Heptane	++++ 0.2981	++++ 0.2720	0.2784 0.2879	0.2930 0.2684	0.3035 0.2828	Ave		0.2855			4.3		30.0				
1,2-Dichloropropane	++++ 0.2996	0.3163 0.2821	0.3080 0.2912	0.3035 0.2627	0.2901 0.2904	Ave		0.2938			5.3		30.0				
Trichloroethene	0.3457 0.3108	0.3142 0.2869	0.2926 0.3139	0.3044 0.2854	0.3149 0.2900	Ave		0.3059			6.0		30.0				
Dibromomethane	++++ 0.2862	++++ 0.2616	0.3011 0.2698	0.2926 0.2655	0.2867 0.2726	Ave		0.2795			5.0		30.0				
Bromodichloromethane	++++ 0.5622	0.4984 0.5150	0.5076 0.5370	0.5261 0.5203	0.5531 0.5355	Ave		0.5283			3.9		30.0				
1,4-Dioxane	++++ 0.1089	++++ 0.0822	0.1014 0.0952	0.0867 0.0773	0.0872 0.0893	Ave		0.0910			11.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13293-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.3963	++++ 0.3193	0.3791 0.3489	0.3842 0.3277	0.3111 0.3902	Ave	0.3571				9.7		30.0				
Methylcyclohexane	++++ 0.5008	0.4679 0.4532	0.4726 0.4782	0.4995 0.4377	0.5052 0.4594	Ave	0.4749				4.9		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.7376	++++ 0.5114	0.5427 0.5931	0.6704 0.5033	0.5135 0.6255	Ave	0.5872				14.6		30.0				
cis-1,3-Dichloropropene	0.4555 0.4327	0.3977 0.4166	0.3950 0.4332	0.4121 0.4057	0.4121 0.4453	Ave	0.4206				4.8		30.0				
trans-1,3-Dichloropropene	0.4256 0.4168	0.3873 0.3976	0.3645 0.4213	0.3847 0.3904	0.3654 0.4394	Ave	0.3993				6.4		30.0				
Toluene	++++ 0.8789	0.8590 0.8111	0.8480 0.8345	0.8439 0.7385	0.7849 0.8137	Ave	0.8236				5.2		30.0				
1,1,2-Trichloroethane	0.2691 0.2761	0.2573 0.2540	0.2530 0.2647	0.2734 0.2355	0.2542 0.2612	Ave	0.2599				4.6		30.0				
2-Hexanone	++++ 0.3601	++++ 0.2423	++++ 0.3018	++++ 0.2374	0.3210 0.3040	Ave	0.2871				16.4		30.0				
n-Octane	++++ 0.3383	++++ 0.3037	0.3119 0.3252	0.3197 0.2988	0.3159 0.3110	Ave	0.3156				3.9		30.0				
C8 Range	++++ 3.3866	++++ 3.0673	++++ 3.2447	++++ 3.0104	3.3153 3.0667	Ave	3.1891				4.5		30.0				
Dibromochloromethane	++++ 0.4949	++++ 0.4796	0.4002 0.5117	0.4374 0.4775	0.4585 0.5016	Ave	0.4702				7.9		30.0				
1,2-Dibromoethane	0.4362 0.4642	0.3924 0.4366	0.4160 0.4565	0.4307 0.4133	0.4186 0.4485	Ave	0.4313				5.1		30.0				
Tetrachloroethene	0.3191 0.3085	0.3056 0.2875	0.2955 0.2904	0.2973 0.2723	0.2986 0.2811	Ave	0.2956				4.6		30.0				
Chlorobenzene	++++ 0.6823	0.6347 0.6165	0.6274 0.6471	0.6665 0.5687	0.6372 0.5936	Ave	0.6304				5.5		30.0				
Ethylbenzene	++++ 1.2040	0.9927 1.0426	1.0913 1.0990	1.1219 0.9529	1.0188 1.0741	Ave	1.0664				7.0		30.0				
m&p-Xylene	0.8906 0.9334	0.7895 0.8128	0.8240 0.8440	0.8839 0.7232	0.7930 0.7928	Ave	0.8287				7.4		30.0				
n-Nonane	0.6804 0.7411	0.6353 0.6548	0.6442 0.7062	0.6989 0.6265	0.6708 0.6597	Ave	0.6718				5.3		30.0				
Bromoform	++++ 0.4303	++++ 0.4100	0.3148 0.4507	0.3638 0.3997	0.3628 0.4287	Ave	0.3951				11.4		30.0				
Styrene	++++ 0.6561	++++ 0.5753	0.5448 0.6233	0.5671 0.5434	0.5317 0.6016	Ave	0.5804				7.5		30.0				
o-Xylene	0.9483 0.9765	0.8461 0.8518	0.8730 0.8801	0.9055 0.7737	0.8035 0.8709	Ave	0.8729				7.0		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13293-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	++++ 0.6990	++++ 0.5729	0.5935 0.5565	0.6423 0.5391	0.5712 0.6133	Ave		0.5985			8.7		30.0				
1,2,3-Trichloropropane	++++ 0.1977	++++ 0.1650	0.1776 0.1757	0.1859 0.1580	0.1615 0.1807	Ave		0.1752			7.6		30.0				
Cumene	1.2167 1.2684	1.1206 1.0727	1.1654 1.1118	1.2047 0.9839	1.0500 1.0988	Ave		1.1293			7.6		30.0				
N-Propylbenzene	++++ 0.3444	++++ 0.2903	0.2905 0.3061	0.3245 0.2722	0.2785 0.3115	Ave		0.3023			8.0		30.0				
2-Chlorotoluene	++++ 0.3163	0.2683 0.2751	0.2858 0.2915	0.3069 0.2545	0.2717 0.2833	Ave		0.2837			6.8		30.0				
4-Ethyltoluene	1.1802 1.2983	1.0116 1.0515	1.1413 1.1220	1.2070 0.9993	1.0471 1.1117	Ave		1.1170			8.4		30.0				
1,3,5-Trimethylbenzene	0.4380 0.5075	0.3882 0.4149	0.4426 0.4432	0.4745 0.3926	0.3987 0.4537	Ave		0.4354			8.7		30.0				
Alpha Methyl Styrene	++++ 0.5033	++++ 0.4343	0.3989 0.4736	0.4374 0.4299	0.3833 0.4831	Ave		0.4430			9.3		30.0				
n-Decane	0.8747 0.9432	0.7509 0.7920	0.8187 0.8445	0.8780 0.7261	0.7935 0.7728	Ave		0.8194			8.1		30.0				
tert-Butylbenzene	0.9684 1.0983	0.8858 0.8812	0.9841 0.9323	1.0423 0.8275	0.8844 0.9292	Ave		0.9434			8.7		30.0				
1,2,4-Trimethylbenzene	++++ 1.1015	++++ 0.8786	0.9629 0.9379	1.0532 0.8297	0.8790 0.9109	Ave		0.9442			9.8		30.0				
sec-Butylbenzene	1.4042 1.6121	1.2383 1.2838	1.3928 1.3577	1.4963 1.1958	1.3002 1.2979	Ave		1.3579			9.2		30.0				
1,3-Dichlorobenzene	0.6719 0.6879	0.5859 0.5841	0.6097 0.6223	0.6686 0.5421	0.5840 0.5830	Ave		0.6140			7.8		30.0				
Benzyl chloride	++++ 0.9497	++++ 0.7915	0.7453 0.8976	0.8357 0.8082	0.6939 0.8925	Ave		0.8268			10.3		30.0				
1,4-Dichlorobenzene	++++ 0.6937	0.6078 0.5884	0.6125 0.6275	0.6709 0.5475	0.5802 0.5853	Ave		0.6126			7.5		30.0				
p-Cymene	++++ 1.2964	++++ 1.0111	1.0677 1.0849	1.2097 0.9716	0.9962 1.0954	Ave		1.0916			10.2		30.0				
1,2,3-Trimethylbenzene	0.8730 1.1017	0.8179 0.8798	0.9554 0.9421	1.0217 0.8438	0.8661 0.9356	QuaF		0.8383	0.0058413					0.9990		0.9900	
Indane	0.8789 0.9974	0.7828 0.8038	0.8917 0.8452	0.9675 0.7360	0.8181 0.8012	Ave		0.8523			9.7		30.0				
1,2-Dichlorobenzene	++++ 0.6723	0.5633 0.5556	0.5995 0.5826	0.6559 0.5036	0.5632 0.5457	Ave		0.5824			9.2		30.0				
n-Butylbenzene	1.1836 1.3906	1.0732 1.0867	1.1566 1.1543	1.3153 1.0099	1.0574 1.0819	Ave		1.1510			10.4		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1 Analy Batch No.: 25539
 SDG No.: _____
 Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.8801	++++ 0.7121	0.7574 0.7655	0.8315 0.6820	0.6782 0.7448	Ave		0.7565			9.3		30.0				
n-Undecane	++++ 0.9943	++++ 0.7761	0.8500 0.8540	0.9850 0.7602	0.7623 0.8384	Ave		0.8525			10.9		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.3478	++++ 0.2779	0.2832 0.3121	0.3169 0.2736	0.2457 0.3173	Ave		0.2968			10.9		30.0				
1,2,4,5-Tetramethylbenzene	++++ 1.1899	++++ 0.9212	1.0058 0.9972	1.1740 0.8826	0.7962 1.0228	Ave		0.9987			13.6		30.0				
n-Dodecane	++++ 0.7357	++++ 0.5299	++++ 0.7091	++++ 0.5805	0.5269 0.7107	Ave		0.6321			15.3		30.0				
1,2,4-Trichlorobenzene	++++ 0.5006	0.4549 0.4143	0.4857 0.4838	0.5498 0.4296	0.3674 0.4992	Ave		0.4650			11.7		30.0				
Naphthalene	++++ 1.1302	1.1299 0.9984	1.1239 1.1677	1.4420 1.0181	0.8036 1.1595	Ave		1.1082			15.4		30.0				
Hexachlorobutadiene	++++ 0.4597	0.4096 0.3590	0.4490 0.3963	0.4721 0.3521	0.3766 0.4165	Ave		0.4101			10.6		30.0				
1,2,3-Trichlorobenzene	++++ 0.4713	0.4475 0.3731	0.4274 0.4448	0.5521 0.3790	0.3362 0.4545	Ave		0.4318			14.7		30.0				
2-Methylnaphthalene	++++ 0.2118	++++ 0.2243	++++ 0.4338	++++ 0.2777	++++ 0.3721	Ave		0.3039			31.7		50.0				
1-Methylnaphthalene	++++ 0.2729	++++ 0.2544	++++ 0.4766	++++ 0.2879	++++ 0.3737	Ave		0.3331			27.7		50.0				
4-Bromofluorobenzene (Surr)	0.7913 0.8258	0.7928 0.8081	0.7863 0.8410	0.8252 0.8281	0.8159	Ave		0.8136			2.3		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25539/8	GK19IC01.D
Level 2	IC 140-25539/9	GK19IC02.D
Level 3	IC 140-25539/10	GK19IC03.D
Level 4	IC 140-25539/11	GK19IC04.D
Level 5	IC 140-25539/12	GK19IC05.D
Level 6	IC 140-25539/13	GK19IC06.D
Level 7	ICIS 140-25539/14	GK19IC07.D
Level 8	IC 140-25539/15	GK19IC08.D
Level 9	IC 140-25539/3	GK19IC09.D
Level 10	IC 140-25539/5	GK19IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 213134	++++ 425995	17313 852115	34392 1641060	91638 3312685	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 122399	++++ 245751	++++ 485328	25131 922660	54576 1861073	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 293942	12847 592333	23762 1179512	47328 2302698	126801 4542189	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 38867	++++ 74207	++++ 152707	7374 284794	17960 571155	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorotetrafluoroethane	CBM	Ave	++++ 165816	6933 333157	13205 661452	26478 1248913	73353 2467542	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	2842 121765	5090 243569	9553 489146	18527 933000	53622 1895212	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 210337	++++ 408489	++++ 826350	33993 1577208	95989 3225870	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 98217	++++ 196095	++++ 400466	15080 760847	43741 1566166	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 93490	++++ 188277	7889 384351	14915 736086	40069 1508068	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 56838	++++ 114013	4619 237140	8851 452118	24256 934730	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 264173	++++ 471116	++++ 1024247	40079 1844034	96753 3900907	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 84388	3663 170971	6582 351375	13309 674263	36170 1396076	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 137913	++++ 273919	11840 583065	23179 1099927	58276 2252813	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	++++ 244363	10052 480008	19100 989104	37339 2018158	105029 3930679	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13293-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	++++ 18084	++++ 44982	++++ 90941	++++ 164247	7475 400688	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 36755	++++ 70220	++++ 141051	++++ 267075	8913 625658	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetone	CBM	Ave	++++ 128743	++++ 229293	++++ 458917	++++ 816802	47231 1827590	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 18477	++++ 35517	++++ 75410	++++ 148503	7676 305309	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 375654	++++ 617236	++++ 1411959	56892 2498339	131556 5234518	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 117694	++++ 215434	++++ 471654	++++ 807636	47943 1883466	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	2297 96413	4138 193344	7295 414843	14876 783088	40696 1640145	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 68397	++++ 140907	++++ 285199	++++ 509989	5155 1242476	10481 1.00	22957 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
1,1,2-Trichlorotrifluoroethane	CBM	Ave	++++ 203839	++++ 414334	++++ 852094	++++ 1589363	8611 3317262	16064 1.00	31673 2.00	87196 4.00	0.160 8.00	0.400 16.0
tert-Butanol	CBM	Ave	++++ 194363	++++ 290919	++++ 722973	++++ 1148226	11933 2560873	30315 1.00	64937 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
Methylene Chloride	CBM	Ave	++++ 105364	++++ 201519	++++ 403707	++++ 724823	27569 1536576	52924 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 117858	++++ 236800	++++ 482696	++++ 951069	7100 2011369	19006 1.00	53543 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
Carbon disulfide	CBM	Ave	++++ 314303	++++ 621752	++++ 1282762	++++ 2428840	24003 5057684	46949 1.00	134386 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 98532	++++ 206361	++++ 425966	++++ 796056	7291 1682746	14833 1.00	41163 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
2-Methylpentane	CBM	Ave	++++ 312910	++++ 648001	++++ 1313967	++++ 2419211	13091 4995390	26387 1.00	47777 2.00	132377 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 278941	++++ 509969	++++ 1044311	++++ 1833163	21793 4473786	42899 1.00	93968 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
1,1-Dichloroethane	CBM	Ave	++++ 218087	++++ 450395	++++ 900321	++++ 1671302	8701 3642762	17501 1.00	32710 2.00	85654 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 282190	++++ 602326	++++ 1144430	++++ 2134172	22663 5237334	43892 1.00	98976 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
Hexane	CBM	Ave	++++ 98376	++++ 207693	++++ 415892	++++ 763910	8450 1658330	15708 1.00	40860 2.00	++++ 4.00	0.0800 8.00	0.160 16.0
2-Butanone	CBM	Ave	++++ 49398	++++ 87654	++++ 183971	++++ 319512	8483 784000	15742 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	++++ 103642	++++ 213674	++++ 432348	++++ 806875	4126 1774981	8217 1.00	15468 2.00	40605 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13293-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
Ethyl acetate	CBM	Ave	++++ 265053	++++ 484309	21416 998518	39882 1813820	82596 4434165	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	++++ 223597	++++ 458167	9370 916990	18157 1724652	90637 3791654	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 135248	++++ 255412	++++ 527305	++++ 954335	45372 2319928	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	5414 231241	9434 472457	19257 948241	35526 1775710	92677 3848807	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	3515 149022	6167 328987	12952 645316	23404 1251312	59768 2781931	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 57756	++++ 114639	++++ 237706	8987 430813	24070 896181	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	7450 309735	13343 653669	25930 1298691	49442 2379560	121628 5061484	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 54462	++++ 79637	++++ 201295	7877 329596	18291 741238	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	4882 218396	6616 443671	13089 847780	32010 1737710	88058 3645457	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 82285	++++ 169965	++++ 344322	6528 628549	13336 1393431	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 173881	++++ 369642	++++ 735880	14436 1403861	26473 3146075	69887 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 620492	++++ 1235504	++++ 2530256	49494 4645523	97913 10056141	242545 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Heptane	DFBZ	Ave	++++ 122383	++++ 253052	9917 517408	18777 964177	49369 2117126	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 122969	++++ 262474	5627 523379	10970 943495	19451 2174092	47190 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	3205 127565	5590 266889	10423 564088	19511 1025189	51213 2171695	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 117498	++++ 243347	++++ 484886	10726 953758	18753 2041273	46630 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 230779	++++ 479179	8867 964967	18081 1868708	33715 4009628	89969 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 44708	++++ 76432	++++ 171069	3087 277476	6500 668565	14191 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 162679	++++ 297095	13506 627079	24620 1176973	50603 2921446	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	++++ 205561	++++ 421647	8324 859405	16836 1572038	32014 3439448	82164 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 302782	++++ 475813	++++ 1065796	19331 1807905	42961 4683489	83517 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13293-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	4223	7075	14071	26411	67030	0.0200	0.0400	0.0800	0.160	0.400
			177618	387570	778502	1457194	3334227	1.00	2.00	4.00	8.00	16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	3678	6417	12164	23363	57675	0.0200	0.0400	0.0800	0.160	0.400
			158910	339832	700890	1310210	3089373	1.00	2.00	4.00	8.00	16.0
Toluene	CBZd 5	Ave	++++	14232	28303	51257	123882	++++	0.0400	0.0800	0.160	0.400
			335051	693251	1388384	2478512	5720473	1.00	2.00	4.00	8.00	16.0
1,1,2-Trichloroethane	CBZd 5	Ave	2326	4263	8444	16606	40113	0.0200	0.0400	0.0800	0.160	0.400
			105258	217108	440430	790249	1836669	1.00	2.00	4.00	8.00	16.0
2-Hexanone	CBZd 5	Ave	++++	++++	++++	19499	38394	++++	++++	++++	0.160	0.400
			137273	207099	502190	796624	2137087	1.00	2.00	4.00	8.00	16.0
n-Octane	CBZd 5	Ave	++++	++++	10409	19420	49853	++++	++++	0.0800	0.160	0.400
			128965	259562	541042	1002854	2186474	1.00	2.00	4.00	8.00	16.0
C8 Range	CBZd 5	Ave	++++	++++	++++	201359	510187	++++	++++	++++	0.160	0.400
			1291089	2621723	5398304	10103657	21559958	1.00	2.00	4.00	8.00	16.0
Dibromochloromethane	CBZd 5	Ave	++++	++++	13356	26567	72362	++++	++++	0.0800	0.160	0.400
			188691	409895	851378	1602672	3526724	1.00	2.00	4.00	8.00	16.0
1,2-Dibromoethane	CBZd 5	Ave	3770	6501	13885	26157	66073	0.0200	0.0400	0.0800	0.160	0.400
			176960	373205	759482	1386991	3152916	1.00	2.00	4.00	8.00	16.0
Tetrachloroethene	CBZd 5	Ave	2758	5064	9863	18059	47134	0.0200	0.0400	0.0800	0.160	0.400
			117594	245717	483226	913891	1976468	1.00	2.00	4.00	8.00	16.0
Chlorobenzene	CBZd 5	Ave	++++	10517	20939	40481	100567	++++	0.0400	0.0800	0.160	0.400
			260123	526924	1076675	1908819	4172904	1.00	2.00	4.00	8.00	16.0
Ethylbenzene	CBZd 5	Ave	++++	16448	36421	68140	160794	++++	0.0400	0.0800	0.160	0.400
			459007	891181	1828423	3198014	7551419	1.00	2.00	4.00	8.00	16.0
m&p-Xylene	CBZd 5	Ave	15395	26164	55002	107364	250316	0.0400	0.0800	0.160	0.320	0.800
			711699	1389444	2808548	4854329	11146974	2.00	4.00	8.00	16.0	32.0
n-Nonane	CBZd 5	Ave	5881	10526	21500	42447	105880	0.0200	0.0400	0.0800	0.160	0.400
			282529	559652	1174879	2102592	4637617	1.00	2.00	4.00	8.00	16.0
Bromoform	CBZd 5	Ave	++++	++++	10507	22098	57258	++++	++++	0.0800	0.160	0.400
			164039	350460	749817	1341429	3013694	1.00	2.00	4.00	8.00	16.0
Styrene	CBZd 5	Ave	++++	++++	18184	34443	83914	++++	++++	0.0800	0.160	0.400
			250111	491766	1037031	1823684	4229327	1.00	2.00	4.00	8.00	16.0
o-Xylene	CBZd 5	Ave	8196	14019	29137	54994	126815	0.0200	0.0400	0.0800	0.160	0.400
			372286	728079	1464208	2596658	6122615	1.00	2.00	4.00	8.00	16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	++++	++++	19807	39013	90150	++++	++++	0.0800	0.160	0.400
			266474	489686	925921	1809382	4311662	1.00	2.00	4.00	8.00	16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++	++++	5928	11288	25496	++++	++++	0.0800	0.160	0.400
			75369	140992	292259	530200	1270140	1.00	2.00	4.00	8.00	16.0
Cumene	CBZd 5	Ave	10516	18567	38895	73170	165726	0.0200	0.0400	0.0800	0.160	0.400
			483580	916878	1849824	3302284	7725096	1.00	2.00	4.00	8.00	16.0
N-Propylbenzene	CBZd 5	Ave	++++	++++	9696	19711	43961	++++	++++	0.0800	0.160	0.400
			131304	248105	509297	913517	2189792	1.00	2.00	4.00	8.00	16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13293-1

Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04

Calibration End Date: 11/19/2018 21:56

Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 120577	4446 235104	9540 484959	18637 854299	42884 1991626	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	10200 494958	16761 898739	38090 1866746	73309 3353829	165259 7815900	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	3786 193494	6432 354673	14772 737322	28820 1317619	62934 3189740	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 191892	++++ 371223	13313 787900	26567 1442818	60498 3396315	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Decane	CBZd 5	Ave	7560 359592	12441 676932	27324 1405096	53327 2436845	125239 5432796	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	8370 418713	14677 753238	32844 1551104	63305 2777445	139594 6532801	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 419918	++++ 750976	32137 1560491	63968 2784519	138740 6404114	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	12136 614586	20517 1097360	46486 2258822	90880 4013369	205213 9124681	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	5807 262262	9708 499287	20350 1035420	40610 1819495	92171 4098836	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 362042	++++ 676508	24875 1493396	50754 2712511	109523 6274527	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	++++ 264470	10071 502954	20441 1043933	40748 1837381	91575 4114618	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
p-Cymene	CBZd 5	Ave	++++ 494218	++++ 864208	35635 1804954	73474 3260871	157227 7700803	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	QuaF	7545 419992	13552 751993	31888 1567341	62052 2832151	136691 6577412	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	7596 380253	12970 687080	29760 1406234	58762 2470291	129114 5633002	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 256293	9334 474922	20010 969247	39836 1690175	88894 3836439	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Butylbenzene	CBZd 5	Ave	10230 530160	17781 928877	38603 1920490	79887 3389522	166884 7605792	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 335541	++++ 608660	25279 1273573	50502 2288947	107041 5236482	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Undecane	CBZd 5	Ave	++++ 379057	++++ 663396	28369 1420906	59824 2551359	120308 5894210	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 132611	++++ 237572	9452 519301	19247 918221	38782 2230442	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 453650	++++ 787407	33570 1659059	71303 2962260	125664 7190615	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Dodecane	CBZd 5	Ave	++++ 280491	++++ 452943	++++ 1179708	++++ 1948321	83156 4996610	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1 Analy Batch No.: 25539

SDG No.: _____

Instrument ID: MG GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/19/2018 13:04 Calibration End Date: 11/19/2018 21:56 Calibration ID: 1749

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 190857	7537 354159	16209 804852	33390 1441740	57989 3509735	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 430856	18721 853395	37511 1942781	87580 3417093	126841 8151861	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 175239	6787 306859	14985 659395	28674 1181716	59443 2927915	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 179674	7414 318921	14265 739999	33535 1271858	53064 3195184	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 80738	++++ 191719	++++ 721705	++++ 932228	++++ 2615960	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 104049	++++ 217486	++++ 792974	++++ 966216	++++ 2627036	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1367760 1259220	1313630 1381357	1312187 1399256	1252969 1389696	1297299 1433969	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD
QuaF = Quadratic ISTD forced zero

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++ 2.3273	+++++ 2.2136	2.6032 2.2367	2.5523 2.4103	2.4630 2.1808	Ave		2.3734			6.7		30.0				
Propene	+++++ 0.7221	+++++ 0.6895	+++++ 0.6844	0.8419 0.7524	0.7507 0.6660	Ave		0.7296			8.2		30.0				
Dichlorodifluoromethane	+++++ 4.1510	+++++ 3.9686	4.5412 4.0428	4.2461 4.8211	5.3003 3.7479	Ave		4.3524			11.7		30.0				
Chloromethane	+++++ 0.2871	+++++ 0.2733	0.4314 0.2689	0.2960 0.2912	0.3371 0.2638	Ave		0.3061			18.1		30.0				
1,2-Dichlorotetrafluoroethane	+++++ 3.0989	3.8991 3.0537	3.2433 3.1101	3.1843 3.3433	3.5538 2.6767	Ave		3.2404			10.6		30.0				
Vinyl chloride	1.3396 0.9887	1.3354 0.9559	1.1215 0.9544	1.1058 0.9748	1.0442 0.9105	Ave		1.0731			14.4		30.0				
1,3-Butadiene	+++++ 0.6523	+++++ 0.6352	+++++ 0.6377	0.7017 0.6500	0.6571 0.6202	Ave		0.6506			4.0		30.0				
Butane	+++++ 1.1091	+++++ 1.0560	1.3166 1.0795	1.1752 1.0850	1.2095 1.0260	Ave		1.1321			8.5		30.0				
Bromomethane	+++++ 1.2054	+++++ 1.1811	1.4266 1.1809	1.2696 1.2035	1.2705 1.1456	Ave		1.2354			7.2		30.0				
Chloroethane	+++++ 0.4893	+++++ 0.4606	0.6023 0.4673	0.5518 0.4597	0.4948 0.4499	Ave		0.4970			10.7		30.0				
Ethanol	+++++ 0.2949	+++++ 0.2999	+++++ 0.2981	0.3286 0.2885	0.3153 0.2724	Ave		0.2997			6.1		30.0				
Vinyl bromide	+++++ 1.2738	+++++ 1.2507	1.4513 1.2699	1.3532 1.2460	1.3493 1.2216	Ave		1.3020			5.9		30.0				
2-Methylbutane	+++++ 0.7979	+++++ 0.7734	0.8639 0.7606	0.8536 0.7713	0.8359 0.7425	Ave		0.7999			5.7		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Acrolein	++++ 0.2149	++++ 0.2505	++++ 0.2493	0.3397 0.2426	0.2316 0.2411	Ave		0.2528			15.9		30.0				
Trichlorofluoromethane	6.6790 5.8128	6.2714 5.6498	6.2323 5.6579	6.0249 5.5584	5.9679 5.2697	Ave		5.9124			6.9		30.0				
Acetonitrile	++++ 0.2348	++++ 0.2373	++++ 0.2818	0.2630 0.2803	0.2428 0.2703	Ave		0.2586			7.8		30.0				
Acetone	++++ 0.4175	++++ 0.3860	++++ 0.3784	0.5760 0.3627	0.4291 0.3557	Ave		0.4151			18.3		30.0				
Pentane	++++ 0.1987	++++ 0.1907	++++ 0.1944	0.2412 0.1914	0.2034 0.1879	Ave		0.2011			9.2		30.0				
Isopropyl alcohol	++++ 1.1215	++++ 1.1376	++++ 1.1294	1.2584 1.0760	1.1488 1.0492	Ave		1.1316			5.9		30.0				
Ethyl ether	++++ 0.6540	++++ 0.6244	++++ 0.6327	0.7089 0.6995	0.6970 0.6464	Ave		0.6661			5.2		30.0				
1,1-Dichloroethene	1.6400 1.3612	1.4528 1.3523	1.4077 1.3829	1.3842 1.3970	1.3751 1.3233	Ave		1.4076			6.3		30.0				
Acrylonitrile	++++ 0.6195	++++ 0.6124	++++ 0.6202	++++ 0.6572	0.6255 0.6313	Ave		0.6277			2.5		30.0				
tert-Butanol	++++ 2.6737	++++ 2.7383	++++ 2.6973	2.6805 2.6655	2.7132 2.5593	Ave		2.6773			2.0		30.0				
1,1,2-Trichlorotrifluoroethane	++++ 3.5282	3.6010 3.4530	3.7397 3.4392	3.5306 3.4042	3.5510 3.1580	Ave		3.4894			4.6		30.0				
Methylene Chloride	++++ 1.2853	++++ 1.1917	++++ 1.1531	2.0228 1.1482	1.5003 1.0647	Ave		1.3380			24.9		30.0				
3-Chloropropene	++++ 1.3439	++++ 1.2944	1.1777 1.2837	1.4302 1.3374	1.3141 1.2919	Ave		1.3092			5.4		30.0				
Carbon disulfide	++++ 3.4096	++++ 3.3395	3.3655 3.3248	3.2471 3.4285	3.3320 3.2774	Ave		3.3406			1.8		30.0				
trans-1,2-Dichloroethene	1.5926 1.4009	1.5829 1.3797	1.4276 1.4044	1.3885 1.4254	1.3834 1.3721	Ave		1.4358			5.7		30.0				
2-Methylpentane	++++ 1.8951	++++ 1.8425	++++ 1.8466	1.9630 1.9346	1.9304 1.8132	Ave		1.8940			2.8		30.0				
Methyl tert-butyl ether	++++ 4.5873	++++ 4.5288	4.7495 4.5802	4.4631 4.6026	4.5963 4.4400	Ave		4.5685			2.1		30.0				
1,1-Dichloroethane	2.6815 2.3300	2.6739 2.2911	2.4729 2.3182	2.3130 2.3408	2.3587 2.2447	Ave		2.4025			6.5		30.0				
Vinyl acetate	++++ 2.2364	++++ 2.3368	++++ 2.4359	2.0297 2.5381	2.1537 2.5129	Ave		2.3205			8.2		30.0				
2-Butanone	++++ 0.5380	++++ 0.5309	++++ 0.5519	0.5759 0.5616	0.5098 0.5445	Ave		0.5446			3.9		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	++++ 0.8187	++++ 0.8108	0.9023 0.8291	0.8416 0.8382	0.8376 0.8031	Ave		0.8352			3.6		30.0				
cis-1,2-Dichloroethene	1.6200 1.4112	1.4958 1.4310	1.4342 1.4304	1.4272 1.4418	1.3943 1.3928	Ave		1.4479			4.6		30.0				
Ethyl acetate	++++ 2.0207	++++ 2.0336	1.8097 2.1099	1.9184 2.1701	1.9214 2.1110	Ave		2.0119			6.0		30.0				
Chloroform	4.2334 3.7394	4.0960 3.6835	3.8341 3.7449	3.7602 3.7523	3.7763 3.5872	Ave		3.8207			5.1		30.0				
Tetrahydrofuran	++++ 0.8846	++++ 0.8714	++++ 0.8870	0.8784 0.9150	0.8832 0.8836	Ave		0.8862			1.5		30.0				
1,1,1-Trichloroethane	4.9709 4.7770	4.9939 4.7670	5.0122 4.8476	4.7467 4.8764	4.7402 4.7023	Ave		4.8434			2.4		30.0				
1,2-Dichloroethane	0.5380 0.5057	0.5327 0.4936	0.5166 0.4997	0.4858 0.5068	0.4926 0.4915	Ave		0.5063			3.5		30.0				
Benzene	0.7533 0.6321	0.7075 0.6240	0.7019 0.6266	0.6312 0.6238	0.6214 0.5956	Ave		0.6517			7.8		30.0				
Cyclohexane	++++ 0.1013	++++ 0.0986	++++ 0.1001	0.0959 0.0971	0.0939 0.0911	Ave		0.0968			3.7		30.0				
1-Butanol	++++ 0.0448	++++ 0.0477	++++ 0.0492	++++ 0.0516	0.0330 0.0509	Ave		0.0462			14.9		30.0				
Carbon tetrachloride	0.9231 0.9489	0.9429 0.9372	0.7537 0.9263	0.9038 0.9692	0.9350 0.9273	Ave		0.9167			6.5		30.0				
2,3-Dimethylpentane	++++ 0.1378	++++ 0.1390	++++ 0.1212	0.1277 0.1410	0.1355 0.1365	Ave		0.1349			5.2		30.0				
Thiophene	++++ 0.3778	++++ 0.3718	0.3563 0.3816	0.3607 0.3893	0.3698 0.3754	Ave		0.3728			2.9		30.0				
2,2,4-Trimethylpentane	++++ 0.8423	++++ 0.8248	++++ 0.8652	0.8182 0.8535	0.8128 0.8176	Ave		0.8342			2.3		30.0				
1,2-Dichloropropane	++++ 0.2041	++++ 0.2015	0.2130 0.2054	0.1991 0.2089	0.2024 0.2020	Ave		0.2045			2.2		30.0				
n-Heptane	++++ 0.2142	++++ 0.2122	++++ 0.1976	0.1979 0.2154	0.2071 0.2066	Ave		0.2083			3.5		30.0				
Trichloroethene	0.4192 0.3857	0.3851 0.3869	0.4007 0.4221	0.3771 0.3913	0.3880 0.3727	Ave		0.3929			4.2		30.0				
Dibromomethane	++++ 0.3459	++++ 0.3374	++++ 0.3725	0.3565 0.3576	0.3464 0.3447	Ave		0.3514			3.1		30.0				
Bromodichloromethane	++++ 0.6680	++++ 0.6726	0.5971 0.7005	0.5918 0.7174	0.6239 0.6980	Ave		0.6587			7.4		30.0				
1,4-Dioxane	++++ 0.0965	++++ 0.1030	++++ 0.1037	0.0992 0.1007	0.0973 0.0954	Ave		0.0994			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++	++++	0.2139	0.1766	0.2044	Ave		0.2275			12.8		30.0				
	0.2243	0.2331	0.2468	0.2628	0.2582												
Methylcyclohexane	++++	++++	0.3972	0.3842	0.3938	Ave		0.4024			2.5		30.0				
	0.4067	0.4050	0.4110	0.4158	0.4053												
4-Methyl-2-pentanone (MIBK)	++++	++++	++++	0.2895	0.3277	Ave		0.3626			11.5		30.0				
	0.3577	0.3715	0.3933	0.4035	0.3952												
cis-1,3-Dichloropropene	++++	0.3635	0.3602	0.3514	0.3808	Ave		0.3948			8.2		30.0				
	0.3940	0.4127	0.4288	0.4368	0.4249												
trans-1,3-Dichloropropene	++++	0.4035	0.3959	0.4276	0.4537	Ave		0.4674			10.5		30.0				
	0.4780	0.4968	0.5178	0.5209	0.5119												
Toluene	1.0184	0.9133	0.9750	0.9478	0.9541	Ave		0.9586			3.2		30.0				
	0.9698	0.9624	0.9710	0.9638	0.9102												
1,1,2-Trichloroethane	0.2339	0.2426	0.2564	0.2580	0.2596	Ave		0.2543			4.0		30.0				
	0.2639	0.2594	0.2610	0.2630	0.2452												
2-Hexanone	++++	++++	++++	0.1399	0.1787	Ave		0.2006			16.0		30.0				
	0.1981	0.2103	0.2238	0.2293	0.2239												
Dibromochloromethane	0.6655	0.5795	0.6334	0.6501	0.6985	Ave		0.7414			14.6		30.0				
	0.7840	0.8296	0.8666	0.8735	0.8331												
n-Octane	++++	++++	0.2922	0.3033	0.2998	Ave		0.3054			3.1		30.0				
	0.3146	0.3133	0.3156	0.3109	0.2932												
C8 Range	++++	++++	++++	++++	2.0961	Ave		2.1360			2.5		30.0				
	2.1678	2.1237	2.1591	2.2092	2.0601												
1,2-Dibromoethane	++++	++++	0.5000	0.4942	0.5448	Ave		0.5574			7.3		30.0				
	0.5766	0.5804	0.5952	0.5984	0.5694												
Tetrachloroethene	0.4858	0.4864	0.4732	0.4838	0.4706	Ave		0.4749			2.9		30.0				
	0.4849	0.4819	0.4752	0.4653	0.4417												
Chlorobenzene	0.8210	0.8425	0.8551	0.8450	0.8379	Ave		0.8374			2.0		30.0				
	0.8508	0.8373	0.8444	0.8430	0.7968												
Ethylbenzene	1.3703	1.3589	1.4055	1.3343	1.4017	Ave		1.3820			2.9		30.0				
	1.4178	1.4128	1.4174	1.4023	1.2986												
m&p-Xylene	1.1137	1.1023	1.1618	1.1488	1.1673	Ave		1.1335			4.1		30.0				
	1.1838	1.1550	1.1536	1.1251	1.0234												
Bromoform	++++	++++	0.5893	0.6166	0.6638	Ave		0.7786			18.1		30.0				
	0.7606	0.8485	0.9286	0.9279	0.8938												
Styrene	++++	++++	0.6004	0.6182	0.6786	Ave		0.7430			13.0		30.0				
	0.7750	0.7975	0.8292	0.8487	0.7961												
o-Xylene	1.1430	1.1230	1.2624	1.2290	1.2492	Ave		1.1905			5.0		30.0				
	1.2366	1.2060	1.1986	1.1769	1.0804												
n-Nonane	++++	++++	0.4455	0.4515	0.4801	Ave		0.4511			5.2		30.0				
	0.4737	0.4580	0.4538	0.4433	0.4032												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13934-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.5797	0.5118	0.5697	0.5802	0.6188	Ave		0.6050			7.5		30.0				
	0.6456	0.6455	0.6181	0.6658	0.6146												
1,2,3-Trichloropropane	++++	++++	0.2911	0.2918	0.2978	Ave		0.3000			2.7		30.0				
	0.3084	0.3034	0.3046	0.3115	0.2914												
Cumene	++++	++++	1.8308	1.7528	1.7150	Ave		1.6941			5.0		30.0				
	1.7012	1.6661	1.6871	1.6694	1.5307												
N-Propylbenzene	0.4435	0.4328	0.4534	0.4640	0.4755	Ave		0.4652			4.5		30.0				
	0.4963	0.4795	0.4859	0.4778	0.4438												
2-Chlorotoluene	++++	0.3991	0.4619	0.4417	0.4398	Ave		0.4306			5.3		30.0				
	0.4524	0.4310	0.4318	0.4245	0.3929												
4-Ethyltoluene	1.5529	1.6047	1.7828	1.7531	1.7972	Ave		1.7594			6.6		30.0				
	1.8829	1.8611	1.8557	1.8469	1.6563												
1,3,5-Trimethylbenzene	0.6792	0.6523	0.7326	0.7228	0.7292	Ave		0.7199			5.1		30.0				
	0.7724	0.7416	0.7410	0.7434	0.6843												
Alpha Methyl Styrene	++++	++++	++++	0.5439	0.5731	Ave		0.6844			13.4		30.0				
	0.6781	0.7295	0.7535	0.7838	0.7289												
n-Decane	++++	++++	0.6176	0.6408	0.6488	Ave		0.6421			4.6		30.0				
	0.6849	0.6585	0.6522	0.6491	0.5849												
tert-Butylbenzene	1.6566	1.6665	1.8313	1.8740	1.8639	Ave		1.7534			6.6		30.0				
	1.8841	1.7827	1.7468	1.6988	1.5293												
1,2,4-Trimethylbenzene	1.4293	1.4880	1.6887	1.6986	1.7123	Ave		1.6066			7.2		30.0				
	1.7233	1.6671	1.6372	1.5922	1.4293												
1,3-Dichlorobenzene	1.1997	1.0963	1.2442	1.1823	1.1621	Ave		1.1598			4.5		30.0				
	1.1856	1.1603	1.1572	1.1516	1.0583												
sec-Butylbenzene	2.0787	2.1298	2.2743	2.2407	2.2363	Ave		2.1706			5.7		30.0				
	2.3069	2.2195	2.1908	2.1561	1.8732												
Benzyl chloride	++++	++++	1.0998	1.0436	1.1034	Ave		1.2392			11.3		30.0				
	1.2529	1.3231	1.4041	1.3938	1.2924												
1,4-Dichlorobenzene	1.2196	1.1487	1.2267	1.2179	1.1651	Ave		1.1644			5.1		30.0				
	1.2112	1.1594	1.1399	1.1212	1.0340												
p-Cymene	2.1095	2.1432	2.2305	2.2370	2.2728	Ave		2.1910			5.2		30.0				
	2.3345	2.2554	2.2238	2.1784	1.9244												
1,2,3-Trimethylbenzene	1.6103	1.5786	1.8623	1.7831	1.7558	Ave		1.7253			6.2		30.0				
	1.8346	1.7874	1.7524	1.7335	1.5556												
1,2-Dichlorobenzene	1.1708	1.2083	1.2580	1.2065	1.1355	Ave		1.1443			6.3		30.0				
	1.1557	1.1157	1.1029	1.0865	1.0034												
Indane	1.4503	1.3817	1.4785	1.4862	1.4419	Ave		1.4233			5.0		30.0				
	1.4994	1.4300	1.4226	1.3893	1.2529												
Indene	++++	++++	1.0339	1.0803	1.0663	Ave		1.1682			8.2		30.0				
	1.2013	1.2223	1.2542	1.2953	1.1920												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
n-Butylbenzene	1.8231 1.8829	1.6985 1.8028	1.8359 1.7871	1.8719 1.7597	1.8266 1.5551	Ave		1.7844			5.4		30.0				
n-Undecane	++++ 0.8059	++++ 0.7917	++++ 0.7809	++++ 0.7402	0.7701 0.6720	Ave		0.7598			5.8		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.5799	++++ 0.6160	0.4391 0.6515	0.4709 0.6213	0.4861 0.5926	Ave		0.5572			14.3		30.0				
1,2,4,5-Tetramethylbenzene	++++ 2.1235	++++ 2.1635	2.1451 2.1540	2.1430 1.9985	1.9593 1.8488	Ave		2.0670			5.7		30.0				
n-Dodecane	++++ 0.7733	++++ 0.8936	++++ 0.8877	0.8688 0.7212	0.6803 0.7447	Ave		0.7957			10.9		30.0				
1,2,4-Trichlorobenzene	++++ 1.1894	++++ 1.2694	1.4472 1.2818	1.3888 1.0940	1.0856 1.1269	Ave		1.2354			10.9		30.0				
Naphthalene	++++ 2.0750	3.4525 2.4487	2.8184 2.5087	2.7367 2.1182	1.8255 ++++	Ave		2.4980			20.6		30.0				
Hexachlorobutadiene	++++ 1.4923	++++ 1.4393	1.7181 1.4314	1.5746 1.2072	1.3912 1.2353	Ave		1.4362			11.7		30.0				
1,2,3-Trichlorobenzene	++++ 1.1295	++++ 1.2212	1.4432 1.2323	1.3860 0.9868	1.0237 1.0761	Ave		1.1873			13.9		30.0				
2-Methylnaphthalene	++++ 0.3586	++++ 0.9509	++++ 1.0808	++++ 0.6399	++++ 0.9374	Ave		0.7935			36.8		50.0				
1-Methylnaphthalene	++++ 0.3899	++++ 0.8629	++++ 0.9496	++++ 0.5203	++++ 0.7770	Ave		0.6999			33.7		50.0				
4-Bromofluorobenzene (Surr)	0.8488 0.8636	0.8528 0.8535	0.8654 0.8546	0.8648 0.8319	0.8641 0.8066	Ave		0.8506			2.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 165552	++++ 330784	13488 670931	27178 1511149	67965 2786793	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 51364	++++ 103039	++++ 205301	8965 471697	20715 851034	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 295289	++++ 593041	23530 1212691	45214 3022572	146259 4789313	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 20420	++++ 40844	2235 80675	3152 182542	9302 337068	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorotetrafluoroethane	CBM	Ave	++++ 220441	10161 456323	16805 932912	33908 2096072	98065 3420506	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	1811 70331	3480 142840	5811 286294	11775 611179	28814 1163551	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 46402	++++ 94920	++++ 191280	7472 407531	18132 792495	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 78896	++++ 157806	6822 323819	12514 680235	33375 1311043	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 85746	++++ 176496	7392 354225	13519 754560	35058 1463890	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 34804	++++ 68833	3121 140181	5876 288211	13655 574974	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 104882	++++ 224069	++++ 447098	17498 904290	43508 1740692	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 90610	++++ 186899	7520 380924	14410 781185	37233 1560991	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 56760	++++ 115570	4476 228167	9090 483547	23067 948871	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrolein	CBM	Ave	++++ 15289	++++ 37440	++++ 74788	3617 152096	6392 308108	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13934-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	9029 413497	16343 844261	32292 1697186	64156 3484877	164680 6733950	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 16703	++++ 35460	++++ 84531	++++ 175714	2801 345458	6701 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Acetone	CBM	Ave	++++ 89101	++++ 173059	++++ 340521	18402 682117	35521 1363433	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 14137	++++ 28499	++++ 58302	2568 119973	5613 240067	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 239341	++++ 509997	++++ 1016357	40201 2023732	95103 4022317	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 46526	++++ 93310	++++ 189800	7549 438542	19232 826066	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	2217 96830	3786 202076	7294 414812	14740 875865	37945 1690964	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 44072	++++ 91512	++++ 186041	++++ 412056	17259 806690	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
tert-Butanol	CBM	Ave	++++ 190196	++++ 409183	13889 809098	28891 1671112	74242 3270376	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichlorotrifluoroethane	CBM	Ave	++++ 250984	9384 515989	19377 1031649	37596 2134286	97989 4035478	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 91431	++++ 178076	++++ 345898	21540 719893	41401 1360585	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 95603	++++ 193431	6102 385054	15229 838478	36262 1650820	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 242543	++++ 499031	17438 997332	34577 2149500	91945 4188128	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	2153 99652	4125 206172	7397 421281	14785 893667	38175 1753401	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 134813	++++ 275324	10171 553915	20556 1212878	53163 2316982	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 326320	++++ 676752	24609 1373906	47525 2885627	126834 5673760	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	3625 165748	6968 342362	12813 695373	24630 1467554	65086 2868475	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 159088	++++ 349189	++++ 730693	21613 1591261	59429 3211124	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2-Butanone	CBM	Ave	++++ 38268	++++ 79333	++++ 165553	6132 352107	14067 695780	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 58239	++++ 121155	++++ 248691	4675 525494	8962 1026278	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	2190 100389	3898 213838	7431 429081	15197 903953	38474 1779827	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13934-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 143745	++++ 303889	9377 632910	20428 1360573	53019 2697533	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	5723 266010	10674 550434	19866 1123349	40040 2352521	104204 4583947	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 62926	++++ 130211	++++ 266070	9354 573668	24371 1129072	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	6720 339819	13014 712345	25970 1454125	50545 3057281	130803 6008857	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4162 199683	7880 414101	15042 837957	29238 1778626	76773 3480930	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	5827 249589	10465 523482	20437 1050705	37991 2189441	96837 4217712	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 39991	++++ 82675	++++ 167839	5770 340746	14632 645373	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 17690	++++ 40004	++++ 82457	++++ 181076	5146 360622	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7141 374679	13947 786171	21947 1553305	54395 3401707	145724 6567265	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 54415	++++ 116636	3528 235995	7686 494713	21116 966448	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 149183	++++ 311873	10374 639928	21711 1366267	57630 2658371	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 332582	++++ 691902	25192 1407509	49245 2995449	126672 5790015	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 80581	++++ 169011	6201 344383	11982 733246	31548 1430590	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Heptane	DFBZ	Ave	++++ 84592	++++ 178041	5754 361284	11910 756110	32279 1463381	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	3243 152289	5696 324569	11668 707793	22698 1373208	60473 2639630	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 136587	++++ 283066	10846 586890	21454 1255108	53985 2441282	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 263754	++++ 564189	17387 1174659	35620 2518000	97237 4943175	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 38117	++++ 86437	++++ 173912	5968 353467	15165 675333	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 88559	++++ 195505	6227 413937	10629 922467	31857 1828238	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	++++ 160604	++++ 339768	++++ 689164	11565 1459181	23124 2870166	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 141224	++++ 311634	++++ 659470	17423 1416282	51070 2798783	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13934-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 155584	5376 346235	10488 719012	21150 1532867	59340 3009068	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 165754	5189 369600	10066 783879	22215 1677181	61443 3381888	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	6779 336279	11744 715966	24790 1469948	49243 3103222	129198 6012505	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	1557 91510	3120 192987	6520 395113	13406 846792	35149 1619482	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 68694	++++ 156406	++++ 338784	7267 738442	24199 1478910	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	4430 271846	7451 617174	16103 1311808	33778 2812660	94584 5503585	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Octane	CBZd 5	Ave	++++ 109095	++++ 233063	7429 477723	15759 1000926	40600 1936591	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	DFBZ	Ave	++++ 855982	++++ 1781529	++++ 3620641	++++ 7753468	++++ 14589114	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,2-Dibromoethane	CBZd 5	Ave	++++ 199953	++++ 431756	12712 900939	25676 1926667	73769 3761382	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3234 168145	6255 358488	12031 719415	25138 1498188	63725 2918044	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	5465 295002	10833 622855	21742 1278293	43900 2714425	113462 5263414	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	9121 491615	17474 1050972	35735 2145561	69322 4515180	189812 8578718	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m&p-Xylene	CBZd 5	Ave	14827 820994	28347 1718390	59080 3492522	119367 7245395	316153 13520878	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	++++ 263744	++++ 631165	14982 1405685	32037 2987666	89888 5904670	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd 5	Ave	++++ 268745	++++ 593262	15265 1255220	32117 2732738	91899 5258738	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	7608 428791	14440 897122	32097 1814388	63851 3789404	169158 7137002	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Nonane	CBZd 5	Ave	++++ 164273	++++ 340741	11326 686883	23460 1427330	65019 2663319	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	3859 223872	6581 480219	14484 935594	30142 2143813	83793 4060026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 106933	++++ 225670	7400 461156	15160 1003093	40330 1925261	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cumene	CBZd 5	Ave	++++ 589911	++++ 1239416	46548 2553866	91067 5375264	232238 10111819	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
N-Propylbenzene	CBZd 5	Ave	2952 172077	5565 356669	11527 735475	24106 1538516	64393 2931395	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-13934-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 156859	5132 320641	11745 653681	22951 1366689	59552 2595696	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	10337 652888	20634 1384436	45329 2809081	91082 5946732	243377 10941125	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	4521 267835	8388 551670	18627 1121740	37553 2393487	98748 4520211	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 235120	++++ 542707	++++ 1140621	28257 2523695	77610 4814736	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
n-Decane	CBZd 5	Ave	++++ 237483	++++ 489862	15703 987208	33292 2090024	87862 3864099	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11027 653325	21429 1326146	46562 2644216	97365 5469769	252400 10102100	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	9514 597546	19133 1240172	42935 2478370	88253 5126755	231880 9441765	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7986 411115	14097 863153	31633 1751738	61425 3707873	157370 6991250	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	13837 799929	27386 1651103	57824 3316313	116417 6942238	302828 12374020	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 434461	++++ 984275	27963 2125520	54221 4487660	149421 8537696	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	8118 419983	14770 862511	31188 1725619	63275 3610216	157774 6830228	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
p-Cymene	CBZd 5	Ave	14042 809499	27559 1677824	56711 3366403	116224 7014221	307780 12712650	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	10719 636168	20298 1329610	47349 2652674	92640 5581569	237762 10276226	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	7793 400754	15537 829934	31984 1669523	62682 3498467	153773 6628325	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	9654 519916	17767 1063787	37591 2153540	77218 4473280	195256 8276746	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 416558	++++ 909289	26287 1898638	56129 4170791	144394 7874065	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Butylbenzene	CBZd 5	Ave	12135 652919	21840 1341073	46679 2705337	97253 5666096	247354 10272864	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Undecane	CBZd 5	Ave	++++ 279455	++++ 588913	++++ 1182131	40009 2383371	102646 4439100	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 201092	++++ 458234	11163 986255	24464 2000539	65829 3914341	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 736323	++++ 1609444	54539 3260653	111338 6434741	265327 12213199	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
n-Dodecane	CBZd 5	Ave	++++ 268129	++++ 664765	++++ 1343815	45141 2322024	92125 4919414	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 412431	++++ 944306	36794 1940306	72153 3522363	147015 7444026	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 719521	++++ 1821564	44394 3797602	71658 6820345	142183 247207 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Hexachlorobutadiene	CBZd 5	Ave	++++ 517445	++++ 1070672	43683 2166873	81808 3886960	188387 8160248	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 391665	++++ 908417	36693 1865471	72007 3177370	138621 7108780	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 124366	++++ 707384	++++ 1636134	++++ 2060557	++++ 6192720	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 135206	++++ 641933	++++ 1437560	++++ 1675488	++++ 5133017	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1129964 1197793	1096528 1269845	1100173 1293730	1123241 1339226	1170099 1332053	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25539/18 Calibration Date: 11/20/2018 00:05
 Instrument ID: MG Calib Start Date: 06/21/2017 17:00
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/21/2017 22:43
 Lab File ID: GK19ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.7395	0.6943			2.00	-6.1	35.0
3-Methylthiophene	Ave	0.7319	0.6778			2.00	-7.4	35.0
2-Ethylthiophene	Ave	0.9478	0.7785			2.00	-17.9	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		0.7194			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.8516	0.5113			2.00	-40.0*	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.167	0.6768			2.00	-42.0*	35.0
Benzo (b) thiophene	Ave	1.068	0.6204			2.00	-41.9*	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25539/18 Calibration Date: 11/20/2018 00:05
 Instrument ID: MG Calib Start Date: 11/19/2018 13:04
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/19/2018 21:56
 Lab File ID: GK19ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.021	3.088		2.04	2.00	2.2	35.0
Propene	Ave	1.802	1.713		1.90	2.00	-4.9	35.0
Dichlorodifluoromethane	Ave	4.227	4.226		2.00	2.00	-0.0	35.0
Chloromethane	Ave	0.5585	0.5236		1.87	2.00	-6.3	35.0
1,2-Dichlorotetrafluoroethane	Ave	2.352	2.351		2.00	2.00	-0.0	35.0
Acetaldehyde	Ave	0.6313	0.5051		8.00	10.0	-20.0	35.0
Vinyl chloride	Ave	1.749	1.748		2.00	2.00	-0.0	35.0
1,3-Butadiene	Ave	1.396	1.383		1.98	2.00	-0.9	35.0
Butane	Ave	2.970	2.965		2.00	2.00	-0.2	35.0
Bromomethane	Ave	1.344	1.301		1.94	2.00	-3.2	35.0
Chloroethane	Ave	0.8143	0.8256		2.03	2.00	1.4	35.0
Ethanol	Ave	0.6939	0.4900		7.06	10.0	-29.4	35.0
Vinyl bromide	Ave	1.221	1.270		2.08	2.00	4.0	35.0
2-Methylbutane	Ave	2.007	1.981		1.97	2.00	-1.3	35.0
Trichlorofluoromethane	Ave	3.482	3.447		1.98	2.00	-1.0	35.0
Acrolein	Ave	0.2960	0.3288		2.22	2.00	11.1	35.0
Acetonitrile	Ave	0.4680	0.3889		1.66	2.00	-16.9	35.0
Acetone	Ave	0.5378	0.4843			2.00	-9.9	35.0
Pentane	Ave	0.2607	0.2692		2.07	2.00	3.3	35.0
Isopropyl alcohol	Ave	1.586	1.741		2.19	2.00	9.7	35.0
Ethyl ether	Ave	1.588	1.556		1.96	2.00	-2.0	35.0
1,1-Dichloroethene	Ave	1.412	1.442		2.04	2.00	2.1	35.0
Acrylonitrile	Ave	0.9481	0.9341		1.97	2.00	-1.5	35.0
tert-Butanol	Ave	2.340	2.270		1.94	2.00	-3.0	35.0
1,1,2-Trichlorotrifluoroethane	Ave	2.926	3.026		2.07	2.00	3.4	35.0
Methylene Chloride	Ave	1.619	1.457		1.80	2.00	-10.0	35.0
3-Chloropropene	Ave	1.663	1.765		2.12	2.00	6.1	35.0
Carbon disulfide	Ave	4.400	4.574		2.08	2.00	4.0	35.0
trans-1,2-Dichloroethene	Ave	1.410	1.494		2.12	2.00	5.9	35.0
2-Methylpentane	Ave	4.504	4.344		1.93	2.00	-3.6	35.0
Methyl tert-butyl ether	Ave	3.665	3.270		1.78	2.00	-10.8	35.0
1,1-Dichloroethane	Ave	3.077	3.305		2.15	2.00	7.4	35.0
Vinyl acetate	Ave	3.992	3.841		1.92	2.00	-3.8	35.0
2-Butanone	Ave	0.6455	0.5571		1.73	2.00	-13.7	35.0
Hexane	Ave	1.430	1.498		2.09	2.00	4.7	35.0
Isopropyl ether	Ave	5.300	4.869		1.84	2.00	-8.1	35.0
cis-1,2-Dichloroethene	Ave	1.467	1.578		2.15	2.00	7.6	35.0
Ethyl acetate	Ave	3.494	2.921		1.67	2.00	-16.4	35.0
Chloroform	Ave	3.196	3.326		2.08	2.00	4.1	35.0
Tert-butyl ethyl ether	Ave	4.592	3.885		1.69	2.00	-15.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25539/18 Calibration Date: 11/20/2018 00:05
 Instrument ID: MG Calib Start Date: 11/19/2018 13:04
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/19/2018 21:56
 Lab File ID: GK19ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.795	1.635		1.82	2.00	-8.9	35.0
1,1,1-Trichloroethane	Ave	3.339	3.414		2.04	2.00	2.2	35.0
1,2-Dichloroethane	Ave	0.3618	0.3874		2.14	2.00	7.1	35.0
1-Butanol	Ave	0.1081	0.1060		1.96	2.00	-1.9	35.0
Cyclohexane	Ave	0.1320	0.1414		2.14	2.00	7.1	35.0
Benzene	Ave	0.7319	0.7951		2.17	2.00	8.6	35.0
Carbon tetrachloride	Ave	0.4758	0.5521		2.32	2.00	16.0	35.0
2,3-Dimethylpentane	Ave	0.1912	0.2034		2.13	2.00	6.4	35.0
Thiophene	Ave	0.4112	0.4335		2.11	2.00	5.4	35.0
2,2,4-Trimethylpentane	Ave	1.419	1.506		2.12	2.00	6.2	35.0
n-Heptane	Ave	0.2855	0.3038		2.13	2.00	6.4	35.0
1,2-Dichloropropane	Ave	0.2938	0.2948		2.01	2.00	0.4	35.0
Trichloroethene	Ave	0.3059	0.3293		2.15	2.00	7.7	35.0
Dibromomethane	Ave	0.2795	0.2972		2.13	2.00	6.3	35.0
Bromodichloromethane	Ave	0.5283	0.5678		2.15	2.00	7.5	35.0
1,4-Dioxane	Ave	0.0910	0.0832		1.83	2.00	-8.6	35.0
Methyl methacrylate	Ave	0.3571	0.3069		1.72	2.00	-14.1	35.0
Methylcyclohexane	Ave	0.4749	0.6201		2.61	2.00	30.6	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5872	0.4916		1.67	2.00	-16.3	35.0
cis-1,3-Dichloropropene	Ave	0.4206	0.4492		2.14	2.00	6.8	35.0
trans-1,3-Dichloropropene	Ave	0.3993	0.4154		2.08	2.00	4.0	35.0
Toluene	Ave	0.8236	0.8353		2.03	2.00	1.4	35.0
1,1,2-Trichloroethane	Ave	0.2599	0.2596		2.00	2.00	-0.0	35.0
2-Hexanone	Ave	0.2871	0.2504		1.74	2.00	-12.8	35.0
n-Octane	Ave	0.3156	0.3325		2.11	2.00	5.4	35.0
Dibromochloromethane	Ave	0.4702	0.5098		2.17	2.00	8.4	35.0
1,2-Dibromoethane	Ave	0.4313	0.4501		2.09	2.00	4.4	35.0
Tetrachloroethene	Ave	0.2956	0.3061		2.07	2.00	3.6	35.0
2,3-Dimethylheptane	Ave	1.119	1.045		1.87	2.00	-6.6	35.0
Chlorobenzene	Ave	0.6304	0.6527		2.07	2.00	3.5	35.0
Ethylbenzene	Ave	1.066	1.036		1.94	2.00	-2.8	35.0
m&p-Xylene	Ave	0.8287	0.8063		3.89	4.00	-2.7	35.0
n-Nonane	Ave	0.6718	0.6933		2.06	2.00	3.2	35.0
Bromoform	Ave	0.3951	0.4257		2.15	2.00	7.7	35.0
Styrene	Ave	0.5804	0.5813		2.00	2.00	0.2	35.0
o-Xylene	Ave	0.8729	0.8297		1.90	2.00	-5.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5985	0.5770		1.93	2.00	-3.6	35.0
1,2,3-Trichloropropane	Ave	0.1752	0.1664		1.90	2.00	-5.1	35.0
Cumene	Ave	1.129	1.079		1.91	2.00	-4.4	35.0
N-Propylbenzene	Ave	0.3023	0.2965		1.96	2.00	-1.9	35.0
2-Chlorotoluene	Ave	0.2837	0.2833		2.00	2.00	-0.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25539/18 Calibration Date: 11/20/2018 00:05
 Instrument ID: MG Calib Start Date: 11/19/2018 13:04
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/19/2018 21:56
 Lab File ID: GK19ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.117	1.024		1.83	2.00	-8.3	35.0
1,3,5-Trimethylbenzene	Ave	0.4354	0.4694		2.16	2.00	7.8	35.0
Alpha Methyl Styrene	Ave	0.4430	0.4326		1.95	2.00	-2.3	35.0
n-Decane	Ave	0.8194	0.8126		1.98	2.00	-0.8	35.0
tert-Butylbenzene	Ave	0.9434	0.8904		1.89	2.00	-5.6	35.0
1,2,4-Trimethylbenzene	Ave	0.9442	0.8973		1.90	2.00	-5.0	35.0
sec-Butylbenzene	Ave	1.358	1.311		1.93	2.00	-3.5	35.0
1,3-Dichlorobenzene	Ave	0.6140	0.5987		1.95	2.00	-2.5	35.0
Benzyl chloride	Ave	0.8268	0.8408		2.03	2.00	1.7	35.0
1,4-Dichlorobenzene	Ave	0.6126	0.6001		1.96	2.00	-2.0	35.0
p-Cymene	Ave	1.092	1.001		1.83	2.00	-8.3	35.0
1,2,3-Trimethylbenzene	QuaF		0.6664		1.57	2.00	-21.4	35.0
Butylcyclohexane	Ave	0.8951	0.8342		1.86	2.00	-6.8	35.0
1,2-Dichlorobenzene	Ave	0.5824	0.5601		1.92	2.00	-3.8	35.0
Indane	Ave	0.8523	0.8079		1.90	2.00	-5.2	35.0
n-Butylbenzene	Ave	1.151	1.107		1.92	2.00	-3.8	35.0
Indene	Ave	0.7565	0.6297		1.66	2.00	-16.8	35.0
n-Undecane	Ave	0.8525	0.8123		1.91	2.00	-4.7	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2968	0.2246		1.51	2.00	-24.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.999	0.8318		1.67	2.00	-16.7	35.0
n-Dodecane	Ave	0.6321	0.6243		1.98	2.00	-1.2	35.0
1,2,4-Trichlorobenzene	Ave	0.4650	0.4441		1.91	2.00	-4.5	35.0
Naphthalene	Ave	1.108	1.050		1.89	2.00	-5.3	35.0
Hexachlorobutadiene	Ave	0.4101	0.3772		1.84	2.00	-8.0	35.0
1,2,3-Trichlorobenzene	Ave	0.4318	0.4059		1.88	2.00	-6.0	35.0
2-Methylnaphthalene	Ave	0.3039	0.3553		2.34	2.00	16.9	50.0
1-Methylnaphthalene	Ave	0.3331	0.4060		2.44	2.00	21.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8136	0.8135		4.00	4.00	-0.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-26778/2 Calibration Date: 01/15/2019 10:02
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVA15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.209		1.86	2.00	-6.9	30.0
Propene	Ave	0.7296	0.6612		1.81	2.00	-9.4	30.0
Dichlorodifluoromethane	Ave	4.352	4.274		1.96	2.00	-1.8	30.0
Chloromethane	Ave	0.3061	0.2740		1.79	2.00	-10.5	30.0
1,2-Dichlorotetrafluoroethane	Ave	3.240	2.974		1.84	2.00	-8.2	30.0
Acetaldehyde	Ave	0.2860	0.2993		10.5	10.0	4.6	30.0
Vinyl chloride	Ave	1.073	1.029		1.92	2.00	-4.1	30.0
1,3-Butadiene	Ave	0.6506	0.7277		2.24	2.00	11.8	30.0
Butane	Ave	1.132	1.255		2.22	2.00	10.8	30.0
Bromomethane	Ave	1.235	1.297		2.10	2.00	5.0	30.0
Chloroethane	Ave	0.4970	0.5351		2.15	2.00	7.7	30.0
Ethanol	Ave	0.2997	0.3107		10.4	10.0	3.7	30.0
Vinyl bromide	Ave	1.302	1.369		2.10	2.00	5.1	30.0
2-Methylbutane	Ave	0.7999	0.9633		2.41	2.00	20.4	30.0
Acrolein	Ave	0.2528	0.2939		2.32	2.00	16.2	30.0
Trichlorofluoromethane	Ave	5.912	6.309		2.13	2.00	6.7	30.0
Acetonitrile	Ave	0.2586	0.2873		2.22	2.00	11.1	30.0
Acetone	Ave	0.4151	0.4339		6.27	6.00	4.5	30.0
Isopropyl alcohol	Ave	1.132	1.217		6.46	6.00	7.6	30.0
Pentane	Ave	0.2011	0.2279		2.27	2.00	13.4	30.0
Ethyl ether	Ave	0.6661	0.7732		2.32	2.00	16.1	30.0
1,1-Dichloroethene	Ave	1.408	1.349		1.92	2.00	-4.2	30.0
Acrylonitrile	Ave	0.6277	0.6696		2.13	2.00	6.7	30.0
tert-Butanol	Ave	2.677	2.445		1.83	2.00	-8.7	30.0
1,1,2-Trichlorotrifluoroethane	Ave	3.489	3.443		1.97	2.00	-1.3	30.0
Methylene Chloride	Ave	1.338	1.185		1.77	2.00	-11.4	30.0
3-Chloropropene	Ave	1.309	1.407		2.15	2.00	7.5	30.0
Carbon disulfide	Ave	3.341	3.371		2.02	2.00	0.9	30.0
trans-1,2-Dichloroethene	Ave	1.436	1.386		1.93	2.00	-3.5	30.0
2-Methylpentane	Ave	1.894	2.164		2.29	2.00	14.3	30.0
Methyl tert-butyl ether	Ave	4.568	4.523		1.98	2.00	-1.0	30.0
1,1-Dichloroethane	Ave	2.402	2.385		1.99	2.00	-0.7	30.0
Vinyl acetate	Ave	2.320	2.612		2.25	2.00	12.6	30.0
2-Butanone	Ave	0.5446	0.5268		1.93	2.00	-3.3	30.0
Hexane	Ave	0.8352	0.9012		2.16	2.00	7.9	30.0
Isopropyl ether	Ave	2.873	3.148		2.19	2.00	9.5	30.0
cis-1,2-Dichloroethene	Ave	1.448	1.433		1.98	2.00	-1.0	30.0
Ethyl acetate	Ave	2.012	2.242		2.23	2.00	11.4	30.0
Chloroform	Ave	3.821	3.715		1.94	2.00	-2.8	30.0
Tert-butyl ethyl ether	Ave	4.141	4.378		2.11	2.00	5.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-26778/2 Calibration Date: 01/15/2019 10:02
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVA15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.9522		2.15	2.00	7.5	30.0
1,1,1-Trichloroethane	Ave	4.843	4.745		1.96	2.00	-2.0	30.0
1,2-Dichloroethane	Ave	0.5063	0.4848		1.91	2.00	-4.3	30.0
Benzene	Ave	0.6517	0.6328		1.94	2.00	-2.9	30.0
1-Butanol	Ave	0.0462	0.0431		1.87	2.00	-6.7	30.0
Cyclohexane	Ave	0.0968	0.1038		2.14	2.00	7.2	30.0
Carbon tetrachloride	Ave	0.9167	0.9065		1.98	2.00	-1.1	30.0
2,3-Dimethylpentane	Ave	0.1349	0.1376		2.04	2.00	2.0	30.0
Thiophene	Ave	0.3728	0.3689		1.98	2.00	-1.0	30.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8898		2.13	2.00	6.7	30.0
1,2-Dichloropropane	Ave	0.2045	0.2092		2.05	2.00	2.3	30.0
n-Heptane	Ave	0.2083	0.2186		2.10	2.00	4.9	30.0
Trichloroethene	Ave	0.3929	0.3754		1.91	2.00	-4.5	30.0
Dibromomethane	Ave	0.3514	0.3376		1.92	2.00	-3.9	30.0
Bromodichloromethane	Ave	0.6587	0.6595		2.00	2.00	0.1	30.0
1,4-Dioxane	Ave	0.0994	0.0885		1.78	2.00	-11.0	30.0
Methyl methacrylate	Ave	0.2275	0.2434		2.14	2.00	7.0	30.0
Methylcyclohexane	Ave	0.4024	0.4073		2.02	2.00	1.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3966		2.19	2.00	9.4	30.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4168		2.11	2.00	5.6	30.0
trans-1,3-Dichloropropene	Ave	0.4674	0.4877		2.09	2.00	4.4	30.0
Toluene	Ave	0.9586	0.9660		2.02	2.00	0.8	30.0
1,1,2-Trichloroethane	Ave	0.2543	0.2614		2.06	2.00	2.8	30.0
2-Hexanone	Ave	0.2006	0.2183		2.18	2.00	8.8	30.0
Dibromochloromethane	Ave	0.7414	0.7859		2.12	2.00	6.0	30.0
n-Octane	Ave	0.3054	0.3177		2.08	2.00	4.0	30.0
1,2-Dibromoethane	Ave	0.5574	0.5642		2.02	2.00	1.2	30.0
Tetrachloroethene	Ave	0.4749	0.4609		1.94	2.00	-2.9	30.0
Chlorobenzene	Ave	0.8374	0.8277		1.98	2.00	-1.2	30.0
2,3-Dimethylheptane	Ave	0.5626	0.6434		2.29	2.00	14.4	30.0
Ethylbenzene	Ave	1.382	1.407		2.04	2.00	1.8	30.0
m&p-Xylene	Ave	1.133	1.180		4.16	4.00	4.1	30.0
Bromoform	Ave	0.7786	0.8213		2.11	2.00	5.5	30.0
Styrene	Ave	0.7430	0.7819		2.10	2.00	5.2	30.0
o-Xylene	Ave	1.190	1.233		2.07	2.00	3.6	30.0
n-Nonane	Ave	0.4511	0.5173		2.29	2.00	14.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6451		2.13	2.00	6.6	30.0
1,2,3-Trichloropropane	Ave	0.3000	0.2879		1.92	2.00	-4.0	30.0
Cumene	Ave	1.694	1.672		1.97	2.00	-1.3	30.0
N-Propylbenzene	Ave	0.4652	0.4589		1.97	2.00	-1.4	30.0
2-Chlorotoluene	Ave	0.4306	0.4180		1.94	2.00	-2.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-26778/2 Calibration Date: 01/15/2019 10:02
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVA15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.772		2.01	2.00	0.7	30.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.6972		1.94	2.00	-3.1	30.0
Alpha Methyl Styrene	Ave	0.6844	0.6657		1.95	2.00	-2.7	30.0
n-Decane	Ave	0.6421	0.7111		2.21	2.00	10.7	30.0
tert-Butylbenzene	Ave	1.753	1.716		1.96	2.00	-2.1	30.0
1,2,4-Trimethylbenzene	Ave	1.607	1.635		2.04	2.00	1.8	30.0
1,3-Dichlorobenzene	Ave	1.160	1.094		1.89	2.00	-5.6	30.0
sec-Butylbenzene	Ave	2.171	2.137		1.97	2.00	-1.6	30.0
Benzyl chloride	Ave	1.239	1.324		2.14	2.00	6.8	30.0
1,4-Dichlorobenzene	Ave	1.164	1.104		1.90	2.00	-5.2	30.0
p-Cymene	Ave	2.191	2.160		1.97	2.00	-1.4	30.0
1,2,3-Trimethylbenzene	Ave	1.725	1.729		2.00	2.00	0.2	30.0
Butylcyclohexane	Ave	0.9488	0.9596		2.02	2.00	1.1	30.0
1,2-Dichlorobenzene	Ave	1.144	1.060		1.85	2.00	-7.3	30.0
Indane	Ave	1.423	1.403		1.97	2.00	-1.4	30.0
Indene	Ave	1.168	1.151		1.97	2.00	-1.5	30.0
n-Butylbenzene	Ave	1.784	1.753		1.96	2.00	-1.8	30.0
n-Undecane	Ave	0.7598	0.8402		2.21	2.00	10.6	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5807		2.08	2.00	4.2	30.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.037		1.97	2.00	-1.5	30.0
n-Dodecane	Ave	0.7957	0.8914		2.24	2.00	12.0	30.0
1,2,4-Trichlorobenzene	Ave	1.235	1.121		1.82	2.00	-9.2	30.0
Naphthalene	Ave	2.498	2.136		1.71	2.00	-14.5	30.0
Hexachlorobutadiene	Ave	1.436	1.295		1.80	2.00	-9.8	30.0
1,2,3-Trichlorobenzene	Ave	1.187	1.074		1.81	2.00	-9.5	30.0
2-Methylnaphthalene	Ave	0.7935	1.091		2.75	2.00	37.5	50.0
1-Methylnaphthalene	Ave	0.6999	1.130		3.23	2.00	61.5*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8772		4.13	4.00	3.1	30.0

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13293-1

SDG No.: _____

Instrument ID: MG Start Date: 11/19/2018 12:29

Analysis Batch Number: 25539 End Date: 11/20/2018 06:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25539/2		11/19/2018 12:29	1	GBFBK19.D	RTX-5 0.32 (mm)
IC 140-25539/3		11/19/2018 13:04	1	GK19IC09.D	RTX-5 0.32 (mm)
IC 140-25539/5		11/19/2018 14:34	1	GK19IC10.D	RTX-5 0.32 (mm)
IC 140-25539/8		11/19/2018 16:45	1	GK19IC01.D	RTX-5 0.32 (mm)
IC 140-25539/9		11/19/2018 17:30	1	GK19IC02.D	RTX-5 0.32 (mm)
IC 140-25539/10		11/19/2018 18:17	1	GK19IC03.D	RTX-5 0.32 (mm)
IC 140-25539/11		11/19/2018 19:00	1	GK19IC04.D	RTX-5 0.32 (mm)
IC 140-25539/12		11/19/2018 19:44	1	GK19IC05.D	RTX-5 0.32 (mm)
IC 140-25539/13		11/19/2018 20:26	1	GK19IC06.D	RTX-5 0.32 (mm)
ICIS 140-25539/14		11/19/2018 21:10	1	GK19IC07.D	RTX-5 0.32 (mm)
IC 140-25539/15		11/19/2018 21:56	1	GK19IC08.D	RTX-5 0.32 (mm)
ICV 140-25539/18		11/20/2018 00:05	1	GK19ICV.D	RTX-5 0.32 (mm)
140-13293-2		11/20/2018 02:18	1	W13293BK2.D	RTX-5 0.32 (mm)
140-13293-3		11/20/2018 03:01	1	W13293BK3.D	RTX-5 0.32 (mm)
140-13293-4		11/20/2018 03:44	1	W13293BK4.D	RTX-5 0.32 (mm)
140-13293-5		11/20/2018 04:27	1	W13293BK5.D	RTX-5 0.32 (mm)
140-13293-6		11/20/2018 05:11	1	W13293BK6.D	RTX-5 0.32 (mm)
ZZZZZ		11/20/2018 05:55	1		RTX-5 0.32 (mm)
140-13293-1		11/20/2018 06:38	1	W13293BK1.D	RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1

SDG No.: _____

Instrument ID: MR Start Date: 11/16/2018 16:00

Analysis Batch Number: 25490 End Date: 11/17/2018 06:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25490/1		11/16/2018 16:00	1	RBFBK16I.D	RTX-5 0.32 (mm)
IC 140-25490/3		11/16/2018 17:23	1	RK16IC09.D	RTX-5 0.32 (mm)
IC 140-25490/5		11/16/2018 19:07	1	RK16IC10.D	RTX-5 0.32 (mm)
IC 140-25490/8		11/16/2018 21:42	1	RK16IC01.D	RTX-5 0.32 (mm)
IC 140-25490/9		11/16/2018 22:34	1	RK16IC02.D	RTX-5 0.32 (mm)
IC 140-25490/10		11/16/2018 23:27	1	RK16IC03.D	RTX-5 0.32 (mm)
IC 140-25490/11		11/17/2018 00:20	1	RK16IC04.D	RTX-5 0.32 (mm)
IC 140-25490/12		11/17/2018 01:12	1	RK16IC05.D	RTX-5 0.32 (mm)
IC 140-25490/13		11/17/2018 02:05	1	RK16IC06.D	RTX-5 0.32 (mm)
ICIS 140-25490/14		11/17/2018 02:58	1	RK16IC07.D	RTX-5 0.32 (mm)
IC 140-25490/15		11/17/2018 03:51	1	RK16IC08.D	RTX-5 0.32 (mm)
ICV 140-25490/18		11/17/2018 06:27	1		RTX-5 0.32 (mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-13934-1

SDG No.: _____

Instrument ID: MR Start Date: 01/15/2019 09:34

Analysis Batch Number: 26778 End Date: 01/16/2019 02:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-26778/1		01/15/2019 09:34	1	RBFBA15.D	RTX-5 0.32 (mm)
CCVIS 140-26778/2		01/15/2019 10:02	1	RCCVA15.D	RTX-5 0.32 (mm)
ZZZZZ		01/15/2019 11:43	1		RTX-5 0.32 (mm)
140-13811-A-5 MDLV		01/15/2019 12:32	1		RTX-5 0.32 (mm)
140-13811-A-6 MDLV		01/15/2019 13:22	1		RTX-5 0.32 (mm)
140-13811-A-7 MDLV		01/15/2019 14:12	1		RTX-5 0.32 (mm)
140-13811-A-8 MDLV		01/15/2019 15:01	1		RTX-5 0.32 (mm)
ZZZZZ		01/15/2019 15:51	1		RTX-5 0.32 (mm)
140-13934-1		01/15/2019 16:40	1	13934BK01.D	RTX-5 0.32 (mm)
140-13934-2		01/15/2019 17:30	1	13934BK02.D	RTX-5 0.32 (mm)
140-13934-3		01/15/2019 18:20	1	13934BK03.D	RTX-5 0.32 (mm)
140-13934-4		01/15/2019 19:09	1	13934BK04.D	RTX-5 0.32 (mm)
ZZZZZ		01/15/2019 19:59	1		RTX-5 0.32 (mm)
ZZZZZ		01/15/2019 20:48	1		RTX-5 0.32 (mm)
140-13934-8		01/15/2019 21:38	1	13934BK08.D	RTX-5 0.32 (mm)
140-13934-12		01/15/2019 22:28	1	13934BK12.D	RTX-5 0.32 (mm)
140-13934-13		01/15/2019 23:17	1	13934BK13.D	RTX-5 0.32 (mm)
140-13934-14		01/16/2019 00:07	1	13934BK14.D	RTX-5 0.32 (mm)
140-13934-15		01/16/2019 00:57	1	13934BK15.D	RTX-5 0.32 (mm)
140-13934-16		01/16/2019 01:46	1	13934BK16.D	RTX-5 0.32 (mm)
140-13934-17		01/16/2019 02:36	1	13934BK17.D	RTX-5 0.32 (mm)

Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

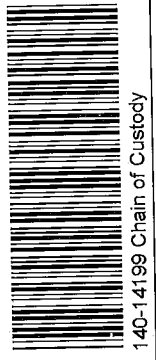
Canister Samples Chain of Custody Record

TestAmerica

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: Peter Rich	Sampled By: L. Lucas	of COCs
Company: Istra Tech	Phone: 443-782-7077		
Address: 980 Ansel Rd, Suite 301	Site Contact:		
City/State/Zip: Annapolis MD 21410	TAL Contact:		
Phone: 443-782-7077			
FAX:			
Project Name: LMC-MRC	Analysis Turnaround Time		
Site/location: MRS Building A	Standard (Specify)		
PO # 117-0512140	Rush (Specify)		



Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)					
													Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
BLDG-A-INFLUENT	2/6/19	11:22	11:23	-30	-4	09958	11828	X										
BLDG-A-MIDGAC	2/6/19	11:26	11:27	-29	-4	10901	11812	X										
BLDG-A-EFFLUENT	2/6/19	11:17	11:18	-29	-4	11594	10003	X										

Sampled by:

Temperature (Fahrenheit)	Interior	
	Ambient	
Pressure (inches of Hg)	Interior	
	Ambient	

Received @ ambient
1 cooler FedEx Po
Trk# 77440488 1128
Custody seal intact
RW 2/7/19

Special Instructions/QC Requirements & Comments:

Baltimore #201

Canisters Shipped by:

Samples Relinquished by: Lee Lucas

Relinquished by: JM

Date/Time: 2/6/19 12:34

Date/Time: 2/6/19 17:30

Canisters Received by:

Received by: J Cam

Received by: JKR

Lab Use Only

Shipper Name

Opened by

Condition

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?			/	<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : <u>SC67</u> Correction factor: <u>fe.o</u>			/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	pH test strip lot number: _____
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____
16. Were samples received with correct chemical preservative (excluding Encore)?				<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	Lot Number: _____ Exp Date: _____ Analyst: _____ Date: _____ Time: _____
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			/		
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	
Project #: <u>14002221</u> PM Instructions: _____					
Sample Receiving Associate: <u>[Signature]</u> Date: <u>2/7/19</u>					

ANALYTICAL REPORT

Job Number: 140-14595-1

Job Description: LMC Middle River, Middle River, MD

For:
Tetra Tech GEO
980 Awald Road
Suite 302
Annapolis, MD 21403
Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
3/22/2019 9:26 AM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
03/22/2019

cc: Belssi Chang
Amy Thomson
Michael Wilks

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TestAmerica Laboratories, Inc.

TestAmerica Knoxville 5815 Middlebrook Pike, Knoxville, TN 37921
Tel (865) 291-3000 Fax (865) 584-4315 www.testamericainc.com

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Definitions/Glossary

Client: Tetra Tech GEO
Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
CI	The peak identified by the data system exhibited chromatographic interference that could not be resolved. There is reason to suspect there may be a high bias.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-14595-1

Receipt

The samples were received on 3/14/2019 at 10:10 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA - Method TO-15 LL

EPA methods TO-14A and TO-15 specify the use of humidified "zero air" as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of "zero air" by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments

No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-A-EFFLUENT

Lab Sample ID: 140-14595-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.24	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.50		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.42		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	5.7		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.5		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	9.9		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.67	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.16	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	7.2		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.25		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.78	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.0		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	23		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	6.0		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	39		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.3	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.63	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	39		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.3		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-A-MIDGAC

Lab Sample ID: 140-14595-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.17	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.63	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.54		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	11		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.0		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	16		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.70	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.27	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	15		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.54	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.2	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.6		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	43		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	8.1		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	63		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.4	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.1	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	80		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-A-INFLUENT

Lab Sample ID: 140-14595-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.4	J	2.0	0.58	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	12		2.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.6		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	15		2.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	61		2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	130		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4.4	J	6.4	1.8	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	48		7.9	2.4	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	11		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	60		7.9	1.4	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	330		11	1.6	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	720		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-C-INFLUENT

Lab Sample ID: 140-14595-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.5		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.077	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.64	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.69		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.78	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.16	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.71		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	4.8		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.39	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.27	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4.9		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.48	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.3	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.8		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.7	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	1.1	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.7		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.68	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	26		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.9	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.75	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.2	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-C-MIDGAC

Lab Sample ID: 140-14595-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.3		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.89	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-C-MIDGAC (Continued)

Lab Sample ID: 140-14595-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.20	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.21	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.25	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.87	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.19	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.11	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	7.3		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.1	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.99	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.83	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.0	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.0	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.59	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BLDG-C-EFFLUENT

Lab Sample ID: 140-14595-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.7		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.0	Cl	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.32	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.18	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.80	J	2.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.64		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.12	J	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.16	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.66		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.27	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.3		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.6	Cl	1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.5	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.70	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.8	J	6.9	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.65	J	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.83	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	3.2		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.3	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-A-EFFLUENT

Lab Sample ID: 140-14595-1

Date Collected: 03/13/19 10:27

Matrix: Air

Date Received: 03/14/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.24	J	0.40	0.12	ppb v/v			03/14/19 18:59	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			03/14/19 18:59	1
Chlorodifluoromethane	0.50		0.40	0.075	ppb v/v			03/14/19 18:59	1
Chloroform	0.42		0.40	0.075	ppb v/v			03/14/19 18:59	1
cis-1,2-Dichloroethene	5.7		0.40	0.12	ppb v/v			03/14/19 18:59	1
Dichlorodifluoromethane	0.26	J	0.40	0.14	ppb v/v			03/14/19 18:59	1
1,1-Dichloroethane	1.5		0.40	0.050	ppb v/v			03/14/19 18:59	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/14/19 18:59	1
1,1-Dichloroethene	9.9		0.40	0.070	ppb v/v			03/14/19 18:59	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			03/14/19 18:59	1
Methylene Chloride	0.67	J	2.0	0.65	ppb v/v			03/14/19 18:59	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/14/19 18:59	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/14/19 18:59	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			03/14/19 18:59	1
Toluene	ND		0.60	0.60	ppb v/v			03/14/19 18:59	1
trans-1,2-Dichloroethene	0.16	J	0.40	0.10	ppb v/v			03/14/19 18:59	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			03/14/19 18:59	1
1,1,1-Trichloroethane	7.2		0.40	0.060	ppb v/v			03/14/19 18:59	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/14/19 18:59	1
Trichloroethene	0.25		0.20	0.070	ppb v/v			03/14/19 18:59	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			03/14/19 18:59	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			03/14/19 18:59	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			03/14/19 18:59	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/14/19 18:59	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			03/14/19 18:59	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.78	J	1.3	0.37	ug/m3			03/14/19 18:59	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			03/14/19 18:59	1
Chlorodifluoromethane	1.8		1.4	0.27	ug/m3			03/14/19 18:59	1
Chloroform	2.0		2.0	0.37	ug/m3			03/14/19 18:59	1
cis-1,2-Dichloroethene	23		1.6	0.48	ug/m3			03/14/19 18:59	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			03/14/19 18:59	1
1,1-Dichloroethane	6.0		1.6	0.20	ug/m3			03/14/19 18:59	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/14/19 18:59	1
1,1-Dichloroethene	39		1.6	0.28	ug/m3			03/14/19 18:59	1
Ethylbenzene	ND		1.7	0.59	ug/m3			03/14/19 18:59	1
Methylene Chloride	2.3	J	6.9	2.3	ug/m3			03/14/19 18:59	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/14/19 18:59	1
Naphthalene	ND		1.0	1.0	ug/m3			03/14/19 18:59	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			03/14/19 18:59	1
Toluene	ND		2.3	2.3	ug/m3			03/14/19 18:59	1
trans-1,2-Dichloroethene	0.63	J	1.6	0.40	ug/m3			03/14/19 18:59	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			03/14/19 18:59	1
1,1,1-Trichloroethane	39		2.2	0.33	ug/m3			03/14/19 18:59	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/14/19 18:59	1
Trichloroethene	1.3		1.1	0.38	ug/m3			03/14/19 18:59	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			03/14/19 18:59	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			03/14/19 18:59	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-A-EFFLUENT

Lab Sample ID: 140-14595-1

Date Collected: 03/13/19 10:27

Matrix: Air

Date Received: 03/14/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			03/14/19 18:59	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/14/19 18:59	1
Xylenes, Total	ND		3.5	0.52	ug/m3			03/14/19 18:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					03/14/19 18:59	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-A-MIDGAC

Lab Sample ID: 140-14595-2

Date Collected: 03/13/19 10:31

Matrix: Air

Date Received: 03/14/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.17	J	0.40	0.12	ppb v/v			03/14/19 19:49	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			03/14/19 19:49	1
Chlorodifluoromethane	0.63	CI	0.40	0.075	ppb v/v			03/14/19 19:49	1
Chloroform	0.54		0.40	0.075	ppb v/v			03/14/19 19:49	1
cis-1,2-Dichloroethene	11		0.40	0.12	ppb v/v			03/14/19 19:49	1
Dichlorodifluoromethane	0.30	J	0.40	0.14	ppb v/v			03/14/19 19:49	1
1,1-Dichloroethane	2.0		0.40	0.050	ppb v/v			03/14/19 19:49	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/14/19 19:49	1
1,1-Dichloroethene	16		0.40	0.070	ppb v/v			03/14/19 19:49	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			03/14/19 19:49	1
Methylene Chloride	0.70	J	2.0	0.65	ppb v/v			03/14/19 19:49	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/14/19 19:49	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/14/19 19:49	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			03/14/19 19:49	1
Toluene	ND		0.60	0.60	ppb v/v			03/14/19 19:49	1
trans-1,2-Dichloroethene	0.27	J	0.40	0.10	ppb v/v			03/14/19 19:49	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			03/14/19 19:49	1
1,1,1-Trichloroethane	15		0.40	0.060	ppb v/v			03/14/19 19:49	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/14/19 19:49	1
Trichloroethene	ND		0.20	0.070	ppb v/v			03/14/19 19:49	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			03/14/19 19:49	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			03/14/19 19:49	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			03/14/19 19:49	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/14/19 19:49	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			03/14/19 19:49	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.54	J	1.3	0.37	ug/m3			03/14/19 19:49	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			03/14/19 19:49	1
Chlorodifluoromethane	2.2	CI	1.4	0.27	ug/m3			03/14/19 19:49	1
Chloroform	2.6		2.0	0.37	ug/m3			03/14/19 19:49	1
cis-1,2-Dichloroethene	43		1.6	0.48	ug/m3			03/14/19 19:49	1
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3			03/14/19 19:49	1
1,1-Dichloroethane	8.1		1.6	0.20	ug/m3			03/14/19 19:49	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/14/19 19:49	1
1,1-Dichloroethene	63		1.6	0.28	ug/m3			03/14/19 19:49	1
Ethylbenzene	ND		1.7	0.59	ug/m3			03/14/19 19:49	1
Methylene Chloride	2.4	J	6.9	2.3	ug/m3			03/14/19 19:49	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/14/19 19:49	1
Naphthalene	ND		1.0	1.0	ug/m3			03/14/19 19:49	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			03/14/19 19:49	1
Toluene	ND		2.3	2.3	ug/m3			03/14/19 19:49	1
trans-1,2-Dichloroethene	1.1	J	1.6	0.40	ug/m3			03/14/19 19:49	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			03/14/19 19:49	1
1,1,1-Trichloroethane	80		2.2	0.33	ug/m3			03/14/19 19:49	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/14/19 19:49	1
Trichloroethene	ND		1.1	0.38	ug/m3			03/14/19 19:49	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			03/14/19 19:49	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			03/14/19 19:49	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-A-MIDGAC

Lab Sample ID: 140-14595-2

Date Collected: 03/13/19 10:31

Matrix: Air

Date Received: 03/14/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			03/14/19 19:49	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/14/19 19:49	1
Xylenes, Total	ND		3.5	0.52	ug/m3			03/14/19 19:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					03/14/19 19:49	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-A-INFLUENT

Lab Sample ID: 140-14595-3

Date Collected: 03/13/19 10:34

Matrix: Air

Date Received: 03/14/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.4	J	2.0	0.58	ppb v/v			03/14/19 20:38	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			03/14/19 20:38	1
Chlorodifluoromethane	ND		2.0	0.38	ppb v/v			03/14/19 20:38	1
Chloroform	ND		2.0	0.38	ppb v/v			03/14/19 20:38	1
cis-1,2-Dichloroethene	12		2.0	0.60	ppb v/v			03/14/19 20:38	1
Dichlorodifluoromethane	ND		2.0	0.68	ppb v/v			03/14/19 20:38	1
1,1-Dichloroethane	2.6		2.0	0.25	ppb v/v			03/14/19 20:38	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			03/14/19 20:38	1
1,1-Dichloroethene	15		2.0	0.35	ppb v/v			03/14/19 20:38	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			03/14/19 20:38	1
Methylene Chloride	ND		10	3.3	ppb v/v			03/14/19 20:38	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			03/14/19 20:38	1
Naphthalene	ND		1.0	1.0	ppb v/v			03/14/19 20:38	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			03/14/19 20:38	1
Toluene	ND		3.0	3.0	ppb v/v			03/14/19 20:38	1
trans-1,2-Dichloroethene	ND		2.0	0.50	ppb v/v			03/14/19 20:38	1
1,2,4-Trichlorobenzene	ND		2.0	0.98	ppb v/v			03/14/19 20:38	1
1,1,1-Trichloroethane	61		2.0	0.30	ppb v/v			03/14/19 20:38	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			03/14/19 20:38	1
Trichloroethene	130		1.0	0.35	ppb v/v			03/14/19 20:38	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			03/14/19 20:38	1
1,2,4-Trimethylbenzene	ND		2.0	0.63	ppb v/v			03/14/19 20:38	1
1,3,5-Trimethylbenzene	ND		2.0	0.65	ppb v/v			03/14/19 20:38	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			03/14/19 20:38	1
Xylenes, Total	ND		4.0	0.60	ppb v/v			03/14/19 20:38	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4.4	J	6.4	1.8	ug/m3			03/14/19 20:38	1
Carbon tetrachloride	ND		13	2.4	ug/m3			03/14/19 20:38	1
Chlorodifluoromethane	ND		7.1	1.3	ug/m3			03/14/19 20:38	1
Chloroform	ND		9.8	1.8	ug/m3			03/14/19 20:38	1
cis-1,2-Dichloroethene	48		7.9	2.4	ug/m3			03/14/19 20:38	1
Dichlorodifluoromethane	ND		9.9	3.3	ug/m3			03/14/19 20:38	1
1,1-Dichloroethane	11		8.1	1.0	ug/m3			03/14/19 20:38	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			03/14/19 20:38	1
1,1-Dichloroethene	60		7.9	1.4	ug/m3			03/14/19 20:38	1
Ethylbenzene	ND		8.7	2.9	ug/m3			03/14/19 20:38	1
Methylene Chloride	ND		35	11	ug/m3			03/14/19 20:38	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			03/14/19 20:38	1
Naphthalene	ND		5.2	5.2	ug/m3			03/14/19 20:38	1
Tetrachloroethene	ND		14	2.7	ug/m3			03/14/19 20:38	1
Toluene	ND		11	11	ug/m3			03/14/19 20:38	1
trans-1,2-Dichloroethene	ND		7.9	2.0	ug/m3			03/14/19 20:38	1
1,2,4-Trichlorobenzene	ND		15	7.2	ug/m3			03/14/19 20:38	1
1,1,1-Trichloroethane	330		11	1.6	ug/m3			03/14/19 20:38	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			03/14/19 20:38	1
Trichloroethene	720		5.4	1.9	ug/m3			03/14/19 20:38	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			03/14/19 20:38	1
1,2,4-Trimethylbenzene	ND		9.8	3.1	ug/m3			03/14/19 20:38	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-A-INFLUENT

Lab Sample ID: 140-14595-3

Date Collected: 03/13/19 10:34

Matrix: Air

Date Received: 03/14/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		9.8	3.2	ug/m3			03/14/19 20:38	1
Vinyl chloride	ND		2.6	1.9	ug/m3			03/14/19 20:38	1
Xylenes, Total	ND		17	2.6	ug/m3			03/14/19 20:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		60 - 140					03/14/19 20:38	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-C-INFLUENT

Lab Sample ID: 140-14595-4

Date Collected: 03/13/19 12:11

Matrix: Air

Date Received: 03/14/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.5		0.40	0.12	ppb v/v			03/14/19 21:27	1
Carbon tetrachloride	0.077	J	0.40	0.075	ppb v/v			03/14/19 21:27	1
Chlorodifluoromethane	0.64	CI	0.40	0.075	ppb v/v			03/14/19 21:27	1
Chloroform	ND		0.40	0.075	ppb v/v			03/14/19 21:27	1
cis-1,2-Dichloroethene	0.69		0.40	0.12	ppb v/v			03/14/19 21:27	1
Dichlorodifluoromethane	0.29	J	0.40	0.14	ppb v/v			03/14/19 21:27	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			03/14/19 21:27	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/14/19 21:27	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			03/14/19 21:27	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			03/14/19 21:27	1
Methylene Chloride	0.78	J	2.0	0.65	ppb v/v			03/14/19 21:27	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/14/19 21:27	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/14/19 21:27	1
Tetrachloroethene	0.16	J	0.40	0.080	ppb v/v			03/14/19 21:27	1
Toluene	0.71		0.60	0.60	ppb v/v			03/14/19 21:27	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			03/14/19 21:27	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			03/14/19 21:27	1
1,1,1-Trichloroethane	0.13	J	0.40	0.060	ppb v/v			03/14/19 21:27	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/14/19 21:27	1
Trichloroethene	4.8		0.20	0.070	ppb v/v			03/14/19 21:27	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			03/14/19 21:27	1
1,2,4-Trimethylbenzene	0.39	J	0.40	0.13	ppb v/v			03/14/19 21:27	1
1,3,5-Trimethylbenzene	0.15	J	0.40	0.13	ppb v/v			03/14/19 21:27	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/14/19 21:27	1
Xylenes, Total	0.27	J	0.80	0.12	ppb v/v			03/14/19 21:27	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4.9		1.3	0.37	ug/m3			03/14/19 21:27	1
Carbon tetrachloride	0.48	J	2.5	0.47	ug/m3			03/14/19 21:27	1
Chlorodifluoromethane	2.3	CI	1.4	0.27	ug/m3			03/14/19 21:27	1
Chloroform	ND		2.0	0.37	ug/m3			03/14/19 21:27	1
cis-1,2-Dichloroethene	2.8		1.6	0.48	ug/m3			03/14/19 21:27	1
Dichlorodifluoromethane	1.5	J	2.0	0.67	ug/m3			03/14/19 21:27	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			03/14/19 21:27	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/14/19 21:27	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			03/14/19 21:27	1
Ethylbenzene	ND		1.7	0.59	ug/m3			03/14/19 21:27	1
Methylene Chloride	2.7	J	6.9	2.3	ug/m3			03/14/19 21:27	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/14/19 21:27	1
Naphthalene	ND		1.0	1.0	ug/m3			03/14/19 21:27	1
Tetrachloroethene	1.1	J	2.7	0.54	ug/m3			03/14/19 21:27	1
Toluene	2.7		2.3	2.3	ug/m3			03/14/19 21:27	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			03/14/19 21:27	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			03/14/19 21:27	1
1,1,1-Trichloroethane	0.68	J	2.2	0.33	ug/m3			03/14/19 21:27	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/14/19 21:27	1
Trichloroethene	26		1.1	0.38	ug/m3			03/14/19 21:27	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			03/14/19 21:27	1
1,2,4-Trimethylbenzene	1.9	J	2.0	0.61	ug/m3			03/14/19 21:27	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-C-INFLUENT

Lab Sample ID: 140-14595-4

Date Collected: 03/13/19 12:11

Matrix: Air

Date Received: 03/14/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	0.75	J	2.0	0.64	ug/m3			03/14/19 21:27	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/14/19 21:27	1
Xylenes, Total	1.2	J	3.5	0.52	ug/m3			03/14/19 21:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		60 - 140					03/14/19 21:27	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-C-MIDGAC

Lab Sample ID: 140-14595-5

Date Collected: 03/13/19 12:06

Matrix: Air

Date Received: 03/14/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.3		0.40	0.12	ppb v/v			03/14/19 22:16	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			03/14/19 22:16	1
Chlorodifluoromethane	0.89	CI	0.40	0.075	ppb v/v			03/14/19 22:16	1
Chloroform	0.20	J	0.40	0.075	ppb v/v			03/14/19 22:16	1
cis-1,2-Dichloroethene	0.21	J	0.40	0.12	ppb v/v			03/14/19 22:16	1
Dichlorodifluoromethane	0.25	J	0.40	0.14	ppb v/v			03/14/19 22:16	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			03/14/19 22:16	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/14/19 22:16	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			03/14/19 22:16	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			03/14/19 22:16	1
Methylene Chloride	0.87	J	2.0	0.65	ppb v/v			03/14/19 22:16	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/14/19 22:16	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/14/19 22:16	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			03/14/19 22:16	1
Toluene	ND		0.60	0.60	ppb v/v			03/14/19 22:16	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			03/14/19 22:16	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			03/14/19 22:16	1
1,1,1-Trichloroethane	0.19	J	0.40	0.060	ppb v/v			03/14/19 22:16	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/14/19 22:16	1
Trichloroethene	0.11	J	0.20	0.070	ppb v/v			03/14/19 22:16	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			03/14/19 22:16	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			03/14/19 22:16	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			03/14/19 22:16	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/14/19 22:16	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			03/14/19 22:16	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	7.3		1.3	0.37	ug/m3			03/14/19 22:16	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			03/14/19 22:16	1
Chlorodifluoromethane	3.1	CI	1.4	0.27	ug/m3			03/14/19 22:16	1
Chloroform	0.99	J	2.0	0.37	ug/m3			03/14/19 22:16	1
cis-1,2-Dichloroethene	0.83	J	1.6	0.48	ug/m3			03/14/19 22:16	1
Dichlorodifluoromethane	1.3	J	2.0	0.67	ug/m3			03/14/19 22:16	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			03/14/19 22:16	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/14/19 22:16	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			03/14/19 22:16	1
Ethylbenzene	ND		1.7	0.59	ug/m3			03/14/19 22:16	1
Methylene Chloride	3.0	J	6.9	2.3	ug/m3			03/14/19 22:16	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/14/19 22:16	1
Naphthalene	ND		1.0	1.0	ug/m3			03/14/19 22:16	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			03/14/19 22:16	1
Toluene	ND		2.3	2.3	ug/m3			03/14/19 22:16	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			03/14/19 22:16	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			03/14/19 22:16	1
1,1,1-Trichloroethane	1.0	J	2.2	0.33	ug/m3			03/14/19 22:16	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/14/19 22:16	1
Trichloroethene	0.59	J	1.1	0.38	ug/m3			03/14/19 22:16	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			03/14/19 22:16	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			03/14/19 22:16	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-C-MIDGAC

Lab Sample ID: 140-14595-5

Date Collected: 03/13/19 12:06

Matrix: Air

Date Received: 03/14/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			03/14/19 22:16	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/14/19 22:16	1
Xylenes, Total	ND		3.5	0.52	ug/m3			03/14/19 22:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					03/14/19 22:16	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-C-EFFLUENT

Lab Sample ID: 140-14595-6

Date Collected: 03/13/19 12:00

Matrix: Air

Date Received: 03/14/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.7		0.40	0.12	ppb v/v			03/14/19 23:05	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			03/14/19 23:05	1
Chlorodifluoromethane	1.0	CI	0.40	0.075	ppb v/v			03/14/19 23:05	1
Chloroform	0.32	J	0.40	0.075	ppb v/v			03/14/19 23:05	1
cis-1,2-Dichloroethene	0.18	J	0.40	0.12	ppb v/v			03/14/19 23:05	1
Dichlorodifluoromethane	0.27	J	0.40	0.14	ppb v/v			03/14/19 23:05	1
1,1-Dichloroethane	ND		0.40	0.050	ppb v/v			03/14/19 23:05	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			03/14/19 23:05	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			03/14/19 23:05	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			03/14/19 23:05	1
Methylene Chloride	0.80	J	2.0	0.65	ppb v/v			03/14/19 23:05	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			03/14/19 23:05	1
Naphthalene	ND		0.20	0.20	ppb v/v			03/14/19 23:05	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			03/14/19 23:05	1
Toluene	0.64		0.60	0.60	ppb v/v			03/14/19 23:05	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			03/14/19 23:05	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			03/14/19 23:05	1
1,1,1-Trichloroethane	0.12	J	0.40	0.060	ppb v/v			03/14/19 23:05	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			03/14/19 23:05	1
Trichloroethene	0.16	J	0.20	0.070	ppb v/v			03/14/19 23:05	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			03/14/19 23:05	1
1,2,4-Trimethylbenzene	0.66		0.40	0.13	ppb v/v			03/14/19 23:05	1
1,3,5-Trimethylbenzene	0.27	J	0.40	0.13	ppb v/v			03/14/19 23:05	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			03/14/19 23:05	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			03/14/19 23:05	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.3		1.3	0.37	ug/m3			03/14/19 23:05	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			03/14/19 23:05	1
Chlorodifluoromethane	3.6	CI	1.4	0.27	ug/m3			03/14/19 23:05	1
Chloroform	1.5	J	2.0	0.37	ug/m3			03/14/19 23:05	1
cis-1,2-Dichloroethene	0.70	J	1.6	0.48	ug/m3			03/14/19 23:05	1
Dichlorodifluoromethane	1.4	J	2.0	0.67	ug/m3			03/14/19 23:05	1
1,1-Dichloroethane	ND		1.6	0.20	ug/m3			03/14/19 23:05	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			03/14/19 23:05	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			03/14/19 23:05	1
Ethylbenzene	ND		1.7	0.59	ug/m3			03/14/19 23:05	1
Methylene Chloride	2.8	J	6.9	2.3	ug/m3			03/14/19 23:05	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			03/14/19 23:05	1
Naphthalene	ND		1.0	1.0	ug/m3			03/14/19 23:05	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			03/14/19 23:05	1
Toluene	2.4		2.3	2.3	ug/m3			03/14/19 23:05	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			03/14/19 23:05	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			03/14/19 23:05	1
1,1,1-Trichloroethane	0.65	J	2.2	0.33	ug/m3			03/14/19 23:05	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			03/14/19 23:05	1
Trichloroethene	0.83	J	1.1	0.38	ug/m3			03/14/19 23:05	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			03/14/19 23:05	1
1,2,4-Trimethylbenzene	3.2		2.0	0.61	ug/m3			03/14/19 23:05	1

Client Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-C-EFFLUENT

Lab Sample ID: 140-14595-6

Date Collected: 03/13/19 12:00

Matrix: Air

Date Received: 03/14/19 10:10

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	1.3	J	2.0	0.64	ug/m3			03/14/19 23:05	1
Vinyl chloride	ND		0.51	0.37	ug/m3			03/14/19 23:05	1
Xylenes, Total	ND		3.5	0.52	ug/m3			03/14/19 23:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		60 - 140					03/14/19 23:05	1

Default Detection Limits

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.40	0.13	ppb v/v	TO 15 LL
Methylene Chloride	1.4	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-14595-1	BLDG-A-EFFLUENT	99
140-14595-2	BLDG-A-MIDGAC	99
140-14595-3	BLDG-A-INFLUENT	99
140-14595-4	BLDG-C-INFLUENT	102
140-14595-5	BLDG-C-MIDGAC	100
140-14595-6	BLDG-C-EFFLUENT	100
LCS 140-28319/1002	Lab Control Sample	105
MB 140-28319/4	Method Blank	100

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-28319/4
Matrix: Air
Analysis Batch: 28319

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.080	0.023	ppb v/v			03/14/19 15:23	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			03/14/19 15:23	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			03/14/19 15:23	1
Chloroform	ND		0.080	0.015	ppb v/v			03/14/19 15:23	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			03/14/19 15:23	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			03/14/19 15:23	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			03/14/19 15:23	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			03/14/19 15:23	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			03/14/19 15:23	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			03/14/19 15:23	1
Methylene Chloride	ND		0.40	0.13	ppb v/v			03/14/19 15:23	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			03/14/19 15:23	1
Naphthalene	ND		0.040	0.040	ppb v/v			03/14/19 15:23	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			03/14/19 15:23	1
Toluene	ND		0.12	0.12	ppb v/v			03/14/19 15:23	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			03/14/19 15:23	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			03/14/19 15:23	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			03/14/19 15:23	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			03/14/19 15:23	1
Trichloroethene	ND		0.040	0.014	ppb v/v			03/14/19 15:23	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			03/14/19 15:23	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			03/14/19 15:23	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			03/14/19 15:23	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			03/14/19 15:23	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			03/14/19 15:23	1

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.26	0.073	ug/m3			03/14/19 15:23	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			03/14/19 15:23	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			03/14/19 15:23	1
Chloroform	ND		0.39	0.073	ug/m3			03/14/19 15:23	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			03/14/19 15:23	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			03/14/19 15:23	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			03/14/19 15:23	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			03/14/19 15:23	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			03/14/19 15:23	1
Ethylbenzene	ND		0.35	0.12	ug/m3			03/14/19 15:23	1
Methylene Chloride	ND		1.4	0.45	ug/m3			03/14/19 15:23	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			03/14/19 15:23	1
Naphthalene	ND		0.21	0.21	ug/m3			03/14/19 15:23	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			03/14/19 15:23	1
Toluene	ND		0.45	0.45	ug/m3			03/14/19 15:23	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			03/14/19 15:23	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			03/14/19 15:23	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			03/14/19 15:23	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			03/14/19 15:23	1
Trichloroethene	ND		0.21	0.075	ug/m3			03/14/19 15:23	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			03/14/19 15:23	1

QC Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-28319/4
Matrix: Air
Analysis Batch: 28319

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			03/14/19 15:23	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			03/14/19 15:23	1
Vinyl chloride	ND		0.10	0.074	ug/m3			03/14/19 15:23	1
Xylenes, Total	ND		0.69	0.10	ug/m3			03/14/19 15:23	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	100		60 - 140		03/14/19 15:23	1

Lab Sample ID: LCS 140-28319/1002
Matrix: Air
Analysis Batch: 28319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	1.00	1.00		ppb v/v		100	70 - 130
Chlorodifluoromethane	1.00	0.968		ppb v/v		97	60 - 140
Chloroform	1.00	0.988		ppb v/v		99	70 - 130
cis-1,2-Dichloroethene	1.00	1.01		ppb v/v		101	70 - 130
Dichlorodifluoromethane	1.00	1.04		ppb v/v		104	60 - 140
1,1-Dichloroethane	1.00	1.02		ppb v/v		102	70 - 130
1,2-Dichloroethane	1.00	0.948		ppb v/v		95	70 - 130
1,1-Dichloroethene	1.00	1.00		ppb v/v		100	70 - 130
Ethylbenzene	1.00	1.05		ppb v/v		105	70 - 130
Methylene Chloride	1.00	0.967		ppb v/v		97	70 - 130
Methyl tert-butyl ether	1.00	1.03		ppb v/v		103	60 - 140
Naphthalene	1.00	0.770		ppb v/v		77	60 - 140
Tetrachloroethene	1.00	1.02		ppb v/v		102	70 - 130
Toluene	1.00	1.05		ppb v/v		105	70 - 130
trans-1,2-Dichloroethene	1.00	0.983		ppb v/v		98	70 - 130
1,2,4-Trichlorobenzene	1.00	0.858		ppb v/v		86	60 - 140
1,1,1-Trichloroethane	1.00	0.979		ppb v/v		98	70 - 130
1,1,2-Trichloroethane	1.00	1.08		ppb v/v		108	70 - 130
Trichloroethene	1.00	0.994		ppb v/v		99	70 - 130
1,2,3-Trimethylbenzene	1.00	1.06		ppb v/v		106	70 - 130
1,2,4-Trimethylbenzene	1.00	1.07		ppb v/v		107	70 - 130
1,3,5-Trimethylbenzene	1.00	1.03		ppb v/v		103	70 - 130
Vinyl chloride	1.00	1.17		ppb v/v		117	70 - 130
Xylenes, Total	3.00	3.30		ppb v/v		110	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon tetrachloride	6.3	6.30		ug/m3		100	70 - 130
Chlorodifluoromethane	3.5	3.42		ug/m3		97	60 - 140
Chloroform	4.9	4.82		ug/m3		99	70 - 130
cis-1,2-Dichloroethene	4.0	3.99		ug/m3		101	70 - 130
Dichlorodifluoromethane	4.9	5.14		ug/m3		104	60 - 140
1,1-Dichloroethane	4.0	4.12		ug/m3		102	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: Tetra Tech GEO
 Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-28319/1002
Matrix: Air
Analysis Batch: 28319

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	4.0	3.84		ug/m3		95	70 - 130
1,1-Dichloroethene	4.0	3.98		ug/m3		100	70 - 130
Ethylbenzene	4.3	4.54		ug/m3		105	70 - 130
Methylene Chloride	3.5	3.36		ug/m3		97	70 - 130
Methyl tert-butyl ether	3.6	3.70		ug/m3		103	60 - 140
Naphthalene	5.2	4.04		ug/m3		77	60 - 140
Tetrachloroethene	6.8	6.93		ug/m3		102	70 - 130
Toluene	3.8	3.94		ug/m3		105	70 - 130
trans-1,2-Dichloroethene	4.0	3.90		ug/m3		98	70 - 130
1,2,4-Trichlorobenzene	7.4	6.37		ug/m3		86	60 - 140
1,1,1-Trichloroethane	5.5	5.34		ug/m3		98	70 - 130
1,1,2-Trichloroethane	5.5	5.88		ug/m3		108	70 - 130
Trichloroethene	5.4	5.34		ug/m3		99	70 - 130
1,2,3-Trimethylbenzene	4.9	5.21		ug/m3		106	70 - 130
1,2,4-Trimethylbenzene	4.9	5.27		ug/m3		107	70 - 130
1,3,5-Trimethylbenzene	4.9	5.05		ug/m3		103	70 - 130
Vinyl chloride	2.6	2.99		ug/m3		117	70 - 130
Xylenes, Total	13	14.3		ug/m3		110	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		60 - 140

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Air - GC/MS VOA

Analysis Batch: 28319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-14595-1	BLDG-A-EFFLUENT	Total/NA	Air	TO 15 LL	
140-14595-2	BLDG-A-MIDGAC	Total/NA	Air	TO 15 LL	
140-14595-3	BLDG-A-INFLUENT	Total/NA	Air	TO 15 LL	
140-14595-4	BLDG-C-INFLUENT	Total/NA	Air	TO 15 LL	
140-14595-5	BLDG-C-MIDGAC	Total/NA	Air	TO 15 LL	
140-14595-6	BLDG-C-EFFLUENT	Total/NA	Air	TO 15 LL	
MB 140-28319/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-28319/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: BLDG-A-EFFLUENT

Date Collected: 03/13/19 10:27

Date Received: 03/14/19 10:10

Lab Sample ID: 140-14595-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	28319	03/14/19 18:59	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-A-MIDGAC

Date Collected: 03/13/19 10:31

Date Received: 03/14/19 10:10

Lab Sample ID: 140-14595-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	28319	03/14/19 19:49	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-A-INFLUENT

Date Collected: 03/13/19 10:34

Date Received: 03/14/19 10:10

Lab Sample ID: 140-14595-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	28319	03/14/19 20:38	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-C-INFLUENT

Date Collected: 03/13/19 12:11

Date Received: 03/14/19 10:10

Lab Sample ID: 140-14595-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	28319	03/14/19 21:27	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-C-MIDGAC

Date Collected: 03/13/19 12:06

Date Received: 03/14/19 10:10

Lab Sample ID: 140-14595-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	28319	03/14/19 22:16	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: BLDG-C-EFFLUENT

Date Collected: 03/13/19 12:00

Date Received: 03/14/19 10:10

Lab Sample ID: 140-14595-6

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	28319	03/14/19 23:05	S1K	TAL KNX
Instrument ID: MR										

TestAmerica Knoxville

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-28319/4

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	28319	03/14/19 15:23	S1K	TAL KNX
Instrument ID: MR										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-28319/1002

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	28319	03/14/19 12:09	S1K	TAL KNX
Instrument ID: MR										

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMC Middle River, Middle River, MD

TestAmerica Job ID: 140-14595-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-14595-1	BLDG-A-EFFLUENT	Air	03/13/19 10:27	03/14/19 10:10
140-14595-2	BLDG-A-MIDGAC	Air	03/13/19 10:31	03/14/19 10:10
140-14595-3	BLDG-A-INFLUENT	Air	03/13/19 10:34	03/14/19 10:10
140-14595-4	BLDG-C-INFLUENT	Air	03/13/19 12:11	03/14/19 10:10
140-14595-5	BLDG-C-MIDGAC	Air	03/13/19 12:06	03/14/19 10:10
140-14595-6	BLDG-C-EFFLUENT	Air	03/13/19 12:00	03/14/19 10:10

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Matrix: Air Level: Low
 GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
BLDG-A-EFFLUENT	140-14595-1	99
BLDG-A-MIDGAC	140-14595-2	99
BLDG-A-INFLUENT	140-14595-3	99
BLDG-C-INFLUENT	140-14595-4	102
BLDG-C-MIDGAC	140-14595-5	100
BLDG-C-EFFLUENT	140-14595-6	100
	MB 140-28319/4	100
	LCS 140-28319/1002	105

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: RCCVC14-LCS.d
 Lab ID: LCS 140-28319/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.00	1.01	101	70-130	
Carbon tetrachloride	1.00	1.00	100	70-130	
Chlorodifluoromethane	1.00	0.968	97	60-140	
Chloroform	1.00	0.988	99	70-130	
cis-1,2-Dichloroethene	1.00	1.01	101	70-130	
Dichlorodifluoromethane	1.00	1.04	104	60-140	
1,1-Dichloroethane	1.00	1.02	102	70-130	
1,2-Dichloroethane	1.00	0.948	95	70-130	
1,1-Dichloroethene	1.00	1.00	100	70-130	
Ethylbenzene	1.00	1.05	105	70-130	
Methylene Chloride	1.00	0.967	97	70-130	
Methyl tert-butyl ether	1.00	1.03	103	60-140	
Naphthalene	1.00	0.770	77	60-140	
Tetrachloroethene	1.00	1.02	102	70-130	
Toluene	1.00	1.05	105	70-130	
trans-1,2-Dichloroethene	1.00	0.983	98	70-130	
1,2,4-Trichlorobenzene	1.00	0.858	86	60-140	
1,1,1-Trichloroethane	1.00	0.979	98	70-130	
1,1,2-Trichloroethane	1.00	1.08	108	70-130	
Trichloroethene	1.00	0.994	99	70-130	
1,2,3-Trimethylbenzene	1.00	1.06	106	70-130	
1,2,4-Trimethylbenzene	1.00	1.07	107	70-130	
1,3,5-Trimethylbenzene	1.00	1.03	103	70-130	
Vinyl chloride	1.00	1.17	117	70-130	
Xylenes, Total	3.00	3.30	110	70-130	

Column to be used to flag recovery and RPD values

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Lab File ID: R500BC14.D Lab Sample ID: MB 140-28319/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MR Date Analyzed: 03/14/2019 15:23
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-28319/1002	RCCVC14-LCS .d	03/14/2019 12:09
BLDG-A-EFFLUENT	140-14595-1	RC14P104.D	03/14/2019 18:59
BLDG-A-MIDGAC	140-14595-2	RC14P105.D	03/14/2019 19:49
BLDG-A-INFLUENT	140-14595-3	RC14P106.D	03/14/2019 20:38
BLDG-C-INFLUENT	140-14595-4	RC14P107.D	03/14/2019 21:27
BLDG-C-MIDGAC	140-14595-5	RC14P108.D	03/14/2019 22:16
BLDG-C-EFFLUENT	140-14595-6	RC14P109.D	03/14/2019 23:05

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Lab File ID: RFBK16I.D BFB Injection Date: 11/16/2018
 Instrument ID: MR BFB Injection Time: 16:00
 Analysis Batch No.: 25490

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	58.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	91.0	
175	5.0 - 9.0 % of mass 174	6.6	(7.3) 1
176	95.0 - 101.0 % of mass 174	88.8	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-25490/3	RK16IC09.D	11/16/2018	17:23
	IC 140-25490/5	RK16IC10.D	11/16/2018	19:07
	IC 140-25490/8	RK16IC01.D	11/16/2018	21:42
	IC 140-25490/9	RK16IC02.D	11/16/2018	22:34
	IC 140-25490/10	RK16IC03.D	11/16/2018	23:27
	IC 140-25490/11	RK16IC04.D	11/17/2018	00:20
	IC 140-25490/12	RK16IC05.D	11/17/2018	01:12
	IC 140-25490/13	RK16IC06.D	11/17/2018	02:05
	ICIS 140-25490/14	RK16IC07.D	11/17/2018	02:58
	IC 140-25490/15	RK16IC08.D	11/17/2018	03:51
	ICV 140-25490/18	RK16ICV.D	11/17/2018	06:27

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Lab File ID: RBFBC14.D BFB Injection Date: 03/14/2019
 Instrument ID: MR BFB Injection Time: 11:41
 Analysis Batch No.: 28319

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.9	
75	30.0 - 60.0 % of mass 95	59.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	86.7	
175	5.0 - 9.0 % of mass 174	6.6	(7.6) 1
176	95.0 - 101.0 % of mass 174	84.1	(97.1) 1
177	5.0 - 9.0 % of mass 176	5.4	(6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-28319/2	RCCVC14.D	03/14/2019	12:09
	LCS 140-28319/1002	RCCVC14-LCS.d	03/14/2019	12:09
	MB 140-28319/4	R500BC14.D	03/14/2019	15:23
BLDG-A-EFFLUENT	140-14595-1	RC14P104.D	03/14/2019	18:59
BLDG-A-MIDGAC	140-14595-2	RC14P105.D	03/14/2019	19:49
BLDG-A-INFLUENT	140-14595-3	RC14P106.D	03/14/2019	20:38
BLDG-C-INFLUENT	140-14595-4	RC14P107.D	03/14/2019	21:27
BLDG-C-MIDGAC	140-14595-5	RC14P108.D	03/14/2019	22:16
BLDG-C-EFFLUENT	140-14595-6	RC14P109.D	03/14/2019	23:05

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Sample No.: ICIS 140-25490/14 Date Analyzed: 11/17/2018 02:58
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RK16IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBzd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	298864	7.40	1677758	9.49	1487799	14.56
UPPER LIMIT	418410	7.73	2348861	9.82	2082919	14.89
LOWER LIMIT	179318	7.07	1006655	9.16	892679	14.23
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-25490/18	299493	7.38	1671036	9.48	1499042	14.55

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Sample No.: CCVIS 140-28319/2 Date Analyzed: 03/14/2019 12:09
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RCCVC14.D Heated Purge: (Y/N) N
 Calibration ID: 1746

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	203113	7.37	1202204	9.43	1060567	14.49	
UPPER LIMIT	284358	7.70	1683086	9.76	1484794	14.82	
LOWER LIMIT	121868	7.04	721322	9.10	636340	14.16	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-28319/1002	203113	7.37	1202204	9.43	1060567	14.49	
MB 140-28319/4	213842	7.37	1231452	9.43	1068992	14.49	
140-14595-1	BLDG-A-EFFLUENT	224154	7.36	1350491	9.43	1177406	14.49
140-14595-2	BLDG-A-MIDGAC	228113	7.37	1348188	9.43	1167801	14.49
140-14595-3	BLDG-A-INFLUENT	204861	7.37	1222504	9.43	1066831	14.49
140-14595-4	BLDG-C-INFLUENT	201515	7.37	1174409	9.43	1031926	14.49
140-14595-5	BLDG-C-MIDGAC	199521	7.37	1168444	9.43	1025116	14.49
140-14595-6	BLDG-C-EFFLUENT	207776	7.37	1223879	9.43	1064280	14.49

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: BLDG-A-EFFLUENT Lab Sample ID: 140-14595-1
 Matrix: Air Lab File ID: RC14P104.D
 Analysis Method: TO 15 LL Date Collected: 03/13/2019 10:27
 Sample wt/vol: 100(mL) Date Analyzed: 03/14/2019 18:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.50		0.40	0.075
67-66-3	Chloroform	119.38	0.42		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	5.7		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.26	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.5		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	9.9		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.67	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.16	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	7.2		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.25		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: BLDG-A-EFFLUENT Lab Sample ID: 140-14595-1
 Matrix: Air Lab File ID: RC14P104.D
 Analysis Method: TO 15 LL Date Collected: 03/13/2019 10:27
 Sample wt/vol: 100(mL) Date Analyzed: 03/14/2019 18:59
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.78	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	2.0		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	23		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	6.0		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	39		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.63	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	39		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D
 Lims ID: 140-14595-A-1
 Client ID: BLDG-A-EFFLUENT
 Sample Type: Client
 Inject. Date: 14-Mar-2019 18:59:30 ALS Bottle#: 4 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-008
 Misc. Info.: 140-14595-a-1
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:52:45 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:52:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.363	7.368	-0.005	70	224154	4.00	
* 2 1,4-Difluorobenzene	114	9.428	9.434	-0.006	95	1350491	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.486	14.492	-0.006	90	1177406	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.212	16.217	-0.005	90	989425	3.95	
6 Chlorodifluoromethane	51	3.502	3.502	-0.011	95	13227	0.0995	M
8 Dichlorodifluoromethane	85	3.550	3.559	-0.006	99	12548	0.0514	
27 1,1-Dichloroethene	96	5.066	5.080	-0.010	97	156219	1.98	
31 Methylene Chloride	84	5.308	5.319	-0.011	88	10044	0.1340	
34 trans-1,2-Dichloroethene	96	5.955	5.965	-0.006	91	2563	0.0319	
37 1,1-Dichloroethane	63	6.274	6.289	-0.010	98	40098	0.2978	
41 cis-1,2-Dichloroethene	96	7.099	7.109	-0.005	94	93041	1.15	
43 Chloroform	83	7.395	7.412	-0.011	88	17873	0.0835	
45 1,1,1-Trichloroethane	97	8.317	8.323	-0.006	95	391858	1.44	
47 Benzene	78	8.867	8.867	0.000	97	10775	0.0490	
56 Trichloroethene	130	10.178	10.183	-0.005	93	6518	0.0491	
65 Toluene	91	12.405	12.405	0.000	92	24126	0.0855	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D

Injection Date: 14-Mar-2019 18:59:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14595-A-1

Lab Sample ID: 140-14595-1

Worklist Smp#: 8

Client ID: BLDG-A-EFFLUENT

Purge Vol: 500.000 mL

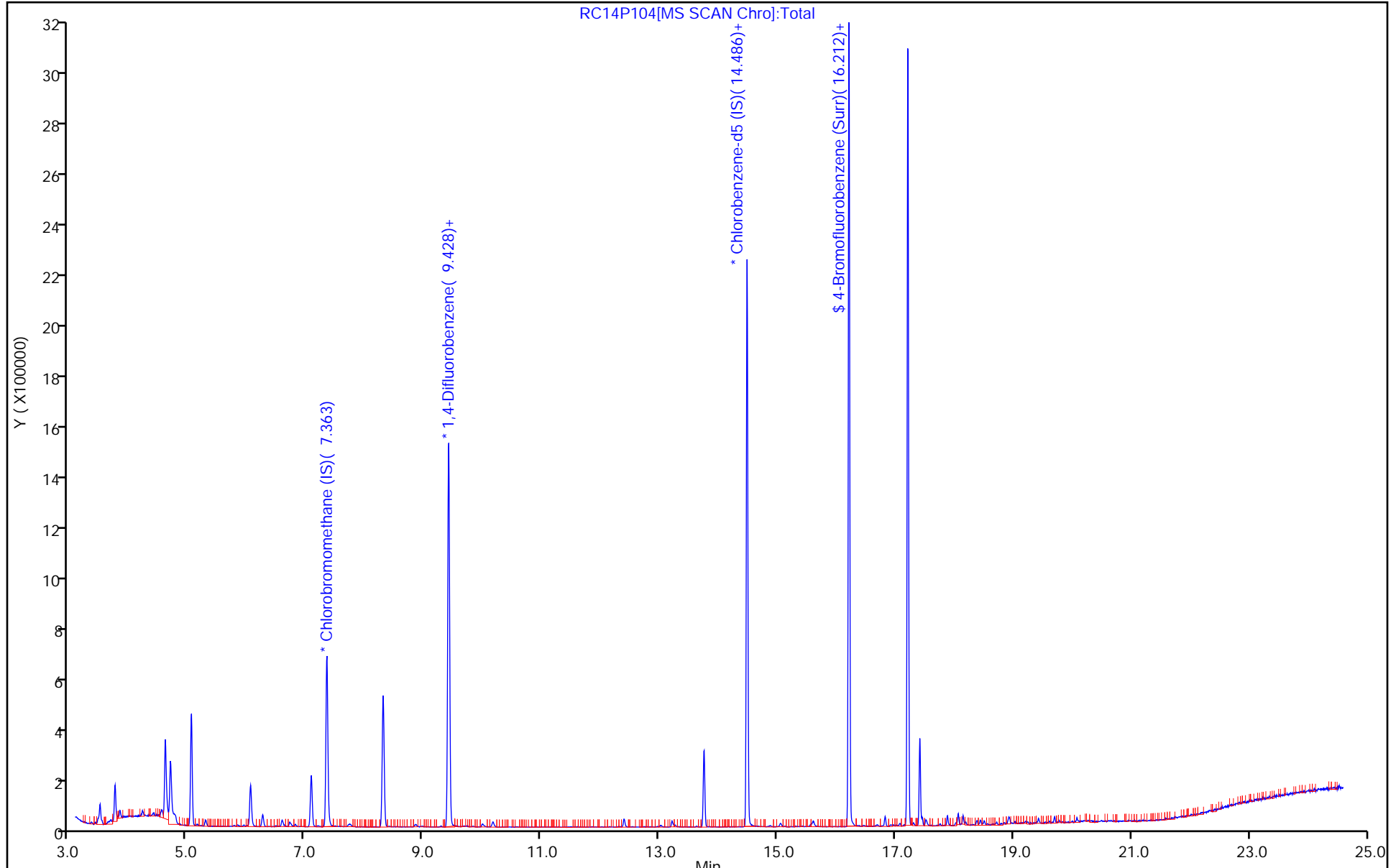
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D
 Lims ID: 140-14595-A-1
 Client ID: BLDG-A-EFFLUENT
 Sample Type: Client
 Inject. Date: 14-Mar-2019 18:59:30 ALS Bottle#: 4 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-008
 Misc. Info.: 140-14595-a-1
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:52:45 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:52:45

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.95	98.79

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D

Injection Date: 14-Mar-2019 18:59:30

Instrument ID: MR

Lims ID: 140-14595-A-1

Lab Sample ID: 140-14595-1

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

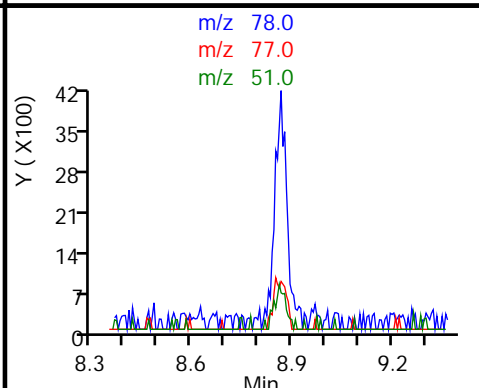
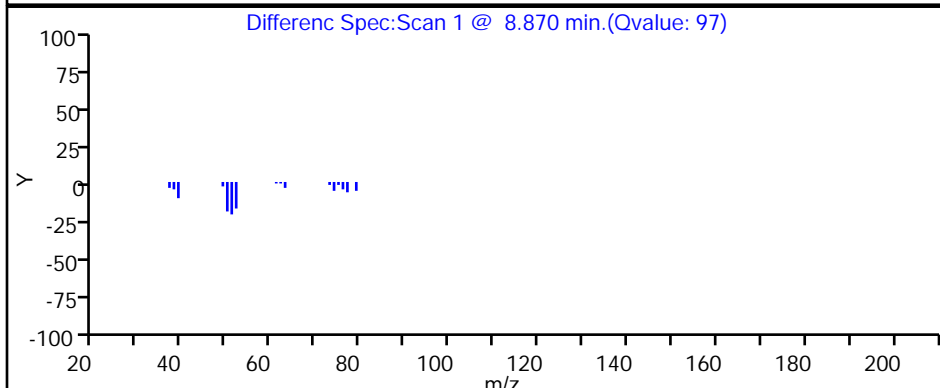
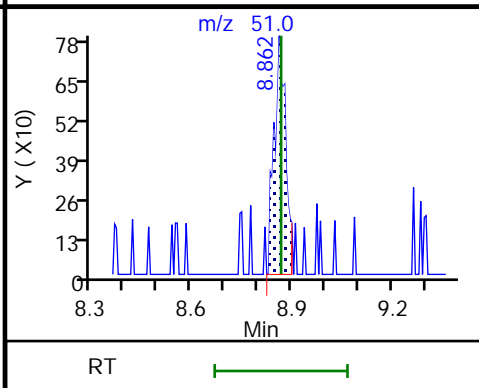
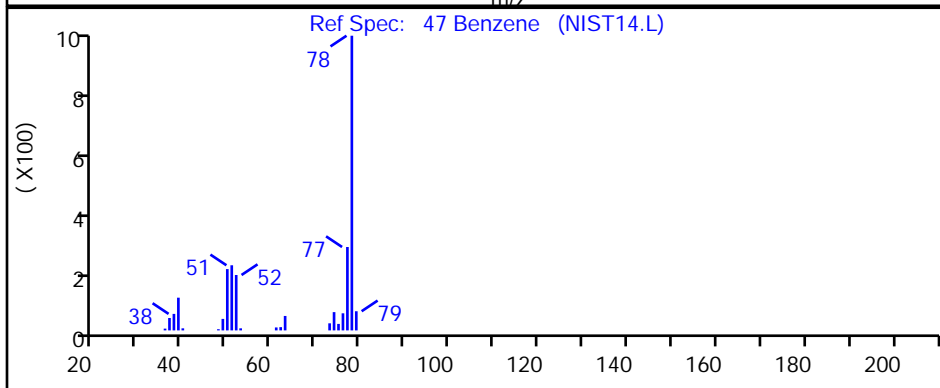
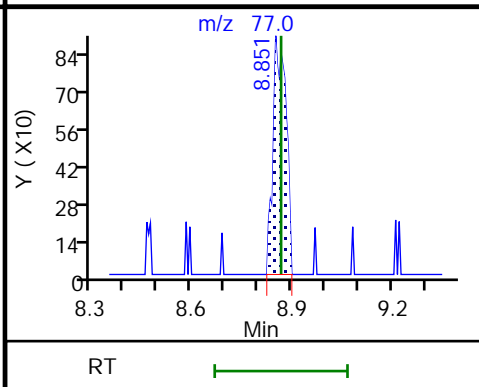
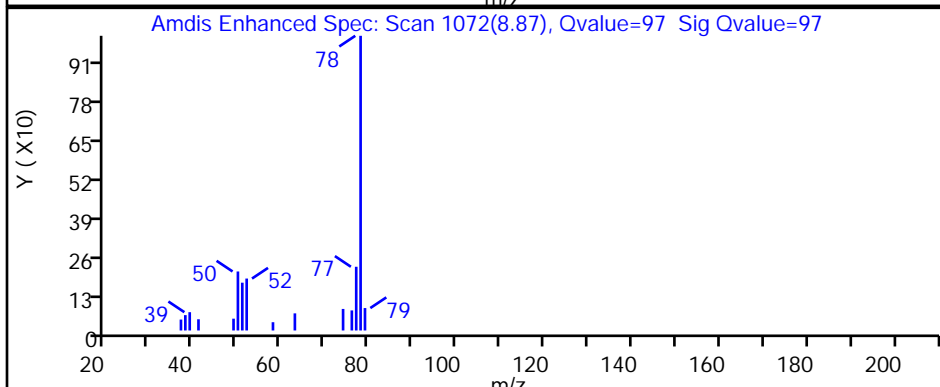
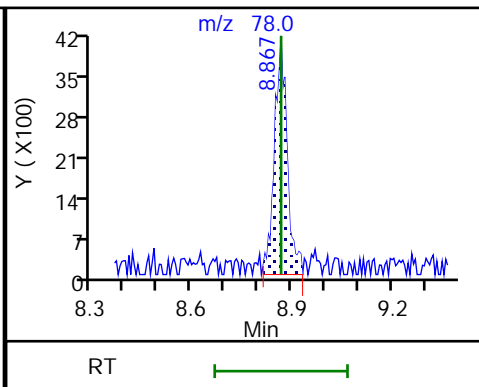
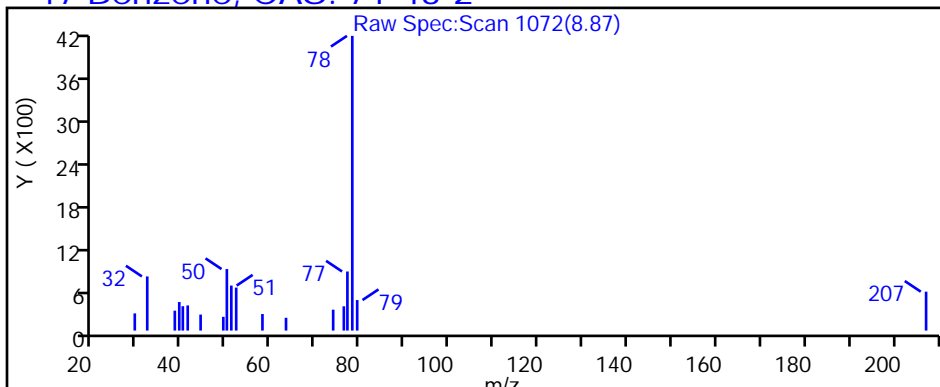
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D

Injection Date: 14-Mar-2019 18:59:30

Instrument ID: MR

Lims ID: 140-14595-A-1

Lab Sample ID: 140-14595-1

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

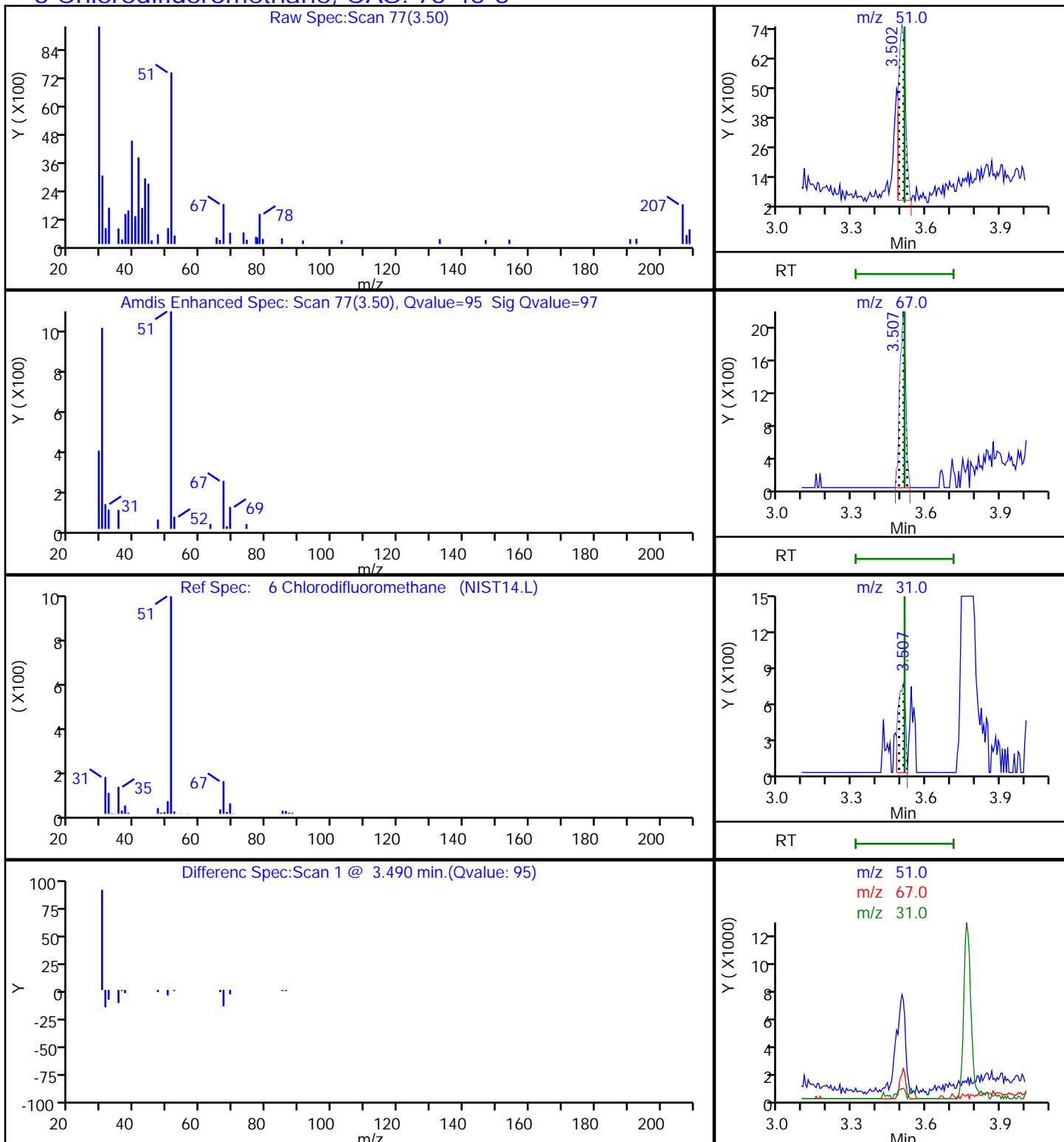
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D

Injection Date: 14-Mar-2019 18:59:30

Instrument ID: MR

Lims ID: 140-14595-A-1

Lab Sample ID: 140-14595-1

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

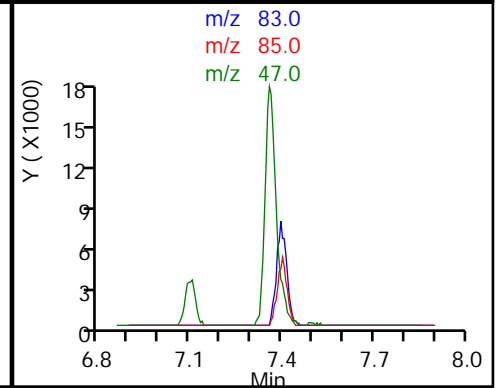
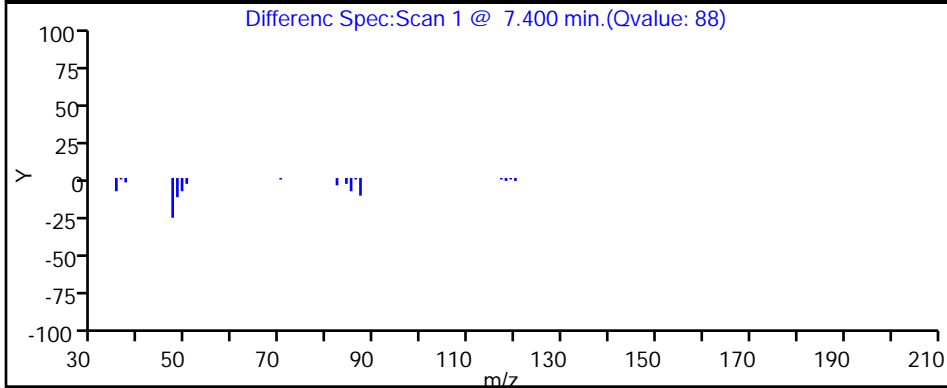
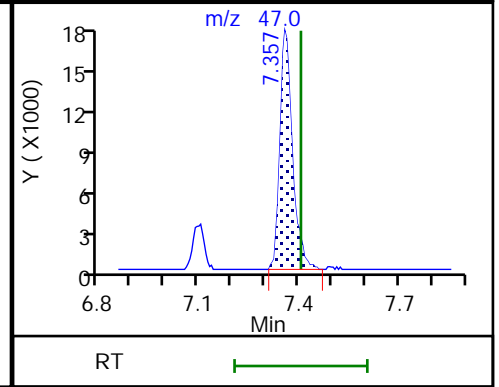
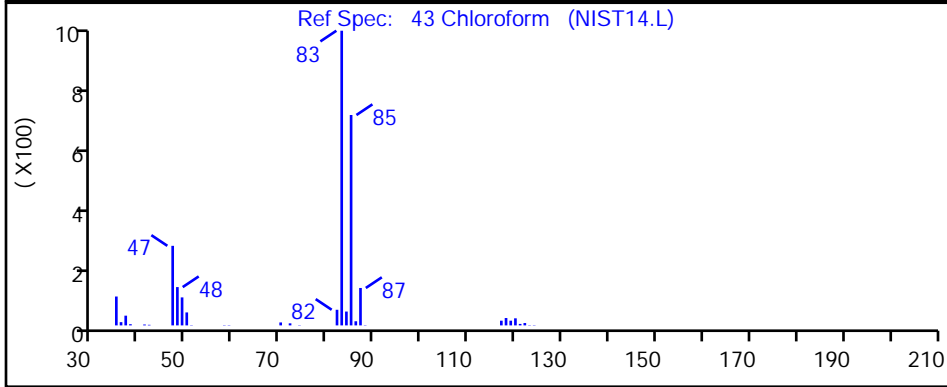
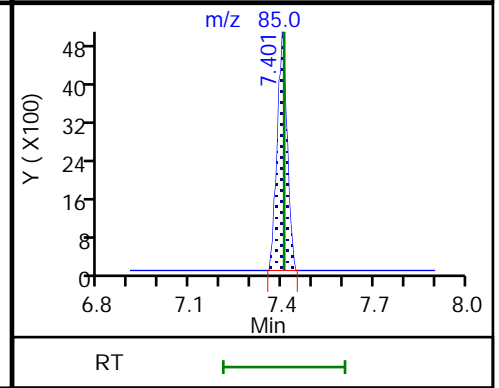
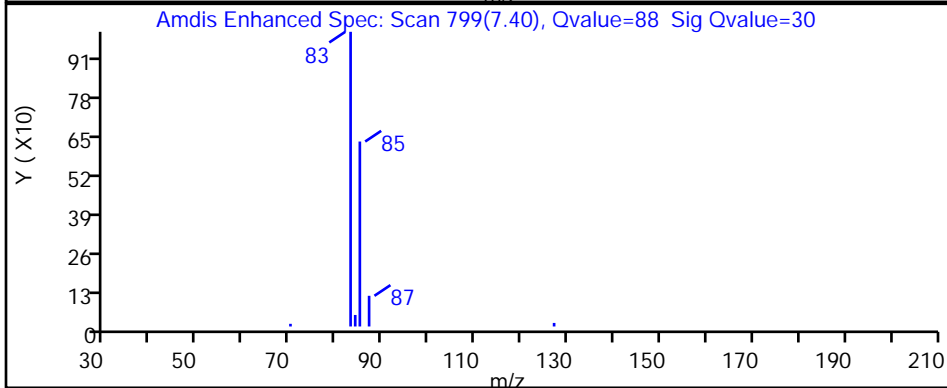
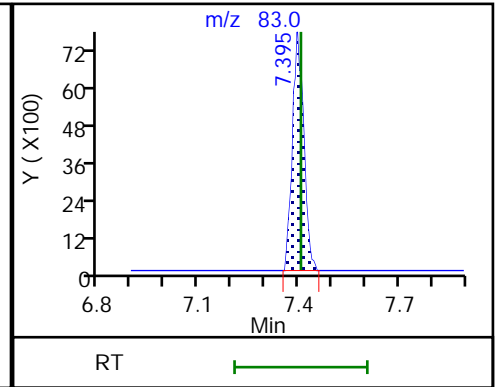
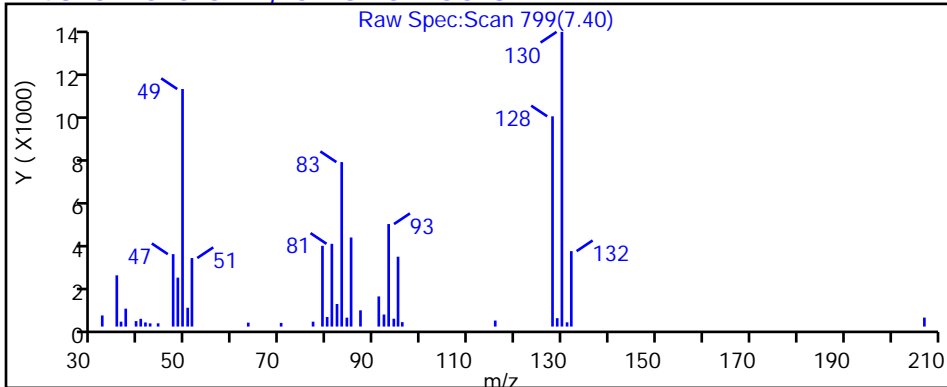
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D

Injection Date: 14-Mar-2019 18:59:30

Instrument ID: MR

Lims ID: 140-14595-A-1

Lab Sample ID: 140-14595-1

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

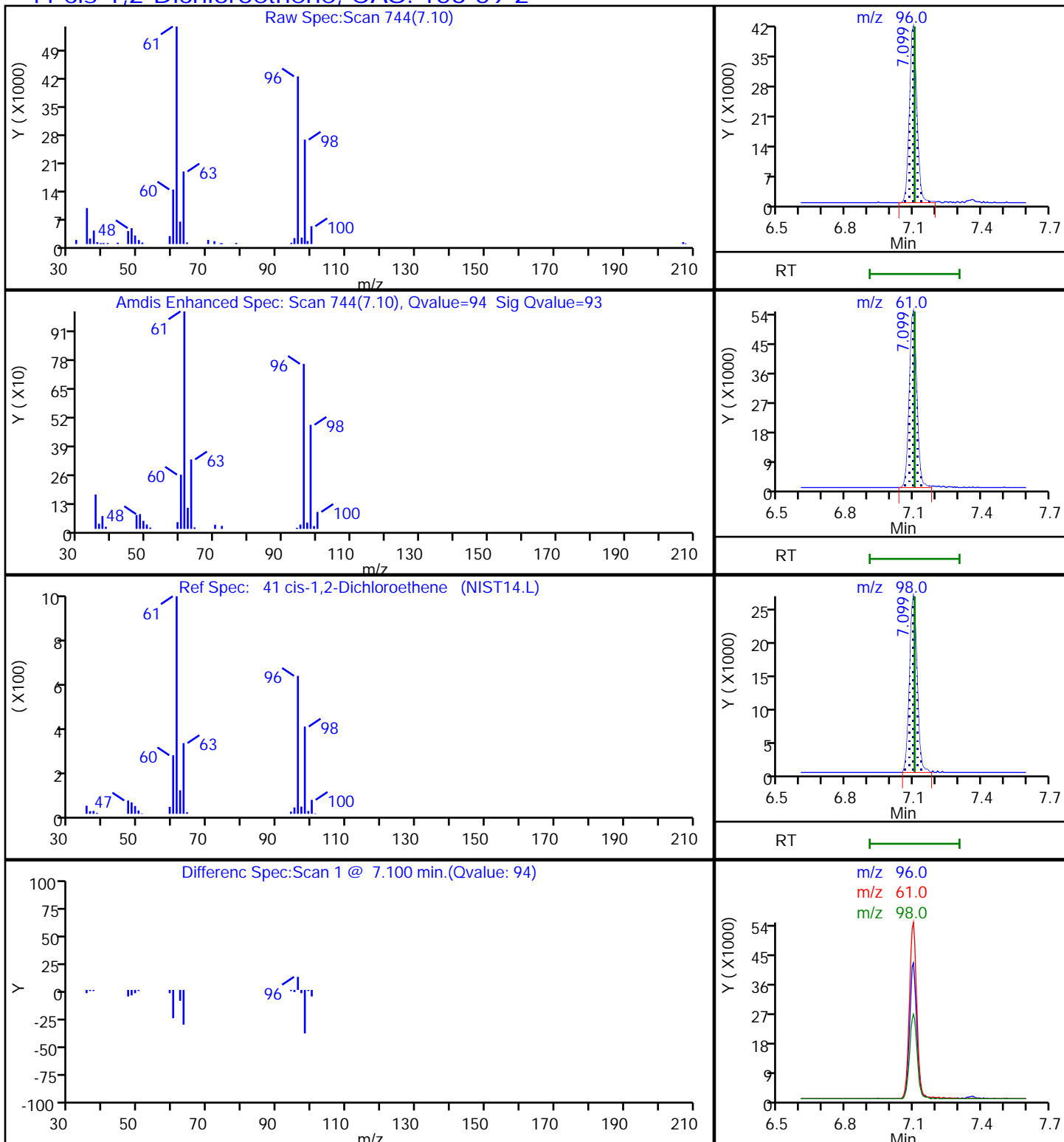
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D

Injection Date: 14-Mar-2019 18:59:30

Instrument ID: MR

Lims ID: 140-14595-A-1

Lab Sample ID: 140-14595-1

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

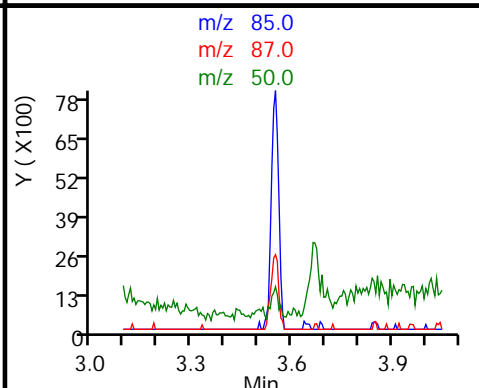
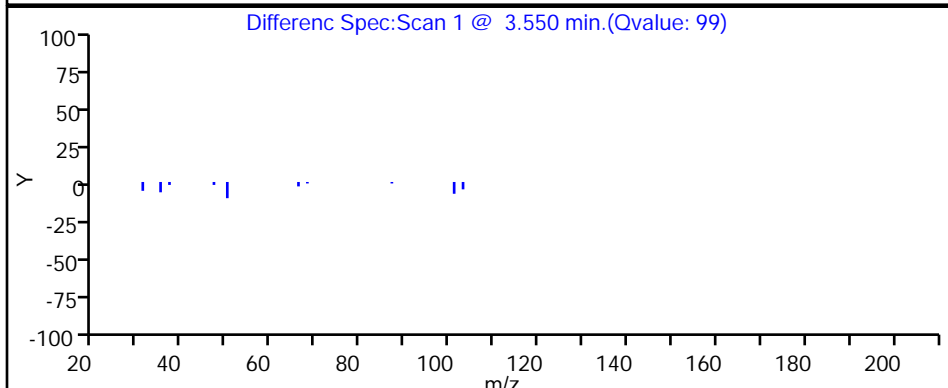
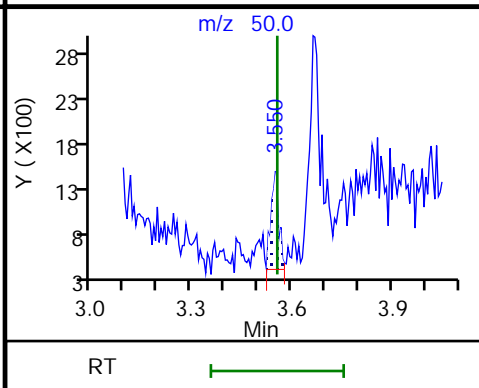
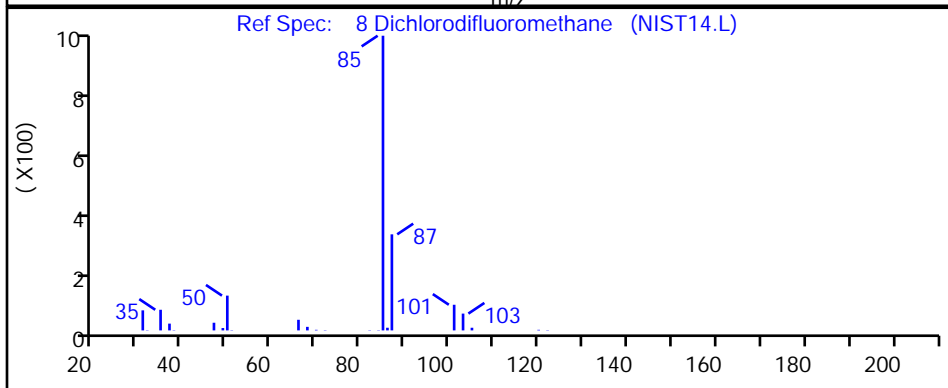
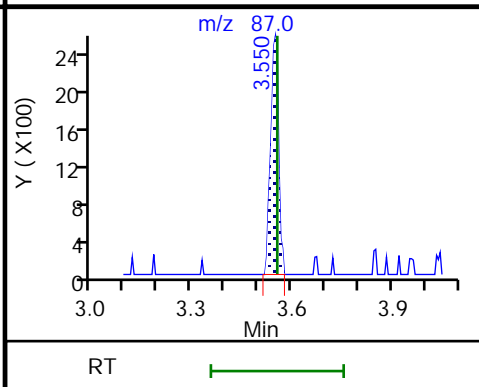
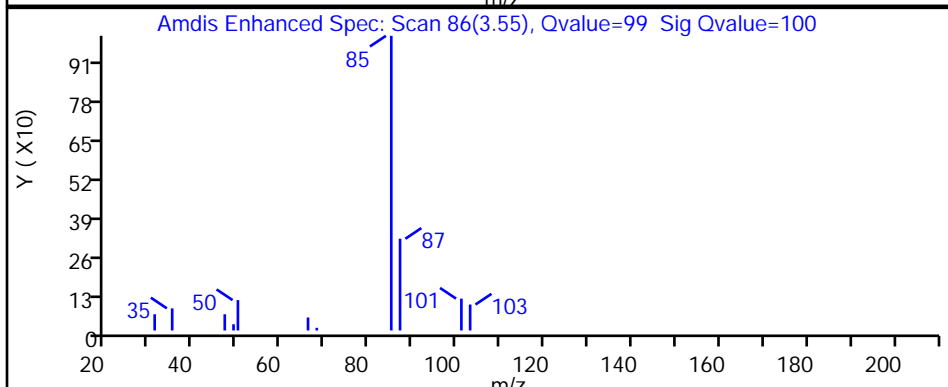
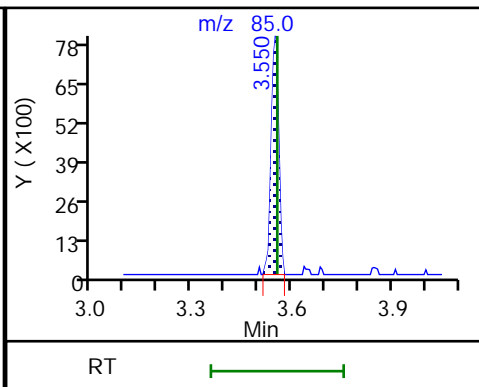
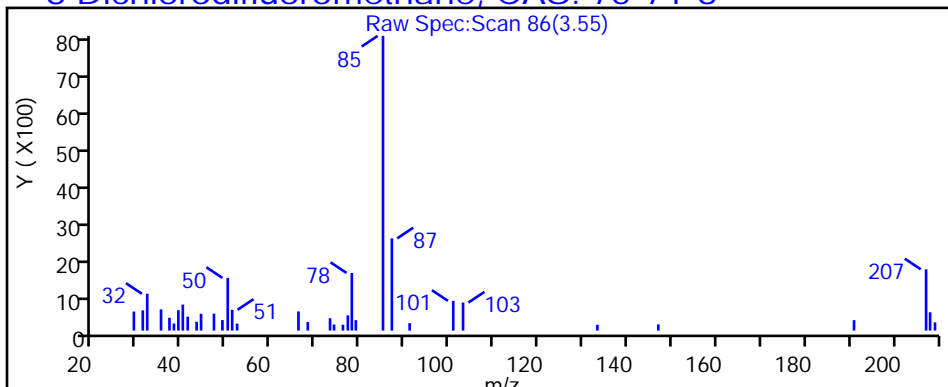
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D

Injection Date: 14-Mar-2019 18:59:30

Instrument ID: MR

Lims ID: 140-14595-A-1

Lab Sample ID: 140-14595-1

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

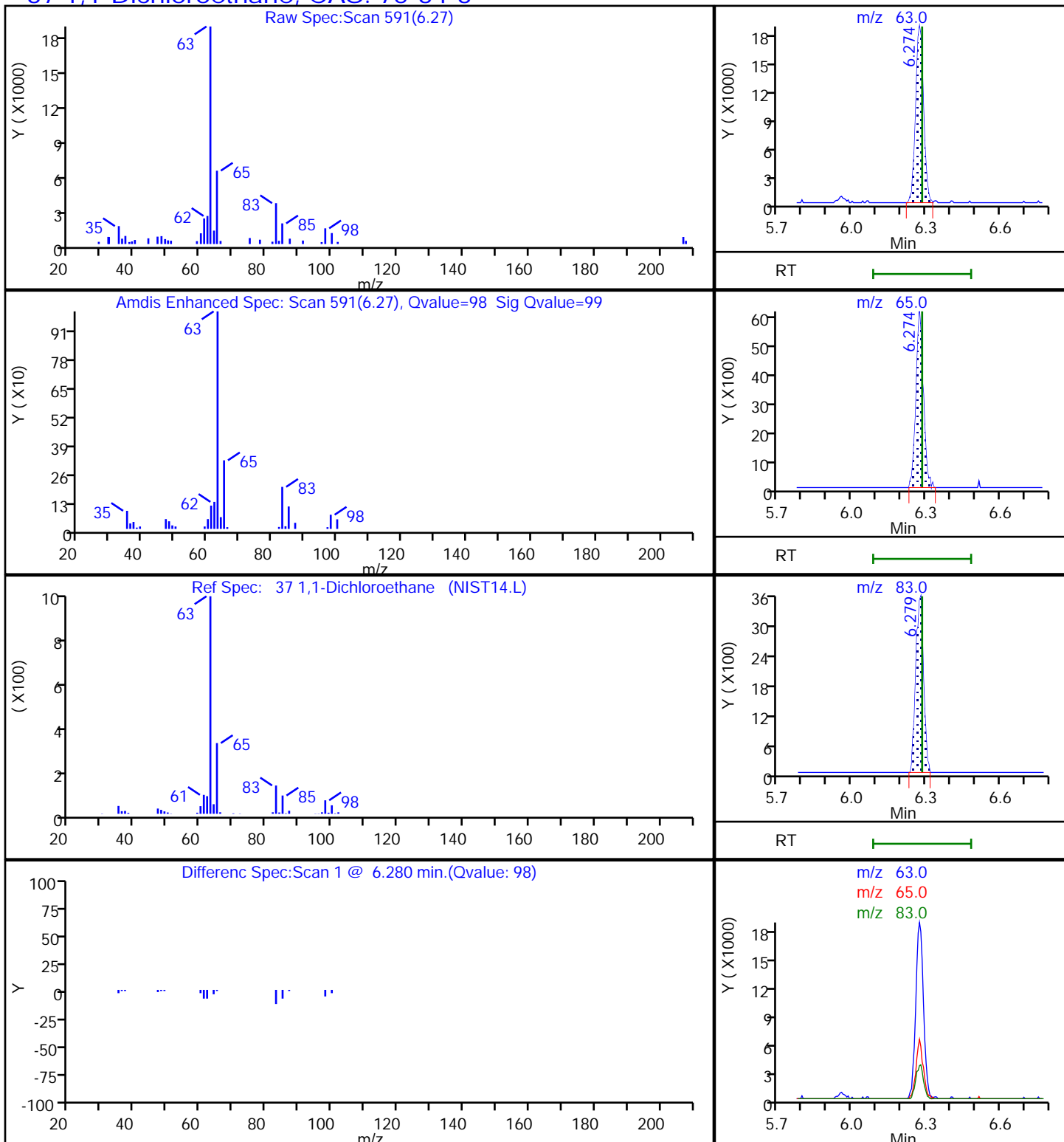
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D

Injection Date: 14-Mar-2019 18:59:30

Instrument ID: MR

Lims ID: 140-14595-A-1

Lab Sample ID: 140-14595-1

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

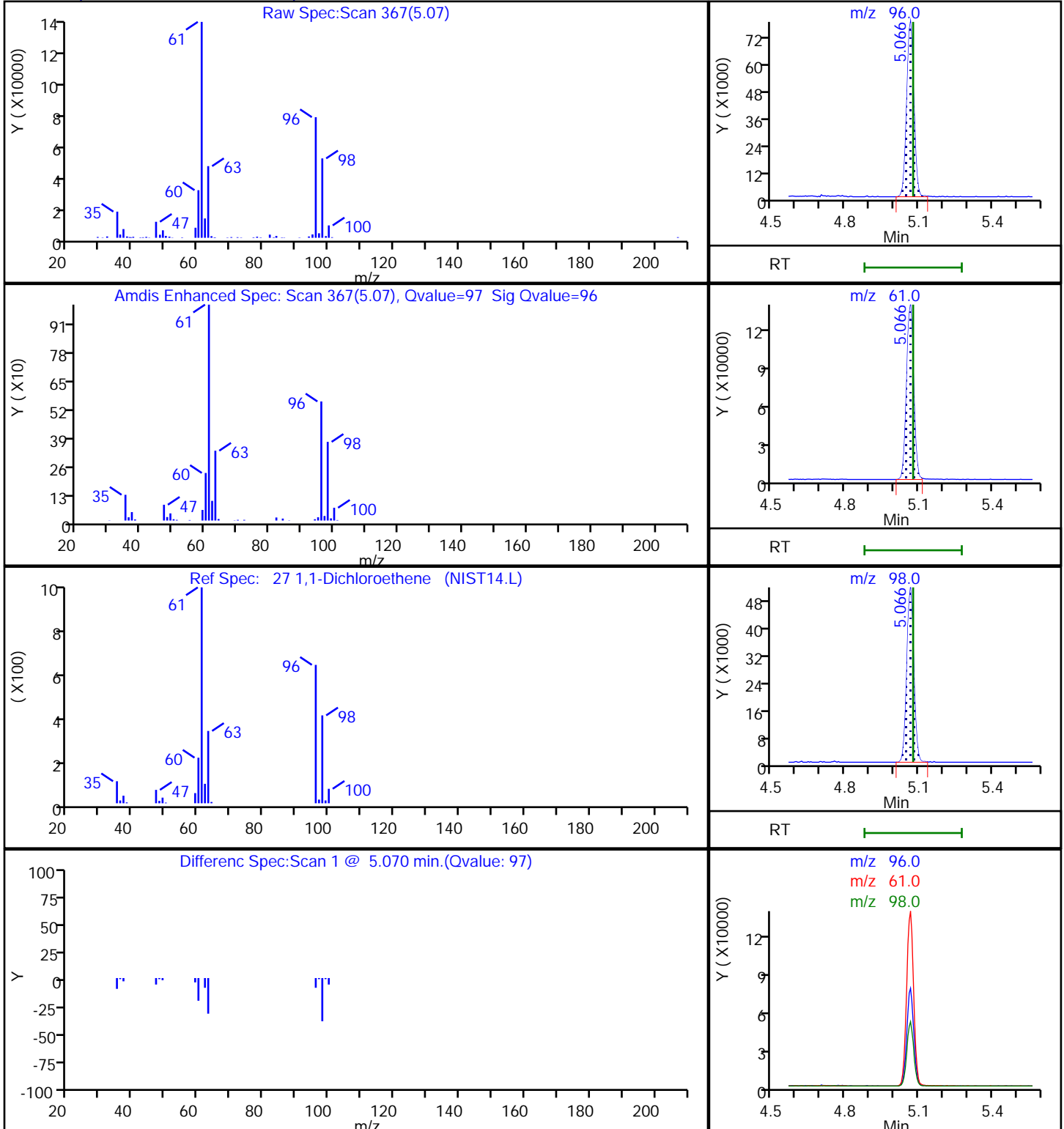
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D

Injection Date: 14-Mar-2019 18:59:30

Instrument ID: MR

Lims ID: 140-14595-A-1

Lab Sample ID: 140-14595-1

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4 Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

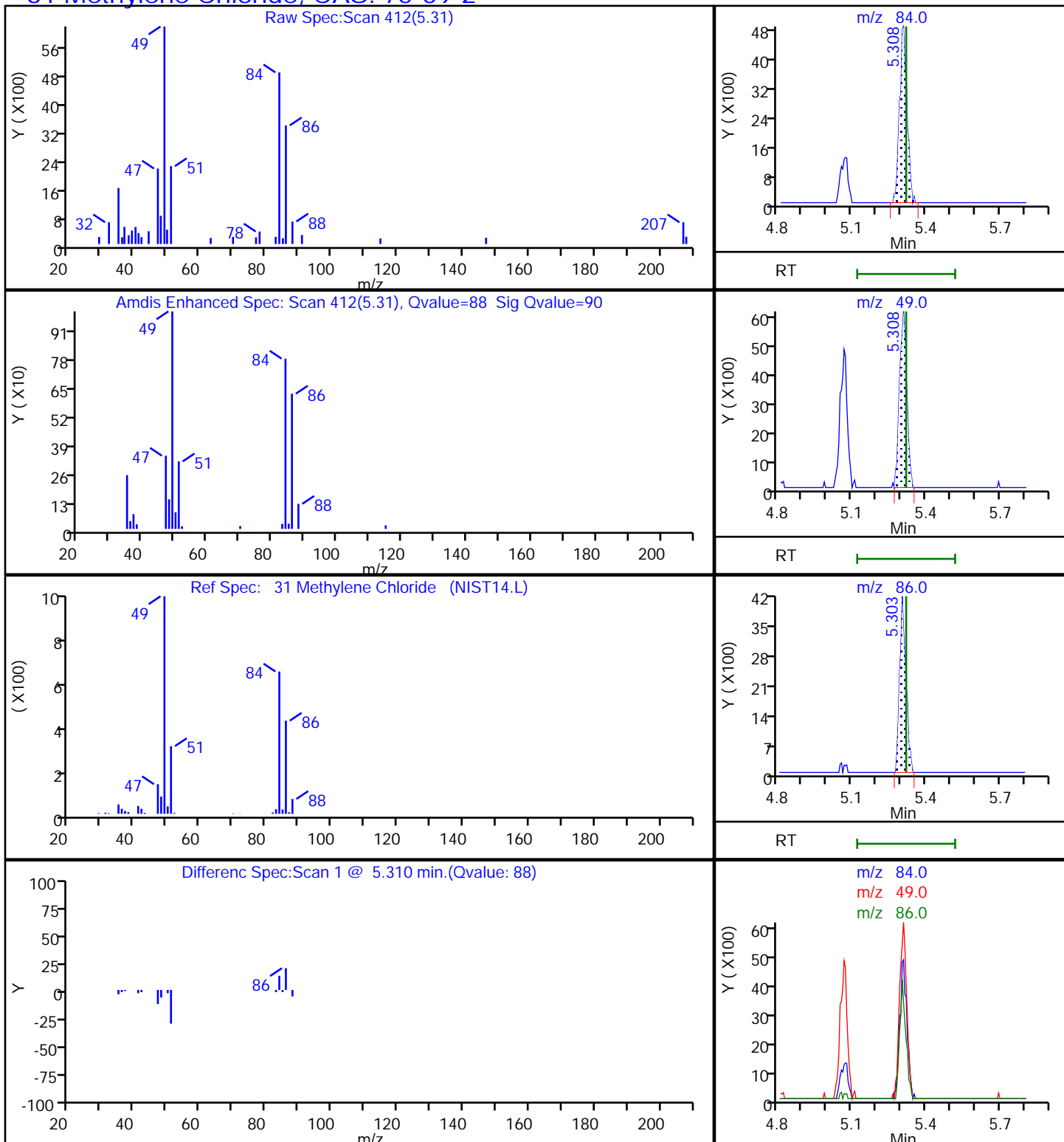
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

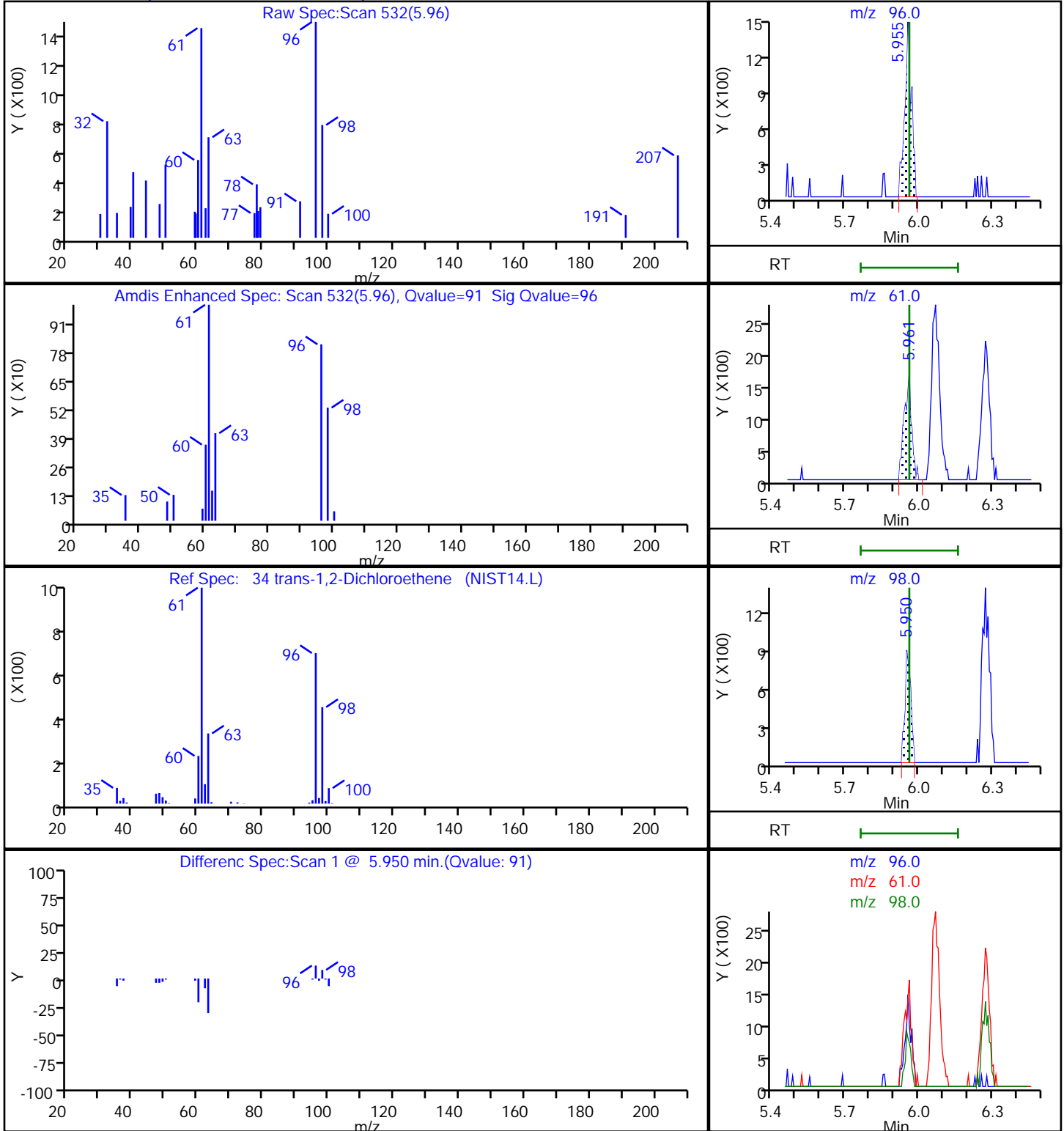
31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D
Injection Date: 14-Mar-2019 18:59:30 Instrument ID: MR
Lims ID: 140-14595-A-1 Lab Sample ID: 140-14595-1
Client ID: BLDG-A-EFFLUENT
Operator ID: ALS Bottle#: 4 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D

Injection Date: 14-Mar-2019 18:59:30

Instrument ID: MR

Lims ID: 140-14595-A-1

Lab Sample ID: 140-14595-1

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

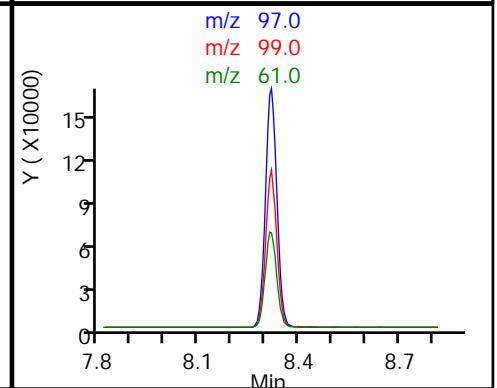
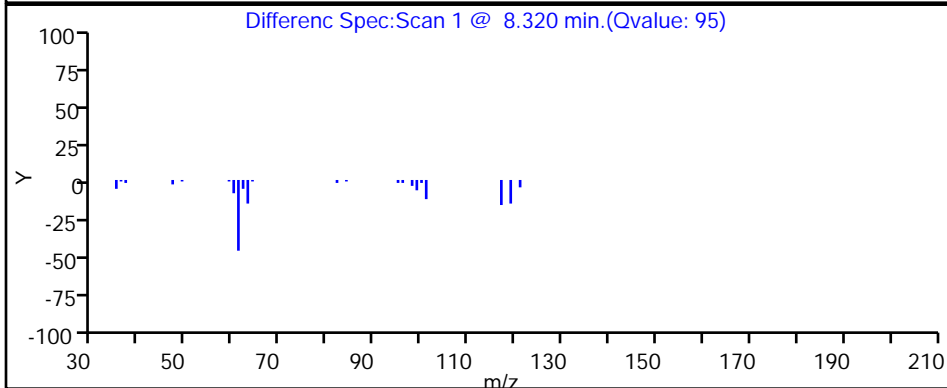
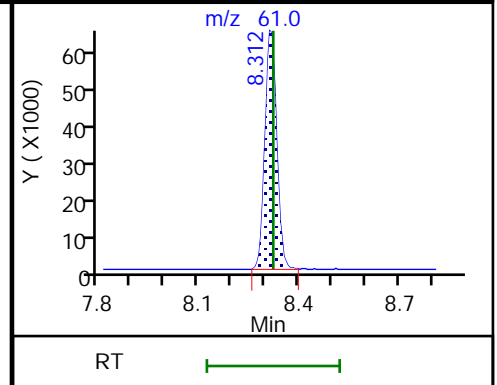
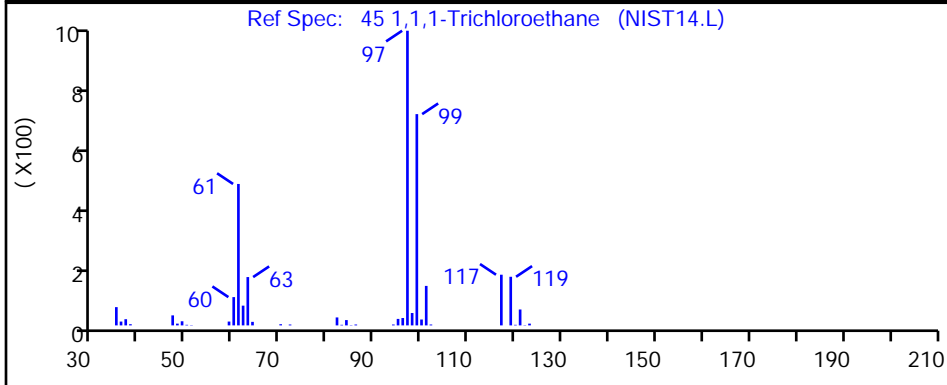
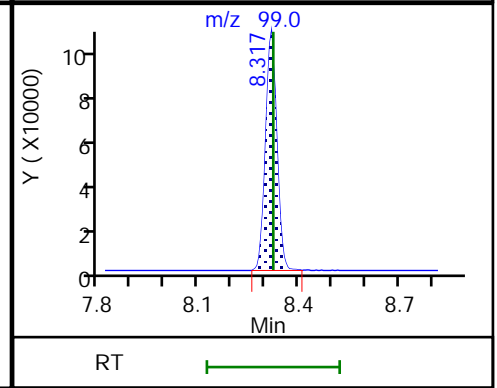
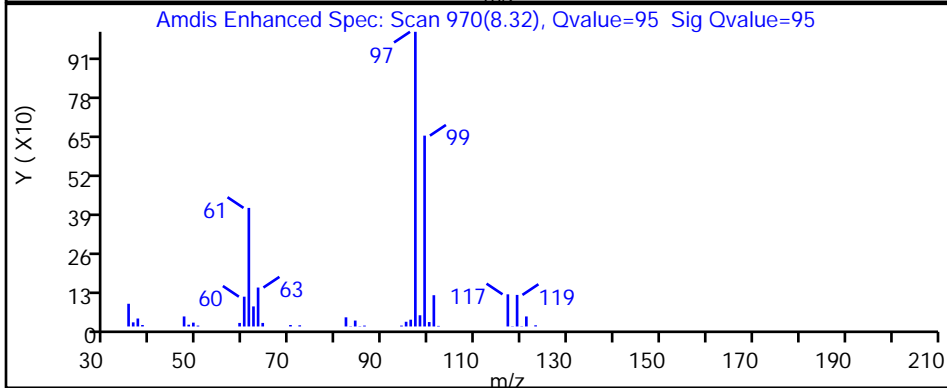
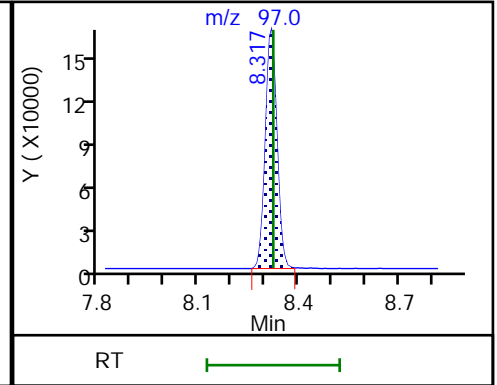
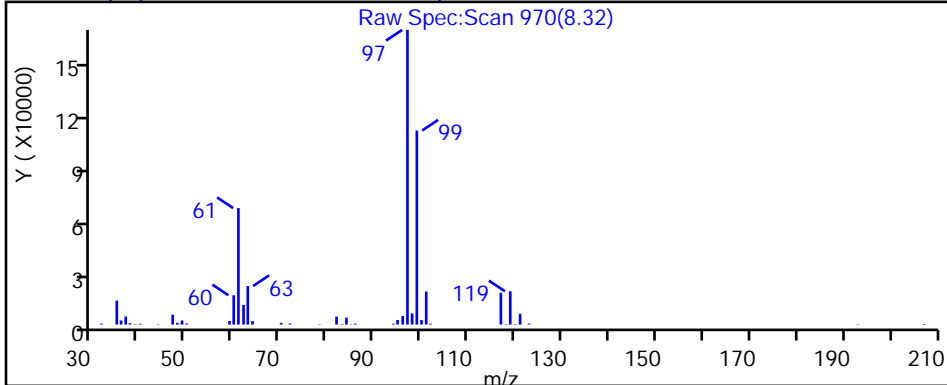
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D

Injection Date: 14-Mar-2019 18:59:30

Instrument ID: MR

Lims ID: 140-14595-A-1

Lab Sample ID: 140-14595-1

Client ID: BLDG-A-EFFLUENT

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

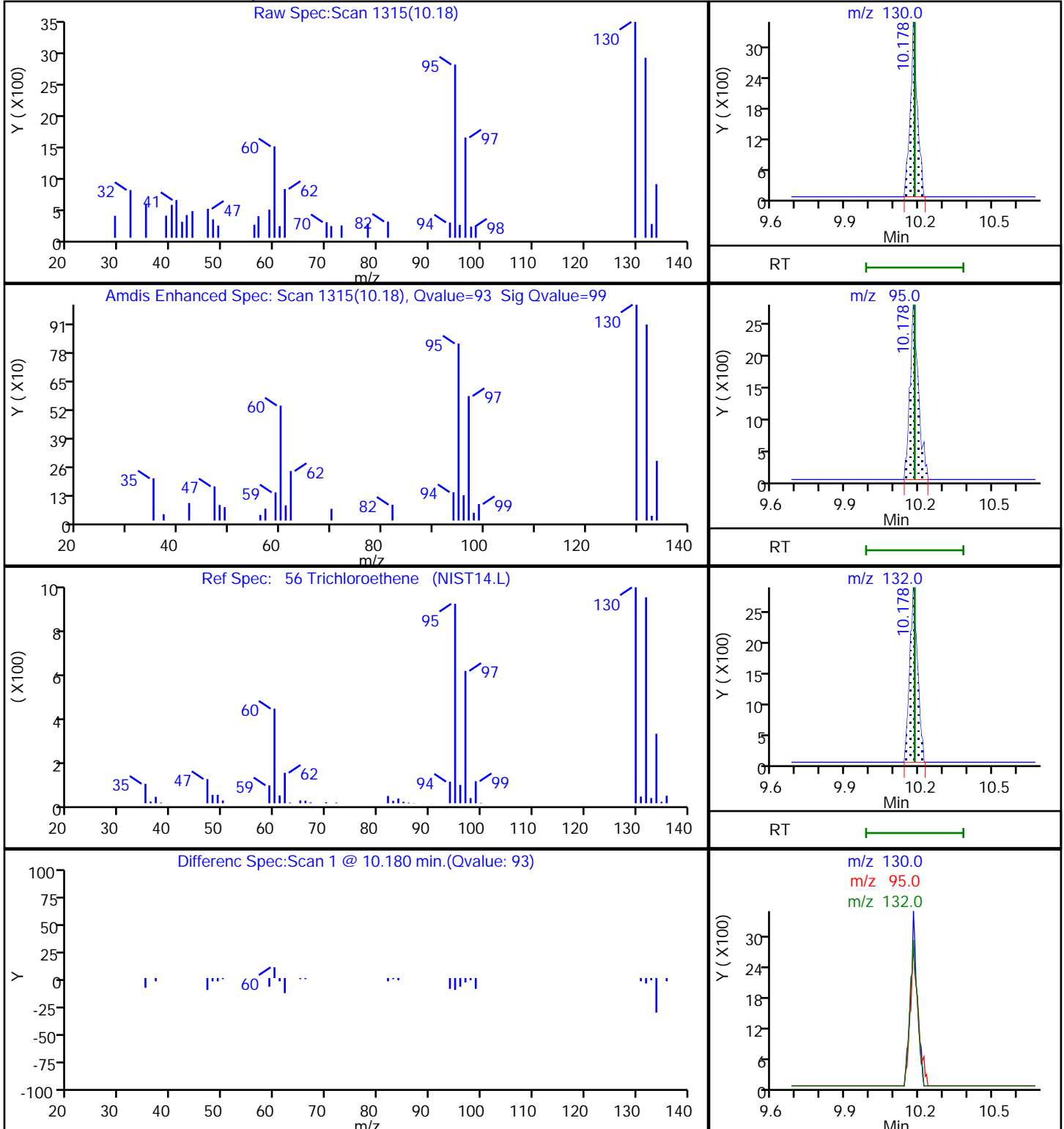
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

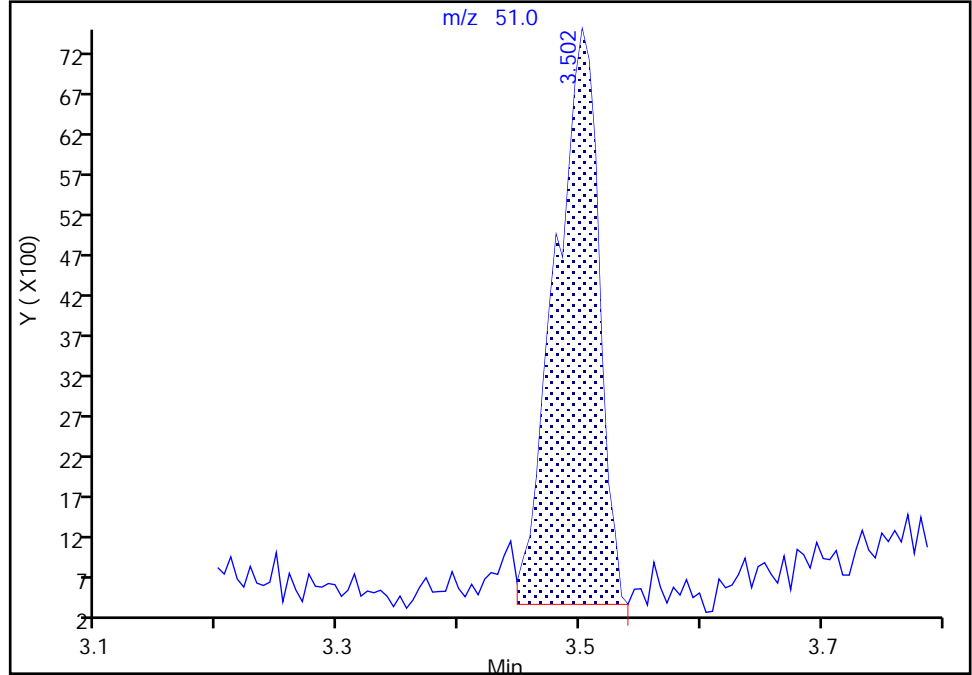
Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D
Injection Date: 14-Mar-2019 18:59:30 Instrument ID: MR
Lims ID: 140-14595-A-1 Lab Sample ID: 140-14595-1
Client ID: BLDG-A-EFFLUENT
Operator ID: ALS Bottle#: 4 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Signal: 1

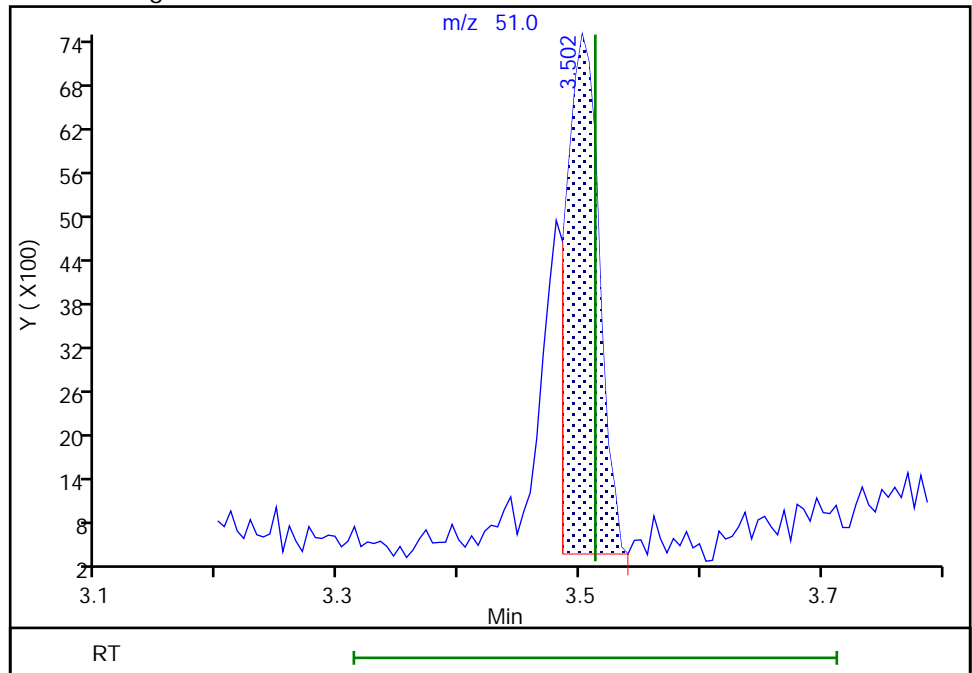
RT: 3.50
Area: 17801
Amount: 0.133841
Amount Units: ppb v/v

Processing Integration Results



RT: 3.50
Area: 13227
Amount: 0.099450
Amount Units: ppb v/v

Manual Integration Results



Reviewer: khachitpongpanits, 15-Mar-2019 14:51:46
Audit Action: Split an Integrated Peak

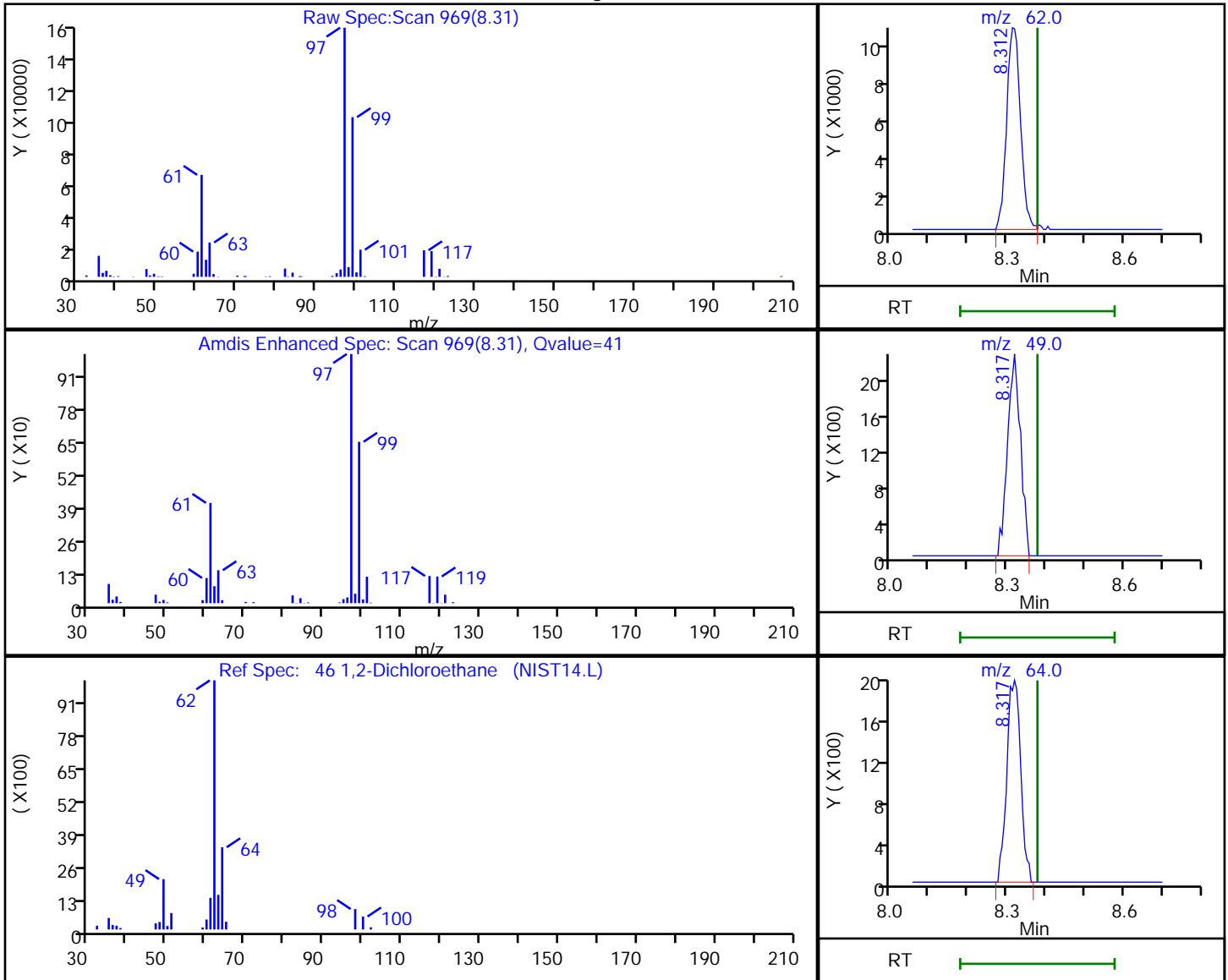
Audit Reason: Split Peak

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P104.D
Injection Date: 14-Mar-2019 18:59:30 Instrument ID: MR
Lims ID: 140-14595-A-1 Lab Sample ID: 140-14595-1
Client ID: BLDG-A-EFFLUENT
Operator ID: ALS Bottle#: 4 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.31	62.00	27231	0.159299
8.32	49.00	5225	
8.32	64.00	4761	

Reviewer: khachitpongpanits, 15-Mar-2019 14:52:18

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: BLDG-A-MIDGAC Lab Sample ID: 140-14595-2
 Matrix: Air Lab File ID: RC14P105.D
 Analysis Method: TO 15 LL Date Collected: 03/13/2019 10:31
 Sample wt/vol: 100(mL) Date Analyzed: 03/14/2019 19:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.63	CI	0.40	0.075
67-66-3	Chloroform	119.38	0.54		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	11		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.30	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.0		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	16		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.70	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.27	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	15		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: BLDG-A-MIDGAC Lab Sample ID: 140-14595-2
 Matrix: Air Lab File ID: RC14P105.D
 Analysis Method: TO 15 LL Date Collected: 03/13/2019 10:31
 Sample wt/vol: 100(mL) Date Analyzed: 03/14/2019 19:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.2	CI	1.4	0.27
67-66-3	Chloroform	119.38	2.6		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	43		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	8.1		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	63		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.4	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.1	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	80		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P105.D
 Lims ID: 140-14595-A-2
 Client ID: BLDG-A-MIDGAC
 Sample Type: Client
 Inject. Date: 14-Mar-2019 19:49:30 ALS Bottle#: 5 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-009
 Misc. Info.: 140-14595-a-2
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:52:45 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:54:27

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.368	7.368	0.000	71	228113	4.00	
* 2 1,4-Difluorobenzene	114	9.434	9.434	0.000	95	1348188	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.486	14.492	-0.006	90	1167801	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.212	16.217	-0.005	94	983047	3.96	
6 Chlorodifluoromethane	51	3.513	3.502	0.000	95	16970	0.1254	
8 Dichlorodifluoromethane	85	3.561	3.559	0.005	99	14734	0.0594	
27 1,1-Dichloroethene	96	5.071	5.080	-0.005	97	255557	3.18	
31 Methylene Chloride	84	5.314	5.319	-0.005	90	10627	0.1393	
34 trans-1,2-Dichloroethene	96	5.961	5.965	0.000	93	4358	0.0532	
37 1,1-Dichloroethane	63	6.279	6.289	-0.005	98	55173	0.4027	
41 cis-1,2-Dichloroethene	96	7.104	7.109	0.000	94	180166	2.18	
43 Chloroform	83	7.406	7.412	0.000	90	23570	0.1082	
45 1,1,1-Trichloroethane	97	8.323	8.323	0.000	95	806579	2.92	
47 Benzene	78	8.873	8.867	0.006	97	7481	0.0341	
65 Toluene	91	12.405	12.405	0.000	90	13602	0.0486	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P105.D

Injection Date: 14-Mar-2019 19:49:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14595-A-2

Lab Sample ID: 140-14595-2

Worklist Smp#: 9

Client ID: BLDG-A-MIDGAC

Purge Vol: 500.000 mL

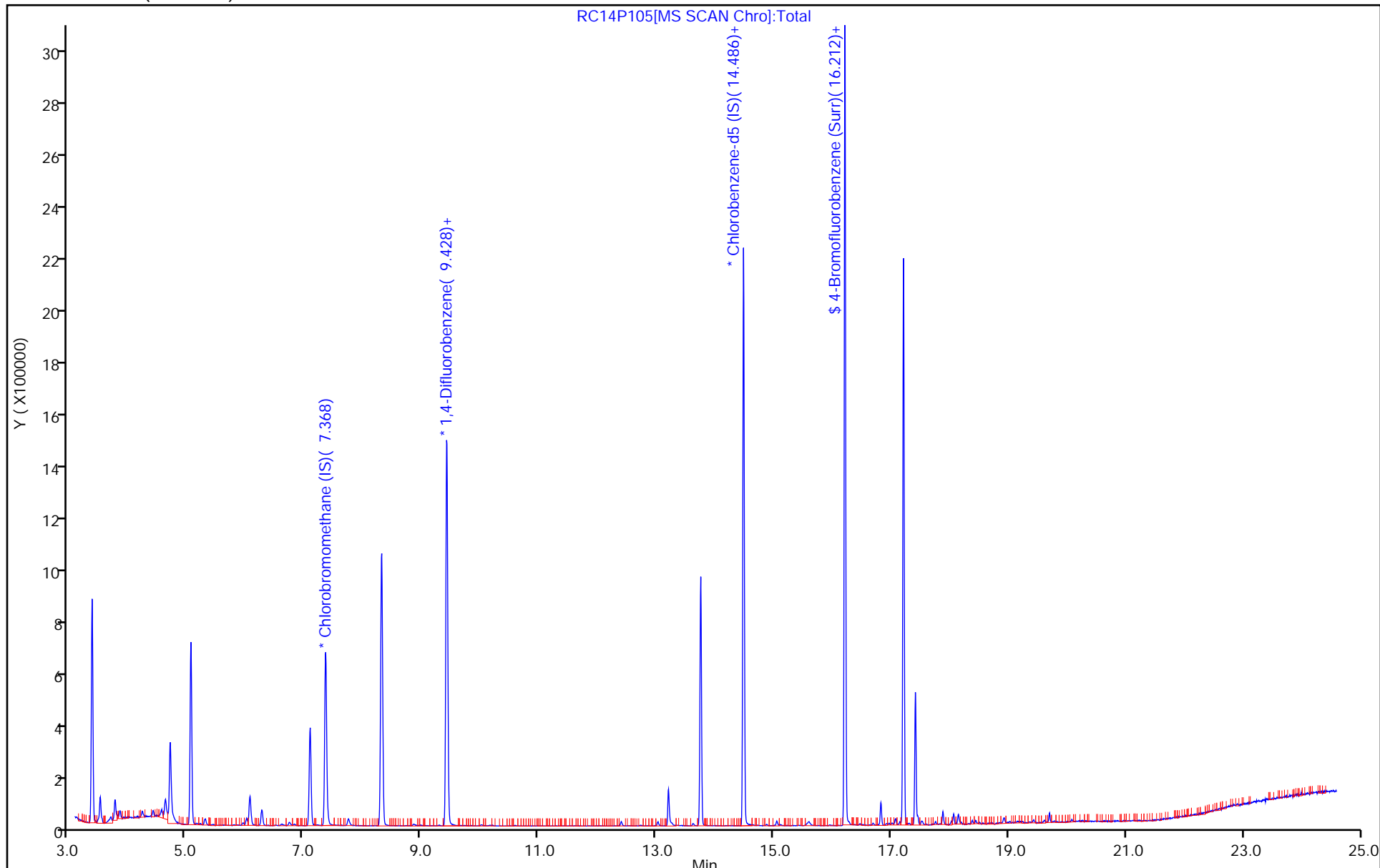
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P105.D
 Lims ID: 140-14595-A-2
 Client ID: BLDG-A-MIDGAC
 Sample Type: Client
 Inject. Date: 14-Mar-2019 19:49:30 ALS Bottle#: 5 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-009
 Misc. Info.: 140-14595-a-2
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:52:45 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:54:27

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.96	98.96

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P105.D

Injection Date: 14-Mar-2019 19:49:30

Instrument ID: MR

Lims ID: 140-14595-A-2

Lab Sample ID: 140-14595-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

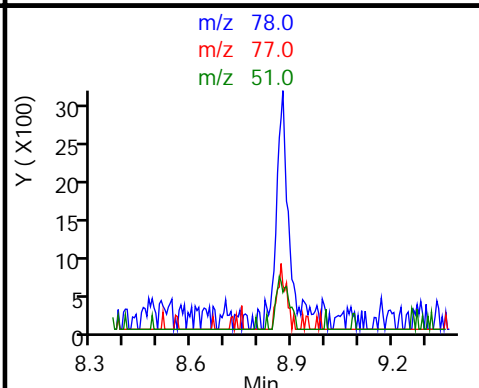
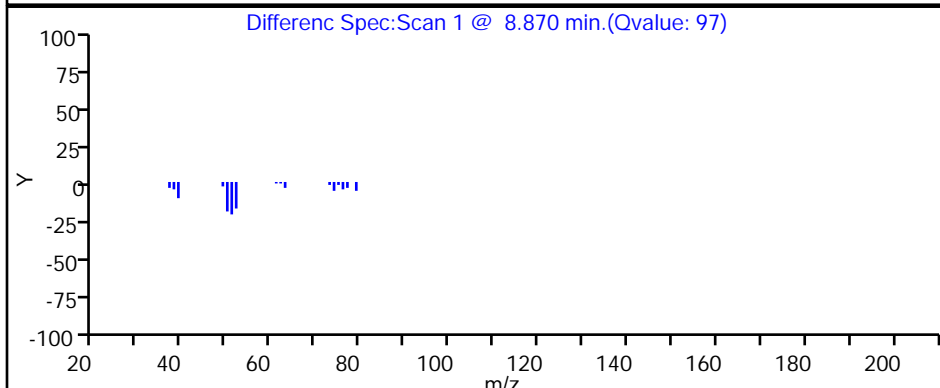
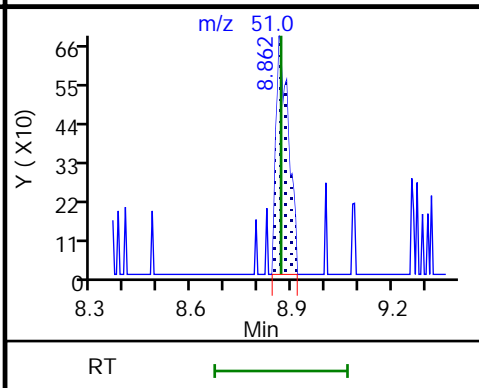
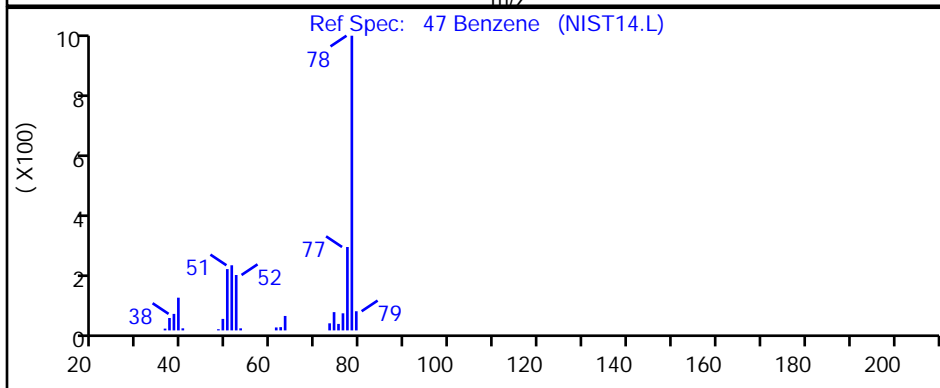
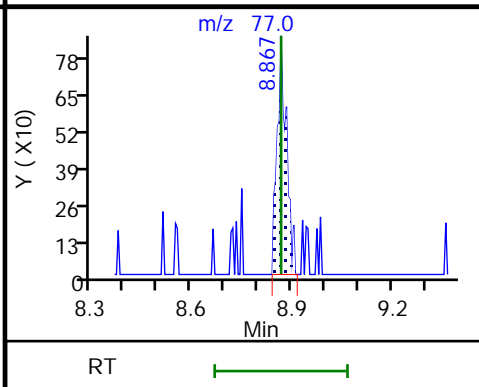
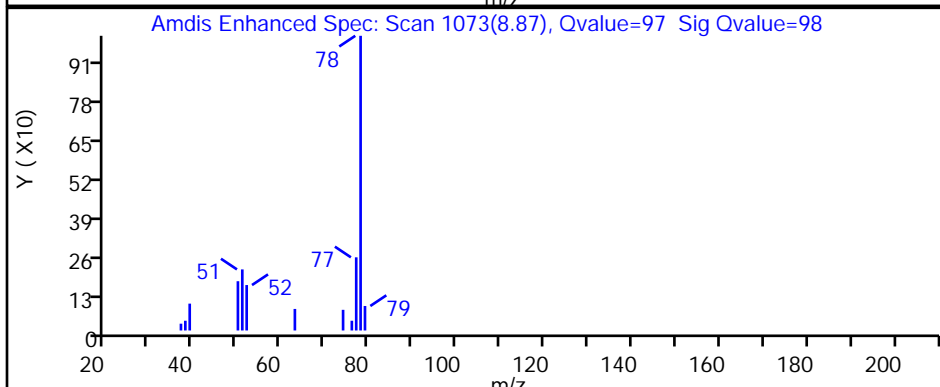
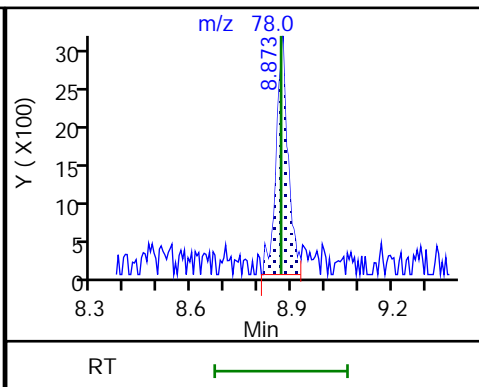
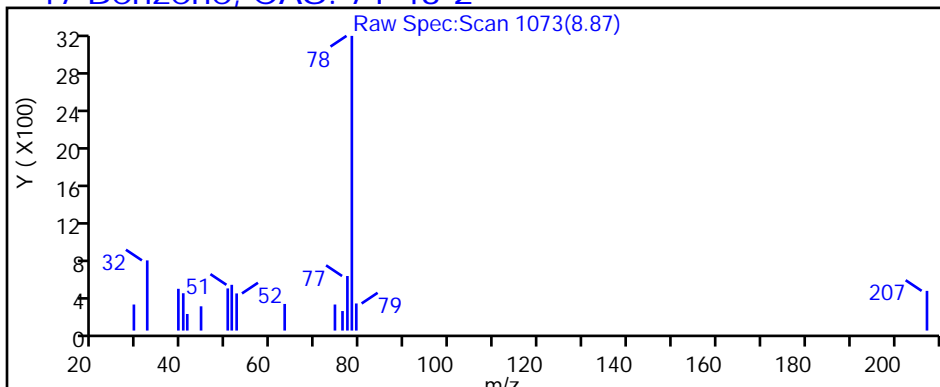
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P105.D

Injection Date: 14-Mar-2019 19:49:30

Instrument ID: MR

Lims ID: 140-14595-A-2

Lab Sample ID: 140-14595-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

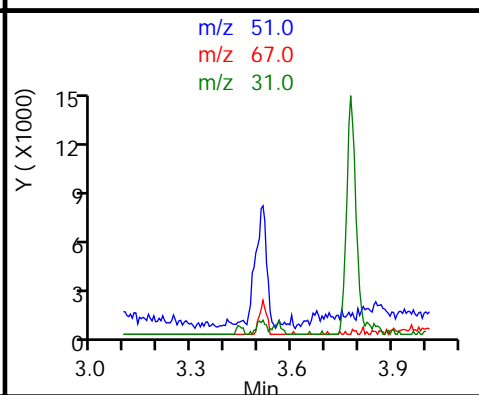
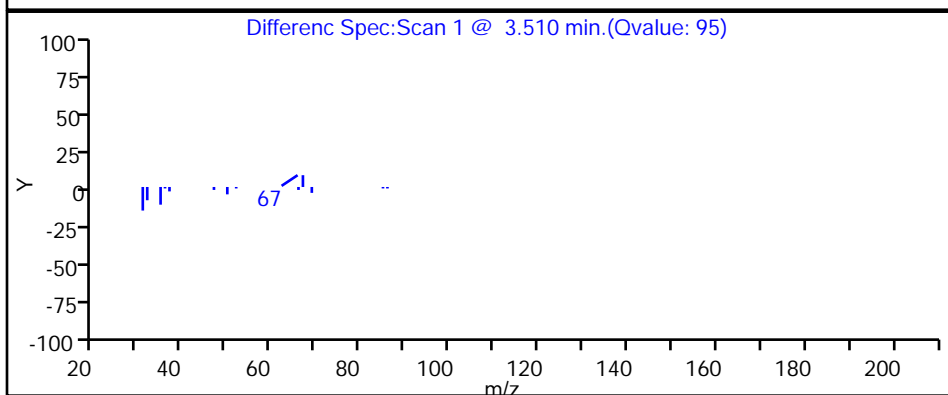
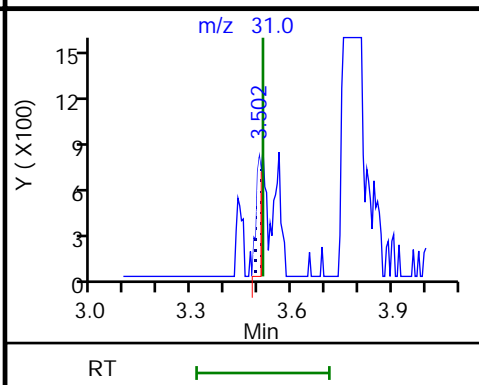
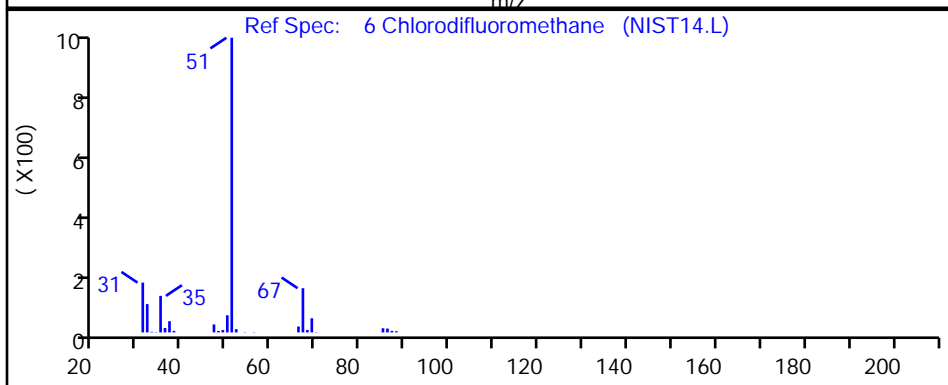
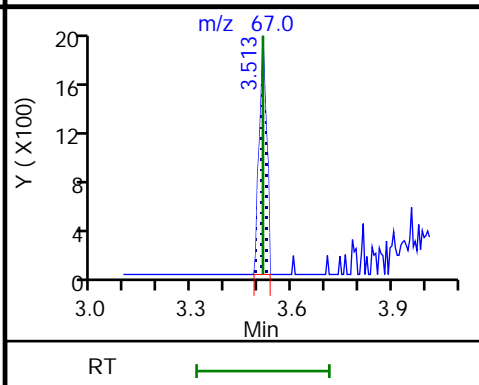
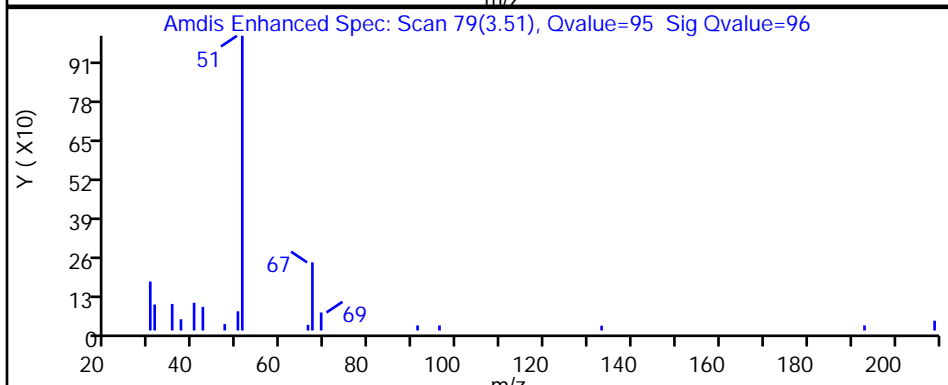
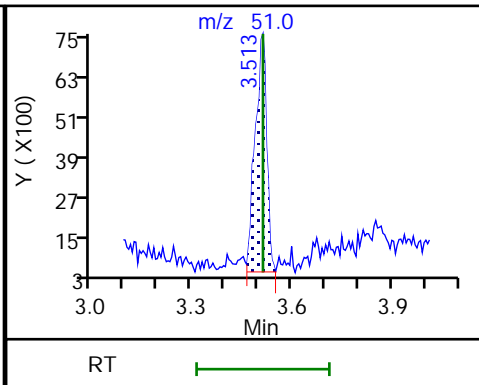
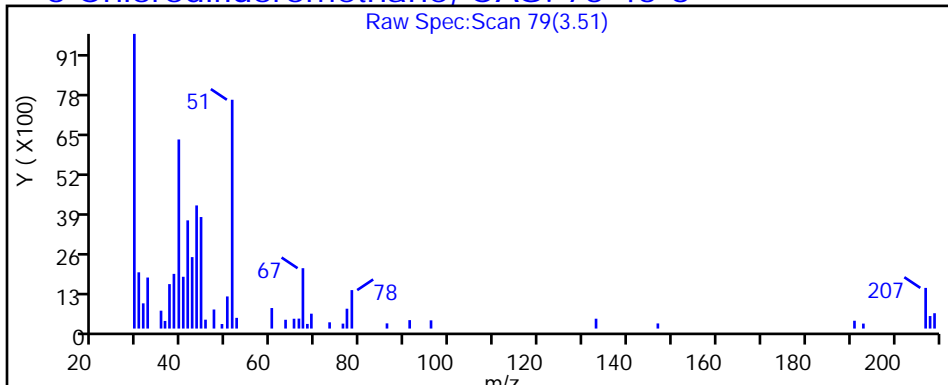
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P105.D

Injection Date: 14-Mar-2019 19:49:30

Instrument ID: MR

Lims ID: 140-14595-A-2

Lab Sample ID: 140-14595-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

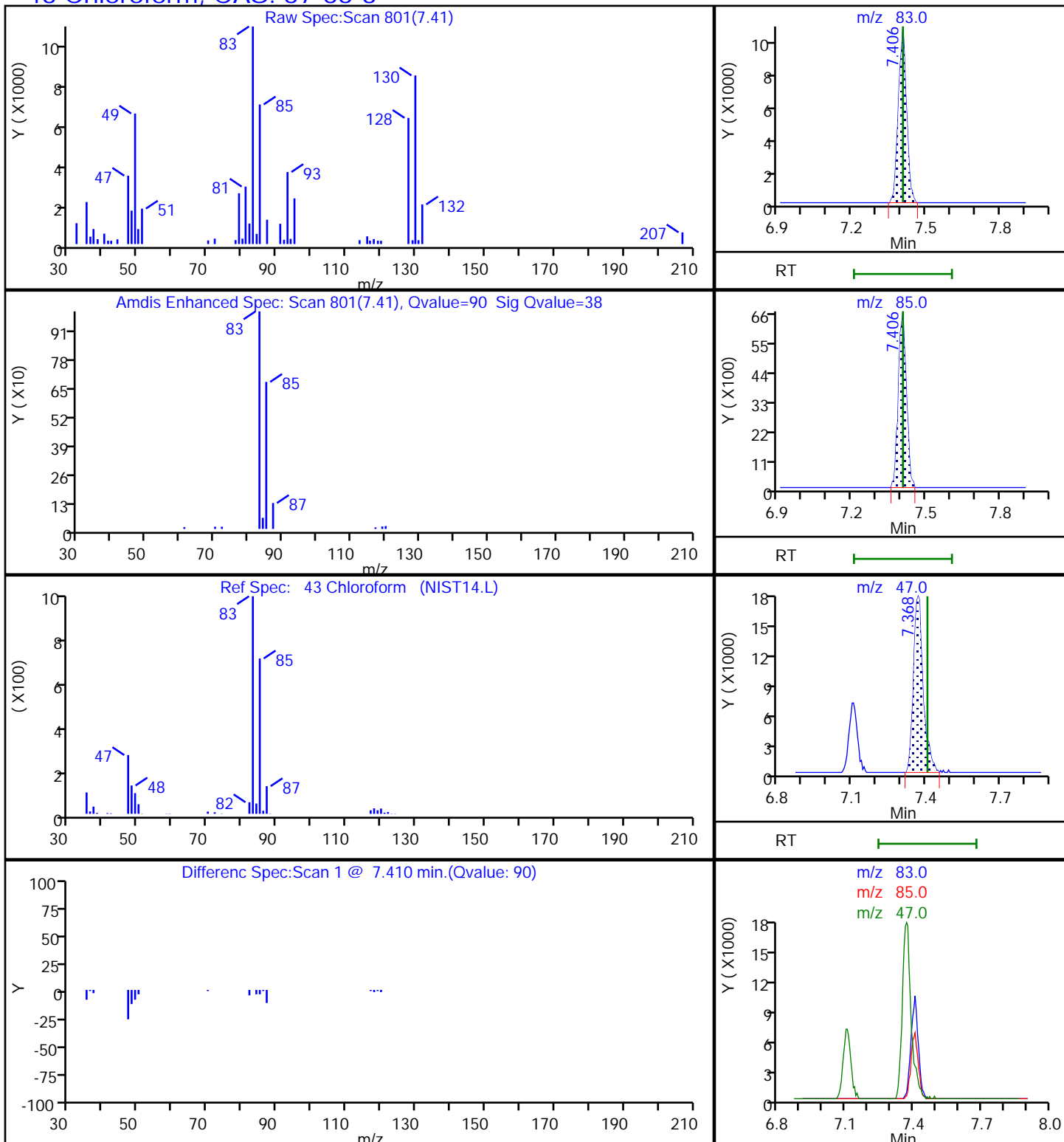
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P105.D

Injection Date: 14-Mar-2019 19:49:30

Instrument ID: MR

Lims ID: 140-14595-A-2

Lab Sample ID: 140-14595-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

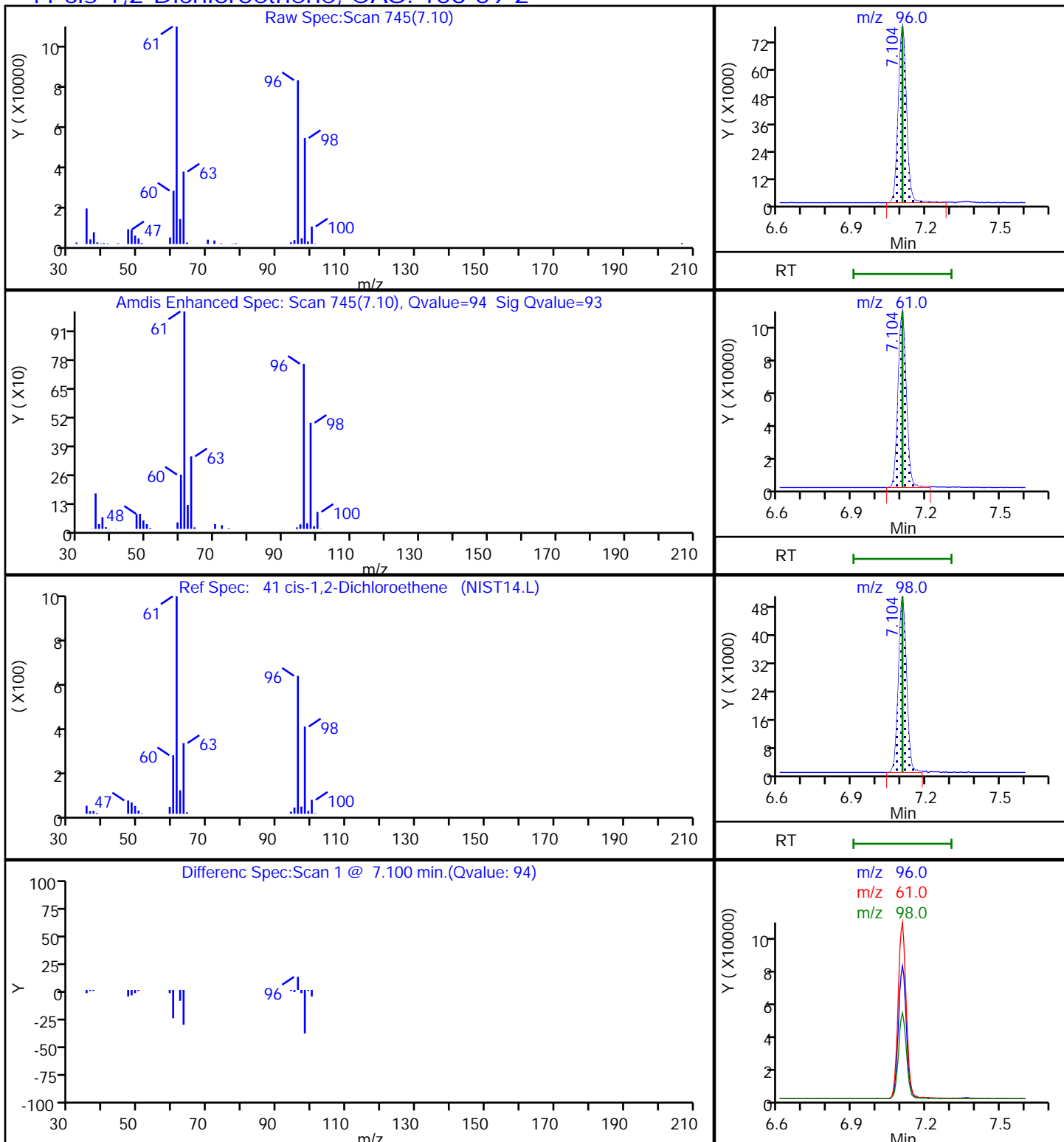
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P105.D

Injection Date: 14-Mar-2019 19:49:30

Instrument ID: MR

Lims ID: 140-14595-A-2

Lab Sample ID: 140-14595-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

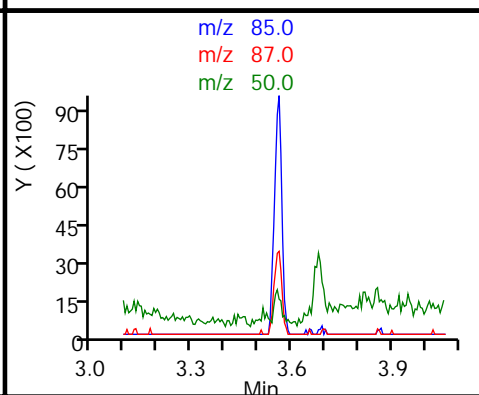
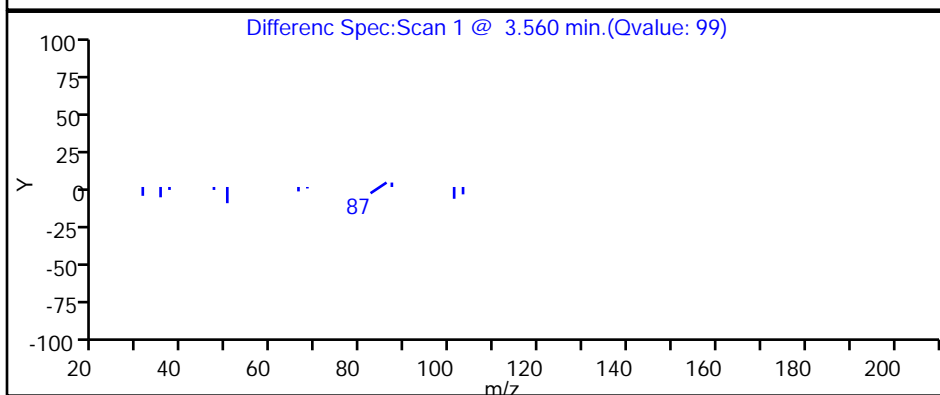
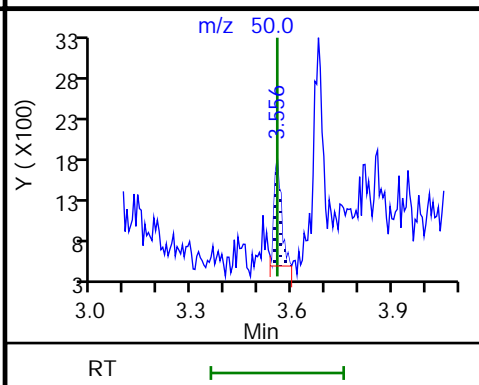
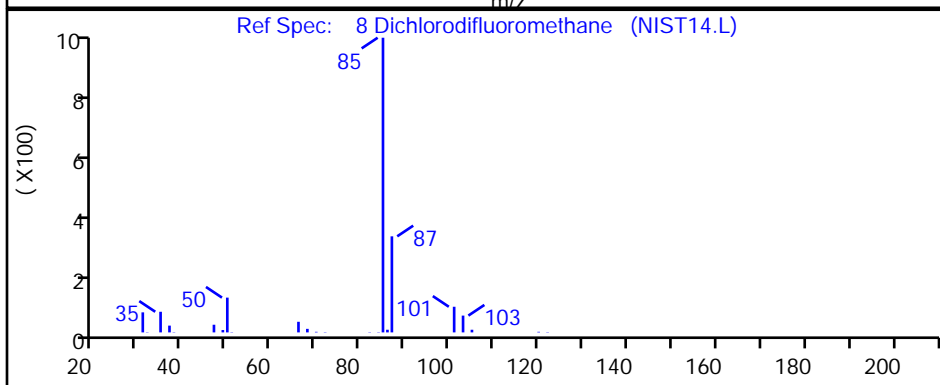
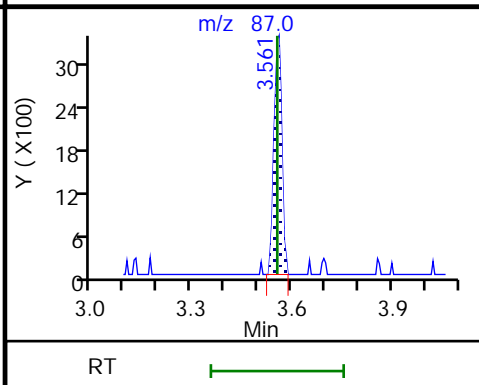
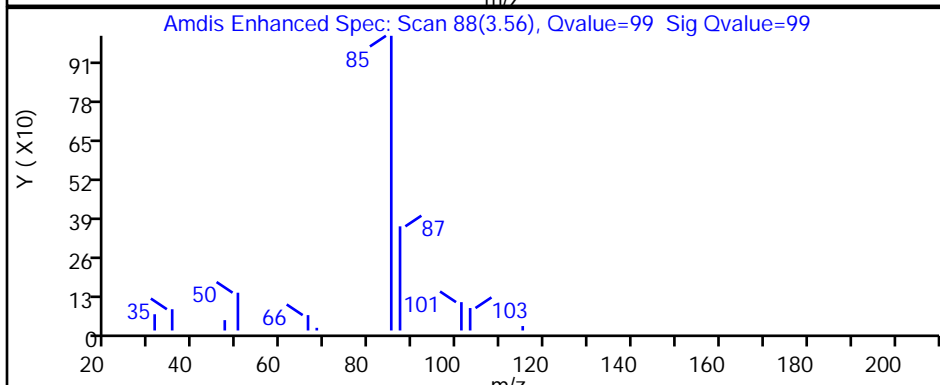
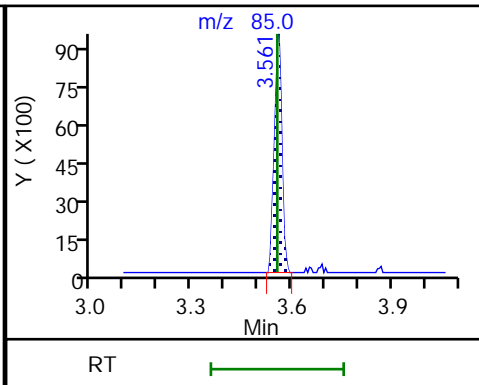
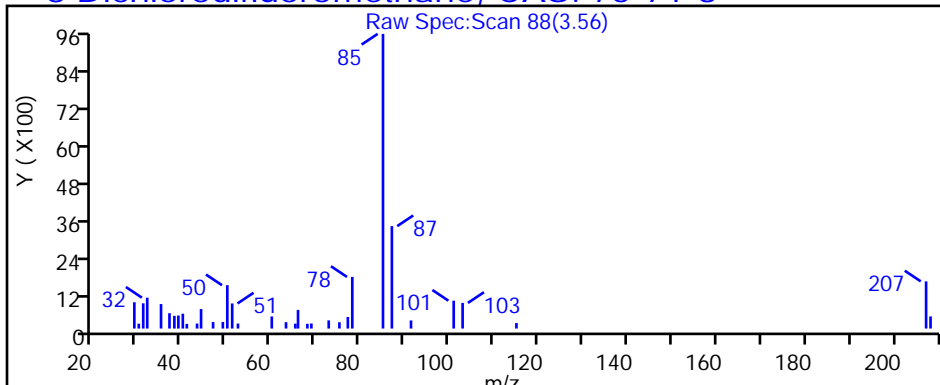
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P105.D

Injection Date: 14-Mar-2019 19:49:30

Instrument ID: MR

Lims ID: 140-14595-A-2

Lab Sample ID: 140-14595-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

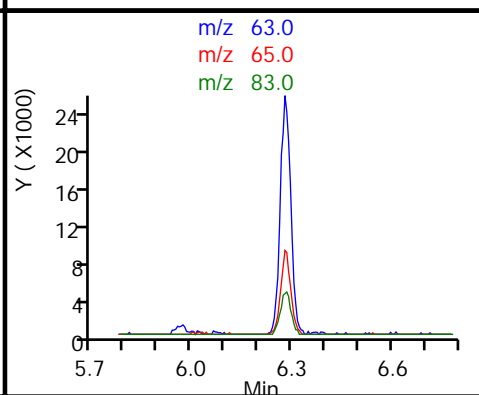
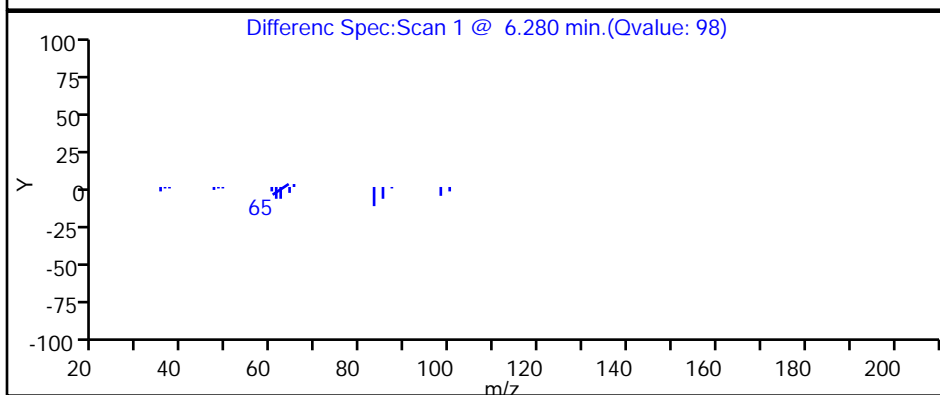
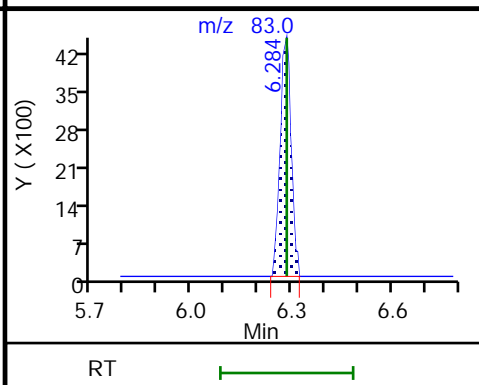
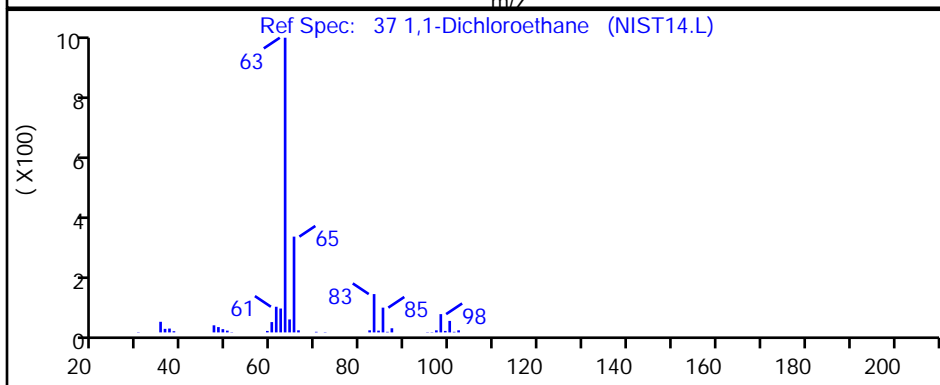
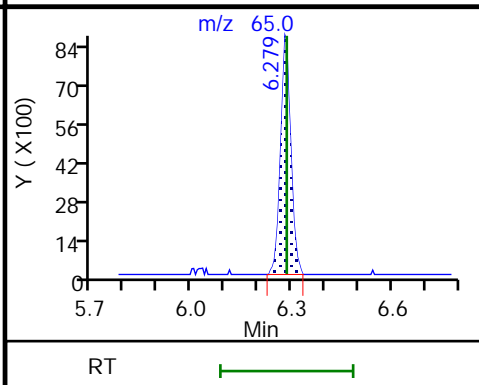
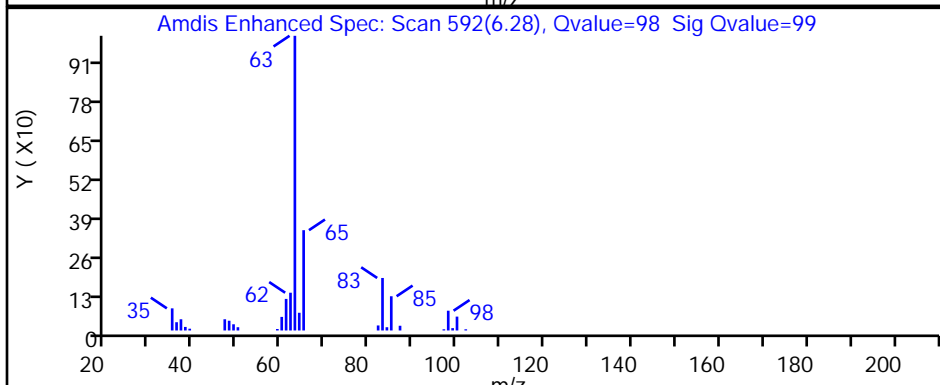
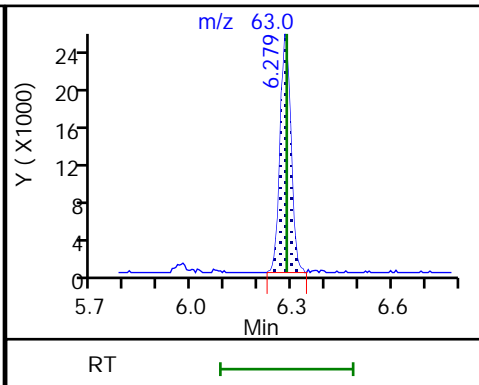
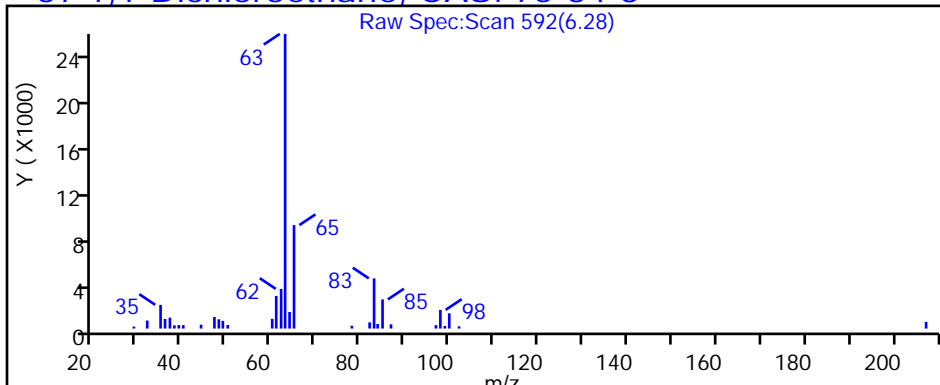
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P105.D

Injection Date: 14-Mar-2019 19:49:30

Instrument ID: MR

Lims ID: 140-14595-A-2

Lab Sample ID: 140-14595-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

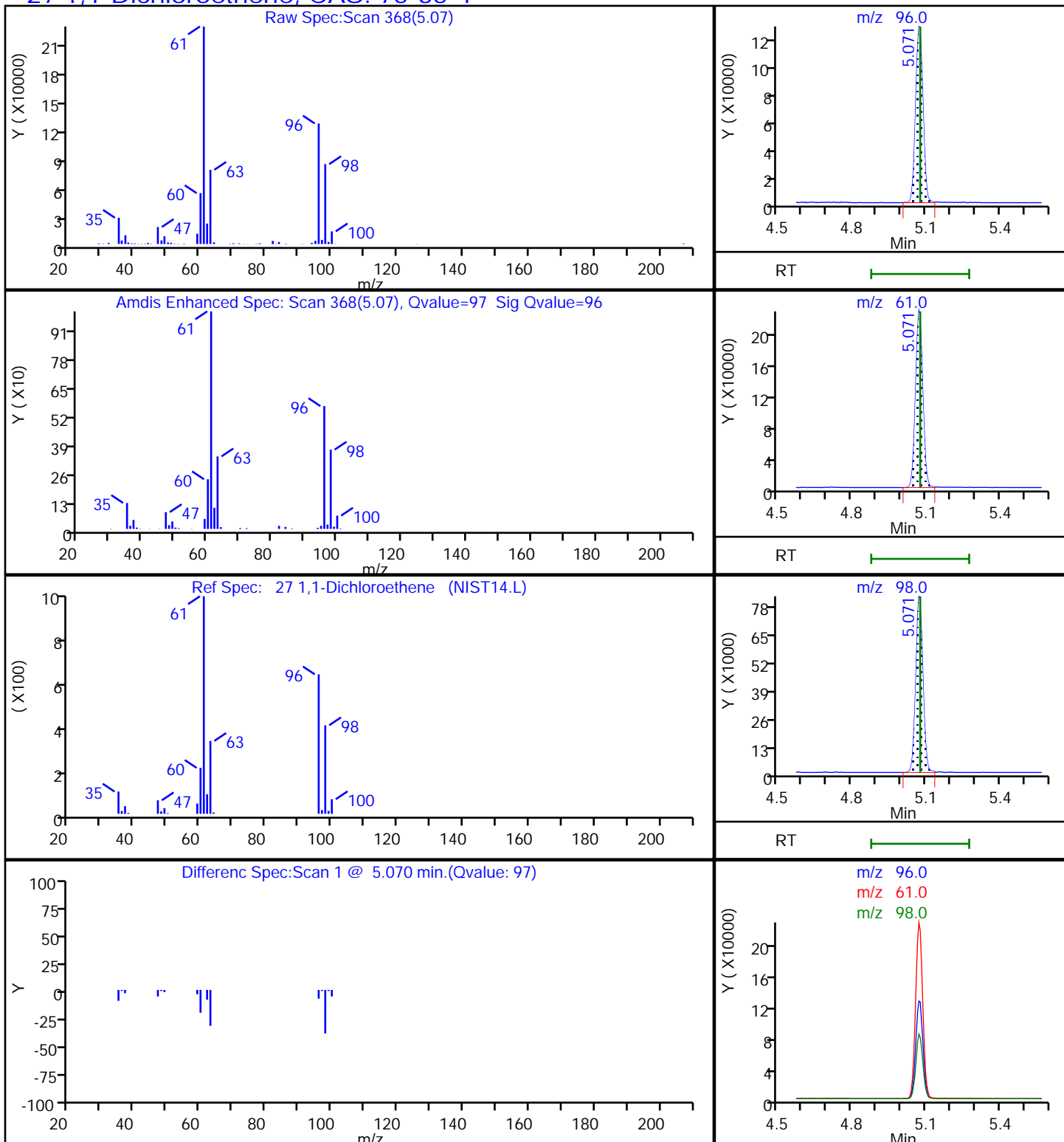
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P105.D

Injection Date: 14-Mar-2019 19:49:30

Instrument ID: MR

Lims ID: 140-14595-A-2

Lab Sample ID: 140-14595-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 5 Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

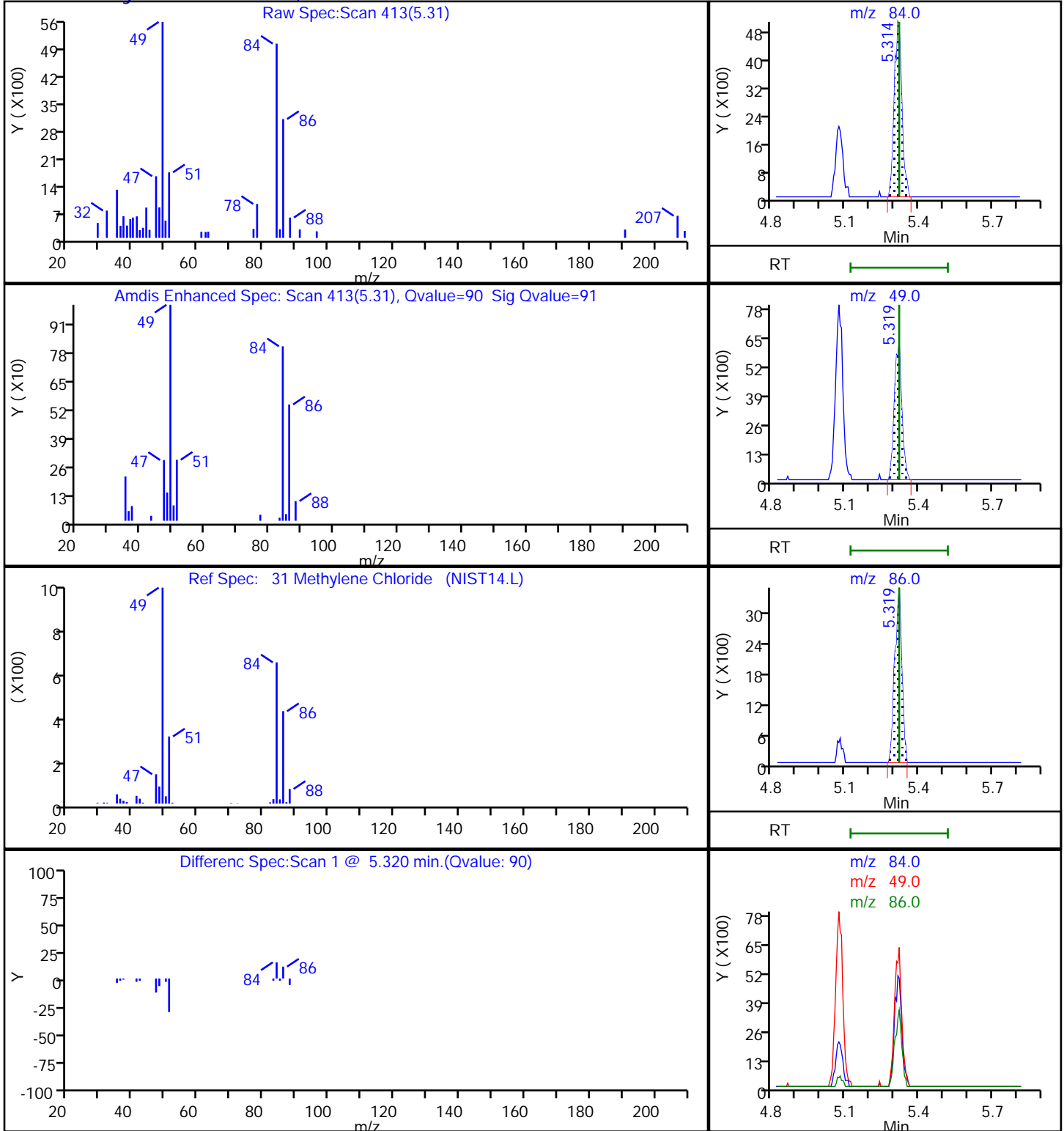
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P105.D

Injection Date: 14-Mar-2019 19:49:30

Instrument ID: MR

Lims ID: 140-14595-A-2

Lab Sample ID: 140-14595-2

Client ID: BLDG-A-MIDGAC

Operator ID:

ALS Bottle#: 5

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

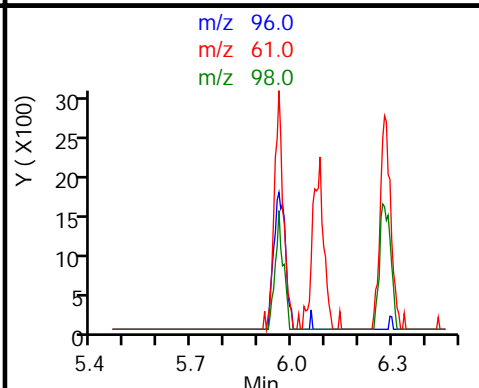
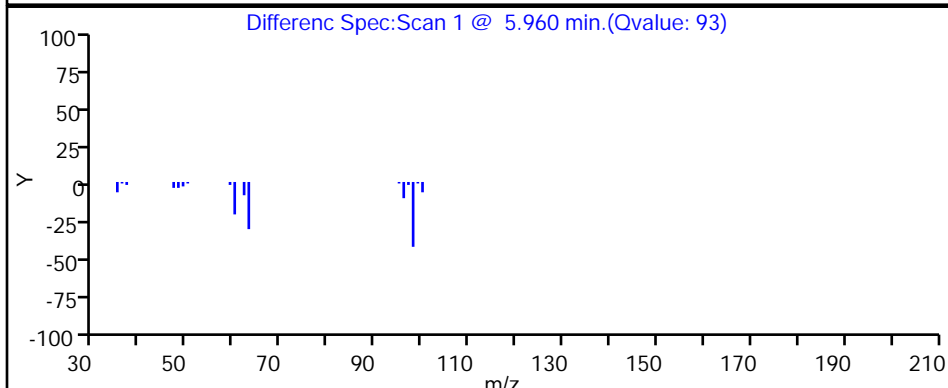
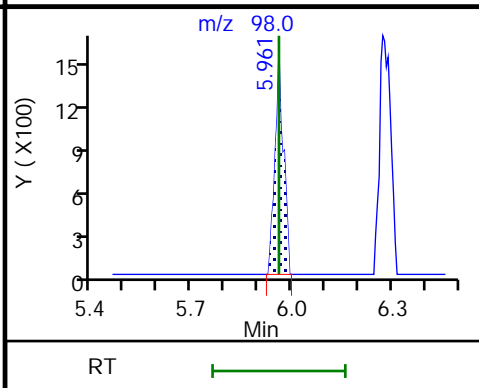
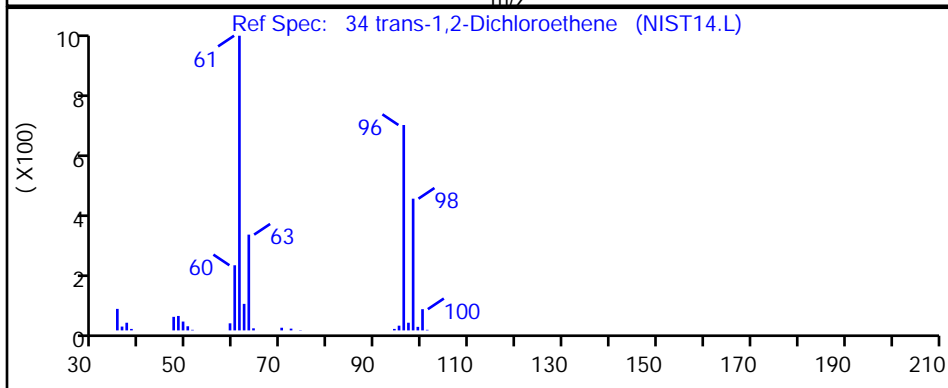
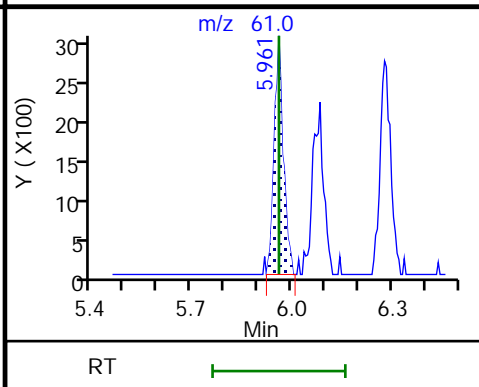
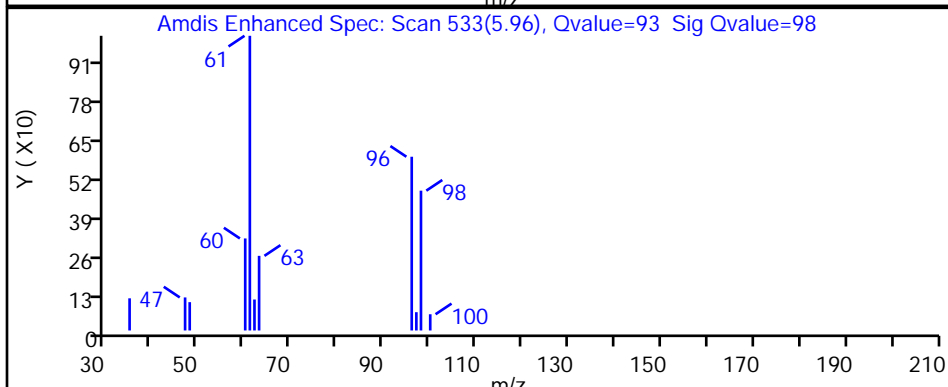
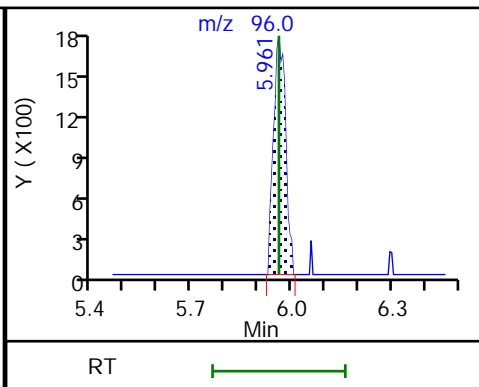
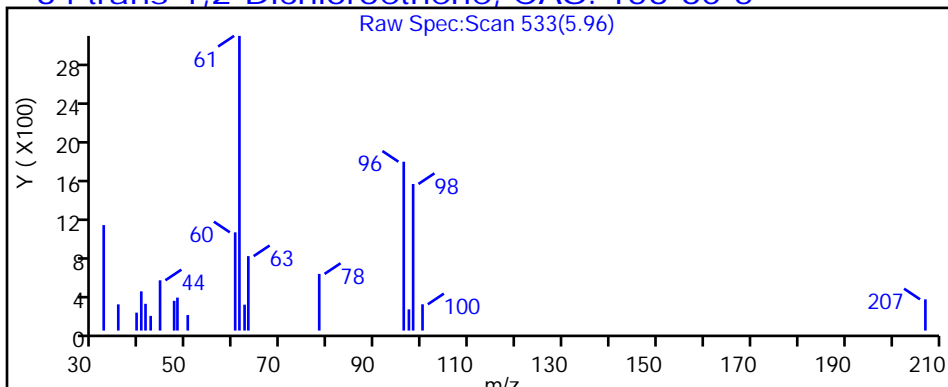
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

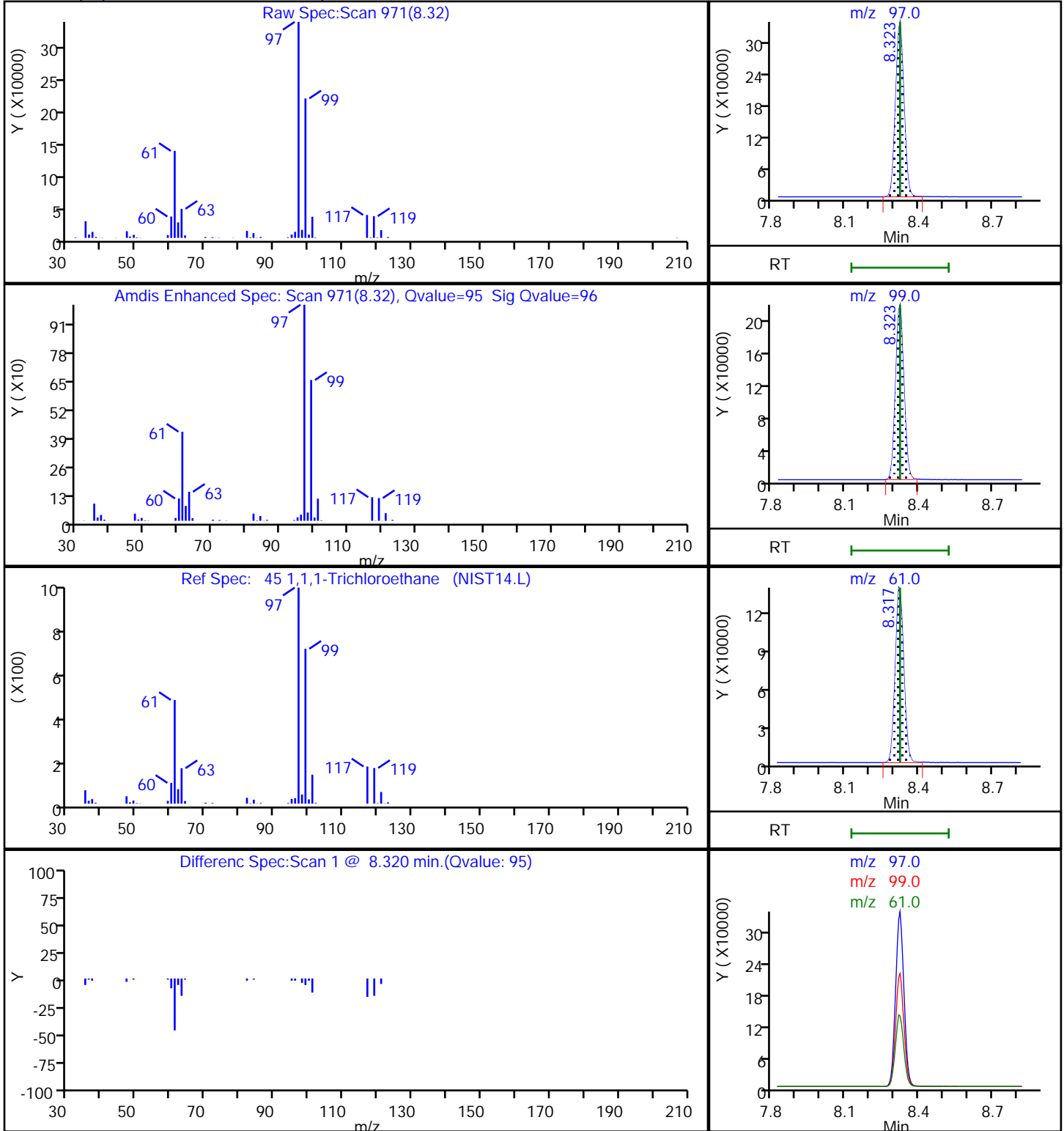
34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P105.D
Injection Date: 14-Mar-2019 19:49:30 Instrument ID: MR
Lims ID: 140-14595-A-2 Lab Sample ID: 140-14595-2
Client ID: BLDG-A-MIDGAC
Operator ID: ALS Bottle#: 5 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: BLDG-A-INFLUENT Lab Sample ID: 140-14595-3
 Matrix: Air Lab File ID: RC14P106.D
 Analysis Method: TO 15 LL Date Collected: 03/13/2019 10:34
 Sample wt/vol: 20 (mL) Date Analyzed: 03/14/2019 20:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.4	J	2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	ND		2.0	0.38
67-66-3	Chloroform	119.38	ND		2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	12		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	2.6		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	15		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	ND		10	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	61		2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	130		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: BLDG-A-INFLUENT Lab Sample ID: 140-14595-3
 Matrix: Air Lab File ID: RC14P106.D
 Analysis Method: TO 15 LL Date Collected: 03/13/2019 10:34
 Sample wt/vol: 20 (mL) Date Analyzed: 03/14/2019 20:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	4.4	J	6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	ND		7.1	1.3
67-66-3	Chloroform	119.38	ND		9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	48		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	11		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	60		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	ND		35	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	330		11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	720		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P106.D
 Lims ID: 140-14595-A-3
 Client ID: BLDG-A-INFLUENT
 Sample Type: Client
 Inject. Date: 14-Mar-2019 20:38:30 ALS Bottle#: 6 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-010
 Misc. Info.: 140-14595-a-3
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:55:13 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:55:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.368	7.368	0.000	73	204861	4.00	
* 2 1,4-Difluorobenzene	114	9.434	9.434	0.000	95	1222504	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.486	14.492	-0.006	91	1066831	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.212	16.217	-0.005	89	900564	3.97	
27 1,1-Dichloroethene	96	5.077	5.080	0.001	98	43516	0.6036	
37 1,1-Dichloroethane	63	6.285	6.289	0.001	98	12771	0.1038	
41 cis-1,2-Dichloroethene	96	7.104	7.109	0.000	96	36086	0.4866	
45 1,1,1-Trichloroethane	97	8.323	8.323	0.000	95	606688	2.45	
47 Benzene	78	8.873	8.867	0.006	97	11074	0.0556	
56 Trichloroethene	130	10.183	10.183	0.000	95	644568	5.37	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P106.D

Injection Date: 14-Mar-2019 20:38:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14595-A-3

Lab Sample ID: 140-14595-3

Worklist Smp#: 10

Client ID: BLDG-A-INFLUENT

Purge Vol: 500.000 mL

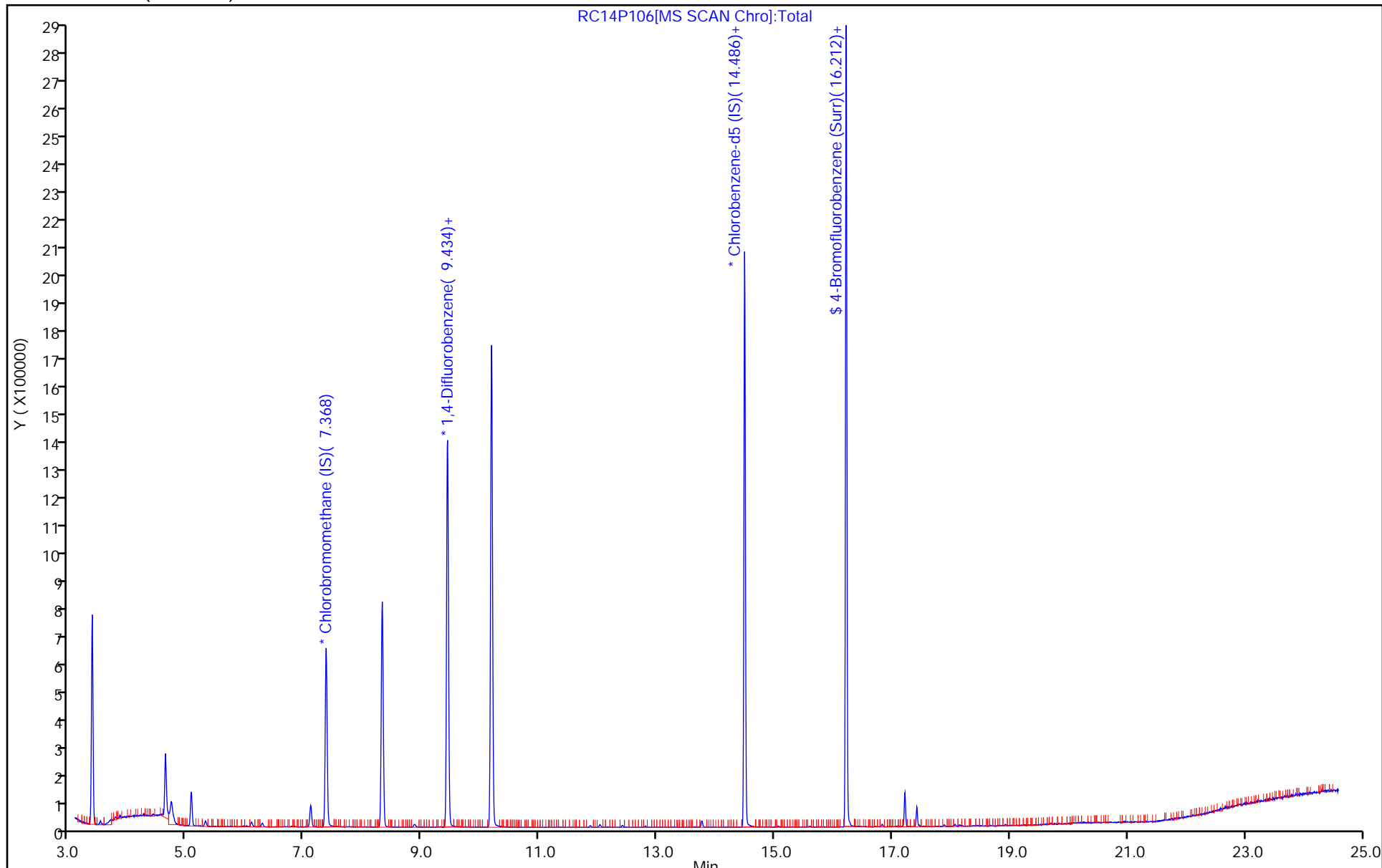
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P106.D
 Lims ID: 140-14595-A-3
 Client ID: BLDG-A-INFLUENT
 Sample Type: Client
 Inject. Date: 14-Mar-2019 20:38:30 ALS Bottle#: 6 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-010
 Misc. Info.: 140-14595-a-3
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:55:13 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:55:13

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.97	99.24

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P106.D

Injection Date: 14-Mar-2019 20:38:30

Instrument ID: MR

Lims ID: 140-14595-A-3

Lab Sample ID: 140-14595-3

Client ID: BLDG-A-INFLUENT

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

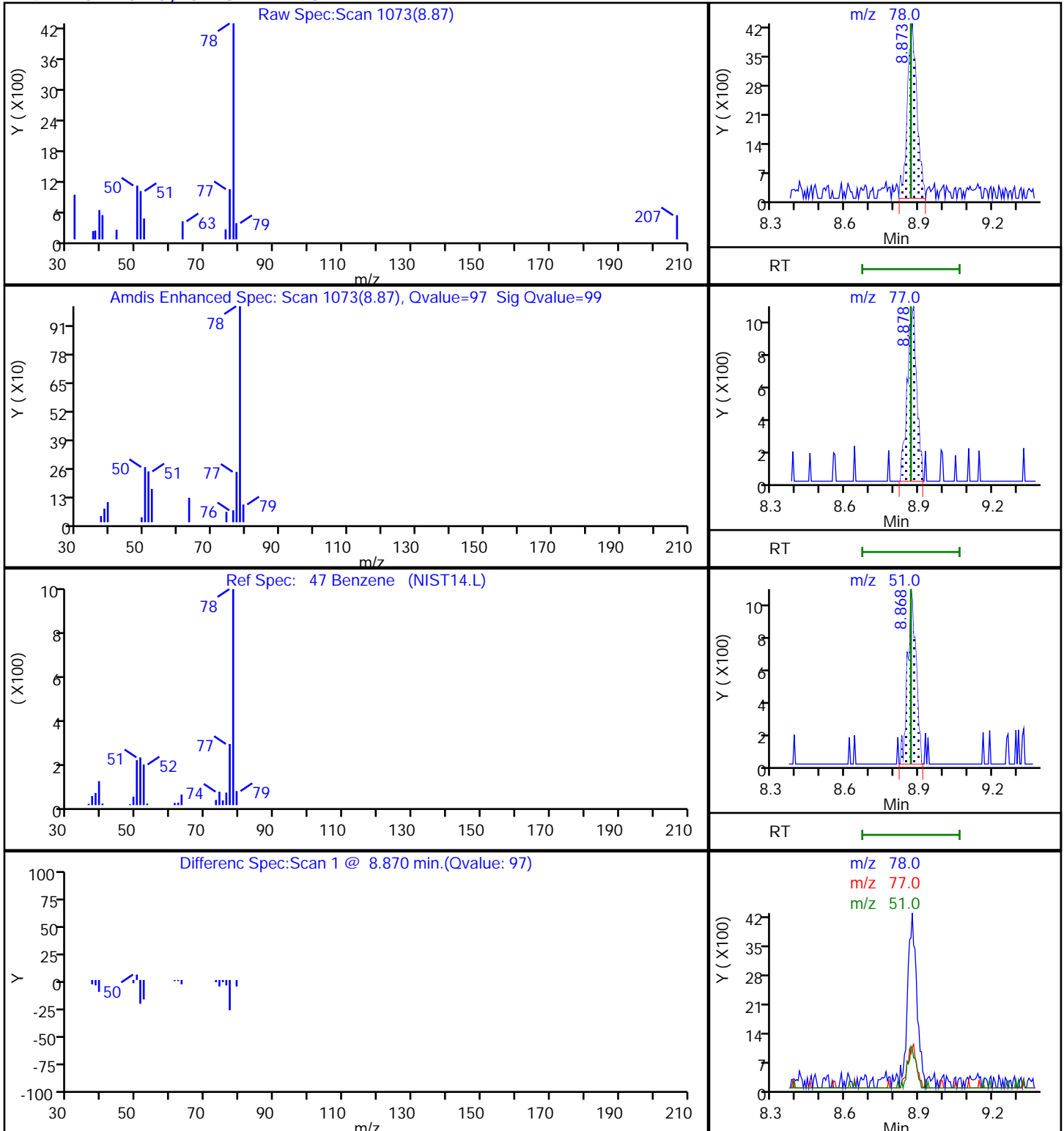
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P106.D

Injection Date: 14-Mar-2019 20:38:30

Instrument ID: MR

Lims ID: 140-14595-A-3

Lab Sample ID: 140-14595-3

Client ID: BLDG-A-INFLUENT

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

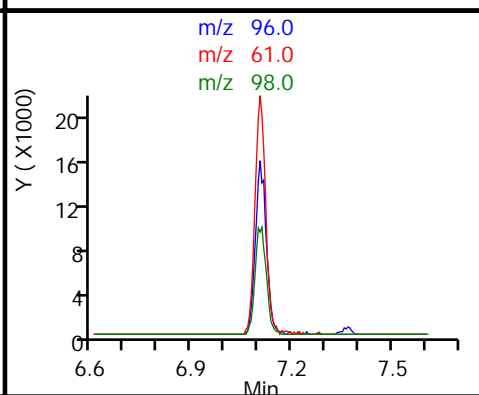
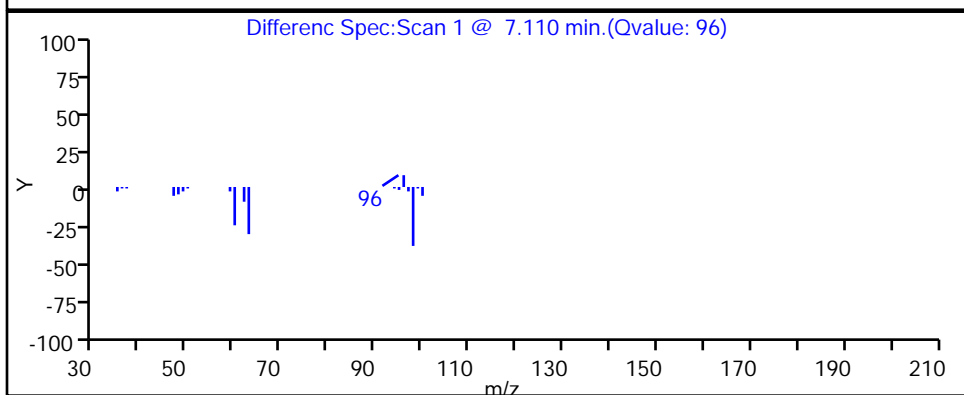
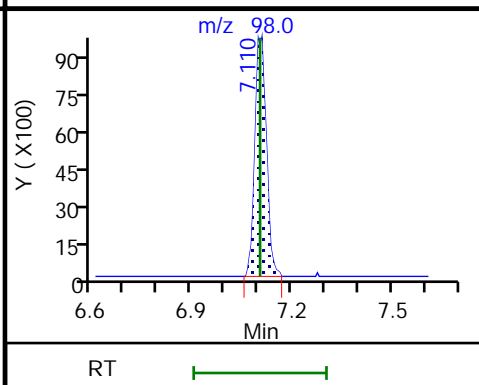
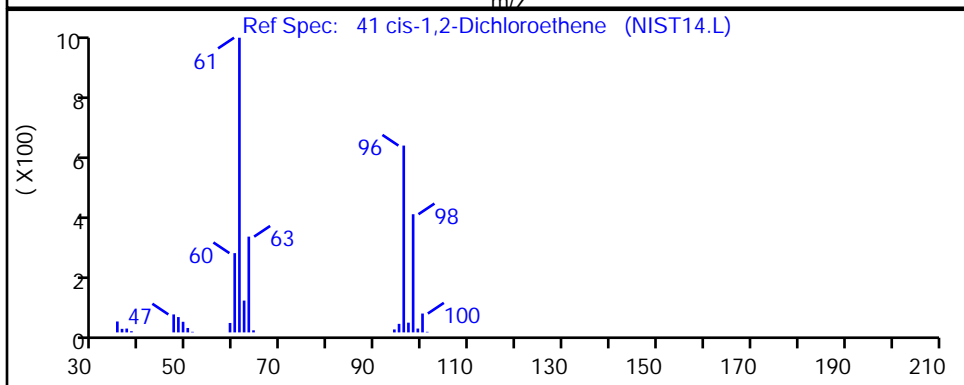
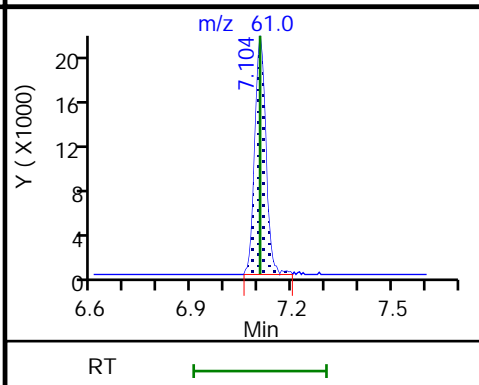
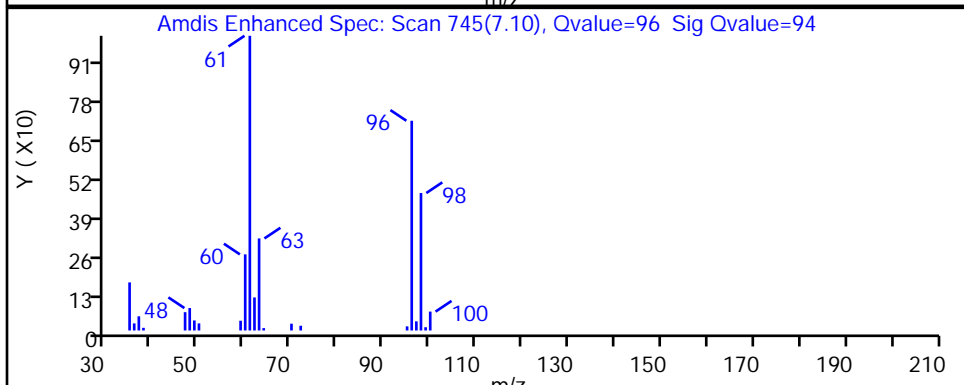
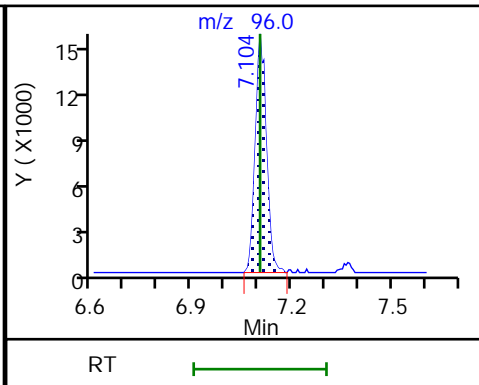
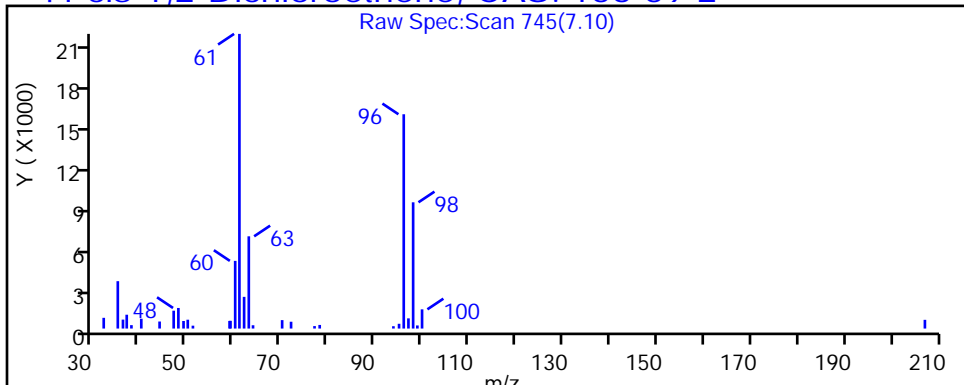
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P106.D

Injection Date: 14-Mar-2019 20:38:30

Instrument ID: MR

Lims ID: 140-14595-A-3

Lab Sample ID: 140-14595-3

Client ID: BLDG-A-INFLUENT

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

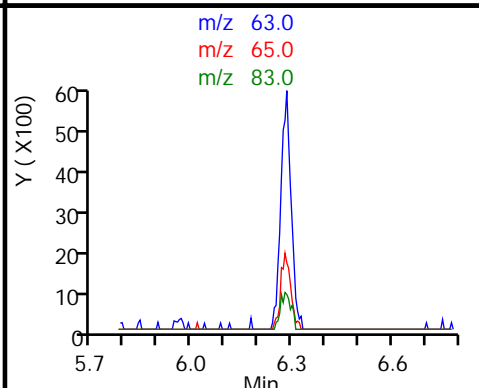
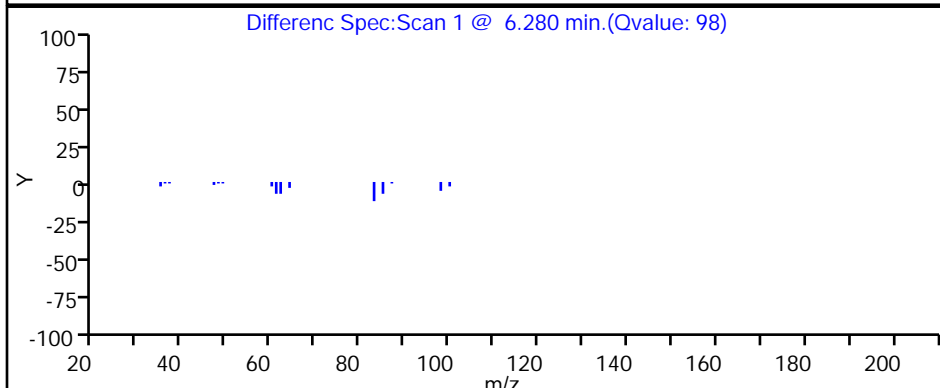
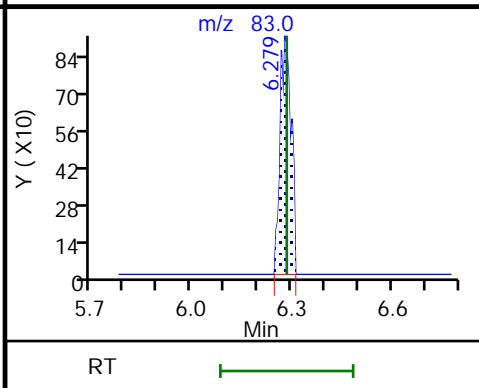
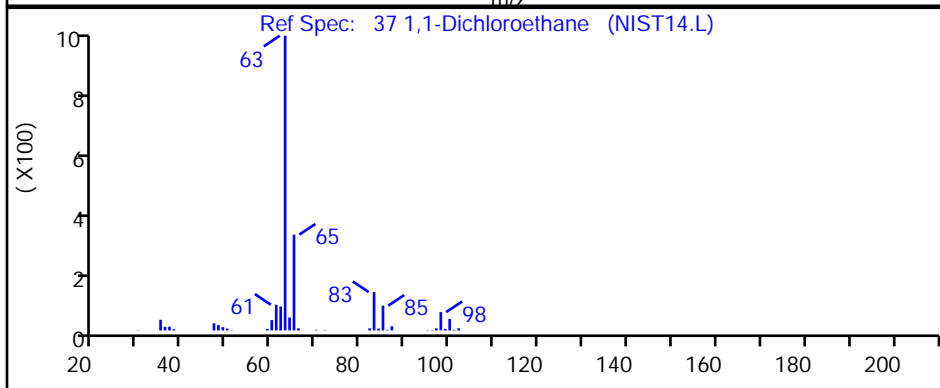
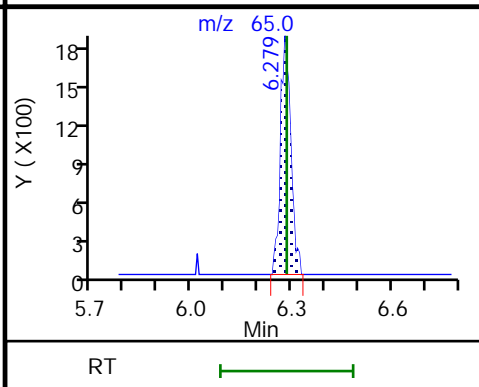
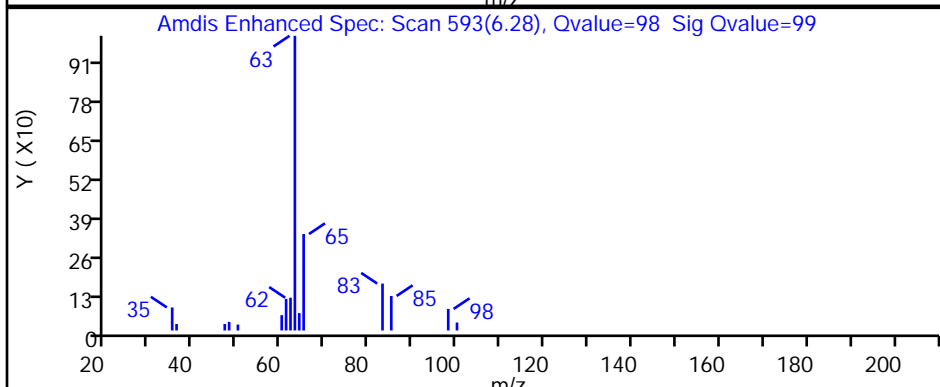
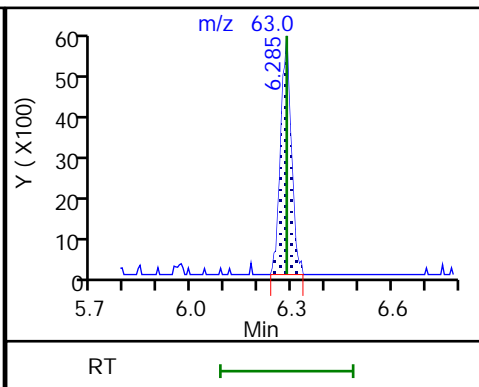
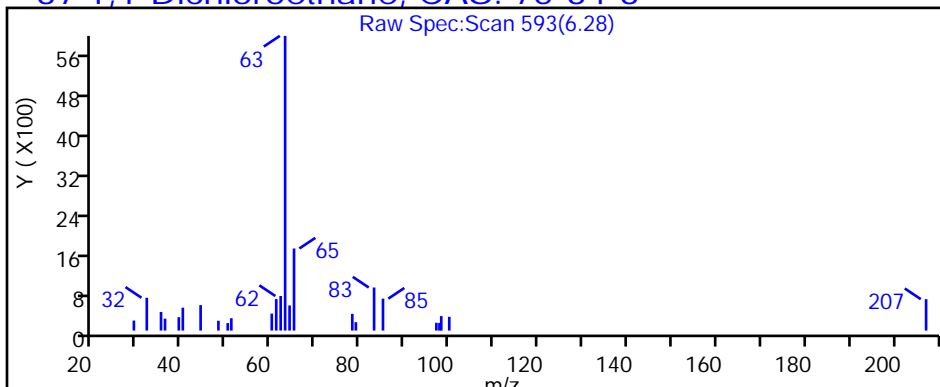
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P106.D

Injection Date: 14-Mar-2019 20:38:30

Instrument ID: MR

Lims ID: 140-14595-A-3

Lab Sample ID: 140-14595-3

Client ID: BLDG-A-INFLUENT

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

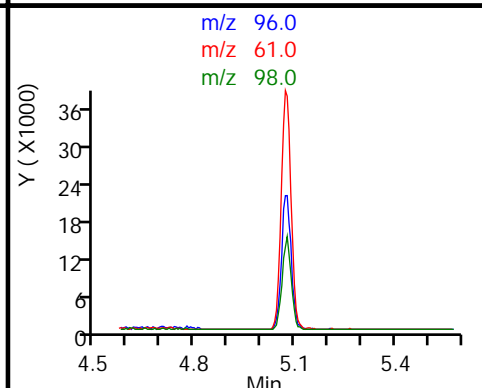
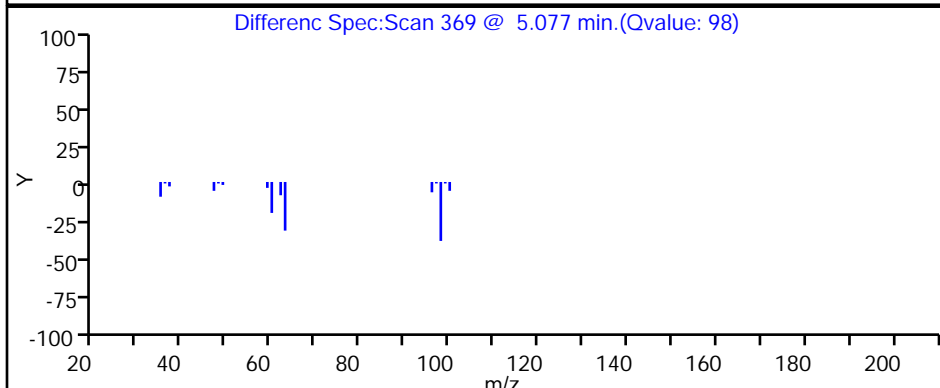
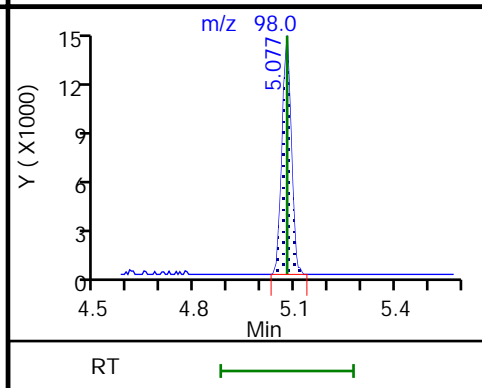
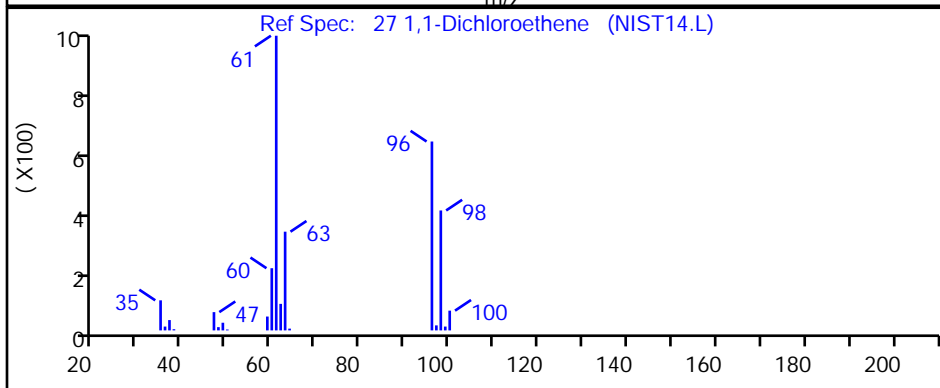
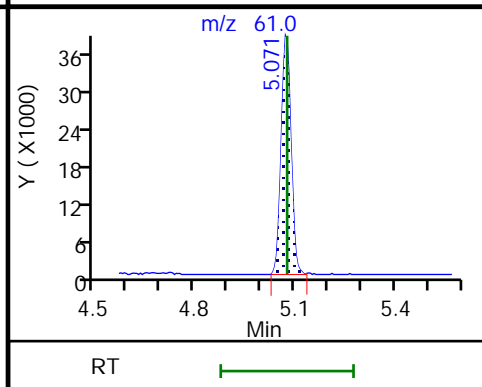
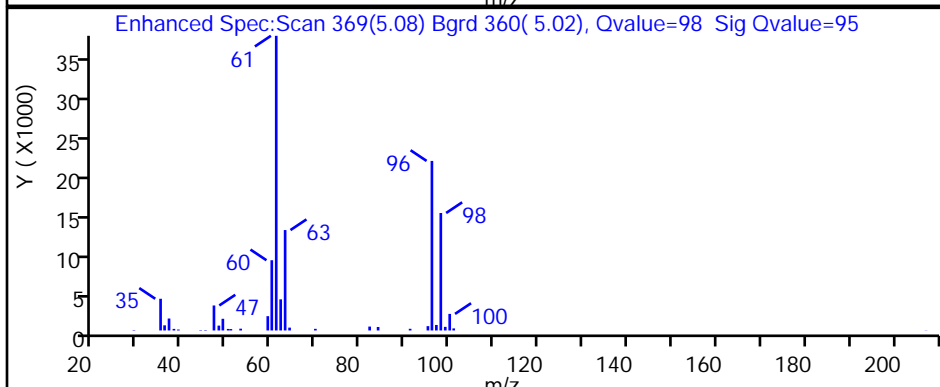
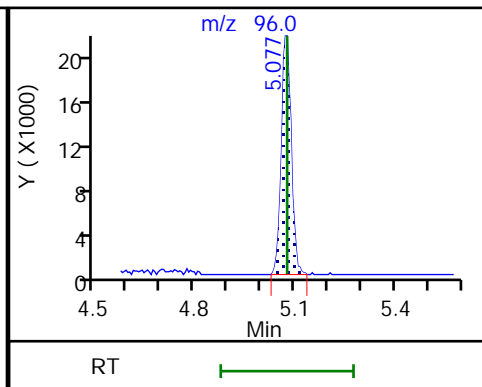
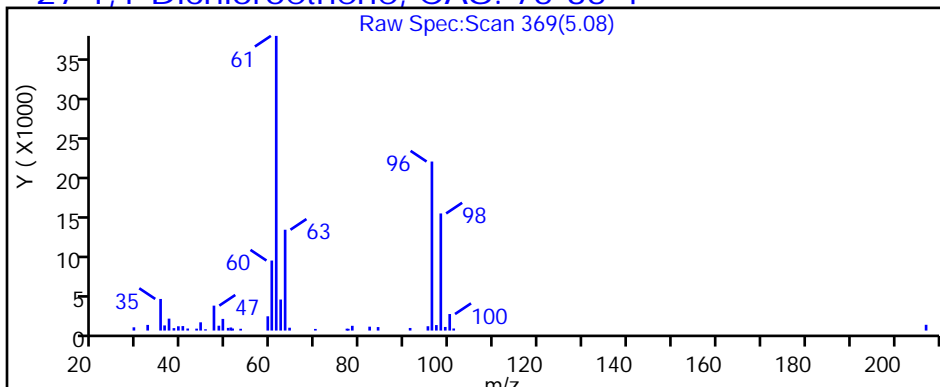
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P106.D

Injection Date: 14-Mar-2019 20:38:30

Instrument ID: MR

Lims ID: 140-14595-A-3

Lab Sample ID: 140-14595-3

Client ID: BLDG-A-INFLUENT

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

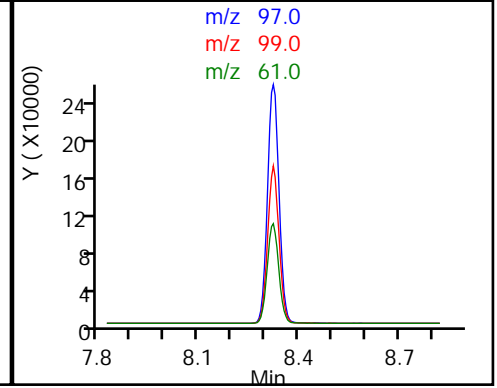
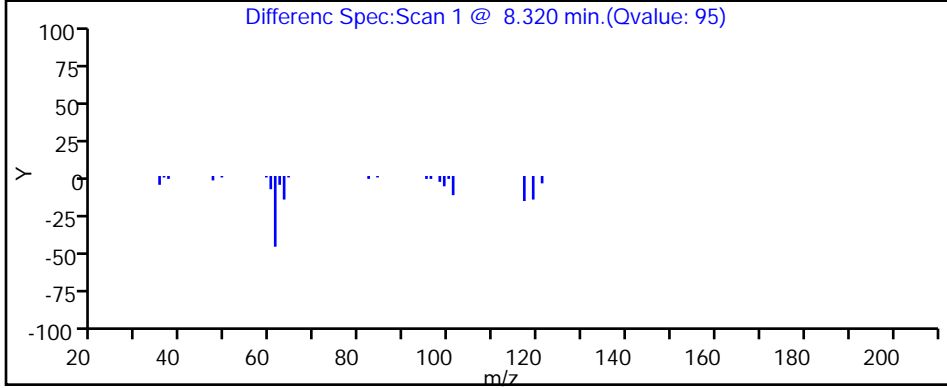
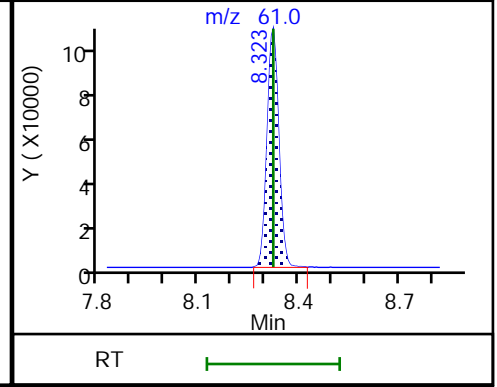
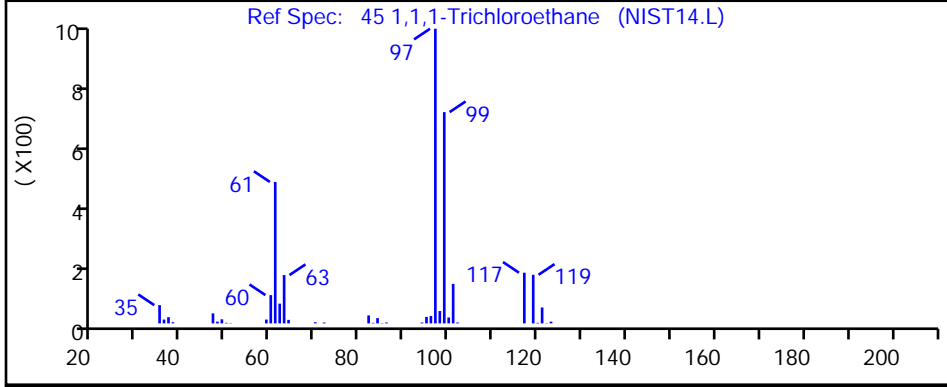
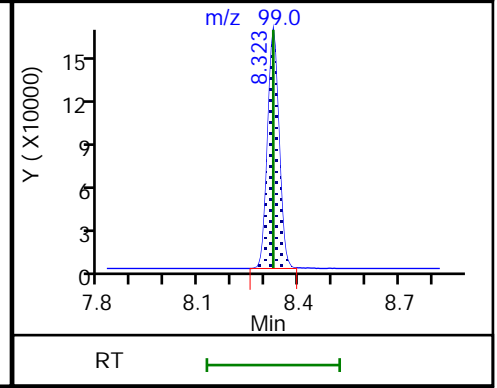
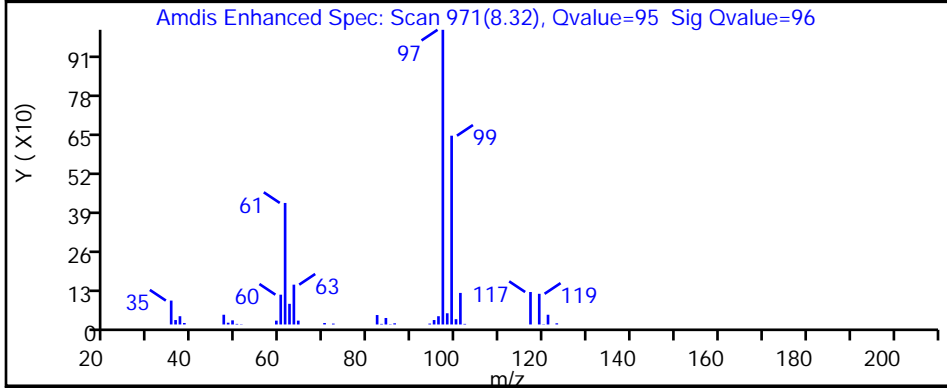
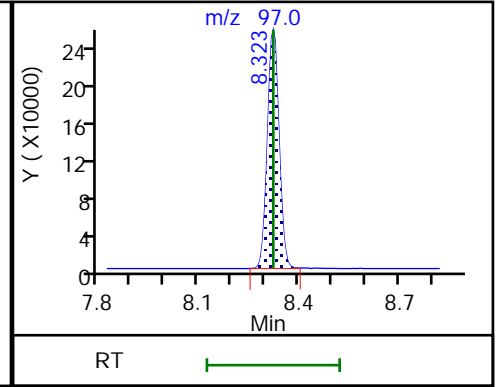
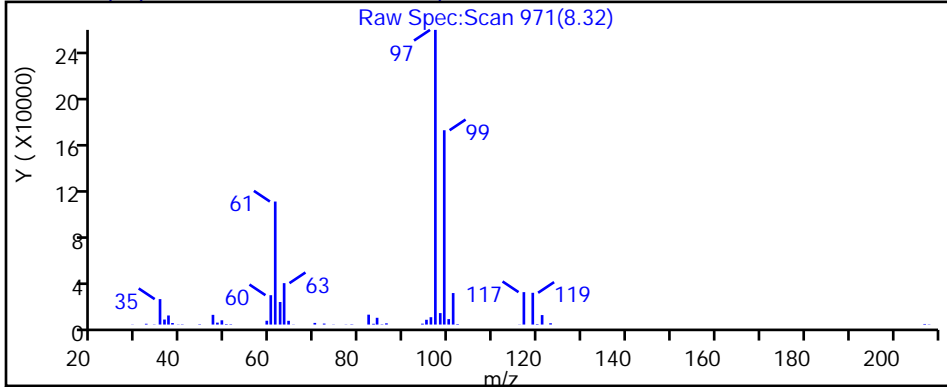
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P106.D

Injection Date: 14-Mar-2019 20:38:30

Instrument ID: MR

Lims ID: 140-14595-A-3

Lab Sample ID: 140-14595-3

Client ID: BLDG-A-INFLUENT

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

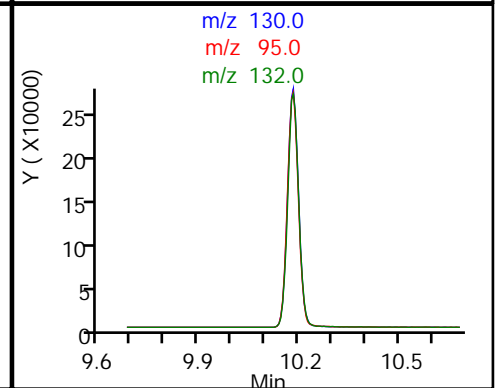
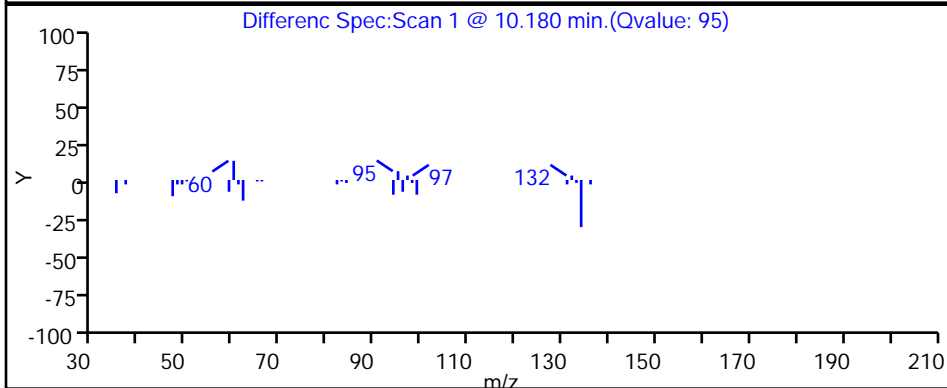
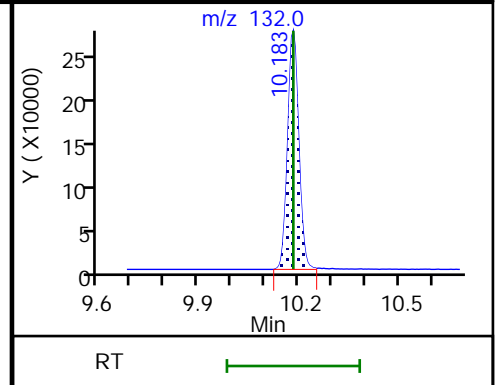
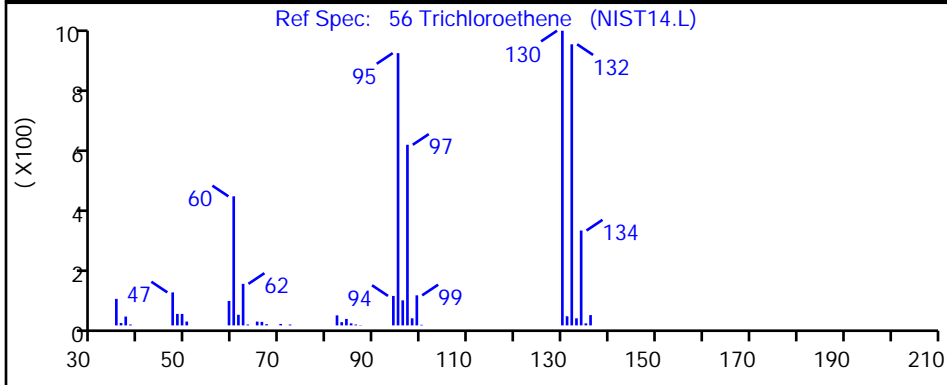
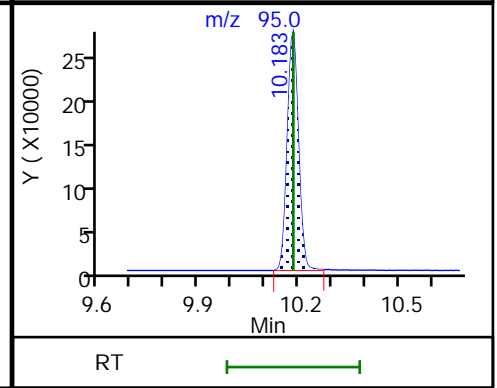
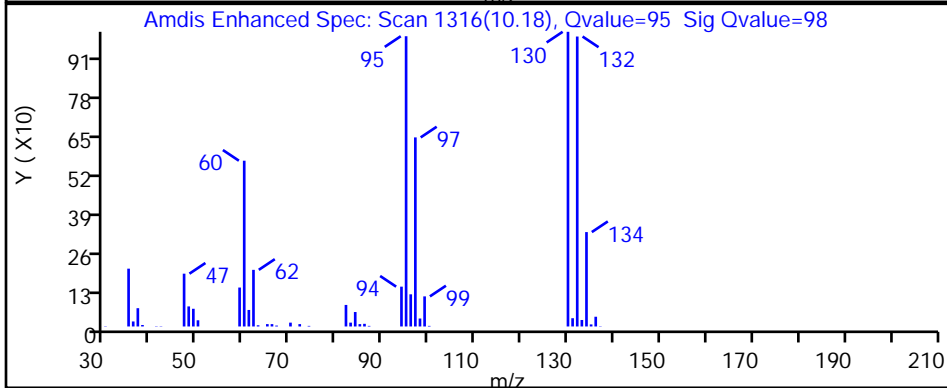
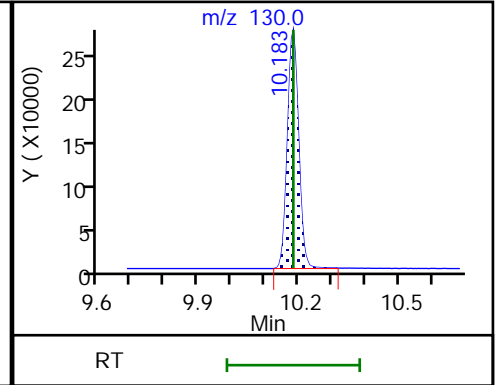
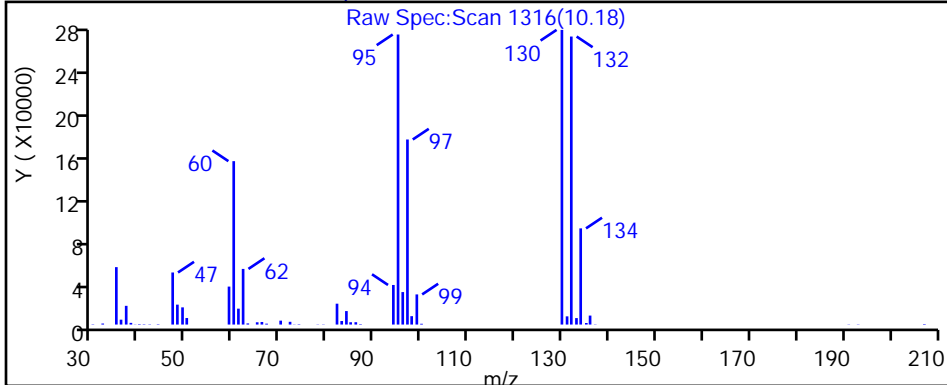
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P106.D

Injection Date: 14-Mar-2019 20:38:30

Instrument ID: MR

Lims ID: 140-14595-A-3

Lab Sample ID: 140-14595-3

Client ID: BLDG-A-INFLUENT

Operator ID:

ALS Bottle#:

6

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

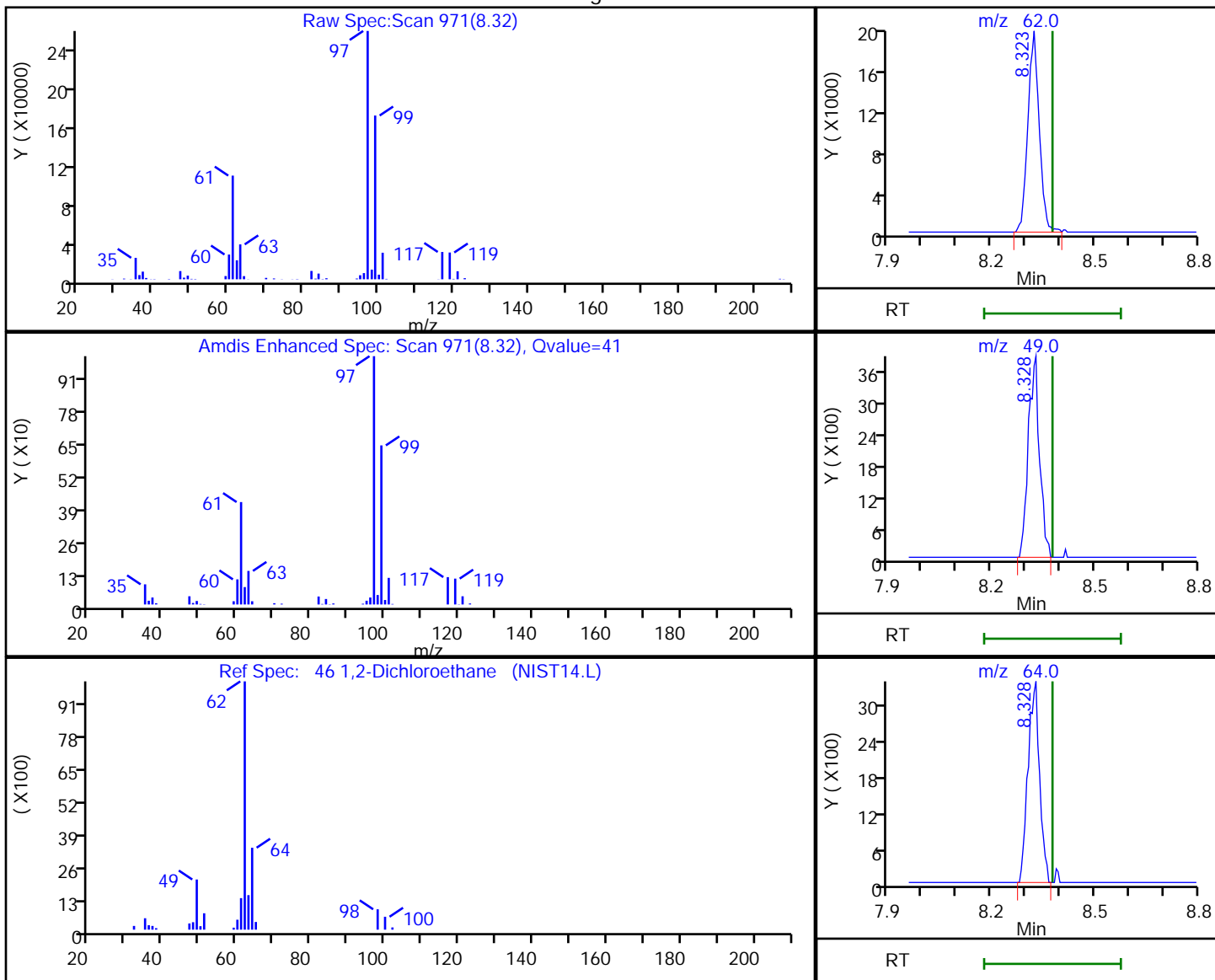
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.32	62.00	44276	0.286128
8.33	49.00	8673	
8.33	64.00	7885	

Reviewer: khachitpongpanits, 15-Mar-2019 14:54:59

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: BLDG-C-INFLUENT Lab Sample ID: 140-14595-4
 Matrix: Air Lab File ID: RC14P107.D
 Analysis Method: TO 15 LL Date Collected: 03/13/2019 12:11
 Sample wt/vol: 100(mL) Date Analyzed: 03/14/2019 21:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.5		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.077	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.64	CI	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.69		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.29	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.78	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.16	J	0.40	0.080
108-88-3	Toluene	92.14	0.71		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	4.8		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.39	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.15	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.27	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: BLDG-C-INFLUENT Lab Sample ID: 140-14595-4
 Matrix: Air Lab File ID: RC14P107.D
 Analysis Method: TO 15 LL Date Collected: 03/13/2019 12:11
 Sample wt/vol: 100(mL) Date Analyzed: 03/14/2019 21:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	4.9		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3	CI	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	2.8		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.5	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.1	J	2.7	0.54
108-88-3	Toluene	92.14	2.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.68	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	26		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.9	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.75	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D
 Lims ID: 140-14595-A-4
 Client ID: BLDG-C-INFLUENT
 Sample Type: Client
 Inject. Date: 14-Mar-2019 21:27:30 ALS Bottle#: 7 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-011
 Misc. Info.: 140-14595-a-4
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:55:13 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:56:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.368	7.368	0.000	72	201515	4.00	
* 2 1,4-Difluorobenzene	114	9.428	9.434	-0.006	95	1174409	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.486	14.492	-0.006	90	1031926	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.212	16.217	-0.005	90	891579	4.06	
6 Chlorodifluoromethane	51	3.507	3.502	-0.006	58	15414	0.1289	
8 Dichlorodifluoromethane	85	3.556	3.559	0.000	98	12862	0.0587	
31 Methylene Chloride	84	5.314	5.319	-0.005	92	10477	0.1554	
41 cis-1,2-Dichloroethene	96	7.099	7.109	-0.005	96	10136	0.1390	
45 1,1,1-Trichloroethane	97	8.328	8.323	0.005	95	6106	0.0250	
47 Benzene	78	8.867	8.867	0.000	97	58493	0.3057	
50 Carbon tetrachloride	117	8.916	8.916	0.000	95	4138	0.0154	
56 Trichloroethene	130	10.178	10.183	-0.005	95	111224	0.9642	
65 Toluene	91	12.405	12.405	0.000	92	35086	0.1419	
73 Tetrachloroethene	129	13.618	13.629	-0.011	90	3985	0.0325	
78 m-Xylene & p-Xylene	91	15.058	15.058	0.000	99	15619	0.0534	
89 1,3,5-Trimethylbenzene	120	17.037	17.047	-0.016	90	5640	0.0304	
93 1,2,4-Trimethylbenzene	105	17.522	17.539	-0.016	98	32487	0.0784	
S 121 Xylenes, Total	100				0		0.0534	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D

Injection Date: 14-Mar-2019 21:27:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14595-A-4

Lab Sample ID: 140-14595-4

Worklist Smp#: 11

Client ID: BLDG-C-INFLUENT

Purge Vol: 500.000 mL

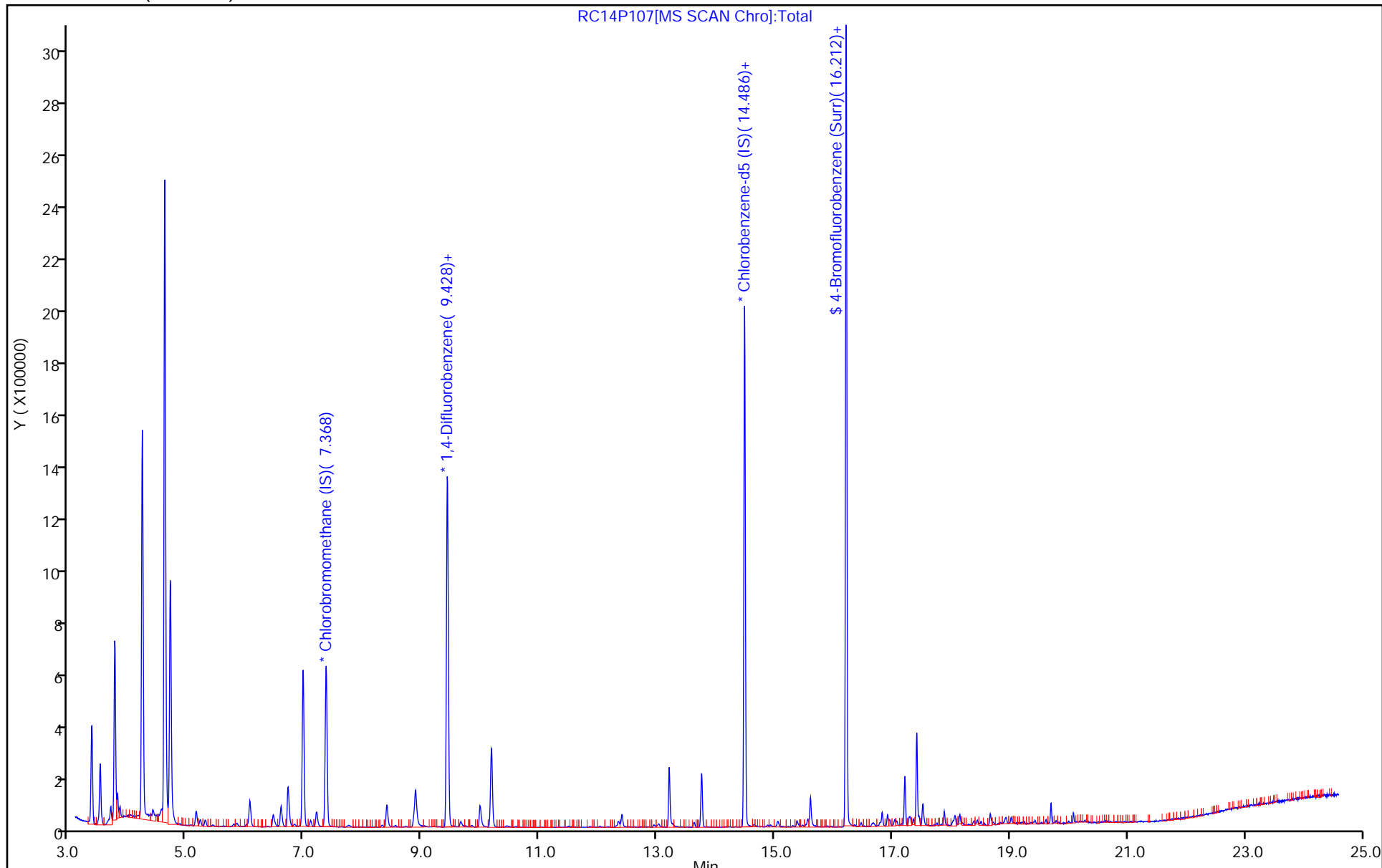
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D
 Lims ID: 140-14595-A-4
 Client ID: BLDG-C-INFLUENT
 Sample Type: Client
 Inject. Date: 14-Mar-2019 21:27:30 ALS Bottle#: 7 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-011
 Misc. Info.: 140-14595-a-4
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:55:13 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:56:00

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.06	101.57

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D

Injection Date: 14-Mar-2019 21:27:30

Instrument ID: MR

Lims ID: 140-14595-A-4

Lab Sample ID: 140-14595-4

Client ID: BLDG-C-INFLUENT

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

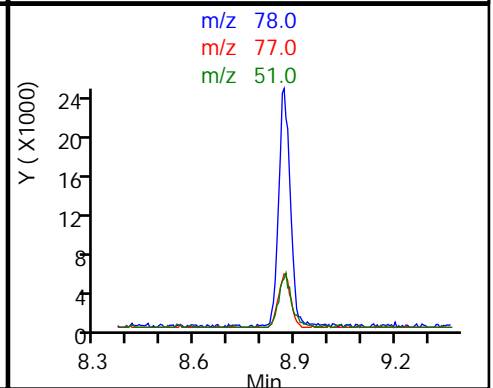
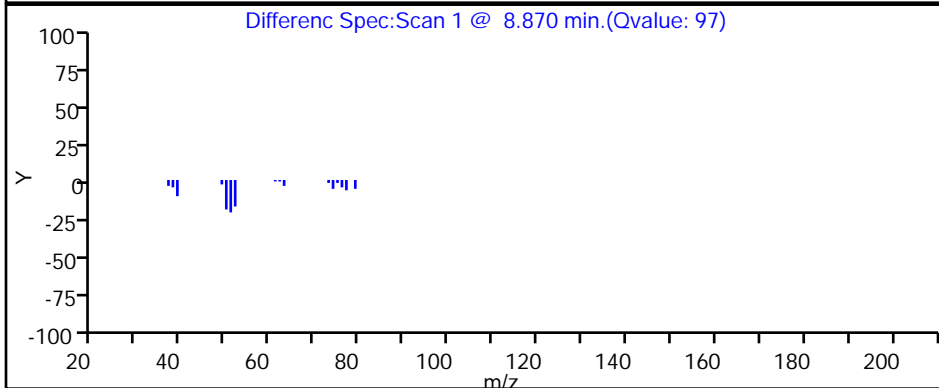
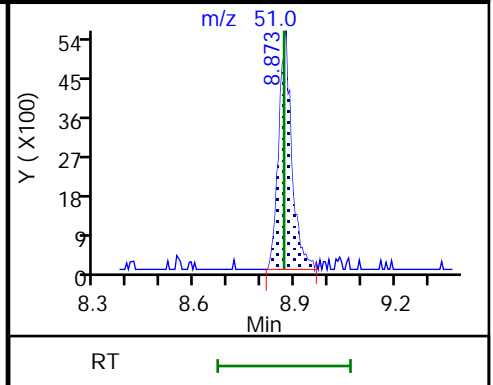
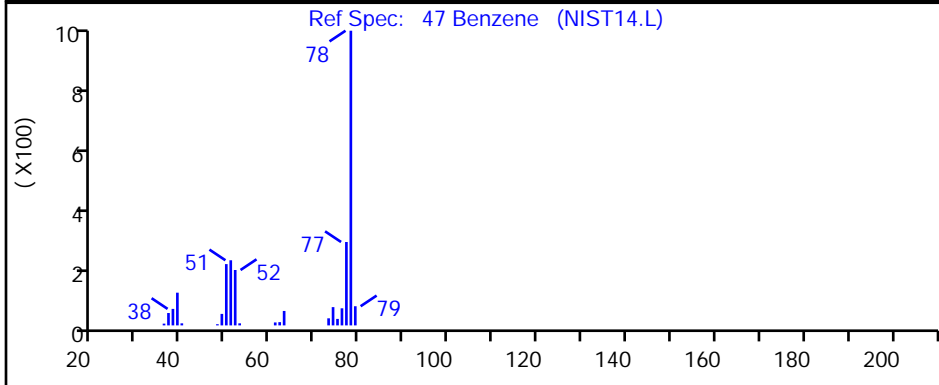
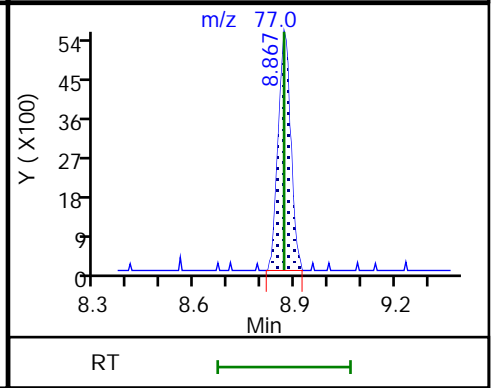
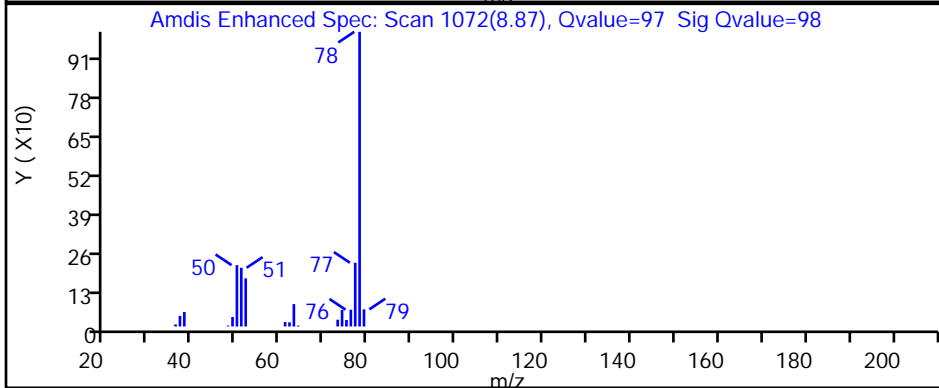
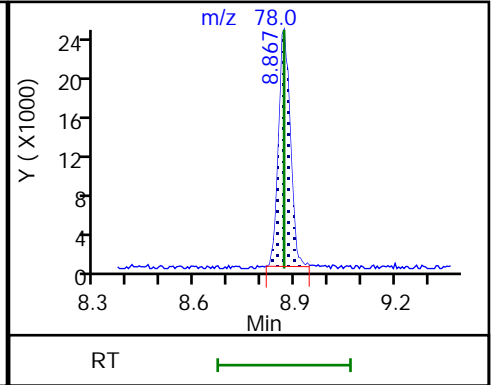
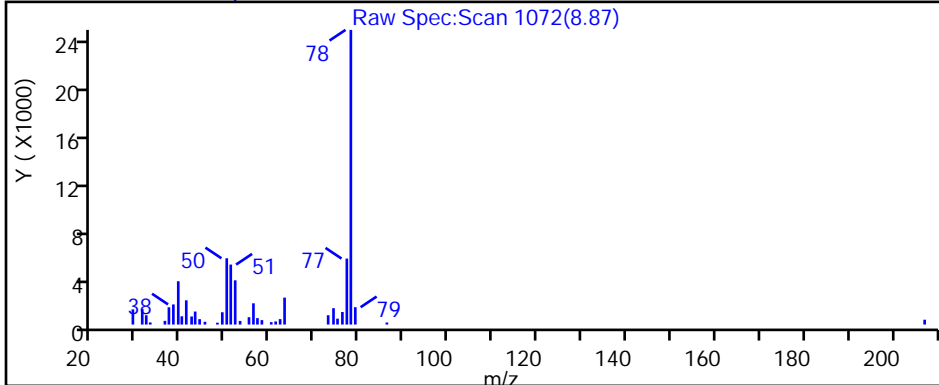
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D

Injection Date: 14-Mar-2019 21:27:30

Instrument ID: MR

Lims ID: 140-14595-A-4

Lab Sample ID: 140-14595-4

Client ID: BLDG-C-INFLUENT

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

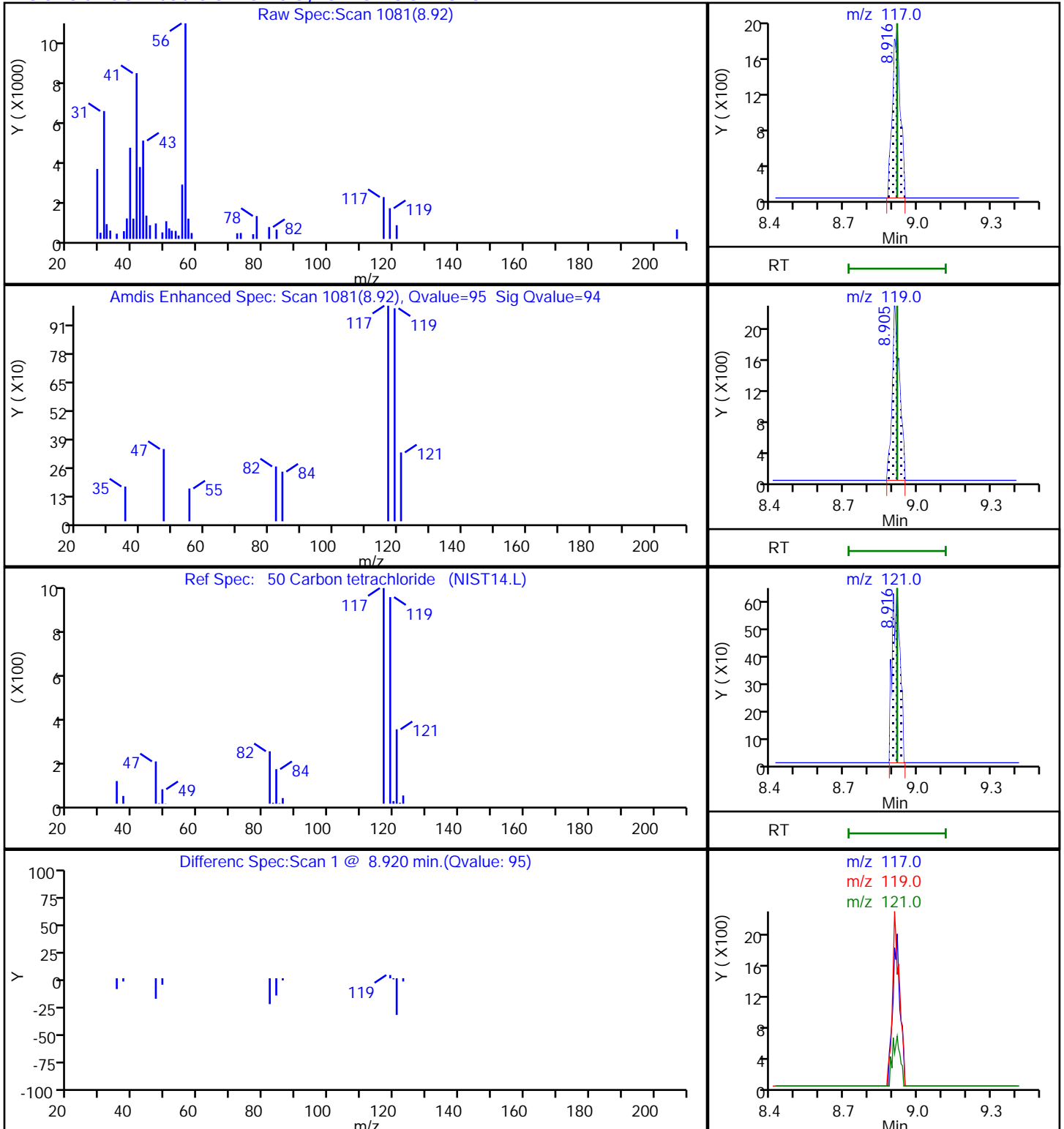
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D

Injection Date: 14-Mar-2019 21:27:30

Instrument ID: MR

Lims ID: 140-14595-A-4

Lab Sample ID: 140-14595-4

Client ID: BLDG-C-INFLUENT

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

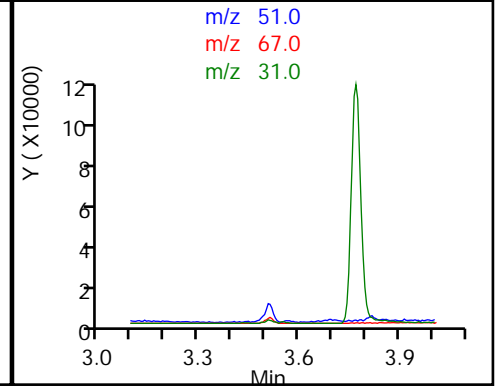
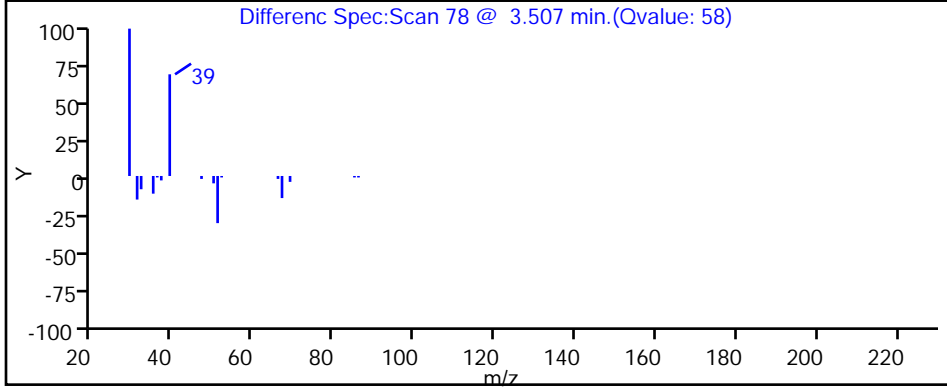
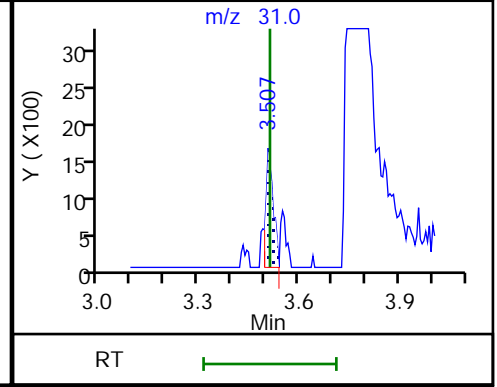
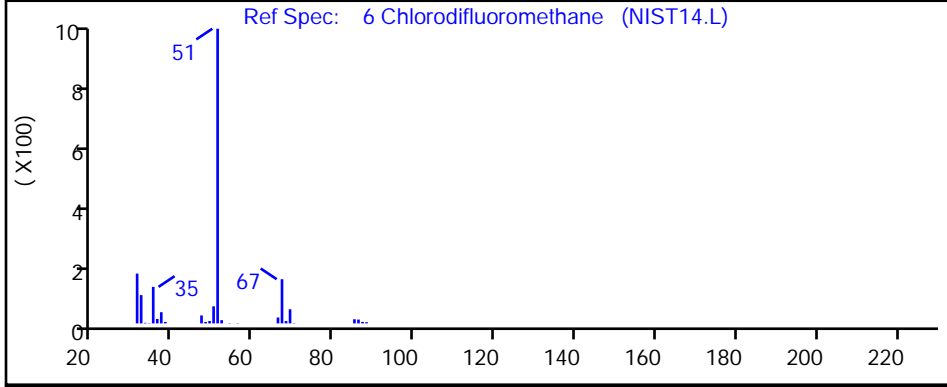
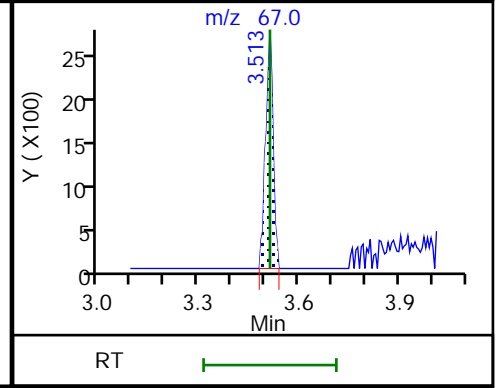
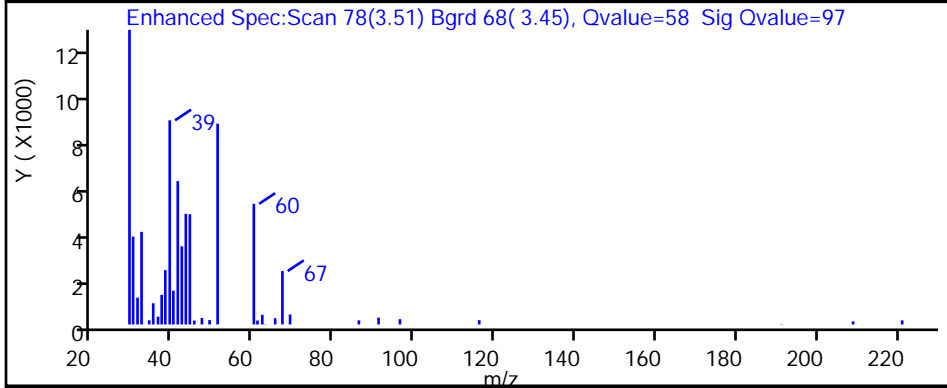
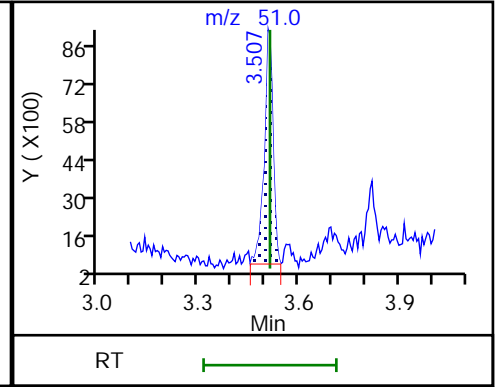
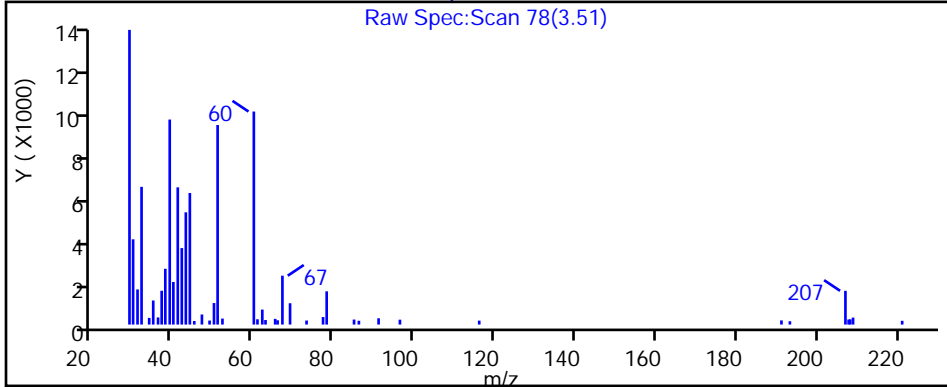
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D

Injection Date: 14-Mar-2019 21:27:30

Instrument ID: MR

Lims ID: 140-14595-A-4

Lab Sample ID: 140-14595-4

Client ID: BLDG-C-INFLUENT

Operator ID:

ALS Bottle#: 7 Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

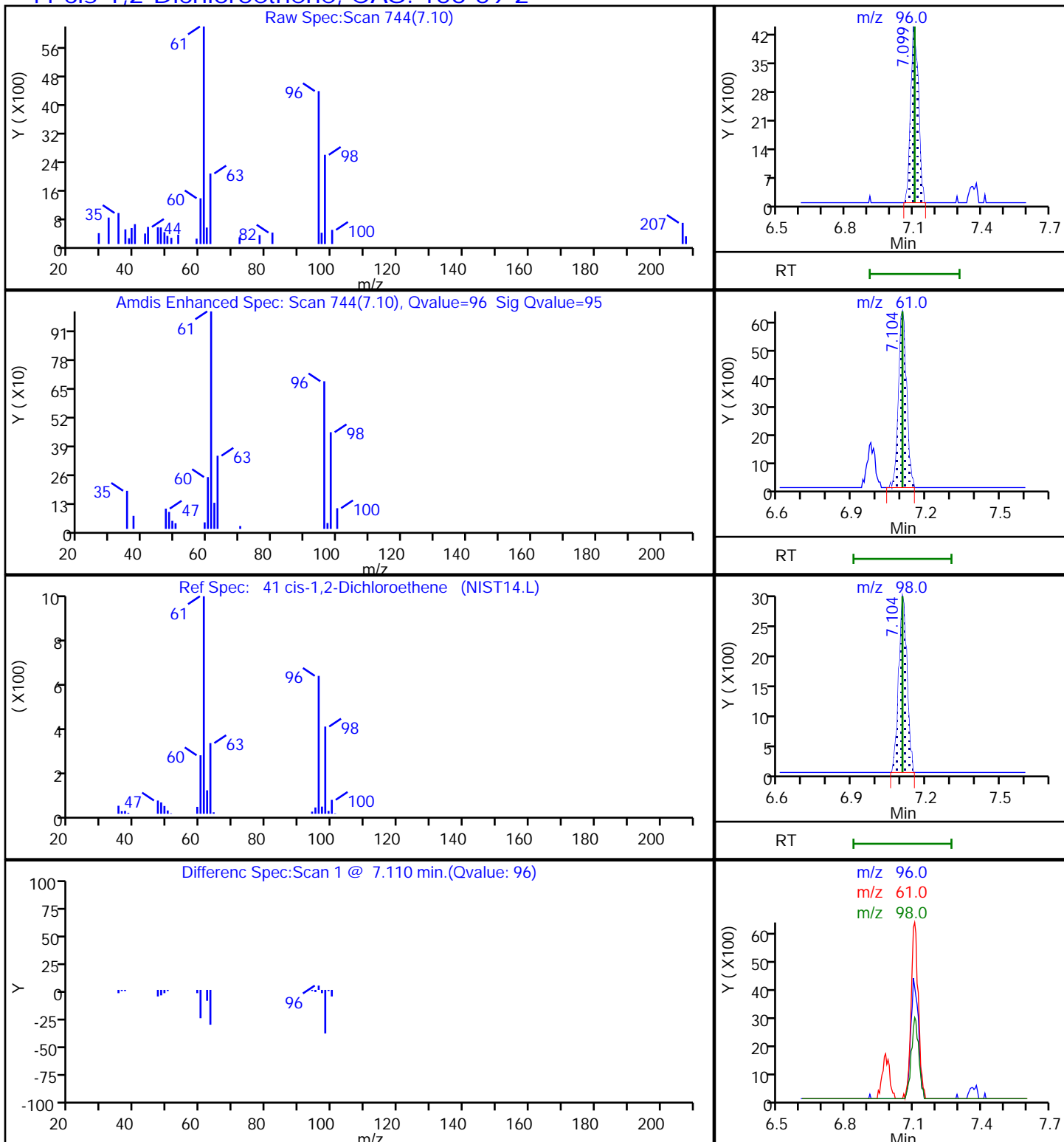
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D

Injection Date: 14-Mar-2019 21:27:30

Instrument ID: MR

Lims ID: 140-14595-A-4

Lab Sample ID: 140-14595-4

Client ID: BLDG-C-INFLUENT

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

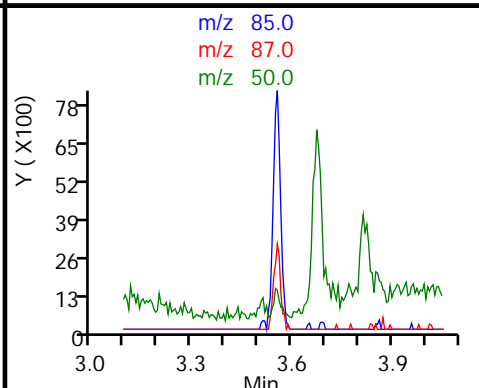
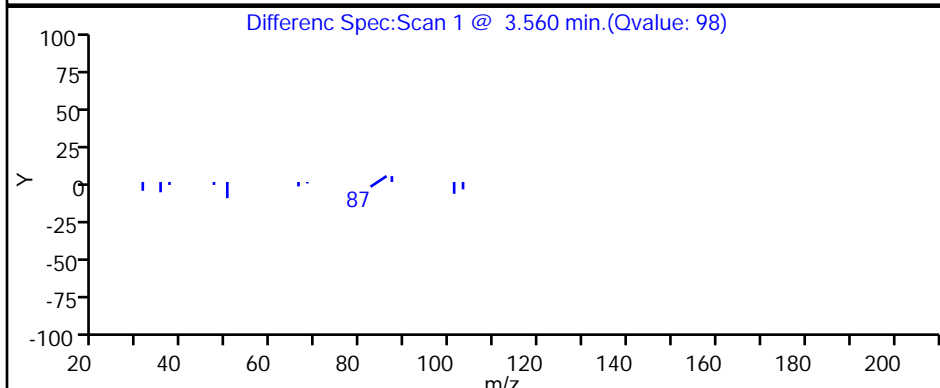
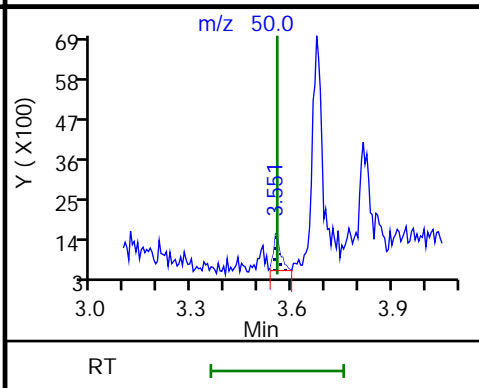
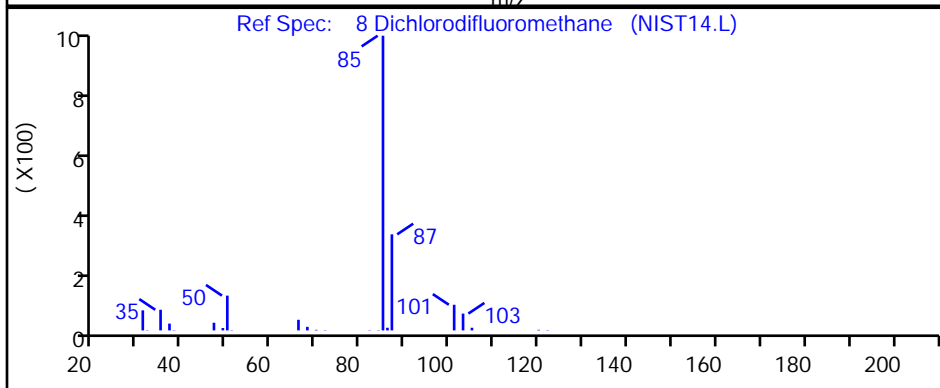
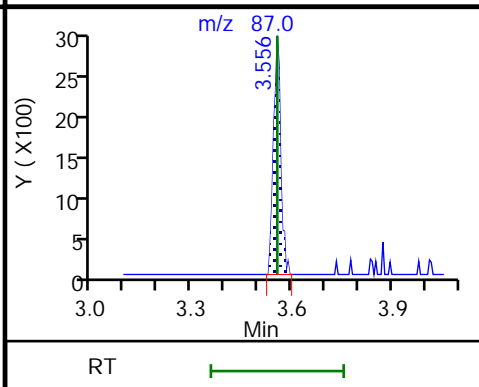
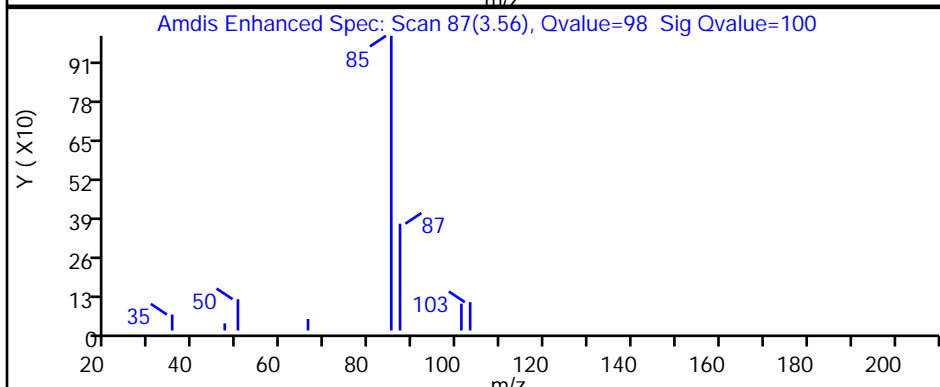
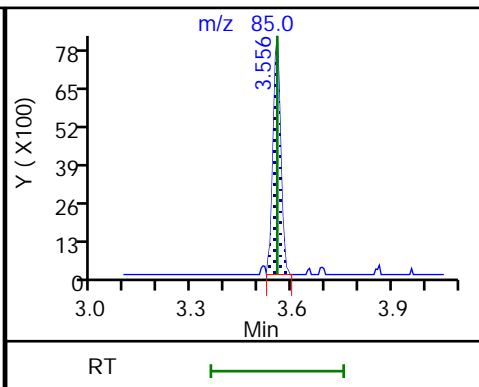
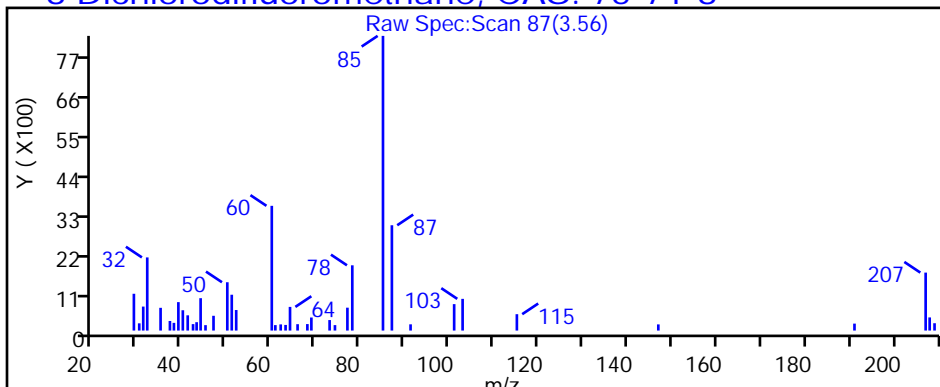
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D

Injection Date: 14-Mar-2019 21:27:30

Instrument ID: MR

Lims ID: 140-14595-A-4

Lab Sample ID: 140-14595-4

Client ID: BLDG-C-INFLUENT

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

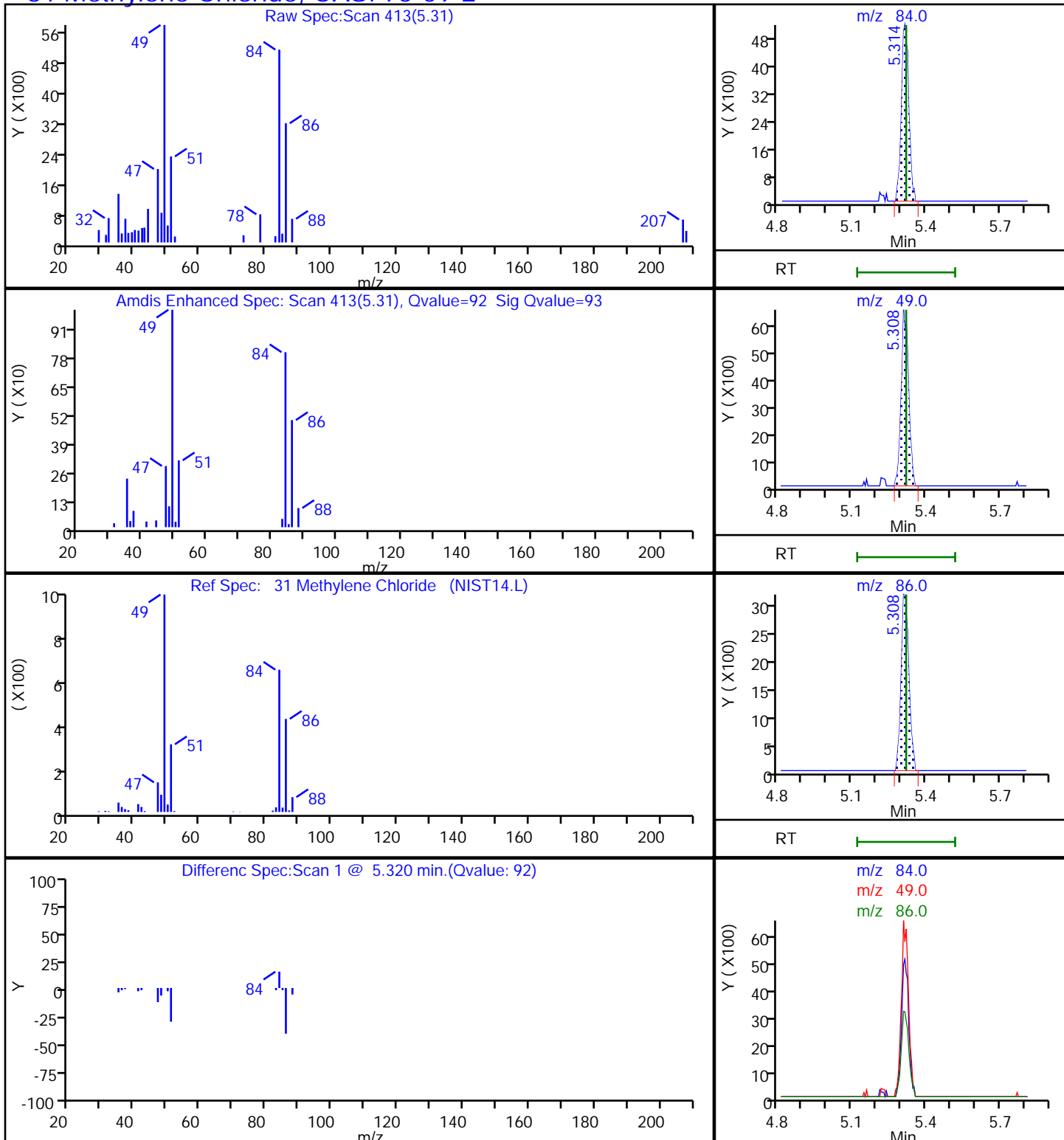
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D

Injection Date: 14-Mar-2019 21:27:30

Instrument ID: MR

Lims ID: 140-14595-A-4

Lab Sample ID: 140-14595-4

Client ID: BLDG-C-INFLUENT

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

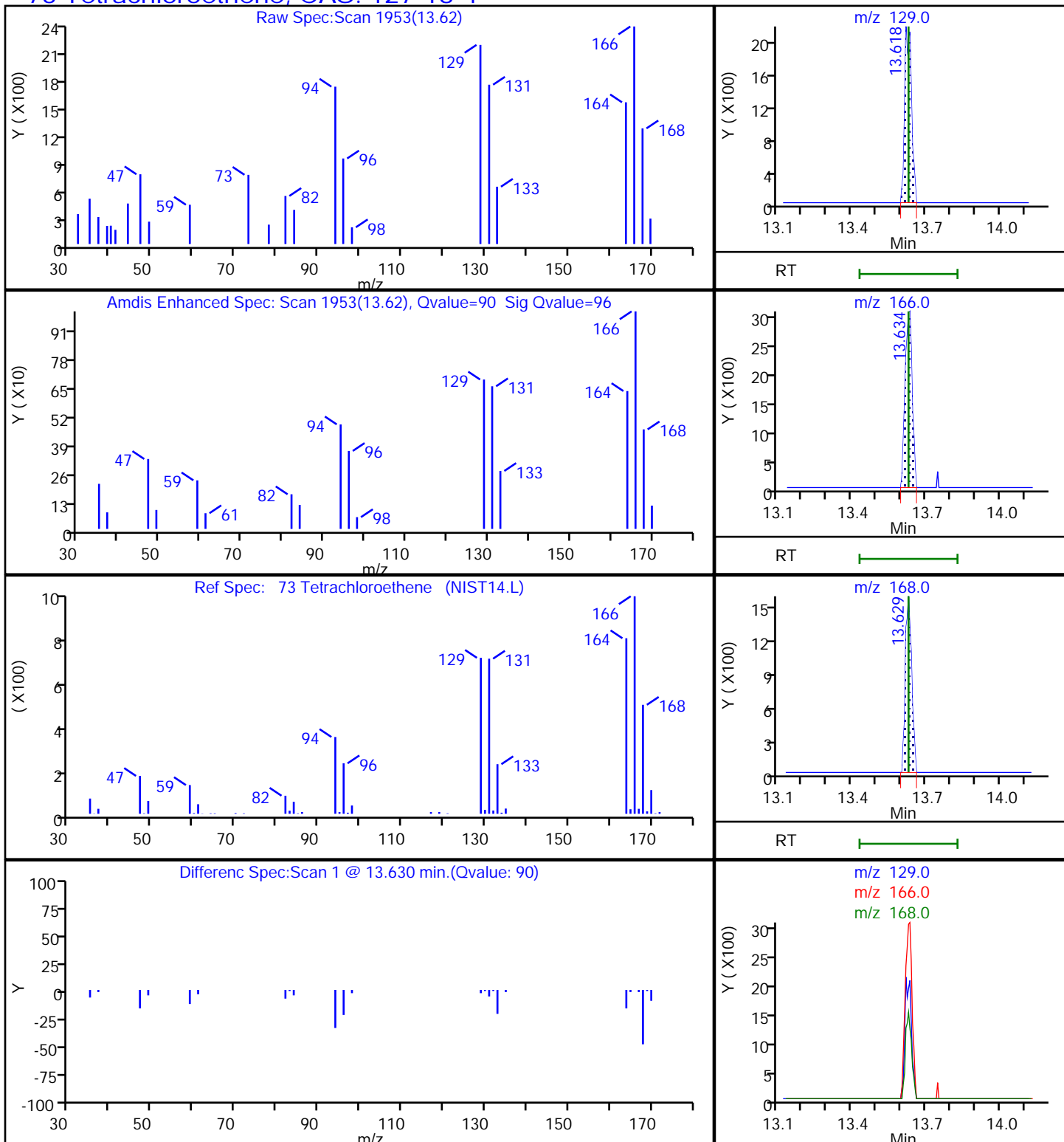
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D

Injection Date: 14-Mar-2019 21:27:30

Instrument ID: MR

Lims ID: 140-14595-A-4

Lab Sample ID: 140-14595-4

Client ID: BLDG-C-INFLUENT

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

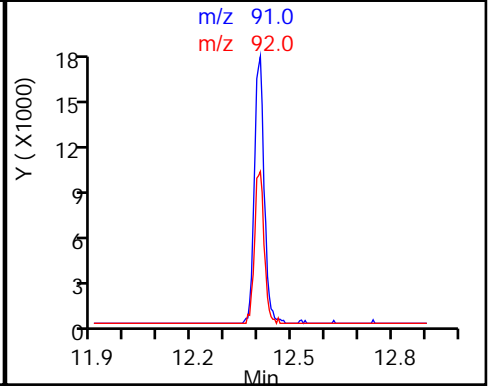
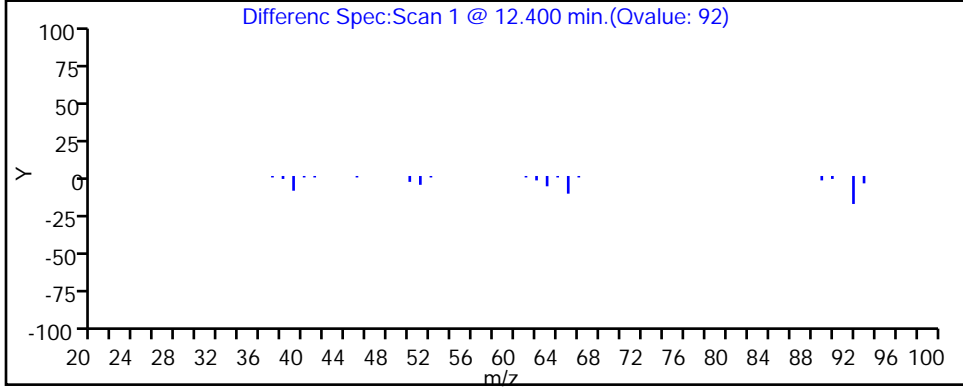
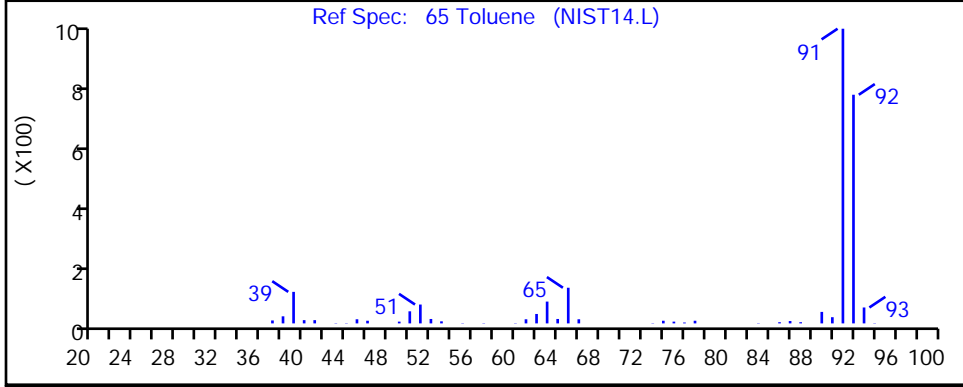
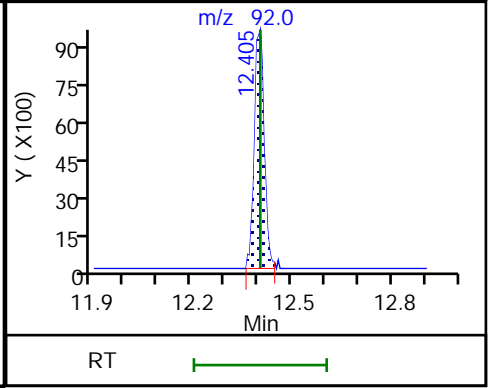
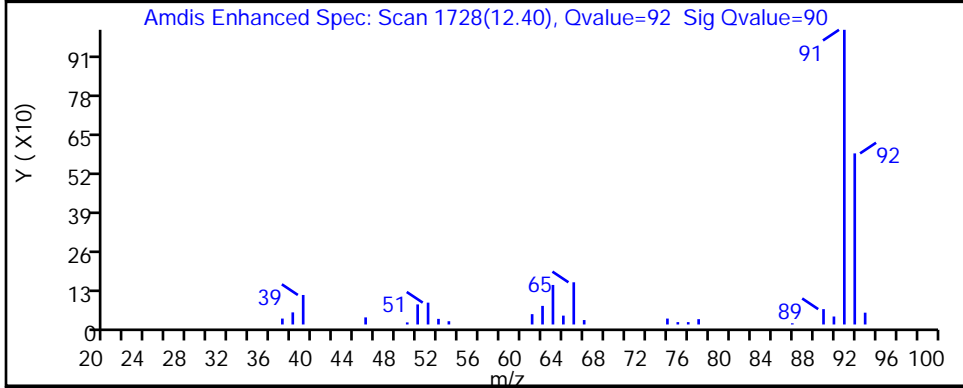
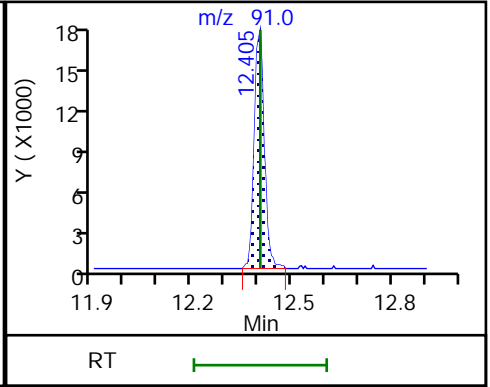
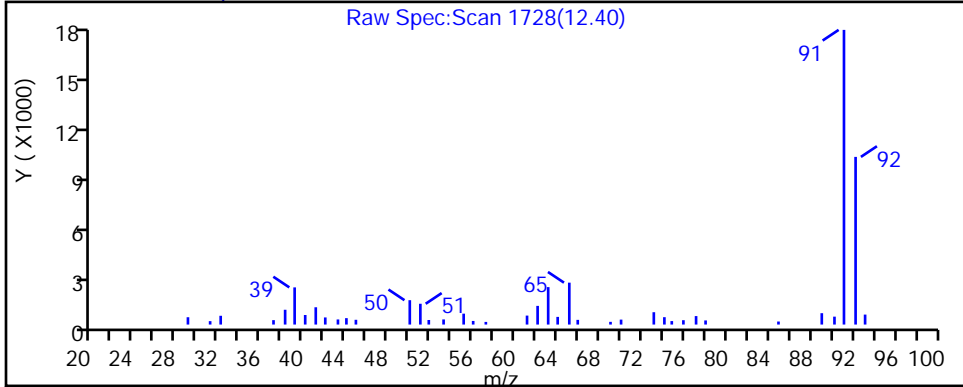
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D

Injection Date: 14-Mar-2019 21:27:30

Instrument ID: MR

Lims ID: 140-14595-A-4

Lab Sample ID: 140-14595-4

Client ID: BLDG-C-INFLUENT

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

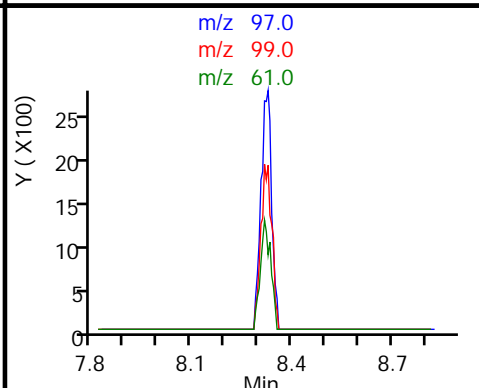
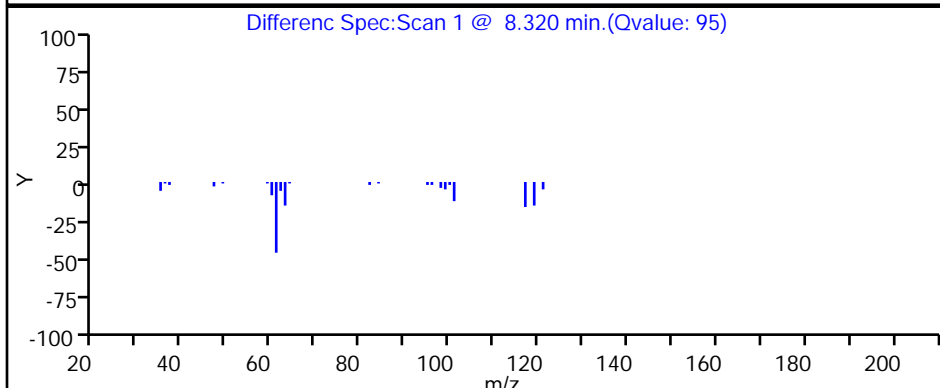
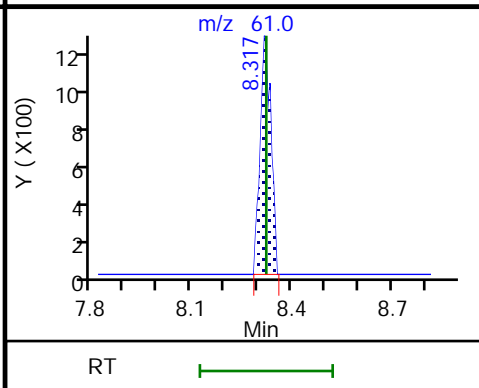
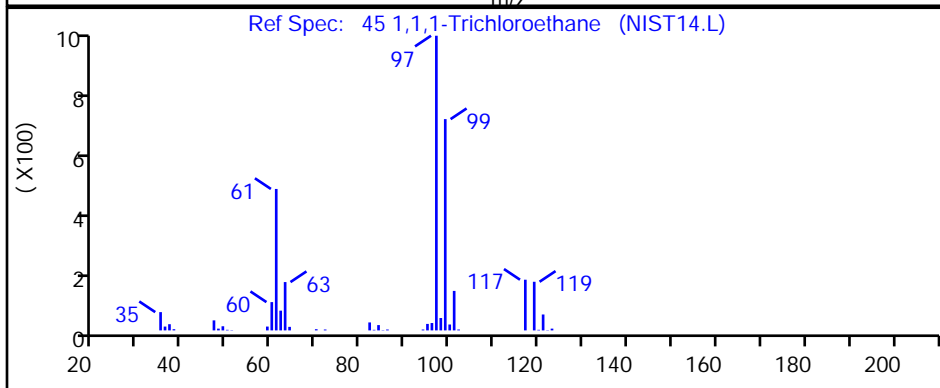
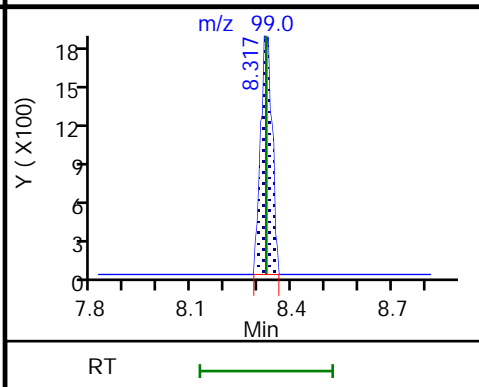
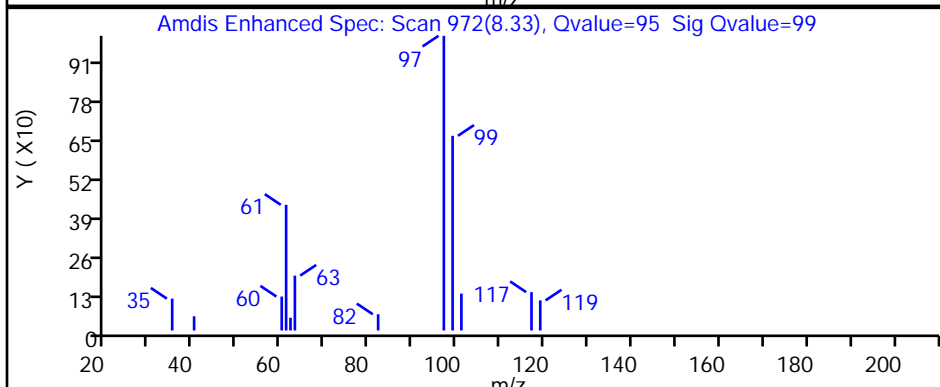
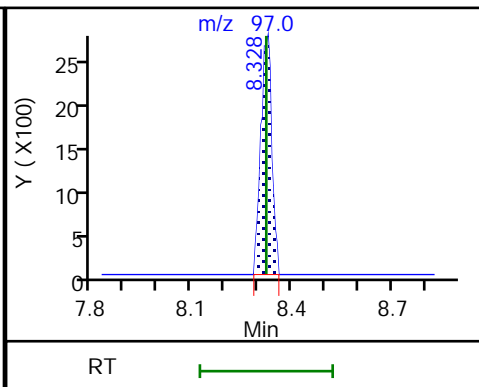
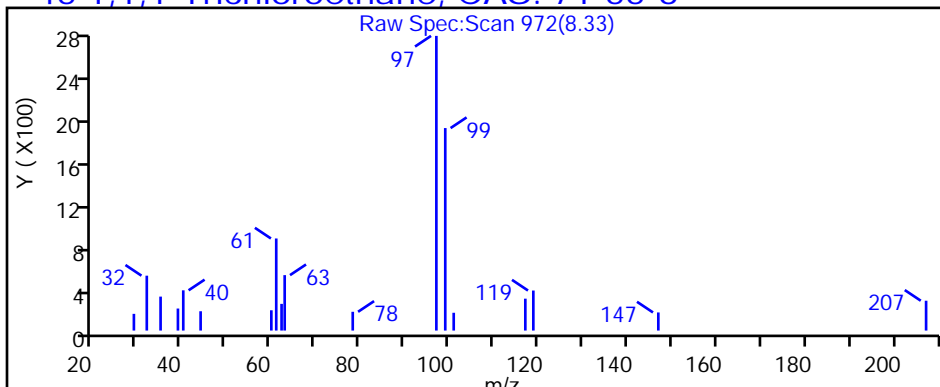
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D

Injection Date: 14-Mar-2019 21:27:30

Instrument ID: MR

Lims ID: 140-14595-A-4

Lab Sample ID: 140-14595-4

Client ID: BLDG-C-INFLUENT

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

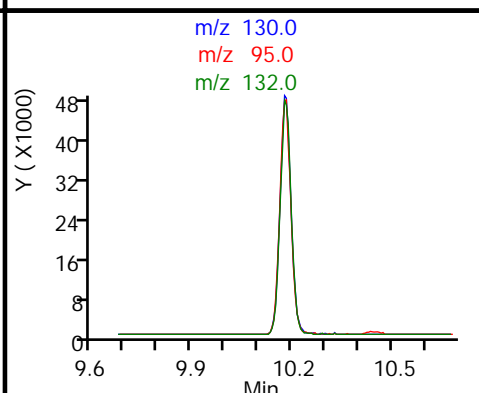
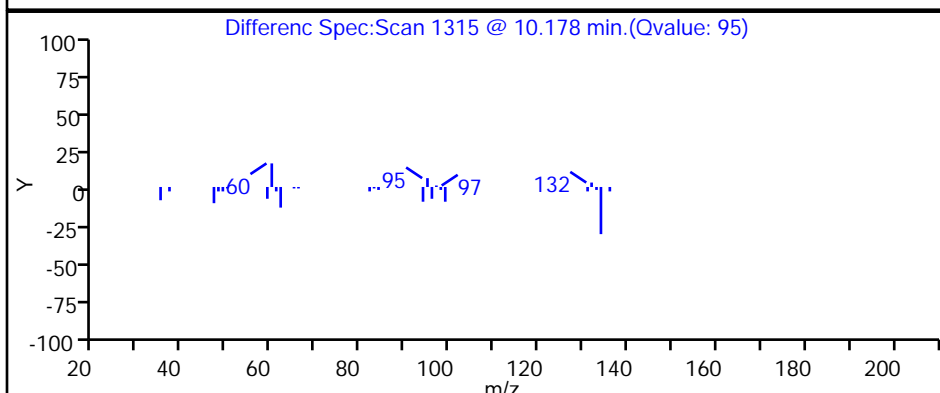
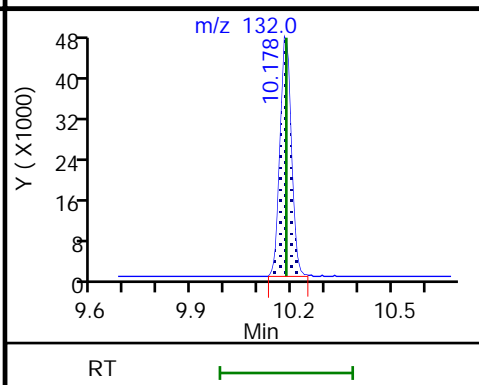
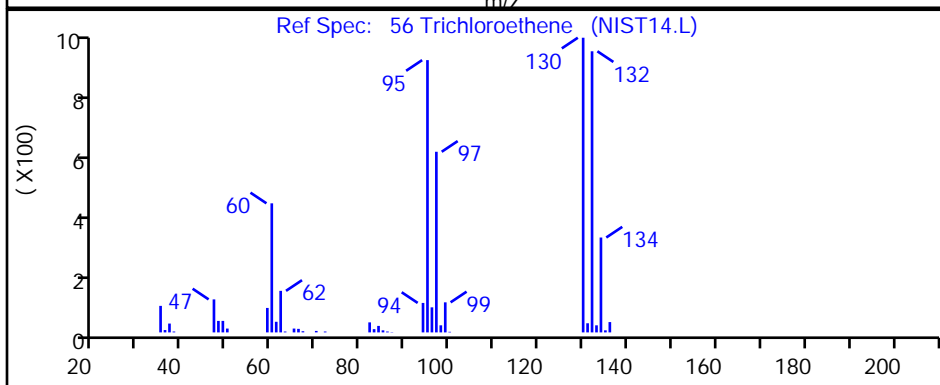
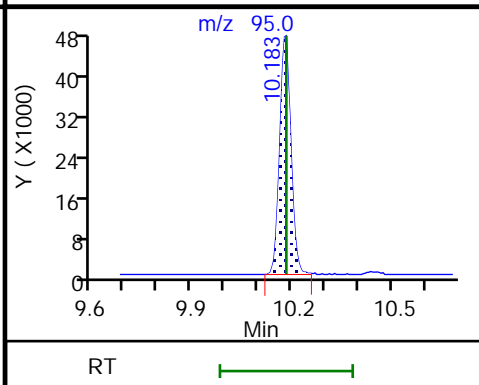
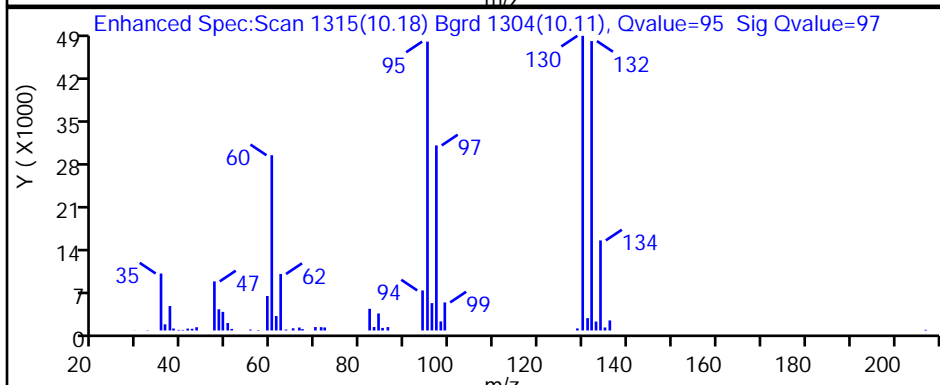
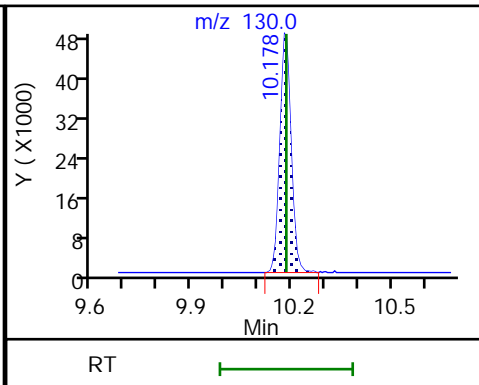
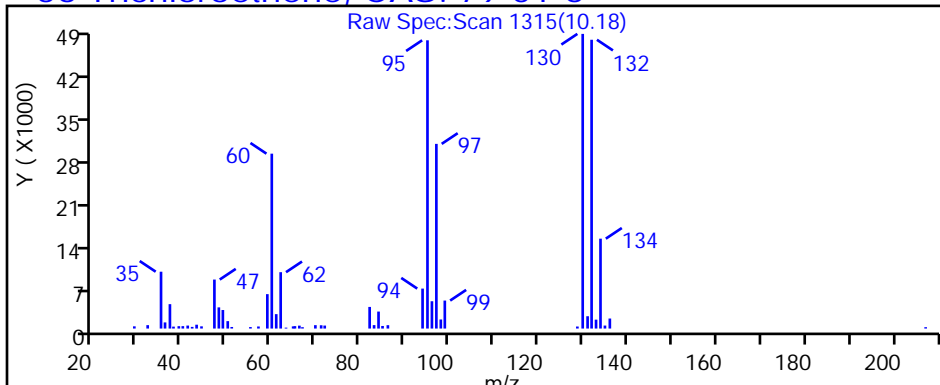
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D

Injection Date: 14-Mar-2019 21:27:30

Instrument ID: MR

Lims ID: 140-14595-A-4

Lab Sample ID: 140-14595-4

Client ID: BLDG-C-INFLUENT

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

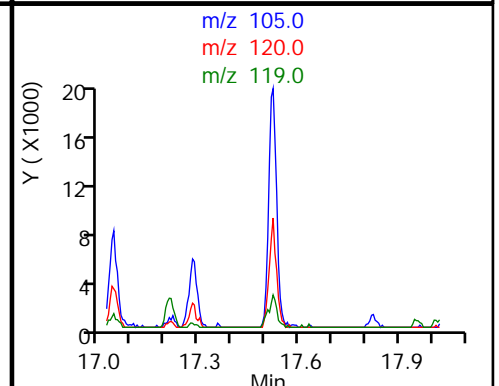
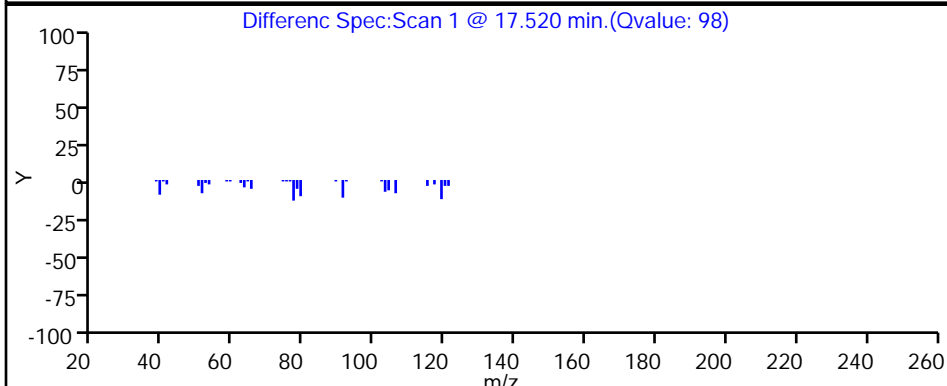
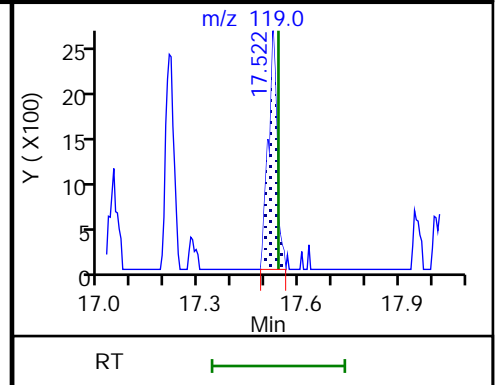
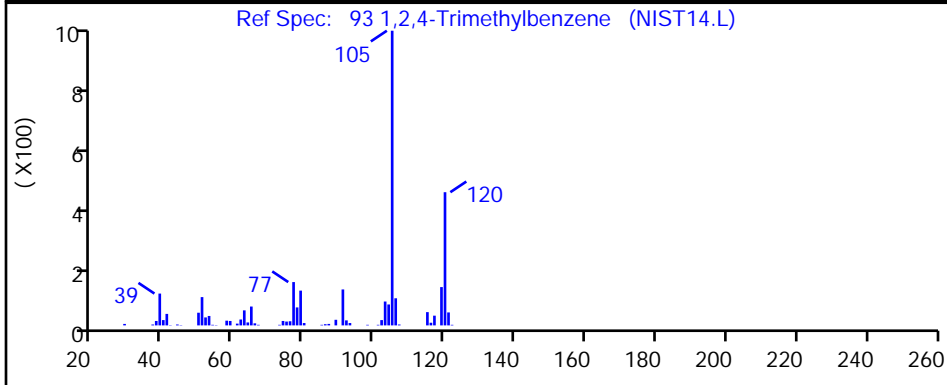
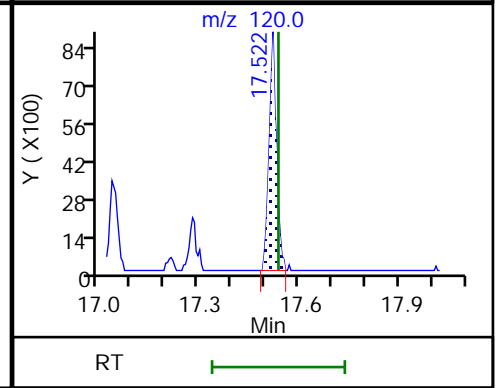
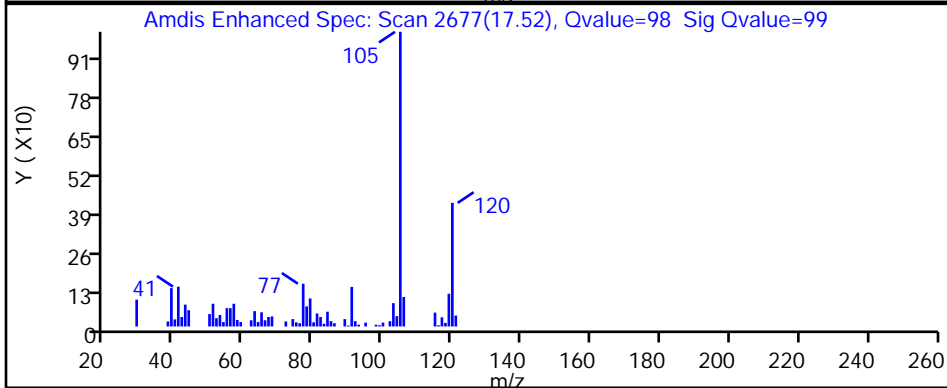
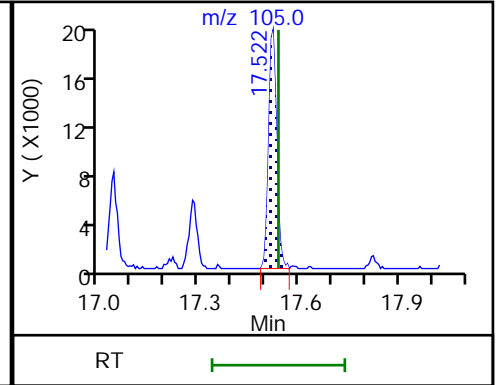
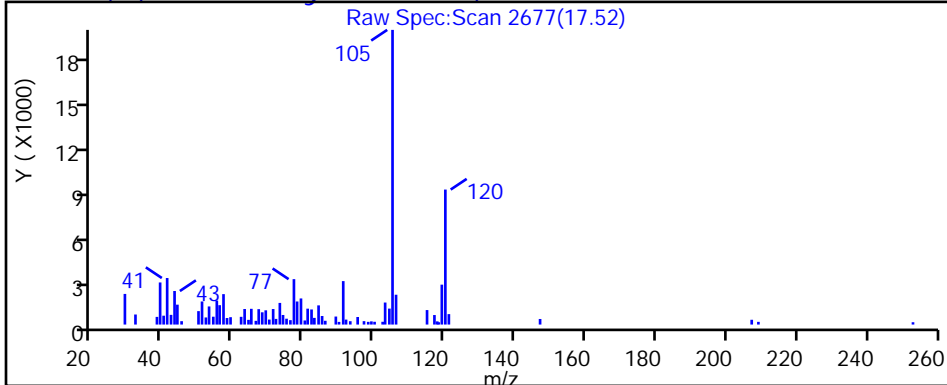
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D

Injection Date: 14-Mar-2019 21:27:30

Instrument ID: MR

Lims ID: 140-14595-A-4

Lab Sample ID: 140-14595-4

Client ID: BLDG-C-INFLUENT

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

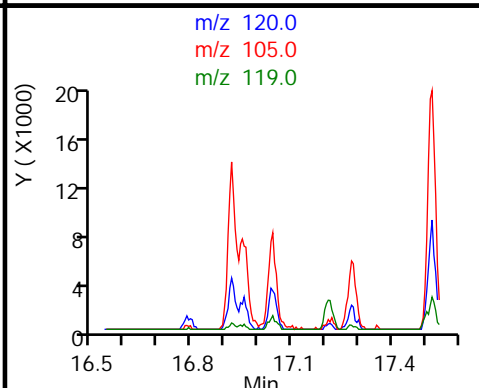
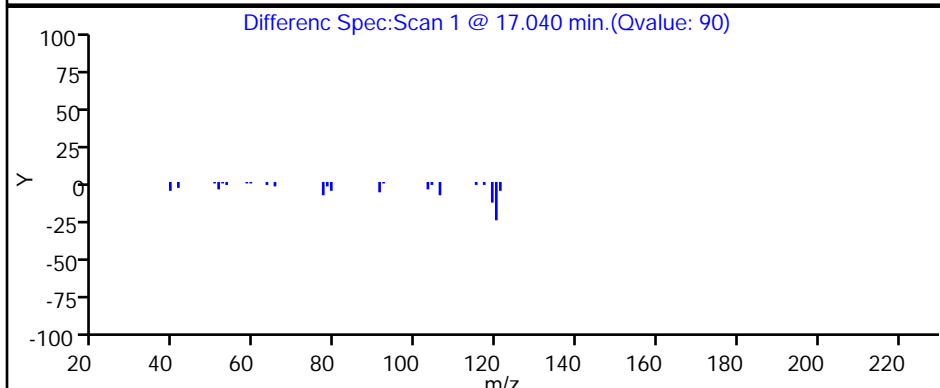
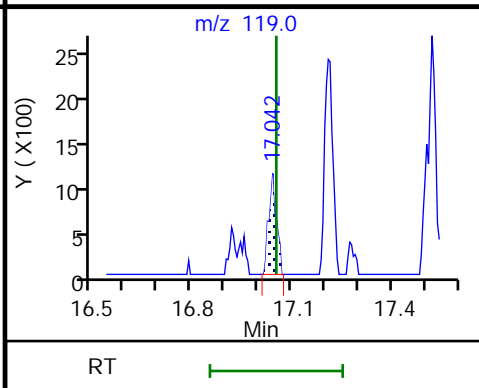
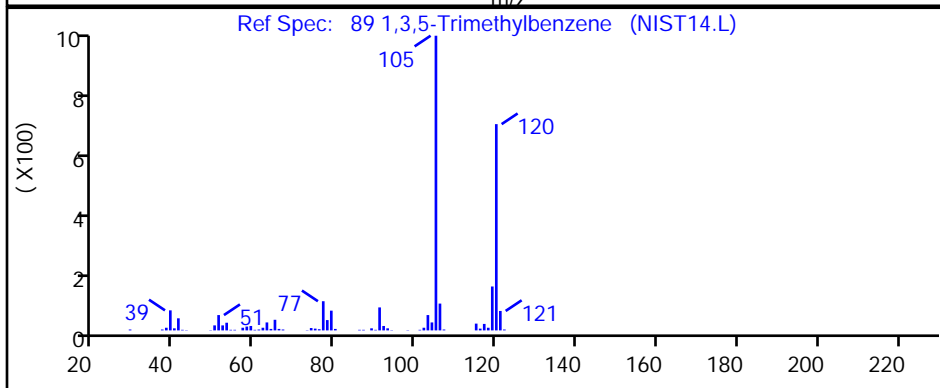
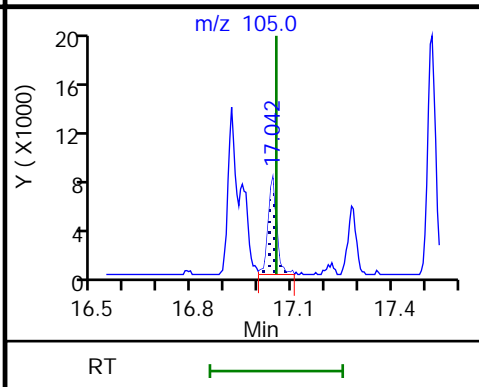
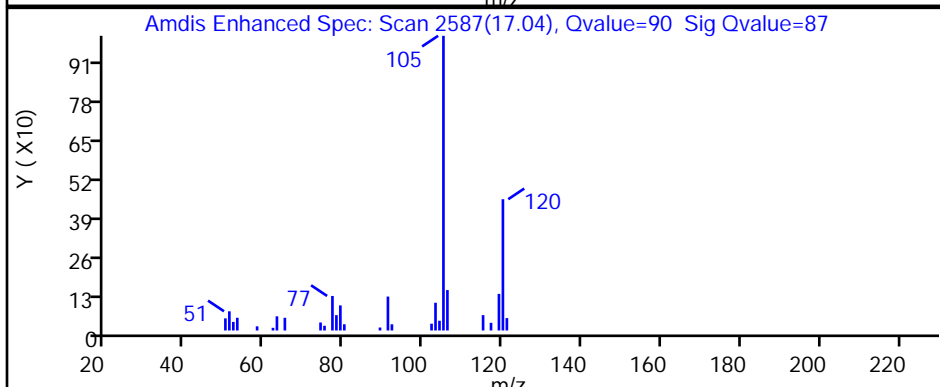
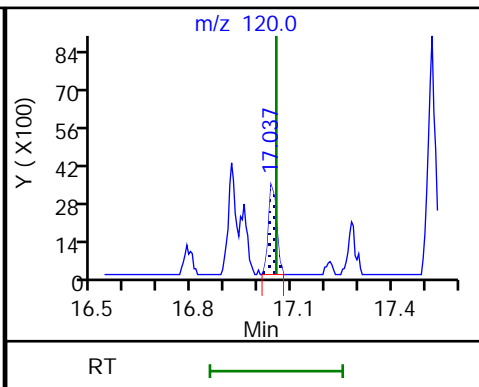
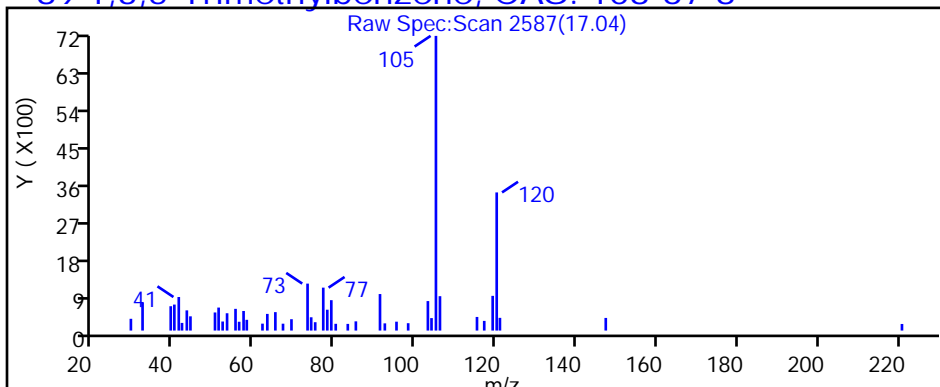
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P107.D

Injection Date: 14-Mar-2019 21:27:30

Instrument ID: MR

Lims ID: 140-14595-A-4

Lab Sample ID: 140-14595-4

Client ID: BLDG-C-INFLUENT

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

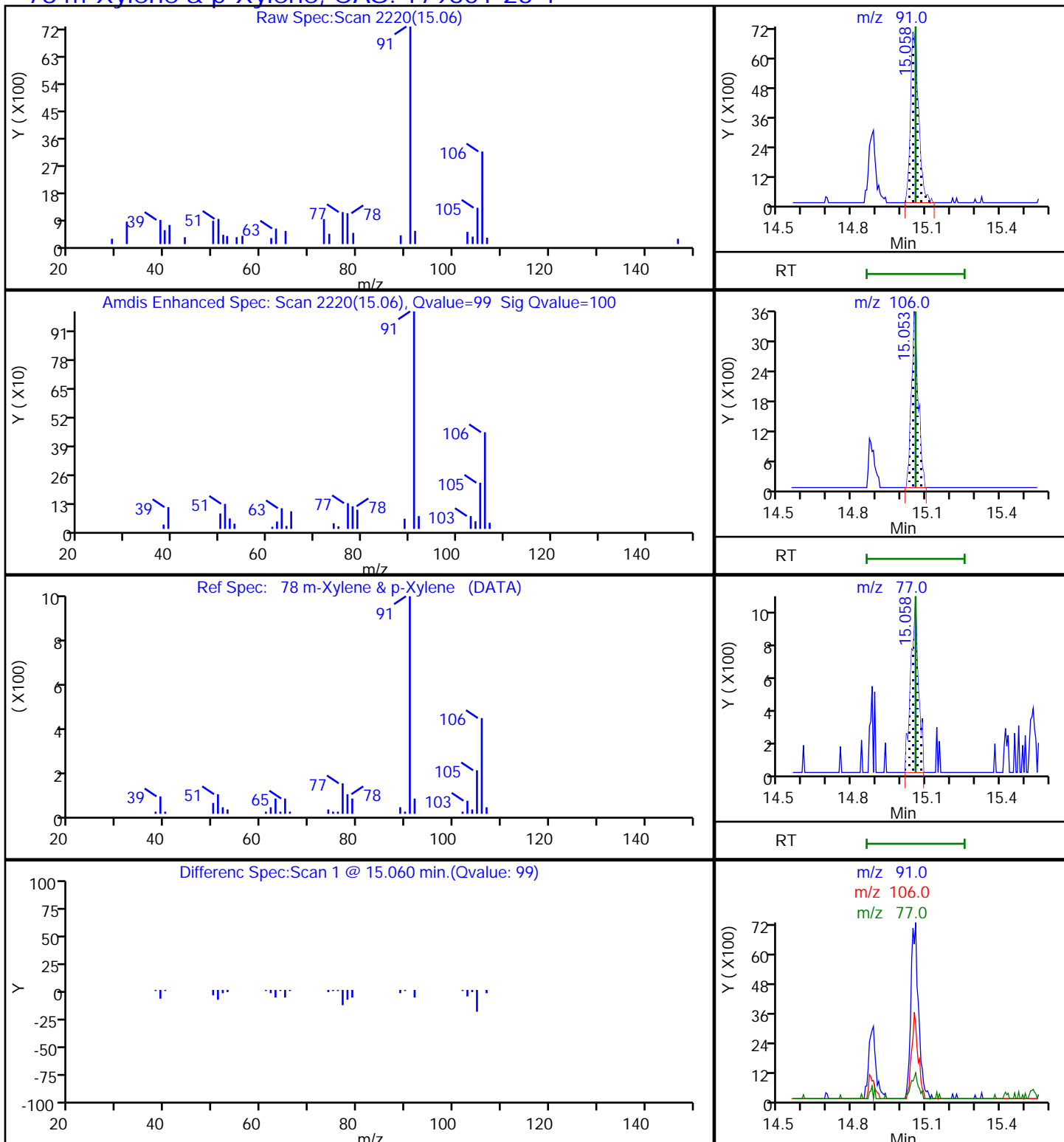
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

78 m-Xylene & p-Xylene, CAS: 179601-23-1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: BLDG-C-MIDGAC Lab Sample ID: 140-14595-5
 Matrix: Air Lab File ID: RC14P108.D
 Analysis Method: TO 15 LL Date Collected: 03/13/2019 12:06
 Sample wt/vol: 100(mL) Date Analyzed: 03/14/2019 22:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.3		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.89	CI	0.40	0.075
67-66-3	Chloroform	119.38	0.20	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.21	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.25	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.87	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.19	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.11	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: BLDG-C-MIDGAC Lab Sample ID: 140-14595-5
 Matrix: Air Lab File ID: RC14P108.D
 Analysis Method: TO 15 LL Date Collected: 03/13/2019 12:06
 Sample wt/vol: 100(mL) Date Analyzed: 03/14/2019 22:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	7.3		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.1	CI	1.4	0.27
67-66-3	Chloroform	119.38	0.99	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.83	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.3	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.0	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.0	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.59	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P108.D
 Lims ID: 140-14595-A-5
 Client ID: BLDG-C-MIDGAC
 Sample Type: Client
 Inject. Date: 14-Mar-2019 22:16:30 ALS Bottle#: 8 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-012
 Misc. Info.: 140-14595-a-5
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:55:13 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:56:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.368	7.368	0.000	72	199521	4.00	
* 2 1,4-Difluorobenzene	114	9.428	9.434	-0.006	95	1168444	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.486	14.492	-0.006	91	1025116	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.212	16.217	-0.005	89	873182	4.01	
6 Chlorodifluoromethane	51	3.513	3.502	0.000	96	20963	0.1771	
8 Dichlorodifluoromethane	85	3.556	3.559	0.000	99	11024	0.0508	
31 Methylene Chloride	84	5.314	5.319	-0.005	91	11656	0.1746	
41 cis-1,2-Dichloroethene	96	7.104	7.109	0.000	96	3041	0.0421	
43 Chloroform	83	7.401	7.412	-0.005	92	7700	0.0404	
45 1,1,1-Trichloroethane	97	8.323	8.323	0.000	96	9255	0.0383	
47 Benzene	78	8.868	8.867	0.001	98	87264	0.4584	
56 Trichloroethene	130	10.183	10.183	0.000	92	2541	0.0221	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P108.D

Injection Date: 14-Mar-2019 22:16:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14595-A-5

Lab Sample ID: 140-14595-5

Worklist Smp#: 12

Client ID: BLDG-C-MIDGAC

Purge Vol: 500.000 mL

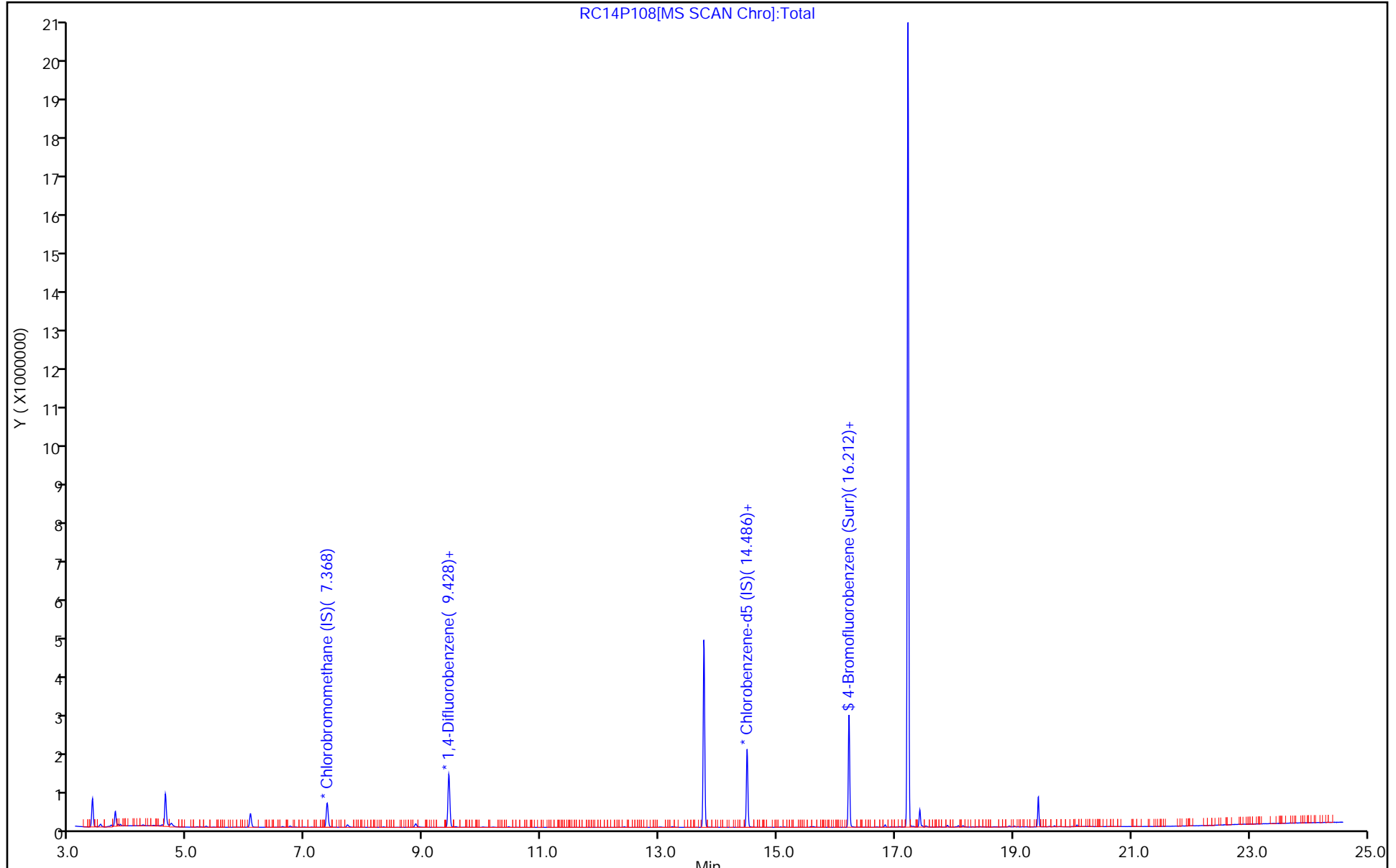
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P108.D
 Lims ID: 140-14595-A-5
 Client ID: BLDG-C-MIDGAC
 Sample Type: Client
 Inject. Date: 14-Mar-2019 22:16:30 ALS Bottle#: 8 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-012
 Misc. Info.: 140-14595-a-5
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:55:13 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:56:55

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.01	100.14

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P108.D

Injection Date: 14-Mar-2019 22:16:30

Instrument ID: MR

Lims ID: 140-14595-A-5

Lab Sample ID: 140-14595-5

Client ID: BLDG-C-MIDGAC

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

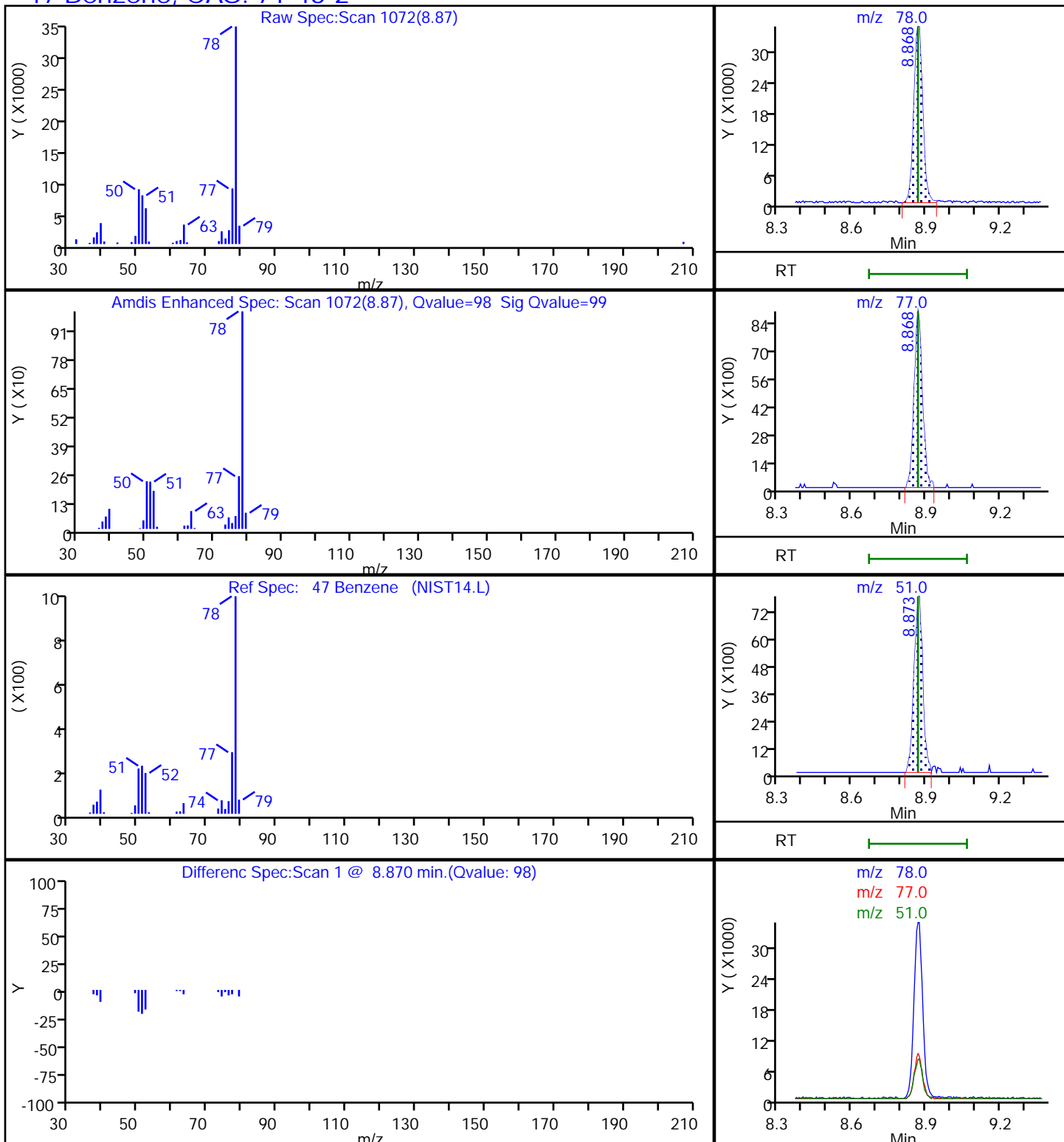
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P108.D

Injection Date: 14-Mar-2019 22:16:30

Instrument ID: MR

Lims ID: 140-14595-A-5

Lab Sample ID: 140-14595-5

Client ID: BLDG-C-MIDGAC

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

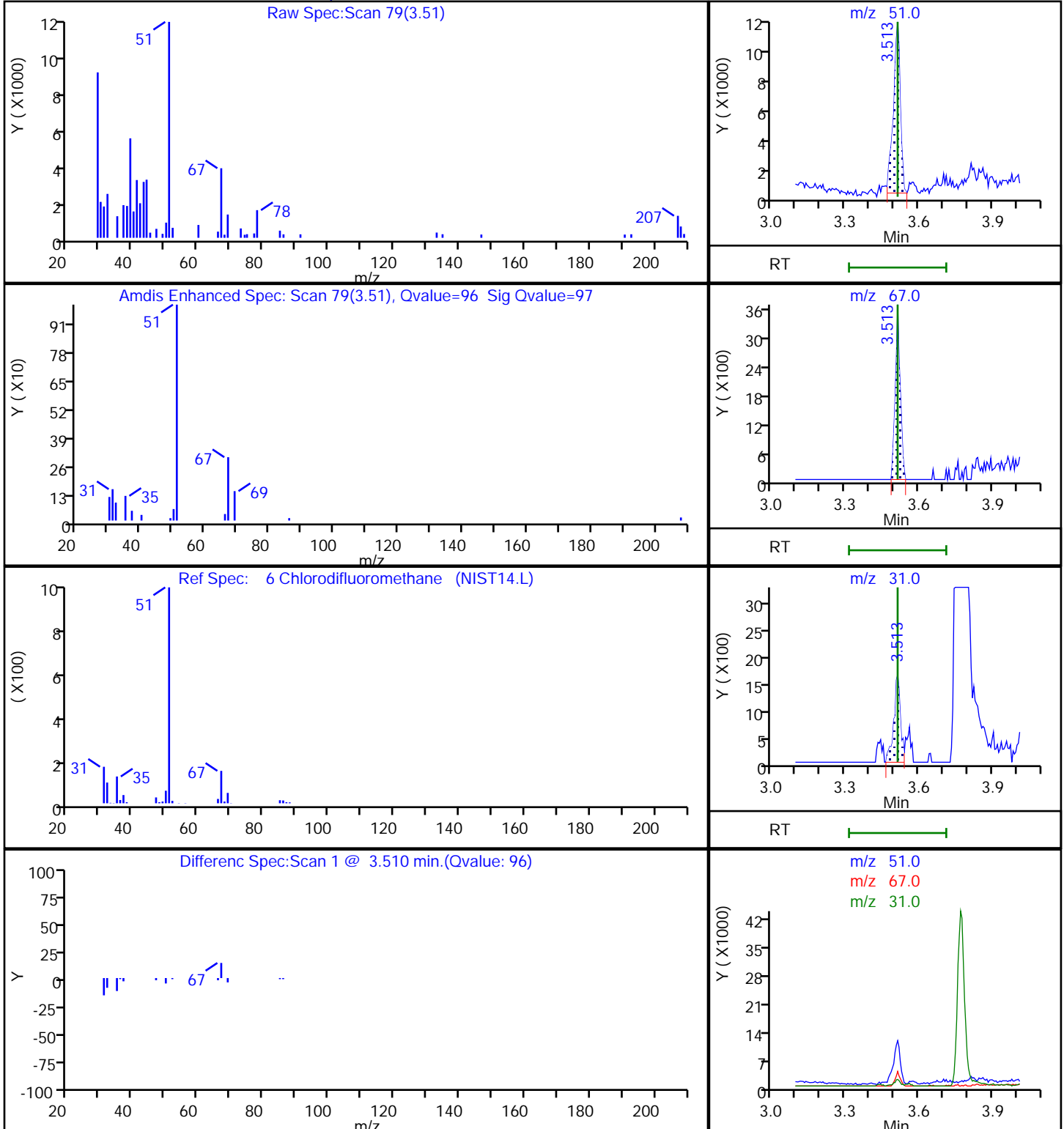
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P108.D

Injection Date: 14-Mar-2019 22:16:30

Instrument ID: MR

Lims ID: 140-14595-A-5

Lab Sample ID: 140-14595-5

Client ID: BLDG-C-MIDGAC

Operator ID:

ALS Bottle#: 8 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

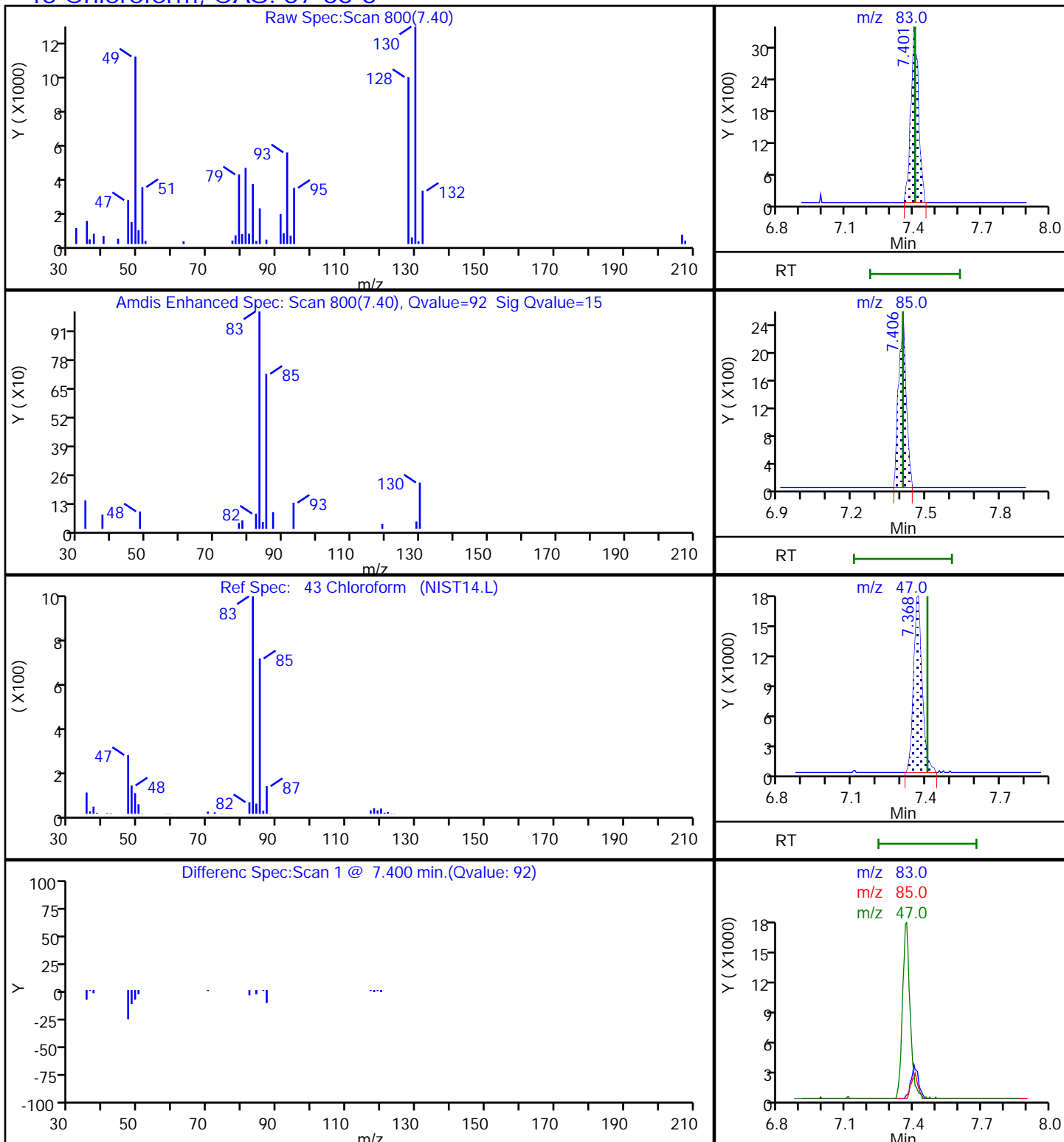
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P108.D

Injection Date: 14-Mar-2019 22:16:30

Instrument ID: MR

Lims ID: 140-14595-A-5

Lab Sample ID: 140-14595-5

Client ID: BLDG-C-MIDGAC

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

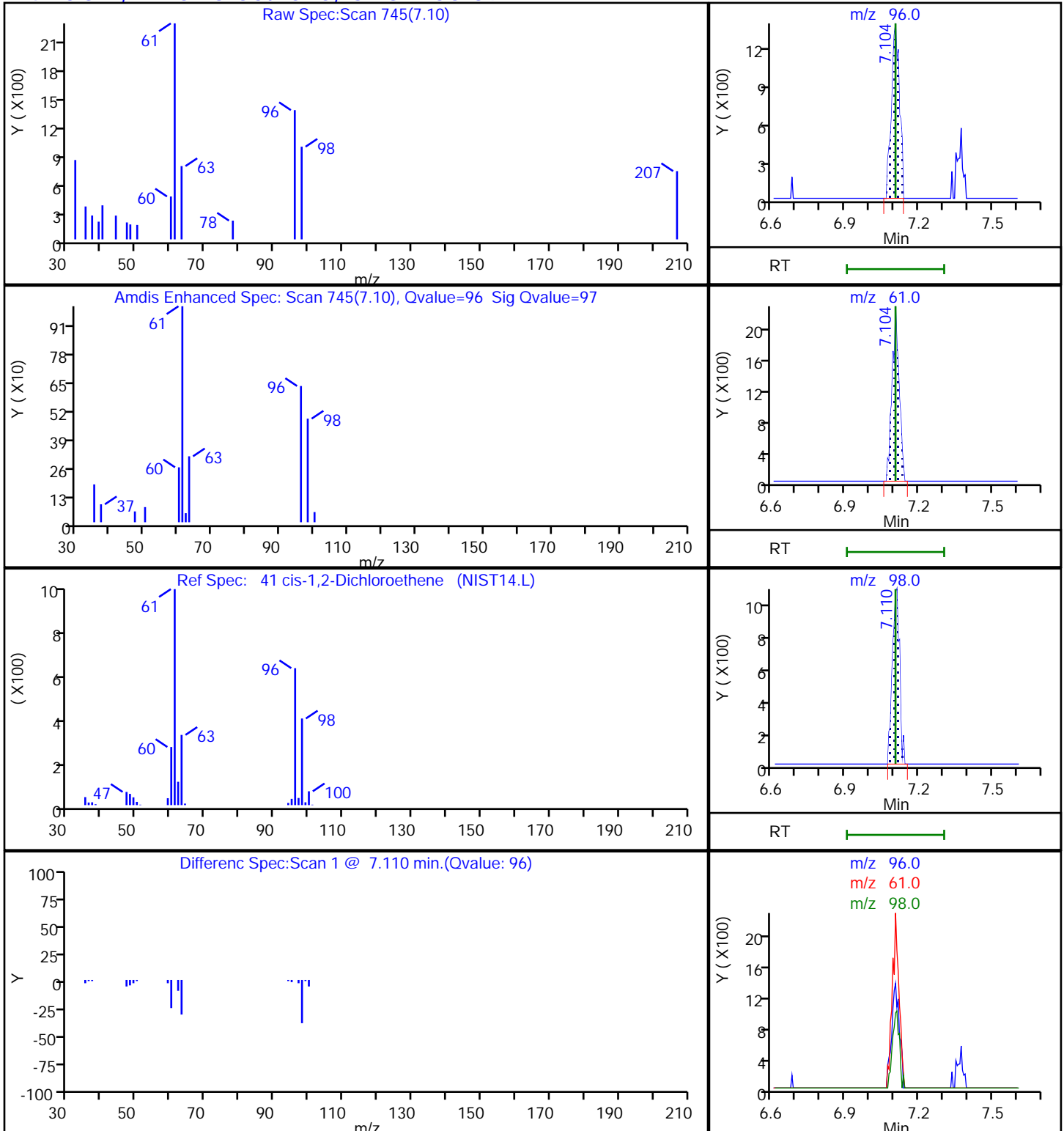
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P108.D

Injection Date: 14-Mar-2019 22:16:30

Instrument ID: MR

Lims ID: 140-14595-A-5

Lab Sample ID: 140-14595-5

Client ID: BLDG-C-MIDGAC

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

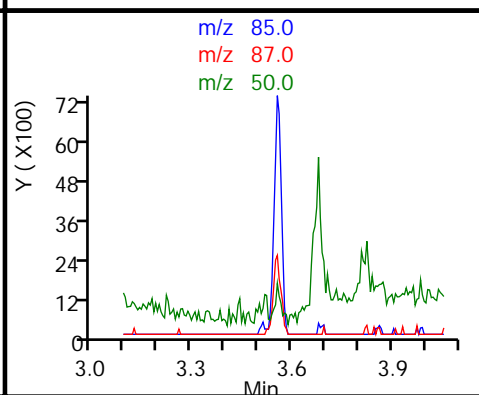
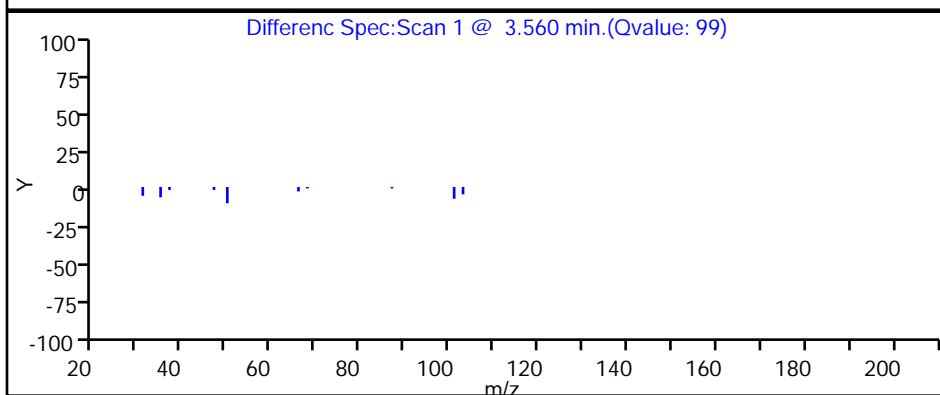
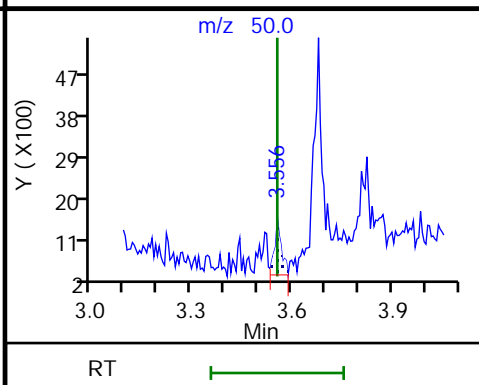
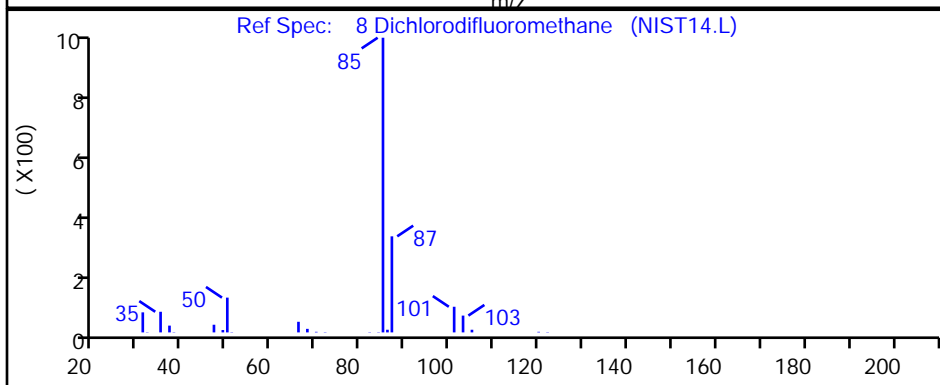
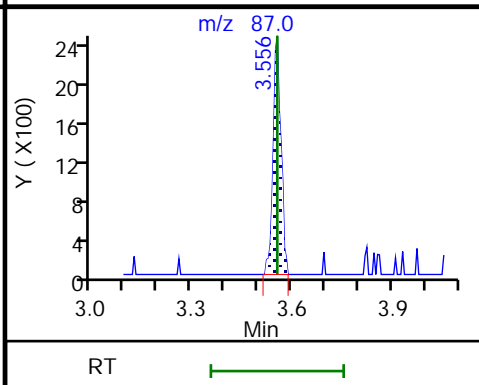
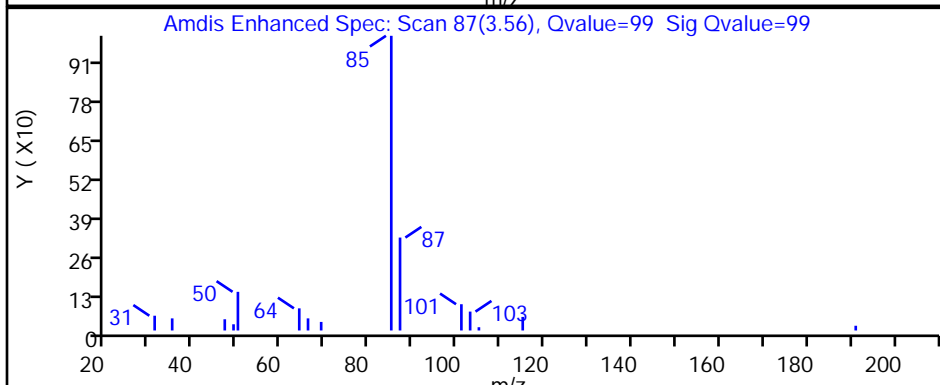
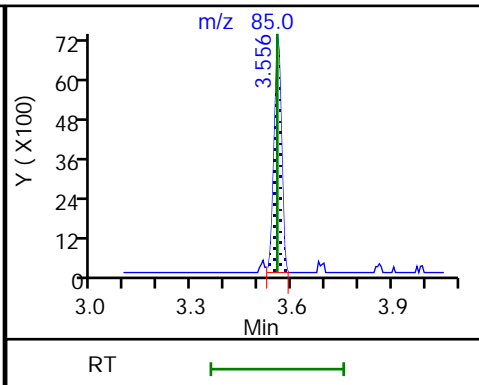
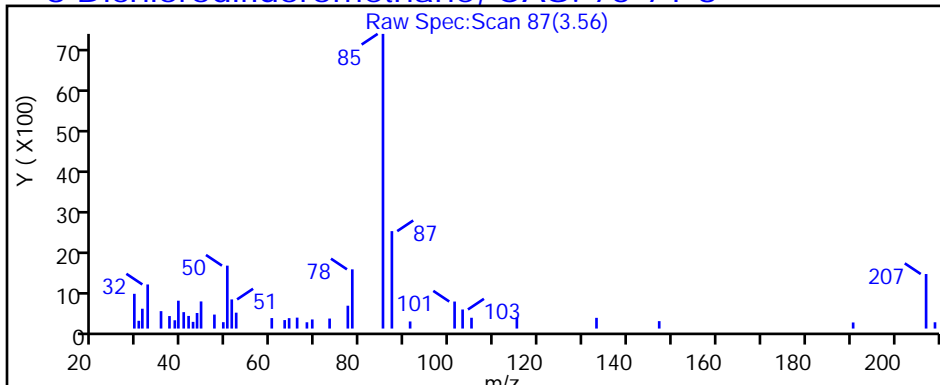
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P108.D

Injection Date: 14-Mar-2019 22:16:30

Instrument ID: MR

Lims ID: 140-14595-A-5

Lab Sample ID: 140-14595-5

Client ID: BLDG-C-MIDGAC

Operator ID:

ALS Bottle#: 8 Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

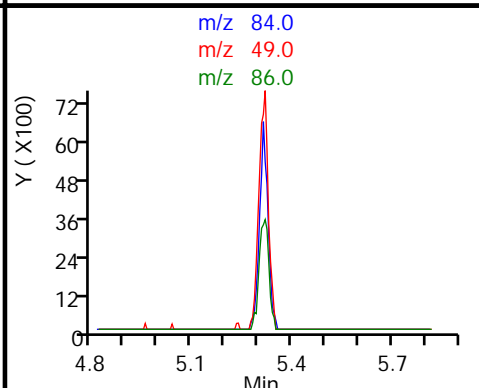
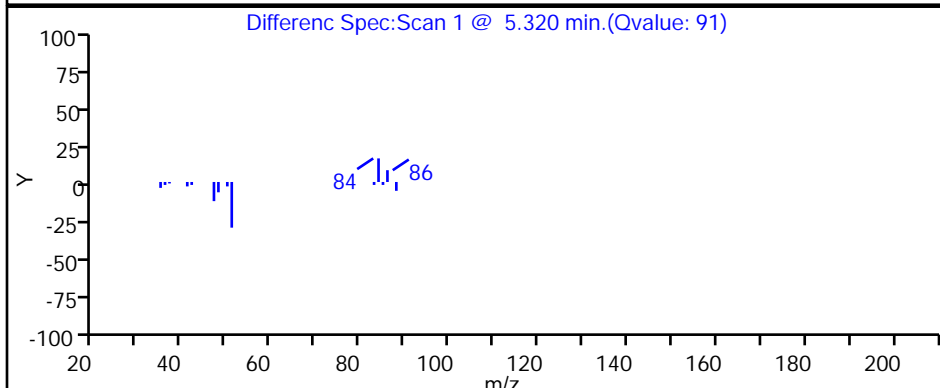
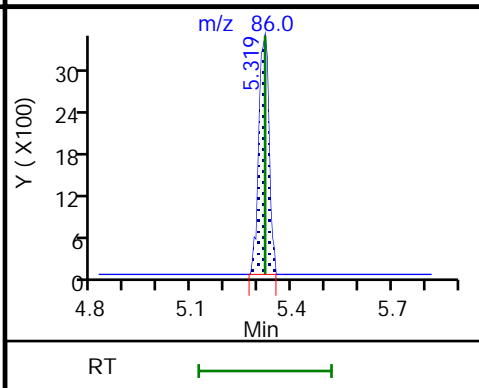
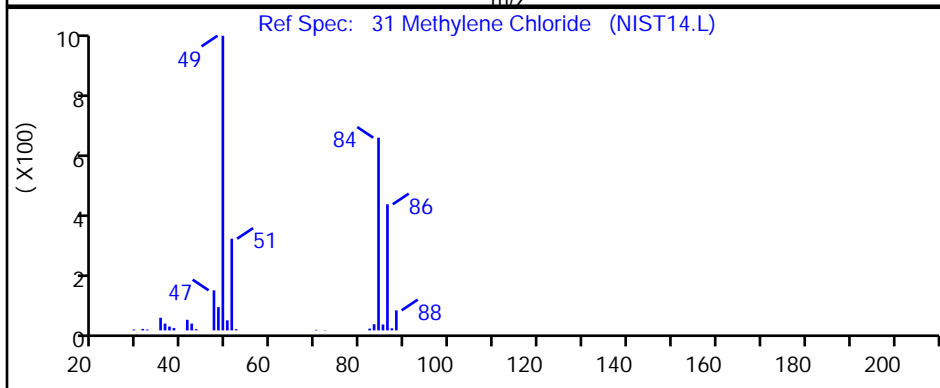
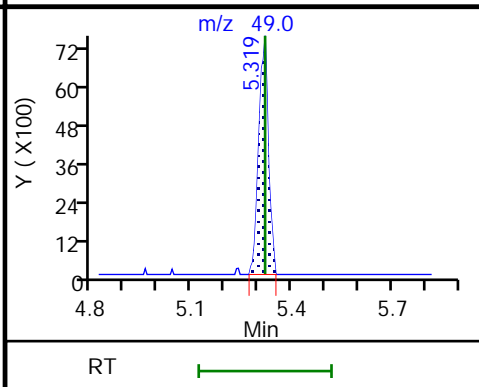
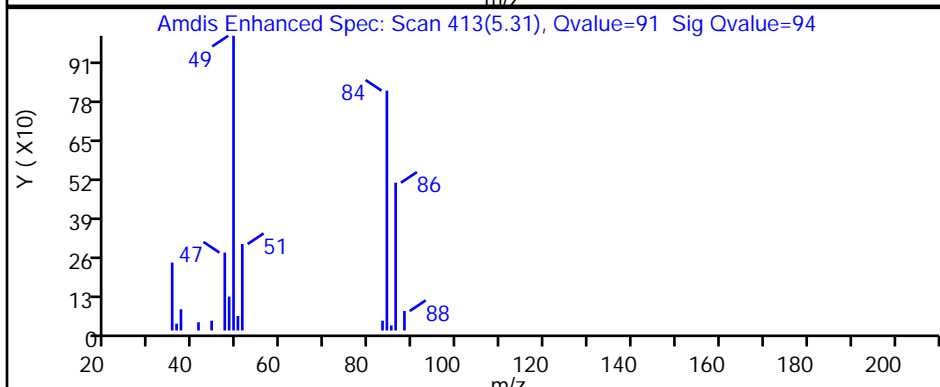
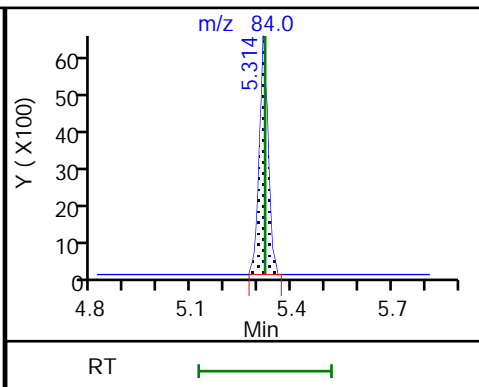
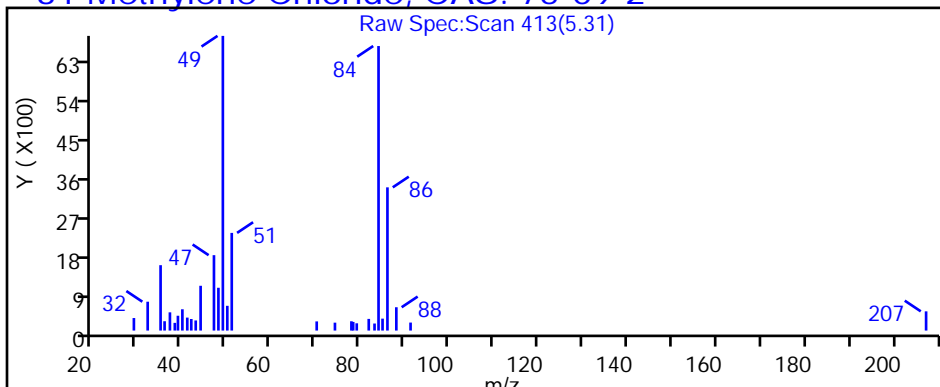
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P108.D

Injection Date: 14-Mar-2019 22:16:30

Instrument ID: MR

Lims ID: 140-14595-A-5

Lab Sample ID: 140-14595-5

Client ID: BLDG-C-MIDGAC

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

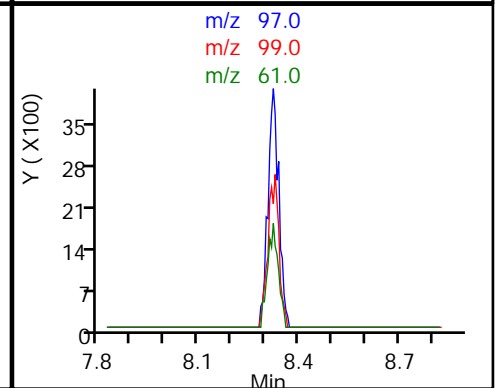
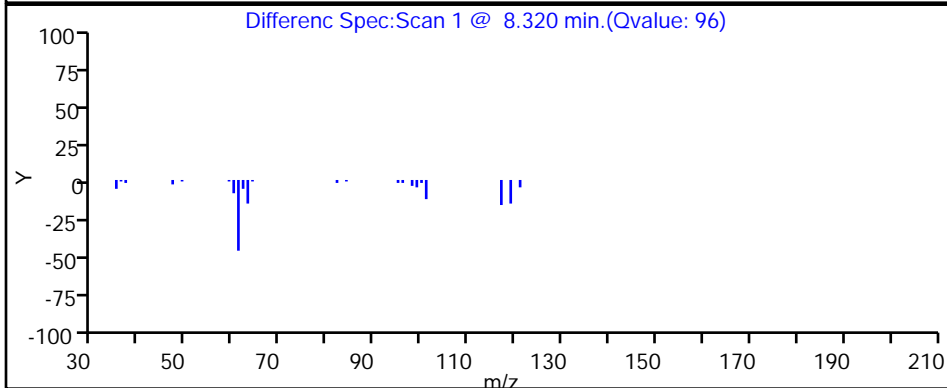
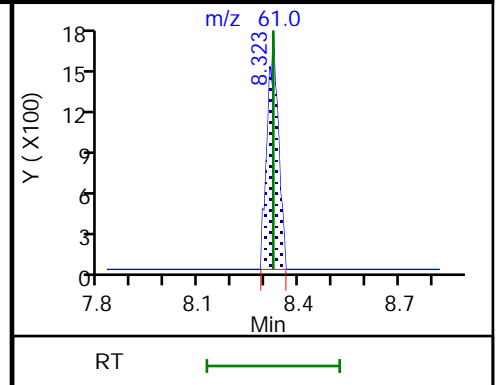
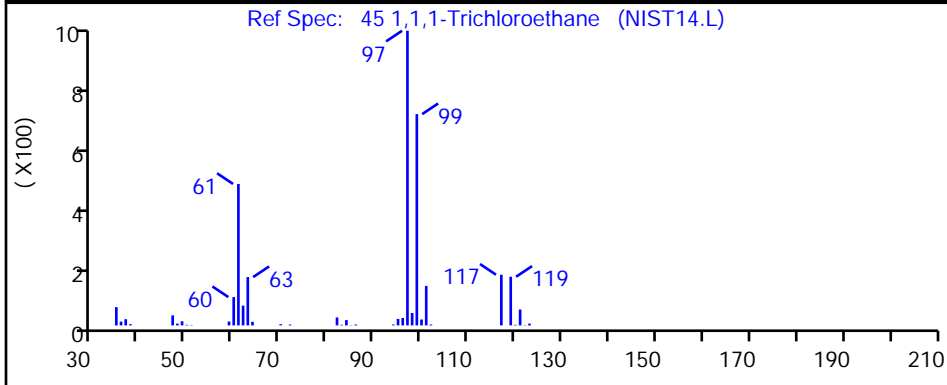
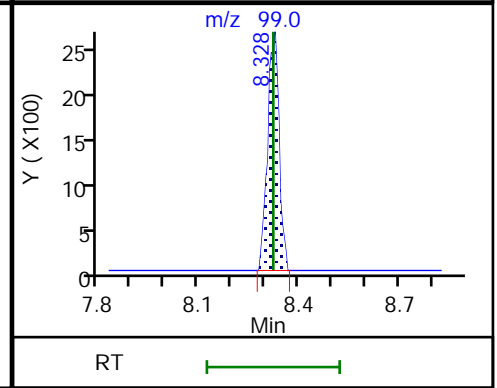
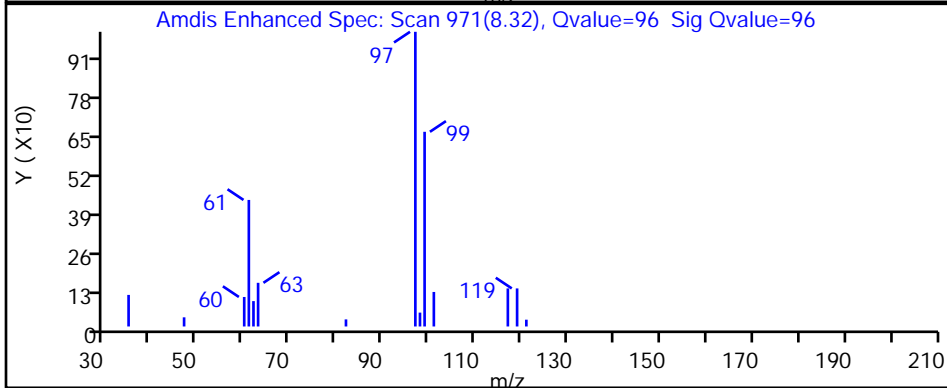
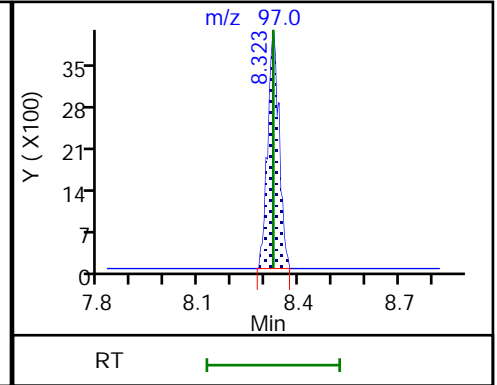
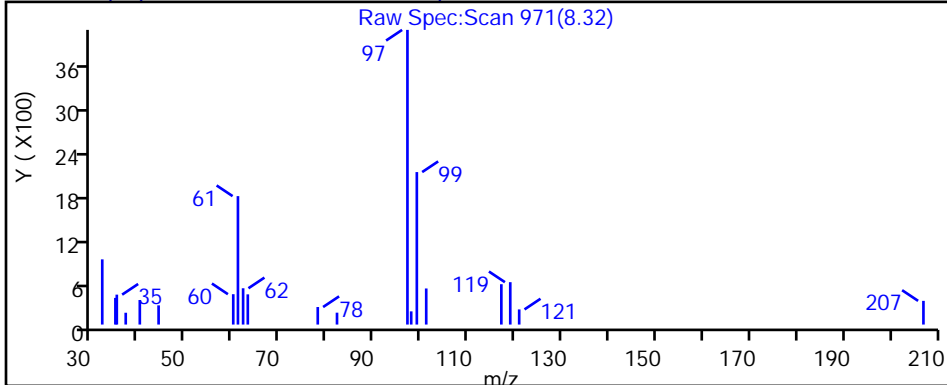
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P108.D

Injection Date: 14-Mar-2019 22:16:30

Instrument ID: MR

Lims ID: 140-14595-A-5

Lab Sample ID: 140-14595-5

Client ID: BLDG-C-MIDGAC

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

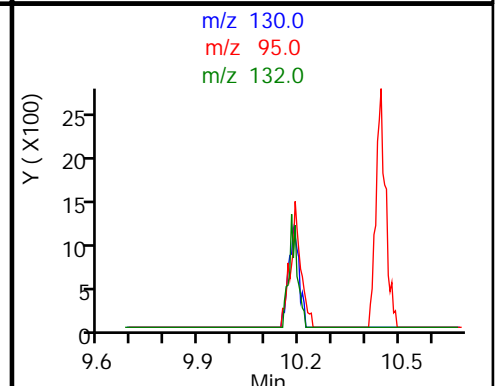
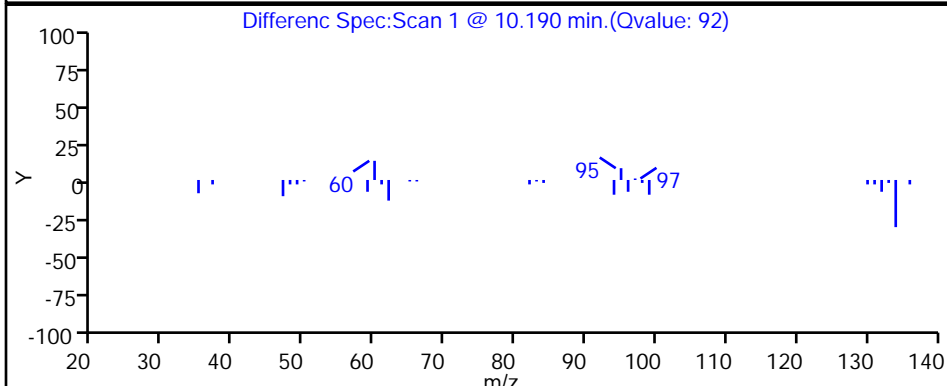
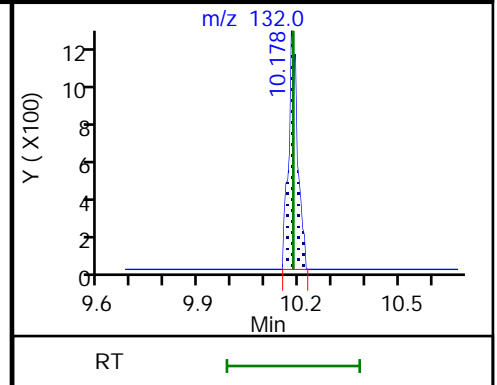
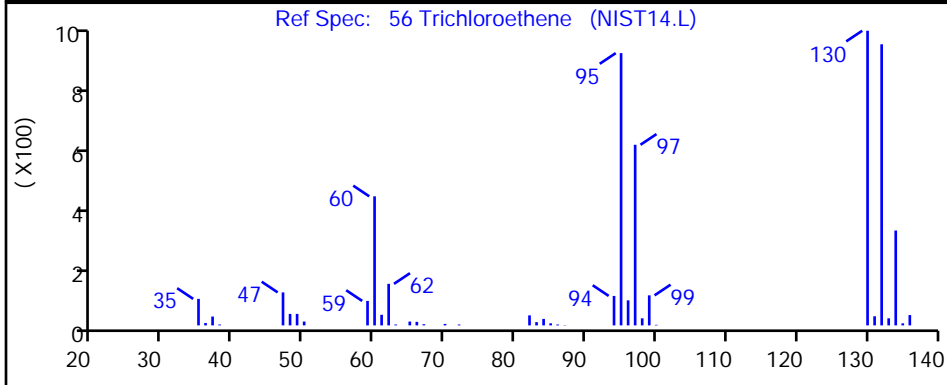
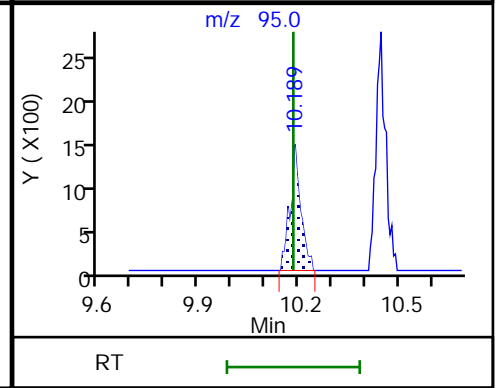
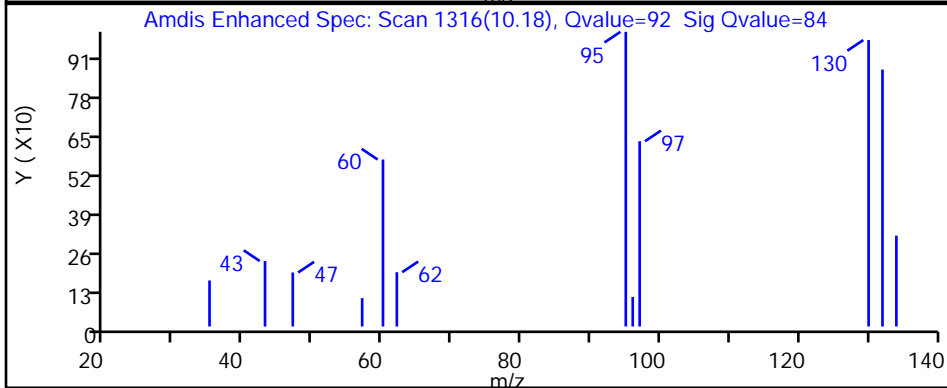
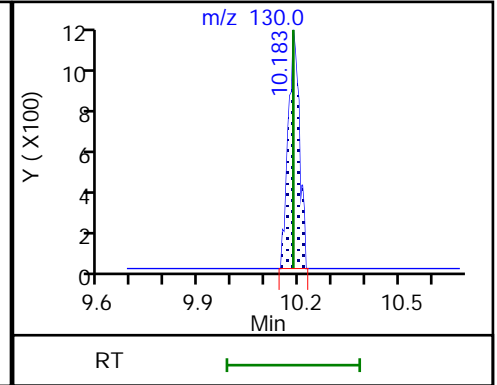
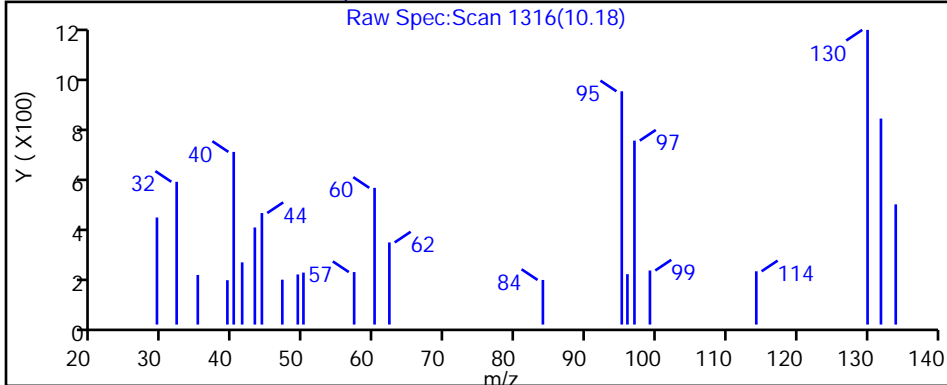
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: BLDG-C-EFFLUENT Lab Sample ID: 140-14595-6
 Matrix: Air Lab File ID: RC14P109.D
 Analysis Method: TO 15 LL Date Collected: 03/13/2019 12:00
 Sample wt/vol: 100(mL) Date Analyzed: 03/14/2019 23:05
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.7		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0	CI	0.40	0.075
67-66-3	Chloroform	119.38	0.32	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.18	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.27	J	0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.80	J	2.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.64		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.12	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.16	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.66		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.27	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: BLDG-C-EFFLUENT Lab Sample ID: 140-14595-6
 Matrix: Air Lab File ID: RC14P109.D
 Analysis Method: TO 15 LL Date Collected: 03/13/2019 12:00
 Sample wt/vol: 100(mL) Date Analyzed: 03/14/2019 23:05
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.3		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.6	CI	1.4	0.27
67-66-3	Chloroform	119.38	1.5	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.70	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	1.4	J	2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	6.9	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.65	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.83	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	3.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.3	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P109.D
 Lims ID: 140-14595-A-6
 Client ID: BLDG-C-EFFLUENT
 Sample Type: Client
 Inject. Date: 14-Mar-2019 23:05:30 ALS Bottle#: 9 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-013
 Misc. Info.: 140-14595-a-6
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:55:13 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:57:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.374	7.368	0.006	79	207776	4.00	
* 2 1,4-Difluorobenzene	114	9.434	9.434	0.000	95	1223879	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.486	14.492	-0.006	91	1064280	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.212	16.217	-0.005	90	908729	4.02	
6 Chlorodifluoromethane	51	3.513	3.502	0.000	96	25354	0.2057	
8 Dichlorodifluoromethane	85	3.556	3.559	0.000	100	12348	0.0546	
31 Methylene Chloride	84	5.319	5.319	0.000	92	11186	0.1609	
41 cis-1,2-Dichloroethene	96	7.109	7.109	0.005	84	2655	0.0353	
43 Chloroform	83	7.406	7.412	0.000	93	12508	0.0630	
45 1,1,1-Trichloroethane	97	8.328	8.323	0.005	97	5990	0.0238	
47 Benzene	78	8.873	8.867	0.006	97	66203	0.3320	
56 Trichloroethene	130	10.172	10.183	-0.011	94	3735	0.0311	
65 Toluene	91	12.399	12.405	-0.006	90	32892	0.1290	
89 1,3,5-Trimethylbenzene	120	17.042	17.047	-0.011	89	10233	0.0534	
93 1,2,4-Trimethylbenzene	105	17.522	17.539	-0.016	98	56118	0.1313	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P109.D

Injection Date: 14-Mar-2019 23:05:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14595-A-6

Lab Sample ID: 140-14595-6

Worklist Smp#: 13

Client ID: BLDG-C-EFFLUENT

Purge Vol: 500.000 mL

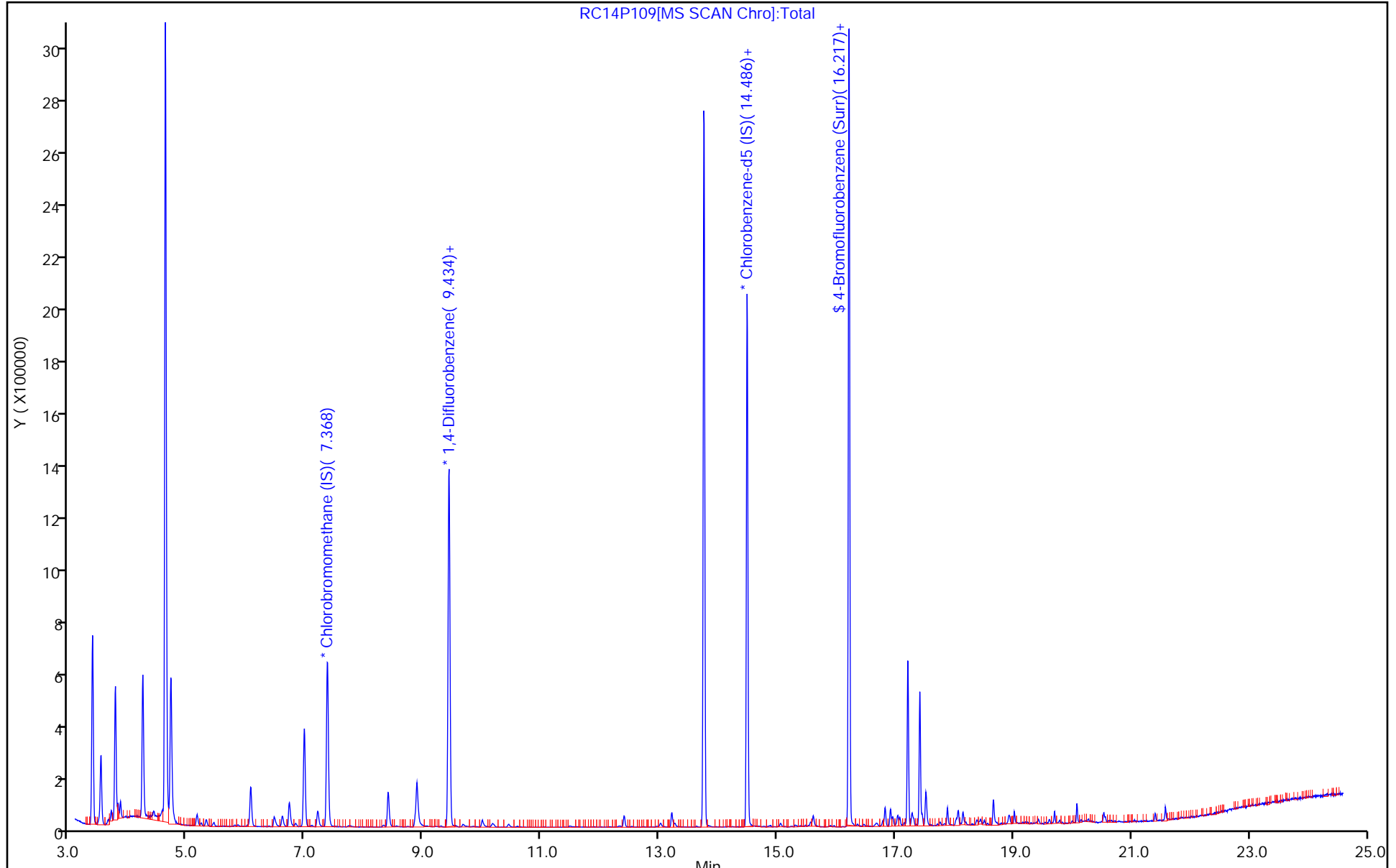
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P109.D
 Lims ID: 140-14595-A-6
 Client ID: BLDG-C-EFFLUENT
 Sample Type: Client
 Inject. Date: 14-Mar-2019 23:05:30 ALS Bottle#: 9 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-013
 Misc. Info.: 140-14595-a-6
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:55:13 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

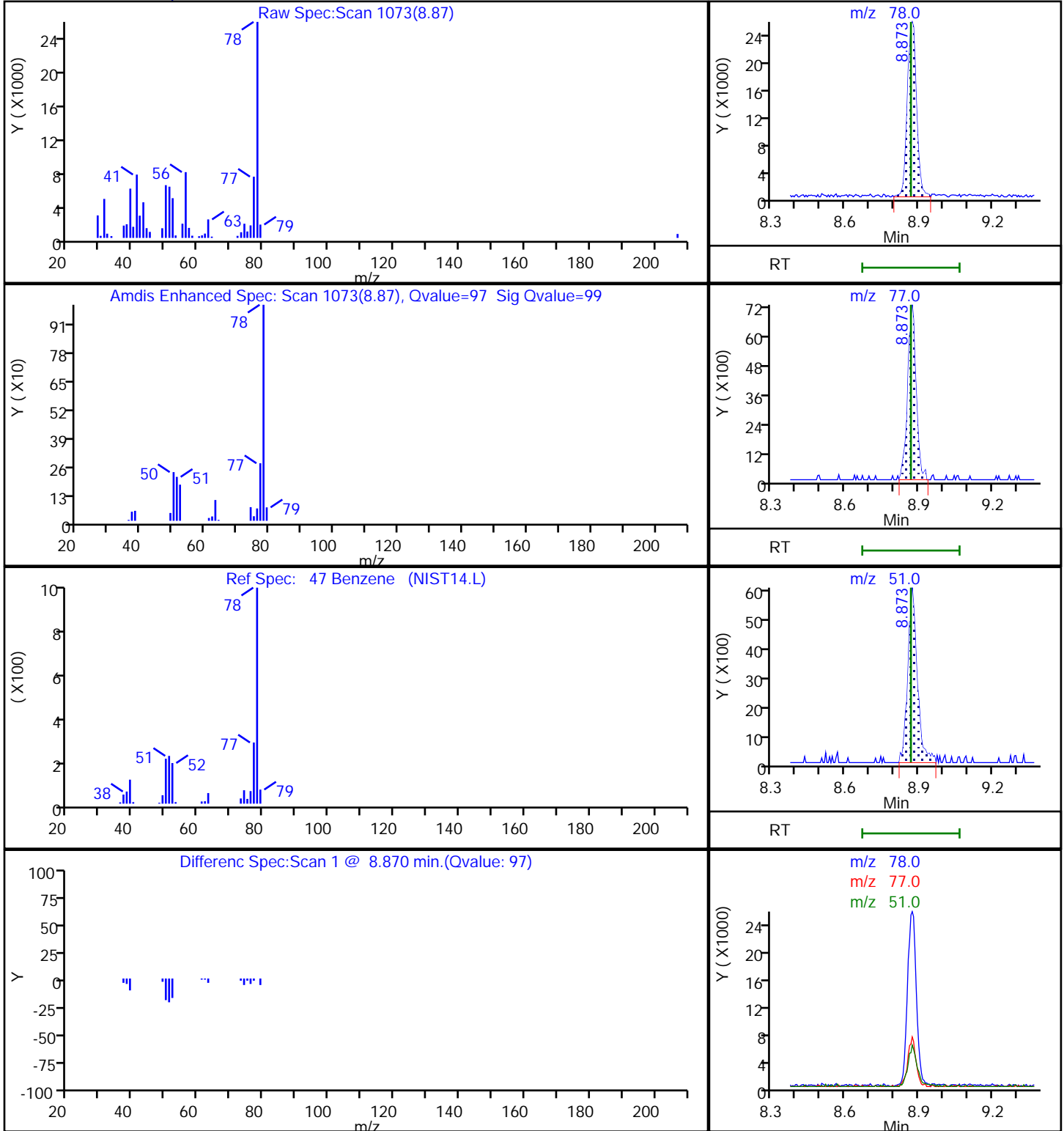
First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:57:43

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.02	100.38

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P109.D
Injection Date: 14-Mar-2019 23:05:30 Instrument ID: MR
Lims ID: 140-14595-A-6 Lab Sample ID: 140-14595-6
Client ID: BLDG-C-EFFLUENT
Operator ID: ALS Bottle#: 9 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P109.D

Injection Date: 14-Mar-2019 23:05:30

Instrument ID: MR

Lims ID: 140-14595-A-6

Lab Sample ID: 140-14595-6

Client ID: BLDG-C-EFFLUENT

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

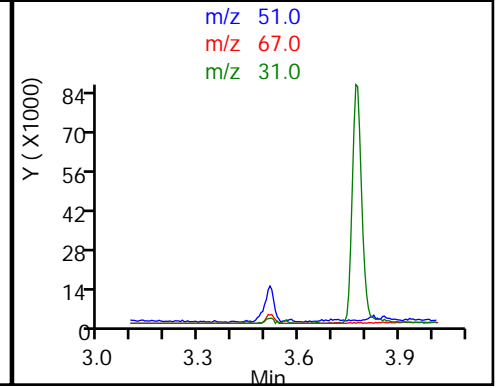
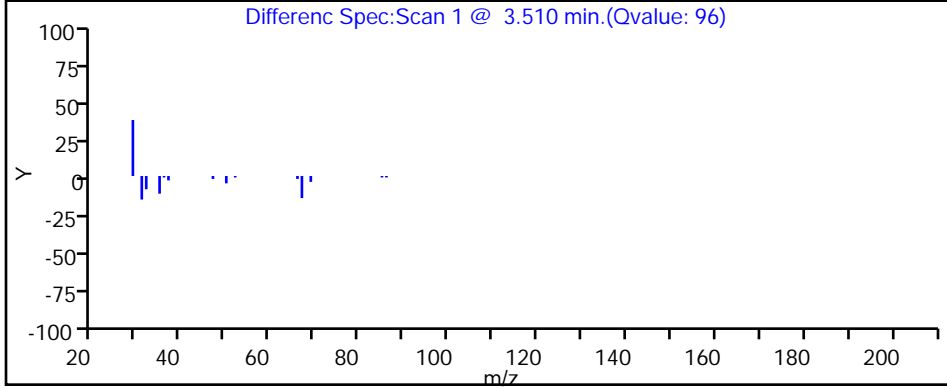
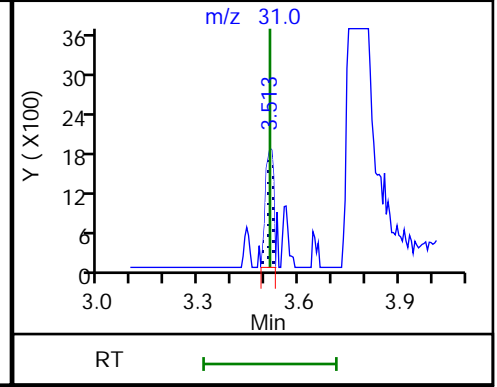
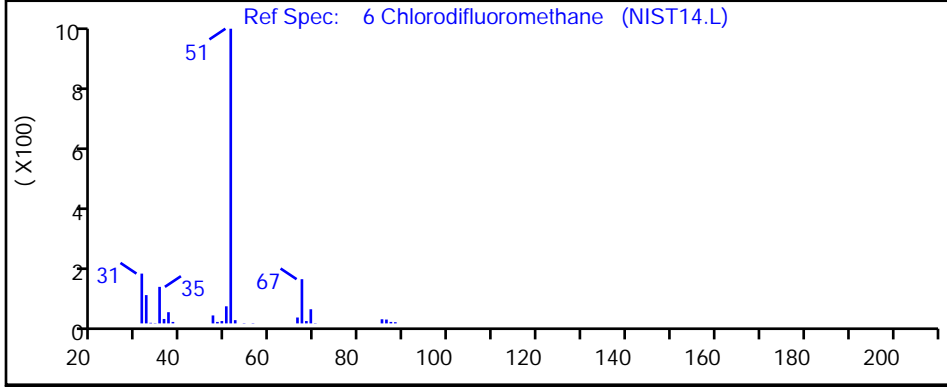
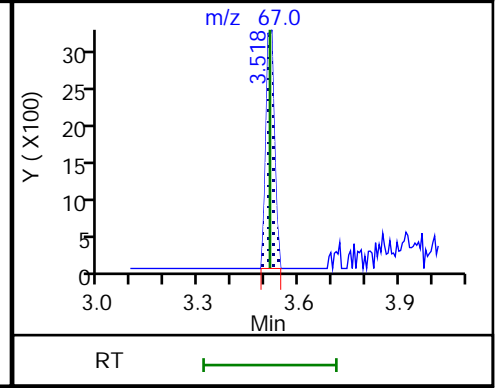
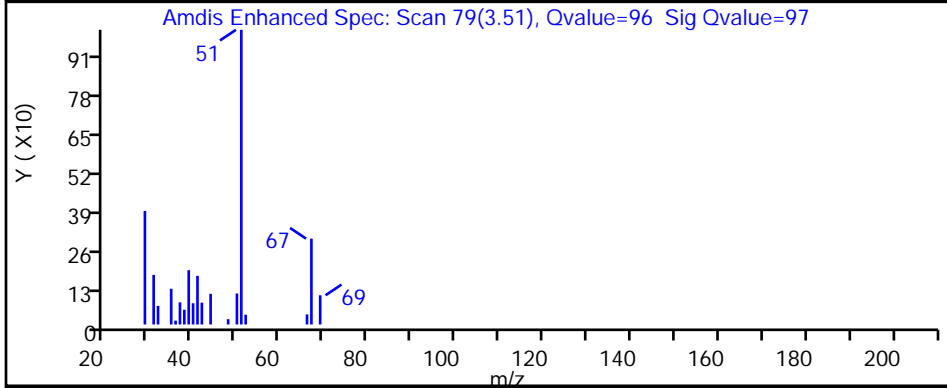
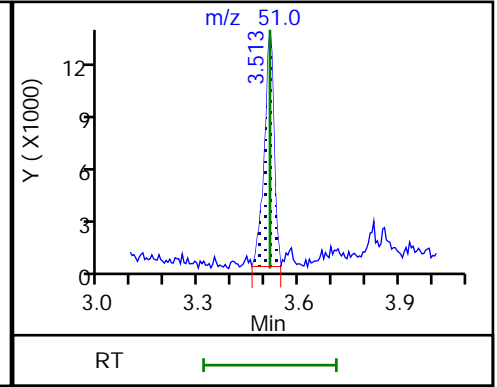
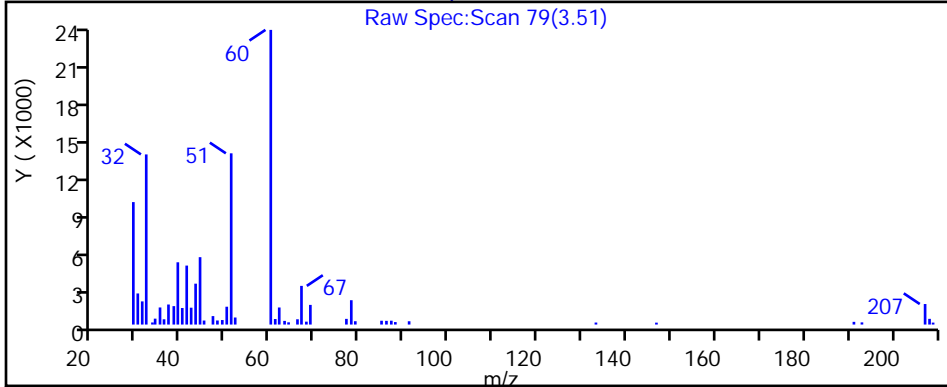
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P109.D

Injection Date: 14-Mar-2019 23:05:30

Instrument ID: MR

Lims ID: 140-14595-A-6

Lab Sample ID: 140-14595-6

Client ID: BLDG-C-EFFLUENT

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

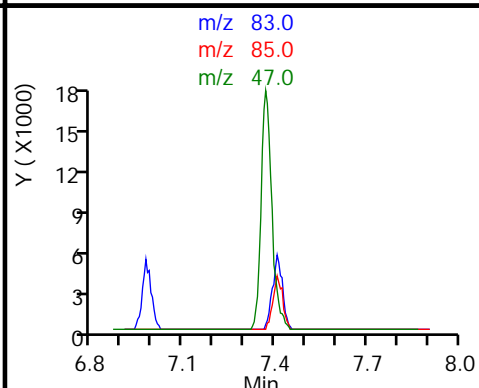
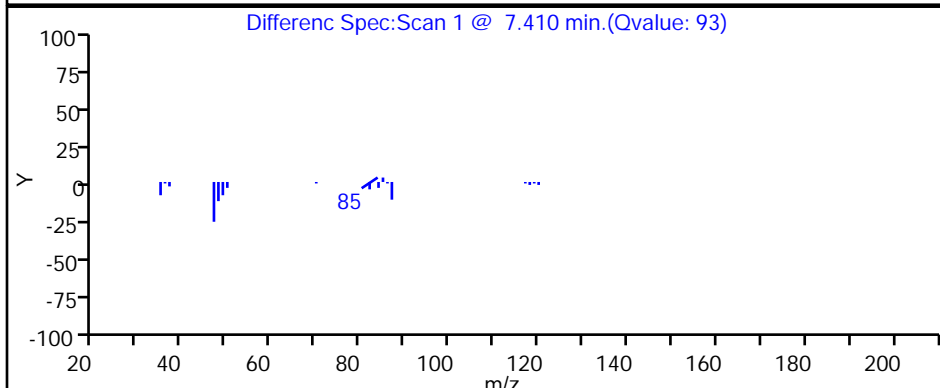
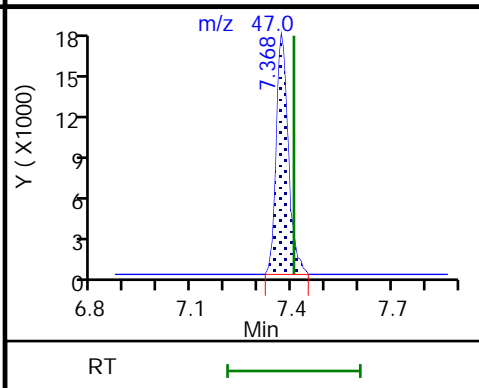
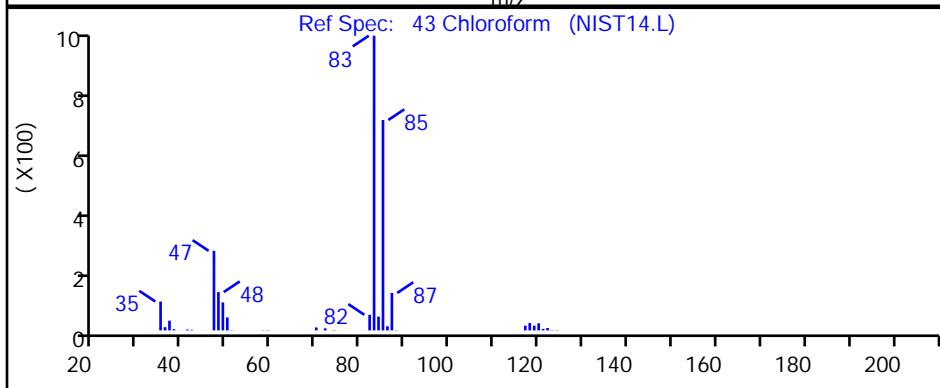
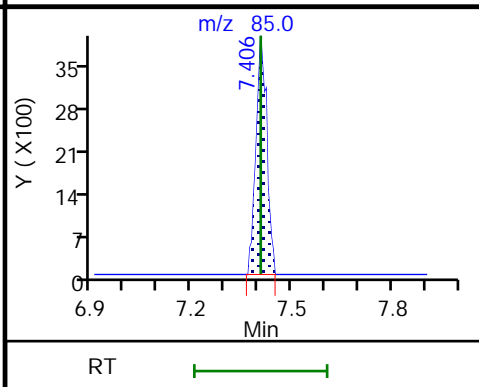
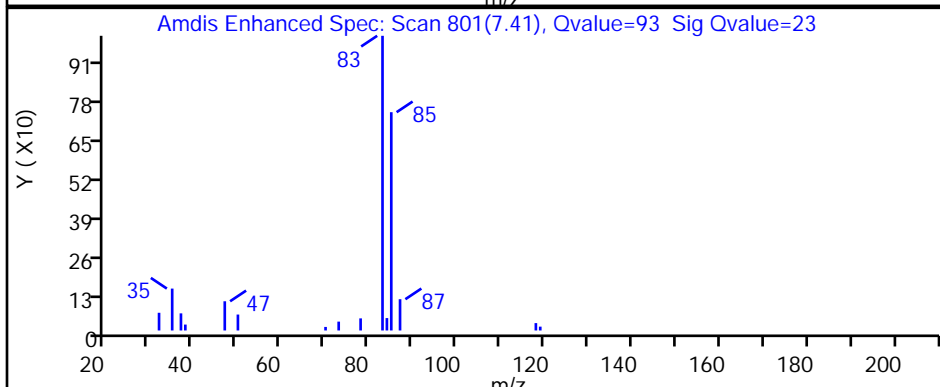
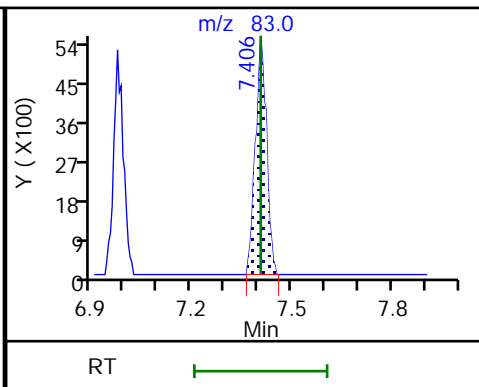
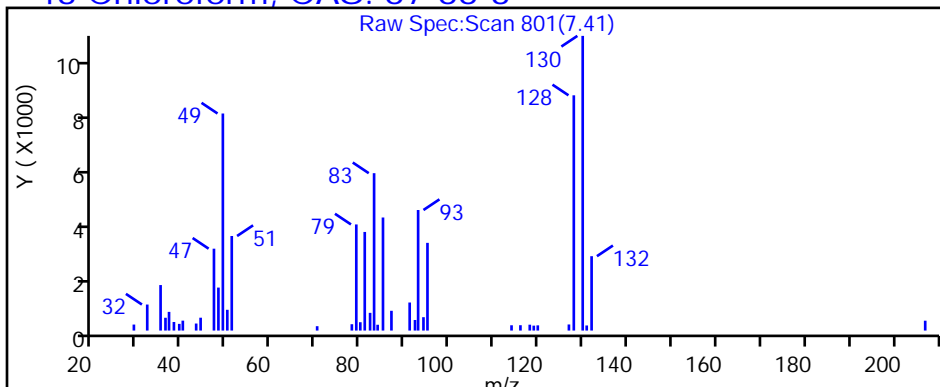
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P109.D

Injection Date: 14-Mar-2019 23:05:30

Instrument ID: MR

Lims ID: 140-14595-A-6

Lab Sample ID: 140-14595-6

Client ID: BLDG-C-EFFLUENT

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

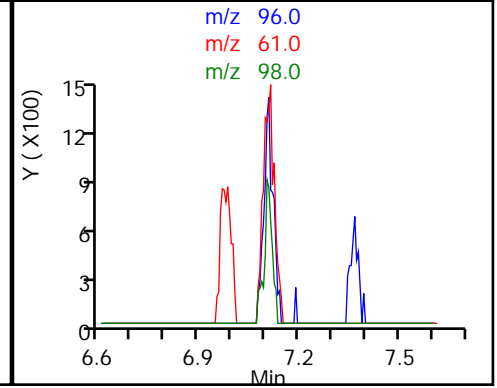
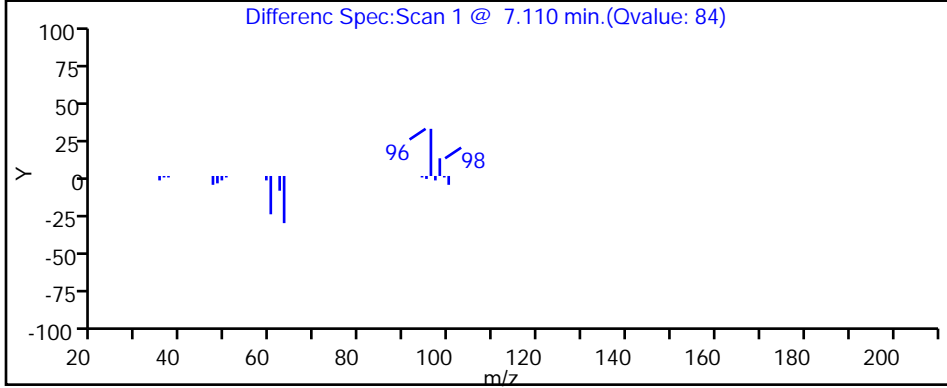
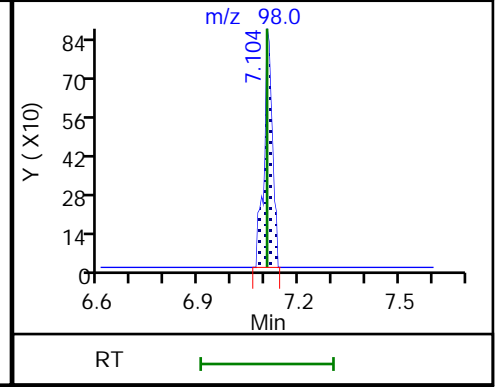
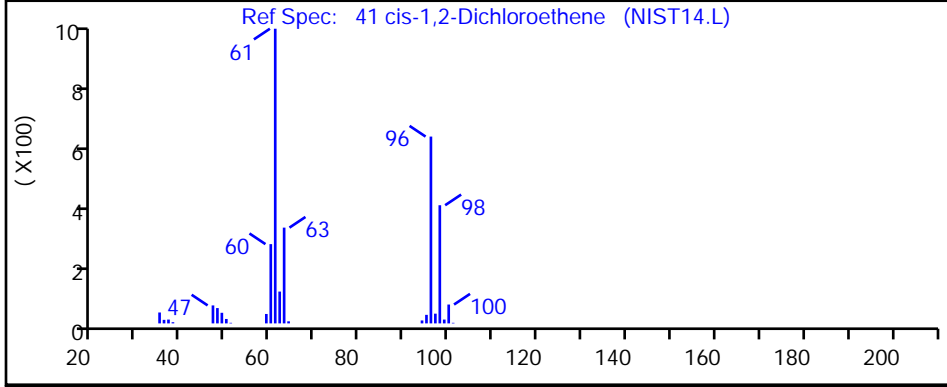
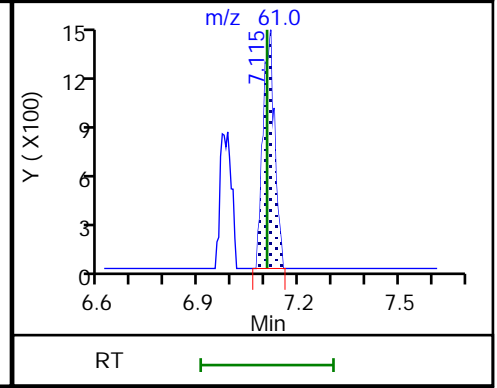
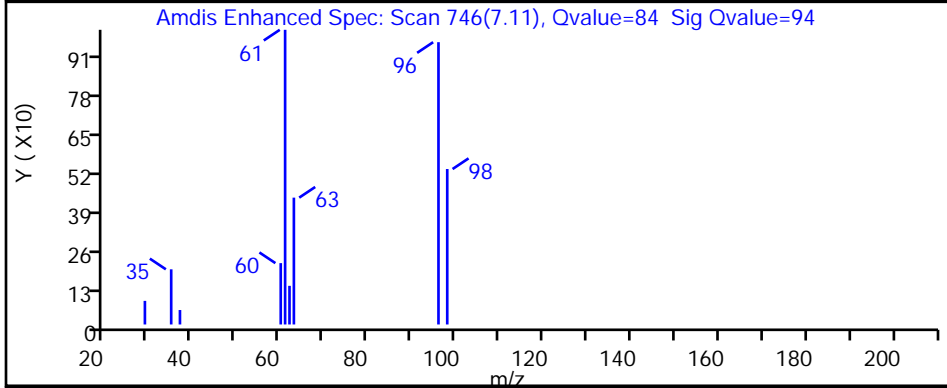
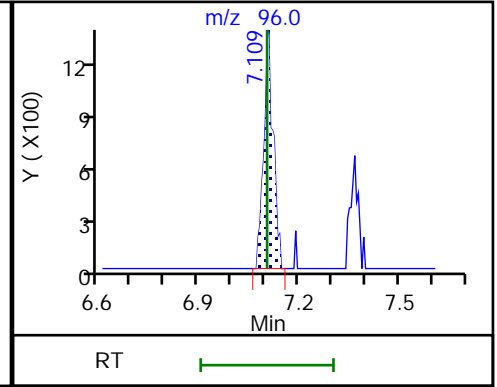
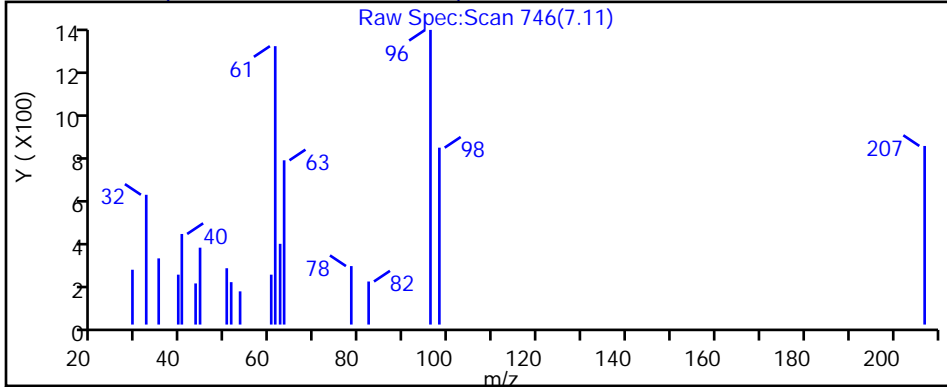
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

41 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P109.D

Injection Date: 14-Mar-2019 23:05:30

Instrument ID: MR

Lims ID: 140-14595-A-6

Lab Sample ID: 140-14595-6

Client ID: BLDG-C-EFFLUENT

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

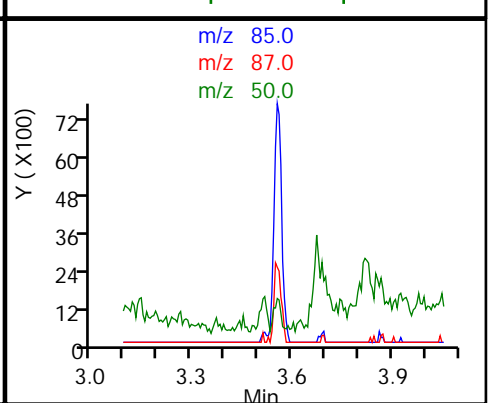
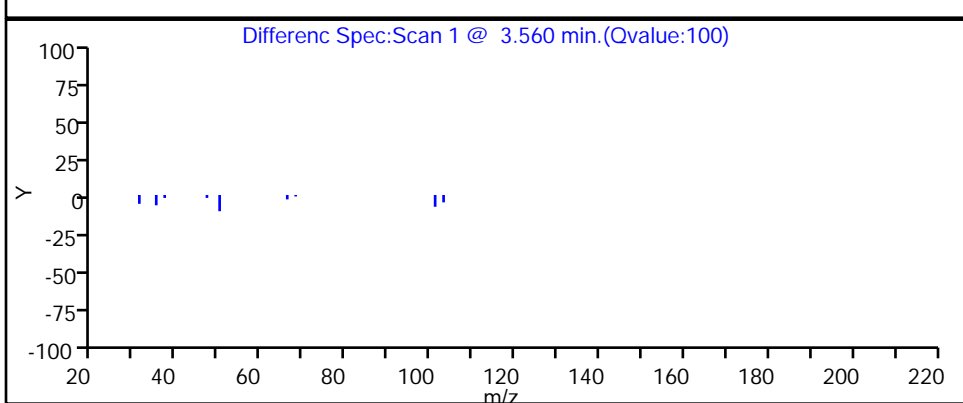
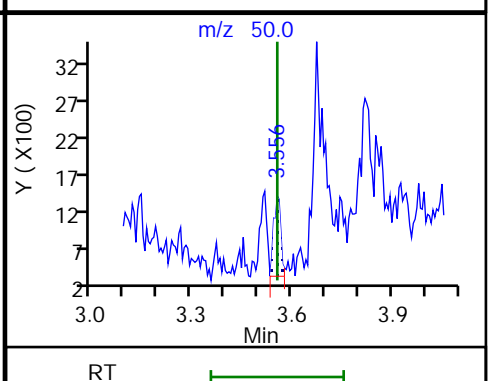
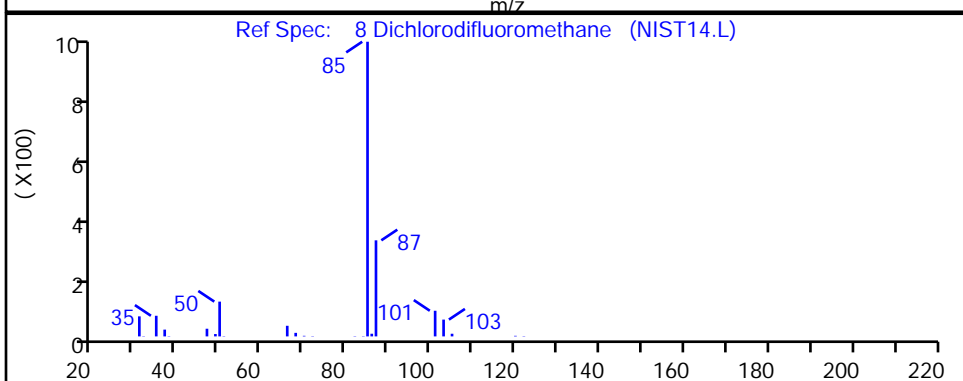
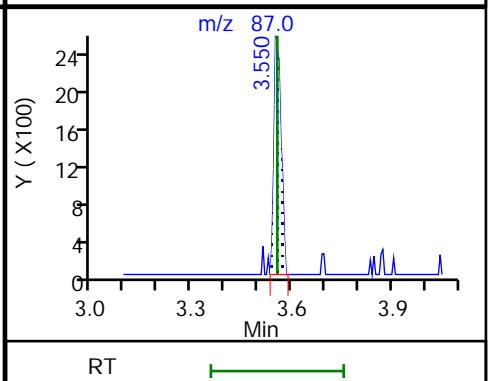
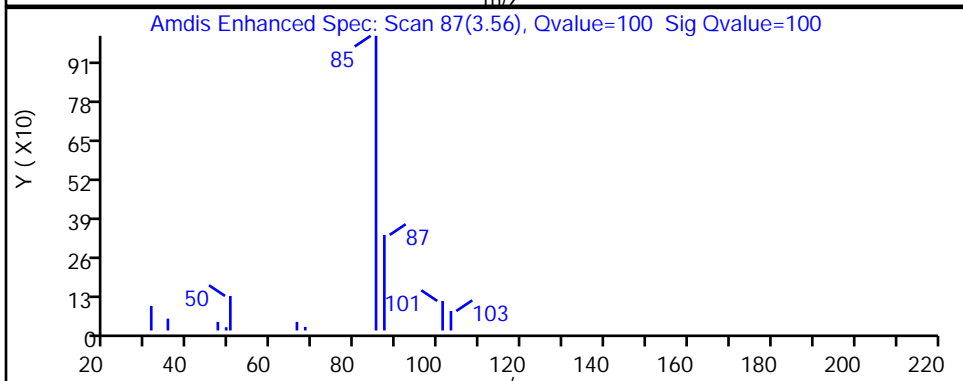
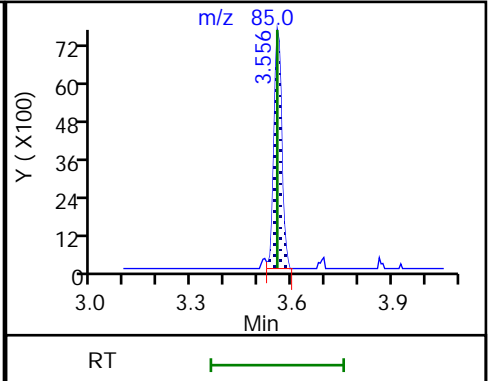
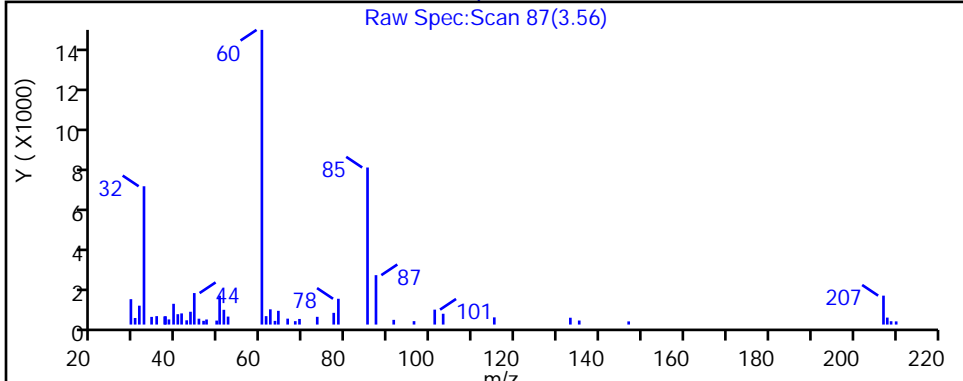
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P109.D

Injection Date: 14-Mar-2019 23:05:30

Instrument ID: MR

Lims ID: 140-14595-A-6

Lab Sample ID: 140-14595-6

Client ID: BLDG-C-EFFLUENT

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

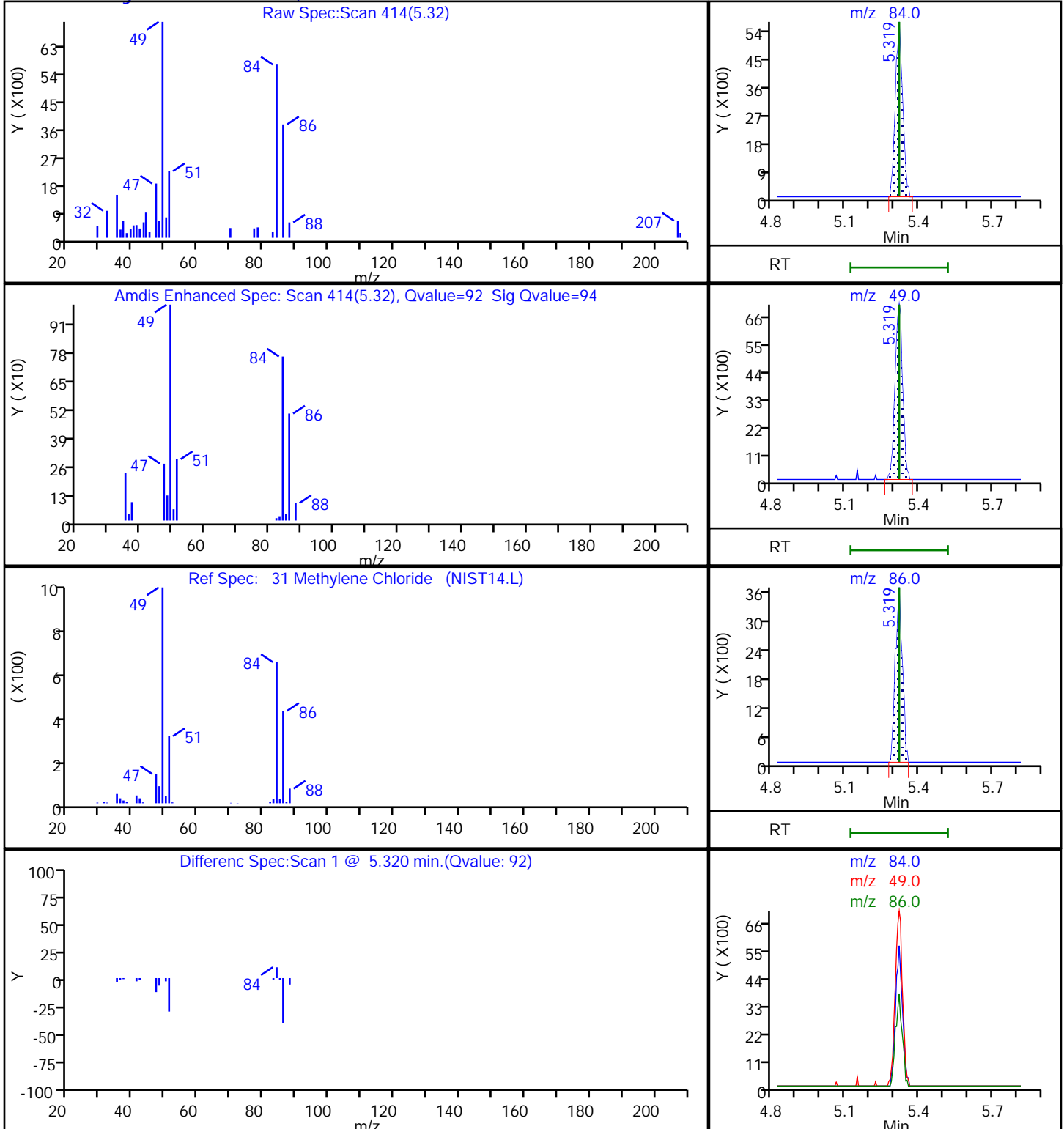
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P109.D

Injection Date: 14-Mar-2019 23:05:30

Instrument ID: MR

Lims ID: 140-14595-A-6

Lab Sample ID: 140-14595-6

Client ID: BLDG-C-EFFLUENT

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

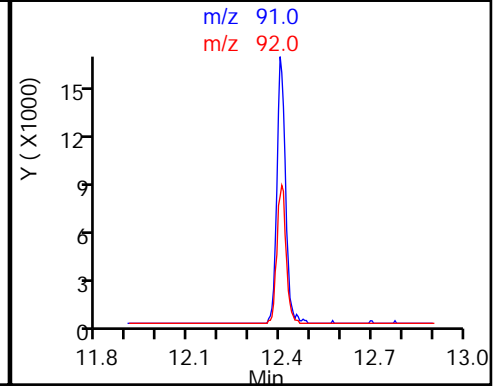
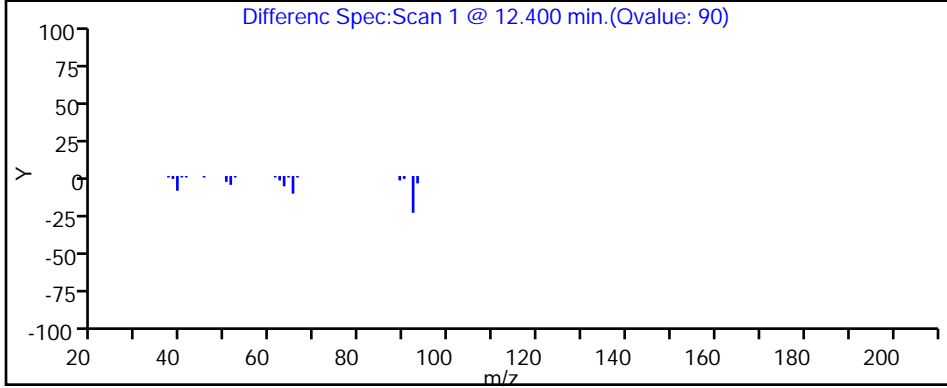
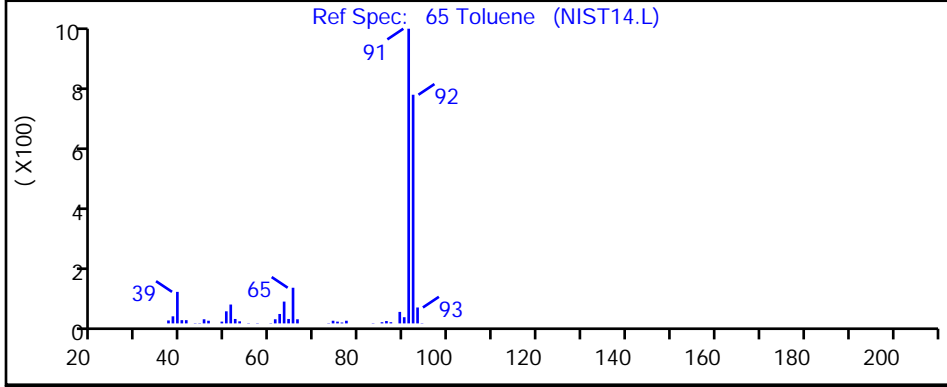
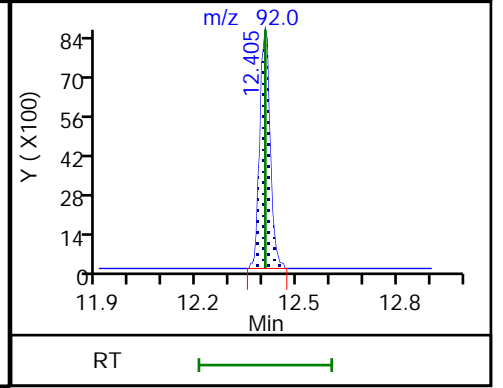
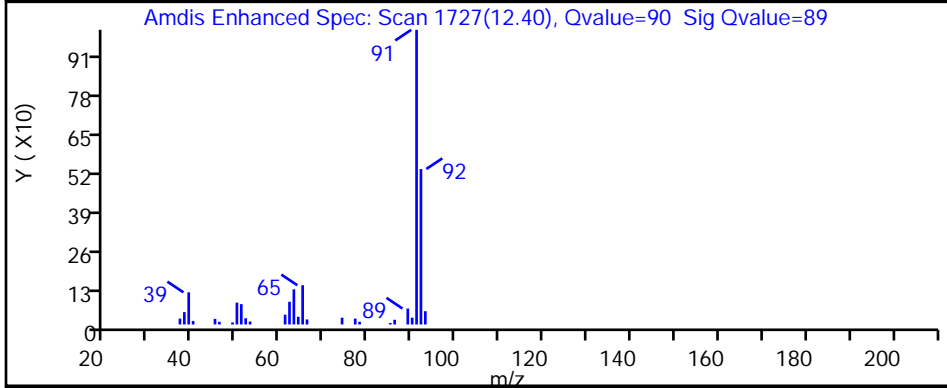
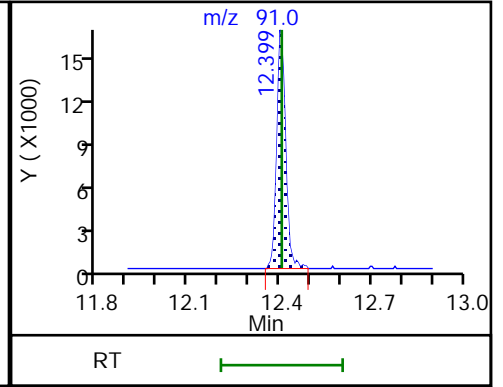
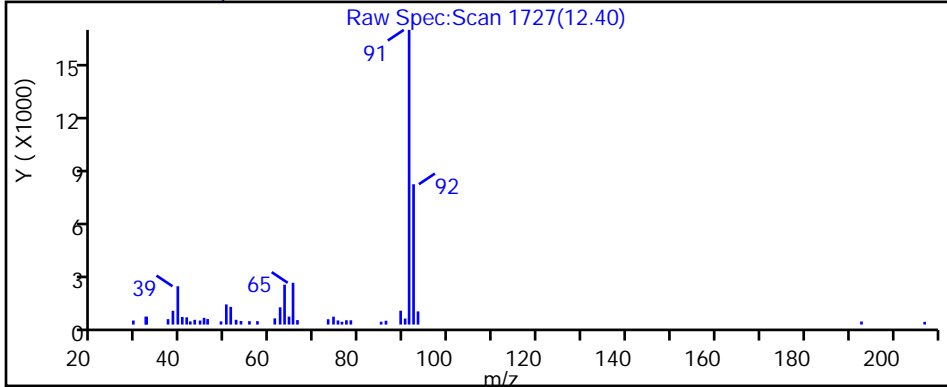
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P109.D

Injection Date: 14-Mar-2019 23:05:30

Instrument ID: MR

Lims ID: 140-14595-A-6

Lab Sample ID: 140-14595-6

Client ID: BLDG-C-EFFLUENT

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

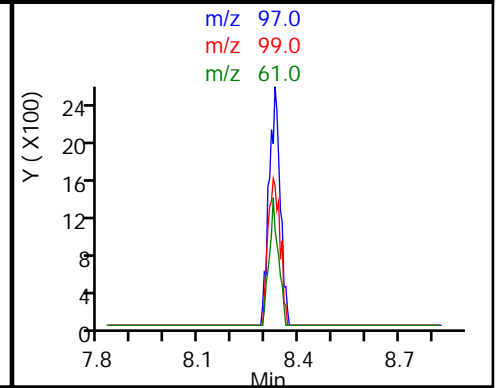
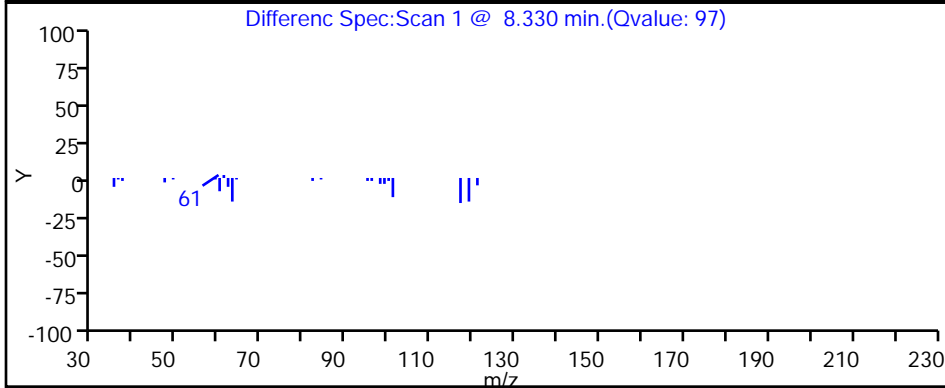
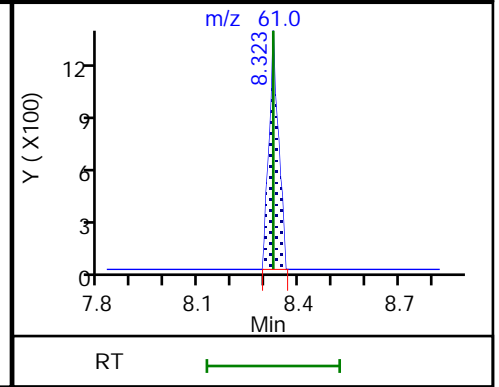
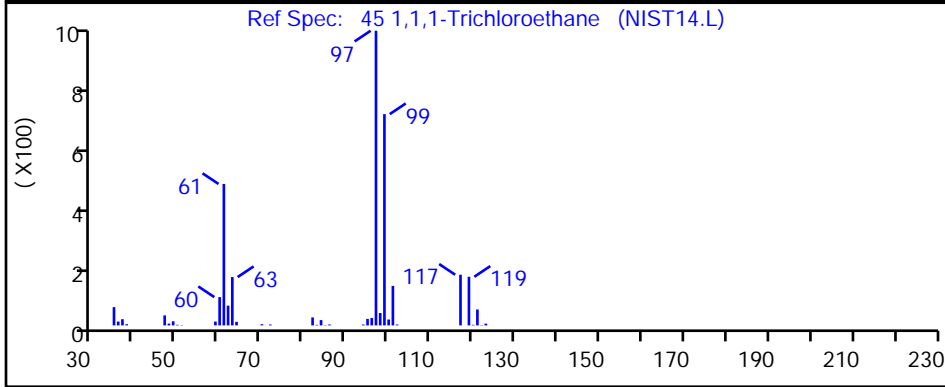
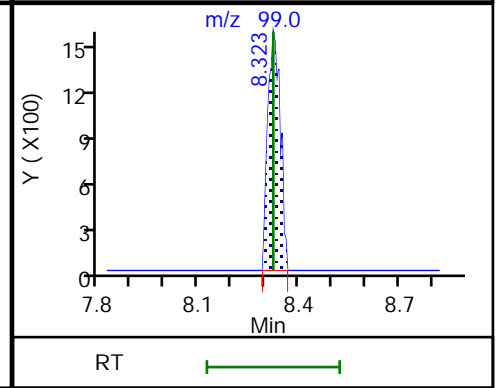
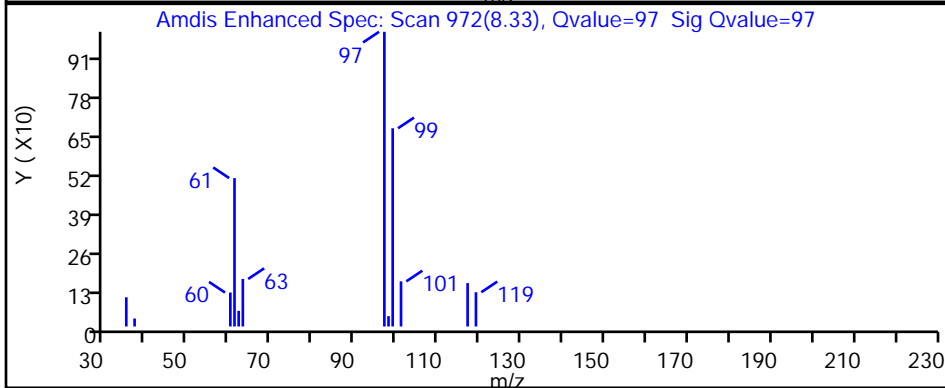
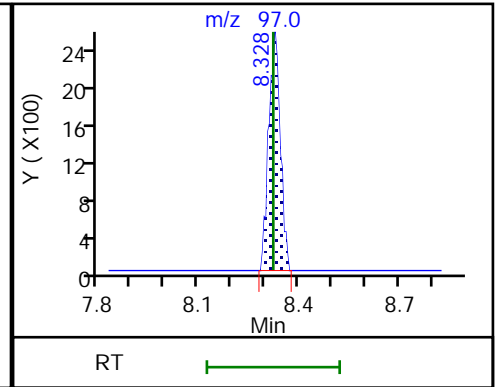
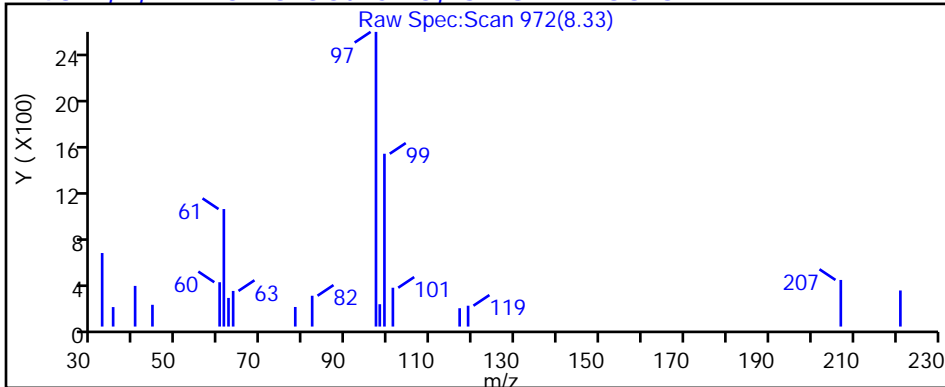
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P109.D

Injection Date: 14-Mar-2019 23:05:30

Instrument ID: MR

Lims ID: 140-14595-A-6

Lab Sample ID: 140-14595-6

Client ID: BLDG-C-EFFLUENT

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

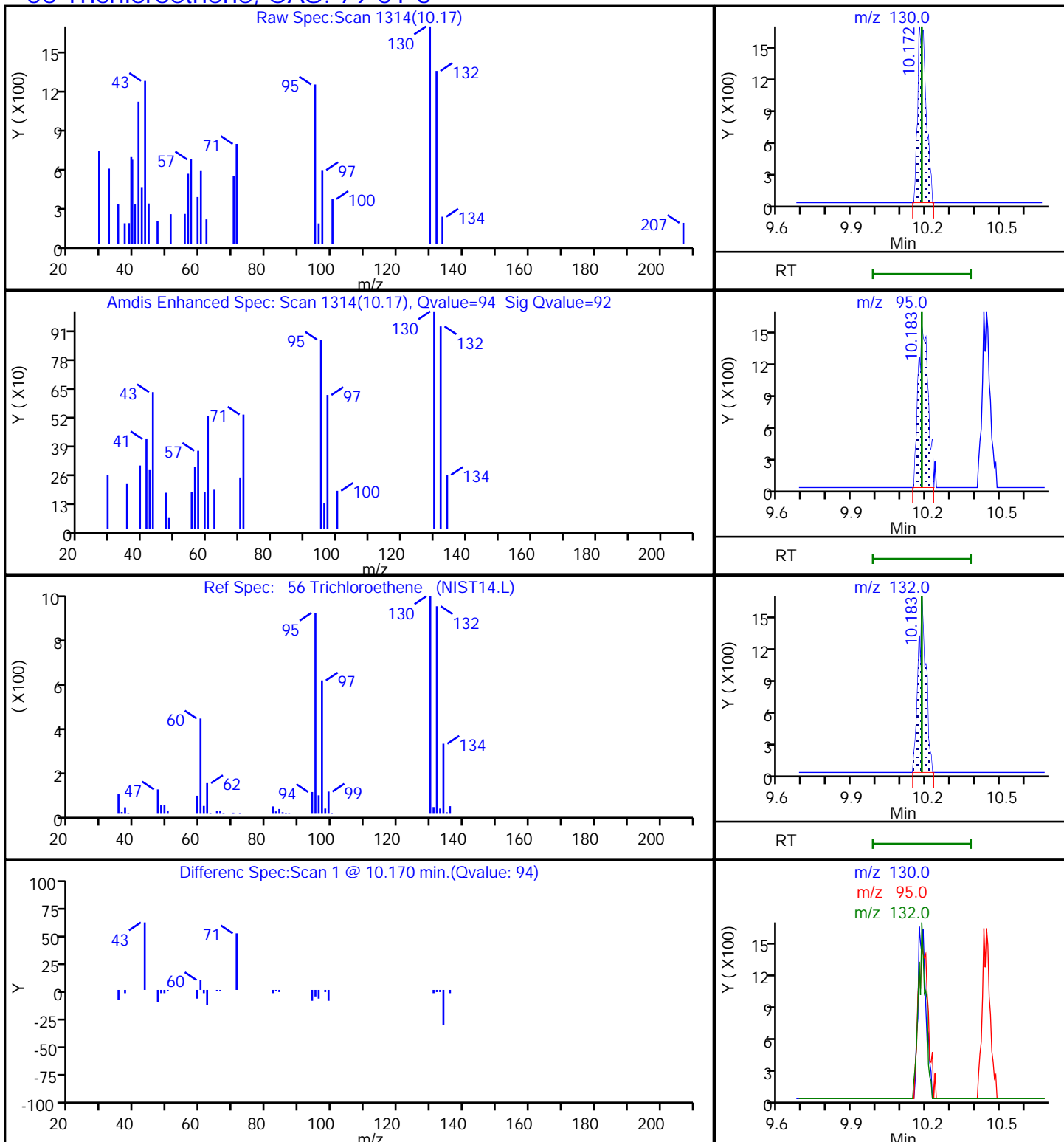
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P109.D

Injection Date: 14-Mar-2019 23:05:30

Instrument ID: MR

Lims ID: 140-14595-A-6

Lab Sample ID: 140-14595-6

Client ID: BLDG-C-EFFLUENT

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

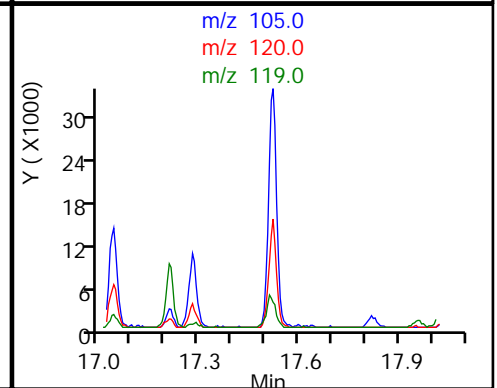
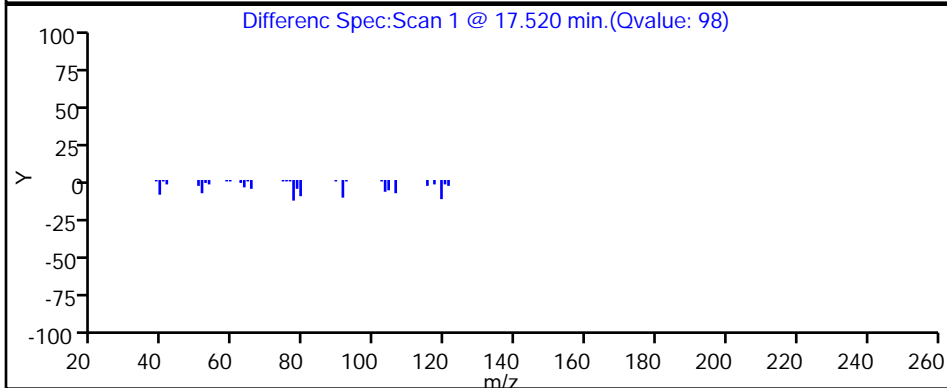
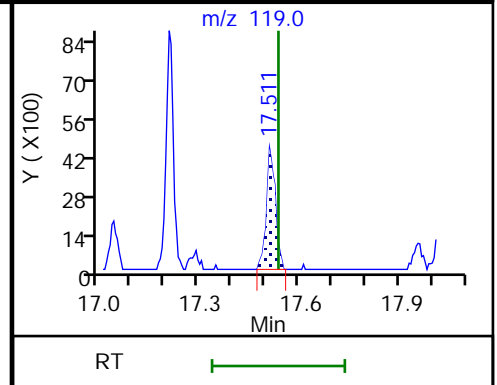
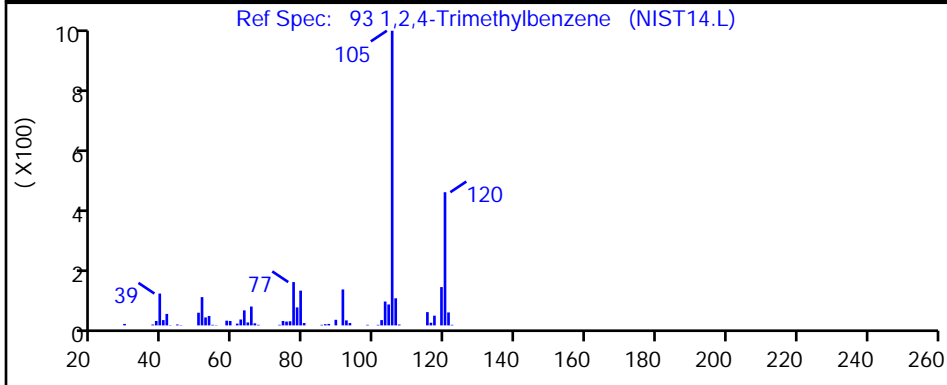
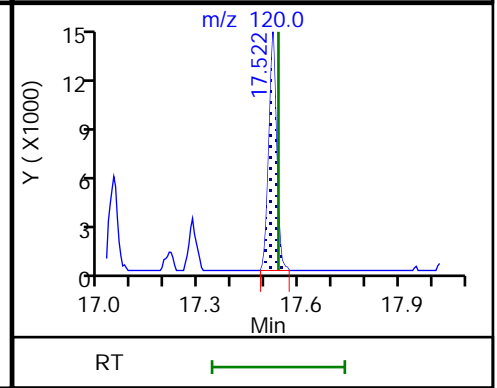
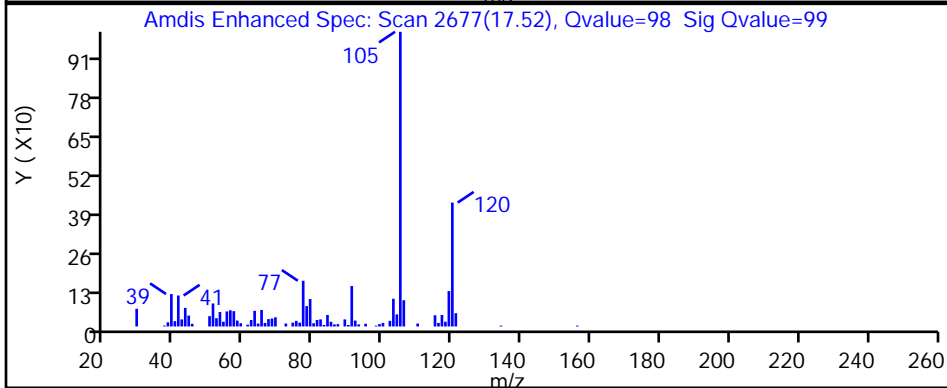
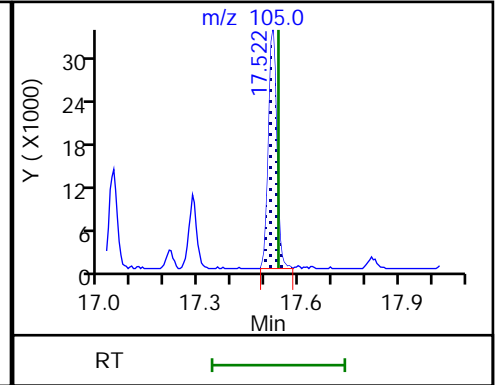
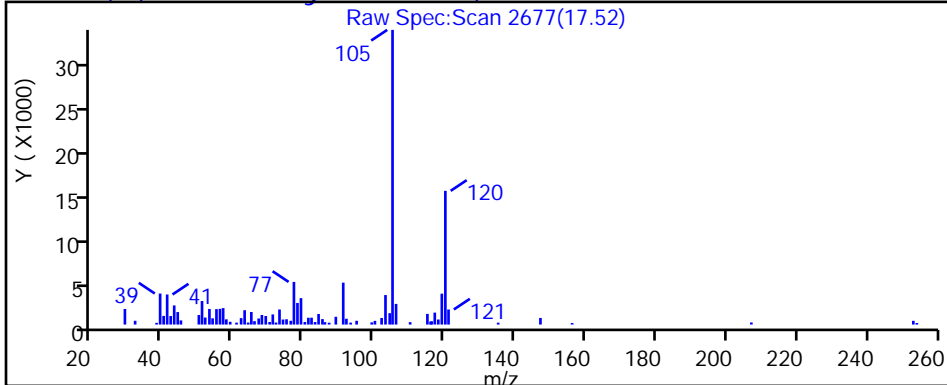
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RC14P109.D

Injection Date: 14-Mar-2019 23:05:30

Instrument ID: MR

Lims ID: 140-14595-A-6

Lab Sample ID: 140-14595-6

Client ID: BLDG-C-EFFLUENT

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

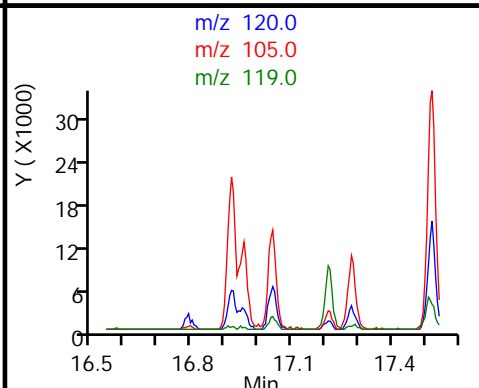
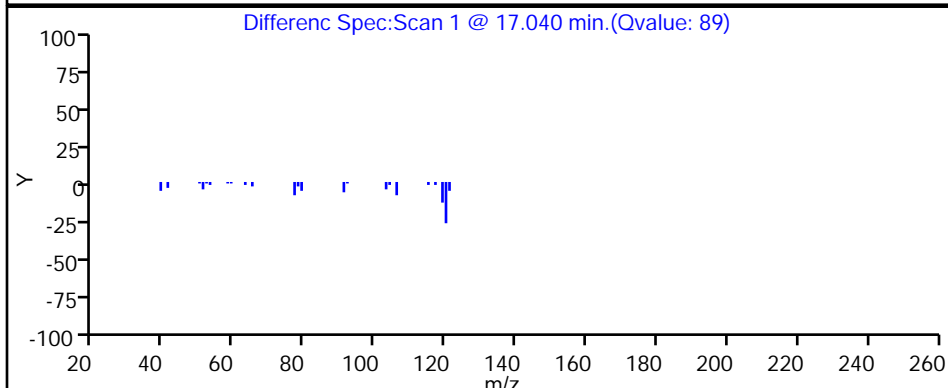
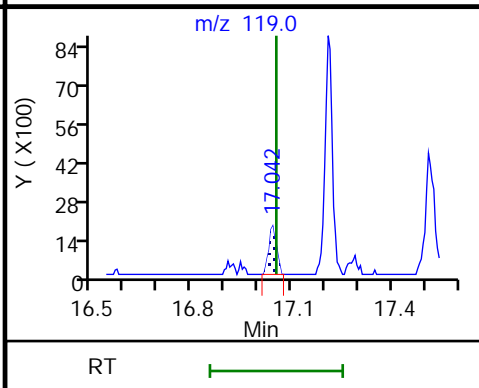
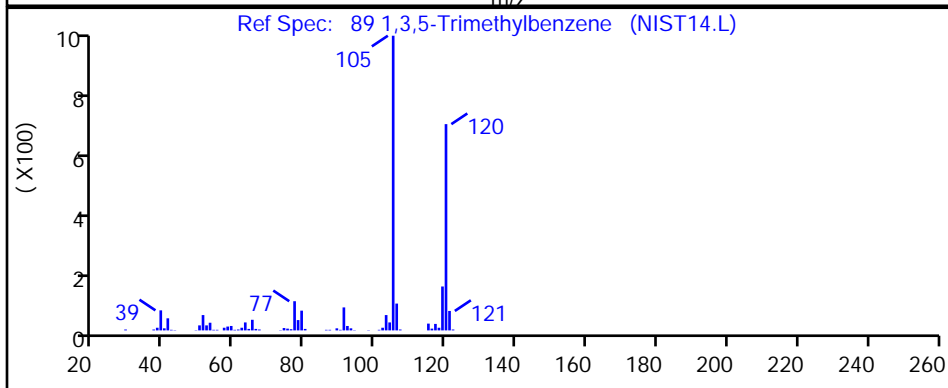
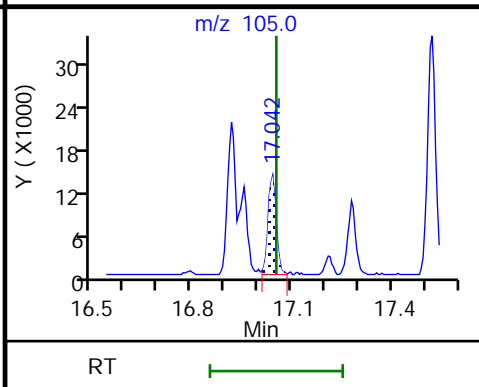
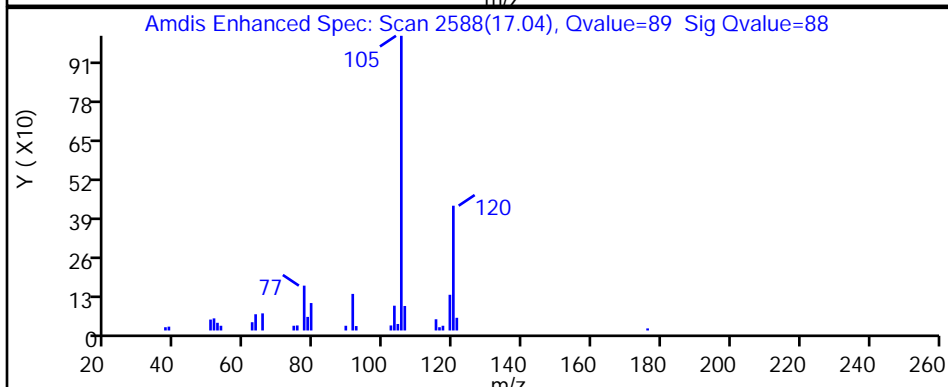
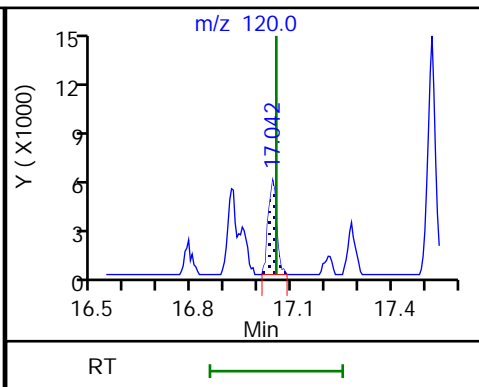
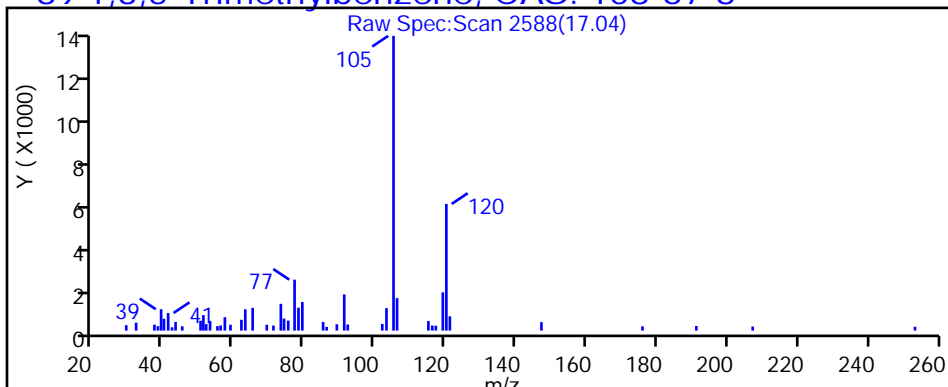
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

89 1,3,5-Trimethylbenzene, CAS: 108-67-8



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Chlorodifluoromethane	+++++	+++++	2.6032	2.5523	2.4630	Ave		2.3734			6.7		30.0				
	2.3273	2.2136	2.2367	2.4103	2.1808												
Propene	+++++	+++++	+++++	0.8419	0.7507	Ave		0.7296			8.2		30.0				
	0.7221	0.6895	0.6844	0.7524	0.6660												
Dichlorodifluoromethane	+++++	+++++	4.5412	4.2461	5.3003	Ave		4.3524			11.7		30.0				
	4.1510	3.9686	4.0428	4.8211	3.7479												
Chloromethane	+++++	+++++	0.4314	0.2960	0.3371	Ave		0.3061			18.1		30.0				
	0.2871	0.2733	0.2689	0.2912	0.2638												
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	3.8991	3.2433	3.1843	3.5538	Ave		3.2404			10.6		30.0				
	3.0989	3.0537	3.1101	3.3433	2.6767												
Vinyl chloride	1.3396	1.3354	1.1215	1.1058	1.0442	Ave		1.0731			14.4		30.0				
	0.9887	0.9559	0.9544	0.9748	0.9105												
1,3-Butadiene	+++++	+++++	+++++	0.7017	0.6571	Ave		0.6506			4.0		30.0				
	0.6523	0.6352	0.6377	0.6500	0.6202												
Butane	+++++	+++++	1.3166	1.1752	1.2095	Ave		1.1321			8.5		30.0				
	1.1091	1.0560	1.0795	1.0850	1.0260												
Bromomethane	+++++	+++++	1.4266	1.2696	1.2705	Ave		1.2354			7.2		30.0				
	1.2054	1.1811	1.1809	1.2035	1.1456												
Chloroethane	+++++	+++++	0.6023	0.5518	0.4948	Ave		0.4970			10.7		30.0				
	0.4893	0.4606	0.4673	0.4597	0.4499												
Ethanol	+++++	+++++	+++++	0.3286	0.3153	Ave		0.2997			6.1		30.0				
	0.2949	0.2999	0.2981	0.2885	0.2724												
Vinyl bromide	+++++	+++++	1.4513	1.3532	1.3493	Ave		1.3020			5.9		30.0				
	1.2738	1.2507	1.2699	1.2460	1.2216												
2-Methylbutane	+++++	+++++	0.8639	0.8536	0.8359	Ave		0.7999			5.7		30.0				
	0.7979	0.7734	0.7606	0.7713	0.7425												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Acrolein	++++ 0.2149	++++ 0.2505	++++ 0.2493	0.3397 0.2426	0.2316 0.2411	Ave		0.2528			15.9		30.0				
Trichlorofluoromethane	6.6790 5.8128	6.2714 5.6498	6.2323 5.6579	6.0249 5.5584	5.9679 5.2697	Ave		5.9124			6.9		30.0				
Acetonitrile	++++ 0.2348	++++ 0.2373	++++ 0.2818	0.2630 0.2803	0.2428 0.2703	Ave		0.2586			7.8		30.0				
Acetone	++++ 0.4175	++++ 0.3860	++++ 0.3784	0.5760 0.3627	0.4291 0.3557	Ave		0.4151			18.3		30.0				
Pentane	++++ 0.1987	++++ 0.1907	++++ 0.1944	0.2412 0.1914	0.2034 0.1879	Ave		0.2011			9.2		30.0				
Isopropyl alcohol	++++ 1.1215	++++ 1.1376	++++ 1.1294	1.2584 1.0760	1.1488 1.0492	Ave		1.1316			5.9		30.0				
Ethyl ether	++++ 0.6540	++++ 0.6244	++++ 0.6327	0.7089 0.6995	0.6970 0.6464	Ave		0.6661			5.2		30.0				
1,1-Dichloroethene	1.6400 1.3612	1.4528 1.3523	1.4077 1.3829	1.3842 1.3970	1.3751 1.3233	Ave		1.4076			6.3		30.0				
Acrylonitrile	++++ 0.6195	++++ 0.6124	++++ 0.6202	++++ 0.6572	0.6255 0.6313	Ave		0.6277			2.5		30.0				
tert-Butyl alcohol	++++ 2.6737	++++ 2.7383	++++ 2.6973	2.6805 2.6655	2.7132 2.5593	Ave		2.6773			2.0		30.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 3.5282	3.6010 3.4530	3.7397 3.4392	3.5306 3.4042	3.5510 3.1580	Ave		3.4894			4.6		30.0				
Methylene Chloride	++++ 1.2853	++++ 1.1917	++++ 1.1531	2.0228 1.1482	1.5003 1.0647	Ave		1.3380			24.9		30.0				
3-Chloropropene	++++ 1.3439	++++ 1.2944	1.1777 1.2837	1.4302 1.3374	1.3141 1.2919	Ave		1.3092			5.4		30.0				
Carbon disulfide	++++ 3.4096	++++ 3.3395	3.3655 3.3248	3.2471 3.4285	3.3320 3.2774	Ave		3.3406			1.8		30.0				
trans-1,2-Dichloroethene	1.5926 1.4009	1.5829 1.3797	1.4276 1.4044	1.3885 1.4254	1.3834 1.3721	Ave		1.4358			5.7		30.0				
2-Methylpentane	++++ 1.8951	++++ 1.8425	++++ 1.8466	1.9630 1.9346	1.9304 1.8132	Ave		1.8940			2.8		30.0				
Methyl tert-butyl ether	++++ 4.5873	++++ 4.5288	4.7495 4.5802	4.4631 4.6026	4.5963 4.4400	Ave		4.5685			2.1		30.0				
1,1-Dichloroethane	2.6815 2.3300	2.6739 2.2911	2.4729 2.3182	2.3130 2.3408	2.3587 2.2447	Ave		2.4025			6.5		30.0				
Vinyl acetate	++++ 2.2364	++++ 2.3368	++++ 2.4359	2.0297 2.5381	2.1537 2.5129	Ave		2.3205			8.2		30.0				
2-Butanone (MEK)	++++ 0.5380	++++ 0.5309	++++ 0.5519	0.5759 0.5616	0.5098 0.5445	Ave		0.5446			3.9		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14595-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	++++ 0.8187	++++ 0.8108	0.9023 0.8291	0.8416 0.8382	0.8376 0.8031	Ave		0.8352			3.6		30.0				
cis-1,2-Dichloroethene	1.6200 1.4112	1.4958 1.4310	1.4342 1.4304	1.4272 1.4418	1.3943 1.3928	Ave		1.4479			4.6		30.0				
Ethyl acetate	++++ 2.0207	++++ 2.0336	1.8097 2.1099	1.9184 2.1701	1.9214 2.1110	Ave		2.0119			6.0		30.0				
Chloroform	4.2334 3.7394	4.0960 3.6835	3.8341 3.7449	3.7602 3.7523	3.7763 3.5872	Ave		3.8207			5.1		30.0				
Tetrahydrofuran	++++ 0.8846	++++ 0.8714	++++ 0.8870	0.8784 0.9150	0.8832 0.8836	Ave		0.8862			1.5		30.0				
1,1,1-Trichloroethane	4.9709 4.7770	4.9939 4.7670	5.0122 4.8476	4.7467 4.8764	4.7402 4.7023	Ave		4.8434			2.4		30.0				
1,2-Dichloroethane	0.5380 0.5057	0.5327 0.4936	0.5166 0.4997	0.4858 0.5068	0.4926 0.4915	Ave		0.5063			3.5		30.0				
Benzene	0.7533 0.6321	0.7075 0.6240	0.7019 0.6266	0.6312 0.6238	0.6214 0.5956	Ave		0.6517			7.8		30.0				
Cyclohexane	++++ 0.1013	++++ 0.0986	++++ 0.1001	0.0959 0.0971	0.0939 0.0911	Ave		0.0968			3.7		30.0				
1-Butanol	++++ 0.0448	++++ 0.0477	++++ 0.0492	++++ 0.0516	0.0330 0.0509	Ave		0.0462			14.9		30.0				
Carbon tetrachloride	0.9231 0.9489	0.9429 0.9372	0.7537 0.9263	0.9038 0.9692	0.9350 0.9273	Ave		0.9167			6.5		30.0				
2,3-Dimethylpentane	++++ 0.1378	++++ 0.1390	++++ 0.1212	0.1277 0.1410	0.1355 0.1365	Ave		0.1349			5.2		30.0				
Thiophene	++++ 0.3778	++++ 0.3718	0.3563 0.3816	0.3607 0.3893	0.3698 0.3754	Ave		0.3728			2.9		30.0				
2,2,4-Trimethylpentane	++++ 0.8423	++++ 0.8248	++++ 0.8652	0.8182 0.8535	0.8128 0.8176	Ave		0.8342			2.3		30.0				
1,2-Dichloropropane	++++ 0.2041	++++ 0.2015	0.2130 0.2054	0.1991 0.2089	0.2024 0.2020	Ave		0.2045			2.2		30.0				
Heptane	++++ 0.2142	++++ 0.2122	++++ 0.1976	0.1979 0.2154	0.2071 0.2066	Ave		0.2083			3.5		30.0				
Trichloroethene	0.4192 0.3857	0.3851 0.3869	0.4007 0.4221	0.3771 0.3913	0.3880 0.3727	Ave		0.3929			4.2		30.0				
Dibromomethane	++++ 0.3459	++++ 0.3374	++++ 0.3725	0.3565 0.3576	0.3464 0.3447	Ave		0.3514			3.1		30.0				
Bromodichloromethane	++++ 0.6680	++++ 0.6726	0.5971 0.7005	0.5918 0.7174	0.6239 0.6980	Ave		0.6587			7.4		30.0				
1,4-Dioxane	++++ 0.0965	++++ 0.1030	++++ 0.1037	++++ 0.1007	0.0992 0.0954	Ave		0.0994			3.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Methyl methacrylate	++++ 0.2243	++++ 0.2331	0.2139 0.2468	0.1766 0.2628	0.2044 0.2582	Ave		0.2275			12.8		30.0				
Methylcyclohexane	++++ 0.4067	++++ 0.4050	0.3972 0.4110	0.3842 0.4158	0.3938 0.4053	Ave		0.4024			2.5		30.0				
4-Methyl-2-pentanone (MIBK)	++++ 0.3577	++++ 0.3715	++++ 0.3933	0.2895 0.4035	0.3277 0.3952	Ave		0.3626			11.5		30.0				
cis-1,3-Dichloropropene	++++ 0.3940	0.3635 0.4127	0.3972 0.4288	0.3514 0.4368	0.3808 0.4249	Ave		0.3948			8.2		30.0				
trans-1,3-Dichloropropene	++++ 0.4780	0.4035 0.4968	0.3959 0.5178	0.4276 0.5209	0.4537 0.5119	Ave		0.4674			10.5		30.0				
Toluene	1.0184 0.9698	0.9133 0.9624	0.9750 0.9710	0.9478 0.9638	0.9541 0.9102	Ave		0.9586			3.2		30.0				
1,1,2-Trichloroethane	0.2339 0.2639	0.2426 0.2594	0.2564 0.2610	0.2580 0.2630	0.2596 0.2452	Ave		0.2543			4.0		30.0				
2-Hexanone	++++ 0.1981	++++ 0.2103	++++ 0.2238	0.1399 0.2293	0.1787 0.2239	Ave		0.2006			16.0		30.0				
Dibromochloromethane	0.6655 0.7840	0.5795 0.8296	0.6334 0.8666	0.6501 0.8735	0.6985 0.8331	Ave		0.7414			14.6		30.0				
Octane	++++ 0.3146	++++ 0.3133	0.2922 0.3156	0.3033 0.3109	0.2998 0.2932	Ave		0.3054			3.1		30.0				
C8 Range	++++ 2.1678	++++ 2.1237	++++ 2.1591	++++ 2.2092	2.0961 2.0601	Ave		2.1360			2.5		30.0				
1,2-Dibromoethane (EDB)	++++ 0.5766	++++ 0.5804	0.5000 0.5952	0.4942 0.5984	0.5448 0.5694	Ave		0.5574			7.3		30.0				
Tetrachloroethene	0.4858 0.4849	0.4864 0.4819	0.4732 0.4752	0.4838 0.4653	0.4706 0.4417	Ave		0.4749			2.9		30.0				
Chlorobenzene	0.8210 0.8508	0.8425 0.8373	0.8551 0.8444	0.8450 0.8430	0.8379 0.7968	Ave		0.8374			2.0		30.0				
Ethylbenzene	1.3703 1.4178	1.3589 1.4128	1.4055 1.4174	1.3343 1.4023	1.4017 1.2986	Ave		1.3820			2.9		30.0				
m-Xylene & p-Xylene	1.1137 1.1838	1.1023 1.1550	1.1618 1.1536	1.1488 1.1251	1.1673 1.0234	Ave		1.1335			4.1		30.0				
Bromoform	++++ 0.7606	++++ 0.8485	0.5893 0.9286	0.6166 0.9279	0.6638 0.8938	Ave		0.7786			18.1		30.0				
Styrene	++++ 0.7750	++++ 0.7975	0.6004 0.8292	0.6182 0.8487	0.6786 0.7961	Ave		0.7430			13.0		30.0				
o-Xylene	1.1430 1.2366	1.1230 1.2060	1.2624 1.1986	1.2290 1.1769	1.2492 1.0804	Ave		1.1905			5.0		30.0				
Nonane	++++ 0.4737	++++ 0.4580	0.4455 0.4538	0.4515 0.4433	0.4801 0.4032	Ave		0.4511			5.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14595-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1,2,2-Tetrachloroethane	0.5797	0.5118	0.5697	0.5802	0.6188	Ave		0.6050			7.5		30.0				
	0.6456	0.6455	0.6181	0.6658	0.6146												
1,2,3-Trichloropropane	++++	++++	0.2911	0.2918	0.2978	Ave		0.3000			2.7		30.0				
	0.3084	0.3034	0.3046	0.3115	0.2914												
Isopropylbenzene	++++	++++	1.8308	1.7528	1.7150	Ave		1.6941			5.0		30.0				
	1.7012	1.6661	1.6871	1.6694	1.5307												
Propylbenzene	0.4435	0.4328	0.4534	0.4640	0.4755	Ave		0.4652			4.5		30.0				
	0.4963	0.4795	0.4859	0.4778	0.4438												
2-Chlorotoluene	++++	0.3991	0.4619	0.4417	0.4398	Ave		0.4306			5.3		30.0				
	0.4524	0.4310	0.4318	0.4245	0.3929												
4-Ethyltoluene	1.5529	1.6047	1.7828	1.7531	1.7972	Ave		1.7594			6.6		30.0				
	1.8829	1.8611	1.8557	1.8469	1.6563												
1,3,5-Trimethylbenzene	0.6792	0.6523	0.7326	0.7228	0.7292	Ave		0.7199			5.1		30.0				
	0.7724	0.7416	0.7410	0.7434	0.6843												
Alpha Methyl Styrene	++++	++++	++++	0.5439	0.5731	Ave		0.6844			13.4		30.0				
	0.6781	0.7295	0.7535	0.7838	0.7289												
Decane	++++	++++	0.6176	0.6408	0.6488	Ave		0.6421			4.6		30.0				
	0.6849	0.6585	0.6522	0.6491	0.5849												
tert-Butylbenzene	1.6566	1.6665	1.8313	1.8740	1.8639	Ave		1.7534			6.6		30.0				
	1.8841	1.7827	1.7468	1.6988	1.5293												
1,2,4-Trimethylbenzene	1.4293	1.4880	1.6887	1.6986	1.7123	Ave		1.6066			7.2		30.0				
	1.7233	1.6671	1.6372	1.5922	1.4293												
1,3-Dichlorobenzene	1.1997	1.0963	1.2442	1.1823	1.1621	Ave		1.1598			4.5		30.0				
	1.1856	1.1603	1.1572	1.1516	1.0583												
sec-Butylbenzene	2.0787	2.1298	2.2743	2.2407	2.2363	Ave		2.1706			5.7		30.0				
	2.3069	2.2195	2.1908	2.1561	1.8732												
Benzyl chloride	++++	++++	1.0998	1.0436	1.1034	Ave		1.2392			11.3		30.0				
	1.2529	1.3231	1.4041	1.3938	1.2924												
1,4-Dichlorobenzene	1.2196	1.1487	1.2267	1.2179	1.1651	Ave		1.1644			5.1		30.0				
	1.2112	1.1594	1.1399	1.1212	1.0340												
4-Isopropyltoluene	2.1095	2.1432	2.2305	2.2370	2.2728	Ave		2.1910			5.2		30.0				
	2.3345	2.2554	2.2238	2.1784	1.9244												
1,2,3-Trimethylbenzene	1.6103	1.5786	1.8623	1.7831	1.7558	Ave		1.7253			6.2		30.0				
	1.8346	1.7874	1.7524	1.7335	1.5556												
1,2-Dichlorobenzene	1.1708	1.2083	1.2580	1.2065	1.1355	Ave		1.1443			6.3		30.0				
	1.1557	1.1157	1.1029	1.0865	1.0034												
Indane	1.4503	1.3817	1.4785	1.4862	1.4419	Ave		1.4233			5.0		30.0				
	1.4994	1.4300	1.4226	1.3893	1.2529												
Indene	++++	++++	1.0339	1.0803	1.0663	Ave		1.1682			8.2		30.0				
	1.2013	1.2223	1.2542	1.2953	1.1920												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Butylbenzene	1.8231 1.8829	1.6985 1.8028	1.8359 1.7871	1.8719 1.7597	1.8266 1.5551	Ave		1.7844			5.4		30.0				
Undecane	++++ 0.8059	++++ 0.7917	++++ 0.7809	++++ 0.7402	0.7701 0.6720	Ave		0.7598			5.8		30.0				
1,2-Dibromo-3-Chloropropane	++++ 0.5799	++++ 0.6160	0.4391 0.6515	0.4709 0.6213	0.4861 0.5926	Ave		0.5572			14.3		30.0				
1,2,4,5-Tetramethylbenzene	++++ 2.1235	++++ 2.1635	2.1451 2.1540	2.1430 1.9985	1.9593 1.8488	Ave		2.0670			5.7		30.0				
Dodecane	++++ 0.7733	++++ 0.8936	++++ 0.8877	0.8688 0.7212	0.6803 0.7447	Ave		0.7957			10.9		30.0				
1,2,4-Trichlorobenzene	++++ 1.1894	++++ 1.2694	1.4472 1.2818	1.3888 1.0940	1.0856 1.1269	Ave		1.2354			10.9		30.0				
Naphthalene	++++ 2.0750	3.4525 2.4487	2.8184 2.5087	2.7367 2.1182	1.8255 ++++	Ave		2.4980			20.6		30.0				
Hexachlorobutadiene	++++ 1.4923	++++ 1.4393	1.7181 1.4314	1.5746 1.2072	1.3912 1.2353	Ave		1.4362			11.7		30.0				
1,2,3-Trichlorobenzene	++++ 1.1295	++++ 1.2212	1.4432 1.2323	1.3860 0.9868	1.0237 1.0761	Ave		1.1873			13.9		30.0				
2-Methylnaphthalene	++++ 0.3586	++++ 0.9509	++++ 1.0808	++++ 0.6399	++++ 0.9374	Ave		0.7935			36.8		50.0				
1-Methylnaphthalene	++++ 0.3899	++++ 0.8629	++++ 0.9496	++++ 0.5203	++++ 0.7770	Ave		0.6999			33.7		50.0				
4-Bromofluorobenzene (Surr)	0.8488 0.8636	0.8528 0.8535	0.8654 0.8546	0.8648 0.8319	0.8641 0.8066	Ave		0.8506			2.2		30.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 165552	++++ 330784	13488 670931	27178 1511149	67965 2786793	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 51364	++++ 103039	++++ 205301	8965 471697	20715 851034	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 295289	++++ 593041	23530 1212691	45214 3022572	146259 4789313	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 20420	++++ 40844	2235 80675	3152 182542	9302 337068	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	++++ 220441	10161 456323	16805 932912	33908 2096072	98065 3420506	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	1811 70331	3480 142840	5811 286294	11775 611179	28814 1163551	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 46402	++++ 94920	++++ 191280	7472 407531	18132 792495	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 78896	++++ 157806	6822 323819	12514 680235	33375 1311043	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 85746	++++ 176496	7392 354225	13519 754560	35058 1463890	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 34804	++++ 68833	3121 140181	5876 288211	13655 574974	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 104882	++++ 224069	++++ 447098	17498 904290	43508 1740692	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 90610	++++ 186899	7520 380924	14410 781185	37233 1560991	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 56760	++++ 115570	4476 228167	9090 483547	23067 948871	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrolein	CBM	Ave	++++ 15289	++++ 37440	++++ 74788	3617 152096	6392 308108	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14595-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	9029 413497	16343 844261	32292 1697186	64156 3484877	164680 6733950	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 16703	++++ 35460	++++ 84531	++++ 175714	2801 345458	6701 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.160 16.0
Acetone	CBM	Ave	++++ 89101	++++ 173059	++++ 340521	18402 682117	35521 1363433	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 14137	++++ 28499	++++ 58302	2568 119973	5613 240067	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 239341	++++ 509997	++++ 1016357	40201 2023732	95103 4022317	++++ 3.00	++++ 6.00	++++ 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 46526	++++ 93310	++++ 189800	7549 438542	19232 826066	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	2217 96830	3786 202076	7294 414812	14740 875865	37945 1690964	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 44072	++++ 91512	++++ 186041	++++ 412056	17259 806690	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Ave	++++ 190196	++++ 409183	13889 809098	28891 1671112	74242 3270376	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 250984	9384 515989	19377 1031649	37596 2134286	97989 4035478	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 91431	++++ 178076	++++ 345898	21540 719893	41401 1360585	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 95603	++++ 193431	6102 385054	15229 838478	36262 1650820	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 242543	++++ 499031	17438 997332	34577 2149500	91945 4188128	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	2153 99652	4125 206172	7397 421281	14785 893667	38175 1753401	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 134813	++++ 275324	10171 553915	20556 1212878	53163 2316982	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 326320	++++ 676752	24609 1373906	47525 2885627	126834 5673760	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	3625 165748	6968 342362	12813 695373	24630 1467554	65086 2868475	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 159088	++++ 349189	++++ 730693	21613 1591261	59429 3211124	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 38268	++++ 79333	++++ 165553	6132 352107	14067 695780	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 58239	++++ 121155	++++ 248691	4675 525494	8962 1026278	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	2190 100389	3898 213838	7431 429081	15197 903953	38474 1779827	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14595-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 143745	++++ 303889	9377 632910	20428 1360573	53019 2697533	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	5723 266010	10674 550434	19866 1123349	40040 2352521	104204 4583947	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 62926	++++ 130211	++++ 266070	9354 573668	24371 1129072	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	6720 339819	13014 712345	25970 1454125	50545 3057281	130803 6008857	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	4162 199683	7880 414101	15042 837957	29238 1778626	76773 3480930	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	5827 249589	10465 523482	20437 1050705	37991 2189441	96837 4217712	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 39991	++++ 82675	++++ 167839	5770 340746	14632 645373	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 17690	++++ 40004	++++ 82457	++++ 181076	5146 360622	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7141 374679	13947 786171	21947 1553305	54395 3401707	145724 6567265	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 54415	++++ 116636	3528 235995	7686 494713	21116 966448	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 149183	++++ 311873	10374 639928	21711 1366267	57630 2658371	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 332582	++++ 691902	25192 1407509	49245 2995449	126672 5790015	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 80581	++++ 169011	6201 344383	11982 733246	31548 1430590	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 84592	++++ 178041	5754 361284	11910 756110	32279 1463381	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	3243 152289	5696 324569	11668 707793	22698 1373208	60473 2639630	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 136587	++++ 283066	10846 586890	21454 1255108	53985 2441282	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	++++ 263754	++++ 564189	17387 1174659	35620 2518000	97237 4943175	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 38117	++++ 86437	++++ 173912	5968 353467	15165 675333	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 88559	++++ 195505	6227 413937	10629 922467	31857 1828238	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	++++ 160604	++++ 339768	11565 689164	23124 1459181	61375 2870166	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 141224	++++ 311634	++++ 659470	17423 1416282	51070 2798783	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14595-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	++++ 155584	5376 346235	10488 719012	21150 1532867	59340 3009068	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	++++ 165754	5189 369600	10066 783879	22215 1677181	61443 3381888	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	6779 336279	11744 715966	24790 1469948	49243 3103222	129198 6012505	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	1557 91510	3120 192987	6520 395113	13406 846792	35149 1619482	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	++++ 68694	++++ 156406	++++ 338784	7267 738442	24199 1478910	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	4430 271846	7451 617174	16103 1311808	33778 2812660	94584 5503585	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	++++ 109095	++++ 233063	7429 477723	15759 1000926	40600 1936591	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	DFBZ	Ave	++++ 855982	++++ 1781529	++++ 3620641	++++ 7753468	++++ 14589114	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	++++ 199953	++++ 431756	12712 900939	25676 1926667	73769 3761382	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	3234 168145	6255 358488	12031 719415	25138 1498188	63725 2918044	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	5465 295002	10833 622855	21742 1278293	43900 2714425	113462 5263414	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	9121 491615	17474 1050972	35735 2145561	69322 4515180	189812 8578718	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	14827 820994	28347 1718390	59080 3492522	119367 7245395	316153 13520878	0.0400 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	++++ 263744	++++ 631165	14982 1405685	32037 2987666	89888 5904670	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd 5	Ave	++++ 268745	++++ 593262	15265 1255220	32117 2732738	91899 5258738	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	7608 428791	14440 897122	32097 1814388	63851 3789404	169158 7137002	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Nonane	CBZd 5	Ave	++++ 164273	++++ 340741	11326 686883	23460 1427330	65019 2663319	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	3859 223872	6581 480219	14484 935594	30142 2143813	83793 4060026	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	++++ 106933	++++ 225670	7400 461156	15160 1003093	40330 1925261	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 589911	++++ 1239416	46548 2553866	91067 5375264	232238 10111819	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	2952 172077	5565 356669	11527 735475	24106 1538516	64393 2931395	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville

Job No.: 140-14595-1

Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR

GC Column: RTX-5

ID: 0.32 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23

Calibration End Date: 11/17/2018 03:51

Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 156859	5132 320641	11745 653681	22951 1366689	59552 2595696	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	10337 652888	20634 1384436	45329 2809081	91082 5946732	243377 10941125	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	4521 267835	8388 551670	18627 1121740	37553 2393487	98748 4520211	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 235120	++++ 542707	++++ 1140621	28257 2523695	77610 4814736	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 237483	++++ 489862	15703 987208	33292 2090024	87862 3864099	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	11027 653325	21429 1326146	46562 2644216	97365 5469769	252400 10102100	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	9514 597546	19133 1240172	42935 2478370	88253 5126755	231880 9441765	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	7986 411115	14097 863153	31633 1751738	61425 3707873	157370 6991250	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	13837 799929	27386 1651103	57824 3316313	116417 6942238	302828 12374020	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 434461	++++ 984275	27963 2125520	54221 4487660	149421 8537696	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	8118 419983	14770 862511	31188 1725619	63275 3610216	157774 6830228	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	14042 809499	27559 1677824	56711 3366403	116224 7014221	307780 12712650	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	10719 636168	20298 1329610	47349 2652674	92640 5581569	237762 10276226	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	7793 400754	15537 829934	31984 1669523	62682 3498467	153773 6628325	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	9654 519916	17767 1063787	37591 2153540	77218 4473280	195256 8276746	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 416558	++++ 909289	26287 1898638	56129 4170791	144394 7874065	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	12135 652919	21840 1341073	46679 2705337	97253 5666096	247354 10272864	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 279455	++++ 588913	++++ 1182131	40009 2383371	102646 4439100	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 201092	++++ 458234	11163 986255	24464 2000539	65829 3914341	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 736323	++++ 1609444	54539 3260653	111338 6434741	265327 12213199	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 268129	++++ 664765	++++ 1343815	45141 2322024	92125 4919414	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 412431	++++ 944306	36794 1940306	72153 3522363	147015 7444026	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	++++ 719521	++++ 1821564	44394 3797602	71658 6820345	142183 247207 ++++	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 ++++
Hexachlorobutadiene	CBZd 5	Ave	++++ 517445	++++ 1070672	43683 2166873	81808 3886960	188387 8160248	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 391665	++++ 908417	36693 1865471	72007 3177370	138621 7108780	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 124366	++++ 707384	++++ 1636134	++++ 2060557	++++ 6192720	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
1-Methylnaphthalene	CBZd 5	Ave	++++ 135206	++++ 641933	++++ 1437560	++++ 1675488	++++ 5133017	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1129964 1197793	1096528 1269845	1100173 1293730	1123241 1339226	1170099 1332053	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-25490/8	RK16IC01.D
Level 2	IC 140-25490/9	RK16IC02.D
Level 3	IC 140-25490/10	RK16IC03.D
Level 4	IC 140-25490/11	RK16IC04.D
Level 5	IC 140-25490/12	RK16IC05.D
Level 6	IC 140-25490/13	RK16IC06.D
Level 7	ICIS 140-25490/14	RK16IC07.D
Level 8	IC 140-25490/15	RK16IC08.D
Level 9	IC 140-25490/3	RK16IC09.D
Level 10	IC 140-25490/5	RK16IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	9.7						50			
Propene	+++++	+++++	+++++	15.4						50		
Dichlorodifluoromethane	+++++	+++++	4.3						50			
Chloromethane	+++++	+++++	40.9						50			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++	20.3						50				
Vinyl chloride	24.8						50					
1,3-Butadiene	+++++	+++++	+++++	7.9						50		
Butane	+++++	+++++	16.3						50			
Bromomethane	+++++	+++++	15.5						50			
Chloroethane	+++++	+++++	21.2						50			
Ethanol	+++++	+++++	+++++	9.7						50		
Vinyl bromide	+++++	+++++	11.5						50			
2-Methylbutane	+++++	+++++	8.0						50			
Acrolein	+++++	+++++	+++++	34.3						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Trichlorofluoromethane	13.0						50					
Acetonitrile	+++++	+++++	+++++	1.7						50		
Acetone	+++++	+++++	+++++	38.8						80		
Pentane	+++++	+++++	+++++	19.9						50		
Isopropyl alcohol	+++++	+++++	+++++	11.2						50		
Ethyl ether	+++++	+++++	+++++	6.4						50		
1,1-Dichloroethene	16.5						50					
Acrylonitrile	+++++	+++++	+++++	+++++	-0.4						50	
tert-Butyl alcohol	+++++	+++++	0.1						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	3.2						50				
Methylene Chloride	+++++	+++++	+++++	51.2						80		
3-Chloropropene	+++++	+++++	-10.0						50			
Carbon disulfide	+++++	+++++	0.7						50			
trans-1,2-Dichloroethene	10.9						50					
2-Methylpentane	+++++	+++++	3.6						50			
Methyl tert-butyl ether	+++++	+++++	4.0						50			
1,1-Dichloroethane	11.6						50					
Vinyl acetate	+++++	+++++	+++++	-12.5						50		
2-Butanone (MEK)	+++++	+++++	+++++	5.7						50		
Hexane	+++++	+++++	8.0						50			
cis-1,2-Dichloroethene	11.9						50					

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	-10.0						50			
Chloroform	10.8						50					
Tetrahydrofuran	+++++	+++++	+++++	-0.9						50		
1,1,1-Trichloroethane	2.6						50					
1,2-Dichloroethane	6.3						50					
Benzene	15.6						50					
Cyclohexane	+++++	+++++	+++++	-1.0						50		
1-Butanol	+++++	+++++	+++++	+++++	-28.5						50	
Carbon tetrachloride	0.7						50					
2,3-Dimethylpentane	+++++	+++++	-10.2						50			
Thiophene	+++++	+++++	-4.4						50			
2,2,4-Trimethylpentane	+++++	+++++	3.7						50			
1,2-Dichloropropane	+++++	+++++	4.1						50			
Heptane	+++++	+++++	-5.1						50			
Trichloroethene	6.7						50					
Dibromomethane	+++++	+++++	6.0						50			
Bromodichloromethane	+++++	+++++	-9.3						50			
1,4-Dioxane	+++++	+++++	+++++	-0.2						50		
Methyl methacrylate	+++++	+++++	-6.0						50			
Methylcyclohexane	+++++	+++++	-1.3						50			
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	-20.2						50		

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-7.9						50				
trans-1,3-Dichloropropene	+++++	-13.7						50				
Toluene	6.2						50					
1,1,2-Trichloroethane	-8.0						50					
2-Hexanone	+++++	+++++	+++++	-30.3						50		
Dibromochloromethane	-10.2						50					
Octane	+++++	+++++	-4.3						50			
1,2-Dibromoethane (EDB)	+++++	+++++	-10.3						50			
Tetrachloroethene	2.3						50					
Chlorobenzene	-2.0						50					
Ethylbenzene	-0.8						50					
m-Xylene & p-Xylene	-1.7						50					
Bromoform	+++++	+++++	-24.3						50			
Styrene	+++++	+++++	-19.2						50			
o-Xylene	-4.0						50					
Nonane	+++++	+++++	-1.3						50			
1,1,2,2-Tetrachloroethane	-4.2						50					
1,2,3-Trichloropropane	+++++	+++++	-3.0						50			
Isopropylbenzene	+++++	+++++	8.1						50			
Propylbenzene	-4.7						50					
2-Chlorotoluene	+++++	-7.3						50				

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1 Analy Batch No.: 25490
 SDG No.: _____
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
 Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	-11.7						50					
1,3,5-Trimethylbenzene	-5.7						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-20.5						50		
Decane	+++++	+++++	-3.8						50			
tert-Butylbenzene	-5.5						50					
1,2,4-Trimethylbenzene	-11.0						50					
1,3-Dichlorobenzene	3.4						50					
sec-Butylbenzene	-4.2						50					
Benzyl chloride	+++++	+++++	-11.2						50			
1,4-Dichlorobenzene	4.7						50					
4-Isopropyltoluene	-3.7						50					
1,2,3-Trimethylbenzene	-6.7						50					
1,2-Dichlorobenzene	2.3						50					
Indane	1.9						50					
Indene	+++++	+++++	-11.5						50			
Butylbenzene	2.2						50					
Undecane	+++++	+++++	+++++	1.3						50		
1,2-Dibromo-3-Chloropropane	+++++	+++++	-21.2						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	3.8						50			
Dodecane	+++++	+++++	+++++	9.2						50		
1,2,4-Trichlorobenzene	+++++	+++++	17.1						50			

FORM VI
 AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
 READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1 Analy Batch No.: 25490

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/16/2018 17:23 Calibration End Date: 11/17/2018 03:51 Calibration ID: 1746

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	+++++	38.2		+++++				80				
Hexachlorobutadiene	+++++	+++++	19.6						50			
1,2,3-Trichlorobenzene	+++++	+++++	21.5						50			
2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-54.8						80
1-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	-44.3						80

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 16-Nov-2018 17:23:30 ALS Bottle#: 15 Worklist Smp#: 3
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-003
 Misc. Info.: 190391
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:32 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 09:42:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.411	7.397	0.014	70	313476	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.504	9.494	0.010	90	1754853	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.555	0.007	62	1609921	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	48	1339226	4.00	3.91	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	95	1511149	8.00	8.12	
7 Propene	41	3.416	3.420	-0.004	49	471697	8.00	8.25	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	3022572	8.00	8.86	
9 Chloromethane	52	3.583	3.586	-0.003	98	182542	8.00	7.61	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	87	2096072	8.00	8.25	
11 Acetaldehyde	44	3.707	3.710	-0.003	92	850959	40.0	38.0	
12 Vinyl chloride	62	3.712	3.711	0.001	71	611179	8.00	7.27	
13 Butadiene	54	3.777	3.780	-0.003	85	407531	8.00	7.99	
14 Butane	43	3.782	3.782	0.000	76	680235	8.00	7.67	
15 Bromomethane	94	3.998	3.995	0.003	93	754560	8.00	7.79	
16 Chloroethane	64	4.106	4.100	0.006	97	288211	8.00	7.40	
17 Ethanol	31	4.230	4.222	0.008	93	904290	40.0	38.5	
18 Vinyl bromide	106	4.322	4.315	0.007	94	781185	8.00	7.66	
19 2-Methylbutane	43	4.370	4.369	0.001	79	483547	8.00	7.71	
20 Acrolein	56	4.516	4.516	0.000	13	152096	8.00	7.68	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	99	3484877	8.00	7.52	
22 Acetonitrile	40	4.564	4.545	0.019	94	175714	8.00	8.67	
23 Acetone	58	4.602	4.605	-0.003	94	682117	24.0	21.0	
24 Pentane	72	4.694	4.693	0.001	89	119973	8.00	7.61	
25 Isopropyl alcohol	45	4.721	4.716	0.005	96	2023732	24.0	22.8	
26 Ethyl ether	31	4.807	4.817	-0.010	72	438542	8.00	8.40	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	875865	8.00	7.94	
28 Acrylonitrile	53	5.109	5.097	0.012	85	412056	8.00	8.38	
29 2-Methyl-2-propanol	59	5.168	5.173	-0.005	86	1671112	8.00	7.96	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	91	2134286	8.00	7.80	
31 Methylene Chloride	84	5.298	5.290	0.008	85	719893	8.00	6.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	79	838478	8.00	8.17	
33 Carbon disulfide	76	5.416	5.410	0.006	99	2149500	8.00	8.21	
34 trans-1,2-Dichloroethene	96	5.961	5.951	0.010	97	893667	8.00	7.94	
35 2-Methylpentane	43	6.015	6.011	0.004	84	1212878	8.00	8.17	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	86	2885627	8.00	8.06	
37 1,1-Dichloroethane	63	6.301	6.283	0.018	98	1467554	8.00	7.79	
38 Vinyl acetate	43	6.409	6.402	0.006	98	1591261	8.00	8.75	
39 2-Butanone (MEK)	72	6.759	6.761	-0.002	66	352107	8.00	8.25	
40 Hexane	56	6.851	6.845	0.006	78	525494	8.00	8.03	
171 Isopropyl ether	45	6.985	6.989	-0.004	86	1854270	8.00	8.23	
41 cis-1,2-Dichloroethene	96	7.142	7.127	0.015	94	903953	8.00	7.97	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	1360573	8.00	8.63	
43 Chloroform	83	7.455	7.439	0.016	97	2352521	8.00	7.86	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	93	2652444	8.00	8.17	
44 Tetrahydrofuran	42	7.784	7.793	-0.009	75	573668	8.00	8.26	
45 1,1,1-Trichloroethane	97	8.377	8.364	0.013	94	3057281	8.00	8.05	
46 1,2-Dichloroethane	62	8.441	8.427	0.014	76	1778626	8.00	8.01	
47 Benzene	78	8.932	8.920	0.012	98	2189441	8.00	7.66	
48 Cyclohexane	69	8.959	8.951	0.008	71	340746	8.00	8.02	
50 Carbon tetrachloride	117	8.975	8.962	0.013	98	3401707	8.00	8.46	
49 n-Butanol	31	8.948	8.969	-0.021	42	181076	8.00	8.93	
51 2,3-Dimethylpentane	71	9.132	9.126	0.006	83	494713	8.00	8.36	
52 Thiophene	84	9.186	9.174	0.012	87	1366267	8.00	8.35	
53 Isooctane	57	9.806	9.798	0.008	95	2995449	8.00	8.18	
54 1,2-Dichloropropane	63	10.183	10.175	0.008	72	733246	8.00	8.17	
55 n-Heptane	71	10.232	10.224	0.008	76	756110	8.00	8.27	
56 Trichloroethene	130	10.259	10.250	0.009	88	1373208	8.00	7.97	
57 Dibromomethane	93	10.291	10.279	0.012	92	1255108	8.00	8.14	
58 Dichlorobromomethane	83	10.474	10.468	0.006	98	2518000	8.00	8.71	
59 1,4-Dioxane	88	10.491	10.497	-0.006	37	353467	8.00	8.11	
60 Methyl methacrylate	41	10.647	10.649	-0.002	90	922467	8.00	9.24	
61 Methylcyclohexane	83	11.116	11.109	0.007	93	1459181	8.00	8.27	
62 4-Methyl-2-pentanone (MIBK)	43	11.542	11.552	-0.010	91	1416282	8.00	8.90	
63 cis-1,3-Dichloropropene	75	11.580	11.577	0.003	95	1532867	8.00	8.85	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	97	1677181	8.00	8.92	
65 Toluene	91	12.475	12.471	0.004	92	3103222	8.00	8.04	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	90	846792	8.00	8.27	
69 2-Hexanone	58	12.993	13.003	-0.010	95	738442	8.00	9.15	
70 Chlorodibromomethane	129	13.262	13.258	0.004	95	2812660	8.00	9.43	
71 n-Octane	85	13.327	13.326	0.001	75	1000926	8.00	8.14	
72 Ethylene Dibromide	107	13.559	13.551	0.008	93	1926667	8.00	8.59	
73 Tetrachloroethene	129	13.699	13.695	0.004	93	1498188	8.00	7.84	
74 Chlorobenzene	112	14.610	14.606	0.004	91	2714425	8.00	8.05	
75 2,3-Dimethylheptane	43	14.751	14.750	0.000	77	1819678	8.00	8.04	
76 Ethylbenzene	91	14.945	14.943	0.002	99	4515180	8.00	8.12	
78 m-Xylene & p-Xylene	91	15.123	15.119	0.004	99	7245395	16.0	15.9	
79 Bromoform	173	15.505	15.507	-0.002	96	2987666	8.00	9.53	
80 Styrene	104	15.597	15.594	0.003	93	2732738	8.00	9.14	
82 o-Xylene	91	15.656	15.655	0.001	77	3789404	8.00	7.91	
81 n-Nonane	57	15.662	15.659	0.003	72	1427330	8.00	7.86	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	93	2143813	8.00	8.80	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	1003093	8.00	8.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.287	16.283	0.004	98	5375264	8.00	7.88	
86 N-Propylbenzene	120	16.859	16.856	0.003	96	1538516	8.00	8.22	
87 2-Chlorotoluene	126	16.870	16.867	0.003	93	1366689	8.00	7.89	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	5946732	8.00	8.40	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	90	2393487	8.00	8.26	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	84	2523695	8.00	9.16	
91 n-Decane	57	17.533	17.532	0.001	95	2090024	8.00	8.09	
92 tert-Butylbenzene	119	17.592	17.590	0.002	64	5469769	8.00	7.75	
93 1,2,4-Trimethylbenzene	105	17.608	17.605	0.003	94	5126755	8.00	7.93	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	3707873	8.00	7.94	
95 sec-Butylbenzene	105	17.905	17.902	0.003	74	6942238	8.00	7.95	
96 Benzyl chloride	91	17.964	17.962	0.002	97	4487660	8.00	9.00	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	92	3610216	8.00	7.70	
98 4-Isopropyltoluene	119	18.099	18.095	0.004	94	7014221	8.00	7.95	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	5581569	8.00	8.04	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	3064197	8.00	8.02	
101 1,2-Dichlorobenzene	146	18.374	18.370	0.004	93	3498467	8.00	7.60	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	88	4473280	8.00	7.81	
103 Indene	116	18.520	18.520	0.000	87	4170791	8.00	8.87	
104 n-Butylbenzene	91	18.579	18.580	-0.001	95	5666096	8.00	7.89	
105 Undecane	57	19.005	19.001	0.004	85	2383371	8.00	7.79	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	97	2000539	8.00	8.92	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.405	0.005	95	6434741	8.00	7.73	
110 Dodecane	57	20.132	20.128	0.004	90	2322024	8.00	7.25	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	3522363	8.00	7.08	
113 Naphthalene	128	20.332	20.329	0.003	98	6820345	8.00	6.78	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	85	3886960	8.00	6.72	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	92	3177370	8.00	6.65	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	2060557	8.00	6.45	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	1675488	8.00	5.95	
A 120 C8 Range	1	13.343	(13.284-13.381)		0	7753468	8.00	8.27	
S 121 Xylenes, Total	100				0		24.0	23.8	
S 122 1,2-Dichloroethene, Total	1				0		16.0	15.9	

Reagents:

40L10DQP_00007

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D

Injection Date: 16-Nov-2018 17:23:30

Instrument ID: MR

Operator ID:

Lims ID: IC L9

Worklist Smp#: 3

Client ID:

Purge Vol: 500.000 mL

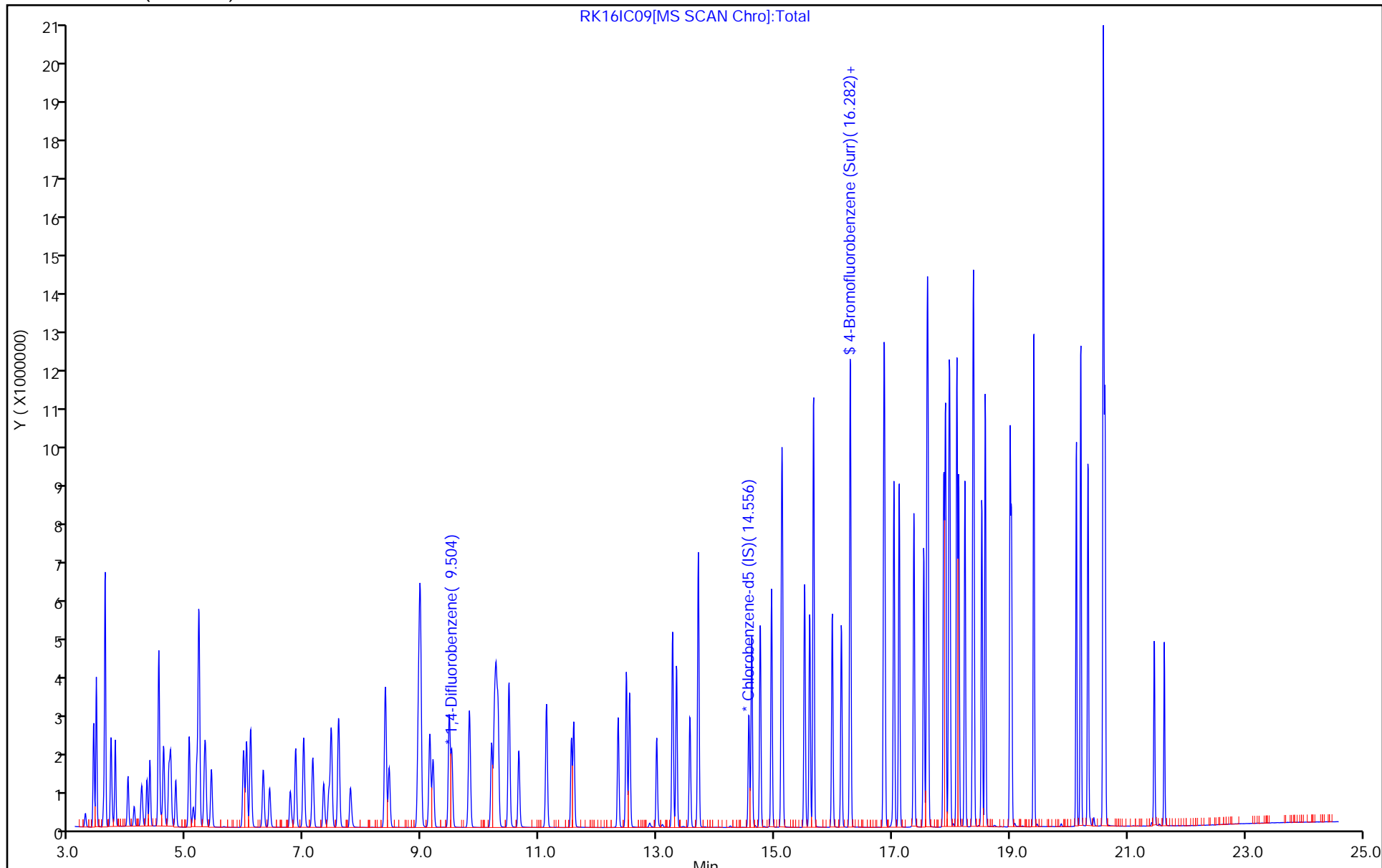
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC09.D

Injection Date: 16-Nov-2018 17:23:30

Instrument ID: MR

Lims ID: IC L9

Client ID:

Operator ID:

ALS Bottle#:

15

Worklist Smp#:

3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

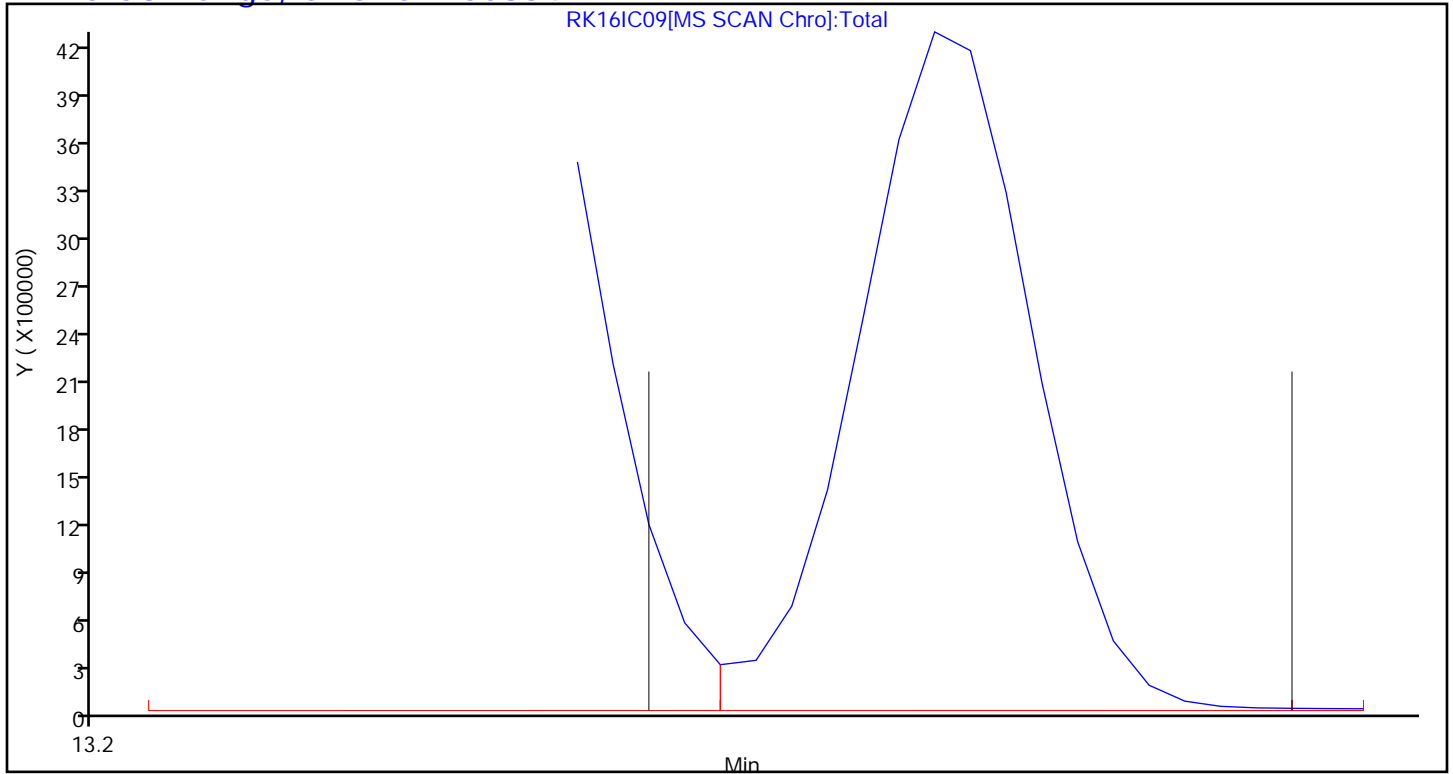
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 16-Nov-2018 19:07:30 ALS Bottle#: 15 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-005
 Misc. Info.: 190391
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:37 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 09:41:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.422	7.397	0.025	70	319466	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.515	9.494	0.020	95	1770477	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.562	14.555	0.007	89	1651474	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	84	1332053	4.00	3.79	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	96	2786793	16.0	14.7	
7 Propene	41	3.416	3.420	-0.004	92	851034	16.0	14.6	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	100	4789313	16.0	13.8	
9 Chloromethane	52	3.588	3.586	0.002	98	337068	16.0	13.8	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	89	3420506	16.0	13.2	
11 Acetaldehyde	44	3.718	3.710	0.008	94	1587481	80.0	69.5	
12 Vinyl chloride	62	3.712	3.711	0.001	99	1163551	16.0	13.6	
13 Butadiene	54	3.782	3.780	0.002	89	792495	16.0	15.3	
14 Butane	43	3.782	3.782	0.000	89	1311043	16.0	14.5	
15 Bromomethane	94	4.004	3.995	0.009	97	1463890	16.0	14.8	
16 Chloroethane	64	4.111	4.100	0.011	96	574974	16.0	14.5	
17 Ethanol	31	4.241	4.222	0.019	93	1740692	80.0	72.7	
18 Vinyl bromide	106	4.327	4.315	0.012	97	1560991	16.0	15.0	
19 2-Methylbutane	43	4.376	4.369	0.007	78	948871	16.0	14.9	
20 Acrolein	56	4.527	4.516	0.011	97	308108	16.0	15.3	
21 Trichlorofluoromethane	101	4.532	4.517	0.015	100	6733950	16.0	14.3	
22 Acetonitrile	40	4.575	4.545	0.030	95	345458	16.0	16.7	
23 Acetone	58	4.618	4.605	0.013	100	1363433	48.0	41.1	
24 Pentane	72	4.699	4.693	0.006	93	240067	16.0	14.9	
25 Isopropyl alcohol	45	4.737	4.716	0.021	98	4022317	48.0	44.5	
26 Ethyl ether	31	4.818	4.817	0.001	74	826066	16.0	15.5	
27 1,1-Dichloroethene	96	5.050	5.033	0.017	97	1690964	16.0	15.0	
28 Acrylonitrile	53	5.120	5.097	0.023	90	806690	16.0	16.1	
29 2-Methyl-2-propanol	59	5.179	5.173	0.006	92	3270376	16.0	15.3	
30 1,1,2-Trichloro-1,2,2-trif	101	5.211	5.199	0.012	92	4035478	16.0	14.5	
31 Methylene Chloride	84	5.308	5.290	0.018	89	1360585	16.0	12.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.330	5.309	0.021	85	1650820	16.0	15.8	
33 Carbon disulfide	76	5.427	5.410	0.017	99	4188128	16.0	15.7	
34 trans-1,2-Dichloroethene	96	5.972	5.951	0.021	97	1753401	16.0	15.3	
35 2-Methylpentane	43	6.026	6.011	0.015	84	2316982	16.0	15.3	
36 Methyl tert-butyl ether	73	6.090	6.094	-0.004	93	5673760	16.0	15.6	
37 1,1-Dichloroethane	63	6.311	6.283	0.028	98	2868475	16.0	14.9	
38 Vinyl acetate	43	6.419	6.402	0.017	98	3211124	16.0	17.3	
39 2-Butanone (MEK)	72	6.770	6.761	0.009	97	695780	16.0	16.0	
40 Hexane	56	6.861	6.845	0.016	81	1026278	16.0	15.4	
171 Isopropyl ether	45	6.996	6.989	0.007	86	3587859	16.0	15.6	
41 cis-1,2-Dichloroethene	96	7.153	7.127	0.026	94	1779827	16.0	15.4	
42 Ethyl acetate	43	7.336	7.330	0.006	98	2697533	16.0	16.8	
43 Chloroform	83	7.465	7.439	0.026	98	4583947	16.0	15.0	
173 Tert-butyl ethyl ether	59	7.589	7.580	0.009	92	5236388	16.0	15.8	
44 Tetrahydrofuran	42	7.789	7.793	-0.004	75	1129072	16.0	16.0	
45 1,1,1-Trichloroethane	97	8.382	8.364	0.018	95	6008857	16.0	15.5	
46 1,2-Dichloroethane	62	8.447	8.427	0.020	97	3480930	16.0	15.5	
47 Benzene	78	8.943	8.920	0.023	98	4217712	16.0	14.6	
48 Cyclohexane	69	8.964	8.951	0.013	91	645373	16.0	15.1	
50 Carbon tetrachloride	117	8.981	8.962	0.019	98	6567265	16.0	16.2	
49 n-Butanol	31	8.959	8.969	-0.010	72	360622	16.0	17.6	
51 2,3-Dimethylpentane	71	9.142	9.126	0.016	83	966448	16.0	16.2	
52 Thiophene	84	9.196	9.174	0.022	94	2658371	16.0	16.1	
53 Isooctane	57	9.811	9.798	0.013	95	5790015	16.0	15.7	
54 1,2-Dichloropropane	63	10.194	10.175	0.019	76	1430590	16.0	15.8	
55 n-Heptane	71	10.237	10.224	0.013	82	1463381	16.0	15.9	
56 Trichloroethene	130	10.269	10.250	0.019	95	2639630	16.0	15.2	
57 Dibromomethane	93	10.296	10.279	0.017	93	2441282	16.0	15.7	
58 Dichlorobromomethane	83	10.485	10.468	0.017	98	4943175	16.0	17.0	
59 1,4-Dioxane	88	10.496	10.497	-0.001	86	675333	16.0	15.3	
60 Methyl methacrylate	41	10.652	10.649	0.003	90	1828238	16.0	18.2	
61 Methylcyclohexane	83	11.121	11.109	0.012	92	2870166	16.0	16.1	
62 4-Methyl-2-pentanone (MIBK)	43	11.547	11.552	-0.005	91	2798783	16.0	17.4	
63 cis-1,3-Dichloropropene	75	11.585	11.577	0.008	96	3009068	16.0	17.2	
64 trans-1,3-Dichloropropene	75	12.340	12.332	0.008	97	3381888	16.0	17.5	
65 Toluene	91	12.480	12.471	0.009	93	6012505	16.0	15.2	
66 1,1,2-Trichloroethane	83	12.534	12.527	0.007	93	1619482	16.0	15.4	
69 2-Hexanone	58	12.998	13.003	-0.005	95	1478910	16.0	17.9	
70 Chlorodibromomethane	129	13.268	13.258	0.010	97	5503585	16.0	18.0	
71 n-Octane	85	13.332	13.326	0.006	73	1936591	16.0	15.4	
72 Ethylene Dibromide	107	13.559	13.551	0.008	97	3761382	16.0	16.3	
73 Tetrachloroethene	129	13.704	13.695	0.009	96	2918044	16.0	14.9	
74 Chlorobenzene	112	14.610	14.606	0.004	92	5263414	16.0	15.2	
75 2,3-Dimethylheptane	43	14.756	14.750	0.006	76	3470701	16.0	14.9	
76 Ethylbenzene	91	14.950	14.943	0.007	99	8578718	16.0	15.0	
78 m-Xylene & p-Xylene	91	15.128	15.119	0.009	98	13520878	32.0	28.9	
79 Bromoform	173	15.511	15.507	0.004	96	5904670	16.0	18.4	
80 Styrene	104	15.597	15.594	0.003	97	5258738	16.0	17.1	
82 o-Xylene	91	15.662	15.655	0.007	97	7137002	16.0	14.5	
81 n-Nonane	57	15.662	15.659	0.003	72	2663319	16.0	14.3	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	93	4060026	16.0	16.3	
84 1,2,3-Trichloropropane	110	16.136	16.132	0.004	92	1925261	16.0	15.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.287	16.283	0.004	98	10111819	16.0	14.5	
86 N-Propylbenzene	120	16.859	16.856	0.003	98	2931395	16.0	15.3	
87 2-Chlorotoluene	126	16.870	16.867	0.003	94	2595696	16.0	14.6	
88 4-Ethyltoluene	105	17.031	17.027	0.004	97	10941125	16.0	15.1	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	4520211	16.0	15.2	
90 Alpha Methyl Styrene	118	17.371	17.366	0.005	85	4814736	16.0	17.0	
91 n-Decane	57	17.538	17.532	0.006	96	3864099	16.0	14.6	
92 tert-Butylbenzene	119	17.598	17.590	0.008	89	10102100	16.0	14.0	
93 1,2,4-Trimethylbenzene	105	17.614	17.605	0.009	96	9441765	16.0	14.2	
94 1,3-Dichlorobenzene	146	17.878	17.874	0.004	98	6991250	16.0	14.6	
95 sec-Butylbenzene	105	17.910	17.902	0.008	97	12374020	16.0	13.8	
96 Benzyl chloride	91	17.970	17.962	0.008	97	8537696	16.0	16.7	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	92	6830228	16.0	14.2	
98 4-Isopropyltoluene	119	18.099	18.095	0.004	94	12712650	16.0	14.1	
99 1,2,3-Trimethylbenzene	105	18.132	18.127	0.005	98	10276226	16.0	14.4	
100 Butylcyclohexane	83	18.239	18.232	0.007	90	5583243	16.0	14.3	
101 1,2-Dichlorobenzene	146	18.374	18.370	0.004	95	6628325	16.0	14.0	
102 2,3-Dihydroindene	117	18.390	18.383	0.007	93	8276746	16.0	14.1	
103 Indene	116	18.525	18.520	0.005	90	7874065	16.0	16.3	
104 n-Butylbenzene	91	18.584	18.580	0.004	97	10272864	16.0	13.9	
105 Undecane	57	19.005	19.001	0.004	85	4439100	16.0	14.2	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	98	3914341	16.0	17.0	
107 1,2,4,5-Tetramethylbenzene	119	19.410	19.405	0.005	96	12213199	16.0	14.3	
110 Dodecane	57	20.132	20.128	0.004	87	4919414	16.0	15.0	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	7444026	16.0	14.6	
113 Naphthalene	128	20.332	20.329	0.003	97	13677643	16.0	13.3	e
115 Hexachlorobutadiene	225	20.596	20.590	0.006	96	8160248	16.0	13.8	
116 1,2,3-Trichlorobenzene	180	20.623	20.618	0.005	94	7108780	16.0	14.5	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	6192720	16.0	18.9	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	5133017	16.0	17.8	
A 120 C8 Range	1	13.348	(13.284-13.381)		0	14589114	16.0	15.4	
S 121 Xylenes, Total	100				0		48.0	43.4	
S 122 1,2-Dichloroethene, Total	1				0		32.0	30.7	

QC Flag Legend

Processing Flags

e - Potential Peak Saturated

Reagents:

40L10DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D

Injection Date: 16-Nov-2018 19:07:30

Instrument ID: MR

Operator ID:

Lims ID: IC L10

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

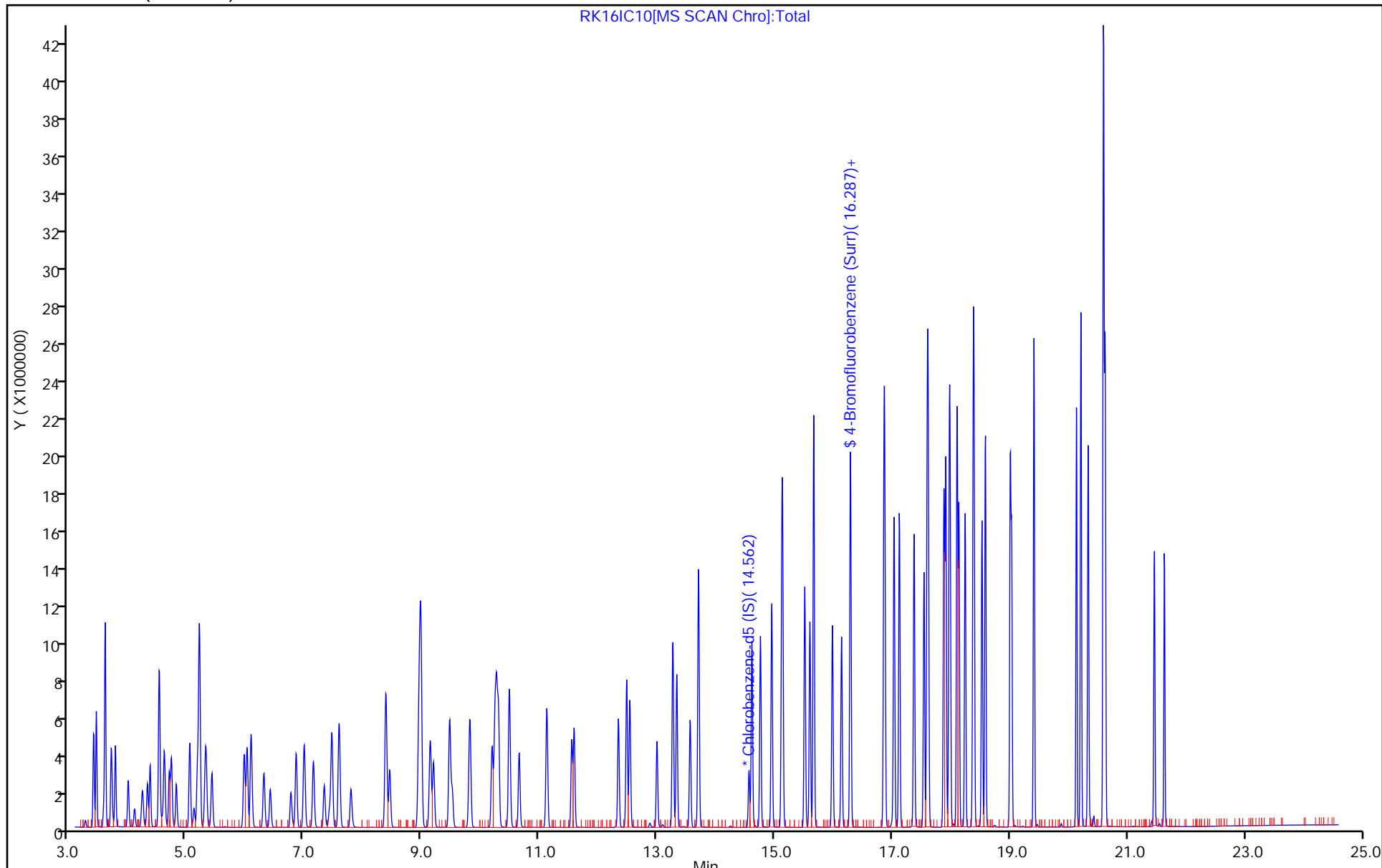
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC10.D

Injection Date: 16-Nov-2018 19:07:30

Instrument ID: MR

Lims ID: IC L10

Client ID:

Operator ID:

ALS Bottle#:

15

Worklist Smp#:

5

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

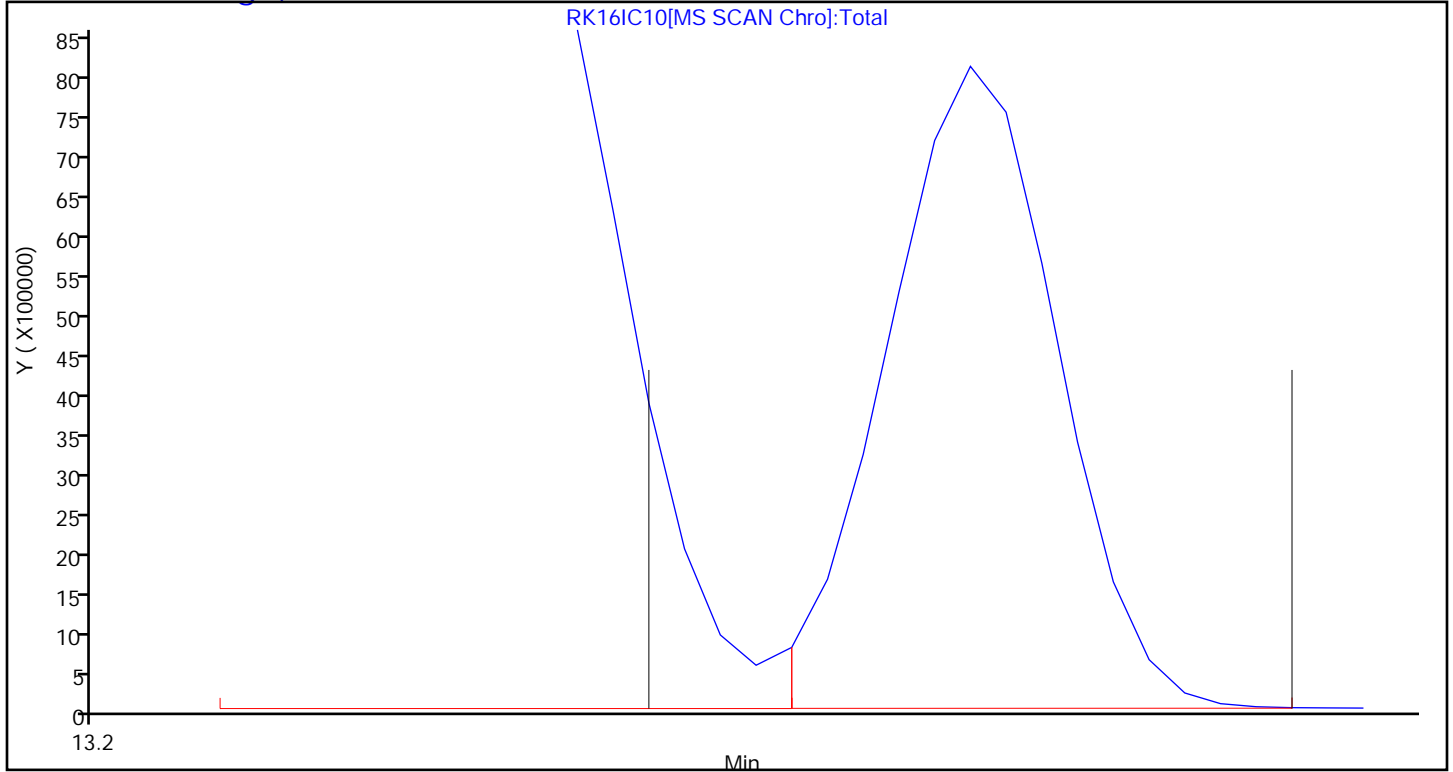
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 16-Nov-2018 21:42:30 ALS Bottle#: 1 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-008
 Misc. Info.: 191045
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:45 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:13:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	270371	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1547161	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1331283	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1129964	4.00	3.99	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	92	4967	0.0200	0.0310	
7 Propene	41	3.416	3.420	-0.004	55	1914	0.0200	0.0388	
8 Dichlorodifluoromethane	85	3.454	3.461	-0.007	99	8536	0.0200	0.0290	
9 Chloromethane	52	3.594	3.586	0.008	56	1365	0.0200	0.0660	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	85	5703	0.0200	0.0260	
11 Acetaldehyde	44	3.712	3.710	0.002	96	5299	0.1000	0.2741	
12 Vinyl chloride	62	3.707	3.711	-0.004	48	1811	0.0200	0.0250	
13 Butadiene	54	3.777	3.780	-0.003	80	1171	0.0200	0.0266	
14 Butane	43	3.777	3.782	-0.005	67	2106	0.0200	0.0275	
15 Bromomethane	94	3.982	3.995	-0.013	91	3340	0.0200	0.0400	
16 Chloroethane	64	4.095	4.100	-0.005	54	1060	0.0200	0.0316	
17 Ethanol	31	4.230	4.222	0.008	85	2602	0.1000	0.1285	
18 Vinyl bromide	106	4.311	4.315	-0.004	93	2112	0.0200	0.0240	
19 2-Methylbutane	43	4.370	4.369	0.001	74	1411	0.0200	0.0261	
20 Acrolein	56	4.527	4.516	0.011	26	1199	0.0200	0.0702	
21 Trichlorofluoromethane	101	4.511	4.517	-0.006	99	9029	0.0200	0.0226	
22 Acetonitrile	40	4.462	4.545	-0.083	58	291	0.0200	0.0166	
23 Acetone	58	4.613	4.605	0.008	99	4528	0.0600	0.1614	
24 Pentane	72	4.694	4.693	0.001	68	224	0.0200	0.0165	
25 Isopropyl alcohol	45	4.732	4.716	0.016	91	7411	0.0600	0.0969	
26 Ethyl ether	31	4.839	4.817	0.022	57	905	0.0200	0.0201	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	96	2217	0.0200	0.0233	
28 Acrylonitrile	53	5.088	5.097	-0.009	49	399	0.0200	0.009404	
29 2-Methyl-2-propanol	59	5.201	5.173	0.028	73	3567	0.0200	0.0197	
30 1,1,2-Trichloro-1,2,2-trif	101	5.190	5.199	-0.009	88	5091	0.0200	0.0216	
31 Methylene Chloride	84	5.282	5.290	-0.008	89	10784	0.0200	0.1192	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	61	1958	0.0200	0.0221	
33 Carbon disulfide	76	5.400	5.410	-0.010	98	5154	0.0200	0.0228	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	89	2153	0.0200	0.0222	
35 2-Methylpentane	43	6.004	6.011	-0.007	85	3091	0.0200	0.0241	
36 Methyl tert-butyl ether	73	6.128	6.094	0.034	91	6785	0.0200	0.0220	
37 1,1-Dichloroethane	63	6.268	6.283	-0.015	96	3625	0.0200	0.0223	
38 Vinyl acetate	43	6.409	6.402	0.007	98	3011	0.0200	0.0192	
40 Hexane	56	6.845	6.845	0.000	79	1159	0.0200	0.0205	
171 Isopropyl ether	45	7.002	6.989	0.013	84	3919	0.0200	0.0202	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	92	2190	0.0200	0.0224	
42 Ethyl acetate	43	7.358	7.330	0.028	33	2159	0.0200	0.0159	
43 Chloroform	83	7.428	7.439	-0.011	90	5723	0.0200	0.0222	
44 Tetrahydrofuran	42	7.821	7.793	0.028	63	1324	0.0200	0.0221	
45 1,1,1-Trichloroethane	97	8.350	8.364	-0.014	95	6720	0.0200	0.0205	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	4162	0.0200	0.0213	
47 Benzene	78	8.911	8.920	-0.009	97	5827	0.0200	0.0231	
48 Cyclohexane	69	8.948	8.951	-0.003	69	709	0.0200	0.0189	
50 Carbon tetrachloride	117	8.959	8.962	-0.003	90	7141	0.0200	0.0201	
51 2,3-Dimethylpentane	71	9.126	9.126	0.000	81	1016	0.0200	0.0195	
52 Thiophene	84	9.164	9.174	-0.010	90	3146	0.0200	0.0218	
53 Isooctane	57	9.790	9.798	-0.008	82	3563	0.0200	0.0110	
54 1,2-Dichloropropane	63	10.167	10.175	-0.008	81	1807	0.0200	0.0228	
55 n-Heptane	71	10.232	10.224	0.008	58	1584	0.0200	0.0197	
56 Trichloroethene	130	10.243	10.250	-0.007	88	3243	0.0200	0.0213	
57 Dibromomethane	93	10.275	10.279	-0.004	93	3779	0.0200	0.0278	
60 Methyl methacrylate	41	10.652	10.649	0.003	1	1037	0.0200	0.0118	
61 Methylcyclohexane	83	11.100	11.109	-0.009	90	2938	0.0200	0.0189	
62 4-Methyl-2-pentanone (MIBK)	43	11.585	11.552	0.033	58	1793	0.0200	0.0128	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	93	2757	0.0200	0.0181	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	93	3115	0.0200	0.0200	
65 Toluene	91	12.470	12.471	-0.001	91	6779	0.0200	0.0212	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	89	1557	0.0200	0.0184	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	93	4430	0.0200	0.0180	
71 n-Octane	85	13.327	13.326	0.001	66	2061	0.0200	0.0203	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	91	3322	0.0200	0.0179	
73 Tetrachloroethene	129	13.699	13.695	0.004	88	3234	0.0200	0.0205	
74 Chlorobenzene	112	14.610	14.606	0.004	84	5465	0.0200	0.0196	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	74	3791	0.0200	0.0202	
76 Ethylbenzene	91	14.945	14.943	0.002	98	9121	0.0200	0.0198	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	99	14827	0.0400	0.0393	
79 Bromoform	173	15.506	15.507	-0.001	93	3956	0.0200	0.0153	
80 Styrene	104	15.603	15.594	0.009	93	3532	0.0200	0.0143	
82 o-Xylene	91	15.657	15.655	0.002	94	7608	0.0200	0.0192	
81 n-Nonane	57	15.657	15.659	-0.002	69	2778	0.0200	0.0185	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	88	3859	0.0200	0.0192	
84 1,2,3-Trichloropropane	110	16.136	16.132	0.004	93	1899	0.0200	0.0190	
85 Isopropylbenzene	105	16.282	16.283	-0.001	46	13150	0.0200	0.0233	
86 N-Propylbenzene	120	16.859	16.856	0.003	96	2952	0.0200	0.0191	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	2686	0.0200	0.0187	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	10337	0.0200	0.0177	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	4521	0.0200	0.0189	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	88	2640	0.0200	0.0116	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
91 n-Decane	57	17.528	17.532	-0.004	92	3562	0.0200	0.0167	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	11027	0.0200	0.0189	
93 1,2,4-Trimethylbenzene	105	17.609	17.605	0.004	96	9514	0.0200	0.0178	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	96	7986	0.0200	0.0207	
95 sec-Butylbenzene	105	17.905	17.902	0.003	96	13837	0.0200	0.0192	
96 Benzyl chloride	91	17.959	17.962	-0.003	96	6895	0.0200	0.0167	
97 1,4-Dichlorobenzene	146	17.981	17.977	0.004	93	8118	0.0200	0.0209	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	14042	0.0200	0.0193	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	10719	0.0200	0.0187	
100 Butylcyclohexane	83	18.234	18.232	0.002	93	5805	0.0200	0.0184	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	90	7793	0.0200	0.0205	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	93	9654	0.0200	0.0204	
103 Indene	116	18.520	18.520	0.000	89	5834	0.0200	0.0150	
104 n-Butylbenzene	91	18.585	18.580	0.005	95	12135	0.0200	0.0204	
105 Undecane	57	19.005	19.001	0.004	86	5832	0.0200	0.0231	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	93	3364	0.0200	0.0181	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	15662	0.0200	0.0228	
110 Dodecane	57	20.127	20.128	-0.001	89	9191	0.0200	0.0347	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	93	13993	0.0200	0.0340	
113 Naphthalene	128	20.332	20.329	0.003	98	24682	0.0200	0.0297	
115 Hexachlorobutadiene	225	20.585	20.590	-0.005	95	19167	0.0200	0.0401	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	93	17493	0.0200	0.0443	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	96	6762	0.0200	0.0256	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	99	10187	0.0200	0.0437	
A 120 C8 Range	1	13.332	(13.295-13.359)		0	15685	0.0200	0.0190	
S 121 Xylenes, Total	100				0		0.0600	0.0585	
S 122 1,2-Dichloroethene, Total	1				0		0.0400	0.0446	

Reagents:

40L1-3DQP_00010

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D

Injection Date: 16-Nov-2018 21:42:30

Instrument ID: MR

Operator ID:

Lims ID: IC L1

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

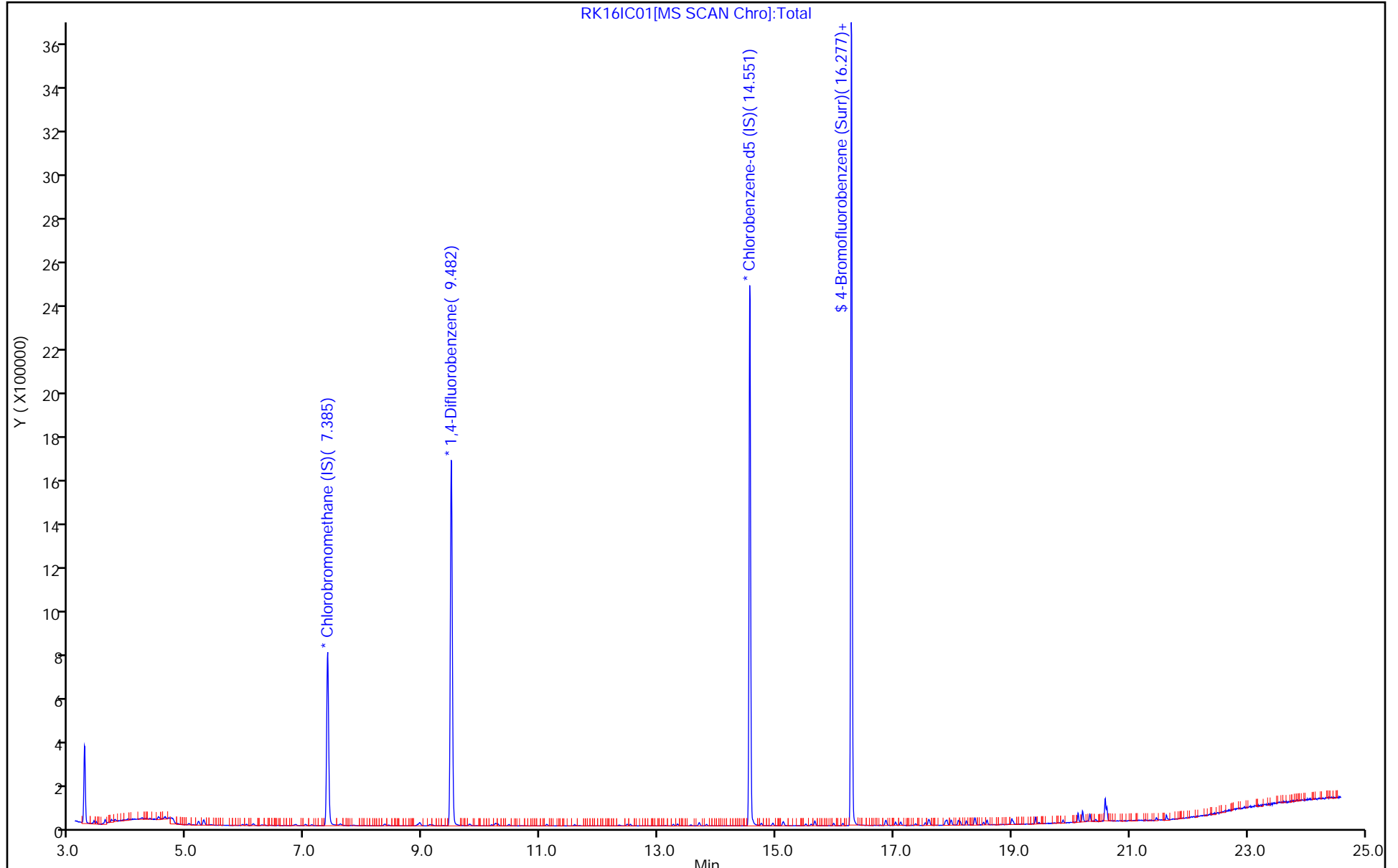
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC01.D

Injection Date: 16-Nov-2018 21:42:30

Instrument ID: MR

Lims ID: IC L1

Client ID:

Operator ID:

ALS Bottle#:

1

Worklist Smp#:

8

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

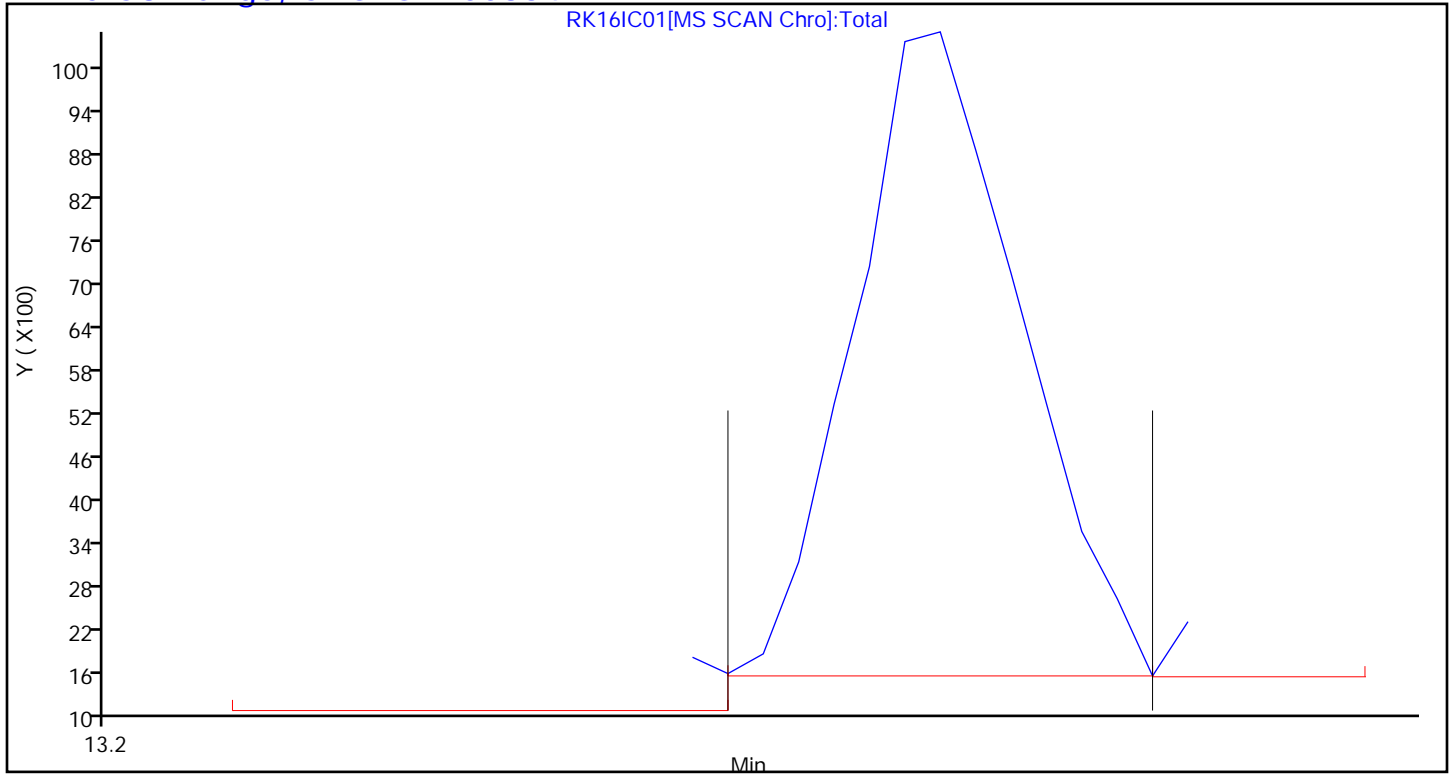
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 16-Nov-2018 22:34:30 ALS Bottle#: 1 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-009
 Misc. Info.: 191045
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:50 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh Date: 19-Nov-2018 10:19:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.397	-0.007	70	260596	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1479125	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1285854	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1096528	4.00	4.01	
6 Chlorodifluoromethane	51	3.432	3.417	0.015	95	7544	0.0400	0.0488	
7 Propene	41	3.427	3.420	0.007	52	2713	0.0400	0.0571	
8 Dichlorodifluoromethane	85	3.470	3.461	0.009	100	14537	0.0400	0.0513	
9 Chloromethane	52	3.594	3.586	0.008	93	1035	0.0400	0.0519	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.615	3.609	0.006	89	10161	0.0400	0.0481	
11 Acetaldehyde	44	3.723	3.710	0.013	97	9143	0.2000	0.4906	
12 Vinyl chloride	62	3.718	3.711	0.007	52	3480	0.0400	0.0498	
13 Butadiene	54	3.788	3.780	0.008	74	1929	0.0400	0.0455	
14 Butane	43	3.788	3.782	0.006	74	3557	0.0400	0.0482	
15 Bromomethane	94	4.004	3.995	0.009	94	4039	0.0400	0.0502	
16 Chloroethane	64	4.106	4.100	0.006	80	1538	0.0400	0.0475	
17 Ethanol	31	4.225	4.222	0.003	91	4623	0.2000	0.2368	
18 Vinyl bromide	106	4.316	4.315	0.001	94	4463	0.0400	0.0526	
19 2-Methylbutane	43	4.370	4.369	0.001	75	2381	0.0400	0.0457	
20 Acrolein	56	4.516	4.516	0.000	28	1003	0.0400	0.0609	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	98	16343	0.0400	0.0424	
22 Acetonitrile	40	4.548	4.545	0.003	68	183	0.0400	0.0109	
23 Acetone	58	4.618	4.605	0.013	99	6843	0.1200	0.2531	
24 Pentane	72	4.694	4.693	0.001	57	764	0.0400	0.0583	
25 Isopropyl alcohol	45	4.721	4.716	0.005	95	10421	0.1200	0.1414	
26 Ethyl ether	31	4.834	4.817	0.017	76	1931	0.0400	0.0445	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	3786	0.0400	0.0413	
28 Acrylonitrile	53	5.098	5.097	0.001	78	1777	0.0400	0.0435	
29 2-Methyl-2-propanol	59	5.190	5.173	0.017	73	6749	0.0400	0.0387	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	92	9384	0.0400	0.0413	
31 Methylene Chloride	84	5.292	5.290	0.002	88	11735	0.0400	0.1346	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.308	5.309	-0.001	61	3483	0.0400	0.0408	
33 Carbon disulfide	76	5.411	5.410	0.001	97	8992	0.0400	0.0413	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	97	4125	0.0400	0.0441	
35 2-Methylpentane	43	6.004	6.011	-0.007	81	5672	0.0400	0.0460	
36 Methyl tert-butyl ether	73	6.112	6.094	0.018	93	12232	0.0400	0.0411	
37 1,1-Dichloroethane	63	6.274	6.283	-0.009	97	6968	0.0400	0.0445	
38 Vinyl acetate	43	6.409	6.402	0.007	97	5742	0.0400	0.0380	
39 2-Butanone (MEK)	72	6.791	6.761	0.030	97	1330	0.0400	0.0375	
40 Hexane	56	6.845	6.845	0.000	80	2274	0.0400	0.0418	
171 Isopropyl ether	45	7.002	6.989	0.013	86	7835	0.0400	0.0419	
41 cis-1,2-Dichloroethene	96	7.115	7.127	-0.012	96	3898	0.0400	0.0413	
42 Ethyl acetate	43	7.347	7.330	0.017	97	5081	0.0400	0.0388	
43 Chloroform	83	7.428	7.439	-0.011	87	10674	0.0400	0.0429	
173 Tert-butyl ethyl ether	59	7.589	7.580	0.009	92	10439	0.0400	0.0387	
44 Tetrahydrofuran	42	7.816	7.793	0.023	76	2575	0.0400	0.0446	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	94	13014	0.0400	0.0412	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	7880	0.0400	0.0421	
47 Benzene	78	8.911	8.920	-0.009	86	10465	0.0400	0.0434	
48 Cyclohexane	69	8.948	8.951	-0.003	60	1344	0.0400	0.0375	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	94	13947	0.0400	0.0411	
51 2,3-Dimethylpentane	71	9.115	9.126	-0.011	81	2179	0.0400	0.0437	
52 Thiophene	84	9.169	9.174	-0.005	90	5500	0.0400	0.0399	
53 Isooctane	57	9.800	9.798	0.002	94	11906	0.0400	0.0386	
54 1,2-Dichloropropane	63	10.178	10.175	0.003	78	2944	0.0400	0.0389	
55 n-Heptane	71	10.216	10.224	-0.008	79	2941	0.0400	0.0382	
56 Trichloroethene	130	10.237	10.250	-0.013	92	5696	0.0400	0.0392	
57 Dibromomethane	93	10.269	10.279	-0.010	87	5842	0.0400	0.0450	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	97	8635	0.0400	0.0355	
59 1,4-Dioxane	88	10.523	10.497	0.026	27	1245	0.0400	0.0339	
60 Methyl methacrylate	41	10.668	10.649	0.019	86	2528	0.0400	0.0300	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	5955	0.0400	0.0400	
62 4-Methyl-2-pentanone (MIBK)	43	11.569	11.552	0.017	61	3006	0.0400	0.0224	
63 cis-1,3-Dichloropropene	75	11.580	11.577	0.003	91	5376	0.0400	0.0368	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	5189	0.0400	0.0345	
65 Toluene	91	12.464	12.471	-0.007	92	11744	0.0400	0.0381	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	90	3120	0.0400	0.0382	
69 2-Hexanone	58	13.036	13.003	0.033	1	1297	0.0400	0.0201	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	93	7451	0.0400	0.0313	
71 n-Octane	85	13.327	13.326	0.001	79	3598	0.0400	0.0367	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	6066	0.0400	0.0339	
73 Tetrachloroethene	129	13.694	13.695	-0.001	89	6255	0.0400	0.0410	
74 Chlorobenzene	112	14.600	14.606	-0.006	96	10833	0.0400	0.0402	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	74	6840	0.0400	0.0378	
76 Ethylbenzene	91	14.945	14.943	0.002	99	17474	0.0400	0.0393	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	28347	0.0800	0.0778	
79 Bromoform	173	15.511	15.507	0.004	92	6657	0.0400	0.0266	
80 Styrene	104	15.592	15.594	-0.002	97	6834	0.0400	0.0286	
82 o-Xylene	91	15.656	15.655	0.001	96	14440	0.0400	0.0377	
81 n-Nonane	57	15.662	15.659	0.003	71	5104	0.0400	0.0352	
83 1,1,2,2-Tetrachloroethane	83	15.980	15.976	0.004	89	6581	0.0400	0.0338	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	91	3252	0.0400	0.0337	
85 Isopropylbenzene	105	16.282	16.283	-0.001	47	23558	0.0400	0.0433	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	16.859	16.856	0.003	96	5565	0.0400	0.0372	
87 2-Chlorotoluene	126	16.870	16.867	0.003	91	5132	0.0400	0.0371	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	20634	0.0400	0.0365	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	89	8388	0.0400	0.0362	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	83	5656	0.0400	0.0257	
91 n-Decane	57	17.533	17.532	0.001	94	7343	0.0400	0.0356	
92 tert-Butylbenzene	119	17.592	17.590	0.002	89	21429	0.0400	0.0380	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	19133	0.0400	0.0370	
94 1,3-Dichlorobenzene	146	17.878	17.874	0.004	97	14097	0.0400	0.0378	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	27386	0.0400	0.0392	
96 Benzyl chloride	91	17.964	17.962	0.002	87	13082	0.0400	0.0328	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	90	14770	0.0400	0.0395	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	27559	0.0400	0.0391	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	20298	0.0400	0.0366	
100 Butylcyclohexane	83	18.234	18.232	0.002	91	12105	0.0400	0.0397	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	15537	0.0400	0.0422	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	91	17767	0.0400	0.0388	
103 Indene	116	18.520	18.520	0.000	89	11379	0.0400	0.0303	
104 n-Butylbenzene	91	18.579	18.580	-0.001	98	21840	0.0400	0.0381	
105 Undecane	57	19.000	19.001	-0.001	85	11356	0.0400	0.0465	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	92	6080	0.0400	0.0339	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	28122	0.0400	0.0423	
110 Dodecane	57	20.132	20.128	0.004	92	20145	0.0400	0.0788	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	93	24325	0.0400	0.0613	
113 Naphthalene	128	20.332	20.329	0.003	98	44394	0.0400	0.0553	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	36463	0.0400	0.0790	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	95	30595	0.0400	0.0802	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	96	7926	0.0400	0.0311	
118 1-Methylnaphthalene	142	21.631	21.626	0.005	97	11502	0.0400	0.0511	
A 120 C8 Range	1	13.332	(13.295-13.359)		0	31729	0.0400	0.0402	
S 121 Xylenes, Total	100				0		0.1200	0.1155	
S 122 1,2-Dichloroethene, Total	1				0		0.0800	0.0854	

Reagents:

40L1-3DQP_00010

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D

Injection Date: 16-Nov-2018 22:34:30

Instrument ID: MR

Operator ID:

Lims ID: IC L2

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

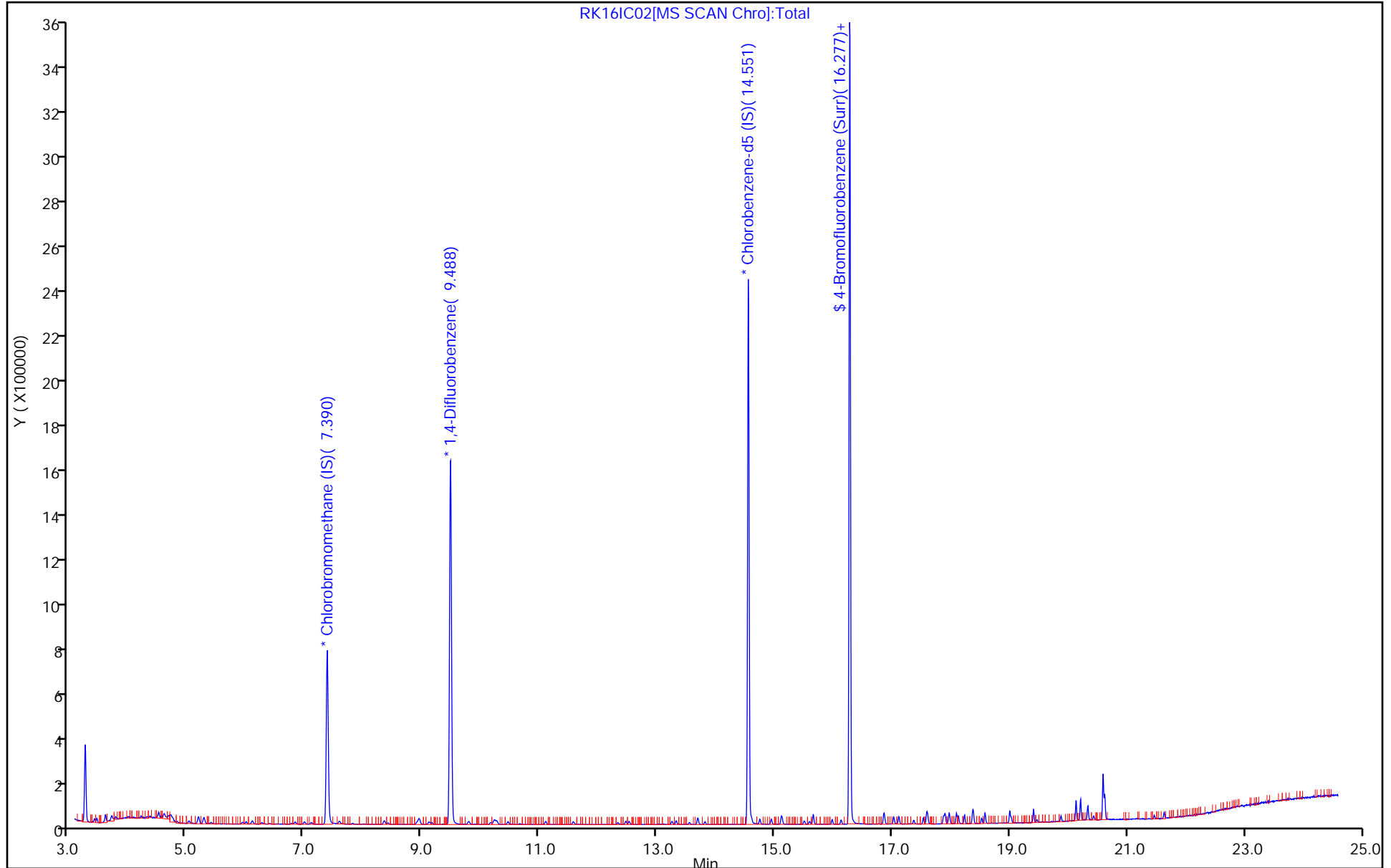
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC02.D

Injection Date: 16-Nov-2018 22:34:30

Instrument ID: MR

Lims ID: IC L2

Client ID:

Operator ID:

ALS Bottle#:

1

Worklist Smp#:

9

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

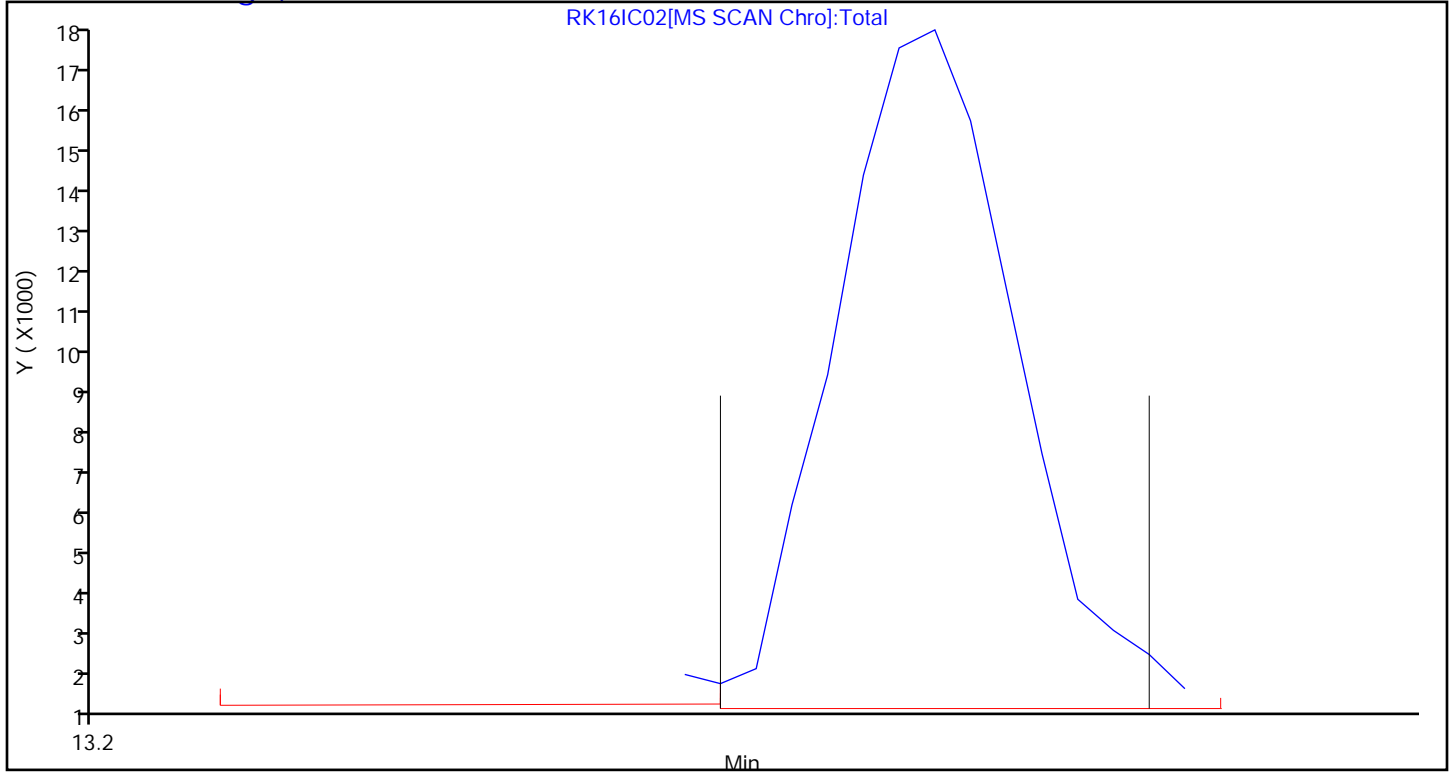
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 16-Nov-2018 23:27:30 ALS Bottle#: 2 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-010
 Misc. Info.: 190398
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:54 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:20:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.395	7.397	-0.002	80	259070	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.494	-0.001	95	1455868	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	90	1271256	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	90	1100173	4.00	4.07	
6 Chlorodifluoromethane	51	3.437	3.417	0.020	94	13488	0.0800	0.0877	
7 Propene	41	3.432	3.420	0.012	55	5125	0.0800	0.1085	
8 Dichlorodifluoromethane	85	3.475	3.461	0.014	99	23530	0.0800	0.0835	
9 Chloromethane	52	3.594	3.586	0.008	98	2235	0.0800	0.1127	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.621	3.609	0.012	88	16805	0.0800	0.0801	
11 Acetaldehyde	44	3.723	3.710	0.013	93	15383	0.4000	0.8304	
12 Vinyl chloride	62	3.723	3.711	0.012	49	5811	0.0800	0.0836	
13 Butadiene	54	3.793	3.780	0.013	81	3945	0.0800	0.0936	
14 Butane	43	3.799	3.782	0.017	77	6822	0.0800	0.0930	
15 Bromomethane	94	4.009	3.995	0.014	94	7392	0.0800	0.0924	
16 Chloroethane	64	4.106	4.100	0.006	95	3121	0.0800	0.0970	
17 Ethanol	31	4.225	4.222	0.003	94	11273	0.4000	0.5808	
18 Vinyl bromide	106	4.327	4.315	0.012	95	7520	0.0800	0.0892	
19 2-Methylbutane	43	4.381	4.369	0.012	80	4476	0.0800	0.0864	
20 Acrolein	56	4.527	4.516	0.011	30	2267	0.0800	0.1384	
21 Trichlorofluoromethane	101	4.527	4.517	0.010	98	32292	0.0800	0.0843	
22 Acetonitrile	40	4.559	4.545	0.014	52	776	0.0800	0.0463	
23 Acetone	58	4.618	4.605	0.013	100	12343	0.2400	0.4592	
24 Pentane	72	4.699	4.693	0.006	91	1155	0.0800	0.0887	
25 Isopropyl alcohol	45	4.721	4.716	0.005	97	22445	0.2400	0.3063	
26 Ethyl ether	31	4.834	4.817	0.017	69	3716	0.0800	0.0861	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	96	7294	0.0800	0.0800	
28 Acrylonitrile	53	5.098	5.097	0.001	97	3780	0.0800	0.0930	
29 2-Methyl-2-propanol	59	5.190	5.173	0.017	96	13889	0.0800	0.0801	
30 1,1,2-Trichloro-1,2,2-trif	101	5.211	5.199	0.012	93	19377	0.0800	0.0857	
31 Methylene Chloride	84	5.298	5.290	0.008	89	14815	0.0800	0.1710	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	83	6102	0.0800	0.0720	
33 Carbon disulfide	76	5.422	5.410	0.012	99	17438	0.0800	0.0806	
34 trans-1,2-Dichloroethene	96	5.956	5.951	0.005	95	7397	0.0800	0.0795	
35 2-Methylpentane	43	6.020	6.011	0.009	84	10171	0.0800	0.0829	
36 Methyl tert-butyl ether	73	6.112	6.094	0.018	92	24609	0.0800	0.0832	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	96	12813	0.0800	0.0823	
38 Vinyl acetate	43	6.409	6.402	0.007	97	10473	0.0800	0.0697	
39 2-Butanone (MEK)	72	6.775	6.761	0.014	96	2930	0.0800	0.0831	
40 Hexane	56	6.845	6.845	0.000	80	4675	0.0800	0.0864	
171 Isopropyl ether	45	7.002	6.989	0.013	83	15025	0.0800	0.0807	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	94	7431	0.0800	0.0792	
42 Ethyl acetate	43	7.336	7.330	0.006	96	9377	0.0800	0.0720	
43 Chloroform	83	7.439	7.439	0.000	91	19866	0.0800	0.0803	
173 Tert-butyl ethyl ether	59	7.595	7.580	0.015	93	21806	0.0800	0.0813	
44 Tetrahydrofuran	42	7.816	7.793	0.023	77	4556	0.0800	0.0794	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	93	25970	0.0800	0.0828	
46 1,2-Dichloroethane	62	8.431	8.427	0.004	97	15042	0.0800	0.0816	
47 Benzene	78	8.921	8.920	0.001	98	20437	0.0800	0.0862	
48 Cyclohexane	69	8.954	8.951	0.003	70	3013	0.0800	0.0855	
50 Carbon tetrachloride	117	8.965	8.962	0.003	95	21947	0.0800	0.0658	
49 n-Butanol	31	9.008	8.969	0.039	1	1240	0.0800	0.0737	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	80	3528	0.0800	0.0718	
52 Thiophene	84	9.169	9.174	-0.005	94	10374	0.0800	0.0764	
53 Isooctane	57	9.800	9.798	0.002	94	25192	0.0800	0.0830	
54 1,2-Dichloropropane	63	10.172	10.175	-0.003	72	6201	0.0800	0.0833	
55 n-Heptane	71	10.226	10.224	0.002	81	5754	0.0800	0.0759	
56 Trichloroethene	130	10.253	10.250	0.003	92	11668	0.0800	0.0816	
57 Dibromomethane	93	10.275	10.279	-0.004	91	10846	0.0800	0.0848	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	17387	0.0800	0.0725	
59 1,4-Dioxane	88	10.507	10.497	0.010	90	2726	0.0800	0.0753	
60 Methyl methacrylate	41	10.658	10.649	0.009	88	6227	0.0800	0.0752	
61 Methylcyclohexane	83	11.111	11.109	0.002	93	11565	0.0800	0.0790	
62 4-Methyl-2-pentanone (MIBK)	43	11.564	11.552	0.012	79	9056	0.0800	0.0686	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	94	10488	0.0800	0.0730	
64 trans-1,3-Dichloropropene	75	12.335	12.332	0.003	96	10066	0.0800	0.0678	
65 Toluene	91	12.470	12.471	-0.001	93	24790	0.0800	0.0814	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	91	6520	0.0800	0.0807	
69 2-Hexanone	58	13.020	13.003	0.017	93	3236	0.0800	0.0508	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	16103	0.0800	0.0683	
71 n-Octane	85	13.327	13.326	0.001	72	7429	0.0800	0.0766	
72 Ethylene Dibromide	107	13.553	13.551	0.002	97	12712	0.0800	0.0718	
73 Tetrachloroethene	129	13.694	13.695	-0.001	93	12031	0.0800	0.0797	
74 Chlorobenzene	112	14.605	14.606	-0.001	91	21742	0.0800	0.0817	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	76	14645	0.0800	0.0819	
76 Ethylbenzene	91	14.945	14.943	0.002	99	35735	0.0800	0.0814	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	59080	0.1600	0.1640	
79 Bromoform	173	15.506	15.507	-0.001	94	14982	0.0800	0.0605	
80 Styrene	104	15.592	15.594	-0.002	96	15265	0.0800	0.0646	
82 o-Xylene	91	15.656	15.655	0.001	95	32097	0.0800	0.0848	
81 n-Nonane	57	15.662	15.659	0.003	72	11326	0.0800	0.0790	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	88	14484	0.0800	0.0753	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	91	7400	0.0800	0.0776	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	48	46548	0.0800	0.0865	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	11527	0.0800	0.0780	
87 2-Chlorotoluene	126	16.870	16.867	0.003	93	11745	0.0800	0.0858	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	45329	0.0800	0.0811	
89 1,3,5-Trimethylbenzene	120	17.118	17.115	0.003	91	18627	0.0800	0.0814	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	87	12787	0.0800	0.0588	
91 n-Decane	57	17.528	17.532	-0.004	95	15703	0.0800	0.0769	
92 tert-Butylbenzene	119	17.592	17.590	0.002	89	46562	0.0800	0.0836	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	42935	0.0800	0.0841	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	31633	0.0800	0.0858	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	57824	0.0800	0.0838	
96 Benzyl chloride	91	17.964	17.962	0.002	97	27963	0.0800	0.0710	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	91	31188	0.0800	0.0843	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	56711	0.0800	0.0814	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	97	47349	0.0800	0.0863	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	24822	0.0800	0.0823	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	94	31984	0.0800	0.0879	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	92	37591	0.0800	0.0831	
103 Indene	116	18.520	18.520	0.000	91	26287	0.0800	0.0708	
104 n-Butylbenzene	91	18.579	18.580	-0.001	98	46679	0.0800	0.0823	
105 Undecane	57	19.000	19.001	-0.001	90	20015	0.0800	0.0829	
106 1,2-Dibromo-3-Chloropropan	157	19.032	19.028	0.004	95	11163	0.0800	0.0630	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	96	54539	0.0800	0.0830	
110 Dodecane	57	20.127	20.128	-0.001	89	22733	0.0800	0.0899	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	36794	0.0800	0.0937	
113 Naphthalene	128	20.332	20.329	0.003	98	71658	0.0800	0.0903	
115 Hexachlorobutadiene	225	20.591	20.590	0.000	96	43683	0.0800	0.0957	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	36693	0.0800	0.0972	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	22514	0.0800	0.0893	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	96	25106	0.0800	0.1129	
A 120 C8 Range	1	13.335	(13.289-13.365)		0	65978	0.0800	0.0849	
S 121 Xylenes, Total	100				0		0.2400	0.2488	
S 122 1,2-Dichloroethene, Total	1				0		0.1600	0.1588	

Reagents:

40L1-3DQP_00009

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D

Injection Date: 16-Nov-2018 23:27:30

Instrument ID: MR

Operator ID:

Lims ID: IC L3

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

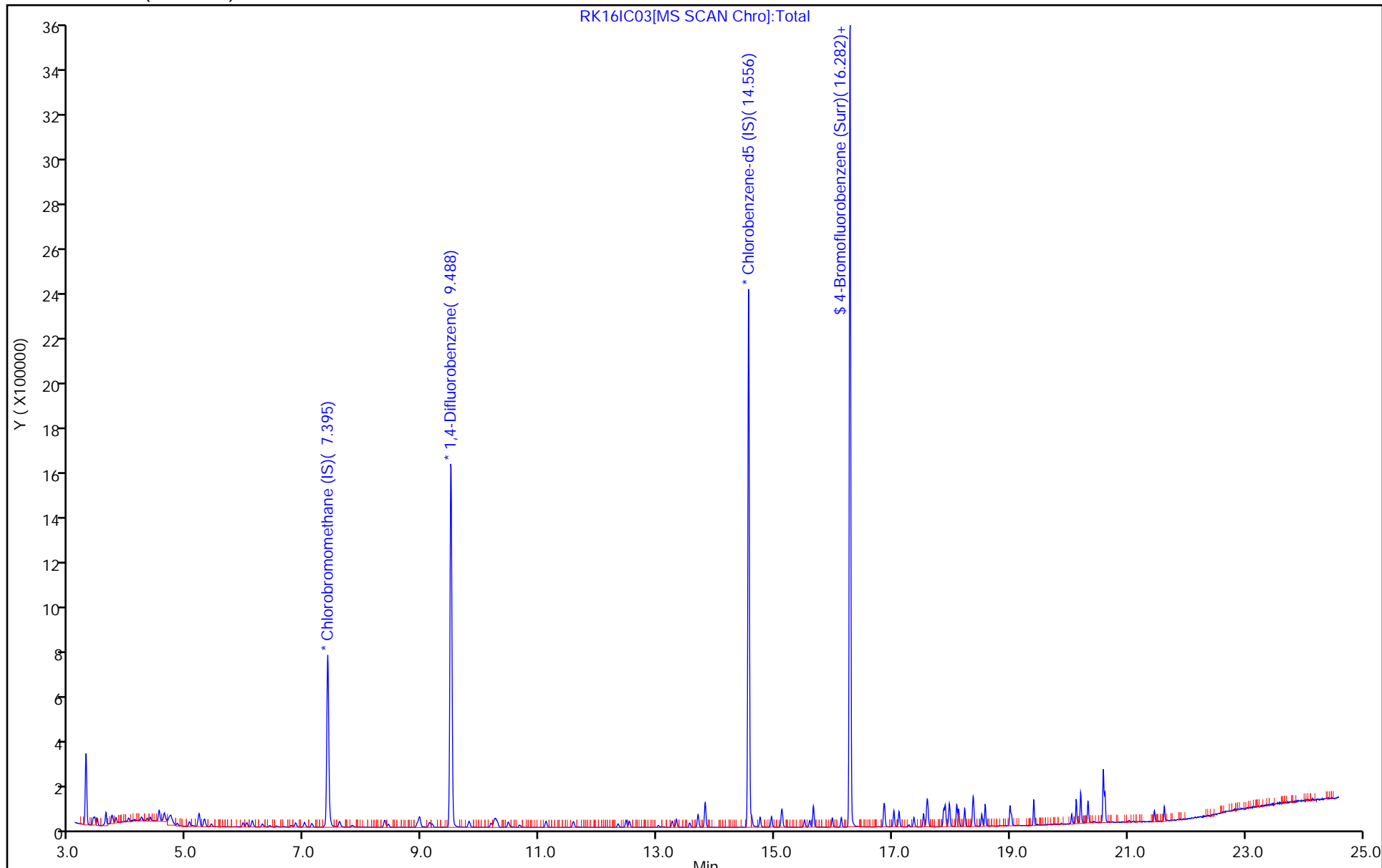
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC03.D

Injection Date: 16-Nov-2018 23:27:30

Instrument ID: MR

Lims ID: IC L3

Client ID:

Operator ID:

ALS Bottle#: 2

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

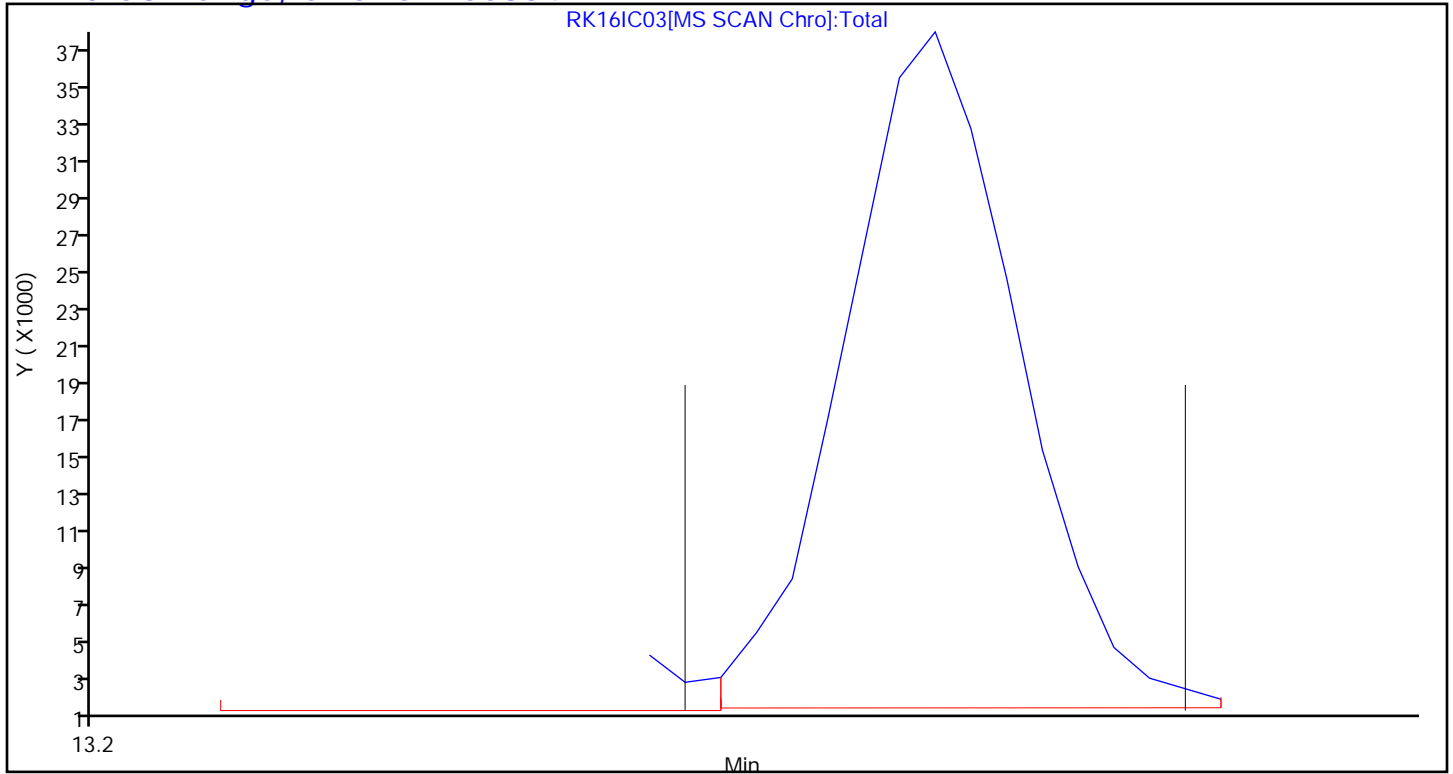
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 17-Nov-2018 00:20:30 ALS Bottle#: 3 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-011
 Misc. Info.: 190397
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:59 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:30:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	266212	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	95	1504650	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1298874	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	89	1123241	4.00	4.07	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	96	27178	0.1600	0.1721	
7 Propene	41	3.421	3.420	0.001	49	8965	0.1600	0.1846	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	45214	0.1600	0.1561	
9 Chloromethane	52	3.583	3.586	-0.003	98	3152	0.1600	0.1547	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.605	3.609	-0.004	89	33908	0.1600	0.1572	
11 Acetaldehyde	44	3.707	3.710	-0.003	91	22123	0.8000	1.16	
12 Vinyl chloride	62	3.707	3.711	-0.004	60	11775	0.1600	0.1649	
13 Butadiene	54	3.777	3.780	-0.003	78	7472	0.1600	0.1726	
14 Butane	43	3.777	3.782	-0.005	77	12514	0.1600	0.1661	
15 Bromomethane	94	3.993	3.995	-0.002	95	13519	0.1600	0.1644	
16 Chloroethane	64	4.095	4.100	-0.005	97	5876	0.1600	0.1777	
17 Ethanol	31	4.209	4.222	-0.013	91	17498	0.8000	0.8773	
18 Vinyl bromide	106	4.306	4.315	-0.009	96	14410	0.1600	0.1663	
19 2-Methylbutane	43	4.365	4.369	-0.004	80	9090	0.1600	0.1708	
20 Acrolein	56	4.516	4.516	0.000	29	3617	0.1600	0.2150	
21 Trichlorofluoromethane	101	4.511	4.517	-0.006	100	64156	0.1600	0.1630	
22 Acetonitrile	40	4.548	4.545	0.003	95	2801	0.1600	0.1627	
23 Acetone	58	4.597	4.605	-0.008	100	18402	0.4800	0.6662	
24 Pentane	72	4.688	4.693	-0.005	90	2568	0.1600	0.1919	
25 Isopropyl alcohol	45	4.705	4.716	-0.011	97	40201	0.4800	0.5338	
26 Ethyl ether	31	4.818	4.817	0.001	78	7549	0.1600	0.1703	
27 1,1-Dichloroethene	96	5.023	5.033	-0.010	96	14740	0.1600	0.1573	
28 Acrylonitrile	53	5.088	5.097	-0.009	93	6563	0.1600	0.1571	
29 2-Methyl-2-propanol	59	5.163	5.173	-0.010	96	28891	0.1600	0.1621	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	91	37596	0.1600	0.1619	
31 Methylene Chloride	84	5.276	5.290	-0.014	88	21540	0.1600	0.2419	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.298	5.309	-0.011	83	15229	0.1600	0.1748	
33 Carbon disulfide	76	5.400	5.410	-0.010	99	34577	0.1600	0.1555	
34 trans-1,2-Dichloroethene	96	5.939	5.951	-0.012	97	14785	0.1600	0.1547	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	20556	0.1600	0.1631	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	47525	0.1600	0.1563	
37 1,1-Dichloroethane	63	6.268	6.283	-0.015	96	24630	0.1600	0.1540	
38 Vinyl acetate	43	6.387	6.402	-0.015	98	21613	0.1600	0.1399	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	97	6132	0.1600	0.1692	
40 Hexane	56	6.840	6.845	-0.005	80	8962	0.1600	0.1612	
171 Isopropyl ether	45	6.986	6.989	-0.003	87	30112	0.1600	0.1575	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	96	15197	0.1600	0.1577	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	20428	0.1600	0.1526	
43 Chloroform	83	7.422	7.439	-0.017	90	40040	0.1600	0.1575	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	93	42934	0.1600	0.1558	
44 Tetrahydrofuran	42	7.794	7.793	0.001	70	9354	0.1600	0.1586	
45 1,1,1-Trichloroethane	97	8.355	8.364	-0.009	94	50545	0.1600	0.1568	
46 1,2-Dichloroethane	62	8.415	8.427	-0.012	98	29238	0.1600	0.1535	
47 Benzene	78	8.911	8.920	-0.009	98	37991	0.1600	0.1550	
48 Cyclohexane	69	8.948	8.951	-0.003	61	5770	0.1600	0.1584	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	95	54395	0.1600	0.1577	
49 n-Butanol	31	8.997	8.969	0.028	35	1642	0.1600	0.0945	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	7686	0.1600	0.1514	
52 Thiophene	84	9.164	9.174	-0.010	94	21711	0.1600	0.1548	
53 Isooctane	57	9.790	9.798	-0.008	95	49245	0.1600	0.1569	
54 1,2-Dichloropropane	63	10.173	10.175	-0.003	75	11982	0.1600	0.1557	
55 n-Heptane	71	10.210	10.224	-0.014	80	11910	0.1600	0.1520	
56 Trichloroethene	130	10.243	10.250	-0.007	91	22698	0.1600	0.1536	
57 Dibromomethane	93	10.270	10.279	-0.009	91	21454	0.1600	0.1623	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	35620	0.1600	0.1438	
59 1,4-Dioxane	88	10.507	10.497	0.010	85	5968	0.1600	0.1596	
60 Methyl methacrylate	41	10.647	10.649	-0.002	88	10629	0.1600	0.1242	
61 Methylcyclohexane	83	11.105	11.109	-0.004	93	23124	0.1600	0.1528	
62 4-Methyl-2-pentanone (MIBK)	43	11.553	11.552	0.001	90	17423	0.1600	0.1277	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	96	21150	0.1600	0.1424	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	22215	0.1600	0.1464	
65 Toluene	91	12.470	12.471	-0.001	93	49243	0.1600	0.1582	
66 1,1,2-Trichloroethane	83	12.529	12.527	0.002	92	13406	0.1600	0.1623	
69 2-Hexanone	58	13.009	13.003	0.006	93	7267	0.1600	0.1116	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	33778	0.1600	0.1403	
71 n-Octane	85	13.322	13.326	-0.004	72	15759	0.1600	0.1589	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	98	25676	0.1600	0.1419	
73 Tetrachloroethene	129	13.688	13.695	-0.007	93	25138	0.1600	0.1630	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	43900	0.1600	0.1614	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	77	29630	0.1600	0.1622	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	69322	0.1600	0.1545	
78 m-Xylene & p-Xylene	91	15.123	15.119	0.004	100	119367	0.3200	0.3243	
79 Bromoform	173	15.506	15.507	-0.001	95	32037	0.1600	0.1267	
80 Styrene	104	15.592	15.594	-0.002	97	32117	0.1600	0.1331	
82 o-Xylene	91	15.657	15.655	0.002	97	63851	0.1600	0.1652	
81 n-Nonane	57	15.657	15.659	-0.002	76	23460	0.1600	0.1601	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	92	30142	0.1600	0.1534	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	92	15160	0.1600	0.1556	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	50	91067	0.1600	0.1655	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	24106	0.1600	0.1596	
87 2-Chlorotoluene	126	16.870	16.867	0.003	94	22951	0.1600	0.1642	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	91082	0.1600	0.1594	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	90	37553	0.1600	0.1606	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	89	28257	0.1600	0.1271	
91 n-Decane	57	17.533	17.532	0.001	96	33292	0.1600	0.1597	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	90	97365	0.1600	0.1710	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	88253	0.1600	0.1692	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	61425	0.1600	0.1631	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	98	116417	0.1600	0.1652	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	54221	0.1600	0.1348	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	92	63275	0.1600	0.1674	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	116224	0.1600	0.1634	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	98	92640	0.1600	0.1654	
100 Butylcyclohexane	83	18.229	18.232	-0.003	93	50956	0.1600	0.1654	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	62682	0.1600	0.1687	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	92	77218	0.1600	0.1671	
103 Indene	116	18.520	18.520	0.000	90	56129	0.1600	0.1480	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	97253	0.1600	0.1678	
105 Undecane	57	19.000	19.001	-0.001	87	40009	0.1600	0.1622	
106 1,2-Dibromo-3-Chloropropan	157	19.021	19.028	-0.007	94	24464	0.1600	0.1352	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	111338	0.1600	0.1659	
110 Dodecane	57	20.127	20.128	-0.001	90	45141	0.1600	0.1747	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	72153	0.1600	0.1799	
113 Naphthalene	128	20.326	20.329	-0.003	98	142183	0.1600	0.1753	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	96	81808	0.1600	0.1754	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	94	72007	0.1600	0.1868	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	50645	0.1600	0.1965	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	98	54962	0.1600	0.2418	
A 120 C8 Range	1	13.337	(13.284-13.370)		0	123442	0.1600	0.1536	
S 121 Xylenes, Total	100				0		0.4800	0.4895	
S 122 1,2-Dichloroethene, Total	1				0		0.3200	0.3124	

Reagents:

40L4DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D

Injection Date: 17-Nov-2018 00:20:30

Instrument ID: MR

Operator ID:

Lims ID: IC L4

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

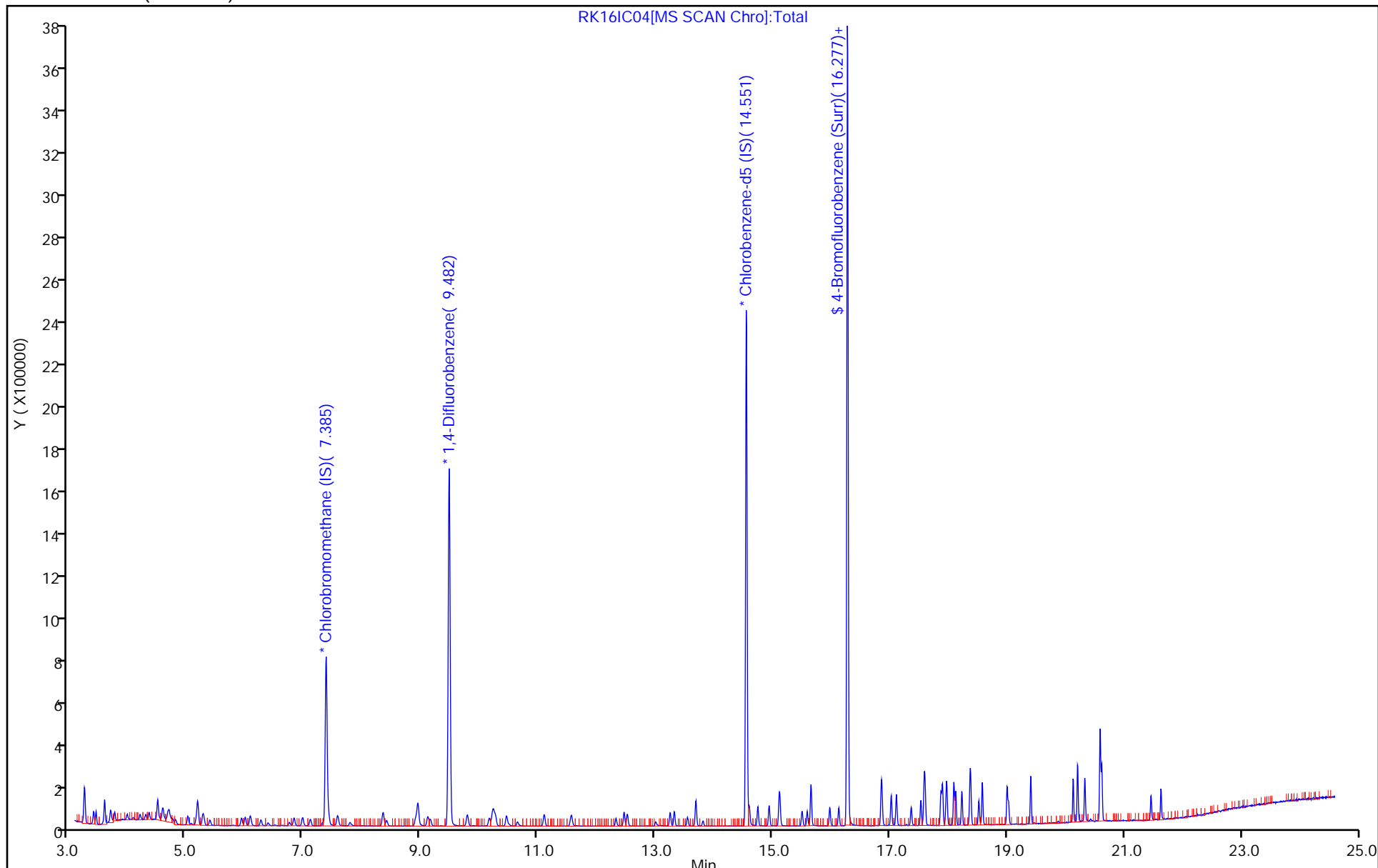
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC04.D

Injection Date: 17-Nov-2018 00:20:30

Instrument ID: MR

Lims ID: IC L4

Client ID:

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

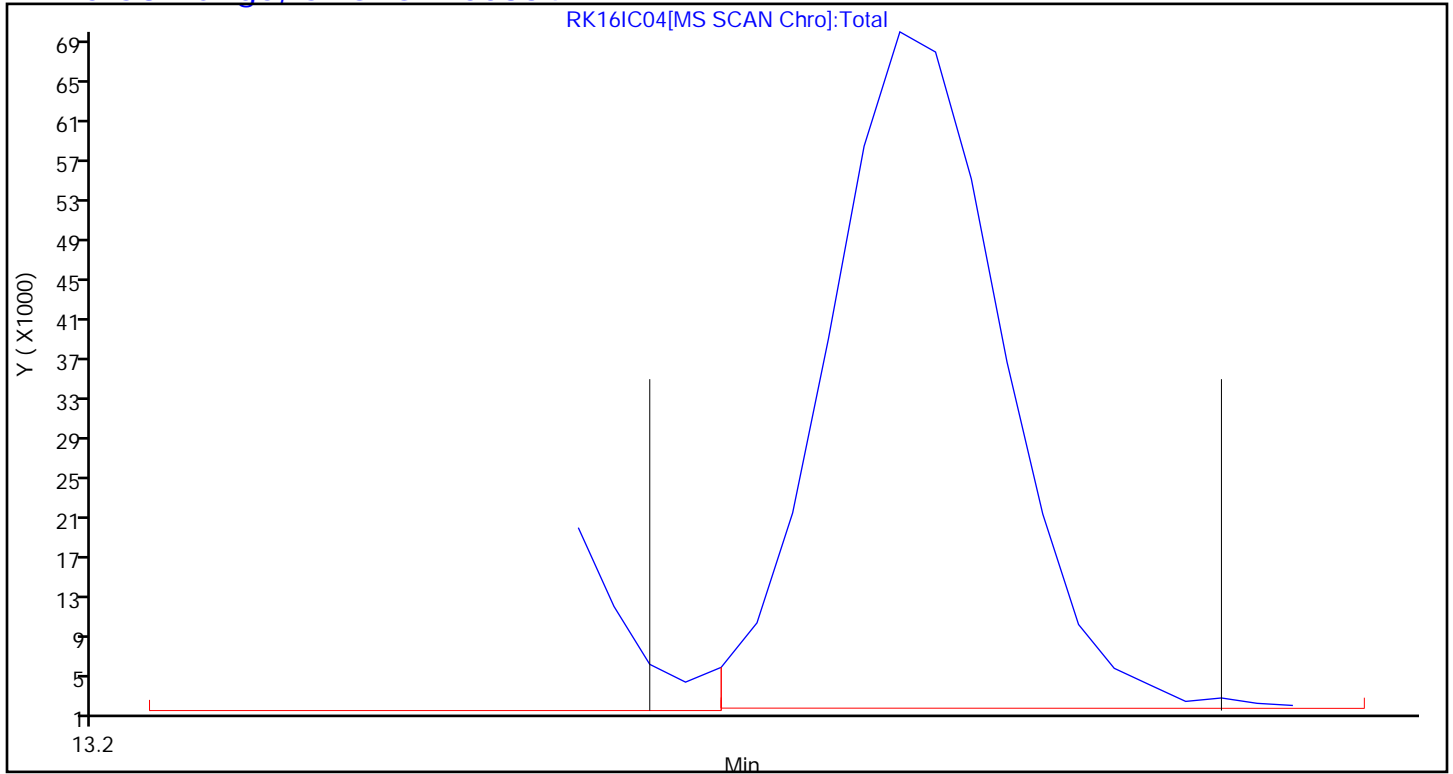
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK161C05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 17-Nov-2018 01:12:30 ALS Bottle#: 4 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-012
 Misc. Info.: 190395
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:05 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK161C08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 19-Nov-2018 10:25:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.397	-0.012	70	275927	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1558367	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	90	1354086	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	90	1170099	4.00	4.06	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	95	67965	0.4000	0.4151	
7 Propene	41	3.410	3.420	-0.010	48	20715	0.4000	0.4116	
8 Dichlorodifluoromethane	85	3.448	3.461	-0.013	100	146259	0.4000	0.4871	
9 Chloromethane	52	3.572	3.586	-0.014	99	9302	0.4000	0.4405	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.599	3.609	-0.010	90	98065	0.4000	0.4387	
11 Acetaldehyde	44	3.696	3.710	-0.014	93	45673	2.00	2.31	
12 Vinyl chloride	62	3.702	3.711	-0.009	85	28814	0.4000	0.3893	
13 Butadiene	54	3.766	3.780	-0.014	83	18132	0.4000	0.4040	
14 Butane	43	3.772	3.782	-0.010	78	33375	0.4000	0.4274	
15 Bromomethane	94	3.982	3.995	-0.013	96	35058	0.4000	0.4114	
16 Chloroethane	64	4.084	4.100	-0.016	95	13655	0.4000	0.3983	
17 Ethanol	31	4.209	4.222	-0.014	92	43508	2.00	2.10	
18 Vinyl bromide	106	4.300	4.315	-0.015	96	37233	0.4000	0.4146	
19 2-Methylbutane	43	4.359	4.369	-0.010	78	23067	0.4000	0.4180	
20 Acrolein	56	4.510	4.516	-0.006	28	6392	0.4000	0.3665	
21 Trichlorofluoromethane	101	4.505	4.517	-0.012	99	164680	0.4000	0.4038	
22 Acetonitrile	40	4.548	4.545	0.003	98	6701	0.4000	0.3756	
23 Acetone	58	4.597	4.605	-0.008	100	35521	1.20	1.24	
24 Pentane	72	4.683	4.693	-0.010	91	5613	0.4000	0.4046	
25 Isopropyl alcohol	45	4.705	4.716	-0.011	97	95103	1.20	1.22	
26 Ethyl ether	31	4.807	4.817	-0.010	72	19232	0.4000	0.4185	
27 1,1-Dichloroethene	96	5.023	5.033	-0.010	98	37945	0.4000	0.3908	
28 Acrylonitrile	53	5.087	5.097	-0.010	95	17259	0.4000	0.3986	
29 2-Methyl-2-propanol	59	5.168	5.173	-0.005	95	74242	0.4000	0.4020	
30 1,1,2-Trichloro-1,2,2-trif	101	5.190	5.199	-0.009	94	97989	0.4000	0.4071	
31 Methylene Chloride	84	5.276	5.290	-0.014	90	41401	0.4000	0.4485	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.298	5.309	-0.011	83	36262	0.4000	0.4015	
33 Carbon disulfide	76	5.395	5.410	-0.015	99	91945	0.4000	0.3990	
34 trans-1,2-Dichloroethene	96	5.939	5.951	-0.012	97	38175	0.4000	0.3854	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	53163	0.4000	0.4069	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	126834	0.4000	0.4025	
37 1,1-Dichloroethane	63	6.274	6.283	-0.009	98	65086	0.4000	0.3927	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	59429	0.4000	0.3713	
39 2-Butanone (MEK)	72	6.754	6.761	-0.007	97	14067	0.4000	0.3744	
40 Hexane	56	6.835	6.845	-0.010	81	23112	0.4000	0.4012	
171 Isopropyl ether	45	6.980	6.989	-0.009	85	80134	0.4000	0.4043	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	95	38474	0.4000	0.3852	
42 Ethyl acetate	43	7.320	7.330	-0.010	98	53019	0.4000	0.3820	
43 Chloroform	83	7.433	7.439	-0.006	89	104204	0.4000	0.3954	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	92	113240	0.4000	0.3965	
44 Tetrahydrofuran	42	7.784	7.793	-0.009	77	24371	0.4000	0.3987	
45 1,1,1-Trichloroethane	97	8.355	8.364	-0.009	94	130803	0.4000	0.3915	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	76773	0.4000	0.3892	
47 Benzene	78	8.911	8.920	-0.009	98	96837	0.4000	0.3814	
48 Cyclohexane	69	8.943	8.951	-0.008	91	14632	0.4000	0.3878	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	98	145724	0.4000	0.4080	
49 n-Butanol	31	8.981	8.969	0.012	66	5146	0.4000	0.2859	
51 2,3-Dimethylpentane	71	9.126	9.126	0.000	80	21116	0.4000	0.4017	
52 Thiophene	84	9.169	9.174	-0.005	92	57630	0.4000	0.3968	
53 Isooctane	57	9.795	9.798	-0.003	94	126672	0.4000	0.3898	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	75	31548	0.4000	0.3959	
55 n-Heptane	71	10.221	10.224	-0.003	82	32279	0.4000	0.3977	
56 Trichloroethene	130	10.243	10.250	-0.007	93	60473	0.4000	0.3951	
57 Dibromomethane	93	10.270	10.279	-0.009	94	53985	0.4000	0.3944	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	98	97237	0.4000	0.3789	
59 1,4-Dioxane	88	10.496	10.497	-0.001	88	15165	0.4000	0.3916	
60 Methyl methacrylate	41	10.642	10.649	-0.007	91	31857	0.4000	0.3594	
61 Methylcyclohexane	83	11.105	11.109	-0.004	92	61375	0.4000	0.3915	
62 4-Methyl-2-pentanone (MIBK)	43	11.548	11.552	-0.004	91	51070	0.4000	0.3615	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	97	59340	0.4000	0.3858	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	61443	0.4000	0.3884	
65 Toluene	91	12.470	12.471	-0.001	93	129198	0.4000	0.3981	
66 1,1,2-Trichloroethane	83	12.524	12.527	-0.003	93	35149	0.4000	0.4083	
69 2-Hexanone	58	13.003	13.003	0.000	95	24199	0.4000	0.3564	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	94584	0.4000	0.3769	
71 n-Octane	85	13.327	13.326	0.001	75	40600	0.4000	0.3928	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	73769	0.4000	0.3910	
73 Tetrachloroethene	129	13.688	13.695	-0.007	93	63725	0.4000	0.3964	
74 Chlorobenzene	112	14.605	14.606	-0.001	93	113462	0.4000	0.4003	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	80	76114	0.4000	0.3997	
76 Ethylbenzene	91	14.939	14.943	-0.004	100	189812	0.4000	0.4057	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	316153	0.8001	0.8239	
79 Bromoform	173	15.506	15.507	-0.001	96	89888	0.4000	0.3410	
80 Styrene	104	15.592	15.594	-0.002	97	91899	0.4000	0.3654	
82 o-Xylene	91	15.651	15.655	-0.004	96	169158	0.4000	0.4197	
81 n-Nonane	57	15.657	15.659	-0.003	73	65019	0.4000	0.4257	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	92	83793	0.4000	0.4091	
84 1,2,3-Trichloropropane	110	16.126	16.132	-0.006	94	40330	0.4000	0.3971	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	95	232238	0.4000	0.4049	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	64393	0.4000	0.4089	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	91	59552	0.4000	0.4086	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	243377	0.4000	0.4086	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	98748	0.4000	0.4052	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	88	77610	0.4000	0.3350	
91 n-Decane	57	17.533	17.532	0.001	97	87862	0.4000	0.4042	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	90	252400	0.4000	0.4252	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	231880	0.4000	0.4264	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	157370	0.4000	0.4008	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	302828	0.4000	0.4121	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	149421	0.4000	0.3562	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	93	157774	0.4000	0.4003	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	307780	0.4000	0.4150	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	98	237762	0.4000	0.4071	
100 Butylcyclohexane	83	18.229	18.232	-0.003	92	134022	0.4000	0.4173	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	153773	0.4000	0.3970	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	93	195256	0.4000	0.4053	
103 Indene	116	18.520	18.520	0.000	90	144394	0.4000	0.3651	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	247354	0.4000	0.4095	
105 Undecane	57	19.000	19.001	-0.001	88	102646	0.4000	0.3991	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	97	65829	0.4000	0.3490	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	96	265327	0.4000	0.3792	
110 Dodecane	57	20.127	20.128	-0.001	89	92125	0.4000	0.3420	
111 1,2,4-Trichlorobenzene	180	20.208	20.205	0.003	94	147015	0.4000	0.3515	
113 Naphthalene	128	20.326	20.329	-0.003	98	247207	0.4000	0.2923	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	96	188387	0.4000	0.3875	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	138621	0.4000	0.3449	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	98	37139	0.4000	0.1383	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	96	44726	0.4000	0.1888	
A 120 C8 Range	1	13.343	(13.284-13.381)		0	326670	0.4000	0.3926	
S 121 Xylenes, Total	100				0		1.20	1.24	
S 122 1,2-Dichloroethene, Total	1				0		0.8001	0.7707	

Reagents:

40L6DQP_00007

Amount Added: 80.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC05.D

Injection Date: 17-Nov-2018 01:12:30

Instrument ID: MR

Operator ID:

Lims ID: IC L5

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

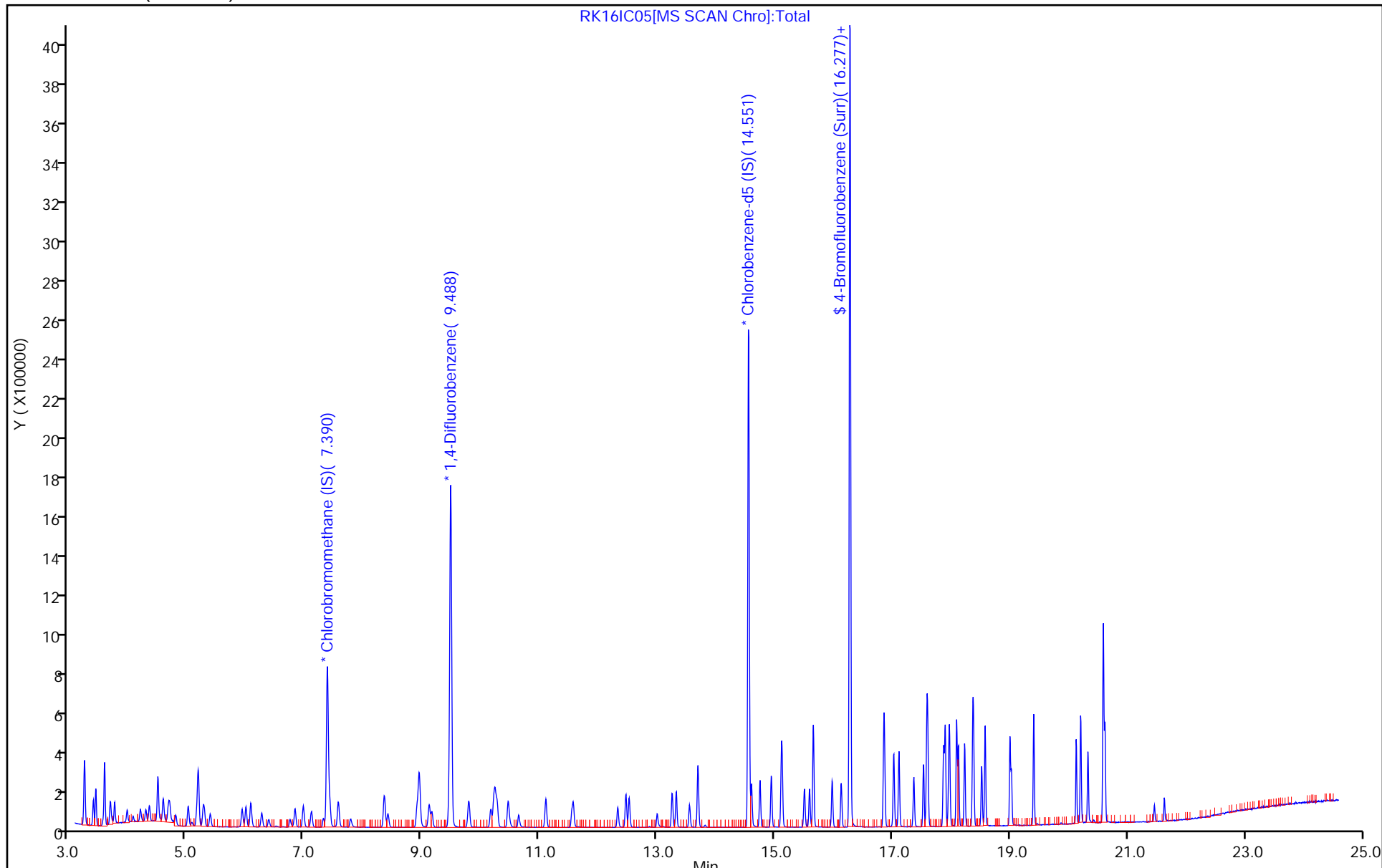
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



RK16IC05[MS SCAN Chro]:Total

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC05.D

Injection Date: 17-Nov-2018 01:12:30

Instrument ID: MR

Lims ID: IC L5

Client ID:

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

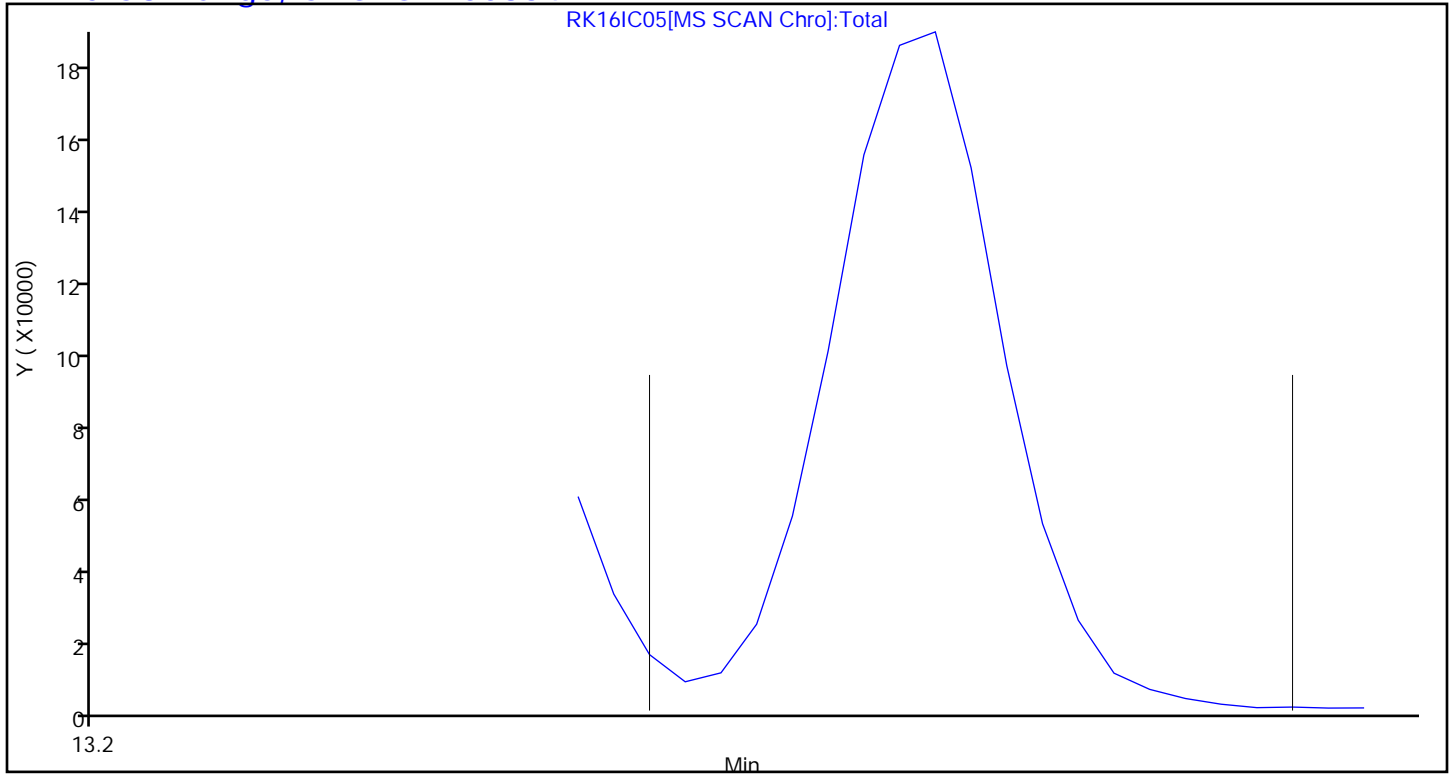
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 17-Nov-2018 02:05:30 ALS Bottle#: 4 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-013
 Misc. Info.: 190395
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:12 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:29:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.390	7.397	-0.007	70	284526	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.488	9.494	-0.006	95	1579313	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	90	1386926	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.277	16.279	-0.002	90	1197793	4.00	4.06	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	95	165552	1.00	0.9806	
7 Propene	41	3.421	3.420	0.001	94	51364	1.00	0.9898	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	99	295289	1.00	0.9538	
9 Chloromethane	52	3.583	3.586	-0.003	98	20420	1.00	0.9379	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	89	220441	1.00	0.9564	
11 Acetaldehyde	44	3.702	3.710	-0.008	93	111533	5.00	5.48	
12 Vinyl chloride	62	3.707	3.711	-0.004	100	70331	1.00	0.9214	
13 Butadiene	54	3.777	3.780	-0.003	88	46402	1.00	1.00	
14 Butane	43	3.782	3.782	0.000	90	78896	1.00	0.9797	
15 Bromomethane	94	3.993	3.995	-0.002	95	85746	1.00	0.9758	
16 Chloroethane	64	4.095	4.100	-0.005	94	34804	1.00	0.9845	
17 Ethanol	31	4.208	4.222	-0.014	93	104882	5.00	4.92	
18 Vinyl bromide	106	4.311	4.315	-0.004	97	90610	1.00	0.9784	
19 2-Methylbutane	43	4.365	4.369	-0.004	79	56760	1.00	1.00	
20 Acrolein	56	4.505	4.516	-0.011	27	15289	1.00	0.8501	
21 Trichlorofluoromethane	101	4.510	4.517	-0.007	99	413497	1.00	0.9832	
22 Acetonitrile	40	4.543	4.545	-0.002	93	16703	1.00	0.9079	
23 Acetone	58	4.591	4.605	-0.014	100	89101	3.00	3.02	
24 Pentane	72	4.688	4.693	-0.005	92	14137	1.00	0.9884	
25 Isopropyl alcohol	45	4.699	4.716	-0.017	93	239341	3.00	2.97	
26 Ethyl ether	31	4.802	4.817	-0.015	72	46526	1.00	0.9819	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	97	96830	1.00	0.9671	
28 Acrylonitrile	53	5.082	5.097	-0.015	91	44072	1.00	0.9871	
29 2-Methyl-2-propanol	59	5.152	5.173	-0.021	91	190196	1.00	1.00	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	92	250984	1.00	1.01	
31 Methylene Chloride	84	5.281	5.290	-0.009	88	91431	1.00	0.9606	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	86	95603	1.00	1.03	
33 Carbon disulfide	76	5.406	5.410	-0.004	99	242543	1.00	1.02	
34 trans-1,2-Dichloroethene	96	5.945	5.951	-0.006	97	99652	1.00	0.9758	
35 2-Methylpentane	43	6.009	6.011	-0.002	86	134813	1.00	1.00	
36 Methyl tert-butyl ether	73	6.080	6.094	-0.014	93	326320	1.00	1.00	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	98	165748	1.00	0.9699	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	159088	1.00	0.9638	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	98	38268	1.00	0.9878	
40 Hexane	56	6.840	6.845	-0.005	82	58239	1.00	0.9804	
171 Isopropyl ether	45	6.975	6.989	-0.014	86	203305	1.00	0.99	
41 cis-1,2-Dichloroethene	96	7.120	7.127	-0.007	94	100389	1.00	0.9748	
42 Ethyl acetate	43	7.314	7.330	-0.016	98	143745	1.00	1.00	
43 Chloroform	83	7.433	7.439	-0.006	94	266010	1.00	0.9788	
173 Tert-butyl ethyl ether	59	7.568	7.580	-0.012	93	291639	1.00	0.99	
44 Tetrahydrofuran	42	7.778	7.793	-0.015	77	62926	1.00	1.00	
45 1,1,1-Trichloroethane	97	8.361	8.364	-0.003	94	339819	1.00	0.9864	
46 1,2-Dichloroethane	62	8.420	8.427	-0.007	97	199683	1.00	1.00	
47 Benzene	78	8.916	8.920	-0.004	98	249589	1.00	0.9699	
48 Cyclohexane	69	8.943	8.951	-0.008	84	39991	1.00	1.05	
50 Carbon tetrachloride	117	8.954	8.962	-0.008	97	374679	1.00	1.04	
49 n-Butanol	31	8.959	8.969	-0.010	73	17690	1.00	0.9698	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	54415	1.00	1.02	
52 Thiophene	84	9.169	9.174	-0.005	94	149183	1.00	1.01	
53 Isooctane	57	9.795	9.798	-0.003	95	332582	1.00	1.01	
54 1,2-Dichloropropane	63	10.167	10.175	-0.008	73	80581	1.00	1.00	
55 n-Heptane	71	10.215	10.224	-0.009	82	84592	1.00	1.03	
56 Trichloroethene	130	10.248	10.250	-0.002	93	152289	1.00	0.9817	
57 Dibromomethane	93	10.275	10.279	-0.004	92	136587	1.00	0.9845	
58 Dichlorobromomethane	83	10.464	10.468	-0.004	98	263754	1.00	1.01	
59 1,4-Dioxane	88	10.485	10.497	-0.012	88	38117	1.00	0.9712	
60 Methyl methacrylate	41	10.641	10.649	-0.008	91	88559	1.00	0.9859	
61 Methylcyclohexane	83	11.105	11.109	-0.004	92	160604	1.00	1.01	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	141224	1.00	0.9864	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	97	155584	1.00	1.00	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	165754	1.00	1.02	
65 Toluene	91	12.470	12.471	-0.001	93	336279	1.00	1.01	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	94	91510	1.00	1.04	
69 2-Hexanone	58	12.993	13.003	-0.010	94	68694	1.00	0.9878	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	271846	1.00	1.06	
71 n-Octane	85	13.322	13.326	-0.004	75	109095	1.00	1.03	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	199953	1.00	1.03	
73 Tetrachloroethene	129	13.694	13.695	-0.001	93	168145	1.00	1.02	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	295002	1.00	1.02	
75 2,3-Dimethylheptane	43	14.750	14.750	0.000	78	202047	1.00	1.04	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	491615	1.00	1.03	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	820994	2.00	2.09	
79 Bromoform	173	15.505	15.507	-0.002	96	263744	1.00	0.9769	
80 Styrene	104	15.592	15.594	-0.002	97	268745	1.00	1.04	
82 o-Xylene	91	15.651	15.655	-0.004	97	428791	1.00	1.04	
81 n-Nonane	57	15.656	15.659	-0.003	75	164273	1.00	1.05	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	93	223872	1.00	1.07	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	106933	1.00	1.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	589911	1.00	1.00	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	172077	1.00	1.07	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	93	156859	1.00	1.05	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	652888	1.00	1.07	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	267835	1.00	1.07	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	235120	1.00	0.99	
91 n-Decane	57	17.528	17.532	-0.004	97	237483	1.00	1.07	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	88	653325	1.00	1.07	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	597546	1.00	1.07	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	411115	1.00	1.02	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	799929	1.00	1.06	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	434461	1.00	1.01	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	95	419983	1.00	1.04	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	96	809499	1.00	1.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	636168	1.00	1.06	
100 Butylcyclohexane	83	18.229	18.232	-0.003	93	349539	1.00	1.06	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	400754	1.00	1.01	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	93	519916	1.00	1.05	
103 Indene	116	18.520	18.520	0.000	90	416558	1.00	1.03	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	652919	1.00	1.06	
105 Undecane	57	19.000	19.001	-0.001	87	279455	1.00	1.06	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	98	201092	1.00	1.04	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	736323	1.00	1.03	
110 Dodecane	57	20.127	20.128	-0.001	90	268129	1.00	0.9719	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	412431	1.00	0.9629	
113 Naphthalene	128	20.326	20.329	-0.003	98	719521	1.00	0.8307	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	96	517445	1.00	1.04	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	95	391665	1.00	0.9514	
117 2-Methylnaphthalene	142	21.459	21.458	0.001	99	124366	1.00	0.4520	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	135206	1.00	0.5571	
A 120 C8 Range	1	13.340	(13.278-13.375)		0	855982	1.00	1.01	
S 121 Xylenes, Total	100				0		3.00	3.13	
S 122 1,2-Dichloroethene, Total	1				0		2.00	1.95	

Reagents:

40L6DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D

Injection Date: 17-Nov-2018 02:05:30

Instrument ID: MR

Operator ID:

Lims ID: IC L6

Worklist Smp#: 13

Client ID:

Purge Vol: 500.000 mL

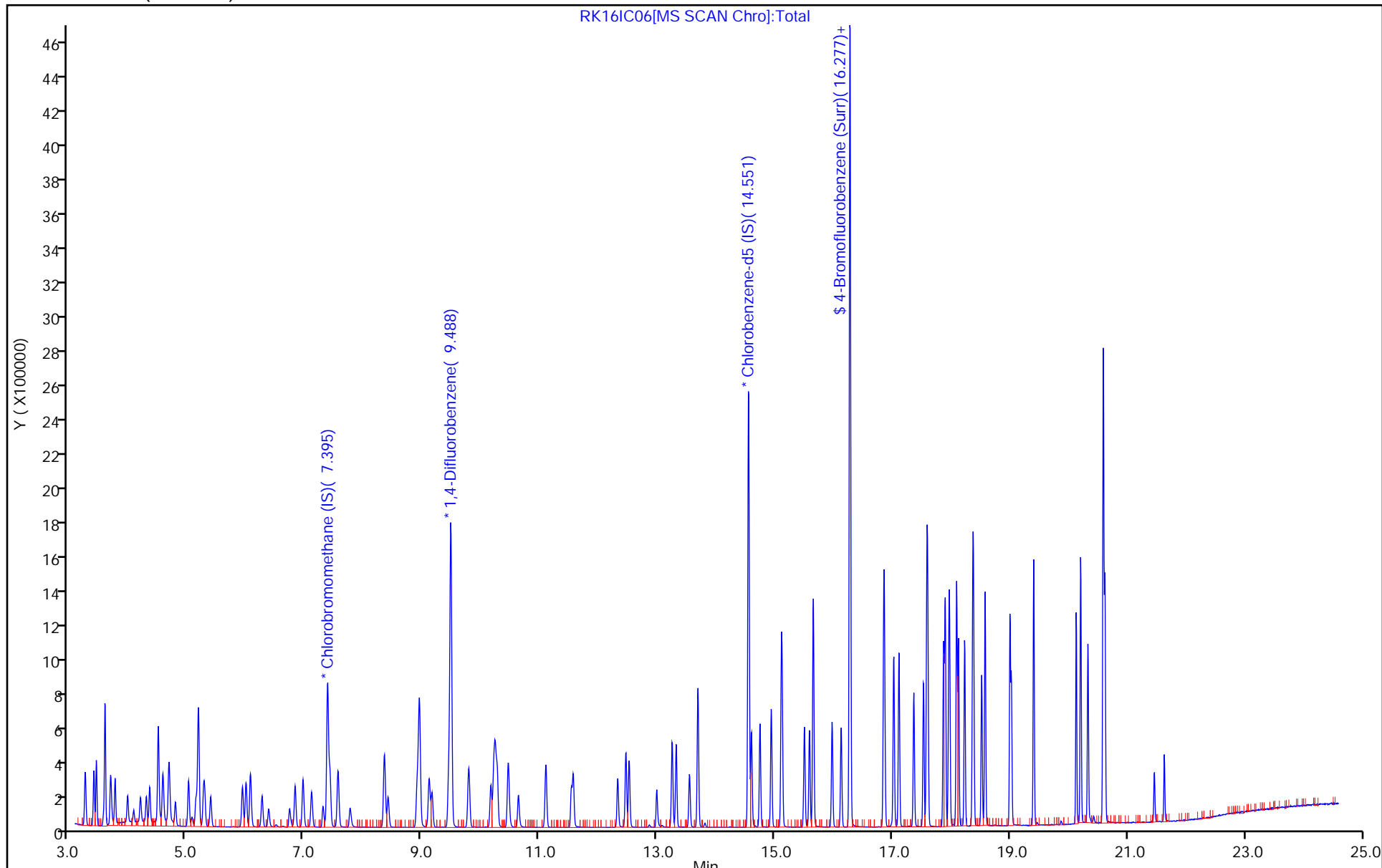
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC06.D

Injection Date: 17-Nov-2018 02:05:30

Instrument ID: MR

Lims ID: IC L6

Client ID:

Operator ID:

ALS Bottle#: 4

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

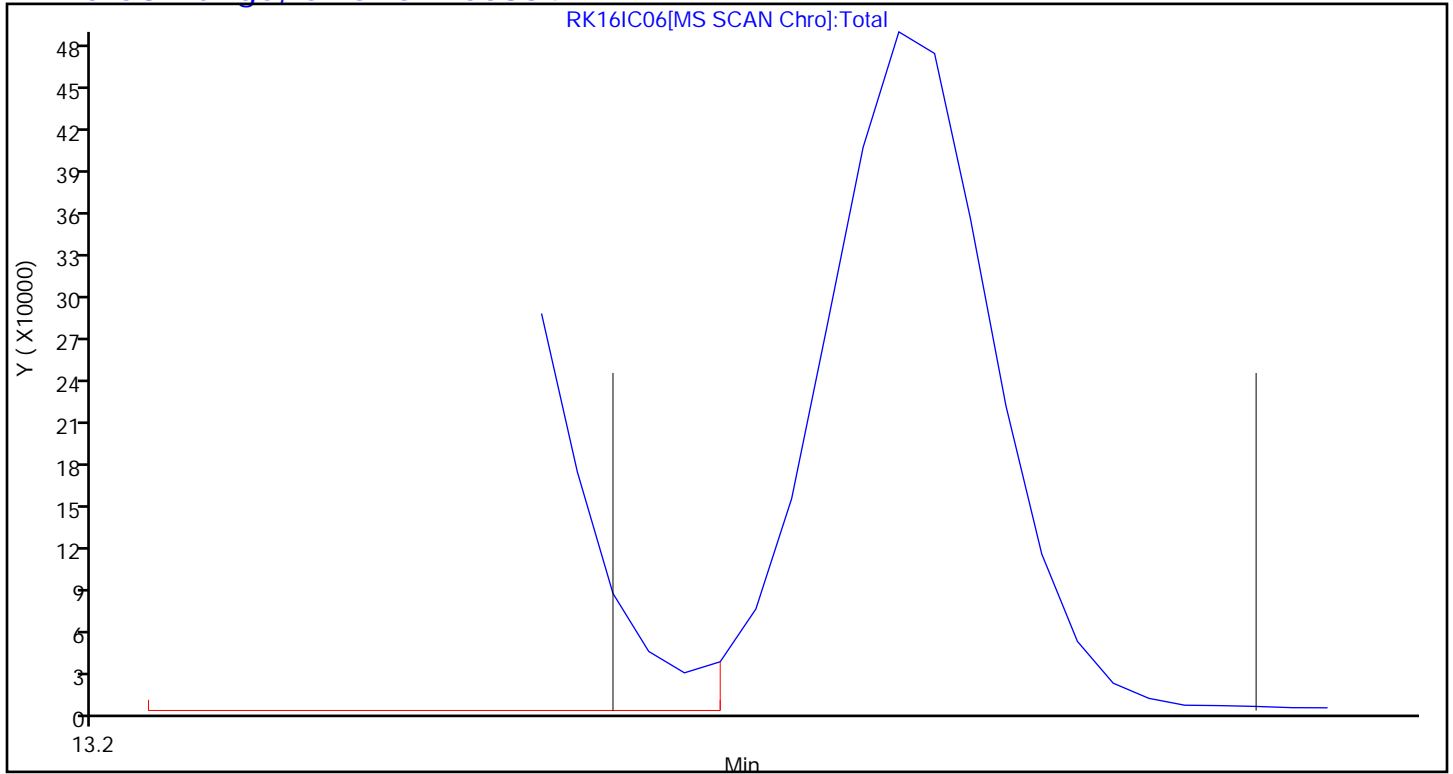
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 17-Nov-2018 02:58:30 ALS Bottle#: 5 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-014
 Misc. Info.: 190394
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:18 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: RT Order ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:29:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.401	7.397	0.004	69	298864	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.493	9.494	-0.001	95	1677758	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.556	14.555	0.001	82	1487799	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	87	1269845	4.00	4.01	
6 Chlorodifluoromethane	51	3.410	3.417	-0.007	77	330784	2.00	1.87	
7 Propene	41	3.416	3.420	-0.004	49	103039	2.00	1.89	
8 Dichlorodifluoromethane	85	3.459	3.461	-0.002	95	593041	2.00	1.82	
9 Chloromethane	52	3.583	3.586	-0.003	98	40844	2.00	1.79	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.604	3.609	-0.005	89	456323	2.00	1.88	
11 Acetaldehyde	44	3.701	3.710	-0.009	91	205358	10.0	9.61	
12 Vinyl chloride	62	3.707	3.711	-0.004	71	142840	2.00	1.78	
13 Butadiene	54	3.777	3.780	-0.003	82	94920	2.00	1.95	
14 Butane	43	3.777	3.782	-0.005	74	157806	2.00	1.87	
15 Bromomethane	94	3.993	3.995	-0.002	95	176496	2.00	1.91	
16 Chloroethane	64	4.095	4.100	-0.005	94	68833	2.00	1.85	
17 Ethanol	31	4.214	4.222	-0.008	93	224069	10.0	10.0	
18 Vinyl bromide	106	4.311	4.315	-0.004	95	186899	2.00	1.92	
19 2-Methylbutane	43	4.365	4.369	-0.004	78	115570	2.00	1.93	
20 Acrolein	56	4.505	4.516	-0.011	26	37440	2.00	1.98	
21 Trichlorofluoromethane	101	4.516	4.517	-0.001	99	844261	2.00	1.91	
22 Acetonitrile	40	4.548	4.545	0.003	68	35460	2.00	1.84	
23 Acetone	58	4.591	4.605	-0.014	92	173059	6.00	5.58	
24 Pentane	72	4.688	4.693	-0.005	91	28499	2.00	1.90	
25 Isopropyl alcohol	45	4.704	4.716	-0.012	91	509997	6.00	6.03	
26 Ethyl ether	31	4.802	4.817	-0.015	70	93310	2.00	1.87	
27 1,1-Dichloroethene	96	5.028	5.033	-0.005	96	202076	2.00	1.92	
28 Acrylonitrile	53	5.093	5.097	-0.004	84	91512	2.00	1.95	
29 2-Methyl-2-propanol	59	5.152	5.173	-0.021	53	409183	2.00	2.05	
30 1,1,2-Trichloro-1,2,2-trif	101	5.195	5.199	-0.004	90	515989	2.00	1.98	
31 Methylene Chloride	84	5.287	5.290	-0.003	86	178076	2.00	1.78	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.303	5.309	-0.006	82	193431	2.00	1.98	
33 Carbon disulfide	76	5.405	5.410	-0.005	99	499031	2.00	2.00	
34 trans-1,2-Dichloroethene	96	5.950	5.951	-0.001	95	206172	2.00	1.92	
35 2-Methylpentane	43	6.004	6.011	-0.007	84	275324	2.00	1.95	
36 Methyl tert-butyl ether	73	6.080	6.094	-0.014	89	676752	2.00	1.98	
37 1,1-Dichloroethane	63	6.279	6.283	-0.004	98	342362	2.00	1.91	
38 Vinyl acetate	43	6.392	6.402	-0.010	98	349189	2.00	2.01	
39 2-Butanone (MEK)	72	6.748	6.761	-0.013	66	79333	2.00	1.95	
40 Hexane	56	6.840	6.845	-0.005	80	121155	2.00	1.94	
171 Isopropyl ether	45	6.975	6.989	-0.014	86	426151	2.00	1.99	
41 cis-1,2-Dichloroethene	96	7.126	7.127	-0.001	93	213838	2.00	1.98	
42 Ethyl acetate	43	7.314	7.330	-0.016	98	303889	2.00	2.02	
43 Chloroform	83	7.438	7.439	-0.001	85	550434	2.00	1.93	
173 Tert-butyl ethyl ether	59	7.568	7.580	-0.012	92	613018	2.00	1.98	
44 Tetrahydrofuran	42	7.773	7.793	-0.020	77	130211	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.366	8.364	0.002	95	712345	2.00	1.97	
46 1,2-Dichloroethane	62	8.425	8.427	-0.002	78	414101	2.00	1.95	
47 Benzene	78	8.921	8.920	0.001	98	523482	2.00	1.91	
48 Cyclohexane	69	8.948	8.951	-0.003	71	82675	2.00	2.04	
50 Carbon tetrachloride	117	8.959	8.962	-0.003	96	786171	2.00	2.04	
49 n-Butanol	31	8.948	8.969	-0.021	25	40004	2.00	2.06	
51 2,3-Dimethylpentane	71	9.121	9.126	-0.005	83	116636	2.00	2.06	
52 Thiophene	84	9.175	9.174	0.001	89	311873	2.00	1.99	
53 Isooctane	57	9.795	9.798	-0.003	95	691902	2.00	1.98	
54 1,2-Dichloropropane	63	10.172	10.175	-0.003	68	169011	2.00	1.97	
55 n-Heptane	71	10.221	10.224	-0.003	77	178041	2.00	2.04	
56 Trichloroethene	130	10.248	10.250	-0.002	93	324569	2.00	1.97	
57 Dibromomethane	93	10.280	10.279	0.001	91	283066	2.00	1.92	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	564189	2.00	2.04	
59 1,4-Dioxane	88	10.485	10.497	-0.012	40	86437	2.00	2.07	
60 Methyl methacrylate	41	10.641	10.649	-0.008	91	195505	2.00	2.05	
61 Methylcyclohexane	83	11.111	11.109	0.002	92	339768	2.00	2.01	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	311634	2.00	2.05	
63 cis-1,3-Dichloropropene	75	11.574	11.577	-0.003	96	346235	2.00	2.09	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	369600	2.00	2.13	
65 Toluene	91	12.469	12.471	-0.002	93	715966	2.00	2.01	
66 1,1,2-Trichloroethane	83	12.523	12.527	-0.004	91	192987	2.00	2.04	
69 2-Hexanone	58	12.987	13.003	-0.016	94	156406	2.00	2.10	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	96	617174	2.00	2.24	
71 n-Octane	85	13.321	13.326	-0.005	74	233063	2.00	2.05	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	431756	2.00	2.08	
73 Tetrachloroethene	129	13.694	13.695	-0.001	94	358488	2.00	2.03	
74 Chlorobenzene	112	14.605	14.606	-0.001	85	622855	2.00	2.00	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	79	424515	2.00	2.03	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1050972	2.00	2.04	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1718390	4.00	4.08	
79 Bromoform	173	15.505	15.507	-0.002	96	631165	2.00	2.18	
80 Styrene	104	15.592	15.594	-0.002	93	593262	2.00	2.15	
82 o-Xylene	91	15.651	15.655	-0.004	77	897122	2.00	2.03	
81 n-Nonane	57	15.656	15.659	-0.003	72	340741	2.00	2.03	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.002	93	480219	2.00	2.13	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	225670	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1239416	2.00	1.97	
86 N-Propylbenzene	120	16.853	16.856	-0.003	96	356669	2.00	2.06	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	320641	2.00	2.00	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	97	1384436	2.00	2.12	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	551670	2.00	2.06	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	84	542707	2.00	2.13	
91 n-Decane	57	17.533	17.532	0.001	94	489862	2.00	2.05	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	65	1326146	2.00	2.03	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	93	1240172	2.00	2.08	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	863153	2.00	2.00	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	94	1651103	2.00	2.05	
96 Benzyl chloride	91	17.959	17.962	-0.003	96	984275	2.00	2.14	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	92	862511	2.00	1.99	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	92	1677824	2.00	2.06	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1329610	2.00	2.07	
100 Butylcyclohexane	83	18.229	18.232	-0.003	92	722497	2.00	2.05	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	93	829934	2.00	1.95	
102 2,3-Dihydroindene	117	18.380	18.383	-0.003	88	1063787	2.00	2.01	
103 Indene	116	18.520	18.520	0.000	83	909289	2.00	2.09	
104 n-Butylbenzene	91	18.579	18.580	-0.001	95	1341073	2.00	2.02	
105 Undecane	57	19.000	19.001	-0.001	86	588913	2.00	2.08	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	99	458234	2.00	2.21	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	94	1609444	2.00	2.09	
110 Dodecane	57	20.127	20.128	-0.001	90	664765	2.00	2.25	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	93	944306	2.00	2.06	
113 Naphthalene	128	20.326	20.329	-0.003	98	1821564	2.00	1.96	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	85	1070672	2.00	2.00	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	93	908417	2.00	2.06	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	707384	2.00	2.40	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	641933	2.00	2.47	
A 120 C8 Range	1	13.340	(13.278-13.375)		0	1781529	2.00	1.99	
S 121 Xylenes, Total	100				0		6.00	6.10	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.90	

Reagents:

40L7DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D

Injection Date: 17-Nov-2018 02:58:30

Instrument ID: MR

Operator ID:

Lims ID: ICIS L7

Worklist Smp#: 14

Client ID:

Purge Vol: 500.000 mL

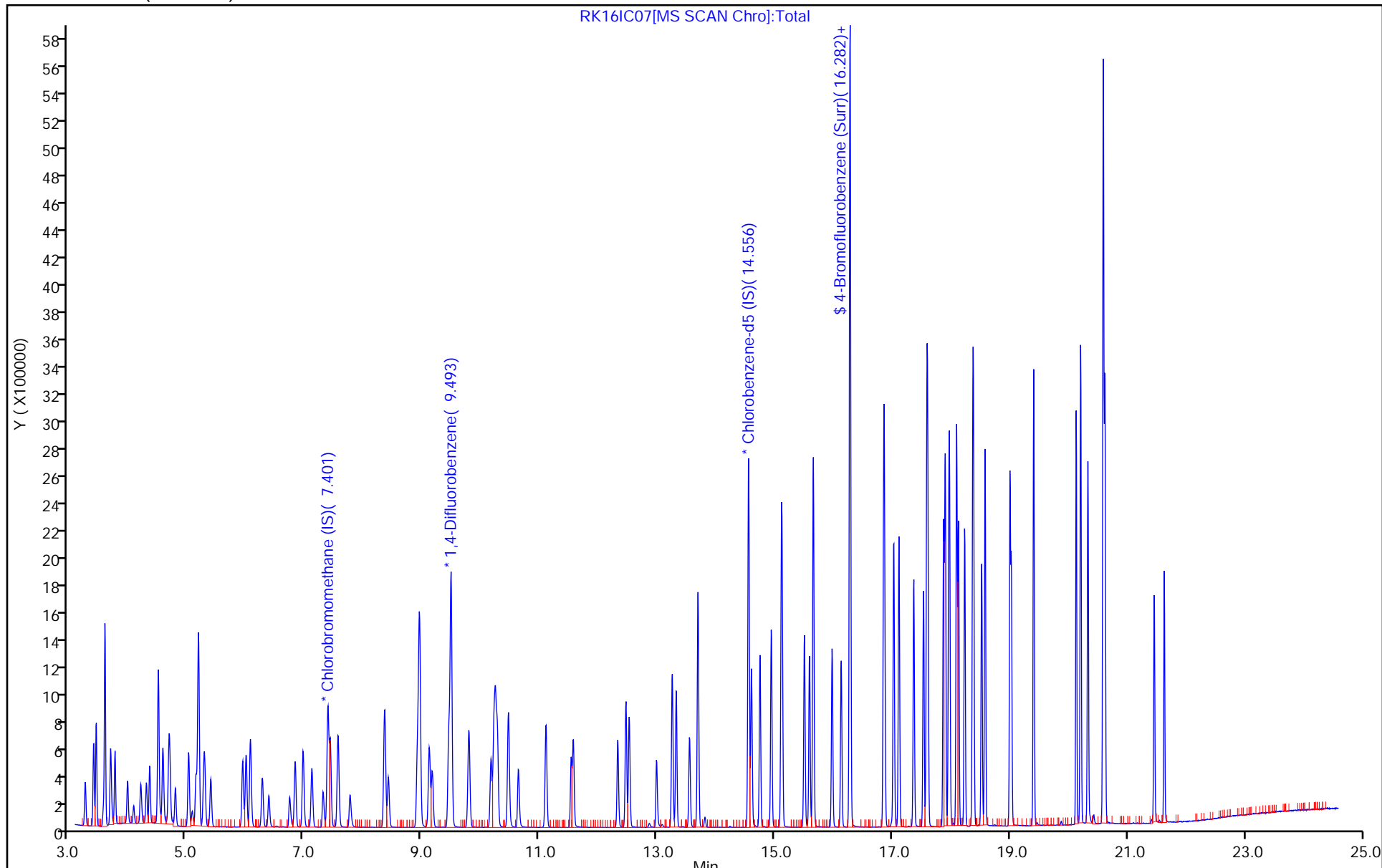
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



RK16IC07[MS SCAN Chro]:Total

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC07.D

Injection Date: 17-Nov-2018 02:58:30

Instrument ID: MR

Lims ID: ICIS L7

Client ID:

Operator ID:

ALS Bottle#: 5

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

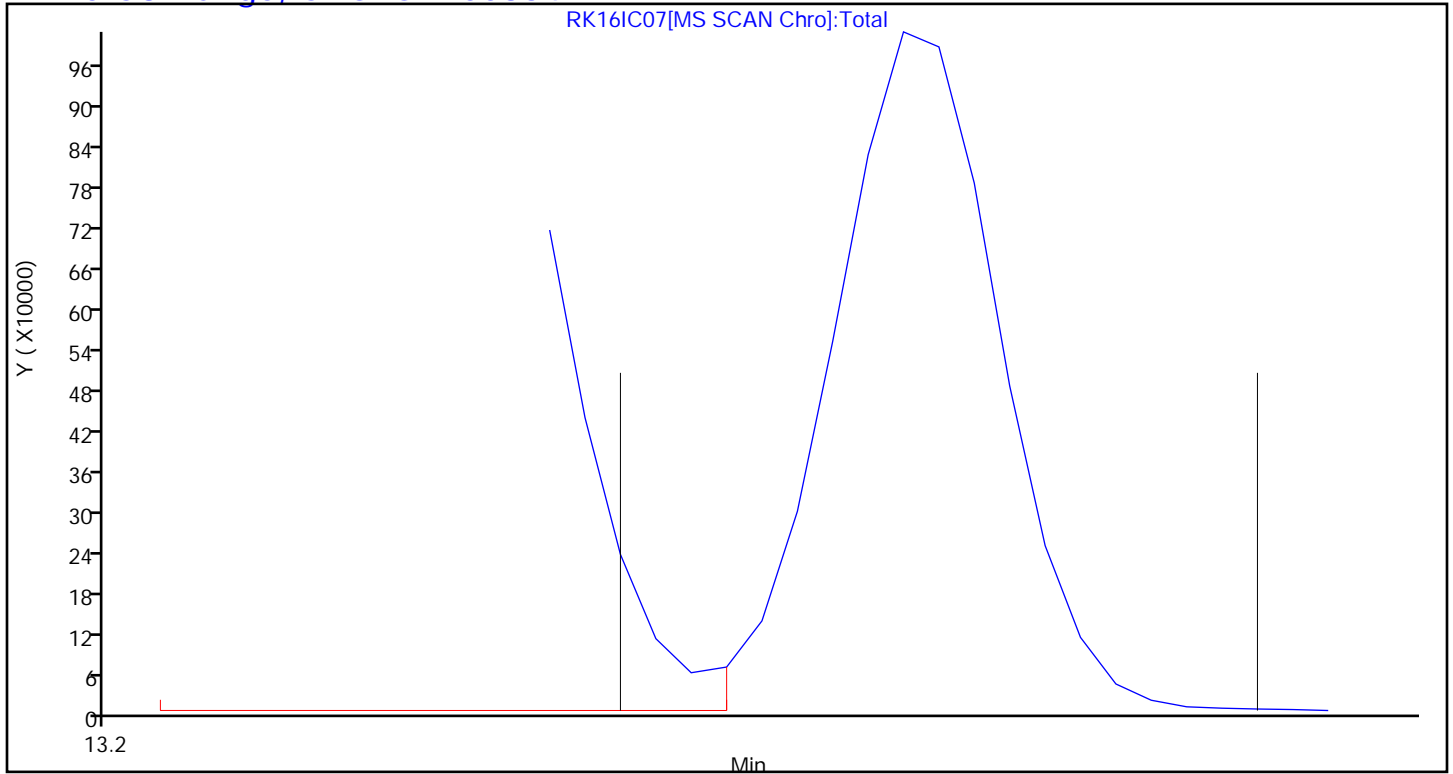
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 17-Nov-2018 03:51:30 ALS Bottle#: 6 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-015
 Misc. Info.: 190393
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:43:24 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh

Date: 17-Nov-2018 07:34:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.406	7.397	0.009	81	299965	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.498	9.494	0.004	95	1676956	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.557	14.555	0.001	89	1513773	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.282	16.279	0.003	84	1293730	4.00	4.02	
6 Chlorodifluoromethane	51	3.416	3.417	-0.001	96	670931	4.00	3.77	
7 Propene	41	3.421	3.420	0.001	91	205301	4.00	3.75	
8 Dichlorodifluoromethane	85	3.464	3.461	0.003	100	1212691	4.00	3.72	
9 Chloromethane	52	3.588	3.586	0.002	98	80675	4.00	3.51	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.610	3.609	0.001	97	932912	4.00	3.84	
11 Acetaldehyde	44	3.707	3.710	-0.003	94	415146	20.0	19.4	
12 Vinyl chloride	62	3.712	3.711	0.001	99	286294	4.00	3.56	
13 Butadiene	54	3.783	3.780	0.003	88	191280	4.00	3.92	
14 Butane	43	3.783	3.782	0.001	89	323819	4.00	3.81	
15 Bromomethane	94	3.998	3.995	0.003	96	354225	4.00	3.82	
16 Chloroethane	64	4.106	4.100	0.006	96	140181	4.00	3.76	
17 Ethanol	31	4.230	4.222	0.008	93	447098	20.0	19.9	
18 Vinyl bromide	106	4.322	4.315	0.007	96	380924	4.00	3.90	
19 2-Methylbutane	43	4.370	4.369	0.001	79	228167	4.00	3.80	
20 Acrolein	56	4.516	4.516	0.000	97	74788	4.00	3.94	
21 Trichlorofluoromethane	101	4.521	4.517	0.004	99	1697186	4.00	3.83	
22 Acetonitrile	40	4.559	4.545	0.014	94	84531	4.00	4.36	
23 Acetone	58	4.602	4.605	-0.003	100	340521	12.0	10.9	
24 Pentane	72	4.699	4.693	0.006	92	58302	4.00	3.87	
25 Isopropyl alcohol	45	4.715	4.716	-0.001	93	1016357	12.0	12.0	
26 Ethyl ether	31	4.812	4.817	-0.005	71	189800	4.00	3.80	
27 1,1-Dichloroethene	96	5.039	5.033	0.006	97	414812	4.00	3.93	
28 Acrylonitrile	53	5.104	5.097	0.007	91	186041	4.00	3.95	
29 2-Methyl-2-propanol	59	5.163	5.173	-0.010	92	809098	4.00	4.03	
30 1,1,2-Trichloro-1,2,2-trif	101	5.201	5.199	0.002	93	1031649	4.00	3.94	
31 Methylene Chloride	84	5.298	5.290	0.008	88	345898	4.00	3.45	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.314	5.309	0.005	85	385054	4.00	3.92	
33 Carbon disulfide	76	5.416	5.410	0.006	99	997332	4.00	3.98	
34 trans-1,2-Dichloroethene	96	5.961	5.951	0.010	97	421281	4.00	3.91	
35 2-Methylpentane	43	6.015	6.011	0.004	84	553915	4.00	3.90	
36 Methyl tert-butyl ether	73	6.085	6.094	-0.009	93	1373906	4.00	4.01	
37 1,1-Dichloroethane	63	6.295	6.283	0.012	98	695373	4.00	3.86	
38 Vinyl acetate	43	6.403	6.402	0.001	98	730693	4.00	4.20	
39 2-Butanone (MEK)	72	6.759	6.761	-0.002	97	165553	4.00	4.05	
40 Hexane	56	6.845	6.845	0.000	81	248691	4.00	3.97	
171 Isopropyl ether	45	6.986	6.989	-0.003	86	863733	4.00	4.01	
41 cis-1,2-Dichloroethene	96	7.137	7.127	0.010	94	429081	4.00	3.95	
42 Ethyl acetate	43	7.325	7.330	-0.005	98	632910	4.00	4.20	
43 Chloroform	83	7.449	7.439	0.010	96	1123349	4.00	3.92	
173 Tert-butyl ethyl ether	59	7.579	7.580	-0.001	92	1274961	4.00	4.11	
44 Tetrahydrofuran	42	7.778	7.793	-0.015	76	266070	4.00	4.00	
45 1,1,1-Trichloroethane	97	8.371	8.364	0.007	95	1454125	4.00	4.00	
46 1,2-Dichloroethane	62	8.436	8.427	0.009	97	837957	4.00	3.95	
47 Benzene	78	8.927	8.920	0.007	98	1050705	4.00	3.85	
48 Cyclohexane	69	8.954	8.951	0.003	91	167839	4.00	4.13	
50 Carbon tetrachloride	117	8.965	8.962	0.003	98	1553305	4.00	4.04	
49 n-Butanol	31	8.948	8.969	-0.021	65	82457	4.00	4.26	
51 2,3-Dimethylpentane	71	9.132	9.126	0.006	83	235995	4.00	4.17	
52 Thiophene	84	9.180	9.174	0.006	94	639928	4.00	4.09	
53 Isooctane	57	9.800	9.798	0.002	94	1407509	4.00	4.02	
54 1,2-Dichloropropane	63	10.178	10.175	0.003	77	344383	4.00	4.02	
55 n-Heptane	71	10.226	10.224	0.002	83	361284	4.00	4.14	
56 Trichloroethene	130	10.253	10.250	0.003	96	707793	4.00	4.30	
57 Dibromomethane	93	10.286	10.279	0.007	91	586890	4.00	3.98	
58 Dichlorobromomethane	83	10.469	10.468	0.001	98	1174659	4.00	4.25	
59 1,4-Dioxane	88	10.485	10.497	-0.012	86	173912	4.00	4.17	
60 Methyl methacrylate	41	10.642	10.649	-0.007	91	413937	4.00	4.34	
61 Methylcyclohexane	83	11.111	11.109	0.002	92	689164	4.00	4.09	
62 4-Methyl-2-pentanone (MIBK)	43	11.537	11.552	-0.015	91	659470	4.00	4.34	
63 cis-1,3-Dichloropropene	75	11.575	11.577	-0.002	95	719012	4.00	4.34	
64 trans-1,3-Dichloropropene	75	12.329	12.332	-0.003	97	783879	4.00	4.43	
65 Toluene	91	12.470	12.471	-0.001	93	1469948	4.00	4.05	
66 1,1,2-Trichloroethane	83	12.524	12.527	-0.003	94	395113	4.00	4.11	
69 2-Hexanone	58	12.987	13.003	-0.016	95	338784	4.00	4.46	
70 Chlorodibromomethane	129	13.257	13.258	-0.001	97	1311808	4.00	4.68	
71 n-Octane	85	13.327	13.326	0.001	74	477723	4.00	4.13	
72 Ethylene Dibromide	107	13.554	13.551	0.003	97	900939	4.00	4.27	
73 Tetrachloroethene	129	13.694	13.695	-0.001	94	719415	4.00	4.00	
74 Chlorobenzene	112	14.605	14.606	-0.001	92	1278293	4.00	4.03	
75 2,3-Dimethylheptane	43	14.751	14.750	0.001	77	866249	4.00	4.07	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	2145561	4.00	4.10	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	3492522	8.00	8.14	
79 Bromoform	173	15.506	15.507	-0.001	96	1405685	4.00	4.77	
80 Styrene	104	15.592	15.594	-0.002	98	1255220	4.00	4.46	
82 o-Xylene	91	15.657	15.655	0.002	97	1814388	4.00	4.03	
81 n-Nonane	57	15.657	15.659	-0.002	75	686883	4.00	4.02	
83 1,1,2,2-Tetrachloroethane	83	15.975	15.976	-0.001	93	935594	4.00	4.09	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	461156	4.00	4.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.282	16.283	-0.001	97	2553866	4.00	3.98	
86 N-Propylbenzene	120	16.854	16.856	-0.002	97	735475	4.00	4.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	653681	4.00	4.01	
88 4-Ethyltoluene	105	17.026	17.027	-0.001	98	2809081	4.00	4.22	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	1121740	4.00	4.12	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	1140621	4.00	4.40	
91 n-Decane	57	17.533	17.532	0.001	97	987208	4.00	4.06	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	2644216	4.00	3.98	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	2478370	4.00	4.08	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	1751738	4.00	3.99	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	3316313	4.00	4.04	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	2125520	4.00	4.53	
97 1,4-Dichlorobenzene	146	17.975	17.977	-0.002	95	1725619	4.00	3.92	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	3366403	4.00	4.06	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	2652674	4.00	4.06	
100 Butylcyclohexane	83	18.234	18.232	0.002	92	1440937	4.00	4.01	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	95	1669523	4.00	3.86	
102 2,3-Dihydroindene	117	18.385	18.383	0.002	93	2153540	4.00	4.00	
103 Indene	116	18.520	18.520	0.000	90	1898638	4.00	4.29	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	2705337	4.00	4.01	
105 Undecane	57	19.000	19.001	-0.001	87	1182131	4.00	4.11	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	98	986255	4.00	4.68	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	3260653	4.00	4.17	
110 Dodecane	57	20.127	20.128	-0.001	90	1343815	4.00	4.46	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	1940306	4.00	4.15	
113 Naphthalene	128	20.326	20.329	-0.003	98	3797602	4.00	4.02	
115 Hexachlorobutadiene	225	20.591	20.590	0.001	95	2166873	4.00	3.99	
116 1,2,3-Trichlorobenzene	180	20.618	20.618	0.000	94	1865471	4.00	4.15	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	1636134	4.00	5.45	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	1437560	4.00	5.43	
A 120 C8 Range	1	13.340	(13.279-13.376)		0	3620641	4.00	4.04	
S 121 Xylenes, Total	100				0		12.0	12.2	
S 122 1,2-Dichloroethene, Total	1				0		8.00	7.86	

Reagents:

40L8DQP_00007

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Injection Date: 17-Nov-2018 03:51:30

Instrument ID: MR

Operator ID:

Lims ID: IC L8

Worklist Smp#: 15

Client ID:

Purge Vol: 500.000 mL

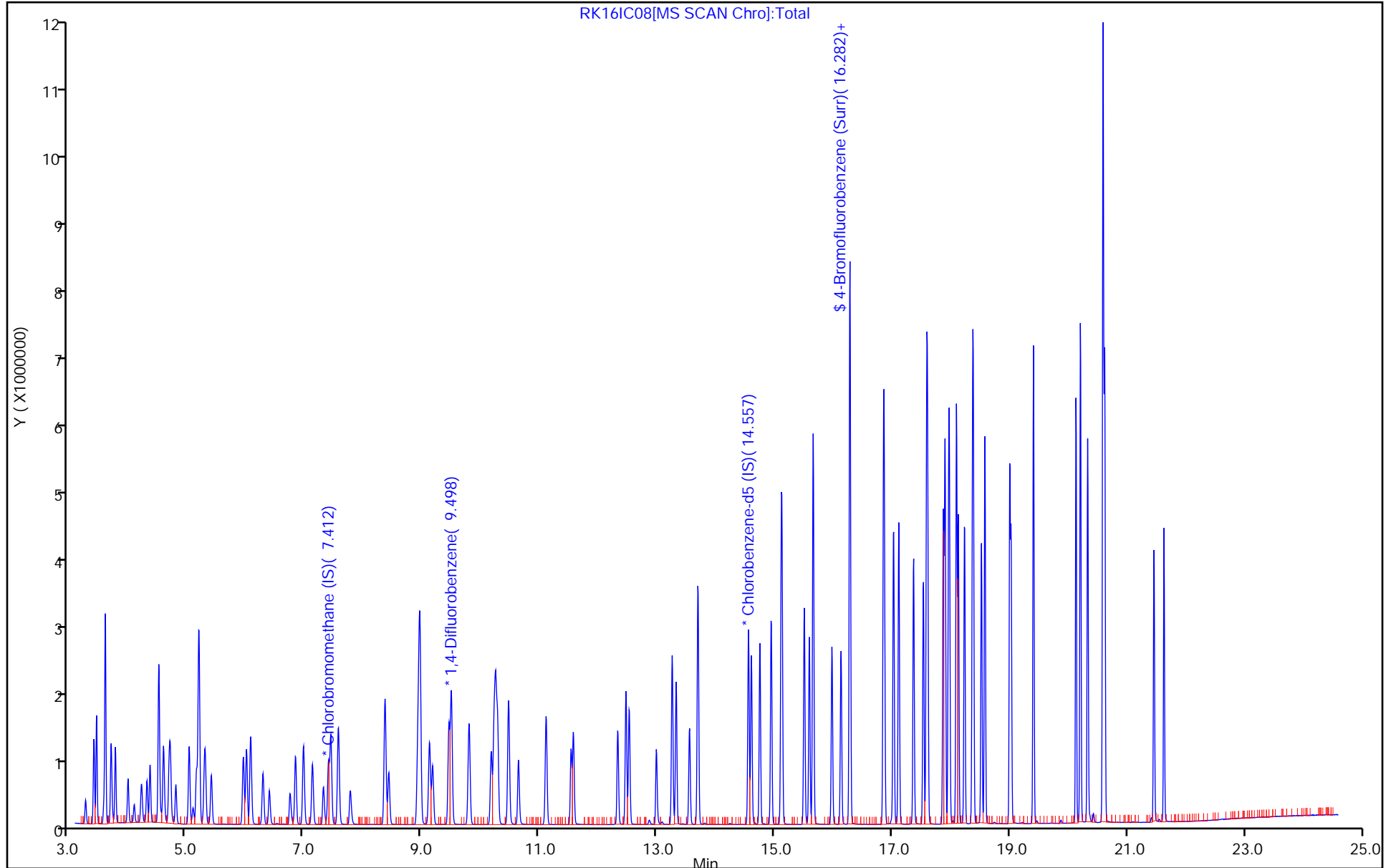
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Injection Date: 17-Nov-2018 03:51:30

Instrument ID: MR

Lims ID: IC L8

Client ID:

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

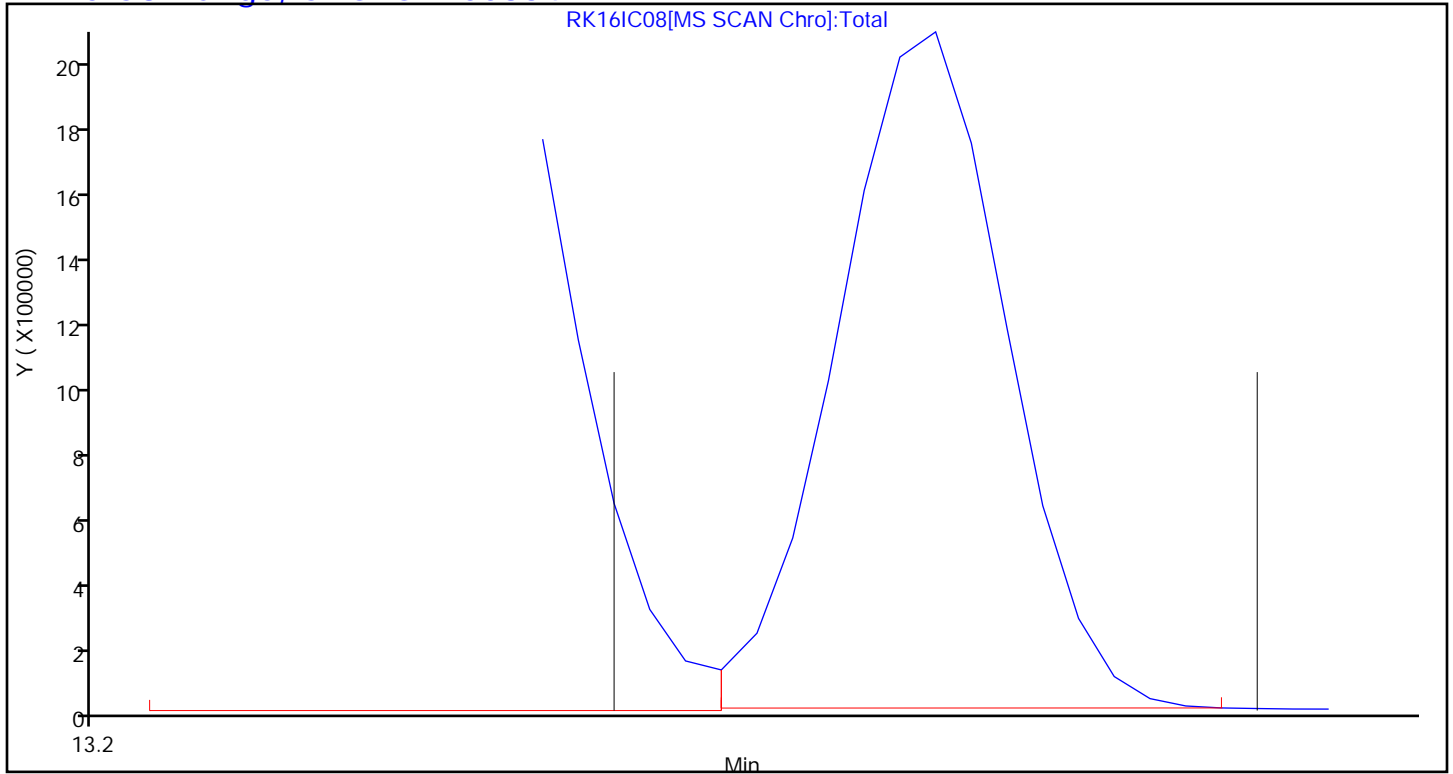
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 120 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 06/28/2017 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/28/2017 21:58
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6999	0.3362			2.00	-52.0*	35.0
3-Methylthiophene	Ave	0.6908	0.7960			2.00	15.2	35.0
2-Ethylthiophene	Ave	0.9153	1.134			2.00	23.9	35.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.640			2.00		35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.275			2.00	39.5*	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	1.768			2.00	43.0*	35.0
Benzo (b) thiophene	Ave	0.9147	1.487			2.00	62.6*	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 17-Nov-2018 06:27:30 ALS Bottle#: 8 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-018
 Misc. Info.: S80
 Operator ID: Instrument ID: MR
 Sublist:

Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 16:30:16 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: tajh Date: 19-Nov-2018 10:15:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.397	-0.018	68	299493	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	94	1671036	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	89	1499042	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	89	1270095	4.00	3.98	
6 Chlorodifluoromethane	51	3.383	3.417	-0.034	95	337816	2.00	1.90	
7 Propene	41	3.389	3.420	-0.031	91	101676	2.00	1.86	
8 Dichlorodifluoromethane	85	3.432	3.461	-0.029	100	757267	2.00	2.32	
9 Chloromethane	52	3.550	3.586	-0.036	98	40890	2.00	1.78	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.583	3.609	-0.026	89	519503	2.00	2.14	
11 Acetaldehyde	44	3.674	3.710	-0.036	93	179473	10.0	8.38	
12 Vinyl chloride	62	3.680	3.711	-0.031	99	144783	2.00	1.80	
13 Butadiene	54	3.750	3.780	-0.030	87	93331	2.00	1.92	
14 Butane	43	3.750	3.782	-0.032	89	162697	2.00	1.92	
15 Bromomethane	94	3.966	3.995	-0.029	96	171614	2.00	1.86	
16 Chloroethane	64	4.068	4.100	-0.032	95	69702	2.00	1.87	
17 Ethanol	31	4.198	4.222	-0.024	92	172190	10.0	7.67	
18 Vinyl bromide	106	4.284	4.315	-0.031	97	197656	2.00	2.03	
19 2-Methylbutane	43	4.343	4.369	-0.026	77	117076	2.00	1.95	
20 Acrolein	56	4.483	4.516	-0.033	97	41705	2.00	2.20	
21 Trichlorofluoromethane	101	4.489	4.517	-0.028	99	845437	2.00	1.91	
22 Acetonitrile	40	4.516	4.545	-0.029	96	35597	2.00	1.84	
23 Acetone	58	4.575	4.605	-0.030	100	57219	2.00	1.84	
24 Pentane	72	4.661	4.693	-0.032	91	30029	2.00	1.99	
25 Isopropyl alcohol	45	4.688	4.716	-0.028	95	209729	2.00	2.48	
26 Ethyl ether	31	4.780	4.817	-0.037	69	85111	2.00	1.71	
27 1,1-Dichloroethene	96	5.006	5.033	-0.027	97	198342	2.00	1.88	
28 Acrylonitrile	53	5.066	5.097	-0.031	91	93387	2.00	1.99	
29 2-Methyl-2-propanol	59	5.141	5.173	-0.032	94	405847	2.00	2.02	
30 1,1,2-Trichloro-1,2,2-trif	101	5.174	5.199	-0.025	92	514124	2.00	1.97	
31 Methylene Chloride	84	5.260	5.290	-0.030	88	175058	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.281	5.309	-0.028	85	194281	2.00	1.98	
33 Carbon disulfide	76	5.378	5.410	-0.032	99	488020	2.00	1.95	
34 trans-1,2-Dichloroethene	96	5.929	5.951	-0.023	97	204116	2.00	1.90	
35 2-Methylpentane	43	5.988	6.011	-0.023	84	255391	2.00	1.80	
36 Methyl tert-butyl ether	73	6.058	6.094	-0.036	92	690950	2.00	2.02	
37 1,1-Dichloroethane	63	6.257	6.283	-0.026	98	346185	2.00	1.92	
38 Vinyl acetate	43	6.376	6.402	-0.026	98	366118	2.00	2.11	
39 2-Butanone (MEK)	72	6.732	6.761	-0.029	98	78637	2.00	1.93	
40 Hexane	56	6.824	6.845	-0.021	81	122366	2.00	1.96	
171 Isopropyl ether	45	6.958	6.989	-0.031	86	443358	2.00	2.06	
41 cis-1,2-Dichloroethene	96	7.104	7.127	-0.023	94	212288	2.00	1.96	
42 Ethyl acetate	43	7.298	7.330	-0.032	98	293488	2.00	1.95	
43 Chloroform	83	7.422	7.439	-0.017	96	555199	2.00	1.94	
173 Tert-butyl ethyl ether	59	7.557	7.580	-0.023	92	591267	2.00	1.91	
44 Tetrahydrofuran	42	7.762	7.793	-0.031	76	130960	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.344	8.364	-0.020	94	715022	2.00	1.97	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	419142	2.00	1.98	
47 Benzene	78	8.905	8.920	-0.015	98	541647	2.00	1.99	
48 Cyclohexane	69	8.932	8.951	-0.019	88	85082	2.00	2.10	
50 Carbon tetrachloride	117	8.943	8.962	-0.019	97	823420	2.00	2.15	
49 n-Butanol	31	8.943	8.969	-0.026	54	40428	2.00	2.09	
51 2,3-Dimethylpentane	71	9.110	9.126	-0.016	82	113510	2.00	2.01	
52 Thiophene	84	9.159	9.174	-0.015	95	308039	2.00	1.98	
53 Isooctane	57	9.784	9.798	-0.014	95	705085	2.00	2.02	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	76	170084	2.00	1.99	
55 n-Heptane	71	10.210	10.224	-0.014	83	179014	2.00	2.06	
56 Trichloroethene	130	10.237	10.250	-0.013	93	332896	2.00	2.03	
57 Dibromomethane	93	10.269	10.279	-0.010	92	292459	2.00	1.99	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	572509	2.00	2.08	
59 1,4-Dioxane	88	10.474	10.497	-0.023	86	85996	2.00	2.07	
60 Methyl methacrylate	41	10.631	10.649	-0.018	90	196157	2.00	2.06	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	414520	2.00	2.47	
62 4-Methyl-2-pentanone (MIBK)	43	11.531	11.552	-0.021	91	315480	2.00	2.08	
63 cis-1,3-Dichloropropene	75	11.569	11.577	-0.008	97	358004	2.00	2.17	
64 trans-1,3-Dichloropropene	75	12.324	12.332	-0.008	97	387987	2.00	2.22	
65 Toluene	91	12.464	12.471	-0.007	93	738479	2.00	2.06	
67 2-Methylthiophene	97	12.518	12.524	-0.006	80	252005	NC	NC	
66 1,1,2-Trichloroethane	83	12.518	12.527	-0.009	94	195833	2.00	2.05	
68 3-Methylthiophene	97	12.831	12.836	-0.005	99	596590	NC	NC	
69 2-Hexanone	58	12.987	13.003	-0.016	95	157281	2.00	2.09	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	97	630906	2.00	2.27	
71 n-Octane	85	13.321	13.326	-0.005	74	241345	2.00	2.11	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	440376	2.00	2.11	
73 Tetrachloroethene	129	13.688	13.695	-0.007	94	362784	2.00	2.04	
74 Chlorobenzene	112	14.599	14.606	-0.007	92	644974	2.00	2.06	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	78	387573	2.00	1.84	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1081684	2.00	2.09	
77 2-Ethylthiophene	97	15.036	15.042	-0.006	98	850130	NC	NC	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1797001	4.00	4.23	
79 Bromoform	173	15.505	15.507	-0.002	96	657515	2.00	2.25	
80 Styrene	104	15.592	15.594	-0.002	97	618923	2.00	2.22	
82 o-Xylene	91	15.651	15.655	-0.004	97	908326	2.00	2.04	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.656	15.659	-0.003	81	352264	2.00	2.08	
83 1,1,2,2-Tetrachloroethane	83	15.974	15.976	-0.002	93	486519	2.00	2.15	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	231227	2.00	2.06	
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1305567	2.00	2.06	
86 N-Propylbenzene	120	16.853	16.856	-0.003	98	380100	2.00	2.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	338365	2.00	2.10	
88 4-Ethyltoluene	105	17.021	17.027	-0.006	98	1360898	2.00	2.06	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	643905	2.00	2.39	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	552848	2.00	2.16	
91 n-Decane	57	17.528	17.532	-0.004	97	510052	2.00	2.12	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	1376781	2.00	2.10	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	1269827	2.00	2.11	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	888433	2.00	2.04	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	1714335	2.00	2.11	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	1039012	2.00	2.24	
97 1,4-Dichlorobenzene	146	17.970	17.977	-0.007	94	887663	2.00	2.03	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	1699119	2.00	2.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1037942	2.00	1.61	
100 Butylcyclohexane	83	18.229	18.232	-0.004	92	701115	2.00	1.97	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	96	857489	2.00	2.00	
102 2,3-Dihydroindene	117	18.379	18.383	-0.004	93	1087727	2.00	2.04	
103 Indene	116	18.520	18.520	0.000	90	809464	2.00	1.85	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	1414728	2.00	2.12	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	96	1229369	NC	NC	
105 Undecane	57	19.000	19.001	-0.001	87	616308	2.00	2.16	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	94	386560	2.00	1.85	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	1560478	2.00	2.01	
109 1,2,3,5-Tetramethylbenzene	119	19.463	19.464	-0.001	94	955538	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	96	1325184	NC	NC	
110 Dodecane	57	20.127	20.128	-0.001	90	688062	2.00	2.31	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	999500	2.00	2.16	
113 Naphthalene	128	20.326	20.329	-0.003	98	1949612	2.00	2.08	
114 Benzo(b)thiophene	134	20.423	20.429	-0.006	99	1114636	NC	NC	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	1114590	2.00	2.07	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	970744	2.00	2.18	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	761819	2.00	2.56	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	709921	2.00	2.71	
A 120 C8 Range	1	13.335	(13.279-13.376)		0	1874356	2.00	2.10	
S 121 Xylenes, Total	100				0		6.00	6.27	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.86	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00080

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D

Injection Date: 17-Nov-2018 06:27:30

Instrument ID: MR

Operator ID:

Lims ID: icv

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

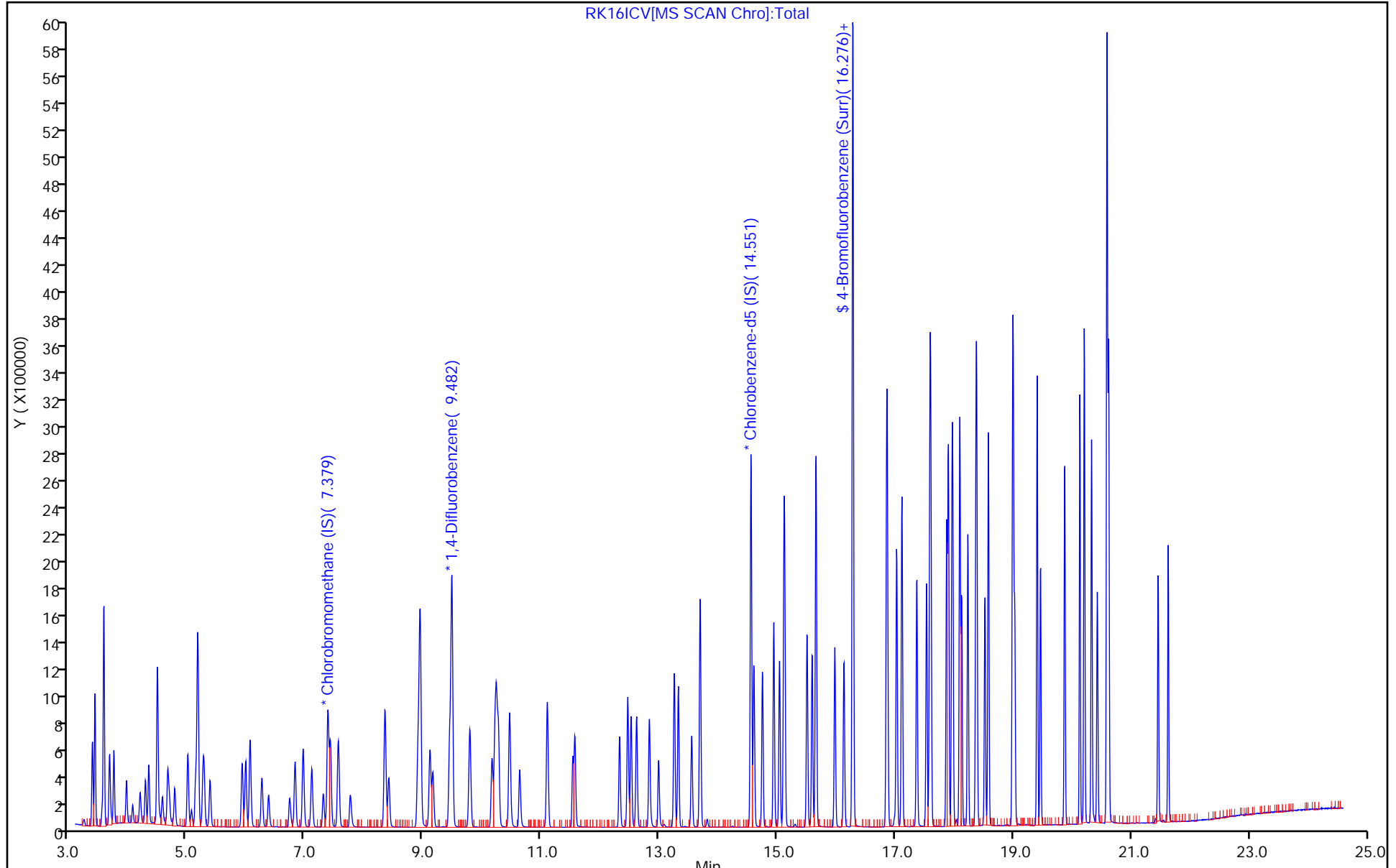
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.256		1.90	2.00	-4.9	35.0
Propene	Ave	0.7296	0.6790		1.86	2.00	-6.9	35.0
Dichlorodifluoromethane	Ave	4.352	5.057		2.32	2.00	16.2	35.0
Chloromethane	Ave	0.3061	0.2731		1.78	2.00	-10.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	3.469		2.14	2.00	7.1	35.0
Acetaldehyde	Ave	0.2860	0.2397		8.38	10.0	-16.2	35.0
Vinyl chloride	Ave	1.073	0.9669		1.80	2.00	-9.9	35.0
1,3-Butadiene	Ave	0.6506	0.6233		1.92	2.00	-4.2	35.0
Butane	Ave	1.132	1.086		1.92	2.00	-4.0	35.0
Bromomethane	Ave	1.235	1.146		1.86	2.00	-7.2	35.0
Chloroethane	Ave	0.4970	0.4655		1.87	2.00	-6.3	35.0
Ethanol	Ave	0.2997	0.2300		7.67	10.0	-23.3	35.0
Vinyl bromide	Ave	1.302	1.320		2.03	2.00	1.4	35.0
2-Methylbutane	Ave	0.7999	0.7818		1.95	2.00	-2.3	35.0
Acrolein	Ave	0.2528	0.2785		2.20	2.00	10.2	35.0
Trichlorofluoromethane	Ave	5.912	5.646		1.91	2.00	-4.5	35.0
Acetonitrile	Ave	0.2586	0.2377		1.84	2.00	-8.1	35.0
Acetone	Ave	0.4151	0.3821		1.84	2.00	-7.9	35.0
Pentane	Ave	0.2011	0.2005		1.99	2.00	-0.3	35.0
Isopropyl alcohol	Ave	1.132	1.401		2.48	2.00	23.8	35.0
Ethyl ether	Ave	0.6661	0.5684		1.71	2.00	-14.7	35.0
1,1-Dichloroethene	Ave	1.408	1.325		1.88	2.00	-5.9	35.0
Acrylonitrile	Ave	0.6277	0.6236		1.99	2.00	-0.6	35.0
tert-Butyl alcohol	Ave	2.677	2.710		2.02	2.00	1.2	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.433		1.97	2.00	-1.6	35.0
Methylene Chloride	Ave	1.338	1.169		1.75	2.00	-12.6	35.0
3-Chloropropene	Ave	1.309	1.297		1.98	2.00	-0.9	35.0
Carbon disulfide	Ave	3.341	3.259		1.95	2.00	-2.4	35.0
trans-1,2-Dichloroethene	Ave	1.436	1.363		1.90	2.00	-5.1	35.0
2-Methylpentane	Ave	1.894	1.705		1.80	2.00	-10.0	35.0
Methyl tert-butyl ether	Ave	4.568	4.614		2.02	2.00	1.0	35.0
1,1-Dichloroethane	Ave	2.402	2.312		1.92	2.00	-3.8	35.0
Vinyl acetate	Ave	2.320	2.445		2.11	2.00	5.4	35.0
2-Butanone (MEK)	Ave	0.5446	0.5251		1.93	2.00	-3.6	35.0
Hexane	Ave	0.8352	0.8172		1.96	2.00	-2.2	35.0
Isopropyl ether	Ave	2.873	2.961		2.06	2.00	3.0	35.0
cis-1,2-Dichloroethene	Ave	1.448	1.418		1.96	2.00	-2.1	35.0
Ethyl acetate	Ave	2.012	1.960		1.95	2.00	-2.6	35.0
Chloroform	Ave	3.821	3.708		1.94	2.00	-3.0	35.0
Tert-butyl ethyl ether	Ave	4.141	3.948		1.91	2.00	-4.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	0.8745		1.97	2.00	-1.3	35.0
1,1,1-Trichloroethane	Ave	4.843	4.775		1.97	2.00	-1.4	35.0
1,2-Dichloroethane	Ave	0.5063	0.5017		1.98	2.00	-0.9	35.0
Benzene	Ave	0.6517	0.6483		1.99	2.00	-0.5	35.0
Cyclohexane	Ave	0.0968	0.1018		2.10	2.00	5.2	35.0
1-Butanol	Ave	0.0462	0.0484		2.09	2.00	4.7	35.0
Carbon tetrachloride	Ave	0.9167	0.9855		2.15	2.00	7.5	35.0
2,3-Dimethylpentane	Ave	0.1349	0.1359		2.01	2.00	0.7	35.0
Thiophene	Ave	0.3728	0.3687		1.98	2.00	-1.1	35.0
2,2,4-Trimethylpentane	Ave	0.8342	0.8439		2.02	2.00	1.2	35.0
1,2-Dichloropropane	Ave	0.2045	0.2036		1.99	2.00	-0.5	35.0
Heptane	Ave	0.2083	0.2143		2.06	2.00	2.8	35.0
Trichloroethene	Ave	0.3929	0.3984		2.03	2.00	1.4	35.0
Dibromomethane	Ave	0.3514	0.3500		1.99	2.00	-0.4	35.0
Bromodichloromethane	Ave	0.6587	0.6852		2.08	2.00	4.0	35.0
1,4-Dioxane	Ave	0.0994	0.1029		2.07	2.00	3.5	35.0
Methyl methacrylate	Ave	0.2275	0.2348		2.06	2.00	3.2	35.0
Methylcyclohexane	Ave	0.4024	0.4961		2.47	2.00	23.3	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.3776		2.08	2.00	4.1	35.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4285		2.17	2.00	8.5	35.0
trans-1,3-Dichloropropene	Ave	0.4674	0.5177		2.22	2.00	10.8	35.0
Toluene	Ave	0.9586	0.9853		2.06	2.00	2.8	35.0
1,1,2-Trichloroethane	Ave	0.2543	0.2613		2.05	2.00	2.7	35.0
2-Hexanone	Ave	0.2006	0.2098		2.09	2.00	4.6	35.0
Dibromochloromethane	Ave	0.7414	0.8418		2.27	2.00	13.5	35.0
Octane	Ave	0.3054	0.3220		2.11	2.00	5.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5875		2.11	2.00	5.4	35.0
Tetrachloroethene	Ave	0.4749	0.4840		2.04	2.00	1.9	35.0
Chlorobenzene	Ave	0.8374	0.8605		2.06	2.00	2.8	35.0
2,3-Dimethylheptane	Ave	0.5626	0.5171		1.84	2.00	-8.1	35.0
Ethylbenzene	Ave	1.382	1.443		2.09	2.00	4.4	35.0
m-Xylene & p-Xylene	Ave	1.133	1.199		4.23	4.00	5.8	35.0
Bromoform	Ave	0.7786	0.8773		2.25	2.00	12.7	35.0
Styrene	Ave	0.7430	0.8258		2.22	2.00	11.1	35.0
o-Xylene	Ave	1.190	1.212		2.04	2.00	1.8	35.0
Nonane	Ave	0.4511	0.4700		2.08	2.00	4.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6491		2.15	2.00	7.3	35.0
1,2,3-Trichloropropane	Ave	0.3000	0.3085		2.06	2.00	2.8	35.0
Isopropylbenzene	Ave	1.694	1.742		2.06	2.00	2.8	35.0
Propylbenzene	Ave	0.4652	0.5071		2.18	2.00	9.0	35.0
2-Chlorotoluene	Ave	0.4306	0.4514		2.10	2.00	4.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Lab Sample ID: ICV 140-25490/18 Calibration Date: 11/17/2018 06:27
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RK16ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.816		2.06	2.00	3.2	35.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.8591		2.39	2.00	19.3	35.0
Alpha Methyl Styrene	Ave	0.6844	0.7376		2.16	2.00	7.8	35.0
Decane	Ave	0.6421	0.6805		2.12	2.00	6.0	35.0
tert-Butylbenzene	Ave	1.753	1.837		2.10	2.00	4.8	35.0
1,2,4-Trimethylbenzene	Ave	1.607	1.694		2.11	2.00	5.5	35.0
1,3-Dichlorobenzene	Ave	1.160	1.185		2.04	2.00	2.2	35.0
sec-Butylbenzene	Ave	2.171	2.287		2.11	2.00	5.4	35.0
Benzyl chloride	Ave	1.239	1.386		2.24	2.00	11.9	35.0
1,4-Dichlorobenzene	Ave	1.164	1.184		2.03	2.00	1.7	35.0
4-Isopropyltoluene	Ave	2.191	2.267		2.07	2.00	3.5	35.0
1,2,3-Trimethylbenzene	Ave	1.725	1.385		1.61	2.00	-19.7	35.0
Butylcyclohexane	Ave	0.9488	0.9354		1.97	2.00	-1.4	35.0
1,2-Dichlorobenzene	Ave	1.144	1.144		2.00	2.00	-0.0	35.0
Indane	Ave	1.423	1.451		2.04	2.00	2.0	35.0
Indene	Ave	1.168	1.080		1.85	2.00	-7.6	35.0
Butylbenzene	Ave	1.784	1.888		2.12	2.00	5.8	35.0
Undecane	Ave	0.7598	0.8223		2.16	2.00	8.2	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5157		1.85	2.00	-7.4	35.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	2.082		2.01	2.00	0.7	35.0
Dodecane	Ave	0.7957	0.9180		2.31	2.00	15.4	35.0
1,2,4-Trichlorobenzene	Ave	1.235	1.334		2.16	2.00	7.9	35.0
Naphthalene	Ave	2.498	2.601		2.08	2.00	4.1	35.0
Hexachlorobutadiene	Ave	1.436	1.487		2.07	2.00	3.5	35.0
1,2,3-Trichlorobenzene	Ave	1.187	1.295		2.18	2.00	9.1	35.0
2-Methylnaphthalene	Ave	0.7935	1.016		2.56	2.00	28.1	50.0
1-Methylnaphthalene	Ave	0.6999	0.9471		2.71	2.00	35.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8473		3.98	4.00	-0.4	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D
 Lims ID: icv
 Client ID:
 Sample Type: ICV
 Inject. Date: 17-Nov-2018 06:27:30 ALS Bottle#: 8 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-018
 Misc. Info.: S80
 Operator ID: Instrument ID: MR
 Sublist:

Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 16:30:16 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0326

First Level Reviewer: tajh Date: 19-Nov-2018 10:15:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.379	7.397	-0.018	68	299493	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.482	9.494	-0.012	94	1671036	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.551	14.555	-0.004	89	1499042	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.276	16.279	-0.003	89	1270095	4.00	3.98	
6 Chlorodifluoromethane	51	3.383	3.417	-0.034	95	337816	2.00	1.90	
7 Propene	41	3.389	3.420	-0.031	91	101676	2.00	1.86	
8 Dichlorodifluoromethane	85	3.432	3.461	-0.029	100	757267	2.00	2.32	
9 Chloromethane	52	3.550	3.586	-0.036	98	40890	2.00	1.78	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.583	3.609	-0.026	89	519503	2.00	2.14	
11 Acetaldehyde	44	3.674	3.710	-0.036	93	179473	10.0	8.38	
12 Vinyl chloride	62	3.680	3.711	-0.031	99	144783	2.00	1.80	
13 Butadiene	54	3.750	3.780	-0.030	87	93331	2.00	1.92	
14 Butane	43	3.750	3.782	-0.032	89	162697	2.00	1.92	
15 Bromomethane	94	3.966	3.995	-0.029	96	171614	2.00	1.86	
16 Chloroethane	64	4.068	4.100	-0.032	95	69702	2.00	1.87	
17 Ethanol	31	4.198	4.222	-0.024	92	172190	10.0	7.67	
18 Vinyl bromide	106	4.284	4.315	-0.031	97	197656	2.00	2.03	
19 2-Methylbutane	43	4.343	4.369	-0.026	77	117076	2.00	1.95	
20 Acrolein	56	4.483	4.516	-0.033	97	41705	2.00	2.20	
21 Trichlorofluoromethane	101	4.489	4.517	-0.028	99	845437	2.00	1.91	
22 Acetonitrile	40	4.516	4.545	-0.029	96	35597	2.00	1.84	
23 Acetone	58	4.575	4.605	-0.030	100	57219	2.00	1.84	
24 Pentane	72	4.661	4.693	-0.032	91	30029	2.00	1.99	
25 Isopropyl alcohol	45	4.688	4.716	-0.028	95	209729	2.00	2.48	
26 Ethyl ether	31	4.780	4.817	-0.037	69	85111	2.00	1.71	
27 1,1-Dichloroethene	96	5.006	5.033	-0.027	97	198342	2.00	1.88	
28 Acrylonitrile	53	5.066	5.097	-0.031	91	93387	2.00	1.99	
29 2-Methyl-2-propanol	59	5.141	5.173	-0.032	94	405847	2.00	2.02	
30 1,1,2-Trichloro-1,2,2-trif	101	5.174	5.199	-0.025	92	514124	2.00	1.97	
31 Methylene Chloride	84	5.260	5.290	-0.030	88	175058	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.281	5.309	-0.028	85	194281	2.00	1.98	
33 Carbon disulfide	76	5.378	5.410	-0.032	99	488020	2.00	1.95	
34 trans-1,2-Dichloroethene	96	5.929	5.951	-0.023	97	204116	2.00	1.90	
35 2-Methylpentane	43	5.988	6.011	-0.023	84	255391	2.00	1.80	
36 Methyl tert-butyl ether	73	6.058	6.094	-0.036	92	690950	2.00	2.02	
37 1,1-Dichloroethane	63	6.257	6.283	-0.026	98	346185	2.00	1.92	
38 Vinyl acetate	43	6.376	6.402	-0.026	98	366118	2.00	2.11	
39 2-Butanone (MEK)	72	6.732	6.761	-0.029	98	78637	2.00	1.93	
40 Hexane	56	6.824	6.845	-0.021	81	122366	2.00	1.96	
171 Isopropyl ether	45	6.958	6.989	-0.031	86	443358	2.00	2.06	
41 cis-1,2-Dichloroethene	96	7.104	7.127	-0.023	94	212288	2.00	1.96	
42 Ethyl acetate	43	7.298	7.330	-0.032	98	293488	2.00	1.95	
43 Chloroform	83	7.422	7.439	-0.017	96	555199	2.00	1.94	
173 Tert-butyl ethyl ether	59	7.557	7.580	-0.023	92	591267	2.00	1.91	
44 Tetrahydrofuran	42	7.762	7.793	-0.031	76	130960	2.00	1.97	
45 1,1,1-Trichloroethane	97	8.344	8.364	-0.020	94	715022	2.00	1.97	
46 1,2-Dichloroethane	62	8.414	8.427	-0.013	97	419142	2.00	1.98	
47 Benzene	78	8.905	8.920	-0.015	98	541647	2.00	1.99	
48 Cyclohexane	69	8.932	8.951	-0.019	88	85082	2.00	2.10	
50 Carbon tetrachloride	117	8.943	8.962	-0.019	97	823420	2.00	2.15	
49 n-Butanol	31	8.943	8.969	-0.026	54	40428	2.00	2.09	
51 2,3-Dimethylpentane	71	9.110	9.126	-0.016	82	113510	2.00	2.01	
52 Thiophene	84	9.159	9.174	-0.015	95	308039	2.00	1.98	
53 Isooctane	57	9.784	9.798	-0.014	95	705085	2.00	2.02	
54 1,2-Dichloropropane	63	10.162	10.175	-0.013	76	170084	2.00	1.99	
55 n-Heptane	71	10.210	10.224	-0.014	83	179014	2.00	2.06	
56 Trichloroethene	130	10.237	10.250	-0.013	93	332896	2.00	2.03	
57 Dibromomethane	93	10.269	10.279	-0.010	92	292459	2.00	1.99	
58 Dichlorobromomethane	83	10.458	10.468	-0.010	98	572509	2.00	2.08	
59 1,4-Dioxane	88	10.474	10.497	-0.023	86	85996	2.00	2.07	
60 Methyl methacrylate	41	10.631	10.649	-0.018	90	196157	2.00	2.06	
61 Methylcyclohexane	83	11.100	11.109	-0.009	93	414520	2.00	2.47	
62 4-Methyl-2-pentanone (MIBK)	43	11.531	11.552	-0.021	91	315480	2.00	2.08	
63 cis-1,3-Dichloropropene	75	11.569	11.577	-0.008	97	358004	2.00	2.17	
64 trans-1,3-Dichloropropene	75	12.324	12.332	-0.008	97	387987	2.00	2.22	
65 Toluene	91	12.464	12.471	-0.007	93	738479	2.00	2.06	
67 2-Methylthiophene	97	12.518	12.524	-0.006	80	252005	NC	NC	
66 1,1,2-Trichloroethane	83	12.518	12.527	-0.009	94	195833	2.00	2.05	
68 3-Methylthiophene	97	12.831	12.836	-0.005	99	596590	NC	NC	
69 2-Hexanone	58	12.987	13.003	-0.016	95	157281	2.00	2.09	
70 Chlorodibromomethane	129	13.251	13.258	-0.007	97	630906	2.00	2.27	
71 n-Octane	85	13.321	13.326	-0.005	74	241345	2.00	2.11	
72 Ethylene Dibromide	107	13.548	13.551	-0.003	97	440376	2.00	2.11	
73 Tetrachloroethene	129	13.688	13.695	-0.007	94	362784	2.00	2.04	
74 Chlorobenzene	112	14.599	14.606	-0.007	92	644974	2.00	2.06	
75 2,3-Dimethylheptane	43	14.745	14.750	-0.005	78	387573	2.00	1.84	
76 Ethylbenzene	91	14.939	14.943	-0.004	99	1081684	2.00	2.09	
77 2-Ethylthiophene	97	15.036	15.042	-0.006	98	850130	NC	NC	
78 m-Xylene & p-Xylene	91	15.117	15.119	-0.002	100	1797001	4.00	4.23	
79 Bromoform	173	15.505	15.507	-0.002	96	657515	2.00	2.25	
80 Styrene	104	15.592	15.594	-0.002	97	618923	2.00	2.22	
82 o-Xylene	91	15.651	15.655	-0.004	97	908326	2.00	2.04	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	15.656	15.659	-0.003	81	352264	2.00	2.08	
83 1,1,2,2-Tetrachloroethane	83	15.974	15.976	-0.002	93	486519	2.00	2.15	
84 1,2,3-Trichloropropane	110	16.131	16.132	-0.001	93	231227	2.00	2.06	
85 Isopropylbenzene	105	16.282	16.283	-0.001	96	1305567	2.00	2.06	
86 N-Propylbenzene	120	16.853	16.856	-0.003	98	380100	2.00	2.18	
87 2-Chlorotoluene	126	16.864	16.867	-0.003	92	338365	2.00	2.10	
88 4-Ethyltoluene	105	17.021	17.027	-0.006	98	1360898	2.00	2.06	
89 1,3,5-Trimethylbenzene	120	17.112	17.115	-0.003	91	643905	2.00	2.39	
90 Alpha Methyl Styrene	118	17.366	17.366	0.000	86	552848	2.00	2.16	
91 n-Decane	57	17.528	17.532	-0.004	97	510052	2.00	2.12	
92 tert-Butylbenzene	119	17.587	17.590	-0.003	89	1376781	2.00	2.10	
93 1,2,4-Trimethylbenzene	105	17.603	17.605	-0.002	96	1269827	2.00	2.11	
94 1,3-Dichlorobenzene	146	17.873	17.874	-0.001	98	888433	2.00	2.04	
95 sec-Butylbenzene	105	17.900	17.902	-0.002	97	1714335	2.00	2.11	
96 Benzyl chloride	91	17.959	17.962	-0.003	97	1039012	2.00	2.24	
97 1,4-Dichlorobenzene	146	17.970	17.977	-0.007	94	887663	2.00	2.03	
98 4-Isopropyltoluene	119	18.094	18.095	-0.001	95	1699119	2.00	2.07	
99 1,2,3-Trimethylbenzene	105	18.126	18.127	-0.001	99	1037942	2.00	1.61	
100 Butylcyclohexane	83	18.229	18.232	-0.004	92	701115	2.00	1.97	
101 1,2-Dichlorobenzene	146	18.369	18.370	-0.001	96	857489	2.00	2.00	
102 2,3-Dihydroindene	117	18.379	18.383	-0.004	93	1087727	2.00	2.04	
103 Indene	116	18.520	18.520	0.000	90	809464	2.00	1.85	
104 n-Butylbenzene	91	18.579	18.580	-0.001	97	1414728	2.00	2.12	
108 1,2-Dimethyl-4-Ethylbenzen	119	18.989	18.989	0.000	96	1229369	NC	NC	
105 Undecane	57	19.000	19.001	-0.001	87	616308	2.00	2.16	
106 1,2-Dibromo-3-Chloropropan	157	19.027	19.028	-0.001	94	386560	2.00	1.85	
107 1,2,4,5-Tetramethylbenzene	119	19.404	19.405	-0.001	95	1560478	2.00	2.01	
109 1,2,3,5-Tetramethylbenzene	119	19.463	19.464	-0.001	94	955538	NC	NC	
112 1,2,3,4-Tetramethylbenzene	119	19.873	19.873	0.000	96	1325184	NC	NC	
110 Dodecane	57	20.127	20.128	-0.001	90	688062	2.00	2.31	
111 1,2,4-Trichlorobenzene	180	20.202	20.205	-0.003	94	999500	2.00	2.16	
113 Naphthalene	128	20.326	20.329	-0.003	98	1949612	2.00	2.08	
114 Benzo(b)thiophene	134	20.423	20.429	-0.006	99	1114636	NC	NC	
115 Hexachlorobutadiene	225	20.590	20.590	0.000	95	1114590	2.00	2.07	
116 1,2,3-Trichlorobenzene	180	20.617	20.618	-0.001	94	970744	2.00	2.18	
117 2-Methylnaphthalene	142	21.453	21.458	-0.005	98	761819	2.00	2.56	
118 1-Methylnaphthalene	142	21.626	21.626	0.000	97	709921	2.00	2.71	
A 120 C8 Range	1	13.335	(13.279-13.376)		0	1874356	2.00	2.10	
S 121 Xylenes, Total	100				0		6.00	6.27	
S 122 1,2-Dichloroethene, Total	1				0		4.00	3.86	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00080

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16ICV.D

Injection Date: 17-Nov-2018 06:27:30

Instrument ID: MR

Operator ID:

Lims ID: icv

Worklist Smp#: 18

Client ID:

Purge Vol: 500.000 mL

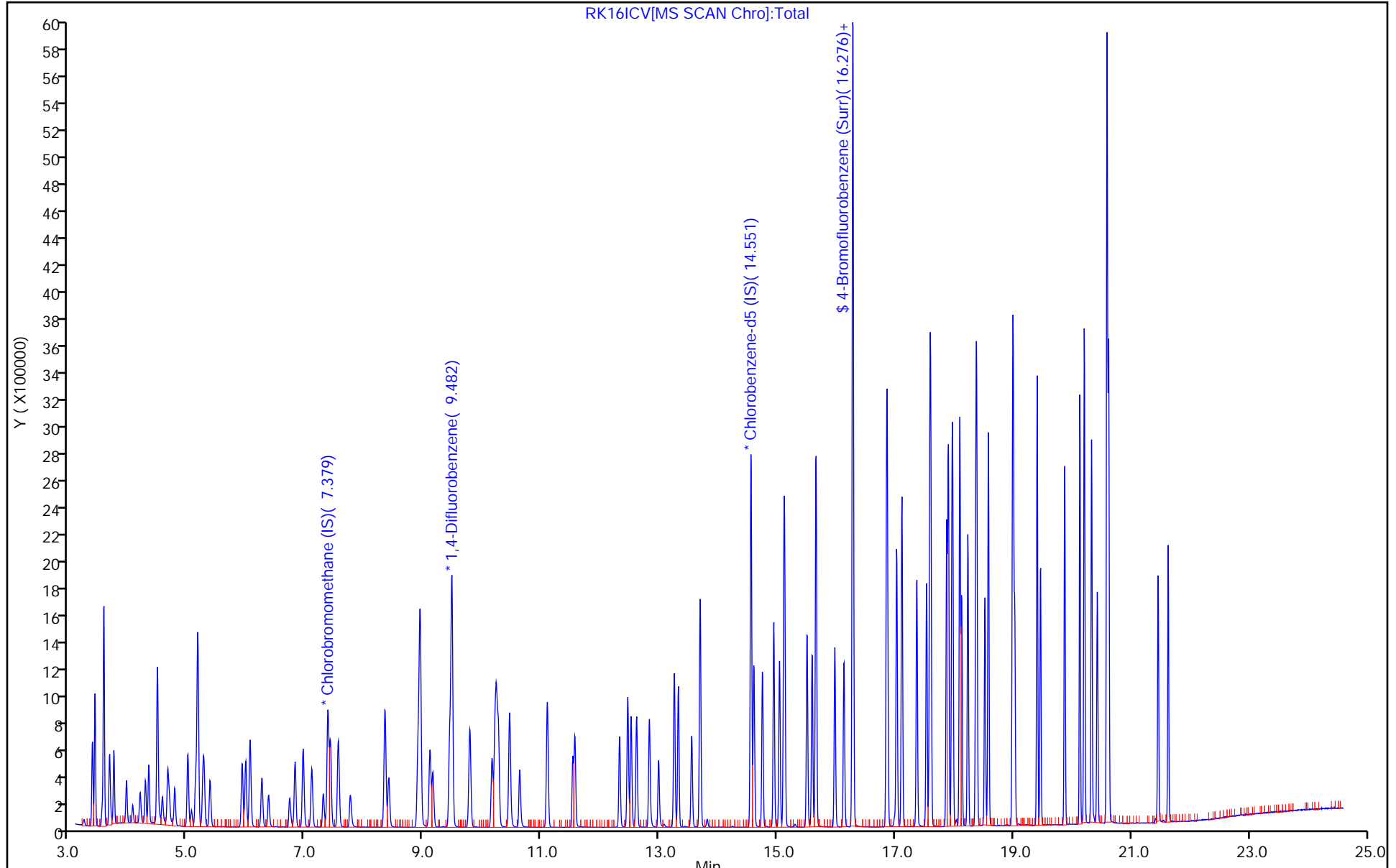
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-28319/2 Calibration Date: 03/14/2019 12:09
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVC14.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	2.373	2.298		0.968	1.00	-3.2	30.0
Propene	Ave	0.7296	0.7319		1.00	1.00	0.3	30.0
Dichlorodifluoromethane	Ave	4.352	4.524		1.04	1.00	4.0	30.0
Chloromethane	Ave	0.3061	0.3466		1.13	1.00	13.2	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	3.240	3.279		1.01	1.00	1.2	30.0
Acetaldehyde	Ave	0.2860	0.3649		6.38	5.00	27.6	30.0
Vinyl chloride	Ave	1.073	1.254		1.17	1.00	16.9	30.0
1,3-Butadiene	Ave	0.6506	0.8532		1.31	1.00	31.1*	30.0
Butane	Ave	1.132	1.440		1.27	1.00	27.2	30.0
Bromomethane	Ave	1.235	1.500		1.21	1.00	21.4	30.0
Chloroethane	Ave	0.4970	0.6302		1.27	1.00	26.8	30.0
Ethanol	Ave	0.2997	0.4106		6.85	5.00	37.0*	30.0
Vinyl bromide	Ave	1.302	1.582		1.21	1.00	21.5	30.0
2-Methylbutane	Ave	0.7999	1.091		1.36	1.00	36.4*	30.0
Acrolein	Ave	0.2528	0.3541		1.40	1.00	40.0*	30.0
Trichlorofluoromethane	Ave	5.912	7.153		1.21	1.00	21.0	30.0
Acetonitrile	Ave	0.2586	0.3764		1.46	1.00	45.6*	30.0
Acetone	Ave	0.4151	0.5141		3.72	3.00	23.9	30.0
Isopropyl alcohol	Ave	1.132	1.568		4.16	3.00	38.6*	30.0
Pentane	Ave	0.2011	0.2619		1.30	1.00	30.3*	30.0
Ethyl ether	Ave	0.6661	0.8941		1.34	1.00	34.2*	30.0
1,1-Dichloroethene	Ave	1.408	1.414		1.00	1.00	0.4	30.0
Acrylonitrile	Ave	0.6277	0.7581		1.21	1.00	20.8	30.0
tert-Butyl alcohol	Ave	2.677	2.783		1.04	1.00	3.9	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	3.489	3.682		1.06	1.00	5.5	30.0
Methylene Chloride	Ave	1.338	1.294		0.967	1.00	-3.3	30.0
3-Chloropropene	Ave	1.309	1.524		1.16	1.00	16.4	30.0
Carbon disulfide	Ave	3.341	3.431		1.03	1.00	2.7	30.0
trans-1,2-Dichloroethene	Ave	1.436	1.411		0.983	1.00	-1.7	30.0
2-Methylpentane	Ave	1.894	2.332		1.23	1.00	23.2	30.0
Methyl tert-butyl ether	Ave	4.568	4.685		1.03	1.00	2.5	30.0
1,1-Dichloroethane	Ave	2.402	2.446		1.02	1.00	1.8	30.0
Vinyl acetate	Ave	2.320	2.737		1.18	1.00	18.0	30.0
2-Butanone (MEK)	Ave	0.5446	0.5610		1.03	1.00	3.0	30.0
Hexane	Ave	0.8352	0.9906		1.19	1.00	18.6	30.0
Isopropyl ether	Ave	2.873	3.358		1.17	1.00	16.9	30.0
cis-1,2-Dichloroethene	Ave	1.448	1.459		1.01	1.00	0.8	30.0
Ethyl acetate	Ave	2.012	2.266		1.13	1.00	12.6	30.0
Chloroform	Ave	3.821	3.774		0.988	1.00	-1.2	30.0
Tert-butyl ethyl ether	Ave	4.141	4.392		1.06	1.00	6.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-28319/2 Calibration Date: 03/14/2019 12:09
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVC14.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8862	1.034		1.17	1.00	16.7	30.0
1,1,1-Trichloroethane	Ave	4.843	4.743		0.979	1.00	-2.1	30.0
1,2-Dichloroethane	Ave	0.5063	0.4800		0.948	1.00	-5.2	30.0
Benzene	Ave	0.6517	0.6557		1.01	1.00	0.6	30.0
1-Butanol	Ave	0.0462	0.0481		1.04	1.00	4.1	30.0
Cyclohexane	Ave	0.0968	0.1119		1.16	1.00	15.5	30.0
Carbon tetrachloride	Ave	0.9167	0.9186		1.00	1.00	0.2	30.0
2,3-Dimethylpentane	Ave	0.1349	0.1472		1.09	1.00	9.1	30.0
Thiophene	Ave	0.3728	0.3877		1.04	1.00	4.0	30.0
2,2,4-Trimethylpentane	Ave	0.8342	0.9212		1.10	1.00	10.4	30.0
1,2-Dichloropropane	Ave	0.2045	0.2115		1.03	1.00	3.4	30.0
Heptane	Ave	0.2083	0.2169		1.04	1.00	4.1	30.0
Trichloroethene	Ave	0.3929	0.3907		0.994	1.00	-0.6	30.0
Dibromomethane	Ave	0.3514	0.3477		0.990	1.00	-1.0	30.0
Bromodichloromethane	Ave	0.6587	0.6467		0.982	1.00	-1.8	30.0
1,4-Dioxane	Ave	0.0994	0.1026		1.03	1.00	3.2	30.0
Methyl methacrylate	Ave	0.2275	0.2355		1.04	1.00	3.5	30.0
Methylcyclohexane	Ave	0.4024	0.4144		1.03	1.00	3.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3626	0.4001		1.10	1.00	10.3	30.0
cis-1,3-Dichloropropene	Ave	0.3948	0.4122		1.04	1.00	4.4	30.0
trans-1,3-Dichloropropene	Ave	0.4674	0.4610		0.986	1.00	-1.4	30.0
Toluene	Ave	0.9586	1.003		1.05	1.00	4.7	30.0
1,1,2-Trichloroethane	Ave	0.2543	0.2742		1.08	1.00	7.8	30.0
2-Hexanone	Ave	0.2006	0.2045		1.02	1.00	2.0	30.0
Dibromochloromethane	Ave	0.7414	0.7653		1.03	1.00	3.2	30.0
Octane	Ave	0.3054	0.3300		1.08	1.00	8.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.5574	0.5563		0.998	1.00	-0.2	30.0
Tetrachloroethene	Ave	0.4749	0.4854		1.02	1.00	2.2	30.0
Chlorobenzene	Ave	0.8374	0.8582		1.02	1.00	2.5	30.0
2,3-Dimethylheptane	Ave	0.5626	0.7241		1.29	1.00	28.7	30.0
Ethylbenzene	Ave	1.382	1.446		1.05	1.00	4.6	30.0
m-Xylene & p-Xylene	Ave	1.133	1.249		2.20	2.00	10.2	30.0
Bromoform	Ave	0.7786	0.7787		1.00	1.00	0.0	30.0
Styrene	Ave	0.7430	0.7510		1.01	1.00	1.1	30.0
o-Xylene	Ave	1.190	1.306		1.10	1.00	9.7	30.0
Nonane	Ave	0.4511	0.5750		1.27	1.00	27.4	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6050	0.6614		1.09	1.00	9.3	30.0
1,2,3-Trichloropropane	Ave	0.3000	0.2862		0.954	1.00	-4.6	30.0
Isopropylbenzene	Ave	1.694	1.775		1.05	1.00	4.8	30.0
Propylbenzene	Ave	0.4652	0.4734		1.02	1.00	1.8	30.0
2-Chlorotoluene	Ave	0.4306	0.4430		1.03	1.00	2.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-28319/2 Calibration Date: 03/14/2019 12:09
 Instrument ID: MR Calib Start Date: 11/16/2018 17:23
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 11/17/2018 03:51
 Lab File ID: RCCVC14.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.759	1.743		0.991	1.00	-0.9	30.0
1,3,5-Trimethylbenzene	Ave	0.7199	0.7396		1.03	1.00	2.7	30.0
Alpha Methyl Styrene	Ave	0.6844	0.6384		0.933	1.00	-6.7	30.0
Decane	Ave	0.6421	0.7601		1.18	1.00	18.4	30.0
tert-Butylbenzene	Ave	1.753	1.824		1.04	1.00	4.0	30.0
1,2,4-Trimethylbenzene	Ave	1.607	1.722		1.07	1.00	7.2	30.0
1,3-Dichlorobenzene	Ave	1.160	1.123		0.969	1.00	-3.1	30.0
sec-Butylbenzene	Ave	2.171	2.208		1.02	1.00	1.7	30.0
Benzyl chloride	Ave	1.239	1.255		1.01	1.00	1.2	30.0
1,4-Dichlorobenzene	Ave	1.164	1.152		0.989	1.00	-1.1	30.0
4-Isopropyltoluene	Ave	2.191	2.267		1.03	1.00	3.4	30.0
1,2,3-Trimethylbenzene	Ave	1.725	1.829		1.06	1.00	6.0	30.0
Butylcyclohexane	Ave	0.9488	1.014		1.07	1.00	6.9	30.0
1,2-Dichlorobenzene	Ave	1.144	1.100		0.961	1.00	-3.9	30.0
Indane	Ave	1.423	1.467		1.03	1.00	3.1	30.0
Indene	Ave	1.168	1.133		0.970	1.00	-3.0	30.0
Butylbenzene	Ave	1.784	1.839		1.03	1.00	3.1	30.0
Undecane	Ave	0.7598	0.8547		1.12	1.00	12.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5572	0.5512		0.989	1.00	-1.1	30.0
1,2,4,5-Tetramethylbenzene	Ave	2.067	1.975		0.955	1.00	-4.5	30.0
Dodecane	Ave	0.7957	0.8082		1.02	1.00	1.6	30.0
1,2,4-Trichlorobenzene	Ave	1.235	1.060		0.858	1.00	-14.2	30.0
Naphthalene	Ave	2.498	1.924		0.770	1.00	-23.0	30.0
Hexachlorobutadiene	Ave	1.436	1.202		0.837	1.00	-16.3	30.0
1,2,3-Trichlorobenzene	Ave	1.187	0.9478		0.798	1.00	-20.2	30.0
2-Methylnaphthalene	Ave	0.7935	0.6146		0.775	1.00	-22.5	50.0
1-Methylnaphthalene	Ave	0.6999	0.7766		1.11	1.00	10.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8506	0.8914		4.19	4.00	4.8	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RCCVC14.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 14-Mar-2019 12:09:30 ALS Bottle#: 15 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-002
 Misc. Info.: P83
 Operator ID: HMT Instrument ID: MR
 Sublist: chrom-MR_TO15*sub16
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:33:51 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:33:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.368	7.368	0.000	72	203113	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.434	9.434	0.000	95	1202204	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.492	14.492	0.000	91	1060567	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.217	16.217	0.000	89	945389	4.00	4.19	
6 Chlorodifluoromethane	51	3.513	3.513	0.000	96	116687	1.00	0.9682	
7 Propene	41	3.518	3.518	0.000	93	37163	1.00	1.00	
8 Dichlorodifluoromethane	85	3.556	3.556	0.000	100	229736	1.00	1.04	
9 Chloromethane	52	3.680	3.680	0.000	58	17600	1.00	1.13	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.691	3.691	0.000	88	166503	1.00	1.01	
11 Acetaldehyde	44	3.777	3.777	0.000	93	92633	5.00	6.38	
12 Vinyl chloride	62	3.799	3.799	0.000	100	63687	1.00	1.17	
13 Butadiene	54	3.858	3.858	0.000	95	43326	1.00	1.31	
14 Butane	43	3.863	3.863	0.000	87	73105	1.00	1.27	
15 Bromomethane	94	4.074	4.074	0.000	96	76145	1.00	1.21	
16 Chloroethane	64	4.165	4.165	0.000	93	32002	1.00	1.27	
17 Ethanol	31	4.235	4.235	0.000	93	104235	5.00	6.85	
18 Vinyl bromide	106	4.375	4.375	0.000	96	80321	1.00	1.21	
19 2-Methylbutane	43	4.424	4.424	0.000	80	55391	1.00	1.36	
20 Acrolein	56	4.553	4.553	0.000	96	17979	1.00	1.40	
21 Trichlorofluoromethane	101	4.570	4.570	0.000	99	363215	1.00	1.21	
22 Acetonitrile	40	4.575	4.575	0.000	24	19115	1.00	1.46	a
23 Acetone	58	4.629	4.629	0.000	100	78310	3.00	3.72	
25 Isopropyl alcohol	45	4.710	4.710	0.000	98	238891	3.00	4.16	
24 Pentane	72	4.737	4.737	0.000	92	13300	1.00	1.30	
26 Ethyl ether	31	4.845	4.845	0.000	79	45401	1.00	1.34	
27 1,1-Dichloroethene	96	5.076	5.076	0.000	96	71781	1.00	1.00	
28 Acrylonitrile	53	5.109	5.109	0.000	93	38496	1.00	1.21	
29 2-Methyl-2-propanol	59	5.152	5.152	0.000	96	141311	1.00	1.04	
30 1,1,2-Trichloro-1,2,2-trif	101	5.227	5.227	0.000	92	186948	1.00	1.06	
31 Methylene Chloride	84	5.319	5.319	0.000	93	65723	1.00	0.9673	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.335	5.335	0.000	86	77407	1.00	1.16	
33 Carbon disulfide	76	5.443	5.443	0.000	98	174195	1.00	1.03	
34 trans-1,2-Dichloroethene	96	5.961	5.961	0.000	96	71668	1.00	0.9830	
35 2-Methylpentane	43	6.020	6.020	0.000	86	118438	1.00	1.23	
36 Methyl tert-butyl ether	73	6.079	6.079	0.000	93	237887	1.00	1.03	
37 1,1-Dichloroethane	63	6.284	6.284	0.000	98	124196	1.00	1.02	
38 Vinyl acetate	43	6.381	6.381	0.000	98	138984	1.00	1.18	
39 2-Butanone (MEK)	72	6.727	6.727	0.000	98	28484	1.00	1.03	
40 Hexane	56	6.834	6.834	0.000	81	50301	1.00	1.19	
171 Isopropyl ether	45	6.953	6.953	0.000	86	170531	1.00	1.17	
41 cis-1,2-Dichloroethene	96	7.104	7.104	0.000	95	74077	1.00	1.01	
42 Ethyl acetate	43	7.282	7.282	0.000	97	115079	1.00	1.13	
43 Chloroform	83	7.406	7.406	0.000	97	191635	1.00	0.9878	
173 Tert-butyl ethyl ether	59	7.541	7.541	0.000	94	223011	1.00	1.06	
44 Tetrahydrofuran	42	7.735	7.735	0.000	78	52497	1.00	1.17	
45 1,1,1-Trichloroethane	97	8.323	8.323	0.000	95	240820	1.00	0.9792	
46 1,2-Dichloroethane	62	8.377	8.377	0.000	96	144271	1.00	0.9481	
47 Benzene	78	8.867	8.867	0.000	98	197078	1.00	1.01	
49 n-Butanol	31	8.905	8.905	0.000	64	14454	1.00	1.04	
48 Cyclohexane	69	8.905	8.905	0.000	93	33620	1.00	1.16	
50 Carbon tetrachloride	117	8.916	8.916	0.000	99	276094	1.00	1.00	
51 2,3-Dimethylpentane	71	9.078	9.078	0.000	83	44232	1.00	1.09	
52 Thiophene	84	9.121	9.121	0.000	95	116531	1.00	1.04	
53 Isooctane	57	9.741	9.741	0.000	94	276881	1.00	1.10	
54 1,2-Dichloropropane	63	10.108	10.108	0.000	72	63576	1.00	1.03	
55 n-Heptane	71	10.167	10.167	0.000	88	65193	1.00	1.04	
56 Trichloroethene	130	10.183	10.183	0.000	95	117427	1.00	0.99	
57 Dibromomethane	93	10.210	10.210	0.000	92	104511	1.00	0.9896	
58 Dichlorobromomethane	83	10.399	10.399	0.000	98	194365	1.00	0.9818	
59 1,4-Dioxane	88	10.415	10.415	0.000	91	30822	1.00	1.03	
60 Methyl methacrylate	41	10.571	10.571	0.000	89	70773	1.00	1.04	
61 Methylcyclohexane	83	11.051	11.051	0.000	92	124556	1.00	1.03	
62 4-Methyl-2-pentanone (MIBK)	43	11.472	11.472	0.000	93	120254	1.00	1.10	
63 cis-1,3-Dichloropropene	75	11.504	11.504	0.000	95	123880	1.00	1.04	
64 trans-1,3-Dichloropropene	75	12.265	12.265	0.000	96	122231	1.00	0.9864	
65 Toluene	91	12.405	12.405	0.000	92	266047	1.00	1.05	
66 1,1,2-Trichloroethane	83	12.453	12.453	0.000	93	72706	1.00	1.08	
69 2-Hexanone	58	12.928	12.928	0.000	93	54228	1.00	1.02	
70 Chlorodibromomethane	129	13.187	13.187	0.000	96	202911	1.00	1.03	
71 n-Octane	85	13.268	13.268	0.000	79	87495	1.00	1.08	
72 Ethylene Dibromide	107	13.483	13.483	0.000	97	147508	1.00	1.00	
73 Tetrachloroethene	129	13.629	13.629	0.000	93	128699	1.00	1.02	
74 Chlorobenzene	112	14.540	14.540	0.000	91	227549	1.00	1.02	
75 2,3-Dimethylheptane	43	14.691	14.691	0.000	89	191984	1.00	1.29	
76 Ethylbenzene	91	14.880	14.880	0.000	99	383298	1.00	1.05	
78 m-Xylene & p-Xylene	91	15.058	15.058	0.000	100	662451	2.00	2.20	
79 Bromoform	173	15.435	15.435	0.000	96	206468	1.00	1.00	
80 Styrene	104	15.527	15.527	0.000	97	199124	1.00	1.01	
82 o-Xylene	91	15.592	15.592	0.000	97	346229	1.00	1.10	
81 n-Nonane	57	15.602	15.602	0.000	83	152446	1.00	1.27	
83 1,1,2,2-Tetrachloroethane	83	15.910	15.910	0.000	93	175352	1.00	1.09	
84 1,2,3-Trichloropropane	110	16.066	16.066	0.000	93	75895	1.00	0.9541	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.223	16.223	0.000	96	470622	1.00	1.05	
86 N-Propylbenzene	120	16.794	16.794	0.000	97	125518	1.00	1.02	
87 2-Chlorotoluene	126	16.805	16.805	0.000	92	117455	1.00	1.03	
88 4-Ethyltoluene	105	16.961	16.961	0.000	98	462120	1.00	0.99	
89 1,3,5-Trimethylbenzene	120	17.053	17.053	0.000	91	196095	1.00	1.03	
90 Alpha Methyl Styrene	118	17.306	17.306	0.000	88	169252	1.00	0.9327	
91 n-Decane	57	17.474	17.474	0.000	97	201531	1.00	1.18	
92 tert-Butylbenzene	119	17.527	17.527	0.000	87	483704	1.00	1.04	
93 1,2,4-Trimethylbenzene	105	17.538	17.538	0.000	96	456704	1.00	1.07	
94 1,3-Dichlorobenzene	146	17.813	17.813	0.000	98	297824	1.00	0.9685	
95 sec-Butylbenzene	105	17.840	17.840	0.000	96	585482	1.00	1.02	
96 Benzyl chloride	91	17.900	17.900	0.000	97	332646	1.00	1.01	
97 1,4-Dichlorobenzene	146	17.910	17.910	0.000	93	305384	1.00	0.9892	
98 4-Isopropyltoluene	119	18.034	18.034	0.000	95	600948	1.00	1.03	
99 1,2,3-Trimethylbenzene	105	18.067	18.067	0.000	98	484974	1.00	1.06	
100 Butylcyclohexane	83	18.175	18.175	0.000	89	268930	1.00	1.07	
101 1,2-Dichlorobenzene	146	18.309	18.309	0.000	92	291577	1.00	0.9610	
102 2,3-Dihydroindene	117	18.320	18.320	0.000	92	389037	1.00	1.03	
103 Indene	116	18.460	18.460	0.000	90	300335	1.00	0.9696	
104 n-Butylbenzene	91	18.525	18.525	0.000	97	487722	1.00	1.03	
105 Undecane	57	18.951	18.951	0.000	88	226624	1.00	1.12	
106 1,2-Dibromo-3-Chloropropan	157	18.967	18.967	0.000	92	146135	1.00	0.9892	
107 1,2,4,5-Tetramethylbenzene	119	19.355	19.355	0.000	95	523556	1.00	0.9553	
110 Dodecane	57	20.083	20.083	0.000	91	214289	1.00	1.02	
111 1,2,4-Trichlorobenzene	180	20.154	20.154	0.000	93	281032	1.00	0.8580	
113 Naphthalene	128	20.278	20.278	0.000	98	510217	1.00	0.7704	
115 Hexachlorobutadiene	225	20.542	20.542	0.000	95	318723	1.00	0.8370	
116 1,2,3-Trichlorobenzene	180	20.563	20.563	0.000	94	251288	1.00	0.7982	
117 2-Methylnaphthalene	142	21.405	21.405	0.000	97	162975	1.00	0.7746	
118 1-Methylnaphthalene	142	21.583	21.583	0.000	98	205912	1.00	1.11	
A 120 C8 Range	1	13.278	(13.219-13.316)		0	739670	1.00	1.15	
S 121 Xylenes, Total	100				0		3.00	3.30	
S 122 1,2-Dichloroethene, Total	1				0		2.00	1.99	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

40CV101P_00083

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RCCVC14.D

Injection Date: 14-Mar-2019 12:09:30

Instrument ID: MR

Operator ID: HMT

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

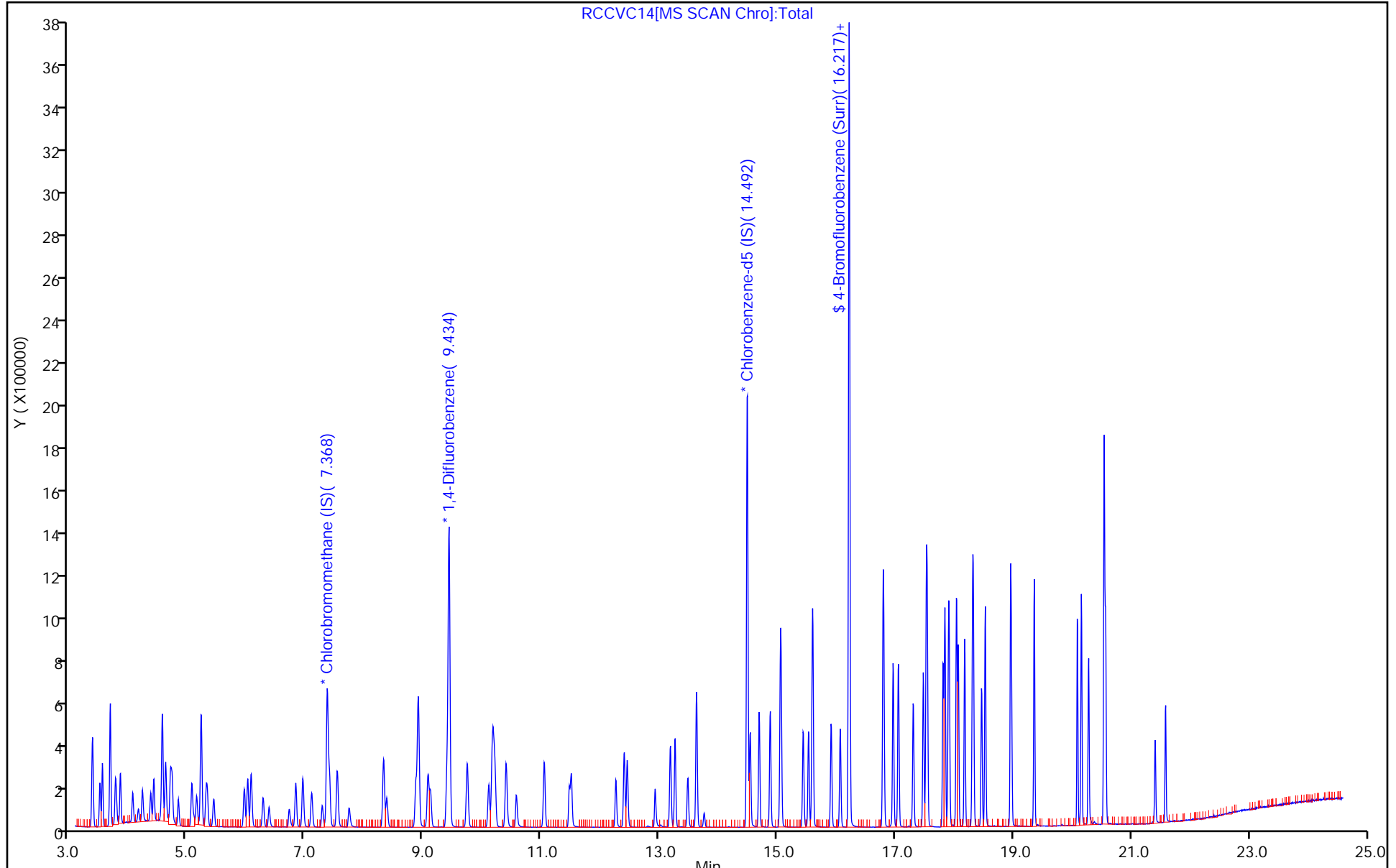
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

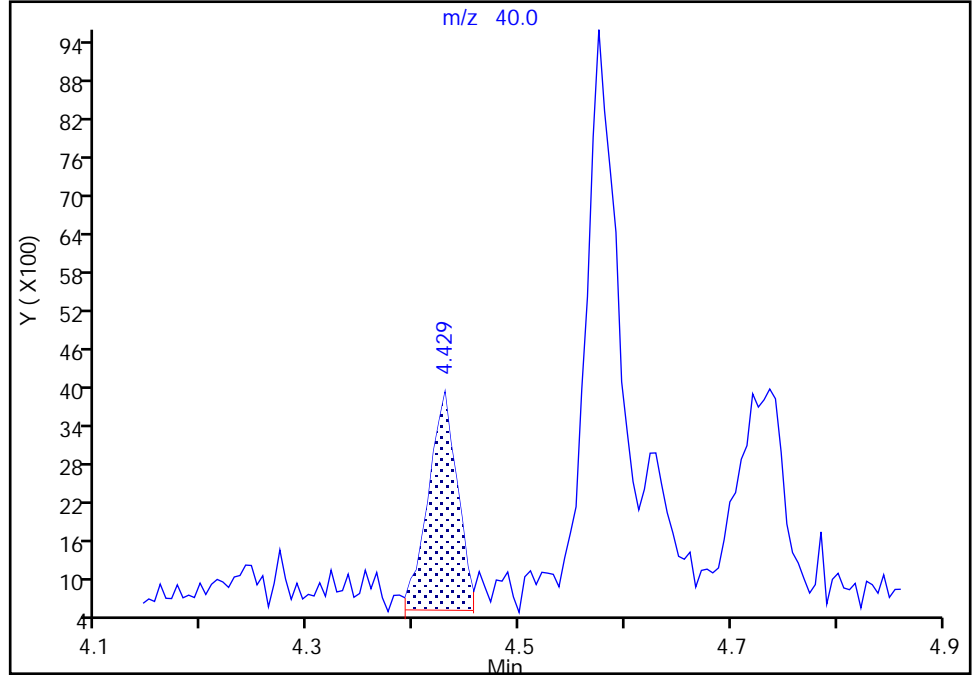
Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RCCVC14.D
Injection Date: 14-Mar-2019 12:09:30 Instrument ID: MR
Lims ID: CCVIS
Client ID:
Operator ID: HMT ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector: MS SCAN

22 Acetonitrile, CAS: 75-05-8

Signal: 1

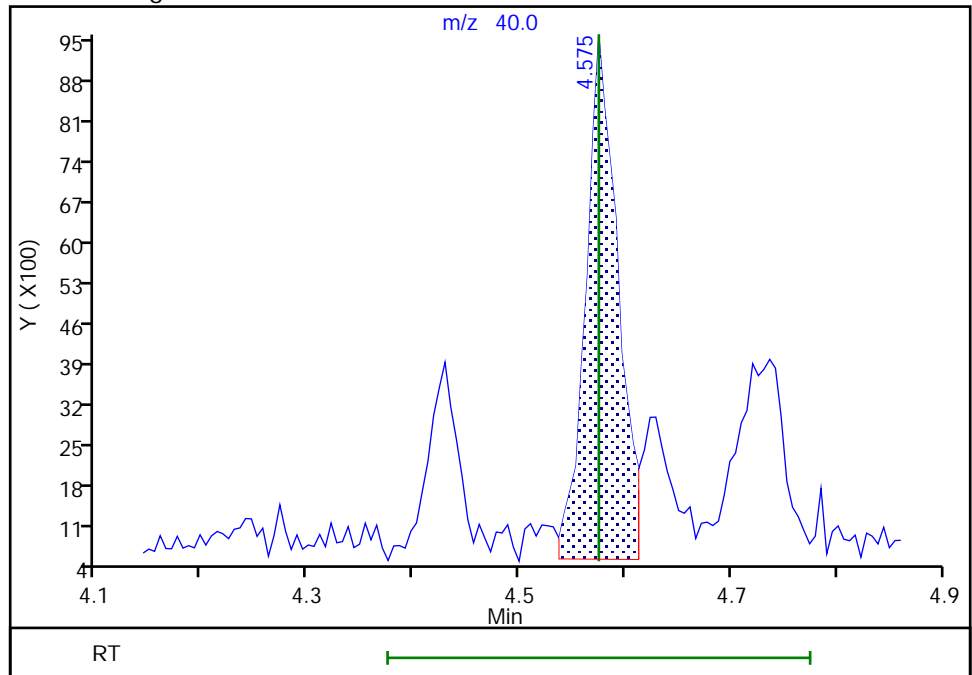
RT: 4.43
Area: 6489
Amount: 0.494112
Amount Units: ppb v/v

Processing Integration Results



RT: 4.58
Area: 19115
Amount: 1.455532
Amount Units: ppb v/v

Manual Integration Results



Reviewer: tajh, 14-Mar-2019 12:47:16
Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RBFBK16I.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 16-Nov-2018 16:00:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0010019-001
 Misc. Info.: BFB
 Operator ID: Instrument ID: MR
 Method: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Nov-2018 15:42:29 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0313

First Level Reviewer: tajh Date: 16-Nov-2018 16:19:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.637	5.637	0.000	0	1507667	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

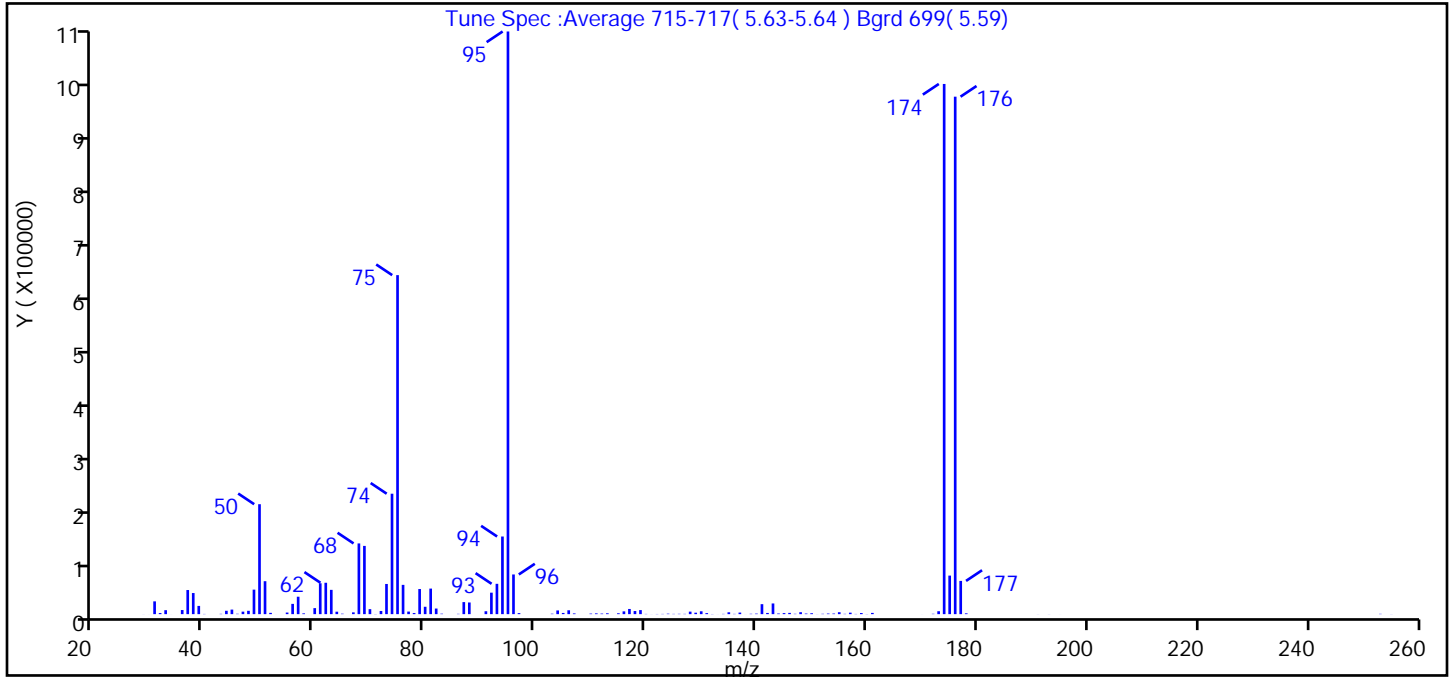
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\BFBK16I.D
 Injection Date: 16-Nov-2018 16:00:30 Instrument ID: MR
 Lims ID: BFB
 Client ID:
 Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.9
75	30 to 60% of m/z 95	58.2
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.5 (0.6)
174	50 to 120% of m/z 95	91.0
175	5 to 9% of m/z 174	6.6 (7.3)
176	Greater than 95% but less than 101% of m/z 174	88.8 (97.6)
177	5 to 9% of m/z 176	5.7 (6.4)

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RBFBK161.DMR_TO15.rslt\spectra.d
Injection Date: 16-Nov-2018 16:00:30
Spectrum: Tune Spec :Average 715-717(5.63-5.64) Bgrd 699(5.59)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 129

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	82	67.00	3051	111.00	1314	145.00	1799
30.00	42	68.00	121608	112.00	1000	146.00	2167
31.00	21976	69.00	117344	113.00	1472	147.00	587
32.00	1872	70.00	8559	115.00	1498	148.00	3341
33.00	6807	71.00	242	116.00	4788	149.00	1013
34.00	47	72.00	5436	117.00	8901	150.00	1582
36.00	7075	73.00	51896	118.00	5361	151.00	97
37.00	41472	74.00	207104	119.00	6961	152.00	589
38.00	36296	75.00	582976	120.00	382	153.00	1032
39.00	14146	76.00	50352	121.00	80	154.00	1046
40.00	352	77.00	4415	122.00	293	155.00	3329
41.00	12	78.00	1882	123.00	395	156.00	504
43.00	505	79.00	43192	124.00	805	157.00	2542
44.00	5765	80.00	12674	125.00	442	158.00	344
45.00	7821	81.00	43936	126.00	550	159.00	1896
46.00	624	82.00	9626	127.00	471	160.00	211
47.00	4314	83.00	791	128.00	4329	161.00	2127
48.00	5729	86.00	523	129.00	2485	170.00	42
49.00	42160	87.00	20704	130.00	4919	172.00	609
50.00	189056	88.00	20064	131.00	1754	173.00	5015
51.00	56648	91.00	5000	132.00	262	174.00	911744
52.00	2215	92.00	36920	133.00	57	175.00	66280
53.00	37	93.00	52152	134.00	435	176.00	889856
55.00	2753	94.00	133504	135.00	3202	177.00	57168
56.00	17664	95.00	1001984	136.00	443	178.00	1378
57.00	29976	96.00	68240	137.00	2704	191.00	97
58.00	1338	97.00	1768	138.00	52	193.00	111
60.00	10347	103.00	745	139.00	624	195.00	40
61.00	53120	104.00	6342	140.00	916	253.00	525
62.00	53968	105.00	2057	141.00	17160	255.00	125
63.00	41768	106.00	6637	142.00	2048		
64.00	4211	107.00	1249	143.00	18376		
65.00	772	110.00	963	144.00	1092		

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	82	67.00	3051	111.00	1314	145.00	1799
30.00	42	68.00	121608	112.00	1000	146.00	2167
31.00	21976	69.00	117344	113.00	1472	147.00	587
32.00	1872	70.00	8559	115.00	1498	148.00	3341
33.00	6807	71.00	242	116.00	4788	149.00	1013
34.00	47	72.00	5436	117.00	8901	150.00	1582
36.00	7075	73.00	51896	118.00	5361	151.00	97
37.00	41472	74.00	207104	119.00	6961	152.00	589
38.00	36296	75.00	582976	120.00	382	153.00	1032
39.00	14146	76.00	50352	121.00	80	154.00	1046
40.00	352	77.00	4415	122.00	293	155.00	3329
41.00	12	78.00	1882	123.00	395	156.00	504
43.00	505	79.00	43192	124.00	805	157.00	2542
44.00	5765	80.00	12674	125.00	442	158.00	344
45.00	7821	81.00	43936	126.00	550	159.00	1896
46.00	624	82.00	9626	127.00	471	160.00	211
47.00	4314	83.00	791	128.00	4329	161.00	2127
48.00	5729	86.00	523	129.00	2485	170.00	42
49.00	42160	87.00	20704	130.00	4919	172.00	609
50.00	189056	88.00	20064	131.00	1754	173.00	5015
51.00	56648	91.00	5000	132.00	262	174.00	911744
52.00	2215	92.00	36920	133.00	57	175.00	66280
53.00	37	93.00	52152	134.00	435	176.00	889856
55.00	2753	94.00	133504	135.00	3202	177.00	57168
56.00	17664	95.00	1001984	136.00	443	178.00	1378
57.00	29976	96.00	68240	137.00	2704	191.00	97
58.00	1338	97.00	1768	138.00	52	193.00	111
60.00	10347	103.00	745	139.00	624	195.00	40
61.00	53120	104.00	6342	140.00	916	253.00	525
62.00	53968	105.00	2057	141.00	17160	255.00	125
63.00	41768	106.00	6637	142.00	2048		
64.00	4211	107.00	1249	143.00	18376		
65.00	772	110.00	963	144.00	1092		

TestAmerica Knoxville

Data File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RFBFK16I.D

Injection Date: 16-Nov-2018 16:00:30

Instrument ID: MR

Operator ID:

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

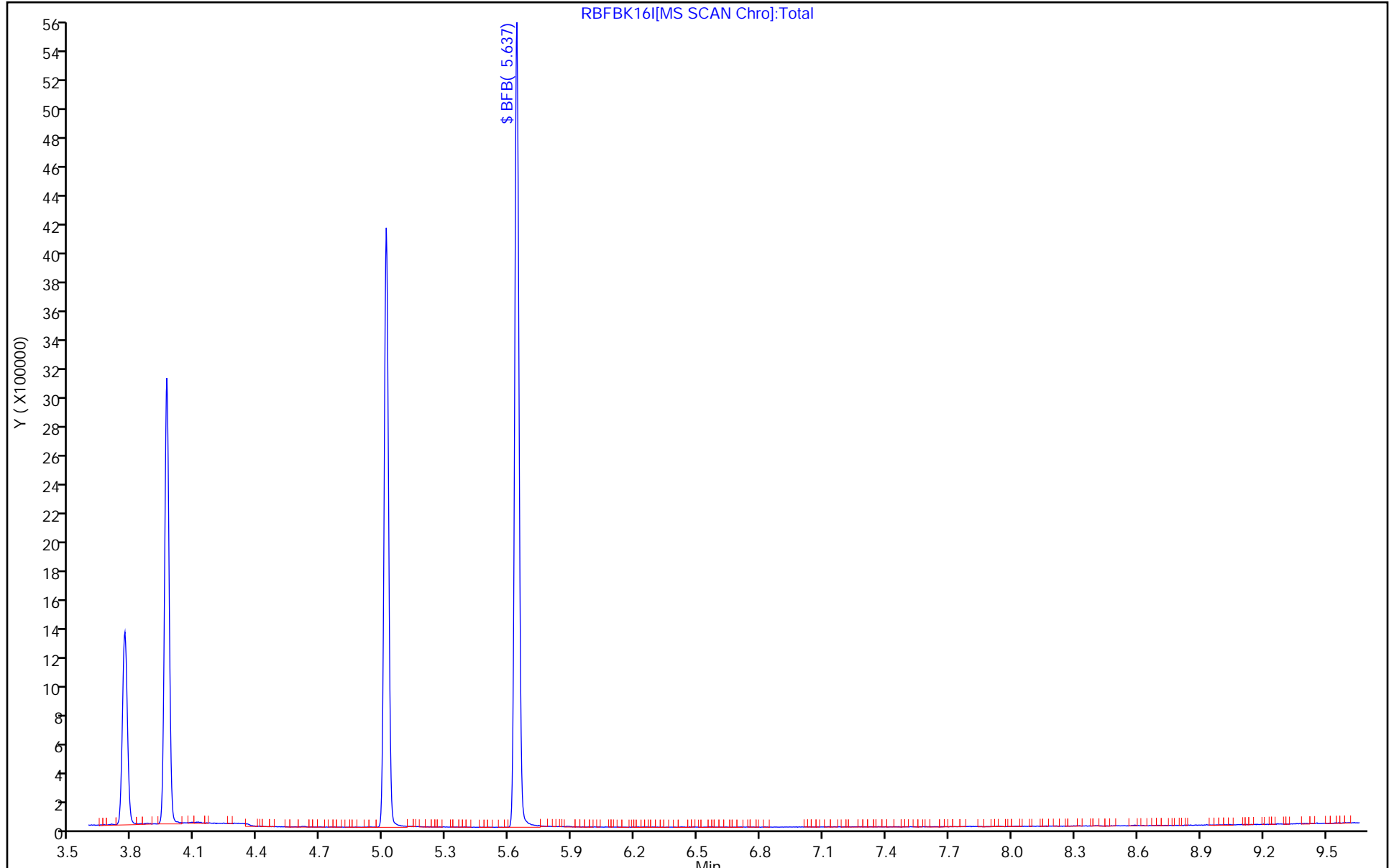
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RBFB14.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 14-Mar-2019 11:41:30 ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-001
 Misc. Info.: BFB
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:32:43 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:32:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
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\$ 5 BFB	95	5.614	5.614	0.000	0	1076951	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

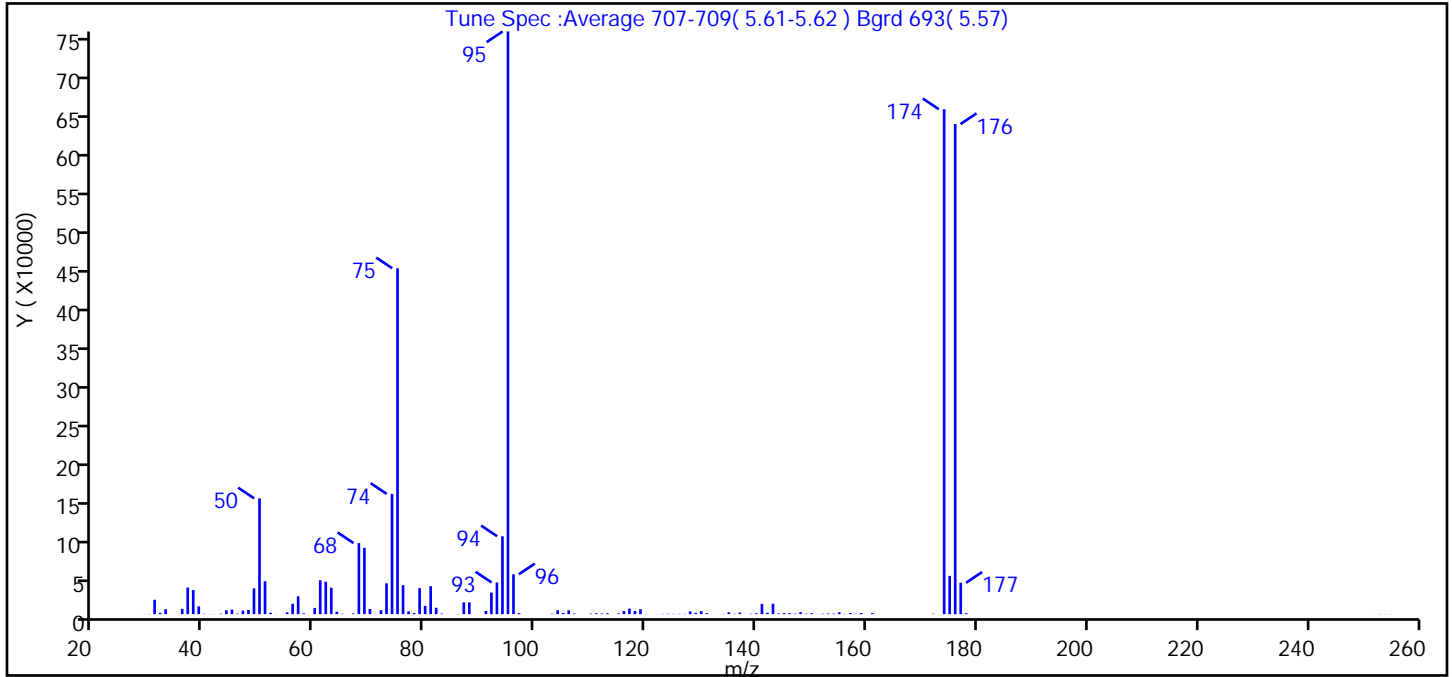
Reagents:

40MXSUR_00002 Amount Added: 40.00 Units: mL

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RBFB14.D
 Injection Date: 14-Mar-2019 11:41:30 Instrument ID: MR
 Lims ID: BFB
 Client ID:
 Operator ID: HMT ALS Bottle#: 16 Worklist Smp#: 1
 Injection Vol: 500.0 mL Dil. Factor: 1.0000
 Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
 Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.9
75	30 to 60% of m/z 95	59.4
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	86.7
175	5 to 9% of m/z 174	6.6 (7.6)
176	Greater than 95% but less than 101% of m/z 174	84.1 (97.1)
177	5 to 9% of m/z 176	5.4 (6.4)

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RBFB14.D\MR_TO15.rslt\spectra.d
 Injection Date: 14-Mar-2019 11:41:30
 Spectrum: Tune Spec :Average 707-709(5.61-5.62) Bgrd 693(5.57)
 Base Peak: 95.00
 Minimum % Base Peak: 0
 Number of Points: 138

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	138	65.00	479	110.00	696	148.00	2561
30.00	279	66.00	100	111.00	1119	149.00	601
31.00	18520	67.00	957	112.00	845	150.00	1158
32.00	1716	68.00	91512	113.00	1204	151.00	148
33.00	6300	69.00	85432	115.00	1078	152.00	506
34.00	38	70.00	6622	116.00	3979	153.00	856
35.00	38	71.00	213	117.00	7136	154.00	693
36.00	6755	72.00	5090	118.00	4077	155.00	2407
37.00	34288	73.00	39744	119.00	6305	156.00	311
38.00	30960	74.00	154880	120.00	273	157.00	1495
39.00	10065	75.00	445568	122.00	124	158.00	434
40.00	456	76.00	37336	123.00	323	159.00	1494
41.00	181	77.00	3533	124.00	495	161.00	1306
42.00	97	78.00	1519	125.00	352	167.00	37
43.00	585	79.00	33504	126.00	367	170.00	90
44.00	4988	80.00	10683	127.00	355	172.00	520
45.00	5913	81.00	36024	128.00	3573	174.00	650432
46.00	587	82.00	8239	129.00	1614	175.00	49296
47.00	4561	83.00	757	130.00	3797	176.00	631360
48.00	5396	84.00	56	131.00	1297	177.00	40424
49.00	33248	86.00	210	132.00	168	178.00	1168
50.00	149120	87.00	15126	134.00	333	191.00	48
51.00	42400	88.00	15197	135.00	2378	192.00	45
52.00	1700	91.00	4149	136.00	432	193.00	55
53.00	176	92.00	27768	137.00	2062	195.00	76
55.00	2332	93.00	40792	138.00	57	197.00	55
56.00	13420	94.00	100352	139.00	516	207.00	83
57.00	23040	95.00	750592	140.00	1117	221.00	36
58.00	972	96.00	51368	141.00	13258	249.00	38
59.00	134	97.00	1368	142.00	1752	251.00	116
60.00	8018	103.00	596	143.00	13392	253.00	254
61.00	43664	104.00	5032	144.00	875	254.00	122
62.00	41696	105.00	1587	145.00	1287	255.00	151

Report Date: 15-Mar-2019 14:32:44

Chrom Revision: 2.3 11-Feb-2019 16:31:10

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RBFBC14.D\MR_TO15.rslt\spectra.d

Injection Date: 14-Mar-2019 11:41:30

Spectrum: Tune Spec :Average 707-709(5.61-5.62) Bgrd 693(5.57)

Base Peak: 95.00

Minimum % Base Peak: 0

Number of Points: 138

m/z	Y	m/z	Y	m/z	Y	m/z	Y
63.00	34048	106.00	4953	146.00	1251		
64.00	3149	107.00	817	147.00	633		

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RBFBC14.D

Injection Date: 14-Mar-2019 11:41:30

Instrument ID: MR

Operator ID: HMT

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

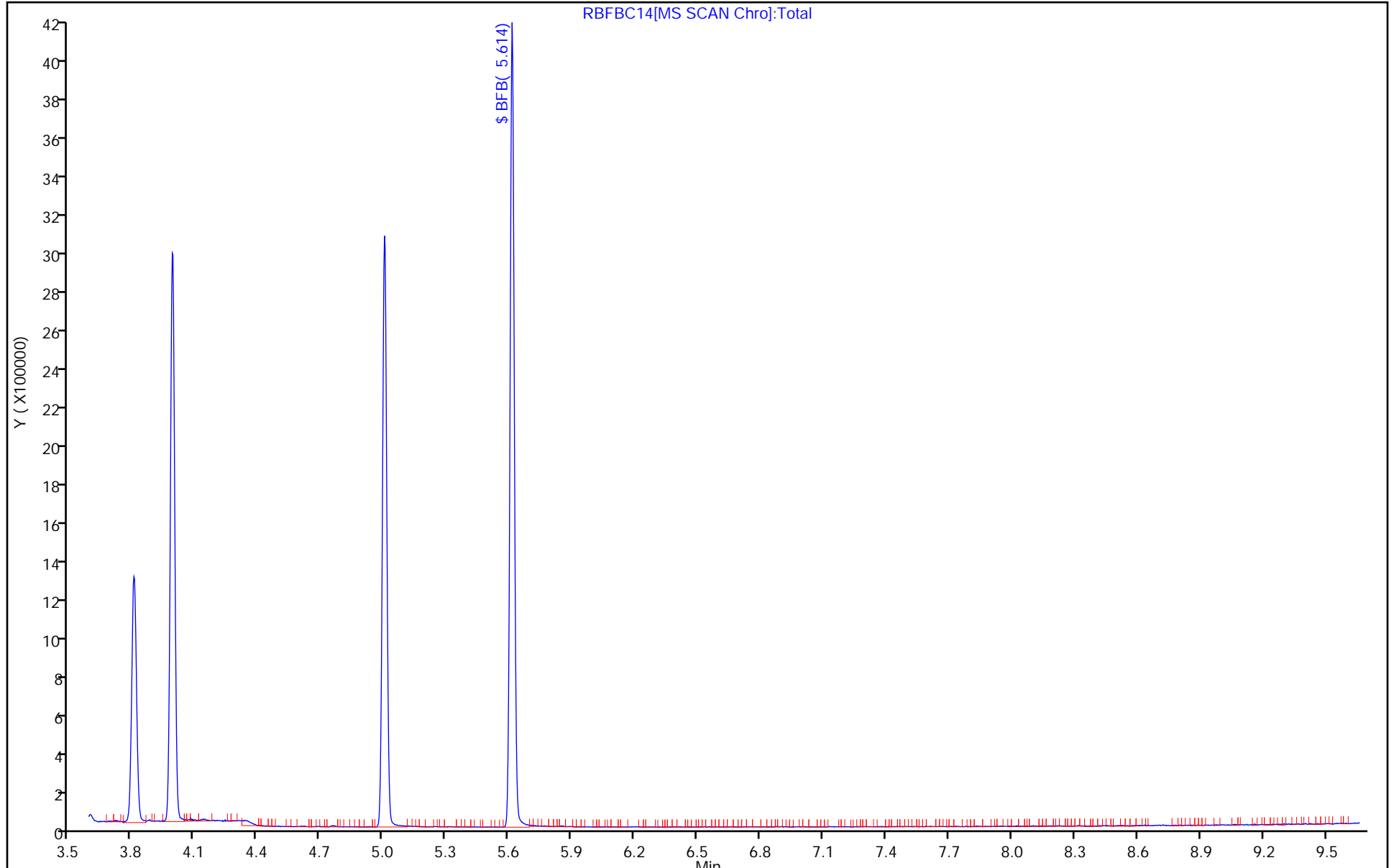
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-28319/4
 Matrix: Air Lab File ID: R500BC14.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 03/14/2019 15:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-28319/4
 Matrix: Air Lab File ID: R500BC14.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 03/14/2019 15:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		1.4	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\R500BC14.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 14-Mar-2019 15:23:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-004
 Misc. Info.: 500ML BLK
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:40:36 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:40:36

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.374	7.368	0.006	73	213842	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.434	9.434	0.000	95	1231452	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.492	14.492	0.000	91	1068992	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.217	16.217	0.000	88	908665	4.00	4.00	
109 1,2,3,5-Tetramethylbenzene	119	19.350	19.426	-0.076	1	537			NC
112 1,2,3,4-Tetramethylbenzene	119	19.841	19.836	0.005	1	168			NC

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\R500BC14.D

Injection Date: 14-Mar-2019 15:23:30

Instrument ID: MR

Operator ID:

Lims ID: MB

Worklist Smp#: 4

Client ID:

Purge Vol: 500.000 mL

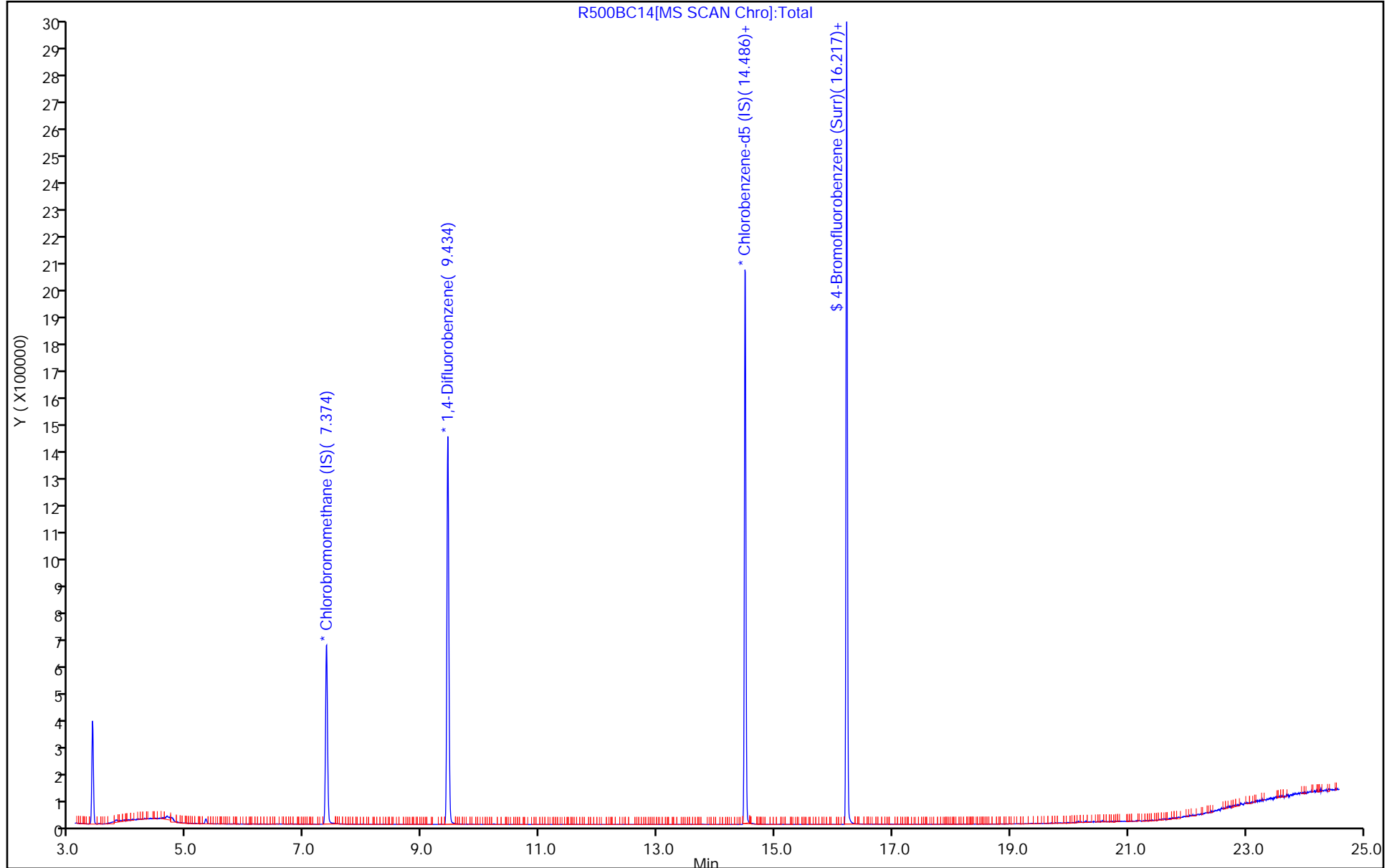
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\R500BC14.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 14-Mar-2019 15:23:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-004
 Misc. Info.: 500ML BLK
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:40:36 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:40:36

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.00	99.93

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-28319/1002
 Matrix: Air Lab File ID: RCCVC14-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500(mL) Date Analyzed: 03/14/2019 12:09
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28319 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.01		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.00		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	0.968		0.080	0.015
67-66-3	Chloroform	119.38	0.988		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.01		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.04		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.02		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	0.948		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.00		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.05		0.080	0.027
75-09-2	Methylene Chloride	84.93	0.967		0.40	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.03		0.40	0.068
91-20-3	Naphthalene	128.17	0.770		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.02		0.080	0.016
108-88-3	Toluene	92.14	1.05		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	0.983		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	0.858		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	0.979		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.08		0.080	0.021
79-01-6	Trichloroethene	131.39	0.994		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.06		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.07		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.03		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.17		0.040	0.029
1330-20-7	Xylenes, Total	106.17	3.30		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RCCVC14-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 14-Mar-2019 12:09:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-002
 Misc. Info.: P83
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:33:51 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:33:51

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.368	7.368	0.000	72	203113	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.434	9.434	0.000	95	1202204	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.492	14.492	0.000	91	1060567	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.217	16.217	0.000	89	945389	4.00	4.19	
6 Chlorodifluoromethane	51	3.513	3.513	0.000	96	116687	1.00	0.9682	
7 Propene	41	3.518	3.518	0.000	93	37163	1.00	1.00	
8 Dichlorodifluoromethane	85	3.556	3.556	0.000	100	229736	1.00	1.04	
9 Chloromethane	52	3.680	3.680	0.000	58	17600	1.00	1.13	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.691	3.691	0.000	88	166503	1.00	1.01	
11 Acetaldehyde	44	3.777	3.777	0.000	93	92633	5.00	6.38	
12 Vinyl chloride	62	3.799	3.799	0.000	100	63687	1.00	1.17	
13 Butadiene	54	3.858	3.858	0.000	95	43326	1.00	1.31	
14 Butane	43	3.863	3.863	0.000	87	73105	1.00	1.27	
15 Bromomethane	94	4.074	4.074	0.000	96	76145	1.00	1.21	
16 Chloroethane	64	4.165	4.165	0.000	93	32002	1.00	1.27	
17 Ethanol	31	4.235	4.235	0.000	93	104235	5.00	6.85	
18 Vinyl bromide	106	4.375	4.375	0.000	96	80321	1.00	1.21	
19 2-Methylbutane	43	4.424	4.424	0.000	80	55391	1.00	1.36	
20 Acrolein	56	4.553	4.553	0.000	96	17979	1.00	1.40	
21 Trichlorofluoromethane	101	4.570	4.570	0.000	99	363215	1.00	1.21	
22 Acetonitrile	40	4.575	4.575	0.000	24	19115	1.00	1.46	a
23 Acetone	58	4.629	4.629	0.000	100	78310	3.00	3.72	
25 Isopropyl alcohol	45	4.710	4.710	0.000	98	238891	3.00	4.16	
24 Pentane	72	4.737	4.737	0.000	92	13300	1.00	1.30	
26 Ethyl ether	31	4.845	4.845	0.000	79	45401	1.00	1.34	
27 1,1-Dichloroethene	96	5.076	5.076	0.000	96	71781	1.00	1.00	
28 Acrylonitrile	53	5.109	5.109	0.000	93	38496	1.00	1.21	
29 2-Methyl-2-propanol	59	5.152	5.152	0.000	96	141311	1.00	1.04	
30 1,1,2-Trichloro-1,2,2-trif	101	5.227	5.227	0.000	92	186948	1.00	1.06	
31 Methylene Chloride	84	5.319	5.319	0.000	93	65723	1.00	0.9673	
32 3-Chloro-1-propene	39	5.335	5.335	0.000	86	77407	1.00	1.16	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.443	5.443	0.000	98	174195	1.00	1.03	
34 trans-1,2-Dichloroethene	96	5.961	5.961	0.000	96	71668	1.00	0.9830	
35 2-Methylpentane	43	6.020	6.020	0.000	86	118438	1.00	1.23	
36 Methyl tert-butyl ether	73	6.079	6.079	0.000	93	237887	1.00	1.03	
37 1,1-Dichloroethane	63	6.284	6.284	0.000	98	124196	1.00	1.02	
38 Vinyl acetate	43	6.381	6.381	0.000	98	138984	1.00	1.18	
39 2-Butanone (MEK)	72	6.727	6.727	0.000	98	28484	1.00	1.03	
40 Hexane	56	6.834	6.834	0.000	81	50301	1.00	1.19	
171 Isopropyl ether	45	6.953	6.953	0.000	86	170531	1.00	1.17	
41 cis-1,2-Dichloroethene	96	7.104	7.104	0.000	95	74077	1.00	1.01	
42 Ethyl acetate	43	7.282	7.282	0.000	97	115079	1.00	1.13	
43 Chloroform	83	7.406	7.406	0.000	97	191635	1.00	0.9878	
173 Tert-butyl ethyl ether	59	7.541	7.541	0.000	94	223011	1.00	1.06	
44 Tetrahydrofuran	42	7.735	7.735	0.000	78	52497	1.00	1.17	
45 1,1,1-Trichloroethane	97	8.323	8.323	0.000	95	240820	1.00	0.9792	
46 1,2-Dichloroethane	62	8.377	8.377	0.000	96	144271	1.00	0.9481	
47 Benzene	78	8.867	8.867	0.000	98	197078	1.00	1.01	
49 n-Butanol	31	8.905	8.905	0.000	64	14454	1.00	1.04	
48 Cyclohexane	69	8.905	8.905	0.000	93	33620	1.00	1.16	
50 Carbon tetrachloride	117	8.916	8.916	0.000	99	276094	1.00	1.00	
51 2,3-Dimethylpentane	71	9.078	9.078	0.000	83	44232	1.00	1.09	
52 Thiophene	84	9.121	9.121	0.000	95	116531	1.00	1.04	
53 Isooctane	57	9.741	9.741	0.000	94	276881	1.00	1.10	
54 1,2-Dichloropropane	63	10.108	10.108	0.000	72	63576	1.00	1.03	
55 n-Heptane	71	10.167	10.167	0.000	88	65193	1.00	1.04	
56 Trichloroethene	130	10.183	10.183	0.000	95	117427	1.00	0.99	
57 Dibromomethane	93	10.210	10.210	0.000	92	104511	1.00	0.9896	
58 Dichlorobromomethane	83	10.399	10.399	0.000	98	194365	1.00	0.9818	
59 1,4-Dioxane	88	10.415	10.415	0.000	91	30822	1.00	1.03	
60 Methyl methacrylate	41	10.571	10.571	0.000	89	70773	1.00	1.04	
61 Methylcyclohexane	83	11.051	11.051	0.000	92	124556	1.00	1.03	
62 4-Methyl-2-pentanone (MIBK)	43	11.472	11.472	0.000	93	120254	1.00	1.10	
63 cis-1,3-Dichloropropene	75	11.504	11.504	0.000	95	123880	1.00	1.04	
64 trans-1,3-Dichloropropene	75	12.265	12.265	0.000	96	122231	1.00	0.9864	
65 Toluene	91	12.405	12.405	0.000	92	266047	1.00	1.05	
66 1,1,2-Trichloroethane	83	12.453	12.453	0.000	93	72706	1.00	1.08	
69 2-Hexanone	58	12.928	12.928	0.000	93	54228	1.00	1.02	
70 Chlorodibromomethane	129	13.187	13.187	0.000	96	202911	1.00	1.03	
71 n-Octane	85	13.268	13.268	0.000	79	87495	1.00	1.08	
72 Ethylene Dibromide	107	13.483	13.483	0.000	97	147508	1.00	1.00	
73 Tetrachloroethene	129	13.629	13.629	0.000	93	128699	1.00	1.02	
74 Chlorobenzene	112	14.540	14.540	0.000	91	227549	1.00	1.02	
75 2,3-Dimethylheptane	43	14.691	14.691	0.000	89	191984	1.00	1.29	
76 Ethylbenzene	91	14.880	14.880	0.000	99	383298	1.00	1.05	
78 m-Xylene & p-Xylene	91	15.058	15.058	0.000	100	662451	2.00	2.20	
79 Bromoform	173	15.435	15.435	0.000	96	206468	1.00	1.00	
80 Styrene	104	15.527	15.527	0.000	97	199124	1.00	1.01	
82 o-Xylene	91	15.592	15.592	0.000	97	346229	1.00	1.10	
81 n-Nonane	57	15.602	15.602	0.000	83	152446	1.00	1.27	
83 1,1,2,2-Tetrachloroethane	83	15.910	15.910	0.000	93	175352	1.00	1.09	
84 1,2,3-Trichloropropane	110	16.066	16.066	0.000	93	75895	1.00	0.9541	
85 Isopropylbenzene	105	16.223	16.223	0.000	96	470622	1.00	1.05	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 N-Propylbenzene	120	16.794	16.794	0.000	97	125518	1.00	1.02	
87 2-Chlorotoluene	126	16.805	16.805	0.000	92	117455	1.00	1.03	
88 4-Ethyltoluene	105	16.961	16.961	0.000	98	462120	1.00	0.99	
89 1,3,5-Trimethylbenzene	120	17.053	17.053	0.000	91	196095	1.00	1.03	
90 Alpha Methyl Styrene	118	17.306	17.306	0.000	88	169252	1.00	0.9327	
91 n-Decane	57	17.474	17.474	0.000	97	201531	1.00	1.18	
92 tert-Butylbenzene	119	17.527	17.527	0.000	87	483704	1.00	1.04	
93 1,2,4-Trimethylbenzene	105	17.538	17.538	0.000	96	456704	1.00	1.07	
94 1,3-Dichlorobenzene	146	17.813	17.813	0.000	98	297824	1.00	0.9685	
95 sec-Butylbenzene	105	17.840	17.840	0.000	96	585482	1.00	1.02	
96 Benzyl chloride	91	17.900	17.900	0.000	97	332646	1.00	1.01	
97 1,4-Dichlorobenzene	146	17.910	17.910	0.000	93	305384	1.00	0.9892	
98 4-Isopropyltoluene	119	18.034	18.034	0.000	95	600948	1.00	1.03	
99 1,2,3-Trimethylbenzene	105	18.067	18.067	0.000	98	484974	1.00	1.06	
100 Butylcyclohexane	83	18.175	18.175	0.000	89	268930	1.00	1.07	
101 1,2-Dichlorobenzene	146	18.309	18.309	0.000	92	291577	1.00	0.9610	
102 2,3-Dihydroindene	117	18.320	18.320	0.000	92	389037	1.00	1.03	
103 Indene	116	18.460	18.460	0.000	90	300335	1.00	0.9696	
104 n-Butylbenzene	91	18.525	18.525	0.000	97	487722	1.00	1.03	
105 Undecane	57	18.951	18.951	0.000	88	226624	1.00	1.12	
106 1,2-Dibromo-3-Chloropropan	157	18.967	18.967	0.000	92	146135	1.00	0.9892	
107 1,2,4,5-Tetramethylbenzene	119	19.355	19.355	0.000	95	523556	1.00	0.9553	
110 Dodecane	57	20.083	20.083	0.000	91	214289	1.00	1.02	
111 1,2,4-Trichlorobenzene	180	20.154	20.154	0.000	93	281032	1.00	0.8580	
113 Naphthalene	128	20.278	20.278	0.000	98	510217	1.00	0.7704	
115 Hexachlorobutadiene	225	20.542	20.542	0.000	95	318723	1.00	0.8370	
116 1,2,3-Trichlorobenzene	180	20.563	20.563	0.000	94	251288	1.00	0.7982	
117 2-Methylnaphthalene	142	21.405	21.405	0.000	97	162975	1.00	0.7746	
118 1-Methylnaphthalene	142	21.583	21.583	0.000	98	205912	1.00	1.11	
A 120 C8 Range	1	13.278	(13.219-13.316)		0	739670	1.00	1.15	
S 121 Xylenes, Total	100				0		3.00	3.30	
S 122 1,2-Dichloroethene, Total	1				0		2.00	1.99	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

40CV101P_00083

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RCCVC14-LCS.d

Injection Date: 14-Mar-2019 12:09:30

Instrument ID: MR

Operator ID: HMT

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

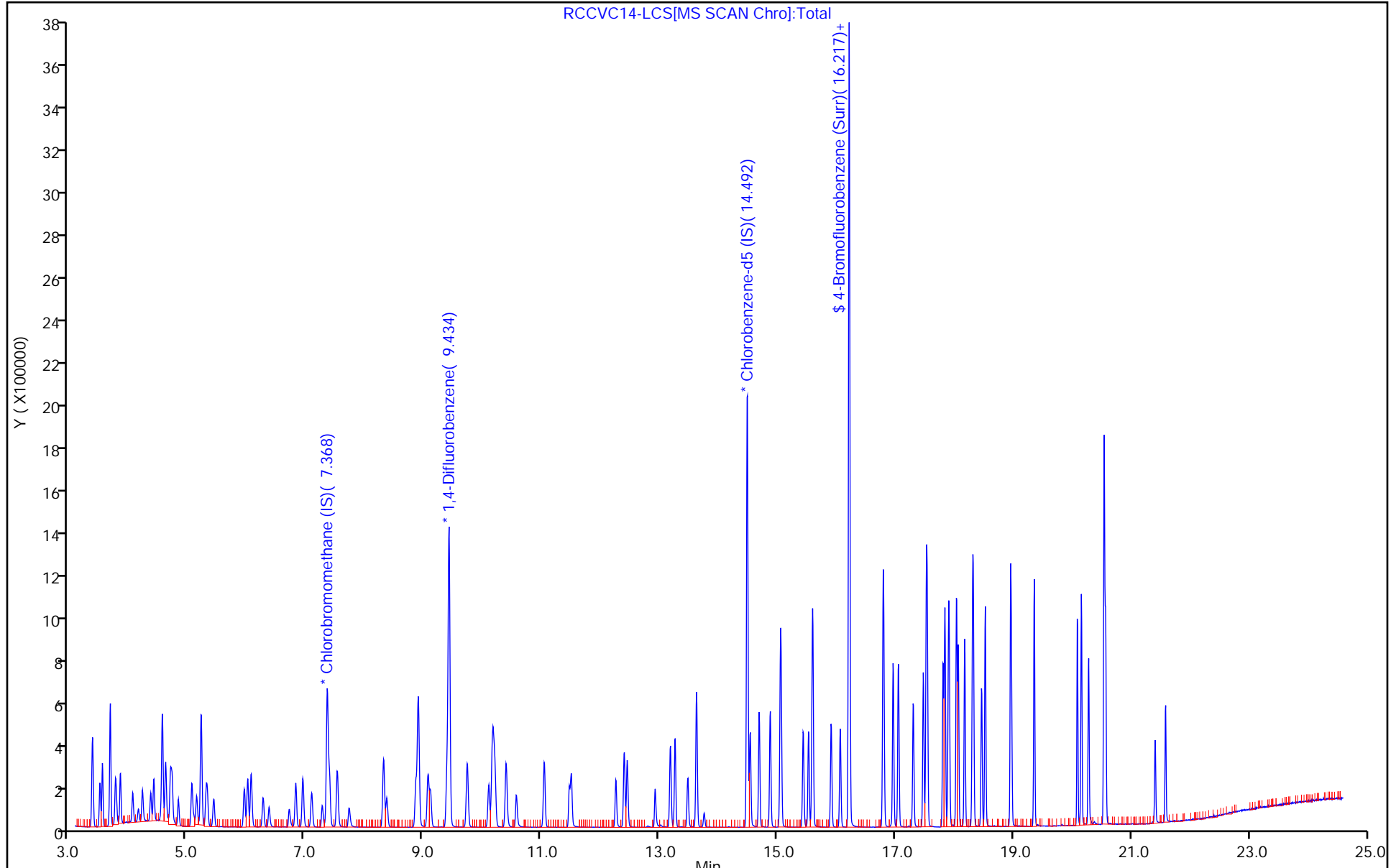
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\RCCVC14-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 14-Mar-2019 12:09:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0011093-002
 Misc. Info.: P83
 Operator ID: HMT Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190312-11093.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 15-Mar-2019 14:33:51 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0328

First Level Reviewer: khachitpongpanits Date: 15-Mar-2019 14:33:51

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.19	104.80

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1

SDG No.: _____

Instrument ID: MR Start Date: 11/16/2018 16:00

Analysis Batch Number: 25490 End Date: 11/17/2018 06:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-25490/1		11/16/2018 16:00	1	RBFBK16I.D	RTX-5 0.32 (mm)
IC 140-25490/3		11/16/2018 17:23	1	RK16IC09.D	RTX-5 0.32 (mm)
IC 140-25490/5		11/16/2018 19:07	1	RK16IC10.D	RTX-5 0.32 (mm)
IC 140-25490/8		11/16/2018 21:42	1	RK16IC01.D	RTX-5 0.32 (mm)
IC 140-25490/9		11/16/2018 22:34	1	RK16IC02.D	RTX-5 0.32 (mm)
IC 140-25490/10		11/16/2018 23:27	1	RK16IC03.D	RTX-5 0.32 (mm)
IC 140-25490/11		11/17/2018 00:20	1	RK16IC04.D	RTX-5 0.32 (mm)
IC 140-25490/12		11/17/2018 01:12	1	RK16IC05.D	RTX-5 0.32 (mm)
IC 140-25490/13		11/17/2018 02:05	1	RK16IC06.D	RTX-5 0.32 (mm)
ICIS 140-25490/14		11/17/2018 02:58	1	RK16IC07.D	RTX-5 0.32 (mm)
IC 140-25490/15		11/17/2018 03:51	1	RK16IC08.D	RTX-5 0.32 (mm)
ICV 140-25490/18		11/17/2018 06:27	1	RK16ICV.D	RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

Analysis Date:	11/16/18	Instrument:	MR	Chrom WL #:	10019	TALS Batch & Event #	TO14/15: 1744 25490 DOD: 1749 / 25492	OHIO: PMT / 25491					
Chrom/Worklist Review							1 st	Comments	2 nd				
1. Re-read each Limit Group	[method editor-limit groups]					✓			na				
2. Verify LODV in Chrom	[method editor -> edit -> MDL]					✓			na				
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level)	[WL Sample Reagents Tab vs. Entech]					✓			/				
4. Files linked properly to calibration levels?	[Sample List- Lab ID vs. Info]					✓			/				
5. Did BFB meet tune criteria?	[F8]					✓			/				
6. Were all standards injected within 24 hr of BFB?	[F7]					✓		Vol ✓ on screen	/				
7. High point checked for saturation and point removed if so?	[Chrom]					✓	na		/				
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given?	[Chrom]					na			MS				
9. RT for each IS +20 sec avg. RT?	[F6 IstdRec]					✓			/				
10. Area for each IS ± 40% avg. area?	[F6 IstdRec]					✓			/				
11. Each analyte ± 0.06 RRT of avg. RRT?	[F6 - RRT]					✓			/				
12. Elution order checked on isomeric pairs?	[Chrom]								/				
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane						✓			/				
• 2-methyl butane / acrolein						✓			/				
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane						✓			/				
• vinyl acetate / hexane						✓			/				
• cis- and trans- isomers						✓			/				
• ethyl benzene / m/p-xylene / o-xylene						✓			/				
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene						✓			/				
• tert-butylbenzene/4-isopropyltoluene						✓			/				
• 1,3-, 1,4-, and 1,2-dichlorobenzene						✓			/				
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes						na			MS				
• 1,2,4- and 1,2,3-trichlorobenzenes						✓			/				
• 2-, and 1-methylnaphthalene						✓			/				
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?						✓			/				
MLG Review							TO	DOD	OH	Comments	TO-	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1 & 2 methylnaphthalene ≤ 50%	[F6 Σ]					✓	✓	✓		✓	✓	✓	
15. Were at least 5 levels of each compound analyzed?	[F6]					✓	✓	✓		✓	✓	✓	
16. Is low level std at or <RL and are the remaining points consec.?	[F6]					✓	✓	✓		✓	✓	✓	
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad)	[F6]					na	→	→		na	→	→	
18. If curves were used, is correlation coefficient ≥ 0.990?	[F6]					na	→	→		na	→	→	
19. Is the intercept less than the RL for each curve?	[F6]					na	→	→		na	→	→	
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous.	[Cntrl-C, details]					na	→	na		na	→	na	
21. Is low point RSE ≤ 50%?	[F6]					✓	✓	✓		✓	✓	✓	
22. Is the second source analysis within limits?	[F8 - icv]					✓	✓	✓		✓	✓	✓	
Analyst/Date:	JL 11/19/18					2nd Level Reviewer/Date: JL 11/19/18							
TALS Review							TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL						✓				na	na	na	
24. Graphics uploaded?	[paperclip]					✓	✓	✓		✓	✓	✓	
25. All points are in the most recent active calibration event?	[Calibration Events --'Fix ICAL linkage' if needed]					✓	✓	✓		✓	✓	✓	
26. Runs linked to BFB?	[QC Links]					✓	✓	✓		✓	✓	✓	
27. Run Checklist and acknowledge findings	[F8]					✓	✓	✓		✓	✓	✓	
28. If criteria not met, was a NCM generated?						na	→	→		na	→	→	
29. After review in TALS, approve the method in TALS.						na	na	na		✓	✓	✓	
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>						na	na	na		✓	✓	✓	
31. Checklist & Entech report scanned, attached & assigned properly?						na	na	na		✓	✓	✓	
Analyst/date:	JL 11/19/18					2nd Level Reviewer/date: JL 11/19/18							
Comments:	Meth, 2-CH3 naph					Comments:							

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1

SDG No.: _____

Instrument ID: MR Start Date: 03/14/2019 11:41

Analysis Batch Number: 28319 End Date: 03/15/2019 09:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-28319/1		03/14/2019 11:41	1	RBFBC14.D	RTX-5 0.32 (mm)
CCVIS 140-28319/2		03/14/2019 12:09	1	RCCVC14.D	RTX-5 0.32 (mm)
LCS 140-28319/1002		03/14/2019 12:09	1	RCCVC14-LCS.d	RTX-5 0.32 (mm)
MB 140-28319/4		03/14/2019 15:23	1	R500BC14.D	RTX-5 0.32 (mm)
ZZZZZ		03/14/2019 16:20	1.56		RTX-5 0.32 (mm)
ZZZZZ		03/14/2019 17:14	1		RTX-5 0.32 (mm)
ZZZZZ		03/14/2019 18:10	1		RTX-5 0.32 (mm)
140-14595-1		03/14/2019 18:59	1	RC14P104.D	RTX-5 0.32 (mm)
140-14595-2		03/14/2019 19:49	1	RC14P105.D	RTX-5 0.32 (mm)
140-14595-3		03/14/2019 20:38	1	RC14P106.D	RTX-5 0.32 (mm)
140-14595-4		03/14/2019 21:27	1	RC14P107.D	RTX-5 0.32 (mm)
140-14595-5		03/14/2019 22:16	1	RC14P108.D	RTX-5 0.32 (mm)
140-14595-6		03/14/2019 23:05	1	RC14P109.D	RTX-5 0.32 (mm)
ZZZZZ		03/14/2019 23:56	1		RTX-5 0.32 (mm)
ZZZZZ		03/15/2019 00:47	1		RTX-5 0.32 (mm)
ZZZZZ		03/15/2019 02:34	1.55		RTX-5 0.32 (mm)
ZZZZZ		03/15/2019 03:29	1.48		RTX-5 0.32 (mm)
ZZZZZ		03/15/2019 04:28	1		RTX-5 0.32 (mm)
ZZZZZ		03/15/2019 05:27	1		RTX-5 0.32 (mm)
ZZZZZ		03/15/2019 06:22	1.56		RTX-5 0.32 (mm)
ZZZZZ		03/15/2019 07:23	1		RTX-5 0.32 (mm)
ZZZZZ		03/15/2019 08:14	1		RTX-5 0.32 (mm)
ZZZZZ		03/15/2019 09:03	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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Instrument/Date	MR 3/14/2019	Routine		DOD		OHIO VAP	
CCAL Chrom WL #	11093	CCAL Batch #	28319				
ICAL Chrom WL #	10019	ICAL Batch # / Event #	25490 / 1746				
Chrom Review		1st		If No, why is data reportable?		2nd	
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]		/				na	
2. Did BFB meet tune criteria? [F8]		/		<input type="checkbox"/> [Failed TO-14A, but passes TO-15]		/	
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]		/		List Target analytes outside CCV limits: _____		/	
4. Elution order checked on isomeric pairs? [Chrom]							
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		/				/	
• 2-methyl butane / acrolein		/				/	
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		/				/	
• vinyl acetate / hexane		/				/	
• cis- and trans- isomers		/				/	
• ethyl benzene / m/p-xylene / o-xylene		/				/	
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene		/				/	
• tert-butylbenzene/4-isopropyltoluene		/				/	
• 1,3-, 1,4-, and 1,2-dichlorobenzene		/				/	
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		NA				MS	
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene		/				/	
• 2-, and 1-methylnaphthalene		/				/	
5. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?		NA				MS	
6. Has the RT been updated to the method?		/				/	
Analyst/date	Suphawan K. 3/15/2019	2nd Level Reviewer/date		[Signature] 3/15/19			
7. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]		/		✓ on spec 3/15/19		/	
8. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]		/				/	
9. Can dilution history verified? [Mgmt Report]		/				/	
10. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:		/		<input type="checkbox"/> Method Blank - Report, ND (NCM# _____)		/	
				<input type="checkbox"/> Method Blank - Report, 10X (NCM# _____)		/	
11. All runs - peaks ID'd correctly and false positives removed?		/				/	
12. If manual integrations performed, are they properly performed, baseline clearly identified, and correct reason given?		/				/	
13. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]		/		<input type="checkbox"/> (1) Surrogate - Matrix (NCM# _____)		/	
Sample Reason Sample Reason				<input type="checkbox"/> (2) Surrogate - High, ND (NCM# _____)		/	
_____	_____	_____	_____	<input type="checkbox"/> (3) ISTD - RA/RA Concur (NCM# _____)		/	
				<input type="checkbox"/> (4) Surrogate -RX concur, Report both (NCM# _____)		/	
				<input type="checkbox"/> (5) ISTD - Matrix, DL required (NCM# _____)		/	
14. Samples outside calibration range scheduled for dilution?		/		<input type="checkbox"/> ICAL - Range Exceeded; Minimum Dilution		/	
Chrom Review		1st		If No, why is data reportable?		2nd	
15. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:		/		<input type="checkbox"/> (1) Reporting Limit - Dilution, Matrix (NCM# _____)		/	
Sample Reason Sample Reason				<input type="checkbox"/> (2) Reporting Limit - Dilution, Non-Target (NCM# _____)		/	
_____	_____	_____	_____	<input type="checkbox"/> (3) Issues with initial collection volume; see DRC.		/	
16. RIC inspected for proper integration for TPH?		NA				MS	
17. Obvious non-TPH peaks excluded?		↓				J	
18. Individual TPH peak area < octane high point area?		↓					

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 19 & KNOX-MS-0023, Rev 4

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TALS Review	1 st	If No, why is data reportable?	2 nd														
19. Graphics uploaded? [open one paperclip]	/		/														
20. NCM generated if BFB failed TO-14A criteria, but passes TO-15?	NA	<input type="checkbox"/> [Failed TO-14A, but passes TO-15] (NCM# _____)	NA														
21. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	/	<input checked="" type="checkbox"/> CCV - %D - LCS criteria met (NCM# <u>16743</u>) <input type="checkbox"/> CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# _____)	/														
22. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	/		na														
23. Project & sample special instructions verified?	/		/														
24. If samples were Tedlar bags, was the 72 hr HT met? ** Narrate transfer to can.	NA	<input type="checkbox"/> Air Analysis - Air Sample Transfer to Canister (NCM# _____)	NA														
25. Sample analyses done within analytical holding time?	/	<input type="checkbox"/> Holding Time - Received w/Insufficient Time (NCM# _____) <input type="checkbox"/> Holding Time - Receipt (NCM# _____)	/														
26. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	/	<input type="checkbox"/> Marginal Exceedances - Within ME Limits and Random Report (NCM# _____) <input type="checkbox"/> LCS/LCSD - %R High (NCM# _____)	/														
<table border="1"> <thead> <tr> <th>Number of target analytes in LCS</th> <th># marginal exceedances of LCS control limits allowed</th> </tr> </thead> <tbody> <tr> <td>>90</td> <td>5</td> </tr> <tr> <td>71 - 90</td> <td>4</td> </tr> <tr> <td>51 - 70</td> <td>3</td> </tr> <tr> <td>31 - 50</td> <td>2</td> </tr> <tr> <td>11 - 30</td> <td>1</td> </tr> <tr> <td><11</td> <td>0</td> </tr> </tbody> </table>	Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed	>90	5	71 - 90	4	51 - 70	3	31 - 50	2	11 - 30	1	<11	0			
Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed																
>90	5																
71 - 90	4																
51 - 70	3																
31 - 50	2																
11 - 30	1																
<11	0																
27. Suffixes assigned properly (DL/RE)? [Sample List Tab]	/		/														
28. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	/		/														
29. Analytes over calibration range set to secondary [Conditions Review Tab]	/		/														
30. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	/		/														
31. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) (If DUP not reported - set to 'Acceptable' for each job)	/	NA	/														
32. Samples linked to proper blank (200 mL or 500 mL)? [QC Links]	/	500 mL blank ID: <u>140-28319/4</u> 200 mL blank ID: _____	/														
33. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	/		/														
34. Correct ICV linked to each MB? [QC Links]	/		/														
35. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/														
36. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	/		/														
37. Run Checklist and acknowledge findings [F8]	/		/														
38. Runs set to 1 st level review?	/	Runs set to 2 nd level review?	/														
39. QC checker run and items addressed?	NA		/														
40. Checklist & Entech report scanned, attached & assigned properly?	NA		/														

Analyst: S. Phommavong Ph.	Date: 3/15/2019	2nd Level Reviewer: [Signature]	Date: 3/15/19
Comments:		Comments:	
CI line 9, 11-13	for Chlorodifluoromethane		
D line 15	for Ethanol, Styrene, Toluene, Methylene Chloride		
line 17	for Hexane		
line 18	for Hexane, Toluene		
Example Calculation: 140-14555-4 Hexane			
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
$5.816861 \times \frac{500}{200} \times 1.55 = 22.54$			

1st level review 3/15/19
 Site 7, 21, 22, 23 only TALS 3/17/19

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1

SDG No.: _____

Batch Number: 28319 Batch Start Date: 03/14/19 11:41 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	InitialPressure	FinalPressure	40CV101P 00083	40MXISSURP 00003
BFB 140-28319/1		TO 15 LL		500 mL	500 mL	1	1		
CCVIS 140-28319/2		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL
MB 140-28319/4		TO 15 LL		500 mL	500 mL	1	1		40 mL
140-14595-A-1	BLDG-A-EFFLUENT	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14595-A-2	BLDG-A-MIDGAC	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14595-A-3	BLDG-A-INFLUENT	TO 15 LL	T	20 mL	500 mL	1	1		40 mL
140-14595-A-4	BLDG-C-INFLUENT	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14595-A-5	BLDG-C-MIDGAC	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
140-14595-A-6	BLDG-C-EFFLUENT	TO 15 LL	T	100 mL	500 mL	1	1		40 mL
LCS 140-28319/1002		TO 15 LL		500 mL	500 mL	1	1	50 mL	40 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	40MXSUR 00002					
BFB 140-28319/1		TO 15 LL		40 mL					
CCVIS 140-28319/2		TO 15 LL							
MB 140-28319/4		TO 15 LL							
140-14595-A-1	BLDG-A-EFFLUENT	TO 15 LL	T						
140-14595-A-2	BLDG-A-MIDGAC	TO 15 LL	T						
140-14595-A-3	BLDG-A-INFLUENT	TO 15 LL	T						
140-14595-A-4	BLDG-C-INFLUENT	TO 15 LL	T						
140-14595-A-5	BLDG-C-MIDGAC	TO 15 LL	T						
140-14595-A-6	BLDG-C-EFFLUENT	TO 15 LL	T						
LCS 140-28319/1002		TO 15 LL							

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

AIR - GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14595-1

SDG No.: _____

Batch Number: 28319 Batch Start Date: 03/14/19 11:41 Batch Analyst: Khachitpongpanit, Suphawa

Batch Method: TO 15 LL Batch End Date: _____

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14430-1
 SDG No.: _____
 Client Sample ID: 09661 Lab Sample ID: 140-14430-16
 Matrix: Air Lab File ID: C01L14430.D
 Analysis Method: TO-15 Date Collected: 02/28/2019 14:30
 Sample wt/vol: 200 (mL) Date Analyzed: 03/02/2019 02:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28050 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
96-12-8	1,2-Dibromo-3-Chloropropane	ND		0.40	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.40	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.40	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.40	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
591-78-6	2-Hexanone	ND		0.40	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	
107-83-5	2-Methylpentane	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14430-1
 SDG No.: _____
 Client Sample ID: 09661 Lab Sample ID: 140-14430-16
 Matrix: Air Lab File ID: C01L14430.D
 Analysis Method: TO-15 Date Collected: 02/28/2019 14:30
 Sample wt/vol: 200 (mL) Date Analyzed: 03/02/2019 02:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28050 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
67-64-1	Acetone	ND		7.5	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		1.0	
75-15-0	Carbon disulfide	ND		0.40	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		1.0	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.40	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.40	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.40	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		1.2	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.40	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-14430-1
 SDG No.: _____
 Client Sample ID: 09661 Lab Sample ID: 140-14430-16
 Matrix: Air Lab File ID: C01L14430.D
 Analysis Method: TO-15 Date Collected: 02/28/2019 14:30
 Sample wt/vol: 200 (mL) Date Analyzed: 03/02/2019 02:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 28050 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		1.0	
91-20-3	Naphthalene	ND		0.40	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.40	
111-84-2	n-Nonane	ND		0.40	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		2.5	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		1.0	
98-06-6	tert-Butylbenzene	ND		0.40	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		1.0	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.40	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\chromna\Knoxville\ChromData\MR\20190228-10976.b\C01L14430.D
 Lims ID: 140-14430-A-16
 Client ID: 09661
 Sample Type: Client
 Inject. Date: 02-Mar-2019 02:36:30 ALS Bottle#: 3 Worklist Smp#: 22
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0010976-022
 Misc. Info.: 09661
 Operator ID: Instrument ID: MR
 Method: \\chromna\Knoxville\ChromData\MR\20190228-10976.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Mar-2019 10:05:08 Calib Date: 17-Nov-2018 03:51:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromdocs2018\q3\Knoxville\ChromData\MR\20181116-10019.b\RK16IC08.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: khachitpongpanits Date: 04-Mar-2019 10:05:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.385	7.385	0.000	72	185501	4.00	
* 2 1,4-Difluorobenzene	114	9.450	9.450	0.000	95	1080026	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.497	14.503	-0.006	91	953971	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.223	16.228	-0.005	88	834657	4.11	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190228-10976.b\C01L14430.D

Injection Date: 02-Mar-2019 02:36:30

Instrument ID: MR

Operator ID:

Lims ID: 140-14430-A-16

Lab Sample ID: 140-14430-16

Worklist Smp#: 22

Client ID: 09661

Purge Vol: 500.000 mL

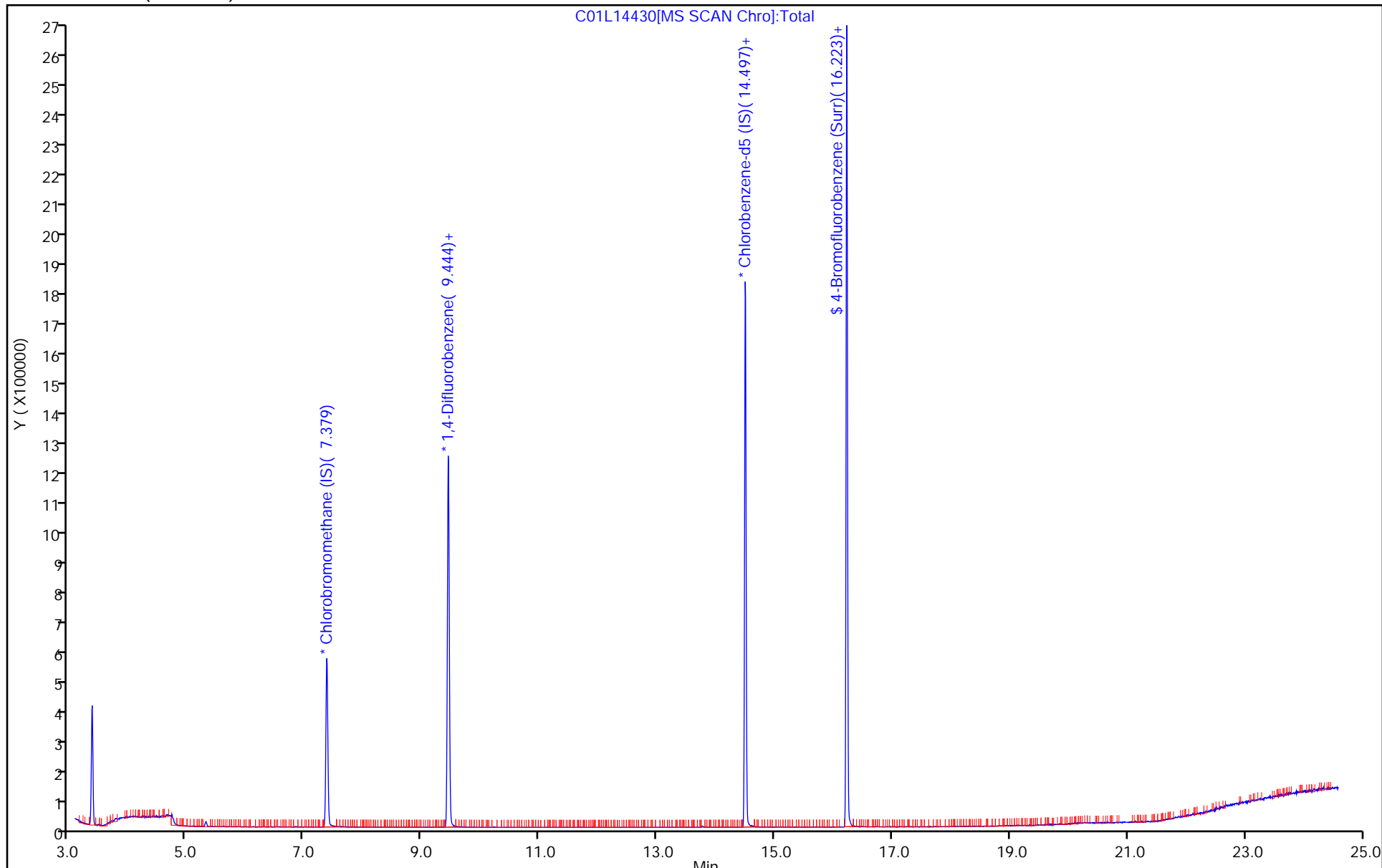
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190228-10976.b\C01L14430.D

Injection Date: 02-Mar-2019 02:36:30

Instrument ID: MR

Lims ID: 140-14430-A-16

Lab Sample ID: 140-14430-16

Client ID: 09661

Operator ID:

ALS Bottle#:

3

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

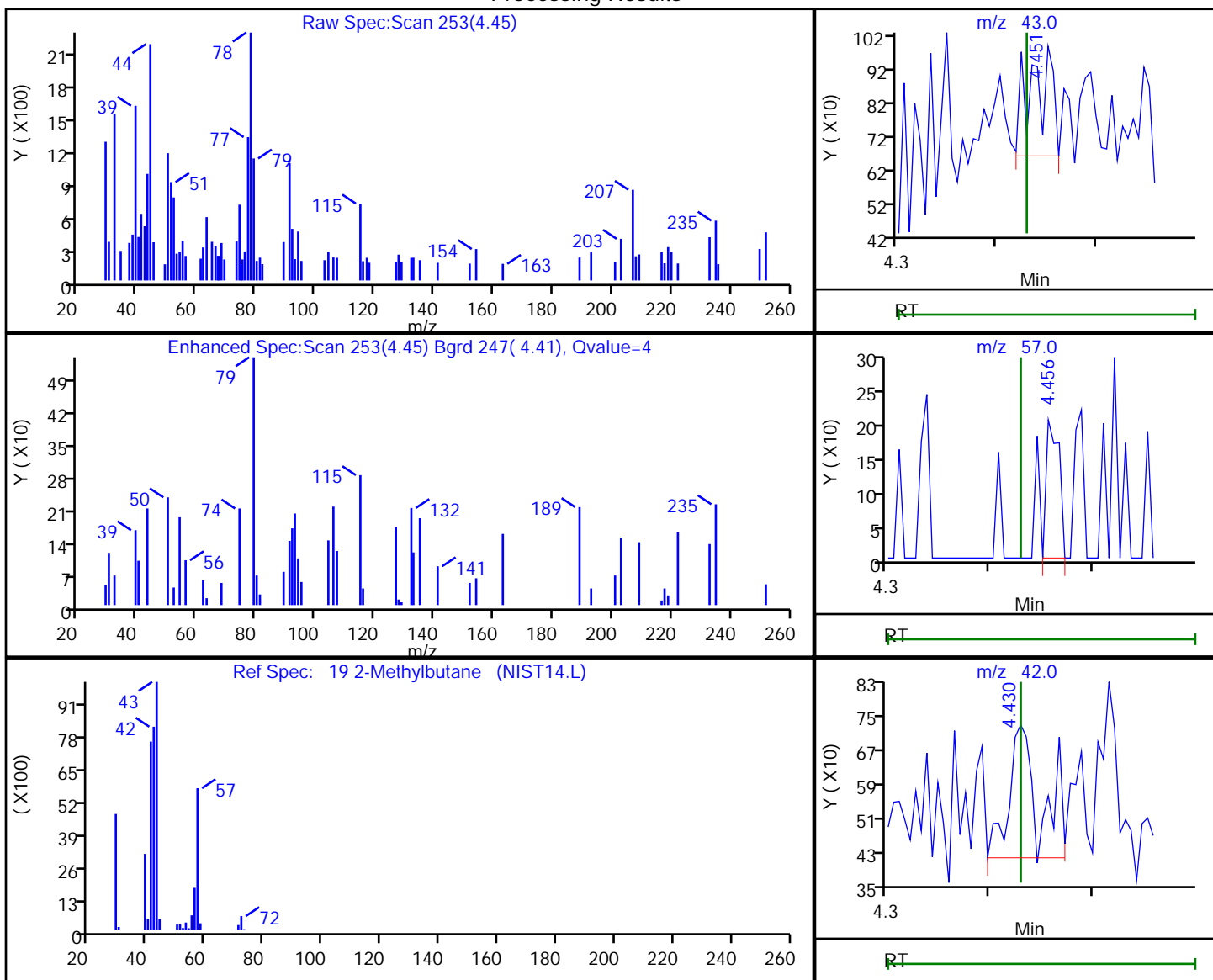
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

19 2-Methylbutane, CAS: 78-78-4

Processing Results



RT	Mass	Response	Amount
4.45	43.00	510	0.013748
4.46	57.00	177	
4.43	42.00	643	

Reviewer: khachitpongpanits, 04-Mar-2019 10:04:42

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190228-10976.b\C01L14430.D

Injection Date: 02-Mar-2019 02:36:30

Instrument ID: MR

Lims ID: 140-14430-A-16

Lab Sample ID: 140-14430-16

Client ID: 09661

Operator ID:

ALS Bottle#: 3

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

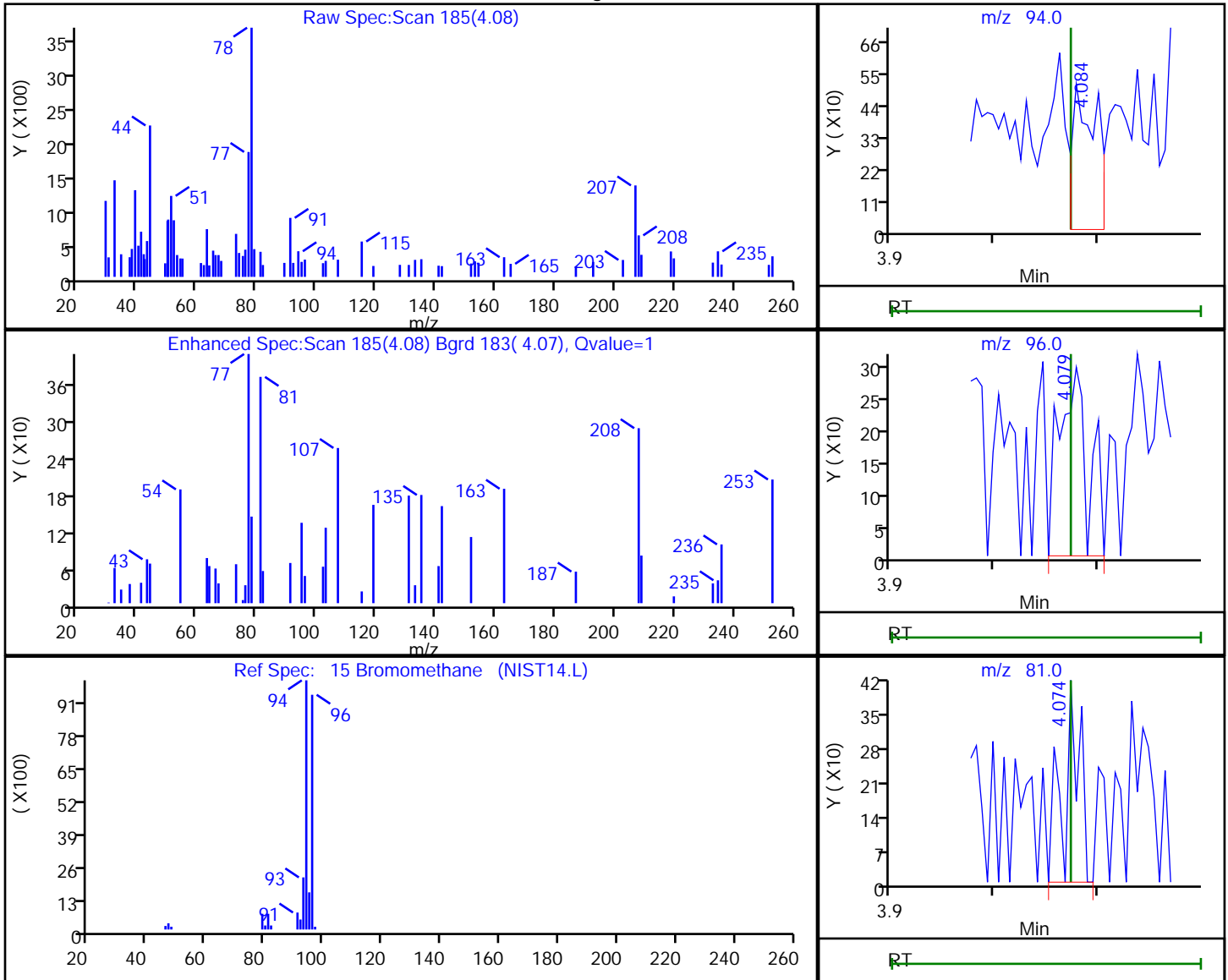
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.08	94.00	830	0.014487
4.08	96.00	583	
4.07	81.00	459	

Reviewer: khachitpongpanits, 04-Mar-2019 10:04:39

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\chromna\Knoxville\ChromData\MR\20190228-10976.b\C01L14430.D

Injection Date: 02-Mar-2019 02:36:30

Instrument ID: MR

Lims ID: 140-14430-A-16

Lab Sample ID: 140-14430-16

Client ID: 09661

Operator ID:

ALS Bottle#:

3

Worklist Smp#: 22

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

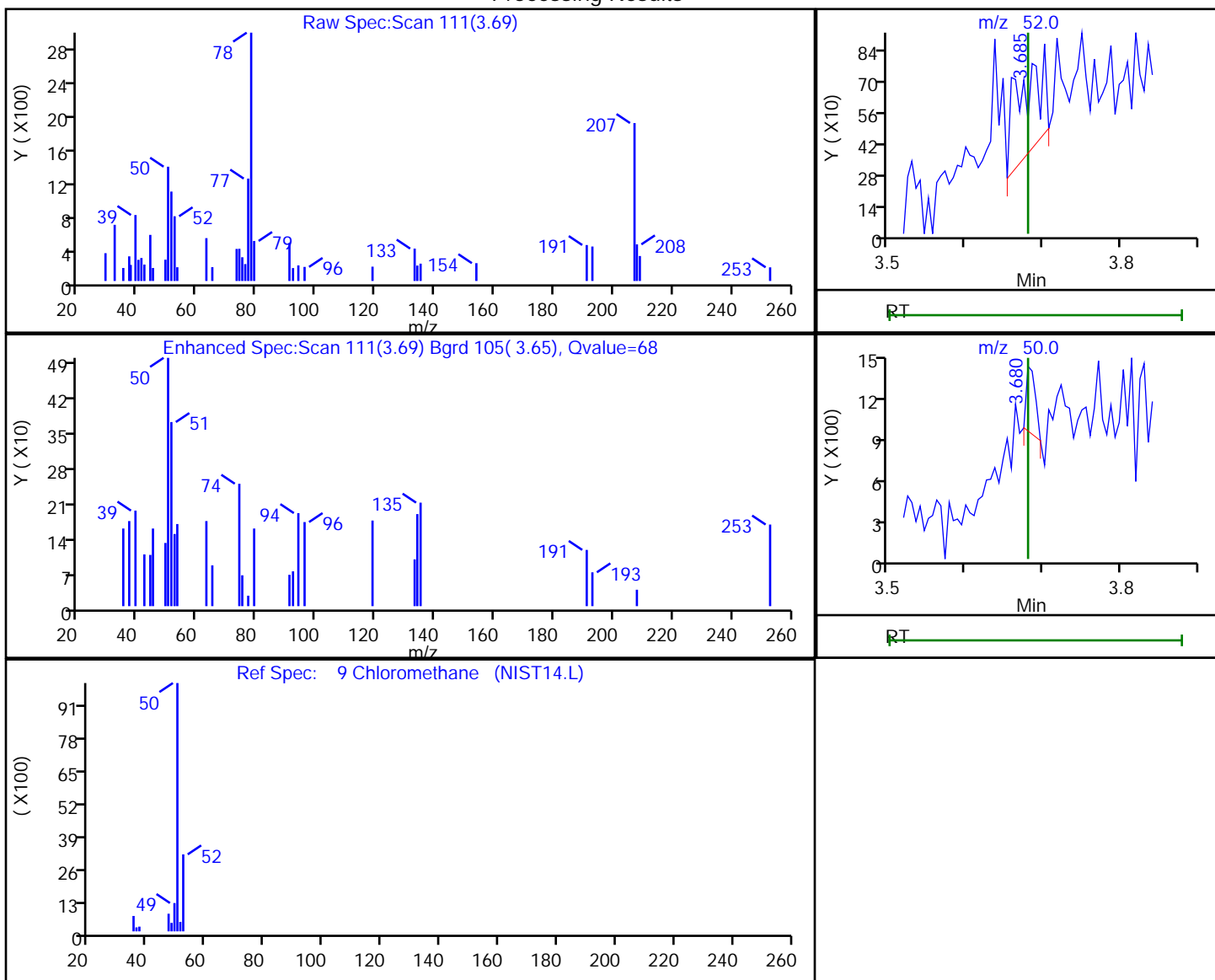
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

9 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
3.69	52.00	916	0.064530
3.68	50.00	387	

Reviewer: khachitpongpanits, 04-Mar-2019 10:04:35

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Report

Baltimore

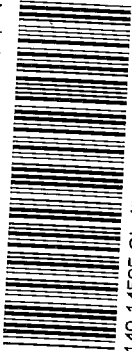
TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

#201

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

Client Contact Information		Project Manager: Peter Rich		Sampled By: D. Lee Lucas		1 of 1 COCs	
Company: Tetra Tech		Phone: 410 990 4607		Andrew Smith			
Address: 780 Awood Rd		Site Contact:					
City/State/Zip: Annapolis, MD, 21403		TAL Contact:					
Phone: 410 990 4607							
FAX:							
Project Name: LMC Middle River		Analysis Turnaround Time					
Site/Location: Middle River, MD		Standard (Specify)					
PO # 117-057240		Rush (Specify)					



140-14595 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)		Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)	
													Sample Type	Sample Type						
Bldg - A - Effluent	3/13/19	1026	1027	-29	-4	10911	11849	✓												
Bldg - A - MidGrac	3/13/19	1030	1031	-30	-4	10930	10969	✓												
Bldg - A - Influent	3/13/19	1033	1034	-30	-4	10614	10749	✓												
Bldg - C - Influent	3/13/19	1210	1211	-30	-4	11594	11870	✓												
Bldg - C - MidGrac	3/13/19	1205	1206	-29	-4	10901	11645	✓												
Bldg - C - Effluent	3/13/19	1159	1208	-30	-4	09458	11666	✓												

Sampled by: Received @ ambient, 1 cooler
 FedEx Pk. Custody seal intact
 TRAF 7746 9930 7243
 KLW 3/19/19

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: J. McNeil
 Date/Time: 3-13-19 / 1344
 Canisters Received by: JH
 Samples Relinquished by: JH
 Date/Time: 3/13/19
 Received by: JH
 Date/Time: 3/19/19 1010 JH
 Relinquished by: JH
 Date/Time: 3/19/19
 Received by: JH
 Date/Time: 3/19/19
 Received by: JH

Lab Use Only Shipper Name: Condition: Opened by: Temperature: Pressure (inches of Hg):

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?	/			<input checked="" type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?	/			<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID: _____ Correction factor: _____	/		/	<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	/			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?	/			<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?	/			<input type="checkbox"/> Headspace (VOA only)	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____	/			<input type="checkbox"/> Residual Chlorine	
19. For 1613B water samples is pH<9?	/			<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?	/			<input type="checkbox"/> Project missing info	

Labeling Verified by: _____ Date: _____
 pH test strip lot number: _____
 Box 16A: pH Preservation
 Box 18A: Residual Chlorine
 Preservative: _____
 Lot Number: _____
 Exp Date: _____
 Analyst: _____
 Date: _____
 Time: _____

Project #: 140292 PM Instructions: _____
 Date: 3/14/19
 Sample Receiving Associate: [Signature]
 QA026R31.doc, 112618

